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MICROPHOTO INC.
CLEVELAND, OHIO

U.S. DEPARTMENT OF COMMERCE
OFFICIAL GAZETTE of the UNITED STATES PATENT OFFICE
May 7, 1963 Volume 790 Number 1

PATENTS
NOTICES

Board of Appeals Decisions Rendered in the Month of March 1963

Examiner affirmed	341
Examiner affirmed in part	63
Examiner reversed	80
Total	484

Disclaimers

2,798,531.—*Robert L. Jackson, Jr., Charlestown, Ind.* CONDENSED FILAMENTOUS MAT AND METHOD AND APPARATUS FOR MAKING SAME. Patent dated July 9, 1957. Disclaimer filed Mar. 7, 1963, by the assignee, *American Air Filter Company, Inc.*

Hereby enters this disclaimer to claim 1 of said patent.

2,853,263.—*Norris N. Murray*, San Rafael, Calif. CARBON DIOXIDE VALVE. Patent dated Sept. 23, 1958. Disclaimer filed Mar. 7, 1963, by the assignee, *United States of America as represented by the Secretary of the Air Force.*

Hereby enters this disclaimer to claims 1, 2, 3, 4, 5 and 6 of said patent.

2,913,336.—*John G. Dean*, Wilton, Conn. PROCESS FOR SEPARATING COBALT AND NICKEL FROM AMMONIACAL SOLUTIONS. Patent dated Nov. 17, 1959. Disclaimer filed Mar. 14, 1963, by the assignee, *United States of America as represented by the Administrator, General Services Administration.*

Hereby enters this disclaimer to claim 1 of said patent.

3,056,853.—*Walter C. Espenlaub*, Syosset, N.Y. MATRIXING APPARATUS FOR COLOR-TELEVISION SIGNALS. Patent dated Oct. 2, 1962. Disclaimer filed Mar. 11, 1963, by the inventor and the assignee, *Haseltine Research, Inc.*, assenting.

Hereby enters this disclaimer to claims 1, 4, 5, and 7 of said patent.

Examination

Pursuant to the provisions of Rule 341(c), an examination for persons seeking registration before the United States Patent Office as patent attorneys or agents will be held on Tuesday, August 6, 1963.

This examination will be given under the supervision of the Civil Service Commission, and may be taken in any of the cities of the country in which the Civil Service Commission regularly conducts examinations. Applications to take the examination must be directed to the Commissioner of Patents and filed in the Patent Office not later than July 5, 1963.

Application blanks may be obtained from the Clerk of the Patent Office Committee on Enrollment, Room 3718, Department of Commerce Building, Washington 25, D.C.

EDWIN L. REYNOLDS,
Apr. 12, 1963. *Chairman, Committee on Enrollment.*

New Applications Received During March 1963

Patents	7,252
Designs	462
Plant Patents	9
Reissues	24
Total	7,747

Issue

Patents	1,029	No.	3,088,114 to No.	3,089,142, incl.
Designs	26	No.	195,163 to No.	195,188, incl.
Plant Patents	1	No.	2,258	
Reissues	5	No.	25,378 to No.	25,382, incl.
Total	1,061			

PATENT EXAMINING CORPS

H. B. WHITMORE, Superintendent

PATENT EXAMINING OPERATIONS AND GROUPS	Oldest Application	
	New	Amended
CHEMICAL EXAMINING OPERATION—P. E. MANGAN, Director.		
GENERAL CHEMISTRY, GROUP 110—R. L. CAMPBELL, Supervisory Examiner	11-3-61	10-2-61
Inorganic and Organo-metal (formerly Div. 59)—M. A. Brindisi.		
Metallurgy (formerly Div. 3).		
Electrochemistry (formerly Div. 56)—J. R. Speck.		
GENERAL ORGANIC CHEMISTRY, GROUP 120—I. MARCUS, Supervisory Examiner	12-29-61	11-24-61
Heterocyclic (formerly Div. 6)—H. J. Lidoff.		
Specialized Organic Compounds (formerly Div. 38)—C. B. Parker.		
Medicines (formerly Div. 43).		
PETROLEUM CHEMISTRY, GROUP 130—J. S. BAILEY, Supervisory Examiner	11-21-61	12-20-61
Hydrocarbons (formerly Div. 31).		
Oxo- and Oxy-Derivatives.		
HIGH POLYMER CHEMISTRY, GROUP 140—M. STERMAN, Supervisory Examiner	5-8-61	4-26-61
High Polymer Preparation (formerly Div. 60).		
Mixed High Polymers and Natural Resins (formerly Div. 50).		
COMPOSITIONS AND MOLDING, GROUP 150—L. H. GASTON, Supervisory Examiner	8-21-61	8-25-61
Coating Compositions and Molding.		
Special Utility Compositions (formerly Div. 64)—J. Greenwald.		
COATING AND LAMINATING, GROUP 160—I. G. STONE, (J. REBOLD, Acting) Supervisory Examiner	9-29-61	9-19-61
Coating Methods and Apparatus (formerly Div. 25)—R. D. Nevius.		
Laminating and Stock Materials (formerly Div. 67).		
SPECIALIZED CHEMICAL ARTS AND INDUSTRIES, GROUP 170—W. B. KNIGHT, Supervisory Examiner	2-18-61	6-6-60
Specialized Chemical Arts (formerly Div. 63)—A. H. Winkelstein.		
Reactors and Miscellaneous Industrial Processes.		
CHEMICAL ENGINEERING, GROUP 180—G. D. MITCHELL, Supervisory Examiner	8-16-61	10-2-61
Gases, Liquids and Solids Separating (formerly Div. 32)—H. L. Martin.		
Distillation, Drying and Physical Processes.		
ELECTRICAL EXAMINING OPERATION—N. H. EVANS, Director.		
POWER, GROUP 210—M. L. LEVY, Supervisory Examiner	9-1-61	8-31-61
Generation and Utilization (formerly Div. 26)—O. L. Rader.		
General Applications (formerly Div. 48)—S. Bernstein.		
Conversion and Distribution (formerly Div. 71)—L. McCollum.		
Heating and Related Art (formerly Div. 76)—R. M. Wood.		
SECURITY, GROUP 220—S. BOYD, Supervisory Examiner	9-5-61	9-19-61
Chemical (formerly Div. 46).		
Electrical (formerly Div. 44)—C. L. Justus.		
Mechanical (formerly Div. 10).		
INFORMATION TRANSMISSION, GROUP 230—S. W. CAPELLI, Supervisory Examiner	9-15-61	9-26-61
Communications (formerly Div. 16)— R. H. Rose.		
Multiplexing Techniques (formerly Div. 77)—D. G. Redinbaugh.		
Facsimile and Related Art (formerly Div. 41)— R. Lake.		
INFORMATION STORAGE AND RETRIEVAL, GROUP 240—W. W. BURNS, Supervisory Examiner	8-10-61	8-17-61
Processing and Related Art (formerly Div. 68)—M. A. Morrison.		
Storage Devices and Related Art (formerly Div. 42)—I. Sragow.		
ELECTRONIC COMPONENT SYSTEMS AND DEVICES, GROUP 250—B. G. MILLER, Supervisory Examiner	9-5-61	8-16-61
Semi-Conductor and Space Discharge Systems and Devices (formerly Div. 51)—G. N. Westby.		
Electronic Component Circuits (formerly Div. 72)—A. Gauss.		
Wave Transmission Lines and Networks (formerly Div. 65)—H. K. Saalbach.		
RADIATION AND INSTRUMENTS, GROUP 260—F. M. STRADER, Supervisory Examiner	5-5-61	9-7-61
Optics (formerly Div. 73)—J. H. Pedersen.		
Radiant Energy (formerly Div. 54)—R. G. Nilson.		
Measuring (formerly Div. 74)—W. L. Carlson.		
ELEMENTS, GROUP 270—E. J. SAX, Supervisory Examiner	9-8-61	9-18-61
Conductors (formerly Div. 75)—J. P. Wildman.		
Switches (formerly Div. 37)—B. A. Gilheany.		
Miscellaneous (formerly Div. 78)—J. F. Burns.		
MECHANICAL ENGINEERING EXAMINING OPERATION—R. A. WAHL, Director.		
GENERAL ENGINEERING AND INDUSTRIAL ARTS EXAMINING OPERATION—J. A. MANIAN, Director.		

INTERIM PATENT EXAMINING GROUPS AND SUPERVISORY EXAMINERS

(III) MADER, R. C.—MECHANICAL MANUFACTURING, MACHINE ELEMENTS AND DESIGNS	2, 12, 13, 14, 21, 24, 57, 58, 61, 81, 82.
(IV) NINAS, G. A.—MATERIAL HANDLING AND TREATING, OPTICS, RAILWAYS AND AMUSEMENT DEVICES.	7, 11, 17, 27, 34, 35, 39, 53, 62.
(V) EVANS, R. L.—STATIC STRUCTURES AND INSTRUMENTS OF PRECISION	5, 8, 20, 29, 33, 36, 40, 52, 66.
(VI) MANIAN, J. A.—AGRICULTURE, CALCULATORS, PUMPS AND MOTORS, TRANSPORTATION	1, 4, 9, 18, 22, 23, 28, 45, 47.
(VII) BENDETT, B.—HEATING AND COOLING, PLASTIC SHAPING AND COATING, SEPARATION AND MIXING, BODY TREATMENT AND CARE.	15, 19, 30, 40, 55.
(CLASSIFICATION) GORECKI, G. A.—ARTS UNDERGOING RECLASSIFICATION AS LISTED UNDER CLASSIFICATION DIVISIONS.	91, 92, 93, 94, 95.

DIVISIONS, EXAMINERS AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application as of Feb. 28, 1963	
	New	Amended
1. (VI) GOLDBERG, A. J., Brakes; Planting; Plant Husbandry; Scattering Unloaders; Earth Working	3-19-62	1-19-62
2. (III) STONE, A., Fishing, Trapping and Vermin Destroying; Presses; Tobacco; Textile Wringers; Buckles, Buttons and Clasps	5-1-62	4-30-62
4. (VI) FALLER, E. A., Material or Article Handling	3-1-62	2-19-62
5. (V) ROBINSON, C. W., Harvesters; Unearthing Objects; Threshing; Knotters; Animal Husbandry; Bee Culture; Dairy; Butchering; Vegetable and Meat Cutters and Comminutors; Fences; Gates; Signals and Indicators; Acoustics; Music (part), Sound Recording and Reproducing	4-2-62	4-2-62
7. (IV) ANDERSON, E. G., Optics (part), (i.e. Kaleidoscope, Motion Picture Apparatus and Optical Projectors, Build-Lights); Recorders	11-2-61	12-11-61
8. (V) SHERRY, F. B. (acting), Beds; Chairs and Seats; Cabinets; Tables; Miscellaneous Furniture; Fire Escapes; Ladders; Deposit and Collection Receptacles; Scaffolds	3-1-62	4-12-62
9. (VI) BRANSON, J. H., Pumps; Fans	3-1-62	5-25-62
11. (IV) BENHAM, E. V., Boots, Shoes and Leggings; Shoe and Leather Manufacture; Button, Eyelet and Rivet Setting; Nailing, Stapling and Clip Clenching; Card, Picture and Sign Exhibiting; Cutlery; Pipes and Tubular Conduits	3-9-62	3-19-62
12. (III) DURHAM, B. G., Machine Elements; Engine Starters; Interrelated Clutch and Motor Controls	10-20-61	11-13-61
13. (III) DYER, W. W., Jr. (acting), Gear Cutting; Electric Lamp and Tube Manufacture; Needle and Pin Making; Metal Working (part), e.g., Special Work, Forging, Plastic Working, Drawing, Sawing, Milling, Planing, Turning	12-8-61	11-20-61
14. (III) WILTZ, W. A., Metal Working (part), e.g., Sheet Metal; Metal Bending, Miscellaneous Processes, Assembly and Disassembly Apparatus; Wire Fabrics	11-6-61	9-8-61
15. (VII) BRINDISI, M. V., Plastics; Plastic Block and Earthenware Apparatus	2-7-62	1-3-62
17. (IV) LEIGHEY, R. A., Packaging; Typewriters; Printing; Type Casting and Setting; Sheet Material Associating or Folding; Sheet Feeding or Delivering	11-21-61	10-31-61
18. (VI) BLUM, A. (LEVINE, S., acting), Power Plants; Fluid Transmissions; Servomotor Systems; Jet Motors; Combustion Turbines; Measuring Speed or Acceleration Power Driven Conveyors	2-13-62	2-9-62
19. (VII) PATRICK, P. L., Stoves and Furnaces; Boilers; Fluid Fuel Burners; Heating Systems; Miscellaneous Heating; Automatic Temperature and Humidity Regulation; Illuminating Burners	10-30-61	10-27-61
20. (V) SEERS, J. D., Miscellaneous Hardware; Closure Fasteners; Locks; Safes; Bank Protection; Bread, Pastry and Confection Making; Tents and Canopies; Umbrellas; Cranes; Undertaking; Electrical Connectors	2-1-62	2-2-62
21. (III) MADER, R. C., Textiles	12-1-61	11-27-61
22. (VI) BUCHLER, M. B., Aeronautics; Boats; Buoys; Ships; Marine Propulsion; Propellers; Windmills; Fluid Diaphragms and Bellows	3-7-62	3-23-62
23. (VI) SMILOW, L., Calculators; Bookkeeping Machines; Cash and Fare Registers; Voting Machines; Counters; Education; Weighing Scales	4-6-62	4-27-62
24. (III) HICKEY, T. J., Apparel (except Corsets and Brassieres); Apparel Apparatus; Sewing Machines; Textiles, Ironing or Smoothing; Clutches and Power-Stop Control; Work Holders	2-20-62	2-7-62
27. (IV) WILLMUTH, C. A. (acting), Brushing, Scrubbing and General Cleaning; Brush, Broom and Mop Making; Textiles, Fluid Treating Apparatus; Cleaning and Liquid Contact With Solids	3-19-62	4-10-62
28. (VI) BRAUNER, R. H., Internal Combustion Engines; Expansible Chamber Motors; Fluid Servomotors; Spring Motors; Cylinders; Pistons; Drive Shafts; Flexible-Shaft Couplings; Chucks or Sockets; Fluid Current Conveyors; Wheel Substitutes; Hoists; Elevators; Pneumatic Dispatch; Store Service; Chutes	2-16-62	1-29-62
29. (V) SCHEEL, W. A. (acting), Tools; Woodworking; Button, Barrel and Wheel Making; Baggage; Cloth, Leather and Rubber Receptacles; Package and Article Carriers; Valved Pipe Couplings; Joint Packings; Tool-Handling Fastenings	1-15-62	2-5-62
30. (VII) O'LEARY, R. A., Comminutors; Refrigeration; Fluid Sprinkling, Spraying and Diffusing, Separating and Assorting Solids (part)	1-17-62	1-10-62
33. (V) MUSHAKE, W. L., Bridges; Hydraulic and Earth Engineering; Roads and Pavements; Building Structures	12-13-61	12-8-61
34. (IV) QUACKENBUSH, L., Railways—Draft Appliances, Switches and Signals, Surface Track, Rolling Stock, Track Sanders; Electricity, Transmission to Vehicles; Dumping Vehicles; Vehicle Fenders; Hand and Hoist Line Implements; Agitating	11-8-61	11-6-61
35. (IV) DEMBO, L. J., Dispensing; Filling Receptacles; Toilet; Severing by Tearing or Breaking; Coin Controlled Apparatus; Dispensing Cabinets; Article Dispensing; Coin Handling	2-1-62	1-8-62
36. (V) EVANS, R. L., Measuring and Testing (part)	1-8-62	1-10-62
39. (IV) WEIL, I., Fluid-Pressure Regulators; Valves; Fluid Handling (except Pressure Modulating Relays, Float Valves, Diaphragms and Bellows)	1-16-62	1-15-62
40. (V) DRUMMOND, E. J., Receptacles—Metallic, Paper, Wooden, Glass; Special Receptacles and Packages	1-31-62	2-2-62
45. (VI) RIORDON, R. C. (acting), Wheels, Tires and Axles; Railway Wheels and Axles; Lubrication; Bearings and Guides; Belt and Sprocket Gearing; Spring Devices; Animal Draft Appliances; Excavating	4-6-62	6-1-62
47. (VI) ARNOLD, P., Mining, Quarrying, and Ice Harvesting; Motor Vehicles: Land Vehicles	3-1-62	2-26-62
49. (VII) BENDETT, B., (O'CONNELL, C. E., acting), Drying and Gas or Vapor Contact With Solids; Ventilation; Wells; Concentrating Evaporators; Earth Boring	12-19-61	11-20-61
52. (V) LE ROY, C. A., Supports and Racks; Separating and Assorting Solids (part)	2-26-62	4-11-62
53. (IV) NINAS, G. A., Books and Book Making; Manifolding; Printed Matter; Stationery; Paper Files and Binders; Flexible or Portable Closures, or Partitions; Doors, Windows, Awnings, and Shutters; Harness; Whip Apparatus; Food Apparatus; Closure Operators; Illumination	11-13-61	11-20-61
55. (VII) FRANKLIN, J. (acting), Surgery; Dentistry; Artificial Body Members	2-12-62	3-7-62
57. (III) TOMLIN, C. W. (acting), Bolt, Nut, Rivet, Nail, Screw, Chain, and Horseshoe Making; Driven and Screw Fastenings; Nut and Bolt Locks; Jewelry; Pipe Joints or Couplings; Cutting	11-21-61	10-25-61
58. (III) BRONAUGH, F. H., Rolls and Rollers; Making Metal Tools and Implements; Stone Working; Abrading Processes and Apparatus; Baths, Closets, Sinks, and Spittoons; Boring and Drilling; Paper Manufacture; Selective Cutting	4-11-62	5-10-62
61. (III) STRIZAK, J. P., Winding and Reeling; Pushing and Pulling; Horology; Railway Mail Delivery; Feeding of Indefinite Lengths	4-16-62	4-18-62
62. (IV) LOWE, D. B., Games; Toys; Amusements and Exercising Devices; Mechanical Guns and Projectors; Photographic Apparatus	11-13-61	11-13-61
66. (V) LISANN, I., Geometric Instruments; Measuring and Testing (part)	11-6-61	11-6-61
81. (III) HANNAH, A. B., Industrial Arts	9-28-62	10-3-62
82. (III) HUNTER, E. H., Household, Personal and Fine Arts	10-17-62	10-29-62
91. BAILEY, J. S., Glass Manufacturing	----------	----------
92. GAUSS, H.	----------	----------
93. PURDY, W. F. (acting), Wire Working	5-3-62	3-1-62
94. BERLOWITZ, W., Motors, Fluid	7-6-62	10-15-62
95. ANGEL, C. D., (REZNEK, J., acting), Metallic Building Structures	12-4-61	12-4-61

CONDITION OF PATENT APPLICATIONS AS OF FEBRUARY 28, 1963

Total number of pending applications (excluding Designs)	193,429
Total number of Design applications pending	5,998
Total number of applications awaiting action (excluding Designs)	110,056
Total number of Design applications awaiting action	2,234
Date of oldest new application awaiting action	Feb. 18, 1961
Date of oldest amended application awaiting action	June 6, 1960

EXPIRATION OF PATENTS

The patents within the range of numbers indicated below expire during April 1963, except those which may have been extended under the Provisions of the Veterans Patent Extension Act (64 Stat. 316 as amended by 66 Stat. 321) and those which may have expired earlier due to shortened terms under the provisions of Public Law 690. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1963*

Patents	Numbers 2,907,458 to 2,909,610, inclusive
Plant Patents	Numbers 672 to 687 inclusive

DECISIONS IN PATENT AND TRADEMARK CASES

U.S. Court of Customs and Patent Appeals

THE SEVEN-UP COMPANY *v.* BUBBLE UP CORPORATION, BY CHANGE OF NAME FROM O-SO GRAPE CO., ASSIGNEE OF LEROY O. SCHNEEBERGER AND THE SWEET VALLEY PRODUCTS CO.

No. 6881. Decided January 16, 1963. Petition for rehearing denied March 20, 1963

[50 CCPA —; 311 F.2d 472; 136 USPQ 210]

1. RES JUDICATA—COLLATERAL ESTOPPEL.

"It is the essence of res judicata that an end should be put to litigation—that when the parties have previously litigated a cause, they are barred from litigating the matter anew in a separate action. * * * If the second suit is for a different cause of action, any facts actually determined in the first suit between the same parties are conclusively established."

2. SAME—SAME—LACHES—TRADEMARK.

"Where, as here, one party to a cancellation proceeding has prevailed in a litigated and finally determined action by reason of the affirmative defense of laches *with respect to the same factual averments* which have been pleaded verbatim in a later cancellation proceeding, we think it is incumbent on the Patent Office and this court to give effect to such an established defense which goes to the relief here sought. Despite the differences in the specific relief sought in the Illinois suit and in the Petition for Cancellation here, we think the defense to the action predicated on laches is binding on the parties here by reason of collateral estoppel."

3. SAME—SAME—SAME—SAME.

"It seems clear to us that the long delay of appellants which was held to constitute laches barring its recovery in a suit for trademark infringement, dilution and unfair competition is equally a bar to the present cancellation proceeding where the two marks sought to be cancelled, No. 141,244 and No. 354,840, have been on the register for 38 and 21 years, respectively, prior to filing this petition."

APPEAL from the Patent Office. Cancellation No. 7,272.

AFFIRMED.

Lewis S. Garner, Helen W. Nies, Woodson, Pattishall and Garner for appellant.

Charles F. Meroni, Carlton Hill, Hill, Sherman, Meroni, Gross & Simpson (*Miller, Westervelt & Johnson* of counsel) for appellee.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, SMITH, and ALMOND, Jr., *Associate Judges*

SMITH, *J.*, delivered the opinion of the court.

The Trademark Trial and Appeal Board, applying res judicata, granted respondent's (appellee's) renewed motion to dismiss the petition brought by appellant under section 14 of the Trademark Act of 1946 (15 U.S.C. 1064) to cancel respondent's Principal Register Registrations Nos. 141,244 and 354,840 for the trademark BUBBLE UP, owned by it as successor to the O-So Grape Company. Petitioner-appellant, The Seven-Up Company, is the owner of a number of registered trademarks for SEVEN-UP and also 7 UP. The marks of the respective parties are used on soft drink beverages.

The Petition for Cancellation avers certain facts and concludes with a prayer for relief which reads as follows:

WHEREFORE, petitioner prays that the said Registrations Nos. 141,244 and 354,840 be cancelled under sec. 18 of the Trademark Act of 1946 on the grounds set forth above, for the reason that the date of first continuous use alleged in the registrations is false and misleading, and is used by the registrant to deceive

and mislead, in violation of 15 U.S.C. 1120 (sec. 38 of the Trademark Act of 1946) and the said material error in the said registrations has been, is, and will be damaging to petitioner.

The Petition for Cancellation was filed March 17, 1959, three days prior to the filing of a Bill of Complaint by petitioner-appellant as plaintiff against respondent-appellee as defendant in the District Court, S.D. Illinois, N. Div. Since the appealed decision of the Trademark Trial and Appeal Board is based on a holding of res judicata predicated upon the decision in this later filed suit, it is necessary to here review this action in some detail.

The complaint in the Illinois action seeks a recovery for trademark infringement, unfair competition and trademark dilution, and prays for specific relief on each of these causes of action. In addition, the complaint prays:

That plaintiff have such other and further relief as the court deems just and equitable.

The complaint, insofar as it is pertinent to the issues raised in the present cancellation proceedings, contains the following averments:

25. On information and belief the trademark BUBBLE UP was registered in the United States Patent Office in 1921, and was used locally and to a slight extent for a short period of time for a grape soft drink, beginning in or about the year 1920, by The Sweet Valley Products Co., of Sandusky, Ohio. All use of the said trademark for said soft drink or for any soft drink or product was abandoned and discontinued by said company in or about the year 1922. In 1937 Leroy O. Schneeberger of St. Louis, Missouri, defendants' predecessor, bought the naked United States registration of BUBBLE UP, No. 141,244, from the aforesaid company and in 1938 reregistered the mark in his own name, No. 354,840. There had been no use of the trademark BUBBLE UP by the assignor or anyone else from 1922 to 1937. By that date (1937) plaintiff's 7 UP (also SEVEN-UP) soft drink had become nationally famous. The said Leroy O. Schneeberger did not use BUBBLE UP for a grape soft drink as it had been originally used by the assignor, but instead used said trademark solely for a soft drink of the same type and flavor, except for quality, as the 7 UP (also SEVEN-UP) soft drink put out by plaintiff. The said trademark BUBBLE UP and said registrations were assigned from Leroy O. Schneeberger to Bubble Up Corporation, a Missouri corporation, in 1946, and were assigned from Bubble Up Corporation to defendant, O-So Grape Co., in 1953.

26. Nothwithstanding the aforesaid facts, the said Reg. No. 354,840, which was registered on February 22, 1938 by Leroy O. Schneeberger, recites that the trademark BUBBLE UP had been used and applied to beverages in the business of the said Leroy O. Schneeberger, and in the business of his predecessors continuously from October 17, 1917 to 1937. The said allegation was made and sworn to by Leroy O. Schneeberger in the application for said registration. The said statement was and is false and the presumption of use and priority as of the said date, namely October 17, 1917 arising from the registration, is likewise false, whereupon the said Reg. No. 354,840 is erroneous and deceptive in a material respect.

27. The present record owner of the aforesaid Registrations Nos. 141,244 and 354,840, defendant O-So Grape Co., and its agents, bottlers, and wholly controlled subsidiaries, have falsely stated, and are stating, representing and implying in numerous legal actions in foreign countries between the parties hereto, and also to the trade and public, that BUBBLE UP is "the first 'UP' drink," that it has been in continuous use since prior to plaintiff's first use of 7 UP (also SEVEN-UP) in 1928; and that it has been continuously used side-by-side with 7 UP (also SEVEN-UP) in the United States since 1917. The Reg. Nos. 141,244 and 354,840, and each of them, have been constantly and specifically referred to in connection with, and as basis for and in support of the said misrepresentations. All of the said representations are wholly false and contrary to fact.

28. The said false and misleading representations are aforesaid and the registrations used in support thereof have been relied upon and widely and forcefully cited and used by third persons against whom plaintiff has brought legal action for infringement of its said trademark 7 UP (also SEVEN-UP), in defense of their said infringements and unfair competition and in support of attempts to invalidate plaintiff's trademark 7 UP (also SEVEN-UP) on the grounds that it is generic and descriptive of soft drinks of a type similar to plaintiff's, based upon the falsely alleged use of BUBBLE UP since 1917 for said type of drink, all to plaintiff's great and irreparable prejudice and damage.

The answer filed by appellee denied the foregoing allegations of the complaint and as an affirmative defense, averred that plaintiff was not entitled to any relief by reason of laches. One averment which is of interest in the present proceeding is as follows:

(C) Although United States Trademark Registration No. 141,244 for the trademark "Bubble Up" was duly renewed by Leroy O. Schneeberger under date of April 2, 1941, and was duly published under the Act of 1946 by O-So Grape Co. on July 20, 1954, *plaintiff, until the bringing of this action, has neither threatened an action for cancellation of said trademark registration nor filed any such action.*

(D) Although United States Trademark Registration No. 354,840 for the trademark "Bubble Up" with design of fanciful bubbles was published under the Act of 1946 by O-So Grape Co. on July 20, 1954; duly renewed by defendant, O-So Grape Co., under date of February 22, 1958, and corrected in accordance with modern usage of the term "Bubble Up" and encircling fanciful bubbles by a certificate of correction dated June 11, 1957, and published in the Official Gazette of the United States Patent Office of that date, *plaintiff has not, prior to the filing of this suit, taken any action seeking to cancel such registration nor has plaintiff, prior to the filing of this suit notified defendants or any thereof of any such intended action.* [Emphasis added.]

A motion was made by appellee (defendant) for a separate trial under Rule 42(b), F.R.C.P., 28 U.S.C., on its pleaded affirmative relief based on laches. The court heard oral argument and granted the motion (177 F. Supp. 91, 123 USPQ 520). Appellant (plaintiff), Seven-Up, under Rule 68, F.R.C.P., 28 U.S.C., offered judgment on the separate issue of laches, which offer was accepted by appellee, Bubble Up. The district court then granted Bubble Up's motion to dismiss the complaint but denied Bubble Up's request for an injunction against further prosecution based upon the two marks involved.

Seven-Up appealed from the order dismissing its complaint and Bubble Up appealed from the denial of its request for injunctive relief. The Court of Appeals, Seventh Circuit, affirmed the lower court's dismissal of the complaint and also its denial of Bubble Up's request for injunctive relief (283 F. 2d 103, 127 USPQ 147).

The essential facts which emerge from this somewhat involved situation are that while two additional parties defendant were named in the Illinois action, the two parties who are here involved were involved in the prior action and are bound by it. The prior action involved several issues which are not here before us. The question here is whether the issue of cancellation of Bubble Up's trademark registrations was in issue in the prior action.

[1] It is the essence of res judicata that an end should be put to litigation—that when the parties have previously litigated a cause, they are barred from litigating the matter anew in a separate action. *Cromwell* v. *County of Sac*, 94 U.S. 351. If the second suit is for a different cause of action, any facts actually determined in the first suit between the same parties are conclusively established. This doctrine of collateral estoppel is stated by Mr. Justice Harlan in *Southern Pacific Railroad* v. *United States*, 168 U.S. 1, as follows:

The general principle announced in numerous cases is that a right, question or fact distinctly put in issue and directly determined by a court of competent jurisdiction, as a ground of recovery, cannot be disputed in a subsequent suit between the same parties or their privies; *and even if the second suit is for a*

different cause of action, the right, question or fact once so determined must, as between the same parties or their privies, be taken as conclusively established, so long as the judgment in the first suit remains unmodified. This general rule is demanded by the very object for which civil courts have been established, which is to secure the peace and repose of society by the settlement of matters capable of judicial determination. Its enforcement is essential to the maintenance of social order; for, the aid of judicial tribunals would not be invoked for the vindication of rights of person and property, if, as between parties and their privies, conclusiveness did not attend the judgments of such tribunals in respect of all matters properly put in issue and actually determined by them. (168 U.S. at p. 48–49). [Emphasis added.]

While the pleadings in the prior action do not specifically ask for the cancellation of the instant trademark registrations, the court in the prior litigation had jurisdiction of the parties and had the authority to cancel the marks. See section 37 of the Trademark Act of 1946 (15 U.S.C. 1119).

In its answer to the Petition for Cancellation, appellee has incorporated the same defense of laches, as it had done in the then pending action in the U.S.D.C., Illinois, N.D. In addition to this defense, the answer here included the following motion:

Registrant respectfully moves that all further required action in this proceeding be deferred pending final disposition of the aforesaid suit in the United States District Court for the Southern District of Illinois, Northern Division, at Peoria, Illinois, entitled *The Seven-Up Company, Plaintiff*, v. *O-So Grape Co., Bubble Up Corporation and Bubble Up International Ltd., Defendants*, Civil Action No. P–2217, *which suit seeks among other things the identical relief here sought, to wit: cancellation of Registrations Nos. 141,244 and 354,840.* The carrying on of proceedings herein coincidental with the carrying on of the defense to said litigation in the United States District Court at Peoria, Illinois would subject registrant to large additional expense, thus achieving an object which registrant avers to be a principal object of petitioner in bringing this petition and in filing the aforesaid suit. Issue has been joined in the aforesaid suit and proceedings therein are being carried on promptly, discovery deposition proceedings of defendants (registrant here) having been noticed to begin May 12, 1969. [Emphasis added.]

Despite appellant's opposition to the granting of this motion, the Trademark Trial and Appeal Board suspended the proceedings, stating:

It appears from the record herein that petitioner has recently instituted a civil action against a number of companies including the applicant herein for trademark infringement and unfair competition, and that said action involves the marks of the instant case. The final determination thereof probably will be conclusive as between the parties with respect to the questions of respondent's right to the continued use of the mark shown in its registrations and of petitioner's claim of probable damage herein. It is the practice of the Office under such circumstances to suspend the proceedings pending before it until determination of the civil action, regardless of which proceeding was the first to be instituted. *Townley Clothes* v. *Goldring, Inc.*, 100 USPQ 57 (Comr., 1953).

[2] Where, as here, one party to a cancellation proceeding has prevailed in a litigated and finally determined action by reason of the affirmative defense of laches *with respect to the same factual averments* which have been pleaded verbatim in a later cancellation proceeding, we think it is incumbent on the Patent Office and this court to give effect to such an established defense which goes to the relief here sought. Despite the differences in the specific relief sought in the Illinois suit and in the Petition for Cancellation here, we think the defense to the action predicated on laches is binding on the parties here by reason of collateral estoppel. *Cromwell* v. *County of Sac*, supra, and *Southern Pacific Railroad* v. *United States*, supra.

The parties hereto are no strangers to litigation involving their

respective trademark rights.[1] This suggests the wisdom of terminating such proceedings as have been finally adjudicated by a court of competent jurisdiction. We think the prior adjudication of the affirmative defense of laches, which found appellant's conduct to constitute laches barring all relief, estops appellant from here contesting again the determination of this issue.

[3] It seems clear to us that the long delay of appellants which was held to constitute laches barring its recovery in a suit for trademark infringement, dilution and unfair competition is equally a bar to the present cancellation proceeding where the two marks sought to be cancelled, No. 141,244 and No. 354,840, have been on the register for 38 and 21 years, respectively, prior to filing this petition. In the Illinois litigation, the United States Court of Appeals, 7th Circuit, stated:

In the case at bar, much more than mere delay is present. In the thirteen years following the dismissal of its suit charging "Bubble Up" infringed its trademark, plaintiff did more than merely acquiesce in defendant's use of "Bubble Up." It would be highly inequitable to permit plaintiff at this late date, to seriously damage, if not destroy, defendants' business by use of injunctive relief. [283 F. 2d at p. 106.]

We have not found any overriding equities or considerations of public policy here which would be served by relitigating determinative issues of fact or law which were finally determined in the Illinois action.

For the foregoing reasons, the decision of the Trademark Trial and Appeal Board is affirmed.

AFFIRMED.

WORLEY, *Chief Judge* (dissenting):

Since I am convinced the Trademark Trial and Appeal Board erred in granting the motion to dismiss Seven-Up's petition for cancellation on the ground of res judicata, I respectfully dissent from the result reached by the majority.

The majority states that the question here is whether the issue of cancellation of Bubble UP's registrations was in issue in the Illinois suit and apparently finds that it was. However, as I read the record, the *specific* relief asked in that suit relates to trademark infringement, unfair competition and trademark dilution, but *not* "the identical relief here sought, to wit: cancellation of Registrations Nos. 141,244 and 354,840."

This court has stated many times that there is a distinction between the right to use a mark and the right to register it. *Alumatone Corporation* v. *Vita-Var Corporation*, 37 CCPA 1151, 183 F.2d 612, 86 USPQ 359; *Salem Commodities, Inc.* v. *Miami Margarine Co.*, 44 CCPA 932, 244 F.2d 729, 114 USPQ 124; *Alfred Dunhill of London Inc.* v. *Dunhill Tailored Clothes, Inc.*, 49 CCPA 730, 293 F.2d 685, 130 USPQ 412. The present petition having been filed three days before the Illinois suit, the matter of Bubble Up's right to its registration has been in issue on the basis of the petition continuously through the entire course of the suit. Affirmance of the Board's dismissal of the petition on a motion to dismiss (in practical effect, a motion for summary judgment), actually denies Seven-Up the right to a determination on the merits of Bubble Up's right to registration on the mere basis that the matter of the right to use the mark has been determined adversely to Seven-Up.

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[1] *The Seven-Up Company* v. *Schneeberger, d.b.a. Bubble Up Company*, Civil Action No. 2384, District Court, E.D. Missouri, E.D., dismissed and abandoned by Seven-Up, and *The Seven-Up Co.* v. *O-So Grape Co.*, 177 F. Supp. 91, affirmed, 283 F. 2d 103, cert. den. 365 U.S. 869.

U.S. Court of Customs and Patent Appeals

IN RE BENNIE F. DIRZIUS, DOING BUSINESS AS DIRZIUS MACHINE SHOP

No. 6868. Decided January 16, 1963

[50 CCPA —; 311 F.2d 825; 136 USPQ 198]

1. TRADEMARK—GOODS—DESCRIPTION OF GOODS.
"We are obliged * * * in the absence of any properly authenticated evidence to the contrary, to be governed by the description of the goods as contained in the application and in the reference."

2. SAME—CONFUSING SIMILARITY—"HI-SPEED DRILLMASTER" AND "DRILLMASTER."
"Appellant argues that there is no competition between his products and Drillmaster drills. That transparently obvious fact is of no legal significance. The question here is whether it might be thought with reason that the same manufacturer produced both 'Drillmaster' electric drills and 'Hi-Speed Drillmaster' drill press attachments. We think it not only likely, which is enough, but highly probable."

3. SAME—SAME—SAME—SIGNIFICANCE OF "HI-SPEED."
"It is so highly descriptive of a device for increasing drill speed as to have little trademark significance when used thereon. Except for this term, there is identity of marks, or complete incorporation of the reference mark in appellant's mark."

APPEAL from the Patent Office. Serial No. 60,903.

AFFIRMED.

James R. McKnight for appellant.

Clarence W. Moore (*George C. Roeming* of counsel) for the Commissioner of Patents.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, SMITH, and ALMOND, JR., *Associate Judges*

RICH, J., delivered the opinion of the court.

This is an appeal from the decision of the Patent Office Trademark Trial and Appeal Board affirming the rejection of application Ser. No. 60,903, filed October 20, 1958, to register "Hi-Speed Drillmaster" on the Principal Register as a trademark for "attachments to industrial drill presses for increasing their speed." The claimed date of first use is May 13, 1955.

The application was rejected under section 2(d) of the Lanham Act (15 U.S.C. 1052) on the prior registration of "Drillmaster," Reg. No. 367,025, issued May 9, 1939, to Chicago Flexible Shaft Company, for "Hand Operated Electrically Driven Drills." This mark appears to have been "republished" by Sunbeam Corp., according to the Examiner's citation of it, the record being very obscure in this particular.

On appeal, the Board affirmed the rejection, expressing the views that hand-held electric drills and attachments for industrial type drill presses are clearly items which a single manufacturer might be expected to make, that average purchasers of such goods would at least to some extent be the same, and that confusion or mistake or deception of purchasers would be quite likely to occur. We are in complete agreement with these views and with the decision based thereon.

Appellant's contentions are based, in essence, on an argument that his goods and the goods of the reference are very different. He argues that his goods consist of a single specialty item made only for industry for attachment to heavy drill presses for increasing the drill speed. The Sunbeam "Drillmaster" of the reference, it is contended, is a light-weight, hand-held drill sold only to homeowners for do-it-yourself work.

There is absolutely nothing in the record other than the description in the application from which we can determine just what appellant's goods are. The "specimen" attached to the application, showing the mark in use, is apparently a photograph of appellant's device which appears to be an auxiliary geared-up chuck. Appellant put into the application record with one of his amendments a clipping from the Chicago Sunday Tribune magazine and another from Life magazine which are advertisements of Sunbeam "Drillmaster" drills or drill kits suitable for household or do-it-yourself work.

[1] We are obliged, however, in the absence of any properly authenticated evidence to the contrary, to be governed by the descriptions of the goods as contained in the application and in the reference. The reference description includes all hand-operated electrically-driven drills and we can see no merit in appellant's argument that "Drillmaster" electric drills would never be used in "industry," which is the only place his drill press attachments are used.

We can give little weight to the argument that appellant's goods are confined to use by industrial drill press users. While it may be the fact that appellant presently sells to no others, there is no proof of that fact, or that it will forever be the case. We presume he would sell to anyone who wished to buy. Furthermore, we see no reason to assume that such users might not also be users of "Drillmaster" hand drills, or, if not users, then at least familiar with the make.

[2] Appellant argues that there is no competition between his products and Drillmaster drills. That transparently obvious fact is of no legal significance. The question here is whether it might be thought with reason that the same manufacturer produced both "Drillmaster" electric drills and "Hi-Speed Drillmaster" drill press attachments. We think it not only likely, which is enough, but highly probable.

[3] We do not regard the "Hi-Speed" part of appellant's mark, a difference also urged upon us, to be particularly significant on this issue. It is so highly descriptive of a device for increasing drill speed as to have little trademark significance when used thereon. Except for this term, there is identity of marks, or complete incorporation of the reference mark in appellant's mark.

The only case cited by appellant is *Younghusband* v. *Kurlash Company, Inc.*, 25 CCPA 886, 94 F.2d 230, 36 USPQ 323 (erroneously referred to as *Kurlash* v. *Younghusband*). We have considered it but find it of no relevance to the issue here.

The decision of the Board is affirmed.

AFFIRMED.

REISSUES

MAY 7, 1963

Matter enclosed in heavy brackets [ ] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates additions made by reissue.

25,378
SPIKE-GRIP FOR INTERCHANGEABLE FUR COLLARS

Murray Lincoln, 9 Hutchinson Ave., Scarsdale, N.Y.

Original No. 2,882,530, dated Apr. 21, 1959, Ser. No. 732,269, May 1, 1958. Application for reissue Apr. 19, 1961, Ser. No. 104,190

1 Claim. (Cl. 2—98)



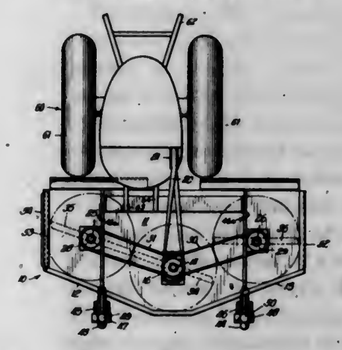
2. A fur collar comprising an elongated fur piece adapted to completely cover the cloth collar of a coat, said fur piece having on its hide side a supporting lining of substantially the same extent as said fur piece, said lining having its edges folded upon itself and secured inwardly of the edges of said hide so as to provide a space between said lining and said hide, said folded edge portions of said lining extending outwardly of the edges of said hide and providing a support for said fur piece, a plurality of sharp pointed spike-type impaling members fixedly mounted in longitudinally spaced relation on said lining to extend normal thereto, a combined spike point sheathing member and fur piece and cloth collar connecting means frictionally engaging over the body of each spike-type member, and each said sheathing member having a planar base portion engageable with said cloth collar in opposed relation to said supporting lining of said fur piece.

25,379
MULTIPLE CUTTER POWER MOWER

Norman F. Swanson, R.R. 1, Warrenville, Ill.

Original No. 2,870,592, dated Jan. 27, 1959, Ser. No. 621,886, Nov. 13, 1956. Application for reissue Aug. 3, 1962, Ser. No. 215,225

12 Claims. (Cl. 56—25.4)



1. In a power mower, a platform, a driven middle shaft journaled in said platform carrying a cutter blade at the underside of said platform, a pair of driven outer shafts journaled in said platform and spaced from said middle shaft carrying cutter blades at the underside of said platform, a pair of castors mounted on said platform forwardly of said middle shaft and between said center shaft and said outer shafts, and a pair of runners mounted at the sides of said platform outside the radius of said cutter blades, said runners depending from said platform to a point above the lowest surface of said castors and to a distance sufficiently below said blades for supporting said platform over uneven ground without allowing scalping of the ground by said blades.

25,380
LIQUID DISPENSER AND APPLICATOR

Dolletta M. Ackerman, Los Angeles, Calif., assignor to Pharma-Craft Corporation, Cranbury, N.J., a corporation of Delaware

Original No. 2,807,817, dated Oct. 1, 1957, Ser. No. 411,668, Feb. 23, 1954. Application for reissue Oct. 27, 1958, Ser. No. 769,962

6 Claims. (Cl. 15—572)



1. A liquid dispenser, comprising: a receptacle having a cylindrical neck portion leading to a mouth; an annular flange within and on the wall of the neck portion below said mouth; a tubular cylindrical member fitting in said flange and having an encircling flange resting on and secured to the first flange, said member having its top end formed to provide a ball seat; a ball resting on said seat; a ring structure fitting in said neck portion and encircling the ball, the ring having a top inside diameter less than the ball diameter and lying above the center of the ball to limit the movement of the ball away from its seat; and a cap overlying the ball and detachably engaged with said ring.

25,381
WELL PACKER

Cicero C. Brown, 8490 Katy Road, Houston, Tex.

Original No. 2,765,853, dated Oct. 9, 1956, Ser. No. 280,971, Apr. 7, 1952. Application for reissue Dec. 28, 1961, Ser. No. 163,386

7 Claims. (Cl. 166—134)

7. A well packer for use within a well pipe comprising, a central tube, a support sleeve surrounding the tube, means connecting the tube and the sleeve to each other, a packing member mounted on said sleeve, a first set of slips mounted on said tube below said packing member, a slip expander carried by the tube and coacting with said first set of slips to anchor the same to the well pipe upon relative longitudinal movement of the tube with respect to said slips, means connected with the tube and engaging the upper end of the packing member for applying endwise force to expand said packing member into sealing position upon continued movement of said tube relative to the anchored slips, a second set of slips



mounted for lateral movement on said sleeve above said packing member, said second set of slips having its exterior surface exposed to fluid pressure in the well pipe above said packing member, passage means located between the central tube and the support sleeve establishing fluid communication at all times between the area adjacent the inner surface of said second set of slips and the area outside the central tube below said packing member, whereby said second set of slips is movable into gripping contact with the well pipe when the fluid pressure in the pipe below the expanded packing member exceeds the pressure thereabove.

25,382
JUVENILE VEHICLE BODY CONSTRUCTION

Alvin P. Douglas, Nashville, Tenn., assignor to The Murray Ohio Manufacturing Company, Nashville, Tenn., a corporation of Ohio

Original No. 3,036,857, dated May 29, 1962, Ser. No. 823,754, June 29, 1959. Application for reissue Dec. 14, 1962, Ser. No. 246,299

16 Claims. (Cl. 296—28)



1. In a drawn sheet metal juvenile vehicle body, a basic body structure comprising: a one-piece main body member including a drawn hood formation and extending laterally therefrom front fender top regions, said main member having generally parallel side panels dependent from said top region to define therewith front wheel wells and fenders, narrowed portions of the said top regions and also said side panels being extended rearwardly beyond the hood to provide rear wheel wells and fenders and to define therebetween a rider space; a drawn front panel member having side and top margins generally conformed to the interior of said main body member and provided with edge flanges abutting the interior of at least said side panels and fender top regions, the top margin and major extent of the side margins being spaced rearwardly from the front edge of the main member, said flanges being spot welded to the main member to secure the panel member as a front closure and transverse beam element of the body; a roughly L-shaped one-piece seat member having an upright back with a rearward top flange, said back being conformed at opposite sides from said top flange toward the bottom to the interior shape of said side panels and said narrowed portions, said seat member also having a forwardly extending bottom with dependent side flanges conformed to and welded to the side panels as a transverse beam member, said top flange being welded to said narrowed portions; and means for closing the back of said body member rearward of said seat back.

PLANT PATENTS

GRANTED MAY 7, 1963

Illustrations for plant patents are usually in color and therefore it is not practicable to reproduce the drawing.

2,258
ROSE PLANT

Michel Krikoff, Antibes, Alpes-Maritimes, France, assignor to Ilgenfritz Nurseries, Inc., Monroe, Mich., a corporation of Michigan

Filed Mar. 20, 1962, Ser. No. 181,216

1 Claim. (Cl. 47—61)

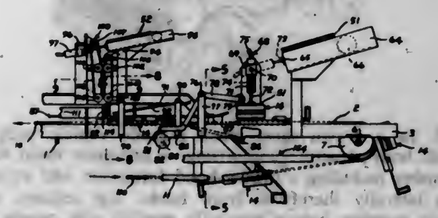
A new and distinct variety of rose plant of the hybrid tea class, substantially as herein shown and described, characterized particularly as to novelty by the unique combination of a strong and vigorous habit of plant growth; very good resistance to mildew and blackspot, abundant bloom production, large and well-shaped flower form; a symmetrical flower petal arrangement resembling a rose window, and a very vivid and very luminous red general color tonality of the flowers.

PATENTS

GRANTED MAY 7, 1963

GENERAL AND MECHANICAL

3,088,114
BOX MAKING MACHINE
John M. Guenther, 41906 Central Road, Yarrow, British Columbia, Canada
Filed Nov. 20, 1961, Ser. No. 153,397
10 Claims. (Cl. 1—111)



1. In a box making machine having a conveyor and a bed therefor, a box form comprising a base frame secured to the conveyor for sliding movement along the bed, opposing plates hingedly mounted on the base frame, a member hingedly connected to the plates, said member having engagement with a bed part to support the plates in extended position.

3,088,115
UPPER ARM PAD
John K. Groot, Evanston, Ill., assignor to Wilson Athletic Goods Mfg. Co., Inc., River Grove, Ill., a corporation of Delaware
Filed July 12, 1960, Ser. No. 42,434
3 Claims. (Cl. 2—2)



1. In combination with a football shoulder pad having shoulder caps connected by flexible hinge means to body protective members, a separable auxiliary upper arm pad comprising a formed pad element made of relatively resilient and flexible material and having a cupped upper portion for fitting over the lateral outer shoulder surfaces of a wearer under said shoulder cap and a lower portion extending downwardly from said upper portion to cover only normally unprotected outer surface regions of a wearer's upper arm below said shoulder caps, flexible web-type elements having end portions secured to said upper portion of the pad element and extending therefrom, said flexible web elements embracing the upper surface of said flexible hinge means of said shoulder pad and releasably connected together for making a flexible connection of the pad element to said football shoulder pad, and another flexible web-type element secured to the lower portion of said pad element for holding the pad element in place against the normally exposed outer surface regions of the wearer's arm.

3,088,116
COMBINATION GARMENT
Natalie L. Simonoff, 256 W. Park Ave., Atlantic Beach, N.Y.
Filed Mar. 28, 1961, Ser. No. 98,815
1 Claim. (Cl. 2—78)



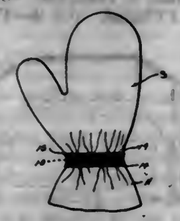
A one piece garment having an upper jacket portion and a lower trouser portion provided with a closed crotch united together at about the waist line, said garment having a front vertically disposed slit extending downwardly from the neck of said upper jacket portion, through the waistline thereof, and into said lower trouser portion to a point spaced above said closed crotch, means for detachably connecting together the front sides of said upper and lower garment portions separated by said slit, said lower trouser portion having a drop seat opening extending downwardly from approximately the waist line of the garment, a drop seat panel completely closing said opening and having a lower edge hingedly connected to said lower portion above said crotch, side edges extending upwardly from said lower hinged edge toward the waist line of the garment, and an upper edge approximating the waist line of the garment, means along the side edges of said drop seat panel for securing the same in closed relation to the side edges of said opening, means along the upper edge of said drop seat panel for securing the same in closed relation along the waist line of the garment, a rear flap depending from said upper garment portion and underlying said drop seat panel, the width of said flap being substantially the same as the width of the upper edge of said drop seat panel, said rear flap having free side edges spaced apart a distance substantially equal to the width of said opening, and having a free bottom edge substantially spaced below said upper edge thereof so that said flap depends freely underneath said drop seat panel for a substantial distance below the waist line of the garment and substantially covers the area of the opening throughout such distance, and waistband means encircling said garment about the waistline thereof and comprising three separated sections, one of which is located at the rear of the garment and is constituted of said securing means along the upper edge of said drop seat panel, and the other two of which are located at the front of the garment and extend along the waistline from the ends of said securing means to said front slit, each of said three sections having means elastically gathering it along the waistline independently of the other two sections.

3,088,117
SHIRT COLLAR AND CUFF REINFORCEMENT
William A. Baker, 5230 Catalina, Shawnee Mission, Kans.
Filed Oct. 26, 1961, Ser. No. 147,826
3 Claims. (Cl. 2—129)



1. A reinforcement for the folded element of shirt collars or cuffs comprising a pair of separate oppositely disposed elongated disposable flat strips of thin, relatively stiff but flexible comparatively inexpensive material and of substantial width generally not greater than the depth of the folded element of the collar or cuff, a coating of pressure sensitive pull-releasable adhesive coating substantially covering one face of each said strip except for small mating corners free from said adhesive, said strips being assembled as a piar with said coated faces in contact, said adhesive free corners facilitating separating said strips from each other for use in being releasably attached to the major area of the inner surface of said folded element of the shirt collar or cuff for providing reinforcement thereto conforming to the major area and shape thereof when the shirt is being worn, said adhesive free corners facilitating separating said strips thereafter from said folded element.

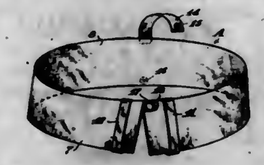
3,088,118
THERMOPLASTIC GAUNTLET AND ELECTRONIC WELDING METHOD FOR UNITING THERMOPLASTIC FILM OR SHEETING
James L. Clark, Milwaukee, Wis., assignor to Mark-Clark, Inc., Milwaukee, Wis., a corporation of Wisconsin
Filed Dec. 4, 1959, Ser. No. 857,370
5 Claims. (Cl. 2—169)



1. The method of connecting an elastic band to the wrist of a waterproof outer gauntlet plastic shell, which consists in first, placing the plastic shell over a floating press bed shaped to conform to the general outline of the shell with the opposite faces of the shell separated by the floating press bed; second, stretching an endless rubber band over the floating press bed and the wrist portion of the shell; third, placing a strip of plastic above and below the wrist portion of the shell to cover the band; fourth, electronically welding the strips to the shell on each side of the longitudinal edges of the band to form a substantially continuous pocket to confine the band on the shell and then stripping the shell with band and strips from the floating press bed.

3,088,119
CONVERTIBLE SCARF AND RETAINING COLLAR
Verna C. Grant, 3615 W. 62nd St., Los Angeles, Calif.
Substituted for abandoned application Ser. No. 828,361, July 20, 1959. This application Aug. 3, 1960, Ser. No. 47,312
4 Claims. (Cl. 2—207)

4. A convertible scarf comprising the combination of a scarf adapted to be worn over the head, or shoulders or draped around the neck of the wearer, and a free flexible collar adapted to be worn around the neck of the wearer, said collar having opposite sides, ends and longitudinal margins, means for detachably connecting said collar ends, a flexible band adjacent each end of said collar ends extending transversely thereof having end portions affixed to said margins and having free intermediate portions adapted to slidably receive and hold spaced portions of the scarf to retain the scarf in overlying relation to the collar with the portion of scarf intermediate the bands extending longitudinally of the collar or draped over the head or spread to overlie the shoulders of the wearer, and a strap intermediate the ends of the collar adapted to detachably receive the scarf.



3,088,120
FLARABLE GARMENT COMBINATION
Albert A. Gould, Bronx, N.Y., assignor to Arthur Imerman Undergarment Corp., Jersey City, N.J., a corporation of New Jersey
Filed Sept. 12, 1960, Ser. No. 55,269
6 Claims. (Cl. 2—216)



1. A garment of the type which includes a skirt portion comprising

at least one annularly arranged fabric casing for holding a tube affixed to said skirt portion in combination with

an air-tight, light, flexible tube of substantially uniform cross-sectional size and shape held within said casing,

valve means for said tube comprising a valve casing a portion of which extends from a region on the periphery of said tube,

said tube being closed at the ends and along the length thereof except for said valve means,

said fabric casing comprising an opening on the inner side thereof with respect to said skirt through which a portion of said valve casing extends,

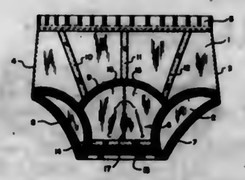
means on said valve casing attaching the fabric casing thereto to fix the position of said tube within said fabric casing,

said tube being sufficiently light and flexible as to exert no distending influence on said fabric casing and garment when collapsed and comprising internal surface irregularities adapted to prevent adherence of the walls of the tube when collapsed whereby the garment may be laundered without removing the tube.

3,088,121
MEN'S WEARING APPAREL
Sarah W. Stedman and William D. Stedman, Asheboro, N.C., assignors to Stedman Manufacturing Co., Inc., Asheboro, N.C., a corporation of North Carolina
Filed Jan. 4, 1961, Ser. No. 80,649
8 Claims. (Cl. 2—226)

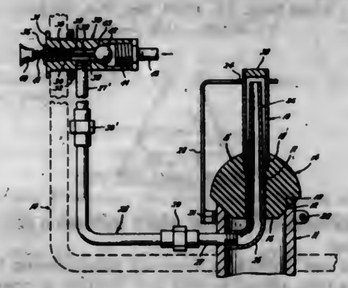
1. A man's undergarment having a front part, a back part sewed together along their side edges, a pouch por-

tion joined to and separating said front and back parts at their lower edges to form two leg openings, an elasticized waistband affixed to the upper edge of said front and back parts; the improvement comprising an elasticized arcuate tape stretchable in a direction along its length and joining the top edge of said pouch portion with a



lower edge of said front part extending from one leg opening to the other leg opening intermediate the side edge of said front and back parts and a plurality of non-elastic vertically extending support tapes joining said arcuate tape and said elastic waistband to support said pouch portion.

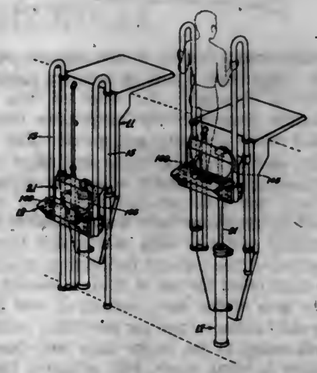
3,088,122
FLUSHING TANK ACTUATOR
Glen L. Pore, 708 4th St., Palacios, Tex.
Filed July 22, 1960, Ser. No. 44,716
2 Claims. (Cl. 4—67)



2. The combination of a flushing water tank having a discharge providing a valve seat upwardly and a flushing tank actuator, said flushing tank actuator comprising a flush valve element including a continuously closed tube extending thereabove, a stop, a jet tube extending upwardly through said valve element with small end upwardly to discharge into said tube, a conduit sealably connected through said discharge to communicate with said jet tube, and an inlet ball valve yieldably, releasably operable through the side wall of said tank to admit pressure fluid to pass through said conduit until said inlet ball valve is released to cut off pressure fluid flow, said pressure fluid passing up said jet tube into said closed tube to lift said flush valve element until it contacts said stop, the flushing water flowing out said discharge as said flush valve element descends and said flush valve element re-seating as the pressure fluid drains downwardly from within said tube into said discharge.

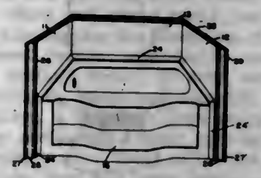
3,088,123
POOL LADDER LIFT
Robert F. Loughridge, Fort Worth, Tex., assignor to Esco Elevators, Inc., Fort Worth, Tex., a corporation of Texas
Filed Apr. 19, 1960, Ser. No. 23,271
5 Claims. (Cl. 4—172)

4. A swimming pool lift device comprising a first support structure adapted for mounting adjacent a pool sidewall in fixed relation thereto; a reciprocable rail structure; means supporting said rail structure on said first support structure for reciprocable motion through said support means; passenger hand rail means disposed in fixed spaced parallel relation to said rail structure and extending longitudinally thereof, a second support structure bridging between said rail structure and said hand rail means adjacent the lower ends thereof; a lift



passenger step mounted to said second support structure; hydraulic means utilizing swimming pool water supply for powering said rail structure for reciprocable motion; and means responsive to motion of said step relative to said second support structure for controlling said hydraulic means.

3,088,124
BUILT-IN PLASTIC BATH TUB STRUCTURE
Richard H. Long, Phoenix, Ariz., assignor to Plastiglas Mfg. Co., Tempe, Ariz., a corporation of Arizona
Filed June 8, 1961, Ser. No. 115,638
2 Claims. (Cl. 4—173)

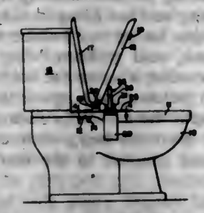


1. A built-in bath tube comprising a unitary plastic body having a tube portion and three unitary wall members extending upwardly from the tub, said wall members having a laterally rearwardly displaced attachment strip running entirely around the periphery of the wall members and continuing on down at sides of the tub to a floor line, and padding material adhesively secured to rear faces of said walls.

3,088,125
FLUID DISPENSER
Dewey R. Southwood, 3012 10th Ave., Rock Island, Ill.
Filed Mar. 30, 1961, Ser. No. 99,531
11 Claims. (Cl. 4—222)

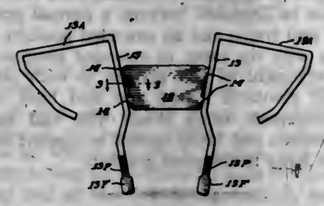
4. An attachment device for mounting a deodorant container of the type having a yieldable valve extending therefrom on a toilet bowl having an upper rim and a toilet seat attached to the toilet bowl for vertical movement about a horizontal hinge, said attachment device comprising: a horizontal plate lying atop and attached to the rim of the bowl and having a portion thereof extending to one side of the rim, said portion having an opening therein through which the container may extend and be frictionally held by the edges of the opening; projecting lug means on the portion; lever means pivotally

mounted on the lug means and extending under the seat; and spring means associated with said lever means for normally biasing said seat from a horizontal to an up-



right position; and means associated with the lever means effective in response to movement of the seat between the aforesaid positions to operate the valve to effect release of a portion of deodorant.

3,088,126
BOWL DEODORANT HANGER
Josef F. Klingler, Wilmette, Ill., assignor to Frank J. Curran Co., a corporation of Illinois
Filed Mar. 16, 1961, Ser. No. 94,862
5 Claims. (Cl. 4—231)



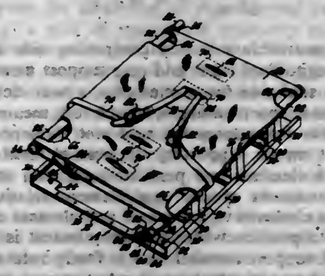
1. A deodorant block hanger comprising a one-piece skeleton frame of molded plastic and having generally parallel spaced-apart support legs interconnected only by a stabilizer element in the form of a face plate extending endwise between corresponding intermediate portions of said legs and connected to said intermediate portions solely through bendable tabs of substantially less thickness than said legs and said plate, each leg having its lower end engageable in a common deodorant block and each leg having a hook-shaped arm portion at its upper end extending generally rearwardly from the plane of said face plate, with the arm portion of one leg being separate and independent of the arm portion of the other leg.

3,088,127
DUAL PURPOSE FURNITURE CONSTRUCTION
Charles Eames, Venice, Calif., assignor to Herman Miller, Inc., a corporation of Michigan
Filed Nov. 6, 1959, Ser. No. 851,468
1 Claim. (Cl. 5—2)



A dual purpose furniture construction in combination with the structure of a room having a first component and a second component: means for hanging said first component upon a wall with its lower end spaced from the floor and its upper end spaced from the ceiling; said means comprising a pair of rails secured on said wall parallel to the floor and to each other, a pair of side support panels arranged vertical to the floor and to the wall with one edge secured to said rails; said first component having a first panel hinged about its lower end between and to the lower ends of said support panels for swinging movement from a substantially vertical storage position to a substantially horizontal open position; a header bar secured between and to the upper ends of said support panels; said first component and said header bar having cooperating locking means for locking said first panel in storage position; said second component being pivotally connected to the outer face of said panel and movable from a storage position generally flat against said panel to an open position extending outwardly from said panel when said panel is in storage position; said locking means including a trip lever projecting outwardly from said panel below said second component and a latch located at the top of said first component with means for interconnecting the lever and latch whereby said trip lever can cause unlocking of said locking means when said second component is in storage position but is inaccessible from above when said second component is open.

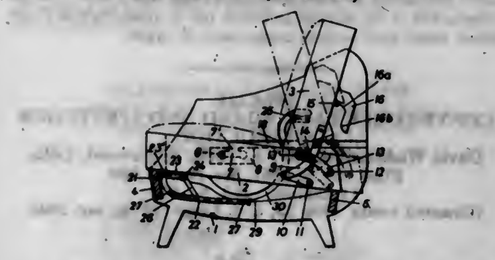
3,088,128
CONVERTIBLE PACK BOARD AND STRETCHER CONSTRUCTION
David Waddington, 1009 E. Tufts, Englewood, Colo.
Filed Jan. 6, 1961, Ser. No. 81,204
13 Claims. (Cl. 5—82)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A stretcher assembly for removing injured personnel from a site of a casualty-producing accident, which comprises, in combination, a plurality of rigidly but demountably interconnected sections, each section when disconnected from contiguous sections being adapted for service as a pack board adapted to be carried by an individual member of a rescue crew for transporting equipment to a site of an accident, and comprising a rigid frame including rigid, parallel, longitudinally extending bottom side rails spaced apart at a distance suitable for service as a stretcher, a continuous and rigid bottom plate fixedly secured to the bottom rails of each section and coextensive in length and width corresponding to corresponding dimensions defined by the bottom rails, means effecting rigid attachment of the bottom plate to the bottom rails, spaced apart rigid upright members rigidly secured to the bottom side rails and being of substantially equal length, spaced apart substantially parallel, longitudinally extending upper side bars carried by the upright members, each of the upper side bars being mounted on the rigid upright members and positioned substantially vertically and parallel above a corresponding bottom side rail at a height corresponding to the length of the rigid upright members, a flexible cover secured to and overlying the upper side bars of each section and substantially continuously interconnecting the upper side bars, adjustable means attaching the flexible cover to the upper side bars of each section at spaced distances and at a selected

lateral tautness of the cover for accommodation of a casualty placed on the cover, harness strap members on the cover adjustably positioned with respect to the cover and secured to the upright members for securing the casualty on the cover against slippage during transport, a plurality of opposed latch locking means for interchangeably interconnecting adjacent corners of the bottom plates of adjacent sections, and additional telescoping and spring biased double detent locking means at diagonally opposite intertelescoping and comating ends of the upper side bars of each section, all of the aforesaid locking means cooperating for rigidly but demountably interlocking both bottom and top portions of the section with substantially identical sections for forming a complete stretcher.

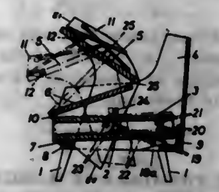
3,088,129
CONVERTIBLE SOFA BEDS
Torodd Fossid, Skotterud, Norway
Filed Aug. 23, 1960, Ser. No. 51,447
5 Claims. (Cl. 5—24)



1. A convertible sofa bed comprising side frame elements, longitudinal front and rear support members connected to said side frame elements, a seat element resting on said support members, a back rest, means pivotally and slidably interconnecting said seat element and back rest, pivot means supporting the seat element from the side frame elements and permitting rotation and limited sliding movement of said seat element relative to said side frame elements whereby said seat element can be displaced to a position where the seat element is free from said front support member and is freely rotatable about said side frame elements, said pivot means including a plate provided with a slot on one of said elements and a pin connected to another of said elements, said pin being slidably and rotatably supported in said slot; and cam means coupling said back rest to said frame elements for controlling movement of said back rest, said cam means, upon initial movement of said back rest, causing the means interconnecting said seat element and back rest to displace said seat element to a position whereat the seat element is disengaged from said front support member so that upon further movement of the back rest the seat element is caused to be rotated about the side frame elements to a bed position, the back rest being controlled by the means connecting the back rest and seat element whereby the back rest is moved into coplanar relation with the seat element as the latter assumes the bed position whereby a substantially level extended surface is provided by said back rest and seat element in the bed position.

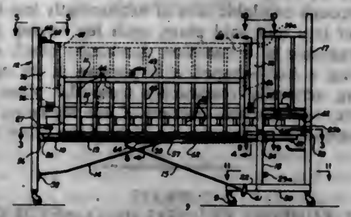
3,088,130
SOFA-BED
Olav Arnold Walstad, Oslo, Norway, assignor to Josef Nordby, Oslo, Norway
Filed Mar. 26, 1959, Ser. No. 802,062
Claims priority, application Norway Oct. 21, 1958
6 Claims. (Cl. 5—44)

1. A sofa bed comprising a frame, an upwardly facing bed bolster, and a cushion adapted for normally constituting a seat pivoted to the front of said bolster, said cushion being normally superposed on said bolster and including an upwardly facing surface forming a seating surface and a downwardly facing surface forming a bed bolster, said downwardly facing surface being in face to face relation with said upwardly facing bed bolster with said cushion constituting a seat, said cushion being pivotally moved to an extended position whereat the surface of the cushion forming the bed bolster faces upwardly and is substantially coplanar with the upwardly facing bed bolster, the first said bolster normally being inclined to the horizontal, control means coupled to the first said bolster for



bringing the same to horizontal position as said cushion is pivoted to said extended position, a back rest pivoted to said cushion, pivotable means pivoted to said frame and having pivotal connection with said back rest whereby the latter can be displaced between a normal position at the back of said frame and an extended position beneath said cushion with the latter in extended position, and a scissors arrangement of legs pivoted to each other and between said pivotable means and said back rest, the scissors arrangement being closed with said back rest in normal position and being opened to support said back rest with the latter in extended position.

3,088,131
PLAY-PEN CRIB COMBINATION
Jack Sedlock, 10276 Elleen St., Cucamonga, Calif.
Filed Dec. 24, 1959, Ser. No. 862,011
4 Claims. (Cl. 5—99)



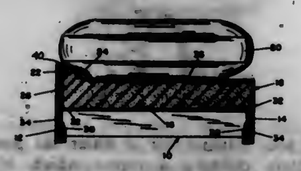
1. In a folding play-pen crib combination the combination, with a nonswingable upstanding front frame, a swingable mattress pad-supporting frame and a foot board member, of an upper pair and a lower pair of movement-coordinating rods each of said rods having one end pivoted to said footboard member and its opposite end pivoted to said mattress pad-supporting frame, all of said rods extending lengthwise of said mattress pad-supporting frame when the latter is in its down-swung position at which time said upper rods extend in a closely parallel subjacent relation to the lower side of said mattress pad-supporting frame and said lower pair of rods are attached at their rear ends to said foot board member at points spaced downwardly from said upper pair of rods and the front end of said lower pair of rods are attached to the lower side portion of said mattress pad-supporting frame forwardly of the front ends of said upper pair of the front ends of said upper pair of rods; and a pair of tie rods having their upper ends pivoted to said upper pair of rods adjacent to the midlength of the latter rods, the opposite end of said pair of tie rods being pivotally connected with the lower part of the aforesaid nonswingable frame; and side guard frames, each comprising a front-to-rear bar swingably connected to the mattress pad-supporting frame by hinges, said bar having a forwardly projecting end portion which carries an angularly projecting operating arm, said operating arm being acted upon by cam means which is carried by the lower portion of the non-swingable frame, the lowering of the play-pen crib combination causing said operating arm to engage said cams means in a sliding manner and to thereby swing the side guard frames up so that, by the time the swingable portion of the play-pen crib combination has been fully lowered, said side guard frames have been swung into vertical positions.

3,088,132
SUPPORTING DEVICE FOR SPRING STRIPS
Harold A. Vegal, Detroit, Mich., assignor to No-Sag Spring Company, Detroit, Mich., a corporation of Michigan
Filed Dec. 22, 1960, Ser. No. 77,609
3 Claims. (Cl. 5—260)



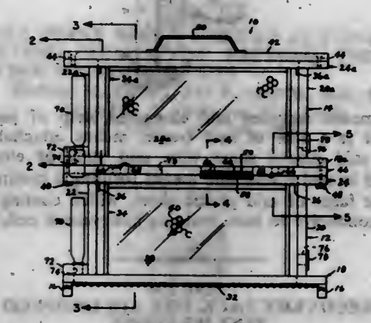
1. In a device for securing the end section of a sinuous spring strip to a rail of a cushion, a coil spring having a hook on each end, a clip having an aperture through which one of the hooks extends and having additional apertures by which the clip is secured to a rail element, and a clip having an aperture through which the hook at the other end of the coil spring extends, said clip also having a loop transversely disposed to said last hook for receiving the transversely disposed straight portion of the end section of a sinuous spring strip in pivotal relation therewith.

3,088,133
FOAM BASE FOR FURNITURE
David Waxman, Worcester, Mass., assignor to Continental Furniture Manufacturing Co., Worcester, Mass., a corporation of Massachusetts
Filed Jan. 11, 1961, Ser. No. 82,089
1 Claim. (Cl. 5—361)



Article of furniture comprising an open frame including a forward edge, a rear edge, and sides, said frame including a vertical depending front member and a vertical depending rear member, said members extending substantially the length of the frame, a horizontal support on the frame, a relatively thick foamed soft resilient base substantially permanently mounted on and coextensive with said support, said base being attached to said frame, upholstery material for said base and said vertical frame members, said upholstery material being adhesively secured to the foamed material and adhesively secured to the frame members, covering the same, a soft thickened portion at the forward edge portion of said base, said thickened portion having a surface downwardly inclined from its edge toward the rear edge portion of the base, said upholstery material being adhesively secured on the downwardly inclined surface so that the upholstery material closely engages the entire top surface of the base, and a vertical stiffening panel at the forward edge portion only of said thickened portion of said base, so that the stiffening panel is at and only at the extreme forward edge of the frame, the stiffening panel being composed of foamed material of greater density than the base.

3,088,134
EXPERIMENTAL BEE COLONY DEVICE
Verlin R. Abel, 1518 Kinkaid Drive, Oklahoma City, Okla.
Filed Oct. 12, 1961, Ser. No. 144,771
2 Claims. (Cl. 6—1)



1. A device for observing an experimental bee colony, comprising: a pair of superposed relatively narrow rectangular frames each having bottom and top members joined by end members and having opposing transparent side walls secured to the bottom and end members and forming a compartment therebetween common to both said frames, said bottom and top members each having a longitudinal opening therethrough; support members transversely connected to the lower surface of said bottom; a cap plate overlying the top of the uppermost said frame and closing the opening therein; a screen secured to the lower surface of the bottom of the lowermost said frame between said members for closing the opening therein; a divider interposed between said frames, said divider having a vertical opening therethrough; and manually operated bee excluder means slidably secured to and spanning the opening in said divider for selectively excluding and permitting the passage of bees through the opening in said divider, said bee excluder means comprising a screen formed by a plurality of closely spaced parallel rods interconnected at their respective ends and slidably extending transversely across the opening in said divider and projecting laterally outward from one side of said frame, a panel co-extensive with and slidably superposed on said screen for closing the opening in said divider in cooperation with and independently of said screen.

3,088,135
FRAME AND PLASTIC COMB FOUNDATION FOR BEEHIVES
William Z. Covington, 1712 E. Fort Worth St., Wichita Falls, Tex.
Filed Aug. 10, 1961, Ser. No. 130,569
3 Claims. (Cl. 6—10)

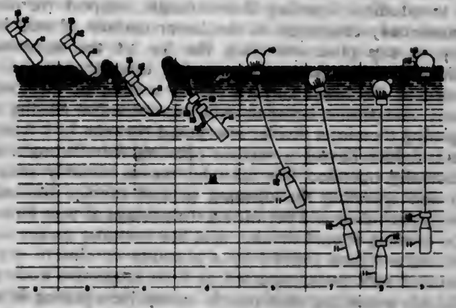
1. A honeycomb foundation to be used within a beehive which honeycomb foundation comprises an elongated sheet of plastic material, which sheet of plastic material has hexagonal indentures complementally arranged on opposite sides thereof, the upper portion of said plastic sheet being thickened to form a wedge-shaped edge, with the wider portion of said wedge-shaped edge being the

upper exterior edge of said sheet, said plastic sheet being of a size to cover a predetermined area in the beehive which the honeycomb is to occupy, an elongated strip of yieldable material having a wedge-shaped groove formed therein, which groove is complementary to said wedge-shaped portion of said plasitc sheet and being engageable therewith, a frame of a size complementary to said plastic



sheet, means securing said elongated strip of yieldable material to a side of said frame, means attachably securing said plastic sheet with said strip of elongated material in said frame, and means forming a coating over opposite faces of said plastic sheet, which coating material is conducive to bees building honeycomb cells thereupon.

3,088,136
RECOVERY PACK FOR AIR DROPPED TEST WEAPONS
Samuel H. Kauffman, Robert L. Detwiler, and Morrison B. Moore, Silver Spring, Md., assignors to the United States of America as represented by the Secretary of the Navy
Filed Dec. 8, 1959, Ser. No. 858,296
4 Claims. (Cl. 9—9)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. In combination with a test weapon for high velocity drops in deep water, a recovery pack comprising; a container, a plurality of releasable clamping means securing the weapon to said container, means for releasing said clamping means upon entry of said weapon into the water, a lanyard operated valve disposed within said container, a lanyard secured to said weapon and connected to said valve to operate said valve upon separation of the weapon and the container a predetermined distance after entry of said weapon into the water, at least one high pressure bottle containing a gas and liquid and contained within said container said bottle being connected to said valve and, the discharge of said bottle being controlled by said valve, an initially deflated balloon within said container, a flexible, substantially non-expansible diffusion liner located substantially centrally within said balloon and connected to said valve to receive the discharge from said bottle, cable dispensing means secured to said recovery pack at one end and to the test weapon at the other end and housed within said test weapon for paying out a length of cable upon inflation of said balloon whereby said balloon is inflated shortly after entry of said weapon into the water to retard the rate of the underwater descent of the weapon and to rise to the surface after said weapon reaches the limit of its descent.

3,088,137
ADJUSTABLE SKI HARNESS
Henry W. Hedlund, Nokomis, Ill., assignor to Hedlund Manufacturing Company, Nokomis, Ill., a corporation of Illinois
Filed Aug. 29, 1960, Ser. No. 52,727
13 Claims. (Cl. 9—310)



11. A water ski harness having a foot-engaging member, mounting and support means for movably supporting said foot-engaging member for movement between a plurality of adjustable desired positions, said mounting and support means comprising a plate having the foot-engaging member secured thereto and spacer means for interposing between the plate and a ski to space said plate upwardly therefrom in substantially open relationship thereto, said spacer means comprising a plurality of laterally spaced apart members defining guide-track means for supporting laterally opposed portions of the plate and another member separate and independent of said spaced members, said another member being disposed intermediate of and in spaced relationship to the spaced members for supporting a central portion of the plate, and means for engaging the plate at spaced locations thereon to restrain the plate against lateral movement during the movement of the foot-engaging member between the adjusted positions.

3,088,138
SKI HEEL RETAINER
Leonard O. Martin, R.R. 1, Box 107F, Monterey, Ind.
Filed Aug. 31, 1961, Ser. No. 135,210
5 Claims. (Cl. 9—310)



1. A ski heel retainer for a water ski comprising a mounting plate defining a recess which is generally U-shaped in plan, mounting means adapted to mount said mounting plate on a water ski for movement longitudinally of said ski and along a line extending in the direction in which said U-shaped recess opens, an upstanding heel embracing cup constructed of flexible, resilient and elastomeric material and including a lower end portion substantially U-shaped in plan, means securing the lower end of said cup to the portions of said mounting plate defining said recess and with said lower end opening in the same direction as said recess, said plate including a lower surface having a first portion thereof adapted to be disposed in sliding contacting relation to the upper surface of said water ski, the lower surface of the portions of said plate defining said recess being laterally and upwardly offset from said first portion of said lower surface, the lower end of said heel embracing cup including a laterally outwardly projecting flange, said securing means including means securing said cup to said plate with said flange underlying said offset lower surface disposed about said recess, said flange having a plurality of small diameter apertures formed therein and spaced about said flange, said securing means comprising a plurality of eye members secured to and depending from the lower surface of said upwardly offset portions, the lower ends of said eye members being passed through said apertures and having elongated horizontally disposed fasteners secured therethrough.

3,088,139
AQUATIC DEVICES
John Carroll Baloch, 609 S. Washington Ave., Whittier, Calif.
Filed Nov. 12, 1958, Ser. No. 773,335
6 Claims. (Cl. 9—347)



4. In an inflatable floating seat, comprising: a continuous inflatable tube of flexible material tending to straighten out when inflated; a strip of flexible material extending longitudinally of said tube to form back and side members; a flexible bottom having its rear and side edges secured to the back and side members respectively, the tube being of greater length than the width of the front end of the bottom and the front ends of the sides combined.

3,088,140
METHOD OF FORMING BLANKS WITH INTERNAL AND EXTERNAL TORQUE ENGAGING MEANS
Raymond H. Carlson, Rockford, Ill., assignor to Textron Industries, Inc., Rockford, Ill., a corporation of Delaware
Filed Jan. 26, 1959, Ser. No. 788,832
2 Claims. (Cl. 10—27)



1. The method of forming a headed article having a tool receiving socket in the head thereof, axially extending wrench engaging serrations on the exterior surface of the head thereof, and a washer flange around the base of the head, said method comprising:

(*a*) extruding a cylindrical workpiece while supporting the sides of said workpiece against lateral deformation to form a reduced shank portion and an unworked head part,

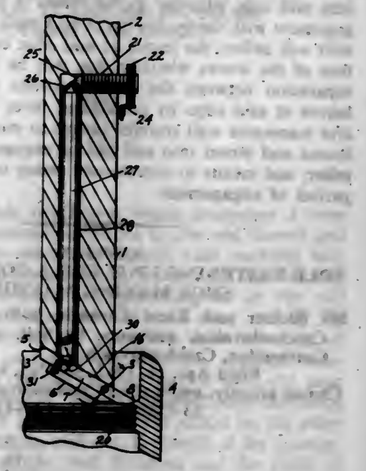
(*b*) placing said shank portion in a holding die,

(*c*) applying endwise over said head part an extruding pressure to extrude the same and form wrench engaging serrations thereon having a crest diameter substantially equal to the diameter of said unworked head part and a length less than the length of said head part,

(*d*) without moving said workpiece advancing into said head part a recess forming pressure area of substantially smaller transverse dimension than the root diameter of the extruded serrations on said head part while simultaneously supporting the outer sides of said head part throughout the entire serrated portion thereof against substantial lateral deformation,

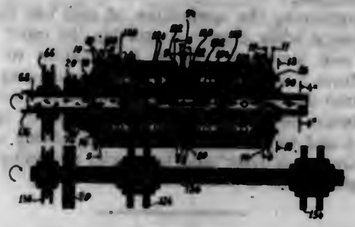
(*e*) continuing the application of said last mentioned pressure while closely supporting the outer surfaces of said serrations against deformation so as fully to form a wrench receiving recess extending coaxially into the end of said head part and to cause lateral outward flow of metal about the base of said head part and to form a washer flange having a surface facing away from said head part extending at right angles to the axis of said shank.

3,088,141
SINGLE POINT SCREW THREAD CUTTING TOOL HAVING MEANS FOR FEEDING THE TOOL AFTER SUCCESSIVE CUTS
Richard G. Tansey, 828 E. 33rd St., Erie, Pa.
Filed Jan. 7, 1960, Ser. No. 1,119
1 Claim. (Cl. 10—101)



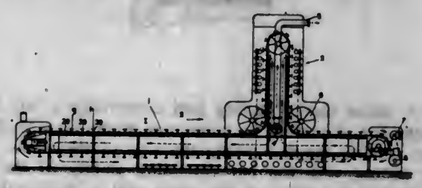
A screw thread cutting tool comprising a bar for attachment at one end to a carriage driven by a lead screw for feeding the tool along the axis of the screw thread to be cut with the bar extending axially of the screw thread and having at the other end a rectangular slot inclined forward in the direction of feed and outward from the direction of feed at an acute angle and parallel to a side of the screw thread to be cut, a friction cap fixed on said other end of the bar closing the slot, a bit having a rectangular shank slidably received in said slot and having a projecting point conforming to the sides of two adjacent threads with one side of the point extending in the same direction as the slot, said cap making friction contact with the shank of the bit and frictionally holding the shank of the bit during cutting, a lengthwise bore in the bar intersecting said slot, a push rod slidable in said bore, bit feed means including a feed screw for moving the push rod lengthwise toward said other end of the bar in proportion to the turning of the screw, said bit feed means being remote from said other end of the bar to permit adjustment while the bit is within the work being threaded, the shank of said bit and the push rod having complementary cam surfaces cooperating to feed in said slot relative to said bar the bit outward in proportion to the lengthwise movement of the push rod.

3,088,142
BOOKBINDING MACHINE
Spyros M. Fotiades, 99 Solonos St., Athens, Greece
Filed July 27, 1959, Ser. No. 829,782
1 Claim. (Cl. 11—1)



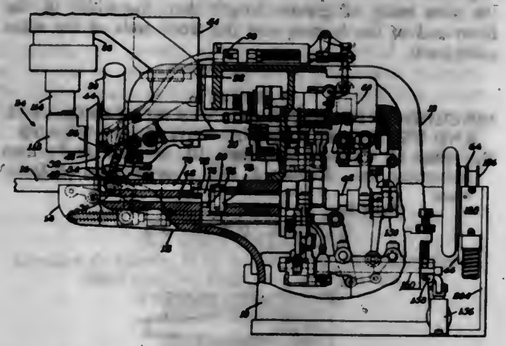
In a machine for binding together a stack of leaves to form a book, a wheel having a cavity along its periphery, at least one transverse wall of said cavity extending across said periphery at an angle to a plane perpendicular to the axis of rotation, said wheel being secured to a hollow power driven axle having ports therein leading to openings in one wall of said cavity, means to pump glue into said axle whereby as the wheel is brought into engagement with the back edge of said stack, said transverse wall will deflect the leaves at said edge causing a separation of the leaves whereby glue will be forced into said separation between the loose portions of the adjacent leaves at said edge by centrifugal force and the successive transverse wall contact, means to move said stack of leaves and wheel into and out of engagement with each other, and means to actuate said pump means during the period of engagement.

3,088,143
SOLE FASTENING UNIT FOR A CONVEYORIZED SHOE MAKING MACHINE
Jiří Richter and Karel Černoch, both of Gottwaldov, Czechoslovakia, assignors to Svit, narodni podnik, Gottwaldov, Czechoslovakia
Filed Apr. 11, 1962, Ser. No. 186,694
Claims priority, application Czechoslovakia June 1, 1961
13 Claims. (Cl. 12—1)



1. In a shoe manufacturing machine, in combination,
(*a*) a conveyor including a frame and belt means movable on said frame in a predetermined direction;
(*b*) a plurality of lasts spaced from each other in said direction, each last being mounted on said belt means and adapted for carrying a vamp and a sole placed on said vamp;
(*c*) drive means for actuating indexing movement of said belt means in such a manner that said soles are sequentially held stationary at a work station at said conveyor for a predetermined period;
(*d*) bracket means mounted on said frame at said work station;
(*e*) expandable pressure cushion means on said bracket means, said bracket means being movable transversely of said predetermined direction toward and away from an operative position in which said pressure cushion means is closely adjacent a sole held stationary at said work station by said belt means;
(*f*) a supply of pressure fluid;
(*g*) valve means for alternatingly connecting said supply to said cushion means and venting said cushion means;
(*h*) rack-and-ratchet means having two cooperating members respectively secured on said frame and said bracket means and engageable for selectively securing said bracket means in said operative position thereof;
(*i*) first cam means synchronized with said drive means for moving said bracket means into said operative position, disengaging said rack-and-ratchet means, for thereupon moving said bracket means away from said operative position, said bracket means being moved into and away from said position during said predetermined period; and
(*j*) second cam means synchronized with said first cam means and operatively connected to said valve means for connecting said supply to said pressure cushion means while said bracket means is in said operative position thereof, and for thereafter venting said cushion means prior to movement of said bracket means away from said operative position by said first cam means.

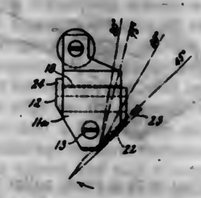
3,088,144
MACHINES FOR OPERATING UPON MARGINS OF WORKPIECES
Horace W. Weeks, Dayton, Ohio, assignor to United Shoe Machinery Corporation, Boston, Mass., a corporation of New Jersey
Filed Apr. 18, 1961, Ser. No. 103,744
11 Claims. (Cl. 12—55.1)



1. In a machine having a tool adapted to operate on successive marginal portions of a work piece, mechanism for feeding the work piece past the tool, and guidance means including a movable member for steering the work piece automatically, as it is fed, in accordance with the curvature of the margin to be operated upon, said guidance means comprising a presser having work engaging portions one of which is arranged to cooperate with the member to exert a turning moment and another of which is cooperative with the tool to determine successive centers about which the turning moment can act to guide the work piece.

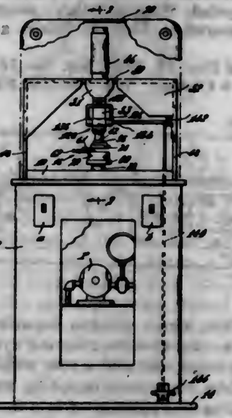
3,088,145
FIXED BEVEL KNIFE CLAMPING BLOCK
Herbert R. Polleys, New Haven, Conn., and George Raeburn, Arlington, Mass., assignors to Wellman Company, Medford, Mass., a corporation of Maine
Filed Apr. 30, 1962, Ser. No. 190,868
2 Claims. (Cl. 12—86.6)

1. A cutting machine comprising a knife clamping block supporting means having two spaced substantially parallel arms, said arms being separated by a crotch, a bifurcated knife clamping block supported between said arms and spaced from said crotch, means for pivotally supporting said block, a knife clamping groove in said block, a knife secured in said groove, and lug means extending outwardly from said block and positioned to abut



a portion of said supporting means, whereby said block may be readily installed between said arms and said knife may be maintained at a fixed angle during a cutting operation by the contact of said lug means with said supporting means.

3,088,146
MACHINE FOR OPERATING ON SHOES
James Louis Forma, Andover, Mass., assignor to Superior Shoe Company, Inc., Lawrence, Mass., a corporation of Massachusetts
Filed June 8, 1960, Ser. No. 34,654
10 Claims. (Cl. 12—87)



1. In a heel trimming machine, a rotatable support having a flat supporting surface, a cam fixed to the support and rotatable therewith, said cam corresponding in shape to the periphery of the heel to be trimmed, a gauge on the support for aligning the heel with the cam, a clamp situated opposite the flat surface of the support movable into engagement with a heel resting on the supporting surface to clamp the heel thereto, said clamp being free to rotate with the support, a carriage movable to and from the support, a cutter, and follower, a slide yieldably mounting the cutter and follower on the carriage in a forwardly displaced position, means for effecting movement of the carriage to bring the forwardly displaced cutter and follower into engagement with the periphery of the heel and cam respectively, means for effecting rotation of the support to turn the heel and cam relative to the cutter and follower, the follower operating to displace the cutter variably on the carriage, according to the dictates of the cam, and means for effecting rotation of the cutter while in contact with the heel.

3,088,147
SHOE LAST INSERTS
Walter P. Field, 157 Belmont St., Brockton, Mass.
Filed Nov. 2, 1960, Ser. No. 66,725
1 Claim. (Cl. 12—140)



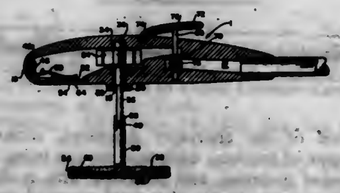
A pressure-formed polyethylene frusto-conical plug for insertion into a recess in a shoe last comprising polyethylene polymerized to such a state that the material is plastic and slightly resilient to receive tacks and tend to close the tack holes when the tacks are removed.

3,088,148
TOOTHBRUSH ATTACHMENT
Michel Moret, Chenes Bougeries, Geneva, Switzerland, assignor to Etablissement AESUP, Vaduz, Liechtenstein, a firm of Liechtenstein
Filed Apr. 17, 1961, Ser. No. 103,482
2 Claims. (Cl. 15—22)



1. A toothbrush attachment which comprises a stem having laterally-extending bristles at one end thereof and a coupling at the other end thereof, said coupling having a longitudinally-extending socket of non-circular cross-section, a longitudinally-extending slot in the wall of said socket and open toward said other end of the stem the width of the slot being less than the width of the socket in the corresponding direction, opposed transversely-extending recesses in the sides of said slot near the open end thereof, and a longitudinally-extending counter-slot in the inner wall of said socket on the other side of the socket from said slot, the depth of the counter-slot being less than the wall thickness and the width of the counter-slot being less than the width of the socket in the corresponding direction.

3,088,149
FLUID MOTIVATED ABRADING AND WASHING DEVICE
Joseph Potenza, Bronx, N.Y., assignor of sixty percent to Robert Williams, Great Neck, N.Y.
Filed Nov. 20, 1961, Ser. No. 153,654
6 Claims. (Cl. 15—29)



1. A device of the character described comprising, in combination, a housing having a top, a bottom and forward and rearward ends, said housing having a fluid inlet passage and first and second fluid outlet passages, said first outlet passage being at said rearward end, said second outlet passage being at said forward end, rotor means

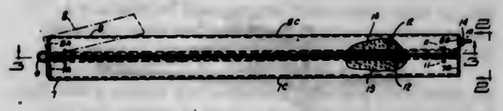
journaled within said housing to be rotated by fluid flowing through the latter, a shaft extending through said housing, said shaft being at one end secured to and rotatable with said rotor means, said shaft having an outer end with a disc fixed thereon, first valve means interposed between said inlet passage and said rotor means, second valve means disposed at said second outlet passage, said shaft having a pivotable joint intermediate said rotor means and said disc to allow the outer end of said shaft to be pivoted, said disc being adapted to actuate said second valve means to thereby effectuate flow through said second outlet passage.

3,088,150
BATTERY TERMINAL AND CABLE CLEANING BRUSH
Francis R. Sweeney, Rocky River, Ohio, assignor to A. J. Rose Manufacturing Co., Cleveland, Ohio, a corporation of Ohio
Filed Aug. 18, 1960, Ser. No. 50,390
10 Claims. (Cl. 15—106)



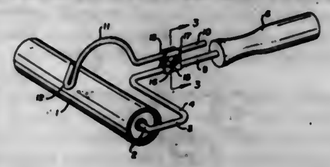
4. A cleaning device of the character described comprising: a cup-shaped base member having cylindrical side walls and a centrally apertured web at one end thereof; a cup-shaped brush holder removably threaded concentrically within said base member with said member and said holder being in inverted relation to each other; an annular brushing element disposed concentrically in said holder and between the webs of said holder and said member with its bristles extending inwardly; and an elongated cover of hollow construction having an open end exteriorly threaded for removable engagement with said base member adjacent said brush holder, said elongated cover being of sufficient length to be grasped and thereby afford protection from a male brush element carried by said brush holder therein.

3,088,151
GREASE BLOTTING DEVICE
Montrose L. Draper, 12700 Lincoln, Highland Park, Mich.
Filed July 31, 1962, Ser. No. 213,673
1 Claim. (Cl. 15—210)



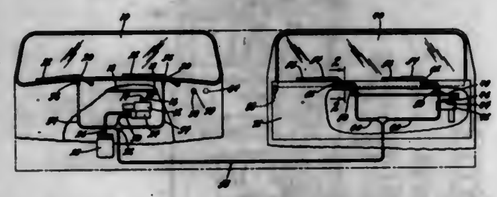
A device of the character described, comprising a matched pair of sections, each said section being made of non-corrosive material, and provided with a disposable pad of inexpensive, highly absorbent material and means to secure each pad to its section, the securing means for each said pad including a highly flexible screen which stretches from end to end of its section and is superimposed on the exposed face of said pad and is held against displacement by inturned elements formed on its said section.

3,088,152
FEELER ROD FOR PAINT ROLLER
George Lucas, 986 Morningview Drive, Tallmadge, Ohio
Filed Aug. 15, 1960, Ser. No. 49,686
3 Claims. (Cl. 15—230)



1. In combination with a paint roller which includes a cylinder and support means extending axially from one end of the cylinder, which support means includes a portion parallel to the axis of the cylinder, and a further portion extending therefrom substantially perpendicularly to the axis of the cylinder; a narrow, stiff feeler extension which lies generally in a plane perpendicular to the axis of the cylinder and is movably attached to said portion of the support means perpendicular to the axis of the cylinder, which extension includes an end feeler portion near the side of the cylinder generally opposite to said support means and includes a generally semi-circular portion with a radius larger than the radius of the cylinder and embracing at least a part of the cylinder.

3,088,153
REAR WINDOW WASHER
Leonard A. Lystad, Warren, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Dec. 18, 1961, Ser. No. 160,067
6 Claims. (Cl. 15—250.02)



4. In a vehicle, a rear window capable of being raised and lowered, a rear window cleaning system comprising a rear window wiper unit and a rear window washer unit, said rear window wiper unit including an electric motor, means precluding energization of said motor except when said rear window is substantially fully raised, said rear window washer unit including conduit means, and valve means blocking said conduit means when said rear window wiper unit is off.

3,088,154
WIPER ARM
William C. Riester, Williamsville, and Anthony C. Scinta, Hamburg, N.Y., assignors to Trico Products Corporation, Buffalo, N.Y.
Filed Aug. 11, 1960, Ser. No. 48,974
8 Claims. (Cl. 15—250.34)



1. A wiper arm comprising a mounting head portion, an elongated hollow portion, means on said elongated hollow portion for mounting a windshield wiper, first pivot means coupling said mounting head portion and said elongated hollow portion, a pressurizing assembly

comprising movable spring supporting means adapted to be inserted into said elongated hollow portion, a spring, means for anchoring one end of said spring to said spring supporting means, means for anchoring the other end of said spring to said mounting head portion, means on one end of said spring supporting means adapted to provide effective slidable engagement relative to a portion of the inside of said elongated hollow portion to thereby transmit the spring pressure from said spring supporting means to said elongated hollow portion, and second pivot means including a pivot edge on the opposite end of said spring supporting means and a fulcrum on said mounting head portion for permitting relative movement between said spring supporting means and said mounting head portion during pivotal movement of said elongated hollow portion on said first pivot means, said second pivot means and said slidable engagement relieving friction at said first pivot means.

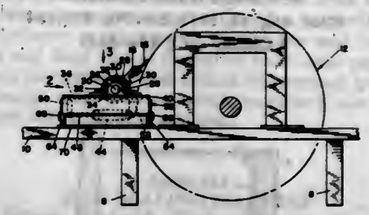
3,088,155
WINDSCREEN WIPERS
Phillip Geoffrey Kent Smithers, Ealing, England, assignor to Trico Products Corporation, Buffalo, N.Y., a corporation of New York
Filed Feb. 23, 1960, Ser. No. 10,299
11 Claims. (Cl. 15—250.42)



1. A curved windscreen wiper blade including a pressure distributing harness having relative movable members, an elongated rubber of which a substantial part will rock with respect to the harness to opposite sides of a central position when the blade is in use, a flexible surface conforming backing strip acted upon by said harness, and a thin self-supporting shroud of a deformable moulded material capable of following the flexing of the strip and lying along the length of the blade to shield from air flow across the windscreen of a vehicle a substantial part of the rocking part of the rubber at least on one side, said shroud being connected operatively to follow the surface conforming action of the backing strip at least in a number of longitudinally spaced positions.

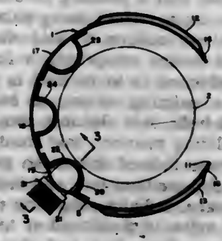
3,088,156
SELF-EQUALIZING SUPPORT FOR DOCTOR BLADES
Ernst Roland Ljungquist, Worcester, and Roger Edgar Bedard, West Boylston, Mass., assignors to Lodding Engineering Corporation, Auburn, Mass., a corporation of Massachusetts
Filed Apr. 26, 1962, Ser. No. 190,494
12 Claims. (Cl. 15—256.53)

1. A doctor support comprising an elongated doctor back, a blade holder thereon and a doctor blade on the holder, a slide at each end of the doctor back, said slides mounting the doctor back for rectilinear motion thereof transverse to its length, means guiding the said slides in generally parallel rectilinear paths, power means for moving the slides, said power means comprising a cylinder and piston for each slide, pneumatic means applied to one end of each cylinder and hydraulic means to the opposite ends thereof for moving the doctor back in one direction under air pressure and in the opposite direction by hydraulic pressure, the hydraulic means serving to move



the doctor back and its blade toward the surface to be doctored.

3,088,157
VACUUM CLEANER COVER
Gilbert E. Aguilar, 1150 23rd St., Manhattan Beach, Calif.
Filed Feb. 3, 1961, Ser. No. 86,924
6 Claims. (Cl. C. 15—323)

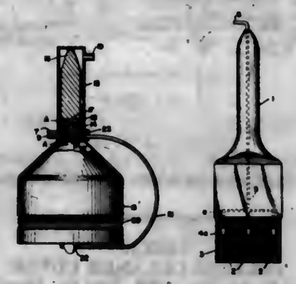


1. A vacuum cleaner cover comprising a flexible sheet member having a substantially horizontal top portion and substantially vertical side portion, whereby said cover is adapted to fit over the top and sides of a vacuum cleaner tank, the side portion of said cover having at least one aperture therethrough for receiving the shank of a vacuum cleaner tool thereby to removably support such a tool, and a protective member disposed behind said aperture in said sheet member, said protective member comprising a substantially trough-like element having its axis extending substantially vertically with respect to said side portion of said cover, and having vertical side portions attached to the interior surface of the said side portion of said cover adjacent said opening therethrough.

3,088,158
CLEANING AND POLISHING SPONGE
Francis K. Boyle, Tonawanda, and John J. Duane, Buffalo, N.Y., assignors to Union Carbide Corporation, a corporation of New York
No Drawing. Filed Mar. 28, 1961, Ser. No. 98,759
14 Claims. (Cl. 15—506)

1. A simultaneous cleaning and waxing oil-in-water emulsion which comprises from about 6 to 7 weight percent aliphatic amine acetate, from about 10 to 12 weight percent of a maximum of sorbitan monopalmitate, polyoxyethylene sorbitan monolaurate, polyoxyethylene nonylphenol and sodium dioctyl sulfosuccinate, from about 13 to 16 weight percent emulsifiable wax, from about 3 to 4 weight percent of a mixture of dimethyl silicone oil and paraffin oil, with the remainder water.

3,088,159
BELLOWS-ACTUATED FOUNTAIN PAINTING DEVICE
Vernon James Ralph, 9 Oldfield Road, Seven Hills, New South Wales, Australia
Filed Aug. 18, 1959, Ser. No. 835,164
1 Claim. (Cl. 15—543)



An improved painting device comprising a paint brush having an attached mass of bristles wherein a plurality of ducts are incorporated, said ducts extending to within a short distance of the tips of said bristles, said ducts being so positioned that a painting medium ejects from the ducts directly on a surface being painted, means to supply said painting medium to said ducts in a controlled flow, said means comprising a flexible bulb so designed and positioned as to be held in the hand of a person using the painting device, a hollow chamber mounted on said bulb, said chamber comprising a fixed member and a sliding member, said fixed member having an inlet passage formed therein so positioned as to convey said painting medium into said bulb, a ball valve in said inlet passage, radially projecting passages in the seat of said ball valve so positioned as to permit a flow of said painting medium into and through said inlet passage, an exit passage so positoned as to convey the painting medium to an upper portion of said hollow chamber, a ball valve in said exit passage, said sliding member being so weighted and positioned as to close said ball valve in said exit passage by means of gravity when said hollow chamber is in an upright position, said sliding member engaging said ball valve in such a manner as to prevent any flow of said painting medium while said chamber remains upright unless said bulb is squeezed, said sliding member being operatively mounted so as to prevent said exit passage ball valve from totally escaping from its valve seat when said hollow chamber is in an inverted position but still allowing flow around said exit passage ball valve while in said inverted position, and an outlet tube is said hollow chamber.

3,088,160
MARKING PEN
Nathan R. Cline, 752 S. Belmont, Wichita, Kans.
Filed Sept. 18, 1961, Ser. No. 138,694
5 Claims. (Cl. 15—563)

5. Marking means comprising, in combination, a barrel, absorbent means for ink mounted in said barrel and extending therefrom with the extending portion thereof forming a marking nib, clip means positioned within said barrel and having flexible arm means, said arm means having means in biting engagement with said absorbent means, another portion of said clip means being in spaced relation to said means of said arm means in biting contact with said absorbent means, said another portion of said clip means being in contact with the inner surface of said barrel, and holder means having a portion within



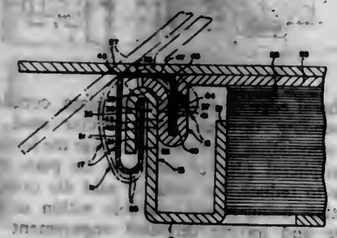
said barrel and engaging said arm means of said clip means to limit outward movement thereof.

3,088,161
DISPENSING AND APPLICATING DEVICE
Wilbur A. Schaich, Maumee, Ohio, assignor to Owens-Illinois Glass Company, a corporation of Ohio
Filed Feb. 9, 1959, Ser. No. 792,013
1 Claim. (Cl. 15—572)



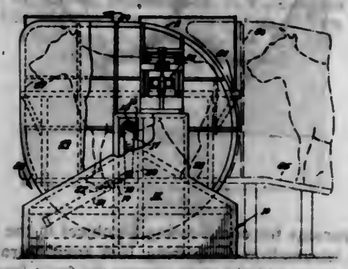
A ball applicator package comprising in combination a container, an applicator ball and a ball positioning member as components thereof and wherein said components are fabricated from two types of material, said types of material being, respectively, a rigid material and a resiliently deformable material, and wherein said container is formed of one of said types of material and said ball and said ball positioning member are both formed from the other of said types of material, said container having a hollow interior portion and axially opposite wall openings communicating with said interior portion, one of said openings forming a dispensing opening and the other of said openings forming an access opening, said ball positioning member having an imperforate axial stem portion closing said access opening and being threadedly received in axial relationship therein for axial movement in frictional fluid-tight contact with the wall of said access opening, said stem portion having a ball shifting end disposed within said container and a manipulating end projecting externally from said container for threaded axial movement of said ball positioning member within said access opening, said manipulating end being shaped to form a base upon which to support said container, said hollow interior portion of said container including an applicator section and a fluid reservoir section, said applicator section being defined by an interior wall segment of said container and being shaped in the form of an annular socket converging at axially opposite ends to form said dispensing opening at one end and a restricted opening at the other end communicating with said fluid reservoir section, said applicator ball having a medial portion of larger size than said dispensing opening and said restricted opening and loosely confining said applicator ball in ball and socket relationship within said applicator section, said restricted opening being situated in alignment with and adapted to accommodate axial movements of said ball positioning member therethrough to axially shift said applicator ball within said socket, whereby rotational manipulation of the manipulating end of said ball positioning member effects inward and outward movements of said stem portion which shifts said applicator ball within said applicator section toward and away from said dispensing opening to selectively vary the size thereof.

3,088,162
HINGE
Frederick P. Robbins, 224 S. Michigan Blvd., Chicago 4, Ill.
Filed Apr. 12, 1960, Ser. No. 21,632
7 Claims. (Cl. 16—180)



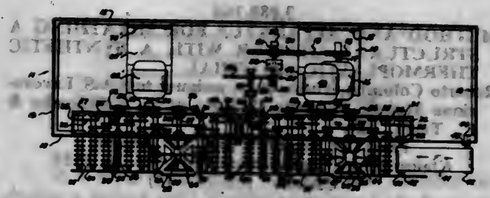
2. A hinge comprising a pair of cooperating bearing components formed for relative rocking movement, the one upon the other, and a spring interfittingly interconnected with said components in position holding the same in rocking engagement and normally urging one component turningly in one direction on the other, said hinge components comprising sheet metal parts each having an end portion bent over upon the body of the part to form a spring mounting slot, between said bent-over end portion and the facing portion of the body, said bent-over portion forming a convex bearing surface on one component and a cooperating concave surface on the other, said spring comprising a strip of resilient material formed with spaced flanges for interfitting engagement in said slots.

3,088,163
STUNNING PEN
Harry W. Weprin, Chicago, Ill., and Samuel Pasutin, Royal Oak, William Chan, Highland Park, and Ernest E. Wilson, Grosse Pointe, Mich., assignors, by mesne assignments, to Armour & Company, Chicago, Ill., a corporation of Delaware
Filed Dec. 17, 1959, Ser. No. 860,264
9 Claims. (Cl. 17—1)



1. A device for use in the stunning of animals comprising: a frame; a pen holder mounted on said frame for rotation about an axis, a pen on said holder, said pen being of a length slightly in excess of the length of an animal and of a width to receive an animal, said pen being mounted on said holder, said pen having a floor to support an animal therein and an open top; and power means connected to said holder to position said floor horizontally whereby an animal can walk into said pen on said floor and to thereafter rotate said pen about said axis to reposition said animal for removal from said pen through said open top which becomes a side of said pen upon the rotation of said pen.

3,088,164
FISH SCALING MACHINE
Albert Simard, Sandwich, Windsor, Ontario, Canada, assignor of one-half to Frederick L. Moore, Sandwich, Ontario, Canada
Filed June 27, 1961, Ser. No. 119,993
7 Claims. (Cl. 17—5)



1. A fish scaling machine, comprising a housing; a horizontally disposed first conveyer on said housing adapted to supportably receive a fish longitudinally movable thereover; a continuous substantially horizontal flexible web on said housing overlying said conveyor, biased downwardly against a fish movable between said conveyor and web;

a horizontally disposed second conveyor on said housing in longitudinal registry with the end of the first conveyor and displaced upwardly thereof adapted to supportably receive a fish longitudinally movable thereunder;

a continuous substantially horizontal flexible web on said housing underlying said second conveyor biased upwardly against a fish movable between the second conveyor and adjacent web;

a power driven descaler roller transversely interposed intermediate the ends of each conveyor operatively registerable with the longitudinal top and bottom surfaces of said fish respectively, a power driven oppositely tapered descaler interposed intermediate the ends of each conveyor operatively registerable respectively with the longitudinally opposed top and bottom side portions of the fish, and opposed pairs of tapered inwardly converging forwardly extending conveyor guides secured in longitudinally spaced relation to the respective upper and lower surfaces of the webs corresponding to said first and second conveyors restraining the fish to a longitudinal path centrally of said conveyors.

3,088,165
CATFISH SKIN AND HEAD REMOVING TOOL
John V. Bellis, Essex, Iowa, assignor to Helen J. Turner, Omaha, Nebr.
Filed July 6, 1961, Ser. No. 122,127
1 Claim. (Cl. 17—8)

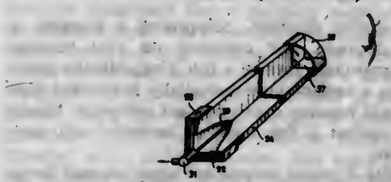
A fish dressing tool comprising a pair of elongated handles pivotally connected at one end, a pair of opposed coacting arcuate jaws integral with the pivotally connected ends of the handles, and an essentially flat, triangular, metallic skin-slitting blade radiating from an intermediate portion of one of the jaws and including a

substantially concave base circumferentially engaged therewith and affixed thereto, said blade further including a square-cut, diamond-shaped apex portion slidable on a fish for controlling the cutting depth of the blade, said



blade still further including outwardly convergent, tapered side edges providing cutting edges extending from the base to and terminating at said apex portion and selectively usable in response to longitudinal pulling or pushing movement of the handles.

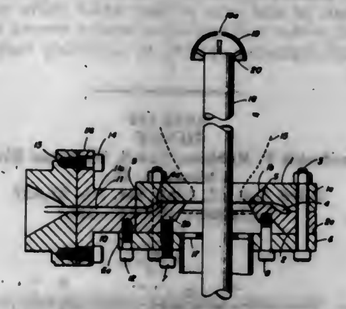
3,068,166
METHOD AND APPARATUS FOR SHEATHING A STRUCTURAL MEMBER WITH A SYNTHETIC THERMOPLASTIC MATERIAL
Roberto Colombo, Turin, Italy, assignor to S.A.S. Lavorazione Materie Plastiche (L.M.P.) di M. I. Colombo & C., Turin, Italy
Filed Oct. 13, 1959, Ser. No. 846,202
Claims priority, application Italy Oct. 20, 1958
5 Claims. (Cl. 18—13)



1. In a process of sheathing with synthetic thermoplastic material an elongated structural member having a concave angle in its cross-sectional outer profile by extruding on the member a sheath of the material in a softened condition while advancing the structural member longitudinally through an extrusion orifice, the improvement which comprises, clamping the thermoplastic material radially inwardly in the direction of said angle circumferentially of said member along a narrow, circumferential zone immediately adjacent the leading end of the structural member when it passes out of said orifice to form a fluid-tight seal between the material and said member throughout said zone, advancing the structural member through said orifice to sheath the structural member circumferentially and longitudinally while maintaining said fluid-tight seal in said zone, providing a short passageway through said zone to provide communication through said fluid-tight zone underneath said material along said concave angle, applying a vacuum at the leading end of said member to said passageway while advancing said member through said extrusion orifice to exhaust air longitudinally of said member along said concave angle while clamping the material along said zone, and setting the thermoplastic material while applying said vacuum and maintaining said zone clamped.

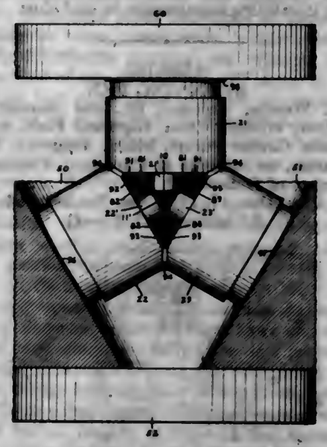
3,068,167
APPARATUS FOR EXTRUDING TUBULAR FILMS
Herbert O. Corbett, Canandaigua, N.Y., assignor to National Distillers and Chemical Corporation, New York, N.Y., a corporation of Virginia
Filed May 20, 1960, Ser. No. 30,530
10 Claims. (Cl. 18—14)

1. An extrusion die comprising a pair of annular die plates assembled in concentric, opposed surface relation; an annular passageway defined between said die plates including also a continuous annular die orifice opening outwardly from said annular passageway between said die plates and peripherally thereof; at least one conduit passageway opening through at least one of said plates into communication with said annular passageway; an annular stud plate joined to one of said die plates in concentric, opposed surface relation thereto; and a series of studs disposed in circumferential spaced relation about



the peripheral edge of said one die plate, certain of said studs extending through said annular stud plate in threaded association therewith to engage the lower surface of the peripheral edge of said one die plate and being adjustable to reduce the width of said die orifice, others of said studs being freely rotatable within said annular stud plate and having threaded engagement with the peripheral edge of said one die plate, said last mentioned studs being adjustable to increase the width of said die orifice.

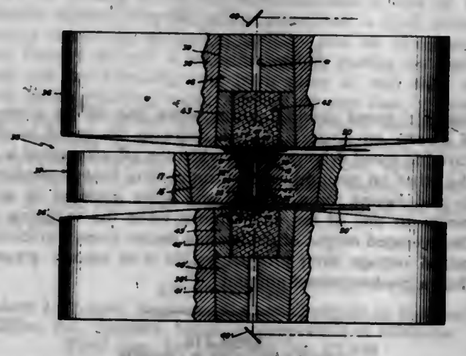
3,068,168
MULTIPLE-ANVIL HIGH PRESSURE APPARATUS
Edward C. Lloyd, Silver Spring, Ulric O. Hutton, Brinklow, Daniel P. Johnson, Silver Spring, and Henry J. Zoranski, Chevy Chase, Md., assignors to the United States of America as represented by the Secretary of Commerce
Filed Jan. 26, 1960, Ser. No. 4,836
Claims priority, application Canada Aug. 13, 1959
8 Claims. (Cl. 18—16)



1. Apparatus for compressing an object in the form of a regular tetrahedron comprising, four anvils tetrahedrally disposed about said object to present the front faces thereof towards said object, a first of said anvils being drivable in the direction of its axis by an operating force, a ring

coaxial with said first anvil and enclosing the other three anvils, said ring having an inner wall which tapers conically to close towards said axis with increasing distance from said first anvil, said wall providing a slide surface for the butt faces of the other three anvils whereby said three anvils by wedging action drive against said object simultaneously with the driving thereagainst of said first anvil.

3,068,169
HIGH PRESSURE, HIGH TEMPERATURE APPARATUS
Robert H. Wentorf, Jr., Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
Filed Jan. 3, 1961, Ser. No. 80,426
11 Claims. (Cl. 18—16)



1. A high pressure, high temperature apparatus comprising in combination, a pair of opposed anvil members adapted to have relative motion therebetween towards each other, a lateral pressure resisting member positioned concentrically between said pair of anvils, said lateral pressure resisting member having a central tapered conical opening therein adapted to contain a specimen material to be subjected to high pressures and high temperatures, a hollow thin walled conical tapered member in said aperture and surrounding said specimen, gaset means between said tapered member and the walls of said aperture to compress and adapt said tapered member to slide axially with respect to the walls of said aperture and into said aperture, and means to move one of said anvils towards the other so that one of said anvils applies an axial force on said specimen and pushes said tapered member into said tapered opening to provide lateral and axial compression of said specimen.

3,068,170
TWO-TERMINAL END CAP FOR HIGH PRESSURE, HIGH TEMPERATURE REACTION VESSELS
Herbert M. Strong, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
Filed Aug. 2, 1961, Ser. No. 130,225
10 Claims. (Cl. 18—16.5)



5. An improved end cap assembly for reaction vessels comprising in combination, an electrically conductive first ring, an electrically nonconductive second ring coaxially positioned within and adjacent said first ring, a portion of said second ring overlying said first ring, an electrically conductive disc concentrically positioned within said second ring, an electrically conductive third ring coaxially positioned within said second ring and in electrical contact with said disc, and an electrically nonconductive plug positioned concentrically within said third ring and on said disc, so that separate electrical circuits may be made to said first ring and to said third ring with the said circuits insulated from each other.

3,068,171
MEANS FOR REMOVABLY INCORPORATING ELECTRICAL HEATING ELEMENTS IN HEATER BODIES
Donald M. MacMillan, Macon, Ga.
Filed Dec. 6, 1954, Ser. No. 473,152
2 Claims. (Cl. 18—38)



2. In a metal heater-body member, said member including a unitary solid foundry aluminum body having a functional surface for emitting heat to perform work, a channel formed in another surface of said body and including at least one undercut wall portion, an electrically insulated heating element disposed in and along said channel and a metal shield surrounding the same, said channel being of a depth to receive said heating element and to provide a space between the heating element disposed therein and its open side, and a cast aluminum metal fillet entirely filling said channel and which though applied while molten has been solidified in the channel embedding said heating element in said channel and having a mechanical bonding contact with said undercut wall portion and intimate heat conducting contact with said body and said heating element in said channel.

3,068,172
PROCESS FOR THE PRODUCTION OF MOLDED CELLULAR POLYURETHANE PLASTICS
Erwin Weinbrenner, Leverkusen, Peter Hoppe, Troisdorf, and Karl Breer, Cologne-Flittard, Germany, assignors, by direct and mesne assignments, of one-half to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany, and one-half to Mobay Chemical Company, Pittsburgh, Pa., a corporation of Delaware
Filed May 10, 1957, Ser. No. 658,263
Claims priority, application Germany May 12, 1956
6 Claims. (Cl. 18—48)



1. A process for the production of molded cellular polyurethane elements which comprises submerging a substantially deflated, elastic, dilatable, hollow body in a liquid to a depth to form a molded element having a predetermined size, configuration and density and introducing into said body a mixture of the reactive components of a cellular polyurethane plastic wherein reaction commences causing expansion of said body against the pressure exerted by said liquid.

3,088,173

PROCESS FOR PREPARING ORIENTED POLYMERIC LINEAR TEREPHTHALATE FILM WITH A DEGLOSSED WRITEABLE SURFACE

John Willard Jones, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed June 2, 1961, Ser. No. 114,356
6 Claims. (Cl. 18—48)

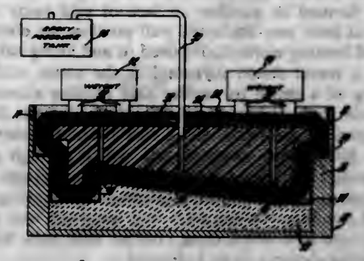
1. The process comprising: stretching substantially amorphous polymeric linear terephthalate film after attaining a temperature within the range of 110° to 114° C. within a period of time of at the most about 3 minutes in both the longitudinal and transverse directions to an extent of at least 1.25 times its original dimensions, cooling said film below its second order transition temperature, and stretching said film a second time after attaining a temperature within the range of 110° to 114° C. within a period of time of at the most about 3 minutes in both the longitudinal and transverse directions to an extent of at least 1.25 times its dimensions after the first stretch, the total extent of the stretch being 3 to 10 times that of the original dimensions of said film.

3,088,174

METHOD OF PRODUCING A REINFORCED PLASTIC DIE

Paul Kolt, Ferndale, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Jan. 28, 1959, Ser. No. 789,620
7 Claims. (Cl. 18—59)



1. A method of producing a reinforced plastic die which comprises forming a plaster cast having a surface with the same general contour as the sheet metal part desired, positioning damming around the periphery of said plaster cast so as to form a casting cavity, applying a mold release agent to surfaces defining said casting cavity, applying a face coat of filled epoxy resin to said surface, thereafter successively applying a plurality of layers of metal mesh over the surface of said face coat, positioning a hardened plastic core member in said casting cavity adjacent said mesh, enveloping said core with said mesh, pressure injecting an epoxy resin interjacent said core and said face coat so as to completely fill the interstices of said mesh and form a reinforced epoxy resin layer surrounding said core, curing said epoxy resin to form a finished die and removing said die from said cavity.

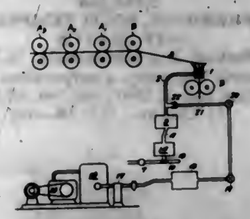
3,088,175

AUTOMATIC LEVEL CONTROL SYSTEM FOR PRODUCT SLIVER WEIGHT

Akira Aoki, 1–94 Ohmino 6-ku, Tomioka-cho, Higashi Sumiyoshi-ku, Osaka, Japan

Filed Jan. 10, 1958, Ser. No. 708,264
2 Claims. (Cl. 19—240)

1. Apparatus for controlling product sliver weight produced by a multi-roll drafting mechanism having feed rolls, intermediate rolls and delivery rolls and having a variable speed driving means driving the feed rolls and intermediate rolls of said drafting mechanism, comprising a sensing means on the delivery side of the drafting mechanism for continually sensing the product sliver weight, means for averaging the output of said sensing means, said means being connected to said sensing means, an off-on control having two on positions and an off position therebetween, and a control means connected to the variable speed driving means for the drafting mechanism, said off-on control being connected to said control means for causing said control means to increase the speed of the



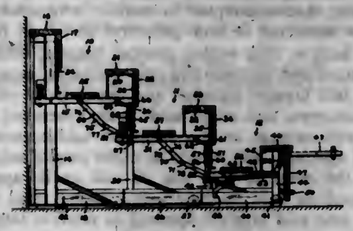
variable speed driving means when the off-on control is in one on position and to decrease the speed of the variable speed driving means when the off-on control is in the other on position, said off-on control being connected to said means for averaging and being actuated by said means to one of the on positions when the variation of the averaged output of the sensing means from a predetermined average sliver product weight is an amount greater than a predetermined amount.

3,088,176

FOLDING BLEACHER

George A. Delf, St. Louis, and Robert E. Kortum, Robertson, Mo., assignors to Narragansett Gymnasium Equipment Company, St. Louis, Mo., a corporation of Missouri

Filed May 5, 1960, Ser. No. 27,058
9 Claims. (Cl. 20—1.126)



4. In a seating structure, a plurality of transverse frames of successively decreasing heights, said frames being retractable in nested relation within and below the next taller frame and successively extensible therefrom, a latch movably mounted to each frame except the lowest frame, an abutment on each frame except the tallest frame engaging the latch on the next taller frame when the frames are extended so as to prevent retraction, means hinged to the lowest frame and movable within limits, means operatively interconnecting the said hinged means with the latch on the next taller frame for moving the said latch out of locking relation to the abutment on said lower frame upon movement of said hinged means to one of said limits, a toggle interconnecting each pair of adjacent frames, and means engageable by said toggles to move said other latches out of locking relation to their associated abutments as the frames are sequentially retracted, the retraction of each frame conditioning the next taller frame for retraction by unlocking the latch normally holding said next taller frame.

3,088,177

LOCKING DEVICE FOR CLOSURE MEMBERS

Harry M. Riggsman, Rolling Hills, Calif., assignor to Security Aluminum Corporation, Compton, Calif., a corporation of California

Filed May 9, 1960, Ser. No. 27,869
18 Claims. (Cl. 20—52)



17. A locking device for mounting onto a stile of a slidable closure member, which comprises: a latch plate having a locking projection thereon and an elongated slot formed therein; a fastening means passing through said slot for fastening said latch plate to said stile; a first spring retaining means formed on one face of said latch plate; a second spring retaining means formed by said fastening means; a spring normally retained, under compression, between said first and second spring retaining means for forcing said fastening means to one end of said slot; and a handle means affixed to said latch plate.

3,088,178

CONNECTOR

Robert L. Propst, Englewood, Colo., assignor to Herman Miller, Inc., Zeeland, Mich., a corporation of Michigan

Filed Aug. 26, 1960, Ser. No. 52,130
5 Claims. (Cl. 20—92)



1. A connector for releasably securing together two pieces of material each having a generally semi-cylindrical groove formed therein, comprising: a pair of complementary connector elements, each of said elements having an axially elongated generally semi-cylindrical body of slightly less than 180° in circumferential extent, and resilient fingers semi-elliptical cross section formed at intervals along one edge of said body with the free ends thereof directed toward the other edge of said body, said fingers being spaced along said body so as to axially alternate with the fingers of the other connector element and lie generally parallel to the body of said other connector element when said connector elements are interengaged; and spreader means insertable between said fingers and rotatable to spread said fingers apart.

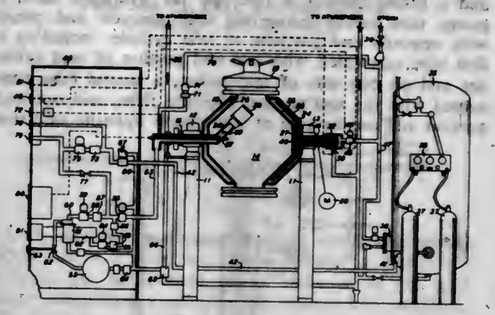
3,088,179

STERILIZER FOR BULK PRODUCTS

Frank G. Lentimer, Gates, N.Y., assignor to Wilmot Castle Company, Brighton, N.Y., a corporation of New York

Filed Nov. 13, 1958, Ser. No. 773,674
8 Claims. (Cl. 21—91)

1. Apparatus for the gas sterilization of products in bulk, comprising a vessel having a chamber for holding the product to be sterilized, said vessel having trunnions by which said vessel may be rotated extending on opposite sides thereof, said vessel having an inside and outside wall spaced from one another and forming a jacket therebetween, each of said trunnions having a conduit therein, a conduit of one trunnion communicating at one end with said jacket, and the conduit of the other trunnion communicating at one end with said chamber, said one trunnion being connected externally of said vessel to a source of heat, and said other trunnion being connected to a source of sterilizing gas for introducing sterilizing gas into the chamber during rotation thereof.

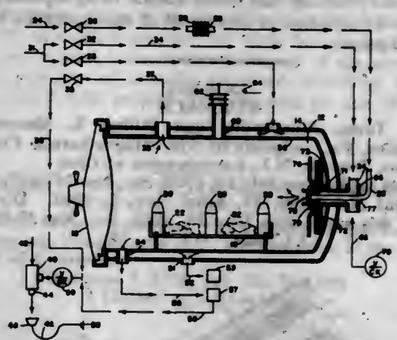


3,088,180

METHOD FOR THE CONTROLLED REDUCTION OF TEMPERATURE IN A STERILIZING CHAMBER

Norman E. Lauterbach, Pittsford, N.Y., assignor to Wilmot Castle Company, Rochester, N.Y., a corporation of New York

Filed Apr. 29, 1960, Ser. No. 25,598
8 Claims. (Cl. 21—98)



1. A method for reducing temperature in a sterilizing chamber comprising the following steps of: introducing steam into the chamber after sterilization when the chamber and contents are still at the effective sterilization temperature and exhausting the chamber at a selected faster rate than steam is being introduced into the chamber, thereby to selectively reduce the temperature and pressure in the chamber.

3,088,181

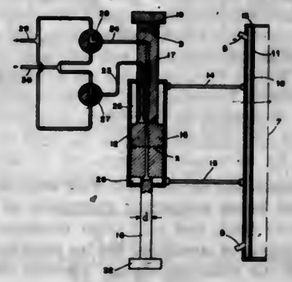
CONTINUOUS CASTING OF METALS

Geoffrey Littlewood, Sheffield, and James S. Morton, Ockham, near Ripley, England, assignors to The British Iron and Steel Research Association, London, England

Filed July 30, 1959, Ser. No. 830,557
Claims priority, application Great Britain July 31, 1958
3 Claims. (Cl. 22—57.3)

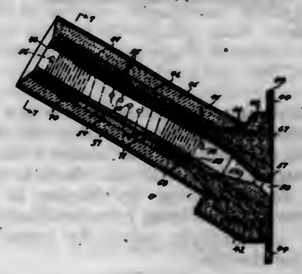
1. In continuous casting apparatus wherein molten metal is delivered to one end of a continuous casting mold

and an embryo ingot is withdrawn from the opposite end of said mold, the combination comprising hydraulic means supporting said mold for positive reciprocation at selected rate in a direction parallel to the longitudinal axis of said mold, said hydraulic means including a cylinder and a piston therein, a reservoir for hydraulic fluid, a pump, tube means connecting said reservoir and pump with opposite end portions of said cylinder including a first tube connected with one end portion of said cylinder and on one side of said piston, a second tube connected with the end portion opposite from said one end portion and on the side of said piston opposite said one



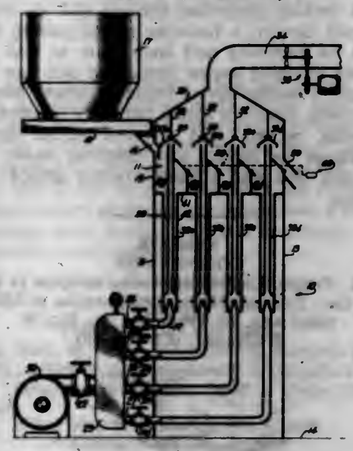
side of said piston for flow of fluid to said opposite end portions and connecting the opposite end portions of said cylinder with said reservoir for discharge of fluid from the opposite end portions of said cylinder, and adjustable valve means in said tube means operable independent of said ingot withdrawal for directing flow of fluid at a selected rate to one end portion of said cylinder and the flow of fluid from the opposite end of said cylinder for movement of said hydraulic mold support means in one direction, reversing said valve means being operable to reverse the direction of movement of said hydraulic mold support means.

3,088,182
FURNACE
Mario Tama, Morrisville, and Wilbur E. Shearman, Yardley, Pa., assignors to Ajax Magnethermic Corporation, Trenton, N.J., a corporation of Ohio
Original application July 10, 1958, Ser. No. 747,667, now Patent No. 2,959,757, dated Nov. 8, 1960. Divided and this application June 20, 1960, Ser. No. 37,457
3 Claims. (Cl. 22—79)



1. A furnace including a refractory lining for molten metal or the like and a pouring spout attached to the furnace in communication with the interior of the refractory lining, said pouring spout comprising a tubular discharge element, insulating material surrounding said element, a heater tube of silicon-nitride bonded silicon carbide interposed between said tubular discharge element and said insulating material, said heater tube having a cylindrical portion and at the end thereof adjoining the furnace an outwardly extending flange portion, electric heater means surrounding said cylindrical portion of said heater tube, said flange having sufficient length to substantially cover that portion of said insulating material between said cylindrical portion of said heater tube and said refractory lining, whereby said flange prevents short-circuiting of said electric heater means by directing molten metal contacting the surface of said flange away from said electric heater means.

3,088,183
APPARATUS FOR TREATING GRANULAR MATERIAL
Robert L. McIlvaine, Winnetka, and Ralph J. Donat, Chicago, Ill., assignors to Herbert Simpson Corporation, Chicago, Ill., a corporation of Illinois
Continuation of application Ser. No. 681,272, Aug. 30, 1957. This application Dec. 19, 1960, Ser. No. 76,976
1 Claim. (Cl. 22—89)



A granular material treating apparatus comprising a plurality of target means, a plurality of side-by-side treating cells in each of which granular material is entrained within a gas stream directed against one of said target means for removing portions of the outer surface of the granular material so that the remainder of the granular material after removal of the surface portions is deflected by the target means toward a collecting point for recycling through the gas stream, a plurality of adjustable directing members respectively disposed between each target means and its associated collecting point for intercepting a portion of the material deflected by each target and feeding it to the succeeding stage in order to effect stage-to-stage flow of the granular material, means for individually and independently adjusting each directing member in order to vary the amount of material intercepted in each stage, thereby to control the recycling, and means for adjusting the position of all of the directing members in unison in order to vary the rate of flow of granular material through the stages.

3,088,184
SLIDING BUCKLE FOR STRAP ENDS
Ernst Bittner, Frankfurt am Main, Germany, assignor to The Scholl Mfg. Co., Inc., Chicago, Ill., a corporation of New York
Filed Sept. 22, 1960, Ser. No. 58,151
Claims priority, application Germany Sept. 23, 1959
1 Claim. (Cl. 24—175)

Fastening means for elongated strap ends, comprising: (*a*) a pair of strap end portions, one of said portions having an aperture therein, the other strap end portion comprising outer and inner layers of material

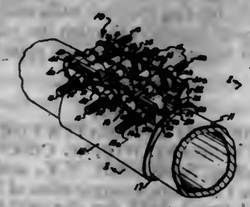
with padding therebetween, the inner layer having an inner uninterrupted surface;

(*b*) an upstanding stud fixedly secured within said other of said portions to said outer layer and positioned to abut said padding, an external portion of said stud being receivable in said aperture, said stud having an external length greater than the thickness of said one portion, and having a peripheral groove disposed outwardly of said thickness; and



(*c*) a rigid slide member carried by said other portion in such a manner that it is movable over said one portion only in the direction of the length of said other portion, said member having means defining a slot of substantially uniform width receivable in said groove and opening at one end into an outer edge of said member, and being closed at its other end and terminating in an outwardly extending U-shaped bead portion receivable in said groove.

3,088,185
OPPOSED BOLT CLAMP
Telford L. Smith, Los Altos, Calif. (1292 Toyon Drive, Millbrae, Calif.)
Filed May 26, 1960, Ser. No. 32,025
6 Claims. (Cl. 24—279)



1. In a pipe clamp of the type wherein the ends of a malleable band are secured around the pipe by lugs and the lugs are tightened together by locking bolts, the improvement wherein each lug is formed as one integral member having a base portion including at one side thereof means to secure one end of said band; a longitudinal series of transversely extending bolt-holding projections protruding upward from said base portion and having aligned faces at the opposite side of said base portion, each of said bolt-holding projections having a transversely disposed bore extending through said face normal thereto to receive the shaft of a locking bolt; said bolt-holding projections having offset flange members which are inwardly spaced from said faces and also being spaced from each other so as to define bolt receiving slots between said flange members, said lugs being arranged to face each other so that said bolt-holding projections on each said lug are substantially aligned with said slots on the facing lug; said bolts having flanged heads and being adapted to lie in said slots at one end when the other end of said bolts is being supported in said bolt-holding projections; and nuts on said bolts, said nuts being threadable to press against the faces of said bolt-holding projections outwardly of said flange members to draw said lugs together and tighten said band around the pipe.

3,088,186
APPARATUS FOR SUPPORTING AND CUTTING SEMIPLASTIC BODIES
Joseph L. Mennitt, Toledo, Ohio, assignor to Owens-Illinois Glass Company, a corporation of Ohio
Filed Jan. 11, 1961, Ser. No. 84,476
4 Claims. (Cl. 25—112)



1. In apparatus for supporting and cutting semiplastic bodies cast in a mold, the combination of a carrier for receiving the unhardened plastic body to be cut, said carrier comprising a plurality of independent longitudinally extending tubes having a substantially rectangular cross-section, said tubes being parallel and closely laterally spaced from each other; a shiftable carriage comprising a supporting bed disposed beneath and supporting said tubes, said bed comprising individual elongated parallel elements narrowly spaced apart with slots therebetween, the lateral disposition of said bed element corresponding generally to that of said tubes; a horizontal track on which the carriage is mounted for longitudinal travel, means for driving said carriage along said track; a gang of cutting wires, a cutter frame on which the cutting wires are mounted in parallel spaced relationship, means for rigidly mounting said frame with said cutting wires extending below said supporting bed and extending upwardly through said slots and spaces to a position above the path of the molded body mounted on said tubes, said cutter frame and wires being inclined in a direction with the wires at an acute angle to the vertical ends of the body of molded material, the wires being operable to sever the molded body during the travel of the carriage into a plurality of laterally separated individual slabs, each of said slabs individually supported by one of said tubes.

3,088,187
PROCESS OF MAKING ELONGATED STRESSED CONCRETE STRUCTURES
Donald S. Justice, Arlington, Va., assignor to The Justice Company, Washington, D.C., a corporation of the District of Columbia
Filed June 3, 1959, Ser. No. 817,892
3 Claims. (Cl. 25—154)



1. A method of making an elongated concrete structure within a cylindrical shell member which comprises: increasing the diameter of the shell member by imparting torsional force thereto; placing a strand member to extend longitudinally within said shell member; reducing the diameter of said strand member by applying torsional force thereto; pouring concrete within said shell member; permitting said concrete to set to a predetermined degree of hardness; and thereafter releasing said torsional forces on said shell member and on said strand member.

3,088,188
MANUFACTURE OF SHAPED OBJECTS OF ACRYLONITRILE POLYMER BY WET SPINNING
John P. Knudsen, Decatur, Ala., assignor, by mesne assignments, to Monsanto Chemical Company, a corporation of Delaware
Filed Jan. 4, 1960, Ser. No. 314
14 Claims. (Cl. 28—82)



1. A textile-grade, molecularly oriented, normally lustrous filament manufactured from an acrylonitrile polymer and substantially free of porosity, characterized by having an internal fiber surface area in the range of about 150–500 square meters per gram of said filament, said surface area being a measure of engaging surfaces defining collapsed submicroscopic interstitial spaces, the surfaces being spaced apart at a distance of at most about 300 A., as measured before the orientation of the filament and the collapsing of said spaces, the frequency of said spaces being in the range of about 200–2000×10¹⁴ per gram of said filament.

3,088,189
TIRE CARCASS DISK ROLLS WITH RETAINING WASHERS
Edward J. Johnston, La Grange Park, Ill., assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Dec. 7, 1959, Ser. No. 857,849
1 Claim. (Cl. 29—125)



A hay conditioning roller comprising an elongated shaft having a substantially square center portion, a laminated roller body on said center portion of the shaft comprising a plurality of fiber impregnated annular rubber disks having substantially square center openings snugly admitting the center section of the shaft therethrough, said disks arranged in pairs, a flat metallic retainer disposed between the disks of each pair only, each retainer having a center opening complemental to said square center section of the shaft and receiving the same therethrough and having four quadrilaterally arranged peripheral toothed edge portions respectively paralleling the sides of the center section of the shaft, two of the opposite edge portions of the retainer being directed axially of the roll in one direction and the other two in the opposite direction, said toothed edge portions being equidistantly spaced from the axis of the roller inwardly of the periphery of the body of the roller and respective toothed portions being aligned with each other axially of the roll, and means clamping said disks and retainers axially under pressure into a unitary assembly.

3,088,190
METHOD FOR MAKING ANTIFRICTION BEARINGS
Lewis R. Heim, Fairfield, Conn.
Filed July 3, 1959, Ser. No. 824,831
15 Claims. (Cl. 29—148.4)



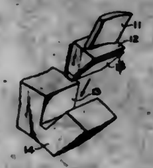
1. A method of making antifriction bearings comprising forming an outer bearing member of unhardened material with a circular opening through it and a raceway in the wall of the opening; forming an inner bearing member with a circular outer wall and a second raceway in the outer wall, the outer wall having a diameter sufficiently small to permit the placing of rolling elements in one of the raceways and then placing the inner member in the opening with raceways and rolling elements aligned; placing rolling elements in one of the raceways; then placing the inner member in the opening with the raceways and rolling elements aligned; and then radially contracting the unhardened outer bearing member sufficiently to interlock the inner and outer members through the rolling elements said contraction being of substantially plastic nature.

3,088,191
METHOD OF AND APPARATUS FOR MAKING PUNCH-BOARD WIRING CIRCUITS
Robert W. Breiling, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
Filed Jan. 2, 1957, Ser. No. 632,080
2 Claims. (Cl. 29—155.5)



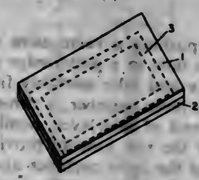
2. The method of fabricating a punchboard wiring circuit comprising the steps of: preparing a metal panel as a receptacle for an electronic assembly by punching apertures therethrough in a predetermined pattern, securing insulators containing hollow-turret terminals in said apertures, each of said terminals having a metal turret protruding only from a first side of said panel and the metal turret being separated from the panel by a heat resistant portion of said insulator, mounting pigtail-carrying electronic components with their respective pigtails disposed on only the second side of the panel and inserting each of said pigtails through its respective terminal, predeterminedly wiring the terminals on said first side of said panel with heat resistant-insulator covered wire sections, and dip-soldering said first side of said panel to solder the ends of said wire sections and said pigtails without exposing said panel to solder which harmlessly rolls off the heat resistant insulators.

3,088,192
METHOD OF JOINING TURBINE BLADE PARTS
Philip George Turner, Inkberrow, England, assignor to The International Nickel Company, Inc., New York, N.Y., a corporation of Delaware
Filed Apr. 23, 1958, Ser. No. 730,283
Claims priority, application Great Britain Apr. 26, 1957
4 Claims. (Cl. 29—156.8)



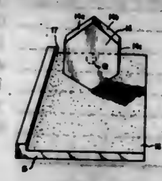
1. A method of forming a unitary metal article which comprises providing at least two chromium-containing metallic components of substantially the same composition made of an alloy selected from the group consisting of nickel-chromium alloys and cobalt-chromium alloys containing at least 25% of chromium plus metal from the group consisting of nickel and cobalt with the balance being essentially iron and having mating faces, interposing between said faces of said metallic components a layer of metallic nickel having a thickness of about 0.0005 inch to about 0.005 inch, and pressing said components together at said faces with a pressure of about 10,000 pounds per square inch to about 20 tons per square inch and insufficient to substantially deform said components, while heating the assembly so formed at between about 1000° C. and about 1100° C. for about eight hours to about fifteen hours to substantially eliminate said nickel layer by diffusion into and between said components and provide a substantially homogeneous article having a composition throughout the body of said article uniformly resistant to the adverse effects of oxidation at high and low temperatures.

3,088,193
METAL FABRICATION
Arthur F. Johnson, Boulder, Colo., assignor to Olin Mathieson Chemical Corporation, East Alton, Ill., a corporation of Virginia
Original application Apr. 7, 1955, Ser. No. 499,956, now Patent No. 2,915,296, dated Dec. 1, 1959. Divided and this application Apr. 13, 1959, Ser. No. 809,334
13 Claims. (Cl. 29—157.3)



1. A method for making heat exchangers which comprises cleaning the to-be-superimposed surfaces of a plurality of metal sheets, placing a band of stop weld on the said cleaned surface of one of the sheets in a pattern adjacent the four edges thereof defining a circuitous system of tubular passageways circumscribing said heat exchanger, said pattern being coextensive with and spaced from the said edges, forming an assembly by superimposing the cleaned surface of another of said sheets adjacent said stop-weld coated surface, heating the assembly and forge welding by hot rolling the adjacent surfaces of said assembly together in the areas not separated by said stop-weld material, forming an inlet into the unwelded areas defined by said stop-weld material, inflating the unwelded areas by means of fluid pressure injected through said opening, injecting a fluid in the resulting passageway, sealing the hole through which the injection was made to seal said fluid in said system of passageways, and thereafter attaching the resulting panel having a conduit containing the fluid to a heat exchanger tube.

3,088,194
METHOD OF MANUFACTURING SYNTHETIC STAR SAPPHIRE JEWELRY PIECE
Joseph Genoa Donadio, 1776 Foster Ave., Schenectady, N.Y.
Filed Oct. 10, 1960, Ser. No. 61,667
4 Claims. (Cl. 29—160.6)



1. The method of producing a synthetic star sapphire for use in a piece of jewelry consisting of obtaining a boule of the synthetic sapphire material, cutting a stone from the boule, shaping the stone so that it has at least one flat surface, fastening the stone to a surface of a fixture having a plurality of straight sides, rubbing the flat surface over a flat surface covered with finely divided diamond dust to obtain a diffraction pattern by utilizing the fixture, the flat surface over which the flat surface of the stone is to be applied having a straightedge projecting upwardly therefrom, a side of the fixture being rubbed against the straightedge of the surface containing the finely divided diamond dust particles during the first mentioned rubbing step with the flat surface of the stone in contact with the dust, applying a light-reflecting material to the flat surface, bonding a backing to the flat surface and fastening the resultant stone into a jewelry fixture.

3,088,195
CLADDING WITH POWDERED METAL TO FORM BIMETALLIC PRODUCTS
Richard M. Nestlich, Jr., Joseph G. Dunleavy, and John G. Kurz, all of Columbus, and John L. Gray, Dublin, Ohio, assignors, by mesne assignments, to Copperweld Steel Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed June 16, 1958, Ser. No. 773,125
17 Claims. (Cl. 29—182.3)



16. A bimetallic clad product comprising, in combination, a preformed ferrous or alloy core, a cladding comprising a continuous coherent layer of aluminous metal metallurgically bonded to said core, said cladding originally comprising powder metal compacted against said core to a density approaching that of solid metal and remaining substantially in unmelted condition throughout rapid heating at a temperature in the neighborhood of from about 1000° F. to about 1150° F. but below the melting point of said aluminous metal and rolling said heated clad core at sufficient pressure to cause said clad-

ding to become coherent and adhere to said core with a metallurgical bond, the interface between said cladding and core being substantially free of any continuous or substantial layer of brittle aluminous metal-iron compound.

3,088,196
METALLIZING WIRE
Sam Tour, New York, N.Y., assignor to Metallizing Engineering Co. Inc., a corporation of New Jersey
No Drawing. Continuation of application Ser. No. 609,354, Sept. 12, 1956. This application June 2, 1960, Ser. No. 33,386
8 Claims. (Cl. 29—196.3)

1. A metallizing wire of the following composition:

	Percent
Carbon	0.06 maximum.
Silicon	0.15 maximum.
Manganese	2.0–2.60.
Sulphur	0.035 maximum.
Phosphorus	0.035 maximum.
Chromium	1.25–1.75.
Nickel	4.0–4.60.
Molybdenum	1.20–1.60.
Aluminum	3.0 maximum.
Iron	Balance.

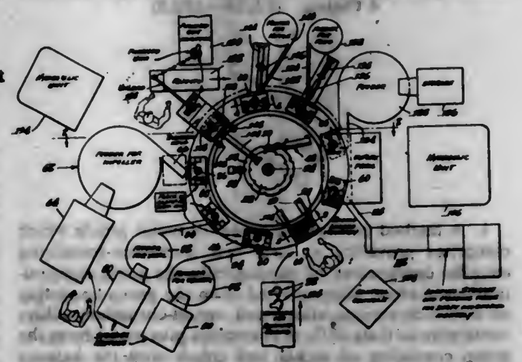
3,088,197
MANUFACTURING SYSTEM USING FREE FLOATING FIXTURE LINE
Don A. Cargill, 822 Fairfax, Birmingham, Mich.
Filed Feb. 27, 1961, Ser. No. 91,819
8 Claims. (Cl. 29—200)



1. Manufacturing apparatus for performing successive operations on production workpieces at successive work stations, such as successive assembly or machining or combination of machining and assembly operations, characterized by a conveyor line, a plurality of work stations spaced along said conveyor line requiring accurate workpiece location relative thereto, a plurality of fixturized pallets independently movable along said conveyor line, selectively operable interengaging means between said fixturized pallets and said work stations for accurately locating workpieces during the operation at each respective work station independently of the operation at and movement of fixturized pallets relative to other of said work stations, the spacing between certain of said work stations being adequate for a plurality of pallets therebetween.

3,088,198
APPARATUS FOR ASSEMBLING AND TESTING PUMP PARTS
Ernest J. Svenson, Rockford, Ill., assignor to Odin Corporation, Rockford, Ill., a corporation of Illinois
Filed Sept. 11, 1958, Ser. No. 760,355
7 Claims. (Cl. 29—208)

1. Apparatus for sequentially assembling pumps, comprising, in combination, a rotatable assembly table, a series of circumferentially spaced assembly fixtures mounted on said table, spring means yieldably supporting each of said fixtures, indexing means coacting with said table for intermittently indexing the latter to a succession of angularly spaced positions to locate the individual assembly fixtures in a succession of assembly stations, pump impeller supplying means located at a first of said assembly stations, pump impeller applying means at said first station for applying a pump impeller to the assembly fixture in said first station, each assembly fixture including a yieldably supported depressible impeller locating element, sealing device supply means located at a second of said stations, sealing device applying means at said second station for applying a sealing device to a pump impeller supported by the assembly fixture in said second station, each of said assembly fixtures including housing clamping means, clamp applying means located at a third one of said stations for effecting clamping of a pump housing applied to a pump impeller supported by the assembly fixture in the third station, pump shaft supply



means located at a fourth one of said stations, pump shaft applying means at said fourth station for applying a pump shaft to a housing encased pump impeller supported by the assembly fixture in said fourth station, transfer means located at a fifth one of said stations for transferring to a testing station successive assembled pumps moved to the fifth station by said assembly fixtures, pump driving means at said testing station movable into driving relation to an assembled pump in said testing station, and fluid supply and discharge means at said testing station movable into connected relation to a pump in said testing station.

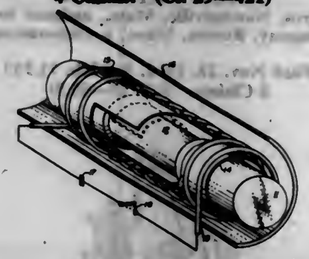
3,088,199
TIRE TOOL
Richard J. Lewis, Uniontown, Ohio, assignor to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
Filed Oct. 25, 1960, Ser. No. 64,914
3 Claims. (Cl. 29—221.5)



1. A tool for pushing a valve stem of an inner tube through the valve hole in a gutter-edge rim base prior to dismounting a tire and tube assembly from the rim, said tool comprising a lever member, a rim-engaging member attached to one end of said lever member to engage the gutter portion of the rim base to provide a fulcrum for leverage action of the lever member and to maintain the tool in position as the lever member is moved toward the rim base, and a valve-pushing member adjustably movable along said lever arm between the ends thereof having a valve-engaging portion extending substantially normal to said lever member and in an arcuate configuration toward the rim-engaging member, the radius of the arc being equal to the approximate distance of the valve hole from the gutter of the rim base with which the tool is most commonly used, said valve-engaging portion being of a diameter less than that of the valve hole in said rim base with the end thereof bevelled at a substantial angle

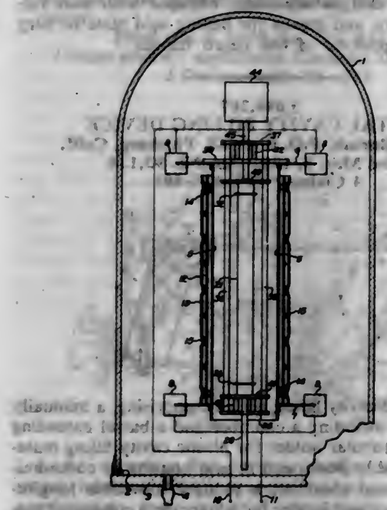
to the length whereby the bevelled portion generally faces toward the rim-engaging member and the bevelled face having an axially extending recess formed therein to provide a seat for the end of the valve stem, the base of said recess being parallel to the lever member with the end of the bevelled portion engaging the valve stem to push the stem therefrom after the valve pushing member passes through the valve hole.

3,088,200
MAGNETIC SHAPING PROCESS
Dale H. Birdsall, Livermore, and Robert E. Riley, Hayward, Calif., assignors to the United States of America as represented by the United States Atomic Energy Commission
Filed Nov. 10, 1960, Ser. No. 68,580
4 Claims. (Cl. 29—421)



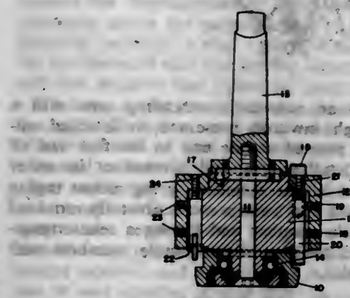
1. In a process for shaping electrically conductive materials the steps comprising placing said material in circumjacent spatial relation about a mandrel of a shape desired to be formed, and applying a high intensity pulsed time varying magnetic field against the surface of said material to create radial pressure thereagainst to force said material against said mandrel and thereby conform the material to the mandrel shape.

3,088,201
METHOD OF MAKING A CERAMIC-TO-METAL SEAL
William C. Louden, South Euclid, and Elmer Homonnay, Cleveland Heights, Ohio, assignors to General Electric Company, a corporation of New York
Filed Aug. 26, 1959, Ser. No. 836,201
1 Claim. (Cl. 29—471.9)



The method of making a sealed transparent high density polycrystalline alumina device which comprises the steps of stacking in sequence such an alumina back-up ring, a thin titanium washer shim, an end cap, a thin titanium washer shim, such an alumina tubing, a thin titanium washer shim, an end cap, a thin titanium washer shim, and such an alumina back-up ring, said end caps consisting of an Fe-Co-Ni alloy in the approximate proportions 48–26–26, pressing the stacked parts together and heating them in a nonoxidizing atmosphere above the titanium-nickel eutectic point at approximately 955° C. but below the titanium-iron eutectic point at approximately 1060° C.

3,088,202
METAL CUTTING METHOD AND APPARATUS
Robert J. Murray, Olean, N.Y., assignor to the United States of America as represented by the Secretary of the Army
Filed Dec. 11, 1959, Ser. No. 859,075
1 Claim. (Cl. 29—567)
(Granted under Title 35, U.S. Code (1952), sec. 266)



In a device for trimming the edge of a tubular member, the combination of
a pilot extensible into said tubular member and having a radial extension adapted to engage the inner periphery thereof,
a body supported by said pilot and rotatable with respect thereto, said body having on its outer circumferential periphery a plurality of longitudinal grooves alined with the outer edge of said extension,
a cap fixed to said body and extending over said circumferential periphery,
a cutter having its shank in one of said grooves and extending therefrom toward said edge,
means extending through said cap against the end of said cutter shank for adjusting the spacing between said cutter and said edge,
means extending through said cap against a side of said cutter shank for locking said cutter shank to said body,
a knurler having its shank in another of said grooves and extending therefrom toward said edge,
means extending through said cap against the end of said knurler shank for adjusting the spacing between said knurler and said edge,
means extending through said cap against a side of said knurler shank for locking said knurler shank to said body, and
means whereby a rotational movement may be imparted to said cap and said body.

3,088,203
CAN OPENERS
Albert Henry Franks Perl, Norton, Stourbridge, England, assignor to Joseph Billingham Limited, Cradley Heath, Staffordshire, England, a company of Great Britain
Filed Apr. 10, 1961, Ser. No. 101,763
Claims priority, application Great Britain Apr. 13, 1960
4 Claims. (Cl. 30—23)

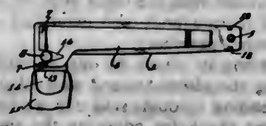
1. A can opener comprising in combination a first handle member having a portion bifurcated at one end

to form two limbs having parallel outwardly presented, concavely curved edges, a second handle member pivoted at one end to the bifurcated end of said first handle member, a flat cutting blade lying between the limbs of said bifurcated portion and pivoted at an intermediate point to an intermediate point on said first handle member and having an inwardly extending arm provided in its edge adjacent said first handle member with an open-ended slot radial to said pivot of the blade and first han-



dle member, and an outwardly extending arm with a substantially straight inwardly presented, knife-edged cutting edge, a link pivoted at one end to the free end of said inwardly extending arm and pivoted at its other end to said second handle member, spring means urging the handle members apart and a catch pivotally mounted on said first handle member and having a sear engageable in the closed position of the handle members with said open-ended slot.

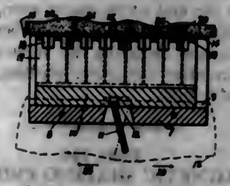
3,088,204
NAIL CLIPPER
Milton R. Levitt, New Brunswick, N.J., assignor to The Scholl Mfg. Co., Inc., Chicago, Ill., a corporation of New York
Filed Sept. 14, 1961, Ser. No. 138,079
7 Claims. (Cl. 30—28)



1. A nail clipper comprising a pair of superposed leaves secured together at one end of the clipper and resiliently separated at the other end, confronting knife edges one on the side of each leaf in the region of leaf separation, and means to close said leaves to bring the knife edges into cutting relationship, said means extending farther laterally toward the knife edges from the longitudinal axis of the upper leaf than toward the opposite side of the leaf to apply pressure immediately adjacent the cutting edges.

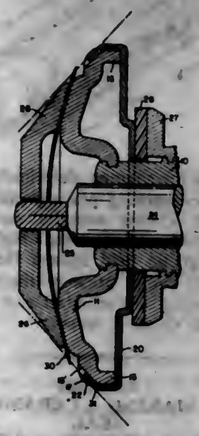
3,088,205
DRY SHAVER WITH HAIR PULLING MEANS TO AID IN CUTTING THE HAIR
Robert Ellis, 5085 Saratoga Ave., San Diego, Calif.
Filed Sept. 15, 1961, Ser. No. 140,628
7 Claims. (Cl. 30—34)

1. A dry shaver comprising a body, a thin perforated shield attached to the upper part of said body, said shield being adapted to be drawn across the skin of a user, said perforations in said shield being adapted to receive the protruding hair on said skin as said shield is drawn across said skin, slotted shearing elements reciprocating closely underneath said perforated shield and forming a hair shaving means therewith, means within said body for reciprocating said shearing elements, and a hair pulling element interposed between each pair of said reciprocating



shearing elements and attached to said reciprocating shearing elements.

3,088,206
ADJUSTABLE RAZOR
Joseph Muros, Newtonville, Mass., assignor to The Gillette Company, Boston, Mass., a corporation of Delaware
Filed Nov. 28, 1960, Ser. No. 71,933
8 Claims. (Cl. 30—60.5)



1. A safety razor comprising a laterally convex blade-supporting member presenting rigid longitudinally spaced fulcrum shoulders, in combination with a spring plate having guard flanges adjustably engaged with said fulcrum shoulders, and means for flexing said plate to vary the effective position of the guard flanges.

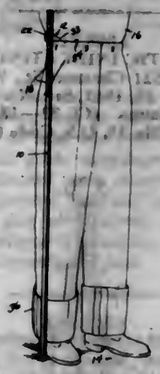
3,088,207
DENTAL CAVITY FILLING DEVICE
Harold Borsuk, P.O. Box 968, Pittsburg, Calif.
Filed Mar. 3, 1961, Ser. No. 93,124
4 Claims. (Cl. 32—60)



1. A dental cavity filling device comprising, a manually held housing including a chamber and a barrel extending therefrom, a tubular holder for plastic cavity filling material demountably positioned in said housing in communication with said chamber, a plunger moveable longitudinally through said holder for advancing a column of material into said chamber, a tube mounted for reciprocation

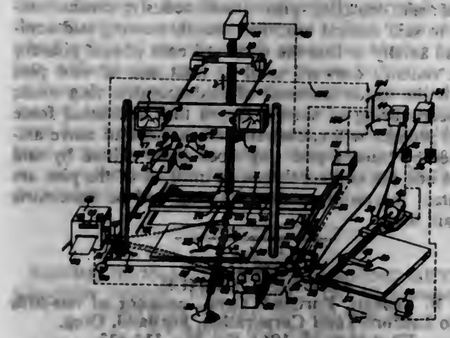
in said chamber for movement across said column to shear off an individual pellet and to position said pellet in registration with said barrel, and a manually operated valve mounted for controlling the admission of gas under pressure to said chamber for driving said pellet through said barrel to a tooth to be filled.

3,088,208
TROUSER LENGTH GAUGE
James P. Mitchell, Forest City, Iowa
Filed Sept. 9, 1957, Ser. No. 682,683
1 Claim. (Cl. 33—2)



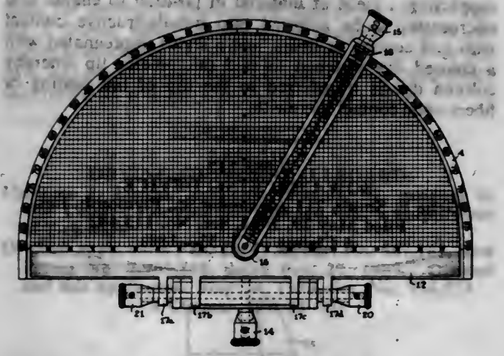
In a trouser gauge: an elongated element having a scale of calibrations at one end; numbers identifying points on said scale of calibrations, said numbers representing, less by a predetermined amount, the distance from the identified point on the scale to the other end of said elongated element; and an indicator slidably embracing said elongated element; said indicator having three calibrations on it spaced from each other along the same axis as said indicator slides on said elongated element.

3,088,209
APPARATUS FOR DRAWING PROFILES
Kurt Schwidefsky, Aalen, Wurttemberg, and Hans Utz, Heidenheim (Brenz), Wurttemberg, Germany, assignors to Carl Zeiss, Heidenheim (Brenz), Wurttemberg, Germany
Filed Oct. 7, 1959, Ser. No. 844,983
Claims priority, application Germany Oct. 9, 1958
3 Claims. (Cl. 33—20)



1. An apparatus for drawing profiles for the stereoscopic interpretation of terrestrial views comprising, in combination, two terrestrial photographs; two stereoscopic viewing means, each of said viewing means having an eye piece, a plurality of mirror-prisms and an objective lens, and two reference marks, respectively arranged in the ray path formed in said stereoscopic viewing means for said photographs, said terrestrial photographs and said reference marks forming a steroscopic terrestrial image with a visual reference mark floating therein; a displacement element movable in three perpendicular coordinate directions including two horizontal and one vertical direction; means for recording the position of said displacement element; means for transferring the three directional movement of said displacement element as individual, two directional displacements of said terrestrial photographs relative to said reference marks; first driving means for moving said element in a settable straight line in a horizontal plane, thereby guiding said visual reference mark on a correspondingly straight line through said terrestrial image; a second driving means for moving said displacement element in a vertical direction; a drawing means having a slide carriage; two spindles provided for said slide carriage at right angles to one another for displacement of said slide carriage in two directions which are perpendicular to each other; a first electrical receiver; a first control element responsive to the movement of said first driving means and connected to said first receiver; first follow up control means including a first servo motor electrically connected to and energized by said first receiver, said first servo motor driving one of said spindles of said slide carriage; a second receiver; a second control element connected to said second receiver and being responsive to said second driving means and to said vertical movement of said displacement element; and a second follow up control means including a second servo motor connected to and energized by said second receiver, said second servo motor driving the other one of said spindles of said slide carriage.

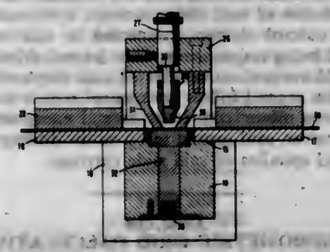
3,088,210
MICROMETRIC GRID CALCULATOR
William E. Cunningham, 111 S. Central Ave., and Arnold L. Ross, 1847 Madera Ave., both of Visalia, Calif.
Filed Jan. 20, 1959, Ser. No. 787,930
2 Claims. (Cl. 33—76)



1. A micrometric grid calculator comprising a base for mounting on a tripod head; an arc, calibrated in degrees, supported by three extensions or arms of the said base; a sub-grid frame attached to said base by a tongue and groove slide to permit unidirectional movement relative to said base; a semicircular movable grid, with grid lines inscribed on the face thereof .100 of an inch apart in two directions at right angles, attached to the said sub-grid frame in such a manner as to permit movement relative to said sub-grid frame and said base in a direction at right angles to the direction of movement of the said sub-grid frame relative to the said base; a movable arm, with its proximal end pivotally attached to an ex-

tension of the said base and its distal end extending beyond the outer edge of the said arc, a transparent slide, attached to said arm with tongues and grooves so as to permit longitudinal movement of the said slide relative to the said arm, said transparent slide being cross-marked with index lines spaced .1000 of an inch apart; a micrometer on the distal end of the said slide to provide micrometric measurement of the movement of the said slide relative to the said arm; two micrometers at opposite ends of the movable grid to provide micrometric measurement of the horizontal movement of the said grid relative to a selected index mark on the said slide of the said movable arm; and a fourth micrometer at the middle of the straight side of the said semi-circular grid to provide micrometric measurement of vertical movement of the said movable grid relative to the said selected index mark on the said movable arm.

3,088,211
DEVICE FOR MEASURING FIBER AND COATING HEIGHT
William E. Semple, Endicott, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 8, 1961, Ser. No. 157,909
10 Claims. (Cl. 33—167)



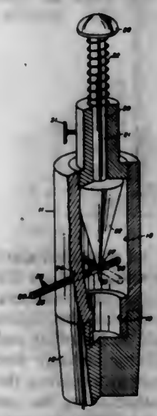
1. In a device for measuring the height of a coating or of fibers projecting from the surface of a piece of material, a micrometer having a movable tip, means for supporting a piece of material in position to enable said micrometer to be adjusted into non-destructive contact with said coating or fibers, and a stylus impregnated with a colored dye fastened to said micrometer tip whereby colored dye is transferred to the top of the coating or fibers upon contact therewith.

3,088,212
BOW CHECKING DEVICE
Gene E. Smith, 211 Alexander St., Plymouth, Ind.
Filed May 29, 1961, Ser. No. 113,482
4 Claims. (Cl. 33—180)



1. A device for checking the bracing height and locating the nocking points on the bow string, comprising an elongated blade being of generally rectangular shape and having an upper straight edge and a lower straight edge, a scale in inches on said blade, a base member of generally rectangular shape being rigidly joined to one end of said blade at right angles thereto in T-shaped relation and having a string contact edge opposite said blade and at right angles to said straight edges, a notch in said contact edge spanning an area intersected by lines projected from said straight edges, a pair of spring clips spaced from one another on said base and projecting outwardly from said string contact edge, said clips forming a clamp for holding the bow string firmly against said contact edge and having a string receiving slot facing in the direction opposite said blade, and a scale in inches on said base adjacent said notch.

3,088,213
AUTOMATIC INDICATING TOOL
Erwin J. Smoltz, 13521 Chestnut St., Westminster, Calif.
Filed May 31, 1961, Ser. No. 113,967
2 Claims. (Cl. 33—180)
(Granted under Title 35, U.S. Code (1952), sec. 266)



2. A centering tool for mounting cylindrical ring stock on a horizontal machine table rotatively supported on a vertical spindle provided with a tapered socket, comprising a tool body having an axial cylindrical bore and a tapered base mounted in said spindle socket, a piece of ring stock on said machine table eccentric to said tool body, a plurality of sliding centering pins of equal length radially mounted in a horizontal plane in said body and having their inboard ends terminating adjacent the axis of said body, a plunger slidably mounted in said axial bore and provided with a conical head; said conical head having an apex aligned for initially contacting all the inboard ends of said centering pins simultaneously; means connected to said conical head for initially moving said conical head axially so that the outboard ends of said pins are moved radially outward until at least one of said pins contacts the inside diameter of said eccentric ring stock; said means being of such a length that additional force on said plunger will cause said conical head to move axially thereby causing said ring stock to be shifted by said at least one pin contact therewith until all of the pins are in contact therewith so that the ring will be concentric with said tool.

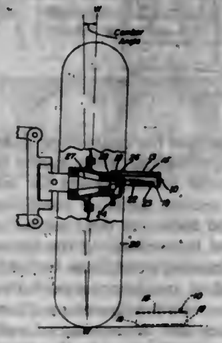
3,088,214
ALIGNING DEVICE
Elmer F. Bennett, Portland, Oreg., assignor of one-fifth to Ledford-Todd Corporation, Portland, Oreg.
Filed May 29, 1961, Ser. No. 113,422
1 Claim. (Cl. 33—203.15)

An aligning device for vehicle wheels comprising an elongated bar, a pair of spaced legs of equal length disposed longitudinally of said bar, a third leg including a first portion extending perpendicular to said first pair of legs at a point between and equidistant from the legs of said pair and a second portion at right angles to said first portion and extending parallel to each leg of said pair, said second portion being equal in length to the legs of said pair, a mounting magnet at the end of each leg, a guide apendage adjacent each end of said body on the side thereof opposite said first portion of said third leg, a pulley at each end of said bar, a spring loaded



reel secured to said bar on the side opposite said guide apendages, an aligning line in said reel extended along said opposite side of said bar over one of said pulleys and then over said guide apendages and the other of said pulleys, a graduated scale attached to the other end of said line for alignment with said bar, a mount for said scale including a pair of relatively short legs, at each end thereof, and magnetic attaching means at each end of each of said last-mentioned legs.

3,088,215
WHEEL CAMBER AND CASTER GAUGE
John H. Payne, Jr., 79 West St., Ballston Spa, N.Y.
Filed Apr. 28, 1958, Ser. No. 731,320
4 Claims. (Cl. 33—203.18)



2. In a camber and caster gauge for a pivoted axle mounted wheel, a symmetrical wedge shaped open box frame having a flat base substantially perpendicular to the axis of symmetry and centrally arched to straddle the wheel axle and provided with means for biasing the base into self-adjusting engagement with the hub of the wheel, said means including an elastic element connected under tension between the wheel axle and a point within the open box frame, and an elongated arcuated bubble level fixed in position on the frame medial between the tapering sides thereof with the plane of curvature of the level perpendicular to the arched base.

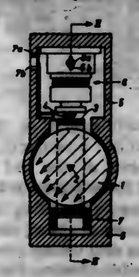
3,088,216
BIDIRECTIONAL LEVEL INDICATING DEVICE
Alexander Jocsak, 1105 Ewing Ave., Clearwater, Fla.
Filed May 5, 1961, Ser. No. 108,071
2 Claims. (Cl. 33—211)

1. A bidirectional level indicating device for indicating in one visual direction both the levelness in that direction and in a direction transverse thereto comprising a first spirit level having an axis mounted to extend in the visual direction, a second spirit level having an axis mounted to extend transverse to the visual direction, each of said levels having the spaced indicia thereon and a planar reflecting means mounted to extend transverse to both axes to produce an image of the first spirit level in



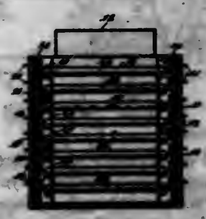
the reflecting means that has an axis extending parallel with the axis of the second spirit level and with the spaced indicia of the image being aligned with the spaced indicia of the second spirit level.

3,088,217
ORIENTATION COMPASS
Martin Drodofsky, Heidenheim (Brenz), Germany, assignor to Carl Zeiss, Oberkochen, Wurttemberg, Germany
Filed Oct. 31, 1961, Ser. No. 149,011
Claims priority, application Germany Nov. 10, 1960
8 Claims. (Cl. 33—222)



1. An orientation compass, particularly used as supplement for geodetical instruments, including within a housing a frame, spring means for suspending said frame within said housing for pivotal movement about a vertical axis, and a polar magnetized circular disc mounted within said frame for rotation about a horizontal axis.

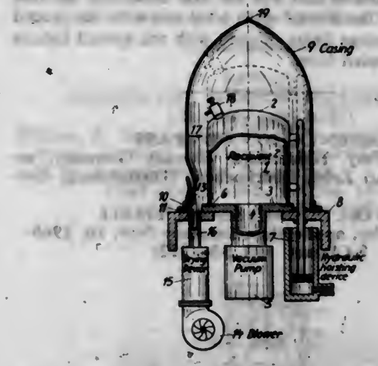
3,088,218
DRYING GYPSUM WALLBOARD
Clarence J. Loechl, Arlington Heights, Ill., assignor to The Celotex Corporation, Chicago, Ill., a corporation of Delaware
Original application Feb. 23, 1956, Ser. No. 567,162, now Patent No. 2,909,850, dated Oct. 27, 1959. Divided and this application May 20, 1958, Ser. No. 736,553
4 Claims. (Cl. 34—7)



1. The method in the drying of gypsum wallboard containing water in excess to that required for rehydration and comprising the steps, while conveying the board through a tunnel-form drier and while subjecting the

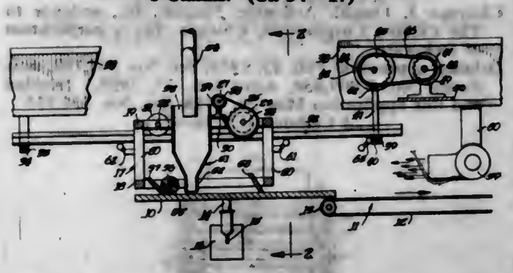
major surfaces to the drying effect of flowing drying medium, of providing adjacent to and around the side edge portions only of the board a relatively static gaseous cushion incorporating a content of substantially atomized cooling fluid.

3,088,219
HIGH-VACUUM PLANTS
Thaddäus Josef Kraus, Vaduz, Liechtenstein, assignor, by meme assignments, to Balzers Patent- und Lizenz-Anstalt, Balzers, Liechtenstein, a company of Liechtenstein
Filed Apr. 7, 1960, Ser. No. 20,790
Claims priority, application Switzerland Apr. 7, 1959
7 Claims. (Cl. 34—15)



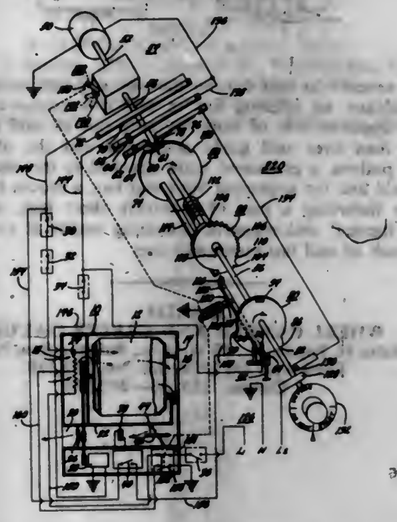
4. A device for treating articles under high vacuum comprising in combination: a recipient, a casing surrounding said recipient at least at one end thereof, means for moving said recipient from an open to a closed position within said casing, a gas-tight sealing member engaged by said recipient in its closed position, means for evacuating said recipient, means in said casing providing access to the interior thereof, a flexible closure for said access means, a source of dried gas, and means for injecting said dried gas into the interior of said casing.

3,088,220
SUPERSONIC VIBRATING DRYING SYSTEM
Frank R. Ofner, Portland, Oreg., assignor, by mesne assignments, to Industrial Powertronix, Inc., Portland, Oreg., a corporation of Oregon
Filed Oct. 21, 1957, Ser. No. 691,388
8 Claims. (Cl. 34—17)



3. In a method of drying a wetted granular material, the steps of spreading a relatively thin layer of such wetted material along a receiver having a surface for the receipt of such material thereon to effect an intimate contact between such material and said receiver surface, vibrating said receiver surface at an ultra-sonic frequency to impart an ultra-sonic frequency vibratory energy to such wetted material spread therealong to vaporize moisture carried thereby and thereby release such vaporized moisture therefrom, passing a stream of air over such layer of material during the vibration thereof to remove the vapor released therefrom, and thereafter removing the thusly dried granular material from said receiver.

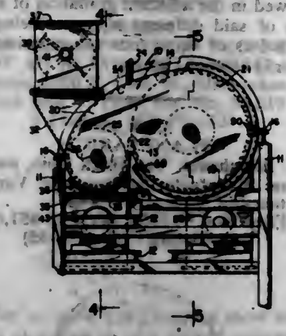
3,088,221
TIME COMPARATOR OR DRIER CONTROL
Nelson J. Panning and George B. Long, Dayton, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed June 29, 1959, Ser. No. 823,763
16 Claims. (Cl. 34—45)



12. An arrangement for controlling a dryer in a drying cycle for moist fabric comprising, means for initiating the drying of said moist fabric, means for sensing predetermined first and second moisture conditions leaving said fabric before said fabric is dry, means actuatable after a delayed interval in response to the sensing of said predetermined first moisture condition by said sensing means for selecting a fabric moisture test period variable in duration in accordance with the time elapsed between the initiation of said drying and the sensing of said first moisture condition, and means for repeatedly comparing the time period necessary to raise the moisture condition leaving said fabric from said first moisture condition to said second moisture condition with said fabric moisture test period until said fabric is dry.

3,088,222
FREEZE DRYING SYSTEM
Robert C. Mace, Santa Monica, Calif., and Frederick J. Moore, Pasadena, Calif. (both % John H. Rice, 111 W. 7th St., Los Angeles 14, Calif.)
Filed July 1, 1959, Ser. No. 824,261
9 Claims. (Cl. 34—92)

1. Apparatus for freeze-drying material containing sublimable frozen-state liquid, the apparatus comprising a substantially closed vessel defining an elongated sublimation chamber and also defining an elongated precipitation chamber extending in generally parallel adjacent relation to the sublimation chamber means for agitating an elongated mass of said material in the sublimation chamber, the precipitation chamber opening into the adjacent sublimation chamber along substantially the entire length of said elongated mass to form an elongated vapor passage between the chambers, means for heating the material in said elongated mass, the vessel having a vapor-precipitating wall at least partly defining the precipitation chamber, means for chilling said wall, and a suction line leading from the interior of the vessel for maintaining in said chambers a partial vacuum sufficient to extract sublimation vapors from said frozen liquid, said vapors passing substantially directly and laterally into the precipitation chamber through said vapor passage from each point of said elongated mass and precipitating in part as ice on said wall.



3,088,223
EQUIPMENT FOR DRYING OF TEXTILE GOODS
Heinz Fleissner, Egelsbach, near Frankfurt am Main, Germany, assignor to Firma Fleissner G.m.b.H., Egelsbach, near Frankfurt am Main, Germany
Filed Oct. 20, 1959, Ser. No. 847,641
Claims priority, application Germany Oct. 20, 1958
1 Claim. (Cl. 34—116)



Apparatus of the character described, comprising rotary drum means, each having a perforated surface for drawing air by suction into said drum means, individual flexible frame means having provision to hold material to be dried and each constructed and arranged for substantially peripheral engagement with said drum means and maintenance thereon by said suction, and means for guiding said individual frame means for movement onto, over and off said drum means, each frame means having predetermined portions which are adapted to adhere by suction to the drum means, said predetermined portions being recesses provided in said frame means to define suction cups.

3,088,224
APPARATUS FOR TREATING FABRIC BY MOISTURIZING
Eugene Cohn, Great Neck, Joseph Cohn, New York, and Frank Catalfo, Elmont, N.Y., assignors to Samcoe Holding Corporation, Woodside, N.Y., a corporation of New York
Filed Apr. 23, 1958, Ser. No. 730,439
1 Claim. (Cl. 34—159)

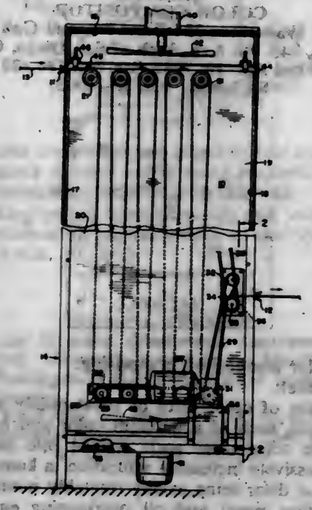
Apparatus for controllably raising the moisture content of knitted fabric, which comprises

(*a*) a housing comprised of imperforate walls arranged to form an effectively completely enclosed and substantially unobstructed zone for confining a predetermined body of treating atmosphere,

(*b*) means comprising a plurality of guide rolls within the zone for supporting and passing the knitted fabric continuously through the zone in a sinuous path comprising a plurality of back and forth runs,

(*c*) means for injecting finely atomized moisture into the housing in open corner areas of the zone to create and maintain a predetermined moisture level in the confined body of treating atmosphere within the zone,

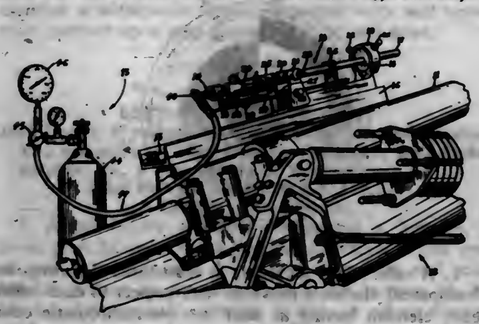
(*d*) said housing having an unobstructed interior configuration whereby the adjacent runs of the fabric are freely exposed to each other throughout their length, and



(*e*) agitation means within the housing for maintaining the confined body of moisture-laden atmosphere in a state of substantial random turbulence throughout said enclosed and unobstructed zone and causing the moisture-laden atmosphere to flow in random manner and at high velocity around and through the fabric,

(*f*) said agitation means comprising fans mounted at each end of the housing, adjacent said guide rolls, for directing streams of moisture-laden atmosphere toward the center of the housing and into the runs of the fabric.

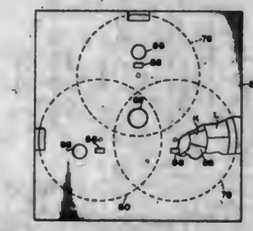
3,088,225
SUBCALIBER HOWITZER TRAINER
E Henry Amistadi, Syosset, N.Y.
(9 Jerome Road, Syosset, N.Y.)
Filed May 26, 1960, Ser. No. 32,062
6 Claims. (Cl. 35—25)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A pneumatic artillery trainer comprising a firearm with a barrel, a second barrel coupled to and aligned

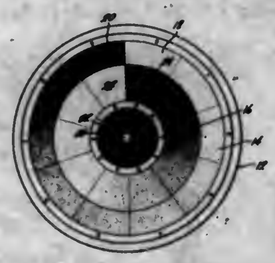
with said firearm barrel for firing a subcaliber projectile, a platform rotatably coupled to said second barrel, a breech member slidably mounted on said platform to facilitate loading of the trainer with the subcaliber projectile, rotatable locking means coupled to said breech member for locking the breech member to the barrel and variable pressure supplying means coupled to said breech member for supplying pneumatic pressure for firing the projectile.

3,088,226
COLOR COMPOSITOR
Charles H. Watterson, 724 Beryl St., and Gail E. Brinkworth, 743 9th Ave., both of San Diego, Calif.
Filed Apr. 10, 1962, Ser. No. 186,420
8 Claims. (Cl. 35—28.3)



1. A color compositor, comprising:
a face panel;
a plurality of color discs of substantially transparent material, each of a different color and having concentric color rings each divided into segments of progressively increasing saturation in known steps;
said color discs being axially rotatably mounted below said face panel and all overlapping equally at a common area;
said face panel having a first opening above the overlapping area of said color discs, said opening exposing one color ring of each disc;
said face panel having further openings positioned to expose other color rings of each disc;
the segments of said color rings being relatively oriented so that the same saturation of a particular color is exposed simultaneously below all openings relating to that disc.

3,088,227
COLOR HARMONY CHART
Charles W. Tudor, New York, N.Y., assignor to Tudor Color Corporation, New York, N.Y., a corporation of New York
Filed Mar. 24, 1961, Ser. No. 98,246
6 Claims. (Cl. 35—28.5)



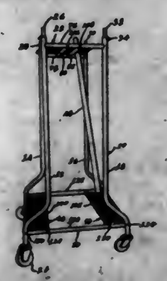
1. A color chart including at least three superimposed transparent elements movable with respect to each other, each element having at least two monochromatic color bands having color gradations ranging in corresponding steps from maximum brilliance to maximum saturation in opposite directions with respect to the relative motion of the elements, the corresponding bands on the elements being in overlying relation, said bands and elements being arranged so that for any color viewed by transmitted light in a gradation of one band the complementary of that color is viewed in the adjacent gradation of another band, said colors of said different elements being selected so that when colors of equal tone are superimposed the resultant color is a neutral grey.

3,088,228
PLANETARIUM
William A. Eisenhauer, Van Wert, Ohio, assignor to The Eisenhauer Manufacturing Company, Van Wert, Ohio, a co-partnership
Filed Nov. 9, 1959, Ser. No. 851,648
25 Claims. (Cl. 35—45)



1. A star scope for the visual representation of celestial bodies, comprising an enclosure, visible indicia of celestial bodies in said enclosure located with respect to each other in the relative position of celestial bodies when viewed from the earth, a sight opening in said enclosure opposite said indicia which is small relative to the size of the enclosure to permit viewing of the interior of the enclosure, and an opaque mask secured in said sight opening selectively positionable with respect to said enclosure for permitting the viewing from said opposite opening of only the indicia representative of the celestial bodies viewable from a specific latitude at a particular time on a specific date.

3,088,229
ROLL-MAP DISPLAY STAND
Lloyd E. Magers, Evanston, Ill., assignor to State Bank and Trust Company, Evanston, Ill., a corporation of Illinois, and Lloyd E. Magers, Evanston, Ill., trustees
Filed Feb. 6, 1961, Ser. No. 87,424
9 Claims. (Cl. 35—60)



1. A display stand for roll-maps and the like comprising a support structure including a plurality of frame tubes and a plurality of upper tubes telescoped in said frame tubes, means on said upper tubes for supporting roll-maps and the like in display position, a plurality of vertically shaped apertures formed in each of said upper tubes and a hook-like retainer releasably received in an aperture in each of said upper tubes and engaging

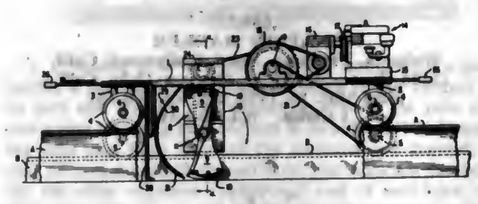
the upper end of the corresponding frame tube therefor whereby to afford secure positioning of a roll-map or the like at a desired elevation.

3,088,230
DEVICE FOR CLEARING SNOW FROM THE PATH OF AN AUTOMOBILE WHEEL
Isaac Bonic, 3000 N. 54th St., Milwaukee, Wis.
Filed Sept. 7, 1960, Ser. No. 54,519
9 Claims. (Cl. 37—53)



1. A tool for scraping and chopping snow and the like from the path of the wheel of a parked vehicle, said tool comprising a substantially planiform blade having a pavement-contacting lower margin and having at least one of its end margins with an intermediate offset to receive the periphery of the wheel and converging at a sharp tool apex toward said lower margin, whereby said blade is operable to remove substantially all material from the path of the wheel, the blade being provided with a handle for its manipulation, said tool apex being provided with a shoe of complementary form whereby to increase the width and mass of the apex.

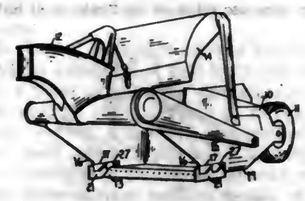
3,088,231
CONCRETE CURB FINAL GRADE MACHINE
Edward H. Morgan, 117 E. 51st St., Savannah, Ga.
Filed Nov. 6, 1961, Ser. No. 150,563
6 Claims. (Cl. 37—108)



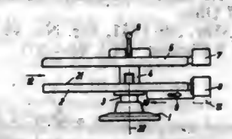
1. In a concrete curb final grading machine, a carriage having supporting and traction wheels adapted to travel on elongated laterally spaced parallel steel forms, a rotary cutter journaled in the carriage and having spirally curved blades, a motor mounted on the carriage driving the traction wheels to propel the carriage along the forms and driving the cutter to loosen the earth between the forms and dig a trench by throwing the loosened earth up and over one of the forms, a shroud carried by the carriage behind the cutter adapted to scrape the bottom of the trench formed by the cutter and engage loosened earth escaping a cutter blade and push the same forward for discharge from the trench upon re-engagement by the cutter, and a fixed scraper blade extending transversely across the machine directly behind the shroud and having an edge at its bottom adapted to scrape the bottom of the trench.

3,088,232
REPLACEABLE SHOE FOR SCRAPER BOWL EDGES
Herman F. Gilbertson, N. 4920 Rebecca, Spokane, Wash.
Filed June 15, 1962, Ser. No. 202,879
4 Claims. (Cl. 37—141)

1. In combination with a scraper side wall having an upright leading edge and a lower edge;
a shoe having an L-shape having an inside corner with two inner edges complementary to said leading edge and lower edge of said side wall respectively;
diagonally directed means on said wall and said shoe adapted to intermesh with one another to thereby locate said complementary edges to one another, said diagonally directed means being projected forwardly and downwardly relative to the side wall;
and locking means interconnecting said wall and said shoe adapted to prevent motion of said shoe relative to said wall.



3,088,233
IRONING PRESSES
Hugo Werner Geschka, Ginsterweg, Angermund Bezirk, Dusseldorf, Germany, assignor to Maschinenfabrik Peter Pfenningsberg G.m.b.H., Lintorf Bezirk, Dusseldorf, Germany
Filed Mar. 17, 1961, Ser. No. 96,475
Claims priority, application Germany Mar. 24, 1960
6 Claims. (Cl. 38—34)

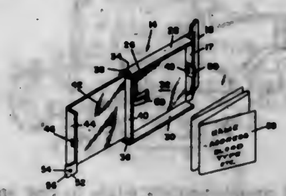


1. In an ironing press, in combination, a support, a buck mounted on said support having a generally horizontally extending ironing surface, a head displaceably mounted on said support for movement toward and away from said surface, a generally concave upper pressing-shoe member mounted on said head along a lateral edge thereof, a convex lower pressing-shoe member shiftably mounted on said buck for displacement transversely to said surface, said lower shoe member being disposed along a corresponding edge of said buck, and manually operable actuating means for displacing said lower shoe member relatively to said buck into a working position wherein said lower shoe member is engageable with said upper shoe member upon displacement of said head toward said surface and an inoperative position wherein said lower shoe member is withdrawn from engagement with said upper shoe member upon said displacement of said head.

3,088,234
BELT-BUCKLE ASSEMBLY
Jack Lesser, Wyncote, and Leon H. Halber, Philadelphia, Pa., assignors to Atlas Novelty Company, Inc., Philadelphia, Pa., a corporation of Pennsylvania
Filed Feb. 28, 1962, Ser. No. 176,374
6 Claims. (Cl. 40—21)

1. A belt-buckle assembly comprising a housing, a cover plate hinged to said housing, a bracket at one end of said housing, and a hook at the opposite end, said bracket having an opening therein, the portion of the bracket defining said opening having an offset stepped configuration whereby it extends from the plane of said housing to an offset plane rearwardly thereof, said hook also extending from said housing to said offset plane, said

housing being defined by a rear wall and upper and lower walls, said cover plate being hingedly connected to said upper and lower walls at one edge of said rear wall for pivotal movement into and out of closed position against the open face of said housing and having an offset flange which is pivotally arranged between said upper and lower walls to define a pivotally movable side wall of said housing, the opposite edge of said rear wall having a per-



pendicularly extending latch plate thereon projecting forwardly of said rear wall and provided with a latch lug, a second offset flange on said cover plate in spaced relation to said first-mentioned offset flange, a recess in said second offset flange of said cover plate adapted to be frictionally engaged by said latch lug when said cover plate is in closed position on said housing, and a clamping finger within said housing adjacent that edge thereof to which said cover plate is hingedly connected.

3,088,235
WIND OPERATED SIGN
Elliott J. Klee, Massillon, Ohio, assignor to The Massillon-Cleveland-Akron Sign Company, Massillon, Ohio, a corporation of Ohio
Filed Mar. 30, 1961, Ser. No. 99,516
2 Claims. (Cl. 40—37)



1. In a wind operated sign for mounting on the side of an upright standard, wherein a pair of spaced upper and lower arms extend outwardly from the standard, and wherein each arm includes a pivot post-receiving opening, the improvement including a rectangular rigid frame having spaced end and edge members, a pliable envelope encasing the frame and having opposite sides, the envelope having two edge and one end portions secured together and having another end portion open for insertion and removal of the frame, means for detachably securing the opposite sides of the open end together for holding the envelope on the frame, one of the pair of edge and end portions of the frame being composed of several parts including a tubular member adapted to receive an outturned end of the other portions, means for detachably holding the tubular member and outturned end rigidly together in a rigid frame position, a pivot post extending from one edge and being vertically aligned with the post on the other edge, the pivot posts being rotatably seated in aligned openings in the spaced arms, whereby the enclosing envelope on the frame serves as a wind vane for rotating the sign about an axis extending through the pivot post.

3,088,236
DISPLAY HOLDER
Melvin L. Hendrick, 6080 Twilight, Kalamazoo, Mich.
Filed Aug. 3, 1961, Ser. No. 129,088
5 Claims. (Cl. 40—308)



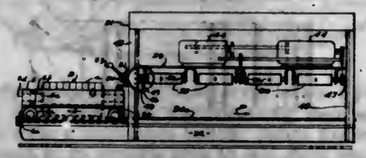
1. A display holder adapted for attachment to a container which includes laterally spaced slats and members disposed in crossing relation to the slats comprising a rectangular frame including top, bottom, and side members, eyelets mounted on said top and bottom and said side frame members centrally thereof to project rearwardly therefrom, a back panel disposed on the rear side of said frame in overlapping relation to portions thereof between said eyelets, said eyelets constituting means limiting the shifting movement of said back panel relative to said frame, said back panel and frame being adapted to supportedly receive a display sheet disposed on the front side of said back panel with its edges between said back panel and said frame, a horizontally disposed coil spring connected to said eyelets on said frame side members, and a flexible vertically disposed anchoring member connected to said eyelets on said frame top and bottom members, said anchoring member at at least one end thereof being detachably engageable with the coacting eyelet so that said anchoring member may be supportingly engaged with slats and horizontal members of a container on which said holder is disposed.

3,088,237
SNAP-ON MARKER
Walter A. Plummer, North Hollywood, Calif. (3546 Crowaridge Drive, Sherman Oaks, Calif.)
Filed Mar. 18, 1959, Ser. No. 800,251
1 Claim. (Cl. 40—316)



A snap-on type indicia-carrying one-piece marker adapted to be packaged flat until required for application about an article to be marked and then to be wrapped about the article and snapped in place thereabout in snug fitting frictional engagement with the object, said marker comprising a thin flexible strip of resilient material having suitable indicia imprinted permanently to one surface thereof, the opposite end portions of said strip having affixed crosswise thereof slide fastener strips having complementally shaped interfitting tongues and grooves formed of pliant material lying parallel to the axis of article encircled thereby and adapted to be pressed into high-strength positive mating engagement by finger pressure without need for auxiliary devices or accessories of any kind, the opposite ends of said marker strip formed with said interfitting tongues and grooves being of different lengths and wherein the longer of said ends is formed with abutment means extending crosswise of the grooves at the opposite ends thereof and cooperable with the other grooved end of said marker strip in the assembled position to prevent relative lengthwise sliding movement of said tongues and grooves.

3,088,238
APPARATUS FOR APPLYING DECORATIVE FOIL TO THE EDGE OF SHEET MATERIAL
Alfred Cahen, Cleveland Heights, and Herman S. Cahen, University Heights, Ohio, assignors to The World Publishing Company, Cleveland, Ohio, a corporation of Ohio
Filed July 15, 1960, Ser. No. 43,101
12 Claims. (Cl. 41—37)



1. Apparatus for decorating the edges of sheet material, comprising conveyor means defining a conveyance path, means for holding a predetermined number of sheets to be decorated in a compact group, means operable with said conveyor means for moving said holding means along said conveyance path, means in said path for abrasively sanding the sheet edges of predetermined sides of said group to thus locate the edges along each side of said group in coplanar relation to each other, and pressure means in said path disposed in tandem relation therealong to said sanding means for applying decorative foil to said sanded edges.

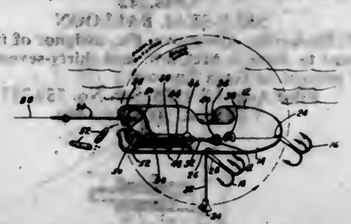
3,088,239
FISHING POLE WITH LINE RETRACTOR
Horace F. Weaver, R.F.D. 3, Moultrie, Ga.
Filed Apr. 13, 1962, Ser. No. 187,381
7 Claims. (Cl. 43—18)



1. A fishing pole with line retractor comprising a pole having a hollow bore of predetermined length formed in its butt end portion and extending toward the pole tip, and a line receiving hole formed in its side wall and opening into said bore adjacent the forward end thereof; a pair of eyes mounted on said pole, one adjacent the pole tip, the other adjacent the forward end of said bore; an elongated retractor member reciprocably mounted within said bore, said retractor member having a bight and eye formed on its forward end; a fishing line passing through the eye on the pole tip, then entering said hole formed in the pole adjacent the forward end of said bore, then making at least one run between said bight and the eye adjacent the forward end of said bore and then back into said bore with its free end secured to said eye on said retractor member; and means for manually moving said retractor member forwardly and rearwardly in said bore whereby said line will be retracted and extended in a predetermined ratio to the lateral distance moved by said retractor member.

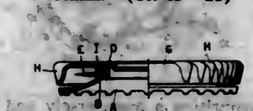
3,088,240
ANIMATED LURE
Harry L. Bellston, North Hollywood, Victor Capp, Van Nuys, and Roy David Murphy, Granada Hills, Calif.; said Bellston and said Capp assignors to said Murphy
Filed Jan. 5, 1959, Ser. No. 785,016
1 Claim. (Cl. 43—26.2)

An animated lure comprising:
a body adapted to support one or more hook elements and having recess means;
a pair of discrete shafts, each independently rotatable on a substantially parallel axis transverse to said body and in opposed relationship, each having an inner end extending into said recess means and an outer end extending outwardly of said body on opposite sides thereof;
discrete spring means in said recess means, each connected to one of said shafts and each being capable of being independently wound in response to independent rotation of said one of said shafts in one direction;
a paddle element secured to each of said outer ends of said shafts exteriorly of said body and each extending in a plane substantially normal to its shaft so as to be rotatable about the axis of its shaft;
said body having a pair of opposed second recess means, each adjacent one of said paddle elements and in communication with the exterior of said body;
a soluble detent element residing in each of said second



recess means and each soluble at a predeterminable rate when immersed in water;
a spring-biased trigger element in each of said second recess means and movable transversely relative to each, each trigger element normally being spring-biased into one position non-engageable by an adjacent paddle element during rotation thereof under the influence of its respective wound spring means and positionable by an adjacent water soluble detent element residing in its respective second recess means into a second position engageable by its adjacent paddle element for holding said adjacent paddle element against rotation, each said trigger element being independently responsive to immersion of said body in water to dissolve its respective soluble detent element so as to release its individual trigger element whereby the released trigger element is spring-biased into said one position to disengage its adjacent paddle element for rotation by its respective spring means.

3,088,241
INSECT-REPELLING DEVICE
Francesco Sbrojavacca, Via 10 Borgonuovo, Milan, Italy
Filed Mar. 27, 1961, Ser. No. 98,637
Claims priority, application Italy Mar. 31, 1960
1 Claim. (Cl. 45—15)



In a device for preventing the access of wingless, predaceous insects to containers holding edible materials, of the kind which comprises a base member of generally frustoconical shape having its outer surface of concave configuration with upwardly directed concavity and a top member consisting of an inverted cup-shaped member, the combination consisting of:
(*a*) a first ring-shaped, outwardly screw-threaded projection on the top portion of said base member;
(*b*) a second ring-shaped, inwardly screw-threaded projection downwardly depending from said top member and adapted to engage screwably said first outwardly screw-threaded projection;

(*c*) an annular horizontal resting surface on said base member, outwardly directed and located adjacent said first outwardly screw-threaded projection of said base member and forming an integral part thereof; and

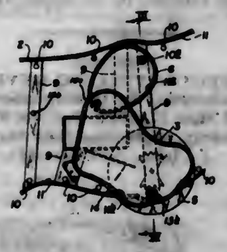
(*d*) a disc-like horizontal member having an acute angular cross-sectional shape with the angular edge pointing outwardly and adapted to rest on said annular resting surface in clamped engagement between said annular resting surface and said second ring-shaped inwardly screw-threaded projection by screwably engaging said first and said second screw-threaded projections whereby said disc-like member provides a barrier which cannot be surmounted by wingless, predaceous insects and thereby prevents access by such insects from said base member to said top member.

3,088,242
SELF-SEAL BALLOON
John F. Rockovits, Allentown, Pa., assignor of twenty-five percent to John J. McGlew, and thirty-seven and one-half percent to Geza Temesy
Filed Aug. 13, 1958, Ser. No. 754,777
7 Claims. (Cl. 46—90)



7. The new combination of a deflated toy balloon having a membraneous-like thin-walled body portion capable of great expansion and a tubular neck portion disposed outside of said body portion, said neck portion having on its inner walls a pressure-sensitive adhesive adapted to adhere together in intimate engagement opposite areas of said inner walls of the neck portion for the purposes of sealing the latter to maintain the balloon in an inflated condition.

3,088,243
COMBINED PLASTIC AND CARDBOARD TOY
Andrew N. Giardina, Leetsdale, Pa., assignor to General Molds & Plastics Corp., Leetsdale, Pa.
Filed Apr. 13, 1960, Ser. No. 21,971
4 Claims. (Cl. 46—123)



1. A toy comprising a transversely and longitudinally flexible plastic strip forming a closed loop defining the contour of a body portion thereof of irregular outline, said strip having an inwardly projecting molded bead portion extending along each edge portion of the strip along the entire length thereof, a plurality of spaced cross-strips, each extending between and interconnecting opposite confronting portions of said strip to provide a framework for maintaining a predetermined contour of said strip, a cardboard panel bearing an artistic design and held within the confines of said strip by said bead portion at each edge of said strip, and support elements rigidly secured to and projecting inwardly of said strip for directly supporting the body portions of said panels.

3,088,244
PROTECTIVE COVER
Nicholas D. Cossimiso, Victor, N.Y., assignor to National Distillers and Chemical Corporation, a corporation of Virginia
Filed Dec. 23, 1959, Ser. No. 861,665
3 Claims. (Cl. 47—29)



1. A protective cover structure comprising an elongated layered sheet wherein the longitudinal edge portions of said layers are united in substantially continuous relation, a plurality of transversely extending pockets formed between said layers and defined laterally of said sheet between spaced pairs of relatively narrow areas of imposed inter-layer adhesion, said pockets extending across the entire width of said sheet from one united edge to the other, said paired areas of adhesion extending transversely across the sheet and being disposed at intervals spaced from pair to pair longitudinally of said sheet, an opening adjacent each extremity of each pocket and extending through at least one layer of said sheet, and frame support means of inverted substantially U-shaped configuration positioned within said pockets and extending beyond the longitudinal edges of said sheet.

3,088,245
PLANT GUARD AND SUPPORT
Carl Menge, 19 3rd Ave. NW., Beulah, N. Dak.
Filed Dec. 15, 1961, Ser. No. 159,595
3 Claims. (Cl. 47—47)



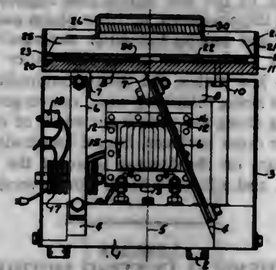
3. A plant encasing and supporting trellis comprising a funnel-shaped frame structure embodying a top hoop, a relatively small bottom hoop in a plane in parallelism below the top hoop, an intermediate hoop spaced from and in a plane between the top and bottom hoops, said intermediate hoop being of a diameter less than the diameter of the top hoop and of a diameter greater than the diameter of the bottom hoop, a plurality of circumferentially spaced rods having upper end portions connected to the top hoop, having median portions connected to the outer perimeter of the intermediate hoop, and lower converging end portions connected to the outer periphery of the bottom hoop, the terminal lower ends of said rods being straight and depending in parallelism below the plane of the bottom hoop and constituting ground penetrating prongs, and a relatively narrow corrugated collar embracing the upper end portions of the prongs with its upper edge in a plane slightly below the plane of the bottom hoop and its lower edge in a plane well above the terminal lower ends of said prongs.

3,088,246
BRIDGE AND METHOD OF BUILDING THE SAME
Gunnar Thimon, Stockholm, Sweden, assignor to Ingenjörsfirman Invent Aktiebolag, Stockholm, Sweden, a corporation of Sweden
Filed Oct. 20, 1958, Ser. No. 768,146
Claims priority, application Sweden July 22, 1958
1 Claim. (Cl. 59—148)



A bridge comprising shore anchorage means, a plurality of steel bands connected together along their adjacent edges to form a continuous bottom, means for coupling said bottom at its opposite ends to said shore anchorage means, at least two piers positioned between the shore anchorage means and supporting intermediate portions of said bottom, the bottom being suspended along a catenary curve from said piers, a concrete roadway carried and reinforced by said steel band bottom, truss rods each connected at one end to one of the piers and at the opposite end to said bottom to apply downward tension to the latter, reinforcing cables having their ends coupled to said anchorage means and embedded in the concrete roadway to further reinforce the roadway, and a plurality of tensioning means each connected from an intermediate part of a reinforcing cable to the adjacent underlying point on the bottom for applying tension to the reinforcing cables.

3,088,247
CIRCULAR LAPPING MACHINE
Wilson George Musbrush, Homer City, Pa., assignor to Syntron Company, Homer City, Pa., a corporation of Delaware
Original application Feb. 1, 1955, Ser. No. 485,494, now Patent No. 2,922,264, dated Jan. 26, 1960. Divided and this application Nov. 30, 1959, Ser. No. 856,072
18 Claims. (Cl. 51—3)

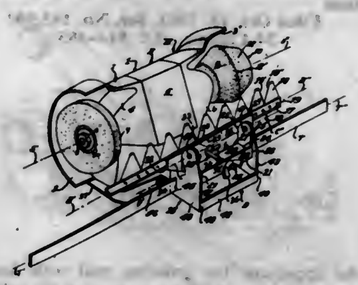


1. A lapping machine comprising a lapping surface means including abrasive particles for receiving thereon the surface of at least one article to be lapped, resilient means to support said lapping surface means facing upwardly and for movement as a free body in an inclined arcuate path of movement about a vertical central axis that is disposed substantially normal to the surface to be lapped, and a motor means to drive the lapping surface means in said inclined arcuate path of movement.

3,088,248
SICKLE BAR GRINDER
Joseph J. Strzoda, Chicago, Ill., assignor to Ram Tool Corporation, Chicago, Ill., a corporation of Illinois
Filed Mar. 13, 1961, Ser. No. 95,199
3 Claims. (Cl. 51—98)

2. Apparatus for attachment to a bench grinder unit including a base, a driving electric motor and an adjacent coaxial direct connected grinding wheel which is of materially smaller diameter than said motor and which has two substantially intersecting conical faces of unequal conical angles to sharpen along adjacent pairs of edges of a sickle bar positioned at an angle to the axis of rotation of the grinder unit to avoid interference with the larger diameter of its electric motor, said attachment apparatus comprising

(*a*) two bracket arms spaced apart along the axis of rotation of said grinder unit and having inner ends with means to be secured to the base of said grinder unit and aligned pivot means at their outer ends to form a first tilt axis offset from and at an acute angle to the axis of rotation of the grinder unit,

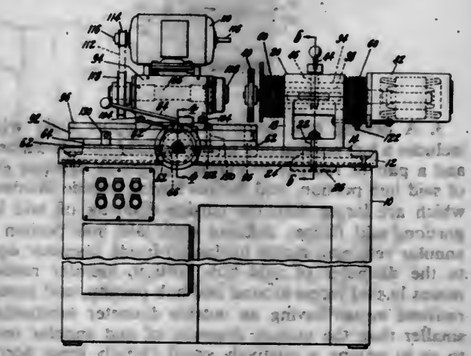


(*b*) a long track member mounted offset from and to swing about said aligned pivots of said first tilt axis,

(*c*) a slider member slidably adjustable along substantially the entire length of long track member to sharpen all of the sickle bar edges within its length without reclamping and repositioning of said sickle bar and having aligned pivot means to form a second tilt axis offset from and parallel to said first tilt axis,

(*d*) and a clamping member to clampingly engage only the rear edge portion of said sickle bar to avoid interference with its teeth, said clamping member being swingably mounted by said pivot means of said slider member to tilt about said second tilt axis.

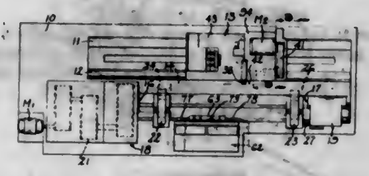
3,088,249
GRINDING MACHINE
Lyman B. Pope, Kingston, and John W. Sjostrom, Salem, N.H., assignors to Pope Machinery Corporation, Haverhill, Mass., a corporation of Massachusetts
Filed Sept. 13, 1961, Ser. No. 137,783
6 Claims. (Cl. 51—105)



1. A grinding machine comprising a bed having thereon a raised platform with an accurately plane surface and an elongated aperture therethrough, a movable grinder head unit having a plane bottom face bearing on said

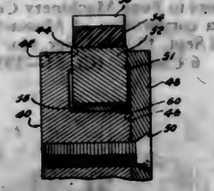
plane surface and universally adjustable thereon, means extending through said aperture for clamping said unit in any position of adjustment, and means on said bed for supporting and rotating a work-piece in an operative position relative to said grinder head unit, said work-supporting means having means for fine angular adjustment thereof about a vertical axis.

3,088,250
AUTOMATED ROLL GRINDER
Peter Hold, Milford, and Alfred T. Parrella, Newtown, Conn., assignors to Farrel-Birmingham Company, Incorporated, Ansonia, Conn., a corporation of Connecticut
Filed Oct. 18, 1961, Ser. No. 145,900
24 Claims. (Cl. 51—165)



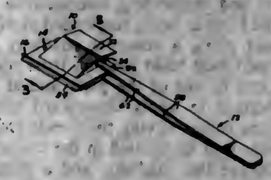
1. An apparatus for grinding mill rolls having high and low points on a working surface of the roll comprising means for supporting the roll so that its longitudinal axis is generally parallel to a fixed reference line, first measuring means for scanning the roll to locate a low point, second measuring means cooperating with said first measuring means for indicating high points, and means cooperating with said second measuring means for moving the roll to align the roll axis in an accurate parallel relationship relative to said reference line.

3,088,251
GEAR FINISHING TOOL
Kenneth John Davis, Detroit, Mich., assignor to National Broach & Machine Company, Detroit, Mich., a corporation of Michigan
Filed Oct. 24, 1958, Ser. No. 769,440
4 Claims. (Cl. 51—168)



3. A honing tool comprising a support body which includes a hub portion of a predetermined outside diameter and a pair of radially extending flanges at opposite ends of said hub portion, said flanges having outside diameters which are larger than the outside diameter of said hub portion, said flanges defining with said hub portion an annular retaining recess having an inside diameter equal to the diameter of said hub portion, annular resilient means in said recess around said hub portion, said annular resilient means having an outside diameter substantially smaller than the outside diameter of said annular recess to as to occupy a relatively small radially inner portion of said recess, an annular toothed honing body having its radially inner portion positioned in said recess to occupy the remaining radially outer portion of said recess, the inside surface of said honing body being in surface to surface contact with said annular resilient means, said honing body having teeth at least the surface portions of which are of hard resilient plastic material having abrasive particles embedded therein, said annular resilient means providing for radial yielding of said toothed honing body relative to said support body, the inner surfaces of said flanges being provided with oppositely facing annular guide abutments which bear against opposite sides of said honing body for preventing relative axial movement between said honing body and said flanges, said annular resilient means comprising a pair of axially spaced yieldable resilient O-rings.

3,088,252
RAZOR BLADE STROPPING HOLDER
Marion A. Schmidt, 1101 W. 2nd, McCook, Nebr.
Filed Dec. 22, 1961, Ser. No. 161,661
3 Claims. (Cl. 51—218)



1. A razor blade stropping holder comprising a pair of opposed and registered jaw plates having outer longitudinal edges and inner lonigtudinal edges, means hinging the jaw plates together at their inner edges, spring means yieldably urging the jaw plates toward each other, said jaw plates having flat inner surfaces adapted to assume parallel relationship when the jaw plates are closed, said jaw plates being narrower than a razor blade to be stropped, and a compressible liner comprising leaves wider than the jaw plates and narrower than a razor blade, said leaves having inner edges and free outer edges, means hingedly connecting the inner edges of the leaves, said liner being disposed between the jaw plates and engaged with related inner surfaces of the jaw plates and adapted to receive a razor blade therebetween, said jaw plates being of wedge cross section and having flat outer surfaces which intersect the inner surfaces to define thin outer longitudinal edges on the jaw plates, the inner longitudinal edges of the jaw plates being relatively wide, convergent flanges on and extending along the wide inner edges of the plates adjacent to their outer surfaces, lateral longitudinally spaced overlapped ears on the flanges adjacent the wider edges of the plates, and a headed hinge pin traversing the overlapped ears.

3,088,253
SPHERICAL CUTTING METHOD
Morton S. Lipkins, 3 Nemeth St., Malverne, N.Y.
Filed Feb. 24, 1959, Ser. No. 795,212
8 Claims. (Cl. 51—283)



7. The method of making a large-angle spherical cut in a body of hard and fracturable material, including the steps of slowly rotating a body of the material about an axis while supporting one axial end and leaving the opposite axial end exposed, rotating a spherical cutter having a circular diamond-bearing cutting edge about an axis intersecting that of said body at the center of the spherical cut to be made, starting the cutting operation with the

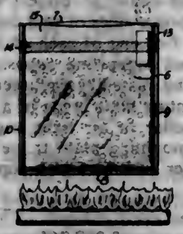
circular cutting edge encircling the axis of said body, and progressively changing the angle between said axes while continuing the rotations aforesaid to form the desired spherical cut, and interrupting said body rotation before the cutting edge reaches the axis of said body.

3,088,254
SPHERICAL CUTTING METHOD
Morton S. Lipkins, 3 Nemeth St., Malverne, N.Y.
Filed Feb. 26, 1960, Ser. No. 11,256
8 Claims. (Cl. 51—283)



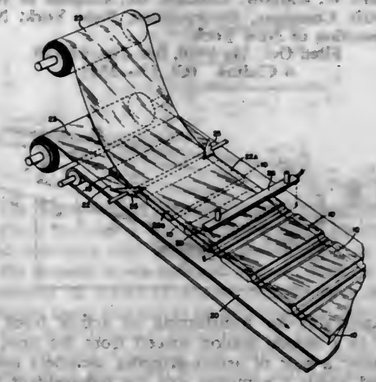
1. The method of making a spherical cut in hard and frangible material, including the steps of rotating a spherical cutter with a diamond-bearing rim in contact with a body of the material while rotating said body relatively slower than the cutter about an axis intersecting with the rotational axis of the cutter, the cutting face of the rim having a prominently projecting portion relative to the portion adjacent at least one of the lateral faces thereof, progressively increasing the angle between the cutter axis and the body rotational axis until only a neck remains connecting the convex and the concave body portions, the neck thereby having a reduced-diameter portion and a larger-diameter portion, breaking said connecting neck and thereby parting said body portions so that one of the body portions has a spherical surface surrounding a residual neck portion, and abrading away said neck portion so as to form a continuous spherical extension of said surrounding spherical surface.

3,088,255
BREATHER FILTER FOR FLEXIBLE BOIL-IN AND STERILIZATION PACKAGES
Milton E. Griem, Milwaukee, Wis., assignor to Milprint, Inc., Milwaukee, Wis., a corporation of Delaware
Filed Mar. 3, 1958, Ser. No. 718,678
2 Claims. (Cl. 53—14)



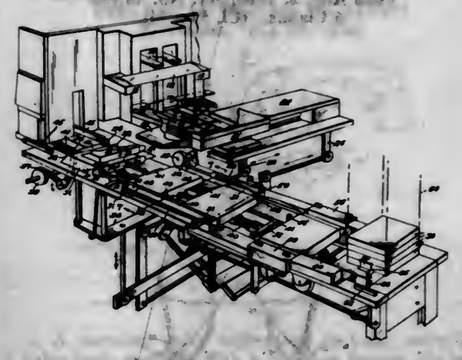
1. The method of packaging a batch of heat processable commodity in a bag-like container of flexible sheet material having an open mouth at one end provided with opposed heat sealable surfaces spanning the mouth opening, which method comprises, introducing the commodity batch into the bag through the open mouth, initially heat sealing the said surfaces across the mouth opening while retaining a local breathing and filtering passage by positioning a breather filler across the initial seal so as to be communicable with the interior of the bag and the exterior thereof, processing the commodity by heating the confined batch through the bag wall while venting the bag interior to the atmosphere through the breather filter to prevent excessive inflation of the bag by the expansion of its heated contents, and finally hermetically heat sealing the bag mouth surfaces entirely across said mouth beyond an end of said breather filter.

3,088,256
METHOD OF PRODUCING A SLEEVE
George M. Brown, Toronto, Ontario, Canada, assignor to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
Filed Aug. 10, 1959, Ser. No. 832,592
12 Claims. (Cl. 53—28)



6. The method of packaging objects by forming sleeves about them, which comprises drawing a continuous web of heat-sealable film from a source thereof and placing objects in spaced relation thereon, drawing another web of heat-sealable film from a source thereof and covering the objects and continuously folding flaps from at least one of said webs over opposite ends of the objects without sealing either flap to either sheet, and extending the end of the flap from one end of the object toward the other end of the object, and then by heat and pressure successively sealing said films and flaps together between each two objects and cutting the packaged objects apart.

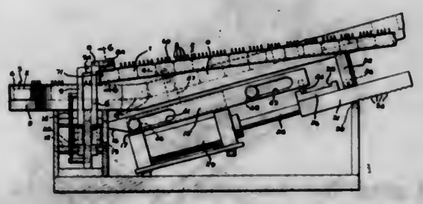
3,088,257
BOX LOADING APPARATUS
Ralph H. Pealey, Rte. 1, Box 781, Salisbury, N.C.
Filed Jan. 4, 1960, Ser. No. 284
14 Claims. (Cl. 53—159)



1. Apparatus for placing a predetermined number of objects in a box having open ends and flaps to close said ends comprising; means to select said predetermined number of objects and place them into a magazine, means to eject said objects from said magazine into a box to be

loaded, finger means to positively grip said box by its edges while it is being loaded and to release it after being loaded, guide means to close flaps on said box, means to move said box along a predetermined path so that its flaps move into said guide means, said guide means being formed to close said flaps as said box is moved along said predetermined path, and means to receive the box when it is loaded and its flaps are closed.

3,088,258
ARTICLE TRANSFER APPARATUS
Theodore W. Kalbow, Chicago, Ill., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed Oct. 11, 1960, Ser. No. 61,929
6 Claims. (Cl. 53—251)



2. Apparatus for transferring an article from a first station to a second station spaced from the first, which comprises: a pair of article-gripping members pivotably mounted about a common axis for independent pivotal movement, said gripping members being initially positioned in spaced relation with an article received therebetween at the first station; means for pivoting a first one of the gripping members toward the second gripping member to grip the article between said gripping members; means for pivoting the second gripping member, after the article has been gripped, in that same direction, the first gripping member continuing to pivot in that direction, so that said pair of gripping members pivot in unison with the article gripped therebetween to transfer the article to a position above the second station; and means for pivoting said gripping members relatively apart, after the article has been transferred, to release the article immediately above the second station.

3,088,259
SADDLE TREE CONSTRUCTION
Charles Nuzzo, 2885 W. Valley Blvd., Alhambra, Calif.
Filed Aug. 2, 1960, Ser. No. 46,983
6 Claims. (Cl. 54—44)





5. In a non-breakable, lightweight saddle construction, a saddle tree including, spaced, elongated side-bar elements extending in the same direction and having top and bottom surfaces, said bottom surfaces facing and being at an angle with each other so that the distance between the lower edges of said side-bar elements is greater than the distance between the upper edges of said side-bar elements, the front portions of said side-bar elements having upstanding, integral sockets adapted to receive a pommel element, said sockets including substantially U-shaped, upstanding retaining walls in plan and the openings of each U-shaped socket facing towards the front portions and upper edges of said side-bar elements, a pommel element extending between said side-bar elements and having end portions positioned within said sockets in said side-bar elements, and means for rigidly connecting said pommel element within said sockets whereby a unitary saddle tree is provided.

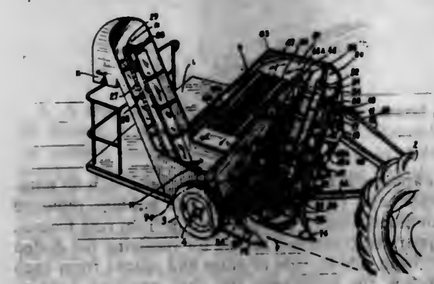
3,088,260
SUCTION CLEANER BAG MOUNTING MEANS
Arthur W. Seyfried, Racine, Wis., assignor to Scovill Manufacturing Company, Waterbury, Conn., a corporation of Connecticut
Filed Aug. 17, 1959, Ser. No. 834,108
3 Claims. (Cl. 55—374)



1. In a suction cleaner provided with dust bag mounting means comprising a housing including a side wall and a bottom providing a chamber, an air intake opening in the side wall, an air intake collar surrounding the air intake opening and projecting axially inwardly from said opening in said side wall into the chamber, and a dust bag having an opening in one of its side walls, a flat plate of stiff material having an opening extending therethrough attached to the dust bag adjacent the dust bag opening with said openings in register with each other; the improvement comprising, a bag mounting plate positioning and fastening means within said chamber comprising a pair of vertically spaced oppositely inclined arms, one of said arms being biased toward the other and each being carried by the side wall of said housing adjacent said collar to project angularly inwardly therefrom on opposite sides of said collar, a keeper member adjacent the free end of each of said arms for yieldably receiving and supporting opposite edge portions of said bag mounting plate therebetween, and the opening in said bag mounting plate being of a diameter to snugly surround said collar in air tight engagement therewith when said bag mounting plate is yieldably received between said keeper members and supported by said inclined arms.

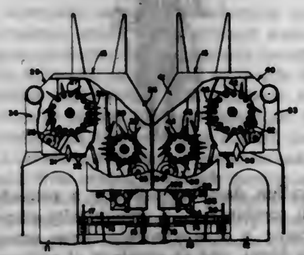
3,088,261
CORN-HARVESTER
Jean Emile Lagouarde, Nay, France, assignor to Societe Anonyme Usines Debeusse, Basses Pyrenees, France, a corporation of France
Filed Dec. 14, 1959, Ser. No. 859,254
Claims priority, application France Dec. 15, 1958
14 Claims. (Cl. 56—18)

1. In a corn-harvesting machine adapted to be coupled to a tractor and to move longitudinally along rows of corn stalks, the provision of a wheeled frame, two stalk-raising input noses carried laterally by said frame and adapted to engage and to hold between them the stalks of a row of stalks to one side of the machine, a stalk cutter carried by the frame adjacent said noses, a pair of snapping rollers extending along parallel lines substantially perpendicular to the direction of progression of the machine in substantial transverse alignment with said input noses, means urging the stalks passing between the two input noses and cut by the cutter into substantial registry with the corresponding end of the pair of snapping rollers, an endless conveyor substantially perpendicular to the direction of progression of the machine and located to the front of the pair of snapping rollers and including a downwardly moving strand facing said



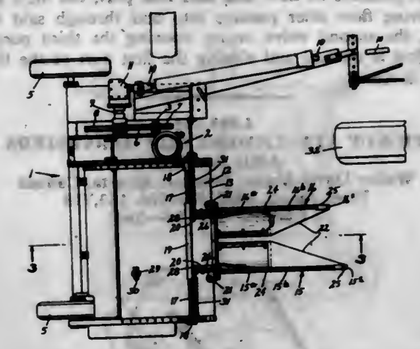
rollers and fed by the ears passing out of the snapping rollers and an upwardly moving strand facing away from said rollers and over which the ears are drawn, husking rollers extending in substantial parallelism with said pair of snapping rollers and receiving said ears from said conveyor, means dropping the ears out of the upwardly moving conveyor strand into the cooperating end of the husking rollers, means driving the snapping rollers, husking rollers and conveyor, and means collecting the ears out of the husking means at the rear of the machine.

3,088,262
COTTON HARVESTER
Karl I. Graham, Des Moines, Iowa, assignor to Deere & Company, Moline, Ill., a corporation of Delaware
Filed Apr. 12, 1961, Ser. No. 102,541
7 Claims. (Cl. 56—41)



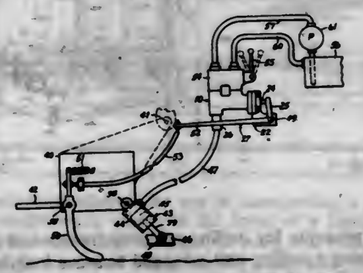
1. In a cotton harvester in which there is provided an upright spindle casing with a material discharge opening in one of its sides, and upright spindle and doffing mechanism adapted to dispatch trash and ripened cotton bolls through the opening, the improvement comprising: panel structure substantially of the expanse of said opening and mounted on the casing adjacent to said opening, the panel structure defining a pair of adjoining compartments with one compartment having a material receiving opening for receiving the cotton bolls from the doffing mechanism via the aforesaid discharge opening, and the other compartment being closed at its side adjacent the discharge opening by an upright panel angularly disposed from one upright edge spaced from the casing to a second edge closely adjacent the casing whereby trash exiting through the discharge opening will impinge against the latter panel and be directed outwardly.

3,088,263
CROP PROCESSING MACHINE
Ralph Thompson, Rte. 1, Whitehall, Wis.
Filed Apr. 6, 1961, Ser. No. 101,293
3 Claims. (Cl. 56—119)



1. The improvement in mobile stalk choppers of the type which includes a rotary stalk chopping mechanism, a hood overlying said chopping mechanism and spaced from the ground at its forward edge to define a mouth for entrance of stalks of a row crop to said chopping mechanism upon movement of said chopper over a given row, said improvement comprising a pair of laterally spaced forwardly diverging crop gathering shoes, means associated with said hood mounting said gathering shoes for common swinging movements on a horizontal axis between an operative position wherein said shoes project forwardly from the transverse center of said mouth with the front ends thereof in closely spaced relation to the ground and an inoperative position wherein said shoes are disposed in overlying relation to said hood, said means including structure mounting said shoes for common lateral movements as a pair when in said operative position, and means yieldingly biasing said shoes toward a point centrally of said mouth but permitting transverse movements of said shoes to compensate for lateral variations between the path of travel of said chopper and the line defined by the stalk plants of a row.

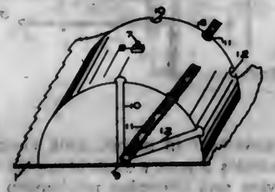
3,088,264
AUTOMATIC HEADER CONTROL MEANS
Aaron D. Sallee, Seymour, Ind., assignor to Seymour Manufacturing Company, Seymour, Ind., a corporation of Indiana
Filed Apr. 14, 1961, Ser. No. 103,147
17 Claims. (Cl. 56—210)



1. A metering valve with safety lock-out comprising a valve body provided with a chamber therein, the valve body being provided with first and second ports communicating with said chamber, a first valve means in said chamber between said first and second ports for regulating flow therebetween, the body being provided with

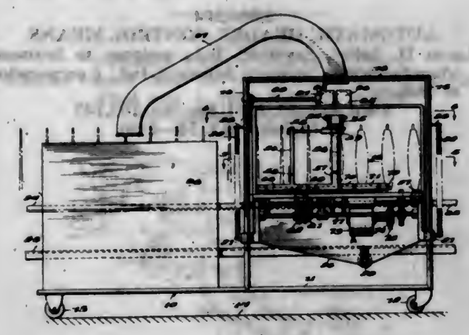
a third port on the same side of the first valve means as said first port and located therebetween, and a second valve means for opening and closing said first and third ports, said second valve means opening said first port under pressure of flow into said first port, the third port receiving flow after passage into and through said first port, the second valve means opening the third port as the first is opened and closing the first port as the third port is closed.

3,088,265
PICKUP ATTACHMENT FOR HARVESTERS AND BALERS
Walter David Hofer, Brocket, Alberta, Canada
Filed Jan. 2, 1962, Ser. No. 163,718
2 Claims. (Cl. 56—364)



1. A mounting for attachment of a pair of teeth on a grain pickup tooth carrier, said teeth having a straight connecting portion from which the teeth project at right angles in a common plane, said mounting comprising a semi-circular base having a slotted under side in which the connected portion of the teeth is engageable and a slot at each end extending radially of the under side slot and in which the teeth are engageable, and means for attachment of the base on the carrier.

3,088,266
APPARATUS FOR DOFFING SPINNING FRAMES
Agnew H. Bahnson, Jr., and James F. King, Jr., Winston-Salem, N.C.; said King assignor to The Bahnson Company, Winston-Salem, N.C., a corporation of North Carolina
Filed July 11, 1960, Ser. No. 41,883
8 Claims. (Cl. 57—53)



1. Apparatus for doffing spinning frames and the like comprising a doffing unit arranged to move longitudinally along a line of full bobbins on the frame, said doffing unit including means for lifting the bobbins in succession from their respective spindles, roll means above and cooperative with said lifting means, and bobbins for effecting a transfer of each bobbin from said lifting means and thereby continuing the upward movement of said bobbins, and means rotating said roll means.

3,088,267
AUTOMATIC DOFFER CONVEYING MECHANISM
Zenzaburo Tsukuno, Nishinomiya, Seiji Izutsu, Showa-ku, Nagoya, and Takeki Sato, Nishiwatamicho, Akashi, Japan, assignors to Toyo Boseki Kabushiki Kaisha, Kita-ku, Osaka, Japan, and Howa Kogyo Kabushiki Kaisha, Nakamura-ku, Nagoya, Japan
Filed Oct. 31, 1961, Ser. No. 149,126
6 Claims. (Cl. 57—53)



1. An apparatus adapted to be associated with an automatic doffer and for dealing with full bobbins removed by the automatic doffer group by group from ring frames, which apparatus comprises means for receiving the doffed full bobbins in side-by-side relation and spaced from each other, means for conveying the thus received bobbins toward and below an upright magazine and for simultaneously moving the spaced bobbins closely adjacent each other, and means for lifting and transferring the group of closely adjacent bobbins into the magazine in side-by-side and stacked up relation.

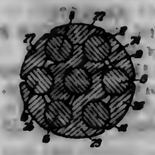
3,088,268
VIBRATION DAMPENING SUPPORT FOR SPINDLE
Jerry B. Holschlag, Cumberland, R.I., and Ivie H. Parsons, Aiken, S.C., assignors to Owens-Corning Fiberglas Corporation, a corporation of Delaware
Filed July 25, 1960, Ser. No. 45,133
9 Claims. (Cl. 57—135)



4. A vibration damping unit for a rotatable spindle including, in combination, a cylindrically-shaped tubular core comprising a comparatively dense mass of compressed glass fibers, and an envelope of resinous material embracing the core of glass fibers.

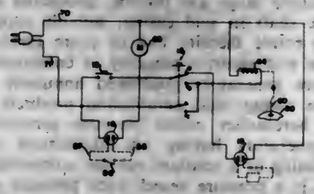
6. A spindle and bolster assembly arranged to be mounted on a support rail of textile packaging apparatus including, in combination, a rotatable spindle, a bolster member, bearing means mounted by the bolster member and supporting the spindle for rotation relative to the bolster member, a wharve associated with the spindle arranged to be engaged by a driving means for rotating the spindle, a cylindrically-shaped vibration damping unit surrounding a portion of the bolster member and engaging the support rail, said vibration damping unit comprising a mass of glass fibers compressed to a density of about twenty pounds per cubic foot, a resin envelope embracing the mass of compressed fibers, abutment means surrounding the bolster member and engagable with the vibration damping unit, said abutment means being adjustable relative to the bolster member for maintaining the vibration damping unit in a state of compression.

3,088,269
WIRE ROPES
Herbert Frederick Henry Shields, Cross Lane, Bexley, Kent, England
Filed Dec. 21, 1961, Ser. No. 161,121
Claims priority, application Great Britain Dec. 29, 1960
17 Claims. (Cl. 57—146)



1. A rope comprising an inner wire or strand of circular section, a plurality of outer wires or strands of circular section surrounding the inner wire or strand, and locking elements, each locking element having an arm passing radially between two of the outer wires or strands and hooking over the inner wire or strand and having an outer portion shaped to extend around only part of the periphery of the rope but at least partly extending over said two of the outer wires or strands to lock these two outer wires or strands to the inner wire or strand.

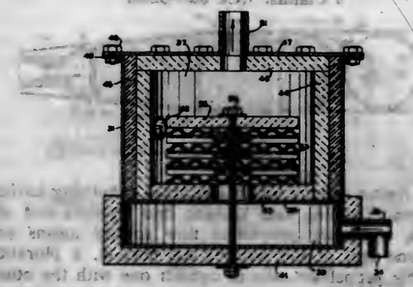
3,088,270
LABORATORY STOP CLOCK
Phillip W. King, Meriden, Richard J. Kavanaugh, Bristol, and William A. Knecht, New Hartford, Conn., assignors to Consolidated Electronics Industries Corp., Waterbury, Conn., a corporation of Delaware
Filed Jan. 18, 1960, Ser. No. 3,088
13 Claims. (Cl. 58—39.5)



1. In a resettable stopclock mechanism comprising a frame, a constant speed, unidirectional motor mounted on said frame, indicator means movably mounted on said frame to be driven by said motor, reversible drive means interconnecting said motor and indicator means, and reversing control means for said stopclock mechanism, the improvement in said reversing control means which comprises a solenoid actuator mounted on said frame for reversing said drive means, stopclock starting and stopping circuit means including a first normally open switch mounted on said frame for selectively energizing said motor, and stopclock reset circuit means including a second normally open switch mounted on said frame for simultaneously energizing said motor and said solenoid, each of the contacts of said stopclock reset circuit means being in the energizing circuit for said solenoid and being in the energizing circuit for said motor whereby, upon closure of said stopclock reset circuit means, said solenoid is reliably energized at least as early as said motor.

3,088,271
REACTION MILIEU AND AFTERBURNER INCORPORATING SAME
Gordon R. Smith, St. Paul, Minn., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware
Filed Feb. 6, 1961, Ser. No. 87,380
6 Claims. (Cl. 60—39)

1. A milieu for gaseous reactions consisting of an assemblage of stacked superimposed refractory corrugated sheets, the axes of the corrugations of adjacent consecutive sheets being non-parallel and the said sheets being held in contact to each other only at the intersection of the ridges of said adjacent sheets, the edges of said corrugated sheets being aligned and collectively forming at least two faces, at least one of the said faces being an inlet into said milieu for unreacted gases and the remainder of said faces being an outlet for reacted gases; and means for introducing gases into said milieu via said inlet.



3,088,272
STABLE PROPELLANTS
Leonard A. Stengel and Emory E. Toops, Jr., Terre Haute, Ind., assignors to Commercial Solvents Corporation, New York County, N.Y., a corporation of Maryland
No Drawing. Filed May 5, 1961, Ser. No. 107,922
7 Claims. (Cl. 60—35.4)

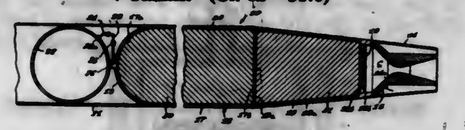
1. A process for producing thrust in a reaction motor which consists essentially of burning in a reaction motor a fluid mixture containing from about 20 to about 60% by weight of monomethylamine nitrate, 20 to about 75% by weight of hydrazine and 1 to about 40% by weight of a compound selected from the group consisting of dimethylhydrazine and monomethylhydrazine, all weights being based on the weight of the mixture.

3,088,273
SOLID PROPELLANT ROCKET
Barnet R. Adelman and Herbert R. Lawrence, Menlo Park, Calif., assignors to United Aircraft Corporation, a corporation of Delaware
Filed Jan. 18, 1960, Ser. No. 3,126
4 Claims. (Cl. 60—35.6)



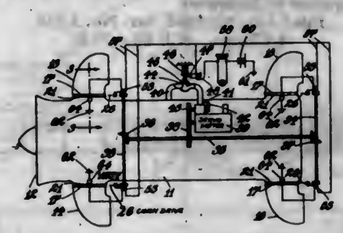
1. A segment adapted for use in constructing a rocket motor comprising a casing in the form of a right truncated cone, said casing having a forward end and an aft end, said forward end being smaller than said aft end, said casing having a propellant grain therein, said grain having a central conical opening therethrough forming a combustion zone, the inner surface of said grain being substantially parallel to said casing whereby the grain has a substantially constant web thickness, said segment having means on said aft end and said forward end for fastening the segment to a mating rocket engine component.

3,088,274
DUAL THRUST ROCKET ENGINE
Roy A. McKinnon and Hubert P. Smreker, Cleveland, Ohio, assignors to Thompson Ramo Wooldridge, Inc., Cleveland, Ohio, a corporation of Ohio
Filed Oct. 19, 1959, Ser. No. 847,215
4 Claims. (Cl. 60—35.6)



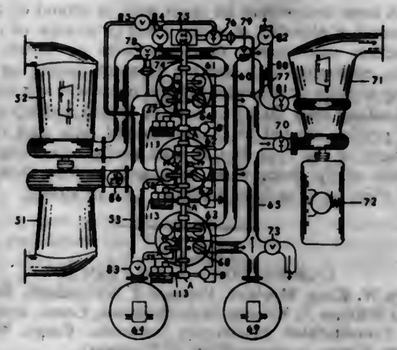
3. A rocket engine, which comprises a housing having a bulkhead dividing said housing into forward and aft portions, stationary propellant flow splitter means adjacent one end of the housing aft portion, a plurality of flexible propellant cells in contact one with the other slidably received in said housing aft portion and one of said cells bearing against said bulkhead and another of said fuel cells bearing against said splitter means, a supply of high energy gelatinous monopropellant in the propellant cell contacting the splitter means, a supply of low energy gelatinous monopropellant in the propellant cell bearing against the bulkhead, a plurality of tubular inserts mounted on the splitter means and having relatively sharp surfaces facing said high energy propellant cell, and force applying means in the housing forward portion for exerting a force against the low energy propellant cell to drive the high energy cell against the sharp surfaces on the tubular inserts to pierce said cell and force the propellant in said cell through the splitter means in shaped columns for ignition, said force applying means then driving the low energy propellant cell into piercing contact with the tubular inserts to force the propellant therein through the splitter means in shaped columns for ignition, whereby a vehicle powered by said engine has relatively high thrust for climb and thereafter a relatively low thrust for cruise.

3,088,275
AIRCRAFT JET PPROPULSION POWER PLANTS
Francis Charles Ivor Marchant and Percy George Batchelor, Bristol, England, assignors to Bristol Siddeley Engines Limited, Bristol, England, a British company
Filed Jan. 30, 1961, Ser. No. 85,881
Claims priority, application Great Britain Feb. 3, 1960
6 Claims. (Cl. 60—35.55)



1. A jet propulsion power plant comprising a plurality of jet nozzles, means for adjusting the direction of the jet discharged from each nozzle relative to the plant, co-ordinating control means adapted to co-ordinate the adjusting means associated with the respective nozzles to cause the direction of the jets to be adjusted in unison, means for detecting loss of control of the adjusting means of any of the nozzles by co-ordinating control means and adapted, when such loss of control of a nozzle is detected, to actuate locking means preventing alteration of the direction of the jet or jets discharged from the nozzle or nozzles, said detecting means being adapted, when such loss of control of a nozzle is detected, also to actuate locking means to prevent alteration of the direction of the jet discharged from the nozzle of which control has been lost.

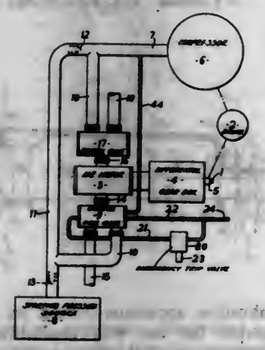
3,088,276
COMBUSTION PRODUCTS PRESSURE GENERATOR
Perry David Hudson, 641 Omaha Drive, Corpus Christi, Tex.
Filed Aug. 31, 1959, Ser. No. 836,964
7 Claims. (Cl. 60—39.6)



1. A multiple stage gas turbine, consisting of a casing, a drive shaft in said casing; suitably supported in bearings to rotate therein; two or more turbine rotors mounted on said shaft; a plurality of combustion products pressure generators positioned annularly adjacent said turbine casing; said combustion products pressure generators hereinafter called pressure generators; said pressure generators having an intermittent explosion cycle; consisting of a constant volume combustion chamber; which is a pressure vessel; each pressure generator having a charge port connected to a source of air supply under pressure; to supply combustion air to each of said pressure generators; each pressure generator having a low pressure discharge port and a high pressure discharge port facing said gas turbine; an ignition means and a means of injecting and atomizing a charge of fuel into each of said pressure generators; said fuel injectors connected to a source of fuel supply under pressure; said gas turbine having a high pressure turbine rotor nozzle port positioned adjacent to and in line with each high pressure discharge port in each pressure generator; suitable conduits connecting each pressure generator high pressure discharge port to each high pressure turbine rotor nozzle; said gas turbine having a low pressure turbine rotor nozzle port positioned adjacent to and facing in line with each low pressure discharge port in said pressure generators; suitable conduits connecting each pressure generator low pressure discharge port to each low pressure turbine rotor nozzle; for the delivery of the hot gases of combustion to said turbine rotors; each pressure generator has a mechanically actuated low pressure discharge valve for controlling low pressure gases of combustion and scavenging air through said low pressure conduits to said low pressure turbine rotors; each pressure generator has a mechanically actuated valve controlling each charge port to supply combustion air to said combustion chamber in each pressure generator; the high pressure discharge valve in each pressure generator controlling each high pressure discharge port are pressure reducing valves; pressure actuated moveable to open position by pressure attendant upon combustion in said

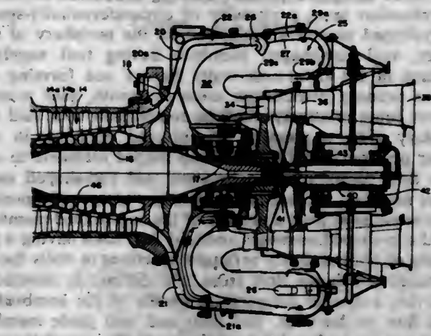
combustion chamber; a mechanically actuated fuel supply injection valve in each of said fuel supply connections, ignition plugs in each of said combustion chambers; said fuel injection valves actuated in timed sequence with said combustion air supply valves, said low pressure discharge valves and ignition means so as to deliver to said gas turbine a substantially steady stream of hot combustion gases in the volume required; actuation of said combustion air supply valves, low pressure discharge valves fuel injector valves fuel supply injector valves, ignition and timing means; to be driven at a speed in variable ratio to said rotor shaft; said variable speed changing means to be controlled by automatic means, thereby governing the speed of said gas turbine accurately; means to start, stop and control said gas turbine.

3,088,277
CONTROL OF COMPOSITE MECHANICAL DRIVES
Norman Frederick North, North Romford, and Peter Bruno Kahn, Loughton, England, assignors to The Plessey Company Limited, London, England, a British company
Filed Mar. 7, 1961, Ser. No. 94,884
4 Claims. (Cl. 60—39.14)



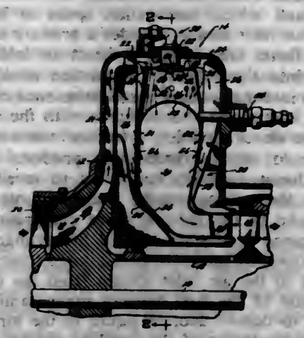
1. A composite mechanical drive for reducing the speed variations of a driven element as the result of speed variations of an engine providing driving power for the element, including a reversible fluid-pressure motor operatively connected with one leg of a three-leg differential gear drive, the other legs of which are respectively connected with a driving shaft of the engine and with the driven element; control means for the fluid pressure motor operative to control the motor so as to tend to reduce speed variations of the driven element with speed variations of the engine; and a change-over valve so connected to the fluid pressure motor and a starting-pressure supply source that the motor compensates speed variations of the driven element when the valve is in one change-over position for normal running of the engine and that the motor drives the engine for starting up the engine when the valve is in the other change-over position, the change-over valve having actuating means which include two pistons of unequal areas each slidable within a cylinder, the smaller of the two pistons tending under the action of fluid pressure in its cylinder to move the change-over valve to its starting position and the larger piston similarly tending to move the change-over valve to its normal position, and wherein fluid pressure from the starting supply is admitted substantially directly to the smaller cylinder and through a restricted passage to the larger cylinder, a further restricted passage connecting the said larger cylinder to an outlet of a fluid compressor driven by or forming part of the engine.

3,088,278
GAS TURBINE ENGINE
Anselm Franz, Stratford, Conn., assignor to Avco Manufacturing Corporation, Lycoming Division, Stratford, Conn., a corporation of Delaware
Filed May 1, 1957, Ser. No. 656,384
2 Claims. (Cl. 60—39.16)



1. In a gas turbine engine, the combination of: a compressor section, a turbine section, an annular combustor section surrounding said turbine section and occupying substantially the same region of axial space longitudinally of the engine as said turbine section, said compressor section comprising a multistage axial compressor and a last stage centrifugal compressor adjacent thereto, a radially positioned diffuser of substantial radial extent carrying air radially outward from the end of said centrifugal compressor to the outer periphery of said combustor section, and folded passages directing flow through said combustor in a generally radially inward direction, said radially positioned diffuser and folded passage and said radial distances for diffusion and combustion comprising a combustor region having a diameter substantially exceeding the diameter of said compressor region, said turbine section comprising a compressor driving turbine and an adjacent power turbine rearward of said compressor driving turbine, and connections for effecting removal of said power turbine and a portion of said combustor section, thereby to provide access to both of said turbines and the interior of said combustor section.

3,088,279
RADIAL FLOW GAS TURBINE POWER PLANT
Gunther Ernst Diedrich, Cincinnati, Ohio, assignor to General Electric Company, a corporation of New York
Filed Aug. 26, 1960, Ser. No. 51,943
2 Claims. (Cl. 60—39.36)



1. Combustion aparatus for use in a radial-flow gas turbine power plant having a centrifugal air compressor, a

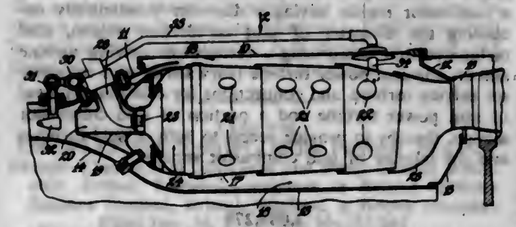
radially-extending diffuser connected to the outlet of said compressor, and a turbine for driving said compressor, said apparatus comprising: an annular combustor casing having a plurality of axially-spaced, radially-extending members on front and back inner walls thereof; a toroidal-shaped liner supported within the casing, said liner having an inner elongated portion defining a discrete secondary combustion area, a plurality of circumferentially-spaced cup-shaped members positioned on the periphery of said liner, said cup-shaped members having fuel supplying means in the outermost walls thereof and forming discrete primary combustion areas therewith, said primary areas being relatively small in comparison with said secondary area; a plurality of enlarged openings in said liner periphery opposite said cup-shaped members to supply flow communication between said cup-shaped members and said secondary combustion area, said openings surrounding at least a portion of the cup-shaped members, said cup-shaped members and said liner each having a plurality of symmetrically arranged apertures in walls thereof through which gas flow from said diffuser is directed to provide a desired temperature profile of the combustible gas flow in the liner, said liner and said guide members cooperating to direct the gas flow radially inward throughout the entire length of the primary and secondary combustion areas.

3,088,280

REDUCING SMOKE IN GAS TURBINE ENGINE EXHAUST

Arthur Henry Lefebvre, Mackworth, Derby, and Stewart Crichton Miller, Allestree, Derby, England, assignors to Rolls-Royce Limited, Derby, England, a British company

Filed Apr. 13, 1960, Ser. No. 22,013
Claims priority, application Great Britain Apr. 17, 1959
7 Claims. (Cl. 60—39.65)



1. In a gas turbine engine comprising an air compressor, combustion equipment including an air casing having air inlet means at one end connected to receive air compressed within the compressor and a flame tube which extends within the air casing and defines a combustion space, which combustion space at its end adjacent the air inlet means includes a primary combustion zone, said flame tube having a direct air inlet from the air casing into the primary combustion zone, means to deliver fuel into the primary combustion zone downstream of the air inlet thereto to be burnt with the air flowing through the direct air inlet, a turbine connected to said flame tube to receive combustion products therefrom, and an exhaust assembly connected to receive exhaust gases from the turbine; smoke abatement means for reducing smoke in the exhaust gases comprising swirling means disposed in the air inlet of the primary combustion zone, injecting means disposed downstream of the air compressor in the air inlet stream from the compressor and upstream of the fuel delivery means and the swirling means to deliver coolant liquid to the air in the air inlet means upstream of the swirling means so that the coolant liquid and the compressed air flow together through the swirling means so that the coolant liquid is directed onto the swirling means and the swirling means imparts to the coolant liquid and the compressed air a swirling motion to commingle thoroughly the coolant liquid and the compressed air with one another and with the fuel and products of combustion in the primary combustion zone so as to reduce substantially the temperature in the primary combustion zone as compared with the temperature when liquid injection is not effected, said swirling means comprising a discontinuous stationary surface element and said injecting means comprising a spray producing a uniform distribution of droplets which contact said element as they pass through the swirling means so that the natural air blast atomization occurring during operation of the engine will reduce at least some of the droplets as to size, said element distributing said droplets uniformly throughout the primary combustion zone.

3,088,281

COMBUSTION CHAMBERS FOR USE WITH SWIRLING COMBUSTION SUPPORTING MEDIUM

William Ernest Soltau and Peter Frederick Orchard, Bristol, England, assignors, by mesne assignments, to Bristol Siddeley Engines Limited, Bristol, England, a British company

Filed Mar. 28, 1957, Ser. No. 649,124
Claims priority, application Great Britain Apr. 3, 1956
5 Claims. (Cl. 60—39.65)



1. A combustion apparatus having an annular combustion chamber for use with combustion supporting medium having substantial components of velocity in both the axial and circumferential directions, comprising an entry portion having inner and outer wall structures each formed as a surface of revolution about a common axis and forming between them at one end an axially directed annular inlet opening to the combustion chamber, means for swirling the combustion supporting medium round said common axis and directly discharging said combustion supporting medium while so swirling into said entry portion, a partition structure for said entry portion formed as a surface of revolution about said common axis, the partition structure extending only through said entry portion and dividing said annular inlet into inner and outer annular parts of which the ratio of the cross-sectional area of the annular part lying inside the partition structure to the cross-sectional area of the annular part lying outside the partition structure is substantially equal to the required ratio of the mass flows of dilution air to combustion air, said outer wall structure and the partition structure diverging from one another in the direction of combustion air flow over at least a part of their length adjacent said inlet opening so as to reduce the speed and increase the turbulence of combustion air flowing therebetween sufficiently to form a zone wherein stable combustion may proceed, means for dispersing fuel into said stable combustion zone, an outlet portion having inner and outer wall structures each constituting a continuation of the corresponding wall structure of the entry portion in a generally axial direction, and a plurality of support members connecting together the partition structure and the inner and outer wall structures of the entry portion, at least those of said support members which extend across the passage between the inner wall structure of the entry portion and the partition structure having a shape which will allow swirling working medium to pass them without substantial alteration of the helix angle of the swirl.

3,088,282

IGNITION APPARATUS

James J. Logan, Unadilla, N.Y., assignor to The Bendix Corporation, a corporation of Delaware

Filed Sept. 14, 1956, Ser. No. 609,577
3 Claims. (Cl. 60—39.82)



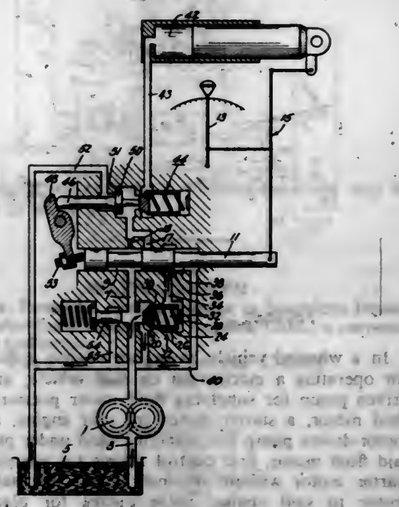
1. Torch ignition apparatus comprising an elongated metal casing having a central passage longitudinally therethrough, said casing having an inner end adapted to project into a combustion chamber and an opposite, outer end adapted to be positioned outwardly of the combustion chamber, said casing having an annular shoulder projecting inwardly from the wall of the passage intermediate the length of the casing, an elongated metal member centrally disposed within the casing, a first sleeve of electrically insulating material surrounding the elongated member at the shoulder and extending on both sides thereof longitudinally of the casing, said first sleeve snugly engaging the casing and the elongated member and having an outwardly extending flange overlying and engaging the shoulder on the casing, the elongated member at its outer end having a cylindrical portion of reduced diameter overlapping the flange on the first sleeve, a second electrically insulating sleeve snugly engaging the outer reduced diameter portion of the elongated member and having its inner end telescoped within the outer end of the first sleeve, a longitudinally extending central bore in the elongated member extending throughout a substantial portion of the length thereof from the inner toward the outer end of the elongated member, a nozzle on the inner end of the elongated member communicating with said bore, means to supply the nozzle with fuel comprising a transverse passage through the wall of the casing, the second sleeve, and the wall of the elongated member into the bore therein, and an annular spark gap comprising a first, inner annular electrode on the inner end of the elongated member and a second, outer annular electrode on the inner end of the casing.

3,088,283

HYDRAULIC SYSTEMS

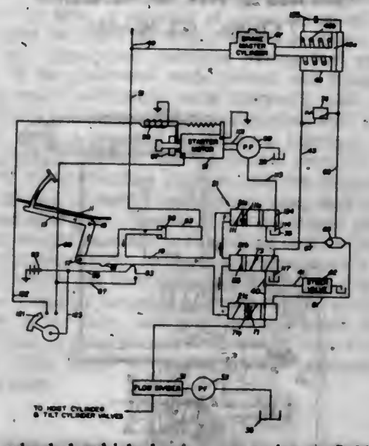
Andre Furia, Neuilly, and Gerard Chevreux, Colombes, France, assignors to Societe Anonyme D.B.A., Paris, France, a company of France

Filed June 22, 1959, Ser. No. 821,944
7 Claims. (Cl. 60—52)



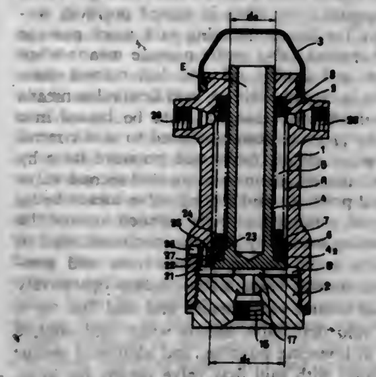
1. In a pressure control system adapted for raising and lowering a work load comprising: a fluid pressure inlet, control valve outlet passage means, work passage means communicating with said control valve outlet passage means, return passage means communicating with said control valve outlet passage means, control valve means for communicating during raised position and cutting off communication during neutral and lowering position of pressure to said control valve outlet passage means from said pressure inlet, first valve means for communicating said return passage means with said control valve outlet passage means when in open position and cutting off said last named communication when in closed position, second valve means for communicating said work passage means with said control valve outlet passage means when in open position and cutting off said last named communication when in closed position, said first valve means being so constructed and arranged as to be biased into closed position by pressure communicated to said control valve outlet passage means from said pressure inlet by said control valve means, means biasing said second valve means into closed position, said second valve means being so constructed and arranged as to be opened against the force of said biasing means by pressure communicated to said control valve outlet passage means from said pressure inlet by said control valve means, means operatively connected to said control valve means and said first valve means to open said first valve means when said control valve means is in lowering position, and abutment means operably associated with said first valve means for abutting said second valve means and simultaneously opening the same when said first valve means is opened thereby providing passage means from said work passage means past said second and first valve means to said return passage means.

3,088,284
VEHICLE HAVING EMERGENCY EQUIPMENT
James R. Aaron, Portland, Oreg., assignor to Hyster Company, Portland, Oreg., a corporation of Nevada
Filed Jan. 9, 1961, Ser. No. 81,487
1 Claim. (Cl. 60—52)



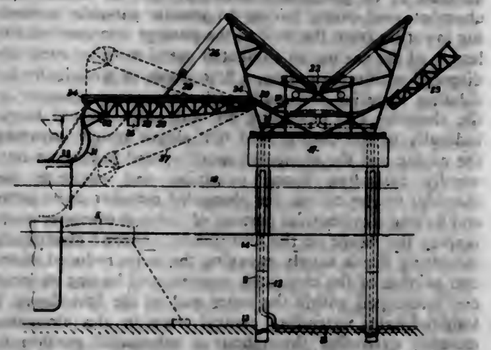
In a wheeled vehicle having an engine, a fluid motor for operating a mechanism on said vehicle, an engine-driven pump for supplying fluid under pressure to said fluid motor, a starter motor for said engine, a starter-motor-driven pump for supplying fluid under pressure to said fluid motor, first control means for energizing said starter motor without drivingly connecting said starter motor to said engine, valve means for placing said pumps in communication with said fluid motor or for isolating said pumps from said motor, and a common means for actuating said control means and said valve means.

3,088,285
DEVICE FOR VARYING HYDRAULIC PRESSURE
Dante Giacosa, Turin, and Philip S. Baldwin, Florence, Italy, assignors, by direct and mesne assignments, to Fiat Societa per Azioni, Turin, Italy
Filed Aug. 30, 1960, Ser. No. 52,808
Claims priority, application Italy Sept. 5, 1959
8 Claims. (Cl. 60—54.6)



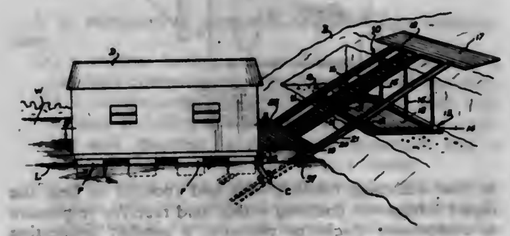
1. A hydraulic pressure ratio changer for interposition in a pressure fluid line to form a part of that line between a fluid pressure source and a working point on the line, comprising a two-diameter piston having a section of large diameter and a section of small diameter, a cylinder for pressure ratio change operation surrounding and guiding said piston, said piston defining first and second axially spaced-apart chambers in said cylinder, one of said chambers being defined by the face of the large diameter section of the piston and the other by the opposite annular face of the piston disposed between its large and small diameter sections, one of said chambers being adapted to be connected to said fluid source and the other to said working point of the line when the cylinder is coupled in the fluid line, means defining a passageway connecting said first and second chambers being defined between the periphery of the large diameter section of the piston and the opposed cylinder wall for passing fluid directly through the cylinder, the periphery of said large diameter section of the piston being formed with an annular recess, a packing ring made of resilient material seated in said annular recess in the periphery of said large diameter section of the piston, said packing ring being dimensioned to be constantly in contact with the cylinder wall and having a smaller width and of a larger inner diameter than the width and bottom diameter of said annular recess, said passageway constantly connecting the portion of said recess lying between its inner surface and the inner wall of said packing ring with said chamber defined by said annular face of the piston, whereby said packing ring acts as a valve controlling the fluid flow across said passageway, a reaction spring constantly urging the piston towards the chamber defined by said large diameter face of the piston and said piston moving against the bias of said reaction spring only after the fluid pressure in the chamber defined by the annular face of the piston has attained a predetermined value to cause the packing to close said passageway whereupon the piston is brought into pressure ratio change operation and the packing ring suddenly reopens said passageway upon the piston beginning its return stroke after the fluid pressure in the fluid pressure source has been released.

3,088,286
OFF-SHORE TERMINALS
William Wallace, South Murreys, Agates Lane, Ashtead, Surrey, England
Filed Apr. 21, 1959, Ser. No. 807,911
Claims priority, application Great Britain Apr. 28, 1958
2 Claims. (Cl. 61—46)



1. In an off-shore terminal connected to shore by pipelines and including a tower having its supporting columns positioned on foundations in the sea bed, a deck structure on said tower; the improvement comprising a rigid framework structure positioned on said deck structure, and framework structure having oppositely disposed sections extending outwardly from the opposite sides of said deck structure and having interconnecting sections therebetween, a pair of oppositely disposed balanced booms pivoted to said framework, an arcuate extension on the outer end of each of said booms and cables adjustably connecting said outwardly extending sections of said framework and said booms for movably supporting the same, flexible hoses secured to each of said booms and extending over said arcuate ends thereof and communicating with said pipelines.

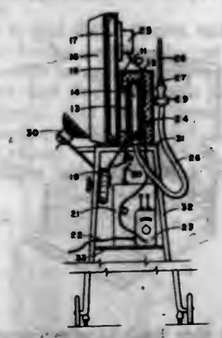
3,088,287
AUTOMATICALLY ADJUSTABLE MOORING STRUCTURE FOR VESSELS
Vivion C. Berry, Bull Shoals, Ark.
Filed Aug. 22, 1960, Ser. No. 51,214
2 Claims. (Cl. 61—48)



2. In combination, a boat enclosure having flotation means for buoyantly supporting the enclosure on the surface of a water body which is subject to changing levels and defined by a shore sloping downwardly at an angle to the surface of the water body, and an automatically adjustable mooring structure for said boat enclosure, said mooring structure comprising an elongate guide member fixedly supported on said shore to extend downwardly along the shore between elevations on the shore respectively above and below the high and low levels of the water body, said guide member comprising a guide rail having a web and longitudinal laterally extending flanges, carriage means rollably mounted on the guide member, arm means pivotally connecting the shoreward end portion of said enclosure to said carriage means and arranged to constrain swinging movement of the enclosure in a generally vertical plane relative to the guide member, a landing stage extending from the shoreward end of said enclosure toward the guide member, said landing stage having pivoted connection about a horizontal axis at one end to said shoreward end of the enclosure, roller means supporting the forward end of the landing stage on said guide member, said carriage means including an inverted generally U-shaped housing having a top wall and parallel side plates depending from the top wall on opposite sides of the guide rail, top roller means journalled in the side plates beneath the top wall to roll on top of said flanges, and a pair of lower roller means supported by said side plates beneath said flanges on opposite sides of said web.

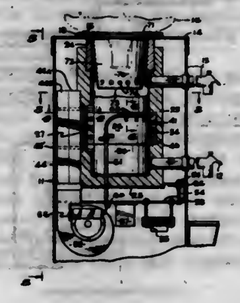
3,088,288
THERMOELECTRIC REFRIGERATION SYSTEM
Thore M. Elfving, 433 Fairfax Ave., San Mateo, Calif.
Filed Dec. 21, 1960, Ser. No. 77,390
15 Claims. (Cl. 62—3)

1. A thermoelectric heat pump comprising a thermocouple assembly having hot and cold junctions, a condenser in heat exchange relationship with the cold junctions of said thermocouple assembly, an evaporator, a flexible hose forming a hermetic connection between said evaporator and condenser to thereby form a hermetically sealed system and a volatile liquid partly filling said hermetically sealed system, said flexible hose permitting



positioning of the evaporator whereby the same may be operative or inoperative.

3,088,289
WATER COOLER
Max Alex, Pasadena, Calif., assignor to Sparkletts Drinking Water Corporation, Los Angeles, Calif., a corporation of California
Filed Feb. 19, 1962, Ser. No. 174,051
4 Claims. (Cl. 62—3)

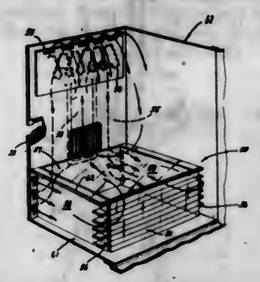


2. In a water cooler having a container adapted to hold water and having good heat conductivity, a mounting block having a side shaped to fit an area of the outer surface of the container, a metal band around said container and secured to said block, a thermoelectric cooling unit, a heat exchanger, means securing said unit to said block and securing said exchanger against said unit, and means on said band for supporting a temperature-sensing tube or the like thereon.

3,088,290
PRESERVATION OF FOODS BY REFRIGERATION
Elmer W. Zearfoss, Jr., Philadelphia, Pa., assignor, by mesne assignments, to Philco Corporation, Philadelphia, Pa., a corporation of Delaware
Filed Jan. 4, 1960, Ser. No. 229
1 Claim. (Cl. 62—78)

In the art of refrigeration, the method of effecting extended preservation of moist foods which consists of placing such foods in a box-like container having top, bottom, and vertical side walls of a material of relatively high thermal conductivity, and maintaining air temperature in the container just above the freezing temperature of water and at a high relative humidity while preventing thermosyphonic flow of air within said container, by subjecting the exterior surfaces of said side walls to a horizontal fan-forced flow of air maintained at near freezing temperature, said air having substantially

the same temperature value as it contacts said walls throughout the height thereof, thereby to cool the interior



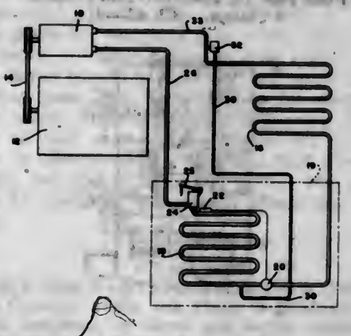
surfaces of said side walls to a temperature just above the freezing point of water.

3,088,291

REFRIGERATING APPARATUS FOR VEHICLES

George B. Long, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Oct. 10, 1961, Ser. No. 144,237
5 Claims. (Cl. 62—192)



4. In combination, an engine, a refrigerating system comprising a compressor, a condenser, an evaporator, and refrigerant flow connections therebetween, means drivingly connecting said compressor to said engine so as at all times to operate said compressor at speeds proportional to the speed of said engine irrespective of refrigeration requirements, means in said refrigerant flow connections controlling admission of liquid refrigerant into said evaporator, a conduit in said system arranged to by-pass refrigerant discharge from said compressor around said condenser and arranged to admit said by-passed refrigerant directly into the lower portion of said evaporator, means controlling said by-pass conduit in response to the pressure at the outlet of said compressor, and a suction pressure regulating valve for controlling the flow of refrigerant from said evaporator to said compressor.

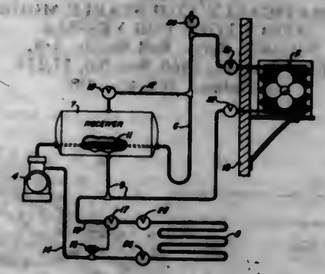
3,088,292

REFRIGERATION SYSTEM HAVING AN ATMOSPHERIC TEMPERATURE RESPONSIVE CONDENSER

Erich J. Kocher, Milwaukee, Wis., assignor to Vilter Manufacturing Corporation, a corporation of Wisconsin

Filed Nov. 16, 1961, Ser. No. 152,771
4 Claims. (Cl. 62—196)

1. A refrigerating system comprising, a refrigerant gas compressor, an atmospheric temperature responsive gaseous refrigerant condenser, a compressed refrigerant gas supply line directly connecting the discharge of said compressor with the inlet of said condenser, a liquid refrigerant receiver, a liquid refrigerant evaporator, liquid refrigerant conducting means directly connecting the outlet of said condenser with said receiver below the liquid refrigerant level therein and also connecting said condenser outlet with the liquid refrigerant intake of said evaporator, a heat transfer device associated with said gas supply line



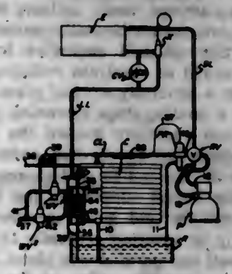
in heat exchange relation with said receiver to heat the liquid refrigerant confined within said receiver responsive to compressor discharge pressure, a conduit connecting said receiver above the liquid refrigerant level therein and being provided with valve means for relieving excess gas pressure over a predetermined value from the receiver into said gas supply line, and a gaseous refrigerant return line connecting the exit of said evaporator with the intake of said compressor.

3,088,293

REFRIGERATION APPARATUS AND METHOD

Ray M. Henderson, 139 E. Ridgewood Court, San Antonio, Tex.

Continuation of application Ser. No. 562,826, Feb. 1, 1956
This application Sept. 11, 1961, Ser. No. 137,362
30 Claims. (Cl. 62—197)



30. In refrigeration apparatus operable to conduct and control circulation of refrigerant from the outlet to the inlet of a compressor in the operation of said apparatus to transfer heat, a receptacle for containing a part of the refrigerant in said apparatus while another part of said refrigerant is circulating therein, and means operable to regulate the flow of said refrigerant down stream from said receptacle during at least a part of said operation of said apparatus including flow regulating means connected down stream from said receptacle for controlling the transfer of refrigerant from said receptacle during at least said part of said operation, said flow regulating means including a flow regulating valve adapted for movement in a direction away from its closed position by pressure of the refrigerant contained in said receptacle.

3,088,294

REFRIGERATING APPARATUS

Robert Smith, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Jan. 24, 1962, Ser. No. 168,382
4 Claims. (Cl. 62—296)



1. A refrigerating apparatus comprising in combination:

(*a*) a cabinet having a food storage chamber and a machine compartment therein beyond said chamber,

(*b*) a refrigerating system to be associated with said cabinet including a refrigerant evaporator for cooling said chamber, a refrigerant condenser and a motor-compressor unit located in a casing,

(*c*) said casing being upon associating the refrigerating system with said cabinet mounted within said machine compartment thereof and having limited movement relative to the cabinet,

(*d*) said condenser being an elongated structure for location outside said machine compartment and adapted to be secured to an upright outer wall of said cabinet in spaced relation thereto,

(*e*) conduits connecting said evaporator, said condenser and said casing in closed refrigerant flow relationship,

(*f*) one of said conduits leading from said casing upwardly of the machine compartment after associating the refrigerating system with said cabinet between the outer wall thereof and the elongated condenser structure and connected to an upper portion of said condenser,

(*g*) a resilient grommet provided with a slit through its thickness extending continuously from an aperture therein to a peripheral edge thereof through which said one conduit is passed in assembling said grommet thereon prior to securing said condenser structure to said cabinet upright outer wall,

(*h*) said grommet embracing the one conduit and being clampingly compressed intermediate the condenser structure and said cabinet outer wall by the securement of said structure thereto whereby the wall of said aperture in the grommet is caused to grip said one conduit and dampen vibrations thereof while the limited relative movement of said casing occurs, and

(*i*) walls of the slit in said grommet having portions directed in changing directions laterally away from the axis of said aperture therein for preventing entry of said one conduit into said slit upon jolting said cabinet during moving and transportation thereof.

3,088,295

FASTENER ADAPTER

Mervyn V. T. Haines, 28 Glennon Road, Livingston, N.J.

Filed June 8, 1962, Ser. No. 201,144
1 Claim. (Cl. 63—20)

A fastener adapter for use in mounting one of a variety of ornaments upon one of a variety of supporting structures, each structure being readily capable of being pierced, said fastener adapter comprising:

(A) a fastener having a first element permanently fixed to the ornament, said element having a radially expansible retainer member located therein;

(B) a mating element of said fastener, said mating element comprising a shell having first and second opposed ends;

(C) a flange in said shell adjacent said first end;

(D) said shell having a recess adjacent said flange, said retainer member being detachably secured within said recess when said first element is in place on said mating element, said flange cooperating with said retainer member to releasably maintain said retainer within said recess;

(E) a lip integral with said second end of said shell;



(F) a disc located within said shell and permanently fixed therein at said second end, said lip being formed over said disc to retain said disc in place within said shell, said disc and said lip comprising a first clamping surface;

(G) a pin projecting from said disc to pierce said supporting structure when said mating element is mounted upon said supporting structure; and

(H) a gripper having a second clamping surface, said gripper being removably engageable with said pin such that said first and second clamping surfaces may be selectively moved toward and away from each other to removably clamp said supporting structure between said clamping surfaces and removably mount said mating element upon said supporting structure.

3,088,296

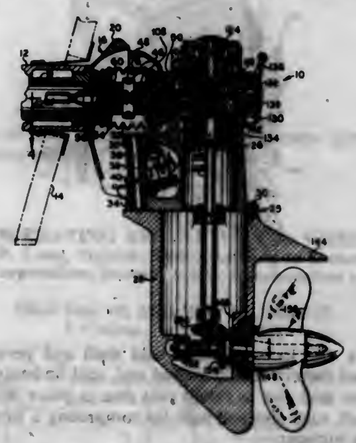
MARINE DRIVE

Jerry C. Barker, 8046 Fairway Drive, Seattle 15, Wash., and John W. Anderson, 2722 SW. 164th Place, Seattle 66, Wash.

Filed Nov. 23, 1960, Ser. No. 71,289
2 Claims. (Cl. 64—17)

1. In an inboard-outboard type marine drive comprising an outboard power leg, a supporting member adapted to be connected to a structural portion of a boat, a forward joint housing carried by said supporting member, an intermediate support means pivotally mounted on said forward joint housing about a first axis, said outboard power leg being pivotally mounted on said intermediate support means about a second axis disposed normal to said first axis thereby allowing said power leg to be oscillated laterally for steering or pivoted upwardly for kick-up, a power shaft adapted to be connected at one end to a prime mover, a universal joint assembly, means connecting said power shaft for rotation with said universal joint assembly, a rearward joint housing carried by said power leg and disposed adjacent said forward joint housing, gearing and power transfer shaft means disposed in said power leg and being connected to said universal joint assembly for rotation therewith, said universal joint assembly comprising a first yoke connected with said power shaft, said first yoke having a pair of laterally spaced, oppositely disposed yoke arms, a second yoke connected with said gearing means, said second yoke

having a pair of laterally spaced, oppositely disposed yoke arms, a connecting ring disposed axially intermediate said first and said second yokes, said connecting ring having a hollow central ring portion, a first set of laterally spaced, oppositely disposed yoke arms on said ring portion, means connecting said first set of yoke arms on said ring portion, with said yoke arms on said first yoke for universal motion therebetween, a second set of yoke arms on said ring portion, means connecting said second set of yoke arms on said ring portion with said yoke arms of said second yoke for universal



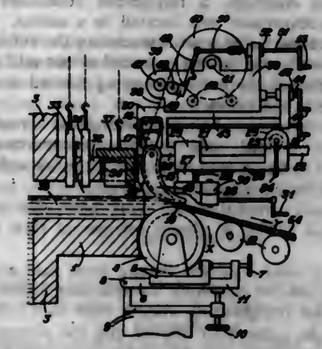
motion therebetween, said first yoke and said second yoke being disposed within the axial confines of the assembly including said forward joint housing and said rearward joint housing, and said forward joint housing being positioned with respect to said rearward joint housing to allow said power leg to be kicked up to a position wherein said rearward joint housing is disposed partially within and in overlapping relationship with said forward joint housing while operating clearance is maintained between the universal joint assembly and said rearward joint housing.

3,088,297
APPARATUS FOR DRAWING FIBERS
Narinder S. Kapany, Chicago, and David F. Capellaro, Glen Ellyn, Ill., assignors, by mesne assignments, to American Optical Company, a voluntary association of Massachusetts
Filed June 1, 1960, Ser. No. 33,240
4 Claims. (Cl. 65—13)



1. In combination a system for drawing a thermoplastic material into fine flexible aligned fiber bundles comprising: a multisection furnace for heating said material; means for selecting various temperatures for the individual sections of the furnace; means for maintaining said temperatures constant; means for feeding the thermoplastic material into the furnace at a predetermined constant rate; means for drawing said material from said furnace into a fine flexible fiber at a constant rate; means for detecting any variation in the diameter of the fiber after it has been drawn from the furnace; means for displacing said drawing means in a direction lateral to the drawing direction so that the fiber is wound in aligned, multiple, parallel, layers upon said drawing means; and means responsive to said detecting means for regulating the rates of the drawing means and the displacing means in accordance with any detected variation in the diameter of the fiber.

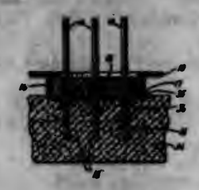
3,088,298
PROCESS FOR THE CONTINUOUS MANUFACTURE OF REINFORCED CAST GLASS
Adolphe Mols, Zevergem, Belgium, assignor to Les Glaceries de la Sambre, Societe Anonyme, Auvelais, Belgium, a Belgian company
Filed Aug. 11, 1959, Ser. No. 832,991
Claims priority, application Belgium Aug. 22, 1958
3 Claims. (Cl. 65—44)



1. A process for manufacturing reinforced cast glass ribbon comprising discharging molten glass from a container onto a roller, cooling the roller to reduce the surface temperature of the glass as it contacts the roller to cause solidifying of the glass, immersing an open mesh reinforcing element in the glass above the roller while feeding the mesh in a direction away from the container at a speed sufficient to allow upward flow of the solidifying glass through the open mesh of the reinforcing element and to allow the glass to solidify around the reinforcing element and form a lenticular surface, and advancing the solidifying glass in a direction away from said container by a force applied through the reinforcing element therein with the glass sufficiently viscous to avoid smoothing of the lenticular surface.

3,088,299
METHOD OF MAKING GLASS TO METAL SEAL
John F. McMahon, Jr., and John Russell Fahey, Lansdale, Pa., assignors, by mesne assignments, to Philco Corporation, Philadelphia, Pa., a corporation of Delaware
Filed July 14, 1960, Ser. No. 42,904
4 Claims. (Cl. 65—49)

1. The method of manufacturing stem units having conductive leads mounted in a glass-to-metal seal on a conductive perforated retaining element, comprising placing the leads in position within the perforations of the element so that portions of said leads extend therethrough, placing glass in association with said element and said leads, implanting in a mat of heat-resistant fibrous material the portions of said leads which protrude from one wall of said element, embedding said one wall in said mat, and firing the units while utilizing said mat to maintain the leads in said position and to prevent the flow



of molten glass through said perforations and formation of fillets along said leads during fusion of the glass and formation of the glass-to-metal seal.

3,088,300
TREATING GLASS SHEETS
James H. Elliott, Greensburg, Pa., assignor to Pittsburgh Plate Glass Company, Allegheny County, Pa., a corporation of Pennsylvania
Filed Oct. 21, 1959, Ser. No. 847,821
2 Claims. (Cl. 65—288)



1. In a skeleton outlined mold for bending glass sheets having edgewise disposed shaping rails which form an outline shaping surface and contact the glass sheets supported thereon at an outwardly disposed peripheral area slightly within the outermost edge periphery of the glass sheet, the improvement which comprises:

(*a*) an edgewise disposed, flexible shaping rail having an upper edge surface forming a part of the skeleton outline shaping surface, said shaping rail having an inner wall and an outer wall, said walls extending downwardly from said upper edge surface in closely spaced relation to provide a shaping rail of relatively small cross section thus imparting flexibility and relatively small thermal capacity to said shaping rail;

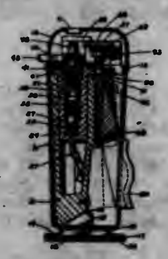
(*b*) a stiffening rail having an upper edge and inner and outer walls, said outer wall of said stiffening rail being in contact with and in abutting, side-by-side relation to said inner wall of said shaping rail, said stiffening rail having a relatively large cross section compared to that of said shaping rail to provide rigidity and relatively large thermal capacity, and wherein the upper edge of said stiffening rail lies below the said upper edge surface of said shaping rail, said upper edge of said stiffening rail lying inwardly of said outwardly disposed peripheral area of the glass sheet; and

(*c*) vertically adjustable, releasable securing means for releasably securing said shaping rail to said stiffening rail, said securing means comprising

(1) a first vertically adjustable element attached to and in contact with said shaping rail, the uppermost portion of said first element lying below said upper edge surface of said shaping rail, and

(2) a second element releasably securing said first element to said stiffening rail.

3,088,301
CIGARETTE LIGHTERS
Francis E. Gruber, St. Paul, and Clarence A. Johnson and Arnold D. Verle, Minneapolis, Minn., assignors to Standard Packaging Corporation, a corporation of Virginia
Filed Jan. 26, 1960, Ser. No. 4,730
6 Claims. (Cl. 67—7.1)



5. A cigarette lighter comprising a housing; a covered fuel tank recessed within said housing; a discharge valve disposed in said tank with the discharge end extending above said fuel tank; rotatable pyrophoric means disposed horizontally over said tank in spaced relationship with the discharge end of said valve; a lifting fork having one end pivotally secured to the top of said tank and the opposite end being free, said fork being joined to the discharge end of said valve adjacent to the pivotal end of the fork for moving the valve upon pivotal movement of the fork; a four sided horizontally disposed actuating arm having one side pivotally secured to the top of said tank, the opposite side having a plurality of teeth for rotating said pyrophoric means upon the pivotal movement of said actuating arm, said arm having a cam depending from the side from which the arm is pivotally secured to said tank; a main lever centrally secured to the side of the tank for pivotal movement, the upper end thereof upon such pivotal movement simultaneously engaging the free end of the lifting fork for moving said valve and the depending cam of said actuating arm for actuating said pyrophoric means by the pivotal action of said actuating arm.

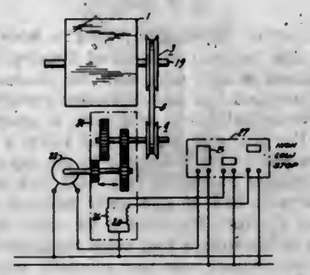
3,088,302
CANDLES
Frederick A. Koch, 82 Mountain Road, Concord, N.H.
Filed Mar. 26, 1957, Ser. No. 648,542
1 Claim. (Cl. 67—22)



As a new article of manufacture, a candle-simulating substitute for an all wax-like bodied birthday cake candle or the like, comprising an elongated and functionally integral plural section body of candle form from end to end, said body providing upper and lower sections of minor and major length respectively, the shorter upper section comprising a relatively soft wick-incorporating and wax-like flame-consumable body, the lower section for insertion in a cake being wickless and comprising a wholly edible, hard textured but brittle candle length-simulating body of substantially impervious-to-heat material which will not become adhesive or warp or bend at atmospheric temperatures; interfitting boss and socket element-provided connecting means at the meeting ends of said sections and providing an inconspicuous joint therebetween, the relatively soft body material of the upper section-pro-

vided connecting means element yielding slightly under the applied assembling pressure of the lower section-provided connecting means element so as to provide a tight joint, and the lower section having a transverse breakoff facilitating weakened area spaced below the section-connecting joint a distance sufficient to provide a finger grip area therebetween, as an aid when breaking off at said weakened area the subjacent portion of said lower section for subsequent consumption as a confectionary item.

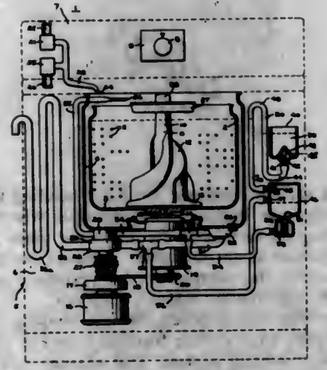
3,088,303
AUTOMATIC WASHING MACHINE HAVING A VARIABLE SPEED DRIVE
Erich Schmettow, Hohenbrunn-Riemerling, Germany, assignor to Siemens-Electrogerate Aktiengesellschaft, Berlin, Germany, a corporation of Germany
Filed Sept. 19, 1961, Ser. No. 139,584
Claims priority, application Germany Sept. 23, 1960
6 Claims. (Cl. 68—12)



1. In a drum-type washing machine having a laundry-receiving rotatable drum, drive means for said drum, and a program control device connected with said drive means for sequentially switching it to operate at a lower speed range for washing operation and at higher speed range for centrifuging operation, said drive means including a motor and a two-step gear transmission mechanism disposed between said motor and said drum and shiftable between a first and second speed for transmitting power to said drum and increasing the speed thereof, a continuously variable V-belt transmission having a pair of sheaves each having a displaceable disc and connected between said two-step transmission mechanism and said drum for controlling acceleration of said drum within said higher speed range, and a centrifugal weight device joined with a first one of said sheaves and engaging the displaceable disc of said first sheave for displacing the latter in dependence upon the second speed of said two step transmission, said control device having means for sending a signal pulse to shift said transmission from a said first speed to said second speed, said centrifugal device being responsive to the two-step transmission reaching said second speed.

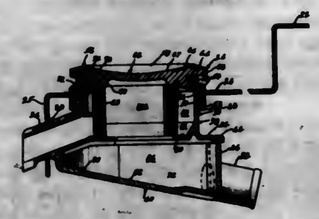
3,088,304
CLOTHES WASHING MACHINE WITH RINSING AGENT DISPENSER ARRANGEMENT
John Bochan, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Filed Mar. 23, 1962, Ser. No. 181,858
6 Claims. (Cl. 68—12)

1. A clothes washing machine comprising:
(*a*) liquid and clothes receptacle means including a rotatable clothes basket;
(*b*) means for washing clothes in said basket;
(*c*) recirculation means including a first reversible pump, first inlet means connecting said receptacle means adjacent the bottom thereof to said first pump, and first outlet means connecting said first pump to discharge into said receptacle means adjacent the top thereof;
(*d*) drain means including a second reversible pump, second inlet means connecting said receptacle means at the bottom thereof to said second pump, and second outlet means adapted to be connected to a drain;
(*e*) reversible drive means connected to said pumps, said drive means in one direction of rotation causing pumping through said first pump from said first inlet means to said first outlet means and causing pumping through said second pump from said second outlet means to said second inlet means, said drive means in the other direction of rotation causing pumping through said first pump from said first outlet means to said first inlet means and causing pumping through said second pump from said second inlet means to said second outlet means;
(*f*) transmission means driven by said drive means and connected to said basket and said washing means, said transmission means operating said washing means in said one direction of rotation and rotating said basket at centrifuging speed in said other direction of rotation;



(*g*) control means for causing said drive means to operate sequentially in said one direction, said other direction, said one direction, and said other direction;
(*h*) means for providing water in said receptacle means for use during operation of said washing means;
(*i*) first and second containers for liquid treating agent, said first container being formed to contain a predetermined amount of agent and having an opening at the bottom thereof, said second container being closed and formed to contain more than said predetermined amount and having a first opening at the bottom thereof and second and third openings above the level reached by said predetermined amount;
(*j*) first conduit means connecting said first container opening and said second opening of said second container, said first conduit means extending up above the highest level reached in either said first container or said receptacle means;
(*k*) a check valve positioned to permit only flow out of said second container from said first opening thereof;
(*l*) second conduit means connecting said first inlet means to said first opening of said second container so as to provide suction at said first opening during rotation of said drive means in said one direction; and
(*m*) third conduit means connecting said second inlet means to said third opening of said second container so as to provide suction at said third opening during rotation of said drive means in said other direction;
(*n*) whereby agent is drawn from said first container to said second container during the first basket rotation and is drawn from said second container into said receptacle during the second operation of said washing means.

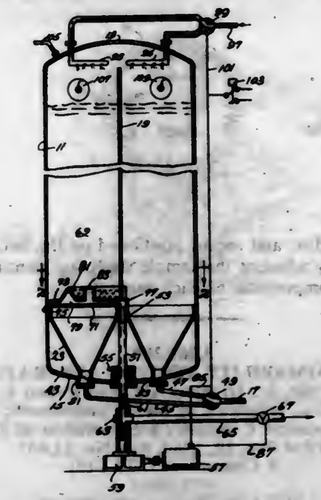
3,088,305
FILTER CONSTRUCTION
William Ohmann, Clyde, Ohio, assignor to Whirlpool Corporation, St. Joseph, Mich., a corporation of Delaware
Filed Mar. 17, 1960, Ser. No. 15,728
8 Claims. (Cl. 68—17)



3. A filter comprising a housing having a bottom wall with a relatively deep well portion, said housing having a shelf forming an opening above said well and having an upstanding wall surrounding said opening, an outlet in said upstanding wall, a filter element between said opening and said outlet, an inlet below said opening, means forming a channel leading from said inlet for a predetermined distance around the periphery of said housing below said opening for directing fluid around the periphery of said housing before its entry into said well, and a damping wall sloping upwardly from said bottom wall in predetermined spaced relation from the end of said channel and positioned in the path of flow from said channel to direct fluid into said well whereby the fluid can rise gently from said well through said opening and thence to said outlet.

3,088,306
CONTAINER FOR WASHING OF CELLULOSE PULP
Johan C. F. C. Richter, St. Jean Cap Ferrat, Alpes Maritimes, France, assignor to Aktiebolaget Kamyr, Karlstad, Sweden, a company of Sweden
Filed Mar. 24, 1961, Ser. No. 98,205
Claims priority, application France Mar. 28, 1960
9 Claims. (Cl. 68—181)

1. Pulp treating apparatus comprising: an upright cylindrical container having a longitudinal axis; means for supplying pulp to the lower end of said container; a partition wall extending longitudinally within said container along at least a portion of the length thereof, and positioned to divide the interior of said container substantially two semi-circular cross-sectional portions; a shaft coaxially mounted for rotary movement within said container; a sieve body of substantially semi-circular transverse configuration cooperatively joined to said shaft in generally perpendicular relationship thereto to selectively abridge said container portions upon rotation of said shaft, said sieve body having an apertured upper wall leading to an interior chamber; and passage means in said shaft communicating with said sieve body chamber to provide an outlet for liquid drawn off via said apertured upper wall.



3,088,307
INSTRUMENT ADJUSTING DEVICE
Walter W. Gray, Charlottesville, Va., assignor to Specialties, Incorporated, Syosset, Long Island, N.Y., a corporation
Filed Aug. 29, 1960, Ser. No. 52,477
3 Claims. (Cl. 73—1)

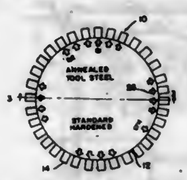


1. In a device for adjusting the alignment of an instrument shaft, an annular plate for supporting said instrument in the space surrounded by said plate, a plurality of guide members extending from both faces of said plate, a plurality of slides movable in said guide members in generally radial direction relative to the axis of said plate, said slides having blade-like extensions therefrom for pushing a plurality of movable members carrying bearings for a shaft of an instrument, and means including differential screw means for producing movement of said slides in said guide members, the working ends of said extensions being curved to fit a curved surface of said instrument.

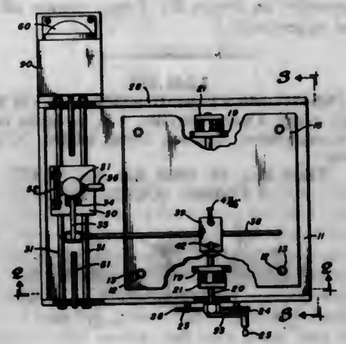
3,088,308
SPARK TESTING STANDARD
George J. Danis, Roseville, Mich., assignor to GLD Products Company, Roseville, Mich., a co-partnership
Filed Nov. 9, 1959, Ser. No. 851,674
1 Claim. (Cl. 73—7)

Spark testing apparatus for producing sparks in conjunction with a grinding wheel representative of materials of known chemical composition for comparison with sparks produced from material of unknown chemical composition whereby the composition of said material of unknown composition may be determined by comparison of said sparks comprising a substantially flat, continuous, circular opaque disc, a plurality of radially extending separate sample studs of steel of different known chemical compositions secured around the periphery of the body

member in spaced relation to each other, the radial extent of the sample studs being small relative to the diameter of the disc, and means positioned on the circular disc immediately adjacent the sample studs for identifying the chemical composition of each separate stud.



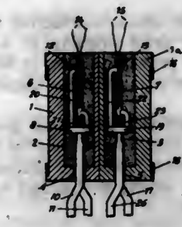
3,088,309
FLAMMABILITY TESTING APPARATUS
Clyde C. White, Jr., Decatur, Ala., and Robert L. Amsler, Macon, Ga., assignors, by mesne assignments, to Monsanto Chemical Company, a corporation of Delaware
Filed Feb. 29, 1960, Ser. No. 11,601
9 Claims. (Cl. 73—15)



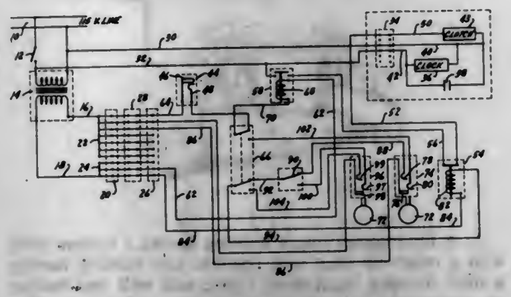
1. A device for testing flammability of a fabric, comprising a base, means on the base for supporting a fabric to be tested, means on the base for applying heat to the fabric at a location thereon, means on the base for moving the heat applying means to traverse said location across the fabric at a predetermined rate, and means for moving the heat applying means away from the fabric after said heat applying means has been traversed a predetermined distance.

3,088,310
GAS ANALYSER BASED ON THE PRINCIPLE OF THERMAL CONDUCTIVITY
Walter H. Penn, Frankfurt am Main, Wiesenau, and Friedrich G. Lotz, Hofheim, Taunus, Germany, assignors to Hartmann & Braun Aktiengesellschaft, Frankfurt, Germany, a corporation of Germany
Filed Aug. 20, 1959, Ser. No. 835,102
Claims priority, application Germany Aug. 26, 1958
1 Claim. (Cl. 73—27)

In a gas analyser for operation by thermal conductivity, a glass conduit for test gas having an inlet and outlet portion at each end and divided flow branches therebetween, an inverted somewhat U-shaped tube of glass having the terminal ends thereof connected to and in gas communication with the respective branches, a vertically disposed longitudinal heater element in said tube, a reference tube for reference gas and heater element therefor, metallic powder tightly packed about the tubes and conduit, and housing means for the powder to enable equalizing temperature of the tubes through the medium of the powder.

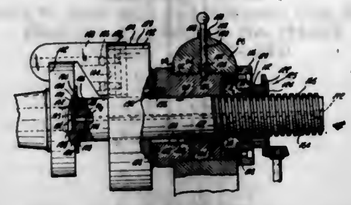


3,088,311
AIR SYSTEM TIMER
Harold L. Dobrikin, Highland Park, and Edward J. Brodl, La Grange Park, Ill., assignors to Berg Airlectro Products Co., Chicago, Ill., a corporation of Illinois
Filed May 7, 1959, Ser. No. 811,647
1 Claim. (Cl. 73—39)



An air pressure testing and timing device for measuring the time from initial application of air pressure to a system until a predetermined pressure has been attained at a given point in the system, and for measuring the time from release of operating pressure until the pressure drops below a predetermined pressure, including an electrical time indicator having an electrically operated clutch and a source of electrical energy, a pair of relays, one of said relays being normally open and the other being normally closed, an electrical circuit connecting the said relays, clutch and source, means for closing said normally open relay to operate said clutch and start said time indicator including a switch adapted to operate upon initial application of air under pressure to said air system, a first set of contacts responsive to variations in air pressure and adapted to open said normally closed relay and release said clutch to stop said time indicator when a predetermined level of air pressure has been reached, a second set of contacts responsive to variations in air pressure lower than that to which said first set of contacts is responsive, a switch for selecting either said low pressure set of contacts or said high pressure set of contacts, a third set of contacts effective to close said normally open relay to operate said clutch and start said time indicator, one of the contacts in said third set of contacts being one of the contacts in said first set of contacts, a switch for selecting either of said third set of contacts or the switch operable upon initial application of air pressure to said system, a fourth set of contacts effective to open said normally closed relay and release said clutch to stop said time indicator when the air pressure has been reduced to a predetermined level, one of the contacts in said fourth set of contacts being one of the contacts in said second set of contacts.

3,088,312
METHOD AND APPARATUS FOR USE IN VALVE TESTS AND ASSEMBLY
William A. Morris, Sulphur Springs, Tex., assignor to Rockwell Manufacturing Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Mar. 1, 1957, Ser. No. 643,266
19 Claims. (Cl. 73—46)

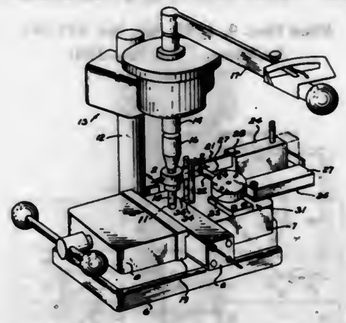


1. A valve testing machine comprising: a support; a fixed head at one end of said support; a shiftable head mounted on said support movable toward and away from said fixed head; selectively operable power means for moving said shiftable head; a jaw chuck with a coaxial reciprocable ram carried by each head; independent selectively operable means for reciprocating each ram relative to its associated chuck; and independent means for developing and applying fluid under pressure through each ram operatively connected to each ram.

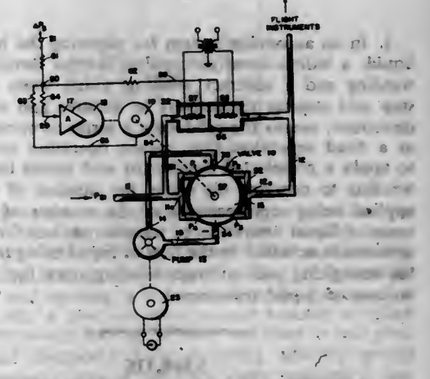
10. A method of testing valves comprising the steps of: releasably clamping one end connection of a test valve in a first clamp device; sealingly applying a means for supplying a fluid pressure source to the valve body opening in the clamped end; filling the body of the valve between said clamped end of the valve and the valve plug with fluid; with the plug of said valve in a closed position, applying a predetermined pressure from the fluid pressure supply source to the fluid in said clamped end of the valve for a predetermined time period; inspecting for leakage at the free end of said valve while pressure is applied; releasably clamping the other end of said test valve in a second clamp device with relative floating movement respective to said one end of the test valve; sealingly applying a second means for supplying a fluid under pressure to the opening in said other clamped end; opening the plug in said test valve and filling the entire valve with fluid; applying pressure on the fluid in said valve; inspecting for valve body leakage; removing the releasable clamping means and the means for supplying pressure from the said one end of said test valve; with the valve plug in closed position, applying a predetermined pressure on fluid in the opposite end of said valve through said second fluid pressure supply means for a predetermined time; and inspecting for leakage at the free end of said test valve.

3,088,313
TORQUE TESTING APPARATUS
Richard D. Berg, Elmhurst, Ill., assignor to Western Electric Company, Incorporated, a corporation of New York
Filed Sept. 15, 1960, Ser. No. 56,210
7 Claims. (Cl. 73—139)

1. Apparatus for determining whether a threaded member has been tightened to a desired extent, which comprises torque applying means including a rotatable bit for applying torque of a desired magnitude to the member, an arm, locking means for connecting said arm to said rotatable bit for rotation therewith, and gage means engageable with and operable by said arm for indicating any rotary movement of the member by said bit, said bit and said arm remaining stationary as said bit applies torque of the desired magnitude to the member, if the member is tightened to the desired extent, and said bit being operative to rotate the member as said bit applies torque of the desired magnitude to the member, if the member is not tightened to the desired extent, so that said arm moves to operate said gage.

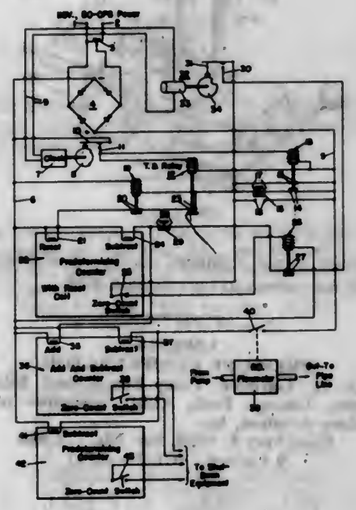


3,088,314
PRESSURE COMPENSATOR
Frederick H. Gardner, Long Beach, and Edward L. Gardner, Canoga Park, Calif., assignors to North American Aviation, Inc.
Filed May 8, 1958, Ser. No. 734,026
9 Claims. (Cl. 73—182)



2. A pressure transmitting system having an inlet adapted to be connected to a source of fluid pressure and an outlet adapted to be connected with a pressure utilization device, the improvement comprising means for transmitting fluid pressure from said inlet to said outlet and combining with said transmitted pressure an adjustable pressure increment during such transmission, said means comprising means for providing first and second fluid paths between said inlet and outlet, first and second variable area ports in said first path, third and fourth variable area ports in said second path, a closed circuit pressure source having pressure communicating connections with said first and second fluid paths respectively at points intermediate the ports of the individual paths for establishing a pressure potential between said points, a source of pressure increment command signal, and means responsive to said signal for simultaneously increasing the area of said first and third ports while decreasing the area of said second and fourth ports.

3,088,315
LIQUID TRANSFER METERING SYSTEM
William E. Withers, Beaumont, Tex., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey
Filed Dec. 9, 1959, Ser. No. 858,343
5 Claims. (Cl. 73—194)



1. In an automatic system for metering the transfer of liquid, a bidirectionally-steppable counter having an add winding and a subtract winding which when energized step said counter respectively in additive and subtractive directions; means for producing a series of current pulses at a fixed repetition rate, means operating periodically to apply a preselected number of said pulses to said add winding to energize the same, the number of pulses so applied being representative of the number of unit volumes of liquid desired to be transferred; and flow-responsive means actuated by the flow of liquid being transferred for energizing said subtract winding once for each unit volume of liquid transferred.

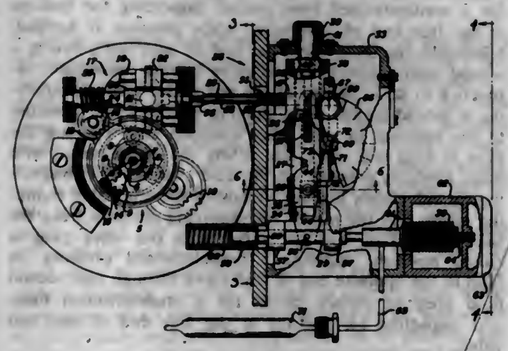
3,088,316
INDIVIDUAL MILK YIELD MEASURING APPARATUS
William David John Hutchings, Paynthouse Farm, Cann, Shaftesbury, England
Filed Aug. 1, 1960, Ser. No. 46,672
Claims priority, application Great Britain Aug. 13, 1959
5 Claims. (Cl. 73—223)

1. Individual milk yield measuring and indicating apparatus comprising a vertically movable vessel, a milk inlet pipe opening into the upper part thereof, a bell-shaped mouth at the lower end of said vessel, a fixed closure member on to which said bell-shaped mouth seats to seal the lower end of said vessel, said closure member having in its upper face a recess of an area not less than the cross-sectional area of said vessel, whereby the milk entering said vessel fills said recess and rises in said vessel until the pressure of the column of milk building up in said vessel lifts said vessel and unseats said bell-shaped mouth, an outer casing into which said vessel discharges said milk column when said vessel is lifted, a suction outlet connection at the lower part of said casing, an air vent in the upper part of



said vessel, and means for registering the number of times said vessel discharges until the milk supply is exhausted.

3,088,317
TEMPERATURE AND COEFFICIENT EXPANSION COMPENSATORS FOR LIQUID FLOW RECORDERS
William E. Steen, South Pasadena, Calif., assignor to A. O. Smith Corporation, Milwaukee, Wis., a corporation of New York
Filed Feb. 15, 1960, Ser. No. 8,813
5 Claims. (Cl. 73—233)



1. In a variable drive control having a temperature sensing device coupled to the liquid to adjust an element in a variable drive connection of a metering and recording apparatus for changes in temperature in the liquid flowing through the meter, which comprises a pivotal lever, a movable carriage carrying a pivot support for the lever for positioning of the pivot support relative to the lever, means connecting one end of the lever to the temperature sensing device for angular positioning of the lever, an adjustment member adapted to be secured to the element of the variable drive connection, a sliding follower attached to the lever and slidably engaging said adjustment member, resilient means on said member clamping the follower to the adjustment member for simultaneous movement thereof and constituting the operating connection therebetween, and second resilient means secured to said follower to angularly bias the lever against the action of the temperature sensing device, said first and second

resilient means loading the connections to the lever to eliminate substantially all backlash and lost motion in the movement of the lever and to establish accurate actuation of said indicator.

3,088,318
LIQUID LEVEL GAUGE FOR UNDERGROUND TANKS
Irvin W. Stall, 4622 Forest, Kansas City, Mo.
Filed Dec. 11, 1961, Ser. No. 158,468
6 Claims. (Cl. 73—321)



1. A liquid level gauge for use in connection with an underground tank having a pipe interconnected therewith and extending above ground level, said gauge comprising:

a. a housing closing and sealing the upper end of said pipe and having a transparent window therein,

b. gauge members supported in said housing, being readable through said window and including a member depending downwardly through said pipe into said tank and movable responsively to the liquid level therein, and

c. a moisture condenser comprising:

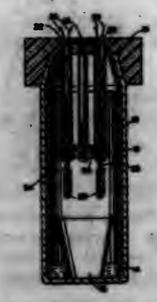
(1) a heat conducting closure member contacting said housing and closing the lower end thereof, said closure member having a restricted hole formed therethrough through which said depending gauge member is trained,

(2) a heat conducting tubular member affixed to said closure member and depending therefrom, said tubular member being open at its lower end and having holes formed therein adjacent its upper end but below said closure member, and

(3) a filling of highly porous heat conducting material in said tubular member.

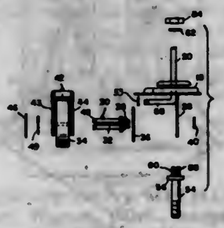
3,088,319
APPARATUS FOR DETERMINING MOLECULAR WEIGHT
John J. Neumayer, St. Paul, Minn., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware
Filed Aug. 20, 1959, Ser. No. 835,131
4 Claims. (Cl. 73—342)

1. In an apparatus for determining molecular weight of a solute by determination of the difference in equilibrium temperature between solvent and solution in an atmosphere saturated with solvent vapor, a temperature sensing means bearing non-solvent-absorbent means of high thermal conductivity in contact with, coextensive



with and encircling the temperature-sensitive portion of said temperature-sensing means utilizing surface tension for retaining a substantially continuous film of liquid in contact therewith and exposed to said solvent vapors.

3,088,320
AUTOMATIC CHOKE ADJUSTING MEANS
Richard M. Saxby, Detroit, Mich., assignor to Holley Carburetor Company, Van Dyke, Mich., a corporation of Michigan
Filed May 18, 1959, Ser. No. 814,058
4 Claims. (Cl. 73—363.5)

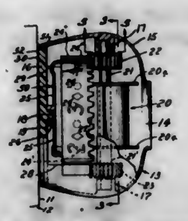


1. Temperature responsive actuating mechanism for adjusting a movable member exterior of a housing in accordance with temperature variations within said housing, said housing having an enlarged opening, a removable cover for said opening, a bracket carried by the cover at its inner side, a post mounted on said bracket, a coiled bimetal thermostat having its inner end fixed to said post, a U-shaped thermostat lever including laterally spaced arms at opposite sides of said thermostat rotatable at one end thereof on said post at one side of said bracket, an elongated element extending between said arms adjacent the other end of said arms, the outer end of said thermostat having a hook portion connected to said element to rotate said lever and to be guided thereby, and an elongated actuator connected to said element and extending through and movable in an opening in said cover for transmitting motion to said movable member.

3,088,321
HEAD SPEED INDICATOR FOR GOLF CLUBS
John Douglas Lathrop, 3456 Alsace Ave., Los Angeles 16, Calif.
Filed May 12, 1960, Ser. No. 28,598
13 Claims. (Cl. 73—379)

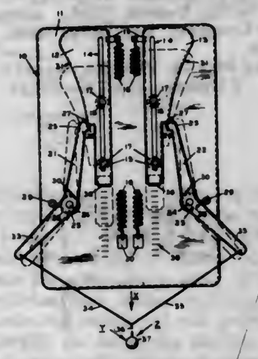
1. A speed indicating device for the striking face of golf club heads comprising an air pressure responsive component; means to support said component adjacent the exterior frontal surface of said striking face; indicator means operable by said component to register the air

pressure exerted on said component during a swinging movement of the club head; means for stabilizing the component and indicator means against registering movement during the preliminary phases of a golf club swing;



means for shielding the air pressure responsive component from lateral air flow or pressures and pressure adhesive attachment means adapted to removably secure said means to support said component upon the striking face of the golf club.

3,088,322
GOLF PRACTICE APPARATUS
Eugene A. Marggraff, Sugar Loaf, Winona, Minn.
Filed Dec. 28, 1959, Ser. No. 862,395
5 Claims. (Cl. 73—380)



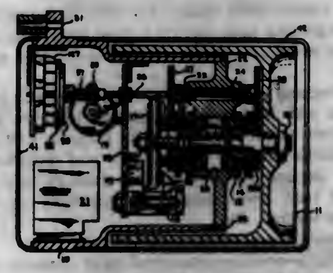
1. A game apparatus comprising, a base, an indicator moveably mounted on said base means for moving said indicator from a cocked to an indicative position, a positive latch mechanism for holding said indicator in said cocked position and preventing it from moving, a ball operably connected to said latch and adapted when hit to open said latch, and means also operably connected to said ball and engageable with said indicator for limiting movement thereof to said indicative position in relation to the force with which said ball is hit.

3,088,323
PIEZORESISTIVE TRANSDUCER
Walter Welkowitz, Nixon, and Max Tralte, East Brunswick, N.J., assignors to Gulton Industries, Inc., Metuchen, N.J., a corporation of New Jersey
Filed Feb. 10, 1960, Ser. No. 7,928
1 Claim. (Cl. 73—398)



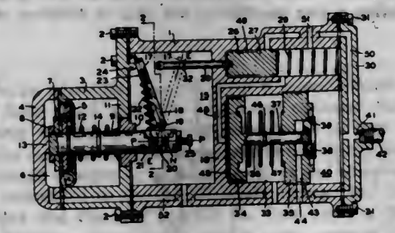
A pressure gauge comprising, an elongated hollow housing, an elongated piezoresistive transducer including a pair of like elongated thin strips of piezoresistive semiconductor material, an elongated thin flexible metal reinforcing strip having planar dimensions substantially like those of the pair of elongated thin strips of piezoresistive semiconductor material, electrically insulating cement securing said pair of elongated thin strips of piezoresistive semiconductor material to opposite sides of said elongated thin flexible metal reinforcing strip and also electrically insulating the same therefrom, and two electrodes affixed at spaced apart points to each of said thin strips of piezoresistive semiconductor material such that they are separated from each other by a large portion of the length of said thin strips of piezoresistive semiconductor material, means for securing one end of said elongated piezoresistive transducer to one end of said elongated hollow housing for cantileverly mounting said elongated piezoresistive transducer in said elongated hollow housing, said elongated hollow housing having an opening in the side thereof adjacent the free end of said cantilever mounted elongated piezoresistive transducer, a flexible diaphragm mounted and sealed in said opening in the side of the elongated hollow housing and extending into the hollow housing and engaging the cantilever mounted elongated piezoresistive transducer for flexing the same in accordance with pressure conditions affecting said flexible diaphragm, and means for making electrical connections to said electrodes for connecting said elongated piezoresistive transducer into a measuring circuit.

3,088,324
NON-GYROSCOPIC INERTIAL REFERENCE
Clifford B. Strang and William Meriwether Furlow, Jr., Orlando, Fla., assignors to Martin-Marietta Corporation, a corporation of Maryland
Filed Apr. 12, 1960, Ser. No. 21,748
12 Claims. (Cl. 73—505)



1. A non-gyroscopic inertial reference arrangement for a missile or the like comprising a housing, a mass rotatably supported in said housing in a three race bearing arrangement which includes a pair of three race bearings disposed in spaced relationship on opposite sides of said mass so as to stably support same, servo means for minimizing the friction present in said bearing arrangement, said servo means including means for oscillating the middle races of each of said bearings simultaneously in opposite rotative directions, thereby to minimize coulomb friction, said servo means also including a first light-polarized disc mounted to rotate with said inertial mass and a second light-polarized disc connected to rotate with said middle race, illuminating means for directing light through said discs, with the amount of light manifesting through said discs being determined by the relative rotative positions thereof, photosensitive means for receiving the light passing through said light-polarized discs from said illuminating means, the resistance of said photosensitive means varying in proportion to the intensity of said light, and control means incorporating said photosensitive means, for actuating said drive means to bring about rotation of said middle race in the opposite direction to rotation of the missile about its axis, so as in effect to isolate from such rotation the race of the bearing directly concerned with the support of the inertial mass, whereby said inertial reference mass is supported in an arrangement having a minimum of torsional restraints.

3,088,325
SNAP-ACTING SAFETY VALVE DEVICE
William J. Lawrence, Trafford, Pa., assignor to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania
Filed May 25, 1959, Ser. No. 815,405
2 Claims. (Cl. 74—100)



1. A fluid pressure responsive snap-acting mechanism comprising:

(*a*) a supporting member,

(*b*) an actuating lever pivotally supported at one end on said supporting member, and having its opposite end free to move,

(*c*) fluid pressure responsive means carried by said supporting member and including,

(I) a diaphragm piston adapted to be subject in a chamber at one side thereof to fluid at varying pressure,

(II) a stem shiftable axially by said diaphragm piston responsively to variation of fluid pressure in said chamber,

(III) spring means interposed between said diaphragm piston and said supporting member for yieldingly opposing axial movement of said stem in one direction responsively to an increasing fluid pressure acting on said diaphragm piston and for restoring said stem reversely responsively to reduction of the fluid pressure acting on said diaphragm piston,

(IV) said stem having an axially extending slot therein and

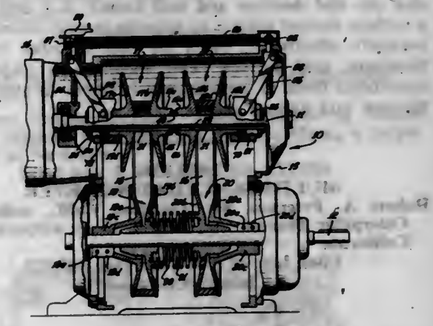
(V) a floating pin slidably movable in said slot,

(VI) tensioned spring means secured at one end to the free end of said lever and at the other end to said pin, and

(VII) means carried on said stem operable to vary the length of said slot therein,

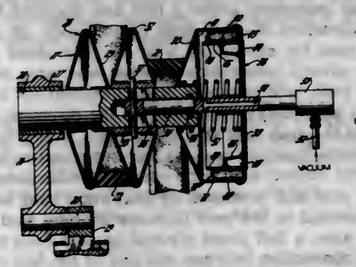
(*d*) movement of said stem in said one direction responsively to fluid pressure exceeding a certain value effecting movement of said pin with said stem so as to effect stretching of said tensioned spring means which becomes active upon swinging movement past the dead center line of said lever to rock said lever from a normal position to an operated position by snap-action, said pin coincidentally being shifted to the opposite end of said slot whereby to render the said tensioned spring means effective to yieldingly resist return pivotal movement of said lever back to its normal position until the fluid pressure acting and said diaphragm piston reduces a certain uniform amount below said certain value, the range between maximum and minimum fluid pressures for effecting snap-acting pivotal movement of said lever between its said normal and operated positions being variable according to the length of said slot.

3,088,326
MULTIPLE PULLEY VARIABLE RATIO TRANSMISSION
Richard C. Woodward, Jr., Fullerton, Calif., assignor, by mesne assignments, to The Emerson Electric Manufacturing Company, St. Louis, Mo., a corporation of Missouri
Filed Aug. 4, 1960, Ser. No. 46,622
6 Claims. (Cl. 74—230.17)



3. In a variable ratio transmission mechanism: a shaft; a pair of pulleys on the shaft for cooperation with a pair of belts; each of the pulleys having an outer section and an inner section; means for causing the inner sections to rotate in synchronism; at least one of said outer sections being movable along the length of the shaft; and means for shifting said movable outer section whereby the effective pulley diameters of both pulleys may be varied; each of said inner pulley sections having sufficient clearance on the shaft for axial movement along the shaft and for slight tilting movement about the shaft; said inner pulley sections having hubs opposed to each other for transmitting axial movements of the pulley sections.

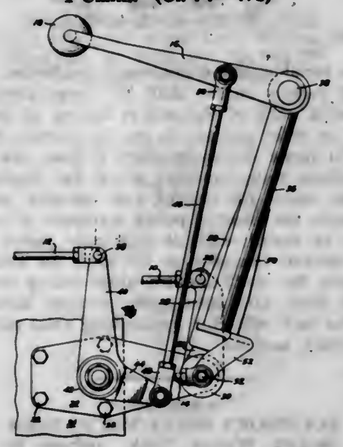
3,088,327
ACCESSORY DRIVE MECHANISM
John E. Swigart, Warren, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Feb. 10, 1961, Ser. No. 88,441
10 Claims. (Cl. 74—230.17)



1. A variable speed drive for driving an accessory of an internal combustion engine comprising a fixed diameter V-pulley driven by the engine and a fixed diameter pulley connected to said accessory, a double V-pulley having spaced conical end members fixed against axial motion, and a double coned member disposed between said end members and movable axially with respect to said end members, belts connecting the opposite halves of said double V-pulley to said fixed diameter pulleys, respectively, an axially movable header rotatable with said double V-pulley and forming with one of said end members a chamber adapted to receive vacuum at one end of

said double V-pulley, means connecting said header to said double coned member whereby said double coned member and said header are axially movable as a unit, means connecting said vacuum chamber to a source of variable vacuum, spring means operable on said header for yieldably opposing the effect of vacuum in said chamber, passage means for admitting atmospheric pressure to said chamber, a flexible seal disposed between said one end member and said header, said seal having a surface thereof subject to vacuum in said chamber and normally effective to block off said chamber from atmosphere, said surface being movable in response to centrifugal force to connect said chamber to atmosphere through said passage means.

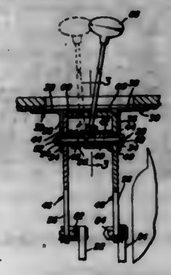
3,088,328
MULTIPLE ACTUATING LEVER
Robert A. Peterson, San Leandro, Calif., assignor to Caterpillar Tractor Co., Peoria, Ill., a corporation of California
Filed July 24, 1961, Ser. No. 126,312
1 Claim. (Cl. 74—471)



In combination with three substantially parallel control rods: a fixed support adjacent said rods, a single hand lever for imparting endwise movement selectively to said rods, a post pivotally mounted on the support for swinging movement about a first axis disposed transverse to the direction of movement of said rods, an arm fixed to the post for movement with the post about the same axis, a pivotal connection between said arm and a first of said rods, said post also being mounted for movement about a second axis transverse to the direction of movement of the rods and at a right angle to the first axis, a second arm fixed on the post for movement with the post about the second axis, a pivotal connection between said second arm and a second of said rods, said hand lever being pivoted to the post to move it about said first and second axes, a bell crank pivoted on said fixed support, a pivotal connection between one end of the bell crank and the third of said rods, and a link connecting the opposite end of said bell crank with said hand lever to move the third rod when the hand lever is swung about its pivotal connection with the post.

3,088,329
MANUAL TRANSMISSION GEAR SHIFT CONTROLS FOR SPEED SHIFTING
Jimmie L. Merritt, Rte. 4, Box 924, Springfield, Mo.
Filed Sept. 22, 1961, Ser. No. 140,020
7 Claims. (Cl. 74—473)

1. A floor-type manual transmission gear shift control for a steering column shift-type transmission employing a pair of movable actuators each movable between two gears positions and a neutral position therebetween, said gear shift control comprising a pivot shaft adapted to be semi-permanently supported in a vehicle in which said transmission is disposed and adjacent the driver's compartment of said vehicle, a pair of shifting levers pivotally mounted at points spaced intermediate their opposite ends on said pivot shaft at points spaced longitudinally therealong and including corresponding end portions which terminate in laterally directed flanges projecting toward, terminating adjacent and registrable with each other, said flanges having endwise opening and confronting recesses formed therein, a sleeve rotatably mounted between said levers for rotation about an axis generally paralleling a line paralleling the axis of rotation of said



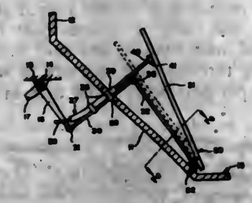
levers and disposed between the opposite ends of said levers, a shift lever arm pivotally secured at one end to said sleeve for rotation about an axis extending transversely of said sleeve and including a shank portion spaced from said one end completely receivable in either of said recesses, and the ends of said lever arms remote from said flanges including means adapted for operative connection with said actuators for selected movement of each of the latter upon movement of the corresponding one of said lever arms, said sleeve including means mounting said one end of said lever arm for lateral displacement in a direction paralleling said line and between two limit positions, means normally resiliently urging movement of said one end of said arm toward one of said limit positions.

3,088,330
MECHANICAL LINKAGE FOR REMOTE CONTROL
George F. Thompson, Sarasota, Fla., assignor, by mesne assignments, to Kiekhaefer Corporation, Chicago, Ill., a corporation of Delaware
Filed Jan. 14, 1960, Ser. No. 2,465
7 Claims. (Cl. 74—501)



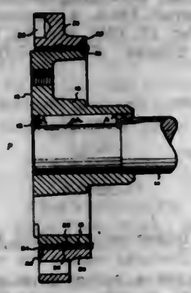
5. A connector for securing a central core wire of a flexible cable to a rigid transmission rod, which comprises a mounting bracket, a support secured to the bracket to slidably support the rod, a pivotal support member secured to the bracket in spaced relation to the support, a two-part telescoped housing secured at opposite ends to the rod and to the pivotal support member and having a passage to receive said core wire, and means to releasably attach the core wire to the part of the housing secured to the rod to transmit the position of the rod to the core wire.

3,088,331
ADJUSTABLE GAS PEDAL FOR MOTOR VEHICLES
Phil F. Buchmann, R.R. 5, Kelowna, British Columbia, Canada
Filed June 26, 1961, Ser. No. 119,369
2 Claims. (Cl. 74—513)



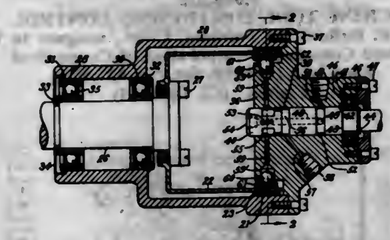
1. In an adjustable gas pedal for a motor vehicle having a floor panel and a throttle valve operated through a system of linkage, the combination of a foot plate hingedly mounted on the floor panel, a link freely extending through an opening in the floor panel and being operatively connected to the throttle valve linkage and having an upper end disposed beneath the foot plate, a flexible cable having a sheath, said sheath being secured at one end to the link and being secured at the opposite end to a part of the motor vehicle near the operator, said flexible cable including a push-pull rod, means pivotally connecting one end of the push-pull rod to the underside of the foot pedal and means on the opposite end of the push-pull rod whereby said rod may be moved relative to the sheath to adjust the angularity of the foot plate with respect to the floor panel.

3,088,332
VIBRATION DAMPER
Herald P. Arnt, Jr., Litchfield, Mich., assignor to Simpson Manufacturing Company, Litchfield, Mich.
Filed Feb. 4, 1960, Ser. No. 6,809
2 Claims. (Cl. 74—574)



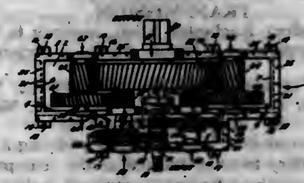
1. In a vibration dampener, a hub member having an axis of rotation and an outer surface concentric to said axis, an annular inertia member circumscribing said outer surface and having an inner surface concentric to, and radially spaced from, said outer surface, an elastic ring having a normal radial thickness greater than the radial thickness of the spacing between said hub and inertia members interposed between said outer and inner surfaces under tension maintaining said hub, ring and inertia members in assembled relation, said tension within said elastic ring being primarily in an axial direction with respect to said surfaces and an annular recess defined in each of said surfaces, said recesses each including opposed radially extending surface portions intersecting the associated surface and transversely related to the axis of said inner and outer surfaces, the width of said recesses being substantially less than the axial width of said inner and outer surfaces and ring, the radial depth of said recesses being sufficient to permit the portions of said ring axially aligned with said recesses to expand into said recesses substantially relieving the tension stresses in said ring portion within said recesses providing a keying portion placing the unrelieved ring portions in shear relation with the localized keying portions thereby resisting relative axial displacement of said ring, hub and inertia member.

3,088,333
FLUID WAVE GENERATOR FOR HARMONIC DRIVE
C Walton Musser, Beverly, Mass., assignor to United Shoe Machinery Corporation, Boston, Mass., a corporation of New Jersey
Filed July 3, 1961, Ser. No. 123,086
18 Claims. (Cl. 74—640)



1. A harmonic drive having a circular spline provided with circumferentially distributed teeth, and a flexspline provided with circumferentially distributed teeth adapted to cooperate with those on the circular spline, the circular spline and the flexspline being one within the other, there being a difference in the number of teeth on the circular spline and the flexspline which is the same or a multiple of the number of contact points between the circular spline and the flexspline, in combination with a fluid wave generator including radially acting fluid means distributed around the side of the flexspline remote from the circular spline and adapted to deflect the teeth of the flexspline into contact with the teeth of the circular spline, and valve means for applying fluid pressure to said radially acting fluid means at a plurality of circumferentially spaced positions and for successively energizing certain of said radially acting fluid means at said circumferentially spaced positions and deenergizing others of said fluid means at intermediate positions to propagate a wave of deflection around said flexspline.

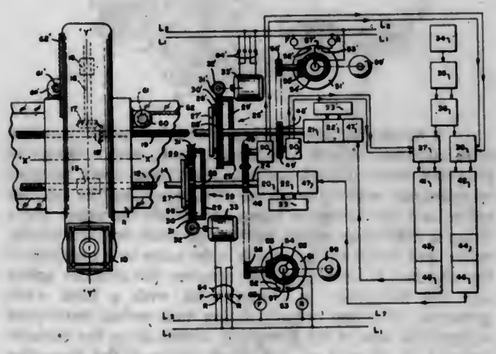
3,088,334
MULTIPLE REDUCTION GEAR UNIT
William S. Richardson, Village of Fox Point, Wis., assignor to The Falk Corporation, Milwaukee, Wis., a corporation of Wisconsin
Filed Nov. 17, 1960, Ser. No. 70,015
8 Claims. (Cl. 74—664)



1. Multiple reduction gearing comprising: a primary driving shaft provided with a pair of helical primary driving pinions having their teeth oppositely inclined, said primary driving shaft having a bearing support on each side of said pair of primary driving pinions; a pair of secondary driving shafts each provided with a helical

gear meshing with one of said pair of helical primary driving pinions and each of said secondary driving shafts being further provided with a secondary driving pinion, said secondary driving shafts each having a bearing support on each side of its associated helical gear and having a cantilever portion extending beyond one of said bearing supports upon which is mounted its associated secondary driving pinion; a pair of tertiary driving shafts each provided with a gear and a tertiary driving pinion, each of said tertiary shaft gears meshing with one of said secondary driving pinions, said tertiary driving shafts each being journaled in bearing supports adjacent each end; and a driven shaft provided with a bull gear meshing with both of said tertiary driving pinions, said driven shaft having a bearing support on each side of said bull gear.

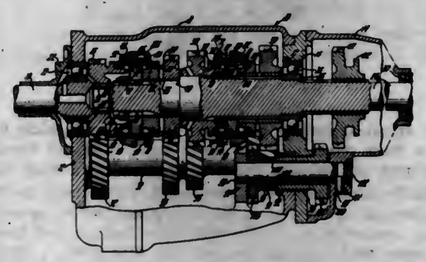
3,088,335
MACHINE TOOL POSITIONING CONTROL
Edward P. Bullard III, Fairfield, Conn., assignor to The Bullard Company, a corporation of Connecticut
Filed July 16, 1959, Ser. No. 827,573
5 Claims. (Cl. 74—675)



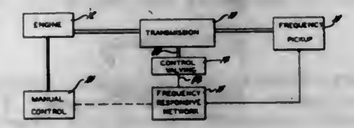
1. In a machine tool, a tool supporting head mounted for movement along an axis; a rotatable shaft for causing said head to move in either direction along said axis; feedworks means for rotating said shaft; epicyclic gearing means between said feedworks and its rotatable shaft, separate elements of said epicyclic gearing arrangement being connected, respectively, to the feedworks and the rotatable shaft; reversible power means separate from said feedworks, connected to the third element of said epicyclic gearing arrangement; and means for rendering effective the separate power means for said epicyclic gearing arrangement in response to the lag in movement of said head relatively to the output of the feedworks connected to said epicyclic gearing arrangement.

3,088,336
TRANSMISSION
James W. Fodrea, Rochester, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Continuation of application Ser. No. 699,714, Nov. 29, 1957. This application Jan. 4, 1960, Ser. No. 451
22 Claims. (Cl. 74—745)

1. In a transmission, a main housing having a forward wall, an auxiliary housing located at the rear portion of said main housing and having a rear wall, a dividing wall located between said main and auxiliary housing and connecting said housing and having an aperture, an input shaft rotatably mounted in said forward wall and having an input gear in said main housing, an output shaft rotatably mounted and extending through said dividing wall, a cluster gear rotatably mounted in said main housing and rotatably supported on said forward wall and said dividing wall and having a drive gear meshing with said input gear and a ratio input gear, a ratio output gear rotatably mounted on said output shaft and meshing respectively with said ratio input gear, means located on said output shaft and movable to clutch said ratio output gear to said output shaft to provide a drive in one ratio, a countershaft fixedly supported within said main housing and said auxiliary housing and extending through said aperture in said dividing wall, said ratio input gear being wider than said ratio output gear to provide a free portion, an input idler gear rotatably mounted on said countershaft and positioned in said main housing in overlapping relation with said ratio output gear and meshing with said free portion of said ratio input gear, an output idler gear rotatably mounted on said countershaft and located in said auxiliary housing and detachably drivingly connected to said input idler gear, and a reverse gear splined to said output shaft in said auxiliary housing for axial sliding movement from a disengaged position to a position meshing with said output countershaft gear to provide reverse ratio.



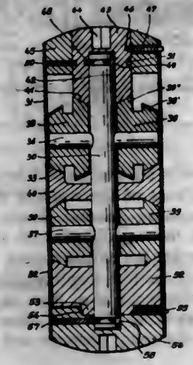
3,088,337
TRANSMISSION CONTROL SYSTEM
Richard W. Bemmann, Flint, Mich., and David W. Turner, Milwaukee, Wis., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Mar. 27, 1961, Ser. No. 98,481
12 Claims. (Cl. 74—752)



1. In a vehicle transmission control system, the combination of ratio changing means for varying the drive ratio of the transmission, means developing an electrical effect corresponding in frequency to the speed of the vehicle, and means responsive to the frequency of the electrical effect, the frequency responsive means including means attenuating frequencies outside a certain frequency range, the frequency responsive means being operative to cause the ratio changing means to be actuated whenever the frequency of the electrical effect is within the certain frequency range.

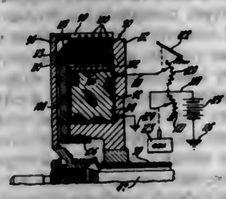
3,088,338
DRIVER FOR ROTARY TOOLS
Normand Duchesne, 332 Tessier St., La Tuque, Quebec, Canada
Filed Aug. 15, 1960, Ser. No. 49,754
2 Claims. (Cl. 74—757)

1. A driving handle for rotary tools comprising a cylindrical shell made of at least first and second separate parts of substantially equal diameter and in end to end relationship, a central shaft coaxial with said shell and mounted therein, a cross shaft secured to said central shaft and extending on opposite sides of the latter, pinions freely rotatably mounted on said cross shaft on opposite sides of said central shaft, a first crown gear freely rotatably mounted on said central shaft and meshing with said pinions, means connecting said first crown gear with said first shell part, a second crown gear freely rotatably mounted on said central shaft and meshing with said pinions, the teeth of said crown gears being inwardly inclined towards the axis thereof, means connecting said second shell part to said second crown gear whereby rotation of said second shell part relative to said first shell part will cause rotation of said central shaft at a reduced



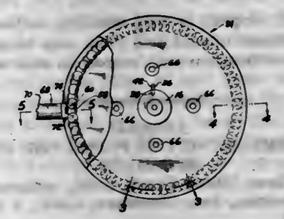
speed, means at the ends of said handle for removably connecting a rotary tool, a third shell part opposite to said second shell part with respect to said first shell part, a bushing fitted within and secured to said third shell part, said bushing freely rotatably mounted on said central shaft, said first crown gear being a double crown gear, a second cross shaft secured to said central shaft and extending on opposite sides of the latter, second pinions freely rotatably mounted on said second cross shaft on opposite sides of said central shaft and meshing with said first double crown gear, a third crown gear freely rotatably mounted on said central shaft and meshing with said second pinions, and pawl and ratchet means between said bushing and said third crown gear.

3,088,339
TRANSMISSION
Robert L. Black, Allen Park, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Nov. 4, 1957, Ser. No. 694,347
22 Claims. (Cl. 74—761)



1. In a transmission for a torque producing engine of the type controlled by a throttle, an input connected to the engine, an output, a drive train interposed between the input and output including first and second gear units for affording a plurality of drive ratios therebetween, each gear unit including driving, driven and reaction elements, ratio establishing devices for each gear unit operable both for holding the reaction element to afford one drive ratio through the gear unit and for joining together two elements of the unit to afford a direct drive ratio therethrough, a reaction mass connected to the first gear unit reaction element for rotation therewith, the ratio establishing device for joining together the reaction element and another element of the first gear unit, when operable, causing acceleration of both the reaction element and the reaction mass and deceleration of said another element, the inertia accelerated being balanced by the inertia decelerated, and an electromagnetically operated clutch in the drive train arranged to vary the torque transferred therethrough in accordance with throttle position.

3,088,340
VARIABLE INDEXING DEVICE
William Shotey, 4004 Lapham, Dearborn, Mich.
Filed Nov. 25, 1960, Ser. No. 71,596
8 Claims. (Cl. 74—813)

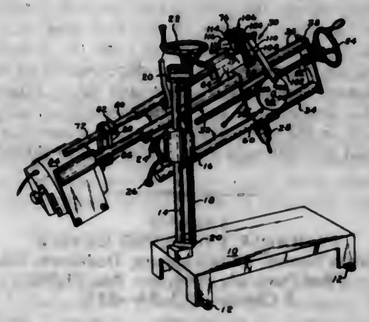


1. A variable indexing device comprising a supporting structure, a pair of coaxial abutment members rotatably mounted on said supporting structure in axially-spaced relationship, said abutment members having facing portions with aligned opposed rollable element races disposed thereon in orbital paths encircling the axis of rotation of said abutment members, two sets of multiple circumferentially-spaced rollable elements disposed in arcuately-movable self-adjusting relationship respectively in the two opposed races and having multiple circumferentially-spaced rollable elements disposed in staggered interpenetrating tight engagement with one another, means engaging said abutment members for holding set two sets of rollable elements in staggered interpenetrating tight engagement with one another, and an indexing stop member mounted adjacent said abutment members in alignment with the rollable elements of one set thereof and movable into and out of successive halting engagement with said last-mentioned rollable elements, whereby to cooperatively effect high precision step-by-step indexing of said abutment members during rotation thereof.

3,088,341
UNIVERSAL DRILL PRESS
Carlos Román-García, Torres 93, Ponce, Puerto Rico
Filed Aug. 15, 1961, Ser. No. 131,566
5 Claims. (Cl. 77—28)

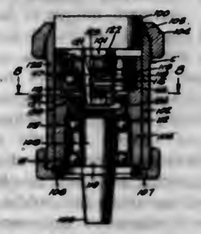
1. A drill press comprising a base having a flat working surface, a main support column extending vertically from said base perpendicular to said working surface, a substantially horizontal beam member adjustably mounted on said main support column by means having three degrees of freedom with respect to said working surface, said means comprising a sleeve slidably mounted on said main support column, a first worm means threadably coupled with said sleeve and pivotally mounted parallel to said column, and a calibrated plate centrally pivoted to said sleeve and carrying said beam member, said sleeve, plate and beam member being vertically adjustable along said column by said worm, said sleeve, worm, plate and beam being pivotally adjustable about said column, and said plate and beam being pivotally adjustable in vertical planes about said col-

umn to any pre-selected angle between said beam and said working surface, drive means mounted on said beam, and drill means driven by said drive means and adjustably mounted on said beam by means having two degrees of



freedom with respect to said working surface, whereby a total adjustment of said drill press may be made having five degrees of freedom with respect to said working surface.

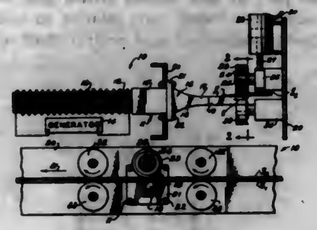
3,088,342
CHIP BREAKING COUPLING FOR DRILL SPINDLES
Alfred L. Whear, Hilton Creek, Calif., assignor to Sierra-Neva Industries, Inc., Torrance, Calif., a corporation of Nevada
Filed May 31, 1960, Ser. No. 32,760
19 Claims. (Cl. 77—32.3)



1. In a drill spindle feeling mechanism: a rotary spindle; means for urging said spindle axially to effect feed thereof toward a work piece; a coupling in said spindle operable to effect intermittent movement of a portion of the spindle away from said work piece responsive to rotation of said spindle; said coupling including: a rotatable member and a nonrotatable member; rotatable means revolvable in a circular path about the axis of the coupling; one of said members having a surface upon which said rotatable means revolves and converging toward the other member; said one member having a portion subject to deflection to provide on said surface an abrupt shoulder over which said rotatable means passes; and means for deflecting said portion of said one member to provide said abrupt shoulder.

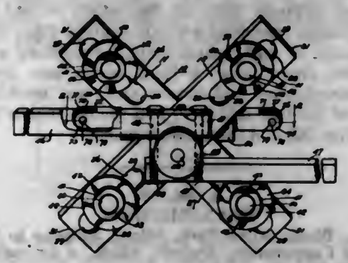
3,088,343
ULTRASONIC SEAM WELDING APPARATUS
Lewis Balamuth, New York, and Arthur Knris, Riverdale, Bronx, N.Y., assignors to Cavitron Ultrasonics Inc., Long Island City, N.Y., a corporation of New York
Filed Apr. 28, 1961, Ser. No. 106,323
23 Claims. (Cl. 78—82)

1. An ultrasonic seam welding apparatus comprising a mechanical vibrator including magnetostrictive transducer means in which high frequency compressive waves are generated and a welding element connected to said transducer means and having an operative surface at which said waves produce vibrations at least parallel to the plane of said operative surface, non-rotatable mounting means supporting said vibrator, back-up means having a surface which confronts said operative surface of the welding element and is movable relative to the latter generally in the longitudinal direction of the seam weld to be formed, means operative to displace said back-up means and welding element toward each other in the direction perpendicular to said operative surface to exert



a clamping pressure on overlapped work pieces engaged between said surfaces of the welding element and back-up means, respectively, so that elastic vibratory energy is introduced in the region of said clamping pressure to there weld together the engaged work pieces, and means operative to effect relative displacement in the direction of the desired seam weld of at least said back-up means and the work pieces so that the latter are successively subjected to said clamping pressure and welded along the desired seam.

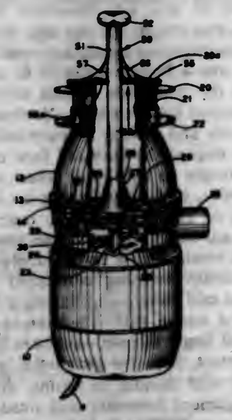
3,088,344
INSIDE KNURLING TOOLS
John C. Glaum, 4621 N. Le Claire Ave., Chicago, Ill.
Filed Nov. 16, 1959, Ser. No. 853,200
1 Claim. (Cl. 80—5.1)



An inside knurling tool for knurling concentrically the inner surfaces of a bore in a body supporting a bearing of the bushing type, comprising a frame adapted to be located and held concentric to the bore in said body, said frame having four radially extending arms, and each arm having a radially extending slot for supporting a guide member, each guide member having a circular head located on the back side of said frame, and a cylindrical guide pin projecting axially from said circular head and surrounded by an annular shoulder for engaging the body outside of its bore, each guide member having an axially extending threaded shank projecting forwardly from said head and slidably mounted in one of said slots in the arms of said frame, a threaded member on each threaded shank and engaging the frame arm in which the threaded shank is located, said frame having an axially extending bore and a shaft in said bore, said shaft having an actuating handle on its outer end and having a through bore concentric with said shaft, and said shaft supporting a dia-

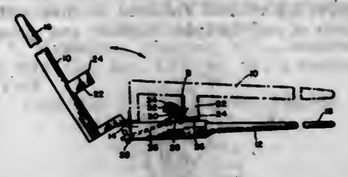
metrically located knurl bar guide on its inner end, said bar guide having a pair of rectangular section knurl bars sliding radially in said bar guide, each knurl bar having a rotatable knurl at its outer end and an axial threaded bore with right hand and left hand threads in the respective knurl bars, and a complementarily threaded knurl actuating shaft engaging said right hand and left hand threads in the knurl bars and having a bevel gear on said knurl actuating shaft and engaging a bevel gear on the shaft located in said axial bore, said latter shaft having a knurl adjusting bead on its outer end, said knurls being first retracted to be received in the bore to be knurled and then expanded into centering engagement with said bore with the guides retracted until the guide pins enter said bore and the annular surface surrounding each guide pin engages the said body outside the bore to be knurled, said guide members then having their guide pins moved out into engagement with the inner wall of the bore to be knurled, and each guide member being secured in this position by its threaded member clamping said frame in fixed position in the bore to be knurled, the frame guiding the axial shaft while it is rotated by said handle and while the knurl bars are moved out by turning the knurl adjusting head to cause the knurls to knurl the inner surface concentrically.

3,088,345
KITCHEN UTENSIL
Homer C. Campbell, 1434 Cherry St., Denver, Colo.
Filed Dec. 19, 1960, Ser. No. 76,766
3 Claims. (Cl. 81—1)



1. As an article of manufacture for use with an automatic garbage disposer having an inlet spaced a distance above its cutting elements, a kitchen utensil comprising an elongated relatively thin support portion and having a manipulating handle adjacent one end and an enlarged tamping member adjacent its other end, said tamping member being of a generally truncated conical configuration and having an enlarged planar bottom surface, there being a stop attached intermediate the ends of said support portion with its lower extremities disposed in a plane substantially normal thereto and spaced above said planar surface a distance less than the distance from the inlet of said garbage disposer to the cutting blades thereof, said stop being a web-like member of substantial length relative to cross-section and said cross-section being sufficiently small to provide a substantial area of direct and open communication from one side of said web to the other whereby substantially uninterrupted and direct ingress of materials may be had to a garbage disposer with which it is used.

3,088,346
BENDING DEVICE FOR DRY WALL CORNER BEAD
Dominic C. Francia, 42 Smith St., Port Chester, N.Y.
Filed Nov. 14, 1960, Ser. No. 69,161
6 Claims. (Cl. 81—15)



1. A bending device of the type suitable for bending an L-shaped strip of material comprising a pair of arms provided with handles, hinge means pivotally connecting said arms, an elongated plate pivotally connected to one of said arms and psitioned at an obtuse angle relative thereto, means connected to said plate for adjusting the angle thereof, said plate including clamping means to accommodate an L-shaped strip of material, and press means secured to the other of said arms whereby when said arms are pivoted towards each other the press means engages said L-shaped strip and bends the same to substantially the identical predetermined obtuse angle shape formed by said elongated plate and the top surface of said one arm.

3,088,347
BEAD SIZING TOOL
Francis Vechiarelli, River Edge, N.J., and Harold R. Rudow, Arlington, Calif., assignors to National Distillers and Chemical Corporation, a corporation of Virginia
Filed July 20, 1961, Ser. No. 125,553
3 Claims. (Cl. 81—15)

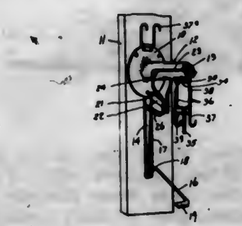


1. A bead sizing tool for sizing and reforming a rolled bead along one edge of a sheet metal slat, said bead being cylindrically curved and having a gap between the edge of the slat and the adjacent side thereof, said tool comprising, in combination, a thin flat blade adapted to be inserted through said gap so that one end thereof lies within said bead while the other end is outside of the bead, sizing means comprising a ball of slightly larger diameter than the original inside diameter of said bead mounted on the top side of said blade at one end for slidably engaging the inner surface of the bead to enlarge the diameter of the same when said tool is drawn from one end of said slat to the other, pilot means also mounted on the top side of said blade ahead of said ball to slidably engage the inner surface of said bead and guide said ball along the length thereof and handle means on said other end of said blade.

3,088,348
TIRE AND TUBE REPAIR FIXTURE
Earl L. Harris, Rte. 1, Spencer, Ind.
Filed May 23, 1960, Ser. No. 32,505
3 Claims. (Cl. 81—15.2)

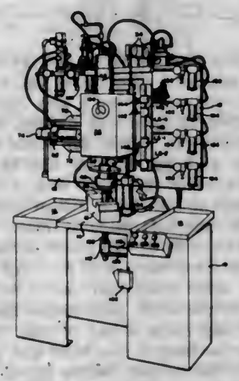
1. A fixture for supporting an inner tube in repair position, said fixture comprising a support member including a flanged base plate adapted to be mounted on a vertical support surface, a generally cylindrical anvil extending horizontally from said base plate and having an outwardly and downwardly inclined endface, an elongated member rigidly secured to said base plate and depending therefrom, a generally V-shaped element pivotally supported

at its apex on said elongated member, the lower leg of said element carrying a foot pedal at its free end, a generally U-shaped clamping member pivotally supported on said anvil at points intermediate the ends of its legs, the free ends of the legs of said clamping member being formed to depend below said anvil, means pivotally joining the upper leg of said V-shaped member and the depending ends of said clamping member, and spring means



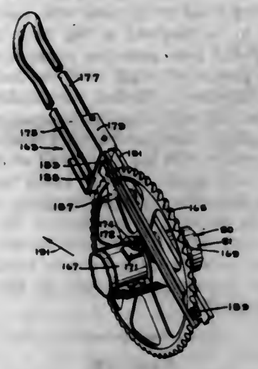
adapted to urge said U-shaped member into a clamping position with relation to said anvil wherein the transverse section of the U-shaped member overlies the inclined anvil end, depression of said foot pedal to rock said V-shaped member about its pivotal support thereby serving to move said clamping member out of said clamping position to permit insertion of an inner tube on said anvil, release of said foot pedal permitting said spring means to move said clamping member into said clamping position.

3,088,349
POWER-OPERATED, MULTISTAGE, PREDETERMINED TORQUE RELEASE WRENCH
Willard R. Cowan, Jackson, and Charles W. White, Clark Lake, Mich., assignors to Aeroquip Corporation, Jackson, Mich., a corporation of Michigan
Filed Oct. 26, 1959, Ser. No. 848,739
16 Claims. (Cl. 81—52.4)



1. A torque machine for assembling threaded parts comprising a base member, a clamping member rotatably mounted on said base for gripping one of the parts to be assembled, a wrench head rotatably mounted upon said base and movable toward and away from said clamping member, means carried by said wrench head adapted to establish a torque transmitting connection with the ungripped threaded part to be assembled, first means for rotating said wrench head facilitating initial threading of parts, second means for rotating said wrench head for assembling said parts with a predetermined torque means resisting rotation of said clamping member and control means sensing rotation of said clamping member controlling termination of the operation of said second means.

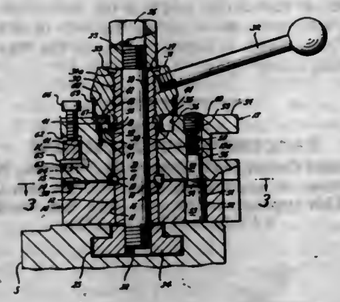
3,088,350
DRIVE MEANS FOR A PORTABLE IRRIGATION SYSTEM
Robert E. Stilwell, Santa Clara, Calif., assignor to FMC Corporation, a corporation of Delaware
Original application Nov. 22, 1954, Ser. No. 470,944, now Patent No. 2,892,466, dated June 30, 1959. Divided and this application May 11, 1959, Ser. No. 812,162
1 Claim. (Cl. 81—90)



A manually actuated drive lever for rotating a gear fixed to a rotatable member comprising a pair of straight spaced elongate side members defining an elongate opening whose length is less than the diameter of the gear, said opening being arranged to receive an arc of the gear with the forward ends of said side members being disposed adjacent teeth at one end of the arc and the rear ends of said members being disposed adjacent teeth in the opposite end of the arc, a handle secured to and projecting rearwardly from the rear ends of said members, a fixed tooth rigidly mounted between said side members at their forward distal ends and having a rearwardly facing surface arranged to engage the forward face of an adjacent tooth to apply torque to said gear when said handle is pressed downwardly, said tooth having an inclined lower surface arranged to engage and slide over the teeth of said gear when said handle is moved in reverse direction to disengage said tooth after a torque-applying operation, a U-shaped abutment member connected between said side members and said handle and having a flat base upon an end portion of which said side members are rigidly mounted at a right angle thereto, said base being movable into abutting contact with the peripheral points of said gear teeth when said handle is swung downwardly to tighten the engagement between said fixed tooth and a tooth on said gear and to apply torque to said gear, and spaced flat gusset plate means mounted at the right angles formed by the juncture of the base of said abutment and said side members to enhance the combined rigidity of said side members and abutment means, whereby the inner facing surfaces of said gusset plate means additionally cooperate with said side members in automatically guiding said lever over said gear as said tooth is disengaged during reverse movement of said handle.

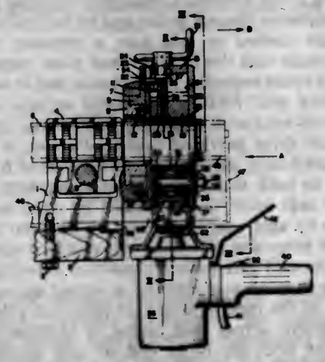
3,088,351
TURRET TOOL BLOCK
Rudolf Schardt, 3510 Laverne Drive, Houston, Tex.
Filed May 9, 1960, Ser. No. 27,560
7 Claims. (Cl. 82—36)

1. A turret tool block, comprising, a base, a shaft extending upwardly therefrom and having an externally threaded upper end section, a tool holder rotatably mounted on said shaft, cooperating elements extending between the base and the holder operable by rotation of the holder relative to the base to locate said holder in a plurality of index positions, and means for rotating said holder between said positions comprising, a drive nut threadedly mounted on said upper end section operable to releasably clamp the holder to the base, the exterior of



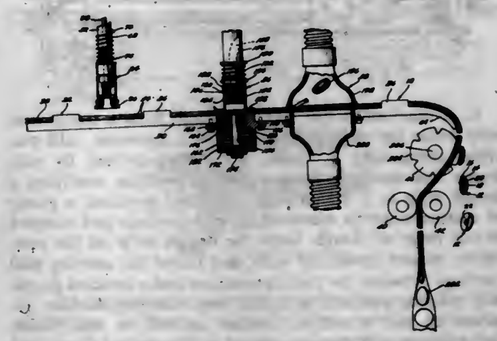
said drive nut having a cylindrical section coaxial with said shaft, and clutch means secured to said holder comprising a split ring having an eccentric bore compressively embracing said cylindrical section whereby rotation of said drive nut about said shaft will rotate said holder relative to said base.

3,088,352
PIPE CUTTING DEVICE
Hans Tanner, Schaffhausen, Switzerland, assignor to Georg Fischer Aktiengesellschaft, Schaffhausen, Switzerland
Filed Apr. 6, 1960, Ser. No. 20,470
Claims priority, application Switzerland Apr. 7, 1959
9 Claims. (Cl. 82—59)



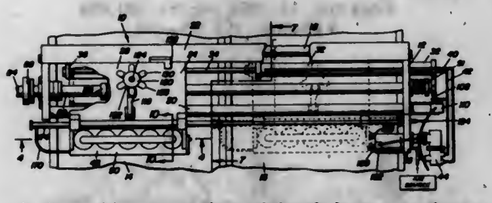
1. A cutting device for cylindrical objects such as pipe which comprises: a stationary housing, work piece gripping means carried by the housing, a cutter head rotatably supported on said housing, a tool carriage slidably mounted in said rotary body and guided therein for movement in a direction perpendicular to the axis of a work piece gripped by said work piece gripping means, said tool carriage being adapted for supporting a cutting tool, a guiding means in the form of a cam fixed to said housing and having a peripheral surface concentric with the axis of a work piece gripped in said gripping means and also having a peripheral notch, control means carried by said rotary body movable therein in the direction of movement of the tool carriage therein and comprising means engaging the periphery of said cam and also including means operatively engaging said tool carriage so that as the cutter head is rotated on the housing the tool carriage will be moved therein in conformity with the configuration of said cam.

3,088,353
MECHANISM FOR AND METHOD OF PRODUCING SURGICAL PADS
Charles A. Hanington, Freeport, N.Y., assignor to The Scholl Mfg. Co., Inc., Chicago, Ill., a corporation of New York
Filed Mar. 23, 1959, Ser. No. 801,088
8 Claims. (Cl. 83—24)



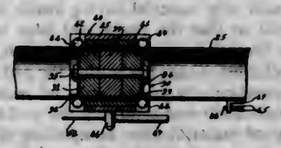
7. A machine for forming bevelled corn, callous or similar pads continuously or automatically comprising a support platform for supporting a moving strip of material, feeding means adjacent the advance end of said platform for drawing the strip material along said platform, means for intermittently driving said feeding means, a bevelling station above said platform having a plurality of elongated flexible blades having sharpened bottom ends, means retaining said blades in staggered, abutting, depending relationship in a cross-sectionally closed configuration, means operated during a dwell in the travel of the strip material for intermittently moving the blades downwardly, and cam means camming the lower ends of the blades outwardly to form a continuous beveled cutting edge, when the blades are moved downwardly, said bevelling station forming a succession of bevelled cuts in the strip material for a portion of the depth of the material during dwells in movement of the material, a punching station above said platform and in advance of said bevelling station including means for simultaneously cutting a vertical peripheral edge and a center hole through the thickness of said strip material during dwells in movement of the material so that the peripheral edge intersects the bevelled edge formed by said bevelling station, said punching station including means permitting the pad thus formed to move perpendicularly to the strip of material during said cutting operation and returning the pad to alignment with the strip of material after completing of the cutting operation, a vacuum station in advance of said punching station enclosing a portion of said platform along which the strip of material travels for removing waste rings formed by the intersection of said vertical peripheral edge and bevelled edge cuts, a rotatable ejector spaced in advance of said vacuum station, but rearwardly of said feeding means and intermittently driven upon the intermittent driving of said feeding means, said ejector having angularly spaced bosses projecting into the holes formed by said bevelling and punching operations and operable during advance of the strip material to eject the completed pads from the strip material.

3,088,354
DOUGHNUT CUTTER AND DEPOSITOR
Edward M. Voorhees, De Land, Fla., assignor, by mesne assignments, of one-fourth to Edward M. Voorhees, De Land, Fla., one-fourth to Ignatius C. Capdeville, Gretna, La., one-fourth to Clarence M. Funk, Greensboro, N.C., and one-fourth to Lawrence L. Mullins, New Orleans, La.
Filed May 9, 1958, Ser. No. 734,267
17 Claims. (Cl. 83—98)



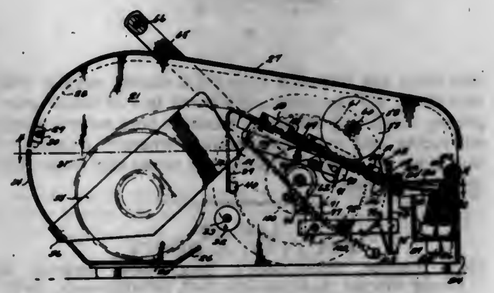
1. A machine to cut rings of dough from a continuous strip while the strip is traveling on a conveyor, said machine comprising a frame, a carriage carried by said frame and movable from a cutting position overlying a dough strip to a dough ring unloading position, a group of cutters movably mounted on said carriage and adapted to cut rings of dough from the dough strip on the conveyor, means connected with said frame for moving said carriage between the cutting position and a selected dough ring ejecting position, a dough ring receiving surface adjacent to said conveyor, means carried by said frame for moving said cutters toward said conveyor and into the strip of dough thereon when said carriage is in said cutting position, said cutters having a chamber therein, means for applying suction into said chamber when said carriage is in the cutting position to hold the dough rings in said cutters, means operable in response to movement of said carriage to the ejecting position for applying pressure to said chamber to eject the dough rings onto said surface, means mounted on the frame, stroke control means cooperating with said frame mounted means and carried by said carriage for alternatively limiting the movement of said carriage to different positions and thereby selecting said cutting position whereby the cut dough rings may be staggered in successive cutting positions.

3,088,355
TRAVERSING CUTTING APPARATUS HAVING MAGNETIC FOLLOWER MEANS
Lloyd Hornbostel, Jr., Beloit, Wis., assignor to Beloit Iron Works, Beloit, Wis., a corporation of Wisconsin
Filed Aug. 31, 1960, Ser. No. 53,118
5 Claims. (Cl. 83—177)



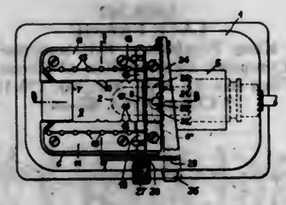
1. In a web processing machine, the combination comprising, means for guiding a travelling web moving along a path, an imperforate tube extending transversely of said path, a piston slidable within the tube and having an annular portion in fluid sealing relationship with the inner surface of the tube to insure movement of the piston with fluid pressure differential thereacross, a carriage means outside of said tube and slidable thereon, means operative on the web and supported on the carriage means for traversing a diagonal path across the moving web, a first magnetic member, a second magnetic member magnetically attracted to the first member with one of said members secured to the piston and the other of said members secured to the carriage means so that the carriage means will move along the tube with the piston, a first fluid connection at one end of the tube for providing a pressure differential across the piston, a second fluid connection at the other end of the tube, and means for selectively providing a flow of fluid through said first or said second connection to cause the piston and carriage means to selectively move across the web in either direction at a rate which is dependent upon the flow of fluid through said connections.

3,088,356
TAPE DISPENSING MACHINE
Samuel Ortner, 169 Murray St., Newark, N.J.
Continuation of application Ser. No. 38,959, June 27, 1960. This application Dec. 13, 1962, Ser. No. 244,400
1 Claim. (Cl. 83—233)



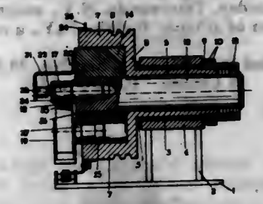
In a tape dispensing machine, the combination of a casing including a rear plate, a roll of tape in said casing, upper and lower spaced feed plates between which the free end of said tape extends, said upper and lower plates each having a slot therein, a vertically movable gate having a tape opening therein at the end of said plates, a tape cutting knife carried by said gate, a pressure roller extending through said slot in said lower plate engaging said tape, a feed roller engaging through said slot in said upper plate, a drive gear rotatably mounted on said casing, a main shaft co-axial with said drive gear, a gear connection between said drive gear and said feed roller, a shaft extending transversely across said casing, a lever fixed at its inner end to said shaft for pivotal movement, an arm secured to said lever, a lug carried by said main shaft engageable by said arm, a connection between the outer end of said lever and a first spring, said first spring normally biasing said gate toward a position allowing passage of said type through said opening, a second spring secured at one end to the inner end of said lever, an axle extending transversely across said casing, a U-shaped bracket fixed to said axle, the other end of said second spring being connected to the bight of said U-shaped bracket, said pressure roll secured between the ends of said U-shaped bracket, handle means carried by said axle to move said lower pressure roll out of engagement with said tape, said second spring normally biasing said lower pressure roller towards said tape, an operating lever secured to said main shaft exteriorly of said casing, a ratchet clutch between said main gear and said operating lever and lost motion means operable by said main shaft for moving said gate to tape passing position upon movement of said lever in one direction and said knife to tape cutting position against the bias of said first spring upon reverse movement of said lever, said ratchet clutch comprising a first clutch plate having clutch fingers thereon connected to said operating lever, a second clutch plate having ratchet teeth thereon in confronting relation with said fingers, said second clutch plate having a pair of elongated arcuate slots therein, a pair of pins engaging in said elongated slots carried by said drive gear, said pins and slots comprising said lost motion means, a housing surrounding said drive gear and clutch means, a rotatable boss on said housing, said operating lever being connected to said rotatable boss, said housing having a plurality of peripheral openings therein, and lugs on said first clutch plate engaging in said openings comprising the connection between said first plate and said boss and hence said operating lever, said housing having an arcuate slot adjacent its periphery, a movable stop in said slot limiting movement of said operating lever in one direction, a pair of angularly disposed, horizontally aligned, polygonal plates in said casing adjacent opposite radial faces of said roll of tape to prevent lateral displacement thereof, said lower feed plate having a downwardly extending vertical portion disposed to form a transverse partition in said casing between said roll of tape and said feed roll, wall portions of said partition defining a plurality of parallel slots adjacent each end thereof, portions of said rear plate defining a plurality of parallel slots in alignment with the slots in said transverse partition, said polygonal plates removably held in certain of said aligned slots to prevent lateral displacement of a roll of tape having one dimension, and movable to other of said aligned slots to prevent lateral displacement of a roll of tape having a different dimension, a half pulley on said main shaft, a third spring partially surrounding said half pulley and secured thereto at one end, and means fixedly securing the other end of said third spring to an adjacent portion of said casing, said third spring normally biasing said main shaft and hence said operating lever away from said stop.

3,088,357
APPARATUS FOR CUTTING TO SIZE PHOTOGRAPHIC PICTURES
Rudolf Styner, Oberbottigen, Switzerland, assignor to Styner & Bienz A.G., Bumpliz, Switzerland
Filed Sept. 4, 1959, Ser. No. 838,211
Claims priority, application Switzerland Sept. 8, 1958
9 Claims. (Cl. 83—247)



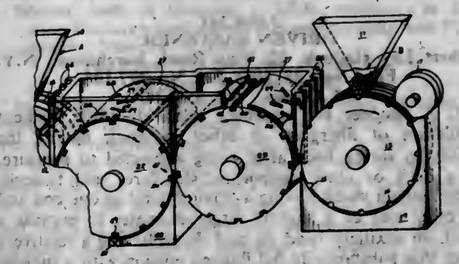
7. A hand-operable apparatus for cutting to size photographic pictures, particularly for cutting pictures from films, of the type described, comprising a guideway and a cutting device at one end of the guideway, means for transilluminating the picture or film on each side of the cutting device for observing picture portions on each side of the cutting device, feeding rollers pressed against each other in the said guideway and adapted to receive the film or picture between them, a hand-operable lever associated with adjustable stop means limiting the displacement of the said lever when operated and gear means adapted to selectively interconnect the said lever and the said feeding rollers, means for coupling said gear means during the forward stroke of said lever by relative radial displacement of said gear means and for completely disengaging said gear means during the return stroke of said lever, the feeding rollers being rotatable by a predetermined amount corresponding to the said displacement of the said lever through the said gear means during said forward stroke, and a hand knob operably associated with the said feeding rollers for operating the feeding rollers in forward and backward direction independently of the said hand-operable lever and gear means respectively, a coarse adjustment of the picture or film being obtained by operation of the said hand-operable lever and a fine adjustment of the picture or film being obtained by operation of the said hand-knob.

3,088,358
TOOL SUPPORT ABSORBING TOOL REACTIONARY FORCE
Wilhelmus H. J. D. Daalderop, Tiel, Netherlands, assignor to N.V. Koninklijke Metaalwarenfabrieken v/h J. N. Daalderop & Zonen, Tiel, Netherlands, a corporation of the Netherlands
Filed Dec. 19, 1958, Ser. No. 781,639
Claims priority, application Netherlands Dec. 20, 1957
12 Claims. (Cl. 83—317)



1. An apparatus for treating a moving strip and the like, comprising a frame, rotatable drive means supported from said frame, said drive means comprising a flywheel and a shaft adapted to be coupled to said flywheel for rotation therewith, a pair of cooperating members for treating said strip guided in alignment with respect to each other and eccentric means associated with said shaft to reciprocate one of said strip treating members with respect to the other, bearing means supported by one of said rotatable drive means, said cooperating strip treating members being both supported in said bearing means with one member reciprocated by said eccentric means and the other member being mounted in said bearing means whereby the reaction forces generated between said members during a pressing operation upon said strip is absorbed by said drive means without said forces being transferred to said frame.

3,088,359
COMPOSITE ROD MACHINE
Milton O. Schur, Asheville, N.C., assignor to Olin Mathieson Chemical Corporation, a corporation of Virginia
Filed May 21, 1958, Ser. No. 736,890
10 Claims. (Cl. 83—411)



1. A shuffling apparatus comprising at least two primary rotary conveyors each operative to carry a plurality of groups of cylindrical segments, a secondary conveyor individual to each primary conveyor, means for transferring the segments from the primary conveyor to the secondary conveyor, at least one friction element indi-

vidual to each secondary conveyor and engageable sequentially with at least one segment of each group effective to move the segment axially, means for spacing at least two segments of each group of a first secondary conveyor a distance at least equal to the length of a segment carried by a second secondary conveyor, means for spacing at least two segments of each group of the second secondary conveyor a distance at least equal to the length of a segment carried by the first secondary conveyor, and means for casting the spaced segments from one secondary conveyor into registry with the spaced segments of the other secondary conveyor so that the segments and spaces of said one secondary conveyor mate with the segments and spaces of the other.

3,088,360

SOLENOID ARMATURE ROD MEANS AND STRIKER MEANS FOR PIANOS

Arthur H. Hayden, Tonawanda, N.Y., assignor to Aurora Corporation of Illinois, Buffalo, N.Y., a corporation of Illinois

Filed Mar. 28, 1961, Ser. No. 98,825
8 Claims. (Cl. 84—246)



1. In a piano having note playing means, the combination therewith of solenoid means for actuating said note playing means, said solenoid means including movable armature rod means having a portion provided with at least three longitudinally spaced laterally projecting stop means, and striker means adjustably mounted on said portion for movement relative to said note playing means from a position between any two adjacent stop means to a position between any other two adjacent stop means, said striker means being engageable with said note playing means when said solenoid means is energized.

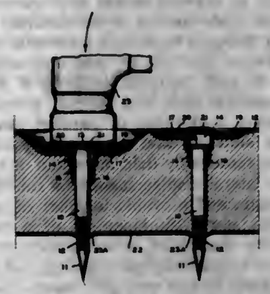
3,088,361

DRIVEN FASTENER

Robert Lay Hallock, 32 Vine Road, Larchmont, N.Y.

Filed Nov. 28, 1958, Ser. No. 777,108
6 Claims. (Cl. 85—28)

1. A fastener for attaching relatively thick resilient insulation of fiberglass or other material, having the ability to spring back after being subjected to pressure, to a deck or other supporting structure, said fastener comprising a shank having a driving point at one end and its other end of a slightly larger diameter to provide a head, an auxiliary head on said shank having a relatively large thin substantially flat flanged portion with a tubular relatively thin walled portion of substantially uniform internal diameter and substantially normal thereto and of substantially greater axial length than said fastener head in which the head of the shank is received in a manner to move freely therein and be guided and supported thereby against lateral movement, and an additional thin walled tubular portion secured to and extending from said portion of substantially uniform internal diameter a substantial distance along said shank and of a diameter snugly to fit, guide and support said shank and serving to maintain it and said shank in driving relation relative to said auxiliary head, there being a small transition between said portion of uniform internal diameter and said extension offering minimum resistance to the penetration of the auxiliary head into the material into which the fastener is driven, the flange on said auxiliary head providing an enlarged driving area on its surface remote from the shank, said relatively large flat flanged



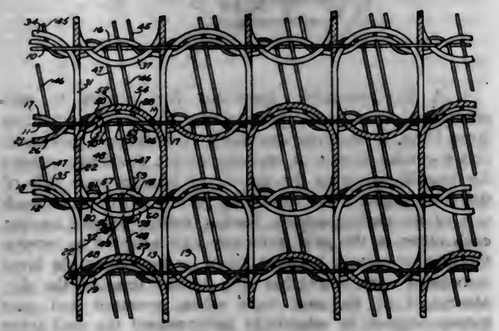
portion including an opening larger than said fastener head and aligned with said tubular portions to receive said shank portion and another member covering said opening and secured to said first flat portion, said fastener being adapted to be applied by the application of force against said heads in a manner to cause such force to be transmitted axially to said shank so that after the fastener is applied the head of the shank will be located in the portion of uniform diameter of the auxiliary head and the auxiliary head will be axially movable relative to the shank and with the surface of the material into which the fastener is driven.

3,088,362

LACE FABRIC

Gilbert M. King, Providence, R.I., assignor to Seekonk Lace Company, a corporation of Rhode Island

Filed Jan. 31, 1962, Ser. No. 170,159
7 Claims. (Cl. 87—4)



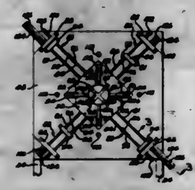
1. A lace fabric comprising a base upon which an ornamental pattern is superimposed, said base comprising a plurality of spaced bobbin yarns, a plurality of front warps extending back and forth between the paths of the bobbin yarns and providing loops at their reversals, back warps also extending back and forth between the paths of the bobbin yarns and locking the front warps to the bobbin yarns by passing from the back of the loop of the front warps through the loop and across the front of the bobbin yarn to lock the loop thereto, and middle warps extending in the direction of and along the bobbin yarns and passing between said loops and the bobbins yarns and then about the bobbin yarns to lock the loops to the bobbin yarns.

3,088,363

BRAIDING APPARATUS

William Sparks, 626 Hamilton St., Costa Mesa, Calif.

Filed July 17, 1962, Ser. No. 210,525
17 Claims. (Cl. 87—33)



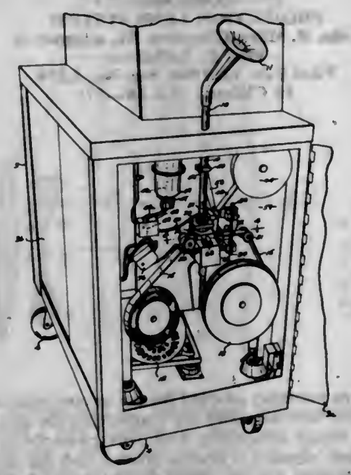
1. In a machine for braiding strands of elongated flexible material, the combination of, a pair of spaced magnetic plates of opposite magnetic polarity, a pair of relatively movable braiding shuttles adapted to receive said strands and formed of magnetically permeable material to be held between said plates by magnetic flux flow therethrough, and means for simultaneously moving said shuttles in predetermined braiding paths between said plates to thereby braid said strands of flexible material.

3,088,364

METHOD AND APPARATUS FOR ANALYSIS OF PARTICLES IN A GASEOUS STREAM

John T. Rozsa, Cleveland, Orlando W. Uguccini, Maple Heights, and Lawrence E. Zeeb, Parma, Ohio, assignors to National Spectrographic Laboratories, Inc., Cleveland, Ohio, a corporation of Ohio

Filed Feb. 25, 1960, Ser. No. 10,924
28 Claims. (Cl. 88—14)



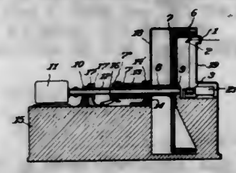
1. A method of quantitatively determining the amount of relatively fine particles of a toxic material in a gaseous fluid medium comprising a recurring cycle having the steps of collecting a plurality of said particles for a predetermined period on a filter to obtain a sample, measuring the gaseous volume required to collect said sample, burning the sample, transducing the light from the burning of said sample into electricity to give a continuous signal corresponding to the quantity of said toxic material in said medium, and thereafter repeating said recurring cycle of collecting, measuring, burning and transducing to thereby start a second cycle on a second sample before the first cycle is completed to continue to produce said continuous signal.

3,088,365

ULTRA-HIGH-SPEED FRAMING CAMERA COMPRISING A COMBINATION OF A ROTATING FILM DRUM AND A REFLECTING MIRROR

Tsuneyoshi Uyemura, No. 340, 4-Chome Kitazawa, Setagaya-ku, Tokyo, Japan

Filed Feb. 20, 1961, Ser. No. 90,560
3 Claims. (Cl. 88—16)



1. An ultra-high speed framing camera comprising a rotatable film drum, a multi-facet rotatable reflector, means supporting the drum and reflector in substantially coaxial relationship, a sleeve arranged axially of the drum and supported for axial shifting movement, a first lens system for forming first real images adjacent the reflecting surface of the multi-facet reflector, a second relay lens system including a plurality of relay lenses, said last-named system being spacially arranged from the drum and reflector for projecting and exposing photographically second real images on the surface of a film positioned on the inner surface of the drum, drive means operably connected to the drum for rotating the drum, further drive means operably connected to the reflector for rotating the reflector, and means associated with said sleeve for shifting the drum axially, the arrangement being such that the drum moves axially corresponding to one frame during the period in which a series of photographs is completed with a spacing corresponding to the arrangement of the relay lens system or preventing mutual overlapping of the image photographed immediately prior to the former image as a result of the rotation of the drum and the reflector.

3,088,366

DEVICE FOR ELIMINATING THE NOTICEABILITY OF BANDS ON A SCREEN AT THE JOINTS OF ADJACENT PANORAMA PICTURES

Vasily Vasilievich Petrov and Alexander Dmitrievich Bodrov, both of Moscow, U.S.S.R., assignors to All-Union Research Institute of Cinematography and Photography, Moscow, U.S.S.R.

Filed June 20, 1960, Ser. No. 40,491
1 Claim. (Cl. 88—16.6)

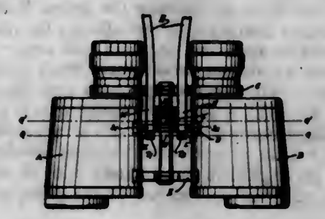
In a projection apparatus for panoramic pictures, a frame, two pairs of spaced parallel members on said frame, a projection lens, a light source, a film channel for receiving and guiding a panoramic film disposed between said lens and said light source and film masking means disposed between said film channel and said lens, said masking means comprising independently operable opposed plates slidably mounted at opposite sides of said film channel for movement toward and away from each other, a pushrod on each plate slidably mounted in one member of each pair of members, a head on each pushrod, a compression spring disposed around each pushrod, said spring engaging each head and each of said one members to urge said plates away from each other and a micrometer screw threadedly mounted in each

other member of each pair of members engaging each head for moving said plates toward each other, whereby



adjustment of said plates will serve to eliminate bands between adjacent projected panoramic pictures.

3,088,367
PRISM BINOCULAR WITH CARRYING STRAP
Eugen Haupt, Oberkochen, near Heidenheim, Leopold Hohmuth, Schmiechen, near Ehingen (Danube), Roland Leinhos, Oberkochen, near Heidenheim, and Paul Nichterlein, Aalen, Germany, assignors to Carl Zeiss, Heidenheim, Wurttemberg, Germany
Filed Jan. 23, 1958, Ser. No. 710,787
Claims priority, application Germany Dec. 10, 1953
1 Claim. (Cl. 88—36)



A prism binocular comprising two monocular parts, link bridges coupling said monocular parts, a strap adapted to suspend the binocular from the neck of a wearer so that it rests on the wearer's breast, said strap engaging in the binocular symmetrically on two points of the surfaces of said monocular parts turned toward and facing each other, which points lie at least approximately in a plane forming a cross-section of the binocular, and including the center of gravity of the binocular, and at least as remote from the wearer's breast as said center of gravity.

3,088,368
VARIABLE MAGNIFICATION OPTICAL SYSTEM
Robert W. Tripp, Brouxville, N.Y., Earle B. Brown, Bergenfield, N.J., and Martin Shenker, Monsey, N.Y., assignors to Farrand Optical Co., Inc., New York, N.Y., a corporation of New York
Filed Jan. 15, 1959, Ser. No. 787,064
21 Claims. (Cl. 88—57)

1. A variable magnification optical system, including first and second groups of optical components spaced apart along a common optical axis, the positions of the components in each said group being fixed relative to each other, the first group comprising essentially an objective with respect to an object located in a fixed object plane before it, means in said first group for forming a real minified image of said object in a first image plane within said groups, the second group comprising essentially an objective with respect to said real image, means in said first group for forming an entrance pupil for said second group, means in said second group for forming a second and magnified image of said minified image in a second

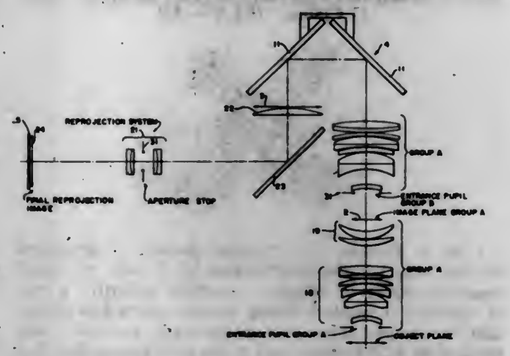


image plane, and means for continously varying the magnification of the second image over a large magnification range which comprises means for continuously adjusting the distance between the object plane and said first group and for continuously adjusting the distance between the object plane and said second group such that said first image plane always lies within said groups, and said entrance pupil for the second group remains substantially stationary in respect to the second group throughout said variation over a large magnification range.

3,088,369
PROJECTION LENS SYSTEM
John R. Miles, Glenview, Ill., assignor to Fred E. Aufhauser
Filed Feb. 12, 1960, Ser. No. 8,279
10 Claims. (Cl. 88—57)



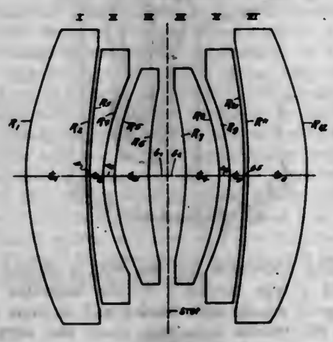
1. A lens assembly adapted for use in combination with a projection lens assembly for magnifying the size of the projected image comprising four lens elements in which the first lens element is double convex and the second is double concave, and in which the third and fourth elements are airspaced and aligned with the first and second elements, and in which the third element is double concave with its first and second surfaces having radii of curvature of .29 to .33 and .80 to .86 times the total length of the lens assembly, respectively, and in which the fourth element is double convex with its first and second surfaces having radii of curvature of .99 to 1.09 and 2.23 to 2.43 times said total length, respectively.

3,088,370
ADJUSTABLE LENS MOUNT
Otto Erbe, Aalen, and Otto Weiss, Aufhausen, Kreis Aalen, Germany, assignors to Carl Zeiss, Oberkochen, Wurttemberg, Germany
Filed June 20, 1960, Ser. No. 37,234
Claims priority, application Germany July 11, 1959
2 Claims. (Cl. 88—57)



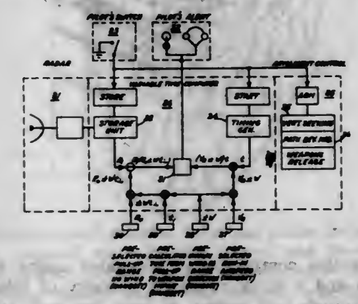
1. In an adjustable lens support, a lens mount, a barrel having a lens system slidably mounted in said mount, a sleeve between said barrel and mount for axial sliding movement, means for preventing rotation of said sleeve, a gear wheel rotatably supported by said sleeve in an opening thereof, a rack on the internal surface of said mount, a rack on the external surface of said barrel, said gear being positioned for drivingly engaging said racks, an operating member on said mount arranged for rotary motion and means drivingly connecting said operating member to said sleeve whereby rotary motion manually applied to said operating member will move said sleeve in an axial direction and adjust said barrel at a rate of speed equal to substantially twice the speed of said sleeve.

3,088,371
SYMMETRICAL SIX COMPONENT PHOTOGRAPHIC OBJECTIVE
Herman Lowenthal, Chicago, Ill., assignor to General Scientific Corporation, Chicago, Ill., a corporation of Illinois
Filed Aug. 5, 1960, Ser. No. 47,657
2 Claims. (Cl. 88—57)



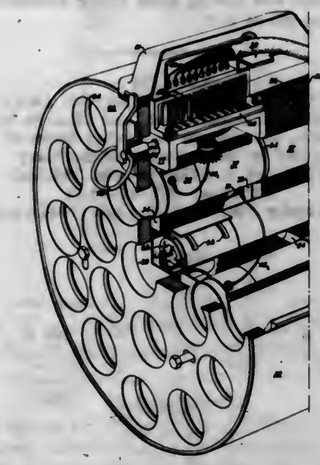
1. A symmetrical six component photographic objective having a stop between the inner two lenses, said objective having a lens group on each side of the stop, the two outer lenses in each group having positive powers with the enclosed lens in each group having a negative power, the two positive powers being about equal with the respective focal lengths of the lenses in a group having a ratio of the order of 5:3:5, the enclosed lens in each group having an index of refraction less than that of the outer lenses in each group, all the outer lenses in the two groups being of the same glass and the enclosed lenses also being of the same glass and the index difference being between 0.040 and 0.050, said components being separated by air spaces, the center air space being about 2.6% of the focal length of the objective and the air spaces in each group at the outer and inner vertices of said enclosed lens being about 0.100% and 0.815%, respectively, of the focal length of the objective, said objective having a field angle of about 56 degrees for substantially unity magnification and being fully corrected and having good fringe illumination and a speed in excess of F:9.

3,088,372
LOW LEVEL MEANS OF WEAPON DELIVERY
Paul L. Brink, Indianapolis, Ind., and Clare D. McGillem, Flint, Mich., assignors to the United States of America as represented by the Secretary of the Navy
Filed Oct. 9, 1958, Ser. No. 766,366
2 Claims. (Cl. 89—1.5)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. In an aircraft, a means of loft delivery of weapons at a target from the aircraft flying at low altitude comprising: an air-to-ground ranging radar carried by said aircraft to produce range voltage representative of the range from said aircraft to a target; a storage circuit coupled to said ranging radar to receive and store, at a selected instant, a range voltage representative of the actual range from said aircraft to said target at said selected instant; a timing generator capable of producing a voltage representing passage of time with respect to an instant of initiating activity; a switching means coupled to said storage circuit and to said timing generator for selecting said instant of storing said actual range voltage and of initiating activity of said timing generator; means separately establishing a direct current voltage respectively representing the air speed of said aircraft, the wind velocity in the direction of flight, the precalculated time required between pull-up of said aircraft from level flight and the impact of weapons at the target, and the preselected range between target and aircraft at time of pull-up during conditions of no wind in the direction of flight; means combining said voltages to produce a first summation voltage of said air speed and wind velocity voltages, a first product voltage of said first summation voltage and the voltage representing the passage of time, a second voltage product of said wind velocity and precalculated time voltages, a second summation voltage of said second voltage product and said preselected range voltage, and a difference voltage of said second summation voltage and said actual range voltage; comparator means coupled to said combining means to receive said difference voltage and said first product voltage to produce, upon the equality thereof, an alerting voltage signal indicative of the correct time for initiation of pull-up of said aircraft; and means activated by said switching means selecting said instant for momentarily sensing the flight path of said aircraft and releasing said weapons at the point in the pull-up flight path to effect weapon-target proximity.

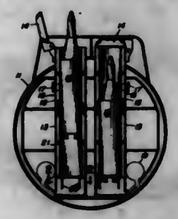
3,088,373
APPARATUS FOR STORING AND FIRING ROCKET BOMBS FROM AIRCRAFT
Roger A. Robert, 33 Blvd. d'Angleterre, Le Vesinet, Seine-et-Oise, France, and Pierre P. Matge, 32 Rue de la Somme, Cachan, Seine, France
Filed Dec. 23, 1959, Ser. No. 861,570
Claims priority, application France Dec. 31, 1958
4 Claims. (Cl. 89—1.7)



1. Apparatus comprising an elongated casing having a forward and a rearward end, a plurality of tubes extending through said casing, at least one wall element in said casing supporting said tubes and through which said tubes extend, said wall element including spaced walls provided with openings to accommodate said tubes and a plastic mass between said walls, a frame adjacent said wall element and detachable from said casing, a plurality of sleeves on said frame and extending into said tubes to constitute extensions of the latter, insulating elements on said sleeves, electrical terminals on said insulating elements and extending into said sleeves, covers extending into said sleeves and adapted to contact said electrical terminals and to connect the latter with rockets in said sleeves and tubes, an electrical distributor on said frame, leads connecting said distributor to said terminals, a plastic mass in said frame embedding said sleeves and leads, a disc on the rearward end of said casing holding said frame therein and provided with openings corresponding with said sleeves, and means detachably locking said disc to said casing.

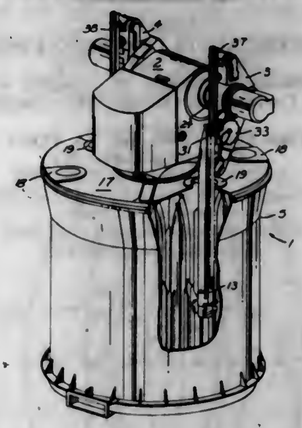
3,088,374
INCHING AND CENTERING SYSTEM
John L. Guyant, Las Vegas, Nev., and Clarence J. Castro, Sunnyvale, Calif., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Nov. 28, 1960, Ser. No. 72,254
5 Claims. (Cl. 89—1.7)

5. In combination with a missile launcher comprising an outer tube, an inner tube concentrically mounted within said outer tube, resilient means supporting said inner tube within said outer tube, a missile positioned within said inner tube, a support ring positioned adjacent the lower end of said inner tube a plurality of rod housings, each having a bore therein and extending downwardly from said support ring, a flexure rod mounted in each of said bores in said rod housings, said rods connected at one end to said inner tube, the other end of said flexure rod connected to the lower end of said housing, said rod being of lesser diameter than the diameter of said bore leaving a clearance between said rod and said housing wall, said support ring having a flange portion which is capable of supporting substantially the entire weight of said missile, a plurality of motors suspended from said inner tube for rotating said support ring with respect to said inner tube, locking means attached to said



support ring for locking said missile to said support ring thus insuring that said missiles will rotate simultaneously with said supporting ring, adjustable abutment means for each motor mounted on said support ring whereby the actuation of said motors permits said missile to be rotated with respect to said inner tube and aligned to its proper position for launching.

3,088,375
RAMMER HEAD HOISTING APPARATUS
George M. Sherman, Bremerton, Wash., assignor to the United States of America as represented by the Secretary of the Navy
Filed Mar. 2, 1962, Ser. No. 177,713
14 Claims. (Cl. 89—1.7)
(Granted under Title 35, U.S. Code (1952), sec. 266)



9. Hoisting apparatus for use with a guided missile launcher of a type having a missile magazine formed with a ring of missile cells having rail sections adapted to receive the missile launching shoes and support the missiles in a vertical disposition, pin means carried by each of said cell rail sections, said launcher further having a launcher arm provided with a rail section rotatable and elevatable by said arm into a vertically-aligned disposition relative to a magazine cell rail section whereupon a continuous track is formed for ramming the selected missile thereon; said hoisting apparatus comprising a chain reel carried by said arm, a chain having one end wound in said reel, chain-engaging drive and idler sprockets carried by the arm in position to lead said chain into said arm rail section, a rammer head carried by the other end of the chain and adapted to be reciprocably moved through said arm and cell rail sections,

drive means for reciprocably extending and retracting the chain, means for regulating said drive for producing reciprocating short and long strokes of varying lengths, said rammer head including an elongate body portion coupled at its rearward end to said chain, an elongate pawl member medially pivoted in the body portion and formed at its rearward end with a latching projection, and cam means engaging and pressing the pawl member's forward end inwardly toward said body to hold said said latch projection outwardly of the body in operative hoisting disposition, said cam means being resiliently depressable for permitting said pawl member's rearward end to be depressed into a non-operative hoisting position, and said cam means having a triangular camming surface for permitting said pawl's forward end to pivotally swing over-center past its apex whereupon said cam resiliently pressures the forward end of the pawl outwardly of the body to hold the latch projection in its inwardly depressed non-operative hoisting position, said pin means being disposed for engaging and depressing said pawl into said non-operative position only when the rammer head is near the outer limit of its long stroke.

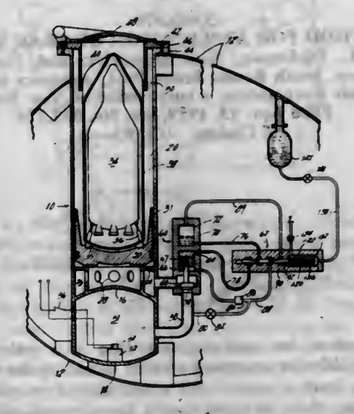
3,088,376
RING FOR IMPARTING SPIN
Robert L. Davis, Hyattsville, Md., assignor to the United States of America as represented by the Secretary of the Navy
Filed Mar. 26, 1962, Ser. No. 182,695
1 Claim. (Cl. 89—1.7)
(Granted under Title 35, U.S. Code (1952), sec. 266)



A device for imparting spin to a fin stabilized rocket launched from a rifled gun barrel comprising a hollow split sleeve formed of a pair of semicircular members provided with a plurality of slots for accommodating fins secured to said rocket whereby rotation of said split sleeve will result in rotation of said rocket, at least one soft metal band partially embedded in the outer surface of each semicircular member and projecting radially, said bands being disposed in corresponding positions on each semicircular member and defining a closed loop when said members are in abutting relationship, and a frangible band for holding said semicircular members in abutting relationship and in engagement with said rocket and said fins, the interior surfaces of said semicircular members defining a frustum complementary to a rearwardly flared section of said rocket whereby rapid acceleration of said rocket will reupture said frangible band and the rearwardly flared section will cam said semicircular members radially outward to force portions of the soft metal bands into the rifling grooves of the gun.

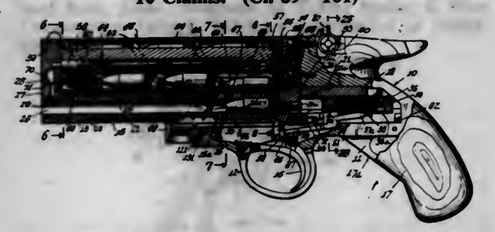
3,088,377
MECHANICAL PROGRAMMED GAS GENERATOR
Moses Siegel, Philadelphia, Pa., assignor to the United States of America as represented by the Secretary of the Navy
Filed June 1, 1962, Ser. No. 200,032
5 Claims. (Cl. 89—1.7)
(Granted under Title 35, U.S. Code (1952), sec. 266)

5. A missile launcher comprising a firing tube for ejecting a missile therefrom by a gas, a flask disposed beneath said tube, a solid propellant in said flask for creating a high temperature, high pressure upon combustion, means for igniting said propellant, an annular diffuser disposed in said firing tube for passing gas thereinto, a piston reciprocably mounted in said tube for supporting a missile, a launch valve having a bore and a piston therein connecting said flask to said diffuser, a reservoir containing a pressurized fluid, a selector valve with a piston and a gas orifice and a fluid orifice that are varied by movement of said piston, first conduit means connecting said reservoir through said selector valve fluid orifice to one side of said launch valve piston for urging it into a closed position, second conduit means connecting said flask to the other side of said launch valve for urging thereof into an open position, third conduit means connecting said



flask through said selector valve gas orifice to said reservoir, a shut-off valve in said second and third conduit means, resilient means in said selector valve for urging said piston therein into a first position whereupon said gas orifice is increased and said fluid orifice is decreased, a fluid passage conduit connected to said selector valve for introducing ambient fluid pressure urging said piston toward a second position whereupon said fluid orifice is increased and said gas orifice is increased, and a cut-off valve in said fluid passage.

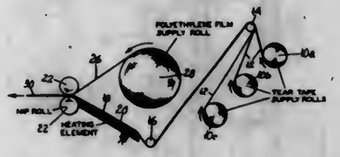
3,088,378
PISTOL WITH SLIDABLE AND FIXED BREECH BLOCK
John L. Boudreau, 655 Short Beach Road, Stratford, Conn.
Filed July 5, 1960, Ser. No. 40,582
10 Claims. (Cl. 89—161)



1. A pistol comprising a lightweight, elongate frame having a trigger means, a grip depending from the frame at the rear thereof, a barrel for firing cartridges slidably carried by the lower part of the frame and disposed above the trigger and normally urged to a retracted position, said grip having a gripping surface forming an angle of 38° with the axis of the barrel, said axis being adapted to be located immediately above the bottom three fingers and passing through the palm of the hand grasping the grip and in line with the forearm, said barrel having a normally retracted position and having means for moving the barrel forwardly of the frame upon the firing of a cartridge, and a fixed breechblock slidably carrying a firing pin and a housing having spring-urged striker

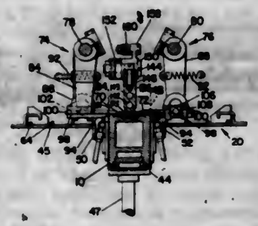
means, a sear on the striker means, a sear link pivotally mounted on the housing and having one end movable under the sear on the striker means and the other end cooperating with the trigger means, said barrel having a rearward extension provided with means operable on the forward stroke thereof for moving the sear link and housing relative to the striker means to cause said link on the return stroke of the barrel to move into engagement with the sear and cock the striker means.

3,088,379
METHOD FOR APPLICATION OF TEAR TAPE
Barry L. Dickinson, New Brunswick, and Donald R. Connor, South Bound Brook, N.J., assignors to Union Carbide Corporation, a corporation of New York
Filed Apr. 13, 1959, Ser. No. 805,776
8 Claims. (Cl. 93—1)



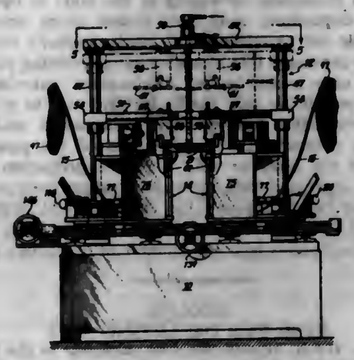
1. Method for applying tear tape to a polyethylene film suitable for wrapping articles including the steps of drawing from a supply roll a tear tape fabricated from a backing material possessing a lower extensibility than said polyethylene film and a synthetic thermoplastic resinous coating heat bondable to said polyethylene film and having a softening point below that of said backing material, passing said tape to a heating zone, softening said synthetic thermoplastic resinous coating, and immediately thereafter contacting said synthetic resinous coating while in a softened condition with said polyethylene film to form a laminate of said tear tape and said polyethylene film.

3,088,380
CONTAINER FORMING MACHINE
John G. Vergobbi, Quincy, Mass., assignor to Pneumatic Scale Corporation, Limited, a corporation of Massachusetts
Filed June 28, 1961, Ser. No. 120,296
20 Claims. (Cl. 93—12)



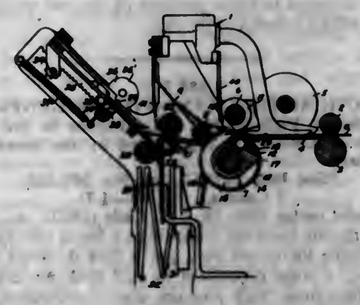
5. In a container forming machine of the character described, in combination, a forming block, means for folding a blank of thermoplastic bag forming material about three sides of the block leaving extended marginal portions, and means for folding the extended marginal portions into engagement with the remaining side of the block to present the marginal edges thereof in overlapping relation, said folding means comprising opposed independently operated folding plates mounted to be rocked into a position parallel to the surface of the block over which the extended marginal portions are folded and to continue their folding movement while maintained in said parallel position.

3,088,381
MACHINE FOR APPLYING METAL STAYS TO CARTONS
Charles Paist, Linwood, N.J., and Donald W. Sibal, Marshall, and Donald V. Clay, Grand Rapids, Mich., assignors to St. Regis Paper Company, New York, N.Y., a corporation of New York
Filed Apr. 4, 1960, Ser. No. 19,635
12 Claims. (Cl. 93—41.1)



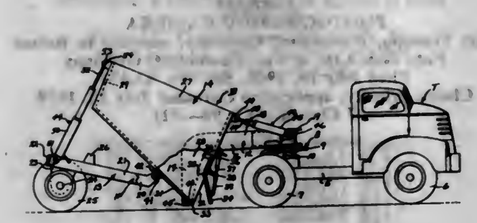
1. In a box making machine of the class described, forming means for bending the side flaps of a scored and cornered box blank into set-up condition for the reception of metal stays at the corners thereof, said means comprising a stationary mandrel for supporting the body of a box blank with the flaps overextending same, a frame movable relatively to said mandrel and carrying slide means for contacting the body of said blank upon movement of said frame towards said mandrel, said slide means sliding relatively to said frame upon further movement of said frame towards said mandrel, flap bending means movable relatively to said slide means and operable upon said further movement to fold said flaps along the edges of said mandrel into set-up condition and means for applying metal stays simultaneously to adjacent regions of said set-up side flaps to form box corners.

3,088,382
FLAP FOLDING APPARATUS
Richard Winkler, Reusdorf, near Neuwied, and Kurt Dunnebier, Wollendorf, near Neuwied, Germany, assignors to Berkley Machine Company, Kansas City, Mo., a corporation of Missouri
Filed July 1, 1959, Ser. No. 824,279
4 Claims. (Cl. 93—62)



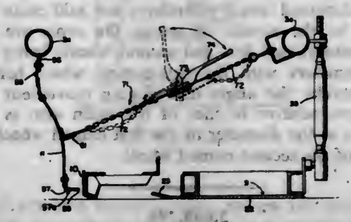
1. A bottom flap folding mechanism for an envelope making machine in which the envelope blanks are delivered to the folding mechanism with side flaps folded and gummed and with the bottom flaps leading, said folding mechanism including upper and lower feed rollers in the path of the blanks for passing the blanks therebetween, a guide roller having a cylindrical surface with the upper portion thereof above the path of the blanks emerging from between the feed rollers for diverting the bottom flaps of the blanks upwardly over the guide roller, said lower feed roller having a peripheral portion spaced in fixed relation from the cylindrical surface of the guide roller to provide a pass therebetween according to the thickness of the blanks, a substantially flat guide means having one end extending under the guide roller to carry the blanks thereon away from said pass to allow absorption of the gum into the material of the blanks, and upper and lower creasing and pressing rollers separate from the feed and guide rollers and located at the other end of the flat guide means, said portion of the lower feed roller having means for seizing a blank to initiate a fold in the bottom flap as the seized portion of the blank is carried downwardly under the guide roller and through said pass without pressing the bottom flap into firm sealing contact with the side flaps while the blank is pushed across the substantially flat guide means by the feed rollers for bringing the fold into engagement with the creasing and pressing rollers for creasing the fold and firmly pressing the bottom flap into sealing contact with the gummed side flaps.

3,088,383
TRAILER DUMP TRUCK
Dean B. Ekstrom, Amery, Wis.
Filed Apr. 6, 1959, Ser. No. 804,513
7 Claims. (Cl. 94—46)



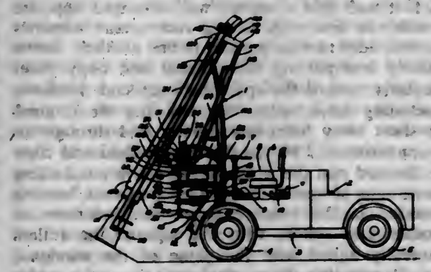
1. The combination with a tractor truck including rear traction wheels and a fifth wheel disposed above and adjacent to the traction wheels, of a dump trailer truck including independent front and rear frame sections, ground wheels supporting the rear end of the rear section, said front frame section being of a gooseneck shape and including a front cross-frame bar resting on and connected with the fifth wheel and depending spaced parallel arm portions, said rear frame section including spaced parallel side frame bars and a rear cross-bar, a dump hopper having a discharge outlet at its front lower end, means pivotally connecting the front lower end of the hopper to the depending arm portions of the front gooseneck frame adjacent to their lower ends, the side frame bars of the rear section extending forwardly under said hopper, means pivotally connecting the front ends of the side frame bars to the bottom of the hopper at a point spaced from and in rear of the pivotal connection of the hopper with the arm portions of the front frame section, and extensible means between the front frame section and the front of the hopper and extensible means between the rear end of the hopper and rear frame section for tilting the hopper about the front and rear frame sections for tilting said hopper relative to said frame sections to raise and lower the hopper discharge outlet.

3,088,384
BITUMINOUS PAVER
Ralph W. Heer and Lloyd W. Mundy, Minneapolis, Minn., assignors to Poor & Company, Chicago, Ill., a corporation of Delaware
Original application Feb. 21, 1957, Ser. No. 641,533, now Patent No. 2,947,230, dated Aug. 2, 1960. Divided and this application May 8, 1959, Ser. No. 812,573
4 Claims. (Cl. 94—46)



1. In a paver for laying bituminous mats, a frame comprising front and rear frame members, screed means carried by the frame, a moldboard arranged in the frame in advance of the screed means, a hinge connecting the upper edge portion of the moldboard with the front frame member, and control means for determining the position of the lower edge portion of the moldboard in relation to said screed means, said control means including, rods adjustable in the direction of their longitudinal axes and carried by the said rear frame member, socket members carried by the rear face of the moldboard and telescopically receiving the forward ends of said rods, flexible tension means also between the moldboard and the rear portion of said frame for holding the bottoms of said sockets against the adjacent ends of the rods when said flexible means is taut to firmly and positively position the moldboard in selected operating proximity to the screed means, and a quick release toggle in said flexible tension means to cause the same to become slack, whereby the moldboard will swing on said hinge so that its free lower edge can be moved away from the screed means facilitating cleaning out of material accumulated between the rear face of the moldboard and said screed means.

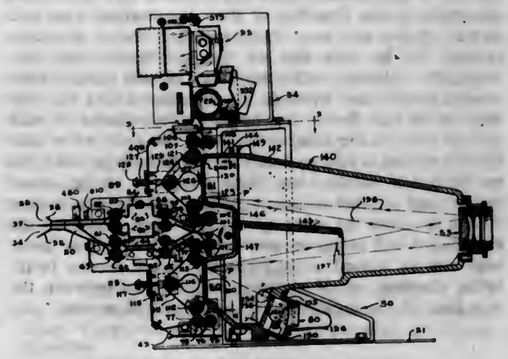
3,088,385
ROAD WORKING MACHINE
Evan E. Dorkins, Ottawa, and Paul D. Gernhardt, Overland Park, Kans., assignors to Young Spring & Wire Corporation, Detroit, Mich., a corporation of Michigan
Filed Apr. 11, 1960, Ser. No. 21,270
8 Claims. (Cl. 94—49)



1. A mechanical movement of the character described comprising, a main arm having one end portion, means fixed on said one end portion for connection with a source of power for bodily swinging said arm so that another end thereof swings through an arcuate path, a shaft rotat-

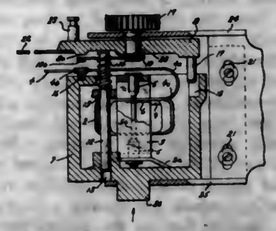
able in said one end portion of said main and having a wheel fixed thereto, a second shaft fixed in said main arm in spaced relation to the first-named shaft, a second arm on said second shaft and swingable on the axis of said second shaft and relative to the main arm, a second wheel about the second shaft and fixed to the second arm and in alignment with said first-named wheel, and a flexible power-transmitting member trained over and operatively engaging said second wheel with ends connected to the first-named wheel whereby when said main arm is operated by the source of power the arms are swung simultaneously, said first and second wheels being of different diameters with the first-named wheel being the larger whereby the angle of swinging movement of the second arm relative to that of the main arm is of the same ratio as the diameter of the first-named wheel to the diameter of the second-named wheel.

3,088,386
ELECTROPHOTOGRAPHIC PHOTOCOPY MACHINE
Meyer L. Sugarman, Jr., Glencoe, Ill., assignor to American Photocopy Equipment Company, Evanston, Ill., a corporation of Illinois
Filed Nov. 16, 1959, Ser. No. 853,123
18 Claims. (Cl. 95—1.7)



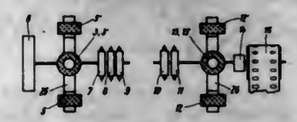
1. In a photocopy machine of the electrophotographic type for use with an original and a copy sheet, a frame having an optical housing, means in said frame providing closely spaced parallel slots for insertion of the original and copy sheet into the respective slots arranged face to face, means for charging the copy sheet, said housing having a first wall and a second wall arranged opposite thereto, with the first wall having rectangular windows therein spaced edge to edge parallel to one another, means for positively transporting the original and copy sheet perpendicularly toward the space between said windows, means including drive rollers for diverting the original and copy sheet away from one another and through an angle of approximately 90° so that the original and copy sheet are directed past the windows respectively travelling at the same rate of speed, the first wall of said housing being recessed in the space between said windows to accommodate said rollers with the nips of the rollers being generally alined with the plane of the windows, means for illuminating the original over the entire width thereof as it passes the illuminating window, a lens and cooperating mirror at the opposite wall of said housing so that the reflected image of the original is cast upon the copy sheet as it passes the exposing window, and means for applying finely divided toner powder to said copy sheet for developing a latent image thereon.

3,088,387
LIGHTMETER WITH FOLLOWER ELEMENT
Hans Joachim Wichmann, Alfred Ahles, and Elsbeth Schorr, Nurnberg, Germany, and Maurice K. Carr, Ann Arbor, Mich., assignors, by mesne assignments, to Argus Incorporated, a corporation of Delaware
Filed Mar. 1, 1960, Ser. No. 12,110
3 Claims. (Cl. 95—10)



1. In automatic exposure control mechanism for a camera provided with a light measuring meter having a swingable indicator element, means for arresting the element in the measured light position, a rotatable follower driven in the same direction as said indicator element by exposure determining means in the camera, said indicator element when arrested serving as a stop to arrest the follower in exposure taking light position, and means rotatable with said follower of such arcuate extent relative to the path of said indicator element travel that under low measured light conditions that are excessively low for automatic exposure control action of said mechanism said follower will be held against movement in said direction when the indicator element is arrested.

3,088,388
PHOTOGRAPHIC CAMERA
Karl Tredopp, Dusseldorf, Germany, assignor to Robot-Foto G.m.b.H., & Co., Dusseldorf, Germany
Filed July 18, 1960, Ser. No. 43,474
Claims priority, application Germany July 18, 1959
7 Claims. (Cl. 95—31)

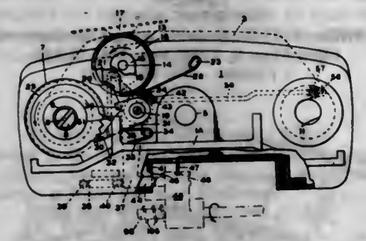


7. In a camera having a shutter and a film feed, an electric shutter and film feed drive system comprising: a shutter drive electric motor having a rotary armature and a drive shaft affixed thereto and operatively connected with said shutter, a film feed electric motor having a rotary armature and a drive shaft operatively connected with said drive shaft of said shutter drive electric motor, and electromechanical means for controlling the action of said film feed motor, said means including an electrical contact switch mechanism connected with said drive shaft of said shutter drive electric motor and responsive to the angular position thereof to effect necessary electrical connections to operate said film feed electric motor.

3,088,389
CAMERA
Vinnie J. Rigolini, Brooklyn, N.Y., assignor to Whitehouse Products, Inc., Brooklyn, N.Y., a corporation of New York
Filed May 1, 1961, Ser. No. 106,713
12 Claims. (Cl. 95—31)

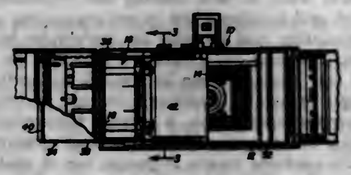
1. In a roll film camera having a camera body, a shutter mechanism and a film winding mechanism, the combination comprising a film metering wheel rotatably

mounted in said camera and arranged so that a peripheral surface of said wheel engages and is rotated by the film upon operation of said film winding mechanism, said film metering wheel having a notch, a ratchet wheel connected to said film winding means and arranged to rotate upon operation of the latter, first and second pawls pivotally mounted in said camera, first biasing means arranged to urge said first pawl into engagement with said notch, second biasing means arranged to urge said second pawl into engagement with said ratchet wheel to



lock said film winding means against operation, means on one of said pawls arranged to contact the other of said pawls and to hold said second pawl out of engagement with said ratchet wheel except when said first pawl engages said notch, a shutter cocking mechanism, and means arranged to hold said pawls out of engagement with said notch and said ratchet wheel when said shutter is uncocked and to free said pawls for engagement with said notch and said ratchet wheel when said shutter is being cocked.

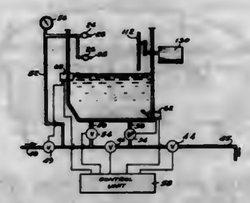
3,088,390
DOUBLE EXPOSURE FILM SHIELD FOR CAMERAS
Ervin W. Zimmerman, Houtzdale, Pa.
Filed June 14, 1961, Ser. No. 117,005
5 Claims. (Cl. 95—36)



1. A double exposure device for roll film cameras having separable sections with an exposure opening in one of the sections comprising, frame means slidably mounted in the camera between sections, handle means connected to the frame means at one end projecting from one side of the camera and limiting movement of the frame means in one direction to a limit position, adjustable stop means mounted on the frame means within the camera for limiting movement thereof in the other direction to another limit position and film shield means adjustably mounted at the other end of the frame means for blocking one half of the exposure opening only when the frame means is in said limit positions.

3,088,391
LIQUID TREATMENT APPARATUS FOR PHOTOPOLYMER SHEET MATERIAL
Harold Sigler, Brooklyn, N.Y., assignor to Fairchild Camera and Instrument Corporation, a corporation of Delaware
Filed Jan. 23, 1958, Ser. No. 710,774
13 Claims. (Cl. 95—93)

4. In apparatus for the liquid treatment of sheet material, a movable support for the sheet material, means on said movable support for releasably securing such sheet material flat upon a surface thereof, a plurality of spray nozzles directed toward said surface, the spray nozzles being relatively positioned to effect solid areas of direct spray on the said surface separated by zones of non-uniform spray caused by the inter-relation of the spray pat-



terns of adjacent spray nozzles, means for moving said support repetitively in a predetermined cyclical path such that each element of area of said sheet passes through at least one such solid area of direct spray at least once during each cycle, and means connecting said spray heads to a source of liquid under pressure for delivering such liquid to said spray heads.

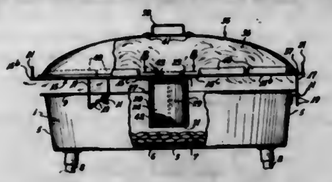
3,088,392
DUCT CONSTRUCTION
Charles E. Egan, Toledo, Ohio, assignor to Owens-Corning Fiberglas Corporation, a corporation of Delaware
Filed Sept. 8, 1960, Ser. No. 54,656
5 Claims. (Cl. 98—40)



1. An air distribution duct assembly for supplying air to the space in a room beneath the sub-ceiling thereof, said assembly comprising, in combination, and elongated, open-bottomed, channel member having laterally spaced, substantially parallel, vertical legs and a horizontal web extending across between said legs, a plurality of air passages through the upper portion of said channel member along the length thereof, a hollow, elongated duct comprising an outer imperforate resilient sheet material jacket and an inner layer of heat insulating material enclosed by said sheet material, said duct having a longitudinal opening thereinto defined by spaced edges of the walls thereof, flange means on the outer sides of said channel member for engaging the outer surface of the walls of said duct with the edges of the walls of said duct located on opposite sides of the air passages in said channel member, whereby said channel member and said duct are in air communication with each other through their length, turned over lips on the outer sides of said flange means and oppositely turned lips on the edges of said jacket, said lips being engageable for retaining said duct on said member, assembly hangers extending downwardly through said duct and connected to said channel member, outwardly extending sub-ceiling support flanges on the lower ends of said legs of said channel member and an air to flow controller removably mounted at the open bottom of said channel member.

3,088,393
APPARATUS FOR COOKING AND SMOKE-FLAVORING FOOD

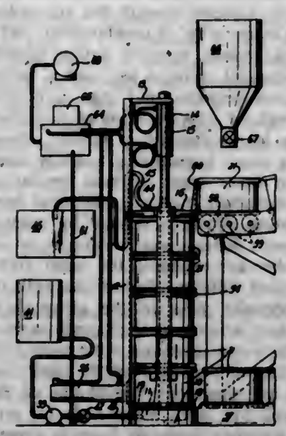
Thad T. Huckabee, P.O. Box 749, Albany, Ga.
Filed Nov. 19, 1957, Ser. No. 697,420
9 Claims. (Cl. 99—259)



1. Food cooking and smoke-flavoring apparatus, comprising: means having a surface for supporting a bed of burning fuel; a grill disposed in relatively closely spaced relation directly above said surface to support food to be cooked by said burning fuel by radiant heat and convection; heat responsive smoke-producing means; means supporting said smoke-producing means spaced above said surface in close proximity to said burning fuel, whereby the heat of said burning fuel can activate said smoke-producing means; and cover means removedly supported on said grill and overlying said grill and smoke-producing means, said cover means having a chamber formed therein, and constituting an enclosure for food on said grill and for accumulating smoke from said smoke-producing means in a zone directly above said grill, said grill having an opening, said means for supporting said smoke-producing means being vertically aligned with said opening, said smoke-producing means including a perforated receptacle containing heat-responsive smoke producing material, said opening being larger than said receptacle to permit the receptacle to be passed through said opening onto the means for supporting said smoke-producing means.

3,088,394
APPARATUS FOR EXTRACTING SOLUBLE CONSTITUENTS FROM VEGETABLE MATTER

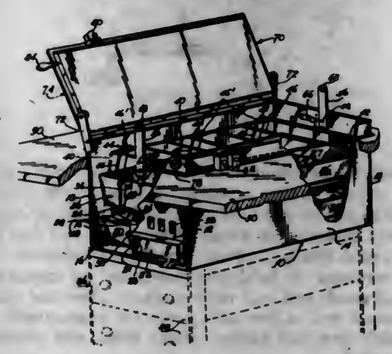
John H. R. Thornhill, Denawaka Estates Limited, Pelmadulla, Ceylon
Filed Mar. 22, 1961, Ser. No. 97,634
18 Claims. (Cl. 99—283)



1. Apparatus for extracting soluble constituents from vegetable matter wherein means are provided for passing a liquid upwardly through a stack of pans each having at least one opening in its base, the pans being stacked in communication with one another between a base and a head provided respectively with an inlet and an outlet for the liquid sealing means provided between said base, each pan and said head to form a hermetic seal therebetween, and means being provided for effecting relative movement, in the direction of the axis of the stack, of the head, the base and the stack of pans excluding the lowermost pan, to enable the said lowermost pan to be removed and a fresh pan to be inserted at the upper end of the stack.

3,088,395
COOKING UNIT

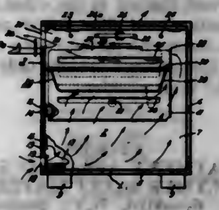
Alice Miller, 6752 N. Kedvale Ave., Lincolnwood, Ill.
Filed Mar. 9, 1960, Ser. No. 13,832
5 Claims. (Cl. 99—340)



1. A device of the character described comprising a housing having vertical walls and a door in one of said walls, a fuel pan inside said housing, a removable ash pan positioned inside said housing below said fuel pan and adjacent said door to be removed through said door, a gridiron supported within said housing above said fuel pan in horizontal position, a pair of uprights secured to the vertical walls of said housing and extending above the top of said housing when in spit supporting position, means mounting said uprights for movement below the top of said housing but positioned adjacent the vertical walls of said housing when in non-spit supporting position, a spit removably positioned on said uprights when in spit supporting position, a closure horizontally positioned over the top of said housing, said closure having electrically operated means to permit use of said closure as an electric griddle when the closure is in closed position.

3,088,396
BROILING OVEN

Richard V. Proffitt, Chicago Heights, Ill., assignor to General Electric Company, a corporation of New York
Filed Mar. 24, 1961, Ser. No. 98,039
8 Claims. (Cl. 99—443)

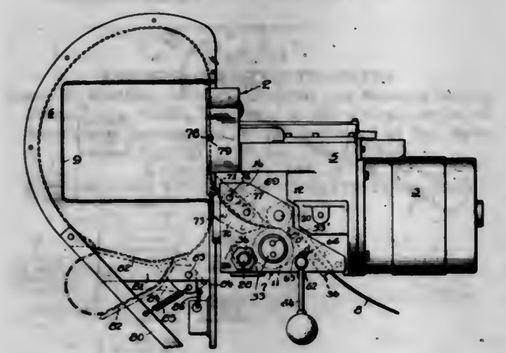


1. A broiling oven comprising: a top wall, a bottom wall, a rear wall and a pair of side walls forming an enclosure having a front opening; radiant heating means in the upper portion of said enclosure; a door mounted in the front opening of said enclosure, each of the side edges

of said door being substantially in contact with the one of said side walls adjacent thereto so as to block air flow therebetween; means forming an air inlet opening adjacent the bottom edge of said door; means forming an air outlet opening adjacent the top edge of said door; a broiler pan supported in said enclosure in spaced parallel relation to said top and bottom walls with its front edge in close proximity to and substantially in contact with said door each of its side edges lying substantially in contact with the one of said side walls adjacent thereto so as to block air flow therebetween and its rear edge being spaced from said rear wall so that air may circulate therebetween; and means in said enclosure for supporting said pan in the aforementioned position.

3,088,397
POWER STRAPPING MACHINE

Hollinshead T. Martin, Evanston, and Frank J. Lindholm, Park Ridge, Ill., assignors to Signode Steel Strapping Company, a corporation of Delaware
Filed July 19, 1960, Ser. No. 43,823
3 Claims. (Cl. 100—26)

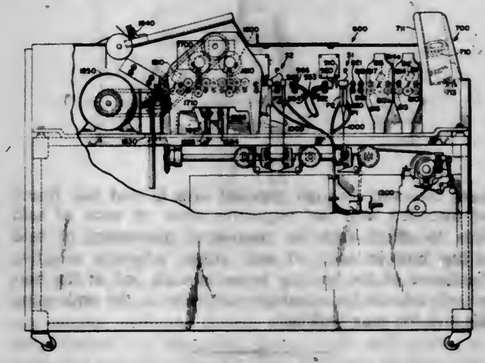


1. In a strapping machine having a frame, the improvement comprising a pair of feed rolls having intermeshing transversely corrugated peripheral surfaces, one of said feed rolls being rotatably mounted between two plates, a rotatable eccentric shaft mounted within said plates and having a ring member journaled therein and adjustably secured to said frame for movement of said plate-mounted feed roll relative to the other feed roll and interrelated reversible drive means for driving both of said feed rolls while said corrugated surfaces intermesh.

3,088,398
DOCUMENT PREPARATION DEVICE

George F. Daly, Endicott, and Fred Saltz, Binghamton, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 29, 1958, Ser. No. 783,425
16 Claims. (Cl. 101—19)

4. In a cyclically operable machine for preparing second card documents bearing information in printed and punched hole form where the printed information is on both the obverse and reverse faces of the card documents, comprising, a card hopper containing blank card documents, means for selectively feeding said blank card documents from said card hopper, a first printing station, means for conveying the blank card documents fed from said card hopper to said first printing station, card arresting means positioned at said first printing station selectively operable to arrest said card documents in first and second predetermined stopping positions, means for successively advancing said card documents from the first to the second stopping position within said first printing station, first printing means positioned at the first printing station and selectively operable to effect print impressions upon the obverse face of the card documents arrested in the first and second stopping positions at the first printing station during one portion of each machine cycle, a second printing station, a card inverting means for receiving the leading edge of card documents coming from the first printing station and inverting the same so as to become the trailing edge upon being presented to said second printing station, means for conveying card documents successively from said first print station to said second print station via said card inverting means, card arresting means positioned at said second printing station to selectively arrest the card documents in a predetermined number of successive stopping positions, means for selectively advancing said card documents from one stopping position to another within said second printing station, second printing means positioned at the second printing station and selectively operable to effect print impressions upon the reverse faces of the card documents arrested at any of



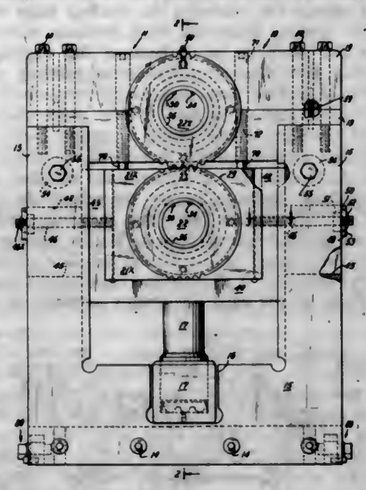
the stopping positions at said second print station during another portion of each machine cycle, print setup means shared by said first and second printing means, control means for enabling said print setup means to set the second printing means during said one portion of each machine cycle and to set the first printing means during said another portion of each machine cycle, a first punching station, first punching means positioned at said first punching station and adapted to selectively enter perforations into any of the index positions of the card documents in the even rows thereof, a second punching station, and second punching means positioned at said second punching station and adapted to selectively enter perforations into any of the index positions of the card documents in the odd rows thereof so that the index positions of the odd rows of one of the card documents will be selectively perforated at the second punching station to complete the punching of that card document while the index positions of the even rows of another card document are being selectively perforated at the first punching station.

3,088,399
ROTARY REGISTER EMBOSSING PRESS

Frank W. Broderick, New Providence, N.J. (P.O. Box 2, Stirling, N.J.)
Filed Feb. 26, 1962, Ser. No. 175,634
8 Claims. (Cl. 101—23)

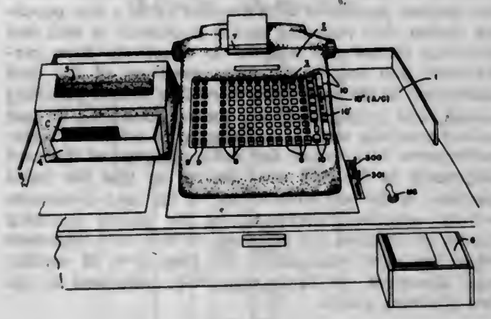
1. In a rotary embossing machine having a bed plate, a pair of opposed side frames, a pair of mated steel end journaled top and bottom embossing rolls disposed in said side supports, and a herringbone gear secured to each roll, the improvement comprising a vertically move-

able U-shaped dual arm yoke slideably disposed in each of said side supports, means for selective movement of said yoke, a bottom roll retaining bearing box captively and slidingly disposed in each of said yokes to permit limited transverse lateral movement of said box relative to the length of said bed plate, and threaded adjustment



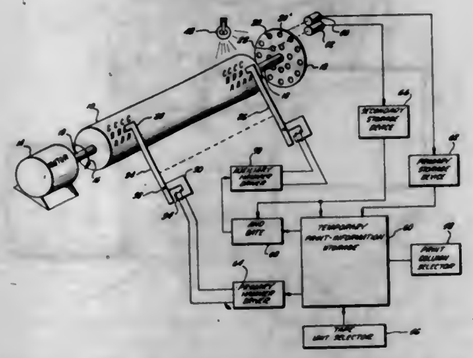
means disposed through opposed slots in said side frame and threaded into the respective arms of each of said yokes to effect selective transverse movement of said bearing box in each of said yokes, whereby selective adjustment of the bearing boxes at each end of the bottom roll adjusts for misalignment between the embossing rolls and for gear backlash.

3,088,400
RECORDING APPARATUS
Harry R. Bergland, St. Clair Shores, and Alfred R. Wagner, Detroit, Mich., assignors to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed Aug. 2, 1960, Ser. No. 47,036
13 Claims. (Cl. 101—93)



1. Recording apparatus comprising recording means settable in accordance with information to be recorded; means for transporting a record meduim having a plurality of recording fields through a feeding path in said apparatus; means for driving said apparatus through cycles of operation; a first record stop in the feeding path of said record medium and operable, when active, to intercept said record medium when one of its recording fields is positioned with respect to said recording means for recording thereon during a cycle of operation; a second record stop in the feeding path of said record medium and operable, when active, to intercept said record medium when a different recording field is positioned with respect to said recording means for recording thereon during a cycle of operation; and means for selectively activating said record stops; said means comprising a member settable in a plurality of positions; means for causing said first stop to be active when said settable member is set in one position; means for causing said second stop to be active when said settable member is set in a second position; and means operative when said settable member is set in a third position to cause said first stop to be active during one cycle of operation and said second stop to be active during the immediately succeeding cycle of operation.

3,088,401
TEMPORARY INFORMATION STORAGE FOR HIGH SPEED PRINTERS
George T. Shimabukuro, Los Angeles, Calif., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed Apr. 28, 1961, Ser. No. 106,346
8 Claims. (Cl. 101—93)



1. In a high speed printer which includes a plurality of print hammers, a print-information storage arrangement comprising: a plurality of magnetic cores having a substantially rectangular hysteresis characteristic and arranged in a row-column array, each core being associated with a particular print hammer; means for independently setting each magnetic core in response to print information including a plurality of column conductors one associated with each column of cores and passing through each core of its associated column, a plurality of row conductors one associated with each row and passing through each core of its associated row, and means for selectively energizing particular row and column conductors; a plurality of output windings one wound around each magnetic core; means including a reset conductor passing through all magnetic cores for simultaneously resetting all magnetic cores to produce an output current in the output winding of each previously set magnetic core to actuate particular print hammers; and means coupled to each output winding for prohibiting the actuation of the print hammers upon a setting of the magnetic cores.

3,088,402
DUPLICATING
Douglas A. Newman, Glen Cove, N.Y., assignor to Columbia Ribbon and Carbon Manufacturing Co., Inc., Glen Cove, N.Y., a corporation of New York
Continuation of application Ser. No. 511,855, May 31, 1955. This application Mar. 31, 1960, Ser. No. 19,113
12 Claims. (Cl. 101—149.4)

1. A method of producing an imaged hectograph master on a flexible master sheet by use of a transfer sheet coated with a transferable layer of copy-producing material including the steps of:

(*a*) producing on a plate a latent electrostatic image of the copy to be reproduced;
(*b*) developing said latent image on said plate with an electroscopic powder tackifiable by heat to form a powder image of said copy;
(*c*) transferring said powder image from said plate to one of said sheets;
(*d*) superposing said sheets so that the powder image is in intimate contact with the master sheet and the transferable layer of the transfer sheet and heating the sheet and the powder image thereon to a temperature sufficiently high to render the powder image tacky;
(*e*) permitting the tackified powder image to solidify and bond to the master sheet and to the transferable layer of the transfer sheet; and
(*f*) stripping the sheets apart; whereby those portions of the transferable layer which have been bonded to the solidified image on the master sheet are separated from the transfer sheet to produce an imaged hectograph master.

3,088,403
ROCKET ASSISTED TORPEDO
James T. Bartling, Orville J. Sabolt, and Bernard Smith, China Lake, Calif., assignors to the United States of America as represented by the Secretary of the Navy
Filed May 26, 1959, Ser. No. 816,008
2 Claims. (Cl. 102—7)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. In an anti-submarine weapon comprising a payload apparatus effective to operate against a submerged target submarine when delivered to a suspect water area, and an airframe of generally tubular configuration severably joined to said payload apparatus, extending rearwardly therefrom and carrying reaction propulsion means operative to project said weapon into a ballistic trajectory directed toward said suspect water area, in combination, the improved structure wherein said tubular airframe is of bivalvular configuration, said bivalvular airframe comprising a pair of semi-cylindrical shell structures hinged at their aft ends, means clamping said shell structures against said payload apparatus and in thrust association therewith, and shear-resisting means releasably mating said shell structures near the forward portions thereof, said shear-resisting means comprising a pair of alignment blocks secured to the contiguous sides of said bivalvular members respectively, one of the blocks in each pair carrying a shear-resisting pin, and the other block in said pair having a matching bore in which said pin is received.

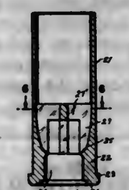
3,088,404
INTERLOCKING SCREW THREADS
Fred Brown, Chicago, and Hubert J. Thomiszer, Skokie, Ill., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Nov. 15, 1956, Ser. No. 622,511
5 Claims. (Cl. 102—7.2)

1. A unitary assembly for use with an aerial launched bomb comprising a plurality of individual submissiles arranged in a cluster, each of said submissiles having a threaded portion integrally formed thereon in threaded engagement with the threaded portion of a neighboring submissile to provide an interlocking connection between each of said submissiles, a plurality of segmented mem-



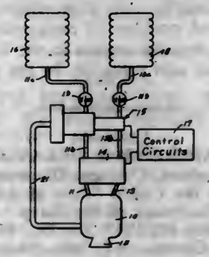
bers in engagement with the outermost submissiles of said cluster for maintaining said interlocking connection and means for normally maintaining said members in engagement with said outermost submissiles.

3,088,405
PLASTIC CARTRIDGE CASE
Homer E. Clark, Jr., Alton, Ill., assignor to Alcan Company, Incorporated, Alton, Ill., a corporation of Illinois
Filed Apr. 1, 1960, Ser. No. 19,336
3 Claims. (Cl. 102—43)



1. A cartridge case formed of molded plastic comprising a casing of tubular form, one end of said casing having a relatively thickened wall portion to define a head, said head having a primer-pocket-forming aperture coaxial with said casing, a plurality of circumferentially spaced ribs integrally formed with said casing and projecting radially inwardly from the inner surface thereof, said ribs being axially parallel with the longitudinal axis of said casing and having end portions remote from said head, a transverse arm integral with each rib in its end portion remote from said head for extension toward the longitudinal axis of said casing, said arms being merged spacedly from said primer-pocket aperture to form a cartridge component support said ribs reinforcing said casing against outward thrust from the weight of a component supported on said arms.

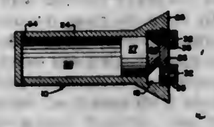
3,088,406
QUANTIZED IMPULSE ROCKET
John W. Horner, Whittier, Calif., assignor to Thompson Ramo Wooldridge Inc., Cleveland, Ohio, a corporation of Ohio
Filed June 22, 1959, Ser. No. 822,164
6 Claims. (Cl. 102—49)



1. A rocket for producing a predetermined quantum of impulse in response to a control signal comprising, a reaction chamber, a nozzle connected to discharge gases

generated by hypergolic reaction in said reaction chamber to produce thrust, first and second low pressure fuel storage tanks for storage of first and second fuel components of said hypergolic reaction, first and second conduits connecting said first and second tanks respectively to said reaction chamber, a normally closed solenoid actuated shut-off valve in each of said conduits to normally prevent flow of said fuel components to said reaction chamber, an injector pump upstream of said solenoid valve in each of said conduits, a check valve upstream of said injector pump in each of said conduits, said injector pump having a piston therein which is urged toward a first normally open position by said low pressure fuel components from said storage tank, means to apply pressure developed in said reaction chamber to urge said piston to a second closed position in which a predetermined measured amount of said fuel components is forced out of said injector pump and into said reaction chamber, signal responsive circuit means connected to actuate said solenoid shut-off valve to an open position to initiate flow of said fuel components to said reaction chamber whereby hypergolic reaction is initiated and the pressure built up in said chamber acts on said piston to inject a predetermined amount of fuel components to said chamber, and means operatively connected to de-energize said solenoid and close said shut-off valves at the completion of the stroke of said piston in said injector pump.

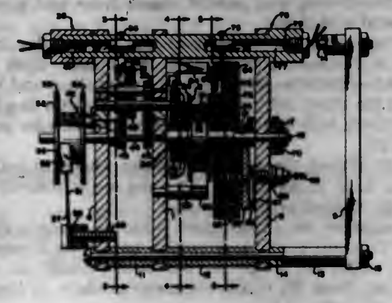
3,088,407
GAS OPERATED MOVABLE MASS FOR BALLISTIC MODEL
John J. Gallagher, 5911 Anniston Road, Bethesda, Md., and William R. Witt, Jr., 1124 Cresthaven Drive, Silver Spring, Md.
Filed Mar. 7, 1961, Ser. No. 94,094
7 Claims. (Cl. 102—50)
(Granted under Title 35, U.S. Code (1952), sec. 266)



4. A gun fired projectile comprising a hollow cylindrical body having a forward wall and a rear wall at the end portions thereof respectively, a relatively heavy slideable inertial plug movable from a rearward position in engagement with said rear wall to a forward position in engagement with said forward wall within said body, said plug being mounted coaxially within said body, gas chamber means within said projectile having a plurality of ports in the rear wall thereof for establishing communication with the interior of the chamber means, and valve means in each of the ports adapted to trap explosion gases under pressure in said chamber means during the flight of said projectile, said plug adapted to be driven from the rearward position in engagement with a rear wall of said gas chamber means to the forward position during the flight of said projectile by the pressure of said trapped gases.

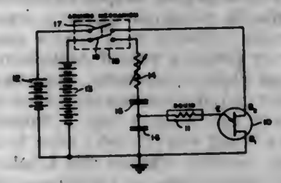
3,088,408
MECHANICAL TIME DELAY DEVICE
Donald E. Richardson, Chicago, Ill., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed May 22, 1957, Ser. No. 660,990
8 Claims. (Cl. 102—70.2)

1. A timing mechanism for sequentially actuating a plurality of circuit closure means comprising a spring wound power drive mechanism, an escapement mechanism connectable to said power drive mechanism for controlling the operation thereof, normally restrained power drive translational means for operationally interconnecting said power drive and escapement mechanism subsequent to release thereof, means for releasing said translational means, cam disc means rotatable by said drive mechanism subsequent to release of said translational means for actuating a first one of the circuit clo-



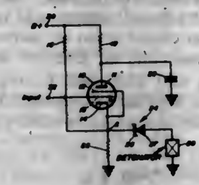
sure means, normally restrained cam arm means rotatable by said drive mechanism subsequent to the release of said cam arm means and said translational means for actuating a second one of the circuit closure means, circular cam means rotatably arranged on said cam arm means for actuating a third one of the circuit closure means a predetermined time after release of said cam arm means, and means for releasing said cam arm means.

3,088,409
ELECTRONIC TIMER
Irvin S. Yavelberg, Tucson, Ariz., assignor to the United States of America as represented by the Secretary of the Navy
Filed Nov. 28, 1960, Ser. No. 72,257
2 Claims. (Cl. 102—70.2)
(Granted under Title 35, U.S. Code (1952), sec. 266)



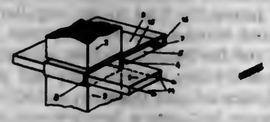
1. A missile destructor fuze apparatus comprising, in combination: a destructor squib; a unijunction transistor having an emitter electrode and a pair of base electrodes; means for providing a predetermined potential gradient in said unijunction transistor between said base electrodes and correspondingly establishing a predetermined value of peak point emitter voltage for firing said unijunction transistor; a series-charging network comprising a source of voltage, a switch, a resistor, a compensating tantalum capacitor, and a firing tantalum capacitor, to effect charging of said firing capacitor to said predetermined value of peak point emitter voltage upon expiration of a predetermined time delay initiated upon closing of said switch; said firing capacitor, squib, and unijunction transistor being connected in circuit to effect flashing of said squib by conduction of discharge current from said firing capacitor through said squib and said emitter electrode when the firing capacitor voltage reaches said predetermined value of peak point emitter voltage; and said capacitors having balancing temperature-dependent characteristics which render said predetermined delay time substantially independent of ambient temperature changes.

3,088,410
THYRATRON FIRING CIRCUIT
Ralph E. Taylor, Silver Spring, Md., assignor to the United States of America as represented by the Secretary of the Army
Filed Dec. 30, 1960, Ser. No. 79,937
3 Claims. (Cl. 102—70.2)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. In an ordnance fuze firing circuit, a thyratron including an anode, a cathode and at least one control grid, a source of electrical energy, said source including an energy storing condenser connected between said anode and ground, input means for applying a trigger signal to said control grid, a resistor connected from said cathode to ground, means for applying a biasing potential to said cathode, a detonator, and a Zener diode connected between said cathode and said detonator, said Zener diode being poled so that said biasing potential is blocked from said detonator.

3,088,411
PUMP
Ernst Heinrich Wilhelm Schmidt, Rumelinstrasse 8, Munich, Germany
Filed Aug. 11, 1958, Ser. No. 754,238
Claims priority, application Germany Aug. 12, 1957
13 Claims. (Cl. 103—1)



1. A pump for pumping electrically conducting liquids, especially liquid metals, comprising, in combination, conduit means through which the liquid having a temperature different than an ambient temperature may flow; a first thermoelectric element; a second thermoelectric element, dissimilar from said first one, said two elements being connected to said conduit means and forming a first junction which includes said liquid as electrical connection in between, said two elements being further connected remote from said first junction so as to form a second junction in heat conductive relationship with said ambient temperature, said two elements constituting thermoelectric means for passing a direct current through the liquid in said conduit means at said first junction in a direction substantially perpendicular to said conduit means; and magnet means for generating a magnetic field the magnetic lines of flux of which pass through said conduit means in a direction substantially perpendicular thereto as well as substantially perpendicular to the direction in which said direct current is passed through said conduit means, said magnet means deriving its energy from a source other than the direct current produced by said thermoelectric means.

3,088,412
AIR VOLUME CONTROL
Arthur L. Good, Goshen, Ind., assignor, by mesne assignments, to Robertshaw-Fulton Controls Company, Richmond, Va., a corporation of Delaware
Filed Apr. 10, 1959, Ser. No. 805,491
2 Claims. (Cl. 103—6)

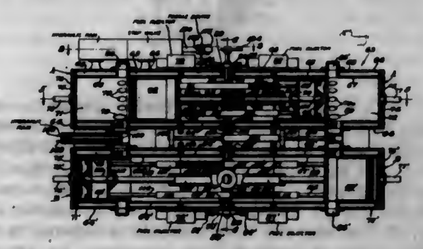


1. In a water supply system having a tank for storing water under air pressure and a pump for intermittently delivering water to the tank, a device for controlling the amount of air in the tank comprising a casing having oppositely disposed end walls defining a hollow interior therebetween, a diaphragm separating the interior into a pair of chambers and being movable in response to differential pressure between said chambers, an externally threaded extension formed on one of said walls for mounting the casing on the tank wall and having a passage therethrough for providing communication between one of said chambers and the interior of the tank, an enlarged recess formed in said one wall in registry with said passage, a cup shaped retaining member mounted in said enlarged recess and having an apertured end wall for the flow of fluid from said one chamber to said passage, a valve member mounted between the end wall of said cup shaped retaining member and the shoulder formed by the junction of said enlarged recess with said passage, said valve member having a disc shaped portion with an annular ridge thereon for seating on the apertured end wall of said retaining member, a plurality of slots in said annular ridge for permitting a flow of air only in both directions between said one chamber and the tank, said disc shaped portion being of resilient material whereby water pressure from said passage causes said disc shaped portion to seat against the apertured end wall of said retaining member to prevent the flow of water from said tank into said one chamber, conduit means adapted to establish communication between the other of said chambers and the inlet side of the pump whereby said other chamber is evacuated during pump operation and said diaphragm is positioned adjacent the other of said walls, a recess formed in said one wall adapted to communicate with atmosphere, check valve means operatively disposed in said recess for permitting a single direction flow of air from atmosphere into said one chamber, and means biasing said diaphragm against said one wall into sealing engagement with said check valve means to prevent a flow of air therethrough and into sealing engagement with the apertured end wall of said retaining member to prevent flow of air from the tank to said one chamber whenever the pump is inoperative.

3,088,413
VEHICLE WITH HYDROSTATIC TRANSMISSION PROPELLED BY FREE PISTON ENGINE HYDRAULIC PUMP
Arnold E. W. Johnson, Oak Park, Ill., assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Nov. 28, 1960, Ser. No. 71,949
6 Claims. (Cl. 103—54)

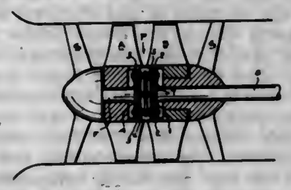
1. A free-piston engine hydraulic pump comprising in combination adjacent first and second power units, each of said units having a casing with a pair of power pistons therein positioned for reciprocation in axially opposed directions in synchronized relation, a fuel-air com-

bustion chamber disposed outboardly of each of said power pistons in said casings, a positive drive coupling means operatively connected to said units adapted to synchronize the power pistons of said first unit in alternate power stroke relation with the power pistons of said second unit, a hydraulic pump piston operatively connected inboardly to each of said power pistons, hydraulic pump cylinders mounted on said casings positioned to receive in cooperative relation each of said pump pistons, valve means adapted to communicate inlet hydraulic fluid from a low pressure hydraulic fluid source to said pump



cylinders independently to each of said units and discharge hydraulic fluid independently from the pump cylinders of each of said units to a high pressure hydraulic fluid receiver whereby a portion of the fuel-air combustion energy for moving the power pistons inboardly of one unit is transferred by said coupling means to move the power pistons of the other unit outboardly for compression in the fuel-air combustion chambers thereof and at least a portion of the balance of said energy is utilized to pump hydraulic fluid from said low pressure source to said high pressure receiver by said hydraulic pump pistons and hydraulic cylinders.

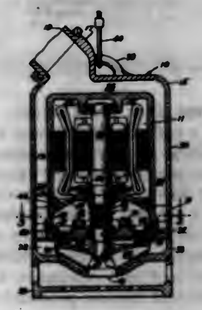
3,088,414
SELF-ADJUSTING CONTRA ROTATING AXIAL FLOW PUMPS AND TURBINES
Cahit Ozgur, Lachine, Quebec, Canada, assignor to Dominion Engineering Works Limited
Filed Oct. 7, 1960, Ser. No. 61,200
3 Claims. (Cl. 103—94)



1. A hydraulic pump-turbine having two coaxial propeller-type wheels of opposite hand, a shaft, spider means for supporting said wheels in operable position and means connecting said wheels for power transmission to said shaft and to each other and to said spider means, said connecting means comprising two simple planetary gear trains employing a common free planet carrier.

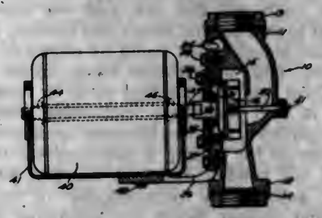
3,088,415
SUBMERSIBLE PUMP
John T. Culleton, Hayward, Calif., assignor to Pacific Pumping Company, Oakland, Calif., a corporation of California
Filed June 15, 1960, Ser. No. 36,226
1 Claim. (Cl. 103—103)

A self-sealing centrifugal pump, comprising in combination: a pump housing having a pumping chamber therein; an impeller mounted on a shaft within said pumping chamber and adapted to rotate in said impeller-chamber, said housing having an inlet, a fluid reservoir within said housing, located substantially adjacent said impeller-chamber and separated therefrom by a rigid wall member through which passes said impeller-shaft and filled with a substantially incompressible fluid, a sealing member mounted around said shaft within said fluid reservoir and seated within and engaging said rigid wall-member, said sealing member being responsive to fluid pressure in said reservoir to increase the sealing pressure around said shaft where it enters said rigid wall member from said impeller-chamber on an increase of pressure in said fluid seal reservoir, an annular flexible diaphragm means encircling said shaft and having inner and outer securing means to hold said diaphragm in a fixed position with its lower surface adjacent said rigid wall-member



and with its upper surface forming an inside-wall of said fluid reservoir, orifice means in said rigid wall member intermediate the inner and outer flexible diaphragm securing means to communicate pressure from the discharge of said impeller in said impeller-chamber through said orifice means to said lower surface of said flexible diaphragm to thereby exert pressure on said fluid in said reservoir whereby sealing pressure on said sealing member is increased, said impeller having pumping-vanes on one face facing the inlet to the impeller-chamber in said housing and being positioned to rotate in said impeller-chamber and having a back-face adjacent said rigid wall-member, and vanes smaller than said pumping-vanes on said back-face of said impeller, radially inwardly of said orifice means to create a low pressure chamber adjacent the impeller shaft.

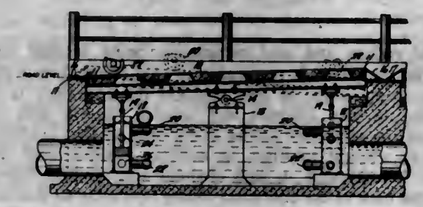
3,088,416
CENTRIFUGAL PUMP
Robert A. Danis, West Warwick, R.I., assignor to General Fittings Company, a corporation of Rhode Island
Filed July 21, 1961, Ser. No. 125,746
4 Claims. (Cl. 103—103)



1. In a pump having a housing having a removable face plate, a pumping means located within said housing, actuating means leading into said housing through said face plate and coupled to said pumping means, a first sealing means including a spring, said sealing means acting between said actuating means and said face plate

and carried by the face plate, secondary sealing means comprising a disk with a sealing face on the pumping means and a cooperating sealing face on the housing spaced from the face plate and both circumscribing the actuating means, said spring normally maintaining the faces of the secondary sealing means spaced and thus ineffective and rigid means to positively move said sealing faces together against the action of the spring to effect a seal between the housing and the pumping means whereby the face plate and first sealing means may be removed for replacement while maintaining fluid in the housing.

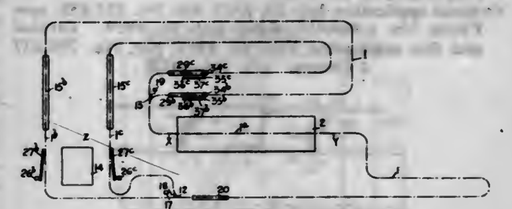
3,088,417
APPARATUS FOR PUMPING FLUIDS
Curtis D. Johnston, P.O. Box 9, Black River, Jamaica, West Indies
Filed Sept. 14, 1961, Ser. No. 138,147
3 Claims. (Cl. 103—208)



1. A pumping device for pumping liquid from one place to another in combination with a traffic lane of a roadway, said pumping device operable by the successively applied pressures of passing vehicles utilizing said roadway, said vehicles having longitudinally spaced wheels, support means mounted below said traffic lane, platform means having oppositely disposed ends and pivotally supported intermediate said ends on said supporting means to extend congruent with said traffic lane, with one said end flush with said roadway and the other said end raised thereabove; steel ramps hinged to each end of said platform means and extending slidably over adjacent portions of said traffic lane for forming alternate inclines up to the alternately raised ends of said platform means; friction plates mounted on said adjacent portions of said roadway for providing a smooth non-friction surface on which said steel ramps respectively slide; double acting reciprocating pump means for pumping fluid operably connected to one of said oppositely disposed ends, said pump having a reciprocating plunger mounted thereon and a pair of intake and delivery pipes on each of the opposite sides of said plunger for simultaneously effecting intake and delivery of liquid respectively on said opposite sides for movement in each direction of said plunger's reciprocation, whereby said vehicles passing from one said end to the other of said platform alternately applies weight to said ends to solely drive said platform, pivotally supported between said ends, to solely reciprocate up and down to drive said plunger of said double acting pump means in both directions of said plunger's reciprocation.

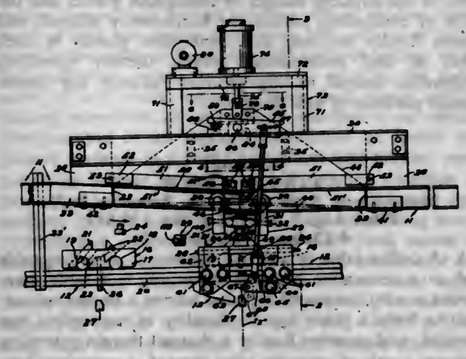
3,088,418
CONVEYOR SYSTEMS
Philip George Armitage, Gostrow, Brede, and Albert Edward Brookes, Bush Bank, Sockley, England; said Armitage assignor to Guinness Hop Farms Limited, London, England, and said Brookes assignor to Bruff Manufacturing Company Limited, Sockley, England
Filed Nov. 13, 1961, Ser. No. 151,978
Claims priority, application Great Britain Nov. 15, 1960
9 Claims. (Cl. 104—91)

1. A conveyor system for feeding hop bines or the like to a plucking machine, and comprising in combination with the plucking machine, an endless track which has a part extending through the interior of said plucking machine, and through a pair of openings formed respectively in opposite sides of the upper portion of said plucking machine, at least one other part extending, at a lower level than said openings, between the entrance and exit ends of a loading position spaced laterally from the lower portion of said plucking machine, upwardly and downwardly inclined parts between the exit end of said loading position and one end of the first mentioned part, and additional downwardly inclined parts between the other end of the first mentioned part and the entrance end of said loading position, a plurality of trolleys which are in engagement with, and movable along, said track, and from which the bines or the like can be suspended at said loading position, driving means associated with said plucking machine, and engageable with said trolleys for



moving them through said plucking machine to a position from which they can gravitate along the additional downwardly inclined parts of said track to the entrance end of said loading position, elevating means which are engageable with said trolleys at the exit end of said loading position, and through the medium of which said trolleys are movable up at least one of the first mentioned inclined parts of said track to a position from which said trolleys can gravitate to another position in which said trolleys are engageable by said driving means so as to be movable thereby through said plucking machine, releasable means for arresting movement of said trolleys at a position between said elevating means and said plucking machine, and additional releasable means for arresting movement of said trolleys at a position between said plucking machine and the entrance end of said loading position.

3,088,419
FLEXIBLE RAIL TYPE STOP AND RELEASE MECHANISM FOR OVERHEAD CONVEYOR
Leonard J. Bishop, Birmingham, Mich., assignor to Mechanical Handling Systems, Inc., Detroit, Mich., a corporation of Michigan
Filed Aug. 7, 1961, Ser. No. 129,696
13 Claims. (Cl. 104—172)



1. A track device for association with a track along which travel a series of pusher-propelling members hav-

ing pushers to engage and advance load units in a path paralleling the direction of the track and in transversely spaced relation thereto, said device comprising an elongated flexible track member along which said propelling members travel, said track member having longitudinally spaced means fixedly supporting the ends thereof and being capable of transverse flexing movement between said ends, said supporting means including means fixedly securing at least one of said ends to said track at a level of that track to constitute a continuation of the latter.

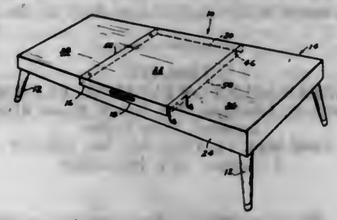
3,088,420
VEHICLE FLOOR CONSTRUCTION
Clyde B. Faverty, Glenview, Ill., and William R. Shaver, Hammond, Ind., assignors to Pullman Incorporated, a corporation of Delaware
Original application July 13, 1955, Ser. No. 521,858, now Patent No. 2,910,016, dated Oct. 27, 1959. Divided and this application Feb. 26, 1959, Ser. No. 795,637
4 Claims. (Cl. 105—422)



1. In a freight vehicle, underframe members having upper surfaces in a common plane, spaced apart stringers mounted transversely on said members, a nailable metal floor structure mounted on said stringers comprising a plurality of metal planks disposed in side by side abutting relation, each plank comprising an inverted generally channel-shaped section having a horizontal web forming the surface of the floor and supported between its side edges on one of said stringers and having flanges depending from said side edges, at least one of said flanges terminating in a free lower edge spaced above said plane of the underframe members, each flange of each plank being formed with a first substantially vertical portion connected by a curved portion with an intermediate sloping portion and by another curved portion to a second vertical portion offset in one direction relative to said first named vertical portion so that the adjacent flanges of contiguous planks are complemental to each other and said named flange of one plank overlies the adjacent flange of a contiguous plank, and embossment means spaced along the length of at least the intermediate sloping portion of one flange of each of said planks and having outer surfaces contoured so as to be complemental to and engage the adjacent flange of a contiguous plank, whereby said overlying flanges are supported by the underlying sloping portions of the adjacent flanges of contiguous planks and the webs of contiguous planks are horizontally aligned, and means fixedly securing said contiguous planks to each other at said embossment means, thereby providing lengthwise spaced nailing grooves between the unembossed portions of said flanges.

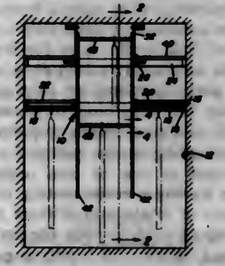
3,088,421
COFFEE TABLE
Lester Ferris, 2119 E. 17th St., Brooklyn, N.Y.
Filed Aug. 7, 1961, Ser. No. 129,612
4 Claims. (Cl. 108—13)

1. A coffee table or the like for use as a serving table and as a decorative piece of furniture, said table comprising a solid integrated member having a horizontal surface to form a table top, a plurality of supporting legs therefor, said member having a channel therein extending between a pair of opposite sides thereof, a container having a base and a plurality of said members, said container being adapted to be received in said channel and to be completely removed therefrom, spring loaded rollers secured in the sides of said channel, receptacles in opposing side members of said container for receiving said spring loaded rollers to hold the container firmly in place in the channel, said receptacles being provided with grooves for the spring loaded rollers so that said rollers do not mar the finish of the sides of the container as the container is slid laterally in and out of the channel, said spring



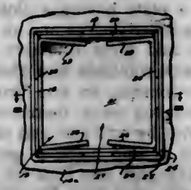
loaded rollers and said receptacles being located such that the container is receivable in said channel in a plurality of positions, in one position the container is receivable in said channel and secured therein with the base of the container facing downward so that container is in an upright position, in another position said container is receivable in said channel and secured therein with the base of the container facing upwardly so that said container covers said channel in said horizontal surface.

3,088,422
ADJUSTABLE POLE HANGER FOR CLOTHES
Oscar E. Kaeslin, 1444 SW. 27th Court, Fort Lauderdale, Fla.
Filed June 22, 1960, Ser. No. 38,010
11 Claims. (Cl. 108—29)



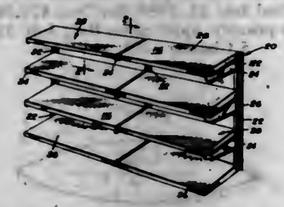
1. A combined hanger for clothes and a clothes closet comprising an assembly including a pair of vertical support members, means supporting the support member in the interior of the closet, a pair of vertically spaced poles disposed on said vertical support members for supporting two vertically superimposed rows of suspended garments, and means connecting the poles to the support members for vertical adjustment of the poles, the space between the poles and below the lower pole being free of obstructions for receiving the rows of garments, said means for supporting the vertical support members including a bracket including a horizontal member and an upwardly inclined member attached to the rear wall of the closet, a flange on the upper edge of each horizontal member of the bracket, and a shelf member supported from the flange, the rear of the horizontal support member including a laterally offset lug, and a cleat on said wall of the closet for engagement by the lug and forming a ledge for supporting the remainder of the shelf.

3,088,423
LEG STRUCTURE FOR PALLET
Larry J. Budd, Elmhurst, Ill., assignor to Pallet Devices Incorporated, Des Plaines, Ill., a corporation of Illinois
Filed May 29, 1961, Ser. No. 113,490
15 Claims. (Cl. 108—53)



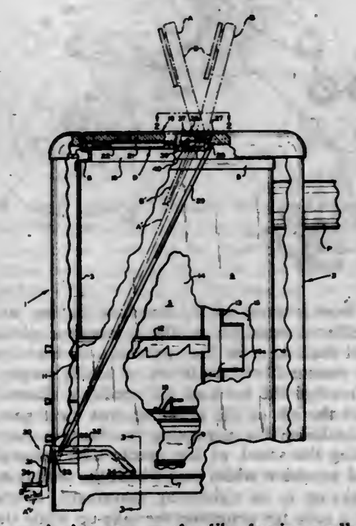
1. A load supporting pallet embodying therein, a load engageable member of corrugated paperboard material, a plurality of spaced apart rectangularly shaped corrugated pillars secured to said load engageable member, each pillar including an outer tubular element of corrugated paperboard material and an inner member of corrugated paperboard material, which clampingly engage inturned portions of said load supporting member, the inner member having a closure insert panel joined integral in one piece therewith and disposed in an opening in said load engageable member from which said inturned portions are turned and which panel provides a closure to prevent goods from falling through the leg openings.

3,088,424
SHELVING STRUCTURE
Harvey G. Knuth, Elgin, Ill., assignor to Lyon Metal Products, Incorporated, Aurora, Ill., a corporation of Illinois
Filed Jan. 13, 1961, Ser. No. 82,573
24 Claims. (Cl. 108—108)



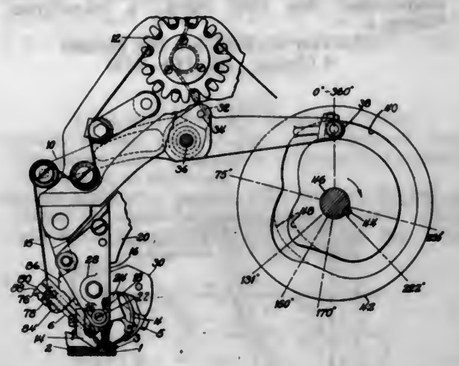
1. A shelving structure comprising first and second upright standards spaced apart and each having a vertically arranged series of spaced holes therein, first and second shelf support brackets respectively on said first and second standards with the longitudinal axes thereof disposed substantially horizontally and parallel to each other, each of said brackets including an elongated body, a mounting portion on one end of said body and having an aperture therein in alignment with one of said holes, a shelf support flange on the upper edge of said body and extending substantially the entire length thereof, a first shelf positioning flange on the other end of said body and extending upwardly therefrom and above said shelf support flange, a second shelf positioning flange on said one end of said body and extending upwardly therefrom and above said shelf support flange, studs in the aligned holes and apertures of said standards and said mounting portions for mounting said brackets on said standards, and a shelf having a downturned flange thereon and mounted on said brackets with said shelf support flanges supporting the lower edge of said downturned flange and said first and second shelf positioning flanges engaging within said downturned flange for fixedly positioning said shelf in a direction parallel to the longitudinal axes of said brackets, whereby said shelf is supported in cantilever fashion to permit free access thereto completely around the front and ends thereof.

3,088,425
DOOR OPERATING MECHANISM
Phillip G. La Rue, Bay City, Mich., assignor to Calcinator Corporation, Bay City, Mich., a corporation of Michigan
Filed July 10, 1959, Ser. No. 826,365
4 Claims. (Cl. 110—178)



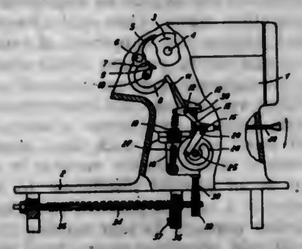
1. In an incinerator or the like having walls defining a chamber for the reception of combustible materials, a charging opening in one of said walls through which materials may be introduced to said chamber, a closure member, and means mounting said closure member for movements from and to a position in which it closes said charging opening, and to and from an open position wherein said door is passed beyond a vertical plane passing through the axis of the mounting means: operating means; means mounting said operating means for movements from a first position to a second position and return; crank means; means pivotally interconnecting said operating means and said crank means; and means connecting said crank means to said closure member for movement therewith and at such an angular relation with said interconnecting means when said closure member is in its closed position that movement of said operating means toward said second position effects relative movement of said interconnecting means and said crank means in such directions as to dispose said interconnecting means and said crank means in dead center relation, the movement of said crank means to such dead center relation causing movement of said closure member in an opening direction but in an amount insufficient to locate said closure member in a vertical position, said closure member being further movable in said opening direction independently of said operating means to a second open position inclined past the vertical, said connecting means between said closure member and said crank means effecting relative movement of said crank means and said interconnecting means to positions beyond dead center during such further movement, said operating means being capable of further movement toward said second position when said closure member is in said second position to effect relative movement of said crank means and said interconnecting means in directions such that said closure member is moved toward its closed position.

3,088,426
SHOE INSEAM SEWING MACHINES
Lloyd G. Miller, Beverly, Mass., assignor to United Shoe Machinery Corporation, Boston, Mass., a corporation of New Jersey
Filed June 14, 1961, Ser. No. 117,057
6 Claims. (Cl. 112—58)



1. A shoe inseam sewing machine having a curved hook needle mounted for oscillation about a substantially horizontal shaft to enter the upper of a shoe and to penetrate the sewing rib of an insole, a needle looper acting to lay thread in the hook of the needle, a channel guide to support the rib of the insole against the thrust of the needle, a take-up for tightening the loop in each stitch surrounding the shank of the needle while engaging the work, and a tension wheel past which the thread is drawn by the take-up in its tightening movement, in combination with a cam for actuating the take-up while the looper is laying thread in the needle hook to give up thread faster than required by the looper before the threaded needle hook is retracted, thereby preventing deflection of the needle during the action of the looper in laying thread in the hook of the needle.

3,088,427
STITCH REGULATING DEVICE
Raffaello Bruscaglioni, Milan, Italy, assignor to Filotecnica Salmoiraghi S.p.A., Milan, Italy, a firm
Filed Mar. 31, 1960, Ser. No. 18,923
Claims priority, application Italy Apr. 7, 1959
4 Claims. (Cl. 112—210)



1. A device for controlling the stitch length in sewing machines comprising in combination with a base plate, an upright supported on said base plate, and a movement control shaft carried by said base plate and extending parallel to said base plate for controlling the feed mechanism, a journal carried by said upright, a finger key pivoted on said journal and having an extension and a hooked finger, a rotary cam supported in said upright and engaging said finger key, another journal supported rotatably in said upright and extending parallel to the first-mentioned journal, an elongated fork supported rotatably at one end on said other journal, said fork having lugs at its other end, a shaft supported rotatably in the lugs on said fork and extending parallel to said other journal, a lever firmly connected at one end to the last-mentioned shaft, the other end of said lever engaging said hooked finger, a key firmly connected to the last-mentioned shaft, a plate having a slot formed therein, said slot having an inner surface and an external surface, means supporting said plate rotatably on said upright whereby said plate is rotatable in a plane normal to the axis of said other journal, an arm firmly connected to said fork and extending away therefrom alongside said plate, a roller carried by said arm and engaging the inner surface of the slot in said plate, a spring connected to said upright and engaging said fork for maintaining said roller in engagement with said inner surface, a rotary eccentric supported in said upright alongside said finger key extension and in a position whereby said eccentric may be moved into engagement with said extension for moving said finger key out of engagement with said cam, a rod supported slidably in said upright and extending normal to said base plate, a rack firmly connected to one end of said rod, said rod at its other end engaging said key, a gear carried by said movement control shaft and engaging said rack, resilient means connected to said movement control shaft and acting to urge said movement control shaft into rotation for maintaining said rod in engagement with said key, a control knob, means connecting said control knob with said plate for rotating said plate to a predetermined position designating a selected stitch length for providing that when said cam is rotated, said key oscillates causing said rod to slide whereby said movement control shaft rotates a distance equal to the preselected stitch length.

3,088,428
SAIL-BOAT
Marcello Majnoni, 10 Via Monte Bianco, Milan, Italy
Filed July 21, 1959, Ser. No. 828,502
Claims priority, application Italy July 22, 1958
5 Claims. (Cl. 114—61)

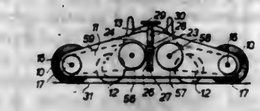


1. In a sailboat, a hull having a bow and a longitudinal vertical plane of symmetry, said hull of such shape that when the boat is tilted by wind to one side of said plane through a predetermined angle a first submerged portion is formed and when the boat is tilted by wind to the other side of said plane through the same predetermined angle a second submerged portion is formed, said first and second submerged hull portions of equal shape, each having a substantially straight keel line pointing toward the bow of the hull, and each substantially symmetrical with respect to its keel line, each submerged keel line defining a windward direction of travel for said boat.

3,088,429
CLEANING DEVICES FOR REMOVING MARINE GROWTH FROM SHIPS' HULLS
Harry de Fine Brandt Johannessen, 3 Torgalmenning, Bergen, Norway
Filed June 28, 1961, Ser. No. 120,307
7 Claims. (Cl. 114—222)

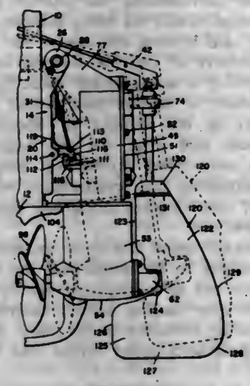
1. A device for removing marine growth from ships' hulls comprising an outer frame having end portions, rotatable roller brushes mounted at the end portions of

said outer frame, an inner frame which is displaceable towards and away from the outer frame, magnetic driving rollers carried by said inner frame, a power source supported by said inner frame, means associated with said power source for imparting a rotary movement to



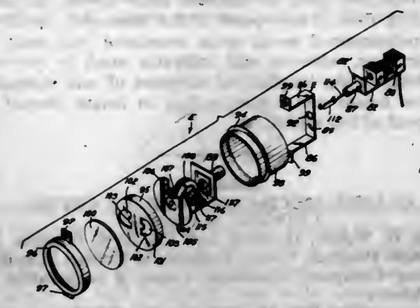
the brushes and to the magnetic rollers, and spring means between the inner and outer frames which causes the brushes to be urged yieldingly into contact with the ship's hull while permitting the device to adjust itself automatically to follow the contour of the hull.

3,088,430
TILTING TRANSOM DRIVE MECHANISM
Ralph P. Champney, Roscommon, Mich.; Carl C. Matheny, executor of said Ralph P. Champney, deceased
Filed Mar. 23, 1959, Ser. No. 801,045
12 Claims. (Cl. 115—41)



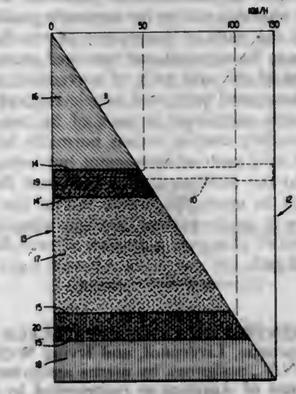
1. A tilting transom drive mechanism for inboard boat motors comprising a mounting plate adapted to be secured to the outer face of a boat transom, an elongate vertically disposed housing, means pivotally suspending the housing at its top end from said plate for rearward swinging, a first drive shaft extending through and rotatably mounted on said plate, a second drive shaft rotatably mounted in the top of the housing, a propeller shaft rotatably supported in the lower part of said housing in parallel relation with the second shaft, said second drive shaft and said propeller shaft having a permanently fixed spaced relationship with one another, a propeller mounted on the forward end of the propeller mounted on the forward end of the propeller shaft, a drive chain in the housing between, and operatively connecting said second shaft and the propeller shaft having an installed pre-stressed condition maintained by the fixed relationship of the second drive and propellor shafts whereby wear, stretch and outbowing of the flights of the chain are substantially eliminated, a clutch means between the first and second shafts adapted to disconnect upon the swinging of the housing away from said plate, and a rudder mounted upon the rear of the housing.

3,088,431
DEVICE FOR INDICATING WHEEL POSITIONS AT THE DASHBOARD OF AN AUTOMOBILE
Martin Brownshield, 16 S. Broadway, Dobbs Ferry, N.Y.
Filed Aug. 17, 1960, Ser. No. 50,157
2 Claims. (Cl. 116—31)



1. A wheel position indicator for installation upon the dashboard of an automotive vehicle of the type having a cable connection from the tie rod to the indicator, said installation comprising an indicator disk member showing the position of the wheel, an intermediate rotary member to rotate said disk member with movement of the cable and spring members to bias said disk and rotary member to central wheel position, said disk member and rotary having horizontal axes positioned in the same horizontal plane, said indicator disk member having a rearwardly projecting arm, and said axis of the intermediate rotary member being transverse to the axis of said indicator disk member, and means actuated by said cable to rotate the indicator disk member from side to side as the wheels are turned.

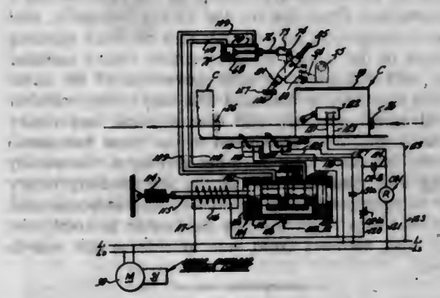
3,088,432
MEASURING DEVICE, ESPECIALLY SPEED INDICATOR FOR MOTOR VEHICLES
Friedrich K. H. Nallinger, Stuttgart, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Untertürkheim, Germany
Filed Oct. 17, 1960, Ser. No. 63,944
Claims priority, application Germany Oct. 20, 1959
10 Claims. (Cl. 116—116)



1. A measuring device, especially speed indicator for motor vehicles, having elongated window means and indicator means forming an indicator line having an end forming an indicator mark thereof, said indicator means forming said indicator line being subdivided into a plurality of indicator zones of different color corresponding to different predetermined speed ranges and into at least

one transitional indicator zone located between adjoining indicator zones corresponding to the respective different predetermined speed ranges, each transitional indicator zone being substantially smaller than adjoining indicator zones corresponding to respective speed ranges, each indicator zone of different color having its color extending from a zero point of the measuring device to the predetermined speed range associated with each indicator zone, whereby said indicator mark is movable effectively in the longitudinal direction of said elongated window means and corresponding in length thereof to the speed of the vehicle.

3,088,433
GLUING MECHANISM FOR A CARTON CLOSING MACHINE
Joseph H. Walter, Haddam, and Curtiss S. Johnson, Jr., Middle Haddam, Conn., assignors to Emhart Manufacturing Company, Hartford, Conn., a corporation of Delaware
Filed Feb. 16, 1960, Ser. No. 9,009
7 Claims. (Cl. 118—1)



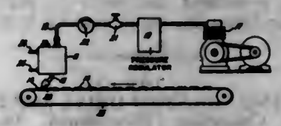
1. Gluing mechanism for a case closing machine which handles a succession of moving cases each having at least one flap disposed for the application of glue thereto, said mechanism comprising a glue applicator nozzle connectible with a source of glue under pressure and which nozzle includes a valve which permits glue to flow therefrom only when the nozzle is engaged by a flap of a moving case, movable means for supporting said nozzle in a position in the path of movement of the flaps of the moving cases to be engaged and operated thereby and in a position out of the said path of movement, and means operatively associated with said nozzle support means to place the nozzle selectively in each of its two said positions and including control means normally holding said nozzle in the said path of movement but being operable in response to the movement of a case past the location of said nozzle to move the nozzle out of the said path and to return it to its normal position whereby to skip the application of glue over a portion of each flap moving along the said path.

3,088,434
PRINTED CIRCUIT APPARATUS
Carlton L. Sprague, Liverpool, and Irving William Wolf, Syracuse, N.Y., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Army
Filed May 2, 1955, Ser. No. 505,264
1 Claim. (Cl. 118—410)

An apparatus for dispensing printed circuit inks onto backing members to produce printed circuit elements having similar electrical characteristics and to maintain any variations in the electrical characteristics of said elements within acceptable tolerance range comprising:

(*a*) a container for said printed circuit inks having an outlet orifice disposable adjacent the surface of said backing members to be inked with the opening of the orifice substantially perpendicular to the backing members, and a fluid tight opening for replenishing the supply of ink contained therein, said outlet orifice having a cross section similar in size and shape to the cross section of said printed circuit elements;

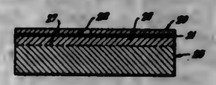
(*b*) a high pressure air system operatively connected to said container for subjecting said printed circuit ink within said container to a desired pressure, wherein said high pressure system is preset to operate within the range of about twenty to thirty pounds per square inch gage, said high pressure air system including an air pressure regulating device for controlling the pressure applied to the ink within said container;



(*c*) a heating coil means comprising a plurality of interconnected conduits formed in the sides of said container surrounding the interior portion thereof, said printed circuit ink being disposed in said interior portion, said heating coil means for maintaining the flow property of the ink flowing out through said outlet orifice at an optimum value by controlling the temperature of said printed circuit ink within said container in the vicinity of about thirty degrees centigrade, and after the ink begins to flow out through said outlet orifice said heating coil means for maintaining the temperature within about one tenth of one degree centigrade for said optimum value flow; and

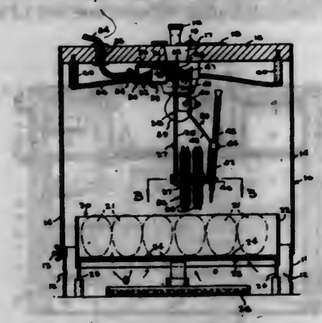
(*d*) a constant speed conveyor for moving said backing members to be inked past the outlet orifice in said container at a constant velocity, the surface of said conveyor having detents thereon for retaining the backing members to be inked as the same are moved past said outlet orifice and ink is deposited thereon.

3,088,435
MASKING DEVICE USEFUL FOR MAKING TRANSISTORS
Elmer A. Wolff, Jr., Richardson, Tex., assignor to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware
Filed Oct. 20, 1959, Ser. No. 847,516
2 Claims. (Cl. 118—504)



1. A mask for use in the fabrication of a semiconductor device comprising a thin metal plate defining an opening and a thin carbon film having a thickness much less than that of said plate on at least one surface of said plate to prevent bonding of said plate wtih a body of semiconductor material when the two are placed in intimate contact and brought to an elevated temperature, said plate having a thickness which is small relative to the thickness of the body of semiconductor material.

3,088,436
DISPLAY INCUBATOR AND BROODER
James Lyon, P.O. Box 6534, San Diego, Calif.
Filed Apr. 16, 1962, Ser. No. 187,744
3 Claims. (Cl. 119—37)



1. A display incubator and brooder comprising a circular rim having a plurality of spaced apart apertures therein, securing elements connected to said rim, a transparent cylindrical wall member extending upwardly from said rim and said wall member having its lower portion engaging said securing elements, a horizontally disposed support member mounted in the upper portion of said wall member, a handle connected to said support member, there being a centrally disposed opening in said support member, a vent cover pivotally connected to said support member and said vent cover being mounted for movement into and out of open and closed position with respect to said opening in the support member; a tray arranged below said support member for holding a plurality of eggs therein, a pan of water arranged below said tray, a bracket arranged below said support member and said bracket including a vertically disposed first portion, a horizontally disposed second portion, and a vertically disposed third portion; a thermostat connected to the lower end of the first portion of the bracket, a support element connected to the first portion of the bracket, an arm pivotally connected to said support element, an adjustable screw member extending through the lower end of the arm for coaction and engagement with the thermostat, a holder connected to the lower portion of said arm, a thermometer supported by said holder; a manually operable control mechanism comprising a switch unit which is movably mounted below the second portion of the bracket, said switch unit including an externally threaded fitting, there being an opening in the first portion of said bracket for the projection therethrough of said fitting, a contact extending from said fitting for selective engagement by the upper end of the arm, a manually operable adjustable wheel arranged in engagement with said fitting, and said wheel being adapted to be engaged by a finger inserted through the opening in the support member, and an electrical circuit including input wires and a pilot light and display light and heating element.

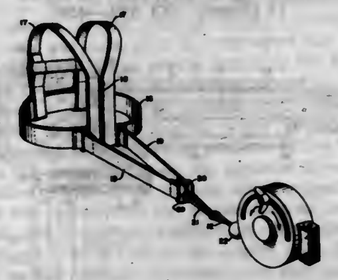
3,088,437
LIVESTOCK FEEDING DEVICE
Donald J. Willems, Omaha, Nebr., assignor, by mesne assignments, to Armour and Company, Chicago, Ill., a corporation of Delaware
Filed Mar. 7, 1960, Ser. 13,007
3 Claims. (Cl. 119—56)

1. A livestock feeding device comprising a feed storage receptacle formed by side walls and ends and having a bottom opening, a frame attached to said receptacle serving to suspend such receptacle above ground level, a divided feed bunk positioned below said receptacle to thereby receive feed material passing out of said receptacle, an exit valve assembly positioned within the bottom opening of said receptacle, operating means on the assembly for rotating said valve assembly and for reversing the rotation of said valve assembly, said valve assembly comprising a hollow rotatable cylinder having a side wall and closed ends and coextensive with the length of said bottom opening, said cylinder having an



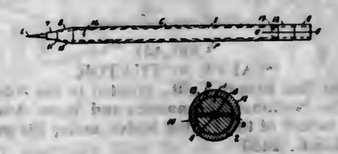
elongated slot extending lengthwise substantially the entire length of said cylinder, said slot formed by two blade edges, the circumference of the circle of rotation of said cylinder cutting through the plane formed by the bottom periphery of said receptacle side walls and ends, said blade edges being adaptable for cutting through feed material contained in said receptacle.

3,088,438
CHILD RESTRAINER AND HARNESS
Virginia W. Oliphant, 4816 W St., Washington, D.C.
Filed Sept. 5, 1961, Ser. No. 136,044
2 Claims. (Cl. 119—96)



1. A child's restraining device, comprising in combination; a restraining element, a flexible element and a reel, the restraining element consisting of a waist strap open at the back, two shoulder straps, connecting means attaching these shoulder straps and a belt together out of reach of the child, a pair of lead straps with terminal portions having one end attached to the waist strap and the other end attached to the flexible element, and means to retain the flexible element under tension, comprising a spring biased reel, said reel being mounted on a stationary object.

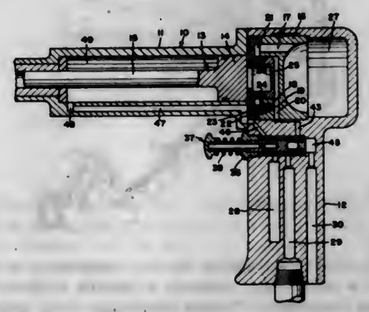
3,088,439
PENCILS
Ernest D. Van Dernal, 2617 Tichner Drive, Portland, Oreg.
Filed Nov. 13, 1961, Ser. No. 152,966
5 Claims. (Cl. 120—19)



1. A pencil having in combination an elongated transparent hollow casing having an interior oval cross section; a head cap joined to one end of said casing and having a tapered bore therethrough of oval cross section; a lead; a

lead confining unit manually retractable within the casing having a tapered end portion adapted to engage the tapered bore of the head cap and project therethrough, said unit including a pair of spaced apart elongated members semi-circular in cross section arranged with their flat faces adjacent to each other said flat faces being provided with oppositely disposed semi-circular grooves in which the lead is slidable endwise; means positioned at one end and between the flat faces of the lead-confining members to hold them in spaced apart relation to provide the unit with an oval cross section; a slide having a spline moveable between the spaced apart members of the unit and adapted to engage lead within the unit; and means adjacent the open end of the unit and projecting outwardly therefrom to provide said end of said unit with an outside diameter greater than the shorter inside diameter of the casing oval interior and lesser than the longer diameter thereof whereby said unit is freely shiftable in said casing when said means extends along said longer diameter but is frictionally gripped in said casing when rotated therein to move said means from along the longer diameter toward said lesser diameter.

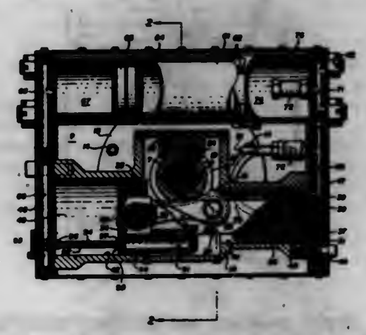
3,088,440
IMPACT TOOLS
Richard K. Wilmer, Mohegan Lake, N.Y., assignor to Ingersoll-Rand Company, New York, N.Y., a corporation of New Jersey
Filed Aug. 1, 1960, Ser. No. 46,433
12 Claims. (Cl. 122—456)



1. An impact tool comprising a barrel, means fixedly secured in the barrel forming a reservoir in the barrel, a valve element movably mounted in the barrel, a handle secured to the barrel, a control valve movably mounted in the handle, a rod having one end secured to the control valve and having its other end projecting beyond the front end of the barrel, a safety device movably mounted in the handle and in one position locking the control valve against movement, and upon movement to a second position unlocking said control valve so as to allow movement of said control valve upon pushing the rod toward the handle to cause the valve element to move and allow fluid under pressure from the reservoir to rush in behind the piston and drive the piston toward the front end of the barrel.

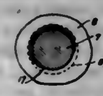
3,088,441
VALVE ACTUATOR
Ray Bacchi, San Bruno, Calif., granted to the Administrator of the National Aeronautics and Space Administration on behalf of the United States, under the provisions of 42 U.S.C. 2457
Filed July 11, 1960, Ser. No. 42,022
3 Claims. (Cl. 121—38)

1. A valve actuator comprising a base plate, a hub on said base plate, a valve stem journalled in said hub, a lever on said valve stem, a pair of aligned cylinders, means connecting said cylinders to said base plate, a pair of connected pistons reciprocable in said cylinders, a link connecting said pistons and said lever, a tube, a free piston reciprocable in said tube, means for closing the opposite ends of said cylinders and of said tube, first means for establishing communication between one end of said tube



and one of said cylinders, second means for establishing free communication between the other end of said tube and the other of said cylinders, means for subjecting said second means to pressure fluid, and means for restricting said communication through said first means in accordance with the position of said valve stem relative to said base plate.

3,088,442
METALLIC SHAFT SEAL
Richard E. Self, Los Alamitos, and Arthur R. Allan, Glendora, Calif., assignors to Thompson Ramo Wooldridge Inc., Cleveland, Ohio, a corporation of Ohio
Filed Jan. 6, 1961, Ser. No. 81,132
13 Claims. (Cl. 121—38)

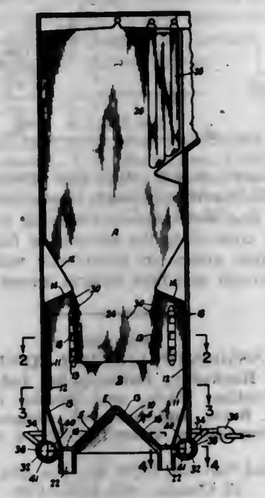


1. A linear servomechanism actuator unit comprising: an actuator housing; a reciprocable piston shaft in said housing cooperating therewith to define at least two pressurizable compartments; and at least one piston shaft receiving member closing an end of said housing, said member normally contacting said piston shaft to prevent introduction of foreign matter along said piston shaft into said housing, said member being operatively responsive to pressure forces in said housing to rock from contact with said shaft to thereby permit reciprocating movement of said shaft.

3,088,443
CYCLONE TYPE FURNACE AND METHOD OF OPERATION
Wilbur H. Armacost, Scarsdale, N.Y., assignor to Combustion Engineering, Inc., New York, N.Y., a corporation of Delaware
Filed Mar. 24, 1958, Ser. No. 723,579
3 Claims. (Cl. 122—235)

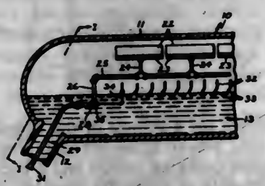
1. In a water cooled upright cyclone type slagging furnace chamber having a roof, a centrally located axial gas outlet duct suspended from said roof, a bottom comprising a peripheral zone and a central zone, and a substantially upright peripheral side wall adjoining said peripheral zone, burners in said side wall for producing a rotating mass of burning gases within said chamber, said gases having a rising temperature characteristic with the temperature rising from the central zone of said chamber

to the peripheral zone thereof, a centrally raised portion included in said central zone bottom, said portion having a downwardly sloping side to meet said side wall adjacent the periphery of said chamber, a slag outlet in said peripheral bottom zone adjacent said upright side wall,



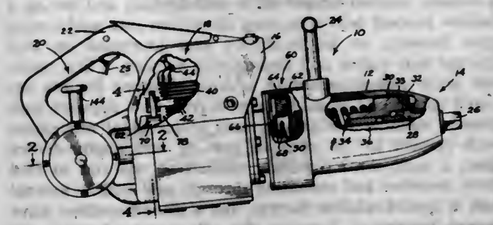
and means for passing cooling water first through said centrally raised portion in flow paths directed radially from said periphery to said portion and back to said periphery and thence through said side wall and said roof.

3,088,444
STEAM GENERATING UNIT
Wilmer R. Taggert, Boylston, Mass., assignor to Riley Stoker Corporation, Worcester, Mass., a corporation of Massachusetts
Filed Apr. 19, 1960, Ser. No. 23,296
1 Claim. (Cl. 122—459)



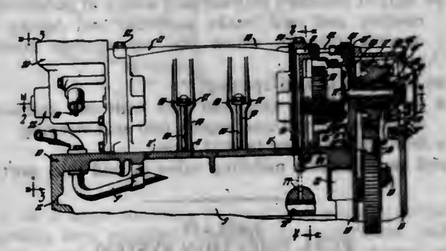
A steam generating unit, comprising a steam-and-water drum adapted to contain a body of water, steam release tubes entering the drum, a steam outlet tube leaving the drum, a downcomer tube leaving a lower part of the drum, a passage leading from the steam release tubes to the steam outlet tube, a feed water pipe entering the steam-and-water drum, a series of condensers connected to the feed water pipe and lying in the said passage for treating steam passing thereover, a series of steam drying devices lying in the passage between the condensers and the steam outlet tube, a feed water supply entering the drum through the feed water pipe and through the condensers, a trough underlying the steam drying devices, a closed tubular conduit extending downwardly from the trough to remove water therefrom, an aspirator in the conduit, at least one of the condensers being connected to the aspirator to cause a portion of the feed water to pass through the aspirator, the other condensers discharging directly into the body of water, and means forming a restriction in each of the said other condensers for controlling the flow of feed water therethrough into the body of water and for producing adequate ejection in the aspirator.

3,088,445
PORTABLE, REVERSIBLY OPERATED, POWER-DRIVEN TOOL
Harold R. Gardner, 1551 S. Toutle Road, Toutle, Wash.
Filed Apr. 11, 1960, Ser. No. 21,207
6 Claims. (Cl. 123—41)



1. An internal combustion engine, and a firing system for the engine operable automatically to produce an ignition spark for the engine at proper time for firing with the engine running in either of opposite directions, said firing system comprising a spark-producing device, a magneto including a rotor portion connected to the engine to be driven thereby, a stator portion, coil means mounted on one of said portions and connected to said spark-producing device, magnet means mounted on the other of said portions, and an interrupter for activating the coil means including means actuating the interrupter connected to the engine, said means actuating the interrupter being constructed to activate said coil means at one position of the rotor portion when the engine is run in one direction and at another position of the rotor portin when the engine is run in the opposite direction, said one position of the rotor portion being proper time for firing of the engine with the engine running in said one direction and the other position of the rotor portion being proper time for firing the engine with the engine running in the opposite direction, said coil and magnet means being constructed to produce voltage peaks in said magnets at each of these positions of the rotor portion.

3,088,446
COMBINED ENGINE ACCESSORY DRIVE AND HOUSING THEREFOR
William R. Fox, Wayne, and Harvey G. Humphries, Birmingham, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Jan. 12, 1960, Ser. No. 2,057
19 Claims. (Cl. 123—55)



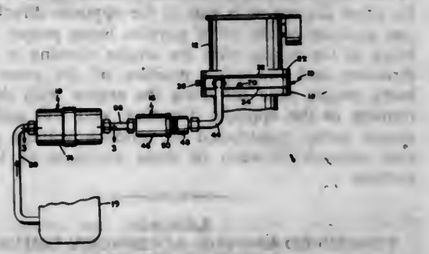
1. An accessory drive for an internal combustion engine comprising a positive displacement blower including two counterrotating impellers of substantial rotational inertial mass, centrifugal governor means drivingly connected to one end of one of said impellers and of limited rotational inertial mass relative to that of said impellers

and particularly susceptible to variations in its driven speed, fuel circulating means of limited rotational inertial mass drivingly connected to the adjacent end of the other of said impellers, blower timing gear means associated with the opposite ends of said impellers to synchronously drive said impellers in phased relation to each other, an engine timing gear housing mountable at one end of the engine in closely spaced relation to the drive gear end of said blower, said timing gear housing having an opening therein in axial alignment with one of said blower gears, a closure member supported in said opening and having a hollow journal hub projecting therefrom into said timing gear housing, an engine-driven gear journaled on said journal hub within said timing gear housing, a first resilient drive means including a drive member flexibly secured to the end of said engine-driven gear opposite said closure member for angular and longitudinal movement with respect to the rotative axis of said engine-driven gear, a quill shaft drivingly splined at one end to said drive member and extending through said hollow journal hub in spaced relation thereto, and a second resilient drive means interposed between the other end of said quill shaft and said one blower gear and operable to isolate torsional fluctuations applied to said engine-driven gear from said blower, governor and fuel circulating means.

3,088,447
CONTROL FOR AUTOMOTIVE EXHAUST AIR POLLUTION

Ray A. Henderson, San Diego, Calif., assignor of five percent to Alvin H. Tutt, Chula Vista, Calif., five percent to Cletus L. Kathol, San Diego, Calif., five percent to John L. Neill, San Diego, Calif., and twenty percent to James A. Willott, Chula Vista, Calif.

Filed Dec. 5, 1961, Ser. No. 157,159
6 Claims. (Cl. 123—119)



1. In combination with an internal combustion engine having a crankcase, a source of combustible mixture and an intake manifold to supply the mixture to the engine; means for reducing the air pollutant products of the engine, comprising:

an adapter mounted between said source of combustible mixture and said intake manifold and having an opening through which the combustible mixture passes;

an inlet port in said opening;

a pipe connecting said inlet port with said crankcase to conduct crankcase vapors into said opening;

a flow control valve in said pipe;

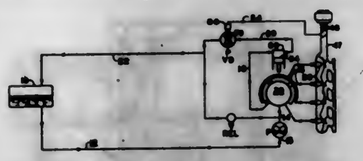
and an adjustable metering valve in said inlet port.

3,088,448
FUEL INJECTION SYSTEM

Maurice C. Fleming, 1013 23rd St. W., Bradenton, Fla.

Filed Jan. 21, 1959, Ser. No. 792,245
12 Claims. (Cl. 123—140)

1. In a fuel supply system having a fuel reservoir tank with supply and return lines connected thereto, a device for metering the amount of fuel delivered to a combustion engine comprising a fuel distributor connected to said supply line, said distributor having first and second outlet ports, movable means within said distributor for proportionately controlling the amount of fuel delivered to said first and second outlet ports, supply means connecting said first port to said combustion engine, flow control

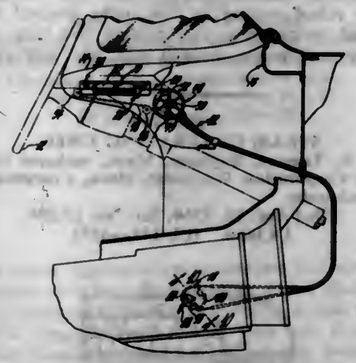


means connected in said return line between said second port and said reservoir, pressure responsive means within said return line and connected to said movable means for variably controlling the amount of fuel delivered to the combustion engine in accordance with the rate of fuel flow through said flow control means.

3,088,449
TRANSMISSION SHIFTER CONTROLS

Beverly G. Hockaday, Indianapolis, Ind., Francis H. Grady, Pontiac, Mich., and Brooks H. Short and Charles E. Bates, Anderson, Ind., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Nov. 20, 1959, Ser. No. 854,378
18 Claims. (Cl. 123—179)



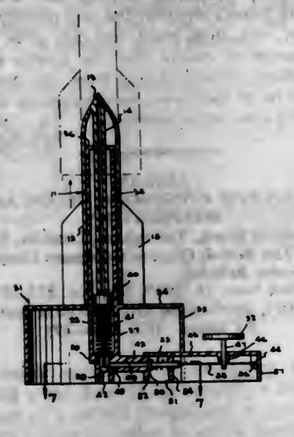
11. In a control for a vehicle of the character having a transmission and plural accessory operating circuits including an engine cranking circuit and a backup light circuit, the combination of manually operable control means comprising a bracket, a manual shifter member, and a carriage for the manual shifter member, the bracket being provided with a guide track and a guide slot, the carriage having revolvably mounted thereon a roller element adapted to traverse the guide track so as to permit the manual shifter member to be maneuvered along the guide track to a plurality of transmission settings including Neutral, Reverse, and Park settings, the manual shifter member being arranged so as to be maneuverable relative to the carriage and into and out of engagement with the guide slot, means biasing the manual shifter member into engagement with the guide slot, transmission control means comprising a transmission shifter member arranged so as to condition the transmission for different operating statuses each corresponding to a transmission setting of the manual shifter member, pulley means for transferring movements between the manually operable control means and the transmission control means, the pulley means including input and output cable structures coacting respectively with the manually operable and the transmission

control means, a pulley member common to both structures for transferring drive therebetween, inhibiting means including a stop on the bracket for preventing movement of the manual shifter member to the Park setting until the manual shifter member is maneuvered relative to the carriage and out of engagement with the guide slot, and a switch carried by the pulley member and arranged so as to render the back-up light and the engine starting motor circuits effective respectively in the Reverse and Neutral settings of the manual shifter member.

3,088,450
TOY ROCKET AND LAUNCHER

Robert L. Clay, Santa Ana, Calif. (510 W. Walnut St., Decatur, Tex.)

Filed Feb. 17, 1961, Ser. No. 89,962
1 Claim. (Cl. 124—26)

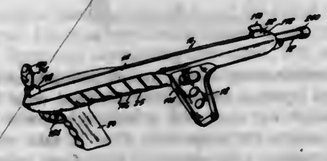


A projectile toy of the character described comprising a base, an upstanding sleeve rigidly secured on said base perpendicularly thereto, a tubular extension depending from said base in axial alignment with said sleeve, a toy projectile having a hollow elongated main body portion slidably engageable over said sleeve and having an axially extending inner propulsion rod receivable inside said sleeve, a first coiled spring mounted in said tubular extension, a plunger member movably disposed in said sleeve and engaging the top end of said coiled spring, said plunger member being engageable with the end of said propulsion rod to deliver propulsive force thereto, an axially extending tension member connected to said plunger member and being movable downwardly with the plunger member when the spring is compressed, said tension member being provided with a downwardly tapering conical detent head, a latch member slidably mounted in said base perpendicular to said plunger member and being lockingly engageable with said detent head when the coiled spring is stressed to store propulsion energy therein, a second coiled spring surrounding said latch member and bearing between the latch member and said base and biasing said latch member toward locking position, a flexible horizontal tension member connecting said latch member to the base and opposing the force of said second coiled spring, a release shaft member mounted vertically and slidably on the base and projecting above the base so that it can be manually depressed, and means connecting said release shaft member to the intermediate portion of said flexible tension member, said release shaft member being downwardly movable to deflect the intermediate portion of said flexible tension member sufficiently to retract said latch member from locking position and to release the plunger member.

3,088,451
TRICK SHOT GUN

Ralph M. Crosby and Abdenoor Kander, Los Angeles, and Robert J. Mortonson, Los Alamitos, Calif., assignors to Ideal Toy Corporation, Hollis, N.Y.

Filed Feb. 1, 1961, Ser. No. 86,355
5 Claims. (Cl. 124—27)

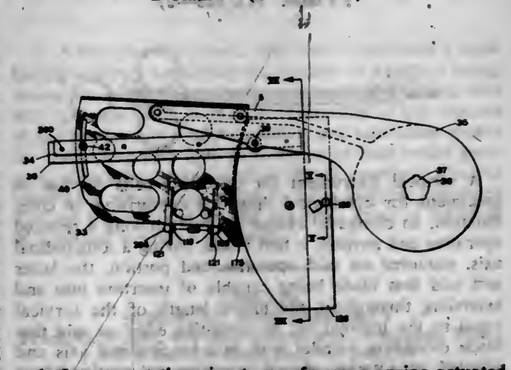


5. A toy gun comprising an elongated breech portion, a barrel extending forwardly of said breech portion, a firing mechanism in said gun, a hand grip at the rear of said gun depending from said breech portion for supporting the gun when rested on the user's shoulder and pointed rearwardly, trigger means within said hand grip, a rear sight on the rear part of said breech portion, said sight having a mirrored front surface, said rear sight having slots formed therein forming cross hairs, and a front sight on the front end of said gun for alignment with said slots so that said front sight can be viewed through said slots and can be centered on the cross hairs found by said slots by viewing said mirrored surface.

3,088,452
TARGET THROWING APPARATUS

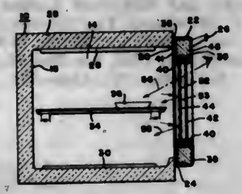
Harry Clark Foster, East Alton, Ill., assignor to Olin Mathieson Chemical Corporation, East Alton, Ill., a corporation of Virginia

Original application June 12, 1958, Ser. No. 741,571. Divided and this application Aug. 15, 1960, Ser. No. 61,793
2 Claims. (Cl. 124—43)



1. In a target throwing trap a frame, a spring actuated throwing arm rotatably mounted on said frame, and a target positioning means mounted on said frame, said means comprising independently retractable spaced members disposed adjacent to and extending transverse the leading edge of said throwing arm in its ready to fire position, with said members yieldingly extending above the leading edge of said throwing arm, and said throwing arm being rotatable over said members.

3,088,453
DOMESTIC APPLIANCE
Edwin O. Grahn, Birmingham, and Louis Gelfand, Detroit, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Sept. 15, 1961, Ser. No. 138,498
5 Claims. (Cl. 126—273)



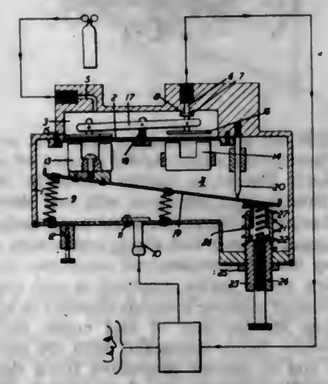
1. In combination, casing means defining an oven having a front opening through which food may be loaded and unloaded and enclosing a heating element for cooking food, means for supporting food in said oven, and a door for closing said opening, said door comprising a frame sealingly selectively engageable with said casing and having a central aperture adjacent said supporting means for visibly exposing food in said oven, a first transparent glass panel carried by said frame and closing said aperture, a second glass panel spaced from said first glass panel and carried by said frame, said second glass panel having a first reflective metallized bar pattern vacuum plated on one side thereof and a second reflective metallized bar pattern on the other side thereof offset from said first metallized pattern by the width of said first metallized pattern, said second glass panel providing an oblique path of vision through the thickness thereof between the first and second reflective metallized bar patterns from the outside of said oven to the supporting means whereby the heat from food on said supporting means and the heat from said heating element is reflected by said patterns back into said oven.

3,088,454
SURGICAL INSTRUMENT
Wallace B. Shute, 300 Island Park Drive, Ottawa, Ontario, Canada
Filed July 25, 1960, Ser. No. 44,916
Claims priority, application Canada Jan. 6, 1960
1 Claim. (Cl. 128—2)



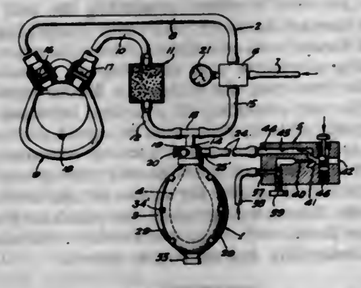
A surgical instrument for collecting cells for use as specimens for cytological diagnosis comprising, in combination, an elongated cylindrical body having a reduced operative end portion; a first blade, having a longitudinal axis, mounted on said operative end portion, the latter and said first blade being capable of insertion into and extending throughout the entire length of the cervical canal to the internal os; an operative edge on said first blade extending parallel with said longitudinal axis and adapted, on rotation of said operative end portion about its longitudinal axis, to obtain individual tissue cells, by scraping, from the entire endocervix; a second blade mounted on said body and located adjacent said operative end portion, said second blade having an operative edge extending normal to said first blade and adapted, on rotation of said operative end portion, to obtain by scraping, and simultaneously with the operation of the first blade, individual tissue cells from the portio vaginalis of the cervix, an end cap detachably secured to the end of the body remote from said operative end portion; finger grips on said remote end; a plunger rod slidably mounted within said body and, at one end thereof, projecting beyond said end cap and terminating in a thumb-piece; at least one plunger fast on said rod and in slidable frictional contact with the inner periphery of the body; a stop member fast on said rod and located a predetermined distance between said plunger and said cap to limit the amount of movement of said rod in one direction, movement of said rod in the other direction being limited by engagement of said plunger with the body where the latter merges with its reduced operative end; that portion of the rod extending beyond the end, remote from said stop, of the plunger being slidable within and throughout the said operative end portion and normally projecting slightly beyond the latter and serving, with the inner periphery of said operative end portion, as a pipette obturator, the end face of said rod slightly projecting beyond said operative end portion being convex whereby the said operative end portion, plunger, rod, stop, body, end cap, grips and thumb piece co-operate to ensure that the pipette extracts, by positive suction, cellular debris from the uterine cavity and internal os of the cervix, said scrapings and said extraction being obtained selectively.

3,088,455
APPARATUS FOR CONTROLLING OR ASSISTING RESPIRATION
Geoffrey Donald Black, Tottenham, London, England, assignor to The British Oxygen Company Limited, a company of Great Britain
Filed Nov. 16, 1959, Ser. No. 853,352
Claims priority, application Great Britain Nov. 19, 1958
5 Claims. (Cl. 128—29)



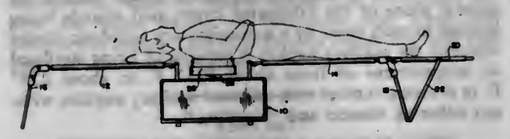
1. In apparatus for controlling or assisting respiration of the type hereinbefore specified, a combined pressure control for intereconnection between a source of pressurizing gas and means for delivering gas under pressure to the lungs of a patient, said control including pressure responsive timing means comprising a variable capacity gas chamber having one wall formed as a pressure responsive member, control valve means in said control movable between open and closed positions, said valve magnetically coupled to said pressure responsive member to move said control valve between open and closed positions in response to pressure variations to control the flow of pressurizing gas through said control, inlet means in said control interconnecting said patient and said variable capacity gas chamber for admitting fluid at a pressure closely related to said patient's lung pressure to the interior of the variable capacity gas chamber during the inhalation phase of the respiratory cycle, said pressure responsive member movable in response to a predetermined pressure in the lungs to move said valve to the closed position, outlet means for releasing gas at a controlled rate from the chamber during the exhalation phase of the respiratory cycle whereby the pressure responsive member is moved to open said control valve means, and adjustable loading means opposing movement of said pressure responsive member to close said control valve means comprising a first biasing means connected to said pressure responsive member operative to bias said member in one direction over the whole range of movement of said pressure responsive member, and said second biasing means effective to oppose selected stages of said movement.

3,088,456
ANESTHETIZING AND GAS THERAPY APPARATUS
Philip L. Stanton, 389 Flintridge Oaks, Pasadena, Calif.
Filed Feb. 8, 1960, Ser. No. 7,366
3 Claims. (Cl. 128—29)



1. Respiratory apparatus for connection with means for providing a gas flow circuit between a source of gas and the lungs of a patient comprising: a pair of bellows mounted one within the other to define therebetween an expansible chamber; the outer bellows of said pair having an opening for intaking and expelling gas; conduit means connecting said opening with said circuit; means embracing and connected with said outer bellows to restrain expansion and contraction thereof; said outer bellows operating to expel gas from said chamber through said opening and to intake gas through said opening into said chamber in response to expansion and contraction of the inner bellows; and means for expanding and contracting said inner bellows by developing positive and negative pressures therein.

3,088,457
THERAPEUTIC DEVICE
Irwin F. Dersch, Sea Cliff, N.Y., assignor of ten percent to Darby & Darby, New York, N.Y., a partnership
Filed Mar. 20, 1961, Ser. No. 96,987
5 Claims. (Cl. 128—33)



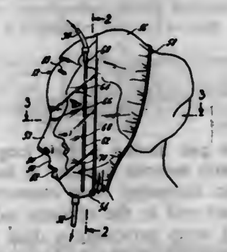
3. A therapeutic device comprising spaced apart body supporting means adapted to receive a patient in a supine position, a generally horizontally disposed platform set in said space between said body supporting means, and means for oscillating said platform eccentric to the axis of said platform so that one edge of said platform facing a body support means oscillates through a different arc than its opposite edge.

3,088,458
FOOT EXERCISING APPLIANCE
Tyler P. Stewart, 122 8th St. SW., Mason City, Iowa
Filed Mar. 8, 1962, Ser. No. 178,385
7 Claims. (Cl. 128—57)



1. A portable foot-manipulated and governed appliance designed and functioning to exercise and strengthen the digits and ligaments connecting the digits, the metatarsal and longitudinal arches and calcaneum comprising: a horizontal base, said base embodying a panel having opposed upstanding lengthwise flanges provided with horizontal slots parallel with the horizontal plane of said panel, a roller positioned between said flanges and having end-journals slidingly and rotatably mounted in their respective slots, said slots terminating short of a forward extending portion of said panel, additional slots provided in forward portions of said flanges beyond the first-named slots, and a second roller positioned between said forward portions and having its ends slidingly and rotatably mounted in said additional slots.

3,088,459
THERAPEUTIC COSMETIC MASK
Max Rabinoff, 550 5th Ave., New York, N.Y.
Filed Sept. 11, 1961, Ser. No. 137,465
8 Claims. (Cl. 128—66)

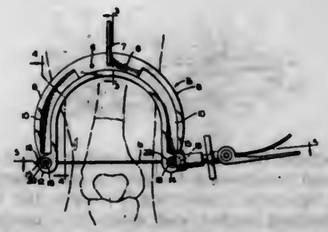


1. A therapeutic cosmetic appliance comprising a mask having contours simulating the features of a human being, means for securing said mask on a head of a person with said contours being in spaced relationship to the features of the person, and a tube extending into said mask, means for connecting said tube to a source of fluid under pressure, said tube having a plurality of openings directed toward the sinus areas of the face for spraying treatment fluid on the face and around the sinus areas of the head of a person wearing said mask.

3,088,460
SURGICAL BOW ASSEMBLY
Frank O. Wright, 880–882 Adams Ave., Memphis, Tenn.
Filed Jan. 19, 1962, Ser. No. 167,299
13 Claims. (Cl. 128—84)

1. In a wire bow structure for surgical use, comprising an integral X-ray lucent molded plastic body including a base portion and a pair of spaced arms, said arms being resiliently associated with their base for movement towards and from each other, head members formed at the ends of said arms, a wire member, diagonal recesses in said head members for receiving said wire member including a mounting face, a jack member for applying

tension to the wire member located in said recesses, a rotatable gripping device mounted in the jack member, a recess formed in the rotatable gripping device, means for securing the wire member in said recess, transversely positioned integral projections including an inclined wall portion projecting from the outer side face of each of the



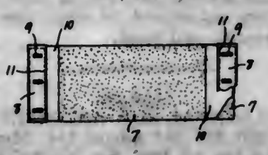
head members for providing an abutment for engaging the mounting face of said jack member when applied thereto to prevent the longitudinal displacement of the jack member in the direction of the length of the arm, and a relatively large flat extension on the jack member for engaging the palm of the hand of an operator during actuation of the jack member.

3,088,461
SURGICAL PAD WITH DIGIT LOOP
Milton R. Levitt, New Brunswick, N.J., assignor to The Scholl Mfg. Co., Inc., Chicago, Ill., a corporation of New York
Filed Apr. 3, 1961, Ser. No. 100,418
7 Claims. (Cl. 128—153)



4. A surgical pad having a digit loop, comprising a pair of body parts secured together in face to face relationship, and an elongated strap connected to one side of one body part and to the opposite side of the other body part, said strap providing a digit loop extending substantially diagonally across the body parts.

3,088,462
PANTY WITH HYGIENIC BAND
Masako Muto, 672 Sato-machi, Hamamatsu City, Japan
Filed Apr. 7, 1960, Ser. No. 20,788
1 Claim. (Cl. 128—290)



A hygienic band to be detachably secured to a panty body on a water-proof lining secured to the inside thereof at the part between the thighs, which comprises a rectangular shaped body made of elastic, very fine foamed synthetic resin having liquid absorbing, non-permeable and ventilating properties, each end portion of said band being covered around its transverse edge with a thin sheet of synthetic resin, and superposed thin edge-pieces of reinforcing material covering said resin sheets, the resin sheets and the thin edge-pieces being provided with button holes extended through the rectangular body to make the band detachable from the panty.

3,088,463
SANITARY NAPKINS
Carlyle Harmon, Scotch Plains, N.J., assignor, by mesne assignments, to Johnson & Johnson, New Brunswick, N.J., a corporation of New Jersey
Filed May 9, 1960, Ser. No. 27,928
1 Claim. (Cl. 128—290)



A sanitary napkin comprising in combination an absorbent pad and a cover surrounding the pad and in intimate contact therewith, said cover comprising a plurality of fibrous webs of cellulosic fibers, the outer fibrous web being permeable and consisting of non-absorbent cellulosic fibers and the remaining fibrous webs being permeable and consisting of absorbent cellulosic fibers, and a binder material distributed in a predetermined pattern of spaced binder areas in bonding relationship with the absorbent cellulosic fibers passing through said areas, said areas extending over the surface of and substantially through the fibrous webs of absorbent cellulosic fibers and the outer fibrous web of non-absorbent cellulosic fibers being substantially free of binder material.

3,088,464
SANITARY NAPKINS
Carlyle Harmon, Scotch Plains, N.J., assignor, by mesne assignments, to Johnson & Johnson, New Brunswick, N.J., a corporation of New Jersey
Filed June 3, 1960, Ser. No. 33,783
5 Claims. (Cl. 128—290)



1. A sanitary napkin capable of being sterilized without "blocking" comprising, in combination, a relatively thick, flexible, absorbent core and a relatively thin, pervious fabricated cover wrapped around said core, said pervious fabricated cover comprising textile strands crossing each other at intersections which extend outside the general plane of the fabricated cover, said strands being bonded to each other by a non-migratory cellulosic binder whereby the sanitary napkin is capable of being sterilized at temperatures of from about 225° F. to about 275° F. in pressing contact with adjacent sanitary napkins without adhering thereto and "blocking."

3,088,465
OBSTETRICAL FORCEPS
Earl Conway Smith, 520 Physicians & Surgeons Bldg., 4500 Magnolia St., New Orleans 15, La.
Filed Jan. 24, 1961, Ser. No. 84,560
1 Claim. (Cl. 128—323)

Obstetrical forceps comprising: first and second forcep blades having cooperating handle portions at one end thereof, joint assembly means for said blades adjacent said handle portions providing longitudinal movement of said blades with respect to one another simultaneous with pivotal movement, one of said blades including a finger portion aligned for engagement with the adjacent blade to limit forward movement of said adjacent blade when said handle portions abut one another, said blades being of rigidly normally unyielding construction, and as viewed in plan when in the closed position extending along the longitudinal handle axis for a portion of the length thereof, thence merging into opposed arcuate extents defining cephalic curves for engagement with the head of a fetus, said blades in longitudinal elevation being downwardly offset relative to the longitudinal



handle axis and defining a downwardly facing perineal curve along the bottom edge of said blades, said perineal curve having a maximum perpendicular distance from the point of zero slope thereof to a straight line from the bottommost extent of said handle portions tangent to the bottommost edge of said arcuate extents, of 1¾ inches; said blade portions from the handle portions to the opposed arcuate extents being of a length sufficient to accommodate aftercoming head in breech delivery, the high, mid and low positions of the fetal head, and to correct persistent occiput posterior and transverse positions and delivery of the fetus head in a single application by virtue of said shallow perineal curve and rigid blade construction.

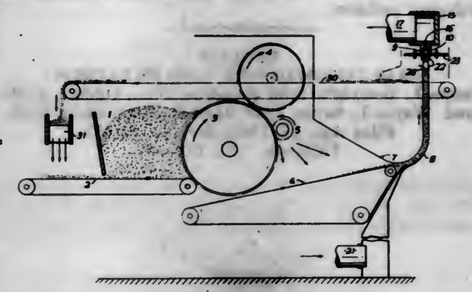
3,088,466
TRACHEAL DEVICES
Edgar B. Nichols, 19 Colonial Ave., Moorestown, N.J.
Filed May 4, 1960, Ser. No. 26,738
6 Claims. (Cl. 128—351)



1. A tracheal device comprising an outer tube adapted to be inserted into the trachea of a user and having an entrance end for reception of an inner tube therein, and an inner tube insertable into said outer tube through said entrance end thereof to be mated therewith, said inner tube having a corresponding entrance end and a radial enlargement adjacent thereto adapted to frictionally engage the inside surface of said outer tube when said tubes are in mated relation to thereby releasably hold said tubes in said mated relation.

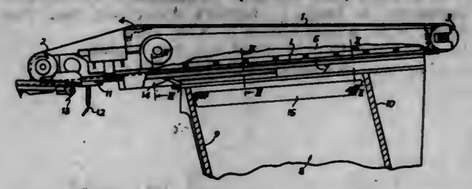
3,088,467
METHOD OF FORMING A CONTINUOUS TOBACCO FILLER
Raymond Lanore, Paris, France, assignor to Usines Decoufle S.A., Paris, France, a French company
Original application Dec. 11, 1957, Ser. No. 702,104, now Patent No. 3,030,966, dated Apr. 24, 1962. Divided and this application Sept. 19, 1961, Ser. No. 139,827
1 Claim. (Cl. 131—20)

In the manufacture of cigarettes on a continuous rod cigarette making machine, a method of producing a continuous trimmed tobacco rod, comprising the steps of building up a continuous tobacco rod containing a surplus of tobacco over that in the trimmed rod, conveying the built up rod by means of a conveyor to a position at which the rod is trimmed by removal of said surplus tobacco while confining the sides of the tobacco rod, at



least adjacent the conveyor, and subjecting the tobacco rod, during a part at least of its passage to the said position, to air pressure directed against and through the tobacco rod and the conveyor in a direction transverse to the direction of movement of the tobacco rod to cause compression in said rod, at least part of said compression existing at said trimming position.

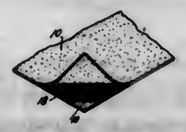
3,088,468
TOBACCO MANIPULATING MACHINERY
Francis Auguste Maurice Labbé, Orleans, France, assignor to Molins Machine Company Limited, London, England, a British company
Filed Jan. 20, 1959, Ser. No. 787,954
Claims priority, application Great Britain Jan. 21, 1958
4 Claims. (Cl. 131—66)



1. Apparatus for use in a cigarette making machine for forming a tobacco filler for enclosure in a continuous cigarette paper web, comprising an air pervious conveyor to convey a stream of tobacco from which the filler is to be formed by the removal of surplus tobacco, opposed walls having tobacco engaging surfaces extending a uniform distance from the conveyor and forming a tobacco confining channel, means to supply tobacco to the conveyor in such quantity that the stream of tobacco while conveyed by said conveyor extends from the conveyor beyond the said distance, suction means to draw air into the said channel and through the said conveyor so as to flow through and compress tobacco confined in the channel, the said tobacco engaging surfaces being arranged to guide air flowing therebetween in a direction substantially normal to the conveyor surface, said walls also having surfaces receding outwardly from the said tobacco engaging surfaces and meeting the latter at said distance to permit air approaching the channel to flow across the said receding surfaces, and through tobacco extending beyond the said distance, in directions transverse to the said direction and at a lower velocity than that of the air flowing through the said channel, thereby effecting less compression of the last named tobacco than of tobacco in the channel, so as to improve the uniformity of the density of the tobacco in the channel by reducing the

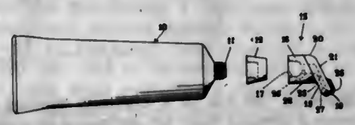
effect thereon of variations in the quantity of tobacco in the stream, and a trimming device to separate and remove tobacco from the tobacco stream to form a filler of desired depth, the said trimming device being operative on tobacco at a distance from the conveyor such that at least the greater part of the tobacco remaining in the trimmed filler is tobacco which has been confined between said tobacco engaging surfaces.

3,088,469
HAIR CONDITIONER AND RETAINER
Emma L. Berryhill, 1100 Woodrow Ave., Oildale, Calif., and Wayne L. Sayer, 2009 22nd St., Bakersfield, Calif.
Filed Apr. 25, 1960, Ser. No. 24,452
5 Claims. (Cl. 132—9)



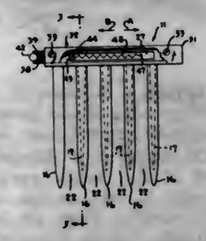
1. A hair retaining and conditioning device for enclosing and protecting a hairdo from heat and humidity while retaining the softness and texture of the hair, comprising: a fibrous sheet of non-woven fabric large enough to completely enclose the hairdo, and having the fibers thereof disposed normal to the plane of the fabric when flat, said fibers being coated by electrically charged, fine particles of anhydrous lanolin thereon, whereby said sheet when wrapped around the head of the user will cling to itself and to the hair so that no ties are necessary.

3,088,470
DEVICE FOR APPLYING CREAMS AND THE LIKE TO THE SKIN
Robert E. Hall, Scarborough, N.Y., assignor, by mesne assignments, to Dean L. Burdick Associates, Inc., New York, N.Y., a corporation of New York
Filed Oct. 27, 1960, Ser. No. 65,468
6 Claims. (Cl. 132—79)



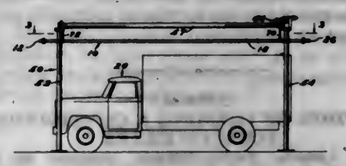
1. A device for spreading upon a person's body with a drawing action an even layer of depilatory cream from a squeezable package receptacle of the same, said device being constituted of a relatively rigid unit having a part adapted to be removably attached to such receptacle and provided with a passageway therethrough, a reservoir part connected to said attaching part and provided with a chamber in communication with the passageway in said attaching part, said reservoir part including a distributing edge portion having at its outer terminal end a skin engaging surface adapted to rest against a person's skin and being of given configuration and of substantial length, said distributing edge portion being provided with elongated means extending along the length thereof to bring the spin engaging surface of such edge portion into cream flow communication with said chamber and being of given dimensions to enable the depositing on the person's skin as said surface of said distributing edge portion of the device is being drawn therealong, sufficient of the depilatory cream to form on the skin a covering layer of such cream and of a width comparable to the length of said elongated means, and a spreader part having a skin engaging surface disposed in substantially aligned relation with and forming a continuation of the skin engaging surface of said edge portion and positioned in following relation to the latter as said device is drawn over the person's skin, said spreader part being of substantial width and of a length at least as long as the length of the part of said edge portion provided with said elongated means so that as the device is drawn over a person's skin, the depilatory cream deposited on such skin just in front of said spreader part is smoothly redistributed on the skin by the skin engaging surface thereof as an even layer with a minimum of rubbing.

3,088,471
PERMANENT WAVING DEVICES
Joseph C. Fiore, 730 E. 232nd St., New York, N.Y.
Filed July 6, 1962, Ser. No. 208,140
5 Claims. (Cl. 132—136)



1. A permanent waving device, comprising in combination a frame including a series of longitudinal fixed teeth, each spaced apart from another fixed tooth for a predetermined gap, a stationary rack connected to said frame, a movable rack disposed opposite said stationary rack and being slidable on said frame between two opposite extreme positions, said racks defining therebetween an elongated space, a plurality of separate planetary longitudinal movable teeth arranged in said gaps, a plurality of pinions supported by said frame and disposed in said space and each mounted on and suspending a movable tooth, said pinions engaging said racks, whereby in one of the extreme positions of the movable rack each movable tooth will be stationed spaced from one of its two gap confining fixed teeth and, respectively, in the other extreme position of the movable rack each movable tooth will be stationed closely adjacent said one fixed tooth, the planetary movement of each movable tooth during shifting of the movable rack being substantially linearly along a portion of said space and spinning about its longitudinal axis.

3,088,472
VEHICLE WASHER
Norman R. Haines, Ann Arbor, Mich., assignor to Canomac Corporation, Ann Arbor, Mich., a corporation of Michigan
Filed Aug. 14, 1961, Ser. No. 131,157
12 Claims. (Cl. 134—57)



1. A vehicle washer comprising a spray frame, power means for reciprocating said spray frame in opposite directions between limits to spray a vehicle, means for supplying a first liquid to said spray frame during movement thereof toward one limit, means for supplying a second liquid to said spray frame during movement thereof toward the other limit, and means operative automatically at said one limit of reciprocation of said frame to deactuate said first liquid supply means and to actuate said second liquid supply means.

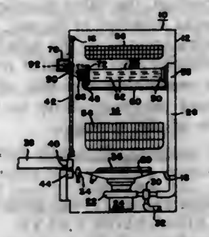
3,088,473
MUNITION CLEANING EQUIPMENT
Bernhard Rogge, Cherry Hill Road, Baldwin, Md.
Filed Oct. 17, 1962, Ser. No. 231,306
6 Claims. (Cl. 134—58)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. Apparatus for cleaning cylindrical chemical munitions comprising:
(*a*) Turntable means for holding said munitions having a plurality of drain basins near the outer periphery thereof;
(*b*) Hood means removably mounted above said turntable means and over said drain basins;
(*c*) Drain means removably mounted beneath said turntable means on the axis of said hood means;
(*d*) Separate elevation means connected to the top of said hood means and to the bottom of said drain means;
(*e*) Means to rotate said turntable means;
(*f*) Automatic fluid supply means connected to the top of said hood means to supply wash water, caustic rinse, and compressed air whereby said munitions are automatically washed and dried when moved into operative relationship with said hood means and drain means;
(*g*) Automatic control means operatively associated with said apparatus to automatically control the sequence of events.

3,088,474
DISHWASHING MACHINE WITH SPRAY TUBE ROTATIONAL SPEED ANALYZER
Ralph V. Leslie, Englewood, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Oct. 9, 1961, Ser. No. 143,755
6 Claims. (Cl. 134—113)

6. In combination, means forming a chamber having an opening, means including a transparent portion for closing said opening, a rotating spray device in said chamber, and a speed analyzer for ascertaining the speed of said spray device, said speed analyzer comprising a strobe member fastened for rotation with said spray device in said chamber, said strobe member having a circle of spaced fluorescent segments facing outwardly from said chamber in a manner to be seen through said transparent portion, the segments on said circle being sized to represent one rotating speed, and a cyclical lamp positioned outside of said chamber in a manner to shed its light on



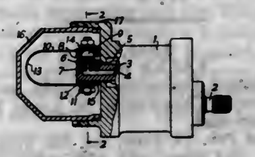
said strobe member and compatible with the fluorescence of said segments, thereby to indicate by the apparent movement of said segments the speed of said spray device.

3,088,475
CAMPING DEVICE
John Muhr, 650 SW. 62nd Court, Miami, Fla.
Filed Oct. 31, 1960, Ser. No. 66,129
9 Claims. (Cl. 135—1)



1. In a camping device, the combination comprising a box having upper and lower sections, means for supporting the box on top of an automobile, linkage means adjacent said sections interconnecting them, a lid for said box attached to said upper section, the upper section and lid being movable to a vertical position spaced from the lower section wherein the linkage means extends horizontally from the top of the upper section to the lower section, a canopy, a plurality of U-shaped ribs attached to spaced points on said canopy, the legs of said ribs being pivotally attached to opposite ends of the lower section, each of said ribs being attached to said lower section at a point laterally displaced from the points of attachment of the remaining ribs, whereby the ribs may be nested to lie in a nearly horizontal position completely within the lower section or pivoted to extend angularly upwardly from the lower section whereby the canopy extends over the lower section to the vertically positioned upper section.

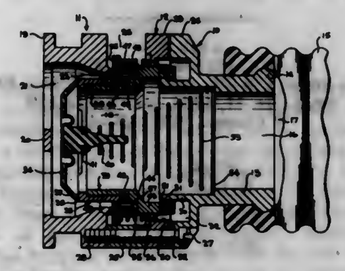
3,088,476
SPILL-TYPE CENTRIFUGAL GOVERNORS
Michael Kellner, London, England, assignor to The Plessey Company Limited, London, England, a British company
Filed July 22, 1960, Ser. No. 46,850
3 Claims. (Cl. 137—56)



1. A centrifugal governor of the kind including a rotary governor spindle having a radial passage terminating in a spill port at the circumference of the spindle,

means connecting the passage to a source of liquid under pressure, a valve member co-operating with the spill port, and a hair-pin type spring having two parallel shanks joined by a bent portion, the valve member being carried by one of said shanks adjacent to its end, and the end of the other shank being secured to the spindle substantially at the point of symmetry to the valve member in relation to the plane containing the axis of the governor spindle and disposed perpendicularly to the plane containing said shanks of the spring.

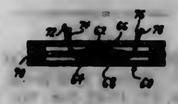
3,088,477
SUFFOCATION INHIBITING INHALATOR-EXHALATOR VALVE
Aaron Bloom, Pasadena, Calif., assignor to Sierra Engineering Company, Sierra Madre, Calif., a corporation of California
Filed Mar. 28, 1961, Ser. No. 98,880
3 Claims. (Cl. 137—64)



1. A composite inhalation-exhalation valve device with low pressure protection comprising a valve body having a passage therethrough and a supply connection thereon for a supply hose in communication with said passage, a sleeve within said passage and movable axially relative to the passage, and a flexible connection between the exterior of the sleeve and the body, an inhalation valve passage at one end of the sleeve forming a communication between the end of the passageway adjacent the supply connection and the opposite end, said sleeve on the supply side thereof having a first area responsive to pressure in the supply passage of a predetermined amount, and an inhalation check valve element normally closing said passage, a first annular exhalation valve component on said body, exhalation passage means forming an exhalation port through the body adjacent said exhalation valve component, a second exhalation valve component mounted on the sleeve, one of said components comprising an exhalation valve element and the other of said components comprising an exhalation valve seat, said exhalation valve seat at the line of engagement with the exhalation valve element defining a second area responsive to exhalation pressure, said second area being of lesser amount than said first area whereby to increase the effective total pressure on said first area during the inhalation cycle thereby to inhibit suffocation when the supply hose is no longer capable of supplying the valve device.

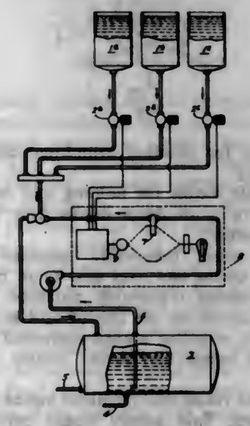
3,088,478
VALVE DEVICE
Morry L. Schimmel, University City, Mo., assignor to McDonnell Aircraft Corporation, St. Louis, Mo., a corporation of Maryland.
Filed Feb. 29, 1960, Ser. No. 11,634
5 Claims. (Cl. 137—68)

1. A diaphragm for closing a passage in a member comprising a laminated body, a pocket formed in said body between adjacent laminations, an explosive charge capable of producing a chemical reaction and an accompanying explosion of sufficient force to rupture the body, said charge being positioned in said pocket, a strain gage positioned in said pocket adjacent to said charge, and a control circuit including a source of energy capable of



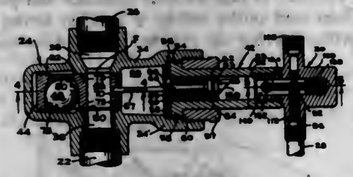
detonating the charge, said control circuit being connected to the strain gage and to the explosive charge and responding to a predetermined condition of the strain gage to connect said energy source across said charge.

3,088,479
SYSTEM OF COLOR MONITORING
John S. Christie, Oreland, Pa., assignor, by mesne assignments, to Proctor & Schwartz, Inc., Philadelphia, Pa., a corporation of Pennsylvania
Original application Feb. 13, 1958, Ser. No. 714,988, now Patent No. 2,978,951, dated Apr. 11, 1961. Divided and this application July 28, 1959, Ser. No. 830,001
4 Claims. (Cl. 137—93)



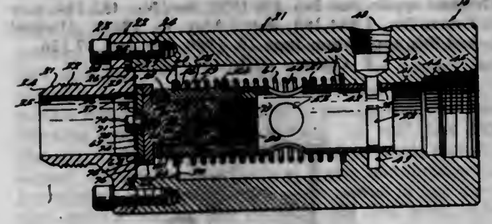
1. A color monitoring system for determining deviation in the color of a fluid bath comprising a light source providing a beam of radiation along a beam path, colored filters sequentially interposed in the beam path to change the color of the beam, a standard arranged in the beam path and variable with each filter representing the intensity of each filter color, means for splitting into two beams the beam directed along the beam path after passing through the standard such that two beams differ in intensity but not in color, a sample holder arranged in the path of the brighter one of the two beams, a fluid flow path between the bath and the sample holder permitting constant change of the sample, means for producing continuous flow from the bath to the sample holder, means for comparing the intensities of the two beams after the brighter beam passes through the sample to determine deviation from the predetermined relative light intensities of the beam which obtains should the sample match the color represen'ed by the standard, color constituent supplies for the fluid bath each having a separate valve, and actuation means responsive to the intensity deviation means for actuation of each of said valves whereby upon detection of deviation a different selection of valves is opened for each color frequency band selected by the color filters to add constituent colors as required to bring the color of the fluid bath back to that of the standard.

3,088,480
FLOW CONTROL APPARATUS
John R. Yancey, Houston, Tex., assignor, by mesne assignments, to FMC Corporation, San Jose, Calif., a corporation of Delaware
Filed Sept. 7, 1960, Ser. No. 54,460
8 Claims. (Cl. 137—116)



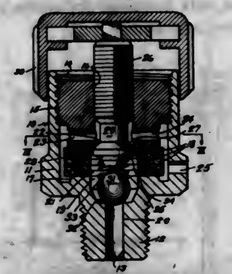
1. A flow control system comprising first and second valves, a choke assembly, means connecting said valves and choke assembly in series with each other with the choke assembly between the valves, said choke assembly receiving fluid flow from said first valve and discharging the fluid flow at reduced pressure to said second valve, means movable in response to a pressure differential on opposite sides thereof for operating said second valve, means for subjecting one side of said movable valve operating means to the fluid pressure within said second valve, means for subjecting the other side of said valve operating means to the fluid pressure between said first valve and said choke assembly, a bleed valve connected to said choke assembly, and means connected to said valve operating means to open said bleed valve when said valve operating means closes said second valve to reduce the pressure in said choke assembly to the ambient pressure.

3,088,481
HYDRAULIC SWITCHING SYSTEM
Alexander W. Brueckner, Farmington, and John G. Lewis, Jr., Detroit, Mich., assignors, by mesne assignments, to Cox Instruments Corporation, Detroit, Mich., a corporation of Michigan
Filed Jan. 4, 1960, Ser. No. 111
5 Claims. (Cl. 137—117)



1. An automatic pressure responsive valve for association with a limited capacity hydraulic transducer and a relatively higher capacity hydraulic transducer for automatically establishing a by-passing path around said limited capacity transducer in response to a predetermined pressure condition, comprising a housing defining a chamber, first, second and third ports in said housing communicating with said chamber, and means for directing flow from between said second and third ports to between said first and third ports upon the occurrence of said predetermined fluid pressure condition comprising a sleeve of relatively small cross-sectional area surrounding said first port having an end portion within said chamber defining an annular seat raised from and surrounding said first port, a first valve comprising a valve head having a circular recess for the support of a valve seal engageable with said valve seat for closing said first port, a sleeve valve for closing said second port, means interconnecting said valve head and said sleeve valve for causing said sleeve valve to close said second port in response to opening movement of said valve head, resilient means biasing said first valve to the closed position and for biasing said sleeve valve to open position, and means including said connecting means for adjusting the positional relationship between said valve head and said sleeve valve.

3,088,482
VENT VALVE
Fred Ostrem, Park Ridge, Ill., assignor to The Dole Valve Company, Morton Grove, Ill., a corporation of Illinois
Filed June 23, 1961, Ser. No. 119,187
2 Claims. (Cl. 137—200)



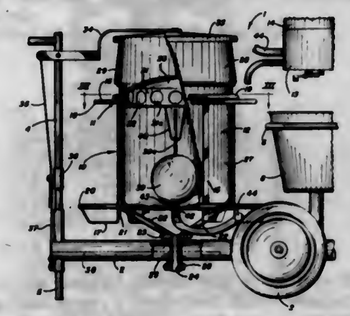
1. A vent valve for venting trapped air from a hot water radiator which comprises: a casing having inlet and outlet ports, a bore formed within said casing coaxially with said inlet port, a valve chamber immediate said ports and communicable therewith, a shoulder of said casing defining said inlet port and opening to said chamber, a passage leading from said chamber to said outlet port, a hygroscopic member positioned within said passage to permit air flow but to prevent liquid flow therethrough, a bypass port formed within said casing coaxially with said inlet port and opening to said chamber, a bypass passageway communicating said bypass port with said outlet port and bypassing said passage and said member, a shouldered portion of said casing defining said bypass port facing toward said shoulder defining said inlet port, a poppet valve cooperable with said shouldered portion and having a stem guided within said bore for controlling fluid flow through said bypass port, means for adjusting the position of said poppet valve relative to said port, a valve member cooperable with said shoulder to control fluid flow through said inlet port, and spring means interposed between said poppet valve and said valve member to bias said valve member toward said shoulder.

3,088,483
MILK HANDLING APPARATUS
Bruce W. Brunson, Grand Rapids, Mich., assignor to Werner Machinery Company, Grand Rapids, Mich., a corporation of Michigan
Filed Mar. 3, 1958, Ser. No. 718,626
7 Claims. (Cl. 137—355.12)

2. A mobile milk handling apparatus comprising a cart frame; wheels supporting said cart frame in a predetermined mobile position in which it is mobile in a direction dictated by the wheels; a reel rotatably mounted on said cart frame and having a hose receiving part extending vertically upwardly from said frame when it is in said predetermined mobile position, said reel having a central opening for receiving a tank within the hose receiving part; tank support means associated with said reel for supporting a tank upright in said opening; an elongated tank having an open top through which milk can be poured into said tank and having essentially a closed bottom with sides extending upwardly therefrom to said open top; a removable cover on said top; said tank being

supported on said tank support means in a generally vertical position while said cart frame is in said mobile position; a hose for conveying milk from said tank to a remote location, said hose being coiled on said reel around the tank and having one end interconnected with the inside of said tank, the position of the convolutions of said hose coiled on said reel being in a generally horizontal position; said reel, hose, and tank support being interrelated in such a way that the hose can be coiled on said reel around said tank by rotating said reel in one direction and said hose can be uncoiled from said reel by moving said cart in a direction dictated by the wheels and exerting a pulling force on said hose causing the reel to rotate in an opposite direction and uncoil the hose.

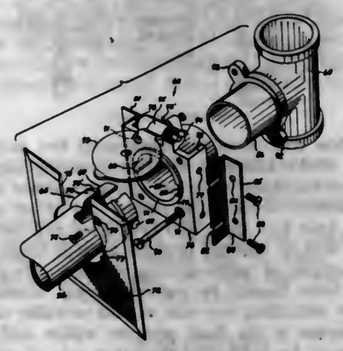
6. A mobile milk handling apparatus comprising a cart



frame; a tank having an open top through which milk can be poured into said tank and having essentially a closed bottom with sides extending upwardly therefrom to said open top; said tank being supported on said frame in a generally vertical position while said cart frame is in a mobile position; a hose for conveying milk from said tank to a remote location, one end of said hose interconnected to and communicating with said bottom of said tank; said hose coiled around said tank, the position of the convolutions of said hose being generally horizontal; a pump and releaser mechanism for drawing milk through said hose by means of a pressure differential; the other end of said hose interconnected to and communicating with said mechanism; and a support means on said cart frame for supporting and holding said mechanism above said top of said tank.

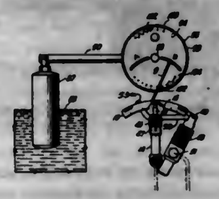
3,088,484
OUTLET SOCKET FITTING FOR CENTRAL VACUUM-CLEANING SYSTEMS
George W. Marsh, R.R. 2, Port Perry, Ontario, Canada
Filed Sept. 26, 1960, Ser. No. 58,416
2 Claims. (Cl. 137—360)

1. In a central vacuum system, a wall socket assembly for use on an apertured vertical wall, said assembly comprising an outlet fitting including a transverse bore terminating at one end in an enlarged diameter portion forming an annular shoulder thereat, said outlet fitting including at least one substantially longitudinal slot on the inner surface thereof opening into the other end of said bore and said slot continuing with a lateral slotted portion spaced from said other end of said bore for detachably receiving a conduit having at least one lateral pin received in said slot and lateral slotted portion, at least one angle plate adjustably attached to said outlet fitting, said angle plate including means for mounting it on a wall and further including a slotted mounting portion for receiving a fastener and permitting relative adjustment of said outlet fitting with respect to the wall upon which said angle plate is mounted, said outlet fitting including a journal portion defining a pivot axis disposed above and inwardly of the other end of said bore, a closure flap pivotally connected in said journal portion and including a plate portion sealingly engageable on said other end of said outlet fitting opening, a cover plate surrounding said other end of said outlet fitting bore and detachably engaged on said outlet fitting, a spacing sleeve sealingly engaged in said annular shoulder and projecting axially from said outlet fitting, a conduit fitting including an orifice having an internal annular increased di-



ameter portion forming a shoulder, said sleeve being received on and sealingly engaging said fitting shoulder and projecting axially from said orifice, and connecting elements extending from beneath said cover plate and extending through said outlet fitting on opposite sides of said spacing sleeve and terminally connected to said outlet fitting for retaining said outlet and conduit fittings in clamped relation at opposite ends of said spacing sleeve.

3,088,485
LIQUID LEVEL CONTROL APPARATUS
Albert J. Hanssen, Glenside, Pa., assignor to Black, Sivalls & Bryson, Inc., Kansas City, Mo., a corporation of Delaware
Original application Jan. 20, 1955, Ser. No. 483,154, now Patent No. 2,984,260, dated May 16, 1961. Divided and this application June 20, 1960, Ser. No. 37,226
8 Claims. (Cl. 137—413)



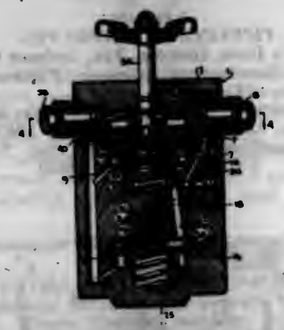
4. In an apparatus having means containing a stream of fluid having a liquid level to be controlled, and a device for automatic control of said liquid level comprising a responsive member adapted for movement in accordance with said liquid level, a control valve, a valve actuated by pressure and adapted to control said liquid level supply means providing actuating pressure control fluid, a bleed nozzle permitting regulated discharge of said pressure control fluid, a regulating member for controlling escape of said pressure control fluid from said bleed nozzle, diaphragm means responsive to pressure conditions in said bleed nozzle to release pressure to said control valve, means transmitting such released pressure for actuation of said control valve to restore the liquid level to the desired value and means for shutting off and exhausting pressure control fluid from said control valve when the

desired liquid level has been restored; the improvement comprising connecting means adapted to transmit the movement of said responsive member to said regulating member for movement of said regulating member in accordance with the control characteristics of said liquid level, said connecting means including:

an adjustable lever means and

cam means adapted to be manually actuated to thereby adjust the effective length of said lever means in accordance with the specific gravity of the liquid to provide sufficient movement of said regulating member when the movement of said responsive member is changed by a variation in specific gravity of liquid.

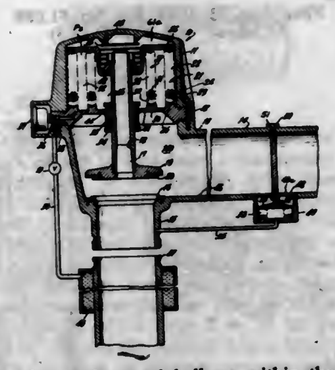
3,088,486
LOADING ARRANGEMENT FOR A REGULATOR
Douglas A. Salmon, Harrington Park, and Donald B. Salmon, Englewood, N.J., assignors to Hoke Incorporated, Cresskill, N.J., a corporation of New York
Filed Nov. 5, 1959, Ser. No. 851,138
2 Claims. (Cl. 137—505)



1. In a pressure regulator having an inlet and an outlet, a device for controlling the supply of compressible fluid to and from a chamber communicating with one surface of a control diaphragm of the pressure regulator comprising the combination of a passage communicating from said inlet to said chamber, a control valve in said passage, a first bleed valve mounted in a passage between said chamber and said outlet operable to connect said chamber with the opposite surface of said diaphragm, a second bleed valve mounted in a passage between said chamber and atmosphere operable to vent said first chamber to the atmosphere, and a single movably mounted control member for selectively engaging said three valves for opening said control valve when moved in one direction and for successively opening said first bleed valve and then said second bleed valve when moved in another direction.

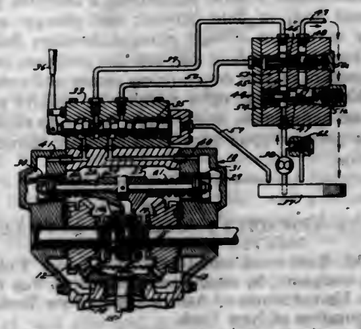
3,088,487
HIGH PRESSURE VALVE ASSEMBLY
Melville F. Peters, Livingston, N.J., assignor of fifty percent to Joseph J. Mascuch, Millburn, N.J.
Filed Sept. 26, 1958, Ser. No. 763,669
7 Claims. (Cl. 137—505.35)

1. A pressure control valve for a fluid line comprising a valve housing, a wall having an opening therein in said housing dividing the housing into a valve chamber and an actuating chamber, bellows means consisting of a first high pressure bellows and a nesting low pressure bellows secured together in end to end relationship and a second high pressure bellows and second nesting low pressure bellows secured together in end to end relationship disposed about the first bellows and spaced therefrom, said first and second bellows being secured at one end to the wall around the opening and extending into the actuating chamber, a valve stem within the housing coupled to the free end of the bellows means and extending through the wall opening into the valve chamber, a valve sealing member on the free end of the valve stem, an inlet and an outlet port in the valve chamber, a valve seat between the inlet and outlet ports in the valve chamber to receive the sealing member and control the flow through the valve ports, a quantity of a first fluid under pressure be-



tween the first and second bellows within the actuating chamber, means to direct the first fluid in the actuating chamber to hold the valve open, and means to apply a second fluid under pressure from the fluid in the fluid line to the actuating chamber to oppose the force exerted by the first fluid, whereby the pressure differential of the first and second fluids will govern the position of the sealing member with respect to the valve seat.

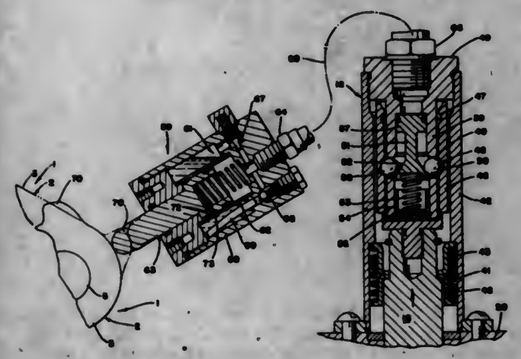
3,088,488
HYDRAULIC CONTROL SYSTEM WITH PRESSURE CONTROL VALVE
Paul B. Benner and Duane R. Chicoine, Decatur, Ill., and Leonard F. Dickeson, Wichita, Kans., assignors to Caterpillar Tractor Co., Peoria, Ill., a corporation of California
Filed Dec. 14, 1960, Ser. No. 75,748
4 Claims. (Cl. 137—621)



1. In a hydraulic control system for actuating a fluid motor which comprises a source of fluid under high pressure, a control valve, and a circuit for directing fluid pressure to said motor through said control valve, a low pressure relief valve and a high pressure relief valve both biased closed by spring pressure only, each relief valve including a chamber communicating with said source of fluid under pressure to bias it toward open position whereby the low pressure relief valve will insure low pressure in said circuit, and means operable upon operation of the control valve to direct pressure to the fluid

motor to vent said low pressure relief valve chamber and establish pressure in the circuit controlled by said high pressure relief valve.

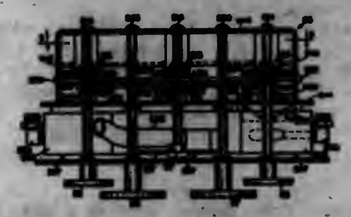
3,088,489
DETENT RELEASE FOR FLOW CONTROL VALVES
Hugh J. Stacey, Chesterland, Ohio, assignor to Parker-Hannifin Corporation, Cleveland, Ohio, a corporation of Ohio
Filed Aug. 22, 1960, Ser. No. 51,080
4 Claims. (Cl. 137—622.5)



1. In combination; a fluid motor and a fluid pressure supply source therefor; a control valve between said source and motor having a valve member therein which is spring-biased to an inactive position blocking fluid communication between said source and motor, and which is movable to an active position permitting flow of fluid from said source to said motor for actuating the latter; a detent mechanism in said valve effective to hold said valve member in active position in opposition to such spring-bias, said detent mechanism comprising complementary interengaged detent-recess means and a fluid pressure actuated cam for holding said detent-recess means in interengagement; and a detent release rendered effective, upon predetermined actuation of said motor, to release said valve member for automatic spring biased return to inactive position; said detent release comprising a movable plunger, a confined body of fluid between said plunger and cam whereby movement of said plunger develops fluid pressure in such body of fluid that actuates said cam to permit disengagement of said detent-recess means and consequent spring biasing of said valve member to inactive position, and a cam actuated by said motor effective to engage said movable plunger upon such predetermined actuation of said motor.

3,088,490
VALVE ASSEMBLY INCLUDING ACTUATING MECHANISM THEREFOR
Albert M. Rockwood and David M. Cowan, Columbus, Ohio, assignors, by mesne assignments, to Tea Council of the United States of America, Inc., New York, N.Y., a corporation of New York
Original application Sept. 12, 1955, Ser. No. 533,788, now Patent No. 2,927,522, dated Mar. 8, 1960. Divided and this application Apr. 23, 1959, Ser. No. 810,523
9 Claims. (Cl. 137—637)

1. A mixing valve comprising: a frame; a plurality of body members supported on said frame; a chamber in each of said body members; a fluid inlet into each of said chambers, terminating in a valve seat; a fluid outlet from each of said chambers converging into one mixing valve outlet; an elastic diaphragm in each of said chambers opposite said valve seat; a plunger supported in said frame in each of said chambers for axial movement with respect to said chamber and positioned opposite said diaphragm to contact and elastically deform said diaphragm into engaging contact with one of said valve seats; a plurality of separate snap-action means, each independently opera-



ble to move one of said plungers axially against one of said diaphragms; and a shaft member supported in said frame moveable to engage a plurality of snap-action means simultaneously.

3,088,491
PIPELINE BATCHING PIG
Howard J. En Dean, Houston, Tex., assignor to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware
Original application Oct. 26, 1960, Ser. No. 65,185, now Patent No. 3,074,436, dated Jan. 22, 1963. Divided and this application June 5, 1962, Ser. No. 200,166
3 Claims. (Cl. 137—802)



1. A batching pig for a pipeline having enlargements at fittings, check valves, and the like comprising at least two sealing members adapted to be inserted in the pipeline and forming sliding seals against the interior wall of the pipe, connecting means between said sealing members adapted to transmit propulsive effort from one of said sealing members to the other and to space said sealing members a distance greater than the length of enlarged sections of the pipeline, the outer surface of said connecting means being frusto-conical in shape with the larger end thereof adjacent to and approaching the diameter of the rearward sealing member, said connecting means cooperating with the forward sealing member to provide substantially an imperforate barrier in the pipe, restricted flow-carrying means providing a hydraulic bypass for the rearward sealing member, at least one of said sealing members being spheroidal in shape with its axis of revolution parallel to the axis joining said sealing members.

3,088,492
PRESSURE VESSELS
Jean Mercier, 1185 Park Ave., New York, N.Y.
Original application Feb. 11, 1955, Ser. No. 487,610, now Patent No. 2,878,834, dated Mar. 24, 1959. Divided and this application Dec. 16, 1958, Ser. No. 780,868
1 Claim. (Cl. 138—30)

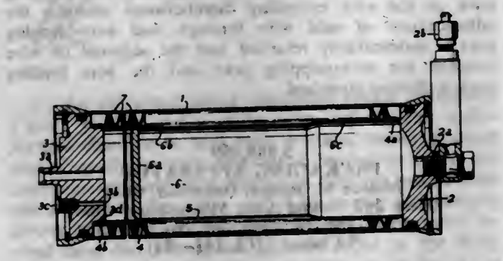
A pressure container having a fluid port at one end and an additional fluid port at the other end, a deformable and expandable partition secured in said container and intervening between said ports, valve means comprising a valve head having a plurality of small openings therethrough,

said valve head being axially aligned with said additional fluid port, the diameter of said valve head being greater than the diameter of said additional fluid port, whereby the periphery of said valve head may abut against the inner surface of said container around said additional fluid port, a tubular member affixed to such container and axially aligned with said additional fluid port, a member substantially U-shaped in cross section having a pair of sub-



stantially parallel guides extending into said tubular member, said valve head being affixed to the cross piece of said U-shaped member, the free ends of said parallel guides being outwardly bent, and fixed abutment means against which said free ends abut to limit the inward movement of said valve means into the container, said partition when expanded abutting against said valve head to seal said openings.

3,088,493
HYDRAULIC ACCUMULATORS
Frederick Baines, Swindon, and Kenneth John William Sheffield, Witney, England, assignors to The Plessey Company Limited, Ilford, England, a British company
Filed Nov. 6, 1961, Ser. No. 158,924
Claims priority, application Great Britain Nov. 10, 1960
2 Claims. (Cl. 138—31)



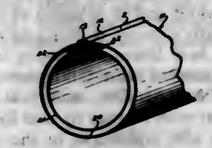
1. An air-balanced hydraulic accumulator, comprising a cylindrical pressure vessel having an air-pressure connection at one end and a hydraulic-pressure connection at the other end, a cylindrical bellows arranged in said vessel and having one end sealingly secured to the pressure vessel at one end thereof, a cup-shaped movable partion having a cylindrical wall portion arranged within the bellows and a bottom closing the end of said wall portion nearest to said one end of the vessel, the free end of the bellows being sealingly secured to the open end of the cylindrical wall portion of the partition, and a cylindrical guide wall fixed into, and extending into the vessel for part of the length of the vessel from, said one end of the vessel inside the bellows and in sliding contact with the other side of the cylindrical wall portion, said guide wall being so constructed as to permit the passage of fluid from one side to the other of said guide wall.

3,088,494
RIBBED VAPOR GENERATING TUBES
Paul H. Koch and Edward A. Pirsh, Akron, and Howard S. Swenson, Alliance, Ohio, assignors to The Babcock & Wilcox Company, New York, N.Y., a corporation of New Jersey
Filed Dec. 28, 1959, Ser. No. 862,232
3 Claims. (Cl. 138—37)



1. In a sub-critical pressure vapor generator having a tube length subject to heat from a heat source and normally conducting a vaporizable fluid increasing in quality as it flows therethrough, the improvement comprising said tube length having its internal wall formed with a plurality of helical grooves to provide turbulence promoting helical lands intermediate the convolutions of the grooves with the lands and grooves being proportioned and arranged so that the ratio of p/h is from 10 to 25, the ratio of w/p is from .2 to .55, the ratio of l/d is from .1 to 2.5, and the ratio of h/d is from .03 to .08, where p is the pitch or distance between corresponding points of consecutive lands measured parallel to the tube axis, h is the height of the lands, w is the width of the lands, l is the lead or distance that the land advances in one complete revolution measured parallel to the tube axis, and d is the minor inside diameter of the tube.

3,088,495
RIB AND GROOVE FASTENER STRUCTURE
Emil Francis Svec, New York, N.Y.; Viera Marina Svec, executrix of said Emil Francis Svec, deceased, assignor to Flexigrip, Inc., New York, N.Y., a corporation of New York
Filed Dec. 16, 1957, Ser. No. 703,033
6 Claims. (Cl. 138—128)

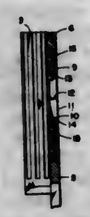


1. A one piece multi-wall tube, comprising flexible tubular strip structure of extended length having spaced wall portions with the spaced wall portions being joined together by linking wall spacers integral with the wall portions, said flexible strip structure having fastener structure at opposite ends of one of the wall portions each fastener structure including complemental edge structure having inclined adjacent ribs and grooves extending along the strip length which ribs and grooves are hook-like in contour in section and in detachable locking inter-engagement together forming a multi-wall tube, the median planes of said ribs and grooves sloping at an angle to the plane of said strip such that the hook-like ribs slant in the direction of their free ends inwardly toward the tubular strip structure to increase the resistance to separation of the interengaged fastener structures, said tubular strip structure inclusive of said fastener structures being integral and composed of a substantially water- and moisture-proof plastic material having high dielectric strength.

4. A fastener structure for the edges of a strip to be formed into a tube or the like comprising a closure strip having a linking portion at one side for joining in a coplanar relationship with a strip, and having a plurality

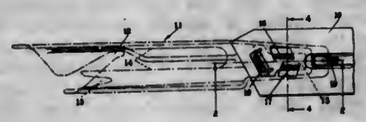
of ribs with grooves adjacent the ribs with said grooves having a shape substantially complemental to the ribs to receive other ribs of substantially the same shape, said ribs and grooves situated with their median planes slanting toward each other for a pincer-like grip to increase the resistance to separation when attached to another closure strip.

3,088,496
LOOM HARNESS
Daniel E. Houghton and Emmett F. Deady, Arlington, and Stanley F. Reed, McLean, Va., assignors, by mesne assignments, to Cambridge Wire Cloth Company, Cambridge, Md.
Filed Nov. 8, 1960, Ser. No. 68,020
13 Claims. (Cl. 139—92)



5. In a heddle frame assembly comprising, in combination; a lower supporting element; a removable upper supporting element; two supporting bars to maintain a fixed relation between said elements; a plurality of unitary heddles supportable by said elements, each of said heddles having a leading edge, a trailing edge, an upper supporting recess, a lower supporting recess, two sides, and a centrally positioned warp eye adapted to retain a warp element engageable therewith during a weaving process, the improvement comprising; in each of said heddles, an access slit connecting said eye with one of said edges, said slit being of such width and so oriented as to facilitate the passage of said warp element therethrough into said eye transversely from at least one of said two sides, and also of such width and so oriented as to insure the retention of said warp element within said eye during said weaving process; said lower supporting element having a section in engagement with said lower supporting recess of each of said heddles; and said heddles being pivotable in unison with respect to said lower supporting element about an axis transverse to the planes that include both the leading edge and the trailing edge of each of said heddles when also engaged by said upper supporting element and being pivotable about said axis individually whenever said upper supporting element is removed.

3,088,497
FILLING CARRIER FOR SHUTTLELESS LOOMS
Bertrand E. Guindon, Cumberland, R.I., assignor to Draper Corporation, Hopedale, Mass., a corporation of Maine
Filed May 22, 1961, Ser. No. 111,836
4 Claims. (Cl. 139—122)



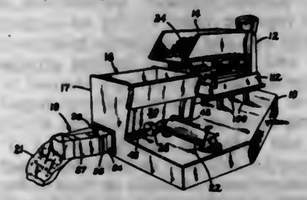
1. For a loom having reciprocable carriers mounted on flexible tapes by which filling from an outside source of supply is inserted within sheds formed by warps threads, a filling carrier detachably mounted to the free end of said tape, said tape being formed of spring steel and the means for retaining the carrier in position thereon comprising projections integral with and extending from said tape, and means on said carrier defining cooperating surfaces with which said projections have a resiliently maintained locking engagement.

3,088,498
LEAD-WIRE FEEDING APPARATUS
Samuel E. Swasey, Edgemere, Marblehead, and Lawson J. Ward, Danvers, Mass., assignors, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware
Original application Aug. 24, 1954, Ser. No. 451,786. Divided and this application Aug. 29, 1958, Ser. No. 757,993
4 Claims. (Cl. 140—71.6)



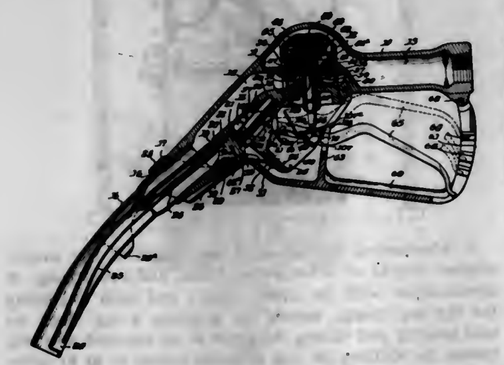
1. Apparatus for unwinding wire from a supply thereof comprising: a base member; wire-gripping jaws, between which said wire extends, mounted on said base member, said wire-gripping jaws normally being open with respect to the wire extending therebetween; wire-receiving jaws mounted on the other end of said base member for receiving the free end of said wire; a slide reciprocably mounted on said base member; wire-feeding jaws, between which the wire extends, mounted on said slide, said wire-feeding jaws being located between said wire-gripping jaws and said wire-receiving jaws; means for advancing said slide whereby said wire-feeding jaws mounted thereon advance the wire held therebetween and present the free end thereof to said wire-receiving jaws; and means, actuated by and during the advancement of said slide, for momentarily closing said wire-gripping jaws on the wire extending therebetween whereby the advancement of said wire through said wire-gripping jaws is momentarily retarded and the segment of wire between the wire-gripping jaws and the wire feeding jaws is thereby stretched.

3,088,499
PACKAGING APPARATUS
Nelson M. Rieger, Oakwood, Ohio (Rear 202 Mound Ave., Miamisburg, Ohio)
Filed Apr. 14, 1960, Ser. No. 22,195
7 Claims. (Cl. 141—81)



1. A device for packaging variable quantities of preweighed material such as produce and reducing such material to a predetermined volume for packaging in a receptacle, comprising a base and first and second fixed walls attached thereto, first and second movable walls spaced from said first and second fixed walls and cooperating therewith and with said base to form a variable volume chamber receiving said material, means forming a discharge aperture in one of said fixed walls, a pivotally mounted cover plate mounted above one of said movable walls to effect initial compression of said material in said variable volume chamber, first motor driving means including a driving piston and rod and an auxiliary compressing piston for forcing said cover plate into the closed position and subsequently advancing one movable wall for reducing the volume of said chamber, stop means carried by said auxiliary compressing piston for controlling the extent of movement thereof and the movement of said one movable wall, said driving piston rod including a lost motion linkage engaging said stop for moving said auxiliary compressing piston, said auxiliary compressing piston connected to said one movable wall for compressing said material and the variable volume chamber subsequent to the closing of said cover plate, and second motor drive means for forcing the other of said movable walls entirely through said variable volume chamber for discharging said compressed material through said discharge aperture and into a packaging receptacle.

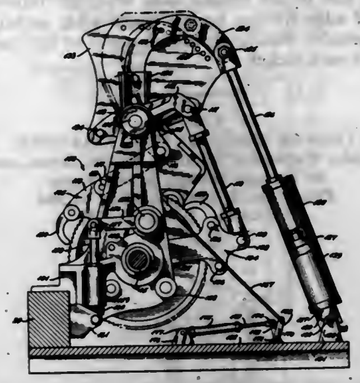
3,088,500
AUTOMATIC CLOSING NOZZLE
Amos O. Payne, 1560 Parkway, Dubuque, Iowa
Filed July 30, 1957, Ser. No. 675,241
21 Claims. (Cl. 141—208)



21. An automatic liquid dispensing nozzle comprising a body portion and a spout connected thereto, a diaphragm chamber in said body portion, an air pressure control conduit within said spout having its inner end communicating with said diaphragm chamber and its outer end secured to the outlet end of the spout, a weakening groove portion at the upper periphery of the spout located near the connection of said spout to the body portion, a peripheral portion on the lower periphery of said spout stronger than, and circumferentially aligned with, said weakening groove portion, and means releasably connecting said air pressure control conduit to said body portion release and separation occurring upon the breakage of said spout at said weakening groove and its separation from said body portion.

3,088,501
PANEL CONTROL SAWMILL
Orland D. Good, Waynesboro, Pa., and Dewey A. Walls, Salisbury, N.C., assignors to Frick Company, Waynesboro, Pa., a corporation of Pennsylvania
Filed Dec. 5, 1960, Ser. No. 73,839
5 Claims. (Cl. 143—118)

2. In a sawmill carriage having a plurality of headblock L's operated by a shaft, a setworks comprising ratchet wheel means on said shaft, multiple pawl assemblies engaging said ratchet wheel means, rocker arm means pivotally mounted on said carriage, rigid means pivotally connecting said pawl assemblies and said rocker arm means, said rocker arm means having connector means, a contact carried by said connector means, a series of contacts mounted on the fixed portion of said setworks in a position to be sequentially engaged by said connector means contact, and reversible means for moving said connector means and said rocker arm means



whereby when one of said series of contacts is energized said reversible means will move said connector means to cause at least one of said pawl assemblies to move said ratchet wheel means in one direction until said connector means contact engages the energized contact whereupon said reversible means will move said connector means in the opposite direction to cause other of said pawl assemblies to move said ratchet wheel means further in the same direction.

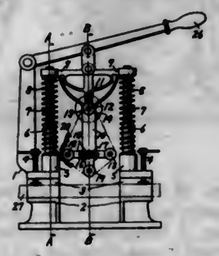
3,088,502
INSERTED TOOTH SAWS AND HOLDER ELEMENTS THEREFOR
Victor A. Kolesh, Holden, and Walter E. Lamlein, Leominster, Mass., assignors to Simonds Saw and Steel Company, Fitchburg, Mass., a corporation of Massachusetts
Filed July 14, 1961, Ser. No. 124,223
4 Claims. (Cl. 143—151)



1. A holder shank for a tooth bit to be inserted in a generally part-circular edge socket of a saw plate, said shank comprising an integral one-piece steel body of partial annular shape encompassing in excess of 180° of arc, said body including opposite end portions and an arcuate intermediate portion between them, said end and intermediate portions having a common convex circular outer margin formed on a radius for acceptance in the saw socket in which the shank is to be inserted and having a generally parallel concave inner margin to define a gullet area when inserted in such saw socket, the width of the shank body between said outer and inner margins at all radii from the outer margin center being adequate to provide capacity for the shank to operate as a bit-holding strut along a diameter through said center and across said shank end portions while further adapting it to be resiliently compressed at such diameter and symmetrically with

respect to the mid-length region of the shank, and said shank end portions each having an extent circumferentially and widthwise of the shank outwardly beyond said diameter to afford locations thereat for and having therein wrench-pin-receiving recesses respectively centered substantially on said shank diameter and to provide around said recesses integral metal wall structure adequate to accept shank-compressive force to be applied along said diameter by relatively movable wrench pins inserted in said recesses and forced toward each other for relieving the shank of edge friction against a saw plate socket in the bodily rotative installation and removal of the shank into and from such socket.

3,088,503
TIMBER PERFORATING MACHINE
Shinnosuke Watanabe, Sakyoku, Kyoto, Japan, assignor to Toyoko Takagi, Kyoto, Japan
Filed Mar. 8, 1961, Ser. No. 94,384
3 Claims. (Cl. 144—72)



1. Apparatus for perforating a rectangular hole in wood or the like, comprising a frame having means for clamping a workpiece to be perforated therein, chain mounting means mounted on said frame for reciprocal vertical movement thereon toward and away from the position in which the workpiece is clamped in the frame, an endless cutting chain mounted on said chain mounting means and having saw and chisel means alternating along the length of said chain, the path of said chain on said chain mounting means having an apex at the lowermost point thereof, said chain mounting means being adjustable for changing the horizontal dimension of said chain path and altering the angle of the apex of the chain at the lowermost point of the path of the chain, and means on said chain mounting means adapted to be connected to driving means for driving said chain, whereby the portion of the chain running past the apex of the path of the chain will contact the workpiece in which the hole is to be formed first and the size of the cut will be gradually elongated as the chain mounting means is moved downwardly toward the workpiece.

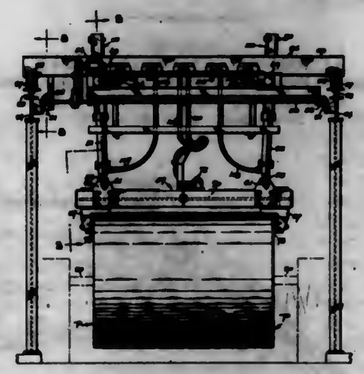
3,088,504
PORTABLE BARK PEELING DEVICE
Andreas Stihl, Neustadt, Rems, Kreis Waiblingen, and Adolf Caspari, Hirschhausen, Oberlahn, Germany, assignors to Firma Andreas Stihl, Neustadt, Rems, Kreis Waiblingen, Germany
Filed Jan. 28, 1959, Ser. No. 789,591
Claims priority, application Germany Sept. 4, 1958
4 Claims. (Cl. 144—208)

1. In combination in a portable bark peeling device: a frame, a hyperboloidal peeling head rotatably mounted in said frame, a motor in said frame drivingly connected with said peeling head, a spiral groove in said peeling head commencing at one end thereof and extending to the other and winding around said head, a saw chain in said groove, and means connecting the opposite ends of said saw chain with said head at the opposite ends thereof, one of said means comprising a plate mounted on the end of said head, means for adjusting said plate on the head in the direction of the circumference thereof



to adjust the tension on said saw chain, and means for clamping the plate in its adjusted position to the said head.

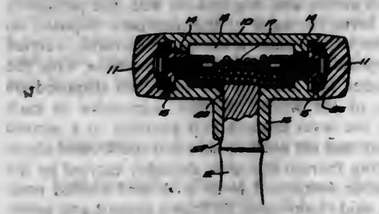
3,088,505
OVERHEAD LATHE CHARGER
Bernard A. Pearson, Seattle, Wash., assignor to Ederer Engineering Co., Seattle, Wash., a corporation of Washington
Filed Sept. 4, 1956, Ser. No. 607,785
13 Claims. (Cl. 144—209)



1. Mechanism for charging log blocks to the axially aligned chucks of a horizontal lathe, and comprising, in combination with the lathe chucks and with a landing for the log blocks, means for gripping a log block on said landing and raising the same to an elevated position, means for shifting the log gripping means so as to move the elevated log block into a pre-centered position whereat a given axis thereof parallels the axial line of the lathe chucks, light rays projected along axially coinciding lines corresponding to said pre-centered position onto the opposite ends of the elevated log block to guide the operator in the pre-centering operation, and means for moving the pre-centered log block bodily from its said pre-centered position to a centered position between the chucks along a plane of travel containing both the axis of the lathe chucks and the pre-centered axis.

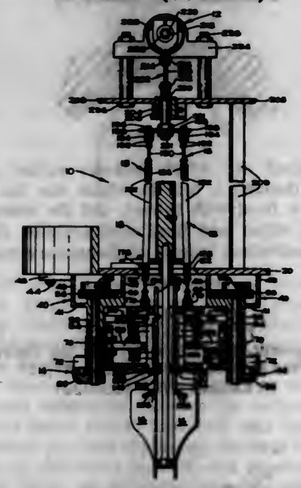
3,088,506
INDUSTRIAL HAMMER WITH REPLACEABLE HEADS
Andrew F. Bianchini, Providence, R.I. (Higgins Lane, Georgiaville, R.I.)
Filed Aug. 9, 1960, Ser. No. 48,533
5 Claims. (Cl. 145—36)

1. A dead blow hammer comprising a cylindrical housing having an integral depending socket portion intermediate its ends for receiving a handle, said housing having an integral wall portion spaced from each end forming a central chamber, a quantity of loose shot in said chamber, each end portion extending beyond said wall portion to form an annular recess, a molded plastic hammer head replaceably mounted in each recess, said head mounting including a central threaded opening in each wall portion and a lock member extending into said chamber and threadedly engaging said opening, said head



having an axially extended portion entering said lock member, and a hammer handle anchored in said depending socket portion.

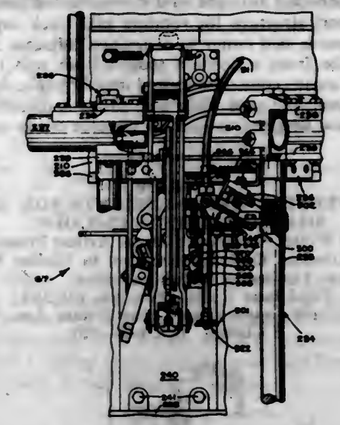
3,088,507
CITRUS FRUIT SECTIONIZING HEAD
Charles T. Mulford, Lakeland, Fla., assignor to FMC Corporation, a corporation of Delaware
Filed Feb. 8, 1960, Ser. No. 7,383
3 Claims. (Cl. 146—3)



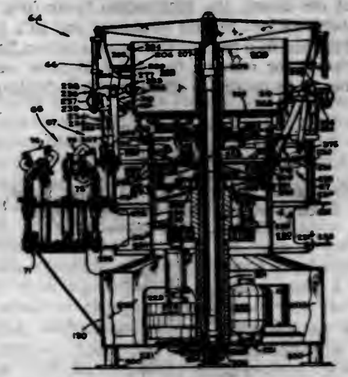
3. In a citrus fruit sectionizing machine having apparatus for concurrently reciprocating a plurality of sectionizing blades; the combination of a plurality of guiding units one for each blade, said guiding units each comprising means for holding a sectionizing blade, means adapted to swing the blade about a vertical axis, and means adapted to swing the blade about a horizontal axis; a head plate; a resilient metal member fastened to said head plate and to said reciprocating apparatus for reciprocating the head plate in a vertical direction; and flaxible means connected between said head plate and each of said guiding units, each of said flexible means comprising at least two strips of metal fastened together in end to end relationship one of said strips being oriented at approximately 90° to the other.

3,088,508
PEAR PEELING MACHINE
Sherman H. Creed, San Jose, and Sandor Csimma, Sunnyvale, Calif., assignors to FMC Corporation, a corporation of Delaware
Original application Nov. 30, 1956, Ser. No. 625,368, now Patent No. 2,979,093, dated Apr. 11, 1961. Divided and this application Nov. 20, 1959, Ser. No. 854,421
2 Claims. (Cl. 146—43)

1. In a fruit preparation machine, a rotary turret, a tubular body pivotally supported by said turret, a shaft journalled in said tubular body, a flexible drive member secured to one end of said shaft and extending outwardly from one end of said tubular body, a circular cutter concentric with and connected to said shaft at the other end thereof, a power driven rotary drive member concentric with and overlying said turret, said drive member including a cylindrical surface which is larger in diameter that the diameter of said turret, and a rotatable drive wheel secured to said flexible member and disposed in frictional driving engagement with said cutter.



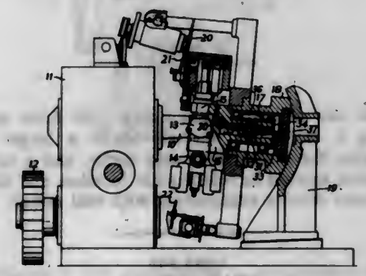
3,088,509
PEAR BOBBER
Sherman H. Creed, San Jose, and Sandor Csimma, Sunnyvale, Calif., assignors to FMC Corporation, a corporation of Delaware
Original application Nov. 30, 1956, Ser. No. 625,368, now Patent No. 2,979,093, dated Apr. 11, 1961. Divided and this application Nov. 20, 1959, Ser. No. 854,335
5 Claims. (Cl. 146—81)



1. In a firuit preparation machine, a support structure, an impaling tube mounted for rotation in said structure and adapted to support a pear impaled thereon with the stem-blossom axis of the pear disposed on the axis of said tube, a shaft journalled on said support structure adjacent said tube and being parallel therewith, a collar rotatable on said shaft, a cutter secured to said collar for movement toward and away from a pear on said tube, a cam follower connected to said collar, a track supporting shaft mounted for rotation in said structure and disposed adjacent to and parallel with said tube, a channel cam

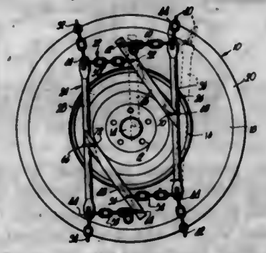
track secured to said track supporting shaft and having said cam follower disposed therein, cam actuated means connected between said track supporting shaft and said support structure for normally holding said cutter in a position spaced from said impaling tube, and resilient means connected between said cam actuated means and said support structure for rotating said track supporting shaft to move said cutter to a position adjacent said impaling tube from a position spaced from said impaling tube, and means connected to said impaling tube for rotating said impaling tube while said cutter is disposed close to said tube whereby to make a circular cut in the pear.

3,088,510
KNIFE-FEEDING ARRANGEMENTS FOR SICKLE-SHAPED KNIVES IN CUT-OFFS
Desmond Walter Molins and James Arthur Mason, Deptford, London, England, assignors to Molins Machine Company Limited, a British company
Filed June 7, 1961, Ser. No. 115,354
Claims priority, application Great Britain June 8, 1960
5 Claims. (Cl. 146—95)



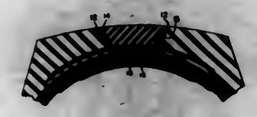
1. A knife-feeding device for a cigarette machine cut-off mounted on a rotatable shaft and having a knife, comprising a knife clamp frictionally gripping the knife, an abutment engaging the knife near its inner end, and means for moving the abutment to feed the knife outwards from the axis about which the cut-off rotates and against the friction of the clamp, the said means comprising a flexible member attached to said abutment and to a nut, and a screw threaded into the nut with means driven from said rotatable shaft for rotating the screw to cause said flexible member to be moved to effect the knife-feeding movement.

3,088,511
TIRE CHAIN ASSEMBLY
Truman A. Myers, R.F.D. 1, Hoyt, Kans.
Filed Sept. 25, 1961, Ser. No. 140,317
8 Claims. (Cl. 152—217)



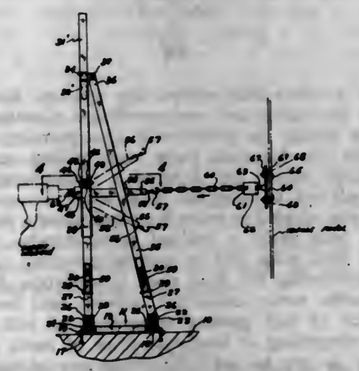
1. A chain assembly for a wheel having a tire thereon and movable over a surface, said assembly comprising a pair of traction-producing units, each including a pair of elongated members and a pair of chains interconnecting corresponding ends of said members, said units adapted to be positioned on said wheel on opposed sides of the axis of revolution thereof with the members of each unit being disposed on opposed sides of said wheel and the chains being disposed across and engageable with the periphery of the tire; a lever for each of the members disposed on one side of the wheel, each lever being shiftably carried by the corresponding member and engageable with the adjacent member for drawing the members disposed on said one side of the wheel together responsive to each movement of the lever from a first position to a second position; and means on each of said last-mentioned members for securing thereto the lever shiftably carried by the adjacent member when said lever is in said second position, whereby said chains may be drawn against and maintained in fixed locations on said periphery to thereby augment the traction of the wheel on said surface.

3,088,512
TIRE REPAIR
Paul S. Buckland, Akron, Ohio, assignor to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
Filed Aug. 9, 1961, Ser. No. 130,342
5 Claims. (Cl. 152—370)



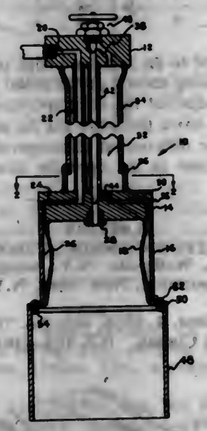
1. A repaired tire which includes rubber stock in an opening through a tire, in which tire the wall of the opening is lined with rubber, and the inner portion of the stock within said lined wall contains short, discontinuous, individual lengths of filamentary material.

3,088,513
PULLING DEVICE
Arthur Marquardt, 23121 Liberty, St. Clair Shores, Mich.
Filed Feb. 6, 1961, Ser. No. 87,227
13 Claims. (Cl. 153—32)



1. A pulling device comprising a rectangular base securable to a floor surface, a pair of parallel spaced, horizontally disposed guide tubes overlying the sides of the base and at their ends axially mounted and journaled thereon, a tubular support slidably mounted on each guide tube, a pair of longitudinally spaced holder rods secured to each support and extending upwardly thereof, a pair of elongated parallel spaced upwardly extending bracing tubes telescopically mounted at their lower ends upon the corresponding holder rods of each of said supports, one of said pairs of bracing tubes being inclined towards the other pair of bracing tubes, means adjacent their upper ends for releasably securing said bracing tubes together, a tubular cross head slidably and adjustably mounted over one of said pairs of bracing tubes, means fixedly securing said cross head in adjusted position, and a power operated pulling means swivelly mounted through said cross head and extending through the other pair of said bracing tubes.

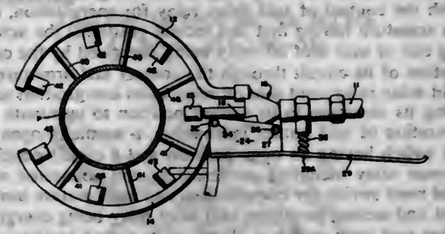
3,088,514
VAPORIZING BURNER WITH DISTRIBUTOR BLOCK
Earl Fredrick Fellbach, Broadway, Washington Township, N.J.
Filed July 28, 1959, Ser. No. 830,084
1 Claim. (Cl. 158—53)



A burner comprising a block member having apertures therein to permit the passage of air therethrough, a vaporizing chamber connected to said block member, a first conduit for connecting a source of liquid fuel to said vaporizing chamber through said block member, a nozzle centrally disposed on said block member and extending towards said vaporizing chamber for projecting a flame to heat said liquid fuel to transform said liquid fuel into a combustible gas, said vaporizing chamber being tapered to be out of the direct path of said projecting flame, a distributor block, an adjustable valve for controlling gas flow included in said distributor block, a second conduit of relatively large area for conducting said combustible gas from said vaporizing chamber to said valve, a third conduit of relatively small area with respect to said second conduit for conducting said combustible gas from said valve to said nozzle, a slip connector, said second conduit including a main tube member connected to said slip connector, said second conduit and said slip connector surrounding said first and third conduits, the main tube member being connected to said distributor block and the slip connector being connected to said block member.

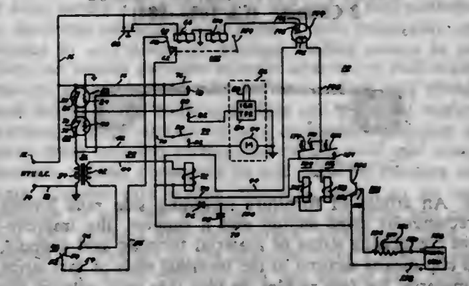
3,088,515
WORK HEATING APPARATUS
Joseph S. Fagan, Dana Point, Calif., assignor to Mutual Liquid Gas & Equipment Company, Inc., Gardena, Calif., a corporation of California
Filed Apr. 4, 1960, Ser. No. 19,567
1 Claim. (Cl. 158—107)

Heating apparatus of the character described comprising a fitting having a main gas inlet and a pair of gas outlets in communication with the inlet, a first arcuate-shaped manifold on said fitting and in communication with one of said outlets, a plurality of jets spaced along said first manifold and extending inwardly and radially thereof, a second arcuate-shaped manifold terminating in an apertured ball having its apertured portion in communication with the other outlet, a plurality of jets spaced along said second manifold and extending inwardly and radially thereof, said fitting being provided with a spherical seat for said ball, a ball retainer also having a spherical seat contacting said ball and secured



to said fitting, an O-ring seal interposed between said ball and said fitting, and means for pivoting said second manifold about an axis of said ball, said last-mentioned means comprising lever means pivotally mounted on said fitting and a sliding connection between said lever means and a portion of said second manifold.

3,088,516
SAFETY CONTROL DEVICE
Carmen L. Marcelliao and Walter P. Palanker, Camden, N.J., assignors of one-third to A. Morton Shapiro, Camden, N.J.
Filed May 16, 1958, Ser. No. 735,790
6 Claims. (Cl. 158—28)



1. A safety control device for use with a burner mechanism comprising, in combination, a flame sensing means for detecting predetermined flame conditions of a burner mechanism, a control unit connected with said sensing means including a first relay for terminating the operation of said burner mechanism in the absence of a flame, a second relay for terminating the operation of said burner mechanism in response to the flame of said burner mechanism exceeding a predetermined combustion rate, said first relay comprising an actuating coil, a contact, and an armature engaging the contact when the relay is deactivated; said second relay comprising an actuating coil, a contact, and an armature engaging the contact when the relay is activated; means activating said first relay during the operation of said burner mechanism upon the detection of a flame by said sensing means and activating said second relay during the operation of said burner when the flame of said burner mechanism exceeds a predetermined combustion rate; a delay relay connected with the contacts of said first and second relays for terminating the operation of said burner mechanism a predetermined time after the deactivation of said first relay or the activation of said second relay, said delay relay comprising a heating element, a contact and an armature normally disengaging said contact and engaging said contact a predetermined time after its heating element is ener-

gized, means connected with the heating element of said delay relay and completing a circuit for energizing said delay relay during the operation of said burner through either of the armatures of said first and second relays in engagement with its respective contact, a shut off relay for the burner mechanism having an actuating coil connected with the contact of said delay relay for energization, and an armature having first and second positions; the actuating coil of said shut off relay being energized by the completion of its circuit through the contact and armature of said delay relay; said shut off relay upon energization actuating its armature to its second position to terminate the operation of said burner mechanism, a normally open reset switch having an open position and a closed position, a reset relay including an actuating coil connected with said reset switch for energization, and an armature having first and second positions; said reset relay being energized when said reset switch is placed in its closed position; the armature of said reset relay assuming its first position upon energization of said reset relay; the armature of said reset relay being coupled with the armature of said shut off relay so that the armature of said shut off relay assumes its first position when said reset relay is energized and the armature of said reset relay assumes its second position when said shut off relay is energized.

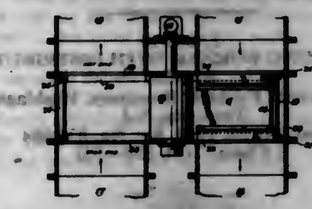
3,088,517
WEBBING STRIP CONNECTOR FOR METALLIC FURNITURE
Kenneth Schwartz and Robert E. Sussman, Miami, Fla., assignors to Medallion Corp., Hialeah, Fla., a corporation of Florida
Filed Nov. 8, 1961, Ser. No. 150,952
2 Claims. (Cl. 160—184)



1. An article of furniture including side rails having a rectangular cross-section and a support, the improvement comprising strips of material forming said support, and clip means secured to the terminal ends of said strips of material for free receipt on said side rails without the use of extraneous fasteners, each of said clip means comprising a web including spaced flanges extending therefrom and forming adjacent channels opening in a common direction from said web, said strips being terminally secured in one of said channels, said other channel conforming to a portion of said side rails and being substantially filled thereby and being removably received over said rails, said strips being wrapped beneath said rails over the outer surface of said rails and over said clip means and said flanges for maintaining said support on said rails.

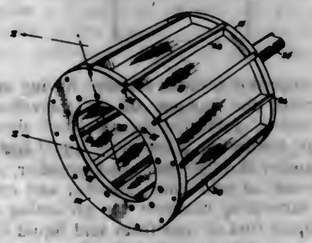
3,088,518
DIFFERENTIAL TEMPERATURE COMPENSATOR FOR RADIAL SEALS
Walker H. Rayburn, Scio, N.Y., assignor, by mesne assignments, to Combustion Engineering, Inc., a stock corporation of Delaware
Filed Oct. 25, 1960, Ser. No. 64,793
4 Claims. (Cl. 165—9)

1. A regenerative heat exchanger having a rotor including a cylindrical rotor shell joined to a rotor post by radial partitions to form sectorial compartments that carry a mass of heat transfer material, and a cylindrical housing surrounding the rotor provided at opposite ends thereof with end plates including imperforate portions located between circumferentially spaced apertures that direct the flow of heating fluid and fluid to be heated through the regenerative heat transfer material carried by the rotor, radial sealing means bridging the space between an end edge of each radial partition and the adjacent end plate to preclude fluid flow therebetween, said sealing means including radially extending leaf members pivotally attached



at one end thereof to an axial end edge of said radial partition, and actuating means at the distal end of said leaf members lying adjacent the inlet aperture for the heating fluid arranged to move them toward the adjacent end plate in response to the differential of temperature that distorts the radial partitions in the opposite direction.

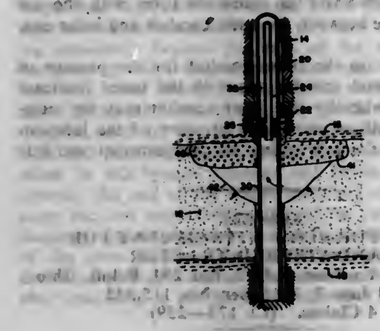
3,088,519
ROTOR CONSTRUCTION
Charles A. Lyle, Wellsville, N.Y., assignor to The Air Preheater Corporation, New York, N.Y., a corporation of New York
Filed Sept. 9, 1958, Ser. No. 759,890
3 Claims. (Cl. 165—10)



1. A rotor for a regenerative heat exchanger comprising an imperforate circular end plate and an axially aligned annular end plate arranged in spaced parallel planes; a first series of uniformly spaced diaphragm bars fixedly secured at opposite ends to the annular end plate and the circular end plate to provide therewith a reel-like framework; a continuous annular heat absorbent matrix carried by said framework having radial perforations that permit the flow of gas and air therethrough; an annular gasket between each end of said annular matrix and its adjacent end plate; a second series of uniformly spaced diaphragm bars radially aligned with said first series of diaphragm bars and lying in abutment with an annular surface of said matrix, said second series of diaphragm bars having axially movable connections between their ends and the adjacent end plates to permit axial elongation of said bars without inducing deformation of said framework.

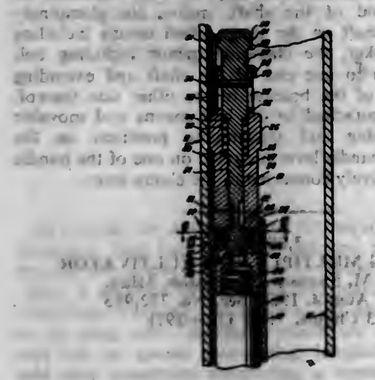
3,088,520
PRODUCING FLUID FROM AN UNCONSOLIDATED SUBTERRANEAN RESERVOIR
Alexander B. Hildebrandt, Tulsa, Okla., assignor, by mesne assignments, to Jersey Production Research Company
Filed Mar. 7, 1958, Ser. No. 719,951
8 Claims. (Cl. 166—33)

8. A method of completing and producing a well that penetrates an unconsolidated subterranean formation containing a producible fluid which comprises: consolidating a wafer-shaped portion of said formation about said well, thereafter forming in the formation immediately below said wafer-shaped portion a cavity having a wall sloping



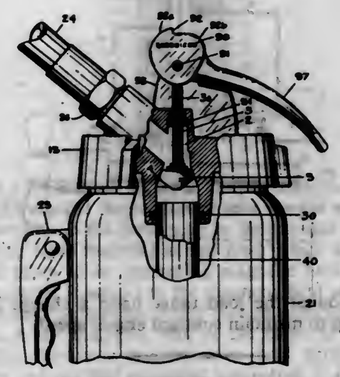
upwardly and outwardly from the well, said cavity surrounding said well and in communication therewith and lying wholly beneath said wafer, and then producing said producible fluid through said well from said cavity.

3,088,521
WELL TOOLS
Shelby J. Graves, Irving, Tex., assignor to Otis Engineering Corporation, Dallas, Tex., a corporation of Delaware
Filed Apr. 7, 1960, Ser. No. 20,606
8 Claims. (Cl. 166—214)



1. A latch including: a body having a longitudinal bore and a lateral bore intersecting said longitudinal bore; a latch pin disposed in said lateral bore for movement between an extended latching position wherein an outer end of said latch pin extends outwardly of the body and a retracted position, said latch pin having a bore extending transversely therethrough intermediate its ends and disposed perpendicularly relative to the axis of said lateral bore; and a plunger movably disposed in said longitudinal bore and extending through said bore of said latch pin, said plunger having a reduced portion movable into registration with said latch pin to permit said latch pin to move in said lateral bore to a retracted position when said plunger is in one position relative to said body, said plunger when in another position in said body engaging said pin to prevent movement of said latch from latching position to retracted position.

3,088,522
MEANS FOR OPERATING A FIRE EXTINGUISHER
Robert J. Zellner, Marinette, Wis., assignor to Ansul Chemical Company, Marinette, Wis., a corporation of Wisconsin
Filed Dec. 24, 1959, Ser. No. 861,916
4 Claims. (Cl. 169—31)

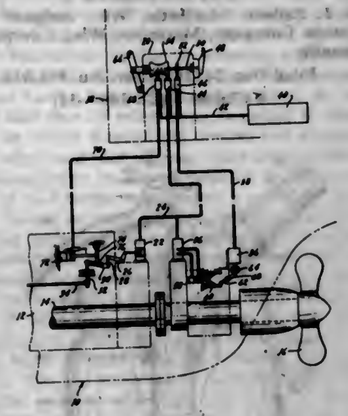


1. A fire extinguisher discharge apparatus comprising: a container having fire extinguisher agent under pressure, a head having a bore therein at one end of said container, a discharge passage in said head, a hose removably connected to said discharge passage, sealing means in said bore, an axially movable plunger attached to said sealing means, a cam located adjacent one end of said plunger and having a first working surface and a second working surface, a third surface on said cam which abruptly departs from said first surface and merges with said second surface, a lever connected to said cam for rotating said cam whereby said sealing means is moved to an open position by said first working surface engaging and moving said plunger and said sealing means can then be moved by pressure in the container into a desired open position in which position said one end of said plunger engages said third surface, said lever being located with respect to said hose so that a portion of said lever is adapted to engage said hose after said sealing means has been moved to the desired open position to thereby prevent movement of said cam with respect to said plunger, said second surface being adapted to engage said plunger upon rotation of said arm to disengage said plunger and said third working surface whereby said cam can be returned to its original position.

3,088,523
MARINE ENGINE CONTROL SYSTEM WITH VARIABLE PITCH PROPELLER
Richard D. Smalley and Warren H. Krogstad, Milwaukee, Wis., assignors to Nordberg Manufacturing Company, Milwaukee, Wis., a corporation of Wisconsin
Filed Apr. 11, 1960, Ser. No. 21,330
11 Claims. (Cl. 170—135.74)

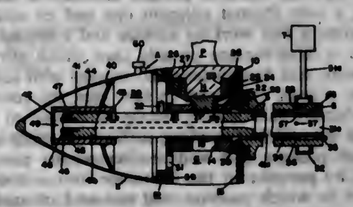
11. A control system for an engine driving a variable pitch propeller, including means for supplying fuel to the engine in quantities in accordance with any desired speed at varying load requirements, means for varying the pitch of the propeller, means for automatically varying the pitch of the propeller upon a change in load requirement at a particular fuel setting over only a portion of the load range to maintain constant engine speed with a constant

quantity of fuel being supplied to the engine, and means for varying the amount of fuel being supplied over the



other portion of the load range upon a change in load requirement to maintain constant engine speed.

3,088,524
PRESSURE EQUALIZER FOR CONTROLLABLE PITCH PROPELLER
John W. Barden, Falls Church, Va., assignor to the United States of America as represented by the Secretary of the Navy
Filed Nov. 27, 1962, Ser. No. 240,462
3 Claims. (Cl. 170—160.23)
(Granted under Title 35, U.S. Code (1952), sec. 266)



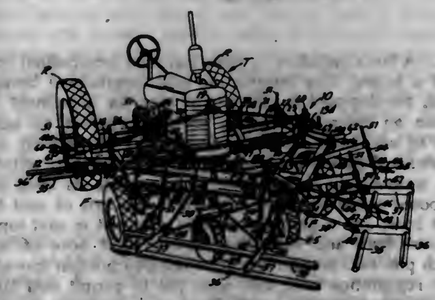
1. Marine propulsion equipment comprising
(*a*) a propeller hub having an axial bore and a group of radial cavities each having mounting structure for a propeller device;
(*b*) a casing having an open inner end secured to one end face of the hub and a closed outer end;
(*c*) a transverse partition in the casing spaced from said one end face of the hub and having a central opening therein;
(*d*) a cylindrical housing extending axially through the central opening in the partition having an open inner end facing said one end face of the hub and a closed outer end;
(*e*) said partition and housing providing a lubricating oil compartment in communication with the hub axial bore;
(*f*) apertures in said one face of the propeller hub providing communication between the lubricating compartment and said cavities;
(*g*) an outer conduit secured to the other end face of the hub and communicating with the hub axial bore;
(*h*) an inner conduit having one end portion concentric with the outer conduit providing an annular space therewith;
(*i*) said inner conduit extending through the hub axial passageway in spaced relation therewith and having its other end portion within said cylindrical housing;
(*j*) sealing means between said other end portion of the inner conduit and the cylindrical housing providing an outer lubricant chamber in communication with said inner conduit;
(*k*) an oil reservoir in communication with the annular space between the outer conduit and inner conduit; and
(*l*) apertures in the inner conduit for the passage of oil from said annular space to the outer lubricant chamber, whereby the inner conduit may be reciprocated without increasing pressure of the lubricating oil in the lubricating oil compartment and hub cavities.

3,088,525
CLAMP FOR PLOW ATTACHMENT FOR HAND-STEERED TRACTOR
Frederick C. Eastham, R.D. 2, Box 291, Beloit, Ohio
Filed June 7, 1961, Ser. No. 115,342
4 Claims. (Cl. 172—259)



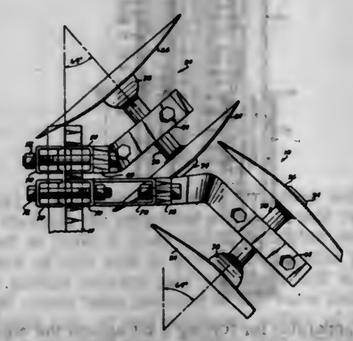
1. In a garden tractor having a pair of wheels, a power unit for driving the wheels, a pair of handle bars extending upwardly and rearwardly from the wheels, a longitudinal shaft extending forwardly from the wheels, and a gardening implement mounted on the shaft between the power unit and wheel means; the improvement comprising gauge-wheel means vertically movably mounted on the forward end of the shaft, means for clampingly mounting the shaft on the gauge-wheel means including a vertical bracket, the clamping means including bolt means attached to one end of the shaft and extending from one side of the bracket to the other side thereof, a clamp lever attached to the bolt means and movable between clamping and unclamping positions on the bracket, and a handle lever mounted on one of the handle bars and operatively connected to the clamp lever.

3,088,526
FOLDING MULTIPLE ROW CULTIVATOR
Gust M. Swenson, Crookston, Minn.
Filed Aug. 4, 1958, Ser. No. 752,955
3 Claims. (Cl. 172—297)



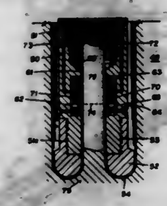
1. A cultivator attachment for a tractor, comprising a pair of sectionalized frame structures attachable to the tractor to extend laterally outwardly therefrom, each of said frame structures having an inner section attached to the tractor and an outer section, said sections having rigid elongate frame members spaced from each other in a fore-and-aft direction, the frame members of the inner and outer sections being disposed in alignment with each other, means pivotally connecting the foremost frame members of the inner and outer sections together, the rearmost frame members of the inner sections extending outwardly beyond the ends of the foremost frame members of the inner sections and said last mentioned rearmost frame members abutting the corresponding rearmost frame members of the outer sections in end-to-end relation, each of the frame structures having a pair of rigid and parallel diagonal frame elements engaging each other in side-by-side relation and extending diagonally between the end of the frame members of the inner and outer sections respectively adjacent the pivot means, said diagonal frame elements preventing rearward swinging of the outer sections and permitting forward swinging thereof, and means on said sections for vertically adjustably mounting a plurality of cultivator spades.

3,088,527
DISC RIDGER
Alvan V. Burch, Evansville, Ind., assignor to Burch Plow Works, Inc., Evansville, Ind., a corporation of Indiana
Filed Aug. 31, 1960, Ser. No. 53,191
1 Claim. (Cl. 172—579)



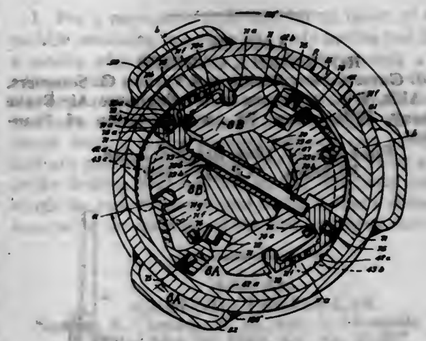
In a ridger for cultivating and ridging soil, an elongated transverse tool bar, a tractor hitching means mounted thereon for connection to a tractor drawbar whereby the ridger is moved over the soil and manipulated, means comprising a plurality of concave disk assemblies mounted on gang angle standards which are secured to said tool bar in spaced relationship longitudinally thereof, said disk assemblies comprising a single pair of disks mounted on said tool bar at the opposite ends thereof, said disks being angularly disposed with respect to the longitudinal axis of said tool bar and having their concave disk surfaces facing towards the middle section of the tool bar, and multiple sets of concave disks spacedly arranged on said tool bar between said single pairs of disks, said sets of disks constituting double pairs of disks and having the first pair disposed so that the axis of rotation of the disks is substantially at right angles to the axis of rotation of the second pair of disks with the first pair of disks disposed forwardly of the second pair of disks and the concave disk surfaces of both pairs of disks facing the tool bar, said pairs of disks of each set being so related that the axis of rotation of the forward pair of disks intersects the axis of rotation of the second pair of disks between the disks of said second pair, whereby a plurality of parallel ridges and valleys are formed in the soil as the ridger is drawn over the soil.

3,088,528
MAGNETIC ORIENTATION OF SAMPLES OF EARTH MATERIAL
Bob J. Patton and John L. Fitch, Dallas, Tex., assignors to Socony Mobil Oil Company, Inc., a corporation of New York
Filed Dec. 22, 1960, Ser. No. 77,545
14 Claims. (Cl. 175—44)



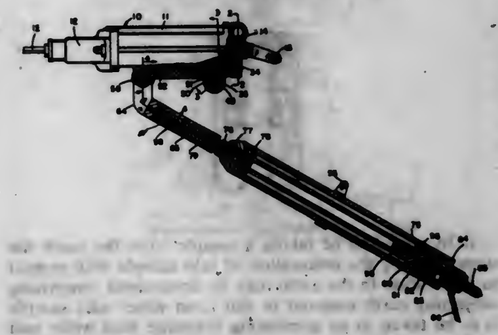
1. In a method of taking a sample from the earth the steps whereby the orientation of said sample with respect to its position in the earth may be determined comprising subjecting earth material in situ from which said sample is to be taken to an alternating magnetic field while said earth material is subject to the magnetic field of the earth, said alternating magnetic field having sufficient strength relative to the magnetic field of the earth to impart anhysteretic remanent magnetism to said earth material, whereby anhysteretic remanent magnetism is imparted to said earth material and said magnetism has a direction equal to that of the magnetic field of the earth, and thereafter removing said sample from the earth.

3,088,529
FLUID-DRIVEN ENGINE
Roy H. Cullen, Leslie D. Richards, and Herbert H. Hodgeman, Houston, Tex.; said Richards and Hodgeman assignors to said Cullen
Filed Sept. 23, 1957, Ser. No. 685,605
27 Claims. (Cl. 175—107)



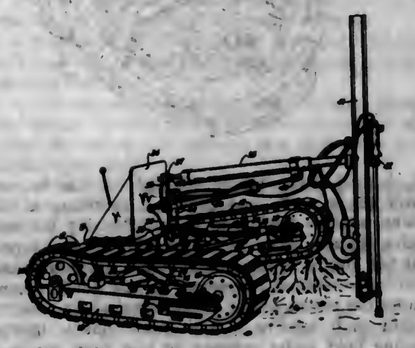
1. A fluid-driven motor adapted for use in rotating a drill bit in wells and the like, including a tubular housing, a shaft positioned in said housing for rotation relative thereto, rotor means slidably mounted on said shaft for limited relative longitudinal movement and for imparting rotational movement to said shaft, means for limiting the extent of the longitudinal sliding movement of said shaft relative to said rotor means, means for directing fluid under pressure to said rotor means from the upper end of the tubular housing to impart rotation to said rotor means, and means for engaging said shaft at each end thereof within said housing to obtain a limited axial adjustment of said shaft relative to said rotor means.

3,088,530
FLUID ACTUATED FEEDING AND SUPPORTING LEG FOR ROCK DRILLS
Jacob E. Feucht, Garfield Heights, Ohio, assignor, by mesne assignments, to Westinghouse Air Brake Company, a corporation of Pennsylvania
Filed June 15, 1953, Ser. No. 361,630
2 Claims. (Cl. 175—124)



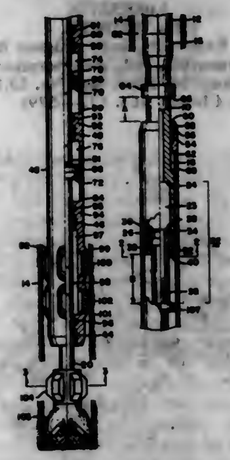
1. A drill rig comprising a pressure fluid actuated drilling motor, a pressure fluid actuated feed leg for said motor including a feed cylinder and a piston longitudinally movable therein having a rod extending through one end thereof, a terminal for said rod extending at an obtuse angle therefrom, connecting means depending from the underside of said motor pivotally connected to said terminal by a pivot pin transversally of said motor, a feed controlling valve transversally within the underside of said motor, an operation controlling throttle for said motor having pressure fluid supplied thereto, means within said throttle for controlling supply of pressure fluid to said feed controlling valve through fluid conveying means extending therebetween, and means within the motor wall and feed leg and extending through said pivot pin controlled by said valve for supplying pressure fluid therefrom to said feed cylinder.

3,088,531
ROCK DRILL CARRIER
Verne M. Garrett, New Berlin, and Vernon G. Sommers, West Allis, Wis., assignors to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania
Filed Jan. 21, 1960, Ser. No. 3,918
3 Claims. (Cl. 175—201)



1. A rock drill cruiser comprising, a pair of laterally spaced elongated frames each having an endless ground engaging track thereon, a platform disposed between said frames and having a rock drill assemblage mounted thereon and transportable by said tracks, coaxial shafts pivotally suspending said frames from the opposite sides of said platform for independent swinging of the frames relative to the platform about a common axis, means carired by said shafts for driving said tracks, a pivot pin disposed in axial alignment with said shafts and being fixedly suspended from a medial portion and within the marginal confines of the platform between the shafts, rigid beams swingably connecting said pivot pin with said frames remote from said shafts, a hydraulic equalizer unit connecting said platform directly with medial portions of each of said beams, each of said units having a piston reciprocable within a liquid filled cylinder and coacting with the liquid to provide a piston displacement chamber, and a pressure equalizing conduit connecting said displacement chambers of said units.

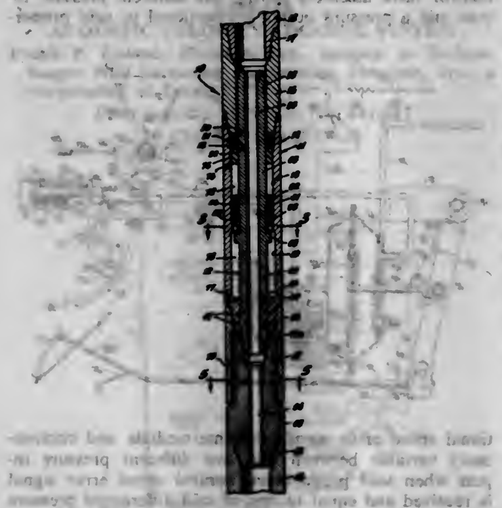
3,088,532
BIT LOADING DEVICE
Jackson M. Kellner, Tulsa, Okla., assignor to Jersey Production Research Company, a corporation of Delaware
Filed Dec. 27, 1960, Ser. No. 78,618
6 Claims. (Cl. 175—230)



1. An apparatus for forcing a bit against the bottom of a borehole comprising: an upper hollow shaft section; a lower hollow shaft section; a telescoping joint section connecting said upper shaft section and said lower shaft section in a longitudinally slidable and non-rotatable relationship, the longitudinal movement of said upper shaft and said lower shaft relative to each other being limited in each direction longitudinally; a housing member mounted around said upper shaft and said lower shaft in a longitudinally slidable and rotatable relationship therewith; pushdown means positioned between said lower shaft section and said housing operable to exert a force on said lower shaft section longitudinally thereof in the direction of said bit and to exert the reaction thrust of such force on said housing member; means to transfer the force on said lower shaft section to said bit; anchor means attached to said outer housing and of a character to transfer the reaction thrust to the borehole wall.

3,088,533
SLEEVE VALVE AND OIL WELL TOOL EMBODYING THE SAME
Wayne N. Sutliff, 2901 Glenwood Circle, Bakersfield, Calif.
Filed Apr. 27, 1959, Ser. No. 809,153
9 Claims. (Cl. 175—297)

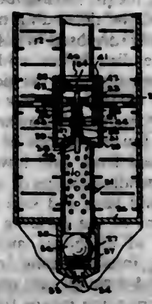
1. A sleeve valve adapted to be axially shiftable on the inner mandrel of an oil tool having telescopically related inner and outer mandrels confining a body of liquid therebetween, said inner mandrel having a stop at one end of the valve and an annular shoulder with a ground seat at the other end of said valve, said outer mandrel having a bore within which said valve slidably fits to effect a retarding action on telescopic movement between said mandrels in a direction which frictionally urges said valve against said ground seat, by limiting the flow of liquid past said valve to that which will flow through the annular peripheral passage between said valve and said bore, said sleeve valve comprising an annular sleeve having a ground face at one end thereof in a plane normal to the axis of said sleeve, said face being adapted



to make a fluid-tight fit with said ground seat on said inner mandrel, the peripheral surface of said valve being adapted to make a loose sliding fit within said retarding bore of said tool to provide an annular peripheral liquid passage between said valve and said bore, relief passage means being provided in said valve leading from an interior area of said peripheral surface of said valve located a relatively short distance from the end of said valve having said ground face, said relief passage means communicating with a portion of said end of said valve disposed radially outwardly from the area thereof covered by contact between said face and said ground seat whereby liquid may readily escape from said peripheral passage through said relief passage means.

3,088,534
WELL POINT
George A. Thompson, P.O. Box 702, Daytona Beach, Fla.
Filed May 18, 1962, Ser. No. 195,781
7 Claims. (Cl. 175—314)

1. In a well point, an elongated main vertical casing formed with spaced horizontal relatively narrow slots, said casing having top and bottom walls, an imperforate tube mounted axially in said casing and extending through said top wall, a perforated tube mounted axially in the lower portion of said casing, a depending nozzle secured centrally to said bottom wall and receiving the bottom end of said perforated tube, a float ball movably disposed in said nozzle and being sealingly engageable with the bottom rim of said perforated tube, a valve housing connecting the top end of said perforated tube and the bottom end of said imperforate tube, a vertical frame reciprocably mounted in said valve housing, means on the frame sealingly engageable with the top wall of the housing to seal the housing relative to said imperforate tube, means biasing said frame upwardly towards sealing position, the frame being movable downwardly responsive



to liquid pressure in said imperforate tube, and upwardly movable normally closed valve means on said frame opening responsive to suction in said imperforate tube.

3,088,535
INSERTED CUTTING FORMATIONS FOR PERCUSSIVE ROCK DRILL BITS
Rees W. Rees, Parry Road, Nuffield Township, Springs, Transvaal, Republic of South Africa
Filed Apr. 6, 1960, Ser. No. 20,464
Claims priority, application Republic of South Africa Sept. 15, 1959
6 Claims. (Cl. 175—410)



1. For a percussive rock drill bit an insert of tungsten carbide consisting in a plate-like body having two flat sides, a cutting edge formed as a wedge to provide a drilling edge, a base and a reaming edge which is curved to the arc of a circle to be convex outwardly and joining the base at a corner which is an obtuse angle, the arc being struck from a centre position between two parallel lines that are parallel to the base, the first line being a tangent to the drilling edge and the second line being spaced towards the base from the root of the wedge a distance that is equal to the distance of the first line from such root.

3,088,536
GROUND CUSHION CAR
Norman B. Chezem, N. 30, Apt. A., Memphis, Tenn.
Filed May 26, 1960, Ser. No. 32,057
3 Claims. (Cl. 180—7)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A ground-cushion vehicle comprising a housing having a base and air intake means, air-pump means mounted in said housing and communicating with said air intake means, laterally spaced pairs of longitudinally extending opposing discharge means extending through said base, said discharge means in each pair opposing each other,

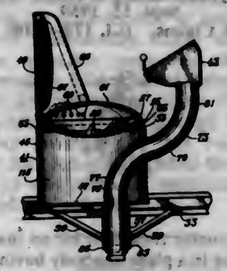
a dividing means separating each pair of said discharge means and extending into said housing and vertically spaced from said air intake and pump means, said housing and said dividing means having longitudinally extending depending means, the depending means of said housing including laterally disposed walls having the lower portions thereof extending below said base and directed inwardly and downwardly and the depending means of said dividing means extending below said base and provided with means extending downwardly and outwardly toward each of said lower portions of said housing walls, said base being spaced from said lower portions of said walls and of said depending means of said dividing means, the space between said base and said lower portions and said depending means of the dividing means constituting said opposing pairs of discharge means whereby air is drawn through said intake means into the interior of said housing, is forced through said discharge means, and is directed by said depending means for forming opposing jets of air below said base between said opposing discharge means creating laterally separated air cushions on each side of said dividing means thereby enhancing the stability of the vehicle.

3,088,537

VEHICLE OPERATOR'S STATION

Robert G. LeTourneau, P.O. Box 2307, Longview, Tex.

Filed May 31, 1961, Ser. No. 113,890
9 Claims. (Cl. 180—77)



1. An operator's station for an electrically powered and controlled work vehicle comprising: a control apparatus compartment having an open top, a platform hingedly secured to said compartment and serving as a top closure for same, a hub fixed to said platform and having a central bore communicating with the interior of said compartment, an operator's seat, conduit means fixed to said seat and coacting with said hub to allow pivoting movement of said seat on said hub about the hub central axis, said conduit means having a portion extending forwardly and upwardly from the front of said seat, a control panel mounted on said conduit means at the upper end portion thereof, with said conduit means communicating between said control panel and said compartment.

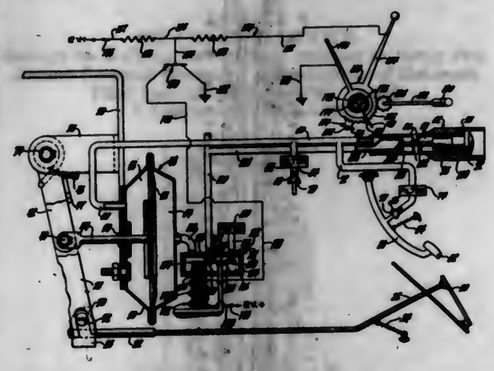
3,088,538

VEHICLE SPEED WARNING AND CRUISE CONTROL SYSTEM

John B. Brennan, Flint, John B. Force, Bancroft, Eugene C. McMurray and John A. McDougal, Flint, and Henry H. Harada, Grand Blanc, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Nov. 7, 1960, Ser. No. 67,820
3 Claims. (Cl. 180—82.1)

1. A speed warning system for a variable speed unit having an operator operated unit speed controller, said system comprising, a speed transducer assembly having an actual unit speed input and a selective desired speed input and establishing a constant speed magnitude zone of proportional speed of less speed magnitude than the magnitude of speed unit variation and being substantially centered on said selective desired unit speed input and movable therewith as different desired unit speed inputs are selected, said assembly producing a continuously variable proportional control speed error signal output when said actual speed input is within said zone and a constant overspeed error signal output when said actual speed input is above said zone and a constant underspeed error signal output when said actual speed input is below said zone, a unit speed warning mechanism connected with said speed transducer assembly to receive said signal outputs therefrom and including a pressure control valve assembly having two different pressure inputs and a pressure output proportional to said propor-



tional speed error signal and intermediate and continuously variable between said two different pressure inputs when said proportional control speed error signal is received and equal to one of said differential pressure inputs when said constant overspeed error signal is received and equal to the other of said differential pressure inputs when said constant underspeed error signal is received, said speed warning mechanism further including a pressure actuated motor responsive to said pressure output and adapted to be connected with said unit speed controller to exert a speed decreasing force thereon positively sensible by the unit operator for warning the unit operator when the actual unit speed increases to equal the selected desired unit speed put into said speed transducer assembly.

3,088,539

VEHICLE INSTRUMENT AND DASHBOARD ASSEMBLIES

Thomas O. Mathues, George W. Beck, Raymond C. Davis, and Robert W. Forward, Dayton, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Original application Sept. 9, 1959, Ser. No. 838,944, now Patent No. 3,042,137, dated July 3, 1962. Divided and this application Nov. 18, 1960, Ser. No. 70,239
7 Claims. (Cl. 180—90)



1. A collapsible instrument-mounted panel structure per se to complement and be secured to a vehicle body

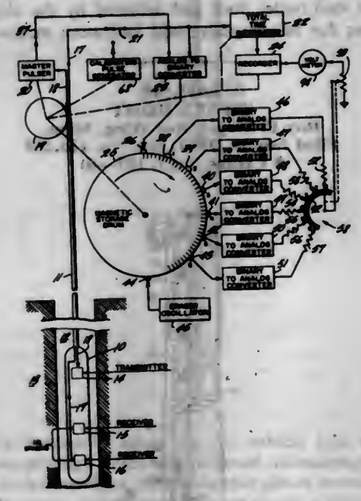
interiorly thereof, comprising, a non-metallic covering of sheet material having a contoured shape including a shelf portion and a laterally projecting curved cushion portion, an insert means which per se is structurally to be supported directly as to the vehicle body though necessarily adapted to be readily deformed when subjected to a predetermined load, and a foam material provided on opposite sides of said insert means so as to fill completely at least space in between said covering and said insert means which also provides instrument device support directly free of any solid continuous sheet metal so as to permit collapse of the contoured shape curved cushion in case of accident impact.

3,088,540

ACOUSTIC VELOCITY LOGGING SYSTEM

Frank P. Kokesh, Houston, Tex., assignor to Schlumberger Well Surveying Corporation, Houston, Tex., a corporation of Texas

Filed Sept. 21, 1959, Ser. No. 841,267
10 Claims. (Cl. 181—.5)



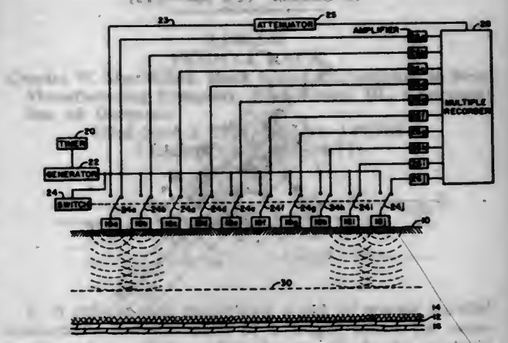
1. An apparatus for measuring the acoustic wave travel time in the earth formations surrounding a bore comprising a support adapted to be lowered into said bore, at least one acoustic wave transmitter and two acoustic wave receivers mounted in longitudinally spaced apart relation on said support, means connected to said transmitter for energizing said transmitter at equal depth intervals in said bore, said transmitter being adapted to generate an acoustic wave in said earth formations upon energization which reaches said receivers in succession, signal storage means synchronized with said energizing means, means coupled to said receivers for impressing a series of signals on said storage means as said receivers are passed along the bore, each of said signals being representative of the time required for an acoustic wave to travel the distance between said receivers, means coupled to said storage means for simultaneously recovering a plurality of said signals from said storage means at a later instant in time, and adding means coupled to said recovering means for determining the acoustic wave travel time over a distance in said formations corresponding to an integral multiple of the distance between said receivers.

3,088,541

SEISMIC EXPLORATION

Warren A. Alexander and Joseph F. Bayhi, Tulsa, Okla., assignors to Jersey Production Research Company, a corporation of Delaware

Filed Nov. 24, 1959, Ser. No. 855,069
4 Claims. (Cl. 181—.5)



1. A method of determining subsurface irregularities using at least two seismic transducer units placed on the surface of the earth and a recording unit which comprises: energizing the first of said seismic transducer units; energizing the second seismic transducer unit the time T_0 after the energization of said first seismic transducer unit in which

$$T_0=\frac{s}{V_1}$$

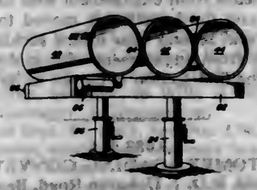
times sin θ in which s is the distance between said transducer units, θ is the selected angle of transmission and V_1 is the velocity of the near surface material; thereafter connecting said transducer units to said recording means whereby reflection from said transmitted energy is detected by said transducer units and is then recorded; and repeating the energization of the first and second transducer units for a different value of T_0.

3,088,542

PIVOTALLY CONNECTED AND SECTIONALIZED FIRE CHUTE ARRANGEMENT

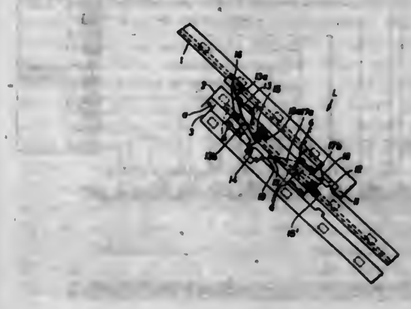
Clas Elmer Johnson and Frederick C. Klingelhofer, both of 8622 Quentin Ave., Baltimore, Md.

Original application Oct. 5, 1959, Ser. No. 844,574, now Patent No. 3,027,966, dated Apr. 3, 1962. Divided and this application Apr. 7, 1960, Ser. No. 20,619
2 Claims. (Cl. 182—48)



1. A pair of spaced independently operated elevating jacks arranged to be mounted on an automotive type vehicle, a substantially elongated shaped base mounted on the top of said pair of spaced jacks and arranged to be canted by said spaced elevating jacks, a tubular chute positioned on top of said base substantially parallel thereto and formed of a plurality of pivotally connected sections arranged to be mounted end to end to form a continuous tube, and means on said base for moving said continuous tubular chute laterally on said base.

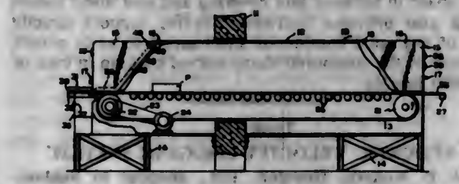
3,088,543
EXTENSIBLE MULTI-SECTION SUPPORTING STRUCTURES
Hermann Möller, Cologne-Merheim, Germany, assignor to Klockner-Humboldt-Deutz A.G., Cologne, Germany
Filed July 20, 1960, Ser. No. 44,212
Claims priority, application Germany Apr. 16, 1960
15 Claims. (Cl. 182—211)



1. In an extensible supporting ladder, in combination, a first, a superimposed second and a superimposed third ladder section, each section having a forward end and a rear end and said third section located between said first and second sections, each of said sections having two spaced side walls and transversely extending rungs therebetween; means for slidably guiding said first and third sections between an extended position in which the rear ends of said first and third sections are respectively adjacent to the forward ends of said third and second sections, and a retracted position in which the forward ends of said first and third sections are respectively adjacent to the forward ends of said third and second sections; and means for controlling the sequence of movements of said first and third sections with respect to said third and second sections, respectively, said controlling means comprising first and second locking means rockably mounted at the forward end of said third section, first and second detent means respectively mounted at the rear end of said first section and at the forward end of said second section, said first detent means engaging with said first locking means when the first section is moved to its extended position and said third section is at least slightly displaced from its retracted position, and said second detent means engaging with said second locking means when the third section is moved to its retracted position, and first and second cam means respectively mounted at the forward end of said second section and at the rear end of said first section, said first cam means rocking the first locking means from engagement with said first detent means when said third section is moved to its retracted position, and said second cam means rocking the second locking means from engagement with said second detent means when the first section is moved to its extended position.

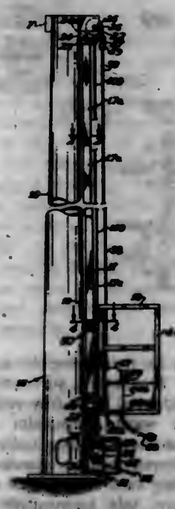
3,088,544
CUSTOMER LOADING CONVEYOR
Wesley W. Field, R.D. 1, Dehaven Road, Beaver Falls, Pa.
Filed July 12, 1960, Ser. No. 42,353
14 Claims. (Cl. 186—1)

13. A conveyor assembly for transporting articles of purchase from an inspection station within a building through a vertical partition wall to a customer loading station, such as an automobile port comprising, a chute extending through a vertical partition wall, an inlet door secured to an inlet end of said chute adjacent the inspection station, an outlet door secured to an outlet end of said chute adjacent the customer loading station, an endless conveyor positioned within said chute, drive means for actuating said conveyor, indicating means adjacent the inlet and outlet ends of said chute for indicating when said chute is in use, a normally open start button positioned adjacent the inlet end of said conveyor for simultaneously energizing said drive means and said indicating means, a normally closed limit switch adjacent the outlet end of said conveyor for energizing said drive



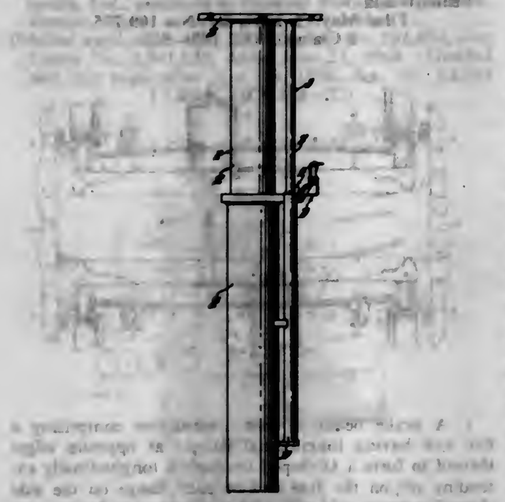
means, means for urging said limit switch to an open position to de-energize said drive means when said outlet door is in a closed position, means for urging said limit switch to an open position when an article conveyed on said conveyor belt reaches a pre-determined position adjacent the outlet end of said chute, and a trip switch adjacent said outlet door and actuated by the closing of said door for de-energizing said indicating means.

3,088,545
TOWER HOIST
Roy E. Meyer, Red Wing, Minn.
Filed July 24, 1961, Ser. No. 126,235
8 Claims. (Cl. 187—6)



1. Apparatus for carrying personnel up and down a tower, comprising a single cable having an upper end secured in stationary position to the top of the tower and hanging downwardly therearound, a personnel-carrying car having means guiding the car along the tower, a power unit in the car and including a pair of cable winding drums with parallel axes lying in a common substantially horizontal plane, said drums having outer peripheries in confronting relation with each other and having annular cable grooves in said peripheries and also having annular ridges between the grooves, the grooves of one drum confronting the ridges of the other drum whereby the grooves of the drums are in offset relation with respect to each other, the upper and lower ends of the cable extending upwardly and downwardly respectively from spaced first and second grooves of the same drum, the cable being wrapped in convolutions encompassing both drums and lying in adjacent grooves of the drums between said first and second grooves, a pressure roller confronting said second groove and engaging the cable lying therein for holding the cable tightly against the drum adjacent the downwardly extending end of the cable, spring means urging said pressure roller against the cable, and reversible rotary driving means connected with one of the drums for revolving the drum and moving the cable therearound.

3,088,546
AUTOMATIC SAFETY LEG
William A. Ross and George E. Swick, Jr., Springfield, Ill., assignors to Dura Corporation, Oak Park, Mich., a corporation of Michigan
Filed July 24, 1961, Ser. No. 126,255
2 Claims. (Cl. 187—8.49)



1. An automatic safety leg for vehicle lifts and the like, comprising: vertically disposed telescoping piston and cylinder members, said telescopic piston member having a diametric slot provided therethrough, a latching bar pivotally mounted and rotatable within said slot, said latching bar being of a width retractable with said piston member as vertically disposed and of a length exposing opposite ends thereof through said slot as horizontally disposed for stop abutment with the terminal end of said cylinder member, said latching bar having one end thereof inclusive of the center of gravity at a position above and to one side of the axis of rotation therefor, said slot being formed through one side of said piston member to permit rotation of the other end thereof within said piston member and to preclude rotation through the other side thereof for preventing said latching bar from flipping over, said latching bar including cam surfaces operative thereof into vertically disposed positions permissive of retraction of said latching bar with said piston member into said cylinder member, and remotely controlled operative means provided on the upper end of said cylinder member separate and apart from said telescoping members for selective actuation of said latching bar, said operative means including a bell crank lever having one end disposed for lifting engagement with an operative cam surface of said latching bar and retraction positioning of said latching member, means engaging and biasing said lever against engagement with said latching bar, and a power operated reciprocal member engaged with the other end of said bell crank lever for overcoming said biasing means and effecting lever engagement with said latching bar, said latching bar having the lift operative cam surface thereof inaccessibly disposed while in a safety leg latching position and accessibly disposed only upon elevation of said telescoping members for such purpose.

3,088,547
VEHICLE RACK
Charles W. MacMillan, Rock Island, Ill., assignor to Bear Manufacturing Company, Rock Island, Ill., a corporation of Delaware
Filed Nov. 2, 1961, Ser. No. 149,765
3 Claims. (Cl. 187—8.71)

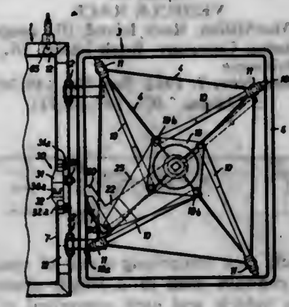


1. A vehicle rack comprising a pair of spaced parallel coextensive runways each of a length about the same as that of a vehicle and each comprised of a pair of hingedly connected runway sections of approximately the same length, a stand beneath corresponding ones of the sections of the runway supporting the same in elevated horizontal position, said stand supporting one of said runways for transverse movement to accommodate adjustment in the tread width of the rack, the free end portions of the other sections of the runways being hingedly movable from a position adjacent ground level wherein said other sections are inclined between said one sections and ground level to an elevated horizontal position wherein said other sections are alined with said one sections, said other sections being of a length to form in their inclined positions a loading ramp accommodating movement of one end of the vehicle upwardly onto said one sections, a lever pivotally mounted on a transverse axis of said other sections for movement from a retracted position adjacent the section to an extended generally upright position, the lever on said one runway including a wheel generally paralleling said stand and engaging the ground in said retracted position to facilitate transverse movement of said one runway, a jack mounted on each of said other sections generally parallel thereto and coupled to the respective lever for swinging the same from said retracted position to said upright position for moving the section from an inclined position to an elevated position, and means for operating said jacks conjointly with one another and independently of one another.

3,088,548
HERMETICALLY SEALED HOIST-SHAFT DOOR
Albert Behrens, Hamburg-Lockstedt, Karl-Heinz Kölzow, Hamburg-Rahlstedt, and Peter Markus Brandt, Hamburg, Germany, assignors to Willy H. Schlieker K.G., Hamburg, Germany, a German firm
Filed Sept. 19, 1961, Ser. No. 139,187
Claims priority, application Germany Sept. 21, 1960
11 Claims. (Cl. 187—61)

1. A hermetically sealable hoist-shaft door, comprising a frame structure, a door structure hinged to said frame structure, one of said structures having a packing extending around said door structure and sealingly engageable by the other structure when the door is tightly closed, a plurality of locking elements mounted on said door structure on the inner side thereof and having each a latch end, wedging tracks mounted on said frame structure, said latch ends being simultaneously engageable with and disengageable from said respective wedging tracks, a pivot pin revolvably mounted in said door structure in gas-tightly sealed relation thereto and having respective ends inside

and outside said door structure, an operating lever rigidly mounted on the outer end of said pivot pin, a control member rotatably seated on the inner end of said pivot pin and connected with said locking elements for simultaneously moving said latch ends by rotation of said control member, a coupling mechanism having an arm fixed on the inner end of said pivot pin for rotation together therewith, said coupling mechanism having coupling



means movable between inactive and active positions respectively and engaging said arm for entrainment of said control member only when in said active positions, spring means biasing said coupling means to said inactive position, and control means actuable under control by the hoist cage and engageable with said coupling means for moving it to said coupling position when the hoist cage is at the level of the door.

3,088,549

CONTROL AND ALARM SYSTEM FOR BRAKE SHOE LININGS OF MOTOR CARS AND THE LIKE

Clelio Carlos Borsa, 181 Avda. America, Porto Alegre, Brazil

Filed June 23, 1960, Ser. No. 38,255
Claims priority, application Brazil Aug. 25, 1959
1 Claim. (Cl. 188—1)



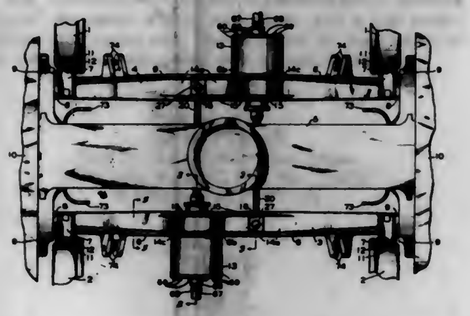
A unitary brake lining for an automotive brake shoe adapted to complete an electrical alarm circuit through a metal brake drum and produce a sensible indication when the brake lining has been worn away to a predetermined extent, the brake lining comprising a lining body of electrically insulative friction material having substantially uniformly spaced, parallel, rectangular inner and outer surfaces adapted respectively to be supported against the braking surface of a brake shoe and to be brought into braking contact with the brake drum, an electrically conductive sheet member substantially coextensive with said inner and outer surfaces incorporated in wholly embedded relation in said lining body and extending in parallelism with said surfaces in uniformly spaced relation therefrom so as to be electrically insulated from said surfaces by the material of said lining body, said lining body having openings extending therethrough perpendicular to said outer surface adapted to receive mounting rivets for securing the lining body to the brake shoe and including an annular outwardly facing shoulder in each opening for engagement with the heads of the mounting rivets positioned to locate the rivet heads between said sheet member and said inner surface, said lining body including an integral sleeve-like extension projecting substantially perpendicularly from said inner surface for a sufficient distance to pass through the brake shoe on which the lining is to be supported and having a bore extending centrally therethrough from said sheet member opening through an extend of said extension remote from said sheet member, and electrical connector means electrically communicating with said sheet member extending from said sheet member through the bore of said sleeve-like extension encased laterally in insulated relation by said extension for connection to an alarm circuit.

3,088,550

BRAKE BEAM WITH INTEGRALLY FORMED BRAKE CYLINDER

Walter B. Kirk, Pitcairn, Pa., assignor to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania

Filed May 12, 1961, Ser. No. 109,775
6 Claims. (Cl. 188—52)



1. A brake beam of cast construction comprising a flat web having longitudinal flanges at opposite edges thereof to form a U-shaped channel, a longitudinally extending rib on the free end of each flange on the side thereof opposite said web, said flanges and said ribs being arcuately curved for a portion of their length between one end of the brake beam and a point midway the length thereof, a pair of arcuate webs cast integral at one end thereof with said flat web and extending transversely between said flanges therefrom in the same direction as said flanges, the opposite edges of said arcuate webs being cast integral therewith and connecting corresponding ends of the arcuately curved portions of said flanges, and a brake cylinder body disposed substantially perpendicular to the longitudinal axis of the brake beam and having one end open and the other end cast integral with said arcuate webs and with the arcuately curved portion of said flanges.

3,088,551

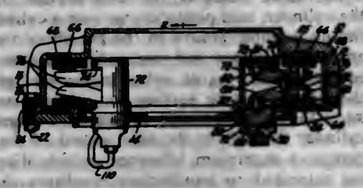
DISK APPLIED DUO-SERVO

Richard T. Burnett, South Bend, Ind., assignor to The Bendix Corporation, a corporation of Delaware

Original application June 1, 1954, Ser. No. 433,609, now Patent No. 2,927,664, dated Mar. 8, 1960. Divided and this application Feb. 29, 1960, Ser. No. 11,596
3 Claims. (Cl. 188—70)

1. In a brake, a rotatable element having spaced parallel sides, substantially flat disk friction elements engageable with said sides, a fluid motor having a movable member reciprocably mounted therein, a stationary member, said fluid motor supported by said stationary member, a pair of levers fulcrumed one against the other and interconnecting said disk friction elements and said movable and stationary members, each of said levers having pivotal

connections with said members and to said disk friction elements to pivot about the longitudinal axis of said fluid



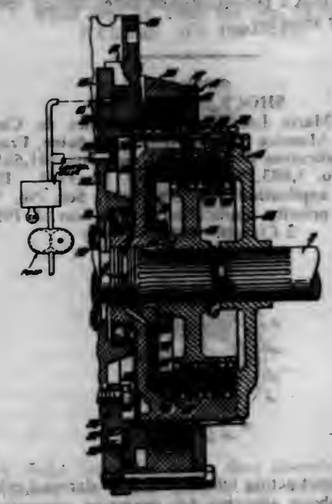
motor and also pivoting perpendicularly to the parallel sides of said rotatable member.

3,088,552

SERVO-TYPE DISC BRAKE

Howard W. Christenson and Ulysses A. Breting, Indianapolis, Ind., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Original application Apr. 30, 1956, Ser. No. 581,654, now Patent No. 2,941,639, dated June 21, 1960. Divided and this application Apr. 18, 1960, Ser. No. 22,804
1 Claim. (Cl. 188—72)



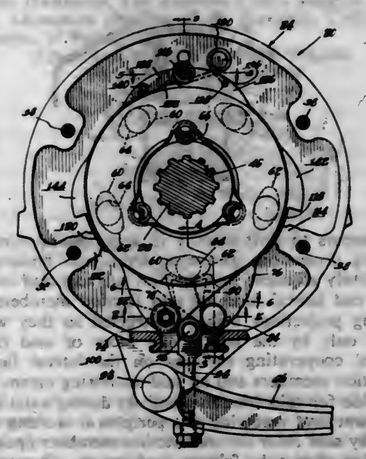
In a brake, a rotating member mounted for rotation about an axis, a stationary assembly having an annular cylinder located on and facing one side of said rotating member with an annular end wall and internal and external cylindrical side walls located concentrically about said axis and having fixed abutment means including a cylindrical portion having an aperture located externally of said cylinder and a stationary abutment plate located on the other side of said rotating member, a unitary annular piston located in said annular cylinder for axial and rotary movement having cylindrical inner and outer surfaces in sealing cooperation respectively with said inner and outer cylindrical side walls of said cylinder, and one end face facing said annular end wall of said cylinder and an opposite end face facing said rotating member, cam means on said end wall and said end face for moving said piston axially in response to rotary movement of said piston, means to supply fluid under pressure to said cylinder to axially move said piston to engage said opposite end face with said rotating member and actuate said cam means to apply said brake and a manual control lever fixed on said piston on said outer cylindrical surface adjacent said opposite end face extending outwardly past said outer cylindrical wall of said cylinder and through said aperture for manually rotating said piston to actuate said cam means to apply the brake.

3,088,553

DISC BRAKE

Osborn A. Kershner, St. Joseph, and Virgil A. Matras, Watervliet, Mich., assignors, by mesne assignments, to Lambert Brake Corporation, St. Joseph, Mich., a corporation of Michigan

Filed Sept. 8, 1960, Ser. No. 54,610
11 Claims. (Cl. 188—72)



2. A disc type brake structure comprising means for providing friction surface means around an axis of a part of a machine with which the brake structure is to be installed with said means and said part being relatively rotatable, friction disc means disposed adjacent said friction surface and connectable to said part of said machine for axial and nonrotative movement relative to said part, a pair of actuating discs disposed adjacent said friction disc means and rotatably and axially shiftable relative to each other, means between said actuating discs for spreading said actuating discs upon relative rotation thereof for urging said friction disc means against said friction surface means, means for applying an actuating force to said actuating discs substantially at one location circumferentially of said actuating discs and including oppositely disposed ear means on said discs and means engageable with and shiftable between said ear means for urging said ear means and the discs relatively in opposite directions, and fixed means located generally diametrically oppositely from said force applying means, said discs including oppositely disposed lug portions selectively engageable with opposite sides of said fixed means for limiting rotation of the actuating discs, and said fixed means providing substantially the only means for limiting rotation of the actuating discs about their own centers and for absorbing braking torque during a braking operation.

3,088,554

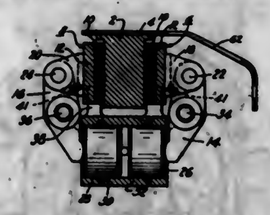
DISC BRAKE

Jean Lucien Desvignes, Viroflay, and Pierre Gancel, Levallois, France, assignors to The Bendix Corporation, a corporation of Delaware

Filed Mar. 20, 1958, Ser. No. 722,757
10 Claims. (Cl. 188—73)

2. A disc brake assembly including a rotor having oppositely facing friction surfaces, a brake mechanism having a fixed housing straddling a portion of said rotor, a pair of oppositely acting friction members adapted to be

axially applied against said friction surfaces, said friction members covering only an angular portion of said rotor, fluid pressure motor means provided in said housing, coaxial pistons received in said pressure motor means, rocking arms interconnecting each friction member with a respective piston, each of said rocking arms having one end operatively connected to one of said pistons and the other end pivotally connected to one of said friction members, each of said rocking arms further being pivotally connected intermediate the ends thereof to said housing, the pivotal connection between each of said rocking arms and the friction members being constructed to allow said friction members to shift slightly in a peripheral direction, anchoring projections extending from said housing and being closely adjacent said friction surfaces and contiguous the end lateral faces of said friction members, said anchoring projections being constructed so they will be engaged only by the lateral end faces of said friction members, cooperating surfaces on the lateral faces of said friction members and on said anchoring means forming a guide for said friction members during axial sliding engagement and receiving the peripheral shifting thrust exerted by said rotor on said friction members upon their application against the friction surfaces of said rotor.

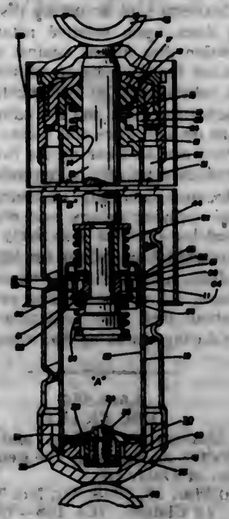


3,088,555

SHOCK ABSORBER WITH SLEEVED PISTON

Wayne A. Karlgaard, Englewood, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed July 27, 1959, Ser. No. 829,595
4 Claims. (Cl. 188—88)



1. In a hydraulic shock absorber containing an oil for displacement therein during operation of the shock absorber, the said shock absorber including a cylinder having a piston therein having a sliding fit engagement with the cylinder and reciprocable therein to effect displacement of the oil in the shock absorber through resistance valving in the shock absorber on reciprocation of the piston in the cylinder, said piston comprising a cylindrical body having an annular groove in the periphery thereof and an annular continuous and necessarily moisture preconditioned cylindrical ring of nylon in the said groove forming the piston bearing surface in intimate surface engagement with the piston and in sliding engagement with the cylinder throughout the axial extent of the said ring and having a maximum tolerance outside diameter when water saturated to equilibrium condition that is less than minimum tolerance inside diameter of the cylinder and a minimum tolerance outside diameter when desaturated that is greater than maximum tolerance outside diameter of the piston and a minimum inside diameter with the ring saturated or desaturated that is less than minimum tolerance diameter of the said groove, to insure thereby engagement of the cylinder wall only by said nylon ring at any time and an interference fit between said ring and groove, said shock absorber also containing water in a state available for absorption by said nylon ring in volume at least equal to that required to effect complete water saturation thereof regardless of moisture equilibrium as well as ambient temperature variation within a pre-established range during operation of the shock absorber.

3,088,556

SHOCK ABSORBERS

Christian Marie Lucien Louis Bourcier de Carbon, 64 Blvd. Maurice Barres, Neuilly-sur-Seine, France

Original application Dec. 9, 1957, Ser. No. 701,585, now Patent No. 3,003,594, dated Oct. 10, 1961. Divided and this application Feb. 20, 1961, Ser. No. 90,466
Claims priority, application France Nov. 4, 1957
2 Claims. (Cl. 188—88)



1. In a direct-acting telescoping fluid-damped cylinder-and-piston shock absorber for operative connection between two members to cushion the relative movements of said members toward and away from each other, the combination of: a cylindrical casing containing a damping liquid, a piston disposed in said casing for reciprocation within the body of damping liquid upon the occurrence of relative movements of the piston and the casing, the casing and the piston adapted to be connected with the respective members; a set of passageways extending through the piston in the longitudinal direction and opening directly through one face of the piston, through which passageways the liquid may pass from one side of the piston to the other during reciprocation of said piston in one direction, said set of passageways comprising three groups of passageways disposed 120° apart as at the apices of an equilateral triangle and each group consisting of at least one passageway; valving secured centrally to said face of said piston and comprising at least one thin flexible valve disc extending substantially flush with the said face of the piston and its marginal portions covering at least parts of the areas of the orifices of said passageways; said valve disc comprising a circular disc with three substantial segments removed along symmetrical chordal lines leaving a triangulated contour with three equally spaced blunt apex portions with arcuate ends overlying the said orifices; means for securing said valving to the face of the piston comprising a circular retaining washer of such diameter relative to that of the valve disc that three lines representing the radially innermost elements of substantial flexure of the discs and subtending the said apex portions, will not intersect within the area of the triangulated disc although possibly intersecting within the confines of the projected complete circle of an uncut disc; and thus the disc in operation will be flexed cylindrically along three marginal mutually exclusive areas thereby reducing the fatigue to which the discs are subjected during use and also equalizing and distributing the directional effect of any anisotropism of the material to which the discs are made, and without diminishing the structure of the radially inward and intermediate areas of the valve discs.

3,088,557

BRAKE HEAD AND BRAKE SHOE ASSEMBLAGE FOR COMPOSITION BRAKE SHOES

George M. Cabble, Jr., Pittsburgh, and Earl E. Allan, Monroe Heights, Pitcairn, Pa., assignors to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania

Filed June 29, 1960, Ser. No. 39,522
5 Claims. (Cl. 188—243)



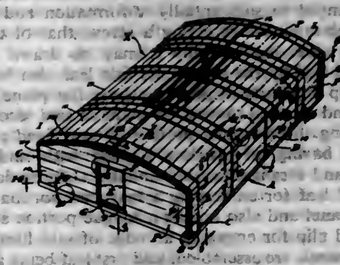
1. A brake head and brake shoe assemblage for use in a railway car brake system, said assemblage comprising a brake head and a composition brake shoe adapted to be secured to the brake head, said brake head being characterized in that it has a tang extending into the slot formed between a pair of laterally spaced end toes located at each end of the brake head, and said composition brake shoe being characterized in that it has a backing plate having at each end thereof a pair of laterally spaced longitudinally extending guide members and a pair of transversely extending stop members, said longitudinally extending guide members and said transversely extending stop members being positioned such that upon installation of said composition brake shoe on said brake head, said longitudinally extending guide members straddle said tangs on said brake head for preventing lateral dispacement of said composition brake shoe on said brake head and each of said transversely extending stop members abuts the outer end of a respective end toe of said brake head, for preventing longitudinal displacement of said composition brake shoe on said brake head, said guide members being relatively positioned upon said backing plate to be received without obstruction between the laterally spaced end toes of a standard brake head intended to receive a standard cast iron brake shoe, said composition brake shoe being further characterized in that said longitudinally extending guide members are each in the form of a relatively thin rectangular strip secured in substantially perpendicular relation to the backing plate, and arranged in parallel relation to each other symmetrically on opposite sides of the longitudinal center line of the backing plate in a manner to fit within the end slot between the end toes at each end of a standard brake head.

3,088,558

PREFABRICATED BUILDING ASSEMBLY

William Dickinson, Los Angeles, Calif., assignor to Harvey Aluminum (Incorporated), Torrance, Calif., a corporation of California

Filed Nov. 17, 1958, Ser. No. 774,466
10 Claims. (Cl. 189—2)



1. A prefabricated building assembled of modular components and including, post components comprising a vertically disposed transverse web and inner and outer parallel walls projecting laterally from both sides of the web and a key projecting from each edge portion of the inner wall, and panels guided between the walls of the post components and with an outer skin positioned by the outer wall of the post and having upper and lower tongue and grooved marginal portions for engagement with each other and with inwardly extending ribs for guiding engagement with the keys at the inner walls of the post components, and with recesses at the end portions of the ribs receiving said keys of the post components.

3,088,559

MEMBRANOUS COVERING FOR STRUCTURAL DEVICES AND FASTENING MEANS THEREFOR

Lee P. Farnsworth, Lancaster, Mass., Thomas F. King, Berkeley, Calif., and Mitchell M. Hannoosh, Wakefield, Mass., assignors to the United States of America as represented by the Secretary of the Air Force

Filed Feb. 3, 1959, Ser. No. 790,991
3 Claims. (Cl. 189—36)



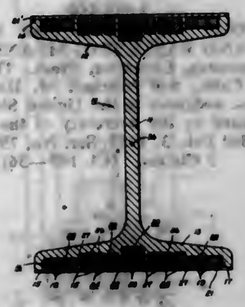
1. A fastening device for securing a membranous covering to the members forming an open building framework, said members having four aligned rectangular grooves along one surface thereof, said fastening system comprising means for clamping said membranous covering in place in the two outer aligned rectangular grooves in said members, and a plurality of locking devices carried by said clamping means and insertible into the two inner aligned rectangular grooves in said members for securing said clamping means to said membranous covering, for support of said covering by said members.

3,088,560
CABINET CONSTRUCTION
Frederick W. Preuss, Terry, Miss., assignor to Storkline Corporation, Chicago, Ill., a corporation of Illinois
Filed June 3, 1960, Ser. No. 33,701
2 Claims. (Cl. 189—36)



1. A resilient, bent sheet-material clip for securing together a pair of panels with adjoining marginal portions disposed in planes generally normal to each other, one of said panels being relatively fixed and the other removable, comprising a first leaf and a second leaf, said leaves being arranged in substantially V-formation and having aligned apertures for receiving a screw, that of the first leaf being threaded whereby it may be drawn toward the second leaf by the screw, the first leaf also having a terminal lip angularly disposed to the major plane of said first leaf and directed toward the plane of said second leaf for engaging the marginal portion of said fixed panel, a third leaf having an aperture aligned with said screw apertures and arranged in substantially U-formation with the second leaf for embracing a marginal portion of the movable panel and also having a tongue portion stamped out of said clip for engaging an edge of said fixed panel when the panels are assembled, said first leaf being adapted to be drawn up by a screw threaded therein and passing through the other leaves and through the marginal portion of the movable panel, from a position substantially free of said fixed panel to a position firmly engaging the marginal portion of said fixed panel, further movement of the screw acting to draw up the movable panel into firmly assembled relation with the fixed panel.

3,088,561
DAMPED STRUCTURES
Jerome E. Ruzicka, Belmont, Mass., assignor to Barry Wright Corporation, Watertown, Mass., a corporation of Massachusetts
Filed Nov. 6, 1958, Ser. No. 772,382
20 Claims. (Cl. 189—37)



1. A self-damped composite member subject to flexural movements responsive to excitation of vibratory character comprising a first portion having all parts thereof substantially rigidly united, a plurality of separate portions each mated with said first portion over a different elongated path, one of each of said mated portions having an elongated passageway therein extending in a direction substantially parallel with a plane of said flexural movements and the other of each of said mated portions being at least partly enveloped within said passageway over one elongated path with external surfaces of said other portion adjacent and longitudinally slidable in relation to internal surfaces of said passageway over said elongated path, said separate portions having a flexural rigidity different from that of said first portion, and a substantially permanently viscous damping medium interposed in a thin layer between said surfaces inside said passageway, said viscous medium having the characteristic of adhesiveness to said surfaces.

3,088,562
EXTENSIBLE AND CONTRACTIBLE JOIST
Addis T. Jones, Chicago, and George S. Ellis, Lombard, Ill., assignors to Thomas Hoist Company, Chicago, Ill., a corporation of Illinois
Filed May 20, 1959, Ser. No. 814,446
4 Claims. (Cl. 189—37)

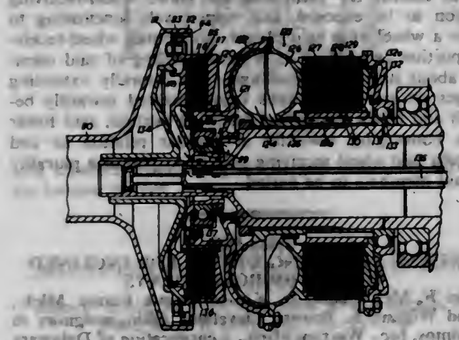


1. An extensible and contractible joist comprising an outer joist member and an inner joist member disposed in telescopic relationship to each other, said outer joist member comprising a top frame, a bottom frame and side frame members defining a hollow frame construction, the inner joist member having a top member, side members and terminating at its bottom in a lateral projection, said inner joist member being of a height less than the spacing between the top and bottom frames of said outer joist member, but the top frame of the outer joist member and the extended portion of the top member of the inner joist member defining a generally continuous unobstructed horizontal load bearing surface, overhanging projection means carried by the bottom frame of the outer joist member at an end thereof, said overhanging projection means overhanging said lateral projection of the inner joist member permitting slidable movement of said inner joist member relative to said outer joist member but restricting upward movement of said inner joist member within said outer joist member to space the top member of the inner joist member a short distance below the top frame of the outer joist member, and a plate carried by said bottom frame of the outer joist member adjacent said overhanging projection means restricting downward movement of said inner joist member within said outer joist member to maintain the top member of the inner joist member in substantially plane-parallel spaced relationship to the top frame of the outer joist member, thereby to cause said inner joist member in use to be loaded in tension at the juncture of said inner joist member with the end of said outer joist member and to prevent the application of crushing force from the outer joist member to the top frame member of the inner joist member.

3,088,563
FLUID COUPLING AND FRICTION CLUTCHES
James Alexander Petrie, Littleover, Derby, and Kenneth Edward George Bracey, Findern, England, assignors to Rolls-Royce Limited, Derby, England, a British company
Filed June 22, 1960, Ser. No. 37,889
Claims priority, application Great Britain June 25, 1959
8 Claims. (Cl. 192—3.2)

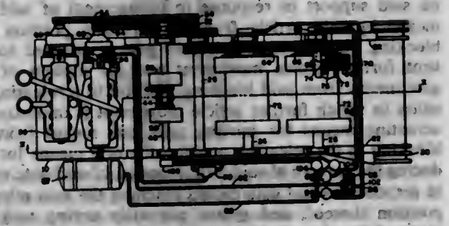
1. A device for effecting a drive between a driving member and a driven member comprising: a first plate-type clutch having a driving part and a driven part, means

connecting the driving member to the first clutch driving part, a hydraulic vane-type coupling, and a second plate-type clutch having a driving part and a driven part, said coupling being positioned between the first and second clutches and having a first part permanently connected to the driven member and a second part permanently connected to the driven part of said first clutch and the driving part of said second clutch, said driven part of said



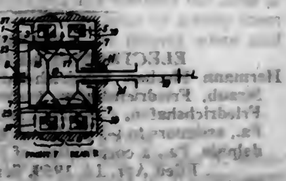
second clutch being connected to said driven member, and automatic means sequentially engaging said first clutch and operating said coupling and then engaging said second clutch whereby the driving and driven parts of said second clutch are moving at differential speeds in the same direction prior to engagement and, when engaged, lock the first and second parts of said fluid coupling together.

3,088,564
DRIVE SYSTEM AND MECHANISM
John G. Grall and Edward B. Nickles, Manitowoc, Roch J. Van De Hey, Whitelaw, and John D. West, Manitowoc, Wis., assignors to Manitowoc Engineering Corporation, Manitowoc, Wis., a corporation of Wisconsin
Filed July 28, 1958, Ser. No. 751,545
9 Claims. (Cl. 192—.098)



1. Drive mechanism comprising an engine,
a throttle for said engine,
a fluid pressure motor connected to said throttle,
a clutch device,
a fluid pressure motor connected to the clutch drive,
modulating valving for connecting pressure fluid to each of the motors, and
apparatus for enabling the clutch motor to be responsive to a given range of fluid pressure and for enabling the throttle motor to be responsive to a range of fluid pressure which is greater than the given range of fluid pressure of the clutch motor, said apparatus comprising
a bias acting on the throttle in a throttle closing direction and
a bias acting on the clutch device in a clutch releasing direction with the throttle device exerting a force greater than the force exerted by the bias of the clutch device.

3,088,565
MULTIPLE-CLUTCH ELECTROMAGNETIC TORQUE DEVICES
Ralph L. Jaeschke, Kenosha, Wis., assignor to Eaton Manufacturing Company, Cleveland, Ohio, a corporation of Ohio
Filed Mar. 28, 1960, Ser. No. 17,814
11 Claims. (Cl. 192—48)



1. Electromagnetic clutch apparatus comprising at least two oppositely magnetically polarized field coil windings adapted to be electrically excited from terminals of a power source and which are so closely located as to be subject to mutual magnetic field interlinkage by leakage flux if only one winding is excited, a control circuit including at least a portion of one of said field coil windings and at least a portion of the other of said field coil windings, said control circuit including conductive connections and switch means adapted to connect said portions for current flow therethrough in series circuit relation between said terminals, and control means including a resistor adapted to produce a number of ampere turns in either field coil winding which are substantially different and less than the number of ampere turns in the other field coil winding and of a value which will produce a magnetic field substantially equal in magnitude and opposite in polarity to that of the leakage flux from said other field coil winding, said switch means adapted in a first position to connect one of said winding portions in series with the other winding portion and to shunt said resistor across said other winding portion, and adapted in a second position to connect said other winding portion in series with said one winding portion and to shunt said resistor across said one winding portion, whereby the effect of leakage flux as to either winding may be substantially cancelled.

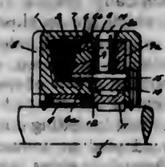
3,088,566
ACCESSORY DRIVE MECHANISM
Jack A. Fleming, Pewamo, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Sept. 13, 1960, Ser. No. 55,642
2 Claims. (Cl. 192—58)



1. Drive mechanism for driving the accessories of an engine comprising an engine driven power input shaft, a disc driven by said shaft, a cover carried by said disc and forming therewith a working chamber, a turbine disposed in said chamber, working fluid in said chamber, a sleeve supporting said turbine for rotation in said cham-

ber and driven by said turbine, power delivery mechanism driven by said sleeve, an expandable and collapsible member carried by said disc, a cover carried by said disc, a fluid passage through said disc providing continuous fluid communication between said working chamber and the interior of said expandable and collapsible member, and yieldable means normally urging said expandable and collapsible member toward its collapsed position.

3,088,567
ELECTROMAGNETIC CLUTCH
Hermann Fischer, Friedrichshafen-Fischbach, Hermann Straub, Friedrichshafen, Ludwig Wiedmann, Obering, Friedrichshafen, Germany, and Otto Jensen, Malvern, Pa., assignors to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Apr. 14, 1959, Ser. No. 806,355
Claims priority, application Germany Apr. 19, 1958
8 Claims. (Cl. 192—84)



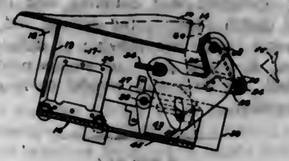
1. In an electromagnetic clutch; a stationary magnetic structure and a movable magnetic structure; said stationary magnetic structure having an annular opening therein; said annular opening receiving a coil at the bottom thereof; said movable magnetic structure including a ring shaped member; at least a portion of said ring shaped member being movably positioned within said annular opening of said stationary magnetic structure and being rotable with respect to said stationary magnetic structure; said movable magnetic structure being magnetically connected to said stationary magnetic structure by air gaps along the inner and outer diameter of said annular shaped opening in said stationary magnetic structure; said portion of said ring shaped member positioned within said annular opening having a trapezoidal shape whereby the total area of said air gaps effective to transmit force to said movable magnetic structure on said inner and outer diameters of said annular opening are substantially equal.

3,088,568
LOADING RAMP OR SKID FOR VEHICLES
Leonard Troy, 5 Pen-y-Bryn Drive, Scranton, Pa.
Filed Nov. 30, 1960, Ser. No. 72,718
9 Claims. (Cl. 193—38)



1. A skid or ramp for use in supporting a vehicle when moving the vehicle between different elevations comprising an elongated unitary extruded member functioning as a beam and wheel guide means, said unitary member including a transverse, substantially planar, horizontal, wheel-receiving portion for receiving a vehicle wheel thereon, said wheel-receiving portion including opposed inner and outer side margins, a pair of lower webs extending the length of said member and depending from said side margins, said lower webs including lower marginal and laterally-extending flanges along the length of said webs and in spaced parallel relation to said wheel-receiving portion for reinforcing said member against bending about its longitudinal axis, at least one upper web extending the length of said member and vertically from one of said side margins and coplanar with the lower web depending from said one side margin, said upper web terminating in an outwardly extending flange along the length thereof for permitting the entire wheel-receiving portion to be exposed, said upper web functioning to guide a wheel onto said planar, horizontal, wheel-receiving portion and aiding to prevent bending of said member about its longitudinal axis, said laterally extending flanges on said lower webs being directed inwardly beneath and below said wheel-receiving portion, said lower webs converging inwardly in angular relation to and beneath said wheel receiving portion to permit a plurality of said members to be nested.

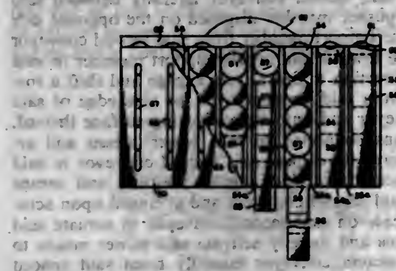
3,088,569
ARTICLE RELEASING DEVICE FOR INCLINED CHUTES OR ROLLERWAYS
James F. McClelland, Jr., Grosse Pointe Farms, Mich., and William L. Brown, Cleveland, Ohio, assignors to Admos, Inc., Warren, Mich., a corporation of Delaware
Filed Aug. 22, 1960, Ser. No. 51,224
11 Claims. (Cl. 193—40)



1. Article releasing mechanism for use with a support on which an article is placed for normally urged movement in one direction comprising frame structure for said releasing mechanism, gate means, means mounting said gate means on said frame structure for initial motion in the general direction of normally urged article movement on said support in response to engagement of said gate means by said article from an arresting position to a blocking position in which said gate is adapted to prevent further article movement and for motion of said gate means from said blocking position to a releasing position in which further article movement is unobstructed, actuating means for moving said gate means from the blocking to the releasing position thereof, means for producing the reverse of said initial motion of said gate means in response to said gate means reaching the said releasing position thereof, and means normally urging said gate means from the releasing position thereof to the blocking position thereof.

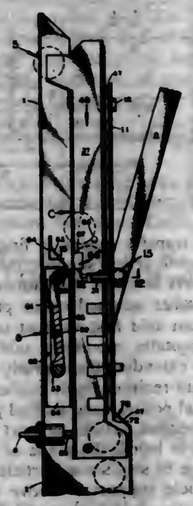
3,088,570
DISPENSING COIN SAVER
Arthur H. Hornish, 3027 Mount Alister Road, Pittsburgh 14, Pa.
Filed Feb. 15, 1960, Ser. No. 8,852
5 Claims. (Cl. 194—91)

1. A device for dispensing message tabs upon the insertion of a coin therein comprising, a housing, said housing having a plurality of guide channels formed therewithin and openly communicating with the bottom thereof, a plurality of guide members positioned between said channels, a message strip positionable within each of said guide channels, each of said strips having a plurality of message tabs removably secured thereto, means for facilitating the entrance of a coin in each of said guide channels, means for dispensing a message tab outwardly through the bottom of each channel upon the insertion of a coin therein and means for preventing coins within



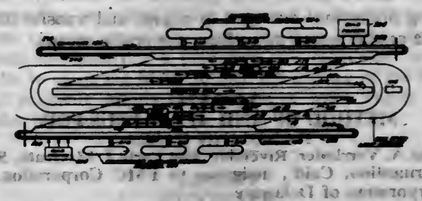
said channel from being discharged outwardly through the bottom thereof.

3,088,571
MULTIPLE COIN ACTUATOR FOR VENDING MACHINES
John F. Skold, 4650 N. Oak Park Ave., Chicago, Ill.
Filed Aug. 7, 1961, Ser. No. 129,748
7 Claims. (Cl. 194—92)



1. A multiple coin actuator for a vending machine comprising means forming a frame, a plurality of chutes in said frame positioned in planar parallel spaced relation adapted to edgewise conduct and temporarily retain gravity propelled coins of different size deposited in each of said chutes respectively, a recess in each of said chutes extending into one edge thereof for engaging and locking a latch therein including an open edge a predetermined distance downward therefrom for bypassing said coins therethrough, a multiple latch casing connected to and responsive to said vending machine retained in said frame for reciprocation from an idle locked position adjacent said open edge of said chutes into a vend position above said open edge, a plurality of latches corresponding to said chutes pivoted in said casing including spring means for normally and independently urging each of said latches into locking engagement with each corresponding one of said recesses in the coin path in each of said chutes for arresting said casing against movement to said vend position, a manually adjustable value pin positioned in said frame constructed and adapted to project into each of said chutes in a selected position for arresting the lowermost one of a predetermined number of like coins descended in each said chute in edge upon edge relation with the uppermost one of said coins positioned adjacent said recesses whereby each of said latches will independently engage and cam over the corresponding edges of each of said uppermost said coins and bypass entry into each of said recesses in each of said chutes and permit said casing to be moved to said vend position when said vending machine is operated and whereby the coins in said chute will descend from said actuator by gravity from said chutes through said open edges thereof when said casing is moved to said vend position.

3,088,572
TRANSFER CONVEYOR
Clair M. Rively, Rockaway, N.Y., and William A. Breneck, West Caldwell, N.J., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Application Apr. 6, 1961, Ser. No. 112,145, which is a division of application Ser. No. 787,059, Jan. 15, 1959. Divided and this application Apr. 6, 1961, Ser. No. 112,144
12 Claims. (Cl. 198—19)

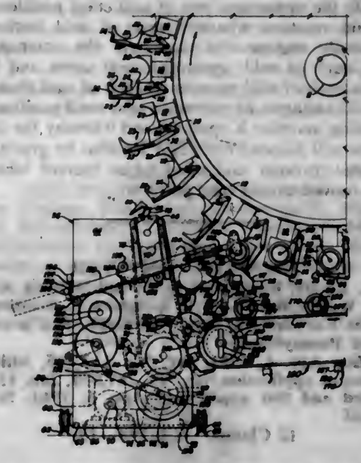


5. A transfer conveyor for transferring articles from an article-producing zone to a discharge zone comprising a reciprocable carriage, a pair of guide members disposed on said carriage in spaced relation, an endless member passing around and supported by said guide members and movable with respect to said carriage, a plurality of article-supporting means on said endless member adapted to receive articles from said article-producing zone, means for moving one portion of said endless member at a substantially uniform rate to permit the article-supporting means to receive articles from said article-producing zone, advancing means for causing movement of a second portion of said endless member to present a line of loaded article-supporting means to said discharge zone, said advancing means being operable to maintain said second portion stationary for a predetermined period of time to permit complete unloading of articles from said line of article-supporting means, and said carriage being movable by said endless member while said second portion is advanced and while said second portion is stationary to compensate for the different rate of movement between the two portions of said endless member.

3,088,573
METHOD AND APPARATUS FOR PROCESSING AND HANDLING FIBROUS MATERIALS
Henry T. Thaes, Bordentown, N.J., assignor to Owens-Corning Fiberglas Corporation, a corporation of Delaware
Filed July 18, 1960, Ser. No. 43,537
12 Claims. (Cl. 198—20)

1. Apparatus for handling heat-cured pipe wrap units of resin-impregnated fibrous material wherein each unit contains a mandrel including, in combination, a frame, a pair of unit transferring members movably mounted on the frame, means including a pair of bars mounted by said members and movable relative thereto for supporting a unit and its mandrel during transfer, relatively movable cradle means supported by the frame arranged to receive

successive pipe wrap units and mandrels transferred by said members, a movable endless conveyor, said conveyor

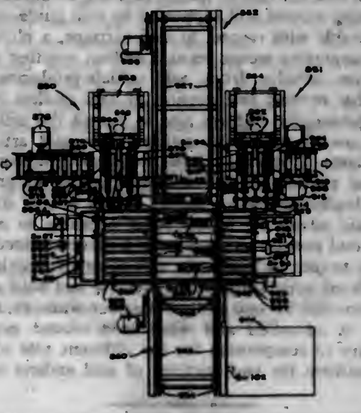


having projections arranged to engage and transfer units in the cradle means away from the cradle means.

3,088,574
METHOD OF AND APPARATUS FOR HANDLING CASES

Ernest A. Verrinder, Riverside, and Earle J. McGrath, San Bernardino, Calif., assignors to FMC Corporation, a corporation of Delaware

Original application July 11, 1955, Ser. No. 521,011, now Patent No. 2,993,315. Divided and this application June 18, 1959, Ser. No. 821,196
6 Claims. (Cl. 198—21)

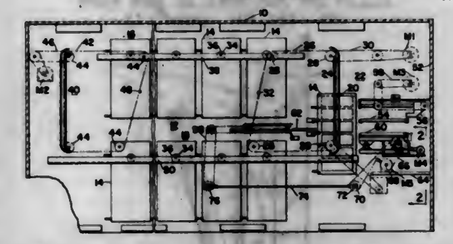


1. Apparatus for handling cases or the like comprising an article support member, a first conveyor having an elongate movable conveying surface disposed at a certain height in a horizontal plane, a support structure adjacent said conveyor, a second conveyor having a conveying surface, said second conveyor being mounted on said support structure with the conveying surface thereof at substantially the height of the conveying surface of said first conveyor and for lateral bodily reciprocating movement in the plane of said conveying surfaces and in a direction transverse to the longitudinal centerline of said elongate movable conveying surface, between a position in alignment with said first conveyor and a position adjacent said article support member and spaced from said aligned position and parallel to said elongate movable conveying surface, power means mounted on said support structure and connected to said second conveyor for reciprocating said second conveyor laterally between said positions, a pusher member disposed on the opposite side of said article support member from said second conveyor and movable toward said article support member in said transverse direction to operatively engage and shift a row of articles from said member over the side edge of said second conveyor and onto the conveying surface thereof, control means connected to said power means and arranged to normally dispose said second conveyor in said position spaced from said aligned position, and means carried by said second conveyor and arranged upon actuation by a case on said second conveyor to actuate said control means and thereby activate said power means to move said second conveyor laterally from said spaced position into alignment with said first conveyor.

3,088,575
ARTICLE TRANSFER MEANS

Anthony J. Ferro, York, Pa., assignor, by mesne assignments, to Baker Perkins, Inc., New York, N.Y., a corporation of New York

Filed Feb. 6, 1961, Ser. No. 87,341
8 Claims. (Cl. 198—24)



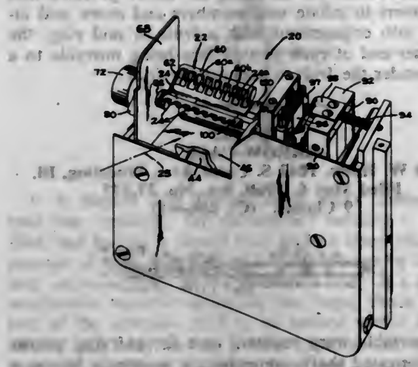
1. In an article transfer means, a first article support and an adjacent second article support, the supporting surfaces of said supports being in near horizontal alinement, a reciprocatable pusher adapted on its pushing stroke to push an article from said first support onto said second support, means pivotally mounting said second article support on an axis extending transversely of the direction of movement of said reciprocatable pusher for movement between a horizontal position and a tilted position wherein the edge of said second article support proximate said first article support is below the plane of said first article support and the edge of said second article support remote from said first article support is above said plane, and means for reciprocating said pusher and pivotally moving said second article support in timed relation including means controlling pivotal movement of said second article support to said tilted position during an initial portion of the pushing stroke of said pusher such that the lower forward edge of the article being pushed will engage the surface of said second article support before said article is pushed from said first article support to an overbalanced position and to said horizontal position during the final portion of the pushing stroke of said pusher.

3,088,576
SCALE DISCHARGE DEVICE

Harold J. Mumma, Riverside, Calif., assignor to FMC Corporation, San Jose, Calif., a corporation of Delaware

Original application June 6, 1953, Ser. No. 358,621, now Patent No. 2,993,592, dated July 25, 1961. Divided and this application July 13, 1961, Ser. No. 123,723
6 Claims. (Cl. 198—25)

1. In combination, a scale platform, means mounting said platform in generally horizontal position and supported at one end only, a drive member mounted for rotation about a generally horizontal axis adjacent the free end of said platform in spaced relation thereto, and an ejector secured to said rotary drive member and having an article contact member disposed generally parallel

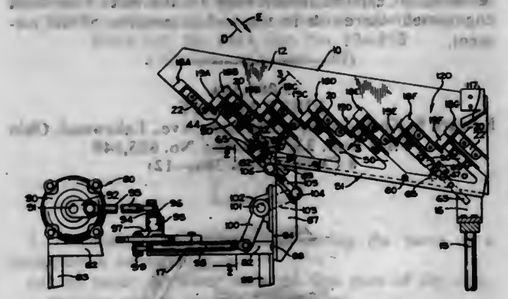


to said scale platform and movable in an orbital path around said platform about said axis, said article contact member being movable across the upper surface of said platform during a portion of said orbital movement to contact an article on the platform and eject it therefrom.

3,088,577
ARTICLE FEEDING MECHANISM

Donald W. Chamberlin, Los Gatos, Calif., assignor to FMC Corporation, San Jose, Calif., a corporation of Delaware

Filed Feb. 19, 1962, Ser. No. 174,118
7 Claims. (Cl. 198—32)

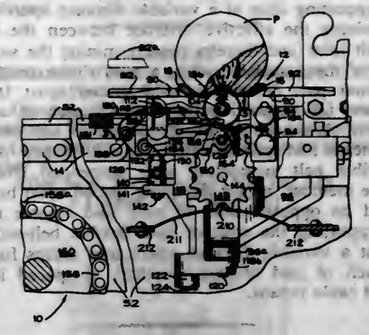


1. In an article feed mechanism of the type in which each of a plurality of pusher members reciprocates between a forward stationary flight and a rearward stationary flight to advance articles step by step from a position in front of the forward edge of the rearward flight to a position in front of the forward edge of the forward flight, the improvement which comprises a pair of article-pushing surfaces on the forward end of said pusher including a first surface defining the foremost edge of said pusher and a second surface disposed rearwardly from said foremost edge whereby when articles are advanced simultaneously by said first and second pushing surfaces, the article associated with said first surface will reach the edge of the forward stationary flight and will drop over said edge before the article being advanced by said second surface is in position to drop over said edge.

3,088,578
FRUIT HANDLING APPARATUS

Paul C. Wilbur, San Jose, and Leslie Vadas, Los Gatos, Calif., assignors to FMC Corporation, a corporation of Delaware

Filed Jan. 23, 1961, Ser. No. 84,142
17 Claims. (Cl. 198—33)

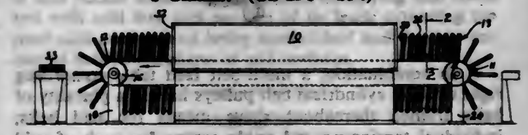


1. Apparatus for handling fruit having a stem indent, comprising an indent finder arranged to move into and from a position projecting into the stem indent, driving means for imparting a predetermined movement to the finder to cause the finder to scan the surface of the fruit, and magnetic means for applying a force urging said finder into said position.

3,088,579
CONVEYER

Charles W. Husum, Toledo, Ohio, assignor to Owens-Illinois Glass Company, a corporation of Ohio

Filed Oct. 18, 1960, Ser. No. 63,300
8 Claims. (Cl. 198—134)

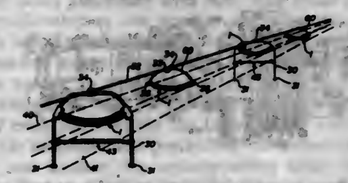


1. Means for conveying sheets having at least one coated surface through a heated oven, comprising a multiplicity of advancing skeletal-like sheet supporting frames, each frame including a plurality of small gauge wires for direct supporting contact with a coated sheet, said wires for the greater part being spaced from the frame proper and means for spacing said wires from said frame.

3,088,580
CONVEYOR

James R. Hughes, Sedalia, Colo., assignor to Hughes-Tyler Manufacturing Co., Denver, Colo., a corporation of Colorado

Filed July 20, 1959, Ser. No. 828,089
1 Claim. (Cl. 198—184)



A belt conveyor system comprising a plurality of spaced apart U-shaped members supported by their legs

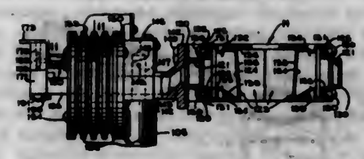
on a foundation, the upper arcuate part of the U-shaped members being secured to cable means and arranged to support a flexible belt-supporting idler suspended from the arcuate section in the upper part of each U-shaped member, means including spaced biased bolt holes carried on opposed sides of the curved portions of each U-shaped member for supporting the ends of said flexible belt-supporting idler at a variable distance apart for predetermining the effective distance between the ends of the belt idler and thereby predetermining the suspended curve of the suspended idler, a return idler mounted on the lower part of each of said spaced apart U-shaped members for supporting the return stretch of a belt, a plurality of arcuate members secured to said cable support means and spaced between said U-shaped members, a flexible belt supporting idler suspended from each arcuate member, means including spaced apart bolt holes carried on opposed sides of each said arcuate member for supporting the ends of said flexible belt-supporting idler at a variable distance apart, and means for securing each of said arcuate members at spaced intervals to said cable means.

3,088,581
CONVEYOR BELT CONTROL DEVICE
Alfred Rostal, Olmsted Falls, Ohio, assignor to Young Brothers Company, Cleveland, Ohio, a corporation of Michigan
Filed Apr. 12, 1961, Ser. No. 102,544
12 Claims. (Cl. 198—202)



1. In combination, a multi-belt feed table comprising right circular cylindrical belt pulleys having a plurality of belts trained thereabout, drive means for said belts; individual tensioning and guide means for each of said belts, said tensioning and guide means comprising an elongated freely pivotally mounted arm having a belt contacting guide roller having its axis of rotation extending generally transversely of said belt on the distal end of said arm, and means to vary the angle of the pivot axis of said arm with respect to the axes of said pulleys to position said belt contacting guide rollers in a plurality of adjusted positions.

3,088,582
FRUIT PREPARATION MACHINE
Hans W. Grotewold, Sebring, Fla., assignor to FMC Corporation, a corporation of Delaware
Filed June 28, 1960, Ser. No. 39,270
11 Claims. (Cl. 198—210)



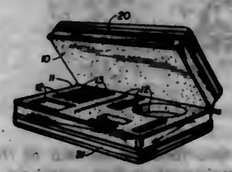
1. In a fruit processing machine, a fruit holder comprising a rigid support ring, a plurality of inflatable members mounted in said ring at spaced points around the inner periphery of said ring, each member having an inner face slanted donwwardly and inwardly toward the axis of said ring and terminating in a lower edge having end portions adapted to be moved into close proximity to the end portions of the faces of adjacent members to define a substantially continuous fruit gripping surface for enclosing a fruit, and means for directing air under pressure into said members to inflate said members and move said inner face into engagement with a fruit in said ring, the lower inner end of each slanted face being movable to a position under the fruit to support the fruit.

3,088,583
ARROW CASE
Robert W. Holtz, 1042 S. Carol Ave., Wheeling, Ill.
Filed May 6, 1960, Ser. No. 27,377
9 Claims. (Cl. 206—1)



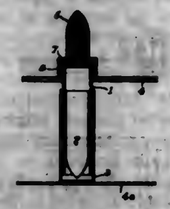
5. A portable warp resistant case for carrying arrows having elongated shafts comprising a receptacle having a plurality of transverse support members within the case, each of said members having at least one cradling groove having sides in axial alignment with the sides of a corresponding cradling groove of another member, and a transverse element for each member and in axial longitudinal alignment with each of a respective of said members and pivotal vertically thereabout from raised to locked position, said element carrying a complemental resilient pad registering with the groove of one member and so arranged to cooperatively associate with a corresponding pad on a complemental element registerable with another member embracingly holding the associated arrow shaft in straightening unwarping cushioned suspension within the case each of the pads in an unstressed condition being dimensioned slightly less than the space between the sides of the respective groove and being compressible to expand transversely of the sides into tight engagement therewith in the locked position of the element.

3,088,584
FIRST AID KIT
Edward S. Kozikowski, 12998 Lake Ave., Lakewood, Ohio
Filed Sept. 23, 1957, Ser. No. 685,648
6 Claims. (Cl. 206—12)



1. A first aid kit comprising, a quantity of medical supplies, a hollowed sectioned body defining a cavity containing said medical supplies, the sections being relatively movable to permit access to said supplies, closure means to hold said body in a closed position as a carrying case for said medical supplies, and a stiff, bendable splint reinforcement peripherally disposed about one of the body sections and frictionally connected to said one section, said reinforcement being facilely removable from said one section, said splint reinforcement having first and second ends disconnectably fastened together, said enforcement also being a first aid splint when said ends are disconnected.

3,088,585
COSMETIC STICK DISPLAY UNIT
Thérèse Solenghi, 34 Rue de Provence, Paris, France
Filed June 24, 1960, Ser. No. 46,856
2 Claims. (Cl. 206—45.19)



1. A display unit for cosmetic sticks comprising at least one container for protectively housing a cosmetic stick and having a closed base and an open end for the passage of said cosmetic stick therethrough; a cover for said container open end; a factitious body of a solid air-unalterable material similating the shape, shade and texture of the cosmetic stick to be housed within said container; said body having a base abutting said container base with said body extending from said container; means fixedly connecting said body base to said container base; a display panel having at least one opening with said container partially extending therethrough; connecting means consisting of a lateral extension of said body base providing a lateral flange; a cup-shaped member having an apertured bottom, an open end, and a skirt and said cup-shaped member bottom abutting said body flange with said container extending into said cup-shaped member open end within said skirt thereof for connection thereto, the outer peripheral dimension of said cup-shaped member being greater than the peripheral dimension of said panel opening and said cup-shaped member contacting said panel.

3,088,586
TWO PART PACKAGE
Kenneth V. Hardman, Upper Montclair, N.J., assignor to DPR Incorporated, a corporation of New Jersey
Filed July 26, 1961, Ser. No. 126,950
3 Claims. (Cl. 206—47)



3. A container for separately storing the parts of a composition comprising

(*a*) an outer container with the first part of the composition stored therein,

(*b*) a seal for the outer container to prevent the loss of the first part of the composition,

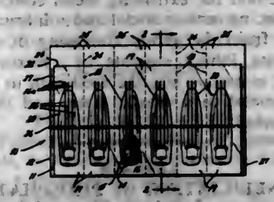
(*c*) a collapsible inner tube, with the second part of the composition therein, positioned within the outer container,

(*d*) said collapsible inner tube having two end portions which are substantially free of the second part of the composition,

(*e*) the first of said two end portions extending out of the outer container through the seal to form a pull tab by which the tube can be grasped from the outside of the outer container and pulled through the seal to permit stripping of the second part of the composition from the tube,

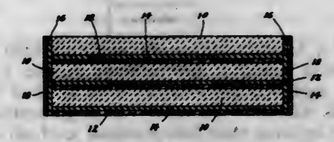
(*f*) the second end portion being folded upon itself to form an openable double fold seal within the outer container which seal is openable by pulling the tube through the outer container seal by means of the pull tab to deposit the second part of the composition into the first part of the composition, whereby the second part of the composition may be stripped from the collapsible inner tube and mixed with the first part of the composition without removing the parts of the composition from the outer container.

3,088,587
COMBINATION PACKAGING ASSEMBLY AND PACKAGED ARTICLE
John D. Dimmig, Norristown, and Robert T. Vaughan, Cheltenham, Pa., assignors, by mesne assignments, to Philco Corporation, Philadelphia, Pa., a corporation of Delaware
Filed Sept. 28, 1961, Ser. No. 141,325
2 Claims. (Cl. 206—56)



1. In combination, a packaging assembly and a packaged article of the type having a main body portion with elongated generally parallel wire leads extending from one side thereof and terminating in free end portions, said assembly comprising a pair of sheet members arranged face-to-face with surfaces in contacting engagement, and a pocket provided in one of said sheet members and cooperating with the other of said sheet members to define an article-receiving space, said article being disposed within said pocket with its body portion occupying said space and with said free end portion of its leads extending beyond said pockets and being sandwiched and fixedely anchored between portions of said surfaces.

3,088,588
CERAMIC TILE
Harold R. Feichter and Ira A. Abernethy, Canton, Ohio, assignors to United States Ceramic Tile Company, Canton, Ohio, a corporation of Delaware
Filed June 3, 1960, Ser. No. 33,750
3 Claims. (Cl. 206—65)



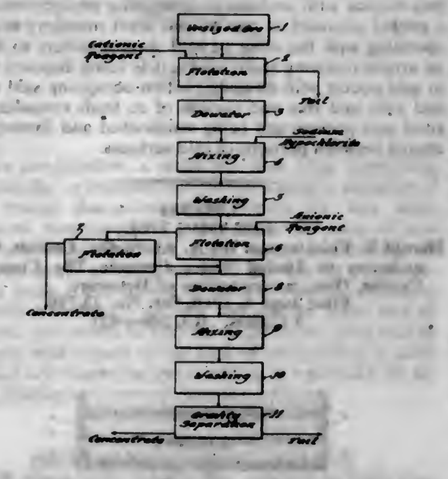
1. A tile assembly comprising a plurality of tiles each of which has a face area, a back area and edges; said back and edges being finished to provide smooth surfaces, said tiles being assembled with their face areas in superposed relationship to one another and with the edges of each tile being substantially in a common plane with the corresponding edges of the other tiles in said assembly; each tile having an adhesive material on its back surface and a removable mask over said adhesive material; the mask of each tile abutting the immediately adjacent tile in said tile assembly and precluding the adhesion of said tiles to one another; the corresponding edges of all of said tiles having adhesive material thereon; and at least one removable mask covering said edges and adhered to said tile by means of the adhesive on said edges.

3,088,589
METHOD FOR CONTINUOUS EXTRUSION OF METALS
Sven R. Botes, Spanga, Sweden, assignor to John Robertson Co., Inc., Brooklyn, N.Y., a corporation
Filed Dec. 23, 1959, Ser. No. 861,602
Claims priority, application Sweden Jan. 16, 1959
2 Claims. (Cl. 207—10)



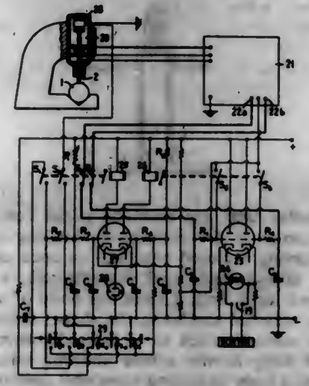
1. In a method for extruding metal comprising: alternately introducing molten metal and a lubricant of material selected from the group consisting of stearic acid, sodium stearate, lithium stearate, or a mixture of two of the aforesaid materials into the feed path to an extruder, cooling the metal to a plastic state, and thereafter extruding the metal.

3,088,590
WET BENEFICIATING OF PHOSPHATE ORES
Joseph F. Haseman, Lakeland, Fla., and John L. Reuss, Zion, Ill., assignors to International Minerals & Chemical Corporation, a corporation of New York
Filed Sept. 2, 1960, Ser. No. 53,527
14 Claims. (Cl. 209—12)



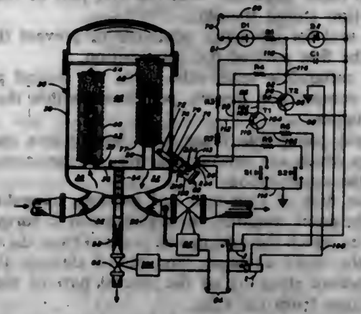
1. The method of beneficiating an unsized phosphate ore fraction which comprises:
(1) Subjecting an unsized liberated deslimed phosphate ore fraction containing particles of a mesh size of from about 10 mesh to about 200 mesh to froth flotation in the presence of a cationic reagent to provide a phosphate-rich underflow and a silica containing overflow;
(2) Subjecting the underflow from (1) to froth flotation in the presence of an anionic flotation reagent to provide a phosphate-rich overflow concentrate and an underflow; and
(3) Subjecting the underflow from (2) to gravity separation to provide a phosphate-rich concentrate and a silica tail.

3,088,591
LINEAR DIMENSION GAUGE
Johannes Franz Perthen and Hans Karl Steudel, Hannover, Germany; said Steudel assignor to said Perthen
Filed Aug. 29, 1958, Ser. No. 758,158
4 Claims. (Cl. 209—88)



1. A linear dimension gauge apparatus comprising, an electrical gauge head having a reciprocable feeler for sensing individual articles of subject matter to be gauged and means for converting the feeler movements into electrical output signals representative of the value of the measured dimension, an electrical measuring mechanism connected to said head and having a pointer for indicating the measured values, automatic coupling means operably coupling the measuring mechanism and the gauge head feeler, a locking device for releasably holding the pointer at indicating positions corresponding to the last successive indication representative of a gauge dimension reading taken on the subject matter comprising an electronic circuit having capacitors chargeable to a capacitance value representative of the measured value between successive gauge readings, means connected to respond to the capacitance value to maintain the pointer at indicating position as long as the capacitors are in a charged condition, and means to discharge at least some of the capacitors between successive gauge readings.

3,088,592
CONTROL SYSTEM
Ray D. Clark, Oakland, Calif., assignor to California Research Corporation, San Francisco, Calif., a corporation of Delaware
Filed Mar. 20, 1961, Ser. No. 96,882
6 Claims. (Cl. 210—114)

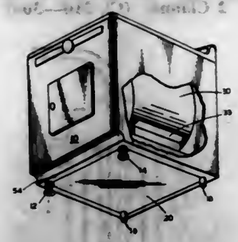


1. In a system for controlling the operation of apparatus for separating intermixed water from a stream of

hydrocarbon fuel and wherein a plurality of water-separating units are connected in parallel relationship between a first manifold conduit supplying a mixture of fuel oil and water to said separating units and a second manifold conduit for hydrocarbon fuel into which said separator units discharge, a water-separating unit comprising a tank, means in said tank for separating admixed water from said hydrocarbon fuel and collecting said water in the bottom portion of said tank, an inlet conduit and an outlet conduit and a drain conduit for said tank, respective electrically actuated valves in said outlet conduit and in said drain conduit, vertically spaced-apart electrodes within said tank and spaced apart from the inner walls thereof, an electrical circuit which includes as electrical conductors the walls of said tank and said electrodes and a body of water in contact with said walls of said tank and said electrodes, said electrical circuit comprising a power supply for said circuit, means controlling the voltage and current of said power supply to said circuit within predetermined maximum limits, a first and a second current amplifying means connected in parallel across said circuit, a first relay means connected in series with said first current amplifying means, a second relay means connected in parallel with said first and said second current amplifying means, means electrically connecting the lower one of said electrodes to said first current amplifying means to activate said first current amplifying means by a signal from said lower electrode to pass a current when said lower electrode is contacted by water, means for electrically connecting said first current amplifying means and said first relay means to energize said first relay means by the current passed by said first current amplifying means, means electrically connecting said first relay means and the electrically actuated valve in said drain conduit to open said valve when said first relay means is energized, means electrically connecting said second relay means and the electrically actuated valve in said outlet conduit to open said valve in said outlet conduit when said second relay means is energized, means electrically connecting the upper one of said electrodes to said second amplifying means to activate said second current amplifying means by a signal from said upper electrode to pass a current when said upper electrode is contacted by water, said second relay means being constructed to be energized by said power supply to hold the valve open in said outlet conduit when said second current amplifying means is not activated by a signal from said second electrode and to be de-energized when said second current amplifying means passes a current upon a signal from said upper electrode and to close the valve in said outlet conduit.

3,088,593
LEVELING AND STABILIZING APPARATUS
William E. Stilwell, Jr., Glendale, Ohio; Frances H. Stilwell, executrix of William E. Stilwell, deceased, assignor to The Murray Corporation of America, Syracuse, N.Y., a corporation of Delaware
Filed Mar. 2, 1959, Ser. No. 796,650
3 Claims. (Cl. 210—144)

1. Stabilizing and leveling apparatus for laundry appliances comprising a frame structure having four supporting feet disposed to define a substantially quadrangular area, a centrifugal extractor mounted on said frame including driving means therefor, means acting to continuously divide the static frame load carried by two adjacent feet on said frame equally between said two feet, viscous damping means associated with said last named means to restrict action thereof in response to dynamic unbalanced rotational forces generated by said extractor, means for vertically extending and retracting each of the other two of said four feet, relative to said frame, independently of each other to establish fixed positions thereof to accommodate for floor irregularity, and means responsive to an increase in pressure in said viscous



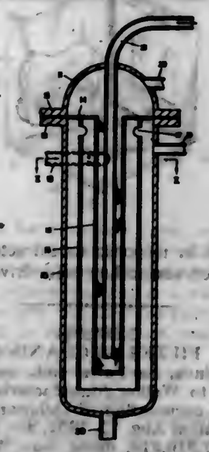
damping means in response to extractor generated dynamic forces for controlling said driving means.

3,088,594
FILTER MECHANISM
Gustav H. Yelinek, La Porte, Ind., assignor, by mesne assignments, to Walker Manufacturing Company, Racine, Wis., a corporation of Delaware
Original application Aug. 12, 1952, Ser. No. 303,859, now Patent No. 2,910,814, dated Nov. 3, 1959. Divided and this application Feb. 18, 1959, Ser. No. 796,727
1 Claim. (Cl. 210—237)



In a filter cartridge, the combination of a base plate having a central opening with a flange around it, an annular body of filter material on said base plate said flange extending axially from the same side of the base plate as the filter material, said filter material comprising compressed fibrous material, an elongated sock holding said fibrous material in compressed condition and extending axially from said opening and having one end embracing said flange, said sock extending axially through the center of said filter body and forming a flexible center tube for it, said sock being reversely turned around the outside of the filter body and having its outer end extending over the outside of said base plate, a ring fitting on the outside of said flange and clamping said one sock end to said flange, said filter body, flange, sock, and ring being substantially coaxial and defining the axis of said cartridge, an axially extending flexible wire handle inside the flexible center tube formed by said sock and having a portion extending transversely to said cartridge axis and through the flange, sock end, and ring and serving to hold them together.

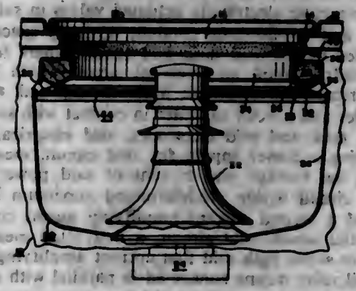
3,088,595
FILTER UNIT
James Robb, Carshalton, England, assignor to The British Oxygen Company Limited, a British company
Filed Sept. 29, 1960, Ser. No. 59,213
Claims priority, application Great Britain Oct. 7, 1959
2 Claims. (Cl. 210—304)



1. A filter unit for separating solid carbon dioxide from a mixture of gaseous and liquid air containing solid carbon dioxide in suspension comprising an elongate cylindrical axially vertically disposed vessel, a cylindrical porous filter candle coaxially disposed within said vessel and including a closed bottom portion spaced from the bottom of said vessel, said candle adapted to permit the passage of gas and liquid but to prevent the passage of solids suspended within said vessel, an impervious cylindrical sleeve member coaxially disposed within said vessel and around said candle, said sleeve extending within said vessel to a point above the bottom thereof but below the closed end of the filter candle, said sleeve including passage means in the upper end thereof, said passage communicating the exterior of said sleeve with said filter candle, a fluid inlet opening tangentially into said vessel exteriorly of said sleeve, and fluid outlet means within said filter candle in the form of an impervious dip pipe parallel to and spaced from the inner wall of said candle and terminating with an open end adjacent the bottom of said candle, said sleeve being open at its lower end below the bottom of the filter candle to permit access of liquid to said filter candle, said gaseous portion of said mixture communicating with said filter candle through said passage means in said sleeve, whereby said gaseous portion of said mixture communicates with said open end of said dip pipe within said filter.

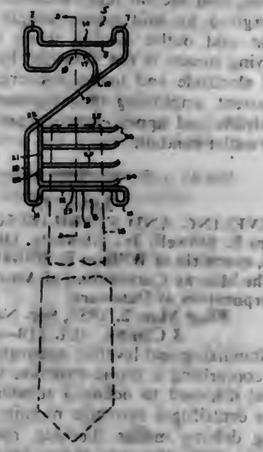
3,088,596
DOMESTIC APPLIANCE
Norman J. Bullock, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Sept. 9, 1960, Ser. No. 55,066
1 Claim. (Cl. 210—382)

In combination, a spin basket having a cylindrical, open-end container portion and a tub rim housing portion, said housing portion having an access opening smaller than the diameter of said container portion and a ported flange attached to said open end of said container portion, means for rotating said tub in a centrifuging operation, and a unitary contractible means having a permanently joined circumferential construction comprising a plurality of concentrically arranged continuous, V-shaped rings, and a plurality of integral connector pieces for holding said rings in spaced relationship to each other and to said ported flange, said contractible means having a natural configuration within said basket in front of said ported flange and in interlocking engagement therewith for preventing a substance being centrifuged from blocking said ported flange, said contractible means formed of a plastic such as polypropylene which has a sufficient characteristic of resilience to enable said contractible means to be deformed



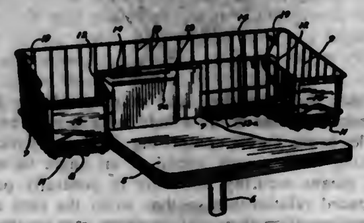
to an unnatural configuration for passing through said access opening, the deforming of said contractible means effecting a restoring force in said plastic to enable said contractible means to snap to said natural configuration, said integral connector pieces having toe portions extending into said ported flange for effecting said interlocking engagement therewith solely as a result of said restoring force for supporting said contractible means in said spin basket when said contractible means snaps to its natural configuration.

3,088,597
NECKTIE HOLDER
William D. Richey, 684 NE. 40th St., Fort Lauderdale, Fla.
Filed May 29, 1961, Ser. No. 113,533
4 Claims. (Cl. 211—13)



1. A necktie holder of the character described for suspendingly holding a plurality of neckties comprising, a wire frame having cross rods at its upper and lower ends, the uppermost cross rod being upturned at one end and then directed downwardly to form a loop having its upper limit disposed above the uppermost cross rod, the downwardly directed part being in the form of a leg extending diagonally across the frame to meet a diagonally opposite end of the lowermost cross rod in a loop having its limit located below the lowermost cross rod, an L-shaped wire necktie-support having parallel necktie-holding rods extending from it and on which neckties are suspended, said support being attached at its upper end to the diagonally-extending leg and being attached at its lower end to the lowermost cross rod, the second end of the uppermost cross rod being formed into an upwardly-extending loop having its upper limit located above the uppermost cross rod, said loop having a downward leg extension provided at its lower end with an inturned suspension loop having an end attached to the diagonal leg.

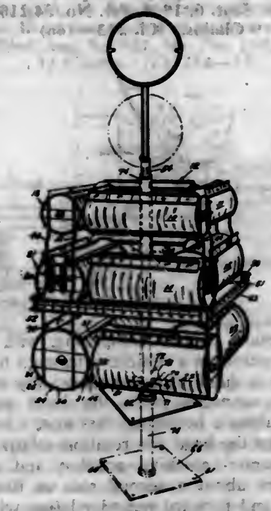
3,088,598
MERCHANDISE DISPLAY RACK
Louis O. Wernicke, Minneapolis, Minn., assignor to Quik-Riter Products, Inc., Minneapolis, Minn., a corporation of Minnesota
Filed Mar. 5, 1962, Ser. No. 177,562
2 Claims. (Cl. 211—88)



1. In combination with a supporting stand having a generally flat top panel and an upstanding back portion, a merchandise display rack having a bottom, upstanding back and end portions, a pair of spaced apart front portions, a recessed front portion spaced inwardly from said spaced apart front portions, and a pair of inner end portions spaced inwardly from said first-mentioned end portions and interconnecting the outer ends of the recessed front portion and the inner ends of the respective spaced apart front portion, a pair of supporting hooks connected to the recessed front portion and receiving the upstanding back of said stand for providing the sole vertical support for said rack, the weight of the merchandise in the forwardly extending display areas counterbalancing at least a substantial portion of the weight of the merchandise disposed across the rear of the rack to produce a minimum of cantilever support required for the unit.

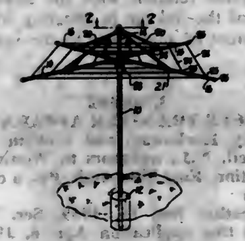
3,088,599
ROTATABLE MERCHANDISE DISPLAY
Nathan Leffeld, 33 Kerr Ave., Newark, NJ.
Filed Feb. 12, 1960, Ser. No. 8,266
11 Claims. (Cl. 211—13)

1. A wire frame assembly display device; said wire frame assembly comprising a plurality of semi-cylindrical members; each of said semi-cylindrical members being formed of a plurality of parallel extending wires; a first end of said parallel extending wires terminating on and being fastened to a first circular wire rim; the other end of said parallel extending wires terminating on and being fastened to a second circular wire rim; said parallel extending wires thereby being spaced from one another to define a semi-cylindrical shape; said semi-cylindrical members being arranged in a closed chain arrangement whereby said first rim of each of said semi-cylindrical members is fastened to one of the parallel extending wires of an adjacent semi-cylindrical member; the opening defined in said semi-cylindrical surface defined by said parallel extending wires facing outwardly of the chain for each of said semi-cylindrical members whereby each



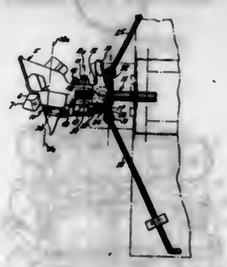
of said semi-cylindrical members can receive cylindrical shaped structures to be displayed.

3,088,600
CLOTHES DRYER
Richard Leroy Cleary, Columbia Station, Ohio (12876 Fountain Court, Cleveland 36, Ohio)
Filed Jan. 18, 1960, Ser. No. 2,945
1 Claim. (Cl. 211—166)



A clothes dryer comprising a tubular column adapted to be anchored in the ground in a vertical position, a shaft in telescoping engagement with said column and extending above the top thereof, laterally extending rigid members affixed to said shaft above said column, a support for each of said members affixed to said shaft above said members and joined to the members associated therewith intermediate the ends of said member, a plurality of clothes supporting lines spaced apart and carried by said members, a housing adjustably affixed to said shaft, a shoulder in said housing confronting the top of said column, a plate in said housing in engagement with said shoulder, a perforate retainer adjacent said plate, a plurality of balls carried in openings in said retainer in engagement with said plate, a second plate in engagement with said balls, and a snap ring engaging said housing and second plate, said second plate engaging the top of the column for supporting said shaft for rotation in respect to said column.

3,088,601
CAR COUPLER
William J. Metzger, East Cleveland, Ohio, assignor to National Castings Company, a corporation of Ohio
Filed Sept. 6, 1960, Ser. No. 54,210
9 Claims. (Cl. 213—166)



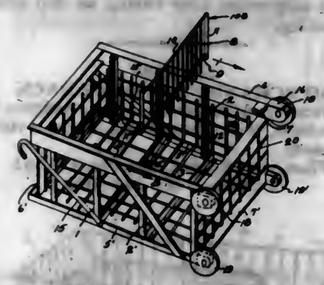
1. An automatic coupler comprising, with respect to its mounted position on a vehicle; a forward head having a lock therein; a shank disposed rearwardly of the head and pivotally connected with the head adjacent its rearward end along a horizontal first axis; a lock-shifting rotor carried by the head for rotation relatively thereto between a coupler-unlocking position and a coupler-locking position about a second axis in fixed relation with the head and forward spaced relation with the first axis, and having a lever portion rotatable in a generally vertical plane at one side of the coupler; and a mechanism for actuating the rotor comprising a lever carried by the shank for rotation relative thereto about a third axis in fixed relation with the shank and rearward spaced relation with the first axis, said lever being rotatable within a vertical plane at said side of the coupler, a linkage extending lengthwise of said coupler side connecting the lever portion and said lever and having a pivot joint intermediate said lever portion and said lever adjacent said first axis; and means mounted on the coupler adjacent said first axis supporting the linkage at said pivot joint and in guide relation with the linkage providing linear motion of the linkage in effecting transmission of angular movement of said lever to the rotor.

3,088,602
ARTICLE TRANSFER APPARATUS
Clair M. Rively, Rockaway, and William A. Brenneck, West Caldwell, N.J., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Original application Jan. 15, 1959, Ser. No. 787,059. Divided and this application Apr. 6, 1961, Ser. No. 112,145
48 Claims. (Cl. 214—1)



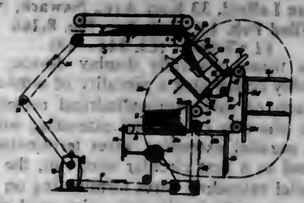
1. Article-transporting apparatus comprising a plurality of article-supporting units on which articles are disposed and a device comprising a carriage, drive means connected to said carriage for causing said carriage to move along said article-supporting units, means supported by said carriage and movable with respect thereto and operable to remove articles from said article-supporting units, means for moving said carriage-supported means, the relative movement of said carriage-supported means with respect to said carriage being such that a portion of said carriage-supported means is relatively stationary with respect to said article-supporting units during a predetermined period of the movement of said carriage along said article-supporting units to permit said carriage-supported means to remove articles from said article-supporting units.

3,088,603
TOBACCO RACK
Noah A. Boyette, Rte. 1, Box 200, Hahira, Ga.
Filed Apr. 5, 1962, Ser. No. 185,426
6 Claims. (Cl. 214—5.5)



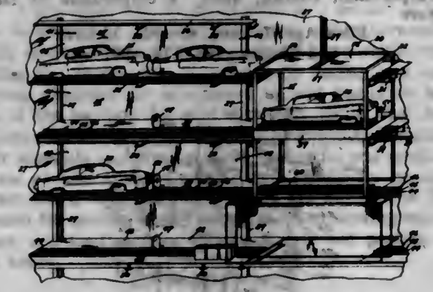
1. A rack for supporting and shaping tobacco leaves during transportation from a field to a curing building and while being cured comprising a plurality of tiers each having track means joined at an angle to a base member, means securing said tiers in generally parallel planar spaced relationship so that when the tiers are in a horizontal position they will lie above one another and will be separated by a distance at least equal to the length of the tobacco leaves, and sticks for pinning tobacco leaves in place each comprising guide means secured for movement along said track means toward and away from the base member of said tiers, spaced pins generally perpendicular to said base member and secured to said guide means for movement therewith which pass between tobacco stems lying across said base members and a cross member transverse to and secured to said pins intermediate to the ends thereof which presses tobacco against said base member.

3,088,604
APPARATUS FOR STACKING NEWSPAPERS AND THE LIKE
Herman Bertil Nilsson, Solna, Sweden, assignor to AB Bonnierforetagen, Stockholm, Sweden, a corporation of Sweden
Filed May 16, 1960, Ser. No. 29,197
Claims priority, application Sweden May 21, 1959
6 Claims. (Cl. 214—6)



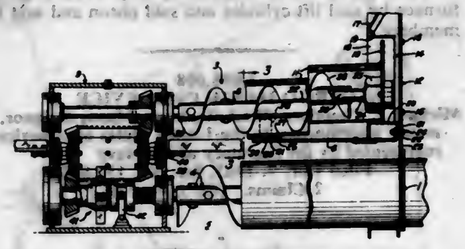
1. An apparatus for stacking newspapers and the like comprising a first conveyor extending substantially horizontally and including upper and lower endless belts for advancing a continuous stream of overlapping papers between the facing portions of said two endless belts to a discharge end of said first conveyor, a second conveyor mounted adjacent the discharge end of said first conveyor and having an inclined paper receiving portion facing said discharge end and located at a lower level so that papers leaving said discharge end will fall down onto said receiving portion, said second conveyor having a plurality of stacking supports located at spaced intervals along said second conveyor and including projecting members to form stacking pockets for receiving a predetermined number of newspapers in each pocket, said projecting members having their outer ends located to move along a path which passes adjacent the discharge end of said first conveyor at such a distance therefrom that said outer ends will engage the stream of overlapping newspapers between two succeeding papers when they are still held between said two belts of said first conveyor and while their leading edge portions are projecting freely out from said discharge end to divide and divert the stream of overlapping newspapers to the succeeding stacking support, means for driving said second conveyor in a direction so that its inclined receiving portion will move downwardly in synchronism with the drive of said first conveyor, an actuator belt mounted parallel with said receiving portion of said second conveyor to receive the leading edges of the newspapers and carry them along part of the path of said second conveyor, said actuator belt being driven in the same direction as, but at a higher speed than, said second conveyor in order to prevent the leading edges of the stacked papers from sliding back, and a receiving means mounted in a substantially horizontal direction in the path of movement of said second conveyor to receive the stacks of newspapers from said stacking supports.

3,088,605
PARKING SYSTEM FOR AUTOMOBILES
Oscar M. Martinson, 530 W. 236th St., Riverdale, N.Y.
Filed July 30, 1956, Ser. No. 601,088
6 Claims. (Cl. 214—16.1)



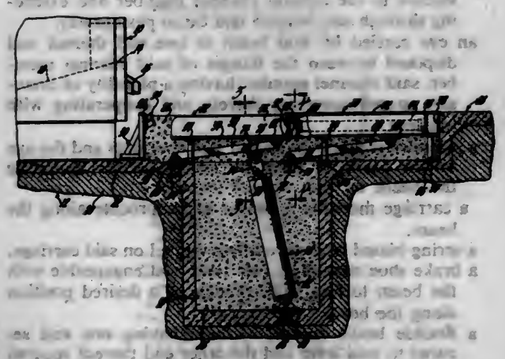
1. In a parking system having a vehicle storage structure including a plurality of vehicle storage floors and an elevator having a vehicle carrying deck, improved means for transferring vehicles between said deck and said floors comprising: a plurality of tracks on said floors, a second plurality of tracks on said elevator deck alignable selectively with said tracks on said floors; a carriage element movable to and from said elevator deck and said floor upon a pair of aligned tracks; said carriage element including a main carrier member adapted to move beneath a vehicle, first and second carrier struts and cable means driven by prime mover means on said elevator deck; said cable means engaging said carrier member and strut members for moving said main carrier member onto said storage floors; said main carrier member having carrier stop means and snubbing strap means associated therewith, said carrier stop means extending vertically from the ends of said main carrier member, said snubbing strap means extending at an angle to the vertical and adapted to engage the extremities of a vehicle.

3,088,606
SWEEP ARM UNLOADER SHIELD MEANS
John W. Schaefer, Kankakee, Ill., assignor, by mesne assignments, to A. O. Smith Harvestore Products, Inc., Kankakee, Ill., a corporation of Delaware
Filed Aug. 9, 1961, Ser. No. 130,298
12 Claims. (Cl. 214—17)



1. In a bottom unloader unit having a sweep arm supported within a storage structure to transport the stored material to a discharge opening, a shield disposed within the storage structure for overlying the arm in a selected position of the arm, means releasably securing said shield in the storage structure and releasable from outside the storage structure, and means for releasing and removing the shield exteriorly of the storage area of the structure.

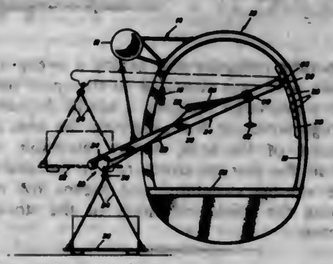
3,088,607
LOADER
Thomas D. Parrish, Flushing, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Aug. 3, 1959, Ser. No. 831,414
7 Claims. (Cl. 214—29)



1. A loading device for a remelting furnace located on a floor having a pit therein adjacent said furnace and comprising a scoop, a plurality of pedestals mounted in said floor and supporting said scoop in the downward position thereof, a first pair of link members pivotally mounted in said floor at one end and pivotally secured to said scoop substantially midway along the length thereof, a second pair of link members pivotally mounted in said floor at one end thereof and pivotally secured to said scoop near the rearward end thereof, said second pair of link members being parallel to said first pair of link members, a lift cylinder pivotally mounted in the floor of said pit and extending upwardly toward said scoop, a piston received in said lift cylinder and having a piston rod extending therefrom, said piston rod being pivotally secured at the upper end thereof to said first pair of link

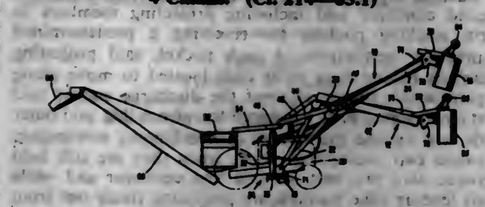
members, said piston and said lift cylinder being operable to raise said scoop and said pairs of link members causing said scoop to follow an arcuate path toward and into said furnace with the floor of said scoop always in a substantially horizontal plane, and a piston and cylinder mounted on said scoop and at the rearward end thereof and operable to push the material from said scoop into said furnace when said scoop is positioned in said furnace by said lift cylinder and said piston and said link members.

3,088,608
CARGO HANDLING DEVICE
Michael J. Theodore, West Roxbury, Mass., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Dec. 7, 1961, Ser. No. 157,862
2 Claims. (Cl. 214—77)



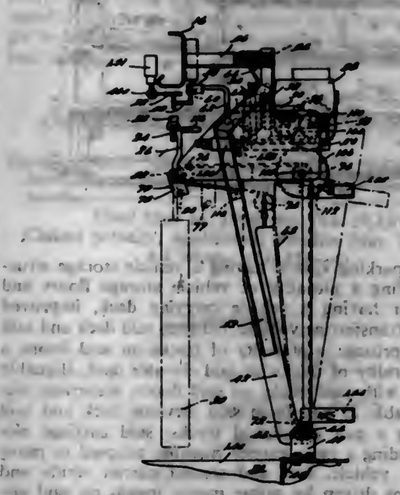
1. In a cargo handling device, the combination of an aircraft fuselage subetantially elliptical in configuration,
an arcuate channel member attached within and on one side of said fuselage,
a cargo passageway on the other side of said fuselage,
a beam pivotally and adjustably mounted at one end thereof to the arcuate channel member and extending through and beyond said cargo passageway,
an eye carried by said beam at one end thereof and disposed between the flanges of said channel member, said channel member having a plurality of mutually spaced apertures therein and cooperating with said eye,
a pin selectively positioned in said apertures and the eye on the beam for pivotally and adjustably mounting the beam on the channel member,
a carriage movably mounted to reciprocate along the beam,
a spring-biased lever pivotally mounted on said carriage,
a brake shoe carried by said lever and engageable with the beam to lock said carriage at a desired position along the beam,
a flexible brake control element having one end secured to said lever and the other end thereof secured to an actuating member in the body for selectively disengaging the brake shoe from the beam whereby the carriage may be moved along the beam to the locked positions,
a pivoted arm resiliently mounted at one end on the beam and having an eyelet at the other end thereof for receiving said flexible element, said arm being movable in a clockwise direction to take up the slack in the flexible element as the carriage moves along the beam in the direction toward the pivoted and adjustable end thereof,
a power hoist mounted on the exterior of the fuselage above said cargo passageway and operatively connected to said beam near the free end thereof for controlling the movement of the beam during a cargo handling operation, and means connecting said power hoist to the beam.

3,088,609
HARVESTING MACHINE
Donald E. Franzen, Monroeville, N.J., assignor to Franzen Corporation, a corporation of New Jersey
Filed Mar. 24, 1959, Ser. No. 801,646
4 Claims. (Cl. 214—83.1)



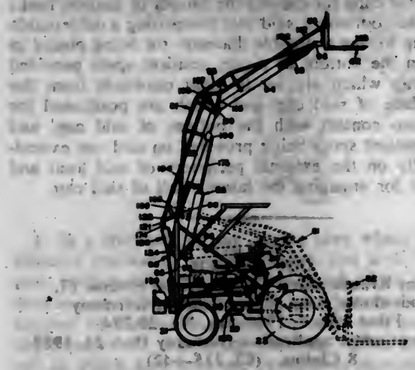
1. A harvesting machine for picking fruit from trees in an orchard comprising a plurality of booms, means for moving said booms to different angular, horizontal and vertical positions, a pair of substantially semi-circular platforms at the end of each of said booms for carrying workers adjacent the trees in said orchard, means for maintaining said platforms in a relatively level position for different vertical heights, means for mechanically adjusting said pair of platforms to different horizontal angles with respect to said boom, a pan disposed between each said pair of platforms for receiving fruit picked by said workers, a movable conveyor belt for carrying said picked fruit away from each said pan, a storage bin for storing fruit, a chute for transporting said fruit from said conveyors to said storage bin, and a conveyor for carrying away the fruit from said storage bin.

3,088,610
SKIP AND DELAYED DIP MECHANISM FOR CONVEYING APPARATUS
Leon J. Pianowski, Detroit, Mich., assignor to The Udylite Corporation, Detroit, Mich., a corporation of Delaware
Filed Apr. 7, 1960, Ser. No. 20,609
12 Claims. (Cl. 214—89)



1. In a conveying machine, the combination comprising a frame, rail means on said frame movable to and from a raised position and a lowered position, work-supporting means movably mounted on said rail means, advancing means for advancing said work-supporting means along said rail means, a selective work-handling means disposed adjacent to said rail means for selectively removing and depositing said work-supporting means on said rail means, means associated with said rail means coacting with and for moving said selective work-handling means out of the path of said rail means during the up and down movement thereof, cam means on said advancing means coacting with and for moving said selective work-handling means out of the path of travel of said work-supporting means during the advancing stroke of said advancing means, said selective work-handling means selectively actuable in response to the vertical movement of selected ones of said work-supporting means.

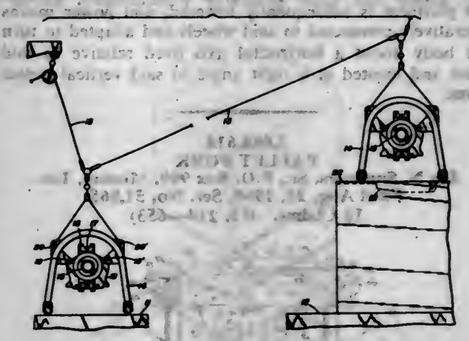
3,088,611
TRACTOR MOUNTED LIFT
Donald R. Holdren, West Liberty, Ohio, assignor to Holdren Brothers, Inc., West Liberty, Ohio, a corporation of Ohio
Filed Mar. 25, 1959, Ser. No. 801,810
6 Claims. (Cl. 214—140)



1. A lift apparatus for attachment to a tractor of the type having front wheels, rear wheels and a forwardly facing seat and steering mechanism, said apparatus comprising, in combination, a rearwardly facing seat and steering assembly for attachment to said tractor at one side of the location for said forwardly facing seat and steering mechanism; a base for attachment to said tractor; a lift assembly including a boom having an end portion, a base portion attached to said base forwardly on said tractor, and a beam portion extended rearwardly over the location for said forwardly facing seat and steering mechanism; and load carrying means on said end portion of said boom.

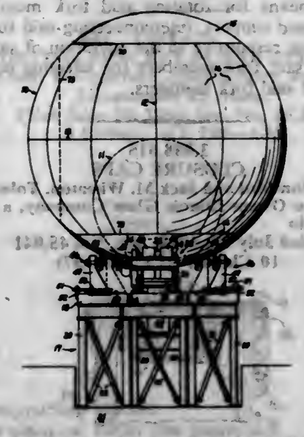
3,088,612
METHOD OF HANDLING STORES
Robert R. Alaise, Silver Spring, Md., Charles W. Webb, Mountain View, Calif., and Homer Eugene Violette, Wheaton, Md., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed May 26, 1961, Ser. No. 113,046
4 Claims. (Cl. 214—152)

1. A method of handling stores comprising the steps of attaching handling attachments to said stores, crating said stores and said handling attachments, conveying said crated stores to the deck of a supply ship, raising said crated stores to a dolly, attaching said stores to said dolly, lowering said crate, attaching a sea transfer line to said dolly, transferring said dolly by said sea transfer line to another ship, manually and accurately positioning said dolly over a strike-down hatch, opening said strike-down hatch, raising a strike-down elevator through said open strike-down hatch, engaging said strike-down elevator to the handling attachments, disengaging the handling attachments from said dolly, lowering said strike-down elevator to its lowest limit of travel, raising a juxtaposed check-out car to engage the bases of said handling attachments, further raising said check-out car to free said handling attachments from said strike-down elevator, moving said check-out car along a check-out platform to a



position beneath a strike-down rail, raising said check-out car to position said stores partially within said strike-down rail, engaging said stores in said strike-down rail, and conveying said stores along the strike-down rail to a storage area.

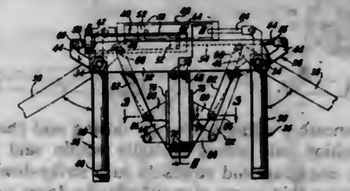
3,088,613
POSITIONING MECHANISM FOR SPHERICAL BODIES
Paul P. Westhoff, St. Louis, Mo., assignor to Pandjiris Weldment Company, St. Louis, Mo., a corporation of Missouri
Filed Apr. 18, 1960, Ser. No. 22,470
3 Claims. (Cl. 214—340)



1. A positioning mechanism for spherical bodies comprising a table, a pair of yokes disposed in a relatively stationary position and in alignment on opposite sides of said table and pivoted to said table on parallel horizontal axes, a plurality of wheels rotatively mounted in each yoke on axes parallel to said yoke axis, one of said wheel axes in each yoke being located on each side of the yoke axis so that said wheels support spherical bodies of different sizes along a vertical center plane, stabilizing means adjustably mounted to the other opposite sides of said table and adapted to engage the body, said stabilizing means being selectively movable toward and away from each other to accommodate spherical bodies of different sizes, a platform between said yokes and below said body, means connected to said platform for vertically raising

the platform to lift the body vertically from the wheels and for vertically lowering the platform to seat the body on said wheels, a gear attached to said platform, drive means operatively connected to said gear for rotating the platform after the platform is raised to change the center plane of the body supported on the wheels when the platform is subsequently lowered, and power means operatively connected to said wheels and adapted to turn the body about a horizontal axis fixed relative to said table and located at a right angle to said vertical center plane.

3,088,614
PALLET FORK
Joe N. Summers, Sr., P.O. Box 909, Mission, Tex.
Filed Aug. 25, 1960, Ser. No. 51,865
10 Claims. (Cl. 214—653)



1. A combined lifting and clamping mechanism for use with an industrial truck having an upwardly extending mast including a carriage movable lengthwise thereof, comprising: a plate member adapted to be mounted on the carriage; a support attached to said plate member; and a combined lifting and clamping means mounted on said plate member, including a pair of pivotally mounted fork members, each fork member having a depending portion and a forwardly projecting end portion; means for rotating said fork members; and additional means separate from said means for rotating said fork members, coacting with said support, interconnecting said fork members and being responsive to the operation of said means for rotating said fork members for effecting concurrent movement of said fork members.

3,088,615
CLOSURE CAPS
George V. Mumford and Jack M. Wheaton, Toledo, Ohio, assignors to Owens-Illinois Glass Company, a corporation of Ohio
Filed July 25, 1960, Ser. No. 45,041
10 Claims. (Cl. 215—37)



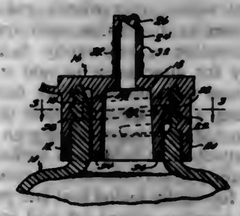
6. A closure for hermetically sealing a container comprising, a resilient sealing member having a depending annular shank portion and a central panel, adapted to be punctured, closing one end of said shank, an annular sealing surface encircling said shank portion, said surface arranged to provide a continuous hermetic seal with said container, a shield formed of a relatively insoluble material and adapted to isolate said sealing member from the contents of the container, said shield having a depending annular body portion surrounding said annular shank portion, a puncturable panel integral with said annular body portion and closing the lower end thereof, said shield also having a radially extending flange adapted to sealingly engage the container and support said shield within the container, and means for removably securing said resilient sealing member to the container.

3,088,616
SEALING JOINT FOR BOTTLE CLOSURE CAPSULES
Tullio Freda, 113 Rue Saint-Charles, Paris, France
Filed Nov. 10, 1960, Ser. No. 68,392
Claims priority, application France Nov. 13, 1959
1 Claim. (Cl. 215—40)



A seal for caps for closing the mouth of bottles, flasks and the like containers, said seal comprising a deformable convex cup having a suitable diameter for being placed in position in the bottom of a cap, resilient spurs provided on said cup which are set to slant outwards from the concave face of said cup and which are positioned for coming into contact with the bottom of said cap, and further resilient spurs being provided on said cup extending radially on the external periphery of said joint and positioned for engaging the lateral wall of said cap.

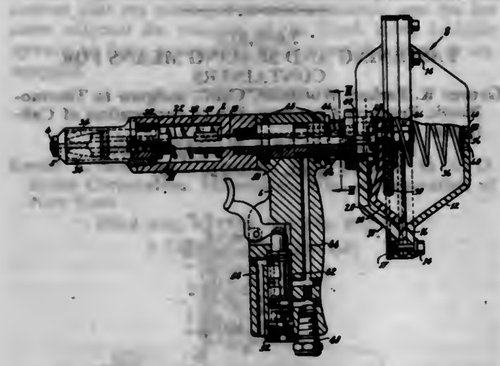
3,088,617
CONTAINER
Adam Krautkramer, Gonsenheimer Strasse 17, Budenheim, near Mainz (Rhine), Germany
Filed June 7, 1960, Ser. No. 29,774
Claims priority, application Germany Dec. 21, 1959
8 Claims. (Cl. 215—42)



1. In combination: a container having a neck with threads provided on at least a portion of one surface of the neck, a plurality of teeth elements extending from the inner surface of the neck at least adjacent the upper end thereof and in a direction opposite to a threading direction and at an angle to a radius of the neck; a closure member having a top portion, an annular skirt depending therefrom, and an inner substantially cylindrical extension for extending into the neck, said closure member having threads thereon for cooperating with the threads on said neck, teeth elements on the outer surface of the cylindrical extension of said closure member at least immediately below the top portion thereof and extending in an opposite direction to a threading direction and at an angle to a radius of the closure, said teeth elements on said neck and said teeth elements on said closure member being resilient and cooperating with each other to permit said closure member to be threaded onto said neck but preventing unthreading of said closure member from said neck, said inner substantially cylindrical extension of said closure member having a substantial length to be contiguous with a substantial

portion of the inner surface of said neck whereby said closure cannot be removed from the container without destroying at least one of these members.

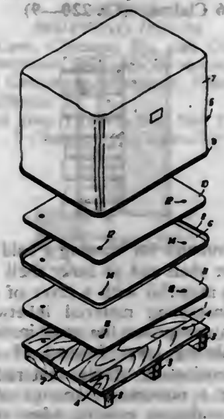
3,088,618
PNEUMATIC RIVET SETTING GUNS
George Pickford, Beverly, Mass., assignor to United Shoe Machinery Corporation, Boston, Mass., a corporation of New Jersey
Continuation of application Ser. No. 823,745, June 29, 1959. This application Nov. 21, 1961, Ser. No. 153,910
7 Claims. (Cl. 218—40)



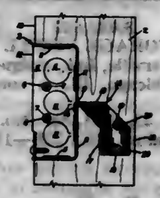
1. In a rivet setting tool having jaws which are power actuated rearwardly to grip, tension and sever a mandril stem portion of a rivet assembly and which are spring returned to their forward position whereat the jaws are adapted to release the severed mandril stem portion, the combination of: a pressure chamber within the forward end of which said jaws are operatively movable along a path in axial alinement with a mandril stem receiving throat apertured to fit closely around the stem of a mandril when inserted between the jaws; a flexible resilient diaphragm, the peripheral edge of which is secured to form a seal at the rearward end of the pressure chamber; an actuating rod operatively connecting the center portion of the diaphragm with said jaws; spring means yieldably urging the rod and diaphragm center forwardly to locate the jaws at their forward mandril-releasing position; and a source of pneumatic pressure including a shiftable air valve for porting compressed air into the pressure chamber, said preasure when first ported into the chamber causing the resilient marginal portions of the diaphragm to become dilated rearwardly beyond the center portion of the diaphragm, thereby enlarging the volume of the pressure chamber while said center portion is in its forward position, and later causing said center portion and interconnected jaws to be actuated rearwardly against the force of said spring means.

3,088,619
PROTECTIVE CONTAINERS
Reginald Conyn Boucher, Milstead, near Sittingbourne, England, assignor to E. P. S. (Research & Development) Limited, Sittingbourne, England, a British company
Filed Nov. 1, 1961, Ser. No. 149,382
3 Claims. (Cl. 220—1.5)

1. A container comprising a flat rigid base comprising a pair of substantially coextensive rigid elements, a cover of flexible and moisture resistant material, said cover comprising a base part and an upper part, said base part being sandwiched between and extending across the entire area of said rigid elements and projecting peripherally of the same to provide an exposed open edge of said base part, said base part and said rigid elements being attached together, and said upper part having an open edge corresponding to that of said base part, and a continuously extending fastener strip attached in moisture resistant attachment along each of said open edges of the cover, each of said fastener strips being of flexible material and having longitudinally extending male and female elements adapted for moisture resistant interlocking engagement connection with said male and female elements of the other of said strips, said fastener strips being further adapted for rolling action with respect to each other for manual engagement and disengagement thereof, whereby said upper part is manually and completely separable from the base part of said cover.

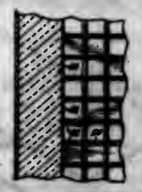


3,088,620
SUPPORTING BRACKET FOR OUTLET BOXES
Wilbur L. Crawford, 3506 Aldrich Ave. N., Minneapolis 12, Minn.
Filed June 10, 1960, Ser. No. 35,279
5 Claims. (Cl. 220—3.9)



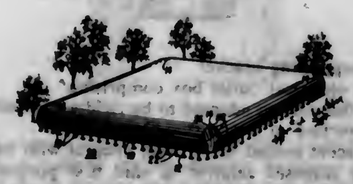
1. A supporting bracket
for an electrical outlet box comprising
a first flat portion adapted to be rigidly secured against the surface of a wall studding,
an adjacent second flat portion integral with and angularly disposed relative to said first portion in the same plane, and
an extending third flat portion integral wits and adjacent said second portion and projecting outwardly therefrom, the plane of said third portion being generally perpendicular to the longitudinal axis of said first portion, and the edge of said extending third portion which is most remote from the first portion being provided with
an integral laterally extending projecting tongue in the plane of said third portion adapted to engage and be secured to said box.

3,088,621
INSULATED TANK FOR THE STORAGE AND TRANSPORTATION OF A COLD BOILING LIQUEFIED GAS
Edwin H. Brown, Elmgrove, Wis., assignor, by mesne assignments, to Conch International Methane Limited, Nassau, Bahamas, a corporation of the Bahamas
Filed July 1, 1958, Ser. No. 745,977
6 Claims. (Cl. 220—9)



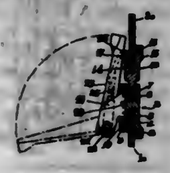
1. In a tank structure for housing a cold boiling liquid including an outer shell and an inner shell of a fluid and vapor-impervious material with a layer of dimensionally stable thermal insulating material inbetween, the improvement which comprises the combination of a relatively thick insulating layer formed of a structurally strong and dimensionally stable material capable by itself of resisting a noticeable amount of deformation under the load conditions existing when the inner shell of a fluid and vapor-impervious material unbonded to the adjacent insulation surface for enabling relative movements therebetween and is filled with said liquid and an inner shell which is incapable of self-sufficiency under the load conditions existing, said inner shell including throughout laterally spaced apart, vertically disposed, and inwardly extending corrugations and vertically spaced apart, horizontally disposed corrugations, the dimensions of the vertical walls of the inner shell in any vertical or horizontal plane thus exceeding the corresponding dimension of the walls at the interface of the insulating layer by an amount which exceeds the amount of contraction which can take place in the shell when reduced in temperature from ambient temperature to the temperature of the liquid thereby to enable the liquid load to effect displacement of the walls of the inner shell for substantially continuous contact with the insulating layer for support.

3,088,622
STORAGE VESSEL
Reign C. Ulm, Schererville, Ind., assignor to Union Tank Car Company, Chicago, Ill., a corporation of New Jersey
Filed Feb. 23, 1961, Ser. No. 91,121
2 Claims. (Cl. 220—18)



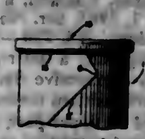
1. A vessel for storing liquid comprising an enclosed container substantially rectangular in plan, said container including a substantially flat roof and a substantially flat bottom interconnected by substantially rigid side walls and substantially rigid corners, each of said side walls having a generally curvilinear configuration provided with substantially vertical side edges joined at their upper and lower ends to the roof and bottom, respectively, the configuration of the side walls being such that the walls tangentially intersect said roof and bottom, respectively, the adjacent vertical side edges of adjacent side walls lying in planes that are substantially right angularly related to each other, each of said corners having a generally curvilinear configuration, similar to the above configuration, and joining the adjacent side edges of adjacent side walls, the horizontal sections of said corners being substantially straight, the configuration of the corners being such that their upper portions and lower portions are progressively narrower than their middle sections, whereby the stresses developed in the corners and the adjacent portions of the side walls are substantially less than in a vessel provided only with intersecting side walls and no corners.

3,088,623
FASTENING AND SEALING MEANS FOR CONTAINERS
George K. Parker, Woodside, Calif., assignor to Thermo-Plastic Products Company, Inc., a corporation of California
Filed July 20, 1961, Ser. No. 125,491
4 Claims. (Cl. 220—46)



1. In fastening and sealing means for containers of the type having upper and lower complementary hollow sections formed with opposed edges, a continuous female strip secured over the edges of one of the container sections, a continuous male strip secured over the edges of the other container section and having a continuous outwardly and upwardly disposed flange, the female strip having a continuous groove facing the male strip, a continuous resilient sealing strip supported in the groove of the female strip, the male strip having a lower edge portion adapted to extend into the groove of the female strip and engage with the resilient sealing strip, the female strip having an outwardly and downwardly extending continuous flange and also an outwardly and upwardly extending continuous flange on its outer side, the said flanges forming opposed continuous grooves, a plurality of brackets supported in the opposed grooves and arranged at the sides of the container, and adjustable clamping devices arranged at the sides of the container and releasably connecting the brackets and the flange of the male strip, the clamping devices being adapted to hold the male strip in contacting relationship with the resilient sealing strip.

3,088,624
METAL FOIL CONTAINER
Charles M. Kinghorn, Wilmette, and Henry G. Henrickson, Mount Prospect, Ill., assignors to Kaiser Aluminum & Chemical Corporation, Oakland, Calif., a corporation of Delaware
Filed Feb. 16, 1959, Ser. No. 794,092
13 Claims. (Cl. 220—64)



1. A combined merchandising and cooking container for foodstuffs having a high grease content requiring cooking prior to consumption comprising a body and end

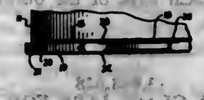
closures positively locked to said body, said body being formed solely from an elongated readily tearable self-supporting cold rolled temper aluminum foil blank coiled upon itself to define a series of superposed wraps, the innermost wrap only of which is adhesively secured to the innermost edge of the blank to define a sealed tube, said end closures acting as the primary means for immobilizing said wraps, said blank including a plurality of parallel ribs in the intermediate portion thereof and flat areas adjacent the side and end margins thereof, the container formed from the blank being openable by uncoiling of said body, whereby the resultant ribbed areas may serve as a grilling surface for the foodstuffs having a high grease content that are packaged in said container, and the flat areas adjacent the margins of the blank being foldable upward to form upstanding walls when the blank is unwrapped.

3,088,625
CLOSURE FOR METAL TANKS
Ewald F. Schmitz, Milwaukee, Wis., assignor to A. O. Smith Corporation, Milwaukee, Wis., a corporation of New York
Filed Aug. 6, 1959, Ser. No. 832,089
3 Claims. (Cl. 220—64)



1. A manway chute assembly establishing access to a glass-lined tank mounted behind a wall, said tank having an opening generally aligned with a larger opening in the wall, a corrosion resistant rim corresponding to said tank opening and having generally the same coefficiency of expansion as the glass lining of the tank, a continuous weld securing said rim to the periphery of the tank opening with the rim projecting inwardly to form a cover engaging edge and outwardly to form a clamping edge, a metal mounting frame disposed peripherally of said rim on the outside of the tank and having an outwardly facing channel shaped cross-section providing an inner flange-like wall encircling the outward projection of the rim and extending outwardly in the direction of said rim with its outer edge adjacent to and coextensive with the outer edge of said rim, a continuous weld securing the contiguous outer edges of the rim and of the inner wall of the mounting frame, a manway chute generally bridging the space between the tank and wall peripheral of said openings therein and having an inner end circumjacent the outer flange-like wall of the channel shaped mounting frame and an outer end circumjacent the wall opening, a flange on the outer end extending over the adjacent wall to close the wall opening, bolt means releasably securing the inner end of the manway chute to the mounting frame, a gasket interposed between the inner end of the manway and the mounting frame to seal the tank opening from the adjacent storage area, an interior cover for said tank opening adapted to engage the cover engaging edge of the rim to seal the opening, and a hinge secured to the frame between the outer and inner walls thereof and to the cover, and a clamp means secured to the cover and engageable with the outer edge of said rim to support the cover.

3,088,626
SHIPPING DRUM
Oscar J. van Loer, Chicago, Ill., and Christian Ragettli, Zurich, Switzerland, assignors, by mesne assignments, to Inland Steel Container Company, Chicago, Ill., a corporation of Illinois
Filed Dec. 1, 1960, Ser. No. 73,070
7 Claims. (Cl. 220—71)



1. A reinforcing member for use with shipping drums having a flat end member that is subjected to drum-head harmonic oscillations during transport, said reinforcing member comprising an extensive flanged support element having a channel-shaped cross section, said support element having its flanges rigidly secured to said flat end member in face-to-face contact over a substantial area of the latter so that said drum-head harmonic oscillations will be dampened.

3,088,627
WINDOW SEALING STRUCTURE
George T. Saunders, Adrian, Mich., assignor to Kewaunee Manufacturing Company, Adrian, Mich., a corporation of Michigan
Filed Mar. 8, 1961, Ser. No. 94,331
8 Claims. (Cl. 220—82)



1. The combination with a laboratory glove box including a wall member provided with a window opening therein, of a window sealing structure for the window opening, said window sealing structure including a window pane of a size to ovelie the marginal portion of said wall member defining said window opening, a peripheral U-shaped gasket enclosing the peripheral edge of the window pane, a sash frame including detachably mounted and complementally formed L-shaped inner and outer peripherally shaped sections of a size to receive the peripheral edge of said window pane encased in said U-shaped gasket and overlie the marginal portions of the window pane, complementally formed detachable securing means for affixing the sash frame to the marginal portion of the wall member defining said window opening, said wall member having a relatively smooth outer face surrounding the window opening therein, said complementally formed detachable securing means for drawing the sash frame toward the wall member, and an annularly shaped gasket member disposed between the latter and the sash frame, said annularly shaped gasket member adapted for affixing to said sash frame and being generally L-shaped in transverse cross-section including a leg com-

prising a substantially rectangular shaped body portion, said rectangular shaped body portion disposed between and adapted to be compressed by the sash frame and wall member, the other leg of said angularly shaped gasket member including an outwardly extending annular projection providing an outer portion, said outer portion being disposed in engagement with and upon compression forming a seal directly between the inner face of the window pane and the marginal face portion of said wall member defining said window opening, and the outer face of the rectangular shaped body portion abutting the inner face of the L-shaped inner peripheral section and the inner peripheral edge of the L-shaped inner peripheral section and inner edge of a leg of the peripheral U-shaped gasket abutting the contiguous face of the L-shaped inner peripheral section complementally formed to and abutting the peripheral vertical edge of the outwardly extending annular projection.

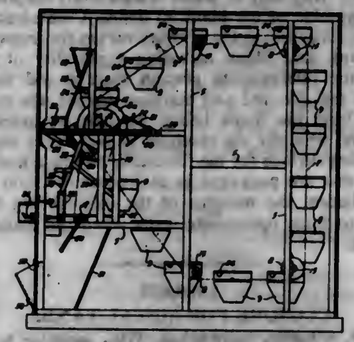
3,088,628
SCREW CAPPED GLASS JARS FOR PACKAGING AND DISPENSING POWDERY PRODUCTS
Walter Edward Horrocks, 1494 Rosewood Ave., Lakewood 7, Ohio
Filed Apr. 17, 1961, Ser. No. 110,841
2 Claims. (Cl. 220—90)



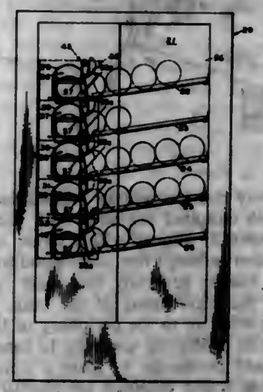
1. In a hermetically sealed screw capped device which contains a powdery substance together with a device which is designed for scrape measuring the substances within the device into four different dispensing quantities, said device comprising in combination; a glass jar, a flat faced ledge arranged within said jar below the top edge of the jar, a separate disk shaped measuring device supported on the flat faced ledge, the measuring device having an irregular shaped aperture extending through the center of the measuring device, the margin of the irregular shaped aperture designed to provide four different recesses in which one recess is designed to scrape measure the level contacts on the scoop portion of a spoon, and one recess is designed to scrape measure the scant rounded contents on the scoop portion of a spoon, and one recess is designed to scrape measure the full rounded contents on the scoop portion of a spoon, and one recess is designed to scrape measure the heaping contents on the scoop portion of a spoon as when a spoon has its scoop portion loaded with the packaged substances within the jar, the outlet of the jar being sealed with a one piece thin paper sealing element extending over the top edge of the jar and having a metal screw cap with a blind washer arranged therein for providing a seal over the top edge of the jar as when the thin paper seal has been broken or removed from the top edge of the jar.

3,088,629
VENDING MACHINE
Donald E. Seymour, 521 4th St., Baraboo, Wis.
Filed Dec. 2, 1960, Ser. No. 73,351
9 Claims. (Cl. 221—77)

1. In combination a vending machine, a bucket conveyor having a series of open top buckets carried by an endless movable member to successively move said buckets through a dumping zone, over center trip release means responsive to the movement of said conveyor to lock the same against further forward movement immediately following the dumping of each bucket, and coin actuated control means for actuating said over center trip release means upon the insertion of a given coin to release said conveyor for travel for dumping the succeeding bucket.

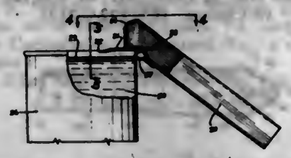


3,088,630
ARTICLE LOCK-OUT MECHANISM FOR VENDING MACHINE
Charles F. Ter Bush, Grove City, Ohio, assignor to Ideal Dispenser Co., Columbus, Ohio, a corporation of Ohio
Filed Apr. 13, 1959, Ser. No. 805,821
4 Claims. (Cl. 221—303)



1. An article release mechanism for a vending machine of the type that includes a plurality of vertically spaced shelves, said mechanism comprising, in combination, frame means; an inclined shelf for supporting a plurality of articles to be vended; an article releasing station at a lower end of said inclined shelf and including an entrance and an outlet opening; a first gate means vertically slideably mounted on said frame means and movable between a closed position obstructing said outlet opening and an open position, said first gate means including a first shoulder; and a second gate means pivotally mounted to said frame means at said entrance for pivotal movement about an axis that extends substantially perpendicular to the plane of said first gate means, said second gate means being movable between a first position wherein articles on said shelf are obstructed against movement into said article releasing station and a second position wherein said articles are not obstructed against movement into said article releasing station, said second gate means including a sheet metal flange portion forming a second shoulder, said second shoulder being obstructed by said first shoulder on said first gate means when said first gate means is in said open position, said first shoulder being movable away from obstructing relationship with said second shoulder by movement of said first gate means into said closed position.

3,088,631
COMBINED SPOUT AND OPENER
Harold G. Lien and Gary D. Lien, Brooklyn Park, Minn. (both of 308 4th Ave. NE., Osseo, Minn)
Filed May 10, 1960, Ser. No. 28,052
3 Claims. (Cl. 222—81)



1. A spout for containers comprising: a tube, a cutter secured to one side of said tube, said cutter having a free end, a fulcrum member secured to said tube and spaced from the free end of said cutter, the plan view of said cutter being the same size and configuration as the tube cross section, said cutter diverging from the longitudinal axis of said tube, the side of said tube opposite and at the end adjacent said cutter curving toward said cutter and the sides of said tube near said cutter slanting inward to form an opening entering portion whereby the entire end of said tube is introduced into an opening formed in a container by said cutter and the walls of said tube frictionally engage all the edges of said opening to wedge said spout in said opening.

3,088,632
COLLAPSIBLE TUBE DISPENSER
Edward Thomas Hickey, 243 W. Foxdale Drive, Milwaukee, Wis.
Filed July 26, 1961, Ser. No. 126,926
3 Claims. (Cl. 222—100)



1. A dispenser for supporting in generally upright relation to a horizontal surface a collapsible filled tube having a closed lower end and a nozzle at the opposite upper end from which material contents are to be discharged by squeezing pressure applied to the tube,

said dispenser comprising a spool having manipulating means on at least one end thereof and means intermediate its ends for engaging the closed end of the tube, and a resiliently flexible member supporting the spool rotatably and including:

a spool bearing portion affording with the spool therein a supporting base structure engageable with said horizontal surface,

said bearing portion having upper opposed generally convergently related end portions defining therebetween an upward entry opening through which the closed end of the tube is received,

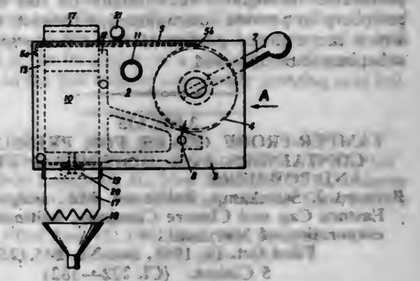
said end portions being spaced apart substantially less than the normal thickness of the filled tube and providing confronting surfaces which engage the respective opposite sides of the tube,

one of said end portions projecting a substantial distance beyond the other of said end portions in supporting relation to its side of the tube and having a supporting base part projecting downwardly opposite to its tube-engaging surface for engaging the horizontal surface spaced from the bearing portion so as to provide with said base structure a stable upright base support for the dispenser and tube,

said one end portion being resiliently manually flexibly movable toward the confronting tube-engaging surface of the other end portion to squeeze the engaged walls of the tube toward one another and thereby force material from the tube through the nozzle,

said spool being rotatable for taking up the closed end portion of the tube as the material is displaced therefrom.

3,088,633
POURING HEAD FOR PRESSURELESS POURING OF LIQUIDS
Bernhard Glanz, Sankt Gallen, Switzerland, assignor to Ulrich Steinemann AG., Maschinenfabrik, Sankt Gallen, Switzerland, a company of Switzerland
Filed Oct. 21, 1959, Ser. No. 847,829
Claims priority, application Switzerland Oct. 21, 1958
6 Claims. (Cl. 222—108)



1. A pouring head for pouring liquids at constant pressure; comprising an open container having end and side walls defining a compartment, substantially vertical partition means located in said compartment to form a first chamber and a second chamber, the upper edge of said partition means being lower than the upper edges of said container to establish communication between said first chamber and said second chamber, whereby a liquid poured into said first chamber in sufficient quantity will be able to overflow said upper edge of said partition wall into said second chamber so that a constant pressure head during pouring of said liquid is maintained in said first chamber, supply means for feeding a supply of liquid to said first chamber, means providing an adjustable pouring slot arranged in said first chamber for controlling delivery of said liquid therefrom, said means providing an adjustable pouring slot including an eccentrically mounted cylindrical body member supported for rotation by said container, said cylindrical body member extending substantially across the width of said first chamber, and a sloping floor portion disposed in said second chamber and spaced from said end walls of said container to define an outlet overflow slot.

3,088,634
TABLET RETAINER CAGE
David de L. Rosskrans and Harry C. McDaniel, Cincinnati, Ohio, assignors to The Procter & Gamble Company, Cincinnati, Ohio, a corporation of Ohio
Filed Jan. 27, 1960, Ser. No. 4,937
3 Claims. (Cl. 222—158)



1. A tablet retainer cage for dissolving a substance in liquid, comprising a neck portion for snug engagement in an opening in a liquid container, a liquid dispensing spout attached to and extending outwardly from the top of said neck portion, and a closed end cylinder attached to and extending from the bottom of said neck portion, said cylinder containing in stacked relation a measured quantity of tablets of the substance to be dissolved, said neck portion having a plurality of inwardly projecting lugs lying in a circular path about its internal periphery, said lugs being adapted to restrain movement of said tablets within said cylinder, said cylinder being perforated throughout substantially its full length and periphery to provide communication between a liquid in which the cylinder portion is to be immersed and the substance to be dissolved.

3,088,635
TAMPER-PROOF COVER FOR PRESSURIZED CONTAINERS FOR DISPENSING LIQUIDS AND POWDERS
Bernard J. Steinkamp, Baltimore, Md., assignor to The Eastern Cap and Closure Company, Baltimore, Md., a corporation of Maryland
Filed Oct. 16, 1961, Ser. No. 145,125
5 Claims. (Cl. 222—182)



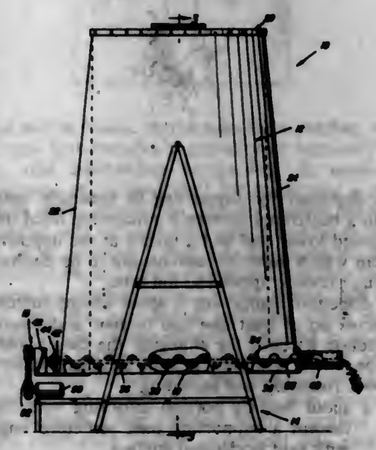
1. For use with a cylindrical container having a reduced neck portion terminating in a discharge valve unit, the valve cup of which has an annular rim terminating in a downwardly-presented peripheral side wall having a circular raw edge, a metallic protective cover for removable securement to said cylindrical container, comprising a circular top, a cylindrical skirt element integral therewith and extending substantially vertically downwardly from the outer edge of said top, said skirt terminating in a circular outwardly rolled edge, there being a plurality of convex sections approximately equally spaced in said rolled edge, positioned at the highest portion of each convex section there is a pair of inwardly protruding studs, the said studs functioning to engage and snap under the raw edge of said downwardly-presented peripheral side wall of the valve cup, and the terminal end of the cylindrical skirt element frictionally engaging the downwardly presented side wall of the valve cup of the container thereby firmly holding the said protective cover to the said container, there being sufficient space between each convex section of the rolled edge and the neck of the container for the insertion of a device to pry the cover from the container.

3,088,636
DISPENSERS FOR FLUENT MASSES
Walter B. Spatz, 11182 Sunset Blvd., Los Angeles, Calif.
Filed Dec. 8, 1959, Ser. No. 858,160
10 Claims. (Cl. 222—213)



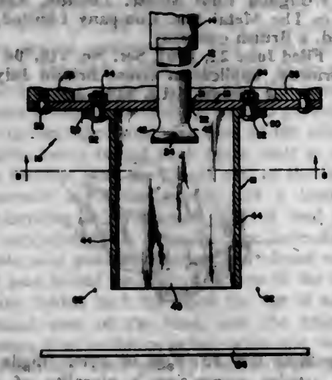
3. In a dispenser for a fluent mass: a container for the mass having a discharge outlet; piston means in said container movable in a forward direction toward the outlet and against the mass in the container; one-way latch means for preventing substantially all movement of said piston means in said container in a rearward direction away from the outlet while permitting movement of the piston means in the container in the forward direction; at least a portion of said container being made of a pliant, elastic material which is deformable to reduce the volume of said container forwardly of the piston means to dispense a portion of the mass throught the discharge outlet, said portion then returning to its original shape to create a partial vacuum in said container forwardly of said piston means, whereby said one-way latch means releases and said piston means is moved by air at atmospheric pressure forwardly in said container toward said outlet; and means for closing said outlet against flow of fluid therethrough into said container.

3,088,637
BULK FEED BIN
Guthrie B. Stone, % Stone Conveyor Co., Inc., Honeoye, N.Y.
Filed Dec. 22, 1960, Ser. No. 77,639
4 Claims. (Cl. 222—413)



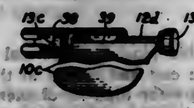
1. A bin for a bulk feed apparatus comprising, a single continuous sheet of smoothly curved material having an upper edge and a lower edge to define a smoothly curved surface therebetween facilitating movement of fluent material for dispensing purposes, one of said edges having a perimetric length slightly larger than that of the other edge for receiving said fluent material therewithin, said upper edge being of circular configuration and said lower edge defining an elongated slot with straight parallel sides interconnected by curved portions at opposite ends thereof and means mounted in the elongated slot for movement of the fluent material therealong toward a dispensing end of the elongated slot.

3,088,638
BAFFLE TUBE AND EXTRUDER
Christian K. Nelson, Charles W. Melton, and Thomas L. Jernigan, all of Henrico County, Va., assignors to Eskimo Pie Corporation, Richmond, Va., a corporation of Delaware
Filed Sept. 28, 1959, Ser. No. 842,939
8 Claims. (Cl. 222—478)



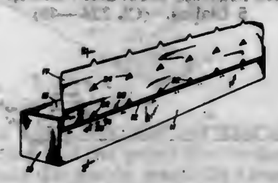
1. An extruder for extruding fluid materials comprising a plurality of nozzles of rectangular cross section secured to a common support in a line closely adjacent each other, each said nozzle having substantially constant cross section from end to end; a plurality of baffle tubes, each said baffle tube extending through said common support and having its outlet end opening into the interior of a said nozzle for delivering fluid material thereto, said outlet end having a diminished transverse aperture formed therein for directing fluid material in the direction of the axis of said baffle tube, said outlet end having a plurality of orifices formed therein extending laterally for directing fluid material laterally of said baffle tube.

3,088,639
SHOE HORNS
William Walt Sexton, 200 Maxome Ave., Willowdale, Ontario, Canada
Filed May 27, 1960, Ser. No. 32,477
1 Claim. (Cl. 223—118)



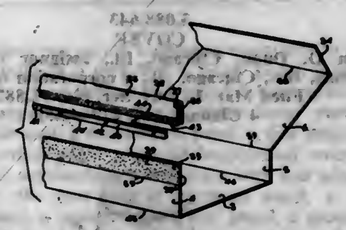
A flexible shoe horn comprising a smooth thin strip of tough pliable material having a rib at one end crosswise its longitudinal axis, a hollow spindle slit lengthwise to form two rounded jaws for holding the ribbed end of the strip, knobs forced on each end of the said spindle, the said knobs shaped to fit and turn in the ends of a containing tube of a resilient material, said tube being slit along one side for the passage of the flexible strip through the tube, the outward ends of the said knobs being extended beyond the tube ends and enlarged in diameter to retain the spindle assembly in the containing case, the said holding and turning knobs limited to a diameter permitting them to be sprung lengthwise through the resilient slit containing tube for removal or insertion of the shoe horn either rolled or unrolled.

3,088,640
PERFORATING FOIL DISPENSER
John Grounds Knutsch, P.O. Box 604, Kelso, Wash.
Filed Oct. 9, 1961, Ser. No. 143,947
3 Claims. (Cl. 225—48)



1. A foil dispenser comprising an elongated container in which a roll of foil may be disposed for rotation therein, said container comprising a longitudinal wall so formed as to provide a slot through which the foil may be projected,
said slot extending generally parallel to the axis of the roll of foil and from end to end of said slot,
and an edge of said slot comprising a severing edge across which the foil may be severed by pressure,
said severing edge having a plurality of spaced-apart projections projecting beyond the remainder of said severing edge for a sufficient distance so that limited pressure of the foil against said severing edge will result in the formation of a plurality of aligned punctures in the foil without completely severing said foil.

3,088,641
DISPENSING CONTAINER FOR ROLLED PAPER
Ernest Calvin Campbell, Jr., New Rochelle, N.Y., assignor to Hallmark Cards, Incorporated, Kansas City, Mo., a corporation of Missouri
Filed Jan. 15, 1962, Ser. No. 166,244
10 Claims. (Cl. 225—48)

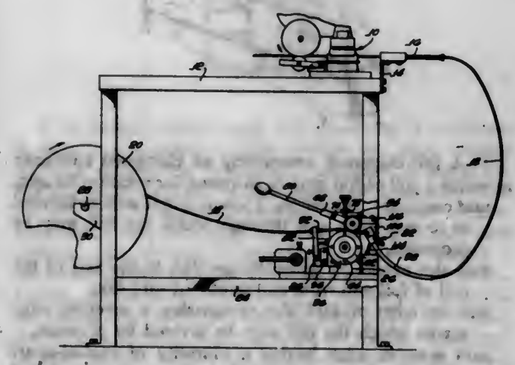


1. A combined carton and dispenser for housing and dispensing sheet paper in roll form comprising:
(*a*) a sheet of paper material so cut and folded as to provide front and back walls and end members of a carton,
(*b*) an integral cover for said carton extending from said back wall into overlying relation to said front wall,
(*c*) a flap on said front wall,
(*d*) and a cutting member fixed on said front wall flap and having a cutting edge adjacent said front wall, said flap and cutting member when the carton is formed lying horizontally over the carton underneath

said cover and said cutting edge facing outwardly from the carton,

(e) whereby when said carton is turned on its cover and said sheet of paper is drawn between said cover and said cutting member pressure applied on the bottom of the carton will hold said sheet between the top and said cutting edge and upward pull on the sheet of paper against said cutting edge will sever the same.

3,088,642
WIRE PRE-FEEDER
Lewis A. Kingsley, Beverly Hills, Calif. (% Kingsley Machine Co., 850 Cahuenga Blvd., Hollywood 38, Calif.)
Filed May 23, 1960, Ser. No. 30,927
5 Claims. (Cl. 226—43)



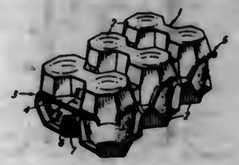
1. A device for feeding insulated wire to a wire marking machine comprising: a pair of wheels one of which has a flat periphery, a pair of rings positioned upon the periphery of the remaining wheel, means biasing the peripheries of said wheels into contact with one another, power means for driving one of said wheels, a bushing in advance of said wheels through which said wire is reeved, and switch means for shutting off said power means, said bushing having switch contacting means actuated by movement of said bushing upon contact with said bushing of a kink in said wire.

3,088,643
COVER
Lyman D. Dunn, Chicago, Ill., assignor to Aqueous Patents, Inc., Chicago, Ill., a corporation of Illinois
Filed Mar. 2, 1961, Ser. No. 92,887
4 Claims. (Cl. 229—1.5)



1. An article of manufacture adapted to be used as a substantially liquid retaining closure for a freezing container and as a drip guard for a frozen confection supported on an elongated implement, comprising: a base having an upstanding liquid trapping edge portion; and a substantially centrally located implement receiving and passing section, said section having upstanding walls defining a passage, each of said walls with a resilient portion inturned into said passage and extending substantially the full length of said walls, the area defined by said inturned portions being slightly less than the cross-sectional area of the remainder of said passage and of an implement for supporting said confection, the cross-sectional area of said implement being substantially equal to the cross-sectional area of the remainder of said passage whereby the introduction of said implement urges said portions outwardly thereby creating a liquid retaining seal between said implement and said section and said passage supports said implement.

3,088,644
CONTAINERS
Richard Wolfgang Emil Mosse, London, England, assignor to The Metal Box Company Limited, London, England, a British company
Filed June 21, 1961, Ser. No. 118,706
Claims priority, application Great Britain July 1, 1960
2 Claims. (Cl. 229—2.5)



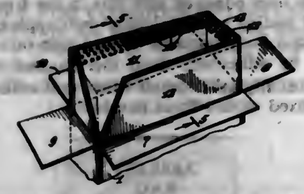
1. A packing tray for eggs or other fragile or easily damaged articles comprising a plurality of connected moulded pockets and an oblong rectangular horizontal marginal portion one side of which is of stepped formation presenting two substantially vertical faces extending along the length of said side with one of the vertical faces nearer than the other to the centre of the tray to provide an indication of the grade of articles packed in the tray.

3,088,645
TOOTHBRUSH CUP
Mary Mechaneck, 705 Dunne Court, Brooklyn 35, N.Y.
Filed Feb. 26, 1962, Ser. No. 175,635
2 Claims. (Cl. 229—3.1)



1. An expansible plastic cylindrical two piece dental cup, open at one end and closed at the other, said cup having a depth greater than its diameter, said cup comprising inner and outer relatively rotatable sleeve portions, one of the sleeve portions being longer than the other, said sleeve portions having a plurality of registering openings of uniform width extending axially of the cup, the space between the openings being greater than the width of the openings so that the sleeves may be rotated to bring the openings completely out of registry.

3,088,646
FLEXIBLE CONTAINER ADAPTED FOR FLUIDS
Raymond E. Jacke, Louisville, Ky., assignor to Reynolds Metals Company, Richmond, Va., a corporation of Delaware
Filed Aug. 29, 1956, Ser. No. 606,873
1 Claim. (Cl. 229—14)



A flexible container comprising, in combination, a substantially rigid box-like member having a plurality of overlapping flaps adjacent to at least one end, an inner liner for said member comprising a layer of tissue porous to the extent of passing a heat sealing composition therethrough on application of heat and pressure adjacent to the inner walls of said member, an intermediate layer of a heat sealing composition, and a surface layer of metallic foil, the liner being positioned to be sealed, by its wax and porous tissues, to the box-like member, said liner having a closure formed by the end portions thereof abutted together, the outermost area of the abutted liner end portions being folded back upon itself to a substantially flat position with the closed end of the liner forming a laterally extending pocket and a laterally outwardly extending wing at each end of said pocket, a laterally extending one of said flaps extending transversely into said pocket between said closed end of the liner and said folded back abutted area of the liner, said wings being folded back flat upon the top of said folded back abutted area of the liner, and the folds of said closure being heat sealed together with said one of said flaps in relatively fixed position within said pocket.

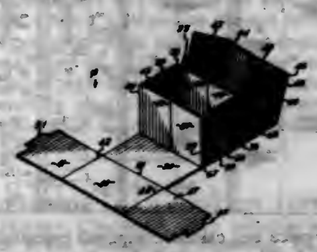
3,088,647
PACKING PADS
Harold G. Zastrow, Minneapolis, Minn., assignor to Waldorf Paper Products Co., St. Paul, Minn., a corporation of Minnesota
Filed Apr. 1, 1960, Ser. No. 19,400
3 Claims. (Cl. 229—14)



1. A cushioning pad including a pair of panels of paperboard foldably connected together, a pad body having flat parallel ends, an aperture in one of said panels of a size to snugly accommodate said pad body when the ends of the pad body are on planes parallel to said one panel, said pad body having one end engaging in face contact with the other said panel and said one panel being at an acute angle to said other panel, whereby said pad body is wedged in said aperture.

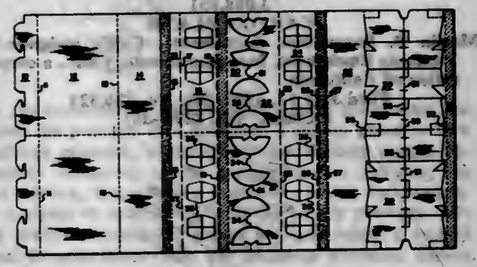
3,088,648
PARTITIONED CARTON AND BLANK FOR FORMING SAME
Frank E. Fobiano, Cincinnati, Ohio, assignor to Premier Carton Company, Cincinnati, Ohio, a corporation of Ohio
Filed Aug. 10, 1961, Ser. No. 130,529
5 Claims. (Cl. 229—27)

1. A blank for forming a container having integral cross-partitions, said blank having a central, generally rectangular bottom panel, a pair of end panels and a pair of side panels hingedly connected to side edges of said bottom panel and adapted to be folded into erect position with respect thereto said side panels being centrally located with respect to the longitudinal edges of said bottom panel and extending longitudinally a distance substantially less than the length of said longitudinal edges, end flaps hingedly connected to opposite ends of



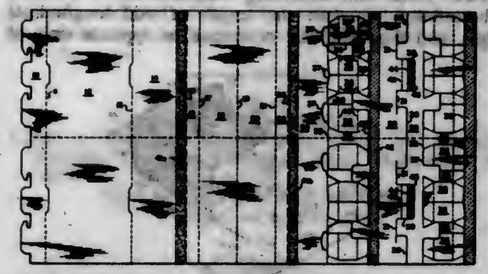
each of said end panels, said end flaps adapted to be folded 90° from said end panels into overlapping engagement with said side panels, means for fastening said end flaps to said side panels to lock said end and said side panels into erect position, partition panels hingedly connected to the opposite ends of each of said side panels and being adapted to be folded transversely to said bottom panel to divide said container into partitioned compartments.

3,088,649
EGG CARTON
David Levkoff, 36 Barstow Road, Great Neck, N.Y.
Filed June 27, 1961, Ser. No. 119,986
1 Claim. (Cl. 229—28)



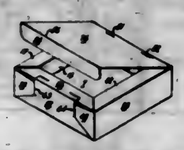
A one-piece egg carton composed essentially in serially arranged order of a tuck-flap, a cover panel, a first side wall panel, a first bottom rail panel folded upwardly in adhesive engagement with the lower inner portion of the first side wall, a first bottom panel, a first longitudinal central partition panel, a second longitudinal central partition panel substantially coextensive with and adhesively secured to the first central partition panel, a second bottom panel, a second bottom rail panel, a second side wall panel the lower portion of which is adhesively secured to the second bottom rail panel, a transverse partition panel provided with cut and fold lines adapted to define a plurality of transverse partition sections capable of being folded downwardly into the space between the side wall panels and longitudinal central partition, the portions of the bottom panels adjacent the lower edges of the downwardly folded transverse partition sections being imperforate, and a glue flap adhesively secured to the inner surface of the first side wall panel, the bottom edges of said first and second longitudinal central partition panels being essentially coterminous with the centrally disposed edges of said first and second bottom panels.

3,088,650
EGG CARTON
David Levkoff, 36 Barstow Road, Great Neck, N.Y.
Filed June 29, 1961, Ser. No. 120,744
1 Claim. (Cl. 229—28)



A single-piece egg carton composed essentially in serially-arranged order of a tuck flap, a cover panel, a first side wall, a first bottom rail panel folded upwardly in adhesive engagement with the lower inner portion of the first side wall, an imperforate bottom wall, a second bottom rail panel folded downwardly, a second side wall the lower portion of which is in adhesive engagement with the second bottom rail panel, a first transverse partition panel positioned above the bottom wall, a first longitudinal central partition panel, a second longitudinal partition panel, a second transverse partition panel positioned above the bottom panel, and a glue flap adhesively secured to the inner surface of the first side wall, at least a portion of one of the partition panels being adhesively secured to the inner surface of the bottom wall, in an inclined position with respect to the bottom wall.

3,088,651
CARTON BLANK
Marlin B. Rasmussen, Sacramento, Calif., assignor to Vitafreze Equipment, Inc., Sacramento, Calif., a corporation of California
Filed July 13, 1959, Ser. No. 826,521
1 Claim. (Cl. 229—35)



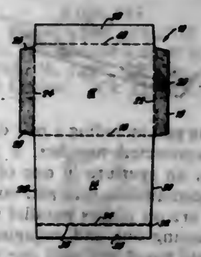
A carton comprising a rectangular base panel, and front, rear and side panels foldably connected to said base panel, a top panel foldably connected along a fold line to said rear panel opposite said base panel, a sealing panel foldably connected to said top panel opposite said rear panel, a front flange foldably connected along a fold line to said front panel opposite the point of connection of said base panel to said front panel, and a side tab foldably connected to each end edge of said side panels, said side tabs having a recess intermediate their length defining a body and a locking head separated by a slotted neck portion of reduced width, said front and rear panels each having slits in spaced parallel relation adjacent to each side edge, each slit being of a length less than the width of said locking head and having an extension extending across said fold lines into said front flange and top panels respectively, said side tabs being insertable through the respective slits when said front flange and top panel are respectively coplanar with said front and rear panels to position said neck portion in the slit, whereby said side tabs are positively locked in engagement with said front and rear panels when said front flange and top panel are folded over said front and rear panels to a non-coplanar position preventing upward rotation of said side tabs and reducing the combined length of the slit and the slit extension to less than the width of the penetrating locking head, and said locking head being deflected inwardly so that the edges of the slotted neck portion lockingly engage over edges of said slits in the front and rear panels, said sealing panel foldably overlapping said front panel and said body portions of said side tabs and being adapted to be adhesively fixed thereto, and said carton being substantially pilfer-proof when said sealing panel is adhesively fixed to said front panel.

3,088,652
BAG
Harold T. Berven, Vancouver, Wash., assignor to Bemis Bro. Bag Company, St. Louis, Mo., a corporation of Missouri
Filed Nov. 4, 1960, Ser. No. 67,201
14 Claims. (Cl. 229—56)



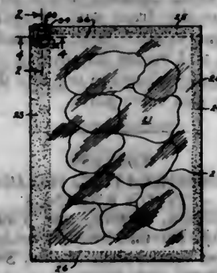
1. A bag comprising an impervious upper portion and a pervious lower portion, and a closure adjacent the bottom of the upper impervious portion, said closure being removable to permit passage of contents from said upper portion to said previous lower portion.

3,088,653
ENVELOPES
William P. Swartz, Jr., P.O. Box 22, Roanoke, Va.
Filed July 20, 1961, Ser. No. 125,589
9 Claims. (Cl. 229—68)



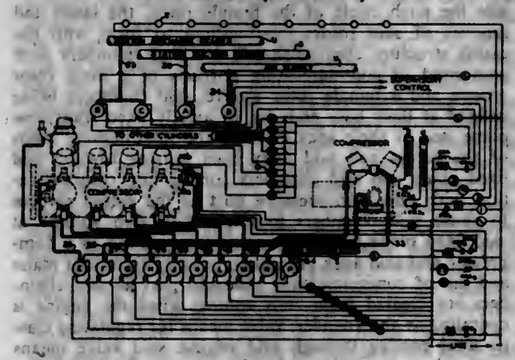
1. An envelope comprising a front panel and a rear panel, said panels being mutually attached to form closed edges and a throat, an abutment panel extending substantially the length of the throat and being hingedly connected to said rear panel for pivotal movement of said abutment panel solely above the plane of the rear panel, an end panel of greater depth than said abutment panel hingedly connected to said abutment panel remote from said rear panel, a cover panel hingedly connected to said front panel and extending the length of said throat, said cover panel having a depth greater than the sum of the depths of the abutment panel and the end panel, whereby the fingers of a loading machine in moving contact with said rear panel toward the throat will release said abutment and end panels for upward pivotal movement to position said abutment panel to insure opening the throat upon movement of the fingers toward said rear panel.

3,088,654
OPENER FOR COMMODITY CONTAINER
Dominic A. Perino and John D. Andrews, Bayside, Wis., assignors to Milprint, Inc., Milwaukee, Wis., a corporation of Delaware
Filed Jan. 9, 1961, Ser. No. 81,572
1 Claim. (Cl. 229—85)



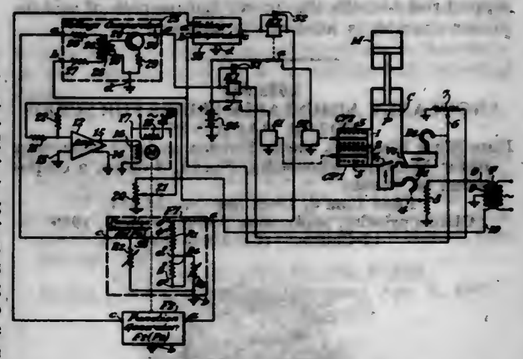
A commodity container comprising in combination: superimposed sheets of flexible material joined togther along marginal edge portions to define a bag having a front face and a rear face; said bag having an opener attachment area formed adjacent an end to be opened, said area comprising juxtaposed portions of the front and rear faces of the bag arranged to be retained in close proximity when the bag is filled, and an opener attached to said bag in the opener attachment area, said opener including a pair of substantially parallel, spaced apart portions between which said juxtaposed portions of the front and rear faces of the bag are interposed, and a cutting portion depending from one of said spaced apart portions and arranged to pierce one of the jutaposed faces of the bag to retain the opener in ready position, said cutting portion having an edge adapted to sever said pierced sheet along a line of severance adjacent one end of the bag upon sliding movement of the opener.

3,088,655
REMOTE CONTROL AND ALARM SYSTEM FOR A COMPRESSOR STATION AND COMPRESSOR ENGINES THEREOF
Clarence E. Miller, Lancaster, Ohio, assignor to The Ohio Fuel Gas Company, Columbus, Ohio, a corporation of Ohio
Filed Aug. 1, 1960, Ser. No. 46,795
5 Claims. (Cl. 230—2)



1. In combination with a compressor station having a plurality of independent compressor units, each of which includes a driving engine having a shutdown control, said station including a plurality of normally functioning station elements, each of said compressor units including a plurality of normally functioning compressor elements; an automatic control system connected to all of said station and compressor elements and including a first control section connected independently between said station elements and the shutdown control of each of said compressor driving engines and actuated by each of said station elements upon a malfunction thereof to shut down all of said compressor units and a second control section connected between all of said compressor elements of each compressor unit and the shutdown control of the engine thereof to shut down only the engine thereof upon the malfunction of any of said compressor elements.

3,088,656
COMPRESSOR LOAD CONTROL SYSTEM
Robert R. Hartley, Cincinnati, Ohio, assignor to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania
Filed May 13, 1960, Ser. No. 28,870
13 Claims. (Cl. 230—21)



1. In combination with a reciprocating compressor for raising the pressure of a gas from a supply pressure to a discharge pressure, adjustable torque limiting means operatively connected to the compressor for reducing the load thereon, first pressure responsive means for generating a signal in accordance with the supply pressure, second pressure responsive means for generating a second signal in accordance with the discharge pressure, means controlled by said first pressure responsive means for generating a third signal in accordance with a predetermined function of said first pressure, and means controlled by said second and third signals for adjusting said torque limiting means to maintain the load on said compressor at a desired value.

3,088,657
GLOW DISCHARGE VACUUM PUMP APPARATUS
Rena Zaphiropoulos and William A. Lloyd, Los Altos, Calif., assignors to Varian Associates, Palo Alto, Calif., a corporation of California
Filed Mar. 23, 1959, Ser. No. 801,186
10 Claims. (Cl. 230—69)



1. A glow discharge electrical vacuum pump apparatus including; a shallow flanged open ended cup-shaped hous-

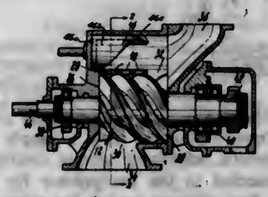
ing member having short side walls; a cover member closing said housing member and being sealed at its periphery in a gas tight manner to said housing member; means forming an entrance into said housing member for gaseous fluid to be pumped; a reactive cathode member having one portion disposed adjacent the bottom wall of said cup-shaped housing member and a second portion disposed adjacent said cover member; a cathode spacer member carried within said cup-shaped housing member and disposed adjacent the short side walls thereof, said cathode spacer having ears struck therefrom for engaging said cathode portions to assure proper spacing therebetween; an anode member disposed between said first and second cathode portions and spaced apart therefrom; a high voltage insulator assembly for allowing operating potentials to be applied to said anode and cathode members to produce sputtering of said reactive cathode member and including, a longitudinal bored vacuum sealed insulator, an anode support rod coaxially disposed within said insulator bore, the inside diameter of said insulator bore being slightly larger than the outside diameter of said support rod for a first portion of said insulator bore, and a second portion of said insulator bore being spaced apart a slightly larger distance from said anode support rod whereby the current leakage path of said insulator assembly is substantially increased.

3,088,658

ANGULARLY ADJUSTABLE SLIDES FOR SCREW ROTOR MACHINES

Hans Börje Wagenius, Nacka, Sweden, assignor to Svenska Rotor Maskiner Aktiebolag, Nacka, Sweden, a corporation of Sweden

Filed June 6, 1960, Ser. No. 34,051
Claims priority, application Sweden June 4, 1959
12 Claims. (Cl. 230—138)



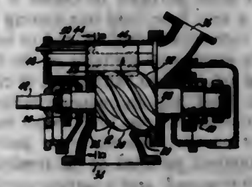
1. A positive displacement, rotary piston engine of the helical screw rotor type comprising casing structure providing a barrel portion having intersecting bores with coplanar axes, male and female rotors having helical lands and interventing grooves rotatably mounted in said bores, the lands of the male rotor having convexly curved flanks the major portions of which lie outside the pitch circle of the male rotor and the grooves of the female rotor having concavely curved sides the major portions of which lie inside the pitch circle of the female rotor, the lands and grooves of said rotors intermeshing to form with the casing structure chevron shaped working chambers each composed of communicating portions of a male rotor groove and a cooperating female groove, the base ends of said chambers being determined by an axially fixed transverse plane and the apex ends thereof being determined by the points of intermesh between cooperating lands and grooves of the rotors and moving axially relative to said fixed transverse plane as the rotors revolve to thereby vary the volume of said chambers, said casing structure providing a high pressure passage terminating in a main high pressure port communicating with said bores, a major portion of said port being located on one side of the plane of said axes at the place of said transverse plane and a low pressure passage terminating in a main low pressure port communicating with said bores, a major portion of said low pressure port being located on the side of the plane of said axes opposite that of said high pressure port, said casing structure further providing a circular valve chamber in direct communication with one of said passages and a plurality of auxiliary passages providing communication between said valve chamber and said working chambers, said auxiliary passages terminating at one end in a plurality of axially separated auxiliary ports located in at least one of said bores and at their opposite ends terminating in a plurality of axially separated valve ports in said valve chamber, rotary regulating valve means located in said valve chamber comprising an obturating portion providing a closure extending across said valve chamber and a circular skirt portion extending axially from said obturator portion and having an oblique control edge, located to coact with said valve ports, and means for turning said valve means to different angular positions to regulate the flow of working fluid through said valve ports.

3,088,659

MEANS FOR REGULATING HELICAL ROTARY PISTON ENGINES

Hans Robert Nilsson, Ektorp, and Lauritz Benedictus Schibbye, Saltsjo-Duvnas, Sweden, assignor to Svenska-Rotor Maskiner Aktiebolag, Nacka, Sweden, a corporation of Sweden

Filed June 17, 1960, Ser. No. 36,763
10 Claims. (Cl. 230—138)



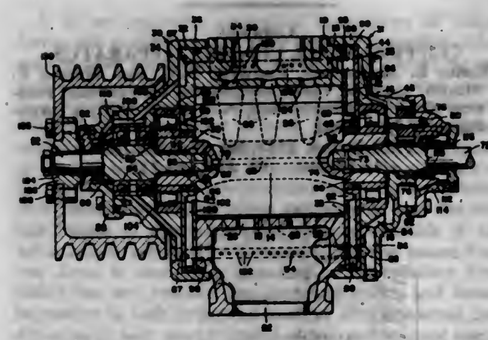
1. A rotary piston, positive displacement elastic fluid engine comprising a casing structure providing a barrel portion having intersecting bores with coplanar axes located between axially spaced end wall portions and further providing spaced apart low pressure and high pressure ports communicating with said bores, rotors provided with helical lands and grooves having a wrap angle of less than 360° rotatably mounted in said bores between said end wall portions and comprising a male rotor having lands provided with convexly curved flanks and intervening grooves the major portions of which lie outside the pitch circle of the male rotor and a female rotor having lands provided with concavely curved flanks and intervening grooves the major portions of which lie inside the pitch circle of the female rotor, the lands and grooves of said rotors intermeshing to form with the casing structure chevron-shaped working chambers each comprised of communicating portions of a male rotor groove and a female rotor groove, said chambers being defined at their base ends by an axially fixed transverse plane and at their apex ends by the intermeshing lands of the rotors and said apex ends moving toward said fixed plane and said chambers coming into communication with said high pressure port as the rotors revolve to cause said chambers to run out to zero volume at said fixed plane when the engine is operating as a compressor and said apex ends moving away from said plane and out of communication with said port as said chambers are created from zero volume when the engine is operating as an expander, valve means for regulating elastic fluid passing through said engine, said valve means comprising an axially extending recess in the barrel portion of said casing structure in open communication with said bores and a valve member axially slidable in said recess, the inner face of said valve member being complementary to the envelope of that portion of the bores of the casing structure confronted by the opening of said recess communicating with the bore portion of the casing structure, whereby said valve member is in sealing relation with the confronting rotor structure, one of said ports having a portion located in the barrel portion of the casing structure, said valve member being movable between terminal positions in one of which said port portion is fully opened and in the other of which said port portion has a predetermined minimum area determined by an edge of said valve member, and the length of said valve member being sufficient to cover the entire remaining length of the confronting portion of the rotor structure throughout the range of movement of the valve member between its terminal positions, and means for moving said valve member between said terminal positions.

3,088,660

ROTARY AIR COMPRESSOR

Ralph F. Voggenthaler, Painted Post, N.Y., assignor to Ingersoll-Rand Company, New York, N.Y., a corporation of New Jersey

Filed Aug. 23, 1960, Ser. No. 51,370
5 Claims. (Cl. 230—207)



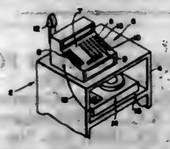
3. A rotary compressor comprising a casing having a bore and an inlet and discharge in communication with the bore, a pair of heads connected to the casing for closing the bore to form a compressor chamber, a rotor eccentrically disposed in the chamber and movable endwise between the heads, said rotor having a central bore and cylindrical ends at the ends of the bore that project into the heads and provide a flow path through the rotor, bearings in the heads for rotatively supporting the rotor ends and for permitting axial movement, a drive shaft independently supported in one of heads and having a connection to the rotor that transmits rotary movement and isolates axial movement, a driven shaft independently supported in the other head and having a connection to the rotor that transmits rotary movement and isolates axial movement, bearings in the heads for independently supporting the driving and driven shafts, the heads having passages in communication with the flow path through the rotor and providing a flow path for lubricating and cooling oil to the shaft connections and to the bearings, said casing having at least one cross-over passage in communication with the passages in the heads to provide a flow path for oil from one of the heads to the other and a pump housed in the head supporting the driven shaft and driven by such shaft to supply the lubricating and cooling oil.

3,088,661

CASH REGISTER-INFORMATION STORAGE ASSEMBLY

Leonard R. Brigham, 1737 Ladd St., and Paul L. Wardell, 10813 Jewett St., both of Silver Spring, Md.

Filed June 20, 1960, Ser. No. 37,192
12 Claims. (Cl. 235—2)



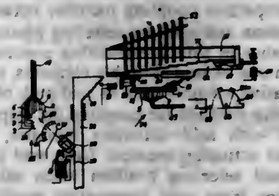
1. A cash register-information storage assembly comprising the combination of an activatable cash register having at least one cash drawer, a group of selecting keys movable from a normal position, and at least one separate operating member movable to activate said register and open said drawer, transducer means for transforming sound into recordable signals and disposed to pick up the voice sounds of an operator of said register; an activatable recording means for storing reproduceable signals; means coupling said transducer means to said recording means; and means operative in response to movement of at least one key in said group from normal position to activate said recording means and responsive to movement of said operating member to de-activate said recording means.

3,088,662

SYSTEM FOR TRANSMITTING VALUES BETWEEN MECHANICALLY DRIVEN AND ELECTRICALLY CONTROLLED CALCULATING MACHINES

Erwin Spiegler, 31 Bullekamp, Hamburg-Farmsen, Germany, and Herbert Roos, 9 Eichenallee, Wohltorf, Lauenburg, Germany

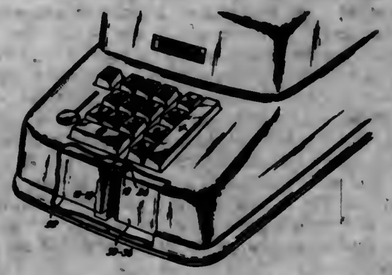
Filed Aug. 25, 1960, Ser. No. 51,839
Claims priority, application Germany Apr. 9, 1960
3 Claims. (Cl. 235—61)



1. A system for interconnecting a plurality of calculating machines for remote operation of one by another, said system including a plurality of calculating machines, each of said machines having movable members which represent numerical values within said machine by the amount of movement of said members and first means for stopping the movement of said members at positions determined by the insertion of values to be computed, means for selecting electrical potentials unique for each amount of movement and stopped position of said members for representing said values to be computed by said potentials, means for selecting a remote calculating machine of said plurality of calculating machines to be controlled by each machine, means for transmitting potentials representing numerical values from a machine to said selected machine, means for receiving from other machines potentials representative of numerical values, second means for stopping the movement of said members, means for setting said second stop means comprising an electrical drive means for said second stop means, said drive means being operable in steps, potential comparing means for comparing potentials received from remote controlling machines with potentials locally available in a prescribed sequence, means for energizing said drive

means for each potential comparison until said potentials are balanced, a latch for each of said movable members, and means for tripping said latch to release said members for movement when values are inserted either through the machine keyboard entry mechanism or by a remote machine to permit said members to move.

3,088,663
ACTUATING ARRANGEMENT FOR BUSINESS MACHINES
Hans Heuer, Wilhelmshaven, Germany, assignor to Olympia Werke A.G., Wilhelmshaven, Germany
Filed Nov. 23, 1960, Ser. No. 71,244
Claims priority, application Germany Nov. 27, 1959
20 Claims. (Cl. 235—61)



1. A data transferring device for business machines and the like, comprising, in combination, a set of shiftable elements, each shiftable element being movable between an inoperative position and an operative position and representing a single character, such as a digit; an actuating means including an actuating member movable along a path between a normal inoperative position and an actuating position; and a set of selector means, each selector means including a coupling member movable between a normal inoperative position, a pre-selecting position, and a selecting position, and control means for moving the respective coupling member between said inoperative position and said pre-selecting position, any one coupling member in said pre-selecting position being located between one of said shiftable elements, respectively, and said actuating member, and in said path of movement of said actuating member for coupling the respective shiftable element with said actuating member, and being moved by said actuating member from said pre-selecting position to said selecting position when said actuating member moves from said inoperative position to said actuated position so that the respective shiftable element is moved by said actuating member through the respective coupling member from said inoperative position to said operative position whereby said actuating means is common to all said shiftable elements and provides the force to move any one of said shiftable elements to said operative position.

3,088,664
METHOD OF AND APPARATUS FOR PROCESS DEAD TIME SIMULATION
Minor W. Oglesby, Jr., and Roy T. Brashear, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware
Filed Mar. 13, 1961, Ser. No. 95,089
6 Claims. (Cl. 235—61)



5. Apparatus comprising a first conduit means communicating with a first pneumatic computing means, said first pneumatic computing means capable of solving the equation

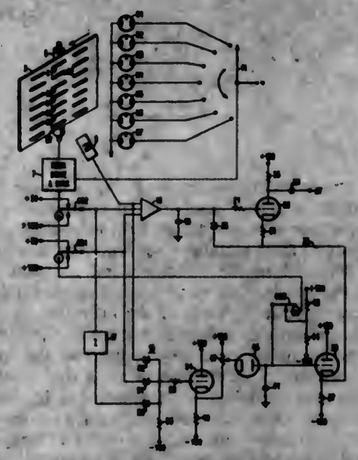
$$X(\text{Output}) = g_1(A - C)$$

where A and C are variables and g_1 is the adjustable gain of said first pneumatic computing means, a second conduit means communicating between said first pneumatic computing means and a first means of pneumatically effecting an adjustable first order lag, a third conduit means communicating between said first means of pneumatically effecting a first order lag and a second means of pneumatically effecting an adjustable first order lag, a fourth conduit means communicating between said second means of pneumatically effecting a first order lag and a second pneumatic computing means, said second pneumatic computing means capable of solving the equation

$$X(\text{Output}) = g_2(A - C) + B$$

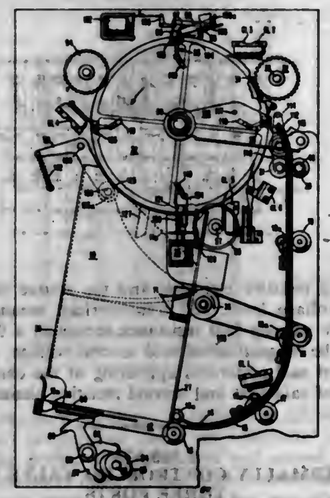
where A, B and C are variables and g_2 is the adjustable gain of said second pneumatic computing means, a fifth conduit means communicating between said third conduit means and said second pneumatic computing means, a sixth conduit means communicating between said fourth conduit means and said first pneumatic computing means, a seventh conduit means communicating between said first conduit means and said second pneumatic computing means, and an eighth conduit outlet means communicating with said second pneumatic computing means.

3,088,665
CLIPPING LEVEL CONTROL APPARATUS
Charles E. Branscomb, Endwell, N.Y., and Harold F. Martin, San Jose, Calif., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 4, 1958, Ser. No. 778,197
13 Claims. (Cl. 235—61.11)



1. Clipping level control apparatus for setting clipping levels for a set of signals supplied from a source of identical sets of signals, comprising a first circuit effective to receive the first set only of said sets of signals, amplitude responsive means connected to said first circuit for determining the value of the minimum of said signals, a second circuit effective to receive all but the first set of said sets of signals, and clipping means connected to said second circuit and governed by said amplitude responsive means for clipping the signals supplied to said second circuit.

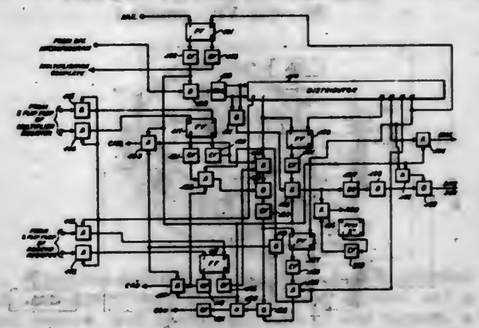
3,088,666
PROGRAMMING APPARATUS
Henry R. Clarke, Vestal, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 28, 1960, Ser. No. 79,849
11 Claims. (Cl. 235—61.11)



1. In an apparatus controlled by a series of record forms, the combination of read means for reading information from the forms, endless means for conveying successive forms from an entry point past said read means to a departure point, reread control means normally conditioned to cause release of each form from the endless means at the departure point and abnormally conditioned to prevent such release to cause forms to be retained on the endless means and recirculated past said read means, feed means for feeding forms successively onto the endless means at the entry point, means operable if and when certain information is read by the read means from one form to command rereading of a preceding form which has not reached the departure point, and means responsive to such command to effect such abnormal conditioning of said reread control means and suspend operation of said feed means.

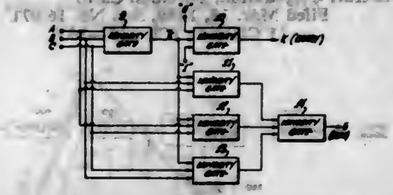
3,088,667
COMPUTER MICROPROGRAMMING SYSTEM
Charles L. Kettler and George P. Sarrafian, Dallas, Tex., assignors to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware
Filed Apr. 6, 1959, Ser. No. 804,589
5 Claims. (Cl. 235—157)

1. In a digital computer of the type which carries out different operations in response to different commands in the sequence in which the commands are given, and which has actuating means for each of said commands to cause such command to be given in response to an applied actuating signal, the combination of a first plurality of beam switching tubes having a multiplicity of outputs for producing an actuating signal from one of its outputs, means to advance the actuating signal from output to output of said beam switching tubes, in sequence, and program means for selectively applying the actuating signals produced from the outputs of said beam switching tubes to said actuating means, and a second plurality of beam switching tubes having a plurality of outputs and producing an output signal from one of its outputs, means operable responsive to an applied actuating signal to advance the output signal from output to output of said second plurality of beam switching tubes in sequence, said program means including means to selectively apply the actuating signals from the outputs of said first mentioned plurality of beam switching tubes to said second plurality of beam switching tubes, circuit means operable in response to the sequence of output signals from said second plurality of beam switching tubes to apply actuating



signals to said actuating means in a predetermined sequence, and means operable in response to the completion of the sequence of output signals from said second plurality of beam switching tubes to cause the actuating signal produced by said first mentioned plurality of beam switching tubes to advance to the next sequential output of said said first mentioned plurality of beam switching tubes.

3,088,668
BINARY ADDER EMPLOYING MINORITY LOGIC
Abraham Harel, Framingham, Mass., assignor to Radio Corporation of America, a corporation of Delaware
Filed Sept. 14, 1960, Ser. No. 55,978
4 Claims. (Cl. 235—176)

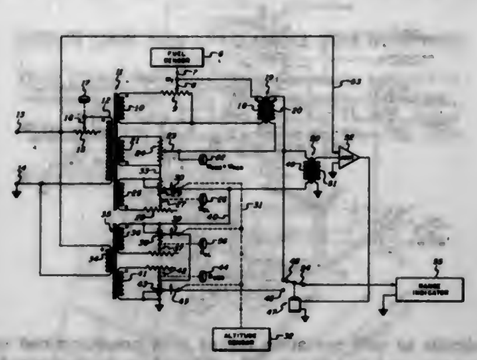


1. A binary adder comprising, in combination, a first minority gate to which input addend, augend, and carry signals are applied for producing a carry-not output signal; second, third and fourth minority gates to each of which different combinations of two of the three of said input signals are applied and to each of which the carry-not output signal is applied; and a fifth minority gate to which the output signals of said second, third and fourth minority gates are applied for producing a sum signal.

3,088,669
REMAINING RANGE COMPUTER
Robert C. Sauer, Roosdale, and Harry D. Smith, Massapequa Park, N.Y., assignors to Sperry Rand Corporation, Great Neck, N.Y., a corporation of Delaware
Filed Jan. 28, 1960, Ser. No. 5,284
6 Claims. (Cl. 235—193)

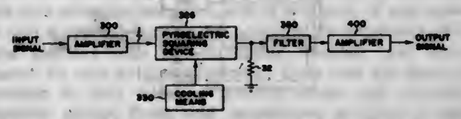
1. Aircraft navigation apparatus for producing an output signal representative of range remaining in flight along the ascending and cruising portions of a predetermined flight profile, said profile consisting of ascending, cruising and descending portions, said apparatus comprising first means for generating a first signal proportional to

aircraft altitude, second means for generating a second signal proportional to present aircraft fuel quantity, means connected to said first means and responsive to said first signal for generating a third signal proportional to range as a function of present altitude to be traversed in executing said ascending profile portion, means connected to both said first and second means and responsive to said



first and second signals for generating a fourth signal proportional to range as a function of present fuel quantity to be traversed during said cruising profile portion, means for generating a fifth signal proportional to the total range to be traversed during said descending profile portion, and means for additively combining said third, fourth and fifth signals to produce said output signal.

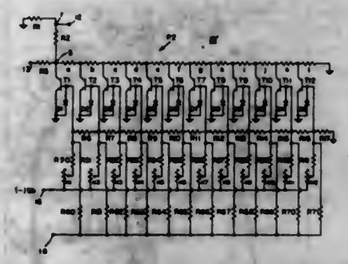
3,088,670
PYROELECTRIC SQUARING ELEMENT
Thomas A. Perls, Los Altos, and Jan J. Hartog and Brenton L. Mattes, Palo Alto, Calif., assignors to Lockheed Aircraft Corporation, Burbank, Calif.
Filed Mar. 18, 1960, Ser. No. 16,071
11 Claims. (Cl. 235—193)



1. A pyroelectric squaring device comprising a piece of polarized pyroelectric material, electrically conductive means through which a current corresponding to the signal to be squared is passed, said conductive means adapted to cooperate with said material to transfer thereto the heat generated by current flow through said conductive means, output electrodes on said material, said electrodes being disposed in planes generally normal to the direction of polarization of said piece, and means connected to said electrodes for extracting therefrom an output current proportional to the rate of change of temperature of said material.

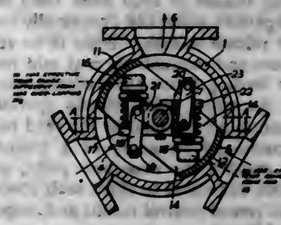
3,088,671
MULTIPLIER CIRCUIT
Robert L. Chase, Blue Point, N.Y., assignor to the United States of America as represented by the United States Atomic Energy Commission
Filed June 22, 1960, Ser. No. 38,083
5 Claims. (Cl. 235—194)

1. Electrical analog computer apparatus for obtaining as an approximation an output voltage whose amplitude is a direct function of the product of the amplitudes of first and second voltages, comprising a series circuit of first, second and third resistive elements connected from the source of a reference voltage level to the source of said first voltage, variable resistance means connected between the common electrical connection of said second



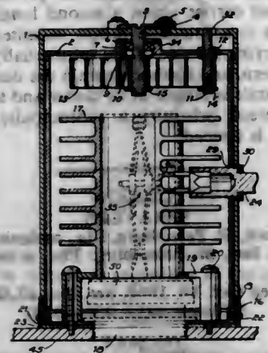
and third resistive elements and the source of said reference voltage level, and transistorized means for electronically varying said resistance means as a direct function of the magnitude of said second voltage, the output voltage of said apparatus appearing at the common connection of said first and second resistive elements.

3,088,672
THERMALLY CONTROLLED VALVE WITH THREE PORTS
Frederick Arnold Simpson, "Poynings," Penn Road, Beaconsfield, Buckinghamshire, England
Filed Nov. 30, 1961, Ser. No. 156,103
Claims priority, application Great Britain Dec. 6, 1960
4 Claims. (Cl. 236—12)



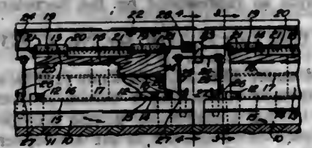
1. A thermally controlled valve comprising a casing having a cylindrical bore therein, said casing having three ports therein, at least two of said ports being at angularly spaced positions in the curved wall of said bore, a stationary spindle mounted axially of said bore, a rotor having two arcuate, diametrically opposed port-controlling shutter members and cross webs connecting said shutter members, said rotor being rotatably mounted on said spindle, said shutter members cooperating with said two ports to adjust the effective aperture thereof in accordance with the angular position of said rotor, a pair of wax filled thermostat elements controlling the angular position of said rotor, each element of said pair of wax filled thermostat elements having a body member, a plunger member guided in said body, a wax mass in said body forcing said plunger and a return spring against which the plunger is forced by thermal expansion of wax, means clamping one of said wax filled thermostat elements to said stationary axial spindle, a carrier rotatably mounted on said spindle, one of said members of the second wax filled thermostat element secured in said carrier, pivoted linkage means connecting the plunger of said first thermostat element to said carrier to turn said carried about said spindle and pivoted linkage means connecting the other member of said second thermostat element to said cross webs of said rotor.

3,088,673
TEMPERATURE REGULATED CHAMBER
Ben R. Halford, Richardson, and William B. Davis, Garland, Tex., assignors to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa
Filed Aug. 1, 1960, Ser. No. 46,511
5 Claims. (Cl. 236—49)



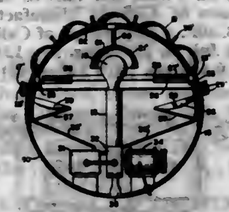
1. A temperature regulated chamber for maintenance of a constant temperature about an internally confined heat radiating device comprising first and second hollow cylindrical members each formed with diametrically opposed openings therethrough, means for mounting said second cylindrical member concentrically within and rotatably with respect to said first cylindrical member, a bimetallic spiral spring member having one end thereof affixed to said first cylindrical member and the other end thereof affixed to said second cylindrical member, the inner surfaces of each of said cylindrical members being optically polished, means for mounting said heat radiating device concentrically within said second cylindrical member, a radiator member formed concentrically about said heat radiating device and extending radially outwardly therefrom, and means for adjustably imposing a predetermined loading on said bimetallic spring member whereby said first and second cylindrical member openings are coincident for a predetermined external ambient temperature and are circumferentially displaced to effect complete disalignment therebetween for a predetermined lower external ambient temperature.

3,088,674
RAILWAY TRACK SUPPORT
Louis X. H. Maynier, 7 Scott St., Waverley, Johannesburg, Transvaal, Republic of South Africa
Filed Oct. 10, 1960, Ser. No. 61,463
Claims priority, application Republic of South Africa Oct. 21, 1959
5 Claims. (Cl. 238—24)



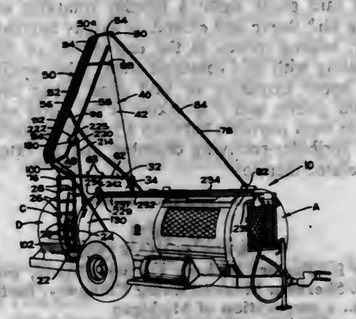
1. Railway permanent way including a foundation, a base member on the foundation, a rail and supporting means for the rail comprising at least one longitudinal intermediate beam between the base member and the rail, raised portions at each end of the longitudinal beam, on which the rail rests, and a strip of resilient material disposed between said base member and said longitudinal intermediate beam, said resilient material being staggered in relation to the raised portions in plan and side views.

3,088,675
ILLUMINATED WATER SPRAYER
Revella M. Bone, 426 N. 1st E., Tremonton, Utah
Filed Dec. 15, 1960, Ser. No. 76,041
3 Claims. (Cl. 239—20)



1. A fountain display unit comprising a hollow spherical body, a diametric support rising therein, a motor and a water pressure tank on opposite sides of said support, a pressure pump between said motor and tank driven by said motor to supply water to said pressure tank, manifold means extending laterally in opposite directions from said tank, said body having a light penetrable section, a skeleton sprayer in said body about said section to which said manifold means lead, a nozzle on said sprayer extending through the wall of said section to provide a shower exteriorly thereof, illuminating means within said body, a color filter adjacent said illuminating means, and means having mirror surfaces to reflect light rays from said illuminating means through said filter and wall onto said shower.

3,088,676
ORCHARD SPRAYER
Lewis E. Nottingham, Orlando, Fla., assignor to FMC Corporation, a corporation of Delaware
Filed Feb. 23, 1961, Ser. No. 91,015
9 Claims. (Cl. 239—78)



1. A spraying machine comprising a generally cylindrical air discharge housing having a discharge opening in its upper periphery, upwardly projecting air conduit means disposed over said opening and arranged to receive air moving upwardly from said housing, means defining an elongate slanted air discharge passage in said conduit means including a first discharge portion extending upwardly from a lower side portion of said conduit means at an acute angle relative to the vertical and a second portion forming an upper continuation of said portion but disposed at an acute angle relative to the horizontal, said second portion being disposed above said housing a distance equal to approximately twice the diameter of said cylindrical housing, and means for forming an air blast in said housing and forcing it upwardly into said con-

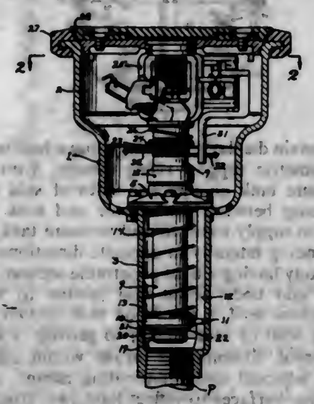
duit means for discharge through said first and second discharge portions, the air leaving said second discharge portion being directed into the upper foliage of trees being sprayed while the air leaving said first discharge portion is directed generally laterally into the side foliage of the trees.

3,088,677

OSCILLATING ARM POP-UP SPRINKLER

Jule H. Coffey, La Verne, and Carl R. Sharp, Glendora, Calif., assignors to Anthony Manufacturing Corporation, Azusa, Calif., a corporation of California

Filed July 3, 1961, Ser. No. 121,481
6 Claims. (Cl. 239—205)



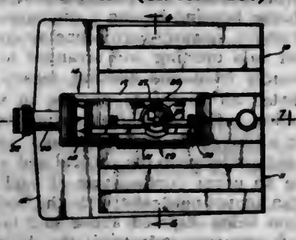
1. Means for pop-up installation of sprinklers, comprising: a housing defining an upper sprinkler-receiving chamber and a lower tubular guide stem open at its lower end and joined to a water supply line; a slide collar at the upper end of said guide stem; a tubular sleeve open at both ends and slidable in said slide collar; means slidably and nonrotatably connecting said sleeve with said guide stem to permit movement of said sleeve axially into said sprinkler-receiving chamber under urge of water pressure in said guide stem; a tubular rotatable stem journaled in said sleeve and extending axially beyond the ends thereof; sealing means at the extremities of said sleeve cooperating with said rotatable stem; other sealing means at the upper extremity of said slide collar cooperating with said sleeve; and a sprinkler at the outer end of said rotatable stem movable between a retracted position within said sprinkler-receiving chamber and an extended position related thereto.

3,088,678

LAWN SPRINKLER

George L. Turner, Hickory Corners, Mich., assignor to H. B. Sherman Manufacturing Company, Battle Creek, Mich., a corporation of Michigan

Filed Nov. 15, 1961, Ser. No. 152,557
8 Claims. (Cl. 239—230)



8. A lawn sprinkler comprising a support, an upwardly directed nozzle carried by said support, said nozzle having a longitudinally elongated outlet to provide a fan-like spray, a water supply tube connected to said nozzle for delivering water thereto, a carrier, first mounting means on said support mounting said carrier for pivotal movement about a first longitudinal axis lengthwise of said nozzle outlet, a spray deflector, and a second mounting means on said carrier mounting said spray deflector for movement with said carrier and for pivotal movement relative to said carrier about a second longitudinal axis, wherein there is a rotatable means mounted above said nozzle for varying the size of the substantially rectangular sprinkler pattern, and further wherein the discharge opening of said nozzle is largest at its center and tapers toward the ends thereof, whereby a substantially rectangular spray pattern is formed.

3,088,679

SPRAYERS

Charles L. Ford, St. Petersburg, Fla., assignor to Sprayers & Nozzles, Inc., St. Petersburg, Fla., a corporation of Florida

Filed Oct. 14, 1960, Ser. No. 62,681
5 Claims. (Cl. 239—318)



1. In a sprayer comprising a housing having an open interior and a removable nozzle assembly, said nozzle assembly comprising a body member having an inlet end and an outlet end and a bore extending from said inlet end to said outlet end, a pair of gaskets mounted in spaced relation about a selected portion of said body member between said inlet and outlet ends, said portion of said body member being positioned within said housing, said gaskets being compressed and sealing said body member within said housing and defining an annular chamber between said body member and said housing, said body member having a fluid intake hole communicating between said bore and said chamber, said housing including a conduit therethrough having one end communicating with said chamber and an opposite end opening outwardly of said housing adapted to receive fluid from an exterior source, a keeper member for engagement with the outlet end of said nozzle assembly, and means attached to said housing for effecting engagement and disengagement of said keeper member with said nozzle assembly for releaseably locking said assembly within said housing.

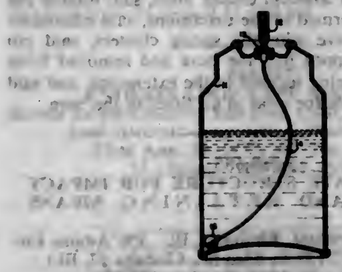
3,088,680

DISPENSER FOR PRESSURIZED PRODUCTS

Robert A. Fulton, Silver Spring, Md., and Alfred H. Yeomans, Washington, D.C., assignors to the United States of America as represented by the Secretary of Agriculture

Filed July 19, 1960, Ser. No. 43,963
4 Claims. (Cl. 239—337)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A dispenser comprising a closed, pressure-resistant container, having a dispensing nozzle provided with an orifice adapted to be opened to the atmosphere, for dispensing fluid contents under pressure, a flexible, nonkinking eduction tube having one end communicating with said nozzle orifice and having its other end in communication with said fluid contents to be dispensed, said nozzle orifice having a diameter not smaller than the internal diameter of said eduction tube, said eduction tube having an internal diameter of capillary dimensions ranging about from 0.010 to 0.100 inch and a corresponding length sufficient to produce boiling in said tube when the orifice of the nozzle is opened to the atmosphere, and means for continuously maintaining communication between said other end of the eduction tube and said fluid contents to be dispensed regardless of the position of the container.

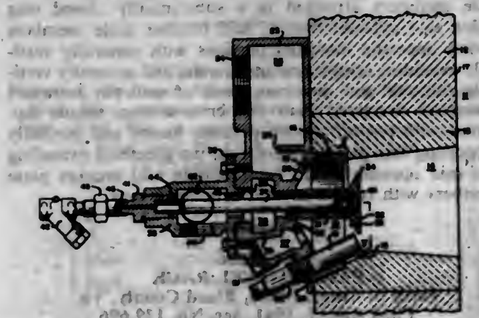


3,088,681

ATOMIZING OIL BURNER NOZZLE

William N. McCutcheon, Jr., Crafton, Pa., assignor to Bloom Engineering Company, Inc., Pittsburgh, Pa., a corporation of Pennsylvania

Filed Feb. 1, 1955, Ser. No. 485,367
1 Claim. (Cl. 239—427)



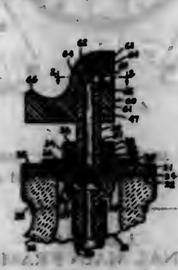
In an atomizer for a burner for a furnace or the like, said burner having a fixed nozzle with a central discharge opening therethrough, in combination, an oil tube, a unitary cylindrical atomizer tip connected to the end of said oil tube, an oil receiving chamber in the rearward end of said tip, the forward end of said tip being in the general form of a right circular conical frustum, a cylindrical cup in the forward end of said tip extending axially from the interior through the front thereof with the walls of said cup intersecting the conical sides of said frustum, said sides of said frustum comprising alternate sector-like inner face portions and radially extending atomizing medium grooves, said portions being of one slope outwardly and rearwardly and said grooves having bottoms of a steeper slope outwardly and rearwardly around the entire periphery of said sides, said grooves being of uniform width, the laterally inward edges of said portions and grooves being respectively coincident with the edge of said cup, said portions being adapted to index against the back edge of said discharge opening, a plurality of straight axially extending oil passages providing communication between said chamber and the bottom of said cup, a like plurality of atomizing medium passages extending from the outer cylindrical side of said tip to the bottom of said cup with the axes of said atomizing medium passages intersecting the axes of said oil passages respectively, said axes of said rearward atomizing medium passages being in a plane substantially normal to the axis of said tip and tangential to a circle subscribed around the axis of said tip of a lesser diameter than the diameter of said cup, and means for supplying atomizing medium to said atomizing medium passages and grooves.

3,088,682

COMBINED ACTUATOR BUTTON AND SPRAY NOZZLE DEVICES FOR AEROSOL VALVES

Frank Venus, Jr., Oxford, Conn., assignor to The Risdon Manufacturing Company, Naugatuck, Conn., a corporation of Connecticut

Original application June 22, 1954, Ser. No. 438,543. Divided and this application Oct. 9, 1959, Ser. No. 845,477
6 Claims. (Cl. 239—573)



1. In a combined actuator button and dispensing nozzle for an aerosol dispensing valve having a movable tubular valve stem providing a passage through which fluid is delivered when the valve is opened by actuation of said stem, said actuator button comprising a molded plastic body member having a socket closed at one end within which the valve stem is adapted to be received in peripheral sealing engagement, said body member having an aperture formed through one of its walls to communicate with the interior of said socket adjacent its closed end to provide a discharge orifice, an integral peg extending axially from the closed end of said socket in circumferentially spaced relation to the side wall thereof, said peg having an end face disposed to partially block said valve stem passage to form an orifice so sized as to break down the fluid droplets being dispensed to a very small size while still passing a desired quantity of the fluid at low pressures.

3,088,683

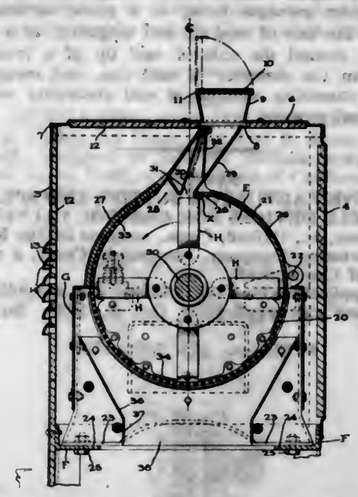
PAPER DISINTEGRATOR

Elias F. Joseph and Benjamin B. Clenney, Tyler, Tex., assignors to J. B. Sedberry, Inc., Tyler, Tex., a corporation of Tennessee

Filed June 6, 1962, Ser. No. 200,498
6 Claims. (Cl. 241—36)

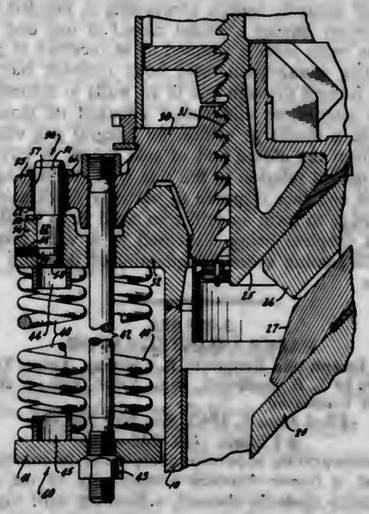
1. Disintegrating apparatus comprising, in combination, a cabinet, a frame disposed transversely of the cabinet substantially medially thereof, a hammer mill supported on said frame, said hammer mill including an arcuate imperforate upper section and an arcuate lower section having a perforate bottom wall, an imperforate casing enclosing said lower section, said upper and lower sections forming a grinding chamber, said upper section including front and rear walls whose upper edges are spaced apart to define a material receiving opening therebetween, a motor for driving said mill also supported on said frame, a shaft having a plurality of hammers thereon and disposed within said grinding chamber, one end of said shaft connected to said motor, a feeding chute at the top of the cabinet communicating with the opening in said

upper section and offset therefrom, a discharge hopper supported on said casing below the perforate bottom



wall of said lower section, and a removable collection receptacle in receiving relation to said discharge hopper.

3,088,684
EXTERNAL MAIN FRAME PIN
Arnold P. Szaj, Hales Corners, Wis., assignor to Nordberg Manufacturing Company, Milwaukee, Wis., a corporation of Wisconsin
Filed Nov. 14, 1961, Ser. No. 152,223
4 Claims. (Cl. 241—290)



1. In a gyratory crusher having a main frame, a head within the frame mounted for gyratory movement, a bowl in the main frame spaced from the head to define a crushing cavity, an adjustment ring with a continuous extension from the bowl to raise and lower the bowl, said ring seated on a continuous extension from the main frame, a combination to allow releasing movement of the adjustment ring, yet prevent rotational movement of the adjustment ring, which includes, a plurality of spring cluster units, each unit having a group of individual springs, said cluster units circumferentially distributed below the extensions and releasably holding the ring down on the frame, said cluster units separated by a space on the extensions substantially greater than the space between the individual springs in the cluster unit, a torsion pin in a space of the extensions between adjacent cluster units, said torsion pin seated in a bore formed in the extensions, said extensions generally coextensive with the spring clusters, said pin adapted to be dropped into the bore and removed from the bore without being secured to the extensions, and said pin being observable for wear at all times in the bore.

3,088,685
BREAKER PLATE STRUCTURE FOR IMPACT CRUSHER AND RETAINING MEANS THEREFOR
Thomas E. Bridgewater, Elmhurst, Ill. (% Adams Engineering Co., 2151 E. 83rd St., Chicago 17, Ill.)
Filed June 26, 1961, Ser. No. 119,526
4 Claims. (Cl. 241—300)



1. In an impact crushing apparatus of the type described including a central upstanding impeller structure for projecting material to be processed outwardly therefrom, the combination comprising upstanding cylinder means for surrounding the impeller structure, a plurality of breaker plate members arranged in a substantially closed ring within said cylinder means, said breaker plate members having opposing marginal portions with generally vertically extending opening means therein, and generally vertically disposed pin members, each of said pin members having an elongated transverse cross-section, means supported with respect to said cylinder means and pivotally supporting said pin members, said pin members extending into said opening means for retaining said breaker plate members with respect to said cylinder means.

3,088,686
PAPER-TOWEL RACK
Percy S. Curry, Bland, Bland County, Va.
Filed Aug. 7, 1961, Ser. No. 129,606
4 Claims. (Cl. 242—55.2)



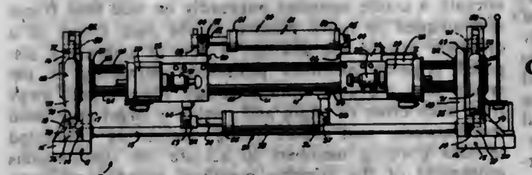
1. A rack for supporting a roll of paper towels comprising an elongated base, a pair of posts mounted on the front face of said base and adapted to hold a paper-towel roll between them, one of said posts being fixed to the base and the other movable with respect thereto in a direction toward and away from said fixed post, the rear face of said base formed with a hollowed-out region having a top wall, said base having a channel at one end communicating with said hollowed-out region, a tongue secured to said movable post extending through said channel into said hollowed-out portion, said tongue having an elongated slot disposed longitudinally with respect to the direction of movement of said movable post, a pin projecting from said top wall through said slot, means secured to said pin for guiding the movement of said tongue, and a tension spring mounted between said top wall and said tongue for constantly urging said movable post toward said fixed post, said guide means comprising a bushing surrounding said pin, the internal diameter of said bushing being about equal to the diameter of said pin and the external diameter of said bushing being about equal to the width of said slot, and including means fixed to the pin near its free end for preventing axial movement of said bushing with respect to said pin.

3,088,687
ENDLESS LOOP TAPE MAGAZINE
Harold Edward Martin, San Jose, Calif., assignor to Lockheed Aircraft Corporation, Burbank, Calif.
Filed Aug. 25, 1959, Ser. No. 835,957
15 Claims. (Cl. 242—55.19)



12. An endless loop tape storage magazine comprising a base member, at least one pair of coaxial, spaced, tape-supporting plates, means for rotatably mounting said tape-supporting plates upon said base member, means on the inner surface of at least one of said tape-supporting plates for gently disposing tape placed therebetween from the outer toward the inner portion of said tape-supporting plates, and means mounted on said base member for guiding said tape as it is simultaneously fed to and withdrawn from the outer and inner peripheral areas, respectively, between said tape-supporting plates.

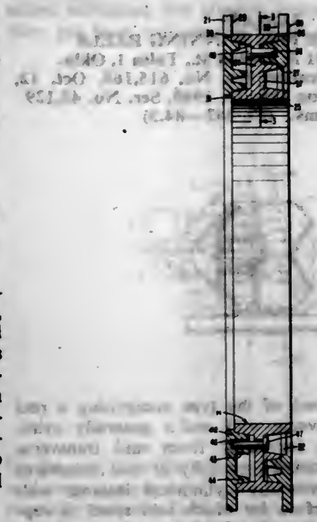
3,088,688
HYDRAULIC SYSTEM
Robert L. Beninger, Sheboygan, and Paul W. Jacobsen, Kiel, Wis., assignors to H. G. Weber and Company, Inc., Kiel, Wis., a corporation of Wisconsin
Filed Sept. 25, 1958, Ser. No. 763,263
4 Claims. (Cl. 242—57.1)



1. In a hydraulic control system for a roll stand having an axially stationary shaft, and a pair of substantially parallel roll-supporting arms slidably carried on the shaft, the improvement comprising: a first actuator adapted to be operatively connected between a first of the arms and the shaft for moving the arm along the shaft axially; and a second actuator having bore and rod diameters equal to said first actuator and adapted to be operatively connected between said first arm and the second arm for moving the second arm axially along the shaft with respect to said first arm, corresponding ends of said actuators being adapted to act on said first arm.

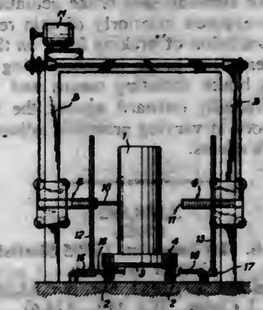
3,088,689
TAPE REEL
Robert S. Perlini, Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed May 27, 1960, Ser. No. 32,362
3 Claims. (Cl. 242—71.8)

6. A reel comprising a hub formed with outer and inner annular ring portions and a central web and an extra intermediate ring portion on one side of the web whereby said hub in cross section has a U-shaped section facing one side and an E-shaped section facing the other side, a pair of flanges fastened on said hub, one of said flanges being formed with three ring extensions which in cross section appear as an E-shaped formation which is proportioned to fit within the U-shaped



section of the hub, and the other of said flanges being formed with two ring extensions which in cross section appear as a U-shaped formation which is proportioned to fit between said outer ring portion and said extra ring portion of said E-shaped section of the hub, and means for fastening said flanges to said hub in the positions noted to form a light but stiff and strong reel.

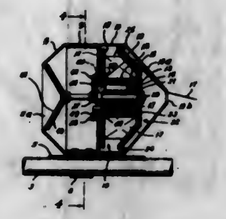
3,088,690
WIRE COILING APPARATUS
Otto Haugwitz, La Celle Saint-Cloud, France, assignor to Societe Anonyme Geoffroy-Delore, Paris, France, a French company
Filed May 25, 1960, Ser. No. 31,695
Claims priority, application France June 2, 1959
3 Claims. (Cl. 242—83)



1. Apparatus for selectively and continuously manipulating filamentary material transformed between straight line and stacked turns conditions, the apparatus comprising: means for transforming material between straight line and turned condition, a temporary turns storer including a horizontal supporting surface adapted for being located a small vertical distance beneath the first said means, means for causing movement of said supporting

surface to release turns of material thereon, a vertically movable support for selectively raising and lowering a stack of regularly staggered turns of filamentary material to maintain the top of the stack at a small distance beneath the first said means, and means for moving said stack towards and away from the vertically movable support.

3,088,691
DRAG BRAKE FOR SPINNING REELS
R. Dell Hull, 1131 E. Easton St., Tulsa 1, Okla.
Continuation of application Ser. No. 615,168, Oct. 12, 1956. This application July 25, 1960, Ser. No. 45,129
13 Claims. (Cl. 242—84.5)



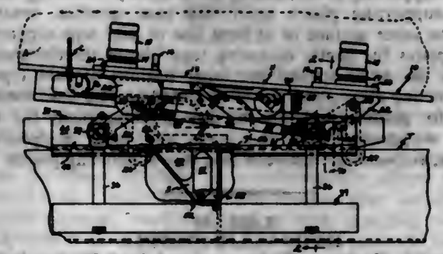
13. In a spinning reel of the type comprising a reel frame having a transverse wall and a generally cylindrical hub projecting forwardly from said transverse wall, a line spool mounted forwardly of said transverse wall and having a generally cylindrical internal wall forming a bearing surface by which said spool is supported for rotation around said hub, said spool being normally non-rotatable but adapted for controlled rotation on said hub, a rotatable pick-up member having line engaging means for wrapping line around said spool, and drag brake means for controlling the rotation of said spool on said hub, the improvement in said drag brake means characterized by a drag brake member received intermediate said hub and said generally cylindrical internal wall of said line spool, said drag brake member comprising a circumferentialy disposed element formed of resilient material and radially distortable to press radially outward against the internal wall of said line spool to frictionally restrain rotation thereof relative to said reel frame, and adjustable brake actuating means comprising an axially extending element projecting through said transverse wall and within the generally cylindrical internal wall of said spool and engaging said radially distortable drag brake element, said brake actuating means including means exposed exteriorly of said reel frame for rapid manual variation of braking force on the line spool, and said resilient drag brake member being radially distorted by said brake actuating means and thereby constantly urged radially outward against the internal wall of said line spool at varying pressures adjustable by said brake actuating means.

3,088,692
REEL
James S. McGlaughlin, 16595 Shaftsbury, Detroit 19, Mich.
Filed Jan. 12, 1961, Ser. No. 82,260
1 Claim. (Cl. 242—118.6)



A reel comprising a cylindrical drum having substantially circular ends, a plurality of flexible tongues fixed upon and against the interior face of the drum at each of said ends and projecting beyond said ends in the direction of the drum axis and spaced apart circumferentially of the reel, and a pair of plates substantially coaxial with the drum and abutting and penetrated by the drum ends, substantially throughout the circular extent of said ends, each plate being formed with a plurality of circumferentially spaced slots respectively receiving the respective tongues on the adjoined end of the drum, said tongues having outer portions flexed to seat against the outer faces of the plates and being offset toward said axis in an inwardly spaced relation to the drum ends, such offsets forming abutments engaged by the inner faces of the plates, whereby the drum ends penetrate the plates in an outwardly spaced relation to the offsets and the drum is reinforced by the tongues against radial flexure.

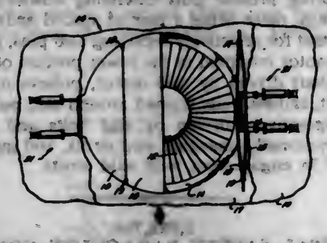
3,088,693
TOWED TARGET LAUNCHING AND RETRIEVAL APPARATUS
Howard C. Brown, Birmingham, Ala., assignor to The Hayes Corporation, a corporation of Delaware
Filed Sept. 15, 1961, Ser. No. 138,395
11 Claims. (Cl. 244—3)



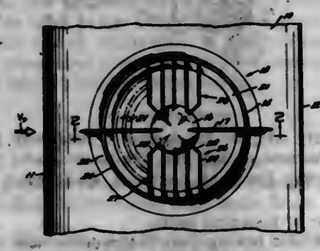
1. In a towing device for launching and retrieving a streamlined elongated tow target from the underside of aircraft, a base frame secured to the underside of the aircraft, a cradle mounted outwardly on said base frame and adapted to move relative to the base frame in a direction toward the aircraft, a pair of oppositely disposed gripping members positioned outwardly of the cradle and movable simultaneously toward and away from each other to retain and release a target positioned therebetween, said cradle being operatively connected to said gripping members to actuate the simultaneous movement of the gripping members toward and away from each other, and means to unreel the towed target from between the gripping members for launching thereof and to reel the target to a position between the gripping members for retrieval thereof, said cradle being engaged by the target upon retrieval therof and being moved toward said base frame to actuate said gripping members for moving toward each other and gripping the target therebetween.

3,088,694
WING-FAN DOORS
Ted Floyd Stirgwolt, Marblehead, and Denis Pierpoint Eddins, Lynnfield, Mass., assignors to General Electric Company, a corporation of New York
Filed Dec. 29, 1960, Ser. No. 79,420
8 Claims. (Cl. 244—12)

1. Wing-fan structure for VTO aircraft comprising, a fixed horizontal wing member for the aircraft having an upper surface thereon, said surface having an opening with a fan disposed therein for the movement of air downwardly therethrough, hinge means disposed on opposite sides of said opening and connected to said wing member, the axis of rotation of said hinge means being aligned substantially parallel to the main airflow across said upper surface, a door mounted on each hinge for rotation toward and away from said wing surface, each door extending over half the opening when closed to continue said wing surface over said opening.



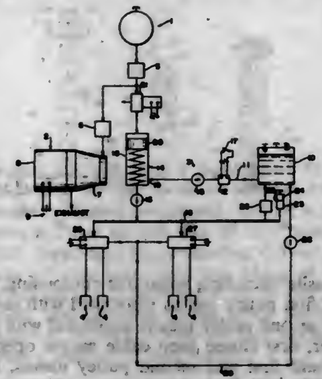
3,088,695
VTO INLET
Donald Edwin Clark, Cincinnati, Ohio, assignor to General Electric Company, a corporation of New York
Filed Feb. 12, 1962, Ser. No. 172,678
9 Claims. (Cl. 244—12)



1. In a vertical take off aircraft having a bellmouth fan inlet duct therethrough for a lift fan,
a bulletnose disposed centrally of said duct for support of said fan,
an airfoil vane concentric with and disposed in said bellmouth substantially parallel to and contiguous with said bellmouth radius and spaced therefrom forming a passage,
a plurality of spaced airfoil vanes disposed transverse to the direction of horizontal flight,
said transverse vanes occupying only part of said inlet total area and secured to said concentric vane and said bulletnose,
the extreme transverse vanes having a radial portion at their connection to said bulletnose.

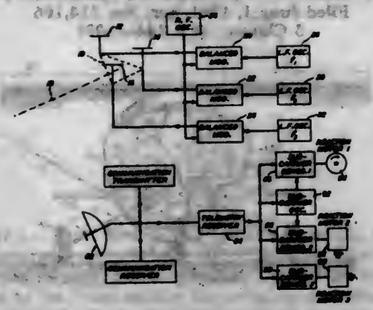
3,088,696
POWER SUPPLY AUXILIARY
Rudolph A. Mathelmel, Baltimore, Md.
Filed Dec. 27, 1957, Ser. No. 722,111
(Filed under Rule 47(b) and 35 U.S.C. 118)
8 Claims. (Cl. 244—14)

7. A power supply auxiliary system for control equipment within an airborne guided missile comprising a vessel adapted to store pressurized gas, a gage for measuring the gas pressure within said storage vessel and adapted to produce a command signal when the gas pressure therewithin decreases to a predetermined minimum, means for maintaining the gas pressure within said storage vessel above said predetermined minimum, comprising a plurality of gas-producing explosive charge units, trigger means responsive to command signals from said pressure gage and adapted to fire a said charge unit in response to each said command signal and to fire the plurality of said charge units in a predetermined order, and means arranging each said charge unit in a position to explode gas into said storage vessel when fired by said trigger means, a reservoir of substantially inelastic fluid, a demand vessel, a fluid injector operable by pressurized gas and connected to pump increments of substantially inelastic fluid from said reservoir into said demand vessel, said demand vessel being adapted to maintain the pressure of the substantially inelastic fluid pumped therein above a predetermined minimum, first conduit means connected to introduce gas from said storage vessel to said fluid injector



for the operation thereof, an actuator unit for driving the said control equipment and operable by pressurized substantially inelastic fluid, second conduit means connected to introduce pressurized substantially inelastic fluid from said demand vessel to said actuator unit for the operation thereof, and a demand valve connected in said second conduit means and adapted to permit fluid flow therethrough in response to the operating requirements of said actuator unit.

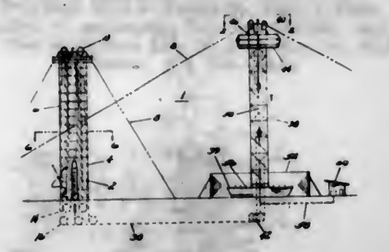
3,088,697
ATTITUDE CONTROL FOR SATELLITE VEHICLES
Cassius C. Cutler, Gillette, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 28, 1959, Ser. No. 862,200
5 Claims. (Cl. 244—14)



1. In a system for determining the attitude of a space vehicle from a base station, means for producing distinctive signals for radiation from spaced points in a reference plane on said vehicle, means for radiating said signals as linearly polarized waves of predetermined polarization, receiving means at the base station responsive with greatest efficiency to waves of a first polarization, means for measuring the relative phases of signals reaching said receiving means from said spaced points to determine the relative distance of said points from said base station, second receiving means responsive with greatest efficiency to waves of a second polarization, and means for com-

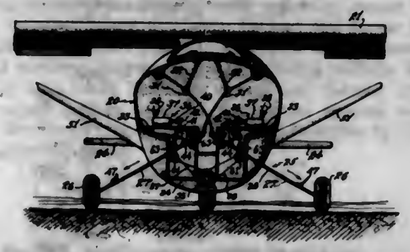
paring representative signals from said first and second receiving means to measure the rotation of said reference plane about the line of sight to said base station.

3,088,698
VERTICAL CATAPULT FOR MISSILES
Theodore Ongaro, 2303 Abington Road, Columbus, Ohio
Filed Aug. 16, 1960, Ser. No. 49,986
10 Claims. (Cl. 244—63)



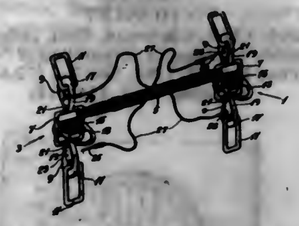
1. Missile launching apparatus comprising, a launching tower, a first pulley means associated with said launching tower, a second pulley means associated with said launching tower, first closed loop cable means operatively connecting said first and second pulley means, means associated with said first closed loop cable means adapted to impart a force to the missile to be launched, a third pulley means associated with said launching tower, a force tower, force developing means movably associated with said force tower, second cable means connected to said force developing means and associated with fourth pulley means for raising said force developing means relative to said force tower, means for releasing the kinetic energy of said movable means as it approaches the lower end of its path of motion, said second cable means being operatively associated with said third pulley means and said second pulley means so as to transmit forces developed by said force developing means to said means associated with said first closed loop cable means.

3,088,699
RETRACTABLE LANDING GEAR
Fred Larson, 2313 SE. 3rd Ave., Vero Beach, Fla.
Filed June 1, 1961, Ser. No. 114,106
3 Claims. (Cl. 244—102)



1. In an airplane, a fuselage having recessed portions in the lower side portions thereof, a retractable landing gear comprising a pair of inclined struts, wheels connected to the lower ends of said struts, brake mechanisms operatively associated with said wheels, said struts having passageways therein for conveying an actuating medium to said brake mechanisms, hoses operatively connected to said passageways, spring members connected to said hoses, upper and lower horizontally disposed support members mounted in said fuselage, locking mechanisms each comprising a solenoid mounted on an upper support member, spring pressed plungers connected to said solenoids, a bell crank lever connected to each plunger, casings depending from the upper support members, vertically disposed spring pressed pins extending downwardly from said casings, there being a pair of spaced apart apertures in each strut for selectively receiving said pins, a reversible electric motor mounted in the lower portion of said fuselage, a shaft driven by said motor, pulleys mounted on said shaft, endless belts trained around said pulleys, drive rollers operatively driven by said belts and said drive rollers frictionally engaging said struts, and guide wheels arranged in engagement with said struts.

3,088,700
UNIVERSAL SAFETY PARACHUTE CONNECTOR
Pierre Joseph Marie Carrey, 17 Boulevard Zola, Aix-en-Provence, France
Filed Aug. 28, 1961, Ser. No. 134,299
3 Claims. (Cl. 244—151)

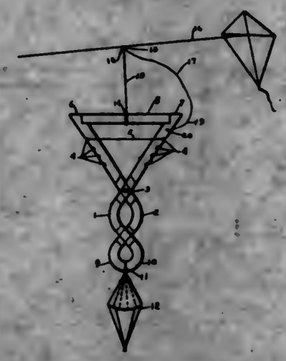


1. A safety adaptor for joining a parachute pack to a parachute harness or the like, the harness and pack having non-mating fastening elements, said device comprising:

(*a*) a pair of fastening units;
(*b*) each unit having two independent sets of fastening elements;
(*c*) each set consisting of two interconnected mating fastening elements;
(*d*) one element of one set being fixed to an element of the other set;
(*e*) means for joining the two units together;
(*f*) a parachute pack;
(*g*) a parachute harness;
(*h*) first connecting elements connected to said parachute pack and second connecting elements connected to said parachute harness;
(*i*) said first connecting elements each being detachably connected to one of said fastening elements of one of said sets of one of said units;
(*j*) and said second connecting elements each being detachably connected to one of said fastening elements of a second one of said sets of one of said units.

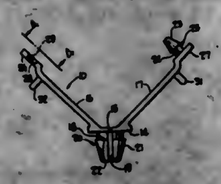
3,088,701
AERO DROP FOR USE WITH KITES AND OTHER OBJECTS
William A. Fricke, 3020 Boswell Drive, Huntsville, Ala.
Filed Aug. 15, 1960, Ser. No. 49,680
2 Claims. (Cl. 244—155)

1. An aero drop for use with kites or the like comprising, two main similar parts, each of said parts being formed partly straight with the other portion formed in two curves, a retaining bolt, said bolt holding the center portions of the main parts loosely together, the ends of the curved portions being in register with each other, the end of each straight portion having a notch formed therein, a rubber band, a cross bar, said cross bar being held by frictional contact of its ends in said notches in the ends of the straight portions of the main parts as a result of the contracting pull of the rubber band, each of said straight portions having a plurality of slots formed in its outer edge, said rubber band being mounted in contracting tension in two of said slots opposite each other, a piece of string, said string having one end attached to the center of said cross bar, the other end of the string being attached to a flying kite string, a second string, said second string being longer than the other string and having one end



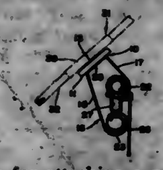
attached to one of said main parts with its other end being attached to said flying kite string, said cross bar being adapted for release when slack is made in the main kite string by a user and then jerked to thus overcome the said frictional contact holding the cross bar.

3,088,702
CABLE RETAINER
Emil H. Orenick, 9911 W. Moreland Road, Parma, Ohio, and Michael W. Orenick, 1224 Irene Road, Lyndhurst, Ohio
Filed May 17, 1961, Ser. No. 110,993
1 Claim. (Cl. 248—71)



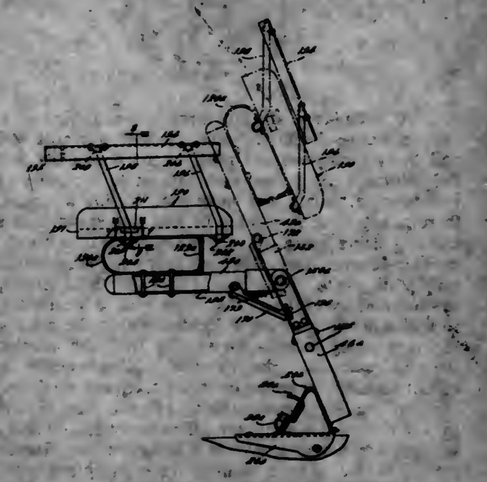
In combination with a panel wall having a hole therethrough, an electric cable retainer, comprising, a base having two angularly disposed and opposed arms formed integral therewith and positioned at opposite edges thereof, the space between the arms at the base being less than the width of a human finger, the base having a hinge groove on the top side thereof between the two arms, and an anchor element positioned on the underside thereof aligned with the groove, the anchor element comprising a conical head mounted on a cylindrical stem, the diameter of the stem being less than that of the panel hole, the diameter of the base of the head being greater than that of said hole, the head and stem having a diametric slot, aligned with the base hinge grooves, dividing them into two identical halves free to flex with the base, at the hinge thereof, toward or away from each other, the arms and base being tiltable relative the hinge groove, upon the pressing of a finger between the arms at the base, to a first position wherein they are flexed away from each other to tilt the two halves of the anchor head toward each other, to contract the head, to permit passage thereof through the panel hole; and to a second position, when the finger is removed, wherein the arms are flexed toward each other to bring the arm ends into apposition to define a closed, cable supporting, loop and to tilt the base anchor head halves away from each other to expand and lock the head against withdrawal through the panel hole, and lock means on the arm ends for maintaining them in said second position.

3,088,703
MAGNETIC PAINT BRUSH HOLDER
Bertram H. Morris, 3139 Hudson Drive, Cuyahoga Falls, Ohio
Filed Apr. 17, 1961, Ser. No. 103,323
2 Claims. (Cl. 248—226)



1. In a holder for attaching a paint brush to the rim of a paint bucket or the like in either vertical, horizontal or at intermediate degrees comprising, a base, a magnetic holding means secured to one side of said base, spaced apart, resilient supporting legs extending outwardly from the other side of said base, said legs being of different lengths and terminating in convoluted, scroll-like, resilient gripping heads, said gripping heads being positioned in adjacent tangential opposition with the legs parallel in the static inoperative position of said holder.

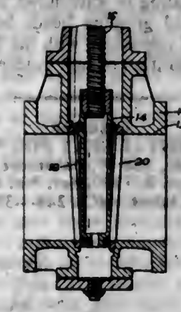
3,088,704
SUPPLEMENTAL SEAT FOR VEHICLES
Maurice J. Grady, 883 W. Baltimore, Detroit, Mich.
Filed Apr. 2, 1959, Ser. No. 803,646
4 Claims. (Cl. 248—371)



1. In a support for a seat or the like, two rigid, hingedly interconnected pedestal sections including a lower section, an upper section, means pivotally connecting the upper section to the lower section for swinging movement about a substantially horizontal axis, and means for limiting downward swinging movement of the upper section with respect to the lower section, comprising a prop, a fulcrum portion pivotally connecting one end of said prop to one of said sections, the other end of said prop being independently swingable about said fulcrum portion toward and from the other of said sections and being separably engageable, in a direction longitudinal with respect to the prop, with an abutment portion carried by said other section, means yieldably urging said prop in an angular direction toward said other section about said fulcrum portion, the pedestal section with which the prop is separably

engageable being provided with a longitudinal slot extending in a direction perpendicular to the first-mentioned axis, the abutment portion being located in said slot, said other end of the prop being swingable in a path in which it is guided by said fulcrum portion to carry said other end of the prop into and out of the slot and into and out of engagement with the abutment portion, guide portions limiting the extent to which said other end of the prop extends into the slot and slidably guiding said other end into engagement with the abutment portion, the pedestal section with which the prop is separably engageable being of rectangular cross section, said prop having a pair of terminal abutments spaced apart a distance slightly exceeding the width of such pedestal section and adapted to overengage opposite sides thereof and to engage said previously mentioned abutment portion.

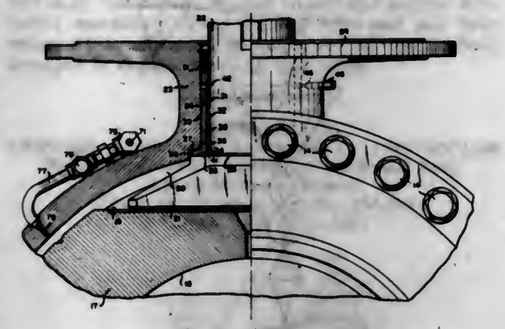
3,088,705
WEDGE TYPE VALVES FOR FLUIDS
Douglas J. W. Blackhall, Brighouse, and Thomas Robertson, Lightcliffe, Halifax, England, assignors to J. Blakeborough & Sons Limited, Brighouse, England
Filed July 1, 1960, Ser. No. 40,480
7 Claims. (Cl. 251—187)



1. A wedge-type fluid control valve, having a valve seat, a wedge-shaped closure member movable toward and away from a closed position to control the flow of fluid through the valve, each face of said closure member directed toward the valve seat, having a ring space therein, a sealing ring fitted to said ring space, said sealing ring being operative to provide a metal to metal seal contact between the valve seat and the closure member, said sealing ring being movable within said ring space toward and away from the valve seat, a resiliently deformable loading member located within the portion of the ring space behind the sealing ring, the portion of the ring space occupied by said loading member being of substantially trapezoidal cross-sectional contour, the resilient loading member being of such size and shape that it does not completely fill said portion of the ring space when not under load, a retaining ring fixedly attached to the closure member in engagement with the sealing ring, said retaining ring being operative to retain the loading member within the ring space, said sealing ring projecting from said closure member by such a distance that it will engage and be moved by the valve seat during the process of closing the valve.

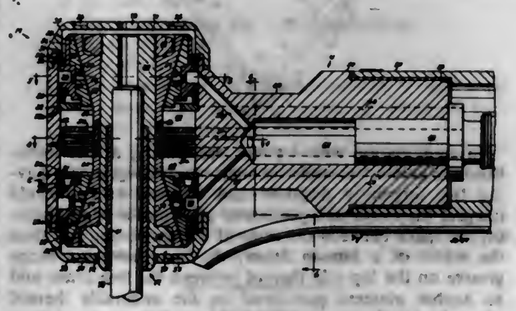
3,088,706
PLUG VALVE STEM MOUNTING
Max L. Hill, Atchison County, Kans., assignor to Rockwell Manufacturing Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed June 14, 1961, Ser. No. 117,041
11 Claims. (Cl. 251—214)

1. In a plug valve assembly, a body having a ported plug rotatably mounted therein and pipeline connection passages at opposite sides of the plug, a rotatable valve stem extending from operative connection with said plug through a body opening to a point outside the body for connection to an operator, and means mounting and sealing said stem within said opening comprising a bushing extending within said opening from the interior of said



body, means for introducing lubricant between said bushing and said stem, and a radial seal assembly in the opening disposed axially outwardly of said bushing, said seal assembly being inserted through said opening from exteriorly of said body and comprising inner and outer radially compressed seal rings.

3,088,707
PNEUMATIC MOTOR
Norman C. Williams and Harry F. Everett, Portland, Oreg., assignors to Power Brake Equipment Company, Portland, Oreg., a corporation of Oregon
Filed Apr. 19, 1962, Ser. No. 188,745
7 Claims. (Cl. 253—2)



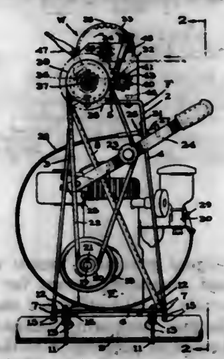
1. A dental handpiece for driving a dental drill at high speed, said handpiece having a stationary casing, a rotor including an axle supported coaxially in said casing, a compressed air driven turbine wheel secured coaxially on said axle for driving said rotor, a pair of outwardly facing oppositely conical rotor bearing journals secured on said axle at its opposite ends, a pair of inwardly facing oppositely conical stator bearing assemblies each including a supporting ring surrounding one of said stator bearings on its outer side to make up said assemblies, each of said supporting rings having a groove sunk circumferentially therearound adjacent to the inner face of said casing, said casing including on either axial side of each of said grooves a pair of identical conical resilient seal rings for sealing and supporting said conical stator bearing assemblies resiliently on the inner face of said casing to provide an inlet manifold for compressed air, each of said inner faced conical stator bearing assemblies including conduit means for connecting its said groove with the conical air gap between said inner faced conical stator bearing assembly and its mating outwardly facing rotor bearing journal.

3,088,708
COMPRESSOR BLADE LOCKING DEVICE
Seymour J. Feinberg, Bellevue, Wash., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Dec. 29, 1961, Ser. No. 163,374
5 Claims. (Cl. 253—77)



1. In a high speed rotary compressor, the combination of a rotor having a dovetail groove extending fully around the circumference thereof in spaced relation with respect to the outer diameter thereof, a platform seat formed on the outer diameter of the rotor in communication with said dovetail groove and extending fully around the circumference thereof, a plurality of bladed platforms mounted in said platform seat in abutting engagement with respect to each other, a dovetail root carried by each platform and disposed within said dovetail groove in spaced relation with respect to each other, an entrance slot in the rotor and extending radially inwardly from the platform seat into said dovetail groove and providing a plurality of walls on the rotor so that the dovetail roots may be inserted therein and into said dovetail groove and the bladed platform into the platform seat for movement circumferentially therein, a locking device disposed within the entrance slot between and in engagement with a pair of the roots and movable to a position in abutting engagement with a pair of the bladed platforms of said plurality of bladed platforms, an arcuate opening formed in each bladed platform of said pair of bladed platforms, a recess in each bladed platform of said pair of bladed platforms in communication with said arcuate openings therein and forming a shoulder on each bladed platform of said pair of platforms at the junction of the recess and arcuate opening in each bladed platform, actuating means rotatably mounted in said pair of platforms, a threaded portion on said actuating means and threadedly connected to said locking device for moving the locking device between said pair of roots into abutting engagement with said pair of platforms and said plurality of walls on the rotor thereby to maintain the roots in the dovetail groove against circumferential movement and the platforms in abutting engagement and an actuating head on the actuating means and rotatably mounted in the arcuate opening in said pair of bladed platforms, said head being of a diameter less than the diameter of the threaded portion and providing a shoulder at the junction of the head and the threaded portion and engageable with the shoulder on each said pair of bladed platforms for preventing displacement of the actuating means as the threaded portion thereof is threaded into said locking device.

3,088,709
POWER-OPERATED WINCH FOR BOAT TRAILERS AND THE LIKE
Donald E. Hunt, Miami, Fla.
(285 Aragon Ave., Coral Gables, Fla.)
Filed Feb. 24, 1961, Ser. No. 91,387
1 Claim. (Cl. 254—166)

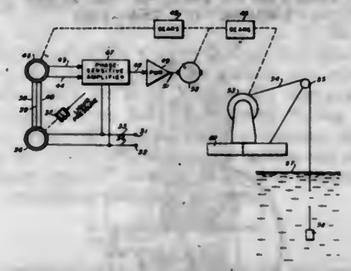


A portable power-operated winch unit for boat trailers and the like, comprising a generally upright supporting frame adapted to be secured to the tongue or draw-bar of the trailer adjacent to the forward end thereof, a bed-plate secured to the lower end of the frame and extended laterally beyond one side thereof, an internal combustion engine mounted on said bed-plate at one side of said frame, a cable winding drum rotatably mounted at the top of said frame, and power transmission means operatively interconnecting said engine with said drum, said supporting frame being of a generally inverted U-form and having an arm connecting the legs of the U and disposed substantially horizontally at the top of the frame upon which the cable winding drum is mounted, the legs of the U-frame diverging slightly from top to bottom and being rigidly connected at their lower ends to said bed-plate, a brace disposed diagonally between the top of the frame and the bed-plate, said brace having one end thereof inclined upwardly and forwardly away from the boat trailer to reinforce the frame against stress imposed on the frame by the cable winding drum when the latter is subjected to load, said power transmission means including co-planar driving and driven pulleys operatively connected to the engine and the cable winding drum respectively, a friction drive belt normally loosely embracing both pulleys, a bracket anchored to one side of the frame and extending therefrom toward the opposite side thereof, a clutch arm disposed between said pulleys and pivotally connected at one end to the bracket, with the free end of said arm extending toward and beyond the opposite side of the frame, and an idler pulley carried by said clutch arm intermediate its respective pivotal and free ends in co-planar relationship to the aforementioned driving and driven pulleys and adapted to frictionally engage and take up slack in the drive belt to effect power-operation of the cable winding drum responsive to pivotal movement of the clutch arm in one direction, and said bed-plate being provided with mounting means for securing the bed-plate and frame upon a trailer draw-bar.

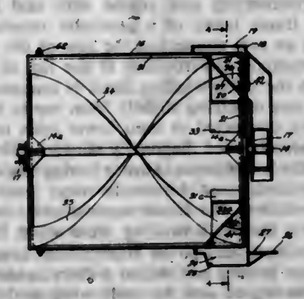
3,088,710
METHOD AND APPARATUS FOR DEPTH REGULATION
Elmer C. Evans, 7976 Lemon Circle, La Mesa, Calif., and Carl J. Shipek, 3639 Flo Place, San Diego, Calif.
Filed Feb. 26, 1962, Ser. No. 175,857
4 Claims. (Cl. 254—172)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A system for regulating the depth of a liquid-immersed object that is cable-suspended from a vacillating

platform comprising a sensor, said sensor being immersed in said liquid, connected to said platform and free to move therewith, said sensor producing an output signal corresponding to its instantaneous depth in said liquid, means coupled to said sensor for generating an error signal, a reference-signal generator, means coupled to said generator and said generating means for comparing the phase and magnitude of said reference and error signals, means coupled to said comparing means and said cable for moving said cable in proportion to the difference between the phase and magnitude of said signals.



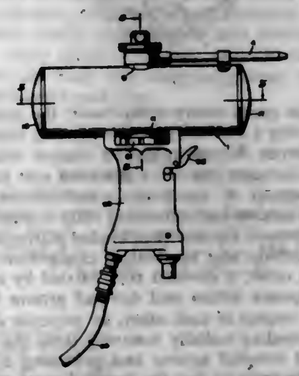
3,088,711
MACHINE FOR MIXING PARTICULATE MATERIALS
Charles E. Phillips, Downsville, Wis.
Filed June 10, 1959, Ser. No. 819,417
12 Claims. (Cl. 259—3)



1. A machine for mixing particulate materials comprising, a drum mounted to revolve about a substantially horizontal axis and having a tubular wall and end walls, power actuated means for rotating said drum about said axis in a predetermined direction, a material receiving bin extending beneath said drum, said tubular wall being formed with an inlet opening, a loading scoop carried by said drum and movable from a retracted position within said drum to an extended position wherein said scoop projects through said opening into said bin for conveying material from said bin to the interior of said drum, means for guiding said scoop from its extended position to its retracted position, and a scoop housing fixed within said drum and disposed to enclose said scoop and prevent the return of loaded material from the drum to said bin through said inlet opening, said housing having an outlet opening disposed to discharge the contents of the scoop and housing into the drum.

5. A machine for mixing particulate materials comprising, a drum mounted to revolve about a substantially horizontal axis and having a tubular wall and end walls, one of said end walls being a discharge end wall formed with a discharge opening disposed at one side of said axis, closure means for said opening, a fixed hood having a wall extending adjacent to the exterior surface of said discharge end wall and formed with a port positioned for alignment with said discharge opening when the latter is at a common elevation with said port during the rotation of the drum, said wall of the hood being disposed to retain said closure means in closed relation to said discharge opening when said opening is out of alignment with said port, a discharge chute carried by and projecting within said drum and disposed to direct material out through said discharge opening, said chute having an opening at its leading side in the direction of rotation of the drum to receive material, and a spirally disposed blade projecting from the tubular wall of the drum and disposed to direct material into said chute.

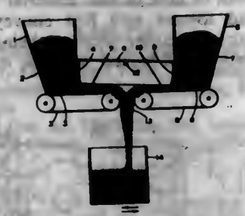
3,088,712
APPLICATOR AND MIXER FOR VISCOUS MATERIALS
Floyd E. Snow, Pasadena, and Jones O. York, Burbank, Calif., assignors, by mesne assignments, to Coast Pro-Seal & Mfg. Co., Los Angeles, Calif., a corporation of California
Original application July 28, 1952, Ser. No. 301,174, now Patent No. 2,814,827, dated Dec. 3, 1957. Divided and this application July 15, 1957, Ser. No. 677,173
8 Claims. (Cl. 259—7)



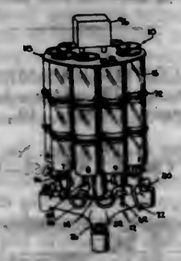
8. In a mixer: a body member having a passage as well as a substantially cylindrical mixing chamber forming a part of the passage; a rotary mixing member in the chamber and having a series of projections arranged in spaced helical sequence about the periphery of the mixing member, there being at least two complete helical turns of the projections; means for rotating the mixing member in a direction so that said helically arranged projections tend to move material toward one end of the passage; means for admitting material into said one end of said passage and forcing material through the passage despite the action of said helically arranged projections; said forcing means including a movable wall for squeezing material into said one end of said passage, a reversible means for operating both the mixing member and said movable wall whereby a charge of material may be inserted in advance of the wall; and a manually operable valve for selectively closing the other end of said passage.

3,088,713
BLENDING METHOD
George E. Gard, East Hempfield Township, Lancaster County, Pa., assignor to Armstrong Cork Company, Lancaster, Pa., a corporation of Pennsylvania
Filed May 9, 1960, Ser. No. 27,958
4 Claims. (Cl. 259—18)

1. A method of controlling relative amounts of ingredients in a blended feed mixture containing cellular polystyrene particles while said mixture is being conveyed at constant volume to a mold, said blended feed mixture containing in addition to said cellular polystyrene particles a second ingredient possessing sufficiently different physical properties from the cellular polystyrene particles as to be difficultly mixable therewith and which is to be present in said mold in varying concentrations from top to bottom of said mold depending on predetermined requirements, which method comprises passing through a first variable opening a first feed containing a mixture of said cellular polystyrene particles and said second ingredient, passing through a second variable opening a second feed of cellular polystyrene particles, admixing said first feed and said second feed to form said blended feed mixture subsequent to the passage of said first feed and said second feed through said variable openings, and adjusting the relative size of said first and said second variable openings to vary the concentration of said second ingredient in said blended feed mixture while maintaining the total outlet area of said first and said second openings constant.



3,088,714
VARIABLE GRADIENT DEVICE
Jack Isreeli, Tuckahoe, N.Y., assignor to Technicon Chromatography Corporation, Chauncey, N.Y., a corporation of New York
Filed Oct. 3, 1960, Ser. No. 60,174
14 Claims. (Cl. 259—66)



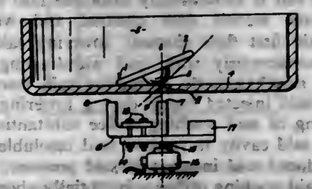
9. A variable gradient device, comprising a supporting base having means for adjusting said base into a horizontal position, a column extending vertically upwardly from said base, means connected to said column for supporting a plurality of vertical open top chambers arranged laterally of each other and connected in fluid flow communication with each other, said chamber supporting means comprising three horizontal members spaced vertically from each other, the lowest member of said horizontal members having a flat horizontal upper surface for engaging a portion only of the lower end of each of said chambers, and said other members having parts thereof for engaging vertically spaced portions, respectively, of the side wall of each of said chambers, whereby each of said chambers is supported by engagement of three vertically spaced portions thereof by said supporting means, mixer means removably mounted on said open ended chambers for stirring the liquids therein, said mixer means having stirring members for extending through said open tops into said chambers in said mounted condition of said mixer means, and cooperating means on said mixer means and said chamber supporting means for predetermining the position of said mixer means on said chambers comprising a plurality of pins extending from said mixer means and a plurality of corresponding holes for said pins provided in said other members.

3,088,715
STIRRING DEVICE
Fred H. Deindoerfer, 61 Chester Circle, New Brunswick, N.J.
Filed Aug. 11, 1959, Ser. No. 833,079
6 Claims. (Cl. 259—72)



1. A flask and stirrer assembly including a flask having an enlarged body portion and a restricted neck, a stirrer resting on the bottom of the flask and comprising a pliable organic plastic body having a size larger than the neck of the flask, a plurality of upstanding vanes connected to the body and extending to the side walls of the flask, the stirrer having a collapsed position in which it is adapted to enter the neck of the flask and an expanded position in which it substantially occupies the radial extent of the bottom of the flask, said stirrer lying wholly within the flask during use and remain fixed with respect to the flask.

3,088,716
MAGNETIC STIRRERS
Frank Dudley Stott, Wootton, Woodstock, England, assignor to National Research Development Corporation, London, England, a British corporation
Filed May 1, 1961, Ser. No. 106,776
Claims priority, application Great Britain May 6, 1960
11 Claims. (Cl. 259—144)

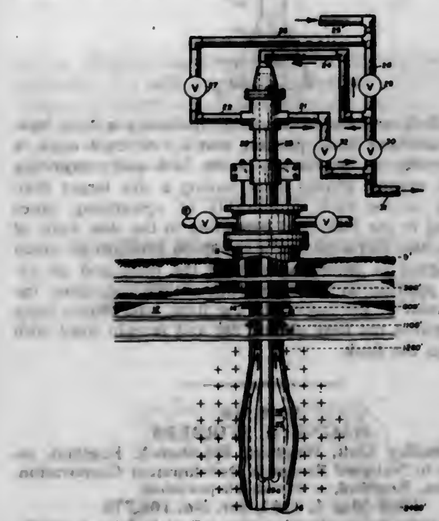


1. A stirrer for stirring liquids in generally flat-bottomed containers comprising a stirring element of magnetic material shaped so as to be dynamically equivalent to a wide-angled cone resting on the container bottom along a generatrix of the conical surface and free to roll on said bottom with the conical wall of said cone always in contact with the bottom, and a rotary magnetic field system acting on said stirring element, the axis of rotation of said field system being substantially normal to the plane tangential to said conical surface and containing said generatrix.

3,088,717
FORMATION OF STORAGE CAVITIES IN SALT DOMES
Richard D. Myers, Jr., Dallas, Tex., assignor, by mesne assignments, to Socony Mobil Oil Company, Inc., New York, N.Y., a corporation of New York
Filed June 9, 1958, Ser. No. 740,941
2 Claims. (Cl. 262—3)

1. The method of enlarging a cavity in a salt formation in which substantial amounts of insoluble materials

are embedded in a matrix of salt and having a first flow channel extending from the earth's surface through said cavity to a point substantially above the bottom thereof and a second flow channel terminating in the region of the upper end of said cavity, which region of the upper end of said cavity is at a distance above the bottom of said cavity greater than said point, the steps comprising, introducing a salt solvent into said cavity through a washing orifice at the bottom of said first flow channel, discontinuing introducing said solvent into said cavity through said washing orifice when the pressure in said first flow channel begins to increase as a result of accumulation of insoluble materials at the bottom of said cavity near said washing orifice, thereafter elevating said washing orifice to a point a small distance above the surface of said insoluble materials and below said region of the



upper end of said cavity, thereafter injecting a liquid in which said salt is substantially insoluble into said cavity through said second flow channel and withdrawing through said first flow channel, lowering said washing orifice simultaneously with said withdrawing, continuously and simultaneously entraining said insoluble materials by said injected liquid during lowering, completing lowering of said washing orifice substantially to the bottom of said cavity to remove said insoluble materials which produced said increase in said pressure, thereafter elevating said washing orifice substantially above the bottom of said cavity but to a point at a distance above the bottom of said cavity less than that of said region of the upper end of said cavcity, and thereafter repeating the aforementioned steps until said cavity reaches the desired volume.

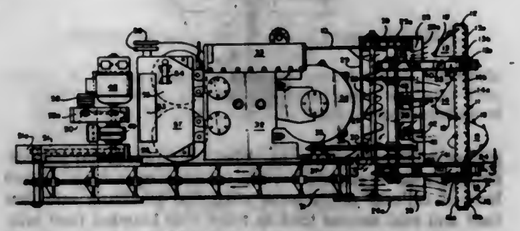
3,088,718

CONTINUOUS MINING MACHINE

Edward C. Lilly, Beckley, W. Va.
(511 N. 3rd St., Wytheville, Va.)

Filed June 29, 1960, Ser. No. 39,610
12 Claims. (Cl. 262—9)

1. A continuous miner comprising a frame member mounted for movement into a body of mineral being mined, a disintegrating head on said frame member comprising an elongated rotatable shaft having a first pair of cutter sections thereon positioned closely adjacent the opposite ends of said shaft and shaped to direct mined material both inwardly and rearwardly of the ends of said shaft and toward said frame member during rotation of said shaft, said rotatable shaft also having a second pair of cutter sections positioned at a central portion of said shaft and shaped to direct mined material rearwardly of said central portion, whereby continuous rotation of said disintegrating head into said body of mineral effects a disintegration of said mineral and rearward flow of said mineral toward and over a portion of said frame member with substantially no spillage to the sides of said head, a first movable conveyor on said frame member, motor means driving said disintegrating head, said motor means also driving elongated cutter chains disposed along the rearward path of flow of said material from said disintegrating head toward said first conveyor, said first and second pairs of cutter sections being shaped and positioned to work said mined material into both sides



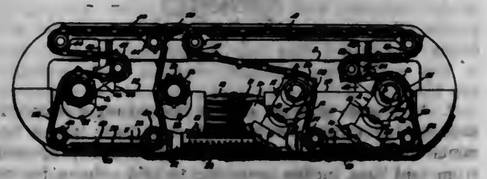
of each of said cutter chains during said rearward flow of said material, said first conveyor being disposed substantially parallel to, below, and rearward of said elongated rotatable shaft for causing said rearwardly flowing material to flow toward one side of said frame member, said first conveyor means being disposed closely adjacent ground level and terminating at a position spaced from said one side of said frame member, and a second movable conveyor disposed along said one side of said frame member and having an inlet end disposed closely adjacent ground level in the space between said one side of said frame member and the termination of said first conveyor, and at substantially the discharge level of said first conveyor, for transporting said material to the rear of said frame member along said one side thereof.

3,088,719

BORING TYPE CONTINUOUS MINING MACHINE

Joseph Gonski, Chicago, Ill., assignor to Goodman Manufacturing Company, Chicago, Ill., a corporation of Illinois

Filed May 11, 1961, Ser. No. 109,434
5 Claims. (Cl. 262—9)



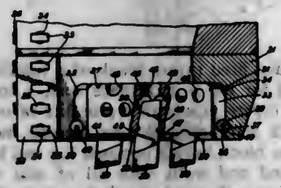
1. In a continuous mining machine, a mobile main frame having a conveyor extending therealong, a cutter frame supported in advance of said main frame and having a throat opening to said conveyor, at least one rotary boring head mounted on said cutter frame on each side of said throat, laterally spaced upper and lower trimmer bars mounted rearwardly of said boring heads on each side of said throat, a drive sprocket and an idler sprocket rotatably mounted on said cutter frame on each side of said throat, individual trimmer chains on each side of said throat guided for movement along said upper and lower trimmer bars and meshing with the associated idler sprockets and drive sprockets and driven by said drive sprockets to travel along the lower of said trimmer bars toward each other, said trimmer chains traveling along the lower of said trimmer bars changing their directions of travel adjacent opposite sides of said throat to progress the mined material toward said throat, and a rotary trimmer bar mounted between said lower trimmer bars in advance of said throat and rotatably driven to cut the upstanding cusp left by said boring heads in advance of said throat and to load the mined material advanced by said trimmer chains toward said throat onto said conveyor.

3,088,720

CUTTER BIT CLUSTER SUPPORT

Emil J. Hlinsky, La Grange Park, Ill., assignor to Goodman Manufacturing Company, Chicago, Ill., a corporation of Illinois

Filed Oct. 15, 1959, Ser. No. 846,609
2 Claims. (Cl. 262—26)



1. In a bit mounting device particularly adapted for the boring heads of continuous mining machines and the like having

a. a rotatable boring arm having

b. a cutter support extending forwardly therefrom and generally conforming to the arc of rotation of said support,

c. a generally rectangular recess in said cutter support opening to the front and opposite sides thereof,

d. said recess having opposite parallel end walls having grooves extending therealong in the direction of the axis of rotation of said boring arm,

e. a bit carrying block insertable within said recess and having a plurality of spaced cutter bits carried thereby and projecting forwardly therefrom,

f. said bit carrying block having opposite parallel end walls conforming to the end walls of said recess, and

g. means for retaining said block within said recess, comprising

h. tongues projecting from and extending along said parallel end walls of said bit carrying block and registerable with said grooves in said cutter support and

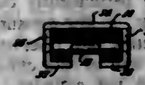
i. spaced locking pins extending through said cutter support and intersecting said recess and having inter engagement with said tongues, said locking pins being within the confines of said cutter support when said block is locked therein.

3,088,721

RESILIENT CONTROLLING MEANS

Claude B. Krukeler, Cincinnati, Ohio, assignor to The Cincinnati Mine Machinery Co., Cincinnati, Ohio, a corporation of Ohio

Filed May 11, 1959, Ser. No. 812,367
17 Claims. (Cl. 262—33)



1. A resilient holding element for the purpose described comprising a rigid elongated metallic pin, a body of rubbery resilient substance encasing said pin excepting at a central portion of the resilient holding means where said pin is exposed at least in part, and metallic means in connection with said body of rubbery resilient substance and located in part at least within the confines of the outer periphery of said body to inhibit the spreading of end portions thereof in the direction of the axis of said pin.

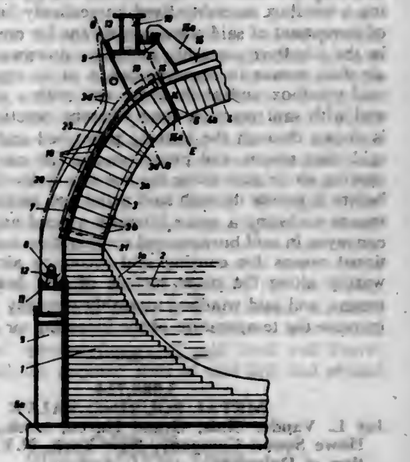
16. A resilient holding means for the purpose described, comprising an elongated rigid metallic pin, said pin lying within a body of rubbery resilient substance molded thereabout, said body encasing said pin excepting at a central portion of said pin where said body is cut away at one side to expose said pin, the ends of said pin lying inside the ends of said body of rubbery resilient substance and covered in part thereby.

3,088,722

WALL CONSTRUCTION AND MOUNTING THEREOF FOR INDUSTRIAL FURNACES

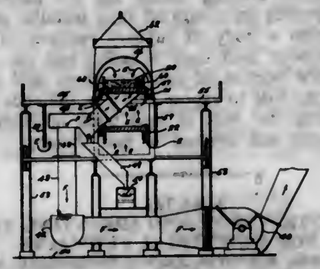
Alfred Slesaczek, Kusnacht, Zurich, Switzerland, assignor to Maerz Ofenbau AG., Zurich, Switzerland, a corporation of Switzerland

Filed Aug. 31, 1960, Ser. No. 53,143
Claims priority, application Austria Sept. 3, 1959
14 Claims. (Cl. 263—46)



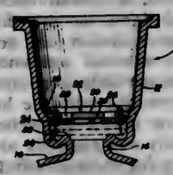
1. In a furnace or the like, a movable refractory brickwork furnace sidewall, a spaced dome member, said furnace sidewall and dome member having juxtaposed end walls forming an expansion joint containing a plane between said furnace sidewall and said dome member, reinforcement means movably supporting said furnace sidewall, means cooperating with the lower end portion of said reinforcement means permitting the latter to move at least vertically and pivotally about a pivot support to accommodate for thermal effects acting on said furnace sidewall, said cooperating means including support means defining said pivot support disposed adjacent one end portion of said reinforcement means, said one end portion of said reinforcement means being pivotally carried by said pivot support of said support means, said reinforcement means having a laterally extending guide member projecting from the upper end portion thereof, guide means having a guide surface disposed at least substantially parallel to said juxtaposed end walls and engaging said guide member to guide movement of said reinforcing means and the sidewall mounted thereby at least substantially parallel to the plane of said expansion joint.

3,088,723
AIR DRAFT FOR PELLETIZING FURNACE
Kenneth M. Haley, Bernard L. Arntz, and Richard L. Reed, Silver Bay, Minn., assignors to Reserve Mining Company, Silver Bay, Minn., a corporation of Minnesota
Filed Mar. 21, 1961, Ser. No. 97,256
3 Claims. (Cl. 266—21)



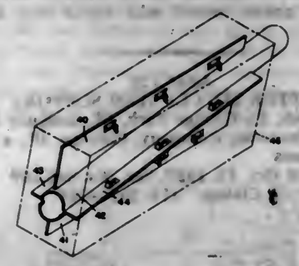
3. In a pellet indurating furnace of the type described wherein a perforate endless conveyor carries a bed of pellets on side-walled pallets through an ignition and reaction zone and then into and through a burning and recuperation zone, means at said burning and recuperation zone directing a stream of air down through said bed including a windbox assembly fixed immediately below the path of movement of said conveyor, means for creating suction in the windbox assembly including downwardly directed air duct means in communication at its upper end with said windbox and at its lower end with a suction pump and with said reaction zone whereby reaction-heated air is drawn through the burning pellet bed and through the said duct means and pump, means for causing said incoming air to pass along the hot side walls of said pallets before it passes through said pellet bed including housing means enclosing a space laterally around and above said conveyor in said burning and recuperation zone, and additional means for causing said incoming air to pass upwardly along the outer surface of said heated air duct means, and said windbox assembly whereby to materially increase the temperature of the incoming air stream.

3,088,724
METAL POURING VALVE
Jay L. Vander Sluis, Grand Haven, Mich., assignor to Howe Sound Company, New York, N.Y., a corporation of Delaware
Filed Sept. 6, 1961, Ser. No. 136,359
14 Claims. (Cl. 266—38)



1. A valve for use in the pouring of molten metal comprising a first upper disc of heat resistant materal having passage means therein for passage of molten metal, a second lower disc having passage means therein for passage of molten metal, means for connecting said discs, said connecting means being adapted to be disconnected responsive to the presence of molten metal on the upper disc, and said passages being designed whereby the lower disc blocks off the passages in the upper disc when the discs are connected and whereby the lower disc provides a continuous passage for the molten metal when the discs are disconnected.

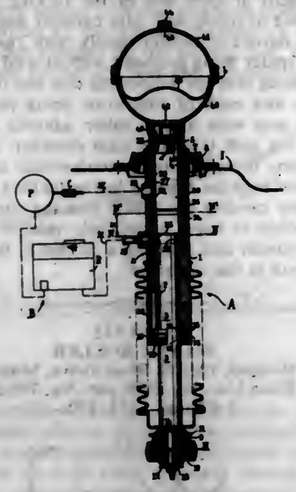
3,088,725
TUYERE BLOCK AND REINFORCING INSERT THEREFOR
Horace N. Hall, Collegeville, Pa., assignor to E. J. Lavino and Company, Philadelphia, Pa., a corporation of Delaware
Filed June 28, 1960, Ser. No. 39,293
6 Claims. (Cl. 266—41)



1. A molded fired tuyere block of a suitable refractory material and for use in a furnace wall, a combined unitary hollow tuyere pipe with a plurality of outwardly extending block reinforcing flanges thereon molded within the block, the block having opposed top and bottom walls, side walls and end walls with all of said walls having exterior surfaces, the said pipe being of considerably less diameter than the over-all cross-sectional dimensions of the block and of such length so that respective open ends thereof are closely adjacent to, exposed and accessible from the exterior surfaces of each end wall of the block, the pipe having the plurality of outwardly extending block reinforcing fins fixed thereon, the fins having extreme respective end portions thereof that are close to, but terminate adjacent the exterior surfaces of respective adjacent end walls, the fins also having respective side edges that are close to, but terminate adjacent the exterior surfaces of respective adjacent top, bottom and side walls, one accessible end portion of the pipe affording connection therewith of means for supplying gas thereat for passage through the pipe molded in the block, and the material of the block being in contacting sealing relationship with the pipe and fins.

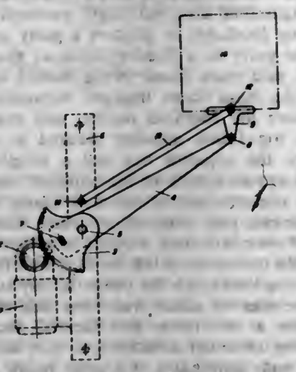
3,088,726
OLEO-PNEUMATIC CARRIER AND DAMPING DEVICE FOR A VEHICLE SUSPENSION SYSTEM
Marcel Dangauthier, Paris, France, assignor to Societe d'Etudes et d'Applications Industrielles Commerciales et Immobilieres Inter-Technique, Paris, France, a French body corporate
Filed Jan. 30, 1961, Ser. No. 85,605
Claims priority, application France Feb. 2, 1960
2 Claims. (Cl. 267—64)

1. In a pneumatic vehicle suspension system having a hydraulic damping and level-regulating device, a cylinder having an open end and an opposite end, a plunger-piston penetrating said open end and tightly reciprocating in said cylinder, connecting means for connecting one of those two elements to the suspended part and the other to the unsuspended part of the vehicle, said plunger-piston and said opposite end of cylinder defining a variable chamber having a variable capacity, a pneumatic chamber communicating with said variable chamber, a source of liquid under pressure permanently communicating with said variable chamber, a low-pressure liquid reservoir, conduit means connecting said reservoir with a discharge orifice formed in the wall of said cylinder in the path of said plunger-piston in the cylinder, whereby said discharge orifice constitutes a level-regulating orifice, and an elastic annular sealing member arranged in the cylinder beyond said discharge orifice, with respect to the direction of the inward stroke of said plunger-piston into said cylinder, the inside diameter of said sealing member being such that said plunger-piston is able to travel therethrough while providing a fluid-tight seal between said



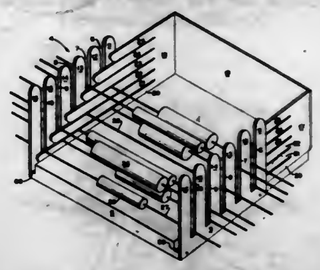
sealing member and a cylindrical end portion of said plunger-piston whereby the inward course of said plunger-piston is tightly limited in the periods during which said source of liquid under pressure is inoperative.

3,088,727
CONTROL DEVICE OF A WINDOW REGULATOR IN MOTOR CAR DOORS
Vincenzo Pelagatti, Monfalcone, Italy, assignor to Fabbrica Italiana Magneti Marelli S.p.A., Milan, Italy, a firm
Filed May 19, 1959, Ser. No. 814,270
Claims priority, application Italy June 19, 1958
4 Claims. (Cl. 268—126)



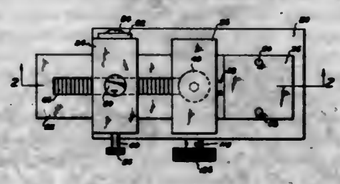
1. Apparatus for controlling the displacement of window glass comprising a support, a pivot pin mounted on said support, an arm having one end pivotally connected to said pivot pin and the free end pivotally connected to said window glass, a sector gear pivotally mounted on said pivot pin, spring means torsionally and elastically connecting said sector gear to said arm, a second arm having one of its ends pivotally connected to said support and its other end pivotally interconnected with the free end of said first mentioned arm to thereby form a deformable parallelogram, and means for effecting movement of said sector gear about said pivot pin to cause associated movement of the window glass.

3,088,728
APPARATUS FOR ASSEMBLING ELECTRICAL CIRCUITRY
Malcolm A. Sanborn, Kingston, N.Y., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Air Force
Filed Dec. 31, 1958, Ser. No. 784,236
1 Claim. (Cl. 269—40)



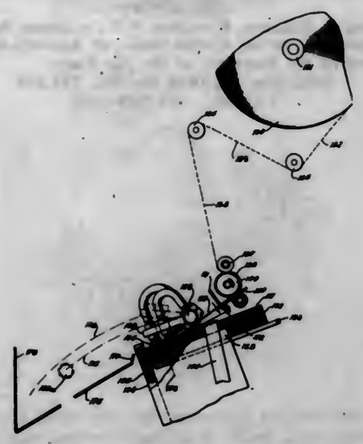
An assembly jig for assembling electronic components to present their leads in a predetermined pattern comprising first and second plates secured in spaced parallel relation, each of said plates having a plurality of uniformly spaced vertical fingers separated by vertical slots of equal depth, said slots on said first plate being opposed to said slots on said second plate, third and fourth plates secured in spaced parallel relation, each of said last named plates having a plurality of uniformly spaced horizontal fingers separated by opposed horizontal slots, said horizontal fingers decreasing uniformly in length from the bottom to the top of said last named plates with adjacent fingers varying in length by an amount equal to a multiple of the distance between center lines of said vertical slots, and guide means providing for movement of said third and fourth plates in a horizontal direction perpendicular to the vertical slots of said first and second plates so that opposed fingers of said third and fourth plates intersect the opposed slots of said first and second plates.

3,088,729
QUICK-ACTING VISES
Abraham Marcus, 95 W. Dakota, Detroit, Mich.
Filed Nov. 8, 1960, Ser. No. 68,009
5 Claims. (Cl. 269—97)



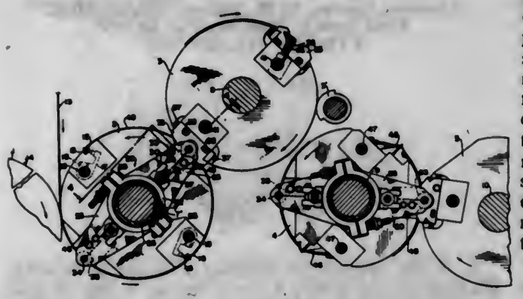
2. A vise adapted for clamping a workpiece in working position, comprising a track support, a pair of jaws slidable along said track support, each of said jaws comprising a body portion adapted for sliding along the upper surface of said track support and a lower flange member lying below and parallel to said track support and rigidly affixed to said body portion, a table spaced below said track support by said flange members of said jaws and slidably supporting said flange members of said jaws, and means for pulling said track support toward said table thereby tightening said jaws against said table.

3,088,730
SYSTEM FOR HANDLING FLIMSY CARBON SHEETS
William B. Austin, Ridgewood, N.J.
(176 Broadway, New York, N.Y.)
Filed Feb. 21, 1961, Ser. No. 135,087
8 Claims. (Cl. 270—58)



1. A method of carrying and collating flimsy carbon sheets with relatively stiff supporting sheets comprising providing a stack of relatively stiff supporting sheets, supplying sheets of relatively flimsy carbon paper thereover picking up the flimsy carbon together with the top supporting sheet by a suction cup and then transporting the combined flimsy carbon and supporting sheet to a new stack position and applying a lateral air blow at the pick up position and the new stack position to cause release of the top supporting sheet at the pick up position and the release of the supplying sheets at the stack position.

3,088,731
FOLDER FOR WEB-FED PRINTING PRESSES
William B. Raybeck, Lansdowne, Pa., assignor to Fred'k H. Levey Company, Inc., New York, N.Y., a corporation of New York
Filed Feb. 2, 1962, Ser. No. 170,687
5 Claims. (Cl. 270—72)



1. A folder mechanism for folding signatures passing from a printing press comprising:

(*a*) a tucking cylinder and a cooperating jaw cylinder rotatably mounted on coaxially-extending parallel shafts,

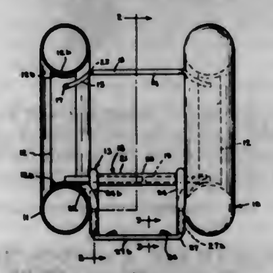
(*b*) the tucking cylinder having at least one tucker blade and the jaw cylinder having a corresponding number of cooperating tucker jaws,

(*c*) a spread-U-shaped cam member symmetrically positioned with respect to, and coinciding with, each end of the jaw,

(*d*) a spider frictionally attached to the tucking cylinder shaft at each end of the tucking cylinder and adapted to rotate with said cylinder and to be forcefully moved circumferentially with respect thereto, each spider being provided with at least one radially-extending arm for supporting one end of the tucking blade and each of said arms being provided at its outer end with a cam roller adapted to cooperate with the said U-shaped cam member, and

(*e*) means for effecting circumferential adjustment of the jaw cylinder relative to the tucking cylinder and thereby causing the spider and the supported tucking blade to move accordingly relative to the tucking cylinder and effecting a change in the position of the fold in the signature.

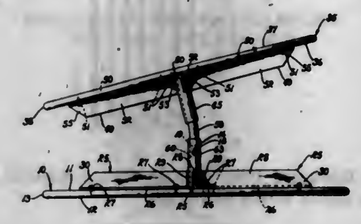
3,088,732
WATER ROLLER
Philip R. Hetland, 1015 S. River Drive, Moorhead, Minn.
Filed Mar. 16, 1959, Ser. No. 799,574
3 Claims. (Cl. 272—1)



1. A water roller comprising a main frame having a longitudinal axis, a float mounted on either longitudinal end of the main frame in fixed positions with respect to said main frame, said main frame having a rim at either end for mounting the respective float, each float being constructed and mounted to have a rotational axis parallel to said longitudinal axis, and means mounted on the frame for forming footholds to support a party and retain the feet of the party in a fixed position as the main frame is rotated, said main frame being formed to have handholds on the main frame that are normally located vertically above the foothold means, said main frame including a top frame member secured at opposite end portions to the adjacent rim and a longitudinal frame secured at opposite ends to the adjacent rim on the diametrically opposite side of the main frame from the top frame member, said longitudinal frame including a pair of support members, said support members each having the foothold means mounted thereon, and two depending means having lower ends for cooperatively supporting one support member on either transverse side of the longitudinal frame at the lower end thereof, each depending means being mounted adjacent one rim so that each of the lower ends terminates at a point below the rim.

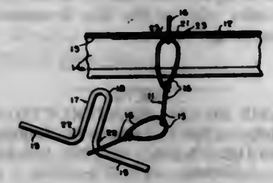
3,088,733
RIDING TOY
Richard E. Ayres, 32501 Road 228, Woodlake, Calif.
Filed Nov. 9, 1959, Ser. No. 851,746
1 Claim. (Cl. 272—51)

An invertible riding toy on which a user may impart rotary motion to himself by successive periodic shifts of his center of gravity comprising a first substantially circular disk concentric to a first axis of rotation therefor, a second substantially circular disk concentric to a second axis of rotation for the second disk, a journal member having an elongated cylindrical mounting portion and an elongated cylindrical journal portion in obtuse angular relation to each other, second means rigidly coaxially mounted on the second disk and rotatably connecting the mounting portion of the journal member in concentric axially extended relation on the second disk, first means coaxially borne by the first disk and rotatably connecting



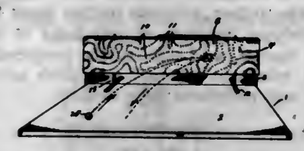
the journal portion of the journal member in concentric axially extended relation on the first disk whereby the disks are in acutely angularly related planes and in opposed relation to each other with the journal member therebetween, and coupling means releasably interconnecting the second connecting means and the mounting portion of the journal member for preventing relative rotation between said second means and said mounting portion.

3,088,734
PLAY SWING
Daniel A. Grudoski, Hartstown, Pa., assignor to Blazon, Inc., Cuyahoga Falls, Ohio, a corporation of Ohio
Filed Aug. 8, 1961, Ser. No. 130,135
4 Claims. (Cl. 272—85)



1. A play swing for suspension from an overhead support, comprising: a seat having laterally spaced apertures through laterally opposite marginal portions thereof; a pair of elongated suspension elements adapted to be swingably suspended in laterally spaced relation from the overhead support, and having eyelets at least at lower ends thereof; and a pair of hangers; each said hanger being of rigid material providing a central loop defined by spaced side portions inturned from a connecting outer end of the loop, and further providing oppositely out-turned terminal end portions, there being a space between said side portions opening outwardly at junctures thereof with said terminal end portions, but the width of the loop otherwise permitting free endwise projection thereof upwardly through a said seat aperture until said terminal end portions supportingly engage the underside of the corresponding said marginal portion, and said loop and terminal end portions being of generally uniform cross-section permitting reception of a said terminal end portion endwise through a selected said eyelet of the respective said element and reception of an edge portion of the eyelet within said space to provide linked supporting engagement of the eyelet with said outer end of the loop; whereby said elements are separately downwardly adjustable through the respective said seat apertures for said linked selective supporting engagement of the hangers with eyelets of the respective suspended elements, and for supporting the seat on the terminal end portions of the hangers.

3,088,735
REBOUND BOARD FOR TABLE TENNIS
Theodore W. Clark, Box 25, Zillah, Wash.
Filed Jan. 13, 1961, Ser. No. 82,563
5 Claims. (Cl. 273—30)



1. The combination, comprising: a generally planar board having a rebound surface, said rebound surface having lands and valleys shaped irregularly and disposed irregularly both vertically and horizontally, a table with a net disposed at the midlength of the table and at substantially right angles to the longitudinal median line of said table, said board positioned co-planar with, above, and adjacent to said net.

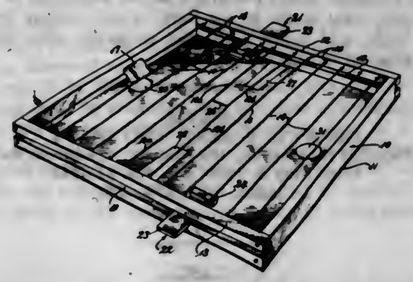
3,088,736
GOLF CLUB HEAD AND SHAFT
Nicholas R. Mospan, 308 May St., Braddock, Pa.
Filed May 5, 1959, Ser. No. 811,058
2 Claims. (Cl. 273—80)



1. A golf club having a head and a shaft, said head having a mono-planar front surface of generally semi-circular proportion extending in a plane disposed angularly to said shaft whereby the top of said front surface lies rearward of said shaft and the bottom of said front surface lies forward of said shaft, a relatively narrow, flat edge surface extending around the periphery of said head, said edge surface forming a mono-planar top surface of said head, said top surface forming an obtuse angle with said shaft, said peripheral edge surface being widest at the top of said head and progressively narrowing to vanish at the bottom of said head at a point adjacent said shaft, a dual-planar rear surface comprising an upper area and a lower area, said areas being disposed in intersecting planes forming an obtuse angle inwardly of said head, said angle defining a ridge formed on the rear surface of said head extending diagonally from a point near the top of said head adjacent said shaft to a point on the periphery of said head intermediate the top and bottom thereof, said ridge defining at all points thereof the thickest part of said head, said upper area of said rear surface slanting inwardly toward said front surface from

said ridge to said top surface and forming a triangular intersection therewith at the side of said head and said lower area of said rear surface slanting inwardly toward said front surface from said ridge to a point intermediate the rearmost and frontmost points of said front surface, said upper and lower areas of said rear surface slanting inwardly from the peripheral portions of said head farthest removed from said shaft progressively to the peripheral portions of said head nearest said shaft and to the portions of said head adjacent said shaft, a curved side surface formed between the peripheral edges of said dual-planar rear surface and said peripheral edge surface, said side surface originating at said triangular intersection of said upper area of said rear surface with said peripheral edge surface at the top of said head and progressively widening to a maximum between said ridge and said peripheral edge surface, said side surface being formed to curve smoothly at the base of said head to become a sole surface thereof, said sole surface progressively narrowing to a minimum adjacent said shaft and merging thereat with said peripheral edge surface.

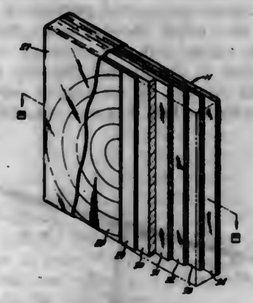
3,088,737
GAME APPARATUS
Garret J. Boone, 211 Bloomington St., Greencastle, Ind.
Filed May 12, 1960, Ser. No. 28,628
6 Claims. (Cl. 273—85)



1. In a game apparatus, the combination of a base, a frame secured to and extending around the periphery of said base, a plurality of elongated resilient members attached to and extending between only two opposite sides of said frame, each of said sides being provided with an elongated slot below said resilient members, said resilient members being substantially parallel and spaced from each other and from said base and substantially free of interconnections, and striking means movable within said slots for selectively striking from below at least one of any pair of adjacent resilient members, whereby a game-piece resting on and supported by said pair of resilient members is propelled as desired by the player of the game.

3,088,738
ARCHERY OR SIMILAR TARGETS AND THEIR ASSOCIATED SUPPORTING EASELS
Leonard S. Meyer, 6423 Bridgewood Road, Columbia, S.C.
Filed Jan. 31, 1961, Ser. No. 86,168
6 Claims. (Cl. 273—102.4)

1. An archery target comprising a multiplicity of laminations in a parallel and surface-contacting relationship enclosed within and bound together by a transparent, flexible covering including a self-sealing face portion, a first easily penetrable lamination fabricated from a self-sealing resilient, foam material, a second arrow-holding lamination fabricated from a non-resilient, closely bound fibrous material, and a plurality of arrow-stopping lami-



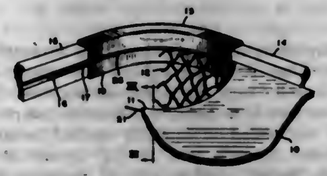
nations fabricated from a tough fibrous material backed up by a tightly woven fabric.

3,088,739
ORBIT DISC TOY
James T. Sawyer, 7504 Martha Drive, Huntsville, Ala.
Filed Aug. 26, 1959, Ser. No. 836,134
2 Claims. (Cl. 273—109)



1. An orbit disc toy comprising a ring, a track portion around the inner face of the ring, part of the body of the ring being flat, said flat portion having a plurality of holes therethrough and evenly spaced apart around the circumference of the ring; a disc, said disc having a groove around in its circumference edge, said groove being of a size to fit movably on the track portion of the ring with the outer edge of the disc in contact with side portions of the track.

3,088,740
GAME BOARD CONSTRUCTION
Robert L. Erickson, 804 E. Loomis St., Ludington, Mich.
Filed Oct. 30, 1961, Ser. No. 148,413
2 Claims. (Cl. 273—126)



2. A game board construction, comprising: edge rail means including portions of similar cross-section disposed on intersecting axes, said edge rail means having a groove on the inner face thereof and a tongue at the end of each of said portions, said groove extending along said tongue; a corner member having recesses for receiving said tongues, and having ridges normally engaging the portions of said grooves in said tongues, said corner member having a groove on the inner face thereof in coplanar relationship with said rail grooves; panel means received in said rail grooves and having a cut-out defining an opening with said corner member, said panel means having an edge recess at said opening; pocket means disposed in said opening; and a retaining ring

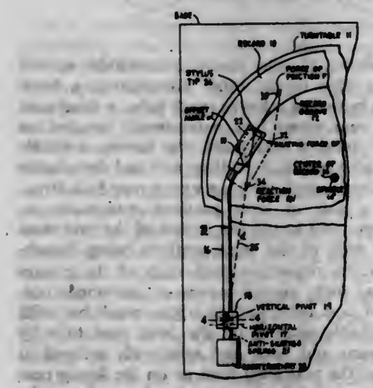
engaging said panel recess and said corner member groove for securing said pocket means.

3,088,741
APPARATUS FOR BALANCING THE OUTPUTS OF A STEREOPHONIC PHONOGRAPH PICKUP CARTRIDGE
Donald E. Johnson, Conneaut, Ohio, assignor to The Astatic Corporation, Conneaut, Ohio, a corporation of Ohio
Filed Apr. 13, 1959, Ser. No. 805,896
15 Claims. (Cl. 274—23)



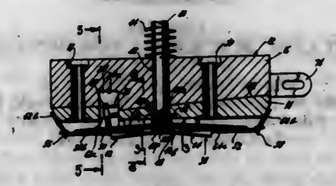
11. Apparatus for balancing the outputs of a stereophonic pickup cartridge of the type adapted for use in reproducing channels of recorded intelligence, said stereophonic pickup cartridge comprising channel sensing means, a tone arm, means mounting said stereophonic pickup cartridge in said tone arm, means mounting said tone arm for pivotal movement from a support at a point spaced from said stereophonic pickup cartridge, and said means mounting comprising means to adjustably tilt said tone arm about its longitudinal axis and to retain said tone arm in tilted position whereby the angle of attack between said channel sensing means and said channels may be adjustably varied, said tone arm comprising a top wall and a pair of transversely spaced vertically extending side walls, a transversely extending pivot pin spanning said side walls, means supporting said pivot pin from said support, said pivot pin being rigidly attached to one of said side walls, an elongated aperture in the other of said side walls through which said pin loosely extends, and adjustment means offset laterally from said longitudinal axis of said tone arm adjacent said other side wall for adjustably varying the distance between said top wall and said transversely extending pivot pin.

3,088,742
COMPENSATED TONE ARMS
George Alexandrovich, Richmond Hill, N.Y., assignor to Fairchild Recording Equipment Corporation, Long Island City, N.Y., a corporation of New York
Filed Oct. 7, 1960, Ser. No. 92,725
4 Claims. (Cl. 274—23)



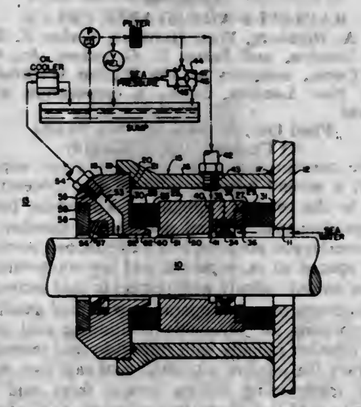
1. The combination comprising a tone arm adapted for use with a rotating record, means for mounting said arm with respect to said rotating record including a stationary member, a vertical pivot connected to said tone arm which allows said arm to track in a normal direction on said rotating record in a plane substantially perpendicular to the axis of the vertical pivot, and a spiral spring located over said vertical pivot and connected between said stationary member and said vertical pivot shaft for exerting a force on said tone arm in a direction opposite to said normal direction.

3,088,743
UNIVERSAL MOUNT FOR STYLUS ASSEMBLY
Alfred L. Di Mattia, Fairfield, and Edward Kaulins, Norwalk, Conn., assignors, by mesne assignments, to Zenith Radio Corporation, Chicago, Ill., a corporation of Delaware
Filed Nov. 2, 1960, Ser. No. 66,738
10 Claims. (Cl. 274—36)



1. A universal mount for a stylus lever of an electromechanical transducer comprising support means defining a cavity including a wall formed with an elongated opening, a stylus lever including an elongated lever arm terminating at one end in a flattened ear, a stylus on the other end of said lever arm and oriented for playback of a record when said ear extends substantially transverse to said elongated opening, said ear being disposed within said cavity and the transverse extent of said ear being greater than the transverse extent of said opening to preclude withdrawal from said cavity when said stylus is oriented for playback, and a mass of elastomeric material in said cavity in intimate contact with said ear.

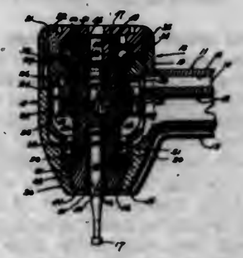
3,088,744
SUBMARINE PROPELLER SHAFT SEAL
Frederick D. Ezekiel, Waltham, George F. Corcoran, Littleton, and R. Langdon Wales, Lincoln, Mass., assignors to Northrop Corporation, Beverly Hills, Calif., a corporation of California
Filed Aug. 23, 1960, Ser. No. 51,429
11 Claims. (Cl. 277—3)



1. A fluid seal for preventing flow of a pressurized fluid along a shaft to an area of lower pressure, said seal

comprising, in combination; an annular sealing element circumferentially engaging the shaft in rotatable relationship and exposed to the pressurized fluid on one axial face thereof, means for supplying a flow of hydraulic fluid to the other axial face of said sealing element under a regulated pressure substantially equal to that of the pressurized fluid, and a sleeve spaced circumferentially about the shaft and forming an annular passageway therebetween, said passageway communicating with said other axial face of said sealing element at one end thereof to receive said flow of hydraulic fluid, said passageway communicating with the area of lower pressure at the other end thereof to deliver said flow of hydraulic fluid under the lower pressure, said passageway tapering from a larger diameter at said one end thereof to a smaller diameter at said other end thereof, said tapered passageway cooperating with said flow of hydraulic fluid therethrough to support said sleeve radially about the shaft.

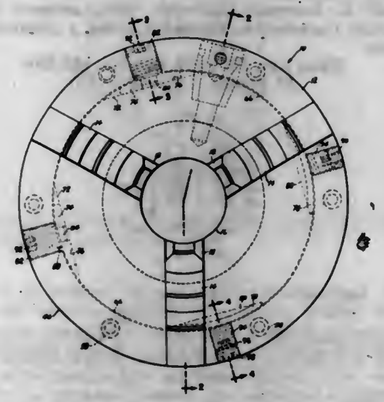
3,088,745
PLASTIC BUR SLEEVE FOR DENTAL HANDPIECES
Martin Staunt, Des Plaines, Ill.
(1980 N. Hawthorne Ave., Melrose Park, Ill.)
Filed Aug. 30, 1961, Ser. No. 135,019
14 Claims. (Cl. 279—102)



1. A replaceable chuck sleeve for holding the shank of dental burs or the like, comprising a cylindrical tube of plastic having a concentric axial bore adapted to grip a cylindrical bur shank frictionally, said sleeve having at its outer end a metal inner sleeve provided with an accurately concentric cylindrical bore flush with the inner surface of the axial bore carried in the bore of the tube for centering and guiding a bur shank as it is being pushed into the tube.

3,088,746
RADIALLY ADJUSTABLE CHUCK
George A. Highberg, West Hartford, Walter E. Beaney, New London, and James C. Greenlees, Jr., Quaker Hill, Conn., assignors to The Whitton Machine Company, New London, Conn., a corporation of Connecticut
Filed Dec. 8, 1960, Ser. No. 74,604
13 Claims. (Cl. 279—110)

1. The combination in a chuck of, a jaw supporting member, a second member adapted for concentric connection to the rotatable spindle of a machine tool, said jaw supporting member and said second member having axially overlapped portions which overlapped portions are radially spaced so as to permit said jaw supporting member to be moved radially with respect to said second member, adjustment means cooperating with said axially overlapped portions for adjustably positioning said jaw supporting member radially with respect to said second member to vary the relative eccentricity of said two members and for transmitting driving torque from said second member to said jaw supporting member, said adjustment means including two mutually perpendicular flat faces on the outer surface of the radially inner one of said axially overlapped portions, and two pressure means supported for adjustable radial movement relative to the radially outer one of said axially overlapped portions, said two pressure means being engageable respectively with said two mutually perpendicular faces for the purpose of positioning said radially inner portion relative to said radially



outer portion and said two mutually perpendicular faces being disposed respectively in planes parallel to the axis of said chuck, and separate means independent of said adjustment means for restraining said jaw supporting member and said second member against relative axial movement.

3,088,747
CONVERTIBLE BICYCLE FRAME
Gilbert B. Hahn, Nashville, Tenn., assignor to The Murray Ohio Manufacturing Company, Nashville, Tenn., a corporation of Ohio
Filed Aug. 21, 1961, Ser. No. 132,806
10 Claims. (Cl. 280—7.11)



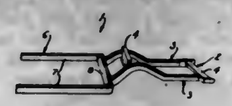
1. A knock-down bicycle frame convertible at will from one frame type to the other comprising: a basic frame structure including a lower reach tube, a head post tube and lower rear wheel fork permanently secured on the lower reach tube, a seat mast tube having a saddle element rigidly attached to its bottom end and detachably secured to the lower reach tube, an upper rear fork structure providing a pair of strut portions detachably secured at the upper end to the top region of the seat mast tube, the lower ends of the strut portions being detachably secured to the respective back ends of the prongs of the lower rear fork; anchor means on the upper portion of the head post tube; and an upper reach bar with front end detachably secured on the head post tube by said anchor means and back end selectively secured at the top region of the seat mast tube or on the lower portion of the seat mast tube in spaced relation from the lower reach tube.

3,088,748
HARD-PACKED SNOW SKIS
Erling Malmo, 3612 30th Ave. W., Seattle 99, Wash.
Filed Feb. 13, 1961, Ser. No. 89,036
2 Claims. (Cl. 280—12)



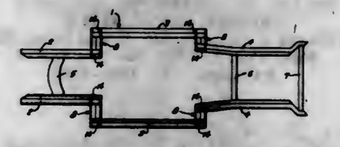
1. Hard-snow ski apparatus comprising a pair of skis individually comprising an elongated and relatively narrow ski body of substantially uniform width, an elongated foot plate wider than the ski body and of a length representing a small fraction of the length thereof, said foot plate having elongated down-turned flanges on opposite sides thereof with lower edges formed as runners of a thickness representing a small fraction of the width of the ski body, said foot plate being mounted on top of the ski body intermediate the ends thereof with the flange runners extending generally parallel thereto spaced outwardly from respectively opposite sides of the ski body, and steering bridle means comprising a pair of upright elongated rods connected at their lower ends to the ski tips and cross-connected at their upper ends to the ends of a handle bar, respectively.

3,088,749
FRAME CONSTRUCTION
Arnold G. Schilberg, Milwaukee, Wis.; Irene G. Schilberg, special administratrix of the estate of said Arnold G. Schilberg, deceased, assignor to A. O. Smith Corporation, Milwaukee, Wis., a corporation of New York
Filed June 3, 1960, Ser. No. 33,702
1 Claim. (Cl. 280—106)



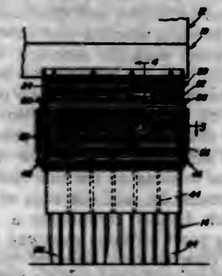
In a wide-hipped vehicle frame having side rails, a connecting cross bar welded to the complementary ends of the side rails and formed of a pair of generally channel-shaped members lap welded together to provide a closed four-sided section, a pair of frame members with each frame member formed of a pair of channeled plates welded together and extending from the cross bar, and with said frame members being spaced from each other and inwardly spaced from the side rails, the channeled plates respectively of each frame member diverging relative to each other as they approach the cross bar to form a split widened end portion having flanges which extend over and embrace the upper side of the cross bar and the side of the cross bar facing the frame members to provide a bulkhead support for the cross bar reinforcing three corners of the cross bar against deformation, welds joining the overlying edges of the respective frame member flanges to the cross bar, and a kick-up section provided in the frame members with the curvature of the kick-up starting directly at the cross bar to thereby increase the radius of curvature of the kick-up section and decrease localized stresses in the kick-up section of the side rail.

3,088,750
BULKHEAD REINFORCED OFFSET FRAME
Arnold G. Schilberg, deceased, late of Milwaukee, Wis., by Irene G. Schilberg, special administratrix, Milwaukee, Wis., assignor to A. O. Smith Corporation, Milwaukee, Wis., a corporation of New York
Filed Apr. 5, 1961, Ser. No. 102,087
1 Claim. (Cl. 280—106)



In a vehicle frame, fore and aft pairs of tubular side rails connected intermediate their ends, a center pair of tubular side rails disposed laterally outwardly of said fore and aft side rails in longitudinally overlapping relation with the ends thereof, a torque box disposed endwise between the ends of each of the center side rails and the corresponding adjacent ends of each of the fore and aft side rails, each torque box including diametrically opposed, extended side portions enclosing the ends of the center side rails and the ends of the corresponding fore and aft pairs of side rails, means for securing each of the torque boxes to the ends of the center side rails and to the ends of the corresponding fore and aft pairs of side rails including means for securing each torque box to the inner walls of the center side rails and the inner walls of the corresponding fore and aft side rails relative to the torque boxes and to the outer walls of the side rails by way of the diametrically opposed extended side portions of the torque boxes, and a bulkhead secured within each of said fore and aft and center side rails a distance in from the end thereof substantially equal to the width of the torque boxes whereby the deflection in the outer and inner walls of each of the fore, aft and center side rails is equalized in the regions of the torque boxes under torsional and vertical loading.

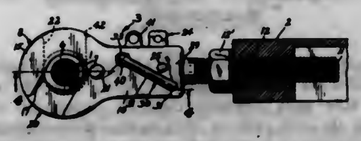
3,088,751
VEHICLE TIRE SPRAY SHIELD
Louis A. Barry, 503½ 4th Ave., Sterling, Ill., and Robert P. Considine, 20 9th Ave., Fulton, Ill.
Filed Jan. 30, 1962, Ser. No. 169,835
10 Claims. (Cl. 280—154.5)



1. A vehicle tire spray shield comprising an upright rigid frame, means carried by the upper end of said frame adapted to support said frame from a vehicle body in depending relation therefrom, behind and in generally horizontal alignment with at least one support wheel of said vehicle and said frame disposed in a plane extending transversely of said vehicle, said frame including upright opposite side members interconnected at their upper ends

by means of a transversely extending upper frame member, a plurality of elongated transversely extending and generally horizontally disposed louvers secured between said side members at points spaced longitudinally therealong, said louvers having at least their rear longitudinal marginal portions rearwardly and downwardly inclined, a coarse screen panel secured between the forward edges of said opposite side members, said louvers having their forward longitudinal side edges disposed in abutting engagement with the rear face of said panel.

3,088,752
THREE POINT HITCH
De Wayne J. Dressen, Rte. 1, Red Wing, Minn.
Filed Feb. 3, 1961, Ser. No. 86,938
2 Claims. (Cl. 280—508)



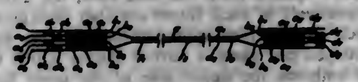
1. A hitch for use in coupling relationship with the hitching support bar of a trailing implement, said hitch comprising a generally spherical bushing received on said bar, a bifurcated claw member, said bifurcated claw member comprising at one end portion thereof a pair of spaced generally parallel claw furcations the planes of which extend generally normal to the axis of said spherical bushing, said claw furcations defining therebetween a recess and each thereof also defining aligned generally laterally outwardly opening coupling slots having beveled slot edges, said bifurcated claw member defining at the other end portion thereof a shank adapted to be rigidly secured to a towing vehicle, the beveled coupling slot edges of said claw furcations being angularly formed with respect to the planes of said furcations whereby said coupling slot edge of each one of said claw furcations forms an inwardly opening angle of considerably less than 180° with the coupling slot edge of the other of said claw furcations, said hitch further comprising a knuckle member pivotally mounted to said claw member in the recess thereof defined between said furcations for oscillatory movements about an axis generally normal to the planes of said furcations, said knuckle member also defining adjacent one end portion thereof a coupling slot which opens in a generally laterally outward direction generally opposite of the opening direction of said coupling slots of said claw member, said knuckle member being movable with respect to said claw member between an open position wherein said hitch is adapted to receive said spherical bushing and a closed coupling position wherein said claw member and said knuckle member securely embrace said spherical bushing, said slotted knuckle member having a slot edge which embraces the generally intermediate portion of said spherical bushing on one side thereof when said knuckle member is in its said closed coupling position and the angularly beveled slot edges of said claw furcations embrace said spherical bushing on the side thereof generally opposite that embraced by said slot edge of said knuckle member, said hitch further comprising a spring-loaded and biased locking pawl pivotally mounted in said recess of said bifurcated claw member adjacent the other end of said knuckle member, said pawl being adapted to engage an abutment surface defined on the other end of said knuckle member for removably locking said hitch in said closed coupling position thereof, and a secondary safety lock associated with said claw member and said knuckle member, said safety lock comprising a U-rod having spaced generally parallel side portions one of which is longer than the other thereof, said claw member defining a bearing aperture and a pair of aligned generally co-axial lock apertures the axes of which are spaced in general parallelism to the axis of said bearing aperture, said knuckle member defining a lock aperture which is so disposed as to be generally co-axially aligned with the lock apertures defined by said claw member when said knuckle member is in said closed coupling position thereof, said longer side portion of said U-rod being slidably received within said bearing aperture and said U-rod being movable between an unlocked position wherein the shorter side portion thereof is in non-engaging relation to said knuckle member and a locked position wherein said shorter side portion may be received within said lock apertures when said hitch is in said closed position, and spring means associated with said long side portion of said U-rod for biasing said safety lock in said locked position thereof.

3,088,753
PLASTIC BOOK COVER AND METHOD OF MAKING
Mortimer S. Sendor, 86—30 221st St., Queens Village, N.Y.
Filed Nov. 18, 1959, Ser. No. 853,861
10 Claims. (Cl. 281—29)



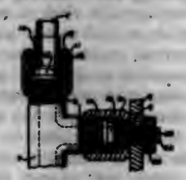
1. In a book comprising a plurality of leaves bound together in a cover having relatively stiff front and back panels over the front and back of the book, a connecting portion of the cover of one-piece construction with the front and back panels and extending across the back of the book, the inside surface of the cover being a continuous smooth surface and the outside surface having decorations thereon, the improvement which comprises a cover made of a non-stretchable synthetic polymer with its molecules in at least the connecting portion and in the panels at their regions of juncture with said connecting portion in an as-cast condition and the mass of plastic material at said regions of juncture being of the same density as adjacent parts of the panels but thinner and, therefore, more flexible than said panels, the outside surface of the cover having a recess therein extending for the full height of the cover and providing the reduced thickness of the cover, an area of the synthetic polymer that forms the outside surface of the cover at said thinner cross section being at a lower level and, therefore, recessed with respect to the adjacent outside surface area of the cover.

3,088,754
MANIFOLDING WRITING SET WITH SHEETS GLUED TOGETHER AT THE HEADS THEREOF
Josef Burgmer, 16–18 Brandstromstrasse, Wuppertal-Barmen, Germany
Filed Oct. 26, 1960, Ser. No. 65,051
Claims priority, application Germany Oct. 27, 1959
12 Claims. (Cl. 282—22)



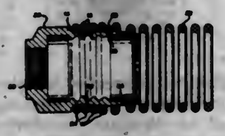
1. A manifolding writing set comprising outer and inner sheets of writing paper, sheets of carbon paper inked in full lengths and prearranged in interleaving relationship with said writing sheets, an attachment strip provided at the head of each of said writing sheets and said sheets of carbon paper transversely of the feed direction thereof, for connecting said sheets one to the other, said sheets of carbon paper being so formed and arranged that continuous strips free from ink are produced on at least one lateral edge of the writing sheets, said strips of said writing sheets being glued together in the region of said attachment strip, and a cutout at the upper portion of each of said inner writing sheets and said sheets of carbon paper, the attachment strips of said outer writing sheets covering said cutout and being glued together in the region of said cutout and the attachment strips of said sheets of carbon paper being glued to the attachment strips of the respective superposed writing sheet at the rear side thereof free from ink.

3,088,755
BRACKET MOUNTING OF TUBE FITTINGS
Carl E. Klamm, Lakewood, Ohio, assignor to Parker-Hannifin Corporation, Cleveland, Ohio, a corporation of Ohio
Filed May 31, 1957, Ser. No. 662,736
2 Claims. (Cl. 285—64)



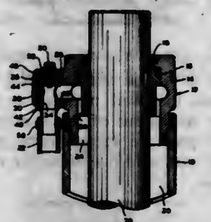
1. In combination, a mounting bracket having a hole therethrough, a multi-leg tube fitting having nuts threaded on the respective legs for joining tubes thereto, a mounting adapter clamped to a leg of said fitting by the associated nut and constituting a closure for that leg of said fitting, said adapter having an imperforate threaded shank extending through said one nut and through the hole in said bracket with the axially outer end face of said one nut abutting said bracket, and a locknut screwed onto said shank to clamp said bracket between said one nut and said locknut.

3,088,756
FITTING FOR HOSE SPRING GUARD
Richard J. May, Jackson, Mich., assignor to Aeroquip Corporation, Jackson, Mich., a corporation of Michigan
Filed Aug. 10, 1959, Ser. No. 832,634
2 Claims. (Cl. 285—116)



1. In combination, a hose, a fitting secured internally to an end of said hose and including a socket in gripping engagement with the external surface of said hose end and having an exterior surface defining first and second substantially frusto-conical smooth surfaced portions, the bases of said portions abutting and forming an annular land, and a coil spring mounted over said socket exterior surface and land by a movement of translation and having a first plurality of turns grippingly engaging said first frusto-conical portion of said socket and a second plurality of turns extending from said socket and surrounding said hose adjacent said socket, said spring having a predetermined internal diameter which is less than the mean outer diameter of each of said first and second frusto-conical portions and the diameter of said annular land wherein said first plurality of turns may be radially outwardly deflected and cammed over said second frusto-conical portion and said annular land during said translatory movement, into a position of gripping engagement with said first frusto-conical portion and wherein axial stretching of said spring increases the gripping action of said first plurality of turns on said first frusto-conical portion.

3,088,757
CONDUIT CONNECTOR
Richard F. McIntosh, Battle Creek, Mich., assignor to Clark Equipment Company, a corporation of Michigan
Filed Dec. 30, 1959, Ser. No. 862,969
1 Claim. (Cl. 285—158)

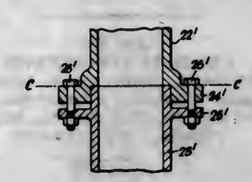


A conduit connector assembly for use with fluid conducting cylinders comprising a cylinder cap mounted on one end of the cylinder and having a projection extending radially outwardly of the wall of the cylinder, an opening extending through said projection in a direction generally parallel to the cylinder axis and in relatively close proximity to the outer wall of the cylinder, connector means adapted to be stab fitted into said opening, a conduit means adapted to be coaxially secured to said connector means, said connector means and conduit means being of considerably smaller diameter than the diameter of said cylinder, said connector means when connected into said opening being in such close proximity to said cylinder as to substantially prevent the use of tools intermediate the cylinder wall and the conduit means to assemble the conduit means to the connector means, said connector means including an elongated tubular member having a port adjacent one end thereof, an inwardly extending flange at the one end thereof forming a chamber, a threaded plug in said chamber and a circumferentially extending projection intermediate the ends of the connector and adapted to engage one side of said projection on said cylinder cap adjacent said opening in sealing relation thereto, holding means equipped with sealing means extending through the opposite side of said projection on said cylinder cap and into said one end of the connector means for threadedly engaging said plug whereby to hold the connector in fixed relation to said projection on said cylinder cap, and a second opening in said projection on said cylinder cap which intersects said first opening intermediate the ends thereof and which is adapted to communicate a chamber in the cylinder with said port and connector means, said connector means being disposed in sealing relation with the radial projection of the cylinder cap upon tightening movement of the holding means in said plug.

3,088,758
THERMOCOMPENSATING JOINT
Harry Chilton, Didcot, England; Hilda Joan Brown, executrix of said Harry Chilton, deceased, assignor to United Kingdom Atomic Energy Authority, London, England
Filed Jan. 29, 1959, Ser. No. 789,954
Claims priority, application Great Britain Feb. 12, 1958
2 Claims. (Cl. 285—187)

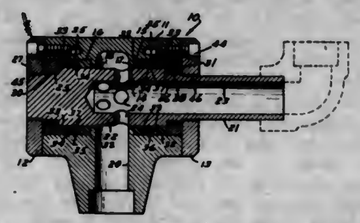
1. A thermocompensating joint for joining two pipe members having different coefficients of thermal expan-

sion, comprising a first pipe member having an end surface and a second pipe member having a shoulder formed therein for engaging said end surface, said shoulder and end surface being disposed on opposite sides of a plane, a portion of said second member extending over the side of the plane on which the shoulder is disposed, the said



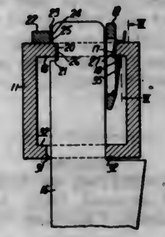
portion defining a second surface area disposed in said plane, and means disposed parallel to the axis of and having the same coefficient of thermal expansion as said first member in pressure engagement with said second surface area and with said first member to clamp the said members together.

3,088,759
SWIVEL PIPE COUPLING HAVING LOW FRICTION SEALS
William T. Corsette, Long Beach, Calif.; Nancy N. Corsette, executrix of said William T. Corsette, deceased, assignor to Dwight J. Ainsworth, Long Beach, Calif.
Filed June 29, 1959, Ser. No. 823,475
1 Claim. (Cl. 285—190)



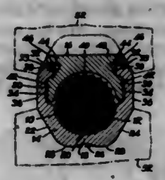
In a swivel joint, means defining a body having a central bore and a second bore for fluid communication with said central bore, means defining a pipe member rotatably mounted in said body member in spaced relationship and having ports therein in communication with said central bore for communication of fluid between said pipe member and said second bore, and pipe shoulders on opposite sides of said ports, and recess means in said central bore on opposite sides of said ports defining seal chambers disposed about said pipe member, sealing means in said seal chambers, said sealing means comprising a pair of packing means formed from deformable plastic material, means defining forward surfaces concave in cross section on each of said packing means facing one another but spaced therefrom, a deformable sealing ring of circular cross section disposed between said forward surfaces, and means urging said packing means toward one another precompressing and deforming said deformable sealing ring and the lips of said forward surfaces so that the inner and outer periphery of said packing means and said deformable sealing ring engages surfaces of the seal and pipe chambers forming a fluid-tight joint, said means urging said packing means including annular members engaging said body and said pipe shoulders and forming the end wall of each of said sealing chambers and providing combined thrust and axial bearing means for said pipe member and an end plate on said body member.

3,088,760
RIPPER SHANK KEY ASSEMBLY
James B. Codlin, Lake Bluff, Ill., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Filed Feb. 7, 1961, Ser. No. 87,578
5 Claims. (Cl. 287—54)



1. In a ripper including a carrier having surfaces defining a vertical opening for receiving a ripper shank, a ripper shank disposed in said vertical opening, cooperating abutment surfaces on said carrier and shank for preventing relative vertical movement between said shank and carrier, a key assembly comprising: a key body having a lower end extending into said opening and having an enlarged head portion at its upper end extending beyond said opening, said lower end presenting a cavity opening to the rear face thereof, a manually operable catch disposed within said cavity and biased rearwardly, and a locking portion formed on said catch for cooperative engagement with said carrier to prevent withdrawal of said key therefrom, said catch being attached to said body to form an assembly therewith and being manually movable to a nonlocking position permitting removal of said key assembly.

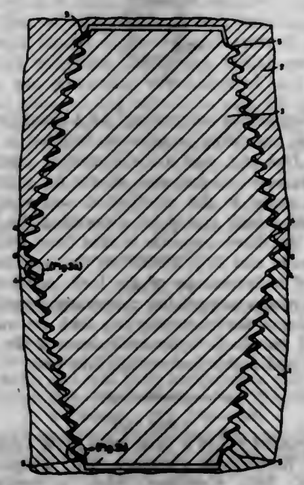
3,088,761
COMPRESSIBLY DEFORMABLE CONNECTORS
Robert R. Myers, Port Vue, McKeesport, Pa., assignor to Aluminum Company of America, Pittsburgh, Pa., a corporation of Pennsylvania
Continuation of application Ser. No. 10,490, Feb. 23, 1960. This application Apr. 25, 1962, Ser. No. 193,643
3 Claims. (Cl. 287—108)



1. In a two-element connector for plastic deformable compressive interengagement and attachment on the exposed surface of an elongate member, said connector comprising a body member of initially generally U-shaped transverse cross-section and a keeper of initially generally T-shaped transverse cross-section, said body member having a bottom web interiorly recessed substantially complementary to one half the exposed transverse circumference of the elongate member with parallel flanges extending outwardly from the bottom web normal to a horizontal transverse plane coincident with the entrance diameter to the interior recessed web, an exterior bottom web surface contiguous with the flanges comprising downwardly converging similar lateral surfaces connected by a transverse contiguous inwardly depressed reverse curvilinear bottom surface, said keeper having a substantially horizontal top head flange and depending central web the bottom surface of which is recessed substantially complementary to the remaining one half exposed transverse circumference of the elongate member, opposite facing surfaces of the

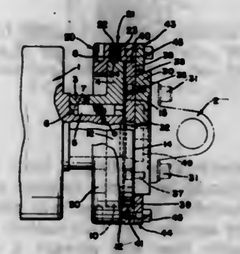
parallel spaced flanges of the body member and opposite lateral side surfaces of the depending central web of the keeper being complementarily configurated for interengaging interlocking tongue and groove axial sliding assembly of the initial keeper between the parallel spaced flanges of the initial body member with the keeper disposed entirely to one side of the transverse plane coincident with the entrance diameter to the interior recessed bottom web of the body member to thereby provide an excess of material comprising the interengaged keeper and parallel spaced body flanges on the keeper side of said transverse plane in circumferentially encircling and enclosing relationship of the elongate member within the assembled keeper and body member, and said initially assembled keeper and body member being capable of and responsive to exteriorly applied and confining pressure to symmetrically duplicate the exterior defining configuration of the compressed assembled connector on both sides of a transverse plane parallel to the transverse plane of initial assembly of the connector and bisecting the compressed and affixed connector with accompanying maximum plastic deformation and redistribution of the execess material of the connector and underlying elongate member on the keeper side of said last-mentioned transverse plane, said symmetrically deformed connector on compressed affixation providing an exterior configuration of substantially the exterior bottom web surface outline defined by the opposite lateral downwardly converging exterior surfaces of the initial body member and redistributed material of the bottom web filling out the initially depressed reverse curvilinear bottom surface of the web.

3,088,762
SCREW NIPPLE JOINT FOR CARBON ELECTRODES
Waldemar Kaufmann and Wilfried Hub, Meitingen, near Augsburg, Germany, assignors to Siemens-Planiawerke Aktiengesellschaft für Kohlefabrikate, Meitingen, near Augsburg, Germany, a corporation of Germany
Filed Jan. 25, 1961, Ser. No. 84,804
Claims priority, application Germany Jan. 27, 1960
5 Claims. (Cl. 287—127)



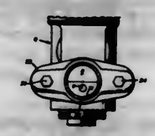
1. A carbon electrode joint, comprising two carbon electrodes coaxially aligned in abutment with each other and forming each a frusto-conical, inwardly tapering and threaded socket in its butt face, a double-conical screw nipple of electrode material having respective external threads on each half portion thereof for engaging the threads of said respective two sockets, a first abutment means extending near said butt face along a portion of at least one thread turn of at least one conical nipple portion, second abutment means extending along a portion of at least one turn of said same nipple portion but near the nipple end, said two abutment means being located at a nipple-thread flank facing away from the butt face for providing space for thermal expansion whereas the other nipple-thread flank directly engages the adjacent socket-thread flank.

3,088,763
QUICK DISCONNECT COUPLING
Jack W. Foltz, North Olmsted, Ohio, assignor to The Yoder Company, Cleveland, Ohio, a corporation of Ohio
Filed Sept. 16, 1960, Ser. No. 56,508
8 Claims. (Cl. 287—129)



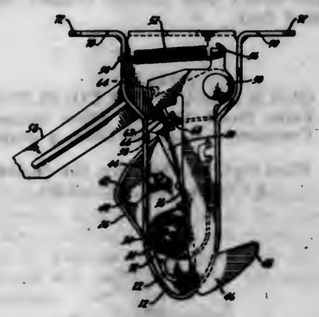
1. A quick disconnect torque transmitting coupling comprising a drive sub-assembly and a driven sub-assembly, one said sub-assembly comprising an adaptor having a diametrically extending tongue secured thereto, the other said sub-assembly comprising a flange member, said flange member having an outwardly extending circular flange portion, said flange portion having a diametrically extending slot in the face thereof and a right circular cylindrical outer surface, said tongue closely fitting within said slot; a locking ring mounted on said flange portion, said locking ring being provided on the face thereof with two circular diametrically opposed plates adapted to overlie said tongue holding the same within said slot in one selected position of rotation of said locking ring and to release said tongue from said slot in another selected position of rotation thereof, and means on said locking ring and flange portion cooperating selectively to hold said locking ring in the selected position of rotation.

3,088,764
SANDER
Virgil L. Frantz, Salem, Va.
Filed July 15, 1960, Ser. No. 43,225
14 Claims. (Cl. 291—11)



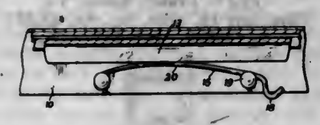
1. In a sander, the combination of a sand trap including a body, an extension removably attached to an outlet end of said body, a sand chamber in said body, and means in said body below said chamber for applying air to sand consisting of air nozzle means, said chamber and air nozzle means opening at said outlet end of said body directly into said extension for mixing of sand and air therein entirely beyond said body.

3,088,765
LOCK ASSEMBLY
Herbert Krause, Chicago, Ill., assignor to Chicago Forging and Manufacturing Company, Chicago, Ill., a corporation of Delaware
Filed Sept. 1, 1960, Ser. No. 53,414
9 Claims. (Cl. 292—11)



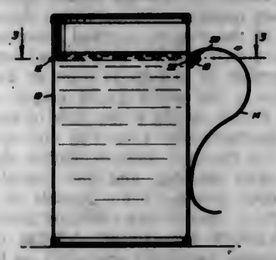
1. A latch structure including a latch plate having an aperture, a plunger positioned to enter said aperture, a latch control member pivoted on said plunger, a latch member pivotally mounted on said control member and extending outwardly from said plunger, a spring urging said latch member to said outwardly extended position, said latch member being positioned to contact said latch plate as said plunger moves through said aperture, a release member pivotally mounted on said plunger, said release member having a portion positioned to block said latch control member when said latch member is in the extended position, and an outwardly extending flange-like surface on said plunger, said latch control member having a portion slideable on said surface during a portion of its travel on said plunger, said surface being adjacent and pivotal with said release member portion to prevent locking contact between the latch control member and said release member portion until the latch member is fully extended.

3,088,766
ELECTRIC LAMP LATCH
Raymond Charles Kember and George Edward Barker, London, England, assignors to Thorn Electrical Industries Limited, London, England, a British company
Filed Aug. 30, 1960, Ser. No. 52,836
4 Claims. (Cl. 292—209)



1. An electric lamp fitting comprising a main dished body, a cover for said body, and means to releasably fit said cover to said body, said means comprising a resilient, substantially arcuate wire pivotally mounted at one end on said body and positioned with its other end in retained engagement with said body and with an intermediate region of the wire resiliently engaging said cover and urging it into engagement with said body, said intermediate region being deformed to facilitate engagement thereof with said cover.

3,088,767
HANDLE FOR CANS, BOTTLES AND THE LIKE
Robert Lamar Deal, 3315 W. Markham, Little Rock, Ark.
Filed May 8, 1961, Ser. No. 108,617
7 Claims. (Cl. 294—31.2)



1. A handle assembly for elonagted containers comprising a resiliently deformable bail of sufficient internal area and shape to loosely embrace a container, a handle detachably secured to said bail by a pivot portion and having a camming surface disposable between said bail and container upon pivoting of said handle on said bail and operable to tension the bail into a frictional, compressively embracing engagement of said container, said bail comprising an endless, continuous ring-like element, said handle having its end inturned upon itself to provide a loop with an entrance opening for the passage of said bail into said loop, said pivot portion being so positioned relative to said camming surface that said handle is movable to an overcenter position when said bail is tensioned, said handle and said bail comprising the sole support for lifting said container.

3,088,768
FREIGHT HANDLING SYSTEM
Donald Willison, Lyndhurst, Ohio, assignor to National Castings Company, a corporation of Ohio
Filed Oct. 22, 1959, Ser. No. 848,087
11 Claims. (Cl. 294—93)

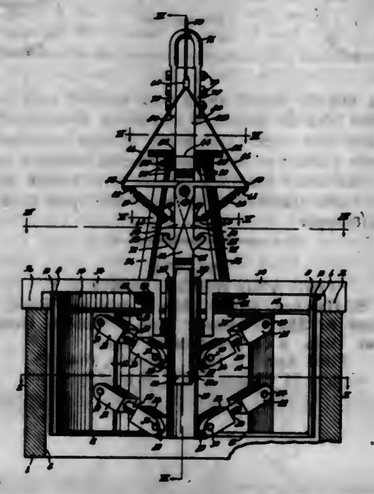


1. A lifting device comprising: an L-member comprising a shank extending lengthwise between a supported end and a free end, and a toe extending laterally from the shank adjacent its free end; means for supporting the L-member joined to the member at said supported end of the shank; a lock means for supporting the lock along the side of the shank opposite to that from which the toe projects; guide and stop means on the member defining an ambit of reciprocation of the lock lengthwise of the shank; and means comprising cooperating portions of the lock and shank for camming the lock outwardly from said side of the shank upon movement of the lock from the end of said ambit nearer said free end.

3,088,769
EXPANSIBLE LIFT FOR HOLLOW OBJECTS
William F. Richardson, Carthage, Mo., assignor to Flex-O-Lators, Inc., Carthage, Mo., a corporation of Missouri
Filed Oct. 18, 1961, Ser. No. 145,845
9 Claims. (Cl. 294—93)

1. An expansible lift for hollow objects having internal bores or recesses opening upwardly, said lift comprising a plurality of arcuately curved, angularly related shoes forming in conjunction a generally cylindrical head

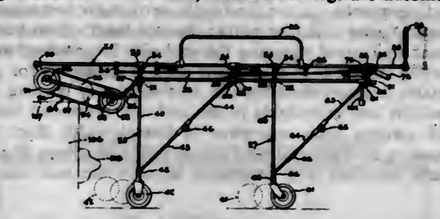
having a vertical axis, a lift member disposed for vertical movement centrally in said head, toggle links pivotally connected at their inner ends to said lift member and at their outer ends to each of said shoes, said toggle links being upwardly inclined toward said shoes whereby upward movement of said lift member will expand said shoes and downward movement of said lift members will contract said shoes, a feeler member affixed to said lift member and normally resting on the tops of said shoes whereby to limit downward movement of said lift member relative to said head, said feeler member extending outwardly from said head whereby to engage the top of an object to be lifted as said head is lowered into the bore thereof, and thereby arrest downward movement



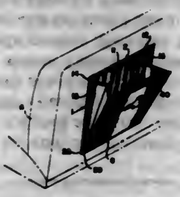
of said lift member, a vertical shaft disposed centrally of said head for vertical movement relative thereto and extending thereabove, means for attaching the upper end of said shaft to a hoist, a hanger member carried by the upper portion of said shaft, support members extending between said hanger members and each of said shoes, said support members permitting radial movement of said shoes and downward movement of said shaft relative to said shoes, a lug affixed to said lift member, an upwardly opening hook carried by said shaft in vertical alignment with said lug, said hook being spaced above said lug when said shoes are suspended by said support members, said hook being horizontally movable with respect to said shaft whereby to pass beneath and engage said lug, and means for moving said hook horizontally.

3,088,770
CART HAVING INDEPENDENTLY COLLAPSIBLE LEGS
Burt Well, Cincinnati, Richard H. Ferneau, Washington Court House, and George A. Selig, Greenfield, Ohio; said Ferneau and said Selig assignors to said Well
Filed Feb. 13, 1959, Ser. No. 793,090
5 Claims. (Cl. 296—20)

1. A cart comprising an elongated frame, forward and rearward legs pivotally mounted on said frame, forward and rearward inclined toggle links operable to brace said forward and rearward legs in a downwardly extended position, an actuator pivotally mounted on said forward and rearward legs respectively, a means connecting each said actuator to said respective toggle link braces for selectively actuating said forward and rearward toggle links independently of each other upon engagement of said actuator with a vehicle bumper to permit said legs to be pivoted to a collapsed position, whereby, as a cart is thrust onto the platform of a vehicle by an operator standing at the rear of the cart, the forward legs are automatically released and collapsed and then the rearward legs are automatically released and after a substantial portion of the cart is on the vehicle platform.



3,088,771
AUTOMOBILE SEAT LITTER RECEIVING DEVICE
Barbara Weigle, 149—19 15th Drive, Whitestone, N.Y.
Filed Oct. 12, 1961, Ser. No. 144,702
2 Claims. (Cl. 296—37)



1. An automobile seat litter receiving device comprised of a housing structure including a back-frame recessedly secured within a recess within the rear of said automobile seat, a front-plate, and an open-topped insert member removably receivable within said housing structure; said back frame including a back wall having top and bottom edges, a pair of side walls, a vertical channel formed within each of said side walls, said channels being disposed in mutually opposed relation, the said front-plate having a top and a bottom edge, the said bottom edge of the said front-plate being pivotally connected along the said bottom edge of the said back-frame, said front-plate being arranged to swing to a closed position flush with respect to the rear surface of the said automobile seat, means to retain said front-plate in closed position, an insert member removably receivable within said housing structure, said insert member being substantially of flexible material providing an integrally united back portion, front portion and foldable side walls, said back portion having a vertically corrugated expandable back wall, a top edge, a bottom edge, and a pair of rigidly extending side edges, said front portion being resiliently united along the said bottom edge of the said back portion, each of the said rigidly extending side edges of said insert member being slidably receivable within a respective one of said vertical channels, the said retaining means being adapted to retain the said front portion contiguously with respect to the said front-plate.

3,088,772
RETRACTABLE WINDSHIELD AWNING AND SUPPORTING MEANS THEREFOR
John P. Francis, 20 Boston St., Haverhill, Mass.
Filed Nov. 15, 1960, Ser. No. 70,100
1 Claim. (Cl. 296—95)

An adjustable rain awning structure supported over the roof top and the windshield area of an automobile, comprising frame supporting means having a longitudinal tubular supporting member and a vertically disposed

threaded member, a vacuum cup threadably engaging and adjustably supporting the said vertical threaded member for the adjustable movement of said longitudinal supporting member, a longitudinally retractable rectangular shaped frame structure having the side longitudinal frame members thereof engaging the said side longitudinal supporting members of said frame supporting means for adjustable support therefrom, a taut supported awning retractable and extendable in the said taut supported form, said awning being narrower in lateral width than the opposing forward and rear lateral frame members of said frame structure and supported to only the said lateral



frame members, and a vertically adjustable clamping member having an upper clamping portion engaging the side longitudinal frame member of said frame structure, a separable lower clamping portion adapted to engage the rain gutter, and a connecting member adjustably connecting said upper and lower clamping portions, said connecting member having vertically spaced apart apertures and provided with threaded fastening means to adjustably engage the said upper and the said lower spaced apart clamping portions to provide longitudinally angular adjustment of said frame structure above the roof top upon the vertical adjustment of said clamping portions on the said connecting member.

3,088,773

SEATS, CHAIRS, CHAIRBACKS AND THE LIKE

David Leslie Horrocks, Sidcup, and Robert George Trenchard, Harold Wood, England, assignors to Microcell Limited, London, England, a British company

Filed May 31, 1961, Ser. No. 113,779
Claims priority, application Great Britain June 2, 1960
22 Claims. (Cl. 297—445)



1. A base for supporting upholstery padding for a seat, chair, chairback and the like, in which a flexible supporting surface extends between anchorages and is connected, intermediate in its width, by flexible ties of fixed length to anchorages spaced in a different plane from the said anchorages of the supporting surface, whereby its shape is at least partly controlled.

3,088,774

BOTTOM DUMP TRAILER CONSTRUCTION

Robert Bernstein, Omaha, Nebr., and Donald V. Zinn, Fresno, Calif., assignors to Fruehauf Trailer Company

Filed Mar. 18, 1959, Ser. No. 800,152
5 Claims. (Cl. 298—27)

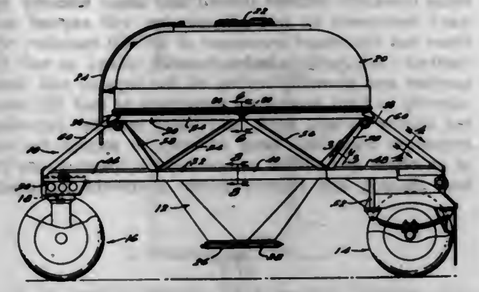
1. A hopper device having a trussed chassis comprising

(*a*) a pair of elongated laterally spaced lower chassis members,

(*b*) a plurality of transverse chassis members connecting said lower members,

(*c*) a pair of spaced upper chassis members vertically spaced above said lower members,

(*d*) a plurality of members forming a truss between said upper and lower members, and



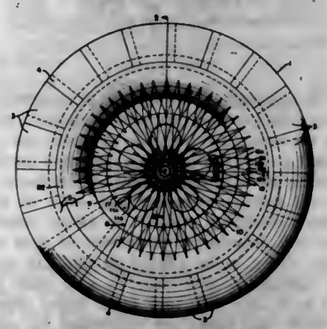
(*e*) a hopper seated along and secured only to said upper chassis members extending downwardly between said upper and lower chassis members, the lower portion of said hopper being shiftable relative to said lower chassis members to minimize deleterious stress transmittal therebetween upon loading of said hopper.

3,088,775

TIRE AND WHEEL ASSEMBLY

Joseph S. Hawkes, Silver Lake, Cuyahoga Falls, Ohio, assignor to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

Filed Apr. 19, 1961, Ser. No. 104,153
11 Claims. (Cl. 301—55)



1. A tire and wheel assembly comprising hub means, inflatable tire means substantially concentric with said hub means, torque transmitting means attached to said hub means and extending radially toward said tire means, means to laterally stabilize said torque transmitting means, and a plurality of pliant elements extending from each axial side and throughout the peripheral extent of said torque transmitting means to the radially inner portions of said tire means, said elements being tensioned at all times when said tire means is inflated to operating pressures and the tire and wheel assembly are operating under normal conditions.

3,088,776

RAILWAY HOPPER CARS

Edmund R. Aller, Gary, Ind., assignor to General American Transportation Corporation, Chicago, Ill., a corporation of New York

Filed Jan. 30, 1961, Ser. No. 85,912
19 Claims. (Cl. 302—52)

1. In apparatus for storing granular material, structure defining a plurality of storage hoppers respectively

provided with a plurality of bottom discharge outlets, a plurality of outlet nozzles respectively carried by said storage hoppers, each of said outlet nozzles including a casing disposed below the bottom outlet in the associated one of said storage hoppers and communicating therewith, each of said outlet nozzles also including a suction tube extending through the lower portion of the associated casing for unloading the granular material from the associated one of said storage hoppers, the intermediate section of each of said tubes being disposed within the associated casing and having a valve port provided in the bottom thereof and communicating with the lower portion of the associated casing, each of said outlet nozzles further including a valve element arranged in the lower portion of the associated casing and disposed below the valve port in the associated tube and cooperating therewith, whereby the interior of each of said tubes is in communication with the lower portion of the associated casing when the associated valve element occupies its open position with respect to the associated valve port and the interior of each of said tubes is cut-off from communication with the lower portion of the associated casing when the associated valve element occupies its closed position with respect to the associated valve port, each of said suction nozzles further including actuating means for selectively operating the associated valve element between its open and closed positions with respect to the associated valve port, each of said valve elements being operated by the associated actuating means into its open position with respect to the associated valve port in response to the presence of granular material in the as-



sociated one of said storage hoppers, each of said valve elements being operated by the associated actuating means into its closed position with respect to the associated valve port jointly in response to suction in the associated tube and to the absence of granular material in the associated one of said storage hoppers, a first fixture providing an air inlet opening communicating therewith, an air inlet member operatively associated with said air inlet opening, means for selectively operating said air inlet member between open and closed positions with respect to said air inlet opening, a second fixture providing an air outlet opening communicating therewith, a closure member removably carried by said second fixture and selectively cooperating with said air outlet opening, and a conduit system extending between said first and second fixtures and commonly connected to said tubes, said second fixture being adapted to be connected to a suction conduit communicating with said air outlet opening when said closure member is removed from said second fixture, whereby conveying air may be supplied through said air inlet opening into said first fixture with said air inlet member in its open position and thence through said conduit system into said second fixture and then through said air outlet opening into the suction conduit connected to said second fixture with the result that the granular material in said plurality of storage hoppers is unloaded therefrom into said respective casings and proceeds therefrom through said respective valve ports with said respective valve elements in their open positions and into said respective tubes and is thus conveyed with the conveying air in said conduit system into the suction conduit connected to said second fixture.

3,088,777

APPARATUS FOR STORING GRANULAR MATERIAL

Edmund R. Aller, Portage, Ind., assignor to General American Transportation Corporation, Chicago, Ill., a corporation of New York

Filed Sept. 26, 1961, Ser. No. 140,936
11 Claims. (Cl. 302—52)



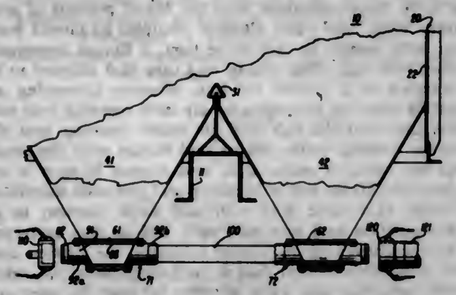
1. In apparatus for storing granular material including structure defining a storage hopper provided with a bottom discharge outlet; an outlet nozzle comprising a casing carried by said storage hopper and disposed below said bottom outlet and communicating therewith, a suction tube extending through the lower portion of said casing for unloading the granular material from said storage hopper through said casing, one end of said tube providing an air inlet opening thereinto and the other end of said tube providing an air outlet opening therefrom, the intermediate section of said tube being disposed within said casing and having a valve port provided in the bottom thereof, a valve element arranged in the lower portion of said casing below said valve port and cooperating therewith, whereby the interior of said tube is in communication with the lower portion of said casing when said valve element occupies its open position with respect to said valve port and the interior of said tube is cut-off from communication with the lower portion of said casing when said valve element occupies its closed position with respect to said valve port, a fixture communicating with said other end of said tube and adapted to be connected to a suction conduit, whereby conveying air may be supplied through said air inlet opening into said tube and then through said air outlet opening into the suction conduit connected to said fixture with the result that the granular material in said storage hopper is unloaded therefrom into said casing and proceeds therefrom through said valve port with said valve element in its open position and into said tube and is thus conveyed with the conveying air in said tube into the suction conduit connected to said fixture, and mechanism for selectively actuating said valve element between its open and closed positions with respect to said valve port; said mechanism comprising a diaphragm arranged in the lower portion of said casing in supporting and surrounding relation with said valve element, the inner perimeter of said diaphragm being sealed to said valve element and the outer perimeter of said diaphragm being sealed to said casing thereby to define a chamber below said valve element and said diaphragm and above the bottom of said casing, said diaphragm having a lower position actuating said valve element into its open position with respect to said valve port and an upper position actuating said valve element into its closed position with respect to said valve port, the upper side of said valve element and the upper side of said diaphragm being subject to the air pressure in the lower portion of said casing and the lower side of said valve element and the lower side of said diaphragm being subject to the air pressure in said chamber, the upper side of said valve element and the upper side of said diaphragm also being subject to the weight of granular material in the lower portion of said casing so long as there is granular material in said storage hopper to be unloaded therefrom, and means defining a restricted passage between the lower portion of said casing

and said chamber, the opening into said passage in the lower portion of said casing being located well outwardly from said valve port and said valve element, whereby the absence of suction in the tube concurrently with or without granular material in the lower portion of said casing subjects the upper side of said valve element and the upper side of said diaphragm and said opening into said passage to relatively high air pressure so that said chamber is subject to relatively high air pressure with the result that said diaphragm is operated into its lower position, and whereby suction in said tube concurrently with the presence of granular material in the lower portion of said casing subjects the upper side of said valve element and the upper side of said diaphragm and said opening into said passage to relatively low air pressure so that said chamber is subject to relatively low air pressure with the result that said diaphragm is operated into its lower position, and whereby suction in said tube concurrently with the absence of granular material in the lower portion of said casing subjects the upper side of said valve element to relatively low air pressure and subjects the upper side of said diaphragm and said opening into said passage to relatively high air pressure so that said chamber is subject to relatively high air pressure with the result that said diaphragm is operated into its upper position.

3,088,778
RAILWAY HOPPER CARS FOR TRANSPORTING GRANULAR MATERIAL

Edmund R. Aller, Portage, Ind., assignor to General American Transportation Corporation, Chicago, Ill., a corporation of New York

Filed Oct. 25, 1961, Ser. No. 147,577
6 Claims. (Cl. 302—52)



1. In a railway car for transporting granular material, a longitudinally extending body, structure defining a pair of laterally spaced-apart storage hoppers in said body and respectively provided with a pair of laterally spaced-apart bottom discharge outlets, a pair of laterally spaced-apart outlet nozzles respectively carried by said storage hoppers, each of said outlet nozzles including a casing disposed below the bottom outlet in the associated one of said storage hoppers and communicating therewith, each of said outlet nozzles also including a suction tube extending laterally through the lower portion of the associated casing for unloading the granular material from the associated one of said storage hoppers, the intermediate section of each of said tubes being disposed within the associated casing and having a valve port provided in the bottom thereof, each of said outlet nozzles further including a valve element aranged in the lower portion of the associated casing below the associated valve port and cooperating therewith, whereby the interior of each of said tubes is in communication with the lower portion of the associated casing when the associated valve element occupies its open position with respect to the associated valve port and the interior of each of said tubes is cut-off from communication with the lower portion of the associated casing when the associated valve element occupies its closed position with respect to the associated valve port, each of said outlet nozzles further including actuating means for selectively operating the associated valve element between its open and closed positions with respect to the associated valve port, each of said valve elements being operated by the associated actuating means into its open position with respect to the associated valve port in response to the presence of granular material in the associated one of said storage hoppers, each of said valve elements being operated by the associated actuating means into its closed position with respect to the associated valve port jointly in response to suction in the associated tube and to the absence of granular material in the associated one of said storage hoppers, a transversely extending pipe interconnecting the inner ends of said tubes, a pair of fixtures respectively carried by the outer ends of said tubes and respectively arranged adjacent to the opposite sides of said body, and a pair of closure members respectively removably carried by said fixtures, each of said fixtures being adapted to be connected to a suction conduit, whereby conveying air may be supplied from the outside into one of said fixtures after removal of the associated closure member and then passed through said tubes in series relation and thence conducted from the other of said fixtures after removal of the associated closure member into the suction conduit connected to said other fixture with the result that the granular material in said storage hoppers is unloaded therefrom into said respective casings and proceeds therefrom through said respective valve ports with said respective valve elements in their open positions and into said respective tubes and is thus conveyed with the conveying air passing therethrough into the suction conduit connected to said other fixture.

3,088,779
SNOW BLOWER CHUTE

René Vachon, St. Timothee Station, Beauharnois County, Quebec, Canada

Filed Dec. 18, 1961, Ser. No. 160,214
5 Claims. (Cl. 302—61)

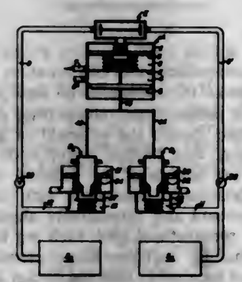


1. A snow ejecting chute for snow blowers comprising a first curved chute portion adapted to be mounted on the snow receiving casing of a snow blower, a second curved chute portion having a substantially channel shape cross-section and overlapping and in telescopic engagement with said first chute portion, a framework rigid with said first chute portion and extending towards the center of curvature thereof, arms pivoted at spaced pivot points on said framework and at the ends of said second chute portion, power means for pivoting said arms and thus displace said second chute portion with respect to said first portion between a retracted position and an extended position, chute sectors of channel shape cross-section and in telescopic engagement forming an extension for said second chute portion, said sectors being pivoted one to another and to the upper end of said second chute portion, a yoke member pivotally connected to said second chute portion adjacent said sectors, and pivotally linked to said sectors, at least one of the arms supporting said second chute portion on said framework provided with a crank arm and a link pivotally connecting said crank arm to said yoke in order that pivoting movement of said crank arm with respect to said second chute portion will cause pivoting of said yoke on said second chute portion, and thus pivotal movement of said sectors in order to form a highly curved extension for said chute during extension movement of said second chute portion.

3,088,780
FAILURE PROTECTION PLURAL BRAKE VALVE SYSTEM

Giuseppe Alfieri, Milan, Italy, assignor to Fabbrica Italiana Magneti Marelli S.p.A., Milan, Italy, a company of Italy

Filed Nov. 5, 1958, Ser. No. 772,020
Claims priority, application Italy Nov. 5, 1957
1 Claim. (Cl. 303—29)



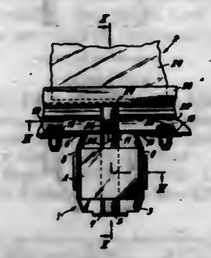
A brake relay means including a plurality of brake distributing valves and an operator for said distributing valves, a main pressure supply connected to said operator, a fluid connection means between said operator and said distributing valves, said distributing valves supplying pressure from said operator to said braking sections upon actuation of said distributing valves, said connection means including a control, and valve means in said control being maintained in a first position under the action of equal velocities of pressure medium to said distributing valves, whereby said operator is in fluid communication with said distributing valves, said valve means being displaced from said first position in response to unequal velocity flow of fluid to said distributing valves to block the flow of fluid to that distributing valve having the greater velocity flow thereto.

3,088,781
BEARING FOR A ROTATABLE WINDOW

Erwin Komenda, Stuttgart, Germany, assignor to Firma Dr. Ing. h.c. F. Porsche K.G., Stuttgart-Zuffenhausen, Germany

Filed Aug. 9, 1960, Ser. No. 48,486
Claims priority, application Germany Aug. 27, 1959
3 Claims. (Cl. 308—15)

1. A bearing construction for a rotatable window in a motor vehicle having a relatively stationary part, comprising a vertically disposed bearing pin adapted to be secured to said window and a base plate extending substantially parallel to the axis of said bearing pin, said base plate being provided with a flange portion disposed essentially perpendicular to said base plate, said flange portion being adapted for attachment to said relatively stationary part and having a bore therein receiving said bearing pin, said base plate being further provided with a bearing portion adjacent said bore and receiving said bearing pin, a bracket portion on said base plate disposed at a right angle thereto and opposite to said flange portion, said bracket portion abutting said bearing pin and supporting the latter in the axial direction thereof, mutually facing angularly bent rim portions on opposite sides of

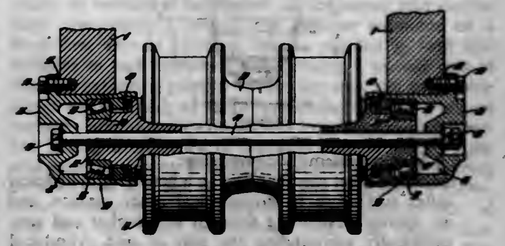


said base plate extending substantially parallel to said bearing pin, and further supporting means for said bearing pin comprising bow-shaped spring means supported by said mutually facing rim portions and engaging said bearing pin along the major portion of its length.

3,088,782
TRACK ROLLER ASSEMBLY

Harry J. Coulan, Pittsburgh, Pa., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed May 1, 1961, Ser. No. 106,602
4 Claims. (Cl. 308—18)



1. A track roller assembly adapted to be mounted on a track frame of a tracked vehicle comprising a roller, axially aligned roller support members at respective ends of said roller, bearing means disposed between the ends of said roller and their respective support members, axially adjustable means including a bolt extending through the roller and said support members to connect and position the latter axially relative to each other to preload said bearing means, and means for mounting said support members on the track frame to support said roller on the latter and permit axial adjustment of the preloaded roller assembly relative to the track frame.

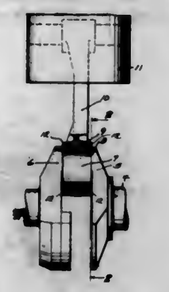
3,088,783
BEARING AND METHOD OF CONSTRUCTION THEREOF

Warren C. Conover, Waukegan, Ill., assignor to Outboard Marine Corporation, a corporation of Delaware

Filed Mar. 12, 1954, Ser. No. 415,889
7 Claims. (Cl. 308—35)

7. An anti-friction bearing comprising two coaxial annular members, an annular series of anti-friction bearing elements between said members, said elements being adapted to roll between said members upon relative rotary movement of said members, one of said members having a radial surface in rotary axial bearing relation with a

complementary radial surface of the other of said members, and a non-galling metal facing on one of said surfaces operative to prevent heating of said elements between said members.

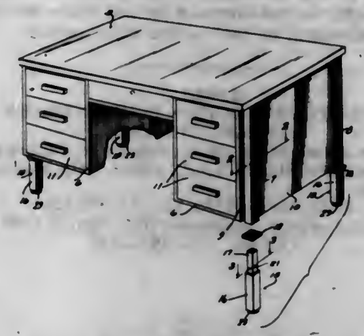


3,088,784
BEARING ASSEMBLY FOR CONNECTING TWO RELATIVELY MOVING MEMBERS
James O. Melton, 1208 Cruce St., Norman, Okla., and Thomas B. Wilkinson, 5925 S. Eggleston, Oklahoma City, Okla.
Filed Nov. 24, 1961, Ser. No. 154,779
9 Claims. (Cl. 308—72)



1. A bearing assembly comprising:
a metallic socket member having a generally cylindrical outer surface, a frusto-spherical inner surface, and an aperture extending through said socket and concentrically surrounding the axis of said cylindrical portion;
a ball member in said socket positioned for pivotation on said frusto-spherical inner surface;
a stud secured to said ball member and extending loosely through said aperture;
a centrally apertured, generally annular, high density synthetic resin cup washer around said stud in contact with said cylindrical outer surface, said cup washer having an inner surface complementary in configuration to the cylindrical outer surface of said socket, and further having an outer surface opposite its inner surface;
a centrally apertured, annular, high density synthetic resin sheath around said stud covering the outer surface of said cup washer, said sheath having one of its surfaces complementary in configuration to the outer surface of said cup washer, and having its surface opposite said one surface of generally convex configuration;
a connecting arm connected to the lower end of said stud for movement relative to said socket member;
and a high density synthetic resin thrust washer around said stud and compressively retained between said connecting arm and said sheath, said thrust washer having a dished surface complementary in configuration to the generally convex surface of said sheath and mating therewith to form a bearing.

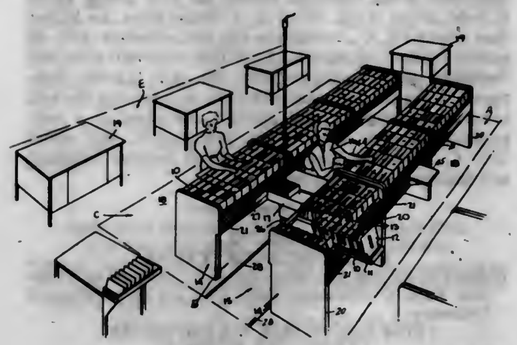
3,088,785
DESK WITH DETACHABLE LEG PORTIONS
John H. Schuette, Manitowoc, Wis., assignor to Invincible Metal Furniture Company, Manitowoc, Wis., a corporation of Wisconsin
Filed Feb. 13, 1961, Ser. No. 88,756
3 Claims. (Cl. 312—195)



1. A desk comprising the combination with a desk top and a pedestal therebeneath, of legs for supporting the top and the pedestal and comprising permanent leg members disposed beside the pedestal in supporting relation to the top, and having lower ends substantially at the level of the bottom of the pedestal, and separable leg members detachably connected with respective permanent leg members and respectively aligned therewith, one of the said members of each such leg being socketed and the other having an inner dowel element projecting from its end and receivable into the socket of the one leg member of such leg to maintain the permanent and separable leg members of each such leg in mutual alignment, and a spacing collar of thickness sufficient to affect materially the overall height of the combined permanent and separable leg members and through which the dowel extends and which is removably interposed between the permanent leg member and the separable leg member of each such leg, the spacing collar being fitted to the dowel element and engaged by both of said leg members and constituting both a spacer and an ornamental trim concealing the joint between said leg members.

3,088,786
FILING SYSTEM
Thomas H. Snethen, Dewittville, N.Y., assignor to Watson Manufacturing Company, Inc., Jamestown, N.Y., a corporation of New York
Filed Feb. 24, 1960, Ser. No. 10,689
6 Claims. (Cl. 312—198)

5. Apparatus for filing and utilizing a large number of records continuously available for reference by a number of clerical personnel comprising a plurality of filing cabinets with a plurality of record holding trays extending in side by side relation transversely to said cabinets in a given horizontal level and with an open top extending below the top surface of the trays forming an unobstructed work space for rendering records accessible from either side of said cabinets, said cabinets aligned in two separate rows spaced by a work path for movement of an operator longitudinally between said files and in close proximity thereto, work aisles extending longitudinally on the other side for access to the trays by other personnel, said trays extending transversely to said work path and said work aisles and positioned in side by side relation to support records in transversely extending stacks, and each cabinet having first side panels on the work aisle side permitting removal of said trays and second side panels on the work path side preventing movement into said work path to render the records available



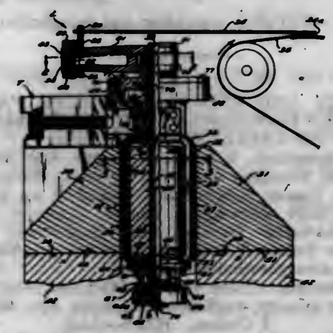
for handling from either side without interference of the operating personnel.

3,088,787
THERMALLY INSULATED BULK STORAGE CONTAINERS
Warren E. Perkins, Grand Island, N.Y., assignor to Union Carbide Corporation, a corporation of New York
Original application Apr. 26, 1956, Ser. No. 580,898. Divided and this application Oct. 4, 1960, Ser. No. 60,506
4 Claims. (Cl. 312—214)



1. A product handling device for a low-temperature storage container having a top opening offset from the container axis and affording access into the large diameter portion of the container defining a low temperature storage area, said device comprising: a vertically disposed compound spindle extending longitudinally of the container and journalled thereto, said spindle comprising at least a pair of concentrically disposed shafts, the outermost and innermost of which are separately supported and journalled so that such shafts are independent and freely rotatable, a pair of vertically spaced trays in said container having a diameter slightly less than the diameter of said storage area, each of said trays separately engaging one of said shafts to be rotated thereby and a cut-out sector in the uppermost of said trays to permit the removal and addition of products on the lower tray, when said offset opening and said cut-out sector are in registry, whereby maximum utilization of the storage area remote from said offset container opening may be effected and means for rotating the spindle such that each of the concentric shafts are rotatable independently of the others.

3,088,788
MAGNETIC PEN RECORDER MECHANISM
Arling Dix Brown, Jr., Cleveland Heights, and Chester L. Morris, Richmond Heights, Ohio, assignors to Clevite Corporation, a corporation of Ohio
Filed Sept. 5, 1961, Ser. No. 135,943
14 Claims. (Cl. 346—139)

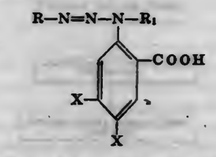


1. A motion converting mechanism for converting from rotary to rectilinear movement or vice versa, said mechanism comprising a rotary first member rotatable on a fixed first axis of rotation, means coupled to said first member to turn therewith and defining a second axis of rotation extending parallel to said first axis and revolvable about said first axis as said first member rotates, a second member rotatable on said second axis, said second member having a rectilinearly movable portion spaced from said second axis by a distance greater than the spacing between said first and second axis and disposed for movement substantially rectilinearly at the opposite side of said first axis from said second axis, and means constructed and arranged with respect to said rotary first member, and including means acting on said second member, to cause said second member to rotate on said second axis, while said first member rotates on said first axis, in a direction opposite to that of said first member and at a rotational speed equal to $(1+K)$ times the rotational speed of said first member, K being a constant which is positive and less than one, in response to either rotation of said rotary first member or rectilinear movement of said rectilinearly movable portion of said second member.

CHEMICAL

3,088,789
DIAZOAMINO COMPOUNDS AND PROCESS FOR THE PRODUCTION OF ICE COLORS IN TEXTILE PRINTING
Kurt Breig and Heinz Gutjahr, Cologne-Stammheim, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany
No Drawing. Filed July 7, 1959, Ser. No. 825,424
Claims priority, application Germany July 9, 1958
6 Claims. (Cl. 8—45)

1. In the process for producing azoic dyestuffs on cellulose textile materials with diazoamino compounds and ice color coupling components and developing the dyestuff with neutral steam, the improvement which consists in employing as diazoamino compound a compound of the following formula:



wherein one X is SO_2R_2 and the other X is hydrogen, R stands for the radical of a diazo compound selected

from the group consisting of mono-chloro-toluidines, dichloro-toluidines, nitro-anisidines, nitro-toluidines, monochloro-anilines, mono-chloro-anisidines, and anisidine carboxylic acid amides, R_1 means a radical selected from the group consisting of lower alkyl, —CH_2COOH, benzyl and cyclohexyl, and R_2 stands for a member selected from the group consisting of lower alkyl, benzyl, cyclohexyl, —NH-lower alkyl, —NH-hydroxy lower alkyl, —NH-chloro substituted lower alkyl, —NH-benzyl, —NH-cyclohexyl, —N-(hydroxy lower alkyl)$_2$, —N-(chloro substituted lower alkyl)$_2$

lower alkyl-N-hydroxy lower alkyl
|
lower alkyl-N-chloro substituted lower alkyl
|
hydroxy lower alkyl-N-chloro substituted lower alkyl
|
—NH-allyl, piperidino and morpholino

3,088,790

DYEINGS AND PRINTS POSSESSING FASTNESS TO WET PROCESSING AND THEIR MANUFACTURE ON CELLULOSE MATERIAL

Werner Schultheis, Koenigstein, Taunus, Kurt Schimmelschmidt, Frankfurt am Main, Hermann Hofmann, Bad Soden, Taunus, Edwin Baier, Frankfurt am Main, and Albert Bode, Schwalbach, Taunus, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany, a corporation of Germany

No Drawing. Filed Apr. 19, 1960, Ser. No. 23,139
Claims priority, application Germany Apr. 30, 1959
9 Claims. (Cl. 8—54.2)

1. A process for dyeing shaped articles of a material selected from the group consisting of natural and regenerated cellulose which comprises applying to said shaped articles a water-soluble organic dyestuff selected from the group consisting of monoazo, disazo, anthraquinone, vat, dioxazine and metal-phthalocyanine dyestuffs containing at least one thiosulfuric acid group linked to a carbon atom of an aromatic nucleus of said dyestuff through a member of the group consisting of —CH_2—

—SO_2—NH-lower alkylene
—SO_2—N-lower alkylene
|
lower alkyl

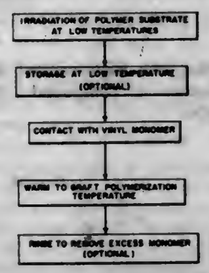
and —O-lower alkylene, and an alkaline reducing agent.

3,088,791

GRAFT POLYMERIZATION OF A VINYL MONOMER TO A POLYMERIC SUBSTRATE BY LOW TEMPERATURE IRRADIATION

Edward Terry Cline and David Tanner, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed Feb. 6, 1959, Ser. No. 791,626
11 Claims. (Cl. 8—115.5)



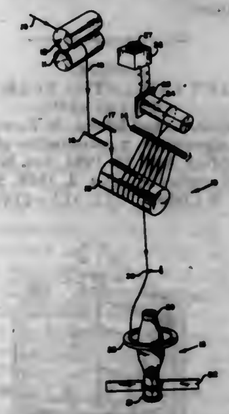
1. A process for the formation of an addition polymer upon a shaped organic polymer substrate which comprises subjecting the said substrate to ionizing radiation of sufficient dosage and intensity to provide energy to nonselectively break chemical bonds, the said dosage being at least about 0.005 Mrad at a temperature no higher than about 10° C., contacting the said substrate with an organic compound capable of addition polymerization and thereafter graft copolymerizing the said organic compound to the said polymer substrate by exposing the said substrate bearing the said organic compound to a temperature between about room temperature and about 100° C., at which latent free radicals become activated and initiate polymerization.

3,088,792

THERMOPLASTIC YARNS

William C. Mathis, Jr., Asheville, N.C., assignor to American Enka Corporation, Enka, N.C., a corporation of Delaware

Filed June 29, 1959, Ser. No. 823,718
1 Claim. (Cl. 8—130.1)



A process for simultaneously producing both drawn and heat treated yarn comprising the steps of feeding successive lengths of thermoplastic yarn having substantially unoriented molecules into a drawing zone at a first rate of speed, passing said yarn from said drawing zone directly to a cylindrical draw roller having a peripheral speed about three times the said first rate of speed, wrapping the yarn at least three times about said draw roller whereby drawing of the yarn to a substantially oriented molecular condition will occur, deflecting the yarn from said draw roller and subjecting the yarn to a dry heat treatment at a temperature of about 140° to 180° C. and returning the thus heat treated yarn to the surface of said draw roller while maintaining the drawn length thereof fixed during said deflecting, heating and returning stages, rewrapping the yarn at least three times about said roller in order to maintain the drawn length thereof fixed during cooling, and collecting said drawn and heat treated yarn in package form.

3,088,793

SPINNING OF ACRYLONITRILE POLYMERS

John P. Knudsen and Pompeio A. Ucci, Decatur, Ala., assignors, by mesne assignments, to Monsanto Chemical Company, a corporation of Delaware

Filed Jan. 4, 1960, Ser. No. 315
2 Claims. (Cl. 18—54)

1. In the process of producing a filament from an acrylonitrile polymer wherein the said polymer is dissolved in a solvent selected from the group consisting of N,N-dimethylformamide and N,N-dimethylacetamide and a stream of the resulting solution is extruded through a gaseous medium for a short distance and thereafter directed into a coagulating bath and wherein the resulting filament is withdrawn from the coagulating bath and stretched in a hot aqueous bath to orient the polymer molecules thereof after which the filament is dried and collected, the improvement of maintaining the temperature of the coagulating bath between +10 and −40° C. and a coagulating bath composition of essentially 100 to 20 percent water and 0 to 80 percent of the selected solvent.

3,088,794

PROCESS FOR SPINNING AND DRAWING POLYALKYLENE ISOPHTHALAMIDES

Willard Hallam Bonner, Jr., Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed Aug. 26, 1960, Ser. No. 52,028
4 Claims. (Cl. 18—54)

1. A process comprising the steps of: spining yarn from a polymer taken from the group consisting of polyhexamethylene isophthalamide and polytetramethylene isophthalamide; treating the as-spun yarn, in a taut condition, by soaking in an aqueous solution of dimethyl formamide; and drawing the treated yarn over a heated draw element.

3,088,795

CONTROLLING CORROSION IN WET GAS COLLECTION SYSTEMS

Joseph F. Chittum, Whittier, Calif., assignor to California Research Corporation, San Francisco, Calif., a corporation of Delaware

No Drawing. Filed Mar. 23, 1960, Ser. No. 16,912
5 Claims. (Cl. 21—2.7)

1. The method of substantially reducing corrosion in a pipeline carrying moist wet gas at elevated temperature and pressure which comprises introducing a mist of an oil solution of an oil soluble corrosion inhibitor into the flowing moist, wet gas stream in a first section of said pipeline from the point of initial condensation of water to the point downstream where the water content of the condensate has decreased to about 25%, and introducing a mist of an aqueous solution of a water soluble corrosion inhibitor into the flowing moist, wet gas stream in the downstream section of said pipeline having an aqueous condensate containing less than 25% water.

3,088,796

AMINE, ALCOHOL AND EMULSIFIER CORROSION INHIBITING COMPOSITION AND PROCESS

Harry Lewis Kahler, Feasterville, and James Kenneth Brown, Huntingdon Valley, Pa., assignors to Betz Laboratories, Inc., Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Filed Dec. 14, 1960, Ser. No. 83,128
21 Claims. (Cl. 21—2.7)

1. The process of protecting metal surfaces against corrosion by a flowing stream of a member of the group consisting of corrosive aqueous liquid and vapor, which comprises adding to such flowing stream a dispersion of a film-forming aliphatic primary amine having between 14 and 29 carbon atoms in the carbon chain and an emulsifier according to the following formula:

$$\left[\begin{array}{l} CH_3 \\ | \\ R-N-(CH_2CH_2O)_xH \\ | \\ (CH_2CH_2O)_yH \end{array}\right]^+ Cl^-$$

where R is a residue of fatty acid having a carbon chain length of 10 to 29, and x and y total the mol ratio of polyoxyethylene to R in the molecule and involve a mol ratio of total polyoxyethylene to R of between 5:1 and 15:1.

3,088,797

PROCESS FOR SEPARATION OF BORON-CONTAINING COMPOUNDS FROM MIXTURES CONTAINING SAME AND A HYDROGEN HALIDE

Jawad H. Murib, St. Bernard, Ohio, assignor to National Distillers and Chemical Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed May 8, 1959, Ser. No. 811,808
8 Claims. (Cl. 23—14)

1. A process for separating boron-containing compounds from mixtures thereof with hydrogen chloride which comprises contacting a mixture comprising hydrogen chloride and a boron-containing compound from the group consisting of boron trichloride, boron hydrogen chlorides, and mixtures thereof with a diaryl sulfide to selectively complex the boron-containing compounds, and dissociating the resulting complex to recover the boron-containing compounds.

3,088,798

EXTRACTION OF A METAL FROM SOLUTIONS CONTAINING SAME

Charles A. Fetscher, Short Hills, N.J., assignor to Nopco Chemical Company, Harrison, N.J., a corporation of New Jersey

No Drawing. Filed May 25, 1959, Ser. No. 815,245
15 Claims. (Cl. 23—14.5)

10. A process for eluting a polyvalent metal from a solid, solvent insoluble polyamidoxime chelated with said metal which comprises the steps of bringing a solid, solvent insoluble polyamidoxime chelated with a single polyvalent metal selected from the group consisting of:

	pH
Rhodium	About 1.0
Thallium	About 1.5
Vanadium	About 1.5
Uranium	About 2.0
Ruthenium	About 2.0
Copper	About 3.5
Nickel	About 4.0
Cobalt	About 4.0
Chromium	About 4.0

into contact with a solution having a pH not numerically greater than the numerical value set forth above, whereby said metal is freed from its complex with said solid, solvent insoluble polyamidoxime and thereafter separating the solid polyamidoxime free from said metal from the solution enriched with said metal.

3,088,799

METAL EXTRACTION PROCESS

Charles A. Fetscher, Short Hills, N.J., assignor to Nopco Chemical Company, Harrison, N.J., a corporation of New Jersey

No Drawing. Filed May 25, 1959, Ser. No. 815,246
14 Claims. (Cl. 23—14.5)

11. A process for selectively eluting at least one polyvalent metal up to one less than the total number of polyvalent metals selected from the group consisting of:

	pH
Rhodium	About 1.0
Iron	About 1.5
Thallium	About 1.5
Vanadium	About 1.5
Uranium	About 2.0
Ruthenium	About 2.0
Copper	About 3.5
Nickel	About 4.0
Cobalt	About 4.0
Chromium	About 4.0

which is chelated with a solid, solvent insoluble polyamidoxime comprising the steps of bringing said chelated

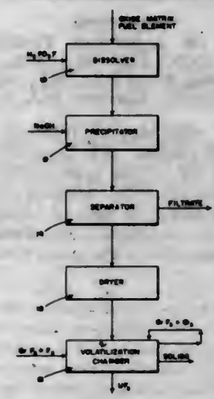
solid, solvent insoluble polyamidoxime into contact with a solution at a pH not numerically greater than the numerical value set forth above for said metals to be eluted so that at least from one of said metals up to one less than the total number of said metals is freed from its complex with said polyamidoxime and enters said solution and thereafter separating the solid polyamidoxime from the resulting metal enriched solution.

3,088,800

DISSOLUTION OF URANIUM FUELS BY MONO- OR DIFLUOROPHOSPHORIC ACID

Richard Johnson, Shoreham, Frederick L. Horn, Sayville, and Gerald Strickland, Blue Point, N.Y., assignors to the United States of America as represented by the United States Atomic Energy Commission

Filed Aug. 30, 1961, Ser. No. 135,085
1 Claim. (Cl. 23—14.5)



A method for dissolving and separating uranium from a uranium matrix fuel element consisting of the steps of dissolving said fuel element in a liquid solvent heated in the range of from 150–275° C. comprising an acid fluoride selected from the group consisting of monofluorophosphoric acid and difluorophosphoric acid, neutralizing said solution with a basic solution to precipitate uranium solids, converting said uranium solids to uranim hexafluoride by treating said solids with a halogen trifluoride to obtain uranium hexafluoride and thereafter volatilizing and recovering said uranium hexafluoride.

3,088,801

CHROMIUM AND BORON CONTAINING PRODUCT AND PROCESS FOR PRODUCING SAME

Alden Johnson Deyrup, West Chester, Pa., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed June 22, 1961, Ser. No. 118,788
7 Claims. (Cl. 23—50)

1. As a new composition of matter $CrXOH \cdot H_3BO_3$ in which X designates a halide selected from the group consisting of chlorine, bromine and iodine.

3,088,802

PRODUCTION OF TETRACHLOROPALLADATES

Francis Sidney Clements, Hunts Hill, and Eric Victor Nutt, Acton, London, England, assignors to The International Nickel Company, Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed June 3, 1960, Ser. No. 33,628
Claims priority, application Great Britain June 19, 1959
2 Claims. (Cl. 23—51)

1. A process for the production of a tetrachloropalladate salt of a metal selected from the group consisting of sodium, lithium, calcium, barium and zinc comprising reacting metallic palladium with at least one mole equivalent weight of gaseous chlorine and up to about two mole equivalent weights of gaseous chlorine in the presence of an aqueous solution of a chloride of a metal of said group while maintaining the temperature within the liquid range of water and not in excess of about 83° C and while maintaining the pressure at at least about one atmosphere to dissolve said metallic palladium and produce a palladium-containing solution, adding to the palladium-containing solution so produced an amount of metallic palladium substantially equal to that amount of palladium present in solution as the hexachloropalladate ion, allowing the reaction of the metallic palladium with the solution components to proceed to substantial completion to dissolve substantially all of the added metallic palladium and, thereafter, decomposing by heating any residual hexachloropalladate ion to form an aqueous solution of tetrachloropalladate ion having a pH value greater than about 3.

3,088,803

METHOD OF SEPARATING METAL VALUES FROM AMMONIACAL SOLUTIONS

Vladimir Nicolaus Mackiw and Vasyl Kunda, Fort Saskatchewan, Alberta, and Robert Lucien Benoit, Ste.-Foy, Quebec, Canada, assignors to Sherritt Gordon Mines Limited, Toronto, Province of Ontario, Canada, a company of Ontario

No Drawing. Filed Mar. 11, 1959, Ser. No. 798,597
Claims priority, application Canada Mar. 11, 1958
4 Claims. (Cl. 23—134)

1. The method of separating values of metals which form insoluble sulphides more readily than nickel in an ammoniacal ammonium sulphate solution which contains, in solution, at least one salt of a metal of the group consisting of nickel and cobalt; free ammonia in excess of about 2.0 mols per mol of dissolved nickel plus cobalt, a salt of at least one other metal which forms an insoluble sulphide more readily than nickel and a finite amount of an oxidizable sulphur compound selected from the group consisting of polythionates having more than two sulphur atoms in their molecular structure and thiosulphate but less than that required to provide, on oxidation, sulphur ions in amount sufficient to combine with said first mentioned metal values as sulphides; which comprises the steps of adjusting the free ammonia content of the solution to within the range of from about 2 to about 4 mols per mol of dissolved nickel plus cobalt, dispersing finely divided particles of elemental sulphur in the solution in excess of the amount required to combine with said first mentioned metal values to form metal sulphides, actively agitating the solution in an inert atmosphere at a temperature above about 100° F. to form and precipitate insoluble metal sulphides from the solution, and separating precipitated metal sulphides from the solution.

3,088,804

PROCESS FOR MAKING DIBORANE AND HIGHER BORON HYDRIDES

Alan L. McClelland, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Nov. 13, 1958, Ser. No. 773,550
14 Claims. (Cl. 23—204)

1. Process for preparing diborane and higher boron hydrides which comprises reacting, at a temperature of from 100° to 800° C., a member of the group consisting of boric oxide, boric acid and metal borates with hydrogen, aluminum and an aluminum halide in which the halogen is a member of the family consisting of chlorine, bromine and iodine.

3,088,805

A METHOD FOR PRODUCING ZIRCONIUM DIBORIDE

Perry G. Cotter, Norris, and Ralph A. Potter, Oak Ridge, Tenn., assignors to the United States of America as represented by the Secretary of the Interior

No Drawing. Filed Aug. 21, 1959, Ser. No. 835,376
4 Claims. (Cl. 23—204)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A method for making a self-bonding zirconium diboride abrasive and refractory material which comprises; reacting a mixture comprising zircon particles, boron carbide, and carbon at an elevated temperature in the range of from about 1350° C. to about 1900° C.

3,088,806

CARBON BLACK PROCESS

Merrill E. Jordan and Harvey M. Cole, Walpole, William G. Burbine, Whitman, and David L. Petterson, Wollaston, Mass., assignors to Cabot Corporation, Boston, Mass., a corporation of Delaware

No Drawing. Filed Nov. 28, 1960, Ser. No. 71,883
8 Claims. (Cl. 23—209.8)

1. In the process of producing carbon black in the presence of alkali metal additives in an impingement type process wherein a plurality of small hydrocarbon flames emanating from narrow burner tips impinge on a relatively cool surface, the improvement which prevents flame forking at said tips comprising introducing into the hydrocarbon feed material going to the flame, a substance which is stable at temperatures up to at least about 425° C., said substance also having a melting point of less than about 300° C. and containing a compound of an alkali metal having an atomic number of at least 19 at a rate sufficient to provide at least about 1000 parts by weight of said alkali metal per million parts of carbon black formed.

3,088,807

PRODUCTION OF PURE PHOSPHORUS

Forrest V. Williams, Dayton, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Jan. 3, 1961, Ser. No. 80,044
1 Claim. (Cl. 23—223)

The process for the purification of elemental phosphorus containing at least one of the impurities of the group of fluorine, chlorine, sulfur and tellurium compounds, which comprises contacting the said impure phosphorus with an excess of a metal selected from the group consisting of silver, cobalt, chromium, copper, iron, molybdenum, nickel, rhenium, rhodium, tantalum, vanadium, tungsten, tin, and zirconium at a temperature in the range of from 200° C. to 900° C. to form the metal phosphide, and thereafter thermally decomposing the said phosphide by applying at least one of the two conditions of (*a*) an increased temperature in the range of from 500° C. to 1500° C. and being at least 20° C. in excess of the temperature of formation of the higher phosphide, and (*b*) a lower pressure than the pressure at which the said higher phosphide was formed, thus yielding purified phosphorus and with the retention of at least a portion of the said original impurities in the said lower valent metal phosphide.

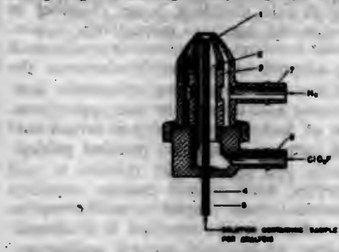
3,088,808

FLAME PHOTOMETRY

Harry Creston Mandell, Jr., Abington, Pa., assignor to Pennsalt Chemicals Corporation, Philadelphia, Pa., a corporation of Pennsylvania

Filed Oct. 28, 1957, Ser. No. 692,879
7 Claims. (Cl. 23—230)

1. A method for the quantitative determination in a material of the content of a metal element forming a refractory metal oxide and selected from the group consisting of Al, Ba, Ca, Cr, Cu, Fe, Mg and Sr which comprises exciting said material in a flame photometer by means of a flame derived from a flame source consisting essentially of perchloryl fluoride and a fuel selected from the group consisting of hydrogen, natural gas, manufactured gas, and mixtures of natural and manufactured gases measuring the intensities of energy emitted by the spectral lines of the metal fluorides and chlorides formed in the flame and comparing the spectral lines and their intensities with those of a material containing a known amount of said metal element.

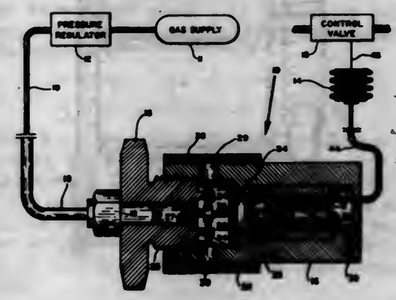


3,088,809

OXYGEN DETERMINATION

Paul M. Boatman, Davenport, Iowa, assignor to The Bendix Corporation, a corporation of Delaware

Filed Oct. 3, 1960, Ser. No. 60,128
3 Claims. (Cl. 23—232)



1. The method of continuously sensing the partial pressure of oxygen in one of a natural and a synthetic atmosphere for environmental control by utilizing the heat of the oxygen-hydrogen reaction which comprises the steps of supplying said hydrogen at a predetermined pressure in sufficient quantity to react all of the oxygen in a sample of said atmosphere, metering said hydrogen at a predetermined rate to inspirate said atmosphere, continuously homogeneously mixing said hydrogen and said atmosphere in a volumetric ratio substantially equal to a predetermined value, diffusing the mixed gases to a palladium catalyst, catalytically reacting all of said oxygen of said atmosphere with said hydrogen by means of exposure to said palladium catalyst, and continuously sensing the heat of reaction as a variation in temperature gradient.

3,088,810

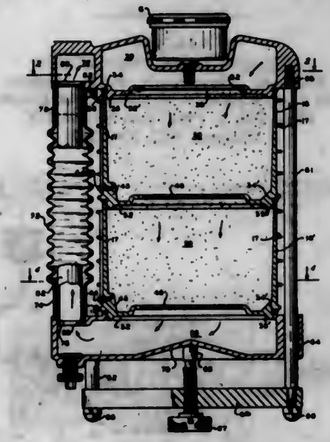
CARBON DIOXIDE ABSORBER

Wayne W. Hay, Madison, Wis., assignor to Air Reduction Company, Incorporated, New York, N.Y., a corporation of New York

Filed Dec. 15, 1958, Ser. No. 780,440
7 Claims. (Cl. 23—252)

1. A respiratory gas absorber device comprising upper and lower housing members disposed in confronting rela-

tion and movable toward and away from each other to receive therebetween an assembled series of at least two nested, separable canisters containing absorbent material effective to remove carbon dioxide upon contact with respiratory gases passed between said upper and lower housings and through said canisters, a gas chamber in each of said housings and openings respectively in confronting faces of said housings communicating with each of said chambers adapted to receive therebetween the top and bottom of said nested canisters, an annular seating surface surrounding said opening in said upper housing, a wall portion of said upper housing in which said opening is formed forming a partition member projecting laterally inwardly and downwardly relative to said annular seating surface, each of said canister members comprising a cylindrical open topped vessel having an upper seating edge adapted to be received in a substantially gas-tight manner against said annular seating surface of said upper housing and having an annular seating surface at the bottom thereof corresponding substantially with said annular seating surface formed on said upper housing and a perforated bottom opening encompassed within said canister annular seating surface in a transversely extending bottom portion of said canister forming a partition projecting laterally inwardly and



downwardly relative to said canister annular seating surface, said lower housing having an annular shoulder formed in the confronting face thereof surrounding said opening therein, said upper seating edges of said canisters and said annular shoulder of said bottom housing being arranged to interchangeably receive the annular seating surfaces of the bottoms of said canisters and of said upper housing in seating engagement, said partition member of said upper housing extending downwardly into the open top of the uppermost of the assembled canisters and the partition members of each of said canisters projecting downwardly into the open top of the next lower of said assembled canisters effecting thereby a compression of an annular outer strata of the absorbent charge material in each of said canisters to effectively equalize the distribution of the gas flow therethrough, and extensible conduit means extending between said upper and lower housings exteriorly of said canisters and between connecting means laterally disposed with respect to said openings in said upper and lower housings, said extensible conduit means effectively accommodating separation of said upper and lower housings to permit replacement of one or more of said canisters without breaking the gas connection between said housings therethrough, and respiratory gas inlet and outlet connections on one of said housings including gas passage means forming a respiratory gas circuit in which said respiratory gas is conducted from one of said housings to the other through said assembled canisters and returned to said housing through said extensible conduit means when said housings and canisters therebetween are in seated relation.

3,088,811
MOISTURE-LIQUID INDICATION DEVICES
Evan Jones, Evanston, Ill., assignor to Henry Valve Company, Melrose Park, Ill., a corporation of Illinois
Filed Dec. 24, 1959, Ser. No. 861,985
7 Claims. (Cl. 23—253)

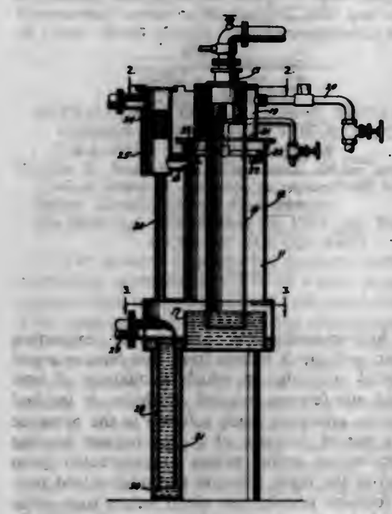


1. A moisture-liquid indicator for mounting in refrigerant flow lines, said indicator including a body portion having a through passageway for liquid refrigerant flow, an enlarged chamber area formed in said body portion to one side of said passageway and in communication therewith, collar-like means formed integral with said body portion and defining internally thereof a substantial portion of said chamber area, a transparent window assembly received in said collar-like means and closing off said chamber area, said window assembly including a window member peripherally encased by a pair of cooperating packing means which overlap the inner and outer face margins of said window member, an O-ring received about said window member between said packing means, a packing gland threadedly received in said collar-like means and in engagement with the outermost of said packing means, and moisture indication means mounted on shoulder means formed integral with said body portion in said chamber area, said moisture indication means being in engagement with the innermost of said packing means and being of centrally apertured disc-like shape for liquid refrigerant viewing therethrough and through said window member, said moisture indication means including a color changeable moisture sensitive portion which is responsive to moisture content variation in said refrigerant and which is observable through said window member.

3,088,812
SUBMERGED EXHAUST COMBUSTION UNIT
Gordon M. Bitterlich, Wayne, Alex L. Primas, Jeffersonville, and Patrick P. Hahn, Trooper, Pa., assignors to Thermal Research & Engineering Corporation, Conshohocken, Pa., a corporation of Delaware
Filed Feb. 12, 1959, Ser. No. 792,912
2 Claims. (Cl. 23—281)

1. A submerged exhaust combustion unit comprising in combination, an enclosed housing having a closed base, a fuel burner mounted adjacent the top of said housing and extending in a direction toward the base of said housing, said burner being adapted to burn fuel and exhaust the products of combustion downwardly in said housing, an elongated combustion gas downflow tube positioned in fluid communication with and surrounding said burner and projecting downwardly interiorly of said housing toward the base thereof, said downflow tube terminating at its discharge end at a predetermined distance above the base of said housing, said downflow tube being bare of lining interiorly and exteriorly and being operable to direct the products of combustion from said burner to the discharge end of said tube and adjacent the base of said housing, a

liquid chamber surrounding said downflow tube at the region of the burner for holding a body of cooling liquid, means for supplying cooling liquid to said chamber, means for supplying cooling liquid from said chamber to and down the outside surface of said tube while keeping the inside of said tube free from liquid, a gas outlet for cooled combustion gas near the upper end of said housing, means disposed at least as high as the height of said gas outlet for supplying a cooling liquid spray to the interior of said housing into upflowing combustion gas, an open-topped spill basin positioned at the base of said housing around the discharge end of said tube and for a limited



height above the lower end of the tube, said spill basin being formed by an annular wall having a top overflow edge spaced away from said housing, said spill basin being arranged to receive downflowing liquid supplied in said housing to maintain a liquid level at the top overflow edge of said annular spill basin wall and above the lower end of said combustion gas tube, and a liquid sealed gas trap and liquid outflow pipe located in the housing below the overflow edge of said annular spill basin for confining the gas against escape at the base of the housing while permitting liquid outflow from said spill basin and escape of liquid from said housing.

3,088,813
ANTIKNOCK MOTOR FUELS
Charles A. Sandy and James H. Wernatz, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed July 8, 1959, Ser. No. 825,679
16 Claims. (Cl. 44—69)

1. A motor fuel for internal combustion engines equipped with fuel injection systems which consists essentially of hydrocarbons boiling in the gasoline boiling range containing, in an amount sufficient to provide from about 0.01 to about 2.0 grams of lithium metal per gallon of fuel, at least one lithium salt of the formula

$$LiOOC—Q—COOR$$

wherein R is a hydrocarbon radical of 1 to 18 carbon atoms of the group consisting of alkyl and alkenyl radicals and Q is a hydrocarbon radical of 1 to 10 carbon atoms of the group consisting of saturated acyclic, alicyclic and methylene substituted alicyclic radicals.

3,088,814
ORGANO-BIMETALLIC COMPOSITIONS
Richard D. Gorsich, Baton Rouge, La., assignor to Ethyl Corporation, New York, N.Y., a corporation of Virginia
No Drawing. Original application Aug. 5, 1960, Ser. No. 47,603, now Patent No. 3,050,537, dated Aug. 21, 1962. Divided and this application Dec. 5, 1961, Ser. No. 163,947
2 Claims. (Cl. 44—69)

1. A liquid hydrocarbon fuel of the gasoline boiling range for spark ignition internal combustion engines containing, in an amount sufficient to improve the octane quality thereof, a compound of the general formula

$$R_nM^4[Mn(CO)_5]_{4-n}$$

wherein R is a radical selected from the group consisting of alkyl, aryl, cycloalkyl, aralkyl and alkaryl radicals containing from 1 to about 18 carbon atoms, M^4 is an element of group IV–A of the periodic system having an atomic number from 14 to 82, inclusive, and n is an integer from 2 to 3, inclusive.

3,088,815
FUEL OIL
Stanley C. Haney, Homewood, and Joseph A. Verdol, Dolton, Ill., assignors, by mesne assignments, to Sinclair Research Inc., New York, N.Y., a corporation of Delaware
No Drawing. Filed Mar. 27, 1958, Ser. No. 724,254
5 Claims. (Cl. 44—71)

1. A fuel composition consisting essentially of a hydrocarbon fuel base distilling in the range of about 150 to 700° F. having a 90 percent distillation point of at least about 450° F. and about 1 to 100 pounds per 1000 barrels of said hydrocarbon fuel of an ester characterized by the formula:

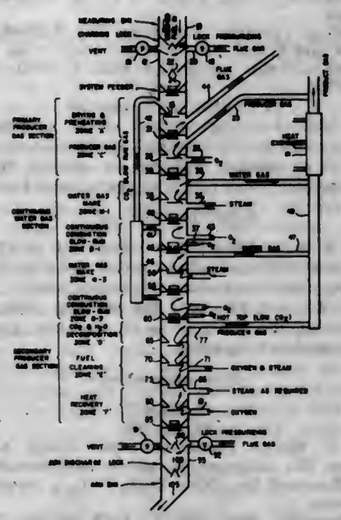
$$HO\left(\overset{O}{\overset{\|}{C}}—R—\overset{O}{\overset{\|}{C}}—OR''—\overset{R'}{\overset{|}{N}}—R''—O\right)_yH$$

wherein R is a non-aromatic divalent hydrocarbon radical containing 8 to 38 carbon atoms, R′ is an alkyl radical containing 4 to 20 carbon atoms, R″ is an alkyl group of 2 to 4 carbon atoms, R and R′ contain a total of 20 to 44 carbon atoms and y is from 1 to an integer providing a fuel compatible ester, said amount of ester being sufficient to provide a composition of high temperature stability.

3,088,816
METHOD AND APPARATUS FOR THE DRY ASH GENERATION OF HYDROGEN AND CARBON MONOXIDE GASES FROM SOLID FUELS
Morgan G. Huntington, Washington, D.C., assignor to Huntington Chemical Corporation, a corporation of Utah
Filed Dec. 9, 1960, Ser. No. 74,907
12 Claims. (Cl. 48—63)

1. A gasification system for the continuous production of gases utilizing solid fuels comprising; a continuous vertical pressurized vessel through which solid fuel may flow vertically downward in a controlled manner, a plurality of gyratory feeder shelf units vertically spaced at various horizons within the pressurized vessel and adapted to retain a predetermined amount of solid fuel thereon and feed the solid fuel therefrom at a predetermined rate so that selected ones of the gyratory feeder shelf units may retain a sufficient amount of solids to create an effective gas seal by carrying deep separating beds of solids, means for continuously introducing an oxidizing gas into the fuel as it is continuously fed downwardly in the vessel to react with the carbon in the fuel and thereby heat the solid fuel to a temperature below its ash fusion temperature, means for passing steam into contact with the hot dry ash fuel within the vessel between

a pair of deep separating beds to chemically react with the hot fuel for continuously producing water gas, and means



for withdrawing the water gas so produced from the pressurized vertical vessel.

3,088,817
METHOD OF CONTROLLING UNDESIRABLE PLANT GROWTH
Sidney B. Richter, Chicago, Ill., assignor to Velsicol Chemical Corporation, Chicago, Ill., a corporation of Illinois
No Drawing. Filed Dec. 7, 1960, Ser. No. 74,238
6 Claims. (Cl. 71—2.3)

1. A method of destroying growing weeds which comprises contacting said weeds with a herbicidal composition comprising an inert carrier and a compound selected from the group consisting of 3-amino-2,4,4,5,5-pentachlorocyclopent-2-en-1-one and 3-amino-2,2,3,4,4,5,5-heptachlorocyclopentan-1-one in a quantity which is herbicidally toxic to said weeds.

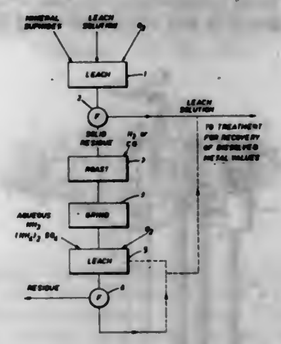
3,088,818
BIS(TETRACHLOROETHYL) DISULFIDE
Emil J. Geering, Grand Island, N.Y., assignor to Hooker Chemical Corporation, Niagara Falls, N.Y., a corporation of New York
No Drawing. Filed Mar. 23, 1959, Ser. No. 800,933
8 Claims. (Cl. 71—2.7)

4. The method for regulating the growth of plants which comprises applying to the media to be treated a composition comprising as an active ingredient bis(tetrachloroethyl) disulfide.

3,088,819
PROCESS AND COMPOSITION FOR REDUCING CORROSION OF ALUMINUM METALS
Garland B. Funkhouser, Hopewell, Va., assignor to Allied Chemical Corporation, a corporation of New York
No Drawing. Filed May 20, 1955, Ser. No. 510,046
12 Claims. (Cl. 71—50)

1. The process for reducing corrosion of aluminum and its alloys in contact with a non-alkaline solution of ammonium phosphate and ammonium nitrate in water, which comprises incorporating in said solution 0.05% to 1% by weight of an inorganic fluoride (calculated as F) soluble in the solution.

3,088,820
PROCESS FOR THE RECOVERY OF METAL VALUES FROM LOW GRADE MATERIALS
Vladimir Nicolaus Mackiw, Port Saskatchewan, Alberta, and John Pelham Warner, Edmonton, Alberta, Canada, assignors to Sherritt Gordon Mines Limited, Toronto, Ontario, Canada, a company of Ontario
Filed May 18, 1959, Ser. No. 813,942
6 Claims. (Cl. 75—7)



1. In a hydrometallurgical process for extracting nickel, copper and cobalt values from non-ferrous metal bearing mineral sulphides in which a mixture of iron sulphides and non-ferrous mineral sulphides is leached with an aqueous ammonia leach solution in the presence and under a partial pressure of a free oxygen bearing gas and non-ferrous metal values are extracted from and dissolved in the leach solution and undissolved residue, which contains non-ferrous metal values iron oxide and iron sulphide at least part of which is in the form of pyrite, is separated from the metal bearing leach solution, the improvement in combination therewith which comprises reacting said residue with a reducing agent at a temperature above about 1000° F. to reduce the pyrite content thereof to pyrrhotite with concurrent reduction of metal oxides to a lower state of oxidation, and thereafter leaching the reduced, non-ferrous metal bearing material at a temperature above about 100° F. with an ammoniacal ammonium sulphate solution in the presence and under a partial pressure of a free oxygen bearing gas, and continuing said last mentioned leaching step to extract non-ferrous metal values from said reduced non-ferrous metal bearing material and dissolve them in the leach solution.

3,088,821
OPEN HEARTH STEELMAKING PROCESS
Dalton F. Brion, Bethlehem, Pa., Carl F. Norbeck, Buffalo, N.Y., and Theodore B. Winkler, Bethlehem, Pa., assignors to Bethlehem Steel Company, a corporation of Pennsylvania
No Drawing. Filed Oct. 4, 1960, Ser. No. 60,294
4 Claims. (Cl. 75—52)

1. A method of operating an open hearth steelmaking furnace, comprising the steps of charging iron ore, limestone or burnt lime, ferrous scrap and molten pig iron into the furnace, burning a fuel above said charge until the charging operation is complete, thereafter applying gaseous oxygen for the refining of the resulting bath from a plurality of nozzles about 4" above the slag-metal interface at a mass velocity above 100 lb./sec.×sq. ft., reducing the firing rate once the application of gaseous oxygen has begun and maintaining an atmosphere in the downtakes containing several percent free oxygen and a furnace pressure less than atmospheric at all doors of the furnace.

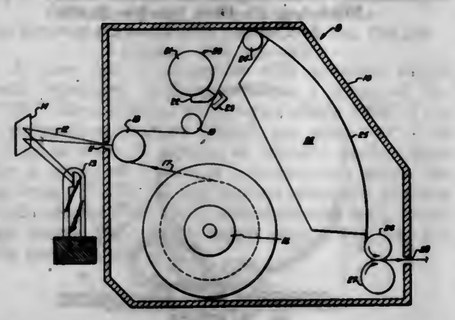
3,088,822
PRODUCTION OF URANIUM METAL
James Elgie Lloyd and Donald Duxbury, Lea, Preston, England, assignors to United Kingdom Atomic Energy Authority, London, England
No Drawing. Filed Jan. 20, 1960, Ser. No. 3,496
Claims priority, application Great Britain Jan. 22, 1959
2 Claims. (Cl. 75—84.1)

1. In the production of uranium metal by the reduction of uranium tetrafluoride with magnesium metal, the steps of heating a compacted charge of the reactants in a reaction vessel to a temperature below the reaction initiation temperature while evacuating the vessel, and continuing heating of the charge to said reaction initiation temperature under a blanket of inert gas at a pressure of about 10–15 pounds above atmospheric pressure.

3,088,823
SEPARATION OF URANIUM METAL FROM OXIDES AND SLAG IN THE REDUCTION OF URANIUM TETRAFLUORIDE
Orville R. Magoteaux, Cincinnati, Ohio, assignor to the United States of America as represented by the United States Atomic Energy Commission
No Drawing. Filed June 26, 1961, Ser. No. 119,747
4 Claims. (Cl. 75—84.1)

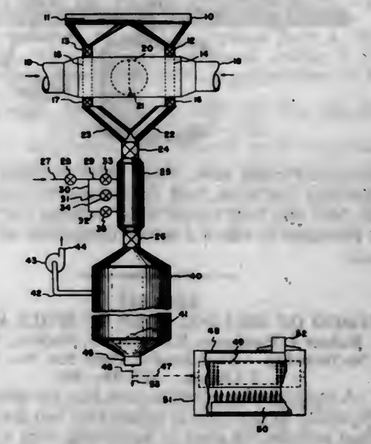
1. The process of preparing uranium metal from UF_4 containing approximately 3 to 10 weight percent uranium oxides which comprises mixing said oxide-containing UF_4 with magnesium in excess of the stoichiometric amount required to reduce said UF_4, providing lead in the resulting mixture at a proportion of at least approximately 0.2 weight percent of the uranium values in said mixture, heating the resulting lead-containing mixture until said mixture reacts whereby uranium metal and slag are formed, recovering the resulting lead-containing uranium metal and heating said lead-containing uranium metal under vacuum whereby said lead is substantially completely removed.

3,088,824
RAPID PHOTOGRAPHIC DEVELOPING
John H. Jacobs, Altadena, Calif., assignor, by mesne assignments, to Consolidated Electrodynamics Corporation, Pasadena, Calif., a corporation of California
Filed Feb. 17, 1959, Ser. No. 793,727
4 Claims. (Cl. 96—63)



2. The method of rapidly developing a silver halide photosensitive emulsion on one side of a support with an alkaline developer solution for the silver halide emulsion containing an alkali thermally unstable between about 90° C. and about 120° C., the support also having a thermally unstable compound which releases an acid gas above the range of about 90° C. to about 120° C., the method comprising exposing the emulsion to light, wetting the emulsion with a thin film of the developer and alkali solution while maintaining the opposite side of the support dry, thereafter heating the wetted emulsion to drive off the unstable alkali and lower the pH of the solution on the emulsion, whereby the developing activity of the solution is decreased, and thereafter heating the support sufficiently to decompose the said compound to produce an acid gas.

3,088,825
PRESSURE ROASTING OF COFFEE
Harry H. Topalian, Pearl River, N.Y., and Varnum D. Ludington, Greenwich, Conn., assignors to General Foods Corporation, White Plains, N.Y., a corporation of Delaware
Filed May 15, 1962, Ser. No. 196,845
3 Claims. (Cl. 99—68)

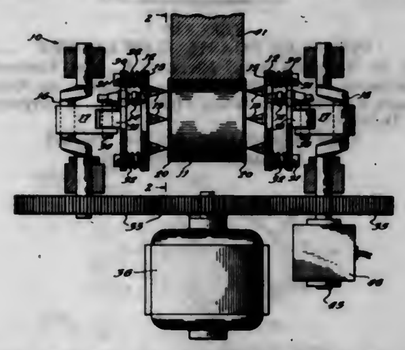


1. Process for roasting whole green coffee beans at an increased rate in a roasting cycle comprising a preheating period and a roasting period, said roasting period being characterized by the ue of the highest temperatures and pressures in said cycle and by the fact that the moisture content is highest during said period; which comprises charging whole green beans to a preheating zone and preheating the beans therein to a bean temperature of 240° F. to 390° F. for a time of 1 to 3 minutes, and at substantially atmospheric pressure; feeding the beans to a roasting chamber and heating the same to a temperature of 370° F. to 550° F. and at a pressure of 190 to 1030 p.s.i.g. for a time of about 0.3 to 4 minutes, thereby to roast the beans, then suddenly releasing the pressure in said chamber and coincidently therewith cooling said beans by discharging the contents of said chamber into an expansion zone where the beans are collected and recovering as a product roasted beans having a soluble solids content of about 30 to 40% by weight, said roasted product having a soluble solids content of up to 10–15% by weight higher than conventionally roasted beans.

3,088,826
METHOD FOR MAKING COFFEE
Frank J. Renner, 6 W. Fairview, Arlington Heights, Ill.; George B. Renner, 211 Olive St., Prospect Heights, Ill.; and William M. Renner, 614 S. Louis St., Chicago, Ill.
Original application Mar. 5, 1956, Ser. No. 569,588. Divided and this application Aug. 26, 1959, Ser. No. 836,210
1 Claim. (Cl. 99—71)

In the method of making coffee which involves the use of a fluid circuit having a confined pressure extracting zone which is capable of withstanding the pressure of the water passing through the same, and forcing hot water through coffee grounds contained in said extracting zone,

the steps of packing the coffee in a rigid container when freshly ground and sealing same in order to maintain the freshly ground coffee out of contact with oxygen until immediately prior to the extracting operation, and constituting said original rigid container as the said confined



pressure extracting zone, which latter includes the steps of piercing the same, and connecting the pierced container into said fluid circuit while utilizing the rigidity of said container to effect a sealed connection in said fluid circuit.

3,088,827
METHOD OF MILLING CORN TO SIMULATE RICE
Robert I. Kaufman, P.O. Box 85, Malden, Mass.
No Drawing. Filed June 7, 1960, Ser. No. 34,361
2 Claims. (Cl. 99—80)

1. A method of processing corn into particles substantially similar to rice both in appearance and texture which method includes the steps of converting corn kernels into corn grits each with an irregular rough and jagged surface, and removing the irregularities and jaggedness from each grit surface by abrading said grits to a smooth surface giving said grits the appearance of translucent polished rice.

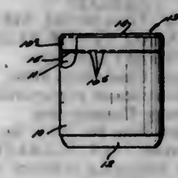
3,088,828
METHODS FOR TREATING CORN FLOUR
Herbert O. Reuner, 332 N. Wolf Road, Des Plaines, Ill.
No Drawing. Filed June 23, 1959, Ser. No. 15,781
(Filed under Rule 47(b) and 35 U.S.C. 118)
4 Claims. (Cl. 99—91)

1. A method for treating corn flour to at least improve the water imbibing capacity thereof, comprising combining acetone and hydrogen peroxide with the corn flour, the acetone and hydrogen peroxide being employed in a weight ratio of from 100:1 to 1:20 and amounts sufficient to provide in the flour a hydrogen peroxide equivalent content of from 0.01% to several percent of the flour weight, and heating the flour at a product temperature which is at least 70° C. but below that at which carmelization occurs in the flour being treated, and thereby causing the acetone and hydrogen peroxide to react to form a reaction product mixture which contains a material proportion of bis-(1,1'-hydroperoxy 1,1'-methyl) diethyl peroxide and is capable of increasing the water imbibing capacity of the flour and bleaching the flour.

3,088,829
GLAZED BAKERY PRODUCT AND METHOD OF MAKING SAME
Robert M. Rapaport, Prairie Village, Kans., assignor to Food Products Corporation, Inc., Kansas City, Kans., a corporation of Kansas
No Drawing. Filed Feb. 16, 1961, Ser. No. 89,646
5 Claims. (Cl. 99—139)

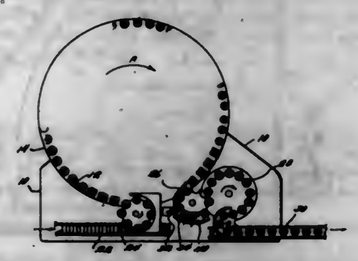
1. A bakery product having a decorative, spoilage-resistant glaze on the surface thereof, said glaze comprising at least a major part of acetylated starch and characterized by being deposited on said product with a water vehicle wherein said acetylated starch forms a dispersal product and is dispersed in a proportion of about one to two parts by weight of acetylated starch to ten parts by weight of water and wherein a major portion of said water evaporates with heat generated during baking of said product.

3,088,830
HERMETICALLY SEALED FOOD PACKAGE WITH TAMPER RESISTANT CLOSURE
Robert E. Graham, Toledo, Ohio, assignor to Owens-Illinois Glass Company, a corporation of Ohio
Filed Oct. 20, 1959, Ser. No. 847,485
1 Claim. (Cl. 99—171)



A hermetically sealed container consisting of a receptacle having a body portion formed with a mouth-defining wall, a food item enclosed therein, a skirted screw-threaded closure cap telescoped over and removably secured to the mouth-defining wall to hermetically seal the receptacle, a readily multilatable paper band encircling contiguous areas of the body and closure cap skirt and means adhesively bonding the band to the receptacle only, said band extending axially over the closure cap skirt a substantial degree whereby to preclude sufficiently effective manual grasping of the closure cap to remove same from the receptacle independently of and without visibly mutilating the band.

3,088,831
AIR FREE PACKAGING
Frederick E. Fauth and Rudolph H. Broeback, Baltimore, Md., assignors to Crown Cork & Seal Company, Inc., Baltimore, Md., a corporation of New York
Filed Aug. 25, 1960, Ser. No. 51,976
14 Claims. (Cl. 99—182)



1. The method of packaging an edible fluid product susceptible to foaming in a container comprising the steps of: filling the container with the product to a level where a head space remains in the container; allowing foam to rise in the head space of the container toward the lip of the same; subjecting an area immediately adjacent the container's lip while the container is open and prior to closing with energy vibrations of sufficient frequency to cause bursting of bubbles of foam as the foam approaches the lip of the container; and then closing the container.

3,088,832
ALUMINA BASE CERAMIC
Arthur V. Somers, Flushing, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
No Drawing. Filed June 7, 1961, Ser. No. 115,322
3 Claims. (Cl. 106—39)

1. A fired ceramic body characterized by a high fired density of at least about 3.9 and showing on chemical analysis aluminum oxide at least 95% by weight and at least a small but effective amount up to 1.5% by weight niobium oxide to provide said high fired density.

3,088,833
SEALING GLASS
Perry P. Pirooz, Toledo, Ohio, assignor to Owens-Illinois Glass Company, a corporation of Ohio
Filed June 6, 1960, Ser. No. 34,223
6 Claims. (Cl. 106—53)

1. A sealing glass composition having a fiber softening point below 600° C., a coefficient of expansion (0–425° C.) in the range from 45×10^{-7} to 69×10^{-7}, and consisting essentially of 11 to 29 weight percent PbO, 18 to 32 weight percent B_2O_3, 34 to 46 weight percent ZnO, 7 to 14 weight percent SiO_2, and 8 to 16 weight percent CuO.

3,088,834
THERMALLY DEVITRIFIABLE SEALING GLASSES
Perry P. Pirooz, Toledo, Ohio, assignor to Owens-Illinois Glass Company, a corporation of Ohio
No Drawing. Filed June 26, 1961, Ser. No. 119,315
2 Claims. (Cl. 106—53)

1. A sealing glass composition that is compatible with materials having expansion coefficients in the neighborhood of 50×10^{-7}, has a liquidus temperature above 2000° F., a fiber softening point above 600° C. but below 700° C. in the vitreous state, is capable of being thermally devitrified within a period of 1 hour at a temperature in the range from 675–750° C., and consists essentially of 16–18 weight percent PbO, 12–15 weight percent B_2O_3, 48–52 weight percent ZnO and 18–20 weight percent SiO_2.

3,088,835
THERMALLY DEVITRIFIABLE SEALING GLASSES
Perry P. Pirooz, Toledo, Ohio, assignor to Owens-Illinois Glass Company, a corporation of Ohio
No Drawing. Filed Sept. 15, 1961, Ser. No. 138,298
2 Claims. (Cl. 106—53)

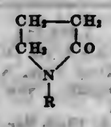
1. A glass that is compatible with materials having thermal expansion coefficients within a range of $35–50\times10^{-7}$, has a liquidus temperature above 1900° F., a fiber softening point above 600° C. but below 700° C. in the vitreous state, is capable of thermal devitrification within a period of 1 hour at a temperature within the range from 675–750° C. and consists essentially of about 5 weight percent PbO, 17–19 weight percent B_2O_3, 59–61 weight percent ZnO, 14–16 weight percent SiO_2 and 2–3 weight percent CuO.

3,088,836
TREATMENT OF SAWDUST AND SIMILAR PARTICLES, ESPECIALLY FOR USE AS A BASE LAYER
Moise Garti and Pierre Louis Buchet, Paris, France; said Buchet assignor to Centre Technique du Bois, Paris, Seine, France, a French organization
No Drawing. Filed June 21, 1960, Ser. No. 37,597
Claims priority, application France June 23, 1959
4 Claims. (Cl. 106—282)

1. A method of making a flowable mass of discrete particles for a sub-floor layer, comprising the steps of preparing a bath of water and solution of a bituminous substance in a solvent therefor immiscible with water, said bituminous substance and said solvent forming a solution constituting between substantially 5 and 10% by volume of said bath; depositing discrete wood particles in said bath at substantially ambient temperature whereby said water expands the pores of said particles, thereby facilitating substantially complete penetration of said bituminous substance into said particles to produce a substantially noncoherent mass of individual particles each impregnated with said substance, the total volume of said discrete wood particles being substantially equal to that of said bath.

3,088,837
PREPARATION OF PAINT COMPOSITIONS CONTAINING A PYRROLIDONE COMPOUND
Francis J. Prescott, Flushing, N.Y., and Emil A. Wich, Plainfield, N.J., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed Sept. 23, 1959, Ser. No. 841,698
8 Claims. (Cl. 106—262)

1. In the preparation of a colored paint composition having a water-insoluble binder, the improvement which consists in milling a mixture of a colored pigment with a non-aqueous liquid component of said composition comprising a pyrrolidone compound having the formula



wherein R is a member of the group consisting of hydrogen and alkyl and alkenyl groups having up to 4 carbon atoms, any additional components of said composition being subsequently incorporated with the resulting milled mixture, the amount of said pyrrolidone compound being at least 1% of the weight of the colored pigment and at least 0.1% of the weight of the mixture subjected to milling, and not substantially exceeding 10% by weight of the ultimate paint composition.

3,088,838
METHOD FOR PRODUCING CLEAR AQUEOUS POLYETHYLENE OXIDE SOLUTIONS
William R. Woodard, Moulton, and Paul R. Cox, Jr., Decatur, Ala., assignors, by mesne assignments, to Monsanto Chemical Company, a corporation of Delaware
No Drawing. Filed July 18, 1960, Ser. No. 43,311
11 Claims. (Cl. 106—287)

1. A method of clarifying aqueous solutions of polyethylene oxide which consists of adding to an aqueous solution consisting of from 2 to 85 parts polyethylene oxide and 15 to 98 parts water from 0.1 to 1.0 part of an aqueous solution of glyoxal, comprising from 10 to 50 percent glyoxal based on the total weight of the aqueous solution of glyoxal, and stirring until the solution becomes clear.

3,088,839
POLYMER COATINGS CONTAINING A TERTIARY TRIDECANOIC ACID
Donald H. Antonsen, Wilmington, Del., Anthony H. Gleason, Scotch Plains, and Marlow H. Paulson, Jr., Fanwood, N.J., and Walter L. Van Nostrand, Jr., Staten Island, N.Y., assignors to Esso Research and Engineering Company, a corporation of Delaware
No Drawing. Filed June 27, 1961, Ser. No. 119,777
9 Claims. (Cl. 106—287)

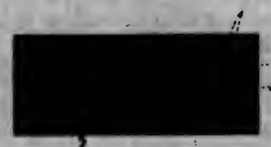
1. A composition of matter consisting essentially of an oxidized polymer of a C_4 to C_6 conjugated diolefin con-

taining 10 to 20% by weight of oxygen in its structure; and 2 to 15% by weight of a zinc salt of a tertiary tridecanoic acid.

3,088,840
TREATMENT OF TITANIUM DIOXIDE
Kenneth Arkless, Stockton-on-Tees, and Edward Whayman, Middlesbrough, England, assignors to British Titan Products Company Limited, Billingham, England, a corporation of Great Britain
No Drawing. Filed Nov. 13, 1959, Ser. No. 852,603
Claims priority, application Great Britain Sept. 3, 1959
20 Claims. (Cl. 106—300)

1. A process of reducing the acidity of titanium dioxide particles produced by reaction of titanium tetrahalide vapor with oxidizing gas resulting in a suspension of particulate titanium dioxide in gas from said reaction, which particulate titanium doxide is separated from said gas suspension, which comprises feeding water vapor to a zone at 50° to 500° C. to contact said separated titanium dioxide particles therein while distributing through the titanium dioxide particles in said zone a small amount of boron compound in vapor state which on interreaction with water forms boric acid, which boron compound and water vapor are provided in said zone in an amount sufficient to reduce the acidity of said titanium dioxide to a pH of at least 5.

3,088,841
SAFETY INKS AND DOCUMENTS
Clifford D. Guertin, River Vale, N.J., assignor to American Bank Note Company, New York, N.Y., a corporation of New York
Filed Mar. 1, 1960, Ser. No. 12,211
4 Claims. (Cl. 117—1)



1. A printed document sensitive to attempted alteration comprising an area adapted to be written upon in ink and having a background of printed elements, certain of the background elements of said area being printed in bleachable, water-soluble and lower alcohol and lower ketone insoluble ink wherein said lower alcohol and said lower ketone contains not more than 8 carbon atoms per molecule and certain other background elements of said area printed in non-bleachable, water-insoluble and the aforesaid lower alcohol and the aforesaid lower ketone soluble ink so that certain printed elements are bleachable and water-soluble and said certain other printed elements are soluble in the aforesaid lower alcohol and in the aforesaid lower ketone.

3,088,842
IMPROVED TECHNIQUES FOR THE HIGH SPEED BLADE COATING OF PAPER
Paul T. Kuhnel, Neenah, Wis., assignor to Kimberly-Clark Corporation, Neenah, Wis., a corporation of Delaware
Filed May 11, 1959, Ser. No. 812,191
3 Claims. (Cl. 117—7)

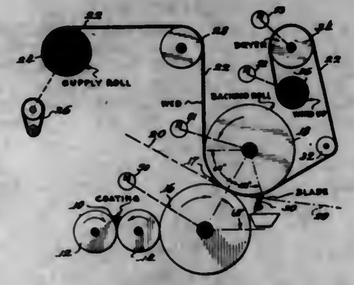
1. In a process for the production of coated paper in which a traveling paper web to be coated is continuously drawn on a resiliently surfaced backing roll from a first pressure nip formed between the resiliently surfaced driven backing roll and a driven coating applicator roll to a second pressure nip formed between the said backing roll and a flexible blade, the steps of:

(*a*) driving the said backing roll and said coating applicator in counter rotation and in the direction of web travel;

(*b*) tensioning the said traveling paper web as it is passed to the backing roll to the extent of about 60–80% of the web strength;

(*c*) wrapping the said web while so tensioned around the surface of said backing roll to the extent of at least a 90° circumferential arc;

(*d*) applying with said applicator roll an excess of a viscous coating to said web at said first pressure nip at a position following the position of web application to said backing roll surface by a circumferential arc of at least 45° to form a uniform layer of coating on

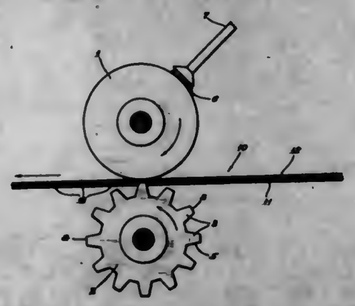


the web surface to force migration of the fluid contents of the coating into the web and to consequently expand the web lengthwise;

(*e*) pressing the driven backing roll and driven applicator roll together to form said first pressure nip under a light positive pressure while applying said coating to said tensioned traveling web; and

(*f*) thereafter removing the excess portion of the applied coating by passing said web on said backing roll to said second pressure nip formed by said flexible blade and said backing roll at a position following that of the coating application by a circumferential arc of at least 45°.

3,088,843
METHOD OF PERFORATING
Charles H. Schaar, Chicago, Ill., assignor to The Kendall Company, Boston, Mass., a corporation of Massachusetts
Filed Nov. 23, 1960, Ser. No. 71,315
11 Claims. (Cl. 117—10)



1. A method comprising applying a liquid to one side of a permeable tape backing on the other side of which is positioned a layer of thermoplastic pressure-sensitive adhesive, pressing a heated projection into said adhesive layer toward the permeable backing to pierce said adhesive layer through to the surface of said backing at the interface between said adhesive layer and said backing, contacting the tip of said projection against the surface of said backing at said interface with no relative linear motion at the time of contact between said backing and said tip of the projection and then withdrawing the heated projection therefrom.

3,088,844
PACKAGING MATERIAL AND PROCESS OF MAKING
Gordon P. Hungerford, Pittsford, N.Y., and Charles W. Cooper and James L. Kaufmann, Columbus, Ohio, assignors, by direct and mesne assignments, to National Distillers and Chemical Corporation, a corporation of Virginia
No Drawing. Filed Sept. 3, 1959, Ser. No. 837,767
16 Claims. (Cl. 117—47)

8. A process for improving the heat sealability of polyolefin films and imparting thereto such characteristics of stiffness and hot slip as to permit their use in commercial wrapping and packaging machines which consists essentially of (1) treating the surface of said polyolefin to render it adhesive, (2) applying to said treated surface a coating of 0.02 to 0.5 mil thickness consisting essentially of a copolymer of vinyl acetate and an ethylenically unsaturated acid having up to 6 carbon atoms wherein said vinyl acetate is in the amount of about 85 to about 98% by weight and said acid is in the amount of about 2 to about 15% by weight, said copolymer being capable of forming a cohesive bond at temperatures below the temperatures at which said polyolefin becomes substantially distorted, and a finely divided inorganic siliceous material, and (3) thereafter drying said thus coated polyolefin.

3,088,845
METHOD OF IMPREGNATING THE WOODEN STRUCTURE OF COOLING TOWERS TO PRESERVE THE SAME
Donald R. Baker, Blue Springs, Mo., and Charles E. Loetel, Overland Park, Kans., assignors to The Marley Company, Kansas City, Mo., a corporation of Delaware
No Drawing. Filed June 16, 1959, Ser. No. 820,609
3 Claims. (Cl. 117—57)

1. In a method of treating the wooden structure of cooling towers by impregnation with a wood preservative subsequent to fabrication thereof, the improved steps of:

completely saturating the wooden structure of the cooling tower to be treated with wood preservative, with water and while the tower is in a fabricated condition;

confining a quantity of water sufficient only to substantially cover and provide a layer of water over the entire outer surface of the wooden structure of the cooling tower to be treated with said wood preservative;

adding predetermined amounts of normally substantially water soluble preservative ingredients to said quantity of water to produce a treating composition and including a metallic sulfate, a metallic dichromate, an arsenic compound and a component having a fluoride radical, all of said ingredients being at least partially dissolved in said quantity of water and present in amounts to effect impregnation of said wooden structure to be treated, with sufficient active ingredients to preserve the wood for an extended period of time, said ingredients being capable of reacting above a pH of approximately 3.5 to form a water insoluble wood preservative;

applying the treating composition to all of the outer surfaces of said wooden structure to be treated with the wood preservative;

applying water to said outer surfaces of the wooden structure undergoing treatment and while the treating composition is thereon, only sufficient water being applied to maintain the surfaces of the wooden structure in a moist condition with minimum runoff, and until the ingredients have diffused into the water saturated wooden structure;

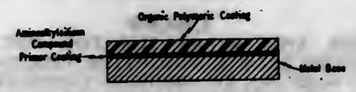
maintaining the proportion of the treating solution on the outer surface of said water saturated wooden structure at a pH below 3.5 until substantially said amounts of the ingredients have penetrated into the wooden structure; and

then raising the pH of the composition in said water saturated wooden structure to a level above 3.5 by passing an alkali neutralizing agent over said wooden structure to thereby cause the ingredients to react and form insoluble precipitates within the wooden structure.

3,088,846
PROCESSES OF TREATING NICKEL-PHOSPHORUS ALLOY COATINGS AND THE RESULTING MODIFIED COATINGS
Warren G. Lee, Gary, Ind., assignor to General American Transportation Corporation, Chicago, Ill., a corporation of New York
No Drawing. Filed Jan. 24, 1962, Ser. No. 168,526
10 Claims. (Cl. 117—71)

1. The process of increasing the corrosion resistance of a nickel-phosphorus coating carried by a metal workpiece and applied thereto by chemical plating from an aqueous plating bath of the nickel cation-hypophosphite anion type, wherein said coating comprises by weight about 85% to 97% nickel and about 3% to 15% phosphorus; said process comprising immersing said coated workpiece during a suitable time interval in a treatment bath, said treatment bath essentially comprising an aqueous solution of a water soluble compound selected from the class consisting of chromic acid anhydride, alkali metal chromate and alkali metal dichromate, said treatment bath containing by weight at least about ½% chromate ions.

3,088,847
AMINOALKYL SILICON COMPOUNDS AS BONDING AGENTS FOR RESINS TO METALS
Arthur N. Pines, Snyder, N.Y., assignor to Union Carbide Corporation, a corporation of New York
Filed May 26, 1959, Ser. No. 815,817
37 Claims. (Cl. 117—75)



1. Process of forming a composite article, which comprises applying to a metal surface a thin film of an aminoalkyl silicon compound containing the group:

$$(>N—R—Si\equiv)$$

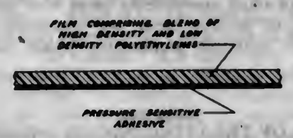
wherein R is a divalent saturated aliphatic or saturated or unsaturated cyclic hydrocarbon radical having a chain of at least three carbons and wherein nitrogen is attached to at least a third carbon removed from silicon, wherein each of the free bonds of the nitrogen atom is bonded to a member of the class consisting of hydrogen, hydrocarbyl, aminoalkyl and $[—(CH_2)_aSi\equiv]$, wherein (*a*) is an integer of at least three and wherein at least one free bond of silicon is attached to a group from the class of alkyl and silicon through Si—O bonds and the remaining free bonds of silicon are attached to hydrocarbyl, and said metal substrate being selected from the group consisting of the metals lying below and including magnesium in the electromotive series and alloys thereof, and then applying a coating of an organic polymeric material to said metal surface over said film.

3,088,848

PRESSURE-SENSITIVE ADHESIVE TAPE HAVING A MOLECULARLY ORIENTED FILM BACKING COMPRISING A BLEND OF HIGH DENSITY AND LOW DENSITY POLYETHYLENES

Ludwig Tritsch, Wilmette, Ill., assignor to The Kendall Company, Boston, Mass., a corporation of Massachusetts

Filed Mar. 24, 1961, Ser. No. 99,662
4 Claims. (Cl. 117—122)



4. A pressure-sensitive adhesive tape having a differential roll speed calendered molecularly oriented polyethylene film backing and a pressure-sensitive adhesive on at least one side thereof, said film backing comprising a blend of a major proportion of a low density polyethylene having a density of about 0.92 and a minor proportion of a high density polyethylene having density of from about 0.95 to 0.98, the proportion of high density polyethylene being at least about 5% but less than that amount which effect is additive to the tensile strength of low density polyethylene in an extruded form of a blend thereof.

3,088,849

FLUOROCARBON-SUBSTITUTED MERCAPTANS

William S. Friedlander, Hudson, Wis., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

No Drawing. Filed Dec. 11, 1961, Ser. No. 158,608
22 Claims. (Cl. 117—127)

18. Metallic articles which have been coated with fluorocarbon-substituted alkyl mercaptans represented by the formula:

$$R_f—alk—SH$$

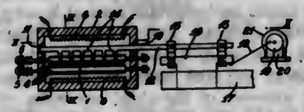
wherein R_f is a saturated fluorocarbon structure containing from 4 to 18 fluorinated carbon atoms and —alk— is an alkylene radical having from 3 to 15 carbon atoms.

3,088,850

PROCESS AND APPARATUS FOR OBTAINING ELECTRICALLY CONDUCTIVE COATINGS ON THE SURFACE OF OBJECTS CONSISTING OF GLASS OR CERAMIC MATERIALS

Edgard Brichard, Jumet, Emile Plumat, Gilly, Gérard Meunier, Jumet, and Edouard Dellere, Marcinelle, Belgium, assignors to Union des Verreries Mecaniques Belges, Societe Anonyme, Charleroi, Belgium, a Belgian company

Filed Sept. 12, 1958, Ser. No. 760,651
Claims priority, application Belgium Sept. 17, 1957
12 Claims. (Cl. 117—211)



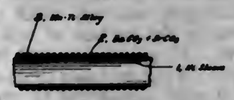
1. In a process for the production of a transparent, stable, electrically-conductive coating on the surface of a glass sheet by applying to the surface thereof while heated an oxidizing gas, an active compound of an element selected from the group consisting of tin, antimony and tellurium and, exclusive of the active element, an adjuvant compound selected from the group consisting of ammonium, antimony and tellurium compounds, the improvement comprising carrying said active and adjuvant compounds as anhydrous vapors within an inert anhydrous carrier gas separated from said oxidizing gas until said application at said surface.

3,088,851

METHOD OF MANUFACTURING OXIDE CATHODES AND CATHODES MANUFACTURED BY SUCH METHODS

Hendrikus Johannes Lemmens, Eindhoven, Jan Bloem, Nijmegen, and Edward Fokko de Haan and Marinus Jacobus Jansen, Eindhoven, Netherlands, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Filed Aug. 4, 1960, Ser. No. 47,357
Claims priority, application Netherlands Aug. 6, 1959
4 Claims. (Cl. 117—221)



1. A method of manufacturing an oxide cathode comprising depositing on a carrier consisting essentially of nickel a layer of alkaline-earth carbonates containing 0.5 to 3% of metallic manganese having an oxide free surface area.

3,088,852

MASKING AND FABRICATION TECHNIQUE

Boyd Cornelison, Dallas, and Elmer A. Wolff, Jr., Richardson, Tex., assignors to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware

Filed Oct. 20, 1959, Ser. No. 847,631
2 Claims. (Cl. 148—1.5)



1. In the fabrication of a semiconductor device, the steps of placing a thin metal mask defining an opening in intimate contact with a surface of a semiconductor body, said mask characterized by a thickness which is small relative to the thickness of the body and by a thin carbon film, having a thickness much less than that of said mask lying between the main portion of said mask and said body to prevent bonding and alloying therebetween, heating said mask and said semiconductor body to an elevated temperature, depositing contact material onto the area of the surface of the semiconductor body exposed by said opening in said mask while maintaining said semiconductor body at said elevated temperature so that the contact material will alloy therewith, moving said mask relative to said semiconductor body, exposing a new area of said body to said opening and depositing contact material onto said new area through said opening in said mask.

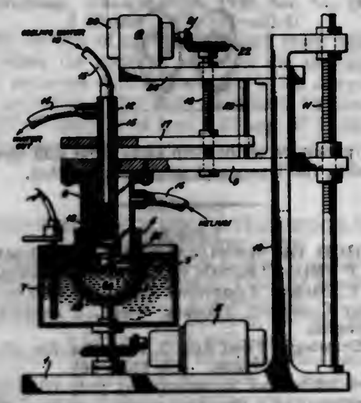
3,088,853

METHOD OF PURIFYING GALLIUM BY RECRYSTALLIZATION

James G. Harper, Dallas, Tex., assignor to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware

Filed Nov. 17, 1959, Ser. No. 853,562
3 Claims. (Cl. 148—1.6)

1. A process of purifying gallium by a single crystal growth method which comprises melting an impure quantity of gallium at about 38° C. in an inert ambient, bringing a seed crystal of gallium cooled to about 7° C. in contact with said melt while maintaining a layer of dilute hydrochloric acid in contact with said melt, withdrawing said seed at a rate of about 0.35 inch per hour to grow a crystal thereon and gradually increasing the speed of withdrawal to 1 inch per hour as the temperature of the melt is lowered to 32° C., and repeating the above procedure using the drawn crystal as the starting material in each successive recrystallization until the desired degree of purity is obtained.

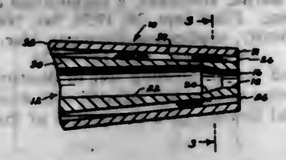


3,088,854

METHODS AND APPARATUS FOR CUTTING

George R. Spies, Jr., Murray Hill, N.J., assignor to Air Reduction Company, Incorporated, New York, N.Y., a corporation of New York

Filed Nov. 8, 1960, Ser. No. 67,992
17 Claims. (Cl. 148—9)



1. The method of cutting which comprises maintaining a cutting gas flow in a flow passage, constricting said gas flow, confining said constricted gas flow, and continuing said confining of the gas flow for a short distance, and at the end of said short distance discharging the gas into the atmosphere.

3,088,855

METALLURGICAL PROCESS AND STEELS MANUFACTURED BY SAME (MARTEMPERING)

Elliot S. Nachtman, Park Forest, Ill., assignor to La Salle Steel Co., Hammond, Ind., a corporation of Delaware

No Drawing. Filed Oct. 22, 1956, Ser. No. 617,269
10 Claims. (Cl. 148—12.4)

1. The metallurgical process of treating steel of the non-austenitic type having a pearlitic structure in a matrix of free ferrite comprising the combination of steps of martempering the steel by heating the steel above its transformation range, quenching the steel in a medium maintained at a temperature in the upper portion of the range for martensite formation, holding the steel at about said temperature for temperature equalization, and then cooling the steel through the martensite formation range to form martensite and then advancing the martempered martensitic steel through a die to effect a reduction in cross-sectional area while the steel is at a temperature within the range of 200° F. to the lower critical temperature for the steel composition.

3,088,856

FUSED JUNCTION SEMICONDUCTOR DEVICES

Arthur L. Wanamland, Jr., Rolling Hills, and Warren P. Waters, Inglewood, Calif., assignors to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware

Original application Sept. 2, 1955, Ser. No. 532,324. Divided and this application Nov. 25, 1957, Ser. No. 698,874
1 Claim. (Cl. 148—33)



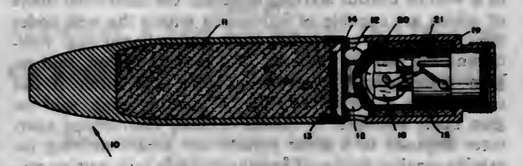
In a semiconductor translating device, a semiconductor crystal body of one conductivity type having at least one substantially planar surface, a volume of an alloy disposed within said semiconductor body and forming an area of alloy exposed at and lying in the plane of said surface of said body, said alloy being an alloy of solvent metal and the semiconductor material of said body, and a regrown crystal region disposed within said semiconductor body adjacent to and surrounding said volume of alloy and forming a first area adjacent said alloy and substantially parallel to said planar surface and a second area exposed at and lying in said planar surface, the diameter of said first area being substantially greater than the thickness of said adjacent alloy, and the conductivity type of said regrown crystal region being opposite the conductivity type of said semiconductor body.

3,088,857

TRACER MECHANISM

Nicholas M. Matusewicz, Upland, Calif., assignor to the United States of America as represented by the Secretary of the Navy

Filed Nov. 26, 1958, Ser. No. 776,655
1 Claim. (Cl. 149—38)
(Granted under Title 35, U.S. Code (1952), sec. 266)



A pyrotechnic composition screened through a 20 mesh screen consisting essentially of 35 to 45 percent sodium nitrate; from 54 to 64 percent magnesium; and from 1 to 2 percent nitrocellulose binder.

3,088,858

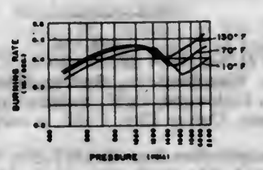
SOLVENTLESS PROCESSED NITROCELLULOSE PROPELLANTS CONTAINING LEAD COMPOUNDS

Albert T. Camp, China Lake, Calif., assignor to the United States of America as represented by the Secretary of the Navy

Filed Apr. 30, 1953, Ser. No. 352,312
9 Claims. (Cl. 149—91)
(Granted under Title 35, U.S. Code (1952), sec. 266)

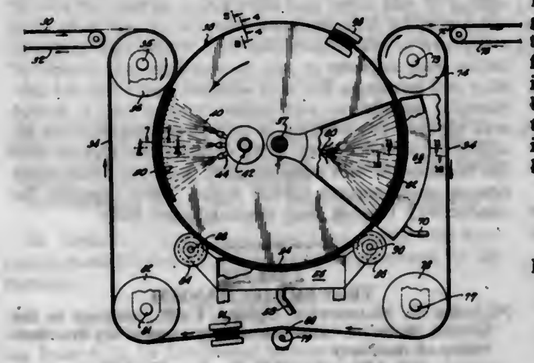
1. A solventless processed propellent composition comprising from about 44 to about 60 percent of nitrocellulose; from about 1 to about 5 percent of at least one compound from the class consisting of lead salicylate,

lead acetylsalicylate, and lead 2,4-dihydroxybenzoate, and from about 1 to about 2 percent of at least one compound



from the class consisting of lead 2-ethylhexoate and lead stearate.

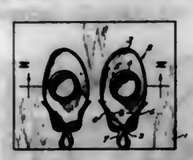
3,088,859
METHODS AND APPARATUS FOR MAKING AND BONDING NONWOVEN FABRICS
Joseph Harold Smith, Amherst, Mass., assignor, by mesne assignments, to Johnson & Johnson, New Brunswick, N.J., a corporation of New Jersey
Filed Aug. 18, 1958, Ser. No. 755,681
14 Claims. (Cl. 156—26)



12. The method of rearranging and bonding the fibers in a web of fibrous starting material, the individual fibers of which are capable of movement within the web under the influence of an applied fluid, which comprises: positioning the starting material in a moving region, said region comprising a rearranging zone and, after it has moved past a particular point, a bonding zone, said region being bounded by means defining rearranging apertures disposed in a given pattern and means defining foramina smaller than said apertures; while said starting material is in said rearranging zone passing a fluid through said rearranging apertures and through said starting material to rearrange individual fibers thereof into a plurality of openings defined by groups of fiber segments interconnected at junctures, said openings defined by the rearranged fibers being formed in registry with the rearranging apertures; and while said rearranged fibrous material is in said bonding zone applying a binder material thereto only at said junctures, whereby substantially only the junctures are bonded.

3,088,860
METHOD OF MAKING A SURGICAL PAD
William M. Scholl, 211-213 W. Schiller St., Chicago, Ill.
Filed June 24, 1959, Ser. No. 822,459
4 Claims. (Cl. 156—222)

3. The method of making a surgical pad having a digit loop, including the steps of superposing a plurality of layers of thermoplastic material, placing the ends of an elongated strip of thermoplastic material at opposed portions of the line where said layers are to be joined, holding the remainder of the strip away from said layers, and heat sealing the layers and strip ends together.

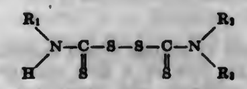


3,088,861
METHOD OF MANUFACTURING CHEMICAL PULP FROM LIGNOCELLULOSE MATERIAL
Samuel C. McKee, Longview, Wash., assignor to Weyerhaeuser Company, Tacoma, Wash., a corporation of Washington
No Drawing. Filed Aug. 3, 1960, Ser. No. 47,140
7 Claims. (Cl. 162—86)

1. The method of manufacturing pulp from lignocellulose material by a two-stage magnesium-base sulfite digesting process which comprises adding sufficient additional magnesium base to a soluble magnesium-base sulfite liquor in the presence of said lignocellulose material in the digesting zone to provide an initial first-stage soluble cooking liquor having a molar ratio of sulfur dioxide to magnesium oxide in the range of 1.4 to 1.85 and a pH in the range of 5.9 to 5.0, said pH being obtained solely by said additional magnesium base.

3,088,862
THIURAM DISULFIDE NEMATOCIDES
Horst Werres, Berlin-Charlottenburg, and Ernst-Albrecht Pieroh, Berlin-Frohnau, Germany, assignors to Schering A.G., Berlin, Germany, a corporation of Germany
No Drawing. Filed Sept. 30, 1958, Ser. No. 764,217
Claims priority, application Germany Mar. 26, 1958
14 Claims. (Cl. 167—22)

14. Method for disinfecting soil to destroy nematodes which comprises mixing soil infested with nematodes with a nematocidal amount of a compound of the formula



wherein R_1, R_2, and R_3 are substituents selected from the group consisting of H, lower alkyl, phenyl, and benzyl.

3,088,863
O,O-DIALKYL-S-HYDROXYPHENYLPROPYL PHOSPHORODITHIOATES
Sidney B. Richter, Chicago, Ill., assignor to Velsicol Chemical Corporation, Chicago, Ill., a corporation of Illinois
No Drawing. Filed July 12, 1961, Ser. No. 123,428
14 Claims. (Cl. 167—30)

1. 2 - [2 - (O,O-dipropylphosphorodithio)propyl] - 4-chlorophenol.

3,088,864
POTASSIUM NITRATE AND KELP COMPOSITION FOR TREATING PINKEYE
Russell E. Collins, 311 S. Market, Oskaloosa, Iowa
No Drawing. Filed Mar. 1, 1961, Ser. No. 92,474
7 Claims. (Cl. 167—53)

1. A medicinal composition for peroral treatment of pinkeye in bovine animals comprising a dry mixture of potassium nitrate and kelp.

3,088,865
IMPROVING FERTILIZED AVIAN EGGS WITH 21-THIOCYANO-17α-OH-PROGESTERONE
Nathan Wernicoff, Vineland, N.J., and Gregory G. Pincus, Northboro, Mass., assignors to Vineland Poultry Laboratories, Vineland, N.J., a partnership
No Drawing. Filed Sept. 26, 1958, Ser. No. 763,459
8 Claims. (Cl. 167—53.1)

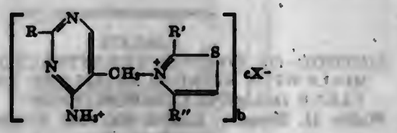
1. The method of treating fertilized avian eggs, while intact within the shell, to stimulate the biological life-growing processes during incubation which comprises the step of providing a live embryo in such fertilized avian eggs with a supply of at least 0.01 mg. of 21-thiocyano-17α-OH-progesterone.

3,088,866
IMPROVING FERTILIZED AVIAN EGGS WITH 3-INDOLEBUTYRIC ACID
Nathan Wernicoff, Vineland, N.J., and Gregory Pincus, Northboro, Mass., assignors to Vineland Poultry Laboratories, Vineland, N.J., a partnership
No Drawing. Filed Sept. 26, 1958, Ser. No. 763,471
8 Claims. (Cl. 167—53.1)

1. The method of treating fertilized avian eggs, while intact within the shell, to stimulate the biological life growing processes during incubation which comprises the step of providing the live animal embryo within the interior of such eggs with a supply of 3-indolebutyric acid.

3,088,867
COMPOSITIONS FOR THE CONTROL OF COCCIDIOSIS
Edward F. Rogers, Middletown, and Robert L. Clark, Woodbridge, N.J., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey
No Drawing. Filed Mar. 8, 1960, Ser. No. 13,452
5 Claims. (Cl. 167—53.1)

1. A composition useful in the control of coccidiosis which comprises a poultry feed having dispersed therein from about 0.0005% to about 0.05% by weight of a compound of the formula



wherein R is a lower alkyl radical, R' and R'' are selected from the group consisting of hydrogen and lower alkyl, X is an anion and *b* and *c* are positive numbers having values such that the positive charge of *b* moles of cation is neutralized by *c* moles of anion X.

3,088,868
ORALLY-ACTIVE THERAPEUTIC COMPOSITIONS AND PROCESS FOR USING SAME
Emanuel Windsor, Sun Valley, Calif., assignor to Riker Laboratories, Inc., Los Angeles, Calif., a corporation of Delaware
No Drawing. Filed Aug. 18, 1958, Ser. No. 755,390
10 Claims. (Cl. 167—55)

1. A therapeutic composition for oral administration comprising a therapeutic substance selected from the class consisting of anticoagulant and antilipemic polysaccharide sulfates which are ordinarily not effective when administered per os and the therapeutic effect of which depends on its being absorbed into the blood stream, and an adjuvant compound comprising an alkali-metal salt, substantially free from magnesium and calcium ions, of an amino acid which is symmetrically substuted on a nitrogen atom and which will chelate an alkaline-earth metal selected from the class consisting of calcium and magnesium.

3,088,869
ANTIEMETIC COMPOSITIONS AND METHODS OF TREATING NAUSEA AND VOMITING
Charles L. Zirkle, Berwyn, Pa., assignor to Smith Kline & French Laboratories, Philadelphia, Pa., a corporation of Pennsylvania
No Drawing. Filed Aug. 29, 1961, Ser. No. 134,585
8 Claims. (Cl. 167—55)

1. A pharmaceutical composition having antiemetic activity, in dosage unit form, comprising a pharmaceutical carrier and from about 10 mg. to about 100 mg. of a compound selected from the group consisting of 1,1-diphenyl-4-(1-piperidyl)-butanol-1 and a nontoxic pharmaceutically acceptable acid addition salt thereof.

3,088,870
LOW VOLUME CONTACT LAXATIVE ENEMA COMPOSITIONS
Charles Byron McDermott, 1450 Broadway, New York, N.Y.
No Drawing. Filed Nov. 25, 1958, Ser. No. 776,199
3 Claims. (Cl. 167—56)

1. An aqueous composition for cleansing the colonic region of the large intestine comprising 0.01 to 0.04% of a contact laxative agent causing peristalsis in the colon, from about 3 to about 7% propylene glycol and about 0.05 to about 0.20% oxyethylated p-tertiary octylphenol-formaldehyde polymer in water, affording in solution a sufficient concentration of the agent to cause peristalsis by enemas of low volume.

3,088,871
PROCESS OF STIMULATING THE CENTRAL NERVOUS SYSTEM
Carl C. Pfeiffer, Decatur, Ga., assignor to Riker Laboratories, Inc., Northridge, Calif., a corporation of Delaware
No Drawing. Filed May 19, 1959, Ser. No. 814,137
9 Claims. (Cl. 167—65)

1. The process of stimulating the central nervous system in mammals, which comprises administering to the mammal a significant amount of an active ingredient selected from the class consisting of 2-dimethylaminoethanol and acid-addition salts thereof.

3,088,872
AYAMYCIN, A NEW ANTIBIOTIC AND PROCESS FOR PRODUCING THE SAME
Ken Katagiri, New York, N.Y., assignor to Shionogi & Co., Ltd., Hyogo, Japan
Filed May 20, 1960, Ser. No. 30,664
Claims priority, application Japan May 22, 1959
7 Claims. (Cl. 167—65)

1. A process for producing a new antibiotic, ayamycin, which comprises cultivating the microorganism *Streptomyces flaveolus* ATCC 13811 in an aqueous nutrient medium under submerged aerobic conditions.

7. The antibiotic, ayamycin A_3, effective in inhibiting the growth of tumor, said antibiotic being a neutral compound containing only the elements carbon, hydrogen and oxygen in substantially the following proportions by weight:

	Percent
Carbon	62.29
Hydrogen	7.09
Oxygen	30.32

being yellow crystals melting at 203° C., having a molecular weight of 560.5, a molecular formula of $C_{29}H_{36}O_{10}$, an optical rotation of $[\alpha]_D^{23°}=-39.8°\pm2°$ when dissolved in dioxane (C. 0.835%), and showing the infrared spectrum and the ultra-violet spectrum as in the attached drawings, FIG. 1 and FIG. 2, respectively.

3,088,873
4-CHLORO-3-SULPHAMYL BENZOIC ACID AND SALTS
Vladimir Petrow, Oliver Stephenson, and Anthony Musgrave Wild, all of London, England, assignors to The British Drug Houses Limited
No Drawing. Filed Feb. 7, 1961, Ser. No. 87,528
Claims priority, application Great Britain Feb. 16, 1960
6 Claims. (Cl. 167—65)

6. A pharmaceutical preparation in compressed tablet form comprising as its essential active ingredient a compound selected from the group consisting of 4-chloro-3-sulphamyl benzoic acid and the sodium, potassium and lithium salts thereof, said active ingredient being admixed with pharmaceutical carriers comprising magnesium stearate, starch and lactose.

3,088,874
POWDER AEROSOL
Daniel C. Geary, Westwood, N.J., and Robert D. West, Ossining, N.Y., assignors to Union Carbide Corporation, a corporation of New York
No Drawing. Filed May 23, 1960, Ser. No. 31,228
10 Claims. (Cl. 167—82)

1. A powder dispensing aerosol composition which comprises (1) at least 15 weight percent of an active powder having a particle diameter of at least 15 microns, (2) a powder bulking agent having a particle diameter no larger than the active powder, (3) a non-polar organic liquid, (4) a liquid surfactant, and (5) a propellant; said non-polar liquid, surfactant, and propellant being miscible in all proportions; the combined volume "YX" of said bulking agent, non-polar organic liquid, surfactant, and propellant being 1 to 10 times the difference between the volume of the active powder at atmospheric pressure and the volume of the active powder at maximum yield point; the volume percent "A" of "YX" which is bulking agent, the volume percent "B" of "YX" which is non-polar organic liquid, the volume percent "C" of "YX" which is propellant and the volume percent "D" of "YX" which is surfactant being defined by:

$$YX=A+B+C+D$$

where Y is a number from 1 to 10, X is the difference between the volume of the active powder at atmospheric pressure and the volume of the active powder at maximum yield point, A is 1 to 60 volume percent of YX, B is 2 to 70 volume percent of YX, C is 9 to 67 volume percent of YX, and D is 0.6 to 10.5 volume percent of YX.

3,088,875
IMMUNOLOGICAL DIAGNOSTICS UTILIZING POLYSTYRENE LATEX PARTICLES OF 0.15 TO 0.25 MICRON
Roy T. Fisk, Glendale, Calif., assignor to Hyland Laboratories
No Drawing. Filed Oct. 27, 1959, Ser. No. 848,922
7 Claims. (Cl. 167—84.5)

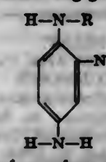
1. An immunological diagnostic reagent comprising polymerized styrene latex having a particle size in the range of about 0.15 to 0.25 micron and an immunological reactant selected from the group consisting of specific, known antibodies and antigens.

3,088,876
FILM FORMING LIPSTICK
William F. Buth, Port Jervis, N.Y., assignor to Kolmar Laboratories, Inc., Milwaukee, Wis., a corporation of Delaware
No Drawing. Filed Nov. 16, 1959, Ser. No. 853,004
5 Claims. (Cl. 167—85)

1. A lipstick composition consisting essentially by weight of 25% to 50% of a wax, 5% to 20% of a resin selected from the group consisting of rosin, shellac, gum dammar, polyol esters of rosin with the polyol radical having up to 8 carbon atoms, polyoxyalkylene esters of rosin with the polyoxyalkylene radical having up to 12 carbon atoms and mixtures thereof, 2% to 15% of a water insoluble pigment insoluble in said wax and said resin, and 10% to 50% of a solvent having an initial boiling point in the range of 60° C. to 150° C. and selected from the group consisting of mineral spirits, Stoddards solvent and petroleum ether, said solvent being miscible with said wax and said resin to provide a solid solution and being immiscible with the pigment, said pigment being dispersed as finely divided particles within the solid solution and said solvent evaporating after application of the lipstick to lips to provide a tough homogeneous film of said wax and resin with the pigment dispersed within the film.

3,088,877
METHOD OF DYEING KERATINACEOUS MATERIALS WITH p-PHENYLENE DIAMINE COMPOSITIONS
Walter H. Brunner, Easton, Pa., and Alexander Halasz, Stamford, Conn.
No Drawing. Filed Oct. 13, 1960, Ser. No. 62,321
11 Claims. (Cl. 167—88)

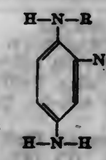
1. A composition for dyeing keratinaceous material consisting essentially of an aqueous solution of from about 0.05% to about 5%, by weight, of a phenylene diamine having the following generic formula:



wherein R is a member selected from the group consisting of an alkyl radical having from 1 to 4 carbon atoms and the phenyl radical; an anionic detergent; and a sufficient quantity of an alkalizing agent to give the aqueous solution a pH of about 7.5 to about 12.

3,088,878
METHOD OF DYEING KERATINACEOUS MATERIALS WITH NITRO-SUBSTITUTED PARA-PHENYLENE DIAMINE COMPOSITIONS
Walter H. Brunner, Easton, Pa., and Alexander Halasz, Stamford, Conn.
No Drawing. Filed Nov. 22, 1960, Ser. No. 70,907
8 Claims. (Cl. 167—88)

1. A composition for dyeing keratinaceous material comprising an aqueous solution of a tinctorially effective quantity of a para-phenylene diamine derivative having the following generic formula:



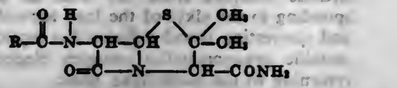
wherein R is a hydroxyalkyl radical having from 1 to 4 carbon atoms; and a sufficient quantity of an alkalizing agent to give the aqueous solution a pH of about 7.5 to about 12.

3,088,879
RELEASE OF MICROBIAL COMPONENTS
Elmer A. Weaver, Spring Mount, Pa.
No Drawing. Filed Oct. 9, 1959, Ser. No. 845,331
13 Claims. (Cl. 195—2)

1. In a method of liberating the contents of microbial cells by mycelial disintegration, the step which comprises contacting said cells with the enzyme papain in a solution maintained at a pH in the range of about 4.3 to 6.3 at an ambient temperature in the range of from about 5° C. to about 85° C.

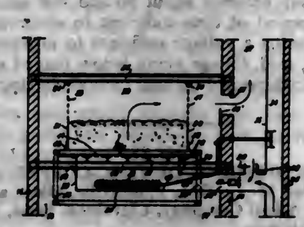
3,088,880
6-AMINOPENICILLANIC ACID AMIDE PRODUCTION
Heing T. Heang, Groton, Conn., assignor to Chas. Pfizer & Co., Inc., New York, N.Y., a corporation of Delaware
No Drawing. Filed Apr. 10, 1961, Ser. No. 101,683
7 Claims. (Cl. 195—36)

1. A process for producing 6-aminopenicillanic acid amide which comprises reacting a penicillin amide having the formula



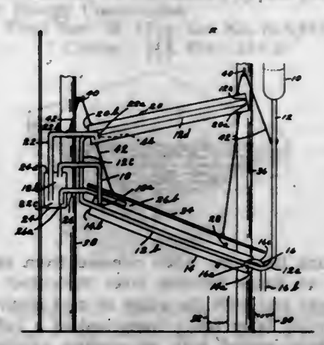
wherein R is selected from the group consisting of benzyl, phenoxymethyl, phenylmercaptomethyl, allylmercaptomethyl, n-heptyl, p-hydroxybenzyl, p-methylbenzyl, n-amyl, 2-pentenyl and 3-pentenyl with the hydrolyzing activity of a penicillin-acylase producing microorganism selected from the group consisting of *Proteus rettgeri, Proteus sphingidis, Aerobacter aerogenes, Escherichia coli, Pseudomonas asplenii, Pseudomonas solaneolens, Micrococcus roseus,* and Nocardia sp. L.A.V.

3,088,881
MALTING PLANT
Hubert Marie Joseph Chevalier, 10 Rue Colonel-Marchand, Dijon, France
Filed Apr. 21, 1959, Ser. No. 807,793
Claims priority, application France Apr. 22, 1958
5 Claims. (Cl. 195—129)



1. A plant for the germination of grain comprising a stationary tray inclined with respect to a horizontal plane, said tray being provided with a plurality of perforations, means for feeding grain to the upper portion of the tray, and forming a layer of grain on said tray, drive means adjacent said tray, bars extending transverse to and on top of the tray and coupled to the drive means, said bars being longitudinally spaced along and in contact with said tray, said drive means advancing said bars to traverse the length of said tray in a determinable period of time for controlling the descent of the mass of grain along said tray, a structure defining a chamber under said tray, fixed partitions extending upwardly from said tray and defining therewith a grain circulation chamber, openings being provided in the upper portion of said chamber, and means for circulating air from the said chamber through the perforated tray and through the mass of grain on said tray, the air being discharged through said openings after passing through the mass of grain, said plant further comprising means in the first said chamber for controlling the temperature of air passing therethrough, and valve means for controllably recirculating a portion of the air passing through the grain circulation chamber back to the first said chamber, inspection and passage openings being provided in said structure for enabling access to the first said chamber.

3,088,882
SOLAR STILL
Donald S. Justice, Arlington, Va., assignor to The Justice Company, Washington, D.C., a corporation of the District of Columbia
Filed Oct. 23, 1959, Ser. No. 848,445
2 Claims. (Cl. 202—205)

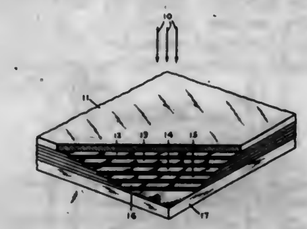


1. Purification apparatus comprising container means at a predetermined elevation for containing a supply of liquid to be purified, a first conduit section, a second conduit section positioned above the first conduit section, a conduit section joining said supply container to the inlet end of the first conduit section, a conduit section joining the outlet end of the first conduit section with the inlet end of the second conduit section, an upwardly extending evaporation enclosure means about said second conduit, an outlet opening of predetermined cross sectional area in said second conduit section within said enclosure means, a siphon device having an intake within said evaporation enclosure below the level of said outlet opening in said conduit therein, the siphon intake having a greater cross sectional area than said outlet opening, whereby the siphon device extracts alternate quantities of liquid and vapor from said evaporation enclosure, a housing into which said siphon empties, a vapor outlet conduit from said housing, a downwardly extending condensation enclosure about said first conduit, the vapor outlet conduit from said housing communicating with said condensation enclosure, and a discharge opening from the condensation enclosure at a point below the entry thereinto of said vapor outlet conduit, the arrangement being such that said siphon means will withdraw liquid from said evaporation enclosure more rapidly than liquid enters same, thereby reducing the vapor pressure within said evaporation enclosure and enhancing evaporation, and the vapor expelled from said siphon means is cooled by incoming liquid in said first conduit within said condensation enclosure to enhance the condensation of said vapor to produce purified liquid within the latter enclosure.

3,088,883
ELECTROPHOTOGRAPHIC SYSTEM
Jean Jules Achille Robillard, New York, N.Y., assignor to Motorola, Inc., Chicago, Ill., a corporation of Illinois
Filed Jan. 14, 1958, Ser. No. 708,948
2 Claims. (Cl. 204—18)

1. In an electrophotographic multilayer structure having electrodes on opposite sides thereof, with one of said electrodes being transparent to permit exposure of photoconductive material in said structure to light, the combination with said electrodes of a layer of photoconductive material in contact with an area of said trans-

parent electrode, a thin film of copper in contact with said photoconductive layer, with said copper film being substantially uniform in thickness and being sufficiently thin to release copper ions therefrom when said structure is electrically energized, said photoconductive layer being adapted to areally modulate the flow of copper ions from said film, a barrier layer in contact with said copper film of a dielectric material selected from the group consisting of silicon dioxide and titanium dioxide, said barrier layer being sufficiently thin to allow copper ions to



pass through the same when released from said copper film, and an image forming layer in contact with said barrier layer and with the other of said electrodes, said image forming layer being comprised of a bulk-forming material impregnated with ammonium nitrate, a polyhydroxy alcohol, and an organo-metallic compound selected from the group consisting of sodium di-nitrocobaltdi-acetylacetonate and cobaltisilver-cyanide, with said organo-metallic compound being adapted to change color when contacted by copper ions applied thereto through said barrier layer.

3,088,884
ELECTRODEPOSITION
Frank Passal, Detroit, Mich., assignor to Metal & Thermit Corporation, Woodbridge Township, N.J., a corporation of New Jersey
No Drawing. Filed Nov. 7, 1960, Ser. No. 67,497
18 Claims. (Cl. 204—55)

1. A process for electroplating bright, lustrous zinc comprising electrodepositing zinc from an aqueous alkali cyanide bath containing zinc ions and containing at least 0.05 g./l. of total aldehyde, said total aldehyde consisting essentially of o-vanillin and at least one compound selected from the class consisting of anisaldehyde, piperonaldehyde, veratraldehyde, and 2,3-dimethoxybenzaldehyde, the weight ratio of said o-vanillin to said compound being between 1:10 and 1:1.

3,088,885
MANUFACTURE OF LEAD ORGANOMETALLIC COMPOUNDS
Tom W. McKay, Baton Rouge, La., assignor to Ethyl Corporation, New York, N.Y., a corporation of Virginia
No Drawing. Filed Dec. 24, 1959, Ser. No. 861,777
4 Claims. (Cl. 204—59)

1. A process for the manufacture and recovery of a lead tetraalkyl compound, the alkyl radicals thereof having at least two carbon atoms, comprising

(*a*) electrolyzing in the presence of a lead anode a bimetallic organometallic complex consisting of an alkali metal, aluminum, and organo radicals selected from the group consisting of alkyl and alkoxide, and having at least three alkyl groups including at least one alkyl corresponding to the alkyl groups of the desired lead tetraalkyllead compound, forming thereby as the cathode product the alkali metal and an anode product consisting essentially of the lead tetraalkyl compound having in admixture therewith an aluminum triorgano compound selected from the group consisting of trialkyl aluminum and dialkyl aluminum alkoxide,

(*b*) hydriding the alkali metal cathode product from (*a*) and forming thereby the corresponding alkali metal hydride,

(*c*) adding to the anode product from (*a*), the alkali metal hydride from (*b*) and reacting with the aluminum triorgano component in the anode product and forming thereby a separate phase alkali metal aluminum triorganohydride complex insoluble in the lead tetraalkyl compound,

(*d*) separating the lead tetraalkyl and the alkali metal aluminum triorganohydride complex, and

(*e*) reacting the alkali metal aluminum triorganohydride complex from (*d*) with an olefin corresponding to the alkyl of the lead tetraalkyl product, and converting thereby the said complex to the bimetallic organometallic complex electrolyzed, and returning to the electrolysis zone.

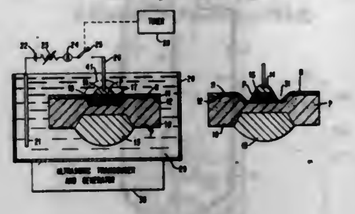
3,088,886
PROCESS OF ELECTROPOLISHING ZINC
Joseph Adrien M. Le Duc, Painesville, Ohio, assignor to Diamond Alkali Company, Cleveland, Ohio, a corporation of Delaware
Filed Nov. 3, 1958, Ser. No. 771,507
15 Claims. (Cl. 204—140.5)

1. A method of anodically electropolishing an article having a surface of metal selected from the group consisting of zinc and zinc base alloys, which comprises making the article to be polished the anode in an electrolytic cell, the electrolyte of which is comprised of an alkali metal hydroxide in the amount between about 450 and 900 grams/liter, maintained at a temperature between about 60° and 220° F. and passing an electric current through said electrolyte between said anode and a cathode having a surface of Fe_3O_4, said current being passed at an anode current density between about 50 and 800 amps./square foot for a period of time sufficient to electropolish said anode, and using a voltage sufficient to provide this current density, said voltage being below that at which zinc will be electrodeposited on said cathode having a surface of Fe_3O_4.

3,088,887
ELECTROPOLISHING OF ZINC-COPPER ALLOYS
Joseph Adrien M. Le Duc, Painesville, Ohio, assignor to Diamond Alkali Company, Cleveland, Ohio, a corporation of Delaware
No Drawing. Filed Feb. 9, 1959, Ser. No. 791,840
9 Claims. (Cl. 204—140.5)

1. A method for anodically electropolishing an article having a surface comprising a zinc alloy containing copper, which method comprises making the article to be electropolished the anode in an electrolytic cell, the electrolyte of which consists essentially of an aqueous solution of a compound selected from the group consisting of alkali metal hydroxides and barium hydroxide in an amount between about 450 and 900 g. per liter, a compound selected from the group consisting of alkali metal cyanides and barium cyanide in an amount between about 1 and 100 g. per liter, and a compound selected from the group consisting of alkali metal thiocyanates and barium thiocyanate in an amount between about 1 and 200 g. per liter, said electrolyte being maintained at a temperature between about 60° and 200° F.; and passing an electric current through said electrolyte between said anode and a cathode having a surface consisting essentially of Fe_3O_4 at an anode current density between about 50 and 800 amps. per square foot and a solution current density not in excess of about 2.5 amps. per liter, using a voltage sufficient to provide said current density but below that at which zinc will be electrodeposited on said cathode, thereby releasing hydrogen gas at said cathode while preventing zinc from plating on the same; and maintaining the passage of said electric current for a period of time sufficient to electropolish said article.

3,088,888
METHODS OF ETCHING A SEMICONDUCTOR DEVICE
Jerry Leff, Hyde Park, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Mar. 31, 1959, Ser. No. 803,190
6 Claims. (Cl. 204—143)



1. The method of etching a semiconductor device which includes a body of semiconductor material having a diffused layer and a PN junction formed in said layer by alloying with a metal impurity in a lead carrier which flow during said alloying and create an undesirable low impedance path across the peripheral region of said junction, comprising:

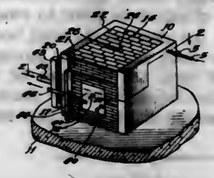
subjecting said device to the influence of a solution comprising 96 parts of water, 32 parts glacial acetic acid and 5 parts of 30% hydrogen peroxide while applying for a period of several seconds to the P-type region of said body a voltage which is positive with respect to said solution and to an electrode immersed therein to establish a current flow of several milliamperes for removing deleterious material including said metal impurity and said lead carrier creating said low impedance path, thereby exposing said junction; and

subjecting said device to an etching solution, which has chemical ingredients different from and capable of eroding said semiconductor material and said peripheral junction region at a rate faster than said first-mentioned solution, for an interval of time sufficient to remove said peripheral junction region and the semiconductor material that is contiguous therewith and extends to the higher resistance portion of said diffused layer, thereby improving the electrical properties of said device.

3,088,889
ELECTROLYTIC MACHINING OF METAL SURFACES
Mitchell A. La Boda, East Detroit, and Charles R. Wiese, Detroit, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
No Drawing. Filed June 8, 1959, Ser. No. 818,542
5 Claims. (Cl. 204—143)

1. The method of electrolytically machining a metal from the class consisting of stainless steel, nickel base alloy and cobalt base alloys, said method comprising making the metal an anode in an aqueous solution consisting essentially of water, ammonium ions, fluoride ions and hydrogen ions, said ammonium, fluoride and hydrogen ions being in the respective concentrations generally corresponding to that produced by dissolving about 20–200 grams ammonium bifluoride in one liter of water, providing a suitable cathode and passing electrical current through the resulting cell so as to induce on said metal an anodic current density of at least about 750 amperes per square foot.

3,088,890
METHOD OF FABRICATING A GRAPHITE-MODERATED REACTOR
Howard R. Kratz, Chicago, Ill., assignor to the United States of America as represented by the United States Atomic Energy Commission
Filed Nov. 30, 1944, Ser. No. 565,992
7 Claims. (Cl. 204—154.2)



1. The method of fabricating a graphite-moderated neutronic reactor that comprises the step of preconditioning of the graphite that contains air by replacing the air with helium and then assembling the graphite with a plurality of fissionable bodies arranged geometrically to constitute the neutronic reactor.

3,088,891
FUEL ELEMENTS FOR NEUTRONIC REACTORS
Frank G. Foote, Chicago, Ill., and Eric R. Jette, Los Alamos, N. Mex., assignors to the United States of America as represented by the United States Atomic Energy Commission
Filed Mar. 4, 1949, Ser. No. 79,703
2 Claims. (Cl. 204—154.2)

1. As an article of manufacture, a slug jacket containing a unitary core of fissionable material and a liquefiable metal bond of a metal of the group consisting of sodium and sodium-potassium alloys.

3,088,892
DISPERSION ELEMENT CONSISTING OF CHROMIUM COATED UO_2 PARTICLES UNIFORMLY DISTRIBUTED IN A ZIRCALOY MATRIX
Francis M. Cain, Jr., and John E. Eck, Apollo, Pa., assignors to the United States of America as represented by the United States Atomic Energy Commission
Filed May 5, 1960, Ser. No. 27,227
5 Claims. (Cl. 204—154.2)



1. An extruded dispersion type nuclear fuel element consisting of spheroidal particles of uranium dioxide, said particles being in the range of about 40 to 500 microns in size, a continuous metal coating on said particles said coating being in the range of about 3 to 150 microns in thickness and unreactive with uranium dioxide and zircalloy at normal reactor operating temperatures, a matrix of zircalloy surrounding the coated particles and zircalloy cladding surrounding said matrix.

3,088,893

MALLEABLE TUBE-CLAD ARTICLE AND MANUFACTURING METHOD THEREFOR

Constantine N. Spalaris, San Jose, Calif., assignor to General Electric Company, a corporation of New York

Filed Aug. 31, 1960, Ser. No. 53,281

13 Claims. (Cl. 204—154.2)

1. A method for producing malleable tube-clad articles which comprises passing a malleable tube containing at least one hard high density material body of cylindrical shape at least once through a swaging mill provided with swaging dies having a circular opening in the contracted position to effect a diametral reduction of said tube by an amount substantially equal to the difference between the inside diameter of said tube prior to swaging and the outside diameter of the smallest material body contained in said tube and produce said article having a material body-to-clad gap of zero, the diameter of said circular opening in said dies being between about 0.2% and about 2.5% less than the diameter of said tube following swaging.

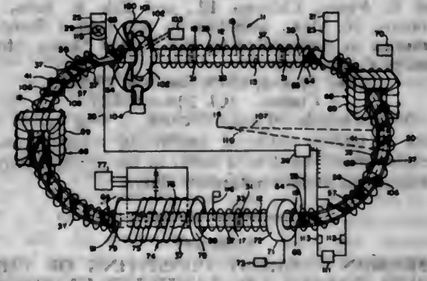
3,088,894

CONFINEMENT OF HIGH TEMPERATURE PLASMA

Harold R. Koenig, Rotterdam, N.Y., assignor to the United States of America as represented by the United States Atomic Energy Commission

Filed Dec. 23, 1960, Ser. No. 78,194

6 Claims. (Cl. 204—193.2)



1. In a high temperature reactor for producing a high temperature plasma, of the type having in a plane an endless toroidal magnetically permeable tube forming an annulus bounded by straight and connecting looped tube portions, means having an axial and helical coil for establishing in said tube substantially cylindrical magnetic surfaces adapted to produce an inward magnetic pressure along an axis corresponding to the axis of said tube, means for introducing into said tube a plasma that exerts an outward pressure whose magnitude toward said magnetic surface increases directly with plasma temperature and density, said plasma pressure having a ratio with said magnetic pressure denoted by the symbol β, which when increased in value tends to shift said magnetic surfaces in a direction outwardly from the center of said tube, and means for heating said plasma, the improvement in said reactor comprising means for introducing into said looped tube portions a magnetic field that is at right angles to the plane of said tube and extends longitudinally along the axis of said tube, thereby to overcome the tendency of said magnetic surfaces to shift outwardly in said tube when the value of β is increased whereby said plasma can be heated effectively to high temperatures at increased β values by said heating means.

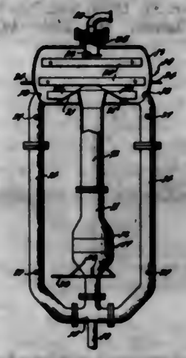
3,088,895

BOILING SLURRY REACTOR AND METHOD OF CONTROL

Michael Petrick, Joliet, and John F. Marchaterre, Naperville, Ill., assignors to the United States of America as represented by the United States Atomic Energy Commission

Filed Mar. 27, 1961, Ser. No. 98,722

9 Claims. (Cl. 204—154.2)



1. A method of controlling a nuclear reactor which includes a core containing a slurry of fissionable material in water and at least one downcomer exterior to the core, the top of the downcomer being in communication with the top of the core and the bottom of the downcomer being in communication with the bottom of the core wherein the reactor is operated under conditions of temperature and pressure such that the water in the reactor core boils thereby causing the slurry to circulate upwardly in the core and downwardly in the downcomer, comprising introducing a gas into the downwardly circulating slurry and varying the amount thereof to change the rate of circulation of the slurry by changing the effective density difference between the upwardly circulating slurry and the downwardly circulating slurry.

4. A nuclear reactor comprising a vertical tube, a steam drum having a steam outlet and communicating with the top of the vertical tube, at least one downcomer pipe in communication with the steam drum and the bottom of the vertical tube, the vertical tube, downcomers, and a portion of the steam drum being filled with a slurry of fine particles of a fissionable material in water in a concentration such that a critical mass of fissionable material can be present only in a portion of the vertical tube, the reactor being operated under conditions of temperature and pressure such that the slurry boils and circulates through the reactor, and means for changing the driving head which causes the slurry to circulate comprising means for introducing a gas into the downwardly moving portion of the slurry thereby controlling the reactivity of the reactor.

3,088,896

OXIDATION OF TRIFLUOROETHANOL

Milton Braid, Springfield Township, Montgomery County, and Francis Lawler, Philadelphia, Pa., assignors to Pennsalt Chemicals Corporation, Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Filed July 19, 1957, Ser. No. 672,871

13 Claims. (Cl. 204—158)

1. Method for the oxidation of 2,2,2-trifluoroethanol to a product selected from the group consisting of trifluoroacetic acid and trifluoroacetaldehyde hydrate which comprises reacting 2,2,2-trifluoroethanol with an oxidizing agent consisting essentially of chlorine in an aqueous medium and in the presence of an energy source comprising actinic radiation effective for the activation of chlorine.

3,088,897

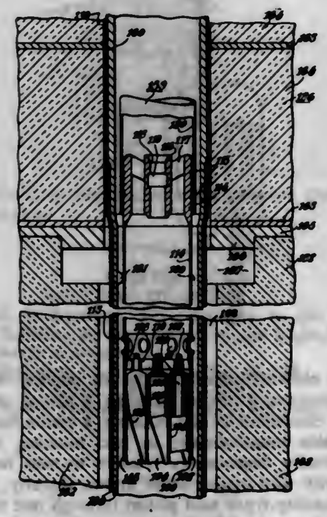
FUEL ELEMENTS FOR NUCLEAR REACTORS

Sydney Fawcett, Hale Barnes, and Frank Geoffrey Greenhalgh, Wigan, England, assignors to United Kingdom Atomic Energy Authority, London, England

Filed June 24, 1958, Ser. No. 744,208

Claims priority, application Great Britain June 24, 1957

3 Claims. (Cl. 204—193.2)



1. In a nuclear reactor having a tubular member disposed upright in a vertical channel in the moderator, means for retractably locating fuel elements in the channel and with the tubular member defining a re-entrant flowpath for the passage of fluid coolant in and out of the channel, said means comprising a second tubular member extending co-axially within the first-named tubular member and defining an annular space therewith, a third tubular member extending within the lower terminal portion of the second tubular member and depending below said lower terminal portion so as to form a telescopic extension of the second tubular member within the first-named tubular member, and means mounted in the third tubular member for supporting fuel elements therewithin.

3,088,898

CONTROL ROD MATERIALS

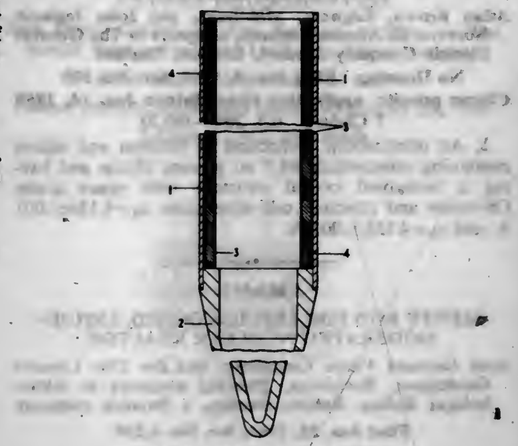
Terence Stanley Busby and Mervin Wyndham Davies, London, England, assignors to The General Electric Company Limited, London, England

Filed Dec. 24, 1958, Ser. No. 782,931

Claims priority, application Great Britain Jan. 6, 1958

13 Claims. (Cl. 204—193.2)

1. A control rod for a nuclear reactor composed of a ceramic material consisting essentially of, in stable combination, an oxide of a metal of the group consisting of boron, gadolinium and europium, and at least one oxide



of the group consisting of magnesium oxide and calcium oxide.

3,088,899

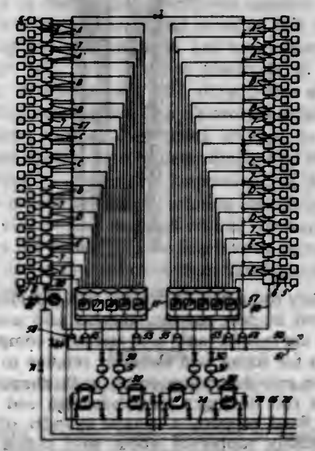
NUCLEAR REACTOR BURST CARTRIDGE DETECTION

David John Gibbons, Orpington, Kent, England, assignor to The General Electric Company Limited, London, England

Filed Sept. 4, 1959, Ser. No. 838,186

Claims priority, application Great Britain Sept. 9, 1958

6 Claims. (Cl. 204—193.2)



1. In a nuclear reactor of the fluid cooled type in which samples of cooling fluid are drawn from each of a plurality of fuel element channels of the reactor and monitored for the presence of radioactive products, that improvement constituting a burst cartridge detection equipment comprising: first monitoring means for monitoring a selected group of said channels at one sensitivity, second monitoring means for monitoring the remainder of said channels at a sensitivity lower than the first sensitivity, and sequentially operated selector means for monitoring all said channels sequentially in groups with said first monitoring means while the remainder of the channels are being monitored by said second monitoring means.

3,088,900

SLURRIES FOR USE AS BREEDING MATERIALS IN NUCLEAR REACTORS

Allan Brown, Edgware, Middlesex, and John Jephson Norreys, St. Albans, England, assignors to The General Electric Company Limited, London, England

No Drawing. Filed Jan. 5, 1960, Ser. No. 500

Claims priority, application Great Britain Jan. 14, 1959

7 Claims. (Cl. 204—193.2)

1. An intermetallic compound of thorium and silicon containing substantially 66.7 at. percent silicon and having a hexagonal crystal structure with space group C6/*mmm* and structure cell dimensions a_0=4.136±.001 A. and c_0=4.126±.001 A.

3,088,901

SAFETY ROD FOR LIQUID-COOLED, LIQUID-MODERATED NUCLEAR REACTOR

Axel Gerhard Värne Gustafsson and Per Olle Leonart Gustafsson, Karlskoga, Sweden, assignors to Aktiebolaget Bofors, Bofors, Sweden, a Swedish company

Filed Jan. 25, 1960, Ser. No. 4,260

2 Claims. (Cl. 204—193.2)



1. A safety rod assembly for use in a liquid-moderated, liquid-cooled nuclear reactor wherein said assembly depends into the reactor tank, said assembly comprising support means for fixing said assembly relative to the top of said reactor and depending downwardly thereinto, a hollow piston rod having a closed bottom end depending from said fixed support, a coaxial cylinder of larger diameter slidably supported about said piston rod, said piston rod and said cylinder being spaced apart in slidable relation by an outwardly enlarged circumferential portion of the bottom of said piston rod and an inwardly enlarged circumferential portion of the top of said cylinder so as to form a closed chamber therebetween of adjustable volume, at least one aperture of relatively small diameter at the lower end of said piston rod communicating the interior thereof with said chamber, a pressurizing aperture at the upper end of said piston rod and communicating with the interior thereof, an absorption rod carried by said cylinder for movement therewith between an immersed position within said reactor tank and a withdrawn position, an electromagnet carried by said support means and adapted to hold said cylinder with said absorption rod in a withdrawn position against the pull of gravity when said electromagnet is energized, a valve at the upper end of said piston rod communicating the upper interior thereof with said reactor tank when said valve is open, said valve being closed by the energization of said electromagnet.

3,088,902

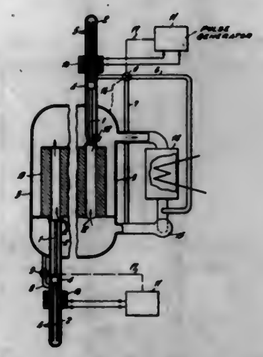
ELECTRO-HYDRAULIC DRIVE FOR NUCLEAR-REACTOR CONTROL

Hermann Kumpf, Erlangen, Germany, assignor to Siemens-Schuckertwerke Aktiengesellschaft, Berlin-Siemensstadt and Erlangen, Germany

Filed Feb. 12, 1960, Ser. No. 8,405

Claims priority, application Germany Feb. 17, 1959

6 Claims. (Cl. 204—193.2)



1. An electro-hydraulic drive for nuclear-reactor control, comprising a tubular housing, a source of hydraulic pressure connected to said housing, a piston hydraulically displaceable longitudinally in said housing, a structure longitudinally displaceable relative to said housing and joined with said piston to be driven thereby, said structure extending from said piston through one end of said housing, a bunch of flexible magnetizable rods also joined at one end of each rod with said piston and extending longitudinally in said housing, said rods being positioned so as to mutually repel each other and deflect when magnetized, said rods in deflected position being frictionally engageable with said housing, a magnetizing coil coaxially disposed on said housing for magnetizing said rods to deflect same, and pulsating current supply means connected with said coil for energizing said rod bunch into deflected position to thereby control the displacement speed of said structure.

3,088,903

NUCLEAR REACTOR CONTROL MEANS

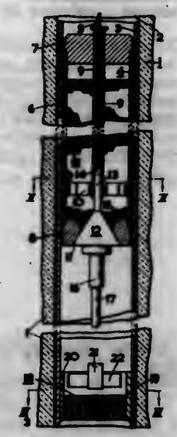
Arthur Firth, Altrincham, England, assignor to United Kingdom Atomic Energy Authority, London, England

Filed Feb. 18, 1960, Ser. No. 9,463

Claims priority, application Great Britain Feb. 26, 1959

4 Claims. (Cl. 204—193.2)

1. In a nuclear reactor core structure having a substantially vertical channel passing therethrough, reactor control means comprising cable means extending down into the channel for movement therein and having a plug member supported thereon, and means defining an elongate casing resting on the plug member in the channel for movement with the cable and having an opening in the base thereof, said casing containing a loosely packed mass of neutron absorbing bodies each adapted to pass through the opening, and said plug member being so engaged in the opening as to normally prevent flow of the bodies therethrough but releasable therefrom under its own



weight to discharge the bodies when relieved from supporting the casing.

3,088,904

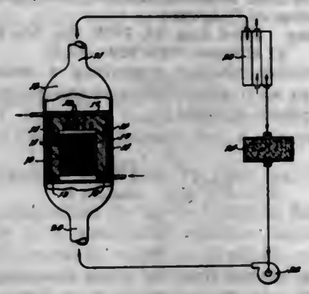
NUCLEAR REACTOR

Roy G. Post, Richardson, Tex., assignor to the United States of America as represented by the United States Atomic Energy Commission

Filed Oct. 17, 1960, Ser. No. 63,230

2 Claims. (Cl. 204—193.2)

(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A nuclear reactor comprising a vertical, cylindrical pressure vessel, a horizontal flow distributor extending across said vessel, a plurality of vertically disposed fuel elements formed of uranium dioxide centrally located in said pressure vessel and spaced therefrom above said flow distributor, a mass of graphite particles of about 100 mesh size disposed in said pressure vessel above said flow distributor, variable pumping means for forcing helium into the pressure vessel below the flow distributor so that the helium rises through the graphite particles to establish and maintain a fluidized bed thereof, a water inlet header disposed near the bottom of said fluidized bed, a water outlet header disposed near the top of said fluidized bed, vertical coolant tubes located in the space between the fuel elements and the pressure vessel extending between said headers, and means for flowing water therethrough.

3,088,905

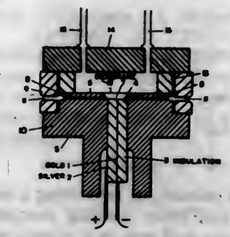
METHOD OF AND APPARATUS FOR OXYGEN DETERMINATION

Jack Harry Glover, London, England, assignor to The British Oxygen Company Limited, a British company

Filed Oct. 13, 1960, Ser. No. 62,375

Claims priority, application Great Britain Oct. 20, 1959

3 Claims. (Cl. 204—195)



1. An electrode system for use in the method of determining the concentration of oxygen in solution in an electrolyte, said electrode system comprising a cylindrical body portion, a silver tube forming a positively-charged electrode mounted within said body portion, a wire of a material selected from the group consisting of platinum and gold mounted co-axially within said silver tube and forming a negatively-charged electrode, an electrical insulating material filling the space between said positively-charged electrode and said negatively-charged electrode, a small body of oxygen-free electrolyte solution mounted in contact only with adjacent end faces of said tube, said wire, and said insulating material, and a membrane spaced from contact with said negative electrode to define a chamber for confining only said oxygen-free electrolyte and separating said oxygen-free electrolyte solution from the electrolyte solution containing oxygen in solution whose oxygen content is to be determined, said membrane being pervious to oxygen but impervious to deleterious constituents in said electrolyte solution containing oxygen in solution, ring means mounted on and surrounding said body portion for controlling the ingress and egress of said oxygen-free electrolyte solution from the chamber defined by said membrane and said electrode.

3,088,906

CATHODE BAR FOR ALUMINUM REDUCTION CELL

Elmer G. Hurd, Holden, Mass., assignor to Norton Company, Worcester, Mass., a corporation of Massachusetts

No Drawing. Filed Dec. 7, 1959, Ser. No. 857,586

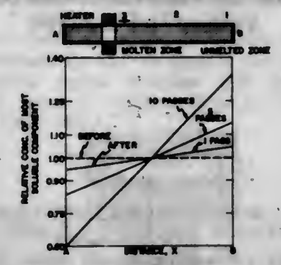
2 Claims. (Cl. 204—279)

1. A cathode bar for insertion through the wall of an aluminum reduction cell made of boride selected from the group consisting of titanium boride and zirconium boride and mixtures thereof, said bar having a laminate adherent coating of magnesia over an area intermediate the ends of the bar and being at least one mil thick, said magnesia having from 1% to 10% silicia, not more than 5% of other material selected from the group consisting of metal oxide and metal and mixtures thereof and not more than .5% of other matter, all by weight.

3,088,907
FRACTIONATION MIXTURES BY ZONE PRECIPITATION

Ibrahim A. Eldib, Union, George E. Charles, Westfield, and Donald L. Baeder, Berkeley Heights, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

Filed June 15, 1960, Ser. No. 36,262
11 Claims. (Cl. 208—24)



1. An improved process for separating a noncrystalline wax into higher and lower melting components which comprises: dissolving said wax in a solvent selected from the group consisting of methyl ethyl ketone, toluene, secondary butyl acetate, carbon tetrachloride, and ethylene glycol in a solvent/wax ratio of from about 6:1 to 3:1; cooling the resulting solution forming an elongated solid mass containing said solvent and said wax dissolved throughout said solvent; passing at least two spaced hot zones from one end of said elongated solid mass towards the other end; liquefying that portion of said elongated solid mass in the immediate vicinity of said hot zone; resolidifying at least a portion of said wax between said hot zones; repeating said passes until the wax has been melted and resolidified about 8 to 40 times, thereby selectively dissolving and increasing the concentration of higher melting point wax in one end of said elongated mass and increasing the concentration of the lower melting point wax in the other end; removing the solvent from said solution; and segmenting the wax into higher and lower melting point fractions.

3,088,908
HYDROCRACKING PROCESS AND CATALYSTS

Rowland C. Hansford, Fullerton, Calif., assignor to Union Oil Company of California, Los Angeles, Calif., a corporation of California

No Drawing. Filed May 11, 1961, Ser. No. 109,246
14 Claims. (Cl. 208—109)

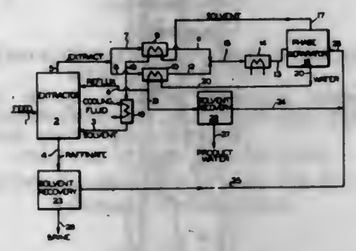
7. A process for hydrocracking a mineral oil feedstock boiling above the gasoline range to produce therefrom lower boiling hydrocarbons in the gasoline range, which comprises contacting said feedstock in the presence of added hydrogen and under hydrocracking conditions including a temperature between about 400° and 800° F., with a hydrocracking catalyst comprising (1) a xerogel phosphate of at least one metal from the class consisting of aluminum, chromium, zirconium and titanium; (2) an impregnated group VIII metal hydrogenation component, and (3) added silicon tetrafluoride in chemical combination with said component (1), and recovering gasoline-boiling-range hydrocarbons from said contacting.

3,088,909
MIXED SOLVENTS FOR SALINE WATER EXTRACTION

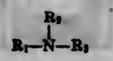
Richard R. Davison and Donald W. Hood, College Station, Tex., assignors to the United States of America as represented by the Secretary of the Interior

Filed Feb. 9, 1961, Ser. No. 88,237
16 Claims. (Cl. 210—22)

1. In the method for removing water having a lessened salt content from saline waters by solvent extraction, wherein the water is removed in an extract phase and a more concentrated salt solution forms the raffinate phase, and wherein the extract phase is heated to cause the water therein to separate out, the improvement which comprises using as the solvent a mixture of amines, at least



two amines having inverse solubility curves with water and having the formula



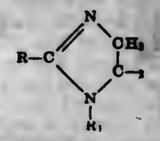
wherein R_1 is a member of the class consisting of hydrogen and alkyl, R_2 and R_3 are members of the class consisting of alkyl, and alkenyl radicals having 3 to 4 carbon atoms, the total number of carbon atoms in each individual amine being 4 to 7, inclusive, the amines composing the solvent mixture having relatively widely separated solubility curves, whereby the relative proportions of the component amines in said solvent may be so selected as to give a predetermined extraction temperature and a predetermined phase separation temperature of the extract.

3,088,910
CORROSION INHIBITORS

Harry W. Rudel, Roselle, and William Seitz, Union, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed Aug. 10, 1959, Ser. No. 832,485
11 Claims. (Cl. 252—32.5)

1. A corrosion inhibitor comprising a neutralization product of an alkyl phosphoric acid and an imidazoline having the general formula:



wherein R is selected from the group consisting of alkyl and alkylene radicals containing from about 2 to 22 carbon atoms; and R_1 is a substituent selected from the group consisting of hydrogen and hydroxy substituted and amino substituted alkyl groups having 1 to 6 carbon atoms, said alkyl phosphoric acid having alkyl groups of from 3 to 18 carbon atoms.

3,088,911
LUBRICANT CONTAINING ASHLESS ANTIWEAR ADDITIVES

Gerald D. Staffin, Westfield, and Walter K. Range, Jr., Elizabeth, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed Nov. 9, 1961, Ser. No. 151,168
5 Claims. (Cl. 252—33.6)

1. An improved lubricating composition having superior antiwear properties which comprises a major proportion of an oil of lubricating viscosity grade into which has been incorporated from about 0.01 to about 5 weight

percent of the mono salt of chlorendic acid and an aliphatic amine having in the range of from 12 to 24 carbon atoms.

3,088,912
LUBRICATING COMPOSITION

Arnold J. Morway, Clark, and Alfred H. Matuszak, Westfield, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed Mar. 1, 1960, Ser. No. 12,007
7 Claims. (Cl. 252—40.7)

1. A lubricating composition comprising a major amount of a silane oil of the general formulae:



wherein R represents a C_6 to C_{20} alkyl group, R' represents an aryl group and R'' represents a member selected from the group consisting of R and R', and a grease thickening amount within the range of about 5 to 40 wt. percent of alkaline earth metal mixed salts of a C_2 to C_4 fatty acid and C_7 to C_{20} fatty acid in a molar ratio of 4 to 20 moles of C_2 to C_4 fatty acid per molar proportion of C_7 to C_{20} fatty acid.

3,088,913
FOAM INHIBITED GLYCOL BASED ANTIFREEZE COMPOSITION

Frank J. Milnes, Spencerport, and Chester M. White, Rochester, N.Y., assignors to Olin Mathieson Chemical Corporation, a corporation of Virginia

No Drawing. Filed Nov. 17, 1955, Ser. No. 547,530
4 Claims. (Cl. 252—73)

1. An ethylene glycol base antifreeze containing dissolved therein an unsaturated monohydric alcohol having eighteen carbon atoms in amount sufficient to substantially decrease the tendency of the composition to foam when admixed with water said amount of monohydric alcohol being from about 0.005 to 0.05 percent by weight.

3,088,914
FIRE-RESISTANT HYDRAULIC FLUIDS

Rudolf J. Holzinger, North Merrick, N.Y., assignor to Socony Mobil Oil Company, Inc., a corporation of New York

No Drawing. Filed Mar. 31, 1960, Ser. No. 18,841
4 Claims. (Cl. 252—76)

1. A composition for use as hydraulic fluid consisting essentially of a water-in-oil emulsion containing about 0.25–2.50 percent by weight of oil-soluble calcium petroleum sulfonate having a molecular weight of at least 900 as an emulsifying agent and about 0.1–2.50 percent by weight of calcium salts of aliphatic acids having carbon chain length of about C_{16}–C_{20} and about 0.1–2.50 percent by weight of calcium salts of naphthenic acids having molecular weights of about 315–1000, the oil portion of said emulsion being a hydrocarbon oil having a viscosity range of about 50–400 Saybolt Universal seconds at 100° F.

3,088,915
RESTORATION OF DECOMPOSED AND POLYMERIZED HEAT TRANSFER FLUIDS

Hugh Frederick Payne and Eric Beauland, London, England, assignors to Hygrotherm Engineering Limited, London, England

No Drawing. Filed Oct. 10, 1960, Ser. No. 61,337
Claims priority, application Great Britain Nov. 16, 1959
3 Claims. (Cl. 252—78)

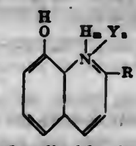
1. A process of lowering the viscosity and melting point of a thermally polymerized and decomposed originally normally liquid heat transfer medium containing originally a liquid tetra-aryl ortho-silicate, comprising mixing tetra-phenyl ortho-silicate into the decomposed medium in quantities sufficient to restore it to a useful lowered viscosity and melting point.

3,088,916
BACTERIOSTATIC AND FUNGISTATIC CLEANSING COMPOSITIONS

Daniel P. Roman, Florissant, Mo., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Aug. 11, 1958, Ser. No. 754,150
6 Claims. (Cl. 252—106)

1. A cleansing composition comprising a synthetic organic detergent selected from the class consisting of anionic and non-ionic detergents and mixtures thereof, and a mycobacteriostatic amount of a substituted quinoline of the formula



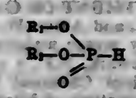
wherein R is an alkyl radical having from 1 to 12 carbon atoms, Y is an anionic radical selected from the group consisting of chloride, bromide, maleate, sulfate, acetate, benzoate and tartrate, and *m* and *n* are like integers selected from 0 and 1.

3,088,917
MIXTURES OF SECONDARY AND TERTIARY PHOSPHITE ESTERS OF ETHER ALCOHOLS

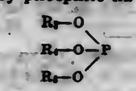
Lester Friedman, Whitestone, N.Y., and Henry Gould, West Orange, N.J., assignors to Weston Chemical Corporation, Newark, N.J., a corporation of New Jersey

No Drawing. Filed Jan. 11, 1961, Ser. No. 97,120
4 Claims. (Cl. 252—182)

1. A mixture of a secondary phosphite having the formula



where R_1 is a member of the group consisting of phenoxyethoxyethyl, methylphenoxyethoxyethyl, lower alkoxyethoxyethyl, phenoxypolyethoxyethyl, and lower alkoxypolyethoxyethyl, and R_2 is selected from the group consisting of R_1, alkyl having 1 to 18 carbon atoms, phenyl, lower alkylphenyl, chlorophenyl, bromophenyl and fluorophenyl with a tertiary phosphite having the formula



wherein R_3 is a member of the group consisting of phenoxyethoxyethyl, methylphenoxyethoxyethyl, lower alkoxyethoxyethyl, phenoxypolyethoxyethyl, and lower alkoxypolyethoxyethyl, and R_4 and R_5 are selected from the group consisting of R_3, alkyl having 1 to 18 carbon atoms, phenyl, lower alkylphenyl, chlorophenyl, bromophenyl and fluorophenyl, 5 to 95% of the mixture being the secondary phosphite and 95 to 5% being the tertiary phosphite.

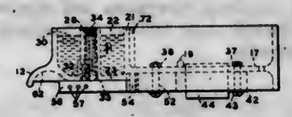
3,088,918
LATHER MAKING APPARATUS

Gerald D. Smith, 6207 Breamore Road, Indianapolis, Ind.

Filed Mar. 28, 1960, Ser. No. 18,149
14 Claims. (Cl. 252—359)

1. A lather making apparatus comprising a two-piece housing having an upper section adapted to be secured

in overlying relation to a lower section, two inwardly converging wall members disposed at one end of said lower housing section to provide an open-ended wedge-shaped lather cavity, the wide end of said cavity terminating at the adjacent side wall of said lower housing section, a lip on said lower housing section side wall adjacent said cavity and extending above the level of said cavity wall members, an agitator blade pivotally supported within said upper housing section and positioned so as to extend into said cavity through the open end thereof when said housing sections are secured in assembled relation, means carried by said upper housing section providing a liquid soap reservoir directly above said cavity, said last mentioned means including a transverse base member forming an upper wall for said cavity and a base wall for said



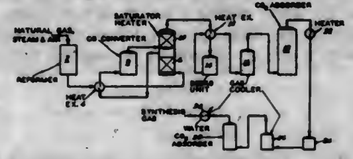
reservoir, soap metering means including an aperture in said base member, a ball closure for said aperture spring biased into engagement with said base member, the relative sizes of said aperture and said ball closure being such that a portion of the ball closure extends into said cavity, said upper housing section having an outwardly extending tab provided a concave surface overlying and spaced from said lip, and an electric vibrator supported within said upper housing section adapted when energized to angularly reciprocate said agitator blade within said cavity whereby engagement of said ball closure by said blade admits liquid soap into said cavity, the motion of said blade serving to draw air into said cavity through its open end and to provide a positive pressure for ejecting lather through the space between said lip and said concave tab surface.

3,088,919

TREATMENT OF GASES

Marion L. Brown, Jr., and Albert W. Green, Yazoo City, Miss., assignors, by mesne assignments, to Engelhard Industries, Inc., Newark, N.J., a corporation of Delaware, and Mississippi Chemical Corporation, Yazoo City, Miss., a corporation of Mississippi

Filed Sept. 10, 1958, Ser. No. 760,113
11 Claims. (Cl. 252—374)



5. A process which comprises adding water vapor to a gaseous mixture comprising hydrogen, nitrogen, carbon dioxide and carbon monoxide, the water vapor being added to the mixture in an amount within the range of 60 to 300 percent by volume of said gaseous mixture, adding sufficient oxygen bearing gas to the resulting gaseous mixture to provide an oxygen to carbon monoxide volume ratio in the range of about 3:1 to 0.25:1, passing the resulting gaseous mixture over a first stage supported platinum catalyst at an elevated temperature, removing the carbon dioxide from the effluent gases, passing the effluent gases over a second stage supported platinum catalyst at an elevated temperature, whereby the carbon monoxide in the gas is substantially completely converted to carbon dioxide.

3,088,920

PROCESS FOR TREATING TETRAALKYLLEAD COMPOSITIONS

Frederick M. Palfrey, Carney's Point, and Richard Wolfe, Wenonah, N.J., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Apr. 26, 1960, Ser. No. 24,657
7 Claims. (Cl. 252—386)

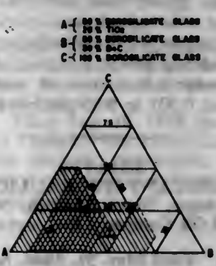
1. The process for purifying an antiknock composition of the group consisting of at least one tetraalkyllead antiknock compound and a tetraalkyllead antiknock blend, which antiknock composition contains a small proportion of impurities which tend to form haze, sludge and corrosive products, which process comprises intimately mixing with said antiknock composition from about 0.5 to about 100 parts by weight of aqueous ammonia for each 100 parts by weight of said antiknock composition, said aqueous ammonia containing an amount of ammonia sufficient to provide at least 0.1% by weight of ammonia based on said antiknock composition, continuing said mixing until said antiknock composition is clear and free of haze, then settling the mixture to form an upper aqueous layer and a lower layer of antiknock composition containing a minor proportion of dispersed aqueous ammonia, and separating said layer of antiknock composition from said aqueous layer.

3,088,921

RESISTOR COMPOSITIONS AND SPARK PLUGS HAVING INTEGRAL RESISTORS

Frederick E. Helschmann, Fostoria, Ohio, assignor, by mesne assignments, to Ford Motor Company, a corporation of Delaware

Filed May 27, 1960, Ser. No. 32,237
4 Claims. (Cl. 252—516)



1. A resistor consisting essentially of borosilicate glass, titanium dioxide and the products of reduction of titanium dioxide, and boron carbide and the products of oxidation of boron carbide, said resistor having a composition produced by heating a mixture consisting essentially of borosilicate glass, titanium dioxide and boron carbide at a temperature within the range of 1600° F. to 1800° F., the proportions of borosilicate glass, titanium dioxide and boron carbide in the mixture falling within the bounds of the single hatched area in FIGURE 3.

3,088,922

POLYETHERS AND USES OF THE SAME

Roger M. Christenson, Gibsonia, and John J. Jaruzelski, Pittsburgh, Pa., assignors to Pittsburgh Plate Glass Company, Allegheny County, Pa.

No Drawing. Filed Sept. 18, 1956, Ser. No. 610,629
3 Claims. (Cl. 260—2)

1. The method of forming a hydroxypolyether which comprises reacting in the presence of an alkaline material selected from the class consisting of alkali metal hydroxides and carbonates of alkali metal:

(I) one mole of a dihalomethyl substituted benzene

selected from the class consisting of dihalomethyl xylene and dihalomethyl mesitylene, with

(II) a mixture of alcohol components,

(A) one of which is a saturated trihydric alcohol,

(B) another of which is a polyalkylene glycol selected from the class consisting of polyethylene glycol, polypropylene glycol and polybutylene glycol, and

(C) a third of which is a glycol selected from the class consisting of 1,4-butanediol, 1,2-butanediol and pentenediol,

the sums of said alcohols being in a range of 1 to 8 moles, there being at least 0.25 mole of each alcohol,

reaction being continued until a hydroxyl number in a range of about 54.4 to about 1030 is obtained.

3,088,923

PROCESS FOR THE PREPARATION OF POLYADDITION PRODUCTS

Rudolf Gabler, Kaenacht, and Hans R. Meyer, Kilchberg, Switzerland, and Alexandre J. Kohlik, Eugene, Oreg., assignors to W. R. Grace & Co., Cambridge, Mass., a corporation of Connecticut

No Drawing. Filed Feb. 24, 1960, Ser. No. 10,576
14 Claims. (Cl. 260—2)

13. A water-soluble, linear polyaddition product formed by the reaction of butadiene dioxide in an inert atmosphere at an elevated temperature below 150° C. in the absence of any acidic or basic constituent with a substantially equimolar quantity of a diprimary glycol wherein the two primary hydroxy groups are directly connected by a carbon-to-carbon chain having between two and six carbon atoms, said diprimary glycol being selected from the group consisting of saturated aliphatic diprimary glycols, unsaturated aliphatic diprimary glycols, saturated cyclic diprimary glycols, unsaturated cyclic diprimary glycols, and the alkyl, aryl, ether, thioether, nitro, fluorine, and chlorine derivatives of the same.

3,088,924

PROCESS FOR PREPARATION OF AN ION-EXCHANGE MATERIAL FROM THE ACID SLUDGE RESULTING FROM SULPHURIC ACID WASHING OF CRUDE LIGHT OILS

Kshitish Ranjan Chakravorty, Sindri, and Bimal Kumar Dutta, Saharpura, India, assignors to Sindri Fertilizers and Chemicals Limited, Bihar, India, a firm of India

No Drawing. Filed Dec. 21, 1959, Ser. No. 860,693
7 Claims. (Cl. 260—2.1)

1. A process for producing ion-exchange material from acid sludge, consisting essentially in

(*a*) heating the acid sludge obtained by the sulfuric acid-washing of crude light oils in by-product recovery plants of coke oven industries, to a temperature in the range of 50° C. to 150° C.,

(*b*) separating the resulting supernatant resinous layer from the acid residual layer,

(*c*) disintegrating the resulting resinous lumps, and

(*d*) washing with water until the resin end product is substantially acid free.

3,088,925

PREPARATION OF EXPANDABLE POLYSTYRENE PARTICLES

Wade E. Hall, Millersville, and Algirdas C. Peskius, Lancaster, Pa., assignors to Armstrong Cork Company, Lancaster, Pa., a corporation of Pennsylvania

No Drawing. Filed Mar. 1, 1960, Ser. No. 11,989
2 Claims. (Cl. 260—2.5)

1. The method of forming expandable polystyrene particles having a normally liquid petroleum ether expanding agent in which said polystyrene is insoluble dispersed throughout said polystyrene particles, which method comprises immersing polystyrene particles in a reactor containing an aqueous solution of polyvinyl alcohol containing from 0.5 to 5.0 percent by weight polyvinyl alcohol based upon the weight of said polystyrene, adding about fifty parts by weight of petroleum ether to said aqueous solution, the amount of water in said solution being from 1 to 15 times, by weight, the amount of petroleum ether, sealing said reactor and heating said immersed polystyrene particles at a temperature in the range of 120° C. to 150° C. and a pressure of about fifty-one pounds per square inch, cooling said reactor rapidly, and separating said polystyrene particles in a form free of agglomerates.

3,088,926

TRIAMERIC SYNTHETIC RESIN COMPOSITIONS AND METHOD OF MAKING THE SAME

Jack P. Morris, Detroit, and Charles J. Meeske, Birmingham, Mich., assignors to Reichhold Chemicals, Inc., White Plains, N.Y.

No Drawing. Filed Mar. 7, 1960, Ser. No. 12,974
15 Claims. (Cl. 260—21)

1. A solution in an organic solvent of a resinous material compatible with aminoplasts and heat convertible to form a surface coating having high chemical resistance, high gloss retention, high color retention and desirable adhesion characteristics, said resinous material being a copolymer of (A) a non-drying alkyd resin and (B) unsaturated monomers, the non-drying alkyd resin being an ester of (1) at least one saturated monocarboxylic acid having 8–14 carbon atoms, (2) at least one benzoid dibasic acid, (3) at least one butanedoic acid, and (4) at least one polyhydric alcohol, said ingredients (1), (2), (3) and (4) constituting the sole reacting ingredients of the alkyd resin, the unsaturated monomers being a mixture of at least one unsaturated carboxylic acid component selected from the group consisting of acrylic and methacrylic esters and mixtures thereof, at most a minor amount of an unsaturated carboxylic acid selected from the group consisting of acrylic and methacrylic acid, and at least one vinyl monomer selected from the group consisting of styrene, vinyl toluene and mixtures thereof.

3,088,927

OIL MODIFIED ALKYL RESINS MODIFIED WITH A THERMAL POLYMER OF DICYCLOPENTADIENE

Israel J. Dissen, Chicago, Ill., assignor to Velsicol Chemical Corporation, Chicago, Ill., a corporation of Illinois

No Drawing. Filed Sept. 10, 1959, Ser. No. 839,070
9 Claims. (Cl. 260—22)

1. A process for the production of oil-modified alkyd resins which comprises reacting a polymer consisting substantially of polycyclopentadiene having a molecular weight of between about 500 and 2,500 prepared by heating cyclopentadiene in the substantial absence of other polymerizable material at a temperature of from about 500° F. to about 550° F. with an oil-modified alkyd resin prepared by reacting unsubstituted polyhydric alcohols containing up to 6 carbon atoms, unsubstituted polybasic acids containing up to 10 carbon atoms, and fatty acids containing from 14 to 22 carbon atoms at a temperature above about 400° F.

3,088,928
NOVEL EMULSIFIABLE WAXY LINEAR POLYESTERS
Clifford R. Berres, Georges E. Tabet, and Edward A. Wilder, Racine, Wis., assignors to S. C. Johnson & Son, Inc., Racine, Wis.
No Drawing. Filed Oct. 1, 1959, Ser. No. 843,642
11 Claims. (Cl. 260—29.2)

9. A self-lustering protective coating composition comprising water and a film forming agent, the film forming agent including emulsifiable waxy linear polyesters of (1) a non-branched polymethylene glycol having from 4 to about 15 carbon atoms, (2) a non-branched polymethylene dicarboxylic acid having from 4 to about 15 carbon atoms and (3) a straight chain aliphatic monohydric alcohol having from 26 to about 45 carbon atoms, said polyesters containing only carbon, hydrogen and oxygen, and having a melting point of at least about 80° C. and an acid value of from about 10 to about 30, the proportions of (1), (2) and (3) being substantially *n* mols of said glycol, *n* plus 1 mols of said dicarboxylic acid and 1 mol of said alcohol, *n* having a value of from 2 to 30 said polyester molecules being terminated predominantly with carboxyl and alkyl groups in substantially equal proportions.

3,088,929
PROCESS OF CURING A CHLORINATED ETHYLENE HIGHER ALPHA OLEFIN COPOLYMER
Henry S. Makowski, Carteret, and William P. Cain, Roselle, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware
No Drawing. Filed June 2, 1958, Ser. No. 738,940
4 Claims. (Cl. 260—41)

1. The process for forming a synthetic rubber comprising the steps of:
(1) mixing (*a*) a chlorinated copolymer having an olefin content consisting essentially of 15 to 85 mol percent ethylene and 85 to 15 mol percent of an α-olefin containing from 3 to 8 carbon atoms, and having a chlorine content of from 1 to 30 weight percent, said copolymer having been chlorinated at a temperature of 70°–120° C.; and (*b*) a curing agent selected from the class consisting of dicumyl peroxide; metal oxides, metal salts and metal powders, the metal components of which are groups IIA and IIB metals, copper and iron; heterocyclic amines; sulfur; quinone dioxime and its derivatives; mixtures thereof; and
(2) heating the resulting mixture to curing temperatures to cure said chlorinated copolymer.

3,088,930
CURED CHLORINATED ETHYLENE-HIGHER ALPHA OLEFIN COPOLYMER AND CURING AGENTS THEREFOR
William P. Cain, Linden and Henry S. Makowski, Carteret, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware
No Drawing. Filed May 29, 1959, Ser. No. 816,708
4 Claims. (Cl. 260—41)

1. A cured chlorinated low pressure copolymer having an olefin content of 15 to 85 mol percent ethylene and 85 to 15 mol percent of an alpha olefin containing from 3 to 8 carbon atoms and a chlorine content of from 2 to 15 wt. percent, the copolymer itself having been prepared with a catalyst of a reduced heavy transition metal halide and a reducing metal-containing compound, and the chlorinated copolymer being characterized in having before curing (*a*) a crystallinity of less than 25%; (*b*) a softening point of less than 25° C.; (*c*) a tensile strength of from 50 to 1000 p.s.i.; (*d*) an apparent modulus of elasticity at —50° C. of from 10,000 to 400,000 p.s.i., and (*e*) an intrinsic viscosity in tetralin at 125° C. at a concentration of one gram per liter of 0.4 to 3.5; said curing being effected with a curing mixture consisting essentially of (1) from 0.5 to 15 parts of a metal-containing substance selected from the group consisting of zinc, cadmium, manganese, iron, copper and lead inorganic salts, oxides and metal powders and (2) from 0.5 to 10 parts of a curing agent which consists essentially of a dialkyl dithiocarbamic acid salt, said parts being based on 100 parts by weight of chlorinated copolymer.

3. The composition of matter of claim 1 wherein said curing mixture also contains from 5 to 150 parts of inert filler.

3,088,931
NITROGEN CONTAINING POLAR MONOMER GRAFTED ON AN ISOBUTYLENE-MONOVINYL-ETHER COPOLYMER BACKBONE
Clyde S. Scanley, Stamford, Frederick H. Stegele, Cos Cob, and Richard L. Webb, Darien, Conn., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine
No Drawing. Filed Oct. 27, 1958, Ser. No. 769,595
2 Claims. (Cl. 260—45.5)

1. A graft polymer having viscosity index improving properties and detergent properties consisting of a copolymer of isobutylene with from 0.2% to 20% of a monovinyl ether monomer having an active hydrogen capable of transformation into an oxidized site said percentage of the monovinyl monomer being based on isobutylene, said polymer having grafted thereon from 0.05% to 15% of an unsaturated, polar, nitrogen-containing monomer based on the weight of the said polymer and having a detergent power such that less than 0.15% by weight of the polymer in an 0.08% by weight carbon black suspension in kerosene which is then centrifuged imparts 10% transmission of visible light.

3,088,932
ACRYLONITRILE POLYMER COMPOSITION AND STABILIZED WITH ZINC OXALATE, ZINC ACETATE, OR CHROMIUM ACETATE
Terry W. Tarkington, Decatur, and Carlton D. Whitt, Athens, Ala., assignors, by mesne assignments, to Monsanto Chemical Company, a corporation of Delaware
No Drawing. Filed Dec. 2, 1960, Ser. No. 73,208
6 Claims. (Cl. 260—45.75)

1. A new composition of matter comprising a polymer containing in polymerized form at least 80 percent of acrylonitrile and up to 20 percent of at least one copolymerized mono-olefinic monomer and, as a light stabilizing agent from 0.025 to 2.0 percent, based on the weight of the polymer, of a compound taken from the group consisting of zinc acetate, zinc oxalate and chromium acetate.

3,088,933
POLYMERS OBTAINED BY POLYCONDENSATION OF POLYHYDRIC ALCOHOLS WITH THE ALKYL ESTERS OF 2,5-DIHYDROXY-HEXAHYDRO-TEREPHTHALIC ACIDS
Gerhard F. Ottmann, Columbus, Ohio, and Christoph J. Grundmann, Lancaster, Pa., assignors to Olin Mathieson Chemical Corporation, a corporation of Virginia
No Drawing. Filed Jan. 13, 1959, Ser. No. 786,465
18 Claims. (Cl. 260—75)

1. Polymerization products comprising the polymeric polycondensation products of not less than 1 mole of a polyhydric aliphatic alcohol containing from 2 to 6 hydroxy groups with 1 mole of a lower alkyl ester of 2,5-dihydroxy-hexahydro-terephthalic acid wherein the alkyl group contains from 1 to 8 carbon atoms.

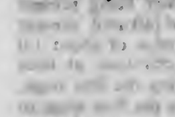
3,088,934
METHOD OF PREPARING A DIISOCYANATE-BASED LAMINATING RESIN
Angelo P. Bonanni, 138A Haddon Hills Apts., Haddonfield, N.J.
No Drawing. Filed Mar. 24, 1960, Ser. No. 17,440
1 Claim. (Cl. 260—77.5)
(Granted under Title 35, U.S. Code (1952), sec. 266)

An improved process for the manufacture of a laminating resin suitable for use in making glass laminates, said method comprising the steps of:
(1) reacting at a temperature of 20° C. 1.1 to 1.6 moles of 2,4-meta toluene diisocyanate with 1 to 1.6 moles of a polyhydric alcohol selected from the group consisting of 2-butene-1,4-diol, butane-1,4 diol, diethylene glycol, and triethylene glycol wherein the said glycol is added at a rate of 1 cc./min.;
(2) mixing 1 to 3 moles of benzene therewith for retarding polymerization of the said resin by selectively dissolving the resin without dissolving either the diisocyanate or the glycol;
(3) maintaining the reaction below 42° C. thereby limiting the degree of polymerization of the resin.

3,088,935
TETRAFLUOROETHYLENE-SULFUR MONOMERIC AND POLYMERIC COMPOUNDS
Carl G. Krespan, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed June 24, 1959, Ser. No. 822,411
11 Claims. (Cl. 260—79)

7. Process of preparing perfluoro-1,2,3-trithiolane, perfluoro-1,2,3,4-tetrathiane, perfluoro-1,2,5-trithiepane and linear copolymers of sulfur and tetrafluoroethylene containing at least 1% sulfur by weight, which comprises heating a reaction mixture consisting essentially of tetrafluoroethylene, sulfur and carbon disulfide in a sealed vessel at a temperature in the range of 250–350° C., the molar ratio of sulfur to tetrafluoroethylene in the reaction mixture being at least 1:1, and the amount of carbon disufide present in the reaction mixture being sufficient to dissolve at least part of the sulfur.

11. Polymers of cyclic sulfides of the formula



wherein *m* and *n* are cardinal numbers from 0 to 1, the sum of *m* and *n* being no greater than 1.

3,088,936
MOLTEN PHASE EXTRACTION OF POLYMERIC OLEFINS
Richard W. Quarles, Princeton, N.J., and Lloyd H. Wartman, Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York
No Drawing. Filed Nov. 10, 1959, Ser. No. 851,979
6 Claims. (Cl. 260—93.5)

1. The process for removing the low molecular weight polymer fraction from a normally solid crystalline lower olefin polymer mass comprising a major fraction of high molecular weight polymer molecules having a molecular weight above 1500 and a minor fraction of low molecular weight molecules having a molecular weight below 1500 which comprises intimately contacting said polymer mass in the molten state with an inert organic liquid extractant having the general formula:

$$R—O—CH_2—CH_2OCH_2CH_2O—R'$$

wherein R and R' are each selected from the group consisting of hydrogen and an alkyl group containing from 1 to 6 carbon atoms in which the said low molecular weight polymer molecules are completely soluble and in which the said high molecular weight polymer molecules are insoluble, said inert organic liquid extractant and said original polymer mass being present in a volume ratio of at least 0.8:1, and thereafter separating the insoluble fraction of the original polymer mass from the organic liquid extractant containing the low molecular weight polymer fraction dissolved therein.

3,088,937
COPOLYMERIZATION OF VINYLIDENE CHLORIDE-VINYL CHLORIDE
Alexei Trofimow, Cambridge, and Philip K. Isaacs and Donald Goodman, Brookline, Mass., assignors to W. R. Grace & Co., Cambridge, Mass., a corporation of Connecticut
No Drawing. Filed Nov. 3, 1959, Ser. No. 850,527
10 Claims. (Cl. 260—87.7)

1. A process comprising copolymerizing 40 to 60% of vinylidene chloride and 60 to 40% of vinyl chloride in an aqueous emulsion including a polymerization catalyst, 0.1 to 1% of glycerine, and 0.1 to 1% of emulsifier selected from the group consisting of long chain alkyl and alkaryl sulfates and sulfonates having a chain of 12 to 20 carbon atoms in the alkyl group in a first stage until 40 to 90% conversion of monomers has taken place, then in a second stage adding a mixture containing 60 to 90% vinylidene chloride and 40 to 10% vinyl chloride and continuing the polymerization until 80 to 95% overall monomer conversion is attained, from 20 to 50% of the total monomers being added in the first stage and the balance being added in the second stage, all percentages expressed herein being based on the total weight of the monomers.

3,088,938
PROCESS FOR CURING VINYLIDENE FLUORIDE-HEXAFLUOROPROPENE COPOLYMERS
Edward F. Cluff, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Dec. 6, 1961, Ser. No. 157,564
6 Claims. (Cl. 260—87.7)

1. In the process of curing an elastomeric copolymer of vinylidene fluoride and hexafluoropropene in the presence of a basic metal oxide with from about 1 to 4 parts by weight per 100 parts by weight of said copolymer of hexamethylenediamine carbamate, the improvement comprising incorporating with said copolymer prior to heating from about 0.1 to 3.0 parts by weight of a compound selected from the group consisting of p-benzoquinone, 2,3 - dichloro-p-benzoquinone, 2,5 - dichloro-p-benzoquinone, trichloro - p - benzoquinone, tetrachloro - p-benzoquinone, 2 - methoxy - 5 - methyl - p - benzoquinone, trichloromethoxy - p - benzoquinone, 2 - hydroxy-1,4-naphthoquinone and quinhydrone.

3,088,939
METHOD OF MAKING A CRYSTALLIZABLE POLYMER WITH LITHIUM AS CATALYST
Mary L. Miller, New York, N.Y., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine
No Drawing. Filed July 26, 1957, Ser. No. 674,371
8 Claims. (Cl. 260—88.7)

1. A method of preparing crystallizable polymers which comprises mixing a monomeric compound selected from the group consisting of acrylonitrile, methacrylonitrile, tertiary butyl acrylate and tertiary butyl methacrylate with a catalyst system consisting essentially of lithium metal, in a finely dispersed condition and having a particle size not exceeding 200 microns, in amounts of from about 0.01% to 5%, based on the weight of said monomeric compound, and polymerizing said mixture in an inert atmosphere,

wherein the monomeric compound is dissolved in an organic medium which is a solvent for said compound and substantially a nonsolvent for the polymer of said compound.

3,088,940

HOMOPOLYMERIZATION OF ACRYLONITRILE WITH CATALYST COMPOSITIONS COMPRISING ORGANO TIN HYDRIDE AND METAL HALIDE COMPLEXES

Lloyd T. Jenkins, Decatur, Ala., assignor, by mesne assignments, to Monsanto Chemical Company, a corporation of Delaware

No Drawing. Filed June 8, 1960, Ser. No. 34,613
6 Claims. (Cl. 260—88.7)

1. A process of the homopolymerization of acrylonitrile which comprises reacting the same in the presence of a catalytic amount of a complex catalyst obtained by the reaction of an organo tin hydride of the general formula:

$$R_nSnH_{n_1}$$

wherein R is a hydrocarbon radical containing from 2 to 20 carbon atoms, n is a whole number of from 2 to 3 and n_1 is a whole number of from 1 to 2, and a metal halide of the general formula:

$$MX_n$$

wherein M is a metal selected from groups IVB and VB of the periodic table of elements, X is a halide and n is an integer of from 3 to 4, under inert conditions, in the presence of a hydrocarbon solvent, at a temperature in the range of 0° C. to 250° C. and a pressure in the range of from 1 to 150 atmospheres absolute.

3,088,941

PROCESS FOR THE PREPARATION OF IMPROVED POLYTETRAFLUOROETHYLENE EXTRUSION POWDER

Keith Leon Uhland, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Mar. 11, 1960, Ser. No. 14,187
5 Claims. (Cl. 260—92.1)

1. In the homopolymerization of tetrafluoroethylene at pressure of 1 to 75 atmospheres in an aqueous medium to obtain a colloidal dispersion of polytetrafluoroethylene by polymerizing said tetrafluoroethylene in said aqueous medium containing a water-soluble peroxide initiator and a water-soluble dispersing agent comprising a water-soluble salt selected from the class consisting of alkali metal salts, the ammonium salt and the substituted ammonium salts of a perfluoroalkanoic acid having the structure $B(CF_2)_nCOOH$, wherein B is from the group consisting of hydrogen and fluorine and n is an integer from 6 to 20, the step which comprises adding to the aqueous medium, prior to polymerization, less than 1% by weight of the aqueous medium of colloidally dispersed, solid, high molecular weight polytetrafluoroethylene having a crystalline melting point at about 327° C. and continuing the polymerization by maintaining the polymerization pressure until a polytetrafluoroethylene concentration of about 35% by weight of the aqueous medium is obtained.

3,088,942

MONOSUBSTITUTED ALUMINUM DIHALIDE CATALYSTS FOR OLEFIN POLYMERIZATION

Harry W. Coover, Jr., Kingsport, Tenn., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Mar. 31, 1958, Ser. No. 724,911
14 Claims. (Cl. 260—93.7)

1. In the polymerization of α-monoolefinic hydrocarbon containing 3 to 10 carbon atoms to form solid, crystalline polymer, the improvement which comprises catalyzing the polymerization with a catalytic mixture consisting essentially of an aluminum dihalide having the formula R_1AlX_2 wherein R_1 is a hydrocarbon radical containing 1 to 12 carbon atoms and selected from the group consisting of alkyl, aryl and aralkyl and the halogen atoms being selected from the group consisting of chlorine, bromine and iodine, an alkoxide of a transition metal selected from the group consisting of titanium, zirconium, vanadium, chromium and molybdenum and an organophosphorus compound selected from the group consisting of tri-lower alkyl phosphites, tri-lower alkyl phosphates and hexa-lower alkyl phosphoramides, the molar ratio of aluminum dihalide to organophosphorus compound being within the range of 1:1 to 1:0.25.

3,088,943

PROCESS FOR MAKING ALKALI METAL SALT OF CARBOXYMETHYLCELLULOSE

James M. Cordrey, Wilmington, Del., and Stanley T. Druckenmiller, Wenonah, and James E. Lufkin, Woodbury, N.J., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed Oct. 21, 1960, Ser. No. 64,979
3 Claims. (Cl. 260—231)

1. A two-stage continuous process for the preparation of a water-soluble alkali metal salt of carboxymethylcellulose in which the first stage involves the preparation of alkali cellulose and the second stage involves the etherification of the alkali cellulose, said first stage comprising mixing intimately and thoroughly a comminuted cellulose with a lower alkanol having from 2 to 4 carbon atoms and aqueous alkali, extruding the resultant mass under pressure through a die, and thereafter steeping the extruded material for a period of at least about 10 minutes, said second stage comprising intimately and thoroughly mixing the product from the first stage with monochloroacetic acid, extruding the resultant mass under pressure through a die, and thereafter aging the extruded material for a period of at least about one-half hour, the amount of water present throughout said process being in the range of about 0.4 to 1.2 parts by weight per part of cellulose, at least about 75% of the water being present during the first stage, the amount of alkanol present throughout said process being in the range of about 1.0 to 2.5 parts by weight per part of cellulose, at least 35% of the alkanol being present during the first stage, the weight ratio of alkali added during the first stage to monochloroacetic acid added during the second stage being in the range of about 0.86 to 1.25 parts of alkali per part of monochloroacetic acid, and the mole ratio of monochloroacetic acid to anhydroglucose units of said cellulose being less than about 1.5:1.

3,088,944

PYRAZOLE DERIVATIVES IN THE PREGNANE SERIES

Katsura Morita, Ikeda, Japan, assignor to Takeda Chemical Industries, Ltd., Higashiku, Osaka, Japan

No Drawing. Filed Nov. 24, 1961, Ser. No. 154,853
Claims priority, application Japan Nov. 30, 1960
3 Claims. (Cl. 260—239.5)

1. A method for preparing pyrazole derivatives of pregnane series steroids, which comprises allowing a member selected from the group consisting of 16,20-diketosteroids, the nucleus of which contains 21 carbon atoms, and their enol type derivatives, to react with a member selected from the group consisting of hydrazine, hydrazine hydrate, lower alkyl hydrazine, lower alkanoyl hydrazine and benzoyl hydrazine.

3,088,945

PROCESS FOR THE PREPARATION OF 12α-ALKYL STEROIDS

Burton G. Christensen, Rahway, Ralph F. Hirschmann, Scotch Plains, and John M. Chemerda, Metuchen, N.J., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Filed Aug. 7, 1958, Ser. No. 753,640
3 Claims. (Cl. 260—239.55)

1. The process which comprises reacting 11β,12β-epoxy-3,20-bis-[ethylenedioxy]-pregnane with an alkylating agent selected from the group consisting of dialkyl magnesium and alkyl magnesium halide to form 12α-alkyl-3,20-bis-[ethylenedioxy]-11β-hydroxypregnane.

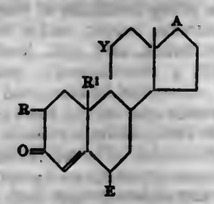
3,088,946

STEROIDAL C-6 ALKINYL OR ALKENYL DERIVATIVES AND PROCESS FOR THE PREPARATION THEREOF

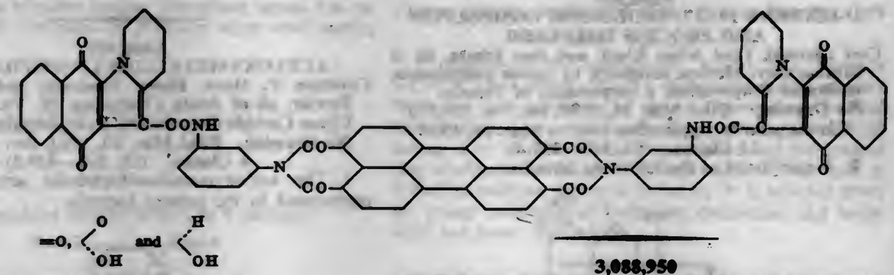
John A. Zderic and Howard J. Ringold, Mexico City, Mexico, assignors, by mesne assignments, to Syntex Corporation, a corporation of Panama

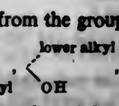
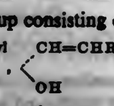
No Drawing. Filed Jan. 19, 1960, Ser. No. 3,277
Claims priority, application Mexico Jan. 20, 1959
33 Claims. (Cl. 260—239.55)

1. A compound of the following formula:

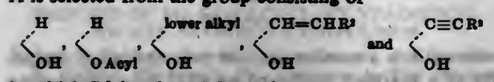


wherein R is selected from the group consisting of hydrogen and lower alkyl; R' is selected from the group consisting of hydrogen and methyl; Y is selected from the group consisting of hydrogen,



=O,  and 

A is selected from the group consisting of



in which R^3 is selected from the group consisting of hydrogen and lower alkyl, and acyl is derived from a hydrocarbon carboxylic acid containing 1 to 12 carbon atoms; E is selected from the group consisting of —CH=CHR³ and —C≡CR³ wherein R³ is selected from the group consisting of hydrogen, lower alkyl and lower alkoxy.

24. 6β-ethinyl-3,20-bis-ethylenedioxy-pregnane-5α-ol.

3,088,947

BENZOYLCARBINOL-AMINOACETATES

Piernicola Giraldi and Willy Logemann, Milan, Italy, assignors to Carlo Erba S.p.A., Milan, Italy, a corporation of Italy

No Drawing. Filed Nov. 22, 1961, Ser. No. 155,457
Claims priority, application Italy Dec. 19, 1960
8 Claims. (Cl. 260—247.2)

1. Benzoylcarbinol-morpholino-acetate.

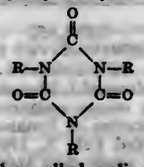
3,088,948

PRODUCTION OF TRIS-2-HYDROXYALKYL ISOCYANURATES

Edwin D. Little, Hopewell, and Bing T. Poon, Colonial Heights, Va., assignors to Allied Chemical Corporation, New York, N.Y., a corporation of New York

No Drawing. Filed Oct. 23, 1959, Ser. No. 848,214
7 Claims. (Cl. 260—248)

1. A tris-2-hydroxyalkyl isocyanurate of the formula:



wherein R is a hydroxyalkyl radical selected from the group consisting of hydroxyethyl, hydroxypropyl and hydroxybutyl.

3. A method of preparing a tris-2-hydroxyalkyl isocyanurate which comprises reacting cyanuric acid with an alkylene oxide selected from the group consisting of ethylene oxide, propylene oxide and butylene oxide, in mol ratio of about 2 to 5 mols of alkylene oxide per mol of cyanuric acid at temperature of about 25° to 140° C. in the presence of an inert solvent for both the cyanuric acid and alkylene oxide and an alkaline catalyst, and recovering the tris-2-hydroxyalkyl isocyanurate thereby formed from the resultant reaction mass.

3,088,949

NEW DYESTUFFS

Eduard Moser, Bottmingen, and Jacob Koch, Basel, Switzerland, assignors to Ciba Limited, Basel, Switzerland, a Swiss company

No Drawing. Filed Dec. 6, 1960, Ser. No. 73,968
Claims priority, application Switzerland Dec. 8, 1959
1 Claim. (Cl. 260—281)

The dyestuff of the formula

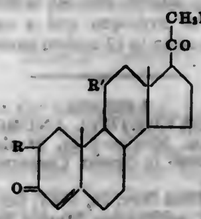
3,088,950

21-FLUORO 2-ALKYL PREGNENE COMPOUNDS

Howard J. Ringold and George Rosenkranz, Mexico City, Mexico, assignors, by mesne assignments, to Syntex Corporation, a corporation of Panama

No Drawing. Filed Aug. 13, 1957, Ser. No. 677,852
Claims priority, application Mexico Aug. 21, 1956
3 Claims. (Cl. 260—397.3)

3. A novel compound of the following formula:



wherein R is selected from the group consisting of lower alkyl and aralkyl, and R' is keto.

3,088,951

16-METHYL DERIVATIVES OF PROGESTERONE

Arthur E. Oberster, Garwood, and Lewis H. Sarett, Princeton, N.J., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Filed Jan. 12, 1959, Ser. No. 786,024
1 Claim. (Cl. 260—397.3)

9α-fluoro-11-keto-16α-methylprogesterone.

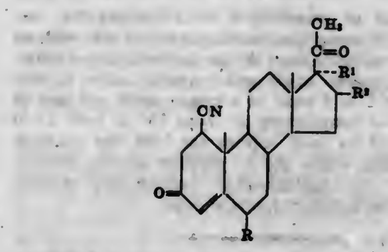
3,088,952

1β-CYANO DERIVATIVES OF Δ⁴-3-KETO PREGNENES

Albert Bowers and Howard J. Ringold, Mexico City, Mexico, assignors, by mesne assignments, to Syntex Corporation, a corporation of Panama

No Drawing. Filed Feb. 5, 1960, Ser. No. 6,850
Claims priority, application Mexico Feb. 7, 1959
19 Claims. (Cl. 260—397.3)

1. A compound of the formula:



wherein R is selected from the group consisting of hydrogen, methyl and fluorine; R' is selected from the group consisting of hydrogen, hydroxy and acyloxy in which the acyl group is that of a hydrocarbon carboxylic acid of less than 12 carbon atoms; R^2 is selected from the group consisting of hydrogen, α-methyl and β-methyl.

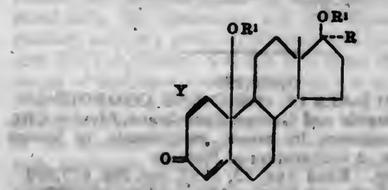
3,088,953

Δ⁴-ESTRENE-10β,17β-DIOL-3-ONE COMPOUNDS AND PROCESS THEREFOR

Carl Djerassi, Fred Allan Kincl, and Jose Iriarte, all of Mexico City, Mexico, assignors, by mesne assignments, to Syntex Corporation, a corporation of Panama

No Drawing. Filed Mar. 18, 1959, Ser. No. 800,093
Claims priority, application Mexico Mar. 19, 1958
11 Claims. (Cl. 260—397.4)

2. A compound of the following formula:



wherein Y is selected from the group consisting of a double bond at C–1(2) and a saturated linkage at C–1(2), R is selected from the group consisting of lower alkyl, lower alkenyl and lower alkinyl and R^1 is selected from the group consisting of hydrogen and a hydrocarbon carboxylic acyl group of up to 12 carbon atoms.

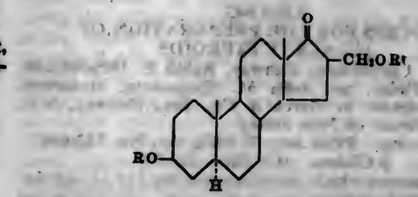
3,088,954

16β-HYDROXYMETHYL ANDROSTANES

Lawrence H. Knox, Mexico City, Mexico, assignor, by mesne assignments, to Syntex Corporation, a corporation of Panama

No Drawing. Filed Nov. 20, 1961, Ser. No. 153,754
Claims priority, application Mexico Sept. 26, 1961
26 Claims. (Cl. 260—397.4)

1. A compound of the following formula:



wherein R is selected from the group consisting of hydrogen and a hydrocarbon carboxylic acyl group of less than 12 carbon atoms and R^1 is selected from the group consisting of hydrogen, lower alkyl, lower aralkyl and a hydrocarbon carboxylic acyl group of less than 12 carbon atoms.

3,088,955

PREPARATION OF ACETYLACETONATES FROM ORES

Raymond A. Foos, Cincinnati, Ohio, and Howard F. Gemperline, Tonawanda, N.Y., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Aug. 11, 1958, Ser. No. 754,130
14 Claims. (Cl. 260—429.1)

1. A process for beneficiating an oxidic ore of a metal selected from the group consisting of uranium, vanadium, manganese, aluminum, copper, nickel and cobalt which comprises comminuting said ore, leaching said comminuted ore with a stoichiometric quantity of acetylacetone for the conversion of contained metal oxides to metal acetylactonates and with at least a sufficient excess to dissolve said metal acetylacetonate in a minimum quantity of acetylacetone at a temperature in the range of from about room temperature up to about the reflux temperature of acetylacetone and said metal acetylacetonate, and separating the leach liquor so produced from the leached ore whereby said leach liquor contains a substantial quantity of the oxide of said metal as a metal acetylacetonate substantially free from gangue materials.

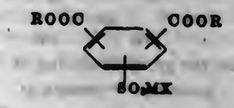
3,088,956

ACYLOXYMETALLOSULFOPHTHALATES

Christian F. Horn, Harry Vineyard, and George W. Fowler, all of South Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Mar. 20, 1961, Ser. No. 96,672
8 Claims. (Cl. 260—429.9)

1. The acyloxymetallosulfophthalic acid compounds represented by the general formula:



wherein R is a member selected from the group consisting of a hydrogen atom, and an alkyl radical containing from 1 to about 10 carbon atoms; M is a divalent metal atom selected from the group consisting of beryllium, magnesium, calcium, zinc, strontium, barium, and tin; and X is an acyloxy radical of the formula —OOCR', wherein R' is a monovalent hydrocarbyl radical containing from 1 to about 15 carbon atoms.

3,088,957

METHOD FOR SEPARATING ORGANOLEAD COMPOUNDS

Tom W. McKay, Baton Rouge, La., assignor to Ethyl Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed July 16, 1959, Ser. No. 827,444
8 Claims. (Cl. 260—437)

1. A process for recovering a hydrocarbon lead compound from a liquid mixture including the lead compound and another organometallic compound, the hydrocarbon lead compound having at least one hydrocarbon radical bonded to the lead through a carbon atom and the remaining valences thereof being satisfied by ligands selected from the group consisting of halogens, hydrogen, and alcoholate groups having up to about 18 carbon atoms in the alcohol residues thereof, said other organometallic compound being a hydrocarbon compound of an element selected from the group consisting of zinc, cadmium, and group III–A elements, and having at least one hydrocarbon radical bonded to the element by a carbon atom, the remaining valences thereof being satisfied by ligands selected from the group consisting of halogens, hydrogen, and alcoholate groups having up to about 18 carbon atoms in the alcohol residues thereof, said process comprising reacting the liquid mixture with a complexing compound capable of complexing with said other organometallic compound of the liquid mixture, nonreactive with the hydrocarbon lead compounds, and selected from the group consisting of hydrides, halides, pseudohalides, and hydrocarbon compounds of alkali and alkaline earth metals, and said complexing compound being provided in proportions of at least about ½ mole per mole of said other organometallic compound to form a complex immiscible with the hydrocarbon lead compound, and separating substantially pure hydrocarbon lead compound from the complex.

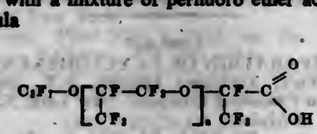
3,088,958

CHROMIUM COMPLEXES OF PERFLUOROETHER ACIDS. ARTICLES COATED THEREWITH AND A PROCESS FOR THEIR PREPARATION

Herbert S. Eleuterio, New Castle County, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Nov. 3, 1960, Ser. No. 66,987
10 Claims. (Cl. 260—438)

8. A composition comprising complexes of the Werner type in which trivalent nuclear chromium atoms are coordinated with a mixture of perfluoro ether acids having the formula



where n is a positive integer from 1 to 6 inclusive.

3,088,959

PROCESS OF MAKING CYCLOPENTADIENYL NICKEL NITROSYL COMPOUNDS

Robert D. Feltham, Joseph F. Anzenberger, and Jonathan T. Carriel, Pittsburgh, Pa., assignors to The International Nickel Company, Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Sept. 1, 1960, Ser. No. 53,374
6 Claims. (Cl. 260—439)

6. A process for the production of nickel nitrosyl derivatives of substances selected from the group consisting of cyclopentadiene and methylcyclopentadiene which comprises subjecting nickel carbonyl to the action of nitric oxide at a partial pressure of at least one atmosphere in the presence of liquid reaction medium and a base selected from the group consisting of nitrogenous bases, phosphorus bases and alkoxides of metals having strong hydroxides at an initial temperature of about room temperature and further reacting the reaction products thereof with a substance selected from the group consisting of cyclopentadiene and methylcyclopentadiene.

3,088,960

PREPARATION OF CYCLOPENTADIENE METAL COMPOUNDS

John C. Wollensak, Royal Oak, Mich., assignor to Ethyl Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Aug. 20, 1959, Ser. No. 834,928
13 Claims. (Cl. 260—439)

1. Process for preparing a cyclopentadiene metal compound selected from the class consisting of cyclopentadienyl cobalt cyclopentadienes, cyclopentadienyl iridium cyclopentadienes, cyclopentadienyl rhodium cyclopentadienes, and bis(cyclopentadiene) nickels wherein the cyclopentadiene and cyclopentadienyl groups are hydrocarbon groups having from 5 to about 13 carbon atoms; said process comprising reacting the corresponding neutral bis(cyclopentadienyl) metal compound at a temperature within the range of about —20° C. to about 100° C. with a reducing agent selected from the class consisting of

A. alkali metals, alkali metal amalgams and simple and complex alkali metal hydrides,

wherein said process is conducted in the presence of a hydrolytic solvent and

B. hydrogen, in the presence of a catalytic quantity of a catalyst selected from the class consisting of Raney nickel, platinum, palladium and copper chromite,

wherein said process is conducted in the presence of a solvent selected from the class consisting of hydrolytic and non-hydrolytic solvents.

3,088,961

π-CYCLOPENTADIENYL COBALT CYCLOPENTADIENE COMPOUNDS

Geoffrey Wilkinson, London, England, assignor to Ethyl Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed June 29, 1960, Ser. No. 39,438
Claims priority, application Great Britain July 31, 1959
10 Claims. (Cl. 260—439)

1. Organometallic compounds having the formula π-CyCoCyX in which π-Cy is a cyclomatic radical selected from the class consisting of the cyclopentadienyl radical and hydrocarbon substituted cyclopentadienyl radicals having 6 to 13 carbon atoms and embodying the general ring configuration found in cyclopentadiene, and CyX is a cyclopentadiene molecule in which X is selected from the group consisting of hydrogen, deuterium, and lower alkyl and lower aryl groups.

3,088,962

ACETYLENIC NICKEL COMPOUNDS

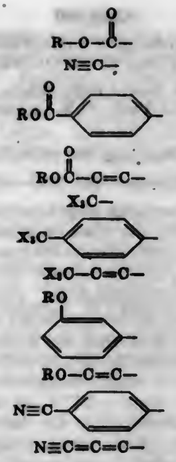
Michael Dubeck, Royal Oak, Mich., assignor to Ethyl Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed Sept. 12, 1960, Ser. No. 55,180
10 Claims. (Cl. 260—439)

1. Organometallic compounds having the formula

ZC≡CZ'·CyNiNiCy'

in which Cy and Cy' are cyclomatic hydrocarbon groups having 5 to about 13 carbon atoms and which are stable toward nickel, and Z and Z' are selected from the group consisting of hydrogen, univalent hydrocarbon groups containing up to about 13 carbon atoms, and which are stable toward nickel, and electron withdrawing groups which are stable toward nickel and are selected from the class consisting of



wherein R is a monovalent hydrocarbon group having up to 10 carbon atoms which is stable toward nickel, and X is a halogen radical, at least one of Z and Z' being an electron withdrawing group.

3,088,963
MANUFACTURE OF CYCLOPENTADIENYL NICKEL NITROSYL COMPOUNDS
Michael Dubeck, Royal Oak, Mich., assignor to Ethyl Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed Sept. 12, 1960, Ser. No. 55,181
6 Claims. (Cl. 260—439)

4. Process comprising reacting a nitrosylating agent selected from the class consisting of nitric oxide, alkali metal nitrites and N-methyl-N-nitrosyl-p-toluene sulfonamide with a compound having the formula

$$QC{=}CQ'{\cdot}CyNiCy'$$

in which Q and Q' are selected from the class consisting of hydrogen and univalent alkyl, cycloalkyl, aralkyl, aryl, and alkaryl hydrocarbon radicals having from one to about 10 carbon atoms, and Cy and Cy' are cyclomatic hydrocarbon radicals selected from the class consisting of the cyclopentadienyl radical and hydrocarbon substituted cyclopentadienyl radicals having 6 to 13 carbon atoms which embody a ring of 5 carbon atoms having the general configuration found in cyclopentadiene.

3,088,964
2-PHENYLPROPYL ORGANOSILOXANES
John W. Ryan, Midland, Mich., assignor to Dow-Corning Corporation, Midland, Mich., a corporation of Michigan
No Drawing. Filed Sept. 29, 1958, Ser. No. 763,817
8 Claims. (Cl. 260—448.2)

1. An organodisiloxane of the formula

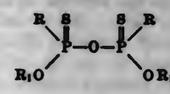
$$[CH_3CH(C_6H_5)CH_2(R)_2Si]_2O$$

wherein each R is a monovalent hydrocarbon radical free of aliphatic unsaturation, there being no more than one $CH_3CH(C_6H_5)CH_2$— radical per Si atom.

3. A process for the production of aralkyl substituted organosilicon compounds in improved yields which comprises reacting (1) α-methylstyrene with (2) an organosilicon compound of the formula R_xHSiCl_{3-x} where R represents a monovalent hydrocarbon radical free of aliphatic unsaturation and x is an integer of from 1 to 2 inclusive, by contacting (1) and (2) in the liquid phase in the presence of a catalytic quantity of chloroplatinic acid.

3,088,965
PYROPHOSPHONIC ACID ESTERS AND PROCESS FOR THEIR PRODUCTION
Gerhard Schrader, Wuppertal-Cronenberg, Germany, assignor to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany
No Drawing. Filed Apr. 5, 1960, Ser. No. 20,909
Claims priority, application Germany Apr. 9, 1959
4 Claims. (Cl. 260—461)

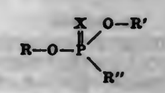
1. A compound of the following general formula



wherein R and R_1 stand for alkyl radicals up to 4 carbon atoms.

3,088,966
PHOSPHORAMIDATES AND PHOSPHORAMIDOTHIOATES
Herman O. Senkbeil, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed July 6, 1961, Ser. No. 122,100
7 Claims. (Cl. 260—461)

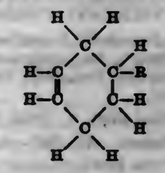
1. A compound corresponding to the formula



wherein R represents a member of the group consisting of 4-hydroxybutenyl and 4-hydroxybutynyl, R' represents lower alkyl, R'' represents a member of the group consisting of amido, mono-lower alkyl amido and di-lower alkyl amido and X represents a member of the group consisting of oxygen and sulfur.

3,088,967
PREPARATION OF 1-CYCLOHEXENES
Philip J. Paré, Yorktown Heights, N.Y., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine
No Drawing. Filed Feb. 24, 1961, Ser. No. 91,308
7 Claims. (Cl. 260—464)

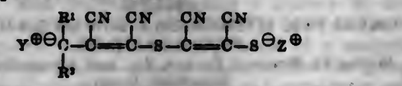
1. A process for preparing 1-cyclohexenes from 3-cyclohexenes containing a reactive group on the 1-carbon atom of the molecule which comprises the steps of: subjecting a 3-cyclohexene having the general formula:



where R is a reactive radical selected from the group —CN, —COOH, —COOR', —$CONH_2$ and —CH_2NH_2, and where R' is an alkyl radical of from one to four carbon atoms, to a temperature between about 300° C. and 450° C. for a contact period within about five to about sixty seconds in the presence of a lead salt catalyst selected from the group consisting of lead acetate, lead sulfate, lead oxide and lead chromate, removing the so-isomerized 1-cyclohexene compound containing said unmodified reactive radical and recovering the same.

3,088,968
POLYCYANO-4,7-DITHIA-2,5-HEPTADIENES
Robert D. Vest, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed May 9, 1960, Ser. No. 27,502
13 Claims. (Cl. 260—465.5)

1. Compounds of the formula



wherein R^1 and R^2 are selected from the group consisting of —CN, —COOR, —COR, —C_6H_5, —$CNH_2{=}C(CN)_2$, —NO_2 and —$SO_2C_6H_5$, R being a member of the group consisting of hydrogen and alkyl of up to 20 carbons, and Y and Z are cations selected from the group consisting of hydrogen, metals, ammonium, lower alkyl-substituted ammonium, sulfonium and lower alkyl-substituted sulfonium.

3,088,969
MANUFACTURE OF t-BUTYL ESTERS OF UNSATURATED ACIDS
James L. Callahan, Bedford, Arthur F. Miller, Lyndhurst, John A. Stamm, Mayfield Heights, and Franklin Veatch, Lyndhurst, Ohio, assignors to The Standard Oil Company, Cleveland, Ohio, a corporation of Ohio
No Drawing. Filed Apr. 21, 1961, Ser. No. 104,533
2 Claims. (Cl. 260—486)

1. A process for the manufacture of t-butyl acrylate comprising the step of reacting iso-butylene with acrylic acid in an aqueous medium at a temperature in the range of 100° F. to 250° F. and in the presence of a catalyst selected from the group consisting of phosphomolybdic and phosphoric acids.

3,088,970
OXIDATION OF POLYETHERS
Howard R. Guest, Charleston, and Ben W. Kitt, Ona, W. Va., assignors to Union Carbide Corporation, a corporation of New York
No Drawing. Filed Mar. 6, 1961, Ser. No. 93,339
8 Claims. (Cl. 260—496)

1. A process for preparing esters which comprises heating a glycol ether corresponding to the formula:

$$RO(CHR^1CH_2O)_nH$$

wherein R is selected from the group consisting of hydrogen and alkyl groups of from 1 through 12 carbon atoms, R^1 is selected from the group consisting of hydrogen and methyl, and n is a positive integer from 2 through 300, in the presence of an oxygen-containing gas at a temperature from 75 to 200° C., and at a pressure of 50 to 1000 p.s.i. in contact with a salt of the metal cobalt.

3,088,971
METAL THIOSULFATES AS STABILIZERS IN VINYLARYL SULFONATES
Leonard A. Mattano and Charles E. Grabiel, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed May 27, 1960, Ser. No. 32,135
4 Claims. (Cl. 260—505)

1. A composition of matter comprising a monomer selected from the group consisting of styrene sulfonic acid and vinyl naphthalene sulfonic acid, their alkali metal, alkaline earth metal and ammonium salts and chloro, bromo, methyl and ethyl ring substituted derivatives of such acids and salts; and from about 0.05 to about 2 percent of a material, based on the weight of the monomer, selected from the group consisting of alkali metal, alkaline earth metal and ammonium thiosulfates.

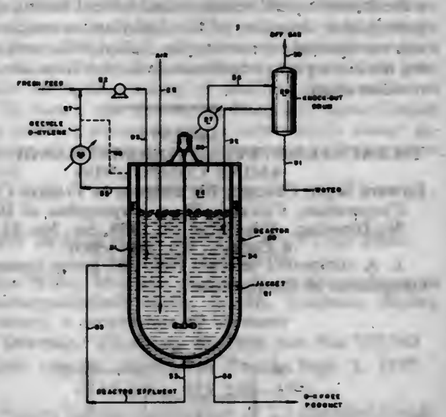
3,088,972
PHENOTHIAZINE AS A STABILIZER IN VINYLARYL SULFONATES
Leonard A. Mattano and Charles E. Grabiel, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed May 27, 1960, Ser. No. 32,136
4 Claims. (Cl. 260—505)

1. A composition of matter comprising a monomer selected from the group consisting of styrene sulfonic acid and vinyl naphthalene sulfonic acid, their alkali metal, alkaline earth metal and ammonium salts and chloro, bromo, methyl and ethyl ring substituted derivatives of such acids and salts; and from about 0.005 to about 0.3 percent of phenothiazine based on the weight of the monomer.

3,088,973
RING CHLORINATED 2,5-DIPHENYLADIPIC ACID
Harry Braus, Springdale, and Otto A. Homberg, Woodlawn, Ohio, assignors to National Distillers and Chemical Corporation, New York, N.Y., a corporation of Virginia
No Drawing. Filed July 22, 1959, Ser. No. 828,720
4 Claims. (Cl. 260—515)

1. A mixture of ring-chlorinated 2,5-diphenyladipic acids having a total of up to four chlorine atoms per molecule prepared by passing a stream of chlorine through a suspension of 2,5-diphenyladipic acid in a solvent selected from the group consisting of trichloroacetic acid, chloroform, and carbon tetrachloride in the presence of about 1 to 20 mole percent of iodine in the absence of light at reflux temperature of the system and recovering the ring-chlorinated 2,5-diphenyladipic acids.

3,088,974
EXOTHERMIC REACTION PROCESS
Harry E. Cier, Baytown, Tex., assignor, by mesne assignments, to Esso Research and Engineering Company, Elizabeth, N.J., a corporation of Delaware
Filed Nov. 14, 1958, Ser. No. 774,066
4 Claims. (Cl. 260—524)



1. A process for oxidizing xylenes to obtain reaction products with a high percentage of toluic acids comprising the steps of: at elevated pressure and elevated temperature, reacting in a reaction vessel a portion of the xylenes with an oxidizing agent to produce an effluent containing from 65% to 55% by weight unreacted xylenes and reaction products; and flowing the unreacted xylenes and reaction products to a confined space at substantially atmospheric pressure and in thermal contact with the reaction vessel, the temperature in the reaction vessel being high enough to provide a temperature in said confined space above the boiling point of the unreacted xylenes

and below the boiling points of the oxidation products whereby the unreacted xylenes are vaporized by the heat generated by the reaction, condensing the vaporized xylenes and recycling the condensed xylenes to the reaction vessel; and removing the xylene-free reaction products.

3,088,975
PREPARATION OF CARBONYL FLUORIDE
Frank S. Fawcett and Charles W. Tullock, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Apr. 9, 1959, Ser. No. 805,133
6 Claims. (Cl. 260—544)

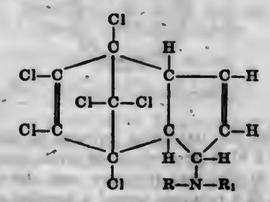
1. The process of preparing carbonyl fluoride which comprises reacting carbonyl chloride with sodium fluoride at a temperature between 0 and 150° C. under substantially anhydrous conditions in a liquid reaction medium of the group consisting of acetonitrile, propionitrile, butyronitrile, crotononitrile, adiponitrile, benzonitrile, nitromethane, nitroethane, 1-nitropropane, 2-nitropropane, nitrobenzene, o-nitrotoluene, m-nitrotoluene, 1-chloro-2-nitrobenzene, methyl o-nitrobenzoate, dimethyl sulfate, diethyl sulfate, cyclic tetramethylene sulfone, ethylene carbonate, trimethylene carbonate, methylethylene carbonate, chloroethylene carbonate and 1,2-dichloroethylene carbonate.

3,088,976
BIS(o-PHENYLENEDIAMINO)DIBORON
Robert J. Brotherton, Fullerton, and Lowell L. Petterson, Whittier, Calif., assignors to United States Borax & Chemical Corporation, Los Angeles, Calif., a corporation of Nevada
No Drawing. Filed Mar. 20, 1962, Ser. No. 181,148
3 Claims. (Cl. 260—551)

1. The method for preparing bis(o-phenylenediamino)-diboron which comprises admixing o-phenylenediamine and a tetra(dialkylamino)diboron having the formula $B_2(NR_2)_4$ where R is selected from the group consisting of primary and secondary alkyls of 1–6 carbon atoms, heating said admixture under reflux in the presence of a solvent inert to said reactants and solvent having a boiling point higher than that of the dialkylamine reaction product, continuously removing the dialkylamine and recovering the bis(o-phenylenediamino)diboron from the residual reaction mass.

3,088,977
HEXACHLOROTETRAHYDROMETHANOINDENE AMINE COMPOUNDS
Edward Segel, Chicago, Ill., assignor to Velsicol Chemical Corporation, Chicago, Ill., a corporation of Illinois
No Drawing. Filed May 18, 1959, Ser. No. 813,661
6 Claims. (Cl. 260—563)

1. A compound selected from the group consisting of compounds of the formula



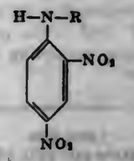
wherein R and R_1 are independently selected from the group consisting of hydrogen and the radicals

$$-(CH_2)_nCH_3,\ -(CH_2)_xOH,\ -(CH_2)_xY$$

and $-(CH_2)_zSH$, n is a whole number from 0 to 6, x is a whole number from 2 to 7, z is a whole number from 1 to 7, and Y is selected from the group consisting of chlorine and bromine, their acid salts with an acid selected from the group consisting of hydrochloric acid, hydrobromic acid, sulfuric acid, phosphoric acid, and tartaric acid; and their quaternary ammonium salts with an alkylating agent selected from the group consisting of alkyl halides, alkyl sulfates, and alkyl sulfonates.

3,088,978
CATALYTIC HYDROGENATION OF 2,4-DINITROPHENYLAMINES
Walter H. Brunner, Easton, Pa., and Alexander Halasz, Stamford, Conn.
No Drawing. Filed Sept. 12, 1960, Ser. No. 55,136
13 Claims. (Cl. 260—580)

1. A process for the catalytic hydrogenation of a 2,4-dinitrophenylamine to an acid addition salt of the corresponding 2-nitro 4-amino phenylamine wherein the amino nitrogen of said 2,4-dinitrophenylamine compound is substituted by at least one hydrogen atom and a member selected from the group consisting of hydrogen, a hydrocarbon radical containing from 1 to about 12 carbon atoms, and a hydroxy-substituted hydrocarbon radical containing from 1 to about 12 carbon atoms wherein the said hydrocarbon radical and hydroxy-substituted hydrocarbon radical are free of olefinic and acetylenic unsaturation, which comprises hydrogenating the 2,4-dinitrophenylamine by introducing hydrogen into a mixture having a temperature of about 0° C. to about 90° C. and containing (*a*) a dispersion of the 2,4-dinitrophenylamine in a polar organic solvent free from olefinic and acetylenic unsaturation, said 2,4-dinitrophenylamine having the generic formula:



wherein R is a member selected from the group consisting of hydrogen, a hydrocarbon radical free from olefinic and acetylenic unsaturation and having from 1 to about 12 carbon atoms, and a hydroxy-substituted hydrocarbon radical free from olefinic and acetylenic unsaturation having from 1 to about 12 carbon atoms; (*b*) a platinum metal hydrogenation catalyst selected from the group consisting of platinum and palladium; and (*c*) an aqueous solution of an acid having a dissociation constant greater than about 1×10^{-3}, said acid imparting a pH of less than about 4 to the mixture; and ceasing the hydrogenation prior to the complete reduction of both nitro groups of said 2,4-dinitrophenylamine.

3,088,979
PRODUCTION OF TRIALKYLBORANES
Albert D. McElroy, Robert G. Brault, and James W. Shepherd, Mars, Pa., assignors to Callery Chemical Company, Pittsburgh, Pa., a corporation of Pennsylvania
No Drawing. Filed May 20, 1959, Ser. No. 814,371
7 Claims. (Cl. 260—606.5)

1. A method of producing a trialkylborane which comprises reacting an olefin with diborane in a molar ratio of below 6 to 1 and in a pre-formed liquid heel consisting essentially of at least one compound selected from the group consisting of alkyl diboranes and trialkylboranes, and then reacting the product thus produced with sufficient additional olefin so as to make the overall molar ratio at least 6 to 1.

5. A method of producing a trialkyl borane which comprises reacting a material selected from the group consisting of an alkyldiborane and mixtures of alkyldiboranes with a stoichiometric excess of an olefin.

3,088,980
HYDROXYALKYLATION OF PHENOLS
John C. Smith and Wilbur L. Brenzier, Lake Jackson, Tex., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed Oct. 2, 1959, Ser. No. 843,944
3 Claims. (Cl. 260—613)

1. In a process for preparing dihydroxyalkylated phenols, the steps comprising reacting a mixture of one molecular equivalent of a phenol and at least one mole of 1,2-glycerol carbonate in the presence of a catalytic amount of an alkaline catalyst selected from the group consisting of alkali metal hydrides and carbonates and at a temperature of from about 160° to about 250° C.

3,088,981
METHOD OF MAKING A GLYCOL FROM AN OCIMENE PEROXIDE
Joseph H. Stump, Jr., Pensacola, and Oliver G. Wilson, Gulf Breeze, Fla., assignors to Newport Industries Company, Pensacola, Fla., a corporation of Delaware
No Drawing. Filed Apr. 4, 1958, Ser. No. 726,352
5 Claims. (Cl. 260—635)

1. The method of improving the yield of a glycol obtained by the hydrogenation of an ocimene peroxide, which comprises conducting said hydrogenation in the presence of a hydrogenation catalyst and an added amount of water constituting from ½ to 7% by weight of the peroxide present.

3,088,982
GLYCOL PURIFICATION
Julian Feldmann, Bernard A. Saffer, and Edwin A. Allgaier, Cincinnati, Ohio, assignors to National Distillers and Chemical Corporation, New York, N.Y., a corporation of Virginia
No Drawing. Filed May 16, 1960, Ser. No. 29,141
5 Claims. (Cl. 260—637)

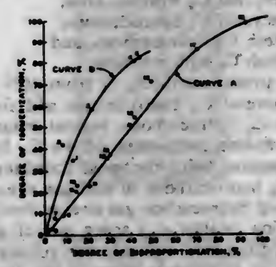
1. A liquid-liquid extraction process for the separation and recovery of substantially pure isomeric aliphatic glycols having 6 to 16 carbon atoms between the hydroxyl groups from a mixture containing said glycols and non-glycollic materials of relatively close boiling points consisting of alkanols and polyalkadienes which includes the the steps of extracting a solution of the crude isomeric glycol mixture dissolved in a polar liquid medium selected from the group consisting of aqueous acetonitrile containing up to about 30 percent of water, a mixture of formamide and acetonitrile containing up to about 30 percent of acetonitrile, and an aqueous mixture of formamide and acetonitrile containing up to about 70 percent of formamide and up to about 5 percent of water with a non-polar, immiscible liquid saturated aliphatic hydrocarbon medium at a temperature between about 0° and 100° C., whereby the non-glycollic materials are extracted to provide an extract phase of the non-glycollic materials and a raffinate phase of said glycols, and recovering the glycols from said polar liquid medium.

3,088,983
CONDITIONING OF ACTIVATED CARBON
Arnold J. Rosenthal, Whippany, N.J., assignor to Celanese Corporation of America, New York, N.Y., a corporation of Delaware
No Drawing. Filed June 17, 1957, Ser. No. 666,223
12 Claims. (Cl. 260—652)

1. The process for the conditioning of a bed of activated carbon which comprises washing the substantially dry carbon bed with an aqueous solution of aluminum sulfate, passing gaseous ammonia through the carbon bed whereby the ammonia dissolves in retained water to form ammonium hydroxide which undergoes double decomposition with the aluminum sulfate to form ammonium sulfate, washing the carbon bed with hot water to remove the ammonium sulfate, and passing steam through the bed to remove any residual ammonia, whereby insoluble aluminum hydroxide is deposited in the carbon.

5. In the recovery of potentially corrosive vapors of chlorinated lower alkanes wherein the vapors are adsorbed on activated carbon and steam stripped from the carbon, the improvement which comprises depositing in the carbon from solution an alkaline reacting compound having a solubility in water of less than about 1% by weight.

3,088,984
PROCESS FOR THE ISOMERIZATION OF ALKYL BENZENES IN THE PRESENCE OF A USED HYDROCRACKING CATALYST
Charles C. Oldenburg, San Rafael, Calif., assignor to California Research Corporation, San Francisco, Calif., a corporation of Delaware
Filed Dec. 19, 1960, Ser. No. 76,594
2 Claims. (Cl. 260—668)



1. A process for the isomerization of a non-equilibrium xylene feed containing at least one xylene isomer which comprises contacting said feed, along with added hydrogen, in an isomerization zone with a catalyst comprising a hydrogenating component selected from the group consisting of nickel sulfide and cobalt sulfide disposed on an active siliceous cracking catalyst support at a pressure above about 300 p.s.i.g., and at an elevated temperature below about 800° F., said catalyst having previously been used for the hydrocracking of distillate fractions for at least 100 hours, and recovering from said isomerization zone a product stream having a substantially closer approach to alkyl benzene isomerization equilibrium than said feed.

3,088,985
NEW OPEN-CHAIN TRIMER AND THE PRODUCTION THEREOF
Günther Wilke, Mulheim (Ruhr), Germany, assignor to Studiengesellschaft Kohle m.b.H., Mulheim (Ruhr), Germany, a corporation of Germany
No Drawing. Filed Aug. 28, 1958, Ser. No. 757,703
Claims priority, application Austria Sept. 2, 1957
6 Claims. (Cl. 260—677)

1. Process for the trimerization of 2,3-dimethyl-butadi-1,3-ene to form an open-chain trimer, which comprises contacting 2,3-dimethyl-butadi-1,3-ene under polymerization conditions including a temperature of from 0 to 100° C. with a catalyst comprising a mixture of at least one member selected from the group consisting of chlorides and oxychlorides of chromium with at least one member selected from the group consisting of aluminum trialkyls, dialkyl aluminum hydrides and alkyl aluminum chlorides, the molar ratio of chromium aluminum in said catalyst mixture being from 1:3 to 5, and recovering the open-chain trimer, of 2,3-dimethyl-butadi-1,3-ene.

3,088,986
DEHYDROGENATION METHOD
Donald H. Stevenson, Milmont Park, Pa., assignor to Air Products and Chemicals, Inc., a corporation of Delaware
No Drawing. Filed June 17, 1959, Ser. No. 820,849
1 Claim. (Cl. 260—680)

The method of preparing isoprene and butadiene simultaneously which includes the steps of:
directing C_4 hydrocarbons from a source of supply as a stream of fresh C_4 hydrocarbons toward a mixing zone;
directing C_5 hydrocarbons from a source of supply as a stream of fresh C_5 hydrocarbons toward a mixing zone;
directing C_4 hydrocarbons from a hereinafter designated separation zone as a stream of recycled C_4 hydrocarbons toward a mixing zone;
directing C_4 hydrocarbons for a hereinafter designated separation zone as a stream of recycled C_5 hydrocarbons toward a mixing zone;
preparing a hydrocarbon gas stream in the mixing zone consisting essentially of a mixture of said:
(1) recycled C_4 hydrocarbons,
(2) recycled C_5 hydrocarbons,
(3) fresh C_4 hydrocarbons, and
(4) fresh C_5 hydrocarbons,
said gas stream consisting of from 40% to 90% by weight normal C_4 hydrocarbons and from 10% to 60% iso C_5 hydrocarbons, normal butane being the most abundant component of the C_4 hydrocarbons and isopentane being the most abundant component of the C_5 hydrocarbons in said gas stream;
directing said hydrocarbon gas stream through chromia on alumina catalyst at a space rate of about 1 to 6 liquid hydrocarbon volumes per volume of catalyst per hour at an absolute pressure less than 15 inches of mercury at a temperature within the range between 1050° F. and 1200° F.;
directing the effluent from the catalyst bed to a separation zone in which the effluent is separated into a plurality of streams, including a stream of recycled C_4 hydrocarbons, a stream of recycled C_5 hydrocarbons, and product streams;
separating in said separation zone as a product of the method a stream of unsaturated C_4 hydrocarbons, the quantity of butadiene constituting a conversion of the normal butane to butadiene substantially as good as that attainable at equivalent conditions in the absence of the C_5 hydrocarbons;
and separating as a product of the method a stream of isoprene, the quantity of isoprene constituting a conversion of the isopentane to isoprene better than attainable at equivalent conditions in the absence of the C_4 hydrocarbons.

3,088,987
ALKYLATION OF ISOPARAFFINS WITH OLEFINS COOLED BY AUTOREFRIGERATION
Robert L. Irvine, New York, N.Y., assignor to Arabian American Oil Company, New York, N.Y., a corporation of Delaware
Filed Nov. 19, 1957, Ser. No. 697,454
9 Claims. (Cl. 260—683.61)

1. An auto-refrigerated alkylation system for alkylating isoparaffin with olefin in the presence of a liquid catalyst which comprises, a vertically disposed alkylation reaction tower, said tower having provided at the top thereof means to flash said isoparaffin into a vaporous portion and a liquid portion, means to withdraw said vaporous portion, said withdrawal means communicating with the bottom of said tower, means to contact said liquid portion with a refrigerant vapor stream, and means to remove said contacted refrigerant vapor stream, said tower having further provided at the bottom thereof a series of vertically positioned horizontally disposed liquid-vapor contact trays, means to emulsify said liquid isoparaffin and said catalyst, means to introduce said isoparaffin-catalyst emulsion onto the uppermost of said contact trays, means to introduce across the inlet of each of said trays said olefin, means to vary the pressure in said reaction tower so as to withdraw a vapor portion of the reaction mixture, said withdrawn vapor portion of the reaction mixture constituting the refrigerant vapor stream, means to compress, condense and return said refrigerant vapor stream to the top of said tower, means to remove the reaction product and catalyst from the bottom of said tower, means to effect the separation of said reaction product from said catalyst and means to contact said reaction product with incoming fresh catalyst.

ELECTRICAL

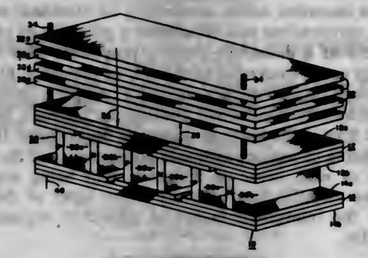
3,088,988
ELECTRICAL POWER SOURCE FOR ROCKETS
Joseph F. Menke, Heidelberg, Germany, assignor to Eltro Gesellschaft für Strahlungstechnik m.b.H., Heidelberg, Germany
Filed Dec. 22, 1958, Ser. No. 782,003
Claims priority, application Germany Feb. 13, 1958
3 Claims. (Cl. 136—4)



1. A rocket structure comprising means defining a combustion chamber and means adjacent and constituting one limit of said chamber, the second said means comprising a massive cylindrical ceramic body provided with a plurality of annular concentric grooves opening into said chamber in the form of nozzles, annular walls in said grooves, first thermocouple elements supported on said walls in said grooves and second thermocouple elements supported on said body with the body being interposed between said second elements and said chamber, said body constituting a heat reservoir whereby said elements operate substantially independently of the heat in said chamber; and utilization means connected to said elements.

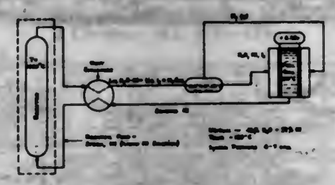
3,088,989
THERMOELECTRIC CONVERTER
Robert P. Lipkis, Los Angeles, Calif., assignor to Space Technology Laboratories, Inc., Los Angeles, Calif., a corporation of Delaware
Filed June 28, 1961, Ser. No. 120,290
10 Claims. (Cl. 136—4)

1. An improved solar thermoelectric converter for converting thermal energy into electrical energy comprising, in combination: a first plate comprising a top surface and a selectively electrically conductive bottom surface, said top surface adapted to be oriented towards the sun and having a high absorptivity for solar electromagnetic radiation energy and a low emissivity for infrared electromagnetic radiation energy and said bottom surface having a low emissivity for infrared electromagnetic radiation; a second plate spaced apart from said bottom surface of said first plate and substantially parallel thereto having a bottom surface and a selectively electrically conductive top surface facing said bottom surface of said first plate, said top surface having a low emissivity for infrared electromagnetic radiation and said bottom surface having a high emissivity for infrared electromagnetic radiation; a plurality of semi-conductors connected to the bottom surface of said first plate and the top surface of said second plate in a preselected array, a first portion of said semi-conductors positively doped and a second portion of said semi-conductors negatively doped; means coupled to said first plate and said second plate for connecting said



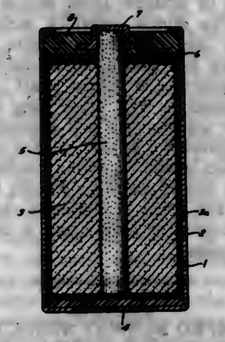
plurality of semi-conductors in a predetermined electrical circuit arrangement; and at least one film means spaced apart from said top surface of said first plate and substantially coextensive therewith and parallel thereto, said film means substantially transparent to solar electromagnetic radiation energy and substantially opaque to infrared electromagnetic radiation energy whereby solar electromagnetic radiation energy is admitted to and absorbed by said top surface of said first plate thereby raising the temperature thereof and whereby loss of energy from said top surface of said first plate by radiation in the infrared portion of the electromagnetic radiation spectrum is substantially reduced.

3,088,990
ENERGY CONVERSION SYSTEM
Robert A. Rightmire, Twinsburg, and James L. Callahan, Bedford, Ohio, assignors to The Standard Oil Company, Cleveland, Ohio, a corporation of Ohio
Filed Apr. 25, 1960, Ser. No. 24,406
4 Claims. (Cl. 136—86)



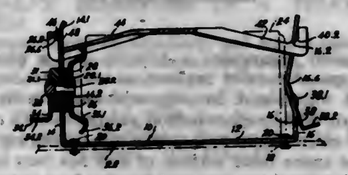
1. In a closed system for converting thermal energy to electrical energy, the combination comprising, a predetermined amount of a solution of hydrogen halide and water in said system, means coacting in said system to endothermically partially decompose said hydrogen halide in the presence of water into hydrogen, halogen and steam and undecomposed hydrogen halide, means for liquefying the halogen, steam and hydrogen halide to form an aqueous solution thereof, means independently coacting in said system to physically separate the hydrogen from the halogen in the presence of water, a fuel cell including spaced electrodes and means for supplying and maintaining a predetermined amount of the solution of water and hydrogen halide in the space between the electrodes, means for supplying the separated hydrogen to the interface at one electrode and means for independently supplying the separated halogen in aqueous solution with undecomposed hydrogen halide to the interface at the other electrode, said fuel cell coacting in the system to generate electrical energy by electrochemically recombining the hydrogen and the halogen into said solution of hydrogen halide and water, and means for recycling said solution of hydrogen halide and water to said decomposing means.

3,088,991
ELECTRIC CURRENT PRODUCING CELL
Samuel Ruben, 271 North Ave., New Rochelle, N.Y.
Filed Jan. 6, 1960, Ser. No. 754
7 Claims. (Cl. 136—106)



1. An electric current producing cell comprising an anode, an electrolyte, and a cathode depolarizer, the major part of which is composed of mercuric dioxychromate, said cathode depolarizer being substantially insoluble in said electrolyte.

3,088,992
HOLDER FOR ELECTRICAL COMPONENTS, SUCH AS BATTERIES
Frank Lyman, Jr., Cambridge, Mass., assignor to Cambridge Thermionic Corporation, Cambridge, Mass., a corporation of Massachusetts
Filed Nov. 1, 1960, Ser. No. 66,526
9 Claims. (Cl. 136—173)



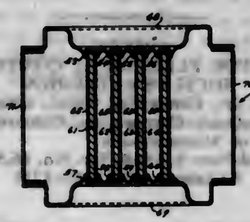
1. A holder for electrical components comprising:
a resilient open frame having a strip-shaped base and two legs essentially of the width of the base and extending therefrom adapted to receive the component therebetween; and
elongate clamp means adapted to fit the ends of said legs with the clamp means essentially parallel to said base and freely separable from each of the respective legs;
the ends of the legs and the ends of the clamp means having interengaging parts with the distance of the interengaging parts of the clamp means being shorter than the distance of the interengaging parts of the legs in relaxed position, for drawing the ends of the legs inwardly to grip the component therebetween when the clamp means engages the legs.

3,088,993
CRIMP CONNECTOR
Irving F. Matthysse, Danbury, and William G. Osborn, Stamford, Conn., assignors to Burndy Corporation, a corporation of New York
Filed Aug. 26, 1959, Ser. No. 836,215
5 Claims. (Cl. 174—71)



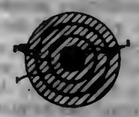
1. A run and tap connector consisting of two connector halves each of uniform cross section throughout its length and having mutual interlock means to join said two halves into the complete connector; said complete connector having two spaced apart conductor receiving portions for supporting in spaced apart relationship two cables; each connector half comprising a body portion and a conductor seat portion; said connector halves body portion being identical, a section of each of the body portions between said conductor seats including a portion extending on each side of the plane passing through each of the conductors and made of malleable metal suitable for crimping said connector halves into a unitary assembly about the two cables.

3,088,994
CLAMPED BUSWAY STRUCTURE
John B. Cataldo, Birmingham, Mich., assignor to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Nov. 10, 1958, Ser. No. 772,814
1 Claim. (Cl. 174—99)



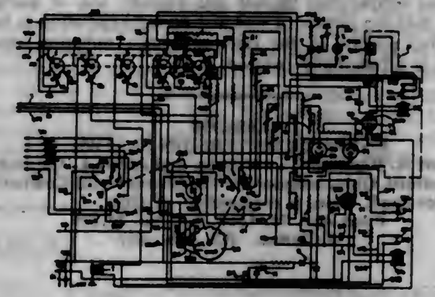
A busway comprising a housing and a plurality of equally spaced parallel bus bars, at least three in number, disposed within said housing; said bus bars having the major axis of their cross-section parallel to each other; insulating means comprising a thin layer covering substantially the entire outer surface of said bus bars to form a unitary insulated bus bar; said housing having bar clamping areas formed in opposite surfaces thereof, each of said insulated bus bars having a first and a second of the insulation covered edge thereof firmly engaged by said clamping areas along a substatnal portion of the length of said bus bar to thereby provide a heat-conducting path from said bus bars to said housing; said clamping areas comprising the sole support for said bus bars; said clamping areas including a longitudinal pocket having a transverse dimension adapted to snugly contain said first and second edge of said unitary insulated bus bar; each of said opposite surfaces having a plurality of longitudinally spaced embossed areas constituting said clamping areas; said embossed areas being at least as long as the joining areas between embossed areas; said joining areas being arched away from the second bus bar edges for improved air circulation; said joining areas being closed.

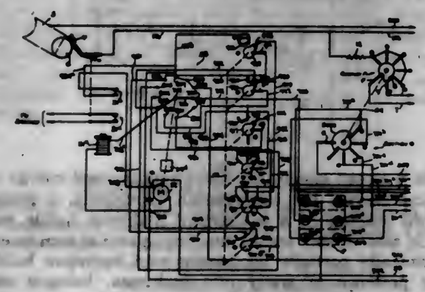
3,088,995
ELECTRICAL CABLE
Louis Vincent Baldwin, Newark, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Jan. 28, 1960, Ser. No. 5,295
5 Claims. (Cl. 174—127)



1. An electrical cable comprising an electrical conductor and surrounding said conductor a plurality of cylindrical layers of a dielectric organic polymeric film of substantially equal thickness, each layer of dielectric film having adhered on one surface thereof a complete covering of thin electrically conductive continuous metallic film, the metallic film of the layer of dielectric film nearest the conductor being in contact with said conductor, and the metallic film of each layer of dielectric film being separated from the metallic film of every other layer of dielectric film by the interposed layers of dielectric organic polymeric film.

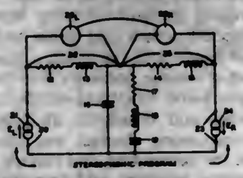
3,088,996
SYSTEM FOR AUTOMATICALLY DISPLAYING ILLUMINATED PICTURES AND DELIVERING SOUND MESSAGES COORDINATED THEREWITH
Melvin A. Carter, New York, N.Y.
(913 St. Marks Ave., Brooklyn, N.Y.)
Filed May 25, 1956, Ser. No. 587,292
3 Claims. (Cl. 179—1)





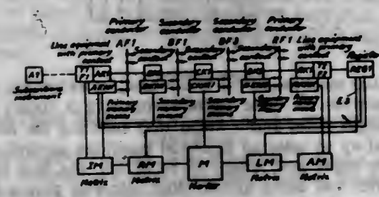
1. In combination, a sound record means comprising a plurality of record portions, a plurality of lamps, one for each portion, means to play back said sound record means, time controlled means to illuminate the lamps sequentially in synchronization with the play back of said record portions, said time controlled means comprising a circuit, a stepping switch in said circuit, means controlled by the stepping switch to control the illumination of the respective lamps, a motor for said stepping switch, a relay to control said motor, said circuit including a condenser, means controlled by the relay to control the charge and discharge of the condenser, a vacuum tube in said circuit, said condenser being connected on one side to the cathode of the tube, and on the other side, to the grid of the tube, and potentiometers associated with said lamps, respectively, and means associated with said potentiometers to control the tube, and said stepping switch having means to control said potentiometers, whereby the timing of the illumination of the lamps is controlled by the settings of the potentiometers for said lamps.

3,088,997
STEREOPHONIC TO BINAURAL CONVERSION APPARATUS
Benjamin B. Bauer, Stamford, Conn., assignor to Columbia Broadcasting System, Inc., New York, N.Y., a corporation of New York
Filed Dec. 29, 1960, Ser. No. 79,246
9 Claims. (Cl. 179—1)



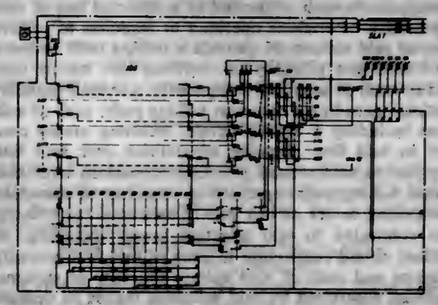
1. In a sound reproducing system, the combination of a pair of earphones, a pair of signal channels connected to energize said respective earphones, and means for effecting additive transfer with time delay of signal energy from each of said signal channels to the other, said time delay being of the order of the time required for sound to travel a distance equal to the distance between the ears of a listener.

3,088,998
ELECTRONIC TELEPHONE SYSTEM
Anders Karlby Bergmann and Anders Harald Elldin, Hagersten, Anton Christian Jacobaeus, Stockholm, Carl Gunnar Svala, Alvsjo, and Gunnar Emil Welander, Stockholm, Sweden, assignors to Telefonaktiebolaget L M Ericsson, Stockholm, Sweden, a corporation of Sweden
Filed May 27, 1959, Ser. No. 816,180
Claims priority, application Sweden May 29, 1958
2 Claims. (Cl. 179—15)



1. In an automatic telephone exchange of the kind including conductors each capable of simultaneously transmitting several voice connections up to a predetermined maximum number and also including a pulse sender sending regularly repeated trains of short current pulses, each train being composed of a number of pulses corresponding to said maximum number, each voice connection being closed through one of said conductors only when a pulse has a predetermined pulse position in each of said trains in the sequence of pulse trains appearing during a voice connection; several groups of lines and a primary conductor common to each group of lines; an individual switch contact for each line in said groups, said switch contacts, during a voice connection, connecting the respective line to the primary conductor of the respective group during intervals of time corresponding to the pulses of the voice connection; a primary memory means for each individual switch contact controlling the make and break of the switch contact in time relationship with the pulses of the voice connection connected to the line associated with the respective switch contact; a marking means for setting up voice connections between said lines through said conductors, said voice connections being set up in circuits including said individual switch contacts and said primary conductors, said primary conductors being grouped in primary groups; a plurality of secondary conductors allocated to each of said primary groups, each of said secondary conductors being capable of transmitting a plurality of simultaneously set up voice connections under the control of the pulses sent by said pulse sender; secondary switch contacts for connecting each of said secondary conductors to a primary conductor within the respective primary group and other secondary switch contacts for connecting a secondary conductor allocated to one primary group to at least one secondary conductor allocated to another primary group; a second memory means for each of said secondary switch contacts controlling the make and break of the respective secondary switch contact in time relationship with the time pulses of every voice connection the circuit of which includes secondary switch contacts, said marking means when setting up a voice connection between two lines through a primary conductor in one primary group and a primary conductor in another primary group first selecting in said trains of short pulses a pulse position free for both said primary conductors and simultaneously free for two secondary conductors allocated to one of each of said primary groups and joined by one of said other secondary switch contacts, said selected secondary conductors being connected together and to the respective primary conductors across the corresponding secondary switch contacts and then setting the memory means for said individual switch contacts and the memory means allocated to said secondary switch contacts controlling the make and break of the respective switch contacts in timed relationship with the pulses in said selected pulse position.

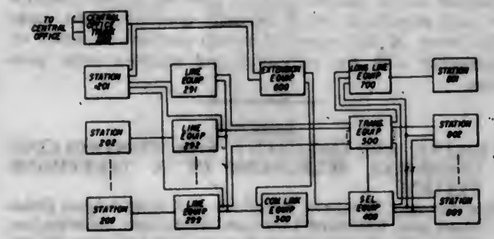
3,088,999
CIRCUIT ARRANGEMENT FOR CONTROLLING CROSS-BAR SELECTORS IN A TELEPHONE SYSTEM
Karl Gunnar Brunberg, Segeltorp, and Rolf August Dahlblom and Bernhard Lillesunde, Hagersten, Sweden, assignors to Telefonaktiebolaget L M Ericsson, Stockholm, Sweden, a corporation of Sweden
Filed Mar. 14, 1960, Ser. No. 14,859
Claims priority, application Sweden Mar. 26, 1959
7 Claims. (Cl. 179—22)



1. A circuit arrangement for restoring cross-bar type selector bridges in an automatic telephone system hav-

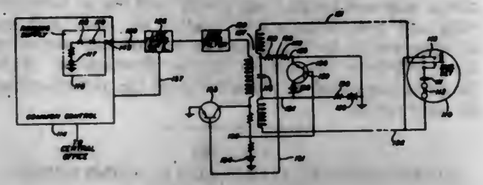
ing a plurality of bridges, each having a plurality of contact groups connecting an input means thereto to one of a plurality of output means connected thereto, the contacts of a contact group which has been used in conversation being held in a closed position and being opened by momentary operation of said bridge to allow closing of a new contact group selected, in combination, comprising a marker circuit means connectable to telephone lines in said system and responsive to calling signals therein for identifying a calling line and connecting it to a called line through idle bridges, a test wire connected to each bridge having a voltage potential dependent upon the idle and occupied condition of said bridges, the closed position of a predetermined contact group defining a restored non-conducting condition of the associated, contact means responsive to the closed position of said predetermined contact group defining a restored non-conducting condition for providing alternate current paths, one current path belonging to each bridge being in restored position and another current path belonging to each bridge being in a non-restored position, said marker circuit means including means connected to said alternate current paths and to said test wires and responsive to said voltage potentials for sensing the idle condition of said bridges and for distinguishing between ones of said idle bridges in said restored condition and ones of said idle bridges in an unrestored condition, and means connected to said sensing and distinguishing means and to said bridges for energizing said ones of said idle bridges in said unrestored condition to place them in said restored condition.

3,089,000
INTERCOMMUNICATING TELEPHONE SYSTEMS
Karl L. Burgener, Villa Park, Ill., assignor to Automatic Electric Laboratories, Inc., Northlake, Ill., a corporation of Delaware
Filed July 7, 1960, Ser. No. 41,357
16 Claims. (Cl. 179—42)



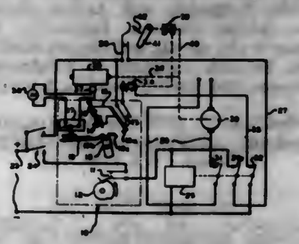
1. An intercommunicating telephone system including: a first plurality of stations; a plurality of associated line equipments each connected to a different one of said first plurality of stations operated in response to seizure by one of said stations to provide a talking path between two of said first plurality of stations; link means connected to each of said line equipments; a second plurality of stations including a common talking path; each of said stations including a calling device; selecting means connected to said first plurality of stations over said link means and to said second plurality of stations over said common talking path, operated in response to operation of the calling device at any one of said stations; transfer means connected to said selecting means including, an individual circuit connection to each of said first plurality of stations and each of said second plurality of stations, and means controlled by said selecting means to operate said transfer means to transmit a signal to a selected one of said stations over one of said circuit connections.

3,089,001
TELEPHONE RINGING CIRCUIT
Oscar H. Williford, Bronxville, N.Y., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 28, 1959, Ser. No. 862,186
9 Claims. (Cl. 179—84)



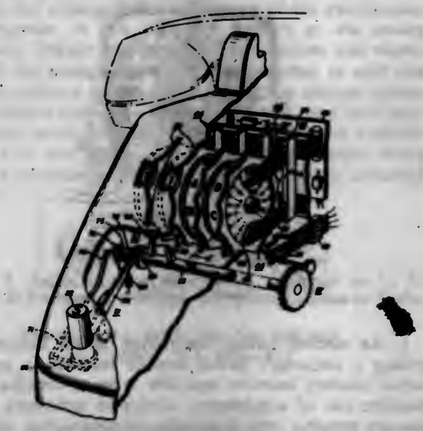
1. A telephone ringing circuit comprising a ringer and capacitor connected in series in a subscriber station, a line circuit comprising a pair of wires connected across said series circuit, a line voltage source connected to said capacitor through said pair of wires, said line circuit including a switching transistor having input and output electrodes connected across said wires and in a parallel circuit with said ringer and capacitor, a bias source poled to maintain said transistor normally nonconducting, ringing control means for supplying unidirectional current pulses to activate said transistor, and means including a telephone transmission channel and transmission gate means operable for connecting said ringing control means to said bias source whereby said transistor controls the charging and discharging of said capacitor through said ringer thereby causing said ringer to produce an audible signal.

3,089,002
DIAL MECHANISM FOR AUTOMATIC TELEPHONE DIALING MACHINES
Richard Kobler, West Orange, and Robert M. Silverman, Springfield, N.J., assignors to McGraw-Edison Company, Elgin, Ill., a corporation of Delaware
Filed Mar. 24, 1960, Ser. No. 17,295
9 Claims. (Cl. 179—90)



1. A dial mechanism for a machine for recording telephone numbers in code form, comprising a rotary dial having finger holes and a finger stop enabling the dial to be wound-up to selected operated positions according to respective digits and letters to be dialed, the first finger hole of the dial being at two digit intervals plus a fractional interval from the finger stop, means for returning the dial when released from an operated position, a motor start switch, a rotary cam for operating said motor switch, a drive coupling between said dial and cam including a one-way ratchet clutch for driving the cam only during return of the dial to home position, said ratchet clutch comprising a first rotary clutch member in permanent coupled relation to said dial and a cooperating second rotary clutch member in permanent coupled relation to said cam, said clutch members having spaced points of inter-engagement and said first clutch member being moved to a mid-position between said engagement points when said dial reaches an operated position, and said coupling having a transmission ratio to cause said ratchet clutch to be engaged by the initial return of said dial from an operated position through said fractional digit interval.

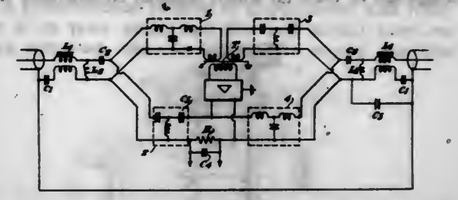
3,089,003
PRESET CALL TRANSMITTER
Angelo L. De Fina, Brooklyn, and Arthur C. Keller, Bronxville, N.Y., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Aug. 12, 1960, Ser. No. 49,264
6 Claims. (Cl. 179—90)



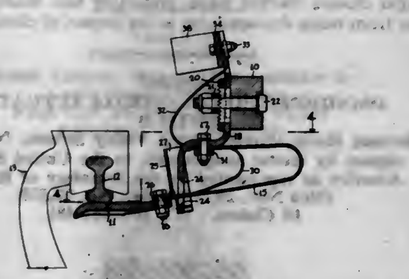
1. A preset telephone calling mechanism comprising a plurality of manually controlled digit wheels, each digit wheel including a plurality of bridging contacts for establishing the digits of a telephone number to be called in accordance with the position of the digit wheel, a signal generator including a plurality of tapped connections for producing discrete signals, an array of conductors having common access to said digit wheels connected to said tapped connections, a disk member associated with each of said digit wheels, each of said disk members comprising means for connecting the bridging contacts of its associated digit wheel to said conductor array to complete the signaling circuit of said signal generator, manually controlled motor means for initiating the transmission of signaling information, and means driven by said motor means for imparting rotary motion to each of said disk members in sequence thereby actuating said connecting means to cause the bridging contacts of each digit wheel to complete in sequence the signaling circuit of the signal generator.

3,089,004
REPEATERS FOR MULTI-CHANNEL TELEPHONE SYSTEMS
Thomas Oswald, Hartley, near Dartford, England, assignor to Submarine Cables, Limited, London, England, a corporation of England
Filed Nov. 27, 1959, Ser. No. 855,795
8 Claims. (Cl. 179—170)

1. A two-directional repeater for a carrier telephone system inserted in a cable having an inner and an outer conductor, in which system different frequency bands are utilized for transmitting signals in opposite directions through the repeater and in which signals from both directions are caused to traverse a single amplifier of the repeater in the same direction comprising at least two pairs of frequency selective filters, a circuit coupled to each side of the repeater and including a signal frequency choke, a second choke having two windings, and a condenser connected between the outer conductor of said cable and one end of a first winding of the second choke, the other end of said first winding being connected to the one terminal of one of the filters, a second condenser, the other winding of said second choke being connected between said inner conductor and one end of said second condenser, the other end of said second condenser being connected to another terminal of said one filter, said signal frequency choke being connected between the terminals of said second choke on the side connected to said frequency selective filters, and a direct current high voltage power source connected between said signal frequency chokes.



3,089,005
THIRD RAIL SHOE MOUNT
Albert G. Dean, Narberth, and Paul W. Gaenssle, Abington, Pa., assignors to The Budd Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed May 2, 1960, Ser. No. 26,156
4 Claims. (Cl. 191—49)

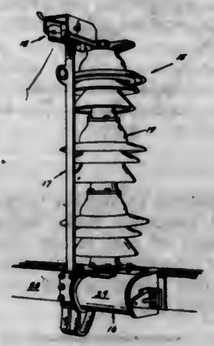


1. A third rail shoe mount adapted to be connected to a truck borne insulating mounting beam, comprising an offset support member having a slotted upper vertical portion adjustably secured to said beam, a horizontal portion and a lower vertical portion with a rectangular opening therein, a bent U-shaped leaf spring having an upper limb secured to the horizontal portion of said support member and a lower limb passing through said rectangular opening, a third rail shoe and a guard both secured to the lower limb of the spring outside said opening, said guard including longitudinally spaced vertical flanges flanking the sides of said support member to limit the lateral movement of said lower spring limb in said opening and limiting twisting, the top and bottom edges of the opening limiting the vertical movement of the lower spring limb.

3,089,006
AUTOMATIC HIGH SPEED GROUNDING SWITCH
Karl A. Thallner, Greensburg, Pa., assignor to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Mar. 14, 1960, Ser. No. 14,653
8 Claims. (Cl. 200—48)

1. A switch comprising a jaw assembly, a blade assembly pivoted at one end to move the other end into and out of engagement with said jaw assembly, and an operating mechanism for moving said blade assembly other end

into and out of engagement; a shock absorbing means operatively positioned for engagement by said blade assembly as it moves into engagement with said jaw assembly; said shock absorbing means comprising a tube and disposed within said tube a plurality of deformable members arranged in a stack; said deformable members being comprised of material which required considerably more



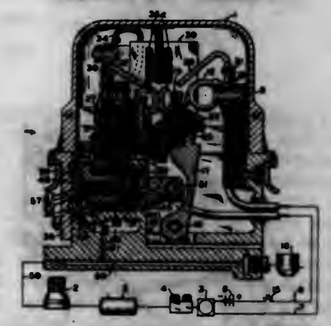
time to return to its normal shape than the time required to deform the material, said shock absorbing means being positioned directly in the path of movement of said blade assembly and adapted to abut said blade assembly prior to completion of said engagement operation and thereby cooperating with said switch blade assembly to permit rapid closure thereof while protecting said blade assembly from being damaged due to the impact of closure.

3,089,007
OMNIDIRECTIONAL INERTIA ACTUATED SWITCH
Herman Rovin, Green Acres, Valley Stream, N.Y., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Nov. 29, 1960, Ser. No. 72,539
10 Claims. (Cl. 200—61.48)



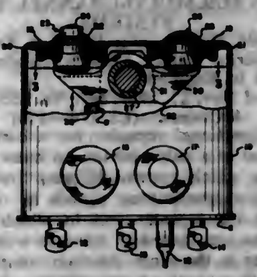
1. An omnidirectional inertia operated switch comprising a plastic housing, means including a shell providing a substantially spherical hollow stationary electrical contact cemented to and forming a lining for said housing, a movable electrical inertial contact means insulated from said liner and within the housing, yieldable means for mounting said movable contact means in said housing and disengaged from said shell contact means whereby a single impact from any direction on said housing will move said movable contact means from an initial position of rest relative to said housing to close a circuit between said shell contact and said movable contact means.

3,089,008
SNAP-ACTING SWITCH CONTACT ACTUATING MEANS FOR COMPRESSOR GOVERNOR
Frank W. Shirey, Irwin, Pa., assignor to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania
Filed July 7, 1960, Ser. No. 41,335
6 Claims. (Cl. 200—82)



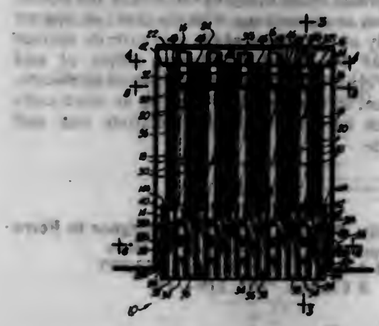
1. An electric circuit controlling switch device comprising a stationary switch contact member, a movable switch contact member operable from a circuit-opening position out of engagement with said stationary switch contact member into a circuit-closing position engaging said stationary switch contact member and reversely, casing means having a chamber therein to which fluid under pressure may be supplied, a piston subjectable to the fluid pressure in said chamber and movable responsively to supply of fluid under pressure thereto and release of fluid under pressure therefrom to effect operation of said movable contact member from its circuit-closing position to its circuit-opening position and vice versa respectively, and means operatively connecting said piston to said movable switch contact member to prevent movement of said movable switch contact member from its circuit-closing position to its circuit-opening position until after said piston has moved a predetermined amount responsively to a build-up of fluid pressure in said chamber.

3,089,009
ACTUATING MEANS FOR A HERMETICALLY SEALED SWITCH OR THE LIKE
Theodore Y. Kerngren, Sr., Woodbury, Conn., assignor to Haydon Switch, Inc., Waterbury, Conn., a corporation of Connecticut
Filed Sept. 2, 1959, Ser. No. 837,670
10 Claims. (Cl. 200—83)



1. A hermetically sealed switch assembly, comprising a casing adapted to be hermetically sealed, a switch-actuating member and a pressure compensating member each extending into an opening in said casing, a flexible seal movably supporting each of said members in the opening through which each extends and hermetically sealing that opening from ambient pressure, said flexible seal permitting axial movement of each member in the opening through which each extends, said switch actuating member extending outward from said casing and being exposed for actuating engagement, and a linkage means mounted on said casing and normally engaged by said switch-actuating member and said pressure compensating member, said linkage means being so constructed and arranged that movement of the switch-actuating member in one direction relative to the casing moves the linkage means in a first direction and movement of the pressure compensating member in said one direction relative to the casing moves the linkage means in a direction opposite said first direction, and said linkage means being adapted to engage and actuate a switch mounted in said casing upon said linkage means being moved a predetermined distance by said switch actuating member.

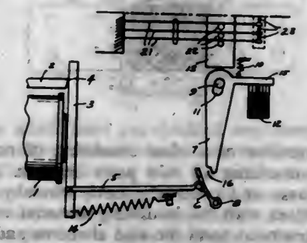
3,089,010
SWITCHING ASSEMBLY
Arthur J. Koda, Morton Grove, Ill., assignor to C. P. Clare & Company, Chicago, Ill., a corporation of Delaware
Filed Oct. 23, 1959, Ser. No. 848,263
10 Claims. (Cl. 200—87)



1. A switching assembly comprising a dielectric base member having a plurality of spaced portions projecting from one edge thereof, a plurality of sealed switch units each mounted on one of said portions, and a plurality of operating windings each surrounding one of said portions and the switch unit mounted thereon.

3,089,011
CODE RELAY SELECTOR
Harald Valdemar Alexanderson, Lidingo, Sweden, assignor to Telefonaktiebolaget L M Ericsson, Stockholm, Sweden, a corporation of Sweden
Filed May 19, 1960, Ser. No. 30,313
Claims priority, application Sweden June 2, 1959
5 Claims. (Cl. 200—104)

1. A switching device comprising at least a pair of relatively movable switch contacts, one contact of the pair being a spring contact, an actuating magnet including a movable armature, a lifting bar coacting with said spring contact for controlling the switching position thereof by the position of lift of the lifting bar, and transmission means coupling said armature with the lifting bar for moving the same into a lifted position in response to a movement of the armature into a position of release from the magnet, said bar in its lifted position deflecting the spring contact into engagement with the other contact of said pair, said transmission means including a first arm mounted pivotally about a stationary pivot point, a second arm mounted pivotally about a second stationary pivot point and longitudinally displaceable within predetermined limits with reference to its pivot point, said second arm coacting with said lifting bar to lift the same into a predetermined position of displacement with reference to its pivot point, said first and second arms coacting with each other to displace the second arm into



said predetermined position by a pivotal movement of the first arm, said bar in its lifted position deflecting the spring contact into engagement with the other contact of said pair, and a link pivotally coupling the first arm to the armature to impart to the first arm said pivotal movement in response to the armature moving into the release position thereof, said arms locking each other and the lifting bar in the lifted position of the latter, thereby forming a knee-joint mechanism.

3,089,012
TIME LAG FUSES
Ralph Abrams, Sharon, Mass., assignor to Cable Electric Products, Inc.
Filed Mar. 10, 1960, Ser. No. 14,115
4 Claims. (Cl. 200—123)

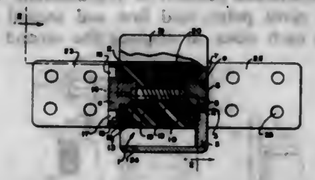


3. A fuse construction comprised by an outer hollow cylindrical member having a transparent top, an inner hollow cylindrical member of shorter length than the outer cylindrical member received within the latter, a fuse link supported on the end of the inner hollowed cylindrical member having a narrow neck, and a cylindrical element of a metal having high heat conductivity flattened across its central section and formed with a slot along the flattened section for receiving said fuse link, portions of said cylindrical element adjacent to said slot, clamping said fuse link securing said fuse link in position.

3,089,013
HIGH VOLTAGE EXPULSION LINK
Ralph S. Gens, 7506 NE. Alameda, Portland, Oreg., and Edward H. Gehrig, 4850 SW. Upper Drive, Lake Grove, Oreg.
Filed Oct. 18, 1960, Ser. No. 63,453
4 Claims. (Cl. 200—131)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A circuit interrupter expulsion link comprising a fuse wire wound around a rod of insulation material, a base element and a cover element each of electrically con-

ductive material, and each having on its inner surface a means providing a socket, and a groove providing a keying surface, the respective ends of the rod being supported in the sockets and the respective ends of the fuse wire being electrically connected to the base and the cover elements, a solid mass of electrically insulating material



which is a member of a class consisting of resins and elastomers, embedding all said parts between the inner sides of the base and cover elements, whereby the said grooves are filled with the insulating material to key together in a structural bond the said elements and all said parts therebetween.

3,089,014
NIGHT SETBACK THERMOSTAT
Russell B. Matthews, Wauwatosa, Wis., assignor, by mesne assignments, to Penn Controls, Inc., Goshen, Ind., a corporation of Indiana
Filed Sept. 15, 1960, Ser. No. 56,305
8 Claims. (Cl. 200—140)



1. A condition responsive circuit controlling device comprising a first contact having means biasing it toward a first position and movable against the bias of said biasing means to a second position, a second contact cooperable with said first contact, condition responsive actuating means for moving said second contact between circuit-making and circuit-interrupting positions with respect to said first contact in response to changes in a given condition when said first contact is in its said first position, and means for selectively moving said first contact against the bias of said biasing means and in a direction away from said second contact toward its said second position.

3,089,015
ELECTRODE PROBE
Ray D. Clark, Oakland, Calif., assignor to California Research Corporation, San Francisco, Calif., a corporation of Delaware
Filed Mar. 20, 1961, Ser. No. 96,883
4 Claims. (Cl. 200—152)

1. A probe comprising a member of electrically insulating material, a chamber within said member, at least one first electrode affixed to said member and exposed to contact by a first body of an electrolyte at the exterior surface of said member and by a separate second body of an electrolyte within said chamber, a second electrode disposed within said chamber in spaced-apart relationship to said first electrode and exposed to contact by said second body of an electrolyte within said chamber, means for introducing said second body of an electrolyte into said chamber and for withdrawing it therefrom independently of an amount of said first body of an electrolyte in contact with the said exterior surface of said



member, said probe being designed to control the operation of apparatus in accordance with the level of contact of said first body of electrolyte at the said exterior surface of said member when said chamber is empty of said second body of electrolyte, said second body of an electrolyte when present in said chamber forming an electrically conducting path between said first electrode and said second electrode.

3,089,016
HEATING UNIT
William D. Kelly, Western Springs, Ill., assignor to Ferro Corporation, a corporation of Ohio
Filed Aug. 17, 1959, Ser. No. 833,997
8 Claims. (Cl. 219—19)

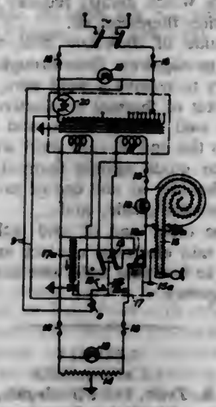


4. A heating unit comprising, a tubular heating element having a plurality of fins thereon each comprising a plate of heat conductive material with a tube receiving opening therein surrounded by a collar portion which frictionally engages the surface of the tube, said fins having key portions defined by folds in said fins extending outwardly a substantial distance from said tube and keyed to an adjacent fin for maintaining alignment of said fins.

3,089,017
ELECTRIC HEATING SYSTEM
Paul Eisler, 57 Exeter Road, London NW. 2, England
Filed July 31, 1958, Ser. No. 752,384
Claims priority, application Great Britain Aug. 6, 1957
7 Claims. (Cl. 219—20)

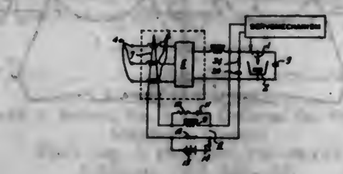
1. A transformer assembly comprising a plate-shaped electrical step-down transformer having a primary and a secondary winding, means in heat conductive contact with the transformer for radiating heat dissipated within the transformer and control means for causing the trans-

former to operate under a predetermined initial load for a predetermined period and for subsequently decreasing



the load and maintaining it at a substantially constant, reduced value.

3,089,018
DISCHARGE MACHINING APPARATUS
Kiyoshi Inoue, 182 Yoga Tamagawa Setagaya-ku, Tokyo, Japan
Filed Aug. 29, 1960, Ser. No. 52,394
Claims priority, application Japan Oct. 29, 1959
12 Claims. (Cl. 219—69)



1. Spark discharge machining apparatus comprising, in combination, an electrode and workpiece which form a spark discharge gap therebetween, a servomechanism responsive to a gap discharge condition normally to feed the electrode in relation to the workpiece for normally maintaining a working gap distance therebetween and for temporarily retracting the electrode in response to a short-circuit condition, thereby to interrupt current flow through the gap, an energy storage circuit connected across the gap to produce intermittent spark discharges therein during normal machining conditions, and means to deliver machining energy to said storage circuit including a rectifier having an alternating current input, and saturable reactor means in said input, including a control coil and an energizing circuit for said coil connected to the spark discharge gap for maintaining the reactor substantially saturated in response to said normal machining conditions, said energizing circuit including means expediting de-energization of said control coil upon removal of energization thereof as the electrode is being retracted, in response to a short-circuit condition of said gap, and means delaying reenergization of said control coil while the electrode is fed back to the normal working gap distance from the workpiece.

3,089,019
ELECTRIC ARC WELDING APPARATUS
Norman Reis, Fords, and Robert L. Hackman, Morris Plains, N.J., assignors to Union Carbide Corporation, a corporation of New York
Filed Dec. 23, 1960, Ser. No. 78,051
6 Claims. (Cl. 219—75)



1. In a triode inert gas shielded non-consumable electrode alternating current electric arc welding system comprising a torch provided with a cylindrical gas cup and a pilot arc electrode in addition to the main electrode, said cup surrounding said main electrode in concentric relation to provide a cylindrical gas outlet passage, and said pilot arc electrode being carried wholly within the cylindrical gas outlet passage of such cup by said torch with one end spaced from but adjacent to the arc end of said main electrode, means electrically isolating such gas cup from said pilot arc electrode as well as from said main electrode, means for connecting said main electrode and a metal workpiece in an alternating current welding arc energizing circuit, and means for connecting said pilot arc electrode and said main electrode in a pilot arc energizing circuit, the pilot-arc arcing portion of said pilot arc electrode being as close as possible to said main electrode but spaced therefrom whereby undesirable trailing of cleaning action is avoided even when the torch is tilted with respect to the direction of movement of the torch in making a weld bead on the metal workpiece in circuit with such main electrode.

3,089,020
INDIRECT WELDING
Richard P. Harlebaus, Huntingdon Valley, Pa., assignor to The Budd Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Dec. 16, 1960, Ser. No. 76,175
2 Claims. (Cl. 219—86)



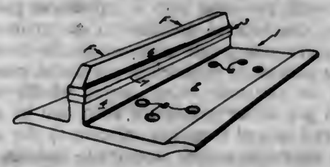
1. The method of mechanical and electrical connection of attenuated metal lead conductors and foil components comprising the steps of superimposing a lead over a fay-

ing surface area of a component, contacting a first portion of the lead substantially symmetrically within the faying surface with a first electrode, contacting a second portion of the lead spaced symmetrically from the first portion with a second electrode, and passing a single capacitor-discharge pulse serially through the one electrode, the lead conductor, the foil component, again through the lead conductor, and finally through the other electrode in that order.

3,089,021
METHOD FOR FORMING A COMPOSITE WELDED ARTICLE

David H. Hawes, Pekin, and T H Spencer, Peoria, Ill., assignors to Caterpillar Tractor Co., Peoria, Ill., a corporation of California

Filed June 1, 1960, Ser. No. 33,229
4 Claims. (Cl. 219—104)

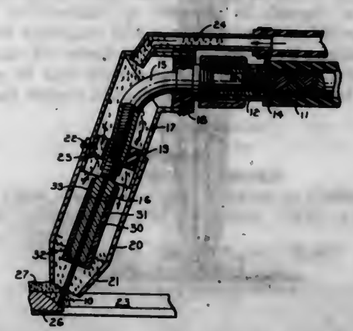


1. A method of forming a composite track shoe for the track of a crawler type vehicle, including the steps of providing a preformed track shoe plate comprised of a machinable plain carbon steel, providing a preformed grouser bar comprised of a wear resistant austenitic manganese steel, maintaining a section of said bar at a predetermined distance from and out of contact with respect to a predetermined section of said plate, passing electrical current through said bar and plate to establish an electrical arc therebetween to melt first portions of said bar and plate which are separated by said predetermined distance and to plasticize second portions of said bar and plate which are adjacent to said first portions thereof, pressing said bar and plate together under substantial pressure to force said melted first portions from therebetween and to weld said plasticized second portions of said bar and plate together in a solid state bond having a well defined interface which is substantially free of interdiffusion and admixture between the respective steels of said bar and plate.

3,089,022
WELD ROD GUIDE

John T. Kinney, Peoria, Ill., assignor to Caterpillar Tractor Co., Peoria, Ill., a corporation of California

Filed May 8, 1961, Ser. No. 108,576
3 Claims. (Cl. 219—130)

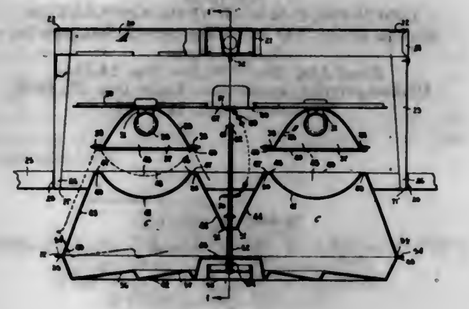


1. In a welding machine having an electrical contact member through which a weld wire is fed to produce an arc between the end of said weld wire and a work piece, said wire being fed to maintain the said end beyond said electrical contact a sufficient distance that the resistance of the wire effects heating thereof to a temperature which greatly reduces its rigidity,
the combination therewith of:
a tubular guide of dielectric heat resistant material having a passageway therethrough adapted snugly but slidably to receive a weld wire,
a tubular jacket of thermal conductive material snugly embracing said tubular guide and arranged closely adjacent to the end of said weld wire for protecting said tubular guide against thermal shock,
an internal shoulder at one end of said jacket supporting said tubular guide, and
means on the other end of said jacket securing said jacket on said electrical contact member to extend therefrom so that said weld wire may be fed through said passageway.

3,089,023
LUMINAIRES

William A. Trott, 115 Middlegate, Winnipeg, Manitoba, Canada

Continuation of application Ser. No. 563,804, Feb. 6, 1956. This application July 6, 1959, Ser. No. 828,427
4 Claims. (Cl. 240—9)

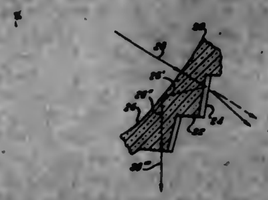


4. A luminous covering for a planar interior surface of a building in the form of a module assembly comprising in combination, a plurality of substantially similar self-contained luminous modules of rectangular configuration, said modules having substantially contiguous marginal edges, and rectangular anterior light diffusing panels co-extensive with said interior surface, said modules each comprising a hollow rectangular light-reflecting and diffusing cell having closed ends, said cell comprising said light diffusing panel, an elongated rectangular light transmitting panel spaced rearwardly from said diffusing panel, and elongated, lateral, light reflecting panels having opposed, reflecting, inner surfaces, said reflecting panels connecting said light diffusing and transmitting panels together along said marginal edges of said cell, a source of light comprising an elongated fluorescent lamp disposed exteriorly and rearwardly of said cell, an elongated posterior reflector having an elongated reflecting surface spaced from and at least partially to the rear of said lamp for optical co-action with said reflecting panels, said reflector and said lamp being parallel to said side edges, the said reflecting surfaces of said reflecting panels, and said reflecting surface of said posterior reflector being substantially co-terminous and co-extensive, and cell retaining means capable of retaining said cell in said luminaire while permitting separation of the same therefrom.

3,089,024
LUMINAIRE

Herbert A. Odle, Newark, Ohio, assignor to Holophane Company, Inc., New York, N.Y., a corporation of Delaware

Filed Mar. 30, 1959, Ser. No. 802,825
4 Claims. (Cl. 240—25)

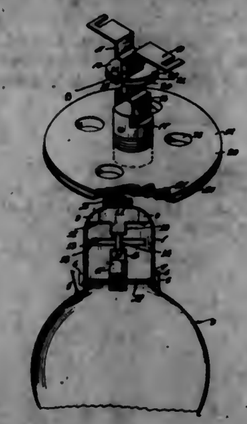


1. A luminaire comprising a light source, a reflector above said light source and a refractor having sides located in the path of light from said reflector and said light source, horizontally extending prisms disposed on one side of said refractor on the outer surface thereof, each said horizontally extending prism including an upper substantially vertical side and a lower substantially horizontal side, a plurality of vertically extending reflecting prisms disposed in horizontal side-by-side relationship on the substantially vertical side of each said horizontal prism, each horizontally extending prism lying inwardly of its next adjacent upper horizontally extending prism, the inner surface of said side of said refractor sloping downwardly and inwardly relative to said light source in a curved path, both of said prisms and said inner surface of said side of said refractor being disposed at such angles relative to said light source and the path of light from said reflector, that light rays striking said curved surface pass to the surfaces of said vertical reflecting prisms and are reflected inwardly back to said curved surface and reflected again by said curved surface in a substantially downward direction through the substantially horizontal sides of said horizontally extending prisms.

3,089,025
LAMP FIXTURES

Harold A. Brisco, Ste. 4–154 Osborne St., Winnipeg, Manitoba, Canada

Filed Aug. 8, 1960, Ser. No. 48,115
2 Claims. (Cl. 240—25)



1. In a street lighting fixture, the combination of a dome-shaped hood having an open bottom and adapted at the top thereof for attachment to an overhead support, a depending globe removably attached to the bottom portion of said hood, a moisture absorbing pad mounted in the open bottom of the hood, said pad being provided with a central socket receiving opening and with at least one vapor passage spaced laterally from said opening and communicating the interior of said globe with the interior of the hood, lamp socket suspension means provided in said hood above said pad, a lamp socket suspended by said suspension means and projecting through said central opening in said pad to support a lamp in said globe, said suspension means including an intermediate portion spaced upwardly from said socket, and a second moisture absorbing pad provided in said hood, said second pad fitting around and being supported by said intermediate portion of said suspension means in upwardly spaced relation from said socket, whereby to prevent gravitation of moisture along said suspension means to said socket.

3,089,026
LIGHTING FIXTURE

Edward M. Caferro, Spokane, Wash., assignor to Columbia Electric & Manufacturing Company, Spokane, Wash., a corporation of Washington

Filed Oct. 30, 1961, Ser. No. 148,475
3 Claims. (Cl. 240—51.11)



1. A ceiling fluorescent lighting fixture comprising:
a pair of parallel fixture channels adapted to be supported on a ceiling structure, each pair of channels including opposed vertical sides spaced from one another and provided with aligned pairs of open apertures;
tubular fittings fixed to said channels and extending outwardly therefrom through said apertures;
aligned pairs of lamp sockets for fluorescent lamps fixed to the channels, each pair of sockets being adapted to receive a lamp therebetween;
a ballast mounted within one of said channels;
a pre-assembled wiring harness including said pairs of lamp sockets and said ballast and interconnecting wiring extending across the separation between each pair of channels, said interconnecting wiring being located across aligned pairs of apertures on said channels and through the fittings mounted therein;
individual conduit spacers mounted on the fittings in each aligned pair of apertures in coaxial relation thereto, said spacers being longitudinally split throughout their length, said interconnecting wiring being surrounded by the assembled conduit spacers, the split edges of said conduit spacers being provided with interlocking means adapted to lock the edges to one another when assembled;
and positioning means operatively connecting each of said conduit spacers and the fittings on which it is mounted adapted to prevent longitudinal or rotational motion of said conduit spacer relative to the respective fittings.

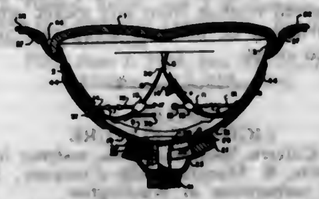
3,089,027
MOUNTING FOR HEADLAMP

John J. Horan, 420 Quigley Ave., Willow Grove, Pa.

Filed Feb. 9, 1959, Ser. No. 791,928
8 Claims. (Cl. 240—57)

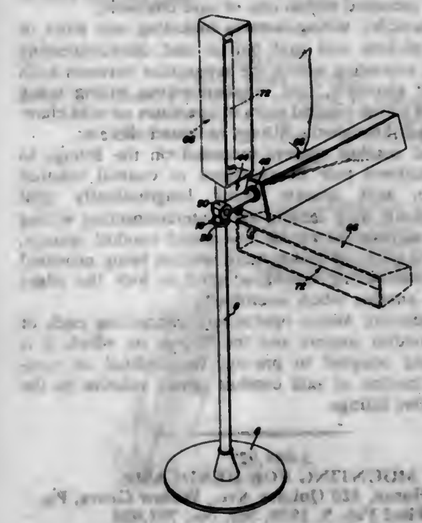
1. An aimable electric headlamp for vehicles comprising:

a radiant energy producing device;
a hermetically sealed enclosure for said device,
said enclosure having a front and a rear,
said enclosure including a radiant energy transmitting lens portion at said front,
said rear having a reflective cavity surface within said enclosure,
said cavity surface being aligned with respect to said radiant energy producing device for orienting radiant energy produced by said device and incident upon said surface by reflection therefrom frontwards of said head lamp via said lens portion;
bracket means attached to said rear,



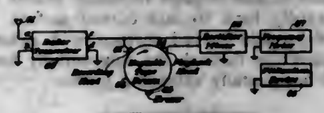
said bracket means projecting from said headlamp and including a spherical segment,
said spherical segment constituting a portion of the boundary of a spherical zone,
said zone having a diameter perpendicular to said spherical segment,
said diameter being directed toward said front of said hermetically sealed enclosure, so that said spherical segment presents a concave surface toward said front,
said segment being adapted to be seated against a mating extraneous spherical mounting segment and to be clamped in angular adjustment thereto, said enclosure being closed by a gas-impervious fused-glass sealing means.

3,089,028
STAND WITH ADJUSTABLY MOUNTED HEAD
Golda G. Klumpferer, Santa Maria, Calif.
(265 Orion Ave., Lompoc, Calif.)
Filed Mar. 23, 1961, Ser. No. 97,858
2 Claims. (Cl. 240—81)



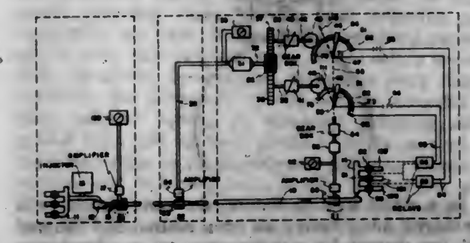
1. A lamp construction comprising a portable base, a hollow standard having a lower end attached to said base, said standard rising perpendicularly from the base and having an upper end provided with a right angularly disposed outstanding attaching flange, head means embodying a circular cap having disk-shaped portion provided with a depending annular marginal rim, said rim having a lower edge portion formed with a turned in lateral flange cooperating with said disk-shaped portion and defining a channel, said attaching flange being provided with cooperating top and bottom friction washers and said flange and washers being confined in said channel and cooperating therewith in providing a swivel joint between the head means and standard, the disk-shaped portion of said head means having a substantially cylindrical hollow head disposed in a plane above the plane of the disk-shaped portion and of a length less than the diameter of the disk-shaped portion, said hollow head having a slot therein and also having end portions provided with axially aligned holes for the accommodation of insertable and removable fastening means, a tubular bracket arm having a head-like end portion conformably enclosing said hollow head and provided with assembling and attaching means cooperating with the end holes in said head and providing a separable hinge joint which permits the bracket arm to be swung up or down in a vertical plane, the outer end of said bracket arm being open and adapted to accommodate a lamp shade.

3,089,029
APPARATUS FOR MEASURING THE ROLLING RESISTANCE OF A CAR
Emil F. Brinker, Blackridge, Pa., assignor to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania
Filed Apr. 9, 1958, Ser. No. 727,388
4 Claims. (Cl. 246—182)



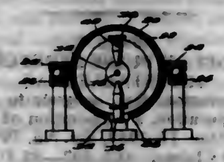
1. Means for measuring the acceleration of a moving body, comprising; in combination, radar means for obtaining a first signal from the body having a frequency proportional to the velocity of the body at a first instant, means for recording said first signal, means operatively connected to said recording means for obtaining a reproduced first signal at a second instant a predetermined time interval after the first instant, said radar means also supplying a second signal at said second instant, and means for comparing the frequencies of the second signal and the reproduced first signal to provide a measurement of acceleration.

3,089,030
OPERATION OF PIPELINES
Serge A. Scherbatskoy, 804 Wright Bldg., Tulsa 3, Okla.
Filed Apr. 4, 1956, Ser. No. 576,059
5 Claims. (Cl. 250—43.5)



1. In a system for operating a pipeline in which a multiplicity of fluid substances in sequential adjacent relationship are transported from a transmitting station to a receiving station, comprising means at said transmitting station for interspersing a radioactive material between adjacent substances at said transmitting station, a second radiation detector at said receiving station and a first radiation detector between said transmitting station and said receiving station, means actuated by said first radiation detector for producing a signal representing the total amount of radioactivity detected by said first detector, means for integrating the output of said second detector, and a distributing means responsive to said signal and to said integrating means for diverting said substances from said pipeline at times at which the output of said integrating means reached a value having a determined relationship to the value of said signal.

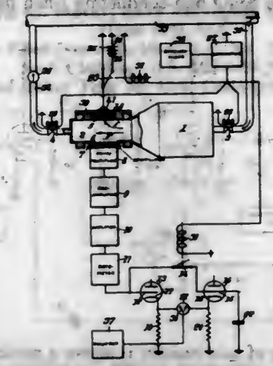
3,089,031
METHOD AND APPARATUS FOR TESTING STRUCTURE OF MATERIALS BY MEANS OF ROENTGEN, GAMMA OR CORPUSCULAR RAYS
Friedrich Endter, Konstanz, Germany, assignor to Deutsche Gold- und Silver-Scheideanstalt, Frankfurt am Main, Germany
Filed Dec. 19, 1957, Ser. No. 703,971
Claims priority, application Germany Dec. 22, 1956
5 Claims. (Cl. 250—65)



1. A method of continuously following structural changes in materials, which comprises impinging a beam of interference generating rays on the material, and moving a sheet of a material sensitive to the scatter rays emitted from the material continuously across the field of such scatter rays in a direction in which the material remains immovable at a speed sufficiently slow, relative to the intensities of the scatter rays, to produce a clear record thereon, and confining the primary rays to a narrow path while permitting the dispersion of the scatter rays over a widely conically spread field of at least one scattering angle to impinge upon the sensitive material.

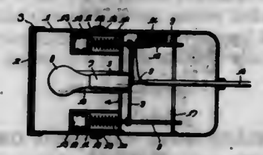
3,089,032
SELECTIVE MEASUREMENT OF SHORT-LIVED FISSION PRODUCTS IN A GAS FLOW
Jean Goupil, Fontenay-aux-Roses, and André Regnin, Antony, France, assignors to Commissariat a l'Energie Atomique, Paris, France
Filed Dec. 2, 1958, Ser. No. 777,731
Claims priority, application France Dec. 4, 1957
7 Claims. (Cl. 250—71.5)

1. Device for selectively measuring the amount of short-lived fission products in a gas flow comprising, in combination, a decay prechamber, a detection chamber disposed downstream said prechamber, duct means for circulating at least a portion of said gas flow successively through said decay prechamber and said detection chamber, detecting means for determining the radioactivity in said detection chamber, ion collecting means for concentrating, when energized, ions in a particular area of said detection chamber, valve means for preventing, when energized, the circulation of said gas flow through said chamber, control means for energizing simultaneously said ion collecting means and said valve means, and comparison means for comparing the determination of said detecting means before and after the operation of said control means, said comparison means comprising a first and a second triode each including one cathode grounded through a resistor, said cathodes being connected through an apparatus adapted to indicate the potential difference therebetween, whereas the grids are connected through a



switch, the grid of said first triode being furthermore connected to the output of said detecting means and the grid of said second triode being connected to one plate of a capacitor having the other plate thereof grounded.

3,089,033
INFRARED RAY TREATER
Masanori Fujisawa, 16 Sumiyoshi-cho, Suginami-ku, Tokyo, Japan
Filed July 21, 1960, Ser. No. 44,469
5 Claims. (Cl. 250—88)

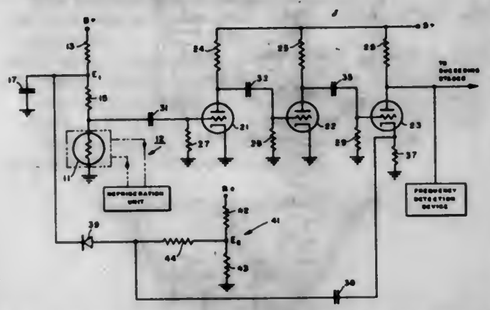


1. An infrared ray treater comprising an outer casing having an open end, a mica plate mounted on said casing at the open end of the latter, an infrared emitting source disposed in said casing spaced apart from said mica plate, and a control means for varying automatically the distance between said source and said mica plate so that a predetermined value of heat may be substantially invariably impinged on said mica plate.

3,089,034
LIGHT SENSITIVE DETECTION CIRCUIT
Robert C. Meade, China Lake, Calif., assignor to the United States of America as represented by the Secretary of the Navy
Filed Aug. 30, 1960, Ser. No. 53,020
3 Claims. (Cl. 250—214)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A detection device comprising an amplifier, a detection cell responsive to light energy, the resistance of said detection cell varying inversely with the temperature of said cell, a resistor, one side of said resistor being connected to a D.C. potential source, the other side of said resistor being connected to one side of said detection cell, the other side of said detection cell being connected to ground, said one side of said detection cell being connected to the input of said amplifier, a regenerative feedback network for interconnecting the output and input of said amplifier, and means responsive to the voltage at said other side of said resistor for controlling transmission of

the amplifier output signal through said network, wherein said last mentioned means comprises a diode the cathode of which is connected to said other side of said resistor and the anode of which is connected to a fixed D.C. potential, said diode being non-conducting when the voltage



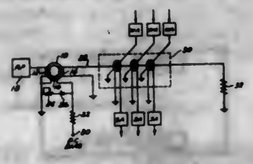
at said other side of said resistor is above a predetermined value, and transmitting said amplifier output signal when the voltage at said other side of said resistor is less than said predetermined value thereby causing oscillation of said amplifier.

3,089,035

ELECTRICAL PULSE PRODUCING APPARATUS

Walter Strohmeier, Newton Highlands, and David Shansky, South Lincoln, Mass., assignors to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Filed Jan. 28, 1959, Ser. No. 789,547
9 Claims. (Cl. 307—88)



1. A magnetic core switch comprising a bistable magnetic core, an input winding on said core adapted to receive an input pulse of predetermined polarity tending to switch said core device in a first direction, a biasing winding on said core, a biasing signal source connected to said biasing winding and being adapted to switch said core in a second direction, an output winding on said core, a symmetrical load connected directly to said output winding, and unidirectional loading means electrically coupled to said core to delay the switching of said core when the switching is in one sense, and not delay the switching when the switching is in the opposite sense.

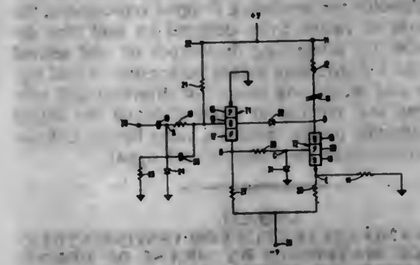
3,089,036

TRANSISTOR PROTECTIVE CIRCUIT

Edward H. Sommerfield, Endicott, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Dec. 29, 1958, Ser. No. 783,327
9 Claims. (Cl. 307—88.5)

6. A transistor circuit comprising in combination, a first transistor having collector, base and emitter electrodes and having a PNP configuration, a second transistor having collector, base and emitter electrodes and having an NPN configuration, a source of positive voltage connected to the base of said PNP transistor and to the collector of said NPN transistor, a source of negative voltage connected to the collector of said PNP transistor and to the emitter of said NPN transistor, input signal means connected to the base of said PNP transistor for switching same into a state of conduction, means connecting the collector output of said PNP transistor to the base of said NPN transistor to switch the NPN transistor into a state of conduction, a magnetic core in circuit between the collector of said NPN transistor and said positive voltage, and a diode circuit connecting the collector of said NPN transistor with the base of said PNP transistor to provide an alternate path for base current to the PNP transistor, in the event said positive voltage or said magnetic core should be inadvertently removed, and thus enabling said PNP transistor to carry emitter current from said NPN transistor.

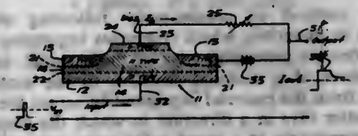


3,089,037

VARIABLE DELAY PULSE STRETCHER USING ADJUSTABLE BIAS

Bernd Ross, Lexington, Ky., assignor to Hoffman Electronics Corporation, a corporation of California

Filed Mar. 17, 1959, Ser. No. 799,977
4 Claims. (Cl. 307—88.5)



1. A pulse stretcher comprising a semiconductor body having first, second, and third regions, said second and third regions being located at least in part on opposite sides of said semiconductor body, said first region being of a first conductivity type, said second and third regions being of a second conductivity type, said first and second regions being contiguous and separated by a first P-N junction, and said first and third regions being contiguous and separated by a second P-N junction, an input lead ohmically connected to said third region, a variable bias supply coupled to said first and second regions for biasing said first P-N junction in the forward direction and modulating the trap saturation in said first region, and an output lead coupled to said first region.

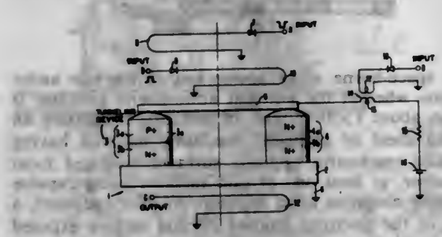
3,089,038

IMPEDANCE MEANS INCLUDING TUNNELING DEVICE FOR PERFORMING LOGIC OPERATIONS

Richard F. Rutz, Fishkill, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Oct. 14, 1959, Ser. No. 846,421
8 Claims. (Cl. 307—88.5)

1. Logic circuit means comprising an impedance unit having a natural frequency of oscillation, said unit including a quantum mechanical tunneling device, and means connecting the tunneling device in a circuit, said tunneling device having a potential-current characteristic including an intermediate potential negative resistance region between lower and higher potential positive resistance regions; a plurality of input sources of electrical energy coupled to the circuit, at least some of the sources being shiftable in potential, said sources cooperating in at least one predetermined combination of the potentials thereof to operate the tunneling device in the intermediate potential negative resistance region of its characteristic and thereby to initiate oscillation of said circuit, in at least a second predetermined potential combination to operate the tunneling device in the lower po-



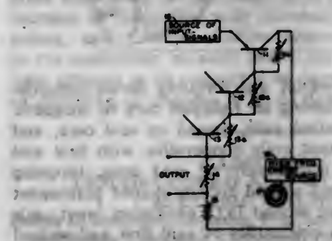
tential positive resistance region and thereby to inhibit oscillation of said circuit, and in at least a third predetermined potential combination to operate the tunneling device in the higher potential positive resistance region of its characteristic and thereby to inhibit oscillation of said circuit; and signal output means coupled to the circuit and responsive to oscillation and non-oscillation thereof, whereby said one predetermined combination may be logically distinguished from said other second and third predetermined combinations.

3,089,039

MULTISTABLE CIRCUIT EMPLOYING DEVICES IN CASCADE CONNECTION TO PRODUCE A COMPOSITE VOLTAGE-CURRENT CHARACTERISTIC WITH A PLURALITY OF NEGATIVE RESISTANCE REGIONS

George Abraham, 3107 Westover Drive SE., Washington, D.C.

Filed May 25, 1960, Ser. No. 31,788
7 Claims. (Cl. 307—88.5)
(Granted under Title 35, U.S. Code (1952), sec. 266)



7. An electrical circuit having a composite voltage-current characteristic with a plurality of negative resistance regions comprising a plurality of selected devices each having a significant internal impedance and capable of exhibiting a negative resistance characteristic, means connecting said plurality of devices in series, means connected to said devices for energizing said devices such that each of said devices has a negative resistance characteristic of the short circuit stable type and the relative internal impedances of said devices differ, said devices selected each with respect to the others in said plurality thereof such that the internal impedance characteristic of each device differs by an amount sufficient to provide a composite voltage-current characteristic having overlapping negative resistance regions at a selected current level when energized by said means for energizing.

3,089,040

DIVIDER CIRCUIT USING DELAY TIME TO INHIBIT TRANSISTOR CONDUCTION FOR PREDETERMINED MULTIPLE OF INPUT PULSES

John M. Hovey, 6533 Abbington Drive SE., Oxon Hill, Md.

Filed Nov. 30, 1960, Ser. No. 72,819
6 Claims. (Cl. 307—88.5)
(Granted under Title 35, U.S. Code (1952), sec. 266)



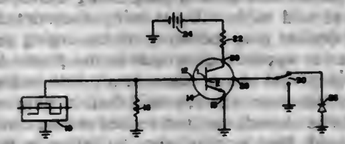
1. In a countdown circuit responsive to a number of input pulses comprising a transistor, having at least a collector, base and emitter junctions, a periodic recurring input pulse signal of positive potential with respect to ground, means connecting said signal directly across the base and emitter junctions, means for applying a potential to said collector junction, said potential being negative with respect to said input signal, a delay line means having a time delay equal to a multiple of the period of said input pulse, said delay line means connected between said collector and base junction so that certain of the periodic input pulses may be inhibited by biasing the transistor into a nonconductive state, impedance means connecting the base junction to ground, means to isolate the impedance means from the negative potential means, output means connected to said isolating means and said collector junction, a periodic output signal produced at said output means having pulses of a width equal to said input pulses.

3,089,041

REDUCED TURN-OFF TIME TRANSISTOR SWITCH

Donald W. Boensel, La Crescenta, Calif., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Army

Filed Dec. 14, 1960, Ser. No. 75,894
1 Claim. (Cl. 307—88.5)



A reduced turn-off time transistor switch comprising a tetrode transistor having a first and second base electrode, an emitter electrode and a collector electrode, an input resistor connected between said first base electrode and said emitter electrode, a source of switching potential connected in parallel with said input resistor, said switching potential providing a positive-negative square wave signal, a source of reverse collector current, an output load resistor connected to said collector electrode, said source of reverse collector current series connected between said emitter electrode and said load resistor, a diode connected between said second base electrode and said emitter electrode, said diode being poled in a direction toward said second base electrode so that said diode conducts on the negative square wave signal.

3,089,842
CONTINUOUS OUTLET SURFACE EXTENSION ASSEMBLY
Robert L. Hickey, St. Clair Shores, and Louis W. Higgins and Elwood T. Platz, Detroit, Mich., assignors to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Jan. 26, 1959, Ser. No. 789,112
1 Claim. (Cl. 307—147)



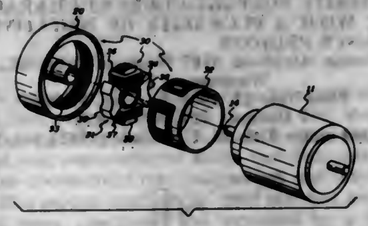
A continuous outlet surface extension assembly comprising an elongated continuous outlet cable of selected convenient length, an energizing extension assembly having a first end operatively connected to said cable and a second end adapted for connection to a source of electrical energy, and at least one electric receptacle removably mounted to said cable and after dismounting being mountable to said cable at any point along the length thereof; said cable comprising an elongated insulating body, a first and a second longitudinally extending lip formed integrally with and overlying a first surface of said body to form a first and a second slot; a first and second longitudinally extending conductor partially imbedded in said body and accessible through said first and second slots respectively; insulating cap means at each end of said cable; a longitudinally extending polarizing rib projecting from said first surface of said body and positioned to one side of a line located midway between said conductors; said receptacle including a housing having a depression operatively positioned to receive said rib and further to cooperate therewith to assure that said receptacle is mounted to said cable in a predetermined manner; said extension assembly including a feed-in plug at said first end mounted to said cable; said feed-in plug including a first and a second contact each comprising a sheet-like free end portion having a sharp edge for contact with said first and second conductors, respectively; said end caps and said lips cooperating to prevent removal of said feed-in plug from said cable; said feed-in plug being movable along the length of said cable without being dismounted therefrom; said feed-in plug including means urging said free end portions in opposite directions in the planes thereof, thereby urging said sharp edges firmly into engagement with said conductors whereby said feed-in plug will not accidentally be moved; said last recited means comprising a spring; said feed-in plug also including a yieldable body in which said spring is disposed; said electric receptacle having a first prong receiving aperture of a first length and a second prong receiving aperture of a second length greater than said first length; said energizing assembly including a plug cap at its said second end; said plug cap including a first and second prong electrically connected to said first and said second flexible conductors; said first prong being wider than said second prong; said first prong being too wide to be received by an aperture of said first length but not too wide to be received by an aperture of said second length; said second prong being narrow enough to be received by an aperture of said first length; said plug cap prongs, said polarizing rib and said electric receptacle depression and prong receiving apertures cooperating to provide a completely polarized system for providing electrical energy which prevents incorrect usage thereof.

3,089,843
SOLAR POWER SOURCE FOR USE IN SPACE
Thomas Gold, Lincoln, Mass. (% Harvard College Observatory, 60 Garden St., Cambridge, Mass.)
Filed Dec. 23, 1958, Ser. No. 782,473
10 Claims. (Cl. 307—149)



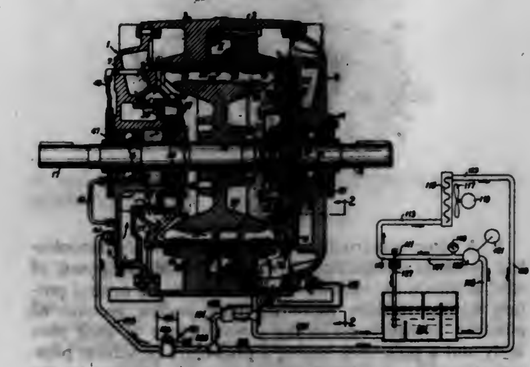
1. A space-borne solar power source for use under conditions wherein the ambient atmospheric pressure is less than about 1×10^{-3} mm. of mercury comprising an apertured sheet of electrical insulating material having electrically conductive opposite surfaces insulated from one another, at least one of said surfaces being capable of emitting electrons upon exposure to solar radiation, a portion of the electrons emitted by said surface exposed to solar radiation passing through the apertures of said sheet to the opposite surface thereof producing a positive residual charge on said exposed surface and a negative residual charge on said opposite surface, said surfaces being adapted to be connected to an electrical load as positive and negative potential sources therefor.

3,089,844
ELECTROMAGNETIC TRANSDUCER DEVICE
Robert H. Bolton, Huntington, N.Y., assignor to Sperry Rand Corporation, Great Neck, N.Y., a corporation of Delaware
Filed May 31, 1960, Ser. No. 32,780
7 Claims. (Cl. 310—36)



3. A combined pick-off and torquing device comprising pick-off means having an I-shaped core of magnetic material, A.C. excitation coils wound on said core, and first and second output coils cooperative with first and second extremities respectively of said core, torquing means having first and second arcuate-shaped permanent magnets and first and second D.C. excitation input coils cooperative with the extremities of said first and second magnets respectively, the extremities of said core and said magnets being symmetrically disposed and curved to thereby define a circle, a common stationary non-magnetic support member for supporting said core and said magnets, said support member having a longitudinal axis, a common circular magnetic flux return path member for providing a magnetic flux return path for said pick-off means and said torquing means, said flux return path member being in spaced relation with respect to said core and said magnets thereby defining a circular air gap therebetween, and a common circular rotatable element disposed within said air gap supporting said pick-off output coils and said torquer input coils for rotation relative to said core and said magnets around said longitudinal axis, said rotatable magnetic element and said flux return path member being coaxially disposed with respect to said longitudinal axis.

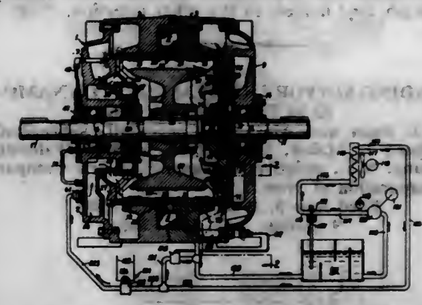
3,089,845
COOLANT-CIRCULATING SYSTEM FOR ELECTRIC MACHINES AND THE LIKE
Richard J. Deckx, Kenosha, Wis., assignor to Eaton Manufacturing Company, Cleveland, Ohio, a corporation of Ohio
Filed Mar. 28, 1960, Ser. No. 17,815
2 Claims. (Cl. 310—53)



1. A cooling system for circulating liquid coolant to and from an inlet and an outlet of a casing of an eddy-current electric coupling having an exciter coil and rotating parts therein, comprising a liquid sump, a pump having a supply connection with said sump and an outlet pressure connection with said inlet, return means from said outlet to said sump, a cross connection between said pressure connection and said return means, said cross connection and the casing which has said rotating parts therein forming parallel-connected flow paths between the pump and the sump, a thermostatically controlled proportioning valve in said cross connection including a temperature-sensitive element responding to temperature of the coolant at the outlet of the casing and adapted to control the position of said valve such that flow therethrough is increased upon coolant temperature reduction in the casing, whereby flow through the casing is decreased and whereby flow through said cross connection is decreased upon coolant temperature increase in the casing with increased flow through said casing, and a minimum-flow-responsive switch located in the connection between said cross connection and the inlet adapted to be connected to deprive said exciter coil of excitation in response to liquid flow below a minimum.

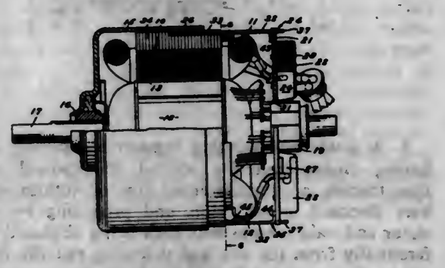
3,089,846
LIQUID-COOLED AND -LUBRICATED ELECTRIC MACHINE
Ralph L. Jaeschke, Kenosha, Wis., assignor to Eaton Manufacturing Company, Cleveland, Ohio, a corporation of Ohio
Filed Mar. 28, 1960, Ser. No. 17,991
5 Claims. (Cl. 310—105)

1. An electric coupling comprising an enclosing vapor-tight casing having end supports for first and second sets of roller-type end bearings and a third roller-type bearing, driving and driven shafts supported in said first and second bearings respectively, said driven shaft supporting a field pole member, a drum in the casing surrounding said field pole member and supported at one end by said third bearing, a fourth roller-type pilot bearing between the drum and the pole member, said casing having inlet and outlet ports, means adapted to admit lubricating coolant from said inlet port into the drum at one end thereof and exit means therefor at the other end of the drum, whereby liquid coolant is circulated through the drum between it and said pole member while forming a lubricant mist inside and outside the drum, means adapted to carry some of the mist through said second and third bearing from the casing and into the drum, means adapted to carry



some of the mist from the drum into the casing through said fourth bearing, and means for establishing circulation of some of said mist from and to the drum through said first bearing.

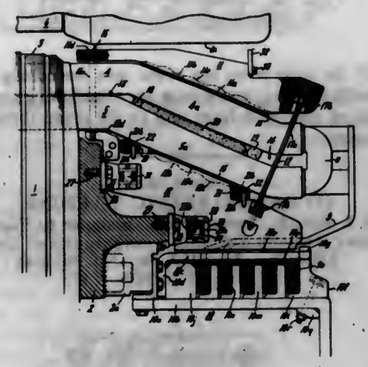
3,089,847
DYNAMOELECTRIC MACHINE
Conrad J. Perzyk, Tipton, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Dec. 24, 1959, Ser. No. 861,848
1 Claim. (Cl. 310—239)



In a dynamoelectric machine having a frame with a pair of longitudinal slots positioned therein and a housing fitting over said frame, a brush card, said brush card having a slot positioned in each end thereof, a pair of brush card holders, each brush card holder comprising a body portion, a retaining tongue including a detent extending from said body portion, a T-shaped tongue extending from said body portion and including a T-bar and a neck, the retaining tongue of one of said brush card holders being positioned in one of the longitudinal slots in said frame, the retaining tongue of the other of said brush card holders being positioned in the other of the longitudinal slots in said frame with the detents on said tongues engaging said housing, the neck of one of said brush card holders being positioned in one of the slots in said brush card, the neck of the other of said brush card holders being positioned in the other slot in said brush card so that said T-bars engage one side of said brush card, each of the body portions of the brush card holders including a first tab positioned adjacent one side of the neck of the T-shaped tongue and a second tab positioned adjacent the other side of the neck of the T-shaped tongue, said first and second tabs extending at substantially right angles to the body portion of each brush card holder toward the center of said dynamoelectric machine and engaging the other side of said brush card, each body portion also including a third tab positioned adjacent one side of the retaining tongue and a fourth tab positioned adjacent the other side of the retaining tongue, said third and fourth tabs of each body portion

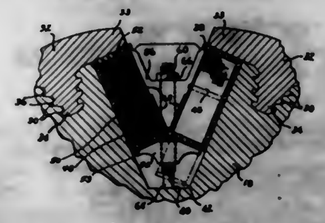
extending into engagement with the frame of the dynamoelectric machine to limit the movement of said brush card holders with respect to said frame in one direction, the detents on the retaining tongues limiting the movement of said brush card holders in the other direction.

3,089,048
WINDING SUPPORT SYSTEM FOR A DYNAMOELECTRIC MACHINE
John J. Bahn and Almy D. Coggeshall, Schenectady, Richard T. Maher, Wilton, and John B. Waldbillig, Albany, N.Y., assignors to General Electric Company, a corporation of New York
Filed June 3, 1960, Ser. No. 33,808
9 Claims. (Cl. 310—260)



5. A stator end winding support comprising a stator having circumferentially spaced longitudinal winding slots therein, a circumferential row of bottom armature bars disposed in said slots and projecting beyond the stator end, said bottom bars each being displaced circumferentially from the slot and diverging radially from the stator axis, a circumferential row of top armature bars disposed in said slots and projecting beyond the stator end, said top bars being displaced circumferentially in an opposite sense from the bottom bars and diverging radially from the stator axis, a plurality of circumferentially spaced first support members projecting from the stator substantially coplanar with the stator axis and defining surfaces diverging radially therefrom and uniformly spaced from one row of armature bars, a plurality of circumferentially spaced second support members projecting from the stator coplanar with the stator axis on the opposite side of the bars from the first support members and radially aligned with said first support members, said second support members defining surfaces diverging radially from the stator axis and uniformly spaced from the other row of armature bars, circumferential separating means disposed between the top and bottom bars, a first group of conformable pads disposed in the spaces between the first support members and the bars, a second group of conformable pads disposed in the space between the second support members and the bars, adjustable tension means securing the first and second support members together for squeezing the pads against the armature bars, and support bracket means connected between said first support members and the stator, to allow axial movement of the first support members with respect to the stator, whereby the projecting armature bars are held in a rigid framework which is axially slidable to compensate for thermal expansion and contraction of the armature bars with respect to the stator.

3,089,049
SALIENT POLE ROTOR CONSTRUCTION
Hubert R. Sills, Peterborough, Ontario, Canada, assignor to Canadian General Electric Company, Limited, Toronto, Ontario, Canada, a corporation of Canada
Filed Dec. 9, 1959, Ser. No. 858,496
Claims priority, application Canada May 12, 1959
3 Claims. (Cl. 310—269)



1. A rotor construction for a salient pole dynamoelectric machine comprising a magnetic core composed of steel laminations, each lamination including a central portion having radially extending pole bodies, grooves of pinetree configuration in the outer surface of each pole body and a pole shoe having a projection of similar pinetree design so that when the grooves are engaged by the projections of the pole shoe, the latter is restrained against radial displacement, a coil on each pole body having one end in contact with a pole shoe flange, locking means positioned in the interpolar space between adjacent poles for holding the coils in intimate contact therewith, said locking means comprising a pair of spaced blocks respectively in contact with the exposed sides of the coils facing the interpolar space and with the surfaces of the other ends of coils mounted on adjacent pole bodies, and a device engageable with said blocks for urging them into contact with said coil surfaces for preventing coil displacement when the rotor is placed in operation.

3,089,050
STORAGE TARGET
Norman H. Lehrer, Los Angeles, and Raymond A. Sollivan, Culver City, Calif., assignors to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Filed Oct. 4, 1960, Ser. No. 60,484
6 Claims. (Cl. 313—68)

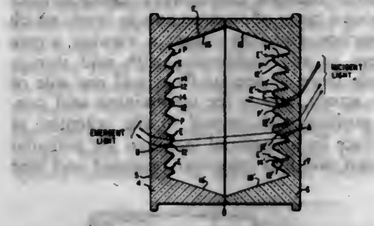


1. In a storage target for a storage tube wherein said target includes a layer of cubic zinc sulfide and a metallic support member therefor of a material which is chemically reactive with cubic zinc sulfide, the improvement comprising: an intermediate layer of material which is non-reactive chemically with cubic zinc sulfide disposed between said support member and said layer of cubic zinc sulfide.

3,089,051
CATADIOPTRIC ELECTROLUMINESCENT GLASS BLOCK
Frank Veres, Toledo, Ohio, assignor to Owens-Illinois Glass Company, a corporation of Ohio
Filed July 17, 1961, Ser. No. 124,542
7 Claims. (Cl. 313—108)

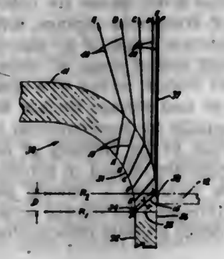
1. A hollow catadioptric electroluminescent glass block having a pair of spaced apart inner surfaces, said

surfaces having a plurality of similarly shaped prisms each having upper and lower surfaces, and at least one



of said prism surfaces having an electroluminescent cell positioned thereon.

3,089,052
CATHODE RAY TUBE FACEPLATE CONSTRUCTION
Paul E. Bibbing, Philadelphia, Pa., assignor, by mesne assignments, to Philco Corporation, Philadelphia, Pa., a corporation of Delaware
Filed Mar. 10, 1960, Ser. No. 17,724
10 Claims. (Cl. 313—110)



1. A cathode ray tube envelope having a frontal curved edge portion whose inside radius of curvature R_1, at any given point, has a value outside the range of from zero to $-n\nu/\sqrt{n^2-1}$ and whose outer surface has a curvature at any given point defined by the expression

$$\frac{1}{R_2}\leqq\frac{n\cos^2\phi}{(n\cos^2\phi-\sqrt{1-n^2\sin^2\phi})\left(\frac{R_1}{n}\sqrt{n^2-1}+\nu\right)}$$

where the elements of said formulae have the following meaning

ϕ=the angle subtended by a ray traversing a tube edge portion and the normal to the outer surface of said edge portion at the point of said ray's impingement with said surface and in which said ray forms a critical angle

$$\alpha=\sin^{-1}\frac{1}{n}$$

with the normal drawn to the inner surface of said edge portion at the point of said ray's impingement with that surface

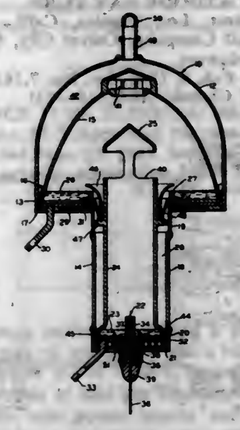
n=refractive index of the cathode ray tube material

ν=length of said traversing ray included between the inner and outer surfaces of the tube edge portion under consideration

R_1=inside radius of curvature of said tube edge portion

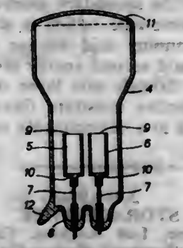
R_2=outside radius of curvature of said tube edge portion.

3,089,053
MERCURY DISCHARGE TUBE
Alfred Vang, Rancho Santa Fe, Calif., assignor of one-third to Anna Vang, and one-third to Alfred Vang, trustee
Filed Sept. 23, 1960, Ser. No. 57,999
6 Claims. (Cl. 313—165)



1. In a mercury discharge tube having an evacuated envelope, a mercury cathode pool, a mercury anode pool spaced from said cathode pool and igniter means within said cathode pool, an improved vapor condensing means comprising a dielectric dome embracing said anode pool and having at least one opening above the surface of said anode pool; a vapor condensing dome concentric with said dielectric dome defining an expansion chamber between said domes, the peripheral extremity of said expansion chamber depending into said anode pool; and port means at the lower margin of said dielectric dome communicating said expansion chamber with said anode pool.

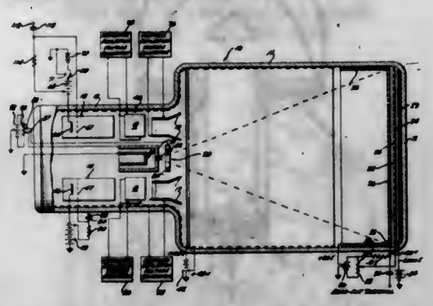
3,089,054
ATOMIC SPECTRAL LAMPS
Alan Walsh, East Brighton, Victoria, and William George Jones, Fairfield, Victoria, Australia, assignors to Commonwealth Scientific and Industrial Research Organization, East Melbourne, Victoria, Australia, a body corporate
Filed Oct. 17, 1960, Ser. No. 62,914
Claims priority, application Australia Oct. 19, 1959
6 Claims. (Cl. 313—185)



1. A discharge tube, said atomic spectral light source being confined wholly to the hollow interior of the respective electrode, comprising a sealed envelope, at least two hollow cylindrical electrodes mounted side by side at one end of the envelope with their axes parallel, and a transparent window at the other end of the envelope in axial alignment with the axes of the said electrode, each of the electrodes including a different element and being capable of providing an atomic spectral light

source characteristic of that element for providing a spectral line of at least two solid elements, whereby light from any one of the electrodes can be viewed through the window without obstruction by any other of the electrodes.

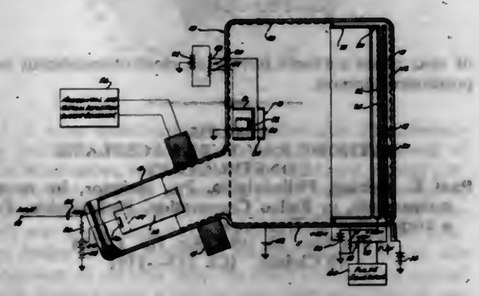
3,089,055
CATHODE RAY TUBE
Norman H. Lehrer, Los Angeles, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Filed Feb. 8, 1960, Ser. No. 7,163
7 Claims. (Cl. 315—12)



1. A storage tube comprising a storage screen including a conductive substrate, a uniformly thin layer of cubic zinc sulfide disposed over at least a portion of said conductive substrate to provide storage surface; means for producing a negative voltage drop across said layer of cubic zinc sulfide; means for collecting secondary electrons ejected from said storage surface thereby to cause electrons of a predetermined energy level to charge said storage surface by secondary electron emission and to discharge said storage surface by bombardment induced conductivity at the same rates; means for producing an electron beam having a first energy level, said first energy level being less than said predetermined energy level and within the range of potential levels wherein the secondary electron emission ratio of said layer of cubic zinc sulfide is greater than unity; means for scanning said electron beam of said first energy level over said storage screen thereby to charge elemental areas of said storage surface in positive directions in proportion to the intensity of said electron beam of said first energy level incident thereon to produce a charge pattern; means for producing an electron beam of a second energy level, said second energy level being greater than said predetermined energy level and within the range of potential levels wherein the secondary electron emission ratio of said layer of cubic zinc sulfide is greater than unity; and means for scanning said storage screen with said electron beam of said second energy level thereby to induce conductivity through said layer of cubic zinc sulfide to said conductive substrate thereby to discharge said storage surface to a determinable reference potential level.

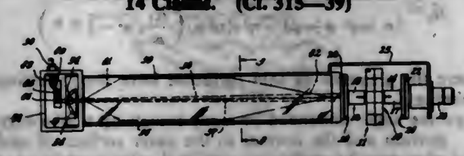
3,089,056
STORAGE TUBE
Norman H. Lehrer, Los Angeles, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Filed Feb. 16, 1960, Ser. No. 9,080
4 Claims. (Cl. 315—12)

1. A half-tone visual display storage tube comprising a storage screen including a conductive screen and a uniformly thin layer of cubic zinc sulfide disposed over at least a portion of one side of said conductive screen, said cubic zinc sulfide having a secondary emission ratio greater than unity throughout a first continuous range of electron energy levels from a first crossover potential level to a second crossover potential level relative to a predetermined reference potential level and exhibiting electron bombardment induced conductivity characteristics throughout a second range of electron energy levels which substantially overlaps said first range; a viewing screen disposed adjacent to and coextensive with said storage screen on the side thereof opposite from said one side of said conductive screen; means for maintaining said conductive screen positive with respect to the potential of said storage surface by an amount less than the potential difference between said first crossover potential and said



reference potential level; means for collecting secondary electrons ejected from said storage screen; means for producing an electron beam of an electron energy level that is within said second range of energy levels; means for scanning said storage screen with said electron beam thereby to charge said storage surface in positive directions at least partially by bombardment induced conductivity in proportion to the intensity of said beam at the instant of impingement thereof to produce a charge pattern; and means including a viewing gun for directing flood electrons through said storage screen to said viewing screen to produce a visual presentation of said charge pattern.

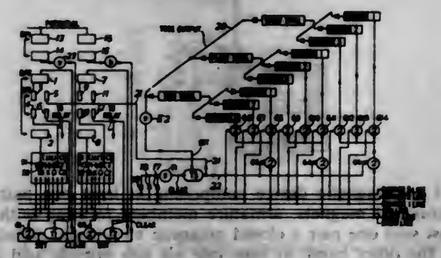
3,089,057
COMBINED TRANSMISSION LINE TERMINATION AND POWER FEED
Harry R. Foster, Montville, and Elmo E. Crump, West Caldwell, N.J., assignors to Olmsega Laboratories, Pine Brook, N.J., a corporation of New Jersey
Filed Mar. 9, 1959, Ser. No. 798,161
14 Claims. (Cl. 315—39)



1. A device for terminating a transmission line which has a high-frequency signal circuit and another circuit arranged to carry filament power in the range from direct-current to approximately 500 c.p.s. range, said other circuit including a lead in common with the high-frequency circuit, said device comprising a pair of elongate juxtaposed, spaced, coextensive conductors of good conductivity, said conductors being insulated from each other at one pair of ends and connected respectively with the said other circuit and being adapted to extend in a direction away from the transmission line; an additional elongate conductor juxtaposed to and extending alongside of said spaced conductors and coupled to the portion of the high-frequency circuit which is not common with the said other circuit, and forming with one of said pair of conductors a high frequency field disposed in an elongate

area; an elongate, electrically resistive strip having a resistance which is high compared to the said coextensive conductors and which has a resistivity value of between 50 and 500 ohms for a one inch length which is one inch wide, disposed so as not to be electrically connected to the said conductors but juxtaposed to the said conductors so as to be in the high-frequency field thereof, said resistive strip having a relatively large area with respect to said coextensive conductors and which has a size of between 5 and 10 square inches and said strip absorbing the energy of the said high-frequency field; and power supply leads connected to the other pair of ends of the spaced conductors, to apply power thereto.

3,089,058
TOTALISATOR SYSTEM
John H. Coady and Norbert Kitz, London, England, assignors to Bell Punch Company Limited, London, England, a British company
Filed Sept. 9, 1957, Ser. No. 682,839
Claims priority, application Great Britain Sept. 11, 1956
13 Claims. (Cl. 315—84.6)



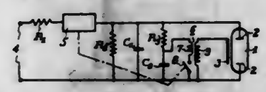
1. An electronic aggregator including a plurality of multi-cathode gas-filled electron discharge glow tubes coupled by carry-over amplifiers to form a counting chain, wherein each carry-over amplifier comprises a trigger circuit which has two conduction phases and which draws substantially the same current in each of its two conduction phases.

3,089,059
HIGH REPETITION RATE SPARK MACHINING APPARATUS
Cecil P. Porterfield and Robert W. Drushel, Pittsburgh, Pa., assignors, by mesne assignments, to Elox Corporation of Michigan, Troy, Mich., a corporation of Michigan
Filed July 2, 1959, Ser. No. 824,503
23 Claims. (Cl. 315—100)



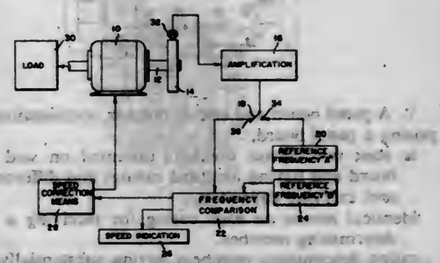
20. A spark-machining apparatus for dislodging particles from a conductive workpiece by a series of time-spaced spark-over discharges through an ionizable dielectric fluid-filled normal spark gap spacing maintained between the workpiece and an electrode tool, comprising an oscillator having a given frequency for producing a signal of a given high frequency and amplitude with respect to ground, a storage capacitor, an electric discharge device rectifier having an anode and a heated cathode, means for heating the cathode including a transformer with a secondary winding connected for heating the rectifier cathode and a primary winding connected to an alternating voltage source referenced to ground, said transformer having distributed capacitance between its primary and secondary windings so as to define a given first capacitance between the rectifier cathode and ground chargeable during alternate half cycles of said oscillator signal, circuit means connecting said anode to one terminal of said oscillator output terminal whereby said capacitance is charged during alternate half cycles, a second capacitance having the same order of magnitude as the first capacitance, and discharge circuit means connecting the first and second capacitances in series across the spark gap for discharge therethrough whenever spark-over occurs.

3,089,060
DISCHARGE TUBE BLINKING SIGNAL DEVICE
Masao Horino, 81 Nakane-cho, Meguro-ku, Tokyo, Japan
Filed Mar. 31, 1961, Ser. No. 99,734
Claims priority, application Japan Dec. 15, 1960
2 Claims. (Cl. 315—224)



1. A flashing device comprising a gas discharge tube including a pair of electrodes and a triggering electrode, a direct current power source of sufficient voltage to cause conduction of said gas discharge tube, a capacitor connected to said power source and arranged to be charged thereby, a resistor in series with said capacitor, said capacitor being connected across said pair of electrodes of said discharge tube, a relay coil in series with said resistor, a biasing resistor in parallel circuit relationship with said capacitor, said resistor, said capacitor, said relay coil, and said biasing resistor providing a charging circuit of predetermined time constant, a triggering circuit including pulse transmitting means connected to said triggering electrode, and a relay contact initiating operation of said triggering circuit, said contact being isolated from the pair of electrodes in said tube and being responsive to current variations in said relay coil to actuate said triggering circuit and thereby flash said gas discharge tube.

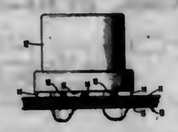
3,089,061
SIGNAL GENERATOR
Gerrit Nieuweboer, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed June 19, 1959, Ser. No. 821,396
2 Claims. (Cl. 317—5)



1. In a system for regulating the speed of a rotary device: a wheel coupled to said device for rotation therewith; a strip of magnetically receptive material attached to the periphery of said wheel; a magnetic head situated in close proximity to said strip; first and second reference signal sources; a circuit coupled to the device for applying a speed correction thereto; and switch means for selectively coupling the head to said first source for impressing the signal therefrom on said strip and to said circuit for

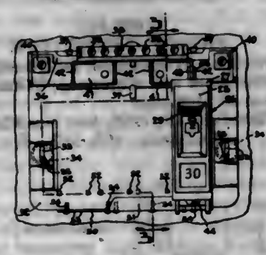
analysis of the impressed signal, said switch means thereby facilitating recording of said first reference signal on said strip each time the set speed of said device is changed, said circuit including components for mixing the signals from said head and said second source to produce a beat frequency and for resonating said beat frequency against a selected low frequency.

3,089,062
ELECTRICAL CIRCUIT BOARD WITH COMPONENT STANDOFF
Peter R. Schulz, Endicott, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed May 16, 1960, Ser. No. 29,460
8 Claims. (Cl. 317—101)



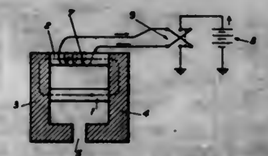
1. A support for electronic components comprising a dielectric planar member; and a series of dielectric component standoff pads each projecting in the same direction out of the plane of said planar member for supporting components in spaced relationship relative to said planar member, said standoff pads consisting of a pair of projecting members inclined toward each other in abutting relationship.

3,089,063
PANEL BOARD AND CIRCUIT BREAKER COMBINATION
William H. Middendorf, Fort Wright, Ky., and Edwin W. Landmeier, deceased, late of Lakeside Park, Ky., by Louise Landmeier, executrix, Lakeside Park, Ky., assignors to Wadsworth Electric Manufacturing Company, Inc., Covington, Ky., a corporation of Kentucky
Filed May 27, 1958, Ser. No. 738,163
3 Claims. (Cl. 317—119)



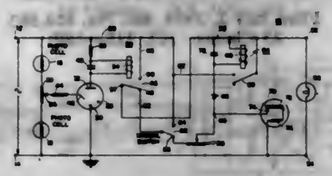
1. A panel board and circuit breaker combination comprising a panel board,
at least two circuit breakers mounted on said panel board and having identical casings and different current carrying capacities,
identical means on each casing for receiving a rating determining member,
rating determining members having substantially identical end portions, each end portion being irremovably secured in said respective receiving means and projecting from one end of each casing so as to be visible,
said rating determining members each terminating in at least one recess positioned in said member in accordance with the capacity of said circuit breaker,
said panel board having at least two circuit breaker receiving positions,
a mounting bracket irremovably fixed on said panel board,
said mounting bracket including at least one irremovable projection at each circuit breaker position, said projection being positioned in said bracket to engage the rating determining member on the respective circuit breaker mounted in that position with said projection received in said recess,
whereby each circuit breaker is positioned on the panel board as determined by the coincidence of the location of the recess in the rating determining member and said bracket projection.

3,089,064
COMBINED PERMANENT MAGNET AND ELECTROMAGNET
Michel Cotton de Bennetot, Vaucresson, France, assignor to Société d'Electro-Chimie, d'Electro-Metallurgie et des Acieries Electriques d'Ugine, a corporation of France
Filed Feb. 3, 1959, Ser. No. 790,941
Claims priority, application France Feb. 8, 1958
6 Claims. (Cl. 317—123)



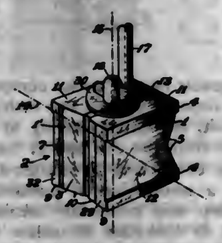
1. A magnetic device comprising at least one pair of permanent magnets, armature members forming with at least said one pair a closed magnetic circuit and defining, on the other hand, at least one air gap outside said circuit, said magnetic device comprising means adapted to reverse the direction of magnetic polarization of one of the magnets of at least said one pair, whereby the flux is prevented to close along the magnetic circuit formed by said pair and said armature members and caused to close through at least said one air gap.

3,089,065
LIGHT CONTROLLED ELECTRICAL SYSTEM AND RELAY THEREFOR
Leslie E. Worden, % Tri-State College, Angola, Ind.
Filed Dec. 7, 1960, Ser. No. 74,359
10 Claims. (Cl. 317—130)



1. A light and manually controlled electrical system comprising: light sensitive means; a relay having an operating coil; means coupling said light sensitive means and said coil for energizing the same responsive to a change in light from a first to a second level sensed by said light-sensitive means; an output circuit for connection to a load; said relay having contacts for coupling said output circuit to a source of energizing potential responsive to energization of said coil; a second relay having an operating coil coupled across said output circuit and energized responsive to closing of the contacts of said first relay, said second relay having contacts coupled to bypass said contacts of said first-named relay and directly to couple said output circuit to said source responsive to energization of the coil of said second relay whereby the coupling of said output circuit to said source and energization of the coil of said second relay are maintained despite deenergization of the coil of said first-named relay responsive to return of the light to said first level; time delay means coupled in circuit with the coil of said second relay for deenergizing the same a predetermined time following deenergization of the coil of said first-named relay; and manually actuated switch means coupling said source to said output circuit for selectively energizing the same.

3,089,066
MULTIPURPOSE MAGNETIC HOLDER WITH PERMANENT MAGNET
Eduard Uc and Karel Kopřiva, Prague, Czechoslovakia, assignors to Kinex, narodni podnik, Bytca, Czechoslovakia
Filed May 27, 1960, Ser. No. 32,295
Claims priority, application Czechoslovakia June 2, 1959
13 Claims. (Cl. 317—159)



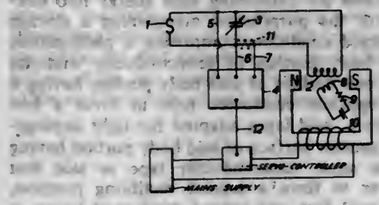
1. A magnetic work holder comprising two magnetic body portions; non-magnetic spacing means interposed between said body portions, said portions jointly defining a cavity in said holder and a plurality of substantially flat work holding faces on said holder, said faces being angularly offset relative to each other; a permanent magnet in said cavity, said magnet being rotatable about an axis passing through one of said faces and having two magnet poles radially spaced from said axis in opposite directions.

3,089,067
SEMICONDUCTOR DEVICE
Donald R. Baird, Greensburg, Pa., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Sept. 30, 1957, Ser. No. 686,908
3 Claims. (Cl. 317—234)



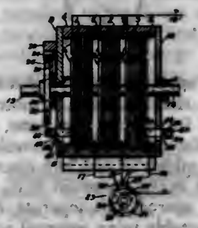
1. In a semiconductor device, a supporting member of good electrical and heat conducting properties having a centrally located solid raised pedestal, a transistor including a wafer of germanium having a ring-shaped electrode of indium alloyed to one face of the surface and a disk-shaped electrode of indium alloyed to the opposite face in alignment with the ring-shaped electrode, means for securing said disk-shaped electrode to the top of the pedestal so that the supporting member acts as one electrode of the transistor, a circular member secured to the periphery of the supporting member, a housing means for enclosing said transistor fitting over the same and having a ribbed flange engaging a surface of the circular member and adapted to be welded to said circular member at which time the rib is consumed and the parts sealed together.

3,089,068
SERVOSYSTEM FOR REGULATING MAGNETIC FIELDS
Sidney Arthur Stuart, Emmer Green, Reading, England, assignor to the United Kingdom Atomic Energy Authority, London, England
Filed Nov. 12, 1959, Ser. No. 852,529
Claims priority, application Great Britain Nov. 18, 1958
4 Claims. (Cl. 318—28)



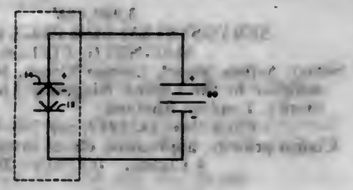
1. Apparatus comprising a coil for suspension in an electro-magnetic field, D.C. supply means for said suspended coil, restoring torque means for said suspended coil, an oscillator coil in space relationship with the said suspended coil such that the two coils are magnetically coupled, A.C. supply means of constant frequency for said oscillator coil, phase comparator means connected to compare the phases of the A.C. supply means and the said oscillator coil and having an output proportional to the difference between the said phases, and coupling means for said output for connection to a servo means to vary the current generating the said electro-magnetic field so as to keep the said electro-magnetic field constant.

3,089,069
STEP MOTOR AND CONTROLS
Albert G. Thomas, Charlottesville, Va., assignor to Industrial Controls Corporation, Chattanooga, Tenn., a corporation of Tennessee
Filed Dec. 24, 1957, Ser. No. 704,919
15 Claims. (Cl. 318—138)



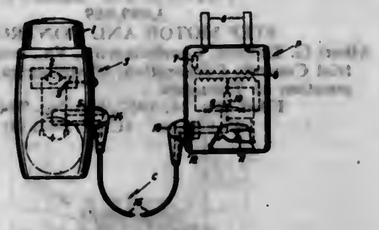
1. An electrical step motor comprising a plurality of stators spaced around a common axis, rotor means for each of said stators rotatable about said axis, said stators and rotors having adjacent groups of magnetizable teeth, means for supplying a tooth energizing impulse to said stators in sequence to magnetize said teeth, and means for varying the effect of said energizing impulses on the teeth of at least one of said rotors with respect to the effect on at least one other of said rotors to equalize the angular step movements of said rotor means.

3,089,070
PHOTOELECTRIC CONVERTER OR THE LIKE
Eugene L. Ralph, Skokie, Ill., assignor to Hoffman Electronics Corporation, a corporation of California
Filed Sept. 3, 1957, Ser. No. 681,798
3 Claims. (Cl. 320—2)



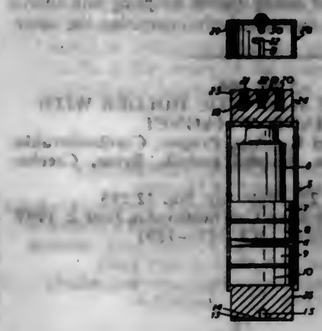
1. An apparatus for converting light energy into electrical energy for the purpose of maintaining a storage battery in charged condition, comprising a photovoltaic cell having a body portion of semiconductor material of a first type, one surface of said body portion having a layer of the opposite conductor type to form a first rectifying junction, said layer adapted for light impingement thereon, another surface of said body portion having a layer of the same semiconductor type as said first mentioned layer to form a second rectifying junction, electrodes for said first and second mentioned layers, a storage battery, and means for connecting said electrodes to said storage battery in such manner that said junctions are in series with said battery; whereby upon cessation of light impingement upon said first mentioned layer, said second junction acts as a high resistance to said battery to prevent discharge of said battery through said photovoltaic cell.

3,089,071
SHAVING APPARATUS
Fritz Hartwig, Oldenburg, Germany, assignor to Licentia Patent-Verwaltungs-G.m.b.H., Hamburg, Germany
Filed Feb. 24, 1959, Ser. No. 795,279
Claims priority, application Germany Feb. 24, 1958
12 Claims. (Cl. 320—2)



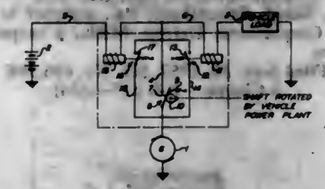
1. In a shaving apparatus, the combination of a shaving unit having a shaving head, a motor connected to said shaving head for driving the same, means defining space in said unit for receiving a removable rechargeable battery, connector means in said unit electrically connecting said motor for making contact with a battery when inserted; a power source unit separate from said shaving unit and connectable to an external source of electric energy, said power source unit having means therein to adapt the electrical energy from said source for selectively energizing said shaving unit motor and recharging said battery, selector switch means in said power unit governing said energy adaption means; and electrical connection means for interconnecting said shaving unit at said connector means and said power source unit in two modes and including means preventing the battery from being connected to said motor in one mode of connection only while actuating said switch means in the other mode of connection only.

3,089,072
RECHARGEABLE ELECTRIC BATTERY UNIT
John Anthony Jephcott, Abingdon, England, assignor to Longwerth Scientific Instrument Company Limited, Abingdon, England, a company of Great Britain
Filed Sept. 22, 1959, Ser. No. 841,498
Claims priority, application Great Britain Oct. 6, 1958
9 Claims. (Cl. 320—2)



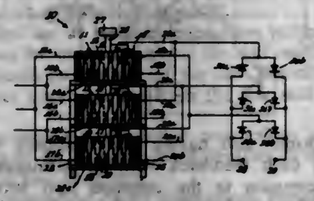
1. A rechargeable battery device comprising a casing in which there is disposed at least one rechargeable cell and a rectifier circuit, the casing having at one end a first output terminal from the cell and at the other end connector means for connecting the rectifier circuit to a source of power and a second output terminal from the cell disposed between said connector means, and movable means adapted in operation to isolate said first output terminal during charging so that that is no risk of a user receiving a shock therefrom which means incorporate a current conducting terminal portion engageable with said second output terminal when the device is to be used as a source of power.

3,089,073
ELECTRICAL SYSTEMS
James B. Godshalk, West Pikeland Township, Chester County, Pa., assignor to Fox Products Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Feb. 25, 1958, Ser. No. 718,181
4 Claims. (Cl. 320—21)



1. In an electrical system of the type comprising an electrical generator, a storage battery to be charged by the generator, and an electrical load to be supplied by the battery and generator, the combination of first circuit means connecting the battery to the load, second circuit means connecting the generator output to said first circuit means, switch means connected in said second circuit means in series with the generator, means operatively associated with said switch means to actuate the same cyclically to interrupt the flow of current from the generator, said first circuit means being effective to pass current from the battery to the load when said switch means operates to interrupt the flow of current from the generator, an electromagnetic relay having its actuating winding connected in series between the battery and said switch means to respond to current flowing to the battery, a circuit portion connecting the output of the generator to a point between the winding of said relay and said switch means, the contacts of said relay being connected in said circuit portion and said relay being operative to close its contacts upon occurrence of current flow to the battery of a predetermined magnitude, and other circuit means connecting the output of the generator to the load independently of said switch means.

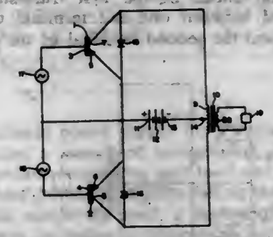
3,089,074
ADJUSTABLE VOLTAGE RECTIFIER
Eric W. Vaughan, Bristol, Conn., assignor to The Superior Electric Company, Bristol, Conn., a corporation of Connecticut
Filed Mar. 18, 1960, Ser. No. 15,980
5 Claims. (Cl. 321—8)



1. An adjustable voltage rectifier comprising a plurality of adjustable transformers, each transformer having a paramagnetic core, a primary winding wound thereon, a secondary winding wound thereon, a brush movable on the secondary winding in electrical engagement continuously with at least one turn thereof, and means for moving the brush; means interconnecting the brush moving means of each of the transformers to cause them to move in unison when moved; means for connecting the primary windings to a multiple phase source of A.C. with each primary winding being energized from one of the phases; a pair of D.C. output terminals with each terminal being a plate formed of conducting material and having apertures formed therein; a first group of one-way valve means conductive in the same direction connected to one plate by each one-way valve means having a stud positioned in an aperture to be in electrical and heat conductive relation to the plate; a second group of one-way valve means connected to the other plate by each one-way valve means having a stud positioned in an aperture to be in electrical and heat conductive relation to the plate with each of the one-way valve means in the second group all being conductive in the same direction but reversed from the conductive direction of the first group; and means connecting the brushes of the transformers to the one-way valve means with each brush being connected to one one-way valve means in each group whereby movement of the brushes in unison provides an adjustable D.C. voltage at the output terminal, said transformers being mounted to be vertically aligned with the plates supported thereon to extend vertically in parallel spaced relation and having the one-way valve means positioned between the plates.

3,089,075
TRANSISTOR CONVERTERS
Robert H. Lee, Highland, Ill., assignor to Basler Electric Co., Highland, Ill., a corporation of Illinois
Filed May 8, 1958, Ser. No. 733,975
3 Claims. (Cl. 321—45)

1. In combination with a power factor A.C. load, a power supply device for converting direct current to alternating current comprising a direct current source having first and second terminals, a transformer having a primary winding and a secondary winding, said primary winding having two end terminals and an intermediate terminal tapped off between such end terminals whereby to establish a primary circuit having two branches, said intermediate terminal being connected to the first terminal of the direct current source, said secondary winding having output terminals to which the A.C. load is connected so that a component of current from the load which is not in phase with the load voltage will flow alternately in the two branches of the primary circuit, first and second transistors each having a base, a collector and an emitter, two signal generating means each having two terminals, one terminal of one signal generating means being connected to one terminal of the other signal generating means by a common lead which is also connected to the second terminal of the direct current source, the other terminals of the two signal generating means being respectively connected to the bases of the two transistors whereby to alternately bias the transistors so that during one time-interval the first transistor is conducting while the second transistor is non-conducting and during a next succeeding time-interval the second transistor is conducting while the first transistor is non-conducting, the collectors of the two transistors being respectively connected to the end terminals of said primary winding, the emitters

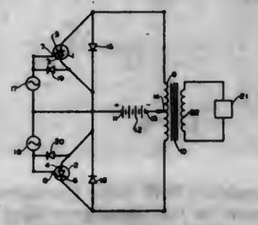


of the two transistors both being connected to the common lead between the two signal generating means, a first diode shunted across the collector and emitter of the first transistor and thereby being connected between one end terminal of the primary winding and the second terminal of the direct current source to provide a unidirectional flow-path for transmitting the component of current from the load which flows from such end terminal to the direct current source during the time-interval when the first transistor is non-conducting whereby to return energy to said direct current source during the off-cycle of the first transistor, and a second diode shunted across the collector and emitter of the second transistor and thereby being connected between the other end terminal of the primary winding and the second terminal of the direct current source to provide a unidirectional flow-path for transmitting the component of current from the load which flows from such end terminal to the direct current source during the time-intervals when the first transistor is non-conducting whereby to return energy to said direct current source during the off-cycle of the second transistor.

3,089,076
CONVERTERS
Robert H. Lee, Highland, Ill., assignor to Basler Electric Co., Highland, Ill., a corporation of Illinois
Filed Sept. 8, 1958, Ser. No. 759,634
3 Claims. (Cl. 321—45)

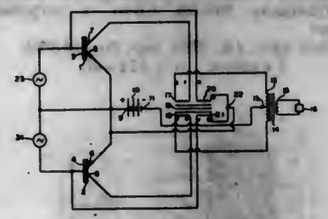
1. In combination with a power factor A.C. load, a power supply device for converting direct current to alternating current comprising a direct current source having first and second terminals, a transformer having a primary winding and a secondary winding, said primary winding having two end terminals and an intermediate terminal tapped off between such end terminals whereby to establish a primary circuit having two branches, said intermediate terminal being connected to the first terminal of the direct current source, said secondary winding having output terminals to which the A.C. load is connected so that a component of current from the load

which is not in phase with the load voltage will flow alternately in the two branches of the primary circuit, first and second transistors having thyratron-like characteristics, each of said transistors including a gate, a cathode and an anode, two signal generating means each having two terminals, one terminal of one signal generating means being connected to one terminal of the other signal generating means by a common lead which is also connected to the second terminal of the direct current source, the other terminals of the two signal generating means being respectively connected to the gates of the two transistors whereby to alternately bias said transistors off and on so that during one-time-interval the first transistor is conducting while the second transistor is non-conducting and during a next succeeding time-interval the second transistor is conducting while the first transistor is non-conducting, the cathodes of the two transistors being respectively connected to the end terminals of said primary winding, the anodes of the two transistors both being connected to the common lead between the two signal generating means, a first diode shunted across the cathode and anode of the first transistor thereby being connected between one end terminal of the primary winding and the second terminal of the direct current source to provide a unidirectional flow-path for transmitting the component of current from the load which flows from such end terminal to the direct current source during the time-interval when the first transistor is non-conducting whereby to return energy to said direct current source during the off-cycle of the first transistor, a second diode shunted across the cathode and anode of the second transistor and thereby being connected between the other end terminal of the primary winding and the second terminal of the direct current source to provide a unidirectional flow-path for transmitting the component of current from the load which flows from such end terminal to the direct current source during the time-intervals when the first transistor is non-conducting whereby to return energy to said direct current source during the off-cycle of the second transistor, a third diode connected between the gate and anode of the first transistor to provide a unidirectional flow-path for limiting any reverse gate current which may tend to flow from the anode to the gate of said first transistor, and a fourth diode connected between the gate and anode of the second transistor to provide a unidirectional flow-path for limiting any reverse gate current which may tend to flow from the anode to the gate of said second transistor.

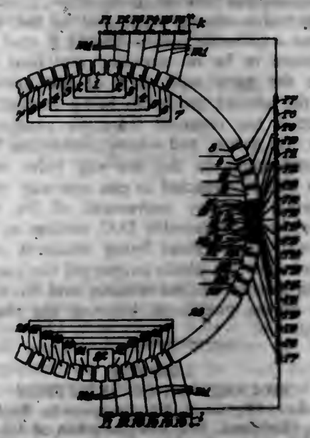


3,089,077
TRANSISTOR CONVERTERS
Robert H. Lee, Highland, Ill., assignor to Basler Electric Co., Highland, Ill., a corporation of Illinois
Filed Oct. 6, 1958, Ser. No. 765,612
5 Claims. (Cl. 321—45)

1. A device for converting direct current to alternating current comprising a power transformer, a source of direct current having two output terminals, two transistors each having a base, an emitter and a collector, the emitters being permanently connected to one terminal of the source of direct current by a common lead, switching-signal means connected across the bases of the transistors and the common lead to the source of direct current for emanating cyclically alternating signals and thereby alternately biasing the transistors so as to alternately allow conduction and block conduction therethrough, and a current transformer having two power windings, one end of each power winding being connected across the primary of the power transformer and the other ends of said power windings being respectively connected to the collectors of the transistors, said current transformer also having two feed-back windings, one end of each feed-back winding permanently connected in common to the common lead between the emitters of the transistors, the other ends of said feed-back windings being respectively connected to the bases of the transistors whereby to deliver feed-back current to said bases of the transistors in simultaneous cyclical concurrence with the signals emanating from said switching-signal means whereby to supplement the transistor-controlling function of said signal.



3,089,078
DIRECT CURRENT TO THREE-PHASE ROTATING CONVERTER
Alfred John Smith and Kenneth Roland Mellin, Derby, England, assignors to Rolls-Royce Limited, Derby, England, a British company
Filed Feb. 25, 1959, Ser. No. 795,433
Claims priority, application Great Britain Mar. 5, 1958
1 Claim. (Cl. 321—49)



An electrical power supply arrangement comprising

(*a*) a D.C. supply having a first pole at a first potential and a second pole at a second potential,

(*b*) a large number of contacts arranged in a ring in angularly spaced relation,

(*c*) a rotatively-driven member having three equi-angularly spaced contact elements which cooperate with the contacts and on rotation of the rotatively-driven member engage the contacts successively,

(*d*) separate electric output connections leading from each contact element, whereby each pair of the contact elements may be connected to a corresponding load,

(*e*) said ring of contacts being arranged in four quadrants, each quadrant comprising centrally disposed equipotential contact means having an angular extent of substantially 30° and small contacts beyond each end of the said contact means,

(*f*) the angular positions and angular extents of the contacts in the quadrants being symmetrical about a first diameter of the ring, two of said quadrants being on one side of said first diameter and two on the other side of said first diameter,

(*g*) the D.C. supply having its first pole directly connected to the said centrally disposed contact means in one of said four quadrants,

(*h*) a first set of resistor connections joining said first pole to the small contacts in the said one of said four quadrants on the side of the said centrally disposed contact means remote from the first said first diameter,

(*i*) a second set of resistor connections joining said first pole to the other small contacts in the said one of said four quadrants,

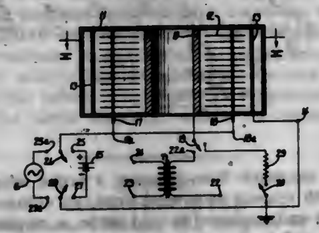
(*j*) corresponding direct connections between the second pole of the D.C. supply and the centrally disposed contact means in a second of said four quadrants, on the side of the first diameter opposite the said one quadrant,

(*k*) corresponding first and second sets of resistor connections between the second pole and the small contacts in the said second quadrant of said four quadrants,

(*l*) the angular positions and angular extents of the contacts being symmetrical also about a second diameter of the ring at right angles to said first diameter, and

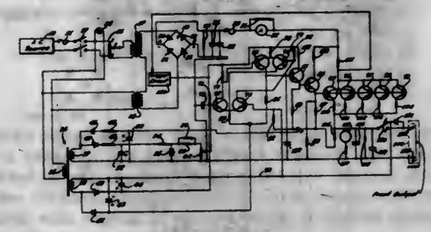
(*m*) direct connections between corresponding contacts on opposite sides of the said second diameter whereby the potential pattern at the contacts is symmetrical about the said second diameter.

3,089,079
METHOD AND APPARATUS FOR ELECTRICAL POWER GENERATION
William C. Milligan, 1615 San Angelo Blvd., San Antonio, Tex.
Filed Dec. 2, 1958, Ser. No. 777,750
21 Claims. (Cl. 322—2)



21. Apparatus for directly converting thermal energy to electrical energy with an efficiency greater than 50% consisting essentially of a housing, an electron emitting cathode in said housing, an anode in said housing spaced from said cathode, means for applying thermal energy to said cathode, a control electrode between said cathode and anode for producing a potential field gradient to accelerate a major portion of the electrons emitted from the cathode to said anode when a positive external potential of predetermined value is applied to said control electrode and without an external potential applied to said anode, passive power absorbing means only connected to said anode, and means connected to said control electrode for applying a positive potential of said predetermined value to said control electrode to produce a transfer of electrical energy to said passive power absorbing means equal to substantially more than 50% of the thermal energy applied to said cathode by said thermal energy applying means.

3,089,080
REGULATED POWER SUPPLY
Charles J. Armour, 14801 McCormick, Sherman Oaks, Calif.
Filed July 24, 1959, Ser. No. 829,258
6 Claims. (Cl. 323—22)



1. A regulated power supply for a variable impedance load including a source of unregulated potential, semiconductor means coupled to said load and to said source of unregulated potential for controlling the magnitude of the potential across the load; a source of reference potential; means including a differential amplifier arrangement coupled to the load and to said reference potential source for comparing the potential across the load with the reference potential and for developing a control output potential in accordance therewith, said differential amplifier arrangement including a first differential amplifier for receiving the potential across the load and the reference potential and for providing two different control potentials in accordance with the difference therebetween, a second differential amplifier coupled to said first differential amplifier for receiving the two control potentials and for providing two different control output potentials in accordance with the potential difference between the two control potentials, and feedback means connected to introduce one of the two different control output potentials from said second differential amplifier to said first differential amplifier at a point to effectively increase the potential difference between the two control potentials; and means coupled to said second differential amplifier for introducing the other of said control output potentials to said semiconductor means to control the magnitude of the potential across the load.

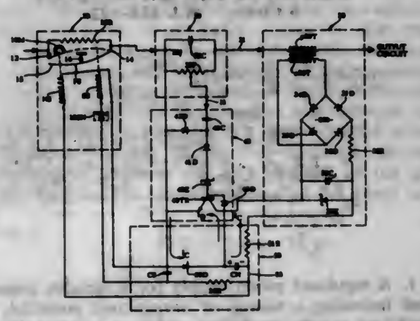
3,089,081
DIFFERENTIAL TRANSFORMER
Amnon Broch, Philadelphia, Pa., assignor to Schaevitz Engineering, a corporation of New Jersey
Filed Jan. 14, 1958, Ser. No. 708,848
10 Claims. (Cl. 323—51)



1. An electro-mechanical transducer comprising a differential transformer, a movable core member associated with said differential transformer, and means as-

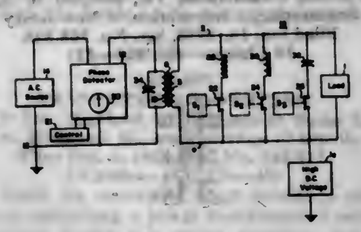
sociated with said differential transformer to provide a single null operating position for said core member and to provide a linear output voltage variable from substantially zero through substantially the full linear operating range of said transformer when said core member is moved in a single direction.

3,089,082
SWITCHING CIRCUITS
Larry L. Little, Orange County, Calif. (2574 Carnegie Ave., Costa Mesa, Calif.)
Filed Jan. 10, 1961, Ser. No. 81,785
3 Claims. (Cl. 323—66)



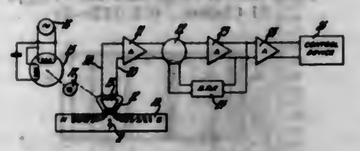
1. A system for automatically adjusting the impedance in series with a load in order to compensate for electrical disturbances in the load which reach a predetermined level and frequency of occurrence, said system comprising: first means in circuit with the load for detecting electrical disturbances which exceed said predetermined level; a transistor having base, emitter and collector electrodes for receiving said detection output signal of said first means at its base electrode; a storage capacitor coupled to the collector-to-emitter path of said transistor; means in circuit with said transistor for providing a relatively fast rate of charging for said capacitor through the relatively low impedance collector-to-emitter path of said transistor; means in circuit with said transistor for providing a relatively slow discharging for said capacitor through the relatively high base-emitter path through said transistor; and means responsive to the signal which is stored in said capacitor for producing an impedance control signal.

3,089,083
INTELLIGENCE TRANSMITTING MEANS
Alfred J. Baeck, Catonsville, Md., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Feb. 29, 1960, Ser. No. 11,676
2 Claims. (Cl. 323—125)



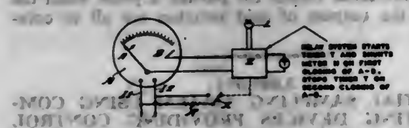
1. A signalling system comprising first and second networks each having first and second sets of network terminals, a transformer having first and second sets of transformer terminals, means coupling said first set of transformer terminals to said first set of terminals of said first network and said second set of transformer terminals to said first set of terminals of said second network, said second set of terminals of said first network being adapted to be connected to a source of pulsating electrical potential, said second set of terminals of said second network being adapted to supply a load, a plurality of impedance devices, a plurality of current regulating apparatuses, means individually connecting said impedance devices through individual ones of said apparatuses to one of said first and second networks, a plurality of condition responsive means individually associated with said current regulating apparatuses for controlling current flow through its associated said impedance device, each said condition responsive means being responsive to a change in the magnitude of a condition beyond a predetermined magnitude for actuating the said current regulating apparatus with which it is associated to maintain the current flow through its associated impedance device at a magnitude dependent upon whether the magnitude of the said condition with which it is associated is above or below its said predetermined magnitude, the impedances of said impedance devices being different from each other so that the change in current flow through said impedance devices caused by a change in magnitude of any one of said conditions through its said predetermined magnitude will cause a change in the phase relationship of the current and voltage at said first pair of terminals of the other of said first and second networks, and a phase detector connected to said other network and sensitive to the phase relation of said current and voltage at said first pair of terminals of said other network for detecting whether the magnitude of any one of said conditions and which of said conditions is above or below its respective said predetermined magnitude.

3,089,084
MAGNETIC CRACK DETECTOR WITH VIBRATED PICKUP
Milton J. Diamond, Saginaw, and Robert F. Spain, Royal Oak, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Mar. 23, 1960, Ser. No. 16,980
3 Claims. (Cl. 324—37)



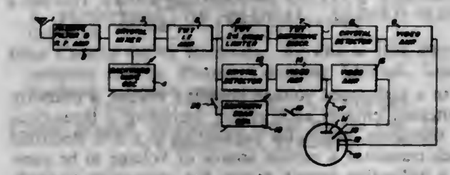
2. In a magnetic flaw detector, a probe adapted to be moved with respect to a workpiece, an elongated spring having one end anchored to said probe, a magnetic pickup mounted on the other end of said spring, an A.C. induction motor mounted on said probe and having a rotor shaft, a cam mounted on said shaft, said spring bearing upon the periphery of said cam whereby said pickup will be vibrated at the speed of said motor, an alternating current source connected to said motor, said motor having a winding arrangement such that the synchronous speed thereof will be appreciably less than the frequency of said source, and electrical means connected to said pickup to receive the signals generated therein and adapted to be responsive only to signals equal in frequency to said synchronous speed.

3,089,085
SIGNAL-CONTROLLED TIMER
Richard B. Frank, Chicago, Ill., assignor to Nuclear-Chicago Corporation, Cook County, Ill., a corporation of Delaware
Filed Apr. 6, 1959, Ser. No. 804,460
12 Claims. (Cl. 324—68)



1. A signal-controlled timer for measuring rate of change of an electrical quantity comprising a pair of input terminals, a pair of contacts having an open condition and a closed condition, means responsive to reaching of a fixed value by an electrical quantity impressed at said terminals to reverse the condition of the contacts, an elapsed time timer, means responsive to the first reversal of the condition of the contacts to again reverse the condition of the contacts to restore the original condition, change said fixed value and start the timer, and means responsive to a further reversal of the condition of the contacts to stop the timer, whereby the timer indicates the elapsed time for change of the electrical quantity between said values.

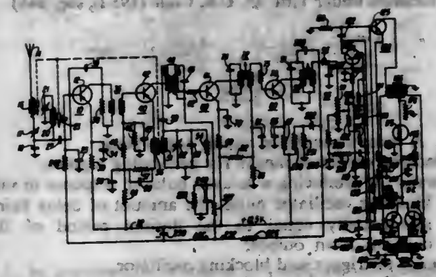
3,089,086
NON-SCAN SPECTRUM ANALYZER
Nathan Marchand, Greenwich, Conn., assignor, by mesne assignments, to The Singer Manufacturing Company, a corporation of New Jersey
Filed Apr. 17, 1958, Ser. No. 729,168
11 Claims. (Cl. 324—77)



1. A non-scan spectrum analyzer, comprising a source of signals falling within a predetermined radio frequency spectrum, means for limiting the amplitudes of said signals to a level value irrespective of frequencies of said signals, said last means including a travelling wave tube amplifier driven to saturation by each of said signals, and a discriminator being coupled in cascade to said means for limiting, said discriminator being a dispersive travelling wave amplifier tube having a gain vs. frequency response of only one slope direction within the predetermined spectrum.

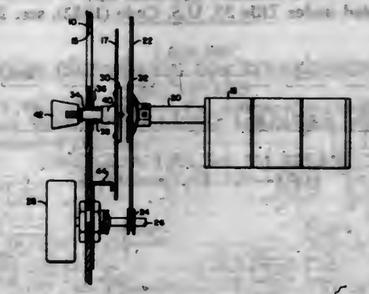
3,089,087
RADIO RECEIVER
Bernhard Birkner, Chicago, Ill., assignor to Motorola, Inc., Chicago, Ill., a corporation of Illinois
Filed Mar. 24, 1959, Ser. No. 801,553
7 Claims. (Cl. 325—319)

2. In a wave signal receiver having a plurality of receiver stages including a stage for translating a received signal which stage includes a transistor having a variable gain characteristic dependent upon application of a control potential applied thereto with respect to a reference point, the gain control and bias system including in combination, a direct current circuit adapted to supply an energizing potential for the receiver stages with respect to a reference point, resistor means connected to the transistor, a rectifier device having a first terminal connected to said direct current circuit and a second terminal connected to said resistor means, said rectifier device being poled to be conductive upon energization from said direct current circuit for applying a relatively fixed bias to the transistor through said rectifier device and said resistor means, circuit means including an impedance across which the



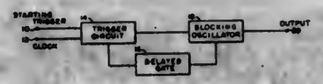
received signal appears with respect to a reference point and a capacitor for applying such signal to said second terminal of said rectifier device to form a detector circuit for the received signal whereby a gain control potential variable with respect to signal strength is applied through said resistor means to the transistor.

3,089,088
EXTENDED BANDSPREAD TUNING FOR A COMMUNICATIONS RECEIVER
Frank B. Roberts, Marblehead, and William F. Genett, Burlington, Mass., assignors to National Company, Inc., Malden, Mass., a corporation of Massachusetts
Filed Nov. 13, 1961, Ser. No. 151,742
7 Claims. (Cl. 325—455)



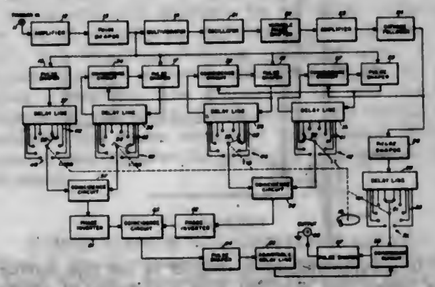
1. In a communications receiver of the type having a main tuning dial provided with a plurality of separate series of indicia corresponding to different frequency ranges, and adjustable main tuning condenser, and an adjustable bandspread tuning condenser, a relatively movable bandspread dial and cooperable indicator, said bandspread dial having a plurality of spaced apart sets of indicia, each set of indicia consisting of a plurality of different frequency ranges each corresponding to a small portion of one of the series of indicia on the main dial, said indicator being in registry with a selected one of said sets of indicia on the bandspread dial, means for adjusting the relative portion of the indicator and bandspread dial over the selected set of indicia and for providing simultaneous adjustment of said bandspread condenser, each frequency range on the bandspread dial corresponding to adjustment of the bandspread condenser between its maximum and minimum values of capacitance, and means for effecting relative movement between said indicator and bandspread dial to register a different set of indicia with said indicator.

3,089,089
POSITIVE COUNTDOWN CIRCUIT WITH DELAYED PULSE FEEDBACK GATING CLOCKED COINCIDENT CIRCUIT
Laddie T. Rhodes, Oxon Hill, Md.
(4622 Cedar Ridge Drive SE., Washington 21, D.C.)
Filed May 29, 1961, Ser. No. 113,561
3 Claims. (Cl. 328—40)
(Granted under Title 35, U.S. Code (1952), sec. 266)



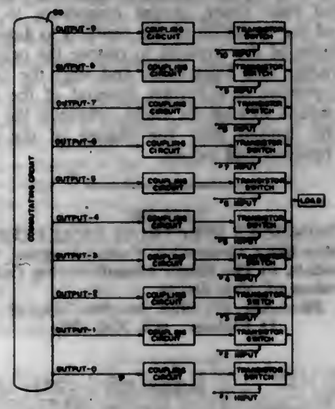
1. A pulse countdown circuit comprising,
blocking oscillator means for generating a pulse,
means for producing a delayed pulse in response to said blocking oscillator pulse, the amount of delay being substantially equal to the desired period of the counted-down output,
means to trigger said blocking oscillator,
means for applying clock pulses to be counted-down to said means to trigger,
means for blocking said means to trigger to inhibit triggering of the blocking oscillator except in response to a clock pulse occurring in coincidence with a delayed pulse,
and means for providing an initial substitute delayed pulse to initiate operation of the circuit for subsequent recurrent operation resultant to coincident delayed pulses and clock pulses.

3,089,090
PRECISION VARIABLE DELAY PULSE GENERATOR
Robert J. Price, Rte. 1, Box 635, Lakeside, Calif.
Filed June 24, 1959, Ser. No. 822,700
4 Claims. (Cl. 328—55)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A precision variable delay pulse generator comprising a synchronizing-pulse responsive gating means for supplying a gate pulse in synchronism with any synchronizing pulse applied thereto, a pulse generating means responsive to said gate pulse, a first time delay means having a minimum time delay connected to the output of said pulse generating means, a last time delay means having a maximum time delay connected to said synchronizing pulse, a plurality of intermediate time delay means having a total time delay varying incrementally from said minimum of said maximum, each of said intermediate time delay means having an input connected to said synchronizing pulse and having a feedback path comprising a total delay output connected to a first input of a different one of a plurality of coincidence circuits, the output of each one of said plurality of coincidence circuits connected to the input of said different one of said intermediate time delay means, a second input of each one of said coincidence circuits connected to the input of the preceding time delay means, a plurality of intermediate time delay output taps on each of said time delay means, a separate switching means associated with each of said time delay means operable to select any one of said output taps, said output taps connected for picking off a given increment of delay from the time delay means connected thereto; and coincidence means for passing a pulse when the signals at the outputs of said switches are all in coincidence.

3,089,091
SEQUENTIAL SAMPLING SYSTEM USING COMMUTATING DEVICES PROVIDING CONTROL SIGNALS FOR BIASING AND SWITCHING OF TRANSISTORS
Murray W. Lindenthal, Baltimore, Md., assignor to Martin-Marietta Corporation, a corporation of Maryland
Filed Apr. 7, 1959, Ser. No. 804,669
14 Claims. (Cl. 328—104)

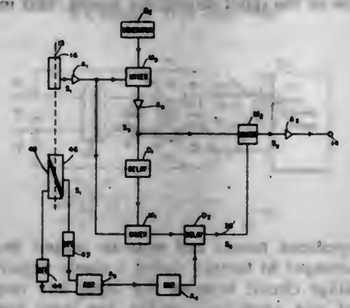


1. In a high-speed voltage sampling system, a plurality of switching circuits each circuit including a three-electrode transistor, means for connecting to a first electrode of each transistor a certain source of voltage to be sampled, a utilization circuit, means for commonly connecting said utilization circuit to a second electrode of each transistor, a continuously operable high-speed commutating circuit having a plurality of output terminals at which high-frequency uni-directional pulses are generated in sequence, means including a pulse-connection from each output terminal respectively to the third electrode of a respective transistor for impressing on said last-mentioned transistor operating bias potential derived from said pulses, the impedance between said first and second electrodes being controlled by said operating bias potential for selectably permitting the voltage to be sampled to appear directly at said utilization circuit, and a common connection between said voltage sources, said utilization circuit and said commutating circuit, whereby the operating and control-pulse potential for each switching circuit is derived from said commutating circuit.

3,089,092
SYNCHROTRON RADIO FREQUENCY PHASE CONTROL SYSTEM
Martin Plotkin, Massapequa Park, Eugene C. Raka, East Patchogue, and Hartland S. Snyder, Bellport, N.Y., assignors to the United States of America as represented by the United States Atomic Energy Commission
Filed Nov. 30, 1959, Ser. No. 856,323
6 Claims. (Cl. 328—155)

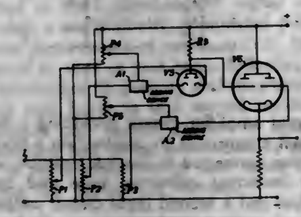
1. A phase shifting network comprising a source of input radio frequency signal of widely variable frequency,

oscillator means for producing a radio frequency signal at a frequency differing by a constant amount from said input signal, said oscillator means comprising a first mixer and a radio frequency generator producing a constant frequency signal, said first mixer heterodyning said input signal with said constant frequency signal for producing said oscillator signal, means for introducing a selected



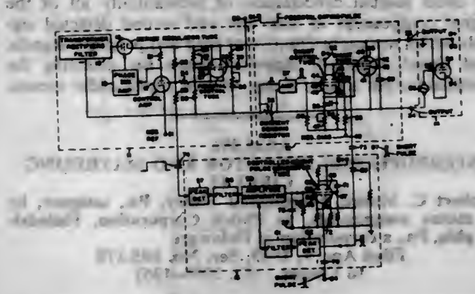
amount of phase change in said oscillator signal, second mixer means for heterodyning said phase shifted oscillator signal and said input signal for producing a beat frequency signal of unchanging frequency, and third mixer means for heterodyning said beat frequency signal with said oscillator signal prior to said phase shifting for producing an output signal of identical frequency to said input signal but phase shifted by the aforesaid selected amount.

3,089,093
CIRCUIT FOR PRODUCING OUTPUT SIGNAL AS A FUNCTION OF PLURAL, VARIED-SLOPED INPUTS
John Charles Oliver Rochester, Buckhurst Hill, England, assignor to The Plessey Company Limited, London, England, a British company
Filed Oct. 17, 1958, Ser. No. 767,990
Claims priority, application Great Britain Oct. 22, 1957
4 Claims. (Cl. 328—178)



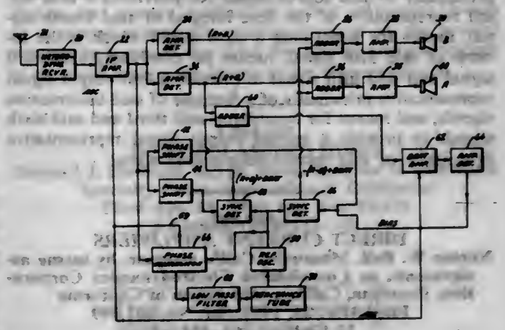
1. An electric voltage-modifying network having an input for the application of an input voltage, an output from which an output voltage may be obtained, means for deriving from the input voltage two primary output voltages which represent functions of the input voltage corresponding respectively to two different gradients, means for adding to one of these primary output voltages a bias voltage for making the two voltages equal at a predetermined value of the input voltage, and a potential-difference sensitive discriminating gate having two input terminals and an output terminal and operative to connect the output terminal to one or the other input terminal according to the sign of the difference between the potentials at the two input terminals, and connecting means applying the two primary output voltages respectively to the said input terminals.

3,089,094
REGULATED PEDESTALLED GRID BIAS SUPPLY
Richard W. French, Liverpool, N.Y., assignor to General Electric Company, a corporation of New York
Filed Aug. 15, 1958, Ser. No. 755,269
8 Claims. (Cl. 328—225)



1. In combination, a source of unidirectional potentials for supplying a pedestalled output voltage to a load coupled to the output terminals thereof, a resistance inserted in series between said source and one of said output terminals for sensing changes in current magnitude in said load, a variable conductance device, having a control electrode, coupled in shunt across the output terminals of said source, means coupling said control electrode to said resistance for controlling the conductivity of said variable conductance device in accordance with the current flowing in said series resistance to maintain said current constant, a filter capacitor connected in shunt across said output terminals, means for producing a short duration pulse timed to coincide with the edge of said voltage pedestal, and means for applying said short duration pulse to said control electrode for causing said conductance device to increase in conductivity to hasten the discharge of said capacitor at said edge.

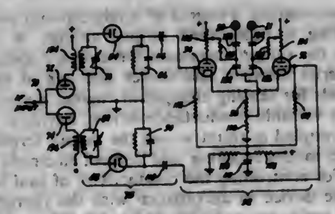
3,089,095
SQUELCH CIRCUITS FOR STEREOPHONIC RECEIVERS
Deril T. Webb, Norristown, Pa., assignor, by mesne assignments, to Philco Corporation, Philadelphia, Pa., a corporation of Delaware
Filed Apr. 8, 1959, Ser. No. 805,018
14 Claims. (Cl. 329—135)



1. In a receiver for single channel compatible stereophonic signals which includes a reference oscillator and a source of a first signal comprising two program signals multiplexed on an intermediate frequency carrier wave, means for generating a squelch signal comprising synchronous detector means responsive jointly to said first signal and the output signal of said reference oscillator for producing a first detected signal including selected

program signal components, second detection means responsive to said first signal for producing a second detected signal including program signal components corresponding to said selected program signal components of said first detected signal, signal adder means for combining said first detected signal and said second detected signal to effect mutual cancellation of substantially all of the signal components of said first and second detected signals which are representative of said two program signals, and signal amplitude detector means for detecting the residual output signal, if any, of said signal adder means.

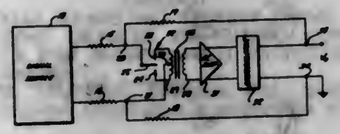
3,089,096
STEREOPHONIC DETECTOR AND MATRIXING CIRCUIT
Robert C. Moore, Huntingdon Valley, Pa., assignor, by mesne assignments, to Philco Corporation, Philadelphia, Pa., a corporation of Delaware
Filed Apr. 9, 1959, Ser. No. 805,178
16 Claims. (Cl. 329—135)



1. A circuit for demodulating a complex wave which is modulated in amplitude as a function of the sum of two information signals and is angularly modulated as a function of the difference of said two information signals, said circuit comprising means responsive to said complex wave for generating first and second detected signals, said first and second detected signals varying in amplitude in the same sense in response to the amplitude modulation component of said complex wave and varying in amplitude in the opposite sense in response to the angular modulation of said complex wave, means for generating a third signal which is proportional to the amplitude variations of said first and second detected signals which are in the same sense, means for generating a fourth signal which is proportional to the instantaneous difference of said first and second detected signals, integrating means responsive principally to said fourth signal for providing a fifth signal representative of the time integral of said fourth signal, means for generating a sixth signal which is the inverse of said fifth signal, means for combining said third signal and said fifth signal to provide a first output signal representative principally of a first one of said information signals, and means for combining said third and said sixth signals to provide a second output signal representative principally of said second information signal.

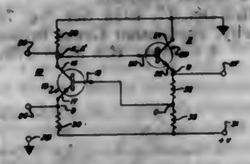
3,089,097
DIRECT CURRENT AMPLIFIERS
Norton W. Bell, Monrovia, Calif., assignor, by mesne assignments, to Consolidated Electrodynamics Corporation, Pasadena, Calif., a corporation of California
Filed Mar. 23, 1959, Ser. No. 801,099
12 Claims. (Cl. 330—9)

1. An amplifying circuit for low-level direct current voltage signals and which direct current signals include interfering signals in combination, said amplifier circuit comprising amplifying means having a single pair of input terminals and a single pair of output terminals, one of said output terminals is directly connected to a point of reference potential and the voltage developed between the output terminals is only dependent upon the difference in potential between the input terminals, individual input impedance means connected in series circuit relationship with each of the input terminals for said amplifying means to receive the combination of direct current signals and the interfering signals applied through said input impedance means to said input terminals, and separate impedance means connected to a different one of the output terminals for the amplifying means and in common with the amplifier end of a different one of the input impedance means, said individual



input impedance means and separate output impedance means arranged to thereby define a single negative feedback voltage circuit between the input and output terminals of said amplifying means, the input impedance means and the output impedance means of said feedback circuit being proportioned relative to each other to provide common mode rejection by causing any interfering signals delivered to said input terminals to be balanced out and to be out of balance relative to the applied direct current difference signals.

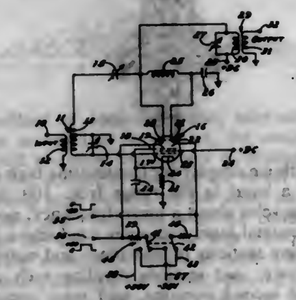
3,089,098
STABILIZED TRANSISTOR AMPLIFIER
John B. Noe, Albuquerque, N. Mex., assignor, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission
Filed Jan. 10, 1962, Ser. No. 165,463
3 Claims. (Cl. 330—19)



1. A signal amplifier circuit providing a highly stable output signal comprising in combustion a first and a second transistor connected in cascade relation, each of said transistors including collector, base and emitter electrodes, a first and a second input circuit coupled with the collector and emitter electrodes respectively of the first transistor, an output circuit coupled with the emitter electrode of the second transistor, a source of circuit energizing potential, a first and a second biasing resistance connecting the collector and emitter electrodes of said first transistor respectively with ground and the source of energizing potential, said resistances being in predetermined ratio to each other, a third and a fourth resistance forming a voltage divider network connected in series between the emitter electrode of the second transistor and the source of energizing potential, said third and fourth resistances being in predetermined ratio to each other, means for establishing direct couplings between the collector electrode of the first transistor and the base of the second transistor, between the collector electrode of the second transistor and ground, and between the junction of the third and fourth resistances of the second

transistor and the base electrode of the first transistor respectively.

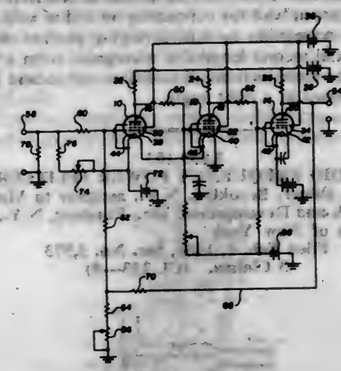
3,089,099
GATED I.F. AMPLIFIER BEAM TYPE
John F. Beckerich and Julius L. Smith, Jr., Richardson, Tex., assignors to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa
Filed July 15, 1960, Ser. No. 43,210
4 Claims. (Cl. 330—46)



1. A gate controlled signal translating device for selectively translating signal components of an input thereto without discontinuing the direct-current output component thereof comprising a beam amplifier electron discharge device including at least an input electrode, a cathode, first and second anodes and first and second beam deflecting electrodes; a common ground return junction, means for impressing said input signal between said input electrode and said common junction, said cathode being returned to said common junction, an output terminal connected to first said anode, first impedance means connected directly between said first and second anodes, said first impedance means being adapted to present low impedance to direct-current signal components and to substantially block alternating-current components of anode current, second impedance means connected directly between said second anode and said common junction and being adapted to block direct-current signal components and to provide a substantially unimpeded path to alternating-current components of anode current, biasing voltages connected to each of said beam deflecting electrodes and being preselected in polarity and magnitude to effect deflection of said beam to said second anode, a source of direct-current gate signals applied to said beam deflecting electrodes and being preselected in polarity and magnitude to effect deflection of said beam to said first anode during the application thereof.

3,089,100
AMPLIFIER CIRCUIT
Roy J. Smoliett, Jr., Silver Spring, Md., assignor to General Electronic Laboratories, Inc., Cambridge, Mass., a corporation of Massachusetts
Filed June 5, 1959, Ser. No. 818,471
4 Claims. (Cl. 330—205)

4. In an amplifier circuit, the combination of a first and second amplifier stage, including a filament type cathode and a control grid in each stage with the control grid of the second stage coupled to the output of the first stage, a resistor chain with the control grid of the first stage coupled through the resistor chain to ground, a battery having positive and negative terminals, the filaments coupled in series across the battery and the negative terminal coupled to ground, and resistor means coupled to the positive terminal of the battery and to a point on the resistor chain such that variations in voltage across the battery will cause corrective voltage



changes at the first grid to maintain a substantially constant current flow in the stages.

3,089,101
FIELD DISPLACEMENT CIRCULATOR
Herman N. Chait, 2509 36th St. SE., Washington, D.C., and Morris L. Kales, 6408 Marjory Lane, Bethesda, Md.
Filed Feb. 27, 1959, Ser. No. 796,183
8 Claims. (Cl. 333—1.1)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A circulator comprising, three waveguides having their longitudinal axes in the same plane intersecting at equal angles enclosing a common region shared by the waveguides, ferrite material disposed in the circulator in at least a part of a region consisting of the common region and portions of the waveguides contiguous thereto, and means for magnetizing the ferrite material to such degree that energy incident at a first waveguide leaves at a second waveguide, energy incident at the second waveguide leaves at the third waveguide, energy incident at the third waveguide leaves at the first waveguide.

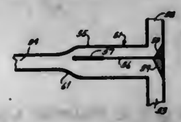
3,089,102
DUAL POLARIZED HORN
Howard J. Rowland, Egypt, Mass., assignor to Electronic Specialty Co., a corporation of California
Filed Apr. 25, 1960, Ser. No. 24,425
6 Claims. (Cl. 333—6)



1. Apparatus for passing complementarily polarized electromagnetic waves, said apparatus comprising first and second lengths of rectangular waveguide having broad walls and narrow walls and a common connection, one of said broad walls of said first length diverging from the opposite substantially straight broad wall at an angle

to form a substantially square open face, said diverging broad wall having a centrally located rectangular aperture the narrow dimension of which is centered in said diverging broad wall for connecting an end of said second length of waveguide to said diverging portion whereby said first and second lengths of waveguide form a V connection, the cross-sections of said first and second lengths being disposed at a right angle.

3,089,103
RADIO FREQUENCY POWER SPLITTER
Arthur A. Oliner, Brooklyn, N.Y., assignor to Merrimac Research and Development, Inc., Flushing, N.Y., a corporation of New York
Filed Feb. 1, 1960, Ser. No. 5,973
3 Claims. (Cl. 333—9)



1. Radio frequency power splitting apparatus comprising a rectangular waveguide input transmission line having at least a small region capable of at least partially supporting two orthogonal modes of propagation having respectively predetermined electric field line configurations, means for transforming input power supplied to said input transmission line into only a first of these orthogonal modes, means for dividing the power propagated in said first mode in said input transmission line into at least two unequal portions, said means comprising at least one conductive wall dividing the cross-sectional area of said input transmission line into at least two unequal parts, at least two rectangular waveguide output transmission line sections, means for transmitting said portions to respective ones of said output transmission line sections without substantial attenuation of or interaction beween said portions and for causing power supplied to said apparatus at a single one of said output transmission lines to be propagated at least partially in the second of said orthogonal modes in said region of said input transmission line, and means located in said region for absorbing power propagated in the second of said modes without substantially attenuating the first of said modes, the last said means comprising a thin body of loss material located substantially transverse to electric field lines of said first mode, whereby said output transmission line sections are substantially isolated from each other as respects radio frequency power within the operating frequency range of the apparatus.

3,089,104
DEVICE FOR INDEPENDENT CONTROL OF ELLIPTICITY AND ORIENTATION OF POLARIZED ELECTROMAGNETIC WAVES
Philip J. Allen, 3000 Marion St., North Forestville, Md.
Filed Oct. 31, 1960, Ser. No. 66,362
9 Claims. (Cl. 333—11)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. In combination, a dual mode transducer, an omnipolarization coupling device, first and second half wave birefringent elements disposed between said transducer and said device, and a quarter wave birefringent element intermediate said first and second elements.

3,089,105
COAXIAL CHOKE COUPLER
Andrew Alford, 299 Atlantic Ave., Winchester, Mass.
Continuation of application Ser. No. 239,046, July 28, 1951. This application July 10, 1956, Ser. No. 596,930
1 Claim. (Cl. 333—73)



A coaxial choke coupler for transmitting high frequency energy over a band in the range from 100 megacycles to 5000 megacycles about a mean frequency, said coupler comprising, coaxial inner and outer conductors, inner and outer insulating sections in said inner and outer conductors respectively, said sections dividing each conductor into first and second portions, said inner conductor insulating section being coextensive with the first and second portions of said inner conductor along the axis common to said conductors for a distance substantially equal to a quarter wavelength for energy in said center conductor insulating section of said mean frequency, said outer conductor having a pair of opposed spaced flanges at adjacent ends of said first and second portions thereof extending radially outward from and orthogonal to said common axis, said outer conductor insulating section being a thin annular disk orthogonal to said common axis with opposite sides in contact with both opposed faces of said spaced flanges for a radial distance substantially equal to a quarter wavelength for energy in said outer conductor insulating section at said mean frequency, wherein said outer conductor first portion includes an inner annular section coaxial about said common axis formed with a sleeve end section extending radially inward from a shoulder portion of said first inner annular section, said outer conductor second portion includes an inner annular section coaxial about said sleeve end section for nearly the entire axial length of said sleeve end section, the end of said second portion inner annular section facing said shoulder portion across a gap which is substantially bisected by the plane of said thin annular disk, said outer conductor first and second portions also including an outer annular section from which said flanges extend, said first and second outer conductor portions being coaxial about only one of said inner conductor portions.

3,089,106
PRINTED CIRCUIT COIL
Theodore N. Saaty, Providence, R.I., assignor to Wheelock Signals, Inc., Long Branch, N.J., a corporation of New Jersey
Filed Aug. 15, 1960, Ser. No. 49,656
5 Claims. (Cl. 336—200)



3. A printed disc comprising an insulated backing, an electrical winding printed on one side thereof in the form of a spiral having a multiple number of turns and a fold-back tab at one end of the terminal foldable along a line substantially radial of said disc, the terminal being carried by the fold-back tab.

3,089,107
WATERPROOFING STRAIN GAGES
Mills Dean III, McLean, Va., assignor to the United States of America as represented by the Secretary of the Navy
Filed Apr. 14, 1961, Ser. No. 103,698
6 Claims. (Cl. 338—2)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A method of applying a flat, wire-resistance-type strain gage to metal to be stressed, the strain gage having insulated electrical conductors extending therefrom, which method comprises cleaning the metal surface, laying the straing gage flatwise on the metal surface, covering the strain gage with wax with the conductors passing through the wax, covering the wax with a pasty layer of self-curing waterproof synthetic rubber with the conductors passing through the rubber, placing a metal shim larger than the strain gage on the layer of synthetic rubber so that the edges of the metal piece overlie the wax and the strain gage but are short of the edges of said rubber layer, and then applying another layer of self-curing synthetic rubber over said metal piece and the first said layer, with said conductors passing through the last said layer.

3,089,108
SEMICONDUCTOR STRAIN GAUGE
Howard Goag, Monterey Park, and Joseph Sanchez and Robert E. Taimo, Pasadena, Calif., assignors to Electro Optical Systems, Inc., Pasadena, Calif., a corporation of California
Continuation of abandoned application Ser. No. 60,041, Oct. 3, 1960. This application Sept. 5, 1962, Ser. No. 222,765
6 Claims. (Cl. 338—2)



1. A strain gauge comprising an elongate unitary single semiconductor crystal body, said body being of either P or N type conductivity of a predetermined crystallographic orientation, said crystal body being a flexible beam having its surface etched to microscopic smoothness, said beam having a length to smallest cross-sectional dimension ratio in the range from about 50:1 to about 4000:1 to render said beam flexible, said smallest cross-sectional dimension being in the range from about 0.00025" to 0.003"; and first and second electrical terminals in low resistance ohmic contact with said body near the ends thereof.

3,089,109
PRECISION PRESSURE TRANSDUCER
Arthur A. Zuehlke, Riverside, Calif.
Filed Aug. 23, 1961, Ser. No. 133,404
19 Claims. (Cl. 338—41)

1. A pressure-sensor instrument comprising:
first means, comprising expansible cell means constructed and arranged for application of separate fluids under pressure to the interior and the exterior thereof, respectively, and including chamber-defining means hermetically sealing said cell means within the defined chamber;
second means, including flexible seal means and lever means extending through a sealed opening in said chamber-defining means, and including means supporting said lever means for pivotal movement about a defined axis, said lever means being connected to said cell whereby the cell imparts pivotal movement to said lever means incident to volume-change of said cell;
third means, comprising motion-multiplying means connected to said lever means outside said chamber and



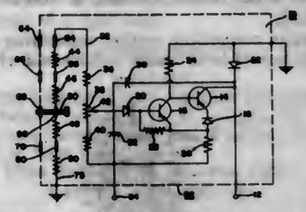
constructed and arranged to amplify movements imparted to said lever means by said cell means; and
fourth means, comprising electric signaling means, connected to said third means and constructed and arranged to translate the amplified movements of said third means into electric signals representative of said movements, whereby said electric signals are representative of the respective difference of the pressures exhibited by said fluids on the interior and the exterior of said cell.

3,089,110
VARIABLE RESISTORS
Marian E. Bourns, Riverside, Calif., and Richard E. Caddock, Ames, Iowa; said Richard E. Caddock assignor to Bourns, Inc., a corporation of California
Filed Feb. 18, 1960, Ser. No. 9,535
6 Claims. (Cl. 338—183)



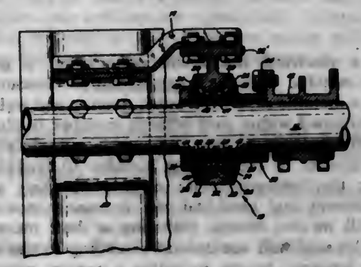
1. An electrical instrument comprising: a generally hollow metallic housing member; support means, comprising a metallic support member, having end wall means and positioned within said housing member in close contact with the housing member over a considerable area of the interior of the housing member to facilitate heat transfer therebetween; other means, including a resistance element and electrical return means, mounted on said wall means; means, including a shaft means, supported by said wall means and extending to the exterior of said housing; means, including a contact member resiliently engaging said resistance element, engaging said shaft means for movement thereby and electricaly connecting said electrical return means with said resistance element and constructed and arranged to be moved to move said contact means along said resistance element in response to movement of said shaft means; means including respective electrical leads connected to said resistance element and said electrical return and extending to the exterior of said housing member; and means sealing the interior of said housing member against ingress of foreign material.

3,089,111
VARIABLE RESISTANCE ASSEMBLY
Louis J. Raver and Thomas E. Kirk, Anderson, Ind., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Dec. 7, 1959, Ser. No. 857,725
3 Claims. (Cl. 338—260)



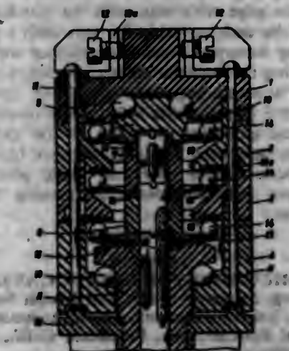
1. In combination, a metal base formed with a side flange, said side flange having a plurality of spaced threaded openings, a resistance assembly supported by said side flange including a sheet of insulating material upon which is wound a length of resistance wire, a plurality of eyelets located in spaced openings in said insulating material and connected with spaced points of said resistance wire, one of said eyelets being connected with the end of the length of said resistance wire, said eyelets being located respectively in alignment with the threaded openings formed in said side flange, first and second sheets of insulating material one of which is positioned between said resistance assembly and said side flange and the other of which is positioned on the opposite side of said resistance assembly, an electrically conductive rivet passing through said one eyelet and engaging said side flange for electrically connecting said one eyelet with said side flange and for mechanically supporting said resistance assembly and said sheets of insulating material from said side flange, and a screw adapted to be passed through another of said eyelets and threaded into one of said threaded openings for electrically connecting another of said eyelets with said side flange.

3,089,112
ROTARY CURRENT INTERCHANGE STRUCTURE
James J. Seaquist, West Allis, Wis., assignor to McGraw-Edison Company, Milwaukee, Wis., a corporation of Delaware
Filed July 15, 1960, Ser. No. 43,139
7 Claims. (Cl. 339—5)



6. Current interchange structure comprising an internal and an external conductive member disposed in concentric spaced relation and connected for relatively rotational movement, one of said members having means for providing an annular channel whose open side is disposed toward the other member, said channel having a pair of generally laterally extending sidewalls and a bottom surface, the other conductive member having a pair of oblique surfaces, said oblique surfaces being in axial spaced relation and each being disposed opposite the intersection of one of said sidewalls and said bottom surface and spaced therefrom to form therewith a pair of substantially parallel annular cavities between said conductive members which are characterized by a pair of divergent sidewalls, a helically wound conductive current interchange spring member disposed in each of said cavities, the effective distances between said conductive members across said cavities being less than the outside helical diameter of said spring members so that the convolutions of each are inclined relative to its helical axis whereby the resiliency of said spring members hold said convolutions in uniformly advancing spiral relation with each other and maintains them in firm electrical contact with said members.

3,089,113
ROTARY ELECTRIC CABLE COUPLING
Karl Mohr, Aschaffenburg (Main), Germany, assignor to Ultra-Praezisionswerk G.m.b.H., Aschaffenburg (Main), Germany, a firm
Filed June 6, 1960, Ser. No. 34,083
5 Claims. (Cl. 339—8)



1. An antifriction cable coupling for connecting two relatively revolving multiple lead members, said coupling comprising an outer and an inner substantially cylindrical member consisting of dielectric material and arranged concentrically one within the other radially spaced apart to define an annular chamber therebetween; two antifriction bearings of the deep-groove ball race type adapted to sustain high radially and axially directed loads, said bearings being disposed between said cylindrical members one at each end of said chamber; a plurality of current transmitting means, corresponding in number to the number of leads of said member to be connected by said coupling, said current transmitting means being disposed in the chamber intermediate said antifriction bearings, each of said current transmitting means comprising a first and a second annular contact element, the first contact element being mounted on said outer cylindrical member and the second contact element being mounted on said inner cylindrical member, at least one of said contact elements being formed of resilient conductive material; and a plurality of antifriction current conductors disposed between each pair of said contact elements and urged into rolling contact engagement with the respective contact elements due to the resiliency of said one contact element.

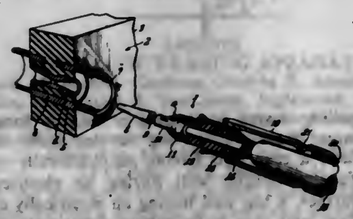
3,089,114
ELECTRICAL CONNECTOR
Judson C. Cole and James R. Hall, Sidney, N.Y., assignors to The Bendix Corporation, a corporation of Delaware
Filed Mar. 22, 1960, Ser. No. 16,751
11 Claims. (Cl. 339—176)

5. In a combination including a multi-contact separable electrical connector having two main connector parts, the connector parts each having a plurality of laterally spaced contacts adapted to interfit when the connector parts are in mating, operative engagement, the improved combination which comprises one of said connector parts, said one connector part comprising a laterally extended insulating plate having upper and lower broad sides, the contacts of said one connector part being in the form of laterally spaced resilient electrically conducting broad blade-like fingers disposed with their broad surfaces at least generally parallel to the broad sides of the plate and projecting longitudinally from the forward edge of the plate, the rear end portion of each of the fingers being secured to the plate by being imbedded therein, the rear end portion



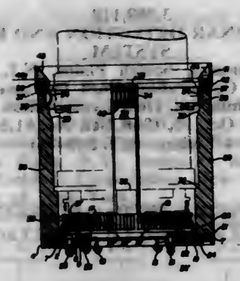
of each of the fingers within the plate having a part bent out of the general plane of its broad surfaces and containing a generally L-shaped offset having a first leg extending toward a broad side of the plate, and a second leg extending generally parallel to, close to, and exposed at said broad side of the plate, a multiple conductor cable having an end in flattened form connected to said one connector part, joint means connecting the conductors of the cable to the respective fingers, said last named means comprising ends of the respective conductors overlying the said exposed parts of the rear end portions of the fingers, and joints between the conductors and the said exposed parts of the fingers, and an electrically insulating sheath covering the plate and joints of the said one connector part.

3,089,115
TAPERED PIN COAXIAL CONNECTION
Grace I. Wicks, Cortado, Ariz., assignor to Burndy Corporation, a corporation of New York
Continuation of application Ser. No. 691,071, Oct. 18, 1957. This application Oct. 20, 1960, Ser. No. 63,929
2 Claims. (Cl. 339—177)



1. A coaxial connection comprising: an end of a coaxial cable including an inner conductor and an outer conductor coaxial with and insulated from said inner conductor; a female connector including a rigid, tapered, inner socket having a solid annulus and an outer socket coaxial with and insulated from said inner socket; and a male connector including a tapered contact pin connected to the end of said inner cable conductor and disposed forward of the end of said outer cable conductor, and in solid, impacted, mating engagement with said tapered inner socket, thereby securing said male connector and said coaxial cable to said female connector; said tapered contact pin having an impact tool receiving shoulder to receive an impaction to provide said securing engagement; an insulating sleeve transversely disposed between at least one of the group consisting of said tapered contact pin and said inner cable conductor end, and said outer cable conductor end; and both said insulating sleeve and said outer cable conductor end disposed rearwardly of and exposing said tapered contact pin shoulder; and an outer conductive sleeve which is transversely resilient, resiliently engaging said outer socket and said outer cable conductor end and substantially enclosing said tapered contact pin; said conductive sleeve being free to longitudinally slide on said outer socket independently of the engagement of said tapered contact pin with respect to said inner socket.

3,089,116
SOCKET
Luigi Dreon, San Francisco, Calif., assignor to Eitel-McCullough, Inc., San Carlos, Calif., a corporation of California
Filed May 2, 1960, Ser. No. 26,084
6 Claims. (Cl. 339—182)

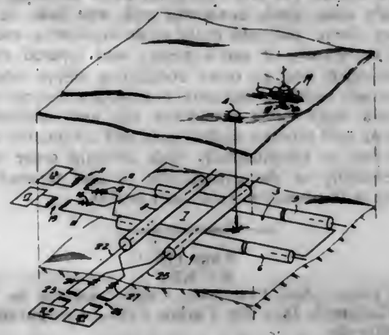


1. A socket for electron tubes comprising an annular dielectric base plate, a pair of coaxially arranged collets including resilient contact finger portions detachably mounted on the base plate, a plurality of circumferentially arranged perpendicularly extending dielectric posts each mouted at one end on the base plate, a contact plate detachably mounted on each post adjacent its end remote from the base plate, and a guide ring detachably mounted on the posts and conductively associated with each said contact plate to electrically connect said contact plates and to guide a tube into the socket.

3,089,117
NAVIGATION SYSTEM WITH ELECTROACOUSTIC LEADER CABLES
Laurence Batchelder, Cambridge, Mass., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Feb. 10, 1960, Ser. No. 7,954
8 Claims. (Cl. 340—4)

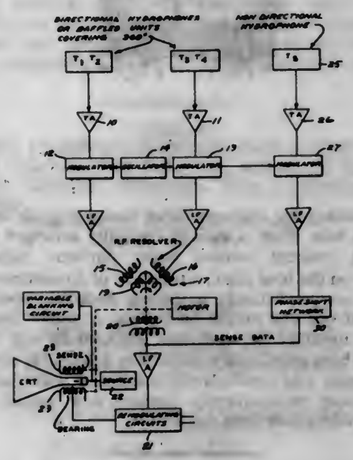
1. Apparatus for continuously indicating the position of a ship within a channel said apparatus comprising a pair of coaxial cables positioned on the bed of the channel, said cables being disposed along opposite longitudinal sides of the channel; a high frequency energy source for each cable; a first circuit which includes in series the central conductor of one cable, one high frequency source,

and the peripheral conductor of the other cable; and a second circuit which includes in series the central con-



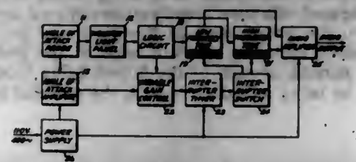
ductor of the other cable, the other high frequency source, and the peripheral conductor of the one cable.

3,089,118
PASSIVE SONAR DETECTION AND BEARING SYSTEM
Harold C. Baumann, Scotch Plains, N.J., assignor to Sperry Rand Corporation, Ford Instrument Company Division, Wilmington, Del., a corporation of Delaware
Filed Oct. 10, 1960, Ser. No. 61,568
4 Claims. (Cl. 340—6)



1. A passive sonar detection and bearing system comprising a plurality of sound transducers, said sound transducers being arranged in pairs with said pairs being disposed at a 90° relationship with respect to each other, a radio frequency oscillator, a modulator connected to each pair of transducers and said oscillator, a goniometer having field coils connected separately to said modulators and a motor driven search coil, a demodulator circuit coupled to said search coil and a cathode ray tube having beam controlling coils rotatably disposed thereon and electrically connected to said demodulator circuit, the coils in the cathode ray tube being driven in synchronism with said search coil.

3,089,119
AURAL LANDING SPEED SYSTEM
John P. Staples, Indianapolis, Ind., assignor to the United States of America as represented by the Secretary of the Navy
Filed Nov. 29, 1960, Ser. No. 72,531
5 Claims. (Cl. 340—27)
(Granted under Title 35, U.S. Code (1952), sec. 266)



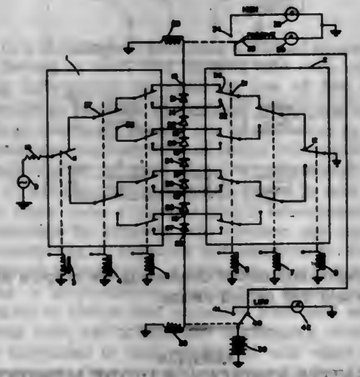
5. A system for producing a plurality of aural tones for use in landing an aircraft comprising: a probe providing an output voltage proportional to angle of attack of an aircraft, a first tone generator providing a low frequency tone, a second tone generator providing a high frequency tone, a logic circuit selectively connecting said tone generators with said output voltage, an interrupter timer providing an output signal having a frequency proportional to input current, an interrupter switch connected to said interrupter timer and said first and second tone generators, and variable gain control means connected between said logic circuit and said interrupter timer for providing different levels of input current to said interrupter timer.

3,089,120
SIGNALLING DEVICE
William Ross Aiken, Los Altos, Calif., assignor to Ross Radio Corporation, Los Altos, Calif., a corporation of California
Filed Sept. 28, 1959, Ser. No. 842,864
13 Claims. (Cl. 340—44)

9. A signalling device comprising a housing formed by a transparent front wall having an electrically conductive surface, a rear wall having an electrically conductive surface, a bottom wall having an electrically conductive surface, a top wall having an electrically conductive surface, and side walls having electrically conductive surfaces, a thin control sheet of plastic material, means hingedly mounting said control sheet adjacent the corner defined by said front wall and said bottom wall for folding movement from a position parallel and adjacent to said bottom wall to a position parallel and adjacent to said front wall, a plurality of spacers mounted upon said bottom wall to keep said control sheet apart from said bottom wall, a plurality of spacers provided on said front wall to prevent contact of said control sheet with said front wall, means applying an electrical charge to the electrically conductive surfaces of said bottom wall and said rear wall, means applying an electrical charge of opposite polarity to the electrically conductive surfaces of said front wall, said top wall and said side walls,

means including a high ohmic resistor connecting said control sheet to ground, and means including a normally open switch operable to apply an electrical charge of the same polarity as applied to the electrical surfaces of said bottom wall and said rear wall directly to said control sheet.

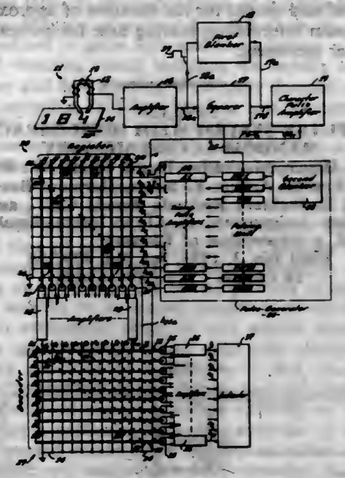
3,089,121
DIGITAL COMPARATOR
Gerald E. Rhodes, Garden Grove, Calif., assignor to North American Aviation, Inc.
Filed Dec. 24, 1958, Ser. No. 782,761
10 Claims. (Cl. 340—146.2)



1. An electrical comparator comprising a plurality of diodes connected together in series circuit, said diodes being poled in the same direction, a first switching means operable to provide connection intermediate each of said diodes, means connected to provide alternating current power to said switching means, means for providing control of said switching means, a second switching means operable to provide a return circuit to said alternating current power source, said second switching means connected to provide connections intermediate each of said diodes and means responsive to the current flow at the end connections of said diodes for indicating the relative states of said switching means.

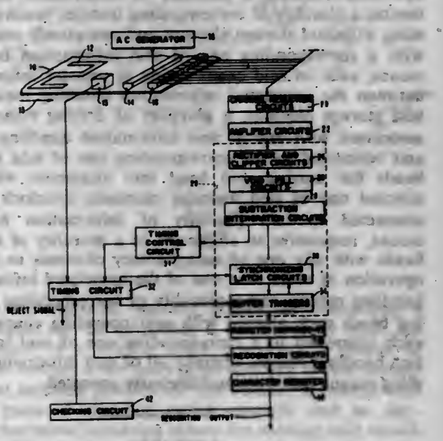
3,089,122
AUTOMATIC READING APPARATUS
Jerrold M. Seebof, Gardena, Melvin S. Armstrong, Lomita, and Stuart B. Smithberg, Inglewood, Calif., assignors to The National Cash Register Company, Dayton, Ohio, a corporation of Maryland
Filed Apr. 14, 1958, Ser. No. 728,323
13 Claims. (Cl. 340—146.3)

11. An automatic reading system comprising: a record medium having a plurality of characters printed thereon, said characters being stylized so that each has at least two spaced vertical portions with a spacing representative of the identity of the character, sensing means for traversing a character substantially horizontally and for producing during a single movement past a character an electrical waveform containing at least two spaced signals which are representative of said two portions of the character, the stylizing of each character and the construction and arrangement of said sensing means being chosen so that when a character is properly located with respect thereto, only a single horizontal movement of said sensing means past the character is required to produce all of the signals required to uniquely identify the character, and electrical circuit means responsive to said two signals in said waveform for producing an indication of the identity of each character sensed, producing timing signals, and means for detecting the time of occurrence of the second of the two



signals in said waveform with respect to said timing signals.

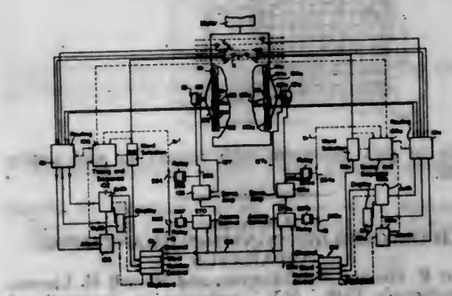
3,089,123
CHARACTER RECOGNITION QUANTIZING APPARATUS
Robert B. Hennis, Poughkeepsie, and Russell H. Larson, Wappingers Falls, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Nov. 12, 1959, Ser. No. 852,326
4 Claims. (Cl. 340—146.3)



2. Character recognition apparatus comprising means for scanning a surface carrying energized character forming areas and producing a signal responsive to the surface scanned, quantizing means for determining successive increments of said signal indicative of scanned character forming areas, timing means for establishing a plurality of character incremental intervals during the scanning of a character, and means responsive to said quantizing means and said timing means during successive character incremental intervals for identifying the character scanned, said quantizing means including means responsive to said signal for producing an output indicative of the duration

of character information bearing increments of said signal having complete interruptions therein not exceeding a predetermined maximum duration and means delaying the start of said output for the duration of approximately the minimum information bearing time for recognition of a character increment.

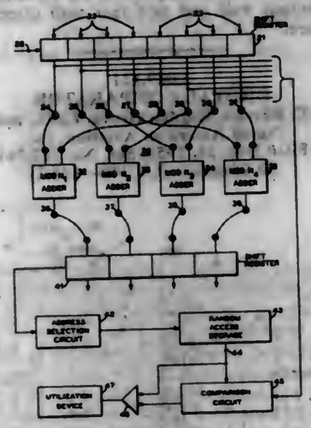
3,089,124
COMPUTER SYSTEM WITH HIGH CAPACITY RANDOM ACCESS MEMORY
Glenn E. Hagen, Manhattan Beach, Charles R. Williams, Palos Verdes, Arthur Y. Baker, Hermosa Beach, and Robert E. Jackson, Redondo Beach, Calif., assignors, by mesne assignments, to Alwac International Incorporated, a corporation of Panama
Filed Jan. 3, 1955, Ser. No. 479,328
14 Claims. (Cl. 340—172.5)



1. A computer which includes: an information storage element having a plurality of memory channels and an operating channel; a plurality of information handling means; a plurality of corresponding transfer heads cooperating with said storage element and operatively associated with a corresponding one of said information handling means, each of said heads acting to transfer information between the associated information handling means and said storage element; a plurality of driving means each associated with one of said information handling means and connected to the corresponding one of said transfer heads for moving said head into alignment with any selected one of said memory channels; interlock means connected to said plurality of information handling means, responsive to alignment of a plurality of transfer heads with any one of said memory channels to prevent operation of more than one of the associated information handling means; and a plurality of corresponding operating heads each aligned with said operating channel and each connected to a corresponding one of said information handling means, whereby all of said information handling means may be simultaneously operated.

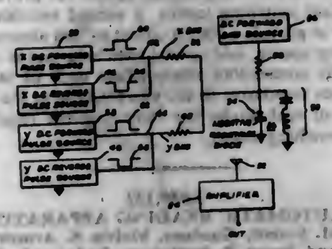
3,089,125
AUTOMATIC STORAGE ADDRESSING APPARATUS
Andrew C. Reynolds, Jr., Waterbury, Conn., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Jan. 11, 1957, Ser. No. 633,700
4 Claims. (Cl. 340—172.5)

1. Apparatus for addressing random access storage with multidigit external address numbers comprising in combination internal address means for selecting a location within said storage, a plurality of modulus adders each having first and second inputs and a single output, means for simultaneously transmitting only selected pairs of digits of said external address number to the inputs of said plurality of adders to thereby add only selected



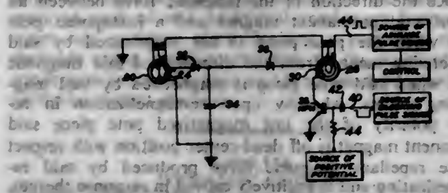
pairs of digits, and means connecting the outputs of said adders to said first named means.

3,089,126
NEGATIVE RESISTANCE DIODE MEMORY
James C. Miller, Hamilton Square, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Sept. 8, 1959, Ser. No. 838,676
6 Claims. (Cl. 340—173)



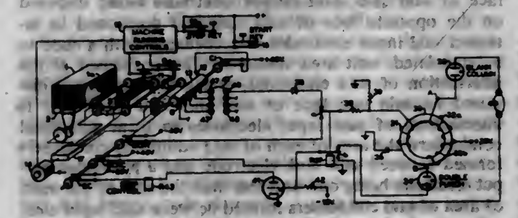
4. A memory system comprising, in combination, a plurality of tunnel diodes; a plurality of x leads; a like plurality of y leads, each diode being connected to one x lead and one y lead, and all diodes being connected to different pairs of said leads; a circuit for reading information stored in the diodes out of the diodes including means for applying a direct-current pulse to one of the x leads and a concurrent direct-current pulse to one of the y leads, said two pulses together having an amplitude sufficient to switch the diode connected to said one x and said one y lead from one of its stable states to another, whereby if said diode is in said one state initially, it is switched and if is it not, it is not switched; a resonant circuit connected to each diode and responsive to the transient across its diode when its diode is switched for producing a ringing oscillation; and a circuit including an antenna which is common to all of said diodes for receiving energy at the ringing oscillation frequency.

3,089,127
MAGNETIC SHIFT REGISTER
Leon J. Mintz, Brooklyn, N.Y., and Roland Yii, West Chester, Pa., assignors to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed Sept. 9, 1958, Ser. No. 759,938
10 Claims. (Cl. 340—174)



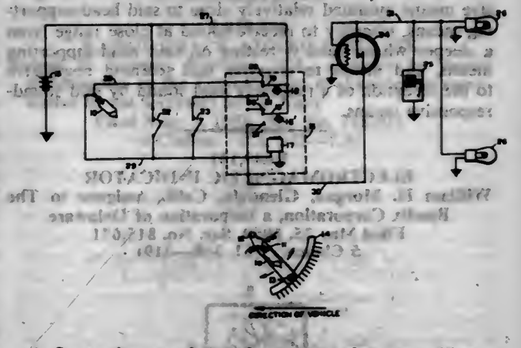
1. In a shift register including a pair of magnetic cores each having at least one winding and each capable of storing information by assuming one of two states of remanence in response to electrical pulses applied to said windings; means for placing one of said cores in one state of remanence representative of stored information; means for applying an advance signal simultaneously to both cores to advance the information stored in said one core to the other core; a transfer circuit interconnecting said two windings for effecting said advance; said transfer circuit comprising a capacitor for temporarily storing the transferred information, a capacitor charging circuit including a unidirectional conductive device operatively connected to charge said capacitor from said winding of said one core, and a capacitor discharging circuit operatively connected to said winding of said other core; the improvement wherein said capacitor discharging circuit comprises a transistor having an emitter, collector and base, and wherein said capacitor is connected in series with said winding of said other core, the transistor emitter and the transistor collector; said base being normally biased to render said emitter and collector circuit conductive and thereby tending to cause the discharge of said capacitor; and means for applying a blocking pulse to said transistor base simultaneously with the application of the advance signal, said blocking pulse being effective to render said emitter and collector circuit non-conductive and thereby to prevent capacitor discharge, said blocking pulse terminating after the termination of said advance signal to effect capacitor discharge through said series connected transistor emitter, transistor collector and said winding of said other core.

3,089,128
MAGNETIC CORE SWITCHING CIRCUIT
Charles B. Smith, Vestal, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Mar. 23, 1961, Ser. No. 98,283
2 Claims. (Cl. 340—174)



1. A device for detecting signals in excess of a required number of signals issued from a periodically operable source which presumably issues a required number of signals for each periodic operation thereof but which may issue signals in excess of the required number comprising a bistable magnetic core having first and second conditions of stability; a first winding on said core adapted to set the latter to either condition of stability depending upon the direction of current flow therethrough; a capacitor connected in series with said first winding; a critically damped detecting circuit including the serially connected capacitor and first winding; a critically damped discharge circuit including said first winding and capacitor; reset means for applying to said detecting circuit a reset pulse of current to reset said core to a first condition of stability in preparation for the detecting operation; means operable thereafter for applying said signals to said detecting circuit during the detecting operation, the first signal of said signals causing said capacitor to charge and, during the fall time of said first signal, said capacitor discharging through said discharge circuit to energize said first winding to cause said core to change from its first condition of stability to its second condition of stability, and, for each subsequent signal of said signals issued thereafter to said detecting circuit, said core changing from a second condition of stability to a first condition of stability respectively during the rise and fall times of said each subsequent signal; a second winding on said core for issuing a particular voltage in response to a change from a second condition of stability to a first condition of stability; and indicating means connected to said second winding and responsive to said particular voltage for providing an indication of the excess signals.

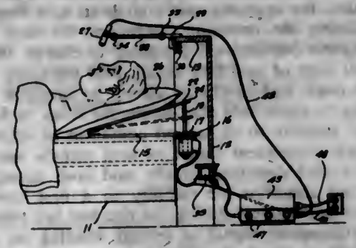
3,089,129
AUTOMATIC VEHICLE WARNING SYSTEM
Euripides R. Nassikas, 7033 Meade St., and Angelo M. Caloyer, 115 Hawthorne Drive, both of Pittsburgh, Pa.
Filed Oct. 25, 1960, Ser. No. 64,752
7 Claims. (Cl. 340—262)



1. In an improved warning system for controlling a visual signal and for providing it automatically upon the deceleration of a vehicle which comprises, a source of electrical energy, a normally open mercury switch mounted in an inclined position on the vehicle, a control unit having pairs of alternate switch contacts and an electrically energized actuating means for moving said switch contacts from one position to a second position upon its initial energization and for moving said switch contacts from the second position back to the one position upon its second energization, a visual signal means connected to said source of energy through said switch contacts when they are in the second position for giving warning, said mercury switch being closed upon a deceleration of vehicular movement to connect said actuating means to said source of energy when said switch contacts are in the one position for initially energizing said actuating means to move said switch contacts to the second position to connect said visual signal means to said source of energy, a second switch connected between said source of

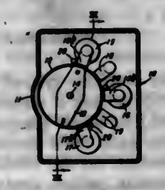
energy and said actuating means independently of said mercury switch for again energizing said actuating means to move said switch contacts from the second position back to the one position to de-energize said visual signal means.

3,089,130
SNORE ALARM
George J. Wilson, 186 Benham Road, Groton, Conn.
Filed Feb. 2, 1962, Ser. No. 170,733
5 Claims. (Cl. 340—279)



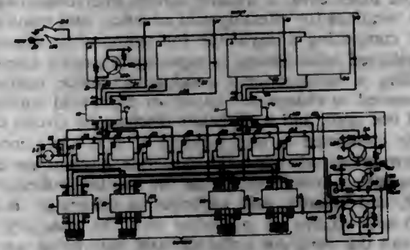
5. In combination, a bed, head-supporting means on said bed, a pair of rigid plate-like leaf members disposed beneath said head-supporting means, means hingedly connecting said plate-like leaf members at their edges, a solenoid vertically secured to the lowermost leaf member at a location relatively remote from the hingedly connected edges, said solenoid having an upwardly projecting substantially vertical movable plunger element provided at its top end with roller means supportingly engaging the bottom surface of the uppermost leaf member so as to suddenly elevate said head-supporting means responsive to energization of said solenoid, sound-responsive means mounted relatively close to said head-supporting means, whereby to receive sound at close range from a sleeper whose head is resting on said head-supporting means, and means to energize said solenoid responsive to the reception of a relatively loud sound by said sound-responsive means.

3,089,131
ELECTROMAGNETIC INDICATOR
William H. Morgan, Glendale, Calif., assignor to The Bendix Corporation, a corporation of Delaware
Filed May 25, 1959, Ser. No. 815,671
5 Claims. (Cl. 340—319)



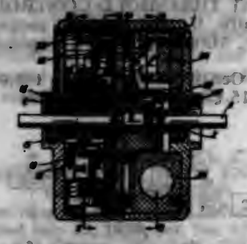
1. An electromagnetic indicator comprising: a rotary indicating member movable through a plurality of discrete positions; a permanent magnet on said rotary member having north and south ends respectively positioned at points angularly displaced from each other a predetermined number of said positions; a stationary structure cooperating with said rotary member and comprising a plurality of paramagnetic pole pieces less in number than said positions and respectively juxtaposed to a consecutive group of said positions less than said predetermined number, each pole piece being magnetizable either north or south to attract either end and repel the other end of said magnet; means for individually selectively magnetizing said pole pieces either north or south, whereby said rotary indicating member can be moved directly from any of said positions into any other selected one of said positions by selectively magnetizing a selected one of said pole pieces either north or south; and a paramagnetic structure associated with each said pole piece to angularly displace the direction of the magnetic force between an end of said permanent magnet and a juxtaposed pole piece when the pole piece is not magnetized by said magnetizing means from the direction of said magnetic force when said pole piece is magnetized by said magnetizing means, whereby upon remagnetization in reverse polarity of the last magnetized pole piece said permanent magnet is off dead-center position with respect to the repellant magnetic force produced by said remagnetization and is positively moved in response thereto.

3,089,132
FERROELECTRIC CODE TRANSLATOR
Irmfried M. Vogt, East Orange, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 30, 1958, Ser. No. 783,852
20 Claims. (Cl. 340—347)



19. A ferroelectric translating device including an initial stage and a terminal stage of ferroelectric crystal translators, each of said translators comprising a plurality of ferroelectric condensers, said crystal translators having input electrodes and output electrodes and a plurality of output conductors individually connected to said output electrodes, inverter amplifier means connected to the input electrodes of said initial stage, amplifier means coupling said output conductors of said initial stage to said input electrodes of said terminal stage, said terminal stage including two groups of crystal translators, means for selectively conditioning one of said groups to an operative state, and means effective on the activation of said initial stage input electrode and the conditioning of one of said groups to an operative state to energize only one of said output conductors from said one group, wherein said crystal translators in said initial stage comprise a ferroelectric translator comprising a slab of ferroelectric material, said input electrodes being disposed on one face of said slab, said output electrodes being disposed on the opposite face of said slab and positioned to intersect said input electrodes in accordance with a code to be translated, unit area condensers being formed at the intersection of said electrodes, and a tank electrode disposed on said one face of said slab and positioned to intersect all of said input electrodes to form additional condensers, the area of each of said additional condensers formed between said tank electrode and a particular output electrode being one unit less than the sum of the units of area of said condensers formed between said input electrodes and said particular output electrode, and means connecting said tank electrode to a source of reference potential, and wherein said crystal translators in said terminal stage comprise a ferroelectric translator comprising a slab of ferroelectric material, said input electrodes being disposed on one face of said slab, said output electrodes being disposed on the opposite face of said slab and positioned to intersect in accordance with a code to be translated, unit area condensers being formed at the intersection of said electrodes, spaced first and second common electrodes disposed on said one face and positioned to intersect all of said output electrodes to form a number of additional condensers, the sum of the areas of each of said additional condensers formed between said common electrodes and a particular output electrode being equal to the sum of the areas of said condensers formed between said input electrodes and said particular output electrode.

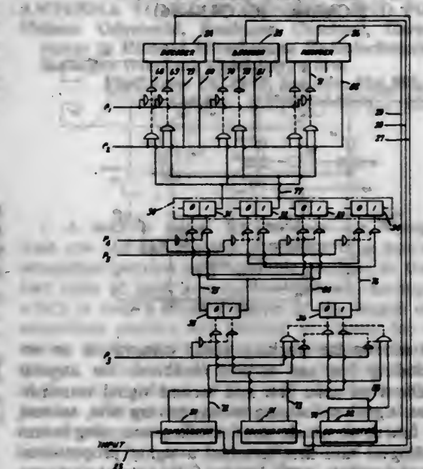
3,089,133
DYNAMIC CODERS
Maurice Koulicovitch, Geneva, Switzerland, assignor to Société Genevoise d'Instruments de Physique, a firm of Switzerland
Filed Mar. 1, 1960, Ser. No. 12,178
Claims priority, application Switzerland Mar. 6, 1959
8 Claims. (Cl. 340—347)



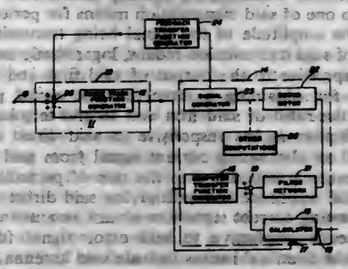
1. An apparatus for converting analogic information into numerical information, comprising a movable track carrier provided with at least one group of parallel code tracks, and with an additional track interrupted in registry with each area of the carrier corresponding to an uncertain reading of said code tracks, means driving said carrier in accordance with the information to be converted, scanning means adapted to be shifted at a high speed across each group of code tracks, scanning means for said additional track, electromagnetic means controlled by last-mentioned scanning means, a movable diaphragm shifted transiently by said electromagnetic means in front of the first-mentioned scanning means to prevent its operation during the passage of said area of uncertainty across the scanning means, and indicating means controlled by said scanning means.

3,089,134
METHOD AND SYSTEM FOR ENCODING A SIGNAL INTO BINARY CODE GROUPS
John L. Robinson, Wenonah, N.J., assignor, by mesne assignments, to Philco Corporation, Philadelphia, Pa., a corporation of Delaware
Filed Mar. 25, 1960, Ser. No. 17,579
6 Claims. (Cl. 340—347)

6. An encoder system for encoding into a binary code group of four elements the instantaneous amplitude of a signal whose amplitude varies within a given range, comprising three decoders, three comparators, means for supplying the individual outputs of said decoders respectively and simultaneously to said comparators, means for supplying said signal simultaneously to all of said comparators, means for translating the outputs of said comparators into binary code elements, a register, means including a plurality of bistable circuits for transferring the binary code elements to said register, means for causing said decoders to supply respectively and simultaneously to said comparators three predetermined reference voltages respectively representative of different amplitude levels within said signal range, whereby the outputs of said comparators are translated into a first pair of binary code elements which are stored in said register and which are representative of a sub-range within said signal range, and means for causing said decoders to supply respectively and simultaneously to said comparators three other predetermined reference voltages respectively representative of different amplitude levels within said sub-range, whereby the outputs of said comparators are translated into a second pair of binary code elements which are stored in said register and which are representative of a signal amplitude within said sub-range.

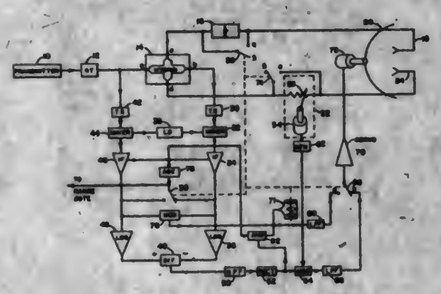


3,089,135
RANGE TRACK AIDING CIRCUITS
Robert H. Loomis, Elkridge, Md., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Mar. 3, 1958, Ser. No. 718,931
6 Claims. (Cl. 343—7.3)



6. In combination: a radar receiver, a computer and adding means; said radar receiver having a range track loop including a function generator for generating a delayed range signal; said computer having input and output means and producing an errorless output signal when an undelayed range signal is applied to said input means, means coupling said delayed signal to said computer input means; said adding means having input and output means, terminal means connected to said adding input means and adapted to be coupled to a radar range input signal, feedback circuit means coupling said delayed range signal to said adding input means, means coupling said adding output means to the input of said function generator, and transfer function generator means for removing the delay of said signal coupled between the output of said computer and the input of said adding means.

3,089,136
TWIN TARGET RESOLVER
Walter J. Albersheim, Waban, Mass., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Army
Filed Oct. 18, 1960, Ser. No. 63,454
5 Claims. (Cl. 343—16)



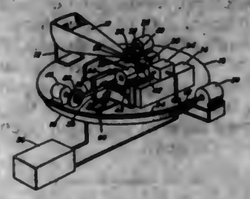
1. In a monopulse tracking radar comprising an antenna including first and second feedhorns for angular tracking about an axis, first and second signal transmission means, signal processing means having first, second, third and fourth terminals and including summing means for providing at said first terminal a signal proportional to the sum of signals applied to said third and fourth terminals and including difference means for providing at said second terminal a signal proportional to the difference of signals applied to said third and fourth terminals, said first transmission means connecting said first feedhorn to said third terminal, said second transmission means connecting said second feedhorn to said fourth terminal, and electrical means coupled to said antenna for training said antenna about said axis; the modification comprising adjacent target resolving means comprising means coupled to said first transmission means for shifting the phase of the signal being transmitted by

$$\frac{\lambda}{2}$$

compared with the phase of the signal being transmitted by said second transmission means, modulation means coupled to one of said transmission means for periodically varying the amplitude of the signal being transmitted by said one of said transmission means, logarithmic amplifier means responsive to the output of said first and second terminals for obtaining a direct current signal proportional to the ratio of said first and second terminal outputs, multiplier means responsive to said direct current signal and an alternating current signal from said modulation means corresponding to the rate of periodic variation of said amplitude for multiplying said direct current and alternating current signals to obtain an antenna error signal, means responsive to said error signal for controlling said electrical means to train said antenna.

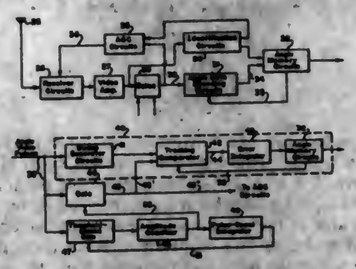
3,089,137
POLARIZATION TRACKING RECEIVER
John R. Pierce, Berkeley Heights, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed July 1, 1959, Ser. No. 824,345
3 Claims. (Cl. 343—100)

1. In a system for receiving linearly polarized waves of varying polarization, an antenna capable of delivering to its feed point linearly polarized waves of any polarization, a receiver for linearly polarized waves, and transmission means interconnecting the feed point of said antenna and said receiver and responsive with greatest efficiency to linearly polarized waves having a particular plane of polarization, means for continuously oscillating the said particular plane of polarization through a small angle, separate means for storing the outputs of said receiver during the respective halves of the rotation of said



particular plane of polarization, and means responsive to the net difference between the quantities stored in said storage means to rotate said particular plane of polarization until said net difference is zero.

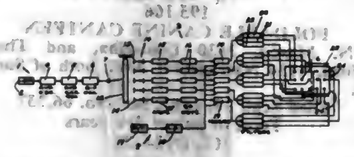
3,089,138
PULSE-COUNT THRESHOLD CONTROL CIRCUIT
Frederick H. Battle, Jr., Seaford, N.Y., assignor to Cutler-Hammer, Inc., Milwaukee, Wis., a corporation of Delaware
Filed Oct. 13, 1961, Ser. No. 145,000
15 Claims. (Cl. 343—106)



1. In a radio navigation system in which a scanning beam is transmitted from a site and pulse-coded in accordance with the beam angle from a predetermined reference angle, a receiver for receiving and decoding the scanning beam which comprises
(*a*) receiving means for producing pulses corresponding to the beam angle-coding pulses,
(*b*) a variable threshold gate for passing pulses supplied thereto from the receiving means which exceed the threshold level thereof,
(*c*) means for varying the threshold of said gate to maintain substantially constant the number of pulses passing therethrough,
(*d*) and means for utilizing pulses corresponding to the pulses passing through said gate to decode the angle represented thereby.

2. In a radio navigation system in which a scanning beam is transmitted from a site and pulse-coded in accordance with the beam angle from a predetermined reference angle, a receiver for receiving and decoding the scanning beam which comprises,
(*a*) receiving means for producing pulses corresponding to the beam angle coding pulses,
(*b*) a variable threshold gate for passing pulses supplied thereto from the receiving means which exceed the threshold level thereof,
(*c*) means for varying the threshold of said gate to maintain substantially constant the number of pulses passing therethrough,
(*d*) and means for utilizing pulses corresponding to the pulses passing through said gate to control the gain of the receiving means.

3,089,139
PROXIMITY WARNING SYSTEM
Albert S. Hovanessian, Arlington, Ansel J. Gere, Westwood, and Charles Cicciarella, Wakefield, Mass., assignors to Diamond Antenna & Microwave Corporation, Wakefield, Mass.
Filed May 1, 1958, Ser. No. 732,367
10 Claims. (Cl. 343—112)



3. A cooperative system for aircraft to aircraft collision avoidance comprising means for emitting a radio frequency signal modulated at a frequency indicative of the altitude of said emitting means, and separate means adapted to be mounted in a detecting aircraft comprising radio frequency detecting means having individual elements independently sensitive to said signals from different azimuthal originations for detecting and displaying said signals in a visual array corresponding with the azimuthal origination of said signals, and means sensitive to said modulated radio frequency signal for detecting and interpreting said modulating frequency.

3,089,140
MULTI-BAND ANTENNA WITH END MOUNTED LOADING SECTION
Wilbert Monola, 631 Nevada Drive, Erie, Pa.
Filed July 22, 1959, Ser. No. 828,785
21 Claims. (Cl. 343—722)



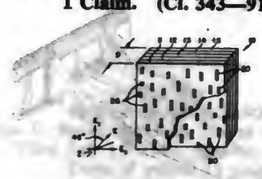
17. An antenna comprising a radiator having an electrical length substantially equal to a quarter wave length of a predetermined frequency, an inductor connected to said radiator at or near the end opposite the feed point, a loading capacitor connected in series with said inductor and said radiator, said inductor having a high impedance and acting as a radio frequency choke at said predetermined frequency, said inductor and said capacitor acting as an additional electrical length to said radiator at a lower frequency than said predetermined frequency, thus providing operation on two different frequencies, and a second inductor with a capacitor in series therewith connected in series with said first mentioned inductor and capacitor, said second inductor being of a value to act as a radio frequency choke at said lower frequency and to act as an additional electrical length to said radiator and said first inductor and capacitor at a still lower frequency than said lower frequency, thus allowing operation on three frequencies, said capacitors comprising split rings having spokes attached thereto and extending radially therefrom, said rings being disposed concentric to said radiator.

3,089,141
ANTENNA TUNED BY BENDING END PORTIONS
Helmut Odenwald, Esslingen (Neckar), Germany, assignor to Richard Hirschmann Radiotechnisches Werk, Esslingen (Neckar), Germany, a firm
Filed June 10, 1955, Ser. No. 514,598
8 Claims. (Cl. 343—802)



1. A tunable aerial for outdoor use, comprising at least one rod-like element consisting of a non-elastic intermediate portion and bendable sections at the extreme free ends of said intermediate portion, having a length which is only a small fraction of the length of said intermediate portion and serving as means for reversible tuning of the aerial within predetermined limits of frequency, said bendable sections at least at their portions in the neighborhood of the said non-elastic intermediate portion offering less resistance to bending than the said non-elastic intermediate portion, so that said bendable sections can be bent easily backward and forward through an angle up to 180° several times without breaking off and will remain in any bent position.

3,089,142
ARTIFICIAL DIELECTRIC POLARIZER
Arthur F. Wickersham, Jr., Sunnyvale, Calif., assignor to Sylvania Electric Products Inc., a corporation of Delaware
Filed Oct. 30, 1959, Ser. No. 849,781
1 Claim. (Cl. 343—911)



A broadband artificial dielectric having an index of refraction which decreases with an increase in the frequency of incident electromagnetic wave energy comprising a plurality of stacked planar dielectric arrays, each of said arrays having a plurality of elongated resonant conducting strips supported in spaced relation in a common plane and being oriented with their long axes parallel to each other and to the axes of strips in the other arrays, the position coordinates of said resonant strips in each array being varied in a random manner derived from a table of random digits, the lengths of said resonant strips in each array being varied whereby the strips are resonant at different frequencies of the electromagnetic wave energy, said arrays being stacked along an axis with adjacent arrays axially spaced apart.

DESIGNS

MAY 7, 1963

195,163
SHOE
Sidney Sandler, 310 E. 44th St., Manhattan, N.Y.
Filed Oct. 24, 1962, Ser. No. 72,241
Term of patent 7 years
(Cl. D7—7)



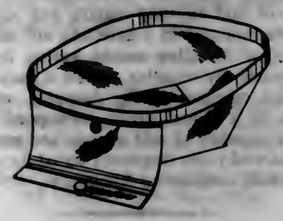
195,164
HINGE
Harold J. Carlson, Union Pier, Mich., assignor to W. H. Miner, Inc., Chicago, Ill., a corporation of Delaware
Filed Feb. 5, 1962, Ser. No. 68,688
Term of patent 14 years
(Cl. D10—9)



195,165
SELF-FEEDER FOR SMALL ANIMALS
Wallace M. L. Johnson, 861 Clayland St., St. Paul, Minn.
Filed Sept. 11, 1961, Ser. No. 66,678
Term of patent 14 years
(Cl. D12—2)



195,166
FOLDABLE CANINE CANTEEN
Hollis N. Mason, 3630 Louisiana, and Thomas J. Lunsford, 4134 Narragansett Ave., both of San Diego, Calif.
Filed Sept. 18, 1961, Ser. No. 66,737
Term of patent 3½ years
(Cl. D12—2)



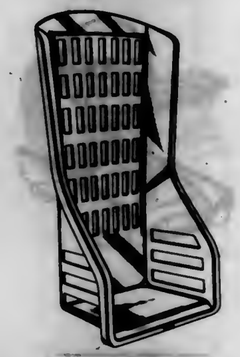
195,167
PET ANIMAL MASTICATION AID OR SIMILAR ARTICLE
Ralph Sena, Glen Oaks, N.Y., assignor to Reliance International Mfg., Ltd., Hempstead, N.Y., a corporation of New York
Filed May 2, 1962, Ser. No. 69,928
Term of patent 14 years
(Cl. D12—2)



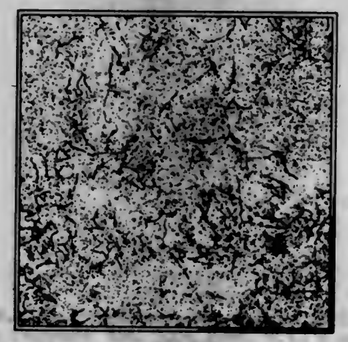
195,168
PET ANIMAL MASTICATION AID OR SIMILAR ARTICLE
Ralph Sena, Glen Oaks, N.Y., assignor to Reliance International Mfg., Ltd., Hempstead, N.Y., a corporation of New York
Filed May 2, 1962, Ser. No. 69,941
Term of patent 3½ years
(Cl. D12—2)



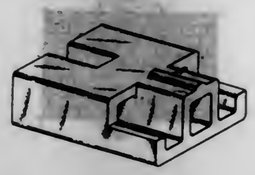
195,169
BABY CARRIER
Alfred J. Ouellette, St. Paul, Minn., assignor, by mesne assignments, to Infanseat Company, Eldora, Iowa, a corporation of Iowa
Filed Jan. 30, 1959, Ser. No. 54,392
Term of patent 14 years
(Cl. D15—1)



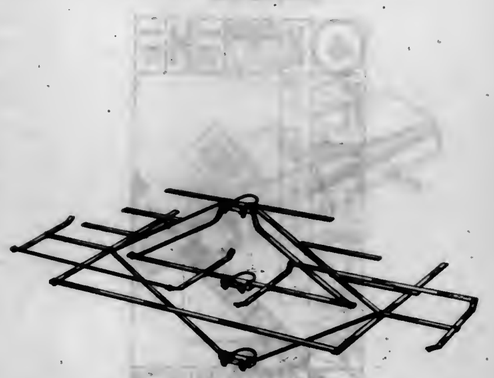
195,170
CEILING TILE OR SIMILAR ARTICLE
David B. Anderson, St. Paul, Minn., and Philip M. Brody, Scarsdale, and Frederic H. Rahr, New York, N.Y., assignors to Wood Conversion Company, St. Paul, Minn., a corporation of Delaware
Filed June 14, 1961, Ser. No. 65,587
Term of patent 14 years
(Cl. D18—2)



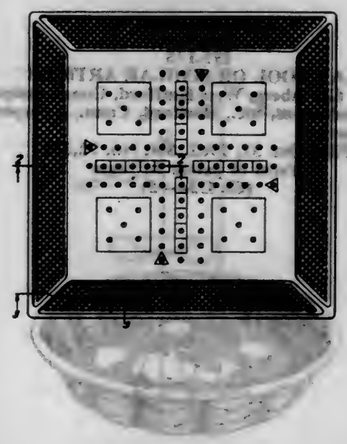
195,171
ELECTRICAL CONNECTOR HOUSING BLOCK
Joseph R. Keller, Harrisburg, Pa., assignor to AMP Incorporated, Harrisburg, Pa.
Filed Sept. 10, 1962, Ser. No. 71,639
Term of patent 14 years
(Cl. D26—1)



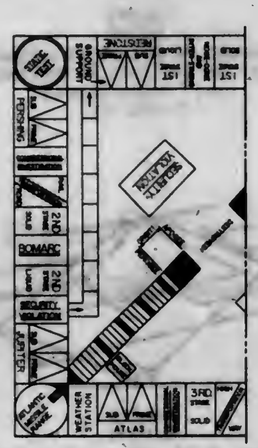
195,172
TELEVISION ANTENNA
Thomas Vitanza, Buffalo, N.Y.
(242 Capen Blvd., Eggertsville, N.Y.)
Filed July 13, 1962, Ser. No. 70,915
Term of patent 14 years
(Cl. D26—14)

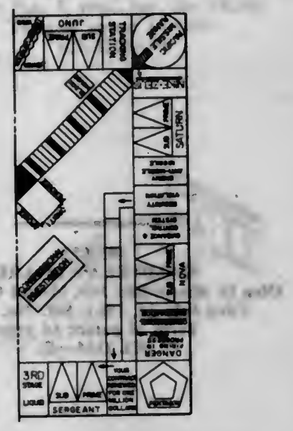


195,173
GAME PLAY BOARD
Olen D. Sharp, Box 349, Mount Carmel, Ill.
Filed July 14, 1961, Ser. No. 65,920
Term of patent 14 years
(Cl. D34—5)



195,174
GAME BOARD
Newburn V. Ragsdale, 1009 Harrison Ave., Huntsville, Ala.
Filed Sept. 15, 1961, Ser. No. 66,724
Term of patent 3½ years
(Cl. D34—5)





195,175
PLAY POOL OR SIMILAR ARTICLE
Leonard E. Greenberg, West Hartford, Conn., assignor to Coleco Industries, Inc., Hartford, Conn., a corporation of Connecticut
Filed Oct. 31, 1962, Ser. No. 72,322
Term of patent 14 years
(Cl. D34—5)



195,176
ANIMATED RACING DRIVER TOY
Arthur Schifrin, 3820 14th Ave., Brooklyn, N.Y.
Filed Sept. 26, 1962, Ser. No. 71,873
Term of patent 3½ years
(Cl. D34—15)



195,177
RIDING ROTARY MOWER
John A. Gale, Minneapolis, Minn., assignor to Toro Manufacturing Corporation, Minneapolis, Minn., a corporation of Minnesota
Continuation of design applications Ser. No. 62,410, Oct. 7, 1960, and Ser. No. 62,411, Oct. 7, 1960. This application Sept. 28, 1962, Ser. No. 71,993
Term of patent 14 years
(Cl. D40—1)

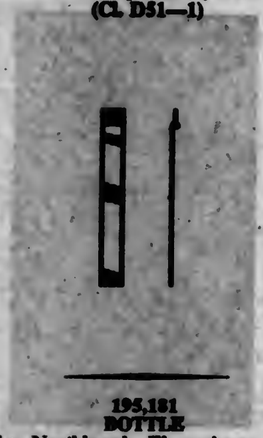
195,178
LIGHTING PANELING
Elmer Szantay, 735 S. Karlov Ave., Chicago, Ill.
Filed Apr. 18, 1961, Ser. No. 64,806
Term of patent 14 years
(Cl. D48—16)



195,179
MARINE LANTERN
Nolan K. Rhoades, Beloit, Wis., assignor to The Electric Storage Battery Company, Philadelphia, Pa., a corporation of New Jersey
Filed Aug. 29, 1962, Ser. No. 71,494
Term of patent 14 years
(Cl. D48—24)



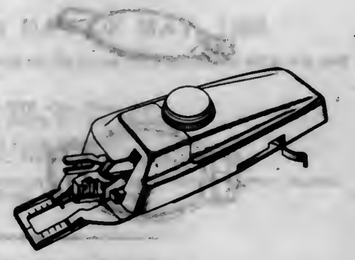
195,180
BRICKLAYER'S LINE HOLDER
Ralph C. Surratt, 5637 W. 38th Ave., Denver, Colo.
Filed Feb. 5, 1962, Ser. No. 68,689
Term of patent 7 years
(Cl. D51—1)



195,181
BOTTLE
Roy W. Dike, Northbrook, Ill., assignor to Continental Can Company, Inc., New York, N.Y., a corporation of New York
Filed Mar. 21, 1962, Ser. No. 69,355
Term of patent 14 years
(Cl. D58—5)



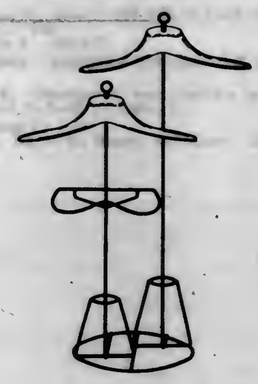
195,182
BUTTONHOLE ATTACHMENT FOR A SEWING MACHINE
Russell A. Fritts, Cranford, N.J., assignor to The Singer Manufacturing Company, Elizabeth, N.J., a corporation of New Jersey
Filed July 16, 1962, Ser. No. 70,944
Term of patent 14 years
(Cl. D70—2)



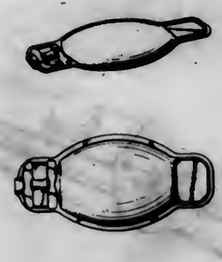
195,183
BOAT
James O. Thomas, 3253 McGill Road, Cincinnati, Ohio
Filed Sept. 22, 1960, Ser. No. 62,233
Term of patent 14 years
(Cl. D71—1)



195,184
GARMENT DISPLAY STAND
Daniel E. Gelles, New York, N.Y. (115 Ocean Ave., Brooklyn, N.Y.)
Filed May 16, 1962, Ser. No. 70,171
Term of patent 14 years
(Cl. D60—8)



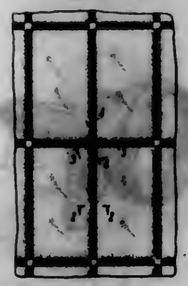
195,185
THERAPEUTIC CONTAINER FOR ICE WATER AND THE LIKE
Sidney R. Witz, 340 N. Mansfield Ave., Los Angeles, Calif.
Filed Feb. 23, 1961, Ser. No. 64,024
Term of patent 3½ years
(Cl. D83—1)



195,186
SYRINGE
Harold Hershenson, Burbank, Calif., assignor to Pharmaseal Laboratories, Glendale, Calif., a corporation of California
Filed Jan. 29, 1962, Ser. No. 68,557
Term of patent 14 years
(Cl. D83—1)



195,187
QUILTED PLASTIC SHEET MATERIAL
Irvin S. Kramer, Lynbrook, N.Y., assignor to The Barr Corporation, Richmond Hill, N.Y.
Filed Oct. 20, 1961, Ser. No. 67,191
Term of patent 14 years
(Cl. D67—3)



195,188
PLASTIC CURTAIN
William Z. Salcer, Rego Park, N.Y., assignor to B. & S. Plastic Art, Inc., Jersey City, N.J., a corporation of New Jersey
Filed Oct. 17, 1962, Ser. No. 72,149
Term of patent 7 years
(Cl. D92—26)







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Brown, Cicero C. Well packer. Re. 25,381, 5–7–63, Cl. 166—134.
Douglas, Alvin P., to The Murray Ohio Mfg. Co. Juvenile vehicle body construction. Re. 25,382, 5–7–63, Cl. 296—28.
Lincoln, Murray S. Spike-grip for interchangeable fur collars. Re. 25,378, 5–7–63, Cl. 2—96.
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Ackerman, Dolletta M. Re. 25,380.
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Krilloff, Michel. 2,258.
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AMP Inc.: *See*—
Keller, Joseph R. 195,171.
Anderson, David B., P. M. Brody, and F. H. Rahr, to Wood Conversion Co. Ceiling tile or similar article. 195,170, 5–7–63, Cl. D18—2.
B. & S. Plastic Art, Inc.: *See*—
Salcer, William Z. 195,188.
Barr Corp., The: *See*—
Kramer, Irvin S. 195,187.
Brody, Philip M.: *See*—
Anderson, David B., Brody, and Rahr. 195,170.
Carlson, Harold J., to W. H. Miner, Inc. Hinge. 195,164, 5–7–63, Cl. D10—9.
Coleco Industries, Inc.: *See*—
Greenberg, Leonard E. 195,175.
Continental Can Co., Inc.: *See*—
Dike, Roy W. 195,181.
Dike, Roy W., to Continental Can Co., Inc. Bottle. 195,181, 5–7–63, Cl. D58—5.
Electric Storage Battery Co., The: *See*—
Rhoades, Nolan K. 195,179.
Fritts, Russell A., to The Singer Mfg. Co. Buttonhole attachment for a sewing machine. 195,182, 5–7–63, Cl. D70—2.
Gale, John A., to Toro Mfg. Corp. Riding rotary mower. 195,177, 5–7–63, Cl. D40—1.
Geller, Daniel E. Garment display stand. 195,184, 5–7–63, Cl. D80—3.
Greenberg, Leonard E., to Coleco Industries, Inc. Play pool or similar article. 195,175, 5–7–63, Cl. D34—5.
Hershenson, Harold, to Pharmaseal Laboratories. Syringe. 195,186, 5–7–63, Cl. D83—1.
Infanseat Co.: *See*—
Ouellette, Alfred J. 195,169.
Johnson, Wallace M. L. Self-feeder for small animals. 195,165, 5–7–63, Cl. D12—2.
Keller, Joseph R., to AMP Inc. Electrical connector housing block. 195,171, 5–7–63, Cl. D26—1.
Kramer, Irvin S., to The Barr Corp. Quilted plastic sheet material. 195,187, 5–7–63, Cl. D67—3.
Lunsford, Thomas J.: *See*—
Mason, Hollis N., and Lunsford. 195,166.
Mason, Hollis N., and T. J. Lunsford. Foldable canine canteen. 195,166, 5–7–63, Cl. D12—2.
Miner, W. H., Inc.: *See*—
Carlson, Harold J. 195,164.
Ouellette, Alfred J., to Infanseat Co. Baby carrier. 195,169, 5–7–63, Cl. D15—1.
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Hershenson, Harold. 195,186.
Ragsdale, Newburn V. Game board. 195,174, 5–7–63, Cl. D34—5.
Rahr, Frederic H.: *See*—
Anderson, David B., Brody, and Rahr. 195,170.
Reliance International Mfg., Ltd.: *See*—
Sena, Ralph. 195,167.
Sena, Ralph. 195,168.
Rhoades, Nolan K., to The Electric Storage Battery Co. Marine lantern. 195,179, 5–7–63, Cl. D48—24.
Salcer, William Z., to B. & S. Plastic Art, Inc. Plastic curtain. 195,188, 5–7–63, Cl. D92—26.
Sandler, Sidney. Shoe. 195,163, 5–7–63, Cl. D7—7.
Schifrin, Arthur. Animated racing driver toy. 195,176, 5–7–63, Cl. D34—15.
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Sena, Ralph, to Reliance International Mfg., Ltd. Pet animal mastication aid or similar article. 195,168, 5–7–63, Cl. D12—2.
Sharp, Olen D. Game play board. 195,173, 5–7–63, Cl. D34—5.
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Fritts, Russell A. 195,182.
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Thomas, James O. Boat. 195,183, 5–7–63, Cl. D71—1.
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Gale, John A. 195,177.
Vitanza, Thomas. Television antenna. 195,172, 5–7–63, Cl. D26—14.
Witz, Sidney R. Therapeutic container for ice water and the like. 195,185, 5–7–63, Cl. D83—1.
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Anderson, David B., Brody, and Rahr. 195,170.

LIST OF PATENTEES

TO WHOM

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Moret, Michel. 3,088,148.

Aaron, James R., to Hyster Co. Vehicle having emergency equipment. 3,088,284, 5-7-63, Cl. 60—52.

Abel, Verlin R. Experimental bee colony device. 3,088,184, 5-7-63, Cl. 6—1.

Abernethy, Ira A.: *See*—
Feichter, Harold R., and Abernethy. 3,088,588.

Abraham, George. Multistable circuit employing devices in cascade connection to produce a composite voltage-current characteristic with a plurality of negative resistance regions. 3,089,039, 5-7-63, Cl. 307—88.5.

Abrams, Ralph, to Cable Electric Products, Inc. Time lag fuses. 3,089,012, 5-7-63, Cl. 200—123.

Adelman, Barnet R., and H. T. Lawrence, to United Aircraft Corp. Solid propellant rocket. 3,088,273, 5-7-63, Cl. 60—35.6.

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McClelland, James F., Jr., and Brown. 3,088,569.

Aeroquip Corp., *See*—
Cowan, Willard R., and White. 3,088,349.
May, Richard J. 3,088,756.

Aguilar, Gilbert E. Vacuum cleaner cover. 3,088,157, 5-7-63, Cl. 15—323.

Ahles, Alfred: *See*—
Wichmann, Hans J., Ahles, Schorr, and Carr. 3,088,387.

Aiken, William R., to Ross Radio Corp. Signalling device. 3,089,120, 5-7-63, Cl. 340—44.

Ainsworth, Dwight J.: *See*—
Corsette, William T. 3,088,759.

Air Preheater Corp., The: *See*—
Lyle, Charles A. 3,088,519.

Air Products and Chemicals, Inc.: *See*—
Stevenson, Donald H. 3,088,986.

Air Reduction Co., Inc.: *See*—
Hay, Wayne W. 3,088,810.
Spies, George R., Jr. 3,088,854.

Ajax Magnethermic Corp.: *See*—
Tama, Mario, and Shearman. 3,088,182.

Albernheim, Walter J., to United States of America, Army. Twin target resolver. 3,089,136, 5-7-63, Cl. 343—16.

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Clark, Homer E., Jr. 3,088,405.

Alex, Max, to Sparkletts Drinking Water Corp. Water cooler. 3,088,289, 5-7-63, Cl. 62—3.

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Alexandrovich, George, to Fairchild Recording Equipment Corp. Compensated tone arms. 3,088,742, 5-7-63, Cl. 274—23.

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Alford, Andrew. Coaxial choke coupler. 3,089,105, 5-7-63, Cl. 333—73.

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Self, Richard E., and Allan. 3,088,442.

Allan, Earl E.: *See*—
Cabble, George M., Jr., and Allan. 3,088,557.

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Feldman, Julian, Saffer, and Allgeier. 3,088,982.

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Funkhouser, Garland B. 3,088,819.
Little, Edwin D., and Poon. 3,088,948.

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Codlin, James B. 3,088,760.

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Myers, Robert R. 3,088,761.

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Guertin, Clifford D. 3,088,841.

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Pare, Phillip J. 3,088,967.
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Sugarman, Meyer L., Jr. 3,088,386.

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White, Clyde C., Jr., and Amsler. 3,088,309.

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Corey, Jule E., and Sharp. 3,088,677.

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Wichmann, Hans J., Ahles, Schorr, and Carr. 3,088,387.

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Lee, Robert H. 3,089,075.
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Alexander, Warren A., and Bayhi. 3,088,541.

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Ljungquist, Ernst R., and Bedard. 3,088,156.

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Beilsten, Harry L., V. Cupp, and E. D. Murphy; said Beilsten and said Cupp assors. to said Murphy. Animated lure. 3,088,240, 5-7-63, Cl. 43—26.2.

Bell, Norton W., to Consolidated Electrodynamics Corp. Direct current amplifiers. 3,089,097, 5-7-63, Cl. 330—9.

Bell Punch Co. Ltd.: *See*—
Condy, John H., and Kitz. 3,089,058.

Bell Telephone Laboratories, Inc.: *See*—
Cutler, Cassius C. 3,088,097.
De Fiza, Angelo L., and Keller. 3,089,003.
Pierce, John R. 3,089,137.
Vogt, Irmfried M. 3,089,132.
Williford, Oscar H. 3,089,001.

Bellis, John V., to H. J. Turner. Catfish skin and head removing tool. 3,088,168, 5-7-63, Cl. 17—3.

Beloit Iron Works: *See*—
Hornbostel, Lloyd, Jr. 3,088,355.

Bemis Bro. Bag Co.: *See*—
Berven, Harold T. 3,088,662.

Bemmann, Richard W., and D. W. Turner, to General Motors Corp. Transmission control system. 3,088,337, 5-7-63, Cl. 74—752.

Bendix Corp., The: *See*—
Boatman, Paul M. 3,088,909.
Burnett, Richard T. 3,088,551.
Cole, Judson C., and Hall. 3,089,114.
Desvignes, Jean L., and Gascel. 3,088,554.
Logan, James J. 3,088,282.
Morgan, William H. 3,089,131.

Beninger, Robert L., and P. W. Jacobsen, to H. G. Weber and Co., Inc. Hydraulic system. 3,088,588, 5-7-63, Cl. 242—57.1.

Benner, Paul B., D. R. Chicoine, and L. F. Dickeson, to Caterpillar Tractor Co. Hydraulic control system with pressure control valve. 3,088,488, 5-7-63, Cl. 137—621.

Bennett, Elmer F., ⅛ to Ledford-Todd Corp. Aligning device. 3,088,214, 5-7-63, Cl. 33—203.15.

Benoti, Robert L.: *See*—
Mackiw, Vladimir N., Kunda, and Benoti. 3,088,803.

Berg Airlectro Products Co.: *See*—
Debrikin, Harold L., and Bredl. 3,088,311.

Berg, Richard D., to Western Electric Co., Inc. Torque testing apparatus. 3,088,313, 5-7-63, Cl. 73—139.

Berglund, Harry R., and A. R. Wagner, to Burroughs Corp. Recording apparatus. 3,088,400, 5-7-63, Cl. 101—93.

Bergmann, Anders K., A. H. Elldin, A. C. Jacobaeus, C. G. Svala, and G. E. Welander, to Telefonaktiebolaget LM Ericsson. Electronic telephone system. 3,088,996, 5-7-63, Cl. 179—15.

Berkley Machine Co.: *See*—
Winkler, Richard, and Dunnebier. 3,088,382.

Bernstein, Robert, and D. V. Zinn, to Fruehauf Trailer Co. Bottom dump trailer construction. 3,088,774, 5-7-63, Cl. 298—37.

Berres, Clifford R., G. E. Tabet, and E. A. Wilder, to S. C. Johnson & Son, Inc. Novel emulsifiable waxy linear polyesters. 3,088,928, 5-7-63, Cl. 260—20.2.

Berry, Vivien C. Automatically adjustable mooring structure for vessels. 3,088,287, 5-7-63, Cl. 61—48.

Berryhill, Emma L., and W. L. Sayer. Hair conditioner and retainer. 3,088,460, 5-7-63, Cl. 132—9.

Bervan, Harold T., to Bemis Bro. Bag Co. Bag. 3,088,652, 5-7-63, Cl. 229—56.

Bethlehem Steel Co.: *See*—
Brion, Dalton F., Norback, and Winkler. 3,088,821.

Betz Laboratories, Inc.: *See*—
Kahler, Harry L., and Brown. 3,088,796.

Bianchini, Andrew F. Industrial hammer with replaceable heads. 3,088,526, 5-7-63, Cl. 145—36.

Billingham, Joseph, Ltd.: *See*—
Perl, Albert H. F. 3,088,203.

Birdsall, Dale H., and R. E. Riley, to United States of America, Atomic Energy Commission. Magnetic shaping process. 3,088,200, 5-7-63, Cl. 29—421.

Birkenes, Bernhard, to Motorola, Inc. Radio receiver. 3,089,087, 5-7-63, Cl. 325—319.

Bissing, Paul E., to Philco Corp. Cathode ray tube faceplate construction. 3,089,052, 5-7-63, Cl. 313—110.

Bishop, Leonard J., to Mechanical Handling Systems, Inc. Flexible rail type stop and release mechanism for overhead conveyor. 3,088,419, 5-7-63, Cl. 104—172.

Bitterlich, Gordon M., A. L. Primas, and P. P. Hahn, to Thermal Research & Engineering Corp. Submerged exhaust combustion unit. 3,088,812, 5-7-63, Cl. 23—281.

Bittner, Ernst, to The Scholl Mfg. Co., Inc. Sliding buckle for strap ends. 3,088,184, 5-7-63, Cl. 24—175.

Black, Geoffrey D., to The British Oxygen Co. Ltd. Apparatus for controlling or assisting respiration. 3,088,455, 5-7-63, Cl. 128—29.

Black, Robert L., to General Motors Corp. Transmission. 3,088,339, 5-7-63, Cl. 74—761.

Black, Sivalls & Bryson, Inc.: *See*—
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Blackhall, Douglas J. W., and T. Robertson, to J. Blakeborough & Sons Ltd. Wedge type valves for fluids. 3,088,705, 5-7-63, Cl. 251—187.

Blakeborough, J., & Sons Ltd.: *See*—
Blackhall, Douglas J. W., and Robertson. 3,088,705.

Blason, Inc.: *See*—
Grudoski, Daniel A. 3,088,734.

Bloem, Jan: *See*—
Lemmens, Hendrikus J., Bloem, de Haan, and Jansen. 3,088,851.

Bloom, Aaron, to Sierra Engineering Co. Suffocation inhibiting inhalator-exhalator valve. 3,088,477, 5-7-63, Cl. 137—64.

Bloom Engineering Co., Inc.: *See*—
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Boatman, Paul M., to The Bendix Corp. Oxygen determination. 3,088,909, 5-7-63, Cl. 23—232.

Bochan, John, to General Electric Co. Clothes washing machine with rinsing agent dispenser arrangement. 3,088,304, 5-7-63, Cl. 68—12.

Bode, Albert: *See*—
Schultheis, Werner, Schimmelschmidt, Hoffmann, Baier, and Bode. 3,088,790.

Bodrov Alexander D.: *See*—
Petrov, Vasily V., and Bodrov. 3,088,366.

Boensel, Donald W., to United States of America, Army. Reduced turn-off time transistor switch. 3,089,041, 5-7-63, Cl. 307—88.5.

Bofors, Aktiebolaget: *See*—
Gustafsson, Axel G. V. and P. O. L. 3,088,901.

Bolton, Robert H., to Sperry Rand Corp. Electromagnetic transducer device. 3,089,044, 5-7-63, Cl. 310—36.

Bonanni, Angelo P. Method of preparing a diisocyanate-based laminating resin. 3,088,934, 5-7-63, Cl. 260—77.5.

Bone, Ravella M. Illuminated water sprayer. 3,088,675, 5-7-63, Cl. 239—20.

Bonic, Isaac. Device for clearing snow from the path of an automobile wheel. 3,088,230, 5-7-63, Cl. 37—53.

Bonner, Willard H., Jr., to E. I. du Pont de Nemours and Co. Process for spinning and drawing polyalkylene isophthalamides. 3,088,794, 5–7–63, Cl. 18—54.

Bonnierföretagen, AB: *See*—
Nilsson, Herman B. 3,088,604.

Boone, Garret J. Game apparatus. 3,088,737, 5–7–63, Cl. 273—85.

Borna, Cielio C. Control and alarm system for brake shoe linings of motor cars and the like. 3,088,549, 5–7–63, Cl. 188—1.

Borsuk, Harold. Dental cavity filling device. 3,088,207, 5–7–63, Cl. 32—60.

Boteh, Sven R., to Jonn Robertson Co., Inc. Method for continuous extrusion of metals. 3,088,589, 5–7–63, Cl. 207—10.

Boucher, Reginald C., to E.P.S. (Research & Development) Ltd. Protective containers. 3,088,619, 5–7–63, Cl. 220—1.5.

Boudreau, John L. Pistol with slidable and fixed breech block. 3,088,378, 5–7–63, Cl. 89—161.

Bourns, Inc.: *See*—
Bourns, Marlan E., and Caddock. 3,089,110.

Bourns, Marlan E., and R. E. Caddock; said R. E. Caddock assor. to Bourns, Inc. Variable resistors. 3,089,110, 5–7–63, Cl. 338—183.

Bowers, Albert, and H. J. Ringold, to Syntex Corp. 18-cyano derivatives of Δ⁴-3-keto pregnenes. 3,088,952, 5–7–63, Cl. 260—397.3.

Boyette, Noah A. Tobacco rack. 3,088,603, 5–7–63, Cl. 214—5.5.

Boyle, Francis K., and J. J. Duane, to Union Carbide Corp. Cleaning and polishing sponge. 3,088,158, 5–7–63, Cl. 15—506.

Bracey, Kenneth E. G.: *See*—
Petrie, James A., and Bracey. 3,088,563.

Braid, Milton, F. Lawlor, to Pennsalt Chemicals Corp. Oxidation of trifluoroethanol. 3,088,896, 5–7–63, Cl. 204—158.

Brandt, Peter M.: *See*—
Behrens, Albert, Kolsow, and Brandt. 3,088,548.

Branscomb, Charles E., and H. F. Martin, to International Business Machines Corp. Clipping level control apparatus. 3,088,665, 5–7–63, Cl. 235—61.11.

Brashear, Roy T.: *See*—
Oglesby, Minor W., Jr., and Brashear. 3,088,664.

Brault, Robert G.: *See*—
McElroy, Albert D., Brault, and Shepherd. 3,088,979.

Braus, Harry, and O. A. Homberg, to National Distillers and Chemical Corp. Ring chlorinated 2,5-diphenyl-adipic acid. 3,088,973, 5–7–63, Cl. 260—515.

Breeback, Rudolph H.: *See*—
Fauth, Frederick E., and Breeback. 3,088,831.

Breer, Karl: *See*—
Weinbrenner, Erwin, Hoppe, and Breer. 3,088,172.

Breig, Kurt, and H. Gutjahr, to Farbenfabriken Bayer Aktiengesellschaft. Diazoamino compounds and process for the production of ice colors in textile printing. 3,088,789, 5–7–63, Cl. 8—45.

Brelling, Robert W., to General Electric Co. Method of and apparatus for making punch-board wiring circuits. 3,088,191, 5–7–63, Cl. 29—155.5.

Brenner, John B., J. B. Force, E. C. McMurray, J. A. McDougal, and H. H. Harada, to General Motors Corp. Vehicle speed warning and cruise control system. 3,088,538, 5–7–63, Cl. 180—62.1.

Brenneck, William A.: *See*—
Rively, Clair M., and Brenneck. 3,088,572.
Rively, Clair M., and Brenneck. 3,088,602.

Bressler, Wilbur L.: *See*—
Smith, John C., and Bressler. 3,088,980.

Breting, Ulysses A.: *See*—
Christenson, Howard W., and Breting. 3,088,552.

Brichard, Edgard, E. Plumat, G. Meunier, and E. Dellere, to Union des Verreries Mecaniques Belges, Societe Anonyme. Process and apparatus for obtaining electrically conductive coatings on the surface of objects consisting of glass or ceramic materials. 3,088,850, 5–7–63, Cl. 117—211.

Bridgewater, Thomas E. Breaker plate structure for impact crusher and retaining means therefor. 3,088,685, 5–7–63, Cl. 241—300.

Brigham, Leonard R., and P. L. Warddell. Cash register-information storage assembly. 3,088,661, 5–7–63, Cl. 235—2.

Brink, Paul L., and C. D. McGillem, to United States of America, Navy. Low level means of weapon delivery. 3,088,372, 5–7–63, Cl. 89—1.5.

Brinker, Emil F., to Westinghouse Air Brake Co. Apparatus for measuring the rolling resistance of a car. 3,089,029, 5–7–63, Cl. 246—182.

Brinkworth, Gail E.: *See*—
Watterson, Charles H., and Brinkworth. 3,088,226.

Brion, Dalton F., C. F. Norbeck, and T. B. Winkler, to Bethlehem Steel Co. Open hearth steelmaking process. 3,088,821, 5–7–63, Cl. 75—52.

Brisco, Harold A. Lamp fixtures. 3,089,025, 5–7–63, Cl. 240—25.

Bristol Siddeley Engines Ltd.: *See*—
Marchant, Francis C. I., and Batchelor. 3,088,275.
Soltau, William E., and Orchard. 3,088,281.

British Drug Houses Ltd., The: *See*—
Petrow, Vladimir, Stephenson, and Wild. 3,088,873.

British Iron and Steel Research Assn., The: *See*—
Littlewood, Geoffrey, and Morton. 3,088,181.

British Oxygen Co. Ltd., The: *See*—
Black, Geoffrey D. 3,088,455.
Glover, Jack H. 3,088,905.
Robb, James. 3,088,595.

British Titan Products Co. Ltd.: *See*—
Arkless, Kenneth, and Wheyman. 3,088,840.

Broderick, Frank W. Rotary register embossing press. 3,088,399, 5–7–63, Cl. 101—23.

Brodl, Edward J.: *See*—
Dobrikin, Harold L., and Brodl. 3,088,311.

Brookes, Albert E.: *See*—
Armitage, Philip G., and Brookes. 3,088,418.

Brosh, Ammon, to Schaevitz Engineering. Differential transformer. 3,089,081, 5–7–63, Cl. 323—51.

Brotherton, Robert J., and L. L. Petterson, to United States Borax & Chemical Corp. Bis(o-phenylenediamino) diboron. 3,088,976, 5–7–63, Cl. 260—551.

Brown, Allan, and J. J. Norreys, to The General Electric Co. Ltd. Slurries for use as breeding materials in nuclear reactors. 3,088,900, 5–7–63, Cl. 204—193.2.

Brown, Arling D., Jr., and C. L. Morris, to Clevite Corp. Magnetic pen recorder mechanism. 3,088,788, 5–7–63, Cl. 346—139.

Brown, Earle B.: *See*—
Tripp, Robert W., Brown, and Shenker. 3,088,368.

Brown, Edwin H., to Conch International Methane Ltd. Insulated tank for the storage and transportation of a cold boiling liquefied gas. 3,088,621, 5–7–63, Cl. 220—9.

Brown, Fred, and H. J. Thomimer, to United States of America, Navy. Interlocking screw threads. 3,088,404, 5–7–63, Cl. 102—7.2.

Brown, George M., to The Goodyear Tire & Rubber Co. Method of producing a sleeve. 3,088,256, 5–7–63, Cl. 53—28.

Brown, Hilda J.: *See*—
Chilton, Harry. 3,088,758.

Brown, Howard C., to The Hayes Corp. Towed target launching and retrieval apparatus. 3,088,693, 5–7–63, Cl. 244—3.

Brown, James K.: *See*—
Kahler, Harry L., and Brown. 3,088,796.

Brown, Marion L., Jr., and A. W. Green, to Engelhard Industries, Inc., and Mississippi Cnemical Corp. Treatment of gases. 3,088,919, 5–7–63, Cl. 252—374.

Brown, William L.: *See*—
McClelland, James F., Jr., and Brown. 3,088,569.

Brownshield, Martin. Device for indicating wheel positions at the dashboard of an automobile. 3,088,431, 5–7–63, Cl. 116—31.

Brueckner, Alexander W., and J. G. Lewis, Jr., to Cox Instrument Corp. Hydraulic switching system. 3,088,481, 5–7–63, Cl. 137—117.

Bruß Mfg. Co. Ltd.: *See*—
Armitage, Philip G., and Brookes. 3,088,418.

Brunberg, Karl G., R. A. Dahlblom, and B. Lillsunde, to Telefonaktiebolaget LM Ericsson. Circuit arrangement for controlling cross-bar selectors in a telephone system. 3,088,999, 5–7–63, Cl. 179—22.

Brunner, Walter H., and A. Halasz. Method of dyeing keratinaceous materials with p-phenylene diamine compositions. 3,088,877, 5–7–63, Cl. 167—88.

Brunner, Walter H., and A. Halasz. Method of dyeing keratinaceous materials with nitro-substituted para-phenylene diamine compositions. 3,088,878, 5–7–63, Cl. 167—88.

Brunner, Walter H., and A. Halasz. Catalytic hydrogenation of 2,4-dinitrophenyl-amines. 3,088,978, 5–7–63, Cl. 260—580.

Brunson, Bruce W., to Werner Machinery Co. Milk handling apparatus. 3,088,483, 5–7–63, Cl. 137—355.12.

Bruscaglioni, Raffaello, to Filotechnica Salmoiraghi S.p.A. Stitch regulating device. 3,088,427, 5–7–63, Cl. 112—210.

Buchet, Pierre L.: *See*—
Garti, Moise, and Buchet. 3,088,836.

Buckland, Paul S., to The Goodyear Tire & Rubber Co. Tire repair. 3,088,512, 5–7–63, Cl. 152—370.

Budd Co., The: *See*—
Dean, Albert G., and Gaenssle. 3,089,005.
Hurlebaus, Richard P. 3,089,020.

Budd, Larry J., to Pallet Devices Inc. Leg structure for pallet. 3,088,423, 5–7–63, Cl. 108—53.

Bullard Co., The: *See*—
Bullard, Edward P., III. 3,088,335.

Bullard, Edward P., III, to The Bullard Co. Machine tool positioning control. 3,088,335, 5–7–63, Cl. 74—675.

Bullock, Norman J., to General Motors Corp. Domestic appliance. 3,088,596, 5–7–63, Cl. 210—382.

Burbine, William G.: *See*—
Jordan, Merrill E., Cole, Burbine, and Petterson. 3,088,806.

Burch, Alvan V., to Burch Plow Works, Inc. Disc ridger. 3,088,527, 5–7–63, Cl. 172—579.

Burch Plow Works, Inc.: *See*—
Burch, Alvan V. 3,088,527.

Burdick, Dean L., Associates, Inc.: *See*—
Hall, Robert E. 3,088,470.

Burgener, Karl L., to Automatic Electric Laboratories, Inc. Intercommunicating telephone systems. 3,089,000, 5–7–63, Cl. 179—42.

Burgmer, Josef. Manifolding writing set with sheets glued together at the heads thereof. 3,088,754, 5–7–63, Cl. 282—22.

Burndy Corp.: *See*—
Matthysse, Irving F., and Osborn. 3,088,993.
Wicks, Grace I. 3,089,115.

Burnett, Richard T., to The Bendix Corp. Disk applied duo-servo. 3,088,551, 5–7–63, Cl. 188—70.

Burroughs Corp.: *See*—
Bergland, Harry R., and Wagner. 3,088,400.
Mintz, Leon J., and Yii. 3,089,127.
Shimabukuro, George T. 3,088,401.

Busby, Terence S., and M. W. Davies, to The General Electric Co. Ltd. Control rod materials. 3,088,898, 5–7–63, Cl. 204—193.2

Buth, William F., to Kolmar Laboratories, Inc. Film forming lipstick. 3,088,876, 5–7–63, Cl. 167—88.

Cabble, George M., Jr., and E. E. Allan, to Westinghouse Air Brake Co. Brake head and brake shoe assemblage for composition brake shoes. 3,088,557, 5–7–63, Cl. 188—243.

Cable Electric Products, Inc.: *See*—
Abrams, Ralph. 3,089,012.

Cabot Corp.: *See*—
Jordan, Merrill E., Cole, Burbine, and Petterson. 3,088,806.

Caddock, Richard E.: *See*—
Bourns, Marlan E., and Caddock. 3,089,110.

Caferro, Edward M., to Columbia Electric & Mfg. Co. Lighting fixture. 3,089,026, 5–7–63, Cl. 240—51.11.

Caben, Alfred and H. S., to The World Publishing Co. Apparatus for applying decorative foil to the edge of sheet material. 3,088,238, 5–7–63, Cl. 41—37.

Caben, Herman S.: *See*—
Caben, Alfred and H. S. 3,088,238.

Cain, Francis M., Jr., and J. E. Eck, to United States of America, Atomic Energy Commission. Dispersion element consisting of chromium coated UO_2 particles uniformly distributed in a zircaloy matrix. 3,088,892, 5–7–63, Cl. 204—154.2.

Cain, William P.: *See*—
Makowski, Henry S., and Cain. 3,088,929.

Cain, William P., and H. S. Makowski, to Esso Research and Engineering Co. Cured chlorinated ethylene-higher alpha olefin copolymer and curing agents therefor. 3,088,930, 5–7–63, Cl. 260—41.

Calcinator Corp.: *See*—
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California Research Corp.: *See*—
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Clark, Ray D. 3,088,592.
Clark, Ray D. 3,089,015.
Oldenburg, Charles C. 3,088,984.

Callahan, James L.: *See*—
Rightmire, Robert A., and Callahan. 3,088,990.

Callahan, James L., A. F. Miller, J. A. Stamm, and F. Veatch, to The Standard Oil Co. Manufacture of T-butyl esters of unsaturated acids. 3,088,969, 5–7–63, Cl. 260—486.

Callery Chemical Co.: *See*—
McElroy, Albert D., Brault, and Shepherd. 3,088,979.

Caloyer, Angelo M.: *See*—
Nassikas, Euripides R., and Caloyer. 3,089,129.

Cambridge Thermionic Corp.: *See*—
Lyman, Frank, Jr. 3,088,992.

Cambridge Wire Cloth Co.: *See*—
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Camp, Albert T., to United States of America, Navy. Solventless processed nitrocellulose propellants containing lead compounds. 3,088,858, 5–7–63, Cl. 149—91.

Campbell, Ernest C., Jr., to Hallmark Cards, Inc. Dispensing container for rolled paper. 3,088,641, 5–7–63, Cl. 225—48.

Campbell, Homer C. Kitchen utensil. 3,088,345, 5–7–63, Cl. 81—1.

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Canomac Corp.: *See*—
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Capdeville, Ignatius C.: *See*—
Voorhees, Edward M. 3,088,354.

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Kapany, Narinder S., and Capellaro. 3,088,297.

Cargill, Don A. Manufacturing system using free floating fixture line. 3,088,197, 5–7–63, Cl. 29—200.

Carlson, Raymond H., to Textron Industries, Inc. Method of forming blanks with internal and external torque engaging means. 3,088,140, 5–7–63, Cl. 10—27.

Carr, Maurice K.: *See*—
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Carrey, Pierre J. M. Universal safety parachute connector. 3,088,700, 5–7–63, Cl. 244—151.

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Feltham, Robert D., Ansenberger, and Carriel. 3,088,959.

Carter, Melvin A. System for automatically displaying illuminated pictures and delivering sound messages coordinated therewith. 3,088,996, 5–7–63, Cl. 179—1.

Caspari, Adolf: *See*—
Stihl, Andreas, and Caspari. 3,088,504.

Castro, Clarence J.: *See*—
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Cataldo, John B., to I-T-E Circuit Breaker Co. Clamped busway structure. 3,088,994, 5–7–63, Cl. 174—99.

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Hawes, David H., and Spencer. 3,089,021.
Kinney, John T. 3,089,022.
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Celanese Corp. of America: *See*—
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Celotex Corp., The: *See*—
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Centre Technique du Bois: *See*—
Garti, Moise, and Buchet. 3,088,836.

Cernoch, Karel: *See*—
Richter, Jiri, and Cernoch. 3,088,143.

Chait, Herman N., and M. L. Kales. Fleid displacement circulator. 3,089,101, 5–7–63, Cl. 333—1.1.

Chakravorty, Kshitish R., and B. K. Dutta, to Sindri Fertilizers and Chemicals Ltd. Process for preparation of an ion-exchange material from the acid sludge resulting from sulphuric acid washing of crude light oils. 3,088,924, 5–7–63, Cl. 260—2.2.

Chamberlin, Donald W., to FMC Corp. Article feeding mechanism. 3,088,577, 5–7–63, Cl. 198—32.

Champney, Ralph P., deceased; by C. C. Matheny, executor. Tilting transom drive mechanism. 3,088,430, 5–7–63, Cl. 115—41.

Chan, William: *See*—
Weprin, Harry W., Pasutin, Chan, and Wilson. 3,088,163.

Charles, George E.: *See*—
Eldib, Ibrahim A., Charles, and Baeder. 3,088,907.

Chase, Robert L., to United States of America, Atomic Energy Commission. Multiplier circuit. 3,088,671, 5–7–63, Cl. 235—194.

Chermerda, John M.: *See*—
Christensen, Burton G., Hirschmann, and Chermerda. 3,088,945.

Chevalier, Hubert M. J. Malting plant. 3,088,881, 5–7–63, Cl. 195—129.

Chevreux, Gerard: *See*—
Furia, Andre, and Chevreux. 3,088,283.

Chesem, Norman B. Ground cushion car. 3,088,536, 5–7–63, Cl. 180—7.

Chicago Forging and Mfg. Co.: *See*—
Krause, Herbert. 3,088,765.

Chicoine, Duane R.: *See*—
Benner, Paul B., Chicoine, and Dickeson. 3,088,488.

Chilton, Harry, deceased; by H. J. Brown, executrix, to United Kingdom Atomic Energy Authority. Thermocompensating joint. 3,088,758, 5–7–63, Cl. 285—187.

Chittum, Joseph F., to California Research Corp. Controlling corrosion in wet gas collection systems. 3,088,795, 5–7–63, Cl. 21—2.7.

Christensen, Burton G., R. F. Hirschmann, and J. M. Chermerda, to Merck & Co., Inc. Process for the preparation of 12a-alkyl steroids. 3,088,945, 5–7–63, Cl. 260—239.55.

Christenson, Howard W., and U. A. Breting, to General Motors Corp. Servo-type disc brake. 3,088,552, 5–7–63, Cl. 188—72.

Christenson, Roger M., and J. J. Jaruzelski, to Pittsburgh Plate Glass Co. Polyethers and uses of the same. 3,088,922, 5–7–63, Cl. 260—2.

Christie, John S., to Proctor & Schwartz, Inc. System of color monitoring. 3,088,479, 5–7–63, Cl. 137—93.

Ciba Ltd.: *See*—
Moser, Eduard, and Koch. 3,088,949.

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Cincinnati Mine Machinery Co., The: *See*—
Krekeler, Claude B. 3,088,721.

Clare, C. P., & Co.: *See*—
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Clark, Donald E., to General Electric Co. VTO inlet. 3,088,695, 5–7–63, Cl. 244—12.

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Clark, Homer E., Jr., to Alcan Co., Inc. Plastic cartridge case. 3,088,405, 5–7–63, Cl. 102—43.

Clark, James L., to Mark-Clark, Inc. Thermoplastic gauntlet and electronic welding method for uniting thermoplastic film or sheeting. 3,088,116, 5–7–63, Cl. 2—169.

Clark, Ray D., to California Research Corp. Control system. 3,088,592, 5–7–63, Cl. 210—114.

Clark, Ray D., to California Research Corp. Electrode probe. 3,089,015, 5–7–63, Cl. 200—152.

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Clark, Theodore W. Rebound board for table tennis. 3,088,735, 5–7–63, Cl. 273—30.

Clarke, Henry R., to International Business Machines Corp. Programming apparatus. 3,088,666, 5–7–63, Cl. 235—61.11.

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Clay, Robert L. Toy rocket and launcher. 3,088,450, 5–7–63, Cl. 124—26.

Clements, Francis S., and E. V. Nutt, to The International Nichel Co., Inc. Production of tetrachloropalladates. 3,088,802. 5–7–63, Cl. 23—51.

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Joseph, Elias F., and Cleneay. 3,088,683.

Clensy, Richard L. Clothes dryer. 3,088,600, 5–7–63, Cl. 211—166.

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Cline, Nathan R. Marking pen. 3,088,160, 5–7–63, Cl. 15—563.

Cluff, Edward F., to E. I. du Pont de Nemours and Co. Process for curing vinylidene fluoride-hexafluoropropene copolymers. 3,088,938, 5–7–63, Cl. 260—87.7.

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Snow, Floyd E., and York. 3,088,712.

Codlin, James B., to Allis-Chalmers Mfg. Co. Ripper shank key assembly. 3,088,760, 5–7–63, Cl. 287—54.

Coffey, Jule H., and C. R. Sharp, to Anthony Mfg. Corp. Oscillating arm pop-up sprinkler. 3,088,677, 5–7–63, Cl. 239—205.

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Cohn, Eugene and J., and Catallo. 3,088,224.

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Hallford, Ben R., and Davis. 3,088,673.
Collins, Russell E. Potassium nitrate and kelp composition for treating pinkeye. 3,088,864, 5–7–63, Cl. 167—53.
Colombo, Roberto, to S.A.S. Lavorazione Materie Plastiche (L.M.P.) di M.I. Colombo & C. Method and apparatus for sheathing a structural member with a synthetic thermoplastic material. 3,088,166, 5–7–63, Cl. 18—13.
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Columbia Electric & Mfg. Co.: *See*—
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Combustion Engineering, Inc.: *See*—
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Commisso, Nicholas D., to National Distillers and Chemical Corp. Protective cover. 3,088,244, 5–7–63, Cl. 47—29.
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Brown, Edwin H. 3,088,621.
Condy, John H., and N. Kits, to Bell Punch Co. Ltd. Totalisator system. 3,089,058, 5–7–63, Cl. 315—84.6.
Conlan, Harry J., to General Motors Corp. Track roller assembly. 3,088,782, 5–7–63, Cl. 308—18.
Conover, Warren C., to Outboard Marine Corp. Bearing and method of construction thereof. 3,088,783, 5–7–63, Cl. 308—35.
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Jacobs, John H. 3,088,824.
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King, Phillip W., Kavanaugh, and Knecht. 3,088,270.
Continental Furniture Mfg. Co.: *See*—
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Cooper, Charles W.: *See*—
Hungerford, Gordon P., Cooper, and Kaufman. 3,088,844.
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Corsette, William T. 3,088,759.
Corsette, William T., deceased; N. N. Corsette, executrix, to D. J. Ainsworth. Swivel pipe coupling having low friction seals. 3,088,759, 5–7–63, Cl. 285—190.
Cotter, Perry G., and R. A. Potter, to United States of America, Interior. Method for producing zirconium diboride. 3,088,805, 5–7–63, Cl. 23—204.
Cotton De Bennetot, Michel, to Societe d'Electro-Chimie, d'Electro-Metallurgie et des Aciories Electriques d'Ugine. Combined permanent magnet and electromagnet. 3,089,064, 5–7–63, Cl. 317—123.
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Rockwood, Albert M., and Cowan. 3,088,490.
Cowan, Willard R., and C. W. White, to Aeroquip Corp. Power-operated, multistage, predetermined torque release wrench. 3,088,349, 5–7–63, Cl. 81—52.4.
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Crawford, Wilbur L. Supporting bracket for outlet boxes. 3,088,620, 5–7–63, Cl. 220—3.9.
Creed, Sherman H., and S. Csimma, to FMC Corp. Pear peeling machine. 3,088,508, 5–7–63, Cl. 146—43.
Creed, Sherman H., and S. Csimma, to FMC Corp. Pear bobber. 3,088,509, 5–7–63, Cl. 146—81.
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Creed, Sherman H., and Csimma. 3,088,508.
Creed, Sherman H., and Csimma. 3,088,509.
Cullen, Roy H., L. D. Richards, and H. H. Hodgeman; said Richards and Hodgeman assors. to said Cullen. Fluid-driven engine. 3,088,529, 5–7–63, Cl. 175—107.
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Bellstem, Harry L., Cupp, and Murphy. 3,088,240.
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Curry, Percy S. Paper-towel rack. 3,088,686, 5–7–63, Cl. 242—55.2.
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D.B.A., Societe Anonyme: *See*—
Furia, Andre, and Chevreux. 3,088,288.
DPR, Inc.: *See*—
Hardman, Kenneth V. 3,088,586.
Daalderop, Wilhelmus H. J. D., to Koninklijke Metaalwarenfabrieken v/h J. N. Daalderop & Zonen, N.V. Tool support absorbing tool reactionary force. 3,088,358, 5–7–63, Cl. 83—317.
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Daly, George F., and F. Saltz, to International Business Machines Corp. Document preparation device. 3,088,398, 5–7–63, Cl. 101—19.
Dangauthier, Marcel, to Societe d'Etudes et d'Applications Industrielles Commerciales et Immobilieres Inter-Technique. Oleo-pneumatic carrier and damping device for a vehicle suspension system. 3,088,726, 5–7–63, Cl. 267—64.
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Deal, Robert L. Handle for cans, bottles and the like. 3,088,767, 5–7–63, Cl. 294—31.2.
Dean, Albert G., and P. W. Gaenssle, to The Budd Co. Third rail shoe mount. 3,089,005, 5–7–63, Cl. 191—49.
Dean, Mills, III, to United States of America, Navy. Waterproofing strain gages. 3,089,107, 5–7–63, Cl. 338—2.
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Le Duc, Joseph A. M. 3,088,887.
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Di Mattia, Alfred L., and E. Kaulins, to Zenith Radio Corp. Universal mount for stylus assembly. 3,088,743, 5–7–63, Cl. 274—36.
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Palfrey, Frederick M., and Wolfe. 3,088,920.
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Creed, Sherman H., and Csimma. 3,088,509.
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Kolt, Paul. 3,088,174.
La Boda, Mitchell A., and Wiese. 3,088,689.
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Haley, Kenneth M., B. L. Arntz, and R. L. Reed, to Reserve Mining Co. Air draft for pelletizing furnace. 3,088,723, 5-7-63, Cl. 266—21.

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Hall, Robert B., to Dean L. Burdick Associates, Inc. Device for applying creams and the like to the skin. 3,088,470, 5-7-63, Cl. 132—79.

Hall, Wade E., and A. C. Pomikus, to Armstrong Cork Co. Preparation of expandable polystyrene particles. 3,088,-928, 5-7-63, Cl. 260—2.5.

Hallford, Ben E., and W. B. Davis, to Collins Radio Co. Temperature regulated chamber. 3,088,673, 5-7-63, Cl. 236—49.

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Halleck, Robert L. Driven fastener. 3,088,361, 5-7-63, Cl. 85—28.

Haney, Stanley C. and J. A. Verdol, to Sinclair Research Inc. Fuel oil. 3,088,815, 5-7-63, Cl. 44—71.

Hanington, Charles A. to The Scholl Mfg. Co., Inc. Mechanism for and method of producing surgical pads. 3,088,-359, 5-7-63, Cl. 32—24.

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Hansford, Rowland C., to Union Oil Co. of California. Hydrocracking process and catalysts. 3,088,908, 5-7-63, Cl. 208—109.

Hanssen, Albert J., to Black, Sivalls & Bryson, Inc. Liquid level control apparatus. 3,088,485, 5-7-63, Cl. 137—413.

Harada, Henry H.: *See*—
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Hardman, Kenneth V., to DPR, Inc. Two part package. 3,088,586, 5-7-63, Cl. 206—47.

Harel, Abraham, to Radio Corp. of America. Binary adder employing mivority logic. 3,088,668, 5-7-63, Cl. 235—176.

Harmon, Carlyle, to Johnson & Johnson. Sanitary napkins. 3,088,463, 5-7-63, Cl. 128—290.

Harmon, Carlyle, to Johnson & Johnson. Sanitary napkins. 3,088,464, 5-7-63, Cl. 128—290.

Harper, James G., to Texas Instruments Inc. Method of purifying gallium by recrystallization. 3,088,853, 5-7-63, Cl. 148—1.6.

Harris, Earl L. Tire and tube repair fixture. 3,088,348, 5-7-63, Cl. 81—15.2.

Hartley, Robert R., to Westinghouse Air Brake Co. Compressor load control system. 3,088,656, 5-7-63, Cl. 230—21.

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Penn, Walter H., and Lotz. 3,088,310.

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Perls, Thomas A., Hartog, and Mattes. 3,088,670.

Hartwig, Fritz, to Licentia Patent-Verwaltungs-G.m.b.H. Shaving apparatus. 3,089,071, 5-7-63, Cl. 320—2.

Harvey Aluminum (Inc.): *See*—
Dickinson, William. 3,088,556.

Haagman, Joseph F. and J. L. Reuss, to International Minerals & Chemical Corp. Wet beneficiating of phosphate ores. 3,088 590, 5-7-63, Cl. 209—12.

Haughwitz, Otto, to Geoffroy-Delore, Societe Anonyme. Wire coiling apparatus. 3,088,690, 5-7-63, Cl. 242—83.

Haupt, Eugen, L. Hohmuth, R. Leinhos, and P. Nichterlein, to C. Zeiss. Prism binocular with carrying strap. 3,088,-367, 5-7-63, Cl. 88—36.

Hawes, David H., and T. H. Spencer, to Caterpillar Tractor Co. Method for forming a composite welded article. 3,089 021, 5-7-63, Cl. 219—104.

Hawkes, Joseph S., to The Goodyear Tire & Rubber Co. Tire and wheel assembly. 3,088,775, 5-7-63, Cl. 301—65.

Hay, Wayne W., to Air Reduction Co., Inc. Carbon dioxide absorber. 3,088,810, 5-7-63, Cl. 23—262.

Hayden, Arthur H., to Aurora Corp. of Illinois. Solenoid armature rod means and striker means for planes. 3,088,-360, 5-7-63, Cl. 84—246.

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Korsgren, Theodore Y., Sr. 3,089,009.

Hayes Corp., The: *See*—
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Heim, Lewis R., to SKF Industries, Inc. Method for making antifriction bearings. 3,088,190, 5-7-63, Cl. 29—148.4.

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Hickey, Edward T. Collapsible tube dispenser. 3,088,632, 5-7-63, Cl. 222—100.

Hickey, Robert L., L. W. Higgins, and E. T. Platz, to I-T-E Circuit Breaker Co. Continuous outlet surface extension assembly. 3,089,042, 5-7-63, Cl. 307—147.

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Hildebrandt, Alexander B., to Jersey Production Research Co. Producing fluid from an unconsolidated subterranean reservoir. 3,088,520, 5-7-63, Cl. 166—33.

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Hlinsky, Emil J., to Goodman Mfg. Co. Cutter bit cluster support. 3,088,720, 5-7-63, Cl. 262—26.

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Rose, Bernd. 3,089,037.

Hoffmann, Hermann: *See*—
Schultheis, Werner, Schimmelschmidt, Hoffmann, Baier, and Bode. 3,088,790.

Hohmuth, Leopold: *See*—
Haupt, Eugen, Hohmuth, Leinhos, and Nichterlein. 3,088,367.

Hoist, Thomas Co.: *See*—
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Hoke Inc.: *See*—
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Hold, Peter, and A. T. Parrella, to Farrel-Birmingham Co., Inc. Automated roll grinder. 3,088,250, 5-7-63, Cl. 51—165.

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Holdren, Donald R., to Holdren Bros., Inc. Tractor mounted lift. 3,088,611, 5-7-63, Cl. 214—140.

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Saxby, Richard M. 3,088,320.

Holophane Co., Inc.: *See*—
Odle, Herbert A. 3,089,024.

Holschlag, Jerry B., and I. H. Parsons, to Owens-Corning Fiberglas Corp. Vibration dampening support for spindle. 3,088,268, 5-7-63, Cl. 57—135.

Holts, Robert W. Arrow case. 3,088,583, 5-7-63, Cl. 206—1.

Holsinger, Rudolph J., to Socony Mobil Oil Co., Inc. Fire-resistant hydraulic fluids. 3,088,914, 5-7-63, Cl. 252—76.

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Homonnay, Elmer: *See*—
Louden, William C., and Homonnay. 3,088,201.

Hood, Donald W.: *See*—
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Hoppe, Peter: *See*—
Weinbrenner, Erwin, Hoppe, and Breer. 3,088,172.

Horan, John J. Mounting for headlamp. 3,089,027, 5-7-63, Cl. 240—57.

Horino, Masao. Discharge tube blinking signal device. 3,089,-060, 5-7-63, Cl. 315—224.

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Horn, Frederick L.: *See*—
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Hornbostel, Lloyd, Jr., to Beloit Iron Works. Traversing cutting apparatus having magnetic follower means. 3,088,355, 5-7-63, Cl. 83—177.

Horner, John W., to Thompson Ramo Wooldridge Inc. Quantized impulse rocket. 3,088,406, 5-7-63, Cl. 102—49.

Hornish, Arthur H. Dispensing coin saver. 3,088,670, 5-7-63, Cl. 194—91.

Horrocks, David L., and R. G. Trenchard, to Microcell Ltd. Seats, chairs, chairbacks and the like. 3,088,773, 5-7-63, Cl. 297—445.

Horrocks, Walter E. Screw capped glass jars for packaging and dispensing powdery products. 3,088,628, 5-7-63, Cl. 220—90.

Houghton, Daniel E., E. F. Daedy, and S. F. Reed, to Cambridge Wire Cloth Co. Loom harness. 3,088,496, 5-7-63, Cl. 139—92.

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Hovey, John M. Divider circuit using delay time to inhibit transistor conduction for predetermined multiple of input pulses. 3,089,040, 5-7-63, Cl. 307—88.5.

Howa Kogyo Kabushiki Kaisha: *See*—
Tsukamo, Zenzaburo, Isutsu, and Sato. 3,088,267.

Howe Sound Co.: *See*—
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Huang, Hsing T., to Chas. Pfizer & Co., Inc. 6-aminopenicillanic acid amide production. 3,088,880, 5-7-63, Cl. 195—36.

Hub, Wilfried: *See*—
Kaufmann, Waldemar, and Hub. 3,088,762.

Huckabee, Thad T. Apparatus for cooking and smoke-flavoring food. 3,088,393, 5-7-63, Cl. 99—259.

Hudson, Perry D. Combustion products pressure generator. 3,088,276, 5-7-63, Cl. 60—39.6.

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Lerner, Norman H. 3,089,055.
Lehrer, Norman H. 3,089,056.
Lehrer, Norman H., and Bolivar. 3,089,050.
Wannlund, Arthur L., Jr., and Waters. 3,088,856.

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Huntington, Morgan G. to Huntington Chemical Corp. Method and apparatus for the dry ash generation of hydrogen and carbon monoxide gases from solid fuels. 3,088,816, 5-7-63, Cl. 48—63.

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Hurlebaus, Richard P., to The Budd Co. Indirect welding. 3,089,020, 5-7-63, Cl. 219—86.

Husum, Charles W., to Owens-Illinois Glass Co. Conveyer. 3,088,579, 5-7-63, Cl. 198—184.

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Hygrotherm Engineering Ltd.: *See*—
Payne, Hugh F., and Beanland. 3,088,915.

Hyland Laboratories: *See*—
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Hyster Co.: *See*—
Aaron, James R. 3,088,284.

I-T-E Circuit Breaker Co.: *See*—
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Fischer, Hermann, Straub, Wiedmann, and Jensen. 3,088,567.
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Ter Bush, Charles F. 3,088,690.

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Imerman, Arthur, Undergarment Corp.: *See*—
Gould, Albert A. 3,088,120.

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Thiman, Gunnar. 3,088,246.

Ingersoll-Rand Co.: *See*—
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Inland Steel Container Co.: *See*—
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Inoue, Kiyoshi. Discharge machining apparatus. 3,089,018, 5-7-63, Cl. 219—69.

International Business Machines Corp.: *See*—
Branscomb, Charles E., and Martin. 3,088,665.
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Daly, George F., and Saltz. 3,088,398.
Hennis, Robert B., and Larson. 3,089,123.
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Rutz, Richard F. 3,089,033.
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International Minerals & Chemical Corp.: *See*—
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Schuette, John H. 3,088,785.

Iriarte, Jose: *See*—
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Hildebrandt, Alexander B. 3,088,520.
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Jesonis, Alexander. Bidirectional level indicating device. 3,088,216, 5-7-63, Cl. 33—211.

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Foote, Frank G., and Jette. 3,088,891.

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Johnson, Arthur F., to Olin Mathieson Chemical Corp. Metal fabrication. 3,088,193, 5-7-63, Cl. 29—157.3.

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Walter, Joseph H., and Johnson. 3,088,433.

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Harmon, Carlyle. 3,088,464.
Smith, Joseph H. 3,088,859.

Johnson, Richard, F. L. Horn, and G. Strickland, to United States of America, Atomic Energy Commission. Dissolution of uranium fuels by mono- or difluorophosphoric acid. 3,088,800, 5-7-63, Cl. 23—14.5.

Johnson, S. C., & Son, Inc.: *See*—
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Johnston, Edward J., to International Harvester Co. Tire carcass disk rolls with retaining washers. 3,088,189, 5-7-63, Cl. 29—125.

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Jones, Evan, to Henry Valve Co. Moisture-liquid indication devices. 3,088,811, 5-7-63, Cl. 23—253.

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McMahon, John F., Jr., and J. R. Fahey, to Philco Corp. Method of making glass to metal seal. 3,088,200, 5-7-63, Cl. 65—49.
McMurray, Eugene C.: *See*—
Brenner, John B., Force, McMurray, McDougal, and Harada. 3,088,538.
Meade, Robert C., to United States of America, Navy. Light sensitive detection circuit. 3,089,034, 5-7-63, Cl. 250—214.
Mechaneck, Mary. Toothbrush cup. 3,088,045, 5-7-63, Cl. 229—3.1.
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Bishop, Leonard J. 3,088,419.
Medallion Corp.: *See*—
Schwartz, Kenneth, and Sussman. 3,088,617.
Meeske, Charles J.: *See*—
Morris, Jack P., and Meeske. 3,088,926.
Mellin, Kenneth R.: *See*—
Smith, Alfred J., and Mellin. 3,089,078.
Melton, Charles W.: *See*—
Nelson, Christian K., Melton, and Jernigan. 3,088,638.
Melton, James O., and T. B. Wilkinson. Bearing assembly for connecting two relatively moving members. 3,088,784, 5-7-63, Cl. 308—72.
Menge, Carl. Plant guard and support. 3,088,245, 5-7-63, Cl. 47—47.
Menke, Joseph F., to Eltro Gesellschaft fur Strahlungstechnik m.b.H. Electrical power source for rockets. 3,088,988, 5-7-63, Cl. 136—4.
Mennitt, Joseph L., to Owens-Illinois Glass Co. Apparatus for supporting and cutting semiplastic bodies. 3,088,186, 5-7-63, Cl. 25—112.
Mercier, Jean. Pressure vessels. 3,088,492, 5-7-63, Cl. 138—30.
Merck & Co., Inc.: *See*—
Christensen, Burton G., Hirschmann, and Chermerda. 3,088,945.
Oberster, Arthur E., and Sarett. 3,088,951.
Rogers, Edward F., and Clark. 3,088,867.
Merrimac Research and Development, Inc.: *See*—
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Merritt, Jimmie L. Manual transmission gear shift controls for speed shifting. 3,088,329, 5-7-63, Cl. 74—473.
Metal Box Co. Ltd., The: *See*—
Mosse, Richard W. E. 3,088,644.
Metal & Thermit Corp.: *See*—
Passal, Frank. 3,088,884.
Metalliking Engineering Co., Inc.: *See*—
Tour, Sam. 3,088,196.
Metzger, William J., to National Castings Co. Car coupler. 3,088,901, 5-7-63, Cl. 213—166.
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Brichard, Edgard, Plumat, Meunier, and Deliere. 3,088,850.
Meyer, Hans R.: *See*—
Gabler, Rudolf, Meyer, and Kohlik. 3,088,923.
Meyer, Leonard S. Archery or similar targets and their associated supporting easels. 3,088,738, 5-7-63, Cl. 273—102.4.
Meyer, Roy E. Tower hoist. 3,088,545, 5-7-63, Cl. 187—6.
Microcell Ltd.: *See*—
Horrocks, David L., and Tretchard. 3,088,773.
Middendorf, William H., and E. W. Landmeier, deceased (L. Landmeier, executrix), to Wadsworth Electric Mfg. Co., Inc. Panel board and circuit breaker combination. 3,089,-065, 5-7-63, Cl. 317—119.
Miles, John R., to F. E. Aufhauser. Projection lens system. 3,088,369, 5-7-63, Cl. 88—57.
Miller, Alice. Cooking unit. 3,088,395, 5-7-63, Cl. 99—340.
Miller, Arthur F.: *See*—
Callahan, James L., Miller, Stamm, and Veatch. 3,088,969.
Miller, Clarence E., to The Ohio Fuel Gas Co. Remote control and alarm system for a compressor station and compressor engines thereof. 3,088,655, 5-7-63, Cl. 230—2.
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Propst, Robert L. 3,088,178.
Miller, James C., to Radio Corp. of America. Negative resistance diode memory. 3,089,126, 5-7-63, Cl. 340—173.
Miller, Lloyd G., to United Shoe Machinery Corp. Shoe inseam sewing machines. 3,088,426, 5-7-63, Cl. 112—58.
Miller, Mary L., to American Cyanamid Co. Method of making a crystallizable polymer with lithium as catalyst. 3,088,939, 5-7-63, Cl. 260—88.7.
Miller, Stewart C.: *See*—
Lefebvre, Arthur H., and Miller. 3,088,280.
Milligan, William C. Method and apparatus for electrical power generation. 3,089,079, 5-7-63, Cl. 322—2.
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Perino, Dominic A., and Andrews. 3,088,854.
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Strohmeier, Walter, and Shansky. 3,089,035.
Minnesota Mining and Mfg. Co.: *See*—
Friedlander, William B. 3,088,849.
Neumayer, John J. 3,088,319.
Smith, Gordon R. 3,088,271.
Mintz, Leon J., and R. Yii, to Burroughs Corp. Magnetic shift register. 3,089,127, 5-7-63, Cl. 340—174.
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Molins, Desmond W., and J. A. Mason, to Molins Machine Co. Ltd. Knife-feeding arrangements for sickle-shaped knives in cut-offs. 3,088,510, 5-7-63, Cl. 146—95.
Molins Machine Co. Ltd.: *See*—
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Molins, Desmond W., and Mason. 3,088,510.
Moller, Hermann, to Klockner-Humboldt-Deutz A.G. Extensible multi-section supporting structures. 3,088,543, 5-7-63, Cl. 182—211.
Moles, Adolphe, to Les Glaceries de la Sambre, Societe Anonyme. Process for the continuous manufacture of reinforced cast glass. 3,088,293, 5-7-63, Cl. 65—44.
Monola, Wilbert. Multi-band antenna with end mounted loading section. 3,089,140, 5-7-63, Cl. 343—722.
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Jenkins, Lloyd T. 3,088,940.
Knudsen, John P. 3,088,188.
Knudsen, John P., and Ueci. 3,088,793.
Roman, Daniel P. 3,088,916.
Tarkington, Terry W., and Whitt. 3,088,932.
White, Clyde C., Jr., and Amsler. 3,088,309.
Williams, Forrest V. 3,088,807.
Woodard, William S., and Cox. 3,088,338.
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Moore, Frederick L.: *See*—
Simard, Albert. 3,088,164.
Moore, Morrison B.: *See*—
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Moret, Michel, to Etablissement AESUP. Toothbrush attachment. 3,088,148, 5-7-63, Cl. 15—22.
Morgan, Edward H. Concrete curb final grade machine. 3,088,231, 5-7-63, Cl. 37—102.
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Morita, Katsura, to Takeda Chemical Industries, Ltd. Pyramle derivatives in the pregnane series. 3,088,944, 5-7-63, Cl. 260—239.5
Morris, Bertram H. Magnetic paint brush holder. 3,088,703, 5-7-63, Cl. 248—226.
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Brown, Arling D., Jr., and Morris. 3,088,788.
Morris, Jack P., and C. J. Meeske, to Reichhold Chemicals, Inc. Triameric synthetic resin compositions and method of making the same. 3,088,926, 5-7-63, Cl. 260—21.
Morris, William A. to Rockwell Mfg. Co. Method and apparatus for use in valve tests and assembly. 3,088,312, 5-7-63, Cl. 73—46.
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Littlewood, Geoffrey, and Morton. 3,088,181.
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Crosby, Ralph M., Kander, and Mortonson. 3,088,451.
Morway, Arnold J., and A. H. Matuszak, to Esso Research and Engineering Co. Lubricating composition. 3,088,912, 5-7-63, Cl. 252—40.7.
Moser, Eduard, and J. Koch, to Ciba Ltd. New dyestuffs. 3,088,949, 5-7-63, Cl. 260—281.
Mospan, Nicholas R. Golf club head and shaft. 3,088,786, 5-7-63, Cl. 273—80.
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Motorola, Inc.: *See*—
Birkenes, Bernhard. 3,089,067.
Robillard, Jean J. A. 3,088,883.
Muhr, John. Camping device. 3,088,475, 5-7-63, Cl. 135—1.
Mulford, Charles T., to FMC Corp. Citrus fruit sectionizing head. 3,088,507, 5-7-63, Cl. 146—3.
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Voorhees, Edward M. 3,088,354.
Mumford, George V., and J. M. Wheaton, to Owens-Illinois Glass Co. Closure caps. 3,088,615, 5-7-63, Cl. 215—97.
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Murphy, Roy D.: *See*—
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Murray Corp. of America, The: *See*—
Stilwell, William H., Jr. 3,088,593.
Murray Ohio Mfg. Co., The: *See*—
Hahn, Gilbert B. 3,088,747.
Murray, Robert J., to United States of America, Army. Metal cutting method and apparatus. 3,088,202, 5-7-63, Cl. 29—567.
Mushrush, Wilson G., to Syntron Co. Circular lapping machine. 3,088,247, 5-7-63, Cl. 51—3.
Musser, C. Walton, to United Shoe Machinery Corp. Fluid wave generator for harmonic drive. 3,088,333, 5-7-63, Cl. 74—640.
Muto, Masako. Panty with hygienic band. 3,088,462, 5-7-63, Cl. 128—290.
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Fagan, Joseph S. 3,088,515.
Myers, Robert R., to Aluminum Co. of America. Compressibly deformable connectors. 3,088,761, 5-7-63, Cl. 287—108.
Myers, Truman A. Tire chain assembly. 3,088,511, 5-7-63, Cl. 152—217.
Nachtman, Elliot S., to La Salle Steel Co. Metallurgical process and steels manufactured by same (martempering). 3,088,855, 5-7-63, Cl. 148—12.
Nallinger, Friedrich K. H., to Daimler-Benz Aktiengesellschaft. Measuring device, especially speed indicator for motor vehicles. 3,088,432, 5-7-63, Cl. 116—116.
Narragansett Gymnasium Equipment Co.: *See*—
Delf, George A., and Kortum. 3,088,176.
Nassikas, Euripides B., and A. M. Caloyer. Automatic vehicle warning system. 3,089,129, 5-7-63, Cl. 340—262.
National Broach & Machine Co.: *See*—
Davis, Kenneth J. 3,088 251.
National Cash Register Co., The: *See*—
Seehof, Jerrold M., Armstrong, and Smithberg. 3,089,-122.
National Castings Co.: *See*—
Metzger, William J. 3,088,601.
Willison, Donald. 3,088,768.
National Co., Inc.: *See*—
Roberts, Frank B., and Genett. 3,089,068.
National Distillers and Chemical Corp.: *See*—
Braus Harry, and Homberg. 3,088,973.
Commiso, Nicholas D. 3,088,244.
Corbett, Herbert O. 3,088,167.
Feldman, Julian, Saffer, and Allgeier. 3,088 982.
Hungerford, Gordon P., Cooper, and Kaufman. 3,088,-844.
Murib, Jawad H. 3,088,797.
Vechiarelli, Francis, and Rudow. 3,088,347.
National Research Development Corp.: *See*—
Stott, Frank D. 3,088,716.
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Rossa, John T., Uguccini, and Zeeb. 2,088,364.
Neill, John L.: *See*—
Henderson, Ray A. 3,088,447.
Nelson, Christian K., C. W. Melton, and T. L. Jernigan, to Eskimo Pie Corp. Baffle tube and extruder. 3,088,638, 5-7-63, Cl. 222—476.
Neumayer, John J., to Minnesota Mining and Mfg. Co. Apparatus for determining molecular weight. 3,088,319, 5-7-63, Cl. 73—342.
Newman, Douglas A., to Columbia Ribbon and Carbon Mfg. Co., Inc. Duplicating. 3,088,402, 5-7-63, Cl. 101—149.4.
Newport Industries Co.: *See*—
Stumm, Joseph H. Jr., and Wilson. 3,088,961.
Nichols, Edgar B. Tracheal devices. 3,088,466, 5-7-63, Cl. 128—351.
Nichterlein, Paul: *See*—
Hamm, Engen, Hohmuth, Leinhos, and Nichterlein. 3,088,267.
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Nieuwsboer, Gerrit, to E. I. du Pont de Nemours and Co. Signal generator. 3,089,061, 5-7-63, Cl. 317—5.
Nilsson Hans R., and L. B. Schibbye, to Svenska Motor Maskiner Aktiebolag. Means for regulating helical rotary piston engines. 3,088,659, 5-7-63, Cl. 230—128.
Nilsson, Herman B., to Bonnierforetagen, AB. Apparatus for stacking newspapers and the like. 3,088,604, 5-7-63, Cl. 214—6.
Noe, John B., to United States of America, Atomic Energy Commission. Stabilized transistor amplifier. 3,089,008, 5-7-63, Cl. 330—19.
Noethlich Richard M., Jr., J. G. Dunleavy, J. G. Kura, and J. L. Glasy, to Cooperweld Steel Co. Cladding with powdered metal to form bimetallic products. 3,088,195, 5-7-63, Cl. 29—182.3.
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Norbeck, Carl F.: *See*—
Brion, Dalton F., Norbeck, and Winkler. 3,088,821.
Nordberg Mfg. Co.: *See*—
Smalley, Richard D., and Krogstad. 3,088,523.
Snaj, Arnold P. 3,088,684.
Nordby, Josef: *See*—
Walstad, Olav A. 3,088,130.
Norreys, John J.: *See*—
Brown, Allan, and Norreys. 3,088,900.
North American Aviation, Inc.: *See*—
Gardner, Frederick H. and E. L. 3,088,314.
Rhodes, Gerald E. 3,089,121.
North American Philips Co., Inc.: *See*—
Lemmens, Hendrikus J., Bloem, de Haan, and Jansen. 3,088,851.
North, Norman F., and P. B. Kahn, to The Plessey Co. Ltd. Control of composite mechanical drives. 3,088,277, 5-7-63 Cl. 60—39.14.
Northrop Corp.: *See*—
Ezekiel, Frederick D., Corcoran, and Wales. 3,088,744.

Norton Co.: *See*—
Hurd, Elmer G. 3,088,906.
No-Sag Spring Co.: *See*—
Vogel, Harold A. 3,088,132.
Nottingham, Lewis E., to FMC Corp. Orchard sprayer. 3,088,676, 5-7-63, Cl. 239—78.
Nuclear-Chicago Corp.: *See*—
Frank, Richard B. 3,089,085.
Nutt, Eric V.: *See*—
Clements, Francis S., and Nutt. 3,088,802.
Nusso, Charles. Saddle tree construction. 3,088,250, 5-7-63, Cl. 54—44.
Oberster, Arthur E., and L. H. Sarett, to Merck & Co., Inc. 16-methyl derivatives of progesterone. 3,088,951, 5-7-63, Cl. 260—397.3.
Odenwald, Helmut, to Richard Hirschmann, Radiotechnisches Work. Antenna tuned by bending end portions. 3,089,141, 5-7-63, Cl. 343—802.
Olin Corp.: *See*—
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Ofner, Frank R., to Powertronix, Inc. Supersonic vibrating drying system. 3,088,220, 5-7-63, Cl. 34—17.
Oglesby, Minor W., Jr., and R. T. Brashear, to Phillips Petroleum Co. Method of and apparatus for process dead time simulation. 3,088,664, 5-7-63, Cl. 235—61.
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Ohmann, William, to Whirlpool Corp. Filter construction. 3,088,305, 5-7-63, Cl. 68—17.
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Oldenburg, Charles C., to California Research Corp. Process for the isomerization of alkyl benzenes in the presence of a used hydrocracking catalyst. 3,088,984, 5-7-63, Cl. 260—668.
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Johnson, Arthur F. 3,088,193.
Milnes, Frank J., and White. 3,088,913.
Ottmann, Gerhard F., and Grundmann. 3,088,933.
Schur, Milton O. 3,088,359.
Oliphant, Virginia W. Child restrainer and harness. 3,088,438, 5-7-63, Cl. 119—96.
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Heuer, Hans. 3,088,663.
Ongaro, Theodore. Vertical catapult for missiles. 3,088,698, 5-7-63, Cl. 244—63.
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Soltau, William E., and Orchard. 3,088,281.
Orenick, Emil H. and M. W. Cable retainer. 3,088,702, 5-7-63, Cl. 248—71.
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Orenick, Emil H. and M. W. 3,088,702.
Ortner, Samuel. Tape dispensing machine. 3,088,356, 5-7-63, Cl. 83—233.
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Matthysse, Irving F., and Osborn. 3,088,993.
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Ottmann, Gerhard F., and C. J. Grundmann, to Olin Mathieson Chemical Corp. Polymers obtained by polycondensation of polyhydric alcohols with the alkyl esters of 2,5-dihydroxy-hexahydro-terephthalic acids. 3,088,935, 5-7-63, Cl. 260—75.
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Oswald, Thomas, to Submarine Cables, Ltd. Repeaters for multi-channel telephone systems. 3,089,004, 5-7-63, Cl. 179—170.
Otis Engineering Corp.: *See*—
Graves, Shelby J. 3,088,521.
Owens-Corning Fiberglas Corp.: *See*—
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Holschlag, Jerry B., and Parsons. 3,088,268.
Tkacs, Henry T. 3,088,573.
Owens-Illinois Glass Co.: *See*—
Graham, Robert E. 3,088,830.
Hurum, Charles W. 3,088,579.
Mennitt, Joseph L. 3,088,186.
Mumford, George V., and Wheaton. 3,088,615.
Piroos, Perry P. 3,088,833.
Piroos, Perry P. 3,088,834.
Piroos, Perry P. 3,088,835.
Schaich, Wilbur A. 3,088,161.
Veres, Frank. 3,089,051.
Ozgur, Cahit, to Dominion Engineering Works Ltd. Self-adjusting contra rotating axial flow pumps and turbines. 3,088,414, 5-7-63, Cl. 103—94.
Pacific Pumping Co.: *See*—
Culleton, John T. 3,088,415.
Paist, Charles, D. W. Sibal, and D. V. Clay, to St. Regis Paper Co. Machine for applying metal stays to cartons. 3,088,381, 5-7-63, Cl. 93—41.1.
Palanker, Walter P.: *See*—
Marcellino, Carmen L., and Palanker. 3,088,516.
Palfrey, Frederick M., and R. Wolfe, to E. I. du Pont de Nemours and Co. Process for treating tetraalkyllead compositions. 3,088,920, 5-7-63, Cl. 252—386.
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Pare, Philip J., to American Cyanamid Co. Preparation of 1-cyclohexenes. 3,088,967, 5-7-63, Cl. 260—464.
Parker, George K., to Thermo-Plastic Products Co., Inc. Fastening and sealing means for containers. 3,088,623, 5-7-63, Cl. 220—46.
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Stacey, Hugh J. 3,088,489.
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Hold, Peter, and Parrella. 3,088,250.
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Holschlag, Jerry B., and Parsons. 3,088,268.
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Paulson, Marlow H., Jr.: *See*—
Antonsen, Donald H., Gleason, Paulson, and Van Nostrand. 3,088,839.
Payne, Amos O. Automatic closing nozzle. 3,088,500, 5-7-63, Cl. 141—206.
Payne, Hugh F., and E. Beanland, to Hygrotherm Engineering Ltd. Restoration of decomposed and polymerized heat transfer fluids. 3,088,945, 5-7-63, Cl. 252—78.
Payne, John H., Jr. Wheel camber and caster gauge. 3,088,215, 5-7-63, Cl. 33—203.18.
Pearson, Bernard A., to Ederer Engineering Co. Overhead lathe charger. 3,088,505, 5-7-63, Cl. 144—209.
Pelagatti, Vincenso, to Fabbrica Italiana Magneti Marelli S.p.A. Control device of a window regulator in motor car doors. 3,088,727, 5-7-63, Cl. 268—124.
Penley, Ralph H. Box loading apparatus. 3,088,257, 5-7-63, Cl. 53—159.
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Penn, Walter H., and F. G. Lotz, to Hartmann & Braun Aktiengesellschaft. Gas analyser based on the principle of thermal conductivity. 3,088,310, 5-7-63, Cl. 73—27.
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Mandell, Harry C. Jr. 3,088,808.
Perino, Dominic A., and J. D. Andrews, to Milprint, Inc. Opener for commodity container. 3,088,654, 5-7-63, Cl. 229—85.
Perkins, Warren E., to Union Carbide Corp. Thermally insulated bulk storage containers. 3,088,787, 5-7-63, Cl. 312—214.
Perl, Albert H. F., to Joseph Billingham, Ltd. Can openers. 3,088,203, 5-7-63, Cl. 30—23.
Perlini, Robert S., to International Business Machines Corp. Tape reel. 3,088,689, 5-7-63, Cl. 242—71.8.
Perla, Thomas A., J. J. Hartog, and B. L. Mattes, to Lockheed Aircraft Corp. Pyroelectric squaring element. 3,088,870, 5-7-63, Cl. 235—193.
Perthen, Johannes F., and H. K. Steudel; said Steudel assor. to said Perthen. Linear dimension gauge. 3,088,501, 5-7-63, Cl. 200—88.
Peryk, Conrad J., to Ford Motor Co. Dynamoelectric machine. 3,089,047, 5-7-63, Cl. 310—239.
Peters, Melville F., 50%, to J. J. Mascuch. High pressure valve assembly. 3,088,487, 5-7-63, Cl. 137—505.35.
Peterson, Robert A., to Caterpillar Tractor Co. Multiple actuating lever. 3,088,328, 5-7-63, Cl. 74—471.
Petrick, Michael, and J. F. Marchaterre, to United States of America, Atomic Energy Commission. Boiling slurry reactor and method of control. 3,088,895. 5-7-63, Cl. 204—154.2.
Petrie, James A., and K. E. G. Bracey, to Rolls-Royce Ltd. Fluid coupling and friction clutches. 3,088,563, 5-7-63, Cl. 192—3.2.
Petrov, Vasily V., and A. D. Bodrov, to All-Union Research Institute of Cinematography and Photography. Device for eliminating the noticeability of bands on a screen at the joints of adjacent panorama pictures. 3,088,866, 5-7-63, Cl. 88—16.6.
Petrow, Vladimir, O. Stephenson, and A. M. Wild, to The British Drug Houses Ltd. 4-chloro-3-sulphamyl benzoic acid and salts. 3,088,873, 5-7-63, Cl. 167—65.
Petterson, David L.: *See*—
Jordan, Merrill E., Cole, Burbine, and Petterson. 3,088,806.
Petterson, Lowell L.: *See*—
Brotherton, Robert J., and Petterson. 3,088,976.
Pfeiffer, Carl C., to Riker Laboratories, Inc. Process of stimulating the central nervous system. 3,088,871, 5-7-63, Cl. 167—65.
Pfenningsberg, Peter G.m.b.H. Maschinenfabrik: *See*—
Geschka, Hugo W. 3,088,233.
Pfizer, Chas., & Co., Inc.: *See*—
Huang, Hsing T. 3,088,880.
Phileo Corp.: *See*—
Bisbing, Paul E. 3,089,052.
Dimmig, John D., and Vaughan. 3,088,587.
McMahon, John F., Jr., and Fahey. 3,088,299.
Moore, Robert C. 3,089,096.
Robinson, John L. 3,089,134.
Webb, Deril T. 3,089,096.
Zearfoss, Elmer W., Jr. 3,088,290.
Phillips, Charles E. Machine for mixing particulate materials. 3,088,711, 5-7-63, Cl. 259—3.
Phillips Petroleum Co.: *See*—
Oglesby, Minor W., Jr., and Brashear. 3,088,664.
Pianowski, Leon J., to The Udylite Corp. Skip and delayed dip mechanism for conveying apparatus. 3,088,610, 5-7-63, Cl. 214—89.

Pickford, George, to United Shoe Machinery Corp. Pneumatic rivet setting guns. 3,088,618, 5-7-63, Cl. 218—48.
Pierce, John R., to Bell Telephone Laboratories, Inc. Polarisation tracking receiver. 3,089,137, 5-7-63, Cl. 343—100.
Pieroh, Ernst-Albrecht: *See*—
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Wernicoff, Nathan, and Pincus. 3,088,865.
Wernicoff, Nathan, and Pincus. 3,088,866.
Pines, Arthur N., to Union Carbide Corp. Aminoalkyl silicon compounds as bonding agents for resins to metals. 3,088,847, 5-7-63, Cl. 117—75.
Piroos, Perry P., to Owens-Illinois Glass Co. Sealing glass. 3,088,833, 5-7-63, Cl. 106—53.
Piroos, Perry P., to Owens-Illinois Glass Co. Thermally devitrifiable sealing glasses. 3,088,834, 5-7-63, Cl. 106—53.
Piroos, Perry P., to Owens-Illinois Glass Co. Thermally devitrifiable sealing glasses. 3,088,835, 5-7-63, Cl. 106—53.
Pirsh, Edward A.: *See*—
Koch, Paul H., Pirsh, and Swenson. 3,088,494.
Pittsburgh Plate Glass Co.: *See*—
Christenson, Roger M., and Jaruselski. 3,088,922.
Elliott, James H. 3,088,300.
Plastiglas Mfg. Co.: *See*—
Long, Richard H. 3,088,124.
Platz, Elwood T.: *See*—
Hickey, Robert L., Higgins, and Platz. 3,089,042.
Plessey Co. Ltd., The: *See*—
Baines, Frederick, and Sheffield. 3,088,493.
Kellner, Michael. 3,088,476.
North, Norman F., and Kahn. 3,088,277.
Rochester, John C. O. 3,089 093.
Plotkin, Martin, E. C. Raka, and H. S. Snyder, to United States of America, Atomic Energy Commission Synchrotron radio frequency phase control system. 3,089,092, 5-7-63, Cl. 328—155.
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Plummer, Walter A. Snap-on marker. 3,088,237, 5-7-63, Cl. 40—316.
Pneumatic Scale Corp., Ltd.: *See*—
Vergobbi, John G. 3,088,380.
Polleys, Herbert R., and G. Raeburn, to Wellman Co. Fixed bevel knife clamping block. 3,086,145, 5-7-63, Cl. 12—86.6
Poon, Bing T.: *See*—
Little, Edwin D., and Poon. 3,088,948.
Poor & Co.: *See*—
Heer, Ralph W., and Mundy. 3,088,384.
Pope, Lyman B., and J. W. Sjostrom, to Pope Machinery Corp. Grinding machine. 3,088,249, 5-7-63, Cl. 51—105.
Pope Machinery Corp.: *See*—
Pope, Lyman B., and Sjostrom. 3,088,249.
Pore, Glen L. Flushing tank actuator. 3,088,122, 5-7-63, Cl. 4—67.
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Komenda, Erwin. 3,088,781.
Porterfield, Cecil P., and R. W. Drushel, to Elox Corp. of Michigan. High repetition rate spark machining apparatus. 3,089,059, 5-7-63, Cl. 315—180.
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Hall, Wade E., and Poshkus, 3,088,925.
Post, Roy G., to United States of America, Atomic Energy Commission. Nuclear reactor. 3,088,904, 5-7-63, Cl. 204—193.2.
Potenza, Joseph, 60% to R. Williams. Fluid motivated abrading and washing device. 3,088,149, 5-7-63, Cl. 15—29.
Potter, Ralph A.: *See*—
Cotter, Perry G., and Potter. 3,088,805.
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Williams, Norman C., and Everett. 3,088,707.
Powertronix, Inc.: *See*—
Ofner, Frank R. 3,088,220.
Premier Carton Co.: *See*—
Fobiano, Frank E. 3,088,648.
Prescott, Francis J., and E. A. Wich, to General Aniline & Film Corp. Preparation of paint compositions containing a pyrrolidone compound. 3,088,837, 5-7-63, Cl. 106—262.
Preuss, Frederick W., to Storkline Corp. Cabinet construction. 3,088,560, 5-7-63, Cl. 189—36.
Price, Robert J. Precision variable delay pulse generator. 3,089,090, 5-7-63, Cl. 328—55.
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Bitterlich, Gordon M., Primas, and Hahn. 3,088,612.
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Rosekrans, David de L., and McDaniel. 3,088,634.
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Christie, John S. 3,088,479.
Proffitt, Richard V., to General Electric Co. Broiling oven. 3,088,396, 5-7-63, Cl. 99—443.
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Pullman Inc.: *See*—
Faverty, Clyde B., and Shaver. 3,088,420.
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Quik-Riter Products, Inc.: *See*—
Werneke, Lewis O. 3,088,598.
Rabinoff, Max. Therapeutic cosmetic mask. 3,088,459, 5-7-63, Cl. 128—66.
Radio Corp. of America: *See*—
Harel, Abraham. 3,088,668.
Miller, James C. 3,089,126.
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Polleys, Herbert R., and Raeburn. 3,088,145.
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Van Leer, Oscar J., and Ragettli. 3,088,626.
Raka, Eugene C.: *See*—
Plotkin, Martin, Raka, and Snyder. 3,089,092.
Ralph, Eugene L., to Hoffman Electronics Corp. Photoelectric converter or the like. 3,089,070, 5-7-63, Cl. 320—2.
Ralph, Vernon J. Bellows-actuated fountain painting device 3,088,159, 5-7-63, Cl. 15—543.
Ram Tool Corp.: *See*—
Strzoda, Joseph J. 3,088,248.
Range, Walter K., Jr.: *See*—
Stamm, Gerald D., and Range. 3,088,911.
Rapaport, Robert M., to Food Products Corp., Inc. Glazed bakery product and method of making same. 3,088,829, 5-7-63, Cl. 99—139.
Rasmusson, Marlin B., to Vitafreze Equipment, Inc. Carton blank. 3,088,651, 5-7-63, Cl. 229—35.
Raver, Louis J., and T. E. Kirk, to General Motors Corp. Variable resistance assembly. 3,089,111, 5-7-63, Cl. 338—260.
Raybuck, William B., to Fred'k H. Levey Co., Inc. Folder for web-fed printing presses. 3,088,731, 5-7-63, Cl. 270—72.
Rayburn, Walker H., to Combustion Engineering, Inc. Differential temperature compensator for radial seals. 3,088,518, 5-7-63, Cl. 165—9.
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Haley, Kenneth M., Arntz, and Reed. 3,088,723.
Reed, Stanley F.: *See*—
Houghton, Daniel E., Daedy, and Reed. 3,088,496.
Rees, Rees W. Inserted cutting formations for percussive rock drill bits. 3,088,535, 5-7-63, Cl. 175—410.
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Reis, Norman, and R. L. Hackman, to Union Carbide Corp. Electric arc welding apparatus. 3,089,019, 5-7-63, Cl. 219—75.
Renner, Frank J., G. B., and W. M. Method for making coffee. 3,088,826, 5-7-63, Cl. 99—71.
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Renner, Frank J., G. B., and W. M. 3,088,826.
Renner, Herbert O. Methods for treating corn flour. 3,088,828, 5-7-63, Cl. 99—91.
Renner, William M.: *See*—
Renner, Frank J., G. B., and W. M. 3,088,826.
Reserve Mining Co.: *See*—
Haley, Kenneth M., Arntz, and Reed. 3,088,723.
Reuss, John L.: *See*—
Hasgman, Joseph F., and Reuss. 3,088,590.
Reynolds, Andrew C., Jr., to International Business Machines Corp. Automatic storage addressing apparatus. 3,089,125, 5-7-63, Cl. 340—172.5.
Reynolds Metals Co.: *See*—
Jacke, Raymond E. 3,088,646.
Rhodes, Gerald E., to North American Aviation, Inc. Digital comparator. 3,089,121, 5-7-63, Cl. 340—146.2.
Rhodes, Laddie T. Positive countdown circuit with delayed pulse feedback gating clocked coincident circuit. 3,089,089, 5-7-63, Cl. 328—40.
Richards, Leslie D.: *See*—
Cullen, Roy H., Richards, and Hodgeman. 3,088,529.
Richardson, Donald E., to United States of America, Navy. Mechanical time delay device. 3,088,406, 5-7-63, Cl. 102—70.2.
Richardson, William F., to Flex-O-Lators, Inc. Expansible lift for hollow objects. 3,088,769, 5-7-63, Cl. 294—93.
Richardson, William S., to The Falk Corp. Multiple reduction gear unit. 3,088,334, 5-7-63, Cl. 74—664.
Richter, Jiri, and K. Cernoch, to Svit, narodini podnik. Sole fastening unit for a conveyorized shoe making machine. 3,088,143, 5-7-63, Cl. 12—1.
Richter, Johan C. F. C., to Kamyr Aktiebolaget. Container for washing of cellulose pulp. 3,088,306, 5-7-63, Cl. 68—181.
Richter, Sidney B., to Velsicol Chemical Corp. Method of controlling undesirable plant growth. 3,088,817, 5-7-63, Cl. 71—2.3.
Richter, Sidney B., to Velsicol Chemical Corp. O,O-dialkyl-3-hydroxyphenylpropyl phosphorodithioates. 3,088,868, 5-7-63, Cl. 167—30.
Riegelman, Harry M., to Security Aluminum Corp. Locking device for closure members. 3,088,177, 5-7-63, Cl. 20—52.
Rieger, Nelson M. Packaging apparatus. 3,088,499, 5-7-63, Cl. 141—81.
Riester, William C., and A. C. Scinta, to Trico Products Corp. Wiper arm. 3,088,154, 5-7-63, Cl. 15—250.34.
Rightmire, Robert A., and J. L. Callahan, to The Standard Oil Co. Energy conversion system. 3,088,990, 5-7-63, Cl. 136—86.
Rigolini, Vinnie J., to Whitehouse Products, Inc. Camera. 3,088,380, 5-7-63, Cl. 95—31.
Riker Laboratories, Inc.: *See*—
Pfeiffer, Carl C. 3,088,871.
Windsor, Emanuel. 3,088,868.
Riley, Robert E.: *See*—
Birdsall, Dale H., and Riley. 3,088,200.
Riley Stoker Corp.: *See*—
Taggart, Wilmer R. 3,088,444.
Ringold, Howard J.: *See*—
Bowers, Albert, and Ringold. 3,088,952.
Zderic, John A., and Ringold. 3,088,946.
Ringold, Howard J., and G. Rosenkranz, to Syntex Corp. 21-fluoro 2-alkyl pregnene compounds. 3,088,850, 5-7-63, Cl. 260—397.3.
Risdon Mfg. Co., The: *See*—
Venus, Frank, Jr. 3,088,682.
Ritchey, William D. Necktie holder. 3,088,597, 5-7-63, Cl. 211—13.

Rively, Clair M., and W. A. Brenneck, to Westinghouse Electric Corp. Transfer conveyor. 3,088,572, 5–7–63, Cl. 198—19.

Rively, Clair M., and W. A. Brenneck, to Westinghouse Electric Corp. Article transfer apparatus. 3,088,602, 5–7–63, Cl. 214—1.

Robb, James, to The British Oxygen Co. Ltd. Filter unit. 3,088,595, 5–7–63, Cl. 210—304.

Robbins, Frederick P. Hinge. 3,088,162, 5–7–63, Cl. 16—180.

Robert, Roger A., and P. P. Matge. Apparatus for storing and firing rocket bombs from aircraft. 3,088,373, 5–7–63, Cl. 89—1.7.

Roberts, Frank B., and W. F. Gemett, to National Co., Inc. Extended bandspread tuning for a communications receiver. 3,089,088, 5–7–63, Cl. 325—455.

Robertshaw-Fulton Controls Co.: *See*—
Good, Arthur L. 3,088,412.

Robertson, John, Co., Inc.: *See*—
Botes, Sven R. 3,088,589.

Robertson, Thomas: *See*—
Blackhall, Douglas J. W., and Robertson. 3,088,705.

Robillard, Jean J. A., to Motorola, Inc. Electrophotographic system. 3,088,883, 5–7–63, Cl. 204—18.

Robinson, John L., to Philco Corp. Method and system for encoding a signal into binary code groups. 3,089,134, 5–7–63, Cl. 340—347.

Robot-Foto G.m.b.H. & Co.: *See*—
Tredopp, Karl. 3,088,388.

Rochester, John C. O., to The Plessey Co. Ltd. Circuit for producing output signal as a function of plural, varied-sloped inputs. 3,088,093, 5–7–63, Cl. 328—178.

Rockovits, John F., 25% to J. J. McGlew and 37½% to G. Tomosy. Self-seal balloon. 3,088,242, 5–7–63, Cl. 46—90.

Rockwell Mfg. Co.: *See*—
Hill, Max L. 3,088,706.
Morris, William A. 3,088,312.

Rockwood, Albert M., and D. M. Cowan, to Ten Council of the United States of America, Inc. Valve assembly including actuating mechanism therefor. 3,088,490, 5–7–63, Cl. 137—627.

Rogers, Edward F., and R. L. Clark, to Merck & Co., Inc. Compositions for the control of coccidiosis. 3,088,867, 5–7–63, Cl. 167—53.1.

Rogge, Bernhard. Munition cleaning equipment. 3,088,473, 5–7–63, Cl. 134—58.

Roguin, André: *See*—
Goupil, Jean, and Roguin. 3,089,032.

Rolls-Royce Ltd.: *See*—
Lefebvre, Arthur H., and Miller. 3,088,280.
Petrie, James A., and Bracey. 3,088,563.
Smith, Alfred J., and Mellin. 3,089,078.

Roman, Daniel P., to Monsanto Chemical Co. Bacteriostatic and fungistatic cleansing compositions. 3,088,916, 5–7–63, Cl. 252—106.

Roman-Garcia, Carlos. Universal grill press. 3,088,341, 5–7–63, Cl. 77—28.

Rose, A. J., Mfg. Co.: *See*—
Sweeney, Francis R. 3,088,150.

Rose, Herbert: *See*—
Spingies, Erwin, and Rose. 3,088,662.

Rosekrans, David de L., and H. C. McDaniel, to The Procter & Gamble Co. Tablet retainer cage. 3,088,634, 5–7–63, Cl. 222—158.

Rosenkrans, George: *See*—
Ringold, Howard J., and Rosenkrans. 3,088,950.

Rosenthal, Arnold J., to Celanese Corp. of America. Conditioning of activated carbon. 3,088,983, 5–7–63, Cl. 260—652.

Ross, Arnold L.: *See*—
Cunningham, William E., and Ross. 3,088,210.

Ross, Bernd, to Hoffman Electronics Corp. Variable delay pulse stretcher using adjustable bias. 3,089,087, 5–7–63, Cl. 307—88.5.

Ross Radio Corp.: *See*—
Aiken, William R. 3,089,120.

Ross, William A., and G. E. Swick, Jr., to Dura Corp. Automatic safety leg. 3,088,546, 5–7–63, Cl. 187—8.49.

Rostal, Alfred, to Young Brothers Co. Conveyor belt control device. 3,088,581, 5–7–63, Cl. 198—202.

Rovin, Herman, to United States of America, Navy. Omnidirectional inertia actuated switch. 3,089,007, 5–7–63, Cl. 200—61.48.

Rowland, Howard J., to Electronic Specialty Co. Dual polarized horn. 3,089,102, 5–7–63, Cl. 333—6.

Rozzo, John T., O. W. Uguccini, and L. E. Zeeb, to National Spectrographic Laboratories, Inc. Method and apparatus for analysis of particles in a gaseous stream. 3,088,364, 5–7–63, Cl. 88—14.

Rubes, Samuel. Electric current producing cell. 3,088,991, 5–7–63, Cl. 136—106.

Rudel, Harry W., and W. Seitz, to Esso Research and Engineering Co. Corrosion inhibitors. 3,088,910, 5–7–63, Cl. 252—32.5.

Rudow, Harold R.: *See*—
Vechiarelli, Francis, and Rudow. 3,088,847.

Rutz, Richard F., to International Business Machines Corp. Impedance means including tunneling device for performing logic operations. 3,089,038, 5–7–63, Cl. 307—88.5.

Runicka, Jerome E., to Barry Wright Corp. Damped structures. 3,088,561, 5–7–63, Cl. 188—37.

Ryan, John W., to Dow Corning Corp. 2-phenylpropyl organosiloxanes. 3,088,964, 5–7–63, Cl. 260—448.2.

S.A.S. Lavorazione Materie Plastiche (L.M.P.) di M. I. Colombo & C.: *See*—
Colombo, Roberto. 3,088,166.

SKF Industries, Inc.: *See*—
Heim, Lewis R. 3,088,190.

Saaty, Theodore N., to Wheelock Signals, Inc. Printed circuit coil. 3,089,106, 5–7–63, Cl. 336—200.

Saffer, Bernard A.: *See*—
Feldman, Julian, Saffer, and Allgeier. 3,088,982.

Saholt, Orville J.: *See*—
Bartling, James T., Saholt, and Smith. 3,088,403.

St. Regis Paper Co.: *See*—
Palst, Charles, Sibal, and Clay. 3,088,381.

Sallee, Aaron D., to Seymour Mfg. Co. Automatic header control means. 3,088,264, 5–7–63, Cl. 56—210.

Salmon, Donald B.: *See*—
Salmon, Douglas A. and D. B. 3,088,486.

Salmon, Douglas A. and D. B., to Hoke Inc. Loading arrangement for a regulator. 3,088,486, 5–7–63, Cl. 137—505.

Salts, Fred: *See*—
Daly, George F., and Salts. 3,088,398.

Samcoe Holding Corp.: *See*—
Cohn, Eugene and J., and Catallo. 3,088,224.

Sanborn, Malcolm A., to United States of America, Air Force. Apparatus for assembling electrical circuitry. 3,088,728, 5–7–63, Cl. 269—40.

Sanches, Joseph: *See*—
Gong, Howard, Sanches, and Talmo. 3,089,106.

Sandy, Charles A., and J. H. Wernts, to E. I. du Pont de Nemours and Co. Antiknock motor fuels. 3,088,813, 5–7–63, Cl. 44—69.

Sarett, Lewis H.: *See*—
Oberster, Arthur E., and Sarett. 3,088,951.

Sarrafian, George P.: *See*—
Kettler, Charles L., and Sarrafian. 3,086,667.

Sato, Takeo: *See*—
Tsukumo, Zenzaburo, Izutsu, and Sato. 3,088,267.

Sauer, Robert C., and H. D. Smith, to Sperry Rand Corp. Remaining range computer. 3,088,669, 5–7–63, Cl. 235—193.

Saunders, George T., to Kewaunee Mfg. Co. Window sealing structure. 3,088,627, 5–7–63, Cl. 220—82.

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Saxby, Richard M., to Holley Carburetor Co. Automatic choke adjusting means. 3,088,320, 5–7–63, Cl. 73—363.5.

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Berryhill, Emma L., and Sayer. 3,088,469.

Sbrojavacca, Francesco. Insect-repelling device. 3,088,241, 5–7–63, Cl. 45—15.

Scanley, Clyde S., F. H. Siegele, and R. L. Webb, to American Cyanamid Co. Nitrogen containing polar monomer grafted on an isobutylene-monovinylether copolymer backbone. 3,088,931, 5–7–63, Cl. 260—45.5.

Schaar, Charles H., to The Kendall Co. Method of perforating. 3,088,843, 5–7–63, Cl. 117—10.

Schaefer, John W., to A. O. Smith Harvestore Products, Inc. Sweep arm unloader shield means. 3,088,606, 5–7–63, Cl. 214—17.

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Schaich, Wilbur A., to Owens-Illinois Glass Co. Dispensing and applicating device. 3,088,161, 5–7–63, Cl. 15—572.

Schardt, Rudolf. Turret tool block. 3,088,351, 5–7–63, Cl. 82—36.

Scherbatskoy, Serge A. Operation of pipelines. 3,089,030, 5–7–63, Cl. 250—43.5.

Schering A.G.: *See*—
Werres, Horst, and Pieroh. 3,088,862.

Schibbye, Lauritz B.: *See*—
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Schilberg, Arnold G., deceased, by I. G. Schilberg, special administratrix, to A. O. Smith Corp. Bulkhead reinforced offset frame. 3,088,750, 5–7–63, Cl. 280—106.

Schilberg, Arnold G., deceased; I. G. Schilberg, special administratrix, to A. O. Smith Corp. Frame construction. 3,088,749, 5–7–63, Cl. 280—106.

Schilberg, Irene G.: *See*—
Schilberg, Arnold G. 3,088,749.
Schilberg, Arnold G. 3,088,750.

Schimmel, Morry L., to McDonnell Aircraft Corp. Valve device. 3,088,478, 5–7–63, Cl. 137—68.

Schimmelschmidt, Kurt: *See*—
Schultheis, Werner, Schimmelschmidt, Hoffmann, Baier, and Bode. 3,088,790.

Schlieker, Willy H., K.G.: *See*—
Behrens, Albert, Kolsow, and Brandt. 3,088,548.

Schlumberger Well Surveying Corp.: *See*—
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Schmettow, Erich, to Siemens-Electrogerate Aktiengesellschaft. Automatic washing machine having a variable speed drive. 3,088,303, 5–7–63, Cl. 68—12.

Schmidt, Ernst H. W. Pump. 3,088,411, 5–7–63, Cl. 103—1.

Schmitz, Ewald F., to A. O. Smith Corp. Closure for Metal tanks. 3,088,625, 5–7–63, Cl. 220—64.

Scholl Mfg. Co., Inc., The: *See*—
Bittner, Ernst. 3,088,184.
Hanington, Charles A. 3,088,353.
Levitt, Milton R. 3,088,204.
Levitt, Milton R. 3,088,461.

Scholl, William M. Method of making a surgical pad. 3,088,860, 5–7–63, Cl. 156—222.

Schorr, Elsbeth: *See*—
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Schrader, Gerhard, to Farbenfabriken Bayer Aktiengesellschaft. Pyrophosphonic acid esters and process for their production. 3,088,965, 5–7–63, Cl. 260—461.

Schuette, John H., to Invincible Metal Furniture Co. Desk with detachable leg portions. 3,088,785, 5–7–63, Cl. 312—195.

Schultheis, Werner, K. Schimmelschmidt, H. Hoffmann, E. Baier, and A. Bode, to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning. Dyeings and prints possessing fastness to wet processing and their manufacture on cellulose material. 3,088,790, 5–7–63, Cl. 8—54.2.

Schuit, Peter R., to International Business Machines Corp. Electrical circuit board with component standoff. 3,089,062, 5–7–63, Cl. 317—101.

Schur, Milton O., to Olin Mathieson Chemical Corp. Composite rod machine. 3,086,259, 5–7–63, Cl. 53—411.

Schwartz, Kenneth, and R. E. Sussman, to Medallion Corp. Webbing strip connector for metallic furniture. 3,088,517, 5–7–63, Cl. 160—184.

Schwidefsky, Kurt, and H. Utz, to C. Zeiss. Apparatus for drawing preglas. 3,088,209, 5–7–63, Cl. 33—20.

Sciuto, Anthony C.: *See*—
Biester, William C., and Sciuto. 3,088,154.

Scovill Mfg. Co.: *See*—
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Security Aluminum Corp.: *See*—
Riegelman, Harry M. 3,088,177.

Sedberry, J. R., Inc.: *See*—
Joseph, Elias F., and Clemeay. 3,088,683.

Sedlack, Jack. Play-pen crib combination. 3,088,131, 5–7–63, Cl. 5—99.

Seehof, Jerrold M., M. S. Armstrong, and S. B. Smithberg, to The National Cash Register Co. Automatic reading apparatus. 3,089,122, 5–7–63, Cl. 340—146.3.

Seekonk Lace Co.: *See*—
King, Gilbert M. 3,088,362.

Segel, Edward, to Velsicol Chemical Corp. Hexachlorotetrahydromethanoindene amine compounds. 3,088,977, 5–7–63, Cl. 260—563.

Seitz, William: *See*—
Rudel, Harry W., and Seitz. 3,088,910.

Self, Richard E., and A. R. Allan, to Thompson Ramo Wooldridge Inc. Metallic shaft seal. 3,088,442, 5–7–63, Cl. 121—38.

Selig, George A.: *See*—
Weil, Burt, Ferneau, and Selig. 3,088,770.

Semple, William E., to International Business Machines Corp. Device for measuring fiber and coating height. 3,088,211, 5–7–63, Cl. 33—167.

Sendor, Mortimer S. Plastic book cover and method of making. 3,088,753, 5–7–63, Cl. 281—29.

Seubbell, Herman O., to The Dow Chemical Co. Phosphoramidates and phosphoramidothioates. 3,088,966, 5–7–63, Cl. 260—461.

Sexton, William W. Shoe horns. 3,088,639, 5–7–63, Cl. 223—116.

Seyfried, Arthur W., to Scovill Mfg. Co. Suction cleaner bag mounting means. 3,088,260, 5–7–63, Cl. 55—374.

Seymour, Donald B. Vending machine. 3,088,629, 5–7–63, Cl. 221—77.

Seymour Mfg. Co.: *See*—
Sallee, Aaron D. 3,088,264.

Shansky, David: *See*—
Strohmeier, Walter, and Shansky. 3,089,035.

Shapiro, Morton: *See*—
Marcellino, Carmen L., and Palanker. 3,088,516.

Sharp, Carl R.: *See*—
Coffey, Jule H., and Sharp. 3,088,677.

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Faverty, Clyde B., and Shaver. 3,088,420.

Shearman, Wilbur E.: *See*—
Tama, Mario, and Shearman. 3,088,182.

Sheffield, Kenneth J. W.: *See*—
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Shenker, Martin: *See*—
Tripp, Robert W., Brown, and Shenker. 3,088,368.

Shepherd, James W.: *See*—
McElroy, Albert D., Brault, and Shepherd. 3,088,979.

Sherman, George M., to United States of America, Navy. Rammer head hoisting apparatus. 3,088,375, 5–7–63, Cl. 89—1.7.

Sherman, H. B., Mfg. Co.: *See*—
Turner, George L. 3,088,678.

Sherritt Gordon Mines Ltd.: *See*—
Mackiw, Vladimir N., Kunda, and Benoti. 3,088,803.
Mackiw, Vladimir N., and Warner. 3,088,820.

Shields, Herbert F. H. Wire ropes. 3,088,269, 5–7–63, Cl. 57—146.

Shimabukuro, George T., to Burroughs Corp. Temporary information storage for high speed printers. 3,088,401, 5–7–63, Cl. 101—93.

Shionogi & Co., Ltd.: *See*—
Katagiri, Ken. 3,088,872.

Shipek, Carl J.: *See*—
Evans, Elmer C., and Shipek. 3,088,710.

Shirey, Frank W., to Westinghouse Air Brake Co. Snap-acting switch contact actuating means for compressor governor 3,089,008, 5–7–63, Cl. 200—82.

Short, Brooks H.: *See*—
Hockaday, Beverly G., Grady, and Short. 3,088,449.

Shotey, William. Variable indexing device. 3,088,340, 5–7–63, Cl. 74—813.

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Palst, Charles, Sibal, and Clay. 3,088,381.

Siegel, Moses, to United States of America, Navy. Mechanical programmed gas generator. 3,088,377, 5–7–63, Cl. 89—1.7.

Siegele, Frederick H.: *See*—
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Siemens-Electrogerate Aktiengesellschaft: *See*—
Schmettow, Erich. 3,088,303.

Siemens-Planiawerke Aktiengesellschaft fur Kohlefabrikate: *See*—
Kaufmann, Waldemar, and Hub. 3,088,762.

Siemens-Schuckertwerke Aktiengesellschaft: *See*—
Kumpf, Hermann. 3,088,902.

Sigler, Harold, to Fairchild Camera and Instrument Corp. Liquid treatment apparatus for photopolymer sheet material. 3,088,391, 5–7–63, Cl. 95—93.

Sierra Engineering Co.: *See*—
Bloom, Aaron. 3,088,477.

Sierra-Neva Industries, Inc.: *See*—
Whear, Alfred L. 3,088,342.

Signode Steel Strapping Co.: *See*—
Martin, Hollinshead T., and Lindholm. 3,088,397.

Sills, Hubert R., to Canadian General Electric Co., Ltd. Salient pole rotor construction. 3,089,049, 5–7–63, Cl. 310—269.

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Kobler, Richard, and Silverman. 3,089,002.

Simard, Albert, ⅓ to F. L. Moore. Fish scaling machine. 3,088,164, 5–7–63, Cl. 17—5.

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Koleah, Victor A., and Lamlein. 3,088,502.

Simonoff, Natalie L. Combination garment. 3,088,116, 5–7–63, Cl. 2—78.

Simpson, Frederick A. Thermally controlled valve with three ports. 3,088,672, 5–7–63, Cl. 236—12.

Simpson, Herbert, Corp.: *See*—
McIlvaine, Robert L., and Donat. 3,088,183.

Simpson Mfg. Co.: *See*—
Arnt, Herald P., Jr. 3,088,332.

Sinclair Research Inc.: *See*—
Haney, Stanley C., and Verdol. 3,088,815.

Sindri Fertilizers and Chemicals Ltd.: *See*—
Chakravorty, Kshitish R., and Dutta. 3,088,824.

Singer Mfg. Co., The: *See*—
Marchand, Nathan. 3,089,086.

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Pope, Lyman B., and Sjostrom. 3,088,249.

Skold, John F. Multiple coin actuator for vending machines. 3,088,571, 5–7–63, Cl. 194—92.

Slesacsek, Alfred, to Maerz Ofenbau AG. Wall construction and mounting thereof for industrial furnaces. 3,088,722, 5–7–63, Cl. 263—46.

Smalley, Richard D., and W. H. Krogstad, to Nordberg Mfg. Co. Marine engine control system with variable pitch propeller. 3,088,523, 5–7–63, Cl. 170—135.74.

Schmidt, Marion A. Razor blade stropping holder. 3,088,252, 5–7–63, Cl. 51—218.

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Schilberg, Arnold G. 3,088,749.
Schilberg, Arnold G. 3,088,750.
Schmitz, Ewald F. 3,088,625.
Steen, William E. 3,088,317.

Smith, A. O., Harvestore Products, Inc.: *See*—
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Smith, Earl C. Obstetrical forceps. 3,088,465, 5–7–63, Cl. 128—323.

Smith, Gene E. Bow checking device. 3,088,212, 5–7–63, Cl. 33—180.

Smith, Gerald D. Lather making apparatus. 3,088,918, 5–7–63, Cl. 252—359.

Smith, Gordon R., to Minnesota Mining and Mfg. Co. Reaction milieu and afterburner incorporating same. 3,088,271, 5–7–63, Cl. 60—30.

Smith, Harry D.: *See*—
Sauer Robert C., and Smith. 3,088,669.

Smith, John C., and W. L. Bressler, to The Dow Chemical Co. Hydroxyalkylation of phenols. 3,088,980, 5–7–63, Cl. 260—613.

Smith, Joseph H., to Johnson & Johnson. Methods and apparatus for making and bonding nonwoven fabrics. 3,088,859, 5–7–63, Cl. 156—26.

Smith, Julius L., Jr.: *See*—
Beckerich, John F., and Smith. 3,089,099.

Smith, Kline & French Laboratories: *See*—
Zirkle, Charles L. 3,088,869.

Smith, Robert, to General Motors Corp. Refrigerating apparatus. 3,088,294, 5–7–63, Cl. 62—296.

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Smithers, Phillip G. K., to Trico Products Corp. Windscreen wipers. 3,088,155, 5–7–63, Cl. 15—250.42.

Smollett, Roy J., Jr., to General Electronic Laboratories, Inc. Amplifier circuit. 3,089,100, 5–7–63, Cl. 330—205.

Smoltz, Erwin J. Automatic indicating tool. 3,088,213, 5–7–63, Cl. 33—180.

Smreker, Hubert P.: *See*—
McKinnon, Roy A., and Smreker. 3,088,274.

Snethen, Thomas H., to Watson Mfg. Co., Inc. Filing system. 3,088,786, 5–7–63, Cl. 312—198.

Snow, Floyd E., and J. O. York, to Coast Pro Seal Mfg. Co. Applicator and mixer for viscous materials. 3,088,712, 5–7–63, Cl. 259—7.

Snyder, Hartland S.: *See*—
Plotkin, Martin, Raka, and Snyder 3,089,092.

Societe d'Electro-Chimie, d'Electro-Metallurgie et des Acieries Electriques d'Ugine: *See*—
Cotton De Bennetot, Michel. 3,089,064.

Societe d'Etudes et d'Applications Industrielles Commerciales et Immobilieres Inter-Technique: *See*—
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Societe Genervoise d'Instruments de Physique: *See*—
Koulicovitch, Maurice. 3,089,133.
Socony Mobil Oil Co., Inc.: *See*—
Holsinger, Rudolph J. 3,088,914.
Patton, Bob J., and Fitch. 3,088,528.
Solenghi, Therese. Cosmetic stick display unit. 3,088,585, 5–7–63, Cl. 206—45.19.
Solivan, Raymond A.: *See*—
Lehrer, Norman H., and Solivan. 3,089,050.
Soltau, William E., and P. F. Orchard, to Bristol Siddeley Engines Ltd. Combustion chambers for use with swirling combustion supporting medium. 3,088,281, 5–7–63, Cl. 60—39.65.
Somers, Arthur V., to General Motors Corp. Alumina base ceramic. 3,088,832, 5–7–63, Cl. 106—39.
Sommerfield, Edward H., to International Business Machines Corp. Transistor protective circuit. 3,089,036, 5–7–63, Cl. 307—88.5.
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Southwood, Dewey R. Fluid dispenser. 3,088,125, 5–7–63, Cl. 4—222.
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Lipkis, Robert P. 3,088,989.
Spain, Robert F.: *See*—
Diamond, Milton J., and Spain. 3,089,084.
Spalaris, Constantine N., to General Electric Co. Malleable tube-clad article and manufacturing method therefor. 3,088,893, 5–7–63, Cl. 204—154.2.
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Alez, Max. 3,088,289.
Sparks, William. Braiding apparatus. 3,088,363, 5–7–63, Cl. 87—33.
Spatz, Walter B. Dispensers for fluent masses. 3,088,636, 5–7–63, Cl. 222—213.
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Gray, Walter W. 3,088,307.
Spencer, T. H.: *See*—
Hawes, David H., and Spencer. 3,089,021.
Sperry Rand Corp.: *See*—
Belton, Robert H. 3,089,044.
Sauer, Robert C., and Smith. 3,088,669.
Sperry Rand Corp., Ford Instrument Co. Division: *See*—
Baumann, Harold C. 3,089,118.
Spies, George R., Jr., to Air Reduction Co., Inc. Methods and apparatus for cutting. 3,088,854, 5–7–63, Cl. 148—9.
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Sprague, Carlton L., and I. W. Wolf, to United States of America, Army. Printed circuit apparatus. 3,088,434, 5–7–63, Cl. 118—410.
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Ford, Charles L. 3,088,679.
Stacey, Hugh J., to Parker-Hannifin Corp. Detent release for flow control valves. 3,088,489, 5–7–63, Cl. 137—622.5.
Staffin, Gerald D., and W. K. Range, Jr., to Esso Research and Engineering Co. Lubricant containing ashless anti-wear additives. 3,088,911, 5–7–63, Cl. 252—33.6.
Stamm, John A.: *See*—
Callahan, James L., Miller, and Stamm. 3,088,969.
Standard Oil Co. (Ohio), The: *See*—
Callahan, James L., Miller, Stamm, and Veatch. 3,088,969.
Rightmire, Robert A., and Callahan. 3,088,990.
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Gruber, Francis E., Johnson, and Verlo. 3,088,301.
Stanton, Philip L. Anesthetizing and gas therapy apparatus. 3,088,456, 5–7–63, Cl. 128—29.
Staples, John P., to United States of America, Navy. Aural landing speed system. 3,089,119, 5–7–63, Cl. 340—27.
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Magers, Lloyd E. 3,088,229.
Staunt, Martin. Plastic bur sleeve for dental handpieces. 3,088,745, 5–7–63, Cl. 279—102.
Stedman Mfg. Co., Inc.: *See*—
Stedman, Sarah W. and W. D. 3,088,121.
Stedman, Sarah W. and W. D., to Stedman Mfg. Co., Inc. Men's wearing apparel. 3,088,121, 5–7–63, Cl. 2—226.
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Stedman, Sarah W. and W. D. 3,088,121.
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Steil, Irvin W. Liquid level gauge for underground tanks. 3,088,318, 5–7–63, Cl. 73—321.
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Steinkamp, Bernard J., to The Eastern Cap and Closure Co. Tamper-proof cover for pressurized containers for dispensing liquids, and powders. 3,088,635, 5–7–63, Cl. 222—182.
Stengel Leonard A., and E. E. Toops, Jr., to Commercial Solvents Corp. Stable propellants. 3,088,272, 5–7–63, Cl. 60—35.4.
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Petrow, Vladimir, Stephenson, and Wild. 3,088,873.
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Stewart, Tyler P. Foot exercising appliance. 3,088,458, 5–7–63, Cl. 128—57.
Stihl, Andreas, and A. Caspari, to Andreas Stihl Firma. Portable bark peeling device. 3,088,504, 5–7–63, Cl. 144—208.
Stihl, Andreas, Firma: *See*—
Stihl, Andreas, and Caspari. 3,088,504.
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Stilwell, William E., Jr. 3,088,593.
Stilwell, Robert E., to FMC Corp. Drive means for a portable irrigation system. 3,088,350, 5–7–63, Cl. 81—90.
Stilwell, William E., Jr., deceased; F. H. Stilwell, executrix, to The Murray Corp. of America. Leveling and stabilizing apparatus. 3,088,593, 5–7–63, Cl. 210—144.
Stirewolt, Ted F., and D. P. Edkins, to General Electric Co. Wing-fan doors. 3,088,694, 5–7–63, Cl. 244—12.
Stone, Guthrie B. Bulk feed bin. 3,088,637, 5–7–63, Cl. 222—413.
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Stott, Frank D., to National Research Development Corp. Magnetic stirrers. 3,088,716, 5–7–63, Cl. 259—144.
Strang, Clifford E., and W. M. Furlow, Jr., to Martin-Marietta Corp. Non-gyroscopic inertial reference. 3,088,324, 5–7–63, Cl. 73—505.
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Strohmeier, Walter, and D. Shansky, to Minneapolis-Honeywell Regulator Co. Electrical pulse producing apparatus. 3,089,035, 5–7–63, Cl. 307—88.
Strong, Herbert M., to General Electric Co. Two-terminal end cap for high pressure, high temperature reaction vessels. 3,088,170, 5–7–63, Cl. 18—16.5.
Strsoda, Joseph J., to Ram Tool Corp. Sickle bar grinder. 3,088,248, 5–7–63, Cl. 51—98.
Stuart, Sidney A., to United Kingdom Atomic Energy Authority. Servosystem for regulating magnetic fields. 3,089,068, 5–7–63, Cl. 318—28.
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Styner, Rudolf, to Styner & Bienz A.G. Apparatus for cutting to size photographic pictures. 3,088,357, 5–7–63, Cl. 83—247.
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Sugarman, Meyer L., Jr., to American Photocopy Equipment Co. Electrophotographic photocopy machine. 3,088,386, 5–7–63. Cl. 95—1.7.
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Vaughan, Eric W. 3,089,074.
Superior Shoe Co., Inc.: *See*—
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Svec, Emil F. 3,088,495.
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Swenson, Gust M. Folding multiple row cultivator. 3,088,526, 5–7–63, Cl. 172—297.
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Djerassi, Carl, Kincl, and Iriarte. 3,088,953.
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Tansey, Richard G. Single point screw thread cutting tool having means for feeding the tool after successive cuts. 3,088,141, 5–7–63, Cl. 10—101.
Tarkington, Terry W., and C. D. Whitt, to Monsanto Chemical Co. Acrylonitrile polymer composition and stabilized with zinc oxalate, zinc acetate, or chromium acetate. 3,088,932, 5–7–63, Cl. 260—45.75.
Taylor, Ralph E., to United States of America, Army. Thyratron firing circuit. 3,088,410, 5–7–63, Cl. 102—70.2.
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Harper, James G. 3,088,858.
Kettler, Charles L., and Sarrafian. 3,088,667.
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Thallner, Karl A., to I-T-E Circuit Breaker Co. Automatic high speed grounding switch. 3,089,006, 5–7–63, Cl. 200—48.
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Bitterlich, Gordon M., Primas, and Hahn. 3,088,812.
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Thiman, Gunnar, to Ingenjorsfirman Invest Aktiebolag. Bridge and method of building the same. 3,088,246, 5–7–63, Cl. 50—148.
Thomas, Albert G., to Industrial Controls Corp. Step motor and controls. 3,089,069, 5–7–63, Cl. 318—138.
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Thompson, Ralph. Crop processing machine. 3,088,263, 5–7–63, Cl. 56—119.
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Zastrow, Harold G., to Waldorf Paper Products Co. Packing pads. 3,088,647, 5-7-63, Cl. 229—14.
Zderic, John A., and H. J. Ringold, to Syntex Corp. Steroidal C-6 alkinyl or alkenyl derivatives and process for the preparation thereof. 3,088,946, 5-7-63, Cl. 260—239.55.
Zearfoss, Elmer W., Jr., to Philco Corp. Preservation of foods by refrigeration. 3,088,290, 5-7-63, Cl. 62—78.
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ISSUED MAY 7, 1963

NOTE.—First number=class, second number=subclass, third number=patent number

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207—	10: 3,088,589		21: 3,088,656		77: 3,088,708		9: 3,088,718		72: 3,088,784		182: 3,089,116
208—	24: 3,088,907		69: 3,088,657	254—	196: 3,088,709		3,088,719	310—	26: 3,089,044	340—	4: 3,089,117
	109: 3,088,908		138: 3,088,658		172: 3,088,710		26: 3,088,720		53: 3,089,045		6: 3,089,118
209—	12: 3,088,590		3,088,659	259—	3: 3,088,711		33: 3,088,721		105: 3,089,046		27: 3,089,119
	88: 3,088,591		207: 3,088,660		7: 3,088,712	283—	46: 3,088,722		220: 3,089,047		44: 3,089,120
210—	22: 3,088,909	235—	2: 3,088,661		18: 3,088,713	286—	21: 3,088,723		260: 3,089,048		146.2: 3,089,121
	114: 3,088,592		61: 3,088,662		66: 3,088,714		38: 3,088,724		269: 3,089,049		146.3: 3,089,122
	144: 3,088,593		3,088,663		72: 3,088,715		41: 3,088,725	312—	195: 3,088,785		3,089,123
	237: 3,088,594		3,088,664		144: 3,088,716	287—	64: 3,088,726		198: 3,088,786		172.5: 3,089,124
	304: 3,088,595		61.11: 3,088,665	260—	2: 3,088,922	288—	126: 3,088,727		214: 3,088,787		3,089,125
	382: 3,088,596		3,088,666		3,088,923	289—	40: 3,088,728	313—	68: 3,089,050		173: 3,089,126
211—	13: 3,088,597		157: 3,088,667		2.1: 3,088,924		97: 3,088,729		108: 3,089,051		174: 3,089,127
	3,088,599		176: 3,088,668		2.5: 3,088,925	270—	88: 3,088,730		110: 3,089,052		3,089,128
	88: 3,088,598		193: 3,088,669		21: 3,088,926		72: 3,088,731		155: 3,089,053		262: 3,089,129
	166: 3,088,600		3,088,670		22: 3,088,927	272—	1: 3,088,732		165: 3,089,054		279: 3,089,130
213—	166: 3,088,601		194: 3,088,671		29.2: 3,088,928		51: 3,088,733	315—	12: 3,089,055		319: 3,089,131
214—	1: 3,088,602	236—	12: 3,088,672		41: 3,088,929		85: 3,088,734		3,089,056		347: 3,089,132
	5.5: 3,088,603		49: 3,088,673		3,088,930	273—	30: 3,088,735		39: 3,089,057		3,089,133
	6: 3,088,604	238—	24: 3,088,674		45.5: 3,088,931		80: 3,088,736		84.6: 3,089,058		3,089,134
	16.1: 3,088,605	239—	/ 20: 3,088,675		45.75: 3,088,932		85: 3,088,737		180: 3,089,059	343—	7.3: 3,089,135
	17: 3,088,606		78: 3,088,676		76: 3,088,933		102.4: 3,088,738		224: 3,089,060		16: 3,089,136
	29: 3,088,607		205: 3,088,677		77.5: 3,088,934		109: 3,088,739	317—	5: 3,089,061		100: 3,089,137
	77: 3,088,608		230: 3,088,678		79: 3,088,935		126: 3,088,740		101: 3,089,062		106: 3,089,138
	83.1: 3,088,609		318: 3,088,679		80.5: 3,088,936	274—	23: 3,088,741		119: 3,089,063		112: 3,089,139
	89: 3,088,610		337: 3,088,680		87.7: 3,088,937		3,088,742		123: 3,089,064		722: 3,089,140
	140: 3,088,611		427: 3,088,681		3,088,938		36: 3,088,743		130: 3,089,065		802: 3,089,141
	152: 3,088,612		573: 3,088,682		88.7: 3,088,939	277—	3: 3,088,744		189: 3,089,066		911: 3,089,142
	340: 3,088,613	240—	9: 3,089,023		3,088,940	279—	102: 3,088,745		234: 3,089,067	346—	139: 3,088,788
	653: 3,088,614										

Classification of Designs

D 7—	7: 195,163	D12—	2: 195,168	D34—	5: 195,173	D40—	1: 195,177	D58—	6: 195,181	D63—	1: 195,185
D10—	9: 195,164	D15—	1: 195,169		195,174	D42—	16: 195,178	D70—	2: 195,182		195,186
D12—	2: 195,165	D18—	2: 195,170		195,175		24: 195,179	D71—	1: 195,183	D67—	3: 195,187
	195,166	D26—	1: 195,171		15: 195,176	D51—	1: 195,180	D80—	8: 195,184	D92—	26: 195,188
	195,167		14: 195,172								

U.S. DEPARTMENT OF COMMERCE

OFFICIAL GAZETTE of the UNITED STATES PATENT OFFICE

May 7, 1963 Volume 790 Number 1

TRADEMARKS

NOTICES

Service by Publication

A petition to cancel each of the registrations identified below having been filed, and the notice of such proceedings sent by registered mail to each registrant at the last known address having been returned by the Post Office as undeliverable, notice is hereby given that unless the registrants listed herein, their assigns or legal representatives, shall enter an appearance within thirty days from the date of this publication, the cancelation will be proceeded with as in the case of default.

Vincent Giordano. Brooklyn, N.Y., Reg. No. 648,878, Canc. No. 8009.

Minerva Corporation of America, New York, N.Y., Reg. No. 428,935, Canc. No. 8013.

A. Franklin Turner, d.b.a. Family Medicine Co., Arthur, Ill., Reg. No. 234,327, Canc. No. 8017.

Roly-Poly Corporation, assignee by mesne assignments from James Franklin Brown, d.b.a. The Roly Poly Co., Cincinnati, Ohio, Reg. No. 239,288, Canc. No. 8028.

Tiny Tailors, Inc., Richmond Hill, N.Y., Reg. No. 440,635, Canc. No. 8030.

Greig-Ettinger, Ltd., assignee of Teledex, Inc., New York, N.Y., Reg. No. 528,995, Canc. No. 8031.

HORACE B. FAY, JR.,
Assistant Commissioner of Patents.

Examination

Pursuant to the provisions of Rule 341(c), an examination for persons seeking registration before the United States Patent Office as patent attorneys or agents will be held Tuesday, August 6, 1963.

With the exception of former patent examiners for whom the examination is waived, all persons recognized for practice before the Patent Office in patent cases must, pursuant to the noted rule, pass the examination. Those passing the examination do not thereby qualify for recognition for practice before the Patent Office in trademark cases. Recognition for practice in trademark cases is governed by Rule 2.12 of the Trademark Rules of Practice, which does not require the passing of an examination.

The examination will be given under the supervision of the Civil Service Commission, and may be taken in any of the cities of the country in which the Civil Service Commission regularly conducts examinations. Applications to take the examination must be directed to the Commissioner of Patents and filed in the Patent Office not later than July 5, 1963.

Application blanks may be obtained from the Clerk of the Patent Office Committee on Enrollment, Room 3718, Department of Commerce Building, Washington 25, D.C.

EDWIN L. REYNOLDS,
Apr. 12, 1963. *Chairman, Committee on Enrollment.*

CONDITION OF TRADEMARK APPLICATIONS AS OF MARCH 31, 1963

Total number of applications awaiting action [excluding renewals and Sec. 12 (c)] 17,322
Date of oldest new application ..... July 2, 1962
Date of oldest amended application ..... July 11, 1962

J. H. MERCHANT, Director, Trademark Examining Operation

TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION	Oldest Application: New	Oldest Application: Amended
(I) C. M. WENDT, Classes 6, 12, 13, 14, 15, 17, 19, 20, 21, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 39, 41, 42, 43, 44	7-2-62	7-11-62
(II) H. E. KASCHUB, Classes 1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 16, 18, 22, 27, 37, 38, 40, 45, 46, 47, 48, 49, 50, 51, 52; Service Mark Classes 100, 101, 102, 103, 104, 105, 106, 107; Collective Membership Marks, Class 200; Certification Marks, Classes A and B	8-20-62	8-28-62
Renewals (All Classes)	3-5-63	3-19-63
Sec. 12 (c) Publications (All Classes)	3-12-63	

Applications filed during the month of March 1963—2,051

Registrations Issued ..... 355—No. 748,919 to No. 749,273
Renewals Issued 60

For the quarter—January 1, 1963 through March 31, 1963

Applications filed	5757
Registrations issued	4634
Renewals issued	444
Cancellations under Section 8	1279

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, is mailed under the direction of the Superintendent of Documents, Government Printing Office, Washington 25, D. C., to whom all subscriptions should be made payable and all communications addressed; subscription price, $10.00 per annum, foreign mailing $3.75 additional; single copies, 20 cents each.

PRINTED COPIES OF TRADEMARK REGISTRATIONS are furnished by the Patent Office for 10 cents each. Address orders to the Commissioner of Patents, Washington 25, D.C.

MARKS PUBLISHED FOR OPPOSITION

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105.

As provided by section 31 of said act, a fee of twenty-five dollars must accompany each notice of opposition.

Class 1—Raw or Partly Prepared Materials

SN 126,024. House Glass Corporation, Point Marion, Pa. Filed Aug. 15, 1961.

PARALLITE

For Fibrous Glass in the Form of Mats, Sheets, Rovings, and Tapes for General Use in the Industrial Arts.
First use Aug. 3, 1961.

SN 128,535. L. A. Dreyfus Company, South Plainfield, N.J. Filed Sept. 25, 1961.

MODEL

For Thermoplastic Compounds Including Resins, Waxes, Elastomers and Polymers, and Combinations and Mixtures Thereof, With and Without Filler, Pigment and Other Inert Materials, Excluding Oils and Greases.
First use Mar 15, 1961.

SN 131,541. Armour and Company, Chicago, Ill. Filed Nov. 8, 1961.

VEGAS

For Leather.
First use Oct. 19, 1961.

SN 131,631. Monsanto Chemical Company, St. Louis, Mo., assignee of Studebaker-Packard Corporation, South Bend, Ind. Filed Nov. 8, 1961.

HAND-E-ROLL

For Polyethylene Sheet Material.
First use Apr. 11, 1960.

SN 134,162. Bell Clay Company, Gleason, Tenn., assignee of Southwestern Talc Corporation and Bell Clay Company, San Antonio, Tex. Filed Dec. 15, 1961.

BLEN-TEX

For Blend of Talc and Clay.
First use Mar. 3, 1960.

SN 134,481. Minnesota Mining and Manufacturing Company, St. Paul, Minn. Filed Dec. 21, 1961.

SCOTCHFOAM

Owner of Reg. Nos. 417,265, 724,110, and others.
For Adhesive Coated Plastic Foam Sold in Slab Form and Having General Utility in the Industrial Arts.
First use Jan. 25, 1961.

SN 134,496. L. Teweles Seed Co., Milwaukee, Wis. Filed Dec. 21, 1961.

NITRO-CHARGE

For Alfalfa Seeds and Clover Seeds, Said Seeds Being Treated With Nitrogen-Fixing Bacteria.
First use Dec. 4, 1961; Oct. 15, 1959, in another style.

SN 137,822. Westlake Plastics Company, Lenni Mills, Pa. Filed Feb. 12, 1962.

NYLUX

For Polyamide Resin Rods, Sheets and Tubes for General Use.
First use Nov. 29, 1960.

SN 138,554. Sinclair Petrochemicals, Inc., New York, N.Y., assignee of Texas Butadiene & Chemical Corporation, New York, N.Y. Filed Feb. 23, 1962.

SMA

For Polymeric Resins.
First use Oct. 18, 1960.

SN 138,646. Powder Weld, Inc., Brooklyn, N.Y. Filed Feb. 26, 1962.

POWMET

For Compounded Stabilized, Fragmented or Powdered Materials, Including Ferrous and Non-Ferrous Metals and Their Alloys, Thermoplastic Compositions and Ceramic-Metallic Compositions Used in the Application of Hot Melt Protective Coatings.
First use June 5, 1961.

SN 138,822. G. E. Smith, Inc., Pittsburgh, Pa. Filed Feb. 28, 1962.

BLAKOTE

For Foundry Wash Materials.
First use December 1961.

SN 140,175. Pittsburgh Plate Glass Company, Pittsburgh, Pa. Filed Mar. 19, 1962.

PPG

Owner of Reg. No. 443,642 and others.
For Fiber Glass and Fiber Glass Reinforced Synthetic Resins.
First use Oct. 1, 1952; Apr. 30, 1945, in a different display.

SN 140,414. Anderson, Clayton & Co., Houston, Tex. Filed Mar. 22, 1962.

LITTLE INDIANS

For Mixture of Planting Seeds—Namely, Forage Sorghum Hybrid and Sudangrass-Sorghum Hybrid Seeds.
First use Feb. 3, 1962.

SN 140,416. Anderson, Clayton & Co., Houston, Tex. Filed Mar. 22, 1962.

CALF-A-TERIA TESTED

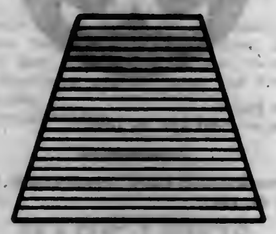
For Planting Seeds Which Have Been Consumer Tested as Grazing Crops—Namely, Forage and Grazing Type Sorghum Hybrid Seeds.
First use Jan. 9, 1962.

SN 141,273. The Dow Chemical Company, Midland, Mich. Filed Apr. 2, 1962.

D.E.N.

Owner of Reg. No. 697,630.
For Synthetic Resins.
First use Sept. 24, 1959.

SN 141,567. American Viscose Corporation, Philadelphia, Pa. Filed Apr. 5, 1962.



The drawing is lined for the color blue.
For Cellulose Crystallite Material.
First use Mar. 12, 1962.

SN 141,714. E. I. du Pont de Nemours and Company, Wilmington, Del. Filed Apr. 6, 1962.

PATTINA

For High Brilliance Olefinic Coated Fabrics Sold in the Piece for Making Shoe Uppers, Dress Accessories, Such as Belts, Handbags, Etc., Book Cloth, and Similar Items.
First use Mar. 1, 1962.

SN 141,977. Patio Party Products, Inc., Marshall, Tex. Filed Apr. 10, 1962.

firebugs

For Starter Lighting Candles for Charcoal and Wood Fires, and the Like.
First use on or about June 1, 1960.

SN 150,782. Husky Oil Company, Cody, Wyo. Filed Aug. 8, 1962.

HUSKY

The drawing is lined for red. Owner of Reg. Nos. 731,685, 612,914, and others.
For Type of Barbecue Briquet.
First use Nov. 15, 1960.

SN 151,163. Pittsburgh Plate Glass Company, Pittsburgh, Pa. Filed Aug. 14, 1962.

Selectrofoam

Owner of Reg. No. 638,266.
For Synthetic Resins.
First use Aug. 16, 1955, on polyester resins.

SN 152,060. Heisdorf & Nelson Farms, Inc., Houghton, Wash. Filed Aug. 28, 1962.



Owner of Reg. Nos. 612,380 and 698,320.
For Baby Chicks Including Breeding Stock and Commercial Egg-Laying Types, and Hatching Eggs.
First use Apr. 1, 1962; May 1, 1951, as to "H & N."

SN 152,292. Emser Werke, A.G., Domat/Ems, Switzerland. Filed Aug. 31, 1962.

GRILONIT

Owner of Swiss Reg. No. 186,530, dated May 29, 1961; and U.S. Reg. Nos. 572,661, 572,662, and 657,769.
For Synthetic Resins, Especially Epoxy Resins.

SN 152,618. National Plastic Products Company, Inc., Odenton, Md. Filed Sept. 6, 1962.



For Laminated Plastic Sheets for General Use in the Industrial Arts, Thermoplastic Extrusions and Moldings Having Profile Shapes, and Plastic Bristles for Brushes and Brooms.
First use July 27, 1962.

SN 152,668. Avisun Corporation, Philadelphia, Pa. Filed Sept. 7, 1962.

OLESYN

Owner of Reg. Nos. 708,574, 737,355, and 742,803.
For Synthetic Rubber.
First use Aug. 1, 1962.

SN 152,669. Avisun Corporation, Philadelphia, Pa. Filed Sept. 7, 1962.

OLEPRENE

Owner of Reg. Nos. 708,574, 737,355, and 742,803.
For Synthetic Rubber.
First use Aug. 1, 1962.

Class 2 — Receptacles

SN 120,195. Falcon Alarm Company, Inc., Summit, N.J. Filed May 17, 1961.

SOUNDS FOR SAFETY

For Gear Hammock—i.e., a Bag and Shelf Made of Open Mesh Material for Storage and Transportation of Articles.
First use May 4, 1959.

SN 137,196. Boatbath, Inc., Los Angeles, Calif. Filed Feb. 5, 1962.

BOATBATH

For Marine Growth Prevention Tank Comprising a Plastic Sheet Which Is Shaped To Enclose the Hull of a Boat, While the Same Is Floating Adjacent a Pier or Mooring, so That Marine-Growth Prevention Chemicals May Be Placed in the Water Between the Plastic Sheet and the Hull Whereby To Prevent Growth of Marine Organisms on the Hull.
First use on or about Dec. 15, 1960.

SN 137,297. Wilson Plastics, Inc., Sandusky, Ohio. Filed Feb. 5, 1962.



For Containers Made of Plastic Material for Edible Food.
First use Jan. 4, 1962.

SN 138,505. Industrial Piping Supply Company, Charlotte, N.C. Filed Feb. 23, 1962.

IPSCO

For Tanks.
First use on or about Feb. 1, 1961.

SN 149,860. Maryland Cup Corporation, Owings Mills, Md. Filed July 26, 1962.



For Plastic Plates.
First use on or about Apr. 25, 1962.

SN 153,771. Kimberly-Clark Corporation, Neenah, Wis. Filed Sept. 24, 1962.

BM*T

Owner of Reg. No. 616,009.
For Cartons and Containers Made Wholly or Partly of Paper, Paper Plates, and Paper Cups.
First use Aug. 23, 1962.

Class 3 — Baggage, Animal Equipments, Portfolios, and Pocketbooks

SN 139,998. Connie's Collars Inc., San Diego, Calif. Filed Mar. 16, 1962.



No claim is made to the descriptive words "Collars" or "California" or to the descriptive phrase "Fashion Has Gone to the Dogs" apart from the mark as a whole.
For Dog Collars, Dog Leashes, Dog Coats, and Dog Shirts and Dog Pants.
First use Mar. 1, 1950.

SN 141,899. Stein Bros. Mfg. Co., Chicago, Ill. Filed Apr. 9, 1962.



Applicant makes no claim to exclusive use of the word "Softone," apart from the mark as shown. Owner of Reg. No. 508,691.
For Business and Carrying Cases—Namely, Zipper Envelopes, Zipper Bags, Zipper-Opening Brief Bags, Frame-Opening Brief Bags, Zipper Ring Binders, Portfolios, Document Cases, Briefcases, Attaché Cases, and Portfolios With Acetate Envelopes.
First use November 1961.

SN 150,628. Sears, Roebuck and Co., Chicago, Ill. Filed Aug. 6, 1962.

MARY LEWIS

"Mary Lewis" is the name of a living individual whose consent is of record. Owner of Reg. No. 703,977.
For Women's Handbags and Wallets.
First use on or about Dec. 20, 1960.

SN 152,638. Stein Bros. Mfg. Co., Chicago, Ill. Filed Sept. 6, 1962.

BUDDY PAK

Applicant makes no claim to exclusive use of the word "Pak," apart from the mark as shown.
For Carrying Cases—Namely, Attaché Cases and Portfolios.
First use May 7, 1962.

SN 153,597. Seward Luggage Manufacturing Company, Incorporated, Petersburg, Va. Filed Sept. 20, 1962.

AERO PAK

For Luggage.
First use Feb. 9, 1931.

Class 4 — Abrasives and Polishing Materials

SN 129,693. K. J. Quinn & Co., Inc., Malden, Mass. Filed Oct. 11, 1961.

FINESSE

For Polish for Leather.
First use Sept. 7, 1961.

SN 152,775. The Drackett Company of Canada, Ltd., Toronto, Ontario, Canada. Filed Sept. 10, 1962.

CHAN

Owner of Canadian Reg. No. 142/32,207, dated Mar. 21, 1933.
For Cleaning and Self-Polishing Waxes for Floors, Furniture, Walls, Varnished or Painted Surfaces, Metal Surfaces and Automobiles.

Class 5 — Adhesives

SN 136,203. The Carter's Ink Company, Cambridge, Mass. Filed Jan. 22, 1962.

STIX-A-LOT

For Adhesive Cement With Dispenser Therefor.
First use Nov. 15, 1961.

SN 136,979. Industrial Polychemical Service, Gardena, Calif. Filed Jan. 31, 1962.

I·P·S

For Multi-Purpose Bonding Adhesives Having a Plastic or Elastomeric Base and Adapted for Use With Various Materials Including Plastics, Ceramics, Glass, Paper, Styrofoam, Strux, Leather, Cloth, Wallpaper, Balsa, and Plaster.
First use Aug. 24, 1954.

SN 154,015. Dacar Chemical Products Company, Pittsburgh, Pa. Filed Sept. 27, 1962.

FOAMGRAB

For Adhesive Mastic for Cold Bonding Foam Plastics, Foam Glass, Cork and Other Materials Used as Insulation or as Acoustic Material to Various Surfaces.
First use Aug. 25, 1960.

Class 6 — Chemicals and Chemical Compositions

SN 115,819. Les Usines de Melle, Melle, Deux-Sevres, France. Filed Mar. 16, 1961.

FLIXIMEL

Priority claimed under Sec. 44(d) on French Reg. No. 856, dated Feb. 4, 1961 (Niort); Natl. Inst. No. 159,873.
For Plasticizers.

SN 116,844. Wilson & Co. Inc., Chicago, Ill. Filed Apr. 27, 1961.

PROTO-PEPTONE

For Peptones.
First use Sept. 1, 1952.

SN 121,372. Durban's S.p.A., Milan, Italy. Filed June 5, 1961.

NICOTOL

Priority is claimed under Sec. 44(d) on Italian application filed Dec. 23, 1960; Reg. No. 160,377, dated Oct. 23, 1962.
For Essential Oils of Tobacco for Use as Ingredient of Toothpaste.

SN 135,371. Murial Lane, Inc., St. Louis, Mo. Filed Jan. 8, 1962.

PERMA-DIP

For Foliage Preservative Intended for Use in Connection With Floral Displays.
First use on about Nov. 15, 1960.

SN 138,566. Robert H. Allgood, d.b.a. Windotint Coating Company, Los Angeles, Calif. Filed Feb. 26, 1962.

Windotint

For Light-Modifying Preparation for Use on Window Panes and Glass Panels To Control Fading, Heat, and Sun Glare.
First use Aug. 2, 1961.

SN 138,746. Wood Treating Chemicals Co., St. Louis, Mo. Filed Feb. 27, 1962.

WOOD TOX

Owner of Reg. No. 379,511.
For Wood Preservatives Containing Water Repellent Properties.
First use Dec. 21, 1936.

SN 138,920. W. S. Shamban & Co., Culver City, Calif. Filed Feb. 28, 1962.

BONDAID

For Solution for Preparing Surfaces of Fluorocarbon Material for Use With Adhesives.
First use July 1, 1960.

SN 138,990. J. P. Stevens & Co., Inc., New York, N.Y. Filed Mar. 2, 1962.

SULFOSET

For Sulfone Chemicals.
First use at least as early as Nov. 15, 1961.

SN 139,014. The Atlantic Refining Company, Philadelphia, Pa. Filed Mar. 5, 1962.

TUFFIN

For Wax-Polymer Compositions.
First use on or about Nov. 7, 1961.

SN 139,586. CMC, Inc., d.b.a. Cumberland Mfg. Company, Nashville, Tenn. Filed Mar. 12, 1962.

CMC

For Brake Fluid and Lighter Fluid.
First use February 1958 on brake fluid.

SN 139,683. Research Chemicals, Inc., Fort Worth, Tex. Filed Mar. 12, 1962.

SEA CREST

For Chemical Compound To Assist in Inhibiting Formation of Scale, Corrosion, Bacteria, Slime, and Algae.
First use Oct. 1, 1961.

SN 139,856. P. W. Howard, Jr., d.b.a. National Scent Company, Garden Grove, Calif. Filed Mar. 14, 1962.

EDGE-A-LINE

For Weed Killer.
First use Feb. 28, 1962.

SN 139,935. Faultless Starch Company, Kansas City, Mo. Filed Mar. 15, 1962.

Faultless

dri-soft

Owner of Reg. Nos. 51,025 and 610,195.
For Laundry Preparation for Softening Fabrics.
First use Mar. 7, 1962; Jan. 23, 1961, as to the term "Faultless."

SN 139,990. H. E. Butt Grocery Company, d.b.a. H.E.B. Food Stores, Corpus Christi, Tex. Filed Mar. 16, 1962.

SILVEX

For Chemical Composition for Use as a Bleach, and a Disinfectant Having Deodorizing Properties.
First use Feb. 1, 1962.

SN 140,031. Michigan Tool Company, Detroit, Mich. Filed Mar. 16, 1962.

consan

For Disinfectants.
First use Dec. 2, 1961.

SN 140,172. Nypac, Incorporated, Elizabeth, N.J. Filed Mar. 19, 1962.

EMOIL-O-PAQUE

For Undecylinic Acid, Ethyl, Phenyl and Iodo Compounds To Be Used by Others in Making Up X-Ray Shadow Producing Compositions.
First use Sept. 15, 1961.

SN 140,222. Azoplate Corporation, Murray Hill, N.J. Filed Mar. 20, 1962.

POSITOP

For Light Sensitive Resists and Liquid Developers Therefor.
First use Mar. 13, 1962.

SN 140,380. Osmose Wood Preserving Co. of America, Inc., Buffalo, N.Y. Filed Mar. 21, 1962.

NAUTOX

For Chemical Preservative for Protecting Wood and Other Materials Against Attack by Marine Organisms.
First use Feb. 5, 1962.

SN 140,411. The Weevil-Cide Company, Kansas City, Mo. Filed Mar. 21, 1962.

MalaThox

For Insecticide.
First use June 1960.

SN 140,974. Nypac, Incorporated, Elizabeth, N.J. Filed Mar. 28, 1962.

RAY-O-PAQUE

For Undecylinic Acid, Ethyl, Phenyl, and Iodo Compounds To Be Used by Others in Making Up X-Ray Shadow Producing Compositions.
First use Sept. 15, 1961.

SN 141,007. Universal Chemicals Corp., Central Falls, R.I. Filed Mar. 28, 1962.

UNIQUAT

Owner of Reg. Nos. 688,928, 782,336, and others.
For Water Soluble Aliphatic High Molecular Weight Quaternary Ammonium Compounds for Use as Textile Finishing Agents To Give Hand Softness to Textiles.
First use January 1950.

SN 141,008. Universal Chemicals Corp., Central Falls, R.I. Filed Mar. 28, 1962.

ALKAWET

For Strong Alkali Mercerizing Bath Ingredients for Treating Cotton and Similar Textiles Including Water Soluble Condensation Products of Aliphatic Amines and High Molecular Weight and Fatty Acids.
First use January 1948.

SN 141,012. Wallace & Tiernan Inc., Belleville, N.J. Filed Mar. 28, 1962.

LUCEL

For Powdered Organic Compounds, Decomposable by Heat To Release Gas for Use as Foaming or Blowing Agents.
First use July 24, 1961.

SN 141,039. Cornelius Wax Refining Corporation, Edison, N.J. Filed Mar. 29, 1962.

CORNELOWAX

For Blends of Natural Vegetable Waxes, Synthetic Waxes, and Hydrocarbon Waxes Used as a Backing Wax in Carbon Paper Production and as an Ingredient in Paste Wax.
First use Sept. 15, 1954.

SN 141,040. Cornelius Wax Refining Corporation, Edison, N.J. Filed Mar. 29, 1962.

CORNOX

For Oxidized Hydrocarbon Waxes Used in the Manufacture of Water Emulsion Waxes.
First use Mar. 11, 1959.

SN 141,041. Cornelius Wax Refining Corporation, Edison, N.J. Filed Mar. 29, 1962.

SOLVAWAX

For Synthetic Waxes Derived From High Melting Point Esters and Used in the Manufacture of Liquid Solvent Waxes.
First use June 7, 1942.

SN 141,110. Puma Corporation, East Farmingdale, N.Y. Filed Mar. 29, 1962.

C-11 NICKELAD

For Additive for Nickel Plating Baths.
First use Sept. 22, 1961.

SN 141,320. Lilbry Bio-Chem Laboratories, Inc., d.b.a. Lilbry Biochem Laboratories, Inc., Arcadia, Calif. Filed Apr. 2, 1962.

Thalcide

For Algaecide.
First use Nov. 30, 1961.

SN 141,846. Nypac, Incorporated, Elizabeth, N.J. Filed Apr. 2, 1962.

SPINE-O-PAQUE

For Undecylinic Acid, Ethyl, Phenyl, and Iodo Compounds To Be Used by Others in Making Up X-Ray Shadow Producing Compositions.
First use Sept. 15, 1961.

SN 141,847. Nypac, Incorporated, Elizabeth, N.J. Filed Apr. 2, 1962.

CHROM-O-PAQUE

For Undecylinic Acid, Ethyl, Phenyl, and Iodo Compounds To Be Used by Others in Making Up X-Ray Shadow Producing Compositions.
First use Sept. 15, 1961.

SN 141,848. Nypac, Incorporated, Elizabeth, N.J. Filed Apr. 2, 1962.

VERT-O-PAQUE

For Undecylinic Acid, Ethyl, Phenyl, and Iodo Compounds To Be Used by Others in Making Up X-Ray Shadow Producing Compositions.
First use Sept. 15, 1961.

SN 141,577. Crocker Industries, Inc., Chicago, Ill. Filed Apr. 5, 1962.

FABRI-SEAL

For Fabric Waterproofing Agent.
First use Jan. 5, 1962.

SN 141,823. The Dow Chemical Company, Midland, Mich. Filed Apr. 9, 1962.

TUASAL

For Chemical Composition Useful as a Germicide.
First use Feb. 19, 1962.

SN 141,962. Macmillan Ring-Free Oil Co., Inc., Los Angeles, Calif. Filed Apr. 10, 1962.

STADUST

For Preparation To Alleviate Road Dust and for Similar Dust Retardant Uses.
First use Mar. 21, 1962.

SN 150,048. William E. Goodfellow, d.b.a. Comet Fire Equipment Co., Haddon Heights, N.J. Filed July 30, 1962.

COMO-WET

For Wetting Agent for Use in Fire Fighting Chemicals.
First use Nov. 10, 1961.

SN 150,331. Dura Commodities Corporation, New York, N.Y. Filed Aug. 2, 1962.

ACIDON

For Hard Wax Used for the Manufacture of Carbon Paper Inks and Polishes of All Kinds.
First use on or about June 1, 1962.

SN 151,748. General Aniline & Film Corporation, New York, N.Y. Filed Aug. 23, 1962.

REPROFLO

Owner of Reg. Nos. 511,912 and 611,287.
For Photographic Chemicals—Namely, Photographic Developers.
First use July 25, 1962.

Class 7—Cordage

SN 133,867. The Colorado Fuel and Iron Corporation, Denver, Colo. Filed Dec. 12, 1961.

SCRAPER FLEX

Owner of Reg. Nos. 600,606, 600,607, and 601,201.
For Wire Rope and Cables.
First use Oct. 3, 1961.

SN 140,360. King Fisher Products, Millington, Tenn. Filed Mar. 21, 1962.

RIVER EDGE

For Seine Twine.
First use Nov. 18, 1961.

Class 9—Explosives, Firearms, Equipments, and Projectiles

SN 138,222. Old Reliable Cartridge Company, Milwaukee, Wis. Filed Feb. 19, 1962.

OLD RELIABLE

For Cartridge Cases.
First use Feb. 12, 1962.

SN 139,562. Explosive Technology, Inc., Santa Clara, Calif. Filed Mar. 9, 1962.

JETCORD

For Flexible Linear Shaped Explosive Charges.
First use Mar. 9, 1961.

SN 151,569. Colt's Patent Fire Arms Manufacturing Company, Inc., Hartford, Conn. Filed Aug. 21, 1962.

THE PEACEMAKER

For Revolvers.
First use Aug. 1, 1962; as early as the 1870's as to "Peacemaker."

SN 151,570. Colt's Patent Fire Arms Manufacturing Company, Inc., Hartford, Conn. Filed Aug. 21, 1962.

THE FRONTIER

For Revolvers.
First use Aug. 1, 1962; as early as the 1870's as to "Frontier" on firearms.

SN 153,956. B. E. Hodgdon, Inc., Shawnee Mission, Kans. Filed Sept. 26, 1962.

4895

For Rifle Powder.
First use Jan. 27, 1948.

Class 10—Fertilizers

SN 137,123. Eastern Dehydrating Company, Lexington, N.C. Filed Feb. 2, 1962.

FERTAL-GRO

For Dehydrated Manure Fertilizer.
First use June 12, 1956.

SN 151,860. W. R. Grace & Co., New York, N.Y. Filed Aug. 22, 1962.

MAGAMP

For Fertilizer Material Consisting Essentially of Magnesium Ammonium Phosphate.
First use July 17, 1962.

SN 152,094. Heritage House Products, Inc., Pittsburgh, Pa., assignee of Seaboard Seed Co., Inc., Pittsburgh, Pa. Filed Aug. 28, 1962.

HERITAGE HOUSE

For Fertilizers.
First use June 20, 1962.

SN 152,095. Heritage House Products, Inc., Pittsburgh, Pa., assignee of Seaboard Seed Co., Inc., Pittsburgh, Pa. Filed Aug. 28, 1962.

HERITAGE HOUSE

For Fertilizers.
First use June 20, 1962.

Class 11—Inks and Inking Materials

SN 128,814. Franklin Ribbon & Carbon Co., Inc., Brooklyn, N.Y. Filed Sept. 28, 1961.

KLEENERTYPE BRAND

For Carbon Paper, Carbon Ribbons, and Correction Paper for Typing Errors.
First use Sept. 1, 1930.

SN 135,061. Sun Chemical Corporation, New York, N.Y. Filed Jan. 2, 1962.

SUNGLO

Owner of Reg. Nos. 436,540, 621,578, and 733,237.
For Fluorescent Inks Including Letterpress Inks, Offset Inks, Flexographic Inks, and Gravure Inks.
First use June 20, 1957.

SN 140,087. Burroughs Corporation, Detroit, Mich. Filed Mar. 19, 1962.

CURL-LESS

Owner of Reg. Nos. 414,702 and 420,976.
For Carbon Paper.
First use Jan. 20, 1944.

Class 12—Construction Materials

SN 122,076. General Concrete Products, Inc., Van Nuys, Calif. Filed June 15, 1961.

GENERAL FLAGCRETE

For Concrete Blocks.
First use Jan. 15, 1952.

SN 122,637. Paco Textures Corporation, Richmond, Calif. Filed June 22, 1961.

PACO

For Materials for Dry-Wall Construction, Bedding Cement, Topping Compounds, Texture Powders, Dry-Wall Acoustic Type Powders, and Metal Corner Casings.
First use Nov. 26, 1957.

SN 133,379. Engelhard Industries, Inc., Newark, N.J. Filed Dec. 5, 1961.

capastic

For Cementitious Plastic Coating Material.
First use May 11, 1961.

SN 136,734. California Metal Enameling Company, Los Angeles, Calif. Filed Jan. 29, 1962.

"RHOMBIC"

For Metal Sun Screen Building Panels.
First use May 16, 1961.

SN 137,439. Illinois Clay Products Company, Joliet, Ill. Filed Feb. 7, 1962.

CASTEX

For Refractory Mix in Dry Powder Form.
First use Jan. 8, 1962.

SN 138,144. American Screen Products Company, Chicago, Ill. Filed Feb. 19, 1962.

FRAME-AHL

For Metal Framing for Panels.
First use Dec. 15, 1961.

SN 138,879. Pope & Talbot Inc., San Francisco, Calif. Filed Mar. 1, 1962.

CUSTOM FIBER

For Sheets of Building Material Comprised of Compressed Wood Particles.
First use Aug. 1, 1961.

SN 138,880. Pope & Talbot Inc., San Francisco, Calif. Filed Mar. 1, 1962.

CUSTOM-BLOCK

For Sheets of Building Material Comprised of Compressed Wood Particles.
First use June 1, 1960.

SN 142,987. Glaverbel, Societe Anonyme, Brussels, Belgium. Filed Feb. 2, 1962.

Polyverbel

Owner of Belgian Reg. No. 3,715, dated Feb. 26, 1955.
For Insulating Windows Comprising Two or More Glass Sheets Separated by a Cushion of Dehydrated Air and Sealed on Their Periphery by a Peripheric Joint Set in a Frame of Stainless Steel.

SN 144,186. H. K. Porter Company, Inc., Pittsburgh, Pa. Filed May 9, 1962.

PITCO

Owner of Reg. No. 643,133.
For Plastic Refractory Material for Lining Furnaces and Associated Equipment.
First use October 1950.

SN 145,958. North American Tile Corporation, Montreal, Quebec, Canada. Filed June 1, 1962.

NATILCO

Priority claimed under Sec. 44(d) on Canadian application filed Apr. 19, 1962; Reg. No. 128,670, dated Nov. 9, 1962.
For Ceiling, Walls, and Floor Linings of Laminated Wood Veneers; Hardwood Parquetry Floors.

SN 147,098. Florida Steel Corporation, Tampa, Fla. Filed June 18, 1962.

For Structural Steel Products—Namely, Shapes, Tanks, Wire Mesh, Gates, Doors, Door Frames, Windows, Culverts, Guard Rails, Flood Gates, Stairs, Gratings, Railings, Hatches, Building Fronts and Facia, Flag Poles, Fabricated Transmission Towers, Manhole Covers, Expansion Joints and Dowel Assemblies, Ornamental Metal Screens, Trash Intake Screens for Sewage Plants and Power Plants, Louver Screens for Sunshades, Walkways, Ladders, Pipe Columns, Column Guards, Highway Signs, Conveyor Framing.
First use December 1958.

SN 153,772. Kimberly-Clark Corporation, Neenah, Wis. Filed Sept. 24, 1962.

BM•T

Owner of Reg. No. 616,009.
For Building Paper.
First use Aug. 23, 1962.

SN 154,665. Miracle Adhesives Corporation, Bellmore, N.Y. Filed Sept. 14, 1962.

MIRACLE

For Surface Anchors—Namely, Anchor Nails, Spindle Anchors, Anchor Bolts, Pronged Anchors, Beam Hangers, and Hanger Supports.
First use Dec. 5, 1947.

SN 155,398. Dura-Tech Corporation, Boca Raton, Fla. Filed Oct. 18, 1962.

SPANEX

For Expandable Polystyrene Foam Plastic Used Mainly for Insulation and Sold in Board or Panel Form.
First use Jan. 12, 1959.

SN 156,016. Owens-Corning Fiberglas Corporation, Toledo, Ohio. Filed Oct. 26, 1962.

FRESCOR

For Acoustical Tile, Boards or Baffles.
First use Apr. 14, 1958.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

SN 130,380. Phillips Screw Company, East Boston, Mass. Filed Oct. 20, 1961.

PHILLIPS POZIDRIV

Owner of Reg. Nos. 704,499 and 707,177.
For Screws.
First use Aug. 25, 1961.

SN 131,706. Phillips Screw Company, East Boston, Mass. Filed Nov. 9, 1961.

PHIL-NUT

For Threaded Fastening Devices, More Particularly, Nuts.
First use Aug. 4, 1961.

SN 132,761. Frank Edward Swain, Leicester, England. Filed Nov. 24, 1961.

FLEXISEAT

Owner of British Reg. No. 759,907, dated Nov. 24, 1956.
For Manually Operated Valves Made of Metal for Use in Controlling the Flow of Fluid in Pipe Systems.

SN 132,822. Ekco Products Company, Chicago, Ill. Filed Nov. 27, 1961.

U.T.I.

For Baking Pans.
First use Mar. 1, 1957.

SN 133,133. Crane Co., Johnstown, Pa. Filed Dec. 1, 1961.

For Plumbing Fixtures.
First use Nov. 2, 1961.

SN 134,848. Standard Manufacturing Co., Cedar Falls, Iowa. Filed Dec. 28, 1961.

TROJAN

For Gates and Hog Waterers.
First use 1910 on gates.

SN 135,938. FMC Corporation, Chicago, Ill. Filed Jan. 16, 1962.

UT

For Pumping Stations Adapted for Use Underground and Comprising Pumps, Motors, Control Panel, Ladders, Exhaust Blower, Dehumidifier, Pump Controls, and Appropriate Piping and Wiring.
First use on or about June 19, 1961.

SN 136,300. Parker-Hannifin Corporation, Cleveland, Ohio. Filed Jan. 23, 1962.

PUSH-LOK

For Couplings for Flexible Hose.
First use May 20, 1959.

SN 138,506. Industrial Piping Supply Company, Charlotte, N.C. Filed Feb. 23, 1962.

IPSCO

For Pipe and Pipe Fittings, Pipe Valves, Metal Tubing and Metal Hose and Connections Therefor, Steam Traps and Parts Therefor, Pressure Vessels, Bolts, and Strainers.
First use on or about Feb. 1, 1961.

Class 14—Metals and Metal Castings and Forgings

SN 142,154. Winters Foundry & Machine Company, Inc., Canton, Ohio. Filed Apr. 12, 1962.

For Metal Castings—Namely, Aluminum, Bronze, and Copper Rough Castings; and Machined Metal Parts Made to Customer's Specifications.
First use Feb. 15, 1961.

SN 151,558. American Potash & Chemical Corporation, Los Angeles, Calif. Filed Aug. 21, 1962.

TRONAMANG

For Electrolytic Manganese Metal.
First use July 13, 1962.

Class 15—Oils and Greases

SN 112,759. O.K. Rubber Welders, Incorporated, Littleton, Colo. Filed Jan. 30, 1961.

The drawing is lined for the color red.
For Gasoline, Oils, and Greases.
First use on or about Apr. 15, 1955.

SN 127,224. Hess Oil & Chemical Corporation, Perth Amboy, N.J., assignee, by mesne assignments, of Hess, Inc., Perth Amboy, N.J. Filed Sept. 5, 1961.

HESS

For Petroleum Products.
First use Jan. 5, 1961.

SN 147,970. Texaco Inc., New York, N.Y. Filed June 28, 1962.

SATO

For Lubricating Oil.
First use June 5, 1962.

SN 152,869. Radiator Specialty Company, Charlotte, N.C. Filed Sept. 5, 1962.

STEER-SEAL

The drawing is lined for red but no claim is made to color.
For Lubricant and Sealer for Power Steering.
First use Sept. 5, 1958.

Class 16—Protective and Decorative Coatings

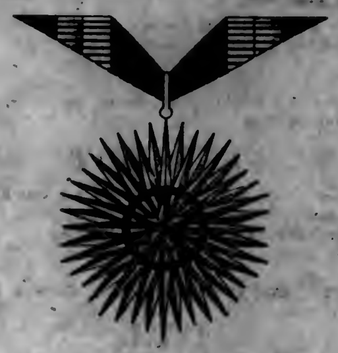
SN 134,899. Prismo Safety Corporation, Huntingdon, Pa. Filed Dec. 29, 1961.

nite-line

For Reflecting Coatings and Binders Used in Markers, Signs, Safety Lines, Center Lines, Lane Lines, and Runway Markers.
First use at least as early as July 1961.

Class 17—Tobacco Products

SN 140,710. Brown & Williamson Tobacco Corporation, Louisville, Ky. Filed July 25, 1962.



The drawing is not lined for color. The line represents shading. Owner of Reg. No. 612,072.
For Cigarettes.
First use June 27, 1960; July 1, 1950, in another display.

SN 151,437. W. H. Snyder and Sons Incorporated, Windsor, Pa. Filed Aug. 17, 1962.

MARK IV
THE CIGAR OF PRECISION

No claim is made to the words "The Cigar of Precision" except in combination with the mark as shown.
For Cigars.
First use May 1, 1961.

Class 18—Medicines and Pharmaceutical Preparations

SN 98,106. William V. Kramer, d.b.a. Pedelite Products, Boston, Mass. Filed May 31, 1960.

PEDELITE

For Medicinal Preparation—Namely, a Foot Lotion.
First use Feb. 7, 1955.

SN 112,978. Parke, Davis & Company, Detroit, Mich. Filed Feb. 2, 1961.



The mark consists of a gray band with straight sides, approximately five-thirty-seconds of an inch wide, encircling the central portion of an opaque white capsule. The drawing is lined to indicate the color gray. The representation of the capsule is disclaimed.
For Antibiotic Preparations.
First use March 1949.

SN 119,765. Geigy Chemical Corporation, Ardsley, N.Y. Filed May 11, 1961.

BUTY

For Analgesic Preparation.
First use Apr. 25, 1961.

SN 123,060. Aktiebolaget Astra, Apotekarnes Kemiska Fabriker, Sodertalje, Sweden. Filed Mar. 27, 1962.

THEAN

Owner of Danish Reg. No. 1017–61, dated Nov. 4, 1961.
For Pharmaceutical Preparation for the Treatment of Bronchial Asthma, Cardiac Asthma, Heart and Circulation Insufficiencies, and Angiospastic States.

SN 128,861. Robert F. McCann, d.b.a. McCann Products Co., Pompano Beach, Fla. Filed Sept. 21, 1961.

FAITHFULLY YOURS

For Medicinal Ointment.
First use Sept. 5, 1961.

SN 129,884. H. L. Sigloch, d.b.a. S & S Pharmacal Company, Oklahoma City, Okla. Filed Oct. 13, 1961.

Cal-P-C

For Preparation for Peptic Ulcer and Hyperacidity.
First use Aug. 9, 1960.

SN 140,216. Andomia Products Limited, Bradford, England. Filed Mar. 20, 1962.

DULCA

Owner of British Reg. No. 756,667, dated Aug. 16, 1956.
For Pharmaceutical Preparation—Namely, an Aid to Digestion.

SN 151,435. Savage Laboratories, Inc., Houston, Tex. Filed Aug. 17, 1962.

MAGNITE

For Chemical Complex Containing Magnesium Sulfate and Bentonite Incorporated in a Medicinal Preparation.
First use Aug. 2, 1962.

SN 151,755. Gyneco Products Incorporated, Roslyn, Pa. Filed Aug. 23, 1962.

7+

For Medicinal Preparation in Tablet Form for Use as an Appetite Depressant.
First use Aug. 17, 1962.

SN 152,867. The Purdue Frederick Company, New York, N.Y. Filed Aug. 28, 1962.

CEREBRATONE

For Nutritional Supplement Containing Vitamins and Minerals.
First use Mar. 1, 1955.

SN 153,522. Summers Laboratories, Inc., Fort Washington, Pa. Filed Sept. 19, 1962.

NEOSUM

For Antibacterial Lotion.
First use May 31, 1960.

SN 153,617. C. H. Boehringer Sohn, Ingelheim (Rhine), Germany. Filed Sept. 21, 1962.

LAXONALIN

Owner of German Reg. No. 739,360, dated Aug. 18, 1960.
For Laxative Agent.

SN 153,976. Olin Mathieson Chemical Corporation, New York, N.Y. Filed Sept. 26, 1962.

HYDREA

For Antineoplastic Preparations.
First use June 29, 1962.

SN 154,105. First Texas Pharmaceuticals, Inc., Dallas, Tex. Filed Sept. 28, 1962.

TRI-AZO-TAB

For Sulfonamide Preparation in Tablet Form.
First use 1954.

Class 19—Vehicles

SN 126,004. Berg Mfg. & Sales Co., Chicago, Ill. Filed Aug. 15, 1961.

BERG

For Safety Equipment for the Transportation Industry—Namely, Automotive Brake Operating Cylinders, Automotive Brake Controls, Automotive Brake Pressure Systems and Parts and Accessories Therefor.
First use 1947.

SN 128,319. Bridgestone Tire Company Limited, Chuo-ku, Tokyo, Japan. Filed Sept. 20, 1961.

CAPTAIN COOK

Priority claimed under Sec. 44(d) on Japanese application filed July 4, 1961; Reg. No. 598,660, dated Oct. 8, 1962.
For Bicycles and Their Parts.

SN 128,320. Bridgestone Tire Company Limited, Chuo-ku, Tokyo, Japan. Filed Sept. 20, 1961.

FLYING CARPET

Priority claimed under Sec. 44(d) on Japanese application filed July 4, 1961; Reg. No. 596,659, dated Oct. 8, 1962.
For Bicycles and Their Parts.

SN 128,322. Bridgestone Tire Company Limited, Chuo-ku, Tokyo, Japan. Filed Sept. 20, 1961.

SURF-RIDER

Priority claimed under Sec. 44(d) on Japanese application filed Aug. 23, 1961; Reg. No. 600,463, dated Nov. 8, 1962.
For Motorcycles, Bicycles and Their Parts.

SN 132,439. Babcock Mfg. Co., Oakland, Calif. Filed Nov. 21, 1961.

BABCO

Owner of Reg. No. 581,225.
For Power Operated Carts for Transporting Golf Clubs.
First use Apr. 12, 1961.

SN 147,528. Airheart Products, Inc., Van Nuys, Calif. Filed June 25, 1962.



For Fluid Actuated Brake Units.
First use Apr. 24, 1958.

SN 151,837. The May Department Stores Company, New York, N.Y. Filed Aug. 24, 1962.

SPORTCREST

For Bicycles.
First use Oct. 18, 1961.

SN 153,842. Universal Trailer Corporation, North Bergen, N.J. Filed Sept. 24, 1962.

Universal

For Truck Bodies and Truck Trailers.
First use on or about Mar. 1, 1960.

SN 155,732. Market Forge Company, Everett, Mass. Filed Oct. 23, 1962.

TWO FOR THE ROAD

For Vehicle Safety Seat Belts.
First use Oct. 8, 1962.

Class 21—Electrical Apparatus, Machines, and Supplies

SN 123,050. Lear Siegler, Inc., Santa Monica, Calif., assignee, by mesne assignment, of Tape Control Corporation, Glenview, Ill. Filed June 28, 1961.

COMMAND CONTROL

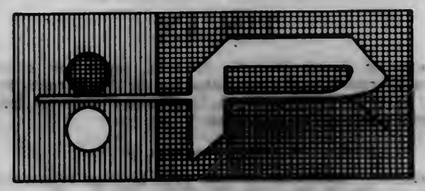
The word "Control" is disclaimed apart from the mark as shown.
For Programmed Tape Actuated Electrical and Mechanical Equipment Used in the Performance of a Series of Programmed Operational Steps To Achieve a Predetermined Sequence of Operations.
First use Jan. 4, 1960.

SN 129,592. Wintronics, Ltd., New York, N.Y. Filed Oct. 10, 1961.

TELECONOMY

For Telephone Intercommunication Equipment, Devices, and Systems.
First use Sept. 27, 1961.

SN 131,064. Potter Instrument Company, Inc., Plainview, N.Y. Filed Oct. 31, 1961.



The drawing is intended to represent the colors red, white and black; however, no claim to color is made.
For Electrical Apparatus—Namely, Components for Use in Computer Peripheral Equipment Such as Counters, Printed Circuits, Specialized Circuitry, and Control Units.
First use July 1, 1961.

SN 131,129. Hamilton Watch Company, Lancaster, Pa. Filed Nov. 1, 1961.

HAMILTON

For Electronic Equipment—Namely, Relay Control Boxes, Which May Be Used With Electric Gauges and Indicators for Performing Various Functions, Such as Machine Control, Sorting and Continuous Process Control.
First use November 1960.

SN 132,440. Babcock Mfg. Co., Oakland, Calif. Filed Nov. 21, 1961.

BABCO

Owner of Reg. No. 581,225.
For Storage Batteries and for Battery Chargers.
First use Apr. 21, 1961.

SN 133,050. Bramco, Inc., Detroit, Mich. Filed Nov. 30, 1961.

BRAMCO

For Resonant Reed Electrical Components and Associated Electrical Circuits.
First use Nov. 15, 1955.

SN 133,437. Allis-Chalmers Manufacturing Company, West Allis, Wis. Filed Dec. 6, 1961.

FUELECTRIC

For Fuel Cell Power Units.
First use Feb. 21, 1961.

SN 133,656. E. W. Bliss Company, Canton, Ohio, assignee of The Gamewell Company, Newton Upper Falls, Mass. Filed Dec. 8, 1961.



Owner of Reg. Nos. 524,435 and 663,070.
For Vehicular and Pedestrian Traffic Control Equipment, Components Thereof, and Industrial Timing Electric Switches and Industrial Counter Electric Switches.
First use Oct. 19, 1961.

SN 134,991. Kondo Electrical Industrial Company Limited, Setagaya-ku, Tokyo, Japan. Filed Jan. 2, 1962.



Priority claimed under Sec. 44(d) on Japanese application filed July 12, 1961; Reg. No. 596,108, dated Sept. 5, 1962.
For Projection Lamps, Spotlight Lamps, Photo Lamps, Exciter Lamps, Studio Lamps, Projector Lamps, Reflector Lamps, and All Other Lamps and Bulbs.

SN 140,117. Garlock Inc., Palmyra, N.Y. Filed Mar. 19, 1962.

FREE-FLEX

For Flexible Printed Circuits.
First use Feb. 21, 1962.

SN 141,322. Litton Industries, Inc., Beverly Hills, Calif. Filed Apr. 2, 1962.

TIMEMARK

For Recording Blanks Such as Electrosensitive Recording Papers Used in Facsimile Recorders, Chart Recorders, and Recorders of Electric Currents.
First use in or about September 1960.

SN 144,473. E. I. du Pont de Nemours and Company, Wilmington, Del. Filed May 14, 1962.

PYRE-M.L.

Owner of Reg. No. 140,246.
For Coated Fabrics and Laminates for Electrical or High Temperature Applications.
First use as early as Mar. 26, 1962.

SN 146,609. Leo G. Furness, d.b.a. Fil-T-Vac Cleaner Co., Ltd., Phoenix, Ariz. Filed June 11, 1962.

FIL-T-VAC

For Air Filter Vacuum Cleaner.
First use Apr. 30, 1962.

SN 149,892. Telefonaktiebolaget L M Ericsson, Stockholm, Sweden. Filed July 26, 1962.

ERICODEBAR

Priority claimed under Sec. 44(d) on Swedish application filed Jan. 30, 1962, Reg. No. 102,738, dated May 11, 1962. Owner of U.S. Reg. Nos. 415,574, 710,844, and others.
For Automatic Telephone Exchanges.

SN 149,893. Telefonaktiebolaget L M Ericsson, Stockholm, Sweden. Filed July 26, 1962.

ERICODE

Priority claimed under Sec. 44(d) on Swedish application filed Jan. 30, 1962, Reg. No. 102,737, dated May 11, 1962. Owner of U.S. Reg. Nos. 415,574, 710,844, and others.
For Automatic Telephone Exchanges.

SN 153,006. Machine-O-Matic, Inc., Evanston, Ill. Filed Sept. 12, 1962.

MACHINE-O-MATIC

For Paper Registering Systems and Other Web Speed Control Devices Including Edge Guides, One-Way Circumferential Register Controls, Two-Way Circumferential Register Controls, Web Splice Detectors, Web Break Detectors, Cut Off Length Controls, as Well as Electrical and Other Components Thereof, Such Controls and Detectors Include Photoelectric Control Devices Which Are Sensitive to Web Movements, Relay Circuitry Responsive to Such Photoelectric Control Devices, Web Speed Correction Devices Responsive to the Relay Circuitry, and Various Combinations Thereof.
First use on or about Oct. 23, 1952.

SN 153,257. Anna Cunningham, d.b.a. A.F.P. Co., Chicago, Ill. Filed Sept. 17, 1962.

A.F.P

For Low Voltage Rectifiers and Burglar Alarm Equipment.
First use July 2, 1943.

SN 154,358. Manhattan Marine & Electric Co., Inc., New York, N.Y. Filed Oct. 2, 1962.

SEATEST

Owner of Reg. No. 740,477.
For Electrical Marine Switches, Dome Lights, Cabin Fixtures, Navigation Lights, and Windshield Wipers.
First use Jan. 16, 1962, on electrical marine switches.

SN 155,899. Dumont Electric Corporation, Clearfield, Pa. Filed Oct. 25, 1962.

triax
DUMONT

For Portable Electric Hand Tools Capable of Selective Composite Rotary and Reciprocation Motions.
First use Aug. 13, 1962.

SN 157,580. Voltronics, Inc., Westbury, N.Y. Filed Nov. 19, 1962.

VARITRIM

For Electrical Capacitors.
First use Oct. 18, 1962.

SN 158,163. Jefferson Electric Company, Bellwood, Ill. Filed Nov. 29, 1962.

POWERFORMER

For Transformers.
First use Nov. 6, 1962.

Class 22 — Games, Toys, and Sporting Goods

SN 69,042. Ed-U-Cards Mfg. Corp., Long Island City, N.Y. Filed Mar. 3, 1959.

ARITHMETIC CAN BE FUN

For Equipment Sold as a Unit for Playing a Numbers Board Game.
First use on or about Aug. 29, 1958.

SN 95,516. Nocona Leather Goods Company, Nocona, Tex. Filed Apr. 21, 1960.

PERMIWHITE

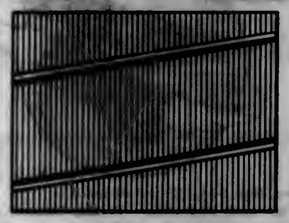
For the Finish on Polyethylene and Vinylaire Padding Which Padding Is Used in Football Equipment—Namely, Shoulder Pads, Knee Pads, Thigh Guards, Arm Pads, Kidney Pads, and Shin Pads.
First use November 1958.

SN 101,170. Gravco, Incorporated, St. Louis, Mo. Filed July 20, 1960.

GRAVCO VALET

For Portable Wheeled Cart for Transporting Baseball Equipment and the Like.
First use Mar. 20, 1960.

SN 128,923. Rawlings Sporting Goods Company, St. Louis, Mo. Filed Sept. 29, 1961.



The drawing is lined for red, but no claim is made to the color.
For Athletic Equipment as Follows: Baseball—Bats, Baseballs, Gloves, Mitts, Leg Guards, Masks, Body Protectors, Umpire Body Protectors, Sliding Pads, Bases, Bat Bags, Glove Laces, Mitt Sponges, Mask Pads, Mask Harnesses, Leg Guard Straps, Body Protector Harness, Shoe Plates, Umpires' Indicators, Base Covers, Home Plates, Pitchers' Box Plates, Carrying Bags, Head Protectors, Protector Caps, Umpires' Leg Guards; Softball—Bat Bags, Mask Pads, Mask Replacement Harnesses, Masks, Body Protectors, Bats, Softballs, Gloves and Mitts, Bases; Tennis—Nets, Rackets, Racket Covers, Racket Strings, Net Cables, Racket Center Straps, Posts, Reels, Balls, Racket Presses, Dry and Wet Court Markers; Badminton—Nets, Rackets, Racket Covers, Racket Strings, Complete Sets, Posts, Shuttles and Presses; Table Tennis and Aerial Tennis Dart Equipment—Complete Sets, Darts, Paddles, Balls, Bats, Nets and Posts; Track and Field Equipment—Hurdles, Vaulting Poles, Cross Bars, Whistles, Batons, Competitors' Numbers, Finish Lines, Spikes and Spike Wrenches, Putting Shots, Javelins, Discuses, Vaulting and Jumping Standards, Starting Blocks; Golf—Clubs, Balls, Bag Sling Straps, Gloves, Spikes, Bags, Umbrellas, Club Head Covers, Tees, Carts; Basketball—Elbow Pads, Repair Kits, Eyeglass Protectors, Backboards, Goal Nets, Timers, Balls, Goals, Officials' Horns, Carriers, Knee Pads; Football—Footballs, Shoulder Pads, Shoulder and Arm Braces, Injury Protective Pads, Helmets, Thigh Guards, Knee Pads, Elbow Pads, Knee Braces, Jock Cups, Hip Pads, Blocking Pads, Shin Guards, Chin Straps, Mouth and Teeth Protectors, Bladders, Laces, Inflating Needles, Kicking Tees, Shoulder Cushion Laces, Arm Pads, Ankle Braces, Goal Flags, Blocking Vests, Face Protectors, Rib Pads, Field Markers, Sideline Markers, Blocking and Tackling Dummies; Boxing—Gloves, Head Gear, Striking Bags, Striking Bag Gloves, Striking Bag Platforms, Ankle, Wrist and Knee Supporters, Mouth Pieces, Abdominal Protectors, Hand Wraps, Striking Bag Bladders, Striking Bag Swivels; Wrestling—Knee Braces, Headguards; and Miscellaneous—Megaphones, Handballs, Indian Clubs, Wands, Kick Balls, Volleyballs, Volleyball Standards, Volleyball and Soccer Bladders, Inflators, Soccer Balls, Medicine Balls, Corkballs, Corkball Bats, Whistles, Smooth Rubber Play Balls, Tether Balls.
First use in January 1957 on baseball gloves.

SN 131,261. Charles S. Bassin, Chicopee, Mass. Filed Nov. 8, 1961.

PUTTER HOUSE

For Golf Clubs, Golf Balls, and Golfing Accessories Other Than Wearing Apparel.
First use Oct. 31, 1961.

SN 131,551. Carlton Shuttlecocks Limited, Horsechurch, Essex, England. Filed Nov. 8, 1961.

CARLTON

For Shuttlecocks.
First use in August 1950; in commerce in January 1951.

SN 133,682. Alfred Malcolm Layson, Waukegan, Ill. Filed Dec. 8, 1961.

TRU-FISH

For Fishing Equipment—Namely, Artificial Fishing Decoys and Lures.
First use Nov. 17, 1961.

SN 134,318. Goldberger Doll Mfg. Co. Inc., Brooklyn, N.Y. Filed Dec. 19, 1961.

ANNETTE

For Dolls.
First use Nov. 27, 1961.

SN 139,115. Mattel, Inc., Hawthorne, Calif. Filed Mar. 5, 1962.

CHATTY BABY

No claim is made to the exclusive right to use the word "Baby" apart from the mark as a whole. Owner of Reg. No. 704,555.
For Doll for Children.
First use Jan. 25, 1962.

SN 141,080. S. Klein Department Stores, Inc., New York, N.Y. Filed Mar. 29, 1962.



The term "Ninety-Plus" is hereby disclaimed and the representation of the goods is disclaimed, per se.
For Golf Balls.
First use on or about June 19, 1961.

SN 150,088. Louis Marx & Co., Inc., New York, N.Y. Filed July 30, 1962.

ENFORCER

For Toy Guns.
First use Mar. 29, 1960.

SN 150,181. Anthony P. Pearson, d.b.a. Pearson Enterprises, Seattle, Wash. Filed July 31, 1962.

CLUB MASTER

For Cart for Golf Bag.
First use Apr. 15, 1960.

SN 150,204. Wonel Corp., Inglewood, Calif. Filed July 31, 1962.

TARGET KING

For Slingshots.
First use June 8, 1962.

SN 150,510. W. R. Blake, d.b.a. W. R. Blake Company, Baxter Springs, Kans. Filed Aug. 6, 1962.

Wake-Breaker

For Water Skis.
First use Apr. 2, 1960.

SN 150,550. Fuld Publishing Co. Inc., San Pedro, Calif. Filed Aug. 6, 1962.

CLAIM

For Board, Playing Markers, Directional Cards, and Dice for Playing a Game.
First use July 23, 1962.

SN 150,595. Penn Fishing Tackle Mfg. Co., Philadelphia, Pa. Filed Aug. 6, 1962.

BAYMASTER

For Fishing Reels.
First use in 1953.

SN 150,596. Penn Fishing Tackle Mfg. Co., Philadelphia, Pa. Filed Aug. 6, 1962.

BEACHMASTER

For Fishing Reels.
First use in 1953.

SN 150,597. Penn Fishing Tackle Mfg. Co., Philadelphia, Pa. Filed Aug. 6, 1962.

DELMAR

For Fishing Reels.
First use in 1941.

SN 150,599. Penn Fishing Tackle Mfg. Co., Philadelphia, Pa. Filed Aug. 6, 1962.

LONG BEACH

For Fishing Reels.
First use in 1953.

SN 150,600. Penn Fishing Tackle Mfg. Co., Philadelphia, Pa. Filed Aug. 6, 1962.

MARINER

For Fishing Reels.
First use in 1953.

SN 150,603. Penn Fishing Tackle Mfg. Co., Philadelphia, Pa. Filed Aug. 6, 1962.

SAILFISHER

For Fishing Reels.
First use in 1953.

SN 150,604. Penn Fishing Tackle Mfg. Co., Philadelphia, Pa. Filed Aug. 6, 1962.

SEA-BOY

For Fishing Reels.
First use in 1953.

SN 150,605. Penn Fishing Tackle Mfg. Co., Philadelphia, Pa. Filed Aug. 6, 1962.

SENATOR

For Fishing Reels.
First use in 1936.

SN 150,606. Penn Fishing Tackle Mfg. Co., Philadelphia, Pa. Filed Aug. 6, 1962.

SILVER BEACH

For Fishing Reels.
First use in 1937.

SN 150,607. Penn Fishing Tackle Mfg. Co., Philadelphia, Pa. Filed Aug. 6, 1962.

SQUIDDER

For Fishing Reels.
First use in 1939.

SN 150,606. Penn Fishing Tackle Mfg. Co., Philadelphia, Pa. Filed Aug. 6, 1962.

SURFMASTER

For Fishing Reels.
First use in 1941.

SN 150,903. Wilson Sporting Goods Co., River Grove, Ill. Filed Aug. 9, 1962.

MONTEREY

For Tennis Rackets.
First use July 20, 1962.

SN 150,960. Leonard L. Lussier, Norwalk, Calif. Filed Aug. 10, 1962.

STRAGGLER

For Fishing Lures.
First use Feb. 3, 1959.

SN 151,083. Roto-Kite Manufacturing Company, Houston, Tex. Filed Aug. 13, 1962.

ROTO-KITE

For Kites.
First use May 1, 1961.

SN 151,113. Ament-Douglass Manufacturing Corporation, Redwood City, Calif. Filed Aug. 14, 1962.

MARAUDER

For Artificial Fishing Lures.
First use on or about Apr. 1, 1962.

SN 151,114. Ament-Douglass Manufacturing Corporation, Redwood City, Calif. Filed Aug. 14, 1962.

MICRO-MITE

For Artificial Fishing Lures.
First use in or about April 1962.

SN 154,848. René Ramillon, Grenoble, Isere, France. Filed Oct. 9, 1962.

RAMY

For Ski Attachments, Sticks, and Straps.
First use Feb. 2, 1938; in commerce 1939.

Class 23 — Cutlery, Machinery, and Tools, and Parts Thereof

SN 130,943. Phillips Screw Company, East Boston, Mass. Filed Oct. 30, 1961.

PHILLIPS POZIDRIV

Owner of Reg. Nos. 704,499 and 707,177.
For Tools—Namely, Drivers and Bits for Driving Bolts, Screws, Rivets and Other Fasteners Having Recessed Heads; and Punches Which Are End Products for Machinery Used To Manufacture Screws, Bolts, Rivets and Other Fasteners Having Recessed Heads.
First use Aug. 25, 1961.

SN 133,767. Davis Manufacturing, Inc., Wichita, Kans. Filed Dec. 11, 1961.



The drawing is lined for silver coloring.
For Self-Powered Earth Working Machines Including Mechanical Shovels, Backhoes, Trench Digging Machines, Post Hole Digging Machines, and Bulldozers; Mowing Machines; Lift Fork Trucks; Highway Trailers for Transporting Such Machines; Earth Working Attachments for Tractors Including Mechanical Shovel Attachments, Backhoe Attachments, Trench Digging Attachments, Post Hole Digging Attachments, Rotary Tiller Attachments, and Back Filling Attachments.
First use Apr. 3, 1959.

SN 135,683. JDD Lubricants Company, Sioux City, Iowa. Filed Jan. 12, 1962.



The lining on the drawing designates the colors green and yellow.
For Hydraulic Wagon Hoists, Weed Sprayers, Wagon Boxes, and Hydraulic Cylinders.
First use Sept. 1, 1960.

SN 135,944. Aerojet-General Corporation, Azusa, Calif. Filed Jan. 17, 1962.



For Rocket Engine Systems and Component Parts Thereof.
First use on or about Dec. 28, 1961.

SN 136,057. McCulloch Corporation, Los Angeles, Calif. Filed Jan. 18, 1962.

SPEED TIP

For Chain Saws and Parts Therefor—Namely, Saw Bars.
First use July 20, 1960.

SN 136,586. Powell Muffler Company, Inc., Chicago, Ill. Filed Jan. 25, 1962.

BUILT STRONGER TO LAST LONGER

Owner of Reg. No. 594,671.
For Mufflers.
First use in or about 1905.

SN 137,738. A. A. Gage Company, Detroit, Mich. Filed Feb. 12, 1962.

ULTRADEX

For Indexing Fixtures.
First use Aug. 25, 1958.

SN 137,739. A. A. Gage Company, Detroit, Mich. Filed Feb. 12, 1962.

ULTRA-SPIN

For Rotary Tables for Supporting Work Pieces for Machine Operations.
First use Nov. 11, 1960.

SN 138,102. McHutchison & Co., Ridgefield, N.J. Filed Feb. 16, 1962.

MAC-PAK

Owner of Reg. No. 729,004.
For Grass Rakes.
First use in or about January 1960.

SN 139,527. Prosser Industries, Inc., Anaheim, Calif. Filed Mar. 9, 1962.



For Submersible Pumps.
First use Sept. 1, 1961.

SN 140,876. Speaker Sortation Systems, Inc., Brookfield, Wis. Filed Mar. 27, 1962.

QIK-TIP

For Conveyors in the Nature of Article and Material Sorting Machines.
First use August 1959.

SN 143,063. Virax—Etablissements Metivier-Lang, Paris, France. Filed Apr. 25, 1962.

VIRAX

Owner of French Reg. No. 462,887, dated Feb. 15, 1957 (Seine); Natl. Inst. No. 37,346.
For Mechanics' Hand-Tools and Metal Working Machine Tools and Parts Thereof.

SN 146,226. Sjostrom Automations, Inc., Boca Raton, Fla. Filed June 5, 1962.

JET TABLE

The word "Table" is disclaimed apart from the mark as shown.
For Machines for Cutting and Handling Fabrics and Textiles in Continuous Lengths.
First use June 1, 1961.

SN 147,038. Richard E. Rhodes, d.b.a. Device Development, Phoenix, Ariz. Filed June 15, 1962.

MICROSIZER

For Ore Grinding and Pulverizing Apparatus.
First use Dec. 1, 1961.

SN 148,548. West Coast Sewing Supply Co., Los Angeles, Calif. Filed July 6, 1962.

NESCO

For Sewing Machines and Parts Thereof.
First use June 5, 1962.

SN 149,790. J. Wiss & Sons Co., Newark, N.J. Filed July 25, 1962.

DART

Owner of Reg. No. 726,470.
For Shears, Snips, Scissors, Trimmers and Clippers; Garden Implements and Tools; and Tool Holders and Tool Racks.
First use Oct. 18, 1960.

SN 155,302. The DeVilbiss Company, Toledo, Ohio. Filed Oct. 17, 1962.

WHIRL-O-MISER

For Paint Spraying Apparatus and Parts Thereof.
First use Oct. 1, 1962.

SN 155,758. Albert Taylor, d.b.a. Various Products Co., Detroit, Mich. Filed Oct. 23, 1962.

Squeezall

For Keys for Rolling Toothpaste Tubes and the Like.
First use Mar. 2, 1962.

SN 155,892. Clary Corporation, Fort Worth, Tex. Filed Oct. 25, 1962.

LUMBERMASTER

For Woodworking Machinery.
First use Sept. 13, 1962.

SN 157,341. The United Industrial Syndicate, Inc., Portland, Maine. Filed Nov. 15, 1962.

DROPLIFT

For Elevating and Lowering Equipment—Namely, That Used in Raising and Lowering Paper Rolls.
First use at least as early as Mar. 1, 1962.

Class 26—Measuring and Scientific Appliances

SN 117,447. Bölkow-Apparatebau GmbH, Nabern/Teck, near Kirchheim, Wurttemberg, Germany. Filed Apr. 10, 1961.

bö 103

Priority claimed under Sec. 44(d) on German application filed Oct. 12, 1960; Reg. No. 760,068, dated Apr. 3, 1962.
For Gyroscopes, Spoilers, Feed Velocity Meters, Sighting Telescopes, Bombsights, Infrared Sighting Devices, Guided Signal Generators, Cable Drums, Electronic Testing Devices for Testing Rocket and Missile Components, Electronic Simulators for Imitating the Movements of Aircraft and Missiles, Proximity Alarm Devices for Indicating Approach Towards and/or Intrusion Into an Area or Space To Be Protected; Optical and Electron-Optical Sighting Devices and Parts and Accessories Therefor Including Stands and Adjusting Devices; Impulse-Generators for Use in Remote Control Arrangements and for Use in Rocket Firing and Control Systems; Electrical Measuring and Surveying Devices; Gauging, Signalling, Measuring and Controlling Devices for Aeronautic Purposes; Grounded Apparatus for Training Helicopter Pilots, Vertical Take-Off Aircraft Pilots, Aircraft Pilots.

SN 134,506. American Speedlight Corporation, Middle Village, N.Y. Filed Dec. 22, 1961.

ascorlume

Owner of Reg. Nos. 641,014 and 702,536.
For Lighting Equipment for Photographic and Graphic Fields.
First use June 21, 1961.

SN 140,551. General Electric Company, New York, N.Y. Filed Mar. 23, 1962.

Directo-Matic

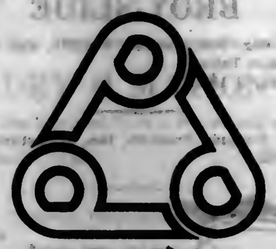
For Packaged, Static, Electrical Control Apparatus (for Controlling and Regulating Electrical Power in Machines and Processes Performed by Electrical Apparatus Including the Generation, Handling, Computing and Recording of Data Associated Therewith and the Control of Logic Functions Corresponding Thereto).
First use Feb. 2, 1962.

SN 149,871. Pikes Peak Plastics, Inc., Colorado Springs, Colo. Filed July 26, 1962.

EGONITE

For Industrial and Sportswear Goggles.
First use on or about May 15, 1946.

SN 149,873. Pikes Peak Plastics, Inc., Colorado Springs, Colo. Filed July 26, 1962.



For Industrial and Sportswear Goggles.
First use on or about May 15, 1946.

SN 153,456. Bowser, Inc., Greeneville, Tenn. Filed Sept. 19, 1962.

Bowser

Owner of Reg. No. 109,710.
For Fuel Dispensing, Metering, and Indicating Apparatus.
First use July 10, 1962.

Class 27—Horological Instruments

SN 137,417. W. Bell & Company, Inc., Washington, D.C. Filed Feb. 7, 1962.

La Cloche

For Watches, Watch Cases, and Chronographs.
First use Sept. 1, 1957.

SN 138,552. Sunbeam Corporation, Chicago, Ill. Filed Feb. 23, 1962.

MENU

For Clocks.
First use Jan. 11, 1962.

SN 147,002. Harris & Mallow Products, Inc., Farmingdale, N.J. Filed June 15, 1962.

Verichron

For Clocks, Casings, and Movements for Clocks and Parts Therefor; Kits of Unassembled Clock Casings, Movements and Parts Therefor for Home Assembly, and Clock Repair Kits Comprising Clock Parts.
First use Apr. 1, 1960.

Class 28—Jewelry and Precious-Metal Ware

SN 134,434. Beaucraft, Inc., Providence, R.I. Filed Dec. 21, 1961.

BEAU

Owner of Reg. No. 741,284.
For Rings, Charms, Clips, Earrings, Bracelets, Pins, Necklaces, and Pendants.
First use October 1947.

SN 141,914. Frank S. White, d.b.a. L. I. Pendleton & Sons, Boston, Mass. Filed Apr. 9, 1962.

PENDLETON BOSTON TOWN

For Men's Jewelry—Namely, Cuff Links, Tie Clips, Tie Slides, Tie Tacks, Tie Chains, Key Chains and Waldemar Chains, Money Clips, Belt Buckles, Studs, and Collar Holders.
First use 1959; 1872 as to "Pendleton."

SN 144,287. Sylvania Jewelry Co., New York, N.Y. Filed May 10, 1962.

SYL

For Jewelry for Personal Wear or Adornment—Namely, Brooch Pins, Charms, Bracelets, Finger Rings, Necklaces, Earrings, Clips, Cuff Links, Tie Bars, and Pendants.
First use Mar. 1, 1954.

SN 147,462. Leon E. Fisher Co. Inc., Albany, N.Y. Filed June 22, 1962.

LEF

For Gold Finger Rings.
First use Dec. 24, 1959.

SN 147,963. J. Segaloff & Sons, Inc., Boston, Mass. Filed June 28, 1962.

JS

For Pins, Watch Attachments, Bracelets, Wedding Rings, Mountings, Stone Rings, Cuff Links, Earrings, Pendants, Crosses, Diamond Rings, and Tie Tacs.
First use February 1937.

SN 152,283. Colonial Bead Co. Inc., New York, N.Y. Filed Aug. 31, 1962.

COLONIAL

Owner of Reg. Nos. 385,820 and 403,477.
For Jewelry for Personal Wear or Adornment, Not Including Watches.
First use 1920.

Class 29—Brooms, Brushes, and Dusters

SN 138,283. Chase Manufacturing Co. Inc., New York, N.Y. Filed Feb. 20, 1962.

DENT-O-MATIC

For Electric Toothbrushes and Gum Massagers.
First use Feb. 9, 1962.
Subj. to Intf. with SN 148,489.

SN 148,489. Doctor-Thomas' Dent-O-Matic Company, New York, N.Y. Filed July 6, 1962.

Doctor THOMAS' dent-o-matic

For Battery Automatic Toothbrushes.
First use Dec. 1, 1961.
Subj. to Intf. with SN 138,283.

Class 31 — Filters and Refrigerators

SN 136,509. True Manufacturing Co. Inc., St. Louis, Mo. Filed Jan. 24, 1962.

TRUE

For Refrigerated Beverage Coolers.
First use 1945.

SN 153,530. Union Tank Car Company, Chicago, Ill. Filed Sept. 19, 1962.



For Ion Exchange Type Water Softeners, Water Filters, and Water Acid Neutralizers.
First use Sept. 1, 1959.

Class 32 — Furniture and Upholstery

SN 121,278. Dux Incorporated, Burlingame, Calif. Filed June 2, 1961.

DUX  DUX

Owner of Reg. Nos. 575,779, 740,629, and 740,630.
For Furniture—Namely, Chairs, Easy Chairs, Occasional Chairs, Sofas, Ottomans, Love Seats, Tables, Nests of Tables, Cabinets, Shelves, and Sideboards.
First use Jan. 15, 1954.

SN 139,768. Maxwell Royal Chair Co., Inc., Hickory, N.C. Filed Mar. 13, 1962.

NEWPORT

For Bedroom and Living Room and Dining Room Furniture.
First use Dec. 16, 1961.

SN 146,972. Broyhill Furniture Factories, Lenoir, N.C. Filed June 15, 1962.

BROY-SLIDE

Owner of Reg. Nos. 656,809, 666,297, and 683,678.
For Extension Tables.
First use May 9, 1962.

SN 152,429. Norquist Products, Inc., Jamestown, N.Y. Filed Sept. 4, 1962.

Coronet WONDER FOLD

Owner of Reg. No. 636,805.
For Folding Furniture in the Form of Folding Chairs.
First use on or about Nov. 14, 1960.

SN 152,711. M & D Store Fixtures, Inc., Industry, Calif. Filed Sept. 7, 1962.



The drawing is lined for gold. Owner of Reg. Nos. 664,627 and 665,136.
For Store Fixtures—Namely, Show Cases, Gondolas, Island Units, Wall Shelving, and Checkout Counters.
First use during November 1960.

SN 154,849. René Ramillon, Grenoble (Isere), France. Filed Oct. 9, 1962.

RAMY

For Metal Folding Beds and Armchairs Transformable Into Beds.
First use Feb. 2, 1938; in commerce 1939.

Class 33 — Glassware

SN 147,692. Borske Sklo, Narodni Podnik, Novy Bor, Czechoslovakia. Filed June 26, 1962.



No claim of exclusive right is made to "Czechoslovakia." Owner of Czechoslovakian Reg. No. 154,968, dated Jan. 23, 1962.
For Cased, Enamelled, Polished, Cut and Engraved Glassware; Glass Tableware; Stemware; Drinking Glasses; Tumblers; Goblets; Glass Bottles; Glass Trays, Bowls, Cups and Dishes; Ornamental Glassware; Candlesticks; Vases; Jars.

Class 34 — Heating, Lighting, and Ventilating Apparatus

SN 135,438. Farm Fans, Inc., Indianapolis, Ind. Filed Jan. 9, 1962.

DRY O MATION

For Grain Bin Equipped With a Heater and an Automatic Humidistat.
First use Jan. 31, 1959.

SN 135,477. Tribotron Corporation, Petaluma, Calif. Filed Jan. 9, 1962.

TRIBOTRON

For Negative Ion Generators, Air Cleaners.
First use on or about Aug. 25, 1961.

SN 137,475. Vernco Corporation, Columbus, Ind. Filed Feb. 7, 1962.

Vernco

The drawing is lined to indicate the color gold, but no claim is made to color. Owner of Reg. Nos. 568,309 and 680,431.
For Atomizing Humidifiers.
First use Nov. 8, 1961.

SN 154,671. American Electrical Heater Company, Detroit, Mich. Filed Oct. 5, 1962.

WASSCO

Owner of Reg. No. 611,733.
For Resistance Soldering Equipment.
First use Mar. 1, 1950.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

SN 134,758. H. K. Porter Company, Inc., Pittsburgh, Pa. Filed Dec. 27, 1961.

THERMOBLOCK

For Brake Blocks.
First use August 1960.

SN 151,511. O.K. Rubber Welders, Incorporated, Littleton, Colo. Filed Aug. 20, 1962.

JET-CRAFT

For Recapping Rubber for Retreads for Tires.
First use on or about July 12, 1962.

SN 151,751. The B. F. Goodrich Company, Akron, Ohio. Filed Aug. 28, 1962.

ULTIMATE

For Pneumatic Tires.
First use July 31, 1962.

SN 152,462. The Texacone Company, Dallas, Tex. Filed Sept. 4, 1962.

TEXACONE

For Machinery Packing—Namely, Rubber Molded Sealing Rings, Stuffing Box Packing, Pump Packing, Rubber, Metal, Asbestos and Plastic Gaskets and Sealing Materials for Hydraulic and Pneumatic Machinery.
First use Jan. 1, 1933.

SN 155,495. The Firestone Tire & Rubber Company, Akron, Ohio. Filed Oct. 19, 1962.

MET-L-LOY

For Brake Linings.
First use Sept. 26, 1962.

SN 155,900. Dunlop Tire and Rubber Corporation, Buffalo, N.Y. Filed Oct. 25, 1962.

DEPUTY

For Tires.
First use Oct. 11, 1962.

SN 156,249. Raybestos-Manhattan, Inc., Passaic, N.J. Filed Oct. 30, 1962.

METL-KING

For Brake Blocks.
First use Sept. 25, 1962.

SN 157,268. United States Rubber Company, New York, N.Y. Filed Nov. 14, 1962.

GUARDIAN

Owner of Reg. No. 506,898.
For Automobile Tires.
First use Oct. 31, 1962.

SN 157,394. O.K. Rubber Welders, Incorporated, Littleton, Colo. Filed Nov. 16, 1962.

POWERSTAR

For Automobile Tires.
First use on or about Nov. 1, 1962.

SN 157,395. O.K. Rubber Welders, Incorporated, Littleton, Colo. Filed Nov. 16, 1962.

HAULSTAR

For Automobile Tires.
First use on or about Nov. 1, 1962.

SN 157,396. O.K. Rubber Welders, Incorporated, Littleton, Colo. Filed Nov. 16, 1962.

TRAC-STAR

For Automobile Tires.
First use on or about Nov. 1, 1962.

SN 157,397. O.K. Rubber Welders, Incorporated, Littleton, Colo. Filed Nov. 16, 1962.

TORQUE-STAR

For Automobile Tires.
First use on or about Nov. 1, 1962.

SN 157,398. O.K. Rubber Welders, Incorporated, Littleton, Colo. Filed Nov. 16, 1962.

DURA-SYN

For Automobile Tires.
First use on or about Nov. 1, 1962.

SN 157,407. Seiberling Rubber Company, Barberton, Ohio. Filed Nov. 16, 1962.

150

For Pneumatic Rubber Tires.
First use Oct. 18, 1962.

Class 36 — Musical Instruments and Supplies

SN 112,064. New Orleans Band Instrument Company, New Orleans, La. Filed Jan. 18, 1961.

DELTA

For Musical Instruments, Parts and Accessories Therefor—Namely, Wind and String Instruments, Accordions, Electric Reed and Reed Chord Organs.
First use April 1958 on electric organs.

SN 129,651. D. J. Records, Auburndale, Fla. Filed Oct. 11, 1961.



For Phonograph Records.
First use Aug. 1, 1961.

SN 159,700. Conover-Cable Piano Co., Oregon, Ill. Filed Dec. 26, 1962.



Owner of Reg. No. 135,406.
For Pianos, Player-Pianos and Parts Thereof.
First use on or about Jan. 1, 1952; Feb. 2, 1900, in a different form.

SN 159,716. Levi I. Galperin, Havertown, Pa. Filed Dec. 26, 1962.



No claim is made to the exclusive right to the word "Records" except in the association shown.
For Grooved Phonograph Records.
First use on or about Dec. 14, 1962.

SN 159,898. Minaret Records, Inc., Valparaiso, Fla. Filed Dec. 28, 1962.

MINARET

For Phonograph Records.
First use on or about Sept. 15, 1962.

SN 162,092. M. Hohner, Inc., Hicksville, N.Y. Filed Feb. 5, 1963.

GOLETTE

For Accordions.
First use Sept. 5, 1962.

Class 37 — Paper and Stationery

SN 121,710. Consolidated Business Systems, Inc., New Brunswick, N.J. Filed June 9, 1961.

REDIfIXT

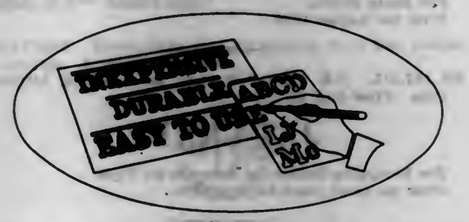
For Interleaved Business Forms and Unit Sets of Carbon.
First use on or about July 1, 1940.

SN 128,521. Columbia Pen and Pencil Co., Inc., New Hyde Park, N.Y. Filed Sept. 25, 1961.

THE PEN THAT REMEMBERS

The word "Pen" is disclaimed apart from the mark as shown.
For Retractable Ball Point Pens.
First use July 5, 1958.

SN 129,544. Stenso Lettering Company, Inc., d.b.a. Stenso Lettering Co., Baltimore, Md. Filed Oct. 9, 1961.



No claim is made to the words "Inexpensive," "Durable," "Easy To Use" apart from the mark as shown. Owner of Reg. No. 708,218.
For Stencils.
First use Mar. 10, 1956.

SN 150,068. KVP Sutherland Paper Company, Kalamazoo, Mich. Filed July 30, 1962.



For Parchment Paper and Parchmentized Paper for Writing, Printing, and Wrapping; Kraft Paper, Bond Paper, Typewriter Paper, Drawing Paper, Notebook Paper, Manifold Paper, Examination Paper; Wrapping Paper Including Moisture-Proof Paper, Waxed Wrapping Paper, Self-Sealing Waxed Paper; Bread Bands; Shelf Papers; Parchmentized Paper for Cooking; Pie Tape Papers; Paper Wash Cloths; Ice Blankets and Nursery Blankets of Parchmentized Paper; Dusting and Polishing Paper; Paper Panels for Use in Packaging Products; Shirt and Collar Protectors for Use by Manufacturers and Laundries.
First use on or before Mar. 31, 1960.

SN 151,789. Swanee Paper Corporation, New York, N.Y. Filed Aug. 23, 1962.

GEM

For Paper Towels and Napkins; and Facial and Bathroom Tissue.
First use July 27, 1962.

SN 151,830. The J. C. Hall Co., Inc., Pawtucket, R.I. Filed Aug. 24, 1962.

"QUIKSERT"

For Checkbook Bindings.
First use May 9, 1961.

SN 152,230. The Mead Corporation, Dayton, Ohio. Filed Aug. 30, 1962.

MEAD MARK I

Owner of Reg. Nos. 404,980, 443,716, and 444,538.
For High Gloss Paper.
First use August 1960.

SN 152,233. The National Cash Register Company, Dayton, Ohio. Filed Aug. 30, 1962.

NCR

Owner of Reg. Nos. 148,174, 619,264, and others.
For Paper Sheets, Paper Rolls, Punch Tape Paper, Fanfold Paper, Printed Forms, Sales Books, Record Books, Record Forms Having Magnetic Storage Means Thereon, Coated Paper, and Printed Forms on Coated Paper.
First use on or about June 6, 1962, on printed forms.

SN 152,258. West Virginia Pulp and Paper Company, New York, N.Y. Filed Aug. 30, 1962.

TWIN COR

For Corrugated Paperboard Sheets.
First use July 5, 1962.

SN 152,357. Union Bag-Camp Paper Corporation, New York, N.Y. Filed Aug. 31, 1962.

SHAMROCK

For Wrapping Paper.
First use Aug. 13, 1962.

SN 152,390. Eversharp, Inc., d.b.a. Schick Safety Razor Company, Culver City, Calif. Filed Sept. 4, 1962.

SHAMROCK

For Ball Point Pens.
First use July 25, 1962.

SN 152,414. Kimberly-Clark Corporation, Neenah, Wis. Filed Sept. 4, 1962.

CHUBBY

For Absorbent Paper Tissue Suitable for Hygenic, Cosmetic, or Cleaning Purposes.
First use Aug. 14, 1962.

SN 152,423. Moore Business Forms, Inc., Niagara Falls, N.Y. Filed Sept. 4, 1962.

FREIGHTMASTER

For Printed Business Forms.
First use Nov. 30, 1961.

SN 153,178. International Paper Company, New York, N.Y. Filed Sept. 14, 1962.

I.P.B.

For Paperboard in Sheet or Roll Form.
First use Jan. 22, 1962.

SN 153,547. L. L. Brown Paper Company, Adams, Mass. Filed Sept. 20, 1962.

COMPANION

For Ledger Paper and Index Bristol.
First use Sept. 6, 1962.

Class 38 — Prints and Publications

SN 120,626. Elysium Inc., Los Angeles, Calif. Filed May 23, 1961.

NUDE LIVING

For Bi-Monthly Magazine.
First use Feb. 23, 1961.

SN 120,627. Elysium Inc., Los Angeles, Calif. Filed May 23, 1961.

SUNDIAL

For Bi-Monthly Magazine.
First use May 12, 1961.

SN 130,870. Avery Adhesive Products, Inc., Monrovia, Calif. Filed Oct. 30, 1961.

AVERY

For Printed Labels.
First use 1941.

SN 139,719. The Midcontinent Map Company, Tulsa, Okla. Filed Mar. 12, 1962.

MIDCONTINENT MAPS

The word "Maps" is disclaimed apart from the mark as shown. Owner of Reg. No. 228,070.
For Maps.
First use on or about Sept. 29, 1926.

SN 152,539. United Feature Syndicate, Inc., New York, N.Y. Filed Sept. 5, 1962.

GINGER

For Newspaper Cartoons.
First use Sept. 7, 1959.

SN 152,570. Electrographic Corporation, d.b.a. Typographic Service Company, New York, N.Y. Filed Sept. 6, 1962.

PERFECTO

For Typographic Proofs for Photomechanical Reproduction.
First use Aug. 30, 1962.

SN 152,652. Rudolph J. Wagner, d.b.a. The Wagner Company, Los Angeles, Calif. Filed Sept. 6, 1962.

LIVING AMERICAN STORIES

For Series of Children's Books Published From Time to Time Relating to Certain Phases of Historical Significance in Our National Heritage.
First use July 22, 1962.

SN 153,009. The Meyercord Co., Chicago, Ill. Filed Sept. 12, 1962.

CHINA-CAL

For Decalcomania Transfers.
First use Dec. 13, 1950.

SN 153,088. Kirby, Block & Company, Inc., New York, N.Y. Filed Sept. 13, 1962.

SALES SPARKLERS

For Monthly Merchandising Guide Distributed to Department and Specialty Stores.
First use Aug. 1, 1962.

SN 153,139. West Printing Company, Detroit, Mich. Filed Sept. 13, 1962.

WESCOS

For Title Block Overlay Prints.
First use Oct. 25, 1956.

SN 153,563. Grosset & Dunlap, Inc., New York, N.Y. Filed Sept. 20, 1962.

TEMPO

For Books Published From Time to Time in Series.
First use Aug. 15, 1962.

SN 153,968. Medical Economics, Inc., Oradell, N.J. Filed Sept. 26, 1962.

RISS

For Monthly Magazine.
First use October 1957.

SN 153,991. Single Sideband Amateur Radio Association, New York, N.Y. Filed Sept. 26, 1962.

THE SIDEBANDER

For Magazine.
First use July 4, 1959.

SN 154,062. Meyer Schattner, New York, N.Y. Filed Sept. 27, 1962.

STUBS

For Seating Plan Guide, a Publication Published From Time to Time.
First use October 1941.

Class 39 — Clothing

SN 105,577. Harry Tilkin, d.b.a. Tilkin's Shoe Store, Charlestown, Mass. Filed Sept. 30, 1960.

Prizzani

For Ladies' and Misses' Shoes.
First use April 1958.

SN 109,374. International Shoe Company, St. Louis, Mo. Filed Dec. 8, 1960.

Accent
DELICADOS

The word "Delicados" is an adjective found both in the Spanish and Portuguese language. It is defined as "delicate, soft, tender." Owner of Reg. No. 513,211.
For Women's Shoes.
First use Nov. 15, 1960.

SN 119,351. Buster Brown Textiles, Inc., Wilmington, Del. Filed May 5, 1961.



The mark consists of the representation of the fictional characters Buster Brown and his dog, Tige, created by the late R. F. Outcault. Owner of Reg. Nos. 51,981, 505,225, and others.
For Sleepwear—Namely, Infants' and Children's Pajamas.
First use June 1959.

SN 128,300. Saks & Company, New York, N.Y. Filed Sept. 20, 1961.

Louis Feraud

The written consent of Louis Feraud, a living individual whose name comprises the trademark, is of record.
For Women's and Misses' Dresses, Coats, and Suits.
First use Sept. 6, 1961.

SN 128,856. Shelby Seamless Hosiery Mills, Inc., Shelby, N.C. Filed Sept. 28, 1961.

AT A GLANCE

For Ladies' Hosiery.
First use Aug. 15, 1961.

SN 138,656. Amy Ross, Inc., Bartow, Fla. Filed Feb. 26, 1962.

Amy Ross
SPORTSWEAR

Applicant hereby disclaims the term "Sportswear." Consent to the use of the name "Amy Ross" is presented herewith.
For Ladies' and Children's Wearing Apparel—Namely, Blouses, Skirts, Bermuda and Jamaica Style Shorts and Slacks.
First use Oct. 19, 1961.

SN 140,272. Kramer Brothers, Inc., New York, N.Y. Filed Mar. 20, 1962.

TRIMFIT

Owner of Reg. No. 266,261.
For Infants', Children's, and Teenage Hosiery, Shirts, Coveralls, Creepers, Crawlers, Playsuits, Sleepers, Pram Suits, Stretch Pants, Swimwear, Pajamas, Underwear, Tights, and Leotards.
First use January 1923.

SN 146,896. Gussie & Becky, Inc., New York, N.Y. Filed June 14, 1962.

gussie & becky

For Blouses, Skirts, Dresses (Evening and Daytime), Coats, Suits, Slacks, Tunics, Jackets, Stoles, Shorts, Children's Dresses, Women's Vests, Bathing Suits, Beachcoats, Ski Parkas, Knickers, Pedalpushers, Lounge Wear (Nightgowns, At-Home Pajamas, Robes, Dresses), Men's Shirts.
First use June 8, 1959.

SN 147,252. Adams-Millis Corporation, High Point, N.C. Filed June 20, 1962.

PERMA-LOC

For Women's and Misses' Hosiery.
First use June 7, 1962.

SN 147,807. Dawnelle, Inc., New York, N.Y. Filed June 27, 1962.

dawnelle

Owner of Reg. Nos. 302,766 and 571,216.
For Gloves.
First use Apr. 1, 1941.

SN 148,292. Blue Gem Manufacturing Company, Greensboro, N.C. Filed July 3, 1962.

DEPUTY

For Men's, Boys', and Kiddies' Dungarees, Jeans, and Boxer Longies.
First use May 31, 1962.

SN 148,761. Societe Rhodiaceta, Paris, France. Filed July 10, 1962.

DROPSAN

Priority claimed under Sec. 44(d) on French Reg. No. 504,375, dated Apr. 19, 1962 (Paris); Natl. Inst. No. 183,349.
For Clothing for Men, Women, Children—Namely, Robes, Two-Piece Suits, Coats, Underwear, Cardigans, Vests, and Waist Coats, Including Boots, Shoes, and Slippers.

SN 153,919. Adrian Tabin Corporation, Chicago, Ill. Filed Sept. 26, 1962.



The representation of the girl is fanciful. Owner of Reg. Nos. 623,106 and 640,724.
For Junior Dresses.
First use Aug. 21, 1962.

Class 40 — Fancy Goods, Furnishings, and Notions

SN 141,332. McCrory Corporation, New York, N.Y. Filed Apr. 2, 1962.

PRESTIGE

For Buttons.
First use Mar. 16, 1962.

SN 151,006. Charles of the Ritz, Inc., New York, N.Y. Filed Aug. 13, 1962.

LIGHTNING STREAKS

For Hair Strands for Personal Wear.
First use July 24, 1962.

Class 42 — Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 136,664. The Kendall Company, Walpole, Mass. Filed Jan. 26, 1962.

LENO-WEB

Owner of Reg. No. 738,874.
For Non-Woven Fabrics Made From Textile Fibers, or Mixtures Thereof, and Such Non-Woven Fabrics in Combination With Other Textile Fabrics, in the Piece and in Cut Lengths or Sizes, for Use as Substitutes for Knitted, Netted and Woven Fabrics and the Like.
First use Oct. 18, 1961.

SN 138,303. Ruth M. Heil, Cleveland, N. Dak. Filed Feb. 20, 1962.

Heil-HOLDER

The exclusive use of "Holder" is disclaimed apart from the mark as shown.
For Potholders.
First use Jan. 15, 1962.

SN 138,321. M. H. Raab-Meyerhoff Co., Inc., Philadelphia, Pa. Filed Feb. 20, 1962.

RAMEY

Owner of Reg. Nos. 524,114 and 630,060.
For Linings, Shirtings, Fabrics, and Interlinings Used in the Making of Clothing.
First use Feb. 15, 1933.

SN 140,063. United Merchants and Manufacturers, Inc., New York, N.Y. Filed Mar. 16, 1962.

"A BLOOM OF THE SOUTH"

Owner of Reg. No. 228,029.
For Drapery and Curtain Fabrics.
First use on or about Jan. 3, 1962.

SN 146,187. P. H. Hanes Knitting Company, Winston-Salem, N.C. Filed June 5, 1962.

RIB-EYE

For Knitted Fabrics of Cotton, or Synthetic Yarns, or Mixtures Thereof.
First use Oct. 31, 1961.

SN 152,973. Cameo Curtains Inc., New York, N.Y. Filed Sept. 12, 1962.

E-Z-SHIR

For Window Curtains.
First use Aug. 30, 1962.

SN 153,058. Joseph Bancroft & Sons Co., Wilmington, Del. Filed Sept. 13, 1962.

BAN-GUARD

For Cellulosic Piece Goods Treated To Resist Creasing and Moisture.
First use Aug. 14, 1962.

SN 153,863. Chapel Hill Manufacturing Company, Huntingdon Valley, Pa. Filed Sept. 25, 1962.

WATER-BOI

For Cotton Knit Tubing.
First use Mar. 1, 1962.

SN 154,349. Graniteville Company, Graniteville, S.C. Filed Oct. 2, 1962.

Nefertiti

For All-Cotton Sail Cloth, Used for Wearing Apparel Such as Slacks, Shorts and the Like.
First use Aug. 2, 1962.

Class 43 — Thread and Yarn

SN 148,763. Societe Rhodiaceta, Paris, France. Filed July 10, 1962.

DROPSAN

Priority claimed under Sec. 44(d) on French Reg. No. 504,375, dated Apr. 19, 1962 (Paris); Natl. Inst. No. 183,349.
For Threads and Yarns of Synthetic Fibers.

Class 44 — Dental, Medical, and Surgical Appliances

SN 103,640. American Massage Sales & Mfg. Corp., Silver Creek, N.Y. Filed Aug. 30, 1960.

SPHEROID ACTION

For Motor Vibrated Massage Apparatus Including Chairs, Cushions, and Pads Appliable to a Person's Body, and Manual Massage Devices.
First use during the fore part of July 1960 on motor operated massage chairs.

SN 143,941. Davol Rubber Company, Providence, R.I. Filed May 7, 1962.

FEED-RITE

Owner of Reg. No. 675,746.
For Nursing Bottles and Nipples.
First use on or about Oct. 8, 1957.

SN 144,968. Meinecke & Company, Inc., New York, N.Y. Filed May 18, 1962.

"VARICK"

Owner of Reg. No. 520,175.
For Sanitary Paper Kerchiefs, Wood Tongue Blades, Wood Applicators, Medicine Droppers, Sterile Cotton Tipped Applicators, Disposable Bed Pan Covers, Disposable Underpads, Cotton Elastic Bandages, Rubber Reinforced Bandages, Stands for Needle Sterilizers, Drainage Bottle Racks, Intravenous Feeding Standards, Disposable Urine Specimen Bottles, Rubber Sheeting, Sanitary Belts, Pre-Folded Hospital Diapers, Seersucker Patients' Gowns, and Paper Mortuary Sheets.
First use 1934 on sanitary paper kerchiefs.

SN 145,415. Sorenson Research Corp., Salt Lake City, Utah. Filed May 24, 1962.

INFUSOR

For Intravenous Catheters and Intravenous Catheter Placement Units for Administration of Anesthetics, Intravenous Feeding and Medicants.
First use May 7, 1962.

SN 149,791. J. Wiss & Sons Co., Newark, N.J. Filed July 25, 1962.

DART

Owner of Reg. No. 726,470.
For Personal Grooming Implements—Namely, Barber Shears.
First use Oct. 18, 1960.

SN 149,793. J. Wiss & Sons Co., Newark, N.J. Filed July 25, 1962.

CAPRI

Owner of Reg. No. 723,295.
For Personal Grooming Implements—Namely, Barber Shears, Nail Scissors, Cuticle Scissors, Nail Nippers, Cuticle Nippers, Clippers and Bandage Scissors.
First use Oct. 18, 1960.

SN 151,445. Turner Hall Corporation, New York, N.Y. Filed Aug. 17, 1962.

CONDITIONAIRE

For Electrically Operated Heated Air Hair Dryer for Professional Use.
First use Aug. 16, 1961.

SN 153,848. Williams Manufacturing Co., Elgin, Ill. Filed Sept. 24, 1962.

ZENITH

Owner of Reg. No. 153,070.
For Adjustable Tables and Parts Thereof for Use by Doctors, Surgeons, Chiropractics, and Osteopaths.
First use May 1916.

SN 155,648. Quest, Inc., Marion, Ind. Filed Oct. 22, 1962.

BEL-O-PAK

For Surgical Suction Pumps and Related Accessories Including Tubing, Needles, and Ties.
First use Sept. 15, 1962.

SN 156,731. Empire State Thermometer Co., Inc., New York, N.Y. Filed Nov. 6, 1962.

CLEARITE

For Hypodermic Syringes.
First use Oct. 15, 1962.

SN 156,732. Empire State Thermometer Co., Inc., New York, N.Y. Filed Nov. 6, 1962.

ZENITH

For Hypodermic Syringes.
First use Oct. 15, 1962.

SN 157,172. Union Bag-Camp Paper Corporation, New York, N.Y. Filed Nov. 13, 1962.

LIT-O-SPLINT

For Combination Splint and Litter.
First use Apr. 25, 1962.

SN 157,741. U.S. Climatronic Corp., Northvale, N.J. Filed Nov. 21, 1962.

FRIGIPLATE

For Thermo-Electric Cold Application Devices for Medical and Therapeutic Use.
First use May 10, 1961.

SN 157,778. The Dentists' Supply Company of New York, York, Pa. Filed Nov. 23, 1962.

DENT-KOTE

Owner of Reg. No. 42,060.
For Parting Agent for Use in Processing Dentures To Facilitate Separation of the Molding Plaster From the Denture and Produce a Smooth Denture Surface.
First use on or about June 12, 1962.

SN 157,792. W. R. Grace & Co., Cambridge, Mass. Filed Nov. 23, 1962.

PRE-PAK

For Cartridge Containing an Absorbent for Use in Anesthesia Re-Breathing Systems.
First use Oct. 29, 1962.

Class 46 — Foods and Ingredients of Foods

SN 107,295. Archway Cookies, Inc., Battle Creek, Mich., assignee of Ruth L. Venn, d.b.a. Swanson's Cookie Company, Battle Creek, Mich. Filed Oct. 27, 1960.

archway
Home Style Cookies

The drawing is lined for red. The words "Home Style Cookies" are disclaimed apart from the combination shown, and the word "Cookies" is disclaimed per se. Owner of Reg. Nos. 601,107, 620,495, and 620,964.
For Cookies.
First use May 29, 1959; June 7, 1954, as to "Archway."

SN 116,923. Salada-Shirriff-Horsey Ltd., Don Mills, Ontario, Canada. Filed Mar. 31, 1961.



Owner of U.S. Reg. Nos. 694,640 and 696,539.
For Fruit Flavored Pudding Mixes, Ice Cream Flavoring Mix, Sherbert Mix, Quick Fudge, Rennet Powder.
First use June 1, 1959; in commerce June 1, 1959.

SN 116,924. Salada-Shirriff-Horsey Ltd., Don Mills, Ontario, Canada. Filed Mar. 31, 1961.



Owner of U.S. Reg. Nos. 694,640 and 696,539.
For Canned Citrus Fruits and Citrus Fruit Juices; Frozen Concentrated Citrus Fruits and Citrus Fruit Juices; Frozen Limeade and Lemonade; Frozen Orange Food Drink Base; Rennet Powder; and Fruit Flavoured Pudding Mixes.
First use Apr. 16, 1959; in commerce Apr. 16, 1959.

SN 118,846. Herbert Winer, Norwood, Mass. Filed Apr. 27, 1961.

Fun-Fest

For Sandwiches.
First use Apr. 4, 1961.

SN 119,430. Elitha A. Shaw, d.b.a. Mrs. Lyman W. Shaw, Pocatello, Idaho. Filed May 5, 1961.

Soy-deens

For All Vegetable Food Product, Composed of Whole Wheat, Wheat Gluten, Soy Products, Yeast, Vegetable Protein Derivative, Soy Oil, Safflower Oil, Algae, Sea Salt, Honey, and Seasonings.
First use June 11, 1958.

SN 124,478. William Underwood Company, Watertown, Mass. Filed July 21, 1961.

SIR WILLIAM

"Sir William" is not the name of a particular living individual.
For Canned Foods—Namely, Deviled Ham, Clam Chowder, and Meat Spreads.
First use Apr. 7, 1961.

SN 125,252. Stoelting Brothers Company, Kiel, Wis. Filed Aug. 2, 1961.

KRIST-O

For Ice Confection Frozen on a Stick and a Semi-Frozen Ice Confection Sold in a Cup or the Like and a Flavoring Preparation for Making the Same.
First use Feb. 10, 1961.

SN 128,053. K and R, Incorporated, Hastings, Nebr. Filed Sept. 18, 1961.

Diners Delight

For Frozen Prepared Corn Beef Hash Containing About 40% Potatoes; and Frozen Prepared Potatoes.
First use Aug. 3, 1961.

SN 132,019. Barricini, Inc., Long Island City, N.Y. Filed Nov. 15, 1961.

COUNTRY STYLE

For Candies.
First use Oct. 9, 1961.

SN 133,969. A. Smith Bowman Distillery, Incorporated, Sunset Hills, Va., assignee of Marketers Plus, Inc., d.b.a. Virginia Gentleman Gifts, Forest, Va. Filed Dec. 13, 1961.

VIRGINIA GENTLEMAN

For Jams, Jellies, Pickles, Maraschino Cherries, Mincemeat, Canned Plum Pudding, and Fruit Cake.
First use June 16, 1961.

SN 134,246. Martin's Food Mills, Inc., New Paris, Ind. Filed Dec. 18, 1961.



For Dog Food.
First use May 26, 1961.

SN 134,247. Martin's Food Mills, Inc., New Paris, Ind. Filed Dec. 18, 1961.

BRACE-MATE

For Dog Food.
First use May 26, 1961.

SN 137,268. Nutrena Mills, Inc., Minneapolis, Minn. Filed Feb. 5, 1962.

PRE-SHOAT-38

Owner of Reg. No. 589,204.
For Vitamin Enriched Feeds for Pigs.
First use Jan. 12, 1962.

SN 140,212. New England Provision Co., Inc., Boston, Mass. Filed Mar. 19, 1962.

MADE WITH A LITTLE BIT OF LOVE

For Frankfurts, Bologna, Salami, Sausage, Cooked Ham, Chicken Loaf, Combination Loaf, Dutch Loaf, Fulton Loaf, Pastrami Loaf, Pickle and Pimento Loaf, Veal Loaf, Olive Loaf, Liverwurst, and Pastrami.
First use on or about Jan. 1, 1960.

SN 150,025. Mont L. Davis, Jr., d.b.a. Dixie Drive-In System, Lubbock, Tex. Filed July 30, 1962.

DIXIE DOG

For Flour Mix Used for Making a Batter for Frankfurters.
First use January 1949.

SN 151,605. Mideal, Inc., New York, N.Y. Filed Aug. 21, 1962.

AIBONITO

The word "Aibonito" translated means "Ah! so beautiful."
For Fruit Nectars Sold in Cans.
First use Aug. 1, 1962.

SN 153,012. Morningstar-Paisley, Inc., New York, N.Y. Filed Sept. 12, 1962.



Applicant makes no claim to the exclusive use of the words "Products" and the notation "Est. 1951," apart from the mark as shown. Owner of Reg. Nos. 221,909, 713,921, and others.
For Starches and Gums To Be Used as Thickeners, Stabilizers, and Emulsifiers in Foods.
First use 1920.

SN 153,177. Imperial Ice Cream Company, Pasadena, Calif. Filed Sept. 14, 1962.

SPREE

For Imitation Ice Milk.
First use Sept. 11, 1962.

SN 153,261. Dole Corporation, d.b.a. Hawaiian Pineapple Company, Honolulu, Hawaii. Filed Sept. 17, 1962.

PARADISE ISLAND

Owner of Reg. No. 99,213.
For Canned Pineapple and Canned Pineapple Juice.
First use July 1903.

SN 153,847. Williams & Woode Ltd., Dublin, Ireland. Filed Sept. 24, 1962.

IRISH COFFEE BAR

Applicant waives exclusive right to the words "Coffee" and "Bar" apart from the mark as shown. Owner of U.S. Reg. No. 730,193.
For Chocolate Bars Flavored With Coffee and Irish Whiskey.
First use Jan. 1, 1960; in commerce September 1960.

SN 154,111. Green Giant Company, Le Sueur, Minn. Filed Sept. 28, 1962.

GREEN GIANT

Owner of Reg. Nos. 230,035, 685,263, and others.
For Frozen Vegetables.
First use Sept. 15, 1961.

SN 154,113. Green Giant Company, Le Sueur, Minn. Filed Sept. 28, 1962.

MEXICORN

Owner of Reg. No. 230,621.
For Frozen Corn With Peppers.
First use May 10, 1962.

Class 47 — Wines

SN 140,619. John Bardenheier Wine & Liquor Co., d.b.a. Bardenheier's Wine Cellars, St. Louis, Mo. Filed Mar. 26, 1962.

SQUARE DANCE

For Wines.
First use Jan. 12, 1962.

Class 49 — Distilled Alcoholic Liquors

SN 132,358. Mr. Boston Distiller Inc., d.b.a. Essex Bottlers, Boston, Mass. Filed Nov. 20, 1961.

RIVA

The Italian word "Riva" is defined as "seashore, bank"; "a cleft in rock—Scot."
For Vodka.
First use Feb. 16, 1960.

SN 150,871. Imported Brands, Inc., d.b.a. Channel Imports, Ltd., Brooklyn, N.Y. Filed Aug. 9, 1962.

LANGSHIRE

For Scotch Whisky.
First use July 26, 1962.

SN 151,978. McKesson & Robbins, Incorporated, New York, N.Y. Filed Aug. 27, 1962.

NEWPORT

Applicant disclaims the word "Quickies" apart from the mark as shown. Owner of Reg. Nos. 311,971 and 725,709.
For Prepared Alcoholic Cocktails—Namely, Bloody Mary, Salty Dog, and Screwdriver.
First use Sept. 13, 1961.

SN 152,220. Justerini & Brooks Limited, London, England. Filed Aug. 30, 1962.

J&B

Owner of U.S. Reg. Nos. 356,957 and 357,800.
For Scotch Whisky.
First use at least the year 1935; in commerce at least the year 1937.

Class 50—Merchandise Not Otherwise Classified

SN 119,252. B. Wilmsen, Incorporated, Philadelphia, Pa. Filed May 3, 1961.



No claim is made to the words "Holly Brand" apart from the mark as shown.
For Tinsel Garlands, Icicles, and Paper Bells.
First use on or about Apr. 1, 1961.

SN 129,296. Clement P. Saila, Toronto, Ontario, Canada. Filed Oct. 5, 1961.

ANIMATIC

Priority claimed under Sec. 44(d) on Canadian application filed July 10, 1961; Reg. No. 127,585, dated Aug. 10, 1962.
For Display Signs.

SN 133,512. Visual Art Industries, Inc., Brooklyn, N.Y. Filed Dec. 6, 1961.

JON GNAGY

"Jon Gnagy" is the name of a living individual whose consent is of record.
For Drawing, Sketching, and Painting Kits or Sets Containing Instruction Books and Art Materials—Namely, Pencils, Charcoal Pencils, Erasers, Pencil Sharpeners and Blocks of Sandpaper for Sharpening Pencils, Paint Brushes, Water Colors, Oil Colors, Palettes, Palette Knives and Palette Cups, Linseed Oil and Turpentine, Chalk, Pastels, Fixative, Atomizers for Fixative, Adjustable Mannikin Models, Sheets and Pads of Paper for Sketching and for Water Colors, and Canvas Panels for Oil Paints.
First use on or about Feb. 14, 1951.

SN 134,009. Bio-Tech, Inc., Cambridge, Mass. Filed Dec. 14, 1961.

RES CAP

Exclusive right to the word "Cap" apart from the complete mark as shown is hereby disclaimed.
For Culture Closure Cap.
First use Nov. 3, 1959.

SN 134,198. Joseph V. Cummiskey, Elmira Heights, N.Y. Filed Dec. 18, 1961.

KNOBBY DOOR MAID

For Door Clothes Hangers.
First use Dec. 4, 1961.

SN 139,515. National Guard Products, Inc., Memphis, Tenn. Filed Mar. 9, 1962.

CINARAMIC

For Frames for Displaying Advertising Signs in Public Transportation Vehicles.
First use Mar. 2, 1962.

Class 51—Cosmetics and Toilet Preparations

SN 49,443. La Maur, Inc., Minneapolis, Minn. Filed Apr. 10, 1958.

STYLE

For Hair Fixative.
First use on or about June 5, 1945.

SN 100,231. Drug Research Corporation, New York, N.Y. Filed July 5, 1960.

MISS MANTAN

For Cosmetic Skin Cream Which Serves Both as a Foundation Cream and as a Tanning Agent.
First use June 8, 1960.

SN 115,073. Harry B. Morton, d.b.a. Parfums Dinard, New York, N.Y. Filed Mar. 7, 1961.

PLAISIR D'AMOUR

The French notation shown on the drawing means "Pleasure of Love" or "Love's Pleasure."
For Perfumes and Colognes.
First use July 1943.

SN 121,703. Chemway Corporation, Wayne, N.J. Filed June 9, 1961.

SURGEX

Owner of Reg. No. 641,859.
For Antiseptic Hair Remover.
First use Apr. 18, 1961.

SN 127,690. Viviane Woodard Corporation, Panorama City, Calif. Filed Sept. 11, 1961.

Freixo

For Cologne.
First use Nov. 9, 1960.

SN 132,872. Walter Scott, Inc., Miami, Fla. Filed Nov. 27, 1961.

WALTER SCOTTS'

For Hair Dressing and Conditioner, and Neutralizer.
First use Oct. 19, 1961.

SN 134,026. Lander Co., Inc., d.b.a. Loveland, New York, N.Y. Filed Dec. 14, 1961.

LOVELAND

For Lipsticks, Nail Polish, Nail Polish Remover, Liquid and Powder Make-Up, and Cosmetic Skin Creams.
First use August 1961.

SN 137,178. Franth Wetherholt, d.b.a. Wetherholt in Chicago, Chicago, Ill. Filed Feb. 2, 1962.

TOPAZ

For After Shave Lotion.
First use 1945.

SN 137,276. Rapidol Distributing Corporation, Garden City, N.Y. Filed Feb. 5, 1962.

RAP-I-DOL

For Hair Rinse, Effervescing Hair Hair Color Rinse, Hair Coloring, Hair Tint, Hair Dye and Color Remover, Dandruff Remover, Skin Lotion, Vanishing Skin Lotion, Powder Base, and Perfume.
First use Oct. 24, 1924.

SN 140,091. Cannolene Company, Atlanta, Ga. Filed Mar. 19, 1962.

CANNOLENE

For Astringents, Astringent Cerates, Bleach Creams, Beauty Creams, Cold Creams, Cleansing Creams, Obesity Creams, Refreshing Creams, Obesity Astringents, Dry Rouges, Liquid Rouges, Face Bleaches, Face Packs; Skin Whitener in Liquid, Cream or Solid Form; Eyebrow and Eyelash Grower, Eye Drops, Eyebrow Pencils, Chemical Preparations for the Darkening of Eyelashes and Eyebrows, Hand Lotions, Skin Lotions, After-Shaving Lotions, Pomades, Face Powders, Talcum Powders, Body Powders, Sachets, Hair Salves, Hair Elixirs, Dandruff Preparations, Hair Tonics, Hair Oils, Hair Dyes, Bath Salts, Lip Sticks, Tooth Powders, Mouth Washes, Dentifrices, Tooth Pastes, Depilatories, Nail Powders, Nail Polishes, Nail Creams, Nail Bleaches, Witch-Hazel Salves, Camphor Creams, Foot Powders, Personal Deodorants, Bay Rum, Perfumes, and Toilet Waters.
First use Sept. 15, 1923.

SN 140,905. The B.V.D. Company, Inc., Cincinnati, Ohio. Filed Mar. 28, 1962.

AZTEC

For Men's Toiletries—Namely, After Shave Lotion, Cologne, Pre-Shave Lotion, and Hair Dressing.
First use Mar. 21, 1962.

SN 141,166. Helene Curtis Industries, Inc., Chicago, Ill. Filed Mar. 30, 1962.

ALWAYS YOURS

For Hair Color Rinse.
First use on or about Mar. 9, 1962.

SN 152,641. Studio Girl-Hollywood, Inc., d.b.a. Studio Girl, Glendale, Calif. Filed Sept. 6, 1962.

HAPPY HANDS

For Hand Lotion.
First use on or about Aug. 14, 1962.

SN 152,645. Studio Girl-Hollywood, Inc., d.b.a. Studio Girl, Glendale, Calif. Filed Sept. 6, 1962.

EVERYTHING NICE

For Talcum Powder and Cologne Sold in a Set.
First use on or about Aug. 14, 1962.

SN 152,716. Roux Laboratories, Inc., New York, N.Y. Filed Sept. 7, 1962.

'tween-time

For Hair Coloring Preparation in the Nature of a Crayon.
First use June 19, 1962.

Class 52—Detergents and Soaps

SN 84,934. National Laboratories, Inc., Chicago, Ill. Filed Nov. 9, 1959.

NATIONAL Easy Clean

The words "Easy Clean" are disclaimed apart from the mark as shown.
For All Purpose Household Cleaners.
First use Oct. 20, 1959.

SN 133,538. Cinderella International Company, Inc., Chicago, Ill. Filed Dec. 7, 1961.

MAGIC WAND

Owner of Reg. No. 674,713.
For Personal Shampoo.
First use Apr. 17, 1957.

SN 137,310. Alberto-Culver Company, Melrose Park, Ill. Filed Feb. 6, 1962.

ALBERTO VO5

Owner of Reg. Nos. 335,421, 723,187, and others.
For Hair Shampoo.
First use Jan. 25, 1962.

SN 139,709. West Indies Bay Company, Minneapolis, Minn. Filed Mar. 12, 1962.

ST. JOHNS

Owner of Reg. Nos. 520,484 and 670,741.
For Bath and Hand Soap.
First use in or about November 1956.

SN 139,931. Darris Products, Inc., Denver, Colo. Filed Mar. 15, 1962.

GLASS 20/20 CLEANER

Applicant disclaims exclusive right to the words "Glass Cleaner" apart from the mark as shown.
For Glass Cleaner (Liquid).
First use in or about March 1960.

SN 141,331. The Milton Company, El Segundo, Calif. Filed Apr. 2, 1962.

Quick 'n Pretty

For Liquid Hair Shampoo.
First use on or about Mar. 1, 1962.

SN 151,013. Hal Collins Company, Dallas, Tex. Filed Aug. 13, 1962.

BAKER'S

Owner of Reg. No. 743,896.
For Hair Shampoo.
First use as early as Feb. 1, 1948.

SN 151,359. The Procter & Gamble Company, Cincinnati, Ohio. Filed Aug. 16, 1962.

MAXIMUM

For Sudsing Cleaner, Cleanser, and Detergent for Household Use.
First use July 12, 1962.

SN 151,479. Dee-Gee Enterprises, Redondo Beach, Calif. Filed Aug. 20, 1962.

DOGGIE Wet-A-Way



For Compound for Removing Stains and Odors From Carpets Caused by Dogs.
First use May 6, 1962.

SN 151,990. Nethercutt Laboratories, d.b.a. Cosgenic Labs., Hollywood, Calif. Filed Aug. 27, 1962.

ANGYA

Owner of Reg. No. 741,033.
For Hair Shampoo.
First use Nov. 14, 1961.

SN 152,394. Marton Freres, Inc., Long Island City, N.Y. Filed Sept. 4, 1962.

AGE OF ELEGANCE

For Toilet Soaps.
First use on or before Oct. 31, 1960.

SN 152,438. Purex Corporation, Ltd., d.b.a. Turco Products, Inc., Wilmington, Calif. Filed Sept. 4, 1962.

AIRLION

For Industrial Metal Cleaning Compounds.
First use June 16, 1937.

SN 152,636. Sprayway, Inc., d.b.a. Tru-Pine Company, Chicago, Ill. Filed Sept. 6, 1962.

TRU-PINE

Owner of Reg. No. 399,162.
For Cleanser for Laundry and General Purpose Use.
First use Sept. 21, 1941.

SERVICE MARKS

Class 100—Miscellaneous

SN 131,412. Smaks International, Inc., Prairie Village, Kans. Filed Nov. 6, 1961.

HASTY HOUSE

For Restaurant Services.
First use Sept. 8, 1961.

SN 134,055. Thoroughbred Racing Associations of the United States, Inc., New York, N.Y. Filed Dec. 14, 1961.

TRA

Owner of Reg. No. 610,063.
For Association Services—Namely, Disseminating Business Information to Members, Setting Codes of Conduct and Standards To Be Followed by Members, Promoting the Interest of Members.
First use July 1, 1961.

SN 137,261. Milner Hotels, Inc., Detroit, Mich. Filed Feb. 5, 1962.



For Hotel and Motel Services.
First use about May 15, 1961.

SN 139,542. Space-General Corporation, Glendale, Calif. Filed Mar. 9, 1962.



Owner of Reg. No. 728,087.
For Engineering and Consulting Services Rendered to Others—Namely, the Conducting of Surveys, Design Studies, Feasibility Studies and Research in the Field of Electronics and Space Activities.
First use in or about September 1961.

Class 101 — Advertising and Business

SN 120,336. Public Relations Research Service, Inc., Pittsburgh, Pa. Filed May 18, 1961.

TELERAMA

For Television Fund Raising Promotions, Projects or Campaigns.
First use Sept. 1, 1960.

SN 124,663. Mid-Continent Corporation, Memphis, Tenn. Filed July 25, 1961.



Applicant disclaims any exclusive rights in the outline of the map of the United States apart from the mark as shown.
For Real Estate Brokerage Services.
First use Dec. 22, 1960.

SN 128,511. CASH, Inc., Indianapolis, Ind. Filed Sept. 25, 1961.



For Accounting Services.
First use Aug. 10, 1961.

SN 130,668. York, Rubin and Belport, Inc., d.b.a. Cinesell International, New York, N.Y. Filed Oct. 26, 1961.

CINESELL
INTERNATIONAL

No claim is made for the word "International."
For Promotion of Motion Pictures of Others.
First use Sept. 1, 1961.

Class 102 — Insurance and Financial

SN 101,448. Home Federal Savings and Loan Association of San Diego, San Diego, Calif. Filed July 25, 1960.

SAVERCARD

For Savings Account Services.
First use June 25, 1960.

SN 133,814. Portland Federal Savings and Loan Association, Louisville, Ky. Filed Dec. 11, 1961.



HAPPY HOME LOANS

Applicant disclaims exclusive use of the words "Home Loans" apart from the mark as shown.
For Providing Loans for the Purpose of Buying, Building or Refinancing Homes.
First use Jan. 15, 1961.

SN 139,816. Mutual Indemnity Company, Madison, Wis. Filed Mar. 7, 1962.

MIGHTY MIDGET

For Underwriting of Accident, Health, and Hospital Insurance.
First use Feb. 22, 1962.

SN 139,677. Preferred Check System, Inc., Eugene, Oreg. Filed Mar. 12, 1962.



For Services Rendered by Applicant and Its Licensees, Including Investigating and Establishing Credit Ratings, Guaranteeing Checks, and Furnishing Protection Against Losses Due to Bad Checks.
First use Nov. 20, 1961.

SN 150,496. Atlas Assurance Company Limited, New York, N.Y. Filed Aug. 6, 1962.



Owner of Reg. No. 555,140.
For Accident and Health Insurance, Fire Insurance, Miscellaneous Property Insurance, Water Damage Insurance, Burglary and Theft Insurance, Glass Insurance, Boiler and Machinery Insurance, Elevator Insurance, Animal Insurance, Collision Insurance, Personal Injury Liability Insurance, Property Damage Liability Insurance, Workmen's Compensation and Employer's Liability Insurance, Fidelity and Surety Insurance, Motor Vehicle and Aircraft Insurance, Marine Insurance, Marine Protection and Indemnity Insurance and Reinsurance of Risks of the Kind or Description Heretofore Stated.
First use Nov. 28, 1955.

SN 150,497. Atlas Assurance Company Limited, New York, N.Y. Filed Aug. 6, 1962.



Owner of Reg. No. 555,140.
For Accident and Health Insurance, Burglary and Theft Insurance, Glass Insurance, Boiler and Machinery Insurance, Elevator Insurance, Animal Insurance, Personal Injury Liability Insurance, Property Damage Liability Insurance, Workmen's Compensation and Employer's Liability Insurance, Fidelity and Surety Insurance.
First use September 1806.

Class 103 — Construction and Repair

SN 130,419. Breuil Boat Company, Inc., North Miami Beach, Fla. Filed Oct. 23, 1961.



The drawing is lined for blue. No registration rights are claimed for the word "Harbour" apart from the mark shown, but the applicant waives none of its common law rights in the mark shown in the drawing or any features thereof.
For Boat Repair.
First use Oct. 16, 1961.

SN 137,496. Associated Professional Launderers of America, Inc., Charlotte, N.C. Filed Feb. 8, 1962. COLLECTIVE MARK.



For Laundering and Dry Cleaning Services.
First use Oct. 25, 1961.

Class 105 — Transportation and Storage

SN 128,139. The American Oil Company, Chicago, Ill. Filed Sept. 19, 1961.

AS YOU TRAVEL ASK US

For Travel Information Service Rendered to the Motoring Public.
First use May 1, 1959.

Class 106 — Material Treatment

SN 129,388. Perrotts Limited, Manchester, England. Filed Oct. 6, 1961.

PERROTTELL

For Material Treatment for Textile Piece Goods for Imparting a Crease Retention Property to the Fiber.
First use June 1, 1961.

Class 107 — Education and Entertainment

SN 84,777. Leo Koplin, Panama City, Fla. Filed Nov. 6, 1959.

GOOFY GOLF

No claim is made to the word "Golf" apart from the mark as shown.
For Services Rendered in the Operation of Miniature Golf Courses.
First use April 1955.

SN 134,356. Susquehanna Broadcasting Company, York, Pa. Filed Dec. 19, 1961.

LOOK UP TO LEARNING

For Title of a Series of Public Service Announcements Broadcast Over the Radio.
First use Oct. 2, 1961.

COLLECTIVE MEMBERSHIP MARKS

Class 200

SN 131,313. Sigma Kappa Sorority, Indianapolis, Ind. Filed Nov. 3, 1961.



The drawing is lined for lavender and maroon. Owner of Reg. No. 244,810.
For Indicating Membership in applicant.
First use September 1920.

SN 131,919. National Child Evangelism Fellowship of U.S.A., Grand Rapids, Mich. Filed Nov. 13, 1961.



For Indicating Membership in the Organization.
First use on or about May 20, 1937.

SN 150,403. Electronic Representatives Association, Chicago, Ill. Filed Aug. 3, 1962.



For Indicating Membership of the Applicant According to Standards Determined by the Applicant.
First use Nov. 14, 1958.

CERTIFICATION MARKS

Class A — Goods

SN 139,165. United States Department of the Army, Washington, D.C. Filed Mar. 5, 1962.



The mark certifies that the fallout shelters to which applied have been found by civil defense authorities to conform to federally defined technical requirements.
For Fallout Shelter Facilities.
First use Oct. 4, 1961.

TRADEMARK REGISTRATIONS ISSUED

PRINCIPAL REGISTER

Class 1 — Raw or Partly Prepared Materials

748,919. VIPLEX. Crowley Tar Products Company, Inc. SN 89,233. Pub. 2-7-61. Filed 12-14-59.

748,920. JUST-RITE STYROFILL AND DESIGN. Castle Industries, Inc. SN 125,855. Pub. 2-19-63. Filed 8-14-61.

748,921. KOBRITE. John N. Bos Sand Company. SN 144,138. Pub. 2-19-63. Filed 5-9-62.

748,922. SUPERGLAS. The Eagle-Picher Company. SN 146,539. Pub. 2-19-63. Filed 6-8-62.

748,923. ABERDEEN. Eagle Ottawa Leather Company. SN 146,716. Pub. 2-19-63. Filed 6-12-62.

Class 2 — Receptacles

748,924. SHO-PAK. Novo Industrial Corporation. SN 106,914. Pub. 2-19-63. Filed 10-6-60.

748,925. POP-UP. Kimberly-Clark Corporation. SN 108,336. Pub. 2-20-62. Filed 11-14-60.

748,926. MICROCREPE. Arbell Safety Bag Company. SN 114,911. Pub. 3-27-62. Filed 3-6-61.

748,927. THE VALLEY FORGE. Boyertown Burial Casket Company. SN 136,950. Pub. 2-19-63. Filed 1-31-62.

748,928. REDMANSON. The Lau Blower Company. SN 146,074. Pub. 2-19-63. Filed 6-4-62.

Class 3 — Baggage, Animal Equipments, Portfolios, and Pocketbooks

748,929. LOVELAND. Lander Co. Inc., d.b.a. Loveland. SN 148,817. Pub. 2-19-63. Filed 7-11-62.

Class 4 — Abrasives and Polishing Materials

748,930. RESISTO-GLOSS. United Sanitary Chemicals Company, Incorporated. SN 120,355. Pub. 2-19-63. Filed 5-18-61.

748,931. PHARAO. Geigy Chemical Corporation. SN 137,851. Pub. 2-19-63. Filed 2-13-62.

748,932. ABRASO. Raymond B. Allen, d.b.a. Blade Economy Co. SN 138,930. Pub. 2-19-63. Filed 3-2-62.

748,933. RELISH. Geigy Chemical Corporation. SN 141,609. Pub. 2-19-63. Filed 4-5-62.

Class 6 — Chemicals and Chemical Compositions

748,934. ROYAL AGRITOX. Reagent Chemical & Research, Inc. SN 125,223. Pub. 2-19-63. Filed 8-3-61.

748,935. HOSTAPHOR. Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning. SN 132,148. Pub. 2-19-63. Filed 11-16-61.

748,936. PATCO'S ROUT. Lee Patten Seed Company. SN 132,710. Pub. 2-19-63. Filed 11-24-61.

748,937. TRUODOR. R. T. Vanderbilt Company, Inc. SN 136,310. Pub. 2-19-63. Filed 1-22-62.

748,938. FLAC. The Dow Chemical Company. SN 138,779. Pub. 2-19-63. Filed 2-28-62.

748,939. IH. International Harvester Company. SN 141,839. Pub. 2-19-63. Filed 4-9-62.

748,940. DACAMINE. Diamond Alkali Company. SN 146,471. Pub. 2-19-63. Filed 6-8-62.

748,941. FLUORO-TEX. Crown Chemical Corporation. SN 146,792. Pub. 2-19-63. Filed 6-13-62.

748,942. NISAPLIN. Aplin & Barrett Limited. SN 146,950. Pub. 2-19-63. Filed 6-15-62.

748,943. BEKUN. Pfister Chemical Works, Inc. SN 147,146. Pub. 2-19-63. Filed 6-18-62.

748,944. MANSULOX. Foote Mineral Co. SN 147,196. Pub. 2-19-63. Filed 6-19-62.

748,945. CAPRICE. Colgate-Palmolive Company. SN 147,442. Pub. 2-19-63. Filed 6-22-62.

748,946. EUREMA. Hammel, Riglander & Company, Inc. SN 148,182. Pub. 2-19-63. Filed 7-2-62.

748,947. FBA AND DESIGN. Farbenfabriken Bayer Aktiengesellschaft. SN 149,068. Pub. 2-19-63. Filed 7-16-62.

Class 8 — Smokers' Articles, Not Including Tobacco Products

748,948. SMOKE-KADDY POUCHETTE. Nash Inc. SN 141,849. Pub. 12-11-62. Filed 4-2-62.

Class 10 — Fertilizers

748,949. AGRAFOAM. Norman L. O'Brien. SN 139,662. Pub. 12-11-62. Filed 3-12-62.

Class 12 — Construction Materials

748,950. THIOPOXY. W. R. Grace Co., assignee of Sun Chemical Corporation. SN 93,955. Pub. 4-11-61. Filed 3-29-60.

748,951. MICROBESTOS. Johns-Manville Corporation. SN 125,052. Pub. 2-19-63. Filed 7-31-61.

748,952. HARBORD CERTI-PLY. Evans Harbor Products Co., by change of name from Aberdeen Plywood and Veneers, Inc. SN 126,978. Pub. 2-19-63. Filed 8-31-61.

748,953. SUPER-BONDSIT. W. R. Grace & Co., assignee of Sun Chemical Corporation. SN 129,303. Pub. 2-19-63. Filed 10-5-61.

748,954. TRIAX. Timber Structures, Inc. SN 130,523. Pub. 2-19-63. Filed 10-23-61.

748,955. PLASTER-ALL. Des Moines Concrete Products Co. SN 131,814. Pub. 2-19-63. Filed 11-13-61.

748,956. CAPITOL. Martin-Marietta Corporation. SN 132,352. Pub. 2-19-63. Filed 11-20-61.

748,957. CAPITOL AND DESIGN. Martin-Marietta Corporation. SN 132,353. Pub. 2-19-63. Filed 11-20-61.

748,958. SURE-SEAL. Sears, Roebuck and Co. SN 132,743. Pub. 2-19-63. Filed 11-24-61.

748,959. INSUL-GLASS ETC. AND DESIGN. Tucker Aluminum Products, Inc. SN 132,770. Pub. 2-19-63. Filed 11-24-61.

748,960. MULTI-MASTIC. Battenfeld Grease & Oil Corporation, Inc. SN 133,202. Pub. 2-19-63. Filed 12-4-61.

748,961. FIRMCRETE. Firmcrete Building Products, Inc. SN 133,780. Pub. 2-19-63. Filed 12-11-61.

748,962. DILLY-WAGON. The It's-A-Dilly Co. SN 134,391. Pub. 12-4-62. Filed 12-20-61.

748,963. DECK HOUSE. Deck House, Inc. SN 134,441. Pub. 2-19-63. Filed 12-21-61.

748,964. TRUS-JOIST. Trussdeck Corporation. SN 139,160. Pub. 2-19-63. Filed 3-5-62.

748,965. CLEARWOOD. Edward Hines Lumber Co. SN 140,314. Pub. 2-19-63. Filed 3-16-62.

748,966. GUNLITE. Plibrico Company. SN 142,352. Pub. 2-19-63. Filed 4-16-62.

748,967. MANHATTAN. Manhattan Terrazzo Brass Strip Co., Inc. SN 143,247. Pub. 2-19-63. Filed 4-27-62.

748,968. SUPER HARBOND. Harbison-Walker Refractories Company. SN 143,376. Pub. 2-19-63. Filed 4-30-62.

748,969. H-W STOVE. Harbison-Walker Refractories Company. SN 143,377. Pub. 2-19-63. Filed 4-30-62.

748,970. H-W GUNSHOT. Harbison-Walker Refractories Company. SN 143,378. Pub. 2-19-63. Filed 4-30-62.

748,971. H-W SAVAGE. Harbison-Walker Refractories Company. SN 143,382. Pub. 2-19-63. Filed 4-30-62.

748,972. APACHITE. Harbison-Walker Refractories Company. SN 143,385. Pub. 2-19-63. Filed 4-30-62.

748,973. SWISS. Swiss Laboratory Inc. SN 143,466. Pub. 2-19-63. Filed 4-30-62.

748,974. AUTO EOT. Marson Corporation. SN 144,627. Pub. 2-19-63. Filed 5-15-62.

748,975. BLACKSMITH AND DESIGN. Marson Corporation. SN 144,628. Pub. 2-19-63. Filed 5-15-62.

748,976. SECUR-GLIDE. Security Aluminum Company. SN 145,414. Pub. 2-19-63. Filed 5-24-62.

748,977. MULTI CAULK. Schalk Chemical Company. SN 145,615. Pub. 2-19-63. Filed 5-28-62.

748,978. LUMINGLAS. Kenneth H. Ripnen, d.b.a. Glowing Ceilings Company. SN 145,853. Pub. 2-19-63. Filed 5-31-62.

748,979. VELVETEX. The Mosaic Tile Company. SN 148,409. Pub. 2-19-63. Filed 7-5-62.

748,980. ADJUSTA-GARD. J. Kaufman Iron Works. SN 149,186. Pub. 2-19-63. Filed 7-17-62.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

748,981. SPARKLE RINSER. Waste King Corporation. SN 127,291. Pub. 2-19-63. Filed 9-5-61.

748,982. SNOW-TROL. Wrought Washer Mfg. Co. SN 128,697. Pub. 11-20-62. Filed 9-26-61.

748,983. SHUTTLE. Race & Race, Inc. SN 136,812. Pub. 2-19-63. Filed 1-29-62.

748,984. SWIFT NOVA AND DESIGN. Swift Slide Fastener Co., Inc. SN 145,137. Pub. 2-19-63. Filed 5-21-62.

748,985. DYNA-THRED. Long-Lok Corporation. SN 145,269. Pub. 2-19-63. Filed 5-23-62.

748,986. TORQ-STRIP. The Nylok Corporation. SN 145,895. Pub. 2-19-63. Filed 5-24-62.

Class 14—Metals and Metal Castings and Forgings

748,987. NEBALOY. New England Brass Company. SN 141,851. Pub. 2-19-63. Filed 4-2-62.

748,988. W AND DESIGN. International Harvester Company. SN 141,842. Pub. 2-19-63. Filed 4-9-62.

Class 15—Oils and Greases

748,989. VAPOR-IZIT. Banner Products Corporation. SN 106,785. Pub. 2-19-63. Filed 10-20-60.

748,990. KEEKO. Mutual Supply Company. SN 121,748. Pub. 2-19-63. Filed 6-9-61.

748,991. LUBRI-COTE. M. M. Madson Co. SN 129,377. Pub. 1-8-63. Filed 10-6-61.

748,992. HOTTEST BRAND GOING. Continental Oil Company. SN 143,732. Pub. 2-19-63. Filed 5-3-62.

Class 16—Protective and Decorative Coatings

748,993. SPECTERIOR AND DESIGN. The Burns & Russell Company of Baltimore City. SN 139,383. Pub. 2-19-63. Filed 3-8-62.

Class 17—Tobacco Products

748,994. MILLECEL. Brown & Williamson Tobacco Corporation. SN 148,294. Pub. 2-19-63. Filed 7-3-62.

748,995. BUGLER AND DESIGN OF BUGLER. Brown & Williamson Tobacco Corporation. SN 149,703. Pub. 2-19-63. Filed 7-25-62.

748,996. DESIGN OF BUGLER. Brown & Williamson Tobacco Corporation. SN 149,704. Pub. 2-19-63. Filed 7-25-62.

748,997. TUBE ROSE DESIGN. Brown & Williamson Tobacco Corporation. SN 149,709. Pub. 2-19-63. Filed 7-25-62.

Class 18—Medicines and Pharmaceutical Preparations

748,998. SUPPOSERT. Talboy-Nason Company, Inc. SN 96,372. Pub. 11-15-60. Filed 5-3-60.

748,999. EPINOR. Barnes-Hind Laboratories, Inc. SN 113,890. Pub. 7-18-61. Filed 2-17-61.

749,000. FAN-LUBE. Wiley W. McMinn. SN 125,154. Pub. 2-19-63. Filed 8-1-61.

749,001. GM AND DESIGN. Gilroy/Mays Company, Inc. SN 135,584. Pub. 2-19-63. Filed 1-11-62.

749,002. FIXTDEE. Dawe's Laboratories, Inc. SN 137,605. Pub. 2-19-63. Filed 2-9-62.

749,003. DURAFOAM. Durex Products Inc. SN 139,050. Pub. 2-19-63. Filed 3-5-62.

749,004. THICALATE. Thicalate, Inc., assignee of Herbert D. Schneyer, d.b.a. Kreis Pharmacy Distributor's. SN 141,370. Pub. 2-19-63. Filed 4-2-62.

749,005. CURACIN. Charles A. Crete, d.b.a. Pharmaceutical Associates. SN 144,357. Pub. 2-19-63. Filed 5-11-62.

749,006. PERVILETS. U.S. Vitamin & Pharmaceutical Corporation. SN 147,653. Pub. 2-19-63. Filed 6-25-62.

749,007. ULTRASPAN. Bristol-Myers Company. SN 147,790. Pub. 2-19-63. Filed 6-27-62.

749,008. PRENATA. Xttrium Laboratories, Inc., d.b.a. Blue Ridge Vitamin Co. SN 147,982. Pub. 12-11-62. Filed 6-28-62.

749,009. NIALIFT. B. F. Ascher & Company, Inc. SN 148,568. Pub. 2-19-63. Filed 7-9-62.

749,010. APPETROL-S.R. Carter Products, Inc. SN 148,875. Pub. 2-19-63. Filed 7-12-62.

749,011. FBA AND DESIGN. Farbenfabriken Bayer Aktiengesellschaft. SN 149,069. Pub. 2-19-63. Filed 7-16-62.

749,012. NUMA. Vitamix Pharmaceuticals, Incorporated. SN 150,131. Pub. 2-19-63. Filed 7-30-62.

749,013. CLASOL. Vitamix Pharmaceuticals, Incorporated. SN 150,133. Pub. 2-19-63. Filed 7-30-62.

749,014. LORMIN. Eli Lilly and Company. SN 150,259. Pub. 2-19-63. Filed 8-1-62.

Class 19—Vehicles

749,015. MAK KART. Fox Go-Boy Carts, Inc. SN 90,048. Pub. 2-27-62. Filed 2-1-60.

749,016. CAR GO CARTS AND DESIGN. Nutting Truck and Caster Company. SN 112,913. Pub. 2-19-63. Filed 2-1-61.

749,017. 'A' BONE AND DESIGN. Rupp Manufacturing, Inc. SN 132,869. Pub. 2-19-63. Filed 11-27-61.

749,018. FONGERS ETC. AND DESIGN. Fongers- de Groninger Rijwielenfabriek N.V. SN 133,655. Pub. 2-19-63. Filed 12-8-61.

749,019. YELLOW JACKET. Vernie C. Mitchell. SN 135,375. Pub. 2-19-63. Filed 1-8-62.

749,020. KEYSTONE ETC. AND DESIGN. Keystone Coach Manufacturing Company. SN 136,132. Pub. 2-19-63. Filed 1-19-62.

749,021. LO-LOADER. F. A. Long Company. SN 141,086. Pub. 2-19-63. Filed 3-29-62.

749,022. 1H. International Harvester Company. SN 141,840. Pub. 2-19-63. Filed 4-9-62.

749,023. REE-TRAK. Kreative Auto Products, Inc. SN 149,298. Pub. 2-19-63. Filed 7-18-62.

749,024. HYDROFRAME-40. Pullman Incorporated. SN 149,320. Pub. 2-19-63. Filed 7-18-62.

749,025. F DESIGN. Fleetwood Management Company. SN 150,044. Pub. 2-19-63. Filed 7-30-62.

749,026. BROADMORE. Fleetwood Management Company. SN 150,045. Pub. 2-19-63. Filed 7-30-62.

749,027. REMCO AND DESIGN. Republic Engineering & Manufacturing Co. SN 150,104. Pub. 2-19-63. Filed 7-30-62.

Class 21—Electrical Apparatus, Machines, and Supplies

749,028. BLISS-GAMEWELL AND DESIGN. The Gamewell Company. SN 109,788. Pub. 2-19-63. Filed 12-7-60.

749,029. EVER-GLO. Valor Enterprises Incorporated. SN 137,578. Pub. 1-8-63. Filed 2-8-62.

749,030. HIL-PAC. Hillyard Chemical Company. SN 140,689. Pub. 11-13-62. Filed 3-26-62.

749,031. BRITE-VUE. Channel Master Corporation. SN 141,159. Pub. 2-19-63. Filed 3-30-62.

749,032. DELCOTRON. General Motors Corporation. SN 142,425. Pub. 2-19-63. Filed 4-17-62.

749,033. MINIARC. Chemetron Corporation. SN 145,042. Pub. 2-19-63. Filed 5-21-62.

749,034. MCC IN A CIRCLE. Mecca Cable & Service, Inc. SN 145,276. Pub. 2-19-63. Filed 5-23-62.

749,035. OMNI-RAY. Channel Master Corporation. SN 146,580. Pub. 2-19-63. Filed 6-11-62.

749,036. UNI-REED. Essex Wire Corporation. SN 149,381. Pub. 2-19-63. Filed 7-19-62.

Class 22—Games, Toys, and Sporting Goods

749,037. "BLABBY." Uneeda Doll Co., Inc. SN 144,902. Pub. 2-19-63. Filed 5-17-62.

749,038. TURN-N-TELL. M. Frances Cassidy. SN 145,246. Pub. 2-19-63. Filed 5-23-62.

749,039. BUNDLE OF LOVE. Uneeda Doll Co. Inc. SN 145,303. Pub. 2-19-63. Filed 5-23-62.

749,040. HEALTH DISC. Diversified Products Corporation. SN 145,342. Pub. 2-19-63. Filed 5-24-62.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

749,041. CARB-AIRATOR. General Motors Corporation. SN 61,383. Pub. 4-28-59. Filed 10-27-58.

749,042. ULTEK AND DESIGN. Ultek Corp. SN 116,683. Pub. 2-19-63. Filed 3-28-61.

749,043. NORDEST. Societe de Constructions Mecaniques Nordest. SN 130,122. Pub. 9-18-62. Filed 10-17-61.

749,044. BOM-BAY. Swingline Inc. SN 131,632. Pub. 2-19-63. Filed 11-8-61.

749,045. GRASS MASTER. J. Wiss & Sons Co. SN 132,604. Pub. 2-19-63. Filed 11-22-61.

749,046. P AND DESIGN. Matthew Forelli, d.b.a. Precision Manufacturing Company. SN 134,880. Pub. 2-19-63. Filed 12-29-61.

749,047. DYNAMASTER. Applied Power Industries, Inc. SN 137,493. Pub. 10-2-62. Filed 2-8-62.

749,048. TELEMETAL. Fritz Hodler. SN 138,017. Pub. 2-19-63. Filed 2-15-62.

749,049. POLY-FLEX. Dodge Manufacturing Corporation. SN 140,431. Pub. 2-19-63. Filed 3-22-62.

749,050. HYDROFLEX. Fawick Corporation. SN 140,438. Pub. 2-19-63. Filed 3-22-62.

749,051. SAILFISH. The W. S. Tyler Company. SN 141,005. Pub. 2-19-63. Filed 3-28-62.

749,052. QUIET DE LUXE. Royal McBee Corporation. SN 141,114. Pub. 2-19-63. Filed 3-29-62.

749,053. DIRECTOMAT. Directomat, Inc. SN 142,022. Pub. 2-19-63. Filed 4-11-62.

749,054. PINKETTE. J. Wiss & Sons Co. SN 142,986. Pub. 2-19-63. Filed 4-24-62.

749,055. FLO-FIL. Horix Manufacturing Company. SN 143,532. Pub. 2-19-63. Filed 5-1-62.

749,056. PRONTOW. Jervis B. Webb Company. SN 144,031. Pub. 2-19-63. Filed 5-7-62.

749,057. GULF. Gulf Oil Corporation. SN 144,069. Pub. 2-19-63. Filed 5-8-62.

749,058. VELVET TOUCH. Dashew Business Machines, Inc. SN 144,814. Pub. 2-19-63. Filed 5-17-62.

749,059. G-DESIGN. Graham Engineering Company, Inc. SN 145,078. Pub. 2-19-63. Filed 5-21-62.

749,060. DUO-HEAT. Super Mold Corporation of California. SN 145,134. Pub. 2-19-63. Filed 5-21-62.

749,061. KOMPACT. Walter Kidde & Company, Inc. SN 147,208. Pub. 2-19-63. Filed 6-19-62.

749,062. FAS'NAILER. International Staple and Machine Company. SN 147,584. Pub. 2-19-63. Filed 6-25-62.

Class 24—Laundry Appliances and Machines

749,063. BLACKSTONE AND DESIGN. Blackstone Corporation. SN 141,800. Pub. 2-19-63. Filed 4-9-62.

Class 26—Measuring and Scientific Appliances

749,064. RECORD-O-WEIGHT. The Hobart Manufacturing Company. SN 103,568. Pub. 2-19-63. Filed 8-29-60.

749,065. SYSTEMS RESEARCH LABORATORIES, INC. SRL AND DESIGN. Systems Research Laboratories, Inc. SN 111,770. Pub. 2-19-63. Filed 1-12-61.

749,066. GIB. Gilfillan Bros., Inc. SN 130,201. Pub. 2-19-63. Filed 10-18-61.

749,067. DITTO. Ditto, Incorporated (Illinois corporation), assignee, by mesne assignments, of Ditto, Incorporated (Delaware corporation). SN 133,770. Pub. 2-19-63. Filed 12-11-61.

749,068. MISC. DESIGN. Ditto, Incorporated (Illinois corporation), assignee, by mesne assignments, of Ditto, Incorporated (Delaware corporation). SN 133,771. Pub. 2-19-63. Filed 12-11-61.

749,069. 5P. Hawker Siddeley Canada Ltd., by change of name from A. V. Roe Canada Limited. SN 136,095. Pub. 2-19-63. Filed 1-19-62.

749,070. LECTRO-TEST. Benjamin Jadow, d.b.a. The Tell Company. SN 141,072. Pub. 2-19-63. Filed 3-29-62.

749,071. PIXIE. Burroughs Corporation. SN 145,762. Pub. 2-19-63. Filed 5-31-62.

749,072. UNIMATIC AND DESIGN. Stanton Instruments Limited. SN 146,678. Pub. 12-11-62. Filed 6-11-62.

749,073. GARDNER LABORATORY AND DESIGN. Gardner Laboratory, Inc. SN 147,775. Pub. 2-19-63. Filed 6-19-62.

749,074. MEMOTUTOR. U.S. Industries, Inc. SN 148,341. Pub. 2-19-63. Filed 7-3-62.

749,075. WYN-MOR XX. Wyn-Mor Race Computers. SN 148,553. Pub. 2-19-63. Filed 7-6-62.

749,076. ATOHM AND DESIGN. Atohm Electronics. SN 148,569. Pub. 2-19-63. Filed 7-9-62.

749,077. NEGA-FLAT. Charles Beseler Company. SN 148,573. Pub. 2-19-63. Filed 7-9-62.

Class 27 — Horological Instruments

749,078. ELLIS. Litwin & Sons. SN 149,099. Pub. 2-19-63. Filed 7-16-62.

749,079. L AND DESIGN. Regency Creations, Inc. SN 149,126. Pub. 2-19-63. Filed 7-16-62.

749,080. ERMANO. Ermano S.A. SN 150,038. Pub. 2-19-63. Filed 7-30-62.

Class 28 — Jewelry and Precious-Metal Ware

749,081. CIS. Maria Zoltovska, born Frankl. SN 115,104. Pub. 5-15-62. Filed 1-22-62.

749,082. TASSLE TALK. Coro, Inc. SN 136,741. Pub. 2-19-63. Filed 1-29-62.

749,083. TOPA AND DESIGN. Fuchs and Stern, Inc. SN 141,430. Pub. 2-19-63. Filed 4-3-62.

749,084. LANG. Irving Lang, d.b.a. Lang Mfg. Co. SN 143,979. Pub. 2-19-63. Filed 5-7-62.

749,085. WLS. W. L. Sutton Company. SN 144,286. Pub. 2-19-63. Filed 5-10-62.

749,086. HC. Harry Cortell. SN 145,249. Pub. 2-19-63. Filed 5-21-62.

749,087. Y IN A CIRCLE. S. Yefleth Jewelry Inc. SN 145,906. Pub. 2-19-63. Filed 5-31-62.

749,088. DS AND DESIGN. Dave Schneider Wholesale Manufacturing Jewelers. SN 146,423. Pub. 2-19-63. Filed 6-7-62.

749,089. PW. Philip Wolman & Co. SN 146,437. Pub. 2-19-63. Filed 6-7-62.

749,090. JTC. Zale Jewelry Company, Inc. SN 147,424. Pub. 2-19-63. Filed 6-21-62.

749,091. MILLS. Harry Pete Mills. SN 147,735. Pub. 2-19-63. Filed 6-26-62.

749,092. LORRAINE MARSEL. Jewels By Lorraine Marsel, Inc. SN 147,743. Pub. 2-19-63. Filed 6-26-62.

749,093. 14K AND DESIGN. N.J. Jewelry Mfg. Co., Inc. SN 147,841. Pub. 2-19-63. Filed 6-27-62.

749,094. HM AND DESIGN. Harry Moss. SN 148,059. Pub. 2-19-63. Filed 6-29-62.

749,095. KGJ. Kurt Goldschmidt, d.b.a. K. Goldschmidt Jewelers. SN 148,174. Pub. 2-19-63. Filed 7-2-62.

749,096. F IN A DIAMOND DESIGN. Maurice Goldstein, d.b.a. Franco-American Jewelry Company. SN 148,175. Pub. 2-19-63. Filed 7-2-62.

749,097. LA & R. Loring Andrews & Rattermann, Inc. SN 148,206. Pub. 2-19-63. Filed 7-2-62.

749,098. MW. Midwest Jewelers. SN 148,212. Pub. 2-19-63. Filed 7-2-62.

749,099. HG AND DESIGN. Henry Gonsales, Inc. SN 148,963. Pub. 2-19-63. Filed 7-13-62.

749,100. J WITHIN FIDDLE DESIGN. Ralph De Genaro, d.b.a. Harper Jewels. SN 149,054. Pub. 2-19-63. Filed 7-16-62.

749,101. MFR. Mighty-Fine Ring Co. SN 149,401. Pub. 2-19-63. Filed 7-19-62.

749,102. Z (FANCIFUL). Harold J. Ziegler and Co., Inc. SN 149,429. Pub. 2-19-63. Filed 7-19-62.

749,103. HF. Heech & Forman, Inc. SN 149,463. Pub. 2-19-63. Filed 7-20-62.

749,104. JM. Jewel Masters, Inc. SN 149,471. Pub. 2-19-63. Filed 7-20-62.

749,105. TSR. Thomas Skat-Rordam, d.b.a. Th. Skat-Rordam. SN 149,785. Pub. 2-19-63. Filed 7-25-62.

749,106. VB. Volmer Bahner & Co. A/S. SN 149,788. Pub. 2-19-63. Filed 7-25-62.

749,107. T AND DESIGN. D.T. Supply Co. SN 149,891. Pub. 2-19-63. Filed 7-26-62.

749,108. WS AND DESIGN. Werner Stein. SN 149,972. Pub. 2-19-63. Filed 7-27-62.

749,109. IGM. Alice Alpert, d.b.a. International Gold Metals. SN 149,997. Pub. 2-19-63. Filed 7-30-62.

749,110. MAMSELLE. B. B. Greenberg Co. SN 150,049. Pub. 2-19-63. Filed 7-30-62.

749,111. M-BE. Maison Behar, Inc. SN 150,065. Pub. 2-19-63. Filed 7-30-62.

Class 29 — Brooms, Brushes, and Dusters

749,112. HB BAR-B-Q SHUCK MOP. HB Bar-B-Q Shuck Mop Company. SN 126,653. Pub. 2-19-63. Filed 8-25-61.

749,113. BRISTO. Ryan Industries, Inc. SN 141,471. Pub. 2-19-63. Filed 4-3-62.

749,114. LOVELAND. Lauder Co. Inc., d.b.a. Loveland. SN 148,814. Pub. 2-19-63. Filed 7-11-62.

Class 31 — Filters and Refrigerators

749,115. SETHCO. Sethco Manufacturing Corporation. SN 104,646. Pub. 3-28-61. Filed 9-16-60.

749,116. SELKO. The Cellulo Company, d.b.a. Selko Filter Company. SN 112,027. Pub. 12-12-61. Filed 1-18-61.

749,117. PRC ETC. AND DESIGN. Power Refrigeration Co., Inc. SN 119,557. Pub. 2-19-63. Filed 5-8-61.

749,118. FILTOMOR. Filtomor, Incorporated. SN 144,708. Pub. 2-19-63. Filed 5-16-62.

Class 32 — Furniture and Upholstery

749,119. CAR JONN. Traveo Plastics Co., Inc. SN 101,441. Pub. 2-19-63. Filed 7-25-60.

749,120. SYSTEM ABSTRACTA. Diversification Development Incorporated. SN 128,421. Pub. 2-19-63. Filed 9-22-61.

749,121. TRENSTYLE AND DESIGN. The Terrill Manufacturing Company, Inc., d.b.a. Terrill Manufacturing Co. and as Trenstyle. SN 135,922. Pub. 2-19-63. Filed 1-16-62.

749,122. PENN COLONY. Broyhill Furniture Factories. SN 144,932. Pub. 2-19-63. Filed 5-18-62.

749,123. CAPITAL R AND RISOM. Jens Risom Design, Inc. SN 145,267. Pub. 2-19-63. Filed 5-23-62.

749,124. MASSAGE-A-REST. The Donald Norton Company. SN 149,546. Pub. 2-19-63. Filed 7-23-62.

749,125. SIMPATICO. Drexel Enterprises, Inc. SN 150,401. Pub. 2-19-63. Filed 8-3-62.

Class 34 — Heating, Lighting, and Ventilating Apparatus

749,126. RAY-JET. General Products Co., Inc. SN 143,524. Pub. 2-19-63. Filed 5-1-62.

749,127. BASTIAN-BLESSING. The Bastian-Blessing Company. SN 146,350. Pub. 2-19-63. Filed 6-7-62.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

749,128. GOLD STAR "220" AND DESIGN. O.K. Rubber Welders, Incorporated. SN 130,486. Pub. 2-19-63. Filed 10-23-61.

749,129. G-8. The Goodyear Tire & Rubber Company. SN 148,721. Pub. 2-19-63. Filed 7-10-62.

749,130. NYLO-GUM. The Goodyear Tire & Rubber Company. SN 148,722. Pub. 2-19-63. Filed 7-10-62.

749,131. NEOTHANE. The Goodyear Tire & Rubber Company. SN 148,723. Pub. 2-19-63. Filed 7-10-62.

749,132. MAGIC-SEAL. Better Monkey Grip Company. SN 150,009. Pub. 2-1-63. Filed 7-30-62.

749,133. KORMETAL. F. D. Farnam Co. SN 150,039. Pub. 2-19-63. Filed 7-30-62.

749,134. ROUGHNECK. Thor Power Tool Company. SN 150,292. Pub. 2-19-63. Filed 8-1-62.

Class 36 — Musical Instruments and Supplies

749,135. MAGNASYNC MAGNAPHONIC. Magnasync Manufacturing Co., Ltd. SN 66,556. Pub. 8-11-59. Filed 1-27-59.

749,136. HERITAGE BY ARMSTRONG. W. T. Armstrong Company, Inc. SN 135,168. Pub. 2-19-63. Filed 1-4-62.

749,137. JAMIE. Jamie Record Co. SN 143,972. Pub. 2-19-63. Filed 5-7-62.

749,138. IMAGES IN SOUND ETC. AND DESIGN. Stereoddities, Incorporated. SN 145,629. Pub. 2-19-63. Filed 5-28-62.

749,139. ATCO. Atlantic Recording Corp. SN 147,686. Pub. 2-19-63. Filed 6-26-62.

Class 37 — Paper and Stationery

749,140. P AND DESIGN. Pairotto Man-Nen-Hitsu Kabushiki Kaisha, d.b.a. The Pilot Pen Co., Ltd. SN 129,786. Pub. 2-19-63. Filed 10-12-61.

749,141. PEELBACK. Coy, Hunt & Company. SN 131,350. Pub. 2-19-63. Filed 11-6-61.

749,142. EXCELLO FAX. Continental-Diamond Fibre Corporation, assignee of Brightwater Paper Company. SN 139,464. Pub. 2-19-63. Filed 3-9-62.

749,143. GROTESQUE REPRESENTATION OF A HUMAN MALE. Whiting-Plover Paper Company. SN 146,696. Pub. 2-19-63. Filed 6-11-62.

749,144. MAMOOK. Potlatch Forests, Inc. SN 147,031. Pub. 2-19-63. Filed 6-15-62.

Class 38 — Prints and Publications

749,145. SHOWBIZ. Newspaper Enterprise Association, Inc., by change of name from NEA Service, Inc. SN 77,836. Pub. 6-6-61. Filed 7-16-59.

749,146. WONDER-VIEW. Wonder-View Mfg. Co., Ltd. SN 113,970. Pub. 2-19-63. Filed 2-17-61.

749,147. WORLD OF COLOR. Colourpicture Publishers, Inc. SN 135,687. Pub. 2-19-63. Filed 1-10-62.

749,148. THE JOURNAL OF TEACHER EDUCATION. National Education Association of the United States. SN 142,440. Pub. 2-19-63. Filed 4-17-62.

749,149. THE MAINTENANCE WELDOR. Eutectic Welding Alloys Corporation. SN 143,519. Pub. 2-19-63. Filed 5-1-62.

749,150. RETAILER'S REVIEW. Electrical Information Publications, Inc. SN 143,606. Pub. 2-19-63. Filed 5-2-62.

749,151. QUICK QUOTE AND DESIGN. Henderson-Hasel Corporation. SN 144,958. Pub. 2-19-63. Filed 5-18-62.

Class 39 — Clothing

749,152. H AND CROWN DESIGN. Hayes Garment Company. SN 116,340. Pub. 2-19-63. Filed 3-10-61.

749,153. LEATHER-TREDS. Modern Import Co. SN 117,208. Pub. 2-19-63. Filed 4-5-61.

749,154. ROMAGORA. Towne and King, Inc. SN 121,882. Pub. 1-16-62. Filed 6-12-61.

749,155. LOLA. Hosiery Promotions, Inc. SN 124,091. Pub. 2-19-63. Filed 7-17-61.

749,156. WEATHERBEE. Weatherbee Coats, Inc. SN 126,494. Pub. 2-19-63. Filed 8-22-61.

749,157. MATCH STICKS. Match Sticks Sportogs Inc. SN 127,483. Pub. 2-19-63. Filed 9-8-61.

749,158. WEATHERBEE AND DESIGN. Weatherbee Coats, Inc. SN 128,124. Pub. 2-19-63. Filed 9-18-61.

749,159. MISS PAT. Miss Pat. SN 131,383. Pub. 2-19-63. Filed 11-6-61.

749,160. LYNLEE. Lynlee Design. SN 133,686. Pub. 2-19-63. Filed 12-8-61.

749,161. "NORDEN." J. E. Morgan Knitting Mills, Inc. SN 138,414. Pub. 2-19-63. Filed 2-21-62.

749,162. LADY ARROW AND ARROW DESIGN. Cluett, Peabody & Co. Inc. SN 140,238. Pub. 2-19-63. Filed 3-20-62.

749,163. K-D AND DESIGN. Karl's Shoe Stores, Ltd. SN 140,265. Pub. 2-19-63. Filed 3-20-62.

749,164. LAUREATE. The B.V.D. Company, Inc. SN 140,903. Pub. 2-19-63. Filed 3-28-62.

749,165. ROGER HALE. Sam Shainberg Company. SN 144,110. Pub. 2-19-63. Filed 5-8-62.

749,166. DISCOVER. Youthcraft Creations, Inc. SN 147,660. Pub. 2-19-63. Filed 6-25-62.

749,167. INNER COMFORT. Youthcraft Creations, Inc. SN 147,661. Pub. 2-19-63. Filed 6-25-62.

749,168. RSVP. Youthcraft Creations, Inc. SN 147,662. Pub. 2-19-63. Filed 6-25-62.

749,169. HAPPY DEBS. M. Beckerman & Sons, Inc. SN 148,131. Pub. 2-19-63. Filed 7-2-62.

749,170. PAMAILLOTS. Chadbourn Gotham, Inc. SN 148,140. Pub. 2-19-63. Filed 7-2-62.

Class 40 — Fancy Goods, Furnishings, and Notions

749,171. JACKIE GLAMOUR BOW. Sylvia Arosty. SN 125,794. Pub. 2-19-63. Filed 8-11-61.

749,172. SILVER STAR. Bermuriee Trading Co. SN 143,096. Pub. 2-19-63. Filed 4-26-62.

749,173. PTM AND TRIANGLE DESIGN. Mina Trading Co., Ltd. SN 145,389. Pub. 2-19-63. Filed 5-24-62.

Class 42 — Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

749,174. BELFAST. Deering Milliken Research Corporation. SN 56,933. Pub. 3-10-59. Filed 8-11-58.

749,175. CARTIER MILLS. David and Dash, Inc. SN 122,429. Pub. 10-2-62. Filed 6-20-61.

749,176. TUFFLEX. Wood Conversion Company. SN 127,170. Pub. 12-18-62. Filed 9-1-61.

749,177. VORWERK AND DESIGN. Vorwerk & Co. SN 129,897. Pub. 2-19-63. Filed 10-13-61.

749,178. LEATHERLASTIC. International Fabric Corporation. SN 130,802. Pub. 1-8-63. Filed 10-27-61.

749,179. ROYAL EAGLE. Norma Sales Corporation. SN 140,719. Pub. 2-19-63. Filed 3-26-62.

749,180. PILOT FABRICS AND DESIGN. Pilot Fabrics, Inc. SN 141,750. Pub. 2-19-63. Filed 4-6-62.

749,181. MAGIKARE. The Wooster Brush Company. SN 143,905. Pub. 2-19-63. Filed 5-4-62.

749,182. QUICKUP. Albany Felt Company. SN 146,443. Pub. 2-19-63. Filed 6-8-62.

749,183. REIGNTWILL. Tilton Textile Corp. SN 146,683. Pub. 2-19-63. Filed 6-11-62.

749,184. GLADSON. Herbert Gladson, Ltd. SN 146,902. Pub. 2-19-63. Filed 6-14-62.

749,185. LILY WHITE PURE AS CRYSTAL AND DESIGN. Lily White Sales Co., Inc. SN 147,166. Pub. 2-19-63. Filed 6-18-62.

749,186. EVERBEST. Everfast Fabrics, Inc. SN 147,195. Pub. 2-19-63. Filed 6-19-62.

Class 43 — Thread and Yarn

749,187. DEDERON. Warenzeichenverband für Kunststofferzeugnisse der Deutschen Demokratischen Republik e.V. SN 96,541. COLLECTIVE MARK. Pub. 2-19-63. Filed 5-5-60.

749,188. FOUR-IN-HAND. Emile Bernat & Sons Company. SN 141,154. Pub. 2-19-63. Filed 3-30-62.

Class 44 — Dental, Medical, and Surgical Appliances

749,189. ALLFIT. Richard-Allan Company, Inc. SN 102,417. Pub. 11-8-60. Filed 8-10-60.

749,190. SUREFIT. Richard-Allan Company, Inc. SN 102,419. Pub. 11-8-60. Filed 8-10-60.

749,191. CAVIT. Espe Fabrik Pharmazeutischer Praparate G.m.b.H. SN 133,946. Pub. 2-19-63. Filed 12-13-61.

749,192. SYNOROPTICON. Samuel C. McLaughlin. SN 145,103. Pub. 2-19-63. Filed 5-21-62.

749,193. I-O GUT. C. DeWitt Lukens Co. SN 146,500. Pub. 2-19-63. Filed 6-8-62.

749,194. METER-MATIC. Specifide, Inc. (Delaware corporation), assignee of Specifide, Inc. (Indiana corporation). SN 147,638. Pub. 2-19-63. Filed 6-25-62.

749,195. 'TUBIFOAM.' Seton Products Limited. SN 149,328. Pub. 2-19-63. Filed 7-18-62.

Class 45 — Soft Drinks and Carbonated Waters

749,196. GINI. Pure Spring (Canada) Ltd. SN 79,353. Pub. 2-2-60. Filed 8-11-59.

Class 46 — Foods and Ingredients of Foods

749,197. KEVO. Golden Valley Brands, Inc., assignee, by mesne assignments, of M. Elizabeth Bartlett and Charles Martin, co-executrix and co-executor of the estate of George Maurice Bartlett, deceased, d.b.a. G. M. Bartlett Kevo Company. SN 73,878. Pub. 3-21-61. Filed 5-18-59.

749,198. BEEFIES. The Sugardale Provision Company. SN 80,368. Pub. 3-7-61. Filed 8-27-59.

749,199. CALTROL. William T. Thompson Company. SN 100,658. Pub. 4-4-61. Filed 7-11-60.

749,200. SWEETIE POP. The Sweets Company of America, Incorporated, d.b.a. The Sweets Company of America Inc. SN 116,358. Pub. 2-19-63. Filed 3-23-61.

749,201. DONUTS TO YOU. DCA Food Industries Inc. SN 126,440. Pub. 2-19-63. Filed 8-22-61.

749,202. NOBEL. Knoebel Mercantile Company, d.b.a. Knoebel Mercantile Co. SN 126,872. Pub. 2-19-63. Filed 8-29-61.

749,203. AWARD. Swift & Company. SN 131,427. Pub. 4-17-62. Filed 11-6-61.

749,204. BAKERDEX. Corn Products Company. SN 135,259. Pub. 2-19-63. Filed 1-5-62.

749,205. SUNSHINE VALLEY AND DESIGN. Natural Food Supplements, Inc. SN 136,798. Pub. 2-19-63. Filed 1-29-62.

749,206. MR. KRUNCH. Joe Lowe Corporation. SN 137,142. Pub. 10-16-62. Filed 2-2-62.

749,207. BLUE ROCK AND DESIGN. Citrus Heights Farms. SN 145,044. Pub. 2-19-63. Filed 5-21-62.

749,208. F AND CHEF'S HEAD DESIGN. Caffe A. Ferrara, Inc. SN 147,263. Pub. 2-19-63. Filed 6-20-62.

749,209. PAN-PREP. The Procter & Gamble Company. SN 150,084. Pub. 2-19-63. Filed 7-30-62.

Class 47 — Wines

749,210. SFF ETC. AND BELT AND MONOGRAM DESIGN. H. Sichel Sons, Inc., assignee of Sichel & Fils Frères. SN 111,433. Pub. 2-19-63. Filed 1-6-61.

749,211. AMERIT. Amerit Vermouth Company of Italy. SN 131,252. Pub. 2-19-63. Filed 11-3-61.

749,212. ZINBARDELLA. E. & J. Gallo Winery. SN 134,969. Pub. 2-19-63. Filed 1-2-62.

Class 48 — Malt Beverages and Liquors

749,213. DESIGN OF GOLD MEDALS. Stegmaier Brewing Company. SN 137,394. Pub. 2-19-63. Filed 2-6-62.

Class 49 — Distilled Alcoholic Liquors

749,214. MIGDAL. W.E.S.T. Wine and Spirits Trade Limited, d.b.a. Migdal Distillery Co. SN 140,066. Pub. 2-19-63. Filed 3-16-62.

749,215. HIGHLAND FLING. M. Duff Mitchell Limited. SN 141,972. Pub. 2-19-63. Filed 4-10-62.

Class 50 — Merchandise Not Otherwise Classified

749,216. DECOMATS. Beaverite Products, Inc. SN 117,837. Pub. 2-19-63. Filed 4-14-61.

749,217. AMERICAN LADDER INSTITUTE AND DESIGN. American Ladder Institute. SN 119,738. COLLECTIVE MARK. Pub. 2-19-63. Filed 5-11-61.

749,218. D.E.S. KIT. Disaster Emergency Survival Corporation. SN 123,971. Pub. 2-19-63. Filed 10-2-61.

749,219. SESCO AND DESIGN. Universal Scientific Company, Inc. SN 133,105. Pub. 2-19-63. Filed 11-30-61.

749,220. CLOSETTE. Mytie Corporation. SN 140,474. Pub. 2-19-63. Filed 3-22-62.

Class 51 — Cosmetics and Toilet Preparations

749,221. MISTY. Wm. Camlynn Cosmetics, Inc. SN 123,870. Pub. 4-24-62. Filed 7-13-61.

749,222. PRINCESS PAT. Princess Pat Co. SN 126,949. Pub. 2-19-63. Filed 8-30-61.

749,223. PLAYMATE. HMH Publishing Co., Inc. SN 140,447. Pub. 2-19-63. Filed 3-22-62.

Class 52 — Detergents and Soaps

749,224. PACKER'S PINE TAR SHAMPOO AND DESIGN. Packers Tar Soap, Inc. SN 117,729. Pub. 2-19-63. Filed 4-12-61.

749,225. 7 BEES AND DESIGN. Kenneth C. Blank, d.b.a. Kenmar Company. SN 125,716. Pub. 1-22-63. Filed 8-10-61.

749,226. METEX AUROSTRIP. MacDermid Incorporated. SN 132,711. Pub. 2-19-63. Filed 11-16-61.

749,227. AMAZON. Trio Chemical Works, Inc. SN 142,873. Pub. 2-19-63. Filed 4-23-62.

749,228. FLO-BRITE. The Stamford Chemical Company. SN 146,325. Pub. 2-19-63. Filed 6-6-62.

749,229. PRIZE. Ramrod Chemical Company. SN 147,852. Pub. 2-19-63. Filed 6-27-62.

Service Marks

Class 101 — Advertising and Business

749,230. REPRESENTATION OF A ROCKET. Environ Electronic Laboratories, Inc. SN 130,786. Pub. 2-19-63. Filed 10-27-61.

749,231. CAM. Statistical Tabulating Corporation. SN 147,642. Pub. 2-19-63. Filed 6-25-62.

Class 103 — Construction and Repair

749,232. OUTLINED REPRESENTATION OF THE U.S. ETC. ON A CIRCULAR BACKGROUND. Reynolds-French and Company. SN 98,743. Pub. 4-4-61. Filed 6-9-60.

749,233. ARKLA AND DESIGN. Arkansas Louisiana Gas Company. SN 131,255. Pub. 2-19-63. Filed 11-3-61.

749,234. NARDA ETC. AND DESIGN. National Appliance & Radio-TV Dealers Association, Inc. SN 146,922. COLLECTIVE MARK. Pub. 2-19-63. Filed 6-14-62.

Class 105 — Transportation and Storage

749,235. GO KOOL. Trans World Airlines, Inc. SN 146,684. Pub. 2-19-63. Filed 6-11-62.

Collective Membership Marks

Class 200

749,236. EMBLEM DESIGN. Gamma Phi Beta Sorority, Inc. SN 141,606. Pub. 2-19-63. Filed 4-5-62.

749,237. GAMMA PHI BETA. Gamma Phi Beta Sorority, Inc. SN 141,607. Pub. 2-19-63. Filed 4-5-62.

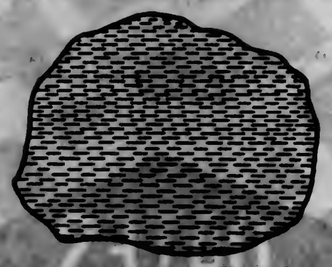
749,238. NAC NATIONAL ASSOCIATION OF CEMETERIES AND DESIGN. National Association of Cemeteries. SN 148,325. Pub. 2-19-63. Filed 7-3-62.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 1 — Raw or Partly Prepared Materials

749,239. Hudson Realty Co., Inc., Ashley, Pa. SN 151,185. Filed 8-16-62.



The drawing is lined for silver. The mark consists of an iridescent aluminum-colored coating applied to coal in a manner to cover the surface of each lump of coal.

For Coal.

First use Mar. 25, 1953.

Class 2 — Receptacles

749,240. James K. Neal, d.b.a. Neal Industries, Dallas, Tex. SN 121,217. Filed P.R. 6-1-61; Am. S.R. 2-7-63.

KWIK-SORT

For Multi-Celled Assorting Trays Having Partitions Therein Defining Rectangular Cells or Pockets for the Reception of Coins, Stamps, and Similar Articles for the Purpose of Sorting and Separating the Articles.

First use Feb. 1, 1960.

Class 6 — Chemicals and Chemical Compositions

749,241. Thompson Materials Corporation, Belleville, N.J. SN 138,441. Filed 2-21-62.

SHUR-MELT

For Ice and Snow Melting Preparation.

First use Oct. 22, 1935.

Class 18 — Medicines and Pharmaceutical Preparations

749,242. Smith-Douglass Company, Incorporated, Norfolk, Va. SN 149,778. Filed P.R. 7-25-62; Am. S.R. 2-21-63.



For Animal and Poultry Mineral Food Supplements.

First use June 20, 1961.

Class 37—Paper and Stationery

749,243. Eaton Allen Corp., Brooklyn, N.Y. SN 146,599. Filed P.R. 6-11-62; Am. S.R. 2-15-63.

CO-REC-COPY

For Paper Containing a Coating of a Transfer Substance for Masking Erroneously Typed Impressions on Spirit Hectograph Master Units.
First use Feb. 5, 1962.

749,244. Eaton Allen Corp., Brooklyn, N.Y. SN 146,600. Filed P.R. 6-11-62; Am. S.R. 2-15-63.

CO-REC-TYPE

For Paper Containing a Coating of Transfer Ink or Similar Transfer Substance for Use in Making a Corrected Typed Impression on Spirit Hectograph Master Units.
First use Feb. 5, 1962.

Class 38—Prints and Publications

749,245. Rogers Sherwood, Chicago, Ill. SN 111,231. Filed P.R. 1-8-61; Am. S.R. 2-12-63.

NATIONAL FRANCHISE REPORTS

For Report Published Monthly.
First use Jan. 18, 1953.

749,246. American Can Company, New York, N.Y. SN 138,141. Filed P.R. 2-19-62; Am. S.R. 2-28-63.

TU-PAK

For Heat-Sealable Printed Paper Labels.
First use Jan. 26, 1962.

Class 45—Soft Drinks and Carbonated Waters

749,247. Jose R. Lindley e Hijos, S.A., Lima, Peru. SN 118,698. Filed P.R. 4-26-61; Am. S.R. 11-15-62.



The mark consists of the configuration of a bottle. Owner of Peruvian Reg. No. 54,064, dated Dec. 15, 1960.
For Soft Drinks.

Class 46—Foods and Ingredients of Foods

749,248. Dixie Mills Company, East St. Louis, Ill. SN 74,124. Filed P.R. 5-20-59; Am. S.R. 2-25-63.



For Dog Food.
First use on or about Mar. 1, 1959.

749,249. Philadelphia Chewing Gum Corporation, Havertown, Pa. SN 112,398. Filed P.R. 1-24-61; Am. S.R. 2-8-63.

GRAPEY

For Chewing Gum.
First use Dec. 20, 1960.

749,250. National Research and Development Corporation, Atlanta, Ga. SN 129,517. Filed P.R. 10-9-61; Am. S.R. 12-12-62.

SHELTER-PAK

For Food Concentrate for Emergency Use and Also for Use in Camping, Traveling, Etc.
First use on or about Sept. 18, 1961.

749,251. Oates Frozen Foods Company, St. Louis, Mo. SN 132,862. Filed P.R. 11-27-61; Am. S.R. 3-4-63.



For Potatoes—Namely, Frozen Potatoes Cut for French Frying, Dehydrated Potatoes and Frozen Mashed Potatoes.
First use May 1, 1961.

749,252. The Griffith Laboratories, Inc., Chicago, Ill. SN 137,436. Filed P.R. 2-7-62; Am. S.R. 2-14-63.

CHILL-MILLED

For Spices.
First use Jan. 4, 1962.

749,253. The Nestlé Company, Inc., White Plains, N.Y. SN 139,774. Filed 3-13-62.



The drawing is lined for red and green.
For Instant Tea.
First use Jan. 20, 1961.

749,254. The Cracker Jack Co., Chicago, Ill. SN 139,831. Filed P.R. 3-14-62; Am. S.R. 2-27-63.

PASS-AROUND PACK

For Popcorn Confection.
First use Feb. 14, 1962.

749,255. Michigan Fruit Canners, Inc. (Delaware corporation), Benton Harbor, Mich., assignee of Michigan Fruit Canners, Inc. (Michigan corporation), Benton Harbor, Mich. SN 140,967. Filed P.R. 3-26-62; Am. S.R. 12-17-62.



For Canned Pie and Fruit Pastry Filling.
First use July 5, 1958.

749,256. The Fleming Co., Incorporated, Topeka, Kans. SN 148,494. Filed P.R. 7-6-62; Am. S.R. 3-8-63.

GOOD VALUE

For Bacon, Sausage, Wieners, and Chili Preparation (Cooked and Condensed) Sold in Brick and Roll Form.
First use in August 1954 on bacon.

749,257. Schuckl & Co., Inc., Sunnyvale, Calif. SN 154,167. Filed 9-28-62.

PIC'T RIPE

For Canned Fruits.
First use Oct. 20, 1941.

Class 47—Wines

749,258. San Marino Wine Corporation, Brooklyn, N.Y. SN 127,376. Filed P.R. 9-14-61; Am. S.R. 2-12-63.

SAN MARINO

For Champagne, Wines, and Vermouth.
First use December 1939.

Class 48—Malt Beverages and Liquors

749,259. Grace Bros. Brewing Co., Santa Rosa, Calif. SN 139,623. Filed P.R. 3-12-62; Am. S.R. 2-14-63.

BREWERS' BEST

For Canned and Bottled Beer.
First use on or about Aug. 1, 1958.

Class 49—Distilled Alcoholic Liquors

749,260. Schenley Distillers, Inc., d.b.a. Park & Tilford Distillers Co., New York, N.Y. SN 140,296. Filed P.R. 3-20-62; Am. S.R. 3-5-63.

MACHKECHNE AND MACHKECHNE

For Blended Scotch Whisky.
First use Feb. 26, 1962.

749,261. James B. Beam Distilling Co., d.b.a. James B. Beam Distilling Co. Incorporated, Chicago, Ill. SN 147,347. Filed P.R. 6-21-62; Am. S.R. 7-26-62.



The mark consists of the conformation of a bottle used as a container for applicant's whiskey.
For Whiskey.
First use Dec. 30, 1955.

Class 50—Merchandise Not Otherwise Classified

749,262. Coro, Inc., New York, N.Y. SN 139,253. Filed P.R. 3-6-62; Am. S.R. 3-7-63.

POP-IN

For Christmas Tree Ornaments.
First use Jan. 12, 1962.

749,263. Skaf-Fold Corporation of America, Miami, Fla. SN 141,758. Filed P.R. 4-6-62; Am. S.R. 3-5-63.

SKĀF-FOLD

For Adjustable, Foldable, Portable Trestles and Parts Thereof.
First use Dec. 13, 1961.

Class 51 — Cosmetics and Toilet Preparations

749,264. Colgate-Palmolive Company, New York, N.Y., assignee of Unexcelled Chemical Corporation, New York, N.Y. SN 88,503. Filed P.R. 1-5-60; Am. S.R. 9-26-62.

BABY BOTTOM BATH

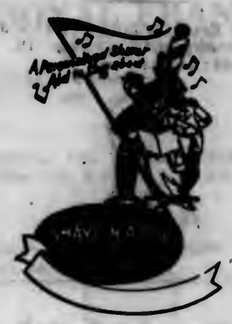
For Premoistened Towelette.
First use on or about Jan. 10, 1958.

749,265. Valmor Products Company, Chicago, Ill. SN 90,596. Filed P.R. 2-8-60; Am. S.R. 9-4-62.

LONG HAIR

For Hair Dressing, Hair Conditioner, Shampoo and Hair Pressing Oil and Preparation.
First use Jan. 2, 1955.

749,266. Arlen, Inc., Portland, Oreg. SN 106,464. Filed 10-17-60.



For Pre-Shave and After-Shave Cosmetics.
First use July 13, 1955.

749,267. Revlon, Inc., New York, N.Y. SN 116,157. Filed P.R. 3-21-61; Am. S.R. 2-26-63.

SOFTINT

For Hair Tint.
First use Mar. 3, 1961.

749,268. D'Arrigone Industries, Inc., Baltimore, Md. SN 130,050. Filed P.R. 10-17-61; Am. S.R. 2-8-63.

Foam Set

For Hair Setting Lotion.
First use Sept. 13, 1960.

749,269. Roux Laboratories, Inc., New York, N.Y. SN 148,328. Filed P.R. 7-3-62; Am. S.R. 2-14-63.

VERY VANILLA

For Hair Coloring Preparations in the Nature of a Rinse.
First use Aug. 15, 1961.

Class 52 — Detergents and Soaps

749,270. El Paso Chemical Company, El Paso, Tex. SN 124,265. Filed P.R. 7-19-61; Am. S.R. 2-15-63.

COOLER CLEAN

For Detergent Concentrate, Sold in a Dispensing Package, for Removing Scale and Preventing Corrosion and Clogging in Evaporative Coolers.
First use June 22, 1961.

749,271. Gojer, Inc., Akron, Ohio. SN 142,942. Filed P.R. 4-24-62; Am. S.R. 1-29-63.



The black configurations on the drawing represent portions of the design mark which are dark blue; and the white configurations and background are of silver-like finish.
For Cream Type Hand Cleaner.
First use Dec. 7, 1961.

Service Marks

Class 100 — Miscellaneous

749,272. Sayve Corporation of America, Cincinnati, Ohio. SN 103,687. Filed P.R. 8-30-60; Am. S.R. 6-28-62.

VIOLET RAY

For Coin Operated Laundries.
First use May 11, 1959.

Class 103 — Construction and Repair

749,273. Tuchman Cleaners Cooperative Advertising Plan, Inc., Indianapolis, Ind. SN 141,392. Filed P.R. 4-2-62; Am. S.R. 3-4-63.

HUGGINS

For Rendering Assistance to Dry Cleaning Establishments in the Fields of Management and Sales Promotion.
First use Nov. 1, 1961.

TRADEMARK REGISTRATIONS RENEWED

22,364. D.M.C. AND DESIGN. Cl. 43. 1-31-1893.
22,386. D.M.C. AND DESIGN. Cl. 43. 1-31-1893.
22,387. D.M.C. AND DESIGN. Cl. 43. 3-31-1893.
22,443. COSMOLINE. Cl. 18. 2-7-1893.
22,623. MICANITE AND DESIGN. Cl. 21. 3-7-1893.
160,230. SHAGMOOR. Cl. 39. 10-17-22.
162,757. SIPH-O AND DESIGN. Cl. 13. 12-26-22.
164,534. DIREX. Cl. 26. 2-20-23.
164,858. NANOOK. Cl. 39. 2-27-23.
165,690. WYDOWN. Cl. 42. 3-20-23.
166,400. STIMPSON. Cl. 13. 4-3-23.
166,521. TWENTIETH CENTURY. Cl. 44. 4-3-23.
167,091. P.K. Cl. 46. 4-24-23.
167,915. BLENDOYL. Cl. 6. 5-8-23.
168,245. SLEDGE HAMMER AND DESIGN. Cl. 6. 5-15-23.
168,942. CLOSEKOTE. Cl. 4. 5-29-23.
169,474. COMMONWEALTH. Cl. 16. 6-19-23.
170,068. EXCELLO "FULL SWING." Cl. 39. 7-10-23.
170,125. EXCELLO. Cl. 39. 7-10-23.
170,147. ANACONDA. Cl. 14. 7-10-23.
170,200. BLACK SHIELD. Cl. 12. 7-10-23.
170,434. FEEN-A-MINT. Cl. 18. 7-17-23.
171,053. BERMICO. Cl. 21. 7-31-23.
171,257. KING'S CANDIES FOR AMERICAN QUEENS. Cl. 46. 7-31-23.
171,270. ELF AND DESIGN. Cl. 46. 7-31-23.
171,436. ELMERITO. Cl. 46. 8-7-23.
171,467. BEACON. Cl. 39. 8-7-23.
172,227. ANESTHONE. Cl. 18. 8-28-23.
397,432. DURFERRIT. Cl. 6. 9-8-42.
399,426. INTERNATIONAL RUMMY. Cl. 22. 1-5-43.
399,496. HY-PRO. Cl. 23. 1-12-43.
399,655. TEXCEL. Cl. 42. 1-26-43.
399,688. FORTISAN. Cl. 42. 1-26-43.
400,404. GALEN "B." Cl. 18. 3-9-43.
400,406. GALEN. Cl. 18. 3-9-43.
400,443. FIREWALL. Cl. 21. 3-9-43.
400,451. MOTO-COOL. Cl. 35. 3-9-43.
400,456. KENT HALL. Cl. 39. 3-9-43.
400,461. SUPER KAPS. Cl. 18. 3-9-43.
400,499. SOONER SELECT. Cl. 46. 3-16-43.
400,513. PRELOAD. Cl. 2. 3-16-43.
400,749. CELATOP. Cl. 1. 3-30-43.
400,970. CHALLENGER. Cl. 42. 4-13-43.
401,051. RAIN KING. Cl. 13. 4-20-43.
401,112. REPRESENTATION OF A GEAR WHEEL. Cl. 23. 4-27-43.
401,154. EXETER. Cl. 42. 4-27-43.
401,476. PANTOPAQUE. Cl. 6. 5-18-43.
401,590. BAR-B-KUBES. Cl. 46. 5-25-43.
401,809. GOLD CROSS AND DESIGN. Cl. 37. 6-8-43.
401,845. DK-50. Cl. 6. 6-15-43.
402,013. LEGACY. Cl. 39. 6-22-43.
402,114. AXAR. Cl. 18. 6-29-43.
402,282. DESIGN. Cl. 6. 7-13-43.
402,289. SULFEDEX. Cl. 18. 7-13-43.
402,402. DAYTEX. Cl. 7. 7-20-43.
402,625. DYNEX. Cl. 18. 8-3-43.
402,708. MIXCO. Cl. 23. 8-10-43.
402,905. HYDANTAL. Cl. 18. 8-24-43.
402,922. STIC-KLIP. Cl. 13. 8-24-43.
402,953. SOLAREUM. Cl. 37. 8-24-43.

TRADEMARK REGISTRATIONS CANCELED

Section 7(d)

275,714. HANDYHOT. Cl. 21. 9-30-30.
500,837. HANDYHOT. Cl. 21. 7-6-48.
530,814. HANDYHOT. Cl. 21. 9-19-50.
640,449. STONERIDGE FARM. Cl. 46. 1-22-57.
708,763. CHURCHILL, STYLED BY ENRO. Cl. 39. 12-20-60.

Section 8

330,436. DESIGN OF WIND ELECTRIC PLANT. Cl. 21. 12-3-35.
344,863. CUTLER-HAMMER THERMETER AND DESIGN. Cl. 26. 4-6-37.
345,447. CUTLER-HAMMER AND DESIGN. Cl. 21. 4-27-37.

The following registrations issued Mar. 19, 1957

642,737. SATNLYNE. Cl. 1.
642,749. THUNDERBIRD. Cl. 3.
642,751. KEITHONE. Cl. 4.
642,763. BRYCOR. Cl. 6.
642,767. POS-MET. Cl. 6.
642,769. GREGG-PEL. Cl. 6.
642,770. CHLORI-SEPT. Cl. 6.
642,775. NEREX. Cl. 6.
642,776. FARFON. Cl. 6.
642,784. CADALOYSTEEL. Cl. 14.
642,789. DESIGN OF A DOUBLE CHECK MARK IN A CIRCLE. Cl. 14.
642,802. INCONEL "702." Cl. 14.
642,807. PENESEAL. Cl. 16.
642,808. AUTO-START. Cl. 16.
642,814. SAGE REZ. Cl. 16.
642,825. LANDFORD. Cl. 18.
642,834. CU-RITIS AND DESIGN. Cl. 18.
642,836. PASKATE. Cl. 18.
642,837. DIOCSUL. Cl. 18.
642,843. DESIGN OF HAND POURING LIQUID ON FLAMES. Cl. 18.
642,844. CLAFANONE. Cl. 18.
642,846. ATH-O-DEX AND DESIGN. Cl. 18.
642,848. COBRAHAUL. Cl. 19.
642,851. HARLEQUIN. Cl. 20.
642,852. SEL-SON AND DESIGN. Cl. 21.
642,853. ESL AND DESIGN. Cl. 21.
642,856. SGT. EDDY. Cl. 22.
642,858. DING DONG SCHOOL AND DESIGN. Cl. 22.
642,859. MAXIBRIX. Cl. 22.
642,866. "DEEP-CREEP." Cl. 22.
642,867. "PADDLE PLUG." Cl. 22.
642,871. "WISSKER-DOODLE." Cl. 22.
642,874. E. Cl. 23.
642,881. KRAUSE-CONCENTRIX. Cl. 23.
642,882. "JEFFERS." Cl. 23.
642,885. RIDE-A-MATIC. Cl. 23.
642,886. V-LINE. Cl. 23.
642,887. JET. Cl. 23.
642,891. MODERN MOOD. Cl. 23.
642,895. GLORIFIED. Cl. 23.
642,898. LU-BRE-TEN. Cl. 23.
642,903. MIGHTY MIDGET. Cl. 23.
642,904. POCKET POWER. Cl. 23.
642,905. C AND DESIGN. Cl. 23.
642,914. VAGABOND. Cl. 25.
642,919. DECRO-STAT. Cl. 26.
642,926. OSKAR DOLD AND DESIGN. Cl. 27.
642,927. ART'N GOLD. Cl. 28.
642,928. LOVE AND KISSES. Cl. 28.
642,938. SHELCO. Cl. 31.
642,941. BARCOIL. Cl. 32.
642,946. REBEL. Cl. 34.
642,947. BW AND DESIGN. Cl. 34.
642,949. TRUC-AIRE. Cl. 34.
642,950. DELTA TANK MFG. CO. INC. AND DESIGN. Cl. 34.
642,956. TUFLEX. Cl. 37.
642,958. POLYCEL. Cl. 37.
642,960. BEV-DEX. Cl. 37.
642,962. REPRESENTATION OF A PARROT. Cl. 37.
642,963. TI-TAINER. Cl. 37.

642,968. GRAFICA. Cl. 38.
642,970. PEDIATRIC PATTERNS. Cl. 38.
642,976. SNAK JAKET. Cl. 39.
642,980. AIRONETTE. Cl. 39.
642,988. PARCRAFT. Cl. 39.
642,991. TALOA. Cl. 39.
642,992. SNO'N BLO. Cl. 39.
642,993. MAGIC DIAMOND. Cl. 39.
642,994. REPLACIT. Cl. 39.
643,000. MEZURE-BIND. Cl. 40.
643,002. NUB-LITE. Cl. 42.
643,007. FABRIKAN. Cl. 42.
643,016. "KITCHEN QUEEN." Cl. 46.
643,017. HORSE-SHOE AND DESIGN. Cl. 46.
643,019. DESIGN FOR PACKAGE DRESS. Cl. 46.
643,023. KOMEET. Cl. 46.
643,033. REX. Cl. 46.
643,043. CARTA CUBA. Cl. 49.
643,046. OLD WHIG AND DESIGN. Cl. 49.
643,048. NOVASTARS. Cl. 50.
643,049. CLOSET CLINIC. Cl. 50.
643,050. FLO-CAP AND DESIGN. Cl. 50.
643,060. VITA KLEEN. Cl. 52.
643,065. TRAVELAV. Cl. 52.
643,066. HALYARD. Cl. 52.
643,067. TEPID. Cl. 52.
643,068. RHYME. Cl. 52.
643,069. HP. Cl. 52.
643,074. HEALTHPAC. Cl. 102.
643,076. FEATURAMA. Cl. 107.
643,081. DEXTER DE FLOREZ AND DESIGN. Cl. 23.
643,084. TRUE-GEM. Cl. 38.
643,085. CONE FIRE. Cl. 84.
643,087. CENTRALIZED OPERATIONS CONTROL. Cl. 103.

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76,741. "PUNCH AND JUDY" AND DESIGN. Cl. 39. 2–15–10.
268,812. TORNADO. Cl. 23. 3–18–30.
405,191. POLAWAVE. Cl. 6. 1–11–44.
429,203. SENECA. Cl. 46. 4–22–47.
436,991. "UPPERCLASSMAN." Cl. 39. 3–2–48.
437,504. MIDGE. Cl. 22. 3–23–48.
440,395. CIEL DE FRANCE. Cl. 6. 8–31–48.
649,757. SWEATER-MATES. Cl. 39. 8–6–57.
650,960. SWEATER SOFT. Cl. 39. 8–27–57.
656,218. STYLE-TEX. Cl. 51. 12–24–57.

TRADEMARK REGISTRATIONS AMENDED, DISCLAIMED, CORRECTED, ETC.

540,785. OXFORD. Cl. 37. 4–10–51. Oxford Filing Supply Co., Inc., Garden City, N.Y. Amended to appear:

Oxford

564,397. FARQUHAR. Cl. 23. 9–23–52. A. B. Farquhar Company. Cletrac Corporation, Chicago, Ill. Amended: In the statement, column 1, line 7 through column 2, line 45, the description of goods is amended by deleting the following items: "portable conveyors of the endless belt type, portable conveyors of the chain and blade type, portable conveyors of the chain and bar type, portable conveyors of the roller type, semi-portable conveyors of the chain type, semi-portable conveyors of the chain and blade type, semi-portable conveyors of the roller type, semi-portable conveyors of the chain and bar type, semi-portable conveyors of the endless belt type, stationary conveyors of the endless belt type, stationary conveyors of the chain type, stationary conveyors of the chain and blade type, stationary conveyors of the chain and bar type, stationary conveyors of the roller type,".

615,246. NIC-L-LYTE. Cl. 21. 11–1–55. Nik-O-Life Battery Corporation. General Battery and Ceramic Corp., Reading, Pa. Restricted under the provisions of Sec. 18 of the Trademark Act of 1946 to that area of the United States comprising the States west of the Mississippi River, including Minnesota and excluding Louisiana, by order of the Assistant Commissioner dated November 21, 1962 following decision on Concurrent Use Proceeding No. 229, *Westric Battery Company* v. *General Battery and Ceramic Corp., assignee of Bowers Battery & Spark Plug Company, assignee of James G. Nedeff; receiver and trustee of the Estate of Nik-O-Life Battery Corporation, bankrupt.*

621,407. HUBBARD. Cl. 46. 2–14–56. Hubbard Milling Company, Mankato, Minn. Amended to appear:

HUBBARD

637,606. FOUR STAR. Cl. 15. 11–27–56. Prairie States Oil & Grease Company, Danville, Ill. Restricted under the provisions of Sec. 18 of the Trademark Act of 1946 to that area of the United States excluding the States of Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington and Wyoming, by order of the Assistant Commissioner dated March 29, 1963 following decision on Cancellation Proceeding No. 7804, *Standard Oil Company of California, doing business as Signal Oil Company* v. *Prairie States Oil & Grease Company.*

657,972. GULF NO-NOX AND DESIGN. Cl. 15. 2–4–58. Gulf Oil Corporation, Pittsburgh, Pa. Amended: In the statement, column 2, after line 3, *First use as to No-Nox about April 1, 1925.* is inserted, lines 4 and 5 are deleted, and the drawing is amended to appear:

Gulf
No-nox

658,739. NATIONAL. Cl. 21. 2–25–58. National Electronics, Inc., Geneva, Ill. Corrected: In the statement, column 1, line 1, "Delaware" should be deleted and *Illinois* should be inserted.

660,554. RUBACORE. Cl. 37. 4–15–58. The Joseph Dixon Crucible Company, Jersey City, N.J. Corrected: In the statement, column 1, line 1, before "Joseph" *The* should be inserted.

714,989. COLOR CRAFT. Cl. 22. 5–9–61. Advance Crayon & Color Corporation, New York, N.Y. Corrected: In the statement, column 2, line 2, after "water colors;" *crayons* should be inserted.

723,970. PRIMEZE. Cl. 52. 11–14–61. Delta Chemical Company. Delta Chemical Corporation, Memphis, Tenn. Amended: In the statement, column 1, after line 1, , *now by change of name Delta Chemical Corporation* is inserted.

741,378. SELLS AND DESIGN. Cl. 46. 11–27–62. William Underwood Company, Watertown, Mass. Corrected: In the statement, column 1, lines 1 and 2, "Massachusetts corporation" should be deleted and *voluntary Massachusetts association* should be inserted.

744,297. THE 600 GROUP OF COMPANIES AND DESIGN. Cl. 14. 1–29–63. George Cohen Sons and Company Limited, London, England. Corrected: In the statement, column 2, line 1, before "rails" *unwrought and partly wrought common metals and their alloys;* should be inserted.

744,298. 600 AND DESIGN. Cl. 14. 1–29–63. George Cohen Sons and Company Limited, London, England. Corrected: In the statement, column 2, line 1, before "rails" *unwrought and partly wrought common metals and their alloys;* should be inserted.

744,299. 600. Cl. 14. 1–29–63. George Cohen Sons and Company Limited, London, England. Corrected: In the statement, column 2, line 1, before "rails" *unwrought and partly wrought common metals and their alloys;* should be inserted.

745,467. PIK-SNAK. Cl. 34. 2–19–63. Paul Hess, doing business as Paul Hess Products, Chicago, Ill. Corrected: In the statement, column 2, line 2, "Filed" should be deleted and *First use* should be inserted.

TRADEMARK REGISTRATIONS—NEW CERTIFICATES

New Certificates issued under sections 7(c), 7(f), 7(g) of the Trademark Act of 1946 for the unexpired term of the original registrations.

218,611. BEN MONT AND DESIGN. Cl. 37. Bennington Wax Paper Company. 9–28–26. New Cert. Sec. 7(c) to The Dow Chemical Company, Midland, Mich.

218,612. BEN MONT AND DESIGN. Cl. 37. Bennington Wax Paper Company. 9–28–26. New Cert. Sec. 7(c) to The Dow Chemical Company, Midland, Mich.

218,613. BEN MONT AND DESIGN. Cl. 37. Bennington Wax Paper Company. 9–28–26. New Cert. Sec. 7(c) to The Dow Chemical Company, Midland, Mich.

548,309. ROTO GLOSS. Cl. 37. Benmont Papers Inc. 9–18–51. New Cert. Sec. 7(c) to The Dow Chemical Company, Midland, Mich.

678,165. FENWAL. Cl. 44. Fenwal Laboratories, Inc. 5–5–59. New Cert. Sec. 7(c) to Baxter Laboratories, Inc., Morton Grove, Ill.

698,171. YANK. Cl. 37. Dalton-Cooper, Inc. 5–24–60. New Cert. Sec. 7(c) to J. V. Palmer Pen Co. Inc., New York, N.Y.

705,373. EVERKRISP. Cl. 46. Gus Schreiber, doing business as Associated Foods. 10–4–60. New Cert. Sec. 7(c) to Associated Foods, Inc., Chicago, Ill.

732,640. OKADEE. Cl. 13. The Okadee Company. 6–12–62. New Cert. Sec. 7(c) to Okadee Controls, Inc., Philadelphia, Pa.

REGISTRATIONS PUBLISHED UNDER SEC. 12(c)

The following marks registered under the act of 1905, or the act of 1881, are published under the provisions of section 12(c) of the Trademark Act of 1946. These registrations are not subject to opposition but are subject to cancellation under section 14 of the act of 1946.

Class 6—Chemicals and Chemical Compositions

399,993. Feb. 9, 1943. The Hamilton Laboratories, Inc., Hamilton, Ohio. Pub. by Wood Ridge Chemical Corporation, Wood-Ridge, N.J.

MERFENEL A

For Germicide for Control of Pulp and Paper Mill Slimes.

Class 16—Protective and Decorative Coatings

22,394. Jan. 31, 1893. Chicago Varnish Company, Chicago, Ill. Pub. by E. I. du Pont de Nemours and Company, Wilmington, Del.

NAVALITE

For Varnishes, Stains, Driers, Japans, and Kindred Goods.

166,040. Mar. 27, 1923. L. Sonneborn Sons Inc., New York, N.Y. Pub. by Sonneborn Building Products, Inc., Chicago, Ill.

MARVELWITE

For Paint Enamels and Undercoatings for Paint Enamels.

401,454. May 18, 1943. Claire Manufacturing Company, Chicago, Ill. Pub. by registrant.

JINX

For Self-Polishing Wax for Floors, Linoleum, and Furniture.

432,989. Sept. 23, 1947. Instant Products Company, Inc., Buffalo, N.Y. Pub. by registrant.

Life O'Wood

For Liquid Polishes for Woodwork, Pianos, Furniture, Autos, and Polished Surfaces of All Kinds.

Class 18—Medicines and Pharmaceutical Preparations

163,929. Feb. 6, 1923. H. Clay Glover Co., Inc., Garden City, N.Y. Pub. by registrant.

GLOVER'S

For Mange Medicine.

171,972. Aug. 21, 1923. Nicholas Proprietary Limited, Melbourne, Victoria, Australia. Pub. by Nicholas International Limited, Toronto, Ontario, Canada.

ASPRO

For Pharmaceutical Preparation for the Relief of Headache, Nerve Pains, Neuralgia, and Rheumatism.

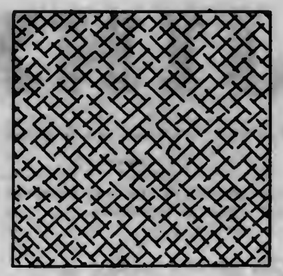
444,584. Oct. 23, 1951. Spra-Pak, Inc., Cleveland, Ohio. Pub. by Gebauer Chemical Company, Cleveland, Ohio.

SPRA PAK

For Ethyl Chloride, Use of Which Is for Anesthesia, in Containers Fitted With Caps and Nozzles Adapted To Dispense Such Liquid Under Pressure.

Class 23 — Cutlery, Machinery, and Tools, and Parts Thereof

399,475. Jan. 12, 1943. The Dayton Rubber Manufacturing Company, Dayton, Ohio. Pub. by Dayco Corporation, Dayton, Ohio.



For Loom Supplies—Namely, Pickers.

401,430. May 18, 1943. Elevator Safety Corporation, New York, N.Y. Pub. by Elevator Safety Company, Baltimore, Md.

ELSCO

For Elevator Roller Guides.

Class 32 — Furniture and Upholstery

379,451. July 9, 1940. The Telescope Folding Furniture Co., Inc., Granville, N.Y. Pub. by registrant.

TELESCOPE

For Folding Chairs and Rockers, Beach Chairs, Deck Chairs, Reclining Chairs, Arm Chairs, Sun Chairs, Beach Rests, Back Rests, Folding Camp Chairs and Stools, Cots, Folding Cots, Army Style Folding Cots, Canvas Cots, Child's Cots, and High Back Arm Chairs.

Class 38 — Prints and Publications

162,394. Dec. 12, 1922. Bernhard Ulmann Co., Inc., New York, N.Y. Pub. by Indian Head Mills, Inc., New York, N.Y.

Everything for Art Needlework

For Initial Books, Monogram Books, Design Books, and Patterns for Art Needlework; Also Instructions and Lessons on Art Needlework, Instruction Books and Similar Publications Relating to Art Needlework; Printed Initials and Designs Forming Outlines for Embroidery and Known as Decalcomanias, Issued in the Form of Books, Sheets, Leaflets, or Paper Tape.

168,952. May 29, 1923. Edward Wray, Chicago, Ill. Pub. by Simmons-Boardman Publishing Corporation, New York, N.Y.

Railway Purchases and Stores

For Monthly Magazine.

266,968. Feb. 11, 1930. The National Exchange Club, Toledo, Ohio. Pub. by registrant.

UNITY FOR SERVICE · NATIONAL EXCHANGE CLUB

For Printed Paper Banners, Signs, and Posters.

Class 39 — Clothing

45,530. Aug. 22, 1905. Mascot Knitting Mills, Sweetwater, Tenn. Pub. by Sweetwater Hosiery Mills, Inc., Sweetwater, Tenn.

MASCOT

For Hosiery.

Class 43 — Thread and Yarn

163,019. Jan. 2, 1923. The Barbour Brothers Co., Paterson, N.J. Pub. by Indian Head Mills, Inc., New York, N.Y.

ONE 6 POUND BLACK CORD
BARBOUR'S
IRISH FLAX
SINEW THREAD
FOR LOCK STITCH MACHINES

For Lock-Stitch Machine Thread.

Class 46 — Foods and Ingredients of Foods

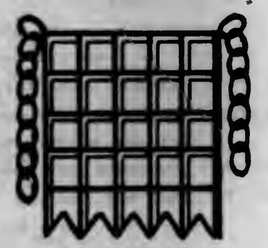
427,012. Jan. 21, 1947. American Breddo Corp., New York, N.Y. Pub. by Breddo-Food Products Corporation, Inc., Kansas City, Kans.

MIRACULENE

For Emulsifier To Be Added to the Dough for Baked Goods.

Class 49 — Distilled Alcoholic Liquors

139,388. Feb. 1, 1921. Seager, Evans & Company, Limited, London, England. Pub. by registrant.



For Gin.

Class 50 — Merchandise Not Otherwise Classified

165,422. Mar. 6, 1923. Oppenheimer Casing Co., Chicago, Ill. Pub. by registrant.

OCECO BRAND

For Salted and Dried Sausage Casings of Every Description, Particularly Dried Sausage Casings for Technical Purposes, and Goldbeater Skins.

Class 51 — Cosmetics and Toilet Preparations

400,684. Mar. 23, 1943. Prince Matchabelli, Inc., New York, N.Y. Pub. by registrant.

Beloved

For Perfume.

422,539. July 30, 1946. Rose B. Caldwell, Chicago, Ill. Pub. by registrant.

PERSPI-CURA

For Liquid Deodorant for Personal Use Only.

Class 52 — Detergents and Soaps

423,335. Aug. 27, 1946. R. S. Ghiselin, Chicago, Ill. Pub. by Arthur G. Gabrielsen, Jr., d.b.a. Glee Products Company, Chicago, Ill.

GLEE

For Detergent Compound Designed To Remove Greasy, Fatty, and Saponaceous Residue.







INDEX OF REGISTRANTS

MAY 7, 1963

(Registered ; Renewed ; Canceled ; Amended, Disclaimed, Corrected, etc. ; New Certificates ; 12c Publications.)

A.P.W. Paper Co., Inc., Albany, to A.P.W. Products Co., Inc., New York, N.Y. 401,809, ren. 5–7–63. Cl. 37.
A.P.W. Products Co., Inc. : *See*—
A.P.W. Paper Co., Inc.
Aberdeen Plywood and Veneers, Inc. : *See*—
Evans Harbor Products Co.
Abott Laboratories, North Chicago, Ill. 402,289, ren. 5–7–63. Cl. 18.
Advance Crayon & Color Corp., New York, N.Y. 714,989, cor. Cl. 22.
Aktiengesellschaft Fur Textil-Industrie, Vormals Dollfus Mieg & Cie, Mulhausen, Belfort, and Paris, Germany and France, to Dollfus-Mieg & Cie, Societe Anonyme, Mulhouse (Haut-Rhin), France. 22,386–7, ren 5–7–63. Cl. 43.
Aktiengesellschaft Fur Textil-Industrie, Vormals Dollfus-Mieg & Cie, Mulhausen, Germany, and Paris, France, to Dollfus-Mieg & Cie. Societe Anonyme, Mulhouse (Haut-Rhin), France. 22,384, ren. 5–7–63. Cl. 43.
Albany Felt Co., Albany, N.Y. 749,182, pub. 2–19–63. Cl. 42.
Albert, Alice, d.b.a. International Gold Metals, New York, N.Y. 749,109, pub. 2–19–63. Cl. 28.
Allen, Eaton, Corp., Brooklyn, N.Y. 749,243–4. Cl. 37.
Allen, Raymond B., d.b.a. Blade Economy Co., St. James, Mo. 748,932, pub. 2–19–63. Cl. 4.
Allied Chemical Corp. : *See*—
Barrett Co., The.
Allied Stores Corp., New York, N.Y. 400,456, ren. 5–7–63. Cl. 39.
American Breddo Corp., New York, N.Y., by Breddo-Food Products Corp., Inc., Kansas City, Kans. 427,012, 12(c) pub. 5–7–63. Cl. 46.
American Can Co., New York, N.Y. 749,246. Cl. 38.
American Ladder Institute, Chicago, Ill. 749,217, pub. 2–19–63. Cl. 50.
Amerit Vermouth Co. of Italy, San Francisco, Calif. 749,211, pub. 2–19–63. Cl. 47.
Anaconda Co. : *See*—
Anaconda Copper Mining Co.
Anaconda Copper Mining Co., to The Anaconda Co., New York, N.Y. 170,147, ren. 5–7–63. Cl. 14.
Aplin & Barrett Ltd., Yeovil, England. 748,942, pub. 2–19–63. Cl. 6.
Applied Power Industries, Inc., Milwaukee, Wis. 749,047, pub. 10–2–62. Cl. 23.
Archer Label Co. : *See*—
Contact Products, Inc.
Arkansas Louisiana Gas Co., Shreveport, La. 749,233, pub. 2–19–63. Cl. 103.
Arkell Safety Bag Co., New York, N.Y. 748,926, pub. 3–27–62. Cl. 2.
Arlen, Inc., Portland, Oreg. 749,266. Cl. 51.
Armstrong, W. T., Co., Inc., Elkhart, Ind. 749,136, pub. 2–19–63. Cl. 36.
Aroesty, Sylvia, New York, N.Y. 749,171, pub. 2–19–63. Cl. 40.
Ascher, B. F., & Co., Inc., Kansas City, Mo. 749,009, pub. 2–19–63. Cl. 18.
Associated Foods : *See*—
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Associated Foods, Inc. : *See*—
Schrieber, Gus.
Atlantic Recording Corp., New York, N.Y. 749,139, pub. 2–19–63. Cl. 36.
Atohm Electronics, Sun Valley, Calif. 749,076, pub. 2–19–63. Cl. 26.
Automatic Siphon Filler Co., The : *See*—
Gavaza, George V.
B.V.D. Co., Inc., The, Cincinnati, Ohio. 749,164, pub. 2–19–63. Cl. 39.
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Baker Castor Oil Co., The : *See*—
Pierce Co., The.
Banner Products Corp., Camden, N.J. 748,989, pub. 2–19–63. Cl. 15.
Bantam-U.S. Toys, Inc., New York, N.Y. 642,871, canc. Cl. 22.
Barbour Brothers Co., The, Paterson, N.J., by Indian Head Mills, Inc., New York, N.Y. 163,019, 12(c) pub. 5–7–63. Cl. 43.
Barnes-Hind Laboratories, Inc., Sunnyvale, Calif. 748,999, pub. 7–18–61. Cl. 18.
Barrett Co., The, to Allied Chemical Corp., New York, N.Y. 170,200, ren. 5–7–63. Cl. 12.
Bartlett, Elizabeth, and Charles Martin : *See*—
Golden Valley Brands, Inc.
Bartlett, G. M., Kevo Co. : *See*—
Golden Valley Brands, Inc.
Bartlett, George M. : *See*—
Golden Valley Brands, Inc.
Battenfeld Grease & Oil Corp., Inc., Kansas City, Mo. 748,960, pub. 2–19–63. Cl. 12.
Bastian-Blessing Co., The, Chicago, Ill. 749,127, pub. 2–19–63. Cl. 34.
Baxter Laboratories, Inc. : *See*—
Ferwal Laboratories, Inc.
Beam, James B., Distilling Co., d.b.a. James B. Beam Distilling Co., Inc., Chicago, Ill. 749,261. Cl. 49.
Beam, James B., Distilling Co. Inc. : *See*—
Beam, James B., Distilling Co.
Beaunit Mills, Inc., New York, N.Y. 643,002, canc. Cl. 42.
Beaverite Products, Inc., Beaver Falls, N.Y. 749,216, pub. 2–19–63. Cl. 50.
Beckerman, M., & Sons, Inc., New York, N.Y. 749,169, pub. 2–19–63. Cl. 39.
Behr, Herman, & Co., Inc., Brooklyn, to Norton Co., Troy, N.Y. 168,942, ren. 5–7–63. Cl. 4.
Benmont Papers Inc., to The Dow Chemical Co., Midland, Mich. 548,309, new cert. Cl. 37.
Bennington Wax Paper Co., to The Dow Chemical Co., Midland, Mich. 218,611, new cert. Cl. 37.
Bennington Wax Paper Co., to The Dow Chemical Co., Midland, Mich. 218,612, new cert. Cl. 37.
Bennington Wax Paper Co., to The Dow Chemical Co., Midland, Mich. 218,613, new cert. Cl. 37.
Bermuriee Trading Co., New York, N.Y. 749,172, pub. 2–19–63. Cl. 40.
Bernat, Emile, & Sons Co., Jamaica Plain, Mass. 749,188, pub. 2–19–63. Cl. 43.
Beseler, Charles, Co., East Orange, N.J. 749,077, pub. 2–19–63. Cl. 26.
Better Monkey Grip Co., Dallas, Tex. 749,132, pub. 2–19–63. Cl. 35.
Blackstone Corp., Jamestown, N.Y. 749,063, pub. 2–19–63. Cl. 24.
Blade Economy Co. : *See*—
Allen, Raymond B.
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Blue Ridge Vitamin Co. : *See*—
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Bonafide Mills, Inc., New York, N.Y. 642,851, canc. Cl. 20.
Borg-Warner Corp., Chicago, Ill. 642,947, canc. Cl. 34.
Boyertown Burial Casket Co., Boyertown, Pa. 748,927, pub. 2–19–63. Cl. 2.
Breddo-Food Products Corp., Inc. : *See*—
American Breddo Corp.
Brightwater Paper Co. : *See*—
Continental-Diamond Fibre Corp.
Bristol-Myers Co., New York, N.Y. 749,007, pub. 2–19–63. Cl. 18.
Brown, Co., Berlin, N.H. 171,053, ren. 5–7–63. Cl. 21.
Brown & Williamson Tobacco Corp., Louisville, Ky. 748,994–7, pub. 2–19–63. Cl. 17.
Broyhill Furniture Factories, Lenoir, N.C. 749,122, pub. 2–19–63. Cl. 32.
Bruton Chemical Co., Marcus Hook, Pa. 742,763, canc. Cl. 6.
Burlington Industries, Inc. : *See*—
Ely & Walker Dry Goods Co.
Burndy Engineering Co., Inc., Norwalk, Conn. 642,807, canc. Cl. 16.
Burns & Russell Co. of Baltimore City, The, Baltimore, Md. 748,993, pub. 2–19–63. Cl. 16.
Burroughs Corp., Detroit, Mich. 749,071, pub. 2–19–63. Cl. 26.
Bux, J. R., & Son, Philadelphia, Pa. 399,655, ren. 5–7–63. Cl. 42.
Cadillac Malleable Iron Co., Cadillac, Mich. 642,784, canc. Cl. 14.
Caldwell, Rose B., Chicago, Ill. 422,539, 12(c) pub. 5–7–63. Cl. 51.
Camylan, Wm., Cosmetics, Inc., Palatine, Ill. 749,221, pub. 4–24–62. Cl. 51.
Cam-Stat, Inc., Los Angeles, Calif. 642,919, canc. Cl. 26.
Carter Products, Inc., New York, N.Y. 749,010, pub. 2–19–63. Cl. 18.
Cassidy, M. Frances, Greeley, Colo. 749,038, pub. 2–19–63. Cl. 22.
Castle Industries, Inc., New Castle, Pa. 748,920, pub. 2–19–63. Cl. 1.
Caulk, L. D., Co., The, Milford, Del. 166,521, ren. 5–7–63. Cl. 44.
Celanese Corp. of America, New York, N.Y. 399,688, ren. 5–7–63. Cl. 42.
Celanese Corp. of America, New York, N.Y. 400,749, ren. 5–7–63. Cl. 1.
Cellulo Co., The, d.b.a. Selko Filter Co., Sandusky, Ohio. 749,116, pub. 12–12–61. Cl. 31.
Cerro Corp. : *See*—
Rockbestos Products Corp.
Chadbourn Gotham, Inc., Charlotte, N.C. 749,170, pub. 2–19–63. Cl. 39.
Chandler Mfg. Co., Inc., The, East Taunton, Mass. 643,007, canc. Cl. 42.
Channel Master Corp., Ellenville, N.Y. 749,031, pub. 2–19–63. Cl. 21.
Channel Master Corp., Ellenville, N.Y. 749,035, pub. 2–19–63. Cl. 21.
Chemetron Corp., Chicago, Ill. 749,033, pub. 2–19–63. Cl. 21.
Chicago Electric Mfg. Co., Chicago, Ill. 275,714, canc. Cl. 21.
Chicago Electric Mfg. Co., Chicago, Ill. 500,837, canc. Cl. 21.

Chicago Electric Mfg. Co., Chicago, Ill. 530,814, canc. Cl. 21.
Chicago Flexible Shaft Co., to Sunbeam Corp., Chicago, Ill. 401,051, ren. 5–7–63. Cl. 13.
Chicago Varnish Co., Chicago, Ill., by E. I. du Pont de Nemours and Co., Wilmington, Del. 22,394, 12(c) pub. 5–7–63. Cl. 16.
Chipmans, Chas., Sons, Easton and Selinsgrove, Pa. 76,741, canc. Cl. 39.
Chlori-Sept Co.: *See*—
Hancock, John F., & Son, Inc.
Citrus Heights Farms, Phoenix, Ariz. 749,207, pub. 2–19–63. Cl. 46.
Claire Mfg. Co., Chicago, Ill. 401,454, 12(c) pub. 5–7–63. Cl. 16.
Cletrac Corp.: *See*—
Farquhar, A. B., Co.
Cluett, Peabody & Co. Inc., New York, N.Y. 749,162, pub. 2–19–63. Cl. 39.
Cohen, George, Sons and Co. Ltd., London, England. 744,297, cor. Cl. 14.
Cohen, George, Sons and Co. Ltd., London, England. 744,298, cor. Cl. 14.
Cohen, George, Sons and Co. Ltd., London, England. 744,299, cor. Cl. 14.
Colgate-Palmolive Co., New York, N.Y. 748,945, pub. 2–19–63. Cl. 6.
Colgate-Palmolive Co., from Unexcelled Chemical Corp., New York, N.Y. 749,264. Cl. 51.
Colourpicture Publishers, Inc., Boston, Mass. 749,147, pub. 2–19–63. Cl. 38.
Confederate Water Heater Co.: *See*—
Hotstream Heater Co., The.
Contact Products, Inc., d.b.a. Archer Label Co., Los Angeles, Calif. 642,956, canc. Cl. 37.
Continental Can Co., Inc., New York, N.Y. 642,962, canc. Cl. 37.
Continental Copper & Steel Industries, Inc., New York, N.Y. 642,848, canc. Cl. 19.
Continental-Diamond Fibre Corp., Newark, Del., from Brightwater Paper Co., Adams, Mass. 749,142, pub. 2–19–63. Cl. 37.
Continental Oil Co., Ponca City, Okla. 748,992, pub. 2–19–63. Cl. 15.
Cook, Frank R., Co., Denver, Colo. 642,904–5, canc. Cl. 23.
Cooperatieve Producenten Handelsvereeniging, "De Producent," Gouda, Netherlands. 643,023, canc. Cl. 46.
Corn Products Co., New York, N.Y. 749,204, pub. 2–19–63. Cl. 46.
Cornett, Walter V., d.b.a. R.P.B. Corp., Los Angeles, Calif. 642,903, canc. Cl. 23.
Coro, Inc., New York, N.Y. 749,082, pub. 2–19–63. Cl. 28.
Coro, Inc., New York, N.Y. 749,262. Cl. 50.
Cortell, Harry, Boston, Mass. 749,086, pub. 2–19–63. Cl. 28.
Coy, Hunt & Co., New York, N.Y. 749,141, pub. 2–19–63. Cl. 37.
Cracker Jack Co., The, Chicago, Ill. 749,254. Cl. 46.
Crete, Charles A., d.b.a. Pharmaceutical Associates, San Francisco, Calif. 749,005, pub. 2–19–63. Cl. 18.
Crowley Tar Products Co., Inc., New York, N.Y. 748,919, pub. 2–7–61. Cl. 1.
Crown Chemical Corp., Providence, R.I. 748,941, pub. 2–19–63. Cl. 6.
Crown Life Insurance Co., The, Toronto, Ontario, Canada. 643,074, canc. Cl. 102.
Cu-Ritis Co.: *See*—
Montgomery, Don.
Cutler-Hammer, Inc., Milwaukee, Wis. 344,863, canc. Cl. 26.
Cutler-Hammer, Inc., Milwaukee, Wis. 345,447, canc. Cl. 21.
DCA Food Industries Inc., New York, N.Y. 749,201, pub. 2–19–63. Cl. 46.
D.T. Supply Co., Oakland, Calif. 749,107, pub. 2–19–63. Cl. 28.
Dalton-Cooper, Inc., to J. V. Palmer Pen Co. Inc., New York, N.Y. 698,171, new cert. Cl. 37.
D'Arrigone Industries, Inc., Baltimore, Md. 749,268. Cl. 51.
Dashew Business Machines, Inc., Los Angeles, Calif. 749,058, pub. 2–19–63. Cl. 23.
David and Dash, Inc., Miami, Fla. 749,175, pub. 10–2–62. Cl. 42.
Davis, Robert E., Rocky River, Ohio. 642,963, canc. Cl. 37.
Dawe's Laboratories, Inc., Chicago, Ill. 749,002, pub. 2–19–63. Cl. 18.
Dayco Corp.: *See*—
Dayton Rubber Mfg. Co.
Dayton Rubber Mfg. Co., The.
Dayton Rubber Mfg. Co., The, by Dayco Corp., Dayton, Ohio. 399,475, 12(c) pub. 5–7–63. Cl. 23.
Dayton Rubber Mfg. Co., The, to Dayco Corp., Dayton, Ohio. 400,451, ren. 5–7–63. Cl. 35.
Rayton Rubber Mfg. Co., The, to Dayco Corp., Dayton, Ohio. 402,402, ren. 5–7–63. Cl. 7.
Deck House, Inc., Burlington, Mass. 748,963, pub. 2–19–63. Cl. 12.
Deering Milliken Research Corp., Spartanburg, S.C. 749,174, pub. 3–10–59. Cl. 42.
Degennaro, Ralph, d.b.a. Harper Jewels, New York, N.Y. 749,100, pub. 2–19–63. Cl. 28.
Delta Chemical Co. Delta Chemical Corp., Memphis, Tenn. 723,970. Am. 7(d). Cl. 52.
Delta Chemical Corp.: *See*—
Delta Chemical Co.
Delta Tank Mfg. Co., Inc., Baton Rouge, La. 642,950, canc. Cl. 34.
Des Moines Concrete Products Co., West Des Moines, Iowa. 748,955, pub. 2–19–63. Cl. 12.
Dexter Folder Co., Pearl River, N.Y., to Miehle Printing Press & Mfg. Co., Chicago, Ill. 643,081, canc. Cl. 28.
Deutsche Gold- und Silber Scheideanstalt vormals Roessler, Frankfurt am Main, Germany. 397,432, ren. 5–7–63. Cl. 6.
D'Hennery, Jean, Inc., New York, N.Y. 440,395, canc. Cl. 6.
Diamond Alkali Co., Cleveland, Ohio. 748,940, pub. 2–19–63. Cl. 6.
Directomat, Inc., New York, N.Y. 749,053, pub. 2–19–63. Cl. 23.
Disaster Emergency Survival Corp., Newark, Ohio. 749,218, pub. 2–19–63. Cl. 50.
Ditto, Inc., from Ditto, Inc., Chicago, Ill. 749,067–8, pub. 2–19–63. Cl. 26.
Diversification Development Inc., Chicago, Ill. 749,120, pub. 2–19–63. Cl. 32.
Diversified Products Corp., Opelika, Ala. 749,040, pub. 2–19–63. Cl. 22.
Dixie Mills Co., East St. Louis, Ill. 749,248. Cl. 46.
Dixon, Joseph, Crucible Co., The, Jersey City, N.J. 660,554, cor. Cl. 37.
Dodge Mfg. Corp., Mishawaka, Ind. 749,049, pub. 2–19–63. Cl. 23.
Dollfus-Mieg & Cie, Societe Anonyme: *See*—
Aktiengesellschaft fur Textil-Industrie vormals.
Dow Chemical Co., The: *See*—
Benmont Papers Inc.
Bennington Wax Paper Co.
Dow Chemical Co., The, Midland, Mich. 748,938, pub. 2–19–63. Cl. 6.
Drexel Enterprises, Inc., High Point, N.C. 749,125, pub. 2–19–63. Cl. 32.
Du Mont, Allen B., Laboratories, Inc., Clifton, N.J. 643,076, canc. Cl. 107.
Du Pont de Nemours, E. I., and Co.: *See*—
Chicago Varnish Co.
Durex Products Inc., New York, N.Y. 749,003, pub. 2–19–63. Cl. 18.
Dutchess Underwear Corp., New York, N.Y. 642,980, canc. Cl. 39.
Eagle-Picher Co., The, Cincinnati, Ohio. 748,922–3, pub. 2–19–63. Cl. 1.
Eastern Electric, Inc., New Bedford, Mass. 642,874, canc. Cl. 23.
Eastman Kodak Co., Rochester, N.Y. 401,476, ren. 5–7–63. Cl. 6.
Eastman Kodak Co., Rochester, N.Y. 401,845, ren. 5–7–63. Cl. 6.
Eckel, Oliver C., d.b.a. Stic-Klip Mfg. Co., to Stic-Klip Mfg. Co., Inc., Cambridge, Mass. 402,922, ren. 5–7–63. Cl. 13.
Eddy, L. M., Mfg. Co., Inc., Framingham, Mass. 642,856, canc. Cl. 22.
Edward Hines Lumber Co., Chicago, Ill. 748,965, pub. 2–19–63. Cl. 12.
Electrical Information Publications, Inc., Madison, Wis. 749,150, pub. 2–19–63. Cl. 38.
Electro-Sonic Laboratories, Inc., Long Island City, N.Y. 642,853, canc. Cl. 21.
Elevator Safety Co.: *See*—
Elevator Safety Corp.
Elevator Safety Corp., New York, N.Y., by Elevator Safety Co., Baltimore, Md. 401,430, 12(c) pub. 5–7–63. Cl. 23.
Elinsky, John L., d.b.a. West Chester Paper Supply Co., West Chester, Pa. 643,048, canc. Cl. 50.
El Paso Chemical Co., El Paso, Tex. 749,270. Cl. 52.
Ely & Walker Dry Goods Co., St. Louis, Mo., to Burlington Industries, Inc., Greensboro, N.C. 165,690, ren. 5–7–63. Cl. 42.
Enro Shirt Co., Inc., The, Louisville, Ky. 708,763, canc. Cl. 39.
Environ Electronic Laboratories, Inc., Minneapolis, Minn. 749,230, pub. 2–19–63. Cl. 101.
Ermano S.A., Elenne, Switzerland. 749,080, pub. 2–19–63. Cl. 27.
Espe Fabrik Pharmazeutischer Praparate G.m.b.H., Seefeld, Upper Bavaria, Germany. 749,191, pub. 2–19–63. Cl. 44.
Essex Wire Corp., Fort Wayne, Ind. 749,036, pub. 2–19–63. Cl. 21.
Eutectic Welding Alloys Corp., Flushing, N.Y. 749,149, pub. 2–19–63. Cl. 38.
Evans Harbor Products Co., from Aberdeen Plywood and Veneers, Inc., Aberdeen, Wash. 748,952, pub. 2–19–63. Cl. 12.
Everfast Fabrics, Inc., New York, N.Y. 749,186, pub. 2–19–63. Cl. 42.
Excello Shirt Co. Inc., to Excello Shirts, Inc., New York, N.Y. 170,068, ren. 5–7–63. Cl. 39.
Excello Shirt Co., Inc. to Excello Shirts, Inc., New York, N.Y. 170,125, ren. 5–7–63. Cl. 39.
Excello Shirts, Inc.: *See*—
Excello Shirt Co. Inc.
Exeter Mfg. Co., Exeter, N.H., and New York, N.Y. 401,154, ren. 5–7–63. Cl. 42.
Falls, Pauline R., d.b.a. Grafica, North Hollywood, Calif. 642,968, canc. Cl. 38.
Farbenfabriken Bayer Aktiengesellschaft, Leverkusen-Bayerwerk, Germany. 748,947, pub. 2–19–63. Cl. 6.
Farbenfabriken Bayer Aktiengesellschaft, Leverkusen-Bayerwerk, Germany. 749,011, pub. 2–19–63. Cl. 18.
Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning, Frankfurt am Main, Germany. 748,935, pub. 2–19–63. Cl. 6.
Farnam, F. D., Co., Chicago, Ill. 749,133, pub. 2–19–63. Cl. 35.
Farquhar, A. B., Co. Cletrac Corp., Chicago, Ill. 564,397. Am. 7(d). Cl. 23.
Fawick Corp., Cleveland, Ohio. 749,050, pub. 2–19–63. Cl. 23.
Fenwal Laboratories, Inc., to Baxter Laboratories, Inc., Morton Grove, Ill. 678,165, new cert. Cl. 44.
Ferrara, Caffe A., Inc., New York, N.Y. 749,208, pub. 2–19–63. Cl. 46.
Filtomor, Inc., Montclair, N.J. 749,118, pub. 2–19–63. Cl. 31.
Firmcrete Building Products, Inc., Hartford, Conn. 748,961, pub. 2–19–63. Cl. 12.

Fleetwood Management Co., Anaheim, Calif. 749,025–6, pub. 2–19–63. Cl. 19.
Fleming Co., Inc., The, Topeka, Kans. 749,256. Cl. 46.
Flo-Cap Inc., Portland, Oreg. 643,050, canc. Cl. 50.
Fongers-De Groninger Rijwielenfabriek N.V., Groningen, Netherlands. 749,018 pub. 2–19–63. Cl. 19.
Food Machinery and Chemical Corp., San Jose, Calif. 642,885, canc. Cl. 23.
Foote Mineral Co., Exton, Pa. 748,944, pub. 2–19–63. Cl. 6.
Forelli, Matthew, d.b.a. Precision Mfg. Co., Corona, N.Y. 749,046, pub. 2–19–63. Cl. 23.
Fox Go-Boy Carts, Inc., Janesville, Wis. 749,015, pub. 2–27–62. Cl. 19.
Franco-American Jewelry Co.: *See*—
Goldstein, Maurice.
Fuchs and Stern, Inc., New York, N.Y. 749,083, pub. 2–19–63. Cl. 28.
Gabrielsen, Arthur G., Jr.: *See*—
Ghiselin, R. S.
Galen Co., Berkeley, Calif., to White Laboratories, Inc., Kenilworth, N.J. 400,404, ren. 5–7–63. Cl. 18.
Galen Co., Berkeley, Calif., to White Laboratories, Inc., Kenilworth, N.J. 400,406, ren. 5–7–63. Cl. 18.
Gallo, E. & J., Winery, Modesto, Calif. 749,212, pub. 2–19–63. Cl. 47.
Gamewell Co., The, Newton, Mass. 749,028, pub. 2–19–63. Cl. 21.
Gamma Phi Beta Sorority, Inc., Chicago, Ill. 749,236–7, pub. 2–19–63. Cl. 200.
Gardner Laboratory, Inc., Bethesda, Md. 749,073, pub. 2–19–63. Cl. 26.
Gavaza, George V., d.b.a. The Automatic Siphon Filler Co., Beverly and Boston, Mass., to Harvey Home Products Corp., Boston, Mass. 162,757, ren. 5–7–63. Cl. 13.
Gebauer Chemical Co.: *See*—
Spra-Pak, Inc.
Geigy Chemical Corp., Ardsley, N.Y. 748,931, pub. 2–19–63. Cl. 4.
Geigy Chemical Corp., Ardsley, N.Y. 748,933, pub. 2–19–63. Cl. 4.
General Aniline & Film Corp.: *See*—
Positype Corp. of America, The.
General Aniline & Film Corp., New York, N.Y. 642,914, canc. Cl. 25.
General Battery and Ceramic Corp.: *See*—
Nik-O-Life Battery Corp.
General Motors Corp., Detroit, Mich. 749,082, pub. 2–19–63. Cl. 21.
General Motors Corp., Detroit, Mich. 749,041, pub. 4–28–59. Cl. 28.
General Products Co., Inc., Fredericksburg, Va. 749,126, pub. 2–19–63. Cl. 34.
Ghiselin, R. S., by A. G. Gabrielsen, Jr., d.b.a. Glee Products Co., Chicago, Ill. 423,335, 12(c) pub. 5–7–63. Cl. 52.
Gilfillan Bros., Inc., Los Angeles, Calif. 749,066, pub. 2–19–63. Cl. 26.
Gillett & Eaton, Inc., Lake City, Minn. 642,898, canc. Cl. 23.
Gilroy/Mays Co., Inc., South Bend, Ind. 749,001, pub. 2–19–63. Cl. 18.
Gladson, Herbert, Ltd., New York, N.Y. 749,184, pub. 2–19–63. Cl. 42.
Glee Products Co.: *See*—
Ghiselin, R. S.
Glorified Steak Mold Co.: *See*—
Orenstein, Edgar E.
Glover, H. Clay, Co., Inc., Garden City, N.Y. 163,929, 12(c) pub. 5–7–63. Cl. 18.
Glowing Ceilings Co.: *See*—
Ripnen, Kenneth H.
Gojer, Inc., Akron, Ohio. 749,271. Cl. 52.
Golden Valley Brands, Inc., Beverly Hills, from M. Elizabeth Bartlett and Charles Martin, co-executrix and co-executor of the estate of G. M. Bartlett, deceased, d.b.a. G. M. Bartlett Kevo Co., Azusa, Calif. 749,197, pub. 3–21–61. Cl. 46.
Goldschmidt, K., Jewelers: *See*—
Goldschmidt, Kurt.
Goldschmidt, Kurt, d.b.a. K. Goldschmidt Jewelers, New York, N.Y. 749,095, pub. 2–19–63. Cl. 28.
Goldstein, Maurice, d.b.a. Franco-American Jewelry Co., Philadelphia, Pa. 749,096, pub. 2–19–63. Cl. 28.
Gonzales, Henry, Inc., New York, N.Y. 749,099, pub. 2–19–63. Cl. 28.
Goodyear Tire & Rubber Co., The, Akron, Ohio. 749,129–31, pub. 2–19–63. Cl. 35.
Grace Bros. Brewing Co., Santa Rosa, Calif. 749,259. Cl. 46.
Grace, W. R., Co., from Sun Chemical Corp., New York, N.Y. 748,950, pub. 4–11–61. Cl. 12.
Grace, W. R., & Co., from Sun Chemical Corp., New York, N.Y. 748,953, pub. 2–19–63. Cl. 12.
Grafica: *See*—
Falls, Pauline R.
Graham Engineering Co., Inc., Palo Alto, Calif. 749,059, pub. 2–19–63. Cl. 23.
Great Lakes Carbon Corp., New York, N.Y. 642,775, canc. Cl. 6.
Greenberg, B. B., Co., Providence, R.I. 749,110, pub. 2–19–63. Cl. 28.
Griffith Laboratories, Inc., The, Chicago, Ill. 749,252. Cl. 46.
Gulf Oil Corp., Pittsburgh, Pa. 657,972. Am. 7(d). Cl. 15.
Gulf Oil Corp., Pittsburgh, Pa. 749,057, pub. 2–19–63. Cl. 23.
HB Bar-B-Q Shuck Mop Co., Pleasanton, Tex. 749,112, pub. 2–19–63. Cl. 29.
HMH Publishing Co., Inc., Chicago, Ill. 749,223, pub. 2–19–63. Cl. 51.
Hamilton Laboratories, Inc., The, Hamilton, Ohio, by Wood Ridge Chemical Corp., Wood-Ridge, N.J. 399,993, 12(c) pub. 5–7–63. Cl. 6.
Hammarlund Mfg. Co., Inc., The, New York, N.Y. 643,087, canc. Cl. 103.
Hammel, Riglander & Co., Inc., New York, N.Y. 748,946, pub. 2–19–63. Cl. 6.
Hancock, John F., & Son, Inc., d.b.a. Chlori-Sept Co., a div. of John F. Hancock & Son, Inc., Baltimore, Md. 642,770, canc. Cl. 6.
Harbison-Walker Refractories Co., Pittsburgh, Pa. 748,968–72, pub. 2–19–63. Cl. 12.
Harper Jewels: *See*—
Degennaro, Ralph.
Harvey Home Products Corp.: *See*—
Gavaza, George V.
Hatch Full Fashioned Hosiery Co., to Knit Products Corp., Belmont, N.C. 402,013, ren. 5–7–63. Cl. 39.
Haviland, Ann: *See*—
Haviland Laboratories, Inc.
Haviland Laboratories, Inc., d.b.a. Ann Haviland, New York, N.Y. 643,065, canc. Cl. 52.
Hawker Siddeley Canada Ltd., from A. V. Roe Canada Ltd., Toronto, Ontario, Canada. 749,069, pub. 2–19–63. Cl. 26.
Hayes Garment Co., Nashville, Tenn. 749,152, pub. 2–19–63. Cl. 39.
Health Products Corp., New York, N.Y., to White Laboratories, Inc., Kenilworth, N.J. 170,434, ren. 5–7–63. Cl. 18.
Henderson-Hazel Corp., Cleveland, Ohio. 749,151, pub. 2–19–63. Cl. 38.
Hennepin Products Co., Minneapolis, Minn. 643,060, canc. Cl. 52.
Hesch & Forman, Inc., New York, N.Y. 749,108, pub. 2–19–63. Cl. 28.
Hess, Paul, d.b.a. Paul Hess Products, Chicago, Ill. 745,467, cor. Cl. 34.
Hess, Paul, Products: *See*—
Hess, Paul.
Hillyard Chemical Co., St. Joseph, Mo. 749,030, pub. 11–13–62. Cl. 21.
Hirsch Fabrics Corp.: *See*—
Hirsch-Werner, Inc.
Hirsch-Werner, Inc., to Hirsch Fabrics Corp., New York, N.Y. 400,970, ren. 5–7–63. Cl. 42.
Hobart Mfg. Co., The, Troy, Ohio. 749,064, pub. 2–19–63. Cl. 26.
Hodler, Fritz, Territet, Vaud, Switzerland. 749,048, pub. 2–19–63. Cl. 23.
Hoffmann-La Roche Inc., Nutley, N.J. 642,844, canc. Cl. 18.
Horix Mfg. Co., Pittsburgh, Pa. 749,055, pub. 2–19–63. Cl. 23.
Horse-Shoe Mills, Inc., Pine Bluff, Ark. 643,017, canc. Cl. 46.
Hosiery Promotions, Inc., Chicago, Ill. 749,155, pub. 2–19–63. Cl. 39.
Houbigant, Inc., New York, N.Y. 643,066, canc. Cl. 52.
Houghton, E. F., & Co., to E. F. Houghton & Co., Philadelphia, Pa. 22,443, ren. 5–7–63. Cl. 18.
Hotstream Heater Co., The, d.b.a. Confederate Water Heater Co., Dallas, Tex. 642,946, canc. Cl. 34.
Hubbard Milling Co., Mankato, Minn. 621,407. Am. 7(d). Cl. 46.
Hudson Realty Co., Inc., Ashley, Pa. 749,239. Cl. 1.
Hy-Pro Tool Co., Inc., to Hy-Pro Tool Co., Inc., New Bedford, Mass. 399,496, ren. 5–7–63. Cl. 28.
Imperial Crown Toy Corp., Brooklyn, N.Y. 437,504, canc. Cl. 22.
Indian Head Mills, Inc.: *See*—
Ulmann, Bernhard, Co., Inc.
Barbour Brothers Co., The.
Instant Products Co., Inc., Buffalo, N.Y. 432,989, 12(c) pub. 5–7–63. Cl. 16.
International Fabric Corp., Boston, Mass. 749,178, pub. 1–8–63. Cl. 42.
International Gold Metals: *See*—
Albert, Alice.
International Harvester Co., Chicago, Ill. 748,939, pub. 2–19–63. Cl. 6.
International Harvester Co., Chicago, Ill. 748,988, pub. 2–19–63. Cl. 14.
International Harvester Co., Chicago, Ill. 749,022, pub. 2–19–63. Cl. 19.
International Laboratories, Inc., Rochester, N.Y. 642,846, canc. Cl. 18.
International Nickel Co., Inc., The, New York, N.Y. 642,802, canc. Cl. 14.
International Staple and Machine Co., Butler, Pa. 749,062, pub. 2–19–63. Cl. 23.
Italian Cook Oil Corp., Brooklyn, N.Y. 429,203, canc. Cl. 46.
It's-A-Dilly Co., The, Potsdam, N.Y. 748,962, pub. 12–4–62. Cl. 12.
Jack's Cookie Co., Inc., Baton Rouge, La. 643,033, canc. Cl. 46.
Jacobs Wind Electric Co., Minneapolis, Minn. 330,436, canc. Cl. 21.
Jadow, Benjamin, d.b.a. The Tell Co., New York, N.Y. 749,070, pub. 2–19–63. Cl. 26.
Jamie Record Co., Philadelphia, Pa. 749,137, pub. 2–19–63. Cl. 36.
Jeffers Journal Lubricators, Chicago, Ill. 642,882, canc. Cl. 23.
Jens Risom Design, Inc., New York, N.Y. 749,123, pub. 2–19–63. Cl. 32.
Jewel Masters, Inc., Beverly Hills, Calif. 749,104, pub. 2–19–63. Cl. 28.
Jewels By Lorraine Marsel, Inc., Detroit, Mich. 749,092, pub. 2–19–63. Cl. 28.
Johns-Manville Corp., New York, N.Y. 748,951, pub. 2–19–63. Cl. 12.
Karl's Shoe Stores, Ltd., Los Angeles, Calif. 749,163, pub. 2–19–63. Cl. 39.
Kaufman, J., Iron Works, New York, N.Y. 748,980, pub. 2–19–63. Cl. 12.

Keith Chemical Co.: *See*—
Keith, Walling.
Keith, Walling, Chemicals Inc.: *See*—
Keith, Walling.
Keith, Walling, d.b.a. Keith Chemical Co., Assor. to Walling Keith Chemicals Inc., Birmingham, Ala. 642,751, canc. Cl. 4.
Kellogg Co.: *See*—
Miller Cereal Mills, Inc.
Keystone Coach Mfg. Co., Waverly, N.Y. 749,020, pub. 2–19–63. Cl. 19.
Kimberly-Clark Corp., Neenah, Wis. 748,925, pub. 2–20–62. Cl. 2.
King Candy Co., Fort Worth, Tex. 171,257, ren. 5–7–63. Cl. 46.
Knight, Joe M., Eilers, Fla. 171,270, ren. 5–7–63. Cl. 46.
Knit Products Corp.: *See*—
Hatch Full Fashioned Hosiery Co.
Knoebel Mercantile Co., d.b.a. Knoebel Mercantile Co., Denver, Colo. 749,202, pub. 2–19–63. Cl. 46.
Krause, Ernst, & Co., Vienna, Austria. 642,881, canc. Cl. 23.
Kreative Auto Products, Inc., Chicago, Ill. 749,023, pub. 2–19–63. Cl. 19.
Kreis Pharmacy Distributor's: *See*—
Thicalate, Inc.
Laminated Plas-Tex Corp., Springfield, Ohio. 642,737, canc. Cl. 1.
Lander Co., Inc., d.b.a. Loveland, New York, N.Y. 748,929, pub. 2–19–63. Cl. 3.
Lander Co. Inc., d.b.a. Loveland, New York, N.Y. 749,114, pub. 2–19–63. Cl. 29.
Lang, Irving, d.b.a. Lang Mfg. Co., New York, N.Y. 749,084, pub. 2–19–63. Cl. 28.
Lang Mfg. Co.: *See*—
Lang, Irving.
Lau Blower Co., The, Dayton, Ohio. 748,928, pub. 2–19–63. Cl. 2.
Lavett, Anthony E., d.b.a. Sun-Bright Prod. Mfg. Co., Pacoima, Calif. 642,808, canc. Cl. 16.
Lerner, Lovie E., d.o.a. Sno'n Blo, Elkhart, Ind. 642,992, canc. Cl. 39.
Lilly, Eli, and Co., Indianapolis Ind. 642,836, canc. Cl. 18.
Lilly, Eli, and Co., Indianapolis, Ind. 749,014, pub. 2–19–63. Cl. 18.
Lily White Sales Co. Inc., New York, N.Y. 749,185, pub. 2–19–63. Cl. 42.
Linder Bros., to Linder Brothers, Inc., Scranton, Pa. 160,230, ren. 5–7–63. Cl. 39.
Linder Brothers, Inc.: *See*—
Linder Bros.
Lindley, Jose R., e Hijos, S.A., Lima, Peru. 749,247. Cl. 45.
Litwin & Sons, Cincinnati, Ohio. 749,078 pub. 2–19–63. Cl. 27.
Long, F. A., Co., Benton Harbor, Mich. 749,021, pub. 2–19–63. Cl. 19.
Long-Lok Corp., Los Angeles, Calif. 748,985, pub. 2–19–63. Cl. 13.
Loring Andrews & Rattermann, Inc., Cincinnati, Ohio. 749,097, pub. 2–19–63. Cl. 28.
Loveland: *See*—
Lander Co., Inc.
Lowe, Joe, Corp., New York, N.Y. 749,206, pub. 10–16–62. Cl. 46.
Lukens, C. De Witt, Co., St. Louis, Mo. 749,193, pub. 2–19–63. Cl. 44.
Lynlee Design, Houston, Tex. 749,160, pub. 2–19–63. Cl. 39.
MacDermid Inc., Waterbury, Conn. 749,226, pub. 2–19–63. Cl. 52.
Mademoiselle Bra Inc., New York, N.Y. 642,994, canc. Cl. 39.
Madson, M. M., Co., Dolton, Ill. 748,991, pub. 1–8–63. Cl. 15.
Magnasync Mfg. Co., Ltd., North Hollywood, Calif. 749,135, pub. 8–11–59. Cl. 36.
Maison Behar, Inc., New York, N.Y. 749,111, pub. 2–19–63. Cl. 28.
Manhattan Terrazzo Brass Strip Co., Inc., Norwalk, Conn. 748,967, pub. 2–19–63. Cl. 12.
Marson Corp., Revere, Mass. 748,974–5, pub. 2–19–63. Cl. 12.
Martin-Marietta Corp., Baltimore, Md. 748,956–7, pub. 2–19–63. Cl. 12.
Mascot Knitting Mills, by Sweetwater Hosiery Mills, Inc., Sweetwater, Tenn. 45,530, 12(c) pub. 5–7–63. Cl. 39.
Match Sticks Sportogs Inc., New York, N.Y. 749,157, pub. 2–19–63. Cl. 39.
McCampbell & Co., Inc., New York, N.Y. 642,769, canc. Cl. 6.
McKesson & Robbins, Inc., New York, N.Y. 402,625, ren. 5–7–63. Cl. 18.
McKesson & Robbins, Inc., New York, N.Y. 402,114, ren. 5–7–63. Cl. 18.
McLaughlin, Samuel C., Boston, Mass. 749,192, pub. 2–19–63. Cl. 44.
McMinn, Wiley W., Sarasota, Fla. 749,000, pub. 2–19–63. Cl. 18.
Mecca Cable & Service, Inc., Houston, Tex. 749,034, pub. 2–19–63. Cl. 21.
Merchandising Corp., d.b.a. Variety Candies, Milwaukee, Wis. 643,019, canc. Cl. 46.
Metallurgical Products Co., Philadelphia, Pa. 642,789, canc. Cl. 14.
Michigan Fruit Canners, Inc., from Michigan Fruit Canners, Inc., Benton Harbor, Mich. 749,255. Cl. 46.
Midwest Jewelers, Oklahoma City, Okla. 749,098, pub. 2–19–63. Cl. 28.
Migdal Distillery Co.: *See*—
W.E.S.T. Wine and Spirits Trade Ltd.
Mighty-Fine Ring Co., New York, N.Y. 749,101, pub. 2–19–63. Cl. 28.
Miller Cereal Mills, Inc., Omaha, Nebr., to Kellogg Co., Battle Creek, Mich. 401,590, ren. 5–7–63. Cl. 46.
Millers Falls Co., Greenfield, Mass. 642,886, canc. Cl. 23.
Millsite Tackle Co., Howell, Mich. 642,866–7, canc. Cl. 22.
Mina Trading Co., Ltd., Chiyoda-ku, Tokyo, Japan. 749,173, pub. 2–19–63. Cl. 40.
Minnesota Mining and Mfg. Co.: *See*—
Munsell, Eugene, Lewis W. Kingsley, and Franklin Brooks.
Miss Pat, Los Angeles, Calif. 749,159, pub. 2–19–63. Cl. 39.
Mitchell, M. Dux, Ltd., Glasgow, Scotland. 749,215, pub. 2–19–63. Cl. 49.
Mitchell, Vernie C., Delhi, La. 749,019, pub. 2–19–63. Cl. 19.
Mixing Equipment Co., Inc., Rochester, N.Y. 402,708, ren. 5–7–63. Cl. 23.
Modern Import Co., St. Louis, Mo. 749,153, pub. 2–19–63. Cl. 39.
Monsanto Chemical Co., St. Louis, Mo. 643,049, canc. Cl. 50.
Monsanto Chemical Co., St. Louis, Mo. 642,814, canc. Cl. 16.
Monsanto Chemical Co., St. Louis, Mo. 643,067–8, canc. Cl. 52.
Montgomery, Don, d.b.a. Cu-Ritis Co., Forrest City, Ark. 642,834, canc. Cl. 18.
Morgan, J. E., Knitting Mills, Inc., Tamaqua, Pa. 749,161, pub. 2–19–63. Cl. 39.
Mosaic Tile Co., The, Zanesville, Ohio. 748,979, pub. 2–19–63. Cl. 12.
Moss, Harry, New York, N.Y. 749,094, pub. 2–19–63. Cl. 28.
Munsell, Eugene, Lewis W. Kingsley, and Franklin Brooks, New York, N.Y., to Minnesota Mining and Mfg. Co., St. Paul, Minn. 22,623, ren. 5–7–53. Cl. 21.
Mutual Supply Co., Denver, Colo. 748,990, pub. 2–19–63. Cl. 15.
Mytie Corp., Philadelphia, Pa. 749,220, pub. 2–19–63. Cl. 50.
NEA Service, Inc.: *See*—
Newspaper Enterprise Association, Inc.
N.J. Jewelry Mfg. Co., Inc., New York, N.Y. 749,093, pub. 2–19–63. Cl. 28.
Nash, Inc., Jersey City, N.J. 748,948, pub. 12–11–62. Cl. 8.
National Appliance & Radio-TV Dealers Association, Inc., Chicago, Ill. 749,234, pub. 2–19–63. Cl. 103.
National Association of Cemeteries, Washington, D.C. 749,238, pub. 2–19–63. Cl. 200.
National Broadcasting Co. Inc., New York, N.Y. 642,858, canc. Cl. 22.
National Education Association of the United States, Washington, D.C. 749,148, pub. 2–19–63. Cl. 38.
National Electronics, Inc., Geneva, Ill. 658,739, cor. Cl. 21.
National Exchange Club, The, Toledo, Ohio. 286,968, 12(c) pub. 5–7–63. Cl. 38.
National Research and Development Corp., Atlanta, Ga. 749,250. Cl. 46.
Natural Food Supplements, Inc., Sherman Oaks, Calif. 749,205, pub. 2–19–63. Cl. 46.
Neal Industries: *See*—
Neal, James K.
Neal, James K., d.b.a. Neal Industries, Dallas, Tex. 749,240. Cl. 2.
Nestle Co., Inc., The, White Plains, N.Y. 749,253. Cl. 46.
New England Brass Co., Taunton, Mass. 748,987, pub. 2–19–63. Cl. 14.
Newspaper Enterprise Association, Inc., from Nea Service, Inc., Cleveland, Ohio. 749,145, pub. 2–6–61. Cl. 38.
Nicholas International Ltd.: *See*—
Nicholas Proprietary Ltd.
Nicholas Proprietary Ltd., Melbourne, Victoria, Australia, by Nicholas International Ltd., Toronto, Ontario, Canada. 171,972, 12(c) pub. 5–7–63. Cl. 18.
Nik-O-Life Battery Corp., General Battery and Ceramic Corp., Reading, Pa. 615,246, restricted. Cl. 21.
Nona Lou Inc., Cleveland, Ohio. 642,976, canc. Cl. 39.
Norma Sales Corp., New York, N.Y. 749,179, pub. 2–19–63. Cl. 42.
Norton Co.: *See*—
Behr, Herman, & Co., Inc.
Norton, Donald, Co., The, Fort Lauderdale, Fla. 749,124, pub. 2–19–63. Cl. 32.
Novo Industrial Corp., Chicago, Ill. 748,924, pub. 2–19–63. Cl. 2.
Nowland, Geo. H., Co., The, Cincinnati, Ohio. 642,825, canc. Cl. 18.
Nutting Truck and Caster Co., Faribault, Minn. 749,016, pub. 2–19–63. Cl. 19.
Nylok Corp., The, Paramus, N.J. 748,986, pub. 2–19–63. Cl. 13.
O.K. Rubber Welders, Inc., Littleton, Colo. 749,128, pub. 2–19–63. Cl. 35.
Oates Frozen Foods Co., St. Louis, Mo. 749,251. Cl. 46.
O'Brien, Norman L., Somerset, Mass. 748,949, pub. 12–11–62. Cl. 10.
Offenhauser Equipment Corp., Los Angeles, Calif. 643,069, canc. Cl. 52.
Okadee Co., The, to Okadee Controls, Inc., Philadelphia, Pa. 732,640, new cert. Cl. 13.
Okadee Controls, Inc.: *See*—
Okadee Co., The.
Oppenheimer Casing Co., by Oppenheimer Casing Co., Chicago, Ill. 165,422, 12(c) pub. 5–7–63. Cl. 50.
Orensten, Edgar E., d.b.a. Glorified Steak Mold Co., Pottstown, Pa. 642,895, canc. Cl. 23.
Oskar Dold Kommanditgesellschaft, Furtwangen, Germany. 642,926 canc. Cl. 27.
Oxford Filing Supply Co., Inc., Garden City, N.Y. 540,785. Am. 7(d) Cl. 37.
Osmun and Co., Oklahoma City, Okla. 400,499, ren. 5–7–63. Cl. 46.
Packers Tar Soap, Inc., Mystic, Conn. 749,224, pub. 2–19–63. Cl. 52.
Pairotto Man-Nen-Hitsu Kabushiki Kaisha, d.b.a. The Pilot Pen Co., Ltd., Tokyo-to, Japan. 749,140, pub. 2–19–63. Cl. 37.

Palmer, J. V., Pen Co., Inc.: *See*—
Dalton-Cooper, Inc.
Parcraft Shirt Co., Inc., New York, N.Y. 642,988, canc. Cl. 39.
Park & Tilford Distillers Co.: *See*—
Schenley Distillers, Inc.
Parke, Davis & Co., Detroit, Mich. 172,227, ren. 5–7–63. Cl. 18.
Parke, Davis & Co., Detroit, Mich. 642,970, canc. Cl. 38.
Patten, Lee, Seed Co., Jersey City, N.J. 748,936, pub. 2–19–63. Cl. 6.
Pete, Harry, Mills, Tampa, Fla. 749,091, pub. 2–19–63. Cl. 28.
Pfister Chemical Works, Inc., Ridgefield, N.J. 748,948, pub. 2–19–63. Cl. 6.
Pharmaceutical Associates: *See*—
Crete, Charles A.
Philadelphia Chewing Gum Corp., Havertown, Pa. 749,249. Cl. 46.
Pierce Co., The, East Rochester, N.Y., to The Baker Castor Oil Co., Bayonne, N.J. 167,915, ren. 5–7–63. Cl. 6.
Pilot Fabrics, Inc., Pilot Mountain, N.C. 749,180, pub. 2–19–63. Cl. 42.
Pilot Pen Co., Ltd., The: *See*—
Pairotto Man-Nen-Hitsu Kabushiki Kaisha.
Pilbrico Co., Chicago, Ill. 748,966, pub. 2–19–63. Cl. 12.
Poloron Products, Inc., New Rochelle, N.Y. 642,749, canc. Cl. 3.
Positive Metals and Alloys Ltd., Toronto, Ontario, Canada. 642,767, canc. Cl. 6.
Positype Corp. of America, The, to General Aniline & Film Corp., New York, N.Y. 164,534, ren. 5–7–63. Cl. 26.
Potlatch Forests, Inc., Lewiston, Idaho. 749,144, pub. 2–19–63. Cl. 37.
Powell Knitting Co., The, Spartanburg, S.C. 171,467, ren. 5–7–63. Cl. 29.
Power Refrigeration Co., Inc., San Francisco, Calif. 749,117, pub. 2–19–63. Cl. 31.
Prairie States Oil & Grease Co., Danville, Ill. 637,606, restricted. Cl. 15.
Precision Mfg. Co.: *See*—
Forelli, Matthew.
Preload Co., Inc., The: *See*—
Preload Co., The.
Preload Co., The, Boston, Mass., to The Preload Co., Inc., Westbury, N.Y. 400,513, ren. 5–7–63. Cl. 2.
Premo Rubber Co. Ltd, Petersfield, England. 642,859, canc. Cl. 22.
Prince Matchabelli, Inc., New York, N.Y. 400,684, 12(c) pub. 5–7–63. Cl. 51.
Princess Pat Co., Chicago, Ill. 749,222, pub. 2–19–63. Cl. 51.
Procter & Gamble Co., The, Cincinnati, Ohio. 749,209, pub. 2–19–63. Cl. 46.
Pullman Inc., Wilmington, Del. 749,024, pub. 2–19–63. Cl. 19.
Pure Spring (Canada) Ltd., Ottawa, Canada. 749,196, pub. 2–2–60. Cl. 45.
R.P.B. Corp.: *See*—
Cornett, Walter V.
Race & Race, Inc., Winter Haven, Fla. 748,983, pub. 2–19–63. Cl. 13.
Ramrod Chemical Co., Chicago, Ill. 749,229, pub. 2–19–63. Cl. 52.
Reagent Chemical & Research, Inc., Middlesex, N.J. 748,934, pub. 2–19–63. Cl. 6.
Regency Creations, Inc., Greenvale, N.Y. 749,079, pub. 2–19–63. Cl. 27.
Republic Engineering & Mfg. Co., St. Louis, Mo. 749,027, pub. 2–19–63. Cl. 19.
Revillon Freres, New York, N.Y., to Revillon Freres, Paris, France. 164,858, ren. 5–7–63. Cl. 39.
Revlon, Inc., New York, N.Y. 749 267. Cl. 51.
Reynolds, William T., Temple City, Calif. 642,960, canc. Cl. 37.
Reynolds-French and Co., Tulsa, Okla. 749,232, pub. 4–4–61. Cl. 103.
Ribbontrim-Pollyanna, Inc., New York, N.Y. 643,000, canc. Cl. 40.
Richard-Allan Co., Inc., Evanston, Ill. 749,189, pub. 11–8–60. Cl. 44.
Richard-Allan Co., Inc., Evanston, Ill. 749,190, pub. 11–8–60. Cl 44.
Rippen, Kenneth H., d.b.a. Glowing Ceilings Co., New York, N.Y. 748,978, pub. 2–19–63. Cl. 12.
Roberts, M., Co.: *See*—
Roberts, Maurice.
Roberts, Maurice, d.b.a. M. Roberts Co., Cleveland, Ohio. 643,084, canc. Cl. 38.
Rockbestos Products Corp., New Haven, Conn., to Cerro Corp., New York, N.Y. 400,443, ren. 5–7–63. Cl. 21.
Roe, A. V., Canada Ltd.: *See*—
Hawker Siddeley Canada Ltd.
Ron Alvarez Camp, S.A., Santiago, Cuba. 643,043, canc. Cl. 49.
Roux Laboratories, Inc., New York, N.Y. 749,269. Cl. 51.
Royal McBee Corp., New York, N.Y. 749,052, pub. 2–19–63. Cl. 23.
Rupp Mfg., Inc., Mansfield, Ohio. 749,017, pub. 2–19–63. Cl. 19.
Russell Hosiery Mills, Inc., Star, N.C. 649,757, canc. Cl. 39.
Russell Hosiery Mill, Inc., Star, N.C. 650,960, canc. Cl. 39.
Ryan Industries, Inc., Detroit, Mich. 749,113, pub. 2–19–63. Cl. 20.
Safeway Stores, Inc., Oakland, Calif. 640,449, canc. Cl. 46.
Sand, John N., Bos. Co., Chicago, Ill. 748,921; pub. 2–19–63. Cl. 1.
Sandos Chemical Works, Inc., New York, N.Y. 642,776, canc. Cl. 6.
Sandos Chemical Works, Inc., New York, N.Y., to Sandos, Inc., Hanover, N.J. 402,905, ren. 5–7–63. Cl. 18.
Sandoz, Inc.: *See*—
Sandos Chemical Works, Inc.
San Marino Wine Corp., Brooklyn, N.Y. 749,258. Cl. 47.
Santa Paula Citrus Fruit Association, Santa Paula, Calif. 171,436, ren. 5–7–63. Cl. 46.
Sayve Corp. of America, Cincinnati, Ohio. 749,272. Cl. 100.
Schaik Chemical Co., Los Angeles, Calif. 748,977, pub. 2–19–63. Cl. 12.
Schenley Distillers, Inc., d.b.a. Park & Tilford Distillers Co., New York, N.Y. 749,260. Cl. 49.
Schield, Wm., Mfg. Co., St. Louis, Mo., to B. T. Babbitt, Inc., New York, N.Y. 168,245, ren. 5–7–63. Cl. 6.
Schneider, Dave, Wholesale Mfg. Jewelers, Long Beach, Calif. 749,088, pub. 2–19–63. Cl. 28.
Schneyer, Herbert D.: *See*—
Thicalate, Inc.
Schrieber, Gus, d.b.a. Associated Foods, to Associated Foods, Inc., Chicago, Ill. 705,373, new cert. Cl. 46.
Schuckl & Co., Inc., Sunnyvale, Calif. 749,257. Cl. 46.
Seager, Evans & Co., Ltd., London, England. 139,388, 12(c) pub. 5–7–63. Cl. 49.
Sears, Roebuck and Co., Chicago, Ill. 400,461, ren. 5–7–63. Cl. 18.
Sears, Roebuck and Co., Chicago, Ill. 748,958, pub. 2–19–63. Cl. 12.
Security Aluminum Co., Detroit, Mich. 748,976, pub. 2–19–63. Cl. 12.
Selko Filter Co.: *See*—
Celluio Co., The.
Sel-Son Electronic Tube Corp., Darby, Pa. 642,852, canc. Cl. 21.
Sethco Mfg. Corp., Merrick, N.Y. 749,115, pub. 3–28–61. Cl. 31.
Seton Products Ltd., Oldham, England. 749,195, pub. 2–19–63. Cl. 44.
Shainberg, Sam, Co., Memphis, Tenn. 749,165, pub. 2–19–63. Cl. 39.
Sheiton, J. F., Co., Memphis, Tenn. 642,938, canc. Cl. 31.
Sherwin-Williams Co., The, Cleveland, Ohio. 169,474, ren. 5–7–63. Cl. 16.
Sherwood, Rogers, Chicago, Ill. 749,245. Cl. 38.
Sichel & Fils Freres: *See*—
Sichel, H., Sons, Inc.
Sichel, H., Sons, Inc., New York, N.Y., from Sichel & Fils Freres, Stuttenberg, Bordeaux, France. 749,210 pub. 2–19–63. Cl. 47.
Simmons-Boardman Publishing Corp.: *See*—
Wray, Edward.
Skaf-Fold Corp. of America, Miami, Fla. 749,263. Cl. 50.
Skat-Rordam. Th.: *See*—
Skat-Rordam, Thomas.
Skat-Rordam, Thomas, d.b.a. Th. Skat-Rordam, Copenhagen, Denmark. 749,105, pub. 2–19–63. Cl. 28.
Smith-Douglass Co., Inc., Norfolk, Va. 749,242. Cl. 18.
Sno'n Blo: *See*—
Lerner, Lovie E.
Societe de Constructions Mecaniques Nordest, Mezieres, Ardennes, France. 749,043, pub. 9–18–62. Cl. 23.
Soehner, Andreas R., d.b.a. Truc-aire Co., Indianapolis, Ind. 642,949, canc. Cl. 34.
Sonneborn Building Products, Inc.: *See*—
Sonneborn, L., Sons Inc.
Sonneborn, L., Sons Inc., New York, N.Y., by Sonneborn Building Products, Inc., Chicago, Ill. 166,040, 12(c) pub. 5–7–63. Cl. 16.
Spare-Time Corp., Minneapolis, Minn. 399,426, ren. 5–7–63. Cl. 22.
Specifide, Inc., from Specifide, Inc., Indianapolis, Ind. 749,194, pub. 2–19–63. Cl. 44.
Spergel, Benjamin, Newark, N.J. 642,927, canc. Cl. 28.
Spra-Pak, Inc., by Gebauer Chemical Co., Cleveland, Ohio. 444,584, 12(c) pub. 5–7–63. Cl. 18.
Stamford Chemical Co., The, Stamford, Conn. 749,228, pub. 2–19–63. Cl. 52.
Stanton Instruments Ltd., London, England. 749,072, pub. 12–11–62. Cl. 26.
Statistical Tabulating Corp., Chicago, Ill. 749,231, pub. 2–19–63. Cl. 101.
Stegmaier Brewing Co., Wilkes-Barre, Pa. 749,213, pub. 2–19–63. Cl. 48.
Stein, Werner, New York, N.Y. 749,108, pub. 2–19–63. Cl. 28.
Stereoddities, Inc., Fort Lauderdale, Fla. 749,138, pub. 2–19–63. Cl. 36.
Stic-Klip Mfg. Co.: *See*—
Eckel, Oliver C.
Stic-Klip Mfg. Co., Inc.: *See*—
Eckel, Oliver C.
Stimpson, Edwin B., Co., to Edwin B. Stimpson Co., Inc., Brooklyn, N.Y. 166,400, ren. 5–7–63. Cl. 13.
Stimpson, Edwin B., Co., Inc.: *See*—
Stimpson, Edwin B., Co.
Sugardale Provision Co., The, Canton, Ohio. 749,198, pub. 3–7–61. Cl. 46.
Sun Chemical Corp.: *See*—
Grace, W. R., Co.
Sunbeam Corp.: *See*—
Chicago Flexible Shaft Co.
Sun-Bright Prod. Mfg. Co.: *See*—
Lavett, Anthony E.
Super Mold Corp. of California, Lodi, Calif. 749,060, pub. 2–19–63. Cl. 28.
Sutton, W. L., Co., Jacksonville, Fla. 749,085, pub. 2–19–63. Cl. 28.
Sweets Co. of America, Inc., The, d.b.a. The Sweets Co. of America Inc., Hoboken, N.J. 749,200, pub. 2–19–63. Cl. 46.
Sweetwater Hosiery Mills, Inc.: *See*—
Mascot Knitting Mills.
Swift & Co., Chicago, Ill. 749,208, pub. 4–17–62. Cl. 46.

Swift Slide Fastener Co., Inc., New York, N.Y. 748,984, pub. 2–19–63. Cl. 13.
Swingline Inc., Long Island City, N.Y. 749,044, pub. 2–19–63. Cl. 28.
Swiss Laboratory Inc., Cleveland, Ohio. 748,973, pub. 2–19–63. Cl. 12.
Systems Research Laboratories, Inc., Dayton, Ohio. 749,065, pub. 2–19–63. Cl. 26.
Tallby-Nason Co., Inc., Dover, Del. 748,998, pub. 11–15–60. Cl. 18.
Talos Trading Corp., Oakland, Calif. 642,991, canc. Cl. 39.
Taylor, William H., d.b.a. XX Products Co., Mount Clemens, Mich. 642,843, canc. Cl. 18.
Taylor, Fred H., Richmond, Va. 643,046, canc. Cl. 49.
Telescope Folding Furniture Co., Inc., The, Granville, N.Y. 379,451, 12(c) pub. 5–7–63. Cl. 32.
Tell Co., The: *See*—
Jadow, Benjamin.
Terrill Mfg. Co.: *See*—
Terrill Mfg. Co., Inc., The.
Terrill Mfg. Co., Inc., The, d.b.a. Terrill Mfg. Co. and as Trenstyle, San Angelo, Tex. 749,121, pub. 2–19–63. Cl. 32.
Texas Delta Development Corp., Lockhart, Tex. 643,085, canc. Cl. 34.
Thicalate, Inc., from H. D. Schneyer, d.b.a. Kreis Pharmacy Distributor's, Baltimore, Md. 749,004, pub. 2–19–63. Cl. 18.
Thompson Materials Corp., Belleville, N.J. 749,241. Cl. 6.
Thompson, William T., Co., Los Angeles, Calif. 749,199, pub. 4–4–61. Cl. 46.
Thor Power Tool Co., Aurora, Ill. 749,134, pub. 2–19–63. Cl. 35.
Tilton Textile Corp., New York, N.Y. 749,183, pub. 2–19–63. Cl. 42.
Timber Structures, Inc., Portland, Oreg. 748,954, pub. 2–19–63. Cl. 12.
Towne and King, Inc., Redwood City, Calif. 749,154, pub. 1–16–62. Cl. 39.
Trans World Airlines, Inc., New York, N.Y. 749,235, pub. 2–19–63. Cl. 105.
Travco Plastics Co., Inc., Brooklyn, N.Y. 749,119, pub. 2–19–63. Cl. 32.
Trendline Furniture Corp., Kendallville, Ind. 642,941, canc. Cl. 32.
Trenstyle: *See*—
Terrill Mfg. Co. Inc., The.
Trio Chemical Works, Inc., Brooklyn, N.Y. 749,227, pub. 2–19–63. Cl. 52.
Truc-aire Co.: *See*—
Soehner, Andreas R.
Trussdeck Corp., Boise, Idaho. 748,964, pub. 2–19–63. Cl. 12.
Tuchman Cleaners Cooperative Advertising Plan, Inc., Indianapolis, Ind. 749,273. Cl. 103.
Tucker Aluminum Products, Inc., Hialeah, Fla. 748,959, pub. 2–19–63. Cl. 12.
Tyler, W. S., Co., The, Cleveland, Ohio. 749,051, pub. 2–19–63. Cl. 28.
Tylon Products, Inc., New York, N.Y. 405,191, canc. Cl. 6.
Ullmann, Bernhard, Co., Inc., by Indian Head Mills, Inc., New York, N.Y. 162,394, 12(c) pub. 5–7–63. Cl. 38.
Ultek Corp., Palo Alto, Calif. 749,042, pub. 2–19–63. Cl. 23.
Underwood, William, Co., Watertown, Mass. 741,376, cor. Cl. 46.
Uneeda Doll Co., Inc., Brooklyn, N.Y. 749,037, pub. 2–19–63. Cl. 22.
Uneeda Doll Co., Inc., Brooklyn, N.Y. 749,039, pub. 2–19–63. Cl. 22.
Unexcelled Chemical Corp.: *See*—
Colgate-Palmolive Co.
Unit Crane & Shovel Corp.: *See*—
Universal Unit Power Shovel Corp.
United Sanitary Chemicals Co., Inc., Baltimore, Md. 748,930, pub 2–19–63. Cl. 4.
U.S. Industries, Inc., New York, N.Y. 749,074, pub. 2–19–63. Cl. 20.
U.S. Vitamin & Pharmaceutical Corp., New York, N.Y. 749,006, pub. 2–19–63. Cl. 18.
United States Rubber Co., New York, N.Y. 402,282, ren. 5–7–63. Cl. 6.
Universal Scientific Co., Inc., Vincennes, Ind. 749,219, pub. 2–19–63. Cl. 50.
Universal Unit Power Shovel Corp., to Unit Crane & Shovel Corp., Milwaukee, Wis. 401,112, ren. 5–7–63. Cl. 23.
Valmor Products Co., Chicago, Ill. 749,265. Cl. 51.
Valor Enterprises Inc., Royal Oak, Mich. 749,029, pub. 1–8–63. Cl. 21.
Vanderbilt, R. T., Co., Inc., New York, N.Y. 748,937, pub. 2–19–63. Cl. 6.
Verdolyack, A. G., Inc.: *See*—
Verdolyack, Arthur G.
Verdolyack, Arthur G., Minneapolis, Minn., to A. G. Verdolyack, Inc., Kalamazoo, Mich. 402,953, ren. 5–7–63. Cl. 37.
Vitamix Pharmaceuticals, Inc., Philadelphia, Pa. 749,012–13, pub. 2–19–63. Cl. 18.
Volmer Bahner & Co. A/S, Copenhagen, Denmark. 749,106, pub. 2–19–63. Cl. 28.
Vorwerk & Co., Wuppertal-Barmen, Germany. 749,177, pub. 2–19–63. Cl. 42.
W.E.S.T. Wine and Spirits Trade Ltd., d.b.a. Migdal Distillery Co., Tel Aviv, Israel. 749,214, pub. 2–19–63. Cl. 49.
Wallace, R., & Sons Mfg. Co., Wallingford, Conn. 642,891, canc. Cl. 23.
Walter Kidde & Co., Inc., Belleville, N.J. 749,061, pub. 2–19–63. Cl. 23.
Warenzeichenverband fur Kunststofferzeugnisse der Deutschen Demokratischen Republik e. V. Rudolstadt, Thuringia, Germany. 749,187, pub. 2–19–63. Cl. 43.
Waste King Corp., Los Angeles, Calif. 748,981, pub. 2–19–63. Cl. 13.
Weatherbee Coats, Inc., New York, N.Y. 749,156, pub. 2–19–63. Cl. 39.
Weatherbee Coats, Inc., New York, N.Y. 749,158, pub. 2–19–63. Cl. 39.
Webb, Jervis B., Co., Detroit, Mich. 749,056, pub. 2–19–63. Cl. 23.
Wella Corp., The, Englewood, N.J. 656,218, canc. Cl. 51.
West Chester Paper Supply Co.: *See*—
Elinsky, John L.
West Virginia Pulp and Paper Co., New York, N.Y. 642,958, canc. Cl. 37.
White Laboratories, Inc.: *See*—
Galen Co.
Health Products Corp.
Whiting-Plover Paper Co., Stevens Point, Wis. 749,143, pub. 2–19–63. Cl. 37.
Williams, John N., New York, N.Y. 642,993, canc. Cl. 39.
Wilver Hill Corp., Riverside, N.J. 643,016, canc. Cl. 46.
Winning-Rattner Co., Inc., New York, N.Y. 436,991, canc. Cl. 39.
Wiss, J., & Sons Co., Newark, N.J. 749,045, pub. 2–19–63. Cl. 23.
Wiss, J., & Sons Co., Newark, N.J. 749,054, pub. 2–19–63. Cl. 23.
Wolman, Philip, & Co., Los Angeles, Calif. 749,089, pub. 2–19–63. Cl. 28.
Wonder-View Mfg. Co., Ltd., Tokyo, Japan. 749,146, pub. 2–19–63. Cl. 38.
Wood Conversion Co., St. Paul, Minn. 749,176, pub. 12–18–62. Cl. 42.
Wood Ridge Chemical Corp.: *See*—
Hamilton Laboratories, Inc., The.
Wooster Brush Co., The, Wooster, Ohio. 749,181, pub. 2–19–63. Cl. 42.
Wray, Edward, Chicago, Ill., by Simmons-Boardman Publishing Corp., New York, N.Y. 168,952, 12(c) pub. 5–7–63. Cl. 38.
Wright Aeronautical Corp., Paterson, N.J. 268,812, canc. Cl. 23.
Wrigley, Wm., Jr. Co., to Wm. Wrigley Jr. Co., Chicago, Ill. 167,091, ren. 5–7–63. Cl. 46.
Wrought Washer Mfg. Co., Milwaukee, Wis. 748,982, pub. 11–20–62. Cl. 13.
Wyn-mor Race Computers, Manhattan Beach, Calif. 749,075, pub. 2–19–63. Cl. 26.
XX Products Co.: *See*—
Taylor, William H.
Xttrium Laboratories, Inc., d.b.a. Blue Ridge Vitamin Co., Chicago, Ill. 749,008, pub. 12–11–62. Cl. 18.
Yates Drug Co., Inc., New York, N.Y. 642,837, canc. Cl. 18.
Yeffeth, S., Jewelry Inc., New York, N.Y. 749,087, pub. 2–19–63. Cl. 28.
Youthcraft Creations, Inc., New York, N.Y. 749,166–8, pub. 2–19–63. Cl. 39.
Zale Jewelry Co., Inc., Dallas, Tex. 749,090, pub. 2–19–63. Cl. 28.
Zickerman, Harry, & Co., New York, N.Y., 642,928, canc. Cl. 28.
Ziegler, Harold J., and Co., Inc., Chicago, Ill. 749,102, pub. 2–19–63. Cl. 28.
Zoltovska, Maria, Born Frankl, Paris, France. 749,081, pub. 5–15–62. Cl. 28.

U.S. GOVERNMENT PRINTING OFFICE: 0—1963

U.S. DEPARTMENT OF COMMERCE
OFFICIAL GAZETTE of the UNITED STATES PATENT OFFICE
May 14, 1963 Volume 790 Number 2

PATENTS
NOTICES

Board of Appeals Decisions Rendered in the Month of March 1963

Examiner affirmed	341
Examiner affirmed in part	63
Examiner reversed	80
Total	484

Order of Examination

Recent instructions to the Examining Corps include:

Cases in which practice requires that the Examiner act within 60 days, such as decisions on motion (M.P.E.P. 1105.06) and Examiner's answers (M.P.E.P. 1208), necessarily take priority over special cases without specific time limits. Such cases should be taken up for action at least 30 days before the 60-day period expires, to guarantee completion within the 60-day limit.

Shortened Statutory Period

Such a period has now been authorized (1) upon reopening a case consequent to a Quality Control review, (2) when restriction is required and the action does not include a rejection of any claim and (3) when multiplicity is the only ground of rejection relied upon.

Quality Control

The new Quality Control procedure will occasionally require further action in an application wherein the applicant already has been led to believe orally or otherwise that the prosecution has been closed by allowance or by some other action.

Change Notices 1—11 and 1—12, soon to be issued to all subscribers to the Manual of Patent Examining Procedure (3rd edition), include these changes in procedure.

HAROLD B. WHITMORE,
Apr. 17, 1963. *Superintendent of the Examining Corps.*

Adjudicated Patents

(C.A.N.Y.) Stiegele Patent No. 2,689,450 (59—79), for expansible bracelet. Claims 1, 2 and 5 to 9 *Held* valid and infringed. *Stiegele* v. *J. M. Moore Import Export Co.*, 312 F.2d 588: 136 USPQ 230.

(C.A.N.Y.) Simon Patent No. 2,778,420 (83—549), for tape splicing device. Claims 1 to 5 *Held* invalid. *Robins Industries Corp.* v. *David Reimer Co., Inc.*, 312 F.2d 889; 136 USPQ 235.

(C.A. Iowa) Harmon Patent No. 2,781,278 (117—36.1), for method of printing carbon transfer ink in a spaced design on paper. Claims 1 to 4 *Held* invalid. *Rota-Card Corp.* v. *Frye Mfg. Co.*, 313 F.2d 443; 136 USPQ 507.

(C.A. Ill.) Stiffel Patent No. 2,793,286 (240—52), for lighting fixture, *Held* invalid. *Stiffel Co.* v. *Sears, Roebuck & Co.*, 313 F.2d 115; 136 USPQ 292.

(C.A. Oreg.) Hoffar Patent No. 2,859,830 (181—49), for vibrating flexible silencers, *Held* invalid. *Griffith Rubber Mills* v. *Hoffar*, 313 F.2d 1; 136 USPQ 334.

(C.A. Oreg.) Hoffar Patent No. 2,877,860 (181—50), for vibrating flexible silencers, *Held* invalid. *Id.*

(C.A. Ala.) Haugen & Henriksen Patent No. 2,953,398 (277—178), for pipe joint, *Held* valid and infringed. *James B. Clow and Sons, Inc.* v. *U.S. Pipe and Foundry Co.*, 313 F.2d 46; 136 USPQ 397.

(C.A. Ill.) Stiffel Design Patent No. 180,251 (48—19), for lighting fixture, *Held* invalid. *Stiffel Co.* v. *Sears, Roebuck & Company*, 313 F.2d 115; 136 USPQ 292.

(D.C.N.Y.) First and Milton Patent No. 2,835,874 (333—79), for electric interference suppression filter, *Held* invalid. *J. and G. Development Co.* v. *All-Tronics Inc.*, 213 F. Supp. 723; 136 USPQ 118.

Patents Available for Licensing or Sale

2,837,939. Hand Drill Stand. Linn J. Leitner, 1432 Pineda Ave., Cocoa, Fla.

3,080,162. Mitered Casing Clamp. Arthur Sam Smith, 1924 Adirondack St., Duluth 11, Minn.

3,082,575. Container Assembly for Plant Husbandry. Kathryn M. Schulz, 1714 Fairfield Road N., Minneapolis 12, Minn.

3,084,775. Centrifugal Clutch. George C. D. Magnavita, 868 E. Lincoln Hwy., Longhorne, Pa.

General Electric Company is prepared to grant non-exclusive licenses under the following 13 patents upon reasonable terms to domestic manufacturers.

Applications for license under the following 7 patents may be addressed to: General Electric Company, Transformer Division, 100 Woodlawn Ave., Pittsfield, Mass. Attn: Patent Counsel.

2,835,019. Method for Casting Ceramic Shapes.
2,958,058. High Voltage Transformer.
2,984,887. Apparatus for Manufacturing Ceramics.
3,067,488. Welded Structure and Welding Process for Making the Same.
3,073,720. Method of Protecting Metal From Corrosion.
3,075,299. Cooling Device.
3,076,167. Manual By-Pass for Meter Socket.

New Applications Received During March 1963

Patents	7,252
Designs	462
Plant Patents	9
Reissues	24
Total	7,747

Issue

Patents	902	No. 3,089,143 to No.	3,090,044, incl.
Designs	58	No. 195,189 to No.	195,246, incl.
Reissues	6	No. 25,383 to No.	25,388, incl.
Total	966		

Applications for license under the following 6 patents may be addressed to: General Electric Company, Patent Counsel, Instrument Department, 40 Federal St., West Lynn, Mass.

2,914,712. Electric Instrument.

2,916,702. Logarithmic Ratio Meter.

2,973,480. Non-Linear Scale Electrical Measuring Instrument.

2,995,975. Photoelectric Exposure Meter.

2,998,571. Voltmeter.

3,028,499. Expanded Scale Photoelectric Device.

Disclaimer

2,978,354.—*David K. Lesser*, Wilmington, Del. METHOD OF APPLYING A COATING. Patent dated Apr. 4, 1961. Disclaimer filed Mar. 25, 1963, by the inventor.

Hereby enters this disclaimer to claims 3 and 4 of said patent.

Errata

In the OFFICIAL GAZETTE, issue of Jan. 22, 1963, List of Patentees, p. xvii, column 2, line 64, for "McGowan, John F., Jr., and Marotta. 3,074,803." read:

National Starch and Chemical Corp.: See—
McGowan, John F., Jr., and Marotta. 3,074,803.

In the OFFICIAL GAZETTE, issue of Mar. 19, 1963, List of Patentees, p. xv, column 2, line 23, for "Kelly, Brendan K., Miller, and Codner. 3,082,155." read:

National Research Development Corp.: See—
Kelly, Brendan K., Miller, and Codner. 3,082,155.

In the OFFICIAL GAZETTE, issue of Apr. 2, 1963, List of Patentees, p. iii, column 1, line 80, under "American Cyanamid Co.: See—" insert *Kuck, Julius A., and Beurdeiois. 3,084,031.*

PATENT EXAMINING CORPS

H. B. WHITMORE, Superintendent

PATENT EXAMINING OPERATIONS AND GROUPS	Oldest Application: New	Oldest Application: Amended
CHEMICAL EXAMINING OPERATION—P. E. MANGAN, Director.		
GENERAL CHEMISTRY, GROUP 110—R. L. CAMPBELL, Supervisory Examiner	7-12-61	7-27-61
Inorganic and Organo-metal (formerly Div. 59)—M. A. Brindisi.		
Metallurgy (formerly Div. 3).		
Electrochemistry (formerly Div. 56)—J. R. Speck.		
GENERAL ORGANIC CHEMISTRY, GROUP 120—I. MARCUS, Supervisory Examiner	12-28-61	11-15-61
Heterocyclic (formerly Div. 6)—H. J. Lidoff.		
Specialized Organic Compounds (formerly Div. 38)—C. B. Parker.		
Medicines (formerly Div. 45).		
PETROLEUM CHEMISTRY, GROUP 130—J. S. BAILEY, Supervisory Examiner	12-6-61	10-20-61
Hydrocarbons (formerly Div. 31).		
Oxo- and Oxy-Derivatives.		
HIGH POLYMER CHEMISTRY, GROUP 140—M. STERMAN, Supervisory Examiner	5-6-61	4-26-61
High Polymer Preparation (formerly Div. 60).		
Mixed High Polymers and Natural Resins (formerly Div. 50).		
COMPOSITIONS AND MOLDING, GROUP 150—L. H. GASTON, Supervisory Examiner	10-9-61	10-17-61
Coating Compositions and Molding.		
Special Utility Compositions (formerly Div. 64)—J. Greenwald.		
COATING AND LAMINATING, GROUP 160—I. G. STONE, (J. REBOLD, Acting) Supervisory Examiner	10-13-61	10-2-61
Coating Methods and Apparatus (formerly Div. 25)—R. D. Nevius.		
Laminating and Stock Materials (formerly Div. 67).		
SPECIALIZED CHEMICAL ARTS AND INDUSTRIES, GROUP 170—W. B. KNIGHT, Supervisory Examiner	9-7-61	9-27-61
Specialized Chemical Arts (formerly Div. 63)—A. H. Winkelstein.		
Reactors and Miscellaneous Industrial Processes.		
CHEMICAL ENGINEERING, GROUP 180—G. D. MITCHELL, Supervisory Examiner	10-31-61	12-12-61
Gases, Liquids and Solids Separating (formerly Div. 32)—H. L. Martin.		
Distillation, Drying and Physical Processes.		
ELECTRICAL EXAMINING OPERATION—N. H. EVANS, Director.		
POWER, GROUP 210—M. L. LEVY, Supervisory Examiner	9-15-61	8-31-61
Generation and Utilization (formerly Div. 26)—O. L. Rader.		
General Applications (formerly Div. 48)—S. Bernstein.		
Conversion and Distribution (formerly Div. 71)—L. McCollum.		
Heating and Related Art (formerly Div. 76)—R. M. Wood.		
SECURITY, GROUP 220—S. BOYD, Supervisory Examiner	11-1-61	10-4-61
Chemical (formerly Div. 46).		
Electrical (formerly Div. 44)—C. L. Justus.		
Mechanical (formerly Div. 10).		
INFORMATION TRANSMISSION, GROUP 230—S. W. CAPELLI, Supervisory Examiner	10-19-61	10-12-61
Communications (formerly Div. 16)— R. H. Rose.		
Multiplexing Techniques (formerly Div. 77)—D. G. Redinbaugh.		
Facsimile and Related Art (formerly Div. 41)— R. Lake.		
INFORMATION STORAGE AND RETRIEVAL, GROUP 240—W. W. BURNS, Supervisory Examiner	8-25-61	9-7-61
Processing and Related Art (formerly Div. 68)—M. A. Morrison.		
Storage Devices and Related Art (formerly Div. 42)—I. Sragow.		
ELECTRONIC COMPONENT SYSTEMS AND DEVICES, GROUP 250—B. G. MILLER, Supervisory Examiner	9-21-61	9-18-61
Semi-Conductor and Space Discharge Systems and Devices (formerly Div. 51)—G. N. Westby.		
Electronic Component Circuits (formerly Div. 72)—A. Gauss.		
Wave Transmission Lines and Networks (formerly Div. 65)—H. K. Saalbach.		
RADIATION AND INSTRUMENTS, GROUP 260—F. M. STRADER, Supervisory Examiner	9-20-61	9-13-61
Optics (formerly Div. 73)—J. H. Pedersen.		
Radiant Energy (formerly Div. 54)—R. G. Nilson.		
Measuring (formerly Div. 74)—W. L. Carlson.		
ELEMENTS, GROUP 270—E. J. SAX, Supervisory Examiner	9-27-61	9-22-61
Conductors (formerly Div. 75)—J. P. Wildman.		
Switches (formerly Div. 37)—B. A. Gilheany.		
Miscellaneous (formerly Div. 78)—J. F. Burns.		
MECHANICAL ENGINEERING EXAMINING OPERATION—R. A. WAHL, Director.		
GENERAL ENGINEERING AND INDUSTRIAL ARTS EXAMINING OPERATION—J. A. MANIAN, Director.		

INTERIM PATENT EXAMINING GROUPS AND SUPERVISORY EXAMINERS	
(III) MADER, R. C.—MECHANICAL MANUFACTURING, MACHINE ELEMENTS AND DESIGNS	2, 12, 13, 14, 21, 24, 57, 58, 61, 81, 82.
(IV) NINAS, G. A.—MATERIAL HANDLING AND TREATING, OPTICS, RAILWAYS AND AMUSEMENT DEVICES.	7, 11, 17, 27, 34, 35, 39, 53, 62.
(V) EVANS, R. L.—STATIC STRUCTURES AND INSTRUMENTS OF PRECISION	5, 8, 20, 29, 33, 36, 49, 52, 66.
(VI) MANIAN, J. A.—AGRICULTURE, CALCULATORS, PUMPS AND MOTORS, TRANSPORTATION	1, 4, 9, 18, 22, 23, 28, 45, 47.
(VII) BENDETT, B.—HEATING AND COOLING, PLASTIC SHAPING AND COATING, SEPARATION AND MIXING, BODY TREATMENT AND CARE.	15, 19, 30, 40, 55.
(CLASSIFICATION) GORECKI, G. A.—ARTS UNDERGOING RECLASSIFICATION AS LISTED UNDER CLASSIFICATION DIVISIONS.	91, 92, 93, 94, 95.

DIVISIONS, EXAMINERS AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application as of Mar. 31, 1963	
	New	Amended
1. (VI) GOLDBERG, A. J., Brakes; Planting; Plant Husbandry; Scattering Unloaders; Earth Working	4-9-62	1-25-62
2. (III) STONE, A., Fishing, Trapping and Vermin Destroying; Presses; Tobacco; Textile Wringers; Buckles, Buttons and Clasps		
4. (VI) FALLER, E. A., Material or Article Handling	3-12-62	3-22-62
5. (V) ROBINSON, C. W., Harvesters; Unearthing Objects; Threshing; Knotters; Animal Husbandry; Bee Culture; Dairy; Butchering; Vegetable and Meat Cutters and Comminutors; Fences; Gates; Signals and Indicators; Acoustics; Music (part), Sound Recording and Reproducing	4-17-62	4-9-62
7. (IV) ANDERSON, E. G., Optics (part), (i.e. Kaleidoscope, Motion Picture Apparatus and Optical Projectors, Build-Lights); Recorders	1-2-62	1-4-62
8. (V) SHERRY, F. B. (acting), Beds; Chairs and Seats; Cabinets; Tables; Miscellaneous Furniture; Fire Escapes; Ladders; Deposit and Collection Receptacles; Scaffolds	4-4-62	5-25-62
9. (VI) BRANSON, J. H., Pumps; Fans	4-4-62	6-4-62
11. (IV) BENHAM, E. V., Boots, Shoes and Leggings; Shoe and Leather Manufacture; Button, Eyelet and Rivet Setting; Nailing, Stapling and Clip Clenching; Card, Picture and Sign Exhibiting; Cutlery; Pipes and Tubular Conduits	3-26-62	4-17-62
12. (III) DURHAM, B. G., Machine Elements; Engine Starters; Interrelated Clutch and Motor Controls	12-4-61	11-27-61
13. (III) DYER, W. W., Jr. (acting), Gear Cutting; Electric Lamp and Tube Manufacture; Needle and Pin Making; Metal Working (part), e.g., Special Work, Forging, Plastic Working, Drawing, Sawing, Milling, Planing, Turning	12-27-61	12-13-61
14. (III) WILTZ, W. A., Metal Working (part), e.g., Sheet Metal; Metal Bending, Miscellaneous Processes, Assembly and Disassembly Apparatus; Wire Fabrics	11-9-61	9-8-61
15. (VII) BRINDISI, M. V., Plastics; Plastic Block and Earthenware Apparatus	3-9-62	3-12-62
17. (IV) LEIGHEY, R. A., Packaging; Typewriters; Printing; Type Casting and Setting; Sheet Material Associating or Folding; Sheet Feeding or Delivering	1-12-62	10-31-61
18. (VI) BLUM, A. (LEVINE, S., acting), Power Plants; Fluid Transmissions; Servomotor Systems; Jet Motors; Combustion Turbines; Measuring Speed or Acceleration Power Driven Conveyors	2-13-62	2-9-63
19. (VII) PATRICK, P. L., Stoves and Furnaces; Boilers; Fluid Fuel Burners; Heating Systems; Miscellaneous Heating; Automatic Temperature and Humidity Regulation; Illuminating Burners	11-9-61	12-11-61
20. (V) SEERS, J. D., Miscellaneous Hardware; Closure Fasteners; Locks; Safes; Bank Protection; Bread, Pastry and Confection Making; Tents and Canopies; Umbrellas; Cranes; Undertaking; Electrical Connectors	3-1-62	2-21-62
21. (III) MADER, R. C., Textiles	1-24-62	12-21-61
22. (VI) BUCHLER, M. B., Aeronautics; Boats; Buoys; Ships; Marine Propulsion; Propellers; Windmills; Fluid Diaphragms and Bellows	3-14-62	3-26-62
23. (VI) SMILOW, L., Calculators; Bookkeeping Machines; Cash and Fare Registers; Voting Machines; Counters; Education; Weighing Scales	5-7-62	4-27-62
24. (III) HICKEY, T. J., Apparel (except Corsets and Brassieres); Apparel Apparatus; Sewing Machines; Textiles, Ironing or Smoothing; Clutches and Power-Stop Control; Work Holders	3-1-62	3-5-62
27. (IV) WILLMUTH, C. A. (acting), Brushing, Scrubbing and General Cleaning; Brush, Broom and Mop Making; Textiles, Fluid Treating Apparatus; Cleaning and Liquid Contact With Solids	4-12-62	4-10-62
28. (VI) BRAUNER, R. H., Internal Combustion Engines; Expansible Chamber Motors; Fluid Servomotors; Spring Motors; Cylinders; Pistons; Drive Shafts; Flexible-Shaft Couplings; Chucks or Sockets; Fluid Current Conveyors; Wheel Substitutes; Hoists; Elevators; Pneumatic Dispatch; Store Service; Chutes	1-3-62	3-16-62
29. (V) SCHEEL, W. A. (acting), Tools; Woodworking; Button, Barrel and Wheel Making; Baggage; Cloth, Leather and Rubber Receptacles; Package and Article Carriers; Valved Pipe Couplings; Joint Packings; Tool-Handling Fastenings	2-8-62	3-14-62
30. (VII) O'LEARY, R. A., Comminutors; Refrigeration; Fluid Sprinkling, Spraying and Diffusing, Separating and Assorting Solids (part)	2-7-62	2-9-62
33. (V) MUSHAKE, W. L., Bridges; Hydraulic and Earth Engineering; Roads and Pavements; Building Structures	12-13-61	12-8-61
34. (IV) QUACKENBUSH, L., Railways—Draft Appliances, Switches and Signals, Surface Track, Rolling Stock, Track Sanders; Electricity, Transmission to Vehicles; Dumping Vehicles; Vehicle Fenders; Hand and Hoist Line Implements; Agitating	11-9-61	11-13-61
35. (IV) DEMBO, L. J., Dispensing; Filling Receptacles; Toilet; Severing by Tearing or Breaking; Coin Controlled Apparatus; Dispensing Cabinets; Article Dispensing; Coin Handling	3-7-62	1-22-62
36. (V) EVANS, R. L., Measuring and Testing (part)	2-1-62	2-6-62
39. (IV) WEIL, I., Fluid-Pressure Regulators; Valves; Fluid Handling (except Pressure Modulating Relays, Float Valves, Diaphragms and Bellows)	1-25-62	2-7-62
40. (V) DRUMMOND, E. J., Receptacles—Metallic, Paper, Wooden, Glass; Special Receptacles and Packages	3-8-62	2-19-62
45. (VI) RIORDON, R. C. (acting), Wheels, Tires and Axles; Railway Wheels and Axles; Lubrication; Bearings and Guides; Belt and Sprocket Gearing; Spring Devices; Animal Draft Appliances; Excavating	4-6-62	6-1-62
47. (VI) ARNOLD, P., Mining, Quarrying, and Ice Harvesting; Motor Vehicles: Land Vehicles	3-8-62	3-6-62
49. (VII) BENDETT, B., (O'CONNELL, C. E., acting), Drying and Gas or Vapor Contact With Solids; Ventilation; Wells; Concentrating Evaporators; Earth Boring	1-8-62	1-19-62
52. (V) LE ROY, C. A., Supports and Racks; Separating and Assorting Solids (part)	5-15-62	5-24-62
53. (IV) NINAS, G. A., Books and Book Making; Manifolding; Printed Matter; Stationery; Paper Files and Binders; Flexible or Portable Closures, or Partitions; Doors, Windows, Awnings, and Shutters; Harness; Whip Apparatus; Food Apparatus; Closure Operators; Illumination		
55. (VII) FRANKLIN, J. (acting), Surgery; Dentistry; Artificial Body Members	1-30-62	3-16-62
57. (III) TOMLIN, C. W. (acting), Bolt, Nut, Rivet, Nail, Screw, Chain, and Horseshoe Making; Driven and Screw Fastenings; Nut and Bolt Locks; Jewelry; Pipe Joints or Couplings; Cutting	12-28-61	12-11-61
58. (III) BRONAUGH, F. H., Rolls and Rollers; Making Metal Tools and Implements; Stone Working; Abrading Processes and Apparatus; Baths, Closets, Sinks, and Spittoons; Boring and Drilling; Paper Manufacture; Selective Cutting	6-12-62	6-12-62
61. (III) STRIZAK, J. P., Winding and Reeling; Pushing and Pulling; Horology; Railway Mail Delivery; Feeding of Indefinite Lengths	4-16-62	4-23-62
62. (IV) LOWE, D. B., Games; Toys; Amusements and Exercising Devices; Mechanical Guns and Projectors; Photographic Apparatus	1-19-62	1-2-62
66. (V) LISANN, I., Geometric Instruments; Measuring and Testing (part)	11-6-61	11-7-61
81. (III) HANNAH, A. B., Industrial Arts	11-1-62	10-31-62
82. (III) HUNTER, E. H., Household, Personal and Fine Arts	11-29-62	12-11-62
91. BAILEY, J. S., Glass Manufacturing		
92. GAUSS, H.		
98. PURDY, W. F. (acting), Wire Working	5-3-62	3-1-62
94. BERLOWITZ, W., Motors, Fluid	7-6-62	7-23-62
96. ANGEL, C. D., (REZNEK, J., acting), Metallic Building Structures	12-11-61	12-18-61

CONDITION OF PATENT APPLICATIONS AS OF MARCH 31, 1963

Total number of pending applications (excluding Designs)	192, 888
Total number of Design applications pending	5, 875
Total number of applications awaiting action (excluding Designs)	111, 125
Total number of Design applications awaiting action	2, 014
Date of oldest new application awaiting action	May 8, 1961
Date of oldest amended application awaiting action	April 26, 1961

EXPIRATION OF PATENTS

The patents within the range of numbers indicated below expire during May 1963, except those which may have been extended under the Provisions of the Veterans Patent Extension Act (64 Stat. 316 as amended by 66 Stat. 321) and those which may have expired earlier due to shortened terms under the provisions of Public Law 600. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1963*

Patents ..... Numbers 2,309,611 to 2,401,291, inclusive

Plant Patents ..... Numbers 688 to 692 inclusive

DECISIONS IN PATENT AND TRADEMARK CASES

U.S. Court of Customs and Patent Appeals

PRICE-PFISTER BRASS MFG. CO. *v.* MILWAUKEE FAUCETS, INC.

No. 6886. Decided January 16, 1963

[50 CCPA —; 311 F.2d 817; 136 USPQ 215]

1. TRADEMARK—CONFUSING SIMILARITY—"ADJUSTO" AND "ADJUSTA-FIT."

In an opposition by appellee, the registrant of "ADJUSTO" for shower fixtures, control valves and spray heads, to appellant's application to register "ADJUSTA-FIT" for manually operated valves for tubs and showers, *Held* that "With respect to appearance, meaning, and sound, the dominant portions of the trademarks differ from each other by the substitution in the suffix portions of an 'A' in appellant's mark for the 'O' in appellee's mark and the addition of the descriptive term 'FIT' to appellant's mark"; that "We think these differences do not obviate the likelihood of confusion, mistake or deception of purchasers arising from appellant's use of its mark on its goods"; and that "The addition of the term 'FIT' to appellant's mark creates an impression that it might well be related appellee's 'ADJUSTO' family of goods."

2. SAME—SAME—THIRD-PARTY REGISTRATIONS.

"Appellant has introduced into the record six third-party registrations in an effort to substantiate the position that appellee is not entitled to such rights in the word 'ADJUSTO' as to justify sustaining the opposition. All of these registrations were issued subsequent to the date of appellee's registration and no one of them contains an alleged date of first use prior to that of appellee. The goods to which such third-party registrations relate are of different descriptive properties than the goods upon which the appellant and appellee use their respective marks. Under these circumstances, they are not sufficient evidence of a lack of distinctiveness to overcome the likelihood of confusion between 'ADJUSTO' and 'ADJUSTA-FIT' when applied to the respective goods here."

APPEAL from the Patent Office. Opposition No. 38,739.

AFFIRMED.

Boris Haskell for appellant.

William A. Lieber, Lieber, Lieber & Nilles for appellee.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, SMITH, and ALMOND, JR., *Associate Judges*

SMITH, *J.*, delivered the opinion of the court.

This is an appeal from the decision of the Trademark Trial and Appeal Board, 131 USPQ 492, sustaining appellee's opposition instituted under section 13 of the Trademark Act of 1946 (15 U.S.C. 1063), to appellant's application [1] for registration of the trademark "ADJUSTA-FIT" for manually operated valves for tubs and showers. Appellee is the owner of the registered trademark [2] "ADJUSTO" for shower fixtures, control valves and spray heads. Appellee, relying solely on its registration to support its opposition, took no testimony.

Appellant's right to the registration sought is contested under section 2(d) of the Trademark Act of 1946 (15 U.S.C. 1052), which provides that a trademark shall not be registered if it "consists of or comprises a mark which so resembles a mark registered in the Patent Office * * * by another and not abandoned, as to be likely, when applied to the goods of the applicant, to cause confusion or mistake or to deceive purchasers * * *." Appellee's ownership of the registered mark, its past and continuing use by appellee and its predecessors in the United States have not been challenged. The single issue therefore is whether the mark which appellant seeks to register so resembles appellee's registered mark as to be barred by the provisions of section 2(d) of the Trademark Act of 1946.

[1] Ser. No. 56,794, filed Aug. 7, 1958, alleging a date of first use of July 23, 1958.
[2] No. 350,025, issued Sept. 14, 1937, and subsequently republished and renewed.

The record establishes that both parties are manufacturers and sellers of plumbing supplies and equipment and that the goods of the respective parties are sold and distributed through the same sources and trade channels and to the same classes of purchasers. Appellee's trademark "ADJUSTO" is used in connection with "shower fixtures, control valves, and spray heads" as set forth in its registration. Appellant's trademark "ADJUSTA-FIT" which it seeks to register is used in connection with "manually operated valves for tubs and showers" as set forth in its application. In addition, the testimony of appellant's witnesses establishes the fact that the goods of both the appellant and appellee as sold under their respective marks are used in conjunction with tub fillers such as showers and faucets installed in bathrooms both in new homes and in homes which are being remodeled.

[1] With respect to appearance, meaning, and sound, the dominant portions of the trademarks differ from each other by the substitution in the suffix portions of an "A" in appellant's mark for the "O" in appellee's mark and the addition of the descriptive term "FIT" to appellant's mark. We think these differences do not obviate the likelihood of confusion, mistake or deception of purchasers arising from appellant's use of its mark on its goods. The addition of the term "FIT" to appellant's mark creates an impression that it might well be related to appellee's "ADJUSTO" family of goods.

[2] Appellant has introduced into the record six third-party registrations in an effort to substantiate the position that appellee is not entitled to such rights in the word "ADJUSTO" as to justify sustaining the opposition. All of these registrations were issued subsequent to the date of appellee's registration and no one of them contains an alleged date of first use prior to that of appellee. The goods to which such third-party registrations relate are of different descriptive properties than the goods upon which the appellant and appellee use their respective marks. Under these circumstances, they are not sufficient evidence of a lack of distinctiveness to overcome the likelihood of confusion between "ADJUSTO" and "ADJUSTA-FIT" when applied to the respective goods here.

While the facts and circumstances vary to such an extent in trademark decisions as to render prior decisions of limited value, we think the facts and circumstances of this case warrant repetition here of our observations in *Wincharger Corporation* v. *Rinco, Inc.*, 49 CCPA 849, 297 F.2d 261; 132 USPQ 289 as follows:

> Obviously, the only difference between WINCO and RINCO is the first letter. It is our opinion that this difference is not significant. Although the words are not identical, we believe that they are so similar that purchasers would be compelled to exercise extreme caution not to mistake one for the other. It should be remembered that purchasers usually do not have the opportunity to simultaneously compare two marks but must recall one or the other separately at different times which in this situation would make the avoidance of error quite difficult. Therefore, we believe that if the goods are similar the marks would cause confusion among purchasers.
>
> * * * * * * * *
>
> It is true that in most instances technicians would use the products of either party and they are a discriminating group of people but that does not eliminate the likelihood of purchaser confusion here. Being skilled in their own art does

not necessarily preclude their mistaking one trademark for another when the marks are as similar as those here in issue, and cover merchandise in the same general field.

We therefore agree with the Trademark Trial and Appeal Board that "the marks 'ADJUSTO' and 'ADJUSTA-FIT' are quite similar in sound and they create substantially the same commercial impressions." We agree also with its conclusion that "their contemporaneous use for goods as closely related in character as those here involved would be quite likely to result in purchaser confusion, mistake or deception."

AFFIRMED.

U.S. Court of Customs and Patent Appeals

GLOBE-UNION INC. *v.* DUDLEY B. CLARK, DOING BUSINESS AS CLARK ELECTRONIC LABORATORIES

No. 6890. Decided January 16, 1963

[50 CCPA —; 311 F.2d 819; 136 USPQ 223]

1. TRADEMARK — CONFUSING SIMILARITY — DISCRIMINATING PURCHASERS — EVIDENCE.

Where, for the most part, the goods of both the applicant and the registrant would be purchased by people who would be considered a discriminating group which should be quite discerning insofar as trademarks are concerned, *Held* that letters, indicating some confusion as to source by people in this very group, negated the conclusion that purchaser confusion would be unlikely because the purchasers are discriminating.

2. SAME—SAME—"CELAB" AND "CENTRALAB."

"While it is true that the marks ["CELAB" and "CENTRALAB"] are distinguishable in sound and appearance, we do not agree with the Board that they do not have the same 'suggestive connotation.' This fact is more apparent, of course, when the marks are not seen together. It should be remembered that the separate and disassociated viewing of the marks really represent the environment in which they are used in commerce. What actually causes two marks to have the same suggestive connotation or to create the same mental impression so as to indicate a common source, as the two at bar do, is not always easy to define. However, in this instance, we are of the opinion that it is caused by the fact that both marks begin with the letters 'CE' and end with 'L-A-B,' and the letters 'N-T-R-A' in CENTRALAB really play an insignificant role in this mental process. Under these circumstances we believe that purchaser confusion is likely to occur."

APPEAL from the Patent Office. Opposition No. 39,290.

REVERSED.

John W. Michael, Michael, Best and Friedrich, Spencer B. Michael and *Garrit D. Foster* for appellant.

Submitted on record on behalf of appellee.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, SMITH, and ALMOND, JR., *Associate Judges*

MARTIN, *J.*, delivered the opinion of the court.

This is an appeal from the decision of the Patent Office Trademark Trial and Appeal Board dismissing an opposition to registration of the word CELAB for electrical composition resistors in the form of solid state transducers, such as load cells and pressure resistors.

The applicant, appellee here, is Dudley B. Clark, doing business as Clark Electronic Laboratories. Use of the mark by appellee on the recited goods since 1955 is alleged. The opposer-appellant, Globe-Union Inc., is the owner of the registered mark CENTRALAB for radio signaling apparatus and parts thereof, comprising condensers, grid leaks, potentiometers, rheostats, vacuum tube detectors, switch

arms and levers, transformers and tuners[1] and for electrical and electronic apparatus, including fixed and variable resistors and capacitors.[2]

The Board found the appellant to be the prior user. It also held that the goods of both parties comprise variable resistors which purchasers would be likely to attribute to the same source if they were sold under the same or confusingly similar marks.

Appellant, in an attempt to show that CELAB so resembles its trademark CENTRALAB as to be likely, when applied to appellee's resistors, to cause confusion or mistake or to deceive purchasers, relies on four letters received by it in the regular course of business from various persons, three requesting information concerning CELAB pressure sensitive resistance material, and the fourth, requesting information concerning a "Pressure Cell," but not relating it to the trademark CELAB.

Appellee filed no brief before this court. However, it asserted in its answer to the notice of opposition that its mark CELAB is so dissimilar to appellant's trademark CENTRALAB in sound, appearance and meaning that confusion or mistake or deception of purchasers is not likely.

The Board, considering that the four letters were received over a two-year period, believed them to be of little significance and by no means conclusive as to the question of purchaser confusion. The Board further concluded that confusion, mistake or deception of purchasers is not reasonably likely to occur. It stated:

While "CELAB" and "CENTRALAB" are alike in that each comprises the letters "CE" and "LAB," they are, however, when considered in their entireties, readily distinguishable in sound and appearance and do not have the same suggestive connotation. In view of the differences between these marks, and since it would appear from the nature of the goods of the parties and the advertising material of record that such products ordinarily would be purchased by technically trained and informed persons, it is concluded that confusion, mistake, or deception of purchasers is not reasonably likely to occur.

Appellant urges several reasons for reversal of the Board's decision. It points out that CENTRALAB and CELAB when considered in their entireties are sufficiently similar in sound, appearance and suggestive connotation as to be likely to cause confusion as to source. It is argued that CELAB is merely a "telescoped version" of CENTRALAB. It is further contended that the four letters received by appellant in the regular course of business requesting information concerning CELAB pressure sensitive material are at least entitled to consideration as an indication of probable confusion.

The goods of the respective parties are obviously very closely related and are in the same channels of trade. Thus we are convinced the Board was correct in holding that purchasers would be likely to attribute them to the same source if sold under the same or confusingly similar marks. The only question before us is the ultimate issue of whether the use of CELAB on appellee's goods is likely to cause confusion among purchasers which would preclude registration under the provisions of the Lanham Act.

[1] It is true that, for the most part, the goods of both parties would be purchased by people experienced in the electronic field. Certainly these people would be considered a discriminating group which should be quite discerning insofar as trademarks are con-

[1] Reg. No. 204,006, issued October 6, 1925 to a predecessor, published under Sec. 12(c) of the Act of 1946 on April 27, 1948; renewed.
[2] Reg. No. 502,313, issued Sept. 21, 1948.

cerned. As noted previously, the Board gave this fact as one of the reasons for concluding that purchaser confusion is unlikely. However, the letters introduced in evidence indicate some confusion as to source by people in this very group. A letter from General Electric Company to Centralab states:

Centralab
Div. Globe Union, Inc.
932 E. Keefe Ave.
Milwaukee, Wisconsin
Gentlemen:
Please send information on CELAB Pressure-Sensitive Powders for variable resistance.
Thank you.
Very truly yours,
(S) Robert T. Ellis,
R. T. ELLIS,
Insulation & Non-Metals Laboratory,
Locomotive & Car Equipment Department.
dh

One from the Director of Engineering of Altec Lansing Corporation to the Chief Engineer, Centralab, reads:

Centralab
914Y E. Keefe Avenue
Milwaukee 1, Wisconsin
Attention Chief Engineer
Gentlemen:
The October issue of Tele-Tech described in their Radarscope Department a pressure sensitive resistance material called "CELAB." On the chance that this material is manufactured by Centralab, I am addressing a request to you for such further information on pressure senstive resistors as you may be able to supply.
Very truly yours,
ALTEC LANSING CORPORATION,
(S) E. S. Seeley,
E. S. SEELEY,
Director of Engineering.
ESS:g

The other one from an individual offering research and development services, states:

Centralab Division
Globe-Union Inc.
932 East Keefe Avenue
Milwaukee 1, Wisconsin
Gentlemen:
I recently noticed in one of the electronic journals an announcement of a new, pressure sensitive resistance material which was given the name "celab." I am presently engaged in the design of several pressure sensitive devices in which it might be possible to employ a material of this nature. While your company was not specifically named as the manufacturer of this material, I imply from its name that you may be the manufacturer.
If my assumption is correct, I would appreciate receiving from you any technical or other descriptive material which you may have concerning properties of "celab."
Very truly yours,
(S) R. P. Gutterman.
R. P. GUTTERMAN.
RPG:ajw

Although only three of the four letters are significant [3] at least they do negate that reason for the Board's conclusion, i.e. that purchaser confusion would be unlikely because the purchasers are discriminating.

[2] While it is true that the marks are distinguishable in sound

[3] Two of the letters encompass the goods of the application and the other one is directly related to those goods.

and appearance, we do not agree with the Board that they do not have the same "suggestive connotation." This fact is more apparent, of course, when the marks are not seen together. It should be remembered that the separate and disassociated viewing of the marks really represent the environment in which they are used in commerce. What actually causes two marks to have the same suggestive connotation or to create the same mental impression so as to indicate a common source, as the two at bar do, is not always easy to define. However, in this instance, we are of the opinion that it is caused by the fact that both marks begin with the letters "CE" and end with "L-A-B," and the letters "N-T-R-A" in CENTRALAB really play an insignificant role in this mental process. Under these circumstances we believe that purchaser confusion is likely to occur. Therefore, we reverse the decision of the Board.

REVERSED.

WORLEY, *Chief Judge* (concurring):

The facts here are so evenly balanced that I concur in the result solely on the ground that doubt should be resolved in favor of the first user, here CENTRALAB, and against the newcomer.

RICH, *J.* (concurring):

I agree with the result and with the court's opinion except for its concluding paragraph, which fails to express my feelings.

I cannot see in the marks CELAB and CENTRALAB either the "same suggestive connotation" or the possibility of creating the "same mental impression." CELAB is meaningless except as an indication of origin. CENTRALAB seems an obvious contraction of the common words "central" and "laboratory" and thus has a connotation.[1] There is neither similarity in sound nor appearance, however, so I am unable to see how either the connotation or the mental impression created can possibly be the *same*, except in the ultimate sense of indicating common origin.

What seems to have caused actual confusion, as shown by the letters in evidence, and is, in my opinion, likely to cause much more, is the fact that CELAB and CENTRALAB, in the words of section 2(d), *so* resemble each other *as to be likely to confuse*. Since CELAB consists of the first two and the last three letters of CENTRALAB, the former mark gives people the impression that CENTRALAB has contracted its name to make another trademark for one of its products. This is a common practice in business. Hence to businessmen it seems probable that a product marked CELAB would come from the CENTRALAB people, regardless of their corporate name.

I believe that it is the mind of the beholder that bridges the obvious differences between these marks and reasons out from them a probable common source for the goods bearing the two marks, so as to result in confusion. The resemblance between the two marks is of such a nature as to make this not only possible but probable. The letters in evidence show that this has happened several times and they are entitled to much more weight than the Board gave them, for, I would assume, they are just the visible portion of the iceberg.

Confusion being likely, it follows that the prohibited degree of resemblance is present.

[1] Reg. No. 204,006 in fact shows that the mark was originally adopted and used by Central Radio Laboratories, so the probable derivation which one would infer from the mark appears to correspond with actual fact. Reg. No. 502,313 is a mark which includes the initials "CRL" in a small diamond, associated with the word mark, and states that that feature was first used in 1922.

U.S. Court of Customs and Patent Appeals

BROWNS HOSIERY MILLS, INC. *v.* RUSSELL HOSIERY MILLS, INC.

No. 6892. Decided January 16, 1963

[50 CCPA —; 311 F.2d 811; 136 USPQ 226]

1. TRADEMARK—SUGGESTIVENESS—"SWEATER KNIT."

"The first point made by the Board is that SWEATER KNIT would 'more than likely' suggest that the socks are knit like a sweater. To us, this statement is practically devoid of meaning. We take judicial notice of the fact that both socks and sweaters are ordinarily knit. They resemble each other in that respect and the word 'knit' aptly describes both. But what does 'sweater knit' means, as applied to a sock? If knit *like* a sweater, then like what kind of a sweater? The variety of knitting in sweaters would appear to equal the variety of knitting in socks, or even to exceed it. The only testimony on the point, which is uncontroverted, is to the effect that the term 'sweater knit' is unknown to the knitting industry."

2. SAME—SAME—PRIME FUNCTION OF TRADEMARKS TO GENERATE MENTAL ASSOCIATIONS WITHOUT USE OF COMMON DESCRIPTIVE TERMINOLOGY.

"The most we can find in the term 'sweater' as part of a trademark for socks by way of suggestiveness is that it generates in the mind an *association* with something soft and warm. The generation of such mental associations, while avoiding the use of common descriptive terminology open to all to use, is one of the prime functions of trademarks of a certain type. It does not follow from the successful selection of such a suggestive trademark that others desirous of creating the same impression or association are free to imitate or copy the mark because of its suggestibility."

3. SAME—CONFUSING SIMILARITY—EVIDENCE—THIRD-PARTY REGISTRATIONS.

"Appellee has introduced five third-party registrations, 'For the purpose of showing that the word SWEATER which is the only feature common to the trademarks here involved, is an apt term for various articles of wearing apparel * * *.'

* * * * * * *

None of them in any way relates to hosiery, the only goods here involved. There is no evidence that any of the marks are in use so as to have had an effect on the public mind. Four of the registrations issued from two to five years after appellant's adoption and first use of its mark. If these registrations show anything of significance here, it would seem to be that the term 'sweater' has no necessary connection with hosiery, is arbitrary when applied thereto as a trademark, and would not be likely to be considered suggestive of socks, as appellee contends, even when combined with the word 'knit' ".

4. SAME—CANCELLATION—EQUITIES IN CANCELLATION PROCEEDING.

"Finally, appellee argues that the 'equities' of the situation favor it, basing this argument on the facts that its applications to register were copending with appellant's application and no interference was declared and that appellant did not file an opposition. The statute provides for cancellation proceedings as well as oppositions and interferences and we are inclined to believe that whatever 'equity' may have accrued to appellee by virtue of appellant's choice of procedure, it is cancelled out by appellee's adoption of two marks including the word 'sweater,' the distinguishing feature of appellant's mark, long after the trademark SWEATER KNIT achieved a degree of popularity in the marketplace. The argument is also made that appellee obtained substantial rights by the registration of the marks SWEATER MATES and SWEATER SOFT and should not be deprived of those rights unless a clear showing of error by the Patent Office is made. On the other hand, it is equally true that appellant obtained substantial rights not only from its registration but from its prior adoption and use and continuing use of SWEATER KNIT which appears to us from the record to have been quite distinctive until appellee came along. If the validity of appellee's arguments is accepted, however, the distinctive nature of appellant's mark would very likely be destroyed by other imitators following in appellee's footsteps."

APPEAL from the Patent Office. Cancellation No. 7,396.

REVERSED.

F. M. de Rosa, Watson, Cole, Grindle & Watson, for appellant.

G. Cabell Busick, Mason, Fenwick & Lawrence, for appellee.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, SMITH, and ALMOND, Jr., *Associate Judges*

RICH, *J.*, delivered the opinion of the court.

This is a petition to cancel two trademark registrations.

The issue before us is whether the concurrent use on the identical goods, hosiery, as trademarks, of SWEATER KNIT, SWEATER-MATES, and SWEATER SOFT would be likely to cause confusion, mistake, or deception of purchasers as to the source of the hosiery, within the meaning of section 2(d) of the Trademark Act of 1946, 15 U.S.C. 1052(d).

Appellant owns the trademark SWEATER KNIT, Reg. No. 678,488 of May 12, 1959. It commenced to use that mark in 1952 and has used it ever since on a line of hosiery products, total sales of which to April 1960, amounted to about three million dollars. Some 40 or 50 different styles of socks in the three general categories of crew socks, bobby socks, and knee-high socks appear to have been sold under the mark.

Appellee is the owner of registrations on the Principal Register of SWEATER-MATES, Reg. No. 649,757 of August 6, 1957, and SWEATER SOFT, Reg. No. 650,960 of August 27, 1957. The only goods named in these registrations is hosiery. These are the registrations appellant has petitioned to cancel. The Patent Office Trademark Trial and Appeal Board denied the petition, from which decision this appeal was taken.

Appellee admits the priority of use by appellant-petitioner of its mark and states in its brief that there is no dispute as to appellant's sales of its product or regarding advertisements of SWEATER KNIT, which appellant's president testified had been run in various trade magazines. Appellant alone took testimony and its sole witness was its president. The significant matters, other than those already mentioned, on which he testified, are that his company's socks retail at from 29¢ to around a dollar; that they are sold to a large extent through chain stores, nation wide; that the socks sold under the trademark are knit socks; that though he had been in the knit socks business since 1929 he had never heard the term "Sweater Knit" used descriptively in the knitting trade; and as to the selection of the trademark he said, "we pulled it out of the air like we do all the names we have." While appellee took no testimony on its own behalf, its counsel cross-examined appellant's president at length. Indeed, many of the above points were developed on cross-examination.

An exhibit in evidence, a survey made in 1955 by the magazine "The American Girl," shows that appellant's SWEATER KNIT socks had attained a recognized degree of popularity in the year prior to appellee's claimed dates of first use of its marks.

In a brief opinion the Board, after stating only the essential facts, set forth all of its reasons for dismissing the petition in the following paragraph:

The marks in question are similar only in that each commences with the word "Sweater" which, as applied to hosiery, would more than likely suggest to purchasers that the goods are either knit like a sweater or are intended to be worn as a co-ordinate therewith. Giving due consideration to the suggestive nature of these marks, and to the differences between them when considered in their entireties, it is concluded that confusion or mistake or deception of purchasers is not reasonably likely to occur.

On a request for reconsideration the Board adhered to its decision, saying:

Upon reconsideration, the Board remains of the opinion that the resemblances between the marks here involved are not such as to be likely to cause confusion or mistake or deception of purchasers.

We cannot agree with the decision of the Board and we believe that, on careful analysis, it will be seen that the reasons it gave for its decision do not support it.

The argument in this case, and we presume it was the same before the Board, revolves about the supposed "suggestiveness" of the word "sweater" as applied to socks. Appellee bases its case on that notion and on it predicates arguments as to the persuasive value of a large number of precedents it has marshalled from the decisions of this court involving two-word marks one word of which as "suggestive" in character.

[1] The first point made by the Board is that SWEATER KNIT would "more than likely" suggest that the socks are knit like a sweater. To us, this statement is practically devoid of meaning. We take judicial notice of the fact that both socks and sweaters are ordinarily knit. They resemble each other in that respect and the word "knit" aptly describes both. But what does "sweater knit" mean, as applied to a sock? If knit *like* a sweater, then like what kind of a sweater? The variety of knitting in sweaters would appear to equal the variety of knitting in socks, or even to exceed it. The only testimony on the point, which is uncontroverted, is to the effect that the term "sweater knit" is unknown to the knitting industry.

Appellee, whose primary objective is to inject some definite meaning into the expression "sweater knit," contends that on the basis of the "usual understanding of the words SWEATER and KNIT when combined together," the appellant's trademark "is clearly suggestive as applied to bulky knit socks." Why bulky socks? Sweaters are not necessarily bulky. It is common knowledge that most sweaters are not bulky. Bulky sweaters, if we are correct in our understanding of the term, are but one type of sweater, wherefore the term "sweater" as applied to a sock would not connote bulkiness.

[2] The most we can find in the term "sweater" as part of a trademark for socks by way of suggestiveness is that it generates in the mind an *association* with something soft and warm. The generation of such mental associations, while avoiding the use of common descriptive terminology open to all to use, is one of the prime functions of trademarks of a certain type. It does not follow from the successful selection of such a suggestive trademark that others desirous of creating the same impression or association are free to imitate or copy the mark because of its suggestibility.

Appellant has referred us to the history of the prosecution of appellant's application to register its mark as proof of the "suggestiveness" of SWEATER KNIT. The prosecution referred to, however, is that wherein the Examiner initially took the position that the mark was *descriptive* as applied to hosiery, within the meaning of section 2(e)(1) of the trademark act, a position from which the Examiner withdrew. We are unable to see that this shows anything other than an admission of error on the part of the Examiner as to his first impression. In any case, we are not in disagreement with the proposition that there is a suggestiveness of the kind we have referred to in appellant's mark, as there is suggestiveness in the trademark "Velvet" for smoking tobacco and in many other good trademarks which readily come to mind.

We feel that the Board's other point, that SWEATER KNIT suggests that the hosiery is intended to be worn as "co-ordinates" with sweaters, is even further afield.

[3] Appellee has introduced five third-party registrations, "For the purpose of showing that the word SWEATER which is the only feature common to the trademarks here involved, is an apt term for various articles of wearing apparel * * *." The first is SWEAT-R-BLOUSE for knitted blouses and sweaters, Reg. No. 404,342. The next two are THE SWEATER GLOVE and THE SWEATERED HAND for knit gloves and mittens, Reg. Nos. 620,441-2. The last two are SWEATER GIRL and SWEATERETTE for brassieres, Reg. Nos. 586,494 and 655,887. The Board made no mention of any of these registrations. None of them in any way relates to hosiery, the only goods here involved. There is no evidence that any of the marks are in use so as to have had an effect on the public mind. Four of the registrations issued from two to five years after appellant's adoption and first use of its mark. If these registrations show anything of significance here, it would seem to be that the term "sweater" has no necessary connection with hosiery, is arbitrary when applied thereto as a trademark, and would not be likely to be considered suggestive of socks, as appellee contends, even when combined with the word "knit." It is to be presumed that if anyone other than appellant and appellee had ever registered a mark including the word "sweater" for socks or other hosiery that appellee would have cited it.

[4] Finally, appellee argues that the "equities" of the situation favor it, basing this argument on the facts that its applications to register were copending with appellant's application and no interference was declared and that appellant did not file an opposition. The statute provides for cancellation proceedings as well as oppositions and interferences and we are inclined to believe that whatever "equity" may have accrued to appellee by virtue of appellant's choice of procedure, it is cancelled out by appellee's adoption of two marks including the word "sweater," the distinguishing feature of appellant's mark, long after the trademark SWEATER KNIT achieved a degree of popularity in the marketplace. The argument is also made that appellee obtained substantial rights by the registration of the marks SWEATER MATES and SWEATER SOFT and should not be deprived of those rights unless a clear showing of error by the Patent Office is made. On the other hand, it is equally true that appellant obtained substantial rights not only from its registration but from its prior adoption and use and continuing use of SWEATER KNIT which appears to us from the record to have been quite distinctive until appellee came along. If the validity of appellee's arguments is accepted, however, the distinctive nature of appellant's mark would very likely be destroyed by other imitators following in appellee's footsteps.

It is our opinion that with the three marks before us in concurrent use on identical goods confusion of the public would be likely; that the Patent Office was in error in granting appellee's registrations; and that the Board erred in dismissing the petition to cancel.

We have considered all of the prior decisions relied on by appellee but see no need to discuss them in detail. As we have often said, trademark issues of this character must be decided on the basis of the facts in each case. The decision of the Board is reversed.

REVERSED.

REISSUES

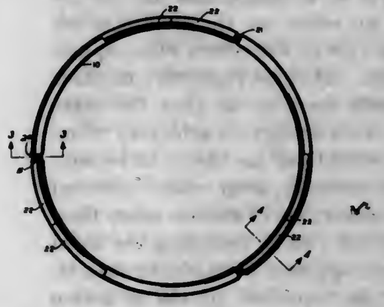
MAY 14, 1963

Matter enclosed in heavy brackets [ ] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates additions made by reissue.

25,383
AUTOMATIC ROTATION BALANCER

Louis R. Morrill, 123 Linden Ave., San Bruno, Calif.

Original No. 3,017,223, dated Jan. 16, 1962, Ser. No. 20,972, Apr. 8, 1960. Application for reissue Mar. 22, 1962, Ser. No. 183,988
11 Claims. (Cl. 301—5)



11. An automatic rotation balancer comprising a circular raceway having a central axis, means dividing said raceway into a plurality of arcuate sections, and a plurality of solid elongated weights movably mounted in said raceway with an equal number of said weights in each of said sections and with the sum of the lengths of the weights in each section measured along the arcuate length of the section being less than the length of the section, said weights being mounted in said raceway sections for substantially free movement of each weight along the length of its section responsive to centrifugal force when said raceway is rotated eccentrically of said axis.

25,384
EXHAUST MUFFLER

Edwin E. Bryant, Stoughton, Wis., assignor to Nelson Muffler Corporation, Stoughton, Wis., a corporation of Wisconsin

Original No. 2,960,179, dated Nov. 15, 1960, Ser. No. 446,033, July 27, 1954. Application for reissue Mar. 14, 1962, Ser. No. 180,939
6 Claims. (Cl. 181—57)

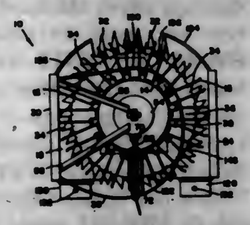


5. An exhaust muffler comprising an elongated shell closed by end members fixed at opposite inlet and outlet ends thereof, a plurality of transverse partitions spaced axially within said shell and providing inlet and outlet end chambers adjacent opposite ends of said shell and intermediate chamber means, an inlet tube extending through and fixedly welded to said inlet end member and extending through all of said partitions and opening into said outlet end chamber, said inlet tube being free of any direct connection fixing said inlet tube with both said partitions and said sheil, said inlet tube having an inner end portion supported by a partition adjacent said outlet chamber for slipping movement relative to said shell for accommodating relative expansion between said inlet tube and said shell, an outlet tube extending through and fixedly welded to said outlet end member and extending through all of said partitions and opening into said inlet end chamber, said outlet tube being free of any direct connection fixing said outlet tube with both said partitions and said shell, said outlet tube having an inner end portion supported by a partition adjacent said inlet end chamber for slipping movement relative to said shell for accommodating relative expansion between said outlet tube and said shell, portions of both of said tubes within said intermediate chamber means being perforated, said partition adjacent said inlet end chamber having an opening therein providing a gas passageway therethrough offset from said outlet tube, said partition adjacent said outlet end chamber having an opening therein providing a gas passageway therethrough offset from said inlet tube, both of said passageways providing direct communication between the chambers at opposite sides of their respective partitions, both of said passageways completely terminating and being fully opened around their entire peripheries immediately at opposite sides of their respective partitions, the intermediate chamber means providing transverse communication between said perforated portions of the tube passing therethrough and thereby combining with said first and second mentioned passageways to promote the flow of exhaust gases back and forth transversely of the shell during passage therethrough.

25,385
LOW CROP HARVESTING ATTACHMENT FOR COMBINES

Delbert G. Jacobson, Rte. 2, Castlewood, S. Dak.

Original No. 3,049,852, dated Aug. 21, 1962, Ser. No. 12,362, Mar. 2, 1960. Application for reissue Aug. 30, 1962, Ser. No. 220,584
9 Claims. (Cl. 56—23)

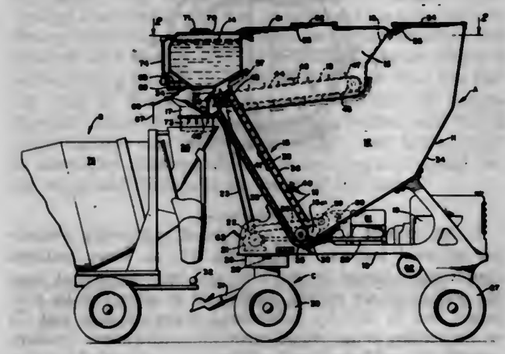


1. In a low crop harvester, the combination which comprises a vertically disposed spindle, a drum carried by the spindle, a base plate upon which the spindle and drum are positioned, a frame mounted on the base plate and in which the upper end of the spindle is rotatably mounted, a shield having vertically spaced horizontally disposed slots therein mounted on the frame and extended around the drum, the shield being positioned whereby the spring fingers travel through the slots therein, and wherein the shield pushes products from the spring fingers upon rotation of the drum with the spring fingers thereon, a horizontally disposed cutter assembly at the lower end of the drum, means for mounting the harvester on a combine, means for tilting the drum and cutter assembly forwardly to compensate for uneven surfaces of the ground, and a universal joint on the upper end of the spindle for connecting the spindle to power means for actuating the harvester assembly from the power take off of the combine.

25,386
PRE-BATCH TRAILER FOR CONCRETE MAKING INGREDIENTS

Robert B. Soldini, 13 Corte Dorado, Millbrae, Calif.

Original No. 2,945,684, dated July 19, 1960, Ser. No. 724,966, Mar. 31, 1958. Application for reissue July 14, 1961, Ser. No. 126,474
4 Claims. (Cl. 222—133)



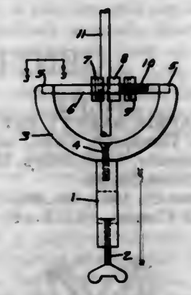
5. A pre-batch trailer for towing behind a loaded concrete mixing truck for transporting an extra pre-measured batch of concrete making material to a remote job site, and comprising a wheeled highway type trailer, a trailer hitch on the forward end of said trailer for towing connection to a concrete mixing truck, a box-like body on said trailer, said body being closed and sand-tight on its sides and bottom to provide an aggregate compartment, and of a size to receive therein a pre-measured quantity of sand and gravel for one batch of concrete for a towing, mixing truck, a dust proof, weather proof cement compartment on said body and sealed off from the aggregate compartment therein, said cement compartment being of a size to receive therein a pre-measured quantity of cement proportionate to the sand and gravel for one batch of concrete for a towing, mixing truck, a discharge spout on the body at a height to discharge into the filler opening of a concrete mixing truck for hauling the trailer, power driven conveyor means in each compartment for discharging the contents of said aggregate and cement compartment simultaneously through the discharge spout.

25,387
FISHING ROD HOLDER

Lofton M. Hendon, 616 Houston St., Birmingham, Ala.

Original No. 3,036,800, dated May 29, 1962, Ser. No. 108,661, May 8, 1961. Application for reissue Nov. 6, 1962, Ser. No. 236,189
4 Claims. (Cl. 248—41)

1. A fishing rod holder comprising, a lower part having a slot formed therein, an adjusting wing type bolt, said bolt being mounted in the lower part, a supporting part, this part being half circular in shape and being mounted revolvably on the lower part, said half circular part having a groove formed in each of its ends, a round bar, said bar fitting removably with its ends in the said grooves; an approximately square part, this part attached on the said round bar, a curved recess formed in one face of this part; a second approximately square part, this part being mounted slidable on the round bar, this square part having a curved recess in its face opposite the recess

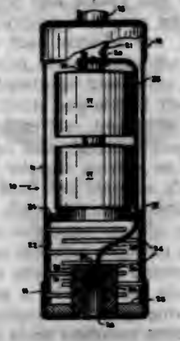


in the other square part; a third approximately square part, this part being attached on the round bar, a wing type bolt, this bolt being inserted through a threaded hole through the third square block.

25,388
RECHARGEABLE BATTERY HANDLE

William C. Moore, Skaneateles, N.Y., by Welch Allyn, Inc., Skaneateles Falls, N.Y., a corporation of New York, assignee

Original No. 3,005,090, dated Oct. 17, 1961, Ser. No. 779,931, Dec. 12, 1958. Application for reissue July 30, 1962, Ser. No. 217,234
3 Claims. (Cl. 240—10.6)



1. A battery handle for electrically illuminated diagnostic instruments comprising a hollow casing, a plurality of rechargeable sealed, dry type battery cells mounted in stacked relation in said casing, a top closure for said casing having means for attaching an instrument thereto, a bottom closure for said casing, means in said casing for conducting current from said battery cells to the instrument through said top closure, and means in said casing for delivering current from an external source to said battery cells to recharge same, said last-named means including an insulated recessed contact in said bottom closure and an insulated conductor in said casing connecting said contact with one terminal of said battery cell stack, the other terminal of said battery cell stack being electrically connected to said casing [.]; *and a recharger unit for said battery handle having a recessed well adapted to receive said handle with a close sliding fit, said unit including a charging circuit having a pair of terminals engageable with said insulated battery handle contact and battery handle casing respectively when the handle is positioned in the well.*

PATENTS

GRANTED MAY 14, 1963

GENERAL AND MECHANICAL

3,089,143
TRAFFIC SAFETY BELTS

Carl H. Jacobson, Thompson, Conn., assignor to American Optical Company, Southbridge, Mass., a voluntary association of Massachusetts

Filed June 29, 1961, Ser. No. 120,621
3 Claims. (Cl. 2—1)

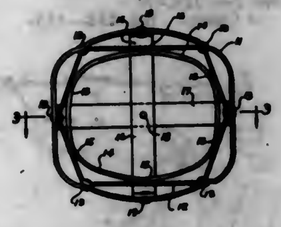


1. A safety belt comprising a generally circular waistband and a pair of shoulder straps each formed of a relatively long and narrow piece of flexible material, a main belt buckle on said waistband embodying a pair of separable sections each having a slot therethrough, opposite ends of said material of said waistband each being relatively loosely directed through a respective one of said slots in said main belt buckle and reversely directed to adjoin the waistband proper, a pair of adjusting buckles on said waistband, one adjacent each side of said main belt buckle, said adjusting buckle being arranged to be slidably adjustable along said waistband toward and away from said main belt buckle and selectively fixed against sliding along said waistband, said ends of said waistband being arranged upon each of said respective adjusting buckles so as to be carried thereby as said adjusting buckles are slidably adjusted and fixed along said waistband proper, means connecting each of said shoulder straps adjacent one of their respective ends to said waistband at respective locations adjacent opposite sides of a point on said waistband diametrically opposite to the location of said main belt buckle, a pair of connecting members each having spaced substantially parallel slots, one of said connecting members being positioned on each of said shoulder straps adjacent the opposite respective ends thereof, the material of each of said shoulder straps being loosely directed through one of said parallel slots in each connecting member and reversely directed therefrom to adjoin the respective shoulder straps proper, an adjusting buckle on each of said shoulder straps which is arranged to be slidably adjusted therealong toward and away from the respective connecting members on said shoulder straps, said opposite ends of said shoulder straps being arranged upon their respectively adjacent adjusting buckles so as to be carried thereby as said adjusting buckles on said shoulder straps are slidably adjusted and fixed thereon, a detachable belt loop relatively loosely directed through the remaining one of said parallel slots in each of said connecting members and encircling said waistband at each side of said main belt buckle, said belt loops being formed of relatively narrow lengths of flexible material which are shorter than said shoulder straps, and fastening means adjacent opposite ends of said belt loops interconnectable to join said opposite ends thereof in forming respective closed loops about said waistband and being detachable therefrom.

3,089,144
IMPACT ABSORBERS

Nicholas Cherup, 24215 Hill St., Center Line, Mich.

Filed Nov. 12, 1958, Ser. No. 775,671
5 Claims. (Cl. 2—3)

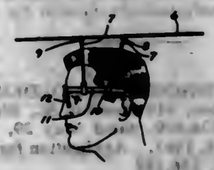


1. An impact absorber capable of repeatedly absorbing external impacts, comprising. (1) an inner resilient membrane adapted to envelope and bear against at least the rear convexly curved portion of an object to be protected and be thereby maintained under tension; and (2) an unyielding outer shield enveloping said inner resilient membrane and being fastened thereto by suitable fastening means at the forward portion thereof and being spaced apart therefrom elsewhere, and adapted to receive and distribute the force of a blow over the surface of the object in contact with said resilient membrane; wherein said resilient membrane comprises a tightly-woven elasticized fabric comprising interwoven substantially inelastic fibers and highly elastic and substantially reversibly stretchable fibers, and characterized by having a convex-concave tensile force-elongation curve, substantially only the convex portion thereof being effective at elongations up to that causing bearing contact of said outer shield and the object to be protected.

3,089,145
SUN HAT

Howard H. Kiefer, Valley View Road, New Hartford, N.Y.

Filed Mar. 31, 1961, Ser. No. 99,743
1 Claim. (Cl. 2—177)



An invention of the character described, comprising a flat circular disk of polished metal having four spaced projections extending downward from the underside thereof, and to which is secured downwardly projecting rods, the lower end of each rod being secured to a spring clip adapted to engage with the temple bars of a pair of spectacles which provide support for the said flat circular disk above the head of the wearer of the said spectacles.

3,089,146
SWEAT BAND

Willard F. Sterne, Snyder, N.Y., assignor to American Allsafe Company, Inc., Buffalo, N.Y., a corporation of New York

Filed Apr. 2, 1959, Ser. No. 803,602
1 Claim. (Cl. 2—181)



A sweatband for absorbing body sweat and evaporating it to the atmosphere to provide an evaporative cooling effect and which is flexible to apply and will not become hard or uncomfortable upon drying so that it can be used repeatedly with equal effectiveness and comfort, comprising a multiplicity of flat, compressed granules of hard drying regenerated cellulose sponge matted together and cohered with one another to provide a ribbon which is self-sustaining initially to a limited degree, at least one facing strip of flexible porous material positioned against opposite faces of said ribbon, means joining said facing strips together and holding said ribbon and facing strips in assembled relation, and means securing said joined facing strips and ribbons to the body of the user.

3,089,147
CAP

Bernhardine Zimmermann, Wuppertal-Ronsdorf, Germany, assignor to Peter Küpper K.G., Wuppertal-Ronsdorf, Germany, a firm

Filed Mar. 13, 1961, Ser. No. 95,166
Claims priority, application Germany Mar. 22, 1960
2 Claims. (Cl. 2—197)

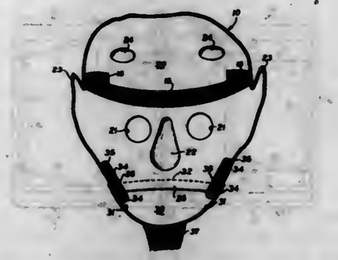


1. A cap comprising a generally inelastic cap top constructed of a woven fabric material, an elastic knitted fabric upper side cap portion having generally circular upper and lower peripheral edges, said woven fabric cap top being of generally circular configuration and being joined by a seam, extending completely around the rounded peripheral edge of said cap top to said upper peripheral edge of said knitted fabric upper side cap portion, said cap further including an elastic knitted fabric lower side cap portion having a generally circular upper edge integral with and extending completely around said generally circular lower peripheral edge of said knitted fabric upper side cap portion, both said upper side and lower side cap portions consisting of a knitted fabric manufactured substantially entirely from a self-elastic thread material whereby said cap is adapted to fit a number of different head sizes, said upper side cap portion being knit in a substantially looser mesh than said lower side cap portion to facilitate the ingress of air to the interior of said cap via said upper side cap portion, a generally horizontally and forwardly extending peak-like insert member of substantially planar configuration disposed adjacent the front of said cap, a forward end portion of said more tightly knit lower side cap portion extending across the bottom surface of said peak-like insert member, said forward end portion of said lower side cap portion then being wrapped around the front edge of said peak-like insert member and rearwardly across the top surface of said peak-like member and being held in position by seams thereby to enclose said peak-like insert member and to form a visor-like structure for said cap, said cap top being relatively widely spaced by said upper side cap portion from said lower side cap portion adjacent the rear of said cap, said cap top being relatively flat and being inclined generally downwardly from the rear of said cap toward the front of said cap with the forward edge of said cap top lying relatively closely adjacent to said enclosed peak-like insert at a position overlying both the upper surface of said peak-like insert member and the portion of said lower side cap portion which overlies the upper surface of said peak-like insert member, said more loosely knit upper side cap portion being shaped adjacent the front of said cap also to overlie at least a portion of the upper surface of said visor-like structure at a position between said cap top and said visor-like structure, said more tightly knit lower side cap portion including a portion folded back upon the remainder of said lower cap portion adjacent the bottom of said cap and into the interior of said cap to define a free edge for said lower side cap portion located within said cap at a position adjacent the junction of the upper edge of said lower side cap portion and the lower edge of said upper side cap portion, thereby to provide an extensible lower periphery for said cap adapted optionally to be folded downwardly from the interior of said cap thereby to cover selectively at least a portion of a wearer's ears and neck.

3,089,148
MASK WITH ARTICULATED SECTION

Abraham Grossberg, Brooklyn, N.Y., assignor to Ben Cooper Inc., Brooklyn, N.Y., a corporation of New York

Filed May 24, 1962, Ser. No. 197,458
3 Claims. (Cl. 2—206)



1. An ornamental face mask comprising, in combination, a face-conforming main section; a lower jaw-conforming section; said main section having rearwardly extending portions at each side edge; said jaw section having rearwardly extending portions at each end; a pair of rivets on the rearwardly extending portions of said main section; a pair of rivets on the rearwardly extending ends of said jaw section; and a pair of relatively elongated slotted slide elements each interconnecting a rivet on said main section with a rivet on said jaw section and each freely movable relative to both associated eyelets, and constituting the sole interconnection between said sections.

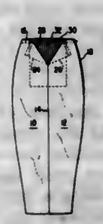
3,089,149
MATERNITY GARMENT

Alta T. Kelleam, P.O. Box 263, Duncan, Okla.

Filed Apr. 27, 1961, Ser. No. 106,017
1 Claim. (Cl. 2—221)

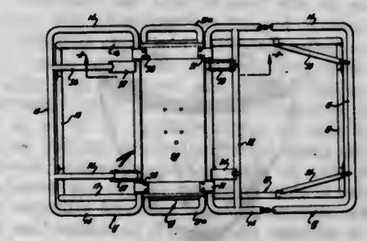
A maternity garment convertible into a garment of normal conformation comprising an outer nether garment having a lower torso and upper leg covering portions and a waist encircling upper edge, a pair of triangular

lapel portions at the front central portion of said garment extending downwardly from said upper edge and folded inwardly of said garment along upwardly divergent fold lines to define a V-shaped opening extending downwardly from said upper edge into the upper front portion of said garment, the sides of each lapel portion being defined by one of said fold lines, a portion of said upper edge, and a free side edge, the free side edges of said lapel



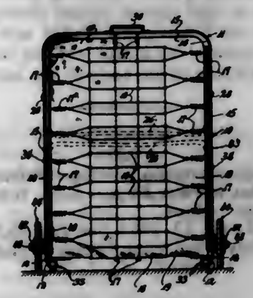
portions being movable into edgewise abutment with each other and adapted to be secured to each other to define a garment of normal conformation with the abutting side edges extending downwardly from the upper edge of the garment along its vertical front center line, and a removable extensible insert panel supported at the interior of said garment and underlying said V-shaped opening.

3,089,150
ADJUSTABLE BED AND CONTROL APPARATUS
Kenneth H. Briggs, Berkeley, and Albert J. Jones, Oakland, Calif., assignors of two-thirds to said Briggs and one-third to said Jones
Filed Oct. 21, 1959, Ser. No. 847,744
3 Claims. (Cl. 5—68)



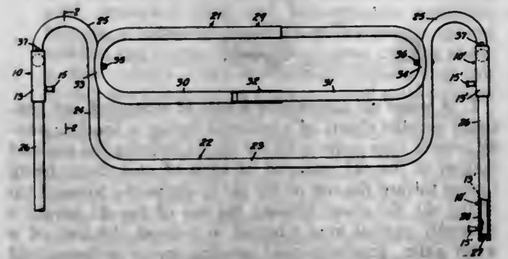
1. An adjustable bed comprising a rigid support structure including two side frames and two tortuous cross support members; said cross support members interconnecting said side frames near opposite ends and having raised surface portions providing head and foot supporting surfaces, respectively, in a common horizontal plane; a head frame pivotally mounted to said support structure between said cross support members, said head frame including first side members extending parallel to while laterally displaced outward from respective side frames and projecting from its pivoted support beyond said head supporting surface, said first side members being joined at their projected ends by a first tie member, a frame truss connected to said tie member and having a lengthwise member inclined from the plane of said head frame to a point between said cross support members and between said side frames, said lengthwise member being vertically misaligned from said raised surface portion of the head cross support member; a foot frame pivotally mounted to said support structure between said cross support members, said foot frame including second side members extending parallel to while laterally displaced outward from respective side frames and projecting from its pivoted support beyond said foot supporting surface, said second side members being joined at their projected ends by a second tie member, a strut member pivotally connected to said second tie member at one end and pivotally connected to said support structure at the other end and at a point between said cross support members, said strut member being vertically misaligned from said raised surface portion of the foot cross support member; whereby said head frame and said foot frame can be pivoted through said common horizontal plane and said frame truss and strut member being unobstructed by said raised surface portions; and means for actuating said head and foot frames into vertically inclined positions from positions below said horizontal plane.

3,089,151
ROLL-AWAY BED
John G. Sevcik, Berwyn, Ill., assignor to Burton-Dixie Corporation, Chicago, Ill., a corporation of Delaware
Filed Jan. 30, 1961, Ser. No. 85,864
3 Claims. (Cl. 5—149)



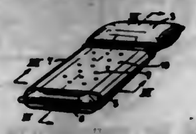
1. A roll-away bed adapted to be unfolded and extended for use and folded into a compact and relatively thin or narrow assembly when made ready for transportation to another location or for storage, comprising an articulated bed frame including end sections of substantially equal length and a pivotally connected intermediate section of short length to conformably receive within said connected sections a collapsible mattress, said end sections having side rails pivotally connected and foldable upwardly about the intermediate section when the bed is not in use to provide a compact assembly for moving about and for storage, one of said end sections having pivotally mounted and transversely extending U-shaped supports and the other having a pair of pivotally mounted and longitudinally extending substantially U-shaped supports with one at each side of said other end section with each of said supports extending for substantially the length of said one section and having a relatively large wheel at the exterior of the side rails at its inner end and a part providing a handle adjacent its outer end for tilting and moving the folded bed about on its wheels when the bed is collapsed with the sections folded together, said handles and large wheels supporting the respective end section when the bed and supports are unfolded and extended for use, means pivotally mounting each end of each support onto an adjacent side rail of the bed frame so that each of said wheel supports is foldable inwardly toward the longitudinal center of said end section when not in use to provide a compact collapsed bed assembly, and a locking clip mounted on said bed frame to move from an inactive position to a locking position to engage and hold said unfolded wheel supports in their operative position.

3,089,152
ADJUSTABLE GUARD FRAME FOR BEDS AND THE LIKE
Charles E. Marcott, Valley Drive, Bay Crest, Huntington, N.Y.
Filed Sept. 25, 1961, Ser. No. 140,537
6 Claims. (Cl. 5—331)



1. A device of the character described comprising a pair of spreader frames having tubular posts at end portions thereof, a guard frame joining the posts at one common end of the spreader frames, said guard frame having at its ends elongated vertical support tubes slidably mounted in the posts of said spreader frames, means on said support tubes engaging said posts in checking downward movement of the support tubes in said posts, interengaging means between the posts and support tubes for support of the guard frame in raised position in said posts, means spaced with respect to said support tubes forming a guard rail portion when the guard frame is in raised position in said posts, said guard rail including a wide U-shaped member having a horizontal rail and upwardly extending side rails, and said rails being spaced from and joining the support tubes in upper rounded portions.

3,089,153
PNEUMATIC MATTRESS
Paul François Bosc, Villefranche-de-Rouergue (Aveyron), France, assignor to Etablissements Youpa-La, Dijon (Cote-d'Or), France, a French company
Filed June 1, 1961, Ser. No. 114,194
Claims priority, application France June 7, 1960
5 Claims. (Cl. 5—348)



1. A pneumatic mattress comprising a pneumatic envelope of a nonporous and impermeable flexible material having inflatable head and body support portions, a noninflatable portion in said body support portion shaped to provide a receptacle having a flat bottom wall and upstanding side walls when the body support portion is inflated, and a resilient, perforated, nonporous sheet removably secured only to said body support portion and overlying said receptacle, said sheet being stretched by the inflation of said body support portion on which it is supported so as to be capable of resiliently supporting a body above said bottom wall of the receptacle.

3,089,154
MATTRESS CONSTRUCTION HAVING DIFFERENT DEGREES OF FIRMNESS
Truman C. Boyles, 315 N. Fairfax, Alexandria, Va.
Filed Mar. 9, 1961, Ser. No. 94,464
8 Claims. (Cl. 5—351)

5. A reversible construction comprising four transverse sets of coil springs, two of said transverse sets providing transverse end sections, and the other two transverse sets of coil springs being superposed one on the other, said two superposed transverse sets being secured at transverse ends to both said transverse end sections, the firmness of one tranverse set of superposed coil springs being different from the coil springs of said other transverse sets



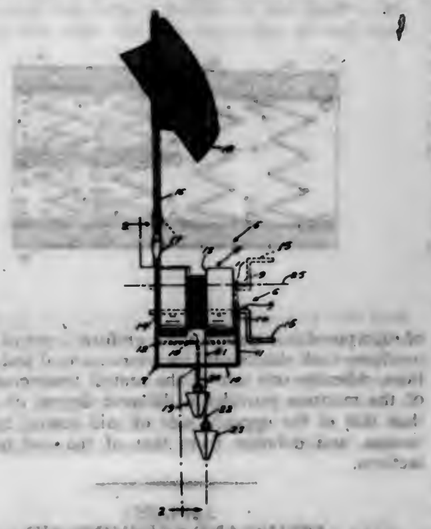
of superposed coil springs and a uniform layer of padding overlying each side of said transverse central and end sections, whereby one side of the central transverse section of the mattress provides a different degree of firmness than that of the opposite side of said central transverse section, and different from that of the end transverse sections.

3,089,155
DIVING AND SWIMMING AID
Lissa Maria Bengtson, 4728 Woodman Ave., Sherman Oaks, Calif.
Filed Mar. 31, 1961, Ser. No. 99,795
5 Claims. (Cl. 9—8)



1. A diving and swimming aid comprised of three members, one of said members being a one-piece disc, perforations through the disc substantially parallel to the direction of thickness of the disc, said disc being made of buoyant relatively rigid material, a second of said members comprising a ballast of material which is denser than the disc, and connecting means engaged with the central portion of the disc and fastened in the ballast to couple the ballast and disc together, said flexible means in use being of a length to maintain the disc below the surface of the liquid in which the swimming aid is submerged, the buoyancy of the disc being more than the combined buoyancies of the connecting member and the ballast, said ballast being readily movable by a person, along with the disc and connecting means, through the body of liquid in which the swimming aid may be immersed.

3,089,156
MARKING BUOY
Alton B. Hamm, Fort Worth, Tex., assignor of one-half to Acey B. Hamm, Fort Worth, Tex.
Filed Apr. 3, 1961, Ser. No. 102,248
5 Claims. (Cl. 9—9)



1. A marking buoy comprising a windlass including a drum, a frame, means eccentrically journaling the drum in the frame, a line wound upon said drum and having one end extending therefrom, and an anchor secured to said end of the line, said frame being formed of a non-buoyant material including a weighted bottom portion for maintaining said journal means thereabove, said drum being formed of a buoyant material capable of sustaining the windlass afloat in the water, and said anchor exerting a gravitational pull on the drum greater than the gravitational pull of said frame for causing the drum to revolve in the frame for unwinding the line therefrom.

3,089,157
FIN FOR WATER SKIS
Gordon H. May, 1923 Camden Ave., San Jose, Calif.
Filed Aug. 11, 1960, Ser. No. 48,898
3 Claims. (Cl. 9—310)



1. A stabilizing fin for providing both vertical and lateral stabilization of a water ski, the fin comprising an elongated hollow member adapted to be aligned with the longitudinal axis of the ski the member including thin flat mounting means, means for providing lateral stability including a pair of elongated spaced generally parallel side sections joined to the fin mounting means along longitudinal edges thereof and depending therefrom and means for providing vertical stability including an arcuate section joined to both side sections along longitudinal edges thereof spaced from and parallel to the mounting means, the arcuate section and the side sections defining a straight unobstructed channel throughout the length of the fin permitting a constant flow of water parallel to the longitudinal axis of the ski.

3,089,158
WATER SKI
Lawrence G. Powers, Hayward, Calif., assignor to Whittlesey Powers, Inc., Hayward, Calif., a corporation of California
Filed Feb. 10, 1961, Ser. No. 88,388
7 Claims. (Cl. 9—310)



7. A water ski comprising a pair of elongated and generally parallel sheets of a material having a specific gravity greater than unity with the sheets defining the top and bottom of the ski, one end of each of said sheets being curved toward the top of the ski to define the forward tip of the ski, the sheet defining the top of the ski having a generally central area adapted to support the foot of a water skier, generally rigid spacing means between said sheets and mounting said sheets together with the thickness of said ski being less than the width of the ski, and a buoyancy cavity bounded by said sheets and said spacing means with substantially more than half of the volume of said cavity positioned between said forward tip and said central area, and with said cavity having sufficient volume and lightness that said ski will float in water.

3,089,159
PROCESS FOR FORMING A FASTENER INCLUDING THE STEP OF PIERCING AN UNWORKED HEAD PORTION
Raymond Harold Carlson, Rockford, Ill., assignor to Textron Industries, Inc., Rockford, Ill., a corporation of Delaware
Filed June 12, 1961, Ser. No. 116,362
3 Claims. (Cl. 10—27)

1. The method for manufacturing a blank for a threaded device having an enlarged head provided with a driver receiving internal wrenching recess having portions extending outwardly toward, but spaced inwardly from, the perimeter of the head, and a threaded shank, said method comprising:

a. providing a workpiece of circular cross section, of predetermined diameter and of a predetermined length materially greater than said diameter,

b. said diameter being approximately from one and one-half times to two and one-half times greater than the diameter of the shank of said device,

c. applying endwise pressure by means of a flat ended punch on said workpiece while positioned wholly within the cavity of an extrusion die to extrude the greater portion of said workpiece to form an elongate shank and to form a flat end surface on the unextruded portion of the workpiece,

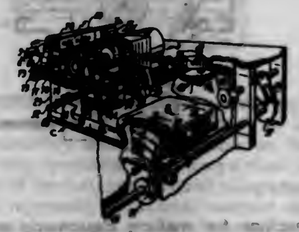
d. terminating said pressure at such point that the unextruded portion of said workpiece within said die is reduced to a volume corresponding substantially to the volume of metal comprising the enlarged head of the device,

e. removing said workpiece from said extrusion die, maintaining said unextruded portion in a cold unworked state and homogeneous condition, positioning said workpiece so maintained in a holding die having a bore snugly receiving said extruded shank,

f. and then while said extruded portion is still in a cold, unworked state and homogeneous condition forming a recess by moving a punch axially against said flat end surface of said workpiece causing metal to flow radially outwardly from the longitudinal axis of said workpiece over a predetermined axial distance extending from said flat end surface, providing a plurality of substantially planar surface punch areas distributed about said axis, at least some of said planar surface areas being disposed in a direction substantially parallel to said axis whereby to define driver engaging surfaces of a driver receiving recess, and sequentially and substantially simultaneously by means of a concave die surface surrounding said unextruded portion of said workpiece controlling the concurrent outward flow of metal of said workpiece portion so as to provide the desired external head configuration surrounding said recess,

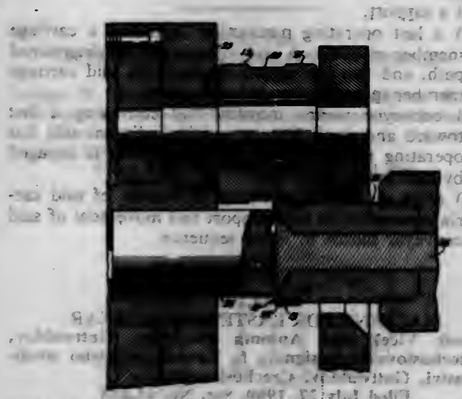
g. said flat end surface of said workpiece having a diameter substantially greater than the maximum transverse dimension of said recess forming punch portion whereby the metal flowing outwardly around said punch during the piercing operation maintains its homogeneity to form a rim free of detrimental cracks surrounding said recess.

3,089,160
AUTOMATIC LATHE FOR CUTTING THREADS
Pierre Bergonzo, Cologny, Geneva, Switzerland, assignor to Tarex S.A., Geneva, Switzerland, a corporation of Switzerland
Filed Oct. 30, 1959, Ser. No. 849,969
Claims priority, application Switzerland Nov. 28, 1958
7 Claims. (Cl. 10—101)



1. An automatic lathe comprising a spindle, means connected to said spindle to drive same, a cross-slide carriage having transverse and longitudinal slides, a cam shaft having mounted thereon first and second flat cams, one of said flat cams being operatively connected to said transverse slide to move said transverse slide transversely with respect to said spindle while the other of said flat cams is operatively connected to said longitudinal slide to move said longitudinal slide along an axis parallel to said spindle, a thread cutting device being mounted on said longitudinal slide; said thread cutting device including a machine cam shaft disposed parallel to said cam shaft, first and second machining cams mounted on said machine cam shaft, an auxiliary longitudinal slide mounted on said longitudinal slide, said first machining cam having a groove therein, a finger having one end connected to said auxiliary longitudinal slide while the other end rides in said groove of said first machining cam to longitudinally move said auxiliary longitudinal slide relative to that of said longitudinal slide upon movement of said first machining cam, a flap member having one end pivotally mounted on said auxiliary longitudinal slide, a thread cutting tool mounted on the outside surface of said flap member, a pusher member movably mounted in said longitudinal slide adjacent said second machining cam and having one end engaging said flap member, a bell-crank lever pivotally mounted on said longitudinal slide between the other end of said pusher member and said second machining cam to be operated thereby to move said flap member and thread cutting tool thereon radially; a plurality of interchangeable gear trains having different transmission ratios operatively connected to said spindle to be driven thereby, a selectable clutch mechanism operatively connected to said interchangeable gear trains to engage one of said interchangeable gear trains, driving means disposed between said machine cam shaft and said interchangeable gear trains to drive said machine cam shaft, and selectable means connected to said clutch mechanism to select one of said interchangeable gear trains.

3,089,161
METHOD OF FORMING AN INTERNALLY THREADED, GASKET-RETAINING CAP
Edwin P. Smedholm, Albert City, Iowa
Filed Feb. 11, 1960, Ser. No. 8,038
3 Claims. (Cl. 10—152)



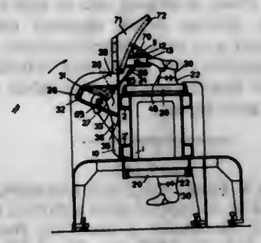
1. The method of forming an internally threaded cap from a cylindrical metal piece having smooth side walls and one closed end, comprising positioning said metal piece on a cylindrical mandrel having an outer free end portion providing a threaded band thereon, the crest diameter of said band being only slightly less than the internal diameter of said piece, said positioning being such that the portion of said side walls adjacent the open end of said piece is opposite said band, holding said closed end against movement toward said mandrel, applying continuous radial pressure by means of smooth faced rollers at circumferentially spaced locations on the outside of the said portion of said side walls adjacent said open end, simultaneously rotating said rollers relative to said side walls in such a direction as to effect tightening of the piece on said mandrel and thereby swaging internal threads in said side walls by forcing the said portion of said side walls against said band, the application of said rollers beginning at an inwardly spaced distance from the closed end of said piece and said application reducing the diameter of said piece around said threaded band while the portion of the side walls of said piece immediately adjacent the closed end thereof maintains an internal diameter of at least slightly greater than the crest diameter of said band, the exterior of the said portion of said walls

adjacent the open end of said piece remaining smooth-surfaced, releasing said radial pressure, and removing the completed piece by rotating said piece on said mandrel in such a direction as to effect unthreading from said mandrel.

3,089,162
AUTOMATIC SHOE LAST OPERATING DEVICE

Jiri Richter and Karel Cernoch, Gottwaldov, Czechoslovakia, assignors to Svit, narodni podnik, Gottwaldov, Czechoslovakia

Filed Dec. 27, 1961, Ser. No. 162,510
Claims priority, application Czechoslovakia Dec. 29, 1960
8 Claims. (Cl. 12—1)



1. In a conveyorized shoe making apparatus, in combination,

(*a*) a support;

(*b*) a last operating mechanism including a carriage member movable on said support in a predetermined path; and two jaw means mounted on said carriage member spacedly opposite each other;

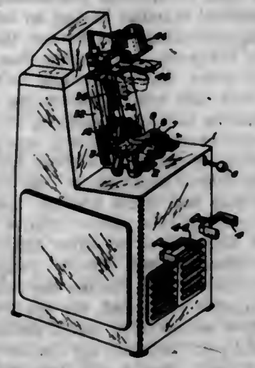
(*c*) conveyor means movable for conveying a last toward and away from a position adjacent said last operating mechanism in which said last is engaged by said jaw means; and

(*d*) drive means for actuating movement of said carriage member on said support and movement of said conveyor means in timed sequence.

3,089,163
MACHINE FOR LASTING FOOTWEAR

Jaromir Vlček and Antonín Petrželka, Gottwaldov, Czechoslovakia, assignors to Závody presneho strojirenstvi, Gottwaldov, Czechoslovakia

Filed July 27, 1960, Ser. No. 45,648
Claims priority, application Czechoslovakia Sept. 1, 1959
6 Claims. (Cl. 12—10.1)

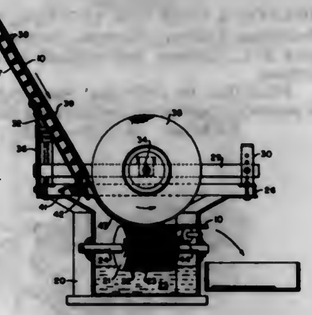


1. A machine for lasting the fronts of footwear, comprising a body of the machine, means for securing the last with the shoe upper fixed thereto in the machine, a mechanism for stretching the shoe upper, a mechanism for ironing the fold of the upper, a mechanism for injecting adhesive, a guide rigidly mounted in the body of the machine, a bifurcated member adapted to travel in the guide, bearing bushes provided in said bifurcated member, a spindle mounted for rotation in the bearing bushes, a clamping head carried by said spindle and adapted for rotation therewith, a profiled clamping mold member carried by said clamping head, said clamping member being adapted to clamp the upper on the last and to exert pressure thereon against the circumference of the last, driving means operatively connected to said spindle and adapted to impart thereto rotary movement and means for displacing the clamping member with its associated parts from one working position into another working position, said latter means comprising a rack mounted in said guide, profiled guiding rails, arresting faces at the ends of said profiled guiding rails to engage and arrest the spindle in its working positions, a recess in the central portion of the profiled guiding rails, permitting the rotation of the spindle, said driving means imparting rotary movement to the spindle comprising a rack and a pinion, meshing with the rack.

3,089,164
SOLE SLITTING MACHINE

Forrest Clayton Meserve, North Andover, Mass., assignor to Micro Machinery Products, Inc., Winchester, Mass., a corporation of Massachusetts

Filed Aug. 4, 1961, Ser. No. 129,326
11 Claims. (Cl. 12—40)



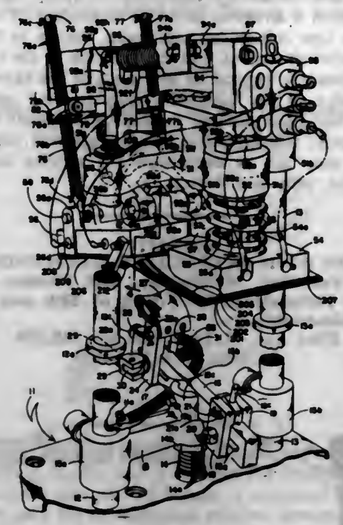
1. A machine for making elastomeric soles of high traction tread, comprising a threaded drum rotatable about a fixed axis and carrying a projecting helical blade, flexible sole feeding means for pressing a sole blank into transverse curvature against said drum whereby, in the rotation of the drum, the helical blade is caused to pass transversely through the sole to form a pattern of normally closed slits in the tread face thereof.

3,089,165
BOTTOM IRONER

Mieczyslaw Dziki, Dorchester, Mass., assignor to Industrial Shoe Machinery Corp., Roxbury, Mass., a corporation of Massachusetts

Filed May 9, 1962, Ser. No. 193,494
8 Claims. (Cl. 12—53.5)

1. A shoe-bottom ironing device comprising a vertically movable shoe supporting assembly cooperable with a fixed heating assembly; said movable assembly comprising a frame on which is pivotally mounted a shoe support; said heating assembly comprising a frame, a heel heating block pivotally and resiliently supported by said frame, two toe-heating blocks pivotally and resiliently supported by said frame, and exterior resilient metal plate means



attached only to said heel blocks but extending to the rear of said toe blocks.

3,089,166
LAST

Albert Kamborian, Newton Center, Mass., assignor to International Shoe Machine Corporation, Boston, Mass., a corporation of Massachusetts

Filed Dec. 1, 1961, Ser. No. 156,245
8 Claims. (Cl. 12—141)



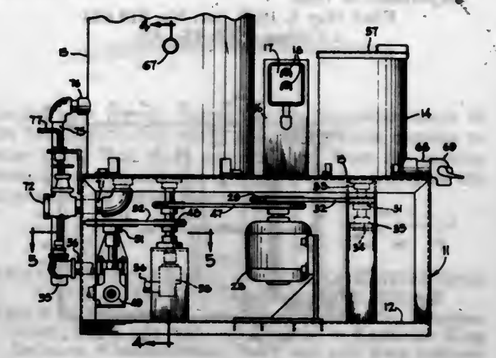
1. The combination with a last for receiving an upper assembly including an insole preparatory to lasting, of means for releasably holding the insole on the bottom during the lasting operation, comprising a material secured to the bottom of the last, said material being characterized in that it is repeatedly activatable without diminution, that during each activation it will adhesively hold the insole to the bottom, and that upon de-activation it will become non-adhesive and will release the insole.

3,089,167
FILTER TUBE CLEANER

Edward R. Jahn and Alvin J. Zaupa, Chicago, Ill., assignors to The Sherwin-Williams Company, Cleveland, Ohio, a corporation of Ohio

Filed Oct. 31, 1960, Ser. No. 66,324
4 Claims. (Cl. 15—4)

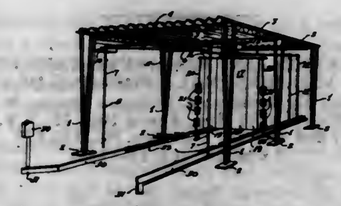
1. A filter tube cleaner comprising in combination a chamber containing a rotatable spindle for carrying a filter tube to be cleaned and clearing the filter surface and interior of heavy particles by centrifugal force, a second chamber containing a rotatable hollow spindle carrying a collar for supporting a filter tube to be cleaned and a cap for securing the filter tube between the cap and the collar, the cap and the portion of the hollow spindle between the collar and the cap having openings, a brush mounted within said second chamber radially movable toward said hollow spindle for contacting the surface of the filter tube mounted thereon, a frame work supporting both spindles, a motor mounted in said frame work connected to both spindles, and means for forcing solvent through said openings from the hollow spindle outward through the mass of the filter tube, whereby the interior and surface of the filter tube on the hollow spindle are cleared simultaneously by flowing solvent action, centrifugal force and brushing.



3,089,168
SELF-SERVICE AUTOMATIC VEHICLE-WASHING DEVICES

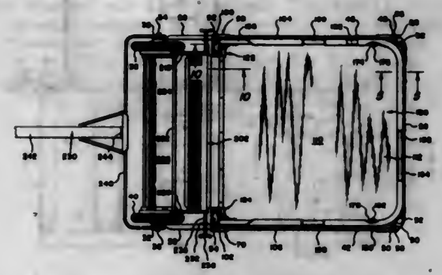
George W. Blanford, Cincinnati, Ohio, assignor of fifty-five percent to John H. Blocksom, five percent to Samuel J. Ginsberg, and five percent to George A. Schwenzer, all of Cincinnati, Ohio

Filed Aug. 14, 1961, Ser. No. 131,384
5 Claims. (Cl. 15—4)



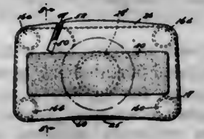
1. A self-service washing device for a vehicle comprising an elongated longitudinal housing, guide tracks within said housing for guiding a vehicle through said housing, positioned exterior of rubber tire wheels on a vehicle, brushes resiliently mounted on said tracks for scrubbing the tire wheels, a water spraying system having electric solenoid actuated valves and spaced inverted U spray frames at an entrance and exit of said housing, one of said inverted U sprays adapted to spray a mixture of detergent and water while a vehicle is passing through said housing upon timed actuation of one of said solenoid valves, said detergent syphoned from a reservoir in measured quantity by the flow of the water to and out of the said inverted U frame at the entrance of said housing, a motor driven eccentric interspaced between said inverted U frames rotatably supporting a wiper and brush to jiggle and oscillate said wiper and brushes while a vehicle passes through and in contact with said brushes and wiper within said housing and another of said inverted U frames adapted to spray said vehicle with water upon exit from said housing when one of said solenoid valves is actuated in timed sequence.

3,089,169
SWEEPER WITH SIDE DUMPING DEBRIS BASKET
Richard W. Parker and Warner Houser, Springfield, and Theophilus P. R. Stout, North Hampton, Ohio, assignors to Parker Sweeper Company, Springfield, Ohio, a corporation of Ohio
Filed May 4, 1959, Ser. No. 810,623
3 Claims. (Cl. 15—83)



1. A sweeper comprising in combination, a sweeper head including a frame, axle means supported on said frame, wheels on said axle, and a rotatable brush carried by the frame; a second frame pivotally connected at the forward end thereof to the axle means and extending rearwardly thereof to form a cart, wheel means swivelly attached adjacent the rear of said second frame; a debris receptacle carried on the cart in a position to receive debris from the sweeper head, the major portion of said debris receptacle disposed between the wheels on the axle and the wheel means attached to the second frame; pivotal bearing means supported on the second frame and means on the debris receptacle for mounting said debris receptacle for rotation in the bearing means to permit lateral dumping of the receptacle on either side of the cart, said bearing means preventing any lateral or longitudinal play of the receptacle with respect to the frame.

3,089,170
COMBINATION LINT REMOVING, TAPE DISPENSING, AND PERSONAL GROOMING DEVICE
Walter H. Buchsbaum, Bellerose Manor, N.Y. (108—42 68th Ave., Forest Hills 75, N.Y.)
Filed May 25, 1961, Ser. No. 112,573
2 Claims. (Cl. 15—105)



2. A combination lint-removing, tape-dispensing, and personal grooming device, comprising: a body including a pair of plates; a plurality of hollow tape-belt supporting elements about which an annularly connected piece of tape may travel, said elements being perpendicularly arranged and interconnecting said plates, and having open ends; an annularly connected tape belt slidably mounted on said tape-belt supporting elements; a tape roll support connected to said body and disposed inwardly of said tape-belt supporting elements; a roll of tape on said tape roll support successive segments of which extend between said tape roll support and said tape belt; a tape cut-off knife element connected to said body and arranged generally transversely of the device, and having a cutting edge disposed between the tape roll support and one of said tape-belt suporting elements, and lying in the path of successive segments of tape extending between said roll and said tape belt; said tape having an outwardly extending adhesive surface; whereby, with the tape end adhesively connected to itself, movement of the belt in a direction to cause unwinding of the tape off of the tape roll support produces tension in the tape portion between the roll and the said one of the tape-belt support elements to produce severance of the tape at said cutting edge in an automatic manner; and means to close the said open ends of the hollow tape-belt supporting elements; whereby said hollow tape-belt supporting elements may act as containers for articles useful in conjunction with said device.

3,089,171
MOPS WITH EXTRACTING MECHANISM
Peter S. Vosbikian, Melrose, Pa., and Thomas S. Vosbikian, Philadelphia, Pa. (both of 20th and Oxford Sts., Philadelphia, Pa.)
Filed Apr. 18, 1962, Ser. No. 188,398
1 Claim. (Cl. 15—119)



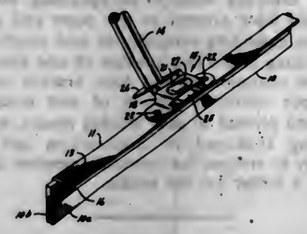
A mop, comprising a mop handle and a mop head connected to the forward end of said mop handle, the forward position of the mop handle in rear of the mop head being in the form of a rectangular bar, a slidable sleeve on the mop handle, a rod pivotally connected at one end to said sleeve, a guide on the mop handle through which said rod passes, an extractor in the form of a split ring pivotally connected at its upper end with said rod at a point forwardly of the sleeve connection, said ring having a slot at its bottom to permit it to pass over said bar, the inner wall of the ring at opposite sides of the slot being recessed, a gap closure pivoted to the ring at one side of the slot extending across the slot to seat in said recess and having its inner face curved to form when in closed position a continuation of the inner wall of said ring, and a cam on the handle in rear of the mop head being of such a shape that it causes said extracting ring during its forward extracting movement to move downwardly and said bar causes the gap closure to move inwardly on its pivot and thereafter said cam because of its shape moves the gap closure into its closed position in its recess prior to its passage of the ring over the mop head during its forward extracting stroke.

3,089,172
SPIKED FOOTWEAR CLEANER
Gary W. Walden, 1971 High St., Cuyahoga Falls, Ohio
Filed Jan. 30, 1961, Ser. No. 85,566
6 Claims. (Cl. 15—237)



1. A device for removing mud from the soles of spiked footwear, comprising; a shaft; a circular head angularly disposed with respect to said shaft; said circular head being centrally apertured for encircling a spike; and lugs on said head for dislodging mud clinging to a spike.

3,089,173
FLOOR SQUEEGEE
George B. Hunt, 648 N. 79th St., Wauwatosa, Wis.
Filed Feb. 3, 1961, Ser. No. 86,950
6 Claims. (Cl. 15—245)



1. A floor squeegee construction including an elongated manipulating handle and a support bar extending transversely to the axis of said handle, a squeegee blade supported by said bar in depending relation thereto, said support bar having an upstanding generally U-shaped bracket thereon, and a hinge arm fixed to the end of said handle and inserted within said U-shaped bracket, said bracket and hinge arm having cooperating recesses and projections therein so as to hold said hinge arm in said bracket, said cooperating recesses and projections being formed and adapted to allow relative angular movement in a limited degree between the axis of said handle and the general plane of said squeegee blade.

3,089,174
WINDSHIELD WIPER BLADES
Lucien Charles Alexis Marie Bignon, 26 Rue Guynemer, Soisy, Issy, France
Filed Feb. 11, 1960, Ser. No. 8,012
Claims priority, application France Feb. 13, 1959
9 Claims. (Cl. 15—250.36)



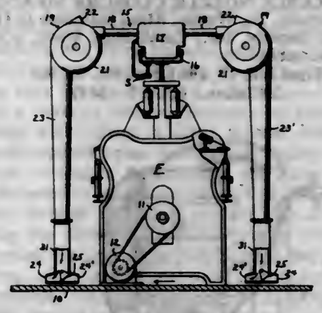
1. In a windshield wiper blade having a head portion adapted to be supported by a holder and a wiping lip, the improvement comprising the provision of apertures extending at spaced intervals along the length and throughout the thickness of the blade in order to permit the passage of the stream of air current striking the windshield so as to prevent the pressure produced thereby from moving the windshield wiper blade away from the glass surface, said apertures defining spaced flanges which connect the head portion with the wiping lip and the apertures occupying a surface at least equal to half the surface of the wiper blade between the wiping lip and the head portion thereof.

3,089,175
WINDSHIELD WIPERS
Gordon H. A. Hinder, Hamilton, Ontario, Canada, assignor to Hamilton Clamp & Stampings Limited, Hamilton, Ontario, Canada
Filed Sept. 1, 1960, Ser. No. 53,501
8 Claims. (Cl. 15—250.36)

1. A windshield wiper assembly for wiping a windshield as it moves along such windshield comprising a backing member; a blade member; means mounting the blade member loosely with respect to the backing member; and cooperating magnetic means on the members; the magnetic means of the blade member being in the field of the magnetic means of the backing member and so arranged with respect thereto that the magnetic means of the backing member repels that of the blade member to urge it and such blade member away from the backing member and against the windshield being wiped by the assembly as it moves along such windshield.



3,089,176
TRAVELING CLEANER WITH FLOOR SWEEPING NOZZLE FOR TEXTILE MACHINE ROOMS
Agnew H. Bahnson, Jr., and James F. King, Jr., Winston-Salem, N.C.; said Bahnson assignor to Katherine King Bahnson, Winston-Salem, N.C., and said King assignor to The Bahnson Company, Winston-Salem, N.C., a corporation of North Carolina
Filed June 12, 1958, Ser. No. 741,573
9 Claims. (Cl. 15—312)

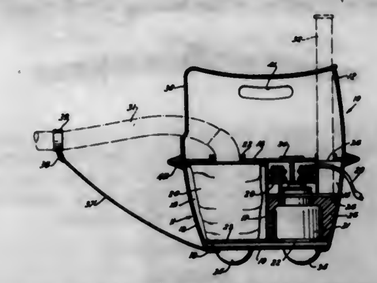


1. Apparatus for sweeping the floor of a textile room containing a plurality of elongated textile machines having tape driving cylinders arranged in end-to-end relation in a row and wherein the tape driving cylinders on some adjacent machines rotate in opposite directions, comprising a track arranged longitudinally of and above said row of machines, a carriage adapted to move along said track, blower means supported by said carriage, a conduit extending from said blower means downwardly along the side of one of said machines and terminating adjacent the floor, air discharge nozzle means disposed at the lower end of said conduit, said nozzle means being positioned to deliver air therefrom along the floor normal to the longitudinal axis of said machines, means for reversing the air delivery direction from said nozzle means through 180° and means controlling said reversing means in accordance with the direction of rotation of the tape driving cylinder of the particular machine about to be travelled over by said carriage and blower means so that the air discharged from said nozzle means and the natural air currents produced by rotation of the tape driving cylinder on said machine have the same direction.

3,089,177
VACUUM CLEANER
Carl Erik Sixten Andersson-Sasse, Solna, Sweden, assignor to Aktiebolaget Electrolux, Stockholm, Sweden, a corporation of Sweden
Filed Jan. 27, 1961, Ser. No. 85,420
Claims priority, application Sweden Feb. 5, 1960
17 Claims. (Cl. 15—323)

13. A suction cleaner comprising a housing, a motor-fan unit and dust collector supported in said housing so

that, upon operation of said unit, air is drawn into said dust collector and discharged from said unit, and suction and air discharge connections carried by said housing and



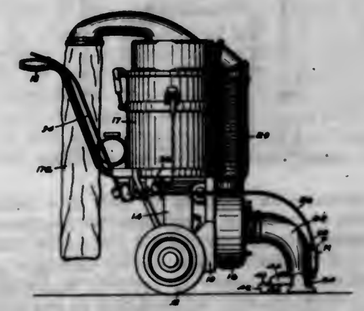
communicating with said dust collector and motor-fan unit, respectively, said housing including a soft side wall which is bendable and bodily movable inward responsive to physical force applied to its outer surface.

3,089,178

MOBILE SUCTION FLOOR CLEANER WITH ADJUSTABLE NOZZLE CLOSURE MEANS

John F. Sherman, Jr., Waban, Mass., assignor to Handling Devices Company, Inc., Cambridge, Mass., a corporation of Massachusetts

Filed Jan. 27, 1961, Ser. No. 85,365
2 Claims. (Cl. 15—347)



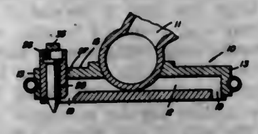
1. In combination, a mobile power actuated floor cleaning machine, including a frame, handling means extending outwardly from one side of the frame, a pair of wheels mounted for rotation at the underside of the frame, a waste receptacle mounted at the upper side of the frame, a motor driven fan unit including a casing secured to the frame and having a waste conduit connecting the fan casing with the waste receptacle, a relatively wide transversely extending nozzle positioned centrally at the front of the cleaning machine, said nozzle having an upper restricted portion connected with a tubular duct communicating with and fixed to the fan casing, said nozzle including a front wall portion, said front wall portion being formed with a relatively wide bottom recess defined by a central thickened horizontal wall portion and marginal recessed portions extending laterally from each side of said central thickened horizontal wall portion, said marginal recessed portions terminating at the bottom edge of said front wall, a gravity actuated litter door for closing the relatively wide bottom recess in the front wall of said nozzle, said litter door comprising a plate having a flat horizontal thickened upper central portion for abutting association with the bottom surface of said central thickened horizontal wall portion of said front wall portion and laterally projecting marginal edges at each side of the horizontal thickened upper central portion of said plate for association with the marginal recessed portions of the front wall portion, a hinge portion including a front vertically extending plate fixed to the front thickened wall portion defining the recess and a second hinge portion pivoted to the first hinge portion and including a plate overlying the thickened upper central portion of the litter door and projecting to the inner face of the door, means for fixing the hinge portions to the front wall of the nozzle and to the inner face of the litter door, a lug projecting from the outer face of the litter door centrally thereof, an operating member for opening said door pivoted to the outer end portion of said lug and extending vertically of said nozzle structure and terminating at the rear portion of said floor cleaning machine for operation of said door, bracket means fixed to the upper restricted portion of said nozzle, and a hinged guard pivoted to said bracket means, said hinged guard being U-shaped in cross-section and swinging downwardly to enclose the operating member therebelow to provide a buffer for the nozzle.

3,089,179

LINT REMOVING MEANS FOR VACUUM CLEANER NOZZLES

Howard A. Taplin, 932 W. Beach Ave., Inglewood, Calif.

Filed Apr. 16, 1962, Ser. No. 187,522
7 Claims. (Cl. 15—371)



7. In a vacuum cleaner nozzle, the combination of
(*a*) an elongated body having a suction chamber with air inlet means in its bottom, the latter being engageable with and movable over the carpet or the like to be cleaned, and
(*b*) means in said body and associated with said air inlet means to loosen lint, threads or the like, said loosening means comprising
(*c*) at least one row of upright elements mounted for substantially vertical movement independent of each other and gravity actuated in a downward direction,
(*d*) said row extending in the direction of the length of said body, and
(*e*) said pins having their lower ends normally projecting below the bottom of said body to enter the pile of the carpet or the like being cleaned.

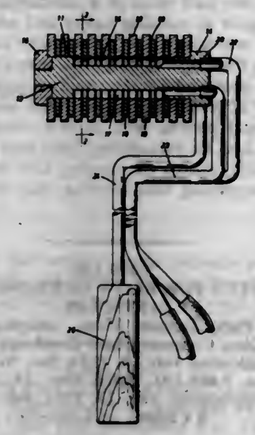
3,089,180

DEVICE FOR MIXING AND APPLYING LIQUIDS

Frederick H. Humphrey, Markham, Ontario, Canada

Filed June 16, 1961, Ser. No. 117,653
11 Claims. (Cl. 15—525)

1. A device for mixing and applying liquids comprising a plurality of circular discs closely stacked side by side and each having an aperture positioned centrally therein, disc mounting means extending through the apertures in said discs, said discs being individually rotatably mounted on said disc mounting means about the longitudinal axis thereof, the diameter of said apertures being at least substantially the same as the diameter of said disc mounting means, said discs thereby being precluded from any substantial degree of lateral movement with respect to said longitudinal axis by engagement of said disc mounting means with the walls defining said apertures, the peripheral surface of said device remote from said disc mounting means having a plurality of longitudinally spaced apart peripheral annular channels formed therein in every position of said discs, retaining means retaining said discs on said disc mounting means and precluding any substantial longitudinal movement of said discs on said disc mounting means, at least two separate liquid headers formed in said



device and communicating in fluid-flow relationship with said channels through spaces between said circular discs, and means adapted to supply a liquid to each of said headers.

3,089,181

FOUNTAIN SUPPLIED SPONGE CLEANING IMPLEMENT

Robert L. B. Hess, 407 SE. 9th St., Fort Lauderdale, Fla.

Filed Feb. 28, 1962, Ser. No. 176,326
6 Claims. (Cl. 15—526)



2. In a cleaning implement, a spray head and means for connecting the head to sources of soap and water, a sponge fitted in the head and through which the soap and water is directed, a backing plate on the sponge, clips removably fitted on the plate and embracing opposite edges thereof and having ears projecting from them, the head being slotted, the ears projecting from the slots therein, and a handle having parts engaging with the ears at the back of the head.

3,089,182

MARKING DEVICE

Charles W. Lofgren, Oak Park, Ill., assignor, by mesne assignments, to Sanford Corporation of Liberia, a corporation of Liberia

Filed Feb. 11, 1960, Ser. No. 8,179
3 Claims. (Cl. 15—563)



1. A marking device of the type described comprising a one-piece extruded, seamless metal container initially extruded to provide a body having a generally cylindrical seamless sidewall and a seamless bottom wall unitary with and having a seamless junction with said side wall, a quantity of absorbent material for containing marking fluid assembled within said body, an end section of said body subsequently being reduced in diameter for retaining said absorbent material and providing an elongated seamless neck portion having a predetermined cross section and a reduced internal diameter, an elongated self-supporting wick having a cross section different from said predetermined cross section and including a major transverse dimension substantially the same as the internal diameter of said reduced neck portion, said wick extending through said neck portion with an inner end contacting the absorbent material and an outer end exposed beyond the end of the neck portion and constituting a marking element, said neck portion including an integral inwardly extending projection engaging a circumferentially limited area of a side of the inserted wick for positioning the same in said neck portion, said neck portion being spaced from side portions of said wick offset circumferentially of said area for providing an air passageway between the wick and the neck portion, and a cap member removably assembled with and sealingly engaging said neck portion.

3,089,183

OVERHEAD DOOR CONTROL ARM

Paul W. Martin, Des Plaines, Ill., assignor to Republic Industries, Inc., Chicago, Ill., a corporation of Illinois

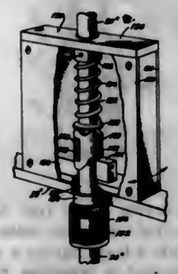
Filed Sept. 19, 1960, Ser. No. 56,981
11 Claims. (Cl. 16—49)



3. An overhead pivotal door control arm mechanism comprising, a first elongated member adapted for connection to an overhead spindle, a second elongated member adapted to be secured within the top rail of a door and held between linearly spaced surfaces on the arm under resilient compressive forces for pivotal adjustment of the door into a selected position relative to the arm, one of said spaced surfaces being positioned near the spindle connection and the other of said surfaces being remote therefrom in a direction toward the free edge of

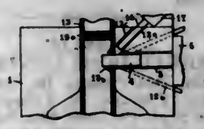
the door, and means carried by one of the members for locking the door in the selected position relative to the arm.

3,089,184
POSITIONING HINGE MECHANISM FOR ROTATABLY AND PIVOTABLY MOUNTED BARRIERS
Mark Kerman, 7612 Bosworth Ave., Chicago, Ill.
Filed Oct. 24, 1960, Ser. No. 64,527
7 Claims. (Cl. 16—141)



7. A panel positioning mechanism for a pivotable body comprising, in combination: an elongated shaft, a sleeve slidably positioned on said shaft, a compressed coil spring on said sleeve, an abutment on said sleeve against which one end of the spring abuts, an annular cam slidably mounted on said sleeve and providing a cam edge and normally biased away from said abutment by said coil spring, keyway means between said sleeve and cam to restrain the cam to reciprocal movements only axially of said sleeve, frame means rotatably mounted on the sleeve and restrained against movement in one direction axially of the sleeve, and a cam-follower on the frame means engaging the cam edge of the annular cam.

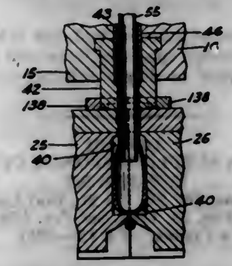
3,089,185
METHOD AND APPARATUS FOR MANUFACTURING HOLLOW PLASTIC OBJECTS
Antoine Di Settembrini, Sucy-en-Brie, France
Filed May 31, 1961, Ser. No. 113,760
Claims priority, application France Mar. 27, 1961
5 Claims. (Cl. 18—5)



1. A method of shaping hollow plastic objects including the steps of: enclosing a tubular blank in a hot-softened condition between two half molds, substantially radially smashing in the blank with a cutting tool, keeping the cutting tool in a protruding position inside the blank, injecting fluid under pressure in an annular vein surrounding said cutting tool in order to enlarge the hole which has been smashed in and to cause the blank to be blown and applied against the walls of the half molds, whereby a rapid cooling of the blank is ensured by continuous circulation of fluid under pressure in the annular opening around said cutting tool, then moving back said cutting tool outside the shaped hollow object, stopping the injection of fluid under pressure, enabling the fluid still remaining in the shaped hollow object to escape, separating the half molds and releasing the hollow shaped object.

3. In an apparatus for shaping hollow plastic objects which comprises two half molds mating together by means of a joint plane, said half molds embodying a molding cavity having the shape of the objects to be manufactured, the combination of: a reciprocating cutting tool having the shape of a solid pin, a passageway provided in one half mold in a substantially radial position with regard to molding cavity and wherein said cutting tool is movable, said passageway having a larger cross-section than said cutting tool, whereby an adequate clearance is provided between said cutting tool and said passageway, at least one blowing duct embodied in one half mold and having port in said clearance between cutting tool and its passageway, said port being close to molding cavity, means for moving said cutting tool and means for supplying said blowing duct with fluid under pressure.

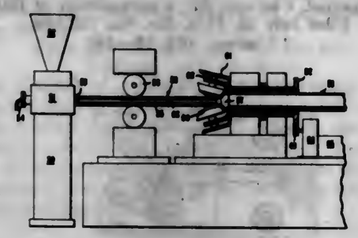
3,089,186
APPARATUS FOR BLOW MOLDING HOLLOW ARTICLES
Robert H. Park, Dennis, Mass., assignor to Brockway Glass Company, Inc., Brockway, Pa.
Original application July 14, 1954, Ser. No. 443,272, now Patent No. 3,008,191, dated Nov. 14, 1961. Divided and this application Aug. 21, 1961, Ser. No. 132,971
5 Claims. (Cl. 18—5)



8. Apparatus for forming open-ended hollow articles from plastic material, said apparatus comprising separable mold means including a cavity having a generally cylindrical open end, extrusion means for supplying material in a plastic state to the mold means by extruding a tube of the material to be formed in the cavity, said extrusion means comprising an extrusion member having an extrusion orifice therein and a coaxial extrusion mandrel, said mandrel having a cylindrical end portion movable axially into the open end portion of the cavity to form a hollow cylindrical mold space, means for closing the mold means to pinch the lower end of said tube at the lower end of said cavity, a sleeve member independently movable in the annular space formed by said extrusion orifice and said extrusion mandrel and into the outer end of said hollow cylindrical mold space to form a neck mold cavity wherein the open end portion of the article is formed at its end face by said sleeve member, externally by said cavity, and internally by said extrusion mandrel.

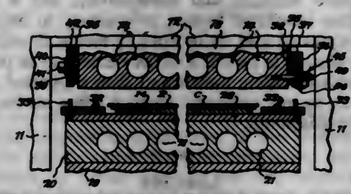
3,089,187
MANUFACTURE OF IMPROVED THERMOPLASTIC PIPE
Paul Dillon Wolfe, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed May 6, 1960, Ser. No. 27,316
7 Claims. (Cl. 18—14)

6. An apparatus for the manufacture of pipe from thermoplastic material which comprises, in combination, an extruder, a crosshead attached to the said extruder, a die attached to the said crosshead, a core partly within the said die, supporting means attached to the said core, a head flared outwardly away from said extruder attached to said supporting means, conical rollers spaced about the said flare, means to drive the said rollers substantially epicyclicly about the said flared head, means to pass



and thence into the annular space between said support and said mandrel, and thence through the said flare of cooling fluid in contact with part of the cone of said die, said mandrel.

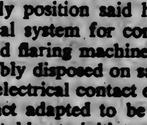
3,089,188
APPARATUS FOR COMPRESSING ARTICLES
Otto Hoffmann, Kenmore, N.Y., assignor, by mesne assignments, to Lake Erie Machinery Co., Philadelphia, Pa., a corporation of Pennsylvania
Filed May 11, 1959, Ser. No. 812,311
5 Claims. (Cl. 18—16)



1. In a molding press having a main cylinder, a ram in said main cylinder, a movable platen carried by said ram, a fixed platen arranged in opposed relation to said movable platen, and a pump having an outlet for supplying fluid under pressure to said main cylinder; the combination therewith of means for molding a workpiece to an exact thickness, comprising a first fluid line connecting said main cylinder with said pump outlet, a check valve in said first line opening toward said main cylinder, an on-off valve having one side connected with said first line between said check valve and main cylinder and having its other side connected to discharge fluid from said first line to exhaust, a second fluid line connecting said pump outlet with exhaust, a control valve in said second line, a branch line connecting said first line, between said check valve and main cylinder, with said second line, between said pump outlet and control valve, a check valve in said branch line and opening toward said second line, and means responsive to the closing movement of said platens to open said control valve and responsive to the opening movement of said platens to close said control valve including a pair of microswitches connected in series with each other and with said control valve and operatively interposed between different parts of said platens.

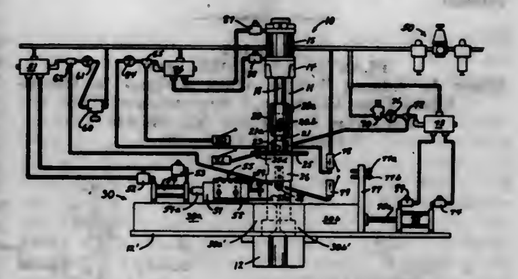
3,089,189
APPARATUS AND PROCESS FOR FORMING HIGH DENSITY COMPACTS
Milton H. Feldmann and Harold E. Hosticka, Pittsburgh, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Aug. 7, 1959, Ser. No. 832,390
8 Claims. (Cl. 18—16)

5. A method for fabricating a body of uniform high density from at least one compactible material in the form of solid particles which comprises (1) charging the compactible material in solid particle form into a die cavity comprised of a perforation within a resilient flowable elastomeric member, the thickness of the wall surrounding said cavity being equal to at least the radius of the cavity, (2) positioning said elastomeric member with the charged compactible material between two platens comprised of a hard relatively non-deformable material with



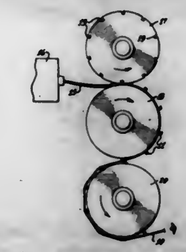
the perforation extending from one platen to the other, (3) applying a pressure of the order of 1×10^6 pounds per square inch over the area of said compactible material by compressing said elastomeric member and said compactible material between said platens without confining the periphery of the elastomeric member, said elastomeric member being in direct contact with the platens during compaction, whereby a compact of uniform high density is formed.

3,089,190
FLARING MACHINE
Robert J. Branham, Indianapolis, Ind., assignor to Central Supply Company, Indianapolis, Ind., a corporation
Filed Apr. 20, 1959, Ser. No. 807,562
1 Claim. (Cl. 18—19)



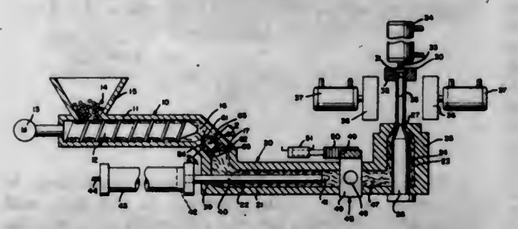
A flaring machine for hollow tubing comprising, in combination, a base, a vise disposed on said base, said vise having a stationary jaw and a movable jaw, said stationary and said movble jaws having portions thereon adapted to releasably position said hollow tubing therebetween, an electrical system for controlling a programing sequence for said flaring machine including a switching mechanism slidably disposed on said stationary jaw of said vise having an electrical contact extending therefrom, said electrical contact adapted to be positioned with respect to said hollow tubing to initiate said electrical system upon engagement thereof by said hollow tubing, and a movable power member having a heated floating end assembly, a flaring member positioned at one end of said heated floating end assembly generally concentric with said hollow tubing, said movable jaw of said vise responsive to the said initiation of said electrical system to grip said hollow tubing and to initiate movement of said power member, where said movable jaw of said vise automatically controls the slidable movement of said switching mechanism.

3,089,191
PRODUCT METHOD AND APPARATUS FOR MAKING A HOBBED-SURFACED SHEET MATERIAL
Bert Conrad, Alhambra, Calif., assignor to American Pipe and Construction Company, South Gate, Calif., a corporation of California
Filed June 13, 1961, Ser. No. 116,851
4 Claims. (Cl. 18—21)



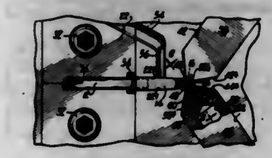
1. An apparatus for making a hobbed-surfaced sheet from deformable and extrudable material, a forming roll comprising: a fluid-cooled roll cylinder having axial fluid inlet and outlet openings, an axially segmented die cylinder coaxially mounted to said roll cylinder and having its inner cylindrical surface secured in abutting relationship to the outer cylindrical surface of said roll cylinder, said die cylinder having a plurality of openings therethrough, each opening terminating in a slotted recess on the inner surface of said die cylinder, each recess extending angularly relative to the axis of said roll and die cylinders and in the same angular direction, the outer surface of said roll cylinder covering each recess and defining an internal cavity having an opening to the outer surface of said die cylinder.

3,089,192
PLASTIC ACCUMULATOR
Elmer L. Adams, Toledo, Ohio, assignor to Owens-Illinois Glass Company, a corporation of Ohio
Filed May 1, 1961, Ser. No. 106,848
3 Claims. (Cl. 18—30)



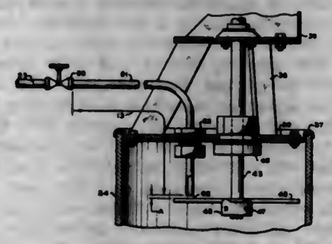
1. In a method of making a plastic article by the steps of continuously plasticizing material from a source at a pressure P1, storing the material in an accumulation chamber at a pressure P2, and dispensing material from said chamber and through an orifice at a pressure P3, the improvements of supplying plasticized material to the accumulation chamber from said source whenever P1 is greater than P2, developing pressure P3 in the chamber by the insertion of a material-displacing rod into the chamber, simultaneously isolating the accumulation chamber from the plasticizer and dispensing material from the chamber through the orifice whenever pressure P3 is developed in said chamber, subsequently isolating the chamber from the orifice, displacing said rod from said chamber by supplying material thereto from said source, and developing pressure P2 in said chamber by the resistance of said rod to displacement from said chamber.

3,089,193
APPARATUS FOR AND METHODS OF ASSEMBLING RECORD ENGAGING STYLI
Charles G. Weigand, Glencoe, Ill., assignor to Fidelitone, Incorporated, Chicago, Ill., a corporation of Illinois
Filed July 16, 1958, Ser. No. 748,994
2 Claims. (Cl. 18—36)



1. An apparatus for making a transducer unit having a stylus element with a pointed tip comprising a mold defining a mold cavity and an opening in communication with said mold cavity, an elongated and manipulable stylus holding means, said stylus holding means including a wall portion defining a part of the mold cavity and a passageway connected to a stylus receiving portion in the wall portion, said stylus holding means being removably mounted in said opening with said stylus receiving portion disposed adjacent said mold cavity, and a flexible vacuum line connected to said passageway to detachably hold the stylus on said stylus holding means in said stylus receiving portion to permit a stylus element to be mounted on said stylus holding means and then supported in said mold cavity by mounting said stylus holding means in said opening in said mold.

3,089,194
PROCESS AND APPARATUS FOR TREATING PLASTIC MATERIAL
Robert R. Goins, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Oct. 10, 1955, Ser. No. 539,523
4 Claims. (Cl. 18—47.5)



1. The method of treating a solution of plastic material which comprises passing said solution along a confined path at a pressure sufficient to maintain said dispersion in the liquid phase, abruptly releasing said pressure and subsequently passing said dispersion along said confined path for a distance sufficient to effect solidification of the plastic material, discharging the solidified material from said confined path, contacting the discharged material closely adjacent the discharge region with a cutting edge having sufficient velocity to effect disintegration of the solidified material, maintaining a reduced pressure in the region of said discharge zone to flash off said solvent, and recovering the resulting disintegrated solid plastic material.

3,089,195
PROCESS FOR PRODUCING A SHAPED GRAPHITE ARTICLE
James Woodburn, Jr., Wheaton, Ill., assignor to Amsted Industries Incorporated, Chicago, Ill., a corporation of New Jersey
Filed Dec. 18, 1957, Ser. No. 703,657
1 Claim. (Cl. 18—47.5)

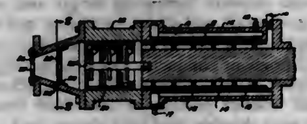
In a method of producing a made-to-shape graphite article, the steps of mixing carbon powder with a thermosetting furfuryl resin binder, then shaping the mixture to form an article, then curing the article, unsupported as to its shape, to set the binder, then firing the article, unsupported as to its shape, to carbonize the binder, and then graphitizing the article.

3,089,196
PROCESS FOR MAKING LAMINATED MATERIAL
William J. Knapp and Francis R. Shanley, Los Angeles, Calif., assignors to The Rand Corporation, Santa Monica, Calif., a non-profit corporation of California
Filed Aug. 10, 1959, Ser. No. 832,695
20 Claims. (Cl. 18—47.5)



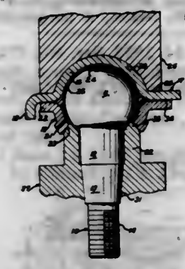
1. A process for making a laminated material, which comprises: depositing a thin layer of brittle material from a source onto a carrier surface, the carrier surface and said source of brittle material moving relative to each other during the deposition; depositing a layer of more ductile material from a source upon said layer of brittle material, the carrier surface and said source of more ductile material moving relative to each other during the deposition, said deposition of brittle and more ductile layers comprising one cycle; repeating said cycle a multiplicity of times to thereby build up a multiplicity of alternating layers of brittle and more ductile material, removing said multi-layered material from said carrier surface; comminuting said multi-layered material to form a multiplicity of small grains of multi-layered structure; and bonding said comminuted material in random orientation.

3,089,197
METHOD FOR PREPARING DETERGENT COMPOSITIONS
Robert H. Chaffee, Cincinnati, and Richard S. Bowles, Wyoming, Ohio, assignors to The Procter & Gamble Company, Cincinnati, Ohio, a corporation of Ohio
Filed July 25, 1960, Ser. No. 45,198
5 Claims. (Cl. 18—55)



1. In a process for preparing aerated detergent bars from a flowable detergent mass containing a compatible gas, by means of a device which extrudes the aerated detergent in a continuous shape-retaining strip and wherein the detergent mass moves sequentially in said device from the inlet thereof through a scraped-wall cooling zone, a mixing zone and discharge zone to an extrusion outlet, the improvement which comprises impeding the flow of the detergent mass beyond the aforesaid scraped-wall cooling zone and mixing zone and prior to the extrusion outlet whereby the said discharge zone is divided into a zone of higher back pressure and a zone of lower back pressure, the said mass in the zone of higher back pressure being under a pressure sufficient to hold a major portion of the compatible gas in solution in the detergent mass, releasing the mass into the aforesaid zone of lower back pressure, whereby a portion of the compatible gas in solution in the detergent mass is released from solution and becomes dispersed throughout the detergent mass in small bubble form, and releasing the mass through the extrusion outlet to atmospheric pressure, whereby compatible gas still in solution in the detergent mass is released from solution, the compatible gas being dispersed as vesiculated gas throughout the extruded detergent mass.

3,089,198
METHOD OF MAKING A BALL JOINT
Harry E. Elrhart, Jr., Detroit, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed May 21, 1958, Ser. No. 736,753
2 Claims. (Cl. 18—59)

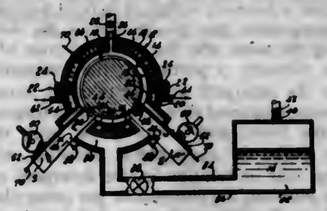


1. The method of making a ball joint having a ball member and a ball retaining member of such relative size as to form a relatively thin cavity therebetween, comprising the steps of applying a coating of binder material of predetermined volume to the surface of one of said members, applying a coating of flocked low friction fiber upon the surface of said coating of binder material, one of said members having an opening therein communicating with said cavity, assembling said members together and clamping them in assembled relationship while said binder material cures, the said predetermined volume of binder material being in excess of the amount required to fill the cavity between said members, and escaping in part through said opening, and controlling the time of curing said binder material in relation to the size of said opening and the excess volume of binder material to provide a predetermined preload in the binder material when the material is cured.

3,089,199
METHOD OF APPLYING INSULATING INCAPSULATION
Andrew A. Halacsy, 380 Irvington Ave., Elizabeth, N.J.
Filed June 17, 1960, Ser. No. 36,847
9 Claims. (Cl. 18—59)

1. A method of incapsulating an electrical unit with a coating of uniform dielectric strength, comprising the steps of applying a uniform coating of an uncured plastic insulating material to the surface area of said unit except for a support area adjacent said coated surface area, said coated surface area having a border zone adjacent said support area and defined between said coated and support areas, curing said coated surface area and gradiently curing said border zone with the cure thereat diminishing from a partially cured zone to an uncured zone adjacent said support area while supporting said

unit at said latter area, exposing said support area and uniformly coating the same with an additional quantity of said uncured material and intimately merging the

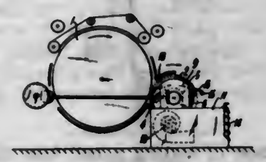


same with the material at said uncured zone of said border zone, and curing said border zone and support area coatings while supporting said unit at a cured region of said coated surface area.

3,089,200

Ferdinand Reiterer, Rueil-Malmaison, France, assignor, by direct and mesne assignments, to Whitin Machine Works, Whitinsville, Mass., a corporation of Massachusetts

Filed Nov. 14, 1958, Ser. No. 774,056
Claims priority, application France Nov. 16, 1957
12 Claims. (Cl. 19—106)



9. Carding apparatus for fibers of all kinds, comprising a main first cylinder for use as a swift onto the periphery of which the fibers to be treated are brought, a doffer cylinder of smaller diameter than the first cylinder and arranged to rotate parallel to the first cylinder and adjacent thereto, said doffer cylinder having a perforate peripheral wall, and means for keeping an interior space of said doffer cylinder under reduced pressure to draw air through the perforations of said perforated wall for holding fibers thereagainst, said last-mentioned means including a fixed hollow structure disposed within the perforated rotating doffer cylinder and having throughout its length on the side facing said first cylinder at least one aperture forming a suction opening, said fixed structure being divided by a longitudinal partition into two compartments, said last-mentioned means further including a fan and means for connecting the suction side of the fan to one of said compartments and the delivery side of the fan to the other compartment, said one compartment being also connected to said suction opening, and said other compartment being exposed to said doffer cylinder for the purpose of cleaning the surface of the latter during its rotation.

3,089,201

METHOD OF MAKING BUILDING STRUCTURES

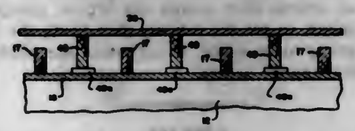
Leroy Helfman, Detroit, Mich.

Filed Aug. 28, 1961, Ser. No. 134,186
2 Claims. (Cl. 20—.5)

1. A method for modifying an existing single story dwelling having an attic bottomed with ceiling joists for the ceiling below said attic and having a low pitched roof whose ridge is so low as to provide insufficient head room for normal living activities in the attic; said method comprising the steps of

(*a*) cutting a rectangular opening of room dimension in said roof at and through the ridge inwardly of the side and end walls of the dwelling;

(*b*) thereafter laying down end bearing blocks on the upper edges of the lower floor walls and between the ceiling joists, with such blocks having their upper surfaces above the upper surface of the ceiling;



(*c*) thereafter laying down floor joists under said roof opening and on such blocks and between the ceiling joists, with such floor joists having their lower edges above and free of the ceiling and having their upper edges above the upper edges of the ceiling joists;

(*d*) thereafter building room walls bearing on said floor joists and paralleling the dwelling walls and bounding said roof opening and extending above the ridge;

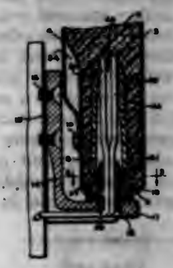
(*e*) and finally constructing a roof on the upper edges of the room walls.

3,089,202

PLASTIC FOAM INSULATED DOOR STRUCTURE INCLUDING ELECTRICAL HINGE

John W. Pulaski, Louisville, Ky., assignor to General Electric Company, a corporation of New York

Filed Nov. 14, 1960, Ser. No. 69,192
1 Claim. (Cl. 20—16)



A door structure comprising spaced inner and outer panels, one of said panels having an inwardly extending flange about the peripheral edges thereof, a hinge sleeve having a portion extending into said door through said flange, a hollow hinge pintle projecting into said sleeve, a tapered plastic thimble having its larger end snugly enclosing the portion of said sleeve extending into said door, said thimble having a pair of spaced openings in the other end thereof, a pair of conductors adapted to be connected to means mounted on said door, said conductors extending from the interior portion of said door through said openings in said thimble and said sleeve, and a mass of resin foam insulation formed in situ within the space between said inner and outer panels, said foam completely surrounding said thimble and anchoring said thimble on said sleeve and said sleeve preventing said foam from embedding the free lengths of said conductors within said sleeve whereby said lengths are free to absorb the twisting action thereof resulting from opening and closing movement of said door on said hinge pintle.

3,089,203

SLIDING DOOR HANGERS AND DOOR

Charles F. Rosellini, Oyster Bay, N.Y., assignor to Otis Elevator Company, New York, N.Y., a corporation of New Jersey

Filed Aug. 22, 1960, Ser. No. 51,216
4 Claims. (Cl. 20—19)



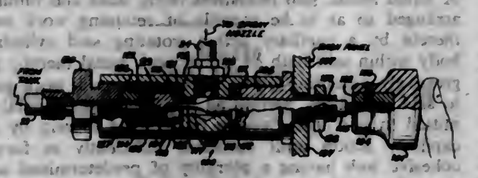
1. In combination, an overhead linear type door hanger horizontally suspended in an entranceway, said hanger including a moveable longitudinal track of rectangular cross-section adapted for sidewise movement in said hanger and having a lower portion depending from said hanger, said lower portion having two end portions for attachment to a vertically disposed door, one of said attaching end portions being in the form of a depending tail block having a bolt receiving aperture formed horizontally therein, the other of said attaching end portions having formed therein a recess of predetermined internal configuration adapted for receiving a horizontally disposed member of cooperating external configuration in male and female mating engagement, a vertically disposed door having a U-shaped channel forming its top edge surface, a mating member rigidly secured in said U-shaped channel adjacent a vertical side edge of said door, said member having a horizontally disposed portion of external configuration adapted for mating fit in said recess, a fastening block secured to said door adjacent the other vertical side edge of said door, said fastening block having a horizontally disposed and threaded bolt receiving aperture formed therein, said lower portion of said movable track being disposed relatively loosely in said U-shaped channel of said door with said tail block aperture in alignment with said fastening block aperture, and a bolt extending through said tail block aperture and threaded into said fastening block to secure said door to said tail block and force the recess formed end of said lower center track portion into frictional engagement with said mating member, thereby suspending said door from said movable track for sidewise movement therewith.

3,089,204

WINDSHIELD WASHER APPARATUS FOR VEHICLES

Ben Fingeroot, Oakland County, Mich., and Marion Albert Elliott, deceased, late of Oakland County, Mich., by Ted J. Leon, administrator, Dallas County, Tex.; said Leon assignor to said Fingeroot

Filed Nov. 30, 1961, Ser. No. 156,175
3 Claims. (Cl. 20—40.5)



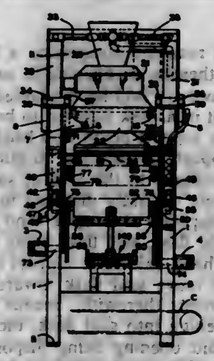
1. In a device for spraying a cleaning liquid under pressure onto a vehicle windshield traversed by a windshield wiper, nozzle means adapted to be fixed to the forward hood of the vehicle and having an outlet shaped for distributing droplets of said liquid over an area greater than the area traversed by said wiper, a tank for containing liquid under pressure, said tank being provided with liquid-inlet means having a socket portion and a seal-engaging surface, said inlet means being shaped and positioned for limiting the quantity of liquid in said tank to a level below the top of the tank, safety closure means for closing off said inlet means comprising a cap portion and a hollow stem portion, a resilient member carried by said cap portion and sealingly engageable with said inlet means surface when said closure means is in closed condition, said stem portion being provided with a side passage through the stem portion wall disposed so as to be within said socket portion when said closure means are in said closed condition, mutual coupling means on said stem and socket portions for resisting axial thrust tending to dislodge said stem portion from said socket portion, said coupling means being partially disengageable to allow the stem portion containing said side passage to extend out of said socket portion beyond said surface for exhausting pressure from said tank, whereby said hollow stem portion and side passage form a pressure-relieving outlet for the tank while said stem portion is being disengaged from said socket portion but before said coupling means are completely disengaged, and a push-button operated control valve connected between said source and said nozzle means for controlling the frequency and duration of spray applications of said cleaning liquid issuing from said nozzle means.

3,089,205

MOLD AND CORE BLOWING MACHINE

Robert W. Elms, North Olmsted, Ohio, assignor to The Osborn Manufacturing Company, Cleveland, Ohio, a corporation of Ohio

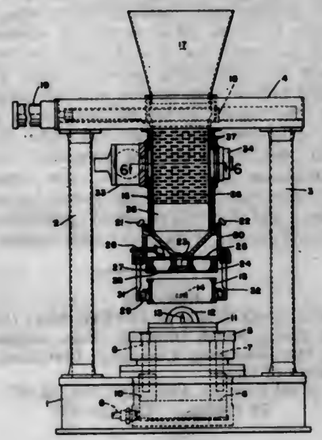
Filed June 23, 1960, Ser. No. 38,307
22 Claims. (Cl. 22—10)



1. In a mold blowing machine having a sand reservoir with an opening for charging with sand, means for closing such opening, a blow valve operative to admit high pressure air to said reservoir, an exhaust valve operative to relieve the pressure in said reservoir, a blow hole through which sand is discharged from said reservoir by such high pressure air, and clamp means operative to clamp a mold box or the like firmly in position to receive sand discharged through such blow hole; said clamp means including a pair of pivotally mounted fluid pressure operated piston-cylinder assemblies, a cradle support assembly for said mold box pivotally mounted on the rod ends of said piston cylinder assemblies about a common horizontal pivot axis, each said cradle pivot being confined in a cam slot having vertically extending and rebent portions, slot means secured to said cradle and extending from such horizontal pivot axis generally parallel to said cam slots, a pivot on said machine adjacent said rebent portion of said cam slots and engaged in said slot means secured to said cradle, whereby vertical movement of said cradle by said piston-cylinder assem-

blies will cause said cradle to rotate about such horizontal pivot axis as such axis moves through the rebent portion of said cam slots thereby to facilitate the withdrawal of a mold from such mold box.

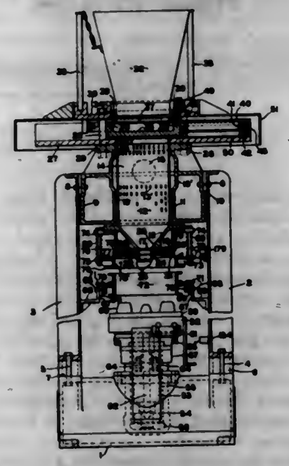
3,089,206
BLOW AND SQUEEZE MOLDING MACHINE AND METHOD OF MOLDING
Edward D. Abraham, Cleveland, Ohio, assignor to The Osborn Manufacturing Company, Cleveland, Ohio, a corporation of Ohio
Filed Jan. 13, 1958, Ser. No. 708,446
14 Claims. (Cl. 22—36)



9. A molding machine comprising a head, said head having a cavity therein, an opening in said head, flexible means in said cavity in said head adapted to receive fluid to compress sand in a flask adapted to be disposed below said head, a flask support below said head, a pattern plate on said flask support, said opening in said head being relatively small compared to the area of said pattern plate, said opening being centrally disposed in said head, said opening being disposed to project sand in a downward direction into said flask, said flask being adapted to form a seal with said head, said flask support having means on said machine to move said flask toward said head into sealing engagement therewith, means to blow sand through said opening into said flask, the portion of said head defining said opening being disposed adjacent the top level of said flask, and means to move said pattern plate and said flexible means relative to each other after said sand is blown into said flask whereby said sand is compressed between said flexible means and said pattern plate.

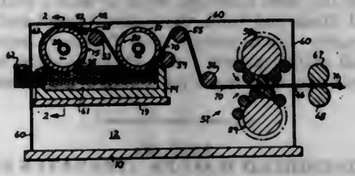
3,089,207
BLOW-SQUEEZE MOLDING MACHINE
Leon F. Miller, Rocky River, Ohio, assignor to The Osborn Manufacturing Company, Cleveland, Ohio, a corporation of Ohio
Filed Apr. 9, 1959, Ser. No. 805,174
24 Claims. (Cl. 22—36)

1. A molding machine comprising a vertically movable table, a blow-squeeze head positioned directly above said table, means to position a flask and pattern on the table, an upset frame pendently mounted around said blow-squeeze head, pressure means effective resiliently yieldingly to maintain said upset frame in its lowermost position, said upset frame being of the same transverse dimensions and aligned with such flask, lift means operative to raise said table with such flask and pattern positioned thereon, means responsive to a predetermined elevated position of such flask after contact between such flask and upset frame effective to stop said lift means and to blow sand into such flask and upset frame through said blow-squeeze head, means operative to actuate said



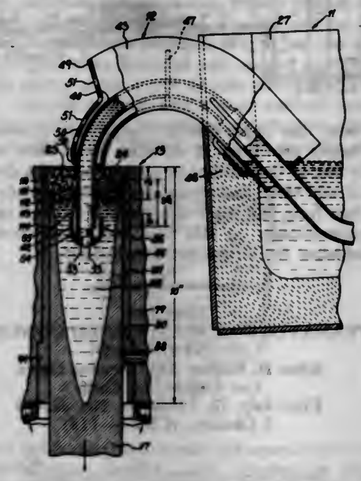
lift means after a predetermined time interval again to raise said table with the sand filled flask positioned thereon raising said upset frame against the force of said pressure means and compressing such sand within the flask and upset frame against said blow-squeeze head.

3,089,208
CONTINUOUS CASTING PROCESS
Albert W. Scribner, 6 Country Club, Darien, Conn.
Filed Sept. 2, 1959, Ser. No. 837,756
1 Claim. (Cl. 22—200.1)



A method of continuously casting strip metal; comprising the steps of providing a bath of liquid work metal, disposing a cylindrical body comprising on its periphery a plurality of laterally adjacent and laterally communicating open-ended interstices partially within said bath of liquid metal, said interstices being sized and mutually arranged so as to be capable of retaining work metal therein by a capillary action, rotating said cylindrical body within said bath of liquid work metal thereby progressively admitting portions of said liquid work metal to said interstices, permitting the liquid work metal admitted to said interstices to be retained therein by said capillary action until hardened sufficiently to form a cohesive web having a plurality of predetermined apertures therein that are complementary in shape with said interstices, removing the hardened web metal from said interstices, filling said web apertures with additional amounts of said liquid work metal, and cooling said additional amounts of work metal to a hardened state, said additional amounts of hardened work metal together with the previously hardened web metal cumulatively defining an elongated substantially homogeneous strip.

3,089,209
METHOD FOR CONTINUOUS CASTING OF METAL
Albert J. Phillips, Plainfield, and Richard Baier, New Brunswick, N.J., assignors to American Smelting and Refining Company, New York, N.Y., a corporation of New Jersey
Filed Jan. 6, 1960, Ser. No. 894
7 Claims. (Cl. 22—200.1)



1. In a method for continuously casting copper base metal in which molten copper base metal is fed into the top of a vertically disposed open-ended mold having a chill section for casting the molten metal and cast metal is withdrawn from the other end of the mold while maintaining the level of the metal in the mold below the top of the chill section, said chill section presenting a graphite face to the metal cast therein, and the meniscus of the metal in said chill section is vertically reciprocated with respect to the wall of the chill section, the improvement in combination therewith which comprises feeding said molten metal to said chill section at a temperature which is less than about 200° F. above the freezing point of the metal being cast, introducing a gas containing more than about 40% by volume of hydrogen to the meniscus of the metal in the chill section during the casting procedure, and controlling the amount of hydrogen which is delivered to said meniscus by controlling the amount of said hydrogen delivered to the meniscus during the casting procedure to a rate of introduction which is between that rate which produces an irregular pattern of irregularities on a major portion of the surface of the casting emerging from the mold and that rate which produces deep tears on the surface of the emerging casting.

3,089,210
CORD HOLDER
Charles E. Ritter, 214 N. 8th Ave., Des Plaines, Ill.
Filed Apr. 6, 1962, Ser. No. 185,663
6 Claims. (Cl. 24—71.1)



1. A cord holder comprising, a base member and a cover member, said base member comprising a pair of spaced apart side walls and a pair of spaced apart end walls integrally molded together and to a bottom wall, said end walls of said base member being formed as a surface inclined inwardly from side walls and upwardly from said bottom wall, there being a slot formed in the upper marginal edge of the extreme end portion of each of said end walls of said base member, said cover member comprising a pair of spaced apart side walls and a pair of spaced apart end walls integrally molded together and to a top wall, said end walls of said cover member being formed to extend inwardly from said side walls and downwardly from said top wall thereof, a slot formed in the lower marginal edge of the extreme end portion of each of said end walls of said cover member, said end and side walls of said base member and said cover member being relatively formed to cooperate to define a closed container with said slots thereof cooperating to define a pair of axially aligned cord openings at each extreme end portion of said cord holder when said cover member is positioned on said base member, means for securing said cover member on said base member, wall means formed on said bottom wall in said base member and extending upwardly into cooperation with the underside of said top wall of said cover member for receiving a cord extending through said cord openings in a serpentine relationship thereabout, and there being opposed projections formed on said wall means for kinking a portion of any cord extending through one of said cord openings, between said projections and disposed about said wall means.

3,089,211
CLIP FOR SECURING AN ARTICLE TO A TABLE
Walter L. Perusse, 911 S. 7th St., De Kalb, Ill.
Filed June 19, 1961, Ser. No. 118,070
1 Claim. (Cl. 24—259)

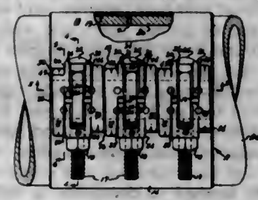


A clip for detachably securing the marginal portion of a flexible sheet of material to the marginal edge of a table top, said clip being formed of a strip of resilient flat stock having an upper leg of flat form substantially throughout its length, a lower leg having a main portion of flat form throughout the major portion of its length and disposed at an acute angle to the upper leg and having a downwardly extending outer portion of substantially straight form and extending away from the upper leg and joined to said main portion by a rounded portion to provide a relatively small area of pressure contact with the underside of the table top when the clip is positioned thereon, and an intermediate leg of flat form substantially throughout its length and connected at opposite ends to corresponding ends of said upper and lower legs, said intermediate leg extending substantially normal to the upper leg and at an acute angle to the lower leg, the outer free ends of said upper and lower legs being bent in opposite outwardly directions.

3,089,212
PIPE CLAMP
Thomas A. Graham, San Carlos, Telford L. Smith, Los Altos, and James C. Merriss, Jr., Belmont, Calif., assignors to Smith-Blair, Inc., San Francisco, Calif., a corporation of California
Filed Apr. 16, 1959, Ser. No. 806,869
9 Claims. (Cl. 24—279)

1. In a pipe clamp of the type having a malleable band with end portions secured in lugs, with the lugs in pairs and tightened together by bolts, the combination wherein each lug has a pair of malleable jaws between which

said end portions fit, one jaw having projections, the other jaw having recesses opposite said projections, said jaws being initially cast in an open, spread-apart position and then closed with said projections fitting into said recesses and thereby holding said end portions, each



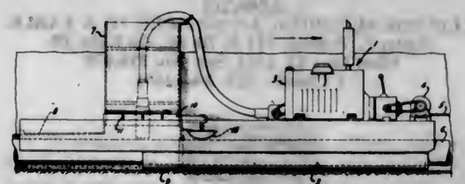
said lug having a radially outer sloping planar surface with radial projections defining bolt-receiving means and generally tangentially projecting fingers with a radially inner sloping planar surface engaging the radially outer sloping planar surface of a mating lug along a point radially inside said bolt-receiving means.

3,089,213

APPARATUS FOR PRODUCING CEMENTITIOUS CONDUITS

Gilbert D. Williamson, Yuba City, Calif., assignor to Plasti-Con Pipe Co., a corporation of California

Filed Jan. 12, 1959, Ser. No. 786,291
3 Claims. (Cl. 25—32)



1. Apparatus for producing cast-in-place conduits in a trench, comprising a skid support adapted to be disposed in and moved longitudinally along the bottom of a trench; means on said skid for supporting a continuous tubular casing in spaced relation to the bottom and sides of said trench, said casing having been disposed longitudinally in advance of said skid; means mounted on the skid support for resiliently biasing said conduit toward said support means including a resiliently mounted bow member having a convex surface for making contact with said casing; a hopper chute mounted to said skid support and adjacent to but rearwardly of said bow member having a discharge opening overlying the continuous tubular casing, whereby cementitious material deposited in said hopper chute will envelop and enclose the casing; and means for advancing the skid and hopper chute in the trench and relative to the continuous tubular casing, whereby said casing remains stationary relative to said trench and is resiliently held upon said support means by engagement with the convex surface of said bow member as said hopper chute passes over and along said casing upon advancement of said skid support.

3,089,214

MACHINE FOR MANUFACTURING AIR CAVITY BUILDING BLOCKS

Joe Marcel Wolff, Elmhurst, N.Y., assignor, by mesne assignments, to Cav-Wal Block Corporation, New York, N.Y., a corporation of New York

Filed Oct. 6, 1959, Ser. No. 844,652
8 Claims. (Cl. 25—41)

1. In a machine for fabricating an air cavity block constituting at least two slabs with parallel coextensive portions unconnected except by at least one tierod, and which machine includes a mold box having inner and outer side walls and end walls defining separate elongated parallel cavities for the slabs, the inner side walls of the mold box at each cavity having registered slots extending inwardly to closed bottoms from like edges of the



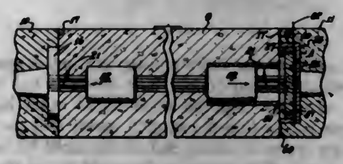
mold box: that improvement comprising, a source of tie rods, means providing an opening in an outer side wall of only one of the cavities in registry with the closed bottoms of said slots, and means for feeding tierods into the mold box from the outer side thereof through said opening, perpendicular to said side walls and through said slots adjacent the closed bottoms thereof.

3,089,215

APPARATUS FOR PRESTRESSED CONCRETE CONSTRUCTION

Allan H. Stubbs, 5543 Bradna Drive, Los Angeles 43, Calif.

Filed July 12, 1960, Ser. No. 42,418
3 Claims. (Cl. 25—118)



1. Apparatus for post tensioning a closure strip of concrete positioned between first and second spaced apart post-tensioned concrete slabs comprising: first and second corresponding pluralities of tendons extending in tension respectively through said first and second slabs with an end of each of the tendons in said first and second slabs extended into the space defined by the opposed edge surfaces of said first and second slabs; means affixing the end of each of said second plurality relative to the edge of said second slab; a bearing plate affixed to said end of each of said tendons of said first plurality; a cylinder positioned surrounding each of said bearing plates within said first slab, said cylinder having an open end at said edge surface of said first slab and extending longitudinally therein, said bearing plate being longitudinally movable within said cylinder with the respective tendon; means for releasably affixing each of said bearing plates in a first longitudinal position within the respective cylinder; a coupler tendon connected between the fixed end of a tendon in the second plurality and the releasable end of the corresponding tendon in the second plurality; means for releasing each of said bearing plates from the exterior of said slab after concrete has been poured and hardened between said edge surfaces whereby each of said bearing plates is released from said first longitudinal position.

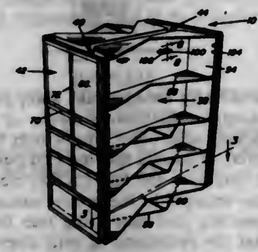
3,089,216

FORMS FOR SECTIONAL PRECAST FEED BUNKERS

Anton A. Swiltick, Omro, Wis., assignor to Valley Pre-Cast Banks, Inc., a corporation of Wisconsin

Filed June 15, 1960, Ser. No. 36,272
4 Claims. (Cl. 25—121)

2. A sectional precast concrete form assembly comprising a pair of opposed channel-shaped panels, each having a web, two substantially perpendicularly extending sides, and flanges extending approximately perpendicularly outward from the outer end of each side and parallel to the web, the channel side of said panels constituting the rear surface of the panels and the opposite side of said panels constituting the shape forming surfaces of the panels, said panels being positioned with the shape forming surfaces facing each other so as to form a substantially I-shaped mold, longitudinally disposed angle iron edge stiffening members each having one leg welded along said outwardly extending flanges and the second leg projecting outwardly perpendicular to the rear surface, said second leg being provided with spaced aligning apertures and spaced slots; a pair of side panels, each having a shape forming surface and a rear surface, said side panels including angle members attached to the rear surface at the edges thereof so as to provide at each



edge, one leg juxtaposed to said side panel and another leg perpendicular thereof, said juxtaposed leg and the subjacent side of said side panel having aligned aligning apertures and slots spaced so as to correspond to the apertures and slots in said stiffening members, means connecting said side panels to said first mentioned pair of opposed panels and spacing said opposed panels in predetermined spaced relation to each other, said side panels being reinforced by rib members extending between and abutting the perpendicular legs of the angle members secured to the side panels, and reinforcing ribs integrally connected to and conforming to the web, sides and outwardly extending flanges of the rear surface of the first mentioned pair of channel-shaped panels, the ends of said reinforcing ribs extending into abutting relationship with the stiffening angles secured to the outwardly extending flanges of said first mentioned panels.

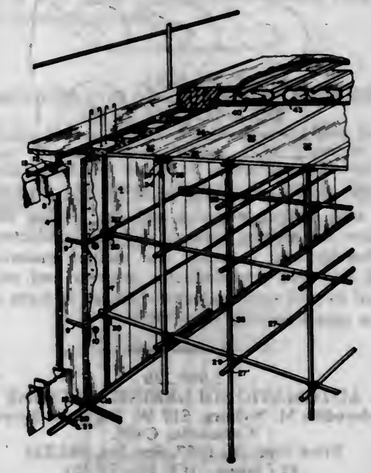
3,089,217

EQUIPMENT FOR CONCRETE BUILDING CONSTRUCTION

Dino Filippi, Via Appia Nuova 484, Rome, Italy

Filed Mar. 10, 1960, Ser. No. 14,059
Claims priority, application Italy Mar. 25, 1959
5 Claims. (Cl. 25—131)

1. Equipment for constructing buildings of concrete and the like, comprising, in combination, a plurality of spaced wall forms located in sections, each section having two parallel rows of wall forms, each wall form having a flat metal plate and a plurality of profile irons enclosing the edges of said plate and constituting a frame, the plates of each section facing each other, whereby concrete may be poured between the plates of each section to provide a concrete wall; a framework of vertical and horizontal metal pipes engaging the profile irons of some of the wall forms in each section for supporting said wall forms vertically, the vertical pipes tangentially contacting the horizontal pipes, a separate bolt extending through each vertical pipe and each horizontal pipe at the point of tangential contact of the two last-mentioned pipes, said horizontal pipes having recesses formed at said points of tangential contact and receiving circumferential portions of adjacent vertical pipes, plate means supported on the tops of the vertical pipes in said framework, a layer of concrete covering said plate means, transverse spacer bars, means connecting said spacer bars with said wall forms, a plurality of core-box forms, each of said core-box forms having a hollow body, forks firmly connected with said hollow body and extending downwardly therefrom, said forks embracing one of said spacer bars for supporting



said hollow body between the plates of said wall forms, and a clip upon said hollow body; an alinement bar connected to the clips of said core-box forms and engaging said wall forms; and at least one floor form supported on said layer of concrete, said floor form having a sectional bottom and collapsible top sections hingedly connected with said sectional bottom.

3,089,218

TEXTILE FABRICS AND FELTS FOR TECHNICAL PURPOSES

Olof Sunden, Ljungaverk, Sweden, assignor to Stockholms Superfosfat Fabriks Aktiebolag, Stockholm, Sweden, a corporation of Sweden

No Drawing. Filed June 2, 1958, Ser. No. 739,005
10 Claims. (Cl. 28—78)

1. A papermakers' felt comprising a woven cloth in which the warp and the filling are composed essentially of a yarn prepared from the fibers of an acrylonitrile copolymer containing at least 90 molar percent of acrylonitrile units and up to about 10 molar percent of monoethylenically unsaturated monomer units, inter-linked to a degree of one inter-link per 1000 to 20,000 monomer units in the polymer by means of an inter-linking polyfunctional compound.

3,089,219

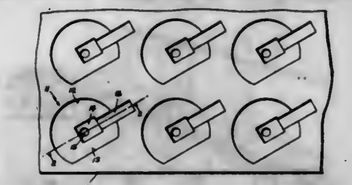
TRANSISTOR ASSEMBLY AND METHOD

John R. Williams, Natick, Mass., assignor to Raytheon Company, a corporation of Delaware

Filed Oct. 19, 1953, Ser. No. 386,977
2 Claims. (Cl. 29—25.3)

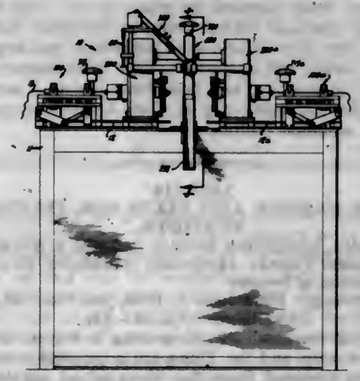
1. A method of forming a fused junction type transistor assembly which comprises pre-positioning a collector material of one type electrical conductivity, a semi-conductor member of a second type of electrical conductivity, an emitter material of said first type electrical conductivity, and a pre-tinned base strip in a mold assembly, said mold assembly being adapted to hold said collector material unconnectedly adjacent to one face of said semiconductor member, said emitter material unconnectedly adjacent to another face of said semiconductor member

and opposed to said collector material, and said strip on an end section of said semiconductor member, all of the foregoing steps being performed before any heat is applied to said assembly, and then simultaneously heating said mold assembly and the components therein to a predetermined temperature, said temperature being sub-



stantially above the melting point of said collector material, said emitter material and the tinning material, but below the melting point of said semiconductor member whereby said collector and emitter materials are alloyed into said semiconductor member and said strip is joined to said semiconductor member to form a fused junction type transistor assembly.

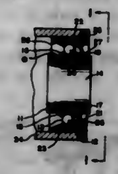
3,089,220
AUTOMATIC SOLDERING MACHINE
Meredith M. Nyborg, 517 W. Highland Drive, Camarillo, Calif.
Filed Sept. 20, 1957, Ser. No. 685,213
32 Claims. (Cl. 29—25.42)



1. A soldering machine comprising a pair of jaw members, means for periodically inserting a tubular capacitor section in said jaw members to be held thereby during a pigtail soldering operation, means for simultaneously positioning pigtail leads having looped ends thereon adjacent each end of said capacitor section, a pair of soldering heads having directionally opposed soldering faces movable against opposite ends of said capacitor section, means for injecting a measured amount of solder between said soldering heads and respective ends of said capacitor section, and means for moving said soldering heads toward and away from said capacitor section while said section is held by said jaw members.

3,089,221
METHOD FOR MAKING BALL BEARING
Irwin R. Barr, Baltimore County, Md., assignor to Aircraft Armaments, Inc., Cockeysville, Md., a corporation of Maryland
Filed Apr. 16, 1959, Ser. No. 806,899
6 Claims. (Cl. 29—148.4)

1. A method for making a bearing assembly which includes (1) a sleeve having a bore therein that is relatively resistant to radial enlargement, and (2) a bearing having an outer ring of substantially the same diameter as said bore concentrically arranged about an inner ring, concentric facing groove means in each ring for forming a toroidal raceway of uniform cross-section, and anti-friction elements of substantially the same cross-section as said raceway engaged therein for effecting relative rotation between the rings, comprising the steps of: forming said outer ring of plastic material capable of substantial deformation within the elastic limit so that it is substantially easier to radially enlarge said outer



ring than to radially enlarge said bore, placing the anti-friction elements in the groove means of the inner ring, radially enlarging said outer ring within the elastic limit of said material by axially moving said outer ring relative to the inner ring over the anti-friction elements until the latter are also engaged in the groove means of said outer ring, and inserting said outer ring into the bore of said sleeve so that the resistance of said sleeve to radial enlargement serves to prevent radial enlargement of said outer ring in response to axial loads transmitted from one ring to the other through the anti-friction elements.

3,089,222
MEMORY ARRAY
John S. Eggenberger, Hillside Lake, Wappingers Falls, Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Original application Nov. 25, 1958, Ser. No. 776,259. Divided and this application Dec. 29, 1959, Ser. No. 2,563
4 Claims. (Cl. 29—155.5)



1. A method of making a magnetic memory array which comprises providing a first sheet of 0.25 mil maximum thickness ferromagnetic material of nickel-iron alloy composition capable of assuming first and second states of flux remanence, and a second sheet of copper having a plurality of spaced apart apertures, assembling said first and second sheet to form a layered structure and heating said structure at an elevated temperature of approximately 1000° C. in an inert atmosphere for a time sufficient to diffuse said second sheet into said first sheet to form thereby regions of substantially non-magnetic material surrounding the magnetic material.

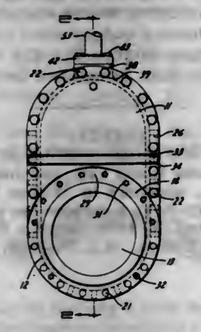
3,089,223
METHOD OF USING AN IMPROVED SOLDER CONNECTOR
Willie Charles Walker, 532 12th Ave., Tuscaloosa, Ala.
Filed Aug. 24, 1959, Ser. No. 835,516
1 Claim. (Cl. 29—155.55)



The method of using an improved solder connector of solid tinned bendable wire having a helical wound

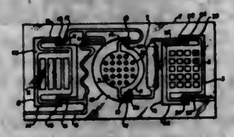
coil of uniform diameter with spaced turns and a free end, designated as a "pig-tail," which continues outwardly from one endmost turn and terminates in an eye, for joining and splicing a wire by soldering the coil over the break in the wire, and embracing the selection of a short connector requiring minimal heat both in soldering on and thence moving along a wire, comprising the follow ing steps: first, the correct selection of coil connector for the wire to be joined having a minimum number of turns, thence the steps of inserting and positioning of this connector directly over the break in said wire using the "pig-tail" as a handle including the twisting and wrapping of said "pig-tail" about the most convenient point, followed by the soldering of said connector on said wire, and finally, the steps of clipping and removing of said "pig-tail" at a point near the coil so the tiny extension left thereon can be contacted easily, and grippingly if desired, in the event this connection had to be re-opened.

3,089,224
METHOD FOR THE MANUFACTURE OF VALVE BODIES
Marvin H. Grove, 340 Hillside Ave., Piedmont, Calif.
Filed Dec. 19, 1960, Ser. No. 76,902
5 Claims. (Cl. 29—157.1)



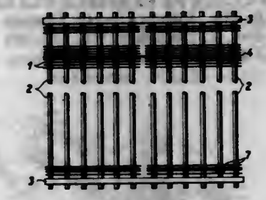
1. In a method for the manufacture of a valve body of the type having an intermediate body part together with side plate-like body parts clamped upon opposite sides of said intermediate body part, there being resilient seal rings interposed between the body parts, the steps of forming said intermediate body part by bending a flat strip of metal into a cylinder, forming a weld connection between the ends of said strip, turning the cylinder in a metal cutting machine, and, while said cylinder is turning, cutting seal ring recesses into the ends of said cylinder.

3,089,225
METHOD OF FABRICATING A HEAT EXCHANGER
Charles A. Heuer, East Alton, Ill., assignor to Olin Mathieson Chemical Corporation, East Alton, Ill., a corporation of Virginia
Filed Sept. 29, 1958, Ser. No. 763,877
3 Claims. (Cl. 29—157.3)



1. A method of fabricating a finned heat exchanger from a rectangular blank containing interconnected passageways comprising transversely slitting said blank between passageway portions thereof in a pattern corresponding to and providing at least one pair of adjacent cuts wherein each of said cuts have terminal portions extending toward and coextensive with each other in spaced relationship, and rotating the portion of said blank disposed between said pair of cuts and their outermost terminal portions out of the plane of said blank about the portion of said blank disposed between and coextended by said terminal portions.

3,089,226
METHOD FOR THE MANUFACTURE OF HEAT EXCHANGERS
Géza Szöts, Ferenc Szetey, Miklós Kocsis, Imre Kondor, Ferenc Havasi, Endre Ritter, Béla Demeter, Ernö Gulyás, and Lajos Bitter, all of Budapest, Hungary, assignors to Altalanos Geptervezo Iroda, Budapest, Hungary, a firm
Filed June 29, 1959, Ser. No. 823,707
2 Claims. (Cl. 29—157.3)



1. In a method for the manufacture of heat exchangers consisting of parallel tubes, cooling fins secured perpendicularly thereto, and spacing rings for maintaining mutual spacing between the latter, comprising the steps of temporarily threading the cooling fins and the spacing rings onto vertical mandrels having a length which is a fraction of the length of the tubes in a sequence corresponding to their ultimate position, tilting the mandrels together with the components on them into a horizontal position, temporarily securing the tubes horizontally in their ultimate relative position in a frame by the use of shiftable supports, aligning the mandrels together with the components threaded on same in one and the same line as the tubes, pushing the threaded-on components across onto the tubes, repeating these operations until the whole length of the tubes is filled with the fins and spacing rings, shifting and removing the shiftable supports as the fins and spacing rings are advanced along the tubes, and after completing the threading of the components onto the tubes securing the heat exchanger's assembled constructional components to form a completed heat exchanger.

3,089,227
BERYLLIUM SHEET HAVING THIRD DIMENSIONAL DUCTILITY
Francis M. Yans, Brookline, Mass., assignor, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission
Continuation of application Ser. No. 830,173, July 28, 1959. This application Dec. 27, 1962, Ser. No. 247,774
12 Claims. (Cl. 29—182)

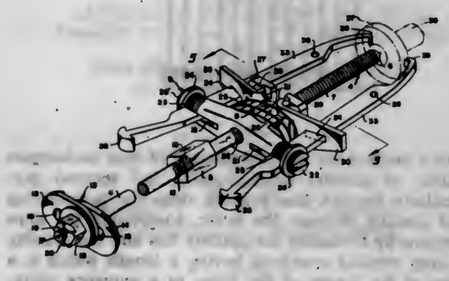
1. A method of producing a beryllium sheet having three dimensional ductility which comprises confining beryllium powder within a thin deformable container, pressing said container to form a billet in which the powder is compacted to at least about 50% theoretical density, heating said billet to a temperature below the melting point of beryllium, upsetting said billet at a temperature in the range 500–2100° F. and at a pressure suffi-

cient to effect a reduction in area of said billet in the range 3:1 to 30:1 and thereafter removing the thus formed sheet from said container.

3,089,228
MAGNETIC STRIP MATERIAL
Arnold Charles Lynch, Potters Bar, England, assignor to Her Majesty's Postmaster General, London, England
No Drawing. Filed July 21, 1958, Ser. No. 749,640
Claims priority, application Great Britain July 26, 1957
4 Claims. (Cl. 29—194)

1. A magnetic strip material for forming the core of a magnetic storage device consisting of a composite strip formed by at least one layer of a magnetic alloy having a composition of 80% nickel, 12% molybdenum and 8% iron bonded to a layer of a non-magnetic alloy having a composition of 76% nickel, 16% molybdenum and 8% iron.

3,089,229
COMBINATION REVERSIBLE PULLER
Mike Brodie, Vilna, Alberta, Canada
Filed Feb. 7, 1962, Ser. No. 171,704
5 Claims. (Cl. 29—261)



1. In a reversible puller, an elongated main support member, a nut mounted rotatably in the main support member, a rod having a work engaging point at one end and a driving head at the opposite end and engaged threadably with the said nut to project substantially at right angles to the elongated main support member, slots in the elongated support member extending from the ends thereof towards the centre, external threads on the ends of the elongated main support member and locking nuts engaged threadably on such threads, locking arms connected pivotally at one end to the main supporting member to extend on opposite sides of the rod in the same plane as the rod, openings in the said locking arms in alignment with the slots in the main support member, spring means coacting between the main support member and the locking arms normally to urge the locking arms away from the main suport member, puller bars mounted slidably through the slots in the elongated supporting member and the openings in the locking arms and work engaging means on the opposite ends of the puller bars.

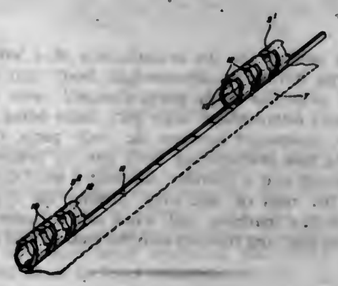
3,089,230
PROCESS FOR SEPARATING INDIVIDUAL METALLIC LAYERS OF A HOLLOW MULTILAYERED OBJECT
Donald D. Chapman, Wilmington, Del., and James P. Swed, Gibbstown, N.J., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Feb. 4, 1960, Ser. No. 6,667
3 Claims. (Cl. 29—403)

1. A process for separating individual metallic layers of a hollow multilayered object wherein the surface of one metal is protected by at least one mechanically bonded layer of a different metal which comprises positioning said multilayered object on a supporting means, the interior of said object being open to the atmosphere, attaching a length of a detonating explosive composition to the outer surface of said object opposite the support means, said charge of explosive being sufficient to provide a reflected shock wave at the interface between the layers adequate



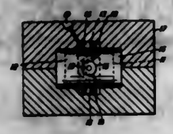
to tension the outer layer and permanently deform the inner layer to a degree greater than the outer layer and thereby separate said layers, attaching initiating means to the said explosive composition, and thereafter causing actuation of the initiating means whereby the explosive composition is detonated and the inner layer is deformed away from the outer layer sufficiently to readily allow disassembly of the inner layer from the outer layer.

3,089,231
SLIDE FASTENER MANUFACTURE
John G. Soave, Long Island City, and John D. Langwell, Freeport, N.Y., assignors to Waldes Kohinoor, Inc., Long Island City, N.Y., a corporation of New York
Filed Dec. 30, 1960, Ser. No. 79,732
8 Claims. (Cl. 29—410)



1. In the manufacture of plastic slide fasteners having element-free tape extensions from successive length portions of a continuous plastic stringer blank consisting of a longitudinal row of uniformly spaced plastic fastener elements which are interconnected by a longitudinally extending, continuous plastic rib and a carrying tape therefor, and wherein said fastener elements are secured to an edge of said tape by stitches looped over the rib portions interconnecting said elements, the step of removing fastener elements from the rib at locations along said row and in number as to form said stringer blank into a stringer strip consisting of a succession of slide fastener or zipper lengths of fastener elements spaced by the rib portions remaining after element removal therefrom as aforesaid and which are adapted also to be secured to an edge of said element-free tape extensions by stitches looped thereover.

3,089,232
METHOD OF MAKING A UNIVERSAL COUPLING
Sidney George Knight, Walmer, England, assignor of one-half to Robert Frederick Oxley, Ulverston, England
Filed Mar. 24, 1960, Ser. No. 17,334
Claims priority, application Great Britain Mar. 26, 1959
6 Claims. (Cl. 29—423)



1. A method of making a Hooke type universal coupling comprising holding in end-to-end relationship two shaft members each supporting two diametrically-opposed radial trunnions; moulding a wax block around said members leaving said trunnions projecting from the block disposed at 90° intervals around the axis of said shaft members; fitting journal bearings over said projecting trunnions; adding a rigid support to said bearings to support said bearings rigidly in relation to each other; and melting said wax allowing it to flow out.

3,089,233
LIGATURE JOINING
William A. Meier, Roselle, Ill., assignor to Signode Steel Strapping Company, Chicago, Ill., a corporation of Delaware
Filed Dec. 28, 1959, Ser. No. 862,118
6 Claims. (Cl. 29—459)



1. The method of forming a joint between overlapped ends of a strap, comprising providing a seal member having a body portion and a pair of flanges thereon joined to the body portion by bight portions, depositing a thick, viscous grit-carrier mixture in the bight portions of the seal, disposing the seal about the overlapped strap ends with the bight portions of the seal adjacent to marginal edges of the overlapped strap ends, squeezing the seal laterally of the strap ends, flowing at least a portion of the grit-carrier mixture into the space between said overlapped strap ends, and crimping said seal and said overlapped strap ends under a pressure sufficient to key at least a portion of the grit in the grit-carrier mixture into adjacent faces of said overlapped strap ends at least at the marginal portions thereof.

3,089,234
METHOD OF MAKING METAL-TO-CERAMIC SEALS
Margaret M. Deevy, North Arlington, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Feb. 1, 1960, Ser. No. 5,922
7 Claims. (Cl. 29—473.1)

6. The method of forming a vacuum tight seal between a conductor of molybdenum and a ceramic member having an aperture therein for receiving said conductor, said aperture having a metalized wall, comprising the steps of coating said conductor with a thin film of carbon particles, inserting said conductor within said aperture, applying a brazing material including copper, and subjecting said ceramic member, said coated conductor and said brazing material to a brazing temperature for sufficient time to cause said copper to melt and flow over said conductor and to fill the space between said conductor and the



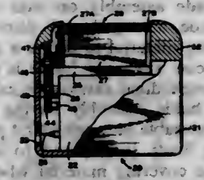
metalized wall of said aperture to braze said conductor to said ceramic member with a vacuum tight seal.

3,089,235
METHODS OF MAKING THIN REINFORCED DIAPHRAGMS AND IN DIAPHRAGMS MADE ACCORDING TO THESE METHODS
Francis Boulet, Massy, Pierre Plurien, Paris, Maurice Queneault, Palaiseau, and Roger Rigot, Paris, France, assignors to Commissariat a l'Energie Atomique, Paris, France, a State administration of France
Filed May 2, 1958, Ser. No. 732,591
Claims priority, application France May 4, 1957
6 Claims. (Cl. 29—527)



1. The method of making a reinforced thin diaphragm which comprises starting from a thin sheet of a metal that is oxidizable in an electrolyte to form a microporous layer of oxide adhering strongly to the metal surface free from any structural defect and the opposite walls of which are parallel to each other, mechanically shaping said sheet so as to form stiffening projections on one face thereof and to give the areas of said sheet located between said projections the desired thickness the other face of said sheet being left smooth, and subjecting said smooth face of said sheet to an oxidizing treatment to such a degree that said stiffening projections remain unoxidized but that the remaining thickness of the sheet is substantially oxidized.

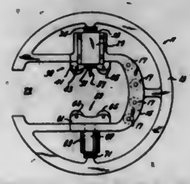
3,089,236
ELECTRIC SHAVER WITH IMPROVED TUBULAR COMB AND ROTOR TYPE CUTTING HEAD
Joseph A. Galvao, 64 Morton St., New York 14, N.Y.
Filed May 10, 1960, Ser. No. 28,067
3 Claims. (Cl. 30—41)



1. A shaver comprising a housing, a motor means positioned in said housing, said motor means having a pinion gear connected to the end of the motor shaft, a shaving head operatively connected to said motor, said shaving

head comprising a plurality of tubular combs, each having an inner annular wall surface, and transversely extending comb teeth terminating at a slot extending longitudinally of the respective combs, a cutting means rotatably mounted in each of said combs, each cutting means including an elongated blade holder rotatably journaled to said head, each of said holders having a plurality of longitudinally extending, radially disposed grooves, each of which twist to comprise a segment of a helix, a flat straight cutting blade having a hollow ground cutting edge positioned in each of said grooves and adapted to assume the helical twist of said groove, a flat spring lead positioned in each groove normally urging said cutting blade into contacting relationship with the inner end of its respective tubular comb, means for loosely retaining each of said blades in its respective groove, a pinion gear connected to each of the blade holders at one end thereof, a gear train in meshing relationship with said motor drive pinion gear and said blade holder driven pinion gears to impart counter-rotation to said blade holders, and means through which the cut hairs are automatically ejected during a shaving operation.

3,089,237
CABLE SHEATH CUTTING DEVICE
Joseph C. Norton, Charleston, W. Va., assignor to Union Carbide Corporation, a corporation of New York
Filed Apr. 19, 1962, Ser. No. 188,725
5 Claims. (Cl. 30—91)



1. Apparatus for removing and beveling cable covering materials which apparatus comprises, in combination;

(*a*) a frame having an opening adapted to fit around a cable;

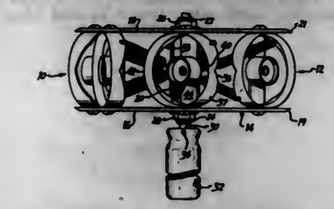
(*b*) a first roller assembly on said frame having a roller journal selectably moveable between a first position in which rollers thereon are disposed to rotate and revolve circumferentially on the cable's peripheral surface when the frame is moved rotatably about the longitudinal axis of the cable and a second position in which said rollers are disposed to rotate and move longitudinally on the cable's outer surface when the frame is moved longitudinally along the cable;

(*c*) a second roller assembly on said frame substantially diametrically displaced from said first roller assembly with respect to the cable cross section, having rollers on a journal moveable between first and second positions corresponding respectively to the first and second positions of the first roller assembly;

(*d*) a first blade assembly on said frame having a beveling blade arranged and disposed to cut the cable covering material to define a generally conical surface thereon when the frame is moved rotatably about the longitudinal axis of the cable and

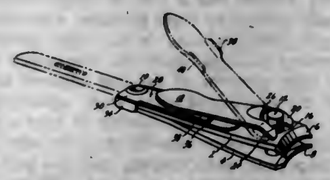
(*e*) a second blade assembly having a cutting blade selectably moveable between a first position in which said cutting blade is disposed to circumferentially slit the cable covering material when said frame is moved rotatably about the longitudinal axis of the cable and a second position in which said cutting blade is disposed to longitudinally slit the cable covering material when said frame is moved longitudinally along the cable.

3,089,238
DOUGH CUTTING DEVICE
Leo S. Przybylowicz, 7334 Fielding, Detroit, Mich.
Filed Aug. 7, 1961, Ser. No. 129,722
7 Claims. (Cl. 30—130)



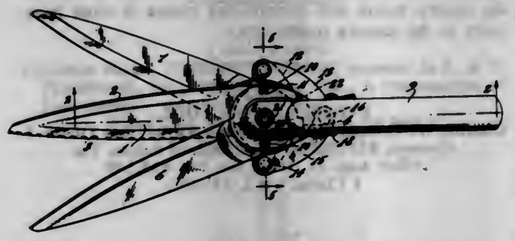
1. A dough cutting device comprising a housing adapted to be rolled over a sheet of dough; a plurality of circumferentially spaced dough cutters resiliently mounted in said housing adjacent the outer periphery thereof; each of said cutters comprising a ring-like element forming a continuous cutting edge to cut a dough article in the shape of said element; each of said cutters having a leading cutting edge and a trailing edge; said trailing cutting edge being normally spaced further from the center of the housing than the leading cutting edge whereby when the device is rolled over a sheet of dough, the cutting action will proceed from the leading edge of each cutter to the trailing edge thereof, said resilient mounting means deforming during cutting to accommodate the progressive cutting of dough from the leading cutting edge to the trailing cutting edge and subsequently returning each cutter to its normal position with a snap action to eject the shaped dough article.

3,089,239
COMBINATION NAIL CLIPPER IMPLEMENT
Paul P. Loda, Ansonia, Conn., assignor to The H. C. Cook Company, Ansonia, Conn., a corporation of Connecticut
Filed June 22, 1962, Ser. No. 204,446
3 Claims. (Cl. 30—142)



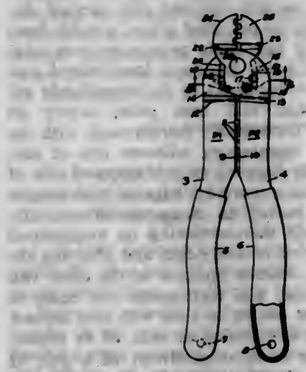
1. A combination nail clipper implement comprising a pair of superposed elongated jaw elements having cooperating cutter jaws at one end thereof; means fastening the other end of said jaw elements, said jaw elements being biased apart to provide yieldable spacing between said cutter jaws; a knife blade extending along the upper surface of the upper of said jaw elements and having a shank portion pivotally mounted on said fastening means, said blade having a cutting edge extending along one side edge thereof and a lug on the shank portion of the other side edge depending along the adjacent side of said jaw elements, said blade having an aperture therein intermediate the length thereof; a pivot pin intermediate the length of said jaw elements and adjacent said one end; and an elongated operating lever for said jaw elements pivotably mounted on said pivot pin and overlying said blade, said lever having a depending lug on its side edge spaced from the knife edge engaged in said aperture of the blade to limit relative pivotal movement therebetween, said lever being dimensioned so that its other side edge is spaced outwardly from said knife edge to provide a protective cover therefor, said blade being pivotable about said fastening means to extend outwardly from said other end of said jaw elements with the lug thereof abutting against the opposite side of said jaw elements to hold said blade in extended position during use thereof.

3,089,240
SHEARS
Peter S. Vosbikian, Melrose, and Thomas S. Vosbikian, Philadelphia, Pa. (both of 20th and Oxford Sts., Philadelphia, Pa.)
Filed July 6, 1961, Ser. No. 122,211
2 Claims. (Cl. 30—213)



1. Shears, comprising a stationary central blade having cutting edges at opposite sides, having its rear end extending upwardly and forwardly and forming an upper forward extension, a lower moveable blade, having an offset arm and located below said stationary blade, an upper moveable blade above said stationary blade, having its rear end deflected upwardly and rearwardly and having an offset arm and positioned between the forward extension and the body portion of the stationary blade, an upper handle on said forward extension, a pivot pin extending through said blades, the forward extension of the stationary blade and through said handle, a lower handle pivoted to the upper handle, links connecting said arms with the lower handle, and tension means for said blades to maintain their cutting edges in contact.

3,089,241
CUTOFF DEVICE FOR THREADED BOLTS AND SCREWS
Oscar E. Batdorf, Downers Grove, Ill., assignor to Vaco Products Company, Chicago, Ill., a corporation of Illinois
Filed Nov. 21, 1960, Ser. No. 70,605
4 Claims. (Cl. 30—226)



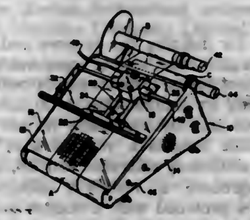
1. In a screw cutter for shortening screws, wherein the cutter is of the type which includes a screw-holding part and an overlapping screw-cutting part mounted together for a reciprocable sliding movement of each part back and forth along the surface of the other, with the screw-holding part having at least one threaded hole therethrough at a location which is alternately covered and uncovered by the sliding movement, the improvement which comprises providing the edge portion of the screw-cutting part which passes back and forth over the threaded hole with slicing edge having a cam contour which makes an acute angle with the direction of movement to thereby prolong the relative movement required to completely cover the threaded hole, the force required to execute the said sliding movement to cut off a screw passed through the threaded hole being correspondingly reduced according to the corresponding increase in the extent of the said movement required to cover the threaded hole.

3,089,242
HOLDING DEVICE FOR REMOVABLE DENTAL PROSTHESIS
Bernard Weissman, 3406 Poplar St., Oceanside, N.Y.
Filed June 5, 1961, Ser. No. 114,875
7 Claims. (Cl. 32—5)



1. A holding device for securing a removable denture to a fixed tooth comprising, in combination, a fixed member adapted to be secured to the side of a fixed tooth, said fixed member containing a vertical channel, a lateral enlargement in the lower end of the vertical channel, and a vertical slot extending downward from the top of said fixed member between the front surface of said fixed member and the vertical channel, and a free member having a block adapted to slide downward within the vertical channel in said fixed member, a spline extending from said block through the slot in said fixed member when said block is within said vertical channel, said spline adapted to be fixed to said removable denture, and a locking spring fixed to said block having a vertical loop wider than the channel above the lateral enlargement, said loop of said locking spring extending into the lateral enlargement in the bottom of the vertical channel securing said block within the vertical channel.

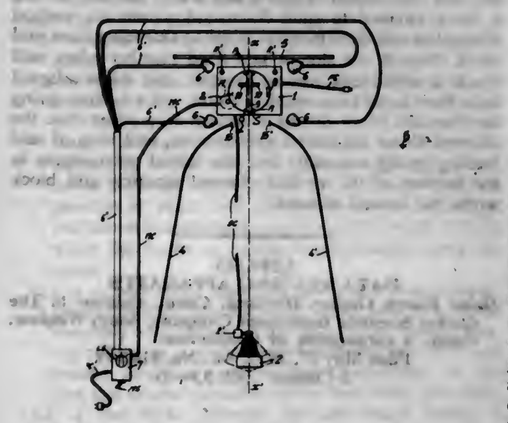
3,089,243
DATA READING APPARATUS
Heinz Joseph Gerber, Hartford, Conn., assignor to The Gerber Scientific Instrument Company, South Windsor, Conn., a corporation of Connecticut
Filed May 27, 1959, Ser. No. 816,299
5 Claims. (Cl. 33—1)



1. A data reader for use with an oscillogram sheet having a generally longitudinal trace thereon and having a

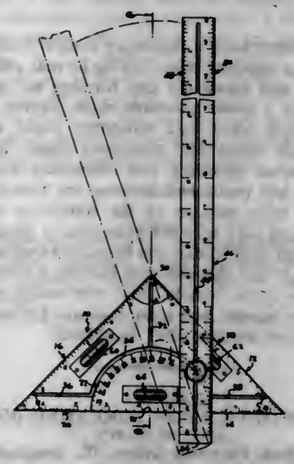
longitudinal reference line thereon in predetermined transversely spaced relationship to a zero position for said trace which data reader comprises in combination, a frame adapted to be located above such an oscillogram sheet, a locating indicator in fixed relationship with the frame and adapted upon transverse adjustment of the frame to register with a known zero position for the oscillogram trace, a slide guided for transverse rectilinear movement relatively to the frame, a measuring indicator connected to said slide and having a longitudinal hairline thereon, manually operable means for moving the slide transversely to bring said measuring indicator into register with a selected point on said trace while said locating indicator remains at said zero position, an electric circuit including a variable resistance constituting a voltage divider, means connected with said resistance for varying it to change the voltage proportionately to the extent of movement of said slide and of said movable indicator, an electrical indicating device connected in circuit with said resistance and responsive to voltage changes resulting from resistance variations which device serves to indicate the amplitude values represented by the distance from said zero position to said selected point on said trace, and a supplemental locating indicator on the frame which is additional to the first said locating indicator and which is transversely adjustable relatively to the frame, said supplemental locating indicator being registrable with said longitudinal reference line to facilitate the subsequent relocation of said head with the first said locating indicator in register with said zero position.

3,089,244
METHOD AND MEANS FOR THE PHOTOGRAPHIC EXAMINATION OF THE OUTLINE AND SHAPE OF A BODY
Annette Levy, nee Amselle, Ibsen 33.902 Polanco, Mexico City, Mexico
Filed Oct. 14, 1957, Ser. No. 690,029
1 Claim. (Cl. 33—2)



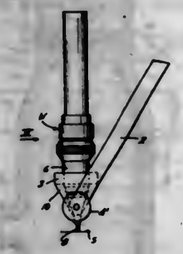
An equipment for defining the outlines and the shapes of an object through a mere visible comparison of photographs of the object taken simultaneously with reference articles, comprising in combination a turntable adapted to carry the object and electric motor means adapted to rotate the turntable around a vertical axis, a support adapted to carry stationary reference articles, a stationary cross-ruled background, a vertically adjustable stand carrying a camera provided with a shutter and a photosensitive surface permitting the taking successively of at least three photographs and adapted to rotate around a vertical axis, two opaque curtains positioned between the turntable and the camera to either side of the line joining same to limit the field of view, means for electrically operating the camera shutter, means for rotating the camera stand and the turntable respectively around their respective vertical axes to provide for the photographing on juxtaposed areas of the photosensitive surface of the subject on the turntable for successive angular positions of the latter, adjustable illuminating means for the object and reference articles, means for automatically producing the operation of the camera shutter operating means in response to the movement of the turntable while permitting corresponding angular positions of the camera to be made about its vertical axis to take the successive photographs upon the photosensitive surface, and control means for the electric motor and illuminating means in close proximity to the camera stand.

3,089,245
COMBINATION TOOL
Charles W. Cromer, 303 Riverland Drive, and Oliver J. Cromer, 813 Illinois Ave., both of Salem, Va.
Filed Aug. 21, 1959, Ser. No. 835,349
1 Claim. (Cl. 33—27)



An instrument or tool comprising a substantially triangular base plate having a continuous work engaging peripheral flange projecting laterally from a side thereof and perpendicular with respect thereto, said base plate having scaler indicia on the opposed side thereof disposed adjacent each of its marginal edges, a spirit level fixedly secured to said base plate proximate each edge thereof, each of said levels having a longitudinal axis substantially parallel with respect to its immediately adjacent base plate edge, said base plate having an arcuate slot extending transversely therethrough with the opposed ends thereof terminating adjacent one of said sides, protractor indicia disposed on said opposed side of said base plate adjacent a marginal edge of said arcuate slot, said base plate having an elongated substantially rectangular slot formed therein having its longitudinal axis perpendicular to one of said edges and bisecting the corner formed at the common junction of the other two edges of said base plate, said rectangular slot being in open communication at one of its ends with said arcuate slot, said arcuate slot terminating at each of its respective ends in the inner ends, respectively, of a pair of elongated slots, said pair of slots having longitudinally-extending axes disposed parallel to said one edge, an elongated substantially rectangular straight edge having a centrally located longitudinally extending substantially rectangular slot extending transversely therethrough, a screw having an enlarged head at one end of the shank thereof, said head being of such size as to span said arcuate and said rectangular slot, said screw having its shank projecting through said slots formed in said straight edge and a selected one of said slots formed in said base plate in which said shank is slidable without disconnection from said base plate or said straight edge, a knob threaded on the other end of said shank to fixedly secure said straight edge in any adjusted position relative to said sides of said base when said knob is tightened against said straight edge, and to permit said straight edge to pivot about or move linearly with respect to said shank when said knob is loosened.

3,089,246
COMPASSES
Helmuth Riepe, Hamburg, Germany, assignor to L. & C. Hardtmuth, Inc., Bloomsbury, N.J., a corporation of New Jersey
Filed Dec. 12, 1960, Ser. No. 75,369
1 Claim. (Cl. 33—27)



A compass structure having what may be termed fixed and mobile legs, the mobile leg having its lower portion formed to provide a two-pronged, substantially widely spaced fork, a hingedly mounted internally threaded receptacle body for removably accommodating an exchangeable writing implement operatively mounted within and at the ends of said fork and at closest possible proximity to the writing surface to become engaged by the writing implement, a pair of spaced substantially parallel extensions depending from the internally threaded portions of the receptacle body, the lowermost ends of said extensions being pivotally mounted at the lowermost ends of said fork, that is at the closet proximity to the writing surface, thus providing adjustability of said receptacle body within said fork, means for holding said body in adjusted position, an externally threaded writing implement, having a writing element, removably associated with said receptacle body so that the end of said writing element is located in its operative position upon a writing surface substantially below the pivotal connection between the lowermost ends or said body extensions and the lowermost ends of said fork.

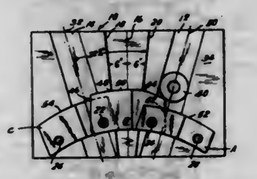
3,089,247
BORE CONCENTRICITY GAUGE
Andrew Eisele, 15025 Cheyenne Ave., Detroit, Mich.
Filed Aug. 21, 1959, Ser. No. 835,312
4 Claims. (Cl. 33—174)

1. A bore concentricity gauge for measuring the concentricity of a pair of intendedly concentric bores, said gauge comprising a stationary handle structure including a stationary elongated hollow support having a first handle in the rearward portion thereof, a dial indicator having a stem mounted in said stationary handle structure and having an operating plunger reciprocably mounted within said stem; a rotary handle structure including a rotary elongated hollow support rotatably mounted relatively to said stationary handle structure and having a longitudinal bore communicating with said dial indicator operating plunger, said rotary support having a pilot surface thereon adapted to slidably engage the surface of one of the bores to be gauged and having a transverse bore therein disposed remote from said first handle and communicating with said longitudinal bore, a transversely reciprocable measuring member reciprocably mounted in said transverse bore and having opposite ends, said measuring member having a workpiece bore surface-contacting feeler portion thereon adapted to slidably engage the



surface of the other bore to be gauged, said measuring member intermediate its opposite ends having a sharp edge thereon, and elongated reciprocable motion-transmitting means reciprocably mounted in said longitudinal bore and having a forward end portion with a forward contact surface inclined obliquely to the longitudinal axis of said motion-transmitting means and having engagement with said measuring member solely at said sharp edge, said motion-transmitting means having a reciprocable rearward part operatively engaging said dial indicator plunger.

3,089,248
MATRIX FOR DETERMINING CUTS ON PATTERN CAMS
Alfred S. Haggar, Paterson, N.J.
(57 Mandon Drive, Wayne, N.J.)
Filed Nov. 10, 1960, Ser. No. 68,405
13 Claims. (Cl. 33—174)

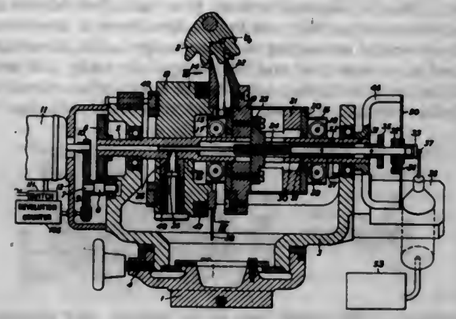


1. A matrix plate for preparing cam links of a pattern cam chain comprising, a plate, said plate including at least three studs, said links being provided with openings for receiving said studs, one of said studs projecting through an opening in each of said links and means associated with said plate to indicate a beginning and a termination of a dwell portion on one of said links, said means including inscribed lines on said plate forming projections of a radii of a circle spaced 12 degrees from each other.

3,089,249
GEAR CHECKING INSTRUMENT
Karl Müller, Zurich, Switzerland, assignor to Maag Gear Wheel & Machine Company Limited, Zurich, Switzerland
Filed Sept. 8, 1959, Ser. No. 838,534
Claims priority, application Switzerland Sept. 11, 1958
9 Claims. (Cl. 33—179.5)

1. A gear checking instrument for measuring the distance of two tooth flanks from one another substantially in the direction of the line of action of a gear to be tested, comprising in combination a base, a mandrel rotatably journalled on said base for mounting the gear to be tested, a casing adjustably mounted on said base, a shaft rotatably journalled in said casing about an axis perpen-

dicular to the axis of said mandrel, two measuring jaws mounted on said shaft and rotating therewith for contacting the tooth flanks of said gear, one of said jaws having a circumferential helical portion contacting said gear,



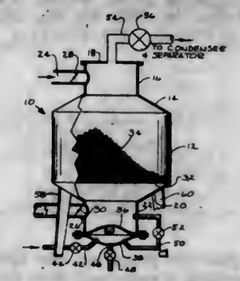
said helical portion being sufficient in extent to displace said gear at least one tooth per revolution, one of said measuring jaws being restrained axially and the other being slidable axially relative to said shaft and means for measuring the relative axial displacement of said jaws.

3,089,250

METHOD OF RECOVERING A VOLATILE ORGANIC SOLVENT FROM AN ABSORBENT WITH STEAM

Irving Victor, Minneapolis, Minn., assignor to Research Development Co., Minneapolis, Minn., a partnership

Filed Aug. 17, 1959, Ser. No. 834,236
3 Claims. (Cl. 34—37)



1. A method of recovering a volatile organic solvent from an adsorbent with stripping steam, comprising the steps of supporting said adsorbent on a perforate surface within a container, heating a surface below the perforate surface and within said container to a temperature above the boiling point of water under the pressure existing within said container, and admitting stripping steam into the container and in contact with the adsorbent to strip the volatile solvent therefrom, said heated surface acting to revolatilize condensate formed by the steaming operation and acting to maintain the area within the container beneath the perforate surface in a liquid-free condition.

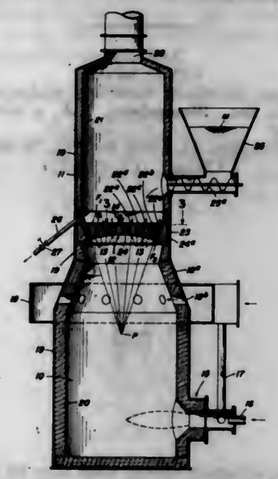
3,089,251

TREATMENT CHAMBER FOR MATERIAL IN A FLUIDIZED STATE

Fritz Helbig, Stamford, and Walfred W. Jukkola, Westport, Conn., assignors to Dorr-Oliver Incorporated, Stamford, Conn., a corporation of Delaware

Filed June 4, 1959, Ser. No. 818,127
20 Claims. (Cl. 34—57)

1. A constriction plate construction having gas passage ducts for maintaining a bed of particles in a fluidized state by an upflowing stream of treatment gases passing through said ducts, which comprises a plurality of concentric rings composed of refractory block units constituting together a self-supporting dome having a planar top face and a concave bottom face, said block units being shaped so as to constitute tapered ducts between the interfaces of contiguous blocks with the narrow ends of the ducts constituting the outlet ends, said ducts having different lengths increasing from a minimum length in the central portion of the constriction plate construction to a maximum in the marginal portion thereof, wherein the effective outlet areas of said ducts are substantially alike in the form of elongated outlet openings



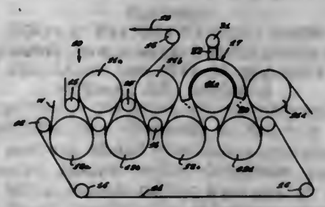
extending radially relative to the vertical axis of the dome, wherein further the ratio of the sizes of the effective inlet area to the size of the effective outlet areas of the ducts is from about 1.5:1 to about 3:1, while the effective axial length of the ducts is in a range from about 9" to about 18", and wherein the tapered shape of the ducts has an angle of convergence from about 2° to about 4½° determinable in a plane extending substantially transversely of said elongated openings and substantially containing the longitudinal axis of the ducts, whereby with sufficient gas pressure drop maintained across said constriction plate construction there is maintainable uniform gas flow distribution through said ducts.

3,089,252

WEB MOISTURE PROFILE CONTROL FOR PAPER MACHINE

Robert A. Daane and Edgar J. Justus, Beloit, Wis., assignors to Beloit Iron Works, Beloit, Wis., a corporation of Wisconsin

Filed Apr. 22, 1959, Ser. No. 808,237
2 Claims. (Cl. 34—114)



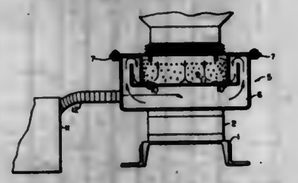
1. In a drier particularly adapted to dry a fibrous web of material and in combination with a rotatable drying drum having a web traveling thereabout, a hood extending about a portion of the circumference of the drying drum, at least one drying head in said hood having a bottom wall generally conforming to said drying drum and the web traveling thereabout and having a plurality of air impingement nozzles leading therethrough, a plurality of parallel spaced baffles within said drying head and conforming to and extending along said bottom wall in the direction of rotation of said drying drum and dividing said drying head into a plurality of adjacent plenum chambers, an air supply duct, individual conduits leading from said air supply duct to said plenum chambers, means for supplying heated air to said air supply duct and withdrawing spent air from said hood, valve means in said conduits operable to control the distribution of air across the width of the web, and means operable to vary the spacing of said baffles along said bottom wall at the selection of the operator of the dryer.

3,089,253

MEANS FOR AERATING GRANULAR AND PULVERULENT MATERIALS

Robley W. Evans, New Albany, Ind., assignor, by mesne assignments, to Chain Belt Company, Milwaukee, Wis., a corporation of Wisconsin

Filed Nov. 24, 1958, Ser. No. 776,060
16 Claims. (Cl. 34—164)



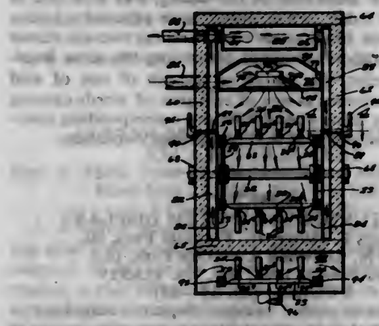
5. In conveying apparatus; a conveyor channel having an imperforate floor and upstanding sides; means for vibrating said channel such that materials carried therein have imparted thereto a series of upward and forward tosses; means defining a plenum chamber extending along at least one side of the channel with an exit slit opening horizontally into the conveying channel adjacent the floor thereof; and means for injecting an aeriform fluid through said slit beneath said material as it is tossed upwardly.

3,089,254

OVEN FOR TREATING ARTICLES

John R. Johnson, Elmer R. Voss, and Francis S. Wright, Toledo, Ohio, assignors to Owens-Illinois Glass Company, a corporation of Ohio

Filed Aug. 21, 1959, Ser. No. 835,329
7 Claims. (Cl. 34—207)



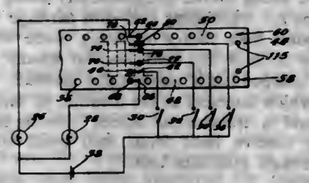
1. An elongated oven structure comprising in combination side, end, top and bottom walls of insulating refractory material defining a central chamber, a pair of spaced apart parallel endless reaches of chain, a plurality of cross members attached at their ends to said chains for carriage thereby, a plurality of article chucks carried on said cross members for holding and conveying articles thereby, transverse shafts mounted near each end of said central chamber, a pair of spaced apart sprockets on each shaft, an entrance to said chamber, an exit from said chamber, the said parallel chains continuously moving through the entrance, respectively, around said sprockets at opposite ends of the chamber and through the exit in a reversing path of travel longitudinal of said chamber, a longitudinally disposed supply header along the top of said chamber, an air heater, a blower, conduit connections between said heater and the blower and the blower and said supply header, a plurality of air diffusers housed in said supply header and spaced longitudinally therealong and each connected into said central chamber for distributing air supplied from said heater downwardly through said chamber and across articles traveling there hrough, a plurality of air exhaust ducts connected into said central chamber near the bottom thereof and extending vertically upwardly along the sides of said chamber, a longitudinally disposed exhaust header and interiorly disposed in the oven structure overlying said supply header, each of the said air exhaust ducts being connected into said exhaust header, a conduit connection between said exhaust header and said air heater, and adjustable dampers in each of said exhaust ducts for regulating the flow of air therethrough.

3,089,255

ANSWER CHECKING DEVICE

Orville I. Thompson, Deerfield, Ill., assignor to DeVry Technical Institute, Inc., Chicago, Ill., a corporation of Illinois

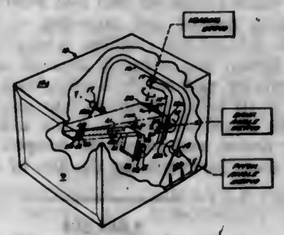
Filed Mar. 5, 1962, Ser. No. 177,609
15 Claims. (Cl. 35—9)



1. An answer checking device comprising a drum of electrically insulating material, a first and a second strip of electrically conducting material disposed about the drum parallel to each other and coaxially of the drum, a first group of fingers of electrically conducting material extending normally from the first strip toward the second strip, said fingers being spaced from each other by equal increments, a second group of fingers of electrically conducting material extending from the second strip toward the first strip, each finger of the second group being disposed between two adjacent fingers of the first group, the fingers of the first group being electrically connected to the first strip and electrically insulated from the second strip and the fingers of the second group being electrically connected to the second strip and electrically insulated from the first strip, a first electrically conducting brush disposed in slidable engagement with the first strip, a source of electromotive force having first and second terminals, a first electrically responsive indicator electrically connected between the first brush and the first terminal of the source, a second brush of electrically conducting material in slidable engagement with the second strip, a second electrically responsive indicator electrically connected between the second brush and the first terminal of the source, a switch having a first terminal electrically connected to the sec-

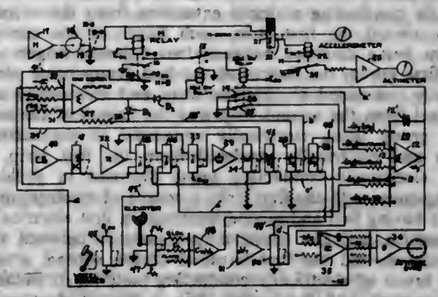
ond terminal of the source and a second terminal, a pair of elongated contact fingers abutting the drum between the two strips thereon at points on an axis normal to the fingers on the drum and spaced by approximately one-half the increment between the fingers of the first group, said fingers being electrically connected to the second terminal of the switch, and a tape of electrically insulating material mounted on the drum between the contact fingers and the first and second group of fingers on the drum, said tape having a perforation confronting only one of the contact fingers, whereby closing the switch completes an electrical circuit through only one of the indicators.

3,089,256
METHOD AND APPARATUS FOR PRODUCING VISUAL DISPLAY
Jack W. Long, 851 Cloverview Ave., Cincinnati 31, Ohio
Filed June 7, 1960, Ser. No. 34,432
11 Claims. (Cl. 35—12)



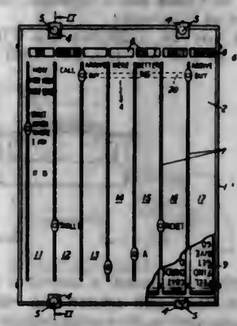
1. Visual display apparatus, comprising in combination: a point light source; a film belt having indicia thereon which is an undistorted small-scale facsimile of a grounded surface area, said belt being supported on a carriage having at least one roller and said film being capable of being driven longitudinally along a first axis; first means for translating said film carriage with respect to said point light source within a plane which is perpendicular to said first axis; second means for rotating said film independently about three mutually perpendicular axes which intersect at the location of said point light source; and a translucent screen viewing-surface positioned to receive light from said point source which passes through said film belt.

3,089,257
SIMULATED ON-GROUND AIRCRAFT PITCHING MOMENT SYSTEM
Roscoe H. Goodwin, Allendale, N.J., assignor to Curtiss-Wright Corporation, a corporation of Delaware
Filed July 31, 1961, Ser. No. 128,187
10 Claims. (Cl. 35—12)



1. In aircraft simulating apparatus having a flight computer for producing signals representing flight factors and forces acting on the aircraft, means for simulating varying pitching moment during the take-off run and landing of a simulated aircraft, said pitching moment including components representing the effects of main and nose wheel landing gear, comprising a rate of pitch computer having an input network that is energized by a plurality of signals representing different pitching moments including signals representing both main and nose wheel pitching moments, a nose wheel pitching moment computer for producing the nose wheel moment signal, and means controlled by said nose wheel computer for applying said signal to said network according to simulated "on" or "off" position of the nose wheel with respect to the runway.

3,089,258
DEVICE FOR INTERPRETATION AND TRANSLATION OF LANGUAGES
James J. Kavanagh, Robert Kavanagh, and William Gerard Kavanagh, Arklow, Ireland, assignors, by direct and mesne assignments, to Ferenc J. Schmidt, Berwyn, Pa.
Filed Jan. 4, 1960, Ser. No. 361
6 Claims. (Cl. 35—35)

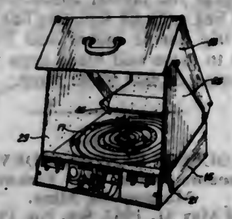


1. A translation device comprising a casing, a pair of parallel spindles mounted therein, a series of rollers independently rotatable on each spindle, a flexible endless band bearing a primary column of words on half of each band disposed around each pair of rollers, an aperture on one side of the casing extending transversely of said bands, a second aperture on the opposite side of the casing extending transversely of said bands, a second primary column of words on the other half of each band, slots in each side of the casing parallel and adjacent to each band, a pin connected to each band extending through the adjacent slot, secondary columns of words on the casing adjacent each slot, said secondary words being interpretations of the words upon the portions of the bands adjacent the respective slots and movable in coincidence with the aperture on the same side of the casing, and arranged in corresponding order, two secondary non-adjacent columns containing a pair of the same words and the two associated primary non-adjacent columns containing the same interpretation therefor, the setting of the pin of one of said two primary columns at one of said pair of words causing the appearance in its aperture of the corresponding interpretation on the other of said two primary columns.

3,089,259
MINIATURE SOLAR SYSTEM DISPLAYS
Jennings F. Miller, Jr., Franklin Park, Ill.
(329 N. Elmwood Ave., Oak Park, Ill.)
Filed June 1, 1961, Ser. No. 123,919
5 Claims. (Cl. 35—45)

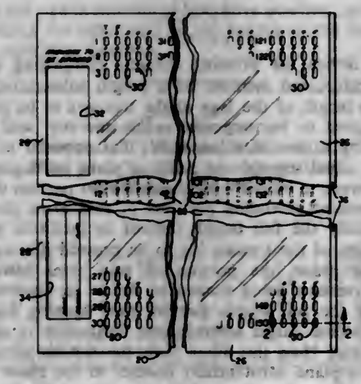
1. A miniature solar system display comprising a stationary central support, a turntable rotatably mounted on the support and having a central opening, a stationary sun symbol above the turntable and secured to the support

by way of said opening, planet symbols distributed about the sun symbol and journaled for rotation in the turn-



table, and drive means engaging the support frictionally for rotating the planet symbols in the same direction as the turntable when the latter is in rotation.

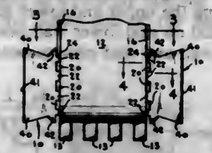
3,089,260
ANSWER GUARD
Robert T. Gray, 5751 Baja Drive, San Diego, Calif.
Filed Sept. 26, 1960, Ser. No. 58,376
5 Claims. (Cl. 35—48)



1. In combination, a multiple choice scoring sheet having problem indicia, each having answer indices; a rectangular shaped answer guard disposed above the scoring sheet, said guard having perforations aligned with each answer index of sufficient width throughout the depth of the guard for the extension of a marking device therethrough, said guard being sufficiently thick to allow said scoring sections of the scoring sheet to be viewed only in an area substantially directly above said scoring sheet; and means for retaining said scoring sheet below the guard in proper registry, both longitudinally and laterally, with the perforations in the guard, said means consisting of ledges extending downwardly from the guard at the four extreme edges thereof, said ledges having a depth at least equal to the thickness of the scoring sheet.

3,089,261
CUTTER BLADE ATTACHMENT FOR EXCAVATOR BUCKET
Roy A. Flath, 9100 W. Herbert Court, Milwaukee, Wis.
Filed June 21, 1961, Ser. No. 118,570
7 Claims. (Cl. 37—118)

5. A cutter attachment for an excavating bucket having side walls comprising, a pair of mounting brackets adapted to be fixedly secured to opposite sides of the bucket, a pair of cutter blades mounted on said brackets and adapted for making a cut having a width in excess of the bucket width, said cutter blades being mounted parallel to and at the leading edge of the bucket side walls, and adjusting means for adjusting the position of said blades with respect to said brackets to facilitate making cuts of different widths without changing buckets or replacing the cutter blades, said adjustment means including mating hinge barrels on said blades and brackets and a hinge pin mounted in said barrels, said adjustment means further including opposing flanges on said



blades and mounting brackets, a plurality of apertures in said flanges, a plurality of adjusting bolts passing through said apertures, and spacer means mounted between said flanges for setting said blades at different angular positions with respect to the sides of the bucket.

3,089,262
CONTOUR FORMING BLADE FOR USE WITH EARTH MOVING EQUIPMENT
Floyd E. Gardner, 539 Wooster Road, Akron, Ohio
Filed Feb. 13, 1961, Ser. No. 89,009
1 Claim. (Cl. 37—129)

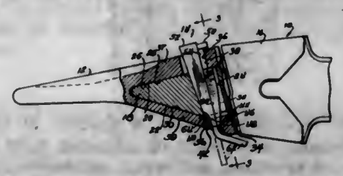


A contour forming scraper blade for use on an earth mover, comprising; a loading pan secured to said earth mover and having a ground engaging leading edge; a flat plate having a blunted arrow-head like configuration in plan so as to include a base edge; a shorter leading edge parallel to said base edge and opposed side edges that are parallel to each other throughout the part of their longitudinal extent adjacent said base edge and that converge toward said leading edge throughout the remainder of their longitudinal extent; said base edge being of sufficient width to have its longitudinal ends received between the opposed side walls of said loading pan; said base edge being apertured for releasable attachment to said leading edge of said loading pan, said shorter leading edge of said plate projecting beyond the leading edge of said loading pan in coplanar alignment therewith; said opposed side edges of said plate being offset at their point of juncture with said base edge and defining shoulder portions disposed in parallel and bearing against the front edges of the opposed sidewalls of said loading pan, whereby said shoulders provide support against forces encountered by said leading edge of said blade; and at least one elongate support arm secured at its forward end to said blade and extending rearwardly of said leading edge thereof; said arm having a length greater than the distance between the base and leading edges of said blade and support means carried by said loading pan rearwardly of said ground engaging leading edge thereof and releasably supporting the rearward end of said arm against forces received by said flat plate.

3,089,263
DIPPER TOOTH ASSEMBLY
James A. Henkel, Park Forest, Ill., assignor to Amsted Industries Incorporated, Chicago, Ill., a corporation of New Jersey
Filed Feb. 20, 1961, Ser. No. 90,333
1 Claim. (Cl. 37—142)

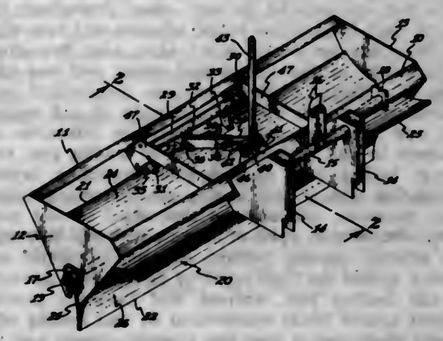
In a dipper tooth assembly, an adapter having a body portion, a nose projecting forwardly from said body por-

tion and having forwardly converging upper and lower surfaces and a flat face substantially parallel to said upper surface and merging with said lower surface to define a recess adjacent said body portion, said nose having an aperture extending between said upper surface and said flat face, a tooth having forwardly converging upper and lower walls engaging the upper and lower surfaces on said nose, an enlargement on said lower wall positioned in said recess, said upper wall and said enlargement having open-



ings in registry with said aperture, a key adapter extending through said openings and aperture and provided at one end with spaced shoulders engaging said upper wall therebetween, the other end of said key adapter having an inclined shoulder engaging said enlargement, a tapered wedge key extending downwardly through said openings and aperture and engaged between said nose and said key adapter, and a tongue on the lower end of said wedge key bent beneath the lower end of the key adapter and the lower surface of the enlargement.

3,089,264
TRIP MECHANISM FOR ROTARY MULTIPLE BLADE SCRAPER
Phil E. Davis, Mesa, Ariz.; Wallace Perry, trustee of said Phil E. Davis, bankrupt, assignor, by mesne assignments, to Sperry Rand Corporation, a corporation of Delaware
Filed Apr. 20, 1961, Ser. No. 104,334
2 Claims. (Cl. 37—143)



1. A trip mechanism for a rotary multiple blade scraper having, a frame, a blade rotor freely journaled on said frame, means for mounting said frame on a tractor, a plurality of scraper blades separated by moldboard portions on said blade rotor adapted to engage and scrape a ground surface, said trip mechanism being adapted to releasing and arresting free rotation of said blade rotor and characterized by a rock shaft journaled on said frame, a plurality of axially spaced blade stops fixed to said rockshaft and extending radially outwardly thereof having abutment surfaces adapted to engage successive moldboard portions, a toggle lock and trip mechanism to hold said blade stops in stop position comprising, a link pivotally connected at one end to one of said blade stops and connec ed at its other end to the outer end of an actuating link which actuating link has its other end pivotally connected to an actuating pin journaled on said frame, a trip handle journaled on said actuating pin, an adjusting block fixed on said trip handle having an abutment surface adapted to engage the pivotal connection between said first mentioned link and said actuating link whereby movement of said trip handle moves said links from overcenter position to move said blade stops to a position to allow free rotation of said blade rotor.

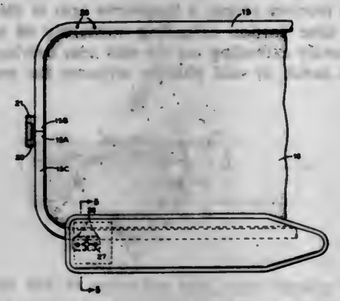
3,089,265
TROUSERS PRESSING DEVICE
Carl Theodore Skanse, 6216 Parkwood Road, Minneapolis, Minn.
Filed May 31, 1962, Ser. No. 198,901
3 Claims. (Cl. 38—69)



1. A device for pressing trousers comprising a light weight bifurcated member of a length substantially less than the length of the legs of the trousers to be pressed, and adapted to be supported solely thereby, said member having a pair of substantially flat opposed arms resiliently urged together to define a plane of engagement therebetween to extend over the entire flat portion thereof, the outermost extending portions of said arms diverging substantially the full length thereof to facilitate guiding the section of the trouser leg to be pressed into said engagement plane, the portion of said arms inward of said flat section being shaped to define an opening substantially the full length thereof, said opening having a cross-sectional shape wherein one dimension is substantially longer than the other with the shorter dimension lying in a plane substantially normal to the plane of engagement of said two arms, and a separating member insertable into said opening with means for spreading the two arms apart to facilitate insertion of the section of the leg of the trousers to be pressed, said separating member being shiftable into releasing position to permit said arms to be resiliently clamped onto the engaged trousers portion to be supported solely thereby and to exert pressing force thereagainst.

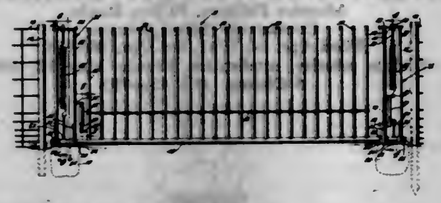
3,089,266
IRONING BOARD CONSTRUCTION
Emanuel Rawson, Chicago, Ill., assignor, by mesne assignments, to Textile Mills Company, Chicago, Ill., a corporation of Illinois
Filed Jan. 10, 1961, Ser. No. 81,870
7 Claims. (Cl. 38—135)

1. An improved ironing board comprising a board top having a circumscribing depending flange, a pad covering said board top, a holder for drawing said pad taut and clamping the same in position on said board top, said holder including a single tubular member shaped to extend about the full perimeter of said board top, the ends of said member being disposed in abutting position at one end of the board top to define a closed figure conforming substantially to the shape of the board top, and a hinge means pivotally connecting said holder to said top whereby said holder is pivoted between raised-inoperative positions and lowered-operative positions, said hinge including a fixed leaf secured to the flange of said board top, a movable leaf, and a hinge pin pivotally securing the movable leaf to said fixed leaf, and said movable leaf being secured to the abutting end portion of said holder, the axis of said hinge pin being positioned below and outwardly of the centroid of said tubular member so that the end portion of the holder connected to said movable leaf swings in a downwardly and inwardly



arc to initially impart a drawing and holding effect on the pad as the holder is moved from inoperative to operative position whereby said holder progressively stretches and clamps the pad in moving to operative position, and means for locking the other end of the holder to the board top in the operative position.

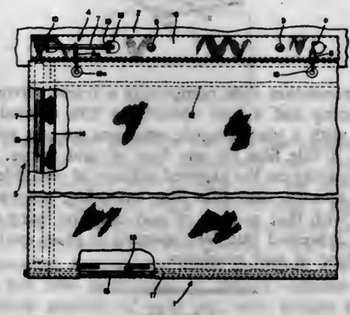
3,089,267
PUSH-OVER GATE
Lawrence T. Wooden, Tiskilwa, Ill.
Filed May 26, 1961, Ser. No. 113,012
6 Claims. (Cl. 39—5)



1. A push-over gate comprising:
(*a*) a pair of standard assemblies;
(*b*) axially-aligned bearing means on each of the standard assemblies;
(*c*) a gate having a trunnion mounting in the bearings;
(*d*) a lever pivoted to one of the standard assemblies;
(*e*) a sliding connection between the lever and the gate at a location spaced from the axis of the trunnion mounting;
(*f*) a tension spring anchored at one end on said one of the standard assemblies, and connected to the lever; and
(*g*) a closure check interposed between the gate and one of the standard assemblies opposing upward swing of the gate.

3,089,268
BANNER MOUNTING CONSTRUCTION
Edward Frey, Akron, and Elliott J. Kies, Massillon, Ohio, assignors to The Massillon-Cleveland-Akron Sign Company, Massillon, Ohio, a corporation of Ohio
Filed Mar. 9, 1961, Ser. No. 94,484
1 Claim. (Cl. 40—128)

A horizontal banner construction for mounting on a horizontal portico including an elongated banner composed of flexible material and having upper and lower elongated hemmed edge portions and having vertical hemmed end portions, means for reinforcing the flexible material of the banner including an elongated reinforcing flexible hose in and coextensive with each end hem portion, means for mounting the banner to the undersurface of a portico including an L-shaped rod at each upper end of the banner including a horizontal portion pivotally mounted on a portico and including a vertical portion extending downwardly into the corresponding end hem portion, the upper end of the flexible hose extend-



ing telescopically over the lower end portion of the L-shaped rod, and said means including a plurality of spaced clips extending between and attached to the upper edge of the banner and a portico, whereby the hose reinforces the banner in a free-hanging position against normal wind forces and yields with the banner when the banner is moved out of a free-hanging position by a moving object passing under and contacting the banner.

3,089,269
PEGBOARD SIGN
Kenneth G. McKiernan, 1056 W. Van Buren St., Chicago 7, Ill.
Filed Mar. 3, 1960, Ser. No. 12,578
4 Claims. (Cl. 40—143)



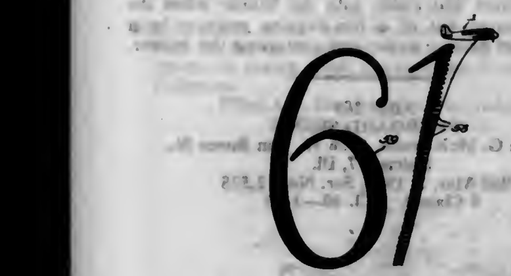
1. A sign comprising a vertical mounting board having a plurality of socket openings distributed thereover, and separate indicia-forming elements secured to said mounting board, each of said indicia-forming elements comprising an indicia body having at least one pair of spaced plug-holding sockets on the back thereof, the spacing between said pair of plug-holding sockets being closer than the spacing between adjacent socket openings of said mounting board, a plug member removably mounted in only one of the plug-holding sockets of said indicia body, the other plug-holding socket being devoid of a plug member and being adapted to receive said plug member to provide a limited adjustment in the spacing of the indicia-forming element, and said plug member extending into a socket opening of said mounting board to hold the indicia-forming element on said mountig board.

3,089,270
SLIDE TITLE MEANS
Robert C. Shoemaker, Portland, Oreg., assignor to Viewlex, Inc., Long Island City, N.Y., a corporation of New York
Filed Sept. 21, 1959, Ser. No. 841,236
3 Claims. (Cl. 40—158)



1. A projection slide comprising a frame having a picture opening and a title opening, a film in said picture opening with a photographic emulsion on one surface of the film, a title film on one face of said frame, a background coating on the exposed surface of said title film of suitable opacity, said title film extending over said title opening with that portion of said title film lying over the opening depressed into said opening to place said coating in the plane of said emulsion.

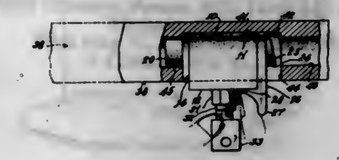
3,089,271
APPARATUS FOR SKYWRITING
Gordon R. Copeland, Park Ridge, Ill., assignor to Dorothy B. Copeland, Park Ridge, Ill.
Filed Dec. 23, 1960, Ser. No. 78,151
8 Claims. (Cl. 40—213)



1. An apparatus for forming smoke constituted characters in the air including, amongst others, letters, numerals, pictures or symbols or combinations thereof, comprising a manifold carried by and extendible from a vehicle, a plurality of relatively longitudinally spaced valved discharge nozzles on and communicating with the manifold, electrically operated means for opening and closing the nozzle valves, and a plurality of relatively adjustable guide pattern scanning photoelectric cells individually connected to the individual electrically operated means for activating the same.

3,089,272
LOCKING TYPE SAFETY BREECH PLUG FOR FIREARMS
Don E. McKinley, 511 Palmer Ave., Lincoln, Ill.
Filed July 31, 1961, Ser. No. 128,935
9 Claims. (Cl. 42—1)

1. A locking type safety breech plug for firearms, said plug comprising an elongated body generally rectangular in cross section and of a size to be inserted into the receiver recess of a firearm through the shell ejection opening, an interchangeable adapter block removably secured to the rear end of said body, said block having a rearwardly extending cylindrical projection for insertion in an opening in the rear end of the receiver recess, an axial bore in said body at the forward end, a transverse bore in said body intersecting said axial bore, a plunger slidably received in said axial bore, a cylindrical nose portion on the forward end of said plunger for insertion into the chamber of a firearm, the forward end of said nose portion being beveled to facilitate insertion of said plug into the receiver recess, a transverse arm at the rear end of said nose portion extending outwardly of said body, a rearwardly extending ear on said arm overlapping said body, a notch in said plunger adjacent the rear end, a



second notch in said plunger of greater width and less depth than said first notch, said second notch intercepting and extending forwardly from said first notch, a lock barrel fixed in said transverse bore, a lock cylinder rotatably mounted in said barrel and a locking lug on the inner end of said cylinder, said lug being disposed in said first notch to lock said plunger in extended position with said body in the receiver recess and said nose portion in the chamber of the firearm and said lug being disposed in said second notch to permit retraction of said plunger and removal of said body from the receiver recess.

3,089,273
LOCKING DEVICE FOR CHOKES FOR SHOTGUNS
Maurice Philippe, 39 Rue Hoche, Courbevoie (Seine), France
Filed Apr. 24, 1961, Ser. No. 104,908
Claims priority, application France May 12, 1960
5 Claims. (Cl. 42—79)

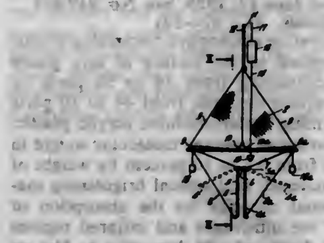


1. Apparatus for locking a choke tube axially and angularly in a shotgun barrel including at least one barrel, a choke tube for each barrel, a recess in the muzzle of said barrel receiving said choke tube, a collar on the muzzle end of said choke tube, a retaining finger secured to said barrel, means for engaging said collar with said retaining finger by rotation of said collar comprising a cut away portion in said collar for movement over said finger, and means for locking said collar against angular rotation including a disengageable element mounted on said barrel for movement into and out of locking engagement with said collar.

3,089,274
FISHING METHOD AND APPARATUS
Jürgen Dethleff, Avenariusstrasse 30, Hamburg-Blankenese, Germany
Filed Nov. 24, 1959, Ser. No. 855,033
Claims priority, application Germany Nov. 26, 1958
13 Claims. (Cl. 43—4.5)

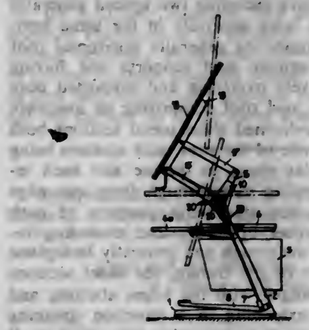
1. The fishing method comprising the steps of lowering a meshwork bell having a closeable mouth at the bell bottom to a location above the fish to be caught, issuing electrotaxis pulses by pulse-forming means beneath the bell mouth through the water when the bell approaches

to within a predetermined distance from the fish, then raising the pulse-forming means up to within the bell for



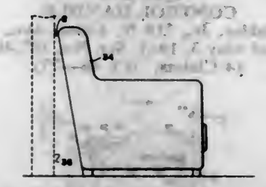
causing the fish to enter the bell, then closing the bell mouth, and raising the bell with the fish caught therein.

3,089,275
DRAWING STANDS OR THE LIKE
Paul Alabor, Buhofstrasse, Rheineck, Switzerland
Filed June 5, 1961, Ser. No. 115,028
Claims priority, application Switzerland June 8, 1960
9 Claims. (Cl. 45—131)



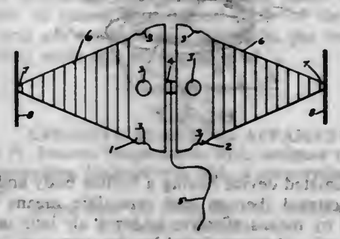
1. In a drawing stand or the like; a base stand, a table top adapted for adjustment with respect to elevation and inclination, means for adjustably mounting said table top on said base stand, said mounting means including means defining at least one parallelogram having a lowermost corner remote from said table top pivotably supported about an axis of rotation by said base stand, said base stand being provided with a plurality of spaced laminae, said lowermost corner of said parallelogram being defined by pivotably arranged lever means each having a plurality of spaced laminae cooperable with said laminae of said base stand to form an interengageable group of laminae defining a clamping mechanism for frictionally retaining said table top in a preset position, means cooperable with said respective laminae for urging the latter into frictional contact with one another, said cooperable means including clamping jaw means adjacent said group of laminae, a bifurcated wedge member for compressing and freeing said clamping jaw means, and push rod means for actuating said bifurcated wedge member, and at least one torsion spring coaxially arranged with respect to the pivotably supported lowermost corner of said parallelogram for counterbalancing the weight of said table top.

3,089,276
BUMPER FOR FURNITURE OR THE LIKE
Harold E. Brooks, Wichita, Kans.
(401 S. Lakeview, Derby, Kans.)
Filed Mar. 20, 1961, Ser. No. 96,955
6 Claims. (Cl. 45—137)



1. A bumper for furniture and the like comprising, in combination, a U-shaped upholstery pin having the U-shaped end portion bent to form with the intermediate portion thereof an acute angle approaching a right angle and with said U-shaped end portion projecting outwardly from said intermediate portion thereof, a wall engageable button molded around said bent U-shaped end portion of said pin and positioned in spaced relation to said intermediate portion of said pin, said button having a cylindrical base portion with a relatively flat side at one end thereof in a plane generally parallel to said intermediate portion of said pin, said base portion merging into a semi-spherical end opposite from said flat side, said button being formed of a smooth, resilient, non-tacky plastic material, said intermediate portion of said pin being spaced from said cylindrical base portion of said button and having a bend in each side portion thereof positioned adjacent to the edge of said cylindrical portion of said button, said bumper being constructed and adapted so that the other end portion of said pin can be inserted into the back of a piece of furniture with the fabric thereof being received between said button and said intermediate portion of said pin with said button and said last-named bends in said pin gripping said fabric therebetween and with said spherical end of said button engageable with a wall or the like to prevent damage thereto or to said piece of furniture.

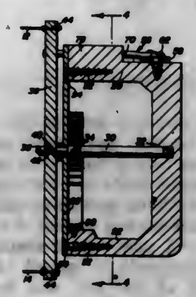
3,089,277
REVOLVABLE TOY
Milous Reese, Jr., 2117 18th St., Birmingham 8, Ala.
Filed Dec. 26, 1961, Ser. No. 162,012
1 Claim. (Cl. 46—61)



A revolvable toy comprising, a center container body having two equal in size parts with equal in size air vent holes therein, a hub, said container parts being attached in fixed condition upon said hub with space between the inner walls of the container parts, a comparatively long flexible string, one end of said string being attached to said hub with the other end of the string being free, said free end being adapted for use by manual means; two similar in shape bellows, each bellows being shaped with a comparatively large round end with its other end round and small, one bellows being attached by its large end to one part of the center container body, the

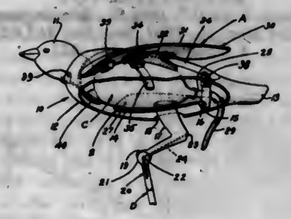
other bellows being attached in the same manner to the other part of the center container body; two similar in size discs, each bellows having one of said discs attached on its small end.

3,089,278
CONTROL HANDLE
Edwin T. Brinkley, Jr., 710 N. Union Ave., Ozark, Ala.
Filed May 3, 1961, Ser. No. 107,466
14 Claims. (Cl. 46—77)



1. A control handle for use with tethered model airplanes of the type having flight control actuating means adapted to have a plurality of generally parallel and spaced flexible tethering and control lines secured thereto, said control handle comprising a hand-grip, a control member, means rotatably mounting said control member on said grip, a pair of generally parallel lines, securing means securing one pair of corresponding end portions of said lines to said control member in spaced relation for lateral swinging movement of said lines about an axis paralleling said lines upon rotation of said control member and means for effecting rotation of said control member relative to said grip.

3,089,279
ANIMATED DEVICES
Lyman F. Higgins, Jr., Hawthorne, Calif.
(10424 Evelyn Drive, R.F.D. 3, Clio, Mich.)
Filed Nov. 6, 1959, Ser. No. 851,381
2 Claims. (Cl. 46—124)



1. An animated device having a hollow body and parts movably mounted thereon and extensible means therein operated by means effective to force air into said extensible means and manipulated by the user;
a plate within and pivoted at one end to the body;
said extensible means comprising a balloon positioned on said plate in position when distended to engage with the body and said parts mounted movably thereon;
and a stationary mounting member on which the body is permanently but movably mounted by means of a part rigidly secured to said plate and projecting through an opening in said body and connected to the stationary mounting member by torsion spring means for oscillatory movement of the body about said stationary member.

3,089,280
TREATMENT OF PLANTS WITH LIGHT-AFFECTING COMPOSITIONS
Ruth Elizabeth Barry Klaas, Arden Hills, Minn.
(3531 Ridgewood Road, St. Paul 12, Minn.)
No Drawing. Filed June 12, 1959, Ser. No. 819,831
2 Claims. (Cl. 47—58)

1. A process for treating chlorophyll-containing plants, in which there is applied to the surface of said plants aqueous dispersion containing from 56 to 90 parts by weight of liquid dispersing medium, from 44 to 10 parts by weight of film-forming, water-insoluble acrylic plastic, said acrylic plastic having an average molecular weight in excess of 10,000 and from 0.1 to 10 percent by weight of optical brightening material, said optical brightening material having substantial capacity for the absorption of light energy only of the ultraviolet and infrared regions of the spectrum, and drying of said dispersion to film on the surfaces of said plants.

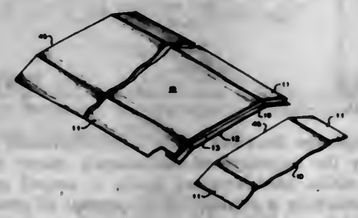
3,089,281
BUILDING ROOFING STRUCTURE
Alberto Borges, Rio De Janeiro, Brazil
Filed Dec. 1, 1959, Ser. No. 856,496
2 Claims. (Cl. 50—61)



1. A building structure including two spaced generally parallel roof supports lying generally in the same horizontal plane, a self-supporting generally horizontal roof spanning the space between said supports and having edge portions respectively overlying and supported only by said roof supports, said roof comprising an assembly of a multiplicity of preformed sheet metal sections both lengthwise and widthwise of the roof, said sections being of generally rectangular shape in outline and each including a trough extending therethrough from one edge to the opposite edge, the other edge portions of each sheet section being offset upwardly and extending respectively laterally of the trough and generally in a plane parallel to the bottom of the trough, the sheet sections of the roof being arranged with the edges abutting and with the troughs all extending in a direction spanning the roof supports, a continuous solder joint joining all adjacent edges of the sheet sections to provide a water-tight roof, the end portions of the roof containing said edges between which extend the troughs constituting the edge portions of the roof overlying and supported by said spaced roof supports, a plurality of spaced upright bars carried by both of said roof supports, the upper portion of each bar being secured to the overlying edge portion of the roof supported by said support, said bars supporting said edge portions of the roof spaced from the supports to allow free expansion and contraction of the roof in all directions, said roof being so formed and attached to said supports as to have a slight arch between said supports, whereby a unitary water-tight roof is provided having an undulating surface with a large inertia and a mean thickness equal to the depth of the troughs provided in the sheet sections.

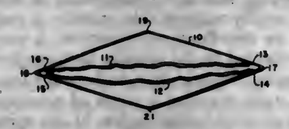
3,089,282
TERMITE SHIELD
James D. Tennison, 450 N. Bellevue, Memphis, Tenn.
Original application Nov. 30, 1950, Ser. No. 198,359, now Patent No. 2,674,765, dated Apr. 13, 1954. Divided and this application Apr. 12, 1954, Ser. No. 422,555
2 Claims. (Cl. 50—73)

1. A termite shield section having a central horizontally disposed portion and at least one inclined side portion said central horizontally disposed portion extending continuously in a single plane to one extremity of the shield section and providing a male element, the opposite extremity of said section being of generally S-shaped conformation, said extremity being bent downwardly and reversely upon itself to provide a first transverse arcuate end portion and an upwardly inclined intermediate leg portion, the upper extremity of said intermediate leg portion frictionally engaging the under surface of said shield section, said intermediate leg portion being bent downwardly and reversely upon itself to provide a second transverse arcuate end portion and a terminal leg of



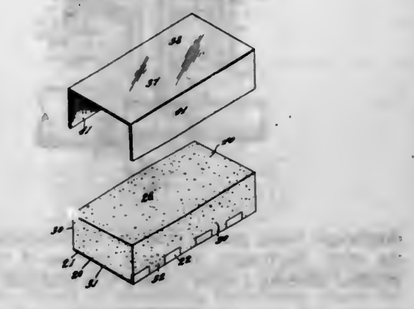
sufficient length to extend beyond said first transverse arcuate end portion, the upper surface of said terminal leg frictionally engaging the lower surface of said first arcuate end portion, said upwardly inclined intermediate leg portion and terminal leg together with the arcuate end portion therebetween comprising a female element for the frictional reception and secure retention of the opposed extremity of an adjacent shield section, said S-shaped extremity being upwardly offset from the plane of the horizontally disposed central portion of said shield so that said horizontally disposed portion and said terminal leg portion lie in the same horizontal plane.

3,089,283
SHRINKABLE FILM AS A STRUCTURAL AID
Wylie C. Kirkpatrick, Wayland, Mass., assignor to W. R. Grace & Co., Cambridge, Mass., a corporation of Connecticut
Filed Oct. 24, 1960, Ser. No. 64,416
3 Claims. (Cl. 50—80)



3. Self-erecting wall portion for a toy house assembly comprising:
(*a*) a flattened rectangular tube of sheet material having two opposed gable walls and two opposed rectangular end walls; and
(*b*) at least one tension member having a length approximating the sum of the lengths of one gable wall and one end wall, each of said members extending across the interior of said tube and being fixedly attached at its respective ends adjacent diagonally opposite corners of said flattened tube;
(*c*) each of said tension members consisting of a biaxially oriented polymeric substance having a shrink energy of from 100 to 500 pounds per square inch at 96° centigrade and a tensile strength between 5,000 and 15,000 pounds per square inch, whereby said toy house wall portion is self-erecting when said tension members are shrunk by heating the same to a temperature of about 96° centigrade.

3,089,284
BASIC REFRACTORY BRICK AND METHOD
Russell Pearce Heuer, Bryn Mawr, Pa., assignor to General Refractories Company, a corporation of Pennsylvania
Filed Feb. 19, 1959, Ser. No. 794,379
3 Claims. (Cl. 50—416)

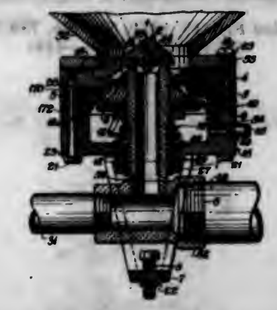


1. A basic refractory brick comprising an integral body of basic refractory having a plurality of lateral longitudinal faces each in a corresponding plane of said body, an oxidizable metallic plate having a base on one of said faces of the refractory body, said plate having projecting arms on opposed edges of the base and supporting projecting tabs between said opposed edges of the base, said projecting tabs and projecting arms being securely embedded in the refractory body of the brick and said projecting arms having outside faces flush with a second and third of said plurality of lateral longitudinal faces of the refractory body, said arms of said plate having a length which is less than one-quarter of the transverse dimension of the corresponding face of the refractory body, said second and third faces being opposed to each other, and a separate external oxidizable metallic U-shaped plate having arms of the U directly abutting substantially the entirety of the respective facial areas of said opposed faces of the refractory body and base of the U directly abutting substantially the entirety of the facial area of a fourth of said plurality of faces of the refractory body opposite said one of said faces, said plate second mentioned extending over the outside faces of said projecting arms of the oxidizable metallic plate first mentioned and being anchored to the body of the brick by said first mentioned plate, and said second mentioned plate being bonded to said projecting arms so that said plates encase said plurality of lateral longitudinal faces of the refractory body and are retained as a casing to the body by said projecting arms and projecting tabs.

3,089,285
ABRASIVE BLASTING APPARATUS
Ralph W. Moore, Hagerstown, Md., assignor to Pangborn Corporation, Hagerstown, Md., a corporation of Maryland
Filed Apr. 19, 1962, Ser. No. 188,744
6 Claims. (Cl. 51—8)

1. A pressure-responsive mixing device for controlling the flow of a stream of particles from a supply tank, said device including a flow conduit, a tubular member having its upper portion projecting into the conduit and providing a discharge path for the conduit, a rubber valve seat in said conduit above the upper portion of the tubular member, a spring for upwardly biasing the tubular member against the valve seat, two spaced pressure-responsive diaphragms holding the tubular member in place, and a pressure applying connection for causing changes in pressure to raise and lower the tubular member against and away from the valve seat, one of said diaphragms

having one face exposed to the conduit while the second diaphragm has the opposite face exposed to the pressure-applying connection, the total moving area of the second



diaphragm being greater than the corresponding area of the other diaphragm, the upper portion of the tubular member forming a valve closure with said seat.

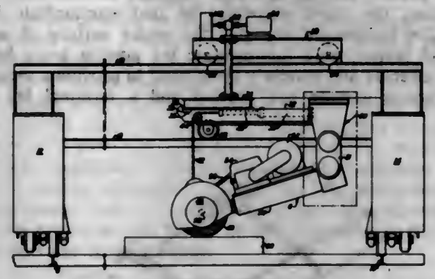
3,089,286
GRINDING WHEEL AND JIG COMBINATION
Ray R. Ulrich, Trenton, N.J., assignor to Crossley Machine Company, Inc., a corporation of New Jersey
Filed Oct. 24, 1961, Ser. No. 147,229
6 Claims. (Cl. 51—34)



5. In a grinding wheel and jig combination of the character described, a jig formed of flat and relatively thin material and a grinding wheel slidably mounted thereon, a flat, inwardly open U-shaped clamp rigidly connected to its lower edge in right angular relation therewith, said clamp having a pair of projections depending from the upper wall of said clamp and screw means projecting through the bottom wall of said clamp between said pair of projections for clamping a flat blade against said projections.

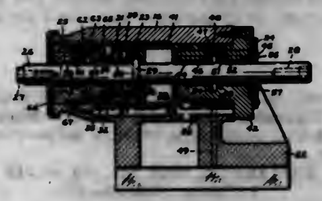
3,089,287
SLAB GRINDER, HYDRAULIC COUNTERBALANCE AND LIFT CONTROL
John H. Dilks, Whitford, Pa., assignor to Lukens Steel Company, Coatesville, Pa., a corporation of Pennsylvania
Filed July 11, 1961, Ser. No. 123,258
5 Claims. (Cl. 51—35)

1. In a slab grinder, an abrasive wheel, an electric motor to rotate said wheel, a hydraulic motive means comprising a cylinder, a piston in said cylinder, and a piston rod extending through an end of said cylinder from said piston, linkage means interconnecting said wheel and said piston rod, said wheel supportably depending from said linkage means, a pump, hydraulic fluid, said pump maintaining said fluid under pressure in said hydraulic motive means acting on said piston against the weight of said wheel, a pressure regulator for said fluid in said hydraulic motive means, a controller included in said pressure regulator to control the pressure of said fluid in said hydraulic motive means, electric actuation means associated with said electric motor and said controller, said electric actuation means being sensitive to the amperage of said motor and acting upon said controller causing the pressure of said fluid to be increased to reduce the downward force of said wheel on a slab and the amperage requirement of said electric motor when said amperage increases over a predetermined amount and to be decreased with the opposite effect when



said amperage decreases under a predetermined amount whereby the amperage of said electric motor is maintained within predetermined limits, a second regulator for maintaining a predetermined amount of pressure of said fluid in said hydraulic motive means, a selector valve for switching the control of pressure of said fluid to said second regulator when said amperage drops to no load.

3,089,288
GRINDING MACHINE
Robert S. Hahn, Northboro, Mass., assignor to The Heald Machine Company, Worcester, Mass., a corporation of Delaware
Filed Mar. 22, 1960, Ser. No. 16,889
11 Claims. (Cl. 51—50)

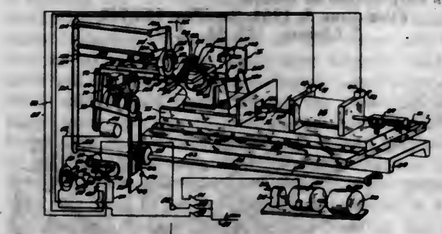


1. A grinding machine, comprising a wheelhead including an axially-reciprocable spindle, a resilient member biasing the spindle in one direction, a source of static pressure connected to the spindle to move it in the other direction against the said bias, and means for introducing to the said static pressure a series of pressure pulsations to bring about axial reciprocation of the spindle.

3,089,289
METHOD AND APPARATUS FOR SUPERFINISHING RING RACEWAYS
Joseph W. Serafin, 6314 S. Troy St., Chicago, Ill.
Filed Apr. 18, 1960, Ser. No. 23,098
23 Claims. (Cl. 51—58)

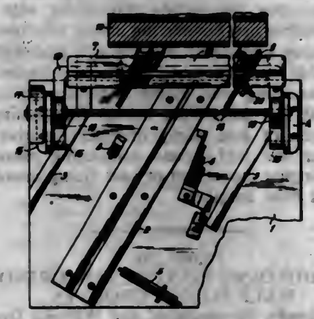
1. In combination with a machine for finishing a raceway on a ring having two parallel, transversely aligned rolls with means for rotating said rolls at the same speed, and a positioning carriage movable horizontally between a position adjacent the rolls and a spaced position endwise of the rolls, a finishing head mounted on the positioning carriage, frame members mounted on the finishing head projecting toward the rolls and spaced by a distance greater than the rolls so that upon a movement of the positioning carriage toward the rolls the frame member will straddle the rolls, aligned bearings in said frame members, one in each frame member, a crank

having a journal on each end rotatably disposed in said bearings, said crank having a throw, an arm mounted on the throw extending forwardly toward the axis of the



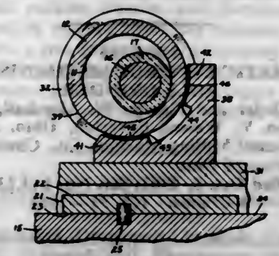
bearings, a solid abrasive having a lower surface contoured to a raceway to be worked mounted on the arm, and means for oscillating the crank.

3,089,290
GRINDING DEVICES
August Wurm-Reithmayer, 38 Eppsteinerstrasse, Frankfurt am Main, Germany
Filed Dec. 9, 1959, Ser. No. 858,492
8 Claims. (Cl. 51—98)



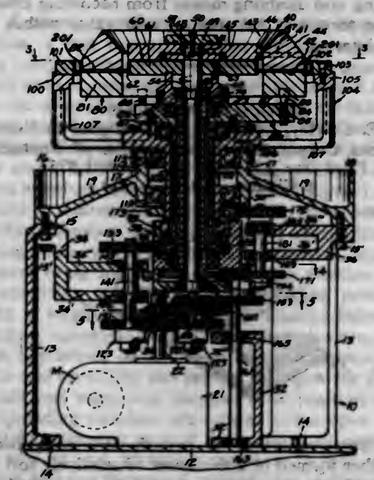
1. In apparatus for grinding the cutting edges of helical drills having cylindrical shanks: a clamping ledge having parallel slots therein arranged side by side for receiving the drills to be ground, a pressure bar for clamping the respective drills in the slots, the slots in said clamping ledge having an angular position relatively to the longitudinal extent of said clamping ledge corresponding to the cutting angle of the drill, one catch coordinated to each slot engaging the flutes in the drills to set their proper cutting angles, means for turning all drills simultaneously around their respective axes through 180° which turning means comprises a common means for sliding the drills and said catches relative to each other in the direction of the axes of the drills, a grinding device extending over the entire width of all slots in said clamping edge, means for moving said clamping ledge and said grinding device into grinding relationship with one another and opening and closing means engaging the drills to close the catches upon the flutes in the drills while said sliding means slides the drills and said catches relative to each other in one direction and thereafter to separate the catches from said flutes while said sliding means returns to its starting position, at which position the catches are closed upon the flutes adjacent to the first mentioned flutes, whereby the catches always grip the proper flute coordinated to the cutting edges to be ground.

3,089,291
GRINDING MACHINE
Norman S. Humes, Worcester, and Frederick A. Hohler, Holden, Mass., assignors to The Heald Machine Company, Worcester, Mass., a corporation of Delaware
Filed Nov. 2, 1961, Ser. No. 149,754
7 Claims. (Cl. 51—103)



1. A grinding machine for finishing a workpiece having an external surface of revolution, comprising means for supporting the workpiece by contact with the external surface thereof, means for rotating the workpiece about the axis of the said surface, a wheelhead having a spindle and an abrasive wheel mounted on the spindle, means to bring about relative movement between the workhead and the wheelhead to bring about an abrading action between the wheel and the workpiece, and shoes associated with the supporting means and contacting the external surface of the wrokpiece, the said shoes being formed of an elastomer material of high abrasive resistance.

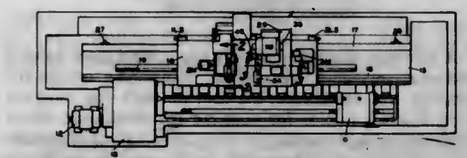
3,089,292
LAPPING MACHINE
Grover C. Hunt, Carlisle, Pa., assignor to Norton Company, Worcester, Mass., a corporation of Massachusetts
Filed Apr. 14, 1961, Ser. No. 103,014
14 Claims. (Cl. 51—118)



10. Lapping apparatus comprising a relatively fixed base, first and second lap assemblies, first and second work carrier driving elements, each lap assembly and each driving element including one of four generally cylindrical depending portions all rotatably supported upon said base for independent rotation about a common vertical axis, and a single drive means operatively connected separately to each of said depending portions so as to produce rotation of each of said lap assemblies and

each of said driving elements in a predetermined direction at a predetermined rate, so that a plurality of circular work piece carrier means interposed between said first and said second lap assemblies and in operative engagement with said first and said second driving elements are rotated concurrently about their respective axes and about the common vertical axis.

3,089,293
AUTOMATIC CONTROL MECHANISM FOR ROLL GRINDER
Walter A. Holer and George W. Marshall, Cincinnati, and Milton V. Waters, Silverton, Ohio, assignors to The Cincinnati Milling Machine Co., Cincinnati, Ohio, a corporation of Ohio
Filed Oct. 5, 1961, Ser. No. 143,138
8 Claims. (Cl. 51—165)



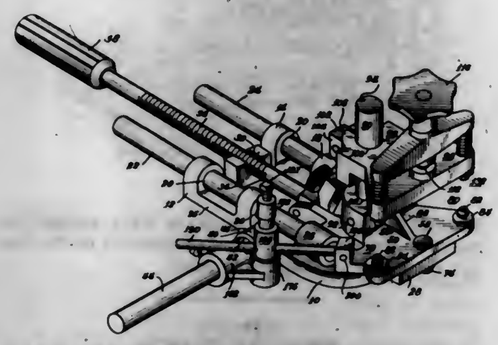
1. A machine for grinding the peripheral face of a cylindrical workpiece comprising in combination:
(*a*) means for supporting the workpiece to be ground for rotation about its longitudinal axis,
(*b*) a grinding wheel,
(*c*) traversing means for effecting longitudinal movement of the grinding wheel relative to the workpiece,
(*d*) a drive motor for the grinding wheel,
(*e*) means for disabling said traversing means in response to a reduction in the torque on said drive motor below a predetermined value, and
(*f*) delay means for inhibiting the operation of said disabling means for a preselected time interval after the torque has fallen below said valve and for preventing said disabling means from becoming effective if the torque is restored to said valve within said time interval.

3,089,294
ABRASIVE ARTICLE
William E. Cowley, Louisville, Ky., assignor to Vermont American Corporation, a corporation of Kentucky
Filed Dec. 23, 1959, Ser. No. 861,575
5 Claims. (Cl. 51—186)



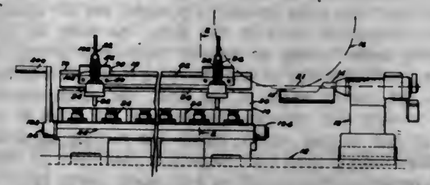
1. An abrasive article of manufacture comprising a base member formed of a thin sheet of relatively soft steel having bent-up end portions adapted to be secured to a supporting structure, said base member having a work surface to which is brazed tungsten carbide grit material, a resilient sheet-steel backing member extending between said end portions on the other side of said base member behind said grit bearing work surface, and marginal side portions of said base member being bent back upon themselves, at least in the areas of the bend lines of the bent-up end portions to strengthen the corners and to secure said backing member to the base member.

3,089,295
BRAKE SHOE CLAMP
Walter P. Kushmuk, Niles, and Leo C. Bogaerts, Antioch, Ill., assignors to Ammco Tools, Inc., North Chicago, Ill., a corporation of Illinois
Filed June 5, 1961, Ser. No. 114,752
7 Claims. (Cl. 51—217)



2. In a device of the type described, the combination comprising a base member, a body member, and a set of clamp members, said clamp members being mounted on said body member for sliding and pivoting movement with respect thereto, said body member being mounted on said base member for sliding movement with respect thereto, releasable first connecting means selectively operable for locking said clamp members to said body member, detachable second connecting means selectively operable for connecting said clamp members to said base member, said first connecting means determining a rectilinear motion of said clamp members relative to said base member and said second connecting means determining a swinging movement of said clamp members relative to said base member.

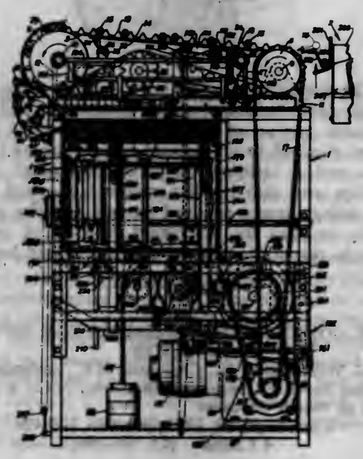
3,089,296
WORK HOLDING FIXTURE FOR GRINDING HALF ROUND GROOVES
Samuel G. Brady, Birmingham, and Wilhelm Dralle, Detroit, Mich., assignors, by mesne assignments, to Ex-Cell-O Corporation, Detroit, Mich., a corporation of Michigan
Filed May 25, 1959, Ser. No. 815,363
16 Claims. (Cl. 51—227)



1. A work holding fixture for simultaneously locating a plurality of workpieces so that an equal amount of material may be removed from a surface of each workpiece, comprising an elongated frame including a substantially flat support member, transversely extending vertical members spaced apart longitudinally of the support member and longitudinally extending frame members secured to each of the transverse members at each end thereof adjacent the top thereof, a separate vertically extending expanding mandrel secured to the support member between each pair of transverse members, a separate resilient annular pad sleeved over each of said expanding mandrels and resting on said support member for yieldably sustaining separate workpieces sleeved over the individual expanding mandrels, locating apparatus

secured to said frame for simultaneously engaging each of said workpieces to accurately vertically position the workpieces on the resilient pads including a plurality of hinge arms pivotally secured to one side of said frame, a locating bar for simultaneously engaging each of said workpieces during limited pivotal movement of said hinge arms extending longitudinally of said frame and rigidly secured to each of said hinge arms whereby said hinge arms are constrained to move together and stops on the other side of said frame and on the other end of said hinge arms operable to limit pivotal movement of said hinge arms in one direction, clamps spaced longitudinally of said frame and supported by said frame and engageable with said other end of said hinge arms operable to hold said stops in contact with the hinge arms in a limiting position thereof and with said locating bar in engagement with the workpieces, and unitary cam means secured to the support member for simultaneously actuating said expanding mandrels.

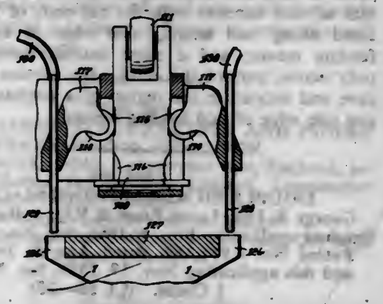
3,089,297
CIGAR ACCUMULATOR
Francis A. Craig, Durham, N.C., and Frank Hollenton, Mountainside, N.J., assignors to International Cigar Machinery Company, a corporation of New Jersey
Filed Dec. 8, 1960, Ser. No. 74,564
24 Claims. (Cl. 53—26)



1. An apparatus for accumulating cigars as they are delivered from a cigar making machine, comprising an endless conveyor disposed adjacent the cigar delivery station of a cigar making machine to collect delivered cigars and convey them sideward to a discharge station, means for continuously driving said conveyor, means adjacent the discharge station of the conveyor for accumulating discharged cigars in a horizontal row, said last mentioned means including a pair of spaced horizontal runners adapted to support the ends of cigars and a reciprocable member operable in timed relation with the conveyor for pushing discharged cigars onto said runners, means for counting the cigars as they are pushed onto said runners, means operable after a predetermined number of cigars have accumulated on said runners to momentarily spread said runners and drop the row of cigars, a platform disposed beneath said runners for stacking rows of cigars, and means operable in synchronism with the runner spreading means to index the platform downwardly a predetermined distance corresponding to the diameter of a cigar.

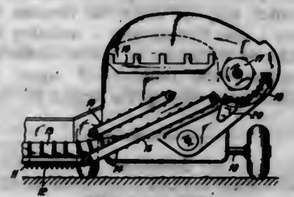
22. The method of accumulating and stacking cigars as they are delivered from a cigar making machine, which comprises delivering the cigars successively to pockets of a conveyor belt of an accumulator driven independently of the cigar machine and at a speed such that the belt pockets pass the cigar delivery station at a rate at least approximately twice that of cigar delivery from the cigar machine, depositing said cigars from the belt onto a horizontal support and synchronously with the rate of travel of belt pockets clearing said horizontal support of a cigar which may be deposited thereon by pushing said cigar into a row former past a counting device, and dropping said row of cigars to a row stacking platform when a predetermined number of cigars have been counted without interrupting the travel of the collector belt.

3,089,298
ARRANGEMENT FOR CLOSING BAGS AND CONTAINERS
Günther Neuendorf, Darmstadt-Eberstadt, Paul Schmidt, Darmstadt, Wilhelm Reil, Elmshausen an der Bergstrasse, and Wilhelm Römer, Welterstadt, Kreis Darmstadt, Germany, assignors to Hahra Werk, Wilhelm F. Ott, Darmstadt, Germany
Filed May 31, 1960, Ser. No. 32,967
Claims priority, application Germany June 2, 1959
19 Claims. (Cl. 53—112)



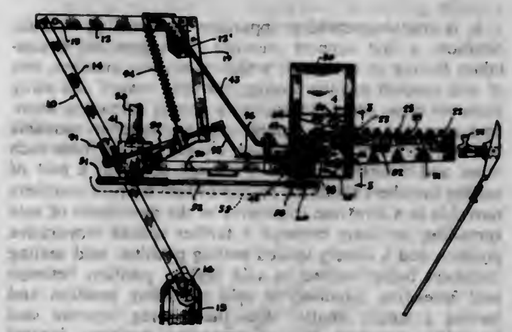
1. A container-making apparatus, comprising, in combination, a first support member for supporting a container having an open end; a second support member, one of said support members being movable toward and away from the other support member; a pair of spreading members mounted on said second support member movable between an inoperative position closely spaced from each other and a farther spaced spreading position; a pair of sealing members mounted on one of said support members movable in a direction transverse to the movement of said spreading members between a farther spaced inoperative position and a closely spaced sealing position, said sealing members being located in said sealing position between said spreading members in said spreading position and having a length smaller than the spacing between said spreading members in said spreading position; control means operatively connected to said one support member and to said spreading and sealing members for first moving said one supporting member to a position in which said spreading members are located in the open end of a container supported on said first supporting member, for then moving said spreading members to said spreading position and for thereupon moving said sealing members to said sealing position for sealing superimposed container wall portions spread by said spreading members whereby lateral flaps are formed, and for moving said spreading and sealing members in reverse order to said inoperative positions and said one supporting member away from the other supporting member, means for cutting said flaps, and means for collapsing and sealing said flaps so that each of said flaps can be independently opened for discharge of the contents of the container.

3,089,299
STONE TRAP FOR COMBINES
Reinhold Claas, Harsewinkel, Westphalia, Germany, assignor to Gebr. Claas, Harsewinkel, Westphalia, Germany, a firm
Filed Oct. 25, 1960, Ser. No. 64,948
Claims priority, application Germany Oct. 29, 1959
7 Claims. (Cl. 56—20)



1. In a combine harvester adapted to travel in one direction, in combination, a threshing drum; a concave cooperating with said drum and having an entry edge portion; cutting means for cutting stalks of a crop to be threshed adjacent to the root ends thereof; elongated feeding means having a side edge leading in said one direction for feeding the cut stalks in a direction transverse to said one direction toward said entry edge portion of said concave with the cut ends of the stalks located along said leading side edge of said elongated feeding means; and a stone catcher trough extending only across part of the entry edge portion of said concave and located in the region of a continuation of said one side edge of said feeding means.

3,089,300
DOUBLE SICKLE MOWING MACHINE
George B. Hill, Lewis Road, R.F.D. 3, Bethesda, Md.
Original application June 4, 1956, Ser. No. 589,168, now Patent No. 2,931,159, dated Apr. 5, 1960. Divided and this application Nov. 19, 1959, Ser. No. 854,130
1 Claim. (Cl. 56—25)



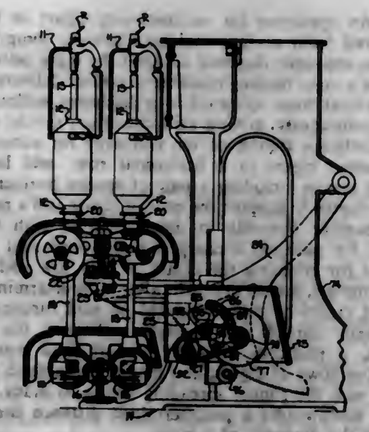
A tractor-powered mower machine having a frame for supporting a laterally extending shoe and cutter bar assembly and a drive system therefor, said cutter bar having inner and outer ends and carrying a driven sickle cutting means, a pivotal support means having a longitudinally extending axis on said frame, a support bar having inner and outer ends, the inner end of said bar being carried on said frame by said pivotal support, the shoe and cutter bar assembly being pivotally supported on said bar to rotate about a longitudinal axis at the outer end thereof, a rotary system including driving and driven means, means connected between the tractor power source and said driving means, said driving and driven means being mounted to rotate about the longitudinal axes of each of said pivotal supports at the inner and outer ends of the support bar, a casing for surrounding said rotary system including said driving and driven means, said casing being supported integrally with said support bar to be movable therewith, means on the mower shoe to convert rotary motion to reciprocating motion to drive said sickle, driving means connected between said motion converting means and said sickle, said driven means being rotatably mounted in a manner to be operatively connected to said motion converting means, and means for raising and lowering said cutter bar and shoe such that the cutter bar and shoe may be rotated about the axis of said driven means at the outer end of said support bar and said support bar may be rotated about the axis of said driving means when said cutter bar is raised to a generally vertical position whereby said cutter bar and shoe may be lifted off the ground.

3,089,301
LAWN MOWER HANDLE SUPPORT
Stanley J. Przekop, 18199 Riopelle, Detroit, Mich.
Filed Apr. 3, 1962, Ser. No. 184,741
4 Claims. (Cl. 56—249)



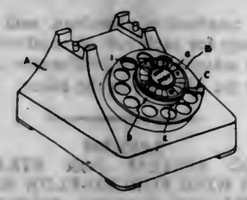
1. The combination with a lawn mower having a frame and a pivotable handle, of a plate received on and secured to an edge portion of said frame, an inverted cup-like member attached to an element comprising part of said handle, and a compression spring interposed between said plate and said cup-like member one end of said spring being loosely received in said cup-like member, whereby to limit the downward pivoting of said handle but to permit the upward pivoting of said handle.

3,089,302
LAY CONTROL TRANSMISSION FOR ROVING FRAMES
John G. Williamson, Jr., Charlotte, N.C., assignor to Perfecting Service Company, Charlotte, N.C., a corporation of North Carolina
Filed Sept. 20, 1961, Ser. No. 139,486
4 Claims. (Cl. 57—96)



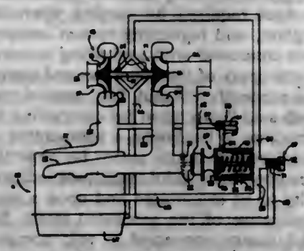
1. In a roving frame having rotating flyers for traversing roving onto relatively rotating spools, a carriage for said spools, a lifter shaft, means for transmitting reciprocatory traversing movement from said lifter shaft to said carriage, a builder motion, and a lifter drive shaft driven to rotate in one direction and the opposite direction in alternation by said builder motion; the combination therewith of means for transmitting reciprocatory motion from the lifter drive shaft to the lifter shaft comprising
(*a*) a jack shaft extending substantially parallel with the lifter shaft and the lifter drive shaft,
(*b*) change gear means transmitting rotation from the lifter drive shaft to the jack shaft,
(*c*) a pair of sprocket wheels fixed on the jack shaft and the lifter shaft, respectively, and
(*d*) an endless sprocket chain engaging said sprocket wheels.

3,089,303
AUTOMATIC TELEPHONE TIMER
Norman C. Dahl, 40 Fern St., Lexington, Mass.
Filed Oct. 31, 1961, Ser. No. 148,964
11 Claims. (Cl. 58—145)



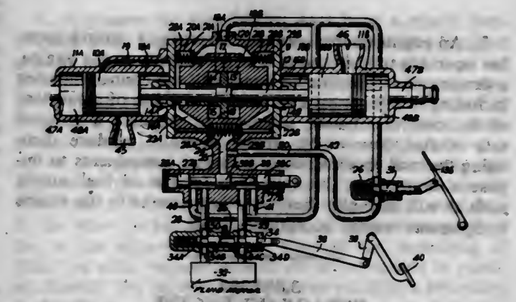
1. A timer for dial telephones comprising framework substantially centrally of the dial plate of a telephone, an index mounted on said framework for angular movement about the axis of rotation of said dial plate, inertia means connected with said index and angularly movable therewith about said axis to introduce relatively high inertia which resists sudden accelerations of said index about said axis when said framework is suddenly accelerated about said axis, stop means obstructing angular movement of said index relative to said framework in one direction beyond a predetermined relative angular orientation of said index and framework, a clockwork mechanism mounted on said framework, clutching means connecting said clockwork mechanism with said index to drive said index at a relatively slow and regulated rate about said axis in direction opposite to said one direction, and index means positioned on said framework in cooperative relationship with said movable index.

3,089,304
TURBOCHARGER WASTE GATE SYSTEM
Riccardo A. Bozzola, Indianapolis, Ind., assignor to Schwitzer Corporation, Indianapolis, Ind., a corporation of Indiana
Filed Mar. 1, 1962, Ser. No. 176,628
6 Claims. (Cl. 60—13)



5. A control system for a turbocharged internal combustion engine having intake and exhaust manifolds, said system including a turbocharger having a compressor and a turbine for driving said compressor, means providing lubricating fluid under pressure for the compressor and turbine bearings, said compressor and turbine each having inlet and outlet passages, an exhaust passage providing communication between said engine exhaust manifold and said turbine inlet passage whereby said turbine is driven by the exhaust gases, an inlet passage providing communication between said compressor outlet passage and said engine intake manifold to supply a boost pressure thereto, a waste gate passage communicating with said exhaust passage and atmosphere, a valve for controlling said waste gate passage including a valve seat, a valve member movable toward and away from said valve seat to close and open said valve, the upstream face of said valve member being exposed to the pressure in said exhaust manifold passage when said valve is closed, resilient means biasing said valve member away from said valve seat, a control housing having a movable wall therein dividing said housing into two chambers, means interconnecting said movable wall and said valve member whereby pressure within said housing on one side of said movable wall opposes said resilient means to urge said valve member toward said seat, a lubricating fluid line for introducing lubricating fluid under said predetermined pressure into said housing at said one side of said movable wall, thereby said waste gate valve member remains off said seat until the lubricating fluid attains a pressure sufficient to overcome said resilient biasing means.

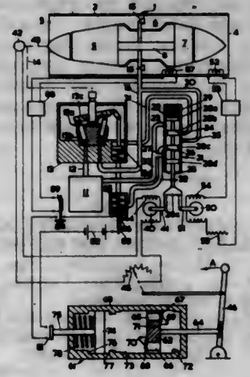
3,089,305
INTERNAL COMBUSTION ENGINES AND POWER TRANSMISSION THEREFOR
Howard Frederick Hobbs, Leamington Spa, England, assignor to Hobbs Transmission Limited, Leamington Spa, England, a British company
Filed Aug. 12, 1959, Ser. No. 833,169
Claims priority, application Great Britain Aug. 21, 1958
9 Claims. (Cl. 60—19)



1. In or for an internal combustion engine and transmission apparatus comprising free pistons operating in cylinders, the provision of at least one pump having a pump piston connected to said free pistons and operating in a pump cylinder, the free pistons and their cylinders being arranged in one or more opposed pairs, the pump piston being connected to both the free pistons, means for introducing fluid into the pump cylinder, said means including inlet valves, outlets for the fluid from said pump cylinder, said outlets including outlet valves, at least one movable part constituting an inertia member acted upon by the pressure developed by movement of said pump piston causing liquid to be displaced first at one end of the pump inertia member and then at the other end of the pump inertia member, the inertia member being so connected with the pump that variation in the position of the inertia member varies the output of the pump and output driving means actuated by the pump

output; said inertia member being variably positioned depending on the pressure built up by the pump in the outlets which is dependent on the load on the output driving means, and on the speed of the pump piston and on the mass of the inertia member, whereby liquid can flow through the outlets to a variable extent and correspondingly displace said inertia member so that delivery through the outlets will be dependent on the load on the output driving means and on the speed of operation of the pump piston and on the mass of said inertia member.

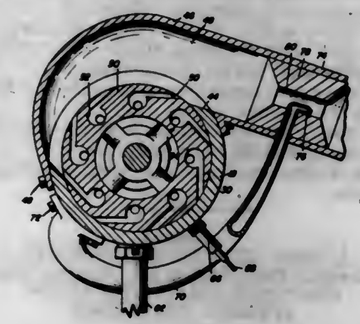
3,089,306
LIMITATION OF THERMAL SHOCK IN ENGINE COMPONENTS
John William Fitchie, Church Crookham, England, assignor to Power Jets (Research and Development) Limited, London, England, a British company
Filed Dec. 10, 1959, Ser. No. 858,760
Claims priority, application Great Britain Dec. 11, 1958
2 Claims. (Cl. 60—39.09)



2. An engine control system comprising a control member operable to vary the rate of fuel supply to the engine, a deceleration control associated with the control member including limiting means responsive to a rate of movement of the control member sufficient to schedule a reduced rate of fuel flow which would normally produce damaging thermal shock stresses in engine components to impose a limit upon the rate of reduction of fuel supply such as will maintain thermal shock stresses in the engine components within acceptable limits.

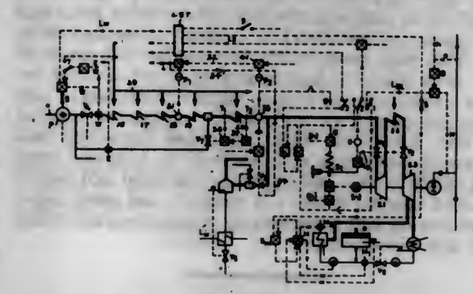
3,089,307
ROTARY JET ENGINE
Melvin M. Kollander, Sandia Park, N. Mex.
(P.O. Box 220, Cedar Crest, N. Mex.)
Filed June 17, 1960, Ser. No. 36,956
4 Claims. (Cl. 60—39.34)

1. A rotary jet engine comprising a stationary stator having a cylindrical hollow interior, a substantially cylindrical rotor mounted in the stator and including a plurality of circumferentially spaced combustion chambers therein, said rotor including a plurality of tangentially extending nozzles communicating with the combustion chambers with the cylindrical peripheral surface of the rotor, said stator having an opening therein with which the nozzles communicate for expansion of combustion products from the nozzles, thereby causing rotation of the rotor, means extending radially into the rotor for supplying a combustible mixture to the combustion chamber, and means extending radially through the stator for igniting the combustible mixture prior to registry of the nozzle with the opening in the stator, said rotor being in the form of an annular member having two peripheral rows of circumferentially spaced and staggered combustion chambers, a common radial inlet for a fuel mixture for the combustion chambers, said igniting means serving



both rows of combustion chambers, said stator having slot-like openings for each row of combustion chambers, and means for scavenging the combustion chambers after they pass over the openings in the stator.

3,089,308
REGULATING SYSTEM FOR STEAM POWER PLANTS WITH FORCED-FLOW BOILERS
Kurt Halle, Erlangen, Germany, assignor to Siemens-Schuckertwerke Aktiengesellschaft, Berlin-Siemensstadt, Germany, a corporation of Germany
Filed June 28, 1960, Ser. No. 39,407
Claims priority, application Germany July 3, 1959
9 Claims. (Cl. 60—106)



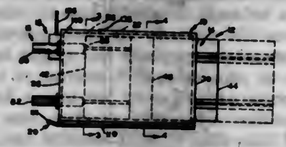
1. In a steam power plant comprising a forced-flow boiler having a firing system and a once-through flow system for working medium to be evaporated and superheated, the combination of a regulating system for regulating the supply of working medium in accordance with the steam output required by varying operating conditions of the plant, said regulating system comprising first control means connected with said firing system for controlling the heat upply of the boiler, second control means operable independently of said first control means and connected with said flow system for controlling the supply of working medium to the boiler, a comparator connected to said first and second control means for controlling them in dependence upon a first pilot magnitude indicative of the liquid quantity to be evaporated and upon a second pilot magnitude indicative of the generated steam flow quantity, and pilot means connected to said comparator for furnishing said second magnitude, said pilot means being independent of the steam flow of said boiler and having load-condition responsive means for indirectly simulating the amount of steam quantity.

3,089,309
SUBTERRANEAN STORAGE OF FLUIDS
George M. Clem, Bryn Mawr, and Patrick F. Dougherty, Chester Heights, Pa., assignors to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey
Filed Mar. 25, 1960, Ser. No. 17,602
2 Claims. (Cl. 61—.5)



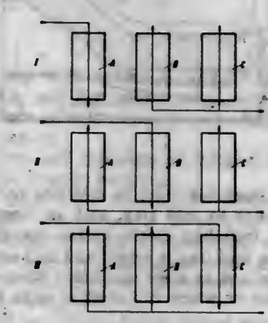
1. In a subterranean cavern for storing a fluid at superatmospheric pressure, said cavern having a communicating shaft extending from the surface of the earth downwardly to the cavern: a casing sealed in said shaft, a closure sealed into said casing at a point below the surface of the earth, a sump extending downwardly from the floor of said cavern, a quantity of a sealing liquid maintained permanently in said sump, said sealing liquid being immiscible with a fluid stored in said cavern and having a higher specific gravity than such stored fluid; a fill pipe for said stored fluid sealed into said casing, extending downwardly therein, sealed through said closure, and extending through said stored fluid and opening into solely the sealing liquid in said sump; and another closure sealed to the upper end of said casing, above the surface of the earth.

3,089,310
TRENCH SHORING MACHINE
Emanuel Torti, 1135 Plainfield St., Johnston, R.I.
Filed Feb. 23, 1960, Ser. No. 10,313
4 Claims. (Cl. 61—41)



1. A trench shoring machine comprising a pair of telescopically associated members, each of said members being hollow and having side and top walls, said walls being rigid plates for engagement with earth forming a trench and protecting the same from cave-ins and the like, one of said members being an outer member and being adapted to receive the inner member therein in a nested relationship, said members having opposing wall surfaces, one of said members having guide channels and the other member having cooperating elements received in said channels for guided movement therein, said guide channels and cooperating elements being on said opposing wall surfaces and disposed to support said inner member by said outer member, a plurality of power operated cylinders operatively interconnecting said members, and control means for selectively simultaneously and individually effecting operation of said cylinders to effect relative movement of said members to an extended relationship and to return said members to their nested relationship, said inner member having an end wall rigidly joining said side and top walls thereof to provide a back fill, earth engaging wall whereby upon engagement between said end wall and back fill earth such relative movement can be effected.

3,089,311
REGENERATIVE HEAT-TRANSFER PROCESS
Wilhelm Lehmer, Munich, Germany, assignor to Gesellschaft fur Linde's Eismaschinen Aktiengesellschaft, Hollriegelskreuth, near Munich, Germany, a company of Germany
Filed Dec. 21, 1959, Ser. No. 860,781
3 Claims. (Cl. 62—12)

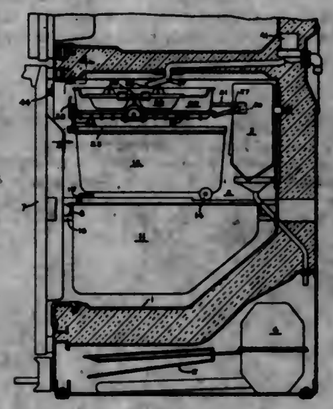


1. A process for transferring heat from a warm compressed crude gas to at least one cold separation product gas, at a pressure ratio of at least 6:1, by means of an arrangement of a plurality of cyclically reversing regenerators which are charged with filler mass, characterized in that in each cyclically reversing period said warm compressed crude gas is passed through one regenerator of a set of at least three regenerators provided for each cold separation product to be warmed, thereby cooling the crude gas and freeing it from freezable constituents; and in the same period passing each cold separation product gas in the opposite direction through the remaining at least two other regenerators of its set connected in parallel, thereby (*a*) vaporizing impurities which in a preceding cyclically reversing period had been frozen out from the crude gas and deposited in at least one of said regenerators of each set of at least three regenerators and (*b*) cooling the filler mass.

3,089,312
SEMI-AUTOMATIC ICE MAKER FOR HOUSEHOLD REFRIGERATORS
Harold P. Harle, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Continuation of application Ser. No. 67,727, Nov. 7, 1960. This application Nov. 8, 1961, Ser. No. 155,879
8 Claims. (Cl. 62—135)

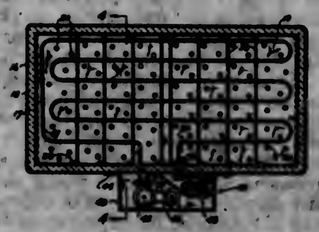
4. A refrigerator including a freezer compartment, an assembly within said compartment movable between a first position and a second position, a freezing tray, means for pivotally supporting one end of said tray on said assembly for manual movement of said tray about an axis adjacent said one end between a freezing position and an inverted discharge position, a movable member for

supporting the other end of said tray on said assembly when said tray is in its freezing position, said movable member permitting movement of said tray from a first position when said tray is empty to a second position when said tray is filled with water, a water supply line for supplying water to said tray when said tray is in its freezing position and said assembly is in its first position,



an electrically operated valve in said line for controlling the flow of water to said tray, and an electrical valve-control circuit including switch means operable to open said valve when said tray is empty and said assembly is in its first position and to close said valve when said tray is filled with water or when said shelf is in its second position.

3,089,313
REFRIGERATION LOCKER ASSEMBLY
Thomas J. Fix, 24700 Kipling Ave., Oak Park, Mich.
Filed Sept. 5, 1961, Ser. No. 136,416
1 Claim. (Cl. 62—239)



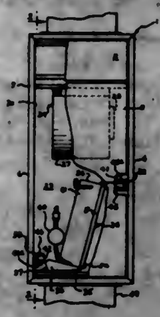
A camper's refrigeration locker comprising a support platform, forward and rear wheeled axles thereunder, a referigerator locker box thereon, said box having two central parallel longitudinal extending closely adjacent top to bottom end to end partitions defining a narrow central top to bottom end to end compartment, outside opening lockers in said box between said central compartment and the outsides of the box; a cooling coil in said central compartment ranging over its entire extent; and a centrally disposed refrigeration equipment containing box under said central compartment and said platform and between said wheeled axles; said equipment box being narrower and shorter than said locker box and said platform so that its sides are remotely inward from the sides of the locker box and platform.

3,089,314
FAN CONSTRUCTION
Lawrence W. Speaker, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Filed June 8, 1961, Ser. No. 115,673
2 Claims. (Cl. 62—379)



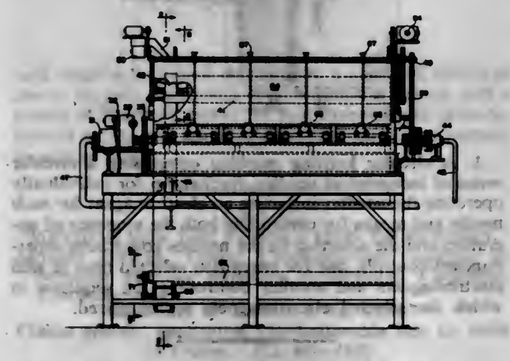
1. In a room air conditioner, the combination comprising a refrigeration system including a cooling unit adapted to condense water out of an air stream, means for collecting said water from said cooling unit, a water disposal means in said unit including a fan and means for directing droplets of water from said water collecting means into said fan thereby to atomize said water droplets during rotation of said fan, said fan including a hub adapted for connection to a rotatable shaft, said hub having an annular section provided with a plurality of spaced apart grooves, said grooves having at least one slot in the bottom thereof extending through said annular section, a plurality of fan blades each having a base portion adapted to fit within a groove of said hub, tab members extending from said base portion of said fan blades and adapted to extend through said slots in said bottom of said grooves, said tabs being transversely bent on the opposite sides of said hub to retain said blades against centrifugal force during rotation of said fan, and a resilient polymeric adhesive material in said grooves and surrounding said base section of said fan blades for deadening sound vibrations in said fan blades caused by water droplets impinging against said fan blades.

3,089,315
CONVERTIBLE SELF-CONTAINED COOLING UNIT FOR AIR CONDITIONING
Theodore C. Brandt, Wichita Falls, Tex., assignor to General Electric Company, a corporation of New York
Filed Sept. 25, 1961, Ser. No. 140,522
4 Claims. (Cl. 62—326)



1. A cooling unit adapted for mounting above or below the air handling duct work of a building for discharging cooled air into the duct work comprising a case including a rear wall, side walls, and a front wall having a front opening therein, partition means in said case forming a plenum chamber in one end thereof, a blower unit mounted in said case and so arranged and constructed as to discharge air into said plenum chamber and to withdraw air from the remaining portions of said case, means including an outlet aperture in said plenum chamber for discharging air into said duct work of said building, an evaporator unit in said case having an upper end and a lower end, an air inlet aperture in said end of said case adjacent said evaporator unit, a pair of support members for supporting said evaporator unit in said end of said case opposite from said plenum chamber, one each of said support members attached to opposite sides of said case in said end thereof opposite from said plenum chamber, one of said support members being arranged substantially above said other support member, upper and lower brackets extending in opposite directions from said upper and lower ends of said evaporator unit, each of said brackets adapted to engage with either of said support members to removably support said evaporator unit within said case so that said evaporator unit may be removed from said case through said front opening therein and be reinstalled into said case with said ends of said evaporator properly oriented regardless of the orientation of said case.

3,089,316
DRUM TYPE FREEZER FOR PEAS AND THE LIKE
Earl D. Robbins, Everson, Wash., assignor of three-eighths to Gail C. Shapley, and three-eighths to Harry G. Callow, Seattle, Wash.
Filed Nov. 14, 1960, Ser. No. 69,011
8 Claims. (Cl. 62—346)

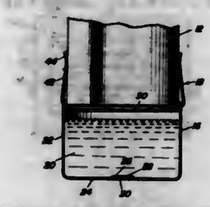


5. A cylindrical drum type freezer for foods in small or particle size, comprising: a refrigerated, horizontal drum disposed for revolution about its longitudinal axis, said drum having two spaced apart concentric shell plates forming a peripheral refrigerant chamber and outside and inside freezing surfaces; means for circulating a refrigerant through said refrigerant chamber and supply and discharge means for said refrigerant; means for revolvably supporting said drum; revolvable conduit means disposed on the axis of rotation of said drum for supplying refrigerant to said peripheral chamber and discharging it therefrom; means for coupling said revolvable conduit to fixed supply and discharge pipes; means for supplying food in particle or legume sizes to said freezing surfaces and means for spreading the same in a single layer over said surfaces; means for resiliently pressing said food into intimate contact with said freezing surfaces and means for removing said food from said drum when frozen comprising power driven vibratory means disposed to vibrate the metal freezing surface adjacent said food.

3,089,317
HEAT EXCHANGING ATTACHMENT FOR RECEPTACLES
Charles J. Bufalini, Pico-Rivera, Calif. (North Hollywood, Calif.)
Filed Aug. 5, 1960, Ser. No. 47,749
1 Claim. (Cl. 62—457)

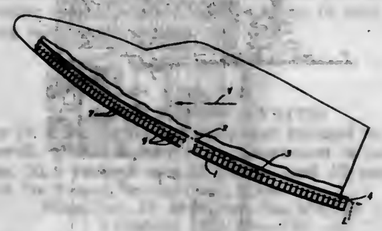
A heat exchange attachment for a receptacle having a flat bottom wall, including:

(a) a container having a eutectic material sealed therein;
(b) said container including a cup open at its top;
(c) said cup having a bottom wall provided with a filling opening;
(d) a closure sealing said filling opening;
(e) said container including an imperforate top wall having a flat, depressed central portion extending downwardly into said cup and adapted to have the flat bottom wall of the receptacle seated thereon in good heat exchange relation;



(f) said top wall having a circumferential shoulder encircling said depressed central portion and seated on the rim of said cup and secured thereto in fluid-tight relation;
(g) said top wall including an integral skirt extending upwardly from its periphery;
(h) said skirt being downwardly notched at circumferentially spaced points to provide a plurality of circumferentially spaced, upstanding, resilient fingers adapted to grip the receptacle when the bottom wall thereof is seated on the depressed central portion of said top wall; and
(i) two of said fingers being spaced apart farther than the remainder of said fingers to receive therebetween a handle on the receptacle.

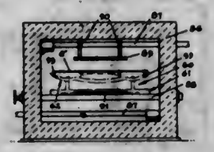
3,089,318
HYPERSONIC COOLING SYSTEM
Henry K. Hebeler, Bellevue, Wash., assignor to Boeing Airplane Company, Seattle, Wash., a corporation of Delaware
Filed Jan. 16, 1961, Ser. No. 81,746
7 Claims. (Cl. 62—467)



1. In combination with the skin of an aerial vehicle designed for hypersonic flight, spaced heat conductive partition means extending from heat conductive contact with said skin inwardly of the vehicle and forming a series of cells with the interior surface of said skin, a metallic charge in each of said cells, said charge consisting essentially of a metal which solidifies at ordinary room conditions and is susceptible to nucleate boiling at the characteristic skin conditions of hypersonic flight, said metal coating the entire area of the interior skin surface bounding its respective cell, and vent means communi-

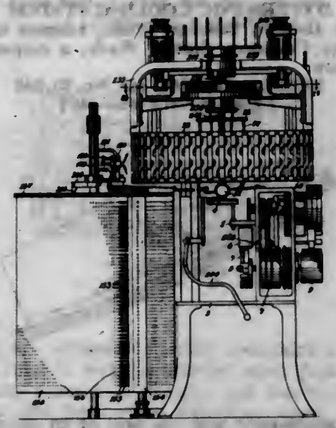
cating with each cell to remove vapor arising from the boiling metal.

3,089,319
GLASS BENDING APPARATUS
Frank J. Carson, Toledo, and Gerald White, Rossford, Ohio, assignors to Libbey-Owens-Ford Glass Company, Toledo, Ohio, a corporation of Ohio
Filed Mar. 12, 1953, Ser. No. 341,969
2 Claims. (Cl. 65—288)



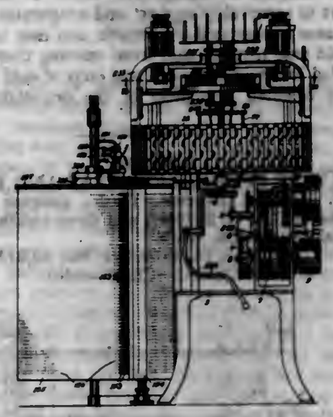
1. In a bending apparatus for bending glass sheets, a plurality of mold sections including a central section and substantially triangular movable end sections, and a metal heat absorbing member carried by each of the triangular end sections at the apex thereof and entirely within the confines of each of the mold end sections and positioned beneath the portions of the glass sheet when mounted above the mold sections which is to be bent into conformity with said end sections.

3,089,320
METHOD OF KNITTING
Paul L. Thurston, Martinsburg, W. Va., assignor, by mesne assignments, to Textile Machine Works, Reading, Pa., a corporation of Pennsylvania
Original application Sept. 9, 1950, Ser. No. 183,989. Divided and this application Sept. 26, 1951, Ser. No. 248,339
8 Claims. (Cl. 66—43)



7. A method of knitting a tubular fabric on a multifeed knitting machine by reciprocating knitting in which at least eight threads form separate sections of individual courses, the steps comprising knitting, during a stroke of reciprocation, thread at each of said feeds to form sections of said individual courses and knitting other threads, during another stroke of reciprocation, at said feeds to form other sections of said individual courses.

3,089,321
CIRCULAR KNITTING MACHINE
Paul L. Thurston, Martinsburg, W. Va., assignor, by mesne assignments, to Kayser-Roth Corporation, New York, N.Y., a corporation of New York
Application Sept. 26, 1951, Ser. No. 248,339, which is a division of application Ser. No. 183,989, Sept. 9, 1950, now Patent No. 2,680,961, dated June 15, 1954. Divided and this application Dec. 18, 1961, Ser. No. 159,900
45 Claims. (Cl. 66—43)

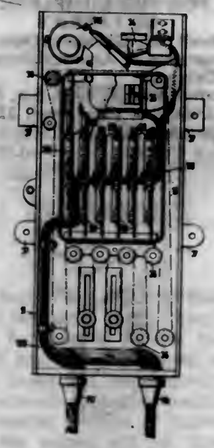


1. A circular knitting machine comprising a circular series of independent needles, mechanism for individually operating the needles including an electromagnet for each needle and means for controlling both the sequence of operation and the selection of the needles comprising superimposed controls, one for energizing selected ones of said electromagnets and another controlling the sequence in which the selected electromagnets are energized.

3,089,322
AUTOMATIC MACHINERY
Donald Marsh Bruce, Grappenhall, Warrington, William Thomas Cowhig, Sale, and Kenneth James Butler, Didsbury, Manchester, England, assignors, by mesne assignments, to The Cotton Silk and Man-Made Fibres Research Association, Shirley Institute, Didsbury, Manchester, England
Filed Sept. 12, 1960, Ser. No. 55,400
Claims priority, application Great Britain Aug. 20, 1958
11 Claims. (Cl. 66—154)

1. Apparatus suitable for imparting a pre-determined sequence of movements to at least one machine member, comprising in combination, an element having a succession of regions prepared in accordance with said pre-determined sequence of movements whereby to constitute a source of recorded information as to the nature of said movements; electrically operable control means associated with said member and including a plurality of control circuits sensitive to said recorded information; means for moving said source of recorded information relative to said electrically operable control means whereby to energize and de-energize parts at least of said control circuit in a sequence corresponding to said sequence of movements; hydraulically operable control means associated with said member and including a plurality of members each adapted to be displaced or not by a fixed amount from a datum position, according to the state of a respective control circuit at a given time, a single displaceable member, a linkage connecting said plurality of members and said single displaceable member whereby said single displaceable member is displaced by an amount corresponding to the sum of the displacements of said plurality

of members, and a negative feed-back mechanism associated with said single displaceable member; a hydraulically operable movement imparting means for said member actuated by said single displaceable member through



said negative feed-back mechanism; a source of electrical power for said electrically operable control means; and a source of hydraulic power for said hydraulically operable control means and said hydraulically operable movement imparting means.

3,089,323
METHOD FOR THE PRODUCTION OF HOSIERY
Jaroslav Javorek, Trebic, Czechoslovakia, assignor to Sdruzeni podniku textilniho strojirenstvi, Chrastava, Czechoslovakia
Filed July 19, 1960, Ser. No. 43,907
Claims priority, application Czechoslovakia July 23, 1959
3 Claims. (Cl. 66—185)



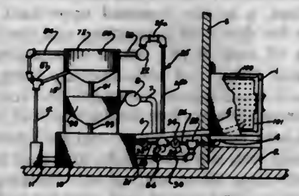
1. In a method of making a knitted stocking, in combination, knitting an axially elongated tube of fabric having a leg portion and a terminal portion flaring in a direction away from said leg portion, said fabric being constituted by a plurality of longitudinally consecutive transverse courses of stitches; sewing a seam through said terminal portion to axially close said tube, said seam having a major portion extending substantially coursewise of said fabric, and a minor portion of said seam extending from said major portion toward said leg portion and defining a heel pocket in said terminal portion; and transversely stretching said terminal portion to form a toe portion therein opposite said heel pocket while substantially maintaining the shape of said heel pocket.

3,089,324
PYROPHORIC LIGHTERS
Harry Barker-Bland, deceased, late of Victoria, London, England, by Maria Claudine Pauline Barker-Bland, administratrix, Victoria, London, England, assignor to George Klashek, London, England
Filed Aug. 23, 1960, Ser. No. 51,470
Claims priority, application Great Britain Aug. 23, 1959
10 Claims. (Cl. 67—7.1)



1. A pyrophoric lighter comprising a body including separate fuel container and mechanism portions, a pivot pin coupling said mechanism portion to said fuel container portion for pivotal movement therebetween, a flint wheel mounted on said pivot pin, a flint spring for urging a flint into contact with said flint wheel, a cap loosely journalled on said pivot pin for movement between open and closed positions, burner means in said fuel container portion, said burner means being enclosed by said cap in its closed position and exposed for use in the open position thereof, an elongated finger-piece member, one end of said finger-piece member being pivotally connected to said cap eccentrically of said pivot pin for producing opening and closing movements thereof, means in said mechanism portion for guiding said finger-piece member for lengthwise movement, spring means carried by said mechanism portion and effective on said finger-piece member for yieldingly urging said finger-piece to tend to move said cap to its closed position, lateral pressure applied to said finger-piece member intermediate its ends at least sufficient to overcome the yielding action of said spring means causing said cap to open, and ratchet means interconnecting said cap and said flint wheel for producing sparking action upon opening of said cap for igniting said burner means.

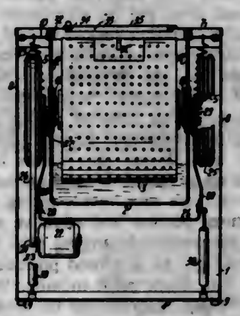
3,089,325
DRY CLEANING SYSTEM
James D. Robbins, Spring Lake, and Richard A. Curtis, Lowell, Mich., assignors of 43.4 percent to said Robbins, 31.6 percent to said Curtis, and 25 percent to Jack De Young, Spring Lake, Mich.
Filed Dec. 10, 1959, Ser. No. 858,765
6 Claims. (Cl. 68—18)



1. A multi-unit dry cleaning system, comprising: a plurality of cleaning units, each unit having a cleaning tank

for containing a fluid dry-cleaning medium, means for agitating clothes in the fluid medium in said tank, an inlet means for flowing a fluid medium into said tank, an outlet means for discharging a fluid medium from said tank; a dry cleaning solvent storage tank means with an inlet means; a filter communicating with said solvent tank means; a first supply conduit leading from said filter; means for circulating solvent from said solvent tank means through said filter and said first supply conduit; a manifold connected to said first supply conduit; a plurality of second supply conduits connected to said manifold; one of said second supply conduits connected to said inlet means of each of said cleaning units; a return conduit connected to each of said second supply conduits and joining them to said solvent tank means; a valve means positioned in said return conduits for selectively directing solvent from said second supply conduits to said solvent tank means or said inlet means of said cleaning units; and coupling means for connecting said inlet means of said solvent tank means to said outlet means of said cleaning units whereby each of said cleaning units may selectively operate as a dry cleaning unit.

3,089,326
WASHING MACHINE
James Frank Beinieff, Collonge-Bellerive, Geneva, Switzerland, assignor to Frame S.A., Fribourg, Switzerland, a corporation of Switzerland
Filed May 22, 1961, Ser. No. 111,674
Claims priority, application Switzerland June 8, 1960
4 Claims. (Cl. 68—24)



1. A washing machine adapted both for washing and for centrifugal drying comprising, in combination, a main frame, a stationary vat rigidly connected to said main frame and having an upper aperture, a rotatable drum with a non-vertical axis disposed inside of said vat, said drum having a predetermined rest position with predetermined, substantial clearances from the vat on all sides, said vat having holes in its side walls, supple bellows-like joint members mounted within said holes, shafts fixedly secured to said drum coaxial with its rotational axis and extending outside said vat through said bellows-like joint members, a freely suspended auxiliary frame, bearings carried by said auxiliary frame, said shafts revolving freely in said bearings, a motor mounted upon said auxiliary frame, means for drivingly connecting said motor to one of the shafts of said drum, return means coupled between said main frame and said auxiliary frame tending to maintain said drum in said predetermined rest position, said return means allowing free displacement of said drum together with said auxiliary frame and said motor along three orthogonal axes simultaneously, and dash pot damping means providing three orthogonal damping components each acting along one of said axes for reducing the amplitude of oscillations of said rotatable drum, said damping means limiting the maximum amplitudes of the drum oscillations in the three orthogonal directions to the order of the clearances existing between the drum and the vat.

3,089,327
APPARATUS FOR THE COMPLETE LAUNDERING OF FABRICS
William E. Stilwell, Jr., Glendale, Ohio, assignor to The Murray Corporation of America, Detroit, Mich., a corporation of Delaware
Original application Sept. 7, 1951, Ser. No. 245,585, now Patent No. 2,960,700, dated Nov. 22, 1960. Divided and this application Nov. 15, 1960, Ser. No. 69,407
3 Claims. (Cl. 68—139)



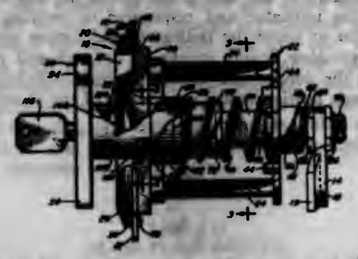
1. In a laundering machine, a cabinet having an access opening in the front substantially vertical wall thereof, a tub mounted in said cabinet having an opening in the upper portion of its front face aligned with the opening in the cabinet, the bottom edge of said openings being disposed substantially upon the axis of the tub, a receptacle rotatably mounted within the tub having a narrow front face adjacent to the periphery thereof providing a large opening which extends substantially equal amounts above and below the bottom edge of the opening in the tub, and a door hinged along one edge of the opening in said cabinet.

3,089,328
SLIDING CLASP FASTENER
Harry Clauss, Unterpfaffenhofen, near Munich, Germany, assignor to Ries G.m.b.H., Bekleidungsverschluss-Fabrik, Unterpfaffenhofen, near Munich, Germany
Filed May 19, 1961, Ser. No. 111,370
Claims priority, application Germany May 19, 1960
3 Claims. (Cl. 70—68)



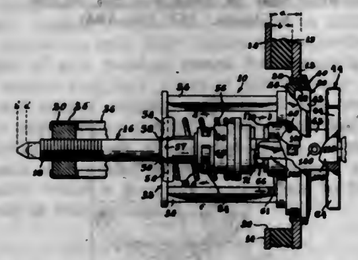
1. A sliding clasp fastener having two rows of teeth, a slide movable along said rows of teeth in one direction to cause interengagement thereof and in the opposite direction to cause separation thereof, said slide having two converging side checks between which is disposed a V-shaped centre piece defining two converging passages for said rows of teeth and embodying key-operated locking means accommodated in said centre piece, said locking means comprising a bolt mounted on said centre piece and slidable thereon between an operative position in which said bolt protrudes from said centre piece in said opposite direction and simultaneously engages said two rows where they converge, and an inoperative retracted position clear of said rows of teeth, and means for moving said bolt between said positions thereof.

3,089,329
LOCK ASSEMBLY FOR A REFRIGERATED CABINET OR THE LIKE
William J. Kerr, Glenview, Ill., assignor to Chicago Lock Company, Chicago, Ill., a corporation of Illinois
Filed Dec. 7, 1961, Ser. No. 157,685
13 Claims. (Cl. 70—135)



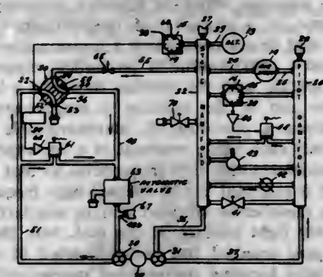
12. In a draw lock of the character described, a housing presenting an outwardly facing recess, an operating handle having a hub portion slidable and rotatable in said housing, said handle being shaped conformably to the shape of the recess and being movable bodily with the hub portion between a retracted position wherein the handle is in an angular position of register with and is disposed within the recess, and an extended position wherein the handle is projected forwardly of the housing and out of the recess, key-controlled latch means for maintaining the handle and hub portion in their retracted position, a rotatable draw shaft in axial alignment with said hub portion and connected to the housing, means on said draw shaft designed for cooperation with a fixed reaction surface and adapted, upon rotation of the draw shaft in one direction, to move the draw shaft, and consequently, the housing to which it is connected, forwardly, and a lost-motion driving connection between said hub portion of the handle and the draw shaft.

3,089,330
LOCK ASSEMBLY FOR A REFRIGERATED CABINET OR THE LIKE
William J. Kerr, Glenview, Ill., assignor to Chicago Lock Company, Chicago, Ill., a corporation of Illinois
Filed Dec. 7, 1961, Ser. No. 157,793
11 Claims. (Cl. 70—140)



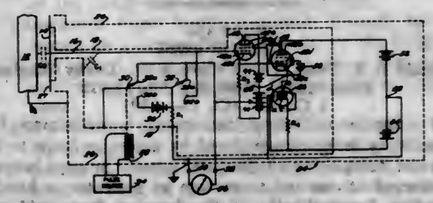
1. In a draw lock for a sealed cabinet door, in combination, a housing structure adapted to be installed in a door lock opening and presenting spaced front and rear internal bearings respectively, said housing structure presenting a front face provided with a shallow elongated recess, an operating handle positioned forwardly of the housing structure and front bearing and having a hub portion slidable axially and rotatable in the latter, a draw screw projecting through the rear bearing in axial alignment with said hub portion, means preventing endwise axial shifting of the draw screw, said draw screw being provided with a threaded portion adjacent the rear end thereof designed for threaded cooperation with a substantially fixed reaction nut on a cabinet to which the door is applied, said operating handle being shaped conformably to the shape of the recess in the front face of the housing structure and being movable with the hub portion bodily as a unit between a retracted position wherein the handle is in an angular position of register with and is wholly contained within said recess, and an extended position wherein the handle is projected forwardly of the housing structure and out of the recess, a connecting sleeve the opposite ends of which are open and into which ends the hub portion and draw screw project respectively, means establishing a rotary driving connection between the sleeve and the hub portion, means establishing a rotary driving connection between the sleeve and the draw screw, one of said two last mentioned means providing for a limited degree of circumferential lost-motion between the sleeve and the member to which the sleeve is drivingly connected by said one means, and one of said two last mentioned means providing for axial shifting between the sleeve and the member to which the sleeve is drivingly connected by said latter one means.

3,089,331
PITOT STATIC TESTER
Sam Sharko, Bayside, N.Y., Joshua Salem, Paramus, N.J., and John H. Andresen, Jr., Greenwood Lake, N.Y., assignors to Intercontinental Dynamics Corporation, Englewood, N.J., a corporation of New York
Filed Jan. 23, 1961, Ser. No. 84,334
14 Claims. (Cl. 73—4)



1. An air data calibrator comprising a first and a second manifold, a first means for establishing a first pressure in said first manifold, a second means for establishing a second pressure in said second manifold, first servo means for maintaining said first pressure refereneed to a vacuum, second servo means for maintaining said second pressure referenced to said first pressure.

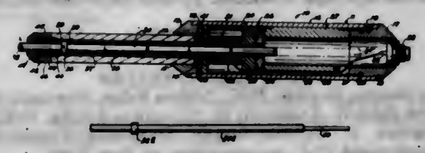
3,089,332
ABSOLUTE VIBRATION MEASURING INSTRUMENT
Daniel F. Comstock, Jr., Cohasset, Mass., assignor to Arthur D. Little, Inc., Cambridge, Mass.
Filed Nov. 18, 1959, Ser. No. 853,789
11 Claims. (Cl. 73—71.4)



2. In an instrument adapted to measure the amplitude of vibration of an object, the combination of a capaci-

tance probe, means charging the capacitor comprising said probe and said object with a charge independent of the capacitance of said capacitor, means eliminating stray capacitance between said probe and object, and means measuring the voltage between said object and said probe, said charging means including a second capacitor, means for charging said second capacitor to a given voltage, and means for periodically transferring the charge on said second capacitor to said capacitor comprising said probe and object.

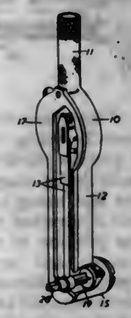
3,089,333
AMPLITUDE MEASURING DEVICES FOR HIGH FREQUENCY VIBRATIONS
Claus Kleesattel, Forest Hills, N.Y., assignor to Cavitron Ultrasonics Inc., Long Island City, N.Y., a corporation of New York
Filed Oct. 26, 1960, Ser. No. 65,200
11 Claims. (Cl. 73—71.4)



10. A device for measuring the amplitude of vibration of a member which is vibrated substantially at a selected one of a plurality of predetermined high frequencies; said device comprising a housing having a pick-up coil and a coaxial annular permanent magnet therein which cooperate with the housing to define a bore opening at one end of the housing, a magnetostrictive rod selected from a plurality of interchangeable magnetostrictive rods each being resonant at a corresponding one of said predetermined high frequencies so that a selected rod which is resonant at the selected high frequency with which the member is vibrated will be similarly vibrated by relatively light contact, at one end, with the vibrated member, said selected rod being inserted in said bore, means axially locating the selected magnetostrictive rod with respect to said housing so that said one end of the rod projects from the housing and said magnet and coil are in surrounding relation to the selected rod to polarize the latter and to have an alternating voltage induced in the coil which is a function of the amplitude of vibration of the contacted member, at least said selected rod having a reduced diameter portion which extends through said pick-up coil when the rod is inserted in said bore to provide a magnification factor increasing the relation between the output of said pick-up coil and the amplitude of the measured vibrations, a microammeter calibrated to indicated amplitude of vibration, and a meter circuit connecting said ammeter to said pick-up coil and having current rectifying means therein, said pick-up coil having a large number of turns matching the impedance of said ammeter and circuit.

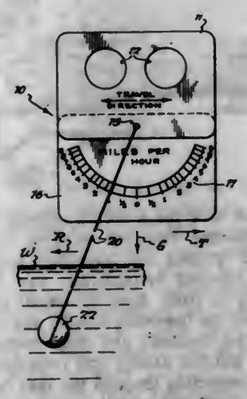
3,089,334
TORQUE PINS
Reginald L. R. Dean, 14–16 Curzon St., Derby, England
Filed Mar. 7, 1960, Ser. No. 12,978
1 Claim. (Cl. 73—139)

In a torque indicating instrument, a mechanism for transmitting motion engendered by a torque force to an indicator, comprising an elongated tubular housing laterally enlarged at one end to enclose an indicator, a handle extending longitudinally of the housing from said enlarged end, a relatively short torque pin within the other end of the housing and extending laterally of the housing, one end of said torque pin being anchored to the housing, said torque pin crossing said housing and having a free end protruding through an opening in the housing for a short distance, said protruding end of the torque pin being provided with planar faces to define a torque nut, and a torque lever extending longitudinally of the housing and connected at one end to the torque pin and its other end to the indicator and responsive to twisting of the torque pin to move the indicator, said torque pin being a solid member having means at its anchored end for securing the torque pin to the housing including a reduced neck portion extending axially of the member for



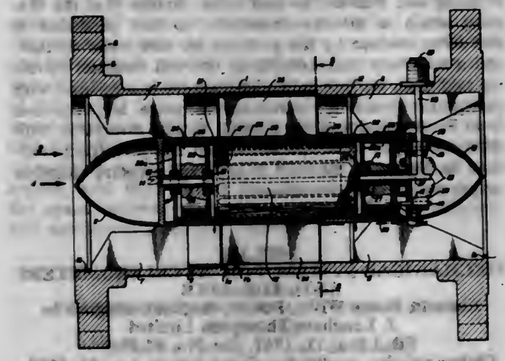
securement within an opening in the housing and an enlarged portion adjacent said neck portion for bearing against the housing, said torque pin having an enlarged collar portion adjacent its free end to which said lever is secured, and an intermediate reduced portion within the housing between said collar and enlarged portions whose cross sectional form includes at least three spline-like elements extending radially from the axis of said member and arranged at substantially equal angles apart, whereby to provide great flexibility to the torque pin at light torques and enable greater movement of said lever.

3,089,335
SPEED INDICATOR
Edward A. Ebert, 203 Huxley Drive, Snyder, N.Y.
Filed May 19, 1960, Ser. No. 30,230
6 Claims. (Cl. 73—184)



1. A speed indicator for measuring the relative difference in speed between said indicator and the water its sensor is immersed in, comprising a card-shaped holder, a card-shaped two-directional dial and a sensor in the form of a weighted cord, said card-shaped holder having pivot means located on its vertical center line and below its horizontal center line, said pivot means forming a free pivotal connection on a vertical center line and above the horizontal center line of said card-shaped dial, said pivot means also forming a free pivotal connection for said cord of said sensor, so that when said speed indicator is suspended by said holder, through gravitational attraction the vertical center line of said dial and said cord will coincide with a zero reading of said dial but when relative movement between said water and said speed indicator takes place in either direction parallel to the plane of the face of said dial, said cord will coincide with a speed indication on said dial equivalent to the differential speed of said indicator and said water.

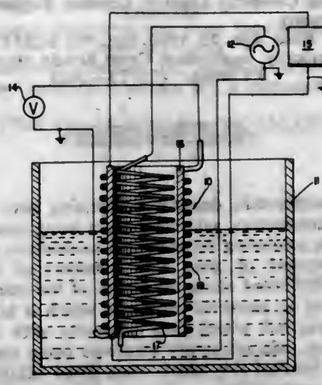
3,089,336
MASS FLOW METER
Charles C. Waugh, Tarzana, and Kenneth R. Jackson and Spencer D. Howe, Los Angeles, Calif., assignors, by mesne assignments, to The Foxboro Company, a corporation of Massachusetts
Filed June 3, 1959, Ser. No. 817,794
10 Claims. (Cl. 73—194)



1. An apparatus for measuring the mass rate of fluid flow through a passage comprising turbine rotor means coaxially located within said passage, a plurality of vanes secured to said rotor means and extending longitudinally of said passage, means for imparting to said rotor means and said vanes a substantially constant rotational torque causing rotation of said vanes and thereby imparting to the fluid flowing past said vanes a substantially constant torque, and means for measuring the speed of rotation of said rotor means to obtain a quantity which is inversely proportional to fluid mass flow rate in said passage.

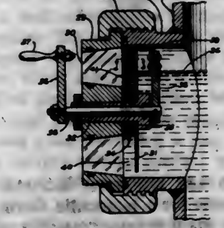
3,089,337
LIQUID LEVEL INDICATING SYSTEM
George A. Cutsogeorge, Cranford, N.J., assignor to Specialties Development Corporation, Belleville, N.J., a corporation of New Jersey
Filed June 23, 1961, Ser. No. 119,121
3 Claims. (Cl. 73—295)

3. A liquid level indicating system comprising a coil adapted to be inserted in a liquid within a container, a second coil adjacent said first coil, means for supplying a periodically varying current to said first coil, means for measuring the signal developed in said second coil, a body of magnetic material positioned between said coils, and means for supplying sufficient heat to said body to maintain it above its Curie point in the presence



of gaseous medium above the liquid level and below its Curie point in the presence of the liquid.

3,089,338
LEVEL GAGE
Clarence O. Glasgow, Tulsa, Okla., assignor to National Tank Company, Tulsa, Okla., a corporation of Nevada
Filed Aug. 23, 1960, Ser. No. 51,356
3 Claims. (Cl. 73—324)



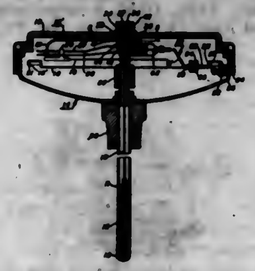
1. A level gage for liquids within a closed pressure vessel including,
- a pressure vessel in which liquid is to be maintained at a level within predetermined limits,
- an access port in the side of the vessel positioned at a height which will span the range of level variation,
- a flange-disc mounted over the port,
- means for sealing the edges of the flange-disc to the port,
- a level-detecting instrument extending through the center of the flange-disc and mounted thereon,
- transparent insert bodies mounted through openings spaced on a circle about the center of the flange-disc and related to the vertical so as to give a substantially continuous view of the level from a point external the vessel,
- and a reflector disc mounted on the instrument extending through the center of the flange-disc and spaced behind the bodies and within the vessel so the liquid level in front of the disc may be clearly and substantially continuously viewed through the transparent bodies.

3,089,339
TEMPERATURE SENSITIVE DEVICES
Edward A. Rogers, London, and Neill Gibson Bennett, Egham, Staines, England, assignors to Gravinor Manufacturing Company Limited, London, England, a British company
Filed Apr. 25, 1960, Ser. No. 24,514
Claims priority, application Great Britain May 1, 1959
3 Claims. (Cl. 73—362)



2. A temperature detector comprising two elongated electrical conductors, said conductors being spaced apart, and a mass extending between said conductors, said mass being composed of glass with members of refractory material distributed along the length of the detector, said glass having an electrical resistance which is high at low temperatures but which falls gradually with increasing temperature, said refractory members being coated with a fusible chemical salt which when fused exhibits a high electrical conductivity.

3,089,340
THERMOMETER
George F. Hageman, Union, N.J., assignor, by mesne assignments, to Daystrom, Incorporated, Murray Hill, N.J., a corporation of Texas
Filed Nov. 21, 1960, Ser. No. 70,763
5 Claims. (Cl. 73—363.9)



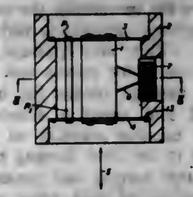
5. A maximum and minimum indicator arrangement and reset mechanism for a bimetallic thermometer of the type comprising a main pointer rotatable over a scale on a scale plate visible through a transparent cover closing the thermometer housing, the said indicator comprising a pair of auxiliary pointer arms, a bracket secured to the scale plate and extending over the pivot axis extended of the main pointer, a pair of leaf springs secured to opposite faces of the bracket and including free end portions spaced therefrom over the pivot axis extended of the main pointer, a staff secured to the bracket axially of the main pointer pivot axis and extending from both faces of the bracket, a pair of bearing-pivot members each having an axial hole therein extended from one end within which the staff extends and seats in the hole bottoms, the other end of the bearing-pivot members being formed with pointed pivots bearing against the leaf springs, a pair of auxiliary pivot arms secured to the individual bearing pivot members, the auxiliary pointers including an offset portion therein lying in the plane of rotation thereof, a vane on the main pointer adapted to engage the auxiliary pointers at the offset portions therein for rotation thereof, a rotatable shaft extending through the transparent cover axially of the main pointer axis, a head formed on the shaft within the housing, means forming an annular groove in the head of the shaft, and a reset arm comprising a resilient wire having a reverse bend thereof straddling the head with the wire in the groove therein, the free end of the reset arm including a downwardly extending portion for engagement with the auxiliary pointers for rotation thereof.

3,089,341
QUICK-RESPONSE TEMPERATURE-CORRECTED INTERNAL-TYPE PRESSURE GAGE
Herman P. Gay, Rte. 1, Box 360, Aberdeen, Md.
Filed Mar. 22, 1960, Ser. No. 16,901
8 Claims. (Cl. 73—398)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. In a pressure gage, the combination of a hollow element having a thick cylindrical wall that is deformable by pressure on its outer surface, a filament of material whose resistance varies with its strain and with the filament arranged circumferentially on the major portion of the circumference of the inner cylindrical surface, means so bonding said filament to said inner surface that the filament strain is directly responsive to that produced at said inner surface by the pressure on said outer surface, and a relatively thin, compliant, thermal insulator covering said outer surface, whereby pressure is measured with maximum sensitivity, minimum response lag, freedom from errors produced by thermal strains associated with sudden changes of temperature, and freedom from resonant oscillation of the fluid in any gage pressure chamber or pressure connection thereto.

3,089,342
MECHANICAL-SYSTEM FOR ACCELEROMETERS AND THE LIKE
Kenneth James Willis, Pinner, England, assignor to J. Langham Thompson Limited
Filed Jan. 11, 1961, Ser. No. 81,999
Claims priority, application Great Britain Jan. 13, 1960
6 Claims. (Cl. 73—514)



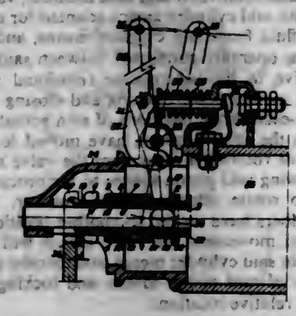
4. A mechanical system comprising a support and a body mounted for sensitive movement in response to minute accelerations of said support along a predetermined axis in said support, said body being mounted by means including first and second sets of resilient members said sets being similar and each comprising arms lying in a general plane at right angles to said axis and extending between points respectively on said support and said body that are spaced radially of said axis, said arms each having portions of their length that have arcuate extent about said axis said arms being relatively compliant for movement of said body in the direction of said axis and substantially less compliant for movement in directions radial of said axis, and tie means extending between more than two pairs of points on said respective arcuate portions of said arms to constrain corresponding arms of said sets to move together in the same direction generally parallel to said axis, said tie means being disposed at substantially uniform angular intervals around said axis, said system further comprising constraining means linking all said tie means and being substantially less compliant for relative movement of the individual members of the tie means in a direction generally parallel to said axis than for relative movement in directions at right angles to said axis.

3,089,343
TRANSDUCER DEVICES EMPLOYING A FLUID FILM FOR IMPROVEMENT OF SENSITIVITY AND FREQUENCY RESPONSE CHARACTERISTICS
Eric Rule, Atherton, Calif., assignor to Lockheed Aircraft Corporation, Burbank, Calif.
Filed Aug. 4, 1960, Ser. No. 47,548
6 Claims. (Cl. 73—516)



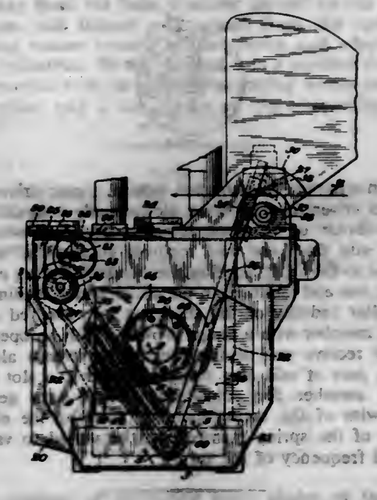
1. In a second order transducer system including a mass adapted to move in response to applied forces, the improvement comprising: a surface provided adjacent and substantially parallel to and as large in area as a surface of said mass and substantially normal to the direction of the applied force so as to provide a fluid film therebetween having a ratio of area to thickness chosen so that said fluid film exerts frequency-dependent forces on said mass which act to improve the frequency response of said system, said fluid having free ingress and egress from the space between said mass and said surface adjacent and substantially parallel thereto.

3,089,344
STARTER FOR INTERNAL COMBUSTION ENGINES
Théodore Laffite, 71 Ave. du Roule, Neuilly-sur-Seine, France
Filed July 12, 1960, Ser. No. 42,348
Claims priority, application France July 18, 1959
9 Claims. (Cl. 74—6)



1. In a self-contained an axially self-balanced starter for engines, a starting motor having an extended drive shaft, a drive sleeve slidably keyed on the drive shaft, clutch teeth on the drive sleeve, a flanged collar slidably mounted on the drive shaft, means for resiliently connecting the drive sleeve with the collar, a gear slidably connected to the collar, and clutch teeth on the gear adapted to be engaged by the clutch teeth on the drive sleeve to be driven thereby, each of said clutch teeth presenting a sliding face and a driving face, both of which faces are helicoidal in shape and of the same chirality but of different pitch so as to form a self-tightening ratchet.

3,089,345
DRIVE ARM STRUCTURE FOR RECIPROCATING MECHANISM
Simeon Budlong, Chicago, Ill., assignor to F. J. Littell Machine Company, Chicago, Ill., a corporation of Illinois
Filed Aug. 28, 1961, Ser. No. 134,335
9 Claims. (Cl. 74—45)



1. In apparatus of the character described, the combination with a rack adapted to be reciprocated, of an oscillatable member for reciprocating the rack, a main drive shaft adapted to rotate constantly during operation of the apparatus, crank arm structure fixed to and rotated by the main drive shaft, a connection between the oscillatable member and the crank arm structure including a driving yoke, said yoke providing a pair of spaced arms located on and having sliding contact with the top and bottom surfaces of the oscillatable member, whereby rotation of the crank arm structure causes the yoke to reciprocate on the oscillatable member and produce oscillating movement of the member.

3,089,346
SIDE BAR LINK CHAIN
Otto Dittrich and Herbert Steuer, Bad Homburg v.d. Hohe, Germany, assignors to Reimers Getriebe K.G., Arcona, Switzerland, a firm
Filed Aug. 3, 1961, Ser. No. 129,156
Claims priority, application Germany Sept. 2, 1960
13 Claims. (Cl. 74—236)



1. A side bar link chain for an infinitely variable cone pulley transmission, comprising a plurality of chain links each including a plurality of intermediate fishplates and two outer fishplates, means positively connecting the outer fishplates of at least some of said links to form a frame around the intermediate fishplates capable of resisting tangential and torsional stresses, means hingedly connecting successive links, the fishplates of each link overlapping those of adjacent links, said last-mentioned

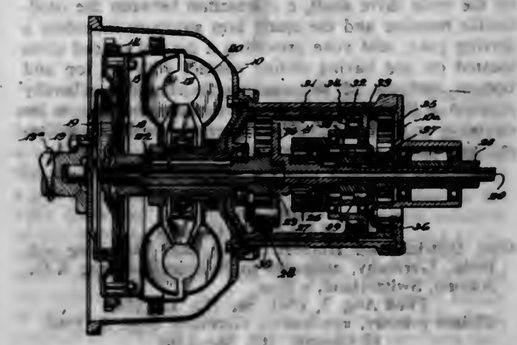
connecting means engaging in the outer fishplates of successive links, and pressure members carried by each link outside the outer fishplates for transmitting frictional forces to and from the pulley cones to the chain.

3,089,347
FILTER
Robert L. Landon, Glenview, Ill., assignor to Warwick Manufacturing Corporation, a corporation of Delaware
Filed June 12, 1961, Ser. No. 116,426
3 Claims. (Cl. 74—574)



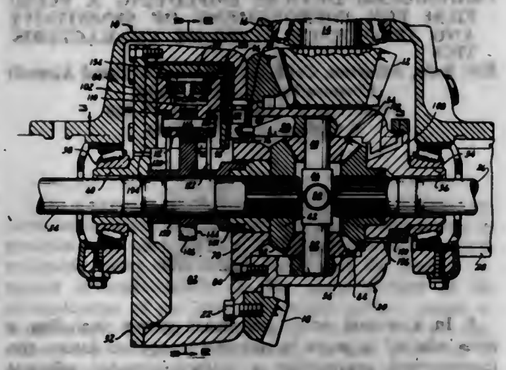
1. In a motion transmission system, a gear driven drive shaft, a driven member rotatable coaxially with said shaft, and a flutter or vibration filtering drive connection between said shaft and said member comprising, a collar secured to the shaft, an elongate bendable spring member having one end mounted in the collar and extending from the collar radially of the shaft, an arm secured to said driven member with a flange provided with an opening to loosely receive said spring member anywhere along its length, part of said arm being mounted in a slot in said driven member for adjustment of the arm generally lengthwise of the spring member whereby the effective length of the spring member can be varied to vary the natural frequency of the spring.

3,089,348
TRANSMISSION
Jacob C. Bollier, 1925 W. Barker Ave., Peoria, Ill.
Filed Oct. 12, 1959, Ser. No. 845,949
8 Claims. (Cl. 74—688)



1. In a continuously variable mechanical transmission: a drive element; a driven element; a planetary gear system having a sun gear, a planet gear mounted on a carrier and a ring gear, the planet gear being in mesh with the sun and ring gears; means operatively connecting said sun gear with said drive element; first interconnecting means operatively connecting said carrier mechanically with said driven element and including a first one-way clutch mechanism; and second interconnecting means, operable simultaneously and in parallel with said first interconnecting means, operatively connecting said ring gear mechanically with said driven element, including a second one-way clutch mechanism, a second ring gear connected with the first-mentioned ring gear through said second one-way clutch mechanism, fixedly mounted pinions and a central gear connected with said driven element and through said pinions with said second ring gear.

3,089,349
LOCKING DIFFERENTIAL
Ray F. Thornton, Dexter, Mich.
Filed Mar. 28, 1960, Ser. No. 18,795
13 Claims. (Cl. 74—710.5)

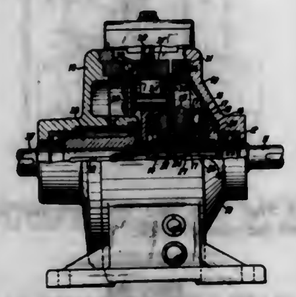


1. A locking differential power transmission for use with a power source comprising a rotatable case member adapted to have fluid therein and to rotate about an axis, a pair of side gears rotatably disposed in said case member and each adapted to be affixed to a different one of a pair of driven shafts, a spider member in said case member and operatively connected to said case member so that limited relative rotational movement about said axis can occur between said members, a plurality of pinion gears rotatably disposed on said spider member, the teeth of said pinion gears being in mesh with the teeth of said side gears, cylinder means within said case member and integral with one of said members, said cylinder means being adapted to receive fluid from said case member, piston means disposed in said cylinder means, means coupled to said piston means and adapted to be coupled to one of said driven shafts for reciprocating said piston means in said cylinder means when said one shaft rotates relative to said case member, valve means associated with said cylinder means adapted for controlling flow of said fluid from said cylinder means, and valve actuating means operably connected between said members and responsive to limited relative rotational movement between said members for opening and closing said valve means at pre-established positions of said actuating means so that when the said members have moved to one position of relative rotational movement the valve means will be open allowing said piston means to reciprocate and the side gears to rotate relative to one another, and when the said members have moved to another position of relative rotational movement the valve means will be closed locking fluid in said cylinder means and thereby preventing reciprocation of said piston means and locking said side gears against relative rotation.

3,089,350
CONTINUOUSLY CONTROLLABLE FRICTION WHEEL-EPICYCLIC GEAR DRIVE
Gerhard Klrschey, Bannhof 12, Wuppertal-Barmen, Germany
Filed Dec. 11, 1961, Ser. No. 158,430
Claims priority, application Germany Nov. 10, 1961
15 Claims. (Cl. 74—796)

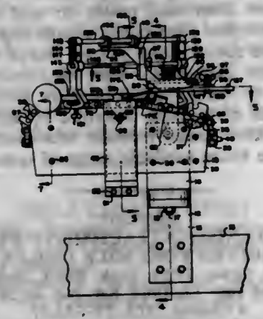
1. A continuously controllable friction wheel-epicyclic gear drive comprising

a housing,
a drive shaft and a driven shaft,
an inner sun consisting of at least two inner rings and driven by said drive shaft,
a clutch disposed between said drive shaft and said inner sun, and
at least two outer gear rings,
one of said outer rings being immovably secured to said housing and the other of said outer rings being axially adjustable,



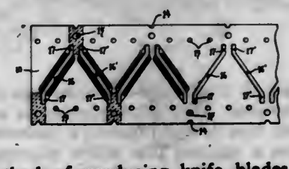
flat, double-conical planet gears engaging said inner rings constituting said inner sun and said outer rings, and
a driven disc coupled with said driven shaft,
said double-conical planet gears being mounted adjustably in radial direction in said driven disc, and said clutch comprising at one side a plurality of coupling bolts supported by roller bearings,
a receiving body engaging said coupling bolts,
a complementary coupling member carrying a control curve rotatable relative to said coupling bolts, and
said coupling bolts being guided by said control curve of said complementary coupling member.

3,089,351
SAW CHAIN HOLDING AND FILING APPARATUS
Gunder W. Nyberg, 6347 Parkcrest Drive, North Burnaby, British Columbia, Canada
Filed Dec. 27, 1960, Ser. No. 78,629
6 Claims. (Cl. 76—36)



6. Saw chain holding and filing apparatus comprising a base plate having a supporting edge, a groove in and extending longitudinally of the supporting edge in which lugs of a saw chain extending along said edge may move with cutting teeth and depth gauges of said chain projecting away from the edge in the plane of the plate, a mounting support connected to the base plate for carrying the apparatus when in use, a pair of jaws carried by the base plate and extending towards each other over the supporting edge, said jaws being relatively movable to increase and decrease the size of a gap therebetween, means connected to at least one of the jaws for moving said jaw towards and away from the other jaw to grip and release a chain on the supporting edge and extending through the jaw gap, a base over and spaced from the supporting edge, supporting means secured to the base plate and the base for holding the latter in place over the supporting edge, said base being spaced from the supporting edge sufficiently to permit a chain on said edge to move therebetween, a substantially horizontal support pivotally mounted on the base for movement towards and away from said base, means for adjusting the support towards and away from the base, a motor carried by the frame near one end thereof and spaced from the rod, and clamping means rotated by the motor and adapted to grip a cylindrical file and to hold it in a position substantially parallel with the rod and extending across the base plate plane and a saw chain on the supporting edge thereof.

3,089,352
MANUFACTURE OF KNIFE BLADES
André Chamouard, Versailles, France, assignor to Massey-Ferguson, S.A., Marquette-lez-Lille, Nord, France, a corporation of France
Filed Sept. 4, 1959, Ser. No. 838,203
1 Claim. (Cl. 76—101)



The method of producing knife blades of the type having a triangular cutting section from an elongated strip of metal which comprises the steps of punching a series of spaced slots along the strip with the slots disposed at an angle to the longitudinal axis of the strips and with alternate slots sloping in opposite directions to delineate the triangular sections of a plurality of blades, pressing the strip between opposed dies having cooperating faces sloped to deflect the edge portions of the sections from the plane of the strip, said die faces having a series of grooves normal to the edge of the blade sections and terminating in sharp points effective to grip the metal of the sections and inhibit lateral flow of the metal as the dies are pressed together to form teeth in the blade sections, grinding off the deflected edge portions to present a face flush with the adjacent surface of the strip and intersecting the opposite face of the edge portion to form a sharp cutting edge, and severing the individual blades from the strip.

3,089,353
METHOD FOR MAKING A ROUTER BIT OR THE LIKE
Wilbur J. Craven, East Hartford, Conn., assignor to The Capewell Manufacturing Company, Hartford, Conn., a corporation of Connecticut
Filed July 25, 1960, Ser. No. 45,059
4 Claims. (Cl. 76—108)



1. A method for making a cutting tool having a cutting blade and a body portion and comprising the steps of forming a cutting blade blank of high speed steel having a hardening temperature in the range of 2150° F. to

2250° F., forming a body portion of shank steel and with a slot therein which has a thickness slightly greater than the thickness of the blade blank, assembling the tool by entering the blade blank in the slot in the body portion thereof, providing a nickel chromium boron alloying material having a melting temperature in the range of 2150° F. to 2250° F. and applying the same along the joint between the blade blank and the body portion of the assembled tool, heating the assembled tool in a substantially pure hydrogen atmosphere and to a temperature in the range of 2150° F. to 2250° F. for at least three minutes whereby to melt the alloying material and to join and harden the blade blank and body portion of the tool, tempering the tool, and providing a cutting edge on the blade blank thereof.

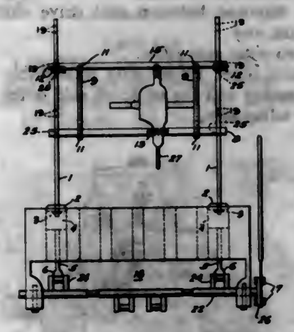
3,089,354
METHOD FOR THE PRODUCTION OF CUTTING TOOLS
Gunther Claas and Erich Schewe, Remscheid-Vieringhausen, Germany, assignors to Deutsche Spiralbohrer- und Werkzeugfabriken G.m.b.H., Remscheid-Vieringhausen, Germany, a firm
Filed Oct. 28, 1960, Ser. No. 65,785
Claims priority, application Germany Oct. 30, 1959
1 Claim. (Cl. 76—108)



A method of producing a cutting tool having a body presenting rotation symmetry, particularly a twist drill, comprising the steps of machining a hardened steel blank to the full external diameter of the finished tool; case-hardening said hardened steel blank to further harden only the surface region of said hardened steel blank and thus provide an especially hard protective surface layer on said hardened steel blank; and finishing said hardened steel blank after said casehardening thereof my machining flutes and lands into the same in such a manner that said especially hard protective surface layer remains only on the lands of the completed tool.

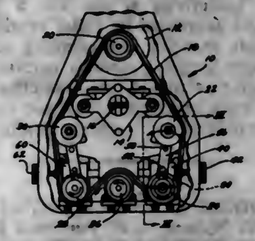
3,089,355
CENTER CRANK FEED DRILL PRESS
Ralph L. Hustead, 433 N. Van Buren, General Delivery, Chicago, Ill.
Filed Nov. 29, 1960, Ser. No. 72,458
1 Claim. (Cl. 77—6)

In a drill press for supporting a portable drill, a motor block having at least two cylinders and a flat upper surface for supporting a workpiece, a crankshaft mounted in said motor block below the cylinders, a crank fastened to one end of the crankshaft for rotating said crankshaft, pistons slideable in said cylinders and attached to said crankshaft by connecting rods, a drill press stand fastened to said pistons including upright supports axially aligned with said cylinders and having a plurality of openings therein, two parallel spaced cross members for supporting a portable drill, means cooperating with said openings for selectively mounting said cross members on said supports, two spacer members parallel with said supports connecting said cross members, means for attaching the handle of a portable drill to one of said cross members, a U-shaped bolt in the other of said cross members for holding the neck of said portable drill, whereby when said crank is rotated the drill press stand



reciprocates and feeds said drill relative to the work supported on the motor block.

3,089,356
BELT DRIVE FOR PAPER PUNCH
Dan P. Westra, Grand Haven, Mich., assignor to The Challenge Machinery Company, Grand Haven, Mich., a corporation of Michigan
Filed Dec. 4, 1961, Ser. No. 156,600
3 Claims. (Cl. 77—24)

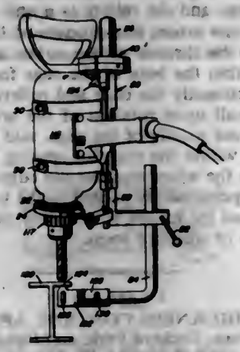


1. In a motor-powered multi-spindle drive for an adjustable paper drill, the improvement comprising: drive pulley means for driving each spindle; belt means transmitting motion from said motor to said drive pulley means; and movable idler pulley means engaged by said belt means and connected to at least one of said spindles for nonresilient movement when the spacing between said spindles is varied, said movement being such that the total length of the path described by said belt about all of said pulley means remains substantially constant throughout the entire available range of spindle spacings.

3,089,357
FEED MECHANISM ATTACHMENT FOR POWER DRIVEN PORTABLE DRILLS
Henry Walter Grau, 7925 York Road, Baltimore, Md.
Filed July 12, 1960, Ser. No. 42,357
4 Claims. (Cl. 77—33.9)

1. In combination with a motive power driven portable drill having a drill spindle and a casing for said drill, means including a detachable bracket having slide bearings and mounted on said casing, a draw rod having an adjustable grab arm for attaching to work to be drilled, said draw rod being slidably supported by said slide bearings for longitudinal movement relative to said drill spindle, a ratchet-wheel having threads, said draw rod having a threaded extension engageable with said threads for supporting said ratchet-wheel, a detachable oscillator mounted on said drill spindle and having a ratchet pawl

for engaging said ratchet-wheel for effecting the feed of said drill, and a control means for controlling the engage-



ment and disengagement as well as the variable speeds of the feed of said drill independently of said oscillator.

3,089,358
ADJUSTABLE BORING HEAD
Marion D. Spurgeon, Rte. 3, Box 706, Excelsior, Minn.
Filed Dec. 17, 1959, Ser. No. 860,184
5 Claims. (Cl. 77—58)



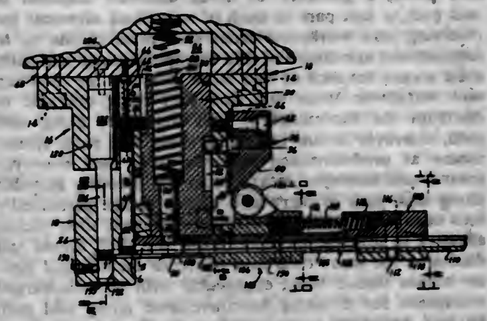
1. For rotatably mounting on a boring machine, a boring tool comprising a spindle having a normal axis of rotation, a bore head, an elongated shank joined at one end to the bore head and at the other end detachably connected to the spindle, a bore bar secured to said bore head offset from said axis of rotation, said bore head having two sections separated by an L-shaped slot having one leg extending in the direction of said axis of rotation and a second leg crossing the axis of rotation and a differential screw threaded into said sections for changing the relative positions of said sections to thereby reposition the bore bar relative to the axis of rotation.

3,089,359
DRILL CONSTRUCTION
Allan R. Poulin, Rochester, Mich., assignor to National Twist Drill & Tool Company, Rochester, Mich., a corporation of Michigan
Filed May 8, 1961, Ser. No. 108,676
12 Claims. (Cl. 77—69)



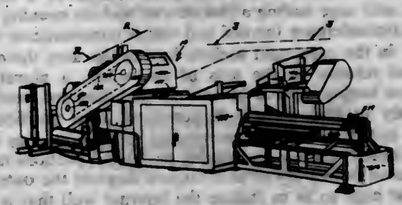
1. A drill having an elongated tubular shank having an adapter at one end and a cutting tip at the other end, designed to cut upon rotation of said drill of a predetermined hand, said shank having a helical flute of lead substantially greater than the diameter of said shank and having a hand opposite to the hand of rotation thereof, the cross-section of said shank being small relative to its length whereby under heavy cuts said shank yields circumferentially to produce substantial angular displacement between said adapter and cutting tip due to the opposite hand of rotation and said helical flute being effective to cause said shank to wind up and shorten to thereby relieve the cut.

3,089,360
FEED HEAD
Jerry H. Steward, Detroit, Mich., assignor to Multi-fastener Corporation, Redford, Mich.
Filed Mar. 25, 1957, Ser. No. 648,344
5 Claims. (Cl. 78—46)



1. In an apparatus for securing to a panel member a part having an enlarged body and a reduced body shank, a punch housing; a passage through said punch housing; a punch movable within said passage; a second opening intersecting said passage; two supporting fingers, one on each side of said passage; two pivot pins disposed in said second opening on which are mounted the supporting fingers, the pivot points being located above centerline on said supporting fingers; an upper and lower cam surface on each of said supporting fingers; a recessed cam surface on two sides of said punch; said fingers supporting the part as it is fed into the passage in the punch housing, said fingers releasing the part as said punch engages the lower cam surface on the supporting fingers, moving said fingers out of the punch path; the upper cam finger surface pivoting into the cam recess in the punch, as the punch moves downwardly against the part; as the punch moves upwardly, the upper cam surfaces on the supporting fingers engage the punch cam surfaces, pivoting the supporting fingers into a positive position for retaining a successive part.

3,089,361
FORGING MACHINE
Merle W. Lamprecht, Cleveland, Ohio, assignor to The Hill Acme Company, Cleveland, Ohio, a corporation of Ohio
Filed Dec. 1, 1959, Ser. No. 856,416
4 Claims. (Cl. 78—99)



1. In a forging machine of the class described having a forging head reciprocal along a plane and a pair of

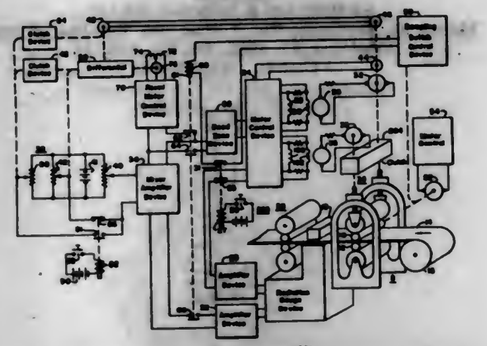
workpiece gripping dies adjacent said head each provided with a series of workpiece gripping recesses in spaced coplanar relation thereon in a direction transverse to said plane and a pair of workpiece gripping fingers actuatable to move a workpiece between said dies for successively disposing the same adjacent opposed recesses and said gripping dies being closed in predetermined timed relation to the reciprocation of said forging head as to securely hold said workpiece in said opposed recesses while work is performed thereon by said head; the combination therewith of workpiece delivery and feeding apparatus for presenting a workpiece to said dies, comprising frame means adjacent said forging head, plate means on said frame means for supporting the ends of a workpiece while the latter moves thereon along a path laterally of said plane, a plurality of block elements disposed in said path, a first part on each of said block elements for receiving said workpiece from said plate means as to continue the movement of said workpiece along said path, shelf means on each of said block elements for receiving said workpiece from said first part being operable to interrupt the movement of said workpiece along said path, conveyor means extending along said path, ejector means at predetermined intervals along said conveyor means, said conveyor means being continuously movable along said path to carry said ejector means periodically into engagement with a workpiece on said shelf means effective to dislodge the latter from said shelf means and discharge the same onto said conveyor means, said ejector means thence being engageable with said discharged workpiece for directing its conveyance along said path by said conveyor means, and means for receiving said workpiece from said conveyor means for supporting said workpiece as it is moved through said dies.

3,089,362
THREAD ROLLING TOOL
Robert H. Hill, Elgin, Ill., assignor to Robert H. Hill and Harold Hoffman, both of Elgin, Ill., jointly
Filed May 2, 1957, Ser. No. 656,580
1 Claim. (Cl. 80—6)



A tool for rolling a thread about an internal wall and comprising, a solid rotatable arbor having a tapered portion that is provided with a screw thread, a cage concentric to the threaded portion of the arbor, said tapered portion being uniformly tapered in one direction only and said arbor having an extended portion disposed externally of the cage in coaxial alignment therewith and which has the free end thereof formed to be rotated by a separate tool, said cage having a plurality of sockets opening about the circumference thereof and which communicate with a bore in the cage, said sockets having the axes thereof inclined relative to the axis of the arbor, a plurality of rollers having tapered outer sides and disposed freely and loosely in said sockets in non-fixed axial positions for free radial in and out movement and adapted to rotate individually therein and having peripheral portions thereof disposed outwardly of said sockets beyond the outer side of the cage so as to engage the internal wall that is to be threaded, said rollers in the sockets being tilted at the angle of inclination of the sockets, said rollers being continuously grooved to provide spaced parallel thread rolling die edges and adapted to roll a thread on said internal wall upon forcing the rollers radially outwardly against the wall to be threaded and at the same time revolving the cage and the rollers as a unit about said wall by in-feeding the arbor, said grooves of the rollers being meshed with the threads of the arbor centered among the rollers within the bore of the cage for revolving and in-feeding frictionally the cage and rollers as a unit relative to said wall upon rotation of the arbor causing the arbor to advance axially of the cage, said arbor being the only member within the cage for spacing the rollers, and the thread on the arbor and the die edges on the rollers being non-perpendicularly related to the longitudinal axes of the arbor and the rollers, respectively, so that the rolled thread will be of standard form.

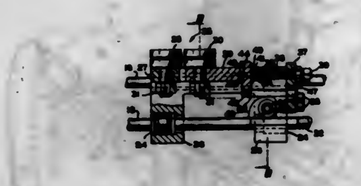
3,089,363
STRIP THICKNESS CONTROL APPARATUS
John W. Wallace, Orchard Park, and Robert E. Hull, Amherst, N.Y., and Raymond W. Moore, Whitehall, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed May 29, 1957, Ser. No. 662,479
11 Claims. (Cl. 80—56)



1. In control apparatus for a machine device including a first work member and a second work member operative with a motor for controlling the spacing between said work members and a workpiece for performing a predetermined operation relative to said workpiece, the combination of a thickness measuring device operative with said workpiece for providing a first control signal that varies as a function of the thickness of said workpiece, a first control device operative with said motor and responsive to said first control signal for controlling the spacing between said work members in accordance with the variations of said first control signal, a second control device responsive to the spacing between said work members for providing a second control signal that varies proportionally with the spacing between said work members, with said first control device being responsive to said second control signal such that said second control signal is differentially combined with said first control signal for controlling the spacing between said work members in accordance with the difference between said first and second control signals.

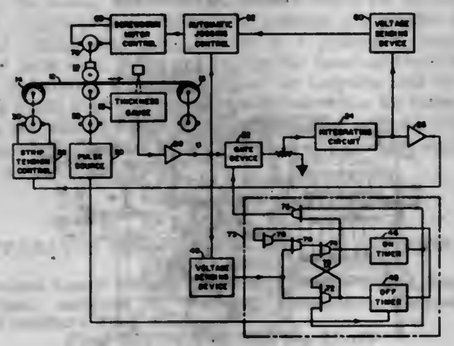
3,089,364
EDGE CONDITIONING UNIT
Joseph Lowinger, Parma, Ohio, assignor to The Yoder Company, Cleveland, Ohio, a corporation of Ohio
Filed June 5, 1959, Ser. No. 818,292
3 Claims. (Cl. 80—56)

1. An edge conditioning unit for strips and the like comprising a plurality of pairs of edging members, adjusting means mounting one edging member of each pair for movement toward and away from the other, means mounting each pair of members for floating movement transversely of such strips and the like to compensate for camber in the strip entering each pair of edging members, said adjusting means including a movable mounting for



one of the edging members of each pair, screw means connected to said mounting to move the mounting with respect to the other edging member of each pair, and wedge means interposed between said screw means and said movable mounting whereby a release of said wedge means will permit the edging members to be moved apart.

3,089,365
WORKPIECE THICKNESS CONTROL APPARATUS
John W. Wallace, Orchard Park, and Paul E. Jacobs, Williamsville, N.Y., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed May 23, 1960, Ser. No. 30,937
5 Claims. (Cl. 80—56)



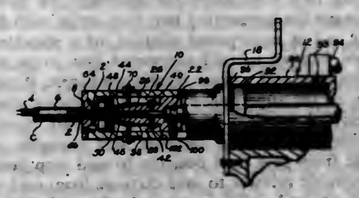
2. In strip thickness control apparatus for a rolling mill including a strip tension control device, the combination of an error signal source operative with the strip for providing a strip thickness error signal, a signal gate device operative with said error signal source, signal integration means connected between said signal gate device and the strip tension control device for controlling the passage of a predetermined integral of the error signal to the tension control device for the purpose of varying the tension of the strip relative to said rolling mill and thereby the thickness of the strip rolled by said rolling mill, a timing device operative with said gate device for opening the gate device for a predetermined time duration period, and a signal magnitude sensing device operative with said signal source and connected to said timing device for controlling the operation of said timing device in accordance with the magnitude of said error signal and thereby the thickness error of said strip.

3,089,366
CRIMPING TOOL
William J. Haraden, Mount Prospect, Ill., assignor to Signode Steel Strapping Company, Chicago, Ill., a corporation of Delaware
Filed July 11, 1960, Ser. No. 41,830
7 Claims. (Cl. 81—9.1)



7. A crimping tool comprising a pair of substantially parallel side plates, a pair of crimping jaws positioned between said side plates and movable in a plane parallel to said side plates between an open work-receiving position and a closed crimping position, a movable handle mounted for pivotal movement with respect to said side plates, means linking said movable handle with said crimping jaws whereby a forward movement of said handle will close said jaws and an opposite movement of said handle will open said jaws, movable means operated by and connected to said movable handle and formed to define a holding face and a stop face adjacent to said holding face and an abutting face spaced from said stop face, a pivotally mounted stop plate having a forwardly-facing sear surface on a downwardly projecting locking finger positioned to engage said movable means, means constantly biasing said stop plate toward said faces of said movable means, retaining means comprising a pivoted latching pawl having a forwardly projecting arm positioned in the path of movement of the upper inner end of one of said crimping jaws and a rearwardly-facing cocking surface normally spring-biased into engagement with said sear surface for retaining said stop plate out of engagement with said movable means whereby said handle is free for opposite movement to open said crimping jaws, said one of said crimping jaws coacting with said forwardly projecting arm to cause said retaining means to release said stop plate when said handle nears the end of its opposite movement, and to release said retaining means when said handle is moved forwardly to close said crimping jaws, said stop plate including means positioned in the path of said abutting face when said handle is moved forwardly to its fully closed position to fully close said crimping jaws whereby said stop plate will be moved into position for engagement with said retaining means as said forward movement of said handle is completed.

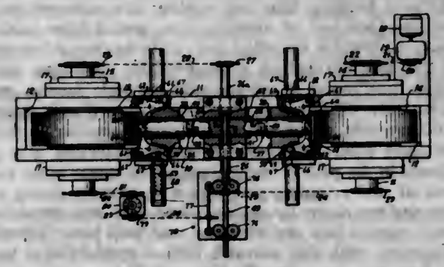
3,089,367
DEVICE FOR REMOVING COVERINGS FROM ELONGATED ARTICLES
Herbert P. Schluter, Baldwin, N.Y., assignor, by mesne assignments, to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed July 8, 1960, Ser. No. 41,633
7 Claims. (Cl. 81—9.5)



1. A tool for stripping a part of a covering from a cable, comprising: a housing closed at one end by a clos-

ure plate having an opening for the reception of one end of the cable to be stripped; a piston assembly slidably received within said housing and formed with a longitudinally extending opening in alignment with the opening of said closure plate for the reception of said cable; said piston assembly comprising a plurality of fingers normally spaced from the cable but movable to engage the covering of said cable; said piston assembly further including an annular cutting member coaxial with the longitudinal opening of said piston assembly and juxtapositionable about said cable when received in said housing; means for moving said piston assembly in a direction bringing said cutting member towards said closure plate; and means for moving said fingers to engage the cable covering during the movement of the piston assembly, causing said cable covering to bulge between the cutting member and the closure plate whereby said bulged portion will be caught between and severed by said annular cutting member and said closure plate.

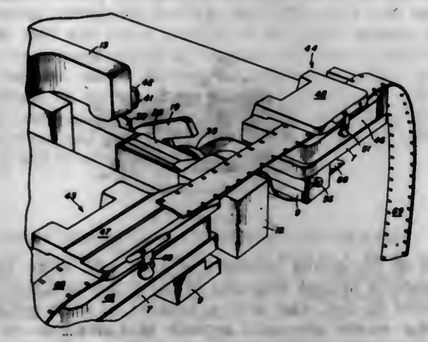
3,089,368
METHOD AND APPARATUS FOR CUTTING OFF ELONGATED MATERIALS
Walter F. Cousino, Toledo, Ohio, assignor to Hydro-Coin, Inc., Toledo, Ohio, a corporation of Ohio
Filed Jan. 21, 1963, Ser. No. 253,527
12 Claims. (Cl. 83—1)



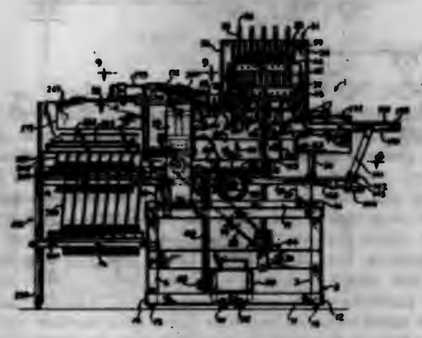
1. A method for cutting off elongated stock which comprises engaging opposite sides of said stock with diametrically opposed surfaces that are complementary to said stock and that terminate in a common plane normal to the longitudinal axis of said stock and simultaneously therewith delivering at a substantially linear rate substantially instantaneous, forceful, radially inwardly directed and opposite impacts to said surfaces and substantially instantaneously thereafter disengaging said surfaces from said opposite sides of said stock, whereby said stock is cleanly severed along said common plane.

3,089,369
AUTOMATIC TRIMMING AND SCRAPING DEVICE
Marvin J. Hermanet, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed Sept. 21, 1960, Ser. No. 57,452
10 Claims. (Cl. 83—3)

1. In an automatic trimming and scraping device for preparing two film strips for splicing; the combination with means for supporting two film strips with their ends aligned and in superposed relation, of a slidable carriage movable relative to said supported film strips between a start position and a stop position wherein it supports a portion of the superposed films; film cutting means movably carried by said carriage; a support member slidably mounted on said carriage and movable with said carriage from said start position to said stop position and then movable relative to said carriage from said stop position to an end position transversely of said supported film strips; resilient means for urging said member and carriage into engagement with one another; a scraping tool and a cam carried by said support member, said cam adapted to actuate said film cutting means upon movement of said support member from said stop position to said end position; and drive means for moving said support member and carriage as a unit from said start position to said stop position, and then moving said support member against the bias of said resilient means to said end position whereby said cam actuates said cutting means to trim off the superposed film strips and said scraping tool scrapes the emulsion off of one end of one of the film strips.

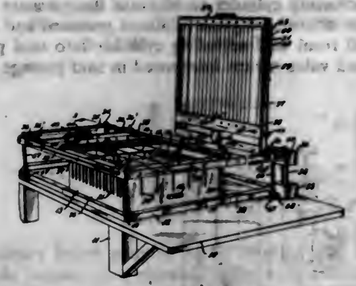


3,089,370
BINDER COMB FORMING MACHINE
Charles Widell, Chicago, Ill., assignor to Plastic Binding Corporation, Chicago, Ill., a corporation of Delaware
Filed May 6, 1959, Ser. No. 811,488
7 Claims. (Cl. 83—89)



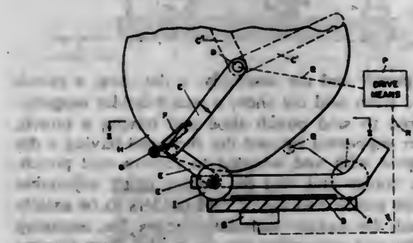
1. A machine for making comb-shaped elements, said machine comprising cutting means operable to cut a blank and form two comb-shaped elements the teeth of which project in opposite directions, guide members for directing the movement of the two elements as they are discharged from the cutting means, a frame having openings on the opposite sides thereof, means between said frame and guide members for receiving the elements from the guide members and transferring the elements to positions on said frame, in which position the teeth on one element project upwardly and the teeth on the other element project downwardly, means mounted on the frame and including opposed members projecting through said openings, means for shifting said opposed members in opposite directions and thereby discharge the elements from the frame, and means below said frame for collecting the ejected elements and supporting them on their backbone at the base of the teeth.

3,089,371
CAKE CUTTER HAVING POWER DRIVEN ENDLESS CUTTING WIRE
Garfield Spears, 674 Rutherford Ave., Macon, Ga.
Filed Jan. 9, 1961, Ser. No. 81,285
7 Claims. (Cl. 83—201)



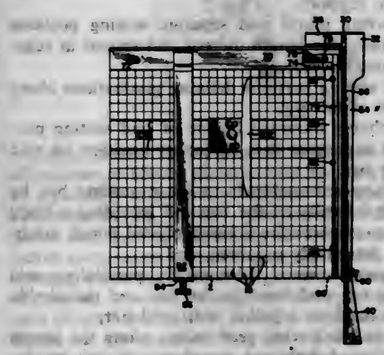
1. A cake cutter comprising a main frame, a cake holder mounted on said frame, and including a cake supporting base and upright walls for providing lateral support for the cake at each of the sides and having guide slots for the reception of cutting wires, at least one of said upright walls having a door for affording access to the interior of said holder, an auxiliary frame connected to and extending outwardly from said main frame, spaced supporting posts carried by said auxiliary frame, a vertically adjustable cutting frame pivotally mounted on said posts, said cutting frame having a series of parallel rollers on opposite sides thereof, a cutting wire extending around said rollers in a serpentine path back and forth across said cutting frame in parallel relation and extending around said rollers on opposite sides for performing the cutting operation, and motor means for moving the lengths of said cutting wire endwise, the lengths of said cutting wire being located in a position to enter said guide slots, means for limiting the downward motion of said cutting frame, and means for fastening said cutting frame in lowered cutting position and also for fastening said cutting frame in elevated position, whereby cutting of the cake may be accomplished at a different angle by a second cutting wire.

3,089,372
APPARATUS FOR CUTTING MOVING MATERIAL TRANSVERSELY
Bernard Joseph Pilliner, Kingsway, Chandler's Ford, England, assignor to National Automation Limited, Chandler's Ford, England
Filed May 24, 1960, Ser. No. 31,458
3 Claims. (Cl. 83—318)



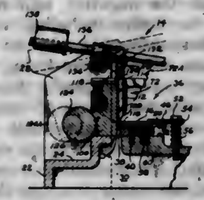
1. An apparatus for cutting sheet material along a rectilinear line transversely of its direction of movement, said apparatus comprising a support surface for supporting the material to be cut, a cutter, a means for rotating the cutter about an axis parallel to said line of movement of the material so that said cutter passes transversely through the material once during each revolution, said rotating means including an arm mounted at one end for rotation about said axis, a lever pivoted to the other end of said arm, and a shaft supporting said cutter and slidably mounted on said lever for longitudinal movement in reference thereto; and means for additionally moving the cutter transversely of its axis of rotation and in the same direction as the material during passage of the cutter through the material, said means for additionally moving the cutter including a first stationary cam coacting with said lever to vary the pivotal position thereof in reference to said arm during rotation of the arm so as to vary correspondingly the distance of the cutter from said axis, and a second stationary cam extending across the material transversely of the direction of movement thereof, said second cam engaging one end of said shaft to effect longitudinal movement of the shaft during passage of the cutter through the material; the rate of rotation of the cutter, the rate of the transverse additional movement of the cutter, and the rate of movement of the material being so correlated that the material is cut along a line generally transverse of the direction of movement of the material.

3,089,373
PAPER TRIMMER
Edmund F. Fischer, East Longmeadow, and Alvin R. Potters, Springfield, Mass., assignors to Milton Bradley Company, Springfield, Mass., a corporation
Filed Aug. 3, 1960, Ser. No. 47,288
1 Claim. (Cl. 83—468)



In a trimming board of the character described, a rectangular platform member having a plane top face and a vertically-disposed metal cutting edge along one side thereof, a horizontally-disposed cutting knife pivoted to said platform member near one end of said cutting edge, a straight edge abutment running along one side of said platform member at right angles to said cutting edge, spaced parallel slots in the plane top face of said platform member extending in a direction away from said cutting edge, a guide assembly comprising a body member having a stop strip facing said cutting edge against which one edge of a paper sheet may extend, pairs of legs depending from said body member and slidably receivable in said slots in said platform member, a pair of clip members on the lower surface of said body member, a pair of foot members depending from said clips and extending angularly outwardly therefrom and slidably receivable in said slots in said platform member, and a manually releasable grip means on said body member fixing said clip members thereto and adapted on rotation to cause said pair of foot members to grip the walls of said slots for holding said guide assembly in any selected position with respect to the cutting edge on the plane top surface.

3,089,374
BROACHING MACHINE HAVING MEANS FOR LATERALLY POSITIONING A PLURALITY OF PUNCH MECHANISMS
Athos J. Taylor, 325 N. Bartlett, Medford, Oreg.
Filed Sept. 8, 1959, Ser. No. 838,661
4 Claims. (Cl. 83—560)



1. In a machine for broaching an elongated workpiece comprising a frame, a workpiece support mounted on the frame for supporting the workpiece, and at least one punch mechanism mounted in the machine adjacent said workpiece support, said punch mechanism including a housing and a shiftable cutter which is shifted relative to the housing upon actuation of the punch mechanism to produce a punch in the workpiece;

means supporting the housing of the punch mechanism for properly positioning the punch mechanism in the machine, said means comprising

an elongated mounting bar detachably mounted in a stationary position in the machine and disposed substantially parallel to a workpiece mounted in said workpiece support,

said bar having plural and separate seating portions formed along the length thereof and spaced at regular modules therealong,

said spaced seating portions defining graduations along the length of the bar,

a clip detachably mounted in one of said seating portions and supported in a stationary position on said mounting bar,

said clip being removable from the mounting bar by shifting it laterally of the bar and including a body portion upon which the housing of said punch mechanism is detachably mounted, and

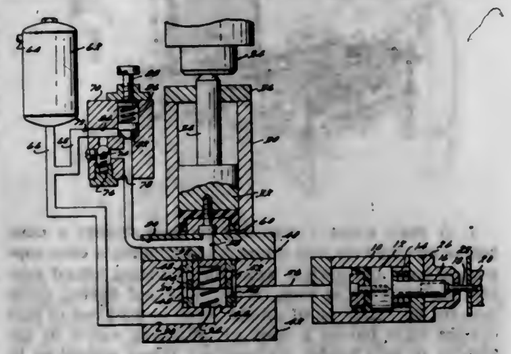
elongated gauge means substantially paralleling said mounting bar and fixed to the bar and detachable from the machine together with said bar,

said gauge means having graduations along the length thereof aligned with and complementing the graduations defined along said mounting bar,

said gauge means being laterally spaced from said mounting bar a sufficient distance to enable the graduations on the portion thereof directly laterally adjacent said clip to be visible with said punch mechanism removed from said clip.

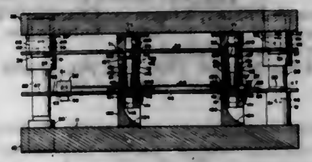
3,089,375
HYDRAULICALLY ACTUATED PIERCING UNIT
Floyd M. Williamson, % Di-dro Engineering Co., 12921 E. Jefferson Ave., Detroit, Mich.
Filed Aug. 10, 1959, Ser. No. 832,720
15 Claims. (Cl. 83—571)

1. A hydraulic system for a hydraulically actuated piercing unit including a punch, said system comprising a hydraulic work cylinder, a piston in said work cylinder operable in response to hydraulic fluid pressure in said work cylinder to move in one direction toward its extended position to effect the working stroke of the punch, a spring for retracting said piston, an oil supply tank, means for maintaining the oil in said tank under a predetermined pressure, a hydraulic pressure line leading from said supply tank to said actuating cylinder for supplying oil thereto at said predetermined pressure, a check valve in said line, passage means providing a communication between said work cylinder and said actuating cylinder, an exhaust passage leading from said work cylinder back to said supply tank, means external of the hydraulic system for applying a force to move the piston in said actuating cylinder to increase the pressure of the oil therein above said predetermined pressure and to discharge oil from said actuating cylinder into said passage means, and valve means interposed in said passage means



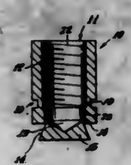
and operable responsive to the flow of oil effected by said movement of said piston in said actuating cylinder for opening said communication between said work cylinder and said actuating cylinder while closing said exhaust passage to supply oil at said increased pressure to said work cylinder thereby to effect movement of the piston in said work cylinder to its extended position, said valve means being operable upon release of said force for closing said communication while opening said exhaust passage to permit movement of said piston in said work cylinder to its retracted position under the force of said spring.

3,089,376
MAGNETIC PUNCH HOLDER AND DIE HOLDER ASSEMBLY
Lawrence V. Whistler, 259 Doncaster Road, and Lawrence V. Whistler, Jr., 251 Doncaster Road, both of Kenmore, N.Y.
Filed Jan. 30, 1959, Ser. No. 790,087
14 Claims. (Cl. 83—619)



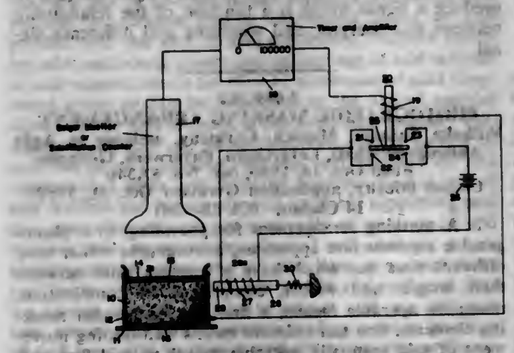
1. In a punch and die assembly, a die shoe, a punch shoe spaced from said die shoe, a punch-holder magnetically adhered to said punch shoe and having a punch, a die holder supported by said die shoe and having a die axially aligned with and adapted to receive said punch, said punch holder and said die holder being adjustable to enable the punch and die of said holders to be axially aligned, said die holder including means for engaging a die templet and preventing the die holder from turning during operation, said means for preventing turning of the die holder comprising a pin member having a sharpened upper end portion, means resiliently urging said pin upwardly for continuously engaging an associated die template, and said die being adapted to fit snugly within an opening formed in the associated die template, whereby interaction of the pin member and die with an associated die template prevents turning of the die holder.

3,089,377
EXPANSION INSERT
Henry O. Engstrom, Fairfield, Conn. (6 Selleck Place, New Canaan, Conn.)
Filed Sept. 4, 1957, Ser. No. 681,990
1 Claim. (Cl. 85—2.4)



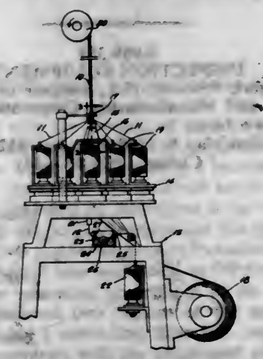
A unitary insert adapted to be inserted and anchored in a hole formed in a member comprising a body having a threaded bore therein opening on the end thereof and terminating in a smooth inner end portion adjacent the other end of the body, said inner end portion being formed with a conical taper at the end thereof, and an integral substantially solid expander plug carried by the body and overlying the inner end portion of the bore, said expander plug having an inclined surface disposed around the exterior thereof adjacent the end of the body and extending under and separated from the inner end portion of said bore by a thin frangible wall formed by said conical taper extending into said plug and cooperating with said inclined surface, whereby axial pressure on the insert causes said wall to break and the inclined surface to move into the end of the bore and uniformly expand the end of the body into anchored relation with the walls of said hole, said body having an annular exterior cut extending therearound and forming a thin uniform wall portion surrounding the bore adjacent said smooth inner end portion to facilitate said expansion of the body.

3,089,378
RADIOISOTOPE METHOD FOR MEASURING THE WEIGHT OF THE CONTENTS OF ASSEMBLED ITEMS
Sigmund Berk, Philadelphia, Pa., assignor to the United States of America as represented by the Secretary of the Army
Filed Mar. 8, 1960, Ser. No. 13,668
4 Claims. (Cl. 86—32)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. In a method of manufacturing primers, such that the quantity of primer composition therein is kept uniform from primer to primer, the steps comprising: mixing a wet primer composition with a radioactive source to achieve homogeneity and uniform radiation therefrom, maintaining the resulting homogeneous mixture in a wet condition, loading said homogenous mixture into primer cups, covering said homogeneous mixture with an anvil having a hole therein, passing said loaded primers under a radioactively sensitive device at a preselected distance therefrom, measuring the radiation emitted from said mixture, said radiation being directly proportional to the amount of mixture in said primer cup, translating said radiation into a potential proportional thereto, and applying said potential to means whereby only those primers causing a potential within a given range are selected and primers causing a potential outside of said given range are rejected.

3,089,379
APPARATUS FOR MAKING BRAIDED CORD
Walter J. Finor and Walter S. Engel, Philadelphia, Pa., assignors to E. W. Twitchell, Incorporated, Philadelphia, Pa., a corporation of Delaware
Filed Sept. 16, 1960, Ser. No. 56,574
1 Claim. (Cl. 87—23)

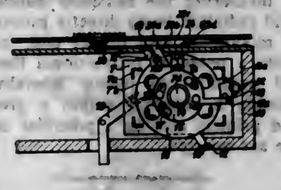


Apparatus for forming cord having an elongated resilient core of fibrous material and having a jacket formed of a plurality of strands positioned over the core with an adhesive-carrying thread positioned intermediate the jacket and core to adhesively secure the strands of the jacket to the core, comprising, a die having a central die opening extending therethrough, means to feed the core of resilient material through the die opening to form the core of resilient material into the desired cross-sectional shape, an eye member through which said core passes spaced from the die opening in the direction of feed of the core of resilient material, a braiding head positioned about said die operable to feed the strands of said jacket to said eye and form said jacket about said core, a guide tube extending in the direction of feed of said core and terminating outwardly adjacent said die opening operable to direct said adhesive-carrying thread into contact with said core intermediate said die opening and said eye, and means adjacent the end of said guide tube opposite the terminal end thereof to apply adhesive in liquid form to said thread.

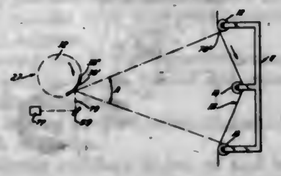
3,089,380
VARIABLE FRAMING MEANS FOR A COMBINED RANGE AND VIEW FINDER
Carl Baur, Baldham-Kolonie, and Georg Kowigl, Munich-Pasing, Germany, assignors to Agfa Aktiengesellschaft, Leverkusen-Bayerwerk, Germany
Original application Dec. 10, 1957, Ser. No. 701,830, now Patent No. 3,041,919, dated July 3, 1962. Divided and this application Mar. 1, 1960, Ser. No. 12,107
Claims priority, application Germany Dec. 20, 1956
4 Claims. (Cl. 88—1.5)

1. In a combined range and view finder, frame image means including a plate formed with sets of cutouts which

respectively provide frame images corresponding to camera objectives of different focal lengths, respectively, and said frame image means including a plurality of masking discs selectively movable by the operator for uncovering the selected set of cutouts, said frame image means including a central hollow sleeve whose axis coincides with the range finder optical axis, said masking discs being of annular circular configuration and being turnable on said sleeve, said discs having different radii and said range finder light rays moving unobstructedly along said optical axis through said sleeve.



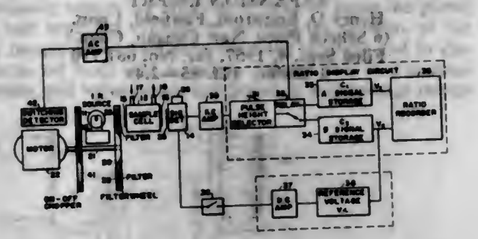
3,089,381
INSPECTION EQUIPMENT
John J. Bogert, Wyckoff, N.J., assignor to National Laboratories and Manufacturing Corporation, a corporation of New Jersey
Filed May 8, 1959, Ser. No. 812,044
7 Claims. (Cl. 88—14)



6. An apparatus for inspecting successive impressions on a running web of material having an observable path, including a plurality of light-reflecting surfaces, means for moving said reflecting surfaces in timed relation to said running web whereby when the light rays reflected by said reflecting surfaces are viewed the impressions on the running web appear substantially stationary and guide means over which the web is trained including at least three spaced-apart guide members, one of which is located intermediate said reflecting surfaces and the running web and transversely engaging the web at the mid-point of the observable path so that the web follows two symmetrical straight line paths, and means for supporting said guide members in said spaced-apart relationship.

3,089,382
METHOD AND APPARATUS FOR ANALYZING FLUIDS
George J. Hecht, El Cerrito, and Vigo N. Smith, San Leandro, Calif., assignors to Shell Oil Company, New York, N.Y., a corporation of Delaware
Continuation of application Ser. No. 669,161, July 1, 1957. This application May 26, 1959, Ser. No. 816,360
8 Claims. (Cl. 88—14)

1. The method of analyzing a sample stream for the presence of a component therein capable of absorbing electromagnetic radiation of selected wave lengths, said method comprising directing a single beam of electromagnetic waves radiated from a radiation source of fixed intensity through said sample stream, said beam of radiation containing wave lengths within a preselected band which are absorbed by the component under analysis, alternately filtering and blocking said beam to permit the passage of a narrow band of wave lengths centered on a selected reference wave length of said radiation beam, at which wave length there is a reduced amount of absorption, subsequently filtering said original beam a second time to permit passage of a second narrow band of wave lengths centered on a second selected wave length of said radiated beam, said first selected wave length varying substantially from said second selected wave length, and measuring the ratio of the individual total energies of the individually transmitted radiations at the two selected wave lengths, which ratio is indicative of the component for which said sample stream is being analyzed.

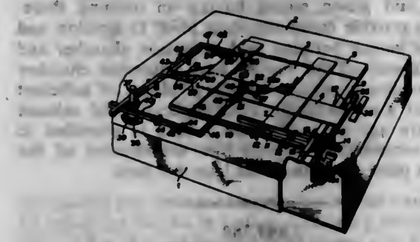


3,089,383
REFLECTANCE MEASURING EQUIPMENT
Harold J. Nearhoof and Caspar L. Woodbridge, State College, and David E. Harris, Boalsburg, Pa., assignors to HRB-Singer, Incorporated, State College, Pa., a corporation of Delaware
Filed Nov. 4, 1959, Ser. No. 850,952
6 Claims. (Cl. 88—14)

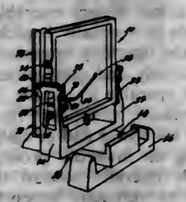
2. A method for determining the quality of a painted surface in the presence of ambient light which includes receiving the light energy reflected from said painted surface and that reflected from surfaces adjacent to said painted surface, receiving directly the ambient light energy present in the area of said painted surface, converting said light energies into proportionate electrical energies, removing the electrical energy proportionate to the ambient light from that proportionate to the reflected light, comparing said proportionate reflected light energies to produce a signal which is a function of the relationship between said energies, and recording said difference signal.

3,089,384
PHOTOGRAPHIC MASKING ARRANGEMENT
Wilhelm Baasner, Munich, Germany, assignor to Agfa Aktiengesellschaft, Leverkusen, Bayerwerk, Germany
Filed Oct. 18, 1960, Ser. No. 63,340
Claims priority, application Germany Oct. 31, 1959
14 Claims. (Cl. 88—24)

1. A masking arrangement for providing, in a photographic reproduction apparatus, photographs which have different sizes but which have a constant ratio between their lengths and widths, comprising, in combination, manually operable means; a first pair of parallel masking elements; first transmission means transmitting movement of said manually operable means to said first pair of masking elements for moving the latter toward and away from each other with a first transmission ratio between said manually operable means and said first pair of masking elements; a second pair of parallel masking elements extending across said first pair of masking elements; second transmission means transmitting movement of said manually operable means to said second pair of masking elements for moving the latter toward and away from each other with a second transmission ratio between said manually operable means and said second pair of masking elements, said first transmission ratio and said second transmission ratio having with respect to each other a ratio equal to said constant ratio between the lengths and widths of the photographs; and clutch means cooperating with one of said transmission means for optionally rendering the latter inoperative so that the pair of masking elements actuated by said one transmission means will not move while said manually operable means actuates the other of said transmission means to move the pair of masking elements actuated by said other transmission means.

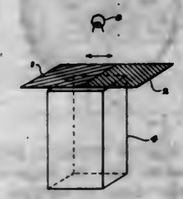


3,089,385
LOCKING MECHANISM FOR A TILTABLE COPYBOARD
Walter Wanielista, Westchester, Ill., assignor to Robertson Photo-Mechanix, Inc., Chicago, Ill., a corporation of Illinois
Filed June 9, 1961, Ser. No. 116,055
6 Claims. (Cl. 88—24)



1. A copyboard mechanism comprising a copyboard having a pair of sections, means pivotally connecting said sections for relative angular movement about an axis parallel with one end of said copyboard, support means for said copyboard, means journalling one of said sections to said support means for tiltable movement of said copyboard about an axis perpendicular to the axis of angular movement of said sections, a pin extending laterally outwardly from said one of said sections and at an end of said one of said sections opposite said one end of said copyboard, a lever arm pivotally mounted in said one of said sections and having one end rotatably supporting said pin, means biasing said pin outwardly of said one of said sections, cam means in the other of said sections, a cam element on the other end of said lever arm, said lever arm being pivoted by said cam means and said cam during closing of said sections to retract said pin and said cam means and cam element affording reverse pivoting of said lever arm to release said pin to an outwardly extended position upon opening of said sections, means defining a lock aperture on said support means, said pin being positioned to enter said lock aperture in a predetermined angular position of said one of said sections and upon relative opening of said sections, to prevent tiltable movement of said copyboard when said sections are in the opened condition thereof and stop means for releasably retaining said one of said sections in said predetermined angular position.

3,089,386
METHOD OF CONTROLLING THE SPECTRAL COMPOSITION OF A LIGHT SOURCE
Robert W. G. Hunt, Wealdstone, England, assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed Jan. 8, 1959, Ser. No. 785,640
Claims priority, application Great Britain July 25, 1958
4 Claims. (Cl. 88—111)

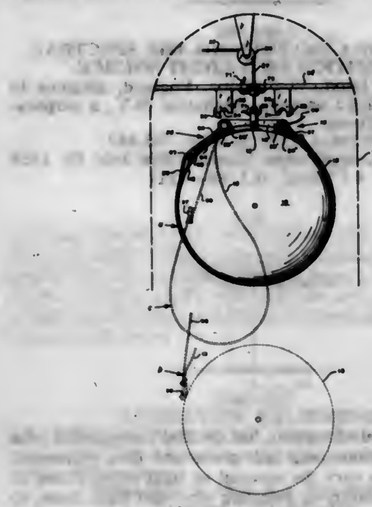


2. The method of varying the spectral composition of a beam of light containing red, green and blue regions of the spectrum to vary the amount of light in only one of said regions comprising inserting into said light beam to a varying extent a color filter having a greater transmission in the two regions of the spectrum not to be varied and a lesser transmission in the region to be varied, and keeping constant the total absorption of the light in said first-mentioned two regions of greater transmission as said color filter is inserted into said beam by varying amounts to counteract for unwanted absorptions of the color filter in said first-mentioned two regions of the spectrum by adjustably inserting a correcting filter into said beam to an extent commensurate with the adjustment of said color filter but in an opposite sense, said correcting filter having substantially the same transmission in the region where said color filter has a greater transmission and having a greater transmission in the region where said color filter has its lesser transmission.

3,089,387
CINCTURE-TYPE SUSPENSION BAND APPARATUS
Carl A. Damm, Upper Black Eddy, Pa., assignor to the United States of America as represented by the Secretary of the Navy
Filed Jan. 27, 1960, Ser. No. 5,077
9 Claims. (Cl. 89—1.5)
(Granted under Title 35, U.S. Code (1952), sec. 266)

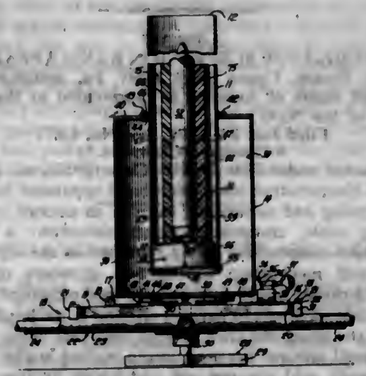
1. A cincture-type suspension band apparatus for hoisting, securing and releasing a store in an aircraft having a hoisting cable, comprising, in combination: a release mechanism adapted for being mounted at the top of the store, said mechanism having two members of equal length, crossties fixed to the ends of said members for disposing said members in parallel relation to the longitudinal axis of the store, the ends of said members being defined by external grooves for insertion in mating hooks fixed to the aircraft, said grooves and said hooks having tapered bearing surfaces for self-aligning the store as said mechanism is secured in the aircraft, one of said members including a channel between the ends of said one of said members, a barrel inserted in said channel, the bore of said barrel having a central portion of enlarged cross-section, each of said ends being further defined by a trunnion bolt bore having the same cross-sectional size and configuration as said bore, a relatively short trunnion bolt in each of said trunnion bolt bores and extending into said bore for retaining said barrel in said one of said members, an ex-

plosive cartridge in each of said ends outwardly disposed from said trunnion bolts for selectively and irreversibly ejecting said trunnion bolt from said trunnion bolt bore and into said central portion, ignition means for firing said cartridges, a band having a loop on one end thereof and



adapted to be wrapped around the store, first means for connecting the other end of said band to the other of said members, said looped end connecting said band about said barrel, and third means connected to said crossties and adapted to be conected to the hoisting cable.

3,089,388
ROCKET LAUNCHERS
Roland C. Webster, Springfield, Va., Edward Spechler, Washington, D.C., and Gerard V. Emerson, Arlington, Va., assignors to Atlantic Research Corporation, Fairfax County, Va., a corporation of Virginia
Filed Nov. 27, 1959, Ser. No. 855,845
12 Claims. (Cl. 89—1.7)



1. A launcher for rockets and the like comprising an elongated launcher tube having muzzle and breech ends adapted to support a rocket prior to ignition adjacent the breech end thereof and guide the rocket during acceleration through the tube, means providing increased launching thrust for the rocket including piston means disposed in the launcher tube for free sliding movement therealong substantially sealing the launcher tube against passage of gases forwardly alongside the rocket and intercoupled with the rocket to impart launching movement thereto, and expansion chamber means surrounding, extending rearwardly of and communicating with the breech end portion of said launcher tube forming an enclosure for accumulating the exhaust gases produced upon ignition of the rocket to apply the pressure of the accumulated gases against said piston means and exert a launching force coacting with reaction thrust produced upon ignition of the rocket for driving the rocket out of the launching tube, said piston means having an opening therethrough to provide communication prior to ignition and throughout launch between said expansion chamber and the trailing end of the rocket, said expansion chamber means providing a gas accumulating volume of sufficient size so that a substantially even application of exhaust gas pressure against said piston means is provided to maintain substantially impulse-free acceleration of the rocket as it proceeds through the launcher tube.

3,089,389
MISSILE LAUNCHER
Zenas B. Andrews, Los Altos, Charles R. Brown, Sunnyvale, and Wilson T. Price, Santa Clara, Calif., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Jan. 9, 1961, Ser. No. 81,636
6 Claims. (Cl. 89—1.7)

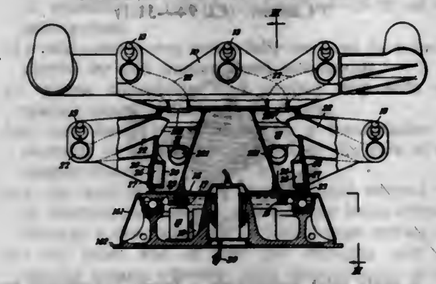


4. A missile launcher system operably mounted in a vehicle and operable to vertically launch a missile, comprising an outer tube operably mounted in said vehicle, an inner tube resiliently and concentrically mounted in said outer tube and operable to receive, laterally support, and launch said missile, a support ring concentrically positioned adjacent the lower end of said inner tube, said support ring having an inwardly projecting flange portion which extends laterally toward the axis of said tube, in a manner to vertically support said missile, a hollow tubular shaped flexure rod housing having its upper end rigidly secured to said support ring, a flexure rod concentrically positioned within said housing and having its upper end rigidly secured to said lower end of said inner tube, interconnecting means operable to connect the lower end of said housing and the lower end of said rod including vibration absorbing means operable to damp vibrations being transmitted through said interconnecting means whereby said support ring may move laterally with respect to said inner tube when said system is subjected to severe shock and said vibration absorbing means attenuates vehicle induced vibrations.

3,089,390
LAUNCHING APPARATUS FOR GUIDED MISSILES
Mervyn Francis Wilson, Belfast, Northern Ireland, assignor to Short Brothers & Harland Limited, Belfast, Northern Ireland, a British company
Filed Mar. 7, 1961, Ser. No. 93,980
Claims priority, application Great Britain Mar. 11, 1960
4 Claims. (Cl. 89—1.7)

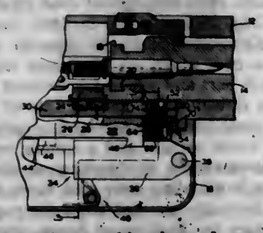
1. In a missile launching apparatus, a stationary base, a receiver for missile efflux gas flame and smoke, means for mounting said receiver upon said base for rotation

about a vertical axis, launching means mounted on said receiver offset from said axis, duct means connecting said launching means to said receiver, means in said receiver



for cooling and extinguishing the gases, and a receiver outlet which has its axis in a plane containing the said vertical axis so that the said thrust vector of gas as it is exhausted through said outlet lies substantially in said plane.

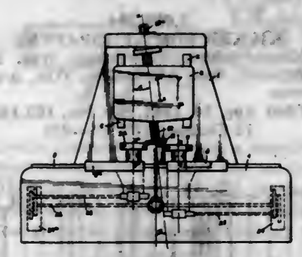
3,089,391
COMBINATION ACTUATOR AND DETENT DEVICE FOR GUNS
Edmond J. Raleigh, West Springfield, Mass., assignor to the United States of America as represented by the Secretary of the Army
Filed Sept. 22, 1961, Ser. No. 140,143
7 Claims. (Cl. 89—198)
(Granted under Title 35, U.S. Code (1952), sec. 266)



5. In a gun, the combination of a receiver, a first member mounted in said receiver for pivotal displacement between two positions, a second member disposed for sliding displacement to an assembled position in said receiver, an actuator-detent device including a body installable in a mating recess in said receiver so as to be releasably retained therein by said second member, a piston telescopically mounted in said body and a spring operationally disposed within said piston and body so that opposite ends of said spring are in respective abutment therewith for resiliently extending said piston relative to said body, a loop formed on the end of said spring having abutment with said body, a slot formed in said body to permit the resilient sliding extension of said loop therethrough for contact with said first member to bias said first member to one of the two positions, and a hole disposed in said second member for matingly receiving the extending portion of said piston when said second member is in the assembled position for releasably retaining said second member therein.

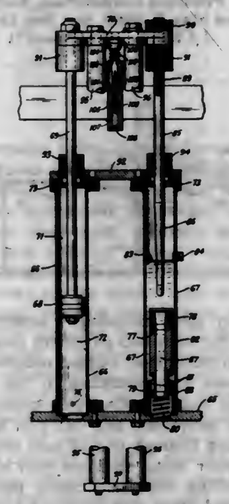
3,089,392
METHOD AND MECHANISM FOR GENERATING GEARS, RACKS AND THE LIKE
Giordano Romi, Santa Barbara d'Oeste, Sao Paulo, Brazil
Filed July 10, 1957, Ser. No. 671,695
10 Claims. (Cl. 90—7)

1. Gear cutting machine comprising, in combination, first support means, and second support means, one of said support means being movable in one direction relative to the other of said support means; at least one rotary holder means for holding at least one gear blank, and being mounted on said first support means for rotation about a first axis parallel to said direction; rotary cutter gear means having a second axis of rotation inclined at an acute angle to said first axis, said rotary



cutter means being mounted on said second support for movement in direction of said second axis and to and from a position adapted to mesh with a gear blank held by said holder means; and operation control means for rotating said cutter gear means and for alternately reciprocating in a timed sequence said one support means in direction of said first axis, and said cutter gear means in direction of said second axis.

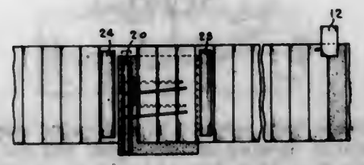
3,089,393
DRIVE MECHANISM FOR FOLDING BOX MACHINES OF THE PLUNGER AND DIE TYPE
Richard V. Pagendarm, Hillsborough, Calif., assignor to Atlas General Industries, Inc., New York, N.Y., a corporation of Massachusetts
Filed Mar. 13, 1962, Ser. No. 179,300
10 Claims. (Cl. 93—51)



1. In a folding box forming machine in which a reciprocating drive means moves a box shaping plunger into a forming die during a work stroke and out of the forming die during a return stroke, an improved force and motion transmitting coupling between the drive means and the plunger comprising: a pneumatic variable volume chamber means and a hydraulic variable volume chamber means including a charge of liquid therein, said pneumatic means comprising a passage to the atmosphere, and passage control means arranged to close said pas-

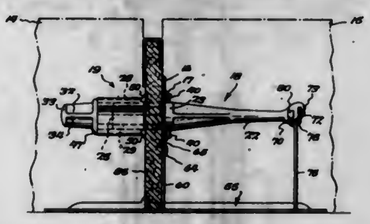
sage during the work stroke sufficiently to cause a difference in air pressure to build up in the chamber with respect to the atmosphere and to vent the chamber pressure to the atmosphere during the return stroke, said hydraulic means comprising a restricted liquid charge passage and being arranged to undergo compression and discharge of liquid during the return stroke.

3,089,394
KICKER FOR NEWSPAPERS
John A. Rauenbuehler, Milwaukee, Wis., assignor to Cutler-Hammer, Inc., Milwaukee, Wis., a corporation of Delaware
Filed Apr. 14, 1961, Ser. No. 103,148
12 Claims. (Cl. 93—93)



1. The combination with a conveyor carrying a number of substantially similar units in a line of flow in an overlapped relation, of means for periodically displacing one of said units comprising, kick means suspended above the conveyor, means biasing the kick means into engagement with the units on the conveyor, means for periodically moving the kick means transversely to the line of flow to displace one of the units on the conveyor, and means for lifting the kick means free of the conveyor after displacing the unit.

3,089,395
TRANSVERSE JOINT FOR PAVEMENTS
Alfred F. Crone, Williamsville, N.Y., assignor to Acme Highway Products Corporation, Buffalo, N.Y.
Filed May 2, 1960, Ser. No. 26,008
2 Claims. (Cl. 94—17)



1. A highway joint including a center plate adapted to be arranged between two pavement slabs and provided at intervals with holes, load transfer members each formed in two parts, one part extending in one direction from the center plate and the other part extending in the opposite direction therefrom, said one part having a portion thereof extending through one of said holes to the other side of said center plate, said one part having a portion thereof interlocking with said center plate at said hole when turned, said other part having a portion interfitting with said first part which extends to the other side of said center plate, said center plate having longitudinally extending reinforcing beads arranged above and below said holes, said first mentioned parts of said load transfer members having spurs extending outwardly therefrom into position interengaging with said beads when said parts are turned to interlock the same with said center plate, and which limits the extent to which said first mentioned part is passed through one of said holes.

3,089,396
GRATE INLET
Eugene R. Rowland, Kirkwood, Mo. (16 N. Central Ave., Clayton 5, Mo.)
Filed Apr. 4, 1960, Ser. No. 19,813
3 Claims. (Cl. 94—31.1)

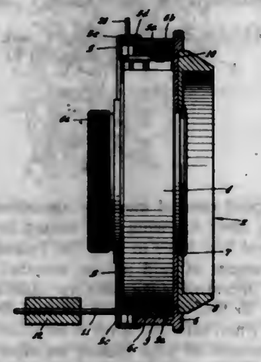


1. A grate inlet comprising a frame constituted by a side member, end members extending laterally from the ends of said side member, one of said end members constituting an upstream end member in respect to the direction of flow of storm water to the inlet and the other constituting a downstream end member, and a beam secured to and extending between said end members spaced inwardly from the ends of said end members remote from said side member, a plurality of grate bars secured to and supported by said side and end members and said beam with their upper edges substantially coplanar with the upper edges of said side and end members, said grate bars extending to said beam at an angle with respect to the direction of flow of storm water to the inlet, and angling toward said beam in downstream direction, said grate bars being spaced apart throughout their length a distance greater than their thickness and inclined downwardly in downstream direction thereby to provide passages between the grate bars which are of greater width than the thickness of said bars and which are inclined downwardly in downstream direction for smooth flow of water therethrough, each grate bar being curved in cross section, having a concave lower surface and a convex upper surface, and curved downwardly in downstream direction, and said grate bars terminating over said beam to provide a clear opening laterally outward from the respective ends of said grate bars for flushing of debris which does not pass through said passages, each of said grate bars having a relatively thin upper upstream edge.

3,089,397
PHOTOGRAPHIC INTRA-LENS SHUTTER AND COUPLED EXPOSURE METER
Franz W. R. Starp, Calmbach (Enz), Germany, assignor to Alfred Gauthier G.m.b.H., Calmbach (Enz), Germany, a corporation of Germany
Filed Feb. 13, 1957, Ser. No. 639,993
Claims priority, application Germany Feb. 23, 1956
2 Claims. (Cl. 95—10)

1. A photographic camera comprising
(*a*) a housing having a front plate,
(*b*) an exposure meter including a tracing means mounted on said housing,
(*c*) an intra-lens shutter means mounted on said front plate,
(*d*) said shutter means including a diaphragm setting ring,
(*e*) a shutter speed setting ring,
(*f*) means for securing said shutter ring so as to prevent axial movement thereof,
(*g*) and a control ring coaxially disposed between said setting rings,
(*h*) a threaded connection between said control ring and said shutter speed setting ring,
(*i*) a slide connection between said control ring and said diaphragm setting ring,

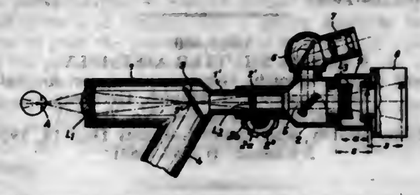
(*j*) said threaded connection and slide connection between said control ring, and said diaphragm setting ring and shutter speed setting ring, respectively, coacting to effect axial shifting of said control ring in response to relative turning movement of said setting rings,
(*k*) said control ring being fully enclosed by a mantle carried by said shutter speed setting ring,
(*l*) means connecting said control ring with said tracing means of said exposure meter,
(*m*) said latter means including a transmission pin movable in a direction parallel to the axis of said shutter means,
(*n*) one end of said pin engaging said control ring in abutting relationship, and said pin being extended through a slot formed in said diaphragm setting ring,
(*o*) the other end of said pin engaging with said tracing means whereby axial displacement of said control ring upon relative movement of said setting



rings effect proportionate movement of said tracing means,
(*p*) and coupling means for releasably connecting said shutter speed setting ring to said diaphragm setting ring for effecting either concurrent or independent movement of said setting rings,
(*q*) said coupling means including a series of circumferentially spaced lugs connected to said shutter rings, and extending laterally therefrom,
(*r*) a cooperating lever pivotally mounted to said diaphragm setting ring, for movement between operative coupling position and inoperative non-coupling position,
(*s*) said lever having spaced fingers for meshing with said lugs to effect coupling of said setting rings in the operative position of said lever, to effect concurrent movement of said setting rings when said lever is rendered operative whereby axial movement of said control ring is prohibited.

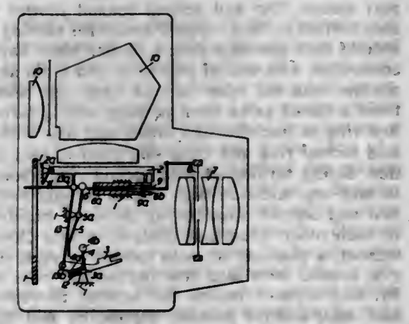
3,089,398
OPHTHALMIC CAMERAS
Karl Heinz Wilms, Oberkochen, Wurttemberg, Germany, assignor to Carl Zeiss, Oberkochen, Wurttemberg, Germany
Filed July 12, 1960, Ser. No. 42,260
Claims priority, application Germany July 21, 1959
4 Claims. (Cl. 95—11)

1. In a camera for photographing the retina of the human eye, comprising a stationary camera portion, collecting front and rear optical systems arranged in spaced relation in said camera portion forming a telecentric photographic objective, the space distance between said two collecting systems being selected such that the image of the pupil of said eye produced by said front system coincides with a stop arranged in the focus plane on the object side of said rear system, a movable camera portion on said stationary portion adapted to be displaced axially along the optical axis of said telecentric photographic objective, an image receiving cassette mounted



on said movable camera portion, and a negative lens system interposed between said cassette and movable camera portion and within the parallel ray path produced by said telecentric photographic objective, said negative lens system being coupled with said image receiving cassette.

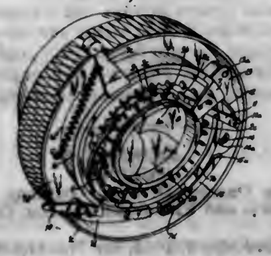
3,089,399
CAMERAS
Hans-Joachim Daeche, Dresden, Germany, assignor to VEB Kamera- und Kinowerke Dresden, Dresden, Germany
Filed May 9, 1960, Ser. No. 27,846
4 Claims. (Cl. 95—42)



1. In a monocular reflex camera having a housing, a prismatic viewfinder arranged therein, an objective lens and a shutter device, said shutter device having a shutter cocking member operatively connected thereto, an adjustable aperture diaphragm, aperture setting means, a mirror within said housing hingedly connected to the housing and movable between a first position in which the mirror is clear of the optical axis of said objective lens and a second position where light rays from said objective lens are reflected from said mirror into said prismatic viewfinder, a covering flap within the housing and pivotally connected to the housing, each of said mirror and covering flaps having a free end displaced from their connections to said housing which cooperate with each other to provide a light-sealed connection therebetween, a coupling member pivotally connected between said mirror and covering flap, said coupling member being operatively connected to said cocking member to simultaneously move said mirror and covering flap toward each other so that said free ends thereof engage each other to provide said light-sealed connection, a first lever pivotally carried by said housing and drivable by said covering flap, a second lever pivotally carried by the housing and drivable about its pivot by said first lever, a first push-rod slidably mounted in said housing and drivable by said second lever in an axial direction, a second push-rod engageable by said first push-rod, and means operatively connected to said aperture diaphragm

to normally maintain same in a closed position for the purpose of taking a picture and to abut against said second push-rod so that when said second push-rod is moved by said levers and first push-rod, said means opens said aperture diaphragm to a fully open position for viewing purposes.

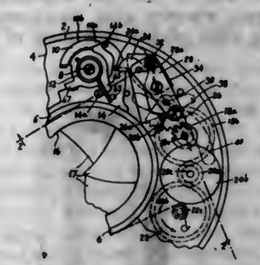
3,089,400
CAMERA SHUTTER ASSEMBLY
Gerd Kiper, Munich, Germany, assignor to Agfa Aktiengesellschaft, Munich, Germany
Filed Dec. 16, 1958, Ser. No. 780,771
Claims priority, application Germany Dec. 18, 1957
3 Claims. (Cl. 95—63)



1. In a camera shutter assembly, in combination, support means; first and second coaxial shutter rings turnably carried by said support means for turning movement around their common axis; a shutter blade having a pivot connection with one of said rings and a pin and slot connection with the other of said rings and being movable from a closed to an open position during turning of said first ring in one direction about said axis with respect to said second ring and from said open to said closed position during turning of said second ring about said axis in said one direction with respect to said first ring, said first and second rings having the same positions relative to each other when said blade is in said closed position thereof; a plurality of teeth carried by each ring; a third ring coaxial with said first and second rings and carried by said support means for turning movement around said axis; a drive member carried by said third ring; a pawl turnably carried by said drive member and engaging the teeth of said rings for turning the latter in said one direction when said drive member and third ring turn in said one direction; and cam means carried by said support means and cooperating with said pawl for turning the latter with respect to said drive member while the latter and said third ring turn in said one direction from a first position where said pawl engages the teeth of said first ring to turn the latter while said pawl is in said first position with respect to said drive member to a second position where said pawl engages the teeth of said second ring during continued turning of said third ring and drive member therewith so that said first ring turns first in said one direction to move said blade from said closed to said open position and said second ring then turns in said one direction to move said blade from said open to said closed position thereof.

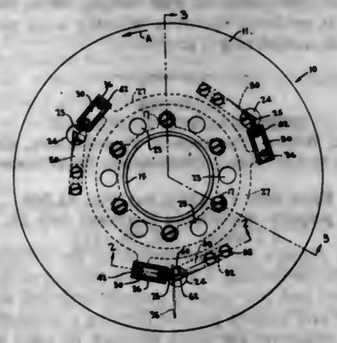
3,089,401
PHOTOGRAPHIC SHUTTER
Kurt Gebele and Franz Singer, Munich, Germany, assignors to Compur-Werk GmbH & Co., Munich, Germany, a firm of Germany
Filed Apr. 18, 1960, Ser. No. 22,816
Claims priority, application Germany Apr. 21, 1959
7 Claims. (Cl. 95—63)

1. A photographic shutter comprising a shutter housing having a baseplate and a lens mount extending forwardly therefrom, a rotatable master member mounted on said baseplate for running down movement from a tensioned position to a rest position, gear retarding mechanism including a flywheel and a restoring spring mounted on said baseplate for retarding said master member during its running down movement for an adjustably variable length of time, lever means arranged to transmit the driving force of said master member to an input gear of said gear retarding mechanism, said lever means comprising a plurality of interconnected levers including a first lever having an input lug which projects into the path of movement of said master member to be displaced by the running down movement of said master member, said first lever being fulcrumed on a timing lever which is rotatable about a fixed pivot on said baseplate and a third one of said levers having an arcuate rack in meshing engagement with the input gear of said gear retarding mechanism, a



rotatable speed control member operatively connected to said timing lever to swing said timing lever and thereby to move said first lever to vary the extent to which it impedes movement of said master member, said first lever having an operating edge bearing against a part of said third lever to transmit motion of said first lever to said third lever when said first lever is displaced by the running down movement of said master member, said operating edge extending in the same general direction as the direction in which said first lever is moved by an adjusting movement of said timing lever so that such movement of said first lever does not substantially affect the position of said third lever and so that the flywheel of said gear retarding mechanism remains substantially at rest during the speed adjusting movements of said speed control member and lever means.

3,089,402
PHOTO-TYPOGRAPHIC MASTER CHARACTER PLATE
George J. H. Sausele, New Providence, N.J., assignor to American Type Founders Co., Inc., Elizabeth, N.J., a corporation of Delaware
Filed Dec. 14, 1961, Ser. No. 159,209
9 Claims. (Cl. 95—85)



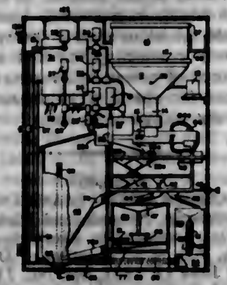
1. A master character plate for photo-typesetting machines or the like, comprising a flat rotatable disc of transparent material bearing at least one font of printing characters, the characters being disposed in accurate alignment upon the disc, at least one stop pin projecting substantially perpendicularly from one face of said disc and adapted to abut selected ones of a series of stop blades carried by the machine to which the disc may be applied and projectable into the path of said stop pin during rotation of the disc, and a yieldable member carried by said disc adjacent said stop element and adapted to be displaced slightly by the stop blade as the stop pin approaches the latter and to move back behind said stop blade when contact between the stop blade and the stop pin is imminent, whereby excessive rebound of the stop pin and therefore of the disc is prevented.

3,089,403
DUAL PURPOSE DOOR HEATER DISCHARGE
Edward Banko, Colonia, N.J., assignor, by mesne assignments, to L. J. Wing Mfg. Co., Division of Aero-Flow Dynamics, Inc., Linden, N.J., a corporation of New York
Filed Jan. 19, 1961, Ser. No. 83,724
12 Claims. (Cl. 98—36)



1. A wall having a door opening, a door for said opening, a heater inside the wall and spaced therefrom and adjacent said opening, said heater comprising a casing having an inlet end and a discharge end, a motor operated fan at the inlet end of the casing, a damper in said casing at the discharge end thereof, an electric motor on the casing, means controlled by the motor to actuate the damper, heating means in the casing, and said damper being movable from a position allowing air to be blown by the fan through the entire discharge end and in one direction to a position in which the air can be blown by the fan through part only of said discharge end and in another direction, and means controlled by said door to control operation of said electric motor.

3,089,404
AUTOMATIC COFFEE MACHINE
Alfredo J. Parraga, Vibora, Havana, Cuba
(3107 N. Hausen Court, Chicago, Ill.)
Filed Oct. 5, 1959, Ser. No. 844,434
18 Claims. (Cl. 99—289)



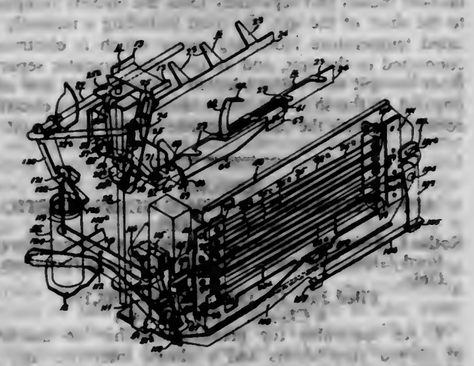
1. In a beverage brewing machine having a boiler and a hopper for storing ground brew making material, the combination of a brewing chamber having an inlet opening for fluid from said boiler at one end and a discharge opening at the other, a sleeve crossing said chamber through opposed openings in the walls thereof, said sleeve having perforated areas to permit the entrance of fluid from the boiler and the exit of the brew, an opening in said sleeve adapted to receive ground brew making material from said hopper, and a piston movable in the sleeve to push the grounds received through said opening into the perforated portion of the sleeve within the brewing chamber, said sleeve being provided with an internal channel having air vent and drain openings, said channel being positioned outside said brewing chamber and between the chamber and said hopper communicating opening.

3,089,405
COFFEE BREWING ELEMENT
Lionel D. Ackerman, 1161 Granada St., Belmont, Calif.
Filed Jan. 26, 1962, Ser. No. 170,305
2 Claims. (Cl. 99—308)



1. In a coffee brewing element of the character described, the combination of a dome-like circular support adapted to be positioned upon the bottom of a water boiling receptacle and under which boiling water will be entrapped, a standpipe carried by and in communciation with the interior of said dome-like support terminating at an off-center point and at its upper end in the form of a substantially continuous horizontally disposed ring portion centrally above said dome-like support and of a diameter corresponding to the open top of a ground coffee accommodating sack, said ring having an inwardly disposed coplanar circular extension with a water discharging open end located substantially centrally thereof, and a disposable water pervious filter sack for ground coffee secured upon the ring portion of said standpipe by tying its open end over the ring portion of said standpipe.

3,089,406
FULLY AUTOMATIC TOASTER
Charles Roger Turner, Philadelphia, Pa., assignor to The Proctor-Silex Corporation, a corporation of Pennsylvania
Filed Jan. 28, 1960, Ser. No. 5,305
36 Claims. (Cl. 99—329)



1. In an automatic bread toaster having a frame including at least one bread receiving well, bread carriage

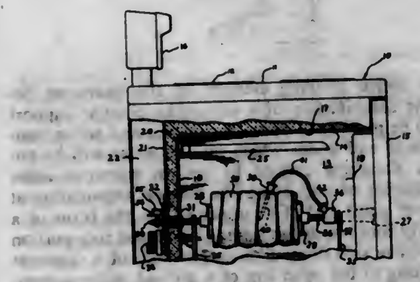
means within said well movable between a toasting position at the lower part of the well and a higher bread removal position, spring means adapted to effect movement of the carriage from one position to the other in the course of releasing stored energy, means acting alternately to stress and release stored energy in the spring means, including motor means which, upon energization, releases the spring means so that the spring means is able to apply its stored energy to move the carriage, a switch in circuit with said motor means, means for closing said switch and thereby causing the carriage to move under the urging of said spring, switch actuating means operatively connected with said carriage to open said switch effective only as a result of interference with the movement of the carriage at any point in its travel under the urging of said spring, and means for holding said switch actuating means inoperative as long as the carriage moves under the urging of said spring.

3,089,407

TEMPERATURE SENSOR FOR ROASTING OVEN

Robert A. Kinkle, Louisville, Ky., assignor to General Electric Company, a corporation of New York

Filed Sept. 21, 1961, Ser. No. 139,709
5 Claims. (Cl. 99—340)



4. A roasting oven comprising walls defining an oven cavity, a rotisserie spit supported within the oven for rotary movement therein, one end of the spit extending through one wall of the oven, a drive motor supported behind said wall and engaging said spit for driving the same, the spit having an elongated hollow metal shaft that is adapted to be supported at its opposite ends, an electric receptacle carried by the spit at one end that is opposite the drive motor but inside the point of support thereof, and electrical take-off means provided at the end of the spit adjacent the drive motor, the spit including a portion of an electric circuit that joins the electric receptacle to the take-off means and separately joins the electric receptacle to the shaft of the spit, the oven including a remotely located temperature indicating meter which is electrically connected to the spit, and an oven thermometer separate from the spit and being adapted to be inserted into meat impaled on the spit, said thermometer having an electrical connection with the said receptacle carried by the spit.

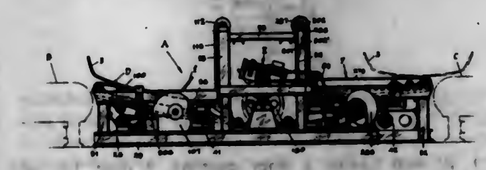
3,089,408

APPARATUS FOR PRESSING GLASS-PLASTIC ASSEMBLIES

Rollin L. Swindler, Ottawa, Ill., assignor to Libbey-Owens-Ford Glass Company, Toledo, Ohio, a corporation of Ohio

Filed Jan. 10, 1958, Ser. No. 708,194
4 Claims. (Cl. 100—49)

1. An apparatus for pressing together an assembly of curved glass sheets and a plastic interlayer and including a structural framework, a conveyor frame pivotally mounted on one end of the framework at its outer end and disposed in a downwardly inclined position, pairs of integral vertically disposed members located in substantially spaced relation from the transverse vertical axis of the framework, rotatable means carried by one pair of the vertically disposed members and operatively connected to the inner end of the conveyor frame, fluid means adapted to drive the rotatable means and to raise and sequentially lower the said frame at the inner end thereof, a source of power mounted on the said framework, a pair of shafts rotatably mounted on the ends of the conveyor frame, a substantially endless belt entrained about the pair of shafts to move a glass-plastic assembly along a predetermined path transversely disposed to the axis of curvature thereof, means operatively connecting at least one of the pair of shafts to the source of power, a rotatable cam actively associated with the fluid means to control the operation thereof, a second conveyor frame mounted on the opposite end of the framework at its outer end and disposed in a substantially horizontal position, rotatable means carried on the second of the pairs of vertically disposed members and operatively connected to the inner end of the second-named conveyor frame, fluid means adapted to drive the second-named rotatable means and to lower and sequentially raise the second-named conveyor frame at the inner end thereof, a pair of



shafts rotatably mounted on the ends of the second-named conveyor frame, a substantially endless belt entrained about the shafts to move a glass-plastic assembly forwardly along a predetermined path transversely disposed to the axis of curvature thereof, means operatively connecting at least one of the pair of shafts on the second-named conveyor frame to the source of power, a rotatable cam actively associated with the second-named fluid means to control the operation thereof, a pair of axially parallel pressing rolls disposed in the transverse axis of the framework, a pivotally mounted frame for supporting the pair of pressing rolls disposed in an angular plane inclined to the horizontal and interposed between the inner ends of the first and second conveyor frames, means operatively connecting one of the pair of rolls to the source of power, operating means for swinging the frame sequentially forwardly and rearwardly between the first angularly inclined position and a second angularly inclined position, fluid means adapted to drive the operating means, a rotatable cam actively associated with the third-named fluid means to control the operation thereof, means operatively connecting the first and third-named cams to the source of power, and means operable by the third-named cam for operatively connecting the second-named cam to the source of power.

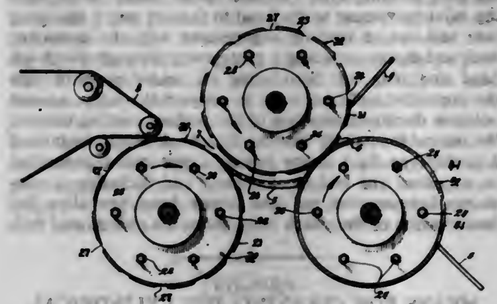
3,089,409

PAPERMAKING MACHINES

Donald G. Tretheway, Neenah, and Richard O. Hansen, Menasha, Wis., assignors to Kimberly-Clark Corporation, Neenah, Wis., a corporation of Delaware

Filed June 12, 1961, Ser. No. 116,329
3 Claims. (Cl. 100—162)

3. In a macerating and dewatering apparatus having circumferentially grooved press rolls, a pair of coacting, nip-forming rolls each comprising an assembly of annular segments of mild steel, the surface of each of said segments being circumferentially grooved, the grooved surface of each of said segments having a spray-applied



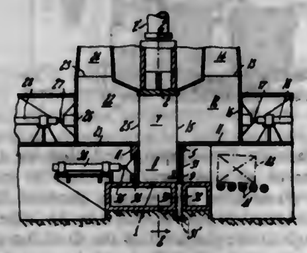
coating of cemented tungsten carbide grit fused thereon to provide an abrasion resistant rough friction surface.

3,089,410

APPARATUS FOR THE PRESSING OF FIBRE GOODS INTO BALES

Karl Stangl, Weiher, Wiesbachstr. 11, Salzburg, Austria

Filed Nov. 20, 1959, Ser. No. 854,295
1 Claim. (Cl. 100—215)



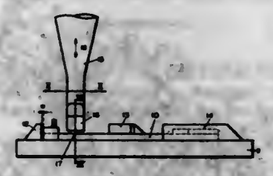
Apparatus for the pressing of successive volumetrically defined increments of defibered fiber goods into a bale into which said increments are successively pressed to have the consistency of individual layers compacted into a bale from which the individual layers are adapted to be peeled off successively, which comprises a base, a pressing chamber having bottom, side and end walls fixed during said pressing operation to conform to the dimensions of a bale to be pressed therein, a vertically movable stamp disposed over said pressing chamber for movement from above to within the pressing chamber, a receiving chamber for defibered fibre goods disposed above, projecting to each side of and opening into said pressing chamber, a pair of oppositely disposed feeding pistons each having a pusher face arranged for movement transversely across said receiving chamber toward the other said pusher face to a position in which said faces form upward extensions of the walls of said pressing chamber and define opposite sides of a semi-compression chamber within said receiving chamber above said pressing chamber, said pusher faces acting to partially press and to push a volumetrically measured increment of material into said semi-compression chamber, means for moving said vertically movable stamp downwardly with each advance of said pusher faces thereby to compact and to press each successive layer of material onto a bale within said pressing chamber, and means comprising a removable plate forming a door in one wall of said pressing chamber and a presser plate forming the opposed wall of said pressing chamber movable to eject the completed bale from said pressing chamber through said door.

3,089,411

METHOD OF REMOVING MATERIAL FROM THE SURFACE OF BODIES

Hans Sollberger, Grenchen, and Walter Roth, Wabern, Bern, Switzerland, assignors to Technik- und Handels Aktiengesellschaft, Zurich, Switzerland

Filed July 21, 1959, Ser. No. 828,475
Claims priority, application Switzerland July 24, 1958
10 Claims. (Cl. 101—3)



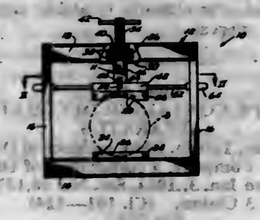
1. The method of removing chip material from a surface portion of a hard and rigid body comprising the steps of holding the body with at least said surface portion oscillatable in a direction perpendicular to said surface portion; bringing a tool edge having the outline of the material to be removed into abutting relationship with said surface portion of said body; and while in said abutting relationship producing ultrasonic vibrations passing in said direction through said tool edge and said body to excite said body to oscillate so that chip material is removed from said surface portion by said tool edge exactly matching the outline of said tool edge.

3,089,412

BOWLING BALL PRESS

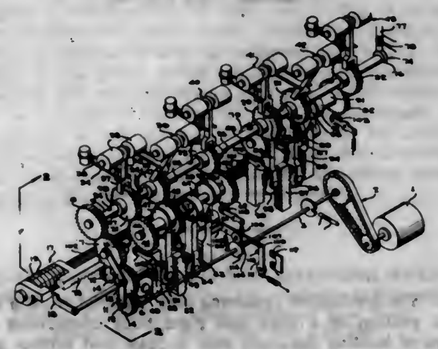
Henry Harold Poort, Grand Haven, Mich., assignor to Dake Corporation, Grand Haven, Mich., a corporation of Michigan

Filed Oct. 21, 1960, Ser. No. 64,092
11 Claims. (Cl. 101—4)



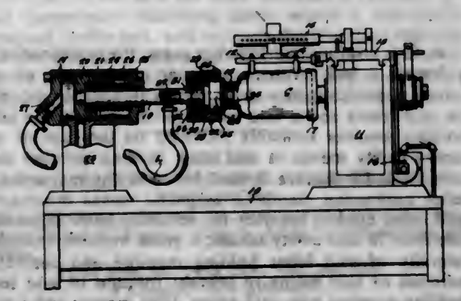
4. In a bowling ball lettering press, the combination of a frame; a ball receiving member on the base of said frame; a vertical screw drive means threadably mounted on said frame above said ball receiving member; a letter holding member rotatably mounted on the base of said screw; cavity means in said letter holding member adjacent the lower surface thereof for receiving magnetizable letter impression members; magnetic means mounted in said letter holding member for retaining letter impression members in said cavity means; a guide member extending laterally of said letter holding member and contacting portions of said frame to prevent rotation of said letter holding member with said screw drive means; and a plastic sleeve mounted on each end of said guide member to provide a bearing surface and to align said letter holding member with said ball receiving member.

3,089,413
MEDIUM-SPEED SERIAL PRINTER
John H. MacNeill, Indialantic, James E. Bellinger, Jr., Eau Gallie, and Thomas G. Holmes, Melbourne, Fla., assignors to Soroban Engineering, Inc., Melbourne, Fla., a corporation of Florida
Filed June 12, 1961, Ser. No. 116,524
24 Claims. (Cl. 101—93)



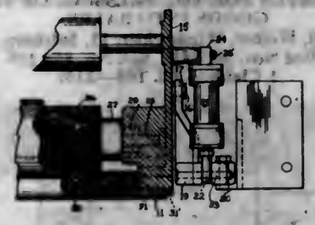
1. A character selection mechanism for printing devices comprising a character bearing element, a printing member and means for positioning said character bearing element relative to said printing member, said means comprising an intermittently rotatable member, means for intermittently rotating said rotatable member such as to provide a short stationary interval between each interval of rotation, a drive element for moving said character bearing element relative to the printing member, and a selectively operable coupling means for coupling said drive element to said intermittently rotatable member for movement thereby, said coupling means comprising a mechanical motion summing device including a plurality of elements each, when coupled to said intermittently rotatable member being movable between a first and a second position for applying mechanical motions to said summing device which, respectively, represent a zero and a different selected multiple of a specified unit of motion and means for at will coupling each of said plurality of elements to said intermittently rotatable member during said stationary interval.

3,089,414
HOLLOW CONTAINER DECORATING APPARATUS
Albert S. Jenkins, Toledo, Ohio, assignor to Owens-Illinois Glass Company, a corporation of Ohio
Filed Jan. 3, 1961, Ser. No. 80,137
3 Claims. (Cl. 101—124)



1. Apparatus for supporting a preformed expanded hollow neck-embodying plastic container in position to receive an exterior decoration or label, comprising a base chuck, a chuck head, a container neck-engaging and sealing plug forming a part of said head, means for imparting axial movement to the head to thereby move said plug into and out of holding engagement with the container neck and means including a passageway through the chuck head and plug for introducing air under pressure into the container sufficient only to support the latter against collapse during application of the surface coating thereto, the means for axially moving the chuck head comprising a piston-type fluid motor having a piston-rod connected to an outer free end to said head and including a connector between the rod and chuck head providing for free rotation of the chuck head about the axis of said rod.

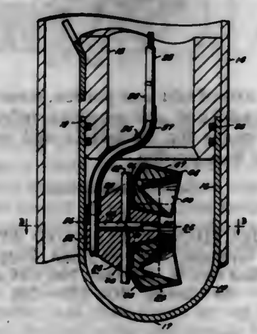
3,089,415
MEANS FOR CLEANING THE CYLINDRICAL SURFACE OF PRINTING PRESS BLANKET ROLLER
Elmer C. Grembocki, 10100 Old Orchard Court, Skokie, Ill., and Adolph J. Nelson, 1230 Forrest Drive, La Grange Park, Ill.
Filed Nov. 24, 1961, Ser. No. 154,614
6 Claims. (Cl. 101—425)



1. A mechanism for scraping and cleaning the cylindrical surface of an elongated blanket roller comprising
(*a*) a trough adapted to contain a cleaning fluid,
(*b*) an elongated brush rotatable in the upper area of the trough above the level of the fluid therein,
(*c*) means for supporting the brush in contact with and for rotation relative to said surface of said blanket roller,
(*d*) and an elongated rotatable applicator roller mounted in said trough and having its cylindrical surface in bearing engagement with said brush and provided with shallow depressions functioning to transfer the fluid from said trough to the bristles of said brush in a uniform amount for transfer by said brush in the form of a film of fluid to said cylindrical surface of said blanket roller, the cylindrical surface of said applicator roller having intersecting spiral grooves formed thereon which engage and comb the bristles of said brush when said brush and applicator roller are rotated relative to each other.

3,089,416
METHODS OF AND MEANS FOR FRACTURING EARTH FORMATIONS
Bruce Gilbert, 518 Meadows Bldg., Dallas, Tex.
Filed Oct. 5, 1959, Ser. No. 844,536
4 Claims. (Cl. 102—20)

1. An apparatus for fracturing an earth formation in a predetermined plane at a location spaced from a surface of said formation, said apparatus including: mounting means; a first pair of explosive jet charges secured to said mounting means and having substantially parallel spaced axes lying in a common plane for directing a first pair of jets into the formation from the surface thereof toward said location when the apparatus is disposed adjacent said surface with said common plane coplanar with said predetermined plane to penetrate the formation and generate a pair of shock waves in the formation having parallel spaced axes lying in said predetermined plane whereby said pair of shock waves intersect initially in said predetermined plane in said formation; a second pair of explosive jet charges secured to said mounting means having converging axes lying in a plane substantially perpendicular to said common plane and intersecting in said common plane and between the axes of said first pair of jet charges for directing into the formation from the surface thereof, when the apparatus is disposed adjacent said surface with said common plane coplanar with said predetermined plane, a second pair of jets having convergent axes intersecting at said predetermined plane in said formation and colliding in said predetermined plane



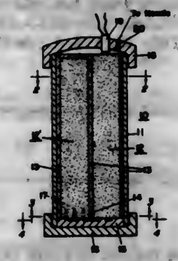
for generating a third shock wave in said formation; and means for detonating said first pair of charges and said second pair of charges, said mounting means and said detonating means cooperating to hold said two pairs of jet charges in predetermined relationship to each other and the surface of the formation when the apparatus is disposed adjacent said surface and to detonate said charges to cause said second pair of jets to penetrate into said formation at said surface subsequent to the penetration of said first pair of jets into said formation at said surface whereby said second pair of jets collide and generate said third shock wave subsequent to the initiation of generation of said first pair of shock waves by said first pair of jets.

3,089,417
EXPLOSIVE CABLE-CUTTING FITTING
Raymond H. Beyer, Fort Worth, Joseph E. Burke, Dallas, and Donald J. Halsey, Arlington, Tex., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Jan. 23, 1961, Ser. No. 84,466
2 Claims. (Cl. 102—24)



1. An explosive fitting for attachment around a cable or the like and capable of severing the cable comprising:
(*a*) a separable holder for supporting a shaped charge;
(*b*) said holder comprising a base member and a cover member;
(*c*) means for detachably connecting said members;
(*d*) said charge being elongate, and the holder supporting the shaped charge in a position oriented transversely the cable;
(*e*) said cover member having an opening for insertion of a primer into the charge for igniting same;
(*f*) removable means for supporting said primer in the holder;
(*g*) a strap having free ends connected to said base member for clamping the holder to the cable; and
(*h*) means for drawing said free ends together in clamping relation whereby the holder can be fixed to the cable to be severed at any desirable location.

3,089,418
GAS GENERATOR FOR GUIDED MISSILES
Ludwig Stiefel, Philadelphia, Pa., assignor to the United States of America as represented by the Secretary of the Army
Filed Nov. 2, 1960, Ser. No. 66,889
3 Claims. (Cl. 102—39)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A compact gas generator comprising a generally similar first and second discontinuous and separate solid propellant for powering a turbine and the like in a missile system wherein the propellants are inclosed in a casing having an upper end and a lower end, a first igniter at said upper end for initial ignition of the first propellant, said propellants being in adjacent parallel relation to each other and having coplanar ends, thermal insulation between said propellants, a second igniter adjacent a lowermost portion of said insulation and contacting each of said propellants, a crossover member at the lower end of said casing in contact with said second igniter and propellants, said second propellant having a plurality of spaced bores in its end adjacent the crossover member, said crossover member being devoid of any propellant therein and containing a series of passageways solely for passage of hot gases therethrough, said passageways communicating between said second igniter and propellants and means adjacent said first igniter for exiting a constant flow of gases upon the separate and sequential burning of the propellants.

3,089,419
GAS-GENERATING POWER SOURCE
Frank B. Pollard, 2722 Ardmore Ave., Manhattan Beach, Calif.
Filed May 8, 1961, Ser. No. 108,516
4 Claims. (Cl. 102—39)



1. A gas-generating power source comprising: an accumulator including an accumulator chamber; a conduit discharging from said accumulator chamber; a casing having a cavity in fluid connection with said accumulator chamber; a solid charge in said cavity so disposed and

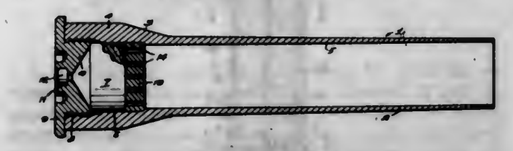
arranged as to discharge gaseous products of its burning into said accumulator chamber; igniter means for causing the charge to burn; actuator means connected to the igniter means for actuating the igniter means; and heat transfer means connected to the conduit to receive gases therefrom and adapted to accomplish heat transfer for said gases without dilution of said gases, whereby upon igniting the igniter, the solid charge is caused to burn and discharge gaseous products of combustion into the accumulator from which they are discharged through the conduit and the heat transfer means, and whereby cooler gases are delivered by the heat transfer means than by the conduit from the accumulator chamber.

3,089,420

CARTRIDGE CASE FOR 20 MM. GUN SYSTEM

Frank W. Littleford, Liberty, Mo., assignor to the United States of America as represented by the Secretary of the Army

Filed Jan. 5, 1961, Ser. No. 80,959
1 Claim. (Cl. 102—43)
(Granted under Title 35, U.S. Code (1952), sec. 266)



In a cartridge case for use in a gun system the combination comprising, a one piece circular in cross section body, said body having a forwardly tapering forward portion and a rearward portion having a cylindrical end part of greater thickness than any portion of said forward portion, said rearward portion further being tapered from said thickened cylindrical part to integrally connect the thickest portion of said forward portion, said rearward portion being of substantially less length than said forward portion, there being a cylindrical axial bore in said forward portion and a coaxial counterbore of greater diameter than said axial bore in said rearward portion connecting said axial bore, said coaxial bore being internally threaded along a part of its length, an externally threaded head having a generally cylindrical threaded portion and a flange portion of greater diameter than said rearward cylindrical portion and said threaded cylindrical portion, said head being secured in said threaded coaxial bore by said threaded cylindrical portion, said counterbore forming a propellant chamber therein, and a throttling means in said propellant chamber, said throttling means including a separate perforated disc disposed in the forward end of said propellant chamber, said disc having a thickness less than the length of and a diameter substantially the same as said propellant chamber.

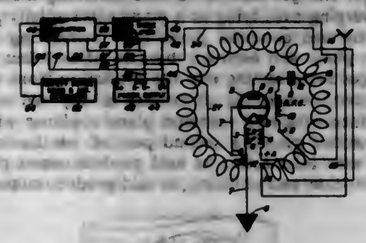
3,089,421

TOROIDAL COIL INFLUENCE OSCILLATOR

Ralph O. Robinson, Jr., Silver Spring, Md., assignor to the United States of America as represented by the Secretary of the Navy

Filed Oct. 27, 1955, Ser. No. 543,285
1 Claim. (Cl. 102—70.2)

In combination with a proximity fuze for projectiles, said fuze having a nose portion, and means responsive to a signal for detonating said fuze; an oscillator arrangement for generating electromagnetic radiation and detecting reflections of said radiation to produce said signal, comprising, an electron tube mounted within said nose portion along the axis of symmetry thereof, a resonant circuit including a toroidal inductance coil, circuit connections between said electron tube and said resonant circuit to cause sustained oscillating currents to flow within said coil, said coil being mounted in a plane transverse to the axis of said nose portion and surrounding said electron tube, said coil also having its centerline coincident with the axis of said nose portion, means for radiating energy from said coil and receiving reflections of said energy, and means for embedding said arrangement in said projectile nose portion.

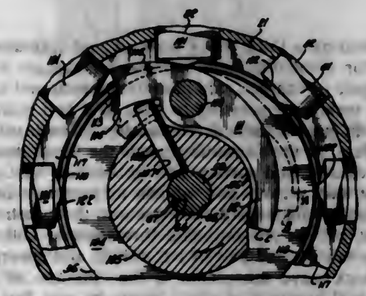


3,089,422

FUEL INJECTION SYSTEM AND APPARATUS

George C. Graham, 76 Crest Road, Ridgewood, N.J.

Filed Oct. 9, 1959, Ser. No. 845,410
13 Claims. (Cl. 103—38)



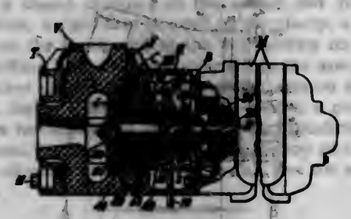
1. A pump comprising a pump body, a plurality of cylinders radially arrayed in said body, a rotatable drive shaft mounted in said body and positioned centrally of said array of cylinders, a piston in each of said cylinders movable freely longitudinally therein, said pistons normally resting at the inner ends of their respective cylinders, a cam mounted pivotably on said shaft, a portion of said cam successively engaging the inner ends of each of said pistons as said shaft rotates to cause said pistons to produce outward pressure strokes within their respective cylinders, an axial aperture in said shaft, a cam control element capable of rectilinear movement in said aperture, a radial bore in said shaft communicating with said axial aperture, a plunger movable longitudinally in said bore, the outer end of said plunger being adapted to cause the pivotal movement of said cam, a sloping camming surface on said cam control element, the inner end of said plunger bearing against said camming surface, the movement of said cam control element causing said plunger to control the position of said cam whereby a pressure stroke of the desired magnitude is produced by each of said pistons when engaged by said cam, and an elongated extension on said cam, said extension being operative when said shaft rotates to move outwardly under centrifugal force and to cause the cam to bear against the outer end of said plunger and to cause the inner end of said plunger to bear continuously against said cam control element.

3,089,423

CORROSIVE RESISTANT PUMP

Samuel H. S. Raab, Bay Village, Ohio, Edwin S. Malkin, Wilton, Conn., and William J. Alton, Cleveland, Ohio, assignors to Union Carbide Corporation, a corporation of New York

Filed Nov. 25, 1960, Ser. No. 71,548
10 Claims. (Cl. 103—87)



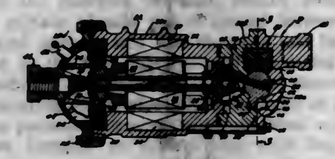
1. In a corrosive resistant pump including a hollow metal casing having a volute support flange and a motor engaging flange, a volute casing and cover of a corrosive resistant material mounted to said volute support flange, a motor mounted to said motor engaging flange and an impeller within said volute casing secured to a shaft driven by said motor; the improvement which comprises a seal assembly of a corrosive resistant material comprising, in combination, a shaft sleeve provided onto said shaft and rotatable therewith, said shaft sleeve having spiral groove means provided thereon at an end remote from said impeller, a rotary seal ring secured to said shaft sleeve and a stationary seal ring mounted within said cover, said rotary and stationary seal rings providing therebetween a primary seal for said pump, a seal ring adaptor positioned to said stationary seal ring, said adaptor being of a dimension larger than said shaft sleeve and providing therewith an annular chamber for entrapment of leakage through said primary seal, said spiral groove means on said shaft sleeve cooperating through a close but free running fit with said adaptor to define a secondary seal for said pump operable through rotation of said shaft, and means for preventing rotation of both said stationary seal ring and said adaptor and for securing them within said volute cover.

3,089,424

WOBBLE PUMP

La Verne L. Smith, Reseda, Calif., assignor to Telecomputing Corporation, a corporation of California

Filed Aug. 16, 1957, Ser. No. 678,579
3 Claims. (Cl. 103—133)



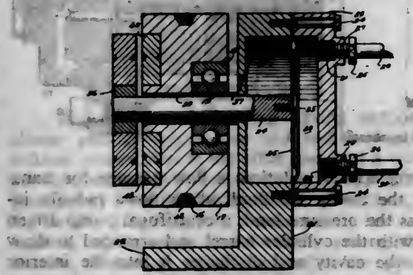
1. In a wobble pump the combination of:
a housing;
a hub journalled in said housing and forming therewith an annular pump chamber having two opposite annular side walls, said chamber having an inlet port and an outlet port;
a radial dividing wall between said inlet port and outlet port;
a circumferential impeller blade carried by said hub in sliding contact with said dividing wall;
an arm extending outward from said hub for actuation thereof, said arm having a driven portion of circular cross-sectional configuration, said driven portion being movable along a path with its center of cross-sectional curvature describing a circular orbit to wobble the impeller blade in rolling contact with said two side walls; and
a rotary driving means with its axis of rotation passing through the center of curvature of said hub, said rotary driving means having a driving face extending along a radius of said orbit in contact with the circular periphery of said driven portion of the arm, said driven portion of the arm being free to shift outwardly along said face for passing said impeller blade against said side walls, the region of said face in contact with said driven portion of the arm lying inside said orbit to impart a radially outward component of force to said arm to press the impeller blade against said side walls.

3,089,425

MAGNETIC PUMP

Harold E. Sprague, Chagrin Falls, and Merle E. Olson, Chesterland, Ohio, assignors to Thompson Ramo Wooldridge Inc., Cleveland, Ohio, a corporation of Ohio

Filed Jan. 30, 1961, Ser. No. 85,555
2 Claims. (Cl. 103—152)



1. A pump assembly comprising a shaft, a rotatable member mounted on said shaft, bearing means interposed between said rotatable member and said shaft to permit relative rotative movement therebetween, means on said rotatable member for coupling said rotatable member to a driving mechanism, a reciprocating member in closely spaced relation to said rotatable member, a plurality of magnets carried in one face of said rotatable member, a plurality of magnets carried in the face of said reciprocating member which confronts said one face of said rotatable member, all of said magnets being magnetized such that they present a single polarity along their confronting surfaces, the magnets in said rotatable member and in said reciprocating member presenting confronting surfaces whose magnetic polarity alternate in sequence, a flexible diaphragm coupled to said reciprocating member, a pump housing receiving said flexible diaphragm for reciprocation therein, a fluid inlet supplying fluid to said pump housing, and a fluid discharge in said housing for discharging pressurized fluid therefrom.

3,089,426

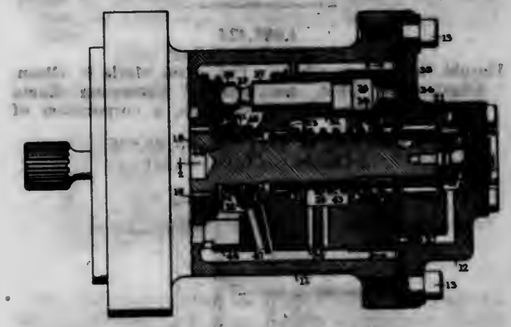
ENGINE

Tadeusz Budzich, Cleveland, Ohio, assignor to The New York Air Brake Company, a corporation of New Jersey

Filed Sept. 17, 1958, Ser. No. 761,530
2 Claims. (Cl. 103—162)

1. In an engine of the type including a housing, a drive shaft, bearings mounted in the housing for supporting the drive shaft, a rotary cylinder barrel driven by the shaft and mounted thereon for universal and longitudinal movement, a circular series of longitudinally reciprocable pistons mounted in the cylinder barrel, a distribut-

ing valve having mating faces carried by the cylinder barrel and by the housing which extend in planes perpendicular to the axis of rotation, high and low pressure ports formed in the valve face carried by the housing, and a pressure land formed in one of the valve faces for supporting an hydraulic film produced by the leakage of high pressure fluid radially inward and outward across the land, and in which the pistons are moved on their discharge strokes by a cam plate inclined with respect to the axis of rotation of the cylinder barrel, whereby the centers of gravity of the pistons lie in a common plane inclined with respect to a plane normal to said axis so that the centrifugal forces generated by the pistons produce a tilting moment on the cylinder barrel, the improvement which comprises a closed cavity formed in the cylinder barrel and isolated from free communication with said high and low pressure ports, the cavity



encircling the axis of rotation; a flow passage for transmitting to the cavity the fluid which flows radially inward across the pressure land; a centrifugal pump driven in unison with the cylinder barrel and arranged to draw fluid from the cavity and discharge it into the interior of the housing; and two opposed reaction surfaces on the cylinder barrel, one of the surfaces being subject to the pressure in the housing and arranged to produce a force which urges the valve faces into contact with each other, and the other surface being subject to the pressure in the cavity, the areas of the reaction surfaces being so correlated with the pressure differential created by the centrifugal pump that the force acting on said one reaction surface predominates, whereby the net pressure force developed by the reaction surfaces counteracts the tendency of the cylinder barrel to tilt under the action of the centrifugal force moment generated by the pistons and the mating faces of the distributing valve are maintained in engagement.

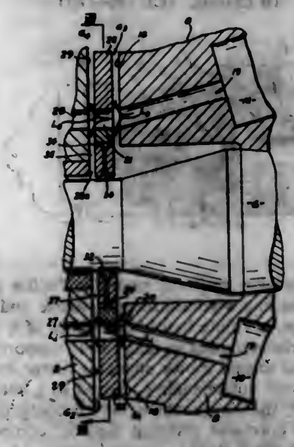
3,089,427

HYDRAULIC MACHINES

Donald Firth and Roger H. Y. Hancock, East Kilbride, Glasgow, Scotland, assignors to Council for Scientific and Industrial Research, London, England, a corporation of the United Kingdom

Filed Apr. 14, 1960, Ser. No. 22,334
Claims priority, application Great Britain Apr. 16, 1959
13 Claims. (Cl. 103—162)

1. A swash plate type hydraulic machine comprising a stationary swash plate, a rotatable cylinder block, a plurality of pistons reciprocable in cylinders in said cylinder block under control of the swash plate, ports in a flat face of the cylinder block communicating with the cylinders therein, a stationary port block having a flat face, inlet and outlet ports in said flat face of the port block registrable with the ports in the cylinder block, a port plate interposed beween the flat faces of the cylinder block and the port block and having apertures permitting the passage of fluid between the ports in the cylinder block and the ports in the port block, said port plate having opposite flat faces of substantially equal area and clearances being provided between said opposite faces and the flat faces of the cylinder block and the port block within the limits of which clearances the port plate is free to move axially, whereby pressure fluid from said ports maintains a fluid film on



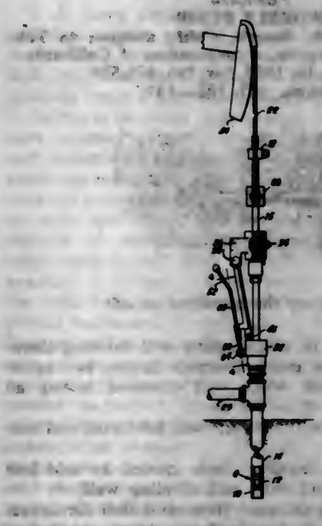
each flat face of the port plate giving substantially equal and opposite axial loadings, a radial locating member having an annular surface spaced with radial clearance from an annular surface on said port plate within the limits of which clearance the port plate is free to move radially, a plurality of pockets disposed symmetrically around one of said annular surfaces and open toward the other annular surface and a constricted fluid-supply connection to each of said pockets.

3,089,428

PUMP SHAKER

Marvin Johnston, Pampa, Tex., assignor, by direct and mesne assignments, to J. M. Huber Corporation, Borger, Tex., a corporation of New Jersey

Filed Mar. 27, 1961, Ser. No. 98,412
14 Claims. (Cl. 103—179)



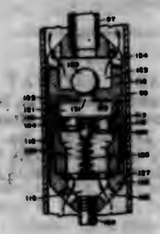
1. In a well including a pipe extending deep within the ground, a pump deep within the ground on the pipe, said pump having a valve to control the flow of fluid within the pump, a sucker rod connected to the pump, said sucker rod extending within the pipe to the surface of the ground, a stuffing box on top of the pipe to form a fluid tight seal between the pipe and the sucker rod, and means for reciprocating the sucker rod relative to the pipe; the improved means for shaking the valve comprising: a clamp clamped to the sucker rod above the stuffing box, a rigid arm pivoted to the clamp, a bearing surface on the lower end of the arm resting on the top of the stuffing box, an elbow attached to the arm extending adjacent the bearing surface of the arm on the stuffing box, and a lever pivoted to the elbow, a portion of said lever resting against the pipe; so that rotation of said lever forces the bearing surface from the top of the stuffing box allowing the sucker rod to fall free for a limited distance.

3,089,429

VALVE FOR SUBSURFACE PUMPS

Curtis L. Massey, P.O. Box 573, Immokalee, Fla.

Original application Feb. 18, 1960, Ser. No. 9,537. Divided and this application Jan. 23, 1961, Ser. No. 84,160
2 Claims. (Cl. 103—225)



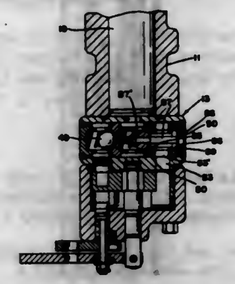
1. Apparatus forming the plunger of a sub-surface pump comprising a reciprocating piston adapted for arrangement in a pumping chamber of said pump, said piston having a cavity therein, first transverse partition member arranged in said cavity dividing said cavity into a first chamber and a second chamber, a second transverse partition member in said cavity vertically spaced from said first transverse partition member and dividing said cavity into a third chamber, said piston being formed to provide a first inlet to the first chamber and an outlet from said third chamber fluidly communicating with the exterior of said housing, said first partition member being formed to provide a second inlet to said first chamber fluidly communicating with the exterior of said piston and with the pumping chamber, sealing means on the exterior surface of said piston spaced between the first and second inlet to said first chamber and between the first inlet to the first chamber and the outlet from the third chamber, said first inlet to the first chamber fluidly communicating separately with the exterior of the piston, said first partition member being provided with at least one port forming an outlet from said first chamber fluidly communicating with said second chamber, said first partition member being formed to provide a seating surface on said second inlet in said first chamber, a first valve member adapted to seat on said seating surface, means in said first chamber normally urging said first valve member against said seating surface to close said second inlet, said first valve member being movable away from said seating surface for said second inlet to open said second inlet on imposition of a fluid pressure from the exterior of said housing against said valve member greater than the force of said urging means, said second transverse partition member being provided with a port fluidity communicating the second chamber with the third chamber, said second partition member being formed to provide a seating surface on said port in said second partition member in said third chamber, and a second valve member seatable on said seating surface in said third chamber member and movable therefrom on exertion of differential pressure in said third chamber against said second valve member.

3,089,430

SAFETY SHUT-OFF FOR PISTON PUMP AND VALVE UNIT

Homer J. Shafer and Benjamin A. Metzger, Mansfield, Ohio, assignors to Shafer Valve Company, Mansfield, Ohio, a corporation of Ohio

Filed Aug. 7, 1958, Ser. No. 753,812
3 Claims. (Cl. 103—228)



1. In a valve unit housing having suction and discharge passageways at one end and fluid pressure and exhaust connections at the other end, and a valve element between said ends for selectively connecting the suction passageway with the fluid pressure connection, said housing having a suction duct connected to said suction passageway at an angle thereto and opening through the housing at one end, an annular seat in the opposite end of said duct, a ball check normally seated on said seat for opening away from said suction passageway, a piston movably mounted in the open end of said duct and having an effective area greater than the effective area of the ball check within said seat, an O-ring seal for the piston, said piston having an annular groove receiving said O-ring of substantially greater axial width than said ring in sealing position, and means rigidly connecting said piston to said ball check.

3,089,431

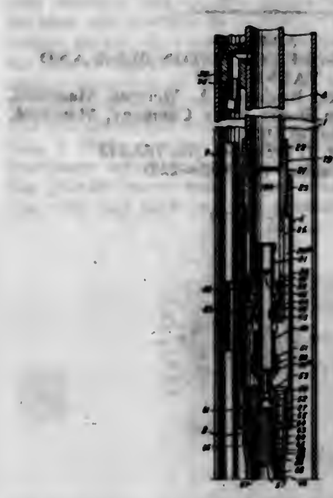
GAS LIFT CHECK VALVE

Roy C. Davis, Dallas, Tex., assignor, by mesne assignments, to Dresser Industries, Inc., Dallas County, Tex., a corporation of Delaware

Filed Feb. 25, 1958, Ser. No. 717,460
8 Claims. (Cl. 103—232)

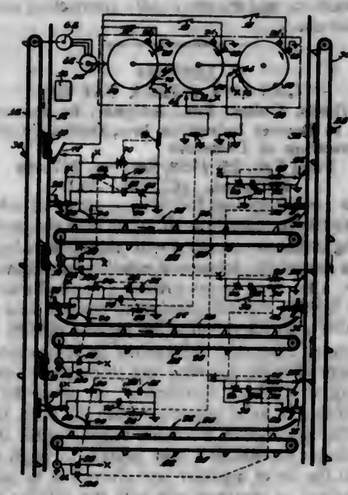
1. In a gas lift system for wells, a string of tubing having an axial bore therethrough; a gas lift valve mounted in the tubing in communication with the bore; a housing attached in the tubing in spaced relationship above the gas lift valve; a latching recess provided in the housing; a retrievable locking device arranged to latch in said recess; a check valve suspended below the locking device, and having a tubular extension therebelow in removable sealing engagement with the housing and in communication with the tubing string bore therebelow; an upwardly opening valve member in axial alignment with the bore, forming a part of the check valve, normally seating in the upper end of the tubular extension; a flow passage through the housing about the valve member and above the tubular extension arranged to communicate with the tubular extension and the tubing string thereabove when the check valve is open the said valve member normally closing the flow passage to the flow of fluid therethrough; the said valve mem-

ber being movable from its seat by gas pressure injected into the tubing through the gas lift valve so as to establish communication through the flow passage and the tubular extension between the tubing string bore above and below the housing; and another flow passage com-



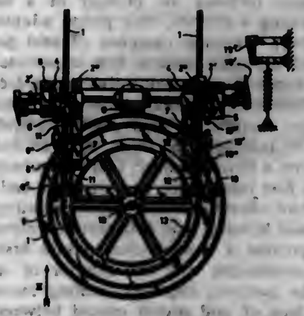
municating with the tubing above and below the check valve to provide communication between the tubing string above and below the check valve when the check valve is in closed position, said another flow passage being less in cross-sectional area than the bore of the tubing string.

3,089,432
ELECTRIC CONTROL FOR CARRIER SYSTEM
Chester W. McKee and Harry D. McKee, Flossmoor, Ill., assignors to Welding Service, Inc., Franklin Park, Ill., a corporation of California
Filed Jan. 8, 1960, Ser. No. 1,356
3 Claims. (Cl. 104—88)



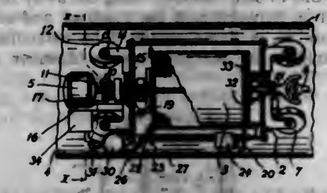
1. A control device for a carrier system including a plurality of carriers moving along a path of travel, a plurality of stations located along the path, and means at each station for performing an operaiton, said control device comprising a plurality of coextensive, mechanically interconnected endless strips of magnetizable material, one of said strips being provided for each station, means associated with each strip for perpendicularly magnetizing a selected area of the outer surface of its strip; means for selectively energizing said magnetizing means when one of the carriers is at a predetermined location on said path, a switch associated with each endless strip for actuating the operation-performing means of the station for which said strip is provided, each switch including an operating arm, and a roller of magnetic material on said arm, said roller being disposed adjacent the outer surface of its strip so as to be attracted by the magnetic field of said selected area to thereby move said arm and actuate said switch, means for moving said strips relative to said switches and to said energizing means at a speed which is in the same proportion to the speed of the carrier along the path of travel as the distance from the magnetizing means on one strip to the roller on the same strip is to the distance from said predetermined location to a location on said path immediately before the station for which said strip is provided, and means disposed along each endless strip after said magnetic operated switch for erasing the magnetized area.

3,089,433
CABLE RAILWAY
Ugo Carlevaro and Felice Savio, both of Via S. Secondo 33, Turin, Italy
Filed Apr. 28, 1961, Ser. No. 106,249
Claims priority, application Italy May 5, 1960
5 Claims. (Cl. 104—134)



1. A cable railway comprising a supporting and driving rope, a plurality of cabins carried by said rope, means for gripping and ungripping said cabins on said rope, a plurality of arrival and departure stations along said rope, each of said stations having a rail disposed parallel to said rope for receiving said cabins, a first fixed member disposed at one extremity of said rail, said first fixed member being adapted to cooperate with said gripping means for releasing said cabins from said rope, a second fixed member disposed at the opposite extremity of said rail, said second fixed member being adapted to cooperate with said gripping means for gripping said cabins on said rope, means for decelerating said cabins, said decelerating means being disposed adjacent to said first fixed member for slackening the speed of said cabins after their release from said rope, and means for accelerating said cabins, said accelerating means being disposed adjacent to said second fixed member for accelerating said cabins before their gripping on said rope.

3,089,434
CONDUIT TRACTOR
Aage Carl Holger Andreasen, Islands Brygge 41, Copenhagen, Denmark
Filed Sept. 22, 1958, Ser. No. 762,293
10 Claims. (Cl. 104—138)



1. A pipeline locomotive for operation through a tubular pipe and for laying and taking up a flexible cable, such as a power supply cable to the locomotive, and said cable emanating from a source of current supply located at one end of the pipeline, comprising a frame, a plurality of supporting rollers for said frame, radially disposed means for connecting said rollers to said frame, at least one of said rollers being yieldingly mounted in said frame in such a way that it is resiliently urged outwardly against the inner wall of the pipeline, and driving, guiding and storing means mounted in the locomotive for laying the cable from and taking up the cable into the storing means while the locomotive is in motion.

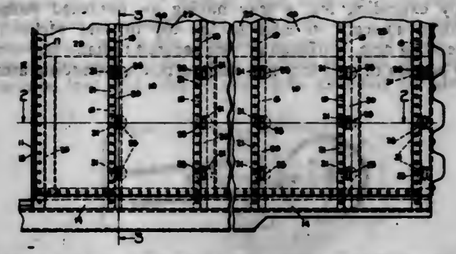
3,089,435
SLIDING HOPPER GATE ASSEMBLY
Walter L. Floehr, Toledo, Ohio, assignor to Unitcast Corporation, Toledo, Ohio, a corporation of Ohio
Filed June 9, 1959, Ser. No. 819,165
7 Claims. (Cl. 105—282)



1. In a slide gate assembly having a frame fixable to a hopper of a hopper car about a bottom opening therein, the combination of a slide gate slidably mounted in said frame, rack means fixed to said gate, a shaft carried by said frame, pinion means fixed against relative movement to said shaft and engaging said rack means for driving said gate between open and closed positions, said shaft being shiftable relative to said frame for disengaging said pinion means from said rack means and enabling removal of said gate, and groove-interrupting abutment means on said rack means and engageable with said pinion means for limiting outward movement of said gate relative to said frame.

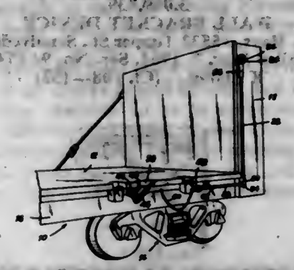
3,089,436
METALLIC LININGS FOR BOXCARS
John J. Buckley, Cleveland, Ohio, assignor to The Youngstown Steel Door Company, Cleveland, Ohio, a corporation of Ohio
Filed Aug. 5, 1957, Ser. No. 676,298
8 Claims. (Cl. 105—369)

1. In a railway boxcar having a side wall including a side sill, intermediate, corner and door posts secured to said side sill and metallic sheathing secured to said side sill and said posts, a planar metallic lining sheet disposed inwardly of said posts, said lining sheet extending substantially from said door posts to said corner posts and spanning said intermediate posts, said lining sheet having portions within the edges thereof which are pressed outwardly at vertically spaced intervals, said outwardly pressed portions being disposed in lateral alignment with said intermediate posts, openings formed within said outwardly pressed portions, and vertical anchor bars extending across the openings and secured to said outwardly



pressed portions in spaced relationship to said intermediate posts, said outwardly pressed portions being welded directly to said intermediate posts and spacing said lining sheet inwardly of said posts.

3,089,437
DIAGONAL BRACE FOR BULKHEAD FLAT CARS
George W. Hendricker, Aurora, Ill., assignor to Chicago, Burlington & Quincy Railroad Company, a corporation of Illinois
Filed Feb. 2, 1961, Ser. No. 86,642
1 Claim. (Cl. 105—411)

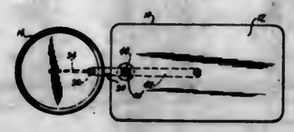


The combination with a freight car having an upright bulkhead transversely of said car, and an underframe, of a foldable brace, in extended position, disposed diagonally from the upper outer corner of said bulkhead to the side of said underframe remote from the bulkhead, one end of said brace being pivotally attached to said bulkhead and the other end of said brace being removably attached to said underframe, means intermediate of the ends of said brace providing a foldable joint for said brace, second means secured to said side sill to removably receive said other end of said brace in its folded position, means movably attached to said joint to prevent said joint from accidentally folding, said underframe attachment comprising a trough-like bracket secured to the underframe to receive the lower end of said brace, and a detent pivotally mounted to said underframe, depending over said brace to retain said brace in said bracket, and swingable to one side of said brace to permit removal of said brace from said bracket.

3,089,438
LAUNDRY TABLE
Mose L. Paradise, 615 E. 2nd St., Ladysmith, Wis.
Filed Oct. 17, 1961, Ser. No. 145,693
1 Claim. (Cl. 108—26)

A laundry table comprising a first tubular member adapted to be vertically inserted in the ground with a portion thereof extending above ground level, a first collar surrounding said portion, a set screw extended through said collar, a second tubular member telescopi-

cally movable in said first tubular member and secured in a selected position of adjustment by said set screw, a second collar secured to said second tubular member below the upper end thereof, an L-shaped arm having a horizontal leg affixed to said second collar and a vertically extending leg, a tray having an upturned flange secured adjacent its edge to the top of said vertically extending arm, a triangular web secured radially between the bottom of said tray and said vertically extending arm,



a third collar secured to said second tubular upright above said second collar, a set screw extending through said third collar, a third tubular upright telescopically mounted in said second tubular upright and secured in a selected position by said last-mentioned set screw, a laundry table having a planar top surface, a stud securing one end of said table to the top of said upright, and an angularly disposed brace secured between a mid point of the underside of said table and an intermediate point of said third tubular upright.

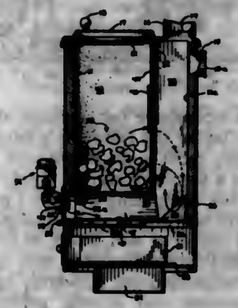
3,089,439
WALL BRACKET DEVICE
Lloyd J. Hays, 15532 Tupper St., Sepulveda, Calif.
Filed Mar. 7, 1961, Ser. No. 94,074
8 Claims. (Cl. 108—152)



6. In an arrangement for supporting a shelf from a wall, the combination of:
an anchor having means thereon accommodating direct attachment to the wall,
a supporting brace for disposition in angular relation to the wall and to the shelf to be supported,
tensioning means for interconnecting the brace and the anchor,
said tensioning means including means thereon to effectively vary the length thereof.

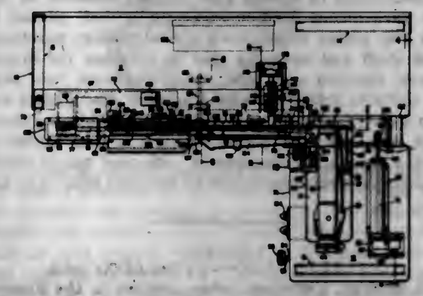
3,089,440
INCINERATOR
Claude A. Morgan, Huntington, Ind., assignor to The Majestic Company, Inc., Huntington, Ind., a corporation of Indiana
Filed Nov. 30, 1960, Ser. No. 72,713
2 Claims. (Cl. 110—18)

1. In an incinerator of the type having a generally hollow cylindrical configuration with a refractory side wall and a flue for disposing of combustion gases, a plate extending chordally across the lower portion of the incinerator and disposed in a generally vertical plane, two spaced grills extending from the upper margin of said plate and in substantially the same vertical plane to the upper margin of said incinerator, a generally channel-shaped member extending to the upper margin of said incinerator and disposed so that the outer face of its web portion is adjacent said plate and the inner side margins of said grills, said plate, grills, refractory side wall and outer face of said member defining a charge-receiving chamber having a truncated cylindrical configuration, whereby generally vertical gas passages are provided along the outer face of the sides of said channel-shaped member, said channel-shaped member defining with said refractory side wall a vertically extending combustion chamber communicating with the incinerator flue, the lower corner portions of said member being cut away to provide communication between said gas passages and said combustion chamber, a flame carrier tube extending transversely through said charge-receiving chamber adjacent



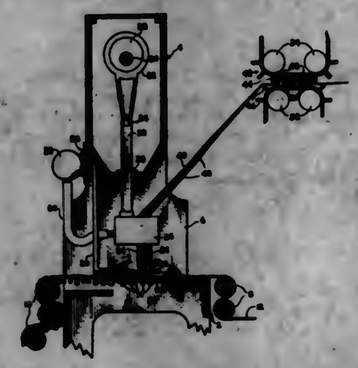
its base for igniting refuse in said chamber, means for introducing flame into one end of said tube, the opposite end of said tube being open to permit the exit of flame therefrom and extending through said channel-shaped member into said combustion chamber, and means for introducing combustion supporting air into said charge-receiving chamber whereby products of charge combustion and air are drawn by convection across said grills and into said vertical gas passages and travel downwardly in said passages to enter the base of said combustion chamber adjacent the open end of said flame carrier tube.

3,089,441
AUTOMATIC SEWING MACHINES
John A. Herr, Garwood, and Orland B. Reid, Kenilworth, N.J., assignors to The Singer Manufacturing Company, Elizabeth, N.J., a corporation of New Jersey
Filed Dec. 9, 1960, Ser. No. 74,820
9 Claims. (Cl. 112—2)



1. In combination, a sewing machine having stitch forming mechanism defining a point of stitch formation and feeding mechanism for advancing work past the point of stitch formation, a loading mechanism comprising a work carrying element, means mounting said element for movement between a loading position wherein work to be sewed is loaded onto said element and a work presenting position wherein said element presents the work to said sewing machine, drive means for moving said element forward from said loading position to said work presenting position and for moving said element in reverse from said work presenting position to said loading position, means for releasably securing work to said element, operator actuated means for closing said work securing means and for initiating forward actuation of said drive means, means for automatically terminating forward actuation of said drive means with said element in the work presentation position, for opening said work securing means, and for initiating operation of said sewing machine and reverse actuation of said drive means, means for automatically terminating reverse actuation of said drive means with said element in loading position, and means for automatically terminating operation of said sewing machine at the completion of the sewing operation.

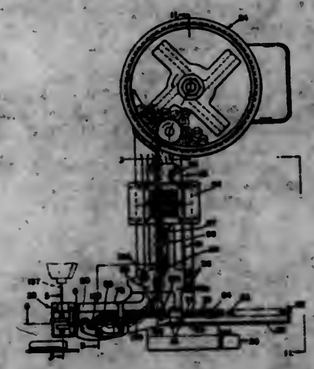
3,089,442
TUFTING METHOD AND APPARATUS
Joe T. Short, West Point, Ga., assignor to International Leasing Corporation, Wilmington, Del., a corporation of Delaware
Filed May 3, 1963, Ser. No. 192,242
11 Claims. (Cl. 112—79)



1. A multiple needle tufting machine comprising means for advancing a backing sheet along a path, a needle carrier extending across said path, a plurality of hollow needles mounted on said needle carrier and each having a free end portion projecting toward the backing sheet, each of said needles having a fluid passageway therein terminating in an outlet opening in said free end portion of the needle and having a yarn inlet opening spaced from said outlet opening, means for moving said needle carrier cyclically back and forth to insert the free end portions of said needles through the backing sheet far enough to expose their outlet openings on the opposite side of the backing sheet and then to withdraw said needles from the backing sheet, means for positively feeding along paths leading to the yarn inlet openings of said needles controlled lengths of yarn sufficient for the formation of stitches containing pile loops, and means for flowing fluid through said fluid passageways and out of said outlet openings in said needles to move said lengths of yarn relative to said backing sheet out of said outlet openings and away from said needles to form a pile fabric having pile loops extending from said backing sheet to heights related to the lengths of yarn fed by said feeding means.

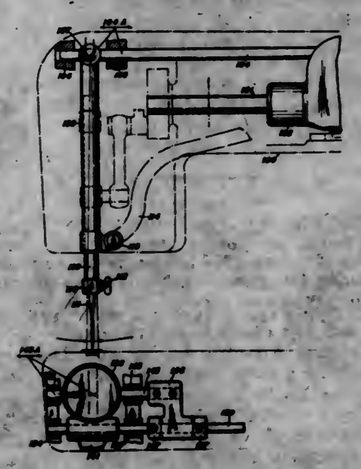
3,089,443
BUTTON FEEDING APPARATUS
Floyd Ames, Glen Oaks, N.Y., assignor to Nemes & Singer, Inc., New York, N.Y., a corporation of New York
Filed May 27, 1960, Ser. No. 32,260
7 Claims. (Cl. 112—110)

1. Button-feeding apparatus comprising a mount having an upstanding arm, an elongated, rigid chute element, means mounting said chute element on said upstanding arm in spaced opposition thereto, a further chute element complementary to said fixed chute element and disposed between said upstanding arm and said fixed chute element, said chute elements having opposing sides, at least two spaced pins on said further chute element extending toward said upstanding arm, said upstanding arm having bearings respectively slidably receiving said pins and mounting said further chute element on said upstanding arm so that said sides of said chute elements are always



parallel to each other and so that said further chute element is movable to vary the spacing between said sides, said sides being shaped to define therebetween a chute for the heads of buttons extending to the tops of said chute elements, said fixed chute element having a slot for reception of the shanks of said buttons, said further chute element being movable so as to accommodate button heads of different thicknesses in said chute, and single adjustment means between said pins coupling said further chute element and said upstanding arm and operable to vary the position of said further chute element.

3,089,444
ZIG-ZAG SEWING MACHINES
Jakob Forster and Erich Grünke, Hinwil, Switzerland
Filed Aug. 4, 1959, Ser. No. 831,612
Claims priority, application Switzerland Nov. 30, 1954
12 Claims. (Cl. 112—159)



1. In a zig-zag sewing machine including a main frame, a needle frame pivotally mounted on said main frame, a

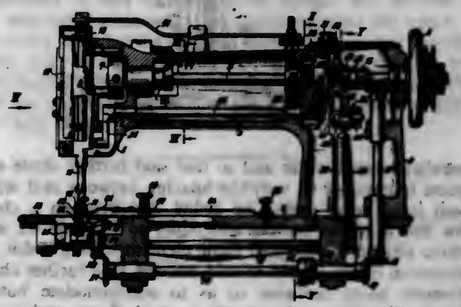
needle reciprocatable up and downwardly in said needle frame, means to reciprocate said needle, and means to swing said needle frame about its pivot in timed relationship to the reciprocation of said needle, the improvement, comprising a loop taker disposed to cooperate with said reciprocating needle and being operatively connected to said needle reciprocating means, and means connected to said needle reciprocating means, said loop taker and said needle frame to displace said needle frame pivot and said loop taker laterally in timed operative relationship, said loop taker being displaced only when said pivot point is displaced.

3,089,445

FEED MECHANISM FOR SEWING MACHINES

Rudolf Reeber and Reinhold Dobner, Kaiserslautern, Pfalz, Germany, assignors to G.M. Pfaff A.G., Kaiserslautern, Pfalz, Germany

Filed June 9, 1960, Ser. No. 34,937
Claims priority, application Germany June 29, 1959
6 Claims. (Cl. 112—208)



1. A feeding mechanism for sewing machines having a drive shaft and a needle bar supporting a needle operatively connected to one end of said drive shaft, said mechanism including a main feeding device mounted in operative relationship to the lower end of said needle bar and an auxiliary intermittently operative feed dog disposed in operating proximity to said main feeding device, means including a first eccentric means operative to impart a phase of normal feeding movements to said main feeding device and actuating means operative to impart a phase of feeding movements to said auxiliary feed dog during the inoperative condition of said main feeding device, said actuating means comprising said drive shaft, a second eccentric means mounted on said drive shaft, a rockable feed shaft having a portion operatively linked to said second eccentric means and a crank portion connected to said auxiliary feeding device to impart thereto feeding movements initiated at said drive shaft.

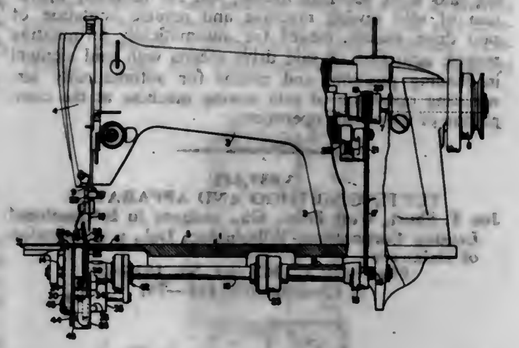
3,089,446

FEEDING MECHANISM FOR SEWING MACHINES

Vito J. Patrick and John D. Fisken, Linden, and Frank Fennesz, Jr., Iselin, N.J., assignors to The Singer Manufacturing Company, Elizabeth, N.J., a corporation of New Jersey

Filed May 6, 1960, Ser. No. 27,354
2 Claims. (Cl. 112—211)

1. In a sewing machine having a bed including a bed plate defining a work supporting surface, a feed shaft journaled in said bed on an axis parallel to said work supporting surface, means for imparting intermittent one-way rotation to said feed shaft, an arm pivotally mounted on and depending from said feed shaft, a frame secured to said arm for linear adjustment in a direction parallel to said work supporting surface and perpendicular to the axis of said feed shaft, an adjusting screw mounted in said bed, means for connecting said adjusting screw to said frame for pivoting said frame about the axis of said feed shaft upon turning said adjusting screw and comprising a bracket secured to said frame and having an open-ended slot disposed in the direction of linear adjustment and a peripheral groove in said adjusting screw defining a



reduced diameter portion that is received within the slot, a feed wheel journaled in said frame and including a work engaging feeding surface and a sprocket, a sprocket secured in said feed shaft, and a belt entrained about said sprockets for imparting rotation to said feed wheel upon rotation of said feed shaft.

3,089,447

TENSION REGULATOR FOR SEWING MACHINE PRESSER BAR

Abraham Shuman, Union Mill No. 1, Fall River, Mass.

Filed Dec. 27, 1960, Ser. No. 78,511
1 Claim. (Cl. 112—235)



In a sewing machine head, a vertical presser bar having a hollow portion at its upper end and a presser foot mounted at its lower end, a shaft mounted axially with said presser bar and having its lower end telescoping into the hollow portion of said presser bar, a bracket locked to the upper end of said hollow portion and vertically movable therewith, a tension spring surrounding said shaft and bearing against the upper edge of said bracket, and means for applying a predetermined tension to said spring, said means including a bolt threaded vertically into the sewing machine head, the lower end of said bolt engaging the upper ends of said shaft and said spring, said bolt extending vertically from the sewing machine head, said bolt having a longitudinal flattened portion with calibrations to permit a reading of the setting of said bolt and spring tension, a collar threadedly mounted on said bolt for locking said bolt in predetermined tensioning position, said collar having an upper edge cooperating with said calibrated portion of said bolt whereby said collar designates the desired position of said bolt.

3,089,448

MACHINES FOR FABRICATING SHEET-METAL PANEL STRUCTURES

Thomas Francis Tribe, Dudley, England, assignor of one-half to British Federal Welder and Machine Company Limited

Filed Aug. 8, 1960, Ser. No. 48,213
Claims priority, application Great Britain Sept. 3, 1959
6 Claims. (Cl. 113—1)



1. A machine for fabricating structures from sheet metal panels comprising: a frame; at least two panel fabricating tools positioned at stations spaced longitudinally along said frame; a carriage for carrying at least a pair of panels spaced longitudinally along said carriage; means within said frame mounting said carriage for reciprocating movement between said stations; means releasably securing panels to said frame; means positioned at each said station for holding each panel upon release from said carriage in position for fabrication by said tools; a control unit for controlling said carriage, means and tools so that all panels are simultaneously advanced by said carriage from one station to the next station and for performing a fabricating operation at the same time at all stations and for holding each panel at each station before release from said carriage and vice versa.

3,089,449

SOLDER APPLYING APPARATUS

Ernst A. Guthier, Danvers, Mass., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York

Filed June 20, 1960, Ser. No. 37,179
1 Claim. (Cl. 113—94)



An apparatus for mounting parts on terminals of electrical components extending through land areas of wiring circuits on wiring boards comprising:

a stationary die having a die cavity aligned with a land area of wiring board and a terminal having an end extending therethrough toward the die,

means for feeding a strip of solder to the die and die cavity,

a reciprocable punch having an end movable between a position spaced from the die and a position beyond the end of the terminal and adjacent to the land area to cooperate with the die cavity to punch a solder part from the strip of solder and move it onto the land area of the wiring board,

an inner die cavity disposed in the end of the punch, larger in cross-section than the cross-sectional contour of the terminal and positioned to receive the terminal and cooperate therewith in perforating the solder part, and

rounded surfaces extending from the end of the punch into the inner die cavity of the punch to cause solder of the part adjacent the perforation to flow into close engagement with the terminal while the remaining portion of the part moved beyond the end of the terminal is forced by the punch against the land area of the wiring board.

3,089,450

METHOD OF MAKING A BAKING PAN STRUCTURE

George A. Lyon, Jr., 13881 W. Chicago Blvd., Detroit, Mich.

Original application Jan. 29, 1959, Ser. No. 788,016, now Patent No. 3,040,735, dated June 26, 1962. Divided and this application Dec. 26, 1961, Ser. No. 161,855
5 Claims. (Cl. 113—120)



1. A method of forming baking pan structures, which comprises stamping a plurality of sheet metal blanks to provide a series of end and central sections each with a pan portion and on outwardly extending peripheral flange thereon, notching each of said end sections at two of its corners on one side of its pan portion, turning said flange on said end sections along one side and opposite ends of the pan portion to provide therealong a downwardly turned portion, turning the flange of said central sections only on opposite ends to provide a downwardly turned portion, welding an unformed flange of each pan portion to a corresponding flange on another pan portion to provide a plurality of spaced and connected pan portions, punching the welded flanges between the pan portions providing a series of transversely spaced flanged openings, and welding the downwardly turned flange portion to opposite ends of the pan portions intermediate the top and bottom thereof to provide a relatively narrow hollow bead portion strengthening the upper ends of the pan portions.

3,089,451

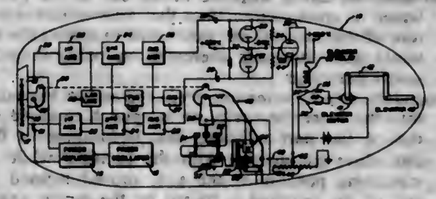
TRANSDUCER PITCH CONTROL FOR ECHO CONTROLLED TORPEDO

Paul C. Gardiner, Scotia, N.Y., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Filed Oct. 4, 1950, Ser. No. 188,463
8 Claims. (Cl. 114—23)

1. In an echo controlled torpedo, a transducer adapted to project a directive acoustic signal, said transducer being adjustable to vary the pitch angle of said signal relative to the torpedo, depth steering gear adapted to change the pitch of the torpedo in accordance with the direction of return of echoes of said signal, a pendulum so mounted as to swing relative to the torpedo upon pitching thereof and means controlled by said pendulum adapted to stabilize said transducer relative to the horizontal, whereby a

selected direction of pitch of said transducer signal chosen for its suitability in the minimization of reverberation



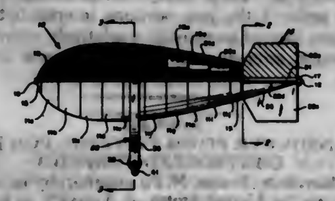
may be maintained notwithstanding changes in torpedo pitch.

3,089,452
ANTI-YAWING COMBINATION
Thomas R. Pedersen, Whitestone, N.Y., assignor to Penn Industries, Inc., New York, N.Y.
Filed May 4, 1961, Ser. No. 107,858
13 Claims. (Cl. 114—126)



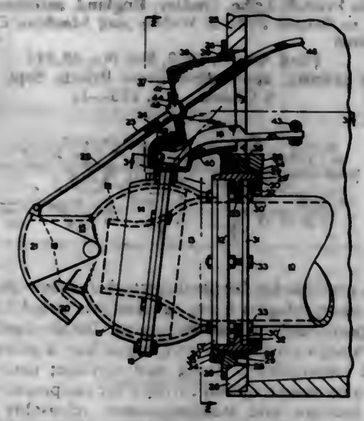
1. The combination with a barge having an upwardly and rearwardly inclined stern of an anti-yawing device mounted on said stern arranged entirely below the light waterline of the barge and comprising an angular substantially vertical plate having the vertex of the angle arranged forwardly of and below the ends of said plate, said vertex being arranged in line with the longitudinal center line of said barge, said plate being of constant width throughout its length and the ends thereof being equidistant from the sides of said barge and from the beam of said barge.

3,089,453
FLOAT FOR TOW CABLES
Francis E. Buck, Philadelphia, and John E. Smith, Hatboro, Pa., assignors to the United States of America as represented by the Secretary of the Navy
Filed Dec. 21, 1961, Ser. No. 161,323
5 Claims. (Cl. 114—235)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A float for preventing bottom drag of nonbuoyant cables engaged in towing a body through water, comprising in combination:
a plurality of lightweight, buoyant members in juxtapositioned relationship to one another,
each of said members configured whereby said plurality of members collectively form a streamlined float,
tail means connected to one end of said plurality of members for stabilizing the float as it streams through the water,
tube means passing through the center of gravity of the float at right angles to the longitudinal axis of the float,
means connected to said tube means for supporting a cable towing a body through the water.

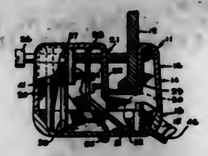
3,089,454
ADJUSTABLE MOUNTING FOR HYDRO-JET PROPULSION MEANS ON BOATS
Bill M. Chronic, Boise, Idaho, assignor to Star-Fire Marine Jet Co., Spokane, Wash., a corporation of Washington
Filed Oct. 2, 1961, Ser. No. 142,295
8 Claims. (Cl. 115—12)



1. In combination with a hydro-jet boat propulsion apparatus of the type described, including a conduit housing mountable in the boat and terminating in an opening in the boat transom, with steering and control elements connected with said conduit so as to be positioned externally of the boat transom, adjustable mounting means on the boat transom for the propulsion apparatus, said mounting means including a mounting frame adapted to be removably secured on the outside of the boat transom, said frame having an open ring portion with an inside periphery having a diameter greater than the overall diameter of the conduit housing in said propulsion apparatus, a spherical segment ring placeable on the rear end of said conduit housing, said segment ring having an outside periphery capable of engagement with the inside periphery of said open ring portion and constituting a zone of a spherical surface, means for securing said segment ring on said conduit housing, the maximum diameter of said outside periphery of said segment ring being greater than the diameter of said inner periphery of said ring portion of said mounting frame, retaining means on the outside of said ring portion of said frame for engaging said outside periphery of said segment ring, and sealing gaskets between said segment ring and said conduit housing and between said segment ring and said ring portion of said frame.

3,089,455
CURB SIGNAL DEVICE
Fred J. Aves, 4211 Redwood Ave., Los Angeles, Calif.
Filed Oct. 17, 1961, Ser. No. 145,707
5 Claims. (Cl. 116—28)

1. In a curb signal device, a housing providing a wall against which to clamp a part of an automobile thereby to secure the housing to the automobile, a keeper member loosely mounted in the housing, a screw threaded through said keeper member for axial movement toward and away from said wall, a feeler having an inner end portion movably mounted in said housing, said keeper member having a portion adapted to engage the inner end portion of said feeler, and a locking lever pivotally mounted in the housing operable for forcing said keeper member into firm engagement with said inner end portion of the feeler for securing the same against movement.

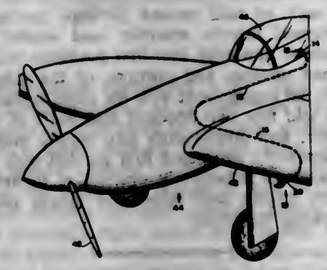


3,089,456
VISUAL WARNING DEVICES
Norman Hastings Servais, 30 Ludlow Road, Vredehoek, Cape Town, Cape Province, Republic of South Africa
Filed July 6, 1961, Ser. No. 122,317
Claims priority, application Republic of South Africa Oct. 5, 1960
5 Claims. (Cl. 116—30)



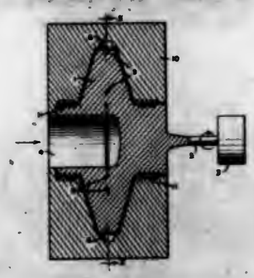
1. A warning device comprising a fixed inner member, an outer member slidably mounted on said inner member, a source of illumination mounted on the outer member, a collapsible sheet of light reflecting material and ribs for unfurling said material both mounted on the outer member, means for restraining the ribs from unfurling said material only when the outer member is in its inner position, a spring loading the outer member to move outwardly and a change of momentum responsive trigger mechanism restraining the outer member from outward movement.

3,089,457
LOW AIR SPEED INDICATOR
Lee D. Milliken, 124 S. 107th East Ave., Tulsa, Okla.
Filed Aug. 5, 1960, Ser. No. 47,631
4 Claims. (Cl. 116—112)



1. A low air speed indicating device for use on aircraft comprising, a tubular member having an air-operated indicating element on one end and a control valve on the other open end, said control valve being intermediately transversely pivoted on said tube, said control valve having an air contacting portion on one of its ends and a valve portion on its other end which is alternatively in coacting engagement with the open end of said tubular member, and a spring means between said control valve and said tubular member normally urging said valve portion away from said open end.

3,089,458
CENTRIFUGAL ACCELERATION SIREN DEVICE
Jacques Dory, Villenoy par Meaux, France, assignor to Realisations Ultrasoniques, Villenoy par Meaux, France, a corporation
Filed Mar. 13, 1959, Ser. No. 799,182
Claims priority, application France Mar. 14, 1958
4 Claims. (Cl. 116—147)



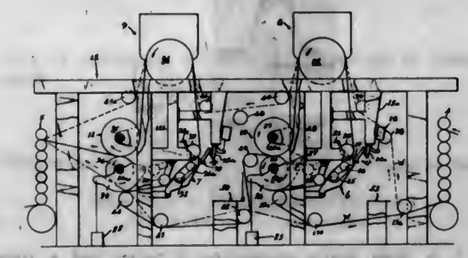
1. A siren device comprising a casing and a rotor having an axial inlet chamber and an outer surface parallel to the inner surface of said casing, centrifugal flow passageways in said rotor extending in straight lines therethrough from said axial inlet chamber to a cylindrical surface portion of the rotor periphery, at least one elongated discharge nozzle projecting through said casing from an inlet opening in said cylindrical surface portion substantially tangentially thereto said cylindrical surface portion being coaxial with a corresponding cylindrical surface portion of the inner surface of the casing and the ends of said passageways being directly adjacent to said cylindrical inner surface portion, whereby the centrifugal flow from said passageways, when said rotor is rotating, will directly discharge by impulses through said inlet opening.

3,089,459
OBTAINING PRINTS OR IMPRESSIONS TO BE TRANSFERRED ONTO A RECEPTIVE MEDIUM
Pierre C. Picard, White Plains, N.Y., assignor to Faurot, Inc., New York, N.Y.
Filed Aug. 5, 1960, Ser. No. 47,807
6 Claims. (Cl. 118—31.5)



1. A disposable unit for imparting a print to be transferred onto a receptive medium comprising a metallic, stiff sheet forming an impermeable base, a layer superimposed on said sheet containing an absorbable material adapted upon contact therewith to impart a film transferable onto a receptive surface forming an outline of the contact with the layer *a* and flexible, metallic means superimposed onto the sheet forming a seal for the layer.

3,089,460
APPARATUS FOR SUBJECTING A PAPER WEB TO A VARIETY OF FINISHING AND/OR COATING TREATMENT
Ralph P. Mahoney and Edgar J. Justus, Beloit, Wis., assignors to Beloit Iron Works, Beloit, Wis., a corporation of Wisconsin
Filed July 13, 1960, Ser. No. 42,643
5 Claims. (Cl. 118—60)



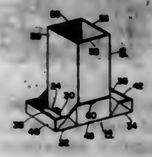
1. An assembly for treating a traveling paper web being received from a source, comprising a lower web coater unit, an upper hot roll dryer unit adapted to apply drying heat to the web passing therethrough, a web finishing unit formed of a hard surfaced finishing roll connected to means for heating the same and a resiliently yieldable roll defining a pressure nip with the finishing roll for receiving the web, said units being positioned closely together and generally at the apexes of a triangle, a trio of upper web guide rolls above the coater unit and below the dryer unit, a trio of lower web guide rolls below the coater unit, and a trio of web guide rolls positioned intermediate the upper and lower trios, whereby the web may be guided from the source through said units.

3,089,461
BIRD FEEDER WITH FLEXIBLE, SLIDABLE, ARCHED ROOF
Gilbert M. Dunn, 14 E. Canal St., Penacook, N.H.
Filed Feb. 3, 1961, Ser. No. 87,016
10 Claims. (Cl. 119—51)



1. A bird feeder comprising a rectangular floor having forward, rearward and opposite side edges; a pair of upstanding side walls attached to said floor proximate said side edges, each said side wall being of substantially arcuate outline and having a continuous, substantially arcuate groove terminating in opposite, open ends, in the inner face thereof, and a unitary, flexible, transparent, self supporting roof of substantially arcuate section extending between said side walls, said roof having forward and rearward edges at predetermined spaced distances from the corresponding edges of said floor and having side edges supported in, and freely slidable in, said arcuate side wall grooves for slidably adjusting the said distances or slidably removing said roof.

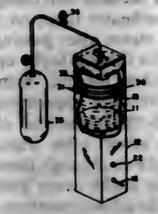
3,089,462
PACKAGE AND FEEDER FOR BIRD FEED
Virgil C. Brockmann, New Haven, Ind., assignor to Henderson-Reed Bros. Co., Inc., Fort Wayne, Ind., a corporation of Indiana
Filed Nov. 14, 1961, Ser. No. 152,351
2 Claims. (Cl. 119—52)



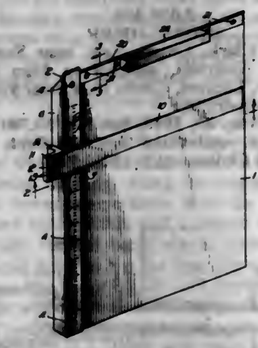
1. A package and feeder for bird feed and the like comprising: a vertically elongated hopper member having a rectangular cross-section and formed of relatively thin self-supporting sheet material for accommodating a quantity of feed, said hopper member having an open lower end, two opposite side walls of said hopper member having means respectively formed therein adjacent said lower end for dispensing feed therefrom; and an integral closure and feeding member formed of relatively thin self-supporting sheet material, said feeding member having a first rectangular portion generally coextensive with said lower end of said hopper member extending across said lower end and closing the same, said first portion having two upstanding rectangular sections respectively joined to a first two opposite sides thereof, said upstanding sections respectively engaging the outer surfaces of the other two opposite side walls of said hopper member and being secured thereto, said feeding member having two rectangular second portions, each of said second portions having one of a first two opposite sides joined to a respective one of the other two opposite sides of said first portion and foldable upwardly thereabout, each of said second portions having a rectangular end section joined to the other of said first two opposite sides thereof and foldable upwardly thereabout, each of said second portions having side sections respectively joined to the other two opposite sides thereof and foldable upwardly thereabout, the side sections of each of said second portions being respectively joined to opposite sides of the respective end sections and being foldable inwardly thereabout, the side sections of each of said second portions being respectively joined to respective sides of said upstanding sections of said first portion and foldable inwardly thereabout, the side sections of each of said second portions having folding creases formed therein whereby said second portions may be folded upwardly into first positions with the respective end sections and portions of the side sections folded into flat engagement with the outer surfaces of the respective said first two opposite side walls of said hopper member, and downwardly into second positions extending outwardly from said first portion with said side and end sections respectively upstanding to define feeding troughs having said dispensing means respectively communicating therewith.

3,089,463
LIQUID DISPENSING DEVICE
Marvin E. Grunzke, Holloman AFB, N. Mex., assignor to the United States of America as represented by the Secretary of the Air Force
Filed Oct. 11, 1961, Ser. No. 144,520
1 Claim. (Cl. 119—71)
(Granted under Title 35, U.S. Code (1952), sec. 266)

A device for dispensing liquids to a test subject on demand, comprising: liquid supply tank, a piston within said liquid supply tank, means for supplying air under pressure to said piston to maintain a predetermined pressure on the liquid in said supply tank, a drinking tube, a solenoid valve connected between said supply tank and said drinking tube, a power supply, a microswitch connected in series with said power supply and said solenoid, means connected in the circuit between said power supply and said solenoid for de-energizing said solenoid a predetermined time after said microswitch is closed, and means controlled by a sucking action on said drinking tube for operating said microswitch to thereby permit the flow of liquid for only a predetermined time after the test subject starts sucking on said drinking tube.



3,089,464
COPYHOLDER
Irwin J. Mendels, 542 Ridge Ave., Evanston, Ill.
Filed Jan. 5, 1961, Ser. No. 80,800
4 Claims. (Cl. 120—33)



1. A copyholder comprising a flat sheet of flexible plastic material restricted at its inner and lower ends to the thickness of said sheet to facilitate slipping of said sheet into a ledger beneath a ledger sheet, an angular metallic member having a first flange overlying and secured to the outer side margin of said flexible plastic sheet, said angular metallic member having a second flange at generally right angles to said first flange and adapted to extend inwardly along the adjacent edges of the sheets of the ledger beneath the ledger sheet beneath which the flat sheet of flexible plastic material is disposed, a flexible plastic line guide adapted to extend across the ledger sheet beneath which the flat sheet of flexible plastic material is disposed to hold desired positions, a plastic member secured to the outer end of said line guide and having a pocket for presentation to the outer surface of the second flange of said angular metallic member, and a magnet bar secured within said pocket for presentation to said outer surface of said second flange of said angular metallic member magnetically to hold said line guide to said second flange of said angular metallic member in any desired position along said angular metallic member.

3,089,465
LETTERING INSTRUMENT
Clarence Edward West, Statesville, N.C., assignor, by mesne assignments, to Hunt Manufacturing Co., Camden, N.J., a corporation of Pennsylvania
Filed Mar. 4, 1960, Ser. No. 12,755
4 Claims. (Cl. 120—46)

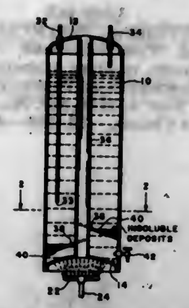


1. A lettering instrument comprising a casing having an open end, an ink bulb within said casing, a plug closing the open end of said casing, a lettering nib having an overfeeder secured to said plug, a tube having one end connected to said bulb and the other end adjacent the overfeeder, a finger lying between said bulb and said casing, said plug having a longitudinal bore for the reception of one end of said finger and said finger being fulcrumed on said plug at the other end of said bore, and a plunger mounted in an opening in said plug which is substantially perpendicular to the axis of the nib, said plunger engaging the end of the finger lying in said bore to pivot the finger about its fulcrum so as to bear against said bulb and cause ink to flow through said tube to said overfeeder and said plunger being recessed so as to lie entirely within the outer diameter of the casing.

3,089,466
ELEVATED TEMPERATURE LIQUID HEATING SYSTEMS
Wayne W. Binger and David G. Vandenburgh, both of New Kensington, Pa., assignors to Aluminum Company of America, Pittsburgh, Pa., a corporation of Pennsylvania
Original application Nov. 25, 1958, Ser. No. 776,317, now Patent No. 3,029,795, dated Apr. 17, 1962. Divided and this application Aug. 3, 1961, Ser. No. 129,083
3 Claims. (Cl. 122—17)

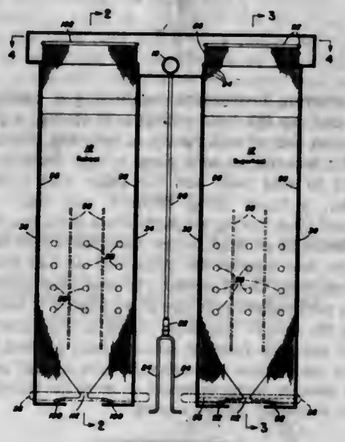
1. In an elevated temperature closed hot water heating and storage system, a storage tank having an exteriorly heated bottom end crown sheet in interior surface contact with water containing entrained insoluble products, means for collecting the insoluble products comprising at least two shelves extending inwardly from contact with the interior wall surface of the storage tank from opposite sides thereof in vertical spaced substantially horizontal relationship in respect of the vertical axis of the storage tank, said shelves being disposed adjacent and spaced above the water contacting surface of

the bottom end crown sheet, and said shelves in their inward extension being each less than the full width of



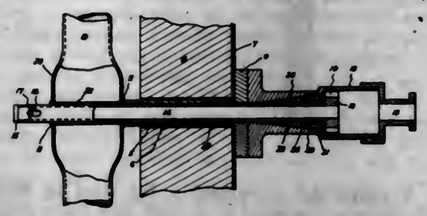
the storage tank and presenting unsupported inwardly disposed spaced overlying marginal shelf edges.

3,089,467
STEAM GENERATOR
Wilbur H. Armacost, Scarsdale, N.Y., assignor to Combustion Engineering, Inc., New York, N.Y., a corporation of Delaware
Filed Mar. 18, 1959, Ser. No. 800,316
5 Claims. (Cl. 122—240)



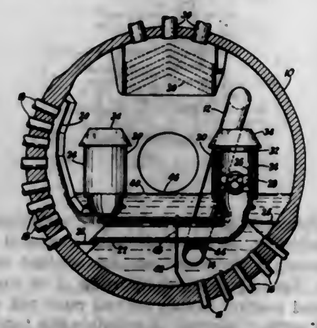
1. A vapor generator operating on the reheat cycle comprising a pair of upright furnaces generally polygonal in transverse section and disposed in side by side spaced relation, one of said furnaces comprising a reheat furnace and the other a superheat furnace, said furnaces having combustion gas outlets at the upper end of their rear wall, passageway means extending from said outlet, vertically extending steam generator tubes lining the front wall of each furnace and the front portion of each side wall thereof, a steam generating circuit into which these tubes are connected and which includes a steam and water drum positioned intermediate said furnaces adjacent the upper end thereof, each furnace having panel means formed of vertically extending steam generator tubes positioned adjacent said front wall at the lower region thereof with said panel means extending into the furnace from said front wall and disposed in spaced relation across said front wall thereby forming horizontally spaced chambers in the furnace, means for horizontally introducing fuel and air into said horizontally spaced chambers, convection heat exchange surface disposed in said passageway means and including superheating surface for superheating steam generated in said steam generating tubes, said superheater furnace having the remaining portion of its walls lined with superheater tubes extending vertically throughout the length thereof, means for conveying steam from said convection superheater surface to a given number of these superheater tubes on the side walls so that the steam is conveyed down therethrough with these tubes being intercalated among the remaining superheater tubes on the side walls, means for conveying this steam after passing down through these superheater tubes on the side walls up through the remaining superheater tubes, the rear furnace wall being lined with vertically extending superheater tubes that extend from the upper to the lower end of the furnace, means for conveying the steam after traversing said remaining superheater tubes down through these tubes lining the rear wall, header means at the lower end of the furnace communicating with these last mentioned superheater tubes, said reheater furnace having the remaining portion of its side walls lined with reheater tubes that extend vertically from the lower end to the upper end thereof, header means receiving steam to be reheated and communicating with the lower end of these reheater tubes so that the steam is conveyed upwardly therethrough, the rear furnace wall being lined with reheater tubes that extend vertically from the upper to the lower end thereof, means for conveying this steam after passing up through the reheater tubes in the side walls to the upper end of the reheater tubes on the rear wall for passage downwardly therethrough, and header means at the lower end of the furnace communicating with the last mentioned reheater tubes and receiving the steam therefrom.

3,089,468
SOOTBLOWER
Edwin William Clark, Crows Nest, near Sydney, New South Wales, Australia, assignor to John Thompson (Australia) Pty. Limited, Crows Nest, near Sydney, New South Wales, Australia
Filed Aug. 29, 1960, Ser. No. 52,701
Claims priority, application Australia Sept. 8, 1959
4 Claims. (Cl. 122—392)



1. In combination with a boiler having a fire-box, a fire-wall surrounding said fire-box, and water tubes within said fire-box; a sootblower comprising a stator assembly mounted on said fire-wall, a bearing tube forming a part of said stator assembly and extending into said fire-box and through one of said water tubes, a movable assembly mounted for axial and rotary movement within said stator assembly, a blower tube housed within said bearing tube and forming a part of said movable assembly, a fluid outlet in said blower tube adjacent one end thereof, means for feeding fluid under pressure to said outlet, means responsive to said fluid under pressure to impart axial movement to said movable assembly to project said blower tube outwardly from said bearing tube during the sootblowing operation, turbo-drive means responsive to said fluid under pressure for rotating said blower tube during the sootblowing operation, and means for retracting said blower tube from said axially projected position upon completion of the sootblowing operation.

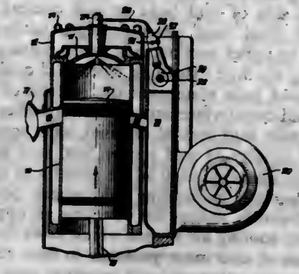
3,089,469
APPARATUS FOR MAINTAINING LIQUID LEVEL WITHIN A STEAM AND WATER DRUM CONSTANT
Albert R. Mumford, Bogota, N.J., assignor to Combustion Engineering, Inc., Windsor, Conn., a corporation of Delaware
Filed Apr. 27, 1961, Ser. No. 105,936
1 Claim. (Cl. 122—491)



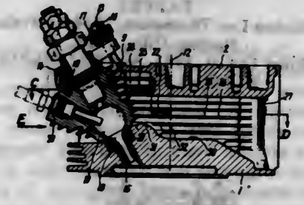
In combination, a cylindrical drum adapted to house steam and water at very high temperatures, riser tubes having open ends extending through one side of the drum through which a mixture of water and steam is discharged into the drum, separating means for separating the steam from the water that is discharged into said drum through said riser tubes, openings in said separating means through which the separated water flows to the bottom of the drum, housing means enclosing all of the riser tube ends and connecting them to the separating means, an outlet in the upper portion of said drum through which steam is discharged, downcomer tubes through which water flows from said drum connected to the side of said drum opposite the connection of said riser tubes, a feedwater pipe extending parallel to the axis of said cylindrical drum above said downcomer tubes, said feedwater pipe containing openings along its length to allow feedwater, at a lower temperature than the temperature of the steam and water within said drum, to enter said drum, a substantially vertical baffle means extending from the bottom of said drum to a point near the water level therein but above the position of said feedwater pipe, said baffle means in conjunction with a portion of the drum forming an open topped tank within said drum, said open topped tank enclosing all of said downcomer tubes and all of said openings in said feedwater pipe, and said openings in said feedwater pipe being positioned such that the incoming feedwater is directed away from said one side of said drum containing the riser tube connections, the greater portion of the comparatively cooler incoming feedwater being entrapped within the open topped tank portion of said drum, and thus flowing from said drum through said downcomer tubes before substantially mixing with a major portion of the separated water from the separating means.

3,089,470
METHOD AND APPARATUS FOR INHIBITING AUTO-IGNITION IN INTERNAL COMBUSTION ENGINES
William H. Payne, Olean, N.Y., assignor, by mesne assignments, to Dresser Industries, Inc., Dallas, Tex., a corporation of Delaware
Filed June 1, 1959, Ser. No. 817,227
4 Claims. (Cl. 123—25)

1. In the operation of an internal combustion engine including a cylinder and piston and having such a compression ratio that auto-ignition can occur, the method of inhibiting auto-ignition comprising the step of injecting just that amount of liquid auto-ignition suppressant directly into the combustion chamber of each engine cylinder without contacting the wall thereof or the piston only during the compression phase thereof as will keep the engine at the threshold of auto-ignition as determined by the sound of the engine.



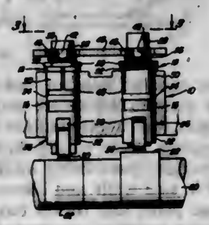
3,089,471
CYLINDER HEADS FOR INTERNAL COMBUSTION ENGINES
Friedrich Espenschied, Mannheim, Germany, assignor to Motoren-Werke Mannheim A.G. vorm. Benz Abt. Stat. Motorenbau, Mannheim, Germany, a German company
Filed Oct. 6, 1960, Ser. No. 60,959
Claims priority, application Germany Oct. 10, 1959
2 Claims. (Cl. 123—32)



1. An air-cooled cylinder head of box-like formation comprising a base plate in which are provided an inlet and an exhaust port, an upper portion constituting a rocker box, connecting walls rigidly linking said base plate and upper portion, there being intake and exhaust channels provided in said walls and communicating with said ports, said base plate, said rocker box and said connecting walls forming together an integral structure and defining a central cooling air channel extending from a point near the center of said cylinder head to a cooling air outlet side of said cylinder head, said head comprising further an auxiliary combustion chamber having a lower face, there being a counterface on said base plate, means fastening said chamber with its lower face detachably in contact with the counterface on said base plate, said lower face lying on a cooling air inlet side of said head, said lower face having an area which is a small fraction of the whole outer surface of said auxiliary combustion chamber, guide walls on said inlet side of said head, said guide walls being in spaced relationship with the whole outer surface of said auxiliary combustion chamber and partially surrounding said auxiliary chamber, said guide walls being integral with said connecting walls and extending in the direction of the incoming cooling air stream, there being inner cooling air passages provided between said guide walls and the walls of said combustion chamber, said inner passages extending from said cooling air inlet side of said cylinder head to said point

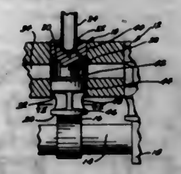
near the center of said cylinder head and thus surrounding said auxiliary chamber, said head comprising furthermore outer surfaces on said connecting walls and said guide walls, said outer surfaces forming parts of the walls of outer cooling air channels which extend from said cooling air inlet side of said head to said cooling air outlet side of said head, said inner passages having a lower portion and an upper portion, said lower portion constituting a cooling air duct extending from said cooling air inlet side of said base plate over the surface of said base plate near said counterface around said chamber and communicating with said central channel, said upper portion lying in the vicinity of said rocker box, said guide walls having lateral openings only in the vicinity of said rocker box, said openings connecting said upper portion with said outer channels, means for directing an upper part of said incoming cooling air stream which flows through said upper portion of said inner passages to flow chiefly from said upper portion through said openings into said outer cooling air channels, means for directing a lower part of said incoming cooling air stream which flows through said lower portion of said inner passages to flow chiefly from said lower portion into said central channel, and means for cooling said auxiliary chamber under the influence of said upper and lower parts of said incoming cooling air stream, said means for cooling said auxiliary chamber being constituted by fins protruding from said chamber, said fins lying substantially in planes which appear to be perpendicular to the cylinder axis in a transverse section of said head and appear inclined with respect to said axis in a longitudinal section of said head, so as to point towards said rocker box.

3,089,472
TAPPET
Marion Lee Thompson, 2734 Eastvale, Rolling Hills, Calif.
Filed Oct. 9, 1961, Ser. No. 143,918
9 Claims. (Cl. 123—90)



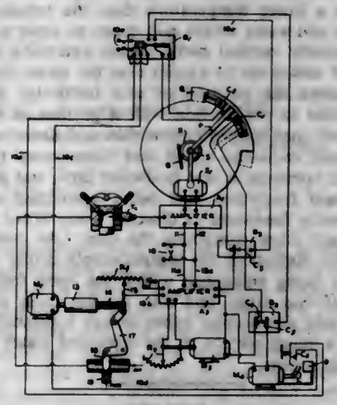
7. A tappet for internal combustion engines comprising: a hollow, cylindrical body receivable in a bore to receive a reciprocal cylindrical plunger having a roller cam follower thereon engageable with a cam on a rotatable camshaft, said body having an external tapered portion thereon, and having a pair of opposed slots therein to receive the roller cam follower when the plunger is lifted by the action of the cam; a split, cylindrical sleeve encircling a portion of said tapered portion, said sleeve having a substantially uniform internal and a substantially uniform external diameter; a first means on said body for urging said sleeve into said bore to achieve expansion of said sleeve by said tapered portion, said expansion being resisted by the wall of said bore to secure said tappet in said bore; and a second means on said body in linear alignment with said slots to receive an aligning tool for aligning said tappet in said bore with respect to adjoining tappets and with respect to the cam on the camshaft.

3,089,473
MECHANICAL TAPPET
Kenneth E. Kenny, North Muskegon, Mich., assignor to Johnson Products, Inc., Muskegon, Mich., a corporation of Michigan
Filed Feb. 1, 1962, Ser. No. 170,371
5 Claims. (Cl. 123—90)



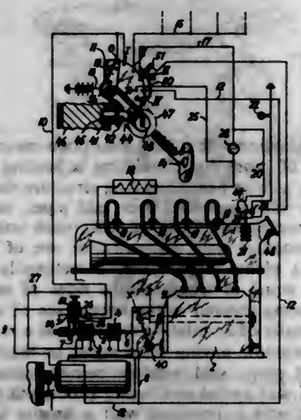
3. A lightweight mechanical tappet comprising: a foot portion including an end cam face; a central alignment portion having a peripheral surface adapted to maintain the tappet aligned in the lower portion of an engine tappet bore; a head portion having an end push rod seat and a peripheral surface adapted to maintain the tappet aligned in the upper portion of an engine tappet bore; a neck between said head portion and said central portion having a smaller cross-sectional width than said head and central portions; and a portion between said central portion and said foot portion having a smaller cross-sectional width than said central and foot portions.

3,089,474
PEAK SEEKING CONTROLLER
Oliver G. Lewis, Westfield, and Albert F. Pearce, Franklin Park, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware
Filed Jan. 3, 1961, Ser. No. 80,472
6 Claims. (Cl. 123—119)



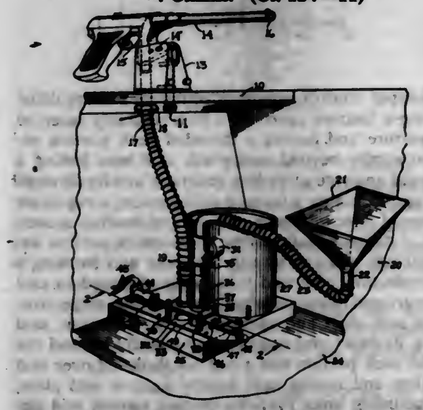
1. A control mechanism for machinery which comprises in combination, a stabilizing means for an operating machine comprising means for sensing changes in at least one element of power input into said machine, another means for sensing a secondary effect of such power input and following it until said secondary effect reaches a desired optimum value, and another means for altering the rate of change in said element when said second sensing means senses said desired optimum value.

3,089,475
STARTING MECHANISM FOR DIESEL ENGINE WITH INCANDESCENT HEATING MEANS
Werner H. Köhler, Stuttgart-Degerloch, and Helmut Gutjahr, Winnenden (Neckar), Germany, assignors to Daimler-Benz Aktiengesellschaft, Stuttgart-Untertürkheim, Germany
Filed Oct. 10, 1960, Ser. No. 61,640
Claims priority, application Germany Oct. 10, 1959
9 Claims. (Cl. 123—179)



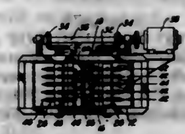
1. A starting mechanism for a diesel engine having a starter, incandescent heating means, a fuel injection pump, fuel control means on said pump, said fuel control means being movable to an off position and to a starting position and electric means for controlling said fuel control means comprising an electric control switch, said switch having a plurality of switch contacts in operative electrical connection with said incandescent means and a further switch contact in operative electrical connection with said starter, a current source and a movable control arm in circuit with said current source and adapted to engage with said plurality of switch contacts and with said further switch contact.

3,089,476
PROJECTILE APPARATUSES
Marcine P. Wolverton, Franklin Park, Ill., assignor to Midway Manufacturing Co., Franklin Park, Ill., a corporation of Illinois
Filed Nov. 7, 1960, Ser. No. 67,663
4 Claims. (Cl. 124—11)



1. In combination, a spent ball receiving tube, a firing tube, a blower having an intake and an outlet, means providing a connection between said intake and said ball receiving tube, means providing a connection between said firing tube and said outlet, a ball director having communication with said firing tube, means for successively transferring balls from said ball receiving tube to said firing tube for projection therethrough and through said ball director by pneumatic pressure generated by said blower, said blower having a second intake providing a by-pass thereto, and means provided by said transfer means for controlling air passage through said by-pass intake when a ball has been transferred by said means to said firing tube, said transfer means including an electromagnetically operated solenoid and a transfer slide operatively connected thereto and having a ball receptacle for receiving the ball from said receiving tube for transfer to said firing tube.

3,089,477
ICE BREAKER
Walter E. Saxe, Pasadena, Calif., assignor to The Conveyor Company, Los Angeles, Calif., a corporation of California
Filed Sept. 8, 1958, Ser. No. 759,715
4 Claims. (Cl. 125—23)

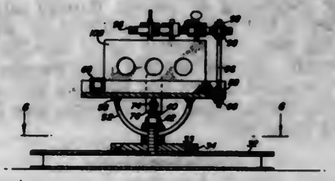


1. In an ice breaker, the combination of: supporting structure providing an ice block path; two rotors mounted on said supporting structure for rotation about spaced, parallel axes respectively disposed on opposite sides of said path; means connected to said rotors for rotating them in opposite directions in timed relation at the same speeds and in such directions that successive circumferential portions of said rotors move in a downstream direction along said path as they approach each other; spaced, generally radial, ice picks on and projecting from each of said rotors and arranged thereon in a rectangular pattern of axially spaced, circumferential bands in transverse planes perpendicular to the axis of such rotor and circumferentially spaced, axial rows in planes containing the axis thereof, said bands on one of said rotors being in register with said bands on the other, respectively, and said rows on one of said rotors registering with said rows on the other, respectively, as said rotors are rotated in timed relation, the tips of said ice picks lying on circles having radii less than half the spacing of said axes so that said ice picks project less than half way across said ice block path when they project thereinto; and splitting means carried by said supporting structure and located on said path downstream from said rotors.

3,089,478
MITER TABLE FOR USE WITH MASONRY SAW
Jefferson F. Jones, P.O. Box 20142, Montclair Station, Denver, Colo.
Filed Apr. 17, 1961, Ser. No. 103,430
4 Claims. (Cl. 125—35)

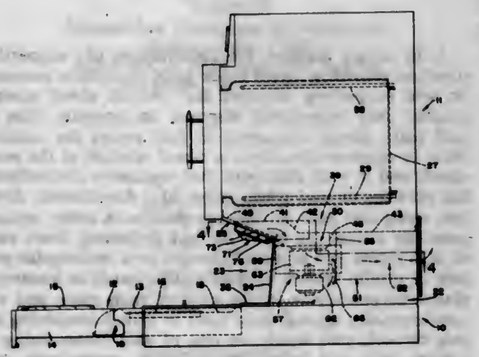
1. A miter table for masonry saws comprising a main base member, a flat table top member spaced from said base member for supporting masonry to be cut, adjusting means connecting said top member to said base member, said means permitting said top member to be tilted with respect to said base member and permitting said top

member to be rotated about an axis normal to one of said members, a single locking means for locking said adjusting means whereby said top member may be instantly locked simultaneously in a preselected tilt position and a preselected angular position about said axis with respect to said base member, a stationary fence secured to one edge of said top and extending therefrom, an ad-



justable fence normal to said stationary fence and adjustably secured thereto and means for rigidly securing said masonry upon said table top including a rod member fixed to the bottom of said table top and a pair of adjustable clamping means slidably mounted upon each end of said rod and extending above said table top for clamping said masonry therebetween.

3,089,479
FORCE VENTED COOKING TOP AND OVEN
Richard L. Perl, Mansfield, Ohio, assignor to The Tappan Company, Mansfield, Ohio, a corporation of Ohio
Filed Aug. 16, 1960, Ser. No. 49,902
3 Claims. (Cl. 126—21)



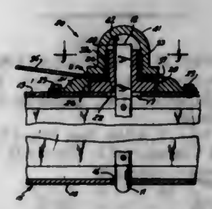
1. In a kitchen range, an enclosure, an oven having a vertically disposed front door mounted in the upper portion of said enclosure, drawer structure in the lower portion of the enclosure, with an intermediate portion of the enclosure between said oven and said drawer structure, a cooking top assembly including surface heating units carried by said drawer structure for in and out movement, heating units of the cooking top assembly being exposed forwardly of the front of the intermediate portion of the enclosure when the assembly is in condition for use, an intake opening being provided at the front of said intermediate portion of the enclosure and adjacent the vertical plane of the door at an elevation above the exposed heating units, exhaust means including a fan located within said intermediate section and operative to draw air inwardly through said intake opening, discharge duct means extending from said fan to a rear outlet provided in the enclosure, filter means removably supported over said intake opening, and control means for the fan accessible at the front of the enclosure.

3,089,480
SOLAR HEAT ABSORBING STRUCTURE
Joseph G. Duncan III, Drexel Hill, Pa.
(128 N. Broad St., Philadelphia 2, Pa.)
Filed July 5, 1961, Ser. No. 123,375
4 Claims. (Cl. 126—270)
(Granted under Title 35, U.S. Code (1952), sec. 266)



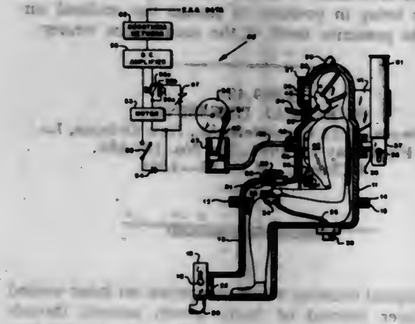
1. In combination with a heat absorption means including a series of pipes for circulating a heating medium therethrough, a solar heat absorbing structure for heating said medium and assembled over said pipes, said structure comprising a multiplicity of units, each unit consisting of a rectangular plate disposed over one of the pipes and having a planar upper face, a rectangular gasket, having sides equal in length to the sides of said plate, said gasket being secured to the upper face of said plate and in diagonally offset relation thereto, and a rectangular transparent window having sides equal in length to the sides of said plate, said window being secured to the upper side of said gasket and in alignment with said plate whereby said unit is provided with a tongue along two adjacent sides and a space along the other two adjacent sides thereof, said tongues and said spaces adapted to enter into the spaces and to receive the tongues respectively of similar units to form a solar heat collector.

3,089,481
DAMPER SHAFT LOCK
Milton Hinden, 15 Bay Link, Massapequa, N.Y.
Filed May 17, 1962, Ser. No. 195,602
7 Claims. (Cl. 126—295)



1. A damper control assembly comprising a regulator plate having a bearing aperture, a boss rotatably received in said aperture and having a threaded neck portion extending outwardly beyond said plate, said boss having a main internal aperture extending generally axially through said boss and including a tapered wall portion, a regulator handle sleeved over said neck portion and bearing against said plate, a damper shaft having an eccentric portion extending through said aperture in said boss and forming a driving connection with said boss, a pin disposed in said main aperture and having side portions bearing, respectively, against said shaft and said tapered wall portion, said pin having its outer end extending outwardly beyond the end of said neck portion and a cap nut threaded over said neck portion and urging said handle against said plate, said nut including inner portions bearing against said pin and urging the latter tightly between said shaft and said tapered wall.

3,089,482
APPARATUS FOR CONTROLLING THE VOLUME OF AIR AND THE DISTRIBUTION OF BLOOD IN THE BODY
Reuben Flanagan Gray, Levittown, Pa., assignor to the United States of America as represented by the Secretary of the Navy
Filed May 28, 1959, Ser. No. 816,650
12 Claims. (Cl. 128—1)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. Pressure breathing apparatus comprising: an enclosed rigid wall container including a head portion shaped to house a subject, an incompressible liquid having a density approximating that of the subject's blood filling the space in said container unoccupied by the subject for completely immersing the subject therein, and respiratory means extending into said head portion and adapted for supplying to the immersed subject pressurized air cyclically varying between preselected limits above ambient atmospheric pressure.

3,089,483
MULTIPLE ELECTRODE HOLDERS FOR INDICATING NERVE RESPONSES TO STIMULATION
Guy C. Sheetz, 6506 Ridge Drive, Washington, D.C.
Filed Mar. 4, 1959, Ser. No. 797,311
3 Claims. (Cl. 128—2.1)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. An apparatus for permanently retaining electrode leads implanted in the brain of an experimental animal which is employed, in conjunction with electroencephalographic-indicating instrumentalities, to stimulate the animal and to obtain repeated electroencephalograms of the animal over an extended period of time comprising:

(*a*) A pedestal having,

(1) A flange shaped to fit snugly the skull of the animal and adapted to be bolted thereto;

(2) A socket at the end of the pedestal opposite said flange;

(3) A longitudinal passage through the pedestal;

(*b*) A cup member fitted and locked within the pedestal socket having,

(1) A longitudinal passage registering with the passage in the pedestal;

(2) At one end, a plurality of slots communicating with the longitudinal passage;

(*c*) A plurality of electrode leads adapted to be implanted in the animal's brain at one end and passing through the longitudinal passages in said pedestal and cup member, the second end of each electrode lead terminating in one of said slots of said cup member;

(*d*) Solidified conductive material overlying an exposed portion of the electrode lead in each of the slots of said cup member;

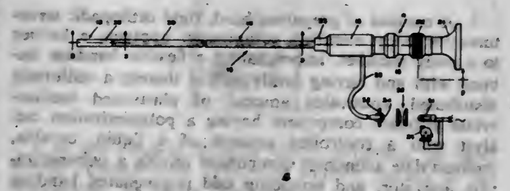
(*e*) Separable connector means for selectively connecting and disconnecting the said electrode leads to and from the aforesaid electroencephalographic-indicating instrumentalities comprising,

(1) A wiping contact member having a plurality of spring pressed contact elements each adapted to make electrical contact with the solidified conducting material in one of the slots of said cup member;

(2) An electrical lead connected to each of said contact elements and capable of further connection to the said encephalographic-indicating instrumentalities;

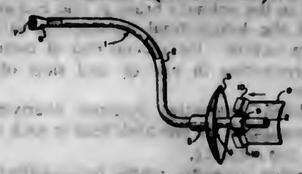
(3) Means for selectively locking the said wiping member in mechanical and electrical engagement with said cup member and pedestal.

3,089,484
FLEXIBLE OPTICAL INSTRUMENT PARTICULARLY FOR CARRYING OUT SURGICAL PROCEDURES
John H. Hett, Crosskill, N.J., assignor to American Cystoscope Makers, Inc., Pelham Manor, N.Y., a corporation of New York
Filed Jan. 26, 1961, Ser. No. 85,040
14 Claims. (Cl. 128—6)



7. A flexible optical instrument particularly for insertion into restricted openings and passageways in the body of a patient in the carrying out of surgical procedures, comprising an elongated light and image-conducting bundle having a multiplicity of very thin flexible light-conducting fibers extending longitudinally from end to end thereof, said fibers being arranged in first and second groups with the fibers of the first group at one end thereof forming a rod-like array extending spaced from the corresponding end of the fibers of the second group, the remaining portions of the fibers of said first group extending about said second group and forming a hollow extension projecting beyond the other end of said second group, and objective lens means positioned in said hollow extension for providing to said other end of said second group an image of a field of view adjacent to the end of said hollow extension, whereby light incident on the end of said rod-like array is conducted by the fibers of said first group to illuminate said field and said image is conducted by the fibers of said second group to said one end thereof.

3,089,485
MOUTH-TO-AIRWAY ARTIFICIAL RESPIRATION DEVICE
Louis Hirschhorn, 6 Pond Park Road, Great Neck, N.Y.
Filed July 15, 1960, Ser. No. 43,127
5 Claims. (Cl. 128—29)



1. A mouth-to-upper airway device for effecting artifical respiration comprising an oval disk-like mouthpiece member of flexible material having a central opening therein and adapted to be wholly inserted and retained in a subject's mouth between the inner portions of the upper and lower lips and the front surfaces of the upper and lower front teeth, a continuous length of hollow cylindrical flexible tubing adjustably and slidably arranged in said central opening of the mouthpiece, said tubing having a total length of the order of eighteen inches and adapted to be frictionally restrained in said opening and to protrude from said mouthpiece at one side thereof a distance of the order of approximately two inches during useful application of the airway.

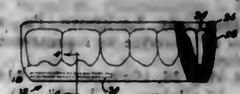
3,089,486
ORTHOPEDIC STRUCTURES, AND METHODS AND COMPOSITIONS FOR MAKING SAME
George J. Pike, Box 139, Fife Lake, Mich.
Filed Mar. 29, 1961, Ser. No. 99,316
20 Claims. (Cl. 128—90)



1. A method of preparing hard, rigid orthopedic structures for body members comprising: applying a barrier to a body member, impregnating a flexible bandage imbued with and having firmly affixed thereto a uniformly distributed, controlled amount of plasticized methacrylate polymer component having a polymerization catalyst with a controlled amount of a liquid, curable, methacrylate monomer component having a polymerization activator, and providing said impregnated bandage to said body member over said barrier to form an impregnated bandage having a monomer reaction system that rapidly and uniformly cures and intimately fuses with said polymer component at room temperature and forms a hard, rigid orthopedic structure of desired thickness and structural strength without necessitating the application of heat thereto and without producing an excessive temperature harmful to said body member.

3,089,487
PROTECTIVE MOUTHPIECE
James H. Enicks and Angelo A. Di Rocco, Greenville, Ohio; said Di Rocco assignor to said Enicks
Filed Oct. 20, 1960, Ser. No. 63,756
3 Claims. (Cl. 128—136)

1. A protective mouthpiece for athletes and which is individually fitted between the upper and lower teeth of the wear's mouth and adapted to engage over and about the teeth of the upper jaw, said mouthpiece comprising a flexible arcuate shaped member composed of superimposed layers of latex material with at least one of the layers embodying fibrous material for reinforcing the mouthpiece and preventing severance of the same by the teeth, said mouthpiece member having additional reinforcing structure comprising a thickened latex layer



in which is embedded a knitted textile pad, said thickened layer being in position to engage the occlusal surfaces of the posterior teeth of the mouthpiece wearer.

3,089,488
SURGICAL DRESSING
Neal Owens, 2223 Carondelet St., New Orleans, La.
Filed May 11, 1961, Ser. No. 109,456
4 Claims. (Cl. 128—156)



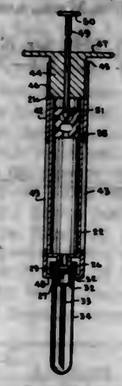
2. A surgical dressing which comprises, an inner wound contact layer formed of finely woven smooth threads having interstices between adjacent threads not exceeding approximately 9 microns in order to prevent capillary penetration but permit drainage of fluid therethrough and an outer layer of absorbent material connected to said inner layer for receiving fluid drained through said interstices.

3,089,489
ASPIRATING TYPE HYPODERMIC SYRINGES
Russell P. Dunmire, Chagrin Falls, Ohio; Hannah Dunmire, executrix of the estate of Russell P. Dunmire, deceased
Filed Apr. 27, 1959, Ser. No. 809,202
9 Claims. (Cl. 128—216)



1. A hypodermic syringe comprising a body of elastically flexible material defining both a closed fluid ampoule and an adjacent closed aspirating chamber, said body including a partition of elastically flexible material constituting a common wall of said ampoule and said aspirating chamber, said aspirating chamber having a relatively rigid wall portion opposite said partition; a hypodermic needle having a pointed butt end disposed in said aspirating chamber and directed toward said partition in close proximity thereto and having an oppositely directed pointed discharge end, an intermediate portion of said needle passing through said relatively rigid wall portion of said aspirating chamber opposite said partition and being surrounded and gripped by said rigid wall portion in sealed relationship therewith; said aspirating chamber between said common wall and said rigid wall portion being of bulbous configuration and elastically flexible so that it may be manually collapsed by external pressure to reduce its volume and will return to its normal configuration when said pressure is released, thereby creating a suction in said needle to draw blood into said aspirating chamber, said partition preventing said blood from mixing with fluid in said ampoule, and the material of said portion of bulbous configuration being translucent to permit visual observation of blood drawn into the aspirating chamber.

3,089,490
DISPOSABLE CARTRIDGE TYPE HYPODERMIC SYRINGES
Samuel D. Goldberg, West Hempstead, N.Y., assignor to Graham Chemical Corporation, Jamaica, N.Y.
Filed Mar. 14, 1960, Ser. No. 14,663
11 Claims. (Cl. 128—218)



1. A disposable, single dose cartridge for use in parenteral administration of medicaments and the like, comprising an elongate tubular body of substantially uniform bore, open at one end, partially constricted and provided with an annular grooved formation on the outer surface near the other end thereof, a piston positioned within the open end of the tubular body and capable of movement axially therein, engaging the inner walls thereof to provide an essentially liquid-tight closure therewith, and a partial closure at the other end of said tubular body, said partial closure comprising a diaphragm extending across and lying against the bottom of said annular grooved formation, said diaphragm being self-sealing, a perforation in said diaphragm normally closed due to the self-sealing characteristics of the diaphragm, but adapted to reopen under the influence of pressure exerted on said piston; and provided as an integral unit, a combination needle mount, diaphragm expansion and needle member comprising a top collar portion adapted to engage said annular grooved formation, an annular re-entrant flange at the top of said collar portion engaging the groove of said annular formation, a re-entrant flange at the bottom of said collar portion abutting against the bottom of said diaphragm along the periphery thereof, a cup-shaped portion serving as an expansion chamber for said diaphragm extending downward from said re-entrant flange at the bottom of the collar portion, a bottom on said cup-shaped expansion chamber portion, and a needle mounted in said bottom and flush therewith, whereby to firmly mount the needle on said tubular body, seal the diaphragm at the bottom thereof, and avoid any contact of said needle with said diaphragm.

3,089,491
CARTRIDGE SEAL AND NEEDLE HOLDER WITH AIR-LOCK DEVICE
Nathan Mirow, 79 Brighton 11th St., Brooklyn, N.Y.
Filed Aug. 24, 1961, Ser. No. 133,633
1 Claim. (Cl. 128—218)

The combination with a tubular, drug-containing cartridge having two open ends, one of the ends closed by a resilient plug entered therein, an external circumferential recess near the other end of the cartridge, and a hollow metal injection needle, adapted to receive the drug and transfer it to a patient; of a seal for the open end of the cartridge and holder for the needle with an air-lock device, said seal and needle holder molded from plastic to form a unitary device, said seal and needle holder comprising a sleeve member, said sleeve member frictionally engaging the cartridge at the circumferential recess, said sleeve member terminating in a constricted element, said constricted element terminating in an external circumferential neck, a recess at said neck, a central transverse opening through said neck and said constricted portion for the passage of one end of the needle therethrough, the other end of the needle extending through and beyond said neck portion, an airtight cover, the second named end of the needle covered therewith,



said recess at said neck forming a seat for said cover, a plastic tube in said needle holder one end of said plastic tube extending into the drug in the cartridge, a spool-shaped retainer in said needle holder, an opening in said retainer, said tube retained therein, one end of the needle passing through said needle holder into the opening in said retainer, whereby said tube and said needle are united, a trap for trapped air formed in said plastic tube, and said needle separated from the drug in the cartridge until the cover is removed from the needle for the escape of the air trapped in the tube.

3,089,492
WET SURGICAL DRESSING
Neal Owens, 2223 Carondelet St., New Orleans, La.
Filed May 11, 1961, Ser. No. 109,457
6 Claims. (Cl. 128—268)

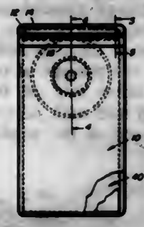


1. A wet surgical dressing which comprises, an inner wound contact layer formed of smooth threads of approximately 30 denier finely woven with approximately 114 by 114 threads per square inch to form interstices between adjacent threads, the said interstices not exceeding approximately 9 microns in width, an outer layer of absorbent material connected to said inner layer and fluid distributing means disposed between said inner and outer layers.

3,089,493
COLOSTOMY BAG WITH DISPOSABLE LINER
Eugene R. Galindo, 4735 Ocean View, La Canada, Calif.
Filed Aug. 12, 1960, Ser. No. 49,279
5 Claims. (Cl. 128—283)

1. In a colostomy bag, the combination of: a first sealing ring; means adapted to secure said first sealing ring onto the body of the user of said bag; an outer bag having an opening in its rear wall and including an inner skirt and an outer skirt, each of said skirts extending radially outwardly from said opening; a second sealing ring located about said outer skirt and adjacent said opening and closely, removably fitted about said first sealing ring, thereby removably securing said outer skirt therebetween in unitary and fluid tight relationship and holding said outer bag in predetermined position; and a disposable

inner bag located within said outer bag and having an inner bag opening, said inner skirt being disposed through said inner bag opening and extending radially from said inner bag opening, said outer bag including a second open-



ing for quickly inserting and removing said inner bag without removing said outer bag from said predetermined position, said outer bag also including means adjacent said second opening to effect fluid tight sealing of said second opening.

3,089,494
PINLESS DIAPER
Robert Schwartz, Rahway, N.J.
(1271 Westfield Ave., Union, N.J.)
Filed Jan. 12, 1962, Ser. No. 165,757
2 Claims. (Cl. 128—284)



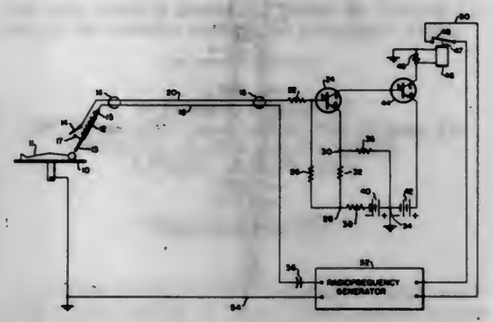
1. A pinless diaper comprising a sheet of absorbent material having a crotch portion; a portion of the diaper extending upwardly therefrom and formed with oppositely extending wings, said wings containing self-sealing adhesive on both surfaces so as to be adapted to be pressed into sealed engagement when folded over other self-sealing adhesive on the diaper; and a portion extending downwardly from the crotch portion adapted to be folded upwardly against the body, and downwardly over the wings in sealed engagement, said portion containing self-sealing adhesive only on the surface away from the body thus adapting it to be folded over the wings and to be pressed into sealed engagement with the wings to hold the diaper in place.

3,089,495
SURGICAL SPONGE AND METHOD OF MAKING SAME
Patrick Anthony Florio, Whitestone, N.Y., assignor to Johnson & Johnson, a corporation of New Jersey
Filed Aug. 8, 1958, Ser. No. 754,011
12 Claims. (Cl. 128—296)



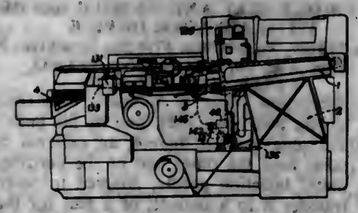
1. A surgical sponge free from raveling having a generally bulbous appearance and an extending neck comprising a core of absorbent material and an outer wrapping of pervious heat-sealable fabric containing an intermittently dispersed thermoplastic material, the edge of said fabric gathered together to form the neck of a bag enclosing said absorbent core, said neck extending out from the bulbous body of the sponge and said gathered fabric edge forming said neck containing a twist and being held in said gathered and twisted state by the thermoplastic material in the fabric of said gathered edge.

3,089,496
CONTROL SYSTEM FOR SURGICAL APPARATUS
John Degelman, Littleton, Mass., assignor to Code Incorporated, Wellesley Hills, Mass., a corporation of Massachusetts
Filed Aug. 19, 1959, Ser. No. 834,819
6 Claims. (Cl. 128—303.14)



1. Surgical apparatus for operating on tissue which is conductively coupled to a point of reference potential, comprising a probe including a surgical electrode protruding therefrom, means for applying high frequency energy between said electrode and said reference point, conductive coupling means connected to said electrode, said coupling means presenting a high impedance at said high frequency, control means including a relay, having a coil and at least one set of contacts, a relay control circuit and a voltage source, both said relay control circuit and said voltage source being connected to said point of reference potential, switching means having a pair of contacts disposed on said probe, means connecting one contact of said switching means to said coupling means and means connecting the other contact of said switching means to said relay control circuit, the contacts of said relay being normally open and being connected so as to interrupt the application of high frequency energy to said electrode when said relay contacts are open, means connecting said relay control circuit between the coil of said relay and said voltage source, said control circuit causing energization of said relay coil when said switching means is closed and said electrode is in contact with said tissue.

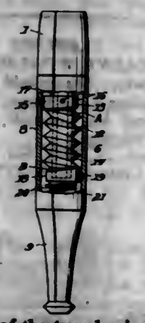
3,089,497
TOBACCO MANIPULATING MACHINES
Desmond Walter Molins, Gordon Francis Wellington Powell, and Frederick Pocock, Deptford, London, England, assignors to Molins Machine Company Limited, London, England, a British company
Filed Sept. 14, 1959, Ser. No. 839,639
Claims priority, application Great Britain Sept. 15, 1958
29 Claims. (Cl. 131—21)



1. A tobacco manipulating machine comprising feeding means to feed tobacco to form a continuous tobacco fill-

er rod, an air pervious conveyor to convey the filler rod lengthwise, opposed side walls between which the filler rod is conveyed by the conveyor, means to pass air into and through the filler rod and the conveyor in a direction transverse to the lengthwise direction of the filler rod, while the latter is moving through the machine, the opposed side walls cooperating with the conveyor to confine the filler rod laterally around part of its periphery, the walls defining a flow path for the air from the side opposite to that constituted by the air pervious conveyor, whereby the whole cross-section of the filler rod is traversed by the air, detector means to detect variations in the uniformity of the moving filler rod, the detector means comprising means to detect variations in a characteristic of the air flow, which variations result from differences in the resistance to the passage of air through the filler rod at different positions along the length of the moving filler rod, a trimming device positioned to remove surplus tobacco from the filler rod, and means to vary the operation of the trimming device so as to cause it to reduce variations in uniformity of the trimmed filler rod, said last-named means being operatively connected to and actuated by the said detector-means.

3,089,498
SMOKING DEVICE
Magoichi Usui, 102 Kamafue-cho, Ogaki-shi, Japan
Filed Nov. 22, 1961, Ser. No. 154,117
1 Claim. (Cl. 131—209)



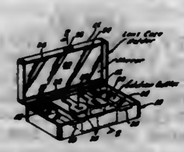
In a smoking article of the type having a mouthpiece at one end and a socket head for holding means for burning tobacco at the other end, the construction of the stem portion between said mouthpiece and socket head which comprises: an inner hollow cylinder having a tubular shank and a head portion of the shape of a truncated cone which fits snugly into a corresponding tapered opening in the said socket head; an outer hollow cylinder joined at one end to said socket head and at the other end to said mouthpiece to form the outer structure of the stem portion; a helical partition made of thin-sheet material having elastic properties and formed to resemble a cylindrical bellows, open at one end and closed at the other, its longitudinal wall being of helical configuration consisting of spiralling ridges and spiralling valleys so that said outer cylinder is disposed concentrically about said helical partition, which in turn is disposed concentrically about the said inner cylinder to form inner and outer helical passages concentrically disposed between said inner and outer cylinders, said helical partition being so disposed that its open end abuts against the aforesaid head of the inner cylinder for retention thereof; and a compression spring which is held at one end in a recess in the said mouthpiece and which at its other end abuts against and retains the said helical partition, the foregoing parts being so disposed that, in operation, suction on the mouthpiece causes smoke to flow from the socket head, successively through the inner cylinder, the said inner helical passage, the said outer helical passage, and the mouthpiece into the smoker's mouth.

3,089,499
MASK WASHER
Robert B. Way, 1503 Chelsea Ave., and Carl D. Hersey, 3107 Marvin Ave., both of Erie, Pa.
Filed Sept. 29, 1960, Ser. No. 59,279
7 Claims. (Cl. 134—141)



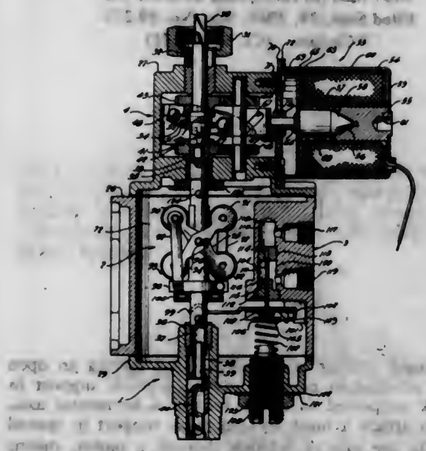
1. A mask washer comprising a tank having an open top and adapted to contain solvent, a mask support in said tank supported to rotate around a horizontal axis, means to attach a mask to said mask support in spaced relation to the axis of rotation thereof, a motor, means connecting said motor to a shaft to drive said shaft, a fluid circuit to conduct driving fluid to said motor, a cam attached to said mask support, spaced valves supported on said mask washer, followers on said valves engaging said cam, each said follower being actuated by said cam when said cam is rotated to a predetermined position actuating said spaced valves, means actuated by said spaced valves to reverse said motor whereby said mask support is driven first in one direction and then in the other, moving said mask support into said solvent and out of said solvent, stopping it out of said solvent and then moving it into said solvent, a timer valve controlling the time during which fluid is connected to said motor, and means to actuate said timer valve.

3,089,500
CONTACT LENS CARRYING CASE
Irl N. Stalcup, 3316 W. 80th St., Inglewood, Calif.
Filed Oct. 12, 1960, Ser. No. 62,287
11 Claims. (Cl. 134—156)



1. In a device for storing a contact lens, the combination of: a storage chamber for containing a body of liquid; means to support the lens in the chamber, said support means being movable between a position for holding the lens above liquid level and an alternate lower position for submerging the lens in liquid; and a resilient body in said chamber having voids for containing liquid, said resilient body being positioned for compression by said support means at the lower position of the support means.

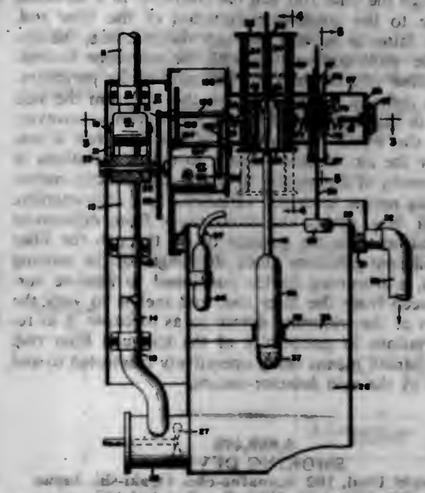
3,089,501
SPEED GOVERNING SYSTEMS
Arthur C. Allen, Chicago, James P. Magerl, Lombard, Bernard J. Sadoff, Jr., Chicago, and Harry P. Wertheimer, Evanston, Ill., assignors to Stewart-Warner Corporation, Chicago, Ill., a corporation of Virginia
Filed Oct. 18, 1957, Ser. No. 690,941
2 Claims. (Cl. 137—53)



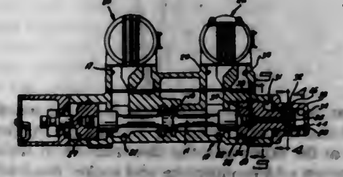
1. A speed responsive device comprising: a body, a shaft rotatably supported by the body, a centrifugal speed responsive mechanism secured to the shaft, a collar keyed concentrically to the shaft for rotation therewith and adapted for relative coaxial movement thereon, linkage interconnecting the centrifugal device and the collar for moving the collar axially relative to the shaft, a lever arm pivoted on an axis generally perpendicular to the axis of the shaft with its free end extending to a position adjacent the shaft, a thrust bearing interposed between the collar and lever arm for moving the lever arm on its pivot incident to axial movement of the collar, a valve stem supported by the lever arm and having a generally hemispherical head, structure on the lever arm including a generally hemispherical seating surface for pivotally supporting the valve stem, an adjustable helical biasing spring axially aligned with the valve stem urging the valve stem toward its seating surface on the lever arm, fluid inlet and outlet passageways in the device, and a valve seat structure interposed between the passageways and cooperating with the valve stem for interconnecting the inlet and outlet passageways in response to shaft speeds above a predetermined level.

3,089,502
DENSITY CONTROL APPARATUS
James P. Davidson, 198 Montclaire Way, and Eugene A. Glassey, 5545 Eva Ave., both of Los Altos, Calif.
Filed July 18, 1960, Ser. No. 43,431
17 Claims. (Cl. 137—90)

1. Density control apparatus comprising a tank, at least two fluid lines discharging into said tank conveying into said tank fluids of different densities and wherein the density of the combined fluid in said tank is dependent upon the relative flow through said lines, a hydrometer suspended in the combined fluid in said tank, an armature on the upper end of said hydrometer and responsive to density of said combined fluid, a differential transformer surrounding said armature and energized responsive to the position of said armature, valve means for adjusting the flow through at least one of said fluid lines, a servomotor controlled by said differential transformer for proportionately adjusting said valve means to maintain the density of said combined fluid at a pre-selected level and manually adjustable means for adjusting said armature and differential transformer relative to each other to alter the density of said combined fluids.



3,089,503
SHUTTLE VALVE WITH DETENT MEANS
Walter D. Ludwig, Bloomfield Township, Oakland County, and Walter J. Bowman, Detroit, Mich., assignors to Mechanical Air Controls, Inc., Detroit, Mich., a corporation of Michigan
Filed Sept. 22, 1961, Ser. No. 139,992
3 Claims. (Cl. 137—111)



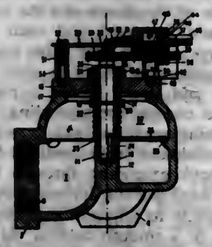
1. In a safety valve of the type having a pair of inlet pressure fluid chambers and a base provided with the pressure fluid inlet and in which is operatively mounted a shuttle valve including a spool provided with a centrally mounted valve head and a piston of equal area at each end for engagement by fluid under pressure provided by said fluid chambers, to maintain the shuttle valve in a central operative balanced position, said valve including an outlet closable by said valve head when it is moved from said balanced central position, a variable pressure detent means comprising, a detent housing connected to said base and having a detent groove formed therein; an extension on one of said pistons projecting into said detent housing; said piston and extension being provided with a pressure fluid passage; a plurality of radially disposed detent pistons slidably mounted in said piston extension and having the outer ends thereof engageable with the groove in said detent housing; the inner end of said detent pistons communicating with the inner end of said pressure fluid passage; and, the outer end of said pressure fluid passage being aligned with a conduit connected to the pressure fluid inlet when the shuttle valve is in the central balanced position to conduct pressure fluid to the inner ends of the detent pistons to move them radially outwardly into detent engaging action with the groove in the detent housing.

3,089,504
VALVE HAVING SELF-CLEANING SEAT
Charles P. Crawford, Room 822, 79 W. Monroe St., Chicago 3, Ill.
Filed Oct. 28, 1960, Ser. No. 57,799
3 Claims. (Cl. 137—242)



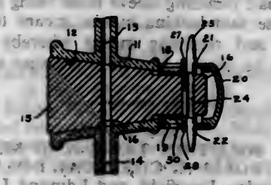
1. A valve having a self-cleaning valve seat and adapted for use in drains or the like comprising a body assembly, a valve seat mounted on said body assembly, a rotatably mounted valve stem extending through said body assembly and cooperating therewith in screw threaded relationship to impart axial movement to said valve stem, a valve member carried by said valve stem and rotating therewith, a hinge device connecting said valve member and said valve stem, and spring means biasing said valve member into a tilted position when said valve member is in its open position so that a peripheral portion of said valve member will engage said valve seat and exert a sweeping motion thereon as said valve stem is rotated into valve closed position in order to clean said valve seat.

3,089,505
SLIDE TYPE MIXING VALVE WITH INTERCHANGEABLE INLET AND OUTLET CONNECTIONS
Robert Forster, Winterthur, Switzerland, assignor to Sarco International Corporation, New York, N.Y.
Filed July 10, 1959, Ser. No. 826,282
Claims priority, application Switzerland July 17, 1958
7 Claims. (Cl. 137—270)



1. A rotary three-way slide valve comprising, in combination: a casing having three connector sockets the axes of which lie in a common plane, two of said axes being in alignment with one another and the third axis being perpendicular to the first two axes, a transfer chamber arranged in said casing and having three equal communication ports mutually offset 120°, each port connecting one of said sockets with said transfer chamber, a slider plate rotatably mounted in said casing between said sockets and said transfer chamber and controlling the flow through the said ports, an annular shoulder formed in said casing, said casing having a central internal boss and three partitions radiating from said boss at angles of 120°, said shoulder, said boss and said partitions defining said ports, said partitions and said casing forming connector chambers each communicating with said transfer chamber through one of said ports, said ports lying between said transfer chamber and said connector chambers and each being sector-shaped, said slider plate having the shape of a 120° circular sector, a spindle rotatably mounted in said boss, said plate being slidably mounted on and coupled for rotation with said spindle, and a compression spring surrounding said spindle and biasing said plate against said partitions and against said shoulder, said slider plate being operative to open one port of a pair while simultaneously closing the other, and mechanism for adjusting the rotational range of said slider plate with respect to a given angular displacement of said spindle for selectively controlling the opening and closing of any pair of the three individual pairs of said ports.

3,089,506
STOPCOCK ASSEMBLY
Joseph T. Dunbeck, Corning, N.Y., assignor to Corning Glass Works, Corning, N.Y., a corporation of New York
Continuation of application Ser. No. 836,245, Aug 26, 1959. This application Mar. 28, 1961, Ser. No. 98,852
2 Claims. (Cl. 137—315)

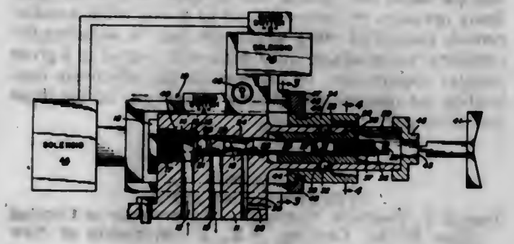


1. A stopcock including a body having an elongated tapered internal bore, said bore having an axial open opposite end and said body having oppositely disposed transverse passages intermediate its ends directly communicating with its tapered bore, an externally tapered plug member rotatably seatable in the bore of said body, said plug member having a transverse passage alignable with such transverse passages and having a portion extending a substantial distance beyond the small open end of said body having a transverse passage therethrough, a hollow cylindrical member encircling such portion having an inwardly flanged open end seated upon the end of the body through which such portion extends and having aligned transverse oppositely disposed passages therethrough in register with the transverse passage through the plug portion, a pin passing through the passages of such plug portion and cylindrical member respectively, a compression spring partly compressed between the flange of said cylindrical member and said pin and a washer interposed between said spring and said pin having tabs available through the cylindrical member passages for seizure to compress said spring to facilitate passage of said pin through the plug and cylindrical member passages respectively.

3,089,507
AIR EJECT SYSTEM CONTROL VALVE
Stephen Drake, Sunnyvale, and Lester Crook, Mountain View, Calif., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Aug. 11, 1961, Ser. No. 131,027
6 Claims. (Cl. 137—383)

1. A valve for a fluid control system comprising a valve body having a valve chamber, valve seating means within said valve body, an inlet and outlet port connected

to said valve chamber, a valve member operably mounted at one end of a valve stem within said valve body to control the flow of fluid passing through said inlet and outlet, vent means operably connected to the interior of said body and said outlet when said valve member is in closed position, locking means for maintaining said valve member in a closed position, retaining means for holding said locking means in locked position, said retaining means



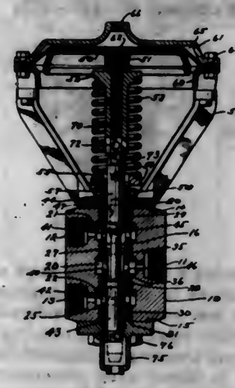
comprising a safety lock member, a valve release yoke and a ball retaining sleeve, said safety lock member engages the underside of said valve release yoke thus preventing said ball retaining sleeve from being lowered and thereby release said locking means, means for releasing said locking and retaining means whereby said valve member may be unseated by inlet pressure acting on its underside.

3,089,508
CHEMICAL SOLUTION TANK AND MEANS FOR CONTROLLING CHEMICAL DOSAGE
Robert E. Schulze, Deerfield, and Edmund J. Heartstedt, Glenview, Ill., assignors to Calligan, Inc., Northbrook, Ill., a corporation of Delaware
Filed Oct. 10, 1958, Ser. No. 766,564
4 Claims. (Cl. 137—433)



1. A system for controlling dosage from a chemical solution tank, comprising a storage tank, an enclosure in said tank and communicating with the tank, a conduit extending from the top of the tank to the bottom of the enclosure, a control valve at the bottom of said enclosure and communicating with said conduit, a float valve operatively connected with said valve to limit the maximum liquid level in the tank, and a weir box mounted on said valve to control the minimum liquid level in the tank and thereby control the dosage withdrawn from said tank, said weir box comprising a cylindrical side wall having an upper open end and an elongated vertical slot along the side and extending to the top thereof, and plural vertically stacked curved segments conforming to the cylindrical contour of the weir box and received in aligned relation in said slot to vary the effective height of the slot and thus vary the minimum liquid level in the tank.

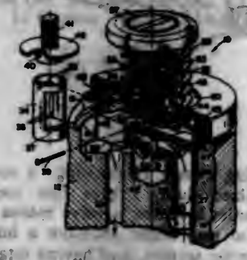
3,089,509
THREE-WAY VALVE AND SLEEVE SEAT
John E. Collins, Akron, Ohio, assignor to International Basic Economy Corporation, New York, N.Y., a corporation of New York
Continuation of application Ser. No. 480,869, Jan. 10, 1955. This application Mar. 4, 1959, Ser. No. 797,263
2 Claims. (Cl. 137—454.6)



1. A flow control valve comprising a valve body having opposing end faces and a main bore through the body open to both said end faces; an integral one-piece sleeve in said main bore, said sleeve having on its interior side a pair of smooth conical valve seats which are integral with the sleeve and are disposed axially and in spaced apart relation to each other with their smaller diameter regions directed toward each other, and said sleeve also having on its interior side a smooth circumferentially continuous guide bore leading from a region near the larger diameter region of each said conical seat toward the end of the sleeve; a first port through the sleeve wall opening to the interior of the sleeve between said valve seats, and a pair of second ports through the sleeve wall each opening into the interior of the sleeve in the region of one of said smooth guide bores and spaced away from the adjoining valve seat; axially spaced annular sealing means encircling said sleeve and engaged between the outside of the sleeve and the main bore of the body between said first port and each of said second ports; passageways through said valve body opening into the bore and communicating with said sleeve ports; a valve stem thru said sleeve having a pair of head portions disposed to engage corresponding valve seats, the head portions being separated axially a greater distance than said seats and said head portions being connected by a narrow shank extending through both said valve seats, and each head portion having a cylindrical shoulder slidable snugly in its adjacent guide bore of the sleeve and terminating in a smooth conical valve face complementary to its adjacent valve seat in the sleeve the spacing of each of said pair of sleeve ports from its seat being such that one of said head portions seals its adjacent sleeve port from said first port prior to the opening of the other of said pair of sleeve ports by the other head portion; a pair of end closures removably engaged with said end faces of the valve body and cooperating to fasten said sleeve in said main body bore; and said stem having one end extending through and beyond one of said end closures; means biasing said stem in one direction axially of said sleeve, and means responsive to fluid pressure, engaged with said extending end of the valve stem to displace said valve stem axially against the opposition of said biasing means whereby the face of each head portion of the stem is selectively engaged with its respective valve

seat while the other head portion is disengaged from its valve seat.

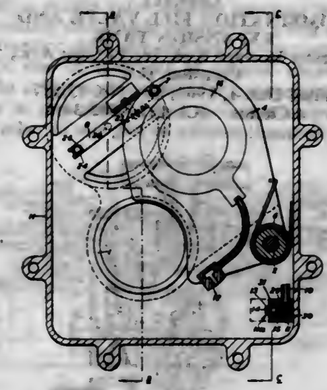
3,089,510
REMOVABLE VALVE HEAD AND SEAT UNIT
Walter O. Lenz, Livingston, N.J.
(1013 NE. Harriet St., Port Charlotte, Fla.)
Filed Dec. 8, 1959, Ser. No. 858,267
3 Claims. (Cl. 137—454.6)



1. In combination: a fluid supply member having an internal shoulder and a pair of spaced apart parallel bores, a valve assembly releasably seated on the shoulder, the assembly comprising: a duct piece resting on the shoulder, an inlet communicating with one of said parallel bores and an outlet, a valve closure guidably associated with said duct piece for movement between an open and a closed position relative to said fluid outlet of said duct piece, and manually operable spring means yieldably urging said valve closure toward said closed position; said duct piece comprising a substantially rigid L-shaped member having a pair of perpendicularly related legs with an internal bore extending at least partially through each said leg, one end of the bore in one leg defining said fluid inlet, and a seat integral with the other one of said legs defining said fluid outlet; and wherein said fluid supply member includes a sump intermediate said parallel bores of substantially larger diameter and greater depth than said seat, and said seat being received within said sump, the space between said seat and said sump providing communication between the other one of said parallel bores and said outlet.

3,089,511
AUTOMATICALLY ACTUATED GATE CUT-OFF VALVE, RESPONSIVE TO PRESSURE DROP, WITH GATE SEALING MEANS, USEFUL IN PRESSURIZED WAVEGUIDES
Frederick John Dunn Taylor, Wembley Park, England, assignor to Her Majesty's Postmaster General, London, England
Filed June 23, 1961, Ser. No. 119,135
Claims priority, application Great Britain July 21, 1960
11 Claims. (Cl. 137—456)

1. A pressure responsive wave guide valve comprising a wave guide section, a gap in the wave guide section wall extending transversely of the longitudinal axis of the wave guide section, a gas-tight housing surrounding the gap on the exterior of the wave guide section, an axle within the housing extending parallel to the longitudinal axis of the wave guide section, a closure device rotatable about the axle, the closure device having an inoperative position in which it is located within the housing and being capable of rotation through the said gap into an operative position in which it closes the wave guide section bore, resilient means for rotating the closure device, movable means biasing the closure device in the said inoperative position, and an actuating mechanism including a device responsive to pressure within the wave guide section for moving the biasing means to permit rotation of the closure device by the resilient means to the said



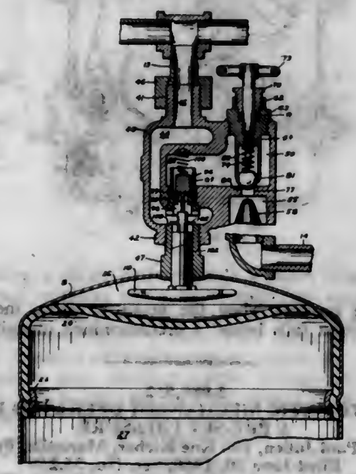
operative position when the pressure within the wave guide section falls below a predetermined magnitude.

3,089,512
AUTOMATIC MECHANISM OPERATED BY A PRE-SET PRESSURE
Louis Paul Julien, 104 Rue Kleber, Marseille, France
Filed June 10, 1960, Ser. No. 35,259
Claims priority, application France Apr. 7, 1960
2 Claims. (Cl. 137—460)

1. An automatic mechanism for operation by a predetermined pressure variation, comprising a source of fluid pressure taken from the circuit to be controlled, valve means associated with said circuit, a reservoir of predetermined volume coupled with said source of fluid pressure, a porous barrier between said source of fluid pressure and said reservoir, a differential pressure valve having two chambers with a flexible diaphragm forming a common wall, a first of said chambers being connected to the fluid pressure source and the second of said chambers being connected to said reservoir, valve means connecting the second of said chambers to a fluid pressure operable relay assembly and including a movable valve member spring-loaded into closing position and coupled to the diaphragm, said relay assembly including a fluid-operated cylinder and piston device arranged to cause actuation of said valve means arranged to relieve pressure in said circuit to be controlled, whereby a pressure drop in said circuit causes the greater pressure then prevalent in the reservoir to open the spring-loaded valve in said second chamber whereafter said greater pressure is trans-

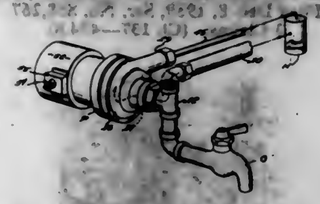
mitted to said relay assembly to cause actuation of the valve means to relieve the pressure therein.

3,089,513
COMBINATION FILL VALVE AND EXPANSION TANK
Chester Howard Kirk, Jr., 14 Glen Ave., Cranston, R.I.
Filed Dec. 1, 1960, Ser. No. 73,117
4 Claims. (Cl. 137—565.34)



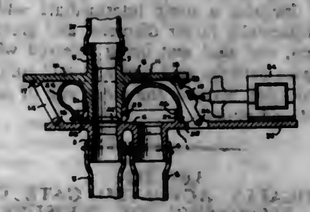
3. A liquid control mechanism and expansion tank combination adapted to be employed in a pressurized hot water heating system, to maintain pressure in the system at all times, to allow water to enter the system as required by the system and to allow for the expansion and contraction of the water in the system as the water is heated and as the water cools off, said combination including a valve and an expansion tank, said valve comprising a hollow body member having a partition forming a chamber and a cavity, said body member having a passageway adapted to provide communication between said chamber and a pressurized hot water system, said body member having a fluid supply inlet passageway communicating with said cavity and adapted to be connected to a supply of make-up water, said partition having a valve passageway providing communication between said cavity and said chamber, valve means in said valve passageway controlling communication therethrough, said expansion tank having a flexible diaphragm with a free area substantially greater than the cross-sectional area of said expansion tank at the periphery of the diaphragm dividing the tank into two non-communicating sections, one of said sections being a pressurized section and the other being a fluid expansion section, a valve actuator engageable by and disengageable from said diaphragm when the latter is flexed in opposite directions, said actuator being operatively coupled with said valve means to effect operation thereof, means limiting movement of said valve actuator to a selected range, said flexible diaphragm being movable through a range of movement substantially greater than said valve actuator range, said diaphragm being movable in response to variations in pressure and volume of the pressurized system as opposed by the pressure in the pressure chamber, said diaphragm being movable into and out of engagement with said valve actuator to effect operation of said valve means only when said diaphragm moves within the range of movement of said valve actuator.

3,089,514
TEMPERATURE-STABILIZED PLUMBING SYSTEM
Gustav H. Sudmeier, 2708 Torrance Blvd., Torrance, Calif.
Filed July 12, 1961, Ser. No. 123,542
5 Claims. (Cl. 137—563)



1. A plumbing system comprising: a source of temperature stabilized fluid; a pipe line connecting said source to an outlet location; a valve means connected to said pipe line at said outlet location; a housing including a non-magnetic section, and having intake and outlet ports, said intake port being connected to said pipe line at said outlet location; means connecting said outlet port to said source; a magnetic means rotatively supported adjacent said non-magnetic section in said housing; an impeller means affixed to said magnetic means and mounted in said housing to develop a pressure differential between said intake and outlet ports which pressure urges said magnetic means away from said non-magnetic section; and means positioned outside said housing for providing a revolving magnetic field to said magnetic means.

3,089,515
THREE-WAY VALVE
John Bochan, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Filed Nov. 13, 1961, Ser. No. 151,760
2 Claims. (Cl. 137—610)



1. A three-way valve comprising a valve plate having a flat surface forming a valve seat, a pair of spaced ports opening into said seat, a valve member including a tubular portion and a radially extending flange portion, a parallel linkage means connecting said flange portion of said valve member to said valve plate with said tubular portion perpendicular to said valve plate surface and one end thereof facing said flat surface, said parallel linkage means providing for movement of said valve member relative to said valve plate through to an arcuate path between a first limiting position in which said end of said tubular portion contacts said seat in communication with one of said ports and a second limiting position in which said end of said tubular portion contacts said seat in communication with the other of said ports, a flexible annular boot having inner and outer edges and being of semi-circular cross section between said edges, means connecting said outer edge of said boot to said valve plate outwardly from said ports and between said linkage means and said ports, and means connecting the inner edge of said boot to said tubular portion whereby said boot forms with said valve plate and said tubular portion a fluid tight valve housing enclosing said ports and said one end of said tubular portion.

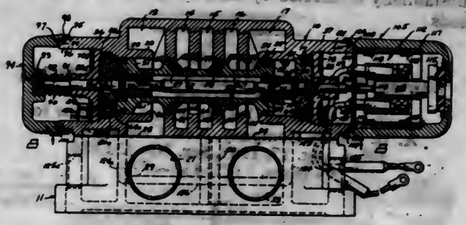
3,089,516
CONTROL MECHANISM FOR HYDRAULIC APPARATUS
Karl Eickmann, 2420 Ishiki Hayama-machi, Kanagawa-ken, Japan
Filed Oct. 24, 1960, Ser. No. 64,319
16 Claims. (Cl. 137—620)



1. In a control mechanism for hydraulic apparatus, a substantially tubular valve housing having a single continuous aperture therein forming at least three chambers disposed in a row behind each other, insert means rigidly inserted into said tubular valve housing and formed with two coaxial bores, the first of said bores connecting the first and second of said chambers, the second bore connecting the second and third of said chambers, a first conduit connected to said first chamber and adapted to serve as a return line for a pressure medium, a second conduit connected to said second chamber and adapted to serve as a feed line for said pressure medium, and a third conduit connected to said third chamber and adapted to be connected to the hydraulic apparatus, a first valve adapted to serve as a return valve, movable in the axial direction within said first bore and guided by the wall thereof, control channels connecting said first and second chambers and disposed between the guide surfaces of said first valve and said first bore in said valve housing, said first valve having valve control means for controlling said control channels, and a second valve adapted to serve as a pressure control valve movable in the axial direction within said second bore and guided by the wall thereof, control channels connecting said second and third chambers and disposed between the guide surfaces of said second valve and said second bore in said valve housing, said second valve having valve control means for controlling the last-mentioned control channels, said valve control means on said first and second valves being designed so that for opening the associated control channels, said first valve is adapted to move to the open position into said second chamber and said second valve is adapted to move to the open position into said third chamber.

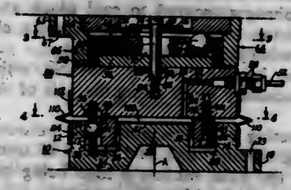
3,089,517
COMPOUND VALVE
Walter D. Ludwig, 3865 W. Lincoln Drive, Birmingham, Mich.
Filed July 17, 1958, Ser. No. 749,212
16 Claims. (Cl. 137—623)

1. A valve construction of the class described comprising: a body, a main supply chamber in said body, a port for admitting fluid under pressure to said supply chamber; a pair of transfer chambers in said body; a pair of exhaust chambers in said body; an outlet port in said body for connecting said exhaust chambers to the exterior of the body; a master valve slidably mounted in said body for connecting said supply chamber to a first one of said pair of transfer chambers and the other transfer chamber to a first one of said pair of exhaust chambers when moved to a first position, and for connecting the supply chamber to the other of said pair of transfer chambers and the other of said pair of exhaust chambers to the first



transfer chamber when moved to a second position; said master valve being movable between said first and second positions in response to fluid under pressure acting on the ends thereof; passageways in said body for conducting and exhausting fluid under pressure to and from the ends of said master valve; a pair of three-way valves for controlling the flow of fluid under pressure in said passageways to alternately admit the fluid under pressure to one end of the master valve and simultaneously exhaust fluid from the other end of the master valve; and, means for operating said pair of three-way valves.

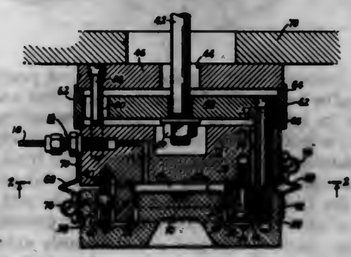
3,089,518
HYDRAULIC LOAD CELL FOR WEIGHING MACHINES
Chester D. Bradley, Darien, Conn., assignor to A. H. Emery Company, New Canaan, Conn.
Original application Aug. 18, 1958, Ser. No. 755,563, now Patent No. 2,960,113, dated Nov. 15, 1960. Divided and this application May 10, 1960, Ser. No. 28,107
8 Claims. (Cl. 137—778)



1. A fluid pressure load cell for weighing apparatus comprising, in combination, a stationary base member having a substantially vertical load-bearing axis, a second member in substantial axial alignment with said base member and movably mounted thereon for substantially vertical axial motion relative thereto, means forming a cylinder portion on one of said members, further means forming a cooperative piston portion on the other of said members, said cylinder and piston portions adapted to freely interfit with each other without frictional engagement therebetween, a relatively thin flexible diaphragm of fluid impervious material sealed to said cylinder portion and overlying said piston portion to form a fluid pressure chamber therebetween, an annular fold of said diaphragm interlying a portion of the free space between said cylinder and piston portions, a fluid pressure passage leading from said pressure chamber to means for connection to an external pressure line, ball and race guiding means between said base member and said second member for

limiting relative movement therebetween substantially in the direction of said vertical load-bearing axis, a laterally movable load bearing member mounted upon said second member and adapted to yield in a generally horizontal direction substantially normal to said load-bearing axis, and a laterally compressible element resiliently urging said load bearing member to a central no cross-load position, whereby the forces of cross loads applied to said load bearing member are not transmitted along said substantially vertical load-bearing axis, and normal axial motion between said base and movable second member remains substantially unaffected by the lateral thrust of such cross loads.

3,089,519
LOAD CELLS FOR HYDRAULIC WEIGHING MACHINES
Chester D. Bradley, Darien, Conn., assignor to A. H. Emery Company, New Canaan, Conn.
Filed Aug. 17, 1961, Ser. No. 132,055
3 Claims. (Cl. 137—778)



1. A tension responsive fluid pressure load cell comprising in combination

A. a stationary block having a recess forming a cylinder in its bottom surface,

1. means forming a fluid passage extending within said block axially from the top of said cylinder and laterally to an external surface of said block and of said cell for direct connection with an external fluid pressure line,

B. a piston interfitting in said cylinder and axially movable therein,

C. a diaphragm secured to said block and overlying said piston to form a fluid pressure chamber between said cylinder and said piston,

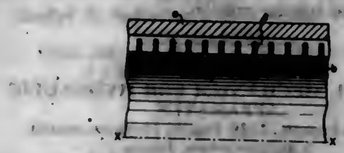
D. a load bearing member movable with respect to said stationary block along the axis of said cylinder, and

E. connecting members connected between said load bearing member and said piston to transfer to said piston the axial motion a load being measured imparts to said load bearing member

1. so that said piston moves to change the volume of said pressure chamber in response to the axial force applied to said load bearing member.

3,089,520
METALLIC PIPING SYSTEM FOR FLUIDS AT HIGH TEMPERATURE
André Huet, 48 Ave. du Président Wilson, Paris 16°, France
Filed Apr. 1, 1960, Ser. No. 19,375
Claims priority, application France Apr. 7, 1959
4 Claims. (Cl. 138—138)

1. A tubular steel conduit for fluids at temperatures in the vicinity of 600° C. and over, comprising a main tube of high mechanical strength provided externally with extensions in the form of radial fins which extend transversely of the axis of said tube, and a secondary tube concentric with the main tube and disposed exteriorly of said main tube and having an inner surface spaced apart radially from the extremities of the extensions by a dis-



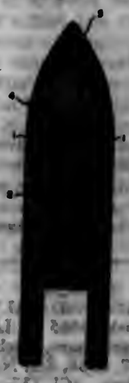
tance corresponding to the expansion of the main tube and of said extensions at the working temperature.

3,089,521
CHIMNEY HOUSING
Georges E. Paiement, Montreal, Quebec, Canada, assignor, by mesne assignments, to The Flintkote Company, a corporation of Massachusetts
Filed Sept. 20, 1960, Ser. No. 57,323
3 Claims. (Cl. 138—158)



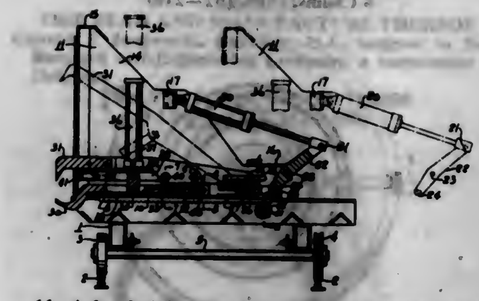
1. A chimney housing, comprising pairs of panels, each of said panels being embossed to present the appearance of rows of brick or the like and intervening mortar joints extending to the lateral edges of the panels, each of the panels of one of said pairs having at each side margin thereof an outwardly opening U-shaped keyway disposed inwardly of the marginal edge and an inwardly opening U-shaped keyway extending along said marginal edge and substantially at a right angle to the plane of the panel, each of the panels of the other of said pairs having a marginal portion to be received in one of said inwardly opening U-shaped keyways and having adjacent each side margin thereof a member extending at a right angle to the plane of said panel and terminating in a flange disposed in a plane parallel to that of said panel, said members being each spaced inwardly of the respective marginal edges, and said flanges extending in a direction away from the respective marginal edges.

3,089,522
TEXTILE SHUTTLE
Horace Nathan Phelps, Cincinnati, Ohio, assignor to Formica Corporation, Cincinnati, Ohio, a corporation of Delaware
Filed Apr. 19, 1960, Ser. No. 23,163
8 Claims. (Cl. 139—196)



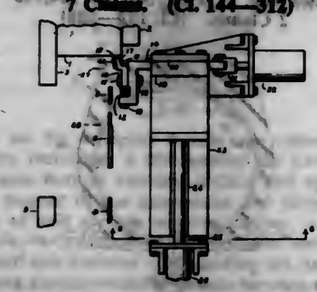
1. A textile shuttle having side members and end members having shoulder areas bonded into a unitary structure with a bobbin cavity having bobbin openings wherein said side members are synthetic thermosetting resin impregnated laminae and said shoulder areas are reinforced by a synthetic thermosetting resin impregnated layer of fabric rolled into the shape of a rod, said rod being oriented so as to have its axis perpendicular to the plane of the shuttle having said bobbin openings.

3,089,523
COMBINATION BOARD AND LOG HOLDING KNEE DOG STRUCTURE OF A SAWMILL
Alexander Shashaty, Youngstown, Ohio, assignor to Wm. K. Stanseth Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Feb. 15, 1961, Ser. No. 89,426
15 Claims. (Cl. 143—126)



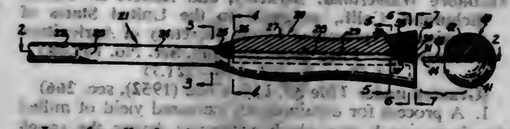
11. A log holding dog lever structure consisting of a knee including connected spaced vertical plates each having a front log engaging face, three pairs of horizontal slots with one slot of each pair in each plate, said pairs of slots being successively positioned in said plates at forward and intermediate and aft positions, a lower dog lever having an upwardly projecting log bite at its forward end and a transverse pivot pin riding in said intermediate slots, an upper dog lever having a downwardly projecting log bite at its forward end and a transverse pivot pin riding in said aft slots, at least two links pivotally connected to a pivot pin riding in said forward slots, one link having its other end pivoted to the middle part of said upper dog lever and the other link pivoted to said transverse pivot pin in said intermediate slots, means to hold said transverse pivot pin in a selected end of said intermediate slots, and power means to move said dog levers toward and away from each other while said log bites move substantially in a straight vertical line.

3,089,524
REDUCTION OF SAW DUST IN CUTTING WOOD BY BENDING THE WOOD
Corline M. Sweet, 1000 E. Mundeen St., Milwaukee, Wis.
Filed Nov. 21, 1960, Ser. No. 70,493
7 Claims. (Cl. 144—312)



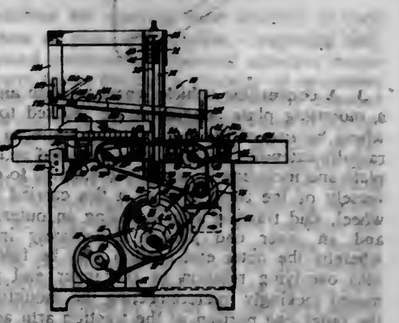
4. The method of placing a stretching force on the fibers of a board to be cut from a timber, comprising pushing at least one dogging type tooth against the end of a board that is to be cut from a timber, exerting a pulling force with a power operated device on said tooth in a direction away from the blade and at an angle of approximately 90 degrees to the side of the blade thereby bending the board being cut off and placing a stretching force on the wood fibers on the convex side of the board to be cut off, cutting a kerf in those of said fibers that are being most stretched with a blade and transferring the means of stretching the wood fibers being cut from said tooth to a wedge that follows said blade in the kerf.

3,089,525
TOOL HANDLE
John P. Palmer, 556 Randolph St., Meadville, Pa.
Filed Oct. 7, 1960, Ser. No. 61,189
1 Claim. (Cl. 145—29)



In a handle for impact type tools, the combination of an elongated shank oval in cross section, a handle member having a bore therein conforming to the cross sectional shape of said shank through which said shank extends, a shoulder on said shank engaging one end of said handle member, a resilient cushion member having a cylindrical bore therethrough of a diameter in excess of a major cross sectional diameter of said shank engaging the other end of said handle, said shank extending through said last-mentioned bore, the end of said shank being reduced and having lateral projections of an extent equal to the major cross sectional diameter of said shank to form an elongated detent formed on the end of said shank, a plate seating against said compression member, said plate having an elongated slot therethrough dimensioned to receive said detent, and a recess extending transversely to said slot for receiving said detent, whereby rotation of said plate to seat said detent in said recess compresses said cushion member and rotation of said plate to juxtapose said slot to said detent permits release of said compression and removal of said plate, cushion member, and handle member, said cushion member having a recess therein dimensioned to receive said plate in flush relation, said plate having tool receiving openings in the outer face thereof adjacent the ends of said slot.

3,089,526
MACHINE FOR SLICING MEAT
Alfred Lykkeberg, 2507 22nd Ave., San Francisco, Calif.
Filed June 23, 1960, Ser. No. 38,345
5 Claims. (Cl. 146—153)



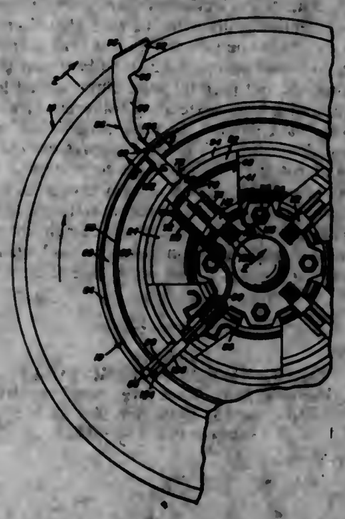
5. A machine of the character described comprising a stationary framework, a cutting head including an up-

right frame member reciprocable in said framework and having a plurality of upright cutting blades mounted therein in spaced parallel relation to slice meat as it is supplied to the head; a first endless feed member provided with spikes to penetrate pieces of meat and to move the same toward said head; a second endless feed member provided with spikes to penetrate sliced meat as it comes from said head and to move the sliced meat away from said head; and hold down means overlying said first and second endless members for applying pressure to the top surface of each piece of meat to impale it on said spikes as it is fed by said first feed member to said head and as it is removed in sliced form by said second feed member from said head.

3,089,527
PROCESS FOR INCREASING MILLING YIELDS OF RICE
Theodore Wasserman, Berkeley, and Robert E. Ferrel, Richmond, Calif., assignors to the United States of America as represented by the Secretary of Agriculture
No Drawing. Filed Sept. 18, 1961, Ser. No. 139,083
3 Claims. (Cl. 146—221.7)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A process for obtaining an increased yield of milled rice from rough rice which comprises drying the rough rice to a moisture level not to exceed 11.5% and milling it at said moisture level.

3,089,528
CONVERTIBLE WHEEL TRACTION AID
Richard P. Aler, 130 Stevenson Lane, Baltimore, Md.
Filed June 14, 1962, Ser. No. 202,567
8 Claims. (Cl. 152—216)



3. A convertible vehicle-wheel traction aid comprising a mounting plate adapted to be secured to the vehicle wheel by use of the lug bolts and nuts, a plurality of radially extending traction arms mounted on the mounting plate and including an outer end adapted to extend transversely of the tread face of a tire carried by a vehicle wheel, said traction arm including an outer end portion and an inner end portion articulately interconnected whereby the outer end portion may be folded inwardly into overlying relation to the inner end portion, and means lockingly interconnecting the mounting plate and the outer end portion of the traction arm adapted to releasably retain the outer end portion of the traction arm in locked position alongside of a vehicle tire whereby the traction arm may be easily converted from an operative position to an inoperative position, said means lockingly interconnecting the outer end portion of the traction arm and the mounting plate including a peripheral flange on the mounting plate having a notch therein, said notch having an arcuate undercut inner end portion, said outer end portion of the traction arm having a substantially semi-cylindrical area having a cross-sectional dimension enabling it to be moved inwardly into the notch and then rotated for locking engagement with the arcuate undercut inner end of the notch.

3,089,529
WHEEL TRACTION AID
Richard P. Aler, 130 Stevenson Lane, Baltimore, Md.
Filed Aug. 10, 1962, Ser. No. 216,190
6 Claims. (Cl. 152—216)



6. A vehicle wheel traction aid comprising a mounting plate adapted to be secured to the vehicle wheel by use of the lug bolts and nuts, a pair of radially extending traction arms mounted on the mounting plate for radial reciprocation, each arm including a traction member forming an outer end for extending transversely of the tread face of a tire, and resilient means interconnecting the inner ends of the arms to retain the arms in assembled condition on the vehicle wheel and enabling the arms to move independently radially inwardly and outwardly, said mounting plate including a cup-shaped adapter having a plurality of apertures for receiving a particular pattern of lug bolts, said mounting plate including an annular member rigidly attached to said adapter, said annular member and adapter having telescopically engaged flanges, each flange having a plurality of spaced apertures receiving fastening means rigidly securing the annular member and adapter together in adjusted position.

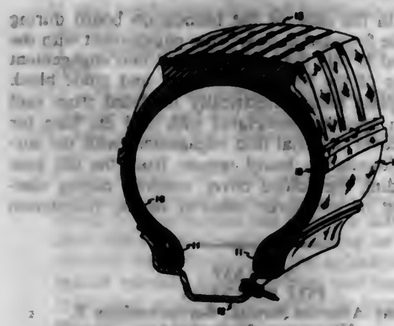
3,089,530
RUBBER AND METAL TIRE
George K. Kocher, 604 Elmira St., White Haven, Pa.
Filed Aug. 29, 1961, Ser. No. 134,746
2 Claims. (Cl. 152—288)



2. In combination, a tire assembly, a rotatable annular support for the assembly having a pair of axially spaced

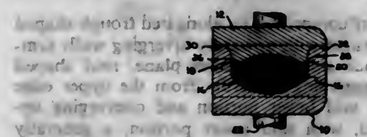
flanges, said assembly including in combination a rubber carcass, a pair of annular beads positionable, respectively, against the flanges of said support, a tread, an endless helical spring means positioned inside the carcass so that each convolution thereof is in engagement with and creates a radially outward pressure on the entire inner transverse peripheral surface of the carcass and with the annular support to resiliently support the carcass, a plurality of helical springs positioned within said helical spring means, each helical spring being joined end to end to form a toroid, the plurality of springs being placed one inside the other, each inside spring creating a radially outward pressure on the spring outside it, and each spring being coiled in opposite directions so that the coils cross each other at an angle.

3,089,531
TIRE BEAD AND MANUFACTURE THEREOF
Conrad J. Jankowski, Bayonne, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware
Filed Feb. 6, 1958, Ser. No. 713,605
4 Claims. (Cl. 152—330)



1. A rubber tire having a bead portion comprising brass-plated steel bead wires embedded in a composition comprising about 60 to 95% of butyl rubber copolymer of about 85 to 99.5% of a C_4–C_7 isoolefin with about 15 to 0.5% of a C_4–C_{10} conjugated multiolefin and about 40 to 5% of halosulfonated polyolefin selected from the group consisting of bromosulfonated polyolefin and chlorosulfonated polyolefin.

3,089,532
DIES FOR CRIMPING ELECTRICAL CONNECTORS
Norwood C. Graeff, Port Treverton, Pa., assignor to AMP Incorporated, Harrisburg, Pa.
Filed Feb. 23, 1960, Ser. No. 10,330
1 Claim. (Cl. 153—1)



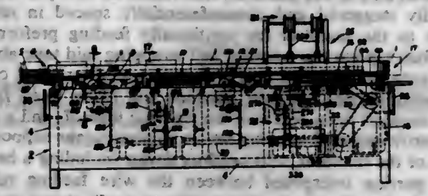
A die set for crimping ferrule-type connectors onto conductors including: a first nesting die having a concave arcuate bottom working surface and opposed side surfaces tangent to the extremities and forming a continuation of said arcuate working surface, a second indenting die having opposed side surfaces narrower than the opposed side surfaces of the nesting die, an intermediate concave arcuate working surface between the opposed side surfaces of the indenting die, and a pair of parallel lands on the indenting die adapted to relieve stress concentration on the indenting die and distribute the crimping force more evenly through the connector, said lands being coplanar and disposed so that one land is on each side of the arcuate working surface and extends from an edge of the arcuate working surface to one of the opposed side surfaces, whereby the connector may be crimped onto the conductor without the formation of sharp side edges.

3,089,533
BEADING THIN METAL CYLINDERS
Arthur Leslie Stuchbery, Enfield, and Jozef Franek, London, England, assignors to The Metal Box Company Limited, London, England, a British company
Filed Mar. 21, 1960, Ser. No. 16,565
Claims priority, application Great Britain Mar. 26, 1959
14 Claims. (Cl. 153—70)



1. The method of ribbing a thin metal cylinder which includes disposing the cylinder about a peripherally ribbed mandrel the diameter of which is slightly less than that of the interior of the cylinder and rotating the cylinder and mandrel about the longitudinal axis thereof while applying opposed radial pressures thereto to conform the cylinder to the ribbed pattern of the mandrel and causing the cylinder to assume a constantly changing oval cross-section the minor axis of which corresponds to the diameter of the mandrel in the region of the ribbing provided thereon.

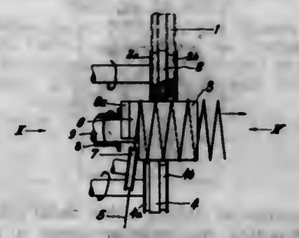
3,089,534
BOOKMAKING MACHINE
Robert C. Schuler, 323 Hoffman Ave., and Emil H. Schuler, 329 Hoffman Ave., both of New Milford, N.J.
Filed Dec. 1, 1959, Ser. No. 856,445
14 Claims. (Cl. 156—357)



5. In a machine for applying sheet material to book backs by means of glue, said machine comprising horizontally disposed continuously operated conveyor means adapted to carry books through a plurality of operations in the machine with the backs in downwardly disposed positions, said conveyor means being adjustable to accommodate books of varying thickness, said plurality of operations being carried out by means spaced along the conveyor path, at least two of said means being glue means, and at least two of said means being sheet applying means, a plurality of actuating means adjacent said conveyor for activating each of said gluing and sheet applying means and wherein the movement of each book on the conveyor sequentially operates each of said actuating means, each of the glue means followed by one of the said sheet applying means and the second of the said sheet applying means comprising a slidably mounted platform adapted to hold

in a fixed and predetermined position a first selected length of sheet material and further adapted to move into position to receive another second selected length of sheet material after release of the first length to the book back and return to the first predetermined position.

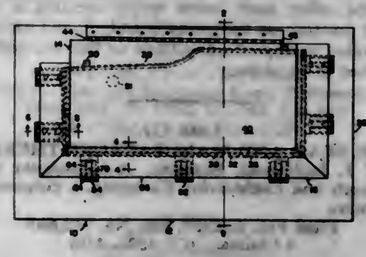
3,089,535
APPARATUS FOR MAKING A WIRE REINFORCED FLEXIBLE HOSE
Herbert Vohrer, Falkenstein (Taunus), and Heinrich Beck and Willi Pleak, Frankfurt am Main, Germany, assignors to Techno-Chemie Kessler & Co. G.m.b.H., Frankfurt am Main, Germany
Filed Sept. 30, 1959, Ser. No. 843,418
Claims priority, application Germany Oct. 11, 1958
3 Claims. (Cl. 156—443)



1. A device for producing an elastic tube having a smooth inner and a spirally grooved outer surface and being reinforced by a wire coil, said device comprising a cylindrical mandrel rotatably supported at one end and free at its other end, said mandrel being secured against axial displacement, simultaneously operable means for winding a reinforcing wire about the mandrel and means for wrapping a pliable profiled tape about wire coils formed on the mandrel, said wire winding means including a rotatably mounted roller having a rotational axis disposed at an angle in reference to the rotational axis of the mandrel for continually feeding reinforcing wire to the mandrel at the supported end thereof to form successive coil windings on the mandrel, and said tape wrapping means including a pair of peripherally profiled rollers rotatably mounted about axes parallel to the rotational axis of the mandrel, said rollers of said pair being axially staggered and circumferentially spaced in reference to the mandrel for continually feeding preformed profiled tape to the mandrel and wrapping said tape about the wire coils formed on the mandrel, said wrapped coils constituting finished tube portions and being freed from the mandrel upon reaching the free end thereof, and a stationarily mounted bending device adjacent to the supported end of the mandrel, said bending device including a bending portion interposed between the wire feeding roller and the mandrel to bend the wire to a cylindrical curvature having a diameter less than the diameter of the mandrel.

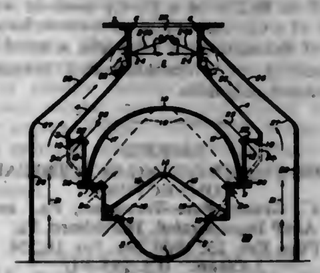
3,089,536
COMBINATION EDGE TURNING AND WELDING DIE
Elwood C. Bolles and Joseph Wlad, Jr., Pacific Grove, Calif., assignors to Chris-Craft Industries, Inc., a corporation of Delaware
Filed June 15, 1960, Ser. No. 36,409
9 Claims. (Cl. 156—479)

1. A die for folding cover material around the edge of a foundation board to form a trim panel and for holding the cover material and foundation board in assembly while the cover material is electronically bonded to the foundation board, comprising a die base including a base plate of electrically conductive material and a bonding rule of electrically conductive material extending from said base plate, said bonding rule being formed to contact the periphery of a trim panel positioned within said die, said die base also including a turning rule of insulating material extending from said base plate adjacent said bonding rule, said turning rule being formed in the configuration of the edge of the foundation board around which the cover material is to be folded, and die lid means operably associated with said die base and insulated electrically therefrom for pressing the foundation board into engagement with the cover material, said turning rule co-



operating with the edge of the foundation board during pressing of the foundation board into engagement with the cover material to fold the cover material into engagement with the edge of the foundation board, and guide block and sliding plate means electrically insulated from said die base also operably associated with said die base for folding the cover material into engagement with the surface of the foundation board remote from the die base and for holding the folded cover material during electronic sealing of the cover material to the foundation board.

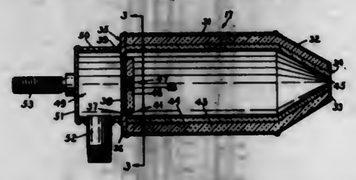
3,089,537
POT BURNERS
Antony Albertus Struijk, Beethovenlaan 9, Hilversum, Netherlands
Filed May 11, 1960, Ser. No. 28,407
Claims priority, application Netherlands May 20, 1959
13 Claims. (Cl. 158—91)



1. A pot burner comprising an elongated trough shaped lower portion formed with upwardly diverging walls symmetrically on each side of a center plane, roof shaped upper portions extending upwardly from the upper edge of each wall of said lower portion and converging upwardly to bound, with said lower portion, a generally diamond shaped enclosure, said upper portions terminating short of the central plane of said lower portion to form a flame opening, primary air openings solely in the diverging walls of said lower portion, said air openings having means to direct inflowing air upwardly and inwardly from each side of said lower portion in a plane, the planes of said inflowing air intersecting below said primary flame opening, said converging upper portions terminating at said primary flame opening in opposed generally parallel upstanding walls, said upstanding walls

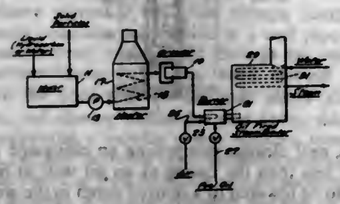
being provided with additional air inlet openings to direct air across said primary flame opening in planes normal to said center plane.

3,089,538
APPARATUS FOR GENERATING A HIGH VELOCITY HOT GASEOUS BLAST
Dominick Labino, Grand Rapids, Ohio, assignor, by mesne assignments, to Johns-Manville Fiber Glass Inc., Cleveland, Ohio, a corporation of Delaware
Filed Aug. 26, 1958, Ser. No. 757,303
4 Claims. (Cl. 158—99)



1. Burner apparatus, comprising in combination:
(*a*) a refractory wall defining a combustion chamber,
(*b*) said combustion chamber having an inlet and a restricted outlet;
(*c*) a plenum combustible fuel chamber adjacent said inlet;
(*d*) a metallic wall disposed between said combustion chamber and said fuel chamber,
(*e*) said metallic wall defining a substantially annular port,
(*f*) the portion of said combustion chamber immediately adjacent to said metallic wall being cylindrical in cross-section and having a diameter greater than said annular port and defining an arrangement wherein the refractory of the cylindrical portion is spaced laterally from said port and the axis of said cylindrical portion is substantially perpendicular to said metallic wall, and
(*g*) said port extending outwardly through said metallic wall at an angle toward said refractory wall to direct the fuel into initial contact with said refractory wall at an acute angle therewith.

3,089,539
METHOD AND FUEL FOR OPERATING COMBUSTION EQUIPMENT
Herbert E. Vermillion, Wappingers Falls, Charles C. Towne, Fishkill, and George W. Eckert, Glenham, N.Y., assignors to Texaco Inc., a corporation of Delaware
Filed June 27, 1955, Ser. No. 518,146
3 Claims. (Cl. 158—117.5)



1. A method for operating oil fired combustion equipment to reduce damage thereto normally caused by at least one metal component in said oil, said method comprising forming a flowable mixture in water of particles of a solid substance characterized by the ability to counteract the damaging effect of said metal component; passing said mixture as a flowing stream through a tubular zone; vaporizing said water as said mixture flows through said tubular zone and forming a flowing dispersion of said particles in steam therein; subjecting said particles in said flowing dispersion to high velocity and turbulence such that the size of said particles is reduced; passing said particles of reduced size along with oil into a combustion zone by atomizing said oil with said dispersion of solid particles in steam; and burning said oil in said combustion zone in association with said particles whereby the detrimental effect of said metal component is counteracted.

3,089,540
ROLL-UP BLIND
Jean Léon Schwartz, Paris, France, assignor to Societe Anonyme des Ateliers de Construction Schwartz-Hautmont, Paris, France, a body corporate of France
Filed Dec. 29, 1960, Ser. No. 79,334
Claims priority, application France Oct. 17, 1960
3 Claims. (Cl. 160—98)



1. A blind structure comprising, in combination, a blind to be mounted in a window or the like frame, a transparent panel to be shielded by said blind, a roller fixedly mounted substantially directly above said panel and spaced therefrom, said blind being secured at one end to said roller and adapted to be unwound on either side of said panel, and means for completely unwinding said blind along one side of said panel and by continuing the movement in the same direction winding said blind on the opposite side of said roller so as to have its free end hang along the other side of said panel.

3,089,541
CLIP
Samuel D. Lockshin, Northampton, Mass., assignor to Hampden Specialty Products Corporation, Easthampton, Mass., a corporation
Filed Jan. 16, 1961, Ser. No. 82,811
1 Claim. (Cl. 160—383)



In a tubular-frame furniture construction, a webbing-strip fastening assembly cooperant with a tubular frame member having an elongated slot in its wall of a length in excess of the width of a webbing-strip operative therewith and of a shape operatively to accept ears and an overlying end portion of a webbing-strip inserted therein and comprising: a fastener operatively securing the webbing-strip to the frame member and including, a relatively stiff resilient clip having an elongated head portion

having a substantial arcuate configuration in transverse cross section and including an elongated central slot having a length slightly in excess of the width of the webbing-strip and a pair of integral longitudinally-spaced ear portions extending downwardly and inwardly from the relatively outboard longitudinal side edge of said head portion and a sawtooth edge at the said outboard side edge intermediate said ear portions of a length corresponding substantially to the width of the webbing strip, the webbing strip being extended beneath said head portion and through the elongated central slot thereof and over said head portion and being folded over and impinged upon said outboard side edge, the ear portions of said pair thereof and the end portion of the webbing-strip being insertable into the elongated slot in the wall of the frame member and into the interior of the frame member enabling said fastener to self-lock itself and thereby the webbing-strip to the frame member with said head portion conforming to the outside curvature of the frame member adjacent the elongated slot and to secure itself to the frame member with increasing force as the webbing strip is tensioned.

3,089,542

OIL WELL FRACTURING METHOD

Edwin R. Kolodny, Stamford, Conn., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Apr. 13, 1960, Ser. No. 21,865
4 Claims. (Cl. 166—42)

1. In a method of fracturing subterranean formations to increase the flow of oil to a well bore, in which a fracturing fluid is pumped down the well into the formation under sufficient pressure to cause the formation to fracture, the improvement which comprises the step of: incorporating into said fluid as propping agents discrete beads consisting essentially of thermoset resins selected from the class consisting of polyester resins and cross-linked styrene resins, said bead being capable of withstanding elevated pressures of at least 33,000 pounds per square inch in the absence of substantial degradation wherein less than about 1 percent of all the beads therein employed will pass through a 60 mesh screen, and further being characterized by a substantial spherical configuration, a particle size of within the range of about 2 and about 60 mesh and by a density in excess of the density of the fracturing fluid.

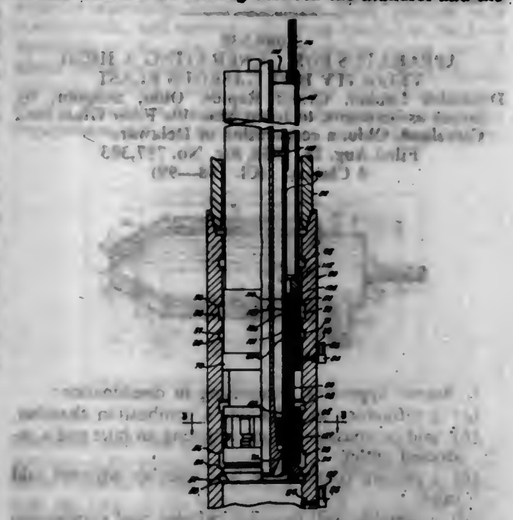
3,089,543

WELL CASING SUSPENDING MEANS

George Max Raulins, Dallas, Tex., assignor, by mesne assignments, to Otis Engineering Corporation, Dallas County, Tex., a corporation of Delaware

Filed Oct. 29, 1958, Ser. No. 770,506
20 Claims. (Cl. 166—71)

1. A well tool for suspending an inner tubular member in an outer tubular member, comprising: a tubular hanger mandrel telescopically receiving said inner tubular member; locking means mounted externally on said mandrel for engagement with the outer tubular member for limiting downward movement of the mandrel in the outer tubular member; an internal lock means carried by the mandrel in its bore engageable with the inner tubular member for limiting downward movement of said inner tubular member in the mandrel, said mandrel having an internal recess in its bore, said internal lock means including a cam ring mounted in said recess for limited longitudinal movement in said mandrel, and gripping means in said cam ring movable inwardly by said cam ring into engagement with said inner tubular member for limiting downward movement of said inner tubular member relative to said mandrel, said gripping means having internal serrations for biting into the external surface of said inner tubular member; internal seal means carried by the mandrel on a shoulder in the internal recess and compressible between said cam ring and said shoulder of said mandrel for sealing between the mandrel and the



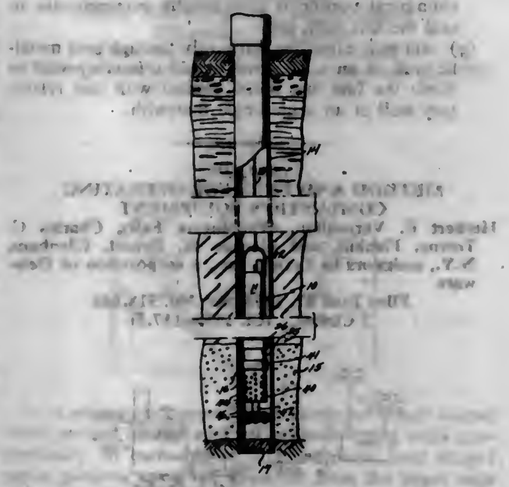
inner tubular member; and external seal means on said mandrel for sealing between said mandrel and said outer tubular member.

3,089,544

OIL WELL CLEANER

Jay T. Cobb, 217½ W. Broadway, Altus, Okla.

Filed June 23, 1961, Ser. No. 119,092
1 Claim. (Cl. 166—162)



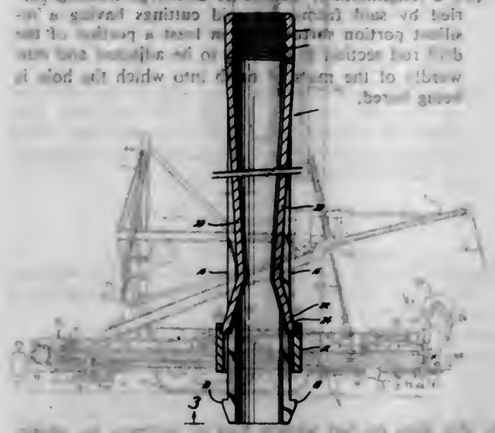
An oil well cleaner comprising an elongated pipe of a diameter less than the casing of an oil well to be cleaned adapted to be lowered to a desired depth in the well casing, a closure for the top of said pipe, a dump valve located at an intermediate point in said pipe, a plug in the bottom of said pipe, a timer carried by said pipe, a connection between said timer and said dump valve, the section of said pipe between said dump valve and said plug being provided with a plurality of annular perforations to permit cleansing fluid contained above the valve and released to impinge against the casing to be cleaned, and insulation on the interior of said pipe above said valve, said plug having a depending stem and a sealing gasket carried by said stem below said pipe to permit cleaning fluid ejected from said perforations to remain in contact with a section of the casing to be treated.

3,089,545

COLLAR STOP

Mason M. Lilly, Houston, Tex., assignor, by mesne assignments, to Harold Brown Company, a corporation of Texas

Filed Aug. 10, 1960, Ser. No. 48,738
9 Claims. (Cl. 166—206)



2. A collar stop for positioning a well tool at a desired level in a well pipe having an internal annular recess, comprising a tubular body having upper and lower ends insertable into said well pipe, means on the upper end of said body for attachment to a well tool, said body comprising a plurality of longitudinally extending alternating mandrel portions and resilient anchor fingers, at least a portion of the lower end of each said resilient finger normally diverging radially outwardly far enough to engage the annular recess, and means slidable longitudinally on said mandrel portions adapted to engage said diverging portions and retain them against radially outward movement.

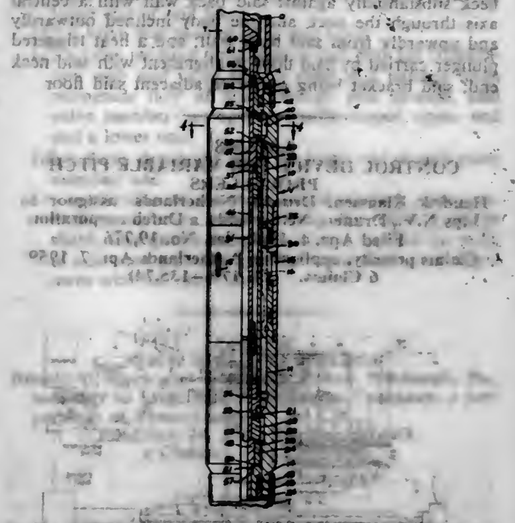
3,089,546

SLEEVE VALVE FOR WELL PIPE STRINGS WITH BLIND CLOSURE SLEEVE

Chadleigh B. Cochran, Houston, Tex., assignor to Cicero C. Brown, Houston, Tex.

Filed Dec. 19, 1960, Ser. No. 76,691
10 Claims. (Cl. 166—224)

1. A sleeve valve for well pipe strings, comprising, a tubular body coaxially connectible in a well pipe string to form a part thereof, radial ports through the wall of the body communicating with the bore thereof, annular grooves in the bore wall of the body above and below said ports, and closure means for said ports, said closure means comprising a tubular sleeve slidably insertable in said bore, radially movable latch elements mounted in the wall of the sleeve at longitudinally spaced points to register with said grooves, a tubular mandrel slidable in the bore of said sleeve, a pair of annular enlargements on the mandrel longitudinally spaced apart to correspond to the spacing of said latch elements, said enlargements being operable when the mandrel is moved to a first position at which the enlargements are in registration with said latch elements to project the latter into latching engagement with said grooves and when moved to a second position out of registration with the latch elements to release said latch elements for retraction from said grooves, cooperable latch means on the sleeve and mandrel for releasably latching the mandrel to the sleeve in said first



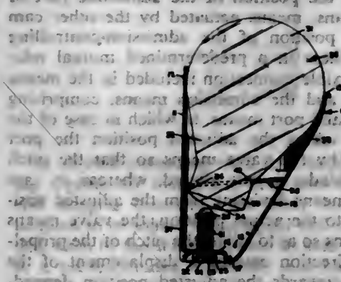
position, and seal means sealing between said closure means and said body to close off fluid flow between the pipe string and said ports.

3,089,547

FIRE EXTINGUISHER GRENADE MOUNTING

Carl E. Holsworth, 610 Division St., Huntington, Ind., and Thomas E. Holsworth, 5914 Dearborn St., Indianapolis, Ind.

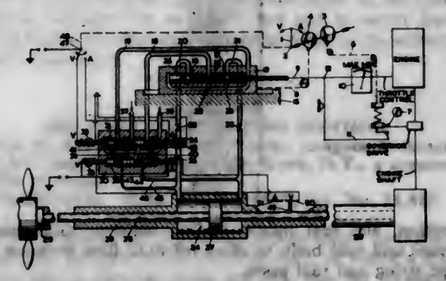
Filed June 22, 1961, Ser. No. 118,952
2 Claims. (Cl. 169—26)



1. Means loosely self-locating a container of fire quenching liquid having essentially a spheroidal body from which a frangible ended neck extends, comprising an upper open ended bracket having a back suspending wall, a floor, and a front and side enclosure extending forwardly from the side of said wall and said floor in an inverted, approximately conoidal shape; an arcuate surfaced seat within said enclosure adjacent the upper end thereof opposite said back wall and shaped to conform to and surround a limited area of said spheroidal body spaced essentially primarily below the major transverse diametrical plane of the body with the opposite side of the body riding against said back wall whereby the body is retained against rolling laterally across said wall, and said neck is directed downwardly within said bracket; a washer in the nature of a diaphragm having a contour following that of said conoidal wall at an elevation spaced above said floor and below the spheroidal body

and extending approximately horizontally to abut said back wall; said washer being slotted a distance from said back wall and of that width which receives said neck therethrough freely and limited in length to direct the neck substantially against said back wall with a central axis through the neck and the body inclined outwardly and upwardly from said back wall; and a heat triggered plunger carried by said floor in alignment with said neck end; said bracket being perforate adjacent said floor.

3,089,548
CONTROL DEVICE FOR VARIABLE PITCH PROPELLERS
Hendrik Klaassen, Drunen, Netherlands, assignor to Lips N.V., Drunen, Netherlands, a Dutch corporation
Filed Apr. 4, 1960, Ser. No. 19,776
Claims priority, application Netherlands Apr. 7, 1959
6 Claims. (Cl. 170—135.74)

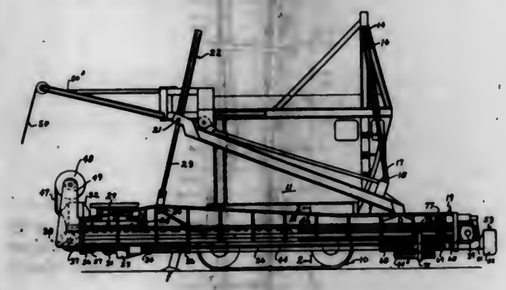


1. An adjusting and control device for a propulsion mechanism of a ship having a driving engine, a propeller with blades of adjustable pitch driven by said engine, means controlling the admission of a working fluid to the engine, and a speed-governing means having a part actuating the working fluid admission-controlling means and an adjustable part, said device comprising manual adjusting means having two cams, means actuated by one cam for adjusting the position of the adjustable part of the governing means, means actuated by the other cam for adjusting the position of the admission-controlling means to adjust them in a predetermined mutual relationship, and a flexible connection included in the means between the cam and the admission means, comprising cooperating valve and port means, in which in case of the admission means taking the adjusted position the port means are closed by the valve means so that the pitch of the propeller blades is not altered, whereas in case of the admission means deviating from the adjusted position with respect to the actual position, the valve means open the port means so as to adjust the pitch of the propeller blades in a direction causing a displacement of the admission means towards the adjusted position depending on the number of revolutions of the engine.

3,089,549
DRILLING APPARATUS
Davis Robbins, Oneonta, Ala.
(P.O. Box 2664, Birmingham 2, Ala.)
Filed Mar. 3, 1960, Ser. No. 12,632
1 Claim. (Cl. 175—85)

Apparatus for drilling holes into the side of a mass of earth comprising

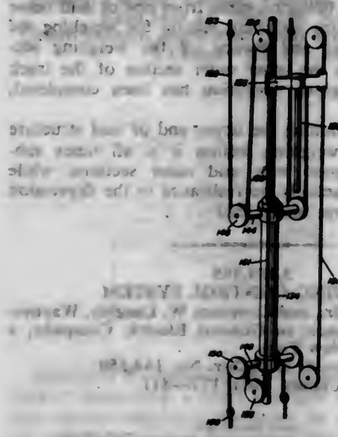
(*a*) a generally horizontal translatable frame,
(*b*) parallel guideways mounted on said frame and extending longitudinally thereof,
(*c*) a carriage mounted for longitudinal movement along said guideways,
(*d*) a drive shaft carried by said carriage,
(*e*) power operated drive means mounted on said carriage to rotate said drive shaft,
(*f*) extensible means carried by said frame and operatively connected to said drive means for supplying power thereto,
(*g*) a hollow drill rod section,
(*h*) means detachably connecting one end of said drill rod section to said drive shaft,
(*i*) a hollow drill bit connected to the other end of said drill rod section,
(*j*) extensible means carried by said frame and operatively connected to said hollow drill rod section for supplying air to said hollow drill rod section to clean the hole being bored of cuttings,
(*k*) a longitudinally adjustable discharge housing carried by said frame for said cuttings having a resilient portion surrounding at least a portion of the drill rod section in position to be adjacent and outwardly of the mass of earth into which the hole is being bored,



(*l*) inwardly extending support arms mounted on said frame for pivotal movement in generally vertical planes adjacent each end of said frame in position to extend inwardly beneath said drill rod section for supporting at least one other drill rod section,
(*m*) an upwardly projecting pin carried by the support arm nearest the drive shaft,
(*n*) there being a recess in the end of each drill rod section adjacent said pin for receiving said pin whereby rotation of the drill rod section is restrained while said pin is in the recess,
(*o*) there being upwardly opening recesses adjacent the inner ends of said arms for receiving said drill rod sections, and
(*p*) power operated means carried by said frame and operatively connected to said arms for moving said arms about their pivot points whereby said other drill rod section is moved selectively in a vertical direction into and out of position between said drive shaft and the first mentioned drill rod section.

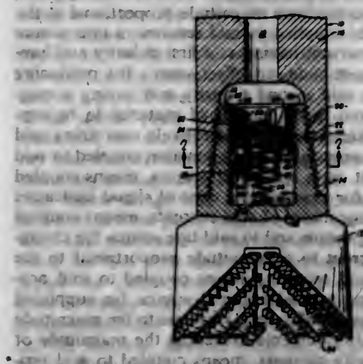
3,089,550
EXCAVATING OR DRILLING DEVICE
John V. Watson, Fort Worth, Tex., assignor to Watson Foundation Company, Inc., Fort Worth, Tex., a corporation of Texas
Filed May 8, 1959, Ser. No. 812,033
2 Claims. (Cl. 175—165)

1. In a drilling device for drilling holes downwardly in the earth, a vertically disposed derrick, a vertical trackway mounted in the derrick, a plate vertically movably mounted on the trackway, a drill bar extending vertically downwardly from said plate, means interconnecting the plate and drill bar for permitting rotation of the drill bar in relation to the plate and preventing longitudinal movement of the drill bar in relation to the plate, means on the lower end of the derrick drivingly engaging the drill bar during vertical movement thereof, and means interconnecting the derrick and said plate for reciprocating the plate and drill bar in relation to the derrick, said last named means including hydraulic and mechanical cable means for multiplying the movement of the hydraulic means for reciprocating the plate a relatively long distance in relation to the distance of expansion and contraction of the hydraulic means, said hydraulic and cable means including a vertically elongated stationary hollow rod mounted in the derrick, said rod having a piston fixed thereon adjacent the center thereof, a cylinder slidably movably mounted on said rod and encompassing said



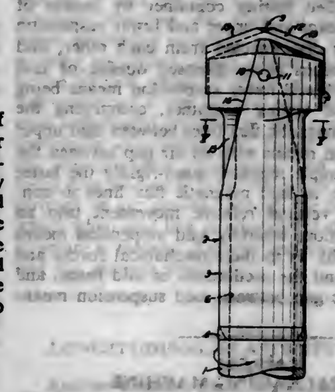
piston, an aperture in said hollow rod on each side of the piston for admitting fluid under pressure into either side of the cylinder while exhausting fluid from the opposite side of the cylinder for moving the cylinder vertically on the rod, said cable means including a cable connected to the derrick, a pulley on the cylinder under which the cable is entrained, a pulley stationarily mounted on the derrick over which the cable is retained, the other end of the cable being connected to the plate whereby the movement of the plate will be multiplied with respect to the movement of the cylinder.

3,089,551
DRILL PIPE FLOAT
Charles H. Greene, Box 127, Healdton, Okla.
Filed Feb. 11, 1960, Ser. No. 8,141
6 Claims. (Cl. 175—318)



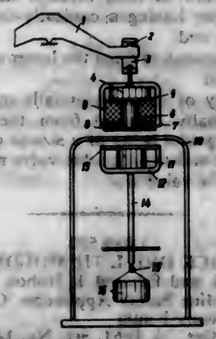
1. In a rotary drill string, the combination of:
(*a*) a drill bit having a shank portion, said shank portion having an upper end and a lower end and said drill bit further having a fluid flow passage therethrough through which drilling fluid normally flows in one direction, said fluid flow passage comprising a bore extending downwardly in said shank portion from the upper end thereof, and a plurality of passages smaller than said bore communicating with the lower end of said bore;
(*b*) a valve seat positioned in said bore;
(*c*) a valve member positioned in said bore for cooperation with said valve seat to close said passage upon retrograde flow of fluid through said passage, said valve member having a conically-shaped upper end and a lower end;
(*d*) a shank depending from the lower end of said valve member; and
(*e*) a plurality of circumferentially-spaced guides extending radially outward from the valve member shank, said guides being of a size to contact the walls of said bore and maintain the valve member in alignment with the valve seat.

3,089,552
ROCK DRILL TIP HOLDER
Ronald C. Black and Edward J. Hobos, Pittsburgh, Pa., assignors to Mine Safety Appliances Company, a corporation of Pennsylvania
Filed Oct. 24, 1961, Ser. No. 147,253
4 Claims. (Cl. 175—400)



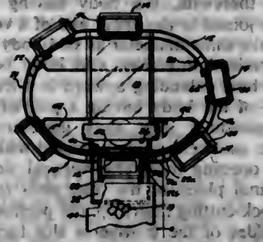
1. A dust collecting rock drill cutting tip holder having a generally cylindrical body and a head at its upper end integral therewith, the body having a lower end adapted to be joined to the upper end of a vertical tubular drill stem of the same diameter as said body and rotatable in a predetermined direction, said body being provided with an axial bore extending upward in it from said lower end, the side of the body having a pair of diametrically opposite longitudinal inlet slots therethrough opening into said bore, said head being provided with an upwardly and radially opening transverse vertical slot in the central longitudinal plane of the inlet slots for receiving a removable rock-cutting insert tip, the portions of the head at opposite sides of the transverse slot forming the side walls thereof, each of said slide walls extending from a different end of the transverse slot inwardly along its trailing side past the center of that slot but being spaced from the opposite end of the slot, the inner end portions of the side walls overlapping each other and having a pair of aligned pin-receiving openings therethrough, and the holder having a flat inclined surface extending along only the leading edge of each inlet slot from a point near its lower end upward across the inner end of the adjoining side wall of the transverse slot, the upper portions of said inclined surfaces forming the inner end surfaces of said side walls.

3,089,553
METHOD OF AND APPARATUS FOR WEIGHING IN VACUUM
Theodor Gast, Dinslaken, Germany, assignor to Fa. Sartorius-Werke A.G. (and vormals Gottinger Prazisionswagenfabrik G.m.b.H.), Gottingen, Germany, a corporation of Germany
Filed Nov. 29, 1960, Ser. No. 72,469
18 Claims. (Cl. 177—1)



1. A method of weighing in a closed space, as an evacuated or gas-filled testing container by means of scales including a beam and upper and lower suspension means mechanically disconnected from each other, said upper suspension means being disposed outside of said testing container and said lower suspension means being disposed within said testing container, comprising the steps of generating magnetic flux lines between said upper and lower suspension means with an air gap between the latter in order to couple together quasi-rigidly the latter by the pulling force of said magnetic flux lines in connection with their vertical relative movement into an end-stabilized condition, whereby said suspension means are neutral outwardly as to their mechanical forces and follow as a single unit the oscillations of said beam, and maintaining said air gap between said suspension means constant.

3,089,554
MEAT PACKAGING MACHINE
Thomas A. Watson, Barrington, Ill., assignor to E. W. Kneip, Inc., Forest Park, Ill., a corporation of Illinois
Filed May 13, 1960, Ser. No. 28,991
1 Claim. (Cl. 177—52)



In an apparatus for filling a container with a desired weight of food product and for transporting said container unidirectionally through a filling and weighing zone, the combination of

(1) a stationary weighing scale having a depressible load-receiving platform located in said zone,

(2) a track extending to and through said filling zone and including,

(a) a pair of spaced stationary outer sections and

(b) a generally horizontal depressible weighing section positioned in the space between said outer sections,

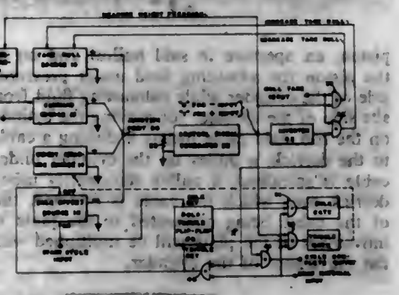
(3) a supporting structure having a lower part fixedly mounted on the platform, and an upwardly extending part secured to said weighing section and supporting said weighing section at an elevation substantially higher than the said lower part of the structure,

(4) a carrier for detachably supporting a container for said food product,

(5) said carrier being movable from one of said outer sections onto the weighing section for weighing the filled container and thence off the weighing section and onto the other outer section of the track after the weighing operation has been completed, and

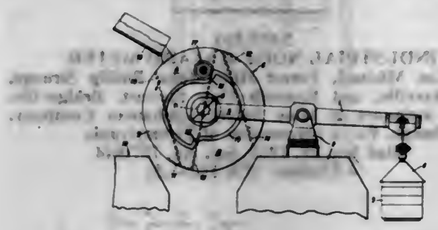
(6) means positioning the upper end of said structure so that said weighing section is at all times substantially aligned with said outer sections, while offering substantially no resistance to the depression of said platform under load.

3,089,555
WEIGHING CONTROL SYSTEM
Samuel C. Harris, Jr., and Lawrence W. Langley, Waynesboro, Va., assignors to General Electric Company, a corporation of New York
Filed Jan. 5, 1962, Ser. No. 164,550
4 Claims. (Cl. 177—81)



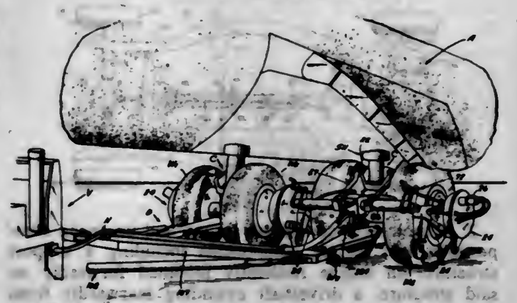
1. A system for controlling the weight of material supplied at a bulk rate and at a trickle rate from a source to a receiver comprising a command source for producing a first polarity of current having a magnitude proportional to the desired weight of material, a weight source coupled to said receiver for producing a second and opposite polarity of current having a magnitude proportional to the weight of material supplied to said receiver, a tare source for producing a current having said first polarity and having a variable magnitude, an offset source for producing a current having said second polarity and having a magnitude proportional to the weight of material to be supplied at said trickle rate, means selectively energizing said offset source, a common summing junction coupled to said command, weight, tare, and offset sources, means coupled to said junction for producing a control signal indicative of the relative magnitudes of said currents, means coupled to said producing means and to said tare source for changing said tare current to a magnitude proportional to the tare weight of said receiver, means coupled to said producing means and to said material source for supplying said material at said bulk rate in response to the magnitude of said first polarity currents exceeding the magnitude of said second polarity currents, means coupled to said producing means and to said offset source for removing said offset current in response to the magnitude of said second polarity currents exceeding the magnitude of said first polarity currents, and means coupled to said producing means and to said material source for supplying said material at said trickle rate in response to the removal of said offset current and in response to the magnitude of said first polarity currents exceeding the magnitude of said second polarity current.

3,089,556
WEIGHING APPARATUS
William Sym Parker and James Norman Fox, Barrow-in-Furness, England, assignors to Vickers-Armstrongs (Engineers) Limited, London, England, a British company
Filed May 13, 1960, Ser. No. 29,082
Claims priority, application Great Britain May 14, 1959
1 Claim. (Cl. 177—86)



Apparatus for weighing loose material such as cement clinker, comprising a drum rotatable about a horizontal axis, means supporting the drum for substantially vertical movement, means for urging the drum to an upper position and for allowing the drum to be displaced downwardly when the weight of the drum and contents exceeds a predetermined amount, first and second discs spaced along said axis to form the ends of the drum, a first plate having opposite edges thereof connected to said discs, the plane of the first plate passing through said axis, a second plate disposed on one side of and at an acute angle to said first plate and connected to the first and second discs and the first plate for defining therewith a first compartment, a third plate disposed on the other side of the first plate substantially parallel to the second plate and connected to said first and second discs and the first plate to define therewith a second compartment, said compartments each having an opening adjacent the periphery of the drum for receiving loose material to be weighed when the associated compartment is in an upright position and for discharging the material when the compartment is inverted, the compartments being shaped so that filling either of them when upright tends to rotate the drum in one direction so that said one compartment becomes inverted, a fourth plate connected to the first and second discs and positioned on the side of the second plate remote from the first plate and at a part of the second plate adjacent the connection of the second plate with the first plate to define with the discs and the second plate a first scoop associated with the first compartment for receiving material directed onto the drum during rotation of the drum in said one direction which brings said first compartment to an upright position, a fifth plate connected to the first and second discs and positioned on the side of the third plate remote from the first plate and at a part of the third plate adjacent the connection of the third plate with the first plate to define with the discs and the third plate a second scoop associated with the second compartment for receiving material directed onto the drum during rotation of the drum which brings said second compartment to an upright position, and indexing means for holding the drum against rotation solely when the drum is in said upper position with one of said compartments upright and for permitting rotation of the drum when the latter is displaced downwardly.

3,089,557
APPARATUS FOR GROUND HANDLING OF HEAVY AIRCRAFT
Jerome I. Davis, Bedford, N.Y., and John E. Steinbach, Windsor, and Raymond J. Enyeart, Westport, Conn., assignors to Consolidated Diesel Electric Corporation, Stamford, Conn., a corporation of New York
Filed May 11, 1960, Ser. No. 28,308
25 Claims. (Cl. 180—14)



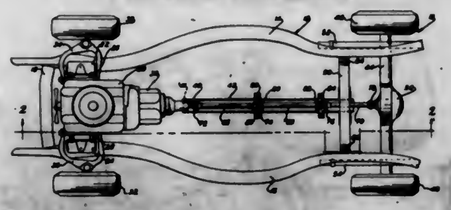
10. In apparatus for the ground handling of aircraft the combination of a bar, a link having one end pivotally secured to said bar and its other end having means for pivotally attaching the same to aircraft landing gear wheel supporting structure, a wheel mover unit including a casing and driven means adapted for driving connection to the aircraft wheel, a frame including a pair of arms interconnected at one of their ends and having their other ends universally attached to said casing, and means for universally connecting said frame to said bar adjacent the interconnected frame arms, said link and said frame being dimensioned to move the center of said driven means through an arc passing through the center of the aircraft wheel when said link is attached to the wheel supporting structure to thereby align the centers of said driven means and the aircraft wheel.

3,089,558
LONGITUDINAL-ELASTICITY SUSPENSION SYSTEM
Antoine Brueder, Paris, France, assignor to Societe Anonyme Andre Citroen, Paris, France
Filed Aug. 7, 1959, Ser. No. 832,286
Claims priority, application France Sept. 8, 1958
1 Claim. (Cl. 180—64)



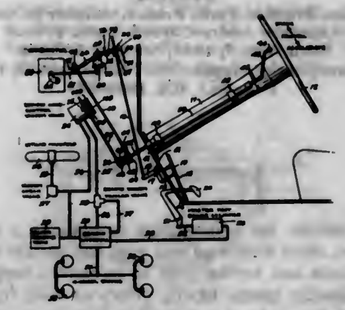
In a vehicle, the combination comprising a frame, a drive axle, drive wheels on said axle, leaf springs mounted on said axle and having ends to resiliently support said frame, shackle means having pivots on said frame and pivots on the ends of said leaf springs to connect said frame to the axle, an engine for rotatably driving said drive wheels, resilient means for supporting said engine on said frame while damping out the vertical oscillations of said engine on said frame, a rigid coupling member of substantially forked configuration having a forward end rigidly connected to said engine and opposite said forward end two rearward ends connected to the pivots on said springs of the forward shackle means and resilient pads carried by said forward shackle means and engageable with said chassis on either side of the pivots on the chassis of said forward shackle means to form an elastic longitudinal connection between the rigid coupling member and said chassis.

3,089,559
VEHICLE ENGINE AND DRIVELINE MOUNTING
Russell W. Riock, Detroit, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Oct. 16, 1959, Ser. No. 846,832
2 Claims. (Cl. 180—64)



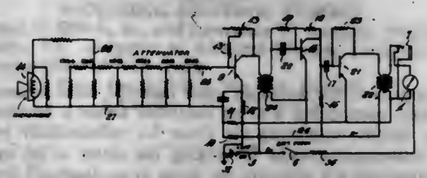
2. A motor vehicle having sprung and unsprung components; said sprung components including a support structure, an engine resiliently mounted forwardly on said structure, a driveshaft extending rearwardly from said engine, and aft engine support means; said aft engine support means including a T-shaped subframe having a central member rigidly secured to said engine and extending longitudinally rearwardly therefrom juxtaposed said driveshaft; said subframe having a transverse member at the rear terminus of said central member resiliently mounted on said support structure at a point rearwardly of the midpoint of said vehicle; said unsprung components including differential gear means, housing therefor and an axle housing rigidly secured thereto and spaced rearwardly of the rear terminus of said subframe and spring supported from said support structure; a shaft piece interconnecting said sprung driveshaft and said unsprung differential gear means.

3,089,560
CONTROL MECHANISM FOR MOTOR VEHICLES
Jefferson J. Priest, 1468 Burr St., Fairfield, Conn.
Filed Aug. 25, 1960, Ser. No. 51,849
1 Claim. (Cl. 180—77)



In a control mechanism for motor vehicles having a steering column, a steering wheel, a carburetor accelerating system, and a power braking system including a control valve, the combination comprising a rotatable shaft disposed in generally parallel relation along one side of said steering column, a lever handle secured to the upper end of said shaft and extending laterally therefrom into proximity to the outer periphery of said steering wheel, a lever arm secured to the lower end of said shaft extending laterally in one direction therefrom and having swinging movement in opposite directions from a neutral position in response to rotary movement of said shaft imparted through swinging movement of said lever handle in opposite directions from a neutral position, a pair of rods pivotally connected to the outer end of said lever arm extending in the same direction therefrom whereby swinging movement of said lever arm in opposite directions respectively imparts longitudinal thrust and pull movement to both said rods in the same direction, an operating lever for said carburetor accelerating system, an operating lever for said control valve, pull and slip connection means between one rod and one of said operating levers which is inoperative in the thrust direction of movement of said one rod, and thrust and slip connection means between the other rod and the other of said operating levers which is inoperative in the pull direction of movement of said other rod,

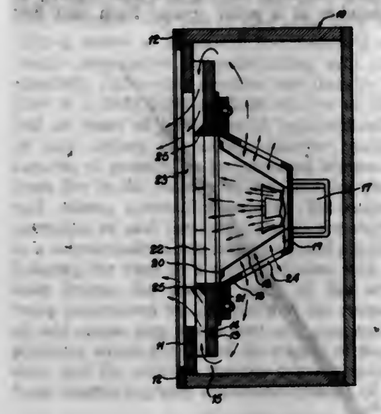
3,089,561
INDUSTRIAL NOISE HAZARD METER
Paul Lee Michael, Forest Hills, John Phillip Strange, Murrysville, and Kenneth Carr Stewart, Bridgeville, Pa., assignors to Mine Safety Appliances Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Jan. 20, 1959, Ser. No. 787,844
4 Claims. (Cl. 181—.5)



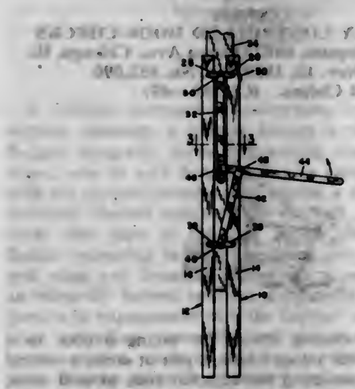
1. A portable battery powered noise hazard meter adapted to be carried and operated by one hand and comprising a casing of a size to permit ready carrying by one hand of an operator, a microphone frequency weighted to have a relatively flat response to approximately 1000 c.p.s. and a rising response to approximately 5000 c.p.s. mounted upon one end of the casing to be directed at a noise source, an adjustable attenuator circuit electrically connected with said frequency weighted microphone within said casing, a single movable adjusting element for the attenuator circuit mounted upon one side of the casing near and inwardly of said microphone and adapted to be manipulated by the thumb of the hand carrying said casing, a power switch mounted upon the other side of said casing near the longitudinal center of the casing to be operated by one finger of the hand carrying said casing, a transistor amplifier circuit within said casing electrically connected with the opposite end of the attenuator circuit and with said power switch, a battery within said casing to energize said circuits when the power switch is held closed, a meter disposed within said casing near the end thereof remote from the microphone and having a dial visible on the face of the casing and electrically connected with the output of the amplifier circuit, and a movable calibrated dial visible through a dial opening in the face of the casing intermediate the microphone and meter dial and near said movable adjustment element and operated by the latter, the visible indicia on said dials being directly indicative of noise hazard to human hearing.

3,089,562
LOUDSPEAKER BAFFLE ASSEMBLY
Pellegrino Joseph Morgillo, Plainview, N.Y., assignor to Lafayette Radio Electronics Corporation, a corporation of New York
Filed Oct. 1, 1959, Ser. No. 843,780
8 Claims. (Cl. 181—31)

1. A baffle plate assembly for loudspeakers which comprises, a front wall having an opening, a baffle plate spaced rearwardly of said wall and having an opening of lesser area than that of the opening in the front wall and centered on a common axis therewith and a deflecting flange on said baffle plate about the periphery of the opening therein and extending forwardly toward said front wall.



3,089,563
SEPARATE ADJUSTABLE LEG FOR A LADDER
Lewis E. Trumpolt and Franklin J. Trumpolt, both of 8 Marjorie St., Hudson, Mass.
Filed June 22, 1962, Ser. No. 204,491
4 Claims. (Cl. 182—201)



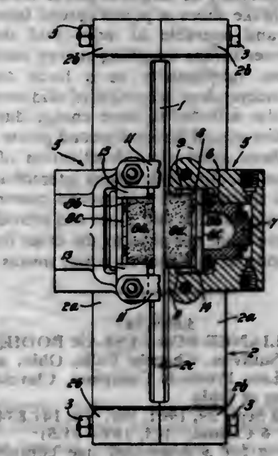
1. A separate detachable unit providing an extensible leg for a ladder, said unit comprising a pair of channel members, means holding said channel members in facing relationship so as to grip the side rail of a ladder therebetween, said means comprising two spaced pairs of interpivoted links, each link of each pair being individually pivoted to a part of its respective channel member, two levers, one lever being pivoted to each pair of links at the inter-pivot point thereof, said levers extending toward each other and overlapping, and an operating handle separately pivoted to both of said levers in the overlapping area thereof and in offset relation so that when the operating handle is turned it selectively effectively shortens and lengthens the combined lengths of the two levers, in order to close and open the unit in adjusted position along the ladder rail.

3,089,564
ENERGY ABSORPTION UNIT FOR SEAT BELTS AND THE LIKE
Darrell G. Smittle, Van Nuys, Calif., assignor to Hardman Tool & Engineering Co., Los Angeles, Calif., a corporation of California
Filed Dec. 5, 1961, Ser. No. 157,237
7 Claims. (Cl. 188—1)



1. An energy absorption device comprising a generally flat, relatively thin, malleable metal body having opposite side faces, a relatively narrow edge, and separate preformed flanges along said edge terminating in edge faces, respectively, and defining therebetween a preformed groove extending parallel to said side faces, the length of said groove being many times the maximum thickness of said flanges, a cable fitted in said groove with one end of the cable extending beyond the body, means securing the other end of the cable to said body, and said flanges being bent inwardly toward one another to place said edge faces thereof in close proximity over said cable and thereby confine the latter in said groove, whereby when opposing forces are exerted on said one end of said cable and on said body in directions to pull said cable from said groove, said flanges are progressively spread and thus deformed by the cable, thereby absorbing energy.

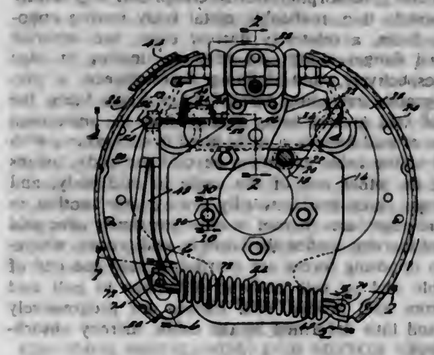
3,089,565
DISC BRAKES
Henry James Butler, Sutton Coldfield, England, assignor to Dunlop Rubber Company Limited, London County, England, a British company
Filed May 25, 1960, Ser. No. 31,616
6 Claims. (Cl. 188—73)



1. A disc brake comprising a rotatable disc, a non-rotatable structure comprising a pair of base members

positioned on opposite sides of said disc in a common plane chordwise of said disc, individual connector means rigidly securing said base members together at their ends beyond the periphery of said disc, a side support rigidly mounted on each of said base supports and extending over and beyond the segment of said disc radially outwardly of said base members, means joining said side supports beyond the periphery of said disc, each said side support having a cylindrical recess formed therein co-axially with the cylindrical recess of the opposite side member, a piston slidable in each said recess toward and from said disc and a friction element between each said piston and said disc to be moved under pressure by said piston into frictional contact with the radial surface of said disc.

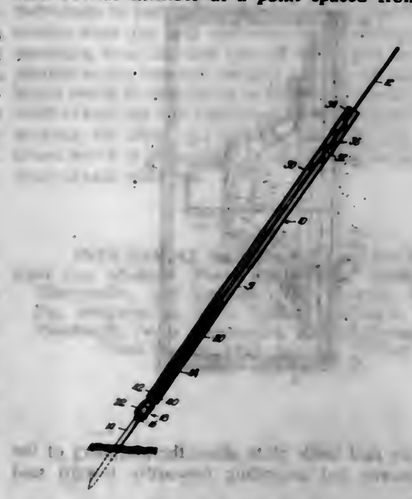
3,089,566
BRAKE MECHANISM
James E. MacAfee, Troy, and Thomas J. Wall, Southfield, Mich., assignors to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware
Filed Aug. 4, 1960, Ser. No. 47,412
8 Claims. (Cl. 188—78)



1. In a drum-type brake structure having a supporting body with brake shoe anchor means thereon, first shoe actuating power means mounted on said body, a pair of brake shoes each having first portions shiftably engaged with said anchor means and second portions in engagement with said first power means and adapted to be moved apart thereby, and second shoe actuating power means operable independently of said first power means engageable with said brake shoes at points spaced from said first power means and operable to move said shoes apart, said second power means including energy storing means which functions substantially as a force transmitting means during independent operation of said second power means and is also actuated to store energy during simultaneous operation of said first and second power means for moving said shoes apart after deactivation of said first power means and floating link means interconnecting said shoes at points spaced from said second power means to provide fulcrum points for said shoes and providing means to transmit force from one shoe to the other during independent activation of said second power means.

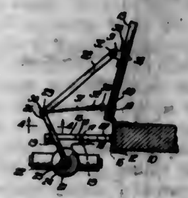
3,089,567
APPLIANCE FOR LINEAR BODIES
Raymond F. Sullivan, Chagrin Falls, Ohio, assignor to Preformed Line Products Company, Cleveland, Ohio, a corporation of Ohio
Filed Sept. 29, 1961, Ser. No. 141,834
6 Claims. (Cl. 189—31.5)

1. A covering for a suspended line comprising a tubular member having an internal diameter at least as large as the overall diameter of said suspended line, a first linear member having one end secured to said tubular member adjacent one end thereof and extending partially through said tubular member along the axis thereof, a second linear member having one end secured to said tubular member at a point spaced from said first



linear member and extending partially through said tubular member along the axis thereof, said linear members being helically preshaped to a pitch and internal diameter of sufficient magnitude to permit them to be applied from the side to said suspended line without exceeding their elastic limits.

3,089,568
THERMALLY CONTROLLED DOOR-CHECKS
Oliver F. Thompson, 6867 Ottawa Ave., Chicago, Ill.
Filed Nov. 16, 1959, Ser. No. 853,090
4 Claims. (Cl. 189—49)



1. In a door closing device for urging a door to a closed position with a door frame, a pair of arms, a vertical pivot pin interconnecting the adjacent ends of said arms, the opposite end of one of said arms being pivotally connected to the door, the opposite end of the other of said arms being pivotally connected to the door frame, said arms assuming a substantially right-angle position when the door remains in an open position relative to the door frame, tensioning means in association with one of said arms for inducing relative angular shifting motion to said arms for bringing the latter to a substantially acute-angled mutual relation for thereby swinging the door to a closed relation with respect to the frame, an oblong connecting member, means for engaging one end of said connecting member with the lower end of said pivot pin, said oblong connecting member terminating in an opposite end fixedly carrying a terminal, disengageable connecting device for disengageably connecting the said opposite end of the oblong member to a fixed connecting member located at a point which is in spaced distanced relation with said pivot pin, said device being spaced from

contact with said arms, said means for engaging one end of said connecting member with the lower end of said pivot pin and said device both supporting said oblong connecting member upon a plane disposed below the plane upon which said arms shift and in a substantially transverse relation with one of said arms with which said tensioning means is associated for rendering said tensioning means inoperative for maintaining said arms in a substantially right-angle position for thereby maintaing the door in a fixed open position relative to the door frame, and an insert of fusible metal intermediately of the ends of said oblong connecting member, said insert being capable of melting by an increased temperature resulting from fire in the vicinity of the door for thereby severing said oblong connecting member for reconditioning the operation of said tensioning means for shifting said arms to a substantially acute-angled mutual relation for thereby bringing the door to a closed relation with respect to the door frame, the severed parts of the oblong member being maintained by said pin and the cooperable relation of said connecting device and said connecting member in positions which are out of the planes of movement of the door and the arms to thereby prevent said severed parts from interfering with automatic closing of the door.

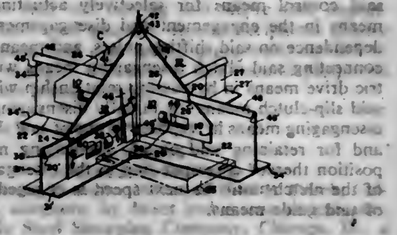
3,089,569
BUILDING CONSTRUCTION
George W. Stelts, Flossmoor, Ill., assignor to Bruco Manufacturing Company, Harvey, Ill., a corporation of Delaware
Filed Jan. 19, 1959, Ser. No. 787,653
5 Claims. (Cl. 189—38)



1. Ceiling construction comprising in combination a support member, a runner having a web portion and flanges integrally formed therewith along each of its edges, one of said flanges being in normal engagement with the support member and having a rib formed longitudinally thereof intermediate the web portion and the outer free edge of the said flange, the other of said flanges extending in two directions away from the said web edge and forming ceiling tile support means, and an integrally formed resilient clip having a central crown portion in engagement with the support member, leg portions extending outwardly and downwardly from said crown portion, each of said leg portions having extensions thereon extending outward and also downward at a lesser angle than does the leg portions, the extensions having inwardly turned end portions extending under the flange on the said runner in engagement with the support with upwardly turned tips thereon abuttingly engaging the said flange on each side of the support member on its side opposite to the side of the flange in engagement with the support member whereby the said runner is supported.

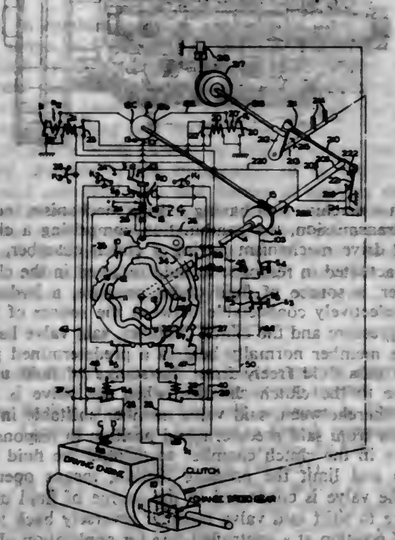
3,089,570
BEAM AND TIE SUPPORT
Timothy H. O'Neil, Jr., 1648 Waverly Way, Baltimore, Md.
Filed July 21, 1959, Ser. No. 828,624
4 Claims. (Cl. 189—36)

1. A clip for securing a joint between an extended beam member and a tie beam member for a suspended ceiling, each of said beam members being of inverted T cross sectional form in which the vertical portion of the T is provided with an enlarged bead extending along its upper edge, the clip comprising, two vertically fixed walls intersecting each other at right angles, each wall comprising two adjacent parallel portions extending from the top to the bottom of the clip, the bottom edge of one wall being in a horizontal plane positioned above the bottom edge of the other wall, each wall having at least one continuous horizontal channel formed therein



throughout the entire length of the wall and at predetermined distances from their respective bottom edges and positioned intermediately of the top and bottom of the clip for receiving the beads carried by the beams, the channel in one wall being in a horizontal plane above the channel in the other wall, means carried by the said walls and positioned between the channels and their bottom edges for engaging the beams for holding the same against lateral movement relative to the clip and means for supporting the clip.

3,089,571
ELECTRIC SHIFTING ARRANGEMENT FOR CHANGE-SPEED GEARS
Rainer Schick, Esslingen (Neckar)-St. Bernhardt, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Untertürkheim, Germany
Filed Feb. 16, 1960, Ser. No. 9,498
Claims priority, application Germany Feb. 18, 1959
24 Claims. (Cl. 192—3.5)



1. An electric shifting and clutch actuating mechanism for a change-speed transmission driven by a clutch coordinated thereto, especially for motor vehicles, comprising shifting means for said transmission, rotatable guide means within said transmission for guiding said

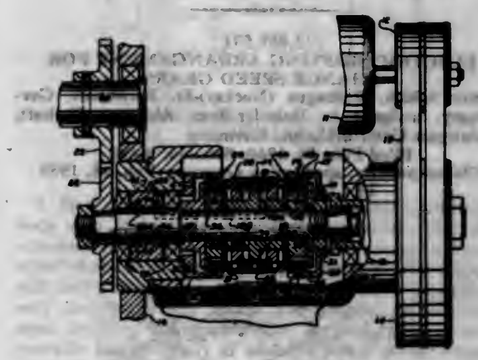
shifting means, clutch disengaging means, electric drive means including an electric motor operatively connected with speed reduction gear means and slip-clutch means for driving said guide means from said electric motor in either direction of rotation thereof, control means for producing electric shifting pulses, said guide means being provided along the periphery thereof with a number of notches corresponding to the individual shifting positions, latch means adapted to engage in a notch when properly positioned therebelow, electromagnetic means included in said control means for selectively actuating said latch means in the engagement and disengagement thereof in dependence on said shifting pulses, and means operatively connecting said clutch disengaging means with said electric drive means in by-passing relationship with respect to said slip-clutch means for initially disengaging said clutch disengaging means in response to one of said shifting pulses and for retaining said clutch disengaging means in the position thereof corresponding to the disengaged position of the clutch until the next speed is engaged by rotation of said guide means.

3,089,572

MACHINE TOOL DRIVE SYSTEM CONTROL MECHANISM

Charles Herfurth, Cincinnati, Ohio, assignor to The Cincinnati Milling Machine Co., Cincinnati, Ohio, a corporation of Ohio

Filed June 7, 1961, Ser. No. 115,530
8 Claims. (Cl. 192—3.5)



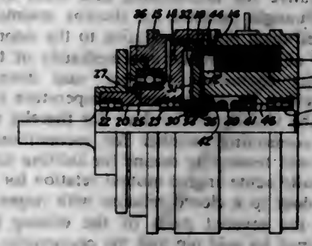
1. In a machine tool having a drive mechanism including a transmission, the combination comprising a clutch in said drive mechanism having a clutch chamber, said clutch actuated in response to fluid received in the clutch chamber, a source of fluid under pressure, a hydraulic valve selectively connectable between the source of fluid under pressure and the clutch chamber, said valve having a valve member normally held in a predetermined position to pass fluid freely from the source of fluid under pressure to the clutch chamber when the valve is connected therebetween, said valve member shiftable in one direction from said predetermined position in response to pressure in the clutch chamber to throttle the fluid flow thereto and limit the pressure therein, means operable after the valve is connected to the source of fluid under pressure to shift said valve member reversely back to its normal position at a controlled rate for application of full pressure to the clutch chamber after a predetermined time, and means selectively to disable said means for reversely shifting said valve member to hold the pressure in the clutch chamber at a reduced level while the gears of the transmission are being shifted.

3,089,573

ELECTROMAGNETICALLY OPERATED CLUTCH-BRAKE

Melvin F. Walker, Tonawanda, N.Y., assignor to General-Electro Mechanical Corporation, Buffalo, N.Y.

Filed Aug. 10, 1960, Ser. No. 48,589
4 Claims. (Cl. 192—18)



1. In an electromagnetically operated clutch-brake unit, a cylindrical casing member of magnetic material having a radial end face comprising a brake surface, an annular recess in said face and an electromagnetic winding in said recess, a cup-shaped casing member of non-magnetic material coaxial with said cylindrical casing member and having its open end connected thereto adjacent to said radial end face whereby the interior of said cup-shaped member and said radial end face form a generally cylindrical chamber, a shaft extending axially through said casing members and having bearing in said cylindrical casing member, a rotor member having bearing on said shaft, a bearing between said rotor member and said cup-shaped casing member, said rotor member having a radially enlarged portion in said chamber comprising a driving clutch member, an annular clutch-brake member in said chamber between the clutch member and said radial face and having a circumferential portion for frictional driving engagement with said driving clutch member, said casing member end face and the adjacent face of said clutch-brake member having braking engagement when said electromagnetic winding is energized, a flexible relatively flat annular diaphragm having its outer marginal portion fixed to said clutch-brake member and its inner marginal portion fixed to said shaft whereby said clutch-brake member has limited axial movement relative to said shaft by flexure of said diaphragm but is fixed by said diaphragm against relative rotative movement relative to said shaft, and a compression coil spring acting between said casing and said clutch-brake member urging the latter to clutching position with respect to said driving clutch member.

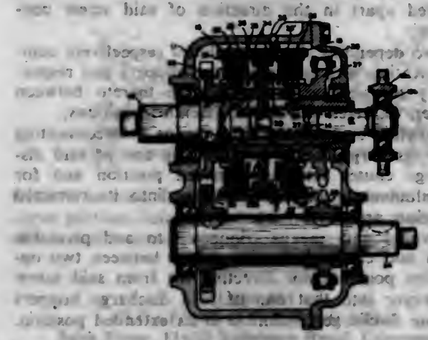
3,089,574

CLUTCH OPERATING MECHANISM

Wayne R. Howard, Jackson, Mich., assignor to Clark Equipment Company, a corporation of Michigan

Filed Apr. 4, 1960, Ser. No. 19,767
4 Claims. (Cl. 192—48)

1. For use in a transmission including a driving shaft having an axially extending opening therein and a driven shaft selectively connectable to the driving shaft by either of a pair of clutch assemblies, a clutch operating mechanism comprising a drum support member connected to the driving shaft, said drum support member having a plurality of radial slots therein, an annular drum connected to said drum support member for supporting a portion of the clutch assemblies radially inwardly of said drum, a plurality of levers pivotally connected to the inner surface of said drum and extending radially inward in said slots, a pair of spring washers located respectively between the clutch assemblies and said levers, a control rod slidably positioned within the axially extending opening in the driving shaft, the driving shaft having a plurality of radially disposed openings through which the said levers extend respectively, and an annular groove



in the said control shaft which receives the inner ends of said levers, whereby axial movement of the said control rod provides selective engagement of the clutches.

3,089,575

SYNCHRONIZING CLUTCH

Paul E. Pontius, Groton, Conn., and Sherman B. Campbell, Erie, Pa., assignors to Zurn Industries, Inc., Erie, Pa., a corporation of Pennsylvania

Filed Sept. 22, 1958, Ser. No. 762,289
20 Claims. (Cl. 192—53)

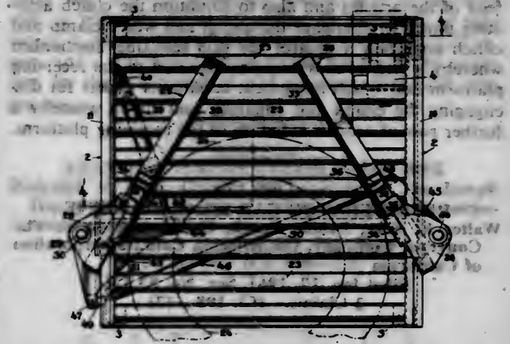
1. In a disengageable gear coupling, in combination, a hubbed externally toothed driving gear, a hubbed externally toothed driven gear, an internally splined sleeve for engaging the teeth of said gears, an annular pressure ring slidably mounted on the hub of said driving gear concentrically of said sleeve and intermediate said driving gear and said driven gear having circumferentially spaced, longitudinally extending first peripheral grooves on the periphery thereof and a circumferential groove, said longitudinally extending grooves having enlarged portions adjacent the driving gear side thereof with tapered shoulders, longitudinally movable annular disks rotatable with said pressure ring, annular disks on said hub of said driven gear and rotatable therewith frictionally engageable with said longitudinally movable disks rotatable with said pressure ring to initially transmit rotative force from said driving gear to said driven gear upon initial longitudinal movement of said sleeve, blocking pins spaced around the inner periphery of said sleeve for disposal in said longitudinally extending grooves of said pressure ring, means to move said blocking pins longitudinally in said ring when said driven gear is synchronized with said driving gear, piston means on said pressure ring disposed concentric to the axis of said driving gear and inward of said driving gear applying a force generally uniformly around the entire circumference thereof urging said ring longitudinally, means actuated after said force has been exerted on said pressure ring for a predetermined time, moving said blocking pins into engagement with said tapered shoulders in said enlarged ends of said grooves after longitudinal movement of said ring toward said driven gear until the speed of said driven gear is synchronized with the speed of said driving gear whereby said pins will be moved longitudinally in said first peripheral grooves, releasing said disks and said pressure ring and moving said sleeve into engagement with both said gears, a second peripheral groove in said pressure ring, and spring urged balls carried by said sleeve engaging one side of said second peripheral groove in said pressure ring.

3,089,576

LOCATING DEVICE

Leo Peter Sauer, Kenosha, Wis., and Paul P. Frisch, Chicago, Ill., assignors, by direct and mesne assignments, to Signode Steel Strapping Company, Chicago, Ill., a corporation of Delaware

Filed Dec. 16, 1960, Ser. No. 76,231
9 Claims. (Cl. 198—29)



1. In combination with a conveyor, a barrier extending across said conveyor in position to intercept articles carried by said conveyor, said barrier having portions thereof disposed in angular relation converging in the direction of movement of said conveyor, holding means normally holding said barrier in position to be engaged by an article being carried by said conveyor, and means being operable by the engagement of an article carried by said conveyor with said barrier at each of said portions thereof to release said holding means, whereby said barrier may be moved from said intercepting position by an article carried by said conveyor to permit said article to be carried past said barrier by said conveyor at a predetermined position laterally of said conveyor.

3,089,577

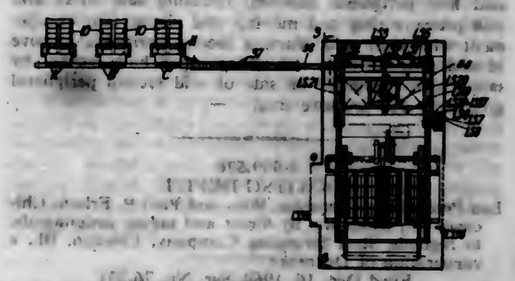
APPARATUS FOR MARSHALLING A GROUP OF ARTICLES IN SPACED ROWS

John Paisley, London, England, assignor to Eastwoods Limited, London, England, a British company

Filed Sept. 27, 1960, Ser. No. 58,820
7 Claims. (Cl. 198—31)

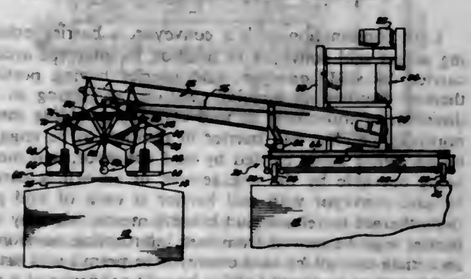
1. An apparatus for marshalling a group of articles in spaced rows comprising a step by step moving and receiving platform for the articles, a feed conveyor extending laterally from one edge of the platform and moving transversely to the step by step motion thereof, which conveyor accommodates a single line of articles end to end thereon, a clamp arranged at the end of the conveyor adjacent the edge of said receiving platform and having clamping members between which the articles pass on their way on to

the receiving platform, indexing mechanism for imparting said step by step motion, a motor and transmission for driving said conveyor, which transmission embodies a clutch, power means for engaging and disengaging said clutch, actuating means for imparting closing and opening movement to said clamping members, control means arranged over the marshalling platform in the path of movement of the row of articles being fed onto it, which control means are adapted to be engaged by a leading article and



when so engaged are adapted to condition the clamp actuating means to close the clamp and thereby arrest the feed of the articles and also to condition the clutch actuating motor to disengage the clutch and which clamp and clutch condition a control for said indexing mechanism whereby a step of movement is imparted to the receiving platform and which movement conditions means for disengaging the clamp and engaging said clutch whereby a further row of articles is fed on to the receiving platform.

3,089,578
REFRIGERATOR CAR ICING MACHINE
Walter E. Saxe, Pebble Beach, Calif., assignor to The Conveyor Company, Los Angeles, Calif., a corporation of California
Filed Jan. 17, 1961, Ser. No. 83,226
2 Claims. (Cl. 198—47)



1. In a refrigerator car icing machine, the combination of:

(*a*) a supporting chassis movable along a predetermined path;

(*b*) a rigid, one-piece, boom-type screw conveyor fixedly mounted on said chassis with respect to movement in the vertical direction, and pivotally mounted on said chassis for swinging movement about an upright axis, through an angle of substantially 180° in the horizontal direction, between two operative positions through an intermediate, inoperative position;

(*c*) said screw conveyor being generally parallel to said path when in its inoperative position, and being generally perpendicular thereto when in either of its operative positions;

(*d*) said screw conveyor being inclined upwardly at a fixed angle from its inner end to its outer end;

(*e*) means for delivering ice to the inner end of said screw conveyor;

(*f*) two depending discharge hoppers carried by said screw conveyor adjacent the outer end thereof and spaced apart in the direction of said screw conveyor;

(*g*) two depending discharge chutes respectively communicating with said discharge hoppers and respectively movable vertically relative thereto between upper, retracted and lower, extended positions;

(*h*) pivoted counterbalancing means interconnecting said discharge chutes for lowering one of said discharge chutes into its extended position and for simultaneously raising the other into its retracted position; and

(*i*) pivoted gate means connected to and pivotable with said counterbalancing means between two operative positions for directing ice from said screw conveyor into that one of said discharge hoppers whose discharge conduit is in its extended position.

3,089,579
COMPOSITE FLIGHT
William R. Beck, Palos Heights, Ill., assignor to Goodman Manufacturing Company, Chicago, Ill., a corporation of Illinois
Filed June 8, 1960, Ser. No. 34,695
3 Claims. (Cl. 198—175)



1. In a chain and flight conveyor, the combination comprising:

a conveyor trough having a bottom wall and a pair of spaced sidewalls extending upwardly from the edges of said bottom wall;

a pair of driving chains, each chain adapted to run along a respective edge of said bottom wall adjacent a respective sidewall, each chain having apertures spaced longitudinally along the inner sides thereof, said apertures in respective of said chains being transversely aligned with each other;

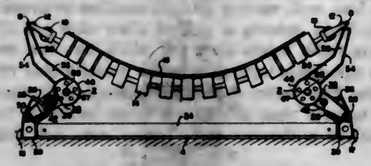
composite flight means extending transversely across said conveyor having a pair of separable overlapping portions, each portion having a driving connection extending outwardly for engagement with an aperture in respective of said driving chains, one portion having an opened wedge-shaped cavity opposite its driving connection, the other portion having a tongue extending oppositely from its driving connection; and

fastening means for securing said tongue in engagement with the sides of said cavity forming a break-away joint connecting said overlapping portions together and arranged so as to open perpendicularly of said flight means.

3,089,580
CONVEYOR DEVICE
Lemoyne W. Dilgard, Dover, Ohio, assignor to Joy Manufacturing Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed May 23, 1960, Ser. No. 31,064
9 Claims. (Cl. 198—192)

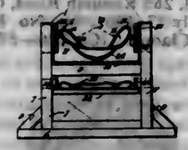
1. In a conveyor device having an elongated flexible belt supported in the form of a catenary for conveying material over a surface, a support means comprising: a pair of laterally spaced linkages having lower, intermediate, and upper link portions; said link portions having

only a fixed path of movement with respect to each other; respectively, extending above such a surface; said intermediate portions being mounted for arcuate movement



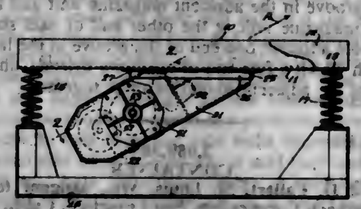
relative to said lower portions; respectively; and said upper portions being mounted for arcuate movement relative to said intermediate portions respectively.

3,089,581
FLOATING CONVEYOR BELT
John Moar, 11632 Edinboro Road, Edmonton, Alberta, Canada
Filed Dec. 7, 1959, Ser. No. 857,944
14 Claims. (Cl. 198—201)



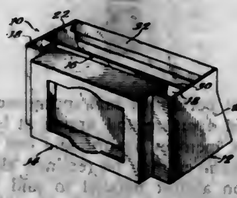
11. In a floating conveyor system, the combination of an elongated trough having a stream of liquid flowing therethrough, an endless flexible conveyor belt having a buoyant run floating on the liquid in said trough and also having a return run, and projectable and retractable means provided at longitudinally spaced points on said belt, said means being projected and depending from the buoyant run of the belt into the liquid stream for propulsion of the belt by liquid flow through said trough and being retracted to an inoperative position on the return run of the belt.

3,089,582
VIBRATORY DEVICE
Albert Musschoot, Barrington, and Marvin G. Thomson, Prospect Heights, Ill., assignors to General Kinematics Corporation, a corporation of Illinois
Filed Dec. 19, 1960, Ser. No. 76,657
8 Claims. (Cl. 198—220)



1. A vibratory particulate material moving device comprising, a first member for moving the material and mounted from a support for vibratory movement, a resonant spring-weight system for vibrating said first member in a generally straight-line path including said first member, a second member having a rotatable eccentric weight and torsion spring means supporting the second member on the first member, said torsion spring means having a resistance to movement in shear greater than its resistance to movement in torsion and said spring means being arranged to transmit in shear forces generated by said second member parallel to said path and to torsionally absorb forces of said second member acting transversely to said shear transmitted force whereby the second member may be free of any support other than said spring means.

3,089,583
SERVING TRAY ACCESSORY
Adam B. White, P.O. Box 271, De Kalb, Ill.
Filed Nov. 3, 1960, Ser. No. 67,130
2 Claims. (Cl. 206—1)



1. A serving tray accessory including in combination, a main body portion in the shape of a rectangular open top debris receiving box provided with a recess at the front side and an outwardly slanted wall at the rear side, a vertically arranged pocket at each end of said recess, a napkin holder removably supported in said recess, and a clip means affixed to the bottom of the accessory for the attachment of said accessory to a food serving tray.

3,089,584
TRAY FOR WATER COLOR PAINT BOX
Roderick V. King, Girard, Pa., assignor to The Joseph Dixon Crucible Company, Jersey City, N.J., a corporation of New Jersey
Filed May 13, 1960, Ser. No. 56,614
5 Claims. (Cl. 206—1.8)



4. A paint box and a tray therefor, said paint box having a pan tray therein, means in said paint box for supporting said pan tray, said pan tray comprising a sheet of thin resilient material, and pan receiving openings in said sheet, pans positioned in said openings, said openings being only slightly larger than said pans, portions of said material defining the marginal edges of each said openings extending inwardly of some of the other of said marginal edge portions and terminating in a free cut edge, said inwardly extending free cut marginal edge portion being coned toward the bottom of said sheet, said free cut edges being roughened and gripping the side walls of a pan inserted in said opening.

3,089,585
REELS OR THE LIKE
Frederic A. Seff, 226—33 Manor Road, Queens Village, N.Y.
Filed Jan. 10, 1962, Ser. No. 165,398
3 Claims. (Cl. 206—53)

1. A reel, comprising:

(*a*) an annular hub about which film is adapted to be wound, and

(*b*) two parallel disks arranged about said hub to locate said film to be wound therebetween, and

(c) an elongated spring member fastened only at its external ends to the side of one of said disks opposite said other disk,

(d) and a thin lock member having an aperture adjacent one end thereof,



(e) the central portion of said spring member passing through said aperture and urging at least a portion of said lock member against said one disk whereby said lock member may be retained alternately in a first position almost parallel to said one disk and a second position perpendicular to said one disk.

3,089,586
COMBINATION DISPENSER AND RECEPTACLE
David F. Cole, 513 Beechwood Drive, Mansfield, Ohio
Filed Sept. 7, 1961, Ser. No. 136,482
2 Claims. (Cl. 206—57)



2. A combination one-piece tissue dispenser comprising a dispenser part holding tissues and the like, and a flexible, collapsible receptacle part, said receptacle part completely enwrapping said dispenser part, said combination when said receptacle part completely enwraps said dispenser part being only slightly greater in size than said dispenser part considered separately, said receptacle part including an upwardly opening pocket for receiving used tissues, pressure sensitive adhesive means on said dispenser part for detachably affixing said combination to a suitable surface, and means retaining said receptacle part in said enwrapped position.

3,089,587
ROLLED PRESSURE-SENSITIVE ADHESIVE TAPE
William Ganz, West Englewood, N.J., assignor to Johnson & Johnson, a corporation of New Jersey
Filed Apr. 20, 1960, Ser. No. 23,506
2 Claims. (Cl. 206—59)

1. A roll of pressure-sensitive adhesive tape which comprises a substantially nonadhesive backing layer and a pressure-sensitive adhesive layer on one side of the backing layer, said tape being wound upon a cylindrical core and then in successive convolutions upon itself in the form of a roll with the pressure-sensitive side of the tape facing the axis of the roll, the edge portions of said tape being bent radially inwardly at an angle to the plane of the tape between the edges, and the nonadhesive corners presented between the top surfaces of the down-turned edge portions of the tape and the corresponding side surfaces of the tape edges being axially spaced outwardly from the adhesive corners presented between the bottom surfaces of the down-turned edge portions of the tape and the corresponding side surfaces of the tape edges



and being substantially free of adhesive, the innermost convolution of the tape roll adhering to the surface of the core from edge to edge of the tape, whereby the effective side surfaces of the roll are nonadhesive.

3,089,588
AERIAL WIRE PAYOUT SYSTEM AND WIRE MAGAZINE THEREFOR
Curtis V. Correll, 265 Kenneth Road, Glendale, Calif.
Filed July 27, 1961, Ser. No. 127,278
4 Claims. (Cl. 206—59)



1. A wire magazine for use in a wire payout system of the character described, comprising a plurality of separate magazine units, each including a generally disc-shaped body of relatively thin, frangible material formed at one side with an upstanding rib which spirals inwardly from the outer edge of the respective body and defines a spiral groove at said one side of the respective body, said magazine units being generally coaxially arranged in a stack with the grooved sides of the several magazine units facing one end of the stack, a wire fitted in the grooves of the several magazine units, the body of each magazine unit having a hole adjacent one end of the groove in the respective magazine unit through which said wire passes from the groove in one magazine unit to the groove in the adjacent magazine unit and the body of the magazine unit at the other end of said stack having a hole adjacent one end of the groove in the latter unit through which a free end of said wire extends, and means bonding the adjacent magazine units together.

3,089,589
CONTAINER
Clifford D. Fallert, St. Louis, Mo., assignor to Crown Zellerbach Corporation, San Francisco, Calif., a corporation of Nevada
Filed May 9, 1960, Ser. No. 27,924
1 Claim. (Cl. 206—65)

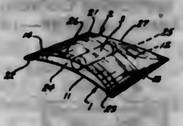
A tall rectangular paperboard package containing a plurality of cold flow synthetic rubber blocks of substantially uniform rectangular form and of a comprised weight of at least 1500 pounds, the package capable of being vertically stacked one upon another, the package comprising an inflexible pallet and a heavy duty container with top and bottom edges and bottom closure flaps integral with the container bottom end edges and vertical outer side and end walls in foldably connected tubular relation, the bottom flaps being infolded and secured to

the pallet, reinforcing and rigidifying members in the container consisting of a plurality of open ended tubes with vertical side and end walls coextensive in height with said container, the open ended tubes having rectangular transverse sections slightly greater than said blocks and with the side walls having a greater width dimension than said end walls, the open ended tubes arranged in side by side relation with the vertical side walls in flatwise contacting relation with each other and with the container outer end walls throughout their vertical height and width, the open ended tubes extending transversely



of the heavy duty container with the end walls thereof each contacting the container side walls throughout their vertical height and width, each such open ended tube filled with a single tier of said blocks at least eight blocks high in restricted vertical alignment, the vertical walls of said tubes being in mutually supporting relation with each other and with the outer container walls throughout their extent, a telescoping top closure having side and end flanges, the top closure resting on the top edges of the walls and open end tubes and enclosing the end edges of the container.

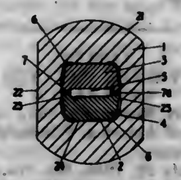
3,089,590
DISPLAY PACKAGE
Jack R. Mell, 440 Logan SE., Grand Rapids, Mich.
Filed Sept. 13, 1961, Ser. No. 137,896
5 Claims. (Cl. 206—78)



1. A display package comprising an elongated base having opposite end portions; said base being flexible along a dimension extending between said end portions; a flexible housing located over said base and having a top extending between the ends of said base and tapered downwardly from its intermediate portion to the ends of the base where it is attached thereto; said housing top in plan view having marginal side edges forming a narrow intermediate portion fanning outwardly to wider end portions corresponding in shape to said base; and side walls depending from the marginal side edges of said top to said base and being free from said base permitting flexing of said base and said housing along said dimension in a direction away from each other thereby providing access to articles in said housing.

3,089,591
CONTAINER FOR METAL TUBE AND EXTRUSION PRESSES
Horst Hans Groos, Duesseldorf, Germany, assignor to Schloemann Aktiengesellschaft, Duesseldorf, Germany
Filed June 27, 1960, Ser. No. 39,169
Claims priority, application Germany July 11, 1959
5 Claims. (Cl. 207—15)

1. In a container for receiving a billet in an extrusion press, said container including an elongated body having a reception opening therein, a plurality of shaped pieces disposed in said opening in opposed spaced relationship, the inner opposed surfaces of said pieces being formed with opposed recesses providing top and bottom walls and partial side walls defining a billet receiving chamber, and intermediate separate filler pieces disposed between



said shaped pieces at opposite sides of said chamber, each filler piece having a portion engaging the spaced adjacent inner surfaces of said shaped pieces forming a partial side wall to provide a complete side wall for said chamber and seal the space between said shaped pieces.

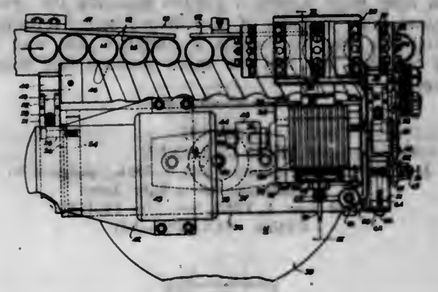
3,089,592
SEED CLEANER
Jerome M. Gage, Sioux Falls, S. Dak., assignor to M. L. Kollman, Iowa City, Iowa
Filed Apr. 1, 1960, Ser. No. 19,418
1 Claim. (Cl. 209—34)



A seed cleaner comprising a casing, a plurality of concentric cylindrical screens mounted for rotatable movement in said casing, said screens including an innermost screen, a next outer screen, and an outer screen, the innermost screen projecting beyond the limits of the next outer screen, the next outer screen projecting beyond the limits of the last outer screen, a plurality of discharge chutes communicating to the projecting portions of said screens, a shaft on which said concentric screens are mounted, means for adjustably positioning the vertical height of one end of said shaft whereby said screens will slope downwardly toward said discharge chutes, said innermost screen having a discharge end section and a forward section, and having a plurality of openings throughout, the openings in said discharge end section being smaller than the openings in said forward section, said next outer screen having a further discharge end section, and a further forward section and having a plurality of further openings throughout, the further openings in said further discharge end section being smaller than the further openings in said further forward section, said outer screen having a still further discharge end section, and a still further forward section, and having a plurality of still further openings throughout, the still further openings in said still further discharge end section being smaller than the openings in said still further forward section, the openings in said innermost screen being larger than the openings in said next outer screen, and the openings in said next outer screen being larger than the openings in said outer screen, a further seed cleaner communicating with the innermost of said discharge chutes, said further seed cleaner including an angularly positioned housing, said housing having an upper discharge opening and an inter-

mediate discharge opening, vertically positioned further discharge chutes communicating with said further discharge openings, means for creating a stream of air passing upwardly along said angularly positioned housing, a slidable gate positioned within said intermediate opening to regulate said stream of air, the lower end of said angularly positioned housing providing means for passage of seed therethrough.

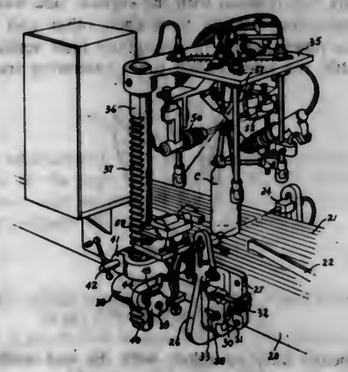
3,089,593
SEALED CONTAINER VACUUM DETECTING APPARATUS
Quentin E. Honnert, Richmond, Ind., assignor to Aluminum Company of America, Pittsburgh, Pa., a corporation of Pennsylvania
Filed July 20, 1960, Ser. No. 44,045
6 Claims. (Cl. 209—82)



1. Apparatus for determining the degree of vacuum in sealed containers moving in a single file, upright position past a test point and having a flexible metal end sealing closure which bows inwardly under vacuum in the containers, said apparatus comprising a turret rotatably mounted on a horizontal axis directly above and in transverse relation to the travel path of said containers, a plurality of equi-angularly spaced test heads slidably carried by said turret in outwardly spaced radiating relation thereto, spring means resiliently urging said heads outwardly for retraction towards the turret in testing successive containers passing thereunder, electrode means rigidly mounted in and radially projecting from each of said heads and comprising a closure-edge contact point and a sharply tipped closure-centered contact point, the latter being in preset projecting relation to the former and both being in line with the axis of said turret for cooperative engagement with the sealing closure on a container passing thereunder to establish an electric test circuit through said closure if its concavity is less than a prescribed amount, ejector means disposed at the exit side of said turret substantially at the point of electrode disengagement from a tested container for effecting lateral displacement of defective containers from said travel path, each after its release by a test head, electrically actuated operating means for said ejecting means, and control switch means including timing means connected in and controlled by said test circuit for actuating said ejector operating means and maintaining the same in actuated condition for a predetermined interval after said test circuit is opened.

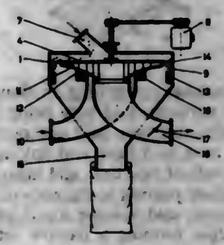
3,089,594
SHAPE AND HEIGHT DETECTION
Richard L. Early, Toledo, Ohio, assignor to Owens-Illinois Glass Company, a corporation of Ohio
Filed June 13, 1960, Ser. No. 35,579
30 Claims. (Cl. 209—111.5)

8. An apparatus for comparing the instantaneous position of one part of an article with another part of an article which comprises means for moving said article in a continuous path past an inspection station, a source of radiant energy mounted adjacent said inspection station for directing a beam of radiant energy transversely of said path in position to be intercepted by the article, a photocell positioned with its line of sight in position to intercept said beam of radiant energy whereby a first voltage pulse is produced when the article enters the beam



and a second pulse is produced when the article leaves the beam, a second source of radiant energy directing a second beam of radiant energy in such manner that said second beam is in predetermined relation to a second part of the article at the inspection station, and means causing a signal if said second beam of radiant energy is not in proper relation to said article during said second voltage pulse.

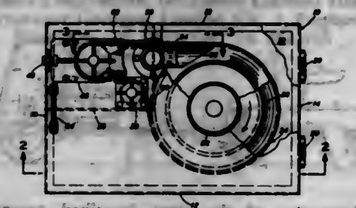
3,089,595
FLOW APPARATUS FOR SEPARATING GRANULAR PARTICLES
Fritz Kaiser, Hammel, near Augsburg, Germany, assignor to Alpine Aktiengesellschaft Maschinenfabrik und Eisengiesserei, a company of Germany
Filed July 24, 1961, Ser. No. 126,166
Claims priority, application Germany Aug. 6, 1960
8 Claims. (Cl. 209—144)



1. A flow apparatus for separating differently sized granular particles, comprising a rotatable separator wheel having a multiplicity of spaced substantially radially directed separating channels extending respectively from the outermost periphery of said wheel toward the center thereof, each of said separating channels being of enclosed substantially zig-zag configuration, means for feeding material to be separated onto an imperforate rotary boundary wall of said wheel at a position adjacent the axis of rotation of said separator wheel, means for rotating said wheel and boundary wall thereby to centrifuge said material away from said axis of rotation over said boundary wall to a position adjacent the outermost periphery of said rotating wheel, means supplying a flow medium at a like position adjacent the outermost periphery of said rotating separator wheel, said rotating wheel being operative to effect a flow of said medium and of portions

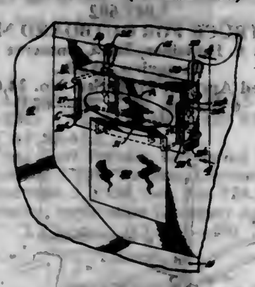
of said material via said channels from the periphery toward the center of said separator wheel, and outlet means communicating with said separating channels adjacent the center of said wheel for discharging said portions of said material from said wheel.

3,089,596
CENTRIFUGAL SEPARATOR
Edward D. O'Brien, 585 Woodside Drive, Woodside, Calif., and William C. Funk, 3917 Mission St., San Francisco, Calif.
Filed Nov. 8, 1960, Ser. No. 68,056
6 Claims. (Cl. 210—369)



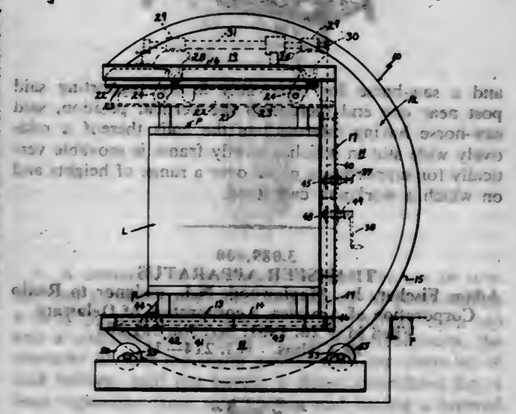
1. Apparatus for separating liquids from solids comprising a wheel member having an outwardly directed concave rim, means including a shaft for supporting and rotatably driving said wheel member, a screen belt trained about a substantial portion of said concave rim in covering relation therewith, said screen belt leaving said rim, extending about fixedly positioned idler roller means, then returning to said rim, said screen belt being driven by said wheel member, said concave rim and that portion of the belt in engagement therewith defining therebetween a continuous and uninterrupted semi-annular chamber, and stationary feed means for introducing a liquid-solid mixture into said chamber defined between said concave rim and said screen belt, said latter means being provided with a discharge outlet disposed in communication with said chamber.

3,089,597
CARRIER FOR BOXED TISSUES
Seymour Kaplan, 6250 N. St. Louis Ave., Chicago, Ill.
Filed July 18, 1960, Ser. No. 43,491
4 Claims. (Cl. 211—88)



2. A carrier for boxed tissues and the like comprising, in combination, a rectangular box holding frame defining a rectangular back and edge restraints projecting forwardly from the two short edges and one long edge of the back, each edge restraint including two spaced elements whose terminals are joined together by a bight element, the extended ends of the three edge restraints being turned inwardly to locate the bights of said edge restraints in a single plane that is spaced forwardly and parallel to the back to define portions of a front that bound an open central region that provides for relatively free access to the contents of a box adapted to be carried in said frame, the other long edge of the frame being unobstructed to permit a rectangular box to be inserted and removed from the frame, said unobstructed edge of the frame being disposed either vertically or along the top of the frame to avoid inadvertent dislocation of a box from within the frame, said back being formed adjacent the top edge thereof to define a pair of spaced connectors, said box holding frame being formed by only two wire members secured together and shaped to define said back, said three edge restraints, and said portions of a front, and a pair of hook members each defining a relatively short arm with an elbow therein and a relatively long arm with at least one connector thereon adapted for connection with a connector on the frame back.

3,089,598
APPARATUS FOR INVERTING LOADS
Robert A. Temple, Birmingham, Ala.; Virginia N. Temple, administratrix of estate of said Robert A. Temple, deceased, assignor to Virginia N. Temple
Filed July 6, 1960, Ser. No. 41,287
6 Claims. (Cl. 214—1)

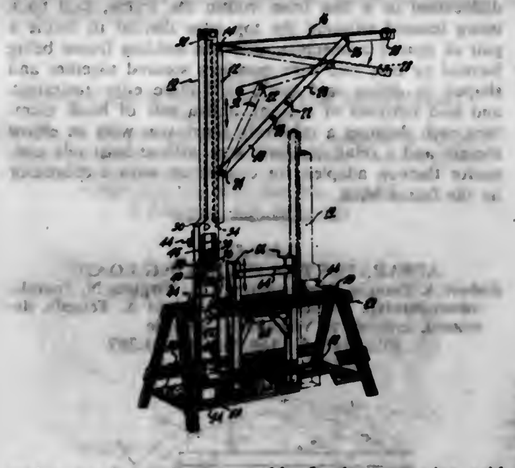


1. In apparatus to invert a load mounted between pallets positioned on the upper and lower surfaces of the load, a rotary load supporting frame having an open front outer side and open ends adjacent the front side whereby a load may be positioned on the frame from either of three positions, a rear vertical support member on the frame against which the load is normally positioned, upper and lower horizontal support members on the frame between which the pallets are positioned, means to rotate the load supporting frame whereby a load between the pallets may be inverted, means on said lower support member to push the load against the rear support member, and means to move the upper support member simultaneously downwardly toward the load and inwardly toward the rear support member while remaining in horizontal relation.

3,089,599
HOIST
Francesco Casella, 3044 Albany Crescent, Bronx, N.Y.
Filed May 23, 1961, Ser. No. 111,937
6 Claims. (Cl. 214—1)

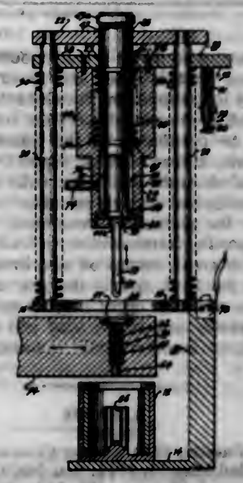
1. A material handling hoist comprising a vertical hollow post having a longitudinal slot therein, an elongated member arranged parallel to said post and movable within said slot, an elongated panel support arm pivotally secured at one end to a point near the upper end of said member, a foldable brace hingedly connected to said

elongated member and to said panel support arm for locking said panel support arm in the horizontal position or for collapsing said panel support arm adjacent to and parallel to said post, means for releasably retaining said panel support arm in any position over the range of heights over which said elongated member can be moved,



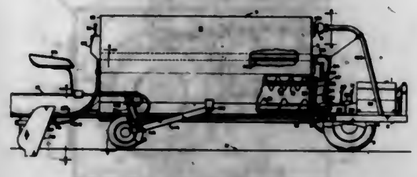
and a saw-horse for removably firmly supporting said post near one end thereof in the vertical position, said saw-horse having intermediate the ends thereof a relatively wide slot in which a sturdy frame is movable vertically for supporting a plank over a range of heights and on which a workman can stand.

3,089,600
TRANSFER APPARATUS
Adam Fischer, Jr., Maplewood, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed May 26, 1961, Ser. No. 121,283
10 Claims. (Cl. 214—1)



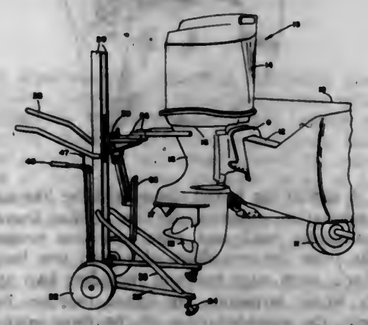
1. A device for transferring an object comprising an elongated rod comprising a portion of first cross-sectional area joined to a portion of reduced cross-sectional area adapted to be inserted within an object, said portion of first cross-sectional area having a recessed area in a region removed from the juncture of the said two portions, said device having a communicating passageway extending between said recessed area and said juncture, said portion of reduced area having a longitudinally extending groove, and means to induce a flow of ambient gas along said groove to hold said object on said portion of reduced area.

3,089,601
MOBILE HOPPER AND SCREW CONVEYOR PICKUP, LOADING AND UNLOADING MEANS THEREFOR
Davis R. Chaney, Rte. 2, Box 246B, and Robert A. Anderson, Rte. 2, Box 212, both of Woodburn, Oreg.
Filed May 24, 1960, Ser. No. 31,365
5 Claims. (Cl. 214—522)



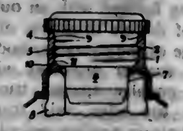
1. Apparatus of the class described comprising in combination a vehicle comprising a traction unit driven by a prime mover mounted thereon and supported upon steerable ground-engaging wheels, a trailer unit including a hopper attached to said traction unit and supported upon steerable ground-engaging idling wheels, a loading screw conveyor rotatably mounted within said hopper and within a tube open at its rearward end and extending outwardly from the corresponding end of said hopper, means operatively interconnecting said loading screw conveyor with said prime mover, a pickup screw conveyor rotatably mounted within a scoop and within a communicating tubular housing in open communication with said loading screw conveyor tube, motor means operatively connected to said pickup screw conveyor, rotatable material-agitating and disintegrating means associated with said pickup screw conveyor and operatively connected to said motor means, a feedback screw conveyor disposed within said hopper in spaced relation to said loading screw conveyor operatively connected to said prime mover and rotatable in a direction to spread incoming material rearwardly within the hopper.

3,089,602
HAND TRUCK FOR OUTBOARD MOTORS
Louis A. Hunziker, 783 Commerce Ave., Longview, Wash.
Filed Apr. 22, 1960, Ser. No. 24,021
6 Claims. (Cl. 214—653)



1. In a hand truck for an outboard motor and the like, a lift carriage, a pair of laterally spaced forwardly projecting journal supports on said carriage, sleeve bearings mounted for rotation on said journal supports, radial arms on said sleeve bearings, load arms on said radial arms projecting forwardly parallel with said journal supports, a link connected to crank arms on said sleeve bearings for moving said load arms together and apart in unison, a stop limiting the opening movement of said load arms when said radial arms are turned upward in slightly converging relation, and a stop limiting the closing movement of said load arms when said radial arms are turned toward each other to positions approaching alignment with each other.

3,089,603
VACUUM FLASKS
Laurance Leslie-Smith, Grosvenor Gardens House, Grosvenor Gardens, London SW. 1, England
Filed Nov. 20, 1959, Ser. No. 854,408
3 Claims. (Cl. 215—13)



1. A vacuum flask assembly comprising a vacuum bottle, a casing housing the said bottle, a pouring lip member surrounding the mouth of the bottle and locating the bottle in the casing, an upstanding cylindrical portion on said pouring lip member extending upwardly from the mouth of the bottle, a screw thread on said cylindrical portion, a pouring lip defined by the open upper end of said cylindrical portion, a stopper, a depending bung portion on said stopper for sealingly engaging in the mouth of the bottle, a screw thread on said stopper engageable with the screw thread on the cylindrical portion of the pouring lip member for releasably securing the stopper with its bung portion engaged in the mouth of the bottle, and means separate from said screw threads providing a secondary seal for the contents of the bottle, the said secondary sealing means comprising a pair of inclined surfaces, each of substantial length on the cylindrical portion of the pouring lip member and inclined surfaces on the stopper which match the respective inclined surfaces on the cylindrical portion of the pouring lip member over substantially the full length thereof, and which wedgingly engage the respective inclined surfaces on said cylindrical portion when the stopper is screwed on to the pouring lip member to cause the secondary seal to have substantial width.

3,089,604
GRIP-ON CAP SEALS FOR BOTTLES OR OTHER CONTAINERS AND METHOD OF PRODUCTION OF SAID CAP SEALS
Erich Golde and Kurt Treydte, Geretsried Via Wolfratshausen, Upper Bavaria, Germany
Filed Apr. 3, 1958, Ser. No. 726,284
Claims priority, application Germany Apr. 5, 1957
2 Claims. (Cl. 215—39)



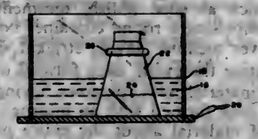
1. A grip-on cap seal for a bottle or the like which comprises (A) a metal grip-on cap having a central hole therein, the annular portion of said cap immediately surrounding said hole being depressed from the upper planar surface of said cap and forming an inwardly inclined anchoring flange, and (B) a pliable insert member positioned against the undersurface of said cap, said insert member having a hollow generally cylindrical stopper-forming part protruding away from said cap and adapted to project into and sealingly engage the inner wall of the neck of a bottle, said cylindrical stopper-forming part being connected at its lower end with the lower end of a smaller cylindrical part which is positioned within said stopper-forming part and is closed at its upper end by a central portion carrying a rivet-headed stump, said rivet-headed stump protruding upwardly through said central hole in said cap and being formed to substantially fill the space within the depressed portion of said cap with the upper surface of said rivet-headed stump being substantially coplanar with the upper surface of said cap, said insert member being arranged to embed both the upper and the lower surface of the anchoring flange of said cap to establish an inseparable connection therewith, said anchoring flange and said rivet-headed stump being spaced radially inwardly from said smaller cylindrical part.

3,089,605
CONVERTIBLE CONTAINER CONSTRUCTION
Frank A. Buonauro, 1219 Summit Ave., Union City, N.J.
Filed June 9, 1961, Ser. No. 116,068
2 Claims. (Cl. 215—99.5)



1. A container of semi-rigid material for use in storing and serving comestibles comprising in combination, a body portion having closed bottom and an open top and a container converging side wall therebetween, the diameter of said top being greater than the diameter of said bottom, said top having a flared chamfered lip, a boss depending from said bottom and having a tapered bore, a dome-shaped convertible base and cover member having a top wall, an annular skirt extending downwardly therefrom, and providing a fillet area between the top wall and the skirt to receive the chamfered lip of said member when the latter is used as a cover, a plurality of aligned spaced ribs along the inner surface of the bottom edge of said skirt to provide snap fit means to resist accidental removal of said member when used as a cover, and a tapered stud extending outwardly from said top wall and adapted to frictionally fit within the bore of said boss when said member is used as a base.

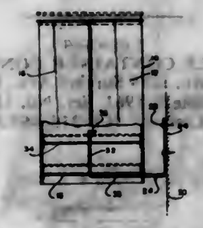
3,089,606
STABILIZER FOR BATH IMMERSED CONTAINERS
Edward L. Rothstein, 5701 Wyndale Ave., Philadelphia, Pa.
Filed Aug. 29, 1960, Ser. No. 52,729
5 Claims. (Cl. 215—100)



1. In combination with a liquid container of tapered shape for immersion in a liquid bath, said container being

tapered with the narrowest portion of said taper at the top thereof, a stabilizer to prevent tipping of said container when immersed comprising a plastic tubular ring of ring diameter suitable for setting on said container and having a high density metal filler within the tubular portion of said ring, said stabilizer being telescoped over the top of said container and engaging the sides thereof.

3,089,607
ROUTEMAN'S SIGNAL
William K. Rottenborg, Box 262, Oakland, Iowa
Filed Oct. 20, 1960, Ser. No. 63,911
1 Claim. (Cl. 220—18)



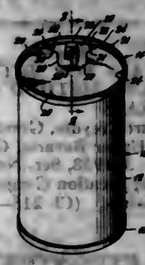
A receptacle comprising a multisided container including a bottom, sidewalls rising from said bottom and each being provided with a skirt portion extending below said bottom, an openable and closable cover extending over the upper ends of said side walls, a partition within said container and supported by said side walls in spaced parallel relation with respect to said bottom, a vertically disposed U-shaped bracket having one leg adapted for securement to a wall surface, the other leg of said bracket extending slidably upwardly through an opening in said bottom and through said partition, the junctions of adjacent sidewall skirt portions being provided with a notch, said notch and said opening defining a line extending substantially normal to one of said side walls, said bottom normally resting upon the portion of the bight of said bracket adjacent said bracket other leg, said bight having a portion selectively receivably in each of said notches when said container is manually lifted and rotated to position one or another of said side walls in a desired direction.

3,089,608
BOX
Ralph V. Burdick and Ralph V. Burdick, Jr., Loudonville, N.Y. (both of P.O. Drawer 29, Albany, N.Y.)
Filed Oct. 28, 1960, Ser. No. 65,660
1 Claim. (Cl. 220—43)



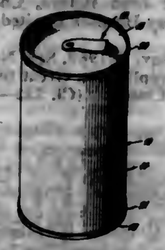
An easily opening and easy-closing substantially cylindrical box formed of thin rigid sheet material specifically adapted for hermetically sealing volatile solid and paste materials such as shoe polish, ointments, creams, and the like, comprising a round container body member and a round cover member having straight sides in hermetic sealing relation therewith, each formed of a single thickness of the material, said container having its top circular uppermost edge formed with an inturned bead of double thickness of material about the entire periphery of said edge which is adapted to fit within said cover, and an annular uniformly wide ledge indented from the side wall of the container body and extending entirely around the container body which is spaced below the upper edge at a distance less than the depth of said cover whereby the lower edge of said cover rests on said ledge in the closed position, the bottom of said single thickness container being inwardly indented at its outer edge to form a bottom edge bead, the bottom being further provided with a concentric struck-down channel section annular bead spaced inwardly from said outer edge bead, these beads stiffening said bottom and forming a pair of outwardly projecting circularly shaped rounded concentric supporting channels for said container bottom, the top of said cover being provided with a pair of inwardly indented concentric channels, one at the edge and the other spaced inwardly from the edge to stiffen the cover top and to nest with the corresponding pair of outwardly projecting channels in the container bottom when a plurality of closed boxes are stacked upon each other, the side wall of said cover being formed with an outwardly projecting peripheral bead of double thickness of material adapted to rest on the ledge of the container body, the side wall of said cover being further provided with at least three circumferentially equally spaced trunnions struck inwardly from the top edge, said trunnions having an arcuately curved bottom portion spaced above the bottom bead of said cover which extends below the top beaded edge of the container body with the cover in sealed position over the container body and an open top portion meeting the top edge of the cover, these inward trunnion indentations of the cover side providing camming and snap closing action on pushing the cover downwardly over the upper beaded edge of the container body, the upper wall portion of the side of the container body above said ledge being tapered from the maximum diameter at the upper double thickness beaded edge downwardly and inwardly to the minimum diameter of the container body at the inner edge of said ledge, whereby the closing movement and the opening movement of said cover flexes the inner edge of said ledge to provide snap action opening and closing due to the camming action of the inner surface of the trunnions against the top beaded edge of the container body.

3,089,609
RECEPTACLE AND OPENING MEANS THEREFOR
A. Ralph D'Andrea, Philadelphia, Pa.
Filed Jan. 9, 1961, Ser. No. 81,445
15 Claims. (Cl. 220—48)



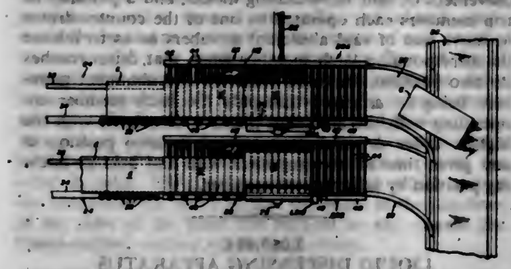
1. In a receptacle, a wall forming a part thereof, means whereby a substantial portion of the wall may be broken away and removed from a fixed part of the wall in one outward movement, a frangible liner sheet disposed in fixed position against the inner surface of the wall, pull means fixed to the said portion of the wall for facilitating the breaking away of said portion in said outward movement, and means whereby the pull means functions to rupture said liner sheet simultaneously with performance of said outward movement.

3,089,610
RECEPTACLE AND OPENING MEANS THEREFOR
James J. Walsh, Cranford, N.J., and A. Ralph D'Andrea, Philadelphia, Pa., assignors to Louis Fried, Philadelphia, Pa.
Filed Nov. 2, 1960, Ser. No. 66,855
19 Claims. (Cl. 220—53)



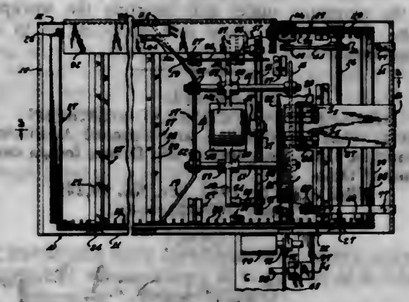
1. A container having a wall with a preformed pour opening therein through which contents of the container can be dispensed, an opener means carried by said wall and disposed in the pour opening and having one part fully covering said opening upon an inner side of said wall, means carried by said part of said opener means engaging the inner side of the wall through the pour opening for securing said part in pour opening covering position, a sheet of frangible material covering said part and said opening upon the inner side of said wall, and means on the outer side of said wall and connected with said part by which said part may be pulled for removal through said opening.

3,089,611
ARTICLE HANDLING APPARATUS
Emil J. Forsyth and William J. Weigle, Jr., Ellwood City, Pa., assignors to Mathews Conveyor Company, Ellwood City, Pa., a corporation of Pennsylvania
Filed Sept. 8, 1959, Ser. No. 838,469
4 Claims. (Cl. 221—7)



1. Article handling apparatus comprising a pair of gravity conveyers, means on each of said conveyers for guiding articles along one side of the conveyer, a stop on each conveyer for accumulating articles along said one side of said conveyer, pusher means on each conveyer operable to shift an article engaged with the stop on the conveyer transversely of the conveyer to a location clear of the stop to discharge the article from the conveyer, an actuating member mounted for movement adjacent both of said pusher means, drive means actuable to drive said actuating member in cycles of pusher means operating movement, normally disengaged coupling means on each of said pusher means independently actuable to couple the pusher means to said actuating member, and selective control means comprising count-select means operable to pre-select a number of articles to be discharged, conveyer-select means operable to assign a first number of articles selected by a first operation of said count-select means to one of said conveyers and operable to assign a second number of articles selected by a subsequent operation of said count-select means to the other of said conveyers, and means controlled by said count-select means and by said conveyer-select means for actuating said drive means and the coupling means of said one conveyer, for disengaging the coupling means of said one conveyer and for engaging the coupling means of said other conveyer after said first number of repeated cycles of said actuating member, and for releasing the last mentioned coupling means and stopping operation of said drive means after said actuating member has been driven said second number of repeated cycles of movement with said last mentioned coupling means engaged therewith.

3,089,612
ARTICLE DISPENSING MECHANISM COMPRISING A PLURALITY OF ENDLESS CONVEYORS
Everett J. Newcomer, Great Neck, N.Y., assignor to City Vending Equipment Corp., Mineola, N.Y., a corporation of New York
Filed Sept. 15, 1960, Ser. No. 56,148
8 Claims. (Cl. 221—11)

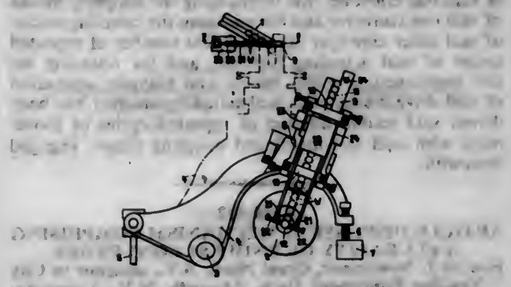


1. An improved dispensing mechanism of the character described comprising a pair of transversely spaced longitudinally extending endless conveyor chains having substantially horizontal parallel upper runs advancing toward a discharge end, a plurality of regularly spaced first fastening elements located along the length of each of said chains, a plurality of transversely extending flights disposed between said chains adjacent of said flights along said chains being separated by intervening first fastening elements, second fastening elements located at opposite ends of said flights and adapted to releasably engage said first fastening elements, a pusher member movable along a transverse discharge defining path adjacent to the forward end of said chains, means for longitudinally adjusting said transverse path of said pusher member along the direction of movement of said flights, drive means responsive to the absence of articles along said discharge path to advance said chains and means responsive to the position of said pusher member along said transverse predetermined path disabling said conveyor chain advancing means.

3,089,613
METHOD AND DEVICE FOR CHARGING A WORKPIECE HOLDER
Paul L. Glocker, Jurastrasse 88, Grenchen, Switzerland
Filed Apr. 4, 1960, Ser. No. 19,660
Claims priority, application Switzerland Apr. 10, 1959
7 Claims. (Cl. 221—176)

1. A feeding device for charging a workpiece to a substantially horizontally disposed work holder, comprising a substantially vertical magazine having an inlet near its top and an outlet near its bottom and swingable in its own plane, the magazine being constructed to allow workpieces to gravitate from its inlet to its outlet, means

for swingably displacing the said magazine in its own plane which is substantially perpendicular to the axis of the said work holder from a magazine loading position wherein said inlet is positioned to receive workpieces and said outlet is positioned away from the work holder to a charging position wherein the magazine out-



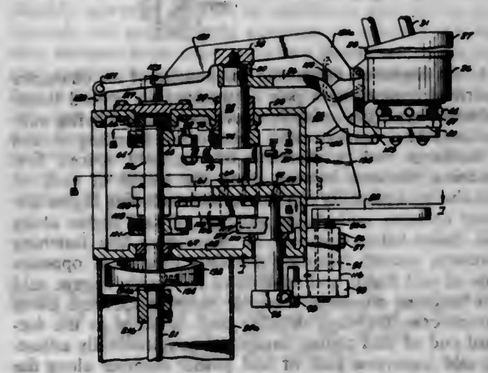
let is adjacent to and directly faces the workpiece holder, and ejector means mounted on and displaceable with the said magazine for ejecting a workpiece horizontally from the magazine outlet and inserting the workpiece into the work holder when said magazine is in said charging position.

3,089,614

DISPENSER FOR CONICAL MEMBERS

Robert T. Wise, Worthington, and Leonard A. Erickson, Columbus, Ohio, assignors to Big Drum, Inc., a corporation of Ohio

Filed Mar. 29, 1961, Ser. No. 99,249
9 Claims. (Cl. 221—251)



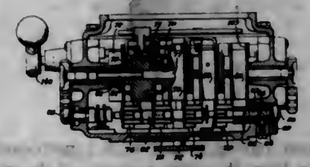
1. A dispenser for dispensing nested hollow conical units each comprising an outer flexible conical sleeve and an inner cone disposed within the sleeve with its upper edge disposed below the upper edge of the sleeve, said dispenser comprising a lower supporting nest composed of separable nest members for supporting a stack of the units by engaging the lowermost article and an upper supporting nest composed of separable nest members for engaging the first and second units next above the lowermost unit, downwardly movable stripping means for engaging the lowermost unit to insure separation from the unit next above, and means for actuating said lower and upper nests successively to release the lowermost unit and to move said stripping means downwardly to engage said lowermost unit as it is released, said upper supporting nest members each being provided with a lower tapered supporting surface complemental to said sleeve and for engaging the sleeve of one said first unit next above said lowermost unit adjacent its upper edge and a set of fingers projecting inwardly at a level above said tapered surface for engaging the sleeve of the said second unit next above said lowermost unit adjacent its upper edge.

3,089,615

LIQUID DISPENSING APPARATUS

Frederick Edward John Wilson, Chessington, England, assignor to Avery-Hardoll Limited, Chessington, England

Filed Nov. 3, 1960, Ser. No. 66,980
Claims priority, application Great Britain Nov. 6, 1959
7 Claims. (Cl. 222—16)



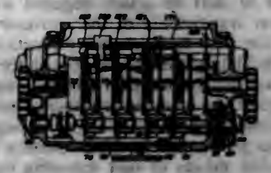
1. Liquid dispensing apparatus comprising a displacement meter, drum type counter means including a plurality of drums and transfer gearing to transmit motion from each of said drums to the next higher order drum, setting means to set the said drums to show a quantity of liquid to be dispensed, driving means for said drums operated by said meter to drive said counter means to the zero position, a valve to control the flow of liquid through said meter, manual opening means for said valve, valve closing means, and latch means controlled by the counter drums to hold the valve open at the start of driving of the counter by the meter while permitting partial operation of said valve closing means during said driving and complete closing of the valve when the counter reaches the zero position, said latch means including a series of latch members arranged upon individual release to sequentially permit incremental valve closing movements of said valve closing means, a plurality of abutment members each arranged to engage one latch member and hold it in a latching position preventing movement of said valve closing means, and a plurality of trip members each operated by one of the counter drums to move one of said abutment members so as to release its corresponding latch member when that drum reaches its zero position, the latch members and abutment members being so arranged that only the latch member cooperating with the abutment member associated with the highest order drum displaced from its zero position at any given time is in engagement with and held in latching position by an abutment member.

3,089,616

LIQUID DISPENSING APPARATUS

Frederick Edward John Wilson, Chessington, England, assignor to Avery-Hardoll Limited, Chessington, England

Filed Nov. 3, 1960, Ser. No. 66,981
Claims priority, application Great Britain Nov. 6, 1959
6 Claims. (Cl. 222—16)



1. Liquid dispensing apparatus comprising a displacement meter, drum type counter means including a plurality of drums arranged to indicate a series of digits having several orders constituting a single number and

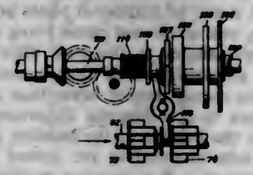
transfer gears cooperating with gears on the drums to transmit motion from each of said drums to the next higher order drum, setting means to set the drums of said counter means to show a quantity of liquid to be dispensed, driving means for said counter means operated by said meter to drive said counter means to the zero position, a valve to control the flow of liquid through said meter, manual opening means for said valve, automatic closing means for said valve operated by the return of the counter means to the zero position, and a clutch in said driving means to free the counter drums for setting, the setting means comprising individual and independently operable setting members connected to separate drums for individually setting more than one drum so that a lower order drum need not be moved to arrive at a desired setting of a higher order drum, and the transfer gears being mounted for movement out of mesh with the cooperating gears on the individually settable drums to release them for setting.

3,089,617

LIQUID DISPENSING APPARATUS

Frederick Edward John Wilson, Chessington, England, assignor to Avery-Hardoll Limited, Chessington, England

Filed Nov. 3, 1960, Ser. No. 66,982
Claims priority, application Great Britain Nov. 6, 1959
6 Claims. (Cl. 222—16)



1. In liquid dispensing apparatus including a displacement meter, drum type counter means manually settable to show the quantity of liquid to be dispensed and driven by the said meter to return said counter means to the zero position, a valve opened manually and closed automatically by means operated by the return of said counter means to the zero position to stop the flow of liquid through the meter, and a clutch to transmit the drive from said meter to said counter means, the improvements wherein said clutch comprises driving and driven members one of which is formed with a frusto-conical recess having its axis coincident with the clutch axis and the other member being a non-circular plate which enters the frusto-conical recess so that the edges at the junctions of the sides of the plate are parallel to and engage the frusto-conical surface of the said recess.

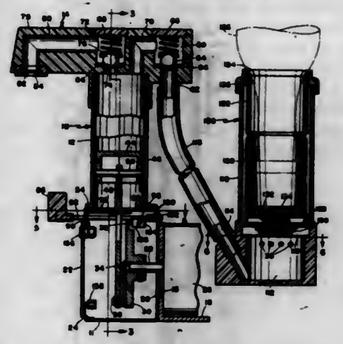
3,089,618

LIQUID MEASURING AND DISPENSING MACHINE

Albert J. C. Forsyth, Coronado, Calif., assignor to Courtesy Products Corporation, San Diego, Calif., a corporation of California

Filed Aug. 30, 1960, Ser. No. 52,995
2 Claims. (Cl. 222—60)

1. A liquid measuring and dispensing machine, comprising: a casing; a pump assembly on said casing; said pump assembly having a cylinder with a piston reciprocally slidable therein; said cylinder having an inlet and an outlet; a liquid reservoir connected to said inlet; a motor, a cam disc in said casing and operatively connected to said motor; a crank plate mounted on said cam disc and pivotally attached at one end adjacent the periphery of the cam disc; lock means securing the other end of said crank plate to said cam disc; a crank pin on said crank plate; said piston being coupled to said crank pin; said crank plate being adjustable to vary the effective throw of said crank pin; a switch controlling said motor; said cam disc having extended cam means engageable with said switch to hold the switch in off position; a push operated actuating member mounted for limited movement in said



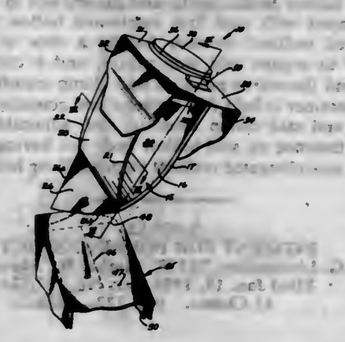
casing; said switch being mounted on said actuating member, whereby shifting of the actuating member in one direction releases said switch from said cam means; liquid level sensing means in said reservoir; said sensing means being connected between said switch and said motor to prevent operation of the motor when the liquid in said reservoir is below a predetermined level.

3,089,619

COMBINED BOX OPENER AND DISPENSER

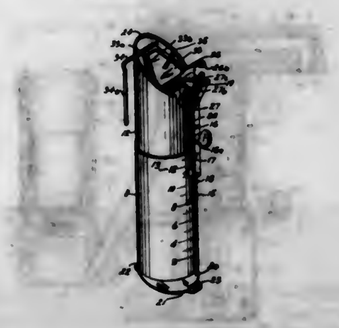
Theodore C. Kaas and Jerry R. Kaas, both of R.F.D. 2, Ravenna, Mich.

Filed Apr. 3, 1961, Ser. No. 100,136
4 Claims. (Cl. 222—81)



1. A dispenser for cartons comprising: body means; said body means having upwardly divergent sides and a back forming a cavity with an open front, the edges of said sides being outwardly flared to form cutting edges; a cutting blade at the apex of said sides; a top on said body, including a spout communicable with said cavity, whereby pressure on said top results in said cutting blade severing said carton in one direction and said cutting edges severing said carton in a transverse direction allowing insertion of said dispenser into said carton, and the severed flaps of said carton being depressed along said divergent sides with said open front being in full communication with material in said carton so that the material can be discharged through said spout.

3,089,620
APPARATUS FOR DISPENSING MEASURED QUANTITIES OF GRANULAR MATERIALS
Martin Green, 155 Airmount Road, Mahwah, N.J., and Fred Fishbein, 140 Glen View Road, South Orange, N.J.
Filed May 9, 1960, Ser. No. 27,547
3 Claims. (Cl. 222—89)



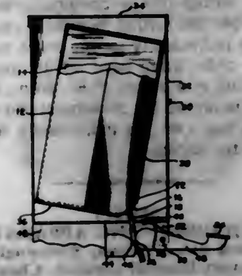
1. A dispenser, comprising in combination, inner and outer hollow bodies of a pair of slidably adjustable telescoped hollow bodies, one of said hollow bodies having a truncated end providing a shorter and longer length thereto; graduated quantity markings on one of said hollow bodies denoting quantity in accordance with the telescopic position of said two hollow bodies; stop means on one of said hollow bodies to hold said hollow bodies at a fixed telescopic position when said stop means are engaged; container piercing means extending from the shorter length of said one hollow body having a truncated end; a clamp member swivelled to and cooperating with said container piercing means to clamp said dispenser against a container; an inner gate at said truncated end including an inner gate opener to allow powdered or granular material to enter said hollow bodies upon actuation of said opener; a discharge gate associated with said other one of said hollow bodies at the end thereof not in telescopic engagement with said first mentioned hollow body; an elongated resilient member having a shoe at one end thereof to engage said stop means, and a curve at the other end thereof to press on said clamp member so that said container is held fast between said container piercing means and said clamp member; and, adjustable holding means fastened on said hollow body not having said stop means, said elongated resilient member being held thereon.

3,089,621
FITMENT FOR POURING SPOUT
Jay G. Livingstone, 715 W. Market St., Akron, Ohio
Filed Jan. 19, 1959, Ser. No. 787,724
11 Claims. (Cl. 222—148)



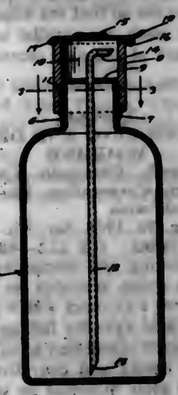
11. A container with a generally cylindrical pouring mouth, threads on the outside of the container, a generally cylindrical fitment composed of a relatively thin wall with a cylindrical opening therethrough and a pouring lip at the outer edge of the fitment, and a closure threaded on to said threads and having a generally circular top, the fitment including a wiper element in the opening which extends substantially radially of the fitment with the wiper edge of said element in contact with the under surface of the closure.

3,089,622
CONTAINER FOR LIQUIDS
Edward B. Westlake, Jr., 307 Lincoln Ave., Haverstown, Pa.
Filed Jan. 7, 1959, Ser. No. 785,436
2 Claims. (Cl. 222—183)



1. A dispensing device comprising in combination a housing, a removable lid for the housing, a slanting base plate positioned within the housing at an acute angle to the horizontal, a pair of additional plates positioned within the housing, said additional plates being secured to the housing at right angles to the base plate and to each other and in an attitude such that a container is supported with one corner thereof lower than any other part of the container to facilitate the dispensing of a liquid; an aperture in the bottom of the housing through which a dispensing tube attached to the lowest corner of the carton may extend; a first member positioned under the bottom of the housing against which the dispensing tube may rest; and a member shiftably mounted under the housing and arranged to cooperate with said first member to control flow of a liquid from the carton through the dispensing tube.

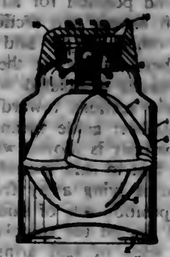
3,089,623
DEVICE FOR DISPENSING PREDETERMINED QUANTITIES OF LIQUID
Nancee L. Padziuski, Oroville, Calif. (710 Riverside, Santa Cruz, Calif.)
Filed Dec. 5, 1960, Ser. No. 73,737
1 Claim. (Cl. 222—285)



A device for dispensing a predetermined quantity of a liquid adapted to seat in the mouth of a vertical flexible walled container, comprising an open ended cylindrical

body, a partition extending transversely within said body and dividing said body into an upper measuring chamber and a lower closure section, said closure section having internal threads adapted to engage external threads surrounding the neck of the container, said partition contacting and closing the said mouth of said container, an elongated tube extending through the said partition and disposed axially of the said partition and said container, the lower end of said tube terminating adjacent to the bottom of said container, the upper end of said tube having a bevelled end with the bevel directed toward said partition and being laterally disposed at right angles and terminating adjacent the upper end of said measuring chamber, and spaced from the side wall thereof and a hinged closure normally closing the measuring chamber, the upper end of said tube being directed toward the hinged edge of said closure.

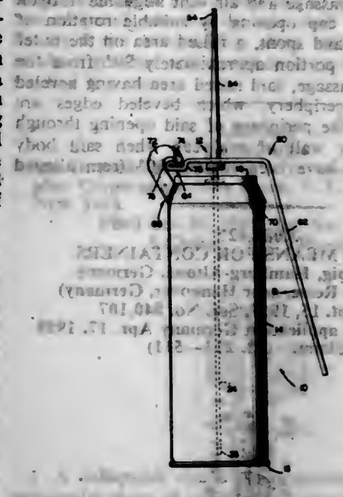
3,089,624
PRESSURE DISCHARGE CONTAINER
Lewis A. Micallef, New York, N.Y., assignor to Leeds and Micallef, New York, N.Y., a partnership
Filed June 28, 1956, Ser. No. 594,415
4 Claims. (Cl. 222—386.5)



1. A dispensing container comprising a fluid-tight outer vessel containing an expansible fluid under pressure, an inner fluid-tight container for the commodity to be dispensed, said inner container comprising two wall portions of flexible material joined at their perimeter, the perimeter of the wall portions being substantially greater than the perimeter of the adjacent portion of the outer vessel, unattached thereto and convoluted in contact therewith, a discharge passage mounted in one wall of the outer container, an opening in the mid portion of one of said wall portions and the material around the opening having a fluid-tight connection with said discharge passage.

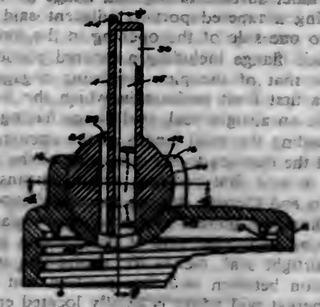
3,089,625
FLOW CHANNELING DEVICE AND VALVE ACTUATING MEANS FOR PRESSURIZED CONTAINER
Hilbert Sorber, Avenel, and Kenneth G. Coolidge, West Orange, N.J., assignors to Scherling Corporation, Bloomfield, N.J., a corporation of New Jersey
Filed Oct. 31, 1961, Ser. No. 148,909
1 Claim. (Cl. 222—398)

Valve actuating means for a pressurized container of the type having a dip tube terminating at one end adjacent the bottom of the container and at the outer end in a chamber, an outlet from the chamber, a valve member in the chamber normally resiliently urged into sealing engagement with said outlet, said valve actuating means comprising an elongated tapered removable tubular flow channeling member, the inlet end of the tubular member adapted to be slidably received in the outlet from the container chamber and when depressed to urge the valve member into the unsealed position, thereby providing a removable continuation of the flow channel through said valve, a flange adjacent the inlet end of the tubular flow channeling member, a lever member, a hand-engaging surface and a pivot point at opposite ends thereof, a bore in the lever member between the pivot point and the hand-engaging surface, said bore being sized to slidably receive the tapered portion of the flow channeling member and to engage the flange about the inlet end of the flow channeling member, a



fulcrum member supported about the outlet end of the container, said fulcrum member having a re-curved surface portion adapted to slidably receive the lever arm for pivotal movement of the lever arm about its pivot point.

3,089,626
POURING SPOUT CONSTRUCTION
Ignas B. Kubilunas, South Boston, Mass., assignor to Polytop Corporation, Hingham, Mass., a corporation of Massachusetts
Filed May 25, 1960, Ser. No. 31,613
5 Claims. (Cl. 222—484)



5. The combination of a screw threaded cap and a cooperating rotatable element mounted therein, said cap comprising spaced opposed concave conically shaped walls and a circular inner wall joining said spaced walls, an opening through said circular inner wall at the lowest part thereof, opposed hooks extending toward each other from said spaced walls and having circular outer surfaces concentric with the axes of said spaced walls, said element mounted in nested relation between said spaced walls and comprising a body portion having opposed truncated conical surfaces and a cylindrical outer wall therebetween matching said spaced walls and circular inner wall, an axially disposed depression in each of said conical surfaces and having one of said hooks therein, each of said depressions having a cylindrical inner face

for slidably engaging the circular outer surface of the cooperating hook, a spout extending from said body portion, a passage commencing in said outer wall and extending through said body portion and spout, an air vent through said body portion and spout paralleling said passage, said passage and air vent alignable in open position with said cap opening by suitable rotation of said body portion and spout, a raised area on the outer wall of said body portion approximately 90° from the entrance to said passage, said raised area having beveled edges about its periphery, which beveled edges are shaped to engage the periphery of said opening through said circular inner wall of said cap when said body portion and spout have been rotated 90° from aligned to closed position.

3,089,627
CLOSURE MEANS FOR CONTAINERS
Alfons Lippig, Hamburg-Altona, Germany (7 Am Berge, Resse, near Hannover, Germany)
Filed Sept. 15, 1959, Ser. No. 840,107
Claims priority, application Germany Apr. 17, 1959
1 Claim. (Cl. 222—511)



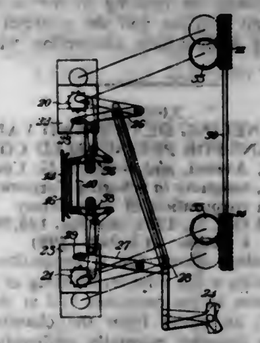
Apparatus for a container adapted for storing substances, said apparatus comprising: a hollow outlet pipe adapted for being sealably inserted into said container, said outlet pipe having a longitudinal axis and an outlet opening directed transversely to said axis, a piston slidably supported in said pipe for movement along said axis, said piston including a flange, said outlet pipe including an inner surface facing said flange of the piston and including a tapered portion adjacent said opening and lying to one side of the opening in the longitudinal direction, said flange including a tapered portion corresponding to that of the pipe for being engaged thereagainst in a first limit position in which the flange and pipe provide an airtight seal, said flange having an axial length exceeding the axial length of the opening to project beyond the opening to the other side of the pipe with the flange in said first position, sealing means on said flange at an end thereof, remote from said tapered portion in sealing engagement with the inner surface of the outlet pipe on said other side of the opening to provide a second airtight seal, means for controlling movement of said piston between said first position and a second position whereat said flange is axially located entirely on said other side of the opening to expose the opening to permit emptying of the substance in the container, and elastic means between said piston and said outlet pipe urging the piston towards said first position, said outlet pipe including an end wall provided with an opening through which said piston rod is slidable and rotatable, said means for controlling movement of said piston including a projection on said piston rod, said end wall of the outlet pipe being provided with a slot contiguous with the latter said opening for accommodating said projection and permitting sliding of said projection therethrough, said projection being located on said rod to engage said end wall of the outlet pipe to hold said piston in said first position against the action of the elastic means with the rod rotated and said slot and projection misaligned.

3,089,628
FILM PROJECTOR
James E. Rookus, Grand Rapids, Mich., assignor of five percent to Edward H. Daverman, Grand Rapids, Mich.
Filed May 7, 1962, Ser. No. 192,747
11 Claims. (Cl. 226—83)



1. In a motion picture projector having a pair of sprockets for intermittent advancement of the film, the sprockets lying generally one above the other, apparatus for threading film and forming loops therein, comprising: a movable member slidably mounted on the projector, said member slidable in a generally horizontal direction between the sprockets from a first position for threading a film to a second position for advancing the film; a pair of arms each having two sections movable one with respect to the other, one of said arms secured at the top and the others secured at the bottom of said movable member; means associated with each of said arms for biasing said sections toward each other and away from said member; guide means for positioning said arms as said member is moved with respect to the projector from said first to said second position, in said first position said arms lying away from the sprockets and in said second position one of said sections of each of said arms biased against the sprockets and the other of said sections of each of said arms extending away from said member to form loops in the strip of film.

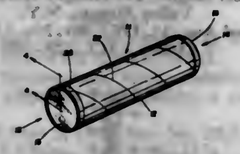
3,089,629
DEVICE FOR THREADING LEADING PORTION OF A CINEFILM IN CINEPROJECTOR
Yoshinobu Sakuki, 5 Kikusakacho 1-chome, Nagoya, Japan
Filed Jan. 2, 1962, Ser. No. 163,523
5 Claims. (Cl. 226—91)



1. In a device for threading a leading portion of a cinefilm into a cineprojector, the combination of a projection gate, a pair of sprocket wheels for driving the cinefilm disposed movably at opposite ends of the projection gate respectively, means coupled to said sprocket wheels for driving said sprocket wheels, and manually operated means coupled to said sprocket wheels for moving said pair of sprocket wheels toward and away from each other, the leading portion of the cinefilm being adapted to engage said pair of sprocket wheels without any slack

when the sprocket wheels are maintained at the longest distance therebetween and to include a pair of loops formed on those portions thereof disposed between the sprocket wheels and the projection gate respectively when the pair of sprocket wheels are moved toward each other to be maintained at the shortest distance therebetween.

3,089,630
CYLINDRICAL PACKAGE
Alex James Garvin, Scarborough, Ontario, Canada, assignor, by mesne assignments, to Superpack Vending (Curacao), N.A., Willemstad, Curacao, Netherlands Antilles, a corporation of Curacao
Filed Aug. 17, 1961, Ser. No. 132,214
8 Claims. (Cl. 229—4.5)



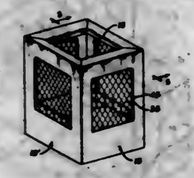
1. A self-feeding merchandising package adapted to be dispensed by conventional dispensing mechanisms and comprising: a hollow cylinder formed by securing together in an overlapping manner helically wound strips of a substantially stiff material; a film of thermoplastic material sealably secured to the exterior of said cylinder; merchandise within said cylinder; and plastic end closures of thin flexible thermoplastic sheet material on each said open end bonded to said plastic film on said cylinder in a marginal area around each said open end, said closures in the area of said bonding being shaped to fit around and conform to the contour of said cylinder, and being manually tearable to permit access to said merchandise.

3,089,631
FOLDING PAPER BOXES
Walter J. Tyrsack, Montville, and Robert A. Hackenberg, Norwich, Conn., assignors to Robertson Paper Box Company Incorporated, Montville, Conn., a corporation of Connecticut
Filed Mar. 2, 1959, Ser. No. 796,478
8 Claims. (Cl. 229—16)



2. A folding paper box comprising four wall elements hingedly joined for collapsing into a flat structure and opening up into a rectangular structure upon application of pressure to the end of said flat structure, an automatically setting up bottom for the said box comprising a pair of bottom panels joined to each other and to a pair of adjacent side walls and a second pair of bottom panels joined to each other and to the other two side walls, each pair of bottom panels being foldable up inside the collapsed structure and opening out into perpendicular relationship to the side walls to which joined when the bor is set up, the side wall adjacent one of said bottom panels having a slit adjacent the hinge line of the said bottom panel, the opposite said bottom panel extending substantially full width of the box and having a central projection passing through said slit to lock the bottom in position, and a shelf structure comprising a shelf within the box and spaced from its bottom, a glue flap along one edge of the said shelf joining it to a wall of the said box and a supporting panel joined to the opposite edge of the said shelf and connecting to the said full width bottom panel, whereby the said shelf structure folds up flat inside the collapsed box along with the bottom panel to which attached and moves downwardly therewith when the box is set up.

3,089,632
DUMP BIN
Edgar O. Bartolucci, Nyack, N.Y., assignor to Lane Display Corporation, New York, N.Y., a corporation of New York
Filed Oct. 31, 1961, Ser. No. 148,867
8 Claims. (Cl. 229—37)

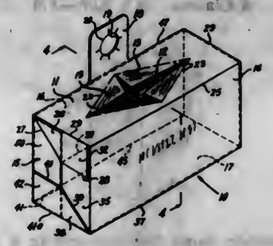


1. A collapsible dump bin comprising a substantially rectangular sheet of paperboard, corrugated board, cardboard or the like, divided by transverse equi-spaced and substantially parallel first fold lines into four panels arranged, when the sheet is folded and its transverse edges united, to form the four sides of the dump bin; each of said panels having a substantially rectangular central flap therein defined by three cut lines and a second fold line in the respective panel, said second fold lines being substantially longitudinally aligned in the sheet; each central flap having a third fold line intermediate its ends parallel to the associated second fold line and dividing the flap into inner and outer sections; said second and third fold lines having a spacing substantially equal to one-half the width of the panel adjacent the one in which they are located, and the distance between each third fold line and the free edge of the associated flap being substantially equal to the distance between said second fold lines and the adjacent longer edge of said sheet; whereby the central flaps of opposed panels, when the dump bin is erected, may be folded inwardly about the second and third fold lines to juxtapose their outer sections to support their inner sections in substantially horizontal coplanar relation to form a raised floor for the dump bin; the central flaps of one pair of opposed panels having formations interlocking with formations on the central flaps of the other pair of opposed panels, when the flaps are so folded, to complete such floor.

3,089,633
TRASH TRAY
Richard T. Renshaw, 625 Lake Drive, Towson, Md.
Filed Apr. 10, 1961, Ser. No. 101,872
1 Claim. (Cl. 229—38)

A collapsible trash receptacle formed from a blank comprised of a rectangular top portion (11) having a central opening (24) defined by crossed perforated lines (21 and 22) forming triangular inwardly extending tabs (13), a supporting tab (18) extending from one side of the top wall portion and having a central circular opening (19) surrounded by radial slits (20) therein, a fold line (18*a*) secured between the top portion and the supporting tab, complementary end flaps (26) each including an angularly disposed portion (27) and a straight portion (28), the flaps being defined by fold lines (29) at the ends

of the top wall or diagonal fold lines extending from the intersection of the angularly disposed portions and the straight portions to the corners (31) of each flap to form a triangular tab portion (32) coated on its rear side with adhesive (33), an integral front wall portion (14) separated from the top wall portion by a fold line (25), rectangular end tabs (35) at the ends of the front wall portion separated therefrom by fold lines (34), adhesively coated triangular portions (36) cooperating when the receptacle is folded with the adhesive coating (33) of the triangular tab portion (32), there being slots (53) between the end flaps (26) and the end tabs (35), an integral bottom wall portion (17) separated by a fold line (37) from the front wall portion, said bottom wall portion bearing additional end tabs (38) characterized by angular portions (39) and straight portions (40) directed by a diagonal fold line (41) with the inside of the tri-



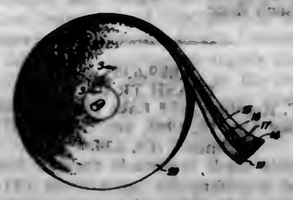
angular part (41) of the straight portion so formed being coated with adhesive (42), the additional end tabs being separated from the ends of the bottom wall portion by fold lines (41*a*), a rectangular rear wall portion (16) integral with the bottom wall portion and separated therefrom by a fold line (45), additional rectangular end flaps (50) separated from the rear wall by fold lines (51), triangular adhesive coated sections (52) on said additional end flaps cooperating with the adhesive coated portions on said additional end flaps when the receptacle is folded, said additional end flaps being divided from said additional end tabs by slits aligned with the fold line between the bottom wall and the rear wall, the additional end flaps being of less width than the first-mentioned end flaps, and a pair of top tabs (48) projecting from the extending end of the rear wall and adhesive coated for securement beneath the top wall when the receptacle is folded.

3,089,634

REINFORCED MULTI-PLY STAY TAPE

Howard L. Heise and Gordon McAllister, both of Troy, Ohio, assignors to St. Regis Paper Company, New York, N.Y., a corporation of New York

Filed Sept. 27, 1961, Ser. No. 141,187
6 Claims. (Cl. 229—49)



1. Multi-ply stay tape comprising at least two superposed strips of flexible sheet material, the marginal portions of the surfaces thereof which face each other being secured together by longitudinally extending bands of adhesive, the mid-portions of the surfaces thereof which face each other and are located between said bands being free of adhesive and free directly to contact each other, the surface of one of said strips which is adapted to be secured to an object when the tape is in use, being covered with an activatable adhesive and said latter surface having adhesively secured thereto along its mid-portions at least one longitudinally extending reinforcing strand formed of a multitude of fine filaments secured by adhesive to each other against fraying, said strand being of such limited cross-section and the adhesive-free portions within the tape providing a cushioning zone for the strand such that the tape may be wound into a roll with a multitude of convolutions which lie in firm relationship throughout their width and with substantially the same diameters at their marginal portions as at their mid-portions.

3,089,635

BAG

Emanuel Kugler, 296 Hungry Harbor Road, Valley Stream, N.Y.

Filed Aug. 21, 1961, Ser. No. 132,886
7 Claims. (Cl. 229—62)



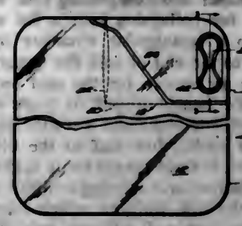
1. A tubular bag of flexible and filmy material having a top end, a bottom end and opposed side edges, and including oppositely disposed front and back face panels merging together in three lines of fold at said top end, said lines of fold being spaced from and alternating in direction of fold with respect to each other to provide a gusseted construction at said top end including two oppositely disposed interior panels, the first and third of said lines of fold being contiguous at said top end and defining an upper edge of said gusseted construction, and the second of said lines of fold defining a lower edge of said gusseted construction, said front face panel and said interior panels and said back face panel being heat sealed together by a singular line of heat seal substantially coincident with said first and third lines of fold, said front and back face panels being heat sealed together at and thereby defining each of said side edges along their respective lengths extending from substantially said bottom end at least to said lower edge of the gusseted construction, a reinforcing member disposed within said gusseted construction, and means retaining said reinforcing member in its said position.

3,089,636

SELF-SEALING CONTAINER

Henry D. Swartz, Brookline, Mass., assignor to Thermoplastic Industries, Inc., Dorchester, Mass., a corporation of Massachusetts

Filed Feb. 1, 1962, Ser. No. 170,473
5 Claims. (Cl. 229—62.5)



1. A flexible valve bag, comprising a plurality of panels marginally attached to one another to form a bag,

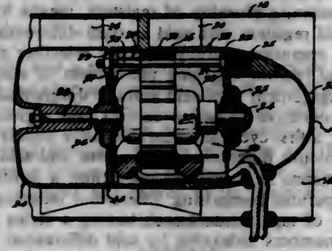
said panels being fabricated from a flexible material, at least one of said panels being formed with an opening therethrough, said opening being located within the margins of said one panel, a flexible sleeve disposed within said bag, said sleeve being closed at one end and open at an opposite end, one side of said sleeve being attached to the inner face of the panel in which is formed the opening, said one side of said sleeve being attached to said panel along a generally transverse line being located generally midway between the ends of said sleeve to define a foldable flap at the free end of said sleeve, said sleeve being formed with an opening through said one side, said sleeve opening being in register with said panel opening and the marginal edges of both of said openings being bonded to one another.

3,089,637

AIR CIRCULATING SYSTEM AND BLOWER STRUCTURE

Albert H. Bell, Birmingham, Mich., assignor to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware

Filed May 2, 1960, Ser. No. 25,929
1 Claim. (Cl. 230—117)



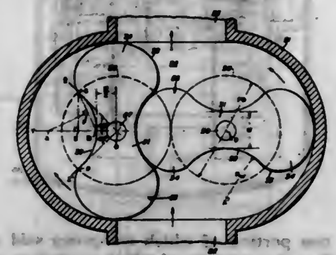
An axial flow blower comprising a tubular shroud provided with an air inlet and an air outlet, a housing supported within said shroud and presenting a tubular portion having a substantially imperforate end portion adjacent said air outlet in spaced co-axial relationship with said shroud, said housing having leading and trailing portions and said housing and said shroud cooperating to define an air passage having a portion between the above-mentioned inlet and outlet in which the cross sectional area of that portion of the passage increases, a plurality of stationary vanes extending outwardly between said housing and said shroud intermediate said leading and trailing portions to define generally longitudinally extending air passages therebetween, electric motor means supported within said substantially imperforate tubular housing, said electric motor means having air passageways extending therethrough for cooling of such motor and said motor being provided with a driven shaft extending axially of said housing, a rotor positioned upstream of said housing leading portion and provided with vanes, said rotor being operatively connected to said shaft for rotation therewith, means forming a first opening in the substantially imperforate end portion of said housing and substantially aligned with the axis of said housing, the above-mentioned first opening communicating with a region of maximum cross sectional area of the above-mentioned air passage portion for the admission of air to said housing and means forming a second opening in said housing ahead of said electric motor means in a region of minimum cross sectional area of the above-mentioned passage portion to accommodate the discharge of air from said housing ahead of said electric motor means whereby a principal air flow is induced by said rotor from the above-mentioned shroud inlet to the shroud outlet and through the space between said housing and said shroud with a higher static pressure in the vicinity of said housing trailing portion than in the vicinity of said rotor and a flow of air induced by such static pressure differential occurs within said housing between the above-mentioned first and second openings and through said motor air passageways to cool said electric motor means.

3,089,638

IMPELLERS FOR FLUID HANDLING APPARATUS OF THE ROTARY POSITIVE DISPLACEMENT TYPE

Willis E. Rose, Connersville, Ind., assignor to Dresser Industries, Inc., Dallas, Tex., a corporation of Delaware

Filed Dec. 1, 1958, Ser. No. 777,350
8 Claims. (Cl. 230—141)



1. Fluid handling apparatus of the rotary positive displacement type comprising a pair of lobed impellers mounted on parallel shafts and rotatable at a constant velocity ratio through timing gears fixed to said shafts, each of said impellers having a central waist portion adapted to be mounted on one of said shafts and a plurality of identically shaped lobe portions extending radially outwardly from said waist portion, the profile of each of said impellers consisting of a like plurality of identical concave circular arcs of uniform radius defining said waist portion and a like plurality of identical convex non-circular curves defining said lobe portions, each of said circular arcs subtending an angle at the axis of the impeller shaft equal to $360°/2n$, where n is the number of said lobe portions, and each of said non-circular curves being generated from a circular arc identical with those defining said waist portion so that, when said impellers are rotated in opposite directions at the same velocity through said timing gears, there is substantially point contact only between said impellers at all positions of relative rotation.

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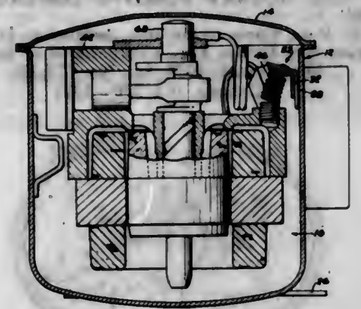
STRUCTURE FOR SUPPORTING A MOTOR-COMPRESSOR UNIT IN A HOUSING

Billy B. Hannibal, Tecumseh, Mich., assignor to Tecumseh Products Company, Tecumseh, Mich., a corporation of Michigan

Filed Mar. 16, 1960, Ser. No. 15,283
13 Claims. (Cl. 230—235)

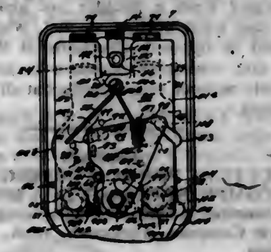
5. In a mechanical refrigeration system including a motor-compressor unit and a housing adapted for receiving said unit, the improvement in structure for mounting said unit in said housing comprising support means associated with said housing forming a plurality of sockets located in spaced relation relative to one another and opening to the interior of the housing, a plurality of brackets each having stem and arm portions with the stem portion being slidably engageable respectively in the opening of one of said sockets to thereby support the bracket with the arm portion extending therefrom and resilient means interconnecting the arm portion of each bracket and said motor-compressor unit for yieldably suspending said unit in the housing, said support means comprising a plurality of metal straps each secured at least at two points to the

interior surface of the housing and each having a portion disposed between said points spaced inwardly of the interior surface to thereby provide said sockets between said surface and said strape, said straps being positioned so that the sockets open in the direction of installation of said unit in the housing, said stem portion of each of said brackets having a shape complemental to the shape of the socket therefor so that said strap holds said stem portion snugly engaged against the interior surface of the housing, each of said brackets comprising a generally L-shaped



stamping one portion of which comprises said arm portion and the other portion of which comprises said stem portion, said stem portion having a transverse curvature which increases progressively from adjacent its outer end toward its junction with said arm portion so that the fit of said stem portion in said socket correspondingly progresses from a relatively free sliding fit to a very tight fit as the stem portion is inserted into said socket to thereby support said bracket against substantial movement relative to said housing surface.

3,089,640
COIN DISPLAYING PARKING METER
Edward Donovan Lewis, 3656 Encanto Drive, Fort Worth, Tex.
Filed July 24, 1961, Ser. No. 126,222
10 Claims. (Cl. 232—1)



1. In a parking meter, a wall member forming one side of a coin channel and having a boss thereon at the exit end of the coin channel, a window in said wall member adjacent the boss, a plate pivotally mounted on said wall member in parallel relationship with and for swinging movement across the latter and forming the other side of the coin channel, a shaft extending through said wall member and boss, an oscillatable member mounted on said shaft for swingable movement across said plate, a first coin support comprised by a pin on said pivotally mounted plate and a lug on said oscillatable member, a second coin support comprised by a stud on said pivotally mounted plate and an abutment on said wall member, and a third coin support aligned with said window comprised by a part of said coin channel and an abutment on said pivotally mounted plate.

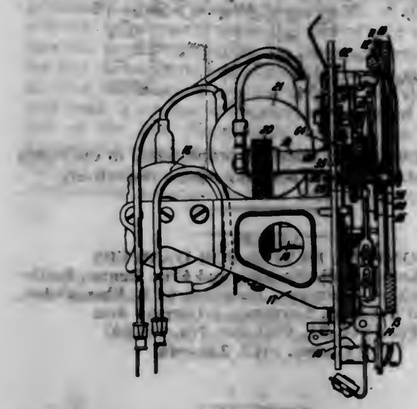
3,089,641
COMBINED DOCUMENT SORTER, PRINTER AND ACCOUNTING MACHINE SYSTEM
Arthur J. Fettig, Grosse Pointe Farms, Don M. Jenks, Ferndale, Charles Laedine, Detroit, Earl P. Maidment, Royal Oak, and Byron A. Rumde, Farmington, Mich., assignors to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed Dec. 26, 1957, Ser. No. 705,443
27 Claims. (Cl. 235—60.13)



1. An accounting and document sorting apparatus comprising computing mechanism including amount differential mechanism, a plurality of registers, means to engage each of said registers with said amount differential mechanism for operation thereby, register selecting means to control said register engaging mechanism to select registers for engagement with said amount differential mechanism, manipulative means to control said register selecting means, a first cyclically operable drive means to operate said amount differential mechanism and said register engaging means in a cycle of operation; a multiple tape printer apparatus comprising differential indexing means, a plurality of tape printers each having a series of printing type members indexable by said differential indexing means, record tape supply means and means to effect printing impression of the indexed types on the record tape, means controlled by said amount differential mechanism to control the differential indexing operation of said differential indexing means, means controlled by said manipulative means to condition for operation the printing impression means of a selected one of said printers corresponding to the selected register, and a second cyclically operable drive means to operate said differential indexing means and the printing impression means of said selected printer in a cycle of operation; means controlled by said first drive means in the course of a cycle of operation thereof to initiate a cycle of operation of said second drive means, and document sorting apparatus having a plurality of sorted document bins; an inserted document receiver, means for conveying an inserted document from said receiver to any of said bins, and means controlled by said manipulative means to direct the document conveyed from said receiver into a selected one of said bins corresponding to the selected register and operated tape printer.

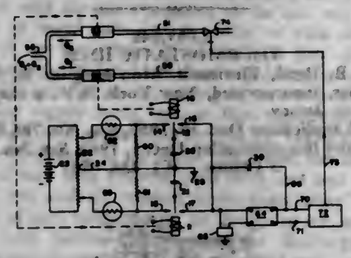
3,089,642
RESETTING MECHANISMS FOR METERS
Cyril Ernest Burroughs, Winchmore Hill, London, and Ivor Bernard Topp and James Martin Kingsland, London, England, assignors, by mesne assignments, to S. Smith & Sons (England) Ltd., London, England, a corporation of England
Filed Sept. 9, 1959, Ser. No. 838,932
Claims priority, application Great Britain Sept. 9, 1958
11 Claims. (Cl. 235—144)

7. A totalizing mechanism comprising a frame, an input element mounted on the frame, a continuously-registering totalizing indicator permanently connected to the input element to be driven thereby, a second indicator, a clutch for coupling the second indicator to the input element in driving relation, resetting means comprising a cam permanently coupled to the second indicator to be driven therewith and a reseting member which is movable between an inoperative position and an operative position in which it engages the cam to reset the second indicator to a datum position, snap action means for actuating abrupt engagement and abrupt disengagement of



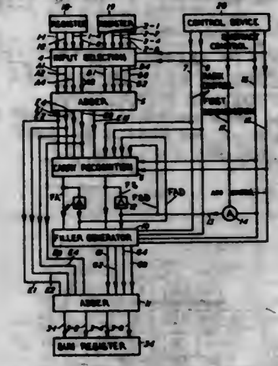
the clutch, and a manually-operable member for actuating both the snap action means and the resetting member, said member being operable to actuate snap action disengagement of the clutch before actuating movement of the resetting member into its operative position, and to actuate snap action re-engagement of the clutch after the resetting member has moved to its inoperative position.

3,089,643
CONTROL SYSTEM
Henricus H. Schotanus à Steringa Idzerda and Lukas Ensing, Delft, Netherlands, assignors to Shell Oil Company, a corporation of Delaware
Filed Dec. 4, 1958, Ser. No. 778,113
Claims priority, application Netherlands Dec. 6, 1957
7 Claims. (Cl. 235—151)



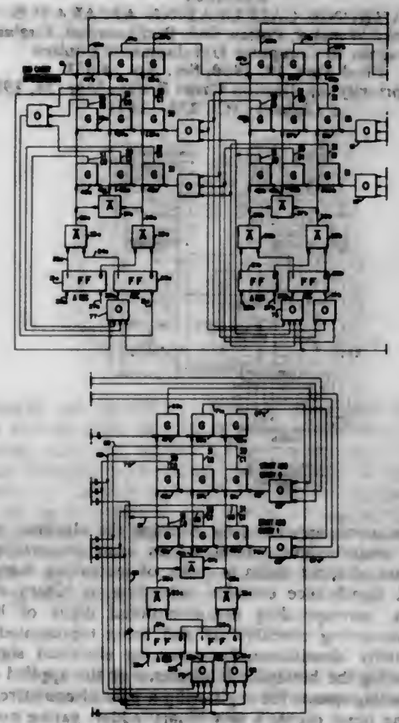
1. In a system for controlling the ratio of a first fluid stream mixed with a second fluid stream in which meter means disposed in said first and second fluid streams generate first and second electrical signals whose frequency is proportional to the flow rate of said first and second streams respectively the combination with said meter means comprising: first and second circuit means, each of said first and second circuit means including a source of direct current potential and a capacitor; a switching means disposed in each of said first and second circuits to alternately connect the capacitors in said first and second circuits to said potential sources and to a capacitor disposed in a third circuit to discharge the capacitors in said first and second circuits to the capacitor in the third circuit in opposition to each other; the switching means disposed in said first and second circuits being controlled by said first and second signals to charge the capacitor in said third circuit as a function of the difference between total flow of each of said streams and control means responsive to the voltage across the capacitor in said third circuit for controlling the flow in one of said fluid streams.

3,089,644
ELECTRONIC CALCULATING APPARATUS
John Henry Wensley, Potten End, Berkhamsted, England, assignor to Computer Developments Limited
Filed Mar. 10, 1960, Ser. No. 14,031
Claims priority, application Great Britain Mar. 24, 1959
8 Claims. (Cl. 235—169)



1. Electronic apparatus for forming the algebraic sum of two multidenominational values each comprising a succession of input digits in order of increasing denominational significance encoded according to binary code notation, corresponding denominational digits of both values occurring concurrently and being represented by substantially simultaneously occurring electrical signals representing the binary code elements of the applied digits, including means for registering a pair of concurrently occurring input digits; a first binary adder; gating means connected between said registering means for both digits and said first adder for transferring the pair of input digits to the first adder, the first adder being responsive only to the application of the pair of digits to produce a binary coded sum value having one more code element than the input digits, said one more code element being of greatest binary code significance; means for examining said binary coded sum value to produce concurrently with said sum value a single carry indicating signal; means for deriving from, and delayed relative to, said carry indicating signal a carry-in signal occurring concurrently with the binary coded sum value associated with the input digits of next succeeding denominational significance, said examining means producing said carry indicating signal in response only to the occurrence of a binary coded sum value representation at least equal to a predetermined value and to the concurrent occurrence of the carry-in signal resulting from the preceding pair of input digits and a binary coded sum value equal to one less than said predetermined value; correction digit generating means operable under control of said carry indicating signal resulting from the current pair of digits and the carry-in signals resulting from the preceding pair of input digits for producing a binary coded correction digit including filler and carry components; a second adder; and means for applying said correction digit and all the binary code elements except that of greatest significance of said binary coded sum value to said second adder, the second adder being responsive thereto to produce a final corrected sum digit having the same number of code elements as the input digits.

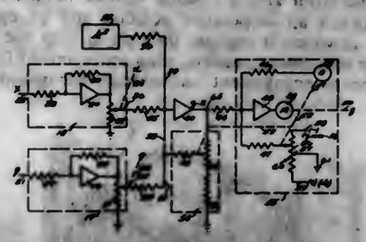
3,089,645
ARITHMETIC ELEMENT
James R. Wood, Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed June 30, 1959, Ser. No. 823,930
9 Claims. (Cl. 235—175)



1. An adder circuit comprising a first register to store signals representative of an addend, a second register adapted to store signals representative of an augend, means for successively sampling said adder stages in a descending sequence commencing with the highest order stage, said sampling means being adapted to generate a signal for each stage sampled indicative of the identity of corresponding stages of said addend and augend registers and means responsive to said signal for effecting the addition operation.

3,089,646
PYTHAGOREAN SERVO COMPUTER
Merle W. Crabb, Endicott, N.Y., assignor to General Precision, Inc., a corporation of Delaware
Filed June 13, 1960, Ser. No. 35,775
3 Claims. (Cl. 235—192)

1. A servo computer comprising: first squaring means; second squaring means; constant voltage source means; summing amplifier means; position servo means; and correction network means; wherein said first and said second squaring means and said constant voltage source means provide input potentials to said summing amplifier means; said summing amplifier means provides an input potential to said position servo means; said correction network is connected in a feedback path across said summing amplifier means; and the output shaft of said position servo provides an input to said correction network; whereby the angular position of said output shaft is proportioned to the electrical inputs to said first and second squaring means as the hypotenuse of a right



triangle of which the sides are proportional to the inputs of said first and second squaring means respectively.

3,089,647
CONTROL DEVICE FOR DAMPERS
Siegfried Kofink, Zell (Neckar), and Fritz Reuter, Esslingen (Neckar), Germany, assignors to J. Eberspächer, Esslingen (Neckar), Germany, a German firm
Filed Feb. 21, 1961, Ser. No. 118,207
5 Claims. (Cl. 236—48)



4. A control device for a pivotally mounted damper and the like comprising a disk adapted to be affixed to a damper for rotation therewith with the plane of said disc being substantially normal to the damper, and mounted for rotation about the same axis, said disk having a peripheral recess, a bimetallic strip, means holding said bimetallic strip at one end, the opposite end of said strip extending into said disk recess, said bimetallic strip being movable on temperature change to correspondingly move said disk through contact of the walls of said disk adjacent the recess, and means to bias said disk to a completely closed position and to completely open position.

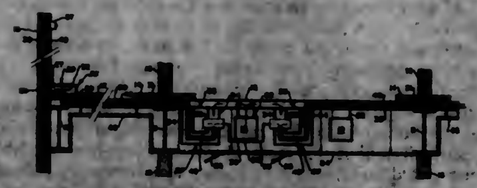
3,089,648
THERMOSTATIC IDLE
Leland B. Read, Florissant, Mo., assignor to ACF Industries, Incorporated, New York, N.Y., a corporation of New Jersey
Original application Dec. 30, 1957, Ser. No. 705,983. Divided and this application Dec. 1, 1960, Ser. No. 72,962
2 Claims. (Cl. 236—93)



1. A thermostatic valve assembly comprising a flat body member including an elongated leg and a transversely extending mounting head at one end of the leg angularly disposed with respect thereto, said mounting head projecting substantially laterally at each side of the leg to provide a relatively large sealing area for overlying a connected member, openings formed in the outer end portions of said mounting head, connecting means extending through the openings in the outer end portions of said head, a valve port formed in said head intermediate of its transverse length and centrally of a longitudinally extending medial line through said leg, the outer free end of said leg being bent to lie generally in a plane above said mounting head and to be positioned in offset relation thereto and formed with an opening therein, the opening in said

leg having a fastening means extending therethrough, an elongated flat thermostatic member secured at one end portion to the top of said leg and centrally thereof by said fastening means, said thermostatic member having its other end portion projecting over and spaced above the valve port in said head, a second thermostatic member fixed to said fastening means and interposed between said first thermostatic member and said leg and extending longitudinally along a portion of the length of the first thermostatic member, the outer free end of said second thermostatic member engaging the inner adjacent surface of the first thermostatic member to oppose the movement of the first thermostatic member towards the valve port in said head, a conical valve member mounted at the free end of the first thermostatic member for movement through the valve port in said head for opening and closing said port, and means for aligning the first and second thermostatic members and the free end portion of said leg.

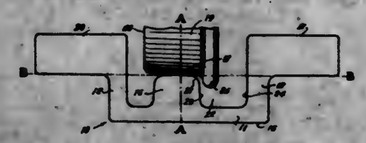
3,089,649
BUILDING AND AIR DISTRIBUTING SYSTEM
Bernard E. Curran, Sewickley, Pa., assignor to H. H. Robertson Company
Filed Oct. 26, 1960, Ser. No. 65,110
4 Claims. (Cl. 237—50)



1. In a building having a longitudinal corridor and a plurality of rooms along at least one side thereof, an improved air conditioning and distributing system including a plurality of metal cells extending transversely of said corridor and forming a part of the floor structure of the building, a pair of generally parallel air supply ducts beneath said metal cells and above the ceiling of said corridor, air conduit connections between a pair of said cells and each of said air supply ducts whereby one of said air ducts supplies air to one cell of the said pair of metal cells and the other of said air ducts supplies air to the other cell of the said pair of metal cells, separate correlated air flow regulating means for each of said cells above the ceiling of said corridor adjacent to said supply ducts, said air flow regulating means including an inlet connected to one of said cells and an outlet connected to the same cell, baffle means within each of said cells between said inlet and said outlet, said inlet and said air conduit connections being on the same side of said baffle means, air discharge means within each room having outlet means for discharging air into said room from the said pair of metal cells, and access openings in the ceiling of said corridor for each said air flow regulating means.

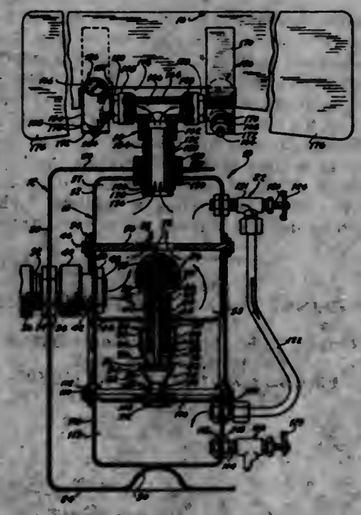
3,089,650
RAILS
Seymour H. Rankin, 4242 Lomo Alto, Dallas, Tex.
Filed May 18, 1962, Ser. No. 195,936
6 Claims. (Cl. 238—122)

4. A rail including: an elongate horizontal base having integral legs extending upwardly from said base at the sides thereof; a rib extending vertically upwardly from said base between said legs and in parallel spaced relation thereto, said rib having a horizontal longitudinally extending tread for supporting a beveled wheel as it runs therealong, said rib being disposed parallel and spaced to the central longitudinal axis of said rail, said tread extending longitudinally centrally of said rail, said legs having outwardly extending flanges disposed above said



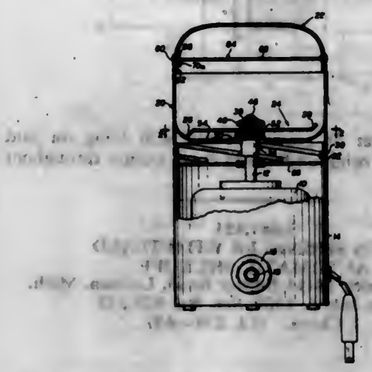
tread, the center of gravity of said rail lying on said tread, said rail being uniform in cross section throughout its length.

3,089,651
LAWN SPRINKLER WITH TIMED AUTOMATIC SHUTOFF
Roy P. Skerritt, 18411 Inkster Road, Livonia, Mich.
Filed July 6, 1959, Ser. No. 825,323
1 Claim. (Cl. 239—68)



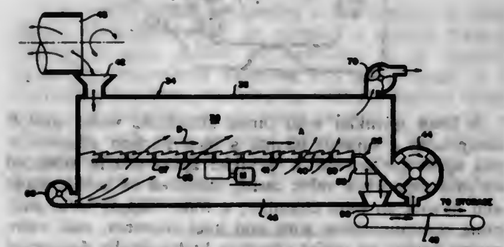
A lawn sprinkler with timed automatic water shutoff comprising a support having a base portion adapted to rest upon the ground, a sprinkler spray nozzle mounted on said support, a valve casing mounted on said support and having an inlet chamber, a water supply hose coupling communicating with said inlet chamber, said valve casing having an outlet chamber hydraulically connected to said spray nozzle, said chambers being interconnected by a passageway having a valve seat therein; a valve member mounted in said casing for motion into and out of closing engagement with said valve seat, means normally resiliently urging said valve member into closing engagement with said valve seat, a resilient latch member having a movable latching arm normally holding said valve member out of closing engagement with said valve seat against the urge of said resiliently-urging means, a hydraulically-operated motor hydraulically connected to said inlet chamber and having a hydraulically-shifted motive member, and a latch releasing cam operatively connected to said motive member for movement codirectionally with said valve member into latch-releasing engagement with said latch member arm in response to the attainment of a predetermined hydraulic pressure within said hydraulic motor against said motive member.

3,089,652
GRINDER-BLENDERS
Norman Haber, New York, N.Y., assignor to Dynamco Company, New York, N.Y., a co-partnership
Filed Nov. 10, 1959, Ser. No. 852,088
1 Claim. (Cl. 241—79)



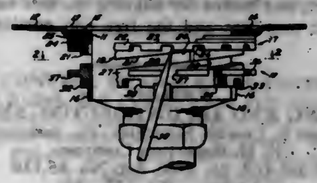
A grinder-blender comprising, in combination, a bowl having a bottom and side walls of uniform and symmetrical contour in all diametrical planes, a rotary blade, rotary driving means supporting the blade centrally of the bowl and near the bottom thereof, a cover removably mounted on the bowl, said cover being formed interiorly with a circular channel which extends completely around the cover at a level considerably below the top of the cover, and a screen of uniform fineness disposed within the cover, said screen having a resilient binding rim adapted to be snapped into and out of said channel.

3,089,653
HOT CLINKER CONVEYING AND COOLING APPARATUS
Werner Ostberg, Milan, Mich., assignor to Dundee Cement Company, Dundee, Mich.
Filed Sept. 20, 1961, Ser. No. 139,502
2 Claims. (Cl. 241—81)



1. In a hot clinker conveying and cooling apparatus, a slow moving, long stroke moving grate type cooling conveyor having a discharge end and having movable grate members and means for reciprocally moving said movable grate members towards and away from said discharge end; an inclined output grizzly at the discharge end of the cooling conveyor grate; and a hammer mill at the lower end of the grizzly; said grizzly comprising parallel, vertical plates separated by parallel vertical slots, with the rear edges of the plates forming the inclined surface of the grizzly; vertical slicing blades in said slots, the blades having slicing edges sloped to correspond to the slope of the inclined surface of said grizzly for slicing conveyor discharge on said grizzly; and means for moving the slicing blades horizontally, continuously and automatically through the grizzly and the clinkers thereon at an amplitude of about five inches, and at a variable speed of about twelve strokes per minute to throw oversized clinkers off said grizzly a substantial distance horizontally towards the upper part of the mill, rather than merely chipping clinkers and dislodging small fragments thereof from the grizzly, so that they slide down the grizzly into the lower part of the mill; said slicing blade moving means comprising bars connecting the movable grate members and the blades together, whereby the grate and the blades move in synchronism.

3,089,654
SINK OUTLET CONNECTION
Arthur A. Voudy, 2909 Willow Road, San Pablo, Calif.
Filed Nov. 3, 1959, Ser. No. 850,549
5 Claims. (Cl. 241—100.5)



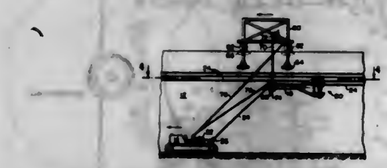
1. In a clamping arrangement for securing a fixture to the outlet of a sink, said fixture having flanged end for engagement with the upper surface of a sink bottom and a body extending downwardly through the outlet, the combination comprising a plurality of circumferentially spaced lugs peripherally substantially integrally secured to the body of said fixture, an upper ring disposed concentrically about said body above said lugs and rotatable about said body, said ring having a downwardly projecting rim with a continuous succession of serrations therein defining a plurality of like circumferentially adjacent inclined camming surfaces, said ring having an outwardly flared annular flange at its upper end with a plurality of radial grooves in the under surface thereof, and a lower ring having a plurality of longitudinal grooves in the inner periphery thereof for passage of the ring over said lugs, said lower ring having a plurality of notches in the underside thereof for engagement by said lugs, said lower ring having an upwardly projecting rim at the upper side thereof with a continuous succession of serrations in the rim defining a plurality of like circumferentially adjacent camming surfaces complementary to said camming surfaces of the upper ring and in end abutment therewith, said lower ring having a radially projecting flange with a plurality of radial notches therein.

3,089,655
PROCESSING WASTE PAPER OR THE LIKE
Adolf Heinz, Didier-Strasse 27, and Fritz Klasse, Gottfried-Kinkelstrasse 4, both of Wiesbaden-Biebrich, Germany
Filed Aug. 22, 1960, Ser. No. 51,117
7 Claims. (Cl. 241—260)



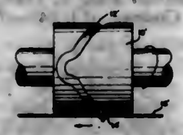
1. In a disc mill for pulping waste paper and other paper wastes comprising two coaxial circular discs upon which are formed radially extending elevations with rounded longitudinal edges, the spacing of said discs leaving a narrow gap between said opposing elevations, the provision of means for rotating at least one of said discs in relation to the other of said discs, means for feeding the material into the central region of the gap between said discs, and said discs each having an annular surface directed toward said gap between said discs and being adapted for gently pushing and rolling said fiber material through and between said gap, said surfaces being of undular cross section, all portions of said undulated surfaces being smooth and of such a kind that each elevation is free of flat surface portions parallel to the plane of rotation of the discs, and has a crown line extremity from which side surfaces continually incline toward adjacent valley lines.

3,089,656
WIRE SPACING MECHANISM
John M. Crom, Princess Issena, Daytona Beach, Fla.
Filed Sept. 9, 1960, Ser. No. 54,927
7 Claims. (Cl. 242—7)



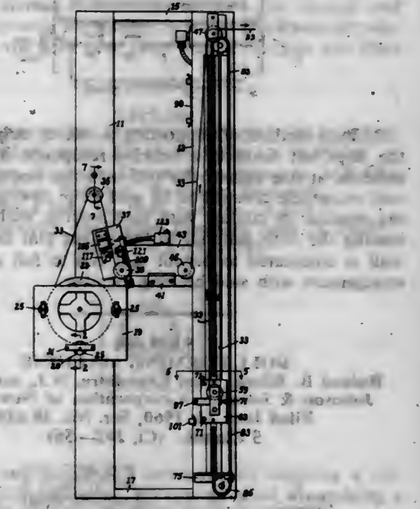
1. Apparatus for banding the upright and continuous wall of a tank circumferentially with a continuous wire, comprising a power driven vehicle disposed to travel about and trail said wire therefrom and into contact with said wall and including means for supporting the trailed wire at a predetermined elevation adjacent to but spaced from the wall, means connected to and movable with the vehicle for placing the trailed wire under predetermined tension, and wire guiding and spacing means connected to and trailing from the vehicle rearwardly of the wire tensioning means and including a circumferentially grooved roller disposed to ride on a previously placed convolution of said wire and a member connected to and in predetermined spaced relation axially from the roller and having a channel therein for receiving said trailed wire thereinto and guiding it onto said wall in said predetermined spaced relation from said previously placed convolution.

3,089,657
YARN TRAVERSING APPARATUS
Pern Joseph Chaussy, Camden, S.C., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Jan. 5, 1961, Ser. No. 80,922
4 Claims. (Cl. 242—43)



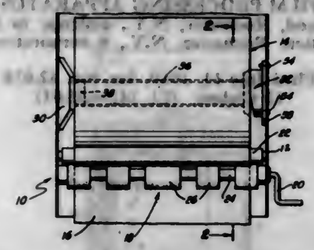
1. A winding apparatus including a rotatably driven barrel cam having a continuous generally helical groove in its surface, a cam follower riding in said groove and means limiting the follower to a reciprocating linear path of travel between the cam reversal points, said follower having a guide fixedly attached thereto and said groove having a profile including successive straight, cutback curve, reversal curve, cutback curve and straight portions, said profile being entirely curvilinear in the portions interconnecting said straight portions, said cutback curves being respectively curves of gradual acceleration and deceleration, each reversal curve having gradual deceleration and acceleration characteristics respectively in the approach to and departure from said reversal points.

3,089,658
FILM PROCESSING APPARATUS
Paul J. Good, Rochester, N.Y., assignor to Dynacolor Corporation, Rochester, N.Y., a corporation of New York
Filed July 11, 1960, Ser. No. 42,010
10 Claims. (Cl. 242—55.01)



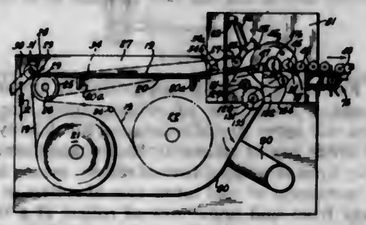
1. A film storage elevator comprising an upper row of rollers and a lower row of rollers, means for fixedly mounting said upper row of rollers and for slidably mounting said lower row of rollers for bodily movement toward and away from said upper row of rollers, means for limiting the movement of said lower row of rollers in a direction away from said upper row of rollers at a rest position, at least one supply film reel mounted for rotation, the film on said reel being adapted to be looped over a first one of said upper rollers to a first one of said lower rollers and back up to the next of said upper rollers proceeding in order from one side to the other, the film feeding continuously from said supply reel alternately between said upper and lower rows of rollers, a temporary stoppage of feeding the film into said rows of rollers causing said lower row of rollers to move toward said upper row of rollers to continue the passage of film therefrom for a limited period of time, means for driving said lower row of rollers for return movement back to said rest position after the film stoppage has been corrected and film is again feeding into said upper row of rollers, said driving means including an overruning clutch and a fixed speed output motor coupled therewith for limiting the rate of return movement to prevent damage and loosening and tangling of the film, a clamping unit mounted between said reel and upper row of rollers and comprising a pair of jaws between which the film passes, means for mounting the jaws for movement between a released postion and a clamping position engaging the film, a switch to be actuated by the movement of said lower row of rollers away from said rest position, said switch being connected with said clamping unit to move said jaws to said clamping position upon being actuated, and means for releasing said jaws for return to said released position to allow free passage of the film therebetween.

3,089,659
METHOD OF AUTOMATICALLY DISMOUNTING ROLLED WEB MATERIAL
Jack L. Perrin, Los Angeles, Calif., assignor to Towlaver, Inc., Los Angeles, Calif., a corporation of California
Filed Apr. 11, 1960, Ser. No. 21,538
12 Claims. (Cl. 242—55.2)



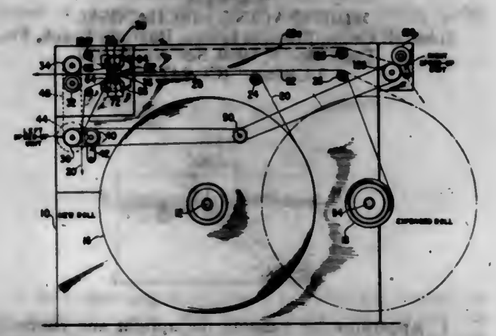
2. In a method of supporting a roll of strip material, the steps of: forming a bearing receptacle in the strip material at one end of the roll with the bearing wall of said receptacle constituted by said strip; inserting a bearing member in contact with said bearing wall; and consuming the strip material to the extent that said bearing wall is eliminated to permit said end to fall away from engagement with said bearing member.

3,089,660
ROLL FORMING MACHINE
Roland B. Bilane, West Keansburg, N.J., assignor to Johnson & Johnson, a corporation of New Jersey
Filed June 24, 1960, Ser. No. 38,620
5 Claims. (Cl. 242—56)



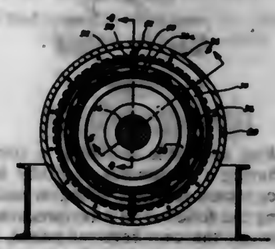
4. A device for winding prescribed lengths of strip material into a roll which comprises first and second rotatably mounted spindles, said spindles being spaced from one another in the direction of movement of the strip and being adapted to move successively into and out of engagement with said strip, each of said spindles being driven from and in continuous engagement with a continuously driven slip clutch, a feeding device for gripping the strip ahead of said first spindle and controlling movement of the strip to said first spindle, means for operating said feeding device to feed the strip and rotating said first spindle simultaneously therewith after said first spindle engages said strip to wind the strip into a roll carried by said first spindle, control means for stopping the feeding of said strip and gripping it when a given length of the strip is wound upon said first spindle, said first spindle being prevented from rotating through the gripping of said strip by the feeding device, means for cutting the strip at a point between said first and second spindles after said second spindle engages the strip extending between said first spindle and said feeding device, said first spindle resuming rotation on the cutting of said strip, due to the torque applied through the slip clutch engaged therewith and cam means associated with said first spindle for stopping the rotation of said first spindle when a portion of the strip length extending between said first and second spindles is wound upon said first spindle, the device being adapted to repeat the above cycle and wind strip material successively upon said first and second spindles.

3,089,661
AUTOMATIC CIGARETTE PAPER SPLICER
Malcolm E. Phillips, Jr., Jesse R. Pinkham, and John E. Hinckle, all of Richmond, Va., assignors to American Machine and Foundry Company, a corporation of New Jersey
Filed June 14, 1961, Ser. No. 117,182
8 Claims. (Cl. 242—58.4)



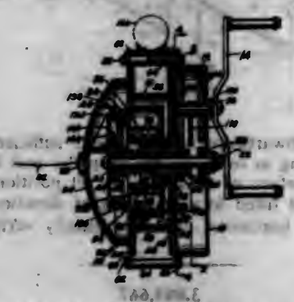
1. A web splicing mechanism comprising, in combination, a pair of reel mounts, a first feeding means for feeding an expiring web from one mount at uniform operating speed, means operable on the leading end of the fresh web for pulling the fresh web from the other mount, comprising a feed couple, a normally idle drive mechanism therefor of limited torque, means driven in unison with the first feeding means for causing said drive mechanism, when a splice is to be made, to gain speed and to accelerate the fresh web to approximately the speed of the expiring web against the inertial resistance of the fresh web reel, and a dead weight directly driven by said mechanism of sufficient mass to limit the rate of acceleration of the mechanism and thereby limit to a safe value the tension applied through the fresh web in overcoming the inertia of the fresh web reel, and means operable at the common speed of the webs, upon the attainment of near correspondence of web speeds to effect a splice by pressure alone.

3,089,662
CLUTCH FOR AUTOMATIC SHOVELING MACHINES AND THE LIKE
Mentor C. Addicks, 5107 Arden Ave., Minneapolis, Minn.
Original application Aug. 9, 1954, Ser. No. 448,696, now Patent No. 2,924,675, dated Feb. 9, 1960. Divided and this application Feb. 5, 1960, Ser. No. 6,970
5 Claims. (Cl. 242—75.5)



1. In a cable winding machine, embodying a cable winding member journaled for rotatable movement, a rotary driving member, one of said members circumscribing the other member, coupling means carried by one of said members and rotatable therewith coacting between said members for establishing a low torque coupling force between said members, means for adjusting said low torque coupling force sufficient to inhibit relative movement between said members during the paying out of cable under conditions which are subject to variation in torque requirements, and releasable means also carried by one of said members and rotatable therewith coacting directly with said last named means and in a direction opposite to the adjustment thereof to substantially increase the coupling force between said members during the winding of cable.

3,089,663
COMBINATION SPINNING AND FLY REEL
Dean E. Kirby, Sr., 4985 Shoshone St., Denver, Colo.
Filed May 7, 1962, Ser. No. 192,672
9 Claims. (Cl. 242—84.1)



1. The combination crank-operated spinning and fly reel which comprises, a stationary spool having a tubular hub terminating at both ends in radial flanges defining a circumferential groove with said hub, a first shaft journalled for rotation coaxially of the hub of the stationary reel leaving an annular space therebetween, disk-shaped bail carrying means attached to one end of the first shaft for rotation therewith in a plane parallel to one of the radial flanges of the stationary spool, bail means carried by said bail-carrying means for radial movement between a retracted position lying wholly inside the peripheral edge of one of the radial flanges on the stationary spool and an extended position projecting beyond said peripheral edge, spring means interconnecting said bail-carrying means and bail means biasing the latter into retracted position, centrally-apertured cover means enclosing the stationary spool positioned and adapted to direct the line axially thereof, a sleeve mounted on the first shaft for rotational movement relative thereto and reciprocal movement axially thereof, a rotatable spool having a central hub splined to the sleeve to permit conjoint rotational and relative axial movement therebetween, a cam disk mounted on the sleeve for rotational movement therewith in axially-spaced relation to the hub of the rotatable spool, said cam disk being positioned and adapted in an extended axial position of the sleeve to move the bail means from retracted to extended position upon rotation of the first shaft, and said cam disk in a retracted axial position of the sleeve releasing said bail means for movement into retracted position, compression spring means mounted on the sleeve between the cam disk and the hub of the rotatable spool normally biasing said sleeve into extended position, bail-retraction means operatively connected to the sleeve and adapted upon actuation to shift said sleeve axially from extended to retracted position, a second shaft journalled for rotation in spaced parallel relation to the first shaft, a hand crank connected to the second shaft, first and second axially-spaced gears carried by the second shaft, a third gear carried by the hub of the rotatable spool in a common plane with the first gear, a fourth gear carried by the first shaft in a plane common with the second gear, and clutch-forming means operative to selectively interconnect the hand crank with the rotatable spool or the bail-carrying means, said clutch-forming means comprising a rocker arm carrying a fifth gear in the plane of the first and third gears and a sixth gear in the plane of the second and fourth gears, said rocker arm in the first operative position thereof completing a driving connection between the first and third gears with the fifth gear while simultaneously disconnecting the second and fourth gears, and said rocker arm in a second operative position completing a driving connection between the second and fourth gears with the sixth gear while simultaneously disconnecting the fifth gear from one of the first and third gears.

3,089,664
MECHANISM FOR AUTOMATICALLY BLOCKING A LIFTING ROLLER IN VENETIAN BLINDS
Harry Faber, Ryslinge, Denmark, assignor to A/S Chr. Fabers Fabriker, Ryslinge, Denmark
Filed June 16, 1960, Ser. No. 36,553
Claims priority, application Denmark June 19, 1959
2 Claims. (Cl. 242—99)

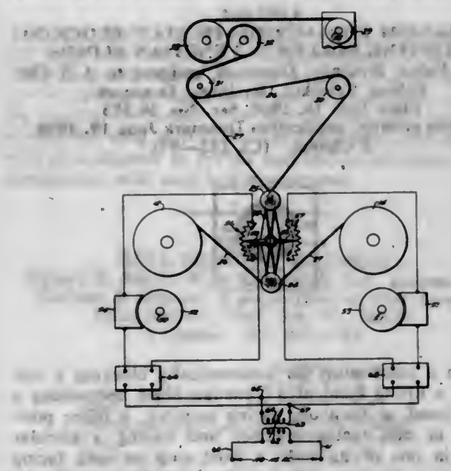


1. In a mechanism for automatically blocking a roller for a lifting band of a Venetian blind, comprising a lifting band, at least one facing member, a roller positioned in said facing member and having a circular recess in one of its ends, a fixed stop on said facing member, a blocking member displaceable inwardly by said band when wound on said roller and in outwardly radial direction with respect to said roller to cooperate with said fixed stop when the band is relieved, and slidably movable into blocking position solely by the action of its own weight, said blocking member being loosely disposed with a certain radial clearance with respect to said roller in said recess and positioned beneath the surface of said roller face, said recess being shaped as a circular arc and being concentrical with the axis of said roller, and lateral arms shaped as circular axis on said blocking member and having a projection guided in an aperture in the roller face, a stop on the blocking member protruding in the axial direction of the roller, said last mentioned stop striking against said fixed stop in the outermost position of the blocking member clear of the same in the innermost position thereof.

3,089,665
TENSION EQUALIZER
Arthur E. Gardner, Jr., Wayne, N.J., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed Nov. 9, 1960, Ser. No. 68,273
1 Claim. (Cl. 242—156)

A device for maintaining a condition of equal tension in first and second strands advancing simultaneously from separate supply spools onto a common arbor, a first shaft for supporting one of the supply spools, a second shaft mounted parallel to said first shaft and laterally spaced therefrom for supporting the other of said supply spools spaced from said one of the supply spools, a rocking element mounted for rotation on an axis paral-

lel to and between said first and second shafts in a plane defined by said first and second shafts, a first pair of pulleys mounted for rotation at one end of the rocking element for receiving the first and second strands advancing in opposite directions from the spaced supply spools, a second pair of pulleys mounted for rotation at the other end of said rocking element for guiding the first and second strands leaving said first pair of pulleys to form an acute angle with respect to the first and second strands advancing in said opposite directions from the spaced supply spools, a first guide pulley mounted on the same side of said element as said second shaft and spaced from said second shaft for guiding said first strand around one pulley of said second pair of pulleys in a first preselected direction, a second guide pulley mounted on the same side of the element as said first shaft and spaced from said first shaft for guiding said second strand around the other pulley of said second pair



of pulleys in a second preselected direction divergent from said first preselected direction, means for drawing said first and second strands simultaneously from said separate supply spools around said respective pulleys onto said common arbor, a rotary spindle mounting said rocking element intermediate the ends thereof, said spindle rotated by the element upon occurrence of an unequal condition between the tension in the first and second strands advancing in said opposite and divergent directions, selectively operable electromagnetic brake means for retarding the rotation of a selected one of said first and said second shafts and releasing a selected other of said first and second shafts to maintain said condition of equal tension, and rheostat means rotated by said rotary spindle upon occurrence of said unequal tension condition for controlling said selectively operable electromagnetic brake means to restore said condition of equal tension.

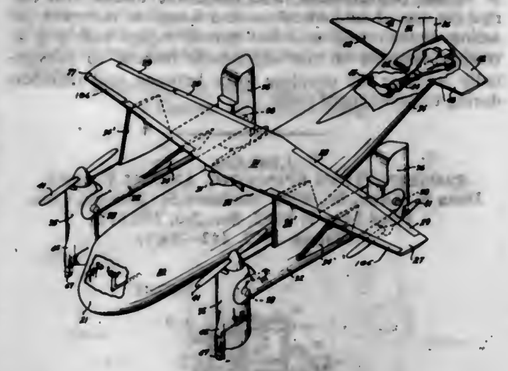
3,089,666

AIRPLANE HAVING CHANGEABLE THRUST DIRECTION

Henry H. W. Quenzler, Seattle, Wash., assignor to Boeing Airplane Company, Seattle, Wash., a corporation of Delaware

Filed Apr. 13, 1961, Ser. No. 102,706
24 Claims. (Cl. 244—7)

1. In an airplane, a wing, an elongated body below said wing, connected thereto in fixed relationship and having its length extending fore and aft, and at least four thrust-producing units carried by the airplane and operable to exert substantially vertical upward thrust thereon, two of said thrust-producing units being arranged in fore-and-aft alignment, one being carried by the forward portion and the other carried by the aft portion of said body and disposed substantially centrally of said body transversely of the airplane, said thrust-producing unit carried by the forward portion of said body being a propeller unit, and pivot means mounting said propeller unit to tilt



about an athwartships axis disposed sufficiently lower than said wing as to locate the propeller unit hub below the upper surface of said wing in all positions of such propeller unit tilted to vary its thrust direction between substantially horizontal and substantially vertical directions.

3,089,667

JET AIRCRAFT FOR SHORT TAKE-OFF AND LANDING DISTANCES

Fritz Gosslau, Grunwald, near Munich, and Kurt Reisiger, Stuttgart-Zuffenhausen, Germany, assignors to Junkers Flugzeug- und Motorenwerke A.G., Munich, Germany

Filed Apr. 28, 1960, Ser. No. 25,365
Claims priority, application Germany May 2, 1959
28 Claims. (Cl. 244—12)



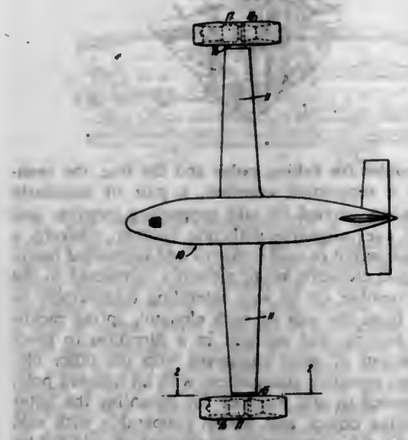
1. A jet aircraft for short take-off and landing distances, comprising, in combination, wing means having a maximum lift at a given great angle of incidence; jet engine means rigidly fixed on the aircraft for producing a longitudinal jet thrust; and means on the aircraft for supporting the aircraft on the ground including first undercarriage means supporting the aircraft in take-off and landing positions in which the angle of incidence of said wing means is substantially said given angle of incidence and in which said engine means is tilted with respect to horizontal and vertical planes so that the vertical component of the jet thrust is substantially half of the weight of the aircraft whereby the aircraft is lifted during the take-off and landing partly by the lift of said wing means produced by the forward movement of the aircraft driven by the horizontal component of the jet thrust and partly by the vertical component of the jet thrust whereby short take-off and landing distances are obtained, and second undercarriage means for supporting the aircraft on the ground in another alighted position in which the longitudinal axis of the aircraft is substantially horizontal.

3,089,668

PISTON AND CYLINDER ARRANGEMENT FOR TILTING AIRCRAFT POWERPLANT

Donald George Goodall, Hucknall, England, assignor to Rolls-Royce Limited, Derby, England, a company of Great Britain

Filed Sept. 1, 1961, Ser. No. 135,589
Claims priority, application Great Britain Sept. 15, 1960
8 Claims. (Cl. 244—12)



1. In a vertical take-off aircraft, a pod rotatively mounted in respect thereto, a jet propulsion engine in said pod, and a piston and cylinder arrangement for effecting rotation of the pod, said piston and cylinder arrangement comprising a movable cylinder, a fixed piston mounted in said movable cylinder, control means for admitting pressure fluid to a selected side of the piston and for releasing it from the opposite side thereof, whereby to effect movement of the cylinder and pod, said control means including a housing and a single valve member which is settable in a neutral position therein in which the pressure fluid is prevented from being supplied to and released from said cylinder, and means, operative as a result of displacement of the valve member from the neutral position, to move the valve member and to restore it to the neutral position after the piston and cylinder have moved relatively to an extent determined by the extent of valve member movement.

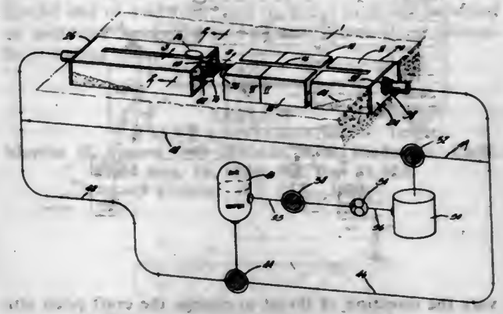
3,089,669

FLEXIBLE CYLINDER LAUNCHER

Saul Broudo, Philadelphia, Pa., assignor to the United States of America as represented by the Secretary of the Navy

Filed Apr. 28, 1961, Ser. No. 115,278
8 Claims. (Cl. 244—63)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. In an aircraft launching apparatus, a longitudinal trackway, a shuttle in said trackway adapted for coupling to an aircraft, said shuttle having a hollow, open-ended body, opposed rollers mounted within said body, a flexible, nonextensible, inflatable cylinder disposed in said trackway and passing through said shuttle body between said rollers and being pinched closed thereby, means for inflating said cylinder from one end thereof with fluid, whereby a force is exerted on the wall of said cylinder causing said shuttle to move longitudinally thereof, a spear projecting from the forward end of said shuttle, and hard comminuted material filling the end-of-launch portion of said trackway whereby forward movement of



said shuttle is arrested by said spear being driven into said material.

3,089,670

SOLAR POWERED VEHICLE

Elmer G. Johnson, 54 Grand Ave., Fairborn, Ohio

Filed Sept. 25, 1957, Ser. No. 686,264
6 Claims. (Cl. 244—74)
(Granted under Title 35, U.S. Code (1952), sec. 266)



4. An aircraft including a wing having an upper surface substantially transparent to solar radiation and a reflective lower surface, the lower surface of the wing being at a predetermined angle to the upper surface of the wing, a solar radiation trap disposed adjacent the upper surface of the wing to trap energy of solar radiation, means for absorbing solar radiation received from the heat trap, a ramjet disposed between the surfaces of the wing, said ramjet having a passage formed between the upper surface of the wing and a lower wall parallel to the lower surface of the wing, means to transfer heat energy obtained from the means for absorption of solar radiation to the air flowing through the ramjet to provide thrust to power the aircraft, and stabilizing means secured to the aircraft to maintain the upper surface of the wing substantially normal to the impinging sun rays.

3,089,671

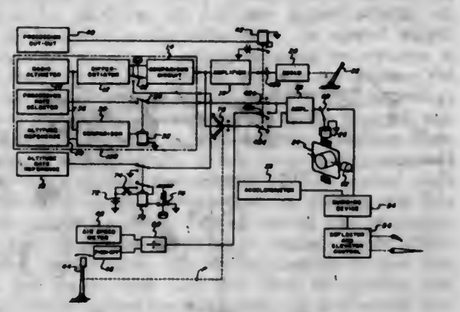
FLIGHT CONTROL SYSTEMS

Donal R. Treffeisen, Huntington Station, N.Y., assignor to Sperry Rand Corporation, Great Neck, N.Y., a corporation of Delaware

Filed Sept. 23, 1960, Ser. No. 57,990
17 Claims. (Cl. 244—77)

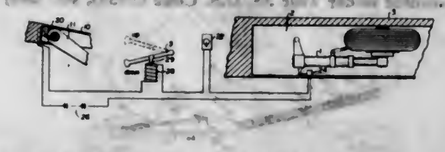
16. Apparatus for use in controlling the pitch attitude of a vertical take-off and landing aircraft during take-off, said craft being of the type which takes off and lands with its longitudinal axis substantially perpendicular to the earth comprising means providing the craft with a substantially constant rate of climb, means providing signals representing a commanded craft pitch rate that is substantially zero and a commanded craft pitch rate that is greater than zero, and servo means responsive during a first portion of the take-off maneuver to said zero pitch rate signals and responsive during a second portion of the

take-off maneuver to said other pitch rate signals, said servo means operating to deflect the craft elevators and



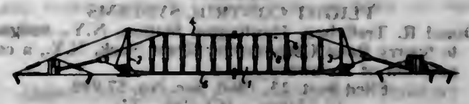
vary the direction of thrust to change the craft pitch attitude.

3,089,672
UNDERCARRIAGE SAFEGUARD SYSTEM
Andrew P. Huchala, 158 Gloucester St., Ottawa, Ontario, Canada
Filed May 15, 1961, Ser. No. 110,132
5 Claims. (Cl. 244—102)



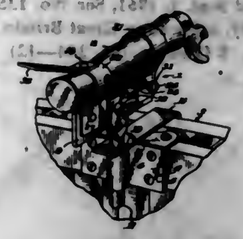
1. In an aircraft having a retractable undercarriage system and an actuable flap mechanism, the improvement which comprises, a switch operable upon attaining a flap position associated with landing trim of said aircraft, an operating control for said undercarriage system having a position for actuating said system to lower undercarriage and over-ride means for said operating control, said switch being connected to said over-ride means for moving the operating control into said position upon lowering of flap to said landing trim position by said flap mechanism when the operating control is not found in said position.

3,089,673
AIRPLANE ARRESTING NETS
Per Börje Fondén, Gotgatan 23, and Karl Ove Torgny Wålander, Vasavagen 49, both of Linkoping, Sweden
Filed Apr. 6, 1960, Ser. No. 20,410
1 Claim. (Cl. 244—110)



An airplane runaway-preventing device of the type comprising an arresting net, a pair of masts for holding said net suspended between themselves, and in which said net comprises substantially horizontal upper and lower wires and substantially vertical connecting members extending individually therebetween so as to leave parallel spaces between themselves extending uninterruptedly between said upper and lower wires, each such vertical connecting member comprising upper and lower end portions of rope material and an individual middle portion consisting of a bendable flat strip of stainless steel.

3,089,674
FISH POLE HOLDER
Paul Bastle, 211 Sheridan Road, McHenry, Ill.
Filed Nov. 29, 1960, Ser. No. 72,436
6 Claims. (Cl. 248—40)



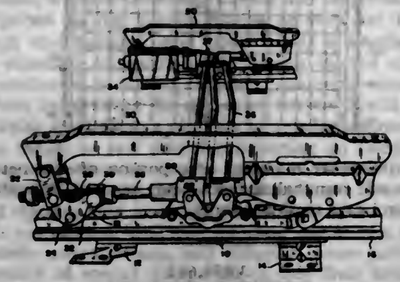
1. In a holder for fishing poles and the like, the combination of a supporting member, a pair of annularly shaped elements carried by said supporting member and having their axes alignable with one another, whereby a pole may be inserted in said elements and supported thereby, one of said elements being pivotally connected to the supporting member on an axis extending transversely to and spaced from the axis of such element, spring means operatively biasing said element in a direction to pivot said element out of axial alignment with the other element and into retentive engagement with an inserted pole, means connected to said member for mounting the latter on a supporting object, and means cooperable with said mounting means for restraining movement of said holder relative to such an object.

3,089,675
MULTIPLE ANGLE SHELF BRACKET
Allan G. Lozier, 3307 Curtis St., Omaha, Nebr.
Filed May 23, 1962, Ser. No. 196,988
6 Claims. (Cl. 248—242)



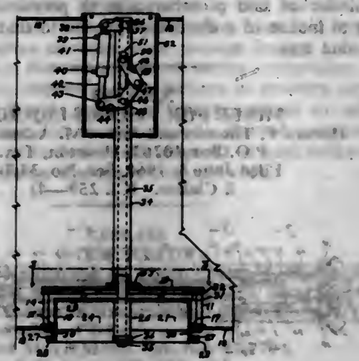
4. In a shelf supporting assembly including an upright post having a plurality of vertically spaced openings formed therein, elongated shelf supporting means in the form of an elongated shelf bracket member, said shelf bracket member having a pair of longitudinally extending and transversely spaced projections formed on one end thereof and a pair of abutment shoulder surfaces facing generally in the direction in which said projections extend, disposed adjacent one of said projections and on the side thereof remote from the other projection, said one projection including a hook recess having a surface facing toward the other end of said bracket member and away from said shoulder surfaces, said other projection including a plurality of hook recesses having surfaces facing toward the other end of said bracket member and away from said shoulder surfaces selectively engageable with the portions of said post defining one of said openings for positioning the bracket member at a plurality of angles, said first mentioned recess selectively engageable with portions of said post defining an opening adjacent said one opening for positioning the bracket member at an additional angle, one of said shoulder surfaces abutting against said post when said bracket member is positioned at the additional angle.

3,089,676
POWER SEAT ADJUSTER
Joseph Pickles, Dearborn, Mich., assignor to Ferro Stamping Company, Dearborn, Mich., a corporation of Michigan
Filed Sept. 6, 1960, Ser. No. 53,995
6 Claims. (Cl. 248—394)



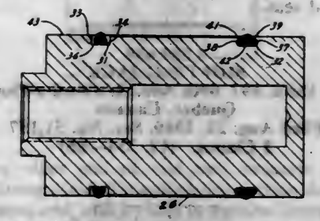
6. Seat adjusting apparatus for a seat slidable fore and aft and having its front and rear edges independently vertically adjustable, comprising a housing having three worm shafts mounted therein for rotation on fixed axes disposed transversely of the seat, worms on said shafts, a pair of screw shafts disposed in substantial axial alignment and extending fore and aft of the seat, a worm gear on each of said screw shafts in mesh with one of said worms, a pivot mounting for each of said screw shafts providing for limited rocking movement thereof about an axis perpendicular to and intersecting the axis of the worm gear carried thereby and intermediate the ends of said worm gear, a nut on each of said screw shafts, seat height adjusting mechanism connected to said nuts and requiring limited swinging movement of said shafts upon operation of the height adjusting mechanism, a third screw shaft journalled in said housing, a third nut on said third shaft, and means for connecting said housing and third nut intermediate the seat and a stationary support to provide for fore and aft seat adjustment.

3,089,677
DUMP VALVES FOR AIRCRAFT
Robert E. Savaria, Union, Oreg. (% Universal Air Tankers, Inc., P.O. Box 4600, Boise, Idaho)
Filed Aug. 25, 1959, Ser. No. 836,022
9 Claims. (Cl. 251—58)



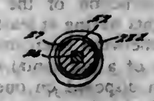
9. In dump valves: a tube secured to the outer surface of a housing for a dump valve in axial alignment with a hole through said housing, said tube having a longitudinal slot diametrically disposed therethrough near its opposite end; a complementary rod slidably mounted in said tube, said rod projecting above said diametrically disposed slot through said tube and secured at its other end to the hub of a hollow cylindrical sleeve valve in said housing, said sleeve valve having radially segmented compartments; double acting hydraulic actuating means secured near the slotted end of said tube; and the links pivotally mounted on said tube connecting said slidable rod and said hydraulic actuating means.

3,089,678
VALVE CONSTRUCTION
Marvin H. Grove, 340 Hillside Ave., Piedmont, Calif.
Filed Aug. 24, 1960, Ser. No. 51,623
9 Claims. (Cl. 251—327)



1. In a valve construction, a body means having a flow passage, a valve means movable between open and closed positions relative to the flow passage, one of said last named means forming a valve working surface surrounding the flow passage and the other of said means having a second surface disposed in close proximity with the valve working surface for closed position of the valve, a seal ring formed of resilient material, one arcuate portion of said seal ring as viewed in section having a radial width substantially greater than the remaining arcuate portion, said other means having a groove interrupting said second surface and serving to accommodate the seal ring, one arcuate portion of the groove as viewed in section being formed to provide seal ring retaining lips and the remaining arcuate portion of the groove being without such lips, both arcuate portions of the groove having a radial width at least equal to the radial width of the first named arcuate portion of the seal ring, and the radial spacing between said lips being at least comparable to the radial width of the second named arcuate portion of the seal ring, said seal ring being capable of rotation within said groove to bring the first named arcuate portion into that portion of the groove that is not provided with retaining lips, whereby the seal ring can be removed.

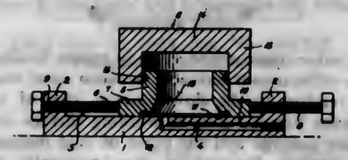
3,089,679
GAS TURBINE NOZZLE SUSPENSION AND ADJUSTMENT
Willi Henny, Southfield, Mich., assignor to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware
Filed June 6, 1960, Ser. No. 34,172
5 Claims. (Cl. 253—59)



1. In combination, a gas driven rotor for a turbine engine, a conduit for conveying motive gases to said rotor, a plurality of adjustable means spaced circumferentially around the axis of said rotor, each adjustable means including a nozzle element within said conduit adjacent said rotor and pivotal to vary the angle of attack of said gases against said rotor, a rotatable shaft secured to said nozzle element to pivot the latter and

extending therefrom radially outwardly with respect to said axis, an annular seat of larger diameter than said shaft and carried coaxially thereby in fluid sealing relationship therewith, an annular bushing carried by the wall of said housing and having said shaft journalled therein, the outer periphery of said bushing being in fluid sealing engagement with said wall, said wall having an annular portion around said seat in endwise abutment with an annular portion of the inner end of said bushing around said seat to locate said bushing with respect to said wall, another annular portion of the inner end of said bushing abutting said seat in fluid sealing engagement therewith around the axis of said shaft, and resilient means yieldingly urging said shaft outwardly and said bushing inwardly with equal and opposite forces to maintain said fluid sealing engagement between said bushing and seat.

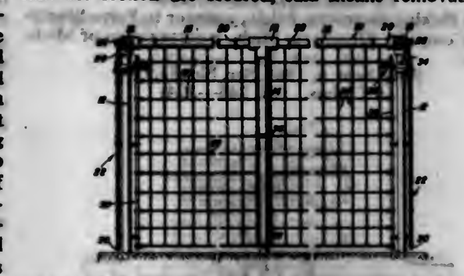
3,089,680
SHIFTING JACK
Vagn Deve, 692 69th Ave., L'Abord-a-Plouffe, Quebec, Canada
Filed Aug. 22, 1960, Ser. No. 51,157
2 Claims. (Cl. 254—85)



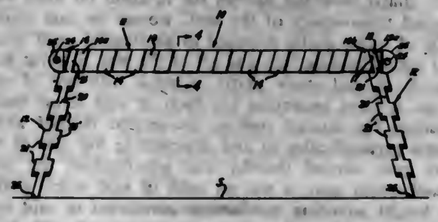
1. A shifting jack comprising a ground engaging base having a smooth top bearing surface and an upright flange at the perimeter thereof, an upright hydraulic cylinder opened at both ends and having a radially outwardly directed flange at its lower end defining a cylindrical lateral wall portion spaced from said flange, and a smooth bottom face in slidable engagement with the bearing surface of said base, said cylinder being rotatable and laterally shiftable in all directions with respect to said base, a piston in the form of a cap having a cylindrical skirt fitting over and slidable with respect to the external surface of said cylinder, the lower edge of said skirt registering with said lateral flange of said cylinder, said piston vertically movable under hydraulic fluid pressure, means to supply hydraulic fluid under pressure in the cavity defined between said cylinder and piston, and radially directed screw means mounted in said flange and engageable with said cylindrical lateral wall portion of said cylinder for allowing rotation of said cylinder and for adjustable lateral shifting and positioning of said cylinder with respect to said base.

3,089,681
FENCE CONSTRUCTION
Henry B. Smithwick, 2352 Coronet Place, Jackson, Miss.
Filed Dec. 29, 1960, Ser. No. 79,423
6 Claims. (Cl. 256—47)

1. In a fence construction of the type including a pair of terminal uprights having at least one intermediate upright disposed therebetween interconnected above their lower ends by means of a horizontal member, a swingable fence net section disposed on one side of said uprights having crossed chords, means pivotally securing the upper end of said net section to said horizontal member between said terminal uprights for movement about a horizontal axis adjacent the upper edge of said net section, means removably securing the lower marginal edge portion of said net section to said terminal and intermediate uprights, rigid upright tension chords carried by the opposite ends of said net section and to which a majority of the chords disposed at the opposite ends of said net section are secured, said means removably securing the lower marginal edge portion of said net section to said terminal uprights being secured between the latter and said tension chords.



3,089,682
STREET BARRICADE
John Henry Parker, 2328 Georgia Ave. NW., Washington, D.C.
Filed Nov. 21, 1961, Ser. No. 153,890
1 Claim. (Cl. 256—64)



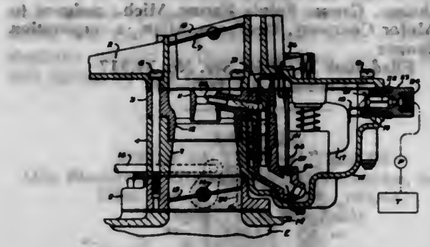
A street barricade comprised of a substantially straight one-piece top member constructed entirely of resilient hard rubber, and a pair of oppositely disposed A-shaped legs having vertical slots in the tops thereof, each being comprised of a single piece of hard rubber supporting said top piece, said top piece and said legs each being provided with a plurality of spaced oppositely extending transverse integral protuberances, the protuberances in said top piece being disposed at a slight angle to the longitudinal axis of said top piece, the spaces between the end protuberances of said top piece and the next inwardly spaced protuberances being engaged in said slots in said legs, and one pair of said next inwardly spaced protuberances having a cut at an angle opposite to the remainder of said protuberances to permit its associated leg to incline in a direction opposite to that of the other of said legs.

3,089,683
MIXER FOR VISCOUS LIQUIDS
Horace F. Thomas and James M. Adams, both of P.O. Box 10262, Houston, Tex.
Filed June 8, 1960, Ser. No. 34,742
2 Claims. (Cl. 259—4)



1. A device for mixing viscous liquids comprising a body, said body having at least two inlet means therein whereby separate streams of viscous liquids may be conducted into said body, a chamber in said body for receiving the viscous liquids from said inlet means, stationary mixing means within said chamber having a plurality of circumferentially and longitudinally spaced transverse passages therein, said circumferentially and longitudinally spaced transverse passages being in communication with said chamber and being tangentially in communication with the interior of said stationary mixing means whereby a circular motion and tangential flow is imparted to the viscous liquids as they are forced through said passages, said body having a longitudinal bore extending substantially the length thereof and in communication with said chamber, atomizing means in said bore for dividing the stream of viscous liquids from the mixing means into a plurality of smaller streams, diffusion means in said bore for imparting an undulating flowing motion to the viscous liquids as they are forced therethrough whereby the viscous liquids are thoroughly mixed together, and an outlet means whereby the viscous liquids are emitted from said diffusion means in a single intimately mixed stream, said diffusion means including a plurality of spaced discs, each of said discs having a relatively small opening therethrough, said small opening being longitudinal in relation to said longitudinal bore, and a plurality of projections extending between and connected to each of said discs, said projections being longitudinal in relationship to said bore.

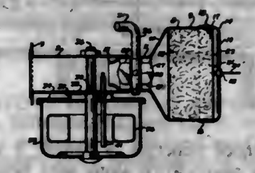
3,089,684
CARBURETOR
Robert J. Smith, St. Ann, Mo., assignor to ACF Industries, Incorporated, New York, N.Y., a corporation of New Jersey
Filed June 3, 1960, Ser. No. 33,754
7 Claims. (Cl. 261—23)



1. In a carburetor for an internal combustion engine, two mixture conduits, throttle valves in said conduits, a fuel bowl, two main fuel passages leading from said bowl to their respective conduits, each passage having a fuel metering orifice therein, a step-up device comprising a piston operable responsive to variations in pressure posterior to said throttle valves, a bracket secured to said piston and having slots in opposite sides thereof, metering rods mounted in said slots and engaged in said orifices, and a tension spring interconnecting said rods.

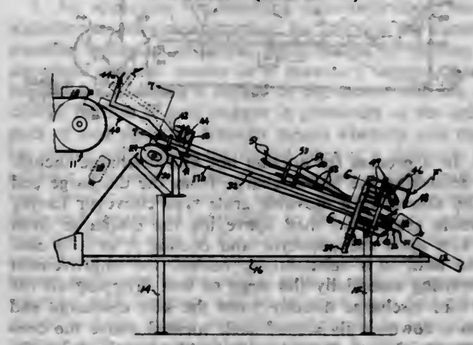
3,089,685
CARBURETOR
Raymond G. Hennemann, St. Louis, Eugene L. Rapplean, Ferguson, and Alfred C. Korte, Jennings, Mo., assignors to ACF Industries, Incorporated, New York, N.Y., a corporation of New Jersey
Filed May 9, 1960, Ser. No. 27,779
2 Claims. (Cl. 261—64)

1. A carburetor comprising a first cylindrical sheet metal section of uniform diameter formed at one end with a flange for connection to an engine manifold, a second cylindrical sheet metal section having one end thereof snugly telescopically fitted within the other end of said first cylindrical section to form a fuel and air mixture conduit therewith, said second section terminating at its said one end within said first section with a reduced terminal portion defining an axially located uninterrupted annular venturi concentrically arranged with the first section of said fuel and air mixture conduit, the other end of said second section extending outwardly of said first section and being enlarged to define an air inlet opening, a throttle valve movably mounted in said mixture conduit and spaced from said venturi, a fuel chamber, a bolt structure within said fuel chamber and having a head at one end holding said fuel chamber to said first cylindrical



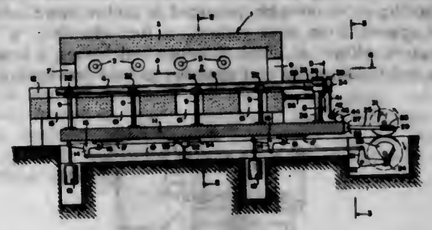
section, the other end of said bolt structure extending laterally through said first cylindrical section downstream of said venturi and with its axis in a plane intersecting the axis of the venturi, a nut threaded on said other bolt end at the outside of said first cylindrical section to clamp said fuel chamber and said first cylindrical section together, and fuel passage means having a terminal discharge portion, said fuel passage means extending from the fuel chamber into the first sheet metal section of said mixture conduit and terminating at a point between a portion of said bolt structure and said annular venturi defined by the reduced terminal portion of the second section and in the path of the airstream therefrom.

3,089,686
FLAME TREATING APPARATUS
Albert S. Jenkins and Raymond A. Atkinson, Toledo, Ohio, assignors to Owens-Illinois Glass Company, a corporation of Ohio
Filed July 13, 1960, Ser. No. 42,707
9 Claims. (Cl. 263—6)



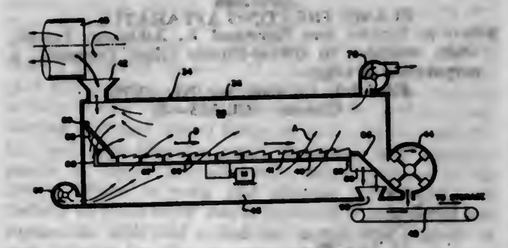
1. In apparatus for flame treating the exterior surfaces of plastic containers to render such surfaces adherent to coatings, a continuous elongated inclined trough for supporting bottles in a recumbent position, said trough being generally V-shape in cross-section, and means forming at least a part of the trough for moving the containers therealong at a constant rate of speed so as to discharge said containers along a predetermined trajectory, and means at the lower end of the trough providing a ring of flames concentric and normal to a portion of the trajectory.

3,089,687
WALKING BEAM MECHANISM
William H. Peck, Alexandria, Ind., assignor to Selas Corporation of America, Dresher, Pa., a corporation of Pennsylvania
Filed Nov. 18, 1960, Ser. No. 70,221
9 Claims. (Cl. 263—6)



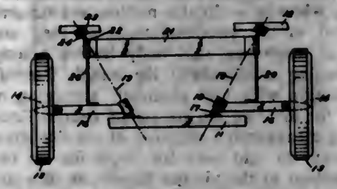
8. In a furnace structure, a hearth, a walking beam mechanism to move work along said hearth, means to move said mechanism through substantially a rectangular path having a high portion and a low portion, a work supporting member, means to mount said member for rotation on said mechanism, said member being above said hearth at the high portion of its path and below said hearth at the low portion of its path, means to rotate said member, means to operate said rotating means, and means to control the operation of said operating means as said mechanism is moving through a portion only of its path.

3,089,688
CEMENT MANUFACTURE
Werner Ostberg, Milan, Mich., assignor to Dundee Cement Company, Dundee, Mich.
Filed Mar. 6, 1961, Ser. No. 93,762
6 Claims. (Cl. 263—32)



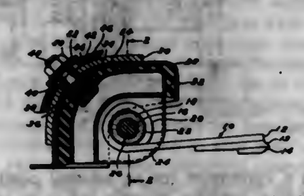
1. In a process for cooling hot kiln discharge including depositing the hot discharge from the discharge end of the kiln upon a movable grate type conveyor having movable grates and then conveying the discharge from the kiln upon the conveyor and cooling it as it is conveyed until it is substantially cooled, the improvement comprising essentially the steps of first dropping all the hot kiln discharge directly from the kiln discharge end upon a downwardly sloped shelf located above the conveyor and below the kiln before placing the kiln discharge upon the conveyor, to form a coating of hot discharge upon the shelf, next, slicing the coating on the shelf by means of regularly applied strokes in vertical planes, simultaneously applied at closely horizontally spaced apart locations along the coating, extending the strokes substantially along the full inclined length of the coating beginning from the surface of the shelf in a substantially horizontal direction towards the direction of the conveyor a sufficient distance to slice the coating and move fragments downwardly upon the conveyor, and applying the strokes in synchronism with the movement of the movable grates of the conveyor.

3,089,689
MOTOR VEHICLE SUSPENSION
Henry J. Kozicki, Livonia, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed May 25, 1960, Ser. No. 31,612
8 Claims. (Cl. 267—11)



4. In a motor vehicle having a frame member, road wheels, means for supporting each of said wheels for independent rising and falling movement, each of said supporting means having its inner end pivotally connected to said frame member to accommodate the vertical movement of the respective wheel, and spring means comprising a pair of generally longitudinally extending leaf spring members adapted to be loaded in bending and torsion, means connecting each leaf spring member at one end to one of said supporting means, and a cross leaf spring member extending generally transversely of said vehicle and adapted to be loaded in bending and torsion, and means connecting the other ends of said pair of longitudinally extending spring members to said cross leaf spring member and to said frame at transversely spaced points.

3,089,690
SPRING MOUNTING MEANS
Heinz Hintzen, Grosse Pointe Farms, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed June 30, 1960, Ser. No. 39,917
8 Claims. (Cl. 267—30)

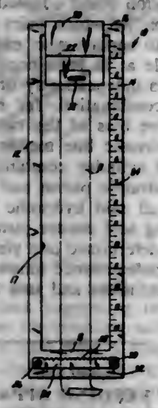


6. A leaf spring and a device for mounting said leaf spring comprising a hollow cup shaped inner bracket member and a hollow cup shaped outer bracket member nesting in each other, one of said bracket members having side wall portions extending beyond the peripheral edge of the other bracket member, a prestressed rubber piece interposed between the nested portions of the inner and outer bracket members, and means for pivotally attaching said leaf spring to the side wall portions of said one of the bracket members.

3,089,691
WEB ELASTIC HOLDER AND SEWING GUIDE
Ralph E. Berry, 488 Heberton Ave., Staten Island, N.Y.
Filed Aug. 22, 1960, Ser. No. 51,095
3 Claims. (Cl. 269—1)

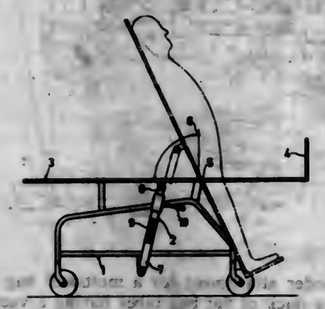
1. A holder for uniformly tensioning and supporting a predetermined length of elastic material comprising, in combination, a frame having a central opening bounded by a pair of spaced apart parallel sides and a pair of spaced apart parallel ends, a tubular section of fabric mounted on one end of the frame and defining a flexible tab

mounting means extending from said end into the frame-opening for pinning one end of an elastic web thereto, and clamp means carried by said frame adjacent the opposite end thereof for fastening another portion of the elastic web thereto in a tensioned state whereby said web intermediate said fastened portions extends across said opening for sewing to a piece of fabric, said clamp means comprising a clamp bar mounted at one of its ends to



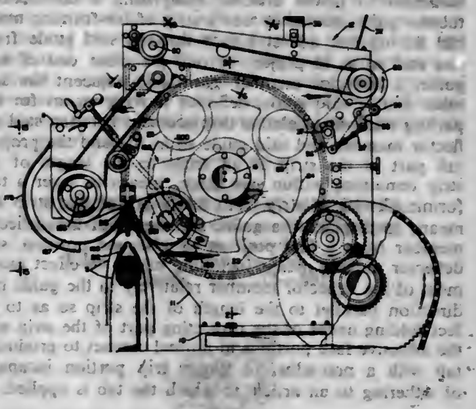
said frame for pivotal movement within a plane parallel to the general plane of said frame, detent means engageable with the opposite end of said clamp bar for securing said clamp bar in a holding position transversely to the direction of stress of the elastic web and a measuring scale carried by said frame intermediate said mounting means and said clamp means, said scale extending substantially parallel to the longitudinal axis of an elastic web carried by said frame.

3,089,692
MEDICAL TIPPING TABLES
Olle Blomqvist, Artillerigatan 38, Stockholm, Sweden
Filed Apr. 3, 1961, Ser. No. 100,423
1 Claim. (Cl. 269—323)



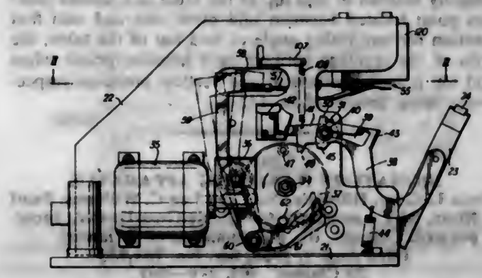
An elongated, medical tilting table comprising a top which is adapted to support a patient and is tiltable from a substantially vertical position to a substantially horizontal position on a pivot axis substantially perpendicular to the longitudinal direction of the tilting table and located between one end of the top of the tilting table and the center thereof; a footplate united with said end of the tilting table and projecting therefrom; a framework carrying said top of the table; and at least one spring unit adapted to counterbalance moments arising when tilting the top of the table and the patient resting thereon on said axis and comprising at least one compression spring which is substantially relaxed when said top is in its substantially vertical position and compressed when said top of the table is in its substantially horizontal position, one end of said spring unit being hingedly secured to said framework in a first junction point located at the same side of said pivot axis as the center of said top of the table, the other end of said spring unit being hingedly secured to said top of the table in a second junction point located between said pivot axis and said first junction for any tilting angle of said top of the table, the ratio of the spacings between said junction points when said top is in its horizontal and vertical positions respectively being greater than 1/2.

3,089,693
SIGNATURE HANDLING APPARATUS
Owen L. Gore, Hillsdale, N.J., and Leo C. Williams, Pearl River, N.Y., assignors to Michle-Goss-Dexter, Incorporated, Chicago, Ill., a corporation of Delaware
Filed Aug. 7, 1958, Ser. No. 753,733
33 Claims. (Cl. 270—54)



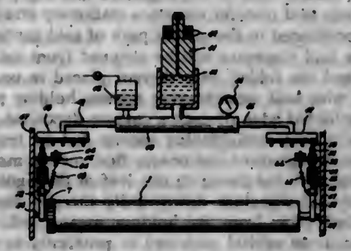
1. An apparatus for handling signatures comprising a signature transfer means, means for carrying the signature transfer means in an orbital path, means for driving the signature transfer means in a planetary orbital path, a hopper for receiving a supply of signatures with the discharge portion of said hopper in proximity to the orbital path of said signature transfer means whereby said transfer means will engage the folded edge of a signature and advance the same along the planetary orbital path of said transfer means, carrier means movable in an orbital path and located in proximity to the planetary orbit to grip the folded edge of the signature and carry the same away from said transfer means, a stationary straightening means positioned in the orbital path of said carrier means whereby said signature will be stripped from said carrier means and the folded edge thereof placed in operational contact with said straightening means, holding means to grip the folded edge of each signature deposited in alignment with said straightening means and to temporarily retain each signature stationary, first means movable in an orbital path for engaging one leaf of the signature and to carry said signature downwardly thereby disengaging the folded edge from its holding means, other means movable in an orbital path and in proximity to said first leaf engaging means for guiding the other leaf away from the one leaf, the engaging means for said one leaf and the guiding means for said other leaf being operable to simultaneously release said leaves whereby the signature will freely fall downwardly in a vertical plane with the leaf portions in a spread apart position.

3,089,694
TAB FORMING UNIT
Geoffrey Smith, 44 East India Dock Road, and Hans Meyer, 63 Jeddo Road, both of London, England
Original application July 7, 1959, Ser. No. 825,565, now Patent No. 3,078,910, dated Feb. 26, 1963. Divided and this application Dec. 2, 1960, Ser. No. 73,437
5 Claims. (Cl. 270—61)



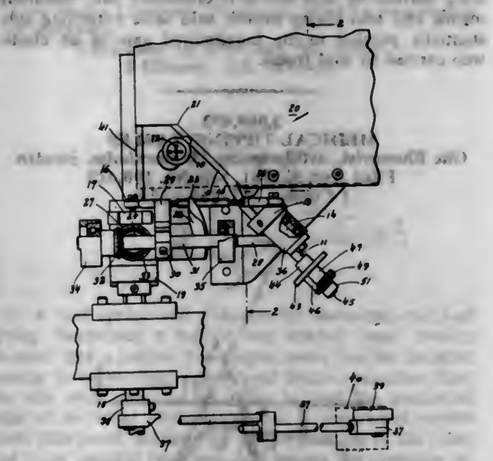
1. Mechanism for forming heat sealable tabs for attachment to textile articles, comprising a displaceable tubular guide, means to feed a strip of tab-forming material having one adhesive face through said guide from one end so as to project beyond the other end of said guide, a deflector member positioned adjacent the said other end of said guide, deflector moving means for imparting transverse relative displacement between said deflector member and said guide so as to bend the projectinfi part of the strip at an angle to the length of the strip remaining within said guide, means to sever a tab-forming length of strip from the length of said strip and means to displace the guide together with the deflector member from a first position to a second position, said deflector moving means including means to effect movement of the deflector member relatively to the guide in a direction parallel to the length of the strip so as to effect folding under of the projecting part of the strip with the adhesive face portions in mutual contact to produce a tab with a non-adherent finger grip portion incapable of adhering to an article to which the tab is applied.

3,089,695
FOLDING MACHINE ROLLER ADJUSTING MECHANISM
Norman C. Brooks, Austin, Tex., assignor, by mesne assignments, to Miehle-Goss-Dexter, Inc., Pearl River, N.Y., a corporation of Delaware
Continuation of application Ser. No. 806,537, Apr. 15, 1959. This application Nov. 7, 1960, Ser. No. 124,741
15 Claims. (Cl. 270—68)



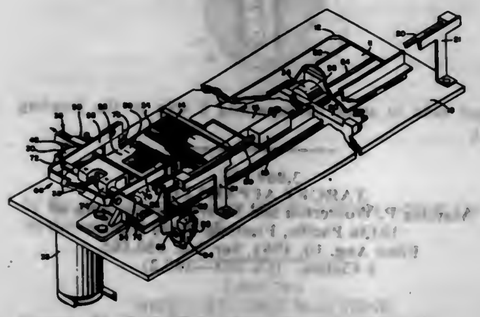
1. In a paper folding machine having a train of a stationary roller and at least two movable rollers all disposed with axes parallel to each other and adapted to have paper passed first between a first of said rollers and a second of said rollers, and thence between the second of said rollers and the third of said rollers the combination comprising a plurality of lever means pivoted to the frame of said paper folding machine with each such lever means carrying one end of one of said movable rollers, first bias means comprising a hydraulic piston and cylinder combination for each such lever means, each such combination being adapted to bias said lever means in a direction by which pairs of said rollers are resiliently urged into contact with each other, additional bias means operable at at least one end of the first of said movable rollers independently of said hydraulic piston and cylinder combination, for making fine adjustments in the relative bias of the two ends of said first movable roller, hydraulic line means connected to each of said piston and cylinder combinations and to each other, a master hydraulic piston and cylinder combination connected to all said hydraulic line means, means for resiliently urging said master piston into said master cylinder with a predetermined and yieldable force whereby a pressure of predetermined amount is created within all said lines and cylinders and said levers are biased in response thereto.

3,089,696
SHEET FEEDING APPARATUS
Clinton R. Hollis, Camden, Ark., assignor to International Paper Company, New York, N.Y., a corporation of New York
Filed Apr. 14, 1961, Ser. No. 103,162
10 Claims. (Cl. 271—29)



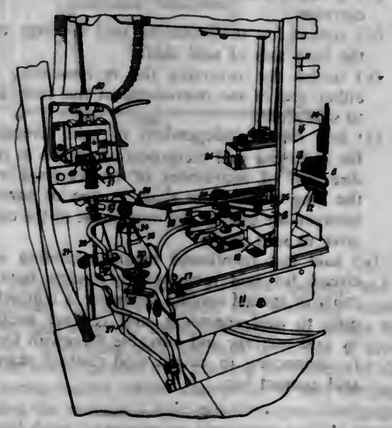
1. A feeder attachment for a multiwall bag bottomer fed from a stack of flat bag tubes having a vacuum sub-assembly comprising a vacuum generating means, a movable vacuum arm means, first fluid connecting means between the vacuum generating means and the vacuum arm means, a movable vacuum communicating means, second fluid connecting means between the vacuum arm means and the vacuum communicating means, and vacuum arm drive means; a stack support sub-assembly comprising an arcuate blade and blade drive means, the blade drive means including the vacuum arm drive means; a stack clamping sub-assembly comprising a clamping lever and lever drive means, the lever drive means including the blade drive means; and, a housing.

3,089,697
STACK CONDITIONING APPARATUS
Donald E. Brozo, Detroit, Mich., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed Sept. 14, 1961, Ser. No. 138,122
10 Claims. (Cl. 271—34)



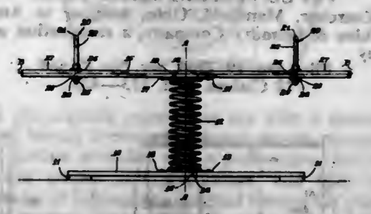
1. In a mechanism for feeding cards from a stack of vertical cards, apparatus for conditioning the stack comprising a base, a stack supporting table resiliently supported theron, means for vibrating said table, a pivotable member mounted on said base, a tamping member fixed to said pivotable member engageable with the exposed edges of the cards in the stack, and means interconnecting said pivotable member and said table whereby the vibrating movement of said table is converted to an oscillating movement of said tamping member into and away from engagement with the edges of the cards in the stack.

3,089,698
VACUUM TYPE BLANK FEEDING DEVICE WITH POSITIVE ON/OFF CONTROL
Thomas R. Baker and Boris S. Pozun, Los Altos, Calif., assignors to Atlas General Industries, Inc., New York, N.Y., a corporation of Massachusetts
Filed Oct. 9, 1961, Ser. No. 143,778
10 Claims. (Cl. 271—56)



1. A blank feeding device comprising, in combination, a carrier movable through its stroke between a blank pick-up station and a blank deposit station; a suction cup on said carrier; a source of vacuum including a line extending to said cup; a control valve in said line for applying and relieving vacuum at the respective ends of the stroke; a blank demand responsive means; a demand valve in said line operated by said demand responsive means for applying and relieving vacuum in response to demand conditions; and means operative within a portion of the stroke adjacent the pick-up station for preventing a change in the position of the demand valve within said stroke portion.

3,089,699
TEETER-TOTTER
Norman F. Flesch, Park Forest, Ill., assignor to Amsted Industries Incorporated, Chicago, Ill., a corporation of New Jersey
Filed Mar. 17, 1961, Ser. No. 96,576
1 Claim. (Cl. 272—54)



In a seesaw, a horizontal base, a helical compression spring mounted vertically on said base, a teeterboard mounted intermediate its ends on said spring, means securing the end convolutions of said spring to said base and teeterboard, respectively, whereby said teeterboard is resiliently supported for vertical, angular and rotational movements relative to said base responsive to alternate engagement of the base by players seated on opposite ends of the teeterboard.

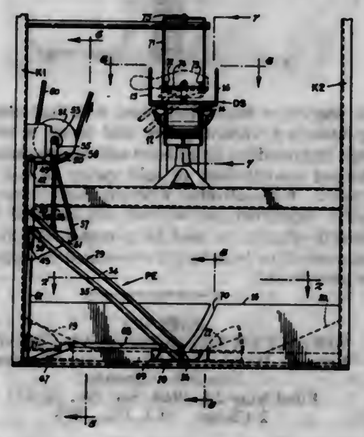
3,089,700
SHOULDER EXERCISING MACHINES
Leon G. Hotas, 190 Osborne St., Winnipeg, Manitoba, Canada
Filed May 24, 1960, Ser. No. 31,447
2 Claims. (Cl. 272—80)



1. A shoulder exercising machine, comprising: a frame supported member presenting a central bearing therethrough; a shaft rotatably and horizontally mounted in and through said bearing and extending therefrom on either side thereof; a sheave secured on one extending end of said shaft; a weight carrier for said machine; a cable having one end secured to said weight carrier and the other end fastened to and windable on said sheave for direct suspension of said weight carrier from said sheave; a rest supported directly on the opposite extending end of the shaft, in a plane parallel to but offset from the centreline thereof, for rotation of said rest around and with said shaft; said frame supported member having a circular plurality of spaced holes around the shaft; a crank carried by the shaft for rotation therewith and swinging movement over said holes; pin means for insertion in the holes to limit the arc swing of the crank and the rest; a pair of handles mounted on the rest end of the shaft and for movement therewith; each of said handles being positioned adjacent one of the longitudinal ends

of the rest and adjustably movable toward and away from same, means for receiving weights on the weight carrier; and means on the rest for securing a human arm thereto, with the humerus thereof centrally aligned with the shaft and the forearm thereof positioned at right angles to the shaft, and such that the shoulder muscles can act through said humerus and said forearm to turn said shaft, while the hand thereof grasps one of said handles.

3,089,701
PIN CONVEYING MECHANISM
John Zuercher, Mansfield, Ohio, assignor to American Machine & Foundry Company, a corporation of New Jersey
Filed Jan. 19, 1961, Ser. No. 83,669
12 Claims. (Cl. 273—43)



1. In a bowling pin spotting machine for use with a bowling alley having a pit at one end, the combination of:
means in the pit for delivering pins which have fallen into the pit to a pin receiving station;
a pin discharge station located above said pin receiving station;
and a pin elevator for elevating pins from said pin receiving station to said pin discharge station, said pin elevator comprising
a pin holder comprising a cradle adapted to support a pin in a horizontal position,
arm means connected to said cradle and arranged in the form of a parallelogram to maintain said cradle in a horizontal position during elevation of a pin,
and cyclically operable driving means connected to move said pin holder, upon each cycle of operation, between said pin receiving station and said pin discharge station to elevate pins, one at a time from said pin receiving station to said pin discharge station.

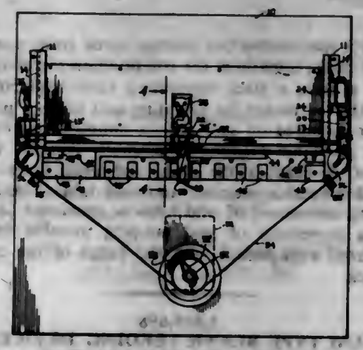
3,089,702
BOWLING BALL
Frederick W. MacDonald, Detroit, Mich.; Ralph W. McKenney, administrator of said Frederick W. MacDonald, deceased
Filed Feb. 1, 1960, Ser. No. 5,937
8 Claims. (Cl. 273—63)

1. A bowling ball having in a finger hole thereof a raised pattern of narrow width extending longitudinally in the direction of the finger hole to an outer point of said finger hole closely adjacent the outer surface of the ball for guiding the finger while being withdrawn from the bowling ball during delivery thereof, said raised pattern extending at a slight angle to the axis of the



finger hole to assist in imparting a spin to the bowling ball.

3,089,703
TARGET APPARATUS
Marcine P. Wolverton and Henry S. Ross, both of 10136 Pacific, Franklin Park, Ill.
Filed Aug. 10, 1961, Ser. No. 130,565
3 Claims. (Cl. 273—105.2)



1. A target apparatus including
(a) an elongated horizontally supported shaft,
(b) a carriage mounted on said shaft for reciprocal movement relative to the long axis thereof,
(c) a target member carried by and movable with the carriage,
(d) means for reciprocating said carriage relative to the long axis of said shaft,
(e) means for reversing the reciprocating means at either end of the movement of the carriage relative to said shaft,
(f) and means independent of said reversing means for reversing said reciprocating means to reverse the direction of movement of the carriage relative to the long axis of the shaft at one of several points between the ends of the movement of the carriage relative to said shaft,
(g) said last mentioned means including an electric circuit for said reciprocating means having a plurality of spaced contact segments, a contact bar common to said segments, and contact means carried by said carriage and movable therewith for selectively connecting in circuit said contact segments with said contact bar.

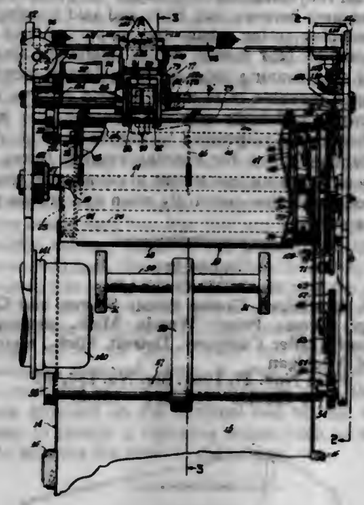
3,089,704
SHUTTLECOCK
James E. Wolf, Altoona, Pa., assignor to R. S. L. Shuttlecocks Co., Ltd., Altoona, Pa., a corporation of Pennsylvania
Filed Sept. 16, 1959, Ser. No. 840,382
2 Claims. (Cl. 273—106)

1. In a badminton shuttlecock adapted to be hit by a racket and having a head and vane portion, the improvement wherein said head is formed of molded polyethylene sponge having a plurality of cells therein and the outer surface of the nose portion of the head being roughened



by the exposure of the cells therein whereby a better "grip" on the racket is obtained.

3,089,705
SHEET-RECORD MACHINE
George H. Fritzinger, West Orange, N.J., assignor to McGraw-Edison Company, Elgin, Ill., a corporation of Delaware
Original application May 2, 1956, Ser. No. 582,152, now Patent No. 2,966,357, dated Dec. 27, 1960. Divided and this application May 27, 1960, Ser. No. 32,471
9 Claims. (Cl. 274—20)



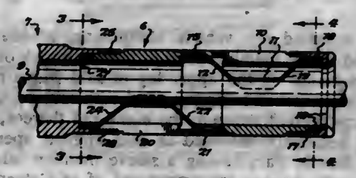
1. In a phonograph including a record support, and a translating-head carriage mounted for traveling movement across said support: the combination of means for progressively advancing said carriage including a drive transmission disengageable by a rocking movement of the carriage; spring-loaded means connected to said carriage for returning the same to a start position upon disengagement of said drive transmission; electromechanical means for rocking said carriage to disengage said drive transmission; a circuit including an end switch operable by said carriage when the carriage reaches a terminal position for supplying current to operate said electromechanical means; and a holding switch connected in parallel with said end switch and operably closed by said electromechanical means as the latter is operated for maintaining said drive transmission in a disengaged condition during the full return of said carriage.

3,089,706
PHONOGRAPH RECORD HOLD DOWN
Philip Devon, Roslyn, N.Y., assignor, by mesne assignments, to Educational Aids Publishing Corp., Long Island, N.Y., a corporation of New York
Filed May 26, 1960, Ser. No. 32,017
4 Claims. (Cl. 274—42)



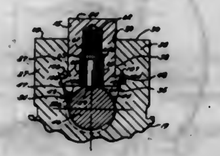
1. A phonograph record, for use with a phonograph turntable having a centrally located spindle, comprising: a body portion provided with a perforation, and recording means around said perforation, said body portion being made of lightweight material having the properties of easy bending and separation upon being folded or scored, and having at least one first scoring means in the said material positioned between the said recording means and an edge of the said body portion, and at least one second scoring means positioned between the said recording means and the first mentioned scoring means, the said first mentioned scoring means being of a configuration so that when the material of the said body portion containing said first scoring means is subjected to pressure at the location of the configuration of said first scoring means, the said material will rupture and provide an opening sufficient to slide fit over the said spindle, and in which the configuration of the said first scoring means is completely within the area defined by the said edge of the said body portion and the said second scoring means; whereby when the material of the said body portion of the record is bent or folded along the said second mentioned scoring means, a portion of the said body portion having the first mentioned scoring means may be separated, the record may be placed on a phonograph turntable with the said perforation over the said spindle, and the said separated portion having the first mentioned scoring means may be pressed over the said spindle to rupture the first mentioned scoring means and forced down on the said spindle to hold down the said record.

3,089,707
FEED CHUCKS
Daniel R. Laux, Elmira, N.Y., assignor to Hardinge Brothers, Inc., Elmira, N.Y.
Filed July 3, 1961, Ser. No. 121,560
4 Claims. (Cl. 279—23)



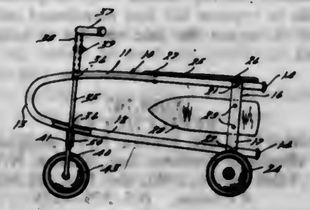
1. A feed chuck including a tubular body member having two sets of springs, said sets being spaced one in advance of the other in said body member, each of said springs having an intermediate portion extending inwardly from said body portion in position to yieldingly engage the stock to be operated upon, the springs of each set being arranged circumferentially at substantially equal intervals from each other and the springs of the two sets being arranged in staggered relation to each other.

3,089,708
JAW KEY NUT
Elbert E. Long, Kalamazoo, Mich., assignor to Buck Tool Company, Kalamazoo, Mich., a corporation of Michigan
Filed Apr. 4, 1962, Ser. No. 185,038
7 Claims. (Cl. 279—123)



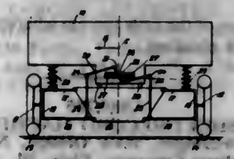
1. A gripping structure, comprising:
a base having upstanding walls defining an upwardly opening slot therein, the opposing surfaces of said walls having horizontal grooves communicating with said slot, said grooves having inwardly and downwardly converging surfaces each defining a small acute angle with a horizontal plane;
a key member having a body portion receivable into said slot and snugly engaged thereby, said key member having sidewardly extending flanges snugly receivable into said grooves, said flanges having downwardly converging gripping surfaces adapted for location snugly adjacent the converging surfaces of said grooves whereby, when said key member is disposed in said slot and is urged upwardly with respect to said base, said upstanding walls are held by engagement between said gripping surfaces and said converging surfaces against deflection away from each other.

3,089,709
WHEELED TOY VEHICLES
Marcel O. De Vos, Grosse Pointe Woods, Mich., assignor, by mesne assignments, to Grow-Rite Corporation, a corporation of New York
Filed Dec. 27, 1961, Ser. No. 162,467
3 Claims. (Cl. 280—87.05)



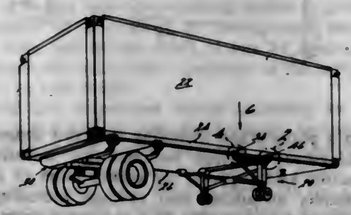
3. A wheeled toy vehicle comprising, a substantially U-shaped frame member formed from a length of tubing, a seat mounted on the upper leg of said frame member, said frame member being provided with aligned apertures in the legs thereof adjacent the bight end thereof, a steering rod rotatively mounted in said aligned apertures, a pair of handle bars having a sleeve member adapted to telescopically engage the upper end of said steering rod, means for detachably securing said sleeve member to said steering rod to operatively connect said handle bars thereto, the steering rod being provided, adjacent its lower end, with a laterally bent portion forming a shoulder engageable by the frame member to support the latter, the end of said steering rod being bent at a substantially right angle to form an axle, a spacer-sleeve on said steering rod selectively positioned between the handle bar sleeve and the frame member and between said steering rod shoulder and the frame member, to vary the position of the frame member with respect to the steering rod and thereby vary the height of the seat, and a wheel rotatably mounted on said axle.

3,089,710
MECHANISM FOR CONTROLLING OUTWARD INCLINATION OF A VEHICLE BODY IN CURVES
Ernst J. H. Fiala, Sindelfingen Kreis Boblingen, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany
Filed Feb. 17, 1959, Ser. No. 793,757
Claims priority, application Germany Feb. 21, 1958
14 Claims. (Cl. 280—112)



1. In a vehicle having a body, a mechanism for controlling the tendency of said body to incline outwardly when said vehicle passes through a curve, comprising running gear means for supporting said body including at least one pair of oppositely disposed wheels and independent suspension means for each said wheel for controlling vertical movement thereof, means for permitting relative movement between said body and said running gear means including spring means for supporting said body on said running gear means, means interconnecting said body and said running gear means, said last-mentioned means being movable in response to said relative movement between said body and said running gear means, and further means responsive to said movement of said interconnecting means for exerting bracing forces upon said body and running gear means to counter the tendency of said body to incline outwardly when said vehicle passes through a curve.

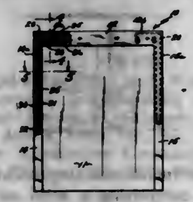
3,089,711
LANDING GEAR
Keith W. Tantlinger, Grosse Pointe Shores, and George Chleger, Grosse Pointe Woods, Mich., assignors to Fruehauf Trailer Company, Detroit, Mich., a corporation of Michigan
Filed Nov. 27, 1961, Ser. No. 154,985
4 Claims. (Cl. 280—150.5)



1. A landing gear for a shipjing container or the like having a pair of laterally spaced longitudinally extending lower side rails, said landing gear comprising
a pair of downwardly depending legs,
a first pair of rolls
at the upper ends of said legs, respectively, engageable with the rails on the container for rollably supporting said landing gear,
a pair of clamps
at the upper end of said legs, respectively, for clamping said landing gear to the side rails of the container, and

a second pair of rolls
spaced longitudinally of said first rolls, respectively, releasably engageable with the rails of the shipping container to facilitate longitudinal movement of said landing gear relative to the shipping container.

3,089,712
SPLASH GUARD
Samuel J. Kosik, Jr., 1900 E. 30th St., Suite 305, Cleveland, Ohio
Filed July 30, 1962, Ser. No. 213,310
5 Claims. (Cl. 280—154.5)



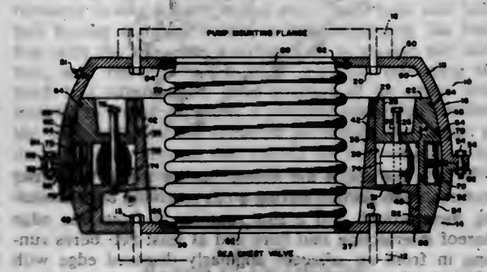
1. A splash guard adapted for use behind the rear wheels of a vehicle such as a truck and the like and adapted to be rigidly mounted the back end thereof, the guard comprising a generally polygonal panel of a rubbery material, the panel having a generally horizontal upper margin portion and two generally parallel vertical side margin portions, said upper marginal portion and said side marginal portions being raised from and thicker than the central body of said panel, an upper panel portion including the upper margin portion adapted to be fastened rigidly to the back of the vehicle, a lower panel portion that is flexible, the flexing portion being not more than about ⅕ to ⅓ of the total length of the panel, and stiffening means for the upper portion of the panel to prevent the flexing thereof, said means comprising a one-piece metal rod embedded in each of the side marginal portions, said rod having an elongated generally U-shaped portion comprising two legs that are spaced apart by the embedded rubbery material and a curved center portion between said legs, the center portion extending down its associated side margin portion at least past the mid-point thereof so that the center portion is located nearer the bottom of the panel than the top, one of said legs of the U-shape having an upper distal end that is generally horizontally disposed along at least a portion of the upper marginal portion to reinforce the same, there being a hook provided on the terminal end of said distal end adapted to receive a fastening means such as a bolt for rigidly securing the panel to the vehicle.

3,089,713
SWIVEL JOINT OR COUPLING FOR PIPE LINES
Domer Scaramucci, P.O. Box 4446, Oklahoma City, Okla.
Filed July 10, 1958, Ser. No. 747,767
6 Claims. (Cl. 285—14)



1. A swivel pipe coupling of the type described, in combination, a two-part outer member and a hollow inner member each constructed to be connected into a pipe system; said inner member having an external cylindrical bearing section with two longitudinally spaced circumferential ball receiving grooves therein and an adjoining cylindrical stem of a substantially less diameter than the first section; said outer member including a sleeve having a bearing section internally sized to fit loosely over said external cylindrical bearing section for substantially its full length and having cooperating ball grooves, an integrally extending portion bored larger than the internally sized portion, internally threaded and extending over said stem, and a separable closure part having an extension threaded externally to engage said integral portion and internally counter-bored to form with said stem an annular packing chamber whose maximum diameter is of the order of that of the first cylindrical section of said inner member; said sleeve having an outwardly extending radial wall terminating the bearing section and a cylindrical wall between it and the internal threads of substantial thread crest diameter; a flange ring having an internal bore slightly greater in diameter than and fitted over said stem, a radial face engaging said radial wall but entirely clear of the inner member and an external diameter less than that of said last-mentioned cylindrical wall; said closure part and said larger bored integral portion of said sleeve having engaging faces to provide positive limit means for the threaded engagement thereof, the inner end of said closure part extension terminating to provide slight clearance with the other face of said flange whereby the latter is free to move radially in respect to the outer member; balls in said grooves connecting said inner and outer members for relative rotation; and a pressure expansible packing in said packing chamber between said stem and counter-bore and having an end area bearing on the other face of said flange ring, said flange being of such thickness as to resist bending on application of axial forces due to fluid pressure in the swivel, access of fluid in said coupling to the opposite end of said packing being through a space between the end of said stem and said closure part, axial forces due to the pressure of said fluid forcing the packing against the flange ring and the outer portion of the opposite radial face of the latter against said radial wall of said sleeve whereby relative rotational movement takes place between the packing and said cylindrical stem to thereby reduce the friction between the relatively rotatable members.

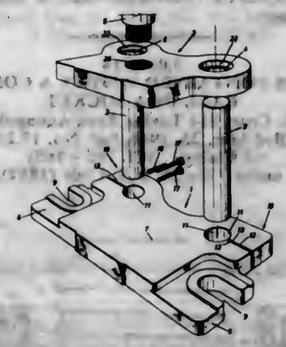
3,089,714
BELLOWS CONTAINED WITHIN A COMPOSITE BALL IN A SOCKET
Fred E. Croy, 814 Taylor Ave., Annapolis, Md.
Filed Mar. 23, 1960, Ser. No. 17,235
3 Claims. (Cl. 285—165)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A flexible conduit coupling comprising the combination of a socket assembly and a ball assembly, said socket assembly including a first socket part having a truncated spherical cavity therein, a radially inner portion forming a flat portion extending transversely inward toward said cavity and terminating in a central aperture adapted to receive a conduit and a radially outer portion on said first socket part forming a flange portion ex-

tending transversely outward from said cavity, a second socket part having a truncated spherical cavity therein which corresponds in size to, and thus forms a continuous segmental spherical surface with the cavity of said first socket part, a radially outer portion on said second socket part forming a flange portion which mates with the flange of the first socket part, an annular ring having its outer portion clamped between said flanges and having its inner portion extending into the composite spherical cavity formed by said two socket parts, and fastening means clamping said flanges together; said ball asembly including an outer part having a segmented spherical outer surface with an annular groove therein dividing the outer surface into an upper and a lower bearing surface, the upper bearing surface mating with the cavity of said first socket part, the lower bearing surface mating with the cavity of said second socket part, and said annular groove surrounding, said annular ring, resilient shock absorbing means freely mounted within said annular groove on both sides of said annular ring to cushion and limit relative movement between said ball and said socket, said outer part also having an internal bore and internal shoulder, said ball assembly also including an inner part telescopically mounted within the internal bore of the outer part, said ball inner part including a shoulder in spaced juxtaposition with said outer part internal shoulder, and a flat portion extending parallel to said first socket part radially inner portion and having a central aperture therein in alignment with said first socket part central aperture, and resilient shock absorbing means interposed between the shoulders on said inner and outer ball parts to limit telescopic movement of said parts.

3,089,715
DIE SET
Donald F. Fairgrieve, Toronto, Ontario, Canada, assignor to Fairgrieve & Son, Limited, Toronto, Ontario, Canada
Filed Dec. 8, 1960, Ser. No. 74,638
4 Claims. (Cl. 287—20.1)



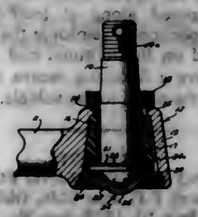
1. In a die set, a die holder having a pair of corner portions, each portion having a pin receiving bore extending therethrough and a slot running in from one edge thereof intersecting said bore and at least two bores running in from an adjacent angularly disposed edge with said latter bores substantially at right angles to said slot, one of said latter bores intersecting and extending inwardly beyond said slot and having the inner end thereof threaded, the other of said latter bores being threaded and opening into and terminating at said slot, a screw member in said one bore which extends inwardly beyond said slot for closing said slot, and a second screw member in said other bore terminating at said slot and adapted to abut the wall of said slot opposite to the point at which said latter bore opens into said slot for spreading said slot and a guide pin adapted to be snugly and releasably received in each of said pin receiveing bores.

3,089,716
FITTING FOR ATTACHING TOGETHER TUBULAR MEMBERS
Irving L. Berkowitz, Oceanside, N.Y., assignor, by mesne assignments, to Kaeser Dilephy Hardware Inc., Brooklyn, N.Y., a corporation of New York
Filed Feb. 4, 1960, Ser. No. 6,666
2 Claims. (Cl. 287—54)



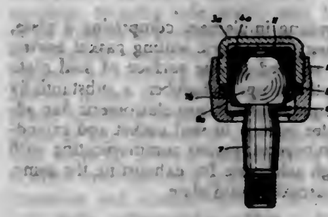
1. A fitting for interconnecting hollow tubular members, said fitting comprising a solid cubic base, a solid plug extending from at least one face of said cubic base, said plug having a square portion adjacent the base, said square portion being of uniform transverse cross-section and of a smaller dimension than said base forming an external shoulder around the four sides of said square portion, a tapered portion of substantial length extending from said square portion, notches formed on the corner edges of said plug and extending from the outer end of the plug to a point spaced substantially inwardly of the outer end of the plug, said notches being of inwardly curved transverse cross-section, and the inner ends of said notches being substantially quarter sphere concave surfaces, said notches providing the plug with reinforcement against bending, the outer end of said plug portion between said notches being rounded.

3,089,717
READILY DISASSEMBLED JOINT SOCKET ASSEMBLY AND METHOD OF MAKING SAME
Albert W. Gair, Fraser, Mich., assignor to Thompson Ramo Wooldridge Inc., a corporation of Ohio
Filed May 26, 1958, Ser. No. 737,097
2 Claims. (Cl. 287—85)



1. A ball joint assembly comprising, a cup-shaped housing having opposed first and second open ends, a ball stud having a head positioned within said housing and having a shank extended through said first open end of said housing, a self lubricating liner on the shank disposed within the housing, a rubber bushing mounted on the liner and the ball stud and seated against an interior surface of the cup-shaped housing between its opposed open ends, an annular shoulder formed adjacent said second open end of said housing, a reaction plate positioned within the second open end of said housing and having an outside diameter smaller than an inside diameter of said annular shoulder, said reaction plate having a bearing surface receiving said ball stud head in engagement therewith, a radially inwardly compressible removable split type retaining ring positioned against a bottom surface of said reaction plate, a spun over chamfered lip having an inside diameter larger than the outside diameter of said plate and with said lip defining a retaining ring groove with said annular shoulder with the lip tightly engaging a bottom surface of the removable retaining ring maintaining the rubber bushing and the reaction plate in compressed loaded position, and said split type retaining ring being spaced from said annular shoulder while said reaction plate is in compressed loaded position and with said split type ring being removable from said groove permitting said reaction plate to be moved axially of the lip into and out of said cup-shaped housing.

3,089,718
BALL JOINT
Rudolf Gottschald, Osterath, and Wolfgang Scheerer, Dusseldorf, Germany, assignors to A. Ehrenreich & Cie., Dusseldorf-Oberkassel, Germany
Filed Jan. 8, 1960, Ser. No. 1,279
Claims priority, application Germany Jan. 9, 1959
5 Claims. (Cl. 287—90)



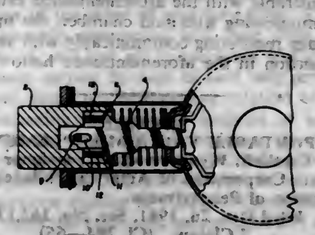
1. A ball joint, especially a supporting joint for individually suspended wheels of motor vehicles, which comprises: a stud, a ball head connected to said stud, a housing extending around said ball head and having an inwardly opening annular groove near the equatorial zone of said ball head, and at least one ball socket located within said housing and surrounding a major portion of said ball head, said socket having a circumferential collar protruding radially outwardly beyond the outer contour of the remainder of said socket means and resting in said annular groove, said socket also being provided with a plurality of radial slits extending from that side of said socket which is remote from the load receiving side thereof through said collar, said socket and said housing confining with each other a chamber located at the loaded side of said ball socket to provide space for axial movement of said socket, said collar being resilient in the axial direction to permit axial movement of the socket under axial load.

3,089,719
POWER OPERATED LATCH FOR CONVERTIBLE TOPS
Alex Csizmansky, Dearborn, Mich., assignor to Dura Corporation, Oak Park, Mich., a corporation of Michigan
Filed July 22, 1960, Ser. No. 44,705
1 Claim. (Cl. 292—25)



A power operated latch mechanism for folding tops of convertible vehicles, and comprising:
a top header formed to provide an elongated and shallow housing for overlapping and abutting engagement with a windshield header bar,
a latch mechanism provided in said top header and including bell crank latch members provided near opposite ends of said housing and extendable through the abutting face thereof for latching engagement with means provided on said windshield header bar, said windshield header bar including latch receptive slots having pin means provided therein and receptive of said latch members in engagement therewith, said latch members having a compound cam surfaced end engaging said pin and for pulling said housing down and into sealing engagement with said windshield header bar,
means for mounting said latch members in said housing and including limit stops for the full retracted positioning of said latch members therein,
latch operating means provided centrally in said housing and operatively connected to the inner disposed ends of said latch members,
said operating means including a gear member, a pinion gear in peripheral and driving engagement with said gear member, a drive motor operatively connected to said pinion gear, and extended latch operating members pivotally engaged to said gear member on diametrically opposite sides thereof and to the inner ends of said latch members,
said latch members being synchronously and positively operable by said gear member through said latch operating members and said limit stops precluding over center travel of said latch operating members in the rotation of said gear member and the actuation thereof.

3,089,720
COMBINATION LATCH BOLT AND FRICTION LATCH
Ernest L. Schlage, Burlingame, Calif., assignor to Schlage Lock Company, a corporation
Filed Feb. 21, 1961, Ser. No. 90,751
2 Claims. (Cl. 292—169)



1. In a door lock, said lock having a retractor, said retractor having a fixed stroke, and a latch bolt, said latch bolt having a longer stroke, a link connecting the latch bolt with the retractor, a strike plate to receive the latch bolt, said retractor when fully retracted retracting the latch bolt substantially three-quarters of its stroke with relation to the strike plate, a yielding connecion between the latch bolt and the retractor permitting movement of the latch bolt beyond that caused by the retractor, said yielding movemen permitting full retraction of the latch bolt when a push or pull is applied to the door.

3,089,721
RAZOR CLAM DIGGER
John Puckett, Olympia, Wash., assignor of one-half to Glenn Courtney, Olympia, Wash.
Filed Dec. 30, 1960, Ser. No. 79,882
6 Claims. (Cl. 294—50.7)

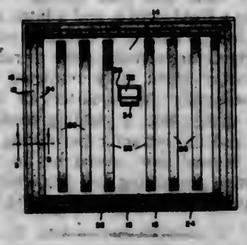
1. For use while facing the surf and digging on the beach, or alternatively, in the surf, a clam digger comprising: a hollow shell vertically elongated ovate in a plane at right angles to the vertical axis of said shell, said shell being open and provided with an endless cutting edge

at its bottom and being closed at its top except for an axially centered orifice, the hollow portion of said shell defining and providing a sand and embedded clam trapping chamber, a T-shaped handle embodying an elongated shank having its lower end rigidly joined to a central portion of said closed upper end, and a crosshead at right angles to and centrally joined to the upper end of said shank and providing hand-grips, said shank being amply long considered in conjunction with the shell to, in this manner, obviate the necessity of stooping and crouching



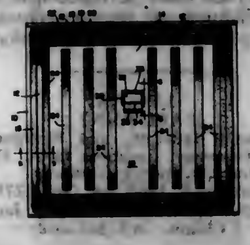
when using the digger, one of said hand-grips being hollow, said hollow grip having an underneath side provided with an exhaust port and being further provided with a downwardly disposed finger controlled nipple registering with said port, said shank being hollow and providing an open-ended passage, a lower end of said passage being registrable with the aforementioned exhaust orifice and communicating with said chamber, the upper end of said passage registering communicably with an end of the hollow portion in the aforementioned hollow hand-grip.

3,089,722
PORTABLE VACUUM IMPLEMENT
Jacob J. Creskoff, Wynnewood, Pa., assignor to Vacuum Concrete Corporation of America, Philadelphia, Pa., a corporation of Pennsylvania
Filed Dec. 26, 1961, Ser. No. 162,118
7 Claims. (Cl. 294—65)



1. A portable vacuum implement comprising a plate providing a work surface, a compressible resilient elastomeric sealing gasket having interconnected cells secured to said surface and defining therewith an open chamber, an air impervious resilient elastomeric flap having an edge secured peripherally to said gasket and a second edge anchored peripherally beyond said gasket, said flap and gasket defining a tubular passage, and means communicating with said chamber for exhausting the same.

3,089,723
PORTABLE HANDLING IMPLEMENT
Richard M. Fortson, Philadelphia, and Jacob J. Creskoff, Wynnewood, Pa., assignors to Vacuum Concrete Corporation of America, Philadelphia, Pa., a corporation of Pennsylvania
Filed Dec. 26, 1961, Ser. No. 162,119
13 Claims. (Cl. 294—65)



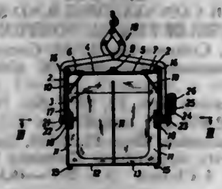
1. A portable handling implement comprising a plate, a compressible resilient elastomeric sealing gasket having interconnected cells secured to one surface of said plate and defining therewith an open chamber, a substantially incompressible air impervious resilient elastomeric flap adhesively secured under tension to said gasket and extending peripherally therebeyond, means communicating with said chamber through said plate for exhausting the same, and support means carried by said plate.

3,089,724
MAGNETIC JUNK SUB
George C. Crooks, Calgary, Alberta, Canada, assignor to Sentinel Oil Tool Development & Services Ltd., Calgary, Alberta, Canada
Filed Dec. 5, 1960, Ser. No. 73,812
12 Claims. (Cl. 294—65.5)



1. A magnetic junk sub adapted to be secured in series with a drill stem string, comprising in combination, a non-magnetic longitudinally extending tube, a shouldered portion around said tube adjacent one end thereof, means on each end of said tube adapted to receive couplers of adjacent elements of said drill stem string, and a magnetic assembly frictionally mounted around said tube between said coupler and said shoulder, said magnetic assembly including a pair of spaced apart cylindrical end pieces surrounding said tube, one end of one of said cylindrical end pieces registering against said shouldered portion, one end of the other of said cylindrical end pieces being engaged by the adjacent end of one of said received adjacent drill string couplers, said magnetic assembly also including at least two sets of arcuately curved magnetic elements mounted around said tube and between said cylindrical end pieces, a pair of cylindrical sleeves surrounding said magnetic elements and engaging by one end of each thereof, said cylindrical end pieces, said magnetic assembly also including a centrally located magnetic separator around said tube and between said sets of magnetic elements, the other ends of said cylindrical tubes engaging said separator.

3,089,725
TILTABLE CONTAINER FOR TRANSPORTING BULK MATERIALS
Josef Bertels, Berzdorf-Wesseling, near Cologne, Germany, assignor to Wilhm Westdeutsche Industrie-u. Strassenbau-Maschinen-Gesellschaft m.b.H., Gelnhausen, Germany
Filed Dec. 26, 1961, Ser. No. 162,138
Claims priority, application Germany Dec. 30, 1960
10 Claims. (Cl. 294—73)



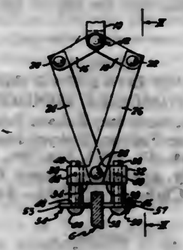
1. A tiltable container for transporting bulk materials, comprising a body substantially in the shape of a parallelepipedon having a top wall, a bottom wall and an envelope forming side walls, said body being adapted to be stacked in contiguous rows and superimposed tiers of identical containers in a gapless and space-saving manner, an emptying and filling aperture in said top wall, closure means in said top wall for said aperture, baffle plates extending within the container from peripheral regions of said top wall to said envelope, for guiding said bulk material towards said aperture when the container is tilted in a top-down position for discharging said bulk materials and coaxial recesses formed in two opposite side walls substantially within a horizontal plane including the center of gravitation of the container, said recesses forming engaging means adapted to receive from outside holding members of an external lifting device for grabbing, lifting, transporting and tilting the container, all portions of said engaging means falling within the space defined between said two side walls.

3,089,726
GRAPPLE
Robert G. LeTourneau, P.O. Box 2307, Longview, Tex.
Filed Jan. 18, 1961, Ser. No. 83,434
1 Claim. (Cl. 294—88)



A grapple comprising opposed load engaging fingers having a common pivot, a grapple closer arm integral with one of said fingers and extending laterally of said pivot in the direction away from said finger, a first sheave mounted on said closer arm, a grapple opener arm integral with said one finger and extending outwardly therefrom, a bridge structure, a link member, means pivoting said bridge structure at one end to said one finger at the outer center portion thereof, means pivoting one end of said link member to the other end portion of said bridge structure, means pivoting the other end of said link member to said other finger at the outer center portion thereof, a second sheave mounted on said bridge structure above said common pivot, a hoist cable bearing on said second sheave, passing downward and around said first sheave and thence upwardly and dead-ended on said bridge structure, an electric motor mounted on said bridge structure, a cable drum driven by said motor, cable on said drum and having one end dead-ended on said opener arm, and means for supplying power to said motor.

3,089,727
SUPPORTING GLASS SHEETS
William J. Hay, Jr., Cheswick, Pa., assignor to Pittsburgh Plate Glass Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed July 29, 1960, Ser. No. 46,306
5 Claims. (Cl. 294—118)

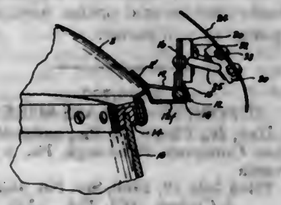


1. In tongs for supporting a glass sheet in a substantially vertical plane and comprising a tong support pin, a pair of links having an upper portion and a lower portion, each link being pivoted at its upper portion to said tong support pin, a pair of link pins, a pair of tong arms having an upper portion and a lower portion, one of said link pins pivotally connecting the lower portion of one of said links and the upper portion of one of said tong arms, the other of said link pins pivotally connecting the lower portion of the other of said links with the upper portion of the other of said tong arms, a common hinge pin pivotally connecting said tong arms together at a point below said link pin connections, and glass sheet gripping means carried by each of said tong arms below said common hinge pin in opposing relation to one another for engaging the opposite surfaces of said glass sheet near its top edge, the improvement in said glass sheet gripping means comprising a pair of opposed glass engaging members having smooth, peripheral edge surfaces opposing one another to engage the opposite sides of a flat glass sheet therebetween, means pivotally attaching one of said pair of glass engaging members in freely pivotable relation to one of said tong arms about a first axis substantially parallel to the surface of said engaged glass sheet, and means pivotally attaching the other of said pair of glass engaging members in freely pivotable relation to the other of said tong arms about an axis substantially parallel to said first axis, each of said glass engaging members being pivotally attached concentrically thereof to said pivotally attaching means.

3,089,728
HORIZONTAL DEFLECTORS
Hugh W. Shumaker, 517 S. Jackson, Moscow, Idaho
Filed Nov. 17, 1961, Ser. No. 153,047
7 Claims. (Cl. 296—91)

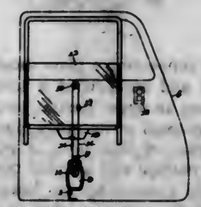
1. An attachment device for an automobile having a rain gutter extending across the back end of the automobile top and a back window in the automobile below said rain gutter, said rain gutter including a horizontal portion and an integral vertical wall portion spaced from the top, said attachment device comprising a vertically disposed and horizontally elongated dam plate positioned in said rain gutter between the top of the automobile and said vertical wall portion, said dam plate extending

above said vertical wall portion and across substantially the entire width of the window and a wind deflector



horizontally disposed and mounted in spaced relationship above said dam plate and the top of the automobile.

3,089,729
RAISING AND LOWERING DEVICE FOR AUTOMOBILE WINDOWS
Hiroyuki Kumai, Koto-ku, Tokyo, Japan, assignor to Kinzo Tajima, Tokyo, Japan
Filed Feb. 28, 1961, Ser. No. 92,262
Claims priority, application Japan July 26, 1960
2 Claims. (Cl. 296—44)



1. A device for operating vehicle windows to predetermined open and closed limit positions, respectively, in vehicle doors comprising

a mechanism disposed in the vehicle doors and operable from within the vehicle,

said mechanism comprising a circuit including a reversible motor for operation of and coordinated to each said vehicle windows,

said motors including a first motor, coordinated to a first window disposed in a first vehicle door next to the driver's seat, and a plurality of second motors coordinated to corresponding second windows disposed in corresponding second vehicle doors,

each of said windows including a lower frame,

two first switches disposed in each vehicle door and operating

as limiting means in said circuit and adapted to stop operation of the corresponding of said motors upon reaching the uppermost and lowermost position, respectively, by the corresponding window,

a second switch operating as reversing switch in said circuit coordinated to each of said second motors and adapted to reverse the direction of rotation of said second motors,

a third switch operating as reversing switch disposed next to the driver's seat and operating said first motor and said second motors in parallel with said second switches,

a fourth switch disposed in said circuit in parallel with said second and third switch and operable upon locking said first door,

means for raising and lowering, respectively, each of said windows,

said means comprising two pulleys disposed vertically spaced apart from each other, an endless wire running on said pulleys being driven by the corresponding of said motors, and said endless wire being secured at a predetermined point to the corresponding of said lower frame in order to join the movement of said endless wire, and

lever means disposed in each of said doors and operating said first switches upon reaching the limit positions of the corresponding windows to stop operation of the corresponding of said motors.

3,089,730
DEVICE FOR CONNECTING AND SUPPORTING CHAIR FRAME PORTIONS
Alfons Mauser, Cologne-Ehrenfeld, Germany, assignor to Mauser Kommandit-Gesellschaft, Cologne-Ehrenfeld, Germany
Original application Nov. 22, 1957, Ser. No. 698,310, now Patent No. 2,975,827, dated Mar. 21, 1961. Divided and this application Dec. 12, 1960, Ser. No. 75,145
Claims priority, application Germany May 25, 1957
4 Claims. (Cl. 297—463)



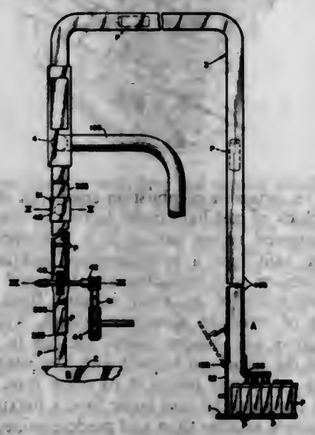
1. A chair structure adapted to be supported on a floor on a stand, comprising first and second laterally spaced supports, each including a forwardly extending finger for securing said support to a seat, a rearwardly extending finger for securing said support to a back frame, and a downwardly extending finger for securing said support to said floor stand, and at least one brace element interconnecting said supports, a seat portion having an end wall with two spaced bores defined therein extending inwardly therefrom at laterally spaced locations in alignment with said forwardly extending finger portions of said supports, said seat portion being inserted over said finger portions.

3,089,731
FLEXURE TYPE TIRE TRIM
James H. Barnes, 154 1st St., Wadsworth, Ohio
Filed Jan. 24, 1961, Ser. No. 84,534
5 Claims. (Cl. 301—37)



1. In a resilient protective and decorative sidewall trim adapted to be removably secured between a tire rim or wheel flange and a bead of a tire mounted on such tire rim, such sidewall trim comprising a radially inner skirt for compressive engagement between a tire rim flange and a tire bead, and a radially outer section for decorating and protecting the sidewall of a tire with which the sidewall is operatively engaged, said outer section having a molded shape with a concave axial inner surface and a convex outer surface, such molded concave shape being on a smaller radius than the general radius of curvature of a tire sidewall with which the tire trim is associated, said outer section having a plurality of radially spaced concentric annular recesses in its axial inner surface to provide a plurality of flexure areas in the tire trim, said recesses being of substantially U-shape in section and being spaced radially of each other a distance of about three to five times the depth of the recesses.

3,089,732
METHOD AND APPARATUS FOR HANDLING ARTICLES
Goffredo Gamberini, Bologna, Italy, assignor to American Machine & Foundry Company, a corporation of New Jersey
Filed July 31, 1959, Ser. No. 830,924
Claims priority, application Italy Sept. 9, 1958
6 Claims. (Cl. 302—2)



1. In an article conveying system, a starting station, an arrival station remote from said starting station, a conduit extending from said starting station to said arrival station and providing for said articles a path of travel therebetween, means connected to said conduit for including a flow of air therein from said starting station to said arrival station, thereby to carry the articles through said conduit, and means responsive to the number of articles accumulated at the discharge end of said conduit for controlling the delivery of articles to said arrival station, the last-mentioned means including means providing lighting at an interior portion of the conduit and photoelectric means sensitive to variable lighting effects thereat caused by the movement of articles in the conduit.

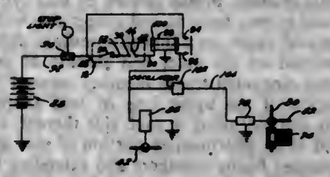
3,089,733
LOADER
Edward A. Natanson, 808 W. Harry, Wichita, Kans.
Filed Nov. 15, 1960, Ser. No. 69,471
6 Claims. (Cl. 302—56)



1. An ensilage loader for a tractor having a power take-off means, comprising, in combination, two vertically spaced and normally horizontally disposed U-shaped frame members, the base portion of said U-shaped frame members being joined by upright support members at the sides thereof, the base portion of the lower one of said U-shaped frame members being constructed and adapted to receive supporting structure of said tractor and to be carried thereby, a box-like housing secured to and positioned between the outer end portion of said lower one of said U-shaped frame members, said box-like housing being closed at the back, sides and bottom, being tapered from top to bottom at the front end portion thereof and open at the front, a shelf secured to the back sides of said housing and extending between said outer end portion of said lower one of said U-shaped frame members, a blower housing secured to the inside face of said back of said box-like housing, said blower housing having a generally cylindrical body portion centrally positioned on said back of said box like housing, said blower housing being shaped at the top portion thereof to form a cylindrical outlet extending upwardly beyond said top of said box-like housing, one side of said outlet being tangential to the side of said body portion of said blower housing and disposed vertically, a blower fan centrally mounted in said body portion of said blower housing with the drive shaft thereof extending through said back of said box-like housing and journaled on said shelf, said drive shaft of said blower fan having a plurality of blades extending radially therefrom and extending longitudinally along said drive shaft across said body portion of said blower housing, said blower housing having a circular inlet opening at the front end thereof coaxial with said blower fan, a conveyor shaft rotatably secured in its end portions to the lower forward portion of said sides of said box-like housing, a sprocket operatively connected to one end portion of said shaft, four straight and longitudinally extending paddles centrally mounted on said shaft and extending radially therefrom, said paddles being equally spaced around said shaft and positioned adjacent said inlet opening in said blower housing, two coaxial spiral flights mounted on said shaft with one end portion of each adjacent one of said paddles, said flights extending in opposite directions from said paddles with a common pitch around said shaft to said end portions of said shaft and being secured to said shaft to turn therewith, the resulting augers and said paddles being dimensioned so that the outer edge portions thereof are spaced from said blower housing and said floor of said box-like housing, a chute rotatably mounted on the upper end portion of said cylindrical portion of said blower housing and extending upwardly therefrom in an arcuate manner, means carried by said cylindrical portion of said blower housing and cooperable with said chute to rotate said chute, an adjustable ensilage deflector pivotally mounted on the outer end portion of said chute, a round and elongated frame member secured to the outer end portion of the upper one of said U-shaped frame members and extending to each side thereof, a drive shaft journaled in an intermediate portion of said upper one of said U-shaped frame members and extending to each side thereof, three sprockets secured to said drive shaft to turn therewith, one of said last-named sprockets being mounted at each end portion of said drive shaft and the other of said last-named sprockets being secured to said drive shaft adjacent one side of said upper one of said U-shaped frame members, other frame means connecting the sides of said upper one of said U-shaped frame members and the intermediate portion of said tubular frame member, mounting means positioned between and carried by said upright support members, a servo motor pivotally securable in one end portion to said mounting means, the other end portion of said servo motor being pivotally secured to said other frame means, arms secured in one end portion to opposite ends of said tubular frame member, a second conveyor shaft rotatably secured in its end portions to the other end portion of said arms, two spiral flights coaxially mounted on said second conveyor shaft,

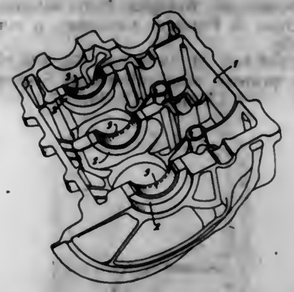
said last-named flights meeting at the center of said second conveyor shaft and extending outwardly therefrom to said end portions of said second conveyor shaft in opposite directions and with a common pitch, said last-named flights having teeth formed on the radial outer edges thereof, sprockets mounted on the end portions of said conveyor shaft, chain means connecting said sprockets on the end portion of said second conveyor shaft with said sprockets on the end portions of said drive shaft, a power shaft journaled on said shelf and connectable to said power take-off means on said tractor, a gear box mounted on said shelf, said gear box having an input shaft and an output shaft, pulleys mounted on said power shaft, said blower fan shaft and said input shaft of said gear box, belts connecting said pulleys so that as said power shaft is turned said blower fan drive shaft will be rotated and said input shaft and said output shaft of said gear box will be turned, said output shaft of said gear box extending over said shelf and having a sprocket at the end thereof, chain means connecting said sprocket on said output shaft of said gear box with said drive shaft on said upper one of said U-shaped frame members to turn said drive shaft and rotate the augers of said second conveyor shaft, and other chain means connecting said output shaft of said gear box with said sprocket on said first-named shaft to rotate said augers and said paddles of said first-named shaft, said device being constructed and adapted so that said augers of said second conveyor shaft can be rotated, said augers and paddles of said first conveyor shaft can be rotated and said blower operated through said power take-off, and said second conveyor shaft moved in an arcuate direction by said servo motor acting on said other frame means, and so that said augers and said paddles of said first-named shaft will receive ensilage and the like loosened by said upper of said augers and deliver same to said blower housing and discharge same therefrom through said chute onto a nearby vehicle.

3,089,734
FREQUENCY OPERATED BRAKE ANTI-SKID DEVICE
Eugene Jankus, Detroit, Mich., assignor to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware
Filed Jan. 23, 1961, Ser. No. 84,047
9 Claims. (Cl. 303—86)



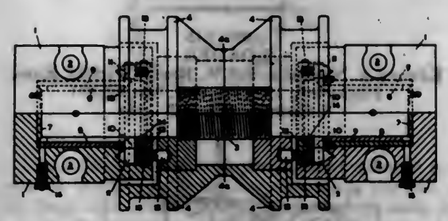
1. In a hydraulic braking system for an automotive vehicle having hydraulic cylinder actuated wheel brakes and a manually operable primary pressure developing mechanism operatively connected to the brake cylinders, a secondary hydraulic cylinder, a secondary source of pressure, said secondary cylinder having one side connected to said primary mechanism and the other side to said secondary source of pressure through conduit means. solenoid valve means in said conduit means for dumping the pressure from said secondary source in response to an electrical signal, oscillator means for cyclicing said electrical signal, accelerometer means operatively connected to said wheels for measuring the deceleration thereof, electrical circuit means electrically connecting said accelerometer means to said oscillator means, and electrical switching means in said circuit means actuated by said accelerometer for completing said circuit means at a predetermined deceleration of said wheels.

3,089,735
RECIPROCABLE COMBUSTION ENGINE
Karl Ernst Mann, Meinerzhagen, Westphalia, Germany, assignor to Otto Fuchs Kommanditt Gesellschaft, Meinerzhagen, Westphalia, Germany
Filed May 31, 1961, Ser. No. 113,892
Claims priority, application Germany June 2, 1960
19 Claims. (Cl. 308—23)



1. In a reciprocable combustion engine, in combination, a motor block of cast light metal having in one face thereof an elongated recess having in a transverse direction parallel to said face a predetermined maximum transversal extension and including an elognated insert consisting essentially of an alloy selected from the group consisting of wrought aluminum alloys, wrought magnesium alloys and copper alloys located in said recess fitting into the same and formed with a substantially elongated part cylindrical recess in its outer face, said recess having in the plane of said outer face a maximum transverse extension smaller than said predetermined maximum transversal extension and the compression yield strength of said alloy being greater than that of the cast light metal of said motor block; and a bearing shell adapted to support a crankshaft fitting into said cylindrical recess in said insert, whereby pressure exerted by a crankshaft on said bearing shell will be distributed upon a surface area of said cast light metal of said cast motor block which is greater than the area of contact between said insert and said bearing shell.

3,089,736
BEARINGS
Alfred James Cullinane, Binnegar Farm, East Stoke, Wareham, England
Filed Dec. 9, 1960, Ser. No. 74,904
5 Claims. (Cl. 308—36.1)



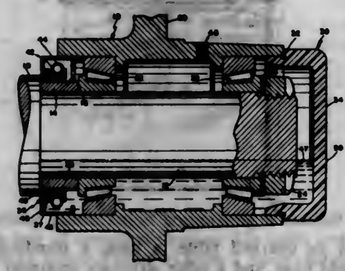
1. A bearing assembly including a track roller, a shaft extending from each end of the track roller so as to rotate therewith, two housings, one for each shaft end, a bearing surface in each housing for rotatably supporting the shaft end that is housed therein, an annular cavity in each housing between the bearing surface therein and the track roller, a sealing plate surrounding each shaft end and closing the annular cavity in the housing, a lubricant passage extending into each housing and from which injected lubricant is forced to flow over the bearing surface in the housing before reaching the annular cavity from whence it can escape past the sealing plate, and a cavity in each side face of the track roller and into which said housings project, there being means in each cavity in the track roller to maintain an annular space between each sealing plate and the opposed end wall of the cavity of the track roller such that lubricant escaping past the sealing plates can collect in these annular spaces.

3,089,737
BEARING ASSEMBLY
Guy D. Bradley, Erie, Pa., assignor to General Electric Company, a corporation of New York
Filed Nov. 25, 1960, Ser. No. 71,789
16 Claims. (Cl. 308—187)



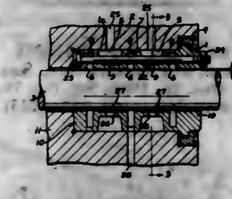
15. In combination with first and second axially aligned rotatable shafts, a bearing assembly having inner and outer rotating races with bearing elements therebetween for axially aligning said shafts; a housing member having an annular portion extending axially with respect to said shafts, said outer race being non-rotatively secured within said annular portion, said inner race being non-rotatively secured on one of said shafts, said housing member being non-rotatively fitted into housing member receiving means provided by the other of said shafts, said housing member having an annular portion extending inwardly beyond said outer race and together with said receiving means defining a lubricant-retaining cavity about said bearing, and means for preventing bearing lubricant from centrifuging from said cavity between said housing member and said receiving means.

3,089,738
BOAT TRAILER HUB WITH OIL BATH AND WATER SEAL
Charles L. Steiner, 4774 70th St., La Mesa, Calif.
Filed July 10, 1961, Ser. No. 122,889
1 Claim. (Cl. 308—187)



A permanently sealed un-vented wheel mounting assembly comprising:
a fixed axle;
a stainless steel sleeve collar having a smooth polished surface of fixed diameter positioned to encircle said axle and affixed thereto and spaced from an end of said axle;
a wheel hub, having bearings, mounted for rotation on said axle;
means, comprising a two-lipped annular seal positioned to encircle said collar with said lips in contact with said smooth outer surface, for providing a frictional seal between said hub and said collar; helical coil spring means, positioned to encircle said annular seal, for producing uniform constant contact between said lips and said smooth outer surface of said collar;
an means to seal said sub adjacent said end of said axle; said hub having a filler hole and closure therefor, whereby fluid lubricating oil may be inserted in said hub; said means including a transparent cup-shaped hub cap sealed to said hub and having its transparent face portion adjacent the end of said axle, whereby the level of said oil can be visually inspected; said transparent face portion portion of said hub cap having an oil level indicator line thereon.

3,089,739
JOURNAL-BEARING BUSHING
Rudolf Spieth, Straßelosweg 5-13, Esslingen (Neckar), Germany
Filed Sept. 6, 1960, Ser. No. 54,103
1 Claim. (Cl. 308—237)



A journal bearing bushing having a plurality of outer circumferential grooves and a plurality of inner circumferential grooves offset with regard to said outer circumferential grooves in axial direction of said bushing thereby subdividing said bushing into a plurality of annular outer bearing sections to be received in a bore of a supporting member and into a plurality of annular inner bearing sections for receiving a rotatable member to be journalled in said bushing, the peripheral wall thickness of said outer bearing sections being less than the peripheral wall thickness of said inner bearing sections whereby when said bushing is subjected to an axial force first the outer bearing sections are pressed radially outwardly and only thereafter in response to a further increase of such axial force the inner bearing sections are pressed radially inwardly, and a plurality of heat expandable pins arranged between the inner and outer periphery of said bushing and extending in longitudinal direction of said bushing from one end to the other end thereof.

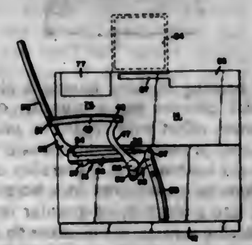
3,089,740
PORTABLE RADIO CABINET
Robert S. Huff, Oak Park, Ill., assignor to Motorola, Inc., Chicago, Ill., a corporation of Illinois
Filed Dec. 2, 1960, Ser. No. 73,446
1 Claim. (Cl. 312—7)



A cabinet for a portable radio receiving set comprising a casing portion having a base portion formed at the

bottom thereof, said base portion being slanted upwardly toward the back of said casing portion, a downwardly extending flange positioned along the front and one side of said base portion to form a blade receiving recess, a substantially rigid and flat elongated blade arm to be received in said recess so that said blade arm is maintained flush with the bottom of said casing and against that part of said flange along said front, pivotal mounting means for securing one end of said blade arm to said base portion adjacent that part of said flange along said one side, a detent disposed upon said base portion adjacent said pivot portion, said detent comprising a spring clip fixedly mounted upon the inner wall of the bottom of said base portion, a ball slidably disposed in said opening in abutting relationship to said spring clip at the inner surface of said blade arm, said blade arm being pivotable out of said recess and engageable with that part of said flange along said one side in a fully extended position and further having a plurality of sockets formed therein to serially receive said ball so that the arcuate movement of said blade arm may be restricted to a plurality of predetermined unretracted positions for supporting said cabinet on a surface in a rearwardly slanting upright manner.

3,089,741
DENTAL EQUIPMENT
William E. Burton, 616 Ventura Ave., San Mateo, Calif.
Filed Dec. 16, 1960, Ser. No. 76,402
14 Claims. (Cl. 312—223)

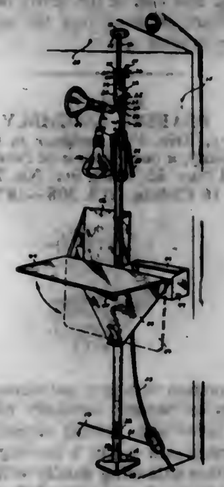


1. Equipment for dental and medical treatment comprising a base, a frame, extensible means for raising and lowering said frame relative to said base, a dental-type chair, support means for mounting said chair in cantilever relationship to said frame for movement with said frame, and a dental-type equipment cabinet mounted for raising and lowering movement with said frame, said extensible means being under control of an operator to raise and lower said chair and follower relative to said base while said chair is occupied.

3,089,742
PORTABLE WORK COUNTER
Earl A. Powell, 3901 E. 30th St., Des Moines, Iowa
Filed Apr. 24, 1961, Ser. No. 105,019
11 Claims. (Cl. 312—223)

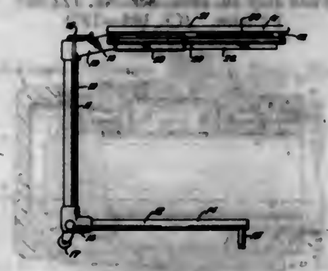
1. In a portable work counter, a first pipe standard adapted to have its lower end engaging a supporting surface, a second pipe standard slidably extending into said first standard and adapted to have its upper end engaging a ceiling, a bearing slidably embracing the upper end portion of said first standard, an ear on said bearing, an arm having its lower end hinged to said first standard, a lever having its central length area hinged to the other end of said arm, and its upper end portion slidably extending through said ear, a stop means on said lever and below said ear, a coil spring embracing said lever having one end engaging said stop means and its other end engaging said ear, a stop means on said second standard capable of being engaged by said bearing, and a work counter operatively secured to said first standard.

10. In a portable work counter, a first pipe standard adapted to have its lower end engaging a supporting surface, a second pipe standard slidably extending into said first standard and adapted to have its upper end engaging a ceiling, a bearing slidably embracing the upper end portion of said first standard, an ear on said bearing, an arm



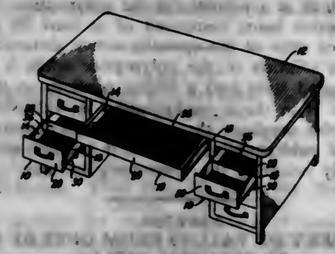
having its lower end hinged to said first standard, a lever having its central length area hinged to the other end of said arm, and its upper end portion slidably extending through said ear, a stop means on said lever and below said ear, a coil spring embracing said lever having one end engaging said stop means and its other end engaging said ear, and a stop means on said second standard capable of being engaged by said bearing.

3,089,743
OVERBED TABLE
Leo W. Heyl, Cincinnati, Ohio, assignor to Institutional Industries, Inc., Cincinnati, Ohio, a corporation of Ohio
Filed Sept. 2, 1960, Ser. No. 53,821
4 Claims. (Cl. 312—227)



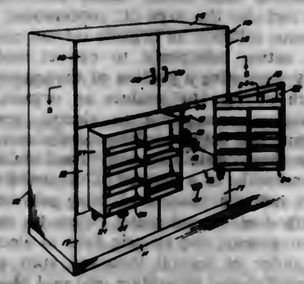
2. In an overbed table, a base, a standard mounted upon said base, and a table structure mounted upon said standard, said table structure comprising a frame extending horizontally from one side of said standard adjacent the upper end thereof, an open-topped tray removably carried by said frame adjacent the free end thereof, a unitary table top mounted upon said frame for horizontal sliding movement in its entirety between a first position covering said tray and a second position revealing the same, and a mirror hingedly mounted adjacent said tray for movement between raised and lowered positions, said mirror when in lowered position extending generally horizontally below the level of said table top and being concealed by the table top when the same is in its first position.

3,089,744
DRAWER FOR CABINETS
Richard J. Valentine, 23050 Park St., P.O. Box 1425, Walnuts, Calif.
Filed Dec. 13, 1960, Ser. No. 75,606
5 Claims. (Cl. 312—229)



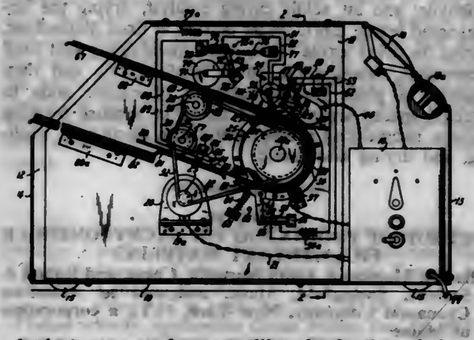
1. In combination: a drawer and means for mounting same to slide to-and-fro in a horizontal path, said drawer having four sides and an impervious bottom wall having a top surface; a flat perforated sheet sized to completely cover said bottom wall between said sides; and thin resilient flexible support elements distributed throughout the area of said sheet between the bottom of said sheet and the top surface of said bottom wall supporting said sheet in said drawer a small fraction of an inch above said bottom wall to provide a dust space therebetween, receiving dust and particulate debris filtered through said perforated sheet by the to-and-fro movement of said drawer, said resilient elements providing a cushioned support for said perforated sheet.

3,089,745
CABINET WITH MULTIPLE VERTICALLY MOUNTED SEPARATE SHELVING MEMBERS
Louis J. Postula and Victor A. Postula, both of R.F.D. 3, Marshall, Mich.
Filed Dec. 27, 1960, Ser. No. 78,713
8 Claims. (Cl. 312—324)



7. A cabinet construction comprising a cabinet frame including a pair of oppositely spaced side walls and a rear wall extending therebetween to form a compartment having an opening therein opposite said rear wall, a first shelving unit, a first rigid hinge arm having one end thereof rigidly connected to said first shelving unit, means pivotally connecting the other end of said first hinge arm to one of said side walls for swinging movement of said first shelving unit between a stored position within said compartment and a projected position substantially through said opening and out of said compartment for access thereto, a second shelving unit, a second rigid hinge arm having one end thereof rigidly connected to said second shelving unit, and means pivotally connecting the other end of said second hinge arm to the other of said side walls for swinging movement of said second shelving unit between a stored position within said compartment and a projected position substantially through said opening and out of said compartment for access thereof, said first shelving unit being located between said second shelving unit and said rear wall with both of said shelving units in their stored positions, and in such stored positions the pivotal connections of said other ends of the respective hinge arms to said respective side walls being located forwardly of the respective shelving unit to which they are connected and spaced different distances from the opening to said compartment, at least one of said pivotal connections being inwardly of the opening of said compartment.

3,089,746
FEED CONTROL APPARATUS FOR RECORD SHEETS
Eugen Beyer, deceased, late of Heilbronn (Neckar), Germany, by Martha Beyer, nee Feist, Fred R. Beyer, Diana Beyer, and Christa Beyer, heirs, all of Heilbronn (Neckar), Germany; said Martha Beyer assignor to said Fred R. Beyer, Diana Beyer, and Christa Beyer
Original application July 21, 1953, Ser. No. 369,384, now Patent No. 2,946,593, dated July 26, 1960. Divided and this application June 30, 1960, Ser. No. 40,104
Claims priority, application Germany July 21, 1952
4 Claims. (Cl. 346—138)



1. An apparatus for controlling the feeding of sheets, comprising, in combination, a rotary member for transporting a sheet wrapped around the peripheral surface thereof; feeding means for successively feeding sheets to said rotary member including a guide portion located adjacent said peripheral surface of said rotary member; a combined sensing and stop element including stop means located adjacent said member and movable between an inoperative position permitting passage of a sheet to said peripheral surface of said rotary member and a blocking position located in the region of said guide portion for blocking passage of sheets to said rotary member, and a sensing means fixedly connected to said stop means and tending to move with the same to a first position engaging said peripheral surface of said rotary member, and assuming a second position when engaging a transported sheet located on said peripheral surface, said sensing means holding said stop means in said inoperative position while said sensing means is in said first position, and holding said stop means in said blocking position while said sensing means is in said second position engaging a sheet transported by said rotary member whereby feeding of sheets to said rotary member is prevented only while a sheet transported by said rotary member is located in the region of said sensing means whereas a record sheet can pass along said guide portion when no sheet is transported by said rotary member.

3,089,747
METHOD OF PREPARING RAYON PLISSÉ
Irvin H. Welch, Jr., Wilmington, Del., assignor to American Viscose Corporation, Philadelphia, Pa., a corporation of Delaware
No Drawing. Filed Apr. 4, 1958, Ser. No. 726,358
11 Claims. (Cl. 8—114.5)

1. A method of preparing a plissé fabric from a textile fabric formed predominantly of regenerated cellulose which comprises applying to and impregnating the entire textile fabric with an aqueous medium comprising from 1–6% by weight of a water-soluble cellulose ether selected from the group consisting of unsubstituted alkyl cellulose ethers, carboxyalkyl cellulose ethers, hydroxyalkyl cellulose ethers, mixed alkyl hydroxyalkyl cellulose ethers, mixed alkyl carboxyalkyl cellulose ethers and water-soluble alkali metal salts thereof, from about 1–10% by weight of a cross-linking agent selected from the group consisting of aliphatic mono-aldehydes containing from 1–8 carbon atoms and the acetal condensation product of an aliphatic mono-aldehyde containing not more than 8 carbon atoms and at least one dialkylene glycol in which the alkylene radical has from 2–4 carbon atoms, said condensation product containing per molecule at least two dioxyalkylene radicals derived from said dialkylene glycol and at least two alkylidene radicals derived from said aldehyde; and an acidic curing catalyst, drying the impregnated textile fabric under tension at fixed dimensions, curing the dried textile fabric while maintaining said fixed dimensions, relaxing the cured textile fabric and then applying a plissé forming amount of caustic soda to selected spaced areas of said fabric in a plissé forming pattern, neutralizing excess caustic with dilute acid, washing, and drying said fabric.

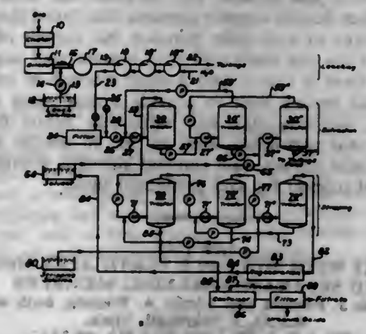
3,089,748
METHOD OF PRODUCING POLYACRYLONITRILE FILAMENTARY MATERIAL
Allan O. Mogensen, South Norwalk, Conn., and Robert J. Stevens, Springfield, Mass., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine
No Drawing. Filed Apr. 29, 1960, Ser. No. 25,512
9 Claims. (Cl. 8—115.5)

1. In a wet-spinning method that includes the step of heat-relaxing oriented, dried, polyacrylonitrile, filamentary material having a collapsed structure, the improvement which consists in bringing into contact with said filamentary material an acidic fluid medium comprising water and a reducing agent comprised of an oxygen-containing compound of sulfur while the said fluid medium is at a temperature above 100° C. but not higher than 160° C., the contact between the said filamentary material and the said fluid medium being effected not later than the aforementioned step of heat-relaxing, and the period of the said contact being from one to sixty minutes.

3,089,749
PRODUCTION OF ARTIFICIAL THREADS
Denis G. H. Ballard, Coventry, England, assignor to Courtaulds Limited, London, England, a British company
Original application Mar. 7, 1961, Ser. No. 94,069. Divided and this application Dec. 1, 1961, Ser. No. 161,762
Claims priority, application Great Britain Apr. 21, 1958
10 Claims. (Cl. 18—54)

1. A process for the manufacture of fibres composed of polymers consisting essentially of units of an optically active form of a glutamic ester chosen from the group consisting of gamma-methyl-glutamate and gamma-ethyl-glutamate which comprises polymerising an optically active N-carboxy anhydride chosen from the group consisting of the N-carboxy anhydrides of gamma-methyl-glutamate and gamma-ethyl-glutamate in an organic liquid medium which is a solvent for the polypeptide formed, the polypeptide being composed of at least 90 percent by weight of units of the optically active glutamic ester, extruding a solution of the polypeptide while it is still in the solvated state into a setting medium so that the polypeptide is in the α configuration on extrusion, and stretching the resultant threads thereby converting the polypeptide substantially into the β configuration and substantially orienting the fibre along its axis.

3,089,750
RECOVERY OF VALUES FROM ORES BY USE OF ELECTRIC FIELDS
Gilbert J. Samuelson and Albert D. Frause, Webster Groves, Mo., assignors to Petrolite Corporation, Wilmington, Del., a corporation of Delaware
Filed Aug. 18, 1958, Ser. No. 755,469
13 Claims. (Cl. 23—14.5)



1. A process for recovering metals from an aqueous solution containing such metal values and impurities, which process includes the steps of: continuously mixing with said aqueous solution an organic solvent containing an extractant acting selectively to extract said metal values; initially separating a portion of the aqueous solution from such mixture to produce an organic-solvent continuous mixture susceptible to electric resolution; further separating said organic-solvent-continuous mixture into an extract phase containing said values but no more than a few hundredths of a percent of dispersed aqueous material and a raffinate phase containing said impurities but substantially free of said metal values by subjecting said mixture in at least one electric field to electrostatic stress of the order of several thousand volts per inch followed by gravitational separation into said phases; and recycling a portion of the separated extract phase to the mixture before said initial separation thereof.

3,089,751
SELECTIVE SEPARATION OF URANIUM FROM FERRITIC STAINLESS STEELS
Richard J. Beaver, Knoxville, and Julian H. Cherubini, Oak Ridge, Tenn., assignors to the United States of America as represented by the United States Atomic Energy Commission
No Drawing. Filed Nov. 25, 1960, Ser. No. 71,844
3 Claims. (Cl. 23—14.5)

1. In a process for the selective separation of uranium from a nuclear fuel element comprising a uranium-containing core portion and a clad of a ferritic stainless steel, the steps which comprise heating said element, in a non-carburizing atmosphere to a temperature in the range 850–1050° C., maintaining said element at temperature for a period of at least 15 minutes, rapidly cooling said heated element through the temperature range 815° C. to 650° C. to avoid annealing said steel, contacting said cooled element with an aqueous nitrate solution until substantially all of the uranium values have been selectively dissolved therein, and thereafter separating the resultant uranyl nitrate solution from the remainder of said element.

3,089,752
PREPARATION AND RECOVERY OF AMMONIUM BIFLUORIDE
George Clark, Scotch Plains, N.J., assignor to The American Agricultural Chemical Company, New York, N.Y., a corporation of Delaware
No Drawing. Filed Dec. 27, 1960, Ser. No. 78,287
12 Claims. (Cl. 23—88)

9. A method for the manufacture of ammonium bifluoride which comprises reacting ammonium fluoride dissolved in an aqueous solution with an organic ammonia complexing agent selected from the group consisting of formaldehyde, acetaldehyde and acrylonitrile at a temperature not higher than about 100° C. to yield ammonium bifluoride as a product of the reaction.

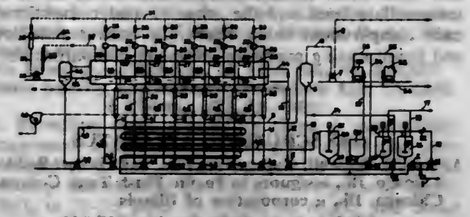
3,089,753
HYDROGEN PEROXIDE STABILIZATION
Robert E. Mecker, Berkeley, Calif., assignor to Shell Oil Company, a corporation of Delaware
No Drawing. Filed Dec. 31, 1959, Ser. No. 863,067
12 Claims. (Cl. 23—207.5)

1. Aqueous hydrogen peroxide solution of at least about 35% hydrogen peroxide concentration by weight containing between about 1 and about 1000 milligrams of water-soluble polycarboxy amine which contains at least one amino nitrogen atom to which are linked two carboxy groups directly joined to said nitrogen atom by a saturated hydrocarbon group having up to two carbon atoms between the nitrogen atom and carboxy carbon atom together with about 0.5 to about 1000 milligrams of soluble stannate per liter of said aqueous hydrogen peroxide solution.

3,089,754
METHOD FOR PRODUCING HIGH-PURITY GRAPHITE
Erich Nedopil, Meitingen, near Augsburg, Germany, assignor to Siemens-Planiawerke Aktiengesellschaft für Kohlefabrikate, Meitingen, near Augsburg, Germany, a corporation of Germany
No Drawing. Filed Oct. 20, 1958, Ser. No. 768,059
Claims priority, application Germany Oct. 25, 1957
1 Claim. (Cl. 23—209.9)

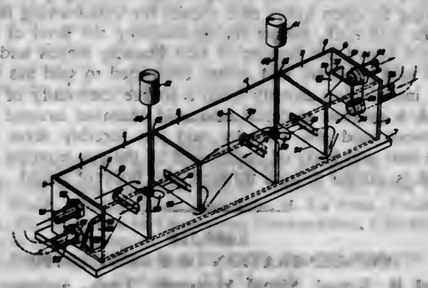
A method for producing high-purity graphite suitable as material in nuclear reactors, comprising treating a portion of graphite with a material selected from the group consisting of halogen gases and halogenide compounds in order to remove impurities from said graphite, and thereafter scavenging the graphite with a scavenging gas having a small neutron absorption cross section at a temperature at which all volatile halogenides and halogen gases are removable, said scavenging operation including two processing steps, said first step comprising treating said graphite at said temperature with high-purity nitrogen until all volatile halogenides and halogen gases are removed, and said second step comprising subsequently continuing the scavenging operation beginning at said temperature with carbon monoxide.

3,089,755
APPARATUS FOR TREATING OILS AND FATS
Ernst Gfeller, Augustinstrasse 10, Prattein, near Basel, Switzerland
Filed May 26, 1958, Ser. No. 737,861
Claims priority, application Switzerland May 28, 1957
3 Claims. (Cl. 23—260)



1. Apparatus for the selective hardening of unsaturated vegetable and animal oils and fats, comprising in combination: an autoclave having partitioning walls for partitioning the space of the autoclave into a plurality of adjacent chambers, said partitioning walls having passage means at predetermined levels for permitting passage of material to be treated from chamber to chamber when the level of the material has reached said passage means, means for conducting material to be treated in longitudinal flow through said chambers, a mixing means outside each chamber, first pipe means connecting said mixing means with said chamber and having an outlet opening below the level of said passage means, second pipe means for supplying hydrogen gas in the form of individual jets to said mixing means, and third pipe means for conveying material from said chamber to the mixing means.

3,089,756
LIQUID-LIQUID CONTACTING APPARATUS
Maurice Charles Tanner, Mirehouse, Whitehaven, England, assignor to United Kingdom Atomic Energy Authority, London, England
Filed Jan. 9, 1958, Ser. No. 707,996
Claims priority, application Great Britain Jan. 10, 1957
1 Claim. (Cl. 23—270.5)



A mixer-settler apparatus for contacting two substantially immiscible liquids of differing densities comprising a horizontal chamber of elongated form and including a base, an even number of transverse partitions dividing said chamber into an odd number of alternate mixer and settler compartments and comprising alternate overflow weirs and underflow weirs, wherein each partition defines a weir wherein the partition of an overflow weir is fixed to said base and defines liquid passage means

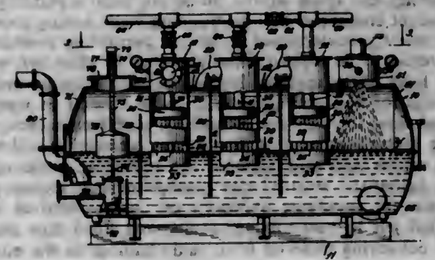
above the partition of the overflow weir, and the partition of an underflow weir is separated from said base and defines liquid passage means between the base and the partition of the underflow weir, said partitions being imperforate except at an intermediate level relative to said base whereat an angled port is defined, means defining two liquid connections in both the first and last compartments at both ends of the chamber, said first and last compartments being settler compartments, one of said connections in each compartment being above said intermediate level and the other of said connections in each compartment being below said intermediate level, and liquid mixing means in the mixer compartments.

3,089,757

GAS SCRUBBING APPARATUS

Arthur M. Buswell, Gainesville, Fla., and Hubert Beddoes, Chicago, Ill., assignors to Pacific Flush Tank Company, Chicago, Ill., a corporation of Illinois

Filed Aug. 31, 1959, Ser. No. 837,253
11 Claims. (Cl. 23—285)



1. Apparatus for scrubbing gas comprising a scrubber tank for containing a body of liquid and having a liquid inlet and outlet and a gas inlet and outlet, means for introducing liquid under pressure through said inlet, jet-forming means including a jet head disposed above the level of said body of liquid and connected to said liquid inlet for directing against the surface of the body of liquid in said tank a plurality of jets of liquid, housing means in said tank surrounding said jets extending downwardly into said body of liquid and defining a chamber having an open lower end, means for withdrawing liquid from said tank, means for maintaining the level of said liquid above the bottom of said housing means and below said jet head, and means connected to said gas inlet for introducing directly from a source externally of said tank a gaseous material into said chamber around and between said jets whereby said jets forcibly drive said gas into said body of liquid, and all the gas entering said tank is caused to pass through said body of liquid.

3,089,758

CONCENTRATION OF RARE EARTHS

Paul R. Kruesi, Signal Mountain, Tenn., assignor, by mesne assignments, to Vitro Corporation of America, New York, N.Y., a corporation of Delaware

No Drawing. Filed Apr. 18, 1960, Ser. No. 22,660
6 Claims. (Cl. 23—296)

1. A process for the concentration of rare earth elements comprising heating an aqueous solution of the chlorides of said elements at a temperature of from about 157° F. to about 162° F. until the specific gravity is from about 1.83 to about 1.87, cooling said solution to from about 122° F. to about 125° F. over a period of about 10 to about 13 hours, separating the resulting crystals enriched in light rare earths, heating the mother liquor until the specific gravity is from about 1.85 to about 1.92, allowing the mother liquor to cool no more than about 3° F. over a period of about 3 to about 5 hours and separating the resulting crystals enriched in heavier rare earths and yttrium.

3,089,759

CONCENTRATION OF RARE EARTHS

Hugh J. Bronaugh, Chattanooga, and Paul R. Kruesi, Signal Mountain, Tenn., assignors, by mesne assignments, to Vitro Corporation of America, New York, N.Y., a corporation of Delaware

No Drawing. Filed Apr. 18, 1960, Ser. No. 22,661
7 Claims. (Cl. 23—296)

1. A process for the concentration of rare earth elements comprising heating a solution of chlorides of said elements at a temperature from about 190° F. to about 203° F. until the specific gravity is from about 1.85 to about 1.92, cooling said solution to a temperature of from about 149° F. to about 160° F. during a period of from about 1 to about 3 hours to cause crystallization of rare earth compounds with an increased content of compounds selected from the group consisting of yttrium and rare earth elements having atomic numbers greater than 59, and immediately separating the crystals from the mother liquor.

3,089,760

BRIQUETTE IGNITING AND GREASE ABSORBENT MATERIAL

Sam Jaffe, Wyncote, Pa., assignor to Rexall Home Products Co., Philadelphia, Pa., a corporation of Pennsylvania

Filed Nov. 4, 1959, Ser. No. 850,802
1 Claim. (Cl. 44—41)



A fuel ignition grease absorbent material for use in a grille for cooking food comprising a free spreading, absorbent, dry, solid, non-combustible granular base capable of absorbing an inflammable component, and having a particle size range of 8 to 42 mesh, said base being selected from the group consisting of fuller's earth, bentonites, bauxites, vermiculites, expanded slag aggregates, synthetic silicates, diatomaceous earth, gypsum and asbestos, said base being intermixed with a dispersable absorbable, volatile, inflammable liquid component in the ratio by weight of 1 to 4 parts of base per part of inflammable liquid component, said material being adapted to be laid as a bed for fuel in said grille whereby said material may be easily ignited to produce a flame which emerges from beneath said fuel and surrounds said fuel to initiate the combustion thereof and whereby said material is adapted to absorb grease which may drip from said food during the cooking process.

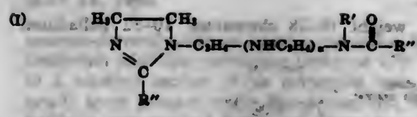
3,089,761

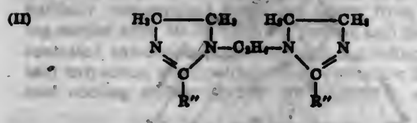
FUEL OIL COMPOSITION

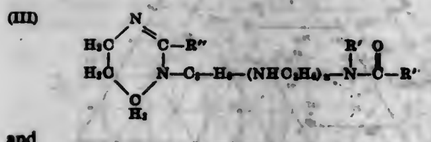
Harry J. Andress, Jr., Pitman, N.J., assignor to Socony Mobil Oil Company, Inc., a corporation of New York

No Drawing. Filed May 16, 1958, Ser. No. 735,680
15 Claims. (Cl. 44—63)

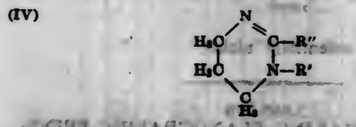
1. A distillate fuel oil containing a small amount, sufficient to inhibit emulsification of the fuel oil with water, of a fuel-oil-soluble compound selected from the group represented by the general formulae:

(I) 

(II) 

(III) 

and

(IV) 

wherein R' is selected from the group consisting of hydrogen and an aliphatic group having up to 18 carbon atoms and up to two double bonds, R'' is an unsubstituted naphthenyl group having a molecular weight up to about 300, and *n* is selected from zero and a small whole number.

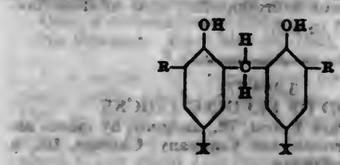
3,089,762

JET FUEL COMPOSITIONS

Harold D. Orloff, Oak Park, and John P. Napolitano, Royal Oak, Mich., assignors to Ethyl Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed July 28, 1960, Ser. No. 45,806
5 Claims. (Cl. 44—78)

1. A thermally stabilized distilled hydrocarbon jet fuel having an end point, higher than gasoline, of at least 480° F. and an API gravity, higher than hydrocarbon mineral lubricating oil, of from 35–50°, containing from about 0.01 to about 5 percent by weight of a compound having the formula:



where R is an alpha-branched alkyl group which has from 4–8 carbon atoms, and X is a halogen selected from the class consisting of chlorine, bromine and iodine.

3,089,763

COATED ABRASIVES

Matthew T. Gladstone, Scotia, N.Y., assignor to Norton Company, Troy, N.Y., a corporation of Massachusetts

No Drawing. Filed Dec. 2, 1959, Ser. No. 856,669
1 Claim. (Cl. 51—295)

In a coated abrasive product wherein a layer of abrasive grain is firmly bonded to a waterproof flexible fibrous backing member by a synthetic resin maker adhesive, the improvement comprising a size coat applied over said layer of grains and maker adhesive wherein said size coat consists essentially of a hardened mixture of (1) a phenol-formaldehyde precondensate catalyzed by a water soluble aliphatic amine containing at least one amine group selected from the group consisting of primary and secondary amine groups, and (2) 10 to 25% by weight, based on the total solids, of a condensation product of ethylene oxide and a hydrophobic base formed by the condensation of propylene oxide and propylene glycol having a molecular weight of between 2,000 and 3,000, wherein the molecular weight of said hydrophobic base unit is in the range of from 1,200 to 2,250 and the oxyethylene content of the reaction product varies between 10 and 40% of the total reactants.

3,089,764

BARRELLING CHIPS

Robert Jack Smith-Germont, East Kilbride, Glasgow, Scotland, assignor to Rolls-Royce Limited, Derby, England, a company of Great Britain

No Drawing. Filed Apr. 13, 1959, Ser. No. 805,677
Claims priority, application Great Britain Apr. 17, 1958
6 Claims. (Cl. 51—308)

1. Barrelling chips formed by firing a substantially homogeneous composition consisting of: about nine parts by weight of a fine particle mixture of ball clay and china clay, said mixture containing 50–60 parts by weight of SiO_2 to 25–35 parts by weight of Al_2O_3; and about two parts by weight of a particulate abrasive material of a mesh size in the range of 120 to 220.

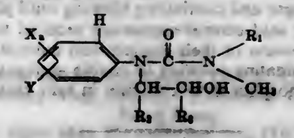
3,089,765

HERBICIDAL METHOD

Henry J. Gerjovich and Raymond W. Luckenbaugh, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Original application Sept. 10, 1959, Ser. No. 839,061. Divided and this application June 29, 1960, Ser. No. 39,432
1 Claim. (Cl. 71—2.6)

The method of killing weeds which comprises applying to the locus to be protected, in an amount sufficient to kill weeds, a compound represented by the formula



wherein X is halogen; Y is selected from the group consisting of hydrogen, alkyl of less than 5 carbons, and nitro; *n* is a positive integer less than 3; R_1 is alkyl of less than 5 carbons; and R_2 and R_3 are selected from the group consisting of hydrogen and methyl, provided that at least one of R_2 and R_3 is hydrogen.

3,089,766

CONTROLLED CHEMISTRY CUPOLA

Lee H. De Wald, deceased, late of Aurora, Ill.; Elsie K. De Wald, administratrix, and John B. La Pota, Evanston, Ill., assignors to Chemetron Corporation, Chicago, Ill., a corporation of Delaware

No Drawing. Filed Jan. 27, 1958, Ser. No. 719,179
6 Claims. (Cl. 75—43)

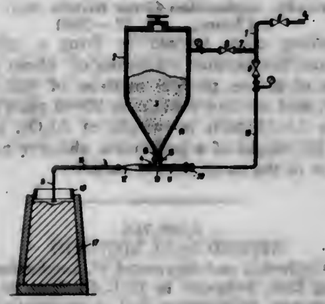
1. A process for maintaining a normal and substantially constant operation in a shaft-type furnace utilizing a solid combustible in the charge to obtain uniform melting of metals therein and to increase the overall efficiency of furnace operation which comprises the steps of injecting, directly into one or more radially spaced tuyeres of the furnace at a velocity greater than that of the air blast, high purity oxygen for from five to fifteen minutes before the initial tap in volumes of from 1% to about 4% of the air blast volume to obtain and maintain uniform

temperatures, gas compositions and metal temperatures within the furnace.

3,089,767
METHOD AND APPARATUS OF TREATING INGOTS OF IRON OR STEEL

Rudolf Rinesch, Linz (Danube), Austria, assignor to Vereinigte Osterreichische Eisen- und Stahlwerke Aktiengesellschaft, Linz, Austria, a company of Austria

Filed Apr. 27, 1960, Ser. No. 24,941
Claims priority, application Austria Apr. 30, 1959
2 Claims. (Cl. 75—51)



1. A method of treating ingots of a metal of the class consisting of iron and steel comprising pouring the molten metal into an ingot mold, cooling the metal to form a solidified outer portion and form a pasty central region in the upper portion of the ingot in the mold, then blowing a jet of high-oxygen gas having finely-divided basic slag-forming agents comprising lime and calcined sodium carbonate suspended therein against the pasty central region of the ingot and continuing blowing until phosphorus and sulfur in said central region are reduced to not substantially in excess of their desired final content in the ingot, and terminating blowing to enable segregation of the sulfur and phosphorus to continue in said central region of the ingot.

3,089,768
DIMENSIONALLY STABLE, CORROSION RESISTANT NUCLEAR FUEL

John Howard Kittel, Naperville, Ill., assignor to the United States of America as represented by the United States Atomic Energy Commission

Filed Mar. 1, 1961, Ser. No. 92,721
3 Claims. (Cl. 75—122.7)

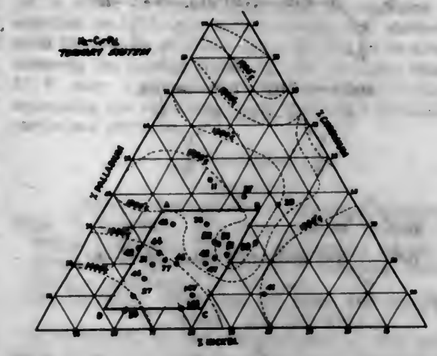
1. A method of improving the corrosion resistance and dimensional stability of an alloy consisting essentially of 5 weight percent zirconium, 1½ weight percent niobium and the balance uranium, comprising sequentially cold-rolling it at about 25° C. to reduce its thickness by about 12 percent, maintaining it at about 800° C. for about 15 minutes, maintaining it at about 650° C. for about 24 hours, air-cooling it to about 25° C., maintaining it at about 800° C. for about 15 minutes and quenching it in water.

3,089,769
NICKEL-CHROMIUM-PALLADIUM BRAZING ALLOY

Ernst George Huschke, Jr., Paul Ray Mobley, and William Roland Blackham, Cincinnati, Ohio, assignors to General Electric Company, a corporation of New York

Filed Mar. 11, 1960, Ser. No. 14,338
8 Claims. (Cl. 75—171)

2. A high temperature brazing alloy comprising in percent by weight 19–28 chromium, 10–32 palladium,



with the balance essentially nickel.

3,089,770
PROCESS FOR MAKING PLANOGRAPHIC PRINTING FORMS USING A LIGHT SENSITIVE GELATIN RECEPTION LAYER

Eberhard Günther, Leverkusen, and Wolfgang Lindig, Cologne-Stammheim, Germany, assignors to Agfa Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Aug. 26, 1959, Ser. No. 836,073
Claims priority, application Germany Sept. 2, 1958
6 Claims. (Cl. 96—29)

1. In a process for producing planographic printing layers from a photographic silver halide emulsion layer by developing the exposed emulsion in contact with a light insensitive gelatin reception layer containing a binding agent, dissolving silver halide from the unexposed parts of said emulsion layer, transferring the unexposed dissolved silver halide to said reception layer, and reducing the transferred silver halide to silver, separating said emulsion layer from said reception layer and hardening said reception layer for planographic printing, the improvement consisting of contacting the gelatin of said reception layer with an aqueous hydrofluosilicic acid solution having a pH value of 5 to 6.5.

3,089,771
METHOD OF FEEDING CHICKS

John H. Hopper, Park Forest, Ill., assignor, by mesne assignments, to Armour and Company, Chicago, Ill., a corporation of Delaware

No Drawing. Filed Feb. 16, 1960, Ser. No. 8,935
2 Claims. (Cl. 99—4)

1. The method of raising chickens for the broiler market, comprising modifying a substantially complete ration for chickens under ten weeks of age by incorporating therein from 0.025 to 0.3% by weight of guanidine based on the weight of said complete ration, said guanidine being uniformly distributed throughout said ration, said ration containing at least 16% by weight of protein, and feeding said ration to chickens under ten weeks of age, said ration comprising the principal diet of said chickens and said feeding being continued on a day-to-day basis.

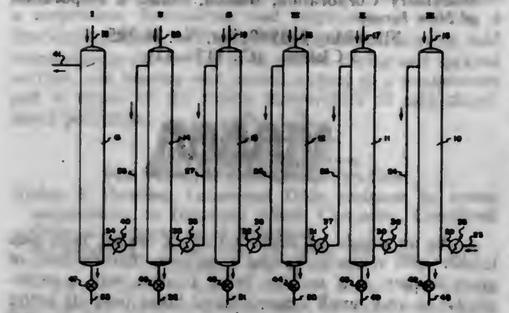
3,089,772
COFFEE EXTRACTION PROCESS

Howard J. Bowden, New City, and Henry G. Schwartzberg, Hartsdale, N.Y., assignors to General Foods Corporation, White Plains, N.Y., a corporation of Delaware

Filed July 25, 1960, Ser. No. 45,159
7 Claims. (Cl. 99—71)

1. A coffee extraction process for producing a coffee extract by contacting progressively fresher coffee grounds

counter-currently with an aqueous extraction liquor which comprises admitting extraction liquor at 270° F.–320° F. to a washing section of an extraction train containing nearly spent grounds at the liquor inlet end, withdrawing partially concentrated extraction liquor from said washing section after 40–90 minutes, passing said partially concentrated extraction liquor through a cooling section of said extraction train, withdrawing extraction liquor from said cooling section at 250° F. to 265° F. after 25–50



minutes passing said extraction liquor through an extracting section of said extraction train, withdrawing extraction liquor having a concentration of 8–12% coffee solubles from said extracting section, at 150° F. to 245° F. after 40–100 minutes and maintaining a high water ratio between about 5.4 and 6.9 parts of water per part by weight of the coffee in said percolation train whereby said extract possesses a high degree of consumer acceptance.

3,089,773
PREPARED POTATO CONTAINING CULINARY MIX

Charles J. Bates and Arlee A. Andre, Cincinnati, Ohio, assignors to The Procter & Gamble Company, Cincinnati, Ohio, a corporation of Ohio

No Drawing. Filed May 24, 1961, Ser. No. 120,836
7 Claims. (Cl. 99—94)

1. A culinary mix composition for the preparation of potato patties which comprises from about 25% to about 65% by weight of a flour component containing a soft wheat flour and a hard wheat flour in the ratio of from about 8:1 to about 1:2; from about 25% to about 65% by weight of a potato component consisting of a non-cold water-rehydratable dried potato and a cold water-rehydratable dried potato in the ratio of from about 1:7 to about 1:1; and a double-acting leavening system.

3,089,774
METHOD OF PRODUCING A BAKERS' YEAST

Robert J. Sumner, Kirkwood, William A. Hardwick, Olivette, Robert D. Seeley, Webster Groves, and Homer F. Ziegler, Jr., Glendale, Mo., assignors to Anheuser-Busch, Inc., St. Louis, Mo., a corporation of Missouri

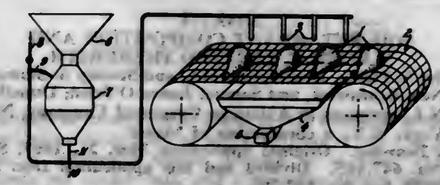
No Drawing. Filed May 29, 1959, Ser. No. 816,671
13 Claims. (Cl. 99—96)

1. A method of producing a bakers' yeast which will support substantially no growth of incidental contaminating bacteria and which loses substantially none of its fermenting power when suspended in cold water, including the steps of drying a good quality yeast of about 70% moisture to a moisture content of from about 15% to about 25% in less than about four hours, and recovering yeast having a glutathione value of less than about 10 and including from about 15% to about 25% moisture.

3,089,775
METHOD OF REMOVING MEAT FROM BONE

Reginald Lindall, Wembley, England, assignor to Unilever Limited, Chester, England, a company of Great Britain

Filed Jan. 21, 1960, Ser. No. 3,923
Claims priority, application Great Britain Jan. 23, 1959
11 Claims. (Cl. 99—107)



1. A method of removing flesh comprising the steps of shot blasting the flesh to be removed with solid frozen particles of the class consisting of ice particles and solid carbon dioxide particles and extracting the solid particles from the removed flesh by changing their phase.

3,089,776
PROCESS FOR PREPARING CHEESE MAKING CURD

Carl A. Ernstrom, Madison, Wis., assignor to Wisconsin Alumni Research Foundation, Madison, Wis., a corporation of Wisconsin

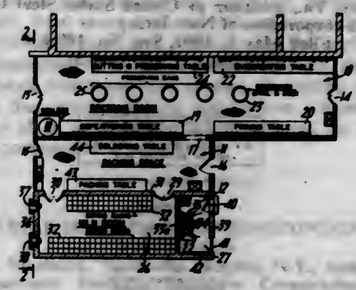
No Drawing. Filed Sept. 29, 1960, Ser. No. 59,206
16 Claims. (Cl. 99—116)

2. The process of preparing cheese making curd which comprises adding a water-soluble, non-toxic acid to cool liquid milk, agitating the acidified milk with rapid warming up to a point short of the temperature at which the acidified milk coagulates, stopping the agitation, and then maintaining the milk in a quiescent state while continuing the warming of the milk until the milk coagulates and forms a firm curd.

3,089,777
METHOD OF PRESERVING DUCK CARCASSES

Wong Wing Cheung, 73 Embassy Court, Hong Kong

Filed May 17, 1961, Ser. No. 110,760
1 Claim. (Cl. 99—157)



The method of drying and preserving duck carcasses comprising: the steps of salting, oiling and spicing fresh defeathered and eviscerated duck carcasses; the step of initially kiln drying said treated carcasses with circulating air heated to a temperature between 100° F.–120° F. for a period of approximately four hours at a constant rate to change the air in the kiln about twenty times an hour; the intermediate step of drying said carcasses by circulating therearound at said constant rate cool unheated air for a further period of about eight hours; the step of completing the drying of said carcasses

by circulating air heated to a temperature between 100° F.–120° F. for a second period of four hours at said constant rate; and then cooling said carcasses in said kiln, whereby said duck carcasses are preserved with improved flavor at an accelerated rate and with uniform results.

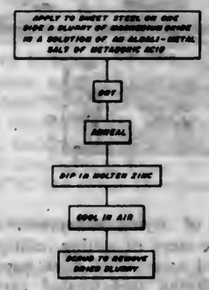
3,089,778
SOIL RETARDANT COMPOSITION AND MATERIAL TREATED THEREWITH
Elliot S. Pierce, Kensington, Md., and Stanley S. Slowata, New Brunswick, and Samuel James O'Brien, Dunellen, N.J., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine
No Drawing. Original application Mar. 21, 1957, Ser. No. 647,485. Divided and this application Dec. 30, 1959, Ser. No. 862,793
6 Claims. (Cl. 106—2)

1. A process for preparing a composition containing a major portion of insoluble basic aluminum salts having an ultimate particle size of less than .5 micron, said composition being characterized by its ability, after being rendered dry, to be readily redispersed in an aqueous medium without the aid of added dispersing agents, which comprises reacting relative amounts of 3 equivalents of a water-soluble aluminum salt and from between about 1.5 and about 2.9 equivalents of a water-soluble inorganic alkaline material by adding said inorganic alkaline material to said water-soluble aluminum salt until the final pH of the reaction mixture is between 6.5 and 8, to produce a water-soluble precipitate.

3,089,779
DIELECTRIC CERAMIC AND METHOD OF PREPARING SAME
Roland C. King, 1445 Marianna Road, Pasadena, Calif.
No Drawing. Filed Oct. 2, 1961, Ser. No. 141,949
2 Claims. (Cl. 106—39)

1. A substantially temperature stabilized ceramic dielectric having the composition 89–91 mol percent barium titanate, 6–8 mol percent bismuth stannate, and 2.5–4.5 mol percent cobalt titanate, the ceramic K value ranging from 850 to 1050.

3,089,780
METHOD AND COMPOSITION FOR SHIELDING STEEL FROM MOLTEN COATING METAL
James C. Siple, Mount Lebanon Township, Allegheny County, Pa., assignor to United States Steel Corporation, a corporation of New Jersey
Filed May 4, 1961, Ser. No. 107,630
4 Claims. (Cl. 117—5.5)



4. A method of shielding steel from coating by metal selected from the group consisting of aluminum, zinc, tin and terne, when immersed in a molten bath thereof, which comprises applying to the surface of the steel a water slurry consisting essentially of from 12 to 28% by weight of an oxide selected from the group consisting of calcium oxide and magnesium oxide, and from 3 to 20% sodium metaborate by weight and drying the resulting film, then immersing the steel in the bath.

3,089,781
FINISHED LEATHER SPLIT
Shu-Tung Tu, Ipswich, Mass., assignor to United Shoe Machinery Corporation, Boston, Mass., a corporation of New Jersey
Filed May 2, 1960, Ser. No. 26,205
3 Claims. (Cl. 117—11)



1. As an article of manufacture, a tanned flesh side leather split material having a surface characteristic of grain leather, said surface being formed with a multiplicity of very small crater-shaped holes over its entire surface, said holes being from about 600 to about 6000 holes per square inch and from about 0.1 mm. to about 0.2 mm. in diameter, and resin deposited on sides of said holes to reinforce said holes against swelling and closing.

3,089,782
COMPOSITION FOR AND METHOD OF APPLYING CERAMIC COLOR
Donald R. Bush, Parma, Ohio, and Thomas E. Howarth and Roy Lawrence, Oakville, Ontario, Canada, assignors to Ferro Corporation, Cleveland, Ohio
No Drawing. Filed May 27, 1960, Ser. No. 32,140
15 Claims. (Cl. 117—38)

11. A method of applying glass colors to a base comprising the steps of applying a first coat to said base through a screen stencil a melted glass color-containing composition that comprises a ceramic flux carrying a ceramic color dispersed in a thermo-fluid vehicle consisting essentially of (1) about 70 to 95 parts by weight of a wax-like material selected from a member of a group consisting of (*a*) a substantially straight chain fatty acid having from 12 to 20 carbon atoms, (*b*) a substantially straight chain fatty alcohol having from 12 to 20 carbon atoms, (*c*) an amide of an aliphatic hydrocarbon having 16 to 20 carbon atoms and (*d*) a poly alkylene ether glycol having a molecular weight of about 2000 to 6000 in which the alkylene groups have 2 to 3 carbon atoms, and mixtures thereof, any poly alkylene ether glycol present being in the amount of less than 50 parts by weight and in combination with at least one of the above named group of *a*, *b*, and *c*; and (2) about 15 to 30 parts by weight of a thermoplastic resin selected from a member of a group consisting of rosin, limed rosin, hydrogenated rosin, limed hydrogenated rosin, polyhydric alcohol ester of hydrogenated rosin, a hard brittle resin that is a polymerization product of rosin and has a melting point of about 208 to 217° F., a reaction product of lime and said brittle resin having a melting point of about 208 to 217° F. and ethyl cellulose having a viscosity of at least 100 centipoises per second in a 5% solution at 25° C. Hercules Powder Company Test E 80–8*b*, and mixtures thereof in which any ethyl cellulose present is present in amounts less than about 10 parts by weight, applying a plurality of at least three coats over said first coat with out intermediate heating steps, and thereafter heating the base with the applied coats to leave the glass carrying color on the base and fused thereto.

3,089,783
CORROSION RESISTANT COATING AND METHOD OF APPLYING THE SAME
William A. Carlson and John R. Little, Rochester, N.Y., assignors to Pfaudler Permutit, Inc., Rochester, N.Y., a corporation of New York
No Drawing. Filed Jan. 6, 1960, Ser. No. 719
6 Claims. (Cl. 117—66)

6. The process of coating a surface with a chlorinated polyether comprising reducing the method steps of reducing said polyether to pass a 200 mesh screen, adding said chlorinated polyether to water while stirring to produce a suspension, flocculating said suspension by adding a flocculating agent, adding a binding agent, spraying said suspension on the surface to be coated, drying said sprayed surface, and heating said coated surface to a temperature just in excess of the fusion temperature of said chlorinated polyether.

3,089,784
POLYESTER COATING SYSTEM
Arthur P. Dowling, Lakewood, Ohio, assignor, by mesne assignments, to Diamond Alkali Company, Cleveland, Ohio, a corporation of Delaware
No Drawing. Filed Mar. 24, 1960, Ser. No. 17,274
2 Claims. (Cl. 117—70)

1. In a process for coating masonry surface with a coating material comprising a solution of unsaturated polyester dissolved in a polymerizable monomer, the improvement which comprises applying to the surface an aqueous mixture containing hydraulic cement and bearing a free radical catalyst capabe of curing said polyester-containing coating material, said hydraulic cement containing not more than about 1% transition element oxide content, measured as iron oxide, and not substantially more than about 2% of free lime, at least partially curing said aqueous mixture to a discrete layer, and thereafter applying said polyester-containing coating material and allowing it to set by the action of said catalyst in said layer.

3,089,785
PROCESS OF MANUFACTURING NUCLEAR FUEL
John G. Lewis and Harold A. Obigren, Ann Arbor, Mich., assignors, by mesne assignments, to American Metal Products Company, Detroit, Mich., a corporation of Michigan
No Drawing. Filed Mar. 23, 1960, Ser. No. 16,927
9 Claims. (Cl. 117—71)

1. The process which comprises,
(*a*) contacting a finely divided solid carbonaceous material with gaseous uranium hexafluoride,
(*b*) causing the uranium hexafluoride to thoroughly diffuse through the carbonaceous material,
(*c*) causing the uranium hexafluoride to react with the solid carbonaceous material, thus resulting in the formation of solid uranium tetrafluoride and gaseous carbon tetrafluoride,
(*d*) thereafter heating the carbonaceous material containing dispersed solid uranium tetrafluoride so as to cause the solid uranium tetrafluoride to react with the carbonaceous material to thereby form uranium carbide and further amounts of carbon tetrafluorides, and
(*e*) recovering a predominantly carbonaceous product having uranium carbides dispersed therein.

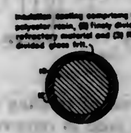
3,089,786
PRESSURE-SENSITIVE ADHESIVE TAPE
Henry G. Nachtsheim, St. Paul, Edward J. Meyer, North St. Paul, and Paul Grande, Roseville, Minn., assignors to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware
Filed July 13, 1959, Ser. No. 826,406
2 Claims. (Cl. 117—122)

1. A pressure-sensitive adhesive tape having a transparent film backing coated with an aggressively tacky pressure-sensitive adhesive, characterized by the feature that said backing is a transparent, rigid, tensilized and cross-stretched, so as to be cross-toughened, film consisting essentially of unplasticized polyvinyl chloride, said film having a thickness of from 1 to 2 mils, a lengthwise stiffness modulus of at least 4.5×10^5 pounds per square inch of cross-sectional area measured at 1 percent elongation,



a lengthwise elongation at break of less than 100 percent, a crosswise elongation at break of from 25 to 150 percent, a lengthwise tensile strength of at least 13,000 pounds per square inch, and a crosswise tensile strength of at least 4000 pounds per square inch; said film not having been subjected to a temperature above 250° F. during or after tensilization processing.

3,089,787
ELECTRICAL INSULATING COATING COMPOSITION, METHOD, AND COATED ARTICLE
Frank A. Sattler and Paul A. Tierney, Monroeville, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Dec. 7, 1959, Ser. No. 857,894
14 Claims. (Cl. 117—215)

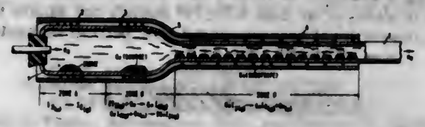


11. A method of producing potted electrical members having fibrous inorganic insulation disposed thereabout comprising the steps of impregnating the fibrous inorganic insulated member with a polyester resin, potting the coated insulated member in a water-alcohol slurry of a ceramic potting composition consisting essentially of, by weight, from 70% to 80% of (I) an intimate admixture consisting essentially, by weight, of from 30% to 35% of alumina, from 35% to 40% of magnesium oxide, from 12% to 17% silica, and from 10% to 15% of ammonium dihydrogen phosphate and (II) from 30% to 20% of a lead-borate glass component consisting essentially of, by weight, from about 10% to 20% of boron oxide and from 90% to 80% of lead oxide, drying the applied potting composition to remove substantially all the water and alcohol therefrom, and heating the potted member to cure the ceramic potting composition whereby substantially all of the polyester is removed and the ceramic potting composition is solidified.

3,089,788
EPITAXIAL DEPOSITION OF SEMICONDUCTOR MATERIALS
John C. Marinace, Yorktown Heights, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed May 26, 1959, Ser. No. 815,956
1 Claim. (Cl. 117—227)

In a method of forming germanium bodies from the vapor phase by a halide disproportionation process wherein a source of semiconductor material and a transport element are provided in one zone of a reaction container and at least one semiconductor substrate is provided in an immediately contiguous second zone of said reaction container and wherein said process said transport element reacts with said source of semiconductor material and is swept out of the firt zone by a non-oxi-

dizing gas into said second zone where epitaxial deposition takes place upon the said at least one substrate, the improvement which comprises providing a total cross sectional area for said second zone narrower than the cross



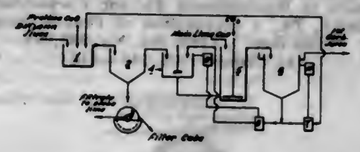
sectional area of said first zone whereby a high velocity flow of said non-oxidizing gas is created so that a superior epitaxial deposition on said at least one substrate is effected.

3,089,789

PROCESS FOR FORMING AND TREATING CALCIUM CARBONATE PRECIPITATES

Robert H. Van Note, Westport, Conn., assignor to Dorr-Oliver Incorporated, Stamford, Conn., a corporation of Delaware

Filed Mar. 23, 1959, Ser. No. 801,161
8 Claims. (Cl. 127—50)



1. A continuous process of treating sugar juice which comprises preliming the juice to remove impurities reacting with CaO, clarifying said prelimed juice to remove said reacted impurities therefrom as sludge, subjecting said clarified juice to further purification by main-liming and carbonation to produce $CaCO_3$ suspension precipitating other impurities along with $CaCO_3$, separating the suspended solids including said $CaCO_3$ from the carbonated juice, recycling a first portion of said separated solids as seed material to the carbonation treatment step at a rate such as to obtain a suspension of active carbonate in a range from about 50 to about 70 grams/liter concentration upon substantial completion of the reactions between CaO and CO_2, and recycling a second portion of the separated solids as seed material to the preliming step to be removed from the prelimed juice and from the system in said sludge, whereby the recycle carbonate is maintained at high purity, and adapted for effective separation from the carbonated and the prelimed juice at said carbonate concentration.

3,089,790

ULTRASONIC CLEANING DEVICES AND METHOD OF CLEANING

Lewis Balamuth, New York, Claus Kleesattel, Forest Hills, and Arthur Kuris, Riverdale, N.Y., assignors to Cavitron Ultrasonics Inc., Long Island City, N.Y., a corporation of New York

Filed June 9, 1960, Ser. No. 35,058
16 Claims. (Cl. 134—1)

1. An ultrasonic cleaning device comprising a member having a face for contact with the surface to be cleaned, conduit means opening adjacent the periphery of said face and at least at one location on said face spaced from said periphery, respectively, means for supplying cleaning liquid to one of said conduit means, means for applying suction to the other of said conduit means so that the cleaning liquid issuing from said one conduit means is made to travel across said face toward said other conduit means and is removed through the latter, and means operative to vibrate said face of the member at a high frequency of at least 5000 cycles per second and low amplitude in directions perpendicular to said face so that the liquid travelling across said face while the latter is in contact with the surface to be cleaned is pressurized and subject to cavitation for enhancing the effectiveness of the liquid in taking-up dirt from the surface to be cleaned and the vibrations of said face facilitate movement of the latter over the surface to be cleaned.



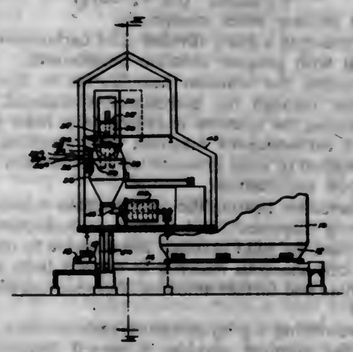
13. A method of cleaning a soiled surface, comprising placing a member against the soiled surface while vibrating the member at a high frequency of at least 5000 cycles per second and with a small amplitude in the direction perpendicular to the soiled surface so that the vibrations of said member facilitate movement of the latter over the soiled surface, supplying a cleaning liquid to the soiled surface so that contact of said vibrated member with the soiled surface pressurizes the liquid and subjects the latter to cavitation for enhancing the effectiveness of the liquid in taking up dirt from the soiled surface, and applying suction to the soiled surface adjacent the vibrated member for removing the dirt laden cleaning liquid from the surface.

3,089,791

METHOD AND APPARATUS FOR MOISTENING DUST

Harold T. Stirling, Pittsburgh, and Harry F. Hartzell, Jr., Allison Park, Pa., assignors to Koppers Company, Inc., a corporation of Delaware

Filed Feb. 26, 1962, Ser. No. 175,851
9 Claims. (Cl. 134—18)



2. A method for improving the flow properties of dust comprising feeding said dust to a surge bin, automatically actuating a conveyor means when said surge bin reaches a predetermined level thereby conveying said dust to a dust wetting drum, fogging water into said dust wetting drum whereby said dust is moistened, subjecting said dust in said dust wetting drum to a plurality of tumbling actions and discharging free-flowing dust containing from 5–14% water from said dust wetting drum.

3,089,792

METHOD OF CLEANSING SPRAY TUBES

Karl A. Skardal, Nabbensberg, Vaxersborg, Sweden

Filed Feb. 27, 1961, Ser. No. 91,852
Claims priority, application Sweden Mar. 1, 1960
3 Claims. (Cl. 134—21)



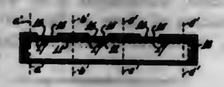
1. A method of cleansing spray tubes from impurities occurring in the flushing liquid, such as fibers and the like that may cause clogging up of the spray holes, in which the liquid enters through an inlet provided at one end of the spray tube and flows out through an outlet provided at the opposite end of the tube, characterized in that the inlet is closed simultaneously with the opening of the outlet, a pressure below atmosphere being then created in the spray tube, whereby air will be sucked in through the spray holes.

3,089,793

SEMICONDUCTOR DEVICES AND METHODS OF MAKING THEM

Eugene L. Jordan, Bound Brook, and Daniel J. Donahue, Somerville, N.J., assignors to Radio Corporation of America, a corporation of Delaware

Filed Apr. 15, 1959, Ser. No. 806,683
14 Claims. (Cl. 148—1.5)



1. The method of fabricating a semiconductor device comprising the steps of depositing a silicon oxide coating on the surface of a semiconductive wafer by excluding oxygen while heating said wafer in the vapors of a siloxane compound at a temperature below the melting point of said wafer but above the decomposition temperature of said compound, removing a predetermined portion of said silicon oxide coating, and treating said wafer with the vapors of a conductivity type-determining substance so as to introduce said substance into the coating-free portion of said wafer.

3,089,794

FABRICATION OF PN JUNCTIONS BY DEPOSITION FOLLOWED BY DIFFUSION

John C. Marinace, Yorktown Heights, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed June 30, 1959, Ser. No. 825,863
2 Claims. (Cl. 148—1.5)



1. A method of producing a PN junction semiconductor structure, comprising the steps of:

epitaxially depositing from the vapor an additional quantity of semiconductor material, including a particular conductivity-type determining impurity, onto an original, compatible semiconductor substrate, containing an opposite conductivity-type determining impurity, so as to form at the interface an abrupt junction having a sharp change in conductivity-type impurity concentration from one side of the junction to the other;

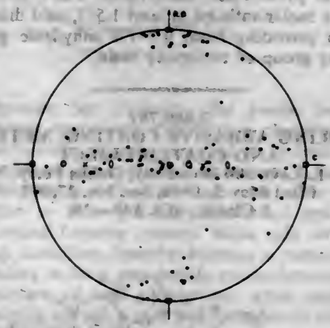
subjecting the combination of the deposited semiconductor material and the substrate semiconductor material to a heating operation whereby conductivity-type determining impurities in said combination are caused to move by diffusion and the junction is positioned at a location removed from the original interface between said deposited semiconductor material and said substrate semiconductor material.

3,089,795

METHOD FOR PRODUCING FIBER TEXTURE AND CUBE-TEXTURE SHEETS OF IRON-BASE ALLOYS

Hsun Hu, Pittsburgh, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed Nov. 18, 1959, Ser. No. 853,929
12 Claims. (Cl. 148—111)

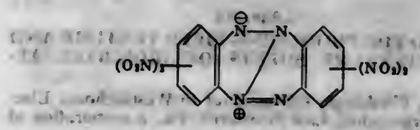


1. A process for producing cube texture iron-base sheet material for magnetic purposes from hot-rolled plate having a recrystallized structure and essentially random grain orientation, comprising the steps of, (1) cold rolling the plate from 40% to 80% to form sheet material, (2) annealing the reduced sheet in a wet hydrogen atmosphere at a temperature of from 700° C. to 1000° C. for from about 1 to 5 hours to provide recrystallization and decarburization, (3) annealing the recrystallized sheet at a temperature of from 1100° C. to 1300° C. for from 6 to 48 hours in dry hydrogen, the above steps yielding a sheet material having a [001] fiber texture with the rolling direction as the fiber axis, (4) cold rolling the fiber texture sheet to effect a reduction of from 40% to 80%, (5) annealing the material at a temperature in the range from 400° C. to 600° C. for from about 4 to 48 hours to obtain partial primary recrystallization, (6) completing the annealing of the sheet material at temperatures in the range from 700° C. to 1000° C. for a period of from about ½ to 12 hours to obtain substantially complete primary recrystallization, and (7) repeating steps 4, 5 and 6, at least once in the order set forth to produce a fine-grained sheet material having at least 40% cube grains, the iron-base sheet material comprising at least one element selected from the group con-

sisting of silicon, aluminum, and molybdenum, the silicon not exceeding 6%, the aluminum not exceeding 8%, and the molybdenum not exceeding 5%, and the balance being iron with small amounts of incidental impurities.

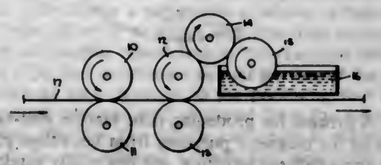
3,089,796
EXPLOSIVE COMPOSITION AND PROCESS FOR MAKING SAME
Elbert Elbridge De Maris, Woodbury, Charles Donald Forrest, Westville, and George Adolbert Noddin, Mantua, N.J., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed June 20, 1961, Ser. No. 118,260
5 Claims. (Cl. 149—19)

1. A new explosive composition comprising a mass of hard, tough, compact, thermally-stable pellets containing from 80 to 95 parts by weight of:



and from 20–5 parts by weight of an epoxy resin having more than one epoxide group per molecule cured with a dianhydride compound selected from the group consisting of pyromellitic dianhydride and the condensation products of pyromellitic dianhydride and polyhydric alcohols in a molar ratio of at least 1.5:1, said dianhydride compound providing from 0.5–1.0 anhydride group for each epoxy group of the epoxy resin.

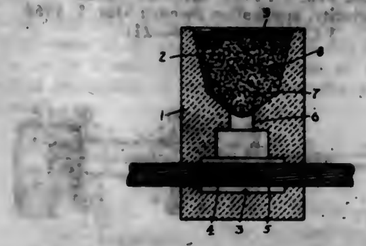
3,089,797
KINDLING ABRASIVE COATING, METHOD, AND COATED OBJECT
Hans L. Levi, 300 Broadway, Dobbs Ferry, N.Y.
Filed May 5, 1960, Ser. No. 27,067
1 Claim. (Cl. 149—30)



A kindling abrasive coating composition which can be printed on the striking surface of match booklets and the like and which is quick-drying at ambient temperature without the necessity of applying heat, comprising a mixture by weight of about 30% amorphous red phosphorus, about 10% powdered manganese, about 8% powdered antimony, about 2% ground glass 200 mesh, about 25% cut shellac and about 25% denatured alcohol.

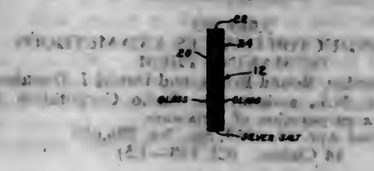
3,089,798
MATERIAL FOR WELDING ALUMINUM AND OTHER METALS
Melvin F. Rejdak, Cleveland, Ohio, assignor to Erico Products, Inc., Cleveland, Ohio, a corporation of Ohio
Original application Apr. 25, 1955, Ser. No. 503,569, now Patent No. 2,870,498, dated Jan. 27, 1959. Divided and this application Apr. 14, 1958, Ser. No. 728,279
8 Claims. (Cl. 149—37)

1. An exothermic reaction mixture for the production of highly heated molten weld metal consisting essentially of 37 parts by weight of stannic oxide and from 17 to



40 parts of metallic aluminum powder.

3,089,799
LAMINATED GLASS ARTICLES AND METHOD OF MAKING SAME
Joseph J. Domicone, Elmira, N.Y., assignor to Corning Glass Works, Corning, N.Y., a corporation of New York
Filed Jan. 22, 1960, Ser. No. 4,088
10 Claims. (Cl. 154—2.7)



1. A laminated glass article comprising spaced glass layers and a fused, transparent silver salt, selected from the group consisting of silver sulfate, silver bromide, and silver chloride, as the laminating interlayer for the glass layers.

3,089,800
FOIL APPLIQUE STRUCTURE
James A. Colfer, Manhattan Beach, and James J. Collins, Los Angeles, Calif., assignors to C & H Supply Company, Inglewood, Calif., a corporation of California
Filed Oct. 7, 1958, Ser. No. 765,770
2 Claims. (Cl. 154—46.3)



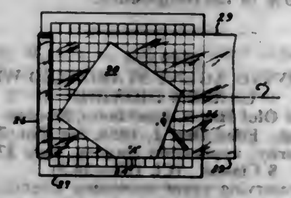
1. An individual applique separable from others with which it may be manufactured, for individual use on a desired surface to which it is to be adhered, said applique comprising the combination of: a metal foil having a predetermined configuration; a release sheet of protective disposable material; a first adhesive coating on said release sheet adhering one side of said foil to said release sheet, said first adhesive coating being less tenacious to said release sheet than to said foil whereby to coat said foil for adhesion to said desired surface upon removal of said release sheet; a protective sheet of disposable material; and a second adhesive coating adhering said protective sheet to the other side of said foil, said second adhesive coating providing a bond to said protective sheet which is weaker than the bond provided between said foil and said desired surface and stronger than the bond provided between said foil and said release sheet by said first adhesive coating.

3,089,801
ULTRA-THIN GLASS SHEET
Hubert J. Tierney and Hans Thurnauer, St. Paul, Minn., assignors to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware
Filed May 27, 1957, Ser. No. 661,945
2 Claims. (Cl. 154—47)



1. A thin, flexible, self-sustaining, continuous composite sheet capable of being formed in rolls for storage and transportation and, upon being unwound from roll form, of being flexed and handled and of being cut with a knife to provide an edge which may be characterized as ragged but free from fissures extending more than ¼ inch into the glass, said composite sheet comprising (1) a flexible carrier web, (2) a detachable layer of glass having a thickness of about 0.001-0.010 inch and, interposed between said carrier web and said layer of glass, (3) a layer of rubbery, stably tacky adhesive which has preferential adherence to the cagrier web and has an adhesion-to-steel value of 1–12 ounces per inch of width.

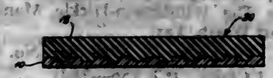
3,089,802
METHOD OF MAKING POLARIZED SLIDES
Joe W. Coffman, Holyoke, and Robert F. Bellveau, Easthampton, Mass., assignors to Tecnifax Corporation, Holyoke, Mass., a corporation of Massachusetts
Filed Feb. 1, 1960, Ser. No. 5,885
1 Claim. (Cl. 156—108)



Method of orienting on slide transparencies portions of a web of longitudinally stressed transparent material having an optical axis parallel to the side edges of said web for producing substantially maximum interference effects on plane-polarized light propagated normal to the plane of said slide; said method comprising: superimposing on said web a template of polygonal configuration defined by rectangularly disposed edges, and at least one obliquely disposed edge, aligning the obliquely disposed edge of said template parallel to a side edge of said web, cutting the underlying stressed material along the rectangularly disposed edges of said template, registering the rectangularly disposed edges of the cutout parallel to corresponding edges of a slide frame, securing the cutout to the frame and removing one or more selected portions of the cutout disposed within said frame.

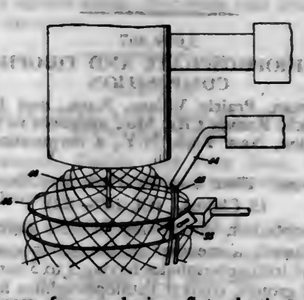
3,089,803
METHOD FOR ADHESIVE BONDING OF SYNTHETIC MATERIAL TO RUBBER
Andries van Gijsen, Velp, Netherlands, assignor to N.V. Onderzoekingsinstituut Research, Arnhem, Netherlands, a corporation of the Netherlands
Filed Feb. 12, 1959, Ser. No. 792,722
Claims priority, application Netherlands Feb. 20, 1958
1 Claim. (Cl. 156—153)

A process of bonding normally smooth-surfaced films of synthetic material to rubber, said synthetic material being selected from the class consisting of polyamides and polyesters, comprising forming recesses homogeneously over one surface of said film at a mutual distance



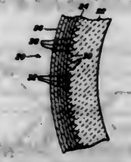
of about 0.05–0.2 mm., covering said one surface with a liquid adhesive, drying said adhesive on said surface, placing said one surface against an unvulcanized rubber article and vulcanizing said rubber article on said film.

3,089,804
PROCESS AND APPARATUS FOR PRODUCING PLASTIC NET
Carlos D. Gutierrez, Middlesex, N.J., assignor to Union Carbide Corporation, a corporation of New York
Filed Oct. 31, 1961, Ser. No. 149,060
6 Claims. (Cl. 156—167)



3. A process for producing flat plastic net having finished edges comprising extruding a plurality of plastic strand-forming streams arranged in at least one circle; imparting relative rotational movement to said strand-forming streams in a direction transverse to the direction of extrusion so as to periodically contact and separate adjacent strand-forming streams while said streams are in a tacky condition, thereby forming a tubular plastic net; extruding at least one double strand-forming stream onto a surface of said tubular net while said double strand-forming stream is in a tacky condition; and slitting said double strand-forming stream and said tubular net along the middle of said double strand-forming stream.

3,089,805
FLUE COVERING PROCESS
Jack H. Schmidt, Princeton, Ill., assignor, by mesne assignments, to The Flintkote Company, a corporation of Massachusetts
Filed Sept. 12, 1955, Ser. No. 533,849
1 Claim. (Cl. 156—187)



A method for forming a chimney comprising first forming a flue comprising fire clay having integral peaks and valleys on the periphery thereof running lengthwise of the flue, wrapping a plurality of layers of wet asbestos-cement sheet around the flue contacting the peaks only, and drying the asbestos-cement sheet.

3,089,806

GARMENT COMPONENT AND METHOD OF MAKING SAME

Louis R. Mizell, Washington, D.C., assignor, by mesne assignments, to The Williamson-Dickie Manufacturing Company, Fort Worth, Tex.

No Drawing. Filed May 13, 1959, Ser. No. 812,806
1 Claim. (Cl. 156—264)

A method of making a garment comprising, cutting pieces of fabric of about 10 ounce weight to peripheral dimensions and shapes for fabrication into a garment, overlaying said pieces in areas of potential wear with a film of thermoplastic material having a thickness of approximately 2 mils, and simultaneously applying heat from about 345° F. to 440° F. and pressure from about 14 p.s.i. to 145 p.s.i. for periods of about 3–10 seconds to cause the film to flow around the fibers of the fabric in said area on one side only and separate at the interstices between the fibers to render said area permeable to air and water and prevent mechanical separation of the thermoplastic material from the fabric.

3,089,807

STABLE THIOPHOSPHATE AND THIOPHOSPHITE COMPOSITION

Leo Trademan, Prairie Village, Kans., and Francis R. Yagelowich, Kansas City, Mo., assignors to Chemagro Corporation, New York, N.Y., a corporation of New York

No Drawing. Filed Aug. 30, 1961, Ser. No. 134,826
15 Claims. (Cl. 167—22)

1. A composition comprising discrete particles of a siliceous mineral, a member of the group consisting of S,S,S-trialkyl trithiophosphates having 3 to 5 carbon atoms in the alkyl groups, trialkyl trithiophosphites having 3 to 5 carbon atoms in the alkyl groups, [O,O-diethyl-S-(ethylthio) ethyl phosphorodithioate], O,O-dimethyl-S-2-(ethylsulfinyl)ethyl phosphorothioate, O,O - dimethyl - O - (4-methylthio)m-tolyl phosphorothioate, and [O,O-dimethyl-S-2-(ethylsulfinyl)isopropyl phosphorothioate] and diacetone alcohol as a stabilizer.

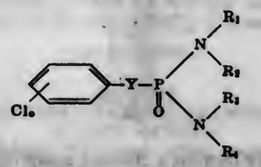
3,089,808

ACARICIDAL DIAMIDO PHOSPHATE PHENOL COMPLEX

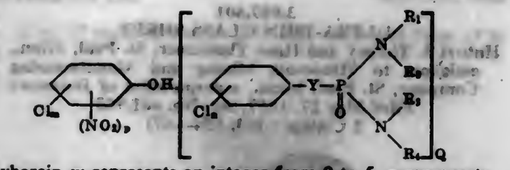
Jacques Meltzer and Bernardus Gerhardus van den Bos, both of Weesp, and Cornelis Johannes Schoot, Eindhoven, Netherlands, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed July 22, 1960, Ser. No. 44,551
Claims priority, application Netherlands Aug. 6, 1959
5 Claims. (Cl. 167—30)

1. An acaricidal composition particularly adapted for the destruction of red spider mites containing an acaricidally effective amount of at least one molecular complex of a diamido phosphate having the general structural formula:



wherein Y represents a member of the group consisting of oxygen and sulfur atoms, R_1, R_2, R_3 and R_4 each represent alkyl groups containing from 1 to 3 carbon atoms and n represents an integer from 2 to 5 and a phenol, said molecular complex having the general structural formula:



wherein m represents an integer from 0 to 5, p represents an integer from 0 to 2 and $m+p$ together have values from 0 to 5 and Q is a whole number from 1 to 2 and an inert carrier therefor.

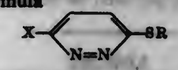
3,089,809

ANTIMICROBIAL THIO PYRIDAZINE COMPOSITIONS FOR AGRICULTURAL USE

Jiro Kisugawa, Osaka, Hiroichi Yamamoto, Kobe, Michihiko Ochiai, Saita, and Ikuo Suzuka, Kyoto, Japan, assignors to Takeda Pharmaceutical Industries, Ltd., Osaka, Japan

No Drawing. Filed May 25, 1960, Ser. No. 31,512
Claims priority, application Japan May 30, 1959
11 Claims. (Cl. 167—33)

1. An anti-microbial composition for agricultural use and, more especially, adapted to protect a plant from diseases caused by fungi and by bacteria, which consists essentially of anti-microbial agent in the form of a compound of the formula



wherein X is a halogen and R is a member selected from the group consisting of hydrogen, cyano and —COOR', wherein R' is a member selected from the group consisting of alkyl, benzyl and phenyl, and an agricultural carrier therefor, said anti-microbial agent constituting from 0.2 to 50% of the composition.

3,089,810

PRESERVING AGENT STABILIZED WITH CARBON DIOXIDE

Bror Olof Hager, Stockholm, Sweden

No Drawing. Filed Dec. 1, 1958, Ser. No. 777,223
Claims priority, application Sweden Apr. 27, 1954
8 Claims. (Cl. 167—38.5)

1. Wood-preserving agent consisting essentially of an aqueous ammoniacal solution of an hydroxide of an amine-forming metal selected from the group consisting of copper, zinc, nickel, cobalt, cadmium and silver, and carbon dioxide, the ratio of the content of carbon dioxide to the content of ammonia of the solution being within the range 1.3:1 and 2.6:1 and the pH of the solution being less than 9 and not less than 7.8.

3,089,811

ARYL MERCURIC FUNGICIDAL COMPOSITIONS

Harry H. Pugh, Chicago, Ill., assignor to Gillette Inhibitor Co., Chicago, Ill., a corporation of Illinois

No Drawing. Filed Feb. 24, 1959, Ser. No. 794,797
6 Claims. (Cl. 167—42)

1. Compositions, effective as fungicides, comprising an aryl mercuric salt, ammonia, acrylic polymer emulsion solids, and water.

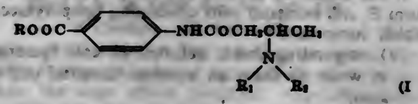
3,089,812

THERAPEUTIC COMPOSITIONS FOR THE POTENTIATION OF BARBITURATES AND ANALGESICS

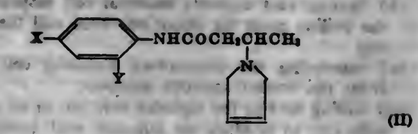
Arthur Ernest Wilder Smith, 18 Chemin des Lilas Blancs, Geneva, Switzerland

No Drawing. Filed Jan. 29, 1962, Ser. No. 169,590
Claims priority, application Great Britain Feb. 7, 1961
11 Claims. (Cl. 167—52)

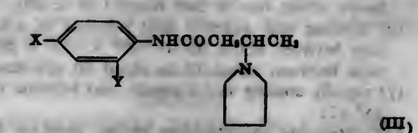
1. A therapeutic composition comprising at least one pharmacologically active compound selected from the group consisting of barbiturates and morphinic analgesics and an effective amount of at least one compound potentiating the activity of the pharmacologically active compound, said potentiating compound being selected from the group consisting of



(I

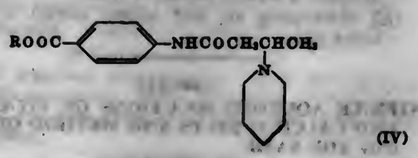


(II)



(III)

and



(IV)

in which R, R_1 and R_2 are each alkyl radicals containing from 1 to 5 carbon atoms, X is a member selected from the group consisting of the group ROOC—, a hydrogen atom and a halogen atom and Y is a member selected from the group consisting of a hydrogen atom and a halogen atom.

3,089,813

METHOD FOR THE TREATMENT OF KETOSIS IN DOMESTIC AND FARM ANIMALS

Alfred Ellsworth Earl, Morristown, N.J., assignor to Ciba Corporation, a corporation of Delaware

No Drawing. Filed June 2, 1958, Ser. No. 738,980
2 Claims. (Cl. 167—53)

1. A method for the treatment of ketosis in domestic and farm animals which comprises intramuscularly administering to said animal a veterinary composition comprising essentially about 1 to about 50 milligrams prednisolone 21-trimethylacetate per milliliter of a liquid pharmaceutical carrier.

3,089,814

PROCESS FOR THE PRODUCTION OF A CONCENTRATE OF ACTIVE SUBSTANCE FROM SENNA

Fritz Blaich, Cologne-Ehrenfeld, Germany, assignor to A. Nattermann & Cie, Cologne-Braunsfeld, Germany

No Drawing. Filed Feb. 26, 1959, Ser. No. 795,605
Claims priority, application Germany Mar. 1, 1958
6 Claims. (Cl. 167—56)

1. A process for the production of a concentrate of active substance from senna which consists essentially in the following steps: the senna is extracted in the cold with an alkaline reacting aqueous solution containing alkaline earth metal ions, the liquid extracted is concentrated in vacuo and the precipitated concentrate is separated and dried without application of heat.

3,089,815

INJECTABLE PHARMACEUTICAL PREPARATION, AND A METHOD OF MAKING SAME

Hans Lieb, Universitatsplatz 2, Graz, Austria; Ernst Kapelwieser, Mozartsberg 17, Salzburg, Austria; and Anton Holasek, Universitatsplatz 2, Graz, Austria

No Drawing. Original application Oct. 11, 1951, Ser. No. 250,961, now Patent No. 2,961,374, dated Nov. 22, 1960. Divided and this application Oct. 26, 1960, Ser. No. 65,007
Claims priority, application Austria Oct. 14, 1950
15 Claims. (Cl. 167—58)

1. An injectable pharmaceutical composition forming, on injection, a drug depot at the site of injection, said composition comprising an injectable aqueous medium, fibrinogen dissolved therein, a water soluble compound forming fibrin with fibrinogen, and the drug to be administered uniformly distributed throughout the composition, said composition being liquid at body temperature for a time sufficient for injection and, upon injection into the human and animal tissue, depositing said drug depot at the site of injection.

3,089,816

LEMACIDINE AND PROCESS FOR ITS MANUFACTURE

Ernst Gaeumann, Zurich, and Fritz Benz, Binningen, Switzerland, assignors to Ciba Corporation, a corporation of Delaware

No Drawing. Filed Sept. 26, 1958, Ser. No. 763,435
Claims priority, application Switzerland Oct. 29, 1957
12 Claims. (Cl. 167—65)

1. Process for the manufacture of a new antibiotic, which comprises aerobically cultivating *Streptomyces venezuelae* A 9692 in an aqueous nutrient solution containing a source of carbon and of nitrogen and inorganic salts until the solution has a substantial antibiotic action, and isolating antibiotic from the nutrient solution.

11. A member selected from the group consisting of the antibiotic lemacidine, a colorless basic, water-soluble substance, insoluble in organic solvents, capable of forming salts with acids, the hydrochloride of which is a crystalline substance easily soluble in water and methanol, having the optional rotation $[\alpha]_D^{20}=+24.4°$ (c.=1.0 in water) and giving in the elementary analysis the following values:

	Percent
Carbon	37.3
Hydrogen	7.0
Nitrogen	16.8
Chlorine	18.1

the sulfate of which is a colorless substance easily soluble in water and formamide, having the optical rotation $[\alpha]_D^{27}=+56°$ (c.=0.59 in water) and giving in the elementary analysis the following results:

	Percent
Carbon	35.0
Hydrogen	6.9
Nitrogen	11.6
Sulfur	8.3

the helianthate, picrate, styphnate, picronolate and reineckate of which are sparingly soluble in water, the yellow colored layered lamellae or needles of the helianthate melting at 202–203° C. with decomposition, the yellow rodlets of the picronolate at 202° C. and the irregular plates of the reineckate at 198-200° C., and acid addition salts thereof, said lemacidine having been prepared by the process of claim 1.

3,089,817
DICHROSTACHYS GLOMERATA HYPOTENSIVE AGENT
Laurence W. Reth and Fred Keller, Northridge, Calif., assignors to Riker Laboratories, Inc., Northridge, Calif., a corporation of Delaware
No Drawing. Filed Mar. 7, 1960, Ser. No. 12,953
11 Claims. (Cl. 167—65)

11. A pharmaceutical preparation for lowering blood pressure comprising as an essential hypotensive ingredient a hydrophilic solvent extract of *Dichrostachys glomerata* plant material and a pharmaceutical carrier.

3,089,818
WATER DISPERSIBLE ANTIBIOTICS
Irwin M. Stone, Staten Island, N.Y., assignor to Baxter Laboratories, Inc.
No Drawing. Filed June 2, 1960, Ser. No. 33,402
5 Claims. (Cl. 167—65)

1. The method of solubilizing a relatively insoluble polypeptide antibiotic which comprises,
(*a*) dissolving said antibiotic and a highly soluble polymeric material selected from the class consisting of: polyvinyl pyrrolidone, polyvinyl oxazolidones, polyoxyethylene-polypropylene block copolymers and vinyl pyrrolidone and vinyl acetate copolymers in a mutual essentially non-aqueous solvent,
(*b*) and then removing substantially all of said solvent to obtain a readily water-soluble molecular complex.

3,089,819
METHOD FOR THE TREATMENT OF HYPERTENSION
James Harold Short, Lake Forest, Ill., assignor to Abbott Laboratories, North Chicago, Ill., a corporation of Illinois
No Drawing. Filed Sept. 5, 1961, Ser. No. 135,764
7 Claims. (Cl. 167—65)

1. A method of lowering blood pressure in a warm blooded animal which comprises administering a composition containing a compound selected from the class consisting of 1-(orthomethoxyphenyl)-4-(3-methylthiopropyl)-piperazine and non-toxic, acid-addition salts thereof.

3,089,820
METHOD OF INCREASING BLOOD CLOTTING TIME WITH A LIVER LIPID
Joseph P. Dailey, Kankakee, and Robert L. Colescott, Bourbonnais, Ill., assignors, by mesne assignments, to Armour Pharmaceutical Company, a corporation of Delaware
No Drawing. Filed May 11, 1959, Ser. No. 812,115
1 Claim. (Cl. 167—74.6)

Treatment to obtain in vitro prolongation of whole blood clotting time and an inhibition of thromboplastin generation by administering to a mammal an anti-thromboplastic liver lipid which is substantially non-toxic on oral and intraveneous administration, characterized by being a lipid derived from mammalian liver tissue, by being soluble in water and heptane and insoluble in ethanol, methanol, acetone and a mixture of one part of heptane and three parts of acetone, by prolonging whole blood clotting time, by prolonging recalcified plasma clotting time, by inhibiting thromboplastin generation, by counteracting the thromboplastic activity of platelets, and, upon intravenous injection into rabbits, prolonging whole blood clotting time, said liver lipid being obtainable by non-polar solvent extraction of mammalian liver tissue, followed by organic solvent precipitation of the active lipid.

3,089,821
PROCESS FOR THE PREPARATION OF LIPIDS
Karl Folkers, Plainfield, N.J., assignor to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey
No Drawing. Filed Oct. 28, 1959, Ser. No. 849,135
4 Claims. (Cl. 167—78)

1. An improved process for the preparation of a lipid from *E. coli* bacterial cells containing lipopolysaccharides which comprises:
(*a*) suspending dried, defatted *E.* coli bacterial cells in water to form an aqueous bacterial cell suspension;
(*b*) heating said aqueous bacterial cell suspension to the boiling point for about one hour and then cooling;
(*c*) separating the undissolved bacterial cell debris from the cooled aqueous solution;
(*d*) adding acid to the aqueous solution in an amount sufficient to produce an aqueous acid solution between about one to two normal in acidity;
(*e*) heating said aqueous acid solution to a temperature between about 90 to 100° C. for a period of time between about 15 to about 60 minutes;
(*f*) rapidly cooling said aqueous acid solution to about 25° C.;
(*g*) extracting the resulting cooled aqueous acid solution with a water-immiscible solvent for the lipid to obtain a solvent extract of lipid;
(*h*) evaporating the said solvent extract to obtain active lipid.

3,089,822
STERILE AQUEOUS SOLUTIONS OF VITAMIN D AND CALCIUM SALTS AND METHOD OF MAKING THE SAME
Jakob Schenk, Bern, Switzerland, assignor, by mesne assignments, to The Wander Company, Chicago, Ill., a corporation of Delaware
No Drawing. Filed Feb. 2, 1959, Ser. No. 790,374
Claims priority, application Switzerland Feb. 11, 1958
6 Claims. (Cl. 167—81)

1. A stable heat sterilizable aqueous solution of a therapeutically active vitamin D compound and a non-toxic calcium salt suitable for parenteral administration which comprises; a clear water solution of a non-toxic water soluble therapeutically active calcium salt and a non-toxic therapeutically active vitamin D ester of a fatty acid having from 1 to 5 inclusive carbon atoms, said solution containing a fatty acid ester of a polyoxyalkylene compound as a solubilizing agent for said vitamin D ester, and said polyoxyalkylene compound having between about 20 to 50 oxyalkylene groups per molecule.

3,089,823
AQUEOUS VITAMIN A OIL EMULSION
Ronald F. Czarnecki, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
No Drawing. Filed Sept. 5, 1961, Ser. No. 135,755
9 Claims. (Cl. 167—81)

1. A stable, aqueous vitamin A oil emulsion which consists essentially of an oily vitamin A-active concentrate at a concentration of about 1–10 weight percent; water at a concentration of about 30–95 weight percent; methyl cellulose at a concentration of about 1.5–3.5 weight percent; and gelatin at a concentration effective to substantially suppress development of coloring under normal storage conditions but ineffective to cause gelation of the water phase of said emulsion.

3,089,824
GRANULATING AND COATING PROCESS FOR UNIFORM GRANULES
Dale E. Wurster, Madison, Wis., assignor to Wisconsin Alumni Research Foundation, Madison, Wis., a corporation of Wisconsin
Filed Apr. 30, 1959, Ser. No. 810,126
8 Claims. (Cl. 167—82)

1. In the granulation art, the improved process of preparing free flowing granules of substantially uniform size and shape, the steps which comprise: suspending small solid particles of substantially uniform size and shape in a gas stream in fluidized bed form as nuclei for the granules, introducing an atomized granulating mixture having granulating material in solution and finely divided granulating material in suspension in a volatile liquid into the gas stream maintaining the nuclei in the fluidized bed, and then lubricating the resulting granules while in fluidized bed form by introducing an atomized liquid lubricating composition into the gas stream maintaining the granules in the fluidized bed.

3,089,825
PHARMACEUTICAL TABLET CONTAINING WHEAT GLUTEN
Ronald J. Brenner, Oreland, Pa., assignor to McNeil Laboratories, Incorporated, a corporation of Pennsylvania
No Drawing. Filed Nov. 2, 1959, Ser. No. 850,097
10 Claims. (Cl. 167—82)

1. An improved pharmaceutical tablet comprising a solid, therapeutically active substance, excipients, a lubricant, and from about 2% to about 20% undenatured wheat gluten.

3,089,826
PRODUCTION OF BRONCHODILATOR EFFECTS WITH O-HALO-N,N-DIMETHYLPHENETHYLAMINE ACID ADDITION SALTS
Melville Sahyun and John A. Faust, Santa Barbara, Calif.; said Faust assignor to said Melville Sahyun, doing business as Sahyun Laboratories, Santa Barbara, Calif.
No Drawing. Filed Oct. 15, 1958, Ser. No. 767,257
1 Claim. (Cl. 167—84.5)

The process of producing bronchodilator effects in the animal organism which comprises the administration therein of dosage units of a non-toxic, pharmaceutically acceptable, acid addition salt of o-halo-N,N-dimethylphenethylamine.

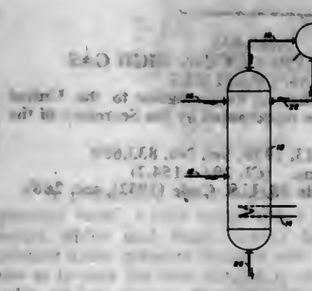
3,089,827
PROCESS FOR PREPARING ZYGOMYCINS
Kôiti Nakazawa, Amagasaki, Motoo Shibata, Toyonaka, Eiji Higashide and Toshihiko Kaneshi, Nishinomiya, Hiroichi Yamamoto, Higashinada-ku, Kobe, Akira Miyake, Nishinomiya, Hiromu Hiroui, Ibaraki, Satoshi Horii, Kamigyo-ku, Kyoto, Takeshi Yamaguchi and Toyohiko Araki, Toyonaka, Kanji Tsuchiya, Neyagawa, Yasuki Oka, Higashiyodogawa-ku, Osaka, and Akihiro Imai, Higashisumiyoshi-ku, Osaka, Japan, assignors to Takeda Pharmaceutical Industries, Ltd., Osaka, Japan
Filed July 18, 1960, Ser. No. 43,469
Claims priority, application Japan July 24, 1959
6 Claims. (Cl. 195—80)

1. A process for preparing a member selected from the group consisting of zygomycin A, zygomycin B, zygomycin C, and zygomycin D, which comprises the steps of inoculating an aqueous nutrient-containing medium with *Streptomyces pulveraceus* nov. sp., and incubating the inoculated medium at a temperature in the neighbourhood of 20–30° C. under aerobic conditions.

3,089,828
EVALUATION OF PROTEOLYTIC ENZYME ACTIVITY
Andrew G. Tsuk, Yonkers, N.Y., assignor to Schwarz Bioresearch, Inc., Mount Vernon, N.Y., a corporation of New York
No Drawing. Filed Dec. 27, 1960, Ser. No. 78,308
3 Claims. (Cl. 195—103.5)

1. Method for evaluating proteolytic enzyme activity which comprises maintaining a solid body of cross-linked thiolated gelatin in a liquid solution of the proteolytic enzyme to be evaluated, and measuring the change in the physical dimensions of said body as a function of time said thiolated gelatin having a sufficient degree of cross-linking with disulfide bonds to render the same insoluble in said liquid solution of the enzyme.

3,089,829
SEPARATION OF m-XYLENE AND p-XYLENE BY DISTILLATION IN THE PRESENCE OF BENZYL ALCOHOL
Allen F. Millikan, Crystal Lake, Ill., assignor to The Pure Oil Company, Chicago, Ill., a corporation of Ohio
Filed Oct. 30, 1959, Ser. No. 849,760
11 Claims. (Cl. 202—39.5)



1. The process of separating p-xylene and m-xylene which comprises subjecting a mixture consisting essentially of same to distillation in the presence of benzyl alcohol and recovering an overhead containing a major portion of p-xylene and a residue of benzyl alcohol containing a major portion of m-xylene.

3,089,830
METHOD OF MAKING A COMPARTMENTED FUEL ELEMENT FOR A NUCLEAR REACTOR
Robert K. McGeary and Erling Frisch, Pittsburgh, Pa., assignors, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission
Filed Mar. 24, 1958, Ser. No. 723,421
3 Claims. (Cl. 204—154.2)



1. A method for making a fuel element of a neutronic reactor, said method including the steps of inserting a column of fuel pellets and spacing disks having diametric edges continuously coated with brazing material into a continuous cladding tube, said spacing disks being spaced along the length of said column, stretching without compressing said cladding tube in the longitudinal direction sufficiently to elongate the tube about one percent while

restraining movement of said fuel pellet column until the walls of said cladding tube very nearly engage said spacing disks; then stretching said cladding tube longitudinally without restraining said pellet column, sufficiently to elongate the tube an additional two percent; then closing the ends of the cladding tube; then heating the assembly to a temperature within the range of 1850°–1900° F. for a sufficient time to soften the brazing material and hermetically attach the diametric edges of the spacing disks to the internal walls of the tube.

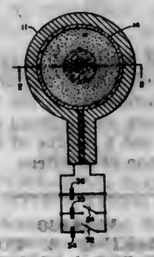
3. A method of making a fuel element for a neutronic reactor, said method comprising steps of inserting a column of fuel pellets and spacing disks within an elongated cladding tube, said spacing disks being spaced along the length of said column and being slightly larger than said fuel pellets in a direction transversely of said cladding tube, stretching without compressing said cladding tube longitudinally thereof while restraining said pellet column until the inner wall of said cladding tube very nearly engages said spacing disks, stretching without compressing said cladding tube without restraining said column until said inner wall tightly engages said spacing disks, continuing stretching without compressing of said cladding tube until its inner wall surface tightly engages each of said fuel pellets and separates said fuel pellets to form spaces therebetween, and closing the ends of said cladding tube.

3,089,831

METHOD OF PRODUCING HIGH GAS TEMPERATURES

Alan C. Kolb, Alexandria, Va., assignor to the United States of America as represented by the Secretary of the Navy

Filed Aug. 13, 1959, Ser. No. 833,650
4 Claims. (Cl. 204—154.2)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A method of developing high gas temperatures within an evacuated cylindrical chamber to produce neutrons and X-rays which comprises admitting into and confining a suitable gas within said chamber, discharging first capacitor sources through a single turn coil means positioned about said chamber to preionize and preheat said gas within said chamber to produce a first axial magnetic field in said ionized gas, and discharging a second capacitor source through said coil means at a predetermined time relative to the discharge of said first capacitor sources to produce a second axial magnetic field in reverse direction to said first magnetic field to trap said first magnetic field within said ionized gas and within said second magnetic field, said second magnetic field compressing said ionized gas to a small volume along the axis of said chamber thereby raising the temperature of said ionized gas to produce X-rays by electron-ion collisions and neutrons by ion-ion collisions of isotopes of hydrogen during the first half cycle of the second magnetic field.

3,089,832

POLYMERIC LUBRICATING OIL ADDITIVES

James F. Black, Convent Station, and Donald A. Guthrie, Cranford, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed Aug. 1, 1956, Ser. No. 601,367
10 Claims. (Cl. 204—158)

1. A method of preparing a polymeric lubricating oil additive comprising irradiating with high intensity ionizing radiation an intimate mixture of 0.1 to 99.9% of an isobutylene polymer having a molecular weight in the range of 500 to 5×10^6 and 99.9% to 0.1% of a polymerizable monomer other than a butene within the range of 5×10^4 to 5×10^7 roentgens at an ionizing radiation intensity of 10^3 to 10^6 roentgens per hour, and recovering a polymer having a molecular weight in the range of 35,000 to 500,000 and consisting of said monomer grafted to said isobutylene polymer.

3,089,833

PREPARATION OF HIGHLY FLUORINATED ALKYL CHLORIDES BY IRRADIATION WITH ULTRAVIOLET LIGHT OF FLUOROACYL CHLORIDES ALONE OR ADMIXED WITH FLUOROOLEFINS

John F. Harris, Jr., Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Aug. 31, 1959, Ser. No. 836,871
9 Claims. (Cl. 204—158)

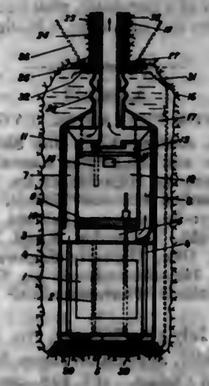
1. The process of forming a chlorofluorocarbon which comprises irradiating with ultraviolet light a polyfluorinated carbacyl chloride which is aliphatic in character and which has at most one hydrogen and that on a terminal carbon, and which otherwise is perhalogenated, the halogens being selected from the group consisting of fluorine and chlorine, each carbon other than the carbonyl carbon bearing at most one chlorine and at least one fluorine.

3,089,834

NUCLEAR REACTOR PLANT

Kristian Dahl Madsen, Vasteras, Sweden, assignor to Allmanna Svenska Elektriska Aktiebolaget, Vasteras, Sweden, a corporation of Sweden

Filed Feb. 26, 1957, Ser. No. 642,533
Claims priority, application Sweden Feb. 29, 1956
6 Claims. (Cl. 204—193.2)



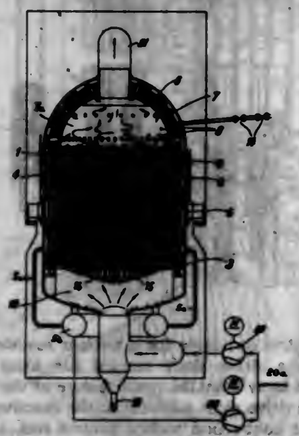
1. A nuclear reactor located in an underground space formed in rock and comprising a reactor body cooled by a circulating medium under pressure, collecting and distributing means for said circulating medium, fuel handling equipment above said body including hoisting means and manipulators for fuel rods, and a reactor vessel enclosing said reactor body and said means and equipment, the inner wall of the reactor vessel being subjected to a substantial pressure during normal operation of the reactor, said rock having at least one exit to the outside means extending through one such exit to transmit the thermal energy absorbed by the cooling medium to the outside of the rock space, means to bring a fluid cooling medium in heat exchange relation with substantially the whole of the wall of the vessel, said wall being of a thickness insufficient to withstand said substantial pressure, a substantially incompressible pressure transmitting medium capable of transmitting pressures substantially equal to the pressure on the inner wall of the vessel confined in and completely filling the space between the bottom, top and side walls of the vessel and the surrounding rock, and subjected to pressure by the pressure exerted on the interior of the wall of the reactor vessel, and means sealing all exits through the rock from such space and the incompressible medium extending to such sealing means.

3,089,835

HETEROGENEOUS NUCLEAR REACTOR

Rudolf Schulten, Mannheim, Wernfried Güth, Mannheim-Gartenstadt, Andreas Schwenk, Neu-Hermsheim, Helmut Braun, Ruisheim, and Georg Berberich, Mannheim, Germany, assignors to Brown, Boveri & Cie Aktiengesellschaft, Mannheim, Germany, a corporation of Germany

Filed Oct. 25, 1957, Ser. No. 692,334
Claims priority, application Germany Oct. 27, 1956
12 Claims. (Cl. 204—193.2)



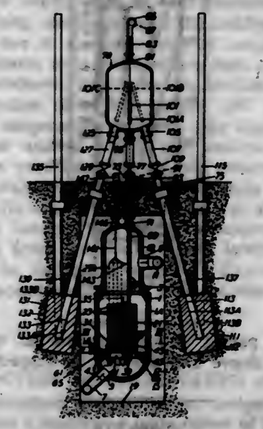
1. A nuclear heterogeneous reactor, comprising a reactor core of graphite having a multiplicity of vertical fuel channels and having ball-shaped fuel elements of predetermined and approximately uniform diameter in said channels when in operative condition, said channels having a square cross section and having inwardly projecting protuberances forming part of said reactor core and located along the channel walls for guiding said elements whereby interspaces of predetermined dimensions are formed between said elements and said channel walls, the transverse distance between said guiding protuberances being only wide enough for a single one of said fuel elements to be disposed within said transverse distance at a time, to thereby axially align a plurality of said ball-shaped fuel elements within said channels, a top plate and bottom plate adjoining said core at the top and bottom thereof respectively, supply means for discharging said fuel elements in sequence individually onto the upper surface of said top plate, each of said two plates having circular openings coaxially aligned with said respective channels and smaller than said square cross section so as to just permit passage of said fuel elements, and each of said two plates having passages adjacent to said respective openings and communicating with said interspaces, and coolant circulation means forming a coolant path through said passages and said interspaces.

3,089,836

PRESSURIZED WATER NUCLEAR REACTOR

William R. Wootton, London, England, assignor to Babcock & Wilcox Limited, London, England, a British company

Filed Jan. 29, 1958, Ser. No. 712,009
Claims priority, application Great Britain Jan. 31, 1957
12 Claims. (Cl. 204—193.2)



1. A pressurized water nuclear reactor comprising a pressure vessel, a core comprising a plurality of fuel elements within said vessel, means for circulating liquid coolant under pressure through said vessel in such manner as to cool the core when it is producing heat, a plurality of fuel element receiving stations provided in said core each arranged to receive one of said fuel elements, a charging and discharging aperture provided in a wall of said pressure vessel above said core, movably positionable fuel element handling means arranged to pass through said aperture, mounting means positioned within said pressure vessel below said core and arranged to support the core and to permit its transverse and rotational movement within said vessel to bring each of said stations, when desired, in alignment below said aperture, and actuating means operable from outside the pressure vessel for positioning said mounting means to bring said stations below said aperture, whereby said handling means are operable through said aperture to remove and insert said fuel elements from and into said stations when the reactor is under pressurized conditions.

3,089,837

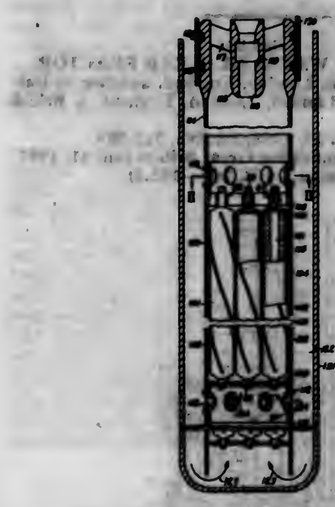
FUEL ELEMENTS FOR NUCLEAR REACTORS

Richard Valentine Moore, Appleton, England, assignor to United Kingdom Atomic Energy Authority, London, England

Filed June 24, 1958, Ser. No. 744,090
Claims priority, application Great Britain June 24, 1957
2 Claims. (Cl. 204—193.2)

1. In combination with an outer sleeve for suspension within a thimble-shaped tube disposed upright in a vertical channel in the moderator of a nuclear reactor, a nuclear fuel element comprising a sleeve having perforations in the walls thereof and extending from within a terminal portion of the outer sleeve to a point outside of the terminal portion so as to form a telescopic extension of said outer sleeve, and means mounted in the tube

for supporting fuel rods therewithin in the region of the perforations, the perforations being of such size as to admit to the interior of the tube a minor proportion of



fluid coolant passed through an annular space defined by the outer sleeve and the thimble-shaped tube within the channel.

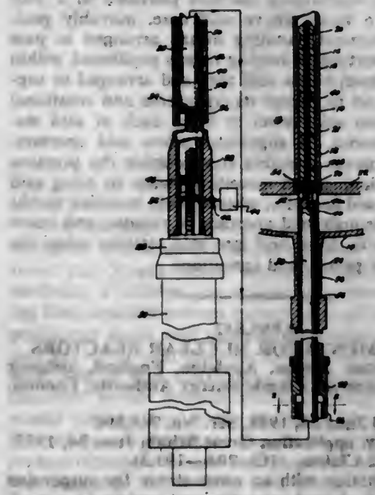
3,089,838

SAFETY SYSTEM FOR CONTROL ROD

John Arthur Paget, Poway, Calif., assignor, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission

Filed July 31, 1961, Ser. No. 128,274

2 Claims. (Cl. 204—193.2)



1. In a nuclear reactor including a reactor core, the combination of a control rod, a control rod drive for selectively positioning the control rod within the reactor core, and a control rod integrity monitoring system, said system comprising an insulated current carrying conductor, a first portion of said conductor extending along the length of the control rod, means securing said first conductor portion to said control rod at least at two locations, means securing a second portion of the conductor to the control rod drive in a fixed relation to the first conductor portion, the portion of said conductor between said first portion and said second portion being wound in a helix to thereby allow free and unrestricted movement of the first conductor portion relative to said second conductor portion.

3,089,839

CONTROL ROD DRIVE MECHANISM FOR A NUCLEAR REACTOR

Basil C. Hawke, San Diego, Calif., Fred J. Liederbach, Philadelphia, Pa., and Walter Lonee, San Diego, Calif., assignors, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission

Filed Aug. 23, 1961, Ser. No. 133,534

4 Claims. (Cl. 204—193.2)



1. A control rod drive for a nuclear reactor, said drive comprising a drive shaft carried for axial movement toward and away from the reactive core of the reactor, the end of said drive shaft adjacent to the reactive core being adapted for connection with a control rod, a lead screw extending within said drive shaft from the other end thereof, means connecting said lead screw and said drive shaft so as to cause relative movement of said drive shaft axially of said lead screw incident to rotation of said lead screw, a fluid motor drivingly connected to said lead screw for rotational driving thereof, an electric motor, a clutch releasably connecting said electric motor to said lead screw so as to facilitate positioning of said drive shaft under normal conditions, said clutch disconnecting said electric motor from said lead screw incident to rotation of said lead screw by said fluid motor thereby permitting free movement of said lead screw relative to said electric motor, means for supplying pressure fluid to said fluid motor in response to development of a scram condition in the reactor so as to rapidly rotate said lead screw thereby displacing said drive shaft toward the reactive core of the reactor, and means including a valve communicating with said fluid motor and operably connected to said lead screw for throttling the flow of pressure fluid through said fluid motor so as to decelerate said lead screw as the drive shaft approaches the limit of its travel toward the reactive core of the reactor.

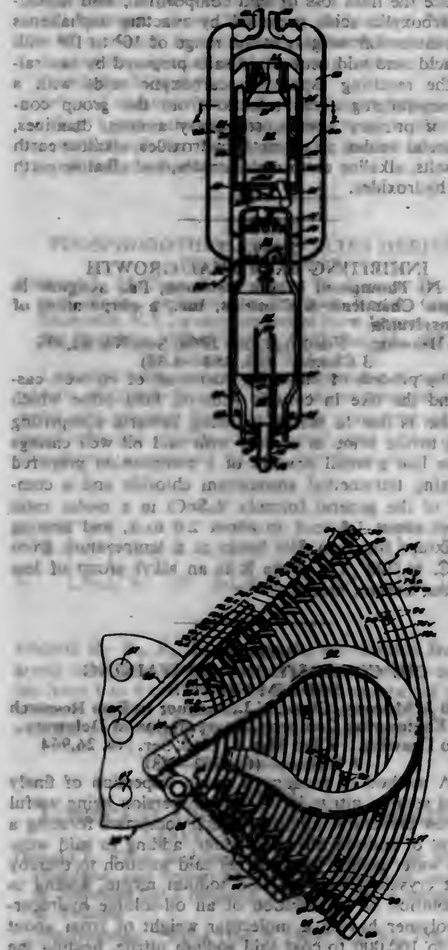
3,089,840

NUCLEAR POWER PLANT

Joseph C. Carter, Elmhurst, Robert H. Armstrong, Park Forest, and Marion J. Jenicke, Downers Grove, Ill., assignors to the United States of America as represented by the United States Atomic Energy Commission

Filed Sept. 28, 1961, Ser. No. 141,553

3 Claims. (Cl. 204—193.2)



1. A compact, easily transportable, nuclear power plant comprising a boiling-mercury reactor, mercury-vapor turbine in direct cycle with said reactor, a generator for electricity operated by said turbine, and a radiator for condensing spent mercury vapor exhausted by said turbine comprising a plurality of arcuate concentric radiator elements of progressively increasing radius and length, as the distance from the reactor increases, hinges connecting one end of the innermost radiator element to the reactor, hinges and swivel connections connecting alternate ends of adjacent radiator elements, said swivel connections placing the radiator elements in flow communication, and means for conducting spent mercury vapor from the turbine to the radiator and for returning liquid mercury to the reactor.

3,089,841

REFINING PROCESS FOR PETROLEUM WAX

Edward B. Berkowitz, Brooklyn, N.Y., Theodore E. Makowski, Jersey City, N.J., Byron G. Spars, Madison, Wis., and Norton H. Berlin, Fords, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed Dec. 30, 1959, Ser. No. 862,754

7 Claims. (Cl. 208—27)

1. A method for hydrofining petroleum waxes which comprises contacting the wax in admixture with hydrogen, and a hydrogenation catalyst under hydrofining conditions in a reaction zone at a temperature in the range of 400 to 650° F., thereby producing a high quality wax, continuing to supply wax to said reaction zone under said hydrofining conditions until the catalyst has become deactivated due to the adsorption of catalyst deactivating contaminants to a point where high quality wax is no longer produced; increasing the reaction temperature to a temperature of at least about 100° F. above the hydrofining temperature at which said high quality wax was obtained and at which said catalyst deactivating contaminants were adsorbed on said catalyst; continuing to feed said wax through said reaction zone at said higher temperature for a period from about 6 to about 72 hours during which time the said catalyst deactivating materials are removed from the catalyst, then lowering the temperature in the said reaction zone to about said first hydrofining temperature to again produce high quality wax.

3,089,842

PRODUCTION OF SULFONATED ASPHALT

Charles A. Stratton, Caney, Kans., assignor to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed Dec. 14, 1959, Ser. No. 859,117

8 Claims. (Cl. 208—44)

1. A process for making sulfonated asphalt, comprising dispersing asphaltic material in a normally liquid, inert, low-boiling paraffinic hydrocarbon diluent having from 5 to 8 carbon atoms per molecule, contacting the resulting dispersion of asphaltic material with a sulfonating agent consisting essentially of liquid sulfur trioxide under anhydrous conditions, neutralizing the resulting sulfonic acids with a basic neutralizing agent selected from the group consisting of ammonia and alkali metal and alkaline earth metal salts, oxides, and hydroxides, separating said diluent from the resulting neutralized sulfonic acids, and drying the resulting separated sulfonated asphalt as the product of the process.

3,089,843

HYDROCONVERSION OF HYDROCARBONS

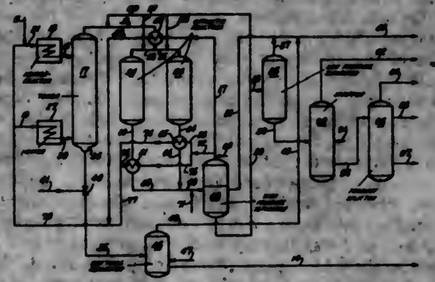
Du Bois Eastman, Whittier, and Warren G. Schlinger, Pasadena, Calif., assignors to Texaco Inc., New York, N.Y., a corporation of Delaware

Filed June 2, 1960, Ser. No. 33,582

26 Claims. (Cl. 208—58)

1. A process for the hydroconversion of a hydrocarbon oil feedstock having a Conradson carbon residue of at least 1.0% by wt. which comprises passing an intimate mixture of said oil and hydrogen said mixture containing at least 5,000 standard cu. ft. of hydrogen per barrel of oil as a confined stream through an elongated reaction zone under conditions of turbulent flow at a temperature between about 700 and 900° F. and a pressure not less than 1,000 p.s.i.g. and not greater than about 5,000 p.s.i.g., separating the reaction zone effluent comprising hydrogen, vaporous hydrocarbons and liquid hydrocarbons into a gasiform portion comprising hydrogen and vaporous hydrocarbons and a liquid portion comprising unvaporized hydrocarbons, contacting said liquid portion in a

non-catalytic contacting zone with a hydrogen stream separately heated to a temperature between about 900 and 900° F. and amounting to at least 20% by volume of the total hydrogen supply but not less than 5,000 cu. ft. per barrel, the total hydrogen supply amounting to between 10,000 and 100,000 standard cu. ft. per barrel, of oil charged to the reaction zone, thereby producing additional vaporous hydrocarbons in said contacting zone, removing unreacted hydrogen and vaporous hydrocarbons



from the contacting zone, combining said last mentioned unreacted hydrogen and vaporous hydrocarbons with said gasiform portion, passing the combined stream into contact in a catalytic treating zone with a hydrogenation catalyst at a temperature between 600 and 800° F. and a liquid hourly space velocity of from 0.4 to 10 volumes of normally liquid feed per volume of catalyst per hour and recovering a normally liquid hydroconversion product from the catalytic treating zone effluent.

3,089,844

METHOD OF ACTIVATING A FRESH, POROUS ALUMINA SUPPORTED PLATINUM-CONTAINING CATALYST

John P. Thorn, Elizabeth, and John A. Hladicky, Irvington, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed May 14, 1953, Ser. No. 355,156

6 Claims. (Cl. 208—139)

1. The method of activating for hydroforming a fresh, porous alumina supported platinum-containing catalyst, which comprises the steps of treating the supported catalyst with a dilute aqueous mixture of nitric acid and hydrogen halide acid, said acid mixture being from 0.01 to 2.5 molal in nitric acid and from 0.1 to about 3 molal in hydrogen halide acid, without materially dissolving said support, drying the thus treated catalyst and reducing the treated catalyst.

3,089,845

NAPHTHA REFORMING WITH NOBLE METAL CATALYST

Robert B. Mossly, Walnut Creek, Calif., assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Dec. 27, 1960, Ser. No. 78,253

17 Claims. (Cl. 208—139)

1. In a process for the catalytic reforming of a hydrocarbon oil, the improvement which comprises contacting the hydrocarbon oil under reforming conditions with a solid catalyst comprising a minor amount of a platinum group metal and 0.1% to about 5% by weight halogen supported on a gel as carrier and on which has been incorporated from about 1% to about 8% by weight of tetraethyl orthosilicate, said gel being selected from the group consisting of silica, alumina, and mixtures thereof.

3,089,846

WELL DRILLING AND FRACTURING FLUIDS

Armin C. Pitchford, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed May 23, 1960, Ser. No. 31,221

17 Claims. (Cl. 252—8.5)

3. A well working composition comprising a fluid medium selected from the group consisting of water, oil, and an emulsion of water and oil, and an additive selected from the group consisting of asphaltene carboxylic acid and the neutralized salts thereof in an amount sufficient to reduce the fluid loss of said composition, said asphaltene carboxylic acids prepared by reacting asphaltenes having molecular weights in the range of 10^3 to 10^5 with nitric acid, and said neutralized salts prepared by neutralizing the resulting asphaltene carboxylic acids with a basic neutralizing agent selected from the group consisting of primary amines, secondary amines, diamines, alkali metal oxides, alkali metal hydroxides, alkaline earth metal salts, alkaline earth metal oxides, and alkaline earth metal hydroxides.

3,089,847

INHIBITING BACTERIAL GROWTH

Ralph N. Thompson, Mount Lebanon, Pa., assignor to Hagan Chemicals & Controls, Inc., a corporation of Pennsylvania

No Drawing. Filed Apr. 15, 1960, Ser. No. 22,396

3 Claims. (Cl. 252—8.55)

2. The process of inhibiting corrosion of oil well casings and the like in contact with oil field brine which corrosion is due to sulfate-reducing bacteria comprising adding to the brine in contact with said oil well casings and the like a small amount of a composition prepared by mixing tetramethyl ammonium chloride and a compound of the general formula R_3SnCl in a molar ratio of from about 1.5 to 1 to about 2.0 to 1, and heating the mixture for 1 to 8½ hours at a temperature from 100° C. to 200° C., where R is an alkyl group of less than four carbon atoms.

3,089,848

OIL COMPOSITIONS CONTAINING SODIUM NITRITE

Arnold J. Morway, Clark, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed May 5, 1960, Ser. No. 26,964

9 Claims. (Cl. 252—18)

1. A method of forming a stable dispersion of finely divided sodium nitrite in oil, said dispersion being useful as a rust preventive additive, which comprises forming a solution of sodium nitrite in water, adding to said solution a water gelling agent to gel said solution to thereby inhibit crystal growth of said sodium nitrite, adding to said solution an oil solution of an oil-soluble hydrocarbon polymer having a molecular weight of from about 5,000 to 100,000 to coat said sodium nitrite, heating the resulting mixture to evaporate substantially all of said water to thereby form a dispersion in said oil of polymer-coated sodium nitrite having an average particle size less than about 15 microns.

3,089,849

COATING AND LUBRICATING COMPOSITION

Donald H. Linson, Mansfield, Ohio

No Drawing. Filed Nov. 16, 1959, Ser. No. 852,941

7 Claims. (Cl. 252—29)

1. A composition of matter capable of being converted into a hard, tough, electrically conductive, matrix bonded, lubricant coating on a base article comprising:

(*a*) a substantially uniform mixture of natural, crystalline, flake graphite particles, substantially all of which

range between about 1/10 micron and about 10 microns in size as measured by direct microscopic examination,

(*b*) a matrix material selected from the group of substances consisting of coumarone-indene resins melting at temperatures between about 200° F and about 225° F., cellulose acetate, shellac, polystyrene and polyethylene, the graphite being present in amounts between about 60 parts and about 70 parts and the resins being present in amounts between about 40 parts and about 50 parts,

(*c*) about 14 parts of furfural,

(*d*) between about 300 parts and about 700 parts of a solvent for said resins selected from the group consisting of trichlorethane and a mixture of naphtha and perchlorethylene,

(*e*) and about 14 parts of a combined wetting and drying agent selected from the group consisting of sardine oil, herring oil, tung oil, linseed oil, soybean oil and menhaden oil.

3,089,850

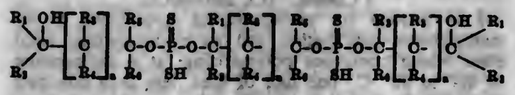
PHOSPHOROTHIOLOTHIONATES DERIVED FROM GLYCOLS

Richard L. McConnell and Harry W. Coover, Jr., Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed May 8, 1957, Ser. No. 657,727

2 Claims. (Cl. 252—32.7)

1. A lubricating composition comprising a major proportion of lubricating oil and a minor proportion of a metal salt selected from the group consisting of alkali metal salts and alkaline earth metal salts of an organophosphorus compound having the formula:



wherein R_1, R_2, R_3, R_4, R_5 and R_6 are selected from the group consisting of hydrogen and alkyl radicals containing from 1 to 4 carbon atoms, the total number of carbon atoms in R_1, R_2, R_3, R_4, R_5 and R_6 not exceeding 10 and wherein n is a whole number not greater than 1.

3,089,851

LUBRICANT ADDITIVE AND COMPOSITION CONTAINING SAME

Donald L. Klass, Barrington, Ill., and Roger W. Watson, Highland, and Robert E. Karll, Munster, Ind., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana

No Drawing. Filed Dec. 8, 1958, Ser. No. 778,606

18 Claims. (Cl. 252—32.7)

1. As a new composition of matter, an oil-soluble detergent neutralized reaction product prepared by the process comprising: reacting a phosphorus sulfide with a hydrocarbon; hydrolyzing the resulting phosphorus sulfide-hydrocarbon reaction product; and reacting the hydrolyzed product with boric acid in an amount corresponding to from about one to about three moles boron per mole of hydrolyzed product and with an aliphatic amine compound having from 2 to 21 carbon atoms and selected from the group consisting of polyamines and hydroxy aliphatic amines in an amount corresponding to from about one to about 1.1 moles of aliphatic amine compound per mole of acid phosphorus, at a temperature below the temperature at which said aliphatic amine compound is driven from the mixture of reactants.

3,089,852

EXTREME PRESSURE LUBRICATING COMPOSITIONS

Stephen A. Herbert, Jr., and Duncan W. Frew, Martinez, Calif., assignors to Shell Oil Company, a corporation of Delaware

No Drawing. Filed Dec. 23, 1958, Ser. No. 782,389

13 Claims. (Cl. 252—32.7)

5. A lubricating composition comprising a major amount of mineral lubricating oil and from about 0.1% to about 10% of an oil-soluble metal selected from the group consisting of alkali metal and alkaline earth metal salt of the reaction product of P_2S_5 and hydrolyzed copolymer of alpha-hydrocarbon olefin containing from 10 to 40 carbon atoms with a vinyl ester of a lower fatty acid of up to 5 carbon atoms in the mol ratio of 1/1 to 1/5, respectively, the phosphorus sulfide and the copolymer reactants being present in the mol ratio of about 1:10 respectively and the two materials reacted under reflux conditions in an inert solvent until evolution of H_2S ceases, and having a molecular weight of from 4,000 to 50,000.

3,089,853

LUBRICATING OIL COMPOSITIONS AND THE OPERATION OF INTERNAL COMBUSTION ENGINES

Samuel Richard Pethrick and Thomas Ronald Welch, Sunbury-on-Thames, England, assignors to The British Petroleum Company Limited, London, England, a British joint-stock corporation

No Drawing. Filed Sept. 23, 1960, Ser. No. 57,908

Claims priority, application Great Britain Oct. 14, 1959

14 Claims. (Cl. 252—37)

1. A mobile lubricating composition, suitable for use in the cylinders of an internal combustion engine operating on a fuel having a total sulphur content of at least 0.1% by weight, consisting essentially of a lubricating oil having dissolved in it,

(*a*) a sufficient amount of an aluminium additive to reduce, during such use, the corrosion caused by acids derived from the sulphur in the said fuel and to provide a maximum aluminium additive concentration of 40% by weight of the total composition, the aluminium additive consisting of a mixture of polymeric organic aluminium compounds of the general formula $(OAlOOCR)_n$, where n is greater than 1 and R represents at least one radical selected from the group consisting of saturated and unsaturated alkyl and aryl radicals containing 6–30 carbon atoms, and

(*b*) a minor amount of cetyl alcohol sufficient to enhance the cylinder wear inhibiting ability of said polymeric aluminium additive.

3,089,854

OIL-IN-WATER EMULSION LUBRICANTS

Richard K. Meyers and Stanley M. Pier, Wappingers Falls, N.Y., assignors to Texaco Inc., a corporation of Delaware

No Drawing. Filed Dec. 19, 1957, Ser. No. 703,765

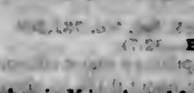
7 Claims. (Cl. 252—49.5)

1. An oil-in-water emulsion lubricant for internal combustion engines consisting essentially of 50–80 weight percent mineral lubricating oil, 50–20 weight percent water, 0.5 to 6.0 weight percent hydrophilic alkylene oxide-alkylphenol adduct emulsifying agent and 2 to 10 weight percent water-soluble amine selected from the group consisting of acyclic and cyclic amines, said acyclic amine having the general formula



wherein R is selected from the group consisting of a hydrogen atom, an alkyl radical, a hydroxyalkyl radical,

and an aminoalkyl radical and R' is selected from the group consisting of an alkyl radical, a hydroxyalkyl radical and an aminoalkyl radical, said alkyl, hydroxyalkyl and aminoalkyl radicals containing 1 to 4 carbon atoms and said cyclic amine having the general formula



wherein X is selected from the group consisting of oxygen, a $=CH_2$ radical and a $=NH$ radical.

3,089,855

OXYGEN LIBERATING COMPOSITION

Robert M. Bovard, Callery, Pa., assignor to MSA Research Corporation, Pittsburgh, Pa., a corporation of Pennsylvania

No Drawing. Filed Aug. 6, 1959, Ser. No. 831,943
3 Claims. (Cl. 252—186)

1. An oxygen liberating composition which upon burning liberates oxygen consisting essentially of a consolidated body having substantially uniformly distributed therethrough, by weight, about 4 to 7 percent of steel wool, 2 to 6 percent of barium peroxide, 0 to 4 percent of iron powder, and the remainder substantially all alkali metal chlorate.

3,089,856

PRODUCTION OF CONDUCTIVE ZINC OXIDE

Howard M. Cyr and Nicholas S. Nanovic, Palmerton, Pa., assignors to The New Jersey Zinc Company, New York, N.Y., a corporation of New Jersey

No Drawing. Filed Nov. 10, 1960, Ser. No. 68,332
2 Claims. (Cl. 252—518)

1. In the method of producing electrically conductive zinc oxide wherein an activating agent comprising aluminum chloride is added to normally non-conductive zinc oxide and the activator-containing oxide is heated in a reducing atmosphere to a temperature of at least about 800° C. with resulting increase in its conductivity the improvement which comprises first heating the activator-containing non-conductive zinc oxide in the ambient atmosphere to a temperature of at least about 650° C., subjecting this air-heated oxide to mechanical disintegration wherein any agglomerates are broken, and thereafter subjecting the disintegrated oxide to the aforementioned heat treatment in the reducing atmosphere.

3,089,857

STORAGE STABLE EXPANDABLE POLYMERIC COMPOSITION CONTAINING EXPANDABLE POLYMERIC PARTICLES AND TWO DIFFERENT BLOWING AGENTS AND METHOD OF MAKING SAME

Carl H. Pettenger, Sewickley, Pa., assignor to Koppers Company, Inc., a corporation of Delaware

Filed Apr. 12, 1960, Ser. No. 21,611
6 Claims. (Cl. 260—2.5)

1. A storage stable expandable polymeric composition comprising a mixture of first and second portions of polymeric particles, said first portion of polymeric particles having incorporated therein a normally liquid aliphatic hydrocarbon boiling in the range of from 20° C. to 100° C. and a carbon dioxide liberating agent selected from the group consisting of carbonates and bicarbonates of the alkali metals and alkaline earth metals, said second portion of polymeric particles having incorporated therein a normally liquid aliphatic hydrocarbon boiling in the range of from 20° C. to 100° C. and an acid selected from the group consisting of boric acid and solid organic acids having at least 10 milli-equivalents of acidic hydrogen per gram, the total amount of said hydrocarbon contained in said composition being between 2% and 15% by weight of the total composition and the amount of carbon dioxide liberating agent in said first portion of polymeric particles and the amount of acid in said second portion of polymeric particles being such that, upon complete reaction of said carbon dioxide liberating agent and acid, there will be formed water and carbon dioxide in an amount between 0.2% and 6% by weight of said polymeric composition.

3,089,858

VINYL RESIN COMPOSITIONS PLASTICIZED WITH DIALKYL ESTERS OF 2,5 DIPHENYL ADIPIC ACID

John F. Nobis, Wilmette, Ill., and Charles E. Frank, Cincinnati, Ohio, assignors to National Distillers and Chemical Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Original application Jan. 17, 1958, Ser. No. 709,482. Divided and this application Dec. 29, 1959, Ser. No. 862,490
5 Claims. (Cl. 260—31.8)

1. A composition of matter comprising a polyvinyl resin selected from the group consisting of polyvinyl chloride and vinyl chloride-vinyl acetate copolymer plasticized with a dialkyl ester of 2,5-diphenyladipic acid, the alkyl groups in the dialkyl ester having from one to eighteen carbon atoms.

3,089,859

PROCESS FOR MANUFACTURING DIMETHYLOLURON-ALKYL-ETHERS AND COPOLYMERS THEREOF WITH METHYLOLMELAMINE ALKYL ETHERS

Teruo Oshima, Sumiyoshi-ku, Osaka, Japan, assignor to Sumitomo Chemical Company, Ltd., Osaka, Japan, a corporation of Japan

No Drawing. Filed Feb. 23, 1960, Ser. No. 10,063
Claims priority, application Japan Mar. 3, 1959
4 Claims. (Cl. 260—45.2)

2. A process for manufacturing co-polymer of dimethylolurea-dialkyl-ether and methylolmelamine alkyl ether which comprises polymerizing, at a temperature of 40° to 80° C., one mol of urea, less than one-third mol of melamine and more than 5 mols of a substance selected from the group consisting of formaldehyde and compounds which release formaldehyde at said temperature while maintaining the pH greater than 10, concentrating the resultant solution in a neutral to acid pH range, and adding to the concentrate an aliphatic lower alcohol at acidic pH.

3,089,860

STABILIZED POLYOLEFIN COMPOSITIONS

Bernard O. Reese, Plainfield, and Cal Y. Meyers, Princeton, N.J., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Dec. 3, 1958, Ser. No. 777,862
4 Claims. (Cl. 260—45.7)

1. A polypropylene composition stable toward molecular degradation at high temperatures which comprises normally solid polypropylene and a stabilizing amount of a free radical supplying compound selected from the group consisting of tetraphenylsuccinodinitrile and triphenylmethane.

3,089,861

POLYHYDROXY NITRILES AND THEIR PRODUCTION

Hermann Leyerzapf, Molsberg (Rhine), Germany, assignor to Deutsche Gold- und Silber-Scheideanstalt vormals Roessler, Frankfurt, Germany

No Drawing. Filed Nov. 2, 1961, Ser. No. 149,511
Claims priority, application Germany Nov. 3, 1960
11 Claims. (Cl. 260—67)

1. A process for the production of a poly-α-hydroxy nitriles which comprises reacting macromolecular polyacrolein with hydrogen cyanide at a temperature between 0 and 100° C. at a pH between 7 and 10 in the presence of an alkaline catalyst.

3,089,862

POLYMERIC REACTION PRODUCT OF POLYALKYL SUBSTITUTED DIISOCYANO COMPOUNDS AND POLYHYDROXY COMPOUND

Lloyd C. Fetterly, El Cerrito, David O. Cullenward, Orinda, and Curtis W. Smith, Berkeley, Calif., assignors to Shell Oil Company, a corporation of Delaware

No Drawing. Filed Sept. 14, 1954, Ser. No. 456,078
11 Claims. (Cl. 260—75)

1. A polymeric product of reaction of (1) a member of the group consisting of benzene, biphenyl, and diphenylmethane substituted by two radicals of the group consisting of isocyanato and isothiocyanato in which the positions ortho to each of said two radicals are each substituted by an alkyl radical, with (2) a polyhydroxy compound of the group consisting of polyhydroxy alkanes, hydroxy terminated ethers, and hydroxy terminated esters.

3,089,863

PROCESS FOR PREPARATION OF A POLYESTER RESIN OF PENTAERYTHRITOL, A DICARBOXYLIC ACID ANHYDRIDE, AND A MONOEPOXIDE

Darrell D. Hicks and John E. Masters, Louisville, Ky., assignors to Devoe & Raynolds Co., Inc., a corporation of New York

No Drawing. Filed June 29, 1956, Ser. No. 594,716
1 Claim. (Cl. 260—75)

In the preparation of thermoplastic polyesters from dicarboxylic acid anhydrides and monoepoxides, the process for preparing branched chain polyesters having end groups which do not react with each other during preparation comprising including pentaerythritol as a reactant with the anhydride and monoepoxide, the four hydroxyl groups being equal to the number of branch chains of the polyester, reacting the pentaerythritol, the anhydride and the monoepoxide in a mol ratio of monoepoxide to dicarboxylic acid anhydride of 2:1 to 1:2, and in a mol ratio of anhydride plus monoepoxide to pentaerythritol greater than 7:1 depending on the desired length of branches, by heating the reactants at an elevated temperature below 150° C. sufficient to bring about a reaction of anhydride with alcoholic hydroxyl groups forming carboxyl groups, as well as a reaction of monoepoxide with the carboxyl groups forming additional hydroxyl groups and maintaining the temperature below that at which a carboxy-hydroxy reaction takes place so that end groups of polyester chains growing by the successive addition of anhydride and monoepoxide to the alcoholic hydroxyl groups do not react with each other and form water, said monoepoxide being selected from the group consisting of oxirane, alkyl oxiranes and ethers and esters, each containing a single 1,2-epoxy group as its sole reactive group.

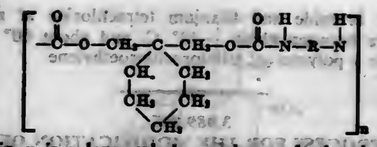
3,089,864

POLYURETHANE PRODUCT

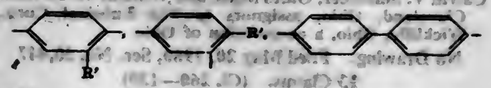
Manfred Katz, Wilmington, Del., and Emerson L. Wittbecker, West Chester, Pa., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Original application Sept. 1, 1954, Ser. No. 453,672, now Patent No. 2,973,333, dated Feb. 28, 1961. Divided and this application Apr. 25, 1960, Ser. No. 24,254
4 Claims. (Cl. 260—77.5)

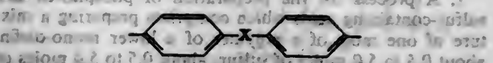
1. A polyurethane with a polymer melt temperature of at least about 200° C. containing recurring units of the formula:



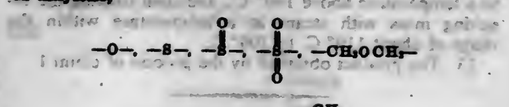
wherein n is a large whole number and wherein R is a member of the group consisting of



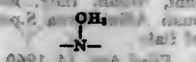
and



wherein R' is a member of the group consisting of hydrogen and methyl and wherein —X— is an inert bivalent radical of one to four atoms in length whose radical weight does not exceed 65 from the class consisting of alkylene,



and



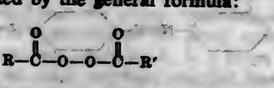
3,089,865

PROCESS FOR POLYMERIZING VINYL COMPOUNDS WITH UNSYMMETRICAL HALOGEN-SUBSTITUTED DIACYL PEROXIDES

Richard A. Walther and Howard M. Rife, Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Jan. 7, 1958, Ser. No. 707,477
8 Claims. (Cl. 260—87.1)

1. The method which comprises polymerizing a mixture of polymerizable monomers comprising principally vinyl chloride in the presence of an unsymmetrical halogen-substituted diacyl peroxide selected from the group of peroxides represented by the general formula:



wherein R represents a member selected from the group consisting of hydrocarbon radicals selected from the group consisting of alkyl radicals containing from 1 to about 10 carbon atoms, cycloaliphatic radicals, and aryl radicals, and R' represents an halogen-substituted hydrocarbon radical selected from the group consisting of an alkyl radical containing up to about 10 carbon atoms, a cycloaliphatic radical, and an aryl radical; said halogen-subetituted hydrocarbon radical containing from 1 to about 5 halogen substituents thereon selected from the group consisting of chlorine and bromine.

3,089,866

PROCESS FOR THE PREPARATION OF FLUORINE-CONTAINING POLYMERS

George H. Crawford, Jr., Rahway, N.J., assignor, by mesne assignments, to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

No Drawing. Filed May 25, 1956, Ser. No. 587,212
1 Claim. (Cl. 260—92.1)

A novel process which comprises polymerizing only trifluorochloroethylene in admixture with diethyl alu-

minum bromide and titanium tetrachloride at a temperature between about —40° C. and about 60° C. to produce a polymer of trifluorochloroethylene.

3,089,867
PROCESS FOR THE MODIFICATION OF OLEFIN POLYMERS

Calvin V. Smalheer, Gates Mills, and William M. Le Suer, Cleveland, Ohio, assignors to The Lubrizol Corp., Wickliffe, Ohio, a corporation of Ohio

No Drawing. Filed May 20, 1960, Ser. No. 30,447
13 Claims. (Cl. 260—139)

1. A process for the preparation of phosphorus and sulfur-containing acids which comprises preparing a mixture of one mole of a polymer of a lower mono-olefin, about 0.5 to 5.0 moles of sulfur, about 0.5 to 5.0 moles of a phosphorus trihalide and about 0.001 to 0.1 mole of a metal salt of a phosphorodithioic acid, said metal salt being selected from the group consisting of barium, zinc, copper and sodium salts thereof, heating said mixture to a temperature above 140° C., and then treating the resulting mass with steam at a temperature within the range of about 110° C. to 200° C.

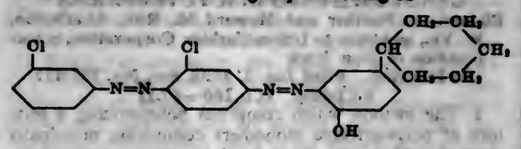
13. The product obtained by the process of claim 1.

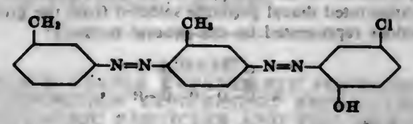
3,089,868
DISAZO DYES

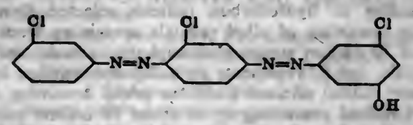
Ermanno Gastaldi, Milan, Italy, assignor to Aziende Colori Nazionali Affini Acna S.p.A., Milan, Italy, a corporation of Italy

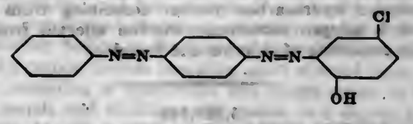
No Drawing. Filed Apr. 14, 1960, Ser. No. 22,122
Claims priority, application Italy Dec. 15, 1959
6 Claims. (Cl. 260—186)

1. A disazo dye, insoluble in water and having a formula selected from the group consisting of

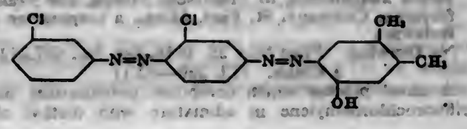








and

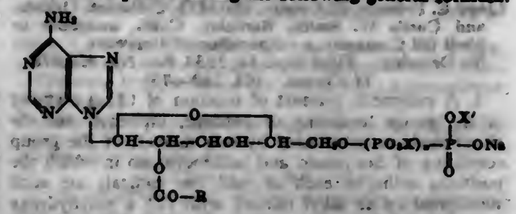


3,089,869
ORGANIC ACID ESTERS OF ADENOSINE PHOSPHATES

Roland Yves Mauvernay, Riom, France, assignor to Laboratoire d'Analyses et de Recherches R. Y. Mauvernay, Riom, France

No Drawing. Filed Mar. 30, 1960, Ser. No. 18,473
Claims priority, application France July 6, 1959
14 Claims. (Cl. 260—211.5)

1. A compound having the following general formula:



wherein X is selected from the group consisting of hydrogen and sodium, X' is selected from the group consisting of hydrogen and sodium, and OCOR is an organic carboxylic acid radical from an acid selected from the group consisting of nicotinic acid, acetylsalicylic acid, salicylic acid, para-amino salicylic acid, acetyl acetic acid, para-amino benzoic acid, valeric acid, lactic acid, pyruvic acid, pantothenic acid, folic acid, cholic acid, 2-phenyl-cinchoninic acid, hexahydro-2-oxo-1-H-thieno(3,4)-imidazol-valeric acid, acetyl-orthocresotic acid, lysine, glutamine, asparagine, glycine, tyrosine, phenylalanine, arginine, ornithine, citrulline, histidine, serine, thyroxine, creatine and sarcosine.

3,089,870
PROCESS FOR PREPARING NITROGEN-CONTAINING CELLULOSE DERIVATIVES

John W. Mench and Braxton Fulkerson, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Jan. 9, 1962, Ser. No. 165,235
5 Claims. (Cl. 260—226)

1. In a process for reacting a cellulose derivative selected from the group consisting of chloroacylated cellulose esters and chloroacylated cellulose ethers with a secondary amine, the improvement which comprises incorporating in the reaction mixture a salt selected from the group consisting of sodium carbonate, sodium bicarbonate, calcium oxide and sodium acetate.

3,089,871
PREPARATION OF STABLE CELLULOSE TRIESTERS

Carl J. Malm and Carlton L. Crane, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed June 9, 1961, Ser. No. 115,908
5 Claims. (Cl. 260—227)

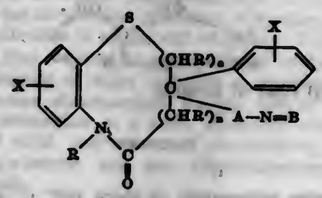
1. A method of making stable cellulose triesters which comprises esterifying cellulose with an esterification bath comprising 4–9 parts of lower fatty acid anhydride and .01–.10 part of sulfuric acid per part of cellulose, the liquid to solid ration in the esterification being 5–10:1 and the maximum temperature being restricted to 70–120° F., followed by neutralizing 50–90% of the sulfuric acid catalyst in the completed esterification mass with an alkaline earth metal neutralizing agent and maintaining in anhydrous condition at a temperature within the range of 70–140° F. thereby imparting low hydroxyl and sulfur contents to the cellulose ester, adding thereto aqueous lower fatty acid in amount no more than 5% excess of that necessary to convert the anhydride present to lower fatty acid and subsequently separating the cellulose ester from the mass.

3,089,872
BENZOTHIAZINE AND BENZOTHIAZEPINE COMPOUNDS

John Krapcho, New Brunswick, N.J., assignor to Olin Mathieson Chemical Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed Mar. 31, 1961, Ser. No. 99,694
9 Claims. (Cl. 260—239.3)

1. A compound selected from the group consisting of bases of the formula



wherein R represents a member of the group consisting of lower alkyl, lower alkenyl, phenyl-lower alkyl and phenyl-lower alkenyl; R' represents a member of the group consisting of hydrogen and lower alkyl; X represents a member of the group consisting of hydrogen, lower alkyl, halogen, mono halo-lower alkyl, trifluoromethyl, and lower alkoxy; A represents lower alkylene; and N=B represents a basic nitrogen radical selected from the group consisting of amino, (lower alkyl)amino, di(lower alkyl)amino, (hydroxy-lower alkyl)amino, di(hydroxy-lower alkyl)amino and saturated 5 to 6-membered monocyclic heterocyclic radicals of less than 12 carbon atoms selected from the group consisting of piperidino, (lower alkyl)piperidino, di(lower alkyl)piperidino, (lower alkoxy)piperidino, pyrollidino, (lower alkoxy)pyrollidino, morpholino, (lower alkyl)morpholino, di(lower alkyl)morpholino, (lower alkoxy)morpholino, thiamorpholino, (lower alkyl)thiamorpholino, di(lower alkyl)thiamorpholino, (lower alkoxy)thiamorpholino, piperazino, (lower alkyl)piperazino, di(lower alkyl)piperazino and (lower alkoxy)piperazino, and *n* represents an integer from 0 to 1, at least one *n* being 0, and pharmaceutically acceptable acid addition salts of said bases.

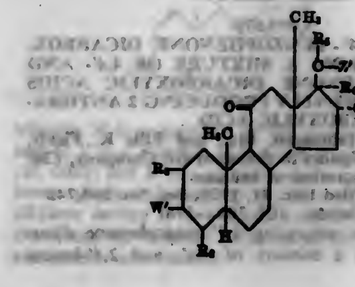
9. 3-(3-dimethylaminopropyl) - 2,3 - dihydro-2,5-dimethyl-3-phenyl-1,5-benzothiazepin-4(5H)-one.

3,089,873
16α-ALKOXYCORTICOIDS

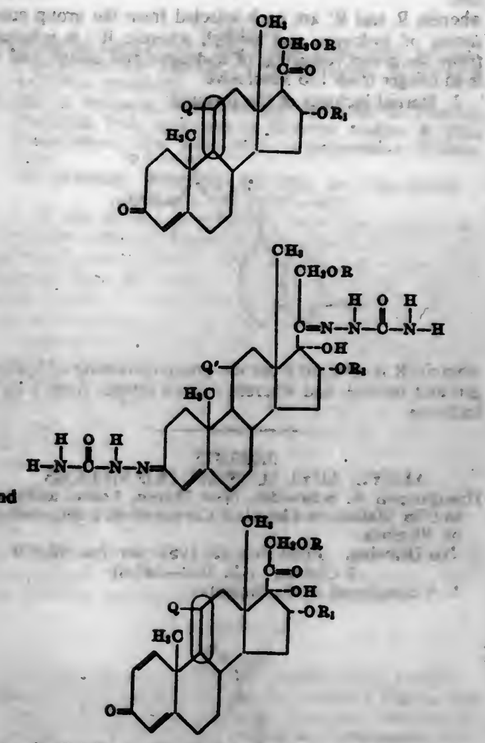
Elliot L. Shapiro, Irvington, and Hans Reimann, Bloomfield, N.J., assignors to Schering Corporation, Bloomfield, N.J., a corporation of New Jersey

No Drawing. Filed Mar. 12, 1959, Ser. No. 798,819
16 Claims. (Cl. 260—239.55)

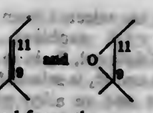
1. A 16-alkoxy steroid selected from the group consisting of compounds represented by the formulae:



and



wherein W' is a member selected from the group consisting of oxygen, hydroxy and acetoxy; Z' is a member selected from the group consisting of oxygen, cyanohydrin and cyano—in which case the C–17: C–20 bond is olefinic and replaces R_4; Q is an arrangement of atoms about the C–9: C–11 positions selected from the group consisting of



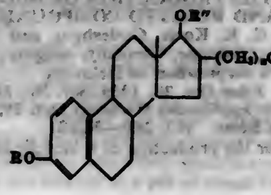
Q' is a member selected from the group consisting of oxygen and hydroxy; R is a member of the group consisting of hydrogen and lower acyl radicals; R_1 is a lower alkyl radical; R_2 and R_3 are each members selected from the group consisting of hydrogen and bromine; R_4 is a member selected from the group consisting of hydrogen and hydroxy; and R_5 is a member selected from the group consisting of methyl and lower acyloxymethyl radicals.

3,089,874
STEROID LACTONES

Paul Kurath, Waukegan, and John Wayne Cole, Deerfield, Ill., assignors to Abbott Laboratories, North Chicago, Ill., a corporation of Illinois

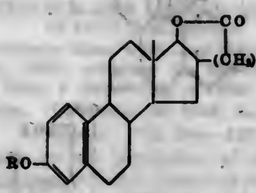
No Drawing. Filed May 31, 1961, Ser. No. 113,610
12 Claims. (Cl. 260—239.57)

1. A steroid of the formula



wherein R and R' are each selected from the group consisting of hydrogen and methyl, wherein R'' is selected from the group consisting of hydrogen and acetyl, and *n* is an integer from 1 to 3 inclusive.

2. Steroid lactones of the formula



wherein R is selected from the group consisting of hydrogen and methyl, and wherein *n* is an integer from 1 to 3 inclusive.

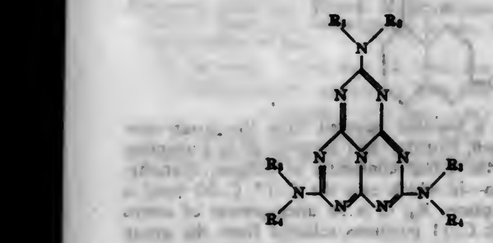
3,089,875

ALKYL, ARYL SUBSTITUTED MELEMS

Hansjuergen A. Schroeder, New Haven, Conn., assignor to Olin Mathieson Chemical Corporation, a corporation of Virginia

No Drawing. Filed Feb. 23, 1961, Ser. No. 90,970
2 Claims. (Cl. 260—249.6)

1. A compound of the formula:



wherein R_1 and R_2 are selected from the group consisting of phenyl, tolyl, xylyl, naphthyl, methylnaphthyl, biphenyl, and methylbiphenyl, R_3 is an alkyl group having 4 to 12 carbon atoms and R_4 is selected from the group consisting of hydrogen and an alkyl group having 4 to 12 carbon atoms.

3,089,876

1-(β-AMINOETHYL)-4-(β-HYDROXYETHYL)-PIPERAZINE

Tsung Y. Shen, Westfield, Edward F. Rogers, Middletown, and Lewis H. Sarett, Princeton, N.J., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Original application Oct. 14, 1958, Ser. No. 767,102, now Patent No. 3,031,452, dated Apr. 24, 1962. Divided and this application Nov. 20, 1961, Ser. No. 153,745
1 Claim. (Cl. 260—268)

1-(β-aminoethyl)-4-(β-hydroxyethyl)-piperazine.

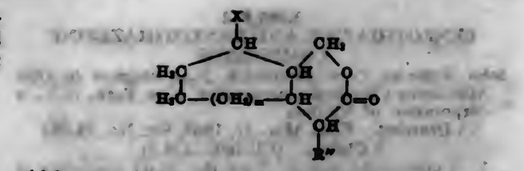
3,089,877

PROCESS FOR THE PRODUCTION OF IRIDOMYRMECIN AND RELATED COMPOUNDS

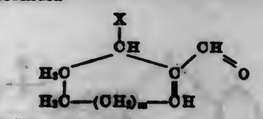
Friedrich W. A. G. K. Korte, Godesberg, and Albrecht K. W. Zechmeister, Cologne, Germany, assignors to Shell Oil Company, a corporation of Delaware

No Drawing. Filed Oct. 28, 1959, Ser. No. 849,187
Claims priority, application Germany Oct. 29, 1958
4 Claims. (Cl. 260—343.2)

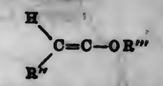
1. A process for the production of a bicyclic lactone of formula



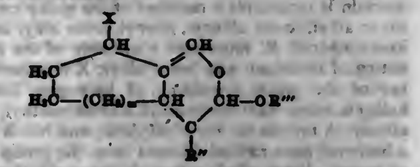
which comprises condensing an alpha-beta-unsaturated aldehyde of formula



with a vinyl ether of formula



at from room temperature to about 160° C. and under atmospheric to superatmospheric pressure to obtain a cyclic adduct of formula



wherein X and R'' are each a member selected from the group consisting of hydrogen and alkyl of one to seven carbon atoms, R''' is alkyl of one to seven carbon atoms and *m* is a whole positive number from 0 to 1, inclusive, hydrogenating the cyclic adduct with hydrogen in the presence of a hydrogenation catalyst selected from the group consisting of nickel, copper, platinum, palladium molybdenum sulfide, tungsten sulfide, copper oxide, chromum oxide and oxidizing the hydrogenated cyclic adduct with hydrogen peroxide.

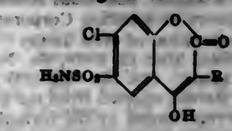
3,089,878

3-ALKYL-4-HYDROXY-7-CHLOROCOUMARIN-6-SULFONAMIDES

Robert F. Meyer, Ann Arbor, Mich., assignor to Parke, Davis & Company, Detroit, Mich., a corporation of Michigan

No Drawing. Filed Nov. 28, 1961, Ser. No. 155,463
3 Claims. (Cl. 260—343.2)

1. A 1-chloro-4-hydroxy-3-alkyl-2-oxo-2H-1-benzopyran-6-sulfonamide having the formula:



where R is selected from the group consisting of methyl and ethyl.

3,089,879

SEPARATING 4,4'-BENZOPHENONE DICARBOXYLIC ACID FROM A MIXTURE OF 4,4'- AND 2,4'-BENZOPHENONE DICARBOXYLIC ACIDS AND CONCURRENTLY PRODUCING 2 ANTHRAQUINONE CARBOXYLIC ACID

Carl Serres, Jr., Hammond, Ind., and Ellis K. Fields, Chicago, Ill., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana

No Drawing. Filed Dec. 21, 1959, Ser. No. 860,742
3 Claims. (Cl. 260—376)

1. A process for separating 4,4'-benzophenone dicarboxylic acid from a mixture of 4,4'- and 2,4'-benzophenone dicarboxylic acids and concurrently producing 2-anthraquinone carboxylic acid which comprises heating such mixture of benzophenone dicarboxylic acids in the presence of sulfuric acid to convert 2,4'-benzophenone dicarboxylic acid to 2-anthraquinone carboxylic acid, treating the resulting mixture with water to precipitate a mixture of 4,4'-benzophenone dicarboxylic acid and 2-anthraquinone carboxylic acid, separating said mixture from the resulting aqueous solution of sulfuric acid, reacting the sulfuric acid free mixture of 4,4'-benzophenone dicarboxylic acid and 2-anthraquinone carboxylic acid with an aqueous solution of sodium hydroxide containing sodium hydroxide in an amount which is a 10 percent excess over that required to react with the carboxy groups and an amount of water sufficient to dissolve the 4,4'-benzophenone dicarboxylate leaving sodium 2-anthraquinone carboxylate as a solid, separating said solution from said solid, and separately reconstituting 2-anthraquinone carboxylic acid and 4,4'-benzophenone dicarboxylic acid.

3,089,880

19-NOR-PROGESTERONE

Josef Fried, Princeton, and Marlene A. Galdecki, Edison, N.J., assignors to Olin Mathieson Chemical Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed Aug. 4, 1961, Ser. No. 129,235
7 Claims. (Cl. 260—397.3)

1. A compound selected from the group consisting of 6-(lower alkyl-19-nor-16-ketoprogesterone, 19-nor-5(10)-pregnene-3,16,20-trione and 6-(lower alkyl)-19-nor-5(10)-pregnene-3,16,20-trione.

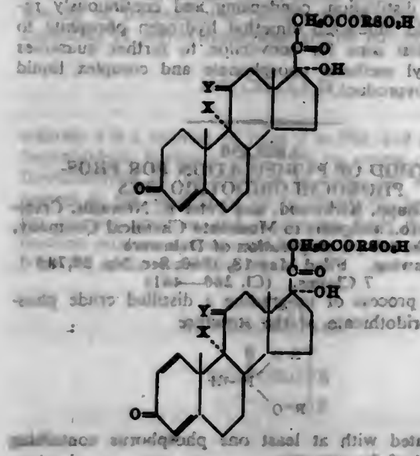
3,089,881

SULFOCARBOXYLIC ACID ESTERS OF HYDROXYLATED STEROIDS

Emanuel B. Hershberg, West Orange, and David H. Gould, Lincoln, N.J., assignors to Schering Corporation, Bloomfield, N.J., a corporation of New Jersey

No Drawing. Filed Oct. 29, 1957, Ser. No. 693,846
27 Claims. (Cl. 260—397.45)

1. Steroids of the group consisting of Δ^4-pregnenes and $\Delta^{1,4}$-pregnadienes the formulae:



wherein X is a member of the group consisting of H, and F; Y is a member of the group consisting of O, and (H, OH); and R is a member of the group consisting of lower alkylene having up to 10 carbon atoms, cycloalkylene having 5 to 6 cyclic carbon atoms, and phenylene; and the nontoxic alkali metal, alkylene earth metal and amine salts thereof.

3,089,882

COLOR STABILIZING PROCESS FOR THE MANUFACTURE OF ESTER-TYPE ANIONIC SURFACE ACTIVE AGENTS

Leslie M. Schenck, Mountainside, and John G. Papalos, Westfield, N.J., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Oct. 19, 1960, Ser. No. 63,468
7 Claims. (Cl. 260—400)

1. In the process of preparing ester-type anionic surface active agents by the condensation reaction of a monocarboxylic acid of from 8 to 22 carbon atoms with a salt selected from the group of alkali metal and alkaline earth metals of a β-alkylisethionate, wherein the alkyl is of 1 to 4 carbon atoms, at a pH of about 2.5 to 3.5 and a temperature of 140 to 320° C. in the presence of a catalytic amount of a compound selected from the group consisting of hypophosphorous acid and its metal, ammonium and amine salts, the improvement of obtaining the said surface active agents substantially color free which comprises introducing at a stage of said reaction consisting of prior to the onset of the said reaction and during the said reaction from 0.01 to 10% of an inorganic compound selected from the group consisting of halides, nitrates, sulfates, phosphates, carbonates, oxalates and citrates of metals selected from the class consisting of potassium lithium, cesium, rubidium, beryllium, barium, calcium, magnesium, cadmium and strontium.

3,089,883

ESTERS OF ACYLAMINOCARBOXYLIC ACIDS

Manfred Dohr, Duesseldorf, and Horst-Jürgen Krause and Carl Wulf, Duesseldorf-Benrath, Germany, assignors to Henkel & Cie. G.m.b.H., Duesseldorf-Holthausen, Germany, a corporation of Germany

No Drawing. Filed July 7, 1958, Ser. No. 746,686
Claims priority, application Germany July 11, 1957
9 Claims. (Cl. 260—404)

1. Esters of acylaminocarboxylic acids of the formula:

$$R—CO—(NH—(CH_2)_n—CO)_x—OH$$

wherein R is an alkyl radical having from 10–40 carbon atoms, *n* is a whole number from 5–18, *x* is a whole number from 1–3, and an alcohol selected from the group consisting of monohydric alcohols containing from 8–60 carbon atoms and polyhydric alcohols having from 2 to 6 carbon atoms.

3,089,884

PREPARATION OF ESTERS

David W. Marshall, Ponca City, Okla., assignor to Continental Oil Company, Ponca City, Okla., a corporation of Delaware

No Drawing. Filed Dec. 21, 1961, Ser. No. 161,366
3 Claims. (Cl. 260—410.9)

1. A process for preparing an alkyl ester of a 1-alkane carboxylic acid which comprises reacting an aluminum trialkyl having alkyl substituents containing not in excess of about 50 carbon atoms with an alkyl chloroformate at a temperature between about 0° and 200° C.

3,089,885

PROCESS FOR THE SELECTIVE RECOVERY OF URANIUM DIRECTLY FROM URANIUM-BEARING ORES

Jurgen M. Kruse, Pitman, N.J., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed June 23, 1959, Ser. No. 822,175
4 Claims. (Cl. 260—429.1)

1. A process for the selective recovery of uranium from uranium-containing ores which consists essentially of contacting the ore directly at a pH of about from 3 to 9 with

a solution consisting essentially of (*a*) at least one organic polydentate chelating agent selected from the group consisting of salicylic acid, salicylaldehyde, salicylamide, 5,5'-methylenedisalicylic acid, uncrosslinked salicylic acid-formaldehyde polymers, and Schiff bases prepared from salicylaldehyde and polyamines, and (*b*) inert organic solvent for said chelating agent.

3,089,886

CYCLOPENTADIENYL AND DI-ETHYL MALONYL TITANIUM COMPOUNDS

Heyme Broederveld, Bloemendaal, and Hein Israel Waterman, Delft, Netherlands, assignors to Shell Oil Company, a corporation of Delaware

No Drawing. Filed May 4, 1953, Ser. No. 352,974
Claims priority, application Great Britain May 5, 1952
19 Claims. (Cl. 260—429.5)

1. Compounds of the general formula $Ti(A)_nX_{(4-n)}$ wherein A is an organic radical of strong negative character selected from the group consisting of the cyclopentadienyl radical and the radical obtained by removing hydrogen from the alpha carbon atom of the malonyl group of an alkyl ester of malonic acid, said radical being linked to the titanium atom by a titanium to carbon bond, X is halogen and *n* is an integer having a value of from 1 to 4 inclusive.

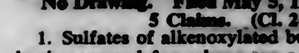
3,089,887

THIOCARBAMIC ESTERS

Jean Metivier, Arpajon, France, assignor to Societe des Usines Chimiques Rhone-Poulenc, Paris, France, a French body corporate

No Drawing. Filed Dec. 13, 1960, Ser. No. 75,472
Claims priority, application France Dec. 15, 1959
3 Claims. (Cl. 260—455)

1. Thiocarbamic esters of the formula:



wherein Ar represents a member of the class consisting of the phenyl group, the naphthyl groups and phenyl groups substituted by at least one member of the class consisting of halogen atoms and lower alkyl, lower alkoxy, lower alkenyloxy, lower alkythio, lower alkoxycarbonyl, lower alkanesulphonyl, nitro and trifluoromethyl groups, Y and Y_1 represent members of the class consisting of oxygen and sulphur atoms, at least one being a sulphur atom, R represents a member of the class consisting of a hydrogen atom and a methyl group, and R_1 and R_2, when individual groups, represent members of the class consisting of a hydrogen atom and a lower alkyl group and, when joined together, represent with the nitrogen atom to which they are attached a morpholine ring.

3,089,888

SULFATES OF ALKENOXYLATED BUTYNEDIOL

Raymond L. Mayhew, Summit, N.J., and Earl P. Williams, Pen Argyl, Pa., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed May 5, 1961, Ser. No. 107,938
5 Claims. (Cl. 260—458)

1. Sulfates of alkenoxylated butynediol having the following general formula:



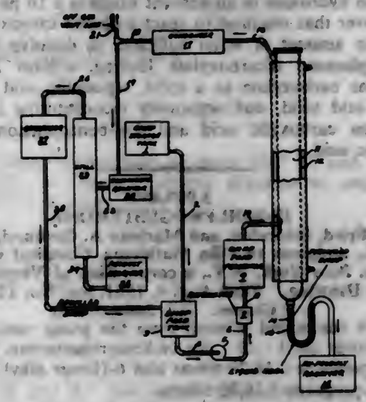
wherein M represents a member selected from the class consisting of hydrogen, alkali metal, alkaline earth metal, ammonium and alkylamino group of from 1 to 12 carbon atoms, *n* represents an integer of from 1 to 2, R represents a member selected from the class consisting of hydrogen and SO_3M, and R_1 represents a member selected from the class consisting of hydrogen and methyl group.

3,089,889

PYROLYSIS PRODUCTS OF DIMETHYL HYDROGEN PHOSPHITE AND METHOD OF PRODUCING SAME

Thomas H. Cleveland, David H. Chadwick, and Edgar E. Hardy, Anniston, Ala., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

Filed July 3, 1956, Ser. No. 172,388
6 Claims. (Cl. 260—461)



5. The method which comprises introducing vaporized dimethyl hydrogen phosphite into a reaction zone, continuously heating said vapor to a temperature of about 200° C. to about 400° C. to continuously produce a vaporous mixture and as a byproduct a complex liquid pyrolysis product, continuously cooling said vaporous mixture to continuously condense a crude liquid product containing dimethyl methane phosphonate and unreacted dimethyl hydrogen phosphite, continuously introducing said condensate into a still to separate said unreacted dimethyl hydrogen phosphite from said phosphonate by fractional distillation, condensing and continuously recycling said unreacted dimethyl hydrogen phosphite to said reaction zone for conversion to further quantities of dimethyl methane phosphonate and complex liquid pyrolysis byproduct.

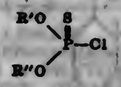
3,089,890

METHOD OF PURIFICATION FOR PHOSPHOROCHLORIDOTHIOATES

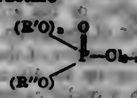
John P. Clapp, Kirkwood, and Peter E. Newallis, Crestwood, Mo., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed May 18, 1960, Ser. No. 29,785
7 Claims. (Cl. 260—461)

1. The process of up-grading a distilled crude phosphorochloridothioate of the structure



contaminated with at least one phosphorus containing compound of the structure



wherein the foregoing *n* is an integer from 0 to 1, and wherein R' and R'' are hydrocarbon radicals having 1 to 8 carbon atoms selected from the group consisting of aryl, alkaryl, aralkyl, cycloalkyl and alkyl radicals which comprises contacting said distilled crude with water and thereafter separating the organic phase from the aqueous phase to recover thereby the said phosphorochloridothioate substantially free of at least one of said phosphorus containing contaminants.

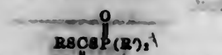
3,089,891

ORGANIC PHOSPHORUS COMPOUNDS

Gail H. Birum, Dayton, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed June 28, 1960, Ser. No. 39,239
19 Claims. (Cl. 260—461)

1. Compounds having the formula



wherein R is selected from the group consisting of aryl, haloaryl, and alkylaryl radicals having from 6 to 12 carbon atoms in each of said aryl, haloaryl and alkylaryl radicals, R' is selected from the group consisting of hydrocarbyl, hydrocarbyloxy, and halohydrocarbyloxy radicals having from 1 to 6 carbon atoms, and R'' is selected from the group consisting of aliphatic hydrocarbon and halogen-substituted aliphatic radicals having from 1 to 6 carbon atoms.

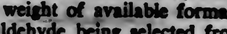
3,089,892

MONO, DI AND CYCLICPHOSPHONATE ALKYL ESTERS AND PROCESS THEREOF

Harold James Harwood, Cuyahoga Falls, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Oct. 31, 1960, Ser. No. 65,960
6 Claims. (Cl. 260—461)

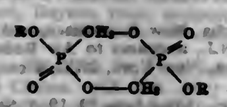
4. A process which comprises reacting a trialkyl phosphite having from 1 to 12 carbon atoms in each alkyl radical with a concentrated formaldehyde source having at least 95% by weight of available formaldehyde, said sources of formaldehyde being selected from the group consisting of polyoxymethylene glycols having a formula



wherein x is a number of from 4 to 200, and monomeric formaldehyde having at least 95% by weight of available formaldehyde, in the presence of water, the water being present in the amount of up to about 5% by weight of the reaction mixture and recovering from the resulting reaction mixture a compound having the formula selected from the group consisting of



and



wherein R represents an alkyl radical having from 1 to 12 carbon atoms.

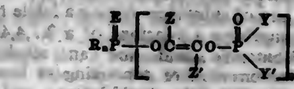
3,089,893

PHOSPHINYLOXYALKENYL CONTAINING PHOSPHORUS ESTERS

James L. Dever, Arlington, Mass., and Gail H. Birum, Dayton, Ohio, assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Nov. 25, 1960, Ser. No. 71,419
10 Claims. (Cl. 260—461)

1. A compound of the formula



wherein R is selected from the group consisting of hydrocarbyl, hydrocarbyloxy, hydrocarbylthio, halohydrocarbyl, halohydrocarbyloxy, and halohydrocarbylthio radicals which are free from aliphatic unsaturation and have from 1 to 12 carbon atoms, and wherein two R radicals taken together denote a bivalent radical selected from the group consisting of —O-alkylene-O— radicals having from 2 to 12 carbon atoms and —O-arylene-O— radicals having from 6 to 12 carbon atoms and completing with the phosphorus atom a ring having from 2 to 4 carbon atoms; *n* is a whole number of from 0 to 2; E is selected from the group consisting of oxygen and sulfur; Z is selected from the group consisting of alkyl radicals having from 1 to 12 carbon atoms and aryl radicals having from 6 to 12 carbon atoms; Z' is selected from the group consisting of Z and hydrogen; Y and Y' are each selected from alkoxy and haloalkoxy radicals of from 1 to 12 carbon atoms and aryl radicals having from 6 to 12 carbon atoms.

3,089,894

CYCLOHEXYL BORATE AND ITS PREPARATION

David D. Neiswender, Jr., Haddonfield, and Phillip S. Landis, Woodbury, N.J., assignors to Socony Mobil Oil Company, Inc., a corporation of New York

No Drawing. Filed June 8, 1961, Ser. No. 115,601
6 Claims. (Cl. 260—462)

1. A process which comprises reacting cyclohexene with boric acid in the presence of a minor quantity of water to produce monocyclohexyl borate.

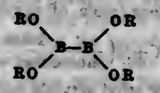
3,089,895

METHOD OF PRODUCING TETRAALKOXY-DIBORONS

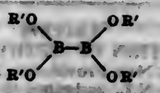
Herbert C. Newsom, Whittier, and Robert J. Brotherton, Fullerton, Calif., assignors to United States Borax & Chemical Corporation, Los Angeles, Calif., a corporation of Nevada

No Drawing. Filed July 23, 1962, Ser. No. 211,901
7 Claims. (Cl. 260—462)

1. The method of producing a tetraalkoxydiboron having the formula



which comprises reacting a compound of the formula

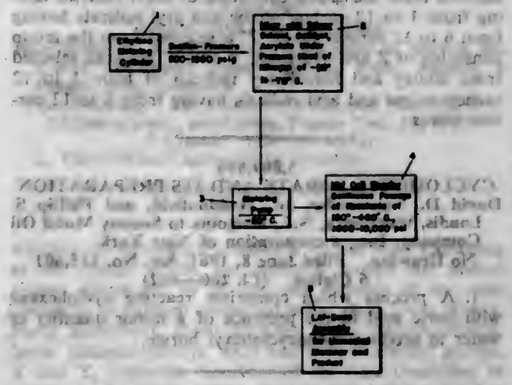


with a stoichiometric excess of an alkanol of the formula ROH where R is selected from the group consisting of the primary and secondary alkyl radicals having at least two carbon atoms and R' is an alkyl group which is derivable from an alkanol of the formula R'OH, normally having a boiling point lower than said ROH.

3,089,896
PREPARATION OF ENOLATES OF 2,2,4,4-TETRAALKYLACETOACETIC ESTERS
Raymond D. Clark, Kingsport, Tenn., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
No Drawing. Filed Sept. 20, 1961, Ser. No. 139,364
3 Claims. (Cl. 260—483)

1. The process for preparing a metal enolate of a 2,2,4,4-tetraalkylacetoacetic ester which comprises forming a reaction mixture free of substances having a labile hydrogen atom, and comprising a β-lactone of a 2,2,4,4-tetraalkyl-3-hydroxy-3-butenoic acid and an alkali-metal alkoxide, said reaction mixture containing at least one mole of said alkoxide per mole of said lactone, and maintaining the reaction mixture at a reaction temperature of 50° to 150° C.

3,089,897
COPOLYMERIZATION OF ETHYLENE WITH ALKYL ACRYLATES OR METHACRYLATES
Clifford E. Balmer, Holland, Clarence A. Brown, Hatboro, and Melvin D. Harwitz, Southampton, Pa., and James E. Masterson, Moorestown, N.J., assignors to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware
Filed June 16, 1959, Ser. No. 820,625
16 Claims. (Cl. 260—486)



10. A liquid copolymer of ethylene and a member from the class consisting of ethyl acrylate, methyl acrylate, and methyl methacrylate, said copolymer having a viscosity in the range of from H to Z_6 on the Gardner-Holdt scale, an acid number which does not exceed 3, a molecular weight of between about 500 and 1500, and a molar ratio of ethylene to the acrylic monomer ranging from 1 to 3 in which ratio the upper limit is a function of molecular weight as expressed by the equation:

Moles of ethylene/mole of acrylic monomer.

$$=X+\tfrac{1}{4}\left(\frac{1500}{\text{molecular weight}}\right)$$

where $X=1.75$ for ethyl acrylate and methyl methacrylate and $X=2.25$ for methyl acrylate.

3,089,898
PREPARATION OF METHYL ACRYLATE
James F. Vitcha, New Providence, and James P. Russell, Scotch Plains, N.J., assignors to Air Reduction Company, Incorporated, New York, N.Y., a corporation of New York
No Drawing. Filed June 29, 1961, Ser. No. 120,514
7 Claims. (Cl. 260—486)

1. A process for the synthesis of methyl acrylate which comprises contacting a vapor mixture comprising methyl acetate and formaldehyde with a zeolite catalyst at a temperature at which methyl acrylate is formed, and recovering methyl acrylate from the resulting product.

3,089,899
PRODUCTION OF METHYL METHACRYLATE USING ZEOLITE CATALYST
James F. Vitcha, New Providence, and Victor A. Sims, Bayonne, N.J., assignors to Air Reduction Company, Incorporated, New York, N.Y., a corporation of New York
No Drawing. Filed June 29, 1961, Ser. No. 120,516
6 Claims. (Cl. 260—486)

1. A process for the synthesis of methyl methacrylate which comprises contacting a vapor mixture comprising formaldehyde and methyl propionate with a zeolite catalyst material at a temperature at which methyl methacrylate is formed, and recovering methyl methacrylate from the resulting product.

3,089,900
PRODUCTION OF ALKYL METHACRYLATES USING ALKALI METAL HYDROXIDE CATALYST
James F. Vitcha, New Providence, and Victor A. Sims, Bayonne, N.J., assignors to Air Reduction Company, Incorporated, New York, N.Y., a corporation of New York
No Drawing. Filed June 29, 1961, Ser. No. 120,517
1 Claim. (Cl. 260—486)

A process for the production of methyl methacrylate which comprises forming a vapor mixture of methyl propionate and formaldehyde having a mole ratio of methyl propionate to formaldehyde within the range of 5:1 to 15:1, passing said vapor mixture over a fixed bed catalyst in a reaction chamber at a temperature of from 325° C. to 425° C. at a pressure not exceeding 200 pounds per square inch gauge and with a space velocity of from 200 to 6000 liters per hour per liter of catalyst, said catalyst consisting of potassium hydroxide impregnated on silica gel wherein said potassium hydroxide is present within the range of from 0.5% to 2% by weight, thereafter recovering a reaction product vapor mixture containing methyl methacrylate and separating the said methyl methacrylate from the reaction product so formed.

3,089,901
PRODUCTION OF METHYL METHACRYLATE USING ALKALI METAL BORATE CATALYST
James F. Vitcha, New Providence, and Victor A. Sims, Bayonne, N.J., assignors to Air Reduction Company, Incorporated, New York, N.Y., a corporation of New York
No Drawing. Filed June 29, 1961, Ser. No. 120,518
7 Claims. (Cl. 260—486)

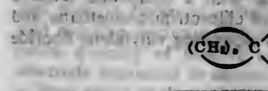
1. A process for the synthesis of methyl methacrylate which comprises contacting a vapor mixture comprising methyl propionate and formaldehyde with an alkali metal borate catalyst selected from the group consisting of alkali metal meta borates on silica gel and alkali metal tetra borates on silica gel, at a temperature of 325° C. to 425° C., and recovering methyl methacrylate from the resulting products.

3,089,902
PRODUCTION OF METHYL METHACRYLATE USING ALKALI METAL SILICATE CATALYST
James F. Vitcha, New Providence, and Victor A. Sims, Bayonne, N.J., assignors to Air Reduction Company, Incorporated, New York, N.Y., a corporation of New York
No Drawing. Filed June 29, 1961, Ser. No. 120,519
5 Claims. (Cl. 260—486)

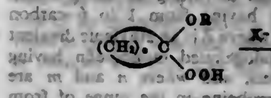
1. A process for the synthesis of methyl methacrylate which comprises contacting a vapor mixture comprising formaldehyde and methyl propionate with an alkali metal silicate on silica gel catalyst material at a temperature at which methyl methacrylate is formed, and recovering the methyl methacrylate from the product.

3,089,903
PROCESS FOR PREPARING HALOGENATED ESTERS OF CARBOXYLIC ACIDS
Francesco Minisci, Milan, Italy, assignor to Montecatini Societa Generale per l'Industria Mineraria e Chimica, Milan, Italy, a corporation of Italy
No Drawing. Filed Jan. 21, 1960, Ser. No. 3,725
Claims priority, application Italy Feb. 13, 1959
14 Claims. (Cl. 260—487)

1. A process for preparing an ester of an omega halogenated carboxylic acid, the process comprising treating an alicyclic ether hydroperoxide of the general formula



where n is an integer from 4 to 5 and R = lower alkyl, with a compound selected from the group consisting of hydrohalogenic acids and alkali and alkaline earth metal halides in the presence of a reducing agent comprising a multivalent metal catalyst, the metal being added exclusively in a lower valence state, the hydrohalogenic acid being taken from the group consisting of hydrogen chloride and bromide, the said metal halides being taken from the group consisting of chlorides and bromides, the reaction being according to the following scheme:



in which X^- is taken from the group consisting of chlorine and bromine ions, the reaction being carried out by adding the hydroperoxide to an aqueous solution containing the said compound and said reducing agent, so that said ester separates out as a water-insoluble phase.

3,089,904
OXONATION OF 1,5,9-CYCLODODECATRIENE
Samuel B. Lippincott, Springfield, Peter P. Klemchuk, Nixon, and Jeffrey H. Barthel, New Providence, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware
No Drawing. Filed Mar. 2, 1959, Ser. No. 796,286
11 Claims. (Cl. 260—514)

1. Cyclododecane carboxylic acids having the general formula:

$$C_{12}H_{24-x}(COOH)_x$$

wherein $C_{12}H_{24-x}$ is a cyclododecane radical and x is an integer from 1 to 2, the carboxylic radicals being in the 1,5-positions on the cyclododecane radical when x is 2.

3,089,905
PROCESS FOR THE PRODUCTION OF 4-HYDROXYISOPHTHALIC ACID
James C. Wygant, Dayton, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed Jan. 13, 1960, Ser. No. 2,119
6 Claims. (Cl. 260—521)

1. The process which comprises reacting a dipotassium salt of an acid selected from the group consisting of salicylic acid and 4-hydroxybenzoic acid and mixtures thereof with carbon dioxide under superatmospheric pressure at a temperature of at least 250° C., but not sufficiently high to cause substantial degradation of the organic substances, and recovering as the essential product from the resulting reaction, a potassium salt of 4-hydroxyisophthalic acid.

3,089,906
OXIDATION CHEMICAL PROCESS
Alfred Saffer, Bayside, and Robert S. Barker, Port Washington, N.Y., assignors to Mid-Century Corporation, Chicago, Ill., a corporation of Delaware
Filed Apr. 21, 1958, Ser. No. 729,922
5 Claims. (Cl. 260—524)

1. The preparation of a benzene polycarboxylic acid by reacting in an oxidation reactor, while maintaining a liquid phase therein, a polyalkyl benzene with molecular oxygen in the presence of a catalyst consisting of the conjoint presence bromine and a heavy metal oxidation catalyst and in the presence of a reaction medium solvent comprising a monocarboxylic acid containing 2 to 8 carbon atoms selected from the class consisting of benzoic acid and lower alkanoic acids at a temperature above 140° F. and at a pressure to maintain said liquid phase in the oxidation reactor wherein molecular oxygen is introduced into said liquid phase and heat of reaction is removed by passing into a cooling zone gases and vapors generated from said liquid phase; the improved combination therewith of: providing in said oxidation reactor a liquid mixture consisting essentially of said polyalkyl benzene, said catalyst and said reaction medium solvent, at the minimum temperature at which at least an essential portion of the oxidation reaction is self-sustaining at the initial temperature and at an initial pressure to maintain a liquid phase of said mixture; introducing molecular oxygen into said liquid phase to initiate the oxidation of the polyalkyl benzene to said self-sustaining oxidation state at a rate to maintain as a maximum of from 2 to 4% oxygen by volume in the mixture of gases and vapors generated from said liquid phase; permitting the temperature of the liquid phase in said oxidation reactor to increase through retention of heat of reaction from said initial temperature to the temperature of maximum oxygen consumption in the range of from above 300° F. up to 500° F. and at the autogenetic pressure at said higher temperature while increasing the rate of introduction of molecular oxygen to provide as a maximum of from 2 to 4% oxygen by volume in the mixture of gases and vapors generated from said liquid phase; thereafter removing heat of reaction by contacting at least a portion of the mixture of gases and vapors generated from the liquid phase with a cooling zone, condensing therein at least a portion of the vapors from said mixture and returning the condensate to the liquid phase in the oxidation reactor while withdrawing the uncondensed portion of the mixture of gases and vapors from said cooling zone to maintain said generated pressure; maintaining the introduction of molecular oxygen at said maximum rate until the drop in temperature of the liquid phase occurs, thereafter increasing pressure in said oxidation reactor to maintain as the reaction temperature said temperature of maximum oxygen consumption obtained at said maximum rate of introduction of molecular oxygen and decreasing the rate of molecular oxygen introduction to provide as a maximum of from 2 to 4% oxygen by volume in said withdrawn gases and vapors until further reduction of introduction of molecular oxygen does not prevent the oxygen volume concentration in said withdrawn gases and vapors from increasing above the explosive limit and thereafter stopping the rate of molecular oxygen introduction and withdrawing the contents of the oxidation reactor for recovery of the benzene polycarboxylic acid produced.

3,089,907
PRESSURE CONTROLLED LIQUID PHASE OXIDATION PROCESS FOR AROMATIC ACID PRODUCTION
Alfred Saffer, Bayside, and Robert S. Barker, Port Washington, N.Y., assignors to Mid-Century Corporation, Chicago, Ill., a corporation of Delaware
Filed Apr. 21, 1958, Ser. No. 729,977
9 Claims. (Cl. 260—524)

1. In the preparation of an aromatic carboxylic acid from an aliphatic substituted aromatic compound by oxidizing with molecular oxygen in the presence of a catalyst system comprising a metal oxidation catalyst and a source of bromine said oxidation being conducted under liquid phase conditions in the presence of an alkanoic acid containing from 2 to 8 carbon atoms per molecule as the reaction medium, the improvement of effecting said oxidation by providing in a reactor at a temperature above 140° F and at least at a pressure to maintain a liquid phase in said reactor of a liquid reaction mixture containing said aliphatic substituted aromatic compound, said catalyst system and said reaction medium; passing a source of molecular oxygen into said reaction mixture slowly to initiate the oxidation at a temperature in the range of 140–300° F., increasing the rate of addition of molecular oxygen into the reaction mixture to the maximum rate for oxidation at a temperature in the range of from 300–500° F. until the reaction temperature begins to decrease and thereafter reducing the rate of addition of molecular oxygen; condensing at least a portion of the materials vaporized from the reaction mixture; returning to the reaction mixture at least a portion of the condensate; and removing a portion of the uncondensed vapors to maintain a substantially constant pressure in said reactor.

3,089,908
PREPARATION OF TEREPHTHALALDEHYDE FROM XYLENE DICHLORIDE
Joachim C. E. Schulz, Bellevue, Pa., and Marvin O. Shrader, deceased, late of Pittsburgh, Pa., by Lala H. Shrader, administratrix, Pittsburgh, Pa., assignors to Pittsburgh Chemical Company, Pittsburgh, Pa., a corporation of Pennsylvania
No Drawing. Filed Sept. 6, 1960, Ser. No. 55,821
5 Claims. (Cl. 260—599)

1. A process of preparing terephthalaldehyde comprising reacting p-xylylene dichloride in the vapor phase with steam at a temperature of 250–550° C. in the presence of a catalyst selected from the group consisting of silica gel, alumina, magnesium oxide and zinc oxide.

3,089,909
PRODUCTION OF UNSATURATED ALIPHATIC ALDEHYDES
John Lyon Barclay, Tadworth, David James Hadley, Epsom Downs, and David Gordon Stewart, Epsom, England, assignors to The Distillers Company Limited, Edinburgh, Scotland, a British company
No Drawing. Filed Jan. 25, 1960, Ser. No. 4,219
Claims priority, application Great Britain Feb. 13, 1959
5 Claims. (Cl. 260—604)

1. The process for the production of a substance selected from the group consisting of acrolein and methacrolein which comprises reacting in the vapour phase at about 300–500° C. a substance selected from the group consisting of propylene and isobutene with oxygen in the presence of an inert gaseous diluent over an oxidation catalyst selected from the group consisting of tin tungstate, silver tungstate, and bismuth tungstate, the molar ratio of tungsten to the other metallic elements being within the range of 0.3:1 to 3:1.

3,089,910
PREPARATION OF VINYLIDENE FLUORIDE
Franciszek Olstowski, Jones Creek, and John D. Watson, Lake Jackson, Tex., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed Oct. 5, 1959, Ser. No. 844,196
3 Claims. (Cl. 260—653.3)

1. A process for preparing vinylidene fluoride which comprises contacting, at a temperature from about 600° C. to about 1000° C. methane with a compound selected from the group consisting of chlorotrifluoromethane and bromotrifluoromethane and separating vinylidene fluoride from the reaction mixture.

3,089,911
HALOGENATED ORGANIC COMPOUNDS
Murray Hauptschein, Glenside, and Milton Braid, Philadelphia, Pa., assignors to Pennsalt Chemicals Corporation, Philadelphia, Pa., a corporation of Pennsylvania
No Drawing. Filed Feb. 26, 1959, Ser. No. 795,585
2 Claims. (Cl. 260—653.8)

1. A product produced by the chlorination of vinylidene fluoride containing cotelomers the chain portion of which consists predominantly of vinylidene fluoride units, said cotelomers having the formula $A(Z)_m(CH_2CF_2)_nB$, where A is selected from the class consisting of halogen and halogenated alkyl radicals having from 1 to 6 carbon atoms; where B is halogen; where Z is an ethylenic divalent radical derived from a halogenated monoolefin having from 2 to 4 carbon atoms; and where n and m are integers, the value of $n+m$ being in the range of from 4 to 40; said cotelomers being prepared by chlorination under conditions effecting the replacement of hydrogen atoms associated with said vinylidene fluoride units with chlorine, said chlorination being continued for a period of time sufficient to replace from 8 to 30 mole percent of said hydrogen atoms with chlorine.

3,089,912
PROCESS FOR THE PRODUCTION OF 6-[2',6',6'-TRIMETHYLCYCLOHEXEN-(1')-YL]-4-METHYLHEXADI-3,5-EN-1-YN
Karl Eiter, Cologne-Stammheim, Ernst Truschelt, Leverkusen, and Hermann Oediger, Cologne-Flittard, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany
No Drawing. Filed Mar. 27, 1961, Ser. No. 98,290
Claims priority, application Germany Apr. 2, 1960
2 Claims. (Cl. 260—666)

1. A process for the production of 6-[2',6',6'-trimethylcyclohexen-1'-yl]-4-methylhexadi-3,5-en-1-yn, which comprises reacting β-ionone at a temperature below +25° C. with an organic aluminium compound prepared from a propargyl halide and aluminium, using from 200 to 800 parts by volume of solvent per mol of propargyl halide.

ELECTRICAL

3,089,913
BATTERY CELL
Wilhelm Garbon, Hagen, Westphalia, Klaus Dehmelt and Hans von Dohren, Frankfurt am Main, and Freimut Peters, Hagen, Westphalia, Germany, assignors to Varta Aktiengesellschaft
Filed Jan. 23, 1959, Ser. No. 788,599
Claims priority, application Germany Jan. 25, 1958
11 Claims. (Cl. 136—6)

1. An alkaline storage battery cell, comprising, in combination, a casing; means for hermetically sealing said casing; at least one positive and one negative electrode located in said casing; separator means between adjacent electrodes; and an electrolyte contacting said electrodes, said positive electrode including positive active mass and said negative electrode including negative active mass, the entire quantity of positive active mass of said positive electrode measured in electro-chemical equivalents being at least equal to the entire quantity of said negative mass of said negative electrode, said negative electrode being capable upon charging to accept a greater amount of electric energy than said positive electrode so that said negative electrode possesses a charge reserve and said positive electrode a discharge reserve, said positive electrode being in electrical contact with an antipolar mass, and said negative electrode being in electrical contact with an antipolar mass, the quantity of antipolar mass of said negative electrode being such that upon deep discharge of said battery cell and reversal of polarity in the same, oxidation of said negative electrode will terminate and oxygen formation thereon will start after oxidation of its antipolar mass at a stage at which the antipolar mass in contact with said positive electrode is only partially reduced and thus does not evolve hydrogen gas.

3,089,914
SEPARATOR FOR GALVANIC CELLS
Robert Carmichael, Lakewood, and John L. S. Daley, Bay Village, Ohio, assignors to Union Carbide Corporation, a corporation of New York
Filed May 2, 1960, Ser. No. 26,242
5 Claims. (Cl. 136—143)



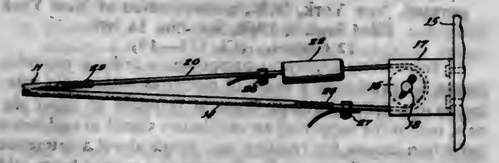
1. In a galvanic cell, a separator construction comprising at least two cupped shaped separator linings, one of which separator linings is inserted within the other, each of said separator linings being made from a paper separator material and comprising a circular bottom composed of one piece of said separator material, cylindrical side walls composed of two juxtaposed semi-cylindrical wall segments, the lateral edges of which overlap, and folded tabs of said separator material folded against the cylindrical side walls of each separator lining, the overlapping lateral edges of said juxtaposed wall segments occupying spaced radial positions about the circumference of the separator construction.

3,089,915
ELECTRICALLY SHIELDED TUBULAR JACKET
Walter A. Plummer, 3546 Crown Ridge Drive, Sherman Oaks, Calif.
Filed June 27, 1960, Ser. No. 38,997
9 Claims. (Cl. 174—36)



1. An elongated tubular jacket for electrical conductors and the like to be shielded with respect to electrical flux fields, said jacket comprising a long narrow thin-walled main body of flexible pliant electrically non-conductive material having secured along its opposite lateral edges interlocking tongue and groove seam means for holding said jacket assembled about electrical conductors, one lateral edge of said main body projecting throughout its length laterally beyond said seam means to provide a guard flap adapted to underlie and bridge said seam in the closed assembled position of the seam, an interior layer of compactly woven soft-textured fabric of electrically conductive material substantially coextensive in area with said non-conductive main body and having one lateral edge thereof embracing the edge and both opposed surface areas of the free edge portion of said guard flap, and means securing said conductive fabric loosely assembled against one surface of said non-conductive main body and about the free edge portion of said guard flap to provide a continuous tubular shield of conductive material in the assembled condition of said jacket seam.

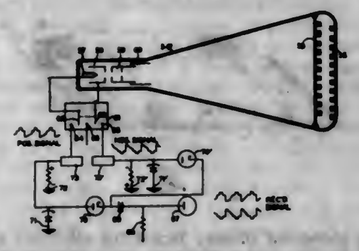
3,089,916
TWO CONDUCTOR DEAD END
Ferdinand P. Baricevic, Chicago, Ill., and Donald E. Cheney, Eau Claire, Wis., assignors to Reliable Electric Company, Franklin Park, Ill., a corporation of Illinois
Filed Feb. 15, 1961, Ser. No. 89,463
7 Claims. (Cl. 174—79)



1. A dead end for a wire pair in the form of a U-shaped structure comprising two tensile members arranged end to end, and a connecting member formed of insulating material, the adjacent end portions of said tensile members being embedded in said connecting member, and each adjacent end portion including hook means which interlinks the hook means of the other end portion, said hook means being separated from each other

at all points by the material of said connecting member so as to provide electrical isolation of each tensile member with respect to the other, one of said tensile members being U-shaped, and the remote ends of said U-shaped structure being offset longitudinally one from the other to provide offset terminals for connection to the two conductors of said wire pair.

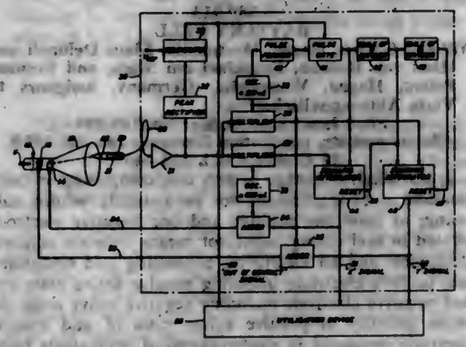
3,089,917
MEANS AND METHOD FOR STEREOSCOPIC TELEVISION VIEWING
Anthony J. Fernicola, 8 Prospect St., Utica, N.Y.
Filed Aug. 21, 1961, Ser. No. 132,624
19 Claims. (Cl. 178—6.5)



1. A television system for stereoscopic viewing of a scene having objects disposed in depth, said scene having portions ranging from foreground to background, comprising: a television camera for each portion, said cameras being synchronized to scan the scene in unison and being provided with means for blanking the signals of each camera as it scans the portions directly behind each foreground object, means for preventing each camera from scanning any portion rearward of its portion, transmitter means for broadcasting the signals from said cameras, switch means for rapidly successively connecting the cameras alternately to the transmitter means, said transmitter being adapted to broadcast a wave including successive signals from said cameras and including a signal of each switch change from one camera to the next, and receiver means for detecting and amplifying said broadcast wave, said receiver means including a picture tube for viewing the scene scanned by said cameras, said tube having spaced phosphor-coated screens, one screen for each scene portion, said screens being at successively spaced intervals from the viewer, and said receiver having means responsive to said switch change signal for illuminating the phosphor-coating of said screens successively.

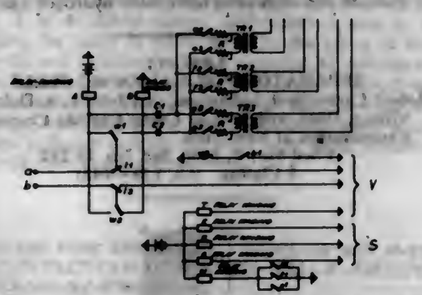
3,089,918
TELEWRITING APPARATUS
Robert E. Graham, Chatham Township, Morris County, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Sept. 9, 1960, Ser. No. 54,989
12 Claims. (Cl. 178—19)

1. Telewriting apparatus comprising a cathode ray tube, means for producing a beam of electrons within said tube, means for deflecting said beam in response to input signals, means for supplying an oscillatory signal to said beam deflection means for rotating said beam about a reference axis, a photocell, means for detecting an output from said photocell as it is moved in closed proximity to the face of said cathode ray tube, means supplied with the output of said photocell and said oscillatory signal for producing a potential corresponding to the difference in phase therebetween and of a magnitude dependent on the distance between said photocell and the point of impingement of said beam on the face of said tube, means for integrating said potential, means for applying said integrated potential to said beam deflection means for deflecting said beam so that said reference axis passes through said photocell, means for applying a signal to said beam deflection means to deflect said electron beam in a search raster



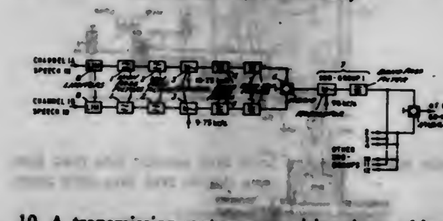
across the face of said tube whenever the magnitude of said photocell output is less than a predetermined threshold, and means for utilizing the aforementioned integrated potential to indicate the "X" and "Y" co-ordinates of said photocell.

3,089,919
TELEPHONE SYSTEM INCLUDING ELECTRO-ACOUSTIC TRANSDUCERS FOR CALL SIGNALLING PURPOSES
Otto Tschumi, Solothurn, Switzerland, assignor to Autophon Aktiengesellschaft, Solothurn, Switzerland
Filed Dec. 23, 1957, Ser. No. 704,600
Claims priority, application Switzerland Dec. 28, 1956
2 Claims. (Cl. 179—2)



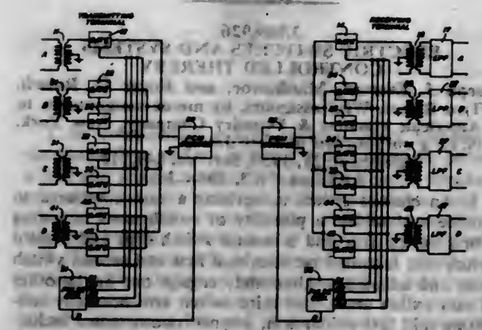
1. A telephone system having an exchange and a plurality of subscriber stations, each subscriber station having an amplifier including two power supply input terminals, and an electro-acoustic transducer energized through said amplifier, first and second conducting lines connecting each said subscriber station with said exchange for applying a D.C. voltage to said terminals from said exchange, switch means for coupling and decoupling said first line to a first one of said terminals and said second line to the second one of said terminals, first rectifier means coupling said first line to said second terminal and second rectifier means coupling said second line to said first terminal, whereby said amplifier is operatively energized by the application of a D.C. voltage to said two lines in a first polarity when said switches are closed and deenergized when said switches are opened, and said amplifier is operatively energized by the application of a D.C. voltage to said two lines in a second polarity reversed from said first polarity when said switches are open, each subscriber station further including means for coupling A.C. signals on said lines to the input of said amplifier, and said exchange including means for transmitting to said amplifier over said two lines call signals and other intelligence when said switches are open and said lines are energized in said second polarity.

3,089,920
CARRIER TELEPHONE SYSTEMS
Harry Bernard Law, Watford, England, assignor to Her Majesty's Postmaster General, London, England
Filed Jan. 26, 1959, Ser. No. 788,957
Claims priority, application Great Britain Jan. 31, 1958
10 Claims. (Cl. 179—15)



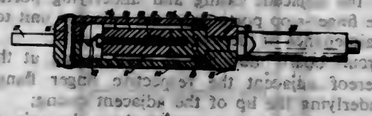
10. A transmission system comprising, in combination, a plurality of communication channels, each including:
(a) means for modulating an information signal fed into a channel for generating a single side band,
(b) two carrier signal source means each connected to a modulating means, said two carrier signal source means having a difference in frequency which provides a frequency gap between the modulated side bands of different channels which is less than the lowest information signal frequency to be transmitted in any channel and with the carrier signal frequency of one channel being within the modulated single side band of another channel; and
(c) means for preventing, in each channel, further transmission of the carrier frequency signal of this channel.

3,089,921
MULTIPLEX MESSAGE TRANSMISSION
Marion E. Hines, Summit, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed July 7, 1960, Ser. No. 41,360
18 Claims. (Cl. 179—15)



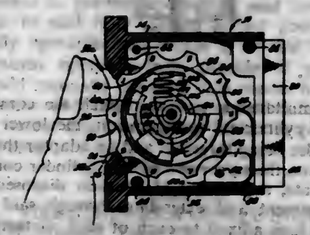
1. An arrangement for transmitting the contents of a plurality of message channels between a pair of terminals which comprises timing means for establishing a succession of recurring groups of time slots and means for combining samples of the contents of all of said message channels in all of the time slots of each of said groups to form a respectively different linear sum and difference combination in each time slot of every group.

3,089,922
NOVEL MOUNTING SHEATH FOR PIEZO-ELECTRIC PHONOGRAPH CARTRIDGE
Stanley Kelly, Forty Hill, Enfield, Alec Schuman, Clay Hill, Enfield, and John Nelson Adams, Enfield, England, assignors to Connaught Limited, Enfield, England, a British company
Filed July 26, 1955, Ser. No. 524,406
4 Claims. (Cl. 179—100.41)



1. A gramophone pickup comprising a casing, a piezoelectric element in said casing, a first sheath of compliant plastic material disposed between a first part of said element and a first part of said casing and directly engaging said element and said casing respectively to impose on said element restraint against movement of the said first part thereof with respect to said casing, a stylus, a carrier for said stylus, a second sheath of compliant plastic material directly engaging said element at a second part thereof and directly engaging said casing at a second part thereof, said second sheath permitting vibratory movement of said second part of said element with respect to said casing, said carrier directly engaging said second sheath, thereby to couple said stylus to said element, and the materials of said first and second sheaths having different moduli of elasticity, the material of said second sheath being less compliant than the material of said first sheath.

3,089,923
SECTIONAL DIGITAL SWITCH
Harry Dudley Wright, Pasadena, Calif., assignor to Endevco Corporation, Pasadena, Calif., a corporation of California
Filed June 15, 1959, Ser. No. 820,543
11 Claims. (Cl. 200—5)



7. In a digital switching system:
a plurality of substantially identical units assembled side-by-side into a compact digital switching assembly, each unit including:
a casing providing therewithin a mounting chamber,
a digit-carrying wheel rotatably mounted in said chamber,
said wheel having an interrupted circumferential finger flange providing a plurality of outstanding finger lugs and a plurality of finger notches disposed between said lugs, and said wheel having a digit-carrying rim at one side of said flange,
said casing having an outer face wall provided in its middle portion with a view opening leaving a finger-stop portion of said face wall at each end of said opening,

a peripheral portion of said finger flange projecting through said opening and a peripheral portion of said rim projecting into said opening between said finger-stop wall portions, whereby to present to view a selected member of a plurality of digits appearing around said rim;

means extending through said units and binding them together, each casing having, at the side of its view opening opposite the finger flange, a lip extending laterally a short distance toward the finger flange of the adjacent casing and underlying portions of the finger-stop portions of the adjacent unit to assist maintenance of the assembly;

a circuit board mounted in each casing at the side thereof adjacent the respective finger flange and underlying the lip of the adjacent casing;

a wiper switch plate mounted about the axis of each wheel and secured thereto on the side facing the adjacent circuit board, said switch plate and circuit board in each case having cooperating contacts; and

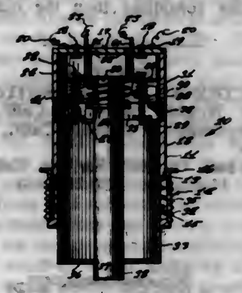
terminal means on each circuit board connected with the respective contacts.

3,089,924

SIMULTANEOUS POSITION SWITCH

Russell E. Brock, Jr., 8 Chester Ave., Rome, Ga.

Filed Nov. 21, 1961, Ser. No. 153,913
4 Claims. (Cl. 200—5)



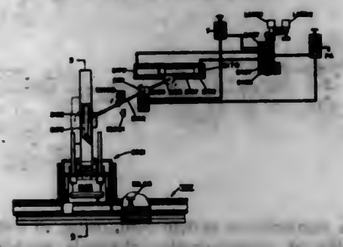
1. In a simultaneous position switch the combination of a case of cylindrical configuration, the lower portion of said cylinder being threaded and an adaptor threadedly secured thereto, the upper end of said cylinder comprising a support plate, a plurality of contacts disposed in circular arrangement and extending through said support plate, solder lugs affixed to each of said contacts on the upper surface of said support plate, a plurality of movable contacts below said contacts mounted in said support plate, each of said movable contacts electrically connected to a plurality of upstanding contacts, said upstanding contacts extending upwardly through said support plate in concentric arrangement respective to first said contact, said first contact and said movable contacts being in alignment with each other and an internal cylindrical element slidable within the first said cylinder, said cylinder element having a central opening in a bottom wall thereof, said upper cylinder, support plate having a guide plate therebelow, a central opening in said guide plate, a longitudinally extending selector rod extending through said openings in said guide plate bottom wall of said inner cylinder element, said selector rod being rotatable and having an outwardly extending arm for urging upwardly any preselected movable contact for engagement with first said contacts in said support plate.

3,089,925

WARMUP CONTACTOR FOR GUIDED MISSILE LAUNCHING SYSTEM

Sven Landstrom, Stockholm, Sweden, and Milton C. Norman and Richard C. Wilson, Champlin, Minn., assignors, by direct and mesne assignments, to the United States of America as represented by the Secretary of the Navy

Original application Oct. 22, 1959, Ser. No. 848,163. Divided and this application May 12, 1960, Ser. No. 11,386
6 Claims. (Cl. 200—23)



1. A connector assembly for aligning and connecting a first member with a second member and comprising, operator means operable to move said first member in simple harmonic motion along a line to effect engagement or disengagement of said members, said operator means including a constant speed motor, linkage means connecting said motor to said first member in a manner to cause gradual acceleration and deceleration of the initial and terminal movements of said first member, said first member including a linkage connected member, an intermediate member, and a head member, said intermediate member being connected to said linkage connected member in a manner to permit relative movement therebetween in a direction normal to said line, said head and said intermediate members being connected in a manner to permit limited relative movement therebetween in a direction normal to said line and said first direction, a pressure rod connecting said head member and said linkage connected member in a manner to urge said intermediate member and said head member toward a central position, and spring means operably connected to said linkage means in a manner to urge said members toward disengagement.

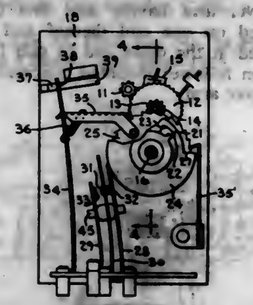
3,089,926

ELECTRIC SWITCHES AND SYSTEMS CONTROLLED THEREBY

Joseph J. Everard, Manitowoc, and Roger D. Rulseh, Two Rivers, Wis., assignors, by mesne assignments, to American Machine & Foundry Company, New York, N.Y., a corporation of New Jersey

Filed Sept. 21, 1959, Ser. No. 841,118
2 Claims. (Cl. 200—38)

1. An electric switch comprising a cam contoured to provide a shoulder, a plurality of switch arms including a first switch arm and a second switch arm and a third switch arm mounted between said first and second switch arms and adapted to alternately engage one or the other of said switch arms, said third switch arm normally contacting said first switch arm, a synchronous motor including driving means for driving said cam for a selected period of time, said first switch arm being arranged to ride on said cam during said driving period, said shoulder of said cam being operative when driven to hold said third switch arm out of contact temporarily with said first switch arm and in contact with second switch arm, thermal element means including a bimetal member having a fixed end and a movable end and means carried by the movable end of said bimetal member temporarily connecting said movable end with said cam when a predetermined temperature is reached, said thermal means being operative to override said synchronous motor drive and rotate said cam and release said third switch arm for reengagement with said first switch arm.

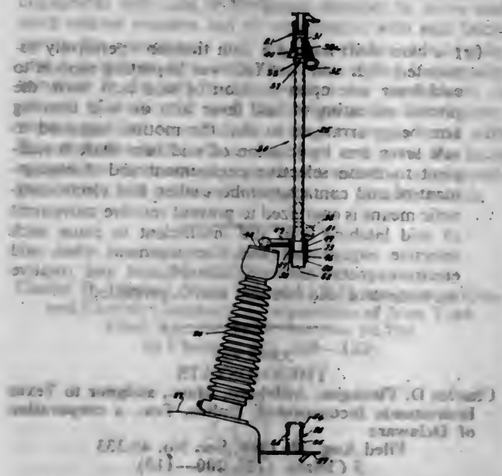


3,089,927

ISOLATING SWITCH ARRANGEMENT

Arem Foti, Greensburg, Pa., assignor to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania

Filed Feb. 1, 1960, Ser. No. 6,039
4 Claims. (Cl. 200—48)



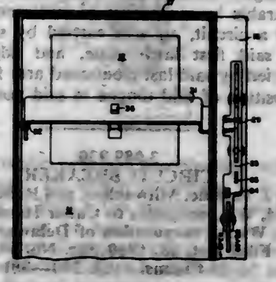
1. In combination a high voltage circuit breaker, an energizing bus, and an isolating switch operable between a first and second position wherein said circuit breaker is connected and disconnected respectively from said energizing bus; said circuit breaker including a casing, an insulator bushing secured to said casing and having a free end disposed externally of said casing; said switch comprising a first stationary contact secured to said bushing free end, a second stationary contact electrically connected to said energizing bus and in fixed spaced relation with respect to said first stationary contact, and a bridging member for completing a circuit between said stationary contacts when said switch is in said first position; said bridging member comprising a rigid elongated conducting means movable along the longitudinal axis thereof for operation of said switch between said first and said second positions the axis of said bushing being at an angle to said longitudinal axis of said bridging member; said bridging member having a ring secured thereto for receiving a hook stick; said free end of said insulator bushing extending beyond the periphery of said casing.

3,089,928

OPERATING MECHANISM FOR ENCLOSED CIRCUIT INTERRUPTER

James O. Rexroad, Beaver, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed Jan. 19, 1960, Ser. No. 3,375
10 Claims. (Cl. 200—50)



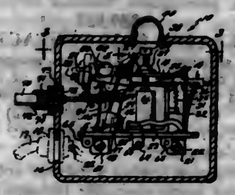
1. In combination, an enclosure comprising a cabinet the front of which is defined as having a top a bottom and two sides, a fixed front portion at one side of the front of said cabinet, an openable cover positioned at the front of said cabinet, a circuit interrupter mounted inside of said enclosure and having an operating member operable to open and close said interrupter, an external operating handle extending from said fixed front portion, means operatively connecting said external operating handle to said operating member in such a manner that said operative connection is maintained regardless of the position of said cover, a cover latching mechanism comprising manually operable cam means operable from outside of said enclosure and being operable from an unlatching position to a latching position to cam said cover to a fully closed latched position, interlocking means operating to prevent closing of said circuit interrupter when said circuit interrupter is open and said manually operable cam means is moved from said latching position to said unlatching position to permit opening of said cover, said interlocking means engaging said manually operable cam means to prevent opening of said cover when said cover is in said fully closed latched position and said manually operable cam means is in said latching position, means operable from outside of said enclosure when said manually operable cam means is in said latching position and said cover is in said fully closed position to defeat said interlocking means to permit opening of said cover.

3,089,929

VIBRATION RESPONSIVE SWITCH

Frank W. Murphy, Tulsa, Okla., assignor of one-half to Frank W. Murphy, Jr., Tulsa, Okla.

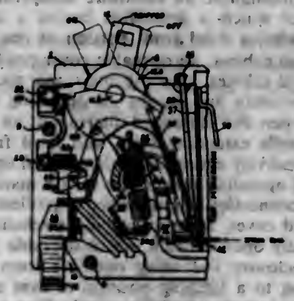
Filed Oct. 13, 1960, Ser. No. 62,353
7 Claims. (Cl. 200—61.45)



1. A vibration responsive switch comprising a housing, a base plate in said housing, an upright on said base plate, a latch plate mounted on said upright for vertical and horizontal movement, a latch arm carried by said latch plate having a notch formed therein, a second latch

plate having a central opening therein and a depending tongue extending into said opening, means pivotally mounting said second latch plate on said base plate in vertical relation with said arm extending into said opening and said tongue engaging in said notch, spring means biasing said latch plate in a direction to engage said tongue with said notch, whereby vibration of said housing disengages said tongue from said notch, contact means operable by movement of said second latch plate to control a circuit, an arm carried by said base plate overlying said first latch plate, and adjustable screw means carried by said last-mentioned arm for varying the relative position of said tongue in said notch.

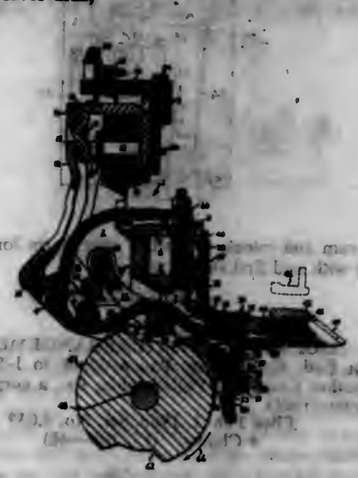
3,089,930
CIRCUIT BREAKER
Alexander J. Pastene, Milwaukee, and Robert W. Wiecher, Delafield, Wis., assignors to Cutler-Hammer, Inc., Milwaukee, Wis., a corporation of Delaware
Filed Oct. 18, 1960, Ser. No. 63,419
10 Claims. (Cl. 200—88)



1. In a circuit breaker, an operating handle having an "on" position and an "off" position, an operating mechanism, a latch in engagement with said operating mechanism, said operating mechanism maintaining said operating handle in its "on" position when the breaker is closed and maintaining said operating handle in its "off" position when the breaker is manually opened, said operating handle in its "off" position indicating the manually-opened condition of the breaker, a current responsive mechanism operable to afford disengagement of said latch to trip the breaker to its open condition, resetting means for reengaging said latch and for moving said operating handle to its "off" position, and means affording said operating handle an intermediate stable position to indicate the tripped condition thereof comprising means operable in response to tripping of the breaker for stopping said operating handle in said intermediate position against the force of said resetting means.

3,089,931
MOTOR OPERATED CAM CONTACT ASSEMBLY
Clarence V. Cunningham, Erie, Pa., assignor to General Electric Company, a corporation of New York
Filed Oct. 20, 1961, Ser. No. 146,599
6 Claims. (Cl. 200—92)

1. A contact arrangement comprising:
(*a*) a frame member;
(*b*) a latching arm having a magnet armature mounted thereon and being pivotally mounted on said frame to allow for rotative movement of said latching arm;
(*c*) electromagnetic means disposed proximate said armature and being operative when energized to attract said armature and hold said latching arm in a fixed position to prevent rotative movement thereof about its pivoted mounting on said frame;
(*d*) first and second contact members adapted for relative movement into and out of engagement;
(*e*) a lever arm having said first contact member mounted on one end thereof and being pivotally mounted at the other end to said latching arm;
(*f*) a cam follower mounted intermediate the ends of said lever arm;



(*g*) a cam shaft having a cam thereon operatively associated with said cam follower imparting motion to said lever arm upon rotation of said cam shaft, the pivotal mounting of said lever arm on said latching arm being arranged so that the motion imparted to said lever arm by rotation of said cam shaft is sufficient to cause selective engagement and disengagement of said contact members when said electromagnetic means is energized to prevent rotative movement of said latching arm and insufficient to cause such selective engagement and disengagement when said electromagnetic means is unenergized and rotative movement of said latching arm is permitted.

3,089,932
THERMOSTATS
Charles D. Flanagan, Attleboro, Mass., assignor to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware
Filed Aug. 12, 1960, Ser. No. 49,333
5 Claims. (Cl. 200—113)



5. A snap-acting thermostatic element comprising a dished flexible conductive disc adapted for inherent snap action upon temperature change, spaced contacts carried by the disc adjacent opposite margins thereof, between which contacts current flows across the disc along a path of density concentration when the disc is connected into a circuit by said contacts, said disc along said path being composed of a diametral strip of bimetallic layers having relatively high and low coefficients of thermal expansion in a first order, said sheet in parts of its dished disc form adjacent to and along opposite sides of said path in the strip having edge-bonded equal segments of bimetallic layers of relatively high and low coefficients of thermal expansion in an inverse order with respect to said first order.

3,089,933
MULTIPLE CIRCUIT BREAKER
Ross E. Locher, San Marino, Calif., assignor to Zinsco Electrical Products, Los Angeles, Calif., a corporation of California
Filed Apr. 25, 1960, Ser. No. 24,491
6 Claims. (Cl. 200—116)



2. In a circuit breaker switch having a manually actuated off-on switch mechanism and an automatic circuit breaking mechanism mounted in a case, the automatic circuit breaking mechanism including a latch movable between a neutral position and a circuit interrupted position and a trigger arm released by the latch when in the circuit interrupted position to automatically interrupt the electrical circuit, the combination of: a latch release member engageable with said latch to hold said latch in a neutral position, with said latch release member biased into engagement with said latch; a thermal trip member engageable with said latch release member to move said latch release member out of engagement with said latch; means for mounting a pair of the switches side-by-side; and a U-shaped link, with the bight of the U pivotally mounted in the side-by-side switches for engagement of an arm of the U with each latch when in the circuit interrupted position to move the arms into engagement with the respective latch release members and move the latch release members out of engagement with the corresponding latches and release the trigger arm of each switch.

3,089,934
FLASHER SWITCH
Gustaf R. Lawson, West Warwick, R.I., assignor to General Electric Company, a corporation of New York
Filed Apr. 26, 1960, Ser. No. 24,724
16 Claims. (Cl. 200—122)



1. An electrical timing switch comprising a non-conducting bar magnet, a first and a second pole piece mounted on the opposite poles of said magnet, an armature centrally mounted on said second pole piece, said armature having a first leg disposed to make bridging engagement with said first pole piece and an oppositely extending second leg, and a resistance wire electrically connected between said pole pieces and mechanically connected between said second pole piece and the projecting end of the second leg of said armature, said resistance wire when cold biasing the first leg of said armature out of contact with said first pole piece whereby when said first and second pole pieces are connected in an electric circuit said resistance wire is lengthened by heating to release the bias on said first armature leg enabling said magnet to attract said first armature leg to make contact with said first pole piece to establish an electrical circuit which shunts said resistance wire.

3,089,935
THERMOSTATIC SWITCHES
Herman Ulanet, 473 Richmond Ave., Maplewood, N.J.
Filed July 6, 1961, Ser. No. 122,187
4 Claims. (Cl. 200—122)



1. A thermostatic switch in combination with an electric power supply, the switch comprising a housing, the housing having at least a top member, at least one rigid member and a pair of normally closed spring contact members and thermal responsive means for the housing, means fixing corresponding ends of the rigid and contact members and thermal responsive means in the housing, the rigid and contact members being downwardly directed from the top member in the order named and further being forwardly directed from the fixed ends in spaced and insulated alignment, one rigid member having a slot formed in the free end thereof, a magnet slidably disposed in the slot, an armature for the magnet disposed on the free end of the most proximate contact member, an electric heating coil carried by the thermal responsive means, means connecting the contact members in series with the power supply and electrical load, means connecting the heating coil across the power supply when the contact members are closed, and contact adjustment means for the contact members.

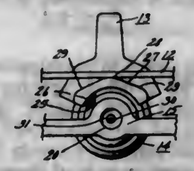
3,089,936
CONTACT STRUCTURE FOR AN ELECTRIC CIRCUIT INTERRUPTER
Sidney R. Smith, Jr., Stockbridge, Mass., assignor to General Electric Company, a corporation of New York
Filed Feb. 23, 1960, Ser. No. 10,169
13 Claims. (Cl. 200—144)



1. In an electric circuit interrupter, a pair of coacting butt contacts relatively movable from a position of engagement to a position of disengagement to establish a circuit-interrupting arc therebetween, at least one of said contacts being a cup-shaped member comprising a body portion and a flange projecting laterally from said body portion toward said other contact, said flange terminating at its free end in a generally annular contact-making surface extending about the periphery of said cup-shaped member and facing said other contact, said other contact having a contact-making surface generally aligned with the contact-making surface of said first contact and butting thereagainst when said contacts are engaged, said contact-making surfaces parting last during a circuit-interrupting operation to initiate said arc between said contact-making surfaces, means for producing arc-motion in a circumferential direction along said contact-making surfaces comprising a plurality of slots in said flange extending through the entire radial thickness of the flange, each of said slots

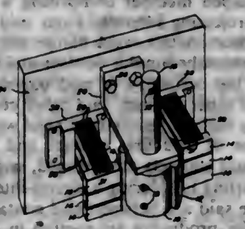
intersecting said contact-making surface and extending from said contact-making surface toward said body portion via a path disposed at an acute angle to said contact-making surface.

3,089,937
TRIGGER INDEX MEANS FOR MERCURY BUTTON SWITCH
Fred G. von Hoorn, Warwick, and Luther M. Sheldon, Oaklawn, R.I., assignors to General Electric Company, a corporation of New York
Continuation of application Ser. No. 790,518, Feb. 2, 1959. This application Aug. 2, 1960, Ser. No. 47,891
3 Claims. (Cl. 200—152)



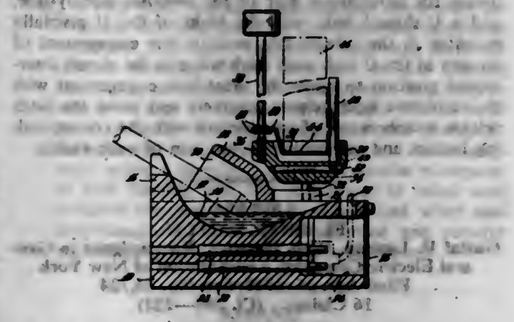
1. A mercury button switch comprising a housing of insulating material with a bottom wall and opposed side and end walls, the housing having an open top portion, two of the opposing walls defining vertical grooves for supporting the ends of a parallel pair of bowed spring contacts, a spring contact positioned in said housing by each pair of vertical grooves, the central portion of each contact having a spherical segment extending toward the other, a mercury button between said spherical segments, each segment mating with a concavity in the side of said mercury button and acting as a pivotal bearing for said button, each spherical segment defining an aperture coaxial with said button, said apertures being of a size to allow movement of said mercury button with reference to said spherical segments, a switch trigger seated on the top of the button and in driving engagement therewith so that movement of the trigger will cause the button to rotate within the contact bearings, a metal mounting strap fastened over the open top portion of the housing, the strap including an opening through which a portion of the trigger extends for manual operation, the trigger having an inverted V-shaped cam on each side of the button in tight engagement with the underside of the strap, whereby shifting the trigger from one extreme position to the other will cause the cams of the trigger to drive the button down into the housing while spreading the spring contacts further apart, the inclined sides of the cams serving as positive stops to limit the stroke of the trigger.

3,089,938
DRUM TYPE SWITCH
Leonard C. Cobbett, Sharon, Mass., assignor to Albert & J. M. Anderson Manufacturing Company, Boston, Mass., a corporation of Massachusetts
Filed Mar. 1, 1960, Ser. No. 12,225
3 Claims. (Cl. 200—155)



1. A drum type switch particularly adapted for use as a low voltage high current switch comprising an insulating panel, a rotatable drum having a segmental arcuate conducting surface extending through an arc of substantially more than 180° and having marginal edges raised above the remaining non-conducting surface of the drum, a pair of diametrically opposed contact members having flat engaging surfaces cooperating with the conducting surface of the drum providing a line contact at the points of tangency when the drum is rotated into normal full contacting engagement with the flat contact members, each of said contact members having a base terminal secured to said insulating panel, and a flexible mounting connecting the contact member and its base terminal providing a semi-rigid resilient contact structure adapted to apply uniform pressure against the conducting surface of the drum, the edges of said arcuate conducting surface engaging the adjacent edges of said flat resilient contacts upon make and break of the contacts at points of tangency spaced from the points of tangency engaged when the switch is in full contacting engagement whereby the areas of the contacting elements which are subject to pitting and erosion upon make and break of the contacts are different from the normally closed contact areas.

3,089,939
DIP-TYPE ADHESIVE CONTAINER
Robert B. Dunlap, Medway, and Jacob S. Kamborian, West Newton, Mass.; said Dunlap assignor to said Kamborian
Filed Apr. 6, 1960, Ser. No. 20,460
9 Claims. (Cl. 219—19)



8. An adhesive melting apparatus comprising: a bowl for retaining a supply of molten adhesive; means for applying heat to the bowl to maintain the supply molten; a support, for supporting a block of adhesive from its bottom, positioned spacedly above the bowl; heating means interposed between the bowl and the support for heating the lower end of the block of adhesive, said support and heating means being so constructed as to permit adhesive melted from the bottom of the block by the heating means to gravitate into the bowl; and means for adjusting the heightwise distance between the heating means and the support so as to control the rate at which the block is melted.

3,089,940
RADIANT HEATER
William H. Norton, Mundelein, Ill., assignor to Thermal Incorporated, Franklin Park, Ill., a corporation of Delaware
Filed May 11, 1960, Ser. No. 28,455
1 Claim. (Cl. 219—34)

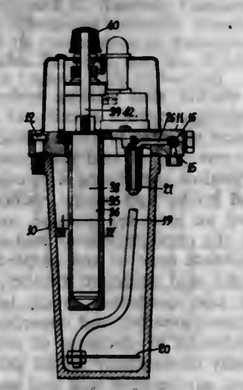
An electrical heater comprising an electrical resistance wire, a heat resistant electrically insulating material surrounding said wire, an elongated tube of high temperature resistant heat conducting material enclosing said wire and said insulating material with the material compacted

therein and having a cylindrical outer heat emitting surface with a plurality of pyramidally shaped radial projections having planar side surfaces facing away from the tube forming a uniform pattern on said surface extending for the full length of the surface and for the full circumference thereof so that the infra-red emission is increased and the size of the tube is reduced for a given heat emission capacity, said projections having planar



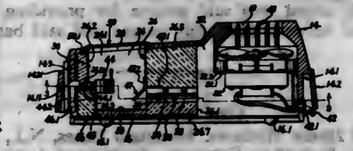
side surfaces at an angle relative to the planar side surfaces of the adjacent pyramidal projections so that infra-red rays emitted normal to the surfaces will not strike surfaces of adjacent projections, and a heat reflector positioned behind said tube and extending parallel thereto to reflect heat from one side of the circumference in the same direction as the heat is emitted from the other side of the circumference.

3,089,941
WATER HEATER
Richard A. Beu, Eggertsville, N.Y., assignor to Hanau Engineering Co., Inc., Buffalo, N.Y.
Filed June 27, 1961, Ser. No. 120,087
1 Claim. (Cl. 219—38)



A water heater assembly for dental use comprising,
a container having an open top,
a cover assembly secured to and closing the open top of said container,
said cover assembly being in the form of a plate-like cap having a portion thereof overhanging and projecting from said container,
an inlet and an outlet nipple rigid with said overhanging portion of the cap and said cap having passages therein leading from such nipples to the undersurface of the cap overlying the open top of said container,
said passages having transversely aligned portions, said overhanging portion of the cap having a transverse valve bore therein intersecting said aligned portions of the passages, and a valve member slidably received in said valve bore for selectively bypassing those portions of the passages beyond said valve bore,
a heat conducting mass depending from said cap within the confines of said container,
said mass having a pair of adjacent vertical bores therein extending from near the lower end of said mass up to and opening at the upper end thereof,
a thermostat cartridge fitted within one of said bores and an electrical heating element fitted within the other of said bores, with said thermostat and said heating element being connected in series.

3,089,942
AIR-TEMPERING DEVICES
Norman A. Wrigglesworth, Williamsville, and Francis R. Moore, Eggertsville, N.Y., assignors to American Optical Company, Southbridge, Mass., a voluntary association of Massachusetts
Filed July 1, 1960, Ser. No. 40,435
3 Claims. (Cl. 219—39)



2. An air-tempering device for temporarily heating thermoplastic ophthalmic mountings, said device comprising: a housing part of which constitutes an air intake chamber, said housing having an air intake opening associated with said chamber and an air exhaust opening in spaced relation thereto, the openings being in the top wall of the housing; an exhaust chamber and a restricted passage leading into the exhaust chamber embodied in a casing of a material having low thermal conductivity and lined with heat-reflective material, said casing being mounted within the housing in spaced relation to the outer side walls of the housing with the passage extending into said air intake chamber and with said exhaust chamber fitted against said exhaust opening, said exhaust chamber and opening and said passage being of a width substantially corresponding to the maximum width of an ophthalmic mounting; air passages leading from said air intake channel along the exterior of said casing and opening outside said housing; grid means fitted at each of said housing openings for receiving an ophthalmic mounting thereon; fan means for drawing air through the intake opening and for forcing air through the major width of said restricted passage and exhaust chamber to the exhaust opening; and for forcing air through said air passages to be vented outside said housing, thereby to cool the exterior of said casing; heater means disposed across the major width of said restricted passage for uniformly heating air passed therethrough; heat-responsive means disposed within the exhaust chamber for regulating said heater means to control the temperature of air forced through said exhaust opening; and baffle means associated with said restricted passage for deflecting heated air forced into the exhaust chamber so that said air is substantially uniformly mixed within the exhaust chamber, said baffle means being positioned for shielding the heat-responsive means from direct radiation from said heater means and for directing said heated air upon the heat-responsive means.

3,089,943
FULLY IMMERSIBLE ELECTRIC FRYING PAN
Anthony W. Serio, Hillcrest Road, Elmira, N.Y.
Filed Aug. 10, 1960, Ser. No. 48,769
15 Claims. (Cl. 219—44)

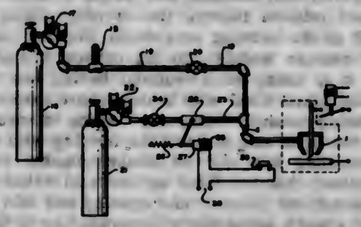
2. A fully immersible electric frying pan including a body means having an under surface, a peripheral groove

formed in said under surface, a base means including a base member, said base member having an upstanding wall formed at the outer edge portions thereof, said body means having cam means thereon comprising spaced outwardly facing sloping surface portions, a plurality of spaced inwardly projecting means supported by the wall



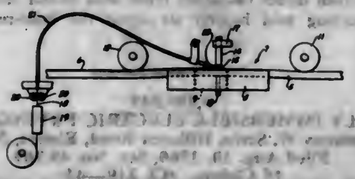
of the base member and engaging said cam means for normally urging the base member toward said body means, whereby the upper edge portion of said wall is normally urged into said groove for providing a fluid-tight seal between said body means and said base member.

3,089,944
ARC WELDING
Howard Hume Mathews, Mountain Lakes, N.J., assignor to Air Reduction Company, Incorporated, New York, N.Y., a corporation of New York
Continuation of application Ser. No. 851,284, Nov. 6, 1959. This application Jan. 19, 1962, Ser. No. 168,579
4 Claims. (Cl. 219—74)



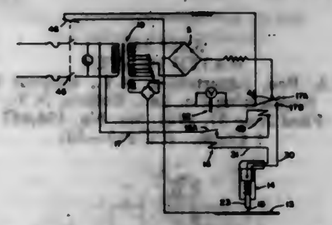
1. The method of reducing the time lag in starting an electric power arc in a stable gas at atmospheric pressure across a gap between cooperating electrodes which are connected in circuit with a source of voltage which will maintain an arc across said gap after it has been initiated, said method comprising supplying a radioactive gas to said gap between said electrodes in sufficient quantity to produce arc starting ionization of the stable gaseous medium in said gap and the consequent prompt initiation of an arc across said gap and interrupting said supply of radioactive gas to said gap after said arc has been initiated.

3,089,945
BAND SAW BLADE STOCK AND METHOD OF MAKING THE SAME
Eugene N. Connoy and Charles E. Cleland, Minneapolis, Minn., assignors to Continental Machines, Inc., Savage, Minn., a corporation of Minnesota
Filed Nov. 7, 1960, Ser. No. 67,654
14 Claims. (Cl. 219—76)



1. Band saw blade stock comprising: a composite band consisting of: (1) a flexible band of steel possessing the properties necessary to withstand shock and have good resistance to fatigue failure, said band being of indiscriminate length, uniform width and thickness and being sufficiently flexible to be unaffected by repeated flexure over the pulleys of a band saw, and (2) a continuous unbroken bead of cutting tool steel fused directly to one edge of said flexible steel band with a well-defined junction therebetween extending across said edge of the band, the bead having a hardness in the 63–66 Rc. range so that it may be tempered to secondary hardness without any intermediate hardening, and having an exceptionally fine grain structure obtained as a result of rapid quenching from the molten state and being free from any evidence of cold working; the composite band being essentially free from internal stresses so that substantially no deformation thereof takes place when teeth are ground into said edge with the gullets of the teeth well below the junction of the flexible steel band and the bead thereon and only the tip portions of the teeth of cutting tool steel.

3,089,946
STUD WELDER
Joseph G. Kaefer, Detroit, and Richard F. Saro, Huntington Woods, Mich., assignors to Deweld, Inc., Oak Park, Mich., a corporation of Michigan
Filed May 8, 1961, Ser. No. 108,589
6 Claims. (Cl. 219—98)



1. In an electric stud welding system, an electrical circuit comprising a control circuit and a condenser circuit, a weldment member to which a stud is to be welded connected to one side of said condenser circuit, a stud holding mechanism comprising a housing having a retractable stud holder and means resiliently urging said holder toward an extended position, said holder being connected to the opposite side of said condenser circuit from the weldment member and adapted to carry a stud for contact with said weldment member, means effecting discharge of said condenser circuit between the stud and the weldment member, and retraction means responsive to and actuated by discharge of said condenser circuit to suddenly momentarily retract said stud holder to produce an arc gap between said stud and said weldment member simultaneously with initial discharge of said condenser circuit.

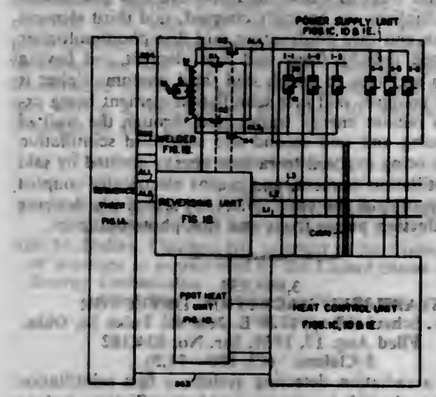
3,089,947
ARRANGEMENT AND METHOD FOR ELECTRICAL IMPULSE WELDING
Frank Friingel, Sueldorfer Landstrasse 400, Hamburg-Rissen, Germany
Filed Dec. 20, 1960, Ser. No. 77,229
8 Claims. (Cl. 219—107)

1. A method of resistance-welding a weldable element from one side to one face of a weldable body having at least two faces opposite to each other, comprising the steps of establishing physical contact between the weldable element and the body in a predetermined area of one face of the latter; establishing an electrical circuit through one electrode in contact with said weldable element, through said body and through a second electrode in contact with said one face of said body in an area considerably larger than said predetermined area; and injecting into said circuit electric energy in a sufficient amount to raise the temperature in said predetermined area within a predetermined period of time to welding temperature characteristic of the materials of said weldable element and body, the duration of said period of time and the wattage of said electric energy being limited to such degree that the heat carried by said body from the weld area by thermal convection characteristic of the material of said body is insufficient to raise the temperature at the opposite face of said body beyond a point causing



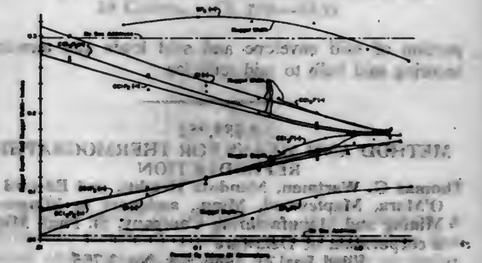
damage to said opposite face, said amount of electric energy being predetermined on the basis of the equation $E=\Delta T \cdot \frac{2}{3}r^3 \cdot \pi \cdot \gamma \cdot c$ wherein T is the permissible temperature rise at the boundary between said weldable body and said weldable element, $\frac{2}{3}r^3$ is the volume of a hemisphere having a radius r equal to the thickness of said weldable body in the welding area, γ is the density of the material of said weldable body and c is the specific heat constant of said material, whereby a welding element can be welded to one face of even a comparatively thin sheet metal body without damaging the structure and appearance of the opposite face thereof.

3,089,948
ELECTRIC DISCHARGE APPARATUS
Clarence R. Stedem, Snyder, Hubert W. Van Ness, Buffalo, and Edward C. Hartwig, Lancaster, N.Y., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Feb. 21, 1952, Ser. No. 272,818
20 Claims. (Cl. 219—114)



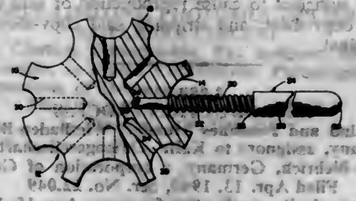
1. Apparatus for controlling the polarity of current flow from a supply through a load to which current pulses of opposite polarity are supplied in succession, comprising, in combination, reversing means interposed between said supply and said load, said reversing means being operable from one position in which it permits current of one polarity to flow through said load to another position in which it permits current of the opposite polarity of flow through said load, means, including a latching relay, responsive to a first event for conditioning said reversing means to be actuated from said one position to the said other position, and means responsive to a second event for actuating said reversing means, from said first position to said second position, after it has been so conditioned.

3,089,949
ARC WELDING METHOD AND ARTICLE
Howard C. Ludwig, Pittsburgh, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Nov. 28, 1958, Ser. No. 776,986
7 Claims. (Cl. 219—118)



1. The method of increasing the penetration in the work in the arc welding of vacuum-melted zirconium-base alloy which comprises adding an effective quantity of zirconium sponge to the welding pool during the welding operation.

3,089,950
FLOATING-TYPE CHILL BLOCK
Stephen Elchyshyn, Woodland Hills, Calif., assignor to North American Aviation, Inc.
Filed June 23, 1961, Ser. No. 119,198
9 Claims. (Cl. 219—160)



1. Chill block means for conducting heat from a member subjected to a heat source, comprising a movable, unitary block having at least one surface defining a recess therein for receiving said member, said recess being adapted to contact from about 90° to about 180° of the surface of said member, and means for urging said block against said member, thereby maintaining contact between said recess and said member.

3,089,951
POTTED TRUCK LIGHT
George D. Baldwin, Jamestown, N.Y., assignor to Truck-Lite Co., Inc., Jamestown, N.Y., a corporation of New York
Filed Aug. 8, 1960, Ser. No. 48,166
4 Claims. (Cl. 240—7.1)

1. For use in combination with vehicles, an enclosed light construction comprising a reflector, an unbased bulb including a transparent, rigid envelope having filament leads projecting therefrom, terminals extending through said reflector engaged with said leads, and a resilient pot-

ting material having substantially the same thermal expansion property as said envelope received over a base



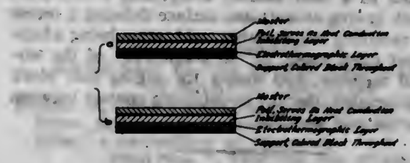
portion of said envelope and said leads and terminals securing said bulb to said reflector.

3,089,952
METHOD AND MEANS FOR THERMOGRAPHIC REPRODUCTION
Thomas G. Wartman, Mendota Heights, and Edward A. O'Mara, Maplewood, Minn., assignors to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware
Filed Jan. 21, 1960, Ser. No. 3,755
7 Claims. (Cl. 250—65)



1. Method for the thermographic reproduction of a graphic original, differentially absorptive of radiant energy, on a heat-sensitive copy-sheet, comprising: releasably adherently bonding together said copy-sheet and said original as a multi-ply composite; irradiating said composite with said radiant energy for a time and at an intensity sufficient to cause reproduction of said original on said copy-sheet; and stripping said copy-sheet from said original.

3,089,953
REPRODUCTION PROCESS
Erwin Lind and Johannes Munder, Wiesbaden-Biebrich, Germany, assignors to Kalle Aktiengesellschaft, Wiesbaden-Biebrich, Germany, a corporation of Germany
Filed Apr. 13, 1960, Ser. No. 22,049
Claims priority, application Germany Apr. 15, 1959
8 Claims. (Cl. 250—65)



1. A reproduction process which comprises placing a master in indirect contact with an electrostatically charged reproduction surface, an intermediate heat ray transmitting and heat conduction inhibiting layer being between the master and charge surface, irradiating the superposed layers while utilizing a heat absorbing agent to effect preferential heating of those parts of the reproduction surface which correspond to the image free areas of the master, and developing the invisible electrostatic image thereby produced on the reproduction surface to produce a visible image.

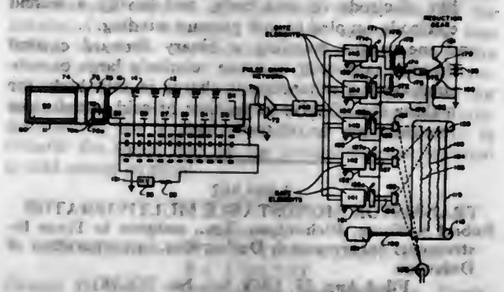
3,089,954
WELL LOGGING APPARATUS
Frank F. Johnson, Danbury, Conn., assignor, by mesne assignments, to Schlumberger Well Surveying Corporation, Houston, Tex., a corporation of Texas
Filed June 20, 1956, Ser. No. 592,557
6 Claims. (Cl. 250—71.5)



1. Well logging apparatus comprising a housing adapted to be passed through a borehole and having an elongated tubular configuration defining a longitudinal axis, first, second and third scintillation elements of cylindrical form supported within the bore of said housing in unequally spaced alignment along said axis, first, second, and third photomultipliers of cylindrical form supported within the bore of said housing in spaced alignment with said axis, said first and second elements having adjacent confronting end faces which are light shielded and having remote end faces to which the respective first and second photomultipliers are optically coupled, said third element having an end face confronting said first photomultiplier and spaced thereby from said first element and having a remote end face to which said third photomultiplier is optically coupled, said first scintillation element being exposed to radiant energy transmitted through the wall of said housing and said second and said third scintillation elements being exposed to radiant energy emitted by said first scintillation element, and means electrically coupled with each of said photomultipliers for selectively deriving pair-production pulses from said first photomultiplier.

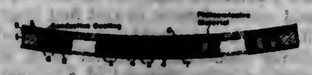
3,089,955
STABILIZED RADIATION DETECTOR
Serge A. Scherbatskoy, 1220 E. 21st St., Tulsa 14, Okla.
Filed Aug. 17, 1959, Ser. No. 834,182
5 Claims. (Cl. 250—71.5)

1. In a radiation detecting system, a first scintillation phosphor adapted to receive incident radiation and to produce first flashes of light in response thereto, a second scintillation phosphor and a standard radiation source mounted cooperatively therewith whereby said second scintillation phosphor emits standard light flashes in response to the radiation emitted by said standard source, a photoelectric device adapted to receive said first flashes and said standard flashes and to produce first electric impulses having magnitudes representing the respective intensities of said first flashes and second electrical impulses having magnitudes representing the intensities of said standard flashes, an optical attenuating system positioned between said first scintillation phosphor and said photoelectric device for selectively attenuating said first light flashes as they pass therebetween, whereby said first electrical impulses have magnitudes smaller than said second



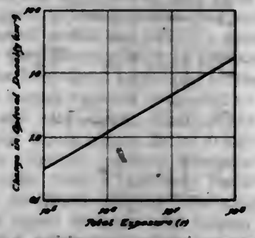
electrical impulses, and means for continuously sensing the magnitudes of said first and said second electrical impulses.

3,089,956
X-RAY FLUORESCENT SCREEN
Walter J. Hushley, now by change of name Walter John Harper, Pittsburgh, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed July 10, 1953, Ser. No. 367,167
10 Claims. (Cl. 250—80)



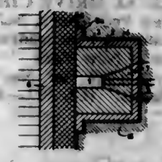
1. In an image amplifier, an input screen comprising a foraminated plate member of insulating material, said plate member having a foraminated surface and a non-foraminated surface, said plate member including a thin septum of said insulating material transverse to the foraminations therein, a layer of transparent conductive material upon said non foraminated surface of said plate member, fluorescent material filling each of said foraminations and a thin metallic member upon said foraminated surface of said plate member, said thin septum having a thickness of less than 10 percent of the thickness of said plate member.

3,089,957
GAMMA RADIATION DOSAGE-MEASURING GLASSES AND METHOD OF USING
Adil M. Bishay, Chicago, Ill., assignor to the United States of America as represented by the United States Atomic Energy Commission
Filed Dec. 23, 1960, Ser. No. 78,195
6 Claims. (Cl. 250—83)



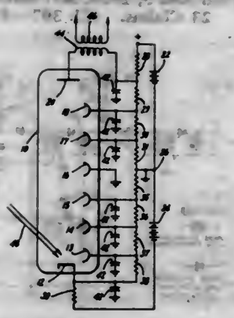
1. A melted and cast glass suitable for use as a gamma radiation dosimeter consisting of from about 15 to about 57 mole percent bismuth trioxide and from about 0.05 to about 0.20 mole percent of a member of class consisting of arsenic trioxide and antimony trioxide, the said glass being free of elemental metal.

3,089,958
JACKETED NEUTRON-FLUX MEASURING GAGE FOR NUCLEAR REACTORS
Karl Jamner, Erlangen, Germany, assignor to Siemens-Schuckertwerke Aktiengesellschaft, Berlin-Siemensstadt and Erlangen, Germany, a German corporation
Filed Nov. 21, 1958, Ser. No. 775,405
Claims priority, application Germany Nov. 27, 1957
24 Claims. (Cl. 250—83.1)



1. With a source of neutron flux, in combination, a neutron-flux measuring gage, comprising a neutron-flux detector and a layered structure at least partly enclosing said detector, the structure at least enclosing the detector on the sides other than the one nearest the source of neutrons, said structure including a layer adjacent the detector composed of a moderator substance of great diffusion length for thermal neutrons, and including an outer layer of neutron absorber, the structure also including material which is neutron reflective situated between said moderator material and said outer layer, and including the case where the moderator substance and the neutron reflective material are the same material, which latter material is of sufficient thickness to have both moderator and neutron reflector functions, the moderator converting fast to thermal neutrons, said layers being contiguous and consecutive.

3,089,959
SELF-LIMITING PHOTOMULTIPLIER AMPLIFIER CIRCUIT
John B. Chatten, Philadelphia, Pa., assignor, by mesne assignments, to Philco Corporation, Philadelphia, Pa., a corporation of Delaware
Filed May 2, 1960, Ser. No. 25,981
14 Claims. (Cl. 250—207)



1. A photomultiplier amplifier circuit comprising a photomultiplier amplifier tube having as electrodes an anode, a cathode and a plurality of dynodes, said photomultiplier amplifier tube being subject to limiting of electron current flow in an interelectrode space thereof in response to a potential difference between the final dynode and an adjacent electrode which is less than a first value, a source of bias potential having a plurality of taps, means

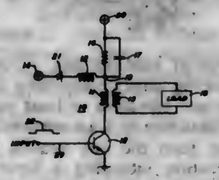
coupling said cathode, said anode and said dynodes to selected taps on said bias source, said means coupling said anode to said bias source including means for deriving an output signal from said amplifier circuit, said bias source including means for causing said taps to be at different potentials, said last mentioned means causing the potential difference between the said taps connected to said final dynode and said adjacent electrode to be substantially less than the potential difference between taps associated with other adjacent electrodes of said photomultiplier amplifier tube and less than said first value.

3,089,960

ELECTRICAL DRIVE CIRCUIT

George G. Bailey, New Providence, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed May 2, 1960, Ser. No. 26,276
13 Claims. (Cl. 307—43)



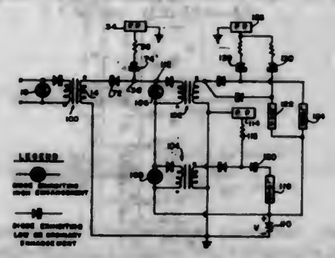
1. A circuit for driving a load device comprising a first winding having two distinct portions, a second winding connected to said load device and inductively coupled to said first winding, capacitive means connected to said first winding, means for controlling current flow through said capacitive means and one portion of said first winding to establish a predetermined voltage in said second winding, and means responsive to a charge established on said capacitive means by said current flow for establishing current flow through both portions of said first winding to induce a second predetermined voltage in said second winding.

3,089,961

BINARY LOGIC CIRCUITS EMPLOYING TRANSFORMER AND ENHANCEMENT DIODE COMBINATION

William M. Overn, Richfield, and Arthur V. Pohm, White Bear Lake, Minn., assignors to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware

Filed Jan. 3, 1958, Ser. No. 707,043
23 Claims. (Cl. 307—88.5)



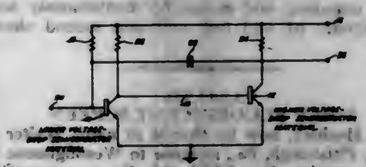
1. An impedance switch comprising:
one transformer having one primary winding and one secondary winding, said transformer having and operating on the slope of a substantially sloping characteristic curve which exhibits the transformer characteristic of substantially no residual flux;
a semiconductor body exhibiting substantial enhancement properties coupled in parallel with said primary winding;
a unidirectional current conducting device exhibiting negligible enhancement properties coupled in series opposition between the primary winding and said body, having one of its two electrodes coupled to a like electrode of said body, and having a second electrode coupled to said primary winding;
and means for coupling a binary forward current through said body to cause relatively large or substantially no enhancement charge in said body for making the effective impedance of said transformer relatively low or relatively high.

3,089,962

TRANSISTOR MONOSTABLE MULTIVIBRATOR

Robert S. Foote, Richardson, Tex., assignor to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware

Filed Aug. 29, 1958, Ser. No. 758,151
13 Claims. (Cl. 307—88.5)



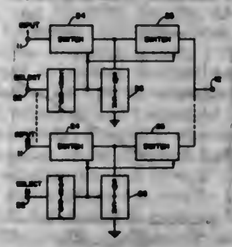
3. An electrical circuit comprising first and second circuit stages, said first stage including an active element of a first semiconductor material having at least an input, an output and a common electrode operatively associated therewith, said active element in said first stage having a potential difference between said output and said common electrodes during conduction of a first value, said second stage including an active element of a second semiconductor material having at least an input, an output and a common electrode operatively associated therewith, said active element in said second stage requiring a potential difference between said input and said common electrodes for conduction of a value greater than said first value, means coupling the input electrode of each active element to the same potential to bias said first stage conductive and means directly connecting the output electrode of said first active element to the input electrode of said second active element.

3,089,963

CONVERGING CHANNEL GATING SYSTEM COMPRISING DOUBLE TRANSISTOR SERIES AND SHUNT SWITCHES

Robert S. Djerup, Winchester, Mass., assignor to Epsco, Incorporated, Boston, Mass., a corporation of Massachusetts

Filed Oct. 6, 1958, Ser. No. 765,660
3 Claims. (Cl. 307—88.5)



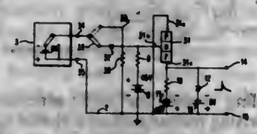
1. A multiplexing system comprising, a plurality of input terminals, an output terminal, a common terminal, respective groups of first, second and third pairs of series-connected transistors associated with each of said input terminals, said first and second pairs being connected in series between a respective one of said input terminals and said output terminal, said third pair being connected between said common terminal and the junction of the associated series-connected first and second pairs, bias voltage means for maintaining said first and second pairs normally nonconductive and said third pair normally conductive, and means responsive to a selection signal for simultaneously rendering said first and second pairs conductive and the associated third pair nonconductive to transfer the signal then on the associated input terminal to said output terminal.

3,089,964

INVERTER WITH OUTPUT CLAMP AND R-C CIRCUIT

George D. Bruce, Poughkeepsie, and Robert A. Henle, Hyde Park, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York

Original application Sept. 30, 1954, Ser. No. 459,322, now Patent No. 2,891,172, dated June 16, 1959. Divided and this application May 22, 1959, Ser. No. 815,174
3 Claims. (Cl. 307—88.5)



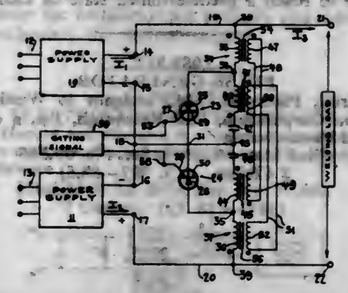
1. An inverter circuit comprising a transistor having an emitter, a collector and a base, means directly connecting the emitter to a common junction having a fixed potential; a first source of direct electrical energy and a first resistor connected in series between the common junction and the base with the source poled to bias the base reversely with respect to the emitter; an input terminal, a second resistor and a capacitor connected in parallel between the input terminal and the base, the input terminal and the base serving as common terminals of the second resistor and the capacitor, signal input means connected between the input terminal and the common junction and shiftable between relatively negative and relatively positive signal conditions and effective in one only of said conditions to overcome the reverse bias of said first source; a load resistor and a second source of direct electrical energy connected in series between the collector and the common junction, said second source being poled to bias the collector reversely with respect to the base, a third source of direct electrical energy having one terminal connected to the common junction, a diode having a first electrode connected to the opposite terminal of the third source and a second electrode connected to the collector, said diode being poled to present its high impedance to current from the third source, said third source being poled with respect to the common junction in the same sense as the second source and having a potential substantially equal to the difference between the potentials corresponding to the two signal conditions of the signal input means, and an output terminal connected to the collector, said sources and said signal input means cooperating when the signal input means shifts from its relatively negative to its relatively positive condition to shift the collector electrode from a relatively positive to a relatively negative condition, thereby producing at the output terminal a signal inverted with respect to the input signal; said third source, said diode, and said transistor cooperating to limit the amplitude of the inverted signal to a value substantially equal to the difference between the potentials of the two signal conditions of the signal input means.

3,089,965

SHUNT CONTROL CIRCUIT FOR CONTROLLING WAVEFORM

Donald Krenik, Watertown, Wis., assignor to Basic Products Corporation, Milwaukee, Wis., a corporation of Wisconsin

Filed Mar. 31, 1960, Ser. No. 18,953
11 Claims. (Cl. 307—88.5)



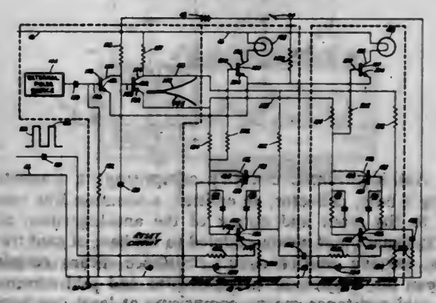
11. In a circuit for producing a predetermined waveform, the combination including a pair of direct current sources connected to one another in series opposition, said serially connected pair of direct sources being connected across the output of said circuit, a shunt circuit including switch means connected in shunt with each of said pair of direct current sources, means for selectively closing one of said switch means for shunting its current source for a predetermined time, means for closing the other of said switch means at a predetermined time, and means for opening the closed switch means upon closing of the other switch means, so that the current source with the open switch means thereacross only furnishes current to said output, whereby the resultant current through the output of said circuit is a function of the current of the unshunted direct current source.

3,089,966

INTERVAL TIMER USING MAGNETIC PICKUP PROBE AND BINARY COUNTER WITH RESET CIRCUIT

Samuel A. Procter, Minneapolis, Minn., assignor to Elmer J. Hankes, Minneapolis, Minn.

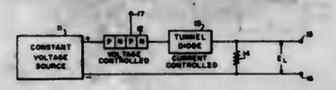
Filed May 12, 1960, Ser. No. 28,705
5 Claims. (Cl. 307—88.5)



1. A pulse counting circuit comprising a plurality of counting stages each including a pair of transistors interconnected for binary operation when triggered by pulses which are to be counted, and means for supplying biasing potentials to said transistors including first and second lines with one electrode of one transistor of each pair of transistors being connected to said first line and the corresponding electrode of the other transistor of each pair being connected to the second line, said biasing

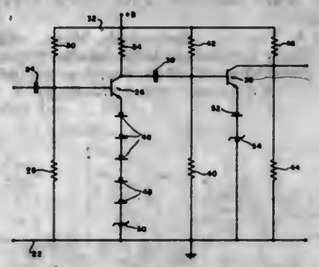
means further including means for delaying the energization of said second line until said first line has been energized, said first line being connectable to one side of a potential supply, said delay means including a resistor and capacitor connected in series between said one side and the other side of said supply, and means responsive to the charging of said capacitor for providing a circuit connection between said lines when said capacitor has had time to reach a predetermined state of charge.

3,089,967
PULSE GENERATOR
Gene Strull, Pikesville, Md., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Mar. 30, 1961, Ser. No. 99,555
2 Claims. (Cl. 307—88.5)



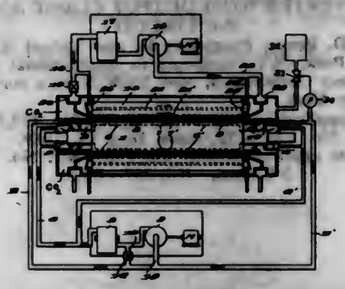
1. A high speed semiconductor switch comprising: a tunnel diode, a four layer semiconductor hyperconductive negative resistance switch connected in series with said tunnel diode, a load resistance and a constant voltage source, said hyperconductive switch having a breakover voltage substantially less than the voltage of said constant voltage source, and said load resistance being of such a value relative to said constant voltage source so that said tunnel diode obtains a high impedance state after berakover of said seminconductor switch wherein the current therethrough is less than the sustaining current of said semiconductor switch.

3,089,968
NON-LINEAR AMPLIFIER
Dale W. Dunn, Van Nuys, Calif., assignor to General Precision, Inc., a corporation of Delaware
Filed June 22, 1961, Ser. No. 118,848
3 Claims. (Cl. 307—88.5)



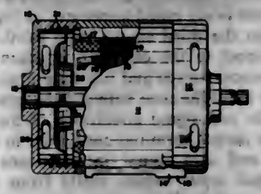
1. Anti-logarithmic circuitry comprising: a transistor having a base, collector, an emitter; a common line common to the input and output of the anti-logarithm circuitry; signal input means coupled to the base of said transistor; varying emitter circuit resistance means coupled between the emitter of said transistor and said common line, said resistance means comprising at least one semiconductor diode in which the resistance decreases logarithmically with increase in voltage applied across it; and collector circuit means including output circuitry and voltage potential circuitry coupled between the collector of said transistor and said common line, said collector circuit means having a total circuit resistance of less than a product of said varying emitter circuit resistance means and the beta characteristic of said transistor whereby said transistor will produce an output signal proportional to the ratio of total circuit resistance in said collector circuit means to said varying emitter circuit resistance means and proportional to the anti-logarithm of the signal introduced to said signal input means.

3,089,969
COOLING ARRANGEMENT FOR TURBOGENERATORS
Eugen Wiedemann, Hasel, Spreitenbach, Switzerland, assignor to Aktiengesellschaft Brown, Boveri & Cie, Baden, Switzerland, a joint-stock company
Filed Oct. 15, 1956, Ser. No. 615,889
Claims priority, application Switzerland Oct. 15, 1955
3 Claims. (Cl. 310—53)



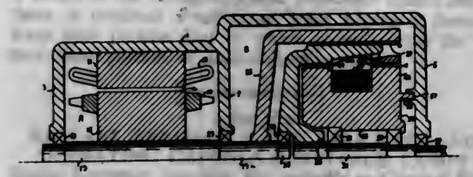
1. In a cooling system for turbo-generators, the combination comprising means sealing a closed space occupied by the rotor element of the turbo-generator from a closed space occupied by the stator element of the turbo-generator and from the surrounding air, means providing a closed re-circulation system for circulating a cooling gas through the rotor element, means providing a closed re-circulation system for circulating a cooling liquid through the stator element, said closed space occupied by the stator element being filled with an incombustible gas and said filling of incombustible gas being entirely separate from the cooling liquid of the stator cooling system, and means for regulating the pressure of the gas filling in the space occupied by the stator element to maintain said pressure equal to the pressure of the cooling gas circulating through the rotor element.

3,089,970
DYNAMOELECTRIC MACHINE HAVING AN AIR GUIDE AND METHOD OF ASSEMBLING THE SAME
Milton C. Rhodes, Jeannette, Pa., assignor to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware
Filed Nov. 2, 1959, Ser. No. 850,194
10 Claims. (Cl. 310—60)



1. In a dynamoelectric machine, a housing, a stator and a rotor within said housing, an impeller rotatable with said rotor, means internally of said housing defining an inwardly open groove having a predetermined depth, and an air guide positioned within said housing and resiliently expanded in said groove, said air guide being adapted to be elastically reduced in external diameter to an extent greater than the predetermined depth of said groove so that it may be passed by said means defining said groove and be positioned and expanded to fit securely within said groove.

3,089,971
BEARING ARRANGEMENT FOR EDDY CURRENT COUPLING
Charles M. Wheeler and Philip M. Folger, Erie, Pa., assignors to General Electric Company, a corporation of New York
Filed June 25, 1959, Ser. No. 822,947
13 Claims. (Cl. 310—105)



7. An eddy current coupling comprising a housing member having bearing support means in the ends thereof, an input shaft extending into said housing, said input shaft being rotatably positioned by bearing means in a first of said bearing support means, an output shaft axially spaced from and axially aligned with said input shaft in said housing and extending from the opposite end of said housing, bearing means axially aligning said shafts, said output shaft being rotatably positioned by bearing means in the second of said bearing support means, an eddy current drum mounted on said input shaft for rotation therewith, said drum having a cylindrical portion coaxial with said output shaft, a pole structure mounted on said output shaft to rotate therewith, said pole structure having an outer periphery in substantially concentric spaced relationship with an inner periphery of the drum to define an air gap therebetween, an annular magnetic core member having an outer periphery in substantially concentric spaced relationship with an inner periphery of the pole structure to define an air gap therebetween, bearing means on said output shaft mounting said core member thereon, and means interconnecting said core member and said housing for restraining rotary movement of said core member.

3,089,972
ELECTRIC DISCHARGE DEVICE
Daniel A. Larson, Cedar Grove, and Peter J. Walsh, East Orange, N.J., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed July 14, 1960, Ser. No. 42,796
9 Claims. (Cl. 313—34)



1. A metallic-vapor discharge device of the type designed to be operated under such conditions that the metallic-vapor pressure normally would be higher than that required for optimum efficiency, comprising a sealed envelope containing spaced electrodes between which a gaseous discharge occurs during the operation of said device, a tubulation integral with and extending from one end of said envelope, and a base attached to said one end of said envelope protectively enclosing but spaced from said tubulation, said base having an envelope-receiving portion and an intermediate vented portion, the outer end of said tubulation being closed and the inner end thereof being open and communicating with the interior of said envelope, said tubulation extending a considerable distance beyond the end of said envelope and into the intermediate vented portion of said base, the length and diameter of said tubulation being such that at least a part thereof has a lower operating temperature than said envelope and thereby provides a cool region within said device that reduces the metallic-vapor pressure and maintains it at approximately the desired value.

3,089,973
ELECTROLUMINESCENT DEVICE
Paul G. Herold and Richard A. Nolan, Lancaster, Pa., assignors to Radio Corporation of America, a corporation of Delaware
Filed Mar. 22, 1961, Ser. No. 97,686
7 Claims. (Cl. 313—108)



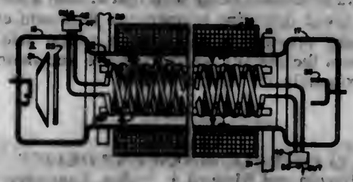
1. An electroluminescent lamp comprising a sealed envelope, a plurality of electroluminescent panels within said envelope, and means for supporting and connecting said electroluminescent panels in electrically parallel relationship within said envelope.

3,089,974
LOW DISPERSION INTERDIGITAL DELAY LINES
Rudolf C. Hergenrother, West Newton, Mass., assignor to Raytheon Company, Lexington, Mass., a corporation of Delaware
Filed Dec. 18, 1959, Ser. No. 860,426
5 Claims. (Cl. 315—3.6)



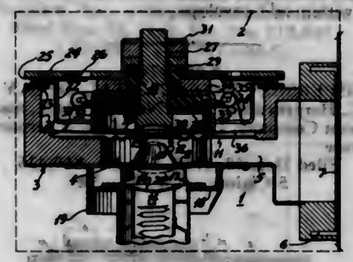
1. In a traveling wave electron discharge device the combination comprising: an electron source and electron beam forming means defining at least two paths of electron flow, one on each side at an elongate delay line comprised of geometrically periodic structure having delay elements disposed in coupling relationship with said path of electron flow, each of said delay elements being comprised of two portions transverse to said path of electron flow and displaced one from another to form an abrupt step in the direction of the longitudinal axis of said line, one pair of oppositely disposed portions of adjacent delay elements being displaced toward each other with respect to the other portions of said adjacent delay elements.

3,089,975
ELECTRON DISCHARGE DEVICE
Frederick L. Washburn, Jr., Round Bay, Severna Park, Md., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Nov. 21, 1961, Ser. No. 153,995
6 Claims. (Cl. 315—3.6)



1. A traveling wave tube comprising an envelope, means disposed at one end of said envelope for the production and projection of an electron beam along the axial length of said envelope, means disposed at the other end of said envelope for the collection of said electron beams, slow-wave propagating means disposed within said envelope substantially coaxial and in an interacting relationship with said electron beam, said slow-wave propegating means comprising first and second helical members of conducting material wound in opposite directions with respect to each other and having the same basic radius and longitudinal axis, each of said helical members having a series of outwardly extending offset portions at alternate points where the two helical members cross one another.

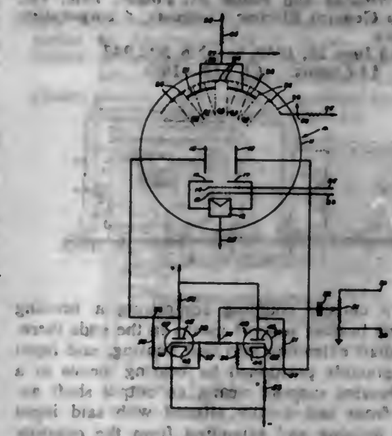
3,089,976
THERMALLY TUNED REFLEX KLYSTRON
Thomas Dawley Fentress, Jr., Eatontown, N.J., William Gerald Shepherd, St. Paul, Minn., and Gunther Ernest Wurthmann, Red Bank, N.J., assignors to The Bendix Corporation, a corporation of Delaware
Filed Apr. 14, 1960, Ser. No. 22,235
3 Claims. (Cl. 315—5.23)



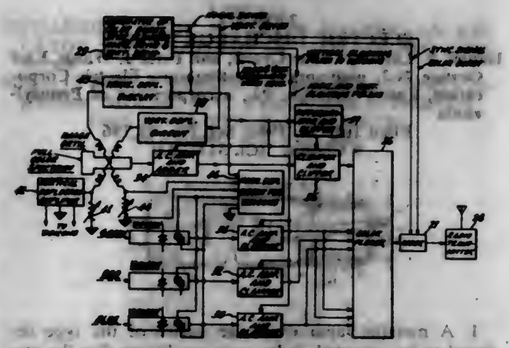
1. A reflex klystron comprising an envelope enclosing a resonant cavity, a fixed grid, a movable grid, a first diaphragm for mounting said movable grid in one wall of said cavity, a second diaphragm member concentric with said first diaphragm and positioned external of said cavity, means for connecting said diaphragms together, and means including a cathode for causing a thermal change in said second diaphragm thereby to tune said cavity.

3,089,977
ELECTRONIC FREQUENCY MULTIPLYING DEVICE
Charles R. Moeller, U.S. Navy, Mare Island Naval Shipyard, Vallejo, Calif.
Filed Apr. 13, 1959, Ser. No. 806,063
6 Claims. (Cl. 315—21)

1. A device for multiplication of an input frequency comprising a cathode-ray type tube having means for developing a cathode-ray beam; an anode structure including an anode field screen disposed opposite said means, and a plurality of anode plates disposed between said screen and said means; said screen having a more positive electric potential than said anode plate; a plurality of beam deflecting electrodes; an input frequency responsive means connected to said beam deflecting electrodes for providing alternate electric potential therein for deflecting said electron beam continuously and uniformly forth and back over said anode structure with each input alternation, means associated with the second mentioned means for varying the magnitude and the position of deflection of said electron beam over said anode structure; said electron beam impinging upon said anode plates on each sweep forth and back generating electric impulses therein, the maximum number of said impulses being equal to double the number of the anode plates so impinged by said beam with each sweep.

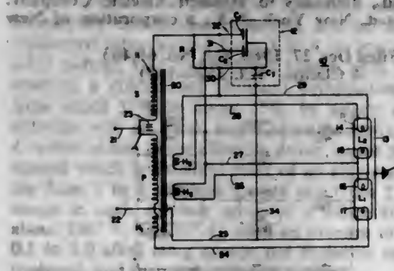


3,089,978
DEFLECTION CIRCUIT
Sidney L. Bendell, Haddon Heights, N.J., and William J. Cosgrove, Claymont, Del., assignors to Radio Corporation of America, a corporation of Delaware
Filed Mar. 27, 1962, Ser. No. 182,855
7 Claims. (Cl. 315—25)



1. In combination, an electromagnetic deflection system and an electrostatic deflection system, said electromagnetic deflection system comprising a deflection coil through which deflection current flows, said current having a waveform that has a forward trace time portion and a return time portion, means for obtaining from said electromagnetic deflection system a voltage having a forward trace time portion and a return time portion with the forward trace time portion being the same as the forward trace time portion of said current, said electrostatic deflection system comprising an adding circuit, circuit means to which the voltage obtained from said electromagnetic deflection system is applied and through which there is supplied to said adding circuit a voltage having a waveform in which a forward trace time portion corresponds to the forward trace time portion of said first-mentioned voltage, means for generating and supplying to said adding circuit a voltage wave that occurs during the return time portion of said current waveform and which has a waveshape such that when it is added to the voltage supplied from said circuit means there is obtained a combined wave having a forward trace time portion part of which occurs during the return time portion of said deflection current.

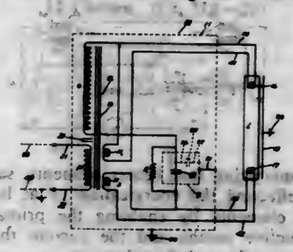
3,089,979
BALLAST APPARATUS FOR STARTING AND OPERATING GASEOUS DISCHARGE LAMPS
Daniel Lovinger, Danville, Ill., assignor to General Electric Company, a corporation of New York
Filed June 1, 1961, Ser. No. 114,118
8 Claims. (Cl. 315—85)



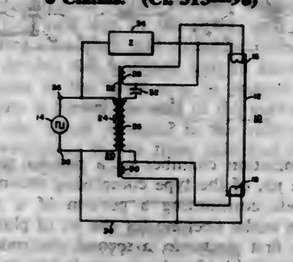
1. A ballast apparatus for starting and operating at least one gaseous discharge lamp from a source of alternating current, said apparatus comprising a transformer having a primary winding and a secondary winding inductively coupled therewith on a magnetic core, a pair of input terminal leads connected across said primary winding, a capacitor connected in series circuit relation with said secondary winding, said capacitor including a capacitor roll disposed in capacitive relation with a conductive container to provide a predetermined capacitance, circuit means including a pair of output leads for applying the output of said transformer across said lamp and for connecting said capacitor container in circuit with said lamp whereby said predetermined capacitance is connected in circuit across said lamp to minimize radio interference resulting from the arcing action of the lamp.

3,089,980
BALLAST APPARATUS FOR STARTING AND OPERATING ELECTRIC DISCHARGE LAMPS
Frank A. Neusbaum, Danville, Ill., assignor to General Electric Company, a corporation of New York
Filed June 1, 1961, Ser. No. 114,068
10 Claims. (Cl. 315—97)

1. A ballast apparatus for starting and operating at least one fluorescent lamp disposed in a capacitive relation with a conductive fixture, said apparatus comprising a high reactance transformer having a primary winding and a secondary winding inductively coupled therewith on a magnetic core, a pair of input terminal leads connected across said primary winding, a circuit means including a pair of output leads for applying the output of said transformer across said lamp, a capacitor serially connected with said secondary winding to cause a leading current to flow therethrough, a conductive ballast case, said high reactance transformer and capacitor being disposed in said ballast case, said capacitor including a capacitor roll having electrodes of interleaved foil layers and a conductive container for housing said capacitor and disposed in capacitive relation with the outer foil layer and circuit means for connecting said container in electrical circuit relationship with said ballast case, the capacitance between said container and said outer foil layer providing sufficient impedance during operation to prevent any significant current flow from the apparatus to said ballast case and said circuit means for connecting said container providing the only return path within said ballast case for the auxiliary starting aid current.



3,089,981
CIRCUIT ARRANGEMENT FOR ENERGIZING DISCHARGE DEVICES
John F. Roesel, Jr., Penn Hills, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed July 18, 1960, Ser. No. 43,484
6 Claims. (Cl. 315—98)

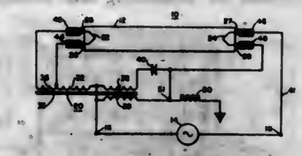


1. A circuit arrangement for energizing at least one discharge device or the like, said circuit arrangement comprising an input connected to a source of fluctuating voltage, inductive means for amplifying said fluctuating voltage, the output of said inductive means providing starting energy for said discharge device, impedance means being connected between the inductive means output and said discharge device for substantially precluding the flow of operating current to said discharge device from said inductive means, and impedance means connected between said input and said discharge device for ballasting said discharge device and for substantially precluding any elevated starting potential from being imposed upon said source.

3,089,982
CIRCUIT ARRANGEMENT WITH MEANS FOR OBTAINING SAFETY STANDARDS
Archie R. Cornell, Avon Lake, Ohio, assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed July 18, 1960, Ser. No. 43,514
6 Claims. (Cl. 315—98)

1. A circuit arrangement for energizing a discharge device having heater elements or the like as described, said arrangement comprising inductive means for trans-

forming the voltage of a source to enable said device to be started and for ballasting said device during its operation, means including a capacitor being connected across a primary portion of said inductive means for correcting the power factor of the circuit arrangement, and



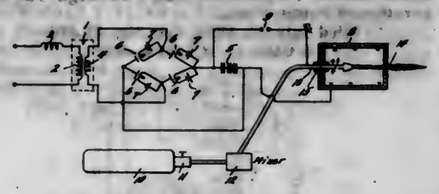
means for energizing said heater elements, said energizing means effecting the energization of at least one of said heater elements by enabling the primary current of said inductive means and the current through said capacitor to be directed therethrough.

3,089,983

IONIZATION CHAMBERS OF PLASMA GENERATORS AT HIGH TEMPERATURES

Alain Camille Hadancourt, Saint-Maurice, France, and Jules Cyprien Joseph Poujade, deceased, late of Melun, France, by Anne Marie Louise Poujade, nee Delmon, legal heir, Salviac, Lot, France, assignors to Societe Nationale d'Etude et de Construction de Moteurs d'Aviation, Paris, France, a company of France

Filed Aug. 9, 1960, Ser. No. 48,587
Claims priority, application France, Aug. 11, 1959
11 Claims. (Cl. 315—111)



1. An ionization chamber of a plasma generator for producing a jet, of the type comprising around an axis a first electrode constituting a portion of a wall of the chamber, an outlet opening for the jet of plasma formed through the first electrode, a second electrode projecting coaxially into said chamber opposite to said opening, passage means for conducting gas into the chamber, means for introducing gas into said passage means, and means including condenser discharge means for creating voltage impulses between both electrodes, in which the second electrode comprises a head portion protruding into the chamber and a body portion formed with an internal passage constituting the said passage means for conducting gas into the chamber, said passage having an axial rear portion and a front portion leading to outlet means of the second electrode, arranged symmetrically around the axis and opening into the chamber recessed with respect to the said head portion.

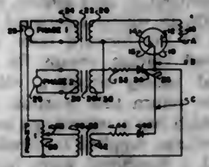
3,089,984

IGNITRON EXCITATION CONTROL CIRCUIT

Gerald Randolph, Franklin Park, N.J., assignor to Wallson Associates, Elizabeth, N.J., a corporation of New Jersey

Filed Dec. 20, 1960, Ser. No. 77,163
4 Claims. (Cl. 315—168)

1. A control circuit comprising a first source of alternating voltage, a load, an ignitron having plate, cathode and igniter electrodes, said load being serially coupled with the plate and cathode electrodes of said ignitron across said first source, a second source of alternating voltage, a controlled rectifier having a gate electrode coupling said second source between said cathode and igniter electrodes of said ignitron, and means for applying a control voltage to the gate electrode of said rectifier to fire said rectifier at a predetermined point on the cycle of the



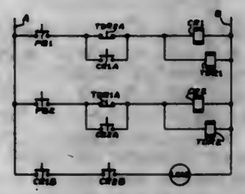
wave form of said second source, said last named means comprising a diode, an alternating voltage coupled to said gate electrode by said diode, and means for controlling the time at which said control voltage reaches the firing voltage.

3,089,985

SAFETY CIRCUIT

Eugene J. Camfield and William E. Hauschild, Indianapolis, Ind., assignors to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York

Filed Oct. 27, 1960, Ser. No. 65,463
4 Claims. (Cl. 317—135)



1. Electrical circuitry for actuating a load device only upon substantially simultaneous actuation of two manually operable switches, comprising two control circuits and an associated output circuit, each of said control circuits including a control relay and a time delay relay arranged in parallel, and a normally open, manually closable switch arranged in series with said relays, each of said time delay relays having normally closed switch contacts arranged in series with the manually operable switch and the relays of the other control circuit, whereby each time delay relay, a prescribed period of time after closing of the associated manually operable switch, may prevent completion of the other control circuit, each of said control relays having normally open switch contacts arranged, when closed, to bypass said time delay relay switch contacts of its own control circuit, whereby actuation of one of said time delay relays may not open the other control circuit after actuation of the control relay thereof, said output circuit including, in series arrangement, a load device and two normally open switches, each of said switches being associated with one of said control circuits and being closable by actuation of one of the relays thereof.

3,089,986

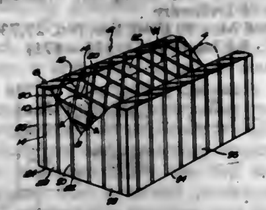
MAGNETIC WORK-HOLDER

Raymond A. Gauthier, 203 W. Hooper St., North Tiverton, R.I.

Filed Mar. 28, 1960, Ser. No. 17,837
10 Claims. (Cl. 317—162)

1. A work-holder comprising a block having a work-receiving recess in a face thereof, said block comprising a first set of non-magnetic flux conducting plates extending at an angle to the direction of said recess, a second set of non-magnetic flux conducting plates extending at an

angle to said first set and at an angle to said direction of said recess and forming with said first set compartments



containing magnetic flux conducting material bonded to said plates into a rigid unit.

3,089,987

DIELECTRIC COMPOSITIONS AND PROCESS

Robert G. Schultz and Van R. Gaertner, both of Dayton, Ohio, assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

Filed May 4, 1961, Ser. No. 107,775
14 Claims. (Cl. 317—258)

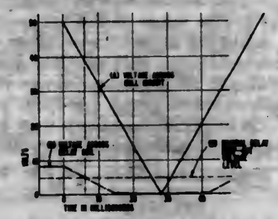
1. A composition of matter consisting essentially of a mixture of chlorinated biphenyls and an alkyl chlorobiphenylyl ether having from 1 to 4 carbon atoms in the alkyl radical, said composition having been prepared by reacting a chlorinated biphenyl composition containing from about 35% to about 55% by weight of combined chlorine with an alkali metal alkoxide having from 1 to 4 carbon atoms in the alkoxide group, in the presence of a solvent which is a dialkyl ether of an alkylene glycol having from 1 to 4 alkylene groups and from 2 to 4 carbon atoms in each alkylene group at a temperature of from about 130° C. to 250° C. until an average of from about 0.1 to 2.0 alkyl ether groups per molecule have been introduced, and then removing the solvent.

3,089,988

SLEWING MOTOR SERVO SYSTEM WITH NULL SENSING RELAY CIRCUIT

Warner E. Stillings, Endicott, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed June 29, 1960, Ser. No. 39,585
11 Claims. (Cl. 318—19)



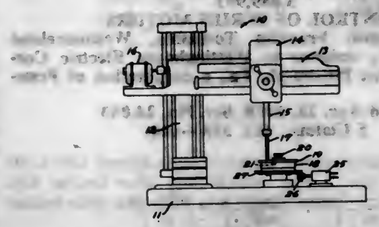
1. A servo system comprising means movable to a number of positions, means responsive to the actual position of said movable means and a desired position for said movable means for generating an error signal of variable magnitude, first torque producing means responsive to said error signal for moving said movable means, a Zener diode connected to be broken down by a certain magnitude range of said error signal, switch means responsive to said error signal only when said Zener diode is broken down, and second torque producing means responsive to the operation of said switch means for moving said movable means.

3,089,989

POSITIONING DEVICE INCLUDING MEANS FOR DIVIDING INTERVALS INTO PRESELECTED NUMBERS OF EQUAL PARTS

Joseph A. Rave, Jr., Cincinnati, Ohio, assignor to The Cincinnati Milling Machine Co., Cincinnati, Ohio, a corporation of Ohio

Filed Sept. 14, 1959, Ser. No. 839,861
12 Claims. (Cl. 318—28)



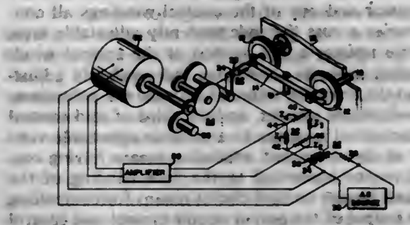
5. In a device for dividing any given dimension on a piece of work into any selected number of equal parts, the combination of a source of reference voltage, a first unit energized by said reference voltage for providing a first preselected voltage which is representative of the distance between a first datum point and one end of said dimension, a second unit energized by said reference voltage for providing a second preselected voltage which is representative of the distance between a second datum point and the other end of said dimension, a transformer having a winding with a plurality of equally spaced voltage taps thereon, switch means for selectively connecting said preselected voltages across a number of taps on the transformer winding equal to the number of parts selected, a slider movable from one tap to the next seriatim, and a servomechanism for moving the workpiece through distances proportional to the voltages derived from said units and from said taps by the slider, said servomechanism including a feedback unit energized from said source, means for driving the feedback unit in accordance with the movement of the workpiece to provide a feedback voltage which is linearly related to the movement of the workpiece and which is equal to the reference voltage when the workpiece moves from said first datum point to said second datum point.

3,089,990

POSITION SENSOR

Ralph Johnson, Los Angeles, Calif., assignor, by mesne assignments, to Tamar Electronics, Inc., Gardena, Calif., a corporation of California

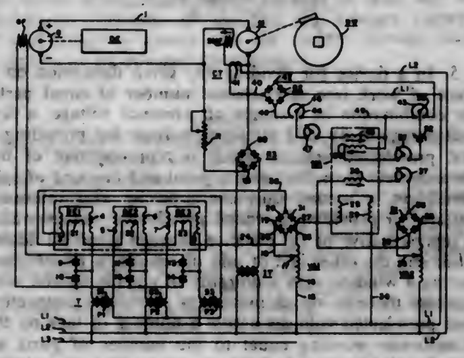
Filed Dec. 6, 1960, Ser. No. 74,088
13 Claims. (Cl. 318—29)



1. In combination, an induction motor having a first phase winding and a second phase winding different from said first phase winding, first means for supplying an alternating current voltage to said first phase winding, second means for supplying a second alternating current voltage of said second phase to said second phase winding, said second means including an electronic amplifier and a phase shift circuit coupled to the input of said amplifier, said phase shift circuit including a pair of

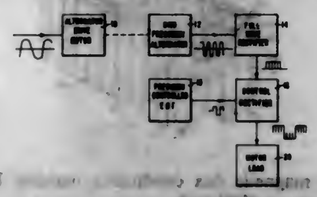
contacts having a contact displacement-resistance characteristic including a substantially linear low resistance region, impedance means connected across said contacts thereby to limit the resistance across said contacts to values within said region, and means for varying the pressure between said contacts.

3,089,991
CONTROL OF SERIES MOTORS
John J. Stamm, Franklin Township, Westmoreland County, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Apr. 22, 1960, Ser. No. 24,043
5 Claims. (Cl. 318—144)



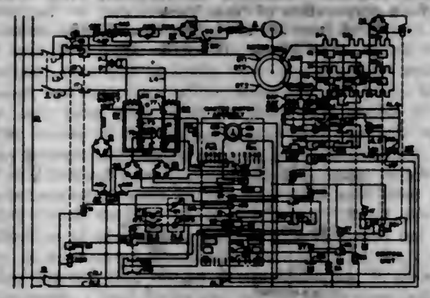
1. In an electric system of control, in combination, a direct current generator having an armature winding and a field winding, a direct current motor of the series type having an armature winding and a field winding connected in series with the motor armature winding, a loop circuit including the generator armature winding, the motor armature winding, and the motor series field winding, control means responsive to an electric condition in the loop circuit, said control means having an output circuit, said output circuit including a pair of potentiometers connected, through a common terminal between them, in series with each other in the output circuit to thus have a voltage drop across the potentiometers that is a function of the electrical condition in the loop circuit, each of said potentiometers having an independently adjustable tap, a magnetic amplifier having main windings and three control windings, a Zener diode, and adjustable resistor and one of the control windings all connected in series across the independently adjustable taps, an adjustable resistor and a second of the control windings connected in series across one independently adjustable tap and the common terminal between the potentiometers, and adjustable resistor, and the third of said control windings connected in series to a suitable adjustable voltage supply of direct current, excitation means having output circuit means connected to the field winding of the generator and having control circuit means for controlling the current output of the output circuit means, said control circuit means being interconnected with the main windings of the magnetic amplifier means, the characteristics and adjustments of the circuitry including the control windings being such that the generator has a voltage output that varies with respect to load current from a selected relatively low value to a relatively high value and then back down to a lower value as current values of full load and above are approached, whereby the motor speed remains nearly constant from no-load to full-load.

3,089,992
PRECISION FREQUENCY CONTROL
John Seymour Seney, Seaford, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed May 9, 1960, Ser. No. 27,734
9 Claims. (Cl. 318—171)



1. An improved system for operating and precisely controlling the speed of a synchronous motor, comprising a first source of unregulated frequency high energy alternating current, rectifying means connected to said source for converting said current to a continuous series of finite direct current pulses, electronic valve means, having input and output terminals connected in series with said rectifying means and a synchronous electric motor, said electronic valve means having a control electrode, a second source of low energy alternating current, having a precisely controlled frequency, connected to said control electrode, said precisely controlled frequency less than said frequency average of the current provided by said first source by a factor of at least 4 to 1, said valve means operating under control of said precisely controlled low energy alternating current to supply said motor directly with a series of precisely timed groups of closely spaced finite direct current pulses to drive and precisely control the speed of the motor.

3,089,993
DRIVE APPARATUS
William R. Wickerham, Buffalo, N.Y., and Robert W. Eggleston, West Hartford, Conn., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Mar. 6, 1957, Ser. No. 644,380
15 Claims. (Cl. 318—443)



1. Apparatus for jogging a drive including a driving motor having a rotor having output terminals between which a rotor alternating potential variable in phase or amplitude or both phase and amplitude in dependence on the function of said rotor is derivable, an energizing circuit for said motor open in the standby condition of said drive, and manually actuable switch means for closing said circuit, the said apparatus comprising in combination first conductors to be connected to said output terminals to derive a first control alternating potential from said rotor potential, second conductors to be connected to said output terminals to derive a second control alternating potential from said rotor potential, said second potential being of substantially different phase than said first potential, third conductors for supplying a third control alternating potential of substantially constant amplitude, normally open switch means connected to said manual switch means to be closed on the closing of said manual means, a first relay having an actuating coil, a second relay having an actuating coil, each of said relays becoming actuated when an alternating potential of at least a first predetermined amplitude is impressed on the actuating coil thereof and remaining actuated so long as the potential impressed across the coil thereof has an amplitude greater than a second predetermined amplitude which is substantially less than said first amplitude, means connecting in series said first conductors, said third conductors, said coil of said first relay and said normally open switch means, means connecting in series said second conductors, said third conductors, said coil of said second relay and said normally open switch means, and means connected to said first and second relays and said energizing circuit for controlling the opening and closing of said circuit when said manual switch means is closed.

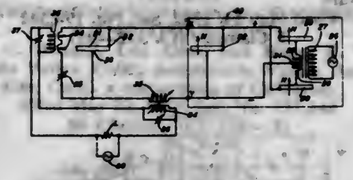
3,089,994
TIMER APPARATUS WITH RAPID ADVANCE
Paul H. Williams, Elmhurst, Ill., assignor to Controls Company of America, Schiller Park, Ill., a corporation of Delaware
Filed Oct. 9, 1959, Ser. No. 845,551
13 Claims. (Cl. 318—443)



2. A timer of the type having a switch operating cam bank, means for advancing the cam bank in a step-by-step manner, slow speed cam means operably engaging the advancing means, timing motor means rotating the slow speed cam means to actuate the advancing means once for each revolution of the slow speed cam means, high speed cam means operably engaging the advancing means driven by the slow speed cam means, and high speed motor means driving the high speed cam means to actuate the advancing means at a speed faster than timing speed.

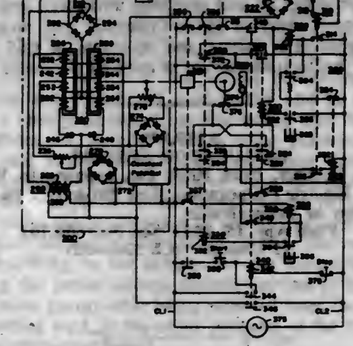
3,089,995
HALL-EFFECT APPARATUS
David A. Kleinman, Plainfield, and Arthur L. Schawlow, Madison, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed June 6, 1960, Ser. No. 34,272
8 Claims. (Cl. 321—2)

6. In combination, a direct-current voltage source comprising an alternating voltage source and a pair of Hall-effect disks connected in full-wave rectification relation with said alternating voltage source, regulating means comprising a third Hall-effect disk connected in parallel across the direct-current voltage source, a fourth Hall-effect disk, a first coil connected in parallel with said fourth Hall-effect disk and oriented to have its axis normal to the disk, a second coil connected serially between said fourth Hall-effect disk and the regulated direct-current voltage source, and an output branch including



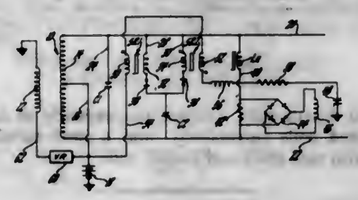
third and fourth coils, coupled magnetically to said first and second coils respectively, and a load serially connected with said third and fourth coils.

3,089,996
ELECTRICAL CONTROL APPARATUS FOR GENERATORS
John N. Easterbrook, Birmingham, Mich., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Original application Dec. 30, 1957, Ser. No. 706,037. Divided and this application Dec. 14, 1960, Ser. No. 75,814
6 Claims. (Cl. 322—25)



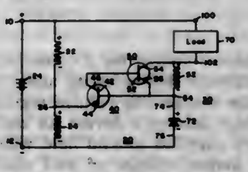
1. In a regulator system for a dynamoelectric machine having an excitation field winding and output terminals, the combination comprising voltage regulating means including a voltage reference device for controlling the excitation current supplied to said field winding to thereby maintain the output votlage of said machine at a predetermined regulated value dependent on the output voltage of said reference device, first relay means connected in circuit relationship with said output terminals to be responsive to a preselected value of output load current of said machine, resistance means connected in circuit relationship with said voltage regulating means for controlling the output voltage of said reference device, second relay means connected in circuit relationship with said first relay means and said resistance means to vary the output voltage of said reference device and the regulated value of output voltage of said machine to thereby maintain said output current at said preselected value and third relay means responsive to the excitation current of said machine for controlling said resistance means to limit the excitation current.

3,089,997
CAPACITANCE TUNING CIRCUIT FOR VARIABLE SPEED ALTERNATOR CURRENT CONTROL
Cecil Kimbleton, Livonia, Mich., assignor to Curtiss-Wright Corporation, Utica, Mich., a corporation of Delaware
Filed May 14, 1962, Ser. No. 194,342
5 Claims. (Cl. 322—95)



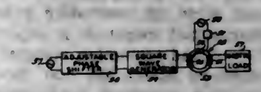
5. A parallel tuning capacitance circuit for variable speed alternator current control, and comprising: a first capacitance received across the output leads of a variable speed alternator, a second capacitance received across the output leads of said alternator and in series with said first capacitance, a pair of magnetic amplifiers having the power windings thereof each connected in series with said second capacitance across said alternator output leads, rectifier means connected in series with said magnetic amplifier power windings and each conductive of current flow in opposite directions, a non-linear inductor and a resistor connected in series across said alternator output leads, a control signal source connected to the control windings of said magnetic amplifiers and including a contact relay in series therewith, and means provided across said resistor and operative of said contact relay for inactivation thereof at reduced alternator speeds.

3,089,998
REGULATOR SYSTEM
John F. Reuther, Penn Hills, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Apr. 15, 1959, Ser. No. 806,701
11 Claims. (Cl. 323—22)



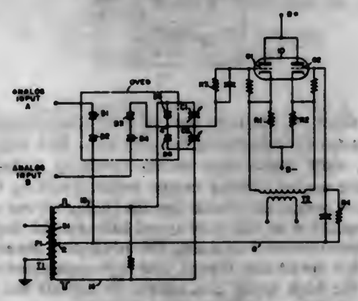
1. In a regulator system for maintaining the current supplied from a source of unidirectional current to a load at substantially a predetermined value, the combination comprising, a semiconductor device having a negative resistance region in its reverse volt-ampere characteristic, the current through said device in its negative resistance region being at substantially a predetermined value, said device being connected in series circuit relation with said load, and means connected in circuit relation between said source and said device for maintaining the operation of said device in its negative resistance region to maintain the current through said load at substantially said predetermined value.

3,089,999
BIAS FOR CURRENT TRANSFORMER
Isadore K. Dortort, Philadelphia, Pa., assignor to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Oct. 20, 1958, Ser. No. 768,312
6 Claims. (Cl. 323—56)



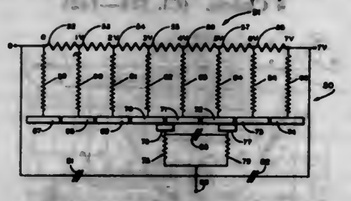
6. A compensating means for a current transformer; said current transformer comprising a magnetic core having a primary winding and a secondary winding thereon and a rectangular hysteresis loop; said secondary winding having a current flow induced therein which is functionally related to the current flow through said primary winding; said compensating means being magnetically connected to said magnetic core to magnetize said core in substantially the same direction as the current through said primary winding which is to be reproduced in said secondary winding; said compensating means generating the magnetizing ampere turns normally supplied by said primary winding; said current flow through said primary winding being an alternating current; said magnetizing ampere turns generated by said compensating means being a square wave current; and phase shift means connected to said compensating winding for controlling the phase shift of said magnetizing ampere turns generated by said compensating means with respect to the induced voltage of said magnetizable core.

3,090,000
HIGH IMPEDANCE VOLTAGE COMPARATOR
John M. Bentley, Glen Burnie, Md., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed July 20, 1961, Ser. No. 125,505
4 Claims. (Cl. 323—67)



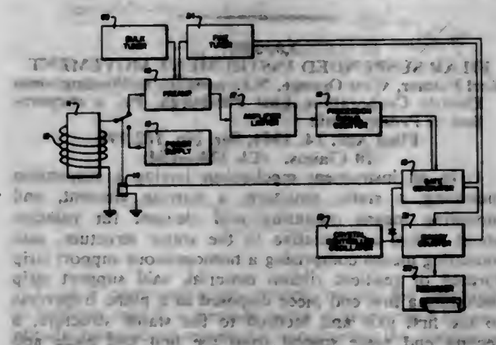
1. A high impedance comparator for selectively comparing the amplitude of two analog signals comprising, a transformer including a primary winding operative to be selectively pulsed and a secondary winding having a center tap, a pair of unidirectional devices poled in the same direction having a common junction therebetween, first high impedance means operatively connected to receive one of said analog signals and apply said signals to said center tap, second high impedance means operatively connected to receive the other of said analog signals and to apply said signals to said common junction, with said pair of unidirectional devices being connected across said secondary winding, and differencing means operatively connected to said center tap and to said common junction and being operative to provide difference signals of said analog signals in response to said primary winding being pulsed.

3,090,001
IMPEDANCE AND VOLTAGE DIVIDERS
William E. Van Horne, Columbus, Ohio, assignor to Kelsey-Hayes Company, Columbus, Ohio, a corporation of Ohio
Filed July 17, 1961, Ser. No. 124,592
15 Claims. (Cl. 323—79)



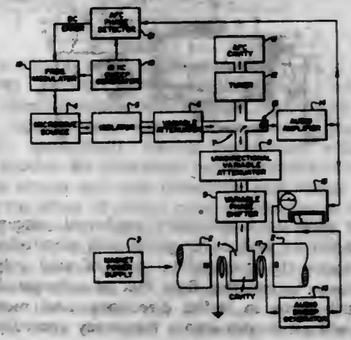
1. In an electrical device of the impedance divider and voltage divider type comprising a plurality of impedance segments connected in series, a plurality of impedances each connected at one end to an end of a different one of said segments and at the opposite end to a different electrical contact, said electrical contacts being positioned in the same sequence as said segment ends to which the ends of said impedances are respectively connected, each said electrical contact being positioned closely adjacent to the next said contact but insulated therefrom, said electrical contacts together forming a contact surface whereon a slidable contact can be positioned and moved lengthwise relative to said surface to contact at least one said electrical contact at any position thereon; means for making electrical connection to said electrical contacts to provide essentially stepwise electrical tapping of said impedance segments in at least substantially four times as many steps as the number of said electrical contacts, comprising a plurality of lengthwise fixedly-spaced and relatively lengthwise-sidable contact members, and means for providing relative lengthwise movement between said contact members and said contact surface.

3,090,002
MAGNETOMETER APPARATUS
Theodore L. Allen, Jr., Los Altos, Calif., assignor to Varian Associates, Palo Alto, Calif., a corporation of California
Filed Jan. 10, 1958, Ser. No. 708,181
10 Claims. (Cl. 324—.5)



1. In an atomic free precession magnetometer of the class wherein atom portions in a sample of matter are first polarized by a strong magnetic field and then precess in the magnetic field to be measured and induce a field dependent signal in a suitable receiver system, the combination with said magnetometer of a tuning circuit in said receiver system, and open loop control means for automatically operating said tuning circuit in response to the field dependent signal to automatically tune said magnetometer receiver system to said precession frequency.

3,090,003
GYROMAGNETIC RESONANCE METHOD AND APPARATUS
Robert C. Rempel, Los Altos, and Harry E. Weaver, Portola Valley, Calif., assignors to Varian Associates, Palo Alto, Calif., a corporation of California
Filed May 23, 1958, Ser. No. 737,340
16 Claims. (Cl. 324—.5)

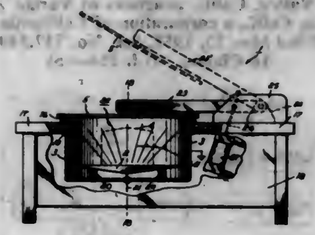


1. A high frequency bridge apparatus for measuring a property of a sample by observing the unbalancing effect on the bridge obtained by action of the sample disposed in a first arm of the bridge on high frequency wave energy applied to the bridge and sample from a power source of wave energy disposed in a second arm of the bridge comprising, a unidirectional attenuator disposed in a measuring arm portion of the bridge, said measuring arm serving to transmit high frequency wave energy derived from the source to the sample contained in said measuring arm portion of said bridge and to transmit the wave energy derived from the source after being reflected from the sample back to other portions of the bridge, said unidirectional attenuator being disposed in said measuring arm in the path of wave energy traveling toward the sample from the power source of high frequency wave energy disposed in the second arm of said bridge for attenuating the power source derived wave energy traveling to the sample but not substantially attenuating the power source derived portion of high frequency wave energy after being reflected from the sample and traveling back to the other portions of the bridge to produce unbalance thereof.

3,090,004
METHOD AND APPARATUS FOR MEASURING CAPACITIVITY OF MATERIALS
Stanley Breen, Norwood, and Samuel J. Mason, Newton, Mass., assignors to Forte-Fairbairn Inc., Norwood, Mass., a corporation of Delaware
Filed Mar. 31, 1959, Ser. No. 803,129
17 Claims. (Cl. 324—61)

5. A capacitor test cell adapted to receive quantities of dielectric substance of different densities and to be coupled into a measurement system, comprising a first conductive electrode of circular configuration, a second hollow conductive electrode having substantially cylindrical inner surfaces, a substantially flat conductive cover plate mounted for closure and removal from one end of said hollow electrode, means supporting said circular electrode within said hollow electrode in an insulated relation thereto with conductive surfaces of said first electrode and cover plate and said cylindrical inner surfaces bordering a substantially cylindrical space larger than

that occupied by said quantities of dielectric substance, conductive surfaces of said first electrode bordering said space being smaller than the combined inner conductive surfaces of said hollow electrode and the conductive surface of said cover plate, whereby generated electric field flux is concentrated in the vicinity of said circular electrode and diverges toward said cylindrical inner surfaces



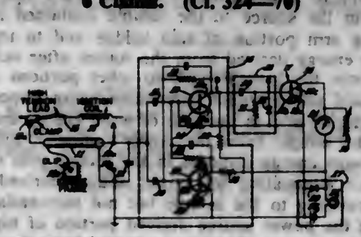
and cover plate to a relatively weakened concentration in the vicinity of said cover plate, said electrodes being colinear about the longitudinal axis of said cylindrical inner surfaces to generate field flux of substantially uniform distributions in radial directions, and means for coupling said electrodes into a frequency controlling circuit in said measurement system.

3,090,005

ELECTRONIC PULSE REPETITION RATE INDICATOR

James L. McConnell, Steubenville, Mich., assignor, by mesne assignments, to Daystrom, Incorporated, Murray Hill, N.J., a corporation of Texas

Filed Sept. 1, 1959, Ser. No. 837,457
6 Claims. (Cl. 324—70)



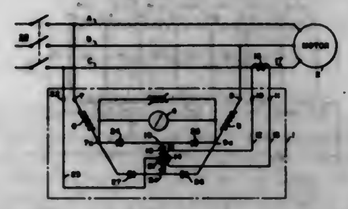
6. An electronic tachometer for indicating the speed of an internal combustion engine having a rotating member comprising, a source of ignition pulses, a bistable multivibrator having first and second switching elements, means for applying said ignition pulses to both said first and said second switching elements for producing a rectangular wave pattern, the leading and trailing edges of said rectangular waves being produced in time coincidence with successively occurring ignition pulses, a differentiating network for producing alternately positive and negative pulses in time coincidence with the leading and end trailing edges respectively of said rectangular waves, clamping means bridging a portion of said differentiating network for eliminating all of said pulses of one polarity, an amplifier coupled to said differentiating circuit for amplifying the pulses of the other polarity, a source of supply connected to said amplifier, means coupled to said source of supply for regulating the voltage applied to said amplifier, and calibrated indicating means coupled to said amplifier for indicating the angular velocity of said rotating member in accordance with the frequency of said ignition pulses.

3,090,006

INPHASE LOAD CURRENT MEASURING APPARATUS

Bernard E. Loschen, Bloomfield, N.J., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed Apr. 25, 1960, Ser. No. 24,536
4 Claims. (Cl. 324—142)



1. An inphase current responsive apparatus responsive to inphase current being supplied to a current consuming device through a plurality of conductors comprising voltage and current input means adapted to be energized from said conductors first and second impedance elements, a transformer having first and second windings with electrically spaced winding terminals, said first winding having a winding terminal intermediate its said spaced winding terminals, a plurality of asymmetric current conducting devices connected in series to form a ring having first and second pairs of ring terminals, a first ring terminal of each said pair being spaced from the other ring terminal of the respective said pair by not less than two of said devices, said ring terminals of said first pair being electrically spaced from said ring terminals of said second pair by at least one said device, means connecting a first of said ring terminals of said first pair to said voltage input means and including one of said elements, means connecting the second of said ring terminals of said first pair to said voltage input means and including the other of said elements, means connecting said electrically spaced winding terminals of said first winding between said second pair of ring terminals, means connecting said spaced winding terminals of said second winding to said current input means, means connecting said intermediate winding terminal to said voltage input means, a translating device, said first pair of ring terminals being energized as a function of the magnitude of the inphase current, and means connecting said translating device across said first pair of ring terminals.

3,090,007

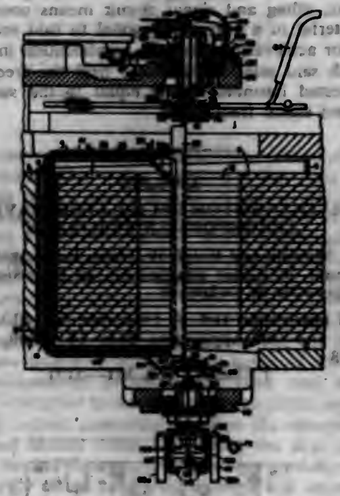
FILAR SUSPENDED INSTRUMENT MOVEMENT

Karl Palmer, West Orange, N.J., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed Apr. 14, 1961, Ser. No. 102,996
10 Claims. (Cl. 324—154)

1. In an instrument mechanism having a suspension mounting, a stator structure, a moving element, and mounting means mounting said element for rotation about a first axis relative to the stator structure, said mounting means comprising a homogeneous support strip formed of resilient ribbon material, said support strip including a first end piece disposed in a plane transverse to the first axis and secured to the stator structure, a second end piece spaced from the first end piece and radially spaced from the first axis, first and second side pieces disposed on opposite sides of the first axis and integrally secured to the end pieces, said side pieces being bent about a second axis transverse to the first axis, and being spaced in the direction of such second axis, said end pieces and side pieces in developed form constituting substantially a hollow rectangle, a projection extending integrally from the second end piece between and spaced

from the side pieces towards the first axis, the free end of said projection terminating in a curved surface arcuate about a third axis transverse to the first axis and spaced in the direction of the first axis from the moving element, said first axis being substantially tangent to the



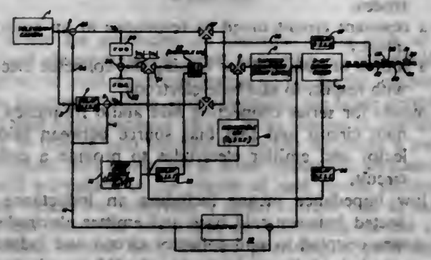
curved surface, and a suspension thread having a first end secured to the moving element and a second end secured to the stator structure, said suspension thread extending along said first axis and over said curved surface in taut condition.

3,090,008

PREDICTIVE QUANTIZATION AND CODING OF VISION SIGNALS

Frank W. Mounts, Murray Hill, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Oct. 24, 1960, Ser. No. 64,524
6 Claims. (Cl. 325—44)



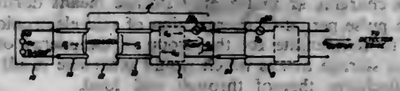
1. In a communication system, means for scanning, at uniform speed, a message wave characterized by amplitude transitions, means for monitoring the successive elements of said wave in groups to identify, for each group, only the element that contains the most significant transition, means for developing a first signal representative of the magnitude of said most significant transition, means for developing a second signal representative solely of the identity of said wave element, means for transmitting said first and second signals to a receiver station and, at said receiver station, means for reconstituting a message wave from said first and second signals.

3,090,009

NOISE FIGURE IMPROVEMENT IN RADIO RECEIVERS

Rudolf S. Engelbrecht, Basking Ridge, and William W. Mumford, Morris Plains, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Dec. 30, 1958, Ser. No. 783,992
4 Claims. (Cl. 325—479)



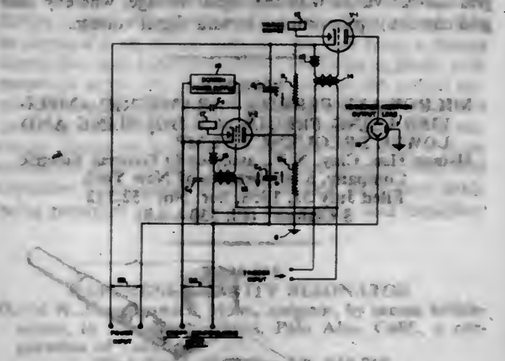
1. In a radio receiver, an antenna circuit, a frequency converter having bilateral transmission, transmission means interconnecting said antenna circuit and said converter, said antenna circuit, transmission means, and coverter, respectively, having impedances which, taken alone, provide for maximum power transfer between said antenna circuit and said converter, and means for minimizing the effect of circuit noise originating at the output of said converter, comprising an impedance mismatch positioned in said transmission means to reflect noise originating at the output of said converter and traveling toward said antenna circuit, back to the output of said converter 180 degrees out of phase at the input signal frequency with the noise originating at said output, the degree of mismatch introduced being effective to cause a greater reduction in the noise at the output of said converter than the reduction in power transfer of the input signal between said antenna circuit and said converter.

3,090,010

DROOP COMPENSATING CIRCUIT FOR HARD TUBE MODULATOR SYSTEMS

Charles T. Zavales, New York, N.Y., assignor to FXR, a Division of Amphenol-Borg Electronic Corp., Woodside, N.Y., a corporation of Delaware

Filed Sept. 29, 1961, Ser. No. 141,818
5 Claims. (Cl. 328—67)



1. A droop compensating circuit for electronic tube modulator systems comprising energy storage means, a source of high power radio frequency energy for charging said energy storage means, a switching tube interposed in the circuit between said energy storage means and the electronic tube load and operable to control energization of the latter, a source of biasing energy connected to said switching tube and operable to render it normally non-conductive, a constant current droop compensator input source, a second switching tube interposed between said droop compensator input source and said energy storage means and operable to control charging of the latter at a predetermined period of time, a source of biasing energy connected to said second switching tube

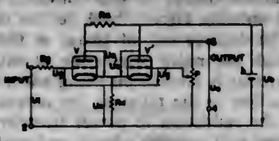
to render it normally non-conductive, and a trigger input source of pulsed energy simultaneously applicable to both said switching tubes to cause said first mentioned tube to become conductive with attendant discharge of said energy storage means through said electronic tube load to energize the latter for a time period corresponding to the duration of the puse from said trigger input source, and said trigger input source causing said second switching tube to become conductive with attendant simultaneous charging of said energy storage means during the entire pulse period of energization of said electronic tube load to compensate for the droop in the energy of said energy storage means which would otherwise result from the discharge thereof through said load.

3,090,011

LOGARITHMIC AMPLIFIER USING COMMON CATHODE POSITIVE COMPENSATING FEEDBACK

Jacobus Adriaan Hammer, Noordwijk, Netherlands, assignor to Internationale Navigatie Apparaten N.V., Amsterdam, Netherlands, a limited-liability company

Filed June 23, 1959, Ser. No. 822,381
Claims priority, application Netherlands June 23, 1958
4 Claims. (Cl. 328—145)



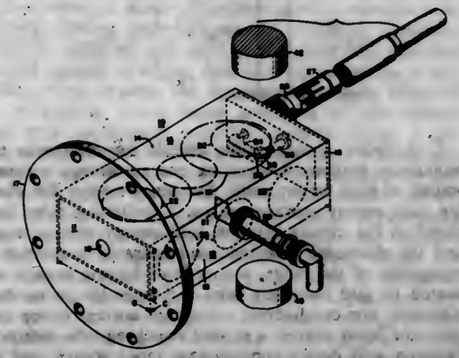
1. A logarithmic amplifier comprising an amplifier tube having a grid-cathode circuit and an anode-cathode circuit, said grid-cathode circuit including a series resistor connected to a source of positive signal voltage such that grid current generally proportional to the signal voltage flows in the grid-cathode circuit, a cathode resistor common to said circuits, and means responsive to the current flow in the anode-cathode circuit arranged to maintain the potential of the grid substantially constant as the grid current varies with the signal voltage, whereby said grid current is proportional to said signal voltage.

3,090,012

MICROWAVE FERRITE PARAMETRIC AMPLIFIER USING FREQUENCY DOUBLING AND LOWER FREQUENCY PUMP

Hsiung Hsu, Clay, N.Y., assignor to General Electric Company, a corporation of New York

Filed July 31, 1958, Ser. No. 752,372
5 Claims. (Cl. 330—4.8)



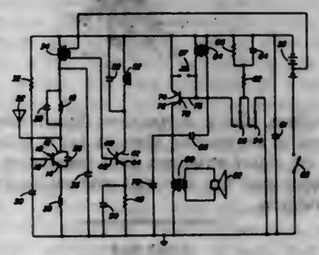
1. In a parametric amplifier, a gyromagnetic ferromagnetic material disposed in a polarizing magnetic field for establishing gyromagnetic resonance, means for applying a pumping field thereto having a substantial component orthogonal to said polarizing field of sufficient intensity to generate harmonics of said pumping field therein oriented in the direction of said polarizing fields, resonant means tuned to the second harmonic coupled to said material for selecting and intensifying said second harmonic, idling and signal circuit means coupled with said material in a plane orthogonal to said second harmonic for achieving parametric amplification in cooperation with said selected harmonic field the frequency of said selected harmonic being equal to the sum of the idling and signal frequencies.

3,090,013

L-C TRANSISTOR OSCILLATOR HAVING TRANSFORMER FEEDBACK

John R. Scantlin and Ralph W. Haas, Los Angeles, Calif., assignors, by mesne assignments, to Lear-Siegler, Inc., a corporation of Delaware

Original application Oct. 4, 1956, Ser. No. 613,913. Divided and this application July 18, 1960, Ser. No. 53,328
7 Claims. (Cl. 331—117)



1. In a radio receiver of the type which is to provide an audible indication when paged, a transistor oscillator stage comprising

a transistor having base, collector and emitter electrodes,

a resonant circuit tuned to resonance at an audio frequency,

a source of potential for biasing the collector electrode with respect to said base electrode,

means for series connecting said audio frequency resonant circuit and said bias source between said collector and emitter electrodes to provide a collector circuit,

low impedance means including an inductance connected between said base and emitter electrodes,

means coupled to said collector circuit and inductively coupled to the inductance of said low impedance means for regeneratively feeding back energy from said collector circuit to said low impedance means,

means for generating a pulse when the receiver is paged,

means for applying said pulse directly between said emitter and base electrodes,

the impedance of said feedback means having a proper value for operating said transistor at or near collector cutoff in the absence of a pulse from said source,

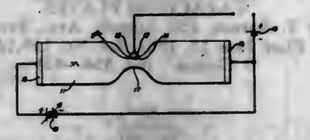
said pulse being of polarity and magnitude to render the transistor conductive whereby said stage is placed in oscillation by said pulse which oscillation is sustained after the pulse ceases by regenerative feedback.

3,090,014

NEGATIVE RESISTANCE DEVICE MODULATOR

George C. Dacey, Murray Hill, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Dec. 17, 1959, Ser. No. 860,183
10 Claims. (Cl. 332—52)



10. In combination, a semiconductive device comprising a semiconductive wafer including a first zone of one conductivity type, a nearly degenerate second zone of the opposite conductivity type contiguous with said first zone for forming a first p-n junction, and a degenerate third zone of said one conductivity type contiguous with said second zone for forming a second p-n junction, said second junction being sufficiently narrow for quantum-mechanical tunneling to occur, the first and second zones being opposite one another and spaced apart a distance which is less than several mean free paths of the charge carriers predominant in the second zone, and separate electrodes connected to the three separate zones, and voltage supply means connected between the electrodes to the first and second zones for biasing the first junction in reverse beyond the onset of avalanche breakdown, and voltage supply means connected between said second and third zones for biasing the second junction in the forward direction to the point of negative resistance.

3,090,015

ELECTRICAL PHASE SHIFTERS

Howard Scharfman, Lexington, Mass., assignor to Raytheon Company, a corporation of Delaware

Filed Mar. 27, 1957, Ser. No. 648,897
1 Claim. (Cl. 333—24.1)



A device for producing an electrical phase shift of a polarized electromagnetic wave comprising a waveguide receptive of said electromagnetic wave, ferrite element means positioned within said waveguide, the outer periphery of said ferrite element means being similar in configuration to that of said waveguide, means including a pair of energized coils connected in series opposition surrounding said waveguide in the region of said ferrite element means, means for supplying a direct current bias to said coils, and means for impressing an alternating current on said direct current bias, thereby providing a static and dynamic phase shift in said electromagnetic wave for any value of current flowing through said coils and independently of amplitude modulation and polarization rotation of said electromagnetic wave.

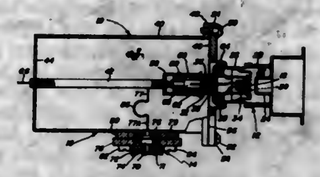
3,090,016

BROADBAND MATCHING CIRCUIT

Charles B. Mayer, Scotia, N.Y., assignor to General Electric Company, a corporation of New York

Filed Apr. 13, 1959, Ser. No. 805,977
8 Claims. (Cl. 333—33)

2. A coupling apparatus for coupling one end of a resistive line to a circuit presenting an effective impedance having a parallel connected resistance and capacitance comprising a coaxial cavity having the respective inner and outer conductors connected to the respective terminals of said circuit, a connector including a loop in series with a capacitor and presenting a series resonant circuit connected between one conductor of said line and



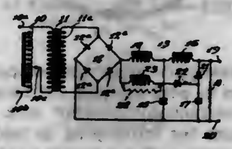
the inner conductor of said coaxial cavity and means for controlling the inductive coupling between the loop of said connector and said cavity to achieve an impedance matching between the impedance of said circuit and the impedance of said line.

3,090,017

SMOOTHING FILTER HAVING SHUNT CAPACITOR CHARGED VIA DIODE FROM OUTPUT AND DISCHARGED VIA SECOND DIODE INTO INPUT

Raymond H. Novic, Chicago, Ill., assignor to Electro Products Laboratories, Inc., a corporation of Illinois

Filed Dec. 11, 1957, Ser. No. 702,155
1 Claim. (Cl. 333—79)



A filter network for a power supply having a rectifier with a pair of output terminals, comprising: a low pass filter having input terminals connected with the output terminals of said rectifier and including a series impedance element and a shunt capacitor, said low pass filter having a pair of output terminals to which a load may be connected; an output capacitor for said filter; a charge circuit for said output capacitor including a diode connected in series with the capacitor across the output terminals of said filter said diode polarized in a direction charging said capacitor from said rectifier; and a discharge circuit for said output capacitor including a diode connected in series with an impedance element from said capacitor to an input terminal of said filter said diode being polarized in a direction discharging said capacitor.

3,090,018

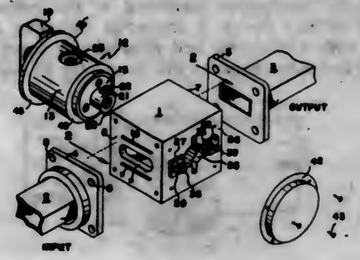
REFERENCE CAVITY RESONATOR

David W. Foss, Ipswich, Mass., assignor, by mesne assignments, to Varian Associates, Palo Alto, Calif., a corporation of California

Filed Oct. 6, 1959, Ser. No. 844,768
6 Claims. (Cl. 333—83)

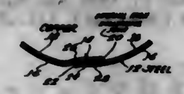
1. Waveguide apparatus comprising a metallic block member adapted for mounting between hollow-pipe waveguide structure, said block member defining openings in opposed walls to permit passage of electromagnetic wave energy, a reference cavity resonator unit removably mounted within said block member along an axis extending perpendicular to the axis of the waveguide structure, said resonator unit being responsive to a fixed predetermined resonant frequency and having a pair of aligned windows, metallic means disposed on one wall of said resonator unit for locking said resonator unit within said block member with said pair of windows aligned with

said openings in said block member, and means disposed at one end of said resonator unit for engaging said lock-



ing means to prevent alteration of frequency response due to improper seating of the resonator unit upon insertion within said block member.

3,090,019
FLEXIBLE WAVEGUIDE
Ernest H. Johnson, Chicago, Richard O. Bremigan, Homewood, and Allen E. Kiburi, Chicago, Ill., assignors to Andrew Corporation, Chicago, Ill., a corporation of Illinois
Filed Feb. 24, 1959, Ser. No. 795,125
7 Claims. (Cl. 333—95)



1. Flexible waveguide apparatus comprising a unitary strip bent to join its edge portions and form an internally unobstructed substantially circular tube and helically corrugated, means for introducing in said tube electromagnetic wave energy of a frequency below the cut-off frequency of any circularly symmetrical propagation mode therein, with a direction of polarization having an electric field vector normal to the wall at the joint between the edge portions, and means for maintaining the polarization direction constant as the energy is propagated through the tube, said direction-maintaining means including a continuous longitudinal weld of said joint having at least one internal surface of relatively high resistance.

3,090,020
LABYRINTHIC SEPTUM WAVE GUIDE
Clarence D. Lunden, Tacoma, Wash., assignor to Boeing Airplane Company, Seattle, Wash., a corporation of Delaware
Filed Feb. 27, 1961, Ser. No. 91,774
12 Claims. (Cl. 333—95)



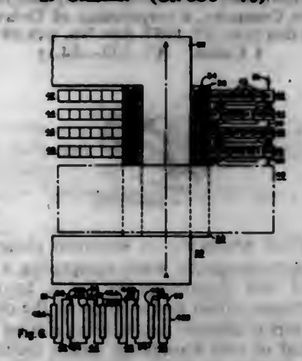
1. A guide for electromagnetic wave energy propagation, said guide being of hollow tubular construction, the interior wave energy propagation cross section of which is defined by an enclosing outer wall to which is joined an internal partition structure including a base portion projecting inwardly from the outer wall, and an adjoining portion which, while remaining spaced from the outer wall, continues from the base portion back at least partially toward the juncture of the outer wall and base portion and in so doing generally reverses its direction of extent to define, within said partition structure, a re-entrant propagation space which is contiguous to the propagation space defined between the outer wall and the base portion.

3,090,021
TUNING DEVICE WITH SPECIALLY SHAPED CAPACITOR PLATES
Llewellyn T. Barnes, 155 Atlantic Ave., Freeport, N.Y.
Filed June 23, 1961, Ser. No. 119,149
5 Claims. (Cl. 334—82)



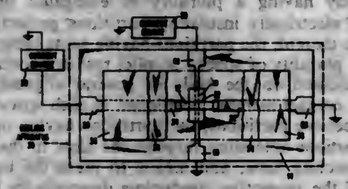
1. A resonator comprising a casing of an insulating material, said casing having a flat inner surface, said casing having a spiral groove therein, a disc of an insulating material rotatably mounted in said casing, said disc having a plurality of concentric elliptical grooves therein, a spiral shaped conductor fixed in said spiral groove and spaced from said flat inner surface, and a plurality of concentric conductors of elliptical shape disposed in said elliptical grooves and spaced from the surface of said disc.

3,090,022
ELECTRICAL INDUCTANCE APPARATUS
Gerhard M. Stein, Sharon, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Apr. 13, 1960, Ser. No. 21,928
19 Claims. (Cl. 336—70)



16. A winding for an electrical inductive apparatus comprising a plurality of coils arranged in a stack, each of said coils including a plurality of turns of at least first and second conductors spirally wound together, the inner end of said first conductor being connected to the outer end of said second conductor in each coil, the turns of alternate coils being wound spirally outwardly from the innermost turn and the turns of the intervening coils being wound spirally inwardly from the outermost turn, the turns of all coils being wound in the same circumferential direction, the inner end of the second conductor in each coil being connected to the inner end of the second conductor in one of the adjacent coils and the outer end of the first conductor in each coil being connected to the outer end of the first conductor in one of the adjacent coils to connect said coils in series circuit relation to form a single current path through said winding.

3,090,023
SUPERCONDUCTOR CIRCUIT
Andrew E. Brennemann and Robert T. Tsui, Poughkeepsie, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed June 30, 1959, Ser. No. 824,016
21 Claims. (Cl. 338—32)



1. In a thin film cryotron circuit of the type including a thin film gate conductor of superconductor material and a thin film control conductor arranged adjacent said gate conductor, said gate conductor being of a thickness to exhibit size dependent properties, and means for supplying current to said gate conductor to be gated under the control of current supplied to said control conductor; the improvement comprising operating said circuit at an operating temperature which is not greater than 94% of the critical transition temperature whereat said superconductor material forming said gate conductor undergoes a transition between superconductive and normal states in the absence of a magnetic field.

3,090,024
VARIABLE RESISTOR
Myron F. Melvin, 6767 Spring Brook, North Drive, Indianapolis, Ind.
Filed Oct. 28, 1960, Ser. No. 65,735
7 Claims. (Cl. 338—170)



1. A variable resistor comprising a metal housing having an open end and a closed end, a cup-shaped member formed of electrical insulating material nested within said housing with the base of the cup-shaped member adjacent the closed end of the housing, said base and closed end having registering apertures therein, said housing having a cut-away portion extending along its margin, an integral boss on said cup-shaped member extending into said cut-away portion for locating the member within the housing, a resistance element including a wire wound on a flexible insulating material and having terminal clips attached to the ends thereof, said resistance element being disposed around an inside wall of said cup-shaped member and being circumferentially located by the terminal clips extending into indentations in the base of said member, said clips having terminal tabs extending radially outwardly through slots in the integral boss and through a boss extending radially inwardly from an inside wall of said cup-shaped member, a rotor having a cylindrical shank portion rotatably mounted in the aperture in said base and having a peripheral flange tilted with respect to the axis of the shank portion and having an arcuate abutment thereon extending to a radius from said axis in engageable relationship to said inwardly extending boss to limit extent of rotation of said rotor, said flange having a chordal slot therein on a side of said flange opposite said abutment, a resilient wiper member including a resistance element contacting ear disposed at the apex of a generally heart-shaped portion received on the shank of said rotor and lying generally in a plane perpendicular to the axis of said shank and having bosses therein in sliding engagement with said base, said wiper member having legs integral with said heart-shaped portion and lying in a plane normal to that of said heart-shaped portion and received in the chordal slots in said flange, said wiper member further having a semi-annular portion integral with said legs and received on said shank and lying predominantly in a plane tilted with respect to the axis of said shank, a conductor having a generally annular portion with an aperture therein, said annular portion encircling the rotor shank and engaging said wiper, said conductor having an integral terminal tab extending radially outwardly through slots in the integral boss and the inwardly extending boss, an aperture through said rotor having at least a portion with cruciform cross section, an end plate fastened to said housing and closing said cup-shaped member, said end plate having an aperture therethrough to receive the shank of said rotor, an insulating washer disposed between said end plate and said conductor to insulate the conductor from said end plate and being of a thickness whereby said end plate retains said conductor in sliding engagement with said wiper member.

3,090,025
POTENTIOMETER
Fred E. Dole, Rocky Hill, Conn., assignor to Ace Electronics Associates, Inc., a corporation of Massachusetts
Filed Feb. 3, 1961, Ser. No. 87,013
11 Claims. (Cl. 338—183)



1. In a potentiometer, a traversing contact structure comprising a lead screw, a slip bar, a carrier for a contact element, and means supporting said lead screw and slip bar in a desired spaced relative orientation, said carrier being interposed between and in bearing engagement with said lead screw and slip bar and being pressed therebetween, the portion of said carrier engaging said lead screw being arcuate to partially circumscribe and cooperate with said lead screw, the portion of said carrier engaging said slip bar having three areas, a first of said three areas being located substantially in the plane common to the two central axes of said lead screw and slip bar, a second of said three areas being that part of said portion lying to one side of said plane, and the third of said areas being that part of said portion lying to the other side of said plane, the distance from the central axis of said lead screw to said second and third areas being greater than the distance to said first area, and the distance from the central axis of said lead screw to at least a part of said second area being greater than the distance to any part of said third area.

3,090,026
ELECTRICAL CONNECTORS
Franklin M. Raddin, Morristown, N.J., assignor to Monroe Calculating Machine Company, Orange, N.J., a corporation of Delaware
Original application Dec. 13, 1956, Ser. No. 628,034, now Patent No. 2,956,258, dated Oct. 11, 1960. Divided and this application Sept. 30, 1960, Ser. No. 59,537
6 Claims. (Cl. 339—17)

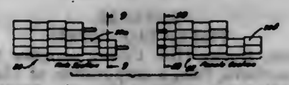
1. An electrical connector comprising a housing having two slots and a fluid filled chamber with flexible wall sections along a side of each of said slots, means for con-

trolling the fluid pressure in said chamber to move said flexible wall sections with respect to said slots, a plurality of first electrical conductors each having a portion mounted on each of said flexible wall sections, insulating



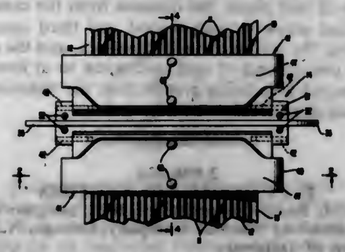
members positioned in said slots, and a plurality of second electrical conductors mounted on each of said insulating members in mating relation with the portions of said first electrical conductors on the adjacent one of said flexible wall sections.

3,090,027
MODULAR ELECTRICAL CONNECTOR
Delbert L. Phillips, 975 Somera Road, Los Angeles 24, Calif., and Joseph S. Jonkey, 1636 W. Mountain Ave., Glendale, Calif.
Filed June 22, 1959, Ser. No. 822,009
6 Claims. (Cl. 339—31)



1. A modular electrical connector unit for grouping in a bundle with identical units in side by side relationship to make a multiple conductor connector fitting, said unit comprising: a conductor member to mate with a complementary conductor member; and an insulating body surrounding and holding said conductor member, the length of said body being divided into at least four sections of equal length, each of the sections being of uniform cross-sectional configuration throughout its length, all of the sections having the same number of peripheral faces and all of the sections being of the same general cross-sectional configuration, the alternate sections being identical and the successive adjacent sections being offset relative to each other to form lateral projections and recesses to interlock the contiguous bodies against relative longitudinal movement, all of said sections being of equal length.

3,090,028
ELECTRICAL CONNECTOR
James R. Hall and Walter F. Hennessey, Jr., Sidney, N.Y., assignors to The Bendix Corporation, a corporation of Delaware
Filed Mar. 28, 1960, Ser. No. 17,935
12 Claims. (Cl. 339—174)



1. In combination, a cable in the form of a laterally extended flexible insulating tape having a plurality of generally parallel spaced flat ribbon-like conductors mounted therein, and an electrical connector connected to said cable, the conductors of the cable having portions positioned at the cable-connecting zone of the connector bared to make electrical connection with the connector, the cable having a plurality of parallel slots through the insulating material thereof between the conductors at the connecting zone, the portions of the cable on both sides of said connecting zone being unslotted, the connector having a generally flat connector body spanning the width of and lying across the cable at said connecting zone, said body having a plurality of elongated upstanding parallel electrically insulating partitions projecting from one side thereof, the partitions having roots secured to the body, a plurality of spaced parallel resilient contact members mounted on the body in general alignment, there being a contact member positioned in each space between the successive partitions, the partitions having upper free edge portions extending through the slots in the cable at its connecting zone, and means to press the bared portions of the respective conductors downwardly into contact with the contact members and to retain the upper free edge portions of the partitions from escape from the slots in the cable.

3,090,029
SMALL TAP-OFF TERMINAL
Hermann Stroebel, Stuttgart-Schoenberg, Germany, assignor to Richard Hirschmann Radiotechnisches Werk, Esslingen (Neckar), Germany, a firm
Filed Oct. 21, 1960, Ser. No. 64,107
Claims priority, application Germany Oct. 30, 1959
1 Claim. (Cl. 339—255)

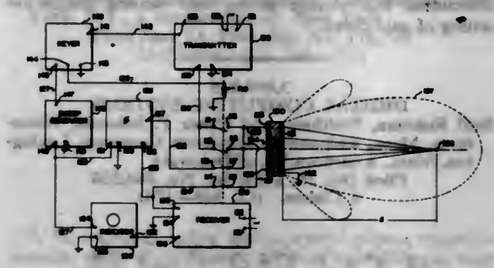


Small tap-off terminal comprising two terminal legs each having a grip portion and a clamping portion and being rotatable about a predetermined axis relative to each other as two-armed levers, and a spring that holds the two terminal legs together passing through longitudinal openings in the two grip portions and resting under pressure against the outside of the two clamping portions, the two longitudinal sides of the two terminal legs each having a tongue bent off at 90°, the pair of tongues of one terminal leg lying between the tongues of the other terminal leg and displaying circularly extending faces which are urged by the spring into a recess between the lateral tongues of the second terminal leg so that the first terminal leg is capable of being rotated relative to the second on the circularly extending faces of its pair of tongues.

3,090,030
VARIABLE FOCUS TRANSDUCER
Oscar Hugo Schuck, Minneapolis, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Sept. 9, 1957, Ser. No. 682,791
3 Claims. (Cl. 340—16)

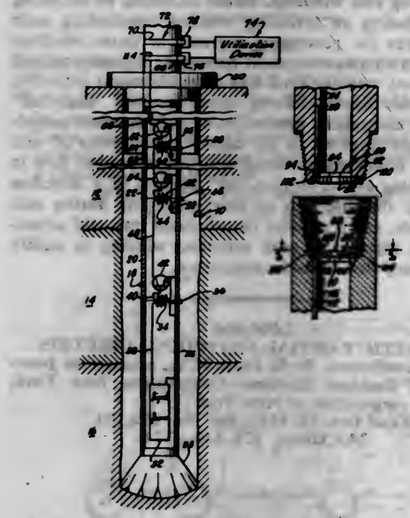
1. Control apparatus for a wave transducer to produce a sweep focus thereof as a function of time, comprising;
bilateral voltage transducer means having first and second concentric electrodes formed in a given plane and defining an axis normal to said plane,
voltage responsive means,
circuit means connecting one of said electrodes to said voltage responsive means,
variable phase control means,
circuit means, including said phase control means, connecting the other of said electrodes to said voltage responsive means,

and sweep control means connected in controlling relation to said phase control means to continuously vary, as a function of time, the relative phase be-



tween the voltages received by said voltage responsive means from said first and second concentric electrodes to provide a continuously variable focus of said transducer means along said axis.

3,090,031
SIGNAL TRANSMISSION SYSTEM
Arthur H. Lord, Houston, Tex., assignor to Texaco Inc., New York, N.Y., a corporation of Delaware
Filed Sept. 29, 1959, Ser. No. 843,110
5 Claims. (Cl. 340—18)



1. In a system for drilling a borehole in the earth comprising a drill string having a drill bit at one end thereof, said drill string including a plurality of sections of drill pipe joined to one another end to end, logging apparatus mounted in the vicinity of said drill bit, and a signal transmission circuit electrically coupling said logging apparatus through said sections of drill pipe to surface electrical equipment at the end of said drill string remote from said drill bit, each of said sections of drill pipe having a first coil disposed at one end thereof and a second coil disposed at the other end thereof, the first coil of one pipe section and the second coil of an adjacent pipe section being inductively coupled to one another thereby comprising a transformer, circuit means coupling said first coil to said second coil within said section of drill pipe, each of said circuit means including a semiconductor amplifier having an input coupled to one of said coils and an output coupled to the other of said coils, said first coil and said semi-conductor amplifier being imbedded within a first annular unit formed essentially of epoxy resin and fitted closely within said one end of each of said sections of drill pipe, and said second coil being imbedded within a second annular unit formed essentially of epoxy resin and fitted closely within said other end of each of said sections of drill pipe.

3,090,032
AUTOMATIC TRAFFIC SIGNALLING SYSTEMS
George Shand, Sale, and George Geoffrey Atkinson, Stretford, England, assignors to Associated Electrical Industries (Manchester) Limited, a British company
Filed Aug. 27, 1957, Ser. No. 680,554
Claims priority, application Great Britain Aug. 29, 1956
1 Claim. (Cl. 340—41)



A programmed automatic traffic signalling system including a programme storing device of a kind capable of storing long term programmes, said programme storing device having a plurality of programme defining elements arranged thereon in a programme pattern which individually programmes for a traffic phase at an intersection at least the ends of successive clearance periods and of successive holding periods in a succession of cycles of traffic signal operation covering periods of differing traffic conditions and differing one cycle from another according to the traffic conditions expected in such periods, said programme storing device comprising a long strip, a pair of receptacles in one of which, initially, the long strip is stored and into the other of which the strip is fed, said system also including a programme reading means for translating said programme defining elements into corresponding control signals, said programme reader having a roller over which said strip passes and with which it is entrained in travelling from one receptacle to the other, a ratchet wheel fixed for rotation with said roller, a driving pawl engaged with said ratchet wheel, an electromagnet connected with a source of current, timing means periodically connecting said source of current to the electromagnet, and means operated by said electromagnet for moving the driving pawl, a programme responding device located at said intersection, means for passing said control signals to said programme responding device, said latter device being responsive to said signals, and means governed by said latter device for controlling the operation of the traffic signals at the intersection in accordance with the response of said latter device to the control signals and therefore in accordance with the programme pattern.

3,090,033
SIGNAL LIGHT
Edward F. Cleary and James B. Rudden, Baltimore, Md., assignors to Marbalite Co., Inc., Brooklyn, N.Y., a corporation of New York
Continuation of application Ser. No. 772,838, Nov. 10, 1958. This application June 29, 1960, Ser. No. 39,730
1 Claim. (Cl. 340—84)

A traffic signal adapter for securing a rectangular shaped wide lateral viewing visor to a traffic signal, said signal having a lens and a circular front portion containing said lens therein, comprising a rectangular mounting plate having a circular opening with which at least a portion

of said lens may register, screws attaching said mounting plate to said circular front portion of said signal, said mounting plate having a face, a back and a peripheral flange extending at substantially right angles to said face and back, said flange having two vertical sides and two horizontal sides extending at right angles to the face and back of said mounting plate, and a visor including a



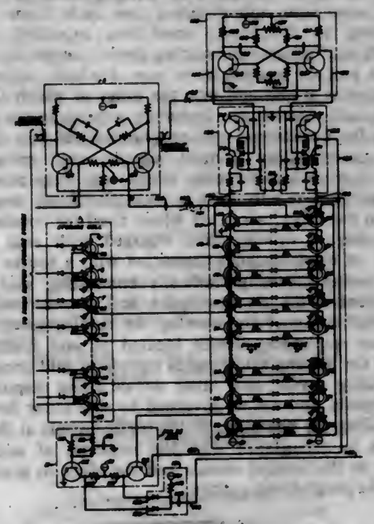
rectangular top portion and substantially right triangular side portions extending from each of two side edges of said top portion at substantially right angles thereto, said side portions being attached to said vertical flanges of said mounting plate by screw means, whereby the visor and flange provide a wide lateral viewing angle of the front portion of said lens.

3,090,034

PARALLEL-TO-SERIAL CONVERTER APPARATUS

George W. Fredericks, Woodhaven, and William J. Lamnock, Jamaica, N.Y., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Jan. 11, 1960, Ser. No. 1,739
20 Claims. (Cl. 340—172.5)



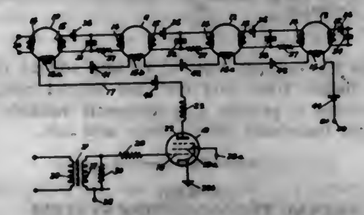
1. A parallel-to-serial converter comprising a word organized storage cell comprising a plurality of square-loop magnetic core devices adapted to be selectively set in parallel in accordance with a binary word, each setting of one of said magnetic cores being productive of a first directional magnetic flux change and a second directional magnetic flux change therein, sensing means inductively coupled to each of said magnetic cores such that the voltages developed there-across due to each of said flux changes are additive, amplifier means normally responsive to the voltages developed across said sensing means due to said first directional flux changes to temporarily inhibit said amplifier means during the time period of development of said voltage due to said second directional flux change across said sensing means on setting of said cores.

3,090,035

DIGITAL COMPUTING SYSTEMS

Emil Rahman, Waltham, and Elmer T. Johnson, Watertown, Mass., assignors to Raytheon Company, Lexington, Mass., a corporation of Delaware

Filed Oct. 25, 1954, Ser. No. 464,536
6 Claims. (Cl. 340—174)



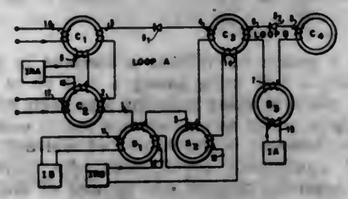
1. In a magnetic control system comprising a plurality of magnetic cores and windings interlinking said cores for the transfer of electrical current along conductors interconnecting said windings, means including an actuating circuit including an actuating winding interlinking each of said cores for generating currents in those windings associated with magnetic cores possessing a predetermined direction and magnitude of flux content, means including an electronic device having alternate "on" and "off" periods for controlling generation of such currents periodically, means inherent in the capacitance aspects of said system for establishing a tendency toward current flow in said actuating circuit during "off" periods in a direction opposite to the direction of flow prevailing during said "on" periods, and a rectifier incorporated into said actuating circuit adjacent to each actuating winding to nullify said tendency due to said capacitance.

3,090,036

MAGNETIC PARTIAL SWITCHING CIRCUITS

John A. Kaufmann, Hyde Park, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Oct. 24, 1957, Ser. No. 692,131
24 Claims. (Cl. 340—174)



18. In an information handling circuit, a first and a second magnetic core made of material exhibiting first and second limiting stable states of remanent flux density, winding means inductively coupled to said cores, means for energizing said winding means during a first and a second interval of time comprising, first means energizing said winding means during the first interval of time for establishing both said cores in a similar stable state of flux density intermediate said limiting states which conjointly defines said information, and second means energizing said winding means during said second interval of time for establishing said first core in said first limiting state and to read out said information.

3,090,037

MAGNETIC MEMORY

Victor T. Shahan, Wappingers Falls, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed June 21, 1961, Ser. No. 118,729
13 Claims. (Cl. 340—174)



9. In a circuit, a first and a second planar magnetic element, each said magnetic element exhibiting an easy axis of magnetization defining a first and a second stable state of remanent flux orientation, said elements positioned in field coupling relationship with respect to one another, first means for establishing said first element in a predetermined one of said stable states to magnetically bias said second element toward said predetermined stable state, second means for thereafter applying a selection field to said second element, said second element responsive only to the coincidence of said bias and selection fields to switch to the predetermined one of said stable states, and means for thereafter demagnetizing said first element whereby said magnetic bias is inhibited.

3,090,038

HAZARDOUS ATMOSPHERE DETECTING AND SIGNALLING SYSTEM

Vernon W. Klein, Kansas City, Mo., and Edwin C. Jones, Jr., deceased, late of Overland Park, Kans., by Cleo Jones, administratrix, Overland Park, Kans., assignors to Great Lakes Pipe Line Company, Kansas City, Mo., a corporation of Delaware

Filed June 8, 1959, Ser. No. 818,872
6 Claims. (Cl. 340—237)

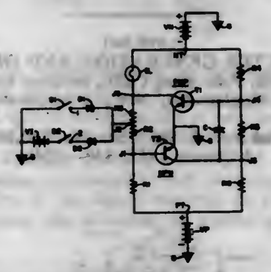
1. Apparatus for maintaining surveillance over and sensing the presence of a potentially explosive concentration of combustible gas in a selected area prior to the time that the concentration is sufficient to produce combustion in the area comprising a combustion chamber, a pressure sensitive switch mechanism associated with said chamber and operated in response to the occurrence of an explosion within said chamber, a signalling circuit controlled by said switch and operable to transmit an electrical signal upon the occurrence of said explosion, means for flowing atmosphere from the area into said chamber, means for adding a known quantity of combustible gas to the chamber, said chamber including ignition means therein, a checking mechanism associated with said signalling circuit and including means for artificially inducing a test explosion in said chamber at timed intervals, said checking mechanism including means for temporarily disabling the signalling circuit and operable to restore the signalling circuit to operative condition upon the occurrence of a test explosion.

3,090,039

BISTABLE INDICATOR CIRCUIT

Allen B. Walls, Catonsville, Md., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed Aug. 25, 1960, Ser. No. 51,826
5 Claims. (Cl. 340—252)



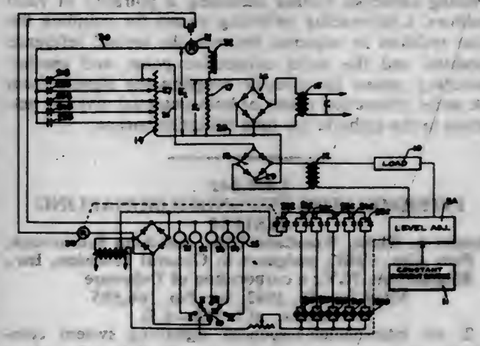
5. Bistable transistor circuitry for amplifying input signals received by the circuitry, in combination, a pair of complementary, namely PNP and NPN transistors having connected grounded emitters, a first terminal energized with positive potential, an impedance connected between the base of the NPN transistor and said first terminal, an impedance connected between the first terminal and the collector of the NPN transistor, a second terminal energized with negative potential, an impedance connected between the base of the PNP transistor and the second terminal, a load unit connected between the second terminal and the collector of the PNP transistor, an impedance connected across the collector of the PNP transistor and the base of the NPN transistor, a second impedance and a capacitor connected in parallel with it connected across the base of said PNP transistor and the collector of the NPN transistor, and means for alternately applying one type signal or another type signal at a selected point on the impedance connected across the collector of the PNP transistor and the base of the NPN transistor.

3,090,040

DETECTION CIRCUIT

Aloysius J. Hauck, Milwaukee, Wis., assignor, by mesne assignments, to Basic Products Corporation, Milwaukee, Wis., a corporation of Wisconsin

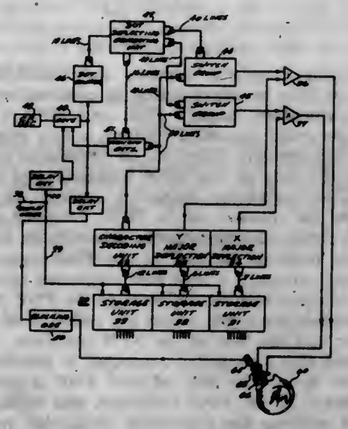
Filed Mar. 11, 1958, Ser. No. 720,777
5 Claims. (Cl. 340—253)



1. In an apparatus for detecting departure of a load current from any one of a plurality of selected preset values,

the combination including means for providing a reference signal having a constant value, means for providing a second signal independent of said reference signal and in accordance with a preselected load current in the load circuit when the selected load current is present therein, said second signal having a constant value for all of said plurality of selected values of load current when the selected load current is present, and combining means for said reference signal and said second signal giving a predetermined signal condition when said load current corresponds to that selected.

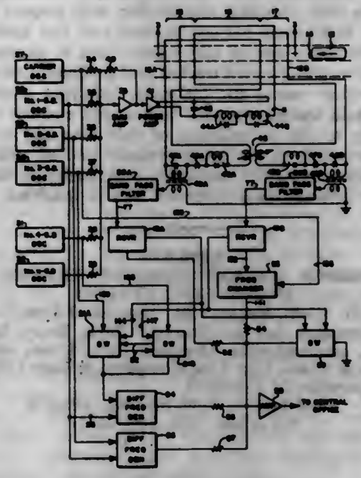
3,090,041
CHARACTER GENERATION AND DISPLAY
Harold R. Dell, Palo Alto, Calif., assignor to Link Aviation, Inc., Binghamton, N.Y., a corporation of New York
Filed Nov. 2, 1959, Ser. No. 850,308
3 Claims. (Cl. 340—324)



1. In a display device including a cathode ray tube having a deflection means, apparatus for generating signals to deflect an electron beam to selected dot positions for forming a display of character, said apparatus comprising a pair of potential dividing resistive networks each coupled between a first reference potential and a second reference potential and each having a series connection point, each of the potential dividing networks including a first resistor coupled between the first reference potential and the series connection point, each of the potential dividing networks further including a plurality of ratio resistors, a sequencing switching means for coupling the ratio resistors in sequence between the second reference potential and the series connection point, and another switching means for directly coupling the signals from the series connection points of both potential dividing networks to the cathode ray tube deflection means.

3,090,042
INTERROGATOR-RESPONDER SIGNALLING SYSTEM
Robert A. Kleist, Woodland Hills, and John Scarbrough, Palo Alto, Calif., assignors to General Precision, Inc., Binghamton, N.Y., a corporation of Delaware
Filed Jan. 16, 1962, Ser. No. 166,585
8 Claims. (Cl. 343—6.5)

2. An interrogator-responder signalling system comprising an interrogator station at a fixed location along the path of a vehicle to be identified and a responder device movable with the vehicle along the path and into spaced relation with the interrogator station, said interrogator station including a transmitter and an inductive loop associated with the transmitter for generating an interrogator signal, said responder device including means for detecting the interrogator signal and means for generating a coded response signal identifiable with the vehicle, said interrogator station including a first receiver having a first inductive loop and a second receiver having a second inductive loop, said inductive loops being arranged in a configuration to define three areas, a first of the areas being within the first inductive loop of the first receiver and outside of the second inductive loop of the second receiver, a second of the areas being within the inductive loops of both receivers, and the third area being outside the inductive loop of the first receiver and within the inductive loop of the second receiver, and a switching



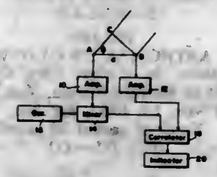
means coupled to receive signals from said receivers and operable to pass a selected signal indicative of the direction of travel of the vehicle, said switching means being operable to pass a first selected signal when the responder device moves into the location of the interrogator station by initially entering the first area of the loops and being further operable to pass a second selected signal when the responder device initially enters the third area of the loops.

3,090,043
METHOD AND MEANS FOR INTERPRETING RADAR PRESENTATIONS
Erik A. Wilkenson, Platensgatan 7, Linkoping, Sweden
Filed Oct. 8, 1957, Ser. No. 688,847
Claims priority, application Sweden Oct. 11, 1956
3 Claims. (Cl. 343—11)



1. The method of utilizing substantially instantaneous presentations appearing on the screen of a PPI type radar device on which the position of a movable observing vehicle carrying the device is represented by a point that maintains a fixed position on the screen, to determine the courses and distances traversed during a predetermined time interval by the observing vehicle and other movable objects, relative to one another and to fixed objects, which method is characterized by the steps of: periodically, at regular intervals, making a facsimile record of presentations appearing on the screen; and superimposing upon a display of a current presentation appearing on the screen a facsimile of an earlier recorded presentation, said display and said facsimile being to the same scale, and said point on the facsimile being spaced from said point on the displayed current presentation by a distance proportional to the distance traveled by the observing vehicle during the interval between the presentation of said earlier recorded presentation and the current presentation and in a direction relative to the displayed current presentation which is opposite to that which corresponds to the direction of travel of the observing vehicle during said interval, and with said facsimile rotated relative to the displayed current presentation through an angle equal to but opposite from the total angle through which the observing vehicle sheered during said interval.

3,090,044
RADIO DIRECTION FINDING SYSTEMS
Raymond M. Wilmotte, New York, N.Y.
(68 Mountain Ave., Princeton, N.J.)
Filed May 2, 1958, Ser. No. 732,633
5 Claims. (Cl. 343—113)

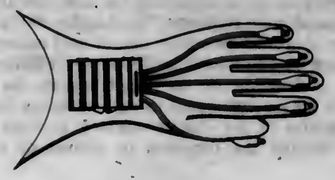


1. Apparatus for determining the direction of a target or a source of wide frequency band radio waves comprising a pair of spaced antennas, one of said antennas being a frequency sensitive antenna having a radiation pattern which is a function of the frequency of the received wave, and means connected to said antennas for analyzing the spectra of the signals received by both antennas and determining the direction of arrival of said radio waves.

DESIGNS

MAY 14, 1968

195,189
ASTRONAUT'S GLOVE
Norman F. Schulte, Jr., Culver City, Calif., assignor of fifty percent to Sanford Simon, Van Nuys, Calif.
Filed Nov. 13, 1962, Ser. No. 72,501
Term of patent 14 years
(Cl. D3—11)



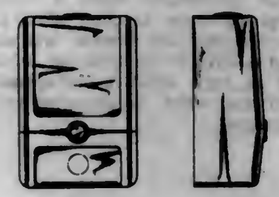
195,190
PREFORMED NECKTIE
Belle A. Kandarian, 920 R St., Fresno, Calif.
Filed Oct. 8, 1962, Ser. No. 72,026
Term of patent 14 years
(Cl. D3—16)



195,191
ELBOW OR KNEE PROTECTING PAD
Ethel M. Marvid, 5316–18 S. Hoover St., Los Angeles, Calif.
Filed Aug. 14, 1961, Ser. No. 66,341
Term of patent 14 years
(Cl. D3—26)



195,192
SOAP DISPENSER
Philip Shore, Los Angeles, Calif., assignor to Shore-Calnevar, Inc., Los Angeles, Calif., a corporation of California
Filed July 17, 1961, Ser. No. 65,928
Term of patent 14 years
(Cl. D4—3)



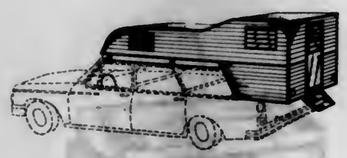
195,193
COMBINED DISPLAY AND STORAGE SHELTER FOR TIRES OR THE LIKE
Harvey J. Smith, Greensboro, N.C., assignor to Modern Metal Products Company, Greensboro, N.C., a corporation of North Carolina
Filed Mar. 10, 1961, Ser. No. 64,211
Term of patent 14 years
(Cl. D13—1)



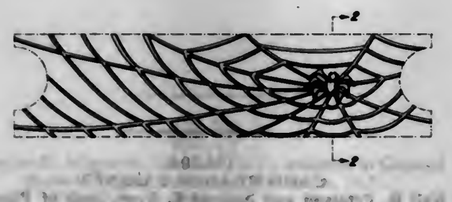
195,194
BOOTH FOR VENDING MACHINES DISPENSING COMESTIBLES AND OTHER PRODUCTS
Sidney Silverman and Betti O. Silverman, both of 372 Darrell Road, Hillsborough, Calif.
Filed May 28, 1962, Ser. No. 70,293
Term of patent 14 years
(Cl. D13—1)



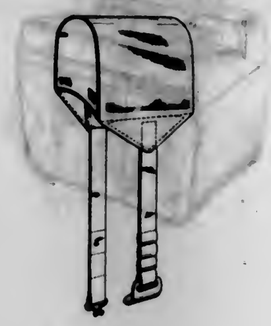
195,195
VEHICLE-SUPPORTED SHELTER
Wayne L. Hunter, 7th and Lisbon St., East Liverpool, Ohio
Filed Jan. 19, 1962, Ser. No. 68,371
Term of patent 7 years
(Cl. D14—3)



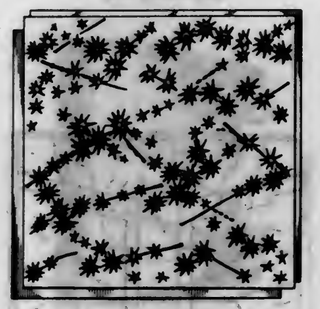
195,196
AUTOMOBILE GRILLE
Paul E. Milliken, 18 Hurlburt Ave., Akron, Ohio
Filed June 20, 1962, Ser. No. 70,630
Term of patent 14 years
(Cl. D14—18)



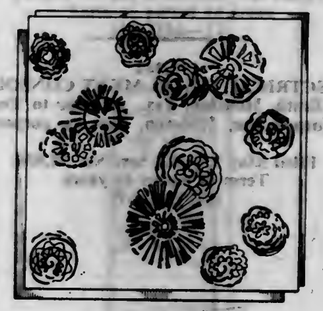
195,197
HEADREST CUSHION
Roy Requa, 5801 N. Federal Blvd., Denver, Colo.
Filed Aug. 28, 1961, Ser. No. 66,511
Term of patent 14 years
(Cl. D15—8)



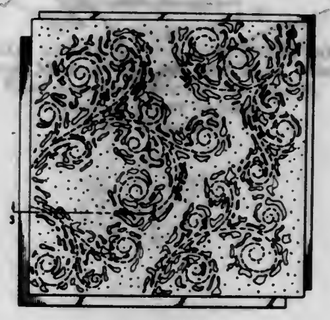
195,198
CEILING TILE
Wallace Lanz, New York, N.Y., assignor to Minnesota and Ontario Paper Company, Minneapolis, Minn.
Filed June 12, 1962, Ser. No. 70,513
Term of patent 14 years
(Cl. D18—2)



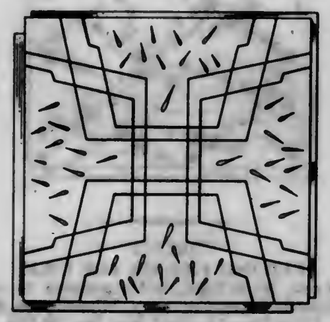
195,199
CEILING TILE OR THE LIKE
Wallace Lanz, New York, N.Y., assignor to Minnesota and Ontario Paper Company, Minneapolis, Minn.
Filed June 12, 1962, Ser. No. 70,514
Term of patent 14 years
(Cl. D18—2)



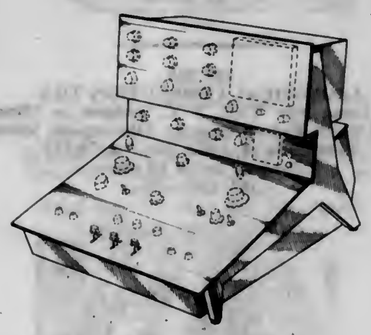
195,200
ACOUSTICAL CORRECTION TILE
Wallace Lanz, New York, N.Y., assignor to Minnesota and Ontario Paper Company, Minneapolis, Minn.
Filed June 12, 1962, Ser. No. 70,517
Term of patent 14 years
(Cl. D18—2)



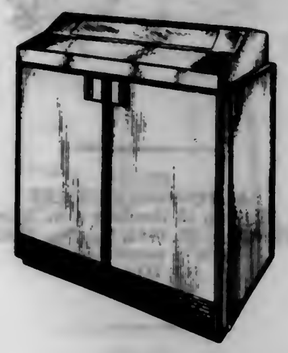
195,201
TILE
Wallace Lanz, New York, N.Y., assignor to Minnesota and Ontario Paper Company, Minneapolis, Minn.
Filed June 12, 1962, Ser. No. 70,518
Term of patent 14 years
(Cl. D18—2)



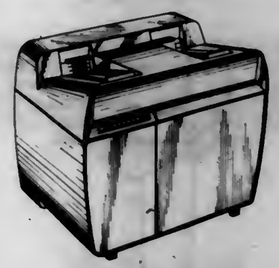
195,202
ELECTRICAL INSTRUMENT CONSOLE
Louis W. Erath, Houston, Tex., assignor to Test Equipment Corporation, Houston, Tex., a corporation of Texas
Filed May 9, 1962, Ser. No. 70,050
Term of patent 14 years
(Cl. D26—1)



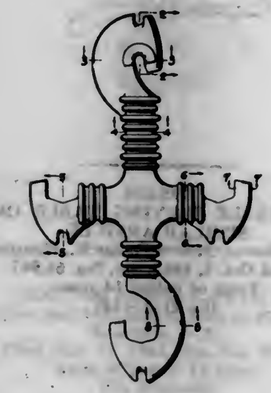
195,203
120 COLUMN PRINTER ENCLOSURE
Charles E. Bonarth, Phoenix, Ariz., assignor to General Electric Company, a corporation of New York
Filed Apr. 10, 1961, Ser. No. 64,663
Term of patent 14 years
(Cl. D26—5)



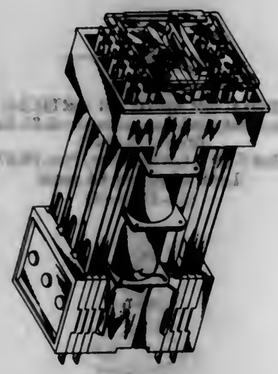
195,204
CARD READER CABINET
Kail R. Peterson and Noland E. Vogt, both of Phoenix, Ariz., assignors to General Electric Company, a corporation of New York
Filed Aug. 23, 1961, Ser. No. 66,476
Term of patent 14 years
(Cl. D26—5)



195,205
AERIAL CABLE SUPPORT AND SPACER
George C. Price, Battle Creek Township, Calhoun County, Mich., assignor to Oliver Electrical Manufacturing Co., Battle Creek, Mich., a corporation of Delaware
Filed Apr. 30, 1962, Ser. No. 69,895
Term of patent 14 years
(Cl. D26—10)



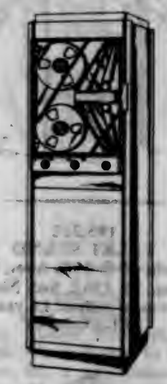
195,206
RELAY
Wheeler D. Maynard, Meadon, N.Y., assignor to General Railway Signal Company, Rochester, N.Y.
Filed Nov. 9, 1962, Ser. No. 72,442
Term of patent 14 years
(Cl. D26—13)



195,207
COVER FOR MAGNETIC RECORDING HEADS OR SIMILAR ARTICLE
Henry Dreyfuss, South Pasadena, Calif., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Aug. 12, 1960, Ser. No. 61,711
Term of patent 14 years
(Cl. D26—14)



195,208
MAGNETIC TAPE APPARATUS
Francis A. Farey, Palo Alto, Calif., assignor to Ampex Corporation, Redwood City, Calif., a corporation of California
Filed Nov. 28, 1960, Ser. No. 62,995
Term of patent 14 years
(Cl. D26—14)



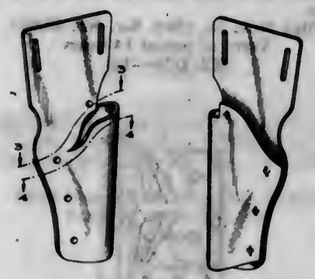
195,209
CRADLE ATTACHMENT FOR TELEPHONES
Jean George Mourra, 4922 SW. 87th Place, Miami, Fla.
Filed Aug. 15, 1961, Ser. No. 66,594
Term of patent 14 years
(Cl. D26—14)



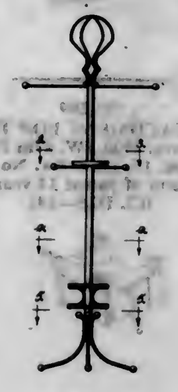
195,210
INSTRUMENT PANEL FOR AN OSCILLOGRAPH
Richard T. Hart, Tulsa, Okla., assignor to Midwestern Instruments, Inc., Tulsa, Okla., a corporation of Oklahoma
Filed Jan. 7, 1963, Ser. No. 73,075
Term of patent 14 years
(Cl. D26—14)



195,211
GUN HOLSTER
Frank A. Stella, Lyndhurst, N.J., assignor to The Hubley Manufacturing Company, Lancaster, Pa., a corporation of Pennsylvania
Filed Mar. 16, 1962, Ser. No. 69,308
Term of patent 14 years
(Cl. D30—1)



195,212
VALET STAND
Roderic M. Koch, 10 S. 11th Ave., Evansville, Ind.
Filed Aug. 14, 1962, Ser. No. 71,283
Term of patent 14 years
(Cl. D33—8)



195,213
TABLE
Robert D. Cook, 16931 Marquez Ave., Pacific Palisades, Calif.
Filed Feb. 3, 1961, Ser. No. 63,817
Term of patent 3½ years
(Cl. D33—14)



195,214
PORTABLE SERVING TABLE OR SIMILAR ARTICLE
Clifford L. Rowse, 319—9 Dallas St., Houston, Tex.
Filed Oct. 4, 1961, Ser. No. 66,967
Term of patent 14 years
(Cl. D33—14)



195,215
DOLL OR SIMILAR ARTICLE
Anne Estern and Neil Estern, both of 82 Remsen St., Brooklyn, N.Y.
Filed May 11, 1962, Ser. No. 70,073
Term of patent 14 years
(Cl. D34—4)



195,216
DOLL OR SIMILAR ARTICLE
Anne Estern and Neil Estern, both of 82 Remsen St., Brooklyn, N.Y.
Filed May 11, 1962, Ser. No. 70,074
Term of patent 14 years
(Cl. D34—4)



195,217
DOLL OR SIMILAR ARTICLE
Anne Estern and Neil Estern, both of 82 Remsen St., Brooklyn, N.Y.
Filed May 11, 1962, Ser. No. 70,075
Term of patent 14 years
(Cl. D34—4)



195,218
DOLL OR SIMILAR ARTICLE
Anne Estern and Neil Estern, both of 82 Remsen St., Brooklyn, N.Y.
Filed May 11, 1962, Ser. No. 70,076
Term of patent 14 years
(Cl. D34—4)



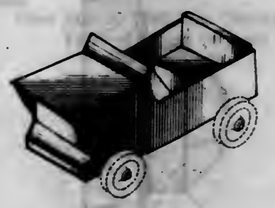
195,219
DOLL OR SIMILAR ARTICLE
Anne Estern and Neil Estern, both of 82 Remsen St., Brooklyn, N.Y.
Filed May 11, 1962, Ser. No. 70,077
Term of patent 14 years
(Cl. D34—4)



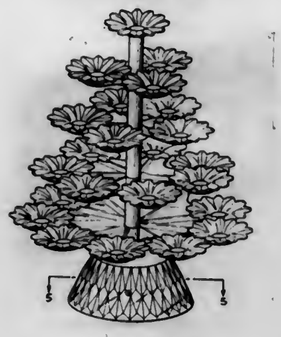
195,220
DOLL OR SIMILAR ARTICLE
Anne Estern and Neil Estern, both of 82 Remsen St., Brooklyn, N.Y.
Filed May 11, 1962, Ser. No. 70,078
Term of patent 14 years
(Cl. D34—4)



195,221
TOY VEHICLE
Robert H. Crowle, Mount Prospect, and William G. Crowle, Deerfield, Ill., assignors to General Box Company, Des Plaines, Ill., a corporation of Delaware
Filed Mar. 12, 1962, Ser. No. 69,186
Term of patent 14 years
(Cl. D34—15)



195,222
CONFECTIONARY STAND
John H. Heiney, 15989 Woodland Ave., Dearborn, Mich.
Filed Sept. 10, 1962, Ser. No. 71,670
Term of patent 14 years
(Cl. D44—10)



195,223
COMBINED SIGNAL LIGHT HOUSING AND EMBLEM FOR TAXICABS
Laurence Atkins, 545 W. 146th St., Apt. 61, New York, N.Y.
Filed June 2, 1961, Ser. No. 65,440
Term of patent 7 years
(Cl. D48—32)

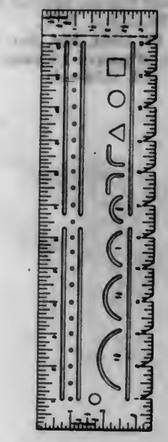


195,224
TAILLIGHT UNIT FOR AUTOMOBILES OR THE LIKE
Eugene Bordinat, Jr., Bloomfield Hills, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Continuation of design applications Ser. No. 66,505, Aug. 25, 1961 and Ser. No. 66,786, Sept. 21, 1961. This application Oct. 31, 1962, Ser. No. 72,369
Term of patent 7 years
(Cl. D48—32)

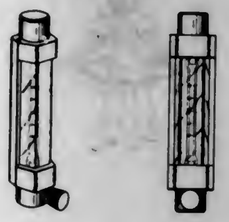




195,225
DRESSMAKERS' MARKING GUIDE
Aaron Traum, 200 W. 86th St., New York, N.Y.
Filed Jan. 29, 1962, Ser. No. 68,539
Term of patent 7 years
(Cl. D52—6)



195,226
FLOWMETER
Eugene P. Busillo, Huntingdon Valley, Pa., assignor to Fischer & Porter Company, Warminster, Pa., a corporation of Pennsylvania
Filed Mar. 16, 1962, Ser. No. 69,301
Term of patent 14 years
(Cl. D52—6)



195,227
ELECTRIC DRILL
Burton P. Franklin, Bachelor's Hall, Va., and Samuel S. Leotta, Hatboro, Pa., assignors to H. K. Porter Company (Delaware), Danville, Va., a corporation of Delaware
Filed Jan. 2, 1962, Ser. No. 68,169
Term of patent 14 years
(Cl. D54—14)



195,228
SPECTACLE FRAME
Wallace J. Murray, Jr., Warwick, and Philip C. Calabro, Cranston, R.I., assignors to Universal Optical Company, Inc., Providence, R.I., a corporation of Rhode Island
Filed Feb. 19, 1962, Ser. No. 68,894
Term of patent 14 years
(Cl. D57—1)



195,229
JUG
Harold D. Hulterstrum, Baraboo, Wis., assignor to Flambeau Plastics Corporation, Baraboo, Wis., a corporation of Wisconsin
Filed June 4, 1962, Ser. No. 70,408
Term of patent 14 years
(Cl. D58—5)



195,230
JAR
John F. Dubbe, Lancaster, Pa., assignor to Armstrong Cork Company, Lancaster, Pa., a corporation of Pennsylvania
Filed Apr. 9, 1962, Ser. No. 69,635
Term of patent 14 years
(Cl. D58—25)



195,231
BOTTLE CAP
Eric De Kolb, New York, N.Y., assignor to Coty, Inc., New York, N.Y., a corporation of Delaware
Filed Nov. 15, 1961, Ser. No. 67,524
Term of patent 14 years
(Cl. D58—26)



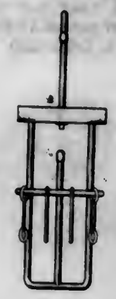
195,232
FAN BLADE ASSEMBLY
Jack Brannan, Pasadena, Calif., assignor to Trade-Wind Motorfans, Inc., Pico Rivera, Calif., a corporation of California
Filed May 8, 1961, Ser. No. 65,071
Term of patent 14 years
(Cl. D62—4)



195,233
COMBINATION BUS AND RAILROAD COMMUTER CAR
John R. Cooney, Dyer, Ind., assignor to Pullman Incorporated, a corporation of Delaware
Filed Aug. 29, 1961, Ser. No. 66,536
Term of patent 14 years
(Cl. D66—1)



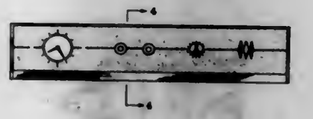
195,234
NECKTIE HANGER
Dewayne K. Williams, Anaheim, Calif., assignor to Williams Manufacturing Co., Anaheim, Calif., a corporation of California
Filed Feb. 12, 1962, Ser. No. 68,779
Term of patent 7 years
(Cl. D88—8)



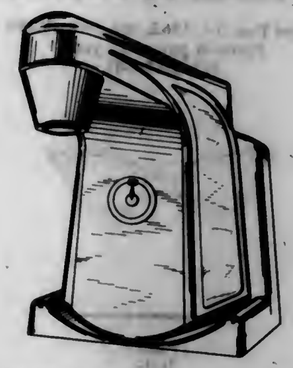
195,235
COOKING STOVE
Melvin Boldt, Chicago, Ill., assignor to Moffats Limited, Weston, Ontario, Canada, a corporation of Ontario
Filed Feb. 24, 1961, Ser. No. 64,049
Claims priority, application Canada Jan. 28, 1961
Term of patent 14 years
(Cl. D61—4)



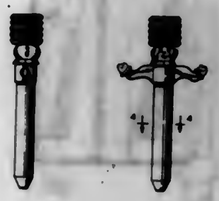
195,236
SMOKE EXHAUSTING HOOD OR THE LIKE
Robert A. Clark, 910 Edward St., and Peter L. Helgeson, 1129 N. 18th St., both of Allentown, Pa.
Filed Apr. 10, 1962, Ser. No. 69,652
Term of patent 14 years
(Cl. D61—25)



195,237
LINEAR ACCELERATOR FOR CANCER RADIOTHERAPY OR THE LIKE
Jacob Haimson and Ronald E. Haynes, both of Palo Alto, Calif., assignors to Varian Associates, Palo Alto, Calif., a corporation of California
Filed Aug. 21, 1961, Ser. No. 66,445
Term of patent 14 years
(Cl. D63—1)



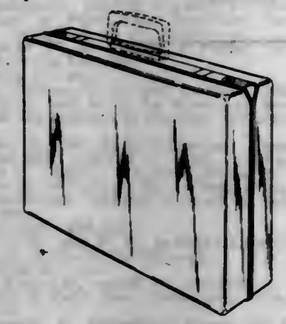
195,238
MEDICINE DROPPER
Joseph M. Mitchell, % Baroner Products Co., High St., Clinton, Mass.
Filed Sept. 19, 1962, Ser. No. 71,763
Term of patent 14 years
(Cl. D63—1)



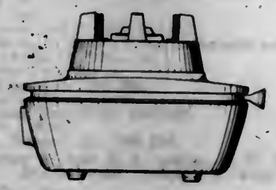
195,239
ASH TRAY
James A. McAdams, 16 E. Southington, Worthington, Ohio
Filed Aug. 14, 1961, Ser. No. 66,343
Term of patent 14 years
(Cl. D85—2)



195,240
LUGGAGE CASE
Melvin H. Best, Pasadena, and Clair A. Samhammer, Altadena, Calif., assignors to Shwayder Brothers, Inc., Denver, Colo., a corporation of Colorado
Filed May 31, 1962, Ser. No. 70,349
Term of patent 14 years
(Cl. D67—5)



195,241
POWER UNIT FOR BLENDERS OR THE LIKE
Dave Chapman and Robert C. Le Sueur, Chicago, Ill., assignors to Scovill Manufacturing Company, Waterbury, Conn., a corporation of Connecticut
Filed June 27, 1962, Ser. No. 70,702
Term of patent 14 years
(Cl. D69—1)



195,242
OFFSET NIPPLE
William E. Kelly, Jersey City, N.J., assignor to The Thomas & Betts Co., Elizabeth, N.J., a corporation of New Jersey
Filed Aug. 31, 1961, Ser. No. 66,571
Term of patent 14 years
(Cl. D91—3)



195,243
OFFSET NIPPLE
William E. Kelly, Jersey City, N.J., assignor to The Thomas & Betts Co., Elizabeth, N.J., a corporation of New Jersey
Filed Aug. 31, 1961, Ser. No. 66,572
Term of patent 14 years
(Cl. D91—3)



195,244
TEXTILE FABRIC
Alexander H. Girard, Santa Fe, N. Mex., assignor to Herman Miller, Inc., Zeeland, Mich., a corporation of Michigan
Filed Feb. 5, 1962, Ser. No. 68,653
Term of patent 14 years
(Cl. D92—1)



195,245
PLASTIC PILE RUG
Beatrice Edesess, Brookline, Mass., assignor to American Biltrite Rubber Co., Inc., Chelsea, Mass., a corporation of Delaware
Filed Sept. 21, 1961, Ser. No. 66,790
Term of patent 14 years
(Cl. D92—21)



195,246
TABLECLOTH
Alexander H. Girard, Santa Fe, N. Mex., assignor to Herman Miller, Inc., Zeeland, Mich., a corporation of Michigan
Filed Feb. 14, 1962, Ser. No. 68,814
Term of patent 14 years
(Cl. D92—26)



LIST OF REISSUE PATENTEES

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PATENTS WERE ISSUED ON THE 14TH DAY OF MAY, 1963

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

Bryant, Edwin E., to Nelson Muffler Corp. Exhaust muffler. Re. 25,384, 5–14–63, Cl. 181—57.
Hendon, Lofton M. Fishing rod holder. Re. 25,387, 5–14–63, Cl. 248—41.
Jacobson, Delbert G. Low crop harvesting attachment for combines. Re. 25,385, 5–14–63, Cl. 56—23.
Moore, William C., by Welch Allyn, Inc., assignee. Rechargeable battery handle. Re. 25,388, 5–14–63, Cl. 240—10.6.
Morrill, Louis R. Automatic rotation balancer. Re. 25,383, 5–14–63, Cl. 301—5.
Nelson Muffler Corp.: *See*—
Bryant, Edwin E. Re. 25,384.
Soldini, Robert B. Pre-batch trailer for concrete making ingredients. Re. 25,386, 5–14–63, Cl. 222—133.
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Farey, Francis A. 195,208.
Armstrong Cork Co.: *See*—
Dubbs, John F. 195,230.
Atkins, Laurence. Combined signal light housing and emblem for taxicabs. 195,223, 5–14–63, Cl. D48—32.
Best, Melvin H., and C. A. Samhammer, to Shwayder Brothers, Inc. Luggage case. 195,240, 5–14–63, Cl. D87—5.
Boldt, Melvin, to Moffats Ltd. Cooking stove. 195,235, 5–14–63, Cl. D81—4.
Bordinat, Eugene, Jr., to Ford Motor Co. Taillight unit for automobiles or the like. 195,224, 5–14–63, Cl. D48—32.
Bozarth, Charles E., to General Electric Co. 120 column printer enclosure. 195,203, 5–14–63, Cl. D26—5.
Brannan, Jack, to Trade-Wind Motorfans, Inc. Fan blade assembly. 195,232, 5–14–63, Cl. D62—4.
Busillo, Eugene P., to Fischer & Porter Co. Flowmeter. 195,226, 5–14–63, Cl. D62—6.
Calabro, Philip C.: *See*—
Murray, Wallace J., Jr., and Calabro. 195,228.
Chapman, Dave, and E. C. Le Sueur, to Scovill Mfg. Co. Power unit for blenders or the like. 195,241, 5–14–63, Cl. D89—1.
Clark, Robert A., and P. L. Helgeson. Smoke exhausting hood or the like. 195,236, 5–14–63, Cl. D81—25.
Cook, Robert D. Table. 195,213, 5–14–63, Cl. D33—14.
Cooney, John R., to Pullman Inc. Combination bus and railroad commuter car. 195,233, 5–14–63, Cl. D66—1.
Coty, Inc.: *See*—
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Crowle, Robert H., and W. G., to General Box Co. Toy vehicle. 195,221, 5–14–63, Cl. D34—15.
Crowle, William G.: *See*—
Crowle, Robert H., and W. G. 195,221.
De Kolb, Eric, to Coty, Inc. Bottle cap. 195,231, 5–14–63, Cl. D58—26.
Dreyfuss, Henry, to Minneapolis-Honeywell Regulator Co. Cover for magnetic recording heads or similar article. 195,207, 5–14–63, Cl. D26—14.
Dubbs, John F., to Armstrong Cork Co. Jar. 195,230, 5–14–63, Cl. D58—25.
Edesess, Beatrice, to American Biltrite Rubber Co., Inc. Plastic pile rug. 195,245, 5–14–63, Cl. D92—21.
Erath, Louis W., to Test Equipment Corp. Electrical instrument console. 195,202, 5–14–63, Cl. D26—1.
Estern, Anne, and N. Doll or similar article. 195,215, 5–14–63, Cl. D34—4.
Estern, Anne, and N. Doll or similar article. 195,216, 5–14–63, Cl. D34—4.
Estern, Anne, and N. Doll or similar article. 195,217, 5–14–63, Cl. D34—4.
Estern, Anne, and N. Doll or similar article. 195,218, 5–14–63, Cl. D34—4.
Estern, Anne, and N. Doll or similar article. 195,219, 5–14–63, Cl. D34—4.
Estern, Anne, and N. Doll or similar article. 195,220, 5–14–63, Cl. D34—4.
Estern, Neil: *See*—
Estern, Anne, and N. 195,215–20.
Farey, Francis A., to Ampex Corp. Magnetic tape apparatus. 195,208, 5–14–63, Cl. D26—14.
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Franklin, Burton P., and S. S. Leotta, to H. K. Porter Co. (Delaware). Electric drill. 195,227, 5–14–63, Cl. D64—14.
General Box Co.: *See*—
Crowle, Robert H., and W. G. 195,221.
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Bozarth, Charles E. 195,203.
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Girard, Alexander H., to Herman Miller, Inc. Textile fabric. 195,244, 5–14–63, Cl. D92—1.
Girard, Alexander H., to Herman Miller, Inc. Tablecloth. 195,246, 5–14–63, Cl. D92—26.
Haimson, Jacob, and R. E. Haynes, to Varian Associates. Linear accelerator for cancer radiotherapy or the like. 195,237, 5–14–63, Cl. D83—1.
Hart, Richard T., to Midwestern Instruments, Inc. Instrument panel for an oscillograph. 195,210, 5–14–63, Cl. D26—14.
Haynes, Ronald E.: *See*—
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Heiney, John H. Confectionery stand. 195,222, 5–14–63, Cl. D44—10.
Helgeson, Peter L.: *See*—
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Hubley Mfg. Co., The: *See*—
Stella, Frank A. 195,211.
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Hunter, Wayne L. Vehicle-supported shelter. 195,195, 5–14–63, Cl. D14—3.
Kandarian, Belle A. Preformed necktie. 195,190, 5–14–63, Cl. D3—16.
Kelly, William E., to The Thomas & Betts Co. Offset nipple. 195,242, 5–14–63, Cl. D91—3.
Kelly, William E., to The Thomas & Betts Co. Offset nipple. 195,243, 5–14–63, Cl. D91—3.
Koch, Roderic M. Valet stand. 195,212, 5–14–63, Cl. D33—8.
Lanz, Wallace, to Minnesota and Ontario Paper Co. Ceiling tile. 195,198, 5–14–63, Cl. D18—2.
Lanz, Wallace, to Minnesota and Ontario Paper Co. Ceiling tile or the like. 195,199, 5–14–63, Cl. D18—2.
Lanz, Wallace, to Minnesota and Ontario Paper Co. Acoustical correction tile. 195,200, 5–14–63, Cl. D18—2.
Lanz, Wallace, to Minnesota and Ontario Paper Co. Tile. 195,201, 5–14–63, Cl. D18—2.
Leotta, Samuel S.: *See*—
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Chapman, Dave, and Le Sueur. 195,241.
Marvid, Ethel M. Elbow or knee protecting pad. 195,191, 5–14–63, Cl. D3—26.
Maynard, Wheeler D., to General Railway Signal Co. Relay. 195,206, 5–14–63, Cl. D26—13.
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Hart, Richard T. 195,210.
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Lanz, Wallace. 195,199.
Lanz, Wallace. 195,200.
Lanz, Wallace. 195,201.
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Mourra, Jean G. Cradle attachment for telephones. 195,209, 5–14–63, Cl. D26—14.
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Requa, Roy. Headrest cushion. 195,197, 5–14–63, Cl. D15—8.
Rowse, Clifford L. Portable serving table or similar article. 195,214, 5–14–63, Cl. D33—14.
Samhammer, Clair A.: *See*—
Best, Melvin H., and Samhammer. 195,240.
Schulte, Norman F., Jr., 50% to S. Simon. Astronaut's glove. 195,189, 5–14–63, Cl. D3—11.
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Williams, Dewayne K. 195,234.

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TO WHOM

PATENTS WERE ISSUED ON THE 14TH DAY OF MAY, 1963

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

ACF Industries, Inc.: *See*—
Hennemann, Raymond G., Rapplean, and Korts. 3,089,685.
Read, Leland B. 3,089,648.
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AMP Inc.: *See*—
Graef, Norwood C. 3,089,532.
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Faber, Harry. 3,089,664.
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Kurath, Paul, and Cole. 3,089,874.
Short, James H. 3,089,819.
Abraham, Edward D., to The Osborn Mfg. Co. Blow and squeeze molding machine and method of molding. 3,089,206, 5–14–63, Cl. 22—36.
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Vitcha, James F., and Sims. 3,089,899.
Vitcha, James F., and Sims. 3,089,900.
Vitcha, James F., and Sims. 3,089,901.
Vitcha, James F., and Sims. 3,089,902.
Alabor, Paul. Drawing stands or the like. 3,089,275, 5–14–63, Cl. 45—131.
Aler, Richard P. Convertible wheel traction aid. 3,089,528, 5–14–63, Cl. 152—216.
Aler, Richard P. Wheel traction aid. 3,089,529, 5–14–63, Cl. 152—216.
Allen, Arthur C., J. P. Magerl, B. J. Sadoff, Jr., and H. P. Wertheimer, to Stewart-Warner Corp. Speed governing systems. 3,089,501, 5–14–63, Cl. 137—53.
Allen, Theodore L., Jr., to Varian Associates. Magnetometer apparatus. 3,090,002 5–14–63, Cl. 324—.5.
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Dahl, Madsen. 3,089,824.
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Andrews, Zenas B., C. R. Brown, and W. T. Price, to United States of America, Navy. Missile launcher. 3,089,889, 5–14–63, Cl. 89—1.7.
Anheuser-Busch, Inc.: *See*—
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Wilson, Frederick E. J. 3,089,615.
Wilson, Frederick E. J. 3,089,616.
Wilson, Frederick E. J. 3,089,617.
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Bahnson, Agnew H., Jr., and King. 3,089,176.
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Baker, Thomas R., and B. S. Posen, to Atlas General Industries, Inc. Vacuum type blank feeding device with positive on/off control. 3,089,698, 5–14–63, Cl. 271—56.

Balamuth, Lewis, C. Kleesattel, and A. Kuris, to Cavitron Ultrasonics Inc. Ultrasonic cleaning devices and method of cleaning. 3,089,790, 5–14–63, Cl. 134—1.

Baldwin, George D., to Truck-Lite Co., Inc. Potted truck light. 3,089,951, 5–14–63, Cl. 240—7.1.

Ballard, Denis G. H., to Courtaulds Ltd. Production of artificial threads. 3,089,749, 5–14–63, Cl. 18—54.

Balmer, Clifford E., C. A. Brown, M. D. Hurwitz, and J. E. Masterson, to Rohm & Haas Co. Copolymerization of ethylene with alkyl acrylates or methacrylates. 3,089,897, 5–14–63, Cl. 260—486.

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Barclay, John L., D. J. Hadley, and D. G. Stewart, to The Distillers Co. Ltd. Production of unsaturated aliphatic aldehydes. 3,089,909, 5–14–63, Cl. 260—604.

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Saffer, Alfred, and Barker. 3,089,907.

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Barnes, Llewellyn T. Tuning device with specially shaped capacitor plates. 3,090,021, 5–14–63, Cl. 334—82.

Barr, Irwin R., to Aircraft Armaments, Inc. Method of making ball bearing. 3,089,221, 5–14–63, Cl. 29—148.4.

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Bastie, Paul. Fish pole holder. 3,089,674, 5–14–63, Cl. 248—40.

Batdorf, Oscar E., to Vaco Products Co. Cutoff device for threaded bolts and screws. 3,089,241, 5–14–63, Cl. 30—226.

Bates, Charles J., and A. A. Andre, to The Procter & Gamble Co. Prepared potato containing culinary mix. 3,089,773, 5–14–63, Cl. 99—94.

Baum, Bernard G., and C. Y. Meyers, to Union Carbide Corp. Stabilized polyolefin compositions. 3,089,860, 5–14–63, Cl. 260—45.7.

Baur, Carl, and G. Konigl, to Agfa Aktiengesellschaft. Variable framing means for a combined range and view finder. 3,089,380, 5–14–63, Cl. 88—1.5.

Baxter Laboratories, Inc.: *See*—
Stone, Irwin M. 3,089,818.

Beaver, Richard J., and J. H. Cherubini, to United States of America, Atomic Energy Commission. Selective separation of uranium from ferritic stainless steels. 3,089,751, 5–14–63, Cl. 23—14.5.

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Daane, Robert A., and Justus. 3,089,252.
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Bendell, Sidney L., and W. J. Cosgrove, to Radio Corp. of America. Deflection circuit. 3,089,978, 5–14–63, Cl. 315—25.

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Hall, James R., and Hennessey. 3,090,028.

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Bergonso, Pierre, to Tarex S.A. Automatic lathe for cutting threads. 3,089,160, 5–14–63. Cl. 10—101.

Berk, Sigmund, to United States of America, Army. Radioisotope method for measuring the weight of the contents of assembled items. 3,089,378, 5–14–63, Cl. 86—32.

Berkowitz, Edward B., T. E. Makowski, B. G. Spars, and N. H. Berlin, to Esso Research and Engineering Co. Refining process for petroleum wax. 3,089,841, 5–14–63, Cl. 208—27.

Berkowitz, Irving L., to Kason Display Hardware Inc. Fitting for attaching together tubular members. 3,089,716, 5–14–63, Cl. 287—54.

Berlin, Norton: *See*—
Berkowitz, Edward B., Makowski, Spars, and Berlin. 3,089,841.

Berry, Ralph E. Web elastic holder and sewing guide. 3,089,691, 5–14–63, Cl. 269—1.

Bertels, Josef, to Wibau Westdeutsche Industrie- u. Strassenbau-Maschinen-Gesellschaft m.b.H. Tiltable container for transporting bulk materials. 3,089,725, 5–14–63, Cl. 294—73.

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Beyer, Diana: *See*—
Beyer, Eugen. 3,089,746.

Beyer, Eugen, deceased, by M. (nee Feist), F. R., D. and C. Beyer; said M. Beyer assor. to said F. R., D. and C. Beyer. Feed control apparatus for record sheets. 3,089,746, 5–14–63, Cl. 346—138.

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Beyer, Eugen. 3,089,746.

Beyer, Martha: *See*—
Beyer, Eugen. 3,089,746.

Beyer, Raymond H., J. E. Burke, and D. J. Hasley, to United States of America, Navy. Explosive cable-cutting fitting. 3,089,417, 5–14–63, Cl. 102—24.

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Wise, Robert T., and Erickson. 3,089,614.

Bignon, Lucien C. A. M. Windshield wiper blades. 3,089,174, 5–14–63, Cl. 15—250.36.

Bilane, Roland B. Roll forming machine. 3,089,660, 5–14–63, Cl. 242—56.

Binger, Wayne W., and D. G. Vandenburgh, to Aluminum Co. of America. Elevated temperature liquid heating systems. 3,089,466, 5–14–63, Cl. 122—17.

Birum, Gail H., to Monsanto Chemical Co. Organic phosphorus compounds. 3,089,891, 5–14–63, Cl. 260—461.

Birum, Gail H.: *See*—
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Bishay, Adli M., to United States of America, Atomic Energy Commission. Gamma radiation dosage-measuring glasses and method of using. 3,089,957, 5–14–63, Cl. 250—83.

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Blomqvist, Olle. Medical tipping tables. 3,089,692, 5–14–63, Cl. 269—323.

Bochan, John, to General Electric Co. Three-way valve. 3,089,515, 5–14–63, Cl. 137—610.

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Lunden, Clarence D. 3,090,020.
Quenzler, Henry H. W. 3,089,666.

Bogaerts, Leo C.: *See*—
Kushmuk, Walter P., and Bogaerts. 3,089,295.

Bogert, John J., to National Laboratories and Mfg. Corp. Inspection equipment. 3,089,381, 5–14–63, Cl. 88—14.

Bolles, Elwood C., and J. Wind, Jr., to Chris-Craft Industries, Inc. Combination edge turning and welding die. 3,089,536, 5–14–63, Cl. 156—479.

Bollier, Jacob C. Transmission. 3,089,348, 5–14–63, Cl. 74—688.

Borges, Alberto. Building roofing structure. 3,089,281, 5–14–63, Cl. 50—61.

Bosc, Paul F., to Etablissements Youpa-La. Pneumatic mattress. 3,089,153, 5–14–63, Cl. 5—348.

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Bowden, Howard J., and H. G. Schwartzberg, to General Foods Corp. Coffee extraction process. 3,089,772, 5–14–63, Cl. 99—71.

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Bradley, Chester D., to A. H. Emery Co. Load cells for hydraulic weighing machines. 3,089,519, 5–14–63, Cl. 137—778.

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Bradley, Milton, Co.: *See*—
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Brady, Samuel G., and W. Dralle, to Ex-Cell-O Corp. Work holding fixture for grinding half round grooves. 3,089,296, 5–14–63, Cl. 51—227.

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Brennemann, Andrew E., and R. T. Tsui, to International Business Machines Corp. Superconductor circuit. 3,090,023, 5–14–63, Cl. 338—32.

Brenner, Ronald J., to McNeil Laboratories, Inc. Pharmaceutical tablet containing wheat gluten. 3,089,825, 5–14–63, Cl. 167—82.

Briggs, Kenneth H., and A. J. Jones, ⅜ to said Briggs, and ⅜ to said Jones. Adjustable bed and control apparatus. 3,089,150, 5–14–63, Cl. 5—68.

Brinkley, Edwin T., Jr. Control handle. 3,089,278, 5–14–63, Cl. 46—77.

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Pethrick, Samuel R., and Welch. 3,089,853.

Brock, Russell E., Jr. Simultaneous position switch. 3,089,924, 5–14–63, Cl. 200—5.

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Brockway Glass Co., Inc.: *See*—
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Brodie, Mike. Combination reversible puller. 3,089,229, 5–14–63, Cl. 29—261.

Bronaugh, Hugh J., and P. R. Kruesi, to Vitro Corp. of America. Concentration of rare earths. 3,089,759, 5–14–63, Cl. 23—296.

Brooks, Harold E. Bumper for furniture or the like. 3,089,276, 5–14–63 Cl. 45—137.

Brooks, Norman C., to Miehle-Goss-Dexter, Inc. Folding machine roller adjusting mechanism. 3,089,595, 5–14–63, Cl. 270—68.

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Broudo, Saul, to United States of America, Navy. Flexible cylinder launcher. 3,089,669, 5–14–63, Cl. 244—63.

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Schulten, Rudolf, Guth, Setzwein, Braun, and Berberich. 3,089,835.
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Brown, Clarence A.: *See*—
Balmer, Clifford E., Brown, Hurwitz, and Masterson. 3,089,897.

Brown, Harold, Co.: *See*—
Lilly, Mason M. 3,089,545.

Broso, Donald E., to Burroughs Corp. Stack conditioning apparatus. 3,089,697, 5–14–63, Cl. 271—34.

Bruce, Donald M., W. T. Cowhig, and K. J. Butler, to Cotton Silk and Man-Made Fibres Research Assn. Automatic machinery. 3,089,322, 5–14–63, Cl. 66—154.

Bruce, George D., and R. A. Henle, to International Business Machines Corp. Inverter with output clamp and R-C circuit. 3,089,964, 5–14–63, Cl. 307—88.5.

Brueder, Antoine, to Andre Citroen Societe Anonyme. Longitudinal-elasticity suspension system. 3,089,558, 5–14–63, Cl. 180—64.

Buchsbaum, Walter H. Combination lint removing, tape dispensing, and personal grooming device. 3,089,170, 5–14–63, Cl. 15—105.

Buck, Francis E., and J. E. Smith, to United States of America, Navy. Float for tow cables. 3,089,453, 5–14–63, Cl. 114—235.

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Long, Elbert E. 3,089,708.

Buckley, John J., to The Youngstown Steel Door Co. Metallic linings for boxcars. 3,089,436, 5–14–63, Cl. 105—369.

Budlong, Simeon, to F. J. Littell Machine Co. Drive arm structure for reciprocating mechanism. 3,089,345, 5–14–63, Cl. 74—45.

Budsich, Tadeusz, to The New York Air Brake Co. Engine. 3,089,426, 5–14–63, Cl. 103—162.

Bufalini, Charles J. Heat exchanging attachment for receptacles. 3,089,317, 5–14–63, Cl. 62—457.

Buonauro, Frank A. Convertible container construction. 3,089,605, 5–14–63, Cl. 215—99.5.

Burdick, Ralph V., and R. V. Burdick, Jr. Box. 3,089,608, 5–14–63, Cl. 220—43.

Burdick, Ralph V., Jr.: *See*—
Burdick, Ralph V., and R. V. Burdick, Jr. 3,089,608.

Burke, Joseph E.: *See*—
Beyer, Raymond H., Burke, and Hasley. 3,089,417.

Burroughs Corp.: *See*—
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Fettig, Arthur J., Jenks, Lasdine, Maidment, and Runde. 3,089,641.
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Burroughs, Cyril E., I. B. Topp, and J. M. Kingsland, to S. Smith & Sons (England) Ltd. Resetting mechanisms for meters. 3,089,642, 5–14–63, Cl. 235—144.

Burton-Dixie Corp.: *See*—
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Burton, William E. Dental equipment. 3,089,741, 5–14–63, Cl. 312—223.

Bush, Donald R., T. E. Howarth, and R. Lawrence, to Ferro Corp. Composition for and method of applying ceramic color. 3,089,782, 5–14–63, Cl. 117—38.

Buswell, Arthur M., and H. Beddoes, to Pacific Flush Tank Co. Gas scrubbing apparatus. 3,089,757, 5–14–63, Cl. 23—285.

Butler, Henry J., to Dunlop Rubber Co. Ltd. Disc brakes. 3,089,565, 5–14–63, Cl. 188—73.

Butler, Kenneth J.: *See*—
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C & H Supply Co.: *See*—
Colfer, James A., and Collins. 3,089,800.
Callow, Harry G.: *See*—
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Camfield, Eugene J., and W. E. Hauschild, to Western Electric Co., Inc. Safety circuit. 3,089,985, 5–14–63, Cl. 317—135.

Campbell, Sherman B.: *See*—
Pontius, Paul E., and Campbell. 3,089,575.

Capewell Mfg. Co., The: *See*—
Craven, Wilbur J. 3,089,353.

Carlevaro, Ugo, and F. Savio. Cable railway. 3,089,433, 5–14–63, Cl. 104—134.

Carlson, Raymond H., to Textron Industries, Inc. Process for forming a fastener including the step of piercing an unworked head portion. 3,089,159, 5–14–63, Cl. 10—27.

Carlson, William A., and J. R. Little, to Pfaudler Permutit, Inc. Corrosion resistant coating and method of applying the same. 3,089,783, 5–14–63, Cl. 117—66.

Carmichael, Robert, and J. L. S. Daley, to Union Carbide Corp. Separator for galvanic cells. 3,089,914, 5–14–63, Cl. 136—143.

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Carson, Frank J., and G. White, to Libbey-Owens-Ford Glass Co. Glass bending apparatus. 3,089,319, 5–14–63, Cl. 65—288.

Carter, Joseph C., R. H. Armstrong, and M. J. Janicke, to United States of America, Atomic Energy Commission. Nuclear power plant. 3,089,840, 5–14–63, Cl. 204—193.2.

Casella, Francesco. Hoist. 3,089,599, 5–14–63, Cl. 214—1.

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Balamuth, Lewis, Kleesattel, and Kuris. 3,089,790.
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Cav-Wal Block Corp.: *See*—
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Central Supply Co.: *See*—
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Chain Belt Co.: *See*—
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Challenge Machinery Co., The: *See*—
Westra, Dan P. 3,089,356.

Chamouard, André, to Massey-Ferguson, S.A. Manufacture of knife blades. 3,089,352, 5–14–63, Cl. 76—101.

Chaney, Davis R., and R. A. Anderson. Mobile hopper and screw conveyor pickup, loading and unloading means therefor. 3,089,601, 5–14–63, Cl. 214—522.

Chapman, Donald D., and J. P. Swed, to E. I. du Pont de Nemours and Co. Process for separating individual metallic layers of a hollow multilayered object. 3,089,230, 5–14–63, Cl. 29—403.

Chatten, John B., to Philco Corp. Self-limiting photomultiplier amplifier circuit. 3,089,959, 5–14–63, Cl. 250—207.

Chaussy, Pern J., to E. I. du Pont de Nemours and Co. Yarn traversing apparatus. 3,089,657, 5–14–63, Cl. 242—43.

Chemagro Corp.: *See*—
Trademan, Leo, and Yagelowich. 3,089,807.

Chemetron Corp.: *See*—
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Cheney, Donald E.: *See*—
Baricevic, Ferdinand P., and Cheney. 3,089,916.

Cherubini, Julian H.: *See*—
Beaver, Richard J., and Cherubini. 3,089,751.

Cherup, Nicholas. Impact absorbers. 3,089,144, 5–14–63, Cl. 2—3.

Cheung, Wong W. Method of preserving duck carcasses. 3,089,777, 5–14–63, Cl. 99—157.

Chicago, Burlington & Quincy Railroad Co.: *See*—
Hendricker, George W. 3,089,437.

Chicago Lock Co.: *See*—
Kerr, William J. 3,089,329.
Kerr, William J. 3,089,330.

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Chris-Craft Industries, Inc.: *See*—
Bolles, Elwood C., and Wind. 3,089,536.
Chronic, Bill M., to Star-Fire Marine Jet Co. Adjustable mounting for hydro-jet propulsion means on boats. 3,089,454, 5–14–63, Cl. 115—12.
Chrysler Corp.: *See*—
Bell, Albert H. 3,089,637.
Henny, Willi. 3,089,679.
Jankus, Eugene. 3,089,734.
MacAfee, James E., and Wall. 3,089,566.
Chupp, John P., and P. E. Newallis, to Monsanto Chemical Co. Method of purification for phosphorochloridothioates. 3,089,890, 5–14–63, Cl. 260—461.
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Earl, Alfred E. 3,089,813.
Gaeumann, Ernst, and Bens. 3,089,816.
Cincinnati Milling Machine Co., The: *See*—
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Hoier, Walter A., Marshall, and Waters. 3,089,293.
Rave, Joseph A., Jr. 3,089,989.
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Brueder, Antoine. 3,089,558.
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Newcomer, Everett J. 3,089,612.
Claas, Gebr.: *See*—
Claas, Reinhold. 3,089,299.
Claas, Gunther, and E. Schewe, to Deutsche Spiralbohrer- und Werkzeugfabriken G.m.b.H. Method for the production of cutting tools. 3,089,354, 5–14–63, Cl. 76—108.
Claas, Reinhold, to Gebr. Claas. Stone trap for combines. 3,089,299, 5–14–63, Cl. 56—20.
Clark, Edwin W., to John Thompson (Australia) Pty. Ltd. Sootblower. 3,089,468, 5–14–63, Cl. 122—392.
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Clark, George, to The American Agricultural Chemical Co. Preparation and recovery of ammonium bifluoride. 3,089,752, 5–14–63, Cl. 23—88.
Clark, Raymond D., to Eastman Kodak Co. Preparation of enolates of 2,2,4,4-tetra-alkylacetroacetic esters. 3,089,896, 5–14–63, Cl. 260—483.
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Closs, George M., and P. F. Dougherty, to Sun Oil Co. Subterranean storage of fluids. 3,089,309, 5–14–63, Cl. 61—5.
Cobb, Jay T. Oil well cleaner. 3,089,544, 5–14–63, Cl. 166—162.
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Cochran, Chudleigh B., to C. C. Brown. Sleeve valve for well pipe strings with blind closure sleeve. 3,089,546, 5–14–63, Cl. 166—224.
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Degelman, John. 3,089,496.
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Mumford, Albert R. 3,089,469.
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Gebele, Kurt, and Singer. 3,089,401.
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Wensley, John H. 3,089,644.
Comstock, Daniel F., Jr., to Arthur D. Little, Inc. Absolute vibration measuring instrument. 3,089,332, 5–14–63, Cl. 73—71.4.
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Conrad, Bert, to American Pipe and Construction Co. Product method and apparatus for making a hobbed-surfaced sheet material. 3,089,191, 5–14–63, Cl. 18—21.
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Copeland, Gordon R. 3,089,271.
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Dunbeck, Joseph T. 3,089,506.
Correll, Curtis V. Aerial wire payout system and wire magazine therefor. 3,089,588, 5–14–63, Cl. 206—59.
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Kelly, Stanley, Schumann, and Adams. 3,089,922.
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Firth, Donald, and Hancock. 3,089,427.
Courtaulds Ltd.: *See*—
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Crabb, Merle W., to General Precision, Inc. Pythagorean servo computer. 3,089,646, 5–14–63, Cl. 235—192.
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Crawford, Charles P. Valve having self-cleaning seat. 3,089,504, 5–14–63, Cl. 137—242.
Crawford, George H., Jr., to Minnesota Mining and Mfg. Co. Process for the preparation of fluorine-containing polymers. 3,089,866, 5–14–63, Cl. 260—92.1.
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Dahl, Madsen, to Allmanna Svenska Elektriska Aktiebolaget. Nuclear reactor plant. 3,089,834, 5–14–63, Cl. 204—193.2.
Dahl, Norman C. Automatic telephone timer. 3,089,303, 5–14–63, Cl. 58—145.
Dailey, Joseph P., and R. L. Colescott, to Armour and Co. Method of increasing blood clotting time with a liver lipid. 3,089,820, 5–14–63, Cl. 167—74.6.
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Davis, Jerome I., J. E. Steinback, and R. J. Enyeart, to Consolidated Diesel Electric Corp. Apparatus for ground handling of heavy aircraft. 3,089,557, 5–14–63, Cl. 180—14.
Davis, Phil E., bankrupt; W. Perry, trustee, to Sperry Rand Corp. Trip mechanism for rotary multiple blade scraper. 3,089,264, 5–14–63, Cl. 37—143.
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Eisele, Andrew. Bore concentricity gauge. 3,089,247, 5–14–63, Cl. 33—174.

Elter, Karl, E. Truscheit, and H. Oediger, to Farbenfabriken Bayer Aktiengesellschaft. Process for the production of 6-[2',6'-trimethylcyclohexen-(1')-yl] - 4 - methylhexadi-3,5-en-1-yn. 3,089,912, 5–14–63, Cl. 260—666.

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Ellms, Robert W., to The Osborn Mfg. Co. Mold and core blowing machine 3,089,205, 5–14–63, Cl. 22—10.

Emerson, Gerard V.: *See*—
Webster, Roland C., Spechler, and Emerson. 3,089,388.

Emery, A. H., Co.: *See*—
Bradley, Chester D. 3,089,518.
Bradley, Chester D. 3,089,519.

Endevco Corp.: *See*—
Wright, Harry D. 3,089,923.

Engel, Walter S.: *See*—
Finor, Walter J., and Engel. 3,089,379.

Engelbrecht, Rudolf S., and W. W. Mumford, to Bell Telephone Laboratories, Inc. Noise figure improvement in radio receivers. 3,090,009, 5–14–63, Cl. 325—479.

Engstrom, Henry O. Expansion insert. 3,089,377, 5–14–63, Cl. 85—2.4.

Enicks, James H., and A. A. Di Rocco, said Di Rocco assor. to said Enicks. Protective mouthpiece. 3,089,487, 5–14–63, Cl. 128—136.

Ensing, Lukas: *See*—
Schotanus à Steringa Idzerda, Henricus H., and Ensing. 3,089,643.

Enyeart, Raymond J.: *See*—
Davis, Jerome I., Steinback, and Enyeart. 3,089,557.

Epsco, Inc.: *See*—
Djorup, Robert S. 3,089,963.

Erickson, Leonard A.: *See*—
Wise, Robert T., and Erickson. 3,089,614.

Erico Products, Inc.: *See*—
Rejdak, Melvin F. 3,089,798.

Ernstrom, Carl A., to Wisconsin Alumni Research Foundation. Process for preparing cheese making curd. 3,089,776, 5–14–63, Cl. 99—116.

Espenschied, Friedrich, to Motoren-Werke Manheim A.G. Vorm. Benz Abt. Stat. Motorenbau. Cylinder heads for internal combustion engines. 3,089,471, 5–14–63, Cl. 123—32.

Esso Research and Engineering Co.: *See*—
Berkowitz, Edward B., Makowski, Spars, and Berlin. 3,089,841.
Black, James F., and Guthrie. 3,089,832.
Jankowski, Conrad J. 3,089,531.
Lewis, Oliver G., and Pearce. 3,089,474.
Lippincott, Samuel B., Klemchuk, and Bartlett. 3,089,904.
Morway, Arnold J. 3,089,848.
Thorn, John P., and Hinlicky. 3,089,844.

Etablissements Youpa-La: *See*—
Bosc, Paul F. 3,089,163.

Ethyl Corp.: *See*—
Orloff, Harold D., and Napolitano. 3,089,762.

Evans, Robley W., to Chain Belt Co. Means for aerating granular and pulverulent materials. 3,089,253, 5–14–63, Cl. 34—164.

Everard, Joseph J., and R. D. Ruisch, to American Machine & Foundry Co. Electric switches and systems controlled thereby. 3,089,926, 5–14–63, Cl. 200—38.

Ex-Cell-O Corp.: *See*—
Brady, Samuel G., and Dralle. 3,089,296.

FXR., a Division of Amphenol-Borg Electronic Corp.: *See*—
Zavales, Charles T. 3,090,010.

Faber, Harry, to A/S Chr. Fabers Fabriker. Mechanism for automatically blocking a lifting roller in Venetian blinds. 3,089,664, 5–14–63, Cl. 242—99.

Fairgrieve, Donald F., to Fairgrieve & Son, Ltd. Die set. 3,089,715, 5–14–63, Cl. 287—20.1.

Fairgrieve & Son, Ltd.: *See*—
Fairgrieve, Donald F. 3,089,715.

Fallert, Clifford D., to Crown Zellerbach Corp. Container. 3,089,589, 5–14–63, Cl. 206—65.

Farbenfabriken Bayer Aktiengesellschaft: *See*—
Elter, Karl, Truscheit, and Oediger. 3,089,912.

Faurot, Inc.: *See*—
Picard, Pierre C. 3,089,459.

Faust, John A.: *See*—
Sabyun, Melville, and Faust. 3,089,826.

Feist, Martha: *See*—
Beyer, Eugen. 3,089,746.

Feldman, Milton H., and H. E. Hosticka, to Westinghouse Electric Corp. Apparatus and process for forming high density compacts. 3,089,189, 5–14–63, Cl. 18—16.

Fenness, Frank R.: *See*—
Patrick, Vito J., Fisken, and Fenness. 3,089,446.

Fentress, Thomas D., Jr., W. G. Shepherd, and G. B. Wurthmann, to The Bendix Corp. Thermally tuned reflex klystron. 3,089,976, 5–14–63, Cl. 315—5.23.

Fernicola, Anthony J. Means and method for stereoscopic television viewing. 3,089,917, 5–14–63, Cl. 178—6.5.

Ferrel, Robert E.: *See*—
Wasserman, Theodore, and Ferrel. 3,089,627.

Ferro Corp.: *See*—
Bush, Donald R., Howarth, and Lawrence. 3,089,782.

Ferro Stamping Co.: *See*—
Pickles, Joseph. 3,089,676.

Fetterly, Lloyd C., D. O. Collamer, and C. W. Smith, to Shell Oil Co. Polymeric reaction product of polyalkyl substituted disocyano compounds and polyhydroxy compound. 3,089,862, 5–14–63, Cl. 260—75.

Fettig, Arthur J., D. M. Jenks, C. Lasdine, E. P. Maidment, and B. A. Runde, to Burroughs Corp. Combined document sorter, printer and accounting machine system. 3,089,641, 5–14–63, Cl. 235—60.13.

Fiala, Ernst J. H., to Daimler-Benz Aktiengesellschaft. Mechanism for controlling outward inclination of a vehicle body in curves. 3,089,710, 5–14–63, Cl. 280—112.

Fidelitone, Inc.: *See*—
Weigand, Charles G. 3,089,193.

Fields, Ellis K.: *See*—
Serres, Carl, Jr., and Fields. 3,089,879.

Filippi, Dino. Equipment for concrete building construction. 3,089,217, 5–14–63, Cl. 25—131.

Fingeroot, Ben, and M. A. Elliotte, deceased (by T. J. Leon, administrator); said Leon, assor. to said Fingeroot. Windshield washer apparatus for vehicles. 3,089,204, 5–14–63, Cl. 20—40.5.

Finor, Walter J., and W. S. Engel, to E. W. Twitchell Inc. Apparatus for making braided cord. 3,089,379, 5–14–63, Cl. 87—23.

Firth, Donald, and R. H. Y. Hancock, to Council for Scientific and Industrial Research. Hydraulic machines. 3,089,427, 5–14–63, Cl. 103—162.

Fischer, Adam, Jr., to Radio Corp. of America. Transfer apparatus. 3,089,600, 5–14–63, Cl. 214—1.

Fischer, Edmund F., and A. R. Pottern, to Milton Bradley Co. Paper trimmer. 3,089,373, 5–14–63, Cl. 83—468.

Fishbein, Fred: *See*—
Green, Martin, and Fishbein. 3,089,620.

Fisken, John D.: *See*—
Patrick, Vito J., Fisken, and Fenness. 3,089,446.

Fitchie, John W., to Power Jets (Research and Development) Ltd. Lamitation of thermal shock in engine components. 3,089,306, 5–14–63, Cl. 60—39.09.

Fix, Thomas J. Refrigeration locker assembly. 3,089,313, 5–14–63, Cl. 62—239.

Flanagan, Charles D., to Texas Instruments Inc. Thermostats. 3,089,932, 5–14–63, Cl. 200—113.

Flath, Roy A. Cutter blade attachment for excavator bucket. 3,089,261, 5–14–63, Cl. 37—118.

Flesch, Norman F., to Amsted Industries Inc. Teeter-Totter. 3,089,699, 5–14–63, Cl. 272—54.

Flintkote Co., The: *See*—
Paiement, Georges E. 3,089,521.
Schmidt, Jack H. 3,089,805.

Floehr, Walter L., to Unitcast Corp. Sliding hopper gate assembly. 3,089,435, 5–14–63, Cl. 105—282.

Florio, Patrick A., to Johnson & Johnson. Surgical sponge and method of making same. 3,089,495, 5–14–63, Cl. 128—296.

Folger, Philip M.: *See*—
Wheeler, Charles M., and Folger. 3,089,971.

Folkers, Karl, to Merck & Co., Inc. Process for the preparation of lipids. 3,089,821, 5–14–63, Cl. 167—78.

Fonden, Per B., and K. O. T. Wålander. Airplane arresting nets. 3,089,673, 5–14–63, Cl. 244—110.

Foote, Robert S., to Texas Instruments Inc. Transistor monostable multivibrator. 3,089,962, 5–14–63, Cl. 307—88.5.

Ford Motor Co.: *See*—
Einhart, Harry E., Jr. 3,089,198.
Hintzen, Heins. 3,089,690.
Kosicki, Henry J. 3,089,689.
Rieck, Russel W. 3,089,559.

Formica Corp.: *See*—
Phelps, Horace N. 3,089,522.

Forrest, Charles D.: *See*—
De Maris, Elbert E., Forrest, and Noddin. 3,089,796.

Forster, Jakob, and E. Grünke. Zig-zag sewing machines. 3,089,444, 5–14–63, Cl. 112—159.

Forster, Robert, to Sarco International Corp. Slide type mixing valve with interchangeable inlet and outlet connections. 3,089,505, 5–14–63, Cl. 137—270.

Forsyth, Albert J. C., to Courtesy Products Corp. Liquid measuring and dispensing machine. 3,089,618, 5–14–63, Cl. 222—60.

Forsyth, Emil J., and W. J. Weigle, Jr., to Mathews Conveyor Co. Article handling apparatus. 3,089,611, 5–14–63, Cl. 221—7.

Forte-Fairbairn Inc.: *See*—
Breen, Stanley, and Mason. 3,090,004.

Fortson, Richard M., and J. J. Creskoff, to Vacuum Concrete Corp. of America. Portable handling implement. 3,089,723, 5–14–63, Cl. 294—65.

Foss, David W., to Varian Associates. Reference cavity resonator. 3,090,018, 5–14–63, Cl. 333—83.

Foti, Arem, to I-T-E Circuit Breaker Co. Isolating switch arrangement. 3,089,927, 5–14–63, Cl. 200—48.

Fox, James N.: *See*—
Parker, William S., and Fox. 3,089,556.

Foxboro Co., The: *See*—
Waugh, Charles C., Jackson, and Howe. 3,089,336.

Frame S.A.: *See*—
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Franek, Josef: *See*—
Stuchbery, Arthur L., and Franek. 3,089,533.

Frank, Charles E.: *See*—
Nobis, John F., and Frank. 3,089,858.

France, Albert D.: *See*—
Samuelson, Gilbert J., and France. 3,089,750.

Frederick, George W., and W. J. Lamneck, to Bell Telephone Laboratories, Inc. Parallel-to-serial converter apparatus. 3,090,034, 5–14–63, Cl. 340—172.5.

Frew, Duncan W.: *See*—
Herbert, Stephen A., Jr., and Frew. 3,089,852.

Frey, Edward, and E. J. Kiss, to The Massillon-Cleveland-Akron Sign Co. Banner mounting construction. 3,089,268, 5–14–63, Cl. 40—128.

Fried, Josef, and M. A. Guiducci, to Olin Mathieson Chemical Corp. 19-nor-progesterone. 3,089,880, 5–14–63, Cl. 260—397.3.

Fried, Louis: *See*—
Walsh, James J., and D'Andrea. 3,089,610.

Frisch, Erling: *See*—
McGeary, Robert K., and Frisch. 3,089,830.

Frisch, Paul P.: *See*—
Sauer, Leo P., and Frisch. 3,089,576.

Fritzinger, George H., to McGraw-Edison Co. Sheet-record machine. 3,089,705, 5–14–63, Cl. 274—20.

Fruehauf Trailer Co.: *See*—
Tantlinger, Keith W., and Chieger. 3,089,711.

Frungel, Frank. Arrangement and method for electrical impulse welding. 3,089,947, 5–14–63, Cl. 219—107.

Fuchs, Otto, Kommandit Gesellschaft: *See*—
Mann Karl E. 3,089,735.

Fulkerson, Brasilton: *See*—
Mench, John W., and Fulkerson. 3,089,870.

Funk, William C.: *See*—
O'Brien, Edward D., and Funk. 3,089,596.

Gaertner, Van R.: *See*—
Schultz, Robert G., and Gaertner. 3,089,987.

Gaetani, Ermanno, to Aziende Colori Nazionali Affini Acna S.p.A. Disazo dyes. 3,089,868, 5–14–63, Cl. 260—166.

Gaeumann, Ernest, and F. Benz, to Ciba Corp. Lomacidine and process for its manufacture. 3,089,816, 5–14–63, Cl. 167—65.

Gage, Jerome M., to M. L. Kollman. Seed cleaner. 3,089,592, 5–14–63, Cl. 209—34.

Gair, Albert W., to Thompson Ramo Wooldridge Inc. Readily disassembled joint socket assembly and method of making same. 3,089,717, 5–14–63, Cl. 287—85.

Galindo, Eugene R. Colostomy bag with disposable liner. 3,089,493, 5–14–63, Cl. 128—283.

Galvao, Joseph A. Electric shaver with improved tubular comb and rotor type cutting head. 3,089,236, 5–14–63, Cl. 30—41.

Gamberini, Goffredo, to American Machine & Foundry Co. Method and apparatus for handling articles. 3,089,732, 5–14–63, Cl. 302—2.

Ganz, William, to Johnson & Johnson. Rolled pressure-sensitive adhesive tape. 3,089,587, 5–14–63, Cl. 206—59.

Gardiner, Paul C., to United States of America, Navy. Transducer pitch control for echo controlled torpedo. 3,089,451, 5–14–63, Cl. 114—23.

Gardner, Arthur E., Jr., to Western Electric Co., Inc. Tension equalizer. 3,089,665, 5–14–63, Cl. 242—156.

Gardner, Floyd E. Contour forming blade for use with earth moving equipment. 3,089,262, 5–14–63, Cl. 37—129.

Garten Wilhelm, K. Dehmelt, H. von Dohren, and P. Peters, to Varta Aktiengesellschaft. Battery cell. 3,089,913, 5–14–63, Cl. 136—6.

Garvin, Alex J., to Superpack Vending (Curacao) N.A. Cylindrical package. 3,089,630, 5–14–63, Cl. 229—4.5.

Gast, Theodor, to Sartorius-Werke A.G. (and vormals Gottinger Prazisionswaagenfabrik G.m.b.H.), Fa. Method of and apparatus for weighing in vacuum. 3,089,553, 5–14–63, Cl. 177—1.

Gauthier, Alfred, G.m.b.H.: *See*—
Starp, Franz W. R. 3,089,397.

Gauthier Raymond A. Magnetic work-holder. 3,089,986, 5–14–63, Cl. 317—162.

Gay, Herman P. Quick-response temperature-corrected internal type pressure gage. 3,089,341, 5–14–63, Cl. 73—398.

Gebele, Kurt, and F. Singer, to Compur-Werk G.m.b.H. & Co. Photographic shutter. 3,089,401, 5–14–63, Cl. 95—63.

General Aniline & Film Corp.: *See*—
Mayhew, Raymond L., and Williams. 3,089,888.
Schenck, Leslie M., and Papaloa. 3,089,882.

General Electric Co.: *See*—
Bochan, John. 3,089,515.
Bradley, Guy D. 3,089,737.
Brandt, Theodore C. 3,089,315.
Cunningham, Clarence V. 3,089,931.
Harle Harold P. 3,089,312.
Harris, Samuel C., Jr., and Langley. 3,089,555.
Hsu, Hsiung. 3,090,012.
Huschke, Ernst G. J., Mobley, and Blackham. 3,089,769.
Kinkle, Robert A. 3,089,407.
Lawson, Gustaf R. 3,089,934.
Lovinger, Daniel. 3,089,979.
Mayer, Charles B. 3,090,016.
Neusbaum, Frank A. 3,089,980.
Pulaski, John W. 3,089,202.
Smith, Sidney R., Jr. 3,089,986.
Speaker, Lawrence W. 3,089,314.
Von Hoorn, Fred G., and Sheldon. 3,089,987.
Wheeler, Charles M., and Folger. 3,089,971.

General-Electro Mechanical Corp.: *See*—
Walker, Melvin F. 3,089,573.

General Foods Corp.: *See*—
Bowden, Howard J., and Schwartzberg. 3,089,772.

General Kinematics Corp.: *See*—
Muschoot, Albert, and Thomson. 3,089,582.

General Precision, Inc.: *See*—
Crabb, Merle W. 3,089,646.
Dunn, Dale W. 3,089,968.
Kleist, Robert A., and Scarbrough. 3,090,042.

General Refractories Co., The: *See*—
Heuer, Russell P. 3,089,284.

Gerber, Heins J., to The Gerber Scientific Instrument Co. Data reading apparatus. 3,089,243, 5–14–63, Cl. 33—1.

Gerber Scientific Instrument Co., The: *See*—
Gerber, Heins J. 3,089,243.

Gerjovich, Henry J., and R. W. Luckenbaugh, to E. I. du Pont de Nemours and Co. Herbicidal method. 3,089,765, 5–14–63, Cl. 71—2.6.

Gesellschaft fur Linde's Eismaschineh Aktiengesellschaft: *See*—
Lehmer, Wilhelm. 3,089,311.

Gfeller, Ernst. Apparatus for treating oils and fats. 3,089,755, 5–14–63, Cl. 23—260.

Gilbert, Bruce. Methods of and means for fracturing earth formations. 3,089,416, 5–14–63, Cl. 102—20.

Gillette Inhibitor Co.: *See*—
Fugh, Harry H. 3,089,811.

Ginsberg, Samuel J.: *See*—
Blanford, George W. 3,089,168.

Gladstone, Matthew T., to Norton Co. Coated abrasives. 3,089,763, 5–14–63, Cl. 51—295.

Glasgow, Clarence O., to National Tank Co. Level gage. 3,089,338, 5–14–63, Cl. 73—324.

Glassey, Eugene A.: *See*—
Davidson, James P., and Glassey. 3,089,502.

Glocker, Paul L. Method and device for charging a workpiece holder. 3,089,613, 5–14–63, Cl. 221—176.

Goins, Robert R., to Phillips Petroleum Co. Process and apparatus for treating plastic material. 3,089,194, 5–14–63, Cl. 18—47.5.

Goldberg, Samuel D., to Graham Chemical Corp. Disposable cartridge type hypodermic syringes. 3,089,490, 5–14–63, Cl. 128—218.

Golde, Erich, and K. Treydte. Grip-on cap seals for bottles or other containers and method of production of said cap seals. 3,089,604, 5–14–63, Cl. 215—39.

Goldstein, Bernard: *See*—
Moore, Albert N. 3,090,485.

Good, Paul J., to Dynacolor Corp. Film processing apparatus. 3,089,658, 5–14–63, Cl. 242—55.01.

Goodall, Donald G., to Rolls-Royce Ltd. Piston and cylinder arrangement for tilting aircraft powerplant. 3,089,668, 5–14–63, Cl. 244—12.

Goodman Mfg. Co.: *See*—
Beck, William E. 3,089,579.

Goodwin, Roscoe H., to Curtiss-Wright Corp. Simulated on-ground aircraft pitching moment system. 3,089,257, 5–14–63, Cl. 35—12.

Gore, Owen L., and L. C. Williams, to Miehle-Goss-Dexter, Inc. Signature handling apparatus. 3,089,093, 5–14–63, Cl. 270—54.

Gosslau, Fritz, and K. Reiniger, to Junkers Flugzeug- und Motorenwerke AG. Jet aircraft for short take-off and landing distances. 3,089,667, 5–14–63, Cl. 244—12.

Gottschald, Rudolf, and W. Scheerer, to A. Ehrenreich & Cie. Ball joint. 3,089,718, 5–14–63, Cl. 287—90.

Gould, David H.: *See*—
Hershberg, Emanuel B., and Gould. 3,089,881.

Grace, W. R., & Co.: *See*—
Kirkpatrick, Wylie C. 3,089,283.

Graeff, Norwood C., to AMP Inc. Dies for crimping electrical connectors. 3,089,552, 5–14–63, Cl. 153—1.

Graham Chemical Corp.: *See*—
Goldberg, Samuel D. 3,089,490.

Graham, George C. Fuel injection system and apparatus. 3,089,422, 5–14–63, Cl. 103—38.

Graham, Robert E., to Bell Telephone Laboratories, Inc. Telewriting apparatus. 3,089,918, 5–14–63, Cl. 178—19.

Graham, Thomas A., and T. L. Smith, to Smith-Blair, Inc. Pipe clamp. 3,089,212, 5–14–63, Cl. 24—279.

Grande, Paul: *See*—
Nachtsheim, Henry G., Meyer, and Grande. 3,089,786.

Grau, Henry W. Feed mechanism attachment for power driven portable drills. 3,089,357, 5–14–63, Cl. 77—83.9.

Graviner Mfg. Co. Ltd.: *See*—
Rogers, Edward A., and Bennett. 3,089,339.

Gray, Reuben F., to United States of America, Navy. Apparatus for controlling the volume of air and the distribution of blood in the body. 3,089,482, 5–14–63, Cl. 128—1.

Gray, Robert T. Answer guard. 3,089,260, 5–14–63, Cl. 35—48.

Great Lakes Pipe Line Co.: *See*—
Klein, Vernon W., and Jones. 3,090,038.

Green, Martin, and F. Fishbein. Apparatus for dispensing measured quantities of granular materials. 3,089,620, 5–14–63, Cl. 222—89.

Greene, Charles H. Drill pipe float. 3,089,551, 5–14–63, Cl. 175—318.

Grembecki, Elmer C., and A. J. Nelson. Means for cleaning the cylindrical surface of printing press blanket roller. 3,089,415, 5–14–63, Cl. 101—425.

Gross, Horst H., to Schloemann Aktiengesellschaft. Container for metal tube and extrusion presses. 3,089,591, 5–14–63, Cl. 207—15.

Gronsberg, Abraham, to Ben Cooper, Inc. Mask with articulated section. 3,089,148, 5–14–63, Cl. 2—206.

Grove, Marvin H. Method for the manufacture of valve bodies. 3,089,224, 5–14–63, Cl. 29—157.1.

Grove, Marvin H. Valve construction. 3,089,678, 5–14–63, Cl. 251—327.

Grow-Rite Corp.: *See*—
De Vos, Marcel O. 3,089,709.

Grünke, Erich: *See*—
Forster, Jakob, and Grünke. 3,089,444.

Grunske, Marvin E., to United States of America, Air Force. Liquid dispensing device. 3,089,463, 5–14–63, Cl. 119—71.

Guiducci, Mariano A.: *See*—
Fried, Josef, and Guiducci. 3,089,880.

Gulyás, Ernő: *See*—
Szőts, Géza, Szetey, Kocsis, Kondor, Havasi, Ritter, Demeter, Gulyás, and Bitter. 3,089,226.

Gunther, Eberhard, and W. Lassig, to Agfa Aktiengesellschaft. Process for making planographic printing forms using a light sensitive gelatin reception layer. 3,089,770, 5–14–63, Cl. 96—29.

Gutbier, Ernst A., to Western Electric Co., Inc. Solder applying apparatus. 3,089,449, 5–14–63, Cl. 113—94.

Guth, Wernfried: *See*—
Schulten, Rudolf, Guth, Setzwein, Braun, and Berberich. 3,089,835.

Guthrie, Donald A.: *See*—
Black, James F., and Guthrie. 3,089,832.

Gutierres, Carlos D., to Union Carbide Corp. Process and apparatus for producing plastic net. 3,089,804, 5–14–63, Cl. 156—167.

Gutjahr, Helmut: *See*—
Kohler, Werner H., and Gutjahr. 3,089,475.

HRB-Singer, Inc.: *See*—
Nearhoff, Harold J., Woodbridge, and Harris. 3,089,383.

Haas, Ralph W.: *See*—
Scantlin, John R., and Haas. 3,090,013.

Haber, Norman, to Dynamco Co. Grinder-blenders. 3,089,652, 5–14–63, Cl. 241—79.

Habra Werk, Wilhelm F. Ott: *See*—
Nesendorf, Gunther, Schmidt, Reil, and Römer. 3,089,298.

Hackenberg, Robert A.: *See*—
Tyrseck, Walter J., and Hackenberg. 3,089,631.

Hadancourt, Alain C., and J. C. J. Poujade, deceased; by A. M. L. Poujade, nee Delmon, legal heir, to Societe Nationale d'Etude et de Construction de Moteurs d'Aviation. Ionization chambers of plasma generators at high temperatures. 3,089,983, 5–14–63, Cl. 315—111.

Hadley, David J.: *See*—
Barclay, John L., Hadley, and Stewart. 3,089,909.

Hagan, Chemicals & Controls, Inc.: *See*—
Thompson, Ralph N. 3,089,847.

Hageman, George F., to Daystrom, Inc. Thermometer. 3,089,840, 5–14–63, Cl. 73—363.9.

Hager, Bror O. Preserving agent stabilized with carbon dioxide. 3,089,810, 5–14–63, Cl. 167—38.5.

Haggar, Alfred S. Matrix for determining cuts on pattern cams. 3,089,248, 5–14–63, Cl. 33—174.

Hahn, Robert S., to The Heald Machine Co. Grinding machine. 3,089,288, 5–14–63, Cl. 51—50.

Halascy, Andrew A. Method of applying insulating encapsulation. 3,089,199, 5–14–63, Cl. 18—59.

Hall, James R., and W. F. Hennessey, Jr., to The Bendix Corp. Electrical connector. 3,090,028, 5–14–63, Cl. 339—174.

Halle, Kurt, to Siemens-Schuckertwerke Aktiengesellschaft. Regulating system for steam power plants with forced-flow boilers. 3,089,308, 5–14–63, Cl. 60—106.

Hamilton Clamp & Stampings Ltd.: *See*—
Hinder, Gordon H. A. 3,089,175.

Hamm, Acey B.: *See*—
Hamm, Alton B. 3,089,156.

Hamm, Alton B., ½ to Acey B. Hamm. Marking buoy. 3,089,156, 5–14–63, Cl. 9—9.

Hammer, Jacobus A., to Internationale Navigatie Apparaten N.V. Logarithmic amplifier using common cathode positive compensating feedback. 3,090,011, 5–14–63, Cl. 328—145.

Hampden Specialty Products Corp.: *See*—
Lockshin, Samuel D. 3,089,541.

Hanau Engineering Co., Inc.: *See*—
Ben, Richard A. 3,089,941.

Hancock, John H.: *See*—
Stubblefield, Thomas A. 3,090,431.

Hancock, Roger H. Y.: *See*—
Firth, Donald, and Hancock. 3,089,427.

Handling Devices Co., Inc.: *See*—
Sherman, John F., Jr. 3,089,178.

Hankes, Elmer J.: *See*—
Procter, Samuel A. 3,089,966.

Hannibal, Billy B., to Tecumseh Products Co. Structure for supporting a motor-compressor unit in a housing. 3,089,639, 5–14–63, Cl. 230—235.

Hansen, Richard O.: *See*—
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Sumner, Robert J., Hardwick, Seeley, and Ziegler. 3,089,774.

Hardy, Edgar E.: *See*—
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Harris, Samuel C., Jr., and L. W. Langley, to General Electric Co. Weighing control system. 3,089,555, 5–14–63, Cl. 177—81.

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Stadum, Clarence B., Van Ness, and Hartwig. 3,089,948.

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Hay, William J., Jr., to Pittsburgh Plate Glass Co. Supporting glass sheets. 3,089,727, 5–14–63, Cl. 294—118.

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Heins, Adolf, and F. Klause. Processing waste paper or the like. 3,089,655, 5–14–63, Cl. 241—260.

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Hermanet, Marvin J., to Eastman Kodak Co. Automatic trimming and scraping device. 3,089,569, 5–14–63, Cl. 83—3.

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Hersbberg, Emanuel B., and D. H. Gould, to Schering Corp. Sulfocarboxylic acid esters of hydroxylated steroids. 3,089,881, 5–14–63, Cl. 260—397.45.

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Heyl, Leo W., to Institutional Industries, Inc. Overbed table. 3,089,743, 5–14–63, Cl. 312—227.

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Hinder, Gordon H. A., to Hamilton Clamp & Stampings Ltd. Windshield wipers. 3,089,175, 5–14–63, Cl. 15—250.36.

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Hunt, Robert W. G., to Eastman Kodak Co. Method of controlling the spectral composition of a light source. 3,089,386, 5–14–63, Cl. 88—111.

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International Shoe Machinery Corp.: *See*—
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Javorek, Jaroslav, to Sdruzeni podniku textilniho strojirenstvi. Method for the production of hosiery. 3,089,323, 5–14–63, Cl. 66—185.

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Jenkins, Albert S., and R. A. Atkinson, to Owens-Illinois Glass Co. Flame treating apparatus. 3,089,686, 5–14–63, Cl. 263—6.

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Klein, Vernon W., and Jones. 3,090,038.

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Kass, Theodore C. and J. R. Combined box opener and dispenser. 3,089,619, 5–14–63, Cl. 222—81.

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Katz, Manfred, and E. L. Wittbecker, to E. I. du Pont de Nemours and Co. Polyurethane product. 3,089,864, 5–14–63, Cl. 260—77.5.

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Kerr, William J., to Chicago Lock Co. Lock assembly for a refrigerated cabinet or the like. 3,089,329, 5–14–63, Cl. 70—135.

Kerr, William J., to Chicago Lock Co. Lock assembly for a refrigerated cabinet or the like. 3,089,330, 5–14–63, Cl. 70—140.

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King, Roland C. Dielectric ceramic and method of preparing same. 3,089,779, 5–14–63, Cl. 106—39.

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Kinugawa, Jiro, H. Yamamoto, M. Ochiai, and I. Sumina, to Takeda Pharmaceutical Industries, Ltd. Antimicrobial thio pyridazine compositions for agricultural use. 3,089,809, 5–14–63, Cl. 167—33.

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Kiper, Gerd, to Agfa Aktiengesellschaft. Camera shutter assembly. 3,089,400, 5–14–63, Cl. 95—63.

Kirby, Dean E., Sr. Combination spinning and fly reel. 3,089,663, 5–14–63, Cl. 242—84.1.

Kirk, Chester H., Jr. Combination fill valve and expansion tank. 3,089,513, 5–14–63, Cl. 137—505.34.

Kirkpatrick, Wylie C., to W. R. Grace & Co. Shrinkable film as a structural aid. 3,089,283, 5–14–63, Cl. 50—80.

Kirschey, Gerhard. Continuously controllable friction wheel-epicyclic gear drive. 3,089,350, 5–14–63, Cl. 74—796.

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Klaas, Ruth E. B. Treatment of plants with light-affecting compositions. 3,089,280, 5–14–63, Cl. 47—58.

Klaassen, Hendrik, to Lips N.V. Control device for variable pitch propellers. 3,089,548, 5–14–63, Cl. 170—135.74.

Klaas, Donald L., R. W. Watson, and R. E. Karll, to Standard Oil Co. Lubricant additive and composition containing same. 3,089,851, 5–14–63, Cl. 252—32.7.

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Klein, Vernon W., and E. C. Jones, Jr., deceased (C. Jones, administratrix), to Great Lakes Pipe Line Co. Hazardous atmosphere detecting and signalling system. 3,090,038, 5–14–63, Cl. 340—237.

Kleinman, David A., and A. L. Schawlow, to Bell Telephone Laboratories, Inc. Hall-effect apparatus. 3,089,995, 5–14–63, Cl. 321—2.

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Knight, Sidney G., ½ to R. F. Oxley. Method of making a universal coupling. 3,089,232, 5–14–63, Cl. 29—423.

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Kolb, Alan C., to United States of America, Navy. Method of producing high gas temperatures. 3,089,831, 5–14–63, Cl. 204—154.2.

Kollander, Melvin M. Rotary jet engine. 3,089,307, 5–14–63, Cl. 60—39.34.

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Malm, Carl J., and C. L. Crane, to Eastman Kodak Co. Preparation of stable cellulose triesters. 3,089,871, 5–14–63, Cl. 260—227.

Mann, Karl E., to Otto Fuchs Kommandit Gesellschaft. Reciprocable combustion engine. 3,089,735. 5–14–63, Cl. 308—23.

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Mayer, Charles B., to General Electric Co. Broadband matching circuit. 3,090,016, 5–14–63, Cl. 333—33.

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Michael, Paul L., J. P. Strange, and K. C. Stewart, to Mine Safety Appliances Co. Industrial noise hazard meter. 3,089,561, 5–14–63, Cl. 181—.5.

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Saffer, Alfred, and Barker. 3,089,907.

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Miller, Leon F., to The Osborn Mfg. Co. Blow-squeeze molding machine. 3,089,207, 5–14–63, Cl. 22—36.

Millikan, Allen F., to The Pure Oil Co. Separation of m-xylene and p-xylene by distillation in the presence of benzyl alcohol. 3,089,829, 5–14–63, Cl. 202—39.5.

Milliken, Lee D. Low air speed indicator. 3,089,457, 5–14–63, Cl. 116—112.

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Moeller, Charles R. Electronic frequency multiplying device. 3,089,977, 5–14–63, Cl. 315—21.

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Molins, Desmond W., G. F. W. Powell, and F. Pocock, to Molins Machine Co. Ltd. Tobacco manipulating machines. 3,089,497, 5–14–63, Cl. 131—21.

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Moore, Ralph W., to Pangborn Corp. Abrasive blasting apparatus. 3,089,285, 5–14–63, Cl. 51—8.

Moore, Raymond W.: *See*—
Wallace, John W., Hull, and Moore. 3,089,363.

Moore, Richard V., to United Kingdom Atomic Energy Authority. Fuel elements for nuclear reactors. 3,089,837, 5–14–63, Cl. 204—193.2.

Morgan, Claude A., to The Majestic Co., Inc. Incinerator. 3,089,440, 5–14–63, Cl. 110—18.

Morgillo, Pellegrino J., to Lafayette Radio Electronics Corp. Loudspeaker baffle assembly. 3,089,562, 5–14–63, Cl. 181—31.

Morway, Arnold J., to Esso Research and Engineering Co. Oil compositions containing sodium nitrite. 3,089,648, 5–14–63, Cl. 252—18.

Mosely, Robert B., to Shell Oil Co. Naphtha reforming with noble metal catalyst. 3,089,845, 5–14–63, Cl. 208—139.

Motoren-Werke Manheim A.G. Vorm. Bens Abt. Stat. Motorenbau: *See*—
Espenschied, Friedrich. 3,089,471.

Motorola, Inc.: *See*—
Hull, Robert S. 3,089,740.

Mounts, Frank W., to Bell Telephone Laboratories, Inc. Predictive quantization and coding of vision signals. 3,090,008, 5–14–63, Cl. 325—44.

Muller, Karl, to Maag Gear Wheel & Machine Co. Ltd. Gear checking instrument. 3,089,249, 5–14–63, Cl. 33—179.5.

Multifastener Corp.: *See*—
Steward, Jerry H. 3,089,360.

Mumford, Albert R., to Combustion Engineering, Inc. Apparatus for maintaining liquid level within a steam and water drum constant. 3,089,490, 5–14–63, Cl. 122—491.

Mumford, William W.: *See*—
Engelbrecht, Rudolf S., and Mumford. 3,090,009.

Munder, Johannes: *See*—
Lind, Erwin, and Munder. 3,089,953.

Murcott, Charles E. Adjustable guard frame for beds and the like. 3,089,152, 5–14–63, Cl. 5—331.

Murphy, Frank W., Jr., to F. W. Murphy, Jr. Vibration responsive switch. 3,089,929, 5–14–63, Cl. 200—61.45.

Murphy, Frank W., Jr.: *See*—
Murphy, Frank W. 3,089,929.

Murray Corp. of America, The: *See*—
Stilwell, William E., Jr. 3,089,327.

Muschenheim, Albert, and M. G. Thomason, to General Kinematics Corp. Vibratory device. 3,089,562, 5–14–63, Cl. 198—220.

Nachtsheim, Henry G., E. J. Meyer, and P. Grande, to Minnesota Mining and Mfg. Co. Pressure-sensitive adhesive tape. 3,089,786, 5–14–63, Cl. 117—122.

Nakazawa, Koiti, M. Shibata, H. Higashide, T. Kansaki, H. Yamamoto, A. Miyake, H. Hitomi, S. Horii, T. Yamaguchi, T. Araki, K. Tsuchiya, Y. Oka, and A. Imai, to Takeda Pharmaceutical Industries, Ltd. Process for preparing zygomycins. 3,089,827, 5–14–63, Cl. 195—80.

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Asnes, Floyd. 3,089,443.

Nanovic, Nicholas S.: *See*—
Cyr, Howard M., and Nanovic. 3,089,856.

Napolitano, John P.: *See*—
Orloff, Harold D., and Napolitano. 3,089,762.

Natanson, Edward A. Loader. 3,089,733, 5–14–63, Cl. 302—56.

National Distillers and Chemical Corp.: *See*—
Nobis, John F., and Frank. 3,089,858.

National Laboratories and Mfg. Corp.: *See*—
Bogert, John J. 3,089,381.

National Tank Co.: *See*—
Glasgow, Clarence O. 3,089,338.

National Twist Drill & Tool Co.: *See*—
Poulin, Allan E. 3,089,359.

Nattermann, A., & Cie: *See*—
Blaich, Fritz. 3,089,814.

Nearhoff, Harold J., C. L. Woodbridge, and D. E. Harris, to HRB-Singer, Inc. Reflectance measuring equipment. 3,089,383, 5–14–63, Cl. 88—14.

Nedopil, Erich, to Siemens-Planiawerke Aktiengesellschaft fur Kohlefabrikate. Method for producing high-purity graphite. 3,089,754, 5–14–63, Cl. 23—209.9.

Neiswender, David D., Jr., and P. S. Landis, to Socony Mobil Oil Co., Inc. Cyclohexyl borate and its preparation. 3,089,894, 5–14–63, Cl. 260—462.

Nelson, Adolph J.: *See*—
Grembecki, Elmer C., and Nelson. 3,089,415.

Neuendorf, Günther, P. Schmidt, W. Bell, and W. Bömer, to Wilhelm F. Ott Hahra Werk. Arrangement for closing bags and containers. 3,089,298, 5–14–63, Cl. 53—112.

Neuman, Milton C.: *See*—
Landstrom, Sven, Neuman, and Wilson. 3,089,925.

Neusbaum, Frank A., to General Electric Co. Ballast apparatus for starting and operating electric discharge lamps. 3,089,980, 5–14–63, Cl. 315—97.

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Chupp, John P., and Newallis. 3,089,890.

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New Jersey Zinc Co., The: *See*—
Cyr, Howard M., and Nanovic. 3,089,856.

Newsom, Herbert C., and R. J. Brotherton, to United States Borax & Chemical Corp. Method of producing tetraalkoxydiboruns. 3,089,895, 5–14–63, Cl. 260—462.

New York Air Brake Co., The: *See*—
Budzich, Tadeusz. 3,089,426.

Nobis, John F., and C. E. Frank, to National Distillers and Chemical Corp. Vinyl resin compositions plasticized with dialkyl esters of 2.5 diphenyl adipic acid. 3,089,858, 5–14–63, Cl. 260—31.8.

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De Maris, Hibert E., Forrest, and Noddin. 3,089,796.

Nolan, Richard A.: *See*—
Herold, Paul G., and Nolan. 3,089,973.

North American Aviation, Inc.: *See*—
Elchyahyn, Stephen. 3,089,950.

North American Philips Co., Inc.: *See*—
Meltzer, Jacques, van den Bos, and Schoot. 3,089,808.

Norton Co.: *See*—
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Hunt, Grover C. 3,089,292.

Norton, Joseph C., to Union Carbide Corp. Cable sheath cutting device. 3,089,237, 5–14–63, Cl. 30—91.

Norton, William H., to Thermel Inc. Radiant heater. 3,089,940, 5–14–63, Cl. 219—34.

Novic, Raymond H., to Electro Products Laboratories, Inc. Smoothing filter having shunt capacitor charged via diode from output and discharged via second diode into input. 3,090,017, 5–14–63, Cl. 333—79.

Nyberg, Gunder W. Saw chain holding and filing apparatus. 3,089,351, 5–14–63, Cl. 76—36.

Nyborg, Meredith M. Automatic soldering machine. 3,089,220, 5–14–63, Cl. 29—25.42.

O'Brien, Edward D., and W. C. Funk. Centrifugal separator. 3,089 596, 5–14–63, Cl. 210—369.

O'Brien, Samuel J.: *See*—
Pierce, Elliot S., Slowata, and O'Brien. 3,089,778.

Ochiai, Michihiko: *See*—
Kinagawa, Jiro, Yamamoto, Ochiai, and Sumina. 3,089,900.

Oediger, Hermann: *See*—
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Ohio Brass Co., The: *See*—
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Ohlgren, Harold A.: *See*—
Lewis, John G., and Ohlgren. 3,089,785.

Oka, Yuushi: *See*—
Nakazawa, Koiti, Shibata, Higashide, Kansaki, Yamamoto, Miyake, Hitomi, Horii, Yamaguchi, Araki, Tsuchiya, Oka, and Imai. 3,089,827.

Olin Mathieson Chemical Corp.: *See*—
Fried, Josef, and Guidaoci. 3,089,880.
Heuer, Charles A. 3,089,226.
Krapcho, John. 3,089,872.
Schroeder, Hansjuergen A. 3,089,875.

Olson, Merle M.: *See*—
Sprague, Harold E., and Olson. 3,089,425.

Olstowski, Franciszek, and J. D. Watson, to The Dow Chemical Co. Preparation of vinylidene fluoride. 3,089,910, 5–14–63, Cl. 260—653.3.

O'Mara, Edward A.: *See*—
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Onderzoekingsinstituut Research, N.V.: *See*—
Van Gijzen, Andries. 3,089,803.

O'Neil, Timothy H., Jr. Beam and tie support. 3,089,570, 5–14–63, Cl. 189—88.

Orloff, Harold D., and J. P. Napolitano, to Ethyl Corp. Jet fuel compositions. 3,089,762, 5–14–63, Cl. 44—78.

Osborn Mfg. Co., The: *See*—
Abraham, Edward D. 3,089,206.
Ellms, Robert W. 3,089,205.
Miller, Leon F. 3,089,207.

Oshima, Teruo, to Sumitomo Chemical Co., Ltd. Process for manufacturing dimethylolurea-alkylethers and copolymers thereof with methylolmelamine alkyl ethers. 3,089,859, 5–14–63, Cl. 260—45.2.

Ostberg, Werner, to Dundee Cement Co. Hot clinker conveying and cooling apparatus. 3,089,653, 5–14–63, Cl. 241—81.

Ostberg, Werner, to Dundee Cement Co. Cement manufacture. 3,089,683, 5–14–63, Cl. 263—32.

Otis Elevator Co.: *See*—
Rosslius, Charles F. 3,089,203.

Otis Engineering Corp.: *See*—
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Overa, William M., and A. V. Pohm, to Sperry Rand Corp. Binary logic circuits employing transformer and enhancement diode combination. 3,089,961, 5–14–63, Cl. 307—88.5.

Owens-Illinois Glass Co.: *See*—
Adams, Elmer L. 3,089,192.
Early, Richard L. 3,089,594.
Jenkins, Albert S. 3,089,414.
Jenkins, Albert S., and Atkinson. 3,089,686.
Johnson, John R., Voss, and Wright. 3,089,254.

Owens, Neal. Surgical dressing. 3,089,488, 5–14–63, Cl. 128—156.

Owens, Neal. Wet surgical dressing. 3,089,492, 5–14–63, Cl. 128—268.

Oxley, Robert F.: *See*—
Knight, Sidney G. 3,089,232.

Pacific Flush Tank Co.: *See*—
Buswell, Arthur M., and Beddoes. 3,089,757.

Padnieski, Nancee L. Device for dispensing predetermined quantities of liquid. 3,089,623, 5–14–63, Cl. 222—205.

Pagendarm, Richard V., to Atlas General Industries, Inc. Drive mechanism for folding box machines of the plunger and die type. 3,089,393, 5–14–63, Cl. 93—51.

Paget, John A., to United States of America, Atomic Energy Commission. Safety system for control rod. 3,089,838, 5–14–63, Cl. 204—193.2.

Palement, Georges E., to The Flintkote Co. Chimney housing. 3,089,521, 5–14–63, Cl. 138—158.

Paisley, John, to Eastwoods Ltd. Apparatus for marshalling a group of articles in spaced rows. 3,089,577, 5–14–63, Cl. 198—31.

Palmer, John P. Tool handle. 3,089,525, 5–14–63, Cl. 145—29.

Palmer, Karl, to Westinghouse Electric Corp. Filar suspended instrument movement. 3,090,007, 5–14–63, Cl. 324—154.

Pangborn Corp.: *See*—
Moore, Ralph W. 3,089,285.

Papalos, John G.: *See*—
Schenck, Leslie M., and Papalos. 3,089,882.

Paradise, Mose L. Laundry table. 3,089,488, 5–14–63, Cl. 108—26.

Park, Robert H., to Brockway Glass Co., Inc. Apparatus for blow molding hollow articles. 3,089,186, 5–14–63, Cl. 18—5.

Parke, Davis & Co.: *See*—
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Parker, John H. Street barricade. 3,089,682, 5–14–63, Cl. 256—64.

Parker, Richard W., W. Houser, and T. P. R. Stout, to Parker Sweeper Co. Sweeper with side dumping debris basket. 3,089,169, 5–14–63, Cl. 15—83.

Parker Sweeper Co.: *See*—
Parker, Richard W., Houser, and Stout. 3,089,169.

Parker, William S., and J. N. Fox, to Vickers-Armstrongs (Engineers) Ltd. Weighting apparatus. 3,089,556, 5–14–63, Cl. 177—86.

Parraga, Alfredo J. Automatic coffee machine. 3,089,404, 5–14–63, Cl. 99—289.

Pastene, Alexander J., and R. W. Wischer, to Cutler-Hammer, Inc. Circuit breaker. 3,089,930, 5–14–63, Cl. 200—88.

Patrick, Vito J., J. D. Fisken, and F. R. Fenness, to The Singer Mfg. Co. Feeding mechanism for sewing machines. 3,089,446, 5–14–63, Cl. 112—211.

Payne, William H., to Dresser Industries, Inc. Method and apparatus for inhibiting auto-ignition in internal combustion engines. 3,089,470, 5–14–63, Cl. 123—25.

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Lewis, Oliver G., and Pearce. 3,089,474.

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Pedersen, Thomas R. to Penn Industries, Inc. Anti-yawing combination. 3,089,452, 5–14–63, Cl. 114—126.

Penn Industries, Inc.: *See*—
Pedersen, Thomas R. 3,089,452.

Pennsalt Chemicals Corp.: *See*—
Hauptschein, Murray, and Braid. 3,089,911.

Perfecting Service Co.: *See*—
Williamson, John G., Jr. 3,089,302.

Perl, Richard L., to The Tappan Co. Forced vented cooking top and oven. 3,089,479, 5–14–63, Cl. 126—21.

Perrin, Jack L., to Towlsaver, Inc. Method of automatically dismounting rolled web material. 3,089,659, 5–14–63, Cl. 242—55.2.

Perry, Wallace: *See*—
Davis, Phil E. 3,089,264.

Perusse, Walter L. Clip for securing an article to a table. 3,089,211, 5–14–63, Cl. 24—259.

Peters, Freimut: *See*—
Garten, Wilhelm, Dehmelt, von Dohren, and Peters. 3,089,913.

Pethrick, Samuel R., and T. R. Welch, to The British Petroleum Co. Ltd. Lubricating oil compositions and the operation of internal combustion engines. 3,089,853, 5–14–63, Cl. 252—37.

Petrolite Corp.: *See*—
Samuelson, Gilbert J., and France. 3,089,750.

Petrželka, Antonín: *See*—
Vlček, Jaromír, and Petrželka. 3,089,163.

Pfaff, G. M., A.G.: *See*—
Forster, Jakob, and Grunke. 3,089,444.
Reeber, Rudolf, and Dobner. 3,089,445.

Pfaudler Permutit, Inc.: *See*—
Carlson, William A., and Little. 3,089,783.

Phelps, Horace N., to Formica Corp. Textile shuttle. 3,089,522, 5–14–63, Cl. 139—196.

Philco Corp.: *See*—
Chatten, John B. 3,089,959.

Philippe, Maurice. Locking device for chokes for shotguns. 3,089,273, 5–14–63, Cl. 42—79.

Phillips, Albert J., and R. Baier, to American Smelting and Refining Co. Method for continuous casting of metal. 3,089,209, 5–14–63, Cl. 22—200.1.

Phillips, Delbert L., and J. S. Jonkey. Modular electrical connector. 3,090,027, 5–14–63, Cl. 339—31.

Phillips, Malcolm E., Jr., J. R. Pinkham, and J. E. Hinckle, to American Machine and Foundry Co. Automatic cigarette paper splicer. 3,089,661, 5–14–63, Cl. 242—58.4.

Phillips Petroleum Co.: *See*—
Goins, Robert R. 3,089,194.
Pitchford, Armin C. 3,089,846.
Stratton, Charles A. 3,089,842.

Picard, Pierre C., to Faurot, Inc. Obtaining prints or impressions to be transferred onto a receptive medium. 3,089,459, 5–14–63, Cl. 118—31.5.

Pickles, Joseph, to Ferro Stamping Co. Power seat adjuster. 3,089,676, 5–14–63, Cl. 248—394.

Pier, Stanley M.: *See*—
Meyers, Richard K., and Pier. 3,089,854.

Pierce, Elliot S., S. S. Biswata, and S. J. O'Brien, to American Cyanamid Co. Soil retardant composition and material treated therewith. 3,089,778, 5–14–63, Cl. 106—2.

Pike, George J. Orthopedic structures, and methods and compositions for making same. 3,089,486, 5–14–63, Cl. 128—90.

Pilliner, Bernard J., to Rational Automation Ltd. Apparatus for cutting moving material transversely. 3,089,372, 5–14–63, Cl. 83—818.

Pinkham, Jesse R.: *See*—
Phillips, Malcolm E., Jr., Pinkham, and Hinckle. 3,089,661.

Pitchford, Armin C., to Phillips Petroleum Co. Well drilling and fracturing fluids. 3,089,846, 5–14–63, Cl. 252—8.5.

Pittsburgh Chemical Co.: *See*—
Schulz, Joachim C. E., and Shrader. 3,089,908.
Hay, William J., Jr. 3,089,727.

Plank, Willi: *See*—
Vohrer, Herbert, Beck, and Plank. 3,089,635.

Plastic Binding Corp.: *See*—
Widell, Charles. 3,089,370.

Plasti-Con Pipe Co.: *See*—
Williamson, Gilbert D. 3,089,213.

Plummer, Walter A. Electrically shielded tubular jacket. 3,089,915, 5–14–63, Cl. 174—36.

Plurien, Pierre: *See*—
Boulet, Francis, Plurien, Quenault, and Rigot. 3,089,235.

Pocock, Frederick: *See*—
Molins, Desmond W., Powell, and Pocock. 3,089,497.

Pohm, Arthur V.: *See*—
Övern, William M., and Pohm. 3,089,961.

Pollard, Frank B. Gas-generating power source. 3,089,419, 5–14–63, Cl. 102—39.

Polytop Corp.: *See*—
Kubilius, Ignas B. 3,089,626.

Pontius, Paul E., and S. B. Campbell, to Zurn Industries, Inc. Synchronising clutch. 3,089,575, 5–14–63, Cl. 192—53.

Poort, Henry H., to Drake Corp. Bowling ball press. 3,089,412, 5–14–63, Cl. 101—4.

Posen, Boris S.: *See*—
Baker, Thomas R., and Posen. 3,089,696.

Postmaster General, Her Majesty's: *See*—
Law, Harry B. 3,089,929.
Lynch, Arnold C. 3,089,228.
Taylor, Frederick J. D. 3,089,511.

Postula, Louis J., and V. A. Cabinet with multiple vertically mounted separate shelving members. 3,089,745, 5–14–63, Cl. 312—324.

Postula, Victor A.: *See*—
Postula, Louis J., and V. A. 3,089,745.

Pottenger, Carl H., to Koppers Co., Inc. Storable stable expandable polymeric composition containing expandable polymeric particles and two different blowing agents and method of making same. 3,089,857, 5–14–63, Cl. 260—2.5.

Pottern, Alvin R.: *See*—
Fischer, Edmund F., and Pottern. 3,089,373.

Poujade, Anne M. L.: *See*—
Hadancourt, Alain C., and Poujade. 3,089,983.

Poujade, Jules C. J.: *See*—
Hadancourt, Alain C., and Poujade. 3,089,983.

Poulin, Allan R., to National Twist Drill & Tool Co. Drill construction. 3,089,359, 5–14–63, Cl. 77—69.

Powell, Earl A. Portable work counter. 3,089,742, 5–14–63, Cl. 312—228.

Powell, Gordon F. W.: *See*—
Molins, Desmond W., Powell, and Pocock. 3,089,497.

Power Jets (Research and Development) Ltd.: *See*—
Fitchie, John W. 3,089,306.

Powers, Lawrence G., to Whittlesey Powers, Inc. Water ski. 3,089,158, 5–14–63, Cl. 9—310.

Preformed Line Products Co.: *See*—
Sullivan, Raymond F. 3,089,567.

Price, Wilson T.: *See*—
Andrews, Zenas B., Brown, and Price. 3,089,389.

Priest, Jefferson J. Control mechanism for motor vehicles. 3,089,560, 5–14–63, Cl. 180—77.

Procter & Gamble Co., The: *See*—
Bates, Charles J. and Andre. 3,089,773.
Chaffee, Robert H., and Bowles. 3,089,197.

Procter, Samuel A., to E. J. Hankes. Interval timer using magnetic pickup probe and binary counter with reset circuit. 3,089,966, 5–14–63, Cl. 307—88.5.

Proctor-Silex Corp., The: *See*—
Turner, Charles R. 3,089,406.

Prsekop, Stanley J. Lawn mower handle support. 3,089,301, 5–14–63, Cl. 56—249.

Przybylowicz, Leo S. Dough cutting device. 3,089,238, 5–14–63, Cl. 30—130

Vlček, Jaromír, and A. Petrželka, to Zavody prasneho strojirenstvi. Machine for lasting footwear. 3,089,163, 5–14–63, Cl. 12—10.1.

Puckett, John, ½ to G. Courtney. Razor clam digger. 3,089,721, 5–14–63, Cl. 294—50.7.

Pugh, Harry H., to Gillette Inhibitor Co. Aryl mercuric fungicidal compositions. 3,089,811, 5–14–63, Cl. 167—42.

Pulaski, John W., to General Electric Co. Plastic foam insulated door structure including electrical hinge. 3,089,202, 5–14–63, Cl. 20—16.

Pure Oil Co., The: *See*—
Millikan, Allen F. 3,089,829.

Quenault, Maurice: *See*—
Boulet, Francis, Plurien, Quenault, and Rigot. 3,089,235.

Quensler, Henry H. W., to Boeing Airplane Co. Airplane having changeable thrust direction. 3,089,666, 5–14–63, Cl. 244—7.

R. S. L. Shuttlecocks Co., Ltd.: *See*—
Wolf, James E. 3,089,704.

Raddin, Franklin M., to Monroe Calculating Machine Co. Electrical connectors. 3,090,026, 5–14–63, Cl. 339—17.

Radio Corp. of America: *See*—
Bendell, Sidney L., and Cosgrove. 3,089,978.
Deevy, Margaret M. 3,089,234.
Fischer, Adam, Jr. 3,089,600.
Herold, Paul G., and Nolan. 3,089,973.
Jordan, Eugene L., and Donahue. 3,089,793.

Raleigh, Edmond J., to United States of America, Army. Combination actuator and detent device for guns. 3,089,391, 5–14–63, Cl. 89—198.

Rand Corp., The: *See*—
Knapp, William J., and Shanley. 3,089,196.

Randolph, Gerald, to Wallson Associates. Ignitron excitation control circuit. 3,089,984, 5–14–63, Cl. 315—168.

Rapplean, Eugene L.: *See*—
Hennemann, Raymond G., Rapplean, and Korte. 3,089,685.

Raskin, Seymour H. Rails. 3,089,650, 5–14–63, Cl. 238—122.

Rational Automation Ltd.: *See*—
Pilliner, Bernard J. 3,089,372.

Rattenborg, William K. Routeman's signal. 3,089,607, 5–14–63, Cl. 220—18.

Raub, Samuel H. S., E. S. Malkin, and W. J. Alton, to Union Carbide Corp. Corrosive resistant pump. 3,089,423, 5–14–63, Cl. 103—87.

Rauenbuehler, John A., to Cutler-Hammer, Inc. Kicker for newspapers. 3,089,394, 5–14–63, Cl. 93—93.

Raulins, George M., to Otis Engineering Corp. Well casing suspending means. 3,089,543, 5–14–63, Cl. 166—71.

Rave, Joseph A., Jr., to The Cincinnati Milling Machine Co. Positioning device including means for dividing intervals into preselected numbers of equal parts. 3,089,989, 5–14–63, Cl. 318—28.

Rawson, Emanuel, to Textile Mills Co. Ironing board construction. 3,089,266, 5–14–63, Cl. 38—135.

Raytheon Co.: *See*—
Hergenrother, Rudolf C. 3,089,974.
Ruhman, Emil, and Johnson. 3,090,035.
Scharfman, Howard. 3,090,015.
Williams, John R. 3,089,219.

Read, Leland B., to ACF Industries, Inc. Thermostatic idle. 3,089,648, 5–14–63, Cl. 236—93.

Realisations Ultrasoniques: *See*—
Dory, Jacques. 3,089,458.

Reeber, Rudolf, and R. Dobner, to G. M. Pfaff, A.G. Feed mechanism for sewing machines. 3,089,445, 5–14–63, Cl. 112—203.

Reese, Milous, Jr. Revolvable toy. 3,089,277, 5–14–63, Cl. 46—61.

Reid, Orland B.: *See*—
Herr, John A., and Reid. 3,089,441.

Reil, Wilhelm: *See*—
Neuendorf, Günther, Schmist, Reil, and Römer. 3,089,298.

Reimann, Hans: *See*—
Shapiro, Elliot L., and Reimann. 3,089,873.

Reimers Getriebe K.G.: *See*—
Dittrich, Otto, and Steuer. 3,089,346.

Reiniger, Kurt: *See*—
Gosslau, Fritz, and Reiniger. 3,089,667.

Reiterer, Ferdinand, to Whitin Machine Works. Carding apparatus. 3,089,200, 5–14–63, Cl. 19—106.

Rejdak, Melvin F., to Erico Products, Inc. Material for welding aluminum and other metals. 3,089,798, 5–14–63, Cl. 149—37.

Reliable Electric Co.: *See*—
Baricevic, Ferdinand P., and Cheney. 3,089,916.

Rempel, Robert C., and H. E. Weaver, to Varian Associates. Gyromagnetic resonance method and apparatus. 3,090,003, 5–14–63, Cl. 324—.5.

Renshaw, Richard T. Trash tray. 3,089,633, 5–14–63, Cl. 229—38.

Renuzit Home Products Co.: *See*—
Jaffe, Sam. 3,089,760.

Republic Industries, Inc.: *See*—
Martin, Paul W. 3,089,183.

Research Development Co.: *See*—
Victor, Irving. 3,089,250.

Reuter, Frits: *See*—
Konuk, Siegfried, and Reuter. 3,089,647.

Reuther, John F., to Westinghouse Electric Corp. Regulator system. 3,089,998, 5–14–63, Cl. 323—22.

Rexroad, James O., to Westinghouse Electric Corp. Operating mechanism for enclosed circuit interrupter. 3,089,928, 5–14–63, Cl. 200—50.1.

Rhodes, Milton C., to Carrier Corp. Dynamoelectric machine having an air guide and method of assembling the same. 3,089,970, 5–14–63, Cl. 310—60.

Richter, Jiri, and K. Cernoch, to Svit, narodni podnik. Automatic shoe last operating device. 3,089,162, 5–14–63, Cl. 12—1.

Rieck, Russel W., to Ford Motor Co. Vehicle engine and driveline mounting. 3,089,559, 5–14–63, Cl. 180—64.

Riepe, Helmuth, to L. & C. Hardtmuth, Inc. Compasses. 3,089,246, 5–14–63, Cl. 33—27.

Ries G.m.b.H Bekleidungsverschluss-Fabrik: *See*—
Clauss, Harry. 3,089,328.

Rife, Howard M.: *See*—
Walther, Richard A., and Rife. 3,089,865.

Rigot, Roger: *See*—
Boulet, Francis, Plurien, Quenault, and Rigot. 3,089,235.

Riker Laboratories, Inc.: *See*—
Roth, Laurence W., and Keller. 3,089,817.

Rinesch, Rudolf, to Vereinigte Osterreichische Eisen- und Stahlwerke Aktiengesellschaft. Method and apparatus of treating ingots of iron or steel. 3,089,767, 5–14–63, Cl. 75—51.

Ritter, Charles E. Cord holder. 3,089,210, 5–14–63, Cl. 24—71.1.

Ritter, Endre: *See*—
Szöts, Géza, Szetey, Kocsis, Kondor, Havasi, Ritter, Demeter, Gulyás, and Bitter. 3,089,226.

Robbins, Davis. Drilling apparatus. 3,089,549, 5–14–63, Cl. 175—85.

Robbins, Earl D., ⅝ to G. C. Shapley, and ⅝ to H. G. Callow. Drum type freezer for peas and the like. 3,089,816, 5–14–63, Cl. 62—346.

Robbins, James D., and R. A. Curtis, 43.4% to said Robbins, 31.6% to said Curtis, and 25% to J. De Young. Dry cleaning system. 3,089,325, 5–14–63, Cl. 68—18.

Robertson, H. H., Co.: *See*—
Curran, Bernard E. 3,089,649.

Robertson Paper Box Co. Inc.: *See*—
Tyrseck, Walter J., and Hackenberg. 3,089,631.

Robertson Photo-Mechanix, Inc.: *See*—
Wanielista, Walter. 3,089,385.

Robinson, Ralph O., Jr., to United States of America, Navy. Toroidal coil influence oscillator. 3,089,421, 5–14–63, Cl. 102—70.2.

Roesel, John F., Jr., to Westinghouse Electric Corp. Circuit arrangement for energizing discharge devices. 3,089,981, 5–14–63, Cl. 315—98.

Rogers, Edward A., and N. G. Bennett, to Graviner Mfg. Co. Ltd. Temperature sensitive devices. 3,089,339, 5–14–63, Cl. 73—362.

Rogers, Edward F.: *See*—
Shen, Tsung Y., Rogers, and Sarett. 3,089,876.

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Balmer, Clifford E., Brown, Hurwitz, and Masterson. 3,089,897.

Rolls-Royce Ltd.: *See*—
Goodall, Donald G. 3,089,668.
Smith-Gorman, Robert J. 3,089,764.

Römer, Wilhelm: *See*—
Neuendorf, Günther, Schmist, Reil, and Römer. 3,089,298.

Roml, Giordano. Method and mechanism for generating gears, racks and the like. 3,089,392, 5–14–63, Cl. 90—7.

Rookus, James E., 5% to E. H. Daverman. Film projector. 3,089,628, 5–14–63, Cl. 226—33.

Rose, Willis E., to Dresser Industries, Inc. Impellers for fluid handling apparatus of the rotary positive displacement type. 3,089,638, 5–14–63, Cl. 230—141.

Roselius, Charles F., to Otis Elevator Co. Sliding door hangers and door. 3,089,203, 5–14–63, Cl. 20—19.

Ross, Henry S.: *See*—
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Roth, Walter: *See*—
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Rothstein, Edward L. Stabiliser for bath immersed containers. 3,089,606, 5–14–63, Cl. 215—100.

Rowland, Eugene R. Grate inlet. 3,089,396, 5–14–63, Cl. 94—31.1.

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Ruhman, Emil, and E. T. Johnson, to Raytheon Co. Digital computing systems. 3,090,035, 5–14–63, Cl. 340—174.

Rule, Eric, to Lockheed Aircraft Corp. Transducer devices employing a fluid film for improvement of sensitivity and frequency response characteristics. 3,089,343, 5–14–63, Cl. 73—516.

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Everard, Joseph J., and Rulseh. 3,089,926.

Runde, Byron A.: *See*—
Fettig, Arthur J., Jenks, Lasdine, Maidment, and Runde. 3,089,641.

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Vitcha, James F., and Russell. 3,089,898.

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Saffer, Alfred, and R. S. Barker, to Mid-Century Corp. Oxidation chemical process. 3,089,906, 5–14–63, Cl. 260—524.

Saffer, Alfred, and R. S. Barker, to Mid-Century Corp. Pressure controlled liquid phase oxidation process for aromatic acid production. 3,089,907, 5–14–63, Cl. 260—524.

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Sahyun, Melville, and J. A. Faust; said Faust assor. to M. Sahyun, d.b.a. Sahyun Laboratories. Production of bronchodilator effects with O-halo-N,N-dimethylphenethylamine acid addition salts. 3,089,826, 5–14–63, Cl. 167—84.5.

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Sarco International Corp.: *See*—
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Sarett, Lewis H.: *See*—
Shen, Tsung Y., Rogers, and Sarett. 3,089,876.

Saro, Richard F.: *See*—
Kastler, Joseph G., and Saro. 3,089,946.

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Sattler, Frank A., and P. A. Tierney, to Westinghouse Electric Corp. Electrical insulating coating composition, method, and coated article. 3,089,787, 5–14–63, Cl. 117—215.

Sauer, Leo P., and P. P. Frisch, to Signode Steel Strapping Co. Locating device. 3,089,576, 5–14–63, Cl. 198—29.

Sausele, George J. H., to American Type Founders Co., Inc. Photo-typographic master character plate. 3,089,402, 5–14–63, Cl. 95—85.

Savaria, Robert E. Dump valves for aircraft. 3,089,677, 5–14–63, Cl. 251—68.

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Saxe, Walter E., to The Conveyor Co. Ice breaker. 3,089,477, 5–14–63, Cl. 125—28.

Saxe, Walter E., to The Conveyor Co. Refrigerator car icing machine. 3,089,578, 5–14–63, Cl. 198—47.

Scantlin, John R., and R. W. Haas, to Lear-Siegler, Inc. L-C transistor oscillator having transformer feedback. 3,090,013, 5–14–63, Cl. 331—117.

Scaramucci, Domer. Swivel joint or coupling for pipe lines. 3,089,713, 5–14–63, Cl. 285—14.

Scarbrough, John: *See*—
Kleist, Robert A., and Scarbrough. 3,090,042.

Scharfman, Howard, to Raytheon Co. Electrical phase shifters. 3,090,015, 5–14–63, Cl. 333—24.1.

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Schenck, Leslie M., and J. G. Papalos, to General Aniline & Film Corp. Color stabilizing process for the manufacture of ester-type anionic surface active agents. 3,089,882, 5–14–63, Cl. 260—400.

Schenk, Jakob, to The Wander Co. Sterile aqueous solutions of vitamin D and calcium salts and method of making the same. 3,089,822, 5–14–63, Cl. 167—81.

Scherbatskoy, Serge A. Stabilized radiation detector. 3,089,955, 5–14–63, Cl. 250—71.5.

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Hershberg, Emanuel B., and Gould. 3,089,881.
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Schewe, Erich: *See*—
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Schick, Rainer, to Daimler-Benz Aktiengesellschaft. Electric shifting arrangement for change-speed gears. 3,089,571, 5–14–63, Cl. 192—3.5.
Schlage, Ernest L., to Schlage Lock Co. Combination latch bolt and friction latch. 3,089,720, 5–14–63, Cl. 292—169.
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Schlinger, Warren G.: *See*—
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Johnson, Frank F. 3,089,954.
Schluter, Herbert P., to Burroughs Corp. Device for removing coverings from elongated articles. 3,089,367, 5–14–63, Cl. 81—9.5.
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Kavanagh, James J., R. and W. G. 3,089,258.
Schmidt, Jack H., to The Flintkote Co. Flue covering process. 3,089,805, 5–14–63, Cl. 156—187.
Schmidt, Paul: *See*—
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Schoot, Cornelis J.: *See*—
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Schroeder, Hansjuergen A., to Olin Mathieson Chemical Corp. Alkyl, aryl substituted melems. 3,089,875, 5–14–63, Cl. 260—249.6.
Schuck, Oscar H., to Minneapolis-Honeywell Regulator Co. Variable focus transducer. 3,090,030, 5–14–63, Cl. 340—16.
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Schuler, Robert C. and E. H. Bookmaking machine. 3,089,-534, 5–14–63, Cl. 156—357.
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Schultan, Rudolf, W. Guth, A. Setzwein, H. Braun, and G. Berberich, to Brown, Boveri & Cie Aktiengesellschaft. Heterogeneous nuclear reactor. 3,089,835, 5–14–63, Cl. 204—193.2.
Schultz, Robert G., and V. R. Gaertner, to Monsanto Chemical Co. Dielectric compositions and process. 3,089,987, 5–14–63, Cl. 317—258.
Schulze, Robert E. and E. J. Heartstedt, to Culligan, Inc. Chemical solution tank and means for controlling chemical dosage. 3,089,508, 5–14–63, Cl. 137—433.
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Kelly, Stanley, Schumann, and Adams. 3,089,922.
Schwartz, Jean L., to Societe Anonyme des Ateliers de Construction Schwartz-Hautmont. Roll-up blind. 3,089,540, 5–14–63, Cl. 160—98.
Schwartz, Robert. Pinless diaper. 3,089,494, 5–14–63, Cl. 128—284.
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Schwenzer, George A.: *See*—
Blanford, George W. 3,089,166.
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Bozzola, Riccardo A. 3,089,304.
Scribner, Albert W. Continuous casting process. 3,089,206, 5–14–63, Cl. 22—200.1.
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Seff, Frederic A. Reels or the like. 3,089,585, 5–14–63, Cl. 206—53.
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Serafin, Joseph W. Method and apparatus for superfinishing ring raceways. 3,089,289, 5–14–63, Cl. 51—58.
Serio, Anthony W. Fully immersible electric frying pan. 3,089,943, 5–14–63, Cl. 219—44.
Serres, Carl, Jr., and E. K. Fields, to Standard Oil Co. Separating 4,4'-benzophenone dicarboxylic acid from a mixture of 4,4'- and 2,4'-benzophenone dicarboxylic acids and concurrently producing 2 anthroquinone carboxylic acid. 3,089,879, 5–14–63, Cl. 260—376.
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Sevcik, John G., to Burton-Dixie Corp. Roll-away bed. 3,089,151, 5–14–63, Cl. 5—149.
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Shafer, Homer J., and Metzger. 3,089,430.
Shahan, Victor T., to International Business Machines Corp. Magnetic memory. 3,090,037, 5–14–63, Cl. 340—174.
Shand, George, and G. G. Atkinson, to Associated Electrical Industries (Manchester) Ltd. Automatic traffic signalling systems. 3,090,032, 5–14–63, Cl. 340—41.
Shanley, Francis R.: *See*—
Knapp, William J., and Shanley. 3,089,196.
Shapiro, Elliot L., and H. Reimann, to Schering Corp. 16a-alkoxycorticoids. 3,089,873, 5–14–63, Cl. 260—239.55.
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Shashaty, Alexander, to Wm. K. Stamets Co. Combination board and leg holding knee dog structure of a sawmill. 3,089,523, 5–14–63, Cl. 143—120.
Sheats, Guy C. Multiple electrode holders for indicating nerve responses to stimulation. 3,089,483, 5–14–63, Cl. 128—2.1.
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Herbert, Stephen A., Jr., and Drew. 3,089,852.
Korta, Friedrich W. A. G. K., and Zechocke. 3,089,877.
Meeser, Robert E. 3,089,753.
Mosely, Robert B. 3,089,845.
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Shen, Tsung Y., E. F. Rogers, and L. H. Sarett, to Merck & Co., Inc. 1-(β-aminoethyl)-4-(β-hydroxyethyl)-piperazine. 3,089,876, 5–14–63, Cl. 260—268.
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Wilson, Mervyn F. 3,089,390.
Short, James H., to Abbott Laboratories. Method for the treatment of hypertension. 3,089,819, 5–14–63, Cl. 167—65.
Short, Joe T., to International Leasing Corp. Tufting method and apparatus. 3,089,442, 5–14–63, Cl. 112—79.
Shrader, Lula H.: *See*—
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Schult, Joachim C. E., and Shrader. 3,089,908.
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Shumaker, Hugh W. Horizontal deflectors. 3,089,728, 5–14–63, Cl. 296—91.
Shuman, Abraham. Tension regulator for sewing machine presser bar. 3,089,447, 5–14–63, Cl. 112—235.
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Vitcha, James F., and Sims. 3,089,901.
Vitcha, James F., and Sims. 3,089,902.
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Patrick, Vito J., Fisken, and Fenness. 3,089,446.
Siple, James C., to United States Steel Corp. Method and composition for shielding steel from molten coating metal. 3,089,780, 5–14–63, Cl. 117—5.5.
Skanse, Carl T. Trousers pressing device. 3,089,265, 5–14–63, Cl. 38—69.
Skardal, Karl A. Method of cleansing spray tubes. 3,089,-792, 5–14–63, Cl. 134—21.
Skerritt, Roy P. Lawn sprinkler with timed automatic shut-off. 3,089,651, 5–14–63, Cl. 239—68.
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Smith, Arthur E. W. Therapeutic compositions for the potentiation of barbiturates and analgesics. 3,089,812, 5–14–63, Cl. 167—52.
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Smith, Geoffrey, and H. Meyer. Tab forming unit. 3,089,-894, 5–14–63, Cl. 270—61.
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Smith, La Verne L., to Telecomputing Corp. Wobble pump. 3,089,424, 5–14–63, Cl. 103—133.
Smith, Robert J., to ACF Industries, Inc. Carburetor. 3,089,684, 5–14–63, Cl. 261—23.

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Smith, Sidney R., Jr., to General Electric Co. Contact structure for an electric circuit interrupter. 3,089,936, 5–14–63, Cl. 200—144.
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Smith-Gorman, Robert J., to Rolls-Royce Ltd. Barrelling chips. 3,089,764, 5–14–63, Cl. 51—306.
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Smittle, Darrell G., to Hardman Tool & Engineering Co. Energy absorption unit for seat belts and the like. 3,089,-564, 5–14–63, Cl. 188—1.
Soave, John G., and J. D. Langwell, to Waldes Kohinoor, Inc. Slide fastener manufacture. 3,089,231, 5–14–63, Cl. 29—410.
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Hadancourt, Alain C., and Poujade. 3,089,983.
Socony Mobil Oil Co., Inc.: *See*—
Andress, Harry J., Jr. 3,089,761.
Neiswender, David D., Jr., and Landis. 3,089,894.
Soliberger, Hans, and W. Roth, to Technik- und Handels Aktiengesellschaft. Method of removing material from the surface of bodies. 3,089,411, 5–14–63, Cl. 101—3.
Sorber, Hilbert, and K. G. Coolidge, to Schering Corp. Flow channeling device and valve actuating means for pressurized container. 3,089,625, 5–14–63, Cl. 222—398.
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Spears, Garfield. Cake cutter having power driven endless cutting wire. 3,089,371, 5–14–63, Cl. 83—201.
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Sperry Rand Corp.: *See*—
Davis, Phil E., Perry, and Davis. 3,089,264.
Overn, William M., and Pohm. 3,089,961.
Treffeisen, Donal R. 3,089,671.
Spieth, Rudolf. Journal-bearing bushing. 3,089,739, 5–14–63, Cl. 306—237.
Sprague, Harold E., and M. E. Olson, to Thompson Ramo Wooldridge Inc. Magnetic pump. 3,089,425, 5–14–63, Cl. 103—152.
Spurgeon, Marion D. Adjustable boring head. 3,089,358, 5–14–63, Cl. 77—56.
Stadum, Clarence B., H. W. Van Ness, and E. C. Hartwig, to Westinghouse Electric Corp. Electric discharge apparatus. 3,089,948, 5–14–63, Cl. 219—114.
Stalcup, Iri N. Contact lens carrying case. 3,089,500, 5–14–63, Cl. 134—156.
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Stamm, John J., to Westinghouse Electric Corp. Control of series motors. 3,089,991, 5–14–63, Cl. 316—144.
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Serres, Carl, Jr., and Fields. 3,089,879.
Stangl, Karl. Apparatus for the pressing of fibre goods into bales. 3,089,410, 5–14–63, Cl. 100—215.
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Chronic, Bill M. 3,089,454.
Starp, Frans W. R., to Alfred Gauthier G.m.b.H. Photographic intra-lens shutter and coupled exposure meter. 3,089,397, 5–14–63, Cl. 95—10.
Stein, Gerhard M., to Westinghouse Electric Corp. Electrical inductive apparatus. 3,090,022, 5–14–63, Cl. 336—70.
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Steiner, Charles L. Boat trailer hub with oil bath and water seal. 3,089,738, 5–14–63, Cl. 308—187.
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Stevens, Robert J.: *See*—
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Stiefel, Ludwig, to United States of America, Army. Gas generator for guided missiles. 3,089,418, 5–14–63, Cl. 102—39.
Stillings, Warner E., to International Business Machines Corp. Slewing motor servosystem with null sensing relay circuit. 3,089,988, 5–14–63, Cl. 318—19.
Stilwell, William E., Jr., to The Murray Corp. of America. Apparatus for the complete laundering of fabrics. 3,089,-327, 5–14–63, Cl. 68—139.
Stirling, Harold T., and H. F. Hartzell, Jr., to Koppers Co., Inc. Method and apparatus for moistening dust. 3,089,-791, 5–14–63, Cl. 134—18.
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Stubbs, Allan H. Apparatus for prestressed concrete construction. 3,089,215, 5–14–63, Cl. 25—118.
Stuchbery, Arthur L., and J. Franek, to The Metal Box Co. Ltd. Beading thin metal cylinders. 3,089,583, 5–14–63, Cl. 153—70.
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Thompson, Oliver F. Thermally controlled door-checks. 3,089,568, 5–14–63, Cl. 189—49.
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3,089,931
158: 3,089,932
3,089,933
193.2: 3,089,934
3,089,935
3,089,936
3,089,937
3,089,938
3,089,939
3,089,940
206— 1: 3,089,583
1.6: 3,089,584
58: 3,089,585
67: 3,089,586
89: 3,089,587
3,089,588
65: 3,089,589
78: 3,089,590
207— 15: 3,089,591
208— 27: 3,089,941
44: 3,089,942
58: 3,089,943

208—	130: 3,060,844	220—	49: 3,060,634	252—	5.5: 3,060,646	260—	486: 3,060,897	294—	66.5: 3,060,724	318—	171: 3,060,992
	3,060,845		62: 3,060,635		5.55: 3,060,647		3,060,898		73: 3,060,725		443: 3,060,993
209—	34: 3,060,592		63.5: 3,060,636		18: 3,060,648		3,060,899		88: 3,060,726		3,060,994
	82: 3,060,593	230—	117: 3,060,637		29: 3,060,649		3,060,900		118: 3,060,727	321—	2: 3,060,995
	111.5: 3,060,594		141: 3,060,638		32.7: 3,060,650		3,060,901	296—	44: 3,060,729	322—	25: 3,060,996
	144: 3,060,595		226: 3,060,639		3,060,651		3,060,902		91: 3,060,728		96: 3,060,997
210—	360: 3,060,596	232—	1: 3,060,640		3,060,652		3,060,903	297—	463: 3,060,730	323—	22: 3,060,998
211—	88: 3,060,597	235—60.12:	3,060,641		37: 3,060,653		514: 3,060,904	301—	5: Re.25,263		86: 3,060,999
214—	1: 3,060,598		144: 3,060,642		40.5: 3,060,654		521: 3,060,905		37: 3,060,731		87: 3,061,000
	3,060,599		151: 3,060,643		186: 3,060,655		534: 3,060,906	302—	2: 3,060,732		79: 3,061,001
	3,060,600		160: 3,060,644		518: 3,060,656		3,060,907		56: 3,060,733	324—	.5: 3,061,002
	522: 3,060,601		175: 3,060,645	233—	89: 3,060,679		599: 3,060,908	303—	86: 3,060,734		3,061,003
	653: 3,060,602		192: 3,060,646	234—	85: 3,060,680		604: 3,060,909	307—	43: 3,060,960		61: 3,061,004
215—	13: 3,060,603	236—	48: 3,060,647	236—	47: 3,060,681		653.3: 3,060,910		86.5: 3,060,961		70: 3,061,005
	30: 3,060,604		98: 3,060,648		64: 3,060,682		663.8: 3,060,911		3,060,962		142: 3,061,006
	96.5: 3,060,605	237—	80: 3,060,649	239—	4: 3,060,683		666: 3,060,912		3,060,963		154: 3,061,007
	100: 3,060,606	238—	122: 3,060,650	240—	2.5: 3,060,657	261—	23: 3,060,684		3,060,964	325—	44: 3,061,008
219—	19: 3,060,939	239—	66: 3,060,651		31.8: 3,060,658		64: 3,060,685		3,060,965		479: 3,061,009
	24: 3,060,940	240—	7.1: 3,060,961		45.2: 3,060,659	262—	6: 3,060,686		3,060,966	326—	67: 3,061,010
	28: 3,060,941		10.6: Re.25,266		45.7: 3,060,660		3,060,687		3,060,967		145: 3,061,011
	30: 3,060,942	241—	79: 3,060,652		67: 3,060,661	267—	22: 3,060,688		3,060,968	329—	4.5: 3,061,012
	44: 3,060,943		81: 3,060,653		75: 3,060,662		11: 3,060,689	308—	23: 3,060,735	331—	117: 3,061,013
	74: 3,060,944		100.5: 3,060,654		3,060,663		30: 3,060,690		24.1: 3,060,736	332—	52: 3,061,014
	76: 3,060,945		260: 3,060,655		77.5: 3,060,664	269—	1: 3,060,691		187: 3,060,737	333—	24.1: 3,061,015
	98: 3,060,946	242—	7: 3,060,656		87.1: 3,060,665		223: 3,060,692		3,060,738		53: 3,061,016
	107: 3,060,947		43: 3,060,657		92.1: 3,060,666	270—	54: 3,060,693		237: 3,060,739		79: 3,061,017
	114: 3,060,948		55.01: 3,060,658		139: 3,060,667		61: 3,060,694	310—	53: 3,060,969		83: 3,061,018
	118: 3,060,949		55.2: 3,060,659		186: 3,060,668		68: 3,060,695		60: 3,060,970		95: 3,061,019
	160: 3,060,950		58: 3,060,660		311.5: 3,060,669	271—	29: 3,060,696		106: 3,060,971		3,061,020
220—	18: 3,060,607		58.4: 3,060,661		320: 3,060,670		34: 3,060,697	312—	7: 3,060,740	334—	82: 3,061,021
	43: 3,060,608		75.5: 3,060,662		327: 3,060,671		46: 3,060,698		223: 3,060,741	336—	70: 3,061,022
	46: 3,060,609		84.1: 3,060,663	250—	3: 3,060,672	272—	54: 3,060,699		3,060,742	338—	82: 3,061,023
	53: 3,060,610		90: 3,060,664		289.55: 3,060,673		80: 3,060,700		227: 3,060,743		170: 3,061,024
221—	1: 3,060,611		156: 3,060,665		289.57: 3,060,674	273—	43: 3,060,701		229: 3,060,744		183: 3,061,025
	11: 3,060,612	244—	7: 3,060,666		349.6: 3,060,675		63: 3,060,702		234: 3,060,745	339—	17: 3,061,026
	176: 3,060,613		12: 3,060,667		362: 3,060,676		105.2: 3,060,703	313—	24: 3,060,973		31: 3,061,027
	251: 3,060,614		3,060,668		343.2: 3,060,677		108: 3,060,704		108: 3,060,974		174: 3,061,028
222—	16: 3,060,615		63: 3,060,669		3,060,678	274—	20: 3,060,705	315—	3.6: 3,060,974		269: 3,061,029
	3,060,616		74: 3,060,670		376: 3,060,679		42: 3,060,706		3,060,975	340—	16: 3,061,030
	3,060,617		77: 3,060,671		397.3: 3,060,680	276—	23: 3,060,707		5.28: 3,060,976		18: 3,061,031
	60: 3,060,618		102: 3,060,672		397.45: 3,060,681		123: 3,060,708		21: 3,060,977		41: 3,061,032
	81: 3,060,619		110: 3,060,673		400: 3,060,682	280—87.06:	3,060,709		26: 3,060,978		84: 3,061,033
	89: 3,060,620	248—	40: 3,060,674		404: 3,060,683		112: 3,060,710		85: 3,060,979		172.5: 3,061,034
	133: Re.25,266		41: Re.25,267		410.9: 3,060,684		130.6: 3,060,711		97: 3,060,980		174: 3,061,035
	148: 3,060,621		242: 3,060,675		420.1: 3,060,685		154.5: 3,060,712		98: 3,060,981		3,061,036
	183: 3,060,622		304: 3,060,676		420.6: 3,060,686	285—	14: 3,060,713		3,060,982		3,061,037
	205: 3,060,623	250—	65: 3,060,952		455: 3,060,687		165: 3,060,714		111: 3,060,983		287: 3,061,038
	264.5: 3,060,624		3,060,953		458: 3,060,688	287—20.1:	3,060,715		163: 3,060,984		302: 3,061,039
	266: 3,060,625		71.5: 3,060,954		461: 3,060,689		54: 3,060,716		3,060,985		303: 3,061,040
	484: 3,060,626		3,060,955		3,060,690		55: 3,060,717	317—	135: 3,060,986		293: 3,061,040
	511: 3,060,627		80: 3,060,956		3,060,691		90: 3,060,718		162: 3,060,986		294: 3,061,041
226—	53: 3,060,628		83: 3,060,957		3,060,692	292—	26: 3,060,719		266: 3,060,987	342—	6.5: 3,061,042
	91: 3,060,629		83.1: 3,060,958		3,060,693		169: 3,060,720	318—	19: 3,060,988		11: 3,061,043
229—	4.5: 3,060,630		207: 3,060,959	462:	3,060,694	294—	80.7: 3,060,721		28: 3,060,989		113: 3,061,044
	16: 3,060,631	251—	58: 3,060,677		3,060,695		65: 3,060,722		30: 3,060,990	346—	136: 3,060,746
	37: 3,060,632		337: 3,060,678	463:	3,060,696		3,060,723		144: 3,060,991		
	38: 3,060,633										

CLASSIFICATION OF DESIGNS

D 3—	11: 196,189	D18—	2: 196,198	D26—	14: 196,208	D34—	4: 196,218	D54—	14: 196,227	D63—	1: 196,237
	16: 196,190		196,199		196,209		196,219	D57—	1: 196,228		196,238
	26: 196,191		196,200		196,210		196,220	D58—	5: 196,229	D65—	2: 196,239
D 4—	3: 196,192		196,201	D30—	1: 196,211		18: 196,221		26: 196,230	D67—	6: 196,240
D12—	1: 196,193	D20—	1: 196,202	D33—	8: 196,212	D44—	10: 196,222		28: 196,231	D69—	1: 196,241
	196,194		5: 196,203		14: 196,213	D46—	22: 196,223	D62—	4: 196,232	D91—	3: 196,242
D14—	3: 196,195		196,204		196,214		196,224	D65—	1: 196,233		196,243
	18: 196,196		10: 196,205	D34—	4: 196,215	D52—	6: 196,225	D80—	8: 196,234	D93—	1: 196,244
D15—	8: 196,197		13: 196,206		196,216		196,226	D81—	4: 196,235		21: 196,245
			14: 196,207		196,217				26: 196,236		26: 196,246

U.S. DEPARTMENT OF COMMERCE

OFFICIAL GAZETTE of the UNITED STATES PATENT OFFICE

May 14, 1963 Volume 790 Number 2

TRADEMARKS

NOTICES

Examination

Pursuant to the provisions of Rule 341(c), an examination for persons seeking registration before the United States Patent Office as patent attorneys or agents will be held Tuesday, August 6, 1963.

With the exception of former patent examiners for whom the examination is waived, all persons recognized for practice before the Patent Office in patent cases must, pursuant to the noted rule, pass the examination. Those passing the examination do not thereby qualify for recognition for practice before the Patent Office in trademark cases. Recognition for practice in trademark cases is governed by Rule 2.12 of the Trademark Rules of Practice, which does not require the passing of an examination.

The examination will be given under the supervision of the Civil Service Commission, and may be taken in any of the cities of the country in which the Civil Service Commission regularly conducts examinations. Applications to take the examination must be directed to the Commissioner of Patents and filed in the Patent Office not later than July 5, 1963.

Application blanks may be obtained from the Clerk of the Patent Office Committee on Enrollment, Room 3718, Department of Commerce Building, Washington 25, D.C.

EDWIN L. REYNOLDS,
Chairman, Committee on Enrollment.

Apr. 12, 1963.

CONDITION OF TRADEMARK APPLICATIONS AS OF MARCH 31, 1963

Total number of applications awaiting action [exeluding renewals and Sec. 12 (c)] 17,322
Date of oldest new application ..... July 2, 1962
Date of oldest amended application ..... July 11, 1962

J. H. MERCHANT, Director, Trademark Examining Operation

TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION	Oldest Application	
	New	Amended
(I) C. M. WENDT, Classes 8, 12, 13, 14, 15, 17, 19, 20, 21, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 39, 41, 42, 43, 44	7-2-62	7-11-62
(II) H. E. KASCHUB, Classes 1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 16, 18, 22, 37, 38, 40, 45, 46, 47, 48, 49, 50, 51, 52; Service Mark Classes 100, 101, 102, 103, 104, 105, 106, 107; Collective Membership Marks, Class 200; Certification Marks, Classes A and B	8-20-62	8-22-62
Renewals (All Classes)	3-6-63	3-10-63
Sec. 12 (c) Publications (All Classes)	3-13-63	

Applications filed during the month of March 1963—2,051

Registrations Issued ..... 312—No. 749,274 to No. 749,585
Renewals Issued 59

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, is mailed under the direction of the Superintendent of Documents, Government Printing Office, Washington 25, D. C., to whom all subscriptions should be made payable and all communications addressed; subscription price, $10.00 per annum, foreign mailing $3.75 additional; single copies, 20 cents each.

PRINTED COPIES OF TRADEMARK REGISTRATIONS are furnished by the Patent Office for 10 cents each. Address orders to the Commissioner of Patents, Washington 25, D.C.

MARKS PUBLISHED FOR OPPOSITION

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105.

As provided by section 31 of said act, a fee of twenty-five dollars must accompany each notice of opposition.

Class 1—Raw or Partly Prepared Materials

SN 132,349. Magnet Cove Barium Corporation, Houston, Tex. Filed Nov. 20, 1961.

NUT PLUG

For Drilling Mud Additive Composed of Ground Walnut Shells for Sealing Small Fractures and Reinforcing the Formation Surrounding a Well Being Drilled.
First use Apr. 20, 1960.

SN 142,246. American Cyanamid Company, Wayne, N.J. Filed Apr. 16, 1962.

AEROTEX

Owner of Reg. No. 705,401.
For Synthetic Resins.
First use Apr. 12, 1940.

SN 142,342. National Tea Co., Chicago, Ill. Filed Apr. 16, 1962.



For Charcoal Briquettes Used as a Fuel.
First use Mar. 19, 1962.

SN 143,145. Paul Klatt, Monahans, Tex., assignee of Kraf Manufacturing Company, Inc., Monahans, Tex. Filed Apr. 26, 1962.

FIBRO-CIRC

For Lost Circulation Material—Namely, Tumbleweed for Oil Wells.
First use July 30, 1961.

SN 145,488. United Shoe Machinery Corporation, d.b.a. B.B. Chemical Co., Boston, Mass. Filed May 25, 1962.

TRU-LINE

Owner of Reg. No. 630,169.
For Fiberboard, Fabric and/or Resin Materials for Use as Box Toe and Counter Stiffeners in the Manufacture of Footwear.
First use on or about May 5, 1960.

SN 145,950. The Macallen Company, Inc., Newmarket, N.H. Filed June 1, 1962.

MICAGLO

No claim is made to the word "Mica" apart from the mark as shown.
For Mica.
First use Apr. 17, 1962.

SN 148,196. S. C. Johnson & Son, Inc., Racine, Wis. Filed July 2, 1962.

SCOPE

For Organic Condensation Polymers of the Polyamide, Polyether, and Polyester Types and Synthetic Resins.
First use on or about May 17, 1962.

SN 148,702. American Viscose Corporation, Philadelphia, Pa. Filed July 10, 1962.

AVORY

Owner of Reg. No. 699,075.
For Microcrystalline Cellulose Ordinarily Sold in the Form of Rods, Sheets, Bars, or the Like for Use in the Industrial Arts.
First use June 27, 1962.

SN 149,309. McHutchison & Co., Ridgefield, N.J. Filed July 18, 1962.

JUMPING

For Plants—Namely, Geraniums, Tuberous Rooted Begonias, Fancy Leaf Caladiums, Chrysanthemums, Azaleas and Gladioli.
First use on or about May 8, 1962.

SN 149,436. Apex Coated Fabrics Co. Inc., New York, N.Y. Filed July 20, 1962.

NYKAF

Owner of Reg. No. 219,882 and others.
For Plastic Material Consisting of a Nylon Coating on a Rayon Backing in the Nature of Artificial Leather Used in the Manufacture of Luggage, Portable Phonographs, Portable Radios, Containers, Pocketbooks, Belts, Billfolds, and Kindred Articles.
First use Nov. 20, 1961.

SN 149,565. Great West Coal Sales Company, New York, N.Y. Filed July 23, 1962.



The lining shown on the drawing is for the colors red, blue, and silver.
For Coal.
First use Mar. 1, 1960.

SN 149,650. Charles O. Howe, d.b.a. Port City Minerals Company, Chicago, Ill. Filed July 24, 1962.



Owner of Reg. No. 725,482.
For Hectorite.
First use Mar. 22, 1962.

SN 149,990. Wyo-Ben Products Company, d.b.a. Wyotana Sales Company, Billings, Mont. Filed July 27, 1962.

TERRA-GEL

The drawing is lined for shading purposes only.
For Refined Bentonite Clay, Raw or Partly Prepared, Principally Used as a Suspensoid in Well Drilling Operations.
First use June 12, 1952.

SN 153,109. Oil-Dri Corporation of America, Chicago, Ill. Filed Sept. 13, 1962.

FIRE-DRI

For Ground Clay To Be Used in the Base of a Charcoal Grill.
First use July 6, 1962.

SN 153,127. Still House Hollow Farm, Hume, Va. Filed Sept. 13, 1962.

DOMINION

For Beef Cattle.
First use Sept. 28, 1959.

SN 154,398. The D. S. Brown Company, North Baltimore, Ohio. Filed Oct. 3, 1962.

STERON

For Self-Sanitizing Rubber.
First use Aug. 28, 1962.

SN 154,578. B. D. Eisendrath Tanning Co., Chicago, Ill. Filed Oct. 5, 1962.

DOLCE

For Leather.
First use Jan. 5, 1962.

SN 154,666. Black Panther Company, Inc., Sanford, N.C. Filed Oct. 8, 1962.

BLACK PANTHER

Owner of Reg. No. 646,951.
For Charcoal.
First use in March 1956.

SN 158,677. Armour and Company, Chicago, Ill. Filed Dec. 7, 1962.

MATADOR

For Leather.
First use Nov. 28, 1962.

SN 158,678. Armour and Company, Chicago, Ill. Filed Dec. 7, 1962.

BALBOA

For Leather.
First use Nov. 20, 1962.

SN 158,679. Armour and Company, Chicago, Ill. Filed Dec. 7, 1962.

FORTUNA

For Leather.
First use Nov. 20, 1962.

Class 2—Receptacles

SN 133,239. Envopak Limited, London, England. Filed Dec. 4, 1961.



Owner of British Reg. No. 772,972, dated Jan. 9, 1958.
For Reuseable Mailing Containers.

SN 142,821. International Harvester Company, Chicago, Ill. Filed Apr. 23, 1962.



The diagonal lining shown in the drawing constitutes a part of the mark. Owner of Reg. Nos. 416,823, 705,836, and others.
For Paper Bags.
First use Dec. 14, 1944.

SN 153,628. Delaware Barrel and Drum Company, Inc., Wilmington, Del. Filed Sept. 21, 1962.

DELPAK

For Plastic Containers—Namely, Carboys and Drums, With or Without Overpacks.
First use about Sept. 1, 1962.
Subj. to Intf. with SN 146,361.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

SN 129,875. Montgomery Ward & Co., Incorporated, Chicago, Ill. Filed Oct. 13, 1961.

BRENT

For Men's Billfolds.
First use Sept. 1, 1956.

SN 137,418. W. Bell & Company, Inc., Washington, D.C. Filed Feb. 7, 1962.

Bel-aire

For Trunks, Suitcases, Brief Cases, Handbags, Attaché Cases, Wallets, and Billfolds.
First use Sept. 1, 1959.

SN 149,042. Bettina, Inc., Kansas City, Mo. Filed July 16, 1962.



The word "Originals" is disclaimed apart from the mark as shown.
For Dog Coats.
First use May 16, 1962.

SN 154,315. John A. Wolff, Minneapolis, Minn. Filed Oct. 1, 1962.

CAGE-UM

For Animal Pet Carrier.
First use June 22, 1962.

Class 4—Abrasives and Polishing Materials

SN 141,682. The American Oil Company, Chicago, Ill. Filed Apr. 6, 1962.



The drawing is lined for red and blue. Owner of Reg. Nos. 434,832, 444,047, and others.
For Floor Wax and Household Wax.
First use Aug. 1, 1961.

SN 142,006. The American Oil Company, Chicago, Ill. Filed Apr. 6, 1962.



Owner of Reg. Nos. 434,832, 436,759, and others.
For Floor Wax and Household Wax.
First use Aug. 1, 1961.

SN 142,040. The Kiwi Polish Company Proprietary Limited, Richmond, near Melbourne, Victoria, Australia. Filed Apr. 11, 1962.

KIWI
(KEE-WEE)

Owner of U.S. Reg. Nos. 294,324, 739,162, and others.
For Polish for Heels and Soles of Shoes.
First use Feb. 20, 1962; in commerce Feb. 20, 1962.

SN 142,044. William A. Leavell, Jr., d.b.a. Carrara Stone Company, Clearwater, Fla. Filed Apr. 11, 1962.

"CARRARA STONES"

No claim is made to the word "Stones."
For Grinding and Polishing Stones.
First use Feb. 1, 1962.

SN 144,591. Barton Mines Corporation, North Creek, N.Y. Filed May 15, 1962.

LENZON

For Garnet Grinding Powders for Optical Lenses.
First use Aug. 4, 1961.

SN 148,143. Cinderella International Company, Inc., Chicago, Ill. Filed July 2, 1962.

CINDERELLA

Owner of Reg. No. 435,778.
For Furniture Polish, Floor Wax, Metal and Glass Cleaner and Polish.
First use Apr. 1, 1959.

SN 155,072. Harrison Specialty Co., Inc., Chestnut Hill, Mass. Filed Oct. 12, 1962.

CHEMTON

For Cleaning and Polishing Wax.
First use May 20, 1959.

SN 158,876. Turtle Wax, Inc., Chicago, Ill. Filed Dec. 10, 1962.

NIPACE

For Floor Wax.
First use Nov. 27, 1962.

Class 5—Adhesives

SN 154,433. Penick & Ford, Ltd., Incorporated, New York, N.Y. Filed Oct. 3, 1962.

ASTRO

For Adhesive Binder Consisting of Chemically Derivatized Starch for Use in the Manufacture of Paper, Paper Board and Fibre Board Products.
First use June 5, 1962.

SN 154,679. Atlantic Gummed Paper Corporation, Brooklyn, N.Y. Filed Oct. 8, 1962.

PAPER ZIPPER

No claim is made to the word "Paper," apart from the other features of the mark.
For Gummed-Paper Tape.
First use Sept. 6, 1962.

SN 155,174. Morningstar-Paisley, Inc., New York, N.Y. Filed Oct. 15, 1962.

MELTITE

For Hot Melt Adhesives.
First use Sept. 14, 1962.

SN 155,669. Trade Paper Co. Inc., New York, N.Y. Filed Oct. 22, 1962.



For Liquid Adhesive Preparation To Be Applied as a Spray to the Undersurface of Markers and Patterns To Prevent Shift and Slip During the Cutting Process.
First use Aug. 7, 1961.

Class 6—Chemicals and Chemical Compositions

SN 115,149. Imperial Chemical Industries Limited, London, England. Filed Mar. 8, 1961.

FLUOLITE

Owner of British Reg. No. B635,944, dated Jan. 30, 1950.
For Fluorescent Whitening Agent.

SN 131,594. The Miami Products & Chemical Company, Dayton, Ohio. Filed Nov. 8, 1961.

BLINK

For Household Bleach With Disinfectant and Deodorant Properties.
First use on or about July 1, 1954.

SN 131,870. Phoenix Gems, Inc., Phoenix, Ariz. Filed Nov. 13, 1961.

PERMA-GUARD

For Insecticidal Composition Comprising Powdered Diatomaceous Earth.
First use October 1958.

SN 133,610. Pyroil Company, Inc., d.b.a. Master Specialty Company, La Crosse, Wis. Filed Dec. 7, 1961.

A.O.K.

For Defrosting Fluid for Windshields and the Like.
First use Aug. 15, 1961.
Subj. to Intf. with SN 126,812.

SN 141,173. Faultless Starch Company, Kansas City, Mo. Filed Mar. 30, 1962.

DIRTGARD

For Laundry Starch.
First use Feb. 12, 1962.

SN 141,679. The American Oil Company, Chicago, Ill. Filed Apr. 6, 1962.



Owner of Reg. Nos. 434,832, 444,047, and others.
For Agricultural Chemicals To Control the Growth of Weeds and Noxious Plants and Promote Growth of Agricultural Products, Herbicides, and Insecticides; Livestock Sprays, Lighter Fluid, and Charcoal Starting Fluid; Anti-Freeze for Radiators and Fuel Systems.
First use Jan. 30, 1961; Apr. 1, 1946, on insecticides in a modified form.

SN 141,683. The American Oil Company, Chicago, Ill. Filed Apr. 6, 1962.



The drawing is lined for red and blue. Owner of Reg. Nos. 434,832, 444,047, and others.
For Agricultural Chemicals To Control the Growth of Weeds and Noxious Plants and Promote Growth of Agricultural Products, Herbicides, and Insecticides; Livestock Sprays, Lighter Fluid, and Charcoal Starting Fluid; Anti-Freeze for Radiators and Fuel Systems.
First use Jan. 30, 1961; Apr. 1, 1946, on insecticides in a modified form.

SN 142,069. The Kiwi Polish Company Proprietary Limited, Richmond, near Melbourne, Victoria, Australia. Filed Apr. 11, 1962.

KIWI

(KEE-WEE)

Owner of U.S. Reg. Nos. 294,334, 739,162, and others.
For Leather Dye.
First use Feb. 20, 1962; in commerce Feb. 20, 1962.

SN 142,086. Filtered Resin Products Company, St. Louis, Mo. Filed Apr. 12, 1962.

FILTROS

For Turpentine.
First use at least as early as Aug. 14, 1942.

SN 142,245. American Antiseptic Co., Inc., Providence, R.I. Filed Oct. 23, 1962.

Baby Safe

For Preparation Used To Soften, Whiten, and Deodorize Diapers and an Antiseptic Diaper Spray.
First use June 1, 1959.

SN 142,576. Vanadium Corporation of America, New York, N.Y. Filed Apr. 18, 1962.

CALSILOY

For Deoxidizer and Non-Metallic Inclusion Control Agent for Steel.
First use Mar. 26, 1962.

SN 143,061. The Town Hill Company, Inc., Charlestown, Mass., assignee of Bernard Triber, d.b.a. The Town Hill Company, Charlestown, Mass. Filed Apr. 25, 1962.

TRAV'L-GARD

For Spot Disinfectant for Toilet Seats.
First use Jan. 29, 1962.

SN 143,691. Thompson-Hayward Chemical Company, Kansas City, Mo. Filed May 2, 1962.

T-MUL

For Emulsifiers for Use in Insecticide and Herbicide Formulations.
First use Feb. 21, 1962.

SN 143,930. Chartres Co., Inc., New Orleans, La. Filed May 7, 1962.

MIRA-KIL

For Insecticide.
First use Aug. 3, 1959.

SN 143,959. J. I. Holcomb Manufacturing Company, Inc., Indianapolis, Ind. Filed May 7, 1962.

CLINIC

For Disinfectant-Deodorant Preparation for Institutional and Industrial Use.
First use Apr. 17, 1962.

SN 144,621. MacAndrews and Forbes Company, Camden, N.J. Filed May 15, 1962.

SHIP-BRAND

Applicant makes no claim to the word "Brand" apart from the mark as shown. Owner of Reg. No. 54,016.
For Licorice Extract.
First use in the year 1906.

SN 145,046. United States Borax & Chemical Corporation, Los Angeles, Calif., assignee of Columbia Wax Company, Glendale, Calif. Filed May 21, 1962.

COL-X

For Bacteriostat Dust Control Preparation.
First use Dec. 7, 1961.

SN 145,525. Cambridge Chemical Products, Inc., Dearborn, Mich. Filed May 24, 1962.

URI-CEL

For Urinary Sediment Stain for Laboratory Use Only.
First use Mar. 5, 1962.

SN 145,501. Agricultural Specialties, Dallas, Tex. Filed May 28, 1962.

STRIKE

For Fly Insecticide.
First use Nov. 8, 1961.

SN 145,544. The Grand Union Company, East Paterson, N.J. Filed May 28, 1962.

GRAND WAY

Owner of Reg. Nos. 65,476, 422,568, 723,741, and 738,901.
For Spray Starch.
First use on or about Mar. 23, 1962.

SN 145,796. The Drackett Company, Cincinnati, Ohio. Filed July 11, 1962.

AIR-CARE

For Surface Disinfectant and Room Deodorant in Pressurized Containers.
First use Feb. 18, 1960.

SN 149,246. Arkansas Company, Inc., Newark, N.J. Filed July 18, 1962.

NUACTANT

For Non-Resinous Chemical Reagents in Water Dispersion Which React With the Cellulosic Fibers To Give Crush Resistance and Shrinkage Control.
First use May 1, 1962.

SN 149,453. The C. B. Dolge Company, Westport, Conn. Filed July 20, 1962.

H.D.

For Fungicidal-Disinfectant Preparation.
First use May 20, 1941.

SN 149,502. Virginia Chemicals & Smelting Company, West Norfolk, Va. Filed July 20, 1962.

VIRSET

Owner of Reg. Nos. 526,525, 617,232, and others.
For Coating Insolubilizer Used in Paper Manufacture.
First use Feb. 5, 1962.

SN 149,856. Paul J. Mandabach, Inc., Chicago, Ill. Filed July 26, 1962.

ALDEFORM

For Crystal Para-Formaldehyde in Tablet Form.
First use June 30, 1940.

SN 150,803. Parker Laboratories, Inc., Newark, N.J. Filed Aug. 6, 1962.

AQUAPOOL

For Additive for Hydrotherapy Baths Containing Agents for the Control of Scum and Foaming and for Imparting a Fragrance to the Water.
First use Sept. 2, 1958.

SN 151,001. Caled Products Company, Inc., Brentwood, Md. Filed Aug. 13, 1962.

DRY-CAL-SIZE

For Sizing Ingredient for Use in Solvents for Dry Cleaning of Fabrics.
First use May 1951.

SN 151,092. A. E. Staley Manufacturing Company, Decatur, Ill. Filed Aug. 13, 1962.

Staley

For Dextrins.
First use May 8, 1962.

SN 151,093. A. E. Staley Manufacturing Company, Decatur, Ill. Filed Aug. 13, 1962.

Staley

Owner of Reg. Nos. 514,132, 567,638, and 605,677.
For Corn Starch for Industrial Purposes.
First use Mar. 21, 1962.

SN 151,430. Olin Mathieson Chemical Corporation, New York, N.Y. Filed Aug. 17, 1962.

END-DT

For Pesticide.
First use May 29, 1962.

SN 154,925. Reedville Oil & Guano Company, Inc., Reedville, Va. Filed Oct. 10, 1962.

Haynie

For Drying Oils for Use in the Paint, Cosmetic, Linoleum, Pharmaceutical, Roof Coating, and Printing Industries, and for General Use in the Industrial Arts.
First use Jan. 2, 1959.

SN 154,933. United States Rubber Company, New York, N.Y. Filed Oct. 10, 1962.

U.S. ROYAL

For Anti-Freeze.
First use Aug. 21, 1962.

SN 155,142. Faultless Starch Company, Kansas City, Mo. Filed Oct. 15, 1962.

The drawing is lined for red. Owner of Reg. Nos. 51,025 and 610,195.
For Laundry Preparations Used for Softening Fabrics.
First use Mar. 7, 1962.

SN 155,248. Humble Oil & Refining Company, Houston, Tex. Filed Oct. 16, 1962.

UNIFIL

For Anti-Freeze Compound.
First use at least since Sept. 15, 1939.

SN 156,479. DeMert & Dougherty, Inc., Chicago, Ill. Filed Nov. 2, 1962.

LOOK

For Composition for Melting Ice and Frost on Glass and Similar Surface.
First use on or about Sept. 18, 1962.

SN 156,721. Ciba Limited, Basel, Switzerland. Filed Nov. 6, 1962.

CIBACHROME

Owner of Swiss Reg. No. 186,004, dated May 17, 1961.
For Photographic Chemicals, Dyestuffs.

SN 156,852. American Potash & Chemical Corporation, Los Angeles, Calif. Filed Nov. 8, 1962.

TRONA

For Titanium Dioxide.
First use Oct. 23, 1962.

SN 156,853. American Potash & Chemical Corporation, Los Angeles, Calif. Filed Nov. 8, 1962.

TRONOX

For Titanium Dioxide.
First use Oct. 23, 1962.

SN 156,983. Industrial Soap Company, St. Louis, Mo. Filed Nov. 9, 1962.

MEDALLION

For Room Deodorant Spray.
First use Oct. 13, 1962.

Class 8—Smokers' Articles, Not Including Tobacco Products

SN 143,780. Zippo Manufacturing Company, Bradford, Pa. Filed May 3, 1962.



The colors red and gold as indicated by the lining on the drawing are claimed as part of the mark.
For Cigarette Lighters, Flints for Lighters, Wicks for Lighters and Fuel for Lighters.
First use Jan. 3, 1962.

Class 9—Explosives, Firearms, Equipments, and Projectiles

SN 154,459. Atlantic Research Corporation, Alexandria, Va. Filed Oct. 4, 1962.

METROC

For Rockets and Parts Therefor.
First use Aug. 19, 1962.

Class 10—Fertilizers

SN 142,135. Warner W. Price Co., Incorporated, Smyrna, Del. Filed Apr. 12, 1962.

GREEN D

For Fertilizer—Namely, a 100% Organic Nitrogen Fertilizer.
First use on or about Mar. 28, 1962.

SN 145,802. Tennessee Corporation, Cincinnati, Ohio. Filed May 23, 1962.

CRAB-BANE

For Lawn Fertilizer With Crabgrass Eradicating and Insecticide Properties.
First use in April 1962.

SN 145,726. Lee Patten Seed Company, Jersey City, N.J. Filed May 29, 1962.

PATCO'S GRASS BILDER

No claim is made to the words "Grass Bilder" apart from the mark as shown. Owner of Reg. Nos. 549,584, 739,597, and others.
For Fertilizer for Lawns, Turf, and the Like.
First use Apr. 24, 1962.

SN 145,727. Lee Patten Seed Company, Jersey City, N.J. Filed May 29, 1962.

PATCO'S TURFGRO

Owner of Reg. Nos. 549,584, 739,597, and others.
For Fertilizer for Lawns, Turf, and the Like.
First use Apr. 16, 1962.

SN 145,728. Lee Patten Seed Company, Jersey City, N.J. Filed May 29, 1962.

PATCO'S SOD MAKER

Owner of Reg. Nos. 549,584, 739,597, and others.
For Fertilizer for Lawns, Turf, and the Like.
First use June 30, 1961.

SN 151,818. Green & Reedy Fertilizer, Inc., Franklinton, La. Filed Aug. 24, 1962.

MISS-LOU

Owner of Reg. No. 555,410.
For Fertilizer.
First use Sept. 1, 1950.

Class 11—Inks and Inking Materials

SN 155,246. Embossograph Process Company Incorporated, Brooklyn, N.Y. Filed Oct. 16, 1962.

CAMEL BACK

For Thermographic Raising Printing Powders and Beads for Application to Paper and Printing Stock To Give Raised Effects Simulating Engraved and Embossed Printing.
First use at least as early as August 1943.

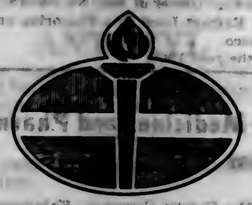
Class 12—Construction Materials

SN 141,680. The American Oil Company, Chicago, Ill. Filed Apr. 6, 1962.



Owner of Reg. Nos. 434,832, 444,047, and others.
For Asphalt.
First use Feb. 9, 1962; June 9, 1947, in a modified form.

SN 141,684. The American Oil Company, Chicago, Ill. Filed Apr. 6, 1962.



The drawing is lined for red and blue. Owner of Reg. Nos. 434,832, 444,047, and others.
For Asphalt.
First use Feb. 9, 1962; June 9, 1947, in a modified form.

SN 150,315. Minnesota and Ontario Paper Company, Minneapolis, Minn. Filed Oct. 31, 1962.

WOODLITE

For Hardboard.
First use Oct. 29, 1954.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

SN 148,110. United Staple Co., Inc., Long Island City, N.Y. Filed June 29, 1962.

TACK-O-MATIC

Owner of Reg. No. 684,639.
For Staplers.
First use Apr. 13, 1962.

Class 14—Metals and Metal Castings and Forgings

SN 128,689. Strategic Materials Corporation, New York, N.Y. Filed Sept. 26, 1961.



The word "Strategic" is disclaimed.
For Ferrous Metal Products—Namely, Pig Iron; Iron; Steels Including Semi-Steels, Stainless Steels and Heat Resistant Steels; and Ferroalloys.
First use at least as early as July 18, 1961.

SN 142,517. R. Lavin & Sons, Inc., Chicago, Ill. Filed Apr. 18, 1962.

CS-2700

For Aluminum and Aluminum Alloys in Case and Wrought Shapes, Particularly Ingots for Remelting.
First use Feb. 15, 1962.

SN 152,295. Crucible Steel Company of America, Pittsburgh, Pa. Filed Aug. 31, 1962.

4-E

For Drill Steels, Including Rods and Bars.
First use September 1956.

Class 15—Oils and Greases

SN 141,681. The American Oil Company, Chicago, Ill. Filed Apr. 6, 1962.



Owner of Reg. Nos. 434,832, 444,047, and others.
For Automotive, Aviation, Heating and Industrial Fuels and Additives Therefor; Motor Oils; Automotive Lubricants;

Industrial and Railway Car Lubricating Oils and Greases; Metal Working Lubricants; Industrial Mineral Wax Petrolatums and White Oils; Naphtha, Household Oil, Mineral Spirits, Stoddart Solvent, and Oleum Spirits.
First use Oct. 8, 1959; Jan. 10, 1946, on lubricating oils in a modified form.

SN 141,685. The American Oil Company, Chicago, Ill. Filed Apr. 6, 1962.



The drawing is lined for red and blue. Owner of Reg. Nos. 434,832, 444,047, and others.
For Automotive, Aviation, Heating and Industrial Fuels and Additives Therefor; Motor Oils; Automotive Lubricants; Industrial and Railway Car Lubricating Oils and Greases; Metal Working Lubricants; Industrial Mineral Wax Petrolatums and White Oils; Naphtha, Household Oil, Mineral Spirits, Stoddart Solvent, and Oleum Spirits.
First use Oct. 8, 1959; Jan. 10, 1946, on lubricating oils in a modified form.

Class 16—Protective and Decorative Coatings

SN 134,271. Rutland Fire Clay Company, Rutland, Vt. Filed Dec. 18, 1961.

THANE

For Interior and Exterior Finish.
First use Nov. 7, 1961.
Subj. to Intf. with SN 146,315.

SN 152,871. Amway Sales Corporation, Ada, Mich. Filed Sept. 4, 1962.

AMWAY

For Protective and Decorative Coatings—Namely, an Anti-Soil Coating Material for Rugs, Upholstery, Painted Surfaces and Draperies.
First use Oct. 12, 1961.

SN 152,670. Ball Chemical Company, Glenshaw, Pa. Filed Sept. 7, 1962.

ALMET

For Aluminum Paint.
First use May 3, 1937.

SN 153,686. Sears, Roebuck and Co., Chicago, Ill. Filed Sept. 21, 1962.

DECOR-EZE

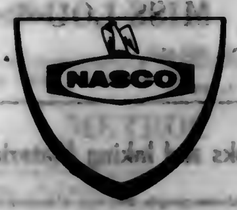
For Interior and Exterior Paint and Roofing Coating.
First use Aug. 22, 1956.

SN 154,396. Bird & Son, Inc., East Walpole, Mass. Filed Oct. 3, 1962.

NEPOLON

For Liquid Elastomeric or Plastic Protective Waterproofing Coatings for Roofs and Walls.
First use July 26, 1962.

SN 155,271. National Solvent Corporation, Cleveland, Ohio. Filed Oct. 16, 1962.



For Paint, Shellac and Lacquer Thinner, Paint and Varnish Remover, Turpentine and Linseed Oil, and Creosote.
First use Dec. 31, 1934.

SN 159,251. Macmillan Ring-Free Oil Co., Inc., New York, N.Y. Filed Dec. 17, 1962.



Owner of Reg. Nos. 249,592, 731,744, and others.
For Protective Coating Compositions for Application to Asphalt, Concrete and Similar Surfaces; General Purpose Sealer, Waterproofing Material and Protective Coating Composition for General Industrial Uses; Metal Enamel; Protective Coating Material for Use as a Protective Seal and Parting Medium for Application to Forms, Equipment, and Other Working Areas; and Undercoating Material for Protecting Automobiles and Other Machinery and Equipment Against Corrosion and Rust.
First use June 24, 1929; Oct. 10, 1961, as to "Weather Gard."

Class 17—Tobacco Products

SN 144,622. MacAndrews and Forbes Company, Camden, N.J. Filed May 15, 1962.

SHIP BRAND

Applicant makes no claim to the word "Brand" apart from the mark as shown. Owner of Reg. No. 84,018.
For Licorice Extract Used as a Flavoring and Conditioning Agent for Tobacco.
First use in the year 1906.

Class 18—Medicines and Pharmaceutical Preparations

SN 143,299. The Upjohn Company, Kalamazoo, Mich. Filed Apr. 27, 1962.

ORASTAT

For Gonadal Hormone Preparation.
First use Feb. 15, 1962.

SN 144,610. Farbenfabriken Bayer Aktiengesellschaft, Leverkusen-Bayerwerk, Germany. Filed May 15, 1962.

BADIONAL

Owner of German Reg. No. 470,912, dated Nov. 23, 1934.
For Chemotherapeutic Agents for Humans and Animals.

SN 151,084. A. E. Staley Manufacturing Company, Decatur, Ill. Filed Aug. 13, 1962.



Owner of Reg. Nos. 518,119, 407,381, and 578,740.
For Corn Starch for Use in Medicines and Pharmaceutical Preparations.
First use Apr. 6, 1962.

SN 152,055. J. E. Eichelberger, d.b.a. Home Health Equipment Co., Pekin, Ill. Filed Aug. 28, 1962.

EMLYD COMPOUND

The word "Compound" is disclaimed apart from the mark as shown.
For Tonic—Namely, a Dietary Food Supplement Consisting Essentially of Vitamins and Minerals.
First use Aug. 19, 1962.

SN 152,090. Earl W. Rahn, d.b.a. E. W. Rahn, Cleveland, Ohio. Filed Aug. 28, 1962.



The figure in the drawing is fanciful.
For Pharmaceutical Preparations for the Treatment of Hay Fever, Asthma, Nasal Catarrh, Head Colds, and Bronchial and Throat Irritations.
First use October 1922.

SN 154,153. Reed & Carnrick, Kenilworth, N.J. Filed Sept. 28, 1962.

ANTHRYL

For Ointment for the Treatment of Psoriatic Lesions.
First use on or about May 1, 1962.

SN 154,213. Dalin Pharmaceuticals, Inc., Bayside, N.Y. Filed Oct. 1, 1962.

SORBUTUSS

For Suppressant for the Relief of Cough Due to Colds.
First use Apr. 18, 1962.

SN 154,315. Lawrence H. Davis, d.b.a. L. H. Davis Co., Los Angeles, Calif. Filed Oct. 1, 1962.

COMEDO

For Medical Ointment To Be Used in the Treatment of Acne, Blackheads, Milia, and Skin Blemishes.
First use Nov. 1, 1960.

SN 154,270. Parke, Davis & Company, Detroit, Mich. Filed Oct. 1, 1962.

NORLANTHATE

Owner of Reg. Nos. 660,731 and 709,261.
For Progestational Agent.
First use on or before July 13, 1962.

SN 154,295. American Scientific Laboratories, Inc., Madison, Wis. Filed Oct. 3, 1962.

SINGLVAX

For Vaccine for Chickens and Turkeys Against Newcastle Disease.
First use Mar. 13, 1962.

SN 154,434. Chas. Pfizer & Co., Inc., New York, N.Y. Filed Oct. 3, 1962.

MITHRACIN

For Antibiotic Preparation.
First use Sept. 13, 1962.

SN 154,518. Savage Laboratories, Inc., Houston, Tex. Filed Oct. 4, 1962.

SAVADERM

For Topical Aerosol Burn Medication.
First use Aug. 21, 1962.

SN 154,659. Winston Pharmaceuticals, Incorporated, Winston-Salem, N.C. Filed Oct. 5, 1962.

FETINIC

For Pharmaceutical Preparation To Be Used as a Hemitinic in Iron Deficiency Anemia.
First use June 20, 1962.

SN 154,660. Winston Pharmaceuticals, Incorporated, Winston-Salem, N.C. Filed Oct. 5, 1962.

NIALENE

For Pharmaceutical Preparation To Be Used as a Mild Cerebral Stimulant and Vasodilator.
First use June 13, 1962.

SN 154,661. Winston Pharmaceuticals, Incorporated, Winston-Salem, N.C. Filed Oct. 5, 1962.

EXOPIN

For Pharmaceutical Preparation To Be Used as an Anthelmintic for the Treatment of Roundworms and Pinworms.
First use June 20, 1962.

SN 154,758. Olin Mathieson Chemical Corporation, New York, N.Y. Filed Oct. 8, 1962.

ANATENSOL

For Central Nervous System Depressant Preparations.
First use Apr. 21, 1960.

SN 154,763. The Pfeiffer Co., St. Louis, Mo. Filed Oct. 6, 1962.

TYCOLENE

Owner of Reg. No. 671,425.
For Pediatric Cold Preparation.
First use Sept. 27, 1962.

SN 154,814. Farbenfabriken Bayer Aktiengesellschaft, Leverkusen-Bayerwerk, Germany. Filed Oct. 9, 1962.

MYCRAS

Owner of German Reg. No. 762,059, dated June 1, 1962.
For Chemotherapeutic Agents.

SN 154,837. Parke, Davis & Company, Detroit, Mich. Filed Oct. 9, 1962.

ARLEF

For Anti-Arthritic Preparation.
First use on or before Sept. 14, 1962.

SN 154,889. Cutter Laboratories, Inc., Berkeley, Calif. Filed Oct. 10, 1962.

PERGONAL

For Hormonal Preparation Used in the Treatment of Human Endocrine Conditions.
First use on or before Jan. 1, 1962.

SN 154,923. Philips Roxane, Inc., New York, N.Y. Filed Oct. 10, 1962.

ACUTUSS

For Expectorants in Liquid and Tablet Forms.
First use Aug. 31, 1962.

SN 154,957. Colorcon, Inc., Ambler, Pa. Filed Oct. 11, 1962.

OPALUX

For Color Coating for Pharmaceuticals.
First use Nov. 16, 1962.

SN 154,991. Chas. Pfizer & Co., Inc., New York, N.Y. Filed Oct. 11, 1962.

HEXA-GLO

For Anthelmintic Preparation for Animal Use.
First use in or before 1945.

SN 154,993. Chas. Pfizer & Co., Inc., New York, N.Y. Filed Oct. 11, 1962.

PET-GLO

For Vitamin Mineral Preparation for Household Pets.
First use in or before September 1956.

SN 154,996. Chas. Pfizer & Co., Inc., New York, N.Y. Filed Oct. 11, 1962.

PICK-GLO

For Preparation for Controlling Cannibalism in Poultry.
First use in or before 1944.

SN 154,999. Chas. Pfizer & Co., Inc., New York, N.Y. Filed Oct. 11, 1962.

A-B-C

For Antiseptic Blood-Clotting Preparation for Animal Use.
First use in or before 1944.

SN 155,000. Chas. Pfizer & Co., Inc., New York, N.Y. Filed Oct. 11, 1962.

CAL-D-MAG

For Veterinary Preparation Containing Calcium, Dextrose, and Magnesium.
First use Jan. 9, 1959.

SN 155,002. Chas. Pfizer & Co., Inc., New York, N.Y. Filed Oct. 11, 1962.

CAMPHOIL

For Stimulant for Use in Animals.
First use in or before July 1934.

SN 155,006. Chas. Pfizer & Co., Inc., New York, N.Y. Filed Oct. 11, 1962.

GLO-STREP

For Antibiotic Preparation for Veterinary Use.
First use Jan. 3, 1958.

SN 155,008. Chas. Pfizer & Co., Inc., New York, N.Y. Filed Oct. 11, 1962.

GLO-BESTROL

For Veterinary Hormone Preparation.
First use in or before October 1951.

SN 155,030. The Upjohn Company, Kalamazoo, Mich. Filed Oct. 11, 1962.

VERAGEN

For Gonadal Hormone Preparation.
First use Aug. 24, 1962.

SN 155,088. Merck & Co., Inc., Rahway, N.J. Filed Oct. 12, 1962.

REDISOL-H

Owner of Reg. No. 565,948.
For Vitamin Preparation for Use in the Prevention and Treatment of Metabolic Deficiencies.
First use Oct. 2, 1962.

SN 155,133. Bristol-Myers Company, New York, N.Y. Filed Oct. 15, 1962.

NOTOMYCIN

For Antibiotic Pharmaceutical Preparation.
First use July 26, 1962.

SN 155,140. Ellison Laboratories, Inc., Westbury, N.Y. Filed Oct. 15, 1962.

ORA-ZONE

For Preparation for the Relief of Denture Irritation, Toothache, and Neuralgia.
First use Oct. 1, 1962.

SN 155,152. Herald Pharmacal, Inc., Wake Forest, N.C. Filed Oct. 15, 1962.

MĀPO

For Emollient Antipruritic Oil.
First use Oct. 8, 1962.

SN 155,170. Merck & Co., Inc., Rahway, N.J. Filed Oct. 15, 1962.

ADENOVAX

For Antigenic Preparation for Use in the Prevention and Treatment of Respiratory Diseases.
First use Oct. 2, 1962.

SN 155,212. Unimed, Inc., Morristown, N.J. Filed Oct. 15, 1962.

ZOPATE

For Composition for Postpartum Uterine Atony.
First use Sept. 11, 1962.

SN 155,230. Blessings, Inc., Cleveland, Ohio. Filed Oct. 16, 1962.

CHLORASEC

For Sedative Drug.
First use Dec. 20, 1961.

SN 155,231. Blessings, Inc., Cleveland, Ohio. Filed Oct. 16, 1962.

DRICLOR

For Sedative Drug.
First use Dec. 20, 1961.

SN 155,458. Vitamix Pharmaceuticals, Inc., Philadelphia, Pa. Filed Oct. 18, 1962.

TIPPIES

For Pharmaceutical Preparation for Correction of Splitting, Peeling, Breaking, and Chipping Fingernails.
First use Sept. 19, 1962.

SN 155,558. Biorex Laboratories Limited, London, England. Filed Oct. 22, 1962.

BIOGASTRONE

Owner of British Reg. No. 800,613, dated Jan. 21, 1960.
For Pharmaceutical Preparations and Substances All for Treating Ailments of the Stomach.

SN 155,593. Endo Laboratories Inc., Richmond Hill, N.Y. Filed Oct. 22, 1962.

FILGANE

For Medicinal Preparation Used as an Appetite Depressant.
First use Aug. 15, 1962.

SN 155,759. Testagar & Co., Inc., Detroit, Mich. Filed Oct. 23, 1962.

RENELATE

For Pharmaceutical Preparation Having Urinary Antiseptic and Germicide Properties.
First use on or about June 15, 1962.

SN 155,780. The Chattanooga Medicine Company, d.b.a. Chattem Laboratories, Chattanooga, Tenn. Filed Oct. 24, 1962.

CONTRASOR

For Pharmaceutical Preparation for the Treatment of Psoriasis.
First use Sept. 12, 1962.

SN 155,876. American Home Products Corporation, New York, N.Y. Filed Oct. 25, 1962.

UNIPEN

For Penicillin Preparation.
First use Oct. 3, 1962.

SN 155,877. American Home Products Corporation, New York, N.Y. Filed Oct. 25, 1962.

OMNIPEN

For Penicillin Preparation.
First use Aug. 6, 1962.

SN 155,960. American Cyanamid Company, Wayne, N.J. Filed Oct. 26, 1962.

PATHINOX

Owner of Reg. Nos. 580,827, 659,523, and 661,295.
For Anticholinergic Preparation.
First use Oct. 12, 1962.

SN 156,534. The Upjohn Company, Kalamazoo, Mich. Filed Nov. 2, 1962.

PROMONE

For Hormonal Preparation for Veterinary Use.
First use June 19, 1962.

SN 156,722. Ciba Limited, Basel, Switzerland. Filed Nov. 6, 1962.

LOCORTEN

Owner of Swiss Reg. No. 190,192, dated Jan. 31, 1962.
For Corticosteroid Preparation.

SN 156,747. Lakeside Laboratories, Inc., Milwaukee, Wis. Filed Nov. 6, 1962.

IRCON-PLUS

Owner of Reg. No. 149,396.
For Anti-Anemic Medication To Treat Iron and Vitamin Deficiency.
First use June 15, 1962.

SN 156,037. Byk-Gulden Lomberg Chemische Fabrik GmbH, Konstanz, Germany. Filed Nov. 9, 1962.

SPEDA

Owner of German Reg. No. 703,414, dated June 13, 1957.
For Medicines and Pharmaceutical Preparations—Namely, Sedatives and Hypnotics.

Class 19—Vehicles

SN 123,044. The Stewart Coach Industries, Inc., Bristol, Ind. Filed June 28, 1961.

GARDNER

For House Trailers.
First use Aug. 26, 1955.

SN 123,395. The Stewart Coach Industries, Inc., Bristol, Ind. Filed June 28, 1961.

STEWART

For House Trailers.
First use in 1945.

SN 129,447. American Motor Scooter Corporation, New York, N.Y. Filed Oct. 9, 1961.

CENTAUR

For Motor Scooter.
First use Aug. 21, 1961.

SN 136,927. The Sierracin Corporation, Burbank, Calif. Filed Jan. 30, 1962.

SIERRAGLO

For Electroluminescent Panels for Aircraft Instruments.
First use Feb. 12, 1959.

SN 149,216. Service Cycle Supply Corporation, d.b.a. Reynolds Cycle Products, Woodside, N.Y. Filed July 17, 1962.

REYNOLDS

Owner of Reg. No. 583,020.
For Bicycles and Component Parts Thereof Including the Following Accessories Thereto, Mirrors, Reflectors, Pedal Blocks, Touring Bags, Training Wheels, Bells, Bulb Horns, Carriers, and Mudguard Flaps.
First use July 1, 1961.

SN 152,178. Victor Mobile Homes, Inc., Bonham, Tex. Filed Aug. 29, 1962.

VICTOR

For Mobile Homes and Travel Trailers.
First use on or about Jan. 9, 1948.

Class 20—Linoleum and Oiled Cloth

SN 144,940. Crofton Plastics, Inc., Byron Center, Mich. Filed May 18, 1962.

CROFTONITE

For Plastic Sheet Material, Particularly Laminated Plastic Wall Covering Materials.
First use Sept. 18, 1961.

Class 21—Electrical Apparatus, Machines, and Supplies

SN 116,719. Futronics, Incorporated, Greensboro, N. C. Filed Mar. 29, 1961.

FUTRONICS

For Electronic Data Processing Control Panels.
First use in November 1960.
Subj. to Intf. with SN 121,143.

SN 121,143. Swartzlander Radio Limited, Fremont, Ohio. Filed May 31, 1961.

FUTRONIC

The horisontal lining appearing in the drawing is for the color blue.
For Radio and Electronic Equipment, Two-Way Radio Communication Systems, Television Equipment, and Electronic Components for Audio Systems.
First use in May 1960.
Subj. to Intf. with SN 116,719.

SN 126,459. Lip Societe Anonyme d'Horlogerie, Besancon, Doubs, France. Filed Aug. 22, 1961.

LIP

Owner of French Reg. No. 2,506, dated June 22, 1960 (Doubs); Natl. Inst. No. 148,424.
For Electric Motors, Electric Clocks and Parts Thereof, Batteries, Alternators, Generators, Electric Switches, Coils, Resistors, Capacitors, Electronic Tubes, Transformers, Rectifiers, Relays, Electromagnets, Magnets, Transistors, Electric Light Bulbs, and Di-Electric Insulation.

SN 132,901. Dayton Electric Manufacturing Company, Chicago, Ill. Filed Nov. 28, 1961.

DAYTON

Owner of Reg. Nos. 551,799, 553,605, and 565,625.
For Electric Motor and Fan Motor Controls—Namely, Magnetic Starters, Control Switches, Reversing Switches, and Multiple Speed Switches; Electric Control Switches; Electric Transformers; Electric Power Plants and Generators; Rheostats and Foot Switches; Electric Cord Sets Including Cords, Extension Cords and Multiple Conductor Cords; Soldering Guns and Kits; Battery Chargers; and Arc Welders.
First use in July 1939 on electric control switches.

SN 144,155. Electric Machinery Mfg. Company, Minneapolis, Minn. Filed May 9, 1962.

SA-FUSE

For Alternating-Current Motor Controls.
First use Sept. 21, 1956.

SN 148,284. Allied Research Products Incorporated, Baltimore, Md. Filed July 3, 1962.

Owner of Reg. No. 724,663.
For Electrically Operated Equipment for Metal Finishing—Namely, Rectifiers.
First use Feb. 1, 1958.

Class 22—Games, Toys, and Sporting Goods

SN 96,269. L. N. Schwartz & Sons, Inc., Philadelphia, Pa. Filed May 2, 1960.

SPORT MASTER

Owner of Reg. No. 421,832.
For Ice Skates, and Ice Skating Outfits—Namely, Shoes With Ice Skates Attached.
First use Aug. 13, 1958.
Subj. to Intf. with SN 102,081.

SN 121,107. Langfelder, Homma & Carroll, Inc., New York, N.Y. Filed May 31, 1961.

LANGCRAFT

For Toys—Namely, Stuffed Animals, Cloth Dolls, Metal Cars and Trucks, Battery-Operated Toy Boats, Toy Fishing Sets, Toy Telescopes and China Toy Tea Sets; and Sporting Goods—Namely, Baseball Gloves, Badminton Sets and Table Tennis Sets.
First use Sept. 18, 1957.

SN 134,280. George D. Smith, New York, N.Y. Filed Dec. 18, 1961.

SKILLWAY

For Equipment Sold as Units for Playing Board, Card, Number, Alphabet, Word, and/or Similar Type Parlor Games.
First use Dec. 7, 1961.

SN 137,804. Scientific Industries, Inc., Glendale, Calif. Filed Feb. 12, 1962.

PLAYALONG

For Toy Musical Instruments.
First use Jan. 23, 1962.

SN 138,233. St. Lawrence Sales Incorporated, Birmingham, Mich. Filed Feb. 19, 1962.

FIGURE

For Snow Skis.
First use Jan. 8, 1962.

SN 139,801. James F. Walsh, Jr., Maryd, Pa. Filed Mar. 13, 1962.

Hobby Hoop

The representation of the boy on the drawing is not that of any known person.
For Toy Hoop or Ring and a Guide Regulator Therefor.
First use Feb. 13, 1962.

SN 144,043. Milton Bradley Company, Springfield, Mass. Filed May 8, 1962.

BOOB TUBE

The term "Tube" is disclaimed.
For Game Device Comprising a Compartmentalized Tube, Each of the Compartments of the Tube Being Interconnected, and a Plurality of Playing Pieces Within the Tube Adapted To Be Moved From One Compartment to Another as the Tube Is Moved.
First use Feb. 3, 1962.

SN 144,487. Dimco-Gray Company, Dayton, Ohio. Filed May 14, 1962.

FREEGLIDE

Owner of Reg. No. 651,692.
For Shuffleboard Equipment.
First use in 1940.

SN 145,356. The A. C. Gilbert Company, New Haven, Conn. Filed May 24, 1962.

WHICH LANE? CHICANE

For Model and Toy Race Sets—Namely, Pseudo Roadways and Cars and Accessories Therefor.
First use Apr. 4, 1962.

SN 145,357. The A. C. Gilbert Company, New Haven, Conn. Filed May 24, 1962.

AMERICAN FLYER

Owner of Reg. No. 238,802.
For Model and Toy Airplanes and Accessories Therefor.
First use Apr. 9, 1962.

SN 147,150. Richard L. Reinoehl, Shillington, Pa. Filed June 18, 1962.

FUTURAMA

For Bowling Scoring Cards, and Playing Cards for Card, Board and/or Parlor Games.
First use Apr. 20, 1962.

SN 149,234. Wilson Sporting Goods Co., River Grove, Ill. Filed July 17, 1962.

SHOT MAKER

For Golf Clubs.
First use Sept. 12, 1958.

SN 149,882. Space Needle Corporation, Seattle, Wash. Filed July 26, 1962.

SPACE NEEDLE

For Toy Kits.
First use May 21, 1962.

SN 149,941. Louis Marx & Co., Inc., New York, N.Y. Filed July 27, 1962.

BIG BRUISER

For Toy Trucks.
First use Apr. 25, 1962.

SN 150,902. Wilson Sporting Goods Co., River Grove, Ill. Filed Aug. 9, 1962.

CLIMA/GARD

For Golf Clubs.
First use July 2, 1962.

SN 151,252. Puritan Cordage Mills, Louisville, Ky. Filed Aug. 15, 1962.

ARLINGTON

For Water Ski Tow Ropes and Harness Including Floats, Tow Bars, and Splicing Fids.
First use Jan. 11, 1962.

SN 151,419. Louis Marx & Co., Inc., New York, N.Y. Filed Aug. 17, 1962.

DINGAROO

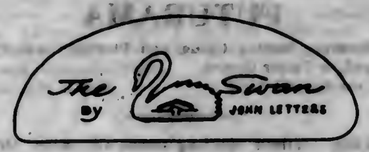
For Bagatelle Game.
First use Apr. 27, 1962.

SN 151,977. Mattel, Inc., Hawthorne, Calif. Filed Aug. 27, 1962.

MATTEL

Owner of Reg. No. 635,129.
For Card, Board, and Parlor Games, and Toys—Namely, Music Boxes, Pull Toys, Music Maker Books, Ge-Tars and Ukes, and Dolls.
First use on or about Mar. 15, 1961.

SN 155,220. John Letters and Company Limited, Glasgow, Scotland. Filed Dec. 11, 1961.



Priority claimed under Sec. 44(d) on British Reg. No. 826,333, dated Oct. 14, 1961. The name "John Letters" refers to a deceased individual.
For Golf Clubs and Parts of Golf Clubs.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

SN 114,045. Reed Roller Bit Company, Houston, Tex. Filed Feb. 20, 1961.



The drawing is lined to indicate the color gold.
For Pneumatic Tools.
First use Jan. 6, 1961.

SN 126,460. Lip Societe Anonyme d'Horlogerie, Besancon, Doubs, France. Filed Aug. 22, 1961.

LIP

The word "Lip" is a coined word. Owner of French Reg. No. 2,566, dated June 22, 1960 (Doubs); Natl. Inst. No. 148,424.
For Cutlery, Machinery, and Tools, and Parts Thereof—Namely, Grinding Machines, Milling Machines, Die-Sets, and Oil-Pneumatic Toggle Presses.

SN 130,457. Hemphill Company, Hopedale, Mass. Filed Oct. 23, 1961.

SCOP

For Knitting Machine and Parts Thereof.
First use Sept. 8, 1953.

SN 135,949. Allis-Chalmers Manufacturing Company, West Allis, Wis. Filed Jan. 17, 1962.

SUGAR BABE

For Farm and Industrial Tractors.
First use Oct. 20, 1961.

SN 137,415. Auburn Machine Works, Inc., Auburn, Nebr. Filed Feb. 7, 1962.

AUBURN

For Power Driven Trenching Equipment.
First use Nov. 17, 1948.

SN 139,311. MP Pumps, Inc., Detroit, Mich. Filed Mar. 7, 1962.



The word "Pumps" is disclaimed apart from the mark as shown.
For Rotary Pumps for the Bulk Transfer of Liquids.
First use on or about May 10, 1944.

SN 148,186. Hoffman Brothers Drilling Company, Punxsutawney, Pa. Filed July 2, 1962.

GLACERAM

For Diamond Core Bits Used in Drilling Materials Such as Glass, Ceramics, and Porcelain.
First use on or about Mar. 1, 1960.

SN 148,187. Hoffman Brothers Drilling Company, Punxsutawney, Pa. Filed July 2, 1962.

METORAM

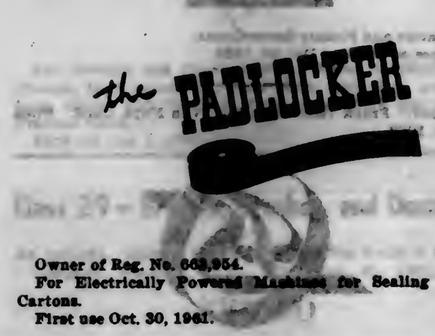
For Diamond Core Bits Used in Drilling Metals and Metallic Materials.
First use on or about June 1, 1960.

SN 148,188. Hoffman Brothers Drilling Company, Punxsutawney, Pa. Filed July 2, 1962.

REFRACTORAM

For Diamond Core Bits Used in Drilling Refractory and Concrete-Like Materials.
First use on or about Sept. 1, 1960.

SN 148,288. Atlantic Gummed Paper Corporation, Brooklyn, N.Y. Filed July 3, 1962.



Owner of Reg. No. 663,954.
For Electrically Powered Machines for Sealing Tape to Cartons.
First use Oct. 30, 1961.

SN 148,433. Swingline Inc., Long Island City, N.Y. Filed July 5, 1962.

43

For Stapling Machines.
First use June 18, 1962.

SN 152,372. Amway Sales Corporation, Ada, Mich. Filed Sept. 4, 1962.

AMWAY

For Fire Extinguishers.
First use Jan. 26, 1962.

SN 157,927. The Red Cross Manufacturing Corporation, Bluffton, Ind. Filed Nov. 28, 1962.

CROSS

For Chain Elevators, Belt Conveyors, Corn Shellers, and Compost Shredders.
First use 1936 on corn shellers.

Class 24—Laundry Appliances and Machines

SN 152,297. The General Industries Company, Elyria, Ohio. Filed Aug. 31, 1962.



Owner of Reg. Nos. 400,923, 429,756, and others.
For Injection and Compression Plastic Molded Parts for Washing Machines and Clothes Dryers.
First use in or about June 1956.

Class 26—Measuring and Scientific Appliances

SN 121,432. Raytheon Company, Waltham, Mass. Filed June 5, 1961.

apelco

For Apparatus—Namely, Direction Finders, and Depth Measuring Devices.
First use in or about August 1946 on direction finders.

SN 126,273. Tom Termohlen, Cedar Rapids, Iowa. Filed Aug. 18, 1961.

HOUSE-O-PROTECTION

For Kits for the Visual Programming of Life Insurance.
First use Aug. 3, 1960.

SN 132,903. Dayton Electric Manufacturing Company, Chicago, Ill. Filed Nov. 28, 1961.

DAYTON

Owner of Reg. Nos. 551,799, 553,605, and 565,625.
For Pressure Control Switches; Float Control Switches; Temperature Control Switches—Namely, Thermostats, Fan Switches and Limit Switches; Time Switches; Electric Volt-Ammeter Instruments; Welders' Helmets and Face Shields.
First use in January 1951 on temperature control switches.

SN 135,354. Walter Heath, d.b.a. Walter Heath Company, Fair Haven, N.J. Filed Jan. 8, 1962.

COMBUSTIMETER

For Instruments Used for the Detection of Combustible Gases.
First use Dec. 29, 1961.

SN 138,259. Radiation Instrument Development Laboratory, Inc., Melrose Park, Ill. Filed Feb. 19, 1962.

RIDL

Owner of Reg. No. 725,944.
For Radiation Detection and Measuring Apparatus.
First use on or before Sept. 22, 1958.

SN 141,247. Borg-Warner Corporation, Chicago, Ill. Filed Apr. 2, 1962.

OMNITRONICS

For Photoelectric Tape Readers and Parts Thereof for Replacement and Repair.
First use on or prior to Nov. 25, 1961.

SN 141,248. Borg-Warner Corporation, Chicago, Ill. Filed Apr. 2, 1962.

OMNI-DATA

For Photoelectric Tape Readers and Parts Thereof for Replacement and Repair.
First use on or prior to Sept. 15, 1961.

SN 141,504. Ditto, Incorporated (Illinois corporation), Chicago, Ill., assignee, by mesne assignment, of Ditto, Incorporated (Delaware corporation), Chicago, Ill. Filed Apr. 4, 1962.



Applicant hereby disclaims the word "Brand" apart from the mark as shown. Owner of Reg. Nos. 127,223, 721,834, and others.
For Materials Having Light Sensitive Coatings Which Are Adapted for Making Various Reproductions Thereon After Suitable Development Thereof, and the Exposure and Development Apparatus Therefor.
First use Mar. 22, 1962.

SN 141,997. Twin City Testing Corp., Tonawanda, N.Y. Filed Apr. 10, 1962.

BETASCOPE

For Thickness Gauges.
First use Mar. 28, 1962.

SN 142,618. Continental Sales Co., Nevada, Iowa. Filed Apr. 16, 1962.

Blend-O-Mixer

For Volume Measuring and Mixing Apparatus Comprising a Machine Adapted To Receive a Plurality of Different Types of Granular Material, Wherein Said Materials Are Blended Together and Then Mixed for Discharge as a Single Mixture.
First use Apr. 9, 1960.

SN 142,994. B. C. Ames Co., Waltham, Mass. Filed Apr. 25, 1962.

ACCU-FLOW

For Gaging Systems and Parts Therefor, Indicator Gages and Gage Recorders for Dimensional and Tolerance Measurements, Checking and Recording.
First use Nov. 11, 1959.

SN 143,753. Oceanic Instruments, Inc., Houghton, Wash. Filed May 3, 1962.



For Marine and Fishery Instruments.
First use on or about Dec. 28, 1961.

SN 148,507. Frank Industries, Inc., Van Nuys, Calif. Filed July 6, 1962.



The trademark is comprised of the initials "IS" in ribbon form surrounded by a circular band crossing ends of the letters.
For Swimming Pool Accessories—Namely, Water Test Sets, Indicator Solutions, and the Like.
First use on or about Aug. 10, 1959.

SN 153,046. William R. Weaver, d.b.a. W. R. Weaver Co., El Paso, Tex. Filed Sept. 12, 1962.



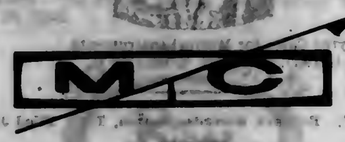
The words "Multi Range Reticle" are disclaimed apart from the mark.
For Firearm Telescope Sight Reticles.
First use Sept. 15, 1960.

SN 153,945. Educational Developmental Laboratories, Inc., Huntington, N.Y. Filed Sept. 26, 1962.

EDL

For Projection Devices and Screens; Scanning Devices (Reading Improvement Devices); Tachistoscopes; Devices for Increasing Speed and Accuracy of Perception; Head Phones; Cameras; Film Strips; Taped Recordings; Records; Rate Motivator and Timing Monitor.
First use in or about 1953.

SN 155,319. Metetelic Corporation, Milford, Conn. Filed Oct. 17, 1962.



For Electric Meters.
First use Aug. 9, 1962.

Class 28 — Jewelry and Precious-Metal Ware

SN 152,393. Charles Frankel, d.b.a. Frankel Company, Brooklyn, N.Y. Filed Sept. 4, 1962.



For Jewelry and Precious Metal Ware, Specifically Gold Charms, Gold Ornaments, Gold Rings, Gold Pins, and Other Gold, Silver and Platinum Ornaments, With and Without Precious Gems.
First use Jan. 1, 1960.

Class 29 — Brooms, Brushes, and Dusters

SN 152,326. Michael H. Ozams, d.b.a. Fine Foods & Products Company, Burbank, Calif. Filed Aug. 31, 1962.

SENNO

For Household Brushes.
First use July 11, 1962.

Class 30 — Crockery, Earthenware, and Porcelain

SN 106,306. Arlen China Company, New York, N.Y. Filed Oct. 13, 1960.



No claim is made for the words "Fine China" apart from the mark. "Nikko" is the Japanese word for "sunshine."
For China Dinnerware.
First use Aug. 26, 1960.

SN 124,816. Joseph C. Hoover, Villanova, Pa. Filed Dec. 28, 1961.

CELEBRITY MUGS

Applicant disclaims the word "Mugs" apart from the mark as shown.
For Ceramic Caricatures in the Form of Mugs or Steins.
First use Mar. 7, 1961.
Subj. to Intf. with SN 137,275.

Class 31 — Filters and Refrigerators

SN 127,688. The Wil-Nes Corporation, New York, N.Y. Filed Sept. 11, 1961.

FILTRIX

For Disposable Super-Activated Charcoal Cartridges for Aquarium Water Filters.
First use Jan. 19, 1958.

SN 134,180. Atchison Industrial Corporation, Fairfax, Va. Filed Dec. 18, 1961.



For Air Filter To Remove Radioactive Materials From the Air To Permit Safe Breathing in Fall-Out Shelters.
First use Nov. 21, 1961.

Class 32 — Furniture and Upholstery

SN 138,265. James Ruben, Silver Spring, Md. Filed Feb. 19, 1962.

DESQUIRE

For Office Furniture.
First use Oct. 25, 1961.

Class 34 — Heating, Lighting, and Ventilating Apparatus

SN 133,888. Sunbeam Lighting Co., Inc., Los Angeles, Calif., assignee, by mesne assignment, of Lighting Dynamics, Inc., City of Industry, Calif. Filed Dec. 5, 1961.

MODU-FLO

For Distributor Outlet Members for Air Conveying Conduit.
First use Mar. 15, 1961.

SN 139,784. Ross-Tacony Crucible Company, Philadelphia, Pa. Filed Mar. 13, 1962.

KEYLOCK

For Graphite Stoppers for Use in Containers for Molten Metal.
First use Dec. 15, 1961.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

SN 157,504. E. F. Houghton & Co., Philadelphia, Pa. Filed Nov. 19, 1962.

REKSYN

For Pneumatic and Hydraulic Packings.
First use Nov. 1, 1962.

SN 158,529. The B. F. Goodrich Company, Akron, Ohio. Filed Dec. 5, 1962.

POWER CURVE

For Pneumatic Tires.
First use November 1949.

Class 36 — Musical Instruments and Supplies

SN 141,247. Borg-Warner Corporation, Chicago, Ill. Filed Apr. 2, 1962.

OMNITRONICS

For Tape Reelers and Tape Recorders and Parts Thereof for Replacement and Repair.
First use on or prior to Nov. 25, 1961.

SN 141,248. Borg-Warner Corporation, Chicago, Ill. Filed Apr. 2, 1962.

OMNI-DATA

For Tape Reelers and Tape Recorders and Parts Thereof for Replacement and Repair.
First use on or prior to Sept. 15, 1961.

SN 143,508. Clarence B. Brown, d.b.a. C.B. & Co., and as Lingua-Musica, Minneapolis, Minn. Filed May 1, 1962.



The drawing is lined for silver but color is not claimed.
For Phonograph Records.
First use May 14, 1958.

SN 143,509. Clarence B. Brown, d.b.a. C.B. & Co., and as Lingua-Musica, Minneapolis, Minn. Filed May 1, 1962.



The drawing is lined for silver but color is not claimed.
For Phonograph Records.
First use December 1959.

SN 143,592. Vincent Bach Corporation, Mount Vernon, N.Y. Filed May 2, 1962.



For Carrying Cases for Musical Instruments.
First use in 1937.

SN 161,297. Bismark Records, Denton, Tex. Filed Jan. 24, 1963.

BISMARK

For Phonograph Records.
First use Jan. 15, 1963.

Class 37 — Paper and Stationery

SN 100,657. The Sweets Company of America, Incorporated, d.b.a. The Sweets Company of America, Inc., Hoboken, N.J. Filed July 11, 1960.

BEST LICK ON A STICK

For Wrappers for Ice Cream Bars.
First use on or about May 26, 1960.

SN 141,435. Gulf States Paper Corporation, Tuscaloosa, Ala. Filed Apr. 3, 1962.



For Solid Bleached Sulphate Board.
First use Mar. 12, 1962.

SN 142,841. National Tea Co., Chicago, Ill. Filed Apr. 16, 1962.

Easy4Life

For Aluminum Foil Used as a Wrapper.
First use Dec. 29, 1961.

SN 143,098. The Birge Company, Inc., Buffalo, N.Y. Filed Apr. 26, 1962.



The words "Background Beauty by" are disclaimed apart from the mark as shown.
For Wallpaper.
First use on or about Jan. 15, 1962.

SN 145,332. Coated Products, Inc., Middlesex, N.J. Filed May 24, 1962.



The words "Pressure Sensitive Products" are disclaimed apart from the mark as shown.
For Blank Labels.
First use June 23, 1959.
Subj. to Intf. with SN 128,475, SN 133,204, and SN 145,333.

SN 146,625. Industrial Consulting & Design Service, Scotch Plains, N.J. Filed June 11, 1962.

SYMBEX

For Printed Stripe With Symbols Thereon for Mounting on Drawings in the Preparation Thereof.
First use May 28, 1962.

SN 148,093. Sperry Rand Corporation, New York, N.Y. Filed June 29, 1962.

TWINPAKT

For Paper Fasteners.
First use Aug. 15, 1959.

SN 150,508. Bergstrom Paper Company, Neenah, Wis. Filed Aug. 6, 1962.

THOR COTE

No claim is made to "Cote" apart from the mark as shown.
Owner of Reg. No. 180,282.
For Offset Paper Surface Sized.
First use Apr. 20, 1962.

SN 151,067. Ross A. Sussman, Minneapolis, Minn. Filed Aug. 13, 1962.

LAWDEX

For Snap-Out Form for Organizing Files in Law Offices.
First use June 1, 1962.

SN 153,581. Ludlow Corporation, Needham Heights, Mass. Filed Sept. 20, 1962.

POLYPRIME

For Polymer Coated, Printable and Glueable Paperboard.
First use prior to Mar. 1, 1962.

SN 153,668. Milprint, Inc., Milwaukee, Wis. Filed Sept. 21, 1962.

NEALAM

For Plastic Film Packaging Material.
First use Apr. 21, 1962.

SN 153,733. Butler Paper Corporations, Chicago, Ill. Filed Sept. 24, 1962.

XLO

Owner of Reg. No. 177,978.
For Envelopes and Paper for Making Envelopes, Bond, Mimeograph, Duplicator, Tablet Paper.
First use 1910 on envelopes and paper for making envelopes.

SN 153,770. Kimberly-Clark Corporation, Neenah, Wis. Filed Sept. 24, 1962.

BM•T

Owner of Reg. No. 616,009.
For Printing and Writing Papers, Envelopes, Corrugated Paper, Wrapping Paper, Paper Sealing Tape, Wax Paper, Crepe Paper, Industrial Wadding, and Absorbent Paper Suitable for Hygenic, Cosmetic, and Cleaning Purposes.
First use Aug. 23, 1962.

Class 38 — Prints and Publications

SN 115,264. Leo Shull Publications, Inc., New York, N.Y. Filed Mar. 9, 1961.

SHOW BUSINESS

For Newspaper About the Entertainment Industry.
First use on or about June 8, 1948.

SN 130,164. Alves Photo Service, Inc., d.b.a. Coast-T-Coast Photo, Braintree, Mass. Filed Oct. 18, 1961.

COAST-T-COAST

For Photographic Prints.
First use in May 1961.

SN 133,695. No. 1-A District Agricultural Association of the State of California, San Francisco, Calif. Filed Dec. 8, 1961.

COW PALACE

For Publications Printed From Time to Time Pertaining to the Events and Schedule of Events of Applicant and Data and Information Pertaining to Exhibitors and Contestants Scheduled in Behalf of Applicant.
First use Aug. 1, 1961; about November 1941 in another style.

SN 139,035. Cambridge Associates, Inc., Boston, Mass. Filed Mar. 5, 1962.

EXEC-U-SCOPE

For Periodical Publication in the Form of a Newsletter Concerning Business Matters.
First use in April 1961.

SN 139,820. Breskin Publications, Inc., New York, N.Y. Filed Mar. 14, 1962.

MP

Owner of Reg. No. 412,237.
For Periodical Publications Relating to the Field of Packaging—Namely, a Monthly Magazine and an Annual Encyclopedia.
First use February 1961.

SN 141,143. American Liberty Foundation, Winter Park, Fla. Filed Mar. 28, 1962.

Back Stage

For Monthly Newsletter.
First use Mar. 12, 1962.

SN 142,665. Hartford Publications, Inc., New York, N.Y., assignee of USA 1 Incorporated, New York, N.Y. Filed Apr. 19, 1962.

USA 1

For Monthly Magazine.
First use Apr. 7, 1962.

SN 145,333. Coated Products, Inc., Middlesex, N.J. Filed May 24, 1962.

STIXIES
pressure sensitive products

The words "Pressure Sensitive Products" are disclaimed apart from the mark as shown.
For Printed Labels.
First use June 23, 1959.
Subj. to Intf. with SN 128,475, SN 133,204, and SN 145,822.

SN 148,021. Gerardine Ogilby Evans, d.b.a. Gae's Originals, Briarcliff Manor, N.Y. Filed June 29, 1962.

TWIS-CARDS

For Gift and Greeting Cards.
First use 1959.

SN 149,028. Ward's Natural Science Establishment, Inc., Rochester, N.Y. Filed July 12, 1962.

Biorama

For Wall Charts.
First use Mar. 26, 1962.

SN 150,988. Stanley Abramovitz, New York, N.Y. Filed Aug. 13, 1962.

THERAPLAY

For Magazine.
First use June 21, 1962.

SN 155,582. Collins Radio Company, Cedar Rapids, Iowa. Filed Oct. 22, 1962.

COLLINS

Owner of Reg. Nos. 524,287, 738,163, and others.
For Instruction Books, Descriptive Specifications, Engineering Proposals, Engineering Reports, Interim Development Reports, and Company Magazines.
First use Aug. 25, 1961; Mar. 15, 1933, as to "Collins."

Class 40—Fancy Goods, Furnishings, and Notions

SN 149,924. John Dritz & Sons, Inc., Spartanburg, S.C. Filed July 27, 1962.

DE LUXE GOLDEN LINE

For Dressmakers' Kits for Making Belts.
First use May 25, 1962.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 142,583. Ack-Ti-Lining, Inc., New York, N.Y. Filed Apr. 19, 1962.

ACK-TION

Owner of Reg. No. 631,397.
For Tie Lining Material and Cut Tie Lining Material.
First use Feb. 16, 1962.

Class 44—Dental, Medical, and Surgical Appliances

SN 132,924. Kas Heating Products, Inc., New York, N.Y. Filed Nov. 28, 1961.

ThermoCap

For Electric Heating Pads for Hair Conditioning.
First use Jan. 15, 1961.

SN 145,992. Aero Engineering Laboratories, Inc., Bloomington, Ill. Filed June 4, 1962.

AERO-SPA

For Hydromassage Apparatus.
First use Mar. 1, 1962.

Class 45—Soft Drinks and Carbonated Waters

SN 118,124. Apollinaris Brunnen A.G., Bad Neuenahr, Germany. Filed Apr. 19, 1961.



Owner of German Reg. No. 720,281, dated Dec. 10, 1958; and U.S. Reg. No. 733,887.
For Fruit-Flavored Drinks—Namely, Lemonades, Orangeades and Limeades; and Mineral Water.

SN 119,743. Bireley's Inc., Bensenville, Ill. Filed May 11, 1961.

Happifies Thirst

For Carbonated Soft Drinks.
First use Jan. 1, 1961.

SN 136,882. Thomas Carvel, Yonkers, N.Y. Filed Jan. 30, 1962.

Carvel Cola

Applicant disclaims the word "Cola" apart from the mark as shown. Owner of Reg. Nos. 597,727, 729,798, and others.
For Cola Flavored Soft Drinks.
First use in June 1958.

SN 142,235. The Miller-Becker Company, d.b.a. Cotton Club Bottling Company, Cleveland, Ohio. Filed Apr. 16, 1962.

COTTON CLUB

The drawing is lined for red and blue. Owner of Reg. Nos. 311,830, 620,857, and others.
For Carbonated Beverages Used as Soft Drinks, and as Mixers.
First use Mar. 5, 1962; Dec. 1, 1939, in another style.

SN 142,816. Herschi N.V., Hoensbroek, Netherlands. Filed Apr. 23, 1962.



Applicant disclaims any exclusive right in the word "Fresh," apart from the mark as shown. The lining in the drawing is a part of the mark and does not represent color.
Owner of Dutch Reg. No. 127,278, dated Feb. 15, 1957.
For Soft Drinks.

SN 151,071. Nestor Machado Rovira, d.b.a. Cawy Bottling Co., Miami, Fla. Filed Aug. 13, 1962.

CAWY

For Carbonated Soft Drinks.
First use Sept. 21, 1946.

SN 155,455. Virginia Dare Extract Co. Inc., Brooklyn, N.Y. Filed Oct. 18, 1962.

MONTE CRISTO

For Syrups, Concentrates and Emulsions for the Preparation of Maltless Soft Drinks.
First use May 1, 1921.

Class 46—Foods and Ingredients of Foods

SN 117,422. Penn Dairies, Inc., Lancaster, Pa. Filed Apr. 6, 1961.

LADY PENN

For Ice Cream of Different Flavors.
First use on or about Mar. 31, 1961.

SN 122,848. Sherman Poultry Industries, Gardena, Calif. Filed June 26, 1961.

TENDER GOLD
THE "QUEEN"

The word "Tender" is disclaimed apart from the mark shown in the drawing. No claim of exclusive right is made to the representation of the chicken except as a part of the mark as a whole. Owner of Reg. No. 739,095.
For Refrigerated and Fresh Dressed Chicken.
First use May 5, 1960.

SN 125,005. Cerna Food Products Company, Chicago, Ill. Filed July 31, 1961.

PINE-O-CHERI

Owner of Reg. No. 639,768.
For Pineapple-Orange Cherry Food Beverage.
First use July 19, 1961.

SN 135,877. Crown Imports Co. Inc., San Francisco, Calif. Filed Jan. 16, 1962.

BONANZA

For Frozen Fish, Shell Fish, Shrimp, Lobster, and Frog Legs.
First use June 1959.

SN 136,246. International Minerals & Chemical Corporation, Skokie, Ill. Filed Jan. 22, 1962.

AC'CETTE

Owner of Reg. No. 435,707.
For Dehydrated Vegetables.
First use Dec. 8, 1961.

SN 136,365. The R. T. French Company, Rochester, N.Y. Filed Jan. 23, 1962.

COPPER KITCHEN

For Meatless Sauces and Meatless Gravy Mixes.
First use Jan. 5, 1962.

SN 137,587. Willow Brook Company, Catasauqua, Pa. Filed Feb. 8, 1962.

WILLOW BROOK FARMS

For Fresh Vegetables.
First use Dec. 26, 1961.

SN 138,060. Frisco Foods Corporation, Wilmington, Del. Filed Feb. 16, 1962.

frisco

For Blend of Coffee and Chicory in Instant Form.
First use Feb. 8, 1962.

SN 139,467. Cal-Zona Company, d.b.a. Cal-Zona, Inc., Glendale, Ariz. Filed Mar. 9, 1962.

Mr. CRISP

No exclusive rights are claimed in the word "Crisp" except in the association and distinctive manner of display disclosed by the present application. Owner of Reg. No. 670,339.
For Fresh Vegetables.
First use Jan. 31, 1962.

SN 139,509. Mission Valley Canning Co., Inc., d.b.a. Mission Valley Canning Co., San Jose, Calif. Filed Mar. 9, 1962.

MISSION VALLEY

For Canned Vegetables.
First use August 1943.

SN 140,220. Andomia Products Limited, Bradford, England. Filed Mar. 20, 1962.

BISKALETS

Owner of British Reg. No. 798,260, dated Nov. 24, 1959; Reg. No. 811,112, dated Sept. 28, 1960; and U.S. Reg. No. 681,910.
For Biscuits.

SN 140,233. British Chemotheutic Products Limited, Bradford, England. Filed Mar. 20, 1962.

HONE-JEL

Owner of British Reg. No. B800,490, dated Jan. 19, 1960.
For Dietetic Jellies Containing Honey.

SN 141,271. The Dietene Company, Minneapolis, Minn. Filed Apr. 2, 1962.

DELMARK

For Powdered Custard Dessert.
First use Feb. 21, 1962.

SN 142,319. Hershey Chocolate Corporation, Hershey, Pa. Filed Apr. 16, 1962.

QUIKMIX

Owner of Reg. No. 551,165.
For Chocolate Compound in the Form of Paste for Flavoring and the Like.
First use July 31, 1928.

SN 142,433. W. Ralph Gamber, d.b.a. Lancaster County Dutch Gold Apiaries, Lancaster, Pa. Filed Apr. 17, 1962.

DUTCH GOLD

For Honey, Ice Cream, Fruit Jelly, Butter Containing Honey, and Peanut Butter Containing Honey.
First use Apr. 13, 1951.

SN 143,195. Robert H. Swicky, d.b.a. Canned Foods Forum, Wankesha, Wis. Filed Apr. 26, 1962.

VANITY

For Canned Vegetables and Fruits and Canned Vegetable and Fruit Juices.
First use Jan. 24, 1962.

SN 143,872. Royalty House Corporation, Minneapolis, Minn. Filed May 4, 1962.

TASTY HOUSE

The word "Tasty" is disclaimed apart from the mark as shown.
For Food Flavoring Extracts, Peanut Butter, Syrup for Food Purposes, and Honey.
First use January 1947.

SN 144,119. Wendt's Cream Top Dairy, Inc., Niagara Falls, N.Y. Filed May 8, 1962.

COFFEE CHUM

For Milk and Cream Substitute Comprising Chiefly Hydrogenated Vegetable Oil.
First use May 1, 1962.

SN 144,309. Beatrice Foods Co., Chicago, Ill. Filed May 11, 1962.

GO-BAR

For Candy Products, Specifically Candy Bars.
First use Mar. 5, 1962.

SN 144,310. Beatrice Foods Co., Chicago, Ill. Filed May 11, 1962.

COUNT DOWN

For Candy Bars.
First use Mar. 5, 1962.

SN 144,319. Chip Steak Company, d.b.a. Western Royal Co., Oakland, Calif. Filed May 11, 1962.

WESTERN ROYAL

For Frozen Meat Products—Namely, Buttered Beef Patties and Beef Chip Steaks.
First use May 11, 1959.

SN 144,623. MacAndrews and Forbes Company, Camden, N.J. Filed May 15, 1962.

SHIP BRAND

Applicant makes no claim to the word "Brand" apart from the mark as shown. Owner of Reg. No. 84,018.
For Licorice Extract Used as a Flavoring and Conditioning Agent for Confections.
First use in the year 1906.

SN 144,865. Mission Valley Canning Co. Inc., San Jose, Calif. Filed May 17, 1962.

Vogue

Owner of Reg. No. 232,683.
For Canned Vegetables.
First use Aug. 7, 1961.

SN 145,108. Mo-Bo Produce Co., Inc., Pompano Beach, Fla. Filed May 21, 1962.

BORIS BRAND

No claim is made to the word "Brand."
For Fresh Fruits and Vegetables.
First use Apr. 25, 1962.
Subj. to Intf. with SN 156,857.

SN 145,233. Acme Markets, Inc., Philadelphia, Pa., by change of name from American Stores Company, Philadelphia, Pa. Filed May 23, 1962.

Farmdale

Owner of Reg. Nos. 531,762, 538,232, and 569,043.
For Canned Pork and Beans.
First use May 1, 1962; May 1, 1928, as to "Farmdale" on canned vegetables.

SN 145,919. Bovey's, Inc., Chicago, Ill. Filed June 1, 1962.

FLITE

For Dietary Food Concentrate for Weight Control.
First use May 22, 1962.

SN 145,925. Frederick Joseph Carton, Westmount, Quebec, Canada. Filed June 1, 1962.

S-MASH

Owner of Canadian Reg. No. 105,913, dated Feb. 22, 1957.
For Processed Sea Weeds (Specifically Dulse) To Be Used as a Dietary Food Supplement (Supplying Minerals) for Domestic Animals.

SN 146,858. Pure Milk Association, Chicago, Ill. Filed June 11, 1962.

Dairy Lane

Owner of Reg. No. 647,192.
For Milk and Dairy Products—Namely, Evaporated, Condensed, Powdered, Dehydrated, Malted and Whole Milk, Bottled Milk, Cream, Ice Cream, Ice Cream Bars, Butter Cheese, Cottage Cheese.
First use Mar. 16, 1950.

SN 147,016. Packaged Products Corp., Brooklyn, N.Y. Filed June 15, 1962.

QUATRO·CAL

For Concentrated Food Preparation for Weight Control.
First use Apr. 10, 1962.

SN 147,572. Great Southern Corporation, Memphis, Tenn. Filed June 25, 1962.

SWEETEX

For Saccharin for Food Sweetening Purposes.
First use June 11, 1962.

SN 148,100. Sterol Derivatives, Inc., Los Angeles, Calif. Filed June 29, 1962.

PERDEX

For Food Preservative To Inhibit Molds, Fungi, Bacteria, and Enzymatic Changes.
First use Jan. 1, 1960.

SN 148,101. Sterol Derivatives, Inc., Los Angeles, Calif. Filed June 29, 1962.

GRAVITOL "C"

For Brominated Vegetable Oil Used as an Additive in Citrus and Other Fruit Beverage Bases.
First use Jan. 1, 1960.

SN 148,141. The Chun King Corporation, Duluth, Minn. Filed July 2, 1962.

CHUN KING

Owner of Reg. Nos. 422,687, 716,567, and others.
For Tea.
First use May 4, 1962.

SN 148,226. Ralston Purina Company, St. Louis, Mo. Filed July 2, 1962.

TEXTURED EDI-PRO

No claim is made to the word "Textured," apart from the mark as shown.
For Edible Soy Protein.
First use May 4, 1961.

SN 148,330. United Marketing Exchange, Delta, Colo. Filed July 3, 1962.

TOM TOM

Owner of Reg. No. 401,020.
For Fresh Deciduous Fruits.
First use July 3, 1922.

SN 148,394. Jones Dairy Farm, Fort Atkinson, Wis. Filed July 5, 1962.

JONES

Owner of Reg. Nos. 58,500, 611,855, and others.
For Sausage, Sausage Meat, Sausage Patties, Sliced and Piece Bacon, Hams, Braunschweiger Sausage and Buckwheat Flour.
First use Aug. 3, 1959.

SN 148,664. The J. M. Smucker Company, Orrville, Ohio. Filed July 9, 1962.

SMUCKER'S

Owner of Reg. No. 506,835.
For Fruit Preserves, Jellies, Jam, Marmalade, Apple Butter, Food Syrups—e.g., Fruit, Chocolate, Caramel, Butterscotch; and Sauces or Toppings for Ice Cream—e.g., Chocolate Fudge, Chocolate Syrup, Caramel, Butterscotch, and Various Fruit Flavored Sauces.
First use about 1900 on fruit preserves, jellies, jam, marmalade, and apple butter.

SN 148,674. Textron Inc., Providence, R.I. Filed July 9, 1962.

BEACON

The drawing is lined for red, but no claim is made as to color. Owner of Reg. Nos. 243,793 and 542,906.
For Feeds for Birds and Game Birds; Feeds for Rabbits; Grains and Mixed Feeds in Whole, Ground, Partially Ground, Crushed or Pellet Form for Cattle, Poultry, Turkeys, Pigeons, Hogs, Horses, and Other Domestic Stock.
First use Apr. 7, 1919, on cattle feeds.

SN 148,894. Humpty Dumpty Potato Chip Co., Scarborough, Maine. Filed July 12, 1962.



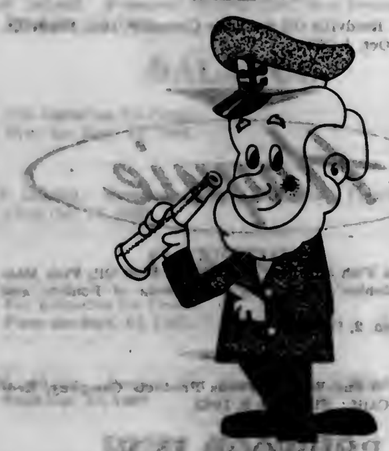
For Potato Chips, Corn Chips, Potato Sticks, Cheese Sticks, Popped Pop Corn, and Pretzels.
First use at least as early as Feb. 21, 1947.

SN 148,895. Humpty Dumpty Potato Chip Co., Scarborough, Maine. Filed July 12, 1962.

HUMPTY DUMPTY

For Potato Chips, Corn Chips, Potato Sticks, Cheese Sticks, Popped Pop Corn, and Pretzels.
First use at least as early as Feb. 21, 1947.

SN 149,321. The Quaker Oats Company, Chicago, Ill. Filed July 18, 1962.



The design is not a representation of any living person.
For Oat Cereal.
First use Mar. 28, 1962.

SN 149,407. Reliance Chemicals Corporation, Houston, Tex. Filed July 19, 1962.

BIOPOL

For Preserved Cultures of B. Megatherium Used as an Animal Feed Supplement.
First use Dec. 15, 1961.

SN 149,645. General Foods Corporation, White Plains, N.Y. Filed July 24, 1962.

START

For Powdered, Flavored Mix for Making a Food Beverage Intended as a Breakfast Drink.
First use Feb. 10, 1960.

SN 149,779. Southern States Cooperative, Incorporated, Richmond, Va. Filed July 25, 1962.

TROPHY WINNER

For Horse Feed.
First use July 19, 1962.

SN 149,780. Southern States Cooperative, Incorporated, Richmond, Va. Filed July 25, 1962.

FIRST PLACE

For Horse Feed.
First use July 19, 1962.

SN 149,781. Southern States Cooperative, Incorporated, Richmond, Va. Filed July 25, 1962.

SILVER STIRRUP

For Horse Feed.
First use July 19, 1962.

SN 149,970. Standard Brands Incorporated, New York, N.Y. Filed July 27, 1962.

C&S

Owner of Reg. No. 54,422.
For Coffee.
First use June 5, 1962.

SN 150,265. Makers of Kal, Inc., Los Angeles, Calif. Filed Aug. 1, 1962.

kalⓃzyme

For Chewing Gum.
First use May 25, 1962.

SN 150,394. Chambers-Godfrey Manufacturing Company, d.b.a. Marteau Hams, Martin, Tenn. Filed Aug. 3, 1962.

MAR TENN
COUNTRY HAM

No claim of exclusive right is made to "Country Ham," said words being the name of the goods.
For Cured Whole Country Hams.
First use May 28, 1962.

SN 151,086. The Schratter Import Co., Inc., New York, N.Y. Filed Aug. 13, 1962.

LA BELLE FRANCE

For Cheese.
First use April 1932.

SN 151,095. A. E. Staley Manufacturing Company, Decatur, Ill. Filed Aug. 13, 1962.

Staley

Owner of Reg. Nos. 407,381, 518,119, and 578,740.
For Corn Starch for Feed Purposes.
First use Mar. 17, 1962.

SN 151,904. General Foods Corporation, White Plains, N.Y. Filed Aug. 27, 1962.

MEATMATE

For Meat Sauce.
First use July 26, 1962.
Subj. to Intf. with SN 152,703.

SN 152,106. Waterman Fruit Products, Inc., Ontario Center, N.Y. Filed Aug. 28, 1962.

MANCHESTER

For Frozen Vegetables.
First use July 1952.

SN 152,585. Jerissa Nut Co., Inc., Brooklyn, N.Y. Filed Sept. 6, 1962.

Prince Eric

For Salted Nuts.
First use Jan. 4, 1962.

SN 152,703. Bernardo H. Karmen, d.b.a. Food Industry Flavors, Glendale, Calif. Filed Sept. 7, 1962.

Burger-Mate

For Flavoring Mix Which Is To Be Used in Ground Meats.
First use Apr. 12, 1962.
Subj. to Intf. with SN 151,904.

SN 152,849. Van Camp Sea Food Company, d.b.a. West Coast Packing Corp., Long Beach, Calif. Filed Sept. 10, 1962.

WESPAC

Owner of Reg. No. 126,370.
For Canned Tomato Products—Namely, Whole Tomatoes and Tomato Puree.
First use Aug. 14, 1962.

SN 152,850. Van Camp Sea Food Company, d.b.a. West Coast Packing Corp., Long Beach, Calif. Filed Sept. 10, 1962.

ROYAL DISH

Owner of Reg. Nos. 284,490 and 716,563.
For Canned Tomato Sauce.
First use Aug. 14, 1962.

SN 154,114. Green Giant Company, Le Sueur, Minn. Filed Sept. 28, 1962.

NIBLETS

Owner of Reg. Nos. 292,700, 546,671, and others.
For Frozen Corn.
First use Sept. 15, 1961.

SN 154,456. ABC Vending Corporation, d.b.a. ABC Vending Corp., Long Island City, N.Y. Filed Oct. 4, 1962.

Mr. Dee-lish

Owner of Reg. No. 619,542.
For Candied, Salted, and Buttered Popcorn.
First use on or about Dec. 1, 1950; on or about Nov. 1, 1950, as to "ABC Dee-Lish."

SN 154,514. Reedville Oil & Guano Company, Inc., Reedville, Va. Filed Oct. 4, 1962.

Haynie

For Canned Fish and Fish Roe, Edible Fish Oil, Fish Meal and Fish Solubles for Use as Ingredients of Poultry and Swine Feeds.
First use Jan. 2, 1959.

SN 154,854. S and W Fine Foods Products Company, Redwood City, Calif. Filed Oct. 9, 1962.

REDWOOD INN

For Canned Vegetables, Fruits in Glass, Pickles and Pickle Relish.
First use Aug. 8, 1962.

SN 154,966. Fox Foods, Inc., Queen Anne, Md. Filed Oct. 11, 1962.

Freddie the Fox

For Canned Vegetables.
First use Aug. 15, 1962.

SN 154,978. George A. Krug Baking Company, d.b.a. Krug Baking Co., Jamaica, N.Y. Filed Oct. 11, 1962.

KRUG'S

For Bakery Products—Namely, Bread, Rolls, Coffee Cake, Cake, Pies, and Cookies.
First use Nov. 15, 1928.

SN 155,065. General Mills, Inc., Minneapolis, Minn. Filed Oct. 12, 1962.

GOLDEN SAFF

Owner of Reg. Nos. 690,056, 691,017, and 691,879.
For Margarine.
First use Sept. 24, 1962.

SN 155,111. Summit Marketing Corporation, Holtville, Calif. Filed Oct. 12, 1962.

"IORS"

For Fresh Melons.
First use Sept. 27, 1962.

SN 155,307. Foremost Dairies, Inc., San Francisco, Calif. Filed Oct. 17, 1962.

BALANCE

For Imitation Ice Cream.
First use Sept. 14, 1962.

SN 155,308. Foremost Dairies, Inc., San Francisco, Calif. Filed Oct. 17, 1962.

CONTROL

For Imitation Ice Cream.
First use Sept. 14, 1962.

SN 155,684. Oregon Nut Shellers, Inc., Hillsboro, Oreg. Filed Oct. 22, 1962.

RUBI RANCHO

For Nuts, Shelled and Unshelled.
First use at least as early as 1939.

SN 155,801. O. D. Huff, Jr., Groves, Inc., McIntosh, Fla. Filed Oct. 24, 1962.

WISSAHICKON

For Fresh Citrus Fruits.
First use Feb. 8, 1962.

SN 155,889. Capitol Food Corporation, San Fernando, Calif. Filed Oct. 25, 1962.

PIZZA-RONI

For Frozen Food Product—Namely, Macaroni Bed Topped With Pizza Sauce and Pizza Cheese.
First use June 29, 1962.

SN 156,857. Ira Boris, d.b.a. I. Boris Company, Pompano Beach, Fla. Filed Nov. 8, 1962.

BORIS

For Fresh Vegetables.
First use February 1955.
Subj. to Intf. with SN 145,108.

SN 157,357. Davis Candy Corporation, Long Island City, N.Y. Filed Nov. 16, 1962.

SUZANNE MARIE

For Candy.
First use Nov. 6, 1962.

SN 157,825. Meat Industry Suppliers, Inc., Northfield, Ill. Filed Nov. 23, 1962.

BAR-B-KRUST

For Extender for Hamburger, Meat Loaf or the Like Composed of Baked Wheat Crumbs, Salt, Non-Fat Dry Milk Solids, Monosodium Glutamate, Extractives of Pepper and Other Spices.
First use on or about Nov. 6, 1962.

SN 157,862. Milton R. Swanson, d.b.a. Wayside Industries, Marlboro, Mass. Filed Nov. 23, 1962.

BEARSKIN NECK

For Canned Clam Chowder and Canned Finnan Haddie.
First use on or about June 1, 1957.

Class 47—Wines

SN 135,186. Fernando A. De Terry S.A., Puerto de Santa Maria, Spain. Filed Jan. 4, 1962.

Terry.

Priority claimed under Sec. 44(d) on Spanish application filed July 7, 1961; Reg. No. 385,539, dated Nov. 3, 1961.
For Wines.

Class 48 — Malt Beverages and Liquors

SN 148,379. Theo. Hamm Brewing Company, St. Paul, Minn. Filed July 5, 1962.

Hamm's

Applicant disclaims any exclusive rights in the word "Beer." Owner of Reg. Nos. 533,200, 567,429, and others.
For Beer.
First use June 1, 1962.

Class 49 — Distilled Alcoholic Liquors

SN 135,187. Fernando A. De Terry S.A., Puerto de Santa Maria, Spain. Filed Jan. 4, 1962.

Terry.

Priority claimed under Sec. 44(d) on Spanish application filed July 7, 1961; Reg. No. 385,540, dated Jan. 17, 1962.
For Brandy and Gin.

SN 141,488. Barton Distilling Company, Chicago, Ill. Filed Apr. 4, 1962.

LONE EAGLE

For Whisky.
First use Mar. 16, 1962.

SN 141,489. Barton Distilling Company, Chicago, Ill. Filed Apr. 4, 1962.

GRAND SLAM

For Whisky.
First use Mar. 16, 1962.

SN 141,491. Barton Distilling Company, Chicago, Ill. Filed Apr. 4, 1962.

MARGATE ABBEY

For Whisky.
First use Mar. 16, 1962.

SN 148,152. Continental Beverages, Inc., Winter Haven, Fla. Filed July 3, 1962.

CYPRESS GARDENS

For Vodka Cocktails.
First use June 14, 1962.

SN 140,861. Seagrer, Evans & Co. Ltd., London, England. Filed July 26, 1962.



Applicant disclaims the exclusive right to the term "London" but does not waiver its rights at Common Law. The drawing is lined for the colors red, gold, and blue. Owner of British Reg. Nos. 770,941, dated Nov. 7, 1957, and 786,929, dated Feb. 5, 1959; and U.S. Reg. Nos. 329,786, 735,025, and others.
For Gin, Cherry Brandy, Alcoholic Bitters, Liqueurs, and Prepared Alcoholic Egg Flip.

SN 155,068. Glenmore Distilleries Company, Owensboro, Ky. Filed Oct. 12, 1962.

BILL BAILEY

The name "Bill Bailey" is fanciful and not the name of a particular living individual.
For Bourbon Whiskey.
First use Sept. 19, 1962.

SN 100,887. Haas Brothers, d.b.a. The Crown Company, San Francisco, Calif. Filed Jan. 7, 1963.

LONDON TOWER

Applicant claims use for the area comprising the States of California, Arizona, and Nevada.
For Alcoholic Beverages—Namely, Gin.
First use at least as early as 1956.
Subj. to concurrent use proceeding with SN 123,819 and SN 123,820.

Class 50 — Merchandise Not Otherwise Classified

SN 123,475. Scott Plastics Co., Palmetto, Fla. Filed Sept. 22, 1961.

STICKEE

For Pressure Sensitive Plastic Letters, Numerals, and Characters.
First use Dec. 31, 1957.
Subj. to Intf. with SN 133,204, SN 145,332, and SN 145,333.

SN 133,204. Irwin Barnett, New York, N.Y. Filed Dec. 4, 1961.

STIK-EES

For Window Decorations of Double-Faced Press-Polished Vinyl Plastic.
First use Nov. 30, 1958.
Subj. to Intf. with SN 123,475, SN 145,332, and SN 145,333.

SN 143,650. Mediterranee Flowers, Inc., Cambria Heights, N.Y. Filed May 2, 1962.

MEDITERRANEE FLOWERS

Applicant disclaims the word "Flowers" apart from the mark as shown.
For Artificial Flowers and Plants.
First use during the month of May 1957.

SN 149,528. Benson and Hullinger Manufacturing Corporation, Salt Lake City, Utah. Filed July 23, 1962.

LAZY LODGER

For Car-Top Carried, Rigid-Walled, Collapsible Enclosures for Camping.
First use May 15, 1962.

SN 149,736. Globe Rubber Products Corp., Philadelphia, Pa. Filed July 25, 1962.

DOOR-MATES

For Welcome Mats and Boot Caddies for Holding Shoes, Boots, Overshoes and Providing a Drip Tray for Umbrellas.
First use June 20, 1962.

SN 150,569. Lee Rowan Company, St. Louis, Mo. Filed Aug. 6, 1962.

FLAIR

For Article Supporting Closet and Bathroom Accessories—Namely, Garment Drying Forms and Garment Hangers and Racks, at Least Some of Said Accessories Being Gold Plated.
First use July 2, 1962.

SN 152,515. Harcourt, Brace & World, Inc., New York, N.Y. Filed Sept. 5, 1962.

SKIL-SLIDE

For Masking Device for Use as a Teaching Aid in Selectively Covering and Uncovering the Correct Responses to Questions in Textbooks.
First use May 1, 1962.

SN 153,421. Penny-Pak Inc., Danville, Ill. Filed Sept. 18, 1962.

PENNY PAK

For Artificial Spray Snow.
First use Aug. 27, 1962.

SN 153,880. Polychrome Corporation, Yonkers, N.Y. Filed Sept. 25, 1962.

POLYGRAIN

For Grained Aluminum Presensitized Offset Plates.
First use Aug. 17, 1962.

Class 51 — Cosmetics and Toilet Preparations

SN 140,354. Invincible Products Corporation, Chicago, Ill. Filed Mar. 21, 1962.

SMOOTH 'N GLOW

For Hand and Body Lotion.
First use in or about December 1959.

SN 141,251. Charles of the Ritz, Inc., New York, N.Y. Filed Apr. 2, 1962.

VEILESSCENCE

Owner of Reg. No. 386,102.
For Cosmetic Cream.
First use Feb. 7, 1962.

SN 142,936. Fairfield Laboratories, Inc., Pasadena, Calif. Filed Apr. 24, 1962.

INVISO-NET

For Hair Sprays.
First use Dec. 21, 1961.
Subj. to Intf. with SN 140,353.

SN 145,335. Colgate-Palmolive Company, New York, N.Y. Filed May 24, 1962.

TOUCHDOWN

Owner of Reg. No. 695,806.
For Shaving Cream.
First use Apr. 23, 1962.

SN 148,914. Schratz Products, Inc., Detroit, Mich. Filed July 12, 1962.

JUMBO'S

Owner of Reg. No. 549,682.
For Bath Bubbling and Perfuming Compounds.
First use Oct. 1, 1960.

SN 149,864. The Mitchum Company, Paris, Tenn. Filed July 26, 1962.

RAVAIR

For Cologne and Toilet Water.
First use June 4, 1962.

SN 151,516. Dorothy Perkins Cosmetics, Inc., St. Louis, Mo. Filed Aug. 20, 1962.

DRY WINE

For Cologne.
First use Aug. 3, 1962.

SN 151,521. Dorothy Perkins Cosmetics, Inc., St. Louis, Mo. Filed Aug. 20, 1962.

SEA TALK

For Cologne.
First use Aug. 3, 1962.

SN 151,522. Dorothy Perkins Cosmetics, Inc., St. Louis, Mo. Filed Aug. 20, 1962.

FULL SAIL

For Cologne.
First use Aug. 3, 1962.

SN 152,912. Paula Payne Products Company, Charlotte, N.C. Filed Sept. 11, 1962.

TROPHI

For Beauty Preparations—Namely, Cold Wave and Styling Lotion for Professional Beauty Shop Use Only.
First use Aug. 15, 1962.

SN 154,089. Lever Brothers Company, New York, N.Y. Filed Sept. 27, 1962.

SIGNAL

Owner of Reg. Nos. 260,480, 787,998, and others.
For Mouth Wash.
First use Mar. 5, 1962.

Class 52 — Detergents and Soaps

SN 141,265. The Davies-Young Soap Company, Dayton, Ohio. Filed Apr. 2, 1962.

MAINTENOL

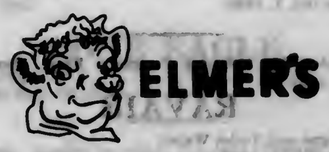
For Cleaning Compound for Cleaning and Washing Floors, Walls, and Woodwork.
First use Sept. 3, 1939.

SN 142,051. Pennsalt Chemicals Corporation, Philadelphia, Pa. Filed Apr. 11, 1962.

KEE-PHOS

For Granular Detergent Composition Particularly Adapted for Bottle Washing.
First use July 1961.

SN 144,316. The Borden Company, New York, N.Y. Filed May 11, 1962.



Owner of Reg. No. 566,899.
For Cleaning Preparation for Removing Contact Cement From Brushes and Tools, and Also for Use as a Thinner for Contact Cement.
First use Nov. 1, 1954.

SN 144,476. Walter M. Elfers, d.b.a. Star Bright Manufacturing Company, Fort Lauderdale, Fla. Filed May 14, 1962.

STAR BRIGHT

For Rug and Upholstery Cleaner.
First use June 1957.

SN 150,240. The Garcia Company, Detroit, Mich. Filed Aug. 1, 1962.

SPRAY MAGIC

For General Purpose Degreasing Cleaner for Commercial Use.
First use in or about August 1960.

SN 150,543. Fels and Company, Philadelphia, Pa. Filed Aug. 6, 1962.

COOL-SUDS

For Household Detergents and Soaps.
First use June 18, 1962.

SN 153,320. Purex Corporation, Ltd., d.b.a. Turco Products, Inc., Wilmington, Calif. Filed Sept. 17, 1962.

PAINTITE

For Cleaning Compounds for the Removal of Grease and Rust From Metals and for Various Other Industrial Cleaning Purposes.
First use Mar. 18, 1938.

SN 154,270. Minnesota Mining and Manufacturing Company, St. Paul, Minn. Filed Oct. 1, 1962.

TARN-I-SHIELD

For Tarnish Preventative and Cleaner.
First use Nov. 10, 1962.

SN 154,850. Rexona Proprietary Limited, Sydney, New South Wales, Australia. Filed Oct. 9, 1962.

REXONA

Owner of Australian Reg. No. 19,778, dated Apr. 8, 1916.
For Toilet Soap.

SN 154,890. Duon Inc., Coral Gables, Fla. Filed Oct. 10, 1962.



For Hair Shampoo.
First use Apr. 15, 1931.

SN 155,060. Harry Miller Corp., Philadelphia, Pa. Filed Oct. 12, 1962.

PURGITOL

For Additive, Constituting a Synthetic Emulsifying Detergent, to Soluble Oil Systems for Purposes of Emulsification, as in Rolling of Steel, Machining and Grinding Metals.
First use February 1962.

SN 155,194. Purex Corporation, Ltd., Lakewood, Calif. Filed Oct. 15, 1962.

GERARDE

For Toilet Soap.
First use August 1953.

SERVICE MARKS

Class 100 — Miscellaneous

SN 128,589. The Red Barn System, Inc., Dayton, Ohio. Filed Sept. 25, 1961.

The RED BARN

The drawing is lined for red.
For Promoting the Establishment of a Chain of Franchised Drive-In Restaurants, and Advising, Instructing, and Financially Assisting the Operators of Such Restaurants.
First use Aug. 22, 1961; May 29, 1961, in a different form.

SN 144,398. Little Pigs of America, Inc., Memphis, Tenn. Filed May 11, 1962.



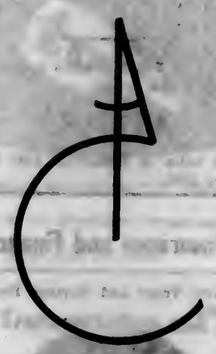
The applicant herein does disclaim and waive his claim to all wording contained in the mark except "Little Pigs of America." No registration rights are claimed herein for the pictorial representation of a sandwich in the service mark; but the applicant waives none of its common law rights to said mark or any features thereof.
For Restaurant Services.
First use Feb. 12, 1962.

SN 148,285. Allied Research Products Incorporated, Baltimore, Md. Filed July 3, 1962.



Owner of Reg. No. 724,603.
For Analyses and Tests in Connection With Chemical Problems for Others and the Submission of Reports in Connection Therewith.
First use Feb. 1, 1958.

SN 155,047. Computer Associates, Inc., Woburn, Mass. Filed Oct. 12, 1962.



For Consulting Services Rendered to Users of Digital Computers, Including Development of Computer Programs.
First use May 1, 1961.

Class 101 — Advertising and Business

SN 142,010. Acme Markets, Inc., Philadelphia, Pa., by change of name from American Stores Company, Philadelphia, Pa. Filed Apr. 11, 1962.



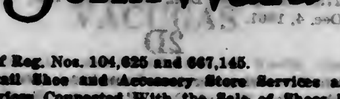
No claim is made to the word "Shop" apart from the mark as shown. Owner of Reg. Nos. 569,043 and 639,085.
For Retail Grocery Store Services.
First use October 1960; in December 1937 as to "Acme."

SN 142,916. Associated Lerner Shops of America, Inc., New York, N.Y. Filed Apr. 24, 1962.

AUTOCHARGE

For Credit Services.
First use Nov. 8, 1960.

SN 148,987. Melville Shoe Corporation, New York, N.Y. Filed July 13, 1962.



Owner of Reg. Nos. 104,625 and 667,145.
For Retail Shoe and Accessory Store Services and Mail Order Services Connected With the Sale of Shoes by Mail.
First use in the year 1895.

SN 149,498. Treasure Trader, Inc., St. Petersburg, Fla. Filed July 20, 1962.

treasure trader

For Retail Gift Store Services.
First use May 8, 1961.

SN 152,267. Atlas Lift Truck Rentals & Sales, Inc., Chicago, Ill. Filed Aug. 31, 1962.

ATLAS

For Rental and Sales of Industrial Lift Trucks.
First use prior to 1953.

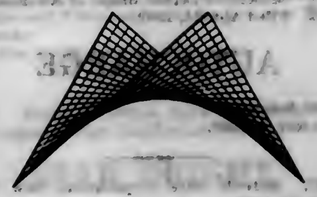
Class 102 — Insurance and Financial

SN 115,147. Harris Trust and Savings Bank, Chicago, Ill. Filed Mar. 8, 1961.



Owner of Reg. No. 692,559.
For Banking and Savings Services.
First use in or about April 1958.

SN 129,702. System Development Corporation, Santa Monica, Calif. Filed Oct. 11, 1961.



For Administration of Funds and Property Exclusively for Scientific, Educational and Charitable Purposes.
First use on or about Dec. 20, 1957.

SN 133,275. Integrated Data Processing, Inc., Orange, N.J. Filed Dec. 4, 1961.

2D

For Data Processing Services Comprising Accounting Services Rendered by Use of Data Processing Equipment.
First use December 1960.

SN 142,857. Protective Life Insurance Company, Birmingham, Ala. Filed Apr. 23, 1962.

PROTECT-U-MATIC

Owner of Reg. No. 694,701.
For Underwriting Life Insurance for Mortgage Loan Borrowers.
First use Jan. 22, 1960.

SN 145,110. The Mutual Life Insurance Company of New York, New York. Filed May 21, 1962.

MONY

For Underwriting of Life Insurance.
First use Feb. 25, 1962.

SN 145,111. The Mutual Life Insurance Company of New York, New York, N.Y. Filed May 21, 1962.

MONY

For Underwriting of Life Insurance.
First use Mar. 5, 1962.

SN 147,779. American Health Credit Plan, Inc., Battle Creek, Mich. Filed June 27, 1962.

CREDICARD

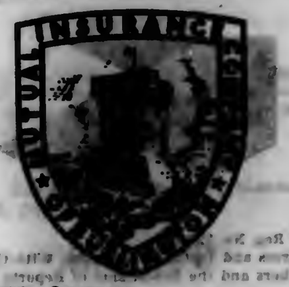
No claim is made to the exclusive right to use the simulation of a caduceus apart from the mark as shown.
For Endorsing the Credit of Qualified Persons for Health Services and Equipment and Paying for Such Services and Equipment in Behalf of the Endorsed Persons.
First use January 1961.

SN 151,165. Plainfield Trust State National Bank, Plainfield, N.J. Filed Aug. 14, 1962.



Owner of Reg. No. 631,079.
For Extension of Credit to Customers Certified by Applicant Who Purchase at Subscribing Retail Outlets.
First use Oct. 15, 1952.

SN 153,972. Mutual Insurance Company of Burlington, South Burlington, Vt. Filed Sept. 26, 1962.



For Underwriting Insurance.
First use on or about July 5, 1962.

Class 103 — Construction and Repair

SN 134,037. Midas, Inc., Chicago, Ill. Filed Dec. 14, 1961.



Applicant claims the exclusive right to the use of the term "Brake Shops" as a part of its service mark, but not otherwise. Owner of Reg. Nos. 620,322, 722,195, and others.
For Inspection of Automotive Brake Systems and Parts Therefor and Installation of Automotive Brake Systems and Parts.
First use on or about July 17, 1961.

SN 135,765. Gervase F. Clifton, d.b.a. Superweld of U.S.A., Brownsboro, Tex. Filed Jan. 15, 1962.

SUPERWELD

For Welding of Cracks in Motor Blocks, Cylinder Heads and Other Metal Castings.
First use Mar. 9, 1939.

SN 136,172. Tiecrafters, Inc., Queens Village, N.Y. Filed Jan. 19, 1962.

tiecrafters

For Cleaning of Neckties.
First use 1948.

SN 143,723. F. J. Cooper, Inc., Philadelphia, Pa. Filed May 3, 1962.

JEWELERS BY BIRTH

For Jewelers' Services, Including the Selecting, Designing, Producing or Procuring of Articles of Jewelry and of Precious and Semi-Precious Metal, the Cleaning, Polishing and Re-Setting of Gems, the Maintaining and Repairing of Watches and Clocks, and the Like.
First use in September 1953.

SN 148,199. Kaufman and Broad Building Company, Inc., Phoenix, Ariz. Filed July 2, 1962.



For Construction of Housing.
First use Nov. 12, 1961.

Class 104 — Communication

SN 144,017. Teleprompter Corporation, New York, N.Y. Filed May 7, 1962.



Applicant disclaims the letters "TV" apart from the mark as shown.
For Distribution of Television Programs by Means of a Closed Circuit.
First use on or about June 20, 1960.

Class 105 — Transportation and Storage

SN 115,650. North American Van Lines, Inc., Fort Wayne, Ind. Filed Feb. 24, 1961.



The drawing is lined for red and buff. Owner of Reg. Nos. 544,210, 726,820, and others.
For Transportation Services—Namely, Transportation of Household Goods, Personal Effects, New Furniture, Exhibits and Displays, and Plant and Office Equipment.
First use Dec. 6, 1960.

SN 154,069. Travel Corporation of America, Chicago, Ill. Filed Sept. 27, 1962.

TRAVCOA

For Travel Agency Services.
First use on or about June 25, 1957.

Class 106 — Material Treatment

SN 145,218. Standard Dyeing and Finishing Co., Paterson, N.J. Filed May 22, 1962.

COLORSTAN

For Processing of Textile Fabrics of Others.
First use Mar. 5, 1962.

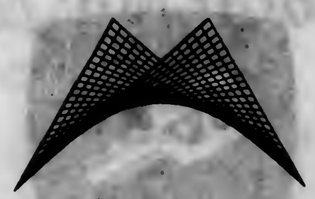
SN 150,169. The Griffith Laboratories, Inc., Chicago, Ill. Filed July 31, 1962.

VACUGAS

For Sterilization and Purification of Foods, Cosmetics, Pharmaceuticals, and Medical Disposables.
First use July 16, 1962.

Class 107 — Education and Entertainment

SN 129,701. System Development Corporation, Santa Monica, Calif. Filed Oct. 11, 1961.



For Scientific Research, Training and Education Relating to Establishment, Operation and Maintenance of Man and Machine Systems and Programming for Electronic Computers and Computer Systems.
First use on or about Dec. 20, 1957.

SN 133,560. Hollywood Museum Associates, Beverly Hills, Calif. Filed Dec. 7, 1961.



For Museum Services—Namely, the Display of Artifacts and Memorabilia of Particular Interest in the Performing Arts and the Encouragement of Further Study To Develop These Arts.
First use Mar. 13, 1961.

SN 141,968. Massey Technical Institute, Inc., Jacksonville, Fla. Filed Apr. 10, 1962.

MTI

For Conducting Correspondence Courses in the Fields of Electronics and Television Repair.
First use Jan. 3, 1957.

SN 145,273. Mars Broadcasting, Inc., Stamford, Conn. Filed May 23, 1962.



The word "Radio" is disclaimed apart from the mark as shown.
For Providing Complete, Individualised Programming Services to Radio Stations, Said Programming Being Supplied by Pre-Recorded Tapes, Programming Schedules, Scripts, Music Lists, and Like Programming Materials.
First use on or about Mar. 31, 1962.

COLLECTIVE MEMBERSHIP MARKS

Class 200

SN 149,202. Phi Epsilon Pi Fraternity, Inc., Philadelphia, Pa. Filed July 17, 1962.



English translation for the Greek words appearing on the drawing is "friendship binds eternally." Owner of Reg. No. 388,558.
For Indicating Membership in Applicant.
First use 1923.

CERTIFICATION MARKS

Class A — Goods

SN 149,433. Amalgamated Clothing Workers of America, New York, N.Y. Filed July 20, 1962.



The mark certified that the work or labor on the goods was performed by members of applicant. Owner of Reg. Nos. 709,150 and 735,816.
For All Types of Gloves.
First use Mar. 7, 1962.

TRADEMARK REGISTRATIONS ISSUED

PRINCIPAL REGISTER

Class 1—Raw or Partly Prepared Materials

749,274. ACRYLUX. Westlake Plastics Company. SN 134,707. Pub. 2-26-63. Filed 12-26-61.

749,275. GALAKERITE. Societa Italiana Galakerite. SN 140,191. Pub. 2-26-63. Filed 3-19-62.

749,276. HYDE AND DESIGN. A. L. Hyde Company. SN 141,182. Pub. 2-26-63. Filed 3-30-62.

749,277. "SEGRANE." Sommers Plastic Products Co., Inc. SN 150,190. Pub. 2-26-63. Filed 7-31-62.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

749,278. MELLO TAN. Aristocrat Leather Products, Inc. SN 134,719. Pub. 2-26-63. Filed 12-27-61.

Class 4—Abrasives and Polishing Materials

749,279. WEEKEND. S. C. Johnson & Son, Inc. SN 135,684. Pub. 2-26-63. Filed 1-12-62.

Class 5—Adhesives

749,280. ADCOTE. Adcote Chemicals, Inc. SN 89,817. Pub. 5-16-61. Filed 1-20-60.

Class 6—Chemicals and Chemical Compositions

749,281. ADM-AND DESIGN. Archer-Daniels-Midland Company. SN 139,013. Pub. 2-26-63. Filed 3-5-62.

749,282. PROTECTO-MUL. Magnet Cove Barium Corporation. SN 140,699. Pub. 2-26-63. Filed 3-26-62.

749,283. POLYRAM. Badische Anilin- & Soda-Fabrik Aktiengesellschaft. SN 146,260. Pub. 2-26-63. Filed 6-6-62.

749,284. OCTAFILM. Betz Laboratories, Inc. SN 146,353. Pub. 2-26-63. Filed 6-7-62.

749,285. COMBAT. Acme Chemical Company. SN 149,349. Pub. 2-26-63. Filed 7-19-62.

Class 9—Explosives, Firearms, Equipments, and Projectiles

749,286. AIDITE. Alpha Hardware Co., d.b.a. Alpha Industrial Supply. SN 137,485. Pub. 2-26-63. Filed 2-8-62.

749,287. CYAPRIME. American Cyanamid Company. SN 138,073. Pub. 2-26-63. Filed 2-16-62.

749,288. OLD GLORY. Zebra Fireworks Co. SN 148,259. Pub. 2-26-63. Filed 7-2-62.

Class 10—Fertilizers

749,289. SOHIOGEN. Sohio Chemical Company. SN 144,774. Pub. 2-26-63. Filed 5-16-62.

Class 12—Construction Materials

749,290. META-MOLD. Meta-Mold Aluminum Company. SN 141,329. Pub. 2-26-63. Filed 4-2-62.

749,291. TUFCHEM. Pennsalt Chemicals Corporation. SN 148,905. Pub. 2-26-63. Filed 7-12-62.

749,292. MAULITE AND DESIGN. Maule Industries, Inc. SN 148,984. Pub. 2-26-63. Filed 7-13-62.

749,293. PANL-RAIL. Newman Brothers, Inc. SN 148,993. Pub. 2-26-63. Filed 7-16-62.

749,294. CERAMASEAL. Ceramaseal, Inc. SN 149,049. Pub. 2-26-63. Filed 7-16-62.

749,295. BLACK MAGIC. American Fire Clay & Products Co. SN 149,351. Pub. 2-26-63. Filed 7-19-62.

749,296. LUTERMA. Luterma. SN 149,578. Pub. 2-26-63. Filed 7-23-62.

749,297. KAL-KOTE. National Gypsum Company. SN 149,585. Pub. 2-26-63. Filed 7-23-62.

749,298. TEC AND DESIGN. Technical Adhesives, Inc. SN 149,609. Pub. 2-26-63. Filed 7-23-62.

749,299. VONCO AND DESIGN. Vonco Corporation, Inc., assignee of Vonco Products Co., Inc. SN 149,616. Pub. 2-26-63. Filed 7-23-62.

749,300. SIGNAL MOUNTAIN AND DESIGN. General Portland Cement Company. SN 149,732. Pub. 2-26-63. Filed 7-25-62.

749,301. PROFI-MATIC. H. D. Hudson Manufacturing Company. SN 149,742. Pub. 2-26-63. Filed 7-25-62.

749,302. HOME-DRAIN. McGraw-Edison Company. SN 149,861. Pub. 2-26-63. Filed 7-26-62.

749,303. UNI-COUSTIC. Baldwin-Ehret-Hill, Inc. SN 150,004. Pub. 2-26-63. Filed 7-30-62.

749,304. PARKLINE. Park Avenue Wood-Working Co. Inc. SN 150,098. Pub. 2-26-63. Filed 7-30-62.

749,305. UNICAN. Unican Plastics Co. Inc. SN 150,198. Pub. 2-26-63. Filed 7-31-62.

749,306. FORBON. National Vulcanized Fibre Company. SN 150,885. Pub. 2-26-63. Filed 8-9-62.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

749,307. HILLS-McCANNA AND DESIGN. Hills-McCanna Company. SN 110,851. Pub. 2-26-63. Filed 12-27-60.

Class 15—Oils and Greases

749,308. ADM AND DESIGN. Archer-Daniels-Midland Company. SN 139,012. Pub. 2-26-63. Filed 3-5-62.

Class 16—Protective and Decorative Coatings

749,309. ELECTRA-KOTE. Vincent & Vincent, Inc. SN 144,292. Pub. 2-26-63. Filed 5-10-62.

749,310. CHEMCURE. Coast Paint and Lacquer Company. SN 144,689. Pub. 2-26-63. Filed 5-16-62.

Class 18—Medicines and Pharmaceutical Preparations

749,311. DECAFOAM. Merck & Co. Inc. SN 139,117. Pub. 2-26-63. Filed 3-5-62.

749,312. DECAFOAM-T. Merck & Co. Inc. SN 139,118. Pub. 2-26-63. Filed 3-5-62.

749,313. NERVOIDS. British Chemotheutic Products Limited. SN 140,232. Pub. 2-26-63. Filed 3-20-62.

749,314. DEXAMETH. U.S. Vitamin & Pharmaceutical Corporation. SN 140,781. Pub. 2-26-63. Filed 3-26-62.

749,315. STYLIZED PARALLELOGRAM. Mallinckrodt Chemical Works. SN 147,010. Pub. 2-26-63. Filed 6-15-62.

749,316. DIACHRON. Hoyt Pharmaceutical Corporation. SN 148,810. Pub. 2-26-63. Filed 7-3-62.

749,317. EATERS DIGEST. Charles A. Crete, d.b.a. Pharmaceutical Associates. SN 149,368. Pub. 2-26-63. Filed 7-19-62.

749,318. DILOTRAK. Vitamix Pharmaceuticals, Incorporated. SN 149,685. Pub. 2-26-63. Filed 7-24-62.

749,319. CETYLETS. Vitamix Pharmaceuticals, Incorporated. SN 149,686. Pub. 2-26-63. Filed 7-24-62.

Class 19—Vehicles

749,320. STRONG-HOLD. Tularcloft, Inc. SN 133,722. Pub. 2-26-63. Filed 12-8-61.

749,321. PACKER AND DESIGN. Packer Engineering Co. SN 136,072. Pub. 2-26-63. Filed 1-18-62.

749,322. ADVENTURE LINER. Adventure Line Mfg. Co., Inc. SN 141,782. Pub. 2-26-63. Filed 4-9-62.

749,323. STANT AND DESIGN. Stant Manufacturing Company, Inc. SN 142,570. Pub. 2-26-63. Filed 4-18-62.

749,324. STANT AND DESIGN. Stant Manufacturing Company, Inc. SN 142,571. Pub. 2-26-63. Filed 4-18-62.

749,325. VISCOUNT. Globe Rubber Products Corp. SN 151,047. Pub. 2-26-63. Filed 8-13-62.

749,326. LIBERTE AND DESIGN. Globe Rubber Products Corp. SN 151,048. Pub. 2-26-63. Filed 8-13-62.

Class 20—Linoleum and Oiled Cloth

749,327. AMTICO PEBBLE AND DESIGN. American Biltrite Rubber Co. Inc. SN 132,621. Pub. 2-26-63. Filed 11-24-61.

749,328. MONTERREY. Congoleum-Nairn Inc. SN 150,021. Pub. 2-26-63. Filed 7-30-62.

Class 21—Electrical Apparatus, Machines, and Supplies

749,329. EYEASE AND DESIGN. Solar Electric Corporation. SN 99,883. Pub. 11-14-61. Filed 6-28-60.

749,330. PROGRESS AND DESIGN. Maus & Pfeifer. SN 130,067. Pub. 2-26-63. Filed 10-17-61.

749,331. COBBLE. Singer-Cobble, Inc. SN 133,593. Pub. 2-26-63. Filed 12-7-61.

749,332. COMMODORE. The Electric Storage Battery Company. SN 144,704. Pub. 2-26-63. Filed 5-16-62.

749,333. PATIO. Webcor, Inc. SN 147,066. Pub. 2-26-63. Filed 6-15-62.

749,334. TUBEOHM. Ohmite Manufacturing Company. SN 147,142. Pub. 2-26-63. Filed 6-18-62.

749,335. CHERRY AND DESIGN. Cherry Electrical Products Corporation. SN 147,187. Pub. 2-26-63. Filed 6-19-62.

749,336. STAR CASTER AND DESIGN. Metrotek Electronics, Inc. SN 147,297. Pub. 2-26-63. Filed 6-20-62.

749,337. SBA STYLE BOARD OF AMERICA. Christopher York Lighting, Inc. SN 147,422. Pub. 2-26-63. Filed 6-21-62.

749,338. TOWN AND COUNTRY. Kreiss Corporation. SN 147,592. Pub. 2-26-63. Filed 6-25-62.

749,339. TETRAC. Telecomputing Corporation. SN 147,645. Pub. 2-26-63. Filed 6-25-62.

749,340. DUAL SHORE. Cannon Electric Company. SN 148,594. Pub. 2-5-63. Filed 7-9-62.

749,341. MUNSEY. Munsey Products Inc. SN 148,644. Pub. 2-26-63. Filed 7-9-62.

749,342. REPRESENTATION OF AN OWL. Sage Laboratories, Inc. SN 148,849. Pub. 2-26-63. Filed 7-11-62.

749,343. IDLE-MATIC. Studebaker Corporation. SN 148,859. Pub. 2-26-63. Filed 7-11-62.

749,344. SUROK. Serpresant Manufacturing Company. SN 148,922. Pub. 2-26-63. Filed 7-12-62.

749,345. OED. Opto-Electronic Devices, Inc. SN 149,000. Pub. 2-26-63. Filed 7-13-62.

749,346. DELCO-PHONE. General Motors Corporation. SN 149,178. Pub. 2-26-63. Filed 7-17-62.

749,347. SUMMIT. Inter-Ocean Merchandising Corp. SN 149,185. Pub. 2-26-63. Filed 7-17-62.

749,348. STENOCENTRAL COMPANION. Jay H. Schiff, d.b.a. Stenocentral Companion. SN 149,326. Pub. 2-26-63. Filed 7-18-62.

Class 22—Games, Toys, and Sporting Goods

749,349. SKIP-STIK. Creations Sales Company, Inc. SN 95,485. Pub. 2-26-63. Filed 4-21-60.

749,350. PRO-KING. Sport Service Supplies, Inc. SN 116,588. Pub. 5-29-62. Filed 3-27-61.

749,351. GROTESQUE FIGURE DESIGN. Transogram Company, Inc. SN 139,980. Pub. 2-26-63. Filed 3-15-62.

749,352. TRANSY. Transogram Company, Inc. SN 139,981. Pub. 2-26-63. Filed 3-15-62.

749,353. MATTERHORN. Matterhorn Corporation, assignee of Anderson & Thompson Ski Co. SN 139,984. Pub. 1-15-63. Filed 3-16-62.

749,354. RAM-RACK. Lefar Enterprises Inc. SN 140,028. Pub. 2-26-63. Filed 3-16-62.

749,355. ROMPER ROOM. Romper Room, Inc. SN 140,870. Pub. 2-26-63. Filed 3-27-62.

749,356. TWIRLER. Universal Manufacturing Company. SN 141,230. Pub. 2-26-63. Filed 3-30-62.

749,357. GEOMETRICAL DESIGN. Nippon Kikai Seizo Kabushiki Kaisha, d.b.a. Sega Incorporated. SN 141,353. Pub. 2-26-63. Filed 4-2-62.

749,358. SEGA. Nippon Kikai Seizo Kabushiki Kaisha, d.b.a. Sega Incorporated. SN 141,355. Pub. 2-26-63. Filed 4-2-62.

749,359. TWISTO-HYDE. Red Raven Rubber Company. SN 141,650. Pub. 2-26-63. Filed 4-5-62.

749,360. PAUTZKE'S. Pautzke Bait Co. Inc. SN 143,263. Pub. 2-26-63. Filed 4-27-62.

749,361. ETHOLITE. Wilson Sporting Goods Co. SN 145,642. Pub. 2-26-63. Filed 5-28-62.

749,362. ASTRO-SPIN. Fil-Back Sales Corporation. SN 145,686. Pub. 2-26-63. Filed 5-29-62.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

749,363. HYDRALIGN. Applied Engineering Corporation. SN 122,989. Pub. 9-11-62. Filed 6-28-61.

749,364. WATERBURY FARREL. Textron Inc. SN 123,149. Pub. 2-26-63. Filed 6-29-61.

749,365. WATERBURY FARREL AND DESIGN. Textron Inc. SN 123,150. Pub. 2-26-63. Filed 6-29-61.

749,366. 15. Swingline Inc. SN 124,770. Pub. 2-26-63. Filed 7-26-61.

749,367. 14. Swingline Inc. SN 124,771. Pub. 2-26-63. Filed 7-26-61.

749,368. 900. Swingline Inc. SN 124,773. Pub. 2-26-63. Filed 7-26-61.

749,369. KLUSTRITE. Houston Oil Field Material Company, Inc. SN 128,274. Pub. 2-26-63. Filed 9-20-61.

749,370. MASTER-SINE. Ex-Cell-O Corporation. SN 131,953. Pub. 2-26-63. Filed 11-14-61.

749,371. SUNCO. Sunbrand Supply Co. Inc. SN 139,898. Pub. 2-26-63. Filed 3-14-62.

749,372. CLOROCEL. The Paterson Engineering Company, Limited. SN 144,528. Pub. 2-26-63. Filed 5-14-62.

Class 26—Measuring and Scientific Appliances

749,373. SHOT. Pyles Industries, Inc. SN 111,010. Pub. 2-26-63. Filed 12-29-60.

749,374. RANDO. Alderson Research Laboratories, Inc. SN 125,189. Pub. 2-26-63. Filed 8-2-61.

749,375. REDDI EYE. Standard Fire Alarm & Signal Inc. SN 132,286. Pub. 2-26-63. Filed 11-20-61.

749,376. PACE. Pacotronics, Inc. SN 134,342. Pub. 2-26-63. Filed 12-19-61.

749,377. T-Y. Houston Instrument Corporation. SN 135,200. Pub. 2-26-63. Filed 1-4-62.

749,378. HI. Houston Instrument Corporation. SN 135,506. Pub. 2-26-63. Filed 1-10-62.

749,379. SERVOPULSE. Servo Corporation of America. SN 139,786. Pub. 2-26-63. Filed 3-13-62.

749,380. SPEC-MATE. Magnetic Controls Company. SN 148,032. Pub. 2-26-63. Filed 7-9-62.

749,381. VACTITE. Vactite. SN 148,682. Pub. 2-26-63. Filed 7-9-62.

749,382. VUEMOR. Comptone Company, Ltd. SN 149,051. Pub. 2-26-63. Filed 7-16-62.

749,383. COLORAMA. Art-Craft Optical Company, Inc. SN 149,248. Pub. 2-26-63. Filed 7-18-62.

749,384. INDISTOR. Sprague Electric Company. SN 149,419. Pub. 2-26-63. Filed 7-19-62.

749,385. NEWPORTER. Durst A.G. Fabrik Fototechnischer Apparate. SN 149,540. Pub. 2-26-63. Filed 7-23-62.

749,386. MICRO-DATA. Bell & Howell Company. SN 149,913. Pub. 2-26-63. Filed 7-27-62.

749,387. STOCK STICK. J. Le Roy Caudill, d.b.a. Stock Stick Co. SN 149,917. Pub. 2-26-63. Filed 7-27-62.

Class 28—Jewelry and Precious-Metal Ware

749,388. B DESIGN. Beaucraft, Inc. SN 134,435. Pub. 2-26-63. Filed 12-21-61.

749,389. HL. H. Lewkowitz, Inc. SN 134,649. Pub. 11-20-62. Filed 12-26-61.

749,390. VE. Martin Flyer, d.b.a. Martin Flyer's Viroy Company. SN 143,948. Pub. 1-15-63. Filed 5-7-62.

749,391. MB AND DESIGN. Murray M. Braunstein Inc. SN 149,915. Pub. 2-26-63. Filed 7-27-62.

749,392. SWL. S.W.L. Inc. SN 150,106. Pub. 2-26-63. Filed 7-30-62.

749,393. ST. S. Toepfer, Inc. SN 150,119. Pub. 2-26-63. Filed 7-30-62.

749,394. BSI. Barnett Shorr Inc. SN 150,222. Pub. 2-26-63. Filed 8-1-62.

749,395. VC. Elwood Van Clief. SN 150,326. Pub. 2-26-63. Filed 8-2-62.

749,396. IJ AND DESIGN. Italian Jewelers Inc. SN 150,349. Pub. 2-26-63. Filed 8-2-62.

749,397. RHC. American Setting Company. SN 150,385. Pub. 2-26-63. Filed 8-3-62.

749,398. TELSTAR. A. C. Becken Co. SN 150,386. Pub. 2-26-63. Filed 8-3-62.

749,399. ABB AND DESIGN. Abraham Bronnstein. SN 150,388. Pub. 2-26-63. Filed 8-3-62.

749,400. M & L. Mandelbaum & Laufer. SN 150,431. Pub. 2-26-63. Filed 8-3-62.

749,401. ER. Erwin Reu, Inc. SN 150,456. Pub. 2-26-63. Filed 8-3-62.

749,402. NB. Norling & Bloom Company. SN 150,591. Pub. 2-26-63. Filed 8-6-62.

749,403. S & CO AND DESIGN. Spaulding & Company. SN 150,645. Pub. 2-26-63. Filed 8-6-62.

749,404. W AND DESIGN. Wallburr. SN 150,657. Pub. 2-26-63. Filed 8-6-62.

749,405. LAG AND DESIGN. Joseph N. Wineroth, Inc., d.b.a. L. A. Giacobbi & Co. SN 150,662. Pub. 2-26-63. Filed 8-6-62.

Class 29—Brooms, Brushes, and Dusters

749,406. ROUND THE CLOCK WITH BABY. Dunhill International, Inc., by merger from The Pyramid Rubber Company. SN 131,229. Pub. 2-26-63. Filed 11-2-61.

Class 32—Furniture and Upholstery

749,407. PORTA-REF. Wilson Jones Company. SN 124,652. Pub. 2-26-63. Filed 7-25-61.

749,408. SCULPTURED SATIN GOLD. The I-XL Furniture Co., Inc. SN 136,041. Pub. 2-26-63. Filed 1-18-62.

749,409. MARBELUX. The I-XL Furniture Co., Inc. SN 136,042. Pub. 2-26-63. Filed 1-18-62.

749,410. MARBELITE. The I-XL Furniture Co., Inc. SN 136,043. Pub. 2-26-63. Filed 1-18-62.

749,411. MARBELICA. The I-XL Furniture Co., Inc. SN 136,044. Pub. 2-26-63. Filed 1-18-62.

749,412. SHADOW-WOOD. The I-XL Furniture Co., Inc. SN 136,045. Pub. 2-26-63. Filed 1-18-62.

Class 34—Heating, Lighting, and Ventilating Apparatus

749,413. CLIMA-PAC. Worthington Corporation. SN 143,705. Pub. 2-26-63. Filed 5-2-62.

749,414. FEATHER. Rotron Manufacturing Co., Inc. SN 153,819. Pub. 2-26-63. Filed 9-24-62.

Class 35—Belting, Hose, Machinery Packing, and Nonmetallic Tires

749,415. T-FLEX. Thompson Ramo Wooldridge Inc. SN 150,824. Pub. 2-26-63. Filed 8-8-62.

749,416. MILEAGE MAKER. J. C. Penney Company. SN 150,889. Pub. 2-26-63. Filed 8-9-62.

749,417. NATION-WIDE. J. C. Penney Company. SN 150,890. Pub. 2-26-63. Filed 8-9-62.

Class 36—Musical Instruments and Supplies

749,418. VICAUDIO. Vicom, Inc. SN 97,734. Pub. 2-26-63. Filed 5-23-60.

749,419. DESIGN MARK. Nippon Kikai Seizo Kabushiki Kaisha, d.b.a. Sega Incorporated. SN 141,352. Pub. 2-26-63. Filed 4-2-62.

749,420. SEGA. Nippon Kikai Seizo Kabushiki Kaisha, d.b.a. Sega Incorporated. SN 141,354. Pub. 2-26-63. Filed 4-2-62.

749,421. RADAR. Prodara, Inc. SN 152,000. Pub. 2-26-63. Filed 8-27-62.

749,422. RAMBLER. Harold J. Michael, d.b.a. M & H Recording Co. SN 152,232. Pub. 2-26-63. Filed 8-30-62.

749,423. INNER-GLO. Nettie M. Dawson, d.b.a. Inner-Glo Music Company. SN 152,381. Pub. 2-26-63. Filed 9-4-62.

749,424. GOLD RIBBON. Pickwick International Inc. SN 153,319. Pub. 2-26-63. Filed 9-17-62.

Class 37—Paper and Stationery

749,425. REPRESENTATION OF BASKETWEAVE DESIGN. George La Monte & Son. SN 52,421. Pub. 2-26-63. Filed 5-27-58.

749,426. RAVEN "CYCOLOK." Wilson Jones Company. SN 106,335. Pub. 2-26-63. Filed 11-14-60.

749,427. RITEWORTHY ETC. AND DESIGN. Lakeside-Central Company. SN 141,628. Pub. 2-26-63. Filed 4-5-62.

749,428. STORMTITE. Avery Adhesive Products, Inc. SN 144,040. Pub. 2-26-63. Filed 5-8-62.

749,429. GOLD SEAL. Charles Bruning Company, Inc. SN 145,035. Pub. 2-26-63. Filed 5-21-62.

749,430. E-Z-DU. Theresa A. Grippa. SN 145,691. Pub. 2-26-63. Filed 5-29-62.

749,431. DINACOR. Container Corporation of America. SN 147,804. Pub. 2-26-63. Filed 6-27-62.

749,432. FRESH-GARD. Crown Zellerbach Corporation. SN 147,897. Pub. 2-26-63. Filed 6-28-62.

Class 38—Prints and Publications

749,433. THE SPACE REPORTER—SELL AND REPORT. William P. Wolfe Organization. SN 81,791. Pub. 4-17-62. Filed 9-21-59.

749,434. DESIGN OF A BUTTERFLY AND A CAMERA ETC. Collier Photo Engraving Co., Inc. SN 100,760. Pub. 2-26-63. Filed 7-13-60.

749,435. YANKEE ARTISTS. Yankee Artists, Inc. SN 120,272. Pub. 2-26-63. Filed 5-17-61.

749,436. AMERICAN BREEDERS AND DESIGN. John Rockefeller Prentice, d.b.a. American Breeders Service. SN 126,390. Pub. 2-26-63. Filed 8-21-61.

749,437. MANPOWER. Manpower Inc. SN 144,260. Pub. 2-26-63. Filed 5-10-62.

749,438. CMD. The Williams and Wilkins Company. SN 145,311. Pub. 2-26-63. Filed 5-23-62.

749,439. PARAMOUNT. The Paramount Line, Inc. SN 148,221. Pub. 2-26-63. Filed 7-2-62.

749,440. COLONY. The Paramount Line, Inc. SN 148,223. Pub. 2-26-63. Filed 7-2-62.

749,441. CC AND DESIGN. The Paramount Line, Inc. SN 148,224. Pub. 2-26-63. Filed 7-2-62.

749,442. TRINITY MISSIONS. The Missionary Servants of the Most Holy Trinity. SN 148,321. Pub. 2-26-63. Filed 7-6-62.

749,443. TRIANGLE DESIGN WITH REPRESENTATION OF A DOVE IN CENTER. The Missionary Servants of the Most Holy Trinity. SN 148,322. Pub. 2-26-63. Filed 7-6-62.

749,444. ELSEVIER. N.V. Uitgeversmaatschappij Elsevier. SN 148,693. Pub. 2-26-63. Filed 6-13-62.

749,445. CITATIONS. George S. Armstrong & Co., Inc. SN 148,703. Pub. 2-26-63. Filed 7-10-62.

749,446. ARB. C-E-I-R, Inc. SN 148,711. Pub. 2-26-63. Filed 7-10-62.

749,447. RECORD AMERICAN AND DESIGN. The Hearst Corporation. SN 148,732. Pub. 2-26-63. Filed 7-10-62.

Class 39—Clothing

749,448. BARAPEL. Baracuta, Inc. SN 97,611. Pub. 2-26-63. Filed 5-23-60.

749,449. UNDERKNITS. Flexnit Company, Inc. SN 133,380. Pub. 2-26-63. Filed 12-5-61.

749,450. SHEFFIELD. Malcolm Kenneth Company. SN 133,732. Filed S.R. 11-21-61; Am. P.R. 11-2-62.

749,451. MATTERHORN. Matterhorn Corporation, assignee of Anderson & Thompson Ski Co. SN 139,983. Pub. 1-15-63. Filed 3-16-62.

749,452. JO JI. The House of Perfection, Inc. SN 147,470. Pub. 2-26-63. Filed 6-22-62.

749,453. SORBEAU. Singing Needles, Inc. SN 147,506. Pub. 2-26-63. Filed 6-22-62.

749,454. SPRINGTEX. Flagg-Utica Corporation. SN 148,026. Pub. 2-26-63. Filed 6-29-62.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

749,455. STEVCOKNIT AND DESIGN. Stevcoknit Textile Company. SN 132,496. Pub. 2-26-63. Filed 11-21-61.

749,456. FASHION HOUSE FABRICS. The Duralon Corporation. SN 137,331. Pub. 2-26-63. Filed 2-6-62.

749,457. "TAKE ME TO YOUR TAILOR." Herbert Gladson, Ltd. SN 139,207. Pub. 2-26-63. Filed 3-6-62.

749,458. BEAUTY WEVE. Wonder Mills, Inc. SN 139,560. Pub. 2-26-63. Filed 3-9-62.

749,459. GANDER CLOTH. Climatic Inc. SN 143,104. Pub. 2-26-63. Filed 4-26-62.

749,460. TOM TOM AND DESIGN. Manuel Archuleta, d.b.a. Tom Tom Symbolized Craft. SN 147,344. Pub. 2-26-63. Filed 6-21-62.

749,461. PLAS MEINECKE TIK AND DESIGN. Meinecke & Co., Inc. SN 147,837. Pub. 2-26-63. Filed 6-27-62.

749,462. PLAS MEINECKE TIK TOP AND DESIGN. Meinecke & Co., Inc. SN 147,838. Pub. 2-26-63. Filed 6-27-62.

749,463. AZOTON. Institute of Textile Technology. SN 147,931. Pub. 2-26-63. Filed 6-28-62.

749,464. RAPPORT. Deering Milliken, Inc. SN 148,484. Pub. 2-26-63. Filed 7-6-62.

749,465. LINSTAR. Deering Milliken, Inc. SN 148,486. Pub. 2-26-63. Filed 7-6-62.

749,466. CENTURION. Deering Milliken, Inc. SN 148,488. Pub. 2-26-63. Filed 7-6-62.

Class 43—Thread and Yarn

749,467. POLY-SIL. Polymer Silk Corp. SN 135,046. Pub. 2-26-63. Filed 1-2-62.

749,468. PED-LON AND DESIGN. Silver Knit Hosiery Mills, Inc. SN 138,121. Pub. 2-26-63. Filed 2-16-62.

Class 44—Dental, Medical, and Surgical Appliances

749,469. TRANPAD. Air Logistics Corporation. SN 138,139. Pub. 2-26-63. Filed 2-19-62.

749,470. VIVOSIL. Becton Dickinson and Company. SN 140,244. Pub. 2-26-63. Filed 3-20-62.

749,471. COPALITE. Mary F. Cooley, Denton A. Cooley, and Ralph C. Cooley, Jr., heirs of Ralph C. Cooley, deceased. SN 148,956. Pub. 2-26-63. Filed 7-13-62.

Class 45 — Soft Drinks and Carbonated Waters

749,472. SUN VALLEY AND DESIGN. Kay B. Fischer, administratrix of the estate of Philip S. Fischer, d.b.a. Sun Valley Company. SN 81,266. Pub. 2-26-63. Filed 9-14-59.

Class 46 — Foods and Ingredients of Foods

749,473. HIAWATHA. Mille Lacs Maple Products Corporation. SN 84,930. Pub. 2-26-63. Filed 11-9-59.

749,474. PLANTATION AND DESIGN. Allied Old English, Incorporated. SN 86,529. Pub. 2-26-63. Filed 12-3-59.

749,475. HUBIE AND DESIGN. Thomas Carvel. SN 98,203. Pub. 2-26-63. Filed 6-1-60.

749,476. BANANITAS. National Food Industries, Inc., assignee of J. M. Martines Canas, d.b.a. J. Martines Canas. SN 105,528. Pub. 2-26-63. Filed 9-30-60.

749,477. SWITZERLAND ETC. AND DESIGN. Switzerland Cheese Association, Inc. SN 107,287. Pub. 2-26-63. Filed 10-28-60.

749,478. MADE IN SWITZERLAND AND DESIGN. Switzerland Cheese Association, Inc. SN 107,801. Pub. 2-26-63. Filed 11-3-60.

749,479. WHISKIT PAK. Armour and Company. SN 107,812. Pub. 2-26-63. Filed 11-4-60.

749,480. P & C AND DESIGN. P & C Food Markets, Inc. SN 114,874. Pub. 8-29-61. Filed 3-3-61.

749,481. SAFE-T-BELTZ. John P. Fitzgerald, d.b.a. Fitzgerald. SN 118,342. Pub. 2-26-63. Filed 4-21-61.

749,482. DEL AND DESIGN. Del Norte Foods, Inc. SN 120,081. Pub. 2-26-63. Filed 5-16-61.

749,483. FREE-TIME. Dynamatics, Inc. SN 134,729. Pub. 2-26-63. Filed 12-27-61.

749,484. BIG LEAGUE. Tom Sawyer Foods, Inc. SN 135,833. Pub. 2-26-63. Filed 1-15-62.

749,485. NORTON. Norton & McElroy Produce, Inc. SN 136,272. Pub. 2-26-63. Filed 1-22-62.

749,486. ACME VIRGINIA LEE AND DESIGN. Acme Markets, Inc., by change of name from American Stores Company. SN 138,364. Pub. 2-26-63. Filed 2-21-62.

749,487. TATER BOY. Betters Food Sales, Inc. SN 139,462. Pub. 2-26-63. Filed 3-9-62.

749,488. MORE PARKS' SAUSAGES MOM ! AND DESIGN. H. G. Parks, Inc. SN 141,102. Pub. 2-26-63. Filed 3-29-62.

749,489. OVER-UNDER STIX. Good Humor Corporation. SN 146,041. Pub. 2-26-63. Filed 6-4-62.

749,490. WILD TURKEY. The Wild Turkey Groves, Inc. SN 146,093. Pub. 2-26-63. Filed 6-11-62.

749,491. MALLOPUFFS. Sunshine Biscuits, Inc. SN 146,860. Pub. 2-26-63. Filed 6-25-62.

749,492. STA-SPERSE. A. E. Staley Manufacturing Company. SN 147,410. Pub. 2-26-63. Filed 6-21-62.

749,493. FULL DRESS. Norris Inc. SN 150,442. Pub. 2-26-63. Filed 8-3-62.

749,494. 4 SUITS. Continental Baking Company. SN 150,528. Pub. 2-26-63. Filed 8-6-62.

749,495. REDWOOD EMPIRE. Redwood Empire Fine Foods. SN 150,618. Pub. 2-26-63. Filed 8-6-62.

749,496. FESTAL. Owatonna Canning Company. SN 151,161. Pub. 2-26-63. Filed 8-14-62.

749,497. QUESTION MARK AND DESIGN. Union Brokerage Co. SN 151,446. Pub. 2-26-63. Filed 8-17-62.

Class 47 — Wines

749,498. ADORNO. Jim Thomas, d.b.a. Thomas Import Co., assignee of Franzia Brothers Winery, d.b.a. Old Chateau Wine Co. SN 144,063. Pub. 2-26-63. Filed 5-8-62.

Class 48 — Malt Beverages and Liquors

749,499. LIEBOTSCHANER. Stegmaier Brewing Company. SN 145,296. Pub. 2-26-63. Filed 5-23-62.

Class 49 — Distilled Alcoholic Liquors

749,500. MERITO. National Distillers and Chemical Corporation, d.b.a. National Distillers Products Co. SN 58,363. Pub. 2-26-63. Filed 9-4-58.

749,501. REMY MARTIN. Maison E. Remy Martin & Co. SN 144,625. Pub. 2-26-63. Filed 5-15-62.

749,502. ROYAL CRYSTAL. Gilmore & Co. SN 144,952. Pub. 2-26-63. Filed 5-18-62.

Class 50 — Merchandise Not Otherwise Classified

749,503. HALL OF FAME. Harmor & Co., Inc. SN 99,516. Pub. 5-9-61. Filed 6-22-60.

749,504. THE CAPTIVATIN' CLIPPER. Cornelia P. Jones. SN 143,402. Pub. 2-26-63. Filed 4-30-62.

749,505. FALCO. Falco Products Co., d.b.a. Falco Products Company. SN 151,035. Pub. 2-26-63. Filed 8-13-62.

Class 51 — Cosmetics and Toilet Preparations

749,506. SHADE. Plough, Inc. SN 136,143. Pub. 2-26-63. Filed 1-19-62.

749,507. RAFIFI. Robert Alan Franklyn, d.b.a. Robaire Alain. SN 138,186. Pub. 2-26-63. Filed 2-19-62.

749,508. JOAN PETTY. Joan Petty Inc. SN 139,669. Pub. 2-26-63. Filed 3-12-62.

749,509. MODELING. Societe L'Oreal. SN 143,057. Pub. 2-26-63. Filed 4-25-62.

749,510. BRUSH-A-TAB. Colgate-Palmolive Company. SN 144,333. Pub. 2-26-63. Filed 5-11-62.

749,511. FLUOROCLEAN. Colgate-Palmolive Company. SN 144,339. Pub. 2-26-63. Filed 5-11-62.

749,512. DREAM SHEEN. The Andrew Jergens Company. SN 144,854. Pub. 2-26-63. Filed 5-17-62.

749,513. YOUNG IDEA. Peggy Sage, Inc. SN 146,421. Pub. 2-26-63. Filed 6-7-62.

749,514. TUBBY TIME AND DESIGN. Tubby Time, Inc. SN 146,688. Pub. 2-26-63. Filed 6-11-62.

749,515. ILLUME. Albert J. Kaplan, d.b.a. Alkap Laboratories. SN 146,828. Pub. 2-26-63. Filed 6-13-62.

749,516. GOOD NEWS. Helene Curtis Industries, Inc. SN 146,901. Pub. 2-26-63. Filed 6-14-62.

749,517. LOVELAND MAGICA. Lander Co. Inc., d.b.a. Loveland. SN 147,209. Pub. 2-26-63. Filed 6-19-62.

749,518. PROPMATIC. The Mennen Company. SN 147,212. Pub. 2-26-63. Filed 6-19-62.

749,519. SO GOOD ! Cardinal Laboratories Inc. SN 147,702. Pub. 2-26-63. Filed 6-26-62.

749,520. OCCUR ! Avon Products, Inc. SN 147,882. Pub. 2-26-63. Filed 6-28-62.

749,521. PROMISE. L. & C. Hardtmuth, Inc. SN 147,924. Pub. 2-26-63. Filed 6-28-62.

749,522. PACKAGE DESIGN. West Indies Bay Company. SN 153,534. Pub. 2-26-63. Filed 9-19-62.

Class 52 — Detergents and Soaps

749,523. FEEL. Fur-Feel Corporation. SN 9,786. Pub. 2-26-63. Filed 6-7-56.

749,524. SC AND DESIGN. Sunshine Chemical Corporation. SN 135,062. Pub. 2-26-63. Filed 1-2-62.

749,525. INDAL. Pennsalt Chemicals Corporation. SN 136,074. Pub. 2-26-63. Filed 1-18-62.

749,526. DESIGN OF CHICKEN IN HALF EGG SHELL WITH PADDLE. The Bon Ami Company. SN 140,624. Pub. 2-26-63. Filed 3-26-62.

749,527. SANAVENE. Clark F. Ross. SN 144,007. Pub. 2-26-63. Filed 5-7-62.

749,528. LOV-IT. Owen Paul, Inc. SN 145,210. Pub. 2-26-63. Filed 5-22-62.

749,529. SILKY SUDS. Fels and Company. SN 150,542. Pub. 2-26-63. Filed 8-6-62.

749,530. 30-30. Bristol-Myers Company. SN 151,393. Pub. 2-26-63. Filed 8-17-62.

Service Marks

Class 100 — Miscellaneous

749,531. MacLEVY AND DESIGN. MacLevy Slenderizing Salon, Inc. SN 46,960. CONCURRENT USE. Pub. 2-26-63. Filed 3-3-58.

749,532. MacLEVY. MacLevy Slenderizing Salon, Inc. SN 46,961. CONCURRENT USE. Pub. 2-26-63. Filed 3-3-58.

749,533. HUBIE AND DESIGN. Thomas Carvel. SN 98,204. Pub. 2-26-63. Filed 6-1-60.

749,534. BEARCAT. Dresser Industries, Inc., d.b.a. Lane-Wells Company. SN 105,800. Pub. 2-26-63. Filed 10-5-60.

749,535. AICHE AND DESIGN. American Institute of Chemical Engineers. SN 146,868. Pub. 2-26-63. Filed 6-14-62.

Class 101 — Advertising and Business

749,536. CMM. Israel Unterman, Inc., assignee of Unterman Associates, Inc. SN 128,226. Pub. 1-29-63. Filed 9-19-61.

Class 102 — Insurance and Financial

749,537. PFC AND DESIGN. Pako Corporation. SN 142,050. Pub. 2-26-63. Filed 4-11-62.

749,538. LANDMARK CORPORATION AND DESIGN. Landmark Corporation. SN 145,699. Pub. 2-26-63. Filed 5-29-62.

749,539. LRM AND DESIGN. Lightning Rod Mutual Insurance Company. SN 146,833. Pub. 2-26-63. Filed 6-13-62.

749,540. YOU'RE IN GOOD HANDS WITH ALLSTATE AND DESIGN. Allstate Insurance Company. SN 151,866. Pub. 2-26-63. Filed 8-27-62.

Class 103 — Construction and Repair

749,541. IP AND DESIGN. Intrusion-Prepakt, Incorporated. SN 148,860. Pub. 2-26-63. Filed 7-9-62.

Class 105 — Transportation and Storage

749,542. FLAG DESIGN. Sabre Shipping Corporation. SN 133,988. Pub. 2-26-63. Filed 12-13-61.

749,543. "ADD-A-MARKET" SERVICE. The Mason and Dixon Lines, Incorporated. SN 140,146. Pub. 2-26-63. Filed 3-19-62.

Class 106 — Material Treatment

749,544. ARROW DESIGN. Materials Testing Company, Inc. SN 137,923. Pub. 2-26-63. Filed 2-14-62.

749,545. PERMASTAN. Standard Dyeing and Finishing Co. SN 142,365. Pub. 2-26-63. Filed 4-16-62.

749,546. DUROSTAN. Standard Dyeing and Finishing Co. SN 142,366. Pub. 2-26-63. Filed 4-16-62.

749,547. AQUASTAN. Standard Dyeing and Finishing Co. SN 142,367. Pub. 2-26-63. Filed 4-16-62.

Class 107 — Education and Entertainment

749,548. LITTLE JOE, THE BRAKEMAN. KTVB, Inc. SN 141,845. Pub. 2-26-63. Filed 4-9-62.

749,549. TURKISH KISMET REVUE. Murat Somay. SN 143,683. Pub. 2-26-63. Filed 6-20-62.

749,550. UNISPHERE. New York World's Fair 1964-1965 Corporation. SN 154,621. Pub. 2-26-63. Filed 10-5-62.

749,551. GLOBE OF THE WORLD DESIGN. New York World's Fair 1964-1965 Corporation. SN 154,622. Pub. 2-26-63. Filed 10-5-62.

Certification Marks

Class A — Goods

749,552. IMPORTED HOLLAND BULBS AND DESIGN. Associated Bulb Growers of Holland, Inc. SN 142,915. Pub. 2-26-63. Filed 4-24-62.

749,553. APPROVED PRODUCT AP ETC. AND DESIGN. The Crayon, Water Color and Craft Institute, Inc. SN 148,957. Pub. 2-26-63. Filed 7-13-62.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 2 — Receptacles

749,554. Sybie H. Mitchell, Arlington, Tex. SN 123,492. Filed P.R. 7-6-61; Am. S.R. 2-19-63.

HANG-A-BASKET

For Wall Suspended Plastic Receptacles for Articles of Clothing, Laundry Supplies, and Similar Articles.
First use Mar. 15, 1961.

Class 8 — Smokers' Articles, Not Including Tobacco Products

749,555. Alexander Beclawski, d.b.a. American Indian Tobacco and Enterprises, Meriden, Conn. SN 137,705. Filed P.R. 2-12-62; Am. S.R. 3-8-63.

[illegible]

For Pipe Tobacco Sold in Plastic Pouches.
First use Jan. 8, 1962.

Class 12—Construction Materials

749,556. Associated Pipe & Fitting Company, Inc., Clifton, N.J. SN 133,621. Filed P.R. 12-8-61; Am. S.R. 1-22-63.

HELIX-PILE SHELL

For Shells for Piling.
First use in October 1961.

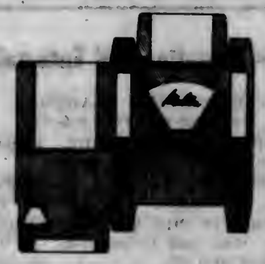
Class 13—Hardware and Plumbing and Steam-Fitting Supplies

749,557. Eaton Manufacturing Company, Cleveland, Ohio. SN 125,481. Filed P.R. 8-7-61; Am. S.R. 2-19-63.

"PRODUCTS OF CREATIVE RESEARCH"

For Fasteners of the Internal and External Thread Type—Namely, Nuts, Bolts, Thread-Cutting Screws, Nut and Washer Combinations, Screw and Washer Combinations; Hose Fasteners; Snap and Retainer Type Rings.
First use October 1960.

749,558. Horst Wolfgang Bentz, d.b.a. Melitta-Werke Bentz & Sohn, Westphalia, Germany. SN 128,131. Filed P.R. 9-18-61; Am. S.R. 12-17-62.



The drawing is lined for the colors red and green, but no claim is made to color. Owner of German Reg. No. 742,415, dated Nov. 14, 1960; and U.S. Reg. Nos. 624,591, 699,811, and others.

For House and Kitchen Implements—Namely, Machines for the Preparation of Coffee and Tea as Well as Machines for Warmkeeping of Coffee and Tea, Coffee and Tea Grinders, Galvanized Milk Cans.

749,559. Adam Bork, Arverne, N.Y. SN 133,525. Filed P.R. 12-7-61; Am. S.R. 11-13-62.



No claim is made to the representation of the goods apart from the mark shown on the drawing.

For Food Inserting Clamp Holder for Electric Toasters.
First use Nov. 8, 1961.

749,560. Fabri-Valve Company of America, Portland, Oreg. SN 152,659. Filed 9-5-62.



For Gate Valves.
First use Feb. 22, 1960.

Class 17—Tobacco Products

749,561. Brown & Williamson Tobacco Corporation, Louisville, Ky. SN 139,027. Filed P.R. 8-5-62; Am. S.R. 3-7-63.

HILTON

For Cigarettes.
First use Feb. 23, 1962.

Class 19—Vehicles

749,562. The Dalton Foundries, Inc., Warsaw, Ind. SN 59,521. Filed P.R. 9-25-58; Am. S.R. 6-27-61.



For Trailer Hitches.
First use July 28, 1958.

749,563. J J Newberry Co., New York, N.Y. SN 149,314. Filed P.R. 7-18-62; Am. S.R. 2-1-63.

MEREDITH

For Bicycles.
First use Oct. 15, 1961.

749,564. Airstream, Inc. (Delaware corporation), Jackson Center, Ohio, assignee of Airstream, Inc. (Ohio corporation), Jackson Center, Ohio. SN 151,642. Filed P.R. 8-22-62; Am. S.R. 2-4-63.

MOBILE INDUSTRIAL

For Mobile House Trailers Used for Housing and as Offices.
First use Sept. 6, 1961.

Class 21—Electrical Apparatus, Machines, and Supplies

749,565. Grayhill, Inc., La Grange, Ill. SN 111,738. Filed P.R. 1-12-61; Am. S.R. 3-4-63.

PUSH POST

For Electrical Connectors.
First use August 1960.

749,566. Jackes-Evans Manufacturing Company, St. Louis, Mo. SN 116,034. Filed P.R. 3-20-61; Am. S.R. 3-20-63.

EPOXY-CLAD

For Valves—Namely, Solenoid Valves, Valve Coils, and Other Valve Parts.
First use Nov. 30, 1960.

749,567. Delta Semiconductors, Inc., Newport Beach, Calif. SN 125,811. Filed P.R. 8-11-61; Am. S.R. 2-21-63.

NEW DIMENSIONS IN DIODES

For Semiconductor Devices—Namely, Diodes.
First use July 1, 1961.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

749,568. Wagner Tool and Supply Corporation, Hialeah, Fla. SN 93,237. Filed P.R. 3-18-60; Am. S.R. 7-13-62.

FIN-COMB

For Fin Straightening Tool for Straightening the Fins of Heat Exchangers and the Like.
First use Oct. 15, 1959.

749,569. Bundy Marine S.p.A., Milan, Italy. SN 125,718. Filed P.R. 8-10-61; Am. S.R. 1-15-63.

BUNDY MARINE

For Marine Engines, Outboard Engines.
First use Nov. 1, 1960; in commerce Dec. 31, 1960.

Class 26—Measuring and Scientific Appliances

749,570. Harry W. Dietert Co., Detroit, Mich. SN 120,507. Filed P.R. 5-22-61; Am. S.R. 3-1-63.

MOLDABILITY CONTROLLER

For Apparatus Which Determines Bulk Cohesion and Other Characteristics of Molding Sand.
First use Feb. 20, 1960.

Class 27—Horological Instruments

749,571. Lunatime, Inc., New York, N.Y. SN 137,446. Filed P.R. 2-7-62; Am. S.R. 3-6-63.

Sheaffer

For Watches and Clocks.
First use Jan. 18, 1962.

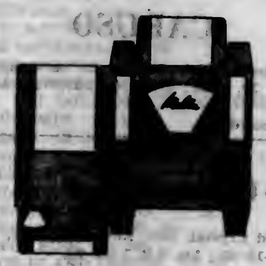
Class 30—Crockery, Earthenware, and Porcelain

749,572. E-Z Cook, Inc., Lakeville, Ind. SN 108,761. Filed P.R. 11-21-60; Am. S.R. 2-11-63.



For China Dinnerware.
First use Oct. 24, 1960.

749,573. Horst Wolfgang Bentz, d.b.a. Melitta-Werke Bentz & Sohn, Westphalia, Germany. SN 128,128. Filed P.R. 9-18-61; Am. S.R. 12-11-62.



The drawing is lined for the colors red and green, but no claim is made to color. Owner of German Reg. No. 742,415, dated Nov. 14, 1960; and U.S. Reg. Nos. 624,591, 699,811, and others.

For Milk Funnels, Milk Strainers, Coffee Pots, Tea Pots.

Class 31 — Filters and Refrigerators

749,574. J. A. Baldwin Manufacturing Co., Kearney, Nebr. SN 136,186. Filed P.R. 1-22-62; Am. S.R. 3-5-63.

Quality FILTER ELEMENT

For Oil, Air, and Fuel Filter Elements.
First use on or about Oct. 31, 1961; on or about Jan. 1, 1960, as to "Quality."

Class 34 — Heating, Lighting, and Ventilating Apparatus

749,575. Wallace Silversmiths, Inc., Wallingford, Conn. SN 113,672. Filed 2-14-61.

FIREGLAZE FINISH

For Finish Applied to Andirons and Fire Screens, and Fire Sets Comprising Shovels, Tongs, Pokers, and Baskets.
First use June 1958.

Class 36 — Musical Instruments and Supplies

749,576. Schulmerich Carillons, Inc., Sellersville, Pa. SN 120,756. Filed P.R. 5-24-61; Am. S.R. 2-6-63.

Campanile Bells

For Automatic Electronic Bell Playing Instrument.
First use Oct. 14, 1960.

749,577. Matthew De Fiorio, d.b.a. De Fiorio Imports, Toronto, Ontario, Canada. SN 145,528. Filed P.R. 5-28-62; Am. S.R. 3-18-63.

CARUSO

Priority claimed under Sec. 44(d) on Canadian application filed Dec. 29, 1961; Reg. No. 127,072, dated June 29, 1962.
For Piano Accordions.

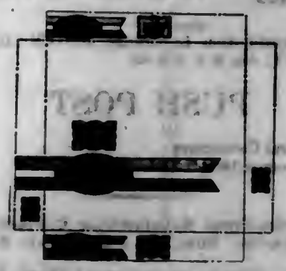
Class 39 — Clothing

749,578. David Crystal, Inc., New York, N.Y. SN 122,280. Filed P.R. 6-19-61; Am. S.R. 1-11-63.

THE UNCRUSHABLES

For Misses' and Ladies' Dresses, Suits, Skirts, Shirts, Blouses, Coats, Slacks, Jumpers; Men's Shirts, Swim Trunks, Shorts, Slacks, Socks, and Jackets.
First use June 1, 1961.

749,579. P. H. Hanes Knitting Company, Winston-Salem, N.C. SN 133,663. Filed P.R. 12-8-61; Am. S.R. 2-20-63. The drawing is lined for red and gold.



For Sports Undershirts and Sports Outershirts, Sports Underwear, Shorts and Bathing Trunks, Jackets and Sweaters, Underwear, Sleepwear, All for Men, Women, and Children, and Men's and Children's Socks.
First use Sept. 15, 1961; November 1914 as to "Hanes."

749,580. BGS Shoe Corporation, Manchester, N.H. SN 135,745. Filed P.R. 1-15-62; Am. S.R. 1-15-63.

PARIGI

"Parigi" means "Paris" in the Italian language.
For Women's Shoes.
First use Dec. 12, 1961.

749,581. W. V. King & Sons (U.S.A.) Ltd., Los Angeles, Calif. SN 139,219. Filed P.R. 3-6-62; Am. S.R. 3-4-63.



For Men's Shirts.
First use May 26, 1961.

749,582. Michaels Stern & Company, Incorporated, Rochester, N.Y. SN 139,691. Filed P.R. 3-12-62; Am. S.R. 2-25-63.

PRE-SET

For Men's and Young Men's Suits, Coats, and Slacks.
First use Feb. 7, 1962.

749,583. Gold-Sachs Company, Inc., New York, N.Y. SN 141,064. Filed P.R. 3-29-62; Am. S.R. 1-7-63.

Baldwin

The drawing is lined for silver and gold.
For Men's and Boys' Shirts.
First use Apr. 28, 1945.

749,584. Springfoot, Inc., Charleston, W. Va. SN 152,535. Filed 9-5-62.

VANDERBILT

For Pajamas.
First use Aug. 18, 1961.

Class 42 — Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

749,585. Meinecke & Co., Inc., New York, N.Y. SN 138,728. Filed P.R. 2-27-62; Am. S.R. 2-8-63.

RUBALIKE

For Synthetic Plastic Piece Goods, Mattress Covers, and Pillow Covers.
First use March 1960.

TRADEMARK REGISTRATIONS RENEWED

163,068. MON CHERI. Cl. 51. 1-2-23.
163,172. VICTOR. Cl. 43. 1-2-23.
163,359. LA LAINIERE DE ROUBAIX AND DESIGN. Cl. 42. 1-9-23.
163,403. STERNOL. Cl. 15. 1-9-23.
165,065. WINDIT. Cl. 48. 3-20-23.
165,791. TOLID. Cl. 18. 3-20-23.
165,792. PULBIT. Cl. 18. 3-20-23.
165,818. FLOREX. Cl. 16. 3-20-23.
165,844. HUMBLE OILS AND DESIGN. Cl. 15. 3-20-23.
166,186. LABELSTIK. Cl. 2. 3-27-23.
166,494. STANOLEX. Cl. 15. 4-3-23.
166,608. WHITBEY. Cl. 39. 4-10-23.
167,233. MUTUAL. Cl. 6. 4-24-23.
167,784. CINDERELLA. Cl. 4. 5-8-23.
168,672. IDEAL. Cl. 37. 5-29-23.
168,736. AUTO-LIFE. Cl. 4. 5-29-23.
169,254. RAMBLER. Cl. 19. 6-12-23.
169,494. DE LUXE. Cl. 39. 6-19-23.
169,829. EVERJET. Cl. 16. 7-3-23.
171,735. DURA AND DESIGN. Cl. 13. 8-14-23.
171,982. MARVELHIDE. Cl. 37. 8-21-23.
172,001. ALL AMERICAN. Cl. 11. 8-21-23.
172,087. MARATHON HATS. Cl. 39. 8-21-23.
172,131. COLLEGIATE. Cl. 38. 8-21-23.
172,229. CHOLELITH. Cl. 18. 8-28-23.
172,312. BROADWAY. Cl. 22. 8-28-23.
399,347. TAVOL. Cl. 46. 12-29-42.
399,788. KASHMIRAN AND DESIGN. Cl. 39. 2-2-43.
400,411. ARCTUSINE. Cl. 51. 3-9-43.
400,517. PHILCO. Cl. 36. 3-16-43.
400,528. AQUASET. Cl. 37. 3-16-43.
400,537. DECCA RECORDS. Cl. 36. 3-16-43.
400,559. SPEC ORAK. Cl. 21. 3-16-43.
400,651. AVONDALE A.M. AVONTIZE AND DESIGN. Cl. 42. 3-23-43.
400,673. LUXIFLUX. Cl. 34. 3-23-43.
400,674. SPEKSOLDER. Cl. 34. 3-23-43.
400,728. AIRLITE. Cl. 42. 3-30-43.
400,890. AVENAUIUS. Cl. 6. 4-6-43.
400,952. U.S. RECORD OF PERFORMANCE N.P.I.P. AND DESIGN. Cl. 46. 4-13-43.
401,156. GERM-TROL. Cl. 6. 4-27-43.
401,157. STANITE. Cl. 29. 4-27-43.
401,321. GLAZA-WOOD. Cl. 16. 5-11-43.
401,327. SPARKLING BURGUNDY. Cl. 51. 5-11-43.
401,345. PYRESOTE AND DESIGN. Cl. 12. 5-11-43.
401,424. WALTHAM PREMIER. Cl. 27. 5-18-43.
401,792. CARRYALL. Cl. 46. 6-8-43.
401,838. NAMEPLATE DESIGN. Cl. 23. 6-15-43.
402,061. NATIONAL AND DESIGN. Cl. 26. 6-29-43.
402,662. DESIGN LARGE AND SMALL GEARS. Cl. 26. 6-29-43.
402,257. IRON LUNG AND DESIGN. Cl. 34. 7-13-43.
402,290. PATHWAYS. Cl. 39. 7-13-43.
402,291. PERAMBULATORS. Cl. 39. 7-13-43.
402,361. SHIELD AND DIAMOND FIGURE. Cl. 48. 7-13-43.
402,467. TRAPIT. Cl. 13. 7-27-43.
402,514. PERE MANON. Cl. 47. 7-27-43.
402,721. PRODUC-TROL. Cl. 50. 8-10-43.
402,736. SOPHIE ORIGINAL. Cl. 39. 8-10-43.
402,928. SEGWELD. Cl. 13. 8-24-43.
402,979. PRO-VITE. Cl. 18. 8-24-43.

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359,539. CRUSADER. Cl. 21. 8-23-88.
424,958. CORSAIR. Cl. 21. 10-29-46.
424,959. PRIVATEER. Cl. 21. 10-29-46.
424,960. SEAFARER. Cl. 21. 10-29-46.
435,757. BUCCANEER. Cl. 21. 1-6-48.

The following registrations issued Mar. 26, 1957

643,089. LAWN-IN-ONE. Cl. 1.
643,090. KISS 'N TELL. Cl. 1.
643,092. JANET DAVID MIAMI AND DESIGN. Cl. 2.
643,094. DUROVAC. Cl. 2.
643,098. ADD-A-TOOL. Cl. 2.
643,110. THERMAX. Cl. 5.
643,115. NEOPILATE. Cl. 6.
643,116. ORTOL. Cl. 6.
643,123. LIQUID-LITE. Cl. 6.
643,131. WASCOLITE SHOWERWALL. Cl. 12.
643,133. LACLEDE PITCO. Cl. 12.
643,138. FLEXI-BOOT. Cl. 12.
643,140. SOMERVILLE DYNAMOLD. Cl. 13.
643,141. SIW DYNAMOLD. Cl. 13.
643,147. CRAZY SUSAN. Cl. 13.
643,148. WHIRLPOOL. Cl. 13.
643,151. SMP CO. AND DESIGN. Cl. 13.
643,154. FERRALOY. Cl. 14.
643,158. RUBBER-HYDE. Cl. 16.
643,163. EKCO-GLO. Cl. 16.
643,164. STYLE-TONE. Cl. 16.
643,168. V-M NUTRICAL. Cl. 18.
643,172. GEVRAMYCIN. Cl. 18.
643,174. DAYAMINERAL. Cl. 18.
643,175. FC INC LOLLIDROPS AND DESIGN. Cl. 18.
643,176. VI-OBAMIN. Cl. 18.
643,187. ARDCO. Cl. 21.
643,189. SHIELD AND CROWN DESIGN. Cl. 21.
643,191. SOLENARC. Cl. 21.
643,193. MELOCOM AND DESIGN. Cl. 21.
643,197. DYNARAMA SOGECO. Cl. 21.
643,200. SPEED-O-MATIC. Cl. 22.
643,204. STATE SIDE. Cl. 22.
643,208. ROCK-IT AND DESIGN. Cl. 22.
643,209. CONEY ISLAND. Cl. 22.
643,210. "MR. BANJO." Cl. 22.
643,213. SUN-TAC. Cl. 22.
643,214. TRACER. Cl. 22.
643,215. TORRENT. Cl. 22.
643,216. TRAVELER. Cl. 22.
643,218. SHOCK-EZE. Cl. 22.

643,220. HOOK A CROOK. Cl. 22.
643,223. DIAMONDWARE. Cl. 23.
643,227. MONOFLOW. Cl. 23.
643,233. THE KANSAS JACK AND DESIGN. Cl. 23.
643,236. PENVEND AND DESIGN. Cl. 23.
643,239. WORK BULL. Cl. 23.
643,242. DESIGN OF MINUTE MAN. Cl. 24.
643,243. INDEPENDENCE. Cl. 24.
643,246. GOLDEN CROWN. Cl. 24.
643,252. LESINE. Cl. 27.
643,255. FAIR LADY. Cl. 28.
643,256. LOVERS LANE. Cl. 28.
643,257. NEVA TOUCH. Cl. 29.
643,259. ION-MASTER. Cl. 31.
643,260. NORGE DOUBLE-DECKER. Cl. 31.
643,264. THE HOUSE OF TIME INC. ETC. AND DESIGN. Cl. 32.
643,273. ECONOMY. Cl. 34.
643,274. THE AQUARIAN AND DESIGN. Cl. 34.
643,280. DECAFLAT. Cl. 37.
643,285. MRS. AMERICA DREAM HOUSE. Cl. 38.
643,286. NATESA REPRESENTATION OF U.S. MAP ETC. AND DESIGN. Cl. 38.
643,288. SCRIPTIPS. Cl. 38.
643,292. BETWEEN US. Cl. 38.
643,297. KINGS NEEDLE DP AND DESIGN. Cl. 39.
643,300. LEATHER BACK. Cl. 39.
643,301. MINUETTES. Cl. 39.
643,310. LADDER. Cl. 39.
643,311. WATER BOY. Cl. 39.
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643,317. EYE-DEAS. Cl. 39.
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643,328. OBEDIENCE. Cl. 42.
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643,331. BERKWAY. Cl. 42.
643,334. TROJAN BRAND AND DESIGN. Cl. 44.
643,336. VISTE PDQ. Cl. 44.
643,347. CEYLON HOUSE AND DESIGN. Cl. 46.
643,352. REPRESENTATION OF LION'S HEAD AND DESIGN. Cl. 46.
643,353. MONARCH AND DESIGN. Cl. 46.
643,354. MONARCH. Cl. 46.
643,356. TOLAS. Cl. 46.
643,365. PROTOSWEET. Cl. 46.
643,367. SUN DISK. Cl. 46.
643,371. KACHINA. Cl. 46.
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643,380. TROPIC GREEN. Cl. 50.
643,381. "FATHER NEPTUNE." Cl. 50.
643,383. CROWN BAY. Cl. 51.
643,385. GOLDEN SECRET. Cl. 51.
643,388. VAUDEVILLE. Cl. 51.
643,392. POMP AND CIRCUMSTANCE. Cl. 52.
643,393. GAH-ZEL ETC. AND DESIGN. Cl. 52.
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643,409. JELL QUIK. Cl. 46.

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425,224. SOFTONE AND DESIGN. Cl. 4. 11-5-46.
647,883. SNO-DRY. Cl. 39. 7-2-57.
658,380. GREEN MAGIC. Cl. 1. 2-18-58.

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MAY 14, 1963

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Abbott Laboratories, North Chicago, Ill. 643,174, canc. Cl. 18.
Acme Chemical Co., Milwaukee, Wis. 749,285, pub. 2-26-63. Cl. 6.
Adcote Chemicals, Inc., Elk Grove Village, Ill. 749,280, pub. 5-16-61. Cl. 5.
Acme Markets, Inc., from American Stores Co., Philadelphia, Pa. 749,456, pub. 2-26-63. Cl. 46.
Adventure Line Mfg. Co., Inc., Parsons, Kans. 749,322, pub. 2-26-63. Cl. 19.
Air Logistics Corp., Pasadena, Calif. 749,469, pub. 2-26-63. Cl. 44.
Airstream, Inc., from Airstream, Inc., Jackson Center, Ohio. 749,564, Cl. 19.
Alabe Crafts, Inc., Cincinnati, Ohio. 643,220, canc. Cl. 22.
Alderson Research Laboratories, Inc., Long Island City, N.Y. 749,374, pub. 2-26-63. Cl. 26.
Alkap Laboratories: *See*—
Kaplan, Albert J.
Allied Chemical Corp.: *See*—
Barrett Co., The.
Mutual Chemical Co. of America.
Allied Old English, Inc., Newark, N.J. 749,474, pub. 2-26-63. Cl. 46.
Allstate Insurance Co., Skokie, Ill. 749,540, pub. 2-26-63. Cl. 102.
Alpha Hardware Co., d.b.a. Alpha Industrial Supply, Nevada City, Calif. 749,286, pub. 2-26-63. Cl. 9.
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American Biltrite Rubber Co. Inc., Trenton, N.J. 749,327, pub. 2-26-63. Cl. 20.
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American Fire Clay & Products Co., Canfield, Ohio. 749,295, pub. 2-26-63. Cl. 12.
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American Machine & Foundry Co.: *See*—
B.M.C. Mfg. Corp.
American Setting Co., Newark, N.J. 749,397, pub. 2-26-63. Cl. 28.
American Stores Co.: *See*—
Acme Markets, Inc.
Anderson & Thompson Ski Co.: *See*—
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Applied Engineering Corp., East Walpole, Mass. 749,363, pub. 9-11-62. Cl. 23.
Approved Products, Inc., Memphis, Tenn. 643,393, canc. Cl. 52.
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Archer-Daniels-Midland Co., Minneapolis, Minn. 749,308, pub. 2-26-63. Cl. 15.
Archuleta, Manuel, d.b.a. Tom Tom Symbolized Craft, Albuquerque, N. Mex. 749,460, pub. 2-26-63. Cl. 42.
Aristocrat Leather Products, Inc., New York, N.Y. 749,278, pub. 2-26-63. Cl. 3.
Armour and Co., Chicago, Ill. 749,479, pub. 2-26-63. Cl. 46.
Armstrong, George S., & Co., Inc., New York, N.Y. 749,445, pub. 2-26-63. Cl. 38.
Art-craft Optical Co., Inc., Rochester, N.Y. 749,383, pub. 2-26-63. Cl. 26.
Associated Bulb Growers of Holland, Inc., New York, N.Y. 749,552, pub. 2-26-63. Cl. A.
Associated Pipe & Fitting Co., Inc., Clifton, N.J. 749,556. Cl. 12.
Athletic Products Co., Inc., South Bend, Ind. 643,218, canc. Cl. 22.
Automatic Products Co., Milwaukee, Wis., to Controls Co. of America, Melrose Park, Ill. 402,467, ren. 5-14-63. Cl. 13.
Automatic Raise-A-Dor Co., Pittsburgh, Pa. 643,187, canc. Cl. 21.
Avery Adhesive Products, Inc., San Marino, Calif. 749,428, pub. 2-26-63. Cl. 37.
Avon Products, Inc., New York, N.Y. 749,520, pub. 2-26-63. Cl. 51.
Avondale Mills, Sylacauga, Ala. 400,651, ren. 5-14-63. Cl. 42.
BGS Shoe Corp., Manchester, N.H. 749,580. Cl. 39.
B.M.C. Mfg. Corp., Binghamton, N.Y., to American Machine & Foundry Co., New York, N.Y. 643,200, canc. Cl. 22.
Baclawski, Alexander, d.b.a. American Indian Tobacco and Enterprises, Meriden, Conn. 749,555. Cl. 8.
Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany. 643,116-8, canc. Cl. 6.
Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany. 749,283, pub. 2-26-63. Cl. 6.
Baldwin-Ehret-Hill, Inc., Trenton, N.J. 749,303, pub. 2-26-63. Cl. 12.
Baldwin, J. A., Mfg. Co., Kearney, Nebr. 749,574. Cl. 31.
Baracuta, Inc., New York, N.Y. 749,448, pub. 2-26-63. Cl. 39.
Barnett Shorr Inc., New York, N.Y. 749,394, pub. 2-26-63. Cl. 28.
Barrett Co., The, to Allied Chemical Corp., New York, N.Y. 169,829, ren. 5-14-63. Cl. 16.
Bentz, Horst W., d.b.a. Melitta-Werke Bentz & Sohn, Westfalen, Germany. 749,558. Cl. 13.
Bentz, Horst W., d.b.a. Melitta-Werke Bentz & Sohn, Westfalen, Germany. 749,573. Cl. 30.
Betters Food Sales, Inc., Oakfield, N.Y. 749,487, pub. 2-26-63. Cl. 46.
Beaucraft, Inc., Providence, R.I. 749,388, pub. 2-26-63. Cl. 28.
Becken, A. C., Co., Chicago, Ill. 749,398, pub. 2-26-63. Cl. 28.
Becton Dickinson and Co., Rutherford, N.J. 749,470, pub. 2-26-63. Cl. 44.
Bell & Howell Co., Chicago, Ill. 749,386, pub. 2-26-63. Cl. 26.
Berkshire Hathaway, Inc., Providence, R.I. 643,331, canc. Cl. 42.
Better Value Building Co., Detroit, Mich. 643,285, canc. Cl. 38.
Bets Laboratories, Inc., Philadelphia, Pa. 749,284, pub. 2-26-63. Cl. 6.
Blatter, Titus, & Co., New York, N.Y. 643,326, canc. Cl. 42.
Bon Ami Co., The, New York, N.Y. 749,526, pub. 2-26-63. Cl. 52.
Booth, Sheldon, & Co., Chicago, Ill., to American Home Products Corp., New York, N.Y. 168,736, ren. 5-14-63. Cl. 4.
Borg-Warner Corp., Chicago, Ill. 643,260, canc. Cl. 31.
Bork, Adam, Arverne, N.Y. 749,559. Cl. 13.
Braun, Philip N., Inc., Syracuse, N.Y. 643,110, canc. Cl. 5.
Braunstein, Murray M., Inc., New York, N.Y. 749,391, pub. 2-26-63. Cl. 28.
Bristol-Myers Co., New York, N.Y. 749,530, pub. 2-26-63. Cl. 52.
British Chemotheutic Products Ltd., Bradford, England. 749,313, pub. 2-26-63. Cl. 18.
Brittains Ltd., Cheddleton Paper Mills, near Leek, England. 643,280, canc. Cl. 37.
Brounstein, Abraham, New York, N.Y. 749,399, pub. 2-26-63. Cl. 28.
Brown & Williamson Tobacco Corp., Louisville, Ky. 749,561. Cl. 17.
Bruning, Charles, Co., Inc., Mount Prospect, Ill. 749,429, pub. 2-26-63. Cl. 37.
Bundy Marine S.p.A., Milan, Italy. 749,569. Cl. 23.
Burke Golf Equipment Corp., Newark, Ohio. 643,208, canc. Cl. 22.
C-E-I-R, Inc., Washington, D.C. 749,446, pub. 2-26-63. Cl. 38.
Canas, J. M. Martinez: *See*—
National Food Industries, Inc.
Canas, J. Martinez: *See*—
National Food Industries, Inc.
Cannon Electric Co., Los Angeles, Calif. 749,340, pub. 2-5-63. Cl. 21.
Carbolineum Wood Preserving Co., Milwaukee, Wis. 400,890, ren. 5-14-63. Cl. 6.
Cardinal Laboratories, Inc., Los Angeles, Calif. 749,519, pub. 2-26-63. Cl. 51.
Carls-Art, Inc., Brooklyn, N.Y. 647,883, canc. Cl. 39.
Carvel, Thomas, Yonkers, N.Y. 749,475, pub. 2-26-63. Cl. 46.
Carvel, Thomas, Yonkers, N.Y. 749,533, pub. 2-26-63. Cl. 100.
Catalina, Inc., Los Angeles, Calif. 643,314, canc. Cl. 39.
Candill, J. Le Roy, d.b.a. Stock Stick Co., Denver, Colo. 749,387, pub. 2-26-63. Cl. 26.
Ceramaseal, Inc., New Lebanon Center, N.Y. 749,294, pub. 2-26-63. Cl. 12.
Cherry Electrical Products Corp., Highland Park, Ill. 749,335, pub. 2-26-63. Cl. 21.
Christopher York Lighting, Inc., Chicago, Ill. 749,337, pub. 2-26-63. Cl. 21.
Climatic Inc., Yonkers, N.Y. 749,459, pub. 2-26-63. Cl. 42.
Cluett, Peabody & Co., Inc., Troy, N.Y. 643,310-12, canc. Cl. 39.
Coast Paint and Lacquer Co., Houston, Tex. 749,310, pub. 2-26-63. Cl. 16.
Cole, Richard J., Inc., New York, N.Y. 643,201, canc. Cl. 39.
Colgate-Palmolive Co., New York, N.Y. 643,392, canc. Cl. 52.
Colgate-Palmolive Co., New York, N.Y. 749,510-11, pub. 2-26-63. Cl. 51.
Collier Photo Engraving Co., Inc., New York, N.Y. 749,434, pub. 2-26-63. Cl. 38.

Columbia Mfg. Co., Inc., The: *See*—
Westfield Mfg. Co.
Commercial Circuits Co., Fullerton, Calif. 643,193, canc. Cl. 21.
Comptone Co., Ltd., New York, N.Y. 749,382, pub. 2–26–63. Cl. 26.
Congoleum-Nairn Inc., Kearny, N.J. 749,328, pub. 2–26–63. Cl. 20.
Container Corp. of America, Chicago, Ill. 749,481, pub. 2–26–63. Cl. 37.
Continental Baking Co., Rye, N.Y. 749,494, pub. 2–26–63. Cl. 46.
Controls Co. of America: *See*—
Automatic Products Co.
Consolidated Foods Corp., Chicago, Ill. 643,352–4, canc. Cl. 46.
Cooley, Denton A.: *See*—
Cooley, Mary F., Denton A. Cooley, and Ralph C. Cooley, Jr.
Cooley, Mary F., Denton A. Cooley, and Ralph C. Cooley, Jr., heirs of R. C. Cooley, deceased, Houston, Tex. 749,471, pub. 2–26–63. Cl. 44.
Cooley, Ralph C.: *See*—
Cooley, Mary F., Denton A. Cooley, and Ralph C. Cooley, Jr.
Cooper-Merritt Corp., Miami, Fla. 643,092, canc. Cl. 2.
Crayon, Water Color and Craft Institute, The, New York, N.Y. 749,558, pub. 2–26–63. Cl. A.
Creations Sales Co., Inc., Jamaica, N.Y. 749,349, pub. 2–26–63. Cl. 22.
Crete, Charles A., d.b.a. Pharmaceutical Associates, San Francisco, Calif. 749,317, pub. 2–26–63. Cl. 18.
Crown Bay Co., to Crown Bay Co., Ltd., St. Thomas, Virgin Islands. 643,383, canc. Cl. 51.
Crown Bay Co., Ltd.: *See*—
Crown Bay Co.
Crown Zellerbach Corp., San Francisco, Calif. 749,432, pub. 2–26–63. Cl. 37.
Curtis, Helene, Industries, Inc., Chicago, Ill. 643,385, canc. Cl. 51.
Curtis, Helene, Industries, Inc., Chicago, Ill. 749,516, pub. 2–26–63. Cl. 51.
Curtis Products, Inc.: *See*—
Plastic Products Co.
Dalton Foundries, Inc., The, Warsaw, Ind. 749,562. Cl. 19.
David Crystal, Inc., New York, N.Y. 749,578. Cl. 39.
Dawson, Nettie M., d.b.a. Inner-Glo Music Co., Emporia, Kans. 749,423, pub. 2–26–63. Cl. 36.
Deaton-Patterson Clothing Co., Memphis, Tenn. 642,297, canc. Cl. 39.
Decca Records, Inc., New York, N.Y. 400,537, ren. 5–14–63. Cl. 36.
Deering Milliken, Inc., New York, N.Y. 749,464–6, pub. 2–26–63. Cl. 42.
Deflorio Imports: *See*—
Deflorio, Matthew.
Deflorio, Matthew, d.b.a. Deflorio Imports, Toronto, Ontario, Canada. 749,577, Cl. 36.
Del Norte Foods, Inc., Oxnard, Calif. 749,482, pub. 2–26–63. Cl. 46.
Delta Semiconductors, Inc., Newport Beach, Calif. 749,567. Cl. 21.
Diamond Match Co., The, New York, N.Y. 643,242–3, canc. Cl. 24.
Dietert, Harry W., Co., Detroit, Mich. 749,570. Cl. 26.
Dresser Industries, Inc., d.b.a. Lane-Wells Co., Dallas, Tex. 749,534, pub. 2–26–63. Cl. 100.
Dunhill International, Inc., New York, N.Y., from The Pyramid Rubber Co., Ravenna, Ohio. 749,406, pub. 2–26–63. Cl. 29.
Dura Co., The, Toledo, Ohio, to Dura Corp., Oak Park, Mich. 171,755, ren. 5–14–63. Cl. 13.
Dura Corp.: *See*—
Dura Co., The.
Duralon Corp., The, New York, N.Y. 749,456, pub. 2–26–63. Cl. 42.
Durst A.G. Fabrik Fototechnischer Apparate, Bolzano, Italy. 749,385, pub. 2–26–63. Cl. 26.
Dynamatics, Inc., New Canaan, Conn. 749,483, pub. 2–26–63. Cl. 46.
E-Z Cook, Inc., Lakeville, Ind. 749,572. Cl. 30.
Eaton Mfg. Co., Cleveland, Ohio. 749,557. Cl. 13.
Ekco Products Co., Chicago, Ill. 643,163, canc. Cl. 16.
Ekco Products Co., Chicago, Ill. 643,223, canc. Cl. 23.
Electric Storage Battery Co., The, Philadelphia, Pa. 749,332, pub. 2–26–63. Cl. 21.
Electro Silv-A-King Corp., Chicago, Ill. 643,189, canc. Cl. 21.
Ellisco Inc.: *See*—
Myers Mfg. Co.
Etablissements Merlin & Gerin, Grenoble, France. 643,191, canc. Cl. 21.
Everett and Barron Co., Providence, R.I. 167,784, ren. 5–14–63. Cl. 4.
Ex-Cell-O Corp., Detroit, Mich. 749,370, pub. 2–26–63. Cl. 23.
Fabri-Valve Co. of America, Portland, Oreg. 749,560. Cl. 13.
Falco Products Co., d.b.a. Falco Products Co., Philadelphia, Pa. 749,505, pub. 2–26–63. Cl. 50.
Farbenfabriken vorm. Friedr. Bayer & Co., Leverkusen, near Cologne-On-The-Rhine, Germany, to Sterling Drug Inc., New York, N.Y. 165,791–2, ren. 5–14–63. Cl. 18.
Fels and Co., Philadelphia, Pa. 749,529, pub. 2–26–63. Cl. 52.
Ferro Corp., The, Cleveland, Ohio. 643,154, canc. Cl. 14.
Filatures Prouvost & Cie, La Lainiere De Roubaix: *See*—
La Lainiere De Roubaix.
Fischer, Kay B., administratrix of the estate of Philip S. Fischer, d.b.a. Sun Valley Co., Skokie, Ill. 749,472, pub. 2–26–63. Cl. 45.
Fischer, Philip S.: *See*—
Fischer, Kay B.
Fisher Flouring Mills Co., Seattle, Wash. 401,792, ren. 5–14–63. Cl. 46.
Fitzgerald: *See*—
Fitzgerald, John P.
Fitzgerald, John P., d.b.a. Fitzgerald, Pittsburgh, Pa. 749,-461, pub. 2–26–63. Cl. 46.
Flagg-Utica Corp., New York, N.Y. 749,454, pub. 2–26–63. Cl. 39.
Flexnit Co., Inc., Elizabeth, N.J. 749,449, pub. 2–26–63. Cl. 39.
Fit-Back Sales Corp., High Point, N.C. 749,362, pub. 2–26–63. Cl. 22.
Flyer, Martin, d.b.a. Martin Flyer's Viroy Co., New York, N.Y. 749,390, pub. 1–15–63. Cl. 28.
Flyer's, Martin, Viroy Co.: *See*—
Flyer, Martin.
Formulary Counselors, Inc., East Rochester, N.Y. 643,175, canc. Cl. 18.
Forstner, Inc., Irvington, N.J. 643,356, canc. Cl. 28.
Franklyn, Robert A., d.b.a. Robaire Alain, Los Angeles, Calif. 749,507, pub. 2–26–63. Cl. 51.
Franzia Brothers Winery: *See*—
Thomas, Jim.
Fur-Feel Corp., Brooklyn, N.Y. 749,523, pub. 2–26–63. Cl. 52.
Gabilla, Henriette, to Les Parfumeries De Gabilla, Societe Anonyme, Paris, France. 163,068, ren. 5–14–63. Cl. 51.
General Molded Plastics, Inc., Dallas, Tex. 643,094, canc. Cl. 2.
General Motors Corp., Detroit, Mich. 749,346, pub. 2–26–63. Cl. 21.
General Portland Cement Co., Chicago, Ill. 749,300, pub. 2–26–63. Cl. 12.
Gerald Hosiery Mills, Inc., New York, N.Y. 643,318, canc. Cl. 39.
Gilmore & Co., San Francisco, Calif. 749,502, pub. 2–26–63. Cl. 49.
Gladson, Herbert, Ltd., New York, N.Y. 749,457, pub. 2–26–63. Cl. 42.
Glandore Knitting Mills Co., New York, N.Y. 643,316, canc. Cl. 39.
Globe Rubber Products Corp., Philadelphia, Pa. 749,325–6, pub. 2–26–63. Cl. 19.
Gold Badge Farms, Phoenix, Ariz. 643,371, canc. Cl. 46.
Gold-Sachs Co., Inc., New York, N.Y. 749,583. Cl. 39.
Good Humor Corp., Brooklyn, N.Y. 749,489, pub. 2–26–63. Cl. 46.
Goodman & Suss Clothes Corp., New York, N.Y. 399,788, ren. 5–14–63. Cl. 39.
Granat Bros., San Francisco, Calif. 643,255, canc. Cl. 28.
Grayhill, Inc., La Grange, Ill. 749,565. Cl. 21.
Grippa, Theresa A., Valley Stream, N.Y. 749,480, pub. 2–26–63. Cl. 37.
Gustin-Bacon Mfg. Co., to Gustin-Bacon Mfg. Co., Kansas City, Mo. 402,928, ren. 5–14–63. Cl. 13.
Hanes, P. H., Knitting Co., Winston-Salem, N.C. 749,579. Cl. 39.
Hardtmuth, L. & C., Inc., Bloomsbury, N.J. 749,521, pub. 2–26–63. Cl. 51.
Harmor & Co., Inc., New York, N.Y. 749,503, pub. 5–9–61. Cl. 50.
Hearst Corp., The, New York, N.Y. 749,447, pub. 2–26–63. Cl. 38.
Higbie Mfg. Co., Rochester, Mich. 643,214–16, canc. Cl. 22.
Hills-McCanna Co., Chicago, Ill. 749,307, pub. 2–26–63. Cl. 13.
Holton Process Co.: *See*—
Russell, Edward H.
House of Perfection, Inc., The, New York, N.Y. 749,452, pub. 2–26–63. Cl. 39.
House of Time, Inc., New York, N.Y. 643,264, canc. Cl. 32.
Houston Instrument Corp., Bellaire, Tex. 749,377–8, pub. 2–26–63. Cl. 26.
Houston Oil Field Material Co., Inc., Houston, Tex. 749,369, pub. 2–26–63. Cl. 23.
Hoyt Pharmaceutical Corp., Newton, Mass. 749,316, pub. 2–26–63. Cl. 18.
Hudson American Corp., New York, N.Y. 424,958–60, canc. Cl. 21.
Hudson American Corp., New York, N.Y. 435,757, canc. Cl. 21.
Hudson, H. D., Mfg. Co., Chicago, Ill. 749,301, pub. 2–26–63. Cl. 12.
Humble Oil & Refining Co., to Humble Oil & Refining Co., Houston, Tex. 165,844, ren. 5–14–63. Cl. 15.
Hunt Foods and Industries, Inc.: *See*—
Southern Cotton Oil Co., The.
Hvistendahl, Nels J., Sioux City, Iowa. 643,336, canc. Cl. 44.
Hyde, A. L., Co., Grenloch, N.J. 749,276, pub. 2–26–63. Cl. 1.
I-XL Furniture Co., Inc., The, Goshen, Ind. 749,408–11, pub. 2–26–63. Cl. 32.
Ideal Coated Paper Co., to McLaurin-Jones Co. of Brookfield, Mass., Brookfield, to Ludlow Corp., Needham, Mass. 168,672, ren. 5–14–63. Cl. 37.
Inner-Glo Music Co.: *See*—
Dawson, Nettie M.
Institute of Textile Technology, Charlottesville, Va. 749,463, pub. 2–26–63. Cl. 42.
International Heater Co., Utica, N.Y. 643,273, canc. Cl. 34.
Inter-Ocean Merchandising Corp., New York, N.Y. 749,347, pub. 2–26–63. Cl. 21.
Intrusion-Prepakt, Inc., Cleveland, Ohio. 749,541, pub. 2–26–63. Cl. 163.
Iron Lung Ventilator Co.: *See*—
Shaver, James B.

Irvin, Jewell and Vinson Co., The, Dayton, Ohio. 643,164, canc. Cl. 16.
Italian Jewelers Inc., New York, N.Y. 749,396, pub. 2–26–63. Cl. 28.
Jackes-Evans Mfg. Co., St. Louis, Mo. 749,568. Cl. 21.
Jergens, Andrew, Co., The, Cincinnati, Ohio. 749,512, pub. 2–26–63. Cl. 51.
Johnson, S. C., & Son, Inc., Racine, Wis. 749,279, pub. 2–26–63. Cl. 4.
Jones, Cornelia P., Altadena, Calif. 749,504, pub. 2–26–63. Cl. 50.
KTVB, Inc., Boise, Idaho. 749,548, pub. 2–26–63. Cl. 107.
Kansas Jack, Inc., McPherson, Kans. 643,283, canc. Cl. 22.
Kaplan, Albert J., d.b.a. Alkap Laboratories, Chicago, Ill. 749,515, pub. 2–26–63. Cl. 51.
Kayser, Julius, & Co., New York, N.Y. 643,320, canc. Cl. 39.
Kee Lox Mfg. Co., Rochester, N.Y. 172,001, ren. 5–14–63. Cl. 11.
King Morpheus Products: *See*—
Bobel, Henry L.
King, W. V., & Sons (U.S.A.) Ltd., Los Angeles, Calif. 749,581. Cl. 39.
Kleinert, I. B., Rubber Co., New York, N.Y. 400,728, ren. 5–14–63. Cl. 42.
Koppers Co., Inc.: *See*—
Walles Dove-Hermiston Corp.
Kreiss Corp., Los Angeles, Calif. 749,323, pub. 2–26–63. Cl. 21.
Kress, S. H., and Co., New York, N.Y. 643,319, canc. Cl. 39.
La Lainiere De Roubaix, to Filatures Prouvost & Cie, La Lainiere De Roubaix, Roubaix, France. 163,859, ren. 5–14–63. Cl. 42.
La Monte, George, & Son, Nutley, N.J. 749,425, pub. 2–26–63. Cl. 37.
Lablime, Inc., Chicago, Ill. 643,269, canc. Cl. 51.
Laclede-Christy Co., St. Louis, Mo. 643,135, canc. Cl. 12.
Lakeside-Central Co., Chicago, Ill. 749,427, pub. 2–26–63. Cl. 37.
Lander Co., Inc., d.b.a. Loveland, New York, N.Y. 749,517, pub. 2–26–63. Cl. 51.
Landmark Corp., Chicago, Ill. 749,588, pub. 2–26–63. Cl. 102.
Lane-Wells Co.: *See*—
Dresser Industries, Inc.
Lawn Seed Corp., The, Milwaukee, Wis. 643,089, canc. Cl. 1.
Lefar Enterprises Inc., Portland, Oreg. 749,354, pub. 2–26–63. Cl. 22.
Legrand, Oriza L., Inc., Wilmington, Del., and New York, N.Y. 233,402, canc. Cl. 6.
Les Parfumeries De Gabilla, Societe Anonyme: *See*—
Gabilla, Henriette.
Les Parfums verchere (Parfums Jerome) S.A.R.L., Clichy (Seine), France. 643,388, canc. Cl. 51.
Lesse, S., & Sons, Inc., Philadelphia, Pa. 643,252, canc. Cl. 27.
Lewis, Clifton D., Hawthorne, N.J. 643,381, canc. Cl. 50.
Lewkowitz, H., Inc., New York, N.Y. 749,350, pub. 11–20–62. Cl. 28.
Lightning Rod Mutual Insurance Co., Wooster, Ohio. 749,539, pub. 2–26–63. Cl. 102
Loma Linda Food Co.: *See*—
Pacific Union Association of Seventh Day Adventists, The.
Loveland: *See*—
Lander Co., Inc.
Ludlow Corp.: *See*—
Smith & Dove Mfg. Co.
Ideal Coated Paper Co.
Lunatime, Inc., New York, N.Y. 749,571. Cl. 27.
Luterma, Clichy (Seine), France. 749,296, pub. 2–26–63. Cl. 12.
M & H Recording Co.: *See*—
Michael, Harold J.
MacLevy Slenderizing Salon, Inc., Silver Spring, Md. 749,-531–2, pub. 2–26–63. Cl. 100.
Macy, R. H., & Co. Inc., New York, N.Y. 166,608, ren. 5–14–63. Cl. 39.
Magnet Cove Barium Corp., Houston, Tex. 749,282, pub. 2–26–63. Cl. 6.
Magnetic Controls Co., Minneapolis, Minn. 749,380, pub. 2–26–63. Cl. 26.
Malcolm Kenneth Co., Boston, Mass. 749,450, pub. 2–26–63. Cl. 39.
Mallinckrodt Chemical Works, St. Louis, Mo. 749,315, pub. 2–26–63. Cl. 18.
Mandelbaum & Laufer, New York, N.Y. 749,400, pub. 2–26–63. Cl. 28.
Manpower Inc., Milwaukee, Wis. 749,437, pub. 2–26–63. Cl. 38.
Marshall Field & Co., Chicago, Ill. 359,539, canc. Cl. 21.
Martin, Maison E. Remy, & Co., Cognac, Charente, France. 749,501, pub. 2–26–63. Cl. 49.
Marvellum Co., The, Holyoke, Mass. 171,982, ren. 5–14–63. Cl. 37.
Mason and Dixon Lines, Inc., The, Kingsport, Tenn. 749,543, pub. 2–26–63. Cl. 105.
Massey-Harris-Ferguson Inc., Racine, Wis. 643,239, canc. Cl. 23.
Materials Testing Co., Inc., Bethesda, Md. 749,544, pub. 2–26–63. Cl. 106.
Matterhorn Corp., from Anderson & Thompson Ski Co., Seattle, Wash. 749,353, pub. 1–15–63. Cl. 22.
Matterhorn Corp., from Anderson & Thompson Ski Co., Seattle, Wash. 749,451, pub. 1–15–63. Cl. 39.
Maule Industries, Inc., Miami, Fla. 749,392, pub. 2–26–63. Cl. 12.
Maus & Pfeiffer, Stuttgart-Botnang, Germany. 749,330, pub. 2–26–63. Cl. 21.
Mayer, B. W., Ltd., New York, N.Y. 643,300, canc. Cl. 39.
McGraw-Edison Co., Elgin, Ill. 749,302, pub. 2–26–63. Cl. 12.
McLaurin-Jones Co. of Brookfield, Mass.: *See*—
Ideal Coated Paper Co.
Meinecke & Co., Inc., New York, N.Y. 749,461–2, pub. 2–26–63. Cl. 42.
Meinecke & Co., Inc., New York, N.Y. 749,585. Cl. 42.
Melitta-Werke Bentz & Sohn: *See*—
Bentz, Horst Wolfgang.
Mennen Co., The, Morristown, N.J. 749,518, pub. 2–26–63. Cl. 51.
Merck & Co. Inc., Rahway, N.J. 749,311–12, pub. 2–26–63. Cl. 18.
Merriam, G. & G., Co., Springfield, Mass. 172,131, ren. 5–14–63. Cl. 38.
Meta-Mold Aluminum Co., Cedarburg, Wis. 749,390, pub. 2–26–63. Cl. 12.
Metrotek Electronics, Inc., Raleigh, N.C. 749,336, pub. 2–26–63. Cl. 21.
Meyer, George J., Malt & Grain Corp., Buffalo, N.Y. 643,377, canc. Cl. 48.
Michael, Harold J., d.b.a. M & H Recording Co., Columbus, Ohio. 749,422, pub. 2–26–63. Cl. 36.
Michaels Stern & Co., Inc., Rochester, N.Y. 749,562. Cl. 39.
Miko Chemical & Research Co., Glenshaw, Pa. 643,123, canc. Cl. 6.
Mille Lacs Maole Products Corp., St. Paul, Minn. 749,473, pub 2–26–63. Cl. 46.
Minneapolis Brewing Co., Minneapolis, Minn. 402,361, ren. 5–14–63. Cl. 45.
Missionary Servants of the Most Holy Trinity, The, Silver Spring, Md. 749,442–3, pub. 2–26–63. Cl. 38.
Mitchell, Syble H., Arlington, Tex. 749,554. Cl. 2.
Mauney Products Inc., Little Rock, Ark. 749,341, pub. 2–26–63. Cl. 21.
Murat Somay, Milwaukee, Wis. 749,549, pub. 2–26–63. Cl. 107.
Murat Chemical Co. of America, to Allied Chemical Corp., New York, N.Y. 167,233, ren. 5–14–63. Cl. 6.
Myers Mfg. Co., Camden, N.J., to Ellisco Inc., Philadelphia, Pa. 166,186, ren. 5–14–63. Cl. 2.
N.V. Uitgeversmaatschappij Elsevier, Amsterdam, Netherlands. 749,444, pub. 2–26–63. Cl. 38.
National Alliance of Television and Electronic Service Associations, Chicago, Ill. 643,286, canc. Cl. 38.
National Cash Register Co., The, Dayton, Ohio. 402,061–2, ren. 5–14–63. Cl. 26.
National Distillers and Chemical Corp., d.b.a. National Distillers Products Co., New York, N.Y. 749,500, pub. 2–26–63. Cl. 49.
National Distillers Products Co.: *See*—
National Distillers and Chemical Corp.
National Drug and Chemical Co. of Canada, Ltd., Montreal, Quebec, Canada, to Ursina Co., New York, N.Y. 400,411, ren. 5–14–63. Cl. 51.
National Food Industries, Inc., Miami, from J. M. Martinez Canas, d.b.a. J. Martinez Canas, Coral Gables, Fla. 749,476, pub. 2–26–63. Cl. 46.
National Gypsum Co., Buffalo, N.Y. 749,297, pub. 2–26–63. Cl. 12.
National Vulcanized Fibre Co., Wilmington, Del. 749,306, pub. 2–26–63. Cl. 12.
New York World's Fair 1964–1965 Corp., Flushing, N.Y. 749,580–1, pub. 2–26–63. Cl. 107.
Newberry, J. J., Co., New York, N.Y. 749,563. Cl. 19.
Newman Brothers, Inc., Cincinnati, Ohio. 749,295, pub. 2–26–63. Cl. 12.
Nippon Kikai Seizo Kabushiki Kaisha, d.b.a. Sega Inc., Ohta-ku, Tokyo, Japan. 749,357–8, pub. 2–26–63. Cl. 22.
Nippon Kikai Seizo Kabushiki Kaisha, d.b.a. Sega Inc., Ohta-ku, Tokyo, Japan. 749,419–20, pub. 2–26–63. Cl. 36.
Norling & Bloom Co., Boston, Mass. 749,402, pub. 2–26–63. Cl. 28.
Norris Inc., Atlanta, Ga. 749,493, pub. 2–26–63. Cl. 46.
Norton & McElroy Produce, Inc., Glendale, Ariz. 749,485, pub. 2–26–63. Cl. 46.
Ohmite Mfg. Co., Skokie, Ill. 749,334, pub. 2–26–63. Cl. 21.
Old Chateau Wine Co.: *See*—
Thomas, Jim.
Opto-Electronic Devices, Inc., Mountain View, Calif. 749,345, pub. 2–26–63. Cl. 21.
Orchids of Hawaii, Inc., New York, N.Y. 643,090, canc. Cl. 1.
Owatonna Canning Co., Owatonna, Minn. 749,496, pub. 2–26–63. Cl. 46.
Oxford Paper Co., New York, N.Y. 400,528, ren. 5–14–63. Cl. 37.
P & C Food Markets, Inc., Syracuse, N.Y. 749,480, pub. 8–29–61. Cl. 46.
P & W Produce Co., Inc., Los Angeles, Calif. 643,367, canc. Cl. 46.
Pacific International Corp., New York, N.Y. 643,197, canc. Cl. 21.
Pacific Union Association of Seventh Day Adventists, The, d.b.a. Loma Linda Food Co., Glendale, Calif. 643,292, canc. Cl. 38.
Pacific Union Association of Seventh Day Adventists, The, Glendale, Calif. 643,409, canc. Cl. 46.
Packer Engineering Co., Bakersfield, Calif. 749,321, pub. 2–26–63. Cl. 19.
Pacotronics, Inc., Glendale, N.Y. 749,376, pub. 2–26–63. Cl. 26.
Pako Corp., Minneapolis, Minn. 749,537, pub. 2–26–63. Cl. 102.
Paramount Line, Inc., The, Pawtucket, R.I. 749,439–41, pub. 2–26–63. Cl. 38.
Park Avenue Wood-Working Co. Inc., New York, N.Y. 749,304, pub. 2–26–63. Cl. 12.

Parke, Davis & Co., Detroit, Mich. 172,229, ren. 5–14–63. Cl. 18.
Parks, H. G., Inc., Baltimore, Md. 749,488, pub. 2–26–63. Cl. 46.
Paterson Engineering Co., Ltd., The, London, England. 749,372, pub. 2–26–63. Cl. 23.
Pawl, Owen, Inc., Detroit, Mich. 749,523, pub. 2–26–63. Cl. 52.
Pautzke Bait Co. Inc., Ellenburg, Wash. 749,360, pub. 2–26–63. Cl. 22.
Penney, J. C., Co., Salt Lake City, Utah, and New York, N.Y., to J. C. Penney Co., New York, N.Y. 172,067, ren. 5–14–63. Cl. 39.
Penney, J. C., Co., New York, N.Y. 749,416–17, pub. 2–26–63. Cl. 35.
Pennsalt Chemicals Corp., Philadelphia, Pa. 749,291, pub. 2–26–63. Cl. 12.
Pennsalt Chemicals Corp., Philadelphia, Pa. 749,525, pub. 2–26–63. Cl. 52.
Pen-vend Corp., Clayton, Mo. 643,236, canc. Cl. 23.
Petty, Joan, Inc., Brooklyn, N.Y. 749,508, pub. 2–26–63. Cl. 51.
Pharmaceutical Associates: *See*—
Crete, Charles A.
Philco Corp., to Philco Corp., Philadelphia, Pa. 400,517, ren. 5–14–63. Cl. 26.
Pickwick International Inc., Long Island City, N.Y. 749,424, pub. 2–26–63. Cl. 36.
Pinney, Reldon G., Gardena, Calif. 643,147, canc. Cl. 13.
Plastic Products Co., Detroit, Mich., to Curtis Products, Inc., Chicago, Ill. 401,321, ren. 5–14–63. Cl. 16.
Plough, Inc., Memphis, Tenn. 749,506, pub. 2–26–63. Cl. 51.
Pneumatic Scale Corp., Ltd., Quincy, Mass. 401,838, ren. 5–14–63. Cl. 23.
Polymer Silk Corp., Boston, Mass. 749,467, pub. 2–26–63. Cl. 43.
Popell Bros., Inc., Chicago, Ill. 643,380, canc. Cl. 50.
Prentice, John R., d.b.a. American Breeders Service, Chicago, Ill. 749,436, pub. 2–26–63. Cl. 38.
Prince Matchabelli Inc., New York, N.Y. 401,327, ren. 5–14–63. Cl. 51.
Prodara, Inc., East Northport, N.Y. 749,421, pub. 2–26–63. Cl. 36.
Protexol Corp., Kenilworth, N.J. 401,345, ren. 5–14–63. Cl. 12.
Pyles Industries, Inc., Detroit, Mich. 749,378, pub. 2–26–63. Cl. 26.
Pyramid Rubber Co., The: *See*—
Dunhill International, Inc.
Range Rhythm Toys, Inc., Chicago, Ill. 643,210, canc. Cl. 22.
Red L Foods Corp., Long Island City, N.Y. 643,356, canc. Cl. 46.
Red Raven Rubber Co., Newark, N.J. 749,359, pub. 2–26–63. Cl. 22.
Reddi-Wipe, Inc., Houston, Tex. 643,138, canc. Cl. 12.
Redwood Empire Fine Foods, San Francisco, Calif. 749,495, pub. 2–26–63. Cl. 46.
Reeves Equipment Corp., New York, N.Y. 643,227, canc. Cl. 23.
Reu, Erwin, Inc., Newark, N.J. 749,401, pub. 2–26–63. Cl. 28.
Robaire Alain: *See*—
Franklyn, Robert A.
Rock Island Millwork Co., Rock Island, Ill. 643,404, canc. Cl. 12.
Romper Room, Inc., Baltimore, Md. 749,355, pub. 2–26–63. Cl. 22.
Ross, Clark F., Kirkwood, Mo. 749,527, pub. 2–26–63. Cl. 52.
Rotron Mfg. Co., Inc., Woodstock, N.Y. 749,414, pub. 2–26–63. Cl. 34.
Russell, Edward H., d.b.a. Holton Process Co., Manchester, N.H. 643,257, canc. Cl. 29.
Russell Playing Card Co., Milltown, N.J., to The United States Playing Card Co., Cincinnati, Ohio. 172,312, ren. 5–14–63. Cl. 22.
S.W.L., Inc., New York, N.Y. 749,392, pub. 2–26–63. Cl. 28.
Sabre Shipping Corp., New York, N.Y. 749,542, pub. 2–26–63. Cl. 105.
Sage Laboratories, Inc., East Natick, Mass. 749,342, pub. 2–26–63. Cl. 21.
Sage, Peggy, Inc., New York, N.Y. 749,513, pub. 2–26–63. Cl. 51.
Saks & Co., New York, N.Y. 402,290–1, ren. 5–14–63. Cl. 39.
Saks & Co., New York, N.Y. 402,736, ren. 5–14–63. Cl. 39.
San Marino Wine Corp., Brooklyn, N.Y. 402,514, ren. 5–14–63. Cl. 47.
Saponified Products Co. Inc., Oakland, Calif. 425,224, canc. Cl. 4.
Schiff, Jay H., d.b.a. Stenocentral Companion, Chicago, Ill. 749,348, pub. 2–26–63. Cl. 21.
Schulmerich Carillons, Inc., Sellersville, Pa. 749,576. Cl. 36.
Screw Machine Products Co., Portland, Oreg. 643,151, canc. Cl. 13.
Scripto, Inc., Atlanta, Ga. 643,288, canc. Cl. 28.
Sega Inc.: *See*—
Nippon Kikai Seiso Kabushiki Kaisha.
Seitz, Don H., d.b.a. The Aquarian, Akron, Ohio. 643,274, canc. Cl. 34.
Selchow & Righter Co., New York, N.Y. 643,209, canc. Cl. 22.
Servo Corp. of America, Hicksville, N.Y. 749,379, pub. 2–26–63. Cl. 26.
Shaver, James B., d.b.a. Iron Lung Ventilator Co., Cleveland, Ohio. 402,257, ren. 5–14–63. Cl. 34.
Silver Knit Hosiery Mills, Inc., High Point, N.C. 749,468, pub. 2–26–63. Cl. 43.
Singer-Cobble, Inc., Chattanooga, Tenn. 749,331, pub. 2–26–63. Cl. 21.
Singing Needles, Inc., Leola, Pa. 749,453, pub. 2–26–63. Cl 39.
Skylon Corp., New York, N.Y. 643,317, canc. Cl. 39.
Smith & Dove Mfg. Co., Andover, Mass., to Ludlow Corp., Needham, Mass. 163,172, ren. 5–14–63. Cl. 43.
Smith & Dove Mfg. Co., Andover, Mass., to Ludlow Corp., Needham, Mass. 165,665, ren. 5–14–63. Cl. 43.
Sobel, Henry L., d.b.a. King Morpheus Products, New York, N.Y. 643,325, canc. Cl. 42.
Societa Italiana Galakerite, Milan, Italy. 749,275, pub. 2–26–63. Cl. 1.
Societe L'Oreal, Paris, France. 749,509, pub. 2–26–63. Cl. 51.
Sohio Chemical Co., Lima, Ohio. 749,289, pub. 2–26–63. Cl. 10.
Solar Electric Corp., Warren, Pa. 749,329, pub. 11–14–61. Cl. 21.
Sommers Plastic Products Co., Inc., New York, N.Y. 749,277, pub. 2–26–63. Cl. 1.
Southern Cotton Oil Co., The, to Hunt Foods and Industries, Inc., New Orleans, La. 399,347, ren. 5–14–63. Cl. 46.
Spaulding & Co., Chicago, Ill. 749,404, pub. 2–26–63. Cl. 28.
Special Chemicals Corp., New York, N.Y., to Special Chemicals Corp., Ossining, N.Y. 400,559, ren. 5–14–63. Cl. 21.
Special Chemicals Corp., New York, N.Y., to Special Chemicals Corp., Ossining, N.Y. 400,673–4, ren. 5–14–63. Cl. 34.
Sport Service Supplies, Inc., Chicago, Ill. 749,350, pub. 5–29–62. Cl. 22.
Sprague Electric Co., North Adams, Mass. 749,384, pub. 2–26–63. Cl. 26.
Springfoot, Inc., Charleston, W. Va. 749,584. Cl. 39.
Staley, A. E., Mfg. Co., Decatur, Ill. 749,492, pub. 2–26–63. Cl. 46.
Standard Dyeing and Finishing Co., Paterson, N.J. 749,545–7, pub. 2–26–63. Cl. 106.
Standard Fire Alarm & Signal Inc., Jenkintown, Pa. 749,375, pub. 2–26–63. Cl. 26.
Standard Oil Co., Chicago, Ill. 166,494, ren. 5–14–63. Cl. 15.
Stanley Home Products, Inc., Westfield, Mass. 401,156, ren. 5–14–63. Cl. 6.
Stanley Home Products, Inc., Westfield, Mass. 401,157, ren. 5–14–63. Cl. 29.
Stant Mfg. Co., Inc., Connersville, Ind. 749,323–4, pub. 2–26–63. Cl. 19.
Star Florist & Nurseries Inc., Detroit, Mich. 658,380, canc. Cl. 1.
Stebbings, Stuart M., De Pere, Wis. 643,365, canc. Cl. 46.
Stegmaier Brewing Co., Wilkes-Barre, Pa. 749,499, pub. 2–26–63. Cl. 48.
Stenocentral Companion: *See*—
Schiff, Jay H.
Sterling Drug Inc.: *See*—
Farbenfabriken vorm. Friedr. Bayer & Co. Leverkusen.
Sterns, Ltd., London, England. 168,403, ren. 5–14–63. Cl. 15.
Stevcoknit Textile Co., New York, N.Y. 749,455, pub. 2–26–63. Cl. 42.
Stevens, J. P., & Co., Inc., New York, N.Y. 643,329, canc. Cl. 42.
Stock Stick Co.: *See*—
Caudill, J. Le Roy.
Strand, Inc., Galesburg, Ill. 643,372, canc. Cl. 46.
Studebaker Corp., South Bend, Ind. 749,343, pub. 2–26–63. Cl. 21.
Sturm & Scheinberg, to Sturm & Scheinberg, Inc., New York, N.Y. 169,494, ren. 5–14–63. Cl. 39.
Sun Rubber Co., The, Barberton, Ohio. 643,213, canc. Cl. 22.
Sunbeam Corp., Chicago, Ill. 643,098, canc. Cl. 2.
Sunbrand Supply Co. Inc., Chamblee, Ga. 749,371, pub. 2–26–63. Cl. 23.
Sunshine Biscuits, Inc., Long Island City, N.Y. 749,491, pub. 2–26–63. Cl. 46.
Sunshine Chemical Corp., Jacksonville, Fla. 749,524, pub. 2–26–63. Cl. 52.
Surprenant Mfg. Co., Clinton, Mass. 749,344, pub. 2–26–63. Cl. 21.
Swain, Robert E., Wakefield, Mass. 643,204, canc. Cl. 22.
Swingline Inc., Long Island City, N.Y. 749,366–8, pub. 2–26–63. Cl. 23.
Switzerland Cheese Association, Inc., New York, N.Y. 749,477–8, pub. 2–26–63. Cl. 46.
Technical Adhesives, Inc., Evanston, Ill. 749,296, pub. 2–26–63. Cl. 12.
Telecomputing Corp., Los Angeles, Calif. 749,339, pub. 2–26–63. Cl. 21.
Tennessee Products & Chemical Corp., Nashville, Tenn. 643,140–1, canc. Cl. 13.
Textile Mills Co., Chicago, Ill. 643,246, canc. Cl. 24.
Textron Inc., Waterbury, Conn. 749,364–5, pub. 2–26–63. Cl. 23.
Thomas Import: *See*—
Thomas, Jim.
Thomas, Jim, d.b.a. Thomas Import, Van Nuys, to Franzia Brothers Winery, d.b.a. Old Chateau Wine Co., Ripon, Calif. 749,498, pub. 2–26–63. Cl. 47.
Thompson Ramo Wooldridge Inc., Cleveland, Ohio. 749,415, pub. 2–26–63. Cl. 35.
Toepfer, S., Inc., New York, N.Y. 749,393, pub. 2–26–63. Cl. 28.
Tom Sawyer Foods, Inc., Santa Fe Springs, Calif. 749,484, pub. 2–26–63. Cl. 46.
Tom Tom Symbolized Craft: *See*—
Archuleta, Manuel.
Transogram Co., Inc., New York, N.Y. 749,351–2, pub. 2–26–63. Cl. 22.

Tubby Time, Inc., Dallas, Tex. 749,514, pub. 2–26–63. Cl. 51.
Tuttle, M. P., Co., Inc., New York, N.Y. 643,327–8, canc. Cl. 42.
Tularcloft, Inc., Tulare, Calif. 749,320, pub. 2–26–63. Cl. 19.
Unican Plastics Co. Inc., Shrewsbury, Mass. 749,305, pub. 2–26–63. Cl. 12.
Union Brokerage Co., Los Angeles, Calif. 749,497, pub. 2–26–63. Cl. 46.
United States Department of Agriculture, Washington, D.C. 400,952, ren. 5–14–63. Cl. 46.
United States Playing Card Co., The: *See*—
Russell Playing Card Co.
U.S. Vitamin Corp., New York, N.Y. 643,176, canc. Cl. 18.
U.S. Vitamin & Pharmaceutical Corp., New York, N.Y. 749,314, pub. 2–26–63. Cl. 18.
Universal Mfg. Co., Bossier City, La. 749,356, pub. 2–26–63. Cl. 22.
Unterman Associates, Inc.: *See*—
Unterman, Israel, Inc.
Unterman, Israel, Inc., from Unterman Associates, Inc., New York, N.Y. 749,536, pub. 1–29–63. Cl. 101.
Ursina Co.: *See*—
National Drug and Chemical Co. of Canada, Ltd.
V-M Nutri-Food, Inc., Evanston, Ill. 643,168, canc. Cl. 18.
Vactite, San Carlos, Calif. 749,381, pub. 2–26–63. Cl. 26.
Van Clief, Elwood, New York, N.Y. 749,395, pub. 2–26–63. Cl. 28.
Vicom, Inc., Rochester, N.Y. 749,418, pub. 2–26–63. Cl. 36.
Vincent & Vincent, Inc., Windsor, Calif. 749,309, pub. 2–26–63. Cl. 16.
Vinnicombe, Kenneth W., San Francisco, Calif. 643,347, canc. Cl. 46.
Vitamix Pharmaceuticals, Inc., Philadelphia, Pa. 749,318–19, pub. 2–26–63. Cl. 18.
Vonco Corp. Inc., Iola, Kans., from Vonco Products Co., Inc., Nashua, Mo. 749,299, pub. 2–26–63. Cl. 12.
Vonco Products Co.: *See*—
Vonco Corp., Inc.
Wagner Tool and Supply Corp., Hialeah, Fla. 749,568. Cl. 23.
Wailes Dove-Hermiston Corp., New York, N.Y., to Koppers Co., Inc., Pittsburgh, Pa. 165,818, ren. 5–14–63. Cl. 16.
Wallace Silversmiths, Inc., Wallingford, Conn. 749,575. Cl. 34.
Wallburr, New York, N.Y. 749,404, pub. 2–26–63. Cl. 28.
Waltham Watch Co., Waltham, Mass., to Waltham Watch Co., Chicago, Ill. 401,424, ren. 5–14–63. Cl. 27.
Wasco Products, Inc., Cambridge, Mass. 643,131, canc. Cl. 12.
Wassell Organization, to Wassell Organization, Inc., Westport, Conn. 402,721, ren. 5–14–63. Cl. 50.
Wassell Organization, Inc.: *See*—
Wassell Organization.
Webcor, Inc., Chicago, Ill. 749,333, pub. 2–26–63. Cl. 21.
West Indies Bay Co., Minneapolis, Minn. 749,522, pub. 2–26–63. Cl. 51.
Westfield Mfg. Co., to The Columbia Mfg. Co., Inc., Westfield, Mass. 169,254, ren. 5–14–63. Cl. 19.
Westlake Plastics Co., Lenni Mills, Pa. 749,274, pub. 2–26–63. Cl. 1.
Whirlpool-Seeger Corp., St. Joseph, Mich. 643,148, canc. Cl. 13.
Wilbur & Williams Co., The, Boston, Mass. 643,158, canc. Cl. 16.
Wild Turkey Groves, Inc., The, Vero Beach, Fla. 749,490, pub. 2–26–63. Cl. 46.
Williams and Wilkins Co., The, Baltimore, Md. 749,438, pub. 2–26–63. Cl. 38.
Wilson Jones Co., Chicago, Ill. 749,407, pub. 2–26–63. Cl. 32.
Wilson Jones Co., Chicago, Ill. 749,426, pub. 2–26–63. Cl. 37.
Wilson Sporting Goods Co., River Grove, Ill. 749,361, pub. 2–26–63. Cl. 22.
Wineroth, Joseph N., Inc., San Francisco, Calif. 749,405, pub. 2–26–63. Cl. 28.
Wolfe, William P., Organization, New York, N.Y. 749,433, pub. 4–17–62. Cl. 38.
Wonder Mills, Inc., Attalla, Ala. 749,458, pub. 2–26–63. Cl. 42.
Worthington Corp., Harrison, N.J. 749,413, pub. 2–26–63. Cl. 34.
Yankee Artists, Inc., Keene, N.H. 749,435, pub. 2–26–63. Cl. 38.
Youngs Rubber Corp., New York, N.Y. 643,334, canc. Cl. 44.
Zebra Fireworks Co., Tacoma, Wash. 749,288, pub. 2–26–63. Cl. 9.

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OFFICIAL GAZETTE of the UNITED STATES PATENT OFFICE
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PATENTS

NOTICES

Board of Appeals Decisions Rendered in the Month of April 1963

Examiner affirmed	340
Examiner affirmed in part	60
Examiner reversed	73
Total	473

Service by Publication
Fred Kasady

In accordance with Rule 47 of the Rules of Practice of the United States Patent Office in Patent Cases, notice is hereby given of the filing on April 29, 1960, of an application for patent entitled "Elevatable Trailers," on behalf of Fred Kasady, whose last known address is 2235 Buckingham Drive, Littleton, Colorado. The application was made in compliance with Rule 47(a) and 35 U.S.C. 116 by a joint inventor George E. Monroe without execution by the said Fred Kasady. Notice of the filing directed to the above noted address has been returned undelivered.

Any action to be taken by the said Fred Kasady in connection with the said application must be taken within thirty days of the publication of this notice.

EDWIN L. REYNOLDS,
First Assistant Commissioner.

Affidavit under Rule 204(b)

For greater uniformity and avoidance of needless interferences, the following practice should be followed in instituting interferences which may involve senior party patentees.

In all cases where claims are copied from a patent, and the applicant's effective filing date is more than thirty days later than the patentee's filing date, the Examiner, before declaring an interference, shall require applicant to file an affidavit setting forth sufficient facts to make out a prima facie case for priority relative to the filing date of the patentee.

H. B. WHITMORE,
Apr. 30, 1963. *Superintendent of the Examining Corps.*

Adjudicated Patents

(C.A. Calif.) Kuther and Smith Patent No. 2,452,666 (141—145), for fish canning machine, *Held* valid and infringed. *Leuschner* v. *Kuther*, 314 F.2d 71; 136 USPQ 332.

(C.A.N.Y.) Gross Patent No. 2,688,655 (174—164), for stand-off insulator, *Held* invalid. *Gross* v. *JFD Mfg. Co.*, 314 F.2d 196; 137 USPQ 1.

(C.A. Calif.) Preisler and Shone Patent No. 2,728,580 (280—36), for collapsible baby stroller, *Held* invalid. *Welsh Co. of Calif.* v. *Strolee of California, Inc.*, 313 F.2d 923; 136 USPQ 519.

(C.A. Ill.) Johnson Patent No. 2,732,919 (189—34), for sliding door frame assembly. Claims 1 and 2 *Held* invalid and not infringed. *Kennatrack Corp.* v. *Stanley Works*, 314 F.2d 164; 136 USPQ 556.

(C.A. Calif.) Smith Patent No. 2,798,730 (280—36), for adjustable baby stroller, *Held* invalid. *Welsh Co. of Calif.* v. *Strolee of California, Inc.*, 313 F.2d 923; 136 USPQ 519.

(D.C. Ind.) Colman Patent No. 2,673,805 (99—171), for popcorn package. Claim 1 *Held* valid and infringed. *Taylor Reed Corp.* v. *Mennen Food Products, Inc.*, 214 F. Supp. 257; 136 USPQ 260.

Disclaimers

2,750,449.—*Lincoln Thompson*, Cheshire, *Frank E. Runge*, Branford, and *William H. Lyon*, Orange, Conn. LONG PLAYING MAGNETIC TAPE RECORDER. Patent dated June 12, 1956. Disclaimer filed Feb. 18, 1963, by the assignee, *The Soundscriber Corporation.*

Hereby enters this disclaimer to claim 22 of said patent.

2,867,728.—*Herbert C. Pollock*, Schenectady, N.Y. LOGGING APPARATUS. Patent dated Jan. 6, 1959. Disclaimer filed Mar. 8, 1963, by the assignee, *General Electric Company.*

Hereby enters this disclaimer to claims 1 through 8, inclusive, of said patent.

3,023,919.—*Lloyd L. Hobson*, Elnora, Ind. LIFT TRUCK ATTACHMENT. Patent dated Mar. 6, 1962. Disclaimer filed Mar. 28, 1963, by the inventor.

Hereby enters this disclaimer to claims 1, 2, 3, 4, 5, 6 and 11 of said patent.

3,066,512.—*Robert J. Moody*, Franklin, N.H. CLAMPING AND CUTTING MEANS FOR CIRCULAR KNITTING MACHINES. Patent dated Dec. 4, 1962. Disclaimer filed Feb. 25, 1963, by the assignee, *Scott & Williams, Incorporated.*

Hereby enters this disclaimer to claims 1, 2, 3, 5, 6, 11 and 12 of said patent.

New Applications Received During March 1963

Patents	7,252
Designs	462
Plant Patents	9
Reissues	24
Total	7,747

Issue

Patents	916	No. 3,090,045	to No.	3,090,960, incl.
Designs	50	No. 195,247	to No.	195,296, incl.
Plant Patents	3	No. 2,259	to No.	2,261, incl.
Total	969			

Dedications

Reissue No. 24,971.—*James L. Getas*, New York, N.Y. METHOD OF CLOSING TOE OF CIRCULAR KNIT HOSE. Reissue patent dated Apr. 18, 1961. Dedication filed Mar. 25, 1963, by the assignee, *Frank D. DeLong, Jr.*

Hereby dedicates to the public the entire term of said patent subsequent to Mar. 11, 1963.

2,904,171.—*James L. Getas*, New York, N.Y. HOSIERY PACKAGE. Patent dated Sept. 15, 1959. Dedication filed Mar. 25, 1963, by the assignee, *Frank D. DeLong, Jr.*

Hereby dedicates to the public the entire term of said patent subsequent to Mar. 11, 1963.

Order of Examination

Recent instructions to the Examining Corps include:

Cases in which practice requires that the Examiner act within 60 days, such as decisions on motion (M.P.E.P. 1105.06) and Examiner's answers (M.P.E.P. 1208), necessarily take priority over special cases without specific time limits. Such cases should be taken up for action at least 30 days before the 60-day period expires, to guarantee completion within the 60-day limit.

Shortened Statutory Period

Such a period has now been authorized (1) upon reopening a case consequent to a Quality Control review, (2) when restriction is required and the action does not include a rejection of any claim and (3) when multiplicity is the only ground of rejection relied upon.

Quality Control

The new Quality Control procedure will occasionally require further action in an application wherein the applicant already has been led to believe orally or otherwise that the prosecution has been closed by allowance or by some other action.

Change Notices 1—11 and 1—12, soon to be issued to all subscribers to the Manual of Patent Examining Procedure (3rd edition), include these changes in procedure.

HAROLD B. WHITMORE,
Apr. 17, 1963. *Superintendent of the Examining Corps.*

PATENT EXAMINING CORPS

H. B. WHITMORE, Superintendent

PATENT EXAMINING OPERATIONS AND GROUPS	Oldest Application: New	Oldest Application: Amended
CHEMICAL EXAMINING OPERATION—P. E. MANGAN, Director.		
GENERAL CHEMISTRY, GROUP 110—R. L. CAMPBELL, Supervisory Examiner	7-12-61	7-27-61
Inorganic and Organo-metal (formerly Div. 59)—M. A. Brindisi.		
Metallurgy (formerly Div. 3).		
Electrochemistry (formerly Div. 56)—J. R. Speck.		
GENERAL ORGANIC CHEMISTRY, GROUP 120—I. MARCUS, Supervisory Examiner	12-28-61	11-15-61
Heterocyclic (formerly Div. 6)—H. J. Lidoff.		
Specialized Organic Compounds (formerly Div. 26)—C. B. Parker.		
Medicines (formerly Div. 42).		
PETROLEUM CHEMISTRY, GROUP 130—J. S. BAILEY, Supervisory Examiner	12-6-61	10-20-61
Hydrocarbons (formerly Div. 31).		
Oxo- and Oxy-Derivatives.		
HIGH POLYMER CHEMISTRY, GROUP 140—M. STERMAN, Supervisory Examiner	5-8-61	4-26-61
High Polymer Preparation (formerly Div. 60).		
Mixed High Polymers and Natural Resins (formerly Div. 50).		
COMPOSITIONS AND MOLDING, GROUP 150—L. H. GASTON, Supervisory Examiner	10-9-61	10-17-61
Coating Compositions and Molding.		
Special Utility Compositions (formerly Div. 64)—J. Greenwald.		
COATING AND LAMINATING, GROUP 160—L. G. STONE, (J. REBOLD, Acting) Supervisory Examiner	10-12-61	10-2-61
Coating Methods and Apparatus (formerly Div. 25)—R. D. Nevius.		
Laminating and Stock Materials (formerly Div. 67).		
SPECIALIZED CHEMICAL ARTS AND INDUSTRIES, GROUP 170—W. B. KNIGHT, Supervisory Examiner	9-7-61	9-27-61
Specialized Chemical Arts (formerly Div. 63)—A. H. Winkelstein.		
Reactors and Miscellaneous Industrial Processes.		
CHEMICAL ENGINEERING, GROUP 180—G. D. MITCHELL, Supervisory Examiner	10-31-61	12-12-61
Gases, Liquids and Solids Separating (formerly Div. 32)—H. L. Martin.		
Distillation, Drying and Physical Processes.		
ELECTRICAL EXAMINING OPERATION—N. H. EVANS, Director.		
POWER, GROUP 210—M. L. LEVY, Supervisory Examiner	9-15-61	8-31-61
Generation and Utilization (formerly Div. 26)—O. L. Rader.		
General Applications (formerly Div. 48)—S. Bernstein.		
Conversion and Distribution (formerly Div. 71)—L. McCollum.		
Heating and Related Art (formerly Div. 76)—R. M. Wood.		
SECURITY, GROUP 220—S. BOYD, Supervisory Examiner	11-1-61	10-4-61
Chemical (formerly Div. 46).		
Electrical (formerly Div. 44)—C. L. Justus.		
Mechanical (formerly Div. 10).		
INFORMATION TRANSMISSION, GROUP 230—S. W. CAPELLI, Supervisory Examiner	10-19-61	10-12-61
Communications (formerly Div. 16)— R. H. Ross.		
Multiplexing Techniques (formerly Div. 77)—D. G. Redinbaugh.		
Facsimile and Related Art (formerly Div. 41)— R. Lake.		
INFORMATION STORAGE AND RETRIEVAL, GROUP 240—W. W. BURNS, Supervisory Examiner	8-25-61	9-7-61
Processing and Related Art (formerly Div. 69)—M. A. Morrison.		
Storage Devices and Related Art (formerly Div. 42)—I. Sragow.		
ELECTRONIC COMPONENT SYSTEMS AND DEVICES, GROUP 250—B. G. MILLER, Supervisory Examiner	9-21-61	9-18-61
Semi-Conductor and Space Discharge Systems and Devices (formerly Div. 51)—G. N. Westby.		
Electronic Component Circuits (formerly Div. 72)—A. Gauss.		
Wave Transmission Lines and Networks (formerly Div. 65)—H. K. Saalbach.		
RADIATION AND INSTRUMENTS, GROUP 260—P. M. STRADER, Supervisory Examiner	9-20-61	9-13-61
Optics (formerly Div. 73)—J. H. Pedersen.		
Radiant Energy (formerly Div. 54)—R. G. Nilson.		
Measuring (formerly Div. 74)—W. L. Carlson.		
ELEMENTS, GROUP 270—E. J. SAX, Supervisory Examiner	9-27-61	9-22-61
Conductors (formerly Div. 75)—J. P. Wildman.		
Switches (formerly Div. 37)—B. A. Gilheany.		
Miscellaneous (formerly Div. 75)—J. F. Burns.		
MECHANICAL ENGINEERING EXAMINING OPERATION—R. A. WAHL, Director.		
GENERAL ENGINEERING AND INDUSTRIAL ARTS EXAMINING OPERATION—J. A. MANIAN, Director.		

INTERIM PATENT EXAMINING GROUPS AND SUPERVISORY EXAMINERS

(III) MADER, R. C.—MECHANICAL MANUFACTURING, MACHINE ELEMENTS AND DESIGNS	2, 12, 13, 14, 21, 24, 57, 58, 61, 81, 82.
(IV) NINAS, G. A.—MATERIAL HANDLING AND TREATING, OPTICS, RAILWAYS AND AMUSEMENT DEVICES.	7, 11, 17, 27, 34, 35, 39, 53, 62.
(V) EVANS, R. L.—STATIC STRUCTURES AND INSTRUMENTS OF PRECISION	5, 8, 20, 29, 32, 36, 40, 52, 66.
(VI) MANIAN, J. A.—AGRICULTURE, CALCULATORS, PUMPS AND MOTORS, TRANSPORTATION	1, 4, 9, 18, 22, 23, 28, 45, 47.
(VII) BENDETT, B.—HEATING AND COOLING, PLASTIC SHAPING AND COATING, SEPARATION AND MIXING, BODY TREATMENT AND CARE.	15, 19, 30, 49, 55.
(CLASSIFICATION) GORECKI, G. A.—ARTS UNDERGOING RECLASSIFICATION AS LISTED UNDER CLASSIFICATION DIVISIONS.	91, 92, 93, 94, 95.

DIVISIONS, EXAMINERS AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application as of Mar. 31, 1963	
	New	Amended
1. (VI) GOLDBERG, A. J., Brakes; Planting; Plant Husbandry; Scattering Unloaders; Earth Working	4-9-62	1-25-62
2. (III) STONE, A., Fishing, Trapping and Vermin Destroying; Presses; Tobacco; Textile Wringers; Buckles, Buttons and Clasps		
4. (VI) FALLER, E. A., Material or Article Handling	3-12-62	3-22-62
5. (V) ROBINSON, C. W., Harvesters; Unearthing Objects; Threshing; Knotters; Animal Husbandry; Bee Culture; Dairy; Butchering; Vegetable and Meat Cutters and Comminutors; Fences; Gates; Signals and Indicators; Acoustics; Music (part), Sound Recording and Reproducing	4-17-62	4-9-62
7. (IV) ANDERSON, E. G., Optics (part), (i.e. Kaleidoscope, Motion Picture Apparatus and Optical Projectors, Building Lights); Recorders	1-2-62	1-4-62
8. (V) SHERRY, F. B. (acting), Beds; Chairs and Seats; Cabinets; Tables; Miscellaneous Furniture; Fire Escapes; Ladders; Deposit and Collection Receptacles; Scaffolds	4-4-62	5-25-62
9. (VI) BRANSON, J. H., Pumps; Fans	4-4-62	6-4-62
11. (IV) BENHAM, E. V., Boots, Shoes and Leggings; Shoe and Leather Manufacture; Button, Eyelet and Rivet Setting; Nailing, Stapling and Clip Clenching; Card, Picture and Sign Exhibiting; Cutlery; Pipes and Tubular Conduits	3-26-62	4-17-62
12. (III) DURHAM, B. G., Machine Elements; Engine Starters; Interrelated Clutch and Motor Controls	12-4-61	11-27-61
13. (III) DYER, W. W., Jr. (acting), Gear Cutting; Electric Lamp and Tube Manufacture; Needle and Pin Making; Metal Working (part), e.g., Special Work, Forging, Plastic Working, Drawing, Sawing, Milling, Planing, Turning	12-27-61	12-13-61
14. (III) WILTZ, W. A., Metal Working (part), e.g., Sheet Metal; Metal Bending, Miscellaneous Processes, Assembly and Disassembly Apparatus; Wire Fabrics	11-9-61	9-6-61
15. (VII) BRINDISI, M. V., Plastics; Plastic Block and Earthenware Apparatus	3-9-62	3-12-62
17. (IV) LEIGHEY, R. A., Packaging; Typewriters; Printing; Type Casting and Setting; Sheet Material Associating or Folding; Sheet Feeding or Delivering	1-12-62	10-31-61
18. (VI) BLUM, A. (LEVINE, S., acting), Power Plants; Fluid Transmissions; Servomotor Systems; Jet Motors; Combustion Turbines; Measuring Speed or Acceleration Power Driven Conveyors	2-13-62	2-9-63
19. (VII) PATRICK, P. L., Stoves and Furnaces; Boilers; Fluid Fuel Burners; Heating Systems; Miscellaneous Heating; Automatic Temperature and Humidity Regulation; Illuminating Burners	11-9-61	12-11-61
20. (V) SEERS, J. D., Miscellaneous Hardware; Closure Fasteners; Locks; Safes; Bank Protection; Bread, Pastry and Confection Making; Tents and Canopies; Umbrellas; Cranes; Undertaking; Electrical Connectors	3-1-62	2-21-62
21. (III) MADER, R. C., Textiles	1-24-62	12-21-61
22. (VI) BUCHLER, M. B., Aeronautics; Boats; Buoys; Ships; Marine Propulsion; Propellers; Windmills; Fluid Diaphragms and Bellows	3-14-62	3-26-62
23. (VI) SMILOW, L., Calculators; Bookkeeping Machines; Cash and Fare Registers; Voting Machines; Counters; Education; Weighing Scales	5-7-62	4-27-62
24. (III) HICKEY, T. J., Apparel (except Corsets and Brassieres); Apparel Apparatus; Sewing Machines; Textiles, Ironing or Smoothing; Clutches and Power-Stop Control; Work Holders	3-1-62	3-5-62
27. (IV) WILLMUTH, C. A. (acting), Brushing, Scrubbing and General Cleaning; Brush, Broom and Mop Making; Textiles, Fluid Treating Apparatus; Cleaning and Liquid Contact With Solids	4-12-62	4-10-62
28. (VI) BRAUNER, R. H., Internal Combustion Engines; Expansible Chamber Motors; Fluid Servomotors; Spring Motors; Cylinders; Pistons; Drive Shafts; Flexible-Shaft Couplings; Chucks or Sockets; Fluid Current Conveyors; Wheel Substitutes; Hoists; Elevators; Pneumatic Dispatch; Store Service; Chutes	1-3-62	3-16-62
29. (V) SCHEEL, W. A. (acting), Tools; Woodworking; Button, Barrel and Wheel Making; Baggage; Cloth, Leather and Rubber Receptacles; Package and Article Carriers; Valved Pipe Couplings; Joint Packings; Tool-Handling Fastenings	2-8-62	3-14-62
30. (VII) O'LEARY, R. A., Comminutors; Refrigeration; Fluid Sprinkling, Spraying and Diffusing, Separating and Assorting Solids (part)	2-7-62	2-9-62
33. (V) MUSHAKE, W. L., Bridges; Hydraulic and Earth Engineering; Roads and Pavements; Building Structures	12-13-61	12-8-61
34. (IV) QUACKENBUSH, L., Railways—Draft Appliances, Switches and Signals, Surface Track, Rolling Stock, Track Sanders; Electricity, Transmission to Vehicles; Dumping Vehicles; Vehicle Fenders; Hand and Hoist Line Implements; Agitating	11-9-61	11-13-61
35. (IV) DEMBO, L. J., Dispensing; Filling Receptacles; Toilet; Severing by Tearing or Breaking; Coin Controlled Apparatus; Dispensing Cabinets; Article Dispensing; Coin Handling	3-7-62	1-22-62
36. (V) EVANS, R. L., Measuring and Testing (part)	2-1-62	2-6-62
39. (IV) WEIL, I., Fluid-Pressure Regulators; Valves; Fluid Handling (except Pressure Modulating Relays, Float Valves, Diaphragms and Bellows)	1-25-62	2-7-62
40. (V) DRUMMOND, E. J., Receptacles—Metallic, Paper, Wooden, Glass; Special Receptacles and Packages	3-8-62	2-19-62
45. (VI) RIORDON, R. C. (acting), Wheels, Tires and Axles; Railway Wheels and Axles; Lubrication; Bearings and Guides; Belt and Sprocket Gearing; Spring Devices; Animal Draft Appliances; Excavating	4-6-62	6-1-62
47. (VI) ARNOLD, P., Mining, Quarrying, and Ice Harvesting; Motor Vehicles: Land Vehicles	3-6-62	3-6-62
49. (VII) BENDETT, B., (O'CONNELL, C. E., acting), Drying and Gas or Vapor Contact With Solids; Ventilation; Wells; Concentrating Evaporators; Earth Boring	1-8-62	1-19-62
52. (V) LE ROY, C. A., Supports and Racks; Separating and Assorting Solids (part)	5-15-62	5-24-62
53. (IV) NINAS, G. A., Books and Book Making; Manifolding; Printed Matter; Stationery; Paper Files and Binders; Flexible or Portable Closures, or Partitions; Doors, Windows, Awnings, and Shutters; Harness; Whip Apparatus; Food Apparatus; Closure Operators; Illumination		
55. (VII) FRANKLIN, J. (acting), Surgery; Dentistry; Artificial Body Members	1-30-62	3-16-62
57. (III) TOMLIN, C. W. (acting), Bolt, Nut, Rivet, Nail, Screw, Chain, and Horseshoe Making; Driven and Screw Fastenings; Nut and Bolt Locks; Jewelry; Pipe Joints or Couplings; Cutting	12-28-61	12-11-61
58. (III) BRONAUGH, F. H., Rolls and Rollers; Making Metal Tools and Implements; Stone Working; Abrading Processes and Apparatus; Baths, Closets, Sinks, and Spittoons; Boring and Drilling; Paper Manufacture; Selective Cutting	6-12-62	6-12-62
61. (III) STRIZAK, J. P., Winding and Reeling; Pushing and Pulling; Horology; Railway Mail Delivery; Feeding of Indefinite Lengths	4-16-62	4-23-62
62. (IV) LOWE, D. B., Games; Toys; Amusements and Exercising Devices; Mechanical Guns and Projectors; Photographic Apparatus	1-19-62	1-2-62
66. (V) LISANN, I., Geometric Instruments; Measuring and Testing (part)	11-6-61	11-7-61
81. (III) HANNAH, A. B., Industrial Arts	11-1-62	10-31-62
82. (III) HUNTER, E. H., Household, Personal and Fine Arts	11-29-62	12-11-62
91. BAILEY, J. S., Glass Manufacturing		
92. GAUSS, H.		
93. PURDY, W. F. (acting), Wire Working	5-3-62	3-1-62
94. BERLOWITZ, W., Motors, Fluid	7-6-62	7-23-62
95. ANGEL, C. D., (REZNEK, J., acting), Metallic Building Structures	12-11-61	12-18-61

CONDITION OF PATENT APPLICATIONS AS OF MARCH 31, 1963

Total number of pending applications (excluding Designs)	192, 888
Total number of Design applications pending	5, 875
Total number of applications awaiting action (excluding Designs)	111, 125
Total number of Design applications awaiting action	2, 014
Date of oldest new application awaiting action	May 8, 1961
Date of oldest amended application awaiting action	April 26, 1961

EXPIRATION OF PATENTS

The patents within the range of numbers indicated below expire during May 1963, except those which may have been extended under the Provisions of the Veterans Patent Extension Act (64 Stat. 316 as amended by 66 Stat. 321) and those which may have expired earlier due to shortened terms under the provisions of Public Law 690. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1963*

Patents ..... Numbers 2,300,611 to 2,401,201, inclusive

Plant Patents ..... Numbers 688 to 692 inclusive

DECISIONS IN PATENT AND TRADEMARK CASES

U.S. Court of Customs and Patent Appeals

GENERAL FOODS CORPORATION *v.* E-Z SPUDS, INC.

No. 6861. Decided January 16, 1963

[50 CCPA —; 311 F.2d 580; 136 USPQ 187]

1. TRADEMARK—CONFUSING SIMILARITY—"E-Z KRINKLES" AND "KRINKLES" ALONE OR AS A COMPONENT OF TRADEMARKS—RESOLUTION OF DOUBT.

Upon review of the dismissal by the Trademark Trial and Appeal Board of an opposition to an application for registration of "E-Z KRINKLES" as a trademark for raw potatoes which have been peeled, sliced and preserved, and with consideration of its findings that opposer had previously used "KRINKLES" alone or as a component of several trademarks for dry rice cereal, and that the goods of the parties might be regarded as emanating from a common source if sold under the same or similar marks, but that purchasers would assume that "KRINKLES," as used by applicant, has reference to the crinkly manner in which the potatoes are sliced, *Held* that "While we appreciate the 'crinkled' nature of applicant's goods, we are unable to agree that that single factor is sufficient, in view of the other facts here, to preclude a likelihood of confusion within the meaning of section 2(d) of the Lanham Act"; and *Held* that "Even if there were doubt on that score, we would feel obliged to resolve it in favor of the first user and against the newcomer."

APPEAL from the Patent Office. Opposition No. 39,260.

REVERSED.

Gordon R. Brown, Frederick F. Mack, Francis C. Browne for appellant.

John B. Hosty for appellee.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, SMITH, and ALMOND, Jr., *Associate Judges*

WORLEY, *Chief Judge*, delivered the opinion of the court.

E-Z Spuds, Inc., seeks registration of "E-Z KRINKLES"[1] as a trademark for raw potatoes which have been peeled, sliced, and preserved. General Foods Corporation opposes on prior registrations of "KRINKLE" for a food made of corn, sugar and salt,[2] "SUGAR KRINKLES"[3] and "SUGAR RICE KRINKLES"[4] for cereal breakfast foods, and on asserted prior use of "KRINKLES" and "SUGAR COATED RICE KRINKLES" on other breakfast foods.

The Trademark Trial and Appeal Board found that opposer was a manufacturer of a long line of grocery items including canned, mashed and sliced potatoes, frozen French fried potatoes, gelatin, dog foods, cocoa, baking powder, dry cereals, syrup, coffee and tea which it sells under different brand names through grocery wholesalers to the retail trade. The Board found also that the opposer has since about 1949 used the word "KRINKLES" at various times alone or as a component of several trademarks for dry rice cereal. Sales of those cereal products bearing the term "KRINKLES" from 1951 through 1960 have amounted to more than $20,000,000. During the same period of time over $6,000,000 was spent by opposer for advertising its "KRINKLES" product. In addition, the Board relies on testimony to the effect that opposer uses the expression

[1] The application, Serial No. 44,887, filed January 29, 1958, states: Applicant disclaims the word "KRINKLES" apart from the mark shown.
[2] Reg. No. 82,436, registered June 27, 1911, to a predecessor; twice renewed.
[3] Reg. No. 607,398, registered June 14, 1955.
[4] Reg. No. 664,134, registered July 8, 1958.

"crinkle cut" in connection with its "Bird's Eye" brand of frozen French fried potatoes to refer to the cut and appearance thereof.

In dismissing the opposition, the Board stated:

> The specimen labels filed with applicant's application indicate that its product is a raw potato which has been "crinkle cut" and otherwise prepared especially for making French fried potatoes. While applicant's product and opposer's dry cereal are specifically different grocery items, *they are usually purchased by the same class of purchasers in the same stores, and, hence, might be regarded as emanating from a common source if sold under the same or similar marks.*
>
> The instant marks resemble each other to the extent that they comprise or include the term "KRINKLES." *Considering, however, the nature of the term "crinkle," as applied to French fried potatoes, it is believed that purchasers would assume that "KRINKLES," as used by applicant in the expression "E-Z KRINKLES," has reference to or suggests a French fried potato product which has been cut or sliced in a crinkly manner rather than another product marketed by opposer.* Under these circumstances, it is concluded that confusion, mistake or deception of purchasers is not likely to occur. [Italics supplied.]

[1] While we appreciate the "crinkled" nature of applicant's goods, we are unable to agree that that single factor is sufficient, in view of the other facts here, to preclude a likelihood of confusion within the meaning of section 2(d) of the Lanham Act.

Even if there were doubt on that score, we would feel obliged to resolve it in favor of the first user and against the newcomer. *Carlisle Shoe Co.* v. *Societe Anonyme: Roger Fare & Cie*, 47 CCPA 966, 278 F.2d 519, 126 USPQ 54.

Under such circumstances, we must reverse the decision appealed from.

REVERSED.

U.S. Court of Customs and Patent Appeals

IN RE EDMUND A. STEINBECK, JR.

No. 6907. Decided February 18, 1963

[50 CCPA —; 312 F.2d 828; 136 USPQ 470]

1. PATENTABILITY—PARTICULAR SUBJECT MATTER—"INVESTMENT MIXER."

The decision of the Board of Appeals, refusing certain claims in an application entitled "Investment Mixer" as unpatentable over the prior art, is affirmed.

APPEAL from the Patent Office. Serial No. 407,337.

AFFIRMED.

Joseph A. Rave (*Frank P. Cyr* of counsel) for appellant.

Clarence W. Moore (*George C. Roeming* of counsel) for the Commissioner of Patents.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, SMITH, and ALMOND, Jr., *Associate Judges*

SMITH, *J.*, delivered the opinion of the court.

Appellant has appealed from a decision of the Board of Appeals which affirmed the Examiner's final rejection of claims 17 and 18 of appellant's application[1] for patent for an "Investment Mixer" as obvious in view of the prior art. Six claims were allowed.

Appellant's application discloses an apparatus used in mixing and compacting an "investment." An "investment" is a cementitious mass that is formed of a powder, generally plaster of Paris, and water. The mixture, which hardens rapidly after mixing, is commonly used in one instance in making molds for small precise metal

[1] Ser. No. 407,337, filed February 1, 1954.

castings by the so-called "lost wax" process such, for example, as dental inlays. Appellant's mixer includes an electric motor which drives a vacuum pump and also a closed mixing chamber having a revolving mixing paddle. The vacuum pump is directly connected to one shaft of the motor while the paddle of the mixing chamber is connected to the other motor shaft by a manually engaged friction coupling. Both claims on appeal are directed to this coupling.

Claim 17 is as follows:

17. A driving connection between a motor and an investment mixer comprising a motor having a driven shaft, a sleeve secured to said shaft for rotation therewith, said sleeve having a portion thereof projecting beyond the shaft and said projecting sleeve portion having formed interiorly thereof a cup or socket having its inner surface inwardly tapered whereby said outer end of the cup or socket is of a greater diameter than the inner end, an investment mixer including a mixing container of a size to be manually held, a mixing shaft, means connecting said mixing shaft to the mixing container to have an end of the shaft projecting outwardly of the mixing container, and a driven head secured to said shaft projecting end, said mixing container being manually held for inserting said driven head into the socket through its greater diameter end, said head having for a relatively short distance thereof intermediate its ends an outwardly projecting portion of less diameter than the greater diameter end of the sleeve socket but of greater diameter than the lesser diameter end of said sleeve socket so that the said driven head may be inserted into the socket but not passed therethrough and removed from the socket while the same is rotating and effect a frictional drive connection between the head and sleeve socket at a point intermediate its larger and smaller ends.

Claim 18 further defines the outwardly projecting portion of the driven head to be:

* * * a compressible contact member carried by said driven head intermediate its ends * * *.

As can be seen from the above claims, the friction coupling is the particular element on which patentability is predicated. It has a female sleeve member secured to the motor driven shaft which has a frusto-conical or inwardly tapered socket. The driven member has a mating male member having a projecting portion such as an O ring which makes friction contact with the wall of the female member when the parts of the coupling are manually engaged.

The following references were relied upon by the Examiner and Board:

Tenney, 244,091, July 12, 1881.
Forde et al., 1,863,977, June 21, 1932.
Hollenback, 2,453,914, November 16, 1948.
Martinez, 2,562,805, July 31, 1951.
Kelleigh, 2,690,246, September 28, 1954.

The Board in its decision affirmed the Examiner's rejection of both appealed claims as being (1) unpatentable over Hollenback in view of Tenney and Forde et al., and (2) unpatentable over Hollenback in view of Kelleigh and Martinez. Since we agree that the Board was correct in affirming the Examiner's second ground of rejection, it is unnecessary to discuss the first ground or to describe the Tenney and Forde et al. patents.

The patent to Hollenback discloses an investment mixer similar to that described and claimed by appellant except that the driven head of the mixer shaft is slotted or kerfed. The revolving paddle is driven by a "conventional power drive" having a flat key on the shaft end which fits into the slot or kerf of the mixer shaft, similar to the manner in which a screwdriver engages the head of a slotted screw.

The Kelleigh patent discloses a clutch having a female member with a recessed, frusto-conical head and a mating male member having an annular recess which carries an O ring of compressible material. In order to prevent slippage, the patentee provides a "plurality of radially extending serrations" on the tapered surface of the female member which increases the frictional engagement of the compressible O ring when the clutch is engaged. The specification states that the:

Objects of this invention are to provide a clutch which transmits torque without slipping, which engages essentially instantaneously at any relative position between its driving and driven members, * * *

The Martinez patent for a motor driven toothbrush discloses frictional clutch couplings between motor driven shafts in the handle of the brush and the driven brush-driving shafts in a detachable brush head. The ends of the driven brush shafts have conical recesses which mate with the tapered ends of the driving shafts. The driving and driven shafts, held in axial alignment, are connected when the operator manually exerts an axially directed pressure on the coupling by pressing the head against the handle.

The position of the Board is stated in its decision as follows:

The self-centering characteristic and the ready connectability and detachability of tapered friction clutches are matters of elementary knowledge, and it is our opinion that one desiring such features in the Hollenback or Steinbock et al. mixer[1] would not have found it unobvious or difficult, at least upon consulting the clutch art, to arrive at the appealed structure. Tenney and Kelleigh are only examples of friction clutches, that of Kelleigh being deemed the full equivalent of that claimed herein.

The Board further stated that "the concept of manually holding a container while it is coupled and uncoupled with a power driven shaft" is an old and well-known practice, and judicially noted the use of conventional hand revolution counters which are manually applied to a rotating shaft.

Appellant, in his brief, emphasizes the fact that his claimed invention enables an operator, said to be often a woman dental technician, to engage manually the friction coupling with the motor running without maintaining exact axial alignment of the shafts. Such procedure is said to be advantageous since the investment must be mixed and cast in a relatively short time before the chemical reaction "sets" the mixture and it becomes unworkable.

While we agree with appellant that the Hollenback mixer which has a keyed shaft would probably be damaged if the operator attempted to engage the key and slot with the motor running, we agree with the Board that it would be obvious to a person of ordinary skill in the art to substitute the friction type clutch of either Kelleigh or Martinez for Hollenback's shaft coupling. Appellant's argument that his coupling requires only approximate axial alignment is equally unpersuasive since we agree with the Board that friction clutches capable of being manually aligned, such as those used on shaft counters, are notoriously old. Furthermore, the appealed claims do not specify any structural features of appellant's clutch which would allow it to operate with any more axial deviation than the clutch shown by Kelleigh.

Appellant further argues that the appealed claims distinguish the coupling means structurally over the friction clutches of both Kelleigh and Martinez, specifically since Kelleigh discloses radial serrations

[1] The "Steinbock et al. mixer" apparently refers to U.S. Patent No. 2,777,177 issued to appellant and Robert Nieman which was co-pending with the appealed application. This patent was not used as prior art by the Examiner or Board.

in the face of the recessed female member and the Martinez shafts are held in exact alignment by the brush handle and head. While there may be some structural differences between appellant's coupling defined in the claims and the reference couplings, these differences are of no patentable significance since it would be obvious to a person of ordinary skill in the coupling art to substitute a suitable friction clutch for the key and slotted coupling of Hollenback. The concept of a hand held mechanism with a manually operated friction clutch is old and notorious, as shown by the use of hand operated shaft rotation counters. The application of this principle to investment mixers is obvious to one of ordinary skill in the art.

[1] For the foregoing reasons, the decision of the Board of Appeals is affirmed.

AFFIRMED.

U.S. Court of Customs and Patent Appeals

IN RE LEPAGE'S INCORPORATED (A SUBSIDIARY OF THE PAPERCRAFT CORPORATION, AND ASSIGNEE OF JOHNSON & JOHNSON)

Nos. 6855 and 6856. Decided January 16, 1963

[50 CCPA —; 311 F.2d 455; 136 USPQ 170]

1. APPEAL TO U.S. COURT OF CUSTOMS AND PATENT APPEALS—JURISDICTION—35 U.S.C. 142—REASONS OF APPEAL.

Held that 35 U.S.C. 142, in stating: "* * * the appellant * * * shall file * * * *his reasons of appeal, specifically set forth in writing* * * *," "contemplates more in a notice of appeal than a mere statement of applicant's appeal from the decision of the Trademark Trial and Appeal Board refusing registration of the mark."

2. SAME—SAME—RAISING JURISDICTIONAL QUESTION.

Where the Solicitor, for the first time in his brief on appeal, raised the question whether appellant had fulfilled the minimum requirements of 15 U.S.C. 1071, 35 U.S.C. 142, 35 U.S.C. 143, and 35 U.S.C. 144, for perfecting appeals to the U.S. Court of Customs and Patent Appeals, *Held* that "since this is a jurisdictional matter it is proper to raise it at any time."

APPEAL from the Patent Office. Serial Nos. 40,299 and 62,303.

DISMISSED.

Francis C. Browne (*William E. Schuyler, Jr.*, and *Andrew B. Beveridge* of counsel) for appellant.

Clarence W. Moore (*George C. Roeming* of counsel) for the Commisisoner of Patents.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, and SMITH, *Associate Judges*, and Associate Judge JOSEPH R. JACKSON, retired

MARTIN, *J.*, delivered the opinion of the court.

This consolidated appeal is from the decision of the Trademark Trial and Appeal Board affirming the refusal of the Examiner to register on the Principal Register a mark [1] consisting of a dispensing container having a generally cylindrical centrally constricted body and cap and having a truncated cylindrical tip, and a mark [2] which has the same overall configuration as the one just discussed but with some slight variations.

It is unnecessary to delineate in more detail the issues presented here because we believe that the appeals should be dismissed for the

[1] Application Serial No. 40,299 (PA 6855), filed October 16, 1957 for liquid glue, mucilage and adhesive cements. Use in commerce is alleged since 1926.

[2] Application Serial No. 62,303 (PA 6856), filed November 12, 1958 for liquid glue, mucilage and adhesive cements. Use in commerce is alleged since 1926.

reason that appellant has failed to fulfill the minimum requirements of the statutes [3] for perfecting appeals in this court.

Appellant's notice of appeal reads as follows:

Notice of Appeal to United States Court of Customs and Patent Appeals,
June 21, 1961

Sirs:

Pursuant to section 2(f)[4] of the Trademark Act of 1946, as amended, applicant hereby appeals to the United States Court of Customs and Patent Appeals from the decisions of the Trademark Trial and Appeal Board dated April 3, 1961 and May 22, 1961, refusing registration of the mark shown in applications Serial Nos. 40,299 and 62,303, filed October 16, 1957 and November 12, 1958, respectively, on the Principal Register under the Trademark Act of 1946.

As is apparent, appellant failed to indicate any reasons of appeal whatsoever.

[1] It is our opinion that 35 U.S.C. 142, in stating:

* * * the appellant * * * shall file * * * *his reasons of appeal, specifically set forth in writing* * * *. [Emphasis ours.]

contemplates more in a notice of appeal than a mere statement of applicant's appeal from the decision of the Trademark Trial and Appeal Board refusing registration of the mark. This position is reenforced by the wording of section 143, wherein it states:

* * * in an ex parte case the Commissioner shall furnish the court with the grounds of the decision of the Patent Office, in writing, *touching all the points involved by the reasons of appeal.* [Emphasis ours.]

and in section 144, wherein it states:

The United States Court of Customs and Patent Appeals, on petition, shall hear and determine such appeal on the evidence produced before the Patent Office, and the *decision shall be confined to the points set forth in the reasons of appeal.* * * * [Emphasis ours.]

It seems to us that if all that was necessary to be done to perfect an appeal was that which was done here, there exist many superfluous words in sections 142, 143 and 144.

[2] The Solicitor raised this question here for the first time in his brief on appeal. However, since this is a jurisdictional matter it is proper to raise it at any time. *In re Wesselman*, 29 CCPA 988, 127 F.2d 311, 53 USPQ 365. For these reasons we dismiss these appeals.[5]

DISMISSED.

WORLEY, *Chief Judge* (concurring):

I agree that appellant has failed to comply with the provisions of section 142,[1] but am unable to agree with the criticism levelled at that section by the concurring opinions.

I am certain Congress did not intend section 142 to be, and that it has not become "a trap for the inexperienced, the unwary, or the careless," nor do I regard it as "an anachronistic procedural hangover" from the 19th century. I am equally certain the facts here, as well as the history of that section, do not fairly support such evaluation.

[3] 15 U.S.C. 1071; 35 U.S.C. 142; 35 U.S.C. 143; 35 U.S.C. 144. 15 U.S.C. 1071 has been amended by Public Law 87-772 so that it now includes specifically the requirements of 35 U.S.C. 142, 143, 144.

[4] We assume that appellant intended to write section 21 of the Trademark Act of 1946 instead of 2(f) since section 21 is written in its Consolidated Petition on appeal.

[5] Since we have found that we do not have jurisdiction of this matter we will not rule upon the request of appellant to file certain papers nor the motion of the Commissioner of Patents to change the title of the appeals.

[1] § 142. Notice of appeal

When an appeal is taken to the United States Court of Customs and Patent Appeals, the appellant shall give notice thereof to the Commissioner, and shall file in the Patent Office his reasons of appeal, specifically set forth in writing, within such time after the date of the decision appealed from, not less than sixty days, as the Commissioner appoints.

Section 142 is but one of the sections of the statute [2] designed for, and so essential to, the orderly and expeditious discharge of the business of this court.

If an appellant is of the bona fide opinion that the Board erred, surely it should present no problem for him to "specifically set forth in writing" his reasons within the sixty day period allowed by law. After all, appellant must eventually make his position known.

I am sympathetic with those who preclude a decision on the merits of an appeal by failing to comply with the statute governing reasons of appeal. I would be equally sympathetic with one who failed to file his appeal within the statutory period, but cannot see where the law is at fault in either case. Even if, in isolated instances such as here, a hardship might ostensibly result, that fact should be balanced with the need for procedures which promote the orderly operation of both the Patent Office and this court; procedures which, I might add, apparently have heretofore offered no obstacles to the overwhelming majority of those coming before this court.

These requirements have been in the law for many years. Inasmuch as Congress has consistently expressed its approval by reenacting them,[3] I would hesitate to suggest they be repealed or substantially modified in the absence of most compelling reasons.

RICH, *J.* (concurring):

There is no room for doubt that one appealing to this court from the Patent Office in a patent or trademark case is required by law to accompany the notice of appeal which is filed with the Commissioner of Patents, or include in it, his "reasons of appeal, specifically set forth in writing." 35 U.S.C. 142. I have long been out of sympathy with this requirement. It lacks even the merit of being a pleasant and harmless ritual of the law. It has the great vice of being but a trap for the inexperienced, the unwary, or the careless. From time to time, as in the instant case, it results in the dismissal of a case with no consideration of its merits; and this after the printing of records, the writing and printing of briefs, oral argument, and study on the part of five judges and their assistants all at great expense of time, money and energy. We have more important work to do than the springing of such traps and we certainly have uses for our limited time and energies of greater social value.

Note should be taken, for the purpose of this discussion, of certain details of the statutory requirement. "Reasons" are required, the plural implying that there should be more than one.[1] They must be "specifically" set forth, which implies, at least, that a generalization is not in compliance with the law. And they must be written down and filed.

[2] § 143. Proceedings on appeal

The United States Court of Customs and Patent Appeals shall, before hearing such appeal, give notice of the time and place of the hearing to the Commissioner and the parties thereto. The Commissioner shall transmit to the court certified copies of all the necessary original papers and evidence in the case specified by the appellant and any additional papers and evidence specified by the appellee and *in an ex parte case the Commissioner shall furnish the court with the grounds of the decision of the Patent Office, in writing, touching all the points involved by the reasons of appeal.*

§ 144. Decision on appeal

The United States Court of Customs and Patent Appeals, on petition, shall hear and determine such appeal on the evidence produced before the Patent Office, *and the decision decision be confined to the points set forth in the reasons of appeal.* Upon its determination the court shall return to the Commissioner a certificate of its proceedings and decision, which shall be entered of record in the Patent Office and govern the further proceedings in the case. [Italics supplied.]

[3] As late as the last session, Congress expressly reenacted the requirements of sections 142, 143 and 144 in Public Law 87-772 (76 Stat. 769), effective August 9, 1962, in amending the Trademark Act.

[1] I am aware that 1 U.S.C. 1 states as a rule of construction that "words importing the plural number" may "include the singular," but I think the implication remains. The language was adopted long before there was such a statutory rule of construction.

As the court's opinion points out, there is not just one section of the statute bearing on reasons of appeal, but three. Section 142 requires that they be filed. Section 143 requires the Commissioner, in ex parte cases, to supply this court with the grounds of the Patent Office decision "touching all the points involved by the reasons of appeal." Section 144 says that this court's decision "shall be confined to the points set forth in the reasons of appeal." This triple emphasis would seem to imply that there is something important about reasons of appeal. In the light of today's actual procedures under other sections of the statute and related rules, however, reasons of appeal are a ridiculous anachronism.

As a court charged with the solemn duty of carrying out the law as it is written by the Congress, we cannot ignore completely express provisions of statutes simply because they have ceased to be grounded in reason, tempted though we may be to do so. Temptation has never, so far as I am aware, led the court into holding, *in the face of a challenge*, that a notice with *no* reasons of appeal in it is a sufficient compliance with the statute to permit of a decision by us on the merits. Even so, I concur only in the result in this case because, for one thing, I am not at all convinced that the absence of reasons is a "jurisdictional" defect, depriving us of the *power* to act if we choose to do so. I am aware that several opinions which I have carefully read have said that it is. But I raise the question whether, *if there is no challenge* and the court chooses to proceed to a decision on the merits, it may not do so on the theory that reasons are for the benefit of the appellee, and possibly of the court, and that if neither raises any question, the defect in, or absence of, the reasons is waived. After all, the reasons of appeal are merely a procedural adjunct to the notice of appeal which is the paper, when followed by a petition of appeal, by which the court's jurisdiction is invoked. In all such cases a notice has been duly filed. Many cases can be cited wherein the court certainly has proceeded with a consideration of points to which no specific reason has been directed, even in the face of challenge, in direct refutation of the basis on which other opinions have expressed the view that the absence of specific reasons deprives us of jurisdiction to consider points not raised. If absence of a specific reason is truly "jurisdictional," the court surely has rendered a multitude of "extrajudicial" decisions.

I concur in the result solely for the reason that I believe respect for law requires that we withhold sanction from total disregard of statutory requirements; not that we, as a court, could not do otherwise, by applying a waiver theory, but I think we *should* not.

The statutes should be changed

My main purpose in writing this opinion is to try to start some wheels turning to modernize the statutes above referred to, to bring them into conformity with existing procedures in the Patent Office and in this court so that they make sense; to conform procedure in taking appeals to this court as nearly as may be to that laid down in the Federal Rules of Civil Procedure so that lawyers need not learn two different procedures within the same Federal court system; and to put an end to the persistent raising by the Patent Office in ex parte appeals of time-wasting procedural technicalities, of no

assistance to anyone, which merely add to the burdens on us and on the bar in deciding controversies on their merits. The bar might well give thought to the desirability of legislation to this end.

What goes on here

The overall picture of what is done in this court with respect to filing reasons of appeal is not, I think, one which is visible from the outside. Our opinions do not reflect it since they never mention the subject unless the adequacy of the reasons is attacked. There is no uniformity of practice. In the instant case someone, probably following the practice in appealing from a District Court to a Court of Appeals under F.R.C.P. 73, 75, filed a notice with no reasons. At the other extreme, by way of example, in a recent appeal in a routine trademark opposition, *Robert Hall Clothes, Inc.* v. *Mary Lindsay Studds*, 48 CCPA 831, 286 F.2d 615, 128 USPQ 542, the notice contained 55 reasons of appeal covering 6 pages of the printed record. Such voluminous reasons are, moreover, frequently reprinted in briefs under the mistaken belief that pointing out such an enormous volume of supposed error in Patent Office decisions helps the party's cause. For reasons explained later, unless reasons are attacked as inadequate—and such voluminous reasons rarely are—no judge is likely to read them. The number of reasons filed fluctuates, from case to case, between the extremes above mentioned.

One common characteristic of reasons of appeal is that they say everything twice, or even three times, even where there is nothing to say except that the appellant thinks the decision of the Patent Office is wrong, thus:

1. The Board erred in affirming the Examiner's rejection of claims 2, 4, and 6.
2. The Board erred in not reversing the Examiner's rejection of claims 2, 4, and 6.
3. The Board erred in rejecting the claims on the references.
4. The Board erred in not allowing the rejected claims over the references.
5. The Board erred in sustaining the Examiner's several grounds of rejection.
6. The Board erred in not reversing the Examiner's grounds of rejection.

I did not make those reasons up. I have merely left a few superfluous words out of the actual reasons filed in *In re Adrian*, 25 CCPA 921, 94 F.2d 808, 36 USPQ 539. It seems a shame to waste money on a legal education if this is the result. While the attorney certainly managed to meet the technicality of filing a plurality of reasons, two would have done that. All these six reasons say is that the Board was in error in sustaining the rejection of the Examiner. The court's opinion does not mention reasons of appeal but they were of the general character above stated. The court nevertheless went into all grounds of rejection including one by the Examiner which was not discussed by the Board, reversing the rejection as to all claims but one. That was in 1938.

Another common characteristic of reasons of appeal is that they are drafted not on the basis of the *decision* appealed from but on the basis of what the Board said in its *opinion*. The statute (35 U.S.C. 141) says "an applicant dissatisfied with the decision of the Board of Appeals may appeal." I am aware that it is the custom to call the Board's opinions "decisions," but that is not what they are. The decision is the act of the Board in saying whether each ground of rejection of the Examiner which is appealed to it is right or wrong. The opinion is a discussion, an exposition, a rationalization or justification of the decision or decisions made. It is apparent

to me from having perused a number of the more voluminous reasons of appeal that their undue multiplicity results from going through an opinion with a fine-toothed comb and asserting error with respect to every statement made which conceivably could be adverse to the appellant's cause, and then doubling them so far as possible by repeating them in negative form. As I said, unless challenged, I, at least, do not read such reasons. I do not believe my colleagues often do either. Why should we? We have to read the Board's opinion and the appellant's brief wherein he sets forth his reasons for disagreeing with the Board in a much more intelligible fashion. The brief, moreover, is the result of more critical analysis of the case and many points mentioned in such reasons may turn out to be unimportant. The reasons, on the other hand, must be prepared in a hurry (Rules 304 and 302, set the time for filing reasons at 60 days from the date of the Board's decision) and, under some of the more frightening opinions of this court, must be designed to cover every possible contingency at a time when it has not been decided how case is to be argued. It is the kind of a job that would be turned over to a junior associate in a law office, and this may give rise to trouble where outmoded technicalities inherited from a century ago must be complied with.

Probably the case which threw the bigegst scare into the bar about reasons of appeal is *In re Boyce*, 32 CCPA 718, 144 F.2d 896, 63 USPQ 80 (1944). The court there dealt with a situation in which the Examiner rejected on several references and the Board, on appeal, discussed only one of them and affirmed. On appeal to this court, the applicant mentioned specifically in his reasons only the reference discussed by the Board but also filed six other reasons of the generalized type. The court, applying the rule of *In re Wagenhorst*, 20 CCPA 991, 64 F.2d 780, 17 USPQ 330, that an affirmance by the Board has the legal effect of a rejection on all grounds and references relied on by the Examiner not expressly reversed by the Board, said that even should it be of the opinion that the reference discussed by the Board was not applicable, it *could* not reverse the Board on the reasons of appeal before it since they did not assign error as to the other references used by the Examiner. The case was not considered on its merits and the Board was affirmed. The court also implied that the application of references had to be challenged by reasons of appeal "to require or *admit* of their consideration by us." [My emphasis.]

Most lawyers will remember that as a result of this decision the Board of Appeals adopted a practice of ending its opinions with the following paragraph:

In the event of appeal attention is directed to *In re Boyce*, 32 CCPA 718, 144 F.2d 896, 1944 C.D. 609, 568 O.G. 568, 63 USPQ 80, in regard to including specifically in the appeal notice *all* grounds of rejection relied upon by the Examiner not expressly overruled by the Board.

If it be not remembered, it is readily discoverable. See, for example, Amdur, Patent Office Rules and Practice, §§ 301–301f; McCrady, Patent Office Practice (4th ed.), sec. 268. Jacobs, Patent and Trademark Practice Forms (1951), chap. VII, p. 175 states:

It should be particularly noted that the reasons for appeal must be fully set forth and must cover all the points on which the appellant wishes a review and decision by the higher tribunal. This is especially important in connection with appeals to the Court of Customs and Patent Appeals which rigidly enforces the rule requiring reasons for appeal to be set forth in full detail. No decision can be had on a point not so specifically included.

While this is sound advice and in accord with the Board's stock *In re Boyce* warning, which continued in use until 1952 (see *Ex parte Goldsmith*, 94 USPQ 403 at 405), the fact is the court has not "rigidly enforced" the supposed rule. In the very same volume with *In re Boyce*, in a case decided six months later, *In re Kopplin*, 32 CCPA 848, 146 F.2d 1014, 64 USPQ 403, the court said:

> While it is quite true that there is no specific mention of the Dodge, Fowler and Novotny patents in the reasons of appeal, appellant assigned as his first reason of appeal that "The Board of Appeals erred in rejecting said claims and each of them for the reasons and *on the references cited against them, respectively.*" [Italics ours.] That reason is the equivalent of setting out in separate reasons of appeal the Dodge, Fowler and Novotny patents. The only reason for rejecting the claims was that they were unpatentable over the prior art. Therefore we are of opinion that that reason of appeal is sufficient.
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> Appellant has clearly advised us and the Patent Office of the issue, and it is not necessary for us to search the record in order to discover the basis of the appeal. The Solicitor in his brief discussed and applied all of the references. Therefore we will consider all of them. [The above "Italics ours" appears in the opinion.]

Citing that case with approval, in our latest decision on this question, *In re Howell*, 49 CCPA 922, 298 F.2d 949, 132 USPQ 449, we accepted, over the objections of the Patent Office, reasons stating generally "that the Board of Appeals erred (1) in rejecting claims 22, 23 and 24 on the Sollmann, Benzel, Cowen and Connell patents and (2) in not allowing claims 22, 23, and 24."

In the case of *In re Wesselman*, 29 CCPA 988, 127 F.2d 311, 53 USPQ 365, cited in the court's opinion in the instant case for the proposition that want of a sufficient reason is a jurisdictional matter, I find one of the most amazing attempts to find lack of jurisdiction in a supposed distinction between Tweedledum and Tweedledee.[2] The court acknowledged that in the *Wagenhorst* case, supra, "a majority [it was 4:1] of this court held that this reason of appeal complied with the statute":

> The Board of Appeals erred in affirming the reason of the Primary Examiner finally rejecting claims 1, 4, 6, 7, 8, and 10 of the above-entitled application.

The court then proceeded to hold that it had no authority under its statutory jurisdiction to review the decision appealed from because the only reason of appeal read:

> 1. The Board of Appeals erred in affirming the Primary Examiner's final rejection of claims 16 and 17 as amended to date.

It may be significant that the lone dissenter in the *Wagenhorst* case, Judge Lenroot, was the author of this *Wesselman* opinion. There seems to be no other logical explanation. Forgotten were the following words of the late Presiding Judge Graham in the *Wagenhorst* majority opinion:

> This court is not disposed to apply, in these cases, the rigid and inflexible rules as to assignments of error sometimes applied by the courts in other proceedings. The statute should be liberally and reasonably construed and its purpose to give the parties appealing to this court from Patent Office decisions a speedy and effective revision thereof, should not be defeated by a highly technical construction of the written "reasons of appeal." If the court and the Patent Office are advised, by these written reasons, of the questions at issue, that is sufficient to enable the court to "revise the decision appealed from in a summary way." Section 4914 R.S. [now 35 U.S.C. 144, with minor language changes].
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> *There seems to be no real necessity, in order to raise the question here, that each ground of refusal given by the Examiner and affirmed by the Board, should be set out, seriatim.* [My emphasis.]

[2] Through the Looking-Glass, Lewis Carroll, chap. IV, "* * * Alice knew which was which in a moment, because one of them had 'DUM' embroidered on his collar, and the other 'DEE.' 'I suppose they've each got "TWEEDLE" round at the back of the collar,' she said to herself."

That was 30 years ago. It still seems that there is no real necessity for setting out grounds of refusal seriatim. Why then do we have this requirement of the statutes?

Legislative history of reasons of appeal

One searching for an explanation of the provisions of the sections of the statute involved, 35 U.S.C. 142, 143, 144, finds more history than legislation. To get matters in proper perspective, I will begin with the Patent Act of 1836. After 46 years of somewhat chaotic experience with the earlier patent statutes, this was the first general statutory reorganization. It repealed all prior statutes and created the office of Commissioner of Patents to head the Patent Office which had come into being in 1802 as an adjunct of the Department of State. The first commissioner was Henry L. Ellsworth.

The statute expressly provided for the entire Patent Office staff. It consisted of the commissioner, a chief clerk, an examining clerk, two other clerks one of whom was to be a draftsman, a machinist, and a messenger. Section 7 of the act provided for the examination of applications for patents and what we would now call office actions and amendments. It also provided for appeals from the refusal of the Commissioner to issue patents to a special board expressly appointed by the Secretary of State to hear each appeal, as follows:

> § 7. * * * And if the specification and claim shall not have been so modified as, in the opinion of the Commissioner, shall entitle the applicant to a patent, he may, on appeal, and upon request in writing, have the decision of a board of examiners, to be composed of three disinterested persons, who shall be appointed for that purpose of the Secretary of State, one of whom at least, to be selected, if practicable and convenient, for his knowledge and skill in the particular art, manufacture, or branch of science to which the alleged invention appertains; who shall be under oath or affirmation for the faithful and impartial performance of the duty imposed upon them by said appointment. Said board shall be furnished with a certificate in writing of the opinion and decision of the Commissioner, stating the particular grounds of his objection, and the part or parts of the invention which he considers as not entitled to be patented. And the said board shall give reasonable notice to the applicant, as well as to the Commissioner, of the time and place of their meeting, that they may have an opportunity of furnishing them with such facts and evidence as they may deem necessary to a just decision; and it shall be the duty of the Commissioner to furnish to the board of examiners such information as he may possess relative to the matter under their consideration. And on an examination and consideration of the matter by such board, it shall be in their power, or of a majority of them, to reverse the decision of the Commissioner, either in whole or in part, and their opinion being certified to the Commissioner, he shall be governed thereby in the further proceedings to be had on such application: *Provided however*, That before a board shall be instituted in any such case, the applicant shall pay to the credit of the treasury, as provided in the ninth section of this act, the sum of twenty-five dollars, and each of said persons so appointed shall be entitled to receive for his services in each case a sum not exceeding ten dollars, to be determined and paid by the Commissioner out of any moneys in his hands, which shall be in full compensation to the persons who may be so appointed, for their examination and certificate as aforesaid.

Commissioner Ellsworth, in his annual report of January 14, 1839, for the year 1838 reported that 520 patents had been issued, that receipts were $38,423.54 and expenses $19,180.18 (a profitable enterprise) and that he had an urgent need for two assistant examiners. I mention these facts to indicate the kind of a world it was then. Not only was the Commissioner running the office with two examiners but the Committee on Patents in the House was imposing on him the duties now carried out by the Department of Agriculture and he was also recovering from the December 15, 1836 fire which completely destroyed the Patent Office. In spite of all this he found the energy to make constructive suggestions about appeals as follows:

* * * Wise and beneficial as the operation of the law is, generally, there are one or two particulars in which experience suggests the propriety, if not necessity, of some modification.

The board of examiners, occasionally appointed in cases of appeals, is attended with inconveniences, not foreseen, which ought, if possible, to be corrected.

This tribunal was provided, it is presumed, to relieve the apprehensions some might have entertained, from the power necessarily conferred and the duty imposed upon the Commissioner, to withhold a patent in every case where the claim is destitute of merit or originality. Contrary, perhaps, to the intention of the framers of the law, it has been construed to open the whole matter, on appeal, to the reception of additional evidence, leading to much delay and expensive litigation before the board.

The compensation provided for this board of examiners appears to have been predicated upon the idea of a brief and summary duty, and is so small that few of requisite qualifications are found who will consent to undertake it.

Hence much delay arises in constituting a board, whenever an appeal is made; and different individuals being appointed in different cases, their rules and course of proceeding are various and unsettled. The examination into the originality of an invention, or supposed discovery, preliminary to the issuing of a patent, and the settling of interfering claims to patents, must necessarily be, in some measure, summary. But the decision between contesting parties is, in all cases, subject to judicial corrections; and a final adjudication is, by law, as it ought to be, referred to the courts.

It is submitted whether the Commissioner could not be authorized to prescribe, with advantage, the necessary rules for the taking of testimony to be used in the hearing before him; and to make suitable regulations for a full and fair hearing of all parties interested.

As a remedy for the evils alluded to (of which parties complain), *I beg leave to suggest, as a substitute for the board of examiners, the expediency of allowing an appeal to the chief justice of this District*, giving him power to examine and determine the matter summarily at chambers, or otherwise, on the evidence had before the Commissioner. From the experience had, thus far, it may be presumed that the judge would have but few cases to examine, and that those would not materially interfere with his other judicial duties. A reasonable compensation for such duty may be made from the patent fund. Parties from a distance could then have their cases settled, without a great delay or trouble to which they are now subjected. [Emphasis added.]

It may sound incredible, but this suggestion made January 14, 1839, resulted in the Patent Act of March 3, 1839. It gave Commisisoner Ellsworth his two assistant examiners and, in section 11, provided for appeals to the Chief Justice of the District Court of the United States for the District of Columbia. I quote the section in full because here our "reasons of appeal" originated and by comparison with the present statute it will be seen that in 123 years the provisions as to those "reasons" have undergone no substantial change, though the practice has. (Corresponding later statutes are marginally noted.)

§ 11. *And be it further enacted*, That in all cases where an appeal is now allowed by law from the decision of the Commissioner of Patents to a board of examiners, provided for in the seventh section of the act to which this is additional [the 1836 Act], the party, instead thereof, shall have a right to appeal to the Chief Justice of the district court of the United States for the District of Columbia, *by giving notice thereof to the Commissioner, and filing in the Patent Office, within such time as the Commissioner shall appoint, his reasons of appeal specifically set forth in writing*, and also paying into the Patent Office, to the credit of the patent fund, the sum of twenty-five dollars. *And it shall be the duty of said Chief Justice, on petition, to hear and determine all such appeals, and to revise such decisions in a summary way, on the evidence produced before the Commissioner, at such early and convenient time as he may appoint*, first notifying the Commisisoner of the time and place of hearing, whose duty it shall be to give notice thereof to all parties who appear to be interested therein, in such manner as said judge shall prescribe. *The Commissioner shall also lay before the said judge all the original papers and evidence in the case, together with the grounds of his decision, fully set forth in writing, touching all the points involved by the reasons of appeal, to which the revision shall be confined.* And at the request of any party interested, or at the desire of the judge, the Commissioner and the examiners in the Patent Office may be examined under oath, in explanation of the principles of the machine or other thing for which a patent, in such case is prayed for. And it shall be the duty of said judge, after a hearing of any such case, to return all the papers to the Commisisoner, with a certificate of his proceedings and decision, which shall be entered of record in the Patent Office; and such decision, so certified, shall govern the further proceedings of the Commissioner in such case: *Provided however*, That no opinion or decision of the judge in any such case shall preclude any person interested in favor or against the validity of any patent which has been or may, hereafter be granted from the right to contest the same in any judicial court in any action in which its validity may come in question. [Emphasis added.]

Cf. § 142 (R.S. 4912)

Cf. § 144 (R.S. 4914)

Cf. § 143 (R.S. 4913)

R.S. 4914; omitted in § 144 as superfluous

Section 13 of the act provided for the payment to the chief justice, out of the patent fund (the profits from the Patent Office held in the Treasury) "in consideration of the duties herein imposed, the sum of one hundred dollars." In 1852 the law was changed to provide that the Commissioner should pay the $25 appeal fee to the judge.

In 1852 appeals were allowed to be made to either of the assistant judges of the then Circuit Court of the District of Columbia. In 1863 the Supreme Court of the District of Columbia was established and the justices thereof were clothed with the same powers theretofore exercised by the judges of the Circuit Court. Section 48 of the Consolidated Patent Act of 1870 (R.S. 4911) provided for appeal to the Supreme Court of the District of Columbia, "sitting en banc." In 1893 The Court of Appeals of the District of Columbia was established and the appeals transferred to it, where they remained until the creation of the Court of Customs and Patent Appeals in 1929 and transfer of Patent Office appeals to it.

It will be observed from comparison that the emphasized portions of section 11 of the 1839 act, insofar as reasons of appeal and the related procedure are concerned, contain the substance of sections 4912,[3] 4913,[4] and 4914[5] of the Revised Statutes. (There is a slight rearrangement in that the confining of the revision to the reasons of appeal appears in R.S. 4913 rather than in the passage of section 11 which became R.S. 4914.)[6]

See footnotes on following page.

The 1952 act was (with respect to these three sections of the Revised Statutes which became sections 142, 143 and 144 in the 1952 act) primarily a codification with trivial changes indicated by the revision notes. None of the changes affect the reasons of appeal requirements which remain, therefore, as they were written in 1839.

Early practice

I now wish to direct attention to the nature of the proceeding in 1839. The Commissioner was almost operating the Patent Office and the examination system in person and a decision to refuse a patent was practically his personal decision. The appellate review of that decision was entirely outside the Patent Office. (No board of appeals was created until 1861.) In taking an appeal to a judge of the district court something was required to inform the judge of the issues. Clearly this was the function of the "reasons of appeal" which were in the nature of a pleading, corresponding to a complaint. In response to this pleading the Commissioner was directed by the statute to do two things: (1) lay before the judge the papers and evidence in the case, and (2) state in writing the grounds of his decision "touching all the points involved by the reason of appeal," the latter clearly corresponding to an answer. The duty of the judge, set forth in the statute, was (1) "to revise such [Commissioner's] decisions in a summary way, on the evidence produced before the Commissioner" and to confine "the revision" to "the points involved by the reasons of appeal," that is to say points raised by the pleadings. This was sensible court procedure. It would also appear to have been carefully devised to meet the objection of Commissioner Ellsworth to the previous appeal to specially designated boards which operated without rules and seem to have had a predeliction to "open the whole matter, on appeal, to the reception of additional evidence, leading to much delay and expensive litigation."

In an early day Judge Cranch, the first judge to receive these appeals, had a lesson in the realities of this *appellate* procedure from which he learned that it was not his duty to substitute himself for the Commissioner of Patents in finding reasons for refusing patents but to *review* the grounds of refusal previously stated by the Commissioner. In *Arnold* v. *Bishop and Akin*, Fed. Cas. No. 553, 1 Fed. Cas. 1168, decided Nov. 25, 1841, it appears that the issue raised by

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[3] Section 4912. When an appeal is taken to the Supreme Court of the District of Columbia, the appellant shall give notice thereof to the Commissioner, and file in the Patent Office, within such time as the Commissioner shall appoint, his reasons of appeal, specifically set forth in writing. [Approved June 22, 1874. The Act of March 2, 1927, c. 273, § 9, 44 Stat. 1366, substituted "Court of Appeals of the District of Columbia" for "Supreme Court of the District of Columbia." The Act of March 2, 1929, c. 488, § 2(b), 45 Stat. 1476, amended this section further by inserting in place of "Court of Appeals of the District of Columbia," "United States Court of Customs and Patent Appeals."]

[4] Section 4913. The court shall, before hearing such appeal, give notice to the Commissioner of the time and place of the hearing, and in receiving such notice the Commissioner shall give notice of such time and place in such manner as the court may prescribe, to all parties who appear to be interested therein. The party appearing shall lay before the court certified copies of all the original papers and evidence in the case, and the Commissioner shall furnish the court with the grounds of his decision, fully set forth in writing, touching all the points involved by the reasons of appeal. And at the request of any party interested, or of the court, the Commissioner and the examiners may be examined under oath, in explanation of the principals of the thing for which a patent is demanded. [Approved June 22, 1874. The Act of March 2, 1927, c. 273, § 10, 44 Stat. 1336 amended this section by deleting the last sentence.]

[5] Section 4914. The court, on petition, shall hear and determine such appeal, and revise the decision appealed from in a summary way, on the evidence produced before the Commissioner, at such early and convenient time as the court may appoint; and the revision shall be confined to the points set forth in the reasons of appeal. After hearing the case the court shall return to the Commissioner a certificate of its proceedings and decision, which shall be entered of record in the Patent-Office, and shall govern the further proceedings in the case. But no opinion or decision of the court in any such case shall preclude any person interested from the right to contest the validity of such patent in any court wherein the same may be called in question. [Approved June 22, 1874.]

[6] For more historical details on the evolution of appeals see P. J. Federico, "Evolution of Patent Office Appeals," 22 J.P.O.S. 838 and 920 (1940).

the reasons of appeal was the propriety of a rejection based on the contention Arnold was not the sole inventor of a machine. In a previous opinion of October 29, 1841, Judge Cranch had held that Arnold had not supported his claim to sole inventorship. Judge Cranch, however, in the same opinion then said that even if Arnold had, he had lost the right to a patent by suffering the machine to be in use for more than two years before applying for a patent. No such rejection appears to have been made by the Commissioner. On a rehearing and in a new opinion the judge adhered to his view on inventorship, said that by "use" he meant "public use" and then said that on reflection "I doubt whether I can decide upon any other matter than that which arises upon the *reasons* of appeal." He emphasized that his duty under the law was to *revise* decisions of the Commissioner and that the revision was to be confined to the points *involved in* the reasons of appeal.

This early decision on reasons of appeal is an important one as it has influenced this court in other cases of an entirely different kind. It is important to note that what Judge Cranch was refusing to do was to pass on a ground for refusing a patent which *he* perceived in the facts of the case but which was *not* asserted by the Commissioner. His concluding words show this:

> If, therefore, after the judge shall have decided *in favor of the applicant* upon the points involved in his reasons of appeal, other sufficient reasons remain for *refusing* the claim for a patent, untouched by the decision of the judge, it would seem that the Commissioner might properly still reject it. Whether such new rejection would be subject to appeal, is a question which may be left * * * to future decisions * * *. For these reasons I doubt very much whether it was competent for me to decide in this case that Mr. Arnold had *lost* his right to a patent by suffering the machine to be in public use for more than two years before his application for a patent. So much, therefore, of my former opinion in this case may be considered as *extra-judicial and as withdrawn*. [Emphasis added.]

History repeats itself. This court, in the second year of its jurisdiction over patent appeals, fell into the same error. In *In re Tucker et al.*, 18 CCPA 875, 46 F.2d 214, 8 USPQ 50 (1931) the Patent Office rejection of claims on a reference was reversed but the court said "In our judgment the claims are too broad, and for that reason should have been rejected." It therefore affirmed. As the court later stated in *In re Sebald*, 31 CCPA 1148, 143 F.2d 366, 62 USPQ 90, this affirmance of a rejection "upon grounds other than those applied by the Patent Office tribunals attracted great interest among members of the patent bar. Rehearing was granted, and the appellants, and another [American Patent Law Association] as *amicus curiae*, as well as the Solicitor for the Patent Office, appeared and argued the question involved at great length." As the *Sebald* opinion tells the story:

> Upon due consideration, and especially in view of the decision in *Arnold* v. *Bishop et al.*, 1 Fed. Cas. 1168, No. 553, and other similar later decisions to the same effect, we followed the holding of Judge Cranch, where he had granted a rehearing, considered the same question which we then were considering, and came to the conclusion that his former decision was "extrajudicial" and that it should be withdrawn. Our holding in *In re Tucker and Reeves*, 19 CCPA (Patents) 810, 54 F.2d 815, 12 USPQ 131, has become the settled law of this court, and we have seen no disposition on the part of Congress to broaden our jurisdiction in this respect.

"In this respect." Those words might well be pondered! It is not likely that in the respect actually involved either in *Arnold* v. *Bishop* or in *Tucker and Reeves*—that is, the assumption by a review-

ing court of the authority to reject applications on entirely new grounds originated by the court—there ever will be a disposition by Congress to broaden the jurisdiction. But what has happened is that phrases and reasoning developed in and applicable to such situations have been applied to entirely different situations in which the court is not originating any rejection and is not being asked to, but is only being asked to *review* rejections actually made below. I believe this is a complete perversion of the procedural conception underlying the original adoption of the reasons of appeal technique in the 1839 act.

Looking upon the reasons of appeal as in essence a pleading, they should be considered sufficient if they get the parties and the issues and a sufficient record into court in such fashion that the court can deal with the issues. The business of modern courts is to decide issues and settle disputes and not to make life unnecessarily difficult for litigants with no gain to itself. As a typical example of making life difficult and of a waste of judicial energy the above-mentioned *Sebald* case will suffice.

In *In re Sebald*, supra, there were two reasons of appeal. The first alleged error in the rejection of claims on three named reference patents. The second read:

> 2. The Board of Appeals erred in not allowing said claims.

The court stated summarily, "The second reason of appeal is too broad to be considered" and never considered it again. Quoting R.S. 4914, the court said "It will be observed that our powers of revision are strictly limited by statute to the points set forth in the reasons of appeal." Just why reason "2" does not point to error in the affirmance by the Board of the rejections made by the Examiner is not at all clear to me. The crux of the case, which had two hearings, was that reason "1" referred to a primary reference and two secondary references while the Examiner had used *two* primary references, one of which was inadvertently omitted in the reason of appeal because the Board had made no mention of it. On this ground the court held that it had no "jurisdiction" to consider the rejection based on the missing primary reference and the secondary references. At the same time, having so labored to find no *power* to act the court uttered the following lament:

> The narrowness of the scope of our revising powers in this jurisdiction has long been a matter of great concern to the court and members of our bar. We think it is at once apparent that our reviewing or revising powers are confined to such a narrow scope by the statute, which in this respect has not been changed for many generations, as to greatly handicap us in being helpful in cases like the instant one and other cases to which we shall allude.

The opinion then alluded to *In re Tucker and Reeves* in which the court was under no handicap and reversed the Board in the end, to *In re Wagenhorst*, supra, where it managed to find authority to act on a reason of appeal which mentioned no reference by name, and to one other case in which the story was different, *In re Lincoln et al.*, 29 CCPA 942, 126 F.2d 477, 53 USPQ 40. There one of the claims appears to have been rejected on the ground of estoppel, as to which no specific reason was filed, on which ground the court refused to consider it saying, "the correctness of such rejection is not before us." The reasons of appeal are not disclosed in the opinion.

The need for reasons is no more

Reading many of these earlier cases, the conclusion is inescapable to me that much depended on which judge was looking at the reasons

of appeal. Even identical courts could reach in explicably different results. I have failed to find anywhere, though I cannot say it does not exist, a consideration of the changed circumstances since 1839. I think they are important, first of all, in helping us to interpret intelligently the statutory provisions as long as we are compelled to live with them and, secondly, as pointing to a need to revise them.

A century and more ago the reasons of appeal had an informative function which no longer exists, having been replaced by better means of communication. In *Greenough* v. *Clark*, 10 Fed. Cas. 1176, No. 5784, Judge Morsell said (1853), "From a careful examination of the statute [of 1839] I am satisfied that the filing [of] the reasons of appeal must be considered as essentially the appeal itself; that the judge can judicially know nothing of the case until the party aggrieved presents to him his petition for a revision on appeal [in which the reasons were, in those days, repeated]." Looking into the oldest Patent Office Rules on which I can lay my hands, of 1886, the form therein for taking an appeal to the Supreme Court of the District of Columbia concluded the notice to be given to the Commissioner as follows (the bracketed matter being in the original—emphasis mine):

> And the said A.B. assigns the following reason for appealing from the said decision of the Commissioner of Patents, viz:
>
> [Here follow reasons, which should be full and explicit, *and constitute a brief of the appellant's argument.*]

From such explicit reasons the Commissioner, who made that form, could tell what points he had to meet in giving the court his grounds of decision.

Today the whole proceeding is different. First of all, appeals are from decisions of one of the three Patent Office boards, which decisions are always contained in and supported by carefully written opinions. In both patent and trademark cases the Examiner has furnished his anwser to the appellant's brief before the Board. Therefore, the Examiner's grounds of rejection have been carefully enumerated and the Board's disposition thereof is fully explained. When an appeal is taken to this court, the appellant files his notice, gets the Patent Office to deliver his record to the court, files his petition and the court clerk has the record printed. Thereafter the appellant files his printed brief containing his full argument as to why the Patent Office erred. Through no stretch of the imagination could present day reasons be considered as constituting "a brief of the appellant's argument." Only after all this has been done does the Solicitor for the Patent Office take up the case for consideration and the writing of appellee's brief. He has no need whatever for reasons of appeal at this stage.

The only reason to look into the reasons of appeal after receipt of appellant's brief is to look for trouble. And that is all too frequently done.

By reason of the essential nature of our appeals from the Patent Office in ex parte cases, the appellant *has* to get a reversal of *every* ground of rejection outstanding against him or he gets *nothing*. Therefore we know, as soon as he appears in our court, that he wants *all* grounds of rejection reversed, though he says no more in his notice of appeal than that he believes the decision below to have been in error, or desires to have it reversed.

As to any claim on appeal, no lawyer consciously appeals from less than all of the rejections outstanding against it; for if he pre-

vailed on less than all, he could not get his patent. The same is true in a trademark registration appeal. I doubt that any lawyer has ever consciously appealed from the Patent Office without *believing* that he has asked for review of all grounds of rejection outstanding against whatever he still seeks.

To determine what the issues are, we on the court need never do more than read the rejection as stated by the Examiner and the opinion of the Board which affirms it. Until—and unless—we do this, the reasons of appeal are practically meaningless to us and, having done it, they are entirely superfluous.

Conditions having changed and the statute having become obsolete, what is primarily needed is statutory amendment and modernization. The opportunity was passed over in the 1952 codification and revision. Constant trouble with the statute since then requires that it be considered *now* in the interest of stopping judicial waste.

There is, furthermore, a glaring procedural inconsistency between appeals to the Court of Customs and Patent Appeals, which is a part of the Federal court system, and appeals to other Federal Courts of Appeal. In the Federal Rules of Civil Procedure, which have now been in force nearly a quarter of a century, Rules 73 and 75 provide for the taking of an appeal by the filing of a simple notice. (Rule 73b.) "No assignment of errors is necessary." (Rule 75d.)[7] They had previously been required but were deliberately done away with for reasons expressed in the following words, which apply as well to "reasons of appeal" under 35 U.S.C. 143, 144, and 145:

> (1) That it is a pitfall which may prevent the consideration of a meritorious appeal simply because a proper assignment of error was not made; and
>
> (2) The requirement often results in a verbose, repetitious, and longwinded list of alleged errors, many of which the appellant has not the slightest intention of pressing in the appellate court but which he has inserted either in an effort to protect himself against all possible contingencies or in an attempt to confuse his adversary.[8]

I will conclude by characterizing the reasons of appeal, for reasons which I hope I have sufficiently set forth, by the term applied by Clark, Chief Judge, one of the Advisory Committee which drew up the F.R.C.P., to assignments of error. Reasons of appeal are a "mummery." An appropriate statutory amendment should do away with them at the earliest possible moment.

Of writing good statutes
There is no end.

SMITH, J. (concurring):

A system of procedure is perverted from its proper function when it multiplies impediments to justice without the warrant of clear necessity. By the judgment about to be rendered, the respondent, caught in a mesh of procedural complexities, is told that there was only one way out of them, and this a way he failed to follow. Because of that omission he is to be left ensnared in the web, the processes of the law, so it is said, being impotent to set him free.

[7] I recognize a practical problem if appellant wishes to appeal on less than the complete record. Rule 75d takes care of this in the following provision:

> If the appellant does not designate for inclusion the complete record and all the proceedings and evidence in the action, he shall serve with his designation a concise statement of the points on which he intends to rely on the appeal.

The problem, however, is related only to the contents of the record and not to the court's jurisdiction.

[8] Hearings before Judiciary Committee, House of Representatives, 75th Cong., 3rd Sess., Serial 17, p. 128 (1938), as quoted in 7 Fed. Rules Serv. 980.

> I think the paths to justice are not so few and narrow. * * * (Mr. Justice Cardozo dissenting in *Reed* v. *Allen*, 286 U.S. 191, 209.)

It is with great reluctance that I concur in the decision in this case. It is shocking to my sense of justice that by statute (35 U.S.C. 142, 143 and 144) this court is rendered "impotent" to aid a party seeking relief and that "the paths of justice" in this court are "so few and narrow." Because of the controlling statutory provisions, we have no discretion but to deny a decision on the merits of this case because of appellant's failure to comply with an anachronistic procedural hangover which, as Judge Rich has pointed out, had its origins early in the 19th century, a time when just such procedural technicalities threatened to make a farce out of the administration of justice by the judicial system. I cannot conceive of any present necessity for a statutory requirement which requires that "reasons of appeal" be filed at the time a notice of appeal is filed in the Patent Office. I regret that Congress has not expunged this requirement from 35 U.S.C. 142, 143 and 144 so that the practice in this court can follow the modern procedural practices permitted in other Federal courts,[1] to the end that we too may embrace the philosophy stated by Mr. Justice Frankfurter in *Indianapolis* v. *Chase National Bank, Trustee*, 314 U.S. 63, 69, that "Litigation is the pursuit of practical ends, not a game of chess."

My dislike for the necessity, under 35 U.S.C. 144, of disposing of the present appeal because of appellant's failure to comply with the technicalities of 35 U.S.C. 142 is based on the essential unfairness in a procedure by which a litigant can be put to the time and expense of perfecting, briefing and arguing an appeal only to find it is doomed to dismissal because of his initial failure to comply with the statutorily sanctioned nicety requiring "reasons of appeal." This is particularly appalling in a case such as the present where this failure was ignored by the other party [2] until the case was ready for decision on its merits, and so far as I am able to determine, without any detriment to its position.

There is, however, another important reason why a decision such as the present should be abhorrent to all those interested in the orderly and speedy administration of justice. This case has consumed already as much or more of the time of the judges of this court than it would have consumed to determine the appeal on its merits; it has required many hours of study, legal research and deep "soul searching" by all judges, and all to what purpose? Simply to be forced to say that since appeals to this court are governed by 35 U.S.C. 142 and 144 [3] and since it is not our function to legislate, we can do nothing here but apply the governing statutory provisions. If the statutory provisions are allowed to stand, this court will be required necessarily to continually warn the bar through hard decisions, such as I consider the present one to be, of the built-in "booby trap" which 35 U.S.C. 142 and 144 provide for the unwary litigant.

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[1] Since the decision of *Glidden Company* v. *Zdanok et al.*, (decided together with *Lurk* v. *United States*), 370 U.S. 530, it is clear that it would be desirable to establish the practice and procedure before this court as consistent as is possible with the Federal Rules of Civil Procedure which govern other "Article III courts."

[2] While the present case is an ex parte appeal, there is a very real "other party" here represented by the Solicitor of the Patent Office.

[3] See *Administrative Agencies and the Courts*, Frank E. Cooper (University of Michigan, 1951), pp. 330–332.

While I question whether the absence of reasons of appeal here is a "jurisdictional defect" which can be raised at any time,[4] my views in this regard are necessarily subordinate to the long line of contrary decisions of this court upon which the majority of the court relies in its application of the statute. Unfortunately for the appellant here, I have been unable to find any authority in the Federal Rules of Civil Procedure which would permit this court to ignore the current statutory provisions requiring reasons of appeal. It is my hope, however, that a decision such as the present may provide the incentive required to bring about a re-examination of the limiting statutory provisions and perhaps result in the enactment of such changes therein that the practice in this court may at last reflect the enlightened procedural reforms which our sister Federal courts were free to adopt some years ago.[5]

One has but to read the decisions in the numerous cases which have been dismissed by this court for failure of the appellant to state what the court considered to be sufficient reasons of appeal in compliance with 35 U.S.C. 142 to appreciate the real importance of this problem to litigants.[6] In my brief service on this court I have been amazed at how many times representatives of the Patent Office have raised this technical point at oral argument.

If, in fact, a Notice of Appeal fails to state a ground for appeal, it seems to me the least that should be required is that the defect be brought to the attention of the court by a motion timely made rather than to encourage perpetuation of the present tactical procedures.

I feel now, as I have in several prior cases, that liberality in the interpretation[7] of 35 U.S.C. 142 may enable us to handle some of these situations. However, where, as here, the Notice of Appeal filed with the Commissioner gives us absolutely nothing upon which to exercise our right to "interpret" this section, we are effectively prevented from acting on the merits of the appeal and have no alternative but to deny the relief sought.

As I have stated previously, I would like to be able to consider a defective "Notice of Appeal," such as is here present, to be at most a procedural defect which is corrected by the subsequent Petition of Appeal in this court and the complete statement of reasons for the appeal which are found in appellant's brief. I would like also to be

[4] Under the Federal Rules of Civil Procedure, I am certain the defect in the "notice of appeal" here would not be so considered. In *Foman* v. *Davis*, 371 U.S. —, decided December 3, 1962, Mr. Justice Goldberg said:

> The defect in the second notice of appeal did not mislead or prejudice the respondent. With both notices of appeal before it (even granting the asserted ineffectiveness of the first), the Court of Appeals should have treated the appeal from the denial of the motions as an effective, although inept, attempt to appeal from the judgment sought to be vacated. Taking the two notices and the appeal papers together, petitioner's intention to seek review of both the dismissal and the denial of the motions was manifest. Not only did both parties brief and argue the merits of the earlier judgment on appeal, but petitioner's statement of points on which she intended to rely on appeal, submitted to both respondent and the court pursuant to rule, similarly demonstrated the intent to challenge the dismissal.
>
> It is too late in the day and entirely contrary to the spirit of the Federal Rules of Civil Procedure for decisions on the merits to be avoided on the basis of such mere technicalities. "The Federal Rules reject the approach that pleading is a game of skill in which one misstep by counsel may be decisive to the outcome and accept the principle that the purpose of pleading is to facilitate a proper decision on the merits." *Conley* v. *Gibson*, 355 U.S. 41, 48. The Rules themselves provide that they are to be construed "to secure the just, speedy, and inexpensive determination of every action." Rule 1.

[5] Rule 73(b), Federal Rules of Civil Procedure, 28 U.S.C., provides, in part as applicable, that:

> *Notice of Appeal.*—The notice of appeal shall specify the parties taking the appeal; shall designate the judgment or part thereof appealed from; and shall name the court to which the appeal is taken. * * *

Rule 75(d), FRCP, provides:

> *Statement of Points.*—No assignment of errors is necessary. If the appellant does not designate for inclusion the complete record and all the proceedings and evidence in the action, he shall serve with his designation a concise statement of the points on which he intends to rely on the appeal. * * *

[6] See Judge Rich's exhaustive concurring opinion.

[7] See footnote 3.

able to hold that the defects in the original Notice of Appeal are waived by the failure of the Patent Office to raise the question at an earlier point in the procedure. However, as pointed out by Judge Rich in his concurring opinion, prior decisions of this court have construed such a dect to be a "jurisdictional" defect which may be raised at any time. While I would have no objection to overruling these cases if we could thereby get rid once and for all of this troublesome problem, it seems to me that this entire matter has now reached the point where it becomes the function of the Congress rather than of this court to do what should be done to change the controlling statutory provisions.

PLANT PATENTS

GRANTED MAY 21, 1963

Illustrations for plant patents are usually in color and therefore it is not practicable to reproduce the drawing.

2,259
POINSETTIA PLANT
Paul Ecke, P.O. Box 488, Encinitas, Calif.
Filed Oct. 19, 1961, Ser. No. 146,387
1 Claim. (Cl. 47—60)

A new and distinct variety of poinsettia plant substantially as illustrated and described, characterized by bracts of a brightness and vividly rich pink-tinted red color, its quality of early blooming, and more especially characterized by the variation of coloring of the foliage leaves, in that the foliage leaves more remotely removed from the bract involucre are of medium green color and the foliage leaves more nearly adjacent to the bract involucre, such as the group of four to six leaves spaced from the involucre, have a purple color which is of darker purple color in the foliage leaves of that group which are more remote from the bracts, and graduating to a lighter shade of purple in the foliage leaves in that group more nearly adjacent to the bracts, and the said last mentioned foliage leaves which are next adjacent to the bracts being irregularly splashed with color approximating the color of the bracts.

2,260
POINSETTIA PLANT
Paul Ecke, P.O. Box 488, Encinitas, Calif.
Filed Oct. 23, 1961, Ser. No. 147,113
1 Claim. (Cl. 47—60)

A new and distinct variety of poinsettia plant substantially as illustrated and described, characterized by a bract involucre of pale, delicately toned, rose-pink color of brilliant hue in which the bracts have varying tones of said rose-pink color, with the bracts of the darker shades being relatively few in number, whereby the involucre as an entirety has a pale rose-pink ocular effect, lighter in tone than that of known pink varieties, the bracts being wider and longer than in known pink varieties and of generally prolately ovate-acuminate shape, said bracts being of the thick, fleshy type, and growing on relatively short petioles, whereby they are closely centered and radiate from the inflorescence in a wreath of a single layer of radiating bracts, the inflorescence at the center of the bract involucre being prominent and closely grouped, and said plant being further characterized by a stiff and sturdy peduncle.

2,261
POINSETTIA PLANT
Paul Ecke, P.O. Box 488, Encinitas, Calif.
Filed Oct. 27, 1961, Ser. No. 148,300
1 Claim. (Cl. 47—60)

A new and distinct variety of poinsettia plant, substantially as illustrated and described, characterized by bracts of a bright and vivid rose pink color, and by a bract involucre having a first group of bracts comprising relatively large prolately ovate-cuminate bracts, the predominating portion of which radiate on relatively long petioles from the center of the involucre as a wreath in generally planar form and providing in the involucre a relatively open center of said large bracts, and further characterized by a second group of similarly colored bracts which are relatively smaller in size and irregular in shape, which grow upstandingly and clustered at the center of the involucre, substantially filling the open center of the first groups of bracts and substantially obscuring the inflorescence from vision, the bracts being relatively thin and tough and thereby resistant to damage and bruising in shipment.

PATENTS

GRANTED MAY 21, 1963

GENERAL AND MECHANICAL

3,090,045
THERMAL HEAD APPLIANCE
Howard Lee Hurst, 616 Medical Arts Bldg., Baltimore 1, Md.
Filed Sept. 26, 1960, Ser. No. 58,398
3 Claims. (Cl. 2—7)



1. A thermal head appliance comprising, in combination, a substantially flat flexible container having sufficient depth and volume to receive a quantity of crushed ice and a cooling fluid, the container having an enlarged opening in the upper side thereof adjacent the center for inserting the ice and liquid and a closure therefor, a support for the container comprising a cap having a band adapted to extend around the head of the wearer and having a flexible crown portion extending upwardly from the band adapted to extend over the head, said cap having a relatively large opening therethrough in the crown portion thereof and means adjacent the center of the container cooperating with the edges of the opening in the cap for securing the container in position on the cap.

3,090,046
ADJUSTABLE HEADBAND
Charles E. Bowers, Sr., Moylan, Pa., assignor to The Fibre-Metal Products Company, Chester, Pa., a corporation of Pennsylvania
Filed May 17, 1961, Ser. No. 110,684
4 Claims. (Cl. 2—8)



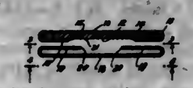
1. An adjustable headband comprising a stiff flexible non-metallic strip of substantially constant thickness and having overlapping end portions, said end portions being formed with substantially straight longitudinal edges in spaced generally facing relation with each other and each end portion being formed with recesses on opposite faces in the region adjacent to and opening through the respective longitudinal edge, guide means slidably receiving said end portions and constraining the latter to relative longitudinal movement, a substantially straight metallic toothed rack extending along and in engagement with each of said longitudinal edges with the teeth of each rack extending toward and spaced from the teeth of the other rack, each of said racks having a thickness approximately equal to that of the adjacent end portion and having its sides substantially flush with the adjacent end-portion faces, a pair of integral metallic extensions on each of said racks extending conformably into the adjacent recesses for fixed embracing engagement with the adjacent end portion, each of said metallic extensions substantially completely filling a respective recess and being substantially flush with the adjacent side of the associated rack and adjacent end-portion face, for fixed securement of each rack to its respective end portion without projection beyond the end-portion faces for unobstructed relative longitudinal movement of the end portions, and a gear element rotatably mounted in said guide means and in meshing engagement with both of said racks, for effecting relative longitudinal movement of said strip end portions.

3,090,047
WATERPROOF SEAM
Joseph De Grazia, Washington, D.C., assignor to the United States of America as represented by the Secretary of the Army
Filed July 12, 1961, Ser. No. 123,598
3 Claims. (Cl. 2—275)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A lap seam for joining together the overlapped edge portions of inner and outer sheets of flexible moisture resistant material, said edge portion of said outer sheet having a narrow marginal portion downwardly and laterally inwardly directed to provide a narrow upper hem comprising a bight and upper and lower plies, a row of stitching connecting said plies together laterally inwardly of said bight and providing a free edge on said lower ply laterally inwardly of said row of stitching, said inner sheet having a narrow marginal portion upwardly and reversely directed to provide a narrow lower hem comprising upper and lower plies, said upper ply of said lower hem being disposed above said lower ply of said upper hem laterally inwardly of said row of stitches, a second row of stitches extending through both of said plies of said lower hem and through said lower ply only of said upper hem, and said second row of stitching being located laterally inwardly of said first row of stitching in parallel relation thereto.

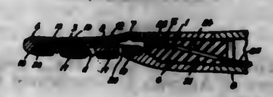
3,090,048
FABRIC FACE PLASTIC BELTING
Theodore Loew, Stamford, Conn., assignor to Cee Bee Manufacturing Co., Inc., Brooklyn, N.Y., a corporation of New York
Filed July 2, 1959, Ser. No. 824,683
6 Claims. (Cl. 2—338)



1. A composite fabric faced plastic belt base structure comprised of a plastic belt backing and inwardly side edge

folded fabric enclosure and cover elements therefor heat united therewith, said belt backing being formed of a heavy transversely stiff longitudinally flexible flat thin polyethylene base of rectangular cross-section with top and bottom faces and side edges and said elements being formed of top and bottom bias weave fabric strips with inturned side edges, said fabric strips when inturned being of the same width as the belt backing, and said fabric enclosure enclosing the top face and outside portions of the bottom face of the plastic belt backing and the fabric cover element covering the bottom face of the plastic belt backing.

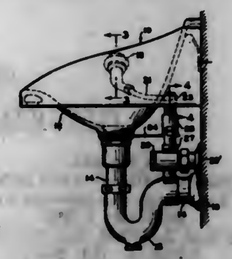
3,090,049
ARTIFICIAL HAND
Lyvin Lanteigne, Box 447, Pointe Gatineau, Quebec, Canada
Filed Nov. 28, 1960, Ser. No. 72,097
4 Claims. (Cl. 3—12.7)



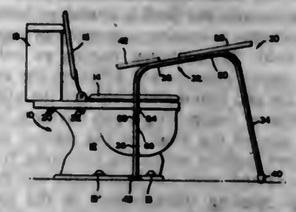
1. An artificial hand comprising an assembly of rigid pivotally interconnected parts, having the external shape of a hand, these parts including a metacarpal part and phalanges pivotally interconnected to each other and to said metacarpal part, said metacarpal part having a cavity with end openings, and said phalanges having bores in communication with each other and with said openings, an internal flexible air pressure expansible glove-like element disposed within said cavity of said metacarpal part and having finger portions extending through said openings and within said bores of said phalanges, a metacarpal block inserted within the internal glove-like element to apply the latter against the surface of the cavity of said metacarpal part, said block having bosses entering within and sealing the finger portions of said internal glove-like element, a duct system within said block opening at each of said bosses and communicating with a common duct in said block, a compressible pouch adapted to be positioned under the armpit of the user in order to produce compressed air by pressing the arm against the body, a tube connecting said pouch to said common duct in order to feed the finger portions of said internal glove-like element with compressed air to cause straightening of said finger portions and consequently opening of said phalanges, and spring means interconnecting said phalanges and metacarpal part and urging the same into closed position, the adjacent ends of said phalanges and metacarpal part being bevelled to allow closing movement of said phalanges under the action of said spring.

3,090,050
EYE AND FACE WASH
James Fraser and Edward S. McLean, Wilmington, Del., assignors to Speakman Company, Wilmington, Del.
Filed Oct. 23, 1961, Ser. No. 147,017
12 Claims. (Cl. 4—166)

1. In an eye wash comprising in combination:
(*a*) a pair of discharge outlets, connected to a mixing chamber by means of a control valve,
(*b*) each discharge outlet having an aerator mounted thereon,
(*c*) said mixing chamber having a hot water inlet and a cold water inlet,
(*d*) an automatic flow control device in each inlet to limit the volume of water admitted through each inlet so as to control the temperature of the water in the mixing chamber.

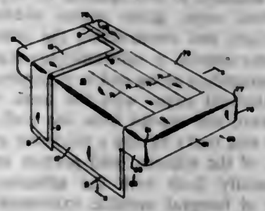


3,090,051
SUPPORT AND REST DEVICE FOR A FLUSH TOILET
John B. Oakland, 1604 Deerwood Place, Biloxi, Miss.
Filed May 2, 1961, Ser. No. 107,097
2 Claims. (Cl. 4—254)



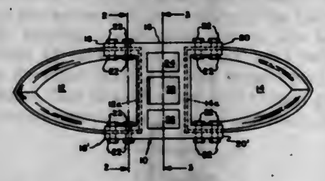
1. A foldable support and rest device for a flush toilet of the type having a bowl and seat means therefor comprising a pair of lateral articulated frame assemblies each comprising a front floor engaging leg member, a rear floor engaging support member, and a bridge member pivotally connected at opposite ends to said front leg member and said rear floor engaging support member, each of said rear floor engaging support members provided with means adapted to receive fasteners for anchoring said rear support members to the floor on opposite sides of the flush toilet bowl, the pivotal connection of the leg members with the bridge members being disposed to cause the leg members to overlap the respective connected portions of the bridge members and the rear floor engaging support members when said rest device is in the folded position.

3,090,052
CONTOUR COVERING FOR MATTRESSES
Elaine B. Goldsmith, 75 St. Andrews Fairway, Memphis, Tenn.
Filed Oct. 9, 1961, Ser. No. 143,831
6 Claims. (Cl. 5—334)



1. In combination with a rectangularly shaped mattress, covering means comprising a head end cap, a first foot end cap, said caps positioned at one side of said mattress and defining the extremities of a side pocket, said caps and pocket being permanently interconnected, said head end cap embracingly covering one corner of the head end of said mattress and terminating inwardly adjacent said corner, said side pocket snugly covering said one mattress side and including a portion underlying said mattress side, said foot end cap embracingly covering one corner at the foot end of said mattress, a second foot end cap embracingly covering the other corner at the foot end of said mattress, said foot end caps defining the extremities of a foot end pocket, said foot end caps and said foot end pocket being permanently interconnected, said foot end pocket extending from side to side of said mattress and snugly covering the foot end of said mattress, a main body portion overlying the majority of the upper surface of said mattress, said body portion being secured to said pockets and adjacent said foot end pocket having pleats providing a loose fullness reducing restraining effect of said body portion, said foot end pocket at said second foot end cap terminating adjacent said pleats, a side flap integrally connected to said body portion and hanging freely downwardly alongside the other side of said mattress, the foot end edge of said side flap separated from said foot end pocket and spaced from the foot end of the mattress, a head end flap integrally connected to and freely foldable upon said body portion at the head end thereof, said head end flap integrally connected with said flap and separated from said head end cap, whereby to provide covering means snugly engaging three corners of said mattress with the remaining corner free with one side of said mattress loosely covered.

3,090,053
DEVICE FOR SECURING SMALL BOATS TOGETHER
William G. Fletcher, 218 Linwood Ave., Bogota, N.J.
Filed Nov. 20, 1961, Ser. No. 153,635
8 Claims. (Cl. 9—2)



1. A device for securing two boats together each having a stern and side gunwales comprising a yoke member having a central portion adapted to fit over the stern of a boat and including means extending outwardly from the central portion from each side thereof adapted to overly the side to secure another boat in position behind the gunwales of another boat stern.

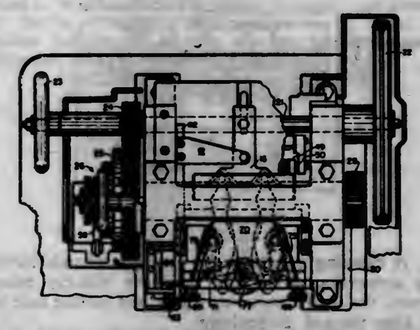
3,090,054
LIFE-PRESERVER PILLOW
Lawrence F. Moran, Wallacks Drive, Stamford, Conn.
Filed May 11, 1960, Ser. No. 28,349
5 Claims. (Cl. 9—313)

1. Means usable in combination with a conventional wearable buoyant life preserver when in its normal folded condition for storage, for converting the life preserver to a pillow or back rest comprising, a removable cover encasing the life preserver and holding the life preserver in said folded condition for storage, a plurality of buoyant pads in said cover attached internally of the cover disposed in respective position to form in conjunction with said life preserver a configuration of a buoyant pillow and shaped for filling pockets formed between the cover and life preserver in said respective positions of the pads,



and said cover having quick-opening means for quickly opening the cover to remove the life preserver therefrom.

3,090,055
SPLITTING MACHINE
Evald O. Peterson, Lynnfield Center, John A. Rodes, Wayland, and Henry Perry, Arlington, Mass., assignors to Compo Shoe Machinery Corporation, Waltham, Mass., a corporation of Delaware
Filed Mar. 1, 1961, Ser. No. 92,613
19 Claims. (Cl. 12—16.5)

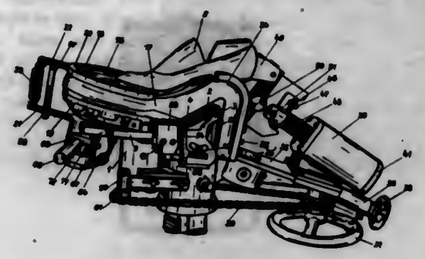


1. A sole splitting machine comprising a knife, an overhead matrix roll and a cooperating feed roll of spaced serrated disks, a carrier member supporting a series of pressure fingers arranged in alternation with respect to the disks of the feed wheel, and means for shifting the carrier member from one position to another to adjust the position and effective action of all the presser fingers at once.

3,090,056
PRESSURE PAD ASSEMBLY FOR SHOE PRESS
Werner Lorenz, Alfeld (Leine), Germany, assignor to Schuhmaschinen-Gesellschaft Hanke & Co. m.b.H., Alfeld (Leine), Germany
Filed Apr. 20, 1961, Ser. No. 104,371
Claims priority, application Germany Apr. 22, 1960
21 Claims. (Cl. 12—38)

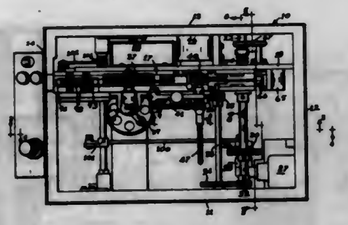
1. In a shoe press, a pressure pad assembly for gluing soles upon shoes, comprising a pressure pad having a front part and a rear part normally disposed substantially at right angles to each other, means for inflating said pad, means for supporting said pad including three parts, joints for pivotably connecting said parts to each other, means for bracing said supporting means, one of said joints being mounted in a fixed position, a second joint together with an associated supporting part being slidable on and in engagement with said bracing means, means for pivoting the supporting part associated with the rear part of said pressure pad to different positions and for locking the same in any of said positions, heel

bracing means associated with said pad for working on heeled shoes, and means for sliding and pivoting said



heel bracing means to different positions and for locking the same in any of said positions.

3,090,057
SPACEBAND CLEANER
Clarence E. Gossen, 315 E. 2nd Ave., Kennewick, Wash.
Filed Dec. 28, 1961, Ser. No. 162,840
8 Claims. (Cl. 15—4)



1. A cleaning apparatus for type spacebands having a long supporting wedge and a sleeve slidably mounted thereon, the sleeve including a polished casting face along one edge thereof, comprising:

a rigid supporting framework;

a guide track fixed to said framework having a top supporting surface adapted to slidably support a spaceband for longitudinal movement relative to the track;

magazine means mounted on said framework adapted to individually place spacebands on the top supporting surface of said track at one end thereof with the casting face of each sleeve facing upwardly;

means mounted on said framework adapted to intermittently feed spacebands from said magazine means along the top supporting surface of said track to successive first and second operating stations located thereon;

first polishing means rotatably mounted on said framework about a transverse horizontal axis located vertically above the first operating station, said first polishing means being adapted to tangentially contact the upper surfaces of a spaceband located on said track;

second polishing means rotatably mounted on said framework about a transverse horizontal axis vertically above the second operating station, said second polishing means being adapted to frictionally contact the casting face of the sleeve on a spaceband located on said track;

and lubricating means on said framework adapted to coat the surfaces of each spaceband with powdered graphite after emergence from the second operating station.

3,090,058
BALL-TYPE PIPELINE SCRAPING AND BATCHING DEVICE
Burton Ver Nooy, Tulsa, Okla., assignor to T. D. Williamson, Inc., Tulsa, Okla.
Filed Sept. 19, 1960, Ser. No. 57,074
4 Claims. (Cl. 15—104.06)



4. A spherical pipeline pig comprising in combination at least four equilateral sections of identical size and shape made of resilient petroleum-resistant material, each of said sections having an external surface of substantially spherical curvature; outturned flanges disposed along each edge of each section and extending radially outward so that the outer edge of all flanges lie in the surface of the sphere; a scraping element disposed between each pair of adjacent flanges; and means for attaching flanges of adjacent sections together to form a hollow sphere, said flanges of each section being cooperable with flanges of other sections to stiffen the pig against sagging into oblate shape in a pipeline under weight of fluid contained therein.

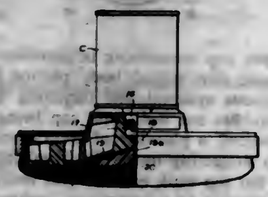
3,090,059
MOP
William C. Albertson, Jr., Lakewood, Ohio, assignor to Erie Mop and Wringer Company, Girard, Pa., a corporation of Pennsylvania
Filed Nov. 10, 1961, Ser. No. 151,526
4 Claims. (Cl. 15—119)



2. In a mop, a mop head, a handle socket extending from the top of the head, a squeezer plate and handle therefore operatively secured to the head, said handle socket having at its upper end a slot presented toward the squeezer plate handle, a clip extending through said slot having a detent portion outside the slot for holding the squeezer handle and having a strip depending axially within and extending chordwise of the handle socket and having teeth inclined inwardly and downwardly toward the bottom of the socket to grip and retain a wood mop handle inserted in the socket, the strip and teeth having

sufficient springiness to accommodate the variations in diameter of wood mop handles while maintaining an adequate grip between the wood mop handle and the socket.

3,090,060
INTERMITTENT FOUNTAIN FEED POLISH APPLICATOR WITH COMPOSITE HEAD
William Percival, Scraptoft, England, assignor to J. Goddard & Sons Limited, Leicester, England
Filed Apr. 9, 1959, Ser. No. 805,204
Claims priority, application Great Britain Apr. 9, 1958
5 Claims. (Cl. 15—547)



1. In a liquid applying device having an inverted canister with a neck and a compressible pad associated therewith, a liquid applying head comprising, in combination, a top portion having an opening substantially in the center thereof and a recessed bottom, a matching central part fitted against said recessed bottom of said top portion from underneath so as to engage the underside of said top portion, said central part having a hollow neck below the opening of said top portion to receive the neck of the canister, a main passageway for conducting liquid by capillary action from the canister toward the pad, said main passageway being provided vertically in said central part and leading downwardly from said hollow neck and a conical recess having its highest central point at the lower end of said main passageway, and an insert fitting into said recess so that a clearance remains between the surface of the recess and the surface of the insert whereby outwardly sloping branch passageways are formed, the bottom face of said liquid applying head being formed partly by the outer portion of said central part and partly by the botom face of said insert, said branch passageways being in direct interconnection with said main passageway.

3,090,061
BRUSH AND BRUSH MATERIAL
Vernon K. Charvat, Bay Village, Ohio, assignor to The Osborn Manufacturing Company, Cleveland, Ohio, a corporation of Ohio
Filed Feb. 1, 1961, Ser. No. 86,378
31 Claims. (Cl. 15—159)



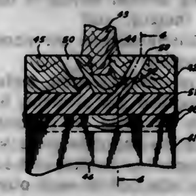
1. A rotary brush comprising a support and stiff brush bristles secured thereto and extending therefrom, said individual bristles having small enlarged portions at spaced intervals along their length effective to space the bodies of said bristles and to engage adjacent bristles to modify the brushing action of such brush in use.

3,090,062
NON-STREAKING BRUSH
Brooks E. Nelson, Chagrin Falls, Ohio, assignor to The Osborn Manufacturing Company, Cleveland, Ohio, a corporation of Ohio
Filed June 10, 1958, Ser. No. 741,182
19 Claims. (Cl. 15—181)



12. A rotary brush comprising a central rotatable hub member, a pair of individual self-supporting rings of resiliently deformable elastomeric material mounted thereon, and an annular brush element interposed between said rings and supported and positioned thereby, said rings being keyed to said hub member and the brush material of said element extending substantially directly radially outwardly.

3,090,063
PAINT BRUSHES
Robert L. Weiss and Earl R. Hunt, Wooster, and Howard C. Davis, Columbus, Ohio, assignors, by direct and mesne assignments, to The Wooster Brush Company, Wooster, Ohio, a corporation of Ohio
Filed Feb. 1, 1962, Ser. No. 170,318
3 Claims. (Cl. 15—193)



3. A brush structure comprising a handle having a bristle receiving portion; a bristle portion connected at its upper end to the lower end of said bristle receiving portion; said bristle receiving portion having a pair of apertures therein opening at least at the bottom surface of said bristle receiving portion; said apertures converging in one vertical direction; and solidified bonding compound permeating the upper end of said bristle portion and extending upwardly into said apertures.

3,090,064
HANDLE FOR SCOURING PADS
Robert C. Garrett, 1125 W. 8th St., McGregor, Tex.
Filed Sept. 19, 1961, Ser. No. 139,165
4 Claims. (Cl. 15—209)



1. A handle for scouring pads comprising, in combination, a handle member, a disc-like base integral with said handle lying in a plane perpendicular to said handle, said

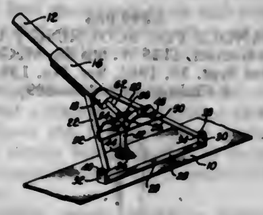
base having a circular recess therein on the side opposite said handle, pointed pad grasping prongs in said recess, said prongs having portions extending in one direction about the periphery of the recess adapted to engage in the material of a scouring pad when the pad is rotated within the recess in a direction toward the points of said prongs to engage said prongs and hold said pad in said recess and serrations on said base, each of said serrations having a tooth surface and a cut away portion, each of said tooth surfaces being disposed at substantially right angles to the plane of said base and facing the point of one of said prongs, said cut away portions being angularly disposed with respect to said tooth surfaces, and said serrations being engageable with a pad grasped by said prongs to prevent displacement of the same therefrom.

3,090,065
SCOURING PAD HOLDER
Frank J. Kriepe, Elmhurst, and Harley H. Matthais, Des Plaines, Ill., assignors to Container Corporation of America, Chicago, Ill., a corporation of Delaware
Filed July 9, 1962, Ser. No. 208,484
14 Claims. (Cl. 15—209)



14. A hand holder formed from a relatively resilient material for cleaning and polishing pads, comprising:
(a) a supporting section having a hand grip portion on one side thereof; and
(b) a pad retaining section on another side of the supporting section;
(c) said pad retaining section including a pair of cooperating toothed jaw elements having outer portions hingedly attached to opposite sides of said supporting section for movement toward and away from said supporting section and having inner portions hingedly attached to each other for movement into and out of said supporting section in a toggle-like arrangement for releasably clamping a pad therebetween.

3,090,066
CEMENT SLAB FINISHING DEVICE
Lawrence H. Ferrell, Jr., 2440 Bunche, Riverside, Calif., and Andrew Kelly, 6661 Jacaranda Ave., Fontana, Calif.
Filed Apr. 3, 1961, Ser. No. 100,400
3 Claims. (Cl. 15—235.8)



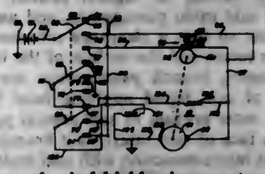
1. A cement slab smoothing device, comprising: a blade; an operating pole having spaced arms pivotally connected to said blade; said arms having a sleeve attached thereto for receiving said pole in a rotational manner; an arcuately shaped member projecting from said blade; a rod projecting from said pole; and a releasable clamping connection between said member and said rod actuated by rotational movement of said pole.

3,090,067
SCRAPER CAP
Maxwell O. Welby, La Crosse, Wis., and Harold A. Petsch, Minneapolis, Minn., assignors to The Pyroll Company, Inc., La Crosse, Wis., a corporation of Wisconsin
Filed Aug. 28, 1961, Ser. No. 134,260
5 Claims. (Cl. 15—236)



1. A scraper cap comprising in combination a generally cup-shaped thin walled body portion formed from a plastic resinous material, and including side walls and a substantially flat top wall, said cap being open at the lower end thereof, a plurality of teeth integral with said body portion projecting upwardly from the upward surface of said flat top wall, each of said teeth being raised at one end thereof and having an inclined upper surface, a substantially vertical end wall adjacent said raised end and a relatively sharp intersection between said inclined upper surface and said vertical end wall and the raised end of each of the teeth being positioned nearer the peripheral edge of said top wall than the other end thereof.

3,090,068
WINDSHIELD WIPER
Kenneth R. Brooks, Dexter, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed July 3, 1961, Ser. No. 121,429
3 Claims. (Cl. 15—250.17)

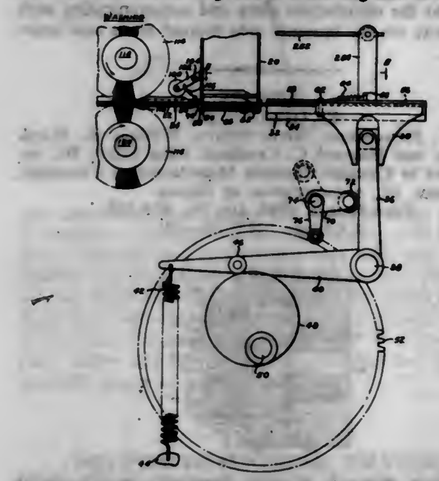


1. A two speed windshield wiper system comprising, an electric motor having two field windings, a windshield wiper blade, driving means interconnecting said windshield wiper blade and said electric motor, a source of electrical energy, a three position switch means connected to said source of electrical energy and to said electric motor for energizing said field windings in series with one another when the switch means is located in a first position and for energizing said field windings in parallel with one another when the switch means is located in a second position, a parking switch, means driven by said electric motor for periodically opening said parking switch, said three position switch means energizing said field windings in parallel with one another through said parking switch when the switch means is located in a third position.

3,090,069
MACHINE FOR CLEANING THE MATRICES OF A PHOTOGRAPHIC LINE COMPOSING MACHINE
Claire N. Brewer and Carl C. Smith, Jr., Indianapolis, Ind., assignors to International Typographical Union of North America, Indianapolis, Ind.
Filed Aug. 9, 1960, Ser. No. 48,484
7 Claims. (Cl. 15—308)

1. A machine for cleaning the matrices used in a photocomposing machine, comprising a vertical storage rack

for receiving a stack of horizontally positioned matrices, a horizontal track which is channel-shaped in cross section having its one end adjacent said storage means with its bottom positioned to receive the lowest matrix of the stack when moved horizontally from the storage means, a horizontally movable head positioned adjacent the lower end of the storage means, a plunger mounted for horizontal sliding movement in the head and positioned in the plane of the lowest matrix of the stack, a spring urging the plunger in the direction of the stack, means for horizontally reciprocating the head to cause the plunger to successively move the lowest matrix from the stack into the track to produce a moving line of matrices



in the track, a pawl positioned between the storage means and the track and having an inclined face adjacent the storage means and a flat vertical face adjacent the track, means resiliently supporting said pawl and urging it upwardly whereby a matrix moving from the storage means to the track will engage the inclined face of the pawl and depress and pass over the pawl but will be held from movement in the opposite direction by the flat vertical face of the pawl after the matrix passes the pawl, means positioned at spaced intervals along the track for cleaning the matrices moving along the track, and means at the end of the track for producing a vertical stack of cleaned matrices.

3,090,070
APPLICATOR FOR LIQUIDS
Jack Simons, 61 Mount Ephraim Road, Streatham, London SW. 16, England
Filed Dec. 7, 1961, Ser. No. 157,884
Claims priority, application Great Britain Apr. 18, 1961
2 Claims. (Cl. 15—541)

1. A device for applying thin liquids, such as colouring liquids, to the hair, of the kind comprising a bristle mount for a resilient container, a set of bristles projecting from the mount, and passage means in the mount for feeding the liquids to the bristles, characterized in that:
(a) the bristles are relatively stiff and are arranged in bundles forming a narrow, elongated, closed loop the sides of which are straight and parallel, the bundles of bristles forming one side being offset relative to the bundles of bristles forming the other side and all of the bundles of bristles including the bristles forming the end portions of the closed loop being set at an inclination in the mount such that the tips of the bristles converge, meet, and interengage to form a continuous linear bristle edge;
(b) a hollow distributor is carried on the mount, is tapered at an end remote from the mount and is positioned so as to extend into and along the length of the enclosure formed by the bristles, the distributor having a plurality of apertures arranged in a line



at the end which extends into the enclosure for feeding of the thin liquid directly to the point adjacent to the tips of the bristles in several streams.

3,090,071
APPLICATOR FOR SPREADABLE FOOD PRODUCTS
Paul J. Le Brocy, 3131 Trafalgar Heights, Montreal, Quebec, Canada
Filed Aug. 19, 1960, Ser. No. 50,742
1 Claim. (Cl. 15—595)



An applicator for spreading food products on bread and the like, the said applicator comprising a flared nozzle member and a prepared food package of thin pliable material forming the handle for said applicator, the said nozzle member having an internally threaded sleeve and a thin flat triangular shaped nozzle flared outwardly from the said internally threaded sleeve, the said flat triangular shaped nozzle having a thin flat passage therethrough and open at one end to the interior of said threaded sleeve and at the opposite end terminating in an elongated and thin dispensing slot extending the full width of the flared nozzle, and means to join the open end of said package to the internally threaded end of said nozzle, the said means comprising a ring member threaded on its external peripheral surface, the open end of the said package adapted to be threaded through said ring and be folded back upon itself over the externally threaded surface of the ring, the folded back portion of the said package forming a seal between said ring and said nozzle when the said nozzle is threaded on to the ring.

3,090,072
COMBINED HEADER AND SUPPORTING MEMBER
Annette E. Fridolph, 461 Park Ave. S., New York 16, N.Y.
Continuation of application Ser. No. 350,670, Apr. 23, 1953, which is a continuation of application Ser. No. 716,531, Dec. 16, 1946, now Patent No. 2,985,590, which is a division of application Ser. No. 448,485, June 25, 1942, now Re. 23,209, dated Mar. 21, 1950. This application Oct. 7, 1957, Ser. No. 688,617
3 Claims. (Cl. 16—95)

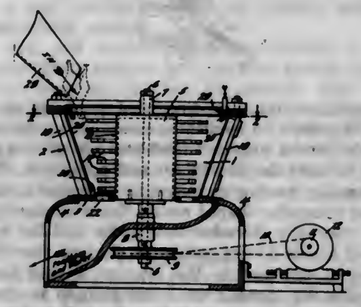
1. A curtain and drapery support comprising an elongated member having a narrow slot extending lengthwise

thereof and an enlarged recess located behind said slot and also extending lengthwise of said member and communicating with said slot and forming therewith a track substantially T-shaped in cross-section, said elongated member also having at least one enlargement in the slot



extending into said recess, said enlargement having opposite ends inclined in the same direction relatively to the axis plane of said enlargement and a member movable relative to said elongated member for uncovering and for at least partially covering said enlargement.

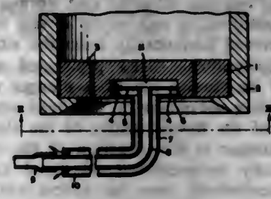
3,090,073
FOWL PICKING APPARATUS
Andrew J. Toti, Modesto, Calif., assignor, by mesne assignments, to International Rectifier Corporation, El Segundo Calif., a corporation of California
Filed June 25, 1953, Ser. No. 364,044
13 Claims. (Cl. 17—11.1)



1. In a fowl defeathering apparatus, the combination of a rotary defeathering beater studded with spaced projecting flexible feather engaging frictional elements and with its axis extending upwardly, means for rapidly revolving said beater, means forming a hopper spacedly surrounding said beater of a size to receive and retain fowls for defeathering by striking with said beater, said hopper and beater relatively formed to provide between them a downwardly converging space to urge the fowls into contact with the beater.

3,090,074
MELT SPINNING APPARATUS
Eldon Lawrence Fletcher, Kingston, Ontario, Canada, assignor to Du Pont of Canada Limited, Montreal, Quebec, Canada, a corporation of Canada
Filed Sept. 8, 1960, Ser. No. 54,705
Claims priority, application Canada Sept. 16, 1959
4 Claims. (Cl. 18—8)

1. In a melt-spinning apparatus, a spinneret plate having a cavity in the outer face thereof, a top plate closing said cavity, a distribution plate in said cavity, and a pair of telescoped coolant conduits, the outer conduit being connected to said top plate and communicating with said cavity between said plates, the inner conduit being con-



nected to the distribution plate and communicating with said cavity on the opposite side thereof from said outer conduit.

3,090,075
EXTRUDER DIE
Alex P. Provenzano, River Grove, William K. Ward, Elgin, and Howard C. Crosland, Glen Ellyn, Ill., assignors to Chicago Rawhide Manufacturing Company, Chicago, Ill., a corporation of Illinois
Filed June 8, 1959, Ser. No. 818,798
2 Claims. (Cl. 18—12)

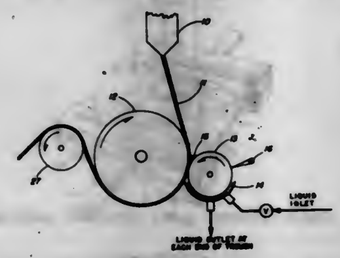


1. An extruder die for use in froming thin strips of polytetrafluoroethylene, said die comprising means for continuously delivering a rod-like element of sintered polytetrafluoroethylene into and through a slicing member disposed transversely of the path of movement of said element, said slicing member including a pair of block-like blade mounting plates each of which is formed from detachably connected half plate sections one of which defines a rectangular blade mounting cavity recessed along an edge thereof, which edge is engaged with a mating edge of the other half plate section fully overextending said cavity, a plurality of spaced flat blades laid in said cavity and extending acroes the same parallel with the mating edge of said other half plate section, and spacer elements received in said cavity between opposite end portions of said blades and in engagement with the opposite end wall portions of said cavity to releasably hold with the drawing together of said plate sections said blades in said cavity, the complement of blades of one plate being arranged at right angles to that of the other plate for cooperatively sub-dividing said element into a plurality of thin strips, said blade mounting plates being received between cover plates each of which is centrally apertured with the apertures conforming to the outer configuration of said element and aligned with said blades to direct and confine said element during extrusion through said cavities, division thereof.

3,090,076
APPARATUS AND PROCESS FOR HIGH SPEED EXTRUSION CASTING
Herbert O. Corbett, Palmyra, N.Y., assignor to National Distillers and Chemical Corporation, a corporation of Virginia
Filed May 20, 1959, Ser. No. 814,479
8 Claims. (Cl. 18—15)

5. An apparatus for producing a cast film of a melt-extruded thermoplastic material comprising a casting roll,

having a highly polished metal surface, disposed for rotation on an axis lying in a first horizontal plane; die means for extruding a film of said material downwardly into contact with said casting roll surface along a line lying in a plane extending substantially from said die means in the general direction of rotation of said casting roll into substantially tangential relation thereto; a nip roll, rotatable in contra-relation to said casting roll, disposed on an axis lying in a second plane parallel to



and below said first plane, said nip roll being adapted to compress said film against said casting roll along a line of relative tangency between said rolls, said line of relative tangency lying substantially in said plane extending from said die means, means for maintaining a liquid pool between said nip roll and the exposed surface of said film compressed by said nip roll at a level vertically above said line of relative tangency but not substantially above said first plane.

3,090,077
DRAWING OF SYNTHETIC POLYMERS
Mark Abbott, Cornwall, Ontario, Canada, assignor to Canadian Industries Limited, Montreal, Quebec, Canada, a corporation of Canada
Filed Feb. 4, 1960, Ser. No. 6,786
Claims priority, application Great Britain Mar. 13, 1959
4 Claims. (Cl. 18—48)



1. A process for hot-drawing polyethylene terephthalate filamentary material, which comprises passing repeatedly the filamentary material around a feed roll having a surface temperature of from 70° C. to 120° C., thereafter passing the filamentary material over an idler roll and then repeatedly around a draw roll having a surface temperature of from 50° C. to 160° C., said draw roll being arranged coaxially with the feed roll and revolving at a faster peripheral speed than the feed roll, and finally winding up the yarn so drawn.

3,090,078
PROCESS FOR FOAMING PANELS IN SITU
Robert N. Ackley, Flint, Mich., assignor to A. M. Stockhouse, Ann Arbor, Mich.
Filed May 29, 1958, Ser. No. 738,820
6 Claims. (Cl. 18—59)

4. In a process for foaming a resin composition in situ to fill a cavity defined by a pair of spaced apart skins of sheet material held marginally separated by a peripheral frame, the steps which include: holding said skins in spaced apart parallel relationship with vacuum to prevent slumping into said cavity; depositing a foam resin com-



position between said sheets and through an edge of said frame and applying back up pressure to said skins to marginally seal them against said peripheral frame and to prevent humping upon expansion of said foam resin composition.

3,090,079
METHOD OF MAKING BUSHINGS FOR BALL AND SOCKET JOINTS
Rudolf Gottschald, Osterrath, Germany, assignor to Viktor Langen, Duesseldorf-Oberkassel, Germany
Filed Nov. 3, 1959, Ser. No. 850,646
Claims priority, application Germany Nov. 3, 1958
3 Claims. (Cl. 18—59)



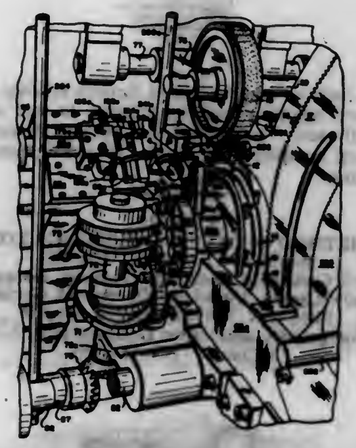
1. A method of making a spherical bushing having an integral sleeve and collar for surrounding the ball pin of a ball and socket joint, comprising the steps of:

(*a*) placing cross-linked polyurethane into a mold having a core to form a spherical bushing having an integral sleeve-like extension;
(*b*) removing the spherical bushing and its sleeve-like extension from the mold;
(*c*) inserting a core into the sleeve-like extension to thereby widen the extension by elastic deformation;
(*d*) placing the core, together with the elastically deformed sleeve-like extension into a die having an internal diameter and shape corresponding to the external diameter and shape of the extension to be formed;
(*e*) simultaneously applying pressure and heat to the extension and core to thereby change the elastic deformation into a plastic deformation, whereby the hardness of the extension is reduced;
(*f*) removing the deformed extension and core from the die; and
(*g*) removing the core from the deformed sleeve-like extension.

3,090,080
SWAB MAKING APPARATUS
Joseph S. Pellicone, Brooklyn, Edwin N. Dejewski, New York, and Lazzaro Pezza, Bronx, N.Y., assignors to Chesebrough-Pond's Inc., a corporation of New York
Filed Sept. 25, 1959, Ser. No. 842,511
36 Claims. (Cl. 19—145.3)

1. In a machine for making swabs, mechanism for grasping and twirling a stick so that tufts of cotton applied to the ends thereof by reciprocating devices moving in line with said stick will form swab tips thereover, said mechanism including a pair of friction rollers adapted to sandwich the stick between them, a stick carrier comprising a pair of spaced discs arranged to rotate on the same axis as one of said rollers and with a step-by-step

motion, said discs having marginal radial slots to accommodate the stick therein, a supply of sticks, mechanism for transferring the sticks from the stick supply to the carrier discs and depositing them one at a time in the slots thereof, and wherein each of the reciprocating devices is characterized by having an elongated member



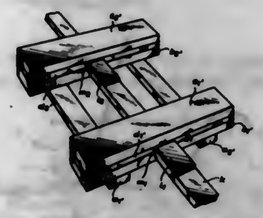
mounted for sliding movement and provided with a pair of axially extending jaws pivoted at one end and spring-biased toward closed position for grasping a tuft of cotton and applying it to one end of the twirling stick, and further characterized by having a spring-actuated mechanism for causing said jaws to close and including a trigger device for controlling said mechanism.

3,090,081
FIBER HANDLING ARRANGEMENT AND PROCESS
Norman E. Klein, Spartanburg, S.C., assignor to Deering Milliken Research Corporation, Spartanburg, S.C., a corporation of Delaware
Filed Mar. 6, 1961, Ser. No. 93,453
11 Claims. (Cl. 19—288)



1. Textile fiber handling apparatus comprising a member having an endless peripheral surface on which is formed a zone of undulating generally chevron shaped configuration, said member having an internal cavity formed therein, and a plurality of spaced apertures connecting between said cavity and said surface along the apex zone of said chevron shaped surface configuration, and means for connecting said internal cavity to a source of negative fluid pressure relative to ambient pressure surrounding said member.

3,090,082
ELASTIC FLOOR
Paul Baumann, 3 Goeberstrasse, Munster, Westphalia, Germany
Filed Nov. 3, 1958, Ser. No. 771,639
Claims priority, application Germany Nov. 2, 1957
5 Claims. (Cl. 20—6)



1. An elastic floor structure, comprising, in combination: an upper floor; a plurality of elastic support members supporting said upper floor, each of said members having two pairs of elastic hardwood boards arranged substantially parallel to the upper floor and supporting the same, said pairs being in parallel spaced relation relative to each other, the two boards of each pair of boards being arranged one above the other, being spaced from each other throughout a mid-portion of their lengths and being joined at their end portions, and transverse lower hardwood boards arranged beneath said end portions of said elastic boards and supporting the same, said transverse boards extending at substantially right angles to said elastic boards and being in parallel spaced relation relative to each other; and filler means arranged in substantially the center of the spaces formed between the two boards of each pair of elastic boards for limiting the degree of elasticity of the floor structure, said filler means including a bar carrying filler boards which are mounted on said bar and which are shiftable therewith in longitudinal direction of said bar between (1) a withdrawn position wherein each respective filler board is out of the space formed between the two elastic boards, so that substantially only the upper one of each pair of elastic boards will flex as a result of a weight being brought to bear upon the respective support member, and (2) an effective position wherein each respective filler board is in the space formed between the two boards of a pair of boards such that a flexing of the upper one of each pair of elastic boards is transmitted, via the respective filler board and said bar carrying the same, to the lower of the last-mentioned pair of elastic boards when a weight is brought to bear upon the respective support members, whereby in each position of said filler means, the support member will provide a different effective elastic support for said upper floor.

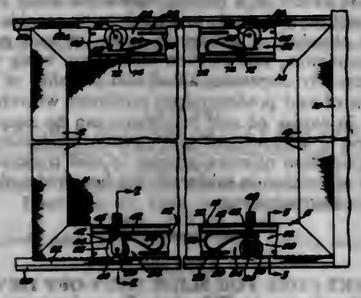
3,090,083
WINDOW STRUCTURE
Michael Emmerich, Bergheim (Sieg), Germany
Filed July 27, 1959, Ser. No. 829,716
3 Claims. (Cl. 20—11)

1. A window element comprising a rigid hollow core and a covering about the periphery of said core, said covering comprising at least two separate sections of polyvinyl chloride resilient material, said sections resiliently gripping said core for maintaining said sections on the periphery of said core, said core having a substantially I-shaped cross section and including flanges extending parallel to the web of said I-shape, said



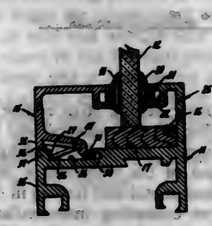
flanges defining channels along opposite edges of said core.

3,090,084
MOUNTING FOR SLIDING PANELS FOR DOORWAYS AND THE LIKE
Joseph Banner, Whittier, Calif., assignor to Anjac Mfg. Co., El Monte, Calif., a co-partnership
Filed May 16, 1960, Ser. No. 29,220
8 Claims. (Cl. 20—19)



1. In combination:
a sliding frame structure to be supported in a vertical position;
a horizontally positioned bottom frame member having a vertically disposed channel extending longitudinally of such member and providing a downwardly directed opening;
a wheel mounted in said channel at said opening to carry weight of said frame structure and provided with means to engage and run upon a track for supporting said frame structure;
mounting means in which said wheel is rotatably mounted;
a spring connected with said frame member for yieldingly positioning said mounting means and its wheel in said channel and to urge said wheel downwardly in said channel and said opening; and
adjustable stop means interengaging between said frame member and said wheel mounting means for adjusting the operating position of said wheel relative to said frame member and said channel, said adjustable stop means being a screw threaded into a portion of said frame member above said channel, and said spring being a leaf spring connected at one end to said frame member and at the other end to said wheel mounting means opposite said adjusting screw.

3,090,085
GLAZING STOP
Arvill B. Brown, Huntington, Ind., assignor to The Mace Corporation, Huntington, Ind., a corporation of Indiana
Filed July 26, 1961, Ser. No. 126,962
4 Claims. (Cl. 20—56.4)



4. In a window assembly, a first rigid frame element having an inwardly facing wall and an inwardly directed flange, said wall having a recess therein spaced forwardly of said flange, a window disposed forwardly of and against said flange, a resilient seal received between said flange and said window, a second rigid frame element received within said first frame element and against said window, a resilient seal received between said second frame element and said window, said second frame element having an outwardly facing indentation, a plurality of springs mounted within said indentation each having a leg projecting outwardly of said indentation and forwardly into said wall recess, said wall recess having a forward face which slopes inwardly and rearwardly for locking said legs within said recess, said legs being resiliently depressable into said indentation and the forward portion of said second frame element being positioned wholly inwardly of the wall of said first frame element, to permit a direct rearward movement of said second frame element into said first frame element, a rigid hook projecting rearwardly from and integral with said second frame element, said first frame element having a forwardly facing groove opening into said wall recess and receiving said hook.

3,090,086
TAPERED DOVE-TAIL JOINTS
Bernard Fata, 56—34 61st St., Maspeth, Long Island, N.Y.
Filed July 7, 1958, Ser. No. 747,560
4 Claims. (Cl. 20—92)



2. A double dove-tail peg of wood of substantially hour-glass shape and tapered longitudinally in the order of 1/16"–1/8" per foot on each side of the taper, said peg embodying a flat slab of wood positioned medially of the cross section of the peg with its grain transversely of the peg, and longitudinally tapered wedge-shaped key pieces adhesively secured to the opposite faces of said slab with their grains extending generally longitudinally of the peg.

3,090,087
STOCK MATERIAL FOR USE AS EDGING STRIP
Peter H. Miller, 175 W. 79th St., New York, N.Y.
Filed Feb. 14, 1961, Ser. No. 89,265
5 Claims. (Cl. 20—92)



1. A building-corner edging strip comprising a carrier web made of coilable fibrous material and having a shallow lengthwise looped portion extending intermediate the lengthwise edges of the web, and a reinforcing web made of coilable sheet metal and having in one of its sides a lengthwise groove extending intermediate the lengthwise edges of said web and on the other side a lengthwise rib opposite said groove, said rib being of a transverse width in excess of the maximum width of said groove, said fibrous web being coextensive in length with said sheet metal web but wider than said web and attached along the two lengthwise marginal portions of the fibrous web defined and separated by the looped web portion to the sheet metal web on the side thereof having said rib in a position in which said rib and said looped web portion are in lengthwise alignment and the marginal portions of the fibrous web protrude laterally from the lengthwise edges of the sheet metal web, the looped web portion being left unattached to the sheet metal web and having a transverse width in excess of the transverse width of said rib, whereby upon lengthwise folding of the edging strip to an angular cross section said rib forms a reinforcing metal bead located opposite the groove and extending within said unattached looped fibrous web portion, said coilable sheet metal web being of a rigidity sufficient to impede lengthwise bending of the web except along said groove, but permitting coiling of the metal web together with the fibrous carrier web.

3,090,088
CONNECTOR DEVICE
Russell W. Foley, Bellwood, and Gordon G. Wood, Elmwood Park, Ill., assignors to Foley & Lavish Engineering Co., Chicago, Ill., a corporation of Illinois
Filed May 7, 1962, Ser. No. 192,679
9 Claims. (Cl. 20—92)



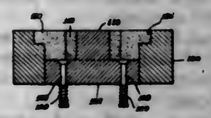
1. A connector device for joining wooden members comprising a planar metal plate means having a plurality of quadrangular openings formed therethrough, a plurality of prong means formed integrally with said plate means and extending unidirectionally from and substantially transversely outwardly of one face thereof, there being one said prong means at each corner of each of said openings, each said prong means having a rigid body portion of substantially right angular cross-sectional configuration and a pointed tip portion formed integrally with and extending outwardly from the outer extremity of said body portion; each said tip portion being formed to protrude generally outwardly of the lengthwise axis of its related said body portion and directed away from the one of said openings with which it is associated.

3,090,089
THERMOMETER DISPENSER AND STERILIZER
Edwin E. Emerson, Osakis, Minn.
Filed Jan. 15, 1960, Ser. No. 2,640
20 Claims. (Cl. 21—57)



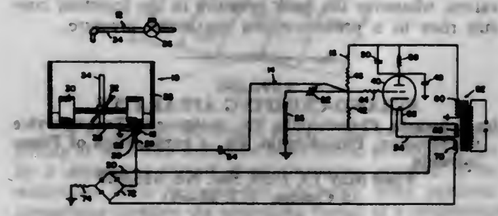
13. A sterilizing and dispensing device comprising structure for housing a bath of sterilizing fluid and having article return and delivery openings, track means for supporting a multiplicity of articles in series in said bath and capable of serially guiding them through said bath from said return to said delivery opening, manually operable ejection mechanism for simultaneously moving all of the articles on said track towards said delivery opening for successive discharge of said articles therefrom, said ejection mechanism being capable of dispensing an article through said delivery opening only when a number of articles in excess of a predetermined minimum plurality are present on said track, said track being capable of carrying a plurality of articles in excess of said predetermined minimum, said ejection mechanism being capable of successively dispensing all of said plurality of articles in excess of said predetermined minimum whereby those articles in excess of said minimum can be successively dispensed by actuation of said ejection mechanism without the addition of more articles to said track until the number of articles on said track has been reduced to said predetermined minimum.

3,090,090
INSERT CORE FOR SLIDE SHUT-OFF DEVICE
James Woodburn, Jr., Wheaton, Ill., assignor to Amsted Industries Incorporated, Chicago, Ill., a corporation of New Jersey
Filed Aug. 24, 1960, Ser. No. 51,657
4 Claims. (Cl. 22—84)



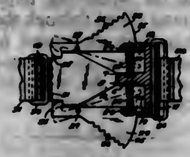
1. In a device for pouring molten high melting point metal into a mold through a bottom gate, the combination of a cut-off slide having an aperture registered with the gate, a bushing in said aperture comprising a sleeve with a flange recessed in the slide, a hollow cylindrical refractory liner in the sleeve, said sleeve being snugly fitted in the aperture and being formed of sand particles bonded to each other and to said liner by a binder said liner being formed of a refractory material more resistant to erosion by said molten metal than said sleeve, and means for actuating the slide to a position where it cuts off flow of said molten metal from said bottom gate when the mold has been filled therewith.

3,090,091
APPARATUS FOR ELECTRICAL MOISTURE MEASUREMENT
Harry W. Dietert, Kerrville, Tex., and Randolph L. Dietert, Alexander L. Graham, and Milton R. Kabel, Detroit, Mich., assignors to Harry W. Dietert Co., Detroit, Mich., a corporation of Michigan
Filed Aug. 8, 1960, Ser. No. 48,065
5 Claims. (Cl. 22—89)



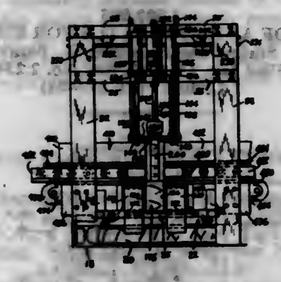
1. Apparatus for controlling the moisture content of granular material, comprising a mill for mixing the granular material, means for adding moisture to the granular material, a probe mounted in said mill including a pair of electrodes electrically insulated from each other and exposed to granular material within the mill for sensing the moisture content of the granular material, means connected to the electrodes for developing an alternating control signal between the pair of electrodes representative of the sensed moisture content, means for controlling said means for adding moisture to the granular material in accordance with the control signal developed, and means connected to the electrodes for producing a unidirectional electric potential difference between said electrodes.

3,090,092
DOUBLE RELEASE SAFETY BUCKLE
Jerome C. Szemplak, Cleveland, Ohio, and Neil E. Morris, East Homer, N.Y., assignors to the United States of America as represented by the Secretary of the Army
Filed Apr. 13, 1961, Ser. No. 102,903
1 Claim. (Cl. 24—230)
(Granted under Title 35, U.S. Code (1952), sec. 266)



A double release safety buckle comprising the combination of a U-shaped housing having a top wall, an opposite bottom wall and an end wall joining said opposite walls, a pair of rearwardly extending tips integral, one each with the outer edges of the inner side of said end wall, top wall and bottom wall, and a central partition integral with the inner side of said end wall, top wall and bottom wall, and extending for a distance rearwardly therefrom, said partition having a flat rearward face and a pair of aligned, oppositely arranged recesses therein, a key disposed centrally of and integral with said bottom wall and extending from the open end of said U-shaped housing to the inner end of said partition, a solid tongue defining a beveled nose portion, said nose portion having a flat forward face and a rearward reduced portion, said last named portion forming a pair of shoulders, there being a keyway integral with the bottom side of said tongue and disposed centrally thereon, said key on said bottom wall of said U-shaped housing adapted to be received in said keyway on said tongue and said flat forward face on said nose portion of said tongue adapted to abut said flat face of said partition when said tongue is inserted fully into said U-shaped housing, a pair of diametrically spaced, identical levers pivotally mounted between said bottom and top walls of said U-shaped housing, each lever having a latch portion at its rearward end for engagement with a respective shoulder on said tongue, and a forwardly extending projection on each forward end of each of said levers for engagement with said rearwardly extending tip on said end wall of said U-shaped housing, there being a recess in the forward portion of the bottom side of each lever and a coil spring having its ends received in said recesses on each side of said partition and each recess in each lever, said springs normally biasing said levers in an outward direction whereby said latch portions on said lever are held in locked engagement with said shoulders on said tongue.

3,090,093
APPARATUS FOR MAKING PRE-CAST CORED BUILDING BLOCKS
Leonard D. Long, % Long Construction Co., P.O. Box 288, 2110 Mount Pleasant St., Charleston, S.C.
Filed Aug. 25, 1960, Ser. No. 51,972
11 Claims. (Cl. 25—45)

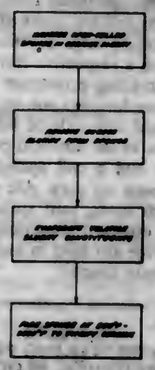


1. An apparatus for making cored building blocks, comprising an elongated base and supporting frame, a mold carried on said base and defining the outer faces of the blocks to be produced, the bottom of said mold having a plurality of spaced openings formed therein along the longitudinal mold axis, a plurality of expandable core-formers disposed in alignment with the longitudinal mold axis and insertable into the mold for forming the block cores, said core-former upon insertion in said mold having their upper and lower faces abutting the portions of the mold defining the upper and lower block faces and having projections received in said mold openings, said core-formers being carried on a plurality of pairs of shafts operatively connected to said supporting frame with one of the shafts in each pair of shafts being rotatable for imparting radial thrust to said core-formers for effecting a uniform radial expansion of said core-formers throughout their lengths to compress the aggregate in the mold, and means carried on said supporting frame above the core-formers for simultaneously rotating said one shaft in said pairs of shafts through equal angles of rotation.

3,090,094
METHOD OF MAKING POROUS CERAMIC ARTICLES
Karl Schwartzwalder, Holly, and Arthur V. Somers, Flushing, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Feb. 21, 1961, Ser. No. 90,619
8 Claims. (Cl. 25—156)

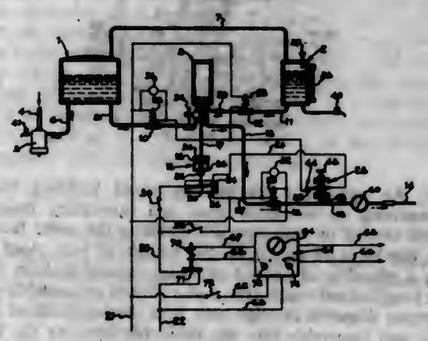
1. A method of making an open-celled, porous ceramic article which comprises immersing an open-celled element of spongy material in a slurry containing a ceramic

coating material to coat cell-defining walls of said element, removing excess slurrry from said element, and



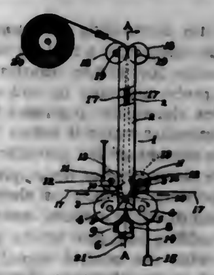
firing said element to remove the spongy material and form a hardened structure of porous ceramic.

3,090,095
METHOD OF AND APPARATUS FOR EMBALMING
William Stirling Moore, Spring St., Batavia, Ohio
Filed Jan. 13, 1960, Ser. No. 2,234
2 Claims. (Cl. 27—22)



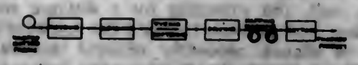
1. In an embalming apparatus comprising, a water reservoir, a concentrate reservoir, a closed mixing tank, respective supply systems for conducting water and concentrate at predetermined pressure and rates of flow from the concentrate reservoir and water reservoir to the mixing tank, respective electrically operated supply valves in each of said supply systems operable to regulate the flow of water and concentrate to the mixing tank, a pressure responsive switch in fluid communication with the mixing tank and adapted to be operated in response to the pressure developed by the water and concentrate introduced into the mixing tank, an injection conduit interconnected to said mixing tank for delivering the solution from the mixing tank to the circulatory system of a body, an electrically operated discharge valve interposed in the injection conduit, the respective supply and discharge valves being interconnected electrically with the said pressure responsive switch, said pressure responsive switch being effective to energize and thereby open the supply valves and to deenergize and thereby close the discharge valve when the solution of water and concentrate in the mixing tank is at a predetermined minimum pressure and to open the discharge valve and close the supply valves when the pressure of the solution in the mixing tank is at a predetermined maximum pressure, thereby to provide a pulsating discharge of solution from the mixing tank to the injection conduit, the improvement which comprises a back pressure device in fluid communication with the injection conduit, and an electrical back pressure control switch associated with the said back pressure device, said electrical back pressure switch being in circuit controlling relationship with the supply valves and being opened to prevent reenergization of said supply valves, whenever the back pressure in the injection conduit rises to a predetermined maximum pressure.

3,090,096
STRAND-CRIMPING APPARATUS
Ira Schwartz, Philadelphia, Pa., assignor to Techniservice Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Filed May 13, 1959, Ser. No. 813,029
5 Claims. (Cl. 28—1)



1. In a stuffer-crimper comprising a hollow crimping chamber, means for feeding a strand into one end of the crimping chamber, and means associated with the crimping chamber for exerting impeding force on the strand to crimp it, the improvement comprising rotatable wheel-like impeding elements projecting from opposite sides into the crimping chamber to exert impeding forces on the strand and thereby to accumulate and crimp the strand means operatively connected to the wheel-like elements and effective to exert a frictional drag thereon, bands engaging and movable with the wheel-like impeding elements in the direction of strand travel through the hollow crimping chamber for withdrawing the strand from the crimping chamber and maintaining its crimped condition, and means mounted adjacent the exit end of said stuffer-crimper for supporting said bands.

3,090,097
METHOD OF MAKING SYNTHETIC VELVET-LIKE KNITTED FABRIC
Jakob E. Ruckstuhl, Kusnacht, Zurich, Switzerland, assignor to Terlinden & Company, Kusnacht, Zurich, Switzerland, a firm
Filed Feb. 24, 1959, Ser. No. 794,961
7 Claims. (Cl. 28—72)



1. A process for treating fabric which comprises subjecting a warp knitted synthetic fabric having a top warp and a back warp, said top warp and back warp being produced by parallel guide bars providing said fabric with substantially straight floats to a softening treatment, and to a loop raising treatment wherein the floats are raised to form a pile of unbroken loops and thereafter heating the fabric to set the same to thereby impart the appearance of velvet to the fabric.

3,090,098
METHOD FOR SEPARATING KNITTED FABRICS
Myron Goldstein, 28 W. 26th St., New York, N.Y.
Filed May 8, 1961, Ser. No. 108,644
7 Claims. (Cl. 28—72)



1. A method of separating knitted fabrics and articles having at least two separable body fabric portions joined by a separating thread stitch formation adapted to be withdrawn from between the adjoining body portions, comprising severing the separating thread at a preselected point to permit withdrawing thereof and before completely withdrawing the separating thread applying a fluid release medium thereto lubricate the separating thread and reduce at least the frictional forces between said body portions to be separated and the separating thread to be withdrawn.

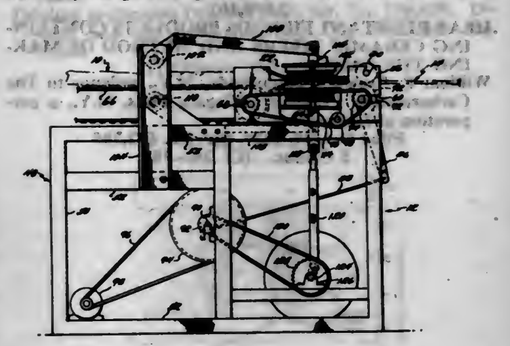
3,090,099
METHOD OF NEEDLE PUNCHING FABRICS SO AS TO INTERLACE THE FIBERS THEREOF
Alexander M. Smith II, Elkin, N.C., assignor to Chatham Manufacturing Company, Elkin, N.C., a corporation of North Carolina
Filed May 13, 1960, Ser. No. 29,115
18 Claims. (Cl. 28—72.2)



1. A method of producing a needled fabric by needling a web of loosely matted fibers comprising the steps of: advancing the web in step-by-step motion through a confined throat, initially penetrating the web from one side thereof by causing a first pattern of needles to travel in a path substantially perpendicular to the surface of the web while the web is moving and further continuing penetration of the web by the first pattern of needles while the web is stationary to a point at least adjacent its other side, withdrawing the first pattern of needles while the web is stationary, and initially penetrating the web from the other side thereof by causing a second pattern of needles to travel in a path substantially perpendicular to the surface of the web while the web is moving and further continuing the penetration of the web by the second pattern of needles while the web is stationary to a point at least adjacent the opposite side.

3,090,100
METHOD OF NEEDLE PUNCHING FIBERS TO MAKE NEEDLED FABRICS OR THE LIKE
Alexander M. Smith II, Elkin, N.C., assignor to Chatham Manufacturing Company, Elkin, N.C., a corporation of North Carolina
Filed May 26, 1960, Ser. No. 31,910
13 Claims. (Cl. 28—72.2)

1. A method of producing a needled fabric material by needling a web of loosely matted fibers comprising the steps of: penetrating one surface of the web while the web is stationary with a first pattern of needles traveling substantially in a path at an acute angle to a median plane through the web, withdrawing the first pattern of needles and advancing the web a small increment, penetrating the opposite surface of the web by an oppositely disposed second pattern of needles traveling substantially in a mirror image path of the path of the first pattern of needles and at an acute angle to the median plane of the web, the path of penetration of said second pattern



of needles being such that it engages fibers previously oriented by oppositely disposed needles of said first pattern of needles during the immediately previous path of penetration of the same, withdrawing the second pattern of needles and advancing the web another small increment, and sequentially repeating the above steps.

3,090,101
METHOD OF CONSTRUCTING A CORRUGATOR BELT
Zephir J. Chagnon, Loudonville, and Robert R. Kelleher, Latham, N.Y., assignors to Albany Felt Company, Albany, N.Y., a corporation of New York
No Drawing. Filed Aug. 26, 1960, Ser. No. 52,009
4 Claims. (Cl. 28—72.2)

1. The method of constructing a corrugator belt consisting of weaving a two-ply base fabric, passing the base fabric through a needling machine to cover the surfaces of the woven fabric with a plurality of fibers mechanically interlocked therewith and then exposing the belt to elevated temperatures in the range of 325° F. to 375° F. while applying tension in the range of 100 to 200 lbs. per inch of width for a period of five to fifteen minutes.

3,090,102
PROCESS FOR THE MANUFACTURE OF COATED FABRIC
Albert E. Jannarelli, Cumberland, R.I., assignor to Owens-Corning Fiberglas Corporation, a corporation of Delaware
Filed Dec. 29, 1960, Ser. No. 79,757
1 Claim. (Cl. 28—75)



In the preparation of fabrics coated with a thermoplastic material which comprises applying a coating of vinyl plastisol to fibrous glass elements, weaving the coated elements into an open mesh fabric of spaced warp and weft strands in surface contact at their points of intersection, and fusing the vinyl plastisol to bond the strands at their points of intersection, the improvement comprising concealing coating defects caused by the inefficient application of the coating and the physical removal of

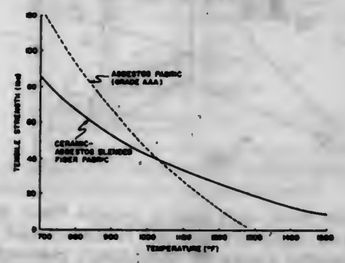
the applied coating during post-coating processing and weaving by applying a second coating of said vinyl plastisol to said fabric after said weaving and said fusing, and fusing said second coating.

3,090,103

HEAT RESISTANT FIBROUS PRODUCTS CONTAINING CERAMIC FIBERS AND METHOD OF MAKING THE SAME

William P. Crawley, Tonawanda, N.Y., assignor to The Carborundum Company, Niagara Falls, N.Y., a corporation of Delaware

Filed Oct. 24, 1957, Ser. No. 692,205
5 Claims. (Cl. 28—78)



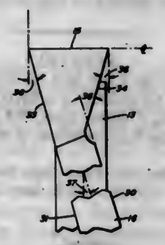
1. A blended, fibrous product characterized by a high degree of strength retention at temperatures between 1000° F. and 2000° F. and consisting essentially of an intimate carded mixture of staple, inorganic, siliceous, ceramic fibers containing a major proportion of aluminum silicate and staple carrier fibers consisting essentially of asbestos, said ceramic fiber constituting from about 10% to about 90% by weight of said product.

3,090,104

OBLIQUELY SHIFTABLE CUTTING TOOL

Raymond E. Novkov, Cuyahoga Falls, Ohio, assignor to Manchester Machine & Tool Co., Akron, Ohio, a corporation of Ohio

Continuation of abandoned application Ser. No. 629,642, Dec. 20, 1956. This application Apr. 22, 1960, Ser. No. 24,174
2 Claims. (Cl. 29—96)



1. A cutting tool of the character described, comprising; a tool body, a support blade supported with respect to said tool body and having opposed sides and a bit receiving edge surface of elongate configuration; first elongate guide means defined by said bit receiving edge surface and extending longitudinally and diagonally thereof; an elongate cutting bit having a cutting edge at one longitudinal end thereof and further having a longitudinal center line; second elongate guide means defined by said bit and extending longitudinally thereof in substantial parallelism with said longitudinal center line; means releasably clamping said first and second guide means into complemental engagement with each other, whereby said bit is longitudinally and diagonally disposed on said bit receiving surface of said blade; said cutting edge being disposed substantially normal to at least one of said opposed sides of said blade when said first and second guide means are complementally engaged.

3,090,105

CRUSHING ROLL CONSTRUCTION

Paul L. Gibbar and Harold L. Gibbar, both of Rte. 2, Perryville, Mo.

Filed Sept. 21, 1961, Ser. No. 139,737
9 Claims. (Cl. 29—124)



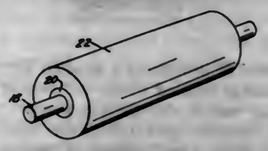
1. A crusher roll having a rotatable hub, said hub having longitudinal slots extending radially inward from its periphery, an annular crushing shell disposed about the periphery of said hub composed of segments, a longitudinal attaching bar extending axially of said segments and radially inwardly from each segment and occupying one of said slots, said bar having at each of its ends a wedge surface, and clamping wedge means engageable with the hub and with said wedge surface at opposite ends of said bars drawing said segments inwardly against said hub.

3,090,106

POLYESTER PRINTING ROLLER

Albert E. Raymond, St. Paul, Minn., assignor to Minnesota Mining & Manufacturing Company, St. Paul, Minn., a corporation of Delaware

Filed June 26, 1959, Ser. No. 823,038
4 Claims. (Cl. 29—132)



1. A printing roller having ends thereon for journaling in bearings of a printing press, a resilient cylindrical roller body intermediate said roller ends, said roller body having at least as the surfacing layer thereof for transferring printing ink from a supply source to a printing plate a solid tacky surfaced rubbery polyester cured with a N,N'-bis-1,2-alkylene amide of a dicarboxylic acid, said polyester comprising the polymeric reaction product of an alkylene diol containing between about 3 and about 8 carbon atoms in the alkylene group, an alkylene dicarboxylic acid containing from about 2 to about 10 carbon atoms in the alkylene group, and a minor amount of a polyfunctional organic compound having more than two reactive hydrogens.

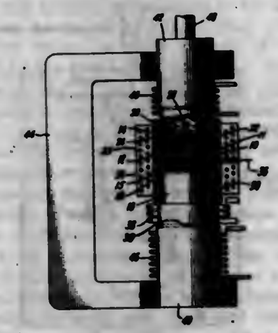
3,090,107

METHOD OF MAKING A PERMANENT MAGNET

Henry T. Minden, Roslyn Heights, and Leonard Berenbaum, Flushing, N.Y., assignors, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware

Filed July 24, 1958, Ser. No. 750,725
2 Claims. (Cl. 29—155.6)

2. The method of making a permanent magnet comprising dispersing particles of a ferromagnetic material in a liquid binder held in a non-magnetic container having a cover, said binder being held at a temperature sufficient to maintain said binder in a liquid state but below the Curie temperature of said ferromagnetic material, subjecting said ferromagnetic material to the influence of a magnetic field to magnetically orient said ferromagnetic particles with respect to the direction of said applied mag-



netic field, densifying said dispersion, directionally cooling and freezing said binder while maintaining said ferromagnetic particles so oriented to permanently fix said particles in said oriented direction, and sealing the cover on said container of non-magnetic material to protect its contents from the atmosphere.

3,090,108

METHOD OF MAKING A RIGID RESILIENT TIPPED NEEDLE VALVE ELEMENT

Robert T. Gifford, Yellow Springs, Ohio, assignor to Vernay Laboratories, Inc., Yellow Springs, Ohio, a corporation of Ohio

Original application Dec. 16, 1960, Ser. No. 76,359. Divided and this application Dec. 19, 1962, Ser. No. 245,718
6 Claims. (Cl. 29—156.7)



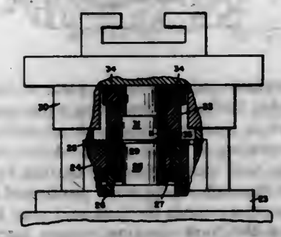
1. A method of making a composite substantially conical valve element having a rigid body and an undistorted resilient tip, the body and tip configuration being such as to provide for minimal turbulence and flow restriction in use, which method comprises the steps of providing a rigid body having a socket, placing said body in contact with the inner surface of a mold for said resilient tip, causing the mold to engage said body so as to swage the exterior periphery of the body in the region of the socket into what will be an uninterrupted continuation of the configuration of the tip to be formed, and then injecting resilient material into said mold to fill said socket and to form said tip, whereby the body constitutes an uninterrupted continuation of the configuration of the tip and whereby no substantial amount of the injected resilient material can escape between the mold and body to form any material amount of flash which would require removal.

3,090,109

APPARATUS FOR ASSEMBLING NEEDLE THRUST BEARINGS

Robert H. White and Paul A. Carullo, Torrington, Conn., assignors to The Torrington Company, Torrington, Conn.

Original application Dec. 30, 1955, Ser. No. 556,688. Divided and this application Sept. 12, 1960, Ser. No. 55,260
11 Claims. (Cl. 29—201)



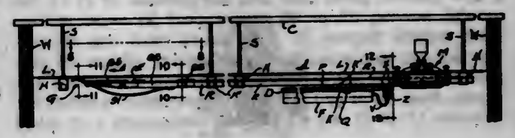
1. Apparatus for assembling roller thrust bearings comprising a lower press member having a base and a center post, a sleeve on the base for supporting one of two annular bearing members around the post, a vertically movable, upper press member having a sleeve opposite the lower sleeve, a punch carried by the upper press member, and a resilient ring on one of said sleeves concentric with said punch for holding one of said annular bearing members free for annular adjustment relative to the other bearing member during their assembly.

3,090,110

INSTALLATION EQUIPMENT FOR SUCCESSIVE ELONGATED UNITS

Charles Williams, 7058 Bancroft, St. Louis, Mo.

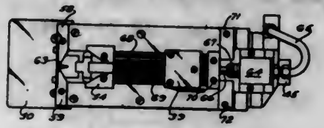
Filed Dec. 18, 1958, Ser. No. 781,226
6 Claims. (Cl. 29—203)



4. In a device for feeding electric conduit-supporting rail, an elongated rigid box-like housing, rail-feeding rollers journaled in the housing and spaced apart lengthwise of the housing, a narrow U-shaped frame at each end of the housing with a cross bar above the housing and depending legs slidable vertically in the sides of the housing, straps extending below each side of the housing and carried by the lower ends of said legs, rollers journaled on said straps below and in the same general vertical plane as the first-mentioned rollers and cooperating therewith to engage a conduit-supporting rail between them, said legs at one side of the housing pivoting on the frame cross bars to swing out from beneath the housing to facilitate shifting the housing transversely onto or off of the rail, and means positively holding said latter-mentioned legs against such pivoting.

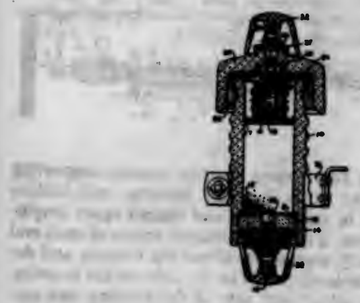
5. A device according to claim 4 in which the means preventing the pivoting of the legs includes an upwardly-facing groove formed by the pivoting legs and the strap mounted thereon, a downwardly-projecting lower edge of a side of the housing received in said groove, and a manually operable mechanism for raising the frames on the housing to hold the side of the housing in said groove.

3,090,111
CONTACT PLUG ASSEMBLY APPARATUS
William P. Herman, Providence, R.I., assignor, by mesne assignments, to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Dec. 21, 1959, Ser. No. 861,136
9 Claims. (Cl. 29—206)



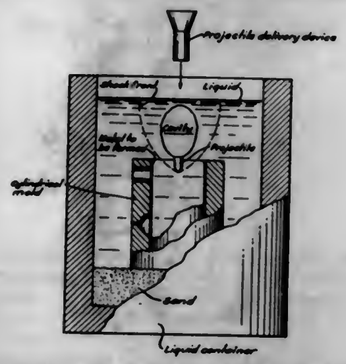
1. An apparatus comprising a base, a nest mounted on said base for limited reciprocating movement, said nest being adapted to receive a plug husk of resilient material having an opening, a block mounted for reciprocating movement on said base, pull arms carried by said block and movable through a plug husk positioned in said nest for pulling contact prongs through said plug husk, means for distending the husk opening, means carried by said block for operating the distending means in timed sequence to the movement of said pull arms, fluid operated means for reciprocating said block, and means for reciprocating said nest in timed sequence to the movement of said block, said nest reciprocating means comprising a fluid cylinder mounted at the rear of said base, a pin extending from said cylinder, a second block slidably mounted on said base and actuated by said pin, and connecting rods between said second block and said nest.

3,090,112
METHOD OF DETERMINING LEAKS IN LIGHTNING ARRESTERS AND THE LIKE
Norman L. Smith, Haddonfield, N.J., assignor to H. K. Porter Company, Inc., Philadelphia, Pa., a corporation of Delaware
Filed Jan. 14, 1960, Ser. No. 2,435
6 Claims. (Cl. 29—407)



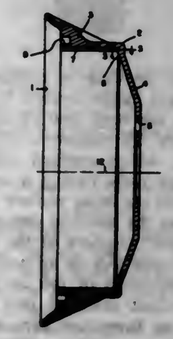
1. A method of testing for leaks a hollow container sealed in an inert gas atmosphere consisting of the steps of, placing the container to be tested into a vacuum chamber having a pair of spaced apart electrodes, said container being so placed within the chamber that the sealed region of the container lies substantially between the spaced electrodes, connecting the electrodes to a source of electric potenial to thereby establish an electric field therebetween, and reducing the pressure in the vacuum chamber below the pressure at which the container was sealed, whereby if a leak exists in the container seal the inert gas within the container will flow outward therethrough into the electric field region of the vacuum chamber and emit a characteristically colored glow in the visible spectrum.

3,090,113
FORMING OF METALS
John Karpovich, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Filed Nov. 17, 1960, Ser. No. 69,895
6 Claims. (Cl. 29—421)



1. A method of forming metals which comprises; immersing a mold within a liquid medium, positioning adjacent to said mold in said liquid medium a metal to be formed, said liquid medium being substantially unreactive with the metal to be formed and the mold and said liquid not being affected adversely by a projectile passing at high speed therethrough, passing a projectile through said liquid within said mold and in the vicinity of said metal being formed, said projectile passing through said liquid near the face of said metal opposite that facing said mold, said projectile moving through said liquid at a velocity which produces a high energy shock front in said liquid along with cavitation of the liquid behind the moving projectile and at such a distance from said metal being formed whereby said metal is forced into contact with said mold and thereby deformed in a predetermined manner by said contact with said mold.

3,090,114
METHOD OF MAKING A BRAKE DRUM
Charles W. Sinclair, Detroit, Mich., assignor to Kelsey-Hayes Company, Detroit, Mich., a corporation of Delaware
Filed Dec. 29, 1958, Ser. No. 783,490
5 Claims. (Cl. 29—447)



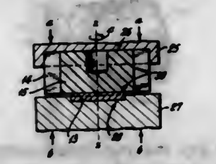
1. A method of assembling a brake drum liner and shell comprising the steps of providing an annular liner having first and second ends and a smooth cylindrical outer surface extending between said ends and having on said first end a series of circumferentially spaced radially extending locking formations projecting axially from said first end, providing a shell of a material softer than said liner including an annular flange having inner and outer ends and a smooth cylindrical inner surface extending between said ends thereof adapted to concentrically receive said liner in surface-to-surface contact with the cylindrical outer surface of said liner and also including a transverse web integrally connected to the inner end of said flange and having an annular surface extending radially inwardly from the inner surface of said flange, axially inserting the first end of said liner concentrically within the outer end of said flange in an axially inward direction relative to said flange by the application of pressure on said liner directed axially inwardly relative to said flange to place the cylindrical surfaces of said liner and flange in surface-to-surface contact and to place the locking formations on the first end of said liner in contact with the radially inwardly extending surface of the web of said shell, embedding said locking formations in the radially inwardly extending surface of the web of said shell by the further application of pressure on said liner directed axially inwardly relative to said flange to oppose relative rotation between said shell and liner, and upsetting the outer end of said flange to form an interlock with the second end of said liner and mechanically oppose axially outward movement of said liner relative to said flange.

3,090,115
METHOD OF INSTALLING GROMMETS
James C. Carr, Roanoke, Va., assignor to General Electric Company, a corporation of New York
Filed May 22, 1961, Ser. No. 111,618
1 Claim. (Cl. 29—450)



The method of installing a grommet having a cylindrical body with flexible flanges extending radially outwardly in parallel relationship from the ends thereof, into an aperture in material of thickness substantially equal to the distance between said flanges and of a diameter substantially equal to the external diameter of said cylindrical body, which comprises placing about said body a loop of cable having the ends extending through said aperture, placing a portion of the near flange through the aperture diametrically opposite the side of said body with the loop of cable therearound and the balance adjacent thereto, pulling the cable taut in an angular direction with respect to the plane containing said aperture to flex said near flange and body and to squeeze them through said aperture, moving the taut cable by sideways motion about the axis of the grommet along the periphery of the aperture to work more and more of the near flange through the aperture thereby relieving the flex of the near flange until said body portion at the side opposite the cable ends enters the aperture, and pulling the remaining part of the near flange through the aperture to release the cable, leaving the grommet installed in the aperture.

3,090,116
METHOD OF COLD BONDING METALLIC PARTS
Peter John Burgess, Winchmore Hill, London, England, assignor to The General Electric Company Limited, London, England
Filed Nov. 4, 1957, Ser. No. 694,311
1 Claim. (Cl. 29—470.1)



A method of cold pressure bonding two members having fractional surface areas adapted to engage one another in mutual mating relation, at least one of said areas being a surface of revolution in respect to a predetermined axis, said method comprising coating said areas with layers of indium, arranging said members with the coated areas in contacting relation, applying a bonding pressure to the contacting members of the order of 15 lbs. per square inch while simultaneously relatively rotating the members about said axis with a relative speed between said members of the order of one half revolution during two seconds.

3,090,117
METHOD OF BRAZING BERYLLIUM
Gale S. Hanks and Robert W. Keil, Los Alamos, N. Mex., assignors to the United States of America as represented by the United States Atomic Energy Commission
No Drawing. Filed Aug. 15, 1961, Ser. No. 131,686
2 Claims. (Cl. 29—494)

1. The process of joining together beryllium metal parts by a brazing process comprising the steps of dipping the beryllium portions to be joined into a molten bath of silver aluminum alloy, said alloy consisting of 65 to 75 percent silver by weight and the balance aluminum, and being at a temperature of 736° C. to 820° C. for 15 to 60 seconds, the said bath being covered with a molten layer of from about 50 to 70 percent lithium fluoride and from about 50 to 30 percent lithium chloride by weight, joining the beryllium pieces together under mechanical pressure and heating the parts to at least the melting temperature of the coating in an inert atmosphere to a temperatue of 700° C. for 10 to 15 minutes.

3,090,118
METHOD OF MAKING A COOKING VESSEL
Richard W. Hanzel, La Grange Park, Ill., assignor to Sunbeam Corporation, Chicago, Ill., a corporation of Illinois
Filed Apr. 16, 1959, Ser. No. 806,982
6 Claims. (Cl. 29—527)



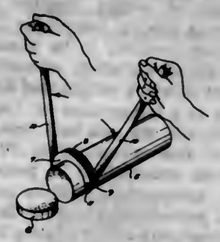
1. The method of making a laminated device, which comprises applying a strike of nickel to a face of a ferrous metal member, applying a plating of metal of the class consisting of tin, cadmium and silver to said strike of nickel, applying molten aluminum to said plating, and cooling the resulting assemblage to solidify said aluminum and fuse it with said bonding metal.

3,090,119
ELECTRIC DRY SHAVER
Ivar Jepson, Oak Park, Ill., assignor to Sunbeam Corporation, Chicago, Ill., a corporation of Illinois
Filed Oct. 22, 1959, Ser. No. 848,102
11 Claims. (Cl. 30—41)



1. An electric dry shaving device comprising a casing defining a motor chamber therein, a motor in said motor chamber, said casing comprising walls extending above said motor chamber and defining a space therebetween, a cutting head receivable between said walls within said space, means extending through an opening in said motor chamber operatively relating said motor and said cutting head, sealing means for said opening, means including a head retainer spring for maintaining said sealing means in position, said head retaining spring releasably holding said cutting head in position, hair retainers for closing the ends of the space between said walls, and means for simultaneously holding said means including said head retainer spring in position and for pivotally supporting said hair retainers.

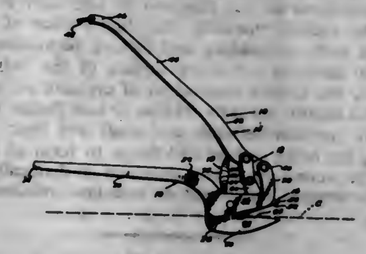
3,090,120
LOG INCISING DEVICE
Vernon W. Conrad, 14512 Edgewater Lane, Seattle, Wash.
Filed Aug. 28, 1961, Ser. No. 134,277
3 Claims. (Cl. 30—165)



1. A device for incising round logs comprising an arcuate central link means having an inner surface for fitting crosswise on a surface portion of a log; two pivot means, each disposed on an end portion of said central link means; two lever means each carried by one of said pivot means to move in a direction crosswise of the log, each of said levers being an integral unit of a relatively long handle means on one side of said pivot means and a relatively short blade means on the other side of said pivot means, said blade means being of a length to make relatively shallow incisions into a log.

3,090,121
HEAVY DUTY SHEARS
Louis Chonka, Port Colbourne, Ontario, Canada, assignor of one-fourth to August Szabo, Port Colbourne, Ontario, and one-fourth to Gustav Z. Szabo, Guelph, Ontario, Canada
Filed Jan. 23, 1962, Ser. No. 168,207
1 Claim. (Cl. 30—251)

Heavy duty shears for cutting sheet metal and the like comprising a fixed, elongated lower jaw having an inner vertical surface and an upper cutting edge in the plane of said inner surface and substantially along the length thereof, said lower jaw including a rear support portion offset laterally across the plane of said inner vertical surface and including a connecting portion having an upper surface substantially level with said cutting edge, said rear support portion further including an elongated handle portion extending rearwardly therefrom and disposed at a higher elevation than said upper cutting edge, said rear support portion including a forwardly extending portion having an inner vertical thrust surface parallel to said inner vertical surface of said fixed jaw and spaced therefrom and extending substantially the length of said cutting edge, said forwardly extending portion forwardly terminating in an upwardly extending forward support portion, a force-transmitting lever terminally connected on a transverse pivot axis on said forward support portion and including a rear handle portion overlying said



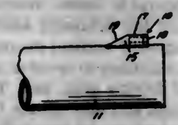
first-mentioned handle portion of said fixed jaw, a displaceable jaw movably interposed in a vertical plane between said fixed jaw and said forwardly extending support portion and connected on a transverse pivot axis on said rear support portion, said displaceable jaw having an inner vertical surface and a lower cutting edge in the plane of said inner vertical surface thereof wiping the inner vertical surface of said fixed jaw, said displaceable jaw further having an outer vertical thrust surface parallel to said inner vertical thrust surface of said forwardly extending portion for bearing thereagainst in a cutting operation, and a force-transmitting link connected between said force transmitting lever and said displaceable jaw on transverse pivot axes rearwardly of said pivot axis of said force-transmitting lever and forwardly of the transverse pivot axis of said displaceable jaw, respectively.

3,090,122
DENTAL APPLIANCE
Norman R. Erickson, 824 Point San Pedro Road, San Rafael, Calif.
Filed Jan. 18, 1961, Ser. No. 83,478
11 Claims. (Cl. 32—33)



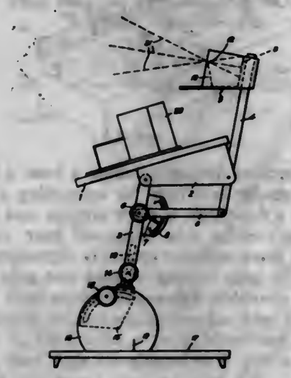
1. A dental appliance for collecting and removing liquid and debris from the mouth of a patient during the conduct of dental operations therein: comprising a flexible, waterproof receptacle adapted to fit within the side of the mouth and having a central depressed portion on the upper side thereof for receiving liquid and debris from above said receptacle, drain means connected to said receptacle and communicating with said central portion for draining liquid and debris therefrom, and apertures at the underside of said receptacle communicating with said drain means for draining liquid from the mouth beneath said receptacle.

3,090,123
SHOTGUN SIGHT
Frank A. Barnes, P.O. Box 1352, Missoula, Mont.
Filed June 10, 1958, Ser. No. 741,035
1 Claim. (Cl. 33—52)



A gun sight comprising a body secured to the forward end of a shotgun, said body having a flat top surface of a width to subtend a width at normal range corresponding to approximately one-third the diameter of the shotgun pattern at such range when projected to the target, said body having a downwardly and rearwardly sloping planar rear face from the flat top surface of said sight to the bottom thereof and of the same width throughout for collecting and reflecting light therefrom, and resulting also in an appearance of thickness or elevation of the sight itself that helps to get on target quickly and facilitate leads.

3,090,124
HELIODON
Gershon Frühling, Sdeh Nechemjah (Huiloth), Mobile Post, Upper Galilee, Israel
Filed Sept. 26, 1961, Ser. No. 140,846
Claims priority, application Israel Oct. 7, 1960
4 Claims. (Cl. 33—61)



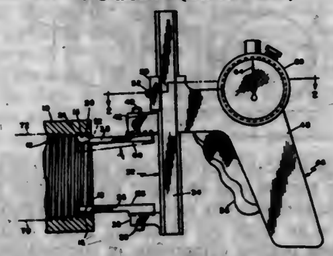
1. A heliodon comprising a model-support platform which is pivotally articulated to a support shaft so as to be pivotable about a first horizontal axis, the support shaft being journaled for rotation about its own axis on a member articulated to a base so as to be pivotable about a second horizontal axis, sundial and declination gnomons articulated to the shaft in fixed relative postiion so that the sundial gnomon remains always to be directed parallel to the shaft, sundial and declination scales articulated to said shaft in fixed relationship to their respective gnomons and a latitude scale articulated to said shaft associated with a pointer articulated to the platform for indicating the inclination of the platform with respect to the shaft.

3,090,125
CYLINDER LINER BORE GAUGE
Leander J. Krodel, Westmont, Ill., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Aug. 3, 1960, Ser. No. 47,262
2 Claims. (Cl. 33—143)



2. A measuring device comprising an elongated base member and an adjustable rod pivotally connected thereto, adjusting means to shorten and increase the length of said rod, means operable to move said rod relative to said member including a gear segment secured to one end of said rod and having its center located at the pivotal point of the pivotal connection between said rod and member and a worm gear meshing with said gear segment mounted on a shaft journaled in the length of said member, said shaft having an operating handle fixed thereto at the end of said shaft opposite said gear, and means to adjust the length of said rod comprising a rotary driving train adapted to extend generally along the length of said base member and including a finger-operated sleeve, a pinion having a driving shaft connected thereto, a pair of universal couplings and a telescoping solid and hollow shaft joint interposed between said couplings, one of said couplings connecting the train to said finger-operated sleeve and the other to said pinion driving shaft to drive said pinion, and a gear in meshing engagement with said pinion and which is internally threaded and has one end of said rod threaded therein.

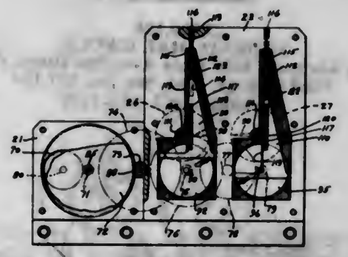
3,090,126
THREAD DIAL GAUGE
John Kernoski, 5411 Gala Ave., San Diego, Calif.
Filed Sept. 11, 1961, Ser. No. 137,153
4 Claims. (Cl. 33—149)



1. A device for checking the pitch diameter of internal and external threads that have diametrically oppositely positioned crests and troughs having sides sloped at a given angle, comprising in combination:
- a slider comprising a pair of spaced apart parallel guide bars of trapezoidal cross section;
- a bracket mounted between said bars at one end of it to space said bars apart;
- a first invertably positionable arm mounted on said bracket;
- a first thread-meshing element mounted at the end of said first arm, said element comprising a cone having its sides at said given angle, and having its top flattened off, whereby said conical thread meshing element will fit snugly into a trough of said thread without bottoming therein;
- a pistol-grip arrangement having a frame having grooves that space and guide said guide bars;

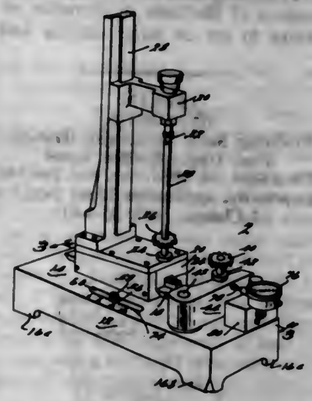
a clamp plate having grooves that space and guide said guide bars;
a single locking screw means for locking together said clamp plate, said guide bars, and said frame;
a finger trigger pivotally mounted on said frame and enclosed by said pistol-grip arrangement, said trigger having convolutions for fitting at least one finger of the hand, said trigger terminating in a lever at the other end thereof, and carrying an actuating bar adjacent said trigger end;
a second invertably positionable arm mounted on said lever;
a second thread-meshing element mounted at the end of said second arm, said second element comprising a sloping side structure whose inner surfaces are at said given angle to mesh with the crest of said thread, and whose outer surfaces are at an angle not to unduly mesh with said thread, the upper portion of said structure being flattened to prevent bottoming in said thread, said second thread-meshing element being arcuate to better mesh with the crest of said thread, whereby said thread-meshing elements may be positioned to mesh with internal and external threads, and said second element may have a limited movement controlled by the movement of said trigger;
a dial indicator having an actuating pin; and means for mounting said indicator on said frame with said actuating pin in contact with said actuating bar of said trigger.

3,090,127
ANGLE INDICATOR IN COMBINATION WITH SINE BARS AND THE LIKE
Primitivo E. Goyeneche, 5505 Inglewood Blvd., Los Angeles, Calif.
Filed Sept. 30, 1958, Ser. No. 764,344
2 Claims. (Cl. 33—174)



1. An angle indicator for sine bars and the like having a lower base portion and an upper plate portion hinged thereto at one end whereby said upper plate portion may be disposed at an angle not exceeding ninety degrees to said lower base portion comprising, in combination:
a first driving gear;
means connecting said upper plate and said first driving gear;
a moving degree pointer actuated by said driving gear;
a fixed full circle dial associated with said degree pointer, said dial being graduated in degrees and selected fractions of a degree from 0° to 90°;
a train of gears driven by said first driving gear;
a first cam plate adapted to be driven by one of said train of gears, said cam plate bearing a radially adjustable cam roller;
an inverted T-rack plate adapted to move vertically in response to the rotary motion of said cam roller;
a pinion driven by said T-rack plate;
a minute indicating pointer actuated by said pinion, said pointer making exactly one revolution in one direction for the downward vertical movement of said T-rack plate and exactly one revolution in the reverse direction for the upward vertical movement of said T-rack plate;
a fixed full circle dial associated with said minute indicating pointer, said dial being graduated to read from 0 to 30 minutes and selected fractions of minutes for the one revoluton of the pointer in the one direction and from 30 to 60 minutes for one revolution of the pointer in the reverse direction;
means comprising said radially adjustable cam roller for adjusting the vertical movement of said T-rack plate so that the minute indicating pointer will make only one complete revolution in either direction; and automatically operable detent means associated with said T-rack plate for detaining said T-rack plate at the limit of its upward vertical movement whereby as said cam plate continues to revolve in response to the rotation of said driving gear, said T-rack plate, said rack driven pinion, and said minute indicating pointer may be held motionless and manually operated means for releasing said detent means.

3,090,128
GEAR CHECKING FIXTURE
James K. Pappas, 28274 Thornybrae, Farmington Township, Oakland County, Mich.
Filed July 1, 1959, Ser. No. 824,384
3 Claims. (Cl. 33—179.5)

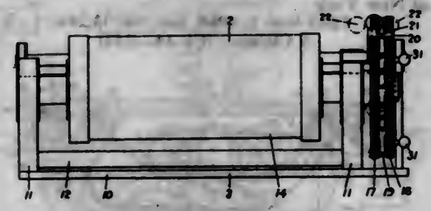


1. A gear checking fixture including a base, a first gear supporting means on said base for supporting a gear for rotation about a fixed axis, a pivot arm on said base pivotable about a vertical axis, a second gear supporting means on said pivot arm for rotatably supporting a gear in mesh with the gear carried by said first gear supporting means, a pivotable bar supported by said base beneath said first gear supporting means for pivotal movement about a horizontal axis, a lever fixed to said bar, a weight adjustably positionable on said lever, an arm extending from said bar, an arm depending from said pivot arm, and elongated means interconnecting said arms whereby said pivot arm will be pulled toward said first means with a predetermined force in accordance with the position of said weight on said lever.

3,090,129
APPARATUS FOR USE IN SETTING UP PRINTING MACHINERY
Guthrie William Gifford, 136 Thornhill Road, Streetly, Warwickshire, England
Filed Aug. 4, 1960, Ser. No. 46,632
Claims priority, application Great Britain Aug. 17, 1959
3 Claims. (Cl. 33—184.5)

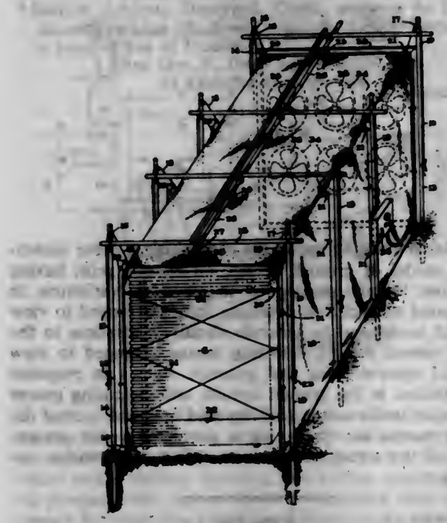
3. For use in setting up printing machinery, apparatus comprising in combination a base, a printing element-

support member rotatably mounted on said base, a disc secured coaxially to said support member, and provided with a circumferentially extending scale, a fixed indicator which serves in conjunction with said scale for measuring the angular displacement of said support member from a datum position, an elongated guide mounted on, and rotatable about, an axis parallel to the rotation axis of said support member, a bracket slidably mounted on said elongated guide, clamping means for releasably securing said bracket in any desired position on said elongated guide, a pair of toothed wheels secured coaxially to said



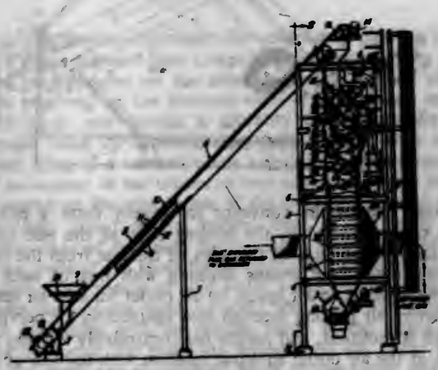
support member so as to be rotatable therewith, and a pair of toothed segments which are pivotally mounted on a fixed axis, and which are respectively engageable with said toothed wheels for retaining said support member in desired positions, the teeth of one of said toothed wheels being out of alignment with the teeth of the other of said toothed wheels, and said toothed segments being rigidly interconnected and arranged so that when either of said toothed segments is in engagement with one of said toothed wheels, the other of said toothed segments is out of engagement with the other of said toothed wheels.

3,090,130
LUMBER DRYING APPARATUS
Samuel Carlton Smith, Memphis, Tenn., assignor to Fan-Air Systems, Inc., Memphis, Tenn., a corporation of Tennessee
Filed June 30, 1959, Ser. No. 823,892
1 Claim. (Cl. 34—50)



In an installation for the preliminary drying of green lumber down to a moisture content of about 20%, an enclosure comprising a roof, side walls and an end wall open at its one extremity opposite to said end wall to the atmosphere, a parallel series of equally spaced fan means mounted in said end wall opposite to said open extremity designed to pull atmospheric, unheated air into and through said enclosure and through a stack of lumber disposed therein and exhaust it to the atmosphere outwardly of said end wall, motors for said fan means mounted in said end wall, a circuit means for controlling said motors including a high level humidostat set to break said circuit to said motors when atmospheric humidity reaches about 90% whereby unheated atmospheric air of up to 90% relative humidity will be pulled uniformly and at uniform velocity through said lumber stack while atmospheric humidity remains below 90%, regardless of atmospheric temperature.

3,090,131
APPARATUS FOR DRYING COMBUSTIBLE SOLID
Clifford W. Waterman, Jr., Pittsburg, Kans., assignor to Gladys Elizabeth Dunkle as administratrix of the estate of Wesley Earl Dunkle
Filed Oct. 28, 1959, Ser. No. 849,280
6 Claims. (Cl. 34—171)

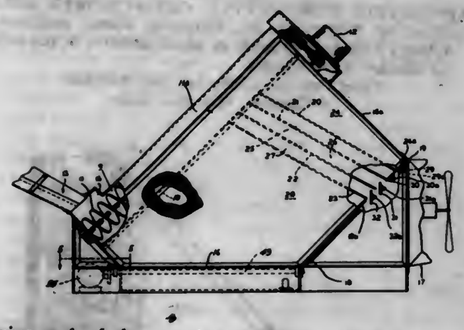


1. Apparatus for drying moisture containing combustible solids comprising an enclosed tower having an inlet at the top and an outlet at the bottom, an upwardly directed conduit having an inlet for solids near the bottom and an outlet for solids at the top communicating with the inlet to the tower, means to elevate solids to the top of the upwardly directed conduit, means forming a zigzag flow path for solids through the tower from the tower inlet to the tower outlet so that a mass of solids moving along the flow path will be caused to reverse its travel direction and expose a different mass surface at each direction change in the path, infra red generators mounted along the flow path in positions to act upon the solids after direction change of the mass to heat the solids and generate steam in the tower to fill the tower and conduit, an outlet for steam communicating with the conduit at a level below the outlet from the tower, and a steam recycling line connected into the tower adjacent the inlet end and adjacent the outlet end to permit flow of steam from the tower adjacent the inlet end to the tower adjacent the outlet end.

3,090,132
COFFEE COOLING STRUCTURE
Leon J. Nowak, Jr., Park Ridge, and Daniel Kerwin, Lombard, Ill., assignors, by mesne assignments, to B. G. Gump Co., a corporation of Illinois
Filed Oct. 13, 1958, Ser. No. 766,823
24 Claims. (Cl. 34—174)

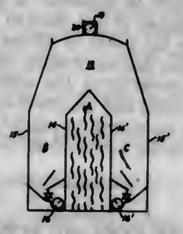
21. In a structure for cooling varying sized batches of granular materials and the like, a material receiving cooling chamber having a bottom formed and adapted to support, in a position of rest, a substantial body of the particles to be cooled, said chamber having generally parallel, generally upright air pervious side walls separated by a distance substantially less than the length and width of

said walls, whereby a space is provided in said cooling chamber for a relatively thin, generally vertical mass of particles to be cooled, a conveyor extending along an upper edge of the cooling chamber defined between said upright walls, means for delivering particles to be cooled to one end of said conveyor, means actuating said conveyor and for thereby conveying the material above the space between said air pervious walls, said conveyor being angled upwardly at an angle approximating the angle of repose of the material to be cooled to discharge the particles substantially throughout its path, thereby to fill first the parts of the cooling chamber nearest the particle re-



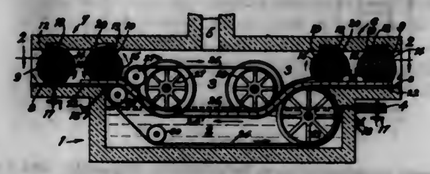
ceiving end of the conveyor to thereby form a pile in the cooling chamber, the leading edge of the pile lying on the opposite side of the apex of the pile from the conveyor, other wall means defining with one of said air pervious walls an air space, an air outlet for said air space whereby air passing through said upstanding air pervious walls is removed, and means for controllably varying the size of the air outlet in direct relation with the size of the pile of material in the chamber between predetermined maximum and minimum heights, to thereby insure passage of air through the pile irrespective of the size of the pile.

3,090,133
GRAIN BIN
Charles M. Kline, Joanna, Harry J. Hofmeister, Jr., New Holland, William Hobbs, Jr., Lancaster, and Albert M. Best, New Holland, Pa., assignors to Sperry Rand Corporation, New Holland, Pa., a corporation of Delaware
Filed Feb. 24, 1960, Ser. No. 10,617
8 Claims. (Cl. 34—174)



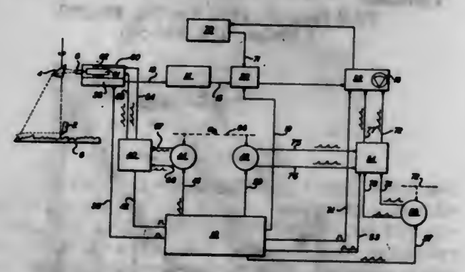
1. A grain bin comprising a vertically extending perforated air inlet wall, a vertically extending perforated air outlet wall spaced from said air inlet wall, said walls confining a column of grain therebetween, a first bottom wall extending downwardly and inwardly from said air inlet wall, a second bottom wall extending downwardly and inwardly from said air outlet wall, said bottom walls supporting said grain column thereabove and defining a discharge passage for withdrawal of grain from the bottom of said column, and a baffle plate mounted above first bottom wall and spaced from said air inlet wall, said baffle plate extending downwardly and inwardly from adjacent said air inlet wall in the same general inward direction as said first bottom wall and converging downwardly therewith to retard the downward movement of that portion of the grain column overlying said first bottom wall when grain is withdrawn through said passage.

3,090,134
GAS LOCKS
Willard L. Morrison, Lake Forest, Ill., assignor to Liquefreeze Company, Inc., New York, N.Y., a corporation of New York
Filed June 1, 1960, Ser. No. 33,204
5 Claims. (Cl. 34—242)



1. A gas lock including a chamber open at both ends having a smooth floor along which solid objects may travel into, through and be discharged from the chamber, a rotating brush closing each end of the chamber, the bristles thereof being in contact at their free ends with said floor and being free to yield to permit passage of solid objects along the floor while maintaining sealing contact therewith.

3,090,135
LAND MASS SIMULATOR
Robert M. Eisenberg, Rockville, Md., assignor to ACF Industries, Incorporated, New York, N.Y., a corporation of New Jersey
Filed Apr. 7, 1959, Ser. No. 804,755
8 Claims. (Cl. 35—10.4)

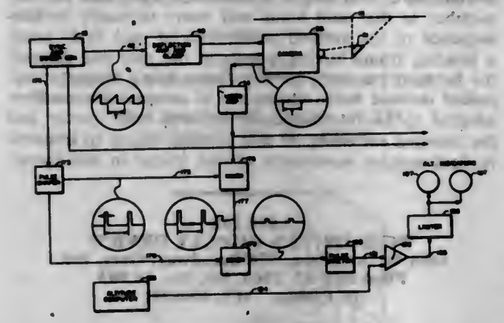


4. Radar training apparatus comprising a three dimensional model of ground terrain, an opaque print having variations thereon analogous to elevation variations in the ground terrain, first detecting means arranged to view the said model and to generate signals in response to the scene viewed, second detecting means arranged to view the said opaque print and generate signals in response to variations in the ground terrain, and indicating means responsive to the outputs of the said first and second detecting means for displaying a simulated radar presentation of the scene viewed as modified by elevation variations.

3,090,136
RADAR ALTIMETER SIMULATOR
George R. Sowter, Silver Spring, and Robert M. Eisenberg, Rockville, Md., assignors to ACF Industries, Incorporated, New York, N.Y., a corporation of New Jersey
Filed Apr. 7, 1959, Ser. No. 804,756
3 Claims. (Cl. 35—10.4)

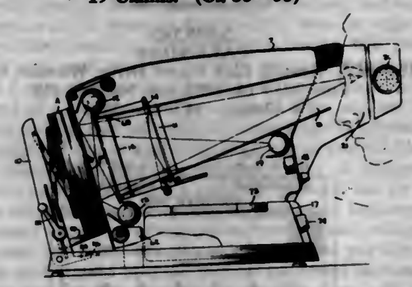
3. In a flight simulator having means for computing the altitude of a simulated aircraft, radiation altimeter

simulation apparatus comprising a photographic plate having two dimensional ground elevation information stored thereon, a vidicon camera positioned to view the said photographic plate and movable in a plane parallel to the plane of the photographic plate so that various portions of the plate may be viewed by the camera, means for sampling a portion of the video signal from the vidicon camera representative of an aircraft's position, rectifying means for generating a D.C. potential proportional to the amplitude of the sampled video signal, means responsive



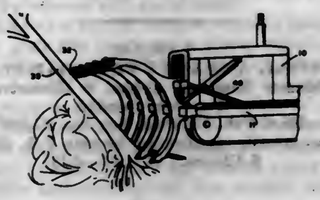
to said computing means for generating a D.C. potential analogous to the distance between the simulated aircraft and a datum line of the ground elevation, said latter potential being of opposite polarity from the former, summing means for electrically adding the two oppositely polarized potentials to yield a resultant potential which is analogous to the distance between the said simulated aircraft and the ground elevation, and indicating means having the appearance of a radiation altimeter for indicating the distance between the said simulated aircraft and the ground elevation.

3,090,137
TEACHING AID APPARATUS
Manfred Asrican, Stamford, Conn., assignor to International Teaching Machine Corporation, New York, N.Y., a corporation of Delaware
Filed Dec. 7, 1961, Ser. No. 157,691
19 Claims. (Cl. 35—35)



1. A teaching aid comprising, in combination, a viewing surface upon which written matter may be presented, means for presenting said written matter on said surface, blind means initially covering said written matter adapted to progressively expose to view successive lines thereof, means for recording matter read aloud by the viewer from said written matter exposed by said blind means, means for returning said blind means to its initial position, first control means for permitting said blind means to repeat its cycle one or more times, means for audibly reproducing said recorded matter, second control means for actuating said sound reproducing means at the same time as said blind means begins a repeat cycle, whereby the operator hears the recorded sound coincidentally with the exposure of the written matter corresponding thereto.

3,090,138
VEGETATION HARVESTER
Earl Austin Dudley, P.O. Box 41, Angleton, Tex.
Filed Oct. 26, 1961, Ser. No. 147,789
7 Claims. (Cl. 37—2)



3. A vegetation harvester for completely clearing land in a single forward pass comprising a tractor having pivoted pusher arms on the sides thereof, a toothed blade unit mounted on the forward ends of said pusher arms, said blade unit having a plurality of substantially C-shaped teeth of approximately half a circle with each tooth lying in a vertical plane extending in the direction of movement of the tractor, a tree engaging pusher blade mounted on the upper ends of the teeth and located substantially ahead of the bottom ends of the teeth, the lower ends of the teeth being spaced rearwardly of the upper ends of the teeth by substantially two-thirds of the radius of curvature of said teeth, a cutting blade on the lower ends of the teeth whereby the blade unit engages tall vegetation with the pusher blade at the upper end and thereafter the roots are engaged by the lower ends of the teeth and the cutting blade at the lower ends of the teeth completely severing the vegetation from the earth.

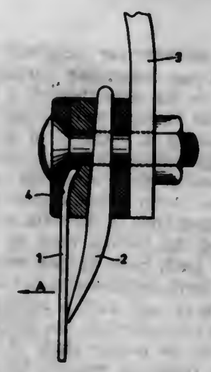
3,090,139
TWO-WHEELED SCRAPER
James E. Hancock, % Hancock Manufacturing Company, P.O. Box 1359, Lubbock, Tex.
Filed Oct. 5, 1961, Ser. No. 143,114
10 Claims. (Cl. 37—8)



2. In a scraper for attachment to a tractor having a hitch and a power take-off, the combination of, a frame with an open front dirt collecting box on said frame, said frame having side members and said box having a rear end and a cross member at its forward end, wheel supports for said frame, means carried by said frame pivotally mounting said frame for tilting movement in a vertical plane, said box having side walls and a fixed bottom plate between the side walls spaced from the rear end of the box leaving an opening in the box rearwardly of said plate, a door for closing said opening, means swingingly mounting said door on said side walls of the box, a scraper blade extending transversely of the dirt collecting box adjacent the forward edge of said bottom plate, a conveyor mounted on said frame for moving dirt from said scraper to said dirt collecting box, wing members secured to the outer ends of said cross member and said side walls forwardly of said blade, said wing mem-

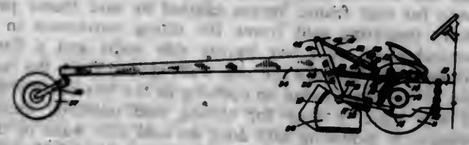
bers having a moldboard and a cutting blade on the lower portion thereof extending at an angle forwardly at their outer ends, means for adjusting the vertical position of said cutting blade with respect to the scraper blade, fluid operated means for tilting said frame to lower said scraper blade to digging position and to raise the same to dirt transporting position, and fluid operated means for swinging said door to open and close the said door opening in the bottom of said box, means operable by the power take-off of the tractor for rotating said conveyor.

3,090,140
SCRAPING ASSEMBLY FOR ROAD PLANER
Valdemar Emanuel Trana, 9 Gjuterivagen, Fagersta, Sweden
Filed Feb. 27, 1961, Ser. No. 92,059
Claims priority, application Sweden Feb. 29, 1960
5 Claims. (Cl. 37—143)



1. A road-planer blade assembly comprising a planer blade, a resilient scraper blade having a curved upper edge portion, means mounting the said upper edge portion of said scraper blade on said planer blade, said mounting means having a recess bounded at its inner portion by surfaces curved similarly as the upper edge portions of said scraper blade and said upper portion of said scraper blade being accommodated in said recess and being retained therein by said curvature of its upper edge portion and of the inner portion of the walls of said recess, and a rigid backing support mounted on said planer blade and extending downwardly in rear of said scraper blade and freely engaging the back face of said scraper blade.

3,090,141
LAND LEVELING ATTACHMENT FOR TRACTORS
Lawrence E. Shumaker, Denver, Colo., assignor to The Eversman Mfg. Company, Denver, Colo., a corporation of Colorado
Filed May 12, 1961, Ser. No. 119,764
8 Claims. (Cl. 37—180)



1. An earth moving implement for a tractor comprising: a pair of draft arms; means for securing said draft arms to said tractor in vertically-movable, rearwardly-extending, spaced-apart relation; a scraper blade; a pair of tongue members fixedly mounted on and extending forwardly from said scraper blade; a substantially-straight, elongated hinge shaft mounted on and extending transversally between said tongue members substantially parallel to said blade with its extremities projecting oppositely outward from said tongue members; said draft arms being removably connected to the extremities of said hinge shaft; an elongated fulcrum member; means attaching the extremities of said fulcrum member to said draft arms so that it will extend horizontally therebetween parallel to and forwardly of said hinge shaft, the forward extremities of said tongue members engaging said fulcrum member so that said blade will move vertically in consequence of the vertical movements of said draft arms; a leveling frame having wheels at the rear end thereof, the forward extremity of said frame being hingedly supported on said hinge shaft; and a compression member adapted to be interconnected between said tractor and the forward extremity of said leveling frame to transmit vertical angular movements of said tractor to said frame.

3,090,142
WIND-DRIVEN DISPLAY DEVICE
John W. Anderson, 578 Broadway, Gary, Ind.
Filed July 22, 1960, Ser. No. 44,803
10 Claims. (Cl. 40—39)



1. A wind-driven display device comprising a frame, a shaft rotatably mounted in said frame, a pair of intersecting vanes loosely mounted on said shaft, said vanes having outward end portions formed to enable the vanes to be rotatably driven by the wind, and a pair of mounting brackets secured on said shaft and adapted to receive opposite axial end portions of said vanes for fixedly maintaining said vanes in a first position relative to the shaft and to each other, at least one of said mounting brackets being axially adjustable with respect to said shaft whereby both vanes are free for manual pivotal manipulation to a second relatively fixed position with respect to each other and with respect to the shaft.

3,090,143
CALENDAR
Harold G. Arnold, 1201 Forest Drive, Wooster, Ohio
Filed May 16, 1961, Ser. No. 110,412
4 Claims. (Cl. 40—119)



3. A calendar comprising a stiff back cover, a plurality of flexible calendar sheets, a stiff front cover, hinge means securing the sheets and covers together along their upper edges, and a support bar for supporting the calendar on a horizontal surface, said bar having a substantially central longitudinal groove receiving the lower edge of the front cover and supporting it in substantially vertical position after it has been swung around the hinge means almost a full 360 degrees, said bar having a tilted back front edge flatly engaging the lower edge of the back cover of the calendar which back cover is of greater dimension vertically than the calendar sheets and front cover whereby the support bar holds the calendar as an inverted V with the unexpired calendar sheets tilted back slightly from the vertical and free to be turned over one by one as they expire.

3,090,144
DISPLAY DEVICES AND STRUCTURES
Simon Malamuede, 10 Monroe St., New York 2, N.Y.
Filed July 7, 1960, Ser. No. 41,379
5 Claims. (Cl. 40—124.1)



1. A display device comprising, in combination, a base panel and a cover panel hingedly connected together for selective movement between an open and closed position, a display panel, and an operating mechanism carried upon said base panel supporting said display panel for movement between a folded position between said base and cover panels and an erect position upstanding from said base panel in response to movement of said cover panel to said open position, wherein said operating mechanism comprises a substantially hollow prism having two pairs of sides hingedly connected together for selected movement between a collapsed position of one pair of sides upon the other and an erect hollow parallelopipedon form, a single one of said sides being secured upon said base panel, stop means limiting movement of said sides beyond said erect position from said collapsed position, and yieldable means acting between diametrically opposite edges of said parallelopipedon form yieldably urging said prism toward said erect position, wherein said stop means comprises a pair of tabs one hingedly carried at one edge by one end of a single side of one pair of sides, and another edge of each of said pair of tabs being hingedly connected to an adjacent one of said sides, each one of said tabs having a diametrical fold line defining a pair of triangular portions movable between a collapsed position one on top of the other and an axially aligned position in response to movement of said parallelopipedon between said collapsed and erect positions, whereby said triangular portions of tabs in said aligned position prevent continued movement of said prism beyond said erect position from said collapsed position.

3,090,145
SLIDE FRAME
Gerhard Geyke, Gutschstrasse 5, Berlin-Waidmannslust, Germany
Filed Sept. 19, 1961, Ser. No. 139,279
Claims priority, application Germany Sept. 23, 1960
2 Claims. (Cl. 40—152)

1. A two-part mounting device for diapositives comprising in combination

(*a*) a substantially rectangular frame plate and a conformingly shaped cover plate adapted to be slidingly pushed over the frame plate into an assembled position with their inner surfaces facing each other;

(*b*) a guide ledge on each of the parallel lateral borders of the frame plate to slidingly guide the cover plate into and out of said assembled position, and a sealing ledge on one of the transverse borders of the frame plate, said ledges projecting from the inner surface of the frame plate forming a U-shaped unit, and said sealing edge abutting in said assembled position the forward edge of the cover plate first entering between said guide ledges;

(*c*) a first and a second window centrally located in the frame plate and in the cover plate, respectively, and registering in said assembled position of said plates;

(*d*) an assembly of four rectangularly arranged contact rails projecting from the inner surface of the frame plate and comprising two lateral rails extending parallel to said guide ledges, a lower rail opposite to and parallel to said sealing edge and an upper rail, said assembly surrounding said first window and dimensioned to accommodate the diapositive and at least one protective glass plate;



(*e*) a reinforcing ledge projecting from the inner surface of the frame plate substantially along the other border thereof;

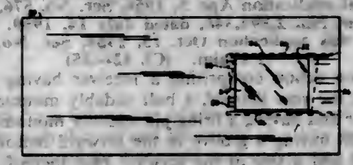
(*f*) an elongated convex and substantially dome-shaped step projecting from the inner surface of the cover plate near its forward edge and adapted to snap between said sealing ledge and said lower rail in said assembled position;

(*g*) two spaced locking members projecting from the inner surface of the cover plate and adapted to snap in said assembled position between said reinforcing ledge and said upper rail;

(*h*) an elongated slot adapted to receive a finger nail entering the inner surface of the cover plate, said slot located intermediate said locking members and opposite and parallel to said reinforcing ledge;

(*i*) and a recess in said reinforcing ledge giving access to a finger nail to enter said slot and to withdraw the cover plate from said assembled position.

3,090,146
RECORD CARD
Robert Beispel, Miami Beach, Fla., assignor to Cavus Manufacturing Corporation, South Bend, Ind., a corporation of Indiana
Filed Jan. 14, 1960, Ser. No. 2,447
7 Claims. (Cl. 40—158)



1. A laminated mounting card and film combination, comprising two layers of paper material of rectangular shape, a vinyl heat regenerating adhesive securing said layers together throughout with the exception of a portion forming a film receiving cavity, said cavity extending in-

wardly from one end of the card and having parallel upper and lower edges flaring outwardly near the edge of said card and an inner edge slanting between two and ten degrees from a line perpendicular to said parallel edges, the portion of one of said layers forming a wall of said cavity being substantially flat and the portion of the other of said layers forming a wall of said cavity being bulged slightly outwardly from said end of the card inwardly, said layers having rectangularly shaped viewing windows in the portions forming the walls of said cavity spaced inwardly throughout from the edges of said cavity to form a continuous frame, and a section of film seating in said cavity having parallel upper and lower edges and an edge at an angle corresponding to the angle of the inner edge of said cavity.

3,090,147

ELECTRICALLY INSULATED FRINGE FINGERS FOR MAKING CHRISTMAS TREE BRANCHES AND METHOD

Samuel P. Crane, 1 Warwick Road, Great Neck, N.Y.

Filed Nov. 18, 1960, Ser. No. 70,165
12 Claims. (Cl. 41—15)



1. A composite decorative fringe comprising
a flexible transversely slitted electrically insulating strip having
a series of transverse cuts therein extending from one side edge of the strip toward the opposite side edge and forming an insulating fringe having separable insulating fringe fingers, each finger constituting the insulating material between a pair of said transverse cuts,
the remaining part of the strip constituting a continuous spine, and
a series of metallic foil fingers each having
an end portion secured to and of the same width as and movable as a unit with a fringe finger of the insulating strip,
the remainder of each foil finger constituting a metallic extension of the insulating fringe finger and being bendable therewith as a unit to form a complete composite finger longer than the metallic extension and having a total length consisting of the combined lengths of the metallic extension and the insulating fringe finger.

3,090,148

BOLT ACTION FIREARM WITH CHARGER

Walter H. B. Smith, Van Dorn Hotel, 150 W. 58th St., New York, N.Y.

Original application Apr. 5, 1956, Ser. No. 576,275, now Patent No. 2,894,346, dated July 14, 1959. Divided and this application Oct. 15, 1958, Ser. No. 767,358
1 Claim. (Cl. 42—25)

A gun action comprising a receiver having a breech plug at the rear thereof, a bolt slidably mounted in said receiver and having a firing pin slidably mounted therein, said bolt having a groove in the forward bottom portion thereof and a slot in the forward face thereof, a trigger housing attached to said receiver, a hammer pivotally mounted in said trigger housing for movement into engagement with said firing pin, and a pair of guide rods extending from said plug into recesses in said bolt, said guide rods being on both sides of said hammer when said hammer engages said firing pin, a pair of coil springs mounted over said rods and urging said bolt forward, an ejector mounted on said receiver, said ejector having a flat portion engaged in a longitudinally extending slot in said receiver wherein said flat portion acts to prevent rotation of said bolt within said receiver, extractor means which consists solely of a single extractor mounted in said bolt and having an extractor finger resiliently urged toward the center line of said bolt, a barrel collar mounted in said receiver in engagement with said bolt when said bolt is in its forwardmost position, said receiver having a forward face surrounding said collar, a barrel having a reduced diameter portion received into said collar, said extractor extending forward from said bolt and being received in a slot in said barrel and barrel collar when said



bolt is in its forwardmost position, said barrel collar including a cartridge guide receivable in said groove in the forward bottom portion of said bolt, a magazine removably attached to the underside of said receiver and extending into said receiver in engagement with the side walls of a slot in said bolt whereby said magazine contains said bolt against rotation in said receiver and the forward feeding of cartridges from said magazine occurs completely within said bolt, elongated charger means extending longitudinally of and slidably mounted in said receiver, said charger means having a portion projecting longitudinally out of said forward face of said receiver adjacent said collar, and means at one end of said charger means for engaging said slot in the forward face of said bolt when said gun is charged.

3,090,149

FIREARM EXTRACTOR

Rémy Michel Pierre Marias, Paris, France (% Adjudant Marias, Armurerie de garnison d'Orange, Orange, Vaucluse, France)

Filed July 1, 1960, Ser. No. 40,405
Claims priority, application France July 3, 1959
1 Claim. (Cl. 42—25)



In a firearm for exploding a cartridge, said firearm being of the rim-firing type comprising a firing chamber, a firing pin, and a breech bolt, the combination comprising a rigid extractor pivotally mounted on said breech bolt for movement between an active position in which it projects into said firing chamber to catch over the rim of a cartridge therein, and an inactive position in which it is clear of said chamber and rim, and percussion means movable between an inactive position and a firing position in which it drives said firing pin against the rim of said cartridge, said extractor being resiliently biassed toward its inactive position and provided with means for manually swinging it about its pivot into its active position, and additional means for swinging it into its active position which is located to be acted upon by said percussion means as it moves toward said firing pin, and thereby project said extractor into said firing chamber to catch over said cartridge rim just before said firearm is discharged.

3,090,150

HAND GUARD CONSTRUCTION

Eugene M. Stoner, Newport Beach, Calif., assignor to Fairchild Engine and Airplane Corporation, Hagerstown, Md., a corporation of Maryland

Filed June 13, 1960, Ser. No. 35,617
9 Claims. (Cl. 42—71)



5. In a gun, the combination of: a receiver; a barrel on said receiver; an elongated hand guard secured in encompassing relationship with said barrel; retention means mounted upon said receiver for securing the rearward extremities of said elongated hand guard; locating means mounted to said barrel for receiving and supporting the forward extremities of said hand guard, said hand guard including an external shell and a pair of internal baffles secured to and within said shell and spaced apart to define a barrel chamber intermediate said baffles and surrounding said barrel, said baffles being spaced from said shell to define a pair of insulating chambers, said shell having openings communicating with said barrel chamber at the top and bottom thereof to permit air flow upwardly past said barrel, said baffles including upper and lower extremities spaced from said shell to define air passages between said insulating chambers and said openings in said shell at the top and bottom thereof, said air passages being narrow relative to said openings whereby the flow of air through said barrel chamber aspirates air through said insulating chambers.

3,090,151

UNDERWATER SPEAR GUN

Trigg Stewart, Rte. 1, Box 40A, Lakeside, Calif., and Jerry L. Helminen, deceased, late of Lakeside, Calif., by Valma Irene Helminen, executrix, Rte. 2, Box 409C, Lakeside, Calif.

Filed Feb. 14, 1958, Ser. No. 715,375
4 Claims. (Cl. 43—6)



1. An underwater spear gun comprising a cylinder, a piston movable within said cylinder, trigger means to effect engagement with said piston after a predetermined travel thereof in a first direction and actuable to release said engagement, bias means operable to bias said piston toward a second direction, cocking means for operating said bias means after said predetermined travel, barrel means in fluid communication with said cylinder and adapted to house a spear, said bias means when operated being operative upon actuation of said trigger means to move said piston in said second direction to force fluid from said cylinder and through said barrel means whereby any spear which may be housed within said barrel means is driven outwardly, and a sleeve disposed about said barrel means and closed at each end to form a hermetically sealed annular space to provide buoyancy for said underwater spear gun, said cocking means comprising a cocking element and a lost motion connection between said cocking element and said piston, said cocking element being relatively movable with respect to said piston in the direction of movement of said piston and said bias means acting between said cocking element and said piston.

3,090,152

FISH LURE

Charles P. Helin, 4099 Beaufait, Grosse Pointe Park, Mich.

Filed May 2, 1960, Ser. No. 26,139
14 Claims. (Cl. 43—42.47)



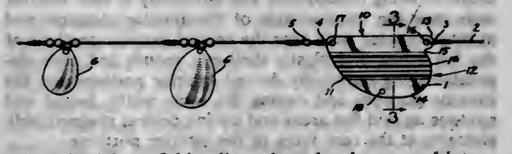
1. A fish lure for use beneath the surface of a body of water comprising a first section extending upwardly and forwardly and a second section extending rearwardly and generally horizontally when the fish lure is pulled beneath the surface of the body of water, the undersurface of said first section being concave, the undersurface of said second section being convex in cross-section, said lure having an intermediate portion thereof connecting said first and second sections, said intermediate portion having an upwardly thickened part and an underlying part, the upper surface of said upwardly thickened part being convex in cross-section, the undersurface of said underlying part merging smoothly with the undersurfaces of said first and second sections, the underlying part having substantially the same specific gravity as said first and second sections, the upwardly thickened part having a specific gravity less than the specific gravity of said underlying part and said first and second sections, said first section having a free forward edge, the forward edge of said first section extending upwardly beyond the uppermost part of said intermediate portion, means for fastening a line to the concave undersurface of said first section at a point spaced rearwardly from the forward edge of said first section only, said second section having a free rear edge, and means for fastening a hook to the convex undersurface of said second section at a point spaced forwardly from the rear edge of said second section.

3,090,153

FISHING KEEL

Cyrus V. Clark, 56 Cooper Square, New York 3, N.Y.

Filed Dec. 28, 1959, Ser. No. 862,385
3 Claims. (Cl. 43—43.13)



1. A keel for a fishing line adapted to be secured intermediate the ends thereof and forwardly of a lure secured to a trailing end of the line, said keel comprising a thin elongated section of material of substantial breadth and having an upper edge, eye members at both ends thereof adjacent said upper edge, and plural equally spaced uniform longitudinal corrugations thereon, located below the eye members and extending the full length of said keel, each of said corrugations being offset from the

median plane of said section a distance equal to that of the other corrugations and greater than twice the thickness of said section.

3,090,154
CUSHION AND METHOD OF MANUFACTURE
Edward P. Harris, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed June 26, 1959, Ser. No. 823,160
3 Claims. (Cl. 45—138)



1. In a method for producing a cushion including a resilient topper pad and a plurality of predominately independent springs, the steps comprising; applying a layer of an adhesive in a mobile state upon one surface of a woven mat which adhesive is capable of subsequently becoming immobile, setting all of said independent springs to be used in the cushion simultaneously on said layer in predetermined position so that their end coils rest on said layer, uniformly compressing all of said springs for embedding said end coils only, into said layer, holding said springs in compressed position for a sufficient period to at least permit a change in mobility of said layer, and then completely immobilizing said layer for permanently attaching said springs to said mat.

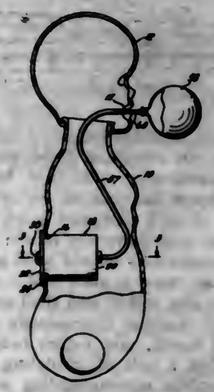
3,090,155
MAGNETIC TOY DEVICE
Charles P. Gordon, Teaneck, N.J. (% Peerless Playthings Co. Inc., 255 Bergen Turnpike, Ridgefield Park, N.J.)
Filed Jan. 26, 1960, Ser. No. 4,807
3 Claims. (Cl. 46—22)



1. An animal face toy consisting of an outwardly domed shell-like base structure simulating the shape and size of an animal face having relatively flat recessed areas at the positions of the mouth and eyes with outwardly projecting ridges extending peripherally around the edges of said flat areas, annular permanent magnet elements positioned in back of and centrally abutting against the interior of said flat areas, tubular elements extending through said annular magnet elements and transversely through the central portion of the flat areas with the ends of the tubular elements being beaded over and outwardly at their interior ends over the interior ends of the annular elements and at their exterior ends over the central exterior portions of the flat areas, and plastic shell eye, mouth and nose elements having outwardly domed exterior portions and flat interior portions and having the same width, height and contour as said flat areas and having central magnetizable elements at the rear faces of the interior portions.

3,090,156
ACTION DOLL OR LIKE FIGURINE
Melchior Scoparino, New York, N.Y. (8755 Dunton St., Hollis, N.Y.)
Filed Nov. 7, 1962, Ser. No. 235,959
6 Claims. (Cl. 46—118)

6. A toy figurine, comprising a hollow body section, including a rigid-walled torso and a head, said body section having an opening formed in a wall portion thereof, an air pump within said body section, said air pump comprising an air cylinder having end walls and a piston reciprocable between said end walls, one of said end walls having an opening formed therethrough, a piston rod connected to said piston and extending through said end wall opening, an expansion spring interposed between said piston and the other of said end walls, said air pump secured within said body section with said piston rod in register with said wall opening for manual engagement



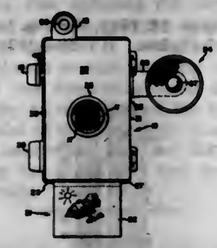
therethrough, said one end wall having an air passage formed therein extending to the exterior of said torso and an air-pressure responsive sound producing device secured within said air passage; the other of said end walls having air outlet means and air inlet means, a check valve provided in said air inlet means to inhibit air outlet therethrough, a second opening formed in another wall portion of said body section, an air-passage responsive toy action device secured within said second opening, and an air conduit connecting said second opening with said air outlet means.

3,090,157
FIGURE TOY
Raymond J. Lohr, Erie, Pa., assignor to Louis Marx & Company, Inc., New York, N.Y., a corporation of New York
Filed Oct. 18, 1961, Ser. No. 147,421
16 Claims. (Cl. 46—157)



1. A come-apart figure toy comprising a body and head and limbs, all separately molded out of a somewhat soft frictional plastic material, said body having pins molded integrally therewith and projecting therefrom, said limbs having holes dimensioned to fit frictionally over said pins, the head having a neck which terminates in a portion with a hole, said body having a short pin to receive a limb on one side and a long pin to receive the neck and a limb at the other side.

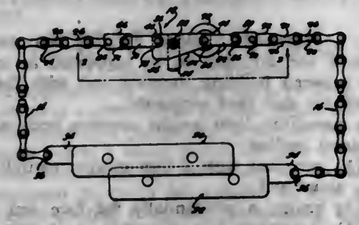
3,090,158
TOY CAMERA
Wallace B. Dixon, 1023 Thompson Ave., Roselle, N.J.
Filed Feb. 21, 1961, Ser. No. 90,729
4 Claims. (Cl. 46—228)



1. A toy camera which includes (1) a housing characterized by a lens opening in one wall thereof and by a slot in one wall thereof, (2) at least one shutter member movably mounted in said housing and aligned with the lens opening therein, (3) a first manipulatable member extending from one side of said housing, (4) means operatively connecting said first manipulatable member with said shutter member whereby upon actuation of said first manipulatable member said shutter member is moved in a fashion visible through said lens opening, (5) a spool rotatably mounted in said housing whereon a strip of pictures may be wound, (6) means within said housing adapted to receive an unwound portion of a picture strip from said spool and eject the same through said slot, said means comprising (i) a friction roller, (ii) at least one spring arm biased toward said roller and between which and said roller said picture strip is adapted to pass intermediate said spool and said slot, and (iii) ratchet means permitting continuous rotation of said friction roller in one direction only, (7) a second manipulatable member extending from one side of said housing, and (8) means operatively connecting said second manipulatable member with said friction roller whereby upon actuation of said second manipulatable member said friction roller is rotated in the direction permitted by said ratchet means to eject a picture strip from said housing through said slot.

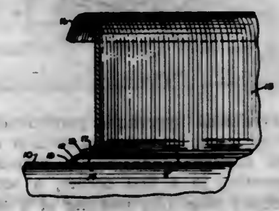
2. A toy camera according to claim 1 which further includes (9) a flash unit mounted on said housing, (10) a battery mounted in said housing, and (11) means in said housing for completing an electrical circuit through said battery and said flash unit as said first manipulatable member is actuated to move said shutter member.

3,090,159
TREE AND STALK GIRDLER
John Wimberley, Rte. 1, Box 154A, Terra Bella, Calif.
Filed Mar. 2, 1962, Ser. No. 177,092
11 Claims. (Cl. 47—1)



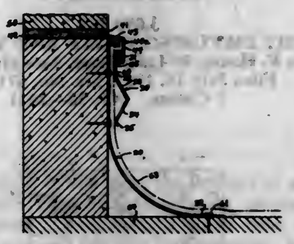
1. A girdler comprising a cutting unit, a guide block on each side of said unit, a bar link extending from each guide block to said unit and having each of its ends pivotally connected to said guide block and said unit, a chain on the side of each guide block remote from said unit and having one end connected to the adjacent guide block, and handles connected to the other ends of said chain.

3,090,160
RAILWAY CAR ROOF HATCH
Raymond M. Shaver and Arthur H. Hartwig, Michigan City, Ind., assignors to Pullman-Standard Car Manufacturing Company, Chicago, Ill., a corporation of Delaware
Filed Feb. 20, 1956, Ser. No. 566,405
2 Claims. (Cl. 50—14)



1. A roof hatch construction for a vehicle including a roof sheet having a hatch opening, an embossment formed in the margin of the roof sheet surrounding the opening comprising an upwardly directed outer portion inwardly sloping at an obtuse angle to the body of the sheet and an upwardly directed inner portion inwardly sloping at an obtuse angle to the outer portion, and a hatch frame having a vertical side wall terminating at its bottom in a marginal flange extending from said side wall at an angle substantially corresponding to the angle made by the inner portion of the embossment with the body of the sheet, said marginal flange being seated on the upper surface of said inner portion of the embossment and being welded thereto.

3,090,161
ROOF FLASHING ASSEMBLY
Harlan H. Edwards, 900 University St., Seattle, Wash.
Filed June 2, 1958, Ser. No. 739,170
1 Claim. (Cl. 50—45)

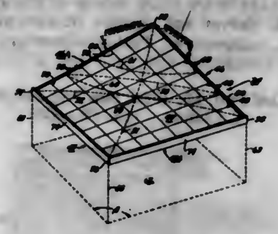


In a flashing assembly, a cant member of sheet material secured as a cove at the juncture of a parapet wall and roof deck and terminating at its upper side by an outwardly directed stop flange, the margin of the roofing for said deck laying as a flashing over said cant member up to said stop flange, a reglet anchored to said wall and providing an apron first engaging said stop flange and then depending to terminate at its lower side by an inturned hem, and a counter-flashing member having an upper out-turned hem detachably interfitting with said inturned hem, the depending portion of the reglet having a vertical length at least as long as the combined heights of the in-turned and the out-turned hems so that the counter-flashing member can be detachably interfitted with the installed reglet, and depending therefrom to overlap said flashing.

3,090,162
BUILDING CONSTRUCTION

Giorgio Baroni, % Baroni Construction Corp., 515 Madison Ave., New York, N.Y.

Filed Feb. 25, 1953, Ser. No. 338,740
17 Claims. (Cl. 50—52)

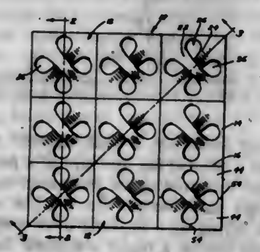


1. A prefabricated hyperbolic paraboloidical building section having a quadrangular projection comprising a first pair of adjacent substantially horizontal straight edge ribs meeting in a first corner, a second pair of adjacent inclined edge ribs meeting at a second corner diagonally across said building section from said first corner, a continuous hyperbolic paraboloidical surface stretching between said ribs, said first pair of edge ribs as seen in vertical cross section having an inclined leg parallel to said surface and secured to said surface, a vertical web projecting up from the outer edge of the inclined leg, and a horizontal leg secured to the top of the vertical web and projecting inwardly in overhanging relationship above the inclined leg, thereby defining a three-sided channel projecting entirely upwardly from said surface, and said second pair of ribs as seen in vertical cross section having an inclined leg parallel to said surface and secured to said surface, a vertical web projecting down from the outer edge of the inclined leg, and a horizontal leg secured to the bottom of the vertical web and projecting inwardly in spaced relationship beneath the inclined leg, thereby defining a three-sided channel projecting entirely downwardly from said surface, whereby said sections are reversible in use and are readily adapted to be assembled together in building construction.

3,090,163
LIGHT DIFFUSING WALLS AND THE LIKE

Erwin F. Hauer, 90 Lake Place, New Haven, Conn.

Filed July 15, 1957, Ser. No. 671,983
7 Claims. (Cl. 50—262)



4. A substantially solid, flat, self-supporting uniplanar light diffusing wall, a plurality of openings extending through said wall, and a pair of crossed fillets spanning each of said openings, each of said fillets consisting of a continuous unbroken strip, the ends of which merge with the marginal portion of each opening, said fillet ends all being in substantially the same plane, but said fillets being completely spaced from each other at their points of intersection, so that no engagement is made between each pair of crossed fillets.

3,090,164
WALL CONSTRUCTION AND RESILIENT RUNNER THEREFOR

Nels Nelsson, Des Plaines, Ill., assignor to United States Gypsum Company, Chicago, Ill., a corporation of Illinois

Filed Sept. 25, 1961, Ser. No. 140,332
3 Claims. (Cl. 50—302)



3. A wall construction comprising in combination: a substantially planar supporting surface; an elongated sheet metal resilient runner for attaching wallboard to said supporting surface comprising a base flange lying in a first plane, a resilient web integral at one edge thereof with said base flange and lying in a second plane inclined at an obtuse angle to said first plane, a support portion, the opposite edge of said resilient web being coextensive with one edge of said support portion, said support portion lying in a third plane inclined to said second plane and extending laterally in an offset position relative to said base flange, said third plane being substantially parallel to said first plane, and a stop flange coextensive with the opposite edge of said support portion, said stop flange being inclined outwardly and extending toward said first plane but being shorter than the distance between said third plane and said first plane; and a wallboard attached to said support portion, said support portion and wall-board in a normal position being resiliently spaced from said supporting surface by said resilient web, said wallboard, with pressure applied normal to the exposed surface of said wallboard, being rigidly spaced from said supporting surface by said resilient web and said stop flange.

3,090,165
LIGHTWEIGHT MOLDED BUILDING SLAB

Paul S. Chiado, Chicago, Ill.
(732 Hinman, Evanston, Ill.)

Filed Aug. 25, 1958, Ser. No. 756,882
5 Claims. (Cl. 50—445)



1. In a lightweight molded building slab especially constructed and arranged to be supported in spanning relation between building supports and with the entire weight of the slab thus supported,

(*a*) a monolithic light weight concrete body of quadrilateral outline

(1) provided with a thin margin entirely thereabout and

(2) having a substantially flat face and

(3) an opposite face comprising a plurality of adjoining hyperbolic-paraboloidal surface areas providing on said opposite face juncture ridges respectively extending from the respective sides of the body and progressively a greater distance generally perpendicularly from said flat face to a common meeting point of maximum projection of said opposite face,

(*b*) a marginal reinforcing ring frame embedded within said margin developing stress under loads perpendicular to the plane of the body,

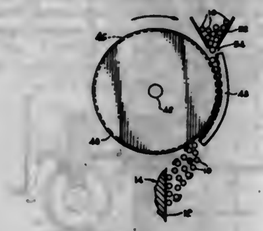
(*c*) and stress bars spanning the respective opposite side portions of the ring frame within said body and substantially parallel to said juncture ridges and meeting adjacent to said common meeting point of said ridges and developing stress under said loads perpendicular to the plane of the body,

(*d*) the material of the body being bonded to said ring frame and said stress bars and sharing the stresses imposed on the frame and bars by loads imposed upon the body.

3,090,166
POLISHING METHOD AND DEVICE

John C. Straub, South Bend, Ind., assignor to Bell Intercontinental Corporation, South Bend, Ind., a corporation of Delaware

Filed Feb. 17, 1959, Ser. No. 793,764
11 Claims. (Cl. 51—9)



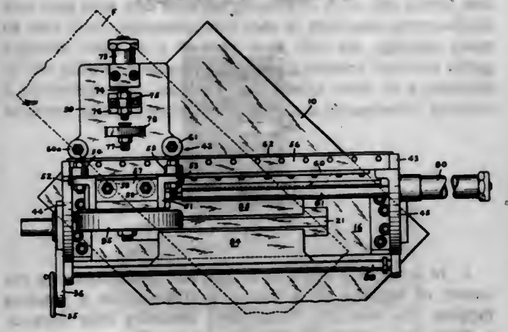
6. A polishing device adapted for the blast polishing of a positioned work piece comprising a wheel mounted for rotational movement, feed means for introducing pellets of a resilient material to the wheel whereby the material is centrifugally thrown in a linear direction from the periphery thereof responsive to rotation of the wheel at high speed, grooves in the surface of the wheel over which pellets travel during rotation of the wheel and wherein the grooves are dimensioned to receive a peripheral portion of the pellets during travel thereover to give the pellets a movement for rotation about their axes simultaneously with the linear component whereby the pellets thrown from the wheel have a linear component and a spinning component about their axes, and means for supplying the surface of the work with a polishing agent in contact therewith when engaged by the pellets thrown from the wheel.

3,090,167
APPARATUS FOR SKIVING ABRASIVE BANDS FOR FORMATION OF ABRASIVE BELTS THEREFROM

Arthur Ackerman, Wilton, Conn.

Filed Sept. 30, 1959, Ser. No. 843,562
7 Claims. (Cl. 51—34)

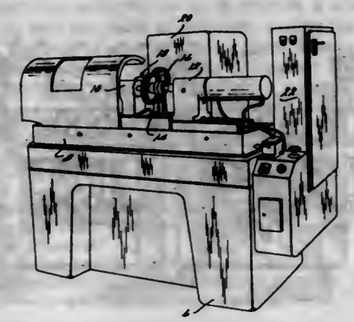
1. An apparatus for removing abrasive from portions of an abrasive coated fabric for the formation of abrasive belts therefrom comprising a support for an abrasive coated fabric, a motor driven abrasive wheel, means supporting said wheel for movement across said fabric in engagement therewith for grinding at least a part of the abrasive coating from said fabric along the path of said wheel, means for effecting a back and forth reciprocating movement of said wheel across said fabric, and means for shifting said wheel axially through a distance about equal to the thickness of said wheel at one end of said path and axially in the opposite direction through the same distance at the opposite end of said path and for guiding said wheel along parallel courses at least partially displaced from each other during said back and forth reciprocating movement.



3,090,168
TOOL HEAD FOR FINISHING MACHINE

William R. Carlsen, Huntington Woods, Mich., assignor to Michigan Tool Company, Detroit, Mich., a corporation of Delaware

Filed Mar. 27, 1961, Ser. No. 98,612
4 Claims. (Cl. 51—52)



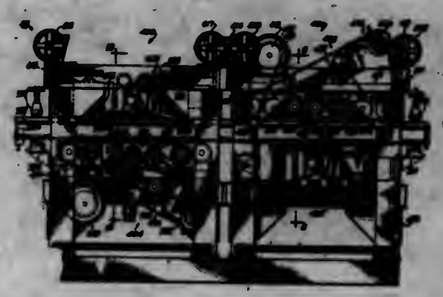
1. In a machine for finishing the surfaces of gear teeth the combination comprising supporting means for rotatably mounting a workpiece, a cutter head assembly including an abrasive finishing tool rotatably and reciprocably mounted thereon and adapted to be disposed in abrasive crossed axis relationship with a workpiece to be finished, said supporting means and said workpiece thereon longitudinally reciprocable relative to said cutter head assembly said cutter head assembly comprising a housing, first shaft means rotatably mounted in said housing and having an axial bore therein, second shaft means slidably disposed in said bore and axially reciprocable therein, coacting means on said first and said second shaft means for rotatably securing said first and said second shaft means to each other, means on said second shaft means for removably securing said finishing tool thereon, drive means for rotating said first and said second shaft means, and cam means associated with said second shaft means for reciprocating said second shaft means axially in said bore in response to rotation of said second shaft means.

3,090,169
LAPPING MACHINE FIXTURE
Stephen A. Boeticher, 1200 Noyes St., Evanston, Ill.
Filed May 11, 1961, Ser. No. 109,423
6 Claims. (Cl. 51—131)



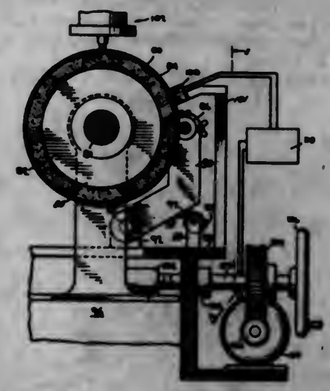
1. In a lapping machine fixture for predetermining the extent of lapping work pieces positioned on a rotating lapping disc within a truing and retaining ring thereon, a plate for resting on said work pieces, a second plate parallel thereto and adjustably distanced therefrom, and means carried by said second plate for engaging the lapping disk to arrest the downward movement of said plates.

3,090,170
METHOD AND APPARATUS FOR GRINDING WELDED RAILS
Robert E. Slattery, Rockford, Ill., assignor to Chemetron Corporation, Chicago, Ill., a corporation of Delaware
Continuation of application Ser. No. 808,171, Apr. 22, 1959. This application May 16, 1961, Ser. No. 120,167
44 Claims. (Cl. 51—140)



1. In a grinding apparatus for use in grinding welds produced by welding rail sections together in end to end relationship to form a continuous rail, the combination of grinding equipment, rail moving mechanism for passing the continuous rail through the grinding equipment, said grinding equipment including a plurality of grinding heads each including a grinding belt and respectively acting upon the top, the bottom and the side edges of the continuous rail in the region of the weld for the purpose of removing weld material, each head including biasing means for moving the belt into and out of engagement with the rail, a first of said grinding heads being spaced from a second of said heads in the direction of travel of the continuous rail, and said mechanism including means for continuously passing the continuous rail through the grinding equipment and for automatically varying the speed of travel in such manner that the continuous rail travels at relatively high speed until the weld reaches a position in the vicinity but in advance of the biasing means of the second grinding head whereupon the speed decreases to a relatively low value while the weld passes the second grinding head, the last named means being operable to increase the speed of travel of the continuous rail to said relatively high speed as the weld passes from the second grinding head to a position near but in advance of the biasing means of the first grinding head, to then decrease the speed of travel to said relatively low value during movement of the weld past the first grinding head, and then to increase the speed of travel to said relatively high speed when the weld moves beyond the first grinding head.

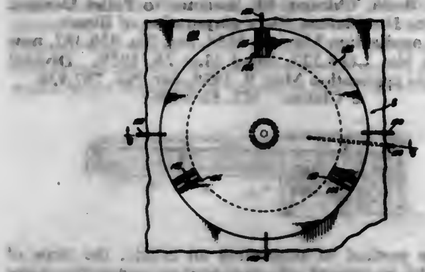
3,090,171
SURFACE MEASUREMENT APPARATUS AND CONTROL
Glen H. Stimson, Greenfield, Mass., assignor to United-Greenfield Corporation, a corporation of Delaware
Filed July 31, 1959, Ser. No. 830,904
4 Claims. (Cl. 51—165)



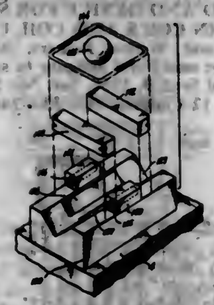
1. Apparatus for shaping the surface of a workpiece comprising a grinding wheel having abrasive surface means, means for rotatably supporting said grinding wheel in a fixed position, supporting means linearly movable in relation to the grinding wheel, workpiece holding means pivotally mounted on said supporting means to move the workpiece to and from said abrasive surface means, indexing means for feeding said workpiece against said abrasive surface means with said supporting means in a precise relation with said abrasive surface means, position determining electrical means having a capacitive member rigidly mounted on said supporting means adjacent to said abrasive surface means for determining the position of said support means relative to said abrasive surface means and control means connected to said electrical means to receive a signal therefrom for positioning said supporting means in precise relation with said abrasive surface means for accurately forming the surface on the workpiece.

3,090,172
CONTRACTION COMPENSATING WORK TABLE
Edward T. Strickland, Palm Springs, Calif., assignor, by mesne assignments, to Philbrick-Strickland Laminates, Inc., a corporation of Washington
Original application Aug. 20, 1958, Ser. No. 756,190, now Patent No. 2,995,875, dated Aug. 15, 1961. Divided and this application Mar. 7, 1960, Ser. No. 13,370
4 Claims. (Cl. 51—237)

2. In a grinding machine, a structure for accurately supporting a mandrel comprising, a support, a mandrel on said support, three upwardly open radially extending V-shaped grooves equidistantly spaced apart adjacent the periphery of said support, three matching ball receiving openings carried on the underside of the mandrel, and a plurality of rigid balls associated one with each pair of grooves and openings and confined therebetween to locate the mandrel relative to the support in a predetermined position determined by the balls being fully seated in their associated grooves and openings.



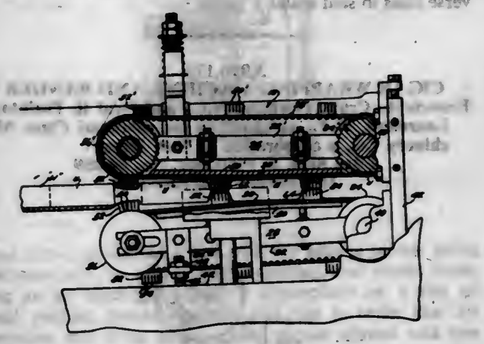
3,090,173
WORK SUPPORT TABLE
Edward T. Strickland and Homer C. Ames, Palm Springs, Calif., assignors, by mesne assignments, to Philbrick-Strickland Laminates, Inc., a corporation of Washington
Original application Aug. 20, 1958, Ser. No. 756,189, now Patent No. 2,995,874, dated Aug. 15, 1961. Divided and this application Mar. 7, 1960, Ser. No. 13,371
3 Claims. (Cl. 51—237)



3. A structure usable in accurately positioning a work piece mandrel on a support member, comprising a block having an upwardly open sloping V-shaped groove and located on the support member, a rigid ball associated with and seated on said groove, and means for locating the ball in a predetermined position relative to the groove and assisting said ball to reach the predetermined position and become fully seated in said groove including a pair of stop members fixed to and upstanding from said block at opposite sides of the groove, a pair of opposed end blocks extending across opposite ends of the stop members to form with the stop members a four sided enclosure for the ball with the distance between the end block substantially equal to the diameter of the ball, a spring surrounding said enclosure and in engagement with said end blocks to yieldably urge the end blocks toward each other and control the ball position, and adjustable stop elements on the stop members engageable by the end blocks for controlling the position of the end blocks relative to the stop members.

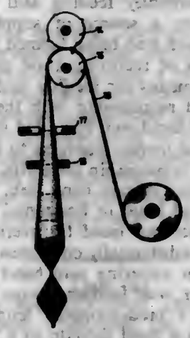
3,090,174
PACKAGING METHOD AND APPARATUS
George Howard Kraft, Wilmette, Ill., assignor to National Dairy Products Corporation, Chicago, Ill., a corporation of Delaware
Filed Aug. 24, 1960, Ser. No. 51,740
4 Claims. (Cl. 53—22)

4. A packaging method for continuously producing packaged units and which comprises successively disposing a plurality of the units to be packaged in spaced-apart relationship within an elongated tube having a single open end and formed of substantially gas impervious, flexible sheet material, continuously introducing a preservative gas into said tube and then progressively, from the closed end of said tube, collapsing said tube at positions intermediate adjacent units in a manner such that the opposite faces of the tubular wrapper are initially pressed together along a transverse line adjacent one of the units to a position adjacent the following unit and in a progressive manner



between such positions, while maintaining said initial engagement, so as to progressively enlarge the area of pressure on the tube, whereby gas is expelled from between said adjacent units and forced back over said following unit, tucking in the side walls of the tube while it is being thus collapsed so as to provide a width corresponding with the width of the units, sealing the pressed together portions of said tubular wrapper into fixed relation, and severing the wrapper at said sealed portions to provide individual packages.

3,090,175
TETRAHEDRON PRODUCING METHOD AND APPARATUS
Erik Eskil Bergland, Atvidaberg, Sweden, assignor to Hermorion Ltd., Toronto, Ontario, Canada, a company of Canada
Filed June 9, 1959, Ser. No. 819,072
Claims priority, application Sweden June 10, 1958
11 Claims. (Cl. 53—28)



1. A method of producing tetrahedron-shaped packages from a relatively stiff web material, e.g. one side

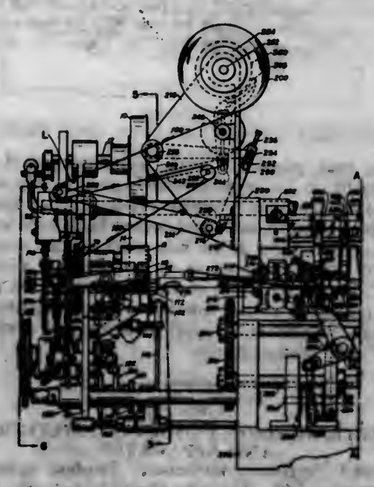
plastic coated paper, comprising the steps of transversely creasing the web material along longitudinally spaced lines; forming the web material into a longitudinally seamed tube; dividing the tube into sealed tetrahedron-shaped packages through transversely sealing the tube in alternatingly one and the other of directions perpendicular to each other and along relatively narrow transverse zones each having an individual one of said transverse crease lines located within said zone; and separating the packages thus formed from each other through severing along transverse lines in said seals.

3,090,176

CIGAR WRAPPING MACHINE AND BANDER

Francis A. Craig, Durham, N.C., and Neal R. Parlatore, Laurelton, N.Y., assignors to International Cigar Machinery Co., a corporation of New Jersey

Filed Sept. 6, 1960, Ser. No. 54,259
16 Claims. (Cl. 53—133)



1. Apparatus for packaging cigars or similar articles in individual wrappers having a band applied thereto comprising a source of supply of continuous wrapper web, means for intermittently feeding said wrapper web in horizontal position, a source of supply of continuous band web, said band web being formed of a substantially endless succession of recurring band patterns in end to end relationship, means for feeding said band web intermittently in timed relationship with the feeding of said wrapper web, said band web being fed in horizontal position along a line of travel transverse to said wrapper web and in underlying relationship therewith, means for severing the leading band of said band web, means for maintaining said severed band in horizontal position and for positioning said severed band transversely beneath said wrapper web and substantially co-extensive with the width thereof, means for adhering said band to said wrapper web, said wrapper web feeding means being thereupon adapted to feed a predetermined length of horizontal wrapper web with a band thereon to a wrapping station, means for severing said predetermined length from the leading edge of said wrapper web, means for supplying an individual cigar beneath said horizontal severed wrapper, and means for folding the margins of said severed wrapper into overlying relationship with each other to envelope said cigar delivered thereto.

3,090,177

APPARATUS HANDLING METHODS

Larry J. Budd, Chicago, Ill., assignor to Pallet Devices, Inc., Des Plaines, Ill., a corporation of Illinois

Original application May 17, 1954, Ser. No. 430,382, now Patent No. 2,888,222, dated May 26, 1959. Divided and this application Mar. 9, 1959, Ser. No. 797,936
3 Claims. (Cl. 53—196)



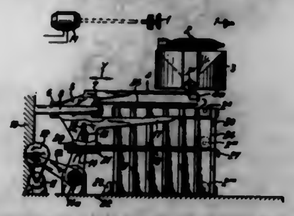
1. The method of supporting an article, the steps of scoring the margins of a fiberboard sheet and cutting holes at spaced intervals in the margins, folding the margins at the score lines providing hollow tube-like legs at the margins on one side of the sheet forming an article support, reinforcing the hollow legs at the area of the holes by inserting reinforcing cups in said holes, engaging an article to be supported over the article support, and inserting fasteners vertically of the article support disposing ends of the fasteners in opens ends of the cups and securing opposite ends of the fasteners in the article thereby attaching the article support to the article.

3,090,178

METHOD AND DEVICE FOR STACKING YARN COILS AND COIL CORES

Stefan Fürst and Walter Reiners, Munich-Gladbach, Germany; said Fürst assignor to said Reiners

Filed Sept. 9, 1960, Ser. No. 55,042
12 Claims. (Cl. 53—246)



1. In the art of winding, an apparatus for stacking quills in vertical stacks, comprising means for feeding the quills downwardly to a horizontally axial issuing position, a magazine box, means for supporting said box at a defined horizontal limit position of said box beneath said issuing position for receiving said quills, said box having guide means fixed to the side walls thereof and defining vertical chambers for receiving a number of vertical stacks of quills, and horizontally reciprocable stop means located in spaced sequence between said issuing position and the bottom of said magazine box for incrementally limiting the free fall of each quill downwardly, said stop means including a member extending horizontally within said magazine box and adapted to engage a quill in a filled stack for advancing the box horizontally during reciprocation of said member when the last named stack is filled, and drive means linked to said stop means for reciprocating the latter.

3,090,179

AIR FILTER AND HUMIDIFIER

William N. Powell, Wheatland, Calif.

Filed Dec. 29, 1959, Ser. No. 862,591
5 Claims. (Cl. 55—233)

1. An air filtering and humidifying device comprising a viscous filtering medium; a water-absorbent filtering medium spaced apart from said viscous filtering medium; a housing enclosing said viscous and said water-absorbent filtering media, said housing having an inlet port and converging to an exit duct normal to said media but of lesser dimension than said media when viewed in front elevation, a louvered baffle disposed within said housing between said media and of substantially the same dimension as said media, the spacing of the louvers of said baffle which when the baffle is viewed in front elevation overlie,



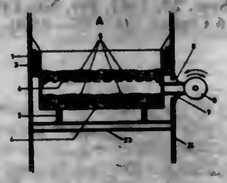
said exit duct being less than the spacing of louvers not overlying said duct; a perforated water distributing tube mounted within said housing and only over said viscous filtering medium; and means for introducing water under pressure to said distributor tube causing water to spray out of said perforations only onto said viscous filtering medium.

3,090,180

DEVICE FOR CLEANING DUST-LADEN GASES

Max Berz and Wolfgang Berz, both of 7 Bayerlandstr., Kochel am See, Germany

Filed May 19, 1960, Ser. No. 30,181
Claims priority, application Germany Oct. 25, 1955
1 Claim. (Cl. 55—282)



A device for the purification of dust-laden gases, comprising an enclosure with upright walls forming at least one substantially vertical air shaft; an inlet port at the bottom of said air shaft and an outlet port at the top of said air shaft, said ports constituting part of a circulation system for gases to be purified; support means in said air shaft below said outlet port; a set of upstanding coil springs rising from said support means within said air shaft; a horizontal frame oscillatably supported on said coil springs and disposed in said air shaft between said inlet and outlet ports with peripheral clearance from said wall; vibrator means coupled with said frame for intermittently imparting oscillatory motion thereto; a plurality of screens horizontally spanning the interior of said frame with mutual separation one above the other; a plurality of particulate filtering layers respectively carried on said screens for successive permeation by said gases, said layers including a lower layer composed essentially of metal chips and an upper layer composed essentially of granular material; flexible sealing means disposed in said clearance for preventing the passage of said gases around said frame; and control means in said system for discontinuing the circulation of said gases during said oscillatory motion.

3,090,181

VACUUM CLEANER

Melvin H. Korrell, Benton Harbor, Mich., and Robert Crehore, White Bear Lake, Minn., assignors to Whirlpool Corporation, a corporation of Delaware

Filed June 2, 1960, Ser. No. 33,479
13 Claims. (Cl. 55—376)

1. A vacuum cleaner adapted to employ air filters each having a filter portion and a stiff rim surrounding an intake opening, comprising: a casing having an inlet opening; means for creating a vacuum in said casing; bag retaining means adjacent said inlet opening; movable resilient bag sealing means adjacent said inlet opening, the retaining and sealing means cooperating to grasp



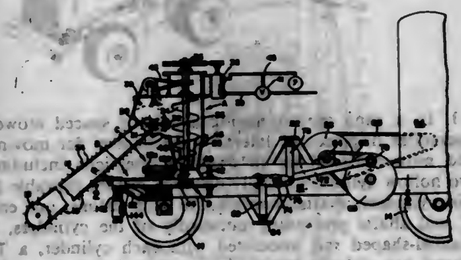
and retain releasably a rim with the sealing means being between said rim and said inlet opening; and means forming an air chamber vented to atmosphere on a side of said resilient means opposite said rim in order that air pressure will force said resilient means against said rim upon operation of said vacuum creating means.

3,090,182

MACHINE AND METHOD FOR PELLETIZING FIELD CURED HAY

Roy W. Johnson and Donald R. Vaughan, Woodland, Calif., assignors to Cal-Cube, Inc., Woodland, Calif., a corporation of California

Filed Mar. 23, 1959, Ser. No. 801,253
17 Claims. (Cl. 56—1)



1. A pelletizing machine comprising a ram housing and a ram reciprocable therein, means to reciprocate the ram, a die, said die comprising a plurality of elongate cavities spaced from said reciprocable ram to provide a head space therebetween, said head space forming a compression area in communication with said ram and die, a compression retention chamber comprising an extension of said die cavities and including means to vary the compression on material being pelletized passing therethrough, and means for conveying matter to be pelletized to said guide housing.

3,090,183

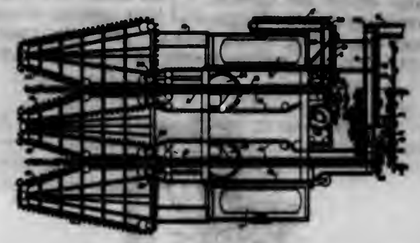
PROCESS FOR HARVESTING AND PILING CANE

Byron C. Thomson, Thibodaux, La., assignor, by mesne assignments, to Lamb Industries, Inc., Toledo, Ohio, a corporation of Delaware

Original application Apr. 30, 1959, Ser. No. 810,104. Divided and this application Mar. 28, 1961, Ser. No. 106,691
10 Claims. (Cl. 56—1)

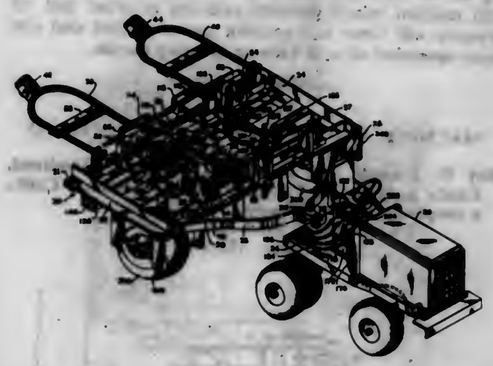
1. The process of harvesting cane which consists in

cutting simultaneously the cane from the hills of two rows



of cane and depositing the cut cane on a common heap row identified by the two hills being harvested.

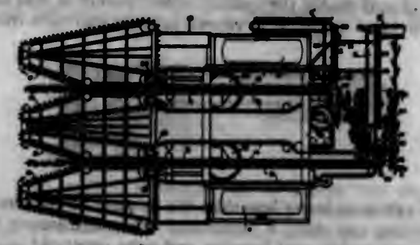
3,090,184
HYDRAULIC HORIZONTAL SLIDING ACTION GANG MOWER
Charles G. Hadek, Oyster Bay, N.Y., assignor to George Fisanick, Flushing, N.Y.
Filed Nov. 8, 1961, Ser. No. 150,999
6 Claims. (Cl. 56—7)



1. In a gang mower having a pair of spaced mower assemblies displaceable laterally, mechanism for moving said mower assemblies in opposite directions including two hollow cylinders, axially disposed pistons movable in said cylinders, shafts connected to said pistons, one end of said shafts protruding outwardly of the cylinders, a channel-shaped rail associated with each cylinder, a T-shaped bar slidably mounted in each rail, and posts depending from one end of said shafts, the other end of the posts connected to said mower assemblies and means for supplying fluid to both ends of said cylinders.

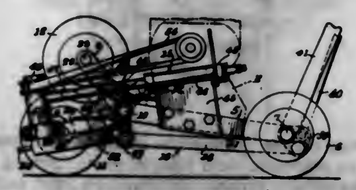
3,090,185
CANE HARVESTER AND PILERS AND PROCESS FOR HARVESTING AND PILING CANE
Byron C. Thomson, Thibodaux, La., assignor, by mesne assignments, to Lamb Industries, Inc., Toledo, Ohio, a corporation of Delaware
Filed Apr. 30, 1959, Ser. No. 810,104
4 Claims. (Cl. 56—17)

1. A cane harvester comprising a harvester frame, at least two substantially parallel longitudinally extending cane receiving channel structures in the frame laterally spaced at the approximate distance of adjacent cane rows and having rear discharge ends, one of said channel structures being longer than the other whereby the rear discharge ends terminate at longitudinally spaced points, lateral deflector means on the frame positioned at the discharge ends of the channel structures for directing the cane stalks issuing from each channel structure in a lateral path toward the other channel structure whereby the stalks from the longer channel structure fall laterally across the two hills being harvested in a heap row, and a laterally moving cutter on the frame in the lateral path



of such stalks issuing from the deflector means at the discharge end of the shorter channel structure for cutting the stalks in two sections and at the same time driving the cut ends of such stalk sections toward the longer channel structure.

3,090,186
SPECIFIC WHEEL SUPPORT MEANS FOR A COMBINATION MOWER AND TRIMMER
Roy L. Dykes, Downey, and James O. Dykes, Compton, Calif., assignors to Power-Trim Co., Paramount, Calif., a corporation of California
Filed Sept. 25, 1961, Ser. No. 140,321
6 Claims. (Cl. 56—25.4)



1. In a mower-trimmer chassis having rear support wheels and having selectively positioned cutting means to edge-trim in one position and mow grass in another, the improvement that comprises

(*a*) a first front support frame on said chassis and provided with an axle and with a first support wheel on said axle,

(*b*) a second front support frame on said chassis and provided with an axle and with a second support wheel on the latter axle,

(*c*) release means carried by one support frame and releasably engaged with the other support frame to connect said frames to hold the wheels thereof and their respective axles in aligned relation, and

(*d*) spring means to bias the second front support frame and the wheel thereof to a raised non-supporting position upon release of the release means, to leave a clear space beneath said raised support and wheel in which the cutting means, in the grass-mowing position thereof, is adapted to operate.

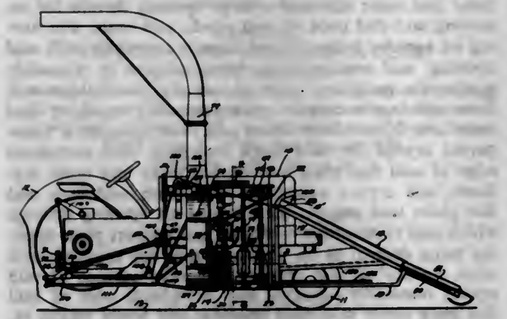
3,090,187
LIQUID DISTRIBUTING MOWER BLADE
Charles M. Livingston, 5039 W. 6th St., Tulsa, Okla.
Filed Dec. 5, 1960, Ser. No. 73,629
9 Claims. (Cl. 56—295)

1. A mower having a mower blade, means mounting the mower blade on the mower for rotation about a vertical axis, a liquid receptacle rotatable with the blade, means for supplying a liquid to the receptacle, and means defining a generally outwardly extending liquid passage between the receptacle and the underside of the blade



for centrifugal liquid feed to the underside of the mower blade.

3,090,188
CROP GATHERING AND CHOPPING DEVICE
Robert H. Gorham, Kendall, Wis., assignor of one-fourth to Adolph Wopat and one-fourth to Arthur Verwiebe, both of Kendall, Wis.
Filed Dec. 12, 1958, Ser. No. 780,121
11 Claims. (Cl. 56—503)



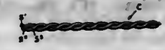
1. In a device movable in a given direction along a row for harvesting crops such as corn, in combination, a drum shaped casing provided with front and rear faces and having a generally circular front face adapted to be positioned transversely of said direction of movement and to be moved therealong, said front face being provided with an intake opening located at a six o'clock position wholly in the lower portion thereof, said casing having a peripheral discharge opening above and to one side of said intake opening and between said front and rear faces, and rapidly revolving means mounted on an axis parallel with said direction within said casing for cutting the stalks as they are fed into said casing through said intake opening and shaped to move the cut stalks centrifugally through an arc in said casing to said discharge opening.

3,090,189
ELASTIC WIRE CABLES
Gabriel Xavier Roger Bousau, Chamalieres, and Louis Pierre Francois Andre Neuville and Louis Henri Noel Saint-Frison, Clermont-Ferrand, France, assignors to Michelin & Cie, Clermont-Ferrand, France
Filed Oct. 30, 1957, Ser. No. 693,457
Claims priority, application France Mar. 30, 1957
8 Claims. (Cl. 57—139)



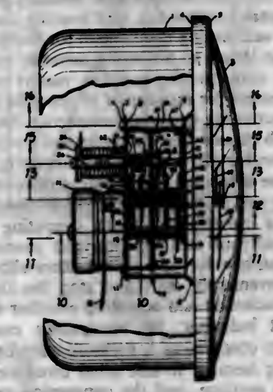
1. A cable comprising a plurality of helical twisted strands of wire, each of said strands having a permanent set elastically opposing any change in its helical shape, and said strands being loosely twisted together to enable said strands to move toward and away from each other when subjected to tension lengthwise thereof, said strands being in side-by-side relation and forming a hollow sheath.

3,090,190
ELASTIC CABLES
Gabriel Xavier Roger Bousau, Chamalieres, and Louis Pierre Francois Andre Neuville and Louis Henri Noel Saint Frison, Clermont-Ferrand, France, assignors to Michelin & Cie, Clermont-Ferrand, France
Filed Dec. 8, 1959, Ser. No. 858,252
Claims priority, application France Mar. 30, 1957
17 Claims. (Cl. 57—139)



1. A cable comprising a plurality of helically twisted strands of wire, each of said strands being formed of a plurality of individually twisted wires twisted around each other and having a permanent set retaining said strand in its helical shape, and said strands being loosely associated to enable said strands to move toward and away from each other when subjected to tension lengthwise thereof.

3,090,191
SECONDARY CLOCK SETTING MEANS
Arvid N. Montgomery, Owensville, Ind., assignor to Montgomery Manufacturing Company, Inc., Owensville, Ind., a corporation of Indiana
Filed Sept. 29, 1960, Ser. No. 59,360
12 Claims. (Cl. 58—34)



1. A synchronous clock comprising a housing having a face plate attached thereto and including a pair of spaced opposing plates, a seconds shaft journaled between said plates, a minutes tube journaled on said seconds shaft, an hours tube journaled on said minutes tube, a synchronous motor operatively mounted on said housing, first driving means for coupling the seconds shaft to the synchronous motor, second driving means for coupling the minutes tube to the seconds shaft, third driving means for coupling the hours tube to the minutes tube, first corrective means for rotating the seconds shaft to a predetermined position independently of the first driving means and at an accelerated speed, second corrective means for rotating the minutes tube to a predetermined position independently of the second driving means and at an accelerated speed, said first and second corrective means being normally idling between said opposing plates but being adapted for operation upon shifting movement

therebetween, means for limiting the movement of the seconds shaft and minutes tube during operation of the first and second corrective means, means for initiating operation of the first and second corrective means by means of an electrical impulse initiated at a point remote from the clock, and indicia means for revealing the relative positions of the seconds shaft and the minutes and hours tubes.

3,090,192
TIMING DEVICE
Harold D. Kraft, 68—60 140th St., Kew Garden Hills 67, N.Y., and Jack A. Kraft, 119 Elm Lane, New Hyde Park, N.Y.
Filed Dec. 28, 1961, Ser. No. 162,679
4 Claims. (Cl. 58—39.5)



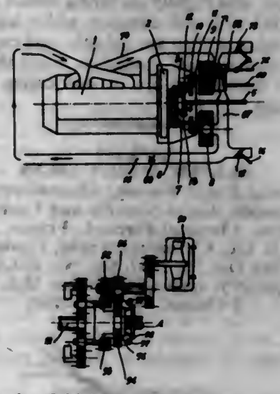
1. A timer assembly comprising a housing, an electrical timing mechanism mounted in said housing, a resettable indicator of elasped time in said housing connected in driven relation with said timing mechanism and exposed for observation externally of said housing, push-on-push-off switch means mounted in said housing and electrically connected to said timing mechanism for energizing and de-energizing the latter, an actuating member located in said housing in a nonactuating position, means mounting said actuating member for movement in opposite directions out of said nonactuating position, connection means on each of said switch means and indicator and connected to said actuating member for respectively actuating said switch means in one direction of actuating-member movement and resetting said indicator in the other direction of actuating-member movement, and an operating member exposed externally of said housing and connected to said actuating member for movement therewith, whereby a user can conveniently start and stop the timing mechanism by operation of said actuating member and selectively reset said indicator, the connection means on said switch means comprising a pressure member for urging said actuating member in said other direction toward said nonactuating position, and the connection means on said indicator comprising a flexible tension member for urging said actuating member in said one direction toward said nonactuating position, whereby movement of said actuating member in said one direction from said nonactuating position relaxes said tension member to avoid resetting of said indicator, said operating member comprising a generally horizontal bar pivoted intermediate its ends for swinging movement in opposite directions to effect actuation of said switch means and resetting of said indicator on depression of respective ends of said operating member, said timing mechanism comprising a shaft adapted to rotate in a single direction upon timing operation and upon resetting operation, drag means frictionally engaging said shaft to resist overrun thereof, said drag means comprising an engagement element loosely engaged about said shaft, an anchor member fixedly adjustable relative to said housing, and spring means connected between said anchor member and engaging element for applying frictional drag to said shaft.

3,090,193
CLOCK HOUSING
Kaj H. Jensen, Lancaster, Pa., assignor to Hamilton Watch Company, Lancaster, Pa., a corporation of Pennsylvania
Filed Dec. 9, 1958, Ser. No. 779,159
4 Claims. (Cl. 58—53)



1. In a battery driven clock having a dial train and dial plate, a housing comprising: a base having a floor and a side wall extending therefrom; said floor having an inner and outer side and a large opening therein for receiving said dial train of said clock; said outer side having an annular ledge formed therein co-axially with said opening; said annular ledge being adapted to releasably receive the peripheral edge of said dial plate about said floor opening; a support plate releasably engaging said outer side of said floor about said floor opening; a transparent crystal for said clock overlying said peripheral edge of said dial plate and having inner and outer surfaces; said crystal extending away from said base and dial plate; said support plate having an opening through which said crystal may protrude; said support plate opening being defined by an annular flange for engaging said outer surface of said crystal; said inner surface of said crystal releasably engaging said peripheral edge of said dial plate about said floor opening; and screw means removably connecting said support plate to said base so as to compress said crystal and dial plate between said annular ledge and annular flange.

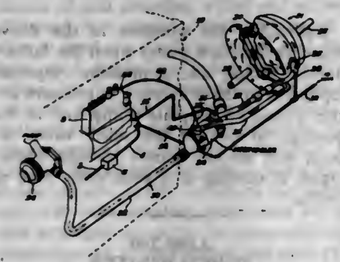
3,090,194
INTERNAL COMBUSTION ENGINES
Wilhelm Glamann, Lyons, France, assignor to Differential-Diesel, Vaduz, Furstentum, Liechtenstein
Filed Oct. 12, 1956, Ser. No. 615,622
1 Claim. (Cl. 60—13)



A power unit of high starting torque, comprising an internal combustion engine, an input shaft driven by said engine, an output shaft, differential gear means interconnecting the input shaft and the output shaft, said differential gear means comprising an input gear and two output gears, the input gear being connected to the input shaft, one of said output gears being connected to said output shaft, a compressor, a tubular conduit between the compressor and the engine for supercharging the engine,

means for driving the compressor from one of said output gears, a gas turbine means for supplying to the turbine gas compressed by the compressor, an output shaft driven by said turbine, and a driving connection between the connecting output shaft of the turbine and said output shaft whereby to increase the torque applied to said output shaft by the differential gear means and to absorb usefully the power applied to the compressor under high torque loads applied on the output shaft, said driving connection including one higher ratio speed reduction gear and one lower ratio speed reduction gear adapted to be placed into operation alternatively with the gear having the higher ratio being used during starting at low speeds and the gear with the lower ratio being used at high speeds, and centrifugal means connected to the gear of lower ratio and operative to automatically engage the same when the speed of the turbine reaches a predetermined value.

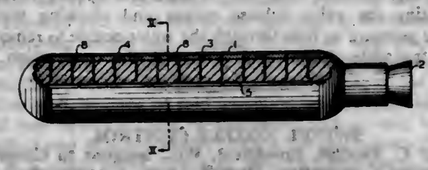
3,090,195
TEMPERATURE RESPONSIVE FUEL GOVERNING MEANS
Byron L. Fisher, Clarendon Hills, and Forrest H. King, River Forest, Ill., assignors to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed May 2, 1960, Ser. No. 26,079
1 Claim. (Cl. 60—12)



In a power plant, an engine being supplied with a fuel, a torque converter containing a fluid, an engine cooling system, a heat exchange between the torque converter fluid and the engine cooling system, a thermal couple responsive to the temperature of the torque converter fluid operatively associated with the engine fuel control through linkage means, the linkage means comprising a flexible link having opposed end portions, and centering means including a first resilient means disposed between one end portion of the link and the fuel control and urging the link to engagement with the fuel control means and second resilient means disposed between the other end portion of the link and the thermal couple and urging the link to engagement with the thermal couple and away from the fuel control with a force opposing the force of the first resilient means, the thermal couple having means movably engaging the other portion and moving the link from a centered position and against the force of the second resilient means to decrease the fuel supplied by moving the fuel control to the engine upon increase in temperature of the fluid beyond an efficient heating range of the torque converter.

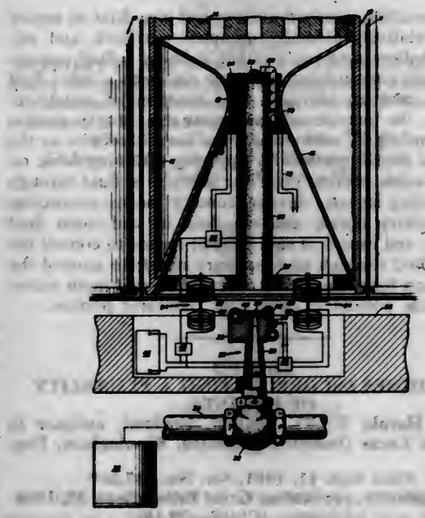
3,090,196
ROCKET PROPELLENT
Leonard Brewer, Herrin, Ill., assignor to Olin Mathieson Chemical Corporation, East Alton, Ill., a corporation of Virginia
Filed Sept. 9, 1959, Ser. No. 839,000
2 Claims. (Cl. 60—35.6)

1. In a rocket motor comprising an outer casing having a gas outlet means and containing a propellant grain having a cross-sectional configuration of the star type, wherein the grain is divided into a plurality of radial segments positioned between the points of the star, the improvement which comprises a plurality of substantially inert supporting members extending radially from the



casing through each of the segments of the grain toward the center of the grain, one end of each support member being secured to the casing and the remainder of the support member being embedded in the propellant grain, each supporting member being provided with a plurality of spines extending from the surface thereof.

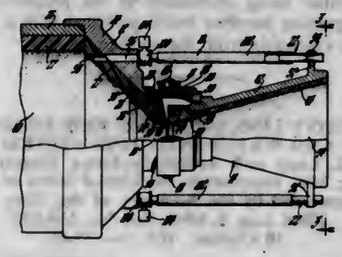
3,090,197
INDUCTIVE LINK INFRARED FIRE DETECTION AND WATER INJECTION SYSTEM
Roger H. Lapp and Arthur Frederick Hogrefe, Silver Spring, Md., assignors to the United States of America as represented by the Secretary of the Navy
Filed Aug. 8, 1961, Ser. No. 130,197
10 Claims. (Cl. 60—35.6)



9. In combination with a plurality of solid propellant rocket motors movably stored in a magazine, each said rocket motor having an exhaust nozzle; a fire extinguishing system comprising a frangible closure in each of said exhaust nozzles, an infrared detector mounted on the side of each of said closures facing the solid propellant, pressurized water supply means, a plurality of water nozzles connected to said water supply means, each said water nozzle being carried by a fixed support adjacent the magazine and being directed toward the solid propellant of each rocket motor, valve means associated with each of said water nozzles for normally preventing flow therethrough, valve release means associated with each of said valve means and responsive to an electrical impulse, means for supplying electrical energy to each of said infrared detectors, and an electrical circuit connecting each of said infrared detectors with its associated valve release means, each said circuit including a first inductive coil mounted within

each of said exhaust nozzles near the outer extremity thereof, and a second inductive coil carried by said fixed support and substantially aligned with said first inductive coil, whereby, upon combustion of one of said solid propellants the infrared detector will be energized to cause an electric impulse to be sent through said circuit, thereby actuating the valve release means and allowing water under pressure to flow through the water nozzle to remove said frangible closure and extinguish the combustion.

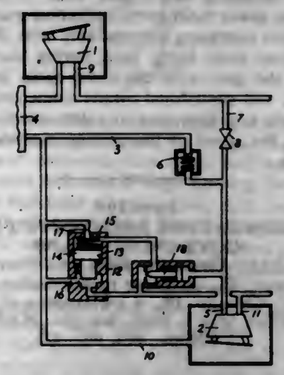
3,090,198
SWIVEL NOZZLE CONTROL
Harry C. Zeisloft, Brookfield, Wis., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Nov. 17, 1960, Ser. No. 70,027
4 Claims. (Cl. 60—35.55)



1. A reaction powered main swivel type fluid jet nozzle having relatively pivotally mounted moveable and stationary hollow portions together defining a fluid passage therewithin communicating at one end with a main fluid chamber, and an auxiliary fluid reaction jet nozzle secured to the outside of said moveable nozzle portion and extending in substantially the same direction as the moveable nozzle portion for applying a turning force on said moveable portion upon the passage of fluid through the auxiliary nozzle, flexible conduit means connecting said auxiliary nozzle and the fluid in said main fluid chamber, and means in said conduit means to control the flow of fluid through said auxiliary nozzle to control the jet reaction force therefrom operable on said main moveable nozzle portion to deflect the moveable portion.

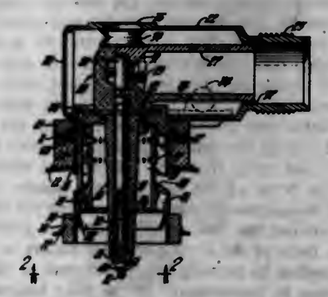
3,090,199
MACHINES INCORPORATING A PLURALITY OF ENGINES
Eugene Harold Warne, Solihull, England, assignor to Joseph Lucas (Industries) Limited, Birmingham, England
Filed Sept. 11, 1961, Ser. No. 137,269
Claims priority, application Great Britain Sept. 22, 1960
3 Claims. (Cl. 60—39.14)

1. For use in a machine having at least one main engine, a fuel tank, a first swash-plate pump which has an inlet pipe and a delivery pipe respectively connected to the fuel tank and the main engine, and which is mechanically connected to, and operable by, the main engine for supplying fuel thereto, at least one subsidiary engine, and a second swash-plate pump which has an inlet pipe and a delivery pipe respectively connected to the fuel tank and the subsidiary engine, and which is mechanically connected to, and operable by, the subsidiary engine for supplying fuel thereto, means comprising in combination with the first and second swash-plate pumps and the fuel tank, a non-return valve in the inlet pipe of the second swash-plate pump, a branch passage which connects the delivery pipe of the first swash-plate pump to the inlet pipe of the second swash-plate pump at a position between the latter and said non-return valve, and through which fuel from the last mentioned delivery pipe is admissible to the inlet pipe of the second swash-plate pump for causing the latter to act as a hydraulic motor for starting the subsidiary engine, a valve which forms a part of said branch passage, and which is operable for controlling fuel flow therethrough, a second branch passage connecting the delivery pipe of the second swash-plate pump to the inlet pipe thereof at a position between said fuel tank and said non-return valve, a pressure-responsive relief valve in said second branch pas-



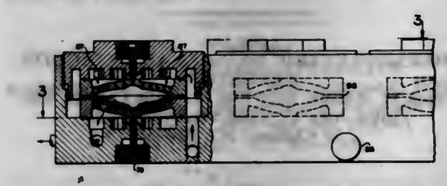
sage for controlling the pressure in the delivery pipe of the second swash-plate pump when the latter is acting as a hydraulic motor, and a pressure responsive valve means responsive to the difference in pressure in the inlet pipe of the second swash-plate pump and in the second branch passage to control the relief valve to prevent flow through said second branch passage when the subsidiary engine is turning at a sufficiently high speed for self operation.

3,090,200
TORCH IGNITER
Fortunato F. Barberis, Flint, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Continuation of application Ser. No. 641,396, Feb. 20, 1957. This application Nov. 17, 1961, Ser. No. 155,231
4 Claims. (Cl. 60—39.82)



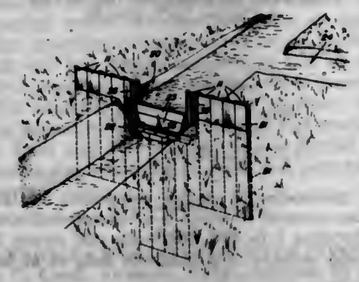
1. A torch igniter comprising, in combination, an annular shell having an open end adapted to extend into a combustion apparatus through a wall thereof, a center electrode disposed on the axis of the shell adjacent the open end, a tubular side electrode extending from the shell and terminating adjacent the center electrode to define a spark gap therewith, the side electrode being adapted to communicate with a source of air external to the said wall and conduct the air to the termination points of the side electrode and being open toward the spark gap, entrance means defined by the shell external to the said wall to admit air thereto for flow through the shell and from the open end thereof, a spray tip mounted in the shell and adapted to spray atomized fuel into the air flowing through the shell, and means for supplying fuel to the spray tip, the side electrode having lateral entrance openings therein to receive the fuel-laden air and conduct it to the spark gap.

3,090,201
FLUID DISPLACEMENT DEVICE
Gordon H. May, San Jose, Calif., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 29, 1958, Ser. No. 783,387
15 Claims. (Cl. 60—54.5)



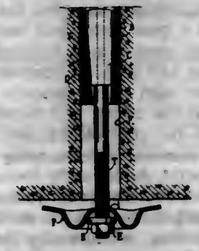
15. A fluid displacement device comprising an expansible fluid coupling containing a non-compressible fluid, a flexible diaphragm and a slave piston defining the end boundaries of said coupling, a first and second cavity member disposed in opposed adjustable spaced relation to each other to limit the displacement of said diaphragm therebetween, said diaphragm being positioned to have a stroke defined by the displacement thereof between said first and second members to transmit motion of said diaphragm through said fluid to said piston to move said piston a predetermined distance in accordance with adjustments in said spaced relation, and a plurality of holes in at least one of said cavity members for passing fluid therethrough into said coupling, said holes being so distributed and arranged so as to be progressively closed by said diaphragm as it approaches the end of its said stroke whereby the rate of fluid flow from said chamber is gradually reduced as said diaphragm is displaced.

3,090,202
IRRIGATION GATE WALL
Lawrence J. Spickard, 721 11th St., Clarkston, Wash.
Filed Jan. 28, 1960, Ser. No. 5,265
5 Claims. (Cl. 61—28)



3. An irrigation ditch gate wall for water to be controlled in irrigation, said gate wall comprising a plurality of planks driven vertically into the earth across the irrigation ditch and extending from side to side of the ditch thus forming an irrigation wall, said planks having interlocking tongue and groove-forming portions along their longitudinal edges and said groove-forming portions including longitudinally extending plank ribs, said portions forming joints interconnecting said planks in the irrigation wall continuously in series continuity against widthwise separation after the planks have been driven and said portions maintaining each of said planks, when driven, in interlock with the next of said planks being driven, said planks providing a passage having selected location in the ditch and suited to the ditch, by the top end of at least one intermediate plank of the series of planks being driven down into the ditch and lower than the top ends of adjacent planks of the series flanking said passage in establishing width and vertical extent of said passage, thus for water to flow in the ditch through the passage from the upstream side to the downstream side of the irrigation wall, an area of said irrigation wall on the side of said wall opposite those of said plank ribs at said intermediate and adjacent planks being a flat area substantially all in a single plane including corresponding plane faces of said intermediate and adjacent planks, and said gate wall further including a vertically movable gate extending across said passage and along said flat area at the bottom of said passage to close said passage and be lifted vertically to open the passage, and gate guide and stop means engaged with said irrigation wall, including gate edge guide portions in substantially conforming abutting relation to said flat area of said irrigation wall on opposite sides of said passage, said edge guide portions extending outwardly from said flat area of the irrigation wall, and thence laterally toward said pasage to define spaces slidably receiving opposite edges of said gate outside said flat area of the irrigation wall, and said means having area thereon for said gate to abut and be stopped against vertical downward movement relative to said irrigation wall when the gate is in the passage closing position.

3,090,203
SUPPORT PLATE FOR AN ANCHORING DEVICE
André Durget, Saverne, France, assignor to Anciens Etablissements Goldenberg & Cie, Zornhoff (Bas-Rhin), France, a French body corporate
Filed Feb. 27, 1959, Ser. No. 796,041
Claims priority, application France Mar. 3, 1958
5 Claims. (Cl. 61—45)



1. The combination of an anchoring expansion bolt inserted in a hole bored in a wall such as a roof and a support element for the bolt, the expansion bolt having a shank, a screw-thread on the end of the shank extending out of the hole, tightening means screw-threadedly engaged on the screwthreaded end of the shank, the support element comprising in the free unclamped state a peripheral outer portion for bearing against said wall, an annular inner portion, a central aperture defined by said inner portion and provided for the shank, and an annular intermediate portion interconnecting said inner portion and said outer portion, the support element having such shape in radial section through said aperture that in said outer portion the support element is substantially rectilinear and in said intermediate portion and said inner portion the support element extends downwardly from said outer portion and upwardly to said aperture in an approximately sinusoidal fashion, said inner portion having a bottom face sub-

stantially in the shape of a concave dome truncated by said aperture, the shank extending through said aperture and the tightening means having a circular bearing face engaging said bottom face around substantially the entire periphery of said bearing face and exerting a clamping force on the support element when the tightening means are screwed along the shank, and the size of said aperture being much larger than the size of the shank so as to permit the latter to assume any of a wide range of inclined positions in the support element, the entire periphery of said bearing face engaging said bottom face at all times due to said dome shape of the latter.

3,090,204
METHOD OF FORMING CONCRETE SHELL IN GROUND
Maxwell M. Upson, Englewood, N.J., assignor to Raymond International Inc., New York, N.Y., a corporation of New Jersey
Filed Mar. 17, 1959, Ser. No. 800,018
4 Claims. (Cl. 61—53.66)



1. The method of forming a tubular concrete shell in the ground by means of a tubular casing, a tapered tubular wedging member of substantially smaller maximum diameter than the casing, a mandrel of sufficiently smaller diameter than the wedging member for slidable disposition therein, and a boot plate, said method comprising: positioning in the ground to a selected depth of penetration said casing and mandrel concentrically supported on said boot plate with liquid concrete filling the annular space between the casing and mandrel, withdrawing the casing before the concrete has set and forcing said tapered wedging member in telescoping relation with respect to said mandrel, downwardly therealong to displace said liquid concrete radially away from said mandrel and into gripping engagement with the earth bared by withdrawal of said casing, withdrawing the mandrel while retaining said wedging member in its downwardly thrust position to retain said concrete in tubular form until permanently set and thereupon withdrawing said wedging member.

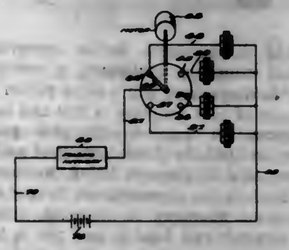
3,090,205
HARNESS PACK FOR FREE DIVING APPARATUS
Abraham Hurwitz, Brookline, and Wilbur J. O'Neill, Chelmsford, Mass., assignors to Hypro Diving Equipment Corp., Allston, Mass., a corporation of Massachusetts
Filed Nov. 23, 1959, Ser. No. 854,642
5 Claims. (Cl. 61—70)

1. A harness pack for free diving apparatus comprising a backplate adapted to extend from the diver's shoulders to his hips, a pair of rigid curved waistband members secured to opposite sides of a mid portion of said backplate each by a hinge having an axis permitting the said members to be opened away from each other, a shoulder strap extending from each side of the top of said backplate to a front portion of the waistband member on the same side of said backplate, a crotch strap extending from the lower portion of said backplate to between the front ends of said waistband members, and a release strap



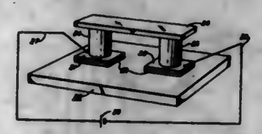
attached to an end of one of said waistband members and adapted to secure the ends of said waistband members and the end of said crotch strap.

3,090,206
THERMOELECTRIC DEVICES AND CIRCUITS THEREFOR
Frank W. Anders, 2415 Elm St., Falls Church, Va.
Filed June 23, 1960, Ser. No. 38,225
33 Claims. (Cl. 62—3)



17. In a thermoelectric circuit, a potential source, a plurality of adjacent thermoelectric devices, distribution means for cyclically connecting said thermoelectric devices one after another into said circuit, and means for cyclically pulsing said circuit.

3,090,207
THERMOELECTRIC BEHAVIOR OF BISMUTH-ANTIMONY THERMOELEMENTS
George E. Smith, Berkeley Heights, and Raymond Wolfe, New Providence, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Mar. 22, 1962, Ser. No. 181,667
6 Claims. (Cl. 62—3)



1. A thermoelectric device comprising at least one couple one element of which is a bismuth-antimony alloy having between 3 to 40% antimony and means for subjecting said element to a magnetic field of at least 100 gauss.

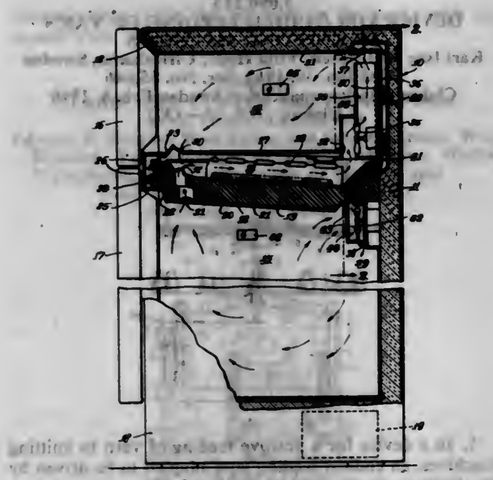
3,090,208
COOLING METHOD BY MEANS OF NEGATIVE PRESSURE GIVEN ON THE VORTEX TUBE
Ken-Iti Munakata, 85 1-chome, Kamikoshien Nishinomiya Hyogo-ken, Japan
Filed Jan. 12, 1960, Ser. No. 1,995
Claims priority, application Japan Jan. 19, 1959
4 Claims. (Cl. 62—5)

1. A cooling device for use in association with a source of negative pressure, such as the inlet for an internal combustion engine, compressor and the like comprising a vortex tube having a cold fluid discharge and a hot fluid discharge, heat exchanger means connected to said cold fluid discharge; and means for connecting the



hot fluid discharge to the source of negative pressure, said source of negative pressure being connected to said heat exchanger means for circulating cold fluid therethrough from said vortex tube.

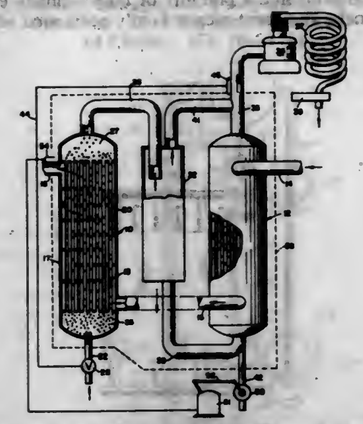
3,090,209
REFRIGERATING APPARATUS
Earl F. Hubacker, Evansville, Ind., assignor to Whirlpool Corporation, a corporation of Delaware
Filed Apr. 24, 1961, Ser. No. 104,961
14 Claims. (Cl. 62—180)



1. Refrigerating apparatus comprising: means forming an air passage; refrigerating means for cooling air in said air passage; means forming first and second chambers; first conduit means interconnecting said air passage and said first chamber; first air moving means for flowing air through said first conduit means from said air passage to said first chamber; second conduit means interconnecting said first chamber and said second chamber; second air moving means for flowing air through said second conduit means from said first chamber to said second chamber; and means for conducting air from said chambers to said air passage.

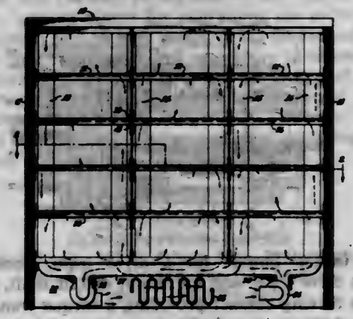
3,090,210
REFRIGERATION SYSTEM WITH CONTROLS
James C. Groff, Anaheim, Calif., assignor, by mesne assignments, to Astro Science Corporation, West Los Angeles, Calif., a corporation of California
Filed Oct. 27, 1960, Ser. No. 65,409
7 Claims. (Cl. 62—197)

1. In a refrigerating system of the compressor-, condenser-expander type, in combination, means comprising a plurality of evaporators connected for series flow of refrigerating medium therethrough, means comprising a separator unit between the evaporators for separating gas from liquid, said unit having a connection for flow of gas from the unit to the outlet of the evaporators, means for passing medium to be cooled through said evaporators, and means for injecting hot gas into the flowing



refrigerating medium, said last means being connected to the connection between two adjacent evaporators and means for controlling the admittance of the hot gas.

3,090,211
REFRIGERATING SHELF STRUCTURE
Louis F. Barroero, 1585 Daniels Drive, San Leandro, Calif.
Filed Feb. 27, 1961, Ser. No. 91,939
17 Claims. (Cl. 62—256)



15. A refrigerator shelf structure for use with a duct air system, said shelf structure having top and bottom surfaces and a peripheral edge, and comprising: means defining upper and lower air compartments separated by an imperforate member, first and second openings being formed in the peripheral edge and each opening being substantially centered relative to top and bottom surfaces, and means communicating said first opening with said upper compartment and said second opening with said lower compartment.

3,090,212
SANDWICH PANEL CONSTRUCTION
Roger A. Anderson, Newport News, and Robert T. Swann, Hampton, Va., assignors to the United States of America as represented by the Administrator of the National Aeronautics and Space Administration
Filed Sept. 27, 1961, Ser. No. 141,220
12 Claims. (Cl. 62—467)
(Granted under Title 35, U.S. Code (1952), sec. 266)

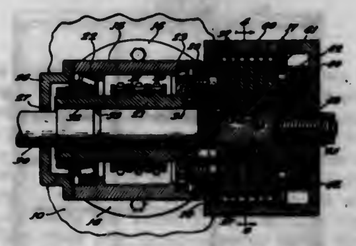
1. A sandwich panel heat barrier structure, comprising: an internal skin, an external skin spaced from said internal skin, a core element including a plurality of

bulkheads disposed intermediate said internal and external skins and attached thereto to divide the space between said skins into a plurality of longitudinally extending channels, absorbent means fixedly positioned adjacent



the inner surface of said external skin and a plurality of spray tubes individually secured within at least some of said channels and adapted to spray a liquid coolant onto said absorbent means.

3,090,213
TORQUE LIMITER
Robert F. Lindgren, Aurora, Ill., assignor to Daco, Incorporated, a corporation of Illinois
Filed Oct. 13, 1961, Ser. No. 144,929
4 Claims. (Cl. 64—30)



1. A torque limiter for a drive train, comprising: an input drive shaft and an output driven shaft, friction plates in driving contact providing a torque transmitting coupling between the shafts, a pressure plate resiliently urging said friction plates into said driving relation, a driving sleeve about the friction plates having a driving connection with some of the plates, said sleeve and input drive shaft having engaging cam surfaces therebetween for driving the sleeve in rotation and urging said sleeve toward said pressure plate in a direction to relieve said resilient urging of the friction plates together, said sleeve sensing torque transmitted by said friction plates and being urged by said engaging cam surfaces in response to the sensed torque to relieve pressure of the pressure plate on said friction plates maintaining torque transmitted to the output shaft below a predetermined maximum.

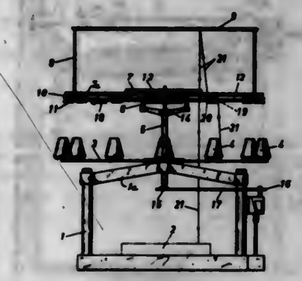
3,090,214
DEVICE FOR POSITIONING THE NEEDLE CAMS OF A HAND-OPERATED KNITTING MACHINE
Walter Bräm, Dietikon, Zurich, Switzerland, assignor to Paliz-Holding AG., Zug, Switzerland
Filed June 8, 1960, Ser. No. 34,819
Claims priority, application Switzerland June 17, 1959
7 Claims. (Cl. 66—60)

1. In a straight frame knitting machine with at least one needle bed having needles disposed therein and a lock with needle cams for moving the needles when reciprocated along the needle bed, a patterning device for adjustably moving the needle cams selectively into and out of action, said patterning device comprising a U-shaped bearing member, a U-shaped cover movably mounted thereon, means for displacing said cover relative to said



member, cam rails movably mounted between said member and said cover, first coupling means for coupling said rails with said needle cams, second coupling means for coupling said rails with said cover, and means for selectively coupling one of said second coupling means with one of said rails.

3,090,215
DEVICE FOR GUIDED FEEDING OF YARN TO KNITTING MACHINES
Karl Isac Joel Rosén, Villa Haga, Ulricehamn, Sweden
Filed Jan. 30, 1961, Ser. No. 85,646
Claims priority, application Sweden Feb. 8, 1960
3 Claims. (Cl. 66—132)

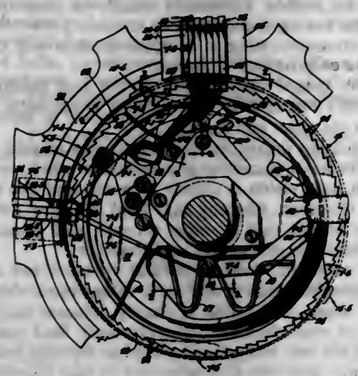


1. In a device for a positive feeding of yarn to knitting machines, an endless feeding tape adapted to be driven by the knitting machine, a plurality of rollers over which said feeding tape runs the number of rollers corresponding to the number of yarn packages in the knitting machine, and means situated in the vicinity of each one of said rollers for guiding the yarn from the different yarn packages in between the tape and the surface of the roller in question.

3,090,216
METHOD OF YARN SEVERING IN CIRCULAR KNITTING MACHINES
Peter A. Mahler, Philadelphia, Pa., assignor to Singer-Fidelity, Inc., Philadelphia, Pa., a corporation of Delaware
Filed July 12, 1960, Ser. No. 42,383
3 Claims. (Cl. 66—140)

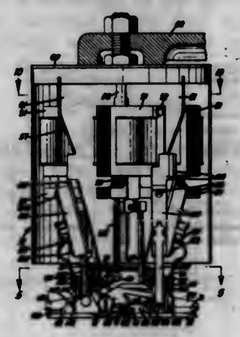
1. A method of knitting a circular-knit stocking comprising feeding a terminal end of one yarn to selected needles of a circle of needles having hooks and latches at one feed station, advancing said selected needles to a subsequent feed station with the one yarn in the hooks thereof, feeding a second yarn into the hooks of said selected needles at the subsequent feed station, actuating said selected needles at the subsequent feed station to close the latches against the hooks and entrap the one yarn in said hooks with the second yarn for the formation of composite loops, and severing the unknit terminal end of said one yarn following said actuation of the

needles and while the latches thereof are closed at a point closely adjacent the needle circle, whereby the



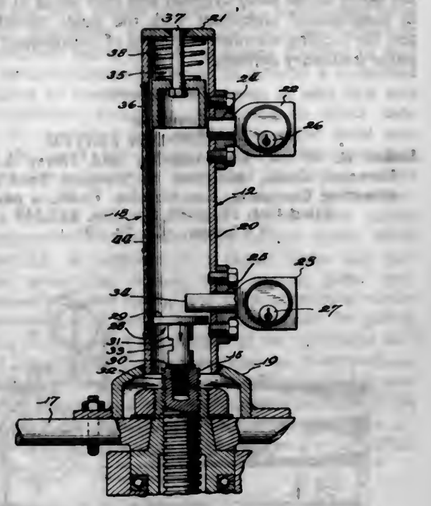
closed latches retain the one yarn in the hooks with the second yarn.

3,090,217
CLAMP AND CUTTER MECHANISM FOR KNITTING MACHINES
Edward R. Ziemba, West Lawn, and John C. Arentz, West Reading, Pa., assignors to Textile Machine Works, Wyomissing, Pa., a corporation of Pennsylvania
Filed Dec. 28, 1960, Ser. No. 79,003
10 Claims. (Cl. 66—140)



1. In a circular knitting machine having yarn feeding means, a rotatable needle cylinder, needles carried by said cylinder for forming yarns fed by said feeding means into knitted fabric, means for moving said yarn feeding means to move the yarns fed thereby between knitting and non-knitting positions, yarn clamping means including a clamping member movable between an active yarn clamping position and an inactive position to receive yarns moved to non-knitting position, yarn severing means movable between a normally closed yarn severing position and an open position to receive yarns moved to non-knitting position, means for moving said yarn severing means to open position, means for moving said yarn severing means to closed position, guard means movable between an active position in which it lies in the path of yarns moved to non-knitting position to prevent said yarns from entering said clamping means and an inactive position, said means for moving said severing means to open position also acting to move said clamping member and said guard means to inactive positions.

3,090,218
LOCKED-SAFE VALVE
Harald A. Birkness, Homewood, Ill., assignor to Standard Oil Company, Chicago, Ill., a corporation of Indiana
Filed Nov. 27, 1959, Ser. No. 855,863
14 Claims. (Cl. 70—179)



3. An interlock mechanism for maintaining in a static position a reciprocable member which mechanism comprises an elongated element adapted for mounting adjacent to and parallel to the line of movement of said member, locking means for restraining the movement of said member, said locking means being positioned on said element, and engaging means responsive to movement of said member adapted for engagement with said locking means independently of the rotational alignment between said member and said locking means, whereby engagement of said locking means and said engaging means maintains said member in a static position.

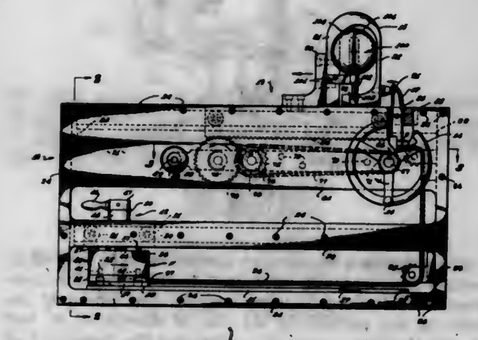
3,090,219
COMBINATION LOCKS
Morris J. Levin, 552 E. Olney Ave., Philadelphia, Pa.
Filed May 3, 1960, Ser. No. 26,583
4 Claims. (Cl. 70—315)



1. A combination lock, comprising an outer stationary cylinder having a series of radially disposed bores opening through its inner periphery, spring pressed pins in said bores, an inner cylinder rotatable in the outer cylinder having a series of radially disposed bores in alignment with said bores in said outer cylinder, each of said bores in said inner cylinder having a ball magazine offset therefrom, each ball magazine being open at its outer and inner end, balls in each ball magazine, tumblers in the bores of the inner cylinder, a core connectible to a locking bolt, said core being rotatable in the inner cylinder, said core having a plurality of openended bores and a keyway in said core into which the bores open, said inner cylinder having a second series of bores in longitudinal alignment with the outer cylinder bores but being laterally offset with respect thereto, a spring pressed locking mem-

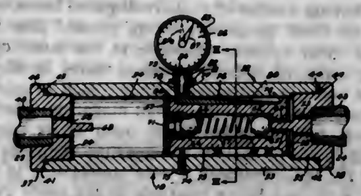
ber in one of the bores of the second series of bores in said inner cylinder, a tumbler in said one bore, said outer cylinder having means to receive said locking member, a combination key insertable into the keyway and a guest key insertable in the keyway to form a new combination, the bores of the inner cylinder and core being at such time in longitudinal alignment with the outer cylinder bores and the locking member being out of engagement with the outer stationary cylinder.

3,090,220
FILE SHARPNESS TESTER
James R. Wood, Los Angeles, and Harry L. Boggs, Downey, Calif., assignors to Western Tool and Engineering Company, Los Angeles, Calif., a partnership
Filed Oct. 19, 1959, Ser. No. 847,318
9 Claims. (Cl. 73—9)



2. A test apparatus comprising: a rigid frame having a surface to support a file thereon; a test block support mounted on said frame for movement over and along the length of said surface; a test block; resilient means mounting said test block on said support to bias said test block against a file on said surface with a predetermined force; actuating means for pulling said test block over a file on said surface and including a spring means interposed between said test block and the point of application of a pulling force to said actuating means; a means to hold a file against movement on said surface when said test block is being pulled thereacross; and a means to measure the reaction of said spring means induced by pulling said test block over said file.

3,090,221
TEST APPARATUS AND HYDRAULIC SYSTEMS
Kenneth W. Cosby, Kalamazoo, Mich., assignor to Carl J. Philippe, Kalamazoo County, Mich.
Filed Nov. 14, 1960, Ser. No. 69,226
4 Claims. (Cl. 73—40)



1. A device for detecting a pressure drop in one of two conduits, both of said conduits containing pressure fluid, comprising:

housing means defining an elongated, substantially cylindrical chamber communicating at the opposite ends thereof with the two conduits;

a cylindrical, floating piston disposed within said chamber for sliding movement lengthwise thereof, said piston having a passageway extending therethrough and communicating at its opposite ends with the opposite ends of said chamber;

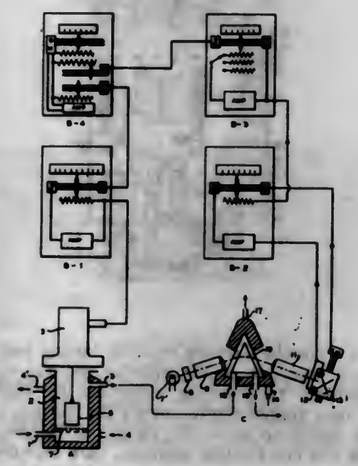
normally closed valve means within said passageway, whereby one end of said chamber is normally sealed from the other end thereof;

first actuating means located at one end of said chamber for holding said valve means open when, and only when, said piston is closely adjacent said one end of said chamber, whereby said fluid can flow from the other end of said chamber through said passageway and into said one end of said chamber;

second actuating means located at the other end of said chamber for holding said valve means open when, and only when, said piston is closely adjacent said other end of said chamber, whereby said fluid can flow from the one end of said chamber through said passageway and into said other end of said chamber;

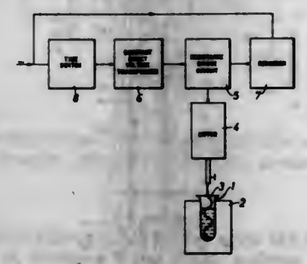
and indicator means responsive to substantial movement of said piston lengthwise of said chamber to indicate a pressure differential between said conduits without obstructing the fluid flow therebetween.

3,090,222
APPARATUS FOR CONTINUOUS MEASUREMENT OF DEGREE OF POLYMERIZATION
Michijiro Akaboshi, Toyonaka City, and Kikuji Uragami and Kensuke Okuma, Toyama City, Japan, assignors to Kurashiki Rayon Co., Ltd., Kurashiki-shi, Japan, a corporation of Japan
Filed Feb. 17, 1960, Ser. No. 9,266
4 Claims. (Cl. 73—53)



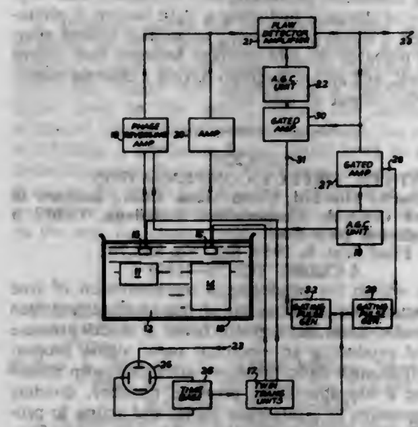
1. An apparatus for continuously measuring the degree of polymerization of the polymer in a polymer solution comprising a continuous viscometer adapted to measure the viscosity of said polymer solution, a continuous refractometer adapted to continuously measure the refractive index of said polymer solution, means for continuously converting the refractive index measurement into a measurement of polymer concentration in the polymer solution, and means for continuously combining the viscosity measurement and concentration measurement into a measurement of the polymer degree of polymerization.

3,090,223
PROCESS FOR SIMULTANEOUSLY MEASURING CHANGES IN THE VISCOSITY AND ELASTICITY OF A SUBSTANCE UNDERGOING A CHEMICAL OR PHYSICAL CHANGE
Richard Juffa, Leverkusen, and Wilhelm Kallert, Cologne-Stammheim, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany
Filed Apr. 14, 1959, Ser. No. 806,366
Claims priority, application Germany May 7, 1958
3 Claims. (Cl. 73—59)



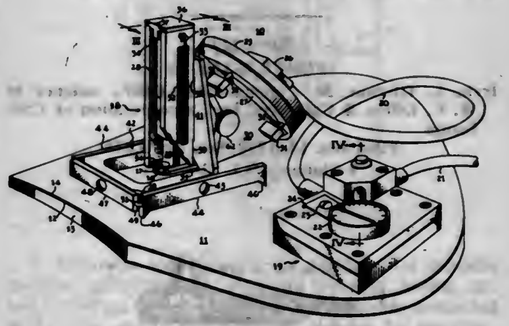
1. In the process for measuring viscosity in which a member is periodically at given time intervals moved through the material under test and the resistance to movement is recorded as a measurement of viscosity, the resistance to said movement being additionally used to determine a change in the elasticity of the material, the improvement comprising effecting at least one additional quickly succeeding measurement of the resistance to movement of the member during each periodic movement, the time of movement of the member being relatively short as compared to the time interval between movements, whereby wide variation of the resistance in said successive measurements indicates elasticity in the material.

3,090,224
ULTRA-SONIC FLAW DETECTION
Alexander Bryce Calder Rankin, Barkingside, England
Filed Apr. 21, 1959, Ser. No. 807,864
3 Claims. (Cl. 73—67.9)



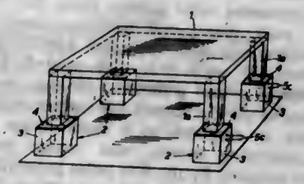
1. Ultrasonic flaw detection apparatus for detecting flaws in a test work piece by comparison with a dummy work piece, comprising in combination container means for liquid, first and second electromechanical vibration transducer means arranged in said container means to transmit pulses of ultrasonic wave energy through liquid to be contained in said container means and to receive echo signals, said container means also being adapted to contain a test work piece and a dummy work piece immersed in the liquid at equal depths below said first and second transducer means respectively, pulse generating means for energizing said first and second transducer means, resultant signal producing means coupled to said first and second transducer means to provide a combined output signal by combining the outputs of said first and second transducer means in opposition to effect cancellation of unwanted echo signals from the front surfaces of the work piece, said resultant signal producing means comprising gain controlled amplifying means coupled to one of said first and second transducer means, a second pulse generator means, and gating means responsive to the combined output signal when made operable in response to a signal from said second pulse generating means, said second pulse generating means actuated by the first pulse generating means and connected to the gating means to actuate the gating means at a time to select the portion of the combined output signal corresponding to echoes from the front surfaces of the work piece and gain control means comprising said gating means coupled to said gain controlled amplifying means to vary the gain of said amplifying means in accordance with the magnitude of the selected echo signal.

3,090,225
METHOD AND APPARATUS FOR SHEAR TESTING
Travis B. Hollar and Wallace F. Harbison, Fort Worth, Tex., assignors to General Dynamics Corporation (Convair Division), San Diego, Calif., a corporation of Delaware
Filed Oct. 16, 1959, Ser. No. 846,993
10 Claims. (Cl. 73—101)



1. Apparatus for testing the shear strength of a laminated body having a surface with a recess therein which recess surrounds a test section of lamina and has a depth corresponding to the thickness of the test section of said lamina comprising, a supporting structure for being positioned adjacent said recess in said surface of said laminated body, means extending into said recess for securing said supporting structure on said surface of said laminated body, shearing means movably supported by said supporting structure for extending into said recess and for effecting a shear stroke to shear said test section of lamina in said recess from said laminated body, said shear stroke being substantially parallel to said surface of said laminated body when said supporting structure is secured to said body, and actuating means for actuating said shearing means.

3,090,226
MOTION MEASURING APPARATUS
Ulrich A. Corti, 6 Waldschulweg, Zurich, Switzerland; Fritz Gassmann, 7 Zurichstrasse, Kusnacht, Zurich, Switzerland; and Max Weber, 345 Bremgartenstrasse, Wohlen, Switzerland
Filed Feb. 16, 1955, Ser. No. 488,618
2 Claims. (Cl. 73—141)



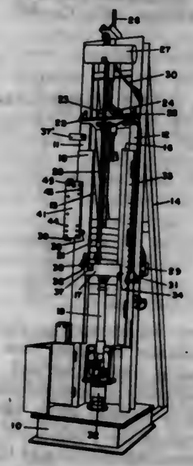
1. A motion measuring device adapted for being supported on a supporting medium comprising a transmitting means adapted to support a subject to be tested, connecting means connecting said transmitting means to said supporting medium and constituting the sole connection therebetween; said connecting means comprising a fixed rigid member supported on said supporting medium, and an elastic diaphragm supported on said rigid member and affixed thereto, said transmitting means being fixedly and centrally connected to said diaphragm; a transducer operatively coupled to said diaphragm to transduce displacements of said diaphragm into measurable units; and indicating means coupled to said transducer to indicate said units, said transmitting means comprising a platform and a plurality of legs depending therefrom, said connecting means comprising one said rigid member and elastic diaphragm for each leg, each leg being fixed to one of the elastic diaphragms.

3,090,227
FORCE GAUGE
Irvin L. Glerum, St. Canoga Park, Calif., assignor to W. C. Dillon & Company, Inc., a corporation of California
Filed Jan. 18, 1960, Ser. No. 3,076
8 Claims. (Cl. 73—141)



1. A force gauge comprising: a force bar, said force bar having a first end portion defining a first longitudinally extending inner slot and its opposite second end portion defining a second longitudinally extending inner slot, said first and second slots lying in substantially the same plane and extending to points in close proximity to each other relative to the length of said bar, said first end portion being designed for coupling to opposing force exerting members acting to effect a change in the width of said first slot by lateral movement of said first end portion whereby an opposite change is effected in the width of said second slot by lateral movement of said second end portion; and, indicator means coupled to said second end portion for measuring said lateral movement thereof.

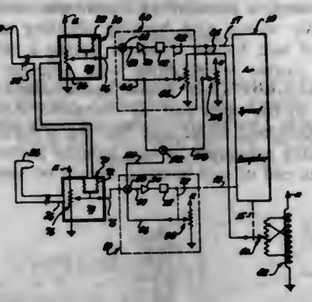
3,090,228
TESTING OF CARTRIDGE ACTUATED DEVICES
Creston F. Laager, Beverly, N.J., and Emil A. Mathias, Cheltenham, Pa., assignors to the United States of America as represented by the Secretary of the Army
Filed Aug. 2, 1961, Ser. No. 128,903
1 Claim. (Cl. 73—167)
(Granted under Title 35, U.S. Code (1952), sec. 266)



In a device for testing a mechanism having parts movable with respect to one another by the firing of an explosive cartridge, the combination therewith of means supporting a vertical track with a support fixed to its lower end, a load cell mounted on said support and coupled to one of said parts, a carriage movable along said track and coupled to the other of said parts, said carriage bearing weight increments simulating the load to be moved by said mechanism, means for producing transitory traces one of which is representative of a distance traveled by said carriage and the other of which is representative of time, and means for making a permanent record of said traces, the means for producing said transitory trace representative of distance including a light source, a photoelectric cell, a signal plate having accurately spaced apertures and movable by said carriage between said source and said cell, and an oscillograph having a channel modulated by the output of said cell.

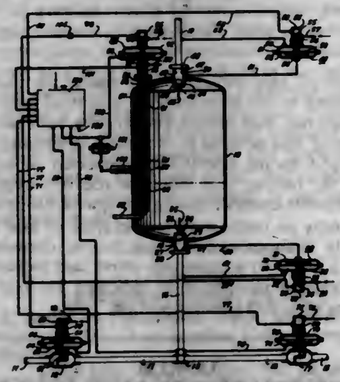
3,090,229
STATIC DEFECT COMPENSATION
Robert Charles Howard, Costa Mesa, Calif., assignor to Giannini Controls Corporation, Pasadena, Calif., a corporation of New York
Filed Sept. 8, 1959, Ser. No. 838,701
4 Claims. (Cl. 73—182)

1. In a system for producing a representation of true static pressure, the combination of means directly driven by pneumatic pressure derived from a static pressure orifice and producing an electrical input signal proportional to indicated static pressure; servo followup means comprising a movable static pressure member, dividing means responsive to a reference signal and acting to produce an electrical output signal equal to a variable fraction of the reference signal, said dividing means being drivable to vary the value of said fraction, and servo means for driving the static pressure member and the dividing means in synchronism to maintain the output signal from the dividing means equal to said input signal; means producing a voltage signal proportional to the ratio of indicated static pressure to true static pressure, and means for supplying the control signal as reference signal



to the dividing means, whereby the position of said static pressure member represents true static pressure.

3,090,230
METERING METHODS AND MEANS
Clarence O. Glasgow, Tulsa, Okla., assignor to National Tank Company, Tulsa, Okla., a corporation of Nevada
Filed Apr. 3, 1958, Ser. No. 726,154
31 Claims. (Cl. 73—224)



1. Metering means for measuring liquids including, a metering vessel of predetermined volume, means for admitting a liquid to said vessel and discharging the liquid therefrom, means for establishing a maximum upper liquid level in the vessel, means for establishing a minimum lower liquid level in the vessel, the means for establishing a minimum lower liquid level in the vessel including valve float and valve seat means, means for detecting the seating of the float on the seat, and means responsive to the detecting of the seating of the float on the seat for closing said discharging means.

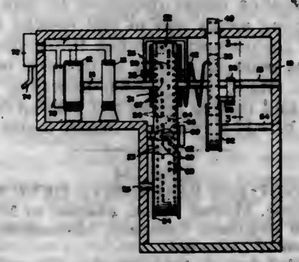
3,090,231
INDICATING FLOWMETER WITH MAGNETIC MERCURY SWITCHES FOR SIGNAL OPERATION
Regner A. Ekstrom, Jr., 15555 Millard, Markham, Ill.
Filed June 20, 1958, Ser. No. 743,383
6 Claims. (Cl. 73—228)

1. A flowmeter having a body formed of a front plate and a rear plate, the rear plate having a cylindrical chamber, an insert mounted in the chamber, an inlet and an outlet for said chamber, the insert having a substantially circular inner wall with an arcuate portion of greater radius of curvature than that of the remainder of the said inner wall and being curved progressively away from the center of the insert, said inner wall having a V-shaped notch opposed to the arcuate surface, a substantially rectangular vane having a knife-edge at one end engaging with said notch to form a pivot with its free end adapted to swing along the arcuate surface, a spring having one end secured to the vane and the other



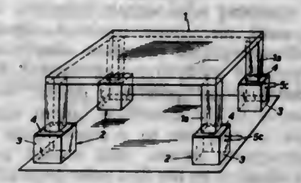
end secured to the insert for holding the vane in position down in the slot and providing tension against its movement, a magnet secured to the vane, a pointer pivotally mounted on the outside of the body plate, and a magnet on the pointer which coacts with the magnet on the vane to move the pointer in accordance with the movement of the vane.

3,090,232
TANK GAUGE
Fred M. Mayes, Richardson, Tex., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey
Filed May 31, 1960, Ser. No. 33,031
8 Claims. (Cl. 73—321)



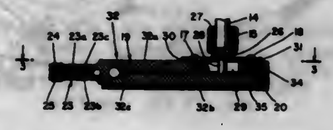
1. Apparatus for indicating the position of a movable member comprising an elongated member having one end connected to said movable member, means connected to the other end of said elongated member for maintaining the same in a taut condition for all positions of the movable member whereby said elongated member is movable with the movable member, a rotatably mounted reel operatively connected to said elongated member for rotation in response to movement of said elongated member, a second rotatably mounted reel, a coded tape operatively connected to said second reel and movable in accordance with the movement of said second reel, a resilient coupling between said reels, said resilient coupling transmitting the movement of said first-named reel to said second reel to cause movement of said coded tape, stop means connected to said reels for normally maintaining said reels in the same respective position under the bias of said resilient coupling, and means for rotating said second reel against the bias of said coupling to cause relative movement of said second reel with respect to said first-named reel.

3,090,226
MOTION MEASURING APPARATUS
Ulrich A. Corti, 6 Waldschulweg, Zurich, Switzerland; Fritz Gassmann, 7 Zurichstrasse, Kusnacht, Zurich, Switzerland; and Max Weber, 345 Bremgartenstrasse, Wohlen, Switzerland
Filed Feb. 16, 1955, Ser. No. 488,618
2 Claims. (Cl. 73—141)



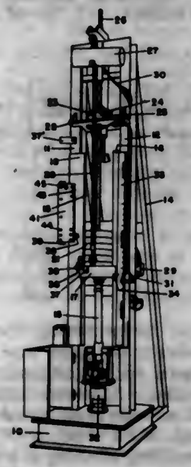
1. A motion measuring device adapted for being supported on a supporting medium comprising a transmitting means adapted to support a subject to be tested, connecting means connecting said transmitting means to said supporting medium and constituting the sole connection therebetween; said connecting means comprising a fixed rigid member supported on said supporting medium, and an elastic diaphragm supported on said rigid member and affixed thereto, said transmitting means being fixedly and centrally connected to said diaphragm; a transducer operatively coupled to said diaphragm to transduce displacements of said diaphragm into measurable units; and indicating means coupled to said transducer to indicate said units, said transmitting means comprising a platform and a plurality of legs depending therefrom, said connecting means comprising one said rigid member and elastic diaphragm for each leg, each leg being fixed to one of the elastic diaphragms.

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Filed Jan. 18, 1960, Ser. No. 3,076
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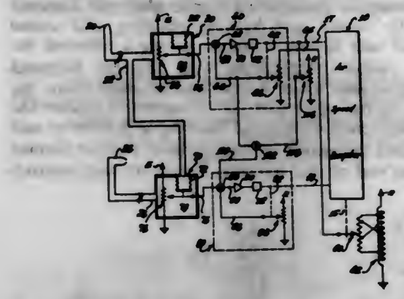
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1 Claim. (Cl. 73—167)
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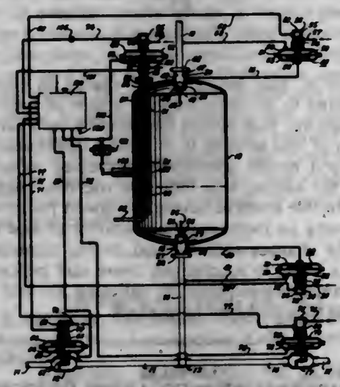
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STATIC DEFECT COMPENSATION
Robert Charles Howard, Costa Mesa, Calif., assignor to Giannini Controls Corporation, Pasadena, Calif., a corporation of New York
Filed Sept. 8, 1959, Ser. No. 838,701
4 Claims. (Cl. 73—182)

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to the dividing means, whereby the position of said static pressure member represents true static pressure.

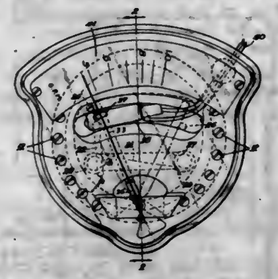
3,090,230
METERING METHODS AND MEANS
Clarence O. Glasgow, Tulsa, Okla., assignor to National Tank Company, Tulsa, Okla., a corporation of Nevada
Filed Apr. 3, 1958, Ser. No. 726,154
31 Claims. (Cl. 73—224)



1. Metering means for measuring liquids including, a metering vessel of predetermined volume, means for admitting a liquid to said vessel and discharging the liquid therefrom, means for establishing a maximum upper liquid level in the vessel, means for establishing a minimum lower liquid level in the vessel, the means for establishing a minimum lower liquid level in the vessel including valve float and valve seat means, means for detecting the seating of the float on the seat, and means responsive to the detecting of the seating of the float on the seat for closing said discharging means.

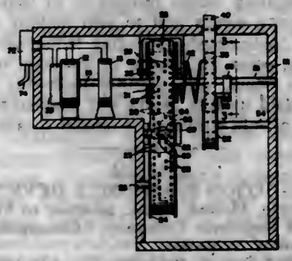
3,090,231
INDICATING FLOWMETER WITH MAGNETIC MERCURY SWITCHES FOR SIGNAL OPERATION
Regner A. Ekstrom, Jr., 15555 Millard, Markham, Ill.
Filed June 20, 1958, Ser. No. 743,383
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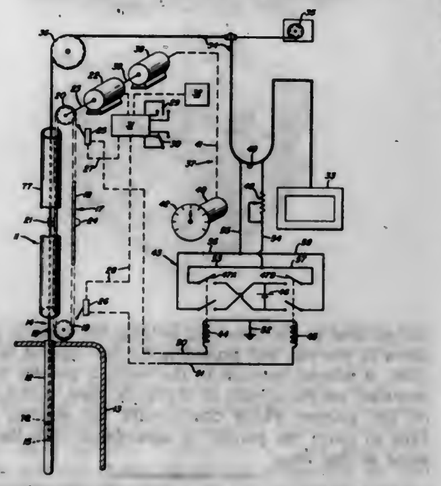
end secured to the insert for holding the vane in position down in the slot and providing tension against its movement, a magnet secured to the vane, a pointer pivotally mounted on the outside of the body plate, and a magnet on the pointer which coacts with the magnet on the vane to move the pointer in accordance with the movement of the vane.

3,090,232
TANK GAUGE
Fred M. Mayes, Richardson, Tex., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey
Filed May 31, 1960, Ser. No. 33,031
8 Claims. (Cl. 73—321)



1. Apparatus for indicating the position of a movable member comprising an elongated member having one end connected to said movable member, means connected to the other end of said elongated member for maintaining the same in a taut condition for all positions of the movable member whereby said elongated member is movable with the movable member, a rotatably mounted reel operatively connected to said elongated member for rotation in response to movement of said elongated member, a second rotatably mounted reel, a coded tape operatively connected to said second reel and movable in accordance with the movement of said second reel, a resilient coupling between said reels, said resilient coupling transmitting the movement of said first-named reel to said second reel to cause movement of said coded tape, stop means connected to said reels for normally maintaining said reels in the same respective position under the bias of said resilient coupling, and means for rotating said second reel against the bias of said coupling to cause relative movement of said second reel with respect to said first-named reel.

3,090,233
TEMPERATURE MEASUREMENT MECHANISM
Stanley E. Shields, Whiting, and Philip W. Dewey, Munster, Ind., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana
Filed Dec. 22, 1959, Ser. No. 861,387
7 Claims. (Cl. 73—343)



1. A mechanism for continuously measuring the temperature along a predetermined path in a reaction zone, which mechanism comprises an electrical temperature sensing means positioned within said reaction zone, moving means adapted for moving said temperature sensing means along said predetermined path and adapted for automatically reversing at predetermined points the direction of travel of said temperature sensing means, temperature indicating means responsive to both said temperature sensing means and to said moving means and adapted for continuously recording temperature and for recording the point of reversal of direction of travel of said sensing means, and position indicating means responsive to said moving means and adapted for showing the position of said temperature sensing means along said path.

3,090,234
CONDITION RESPONSIVE DEVICES
David N. Reese, Mound, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Sept. 6, 1961, Ser. No. 136,355
12 Claims. (Cl. 73—356)



1. In an indicating system which provides indication of the extent of migration of ions through an electrolyte medium, the method of delineating the leading edge of the boundary of the migrating ions which comprises uniformly distributing within said medium an insoluble compound containing a metal ion as a constituent thereof.

3,090,235
TEMPERATURE RESPONSIVE DEVICE
Roy W. Houser, Orange, Calif., assignor to Robertshaw-Fulton Controls Company, Richmond, Va., a corporation of Delaware
Filed Jan. 12, 1961, Ser. No. 82,356
1 Claim. (Cl. 73—358)

A disposable thermal responsive device, the combination comprising an elongated tubular housing having an open end and a sealed end adapted for insertion into a heated material, an annular portion formed on said open end, hand holding means formed intermediate the length of said housing, a plurality of fusible elements disposed longitudinally within said housing abutting said sealed end, each of said fusible elements having a different determinable fusible temperature with adjacent elements having successively lower fusion temperatures from the sealed end to the open end, an elongated indicator rod coaxially positioned within said housing, a portion of said rod protruding outwardly of said annular portion formed on said open end of said housing, indicia on said protruding portion of said indicator rod spaced in increments corresponding to the determinable height of each of said fusible elements, said indicia cooperating with said annular portion of said housing to indicate a determinable temperature, and means operatively connected to said indicator rod for biasing said indicator rod into engagement with said fusible element having the lowest fusion temperature whereby an increase in temperature of said housing successively changes each of said fusible elements from a solid to a liquid to successively move said indicator rod, which successive movement is indicated by said indicia cooperating with said annular portion.

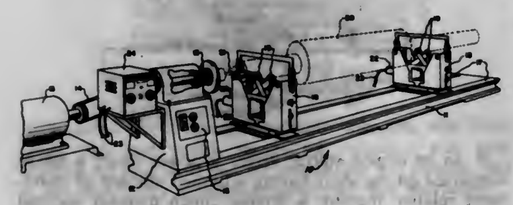


3,090,236
TEMPERATURE INDICATING DEVICES
Donald Laurence Nicol, Hull, England, assignor to National Research Development Corporation, London, England, a British corporation
Filed Oct. 2, 1961, Ser. No. 142,042
Claims priority, application Great Britain Oct. 15, 1960
13 Claims. (Cl. 73—358)



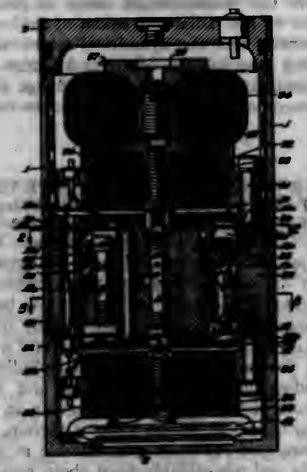
6. A temperature indicating device comprising a vessel having a transpicuous wall, at least one separator dividing said vessel into separate compartments, said separator being composed of a substance which melts at a temperature required to be indicated, and liquids in said compartments which upon mixing change in appearance.

3,090,237
LATHE BALANCING SUPPORT STANDS
Theodore Ongaro, Columbus, Ohio, assignor to International Research and Development Corporation
Filed July 21, 1960, Ser. No. 44,355
7 Claims. (Cl. 73—462)



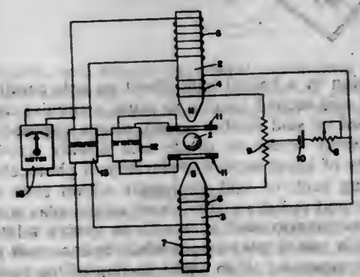
1. Supporting apparatus for use in dynamic balancing of rotors comprising a stationary housing adapted to be secured to the horizontal bed of a lathe, said housing including parallel trunnion plates, a first pivot shaft at the upper corners of each trunnion plate extending between said trunnion plates, a rigid cradle formed from a pair of parallel cradle plates, a second pivot shaft at the upper corners of each cradle plate extending between said cradle plates, a pair of pendulum rods each pivotally connected to a said first pivot shaft at its upper end and to a said second pivot shaft at its lower end whereby said rigid cradle is oscillatable between said trunnion plates, a pair of wheels mounted upon and between said cradle plates and extending thereabove, and electromechanical transducer means associated with said cradle for generating electrical signals in response to oscillatory movement of said cradle.

3,090,238
MOTION SENSING DEVICE
Cecil K. Stedman, Enumclaw, Wash., assignor to Statham Instruments, Inc., Los Angeles, Calif., a corporation of California
Filed May 11, 1960, Ser. No. 28,440
32 Claims. (Cl. 73—515)



1. A damped motion sensing device comprising a case, a member mounted on said case, a yieldable constraint connected to said member and said case to constrain the motion of said member in said case, a liquid in said case, said member immersed in said liquid, a plurality of passageways for said liquid adapted to permit flow of liquid in series through said passageways on oscillation of said member on said constraint, the resistive component of the impedance to flow in one of said passageways being equal to n_1 times the sum of the resistance components of the impedances to flow in said passageways wherein n_1 is greater than 0.5 and less than unity and the reactive component of the other of said passageways is equal to n_2 times the sum of the reactive components of the impedance to flow in said passageways when n_2 is greater than 0.5 and less than unity.

3,090,239
ACCELEROMETER
Edward N. Dacus, San Diego County, Calif., assignor to Bill Jack Scientific Instrument Co., Solana Beach, Calif., a corporation of California
Filed May 12, 1955, Ser. No. 507,768
5 Claims. (Cl. 73—517)

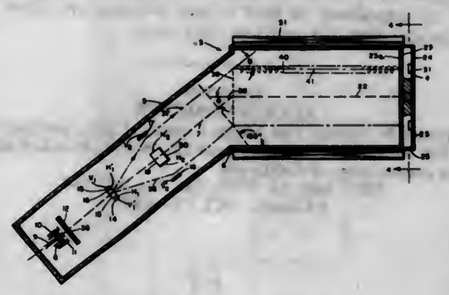


1. In combination with a magnetic material mass and a pair of electromagnets coaxially disposed on opposite sides of said mass and in non-overlapping relationship with said mass, a source of electric power and a differential rheostat between said source and the input ends of windings around the opposed poles of said electromagnets for magnetically suspending said mass freely in space substantially axially between said poles, said electromagnets constituting the sole supporting means for said mass, a variable rheostat between said output ends of said windings and said power source, a device for measuring and indicating axial components of forces and accelerations imposed upon said mass between said electromagnets and including a sensing device, a detector and an amplifier coupled in tandem with said sensing device, a measuring and indicating device coupled with said amplifier and a second pair of windings coupled to the poles of said electromagnets and to said amplifier, the sensing and detecting means in conjunction with each other being adapted to generate electrical signals of predetermined magnitude, frequency and phase to control the amplifying means, which in turn, controls the electromagnets, the whole operating as a system to control, measure and indicate axial movements of said mass between the electromagnets.

3,090,240
ELECTRONIC ACCELEROMETER
Alvin E. Nashman, Rutherford, and Donald Metsky, Livingston, N.J., assignors to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland
Filed Oct. 27, 1960, Ser. No. 65,392
10 Claims. (Cl. 73—517)

10. A cathode ray indicating system comprising an evacuated tube having a display screen and first and second

portions, said first portion of said tube being angularly disposed relative to said second portion, means within said first portion for producing a beam of electrically charged particles, first deflection means for directing said particles along a path describing a cone of revolution about the axis of said first portion, second deflection means directing said beam along a path describing a cylinder of revolution along the axis of said first portion in tandem with said cone of revolution, third electromagnetic deflection means disposed about said second portion for directing each particle of said beam in said described cylinder of



revolution in a helical path about an axis parallel to the axis of said second portion to cause a circular trace to be described on said display screen, means disposed adjacent said display screen to divide said display screen into a plurality of equal sectors, a plurality of photocells, means disposing each of said photocells within each sector in angular and radial equality about said display screen, and means to support said photocells in spaced relation with respect to said display screen whereby each said photocell will be responsive to an equal portion of the periphery of said circular trace and to any movement of said portion of said circular trace within said sector.

3,090,241

INTERNAL COMBUSTION ENGINE STARTER DRIVE

Nelson H. Mageoch and Harold J. Little, Elmira, N.Y., assignors to The Bendix Corporation, Elmira, N.Y., a corporation of Delaware

Filed Dec. 16, 1960, Ser. No. 76,203
8 Claims. (Cl. 74—7)



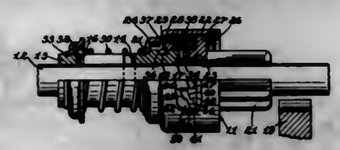
1. A starter drive for internal combustion engines comprising: a sleeve adapted to be drivingly connected to a power shaft of a starting motor; a pinion adapted to be slidably journalled on the shaft for movement into and out of mesh with a gear of the engine to be started; an overrunning clutch including a driving clutch member connected to the sleeve and a driven clutch member connected to the pinion, said clutch members being concentrically positioned relative to one another; means providing a unidirectional driving connection between the concentrically positioned clutch members; unitary annular means having a central aperture shaped to conform to the external toothed configuration of the pinion adapted to be slid into position over the pinion to engage portions of the clutch members and the clutch driving connection means for axially aligning the clutch members; a casing formed to envelop portions of the overrunning clutch for maintaining the axially aligned clutch members and clutch driving connection means in an assembled relationship; and, means supported on the sleeve for axially shifting the drive into and out of mesh.

3,090,242

STARTER DRIVE

John J. Sabatini, Horseheads, N.Y., assignor to The Bendix Corporation, Elmira, N.Y., a corporation of Delaware

Filed Apr. 6, 1961, Ser. No. 101,186
18 Claims. (Cl. 74—7)



9. In an engine starter drive: a power shaft; a sleeve supported on the shaft having a limited amount of movement relative thereto; a driving clutch member secured to an extremity of the sleeve; circumferential groove means formed in the sleeve adjacent the driving clutch; means for moving the sleeve relative to the shaft; a casing fixedly secured to the sleeve with a portion thereof concentrically and spatially disposed about the groove and said clutch member, said casing including an angularly inclined surface axially adjacent the groove; a pinion including a flange positioned within the casing slidably journalled on the shaft for movement into and out of mesh with a gear of the engine to be started; a driven clutch member secured to the pinion adapted to engage the driving clutch member to provide an overrunning connection between the sleeve and the pinion; means cooperating with the casing and flange for normally biasing the clutch members into driving engagement; a cylindrical sleeve member of limited flexibility secured to the flange concentrically and spatially disposed within the casing having its free extremity adjacent the inclined surface; elongated arm means having one extremity supported on the flange and disposed within the casing overlying the clutch members adapted for radial movement; detent means secured to the free extremity of the arm means adapted to cooperate with the circumferential groove below a predetermined range of pinion speeds for locking the clutch members into driving engagement and adapted to be responsive to centrifugal force generated at and above the predetermined range of pinion speeds to be pivoted by the radial movement of said arm means into engagement with the cylindrical sleeve and the inclined surface whereby the centrifugal forces are translated into axial forces exerted on the flange for causing the clutch members to be separated and to overrun.

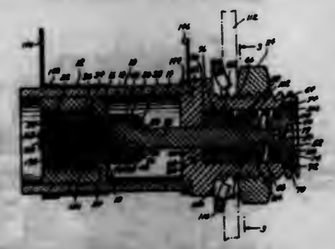
3,090,243

DRIVE MEANS FOR REACTANCE UNIT

Llewellyn T. Barnes, 155 Atlantic Ave., Freeport, N.Y.

Filed Oct. 12, 1960, Ser. No. 62,282
12 Claims. (Cl. 74—10.85)

1. An adjustable electrical reactance unit comprising a hollow body having a longitudinal bore, a piston slidably and non-rotatably mounted in said hollow body, drive means for moving said piston longitudinally in said hollow body, said hollow body including an end wall having an opening therein, said drive means including a drive shaft extending through said opening and threadedly coupled to said piston, said end wall having an externally threaded extension and having a recess therein, said shaft extending into said recess, a split thimble in said recess non-rotatably and non-slidably fixed about said shaft and having a portion engaging said end wall to hold said shaft in said recess, wedge means surrounding said thimble for holding said thimble in position, a drive head secured to said shaft, means retaining said drive head in



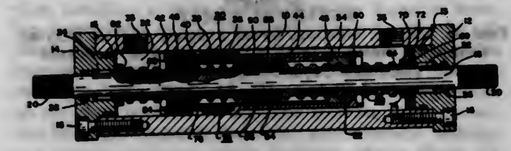
said recess and a spring yieldingly engaging said drive head and said wedge means for retaining said split thimble on said shaft and for preventing lost motion, and a nut threadedly secured on said end wall extension.

3,090,244

ROTARY ACTUATOR

James E. Davis, Kettering, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Aug. 15, 1960, Ser. No. 49,725
6 Claims. (Cl. 74—89)



1. A rotary actuator including, a cylinder, a sleeve piston disposed in said cylinder capable of fluid pressure actuation in both directions, a reaction member disposed within said cylinder and restrained against rotation relative thereto, a rotary member disposed within said cylinder and supported for rotation relative thereto, said members having external helical means of different hands or leads, a pair of spaced elements carried by said sleeve piston having internal helical means mating with the external helical means of said members whereby reciprocation of the sleeve piston imparts rotation to said rotary member, and a tubular member interlocked with said elements and carried by said sleeve piston for supporting the torsion loads between the two elements during reciprocation of said sleeve piston.

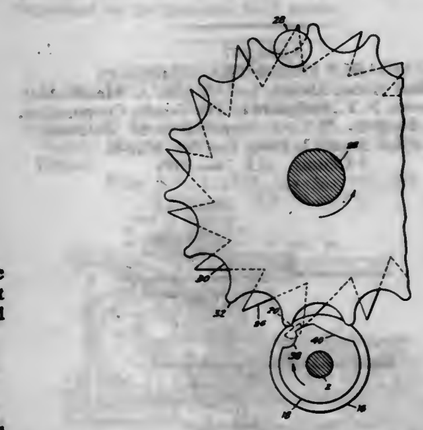
3,090,245

INDEXING MECHANISM FOR A BATTERY OPERATED ELECTRIC WATCH

John Reber, Jr., Manheim, Pa., assignor to Hamilton Watch Company, Lancaster, Pa., a corporation of Pennsylvania

Filed Nov. 16, 1960, Ser. No. 69,634
7 Claims. (Cl. 74—126)

1. A mechanical double index prevention device for use in an electric watch comprising an oscillating balance staff, an index roller carried by said balance staff, an index jewel mounted on said index roller, a safety roller mounted on said balance staff, said safety roller being provided with a first and second peripheral indentation, a rotatable index assembly, said index assembly including an index wheel having a plurality of teeth on its periphery and a safety wheel having a plurality of teeth on its periphery, said index jewel engaging with the teeth of said index wheel to cause rotation of said index assembly in a first direction when said balance staff rotates in one direction, said first peripheral indentation of said safety roller engaging the teeth of said safety wheel to limit rotation of said index assembly in said



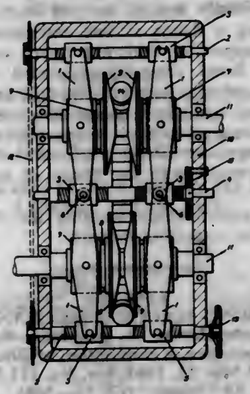
first direction, said second peripheral indentation of said safety roller allowing a limited rotation of said index assembly in a second direction when said balance staff rotates in an opposite direction.

3,090,246

CONTROL MECHANISM FOR INFINITELY VARIABLE CONE PULLEY TRANSMISSIONS

Heinrich Berens, Bad Homburg vor der Hohe, Germany, assignor to Reimers-Getriebe KG., Ascona, Switzerland, a firm of Switzerland

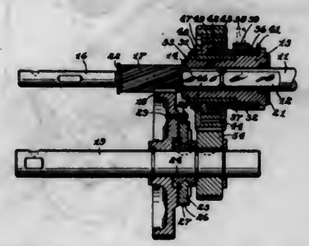
Filed June 26, 1961, Ser. No. 119,404
Claims priority, application Germany July 22, 1960
3 Claims. (Cl. 74—230.17)



1. A control mechanism for an infinitely variable cone pulley transmission having two pairs of axially movable cone pulley discs and a flexible member connecting the same, comprising four lever members arranged in pairs and adapted to act upon said pulley discs, said lever members being disposed symmetrically with respect to a first plane perpendicular to the axes of rotation of the pulley discs and also symmetrically with respect to a second plane parallel to said axes and perpendicular to said first plane and located midway between said axes, means mounting said lever members so as to be independently pivotable at their inner ends about axes disposed within said second plane, and means operatively con-

nected with the outer ends of the said lever members for simultaneously adjusting said lever members by equal amounts of pivotal movement, the lever members of each pair of lever members on the same side of said first plane being pivoted in opposite directions by said adjusting means.

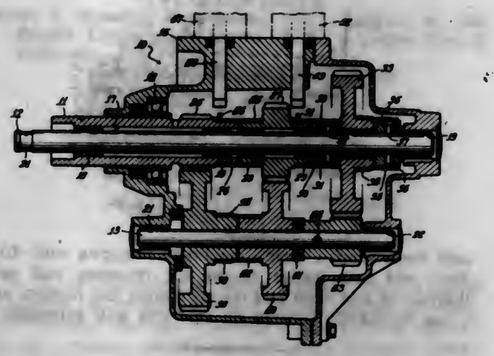
3,090,247
VARIABLE SPEED TRANSMISSION
Edwin Elliott Hood, Elmira, and Charles A. Meidenhall, Horseheads, N.Y., assignors to The Bendix Corporation, Elmira Heights, N.Y., a corporation of Delaware
Filed Sept. 12, 1960, Ser. No. 55,548
8 Claims. (Cl. 74—359)



1. In a transmission:
a power shaft;
a driving shaft;
a coupling member for said shafts;
a driven shaft;
a plurality of gear trains for connecting the driving and driven shafts at different gear ratios, at least one of said gear trains including a driven gear supported on the driven shaft and a driving gear supported on the coupling member adapted to mesh with the driven gear;
means for selectively rendering the gear trains operative;
means for coupling one of the gears of said one gear train to its respective support including a collar member fixedly secured to said respective support and having a flange at one extremity thereof rotatably supporting said one gear, said one gear having a flange rotatably supported on the other extremity of the collar, a flat-coil spring concentrically and spatially disposed about the collar having a splined connection at one extremity with the collar flange and having a splined connection at its other extremity with the flange of said one gear; and,
means for non-rotatably securing the other of said gears to its respective support.

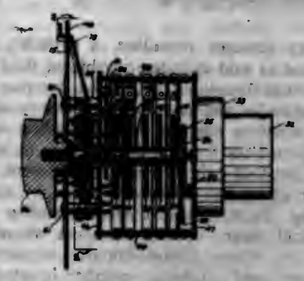
3,090,248
WASHING MACHINE MECHANISM
Curtis E. Kurtz, Herrin, Ill., assignor to Borg-Warner Corporation, a corporation of Illinois
Filed May 22, 1961, Ser. No. 111,728
10 Claims. (Cl. 74—368)

1. In a variable speed transmission comprising a casing, a drive shaft rotatably mounted in said casing, a driven shaft element rotatably mounted in said casing and coaxially within said drive shaft, an idler shaft element rotatably mounted in said casing parallel to said drive shaft, first, second, and third drive gear elements coaxially mounted on said driven shaft, said first drive gear element being rotatable with said drive shaft, first, second, and third driven gear elements coaxially mounted on said idler shaft in meshing engagement with said first, second, and third drive gear elements respectively, first and second self-engaging overrunning clutches for providing driving interconnections between four elements of the transmission and adapted to disengage in response to overrunning tendency between the elements normally interconnected thereby, first and second self-engaging releasable clutches for providing driving interconnections



between four remaining elements of the transmission and adapted to be selectively actuated for providing four speeds forward, and means for selectively actuating said releasable clutches.

3,090,249
INTERVAL TIMER
Paul A. Martin, Newton, Iowa, assignor to The Maytag Company, Newton, Iowa, a corporation of Delaware
Filed Oct. 31, 1957, Ser. No. 693,744
2 Claims. (Cl. 74—568)



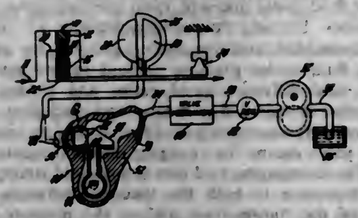
1. In a timer mechanism having a plurality of coaxially rotatable cam members having predetermined cam profiles thereon for controlling the programmed actuation of switch members, the combination of a first cam means; a second cam means coaxially and rotatably mounted with respect to said first cam means; and a planetary differential means interconnecting said first and second cam means including a drive gear, means operatively connecting said drive gear to said first cam means, a driven gear, means operatively connecting said driven gear to said second cam means, carrier means, a first planetary pinion rotatably mounted on said carrier means and meshing with said drive gear, a second planetary pinion rotatably mounted on said carrier means and meshing with said driven gear, a stationary ring gear meshing with said first planetary pinion, and an adjustable ring gear means meshing with said second planetary pinion whereby said rotation of the drive gear provides for rotation of said first and second cam means in unison and angular movement of said adjustable ring gear means changes the angular relationship between said first and second cam means.

3,090,250
MICRO-FEED ADJUSTING MECHANISM
Simeon Budlong, Chicago, Ill., assignor to F. J. Littell Machine Company, Chicago, Ill., a corporation of Illinois
Filed Apr. 25, 1961, Ser. No. 105,324
10 Claims. (Cl. 74—600)



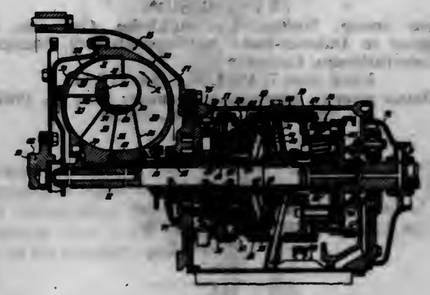
1. In apparatus for processing strip material fed to said apparatus, in combination, an operating shaft, a plate member fixed to and rotating with the shaft, a trunnion member adjustably fixed to the plate member to form crank arm mechanism therewith, an adjustable eccentric device in associated relation with the trunnion member, whereby the device is capable of varying the eccentricity of the crank arm mechanism for any fixed position of the trunnion member, said device including a clamping sleeve in telescoping relation on the trunnion member and having its base end in contact with the plate member, a helix gear fixed to the trunnion member beyond the sleeve and having contact with the adjacent end of the sleeve, securing means on the trunnion member beyond the helix gear for retaining the trunnion member, sleeve and the gear as a unit in fixed position on the plate member an eccentric member having a second helix gear integral therewith, said eccentric member and second helix gear being mounted on the sleeve for rotation and being so arranged that the second helix gear is disposed adjacent and concentric with the fixed helix gear, an annular gear disposed in encircling relation with the said helix gears, said annular gear having internal teeth at respective ends thereof for meshing relation with the teeth of the helix gears, respectively, means for effecting axial movement of the annular gear, and a housing unit for said device mounted for rotation on the eccentric member.

3,090,251
TRANSMISSION
Kenneth E. Snyder, Northville, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Aug. 19, 1957, Ser. No. 678,814
17 Claims. (Cl. 74—677)



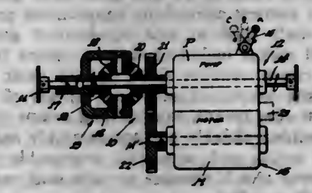
1. In a transmission having an input and an output, a hydrodynamic drive device for establishing drive between the input and output of the transmission, a source of pressure fluid, a fluid passageway between the source and the device, and means exposed to the fluid within the passageway, the means being sensitive to changes in the temperature of the pressure fluid from the source for controlling the supply of pressure fluid from the source to the hydrodynamic drive device so as to cause the operation of the hydrodynamic device to be relatively unaffected by variations in the temperature of the pressure fluid furnished by the pressure fluid source.

3,090,252
FLOATING MEMBER INFINITELY VARIABLE TRANSMISSION
Anthony C. Mamo, Des Plaines, Ill., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Filed Feb. 4, 1959, Ser. No. 791,192
6 Claims. (Cl. 74—677)



5. In a transmission, the combination of a drive shaft, a driven shaft, a hydraulic torque converter having an impeller and a turbine and a floater member and a stator, said impeller being connected to be driven from said drive shaft, a planetary gear set having three elements one of which is connected to said driven shaft and a second of which is connected to said turbine, a brake for said second element and turbine, and clutch mechanism for connecting said floater member and the third of said elements so that when said brake and said clutch are engaged said floater member drives said driven shaft through said planetary gear set.

3,090,253
VARIABLE SPEED TRANSMISSION
Douglas F. Linsley, Westport, Conn., and Harry J. Miller, Jr., Jericho, N.Y., assignors to Morgan Development Laboratories, Inc., Westport, Conn., a corporation of Delaware
Filed Dec. 18, 1958, Ser. No. 781,305
8 Claims. (Cl. 74—687)



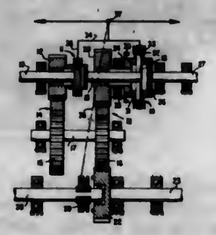
1. A variable speed transmission comprising a driven member; a driving means including a constant speed drive and a variable speed drive having a hydraulic pump having a variable volumetric output and a hydraulic motor having a constant volumetric displacement, the pump being driven by said constant speed drive and said variable speed drive having a range of speed change from a determinate value in one direction to nil and a second range of speed change from nil to said determinate value in the opposite direction, said determi-

nate value being substantially the same as the value of the constant speed drive; means for adjusting the variable speed drive solely by varying the volumetric output of the pump for varying the output speed and direction of the variable speed drive between said first and second determinate values; and means for connecting both the constant speed drive and variable speed drive to said driven member, said driving means transmitting no motion to said driven member when said variable speed drive is operating at said first determinate value and transmitting increasing motion to drive the driven member solely in said one direction as said variable speed drive is varied through said first range to nil and thereafter through said second range in the opposite direction to said determinate value.

3,090,254
TRANSMISSION

Eugen Stump, Stuttgart-Unterturkheim, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany

Filed June 7, 1961, Ser. No. 115,345
Claims priority, application Germany June 10, 1960
20 Claims. (Cl. 74—710.5)



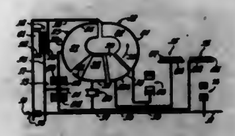
1. A distributor gearing for multi-axle vehicles, comprising input means, first transmission gear means, second transmission gear means, each of said transmission gear means having a plurality of gear wheels, said first transmission gear means effectively terminating in one of the gear wheels of said second transmission gear means, differential gear means including a plurality of elements, first output means operatively connected wtih one of the elements of said differential gear means, a first one of the gear heels of said second transmission gear means being operatively connected with another element of said differential gear means, second output means operatively connected with a second gear wheel of said second transmission gear means, and means including shifting means for selectively connecting said input means with one of the gear wheels of said first transmission gear means or with a further element of said differential gear means, said further element comprising equalization gear carrier means, a shaft fixed to said equalization gear carrier means, said means including shifting means further including a clutch member fixed to said shaft, a clutch member fixed to one of said gear wheels of said first transmission gear means, said shifting means comprising a clutch member slidably but non-rotatably mounted on said input means and selectively engageable with said first-mentioned clutch member or with said second-mentioned clutch member.

3,090,255
TRANSMISSION

Richard L. Smirl and Mieczyslaw J. Waclawek, Chicago, Ill., assignors to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois

Filed May 7, 1956, Ser. No. 583,069
3 Claims. (Cl. 74—732)

2. In a transmission, the combination of a drive shaft, a driven shaft, a hydraulic torque converter including a housing and having an impeller driven by said drive shaft and a turbine having first and second stages and a stator, a planetary gear set in said torque converter housing and having a sun gear and a ring gear and a plurality of planet gears each of which is in mesh with said sun gear and said ring gear and a planet gear carrier for said planet gears, a shaft connected with said sun gear and extending

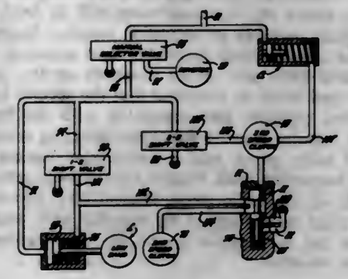


out of said converter housing, a one-way engaging device between said sun gear shaft and said stator, said ring gear being connected directly to one of the stages of said turbine to be driven thereby, said planet gear carrier being connected to said driven shaft, and brake means for said sun gear shaft disposed outside of said converter housing for completing a low speed power train between said drive and driven shafts.

3,090,256
TRANSMISSION CONTROLS

Gilbert K. Hause, Bloomfield Hills, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Aug. 30, 1961, Ser. No. 135,025
6 Claims. (Cl. 74—752)

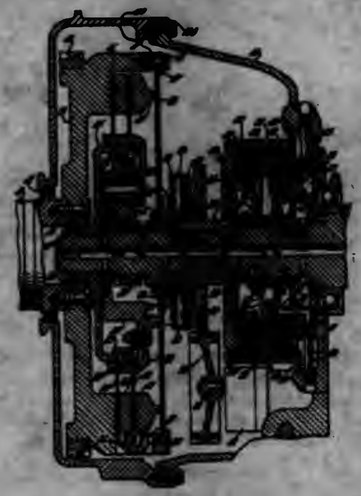


1. In a multiple speed ratio transmission having gearing and having a first fluid actuated friction means for establishing one speed ratio in the transmission and a second fluid actuated friction means for establishing a different speed ratio in the transmission, a hydraulic control system for said fluid actuated means including a source of fluid under pressure, ratio selection valve means for at times directing fluid under pressure to said first means to establish said one speed ratio and for at times directing fluid under pressure to said second means to establish said different speed ratio, and timing valve means between said valve means and said first means for alternatively connecting said first means to said ratio selection valve means for engaging said first means or to exhaust for disengaging said first means, said timing valve means responsive to both the speed of rotation of an element of the transmission and to the pressure acting on said second means and effective to delay the disengagement of said first drive establishing friction means until the fluid pressure acting on said second drive establishing means reaches a predetermined value dependent on the speed of said transmission element.

3,090,257
TRANSMISSION

Hans O. Schjolin, Birmingham, Luther N. Kern, Berkley, and Millis V. Parshall, Pontiac, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Nov. 21, 1960, Ser. No. 70,525
11 Claims. (Cl. 74—781)



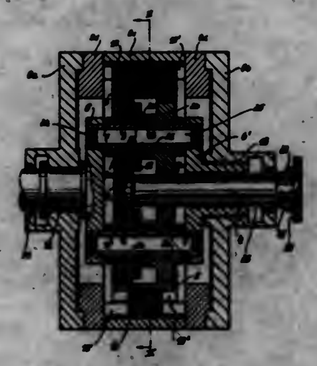
1. In a transmission of the type having a power input shaft, a power delivery shaft and a planetary gearing unit disposed between said power input shaft and power delivery shaft including a planet carrier supporting a plurality of planet pinion gears in mesh with a ring gear and a sun gear and having a drum member rotatable as a unit with said sun gear; said drum member having a first set of friction elements effective when engaged to establish one transmission drive ratio and a second set of friction elements effective when engaged to establish a second transmission drive ratio, means normally effective to engage said first set of friction elements including a Belleville spring in said drum element, and means for moving said Belleville spring to release said first set of friction elements and to engage said second set of friction elements.

3,090,258
EPICYCLIC GEAR TRANSMISSION WITH HERRINGBONE TEETH

Heinrich Johann Zink, Goggingen, near Augsburg, and Erich John and Paul Büttner, Augsburg, Germany, assignors to Zahnradfabrik Renk Aktiengesellschaft, Augsburg, Germany

Filed May 29, 1958, Ser. No. 738,691
Claims priority, application Germany Jan. 31, 1958
6 Claims. (Cl. 74—801)

1. An epicyclic gear system for the transmission of power from a drive shaft to a driven shaft, comprising three coaxial and relatively rotatable members including a support, a ring member and a central member surrounded with clearance by said ring member, an external gear on said central member, an internal gear on said ring member, a set of planetary gears journaled at angularly spaced locations on said support in mesh with both said external and internal gears, each of said gears being axially subdivided into at least one pair of rotatively interconnected helically toothed portions of opposite pitch and equal diameter respectively engaging corresponding portions of the gears in mesh therewith, and housing means holding one of said members along with each gear carried thereon against major angular displacement, the toothed portions of at least one of said gears other than said planetary gears being interconnected against relative axial displacement, the toothed

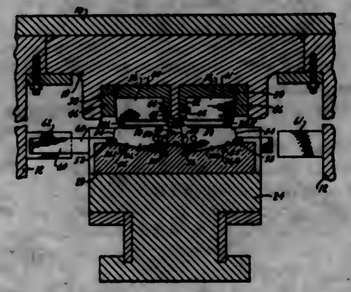


portions of each of said planetary gears being axially displaceable relatively to each other and being provided with interlocking attachments positioned for mutual engagement upon a predetermined maximum axial separation of the planetary-gear portions.

3,090,259
METHOD OF MAKING SELF-SHARPENING LEDGER PLATES

John J. Lang, Chicago, Stanley N. Oman, Bensenville, and James F. Cronin, Chicago, Ill., assignors to Appleton Electric Company, Chicago, Ill., a corporation of Illinois

Filed Aug. 23, 1960, Ser. No. 51,421
5 Claims. (Cl. 76—39.1)

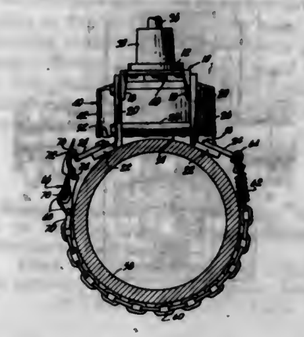


5. The method of forming self-sharpening ledger teeth in the opposed lateral edges of a plurality of ledger plates which comprises supporting said plurality of ledger plates so that a first lateral edge of each plate is exposed and so that the bottom face of each plate is inclined towards a cutting tool, forming teeth in the central portion of said first exposed lateral edges by passing the ledger plates in proximity to the cutting tool in cutting relationship therewith, reversing said plurality of ledger plates so that the opposite lateral edge of each plate is exposed and supporting the reversed plates on the untoothed extremities of said first lateral edges with the bottom faces of said plates inclined towards the tool, and forming teeth in the central portion of the opposite exposed lateral edges of said plates by passing the inclined plates in proximity to the cutting tool in cutting relationship therewith.

3,090,260
APPARATUS FOR FORMING HOLES IN SEWER MAINS

Charles P. Brooks, Overland Park, Kans., and Harold F. Livers, Kansas City, Mo.; said Livers assignor to said Brooks

Filed June 20, 1960, Ser. No. 37,255
2 Claims. (Cl. 77—14)



1. In an apparatus for cutting a circular hole in a side of a circular underground sewer pipe comprising:

(A) a cutter support including an elongated plate having opposed faces and an opening therein,

(B) a housing secured to said plate at one face thereof in surrounding relationship to said opening and extending outwardly therefrom,

(C) a cutter shaft extending through said opening and housing,

(D) bearing means within said housing mounting said cutter shaft for rotation about its longitudinal axis and for reciprocal movement toward and away from said pipe,

(E) a cutter secured to said cutter shaft and disposed between said plate and said pipe,

(F) at least two pairs of legs secured to said plate and extending generally perpendicularly outwardly from the opposite of said faces,

(G) each of said legs having a pipe-engaging foot extending laterally therefrom generally tangentially to said side of said circular pipe,

(H) two link chains, each interconnecting the feet of corresponding pairs of legs for holding the feet against said side of said pipe,

(I) a coil spring connecting one end of each chain to the foot on one leg of each pair;

the improvement in means for tightening said chains against said pipe comprising a quick release coupling attached to the opposite end of each chain comprising:

(*a*) hook means for insertion into a hole in the foot on the other leg of each pair of legs, and

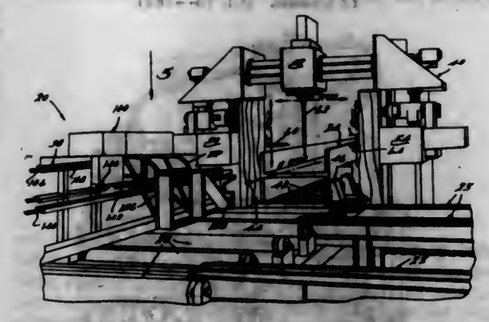
(*b*) lever means connecting each hook means to one of said chains, said lever means being pivoted off-center for quickly moving said hook means toward and away from said hole.

3,090,261
NUMERICALLY CONTROLLED BEAM FABRICATING MACHINE

Walter P. Hill, 22183 Telegraph Road, Detroit, Mich.

Filed June 5, 1961, Ser. No. 114,926
3 Claims. (Cl. 77—32.2)

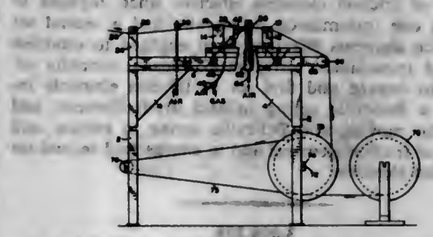
1. A numerically controlled beam fabricating machine comprising a plurality of rolls for the support of the beam, a work station, a numerically controlled prime mover for driving said rolls to effect movement of the beam with respect to the work station, a movable carriage driven by said numerically controlled prime mover so as to be movable at substantially the same rate as the beam, a second prime mover for driving said carriage in the opposite direction to said numerically controlled prime mover, a fluid coupling interposed between said prime movers, means for varying the effective force on said carriage, and means on said carriage for sensing the position thereof with respect to said work station.



3,090,262
WELDING APPARATUS

Ralph T. Williams, Toronto, Ontario, and Douglas W. Eley, Willowdale, Ontario, Canada, assignors to Engelhard Industries of Canada Limited, Toronto, Ontario, Canada, a corporation of Ontario

Filed Jan. 21, 1958, Ser. No. 710,273
4 Claims. (Cl. 78—82)

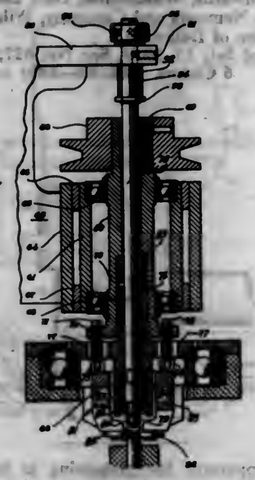


1. An apparatus for welding strips of woven metal gauze including wire of a predetermined thickness comprising a hammer having opposed blades of hardened metal providing an extended but narrow welding zone therebetween, one of said blades being immovable and the other blade reciprocatable, and spaced apart guide members with the reciprocatable blade mounted therebetween, said blades when closed having a small clearance appreciably less than twice the diameter of the wire in said gauze and approximating the diameter of said wire, means for feeding the gauze through said welding zone between the blades under tension, means for heating said gauze to welding temperature immediately prior to passing it between the blades, and means for reciprocating the reciprocatable blade at a rate of 3500–9000 strokes per minute thereby rapidly hammering the woven gauze over a narrow area extending transverse to the direction of movement of the gauze and avoiding excessive conduction heat loss from the gauze to the blades to effect strong, uniform welds of the gauze wires at the intersections thereof.

3,090,263
SEALED TUBE

Martin J. Laverty, West Hempstead, and Theodore F. Aronson, Glen Cove, N.Y., assignors to Murray Manufacturing Corporation, Brooklyn, N.Y.

Filed Mar. 15, 1957, Ser. No. 646,425
13 Claims. (Cl. 78—39)



1. Apparatus for sealing one end of a tube, comprising means for fixably clamping said tube at the opposite end thereof, a spin-forming head comprising a pair of rotatably mounted and longitudinally offset forming rollers diametrically located on opposite sides of said tube where it is desired to seal said tube, means for rotating said spinning head so that said rollers revolve about said tube, means for gradually moving said rollers toward each other against the wall of said tube thereby deforming said wall radially inwardly until opposite portions of the side wall are cohered together, and means for supporting said one end of the tube to limit the outward movement thereof during the deformation and elongation of the tube wall, the elongation being sufficient to cause the radially formed end wall to move inwardly in the form of a concavity, and the cohered wall being pinched off by said forming rollers.

3,090,264
APPARATUS FOR ROLLING DISKS

Morris D. Stone and Howard H. Talbot, Pittsburgh, Pa., assignors, by mesne assignments, to Kelsey-Hayes Company, Detroit, Mich., a corporation of Delaware

Filed Jan. 16, 1959, Ser. No. 787,173
8 Claims. (Cl. 80—16)

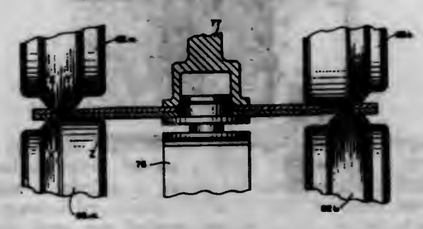


1. A mill for cold rolling blanks to form disks of a desired contour comprising a fixed housing having at least two vertically extending windows in the opposite sides thereof, a pair of vertically disposed chocks on either side of the vertical centerline of the mill and arranged for horizontal and relative vertical movement within each of said windows, a shaft rotatably supported by each of said chocks, a reducing roll secured to the end of each of said shafts adjacent to said chocks, means engaging at least one of the chocks of each pairs and said housing so arranged to provide a rigid construction between the housing and chocks during the rolling operation and operable to displace said chocks and rolls associated therewith in a vertical direction, means operatively connected to and for displacing said pairs of chocks and rolls in a horizontal direction, means connected to said pairs of chocks to cause simultaneous movement therebetween an equal distance with respect to the vertical centerline of the mill, the extent of said horizontal displacement being related to the relative vertical displacement of said chocks thereby to effect the desired contour and means connected to and for driving said shafts and the reducing rolls connected thereto.

3,090,265
APPARATUS FOR ROLLING DISKS

Charles S. Shumaker, Glenshaw, Pa., assignor, by mesne assignments, to Kelsey-Hayes Company, Detroit, Mich., a corporation of Delaware

Filed May 18, 1959, Ser. No. 813,812
2 Claims. (Cl. 80—16)

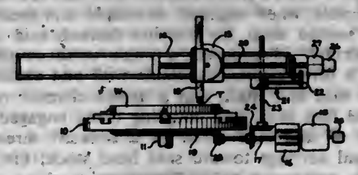


2. In a mill for simultaneously forming a pair of disks from blanks of a substantially uniform thickness, two pairs of rolls each pair comprising one roll having a relatively wide portion for at least engaging a substantial portion of a blank from one side and the other having a relatively narrow portion for engaging and reducing said blank from the side opposite said first roll, said pairs of rolls spaced diametrically apart with respect to the centers of said blanks and one pair inverted with respect to the other.

3,090,266
APPARATUS TO PROVIDE CONSTANT FACING SPEED

Elmer K. Wagner, Rockford, Ill., assignor to Giddings & Lewis Machine Tool Company, Fond du Lac, Wis., a corporation of Wisconsin

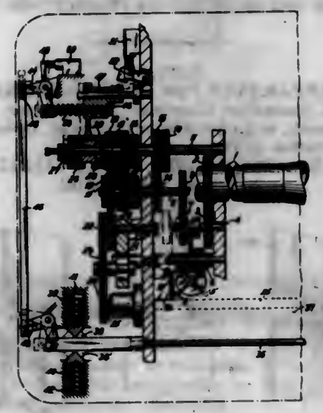
Filed Apr. 29, 1957, Ser. No. 655,608
1 Claim. (Cl. 82—2)



The method of controlling a machine tool rotary drive having a speed varying linearly with the input control voltage for providing constant facing speed between the relatively rotating work and tool from a given minimum facing radius above zero to a maximum radius, which method comprises varying a first resistance from zero to maximum value at a rate linearly proportional to the difference between the facing radius and said given minimum radius, dividing a constant voltage in proportion to the total resistance of the varying resistance and a fixed resistance equal to the product of the linear rate of vary-

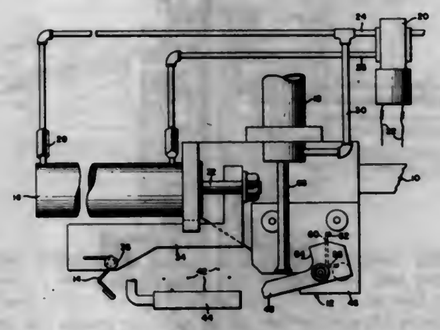
ing the variable resistance times said given minimum radius, and applying the voltage proportional to the fixed resistance part of the total resistance as the input voltage of the rotary drive.

3,090,267
UNIVERSAL LATHE STRUCTURE
Erich Trumpp, Flein, Kreis Heilbronn, Germany, assignor to Eugen Weisser & Co. KG., Heilbronn, Germany
Filed July 21, 1960, Ser. No. 44,314
Claims priority application, Germany Sept. 23, 1959
10 Claims. (Cl. 82—5)



1. A universal lathe and thread cutting machine comprising, in combination, a head stock; a carriage movable toward and away from said head stock; a main spindle continuously rotated in a single respective direction during cutting of threads of one respective hand, and continuously rotated in the opposed direction during cutting of threads of the other respective hand; a rotatable lead screw threadedly connected to said carriage for moving the latter in reverse directions relative to said head stock; first and second substantially parallel rotatable shafts geared together for rotation in opposed directions; gearing operable to drive one of said shafts from said spindle; a first gear freely rotatable on said first shaft; a second gear freely rotatable on said second shaft; gearing, including a third gear meshing with both said first and second gears, drivingly interconnecting said lead screw to said first and second gears; a first clutch rotatable with said first shaft, and operable, when energized, to couple said first gear to said first shaft for rotation therewith; a second gear rotatable with said second shaft, and operable, when engaged, to couple said second gear to said second shaft for rotation thereof; said clutches being normally disengaged; a single tooth coupling, including a drive element rotatable with and axially movable on said first shaft, and a driven element rotatable with said first gear, said coupling being engaged during rotation of said lead screw in a forward direction to move said carriage toward said head stock; first means operable, responsive to said carriage reaching substantially its limit of movement toward said head stock, to disengage said coupling and engage said second clutch for reverse rotation of said lead screw; second means, including said first means, operable, responsive to said carriage reaching substantially its limit of movement away from said head stock, to disengage said second clutch and momentarily to engage said first clutch to initiate forward rotation of said lead screw; and third means operable, responsive to such initiation of forward movement of said lead screw, to disengage said first clutch and to re-engage said coupling, while the elements of the latter are rotating in the same direction with said driven element decelerating due to disengagement of said first clutch.

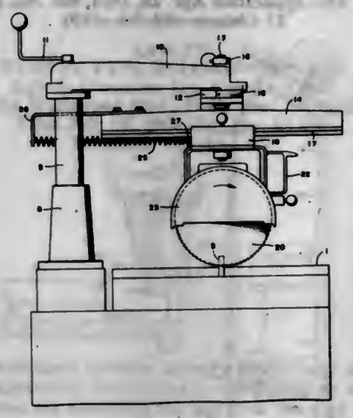
3,090,268
APPARATUS FOR SEVERING FED STRANDS AND SUBSEQUENT HANDLING THEREOF
Donald W. Edwards, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed July 17, 1959, Ser. No. 827,901
6 Claims. (Cl. 83—100)



5. In an apparatus for processing at least one continuously advancing strand: a support situated adjacent the path of travel of the strand; strand-severing means mounted on the support at one side of said path of travel, said severing means including a fixed plate and a pivotally mounted knife blade; spring means normally biasing the blade to an open, strand-receiving position; a hook normally positioned on the opposite side of said path from said severing means, said hook being mounted on said support for movement across said path to the vicinity of said severing means and including a part engageable with said blade for pivoting the latter to a closed position against the bias of said spring means; an actuator connected to said hook for moving it across said path; and an aspirator having a tube terminating adjacent said severing means for picking up and disposing of the severed, continuously advancing strand.

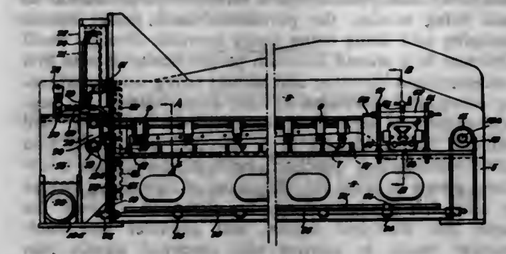
3,090,269
ADJUSTABLE ANGLE TRAVELLING SAW
Glenn M. Porter, Riverside, Calif., assignor to National Distillers and Chemical Corporation, a corporation of Virginia
Filed Dec. 21, 1959, Ser. No. 860,913
1 Claim. (Cl. 83—473)

A cut-off saw comprising a table having side extensions projecting laterally from opposite sides thereof, a fence extending across the back of said table and extending out along the length of each of said extensions, a pair of oppositely extending graduated scales mounted on said fence, each of said scales starting from a common zero point located adjacent the center of said table and in the vertical plane of said fence, a vertical post mounted to the rear of said table, a radial arm fixed to the top end of said post and extending forwardly over said table, a flat horizontal plate pivoted on the outer end of said radial arm for swinging movement about a vertical axis directly above and in alignment with said zero point, said plate extending laterally to one side of said axis, a supporting track fixedly mounted on the laterally extended end of said plate, a carriage slidably mounted on said track, a motor driven saw mounted on the underside of said carriage, the blade of said saw being offset laterally with respect to said carriage whereby when a work piece is placed against the fence in a selected position the blade of said saw will pass through the zero point for all angu-



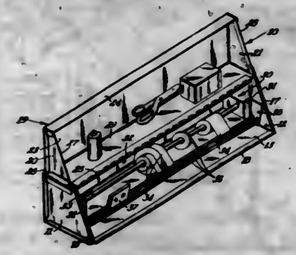
lar positions of said plate when said carriage is slidably moved along said track.

3,090,270
MACHINES FOR CUTTING OR SHEARING SHEETS OR PLATES
Charles Joseph Rhodes, Wakefield, and Harry Ridgway, Sandal, Wakefield, England; William Stanley Rhodes and Harry Ridgway, executors of said Charles Joseph Rhodes, deceased, assignors to Joseph Rhodes & Sons Limited, Wakefield, England, a British company
Filed Dec. 1, 1958, Ser. No. 777,383
Claims priority, application Great Britain Dec. 27, 1957
3 Claims. (Cl. 83—601)



1. A shearing machine comprising a frame having a horizontal table surface upon which the work to be cut is placed, a tool beam above said table surface pivotally connected at one end to said frame adjacent one side of said horizontal table surface, a movable cutter blade secured to said tool beam at right angles to the pivot axis thereof, a stationary cutter blade secured to said table surface substantially coplanar therewith at right angles to the tool beam pivot axis for shearing cooperation with said movable cutter blade, the cutting edge of said movable cutter blade having a predetermined downward inclination in a direction away from the beam pivot so that during a cutting operation the end of the movable cutter blade remote from the tool beam pivot axis will cooperate with said stationary blade before the end of said movable cutter blade which is adjacent said pivot axis, and means connected to said tool beam at the other end thereof remote from said pivot axis for pivoting said tool beam toward said table surface, said movable cutter blade being secured to said tool beam in such manner that the cutting intersection between said stationary cutter blade and said movable cutter blade lies always in a straight line which approximately can be drawn through the tool beam pivot axis and the point of connection of the means for pivoting said tool beam about its pivot axis toward said table surface, whereby said movable cutter blade has a substantially true angle of cut throughout its length and a progressively increasing shearing action starting from its end furthest from said pivot axis.

3,090,271
CONTAINER
Charles Castelli, New Brunswick, N.J., assignor to Johnson & Johnson, a corporation of New Jersey
Filed July 18, 1958, Ser. No. 749,548
2 Claims. (Cl. 83—614)

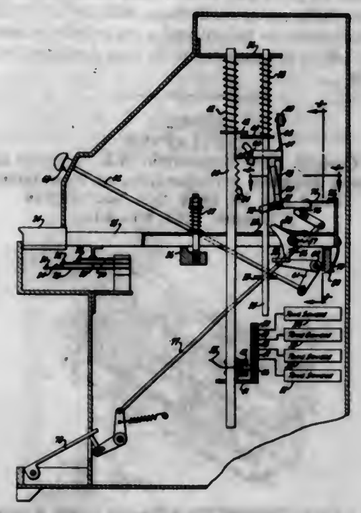


1. In a tape dispenser for adhesive tapes, a rectangular shaped container having a body portion and a cover portion adapted to be raised for opening said container and lowered for closing the same, said container having a back, front, top, bottom, and two ends, means on said back for mounting said container body on a vertical surface, a removable spindle adapted to hold rolls of adhesive tape extending lengthwise within said container body portion spaced from said container bottom and top, spindle supporting means inside said container body portion and secured thereto so as not to be movable relative to said container body portion, guide rods extending between the ends of said container and in front of said removable spindle, said guide rods being secured to said container body portion so as not to be movable relative thereto, and a cutter carriage slidably mounted on said guide rods, said spindle, guide rods and cutter carriage all being enclosed within said container when said cover portion is lowered to closed position, the top of said container being in two sections secured by hinge means to each other, one section being a part of said container body portion and the other section being a part of said container cover portion so that said container top can be folded back on itself to give more ready access to said tape supporting spindle for inserting and removing tape rolls placed thereon, the distance between the top of said container and said guide rods being insufficient to permit insertion of said spindle with full rolls of tape should said top not be foldable on itself, the top of said container when folded on itself being substantially narrower than the bottom of said container when said cover is fully opened and providing an unrestricted shelf.

3,090,272
DYNAMICALLY KEYED MUSICAL INSTRUMENT
Melville Clark, Jr., 17 Bellevue St., Newton, Mass.
Filed Mar. 16, 1960, Ser. No. 15,480
11 Claims. (Cl. 84—1.26)

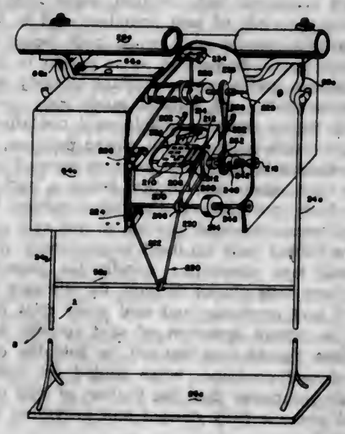
1. In an electrical musical instrument, the combination comprising first and second movable parts, a playing key operatively connected to move said first part, said second part normally resting against said first part so that movement of the first part by said key causes said second part to move away from its normally resting position against said first part a distance that varies depending upon

the speed of operation of said key, and tone generator means connected to said second part for generating an



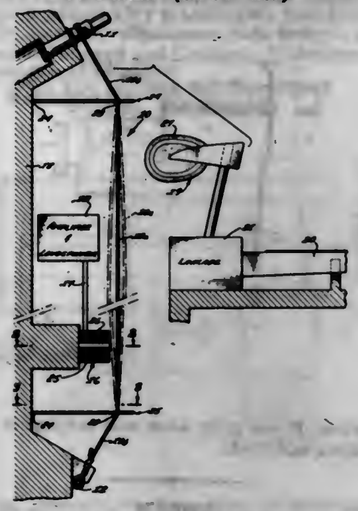
electric tone signal that progressively changes in character as said distance varies.

3,090,273
MUSICAL SWING
Walter E. Fox, 703 Greenleaf Drive, Monroeville, Pa.
Filed Aug. 5, 1960, Ser. No. 47,769
5 Claims. (Cl. 84—94)



1. A musical swing comprising: a fixed support; swing structure providing a seat for children depending from said support for oscillatory movement with respect thereto; a sound-producing mechanism fixedly attached to said support; said sound-producing mechanism having a rotary operating element connected thereto; and means including a one way clutch and an energy storage device drivingly connecting said swing structure to said rotary operating element to translate swinging motion of said structure by a child swinging thereon into substantially constant speed rotation of said operating element irrespective of the speed or frequency of oscillation of said seat.

3,090,274
ELECTRIC PIANO
Clarence L. Fender, 2212 E. Revere, Fullerton, Calif.
Continuation of application Ser. No. 819,082, June 9, 1959. This application Apr. 28, 1961, Ser. No. 107,009
17 Claims. (Cl. 84—289)



1. In an electric piano, a string, first and second means to connect the end portions of said string to a support and under tension, hammer means movable generally perpendicular to said string to impart a hammer blow thereto, first and second bridge means disposed respectively between said connector means and the point of engagement of said hammer means with said string to acoustically isolate a section of said string, said bridge means each engaging said string and said support to prevent movement of the engaged increments of said string in a first predetermined direction perpendicular to said string section, the portion of each bridge means engaging said string being freely movable through small distances in a second direction perpendicular to said first predetermined direction and to said string section whereby substantial vibrations of said string section are supported only in said first predetermined direction, said hammer means moving in a direction parallel to said first predetermined direction, mechanical-electrical transducer means to sense the vibrations of said string section in said first predetermined direction and convert the same into electrical signals, and amplifier and loudspeaker means to convert said electrical signals into sound.

3,090,275
VIOLIN WITH CHIN REST
Yehudi Menuhin, Gstaad, Switzerland, and Erno Meir Goldberger, Milan, Italy
Filed June 2, 1960, Ser. No. 33,530
Claims priority, application Switzerland June 4, 1959
5 Claims. (Cl. 84—279)



5. The combination of a violin type musical instrument having a button in the tail end thereof, a chin rest having

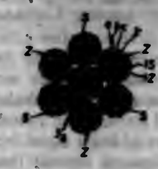
bearing portions resting on the top edge of the violin type instrument, and means interconnecting said chin rest and said button forming the sole securing means of said chin rest to said violin type instrument.

3,090,276
TURRET TYPE RELOADING PRESS
Lyle S. Corcoran, Los Angeles, Calif.
(6116 Hollywood Blvd., Hollywood 28, Calif.)
Filed July 18, 1960, Ser. No. 43,497
2 Claims. (Cl. 86—33)



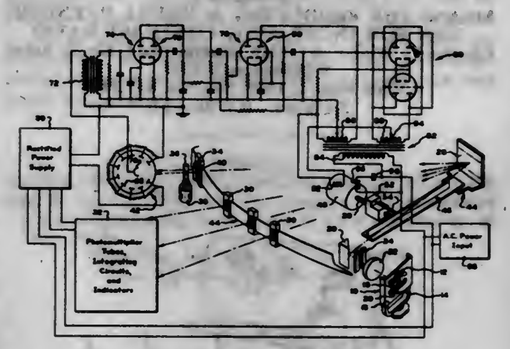
2. A combined powder delivery nozzle and shell reloading apparatus, comprising a die having an external male thread for mounting the tool in a threaded bore in a support, said die having in its upper end an internally threaded socket for mounting the lower end of a powder dispenser therein, a cup shaped powder-delivery nozzle integral with and projecting downwardly from the bottom of said die, having an open upper end communicating with said socket for receiving powder from said dispenser, having a cylindrical lateral wall for internal sizing of the shell, and having a downwardly tapered bottom provided with powder-delivery apertures, a decapping stem secured to and projecting downwardly from the center of said nozzle bottom for decapping the shell simultaneously with said internal sizing, and a cylindrical skirt integral with and projecting downwardly from the bottom of said die at the periphery thereof and spaced radially outwardly from said cylindrical outer nozzle wall by a cylindrical annular space adapted to receive the lateral wall of the shell, said skirt having an internal cylindrical wall for external sizing of said shell.

3,090,277
BRAIDED COMBINED CORDAGE
Hans-Richard Schmittmann, Leverkusen, Germany, assignor to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany
Filed May 19, 1959, Ser. No. 814,307
Claims priority, application Germany May 21, 1958
8 Claims. (Cl. 87—9)



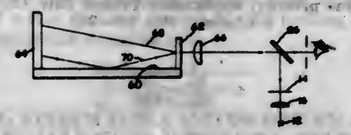
1. Braided string, line, rope, cord, and the like, from formed strands having a low degree of twist, comprising a plurality of strands having an inner layer of yarn provided with a Z-twist and an outer layer of yarn provided with an S-twist, and a plurality of strands having an inner layer of yarn provided with an S-twist and an outer layer of yarn provided with a Z-twist, said strands being braided together, said strands being composed of yarns twisted in opposite direction to the corresponding direction of twist of the respective strands in the braid and the twisted yarns including formed components twisted in opposite direction to the corresponding direction of twist of the respective yarns.

3,090,278
AUTOMATIC MEANS FOR ALIGNING SPECTROMETER COMPONENTS
Jason L. Saunderson, Lexington, Mass., assignor to Baird-Atomic, Inc., Cambridge, Mass., a corporation of Massachusetts
Filed Mar. 22, 1960, Ser. No. 16,690
2 Claims. (Cl. 88—14)



1. Spectroscopic apparatus comprising source means for exciting a chemical sample to emit radiation from a single location, entrance slit means for passing said radiation from said source means, diffraction grating means for diffracting said radiation from said entrance slit means into a distribution of spectrum lines of which a plurality of spectrum lines indicate the composition of the sample and a selected spectrum line serves as a reference, a plurality of exit slit means for passing said plurality of said spectrum lines, a plurality of indicator photodetecting means for receiving said plurality of spectrum lines, a selected exit slit means for passing said selected spectrum line, a reference photodetecting means for receiving said selected spectrum line in order to produce a signal, said entrance slit means, said diffraction grating means, said plurality of exit slit means and said selected exit slit means being geometrically related and oriented with repsect to each other to provide coincidence of said plurality of spectrum lines with said plurality of exit slit means and said selected spectrum line with said selected exit slit means, and servo means responsive to said signal for controlling the relations among and orientations of said entrance slit means, said diffraction grating means, said plurality of exit slit means and said selected slit means.

3,090,279
INTERFEROMETER USING A DIFFRACTION GRATING
James J. Chisholm, Rochester, N.Y., assignor to Bausch & Lomb Incorporated, a corporation of New York
Filed May 13, 1960, Ser. No. 29,067
5 Claims. (Cl. 88—14)



1. An interferometer comprising a diffraction grating for receiving collimated light and dividing light so received into two divergent beams, and a Littrow mounted reflection type diffraction grating spaced from the first said grating for reflecting said divergent beams back toward the first said grating for recombination thereat into a single return beam, said reflection type grating

being disposed generally parallel to the first said grating and having substantially twice the line density thereof, whereby the useful diffracted ray which is reflected from the reflection type grating is caused to leave the grating along the path of the ray which is incident thereon.

3,090,280
MEANS FOR PRODUCING A VISUAL PHENOMENON FOR INCREASING CONTRAST RATIO
Charles H. Winter, Jr., 1318 Oberlin Road, Green Acres, Wilmington 3, Del.
Filed Sept. 2, 1959, Ser. No. 837,580
5 Claims. (Cl. 88—24)



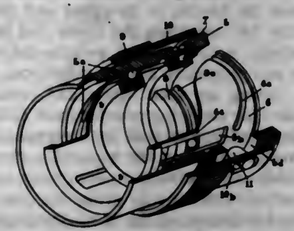
1. A display adapted to attract visual observation comprising a surface having an image of a subject formed thereon, said surface and image being overall illuminated by a first light source, and a replica of at least a portion of the same image projected by a second light source onto the surface in substantially exact registry with the said portion of the image during the entire period of time that the display is to be visually observed and while said image is illuminated by the first light source, said replica being obtained by photographing the corresponding portion of one of said subject and image from a selected position to obtain a negative and projecting said replica from relatively said selected position onto the image through a positive transparency made from said negative, whereby to markedly improve the vividness of colors, greatly increase the contrast ratio of said portion of the image and greatly reduce surface glare.

3,090,281
OPTICAL SYSTEMS
Robert Gaston André Maréchal, Paris, and Paul Laurent Croce, Issy-les-Molineaux, France, assignors to Centre National de la Recherche Scientifique, Paris, France, a corporation of France
Continuation of application Ser. No. 442,302, July 9, 1954. This application Mar. 13, 1961, Ser. No. 96,636
Claims priority, application France July 15, 1953
3 Claims. (Cl. 88—24)



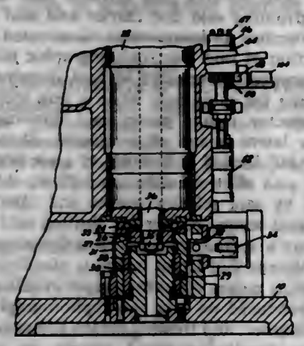
1. In an optical system, the combination including source means of substantially monochromatic light, means for positioning a photograph or the like to be reproduced, lens means for projecting said light onto said photograph, the light projected from said photograph comprising light of varying amplitude projected from a plurality of points forming spatial frequencies in the light projected therefrom corresponding to a periodicity component for which the variable is the position of the point in the plane of the photograph, said projected light being diffracted by said photograph in accordance with spatial frequencies with the angles of diffraction being proportional to said spatial frequencies, means for producing an improved image of said photograph in an image plane, said means comprising filter means having different light absorption factors over different areas thereof for varying the amplitude of said diffracted light in predetermined zones corresponding to predetermined angles of diffraction, so that the optical transmissibility of said filter means is a predetermined function of said spatial frequency, and lens means for forming a corrected image of said photograph from the light transmitted through said filter means.

3,090,282
MECHANISM FOR CONTROLLING THE AXIAL DISPLACEMENTS OF OPTICAL ELEMENTS
Pierre Angenieux, 27 Rue du Cherche Midi, Paris, France
Filed Mar. 3, 1959, Ser. No. 796,791
Claims priority, application France Jan. 28, 1959
5 Claims. (Cl. 88—57)



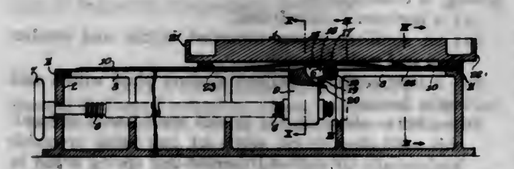
1. A mechanism for simultaneously controlling the axial displacement of two optical elements according to a specific law for each of said optical elements, said mechanism comprising a fixed tubular support; a first barrel supporting of said optical elements, the latter mounted for concentric rotation within said fixed tubular support, said fixed tubular support having guide means disposed on its inner surface, said first barrel being operatively connected to said fixed tubular through said guide means, the latter comprising cam grooves, so that upon rotation of said first barrel, the latter performs an axial displacement movement of predetermined axial length, a second barrel supporting the other of said optical elements and having a circular groove disposed on its outer peripheral surface, said cam grooves disposed on the inner surface of said fixed tubular support having a predetermined contour dictated by the law governing the axial displacements of said second barrel in relation to the rotary movement of said first barrel; a rotary member secured to said first barrel disposed within said fixed tubular support and surrounding said second barrel; said member having longitudinal slots, a plurality of balls equal in number to that of said cam grooves disposed in said fixed tubular support and engaging the longitudinal slots in said rotary member, each of said balls being disposed in one of said longitudinal slots and engaging on the other hand simultaneously said circular groove of said second barrel, constituting a first guideway, and one of said cam grooves of said fixed tubular support constituting a second guideway, whereby said second barrel is centered by said balls in said fixed tubular support; and means for rotatably driving said first barrel, which, is thereby rotating said balls, and the latter moving in engagement with said cam grooves of said fixed tubular support through said longitudinal slots, in order to ensure the axial displacement of said second barrel according to the desired predetermined law consistent with the configuration of said cam grooves.

3,090,283
MULTIPLE START SCREW MACHINE
Lester F. Chaffee, Jr., Coventry, Conn., assignor, by mesne assignments, to Sundstrand Corporation, a corporation of Illinois
Filed Mar. 19, 1958, Ser. No. 722,456
6 Claims. (Cl. 90—11.62)



1. In a multiple start screw machine, a plurality of fixed tool stations each provided with a depending rotatably driven cutter, a member mounted for indexed rotation in a plane below the cutters, a plurality of collets mounted on said member, means for indexing said collets in registry with said cutters, said means comprising a plurality of stops fixed to said member, a stop member fixed with respect to said tool stations in the direction of rotation of said member and slidably mounted for projection from a position outside the path of movement of said stops to a position of indexed engagement with one of said stops, means for simultaneously raising and rotating said collets when in said indexed position, and means for continuously maintaining said stops in pressure engagement with said stop member when said collets are in an indexed position.

3,090,284
WELL COVER FOR MACHINE TOOL
Emery A. Dunning, Cortland, N.Y., assignor to Harsco Corporation, Harrisburg, Pa., a corporation of Delaware
Filed Aug. 1, 1960, Ser. No. 46,579
5 Claims. (Cl. 90—58)



1. In a machine tool, a movable table upon which to secure objects to be worked upon; a mounting for said table comprising walls having a top surface, said walls being disposed to provide a well having longitudinal edges forming a slot opening upwardly from said wall, said movable table being mounted to move over and above the said top surface of the wall; a cover spanning said slot for excluding extraneous material from said well; said cover being an elongated, resilient, self-reforming, stiff, transversely arched member which is formed with down struck legs along its longitudinal edges, said down struck legs forming at their lower extremities sealing means spaced from and along the longitudinal edges of the slot; a bracket secured to said table mounted to extend downwardly into said slot, said bracket having an opening therein above the level of said top surface for threading said cover longitudinally therethrough and causing the cover to rise locally above the level of said surface; means for fastening the ends of the cover to said mounting for preventing endwise movement of the cover; and depressor means bearing downwardly on either side of said bracket and on portions of the top of said cover for vertically positioning said legs in seated and sealing engagement with said top surface and spaced from and on opposite edges of the slot said depressor being disposed to depress said portions of the cover until the same are compressed and transversely flexed to space said longitudinal edges of the downstruck legs outwardly from said seated engagement.

3,090,285
APPARATUS FOR APPLYING TEAR TAB TO A WEB
Olof B. Carlson, Berwick, Pa., assignor to Consolidated Cigar Corporation, New York, N.Y., a corporation of New York
Filed Feb. 20, 1959, Ser. No. 794,570
1 Claim. (Cl. 93—1)

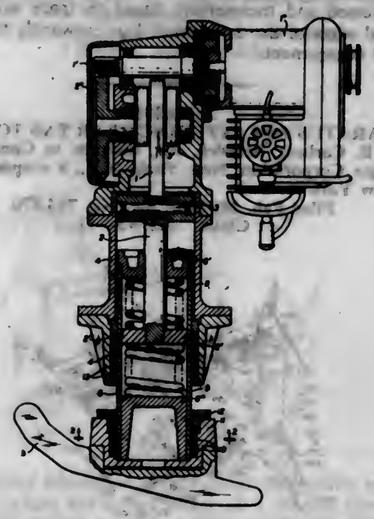


An improved tear tab applying mechanism of the character described for use with a wrapping machine, comprising a support frame including a pair of laterally spaced parallel walls and having parallel confronting vertical tracks located in the inner faces thereof; a heating pad unit disposed between said walls and slidable along said tracks and separable from said support frame through the bottom thereof and having a body member and a pair of guide members engaging said tracks and mounted on and separated from said body member by standoff elements; a drive shaft journalled between said walls; an actuating cam mounted on and rotatable with said drive shaft; a rocking member rotatably and separably supported between said frame walls and including a pair of laterally spaced arms engaging opposite sides of said pad unit; and a cam follower carried by said rocking member and engaging said actuating cam.

3,090,286
SWING SYSTEM FOR A MOTOR-DRIVEN AND MANUALLY-GUIDED WORKING DEVICE
Heinrich Kestel, Munich, Germany, assignor to Herman Wacker and Peter Wacker, Munich, Germany
Filed Oct. 4, 1960, Ser. No. 60,330
Claims priority, application Germany Oct. 24, 1959
2 Claims. (Cl. 94—49)

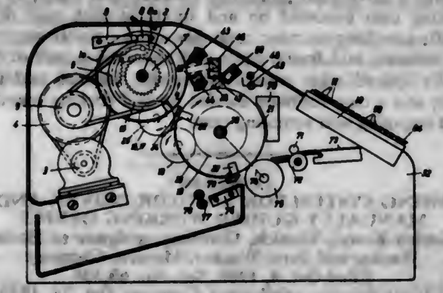
1. A swing system for a motor-driven manually-guided working device including a reciprocating tool, comprising a driving motor operatively connected with said work-

ing device, said driving motor having a shaft, the latter carrying a pinion, a gear meshing with said pinion, a crank drive operated by said gear and including a connecting rod, said crank drive transmitting the driving force to said swing system, a first, outer cylinder forming a housing for said working device, a second, guiding cylinder coaxially disposed in said first cylinder and movable axially in the latter, a tool connected to and movable with said guiding cylinder, a piston reciprocating in said guiding cylinder and having a piston rod, the free end of said



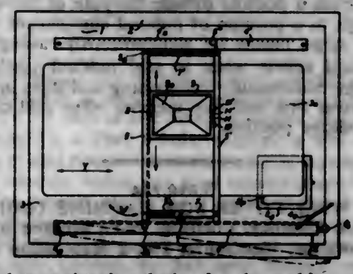
piston rod being pivotally connected with the free end of said connecting rod, and a spring disposed on each side of said piston and each of said springs engaging one face of said piston and the corresponding opposite inner end face of said guiding cylinder, so that said second guiding cylinder reciprocates jointly with said tool in axial movements by following the forced reciprocating movement of said piston by the intermediary of said springs, the strokes of said guiding cylinder being of greater axial length than those of said piston.

3,090,287
XEROGRAPHIC DUPLICATING MACHINE
Wilhelm Ritzerfeld, Schorlemer Allee 14, Berlin-Dahlem, Germany, and Gerhard Ritzerfeld, Franzensbader Str. 21, Berlin-Grunewald, Germany
Filed Mar. 28, 1960, Ser. No. 18,120
Claims priority, application Germany Apr. 3, 1959
20 Claims. (Cl. 95—1.7)



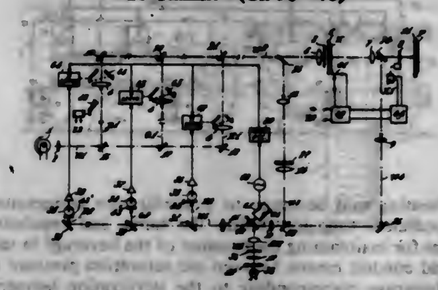
1. An electrophotographic duplicating machine, comprising, in combination, a first movable carrier for supporting a text sheet having text sections; a second movable carrier; an electrophotographic plate mounted on said second carrier; charging means for charging said electrophotographic plate during movement of said second carrier; illuminating means confronting said first carrier for projecting light on an area corresponding to a text section so that during movement of said first carrier successive text sections pass through said area; optical means confronting said first carrier and said second carrier for projecting an image of an illuminated text section onto a section of said electrophotographic plate; selector means operatively connected to said illuminating means for operating the same only when a text section selected by said selector means passes said illuminating means whereby a latent image of a selected, illuminated, and projected text, section is formed on a correlated charged section of said electrophotographic plate; shifting means controlled by said selector means and operatively connected to said second carrier for shifting said second carrier so that a section of said electrophotographic plate located adjacent said latent image is placed in the region of said optical means whereby images of selected text sections are produced on said electrophotographic plate adjacent each other; and treating means adjacent said second carrier for developing latent images on said electrophotographic plate.

3,090,288
REGISTERING OF PLATES, TRANSFERS AND THE LIKE
Georges Wagner, Paris, France, assignor to La Technique Appliquee, Paris, France, a French corporate society
Filed Mar. 31, 1960, Ser. No. 18,955
2 Claims. (Cl. 95—73)



1. A plate registering device for the making of photographic plates intended for mass copying, said device comprising, in combination:
(*a*) a horizontal main frame;
(*b*) an auxiliary frame mounted within and smaller than said main frame;
(*c*) a light sensitive horizontal sheet plate within said main frame;
(*d*) a horizontal rack bar in said main frame and outside said sheet plate; said rack bar being pivotable horizontally at one end thereof and spring urged to operative position;
(*e*) a horizontal ruler fixed in said main frame, outside said sheet plate and opposite said rack bar;
(*f*) a large carriage, displaceable over and above said sheet plate, having two lateral members extending, in operative position of the carriage, normal to said rack bar and ruler and two transverse members connecting said lateral members together; one of said lateral members being pivotable at one end thereof;
(*g*) first cooperating means on said rack bar and the adjacent transverse member of said large carriage to fix the latter in selective position along said rack bar;
(*h*) a small carriage displaceably mounted between said lateral members;
(*i*) second cooperating means on said pivotable lateral members and on an adjacent side wall of said small carriage for fixing the latter in selective position along said pivotable lateral member;
(*j*) said pivotable lateral member of said large carriage being provided with lighting means operable when said second cooperating means is in engagement in one of a series of predetermined positions.

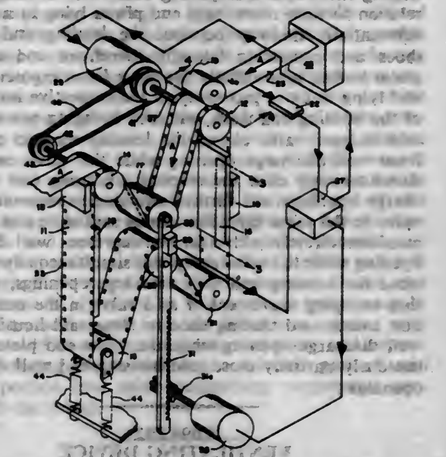
3,090,289
COLOR PHOTOGRAPHIC PRINTER
Alan M. Gundelfinger, Los Angeles, Calif., assignor to Technicolor Corporation of America, Hollywood, Calif., a corporation of Maine
Filed Aug. 29, 1960, Ser. No. 52,555
16 Claims. (Cl. 95—73)



1. Photographic apparatus for printing from a color record comprising means to form a plurality of separate color beams, means for variably obscuring cross-sectional areas of respective color beams, means to form the color beams into a single beam and projecting the beam on said record, a correction mask, means in advance of said record for projecting a portion of said single beam through said mask, means for diverting a portion of the beam from said record and forming a mixed beam of the portions from said mask and record, said means projecting a portion through said mask including means whereby variation of said obscuring means produces intensity variations in said mixed beam, photoelectric means for sensing the energy variations of the respective color components of said mixed beam and for producing electrical signals dependent on said energy variations, and means responsive to respective electrical signals for controlling respective obscuring means in said separate color beams so as to obscure respective beams increasingly as the energy in respective components increases.

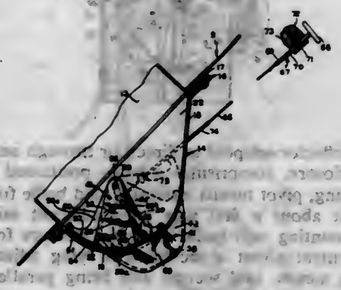
3,090,290
DATA PROCESSING SYSTEM
Donald S. Ross, Lexington, Mass., assignor to Itek Corporation, Waltham, Mass., a corporation of Delaware
Filed Oct. 14, 1960, Ser. No. 62,611
7 Claims. (Cl. 95—89)

1. A data processing system, comprising: a source of moving data bearing film, said film having an indeterminate velocity; processing means, including a processing medium for continuously processing said film, the time of processing being preselected in accordance with selected characteristics of said medium and film; conveyance means coupled to said source and processing means for transporting said film through said processing means at said film velocity; film length control means coupled to said conveyance and processing means for controlling the length of film in said processing means, said control means including a reference velocity signal generator for producing a reference velocity signal proportional to said preselected time, a film density sensor for producing a signal indicative of said film density and modifying said reference velocity signal proportional to said film density, for providing controlled density of said processed film, a film velocity sensor for producing a signal indicative of said film velocity, a velocity comparator for producing an error signal in accordance with the algebraic difference of said velocity signals; and driving means coupled to said film



length control means adapted for receiving said error signal, said driving means adjusting the film length in said processing means in accordance with said modified error signal, whereby said film is processed for said preselected time irrespective of said film velocity.

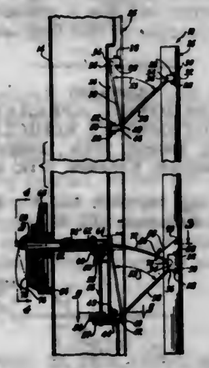
3,090,291
AIR CONDITIONING APPARATUS FOR AUTOMOTIVE VEHICLE
Leroy J. Herbon, Detroit, Mich., assignor to American Motors Corporation, Kenosha, Wis., a corporation of Maryland
Filed Aug. 10, 1960, Ser. No. 48,724
4 Claims. (Cl. 98—2)



1. Air distributing apparatus for a vehicle having a passenger compartment and an engine compartment separated by a partition wall, said apparatus comprising; means for admitting air from outside of the vehicle and directing same to the partition wall; an air reception housing mounted on the partition wall in the passenger compartment, said partition wall having an opening therein communicating with the interior of the housing; said housing having a front wall with a portion formed arcuately to define, in cross section, a cylindric sector of less than 180°; spaced end walls connected to the front wall at opposite ends thereof; said front wall having a discharge opening in its arcuate portion and the end walls having discharge openings; a damper valve carried by and between the end walls for swinging movement within the housing; said valve including an arcuate leading shoe and an arcuate

trailing shoe collectively defining, in cross section, a cylindric sector of less than 180° and having an elongated slot formed therebetween; said valve also including spaced end plates connected at opposite ends of the leading and trailing shoes and maintaining said shoes in fixed spaced relation to each other; said end plates lying in a position substantially midway between the leading and trailing shoes and projecting laterally therefrom and said end plates having substantially flat outer faces exposed toward and lying in close proximity to the respective inner faces of the housing end walls, whereby swinging movement of said damper valve causes the leading shoe to close the front wall discharge opening while the valve end plates simultaneously close the respective housing end wall discharge openings and further swinging movement of said valve in the same direction causes said shoe slot to communicate directly with said housing front wall discharge opening while the valve end plates simultaneously partially close the housing end wall discharge openings, and further swinging movement of said valve in the same direction causes said trailing shoe to close said housing front wall discharge opening while the valve end plates simultaneously partially close said housing end wall discharge openings.

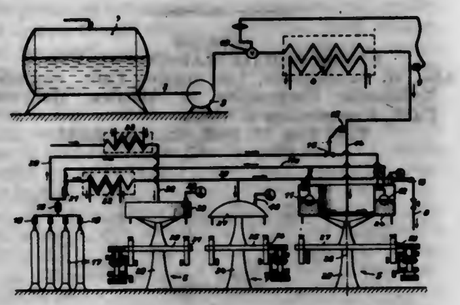
3,090,292
VENTILATING DEVICE
Henry A. Berliner, 2841 Tilden St. NW., Washington, D.C.
Filed Feb. 24, 1961, Ser. No. 91,350
16 Claims. (Cl. 98—2)



1. A deflector adapted to direct air through an opening in an enclosure, comprising: a baffle positioned adjacent said opening; pivot means mounting said baffle for pivotal movement about a first axis lying adjacent said baffle; means mounting said baffle on said enclosure for swinging movement about a second axis lying adjacent said mounting means, said second axis being parallel to and spaced from said first axis; and means mounting said baffle about a third axis disposed normal to said second axis for swinging movement laterally of said second axis.

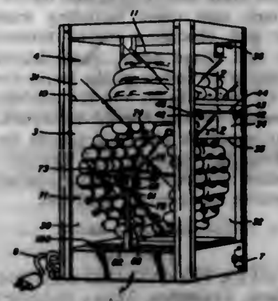
3,090,293
SYSTEM FOR HOT-FILLING WITH CARBON DIOXIDE CONTAINING DRINKS
Karl Plock, Dortmund-Lucklemberg, Karl Quest, Dortmund-Korne, and Karl-Heinz Rusack, Dortmund-Kirchhorde, Germany, assignors to Bruno Kaiser, Hamburg, and Emil Pauls, Hamburg-Eidelstedt, both of Germany
Filed July 7, 1958, Ser. No. 746,903
Claims priority, application Germany July 6, 1957
7 Claims. (Cl. 99—275)

1. A system for filling containers adapted to be used for direct consumption with carbon dioxide-containing beverages having, in combination, a pump, a vessel adapted to receive a carbon dioxide-containing beverage, a counter pressure bottle filling machine having a receptacle and a plurality of filling elements, first conduit means for connecting said vessel to the suction side of said pump, second conduit means for connecting the discharge side of said pump to said receptacle including a heat exchanger



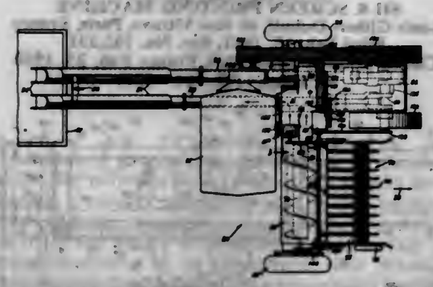
for heating said beverage to a sterilization temperature for sufficient time to sterilize the same, and regulating means for maintaining the pressure of the beverage in said second conduit means between the saturation pressure of the beverage corresponding to the sterilization temperature and a predetermined pressure above the saturation pressure of said beverage corresponding to said sterilization temperature.

3,090,294
SAUSAGE COOKER
James P. Rodman, 1125 Fernwood Blvd., Alliance, Ohio
Filed Dec. 19, 1958, Ser. No. 781,785
2 Claims. (Cl. 99—427)



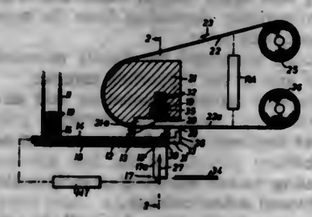
1. A sausage cooker which includes a drum-shaped sausage holder for sausages while being cooked, means for rotating the holder about its axis and heating means outside of the holder; each end of the holder being generally cylindrical and formed of a wire circuitously bent to form a plurality of the same number of generally circular receptors each the same distance from the axis of the holder, each receptor having a mouth facing radially outward; each receptor constituting less than a full circle but greater than half a circle of the bent wire whereby the width of the mouth is less than the diameter of the receptor, the wire extending from the mouth of each receptor to the mouth of the adjoining receptors on the two sides thereof, the wire being relatively stiff and unyielding whereby a pair of receptors of which one is in each end of the holder is adapted to receive a sausage and retain the same when the mouths of the receptors face downwardly, a sausage being introduceable into and removable from such a pair of receptors through their mouths by moving the sausage radially through the mouths with sufficient force to squeeze it therethrough.

3,090,295
HARVESTER
Jack W. Crane and Albert M. Best, New Holland, Pa., and William J. Dwyer, Springfield, Ill., and William G. Searles, Indianapolis, Ind., assignors to Sperry Rand Corporation, New Holland, Pa., a corporation of Delaware
Filed Aug. 2, 1960, Ser. No. 47,049
16 Claims. (Cl. 100—97)



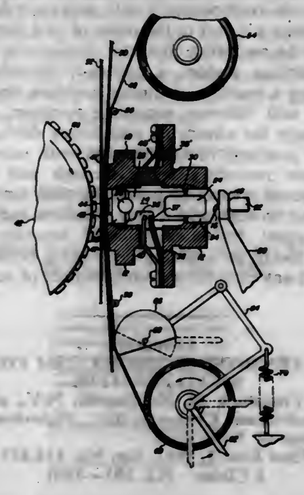
1. Apparatus for forming hay and other crop material into pellets comprising first and second coextending compression chambers mounted side by side, means operable in a direction transverse to said chambers for conveying material into said first chamber and past the first chamber and into the second chamber, said chambers having inlet sections through which said material is admitted, means severing conveyed material to divide it into first and second portions for said first and second inlet sections, respectively, a first means operable to form material deposited in said first section into pellets, a second means operable to form material deposited in said second section into pellets, and means alternately operating said first and second pellet forming means.

3,090,296
METHOD AND APPARATUS FOR THE APPLICATION OF COLORING MATTER TO TABLETS, SUCH AS DRAGEES
Wilhelm Pechmann, Burscheid, near Cologne, Germany, assignor to H. Strunck & Co., Cologne-Ehrenfeld, Germany
Filed Dec. 19, 1960, Ser. No. 76,954
Claims priority, application Germany Dec. 19, 1959
3 Claims. (Cl. 101—44)



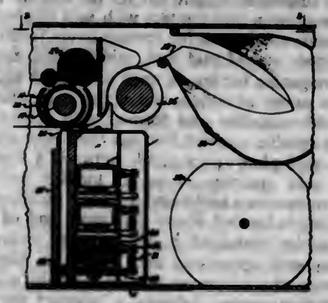
1. An apparatus for consecutively applying coloring matter to tablets, such as dragees and the like, said apparatus comprising, in combination, a ribbon-like carrier of coloring matter which is more readily transferrable at elevated than at lower temperatures, said carrier having a portion located in a substantially horizontal plane and said carrier portion having an upper side and an underside; stationary impression producing means of at least slightly elastic heat-resistant material, said impression producing means located at the upper side of and adjacent to said carrier portion; means for heating said impression producing means; a ram having an upper end vertically aligned with said impression producing means and reciprocable toward the underside of said carrier portion for deflecting said carrier portion into contact with said impression producing means; and means for consecutively feeding tablets onto the upper end of said ram, said feeding means comprising a magazine having an open lower end and adapted to receive a supply of tablets, and a conveying plate located beneath said magazine and formed with aperture means adapted to receive a tablet through the lower end of said magazine, said plate reciprocable between a first position in which said aperture means is located beneath said magazine to receive a tablet and a second position in which said aperture is located above the upper end of said ram so that a tablet contained in said aperture means may be engaged by said upper end and lifted into contact with the underside of said carrier portion whereby said impression producing means deforms a selected part of said carrier portion into color-transmitting compressive contact with the tablet.

3,090,297
MECHANICAL APPARATUS
Robert E. Wilkins, Wollaston, and Leonard E. Fowle, Woburn, Mass., assignors to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Nov. 17, 1960, Ser. No. 69,853
16 Claims. (Cl. 101—93)



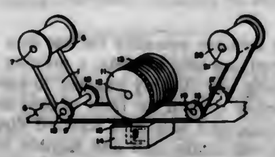
1. A slug actuator assembly for use in a printer, comprising at least one slug housing, a printing slug disposed in said housing and slidably adapted to have its printing surface protrude beyond the front of said housing, means for accelerating said slug in a forward direction, a protective film sufficiently thin and flexible to permit slug printing through it, and means for selectively advancing said film under tension past said housing including means for positioning a stationary film section immediately in front of said housing under less tension than said advancing film to prevent a restraint from being imposed on the forward movement of said slug.

3,090,298
HIGH SPEED PRINTING SYSTEM
Chris A. Christoff, San Gabriel, John D. Gearheart, Temple City, and Richard E. Busch, La Puente, Calif., assignors to Clary Corporation, San Gabriel, Calif., a corporation of California
Filed Feb. 5, 1962, Ser. No. 170,930
9 Claims. (Cl. 101—93)



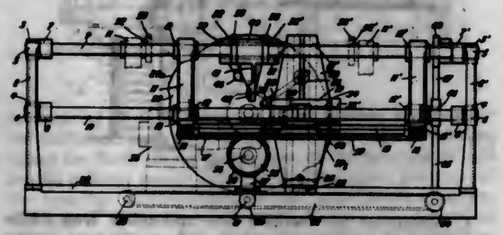
1. In a high speed recording system including a character recording device movable into different recording positions for recording different respective characters at a recording station, means for constantly advancing said recording device repetitively through said positions, and normally disabled recording control means for effecting recording by said recording device; the combination comprising a comparison device having two inputs and an output for transmitting a recording signal when two similar signals are received by said inputs, means for transmitting a signal representative of a character to be recorded by said recording device to one of said inputs, means operable synchronously with said recording device for transmitting a signal to the other of said inputs representative of the recording character instantly in proximity to said recording station, a cyclically operable timing device having a number of timing positions equal to the number of said different recording positions, normally disabled means for advancing said timing device through said timing positions in synchronism with movement of said character recording device through said recording positions, means controlled jointly by said timing device when moving through said timing positions and by a said recording signal for enabling said recording control means, and means for enabling said timing device advancing means at any time during advancement of said recording device.

3,090,299
RIBBON TENSIONING MECHANISM FOR HIGH SPEED PRINTERS
George E. Comstock 3d, Huntington, N.Y., assignor to Potter Instrument Company, Inc., Plainview, N.Y., a corporation of New York
Filed June 2, 1961, Ser. No. 114,432
1 Claim. (Cl. 101—100)



In a system for moving a printing ribbon over the printing area of a printer apparatus and the like, the combination including, a printing station having hammers and type font, printing ribbon storage means located relative to said printing station to permit a ribbon to be fed contiguously past the printing station, a printing ribbon including perforations at the edges for engaging sprocket means, and ribbon feed means including tensioning means comprising at least two shafts journaled transverse of the direction of feed for said ribbon on opposite sides of said printing station, first and second sprocket means rotatably fixed on each shaft, corresponding sprocket means being slidable freely on each respective one of said shafts, and resilient means continually acting against each respective one of said slidable sprocket means in a direction away from the other sprocket means so that a printing ribbon is maintained under a substantially uniform, lateral tension.

3,090,300
SILK SCREEN PRINTING MACHINE
Louis Gilbert Dubuit, 60 Rue Vitruve, Paris, France
Filed Feb. 15, 1961, Ser. No. 102,331
Claims priority, application France Feb. 23, 1960
6 Claims. (Cl. 101—123)



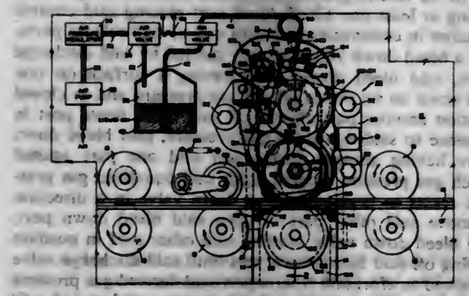
1. In a silk screen printing machine the improvement comprising in combination
(*a*) a machine frame,
(*b*) an assembly of four parallel shafts forming the fulcrums of a parallelogrammatic linkage system including an upper rear or actuating shaft rotatably mounted in the frame, a lower rear or guide shaft fixedly mounted in the frame with its axis located in a vertical plane containing the axis of said upper rear shaft, two upper arms keyed to said actuating shaft, two lower arms pivoted on said guide shaft, an upper frontal shaft rotatably mounted in the outer ends of said upper arms, a lower frontal shaft rotatably mounted in the outer ends of said lower arms, and at least one vertical tie rod with its ends pivotably and slidably resting on said two front shafts,
(*c*) a first horizontal bar attached to the lower ends of said tie rods,
(*d*) a silk screen frame attached to said bar,
(*e*) a supporting member composed of a horizontal and a vertical arm, the outer end of the horizontal arm slidingly embracing the said upper rear shaft, the inner end of the horizontal arm slidingly embracing said upper frontal shaft, and a forked extension vertically depending from the outer end of said horizontal arm;
(*f*) a second horizontal bar fixedly mounted on said vertical arm of the supporting member,
(*g*) a squeegee carrier mounted on said second horizontal bar,
(*h*) driver carriage slidingly mounted on said lower rear shaft,
(*i*) actuating means imparting a reciprocating movement to said driver carriage,
(*j*) a two armed stirrup member with its arms rotatably mounted on said driver carriage and a spur thereupon, said spur when in upturned vertical position adapted to engage said forked extension, and thus to operatively connect said driver carriage with said second horizontal bar supporting the squeegee carrier,
(*k*) a clevis member attached to said first horizontal bar and adapted to be engaged by said spur when in horizontal position and thus operatively connecting said driver carriage with said first horizontal bar supporting the screen frame,
(*l*) and actuating means adapted to pivot said upper rear shaft and actuate said parallelogrammatic linkage system.

3,090,301
MANUAL PATTERN TRANSFER DEVICE
Astra Serk, born Arousowa, 20 Boulevard Princesse Charlotte, Monte Carlo, Principality de Monaco
Filed Aug. 1, 1961, Ser. No. 128,524
Claims priority, application France Aug. 3, 1960
6 Claims. (Cl. 101—134)



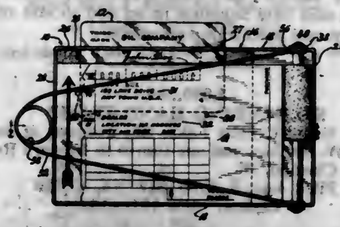
1. A manual pattern transferring device for decorative and the like purposes, which comprises a support having a handle, a transfer roller journalled in said support, a pattern element surrounding the cylindrical surface of said roller and having at least one selected surface area thereof constituted by an assembly of solid pre-shaped solvent-soluble dye members, and a wetter roller journalled in said support about an axis parallel to and spaced from the axis of the transfer roller and containing a store of a liquid solvent for said dye members, said pattern element being adapted for direct application to a surface to be decorated to deposit thereon peripheral layers of said dye members dissolved by the liquid solvent from said wetter roller.

3,090,302
INKING MECHANISM FOR PRINTING APPARATUS
Edward M. Johnson, King of Prussia, Pa., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed Mar. 15, 1961, Ser. No. 96,033
13 Claims. (Cl. 101—232)



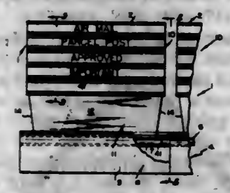
1. Printing apparatus comprising, an ink distributing member having an exposed surface portion thereon, means mounting said ink distributing member for fluid floating rock and roll movement about two axes at right angles to each other, an indicia bearing member capable of producing an impression therefrom, means for rotating said indicia bearing member, means for transferring ink from the exposed surface of said ink distributing member to the surface of said indicia bearing member, and, means operatively associated with said indicia bearing member for entraining and moving a sheet item therebetween so as to produce a printed impression thereupon when said items are fed thereto.

3,090,303
PORTABLE CREDIT CARD IMPRINTER
Don L. Manners, 6210 N. Artesian, Chicago, Ill., and Jack Whedon, 5 Ridgewood Road, Elk Grove Village, Ill.
Filed Apr. 1, 1960, Ser. No. 19,383
10 Claims. (Cl. 101—269)



1. A portable imprinter device for recording indicia from embossed surfaces of credit cards and the like and adapted to be carried upon the person of an individual and comprising, an open-topped tray member adapted to receive a credit card and blank invoice therein, said invoice being entirely within the tray, roller means for forming a visible mark representative of said indicia contained on said embossed surface, and means for passing said roller means in pressure contact with said embossed surface with the blank invoice therebetween, said latter means comprising spring-like free-ended grasping means for said roller means and pivotally mounted thereto, track means adapted to receive and guide said roller means along the length of said tray member, and guide means at one end of said tray cooperating with said track means to force the roller means along a pressure path to bring same in pressure contact with said blank invoice, said guide means comprising at least a pair of spaced L-shaped slots formed at one end of the tray, the upper ends of said slots opening to the said one end of said tray, said spring-like free-ended grasping means being threaded through said slots and adapted to be pulled back and forth across the length of said tray, said grasping means adapted to be removed from said slots when said roller means is disposed at the other end of said tray.

3,090,304
RUBBER STAMP DEVICE
Thomas A. Sulkie, 1733 Wisconsin Ave. NW., Washington, D.C.
Filed Aug. 28, 1961, Ser. No. 141,937
19 Claims. (Cl. 101—333)



1. A hand stamp assembly comprising a plurality of hand stamp units, base supports for said hand stamp units, said hand stamp units comprising a plurality of nested cup-shaped hand stamps, said hand stamp units having inking means, said hand stamps having means for mounting an easily readable title, said hand stamps having spacing means to provide for non-sticking action on removal of one of said hand stamps from another of said hand stamps, said hand stamps having positioning means for positioning one hand stamp with respect to another, said hand stamps having a stamp member, said hand stamps having means for mounting said stamp member, said base supports having means for connecting with said hand stamp units, said means for connecting said hand

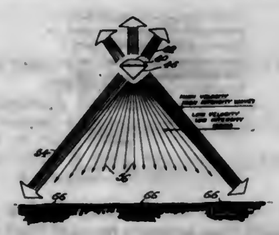
stamp units to said base supports comprises a beaded portion extending around the perimeter of the bases of each of said hand stamp units, said base supports having a valley in the top portion thereof, said beaded portion wedging into said valley of said base supports thereby connecting said hand stamp units to said base supports, and means for connecting said base supports in an end to end relationship to form said hand stamp assembly.

3,090,305
SELF-INKING HAND STAMP
Harold P. Keck, Crystal Lake, Ill., assignor of one-half to Jack W. Robbins and one-fourth to Bernard Robbins, both of Chicago, Ill.
Filed Aug. 5, 1960, Ser. No. 47,750
6 Claims. (Cl. 101—334)



1. A self-inking hand stamp comprising a base frame, a depressible sub-frame supported by said base frame, a printing unit rotatably supported at the lower end of said sub-frame to rotate upon the depression of said depressible sub-frame, an ink container secured to said sub-frame above said printing unit, an opening at the lower end of said ink container, a roller rotatably supported at the lower end of said ink container and blocking said opening but adapted to receive the ink from said ink container by gravity flow, means on said printing unit and on said roller cooperating to rotate said roller with each downward actuation of said depressible sub-frame to expose a new inking surface on said roller to said printing unit before said printing unit engages said inking roller, said means permitting said printing unit to return on the upstroke without rotating said roller.

3,090,306
EXPLOSIVE
Hubert G. Reuther, Elk Club, 2828 Kalkaua Ave., Honolulu, Hawaii
Filed Feb. 3, 1948, Ser. No. 6,105
2 Claims. (Cl. 102—22)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. An explosive charge adapted to produce directionalized blast effects comprising a body including upper and lower body sections, a common planar base portion for the sections, the base portion having opposite planar surfaces from which the body sections converge oppositely, the upper body section terminating in a truncated surface paralleling said planar surfaces, the lower body section terminating in an apex, a source of detonation initiation mounted centrally of said truncated surface and symmetrically with respect to the planar surfaces of the common base portion, the source of detonation initiation producing upon detonation a detonation wave which, passing through the body section in which detonation originated, impinges simultaneously all points of the planar base portion whereby an explosive pattern consisting of high velocity, high intensity shock waves, enclosing waves of lesser intensity and velocity, is propagated by the body section opposite to that containing the source of detonation initiation.

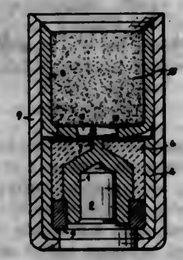
3,090,307
MATERIAL BREAKING CARTRIDGE
Francis M. Niekrasz, Chicago, Ill., assignor to Marmon-Herrington Company, Inc., Indianapolis, Ind., a corporation of Indiana
Filed July 18, 1960, Ser. No. 43,511
13 Claims. (Cl. 102—25)



1. In combination; a cylindrical cartridge body having arranged successively longitudinally thereof in the order named a cylindrical release chamber in which a material breaking charge of compressed gas is to be developed and from which the charge is to be released, lateral gas charge release ports, and a cylindrical control chamber; means providing an annular valve seat at the end of said release chamber adjacent said release ports, a cylindrical discharge valve slidable in said control chamber and overlying said release ports, means biasing one end of said discharge valve into sealing engagement with said valve seat, said discharge valve having a passageway therethrough to permit the flow of gas from said release chamber to said control chamber at a rate that will equalize the gas pressures in said control and release chambers while said sealing engagement is maintained with said valve seat, means for lowering the gas pressure in said control chamber to a value substantially below that of the gas in said release chamber thereby permitting the gas pressure in said release chamber to move said discharge valve away from said valve seat and to uncover said lateral gas charge release ports and the compressed gas to be discharged therethrough, said discharge valve having at least one bleed down port placing said control chamber in communication with one of said release ports, and a bleed down valve slidably carried by said discharge valve, said bleed down valve having a surface on one part acted on by the equalized gas pressure and in closed position another part closing off said bleed down port in response to said equalized gas pressure, said bleed down valve having another surface on said one part against which gas pressure derived from said equalized gas pressure reacts to urge said bleed down valve in a direction to move said other part to open said bleed down port, said bleed down valve holding said other part in position closing off said bleed down port until said discharge valve is moved as aforesaid whereupon said derived gas pressure moves said bleed down valve to open position and said control chamber is vented to the atmosphere through said bleed down port.

3,090,308
ELECTRIC PRIMERS FOR PROJECTILES
Louis-David Paschoud, Lausanne, Switzerland, assignor to Brevets Aero-Mecaniques S.A., Geneva, Switzerland, a corporation of Switzerland
Filed Oct. 24, 1960, Ser. No. 64,466
Claims priority, application Switzerland Oct. 28, 1959
6 Claims. (Cl. 102—28)

6. An electrical primer for a projectile comprising, first and second cylindrical electrodes, said second electrode including an internal sleeve provided with a base, said base having an orifice, said first electrode disposed within and spaced from said second electrode, an insulating mass between said electrodes, said sleeve of said second electrode containing an explosive charge to be ignited by a spark jumping between said electrodes, a part of said first electrode emerging from said insulating mass adjacent said orifice in said base, a single metallic deposit in colloidal form overlying said insulating mass and connecting said first and second electrodes adjacent



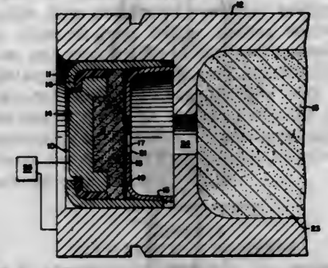
said orifice in said base, a single protective layer of electrically insulative material disposed upon said metallic deposit opposite said orifice, said protective layer overlying said metallic deposit and being contiguous therewith, said protective layer completely isolating said explosive charge from said metallic deposit and said first electrode, whereby, a spark of sufficient intensity to properly ingite said explosive charge will destroy said protective layer and contact said charge to ignite the same.

3,090,309
TRAINING CARTRIDGE
Arthur H. Burns, Jr., Alton, Ill., assignor to Olin Mathieson Chemical Corporation, a corporation of Virginia
Filed Feb. 19, 1962, Ser. No. 174,228
4 Claims. (Cl. 102—41)



1. A dog training cartridge comprising a regular shot shell of a given gauge having a primed end and opposite said end a cartridge closure integral with said shell, a less than regular charge of explosive propellant in said shell adjacent said primed end, an intervening wad of frangible material pressed over said propellant, and a charge of cellulosic meal compressed in said shell against said wad to form for disintegrating under shell firing a column of said meal of predetermined granulation and compression extending between said wad and closure, said closure sealing said column and being nondisintegrating and together with said column and wad being operative to obturate said shell and produce with said charge an audible report substantially indistinguishable from the report of a regular shell conventionally loaded to include shot.

3,090,310
CONDUCTIVE EXPLOSIVE PRIMER MIXTURE AND DEVICE
George W. Peet, Mount Rainier, and Leo F. X. Gowen, Silver Spring, Md., assignors to the United States of America as represented by the Secretary of the Navy
Filed May 4, 1960, Ser. No. 26,921
6 Claims. (Cl. 102—46)
(Granted under Title 35, U.S. Code (1952), sec. 266)

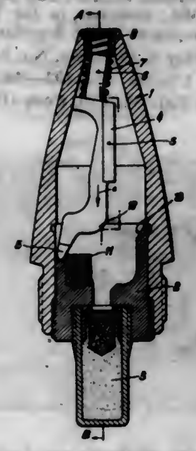


5. An electrostatic discharge proof primer for use with a cartridge containing a propellant which comprises; cup means having a rearwardly disposed aperture therein, an electrically conducting button disposed within said cup and extending into the aperture thereof, insulating means electrically separating said button and said cup, an electrically conducting priming mixture having a resistance of at least 1,000 ohms disposed in electrical contact between said button and said cup, means for producing a voltage across said cup and said button through said priming mixture, said priming mixture consisting essentially of an electrically conductive primer composition of a heavy metal peroxide as an electroconductive oxidizing agent, a finely divided metal, an oxidizing salt, and a crystalline organic high explosive and about 30% of the zirconium hydride to prevent accidental initiation of the primer mixture by electrostatic discharge.

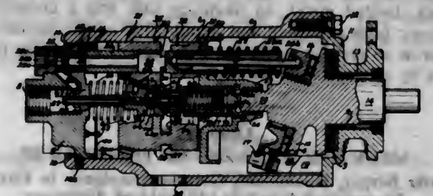
3,090,311
MECHANICAL FUZE FOR PROJECTILES
Fritz Berger, Dusseldorf, Germany, assignor to Firma Rheinmetall G.m.b.H., Dusseldorf, Germany
Filed Sept. 26, 1960, Ser. No. 58,438
Claims priority, application Germany Sept. 26, 1959
4 Claims. (Cl. 102—71)

1. A mechanical fuze for spinning projectiles comprising a fuze body having a fuze bottom member in the bottom end of the body, said fuze bottom having an oblique surface therein on one side thereof, a compression spring in the top end of the fuze body, a firing pin mounted in the fuze body with one end in and in contact with the spring and being unsymmetrical relative to its longitudinal axis and also having a contact point at the other end, said fuze bottom having a groove therein on the other side thereof to receive the contact point of the firing pin in the safety position of the projectile fuze, a retarding element on the fuze bottom adjacent the groove and adapted to be contacted by the contact point on the firing pin, said pin having a projection thereon approximately intermediate the ends thereof to slide and be guided by the oblique surface on the fuze bottom, and means on the firing pin operative by centrifugal force to urge the firing pin point out of the groove and over the retarding element, movement of said firing pin being arrested by contact of said projection with the oblique surface on the bottom member during the flight of the projectile and after centrifugal force has forced said projection against said oblique sur-

face the spring force overcomes a diminishing centrifugal force causing the projection to slide on the oblique surface to permit the pin to assume a detonating position due to the force of the compression spring.

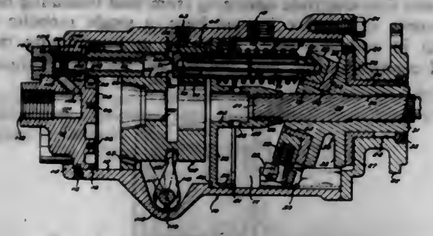


3,090,312
PUMP
Tadeusz Budzich, Shaker Heights, Ohio, assignor to The Weatherhead Company, Cleveland, Ohio, a corporation of Ohio
Filed Feb. 9, 1961, Ser. No. 88,142
9 Claims. (Cl. 103—37)



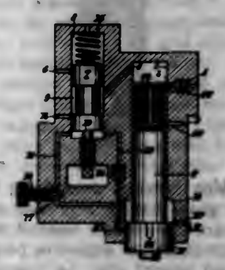
1. A variable volume pump comprising a housing, said housing having a cylindrical interior wall portion, a cylinder block mounted in said housing, said cylinder block having exterior portions thereof cylindrical and mounted for axially sliding movement within said cylindrical portions of said pump housing, an outlet chamber at one end of the housing, control means to move said cylinder block axially within said housing from a position of maximum volume output to a position of minimum volume output, said control means being mounted centrally of the cylinder block and including a spring arranged to bias said cylinder block to a position of maximum output, said control means having an elongated hollow transfer tube projecting into said outlet chamber, said transfer tube arranged for axially sliding movement through a wall in said outlet chamber, said control means having an axially slidable plunger, said plunger having one end thereof subjected to outlet fluid pressure and having the other end thereof spring biased toward the outlet chamber, said control means having a reaction chamber enclosing one end of said plunger, and valve means on said plunger to admit outlet fluid pressure to said reaction chamber in response to movement of the plunger away from said outlet.

3,090,313
VARIABLE DISPLACEMENT PUMP
Tadeusz Budzich, Shaker Heights, Ohio, assignor to The Weatherhead Company, Cleveland, Ohio, a corporation of Ohio
Filed Apr. 25, 1961, Ser. No. 105,357
9 Claims. (Cl. 103—37)



1. A pump comprising a pump housing providing a fluid chamber therein, an inlet port to said fluid chamber, an outlet port on said pump housing, a cylinder block mounted for slidable movement within said fluid chamber along a longitudinal axis, a plurality of cylinder bores in said cylinder block, a piston within each of said cylinder bores, means in said pump housing to progressively reciprocate said pistons in said cylinder bores between forward and retracted positions, means connecting each of said cylinder bores to said outlet port, an inlet port for each cylinder bore in said cylinder block, said port having axially spaced edges, said cylinder block defining a maximum volume position when the piston head is intermediate said port edges when the piston is in the retracted position, means to shift said cylinder block in one direction from said maximum volume position to reduce the effective area of said cylinder bore inlet ports, and means to shift said cylinder block in the other direction from said maximum volume position to reduce the effective length of the pumping stroke of the pistons.

3,090,314
SELF REGULATING RECIPROCATING PUMPS AND IN PARTICULAR FUEL INJECTION PUMPS
Pierre Etienne Bessiere, 55 Blvd. du Commandant Charcot, Neuilly-sur-Seine, France
Filed May 1, 1961, Ser. No. 106,663
Claims priority, application France May 11, 1960
8 Claims. (Cl. 103—41)



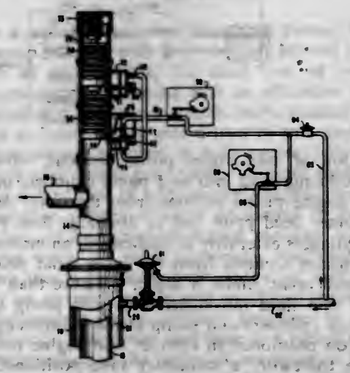
1. For use with an internal combustion engine, a reciprocating action fuel pump which comprises, in combination, a pump cylinder, a piston adapted to cooperate with said cylinder mounted for reciprocating movement therein, so as to limit therewith a variable volume working space, the movements of said piston in said cylinder in the direction for which the volume of said working space is reduced being called delivery strokes, and those in the opposed direction return strokes, a casing rigid with said cylinder provided with a discharge port opening to the outside, a shuttle member adapted to control said discharge port, said shuttle member fitting movably in said casing so as to limit with the inner wall thereof a variable volume chamber, the movements of said shuttle member in said casing in the direction for which the volume of said chamber is increased being called outward strokes and the movements of said shuttle member in the opposed direction being called return strokes, a fuel delivery means, conduit means in said casing including a connection from said working space to said fuel delivery means and a connection to said variable volume chamber and conduit means providing an outflow for liquid from the variable volume chamber, means operative by said piston for forcing liquid through said connection to said variable volume chamber during the delivery strokes of said piston to produce outward strokes of said shuttle member, valve means in said connection to the variable volume chamber responsive to movements of said piston to close said connection during the return strokes of said piston, and said outflow having its smallest cross-section very substantially less than the cross-section of the shuttle member so as to slow down said liquid outflow and thus to exert on said shuttle member, during its return strokes, a braking action such that, for speeds of operation of the pump above a given value, said shuttle member return strokes are shorter as the speed of operation of the pump is higher, means, operative at least during the return strokes of said piston, for exerting a limited thrust on said shuttle member to urge it in the direction to produce the return strokes thereof, fuel being fed to said delivery means during the delivery strokes of said piston, the feed of fuel to said delivery means being stopped during every delivery stroke of said piston at least after the shuttle member has cleared said discharge port, said valve means in said connection to the variable volume chamber comprising a check valve and a mechanically driven valve mounted in series in said last mentioned connection, said mechanically driven valve being operatively connected with said piston to be opened just before said check valve opens normally and to be closed just after said check valve closes normally.

3,090,315
FREE PISTON
Taylor Milton, Longview, Tex., assignor to U.S. Industries, Inc., New York, N.Y.
Filed Oct. 20, 1960, Ser. No. 63,925
9 Claims. (Cl. 103—52)



1. A free piston comprising, in combination, a body having a passageway for fluid therethrough; valve means in the body for controlling flow of fluid therethrough; an expansible packer on the body, said packer including an outer sealing assembly comprising a plurality of interlocking sealing segments mounted for limited movement radially of the body, said sealing segments having spaces between their adjacent longitudinal edges when the packer is expanded, and a separate inner back-up assembly interposed between said body and said sealing segments, said back-up assembly comprising a plurality of arcuate shims having surfaces shaped to conform to the inner surfaces of said sealing segments, the several shims being arranged so that each shim overlies and sealably bridges said space between adjacent ones of the sealing segments during expansion and contraction of the packer; resilient means acting between the body and said arcuate shims to urge the shims outwardly into engagement with the sealing segments and at the same time to move the segments radially outwardly from the body; and stop means, carried by the body, for limiting said radially outward movement of the sealing segments.

3,090,316
GAS LIFTING SYSTEM
Norman E. Montgomery, Metairie, La., assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware
Filed Nov. 24, 1961, Ser. No. 154,722
9 Claims. (Cl. 103—52)

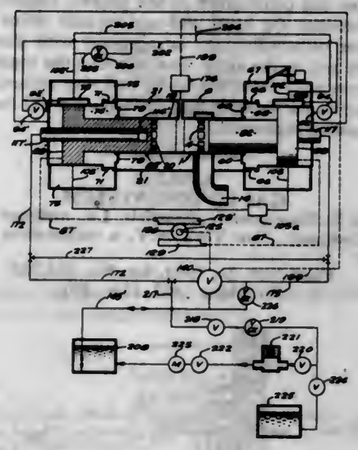


1. A method of producing an oil well by means of fluid lifting, said oil well having a production string and a string for introducing gas into the well, said method comprising:
introducing gas into the well to increase the pressure to lift the uppermost of a plurality of plungers disposed at the bottom of the well, continuing to inject said gas to transport said plunger and the slug of oil trapped above it to the surface;
catching and retaining the plunger at the surface;
injecting additional gas to raise the next plunger and continuing to inject the gas to transport said next plunger and slug of oil trapped above it to the surface, catching and retaining the next plunger at the surface;
continuing to inject the gas until all of the plungers have been transported to the surface;
discontinuing the injection of gas and permitting all of the plungers to fall to the bottom of the well as a group.

3,090,317
FREE PISTON ENGINES
John E. Luderer, P.O. Box 432, Balboa Island, Calif.
Filed June 10, 1960, Ser. No. 35,176
19 Claims. (Cl. 103—54)

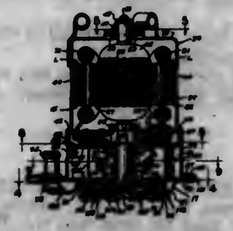
1. A free piston engine comprising an engine cylinder section, a pair of free engine piston sections moving re-

ciprocally in said engine cylinder between an inner dead point and an outer dead point, a combustion chamber in said engine cylinder between said free piston sections, compressor cylinders, compressor piston sections connected to said engine piston sections and mounted in said compressor cylinders, bounce cylinders and bounce piston sections in said bounce cylinders, pump cylinders, pump piston sections connected to said engine piston sections, each of said pump cylinders being separate and independent from said bounce cylinders, compressor cylinders and said engine cylinder, means sealing said pump cylinders from said compressor cylinders and said engine cylinder and said bounce cylinders throughout the re-



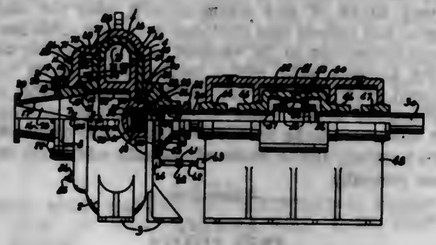
ciprocation of said engine piston sections, valve means for introducing fluid into said pump cylinders on motion of said engine piston sections from the outer dead point to the inner dead point and to discharge fluid from said pump cylinders exteriorly of said engine on motion of said engine piston sections from the inner dead point to the outer dead point, under a higher pressure than the pressure of said fluid introduced into said pump cylinders, said pump cylinders and pump piston comprising a tubular section positioned in each of said engine pistons and movable therewith, a stationary tube positioned in said tubular section, making a slidable fluid type fit with the wall of said tubular section at one end of said stationary tube, and a fluid outlet from said stationary tube.

3,090,318
ELECTRIC FUEL PUMP
Charles W. Jeep, Jr., Webster Groves, Edgar W. Niemeyer, Normandy, and John B. Fitzgerald, St. Louis, Mo., assignors to ACF Industries, Incorporated, New York, N.Y., a corporation of New Jersey
Filed June 13, 1960, Ser. No. 35,583
10 Claims. (Cl. 103—87)



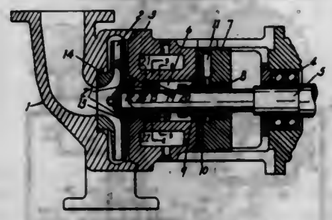
1. An electric fuel pump adapted for use in a fuel tank, said pump comprising a tubular sheet metal motor housing having an end wall at one end and being adapted to be vertically positioned in a tank with said end wall up, said housing being formed to provide a downwardly facing shoulder intermediate its upper and lower ends, an electric motor contained in said housing comprising a field core secured in said housing above said shoulder, a shaft extending vertically in said housing and having an armature core thereon rotatable within said field core, a brush holder plate in said housing engaging said shoulder, a partition extending across said housing below said housing shoulder and having an upwardly extending rim portion engaging and holding said brush holder against said shoulder, said shaft extending through said brush holder and said partition and having a commutator thereon, brushes on said holder engaging said commutator, a pump casing at the lower end of said housing, an impeller in said pump casing operatively connected to said shaft, and tangs struck inwardly from the tubular wall of said housing below and adjacent to said partition, said tangs having inclined upper edges contacting and wedging said partition upwardly whereby said partition rim portion is forced against said brush holder plate.

3,090,319
PUMP LINER
Henderson Musgrove Stanley, Fairmont, W. Va., assignor to Helmick Foundry-Machines Company, Fairmont, W. Va., a corporation of West Virginia
Filed June 30, 1961, Ser. No. 121,038
11 Claims. (Cl. 103—103)



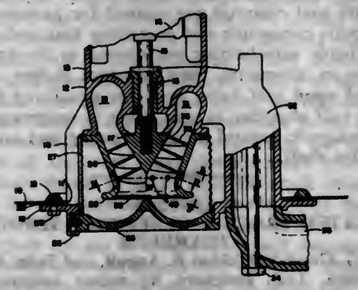
1. A centrifugal fluid pump consisting of a two-part annular housing with integral radial flanges and having an axial inlet and a circumferential discharge connected to an outlet, said housing with its flanges partible along a single medial transverse line with pressure exerting means to secure the parts together, a rigid two-part annular liner having integral radial flanges removably mounted in said housing to form a pump chamber defined by a complementary circumferential discharge and an impeller enclosure, said liner with its flanges partible along the same medial transverse line as said housing, said liner flanges forming the sides of said impeller enclosure and on one side circumscribing the inlet thereto, cooperating complementary seats located on opposed surfaces on each housing and liner part between each flange and its circumferential discharge to hold said liner parts in mating engagement with each other along said medial transverse line when said housing parts are secured to each other by said pressure exerting means, a radial discharge impeller having an inlet vortex on one side and mounted for rotation in said impeller enclosure and having parallel sides radial to its rotary axis and closely adjacent to and coextensive with but spaced from said liner flanges, annular marginal surfaces defining said liner circumferential discharge and being flush with the corresponding inner surfaces of the radial discharge sides of said impeller, one of said liner parts being removable from around said mounted impeller when the other part of said liner and housing are removed from said medial transverse line.

3,090,320
SEALS FOR STUFFING BOXES AND THE LIKE PERMITTING FLUSHING THEREOF
Herbert B. Hummer and Elmer W. Conklin, Kalamazoo, Mich., assignors to Durametallic Corporation, Kalamazoo, Mich.
Filed Dec. 7, 1960, Ser. No. 74,414
11 Claims. (Cl. 103—111)



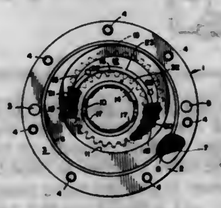
1. A structure of the class described comprising an impeller, a driving shaft therefor, a housing having a cylindrical chamber therein through which said shaft is disposed, there being an inwardly projecting shoulder at the end of said chamber adjacent said impeller, a shaft seal means spaced from said shoulder axially of said shaft, a split annular collar, screw means engaged with the edges of the split of said collar for expanding the collar into clamping engagement with the wall of the chamber, a seal member of springably yieldable plastic supportedly disposed between said collar and said shoulder and comprising an annular body portion having an annular rib-like portion in thrust engagement with said shoulder, said seal member having an integral inwardly projecting flexibly yieldable conical lip disposed in yielding engagement with said shaft and having a radial groove in the inner side thereof, said collar having a lug thereon projecting into said radial slot in said seal member preventing rotative movement thereof, and a flushing liquid inlet opening to said chamber so that the flushing liquid entering flows around said packing and through said collar and said seal member, said lip on said seal member acting to prevent the reverse flow of liquid into said chamber.

3,090,321
VAPOR SEPARATING PUMP
Miles Lowell Edwards, 13191 Sandhurst Place, Santa Ana, Calif.
Filed Sept. 21, 1959, Ser. No. 841,094
4 Claims. (Cl. 103—113)



1. In a vapor separating and mixed flow submersible pump, an impeller rotatable on an axis of rotation and having an axial inlet eye, a housing having walls forming a pumping chamber, said housing having an inlet communicating with said impeller eye along the line of the axis rotation of said impeller, said impeller having an entrance end adjacent said inlet, said housing having circumferentially spaced openings surrounding the entrance end of the impeller and outwardly divergent wall surfaces forming opposite leading and trailing sides of said openings directed approximately tangentially to the impeller, said surfaces intersecting the inside surface of said chamber at small acute angles forming sharp edges at the inner ends of the openings to flow gas out of the chamber at low flow rates and to flow liquid into the chamber at high flow rates, and means for mounting said pump with said openings and inlet submerged in a body of liquid to be pumped.

3,090,322
OIL PUMP
John H. Metternheimer, Jr., Miami, Fla., assignor to AAPCD Automotive, Inc., Miami, Fla., a corporation of Florida
Filed Oct. 6, 1961, Ser. No. 143,368
6 Claims. (Cl. 103—126)

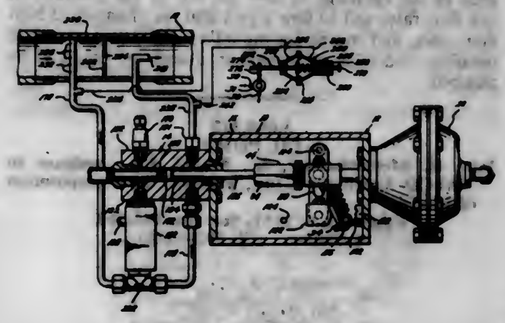


1. In a process for rebuilding gear pumps having a metal pump housing with a drive shaft journal in a central hub of said housing, the axial hole of said drive shaft journal communicating with an off-center recess in the face of said housing, in which recess rotates a pinion gear and an internal ring gear driven by said pinion gear, a crescent-shaped member in said recess between said gears, and said pinion gear rotates in close proximity to the inner curved face of said crescent-shaped member and said ring gear rotates in close proximity to the outer, curved face of said crescent-shaped member, said inner face being worn, the steps comprising machining off of said inner face a predetermined amount of said crescent, securing an arcuate liner to said machined inner face to bring the crescent-shaped member plus liner to an oversized condition, machining said liner to a radius of curvature corresponding to the radius of curvature of the inner face of the original crescent-shaped member, reboring the axial hole in said hub, and mounting a cylindrical bushing in said rebored axial hole.

3,090,323
LIQUID SAMPLE PUMP ASSEMBLY
Horace V. Smith, Houston, Tex., assignor to Metro Corporation, a corporation of Texas
Filed Jan. 25, 1960, Ser. No. 4,463
4 Claims. (Cl. 103—178)

1. In a pump for taking samples of liquid from a liquid container the improvement comprising, a body having a bore extending therethrough, a stuffing box at each end of the bore, a piston rod loosely received in the bore and sealingly and slidably extending through each stuffing box, a hollow piston on the piston rod within the bore and slidable with respect to a limited portion of the piston rod, said piston having an external portion snugly and slidably fitting the bore, and an internal diameter greater than the external diameter of said portion of the piston rod, mating valve surfaces on the limited portion of the piston rod and the piston adapted to sealingly engage each other upon movement of the piston rod in a first direction and to separate upon movement of the piston rod in a second direction, a passageway for liquid communicating between the bore and a point on said limited portion of the piston rod spaced from the valve surfaces, a liquid

inlet line to and a liquid outlet line from the bore at axially spaced points along the bore, and a relief valve in the liquid outlet line, said relief valve having a flow passageway communicating between the liquid outlet line and the exterior of the relief valve, a movable valve member in the relief valve adapted upon alternate movement to



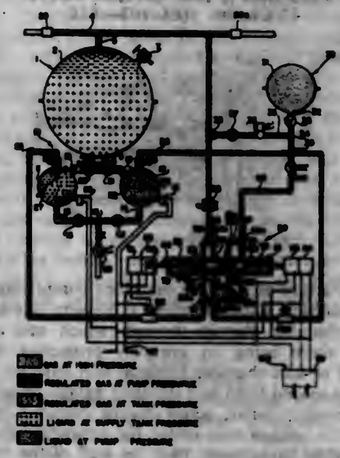
open and close the liquid passageway, a valve closing chamber in fluid communication with the valve member so that application of fluid pressure to the valve closing chamber urges the valve member to close the flow passageway, resilient means urging the valve member to close the flow passageway, and a liquid conduit between the valve closing chamber and the liquid inlet to the pump.

3,090,324
SAND TRAPPING SUCKER-ROD FOR PISTON TYPE OIL WELL PUMP
Benjamin F. Schmidt, 450 Fairview Ave., Sierra Madre, Calif.
Filed Sept. 22, 1960, Ser. No. 57,661
12 Claims. (Cl. 103—220)



1. In an oil well structure embodying a production tube through which oil is flowed from the well by a pumping operation, a multiple of sand collecting cups in said tube, and means for supporting said cups in spaced relation to each other along a length of said tube, each of said cups being annular and including a bottom wall, an outer side wall and an upstanding inner side wall; said inner side wall having greater extent axially of said production tube than said outer side wall and having a portion thereof between its ends circumferentially spaced from said means for support in said cups; and said portions of said inner side wall of said cups having apertures therein for upward passage of pumped well fluid therethrough to dislodge sands collected in said cups.

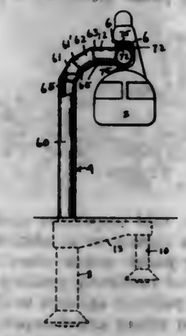
3,090,325
CONTINUOUS FLOW DISPLACEMENT PUMP
Clarence J. Ross, Los Altos, Calif., assignor to Lockheed Aircraft Corporation, Burbank, Calif.
Filed Oct. 20, 1958, Ser. No. 768,195
5 Claims. (Cl. 103—238)



1. A fluid-acuated pumping system comprising a supply reservoir, a pair of evacuable subchambers each connected directly to said reservoir through a one-way check valve, a Y-pipe discharge conduit having two of its arms connected, respectively, into each of said sub-chambers through one-way check valves, a self-contained high pressure fluid energizing tank connected to said reservoir and to each of said sub-chambers, control means connected to said reservoir, said sub-chambers and said energizing tank for controlling the sequence of operation of each, and a pressure lowering regulator valve connected to said energizing tank on the input side and said reservoir and said control means on the output side thereof, said control means comprising a housing having a chamber therein, access ports providing entry into said chamber which are connected to said energizing tank, said reservoir and said sub-chambers, a valve member longitudinally, slidably journaled in said chamber, said valve member being provided with two enlarged access port blocking enlargements thereon adapted to selectively open and close said ports, whereby, as said valve member is longitudinally reciprocated, the ports connecting one of said sub-chambers with said reservoir are opened for passage of fluid as the ports connecting said energizing tank and said other evacuable sub-chamber are opened to the passage of fluid on an alternating basis, pressure buffers coaxially mounted upon said valve shaft for equalizing the pressure in said chamber as said valve is reciprocated, and electromagnetic control means actuating and controlling said valve shaft.

3,090,326
ELEVATED TRACK AND SUPPORT STRUCTURE THEREFOR
Murel G. Goodell, Weldon F. Appelt, and Felix A. Davis, Houston, Tex., assignors, by mesne assignments, to Alwac International, Bahamas, British West Indies, a corporation of Panama
Filed Feb. 23, 1956, Ser. No. 567,101
2 Claims. (Cl. 104—124)

1. A construction for supporting an elevated rail to receive a coach for movement therealong comprising, a hollow tubular tower, a foundation therefor, said foundation including a main footing axially aligned with said tower, an arm extending from said tower at the upper end thereof, an auxiliary footing spaced in front of said main footing and in substantially the same vertical plane with said arm, a beam extending between said footings, a tower tube at the upper end of said main footing to which said tower is connected, reinforcing in said footings and



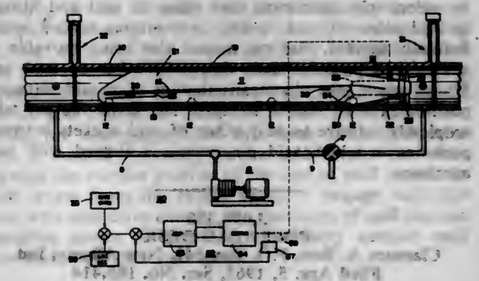
beam and connected to said tube to join said footings and beam into a unitary foundation, a rail girder secured to the outer end of said arm, a track on the upper surface of said girder for moving the coach therealong, and projecting fin surfaces on opposite sides of said girder for guiding the coach on said girder.

3,090,327
HYDRO-AIR VEHICLE
Walter A. Crowley, Royal Oak, Mich., assignor, by mesne assignments, to Carwill Enterprises, Incorporated, Daytona Beach, Fla., a corporation of Florida
Original application Sept. 29, 1958, Ser. No. 763,919. Divided and this application Oct. 3, 1961, Ser. No. 149,800
14 Claims. (Cl. 104—134)



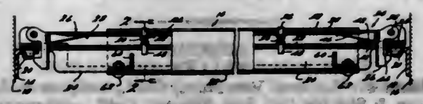
1. A railway vehicle adapted to raise itself by gas under pressure from a track having opposed side faces and to hold to the course of the track on a bearing formed by the gas between the vehicle and the opposed side faces of the track, said vehicle including hollow downwardly open gas enclosure means so corresponding to the track as to extend over the track and along the opposed side faces of the track to enclose plenum space in the hollow thereof between said enclosure means and the opposed side faces of the track, said plenum space when said gas enclosure means is raised from the track being over the track in communication with the opposed faces of the track while said enclosure means forms a lift gap with the track for gas to escape from said plenum space to the atmosphere, and means for vertically lifting and horizontally propelling the vehicle, the latter said means including pressurizing means on the vehicle communicating with said plenum space for maintaining gas under pressure in said plenum space to lift said vehicle upward only in the region of ground effect of the lift gas upon the track into a horizontally idle hovering position wherein substantially all vertical thrust of the vehicle exerted upon the track by the vehicle is in the downward direction and for the vehicle to stabilize itself laterally of the track by the effect of the lift gas upon the opposed faces of the track with the vehicle forming a lift gap with the track, and said means for verically lifting and horizontally propelling the vehicle further including horizontal propulsion means on the vehicle for the vehicle to horizontally propel itself along the track while said gas pressurizing means maintains gas under pressure in said plenum space and ground effect lift of the vehicle relative to the track for the vehicle to follow the track in gap forming relation to the track.

3,090,328
TRANSPORTATION SYSTEMS
Lloyd E. Berggren, Minneapolis, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Sept. 15, 1961, Ser. No. 138,402
12 Claims. (Cl. 104—138)



1. A device of the character described comprising a tube through which cars or vehicles are adapted to move; a car or vehicle within said tube having propulsion means, said car exterior conforming adjacent its front end with respect to its direction of propulsion and for a considerable length toward the rear to the inside of the tube and having a smaller diameter than the tube to provide for passage of air between the car and the tube, said car having a portion thereof adjacent the rear end and over a substantial portion such as a semicircular portion of the bottom enlarged transversely of the car to substantially prevent relative passage of air between this portion of the vehicle and the tube wall and thus substantially prevent relative motion of air relative to the vehicle, whereby at high speed of propulsion and relative motion of air and the vehicle over the upper portion of the vehicle, the vehicle or car is supported on air within the tube by the Bernoulli effect caused by the decrease in static pressure of the air at the top of the car and the increase in static pressure on the bottom of the car.

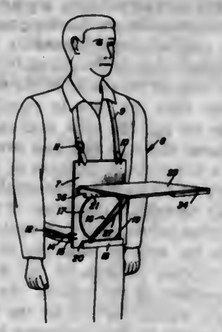
3,090,329
CARGO BRACING EQUIPMENT
Herbert E. Rolfe, Jr., Garden City, Mich., assignor to Evans Products Company, Plymouth, Mich., a corporation of Delaware
Filed May 25, 1959, Ser. No. 815,423
2 Claims. (Cl. 105—369)



1. A crossbar for use in supporting and bracing freight in freight receiving chambers having substantially differently spaced supports and adapted in each of said chambers to accommodate itself to minor variations in the spacing between the supports therein, said crossbar

being adapted to extend between and be connected to said supports and comprising an elongated bar body having a socket at each end thereof, one of said sockets having a longitudinally extending slot at one side thereof communicating with the interior thereof and the other of said sockets having a pair of longitudinally spaced apertures at one side thereof communicating with the interior thereof, a pair of identical end fittings each having a shank telescopically received in one of said sockets, pin means carried by said shank of each end fitting and movable laterally of said shank to and from an extended operative position in which said pin means of the one of said end fittings which has its shank received in said one of said sockets projects into said slot and is adapted to engage said one of said sockets at the opposite ends of said slot to limit telescopic movement of said one of said end fittings relative to said one of said sockets and wherein said pin means of the other of said end fittings, the shank of which is received in said other of said sockets extends into one of said longitudinally spaced apertures for selectively connecting said other of said end fittings to said other of said sockets in positions spaced longitudinally thereof, said pin means also being movable to a retracted position such that said other of said end fittings when said pin means thereof is in said retracted position may be moved to move the shank thereof telescopically relative to said other of said sockets between positions in which said pin means is aligned with said apertures.

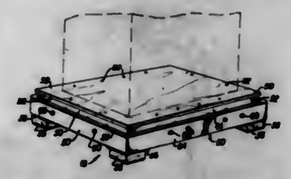
3,090,330
PORTABLE DESK
Clarence A. Best, P.O. Box 341, New Albany, Ind.
Filed Apr. 5, 1962, Ser. No. 185,414
3 Claims. (Cl. 108—43)



1. A portable desk comprising a substantially vertical body plate, means for securing said plate on the body of a user, a vertical disk rotatably mounted on said plate in parallelism therewith, a writing panel hingedly mounted on the disk for swinging movement to a substantially horizontal operative position, means for supporting said panel in said operative position, and means for limiting rotation of the disk and the panel thereon in opposite directions, the last-named means including cleats mounted on the plate at right angles to each other with one end in the path of the panel for engagement thereby.

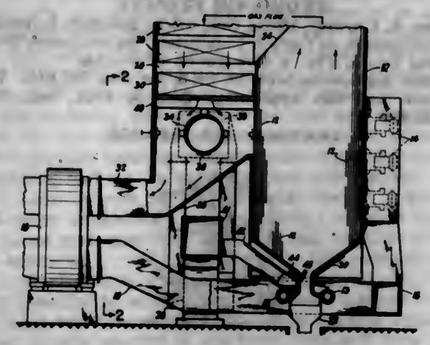
3,090,331
PALLET
William F. McCann, Van Nuys, Calif., assignor to Lyon Van & Storage Co., Los Angeles, Calif., a corporation of California
Filed Jan. 5, 1962, Ser. No. 164,462
6 Claims. (Cl. 108—51)

1. A load receiving pallet comprising a base frame of generally rectangular configuration adapted to be seated upon a surface and including upright side elements, load supporting pallet means primarily disposed within the perimeter of said side elements of said frame, and resilient suspension elements interconnecting each of said side elements with said supporting pallet means, each side element being connected to an opposed adjacent portion of said load supporting pallet means by a plurality of said



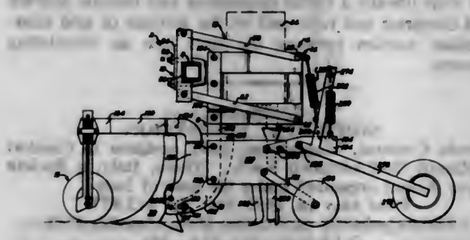
suspension elements, said suspension elements possessing rigidity sufficient to sustain at a relatively mean elevation the supporting pallet means when loaded and the pallet is quiescent but resiliently yielding from the mean elevation when the pallet is agitated to floatingly sustain the supporting pallet means and dampen communication of shock from the frame to the supporting pallet means.

3,090,332
GAS RECIRCULATION DUCT
Henry E. Burbach, Avon, and Otto T. Hipp, West Hartford, Conn., assignors to Combustion Engineering, Inc., Windsor, Conn., a corporation of Delaware
Filed Dec. 29, 1960, Ser. No. 79,356
2 Claims. (Cl. 110—49)



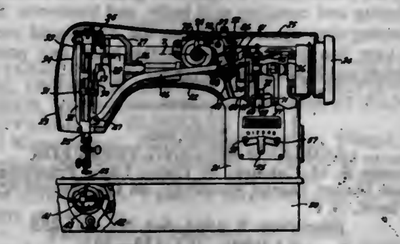
1. A steam generating unit comprising a furnace, fuel and air inlets for said furnace, an outlet leading from the upper portion of said furnace through which the hot combustion gases pass, vertical wall means forming a gas pass containing heat exchange means, said gas pass being connected to said furnace outlet such that the gases pass downwardly therethrough, a duct in communication at one end with the gas pass downstream of said heat exchange means, and in communication at its other end with said furnace, a fan in said duct, a portion of said duct contained within said gas pass, said portion of said duct extending across the center portion of the gas pass, a plurality of openings in said duct being evenly spaced across the width of the gas pass through which gases are allowed to flow from the gas pass into said duct, said openings being positioned on the underside of said duct, such that the gases flowing in the gas pass must make a 180° turn to enter said openings, said openings progressively decreasing in size, the smallest opening being located the closest to the fan, so there is no imbalance of flow of gases through the portion of the gas pass containing said heat exchange means due to the suction effect of said fan.

3,090,333
GROUND-WORKING APPARATUS
Theophil A. Caha, Rte. 1, Wahoo, Nebr.
Filed Dec. 20, 1960, Ser. No. 77,070
17 Claims. (Cl. 111—63)



1. In a self-adjusting ground-working apparatus adapted to be attached to a support member, the combination comprising a frame means, a thrust bar means fixed to and extending below said frame means, arm means, means for coupling said arm means to the member for vertical pivotal movement with respect thereto; means for pivotally coupling said arm means to said frame means for vertical pivotal movement with respect thereto; said thrust bar means being disposed between the member and the pivotal connection of said arm means with said frame means whereby said frame means and said thrust bar means are reciprocal with respect to the member; a ground-engaging wheel; and support means pivotally coupled to said thrust bar means and supporting said ground-engaging wheel forward of the thrust bar whereby said support means pivots about said thrust bar means, and moves vertically with said frame means in response to movement of said ground-engaging wheel over surface irregularities, said support means having means adapted to support a ground-cutting tool for movement therewith in response to movement of said ground-engaging wheel and means cooperating between said frame and said support means for urging said support means to pivot about said thrust bar means in a direction to maintain said ground engaging wheel in engagement with a surface being traversed.

3,090,334
SEWING MACHINE
Tadao Hayashi and Mumeo Ando, Nagoya, Japan, assignors to Nikon Mishin Seizo Kabushiki Kaisha, Nagoya, Japan, a corporation of Japan
Filed Nov. 12, 1959, Ser. No. 852,244
10 Claims. (Cl. 112—158)



1. A buttonhole stitching mechanism for zigzag sewing machines of the type provided with an amplitude adjusting device for controlling lateral motion of a needle bar, a needle base position adjusting device for changing the range of motion of said needle bar and a feed adjusting device for reversing feed direction and for adjusting feed amount, comprising in combination a cam shaft rotatably supported in the machine frame, a drive cam for driving said cam shaft operatively connected with the main shaft of the machine, a first lever oscillatably supported on said cam shaft, a first spring biasing one end of said first lever against said drive cam, means for converting the motion imparted to said first lever by rotation of said drive cam into intermittent rotary motion of said cam shaft, a feed reversing cam for said machine, a needle based position changing cam for said machine, said feed reversing and needle base position cams being secured to said cam shaft, a second lever pivotally supported on said frame, a second spring biasing one end of said second lever against said needle base position changing cam, means for connecting the remaining end of said second lever to said needle base position adjusting device, whereby said adjusting device is actuated according to the outline of said needle base position changing cam and the range of motion of needle bar is automatically changed, a third lever pivotally supported on said frame, a third spring biasing one end of said third lever against said feed reversing cam, means connecting the other end of said third lever to said feed adjusting device, whereby said feed adjusting device is actuated according to the outline of said feed reversing cam and feed direction is automatically reversed, one of said feed reversing and needle base position cams having a recessed portion, for receiving the contact portion of one of said second or third levers associated therewith, means for disengaging said first lever from said drive cam, a manual operating device and means for withdrawing the contact portion of the one of said second or third levers from the recess so as to engage said first lever with said drive cam by the operation of said manual operating device in order to operatively connect said cam shaft with said main shaft.

3,090,335
ROTARY HOOK FOR SEWING MACHINES
Luigi Bono, Pavia, Italy, assignor to Necchi Societa per Azioni, Pavia, Italy
Filed July 11, 1960, Ser. No. 41,839
Claims priority, application Italy July 20, 1959
7 Claims. (Cl. 112—231)

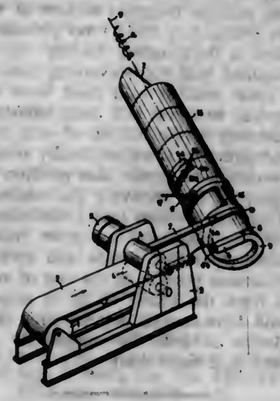


1. In a rotary hook assembly of the type including a shaft and a rotary hook body secured to the shaft, a bobbin case seated in said rotary hook body, a bobbin case holder ring seated on said rotary hook body and retaining said bobbin case therein, said bobbin case holder ring having circumferentially spaced seats, and a fastener connected to said rotary hook body having fingers extending up alongside said bobbin case holder ring and terminating in ends releasably engaging said seats, said bobbin case holder ring having finger end receiving grooves disposed in circumferentially spaced relation to said seats, whereby said bobbin case holder ring may be released by rotating said fastener, said fastener having a base portion resiliently clamped between said rotary hook body and said shaft.

3,090,336
SPIRAL PIPE WELDING MACHINE
Bernhard Grüter, 100 Gutstrasse, Zurich, Switzerland
Filed Apr. 28, 1959, Ser. No. 809,542
Claims priority, application Switzerland May 2, 1958
3 Claims. (Cl. 113—35)

1. In a machine for making a tube by spirally winding a band having parallel edges, in combination, transporting means for transporting the band in one direction;

two pairs of stationary inner and outer guide rail means, said inner and outer guide rail means being spaced from each other a distance corresponding to the thickness of the band, said pairs of inner and outer guide rail means being transversely spaced across the width of the band so as to be located inwardly spaced from the longitudinal edges of the band, respectively, while defining a free space between themselves, said two pairs of inner and outer guide rail means having straight inlet portions extending in said direction to the region of said transporting means for receiving and slidably guiding a transported band, and said inner and outer guide rail means having helical forming portions respectively following said straight inlet portions and receiving the transported band



from said inlet portions for slidably guiding and curving the transported band, said helical forming portions having a helix axis inclined to said one direction, said helical forming portions of said outer guide rail means extending at most through an angle of 270°, and said helical forming portions of said inner guide rail means extending at most through an angle of 90°; at least one abutment roller means located laterally of the guide rail means for supporting at least one edge of the transported band against forces acting in the direction of said helix axis whereby the transported band is spirally wound to form an empty tube; and welding means located spaced from said inlet portions in the direction of said helix axis for welding adjacent band edges of the newly formed tube.

3,090,337
METHOD OF MAKING WHEEL COVER MEMBERS AND THE LIKE
George Albert Lyon, Detroit, Mich., assignor to Lyon Incorporated, Detroit, Mich., a corporation of Delaware
Filed July 11, 1960, Ser. No. 42,464
9 Claims. (Cl. 113—116)



3. In a method of making a circular sheet metal member such as a wheel cover, comprising drawing a sheet metal blank and thereby providing therein radially inner and radially outer annular substantially stiff portions and an intermediate radially curved annular uniform portion, transversely slotting said intermediate portion along lines angled uniformly circumferentially, and then relatively torsionally displacing said annular stiff portions to work the slots toward a radial disposition and thereby shorten and compress and twist and set the sections of said intermediate portion between the slots into air circulating louvers.

3,090,338
SHIP'S HULL FORMATION
Nicolo Costanzi, Monfalcone, Italy, assignor to Cantieri Riuniti Dell'Adriatico S.p.A., Trieste, Italy, a Societa per Azioni organized under the laws of Italy
Filed May 18, 1959, Ser. No. 813,977
Claims priority, application Italy May 20, 1958
3 Claims. (Cl. 114—56)



1. A ship's hull shaped so as to include, at the bow and symmetrically in each side wall, a recess the lower part of which begins at the stem substantially at the mean load water line and which meets the side wall at an angle along a line extending aft at an inclination below said water line, said recess being of such a height and length as to be at least equal to that of the primary wave caused by forward motion of the hull at maximum speed of the ship.

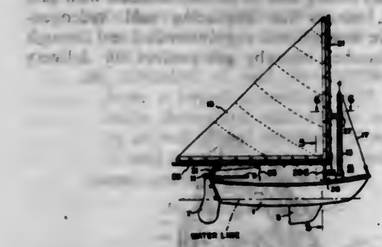
3,090,339
MOLDED PLASTIC PONTOONS
Thomas E. Carr, P.O. Box 402, Sterling City, Tex.
Filed Apr. 6, 1962, Ser. No. 185,579
1 Claim. (Cl. 114—66.5)



A pontoon comprising an elongated molded body of buoyant plastic foam, a rigid fiber glass cover conformably enclosing and covering said body, and transverse channel mounting eyes upstanding from the cover, said eyes having base flanges bearing upon the body and positioned beneath and bonded to the cover.

3,090,340
SAIL AND RIGGING THEREFOR
Brunson S. McCutchen, 89 Olden Lane, Princeton, N.J., and Halsey Daniel Shumway, 46 Greenwood St., Lake Placid, N.Y.
Filed Nov. 9, 1961, Ser. No. 151,255
4 Claims. (Cl. 114—102)

1. A device for a sailing vehicle including a sail, a boom for supporting the foot of said sail, a spar for supporting the luff of said sail, a mast for supporting said spar on said vehicle, a flexible joint connected to said mast and to said spar at a single point intermediate the ends of said spar, pressure yielding means for connecting said boom to said vehicle between a point adjacent the stern of said vehicle and a point aft of the center of said boom, and a second pressure yielding means for connecting the tack end of said boom to said vehicle whereby wind pressure on said sail tends to rotate the sail



about an axial line between said flexible joint and the first mentioned pressure yielding means and about the axis of said spar.

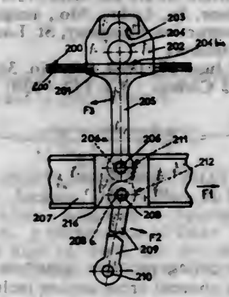
3,090,341
MOUNTING HATCH FOR SUBMARINE VESSELS
Karl Schröer, Trappenkamp via Neumunster, and Willy Bratumyl, Holzkoppel, Kiel, Germany, assignors to Kieler Howaldtswerke Aktiengesellschaft, Kiel-Dietrichsdorf, Germany, a firm
Filed Feb. 27, 1962, Ser. No. 176,077
Claims priority, application Germany Mar. 3, 1961
4 Claims. (Cl. 114—201)



1. A mounting hatch for submarine vessels, comprising a frame having an opening and adapted to be welded into the substantially tubular hull of a vessel while the latter is being constructed, a cover inserted in the opening of the frame, the frame providing a seat for the cover and the seat of the frame and the cover being worked in the workshop to fit each other at their engaging sealing surfaces, inwardly directed abutting flanges on the frame and cover with the flanges of the frame being longer than the flanges on the cover, and a connection provided between said frame and cover and adjustable from the interior of the vessel, said adjustable connection including screws carried by the inner edges of the cover flanges and projecting into the interior of the vessel, angle plates for each pair of flanges and each angle plate having one leg engaged with the adjacent screw and underlying the longer flange on the frame and the other leg engaged with the adjacent side of the cover flange.

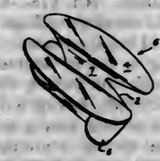
3,090,342
MULTI-SECTION LIFT-LOCK DEVICES FOR CLOSING OPEN-TOP SPACES SUCH AS SHIPHOLDS, SHEDS, VEHICLES, ETC., BY MEANS OF PANELS MOVABLE ON RUNWAYS
Henri Kummerman, Paris, France, and Jan Vlieger, Amsterdam, Netherlands, assignors, by direct and mesne assignments, to International MacGregor Organization (I.M.G.O.), Monte Carlo, a corporation of the principality of Monaco
Filed Jan. 30, 1961, Ser. No. 85,632
Claims priority, application France Mar. 2, 1960
20 Claims. (Cl. 114—202)

1. A removable fluid-tight closure arrangement for a substantially horizontal rectangular opening in travelling and stationary enclosed spaces such as a hatchway in a ship deck, a roof aperture in open top vehicles and buildings, comprising at least one movable cover panel made of a plurality of adjoining separate panel sections forming a row movable in a same direction and laterally fitted with pairs of displacement means, a pair of continuous substantially horizontal runways provided along to opposite edges of said opening for supporting and guiding said panel sections which bear thereupon with said displacement means whereby they are displaceable thereover to cover and uncover said opening, a releasable panel closing and dogging device associated with each of said runways, adapted on the one hand to lower said panel sections in their covering position to seat them onto the edges of said opening in biased sealing engagement therewith and to automatically hold them against motion by pulling them downwards thereby effecting a fluid-tight joint and on the other hand to raise said panel sections away from said edges to break said sealing arrangement preparatory to removing said panel sections, said device comprising a plurality of orifices formed in said runway at the location of said displacement means respectively in the covering position of said panel sections to allow said displacement means to descend through said orifices, a plurality of bearing means associated with



said orifices respectively, engageable by said displacement means and movable substantially upwards and downwards by tilting through said orifices while being guided by the edges thereof, and consisting each one of a substantially straight upstanding lever formed at its upper end on the one hand with a platform constituting a downward retractable portion of said runway and filling out in its lifted horizontal position one of said orifices in flush relationship with said runway to support on a level therewith a corresponding one of said displacement means, and on the other hand with an integral locking member movable through said orifice into locking and unlocking positions, laterally projecting catch means provided on said panel sections and engaged by said locking members in the lowered position of said panel sections, mechanical actuating means operatively connected to said levers for carrying and moving same, said levers being pivoted thereto by their lower ends for swinging in a vertical plane parallel to said runway, and operating means to drive and to control said actuating means.

3,090,343
CLEAT
Nelson Rousheim, Cincinnati, Ohio, assignor to Peters & Russell, Inc., Springfield, Ohio, a corporation of Ohio
Filed Jan. 6, 1960, Ser. No. 860
1 Claim. (Cl. 114—218)



A cleat formed from a metal stamping which is initially generally rectangular in shape and formed with a wedge

shaped notch in each side edge thereof, the location of said notches relative to the ends of the stamping on the respective side edges being the reverse of one another, said stamping being bent along longitudinally spaced-apart transverse lines in adjacent relation to said notches, and being further reversely bent at its ends to define base and head plate portions and laterally spaced apart interconnecting waist portions, said notches appearing in different waist portions at apposite ends thereof, an arcuate cut being formed in each side edge of the metal stamping located approximately in transverse alignment with the wedge shaped notch on the other side edge of the stamping, said arcuate cut and the wedge shaped notch on each side of the stamping defining in the formed condition of the cleat relatively offset ears at the ends of the base portion, said ears extending in respectively different directions.

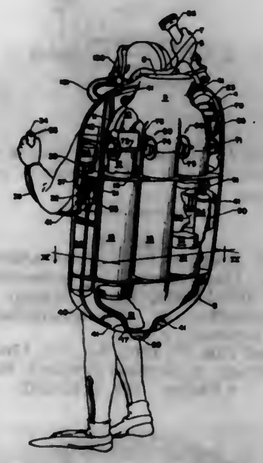
3,090,344
MOORING RING MOUNTING
Joseph E. Vollmar, Jr., Ladue, Mo., assignor to Vollmar Brothers Construction Company, St. Louis, Mo., a corporation of Missouri
Filed June 17, 1960, Ser. No. 36,833
2 Claims. (Cl. 114—230)



1. A marine piling mooring structure comprising a base member of channel cross section including a narrow elongated web and spaced apart marginal flanges extending from one face of the web, said flanges being flat and terminating in generally parallel free edges spaced from said web, said free edges adapted to fit flush against the surface of a marine piling whereby the edges may be welded directly to the surface of the piling, an open end U-shaped securing member projecting from the opposite face of said web, said U-shaped member including spaced legs connected at one pair of adjacent ends by a bight portion, another pair of adjacent ends of said legs inserted into and projecting through openings in said web and welded directly to opposite faces of said web, said flanges being relatively close together and spaced apart less than the width of said U-shaped member, a closed ring passing through said U-shaped securing member and loosely suspended therefrom, said closed ring having an opening therethrough which has a diameter at least twice the cross sectional diameter of each of said legs, the length of the base member parallel to its flanges substantially exceeding the combined distance between said legs and outside dimension of said ring, and the legs defining a plane generally parallel to said flanges.

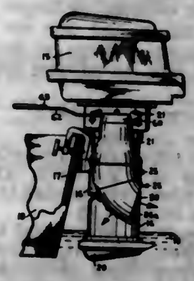
3,090,345
HYDRODYNAMIC PROPULSION SYSTEM
John K. Hulbert, Grand Island, N.Y., assignor to Bell Aerospace Corporation
Filed Feb. 19, 1962, Ser. No. 173,906
8 Claims. (Cl. 115—6.1)

1. A self-contained monopropellant energized propulsion unit for personnel engaged in underwater maneuvers, said unit comprising a casing adapted to be strapped against a person's back and having therein a propulsion engine comprising a cylinder having a discharge end opening at the lower end of said casing and an inlet port at the upper end of said casing, a multiposition valve controlling said inlet port, an ambient water inlet conduit leading from the upper end of said casing to said control valve, a gas supply conduit in communication with said control valve, a catalyst chamber disposed within said gas supply conduit, a hydrogenperoxide liquid supply stored within said casing and in communication with said supply conduit, means for displacing said hydrogenperoxide to move through said supply conduit and through said catalyst chamber whereby gas evolves for delivery



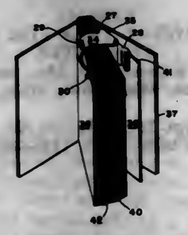
to said control valve, and means for alternatively setting said control valve at water inlet and gas inlet positions whereby said cylinder is alternatively filled with ambient water and then with evolved gas displacing the water from said cylinder and thereby producing intermittent propulsion thrusts of water against the ambient water at said discharge opening.

3,090,346
BOAT PROPELLING WATER JET NOZZLE
Kermit H. Burgin, Whitestown, Ind., assignor of fifty percent to Frederick B. Cline, Indianapolis, Ind.
Filed May 31, 1962, Ser. No. 198,945
6 Claims. (Cl. 115—12)



1. In a propelling mechanism, for mounting on a boat, the combination with a motor and a motor driven pump, of
a pump water discharge conduit terminating by nozzle mounting end;
a water discharge elbow nozzle swivelly mounted on said conduit end to have the nozzle upon rotation selectively discharge from an end in a range of directions from rearwardly and downwardly from the horizontal to forwardly and downwardly;
means mounting said mechanism on said boat to have said nozzle discharge at all times above the level of the water in which said boat floats;
an exhaust line leading from said motor through said conduit to a central zone of said conduit discharge end;
an extension of said line continuing arcuately from a swivel connection with said line centrally throughout said nozzle and terminating by an end spaced outwardly from and centrally of said nozzle discharge end; and
means rotating said nozzle.

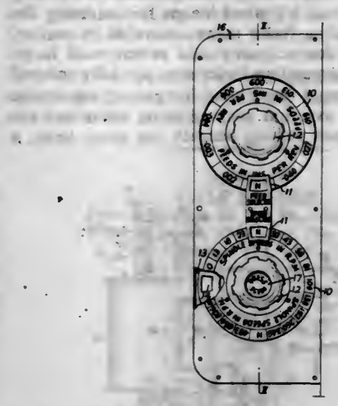
3,090,347
BOOKMARK
John S. Harnett, Jr., 1415 Torrey Place, Hyattsville, Md.
Filed Oct. 30, 1961, Ser. No. 148,419
8 Claims. (Cl. 116—119)



1. A bookmark consisting of a single continuous piece of flexible sheet material, the piece of flexible sheet material including a first portion, the first portion having at least one second portion of sheet material extending therefrom, the second portion being folded upon the first portion thereby forming means for attaching the bookmark to the book, the first portion also having at least one elongated third portion of the sheet material extending therefrom, the third portion being folded toward the first portion and forming a page marking member, the first, second and third portions being arranged whereby the bookmark may be attached to a page of a book by means including the first and second portions with the third portion extending onto the page of the book to be marked and at least one of the first and second portions being corrugated in a direction generally longitudinal to the third portion to thereby increase the rigidity of at least one of said first and second portions.

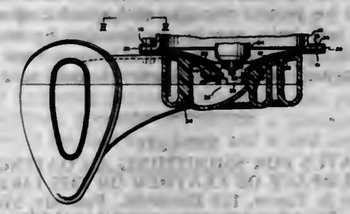
3,090,348
SPEED AND FEED INDICATOR FOR MACHINE TOOLS
Alfred Johnson, Halifax, England, assignor to William Asquith Limited, Halifax, England, a company of Great Britain
Filed Mar. 25, 1960, Ser. No. 17,583
7 Claims. (Cl. 116—124)

1. In a change gear control mechanism for use with a machine tool having a preselector unit for determining the gear ratio, a control unit for determining the time of change in the gear ratio and a dial being rotatably mounted and having markings, a fixed indicating member adjacent to said dial, means for manually rotating said dial relative to said fixed indicating member bringing any one of said markings on said dial into alignment with said fixed indicating member, means connecting said dial to said preselector unit so that movement of said dial changes the setting of said preselector unit, rotatably mounted indicating means, locking means locking said indicating means to said dial for movement therewith, means activated with said control unit disconnecting said locking means when said control unit is operated, and means rotating said rotatably mounted indicating means to a given



position in relation to said fixed indicating member when said locking means is disconnected.

3,090,349
HORN CONSTRUCTION
Weichien Chow, Jackson, and William H. Fisher, Vandercock Lake, Mich., assignors to Sparton Corporation, Jackson, Mich., a corporation of Ohio
Filed Aug. 11, 1960, Ser. No. 49,033
3 Claims. (Cl. 116—142)

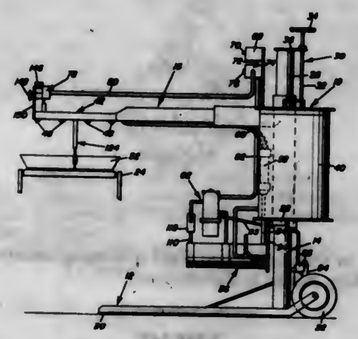


1. In a horn comprising, in combination, a motor having rigid front and back interconnected portions, a diaphragm within said housing defining a resonator chamber with said front portion, a scroll projector of lightweight nonmetallic material, an orifice defined in said front portion, a plurality of radially extending projections mounted on said front portion concentrically spaced about said orifice, bayonet grooves defined on said scroll cooperating with said projections mounting said projector on said front portion in communication with said chamber and a resilient member interposed and compressed between said front portion and said projector.

3,090,350
OILER FOR DOUGH PORTIONS
Clayton T. Walters, Corpus Christi, Tex., assignor to Clayton Specialties, Inc., Corpus Christi, Tex., a corporation
Filed May 27, 1960, Ser. No. 32,337
5 Claims. (Cl. 118—2)

4. In an oiling machine for dough in a commercial bakery line, a frame, a supply of oil, a pumping chamber, a means communicating said pumping chamber with said supply of oil, a spray head including a plurality of spray nozzles supported from said frame, means communicating said pumping chamber with said spray nozzles, movable chamber volume varying means operable for alternately increasing and decreasing the effective volume of said

chamber, motor means for actuating said chamber volume varying means including control means including an electrical circuit having a switch and conductor extending from said switch to said control means for actuating the latter, means including feeler means movable by contact with a dough pan for actuating said switch, said feeler means including a depending feeler arm pivotally secured at its upper end to said spray head for pivotal movement about a horizontal axis and adapted at its lower end for engagement by a pan passing beneath the spray head, a



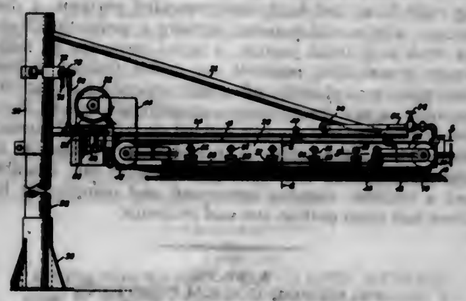
lever arm operatively connected to said feeler arm for swinging movement in response to swinging movement of the latter, lost motion cam means carried by the free end of said lever arm, a switch arm carried by said switch and having a depending actuator for engagement by said lost motion cam means, said lost motion cam means including a toe portion engaging said actuator upon movement of said feeler arm in one direction by its engagement with a pan passing beneath said spray head to close said electrical circuit and thereby actuate said control means.

3,090,351

APPARATUS FOR SMOOTHING A COATING ON A SURFACE OF LEATHER OR THE LIKE

John B. Coyne, 119 Foster St., Peabody, Mass.

Filed June 11, 1958, Ser. No. 741,338
4 Claims. (Cl. 118—223)



1. An apparatus for smoothing a coating on a surface of leather or the like while said leather is traveling in a single direction at a constant speed on a generally horizontal conveyor, said apparatus comprising; at least one pair of upright standards, one of said pair of standards disposed on each side of said conveyor, an endless belt assembly including an endless plush belt carried by each of said standards, means for mounting the endless belt assembly on said standards with said endless belts extending generally at right angles to the vertical axis of said standards and above said moving conveyor and said leather, means on said standards to adjust the direction of travel of said belts with respect to the direction of travel of said conveyor such that the longitudinal axis of said belts is positioned at different angles with respect to the direction of travel of said conveyor, and both of said belts extending across the width of the conveyor, variable speed means for rotating the belts on said belt assemblies at a predetermined speed in opposite directions, the component of relative movement of said belts and said conveyor being at right angles to the direction of movement of said leather and extending from the center of said leather toward the side edges thereof, weighted wedging devices positioned within each of said belts, means for applying said weighted wedging devices to said belts to cause a wedging action between the work and the bottom surface of the belt in the direction of travel of the work, and a guard device positioned beside said belt and operable to prevent coating material from splattering inside said endless belt.

3,090,352

MOLTEN METAL TRAP FOR COATING APPARATUS

Earle L. Knapp, Kansas City, Mo., assignor to Armco Steel Corporation, Middletown, Ohio, a corporation of Ohio

Filed Sept. 26, 1960, Ser. No. 58,272
7 Claims. (Cl. 118—405)



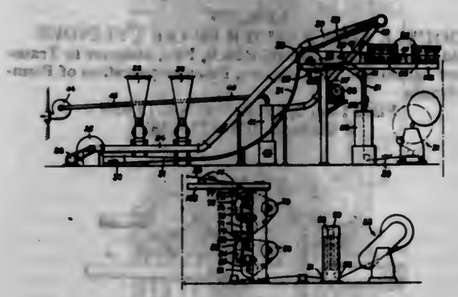
1. In a coating apparatus wherein a clean, hot metallic strand is coated with a different metal by the hot dip process, and wherein said strand is caused to pass from a pretreatment apparatus vertically upward through an aperture in the bottom of the coating pot containing molten coating metal; a trap for preventing molten coating metal which may seep through said aperture from getting into said pretreatment apparatus, comprising a vertical tubular member secured to the bottom of said pot in alignment with said aperture and connected to said pretreatment apparatus, said tubular member having an internal diameter substantially greater than the strand being coated, said tubular member being at a temperature below that of said coating metal, and a tubular insert in said tubular member below the top thereof, said insert having an inside diameter from about .035 inch to about .040 inch greater than said strand, said tubular insert being also at a temperature below that of said coating metal whereby any molten coating metal which falls through said aperture in the bottom of the coating pot will freeze against said insert.

3,090,353

ELECTROSTATIC PRODUCTION OF GUMMED WEB

Frederick W. Holt, Jr., Troy, Ohio, Clermont H. Lorenz, Baldwinsville, N.Y., and Robert B. Reif, Columbus, Ohio, assignors, by direct and mesne assignments, to The Brown-Bridge Mills, Inc., Troy, Ohio, a corporation of Ohio

Filed June 10, 1960, Ser. No. 35,219
19 Claims. (Cl. 118—621)



1. Coating apparatus for providing an advancing web with a coating consisting essentially of a finely divided substantially nonthermoplastic material and a finely divided thermoplastic binder material, comprising a driven backing drum, hood means defining a coating chamber overlying an angular portion of the surface of said drum, means defining entry and exit slots for the web with respect to said chamber, means including an entry duct leading to said entry slot for supplying to said chamber a mixture of said finely divided material, means including a plurality of charging wires extending through said chamber axially of said drum and in radially spaced overlying relation therewith for charging said finely divided materials, means for connecting said wires to a high voltage source, means for grounding said drum, means guiding the web into contact with said drum from a position angularly ahead of said entry slot to a position angularly beyond said exit slot to cause said charged materials to deposit on the web, a heated roll arranged to receive the uncoated side of the web therearound from said chamber to effect fusion of said thermoplastic material in the coating on the web, a chilled roll arranged to receive the uncoated side of the web from said heated roll to effect setting of said fused material, and a pair of rolls forming a pressure nip arranged to receive the web from said chilled roll to effect calendering of said coating.

3,090,354

BIRD FEEDERS

Willie M. Merritt and Frank F. Forth, Warwick, Ga., assignors to Merritt Bird Feeder Company, Warwick, Ga.

Filed July 29, 1960, Ser. No. 46,223
11 Claims. (Cl. 119—52)



1. A ground-type feeder for use in feeding small game birds on ranges, game preserves and the like, comprising an upright feed container having a generally cone-type bottom for distributing feed in the container downwardly and outwardly therein, at least one feed spout adjacent the lower portion of said container, said spout extending outwardly and upwardly and said container having an opening therethrough in communication with that of said spout and being substantially coextensive therewith, the lateral dimension of at least said spout opening being of the order of a half inch, whereby said birds may feed from the spout but animals, particularly of the small animal group, may not pull the feed out through the spout onto the ground.

3,090,355

CALF FEEDER

Jean H. Gaine, 22 9th St., Geneva, Ill.

Filed Sept. 15, 1961, Ser. No. 138,418
10 Claims. (Cl. 119—71)



1. In automatic fluid feeding apparatus, a supply tank, an outlet at the bottom wall of said tank, a conduit in flow communication with said outlet, a time controlled valve adapted to normally close said conduit, a container to receive fluid flowing through said conduit, a vent in said container, a float valve cooperating with said vent to close the container when it is filled to capacity, a teat simulating member in communication with said container and extending outwardly therefrom, and electrical heating elements operable to maintain a predetermined temperature in the fluid in said tank and in said container.

3,090,356

ANIMAL TOILET GARMENT

Samuel Andriani, 2057 Elmwood Ave., Los Angeles, Calif.

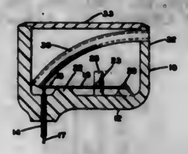
Filed Feb. 13, 1961, Ser. No. 89,070
1 Claim. (Cl. 119—95)



An animal toilet garment comprising a duality of flexible straps adapted to extend substantially horizontally on opposite sides of the hind quarter of an animal, a first annular member interconnecting said straps at one end thereof, said annular member being inclined with respect to said straps such that the top portion thereof inclines outwardly away from said straps, an additional strap interconnecting said duality of straps intermediate the ends thereof and extending upwardly therefrom for fitting over the top hind quarter of an animal, said additional strap being adjustable in length, a second annular member interconnecting said straps at the opposite ends thereof and being adapted to fit around the body of an animal, a trough carried by the lower portion of said second annular member, said trough having an open

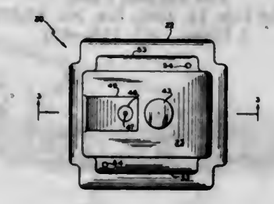
upper face and being inclined downwardly and toward said second end of said duality of straps, a flexible bag removably carried by said first annular member, and a flexible bag removably carried by the lower end of said trough.

3,090,357
RECORDER PEN
Sherman Gauley, Irondequoit, N.Y., assignor to Bausch & Lomb Incorporated, Rochester, N.Y., a corporation of New York
Filed May 29, 1961, Ser. No. 113,510
3 Claims. (Cl. 120—42.06)



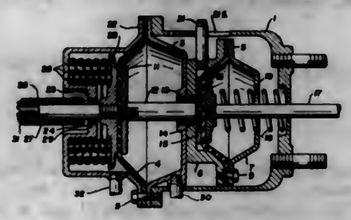
1. A recorder pen comprising means defining a generally rectangular reservoir adapted for holding a supply of ink, a hollow ink feed tube and a hollow vent tube, said feed tube fixed in and extending through a base wall of the reservoir, said vent tube disposed within said reservoir, a first end of said vent tube disposed in a lower forward portion of the reservoir relatively close to an inner portion of said feed tube and an opposite end of said vent tube extending through a side wall of the reservoir, an integral spring needle including a first portion extending through said feed tube and extending therefrom and a second portion disposed within said reservoir and separated from said first portion by a bend of approximately 90°, and said second portion disposed within said reservoir and adapted for biasing said first portion through said feed tube in a direction away from said reservoir.

3,090,358
SHARPENING DEVICE FOR PENCIL LEADS
Robert S. Condon, 112 Cindy Lane, Berlin, Conn.
Filed July 27, 1961, Ser. No. 128,635
8 Claims. (Cl. 120—96)



1. In a sharpening device of the character described: a lower housing adapted to rest upon a drawing board, a motor mounted in said housing with its shaft extending substantially vertically through the top wall thereof, an upper housing positioned on the top wall of said lower housing and forming therewith an enclosed cutter chamber, manually releasable means normally securing said upper to said lower housing, dowel means in said housings for the accurately aligned interengagement of said housings, and a cutter assembly located in said enclosed cutter chamber, said cutter assembly including a blade support secured directly to the upper end of said motor shaft and a plurality of independent cutter blades each secured at one end in fixed relation to said support, each of said cutter blades being formed with a concave cutting edge extending in a generally axial direction relative to said shaft, and said upper housing having an elongated cant-preventing guide passage in the top wall thereof axially aligned with said shaft for receiving and supporting the body of a drafting pencil, said guide passage terminating in a smaller axially aligned pencil-lead centering passage opening into said cutter chamber, whereby said upper housing is removable for cleaning and clearing broken leads from said blades.

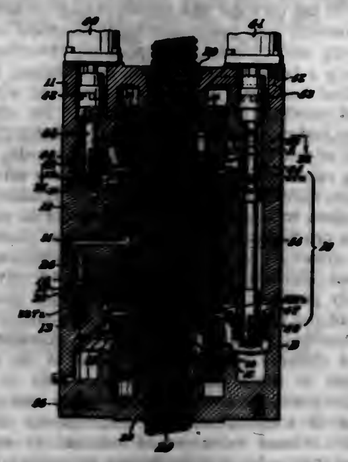
3,090,359
DOUBLE AIR CHAMBER BRAKE CYLINDER
David Hoppenstand, Miami Beach, Fla., assignor to Transport Industries, Inc., Albion, Pa., a corporation of Pennsylvania
Filed Dec. 5, 1960, Ser. No. 73,699
8 Claims. (Cl. 121—38)



1. A break-actuating fluid-operated motor comprising a first housing closed at both ends, a first diaphragm disposed across the first housing intermediate its ends, a second housing closed at one end positioned with its closed end adjacent to an end of the first housing, the first and second housings being movable with respect to each other, a second diaphragm disposed across the second housing intermediate its ends, a first push plate disposed against the first diaphragm, a push rod attached at one end to the first push plate and extending through the adjacent ends of the first and second housings, a second push plate attached to the push rod at its other end and positioned between the closed end of the second housing and the second diaphragm, a third push plate disposed against the other side of the second diaphragm, a brake operating rod attached to the third push plate, means for introducing fluid under pressure into the second housing only so as to flex the second diaphragm and thereby move the brake operating rod, and means for introducing fluid under pressure into the first housing only so as to flex the first diaphragm and thereby move the push rod.

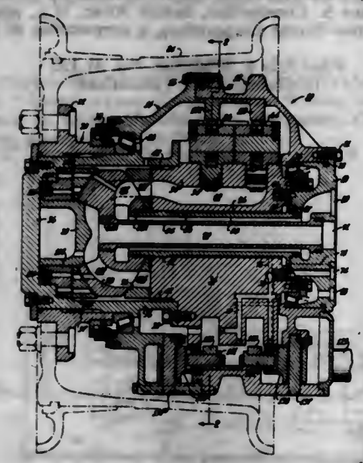
3,090,360
HYDRAULIC ACTUATOR
Richard A. Bennett, Glenside, and Harold O. Kron, Philadelphia, Pa., assignors to King of Prussia Research & Development Corporation, King of Prussia, Pa., a corporation of Pennsylvania
Filed Sept. 8, 1961, Ser. No. 136,810
19 Claims. (Cl. 121—38)

1. A hydraulic actuator for a threaded shaft; said actuator comprising, first and second nuts adapted to be threaded on said shaft at spaced-apart positions; first and second pistons, one associated with each of said nuts; first fluid-pressure means for thrusting said first and second pistons alternately and successively against their respective nuts in a common axial direction with respect to said shaft, thereby to move said shaft axially in said direction; second fluid-pressure means for returning one of said pistons to its start-of-thrust position during at least a portion of the thrust stroke of the other piston; and fluid-motor drive means for driving the nut associated with said returning piston rotationally on said shaft in a direction to move said nut in the same axial direction as that in which said returning nut is being driven, thereby to return said nut to a position adjacent to the returned



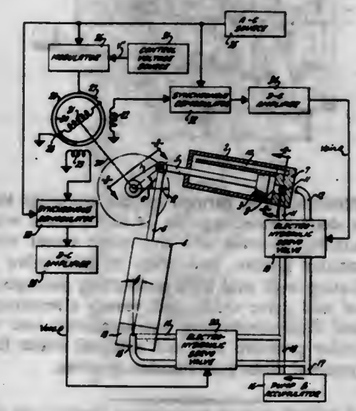
piston at least by the time of the start of the succeeding thrust stroke of said returned piston.

3,090,361
HYDRAULIC MOTOR
Elias Orshansky, Jr., San Francisco, Calif.
Filed Sept. 28, 1961, Ser. No. 141,327
13 Claims. (Cl. 121—61)



1. A fluid-operated motor comprising a stationary housing; a hub mounted for rotation within said housing and extending from one end of the housing; a cylinder block fastened to the hub having a plurality of pairs of cylinders radially therein, each pair of cylinders leading to a manifold common for that pair whereby a plurality of manifolds is provided, each manifold terminating in a port in a rotating valve plate formed by a flat face on said cylinder block; pistons in each of said cylinders, each piston having a cam follower facing outwardly therefrom; a pair of annular cam rings mounted within said housing, the cam followers of one of each pair of pistons running on each of said cam rings; a plurality of lobes on each of said rings, each ring having the same number of lobes; a stationary valve plate in contact with said rotating valve plate, said stationary valve plate having alternate inlet and outlet openings, the number of each of the inlet and outlet openings being equal to the number of lobes on one of the cam rings; means for rotating the positions of said cam rings in opposite directions about a common point, said common point being indexed on the openings of the stationary valve plate; and means for supplying high pressure oil to the inlet openings and removing low pressure oil from the outlet openings.

3,090,362
ELECTRICALLY COMMUTATED FLUID MOTOR
Glen D. Rolls, Redwood City, Calif., assignor to Textron Inc., Belmont, Calif.
Filed June 13, 1961, Ser. No. 116,852
7 Claims. (Cl. 121—63)

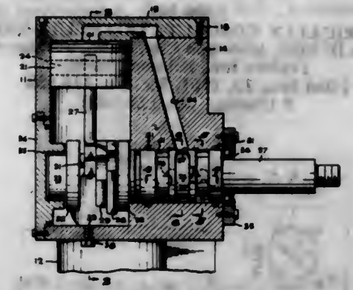


3. An electrically commutated fluid motor comprising a crankshaft, two double-acting hydraulic cylinders each containing a reciprocating piston, said two cylinders being spaced ninety degrees from each other relative to said crankshaft to continuously rotate said crankshaft in one direction in spite of the repeated direction reversal of the motion of said reciprocating pistons, connecting rods connecting said pistons to said crankshaft, rotary fluid joints attached to said cylinders for introducing and extracting hydraulic fluid, each cylinder being pivoted upon said joints for oscillation as the crankshaft rotates, two electrically controlled valves connected in fluid-controlling relation to the rotary joints of the two cylinders, means for supplying to one of said valves an electric signal proportional to the sine of the angular position of said crankshaft, and means for supplying to the other of said valves an electric signal proportional to the cosine of the angular position of said crankshaft so that said reciprocating pistons continuously rotate said crankshaft in the direction determined by said quadrature phase relation.

3,090,363
FLUID MOTOR
Paul M. Stuver, 1025 W. Pico, Santa Monica, Calif.
Filed July 18, 1961, Ser. No. 124,990
6 Claims. (Cl. 121—121)

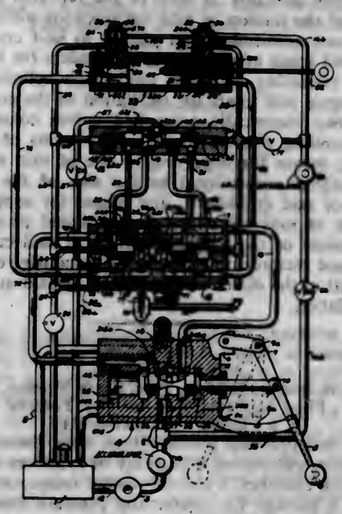
1. A reciprocating piston driven fluid pressure operated motor, comprising a plurality of cylinders each having a work chamber, a piston member reciprocable therein, and a passage for conducting pressure fluid to said work chamber during the work stroke of its piston member and from said work chamber during the exhaust stroke of said piston member, a rotatably mounted drive shaft, motion transmitting means operatively connecting each piston member to said drive shaft, an external source of fluid under pressure, an external outlet for dis-

charged fluid, a cylindrical valve casing surrounding a segment of said drive shaft and forming a fluid-tight connection with the outer surface thereof, ports in said casing near its opposite ends communicating with said external source of fluid under pressure and said external outlet, respectively, annular grooves formed on the drive shaft each registering with one of said ports, grooves formed on the opposite sides of the drive shaft between said annular grooves to provide intake and exhaust ves-



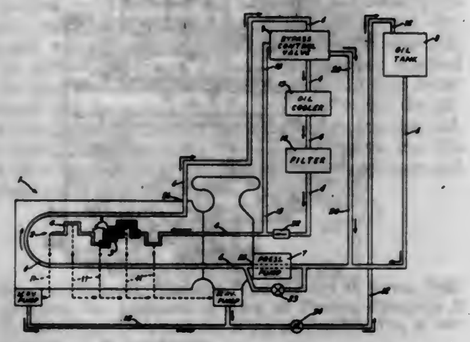
sels, longitudinal slots formed on the opposite sides of said drive shaft connecting one of said vessels with one of said annular grooves and the other vessel with the second annular groove, and ports in said valve casing communicating with said fluid conducting passages, upon rotation of said drive shaft, said vessels alternately connecting said fluid conducting passages with said source of fluid under pressure and said external outlet through said longitudinal slots and annular grooves.

3,090,364
HYDRAULIC ENGINE
Lorin Lefevre, 2905 1st Ave. N., Great Falls, Mont.
Continuation of application Ser. No. 470,155, Nov. 21, 1954. This application Mar. 28, 1960, Ser. No. 47,127
7 Claims. (Cl. 121—158)



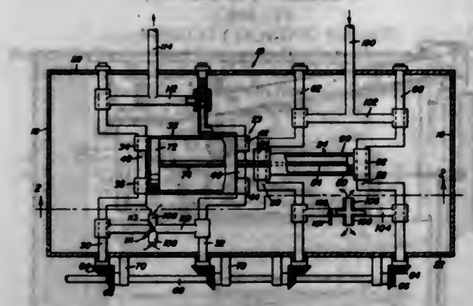
1. A fluid reciprocating engine comprising a power cylinder, a fluid powered piston dividing said cylinder into forward and rearward chambers and adapted to reciprocate longitudinally rearward and forward along a longitudinal path within said cylinder, pressure reversing valve means connected to the forward and rearward chambers of said cylinder and adapted to alternately apply pressure to the forward and rearward ends of said chamber for moving said piston alternately forward and rearward along said cylinder, said pressure reversing means comprising a housing and a spool, said housing having a longitudinal bore, said spool being contained within said bore and movable longitudinally therein for alternately supplying and exhausting fluid to said cylinder chambers, each end of said spool together with said housing defining opposing valve actuating chambers, reversing valve actuation means mounted on said cylinder and actuated by said power piston to alternately supply pressure to said valve actuation chambers at the end of the power piston movement in either its forward or rearward direction to shift said spool whereby said pressure reversing valve means will apply pressure to said forward cylinder chamber at the end of the forward movement of said piston to move said piston rearwardly, and will apply pressure to said rearward cylinder chamber at the end of the rearward movement to move said piston forwardly to thereby enable the piston to reciprocate forwardly and rearwardly along its longitudinal path continuously and automatically, exhaust valve means actuated by said valve actuation means for simultaneously exhausting the valve actuation chamber opposite that being supplied by said valve actuation means, fluid pump means for providing fluid under pressure to said reversing valve means and said valve actuation means, and main control means for interrupting communication between said pump and reversing valve means.

3,090,365
ENGINE LUBRICATION AND COOLING SYSTEM
Constantine S. Constantino, Saddle River, N.J., assignor to Curtiss-Wright Corporation, a corporation of Delaware
Filed July 6, 1960, Ser. No. 41,122
15 Claims. (Cl. 123—41.08)



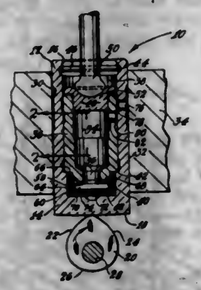
1. A cooling and lubricating system for use in a mechanism having a housing, a rotatable member and bearing means for supporting the rotatable member in the housing; said system comprising first passage means in the housing and having an inlet and an outlet for flow of a lubricating and cooling fluid therethrough for cooling said housing; means including a second passage means communicating with said housing outlet for supplying at least a portion of said fluid to and for lubrication of said bearing means and thence back to said housing inlet; and means including a third passage means communicating with said outlet and bypassing said bearing means for returning the remaining portion of said fluid to said inlet.

3,090,366
POWER PLANT HAVING ALIGNED RECIPROCATING COMPRESSOR AND ENGINE
Clemens B. Nagelmann, Santa Barbara, Calif.
Filed Nov. 14, 1960, Ser. No. 68,802
14 Claims. (Cl. 123—42)



1. A power plant comprising two pairs of parallel crankshafts having equal throws, a power cylinder journalled upon the throws of one pair of crankshafts and a compressor cylinder journalled upon the throws of the other pairs of crankshafts, a piston slidable in each cylinder, piston rods connecting the piston in one cylinder to the other cylinder for simultaneous movement therewith, means for rotating the pairs of crankshafts in opposite directions in synchronized relation whereby to maintain the cylinders and pistons in a straight line relation throughout their rotation by the crankshafts, means for effecting the intake and exhaust of fluid into and from each end of each cylinder including means for introducing an expansible motive fluid into each end of said power cylinder.

3,090,367
HYDRAULIC VALVE LIFTER MECHANISM
Harry Vincent Ayres, Grosse Pointe Woods, Mich., assignor to Eaton Manufacturing Company, Cleveland, Ohio, a corporation of Ohio
Filed May 22, 1961, Ser. No. 111,719
3 Claims. (Cl. 123—90)



1. A hydraulic tappet comprising a cast iron body member including a corrosion resistant tubular portion and a cam engageable wear resistant end portion, a steel plunger member having a main body portion and being reciprocably mounted in said body member and being subject to corrosion and wear relative to said body member, a fluid chamber formed between said body and said plunger members, fluid in said chamber operable to impart a reciprocable movement to said plunger member under load, a predetermined clearance provided between said plunger and body members forming a passageway therebetween operable to allow a predetermined minimum of fluid flow therein from said chamber, said steel plunger main body portion having a wear and corrosion resistant chromium surface thereon forming a part of said passageway operable to maintain said predetermined clearance in said passageway and control said fluid flow therein.

3,090,368
VALVE ACTUATION MEANS
Robert M. Buchwald, Berkley, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed June 6, 1961, Ser. No. 115,120
3 Claims. (Cl. 123—90)



2. In an internal combustion engine having a cylinder and a valve opening into said cylinder, means for actuating said valve comprising:
a camshaft mounted in said engine and having a pair of integral cams formed thereon, said cams being axially spaced and having cam surfaces inclined towards each other;
a pair of cam rings secured to said camshaft and rotatable therewith and surrounding said integral cams, said cam rings and said integral cams forming eccentric grooves about said camshaft;
a rocker arm pivotally mounted at one end to said engine and secured at the other end to said valve;
cam followers secured to said rocker arm and received in said eccentric grooves;
spring means biasing said cam rings into engagement with said cam followers to insure positive engagement between said cams and said followers;
and means for rotating said camshaft to oscillate said rocker arm through said cam followers and said eccentric grooves for actuating said valve in said cylinder.

3,090,369
INTERNAL COMBUSTION MOTOR FUEL INJECTION SYSTEM
Charles D. Corlew, Cunningham, Montgomery County, Tenn.
Filed Sept. 22, 1960, Ser. No. 57,774
3 Claims. (Cl. 123—138)

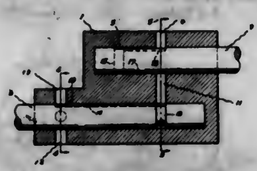
1. An internal combustion motor fuel injection system, comprising:
(*a*) an elongated fuel control member,
(*b*) means for longitudinally and slidably receiving said control member,
(*c*) an elongated rotor,
(*d*) means for rotatably receiving said rotor,

(*e*) annularly spaced fuel discharge ports in said rotor receiving means,

(*f*) a fuel inlet communicating with said control member receiving means,

(*g*) a fuel passage communicating said control member receiving means with said rotor receiving means, said fuel passage being longitudinally spaced from said discharge ports and substantially opposite said fuel inlet,

(*h*) an elongated groove in said rotor extending from said fuel passage to the annular plane of said discharge ports for progressive communication with said ports as said rotor rotates,

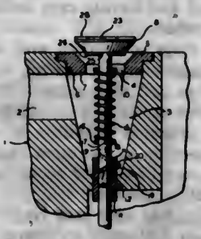


(*i*) a transverse fuel control passage through said control member,

(*j*) an elongated channel-shaped recess in said control member for communicating said transverse passage with said fuel inlet for various longitudinal positions of said control member,

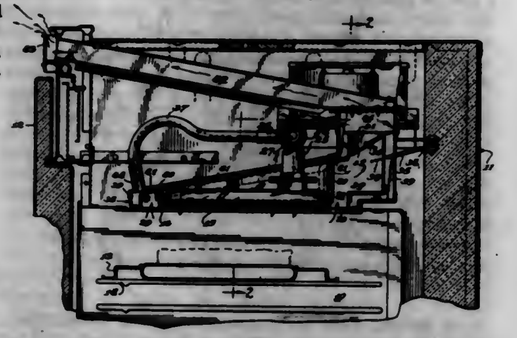
(*k*) a longitudinal tapered recess formed on said control member tapering from said transverse recess outwardly of said control member for communicating said transverse passage with said fuel passage so that the passage of fuel therethrough varies with the longitudinal position of said control member.

3,090,370
COMBUSTION ENGINE VALVE
Harold W. Kimball, 2738 N. 87th St., Milwaukee, Wis.
Filed Apr. 4, 1962, Ser. No. 185,160
4 Claims. (Cl. 123—188)



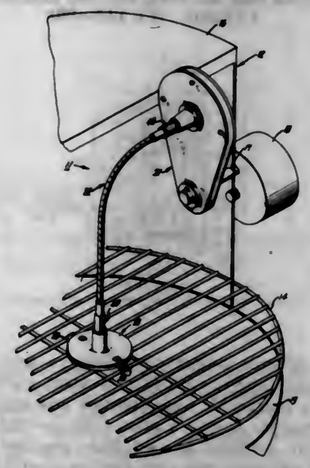
1. In an internal combustion engine including a cylinder block having a combustion chamber, a gas passage in said block communicating with the chamber and a valve seat in said block disposed between said chamber and passage, the combination of a valve complementary to said valve seat, guide means in said block, said valve having a valve stem integral therewith and slidably and rotatably mounted in said guide means, said stem having a groove in its periphery extending spirally relative to the axis thereof, pin means carried by said guide means and extending into said groove, whereby when said stem moves longitudinally relative to its axis it will be caused to simultaneously rotate, means for reciprocating said stem, said valve having upper and lower sides, and arcuate ribs on each of said sides extending in a radial direction relative to said stem, whereby gases passing said valve will be entrained by said ribs and positively impelled at an augmented speed, whereby the density of gases in said combustion chamber may be increased prior to compression and decreased subsequent to exhaustion.

3,090,371
COMBINED BAKING OVEN AND BROILER APPARATUS
James E. Davis, Hamilton, Ohio, assignor to Whirlpool Corporation, a corporation of Delaware
Filed Oct. 10, 1960, Ser. No. 61,551
2 Claims. (Cl. 126—21)



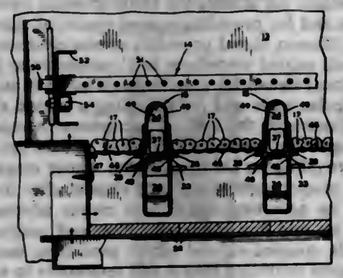
1. A combined baking oven and broiler apparatus comprising: means defining an oven and broiling chamber having a door closed opening therein; heat supply means in said chamber; duct means for exhausting effluent from said chamber, said duct means having an opening to said chamber adjacent said heat supply means, a mixing portion and a control portion between said opening and said mixing portion; means for forcing relatively cool air to said mixing portion of said duct means; and a control in said control portion selectively opening said duct means during broiling and closing said duct means during baking for selective delivery of effluent from said chamber.

3,090,372
BARBECUE ATTACHMENT
Kenneth G. Evans, 1307 Santa Fe Ave., Berkeley, Calif.
Filed Aug. 22, 1960, Ser. No. 51,032
2 Claims. (Cl. 126—25)



1. An improved barbecue comprising a fire box, a rotary grill mounted for rotation above said fire box, a spit motor with means for mounting same adjacent and radially outward of the grill, a reduction unit having a first shaft adapted to engage said spit motor and a second shaft coupled to the first through reduction means, a flexible shaft having a sheath with means for attachment of same to said reduction unit and a central cable adapted for connection to the second shaft of said reduction unit, and means connecting said cable to said grill at the center thereof to transmit motion thereto for slowly rotating the grill.

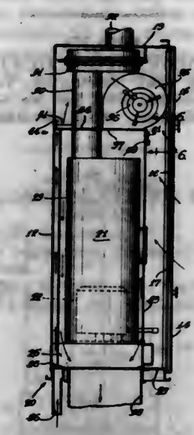
3,090,373
GAS FIRED COOKING RANGE
Robert J. Yagley and Elmer A. Fischer, Hicksville, N.Y., assignors to Welbilt Corporation, Mayeth, N.Y.
Filed Mar. 24, 1960, Ser. No. 17,381
6 Claims. (Cl. 126—41)



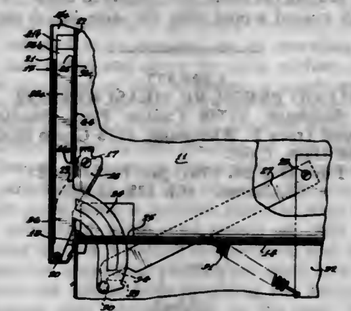
1. In a gas-fired open-hearth type stove, a plurality of spaced apart parallel gas burners extending from one edge of the hearth of said stove to the other and supported at the ends thereof, an air manifold adapted to contain air under pressure extending along the back of said hearth and providing the support for one end of said burners, a plurality of air discharge ports along the top of said manifold, horizontal mesh trays between said burners, beds of refractory lumps supported by said trays, means including said burners for supporting horizontal mesh trays containing beds of refractory lumps between the same, means including said burners for distributing gas along the sides thereof to be burnt in substantially flat horizontal thin and continuous flames the length of said burners and below said lumps to heat the same and means also including said burners for distributing air from said discharge ports of said manifold to form a substantially flat, thin, horizontal wave of air the length of said burners above said lumps and substantially parallel to said flames.

3,090,374
CIRCULATING HOT AIR FURNACE
Joseph A. Allen, Wisconsin Rapids, Wis., assignor to Preway Inc., a corporation of Wisconsin
Filed Aug. 12, 1960, Ser. No. 49,252
3 Claims. (Cl. 126—110)

1. In a circulating air furnace for a mobile home, in combination, an exterior casing with a rear wall and side walls and having air inlet openings, a combustion unit positioned within the casing, a heat shield surrounding said combustion unit with rear and side walls spaced from said unit, said shield walls also being spaced from the rear and side walls of the casing to define an insulating air space, said shield having a front wall extending between the side walls of the casing, and a top wall extending from the shield front wall to the back wall of the casing and to the side walls of the shield, means for moving circulating air downwardly between the combustion unit and the heat shield for emission to the exterior of the furnace including a blower near the top of said shield having an inlet for receiving air from said air inlets in the casing and in communication with said insulating air space, a duct extending downwardly beneath the casing for extension to the outside of the mobile home and in communication with said insulating air space, and means mounted adjacent the top of said heat shield for regulating the flow of air from said insulating air space to the blower inlet and for blocking said flow.



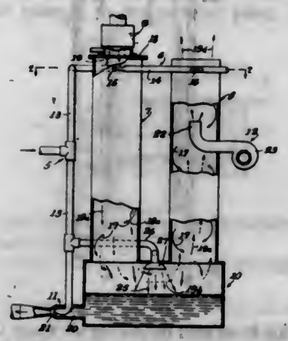
3,090,375
OVEN DOOR STRUCTURE
Averd G. Nelson, Wisconsin Rapids, Wis., assignor to Preway, Inc., a corporation of Wisconsin
Filed Aug. 10, 1961, Ser. No. 130,553
4 Claims. (Cl. 126—194)



1. In an oven having walls defining a cooking chamber with a front opening therein, a door structure comprising: a door; a projecting hinge arm adjacent the bottom edge of said opening; a hinge member pivotally secured to said arm and adapted to support the door for movement between a substantially fully open position, an ajar position and a closed position, cooperating latching portions on said hinge member and door for releasably securing the door thereto including an extension on the hinge member having a ledge formed therein facing the cooking chamber and a frame member secured to the door and adapted to engage said ledge to selectively releasably secure said door to the hinge member; means applying force to said hinge member to urge the door from adjacent the fully open position to the ajar position, to maintain the door in the ajar position, and to maintain the door in the fully closed position, said latching portions adapted to cooperate with the force applying means and to utilize gravity in the fully open position to positively secure the door to the support member when the door is in any position other than the ajar position; and means

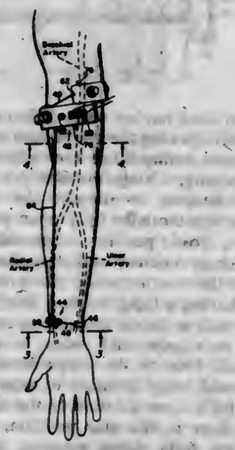
neutralizing the force on said member when the door is in the ajar position whereby the latching portions may be disengaged and the door detached from the oven.

3,090,376
SWIMMING POOL HEATER
John Chambers, 4262 Newton St., Torrance, Calif.
Filed June 24, 1957, Ser. No. 667,411
3 Claims. (Cl. 126—350)



1. A heater for swimming pool water comprising, a water inlet, side by side generally vertical tubes, means to introduce water spirally from said inlet into said tubes so that flow in the tubes is attenuated and is in a downward direction in both tubes, one of said tubes having a cap at the upper end thereof containing a gas heater with a discharge into said tube, means to cause a flow of the exhaust from said gas heater downward in said tube and upward in the other to generate heat in contact with the flows of water for heating the latter, and means to draw the heated water back toward a pool after the same leaves the tubes.

3,090,377
BLOOD PRESSURE MEASUREMENT
Peter F. Salisbury, 11750 Canton Place, Studio City, Calif., and Tracy F. Wichmann, 4116 Green Bush Ave., Sherman Oaks, Calif.
Filed Oct. 30, 1961, Ser. No. 148,527
12 Claims. (Cl. 128—2.05)



1. Apparatus for the continuous measurement of blood pressure comprising a first transducer responsive to the condition of an artery and adapted to be mounted adjacent thereto for sensing the blood pressure pulse wave within the artery and for providing first electrical signals proportional thereto, a peak detector electrically coupled to said first transducer and responsive to said first electrical signals for detecting that portion of said electrical signals corresponding to the systolic peak of said blood pressure pulse wave and for providing a first electrical pulse indicative of the time of occurrence thereof, marking means adapted to be mounted adjacent the artery and responsive to said first electrical pulse for notching said blood pressure pulse wave at the systolic peak of said wave upon the occurrence of said first electrical pulse, a second transducer responsive to the condition of the artery and adapted to be mounted adjacent thereto at a fixed distance from said first transducer for sensing the blood pressure wave within the artery and for providing second electrical signals proportional thereto, signal providing means electrically coupled to said second transducer and responsive to said second electrical signals for detecting said notch in said blood pressure pulse wave and for providing a second electrical pulse indicative of the time of occurrence thereof, signal generating means electrically coupled to said peak detector for providing an electrical signal whose magnitude is inversely proportional to the time elapsed after the occurrence of an actuating signal, said means adapted to be actuated by said first electrical pulse, and output means electrically coupled to said signal generating means and to said signal providing means and responsive to said electrical signal and to said second electrical pulse for registering the magnitude of said electrical signal at the time of occurrence of said second electrical pulse, said magnitude being indicative of the blood pressure within the artery.

3,090,378
FOCUSING ENDOSCOPE
Gilbert J. Sheldon, Irondequoit, and Gustav A. Ulrich, Rochester, N.Y., assignors to Bausch & Lomb Incorporated, a corporation of New York
Filed May 16, 1960, Ser. No. 29,416
3 Claims. (Cl. 128—4)



1. In a device of the character described comprising in combination, an endoscope including an elongated coherent bundle of optical fibers for transmitting a light image from the front to the rear of said endoscope, an optical objective means mounted in the front of said endoscope for projecting an image on the front face of said bundle of optical fibers, focusing means controllably moving the front face of said bundle of fibers selectively to and from said objective means to focus said image received from said objective means on said front face including, actuating means mounted at the rear of said endoscope flexible tension means comprising two longitudinally extending portions connecting said actuating means with the front portion of said bundle for moving the front face of said bundle means to provide coincidental relationship between the front face of said optical fibers and the image projected by said optical means.

3,090,379
ILLUMINATED ENDOSCOPE
John T. Ferris, Pittsford, and Gustav A. Ulrich, Rochester, N.Y., assignors to Bausch & Lomb Incorporated, a corporation of New York
Filed May 16, 1960, Ser. No. 29,442
3 Claims. (Cl. 128—6)



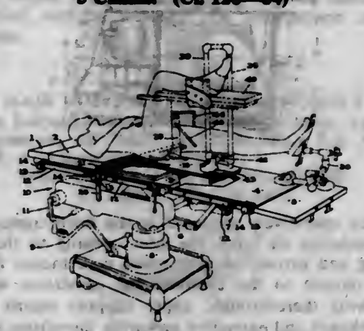
1. An endoscope comprising in combination, an elongated tube, objective lens means in the forward end of said tube, a light source located concentrically around said lens means for radiating light through 360°, a peripheral window mounted on the forward portion of said tube enclosing said light source, an intermediate wall separating said light source from said objective lens means and preventing the direct radiation of said light source from radiating on said objective lens means, and reflector means mounted within said window adjacent said objective lens means and axially rotatable relative to said window for directing a reflective illuminated objective image through said lens means.

3,090,380
RESUSCITATION DEVICE
John F. Dold, Rye, N.Y.
Filed Apr. 13, 1961, Ser. No. 102,786
5 Claims. (Cl. 128—29)



5. A resuscitator valve assembly comprising, in combination, a compoundly curved casing forming a chamber therein, means forming an opening in said casing for connection to a patient, means forming an exhaust port in said casing at a point removed from said opening, a thin-walled inflatable balloon-like member in said casing connectable to a source of gas outside said casing, and a normally closed one-way valve supported in the wall of said balloon-like member and positioned to communicate with said opening when said balloon-like member is inflated, said valve opening only at a pressure greater than that required to inflate said balloon-like member to substantially fill said casing chamber whereby said valve is movable to and from said opening by pressure changes in said balloon-like member to release gas therethrough only when positioned at said opening by inflation of said balloon-like member.

3,090,381
SURGICAL COMPONENTS FOR OPERATING TABLES
William S. Watson, Rochester, N.Y., assignor to The Pelvic Anchor Corporation, Rochester, N.Y., a corporation of New York
Filed Dec. 30, 1960, Ser. No. 79,735
5 Claims. (Cl. 128—84)

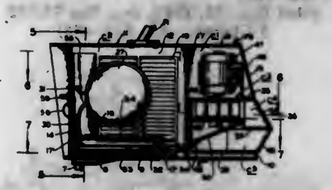


1. Orthopedic accessory apparatus for use with operating tables comprising a generally T-shaped horizontal support adapted to be mounted on an operating table in a plane parallel to and above the table surface, the cross arms of the head of the T having a combined length substantially equal to the width of the table, an iliac post, means on each of said cross arms for mounting said post thereon in an upright position on one side of the center line of the support, said mounting means providing for adjustment of said iliac posts longitudinally on the respective cross arms, a perineal post, the stem of the T having substantial width, and means on both sides of said center line for mounting said perineal post in an upright position near either side of the stem, said perineal post mounting means both providing for adjustment of said perineal post longitudinally on the stem, said iliac post when located on the same side of said center line as said perineal post co-operating with said perineal post to provide means for anchoring the pelvis of a human body in a position that is offset laterally with respect to said center line against unilateral traction applied to one leg.

3,090,382
OVERBED OXYGEN TENTS
Frank J. Fegan and William H. Smith, Norwalk, Conn., assignors, by mesne assignments, to Shampaine Industries Inc., St. Louis, Mo., a corporation of Missouri
Filed Apr. 22, 1959, Ser. No. 808,134
5 Claims. (Cl. 128—191)

1. An oxygen treatment device for use with a hospital bed; said oxygen treatment device comprising a base, a vertical post mounted on and projecting upwardly from the base, a bracket carried by the post, a chassis mounted on the bracket and being internally subdivided into a plurality of compartments, a refrigerant compressor mounted on the chassis and being located in the first of said plurality of compartments, a condenser mounted on the

chassis and being located in the first of said plurality of compartments, an evaporator coil mounted on the chassis and being located in the second of said plurality of compartments, an auxiliary condenser mounted on the chassis and being located in the first of said plurality of compartments, said compressor, condenser, auxiliary condenser, and evaporator being operatively connected in series to form a refrigeration system, means for automatically disengaging said evaporator from said refrigeration system when the temperature of said oxygen treatment device reaches a certain minimum value, means on the chassis and disposed around the evaporator forming the third of said compartments and being divided into fourth and fifth compartments, said fourth and fifth compartments having outlet and inlet openings, respectively,



a blower operatively mounted in the third compartment for circulating air from the inlet opening to the outlet opening and across the evaporator coil, means for supplying oxygen to the chamber for admixture with the air flowing therethrough, upper support means carried by the chassis and extending upwardly therefrom and outwardly over the bed, and tent-forming means carried by the upper support means for enveloping a substantial space over the bed, said tent-forming means having an opening disposed adjacent to said chassis, a portion of the chassis extending into the space over the bed through said opening for placing such enclosed space in communication with the inlet and outlet openings so that the atmosphere within such space can be controlled by the refrigeration system.

3,090,383
HYPODERMIC SYRINGES
Egan R. Brooks, Greyholme, 191 Dialstone Lane, Stockport, England
Filed Mar. 19, 1959, Ser. No. 800,528
Claims priority, application Great Britain Mar. 24, 1958
17 Claims. (Cl. 128—216)



1. A needle-holding end for a hypodermic syringe comprising inner and outer relatively rotatable parts of frusto-conical shape, a cover over the larger end of the outer part sealed thereto, an extension of the smaller end of the inner part projecting through the smaller end of the outer part, said inner part having a through passage mainly parallel to and close to its conical periphery and said cover having a hole complementary to the inner end of said passage to co-operate therewith as a valve, the extension of the smaller end of the inner part being adapted to hold a needle so that it is in communication with said passage.

3,090,384
NEEDLE
Brian E. Baldwin and Ray S. Lindenmeyer, Evanston, Ill., assignors to Manufacturing Process Laboratories, Inc., Chicago, Ill., a corporation of Illinois
Filed Apr. 15, 1960, Ser. No. 22,590
2 Claims. (Cl. 128—221)



1. A hypodermic needle formed from cylindrical stock having a lumen of uniformly cylindrical cross section extending axially therethrough, said needle having an inclined front face merging at its rear edge with the cylindrical outer surface of said needle and having a pair of side faces meeting said front face at acute angles to define a pair of sharp side edges, said side faces also meeting each other to form a sharp bottom edge extending along a line angled slightly with reference to the needle's longitudinal axis, said side edges and said bottom edge converging to define an extremely sharp needle point having low puncture and penetration force characteristics.

3,090,385
TAMPON APPLICATOR
George Brecht, East Brunswick, N.J., assignor, by mesne assignments, to Johnson & Johnson, New Brunswick, N. J., a corporation of New Jersey
Filed Dec. 5, 1960, Ser. No. 73,835
11 Claims. (Cl. 128—263)



1. A tampon applicator comprising an outer tube adapted to contain a tampon in an end thereof, a tampon-ejecting plunger positioned within said outer tube and longitudinally movable therein, said plunger having an arm, a portion of which is positioned between said tampon and said outer tube when said tampon is positioned in said outer tube, said arm portion being movable from between said tampon and said outer tube and then towards the axis of said outer tube, the end of said arm being adapted to engage the end of said tampon as said plunger is moved longitudinally into said outer tube to eject said tampon.

3,090,386
SURGICAL SUTURING INSTRUMENT
William Babcock Curtis, Dallas, Tex., assignor to Curtis-Scott Company, Dallas, Tex., a partnership
Filed July 20, 1961, Ser. No. 125,531
20 Claims. (Cl. 128—334)



1. A surgical suturing instrument including an elongate body having a transverse opening at one end thereof,

needle extracting means detachably mounted on one side of the body adjacent its opening and having a tubular portion extending through and beyond the opening so that its outer end projects from the opposite side of said body, the tubular portion being adapted to receive a surgical needle and its projecting end being adapted to support the pre-tied knot of a suture on which the needle is threaded, means adjacent said opening for confining the knot on the projecting end of said tubular portion, the needle extracting means having means co-acting with said tubular portion for holding the needle, and means extending longitudinally of said body for releasing said needle extracting means therefrom and withdrawing said tubular portion from said opening whereby the needle and suture are pulled through the knot and opening and the knot is stripped from said projecting end of said tubular portion, the knot confining means having an aperture complementary to the suture for receiving the suture adjacent the knot to permit tightening of the knot upon pulling of the suture through the aperture.

3,090,387
BRASSIERE
Lois H. Hopper, North Hollywood, Calif., assignor to Munsingwear, Inc., Minneapolis, Minn., a corporation of Delaware
Filed July 18, 1960, Ser. No. 43,380
3 Claims. (Cl. 128—498)



1. In a brassiere; a pair of breast cups; a body-encircling member having a top edge, a bottom edge and ends meeting at the rear central portion of the garment; each of said ends and the top edge forming an upper corner; detachable fastening means at the opposed edges of said ends; and a pair of longitudinally elastic strips, each strip being attached only at its ends respectively to an upper corner, and to the bottom edge of the garment, said strips extending diagonally downwardly to said bottom edge.

3,090,388
SNAPPING BARS FOR CORN PICKER SNAPPING ROLLS
Herman Harvey Schulze, Coldwater, Ohio, assignor to Avco Corporation, Coldwater, Ohio, a corporation of Delaware
Filed Apr. 25, 1961, Ser. No. 105,421
5 Claims. (Cl. 130—5)



1. In a corn picker snapping roll assembly of the type having a pair of adjacent counter-rotating snapping rolls, each having a substantially cylindrical body portion with a spirally arranged radially projecting spiral rib pattern extending in convolutions positioned in spiral formation around the cylindrical surface of each roll but with an intervening spiral cylindrical surface extending between said spiral rib pattern convolutions on which no rib pattern is provided, the spiral rib patterns on said adjacent counter-rotating rolls being so positioned relative to each other that the spiral rib pattern on one roll counter rotates adjacent the intervening spiral cylindrical surface between spiral rib pattern convolutions of the opposite roll, said radially projecting spiral rib pattern on each roll comprising a plurality of snapping pockets of substantially U-shaped form having the open sides thereof extending toward the direction of rotation of the roll,

the combination therewith of:

a plurality of radially projecting snapping bars formed in and confined within the spiral convolutions of the rib pattern of each roll with one said bar located adjacent and in front of the open side of each of a plurality of said snapping pockets and positioned in a longitudinal direction relative to the axis of the roll and with each said snapping bar extending crosswise and adjacent the open side of such adjacent U-shaped snapping pocket but of such length as not to extend into the adjacent intervening spiral cylindrical surface between said rib pattern convolutions.

3,090,389
HAIR ROLLER AND CLIP ASSEMBLY
Gordon Eckman, Pico Rivera, Calif., assignor, by mesne assignments, to Reiner Industries, Inc., Los Angeles, Calif., a corporation of California
Filed Apr. 12, 1961, Ser. No. 102,608
6 Claims. (Cl. 132—41)

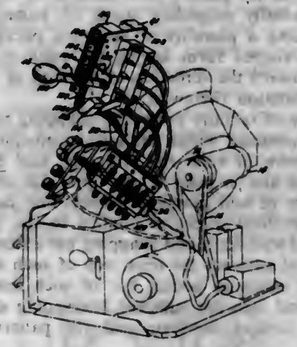


1. A clamp comprising first and second elongated members, said first member comprising a short end wall having a pair of integral arms extending outwardly in the same direction from opposite edges thereof to provide a bight area between said arms and adjacent said end wall, one of said arms being relatively short, the other of said arms being of greater length than said relatively short arm and providing a finger grip portion adjacent said end wall and a clamping portion, said second member comprising a clamping jaw and an integral handle angularly related to said clamping jaw, means pivotally supporting said second member on the short arm of said first member with said clamping jaw superposed over the clamping portion of said first member and with said handle overlying and angularly related to said finger grip portion, and spring means constantly urging the clamping jaw and the clamping portion towards one another in clamping relationship, said finger grip portion being at an angle of less than 90 degrees relative to said end wall to provide an acute angle corner at the juncture of said end wall and said finger grip portion whereby to inhibit slippage from the fingers of a user.

3,090,390
COMBINED COIN SORTER AND COUNTING MACHINE
Donald W. Jones, Riverside, Conn., assignor to Abbott Coin Counter Co. Inc., Greenwich, Conn., a corporation of Delaware
Filed Apr. 6, 1960, Ser. No. 20,496
9 Claims. (Cl. 133—8)

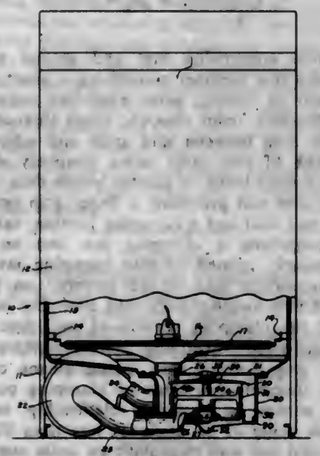
1. In a coin handling machine having a main frame and coin moving means mounted therein, a self-contained counting unit embodying a supporting bracket means, a plurality of coin sensing elements pivotally mounted thereon, a series of counters mounted on said bracket means, a flexible push-pull cable operating connection from each of said coin sensing elements to a respective one of said counters, and means for removably securing

said unit intact as a self-contained mechanism to said main frame with said sensing elements in operative posi-



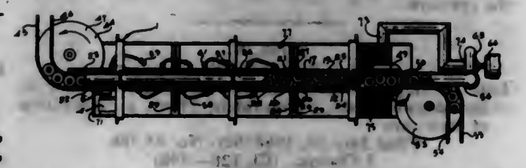
tion to respond selectively to coins of different denomination in their movement through the machine.

3,090,391
DISHWASHER SELF CLEANING ARRANGEMENT
Henry K. Kaldenberg, Des Moines, and Ival Gene Dutcher, Newton, Iowa, assignors to The Maytag Company, Newton, Iowa, a corporation of Delaware
Filed Feb. 2, 1961, Ser. No. 86,607
2 Claims. (Cl. 134—104)



1. In a dishwasher having a washing period and a draining period, the combination comprising; a washing chamber; a fluid discharge device for introducing washing fluids into said chamber; a receptacle for receiving the washing fluids from said chamber; a pump; a discharge conduit connected from said receptacle to said pump for returning washing fluids from said receptacle to said pump; a supply conduit connected to said pump for supplying washing fluids from said pump to said fluid discharge device; a self-cleaning filter means including a cylindrical strainer mounted on a vertical axis in said receptacle and disposed between said washing chamber and said discharge conduit in the path of the recirculated washing fluids in order to collect foreign particles on the upstream side of said strainer, a shaft member coaxially disposed relative to said cylindrical strainer, a revoluble spray device inside said cylindrical strainer mounted on said shaft member for projecting fluids against the downstream side of said strainer for dislodging the foreign particles thereon, a cover member over the top of said cylindrical strainer mounted on said shaft member and means retaining said cover on said shaft member whereby said strainer is removably retained between said cover and said receptacle; a spray conduit connecting said supply conduit to said spray device and constructed and disposed to supply a predetermined portion of the total fluid flow from said pump to said spray device during said washing and drain periods; trough means formed in said receptacle adjacent the upstream side of said strainer; and a drain conduit connected to said trough for conducting the foreign particles to drain during said draining period.

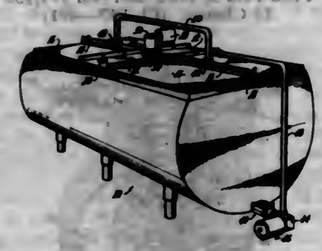
3,090,392
LABEL REMOVING APPARATUS
Hugh H. Libby, % Libby Welding Co., 2700 Truman Road, Kansas City, Mo.
Filed Dec. 19, 1960, Ser. No. 76,946
7 Claims. (Cl. 134—125)



1. Apparatus for simultaneously rotating and progressing a plurality of substantially equal diameter cylindrical bodies comprising, a frame, conveyor means operatively supported by said frame, means for moving said conveyor, said conveyor forming a moving body supporting surface, a pair of elongated guide rails, means supporting said guide rails in laterally spaced relation and vertically of said body supporting surface, said guide rails and supporting surface defining a path, said guide rails being laterally spaced from each other a distance substantially greater than one but less than two times the diameter of the bodies and vertically spaced from said supporting surface a distance sufficient to provide lateral support to the bodies, means for feeding the bodies in upright relation into said path for filling said path, said guide rails and conveyor means having a discharge end, means for receiving said bodies at said discharge end and carrying them away at a rate faster than the movement of the bodies by said conveyor means along said path, and means at said discharge end of said guide rails retarding movement of the bodies therefrom whereby the conveyor means moves the bodies to maintain forward pressure on the trailing bodies and force the bodies forwardly thereof laterally against the guide rails with succeeding bodies in contact with alternate guide rails and each other on the cylindrical surfaces thereof in a staggered relation, said moving supporting surface, retarded movement and lateral pressure of the bodies against the guide rails producing a co-action urging the bodies to rotate about their vertical axes as they proceed toward said discharge end.

3,090,393
METHOD AND APPARATUS FOR CLEANING TANKS
Edward L. Valentine, 9335 E. Friendship Ave., Pico Rivera, Calif.
Filed July 6, 1959, Ser. No. 825,303
9 Claims. (Cl. 134—169)

1. In a milk tank, the improvement comprising: a spray head stationarily mounted within an uppermost portion of said tank and formed with a plurality of substantially horizontally directed and horizontally elongated orifices arranged for delivering overlapping wide and thin streams of a cleaning solution onto interior surfaces of said tank immediately adjacent said spray head to form a circulating film of cleaning solution on said surfaces; an outlet opening in said tank adapted for draining cleaning solution collecting on the floor of said tank; and a recirculatory means operatively associated with said outlet



opening and with an inlet opening formed in said spray head for withdrawing cleaning solution from said outlet opening to forcefully introduce said solution at a substantially uniform pressure into said spray head and out of said orifices.

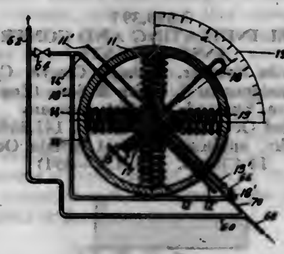
3,090,394
PRESSURE CONTROL VALVES OF THE CENTRIFUGAL TYPE
Graham D. Page, Moseley, Birmingham, England, assignor to The Austin Motor Company Limited, Birmingham, England
Filed July 6, 1960, Ser. No. 41,862
Claims priority, application Great Britain July 8, 1959
5 Claims. (Cl. 137—56)



1. In a centrifugal type fluid pressure relief valve of the type in which rotating weight means act upon a variable rate spring such that its deflection, due to the centrifugal force on said weight means, is proportional to the rotational speed of the latter, the improvement which comprises a valve closure element normally subjected to fluid pressure for moving said element toward open position, and means for moving said element toward closed position with a force substantially directly proportional to the rotational speed of said weight means, comprising a connection between the weight means and the valve closure element, said connection including a second spring.

3,090,395
PNEUMATIC GOVERNOR WITH STAR-SHAPED ARRANGEMENT OF BELLOWS
Walter Weiss, Backnang, Wurttemberg, Hans Kowalski, Rommelshausen, near Waiblingen, Wurttemberg, and Alfred Koebele, Ludwigsburg, Wurttemberg, Germany, assignors to J. C. Eckardt A.G., Stuttgart-Bad Cannstatt, Germany, a corporation of Germany
Filed Feb. 13, 1961, Ser. No. 89,046
Claims priority, application Germany Nov. 25, 1960
9 Claims. (Cl. 137—86)

1. An automatic pneumatic governor comprising at least a pair of resilient elements adapted to be acted upon by a pressure medium representing a desired value and an actual value of a controlled variable and disposed substantially diametrically opposite to each other, at least a second pair of resilient elements also adapted to be acted upon by a pressure medium for producing a feedback effect and also disposed substantially diametrically opposite to each other and at substantially right angles to said first pair, all of said elements being disposed within a common plane and together forming a star-shaped arrangement having a common center, means for supporting one end of each of said elements in a fixed position, the other end of each element being movable under pres-



sure, means for supplying said pressure media to said elements, a ring disposed within said common plane, said other ends of said elements being in engagement with and acting upon said ring, a nozzle member pivotably mounted for rotation about said common center, said ring having a peripheral surface disposed opposite to the nozzle opening of said nozzle member and serving as a flapper surface, and means for supplying a pressure medium to said nozzle member and for directing it through said nozzle opening upon said flapper surface.

3,090,396
ROTATABLE SPINDLE VALVE
John Rudelick, Milwaukee, Wis., assignor to Bruner Corporation, Milwaukee, Wis., a corporation of Wisconsin
Filed Feb. 10, 1960, Ser. No. 7,832
1 Claim. (Cl. 137—375)



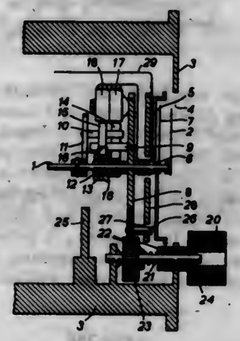
A valve comprising: means defining a hollow outer body comprised of separable complementary sections one of which has a passage opening from the interior of the body; a tubular thermoplastic inner body inside the outer body, defining a bore, and having an integral collar that projects laterally outwardly from its exterior to define a valve port, said collar extending into the passage in the outer body to hold the inner body against rotary and axial motion out of a position at which said port thereof registers with the passage in the outer body, the junction of the collar with the wall of the bore being rounded around the entire circumference of said valve port; means connecting the complementary outer body sections to hold them in place upon the inner body; a spindle coaxially movable in the bore of the inner body; a resilient land encircling the spindle and movable therewith, said land snugly and sealingly engaging the exterior of the spindle and the wall of the bore in the inner body to control communication between said valve port and another port in the valve in accordance with the position to which

the spindle is moved, and said land being slidable smoothly across said rounded edge of the valve port regardless of the size relationship between it and the port so as to minimize the danger of the resilient land becoming damaged as it is moved across said valve port; and seal means encircling said collar at its junction with the exterior of the inner body, and confined between the bodies to prevent leakage of fluid from the port and passage along the exterior of the inner body.

3,090,397
LEVEL INDICATING AND CONTROL INSTRUMENTS

Dennis Lincoln Spencer, Bishops Cleeve, Cheltenham, England, assignor to S. Smith & Sons (England) Limited, London, England, a British company

Filed Oct. 2, 1961, Ser. No. 142,300
Claims priority, application Great Britain Oct. 6, 1960
14 Claims. (Cl. 137—391)

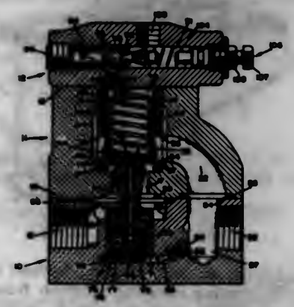


13. A vehicle's fuel system of the kind having at least one fuel tank, means for gauging the fuel contents of the tank, means for controlling the flow of fuel to and from the tank, and an indicating instrument for indicating the contents of the tank as gauged by said gauging means, the indicating instrument being of the kind in which a pointer is mounted on a shaft and rotates relative to a scale on rotation of the shaft, and being provided with an auxiliary pointer, means supporting the auxiliary pointer for rotation independently of the main pointer but about a common axis, a pair of actuating pins, mounted to lie parallel to but displaced at different distances from the common axis, one coupled to the main pointer for rotation therewith about the common axis and the other coupled to the auxiliary pointer for rotation therewith about the common axis, a pair of cams, means supporting each cam for independent rotation about the common axis, spring means for biasing the cams towards one another, the construction and arrangement of the pins and the cams being such that, when the main and auxiliary pointers are aligned with one another, the pins are aligned with one another and the cams are held apart against the action of the spring means by the pins, a pair of electric switches each having contacts having at least two conditions of operation, and means supporting the switches for rotation with one of the pointers, the switches being positioned with respect to the cams to be actuated to change from one operating condition to another by a respective one of the cams only when that cam is in contact with the actuating pin which rotates with the pointer with which the switches rotate and the system further comprising an electrical control circuit for controlling the operation of the fuel flow controlling means, which circuit comprises the contacts of the switches provided in the indicating instruments.

3,090,398
DUAL DIRECTION RELIEF OR SEQUENCE TYPE VALVE

Cecil E. Adams, Columbus, Ohio, assignor to American Brake Shoe Company, New York, N.Y., a corporation of Delaware

Filed Feb. 5, 1962, Ser. No. 171,135
13 Claims. (Cl. 137—491)



1. In a valve of the type described which includes means forming a valve between a first port and a second port, said valve means including a movable element the position of which controls the flow of fluid between said ports, means forming a control pressure chamber the pressure in which acts to urge said movable element in one direction, means presenting a surface subjected to fluid pressure at said first port for urging said movable element in the opposite direction, orifice means through which fluid must flow to enter said control chamber, and pilot valve means for controlling the maximum pressure in said control chamber, that improvement which makes the valve responsive to the higher of the pressures in said first and second ports which comprises a movable differential pressure operated piston means having opposite surfaces disposed to be acted upon respectively by the fluid pressures at said first port and at said second port and arranged to cooperate with said surface presenting means for urging said movable element in said opposite direction when the pressure at said second port is greater than the pressure at said first port, and valve means operated by said movable piston means for connecting said orifice means with whichever of said ports contains the higher pressure while isolating said orifice means from that port which contains the lower pressure.

3,090,399
AUTOMATIC POULTRY WATERING VALVE

James B. Godshalk, Pikeland Township, Chester County, Pa., assignor to Fox Products Company, Philadelphia, Pa., a corporation of Pennsylvania

Filed Aug. 3, 1961, Ser. No. 129,028
4 Claims. (Cl. 137—614.14)

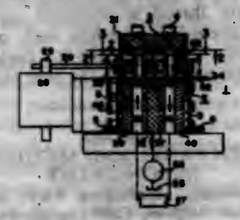


1. In a poultry watering valve of the type described, the combination of a valve body; movable valve means operatively arranged in said body; an operating lever supported on said body for pivotal movement from an initial position, in which said movable valve means is closed, through an intermediate position, in which said movable valve means is opened by said lever, to another position, in which said lever maintains said movable valve means closed; a movable connector operatively disposed on said lever for continuous infinitesimally fine adjustment lengthwise of said lever over a definite portion of the length of said lever, the pivotal axis of said lever being located between said body and said portion of said lever along which said connector is adjustable; a fixed support mounted on said body and spaced from said lever in the direction of movement of said lever from said other positions to said initial position and at least generally in the plane of movement of said lever; and a biasing spring of the tension type, one end of said spring being attached to said fixed means with substantial freedom for pivotal movement generally about its point of attachment to said support means, the other end of said spring being connected to said movable connector, adjustment of said movable connector over said portion of said lever causing the same to move in a straight line tangent to a circle, described about the point of connection of said one end of said spring to said support when said lever is in said initial position, said portion of said lever along which said connector is adjustable extending for a material distance on both sides of the said point of tangency to said line of movement of said movable connector, said spring being at least substantially relaxed when said movable connector is at said point of tangency and said lever is in said initial position, with the valve closed.

3,090,400
PRESSURE BALANCED DOUBLE PORTING SERVO VALVE

Joseph W. Broome, South Sudbury, Mass., assignor to The Oilgear Company, Milwaukee, Wis.

Filed May 16, 1960, Ser. No. 29,238
2 Claims. (Cl. 137—622)



1. A flat valve construction comprising a valve block having a first flat valve face, a valve head rigidly secured in spaced relation to said valve block and presenting a second flat valve face, rectangularly shaped control chambers formed in said first flat valve face and corresponding control chambers formed in said second flat valve face in alignment with said control chambers in said first flat valve face, a valve plate having opposite symmetrically arranged third and fourth flat valve faces each formed by a pair of rectangular shaped lands aligned with said control chambers when the valve is in a null position, a pair of leaf springs secured to opposite ends of said valve plate and to opposite sides of said valve block to support said valve plate between said valve block and said valve head in closely spaced friction free relation to said first and second flat valve faces thereof and to permit rectilinear movement of said valve plate in opposite directions along a line through said lands for controlling fluid flow through said valve, passage means through said valve plate interconnecting opposite face portions thereof; said valve block comprising an assembly of parallel sections normal to said valve plate, bolt means parallel with said valve faces securing said sections together so that their ends defining portions of said first valve face are coplanar, means integrally joining adjacent said sections together along abutting side edges thereof; said sections including a pair of end sections, a pair of control sections each adjacent one of said end sections, and a central section between said control sections; said central section having a passage extending therethrough for supplying pressure fluid to pressure chambers formed between said lands in said valve plate and said central section also having a width gauged to the spacing between said lands so that opposite face of said central section provide sharply defined square edges in the first valve face; said control sections each comprising a pair of spacer members spaced apart in the plane of its own section and having a width equal to the width of one of said lands to space the end sections from the central section so that flat vertical surfaces of said end sections and center section define walls of said control chamber and also provide sharply defined edges in the first valve face which cooperate with the edges of the lands to define flow control orifices.

3,090,401
STREET HOSE FOR PNEUMATICALLY ACTUATED PARKING METER

John R. Handley, Los Altos, Calif., assignor, by mesne assignments, to Calpat Products, Inc., a corporation of Nevada

Filed Nov. 12, 1958, Ser. No. 773,260
1 Claim. (Cl. 137—778)



An automobile tire actuated street positioned pneumatic sensing device comprising, an elongated rubber body having an elongated internal cavity and formed with a flat bottom for resting upon the street and an oval top wall as viewed in cross-section and across which a tire may roll for collapsing said top wall into said cavity to produce a pneumatic pressure pulse, said oval formed top wall functioning to direct the collapse of the said top wall into said cavity for minimal lateral shifting force on said bottom; an elongated resilient metal spring of concavo-convex cross-sectional form conforming generally to said oval form and carried by said top wall for joint movement therewith and providing a continuous longitudinal reinforcement over the full length of said cavity to enforce extended collapse of said cavity when traversed by said tire, and said body bottom being provided with a pair of longitudinal relief channels into which said spring and body can flow upon deformation thereof.

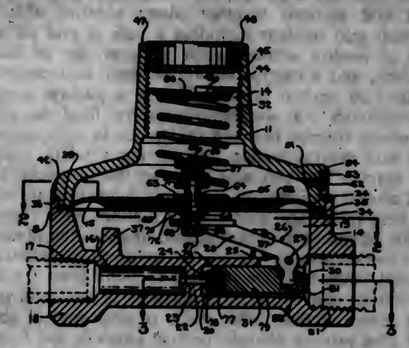
3,090,402
GAS REGULATOR

Theodore A. St. Clair, Deerfield, Ill., assignor to The Bastian-Blessing Company, Chicago, Ill., a corporation of Illinois

Filed Mar. 24, 1958, Ser. No. 723,519
6 Claims. (Cl. 137—791)

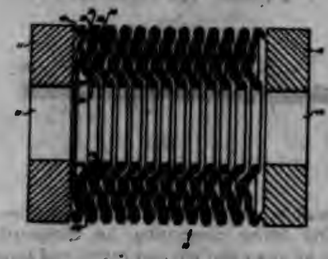
1. In a pressure reducing regulator the combination of a housing having a low pressure compartment bordered by a wall, a diaphragm of a dimension whose peripheral margin fits inside said wall and comprising a fabric reinforced sheet of elastomer material of predetermined thickness, radially spaced concentric lands of different heights within said wall engaging the margin of said diaphragm

the outer one of which is higher than the inner one by a fraction of the thickness of the diaphragm; and a bonnet



for holding the diaphragm flat marginally at the innermost land.

3,090,403
LAMINATED METALLIC BELLOWS
Rolf Heinz Werner Kroekel, West Greenwich, R.I., assignor to Sealol, Inc., Warwick, R.I., a corporation of Delaware
Filed Feb. 9, 1962, Ser. No. 172,294
3 Claims. (Cl. 137—793)



1. A metallic bellows structure adapted to connect two relatively movable parts to form a flexible and expansible joint therebetween, said bellows structure consisting of a plurality of diaphragms, each diaphragm comprising two layers of flexible metal, having a central bore, one of said layers having a gas escape orifice exposed to the atmosphere, said diaphragms being welded to each other and to the adjacent diaphragms on one side thereof at the outer margins and to each other and to adjacent diaphragms on the opposite side thereof at the inner margins at the central bore.

3,090,404
PRESSURE TUBE FOR TRAFFIC INDICATOR
Robert L. Roby, San Marcos, Calif., assignor to Accurate Products Company Inc., Pacific Beach, Calif.
Filed July 24, 1961, Ser. No. 126,276
4 Claims. (Cl. 138—119)



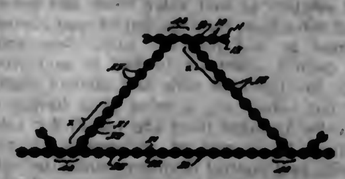
1. A pressure tube comprising a length of resilient material having a cross section that approximates a semi-oval, said tube having a bottom wall, side walls and a top wall defining a longitudinal passage substantially centrally therethrough, said passage being substantially oblong in cross section having a major axis of substantial length which has a minimum length of approximately one-third the width of the tube, the longitudinal axis of the passage being parallel to the longitudinal axis of the tube and the short ends of the oblong being rounded, the outer surface of said side walls and top wall joining to form a smoothly convex surface extending from substantially the bottom of one side wall to substantially the bottom of the other side wall, the outer surface of said bottom wall being slightly concave transversely of the tube so that said tube normally rests on its longitudinal edges, said top wall being of such thickness and material that it is readily collapsed by the weight of an overriding object, of substantial weight.

3,090,405
PROCESS FOR THE FORMATION OF SELVEDGES ON LOOMS
Raymond Dewas, 120 Blvd. de Saint-Quentin, Amiens, France
Filed June 1, 1959, Ser. No. 817,226
Claims priority, application Luxembourg June 4, 1958
8 Claims. (Cl. 139—124)



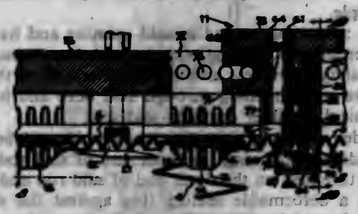
8. A method of forming fabric selvedges on looms, which comprises the steps of inserting an auxiliary thread in the form of loops between the marginal threads of the warp shed with the loops having alternately an outer bight embracing the outermost warp thread and an inner bight, successively severing the loops at their inner bight whereby the auxiliary thread is gradually separated into a plurality of hairpin-like elements each of which comprises two shanks, and beating-up the shanks of the hairpin-like elements together with the weft threads.

3,090,406
WOVEN PANEL AND METHOD OF MAKING SAME
Edward Koppelman, Huntington Park, and Arthur R. Crumpman, Los Angeles, Calif., assignors, by direct and mesne assignments, to Raymond Development Industries, Inc., Huntington Park, Calif.
Filed Feb. 23, 1961, Ser. No. 91,264
35 Claims. (Cl. 139—384)



1. A woven, multi-ply fabric comprising a pair of woven face plies and an intermediate woven rib ply, said rib ply being interwoven alternately and at spaced intervals with each of said face plies to form a plurality of woven rib portions extending between said face plies, each of the portions of said rib ply disposed between adjacent areas of interweaving with one of said face plies having a greater number of picks than the corresponding portion of said one face ply disposed between said same two areas of interweaving.

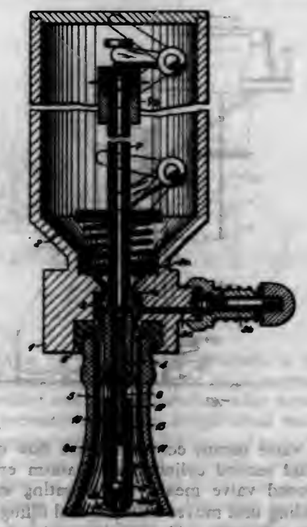
3,090,407
HELICAL WIRE TRIMMING AND FORMING MECHANISM
John R. Greene, 219 Hill Top Lane, Wyoming, Ohio, and Thomas J. Dull, 1293 Prospect Place, Cincinnati, Ohio
Filed Mar. 14, 1960, Ser. No. 14,749
3 Claims. (Cl. 140—92.7)



1. A helical trimming and forming mechanism for a spring assembly machine, said assembly machine adapted to rotate and thread a helical wire about mating portions of coil springs in row formation thereby to join the springs together, said wire trimming and forming mechanism comprising, a base adapted to be attached to the spring assembly machine, a trimmer head mounted in a substantially fixed plane for rotation relative to said base in the path of advancement of the helical wire, said trimmer head having a flat outer end surface disposed at right angles to the axis of rotation of the trimmer head, said trimmer head having an open slot formed therein, said trimmer head normally residing in a receiving position with said slot disposed at an angle corresponding to the lead of the helical wire, said slot extending inwardly from said flat outer end surface and having a depth equal to substantially one-half the diameter of a convolution of the helical wire, adapting the slot to receive and confine a partial convolution of the helical wire with an endwise portion thereof projecting beyond said slot after the same is threaded in place, a stationary shearing element, said base having a socket adapted to receive an end portion of said shearing element, releasable clamping means connected to the base and adapted to secure said portion of the shearing element in said socket with an opposite end portion of the shearing element slidably contacting the flat outer end surface of the trimmer head in a position to shear the endwise portion of the helical wire which projects beyond the slot, said releasable clamping means adapting the shearing element to be adjusted relative to said flat outer end surface of the trimmer head, means for rotating said trimmer head from said receiving position toward a forming position with said partial convolution confined in said slot, said shearing element adapted to coact with said slot to sever the projecting endwise portion from the helical wire during rotation of the trimmer head toward said forming position, said trimmer head adapted to bend the partial convolution, which is confined in said slot, in a reverse direction to form a closed loop during continued rotation in the same direction toward the forming position after the projecting end portion has been severed therefrom, said closed loop adapted to lock the helical wire relative to the row of coil springs.

3,090,408
APPARATUS FOR FILLING CONTAINERS
Uwe Neecker, Hamburg-Bergedorf, Germany, assignor to Firma Ortmann & Herbst, Hamburg, Germany
Filed July 19, 1962, Ser. No. 211,053
Claims priority, application Germany July 20, 1961
12 Claims. (Cl. 141—57)

3. In an apparatus for filling containers with a liquid under pressure, in combination, filling means including inlet control means movable between an open position for connecting the container to a source of liquid under pressure and a closing position disconnecting the source from the container, venting means for venting the container in said closed position, and an outlet tube having a lower end adapted to project into the container for receiving discharged air from the same; valve means secured to said lower end of said tube communicating with the same and having a lower inlet adapted to be located at the desired level of liquid in the container and a higher outlet for air located above said level, said valve means including a movable valve element responsive to flow of air through said inlet to move between an open position permitting air to pass from said container through

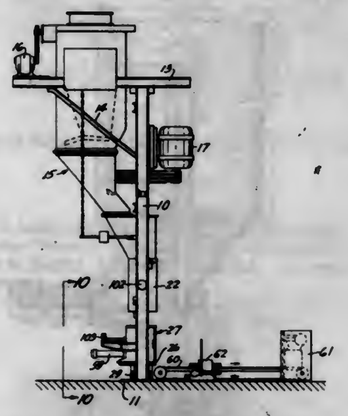


said inlet and out of said outlet tube, a higher closing position closing said tube to terminate filling, and a lower closing position closing said lower inlet, and a valve member responsive to pressure and operable between a normal position blocking discharge from said higher outlet and an actuated position permitting discharge from said higher outlet, said valve member moving to said actuated position in response to pressure in said valve means when said valve element is in said lower closing position whereby air is discharged from said outlet into the air filled vented spaced above said level of the liquid in the filled container so that foaming of the liquid is prevented.

3,090,409
BAGGING MACHINE
Malcolm McDermid and John Pilney, Minneapolis, Minn., assignors, by mesne assignments, to Howe Richardson Scale Company, Clifton, N.J.
Filed Oct. 15, 1959, Ser. No. 846,596
19 Claims. (Cl. 141—282)

2. Bagging equipment comprising a downwardly disposed bag filling spout, an open topped bag holding unit mounted beneath said spout for movement between an upper filling position adjacent the discharge end of said spout and a lower discharge position, said unit having a bag supporting floor, side wall structure, a portion of which is movable between open and closed positions to permit lateral removal of a filled bag therefrom and ejector mechanism mounted opposite said movable wall portion for engaging a filled sack to effect said removal from the unit, and fluid actuating means for moving said unit, movable wall portion, and ejector mechanism, said fluid actuating means including a first fluid cylinder for

raising and lowering said unit between filling and discharge positions, a second fluid cylinder for opening and closing said movable wall portion, and a third fluid cylinder for operating said ejector mechanism, first valve means for admitting fluid to said first cylinder to raise said unit to filling position, first switch means actuated by said ejector mechanism when in fully retracted position and operatively connected with said first valve means and preventing opening of said first valve means to admit fluid to said first cylinders until the ejector mechanism is fully retracted, fluid escape means permitting the escape of fluid from said first cylinder to drop the unit after said bag is filled from the spout to discharge position,



second valve means controlling the flow of fluid to and from said second cylinder, mechanism engageable with said second valve means for actuating same when the bag holding unit moves between said filling and discharge positions whereby said movable wall portion is closed after the unit begins its rise and prior to reaching filling position and is opened after dropping thereof by said escape means and prior to reaching discharge position, third valve means for controlling the flow of fluid to and from said third fluid cylinder, timing mechanism operatively connected to said third valve means for actuating same to extend and retract said ejector mechanism, and means carried by said unit for energizing said timing mechanism after opening of said movable wall portion.

3,090,410
FILLER SPOUT AND SAFETY CLOSURE FOR MOBILE WATER SYSTEMS
Hughlin E. Klingler, 223 Arcade Ave., Elkhart, Ind.
Filed May 17, 1961, Ser. No. 110,719
14 Claims. (Cl. 141—302)



1. In a combination with a mobile vehicle having a pressurized water system with a tank and a filler tube connected thereto,

a filler spout connected to said tube and mounted on an outside wall of the vehicle,

a hose connection nipple opening through the bottom of said spout and having a threaded ferrule adapted to connect a hose to the spout,

an outwardly seating check valve cooperative with the inner end of said nipple,

the top of said spout defining an inclined internally threaded filler opening substantially wider than said nipple,

a cap removably sealed in said opening and having an internally shouldered bore formed therethrough with a safety valve seat around the outer end of the bore,

a valve rod extending through said bore and having a conical shoulder opposite said seat,

a spider seated against the shoulder in said bore and guidingly receiving the inner end of said rod,

a nut threaded on the outer end of said rod and clamping a deformable sealing ring against the shoulder on the rod in cooperative relation to said seat,

a cap adjustable on the inner end of said rod,

a spring compressed between said cap and said spider,

the outer end of said rod having an internal bore formed therein with an outwardly seating check valve therein,

and the mid-section of said rod having a part formed therein communicating between the inner end of said internal bore and said bore in said cap inwardly of said sealing ring.

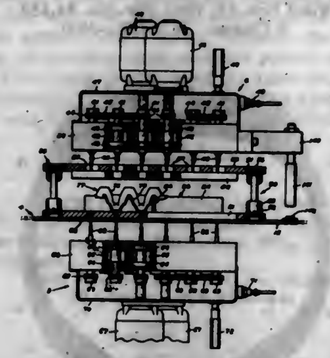
3,090,411
METHOD OF SIMULTANEOUS STABILIZATION AND DRYING OF WOOD
Flemming G. Juncker, Havndal, Jørgen Damgaard and Vagn Klago Jacobsen, Kege, Peter Henk, Hellerup and Jørgen Schmidt, Kege, Denmark, assignors to Junckers Savværk A/S, Vaerftsvej, Kege, Denmark
No Drawing. Filed July 26, 1961, Ser. No. 126,894
Claims priority, application Denmark July 29, 1960
2 Claims. (Cl. 144—320)

1. In treating wood to stabilize its tendency to warp consequent to varying air humidity, the improvement which comprises relieving the wood of its ability to contract tangentially to its annual rings by applying pressure of 5 to 100 kg. per cm.^{2} at a temperature of 110–200° C. across the width of the wood and only in a direction at right angles to its fibers for a period of ½ to 5 hours until the water content of the wood has been lowered to below 5% by weight of the wood, whereby the wood will be stabilized against contraction in directions at right angles to the direction of said hot pressing and will not warp with varying air humidity.

3,090,412
EGG DRILLING MACHINE
Rene Arthur Conrad, 2510 Humphrey Ave., Richmond, Calif.
Filed Nov. 24, 1959, Ser. No. 855,215
5 Claims. (Cl. 146—2)

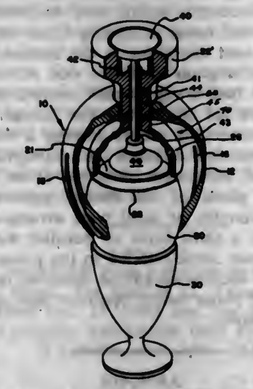
1. An egg drilling machine for drilling simultaneously a plurality of eggs on both ends, comprising a frame, a table secured to said frame, means on said frame for securely holding a carton of eggs in a predetermined position on said table; an upper drilling unit located above said table, including a plurality of drills, each drill being located over a respective egg in said carton, means for rotating said drills, a pneumatic cylinder secured to said frame and having a shaft depending therefrom secured to said drilling unit for moving the same downwardly and upwardly for drilling the upper ends of said eggs; a lower drilling unit, located under said table, including a plurality of drills, each drill being located under a respective egg in the carton, means for rotating said drills, a pneumatic cylinder secured to said frame and having a shaft extending therefrom and secured to said lower drilling unit for raising and lowering said unit for drilling the lower ends of the eggs in the carton; pneumatic means including a four

way valve operatively connected to said cylinders for synchronizing the movements of said drilling units to drill the eggs simultaneously on both ends, and means for



preventing said units from moving toward the table until said carton is properly placed in said predetermined position.

3,090,413
EGG TOP REMOVER
Emil Richard Rossi, 801 Bachelor Ave., Linden, N.J.
Filed Jan. 11, 1962, Ser. No. 172,363
1 Claim. (Cl. 146—2)



An egg shell top section remover, comprising

a hollow hood having a centrally-disposed hole in its upper portion and having a slotted flexible lower wall and a downwardly-directed opening for accommodating an egg inserted therein,

a hollow knob disposed over said hood and having a narrower portion protruding downwardly through the hole in said hood,

a cap fitting onto said narrower knob portion and coaxially within said hood and disposed over an egg placed in said hood,

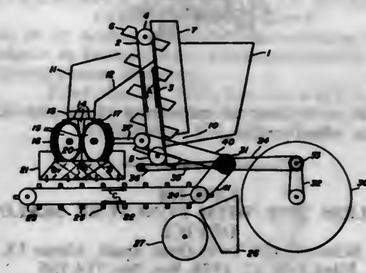
a circular cutter supported on said cap and coaxially within said hood in cutting position over the upper portion of an egg, in a manner such that when said knob is pressed and rotated, said cutter will cut a round section out of an egg shell of an egg disposed thereunder,

a push button disposed within the top of the hollow in said knob,

a rod attached to said button and protruding downwardly through said hollow, and

a suction cup attached to the lower end of said rod in a manner such that when said button is pressed, said suction cup will grip the upper section of an egg shell to be cut off.

3,090,414
APPARATUS FOR CUTTING AND PLANTING SEED POTATOES
Merle A. Briggs, R.R. 2, Plaster Rock, New Brunswick, Canada
Filed June 23, 1961, Ser. No. 119,090
5 Claims. (Cl. 146—59)



1. In apparatus for cutting seed potatoes, a horizontally disposed frame member, a knife blade supported by said frame member and having a cutting edge arranged to cut a potato symmetrically into longitudinal sections, a plurality of bearing members rigidly secured to said frame, a plurality of vertically situated, rotatable wheels journalled in said bearing members with their axes of rotation lying in a common plane at about the same level as said cutting edge, said wheels being symmetrically arranged and radially disposed with their vertical centre planes intersecting along a common vertical line, a plurality of resiliently flexible, elongated potato orienting fingers projecting radially outwardly from the peripheral surfaces of said wheels, said fingers being sufficiently rigid to exert a lateral force on a potato situated between said wheels to position it symmetrically above said cutting edge with its longitudinal axis substantially coextensive with said common vertical line and sufficiently flexible to permit said cutting edge to support the potato when the latter is being so oriented, a rigid projection extending radially outwardly from the peripheral surface of at least one wheel a distance slightly less than the shortest distance between the wheel and said common vertical line and adapted to force a potato past said cutting edge whereby to cut a potato symmetrically into longitudinal sections on rotation of the wheel, and power means operatively connected with said wheels to rotate them such that their peripheral portions nearest said common vertical line move downwardly at the same speed.

3,090,415
RESILIENT WHEELS
Edward H. Sahagian, 46 Brent St., Dorchester, Mass.
Filed Feb. 13, 1962, Ser. No. 172,906
6 Claims. (Cl. 152—41)

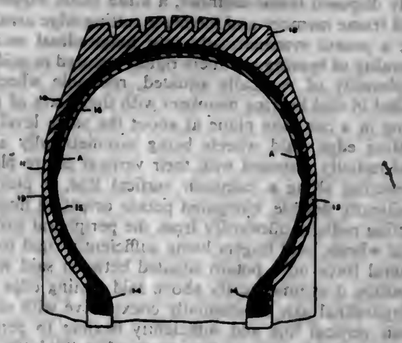
6. A pneumatic tired vehicle wheel having in combination a wheel proper having spokes, a rim having a central web having a series of circumferentially spaced apertures therein, a band of elastomeric material mounted against and affixed to the radially inward surface of the web and affixed to the spokes within the areas of the apertures, the portions of the wheel proper intervening

between spokes being normally spaced from the band but adapted to engage the latter where supported by



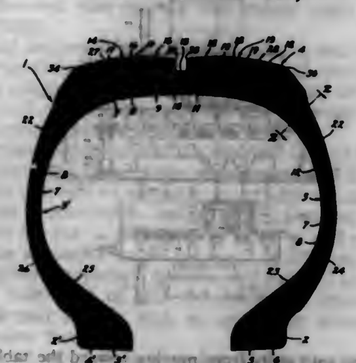
the web so as to limit the movement of the rim radially toward the wheel proper.

3,090,416
TUBELESS TIRE WITH PUNCTURE SEALING DEVICE
Harry P. Schrank, 120 Twin Oaks Road, Akron 13, Ohio
Filed Feb. 12, 1958, Ser. No. 714,755
4 Claims. (Cl. 152—347)



1. A tubeless pneumatic tire, comprising a rubber and fabric reinforced vulcanized casing having a tread portion and opposite sidewalls terminating in spaced annular beads, said casing having a liner of air-impervious vulcanizable elastic material integrally vulcanized to the inner surface portions thereof from bead to bead, and an annular member of relatively thin air-impervious vulcanizable elastic material integrally vulcanized to the shape of the inner surface of the casing and integrally bonded at marginal portions thereof to the opposite said sidewalls through said liner, peripherally around the same intermediate the tread portion and the respective said beads, said member between the marginal portions thereof being non-adhesive and unattached to the casing but fitting snugly against and conforming to the corresponding inner surface of said tread portion, the unattached portion of the member between said marginal portions normally being in smooth untensioned condition of the elastic material of the same, whereby a puncture made in the elastic member by an object pierced through the inflated casing will be sealed by the inherent tendency of the vulcanized elastic material of the member to resume said normal untensioned condition.

3,090,417
RADIAL CORD TRUCK TIRE
Rollin H. Spelman, Akron, Ohio, assignor to The General Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
Filed Feb. 23, 1961, Ser. No. 91,154
4 Claims. (Cl. 152—354)



1. A heavy duty pneumatic rubber truck tire comprising a tread portion with a narrow, deep, central, circumferentially continuous groove therein which separates it into two crowned, ground-engaging bands having their inner edges adjacent said central groove and extending to a side edge of the tread portion, the distance between the side edges of such tread being substantially less than the maximum internal width of the tire carcass, two wire bead rings in each tire bead portion; radial ply layers of high strength, nylon cord material, each ply layer having radial cords extending from one bead ring on one side of said tire through the carcass to the corresponding bead ring on the other side of said tire; and circumferential restricting means outwardly of said radial ply layers for improving the lateral stability of the tire, said restricting means having a width greater than said first-named distance and comprising a first layer of parallel wire cords arranged at an acute angle relative to the plane of the central groove, a second layer of short lengths of steel wire arranged in a rubber matrix, and a third layer of parallel wire cords arranged at an acute angle relative to the plane of the central groove, the inclination of the cords of the first layer relative to said plane being opposite that of the cords of said second layer.

3,090,418
LOCATING TOOL FOR SHEET METAL BENDING AND PROCESS FOR LOCATING A METAL SHEET FOR BENDING
Frank Marak, 3839 S. Lombard Ave., Cicero, Ill.
Filed July 22, 1960, Ser. No. 44,594
2 Claims. (Cl. 153—21)



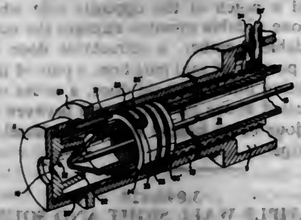
1. A process of locating a sheet of metal in forming dies for forming an angle bend on said sheet, said dies comprising upper and lower die members, the lower die member having a certain transverse width dimension and having a central vertical bending plane, measuring inwardly from the edge of said sheet the transverse width dimension of the lower die and scribing a line on said sheet, placing said sheet between the upper and lower dies, placing a pair of pointed end indicators against said lower dies with the pointed ends disposed above the sheet at opposite ends thereof whereby the dimension between the bending plane and said pointed ends equals one half the width dimension of the lower die, and aligning said pointed ends with the scribed line whereby a bend line on said sheet is coincident with said central bending plane.

3,090,419
HELIX FORMING MEANS
Allan P. Charbonneau, Wauwatosa, Wis., assignor to Cutler-Hammer, Inc., Milwaukee, Wis., a corporation of Delaware
Filed June 14, 1960, Ser. No. 36,018
20 Claims. (Cl. 153—64)



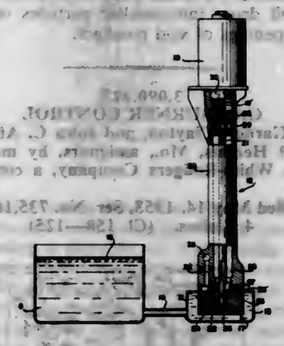
1. In a machine for winding linear metallic stock material into helical form, a relatively rotatable winding means and receiving means, said winding means comprising means for supporting and guiding the material to the receiving means whereby rotation of said winding means relative to said receiving means causes the material to be wound around said receiving means to form a helix, said receiving means comprising means causing release of the helix axially therefrom as additional turns of material are wound thereon, the turns of the metallic helix having a tendency to open slightly radially as they are released from said receiving means to cause the helix to rotate, means for driving said winding means, and means for driving said receiving means at such rotary speed as to offset such rotation of the helix whereby said helix does not rotate as it leaves said receiving means.

3,090,420
BURNER FOR LIQUID FUELS
Ernesto Socco, Via Ghilini 32, Alessandria, Italy
Filed Dec. 19, 1960, Ser. No. 76,686
Claims priority, application Italy Jan. 20, 1960
2 Claims. (Cl. 158—36)



1. A liquid fuel injecting assembly comprising an inner fuel duct surrounded by an outer gas duct coaxial therewith in their last portion before a combustion chamber of a burner, a tube of refractory material between said ducts and adherent to the fuel duct, said tube having an outer diameter slightly smaller than the inner diameter of the air duct, so as to leave an annular space of small thickness for the passage of gas, said tube having an electric resistance coiled on its outer surface arranged to heat the gas within the gas duct to a high temperature directly by conduction and radiation and simultaneously to increase the temperature of the liquid fuel by conduction through the wall of said fuel duct so that the fuel passes to a vapor phase, an annular chamber at the end of the gas duct surrounding a mixing chamber at the end of said fuel duct, small radial channels provided in the walls of said mixing chamber to permit entry of gas under pressure from said annular chamber, means for regulating the entry of fuel from said fuel duct to the mixing chamber, and a discharge bore in said mixing chamber having a relatively small diameter to impart a high speed to the mixture of gas and fuel discharged into an adjacent combustion chamber.

3,090,421
FUEL SUPPLY SYSTEM FOR AN INTERNAL COMBUSTION ENGINE
Ulrich W. P. Anders, Stuttgart-Unterturkheim, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany
Filed Mar. 25, 1957, Ser. No. 648,071
Claims priority, application Germany Mar. 31, 1956
14 Claims. (Cl. 158—36.3)

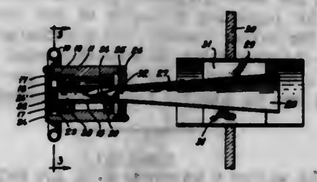


1. A fuel supply system for an internal combustion engine comprising an injection pump, a main fuel tank, a suction line including an engine driven fuel pump interconnecting said main fuel tank and said injection pump, an auxiliary fuel tank, suction line means interconnecting said main fuel tank and said auxiliary tank, a booster pump including a pump body, movable pump means within said pump body, said pump body being disposed in said auxiliary fuel tank and said movable pump means being submerged below the normal fuel level in said main fuel tank, line means connecting said pump body and said suction line, means for driving said movable pump means including an electric motor, and means furnishing protection against the danger of fuel ignition by sparks from said electric motor comprising elongated housing means disposed in a lengthwise upwardly extending position, said housing means having upper and lower end portions, said lower end portion being joined to said pump body and said upper end portion being joined to said electric motor, said elongated housing means being disposed in a position above said auxiliary fuel tank and remotely spacing said electric motor from said auxiliary fuel tank.

3,090,422
FUEL OIL BURNER
Alphonse Ducharme, St. Chrysostome, Quebec, Canada, assignor of forty-nine percent to Jean Charles Marcotte, Montreal, Quebec, Canada
Filed Nov. 20, 1961, Ser. No. 153,579
8 Claims. (Cl. 158—77)

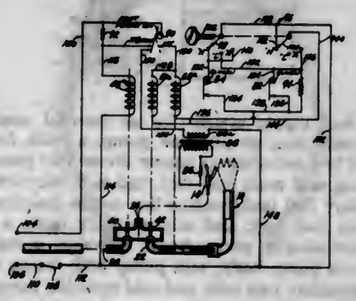
1. An oil burner comprising a turbine casing, a turbine rotor freely rotatably mounted within said casing, said

rotor consisting of a tube and of an end enlarged cylindrical hollow part having a central chamber coaxial with and in communication with said tube and angularly equally spaced bores opening at the periphery of said part and in said chamber, said bores being inclined with respect to the radii of said rotor intersecting said bores, the peripheral face of said part being in close proximity to an



internal cylindrical face of said casing, and means to feed a mixture of oil drops and air under pressure to angularly spaced passages made in said casing and opening in said cylindrical face opposite said bores, whereby the rotor is caused to rotate at high speed under the impulse of said pressurized mixture and the outer ends of said bores separate said oil drops into smaller particles upon moving across the openings of said passages.

3,090,423
GAS BURNER CONTROL
Claude M. Garner, Clayton, and John C. Atterbury, Jr., Richmond Heights, Mo., assignors, by mesne assignments, to White-Rodgers Company, a corporation of Missouri
Filed May 14, 1958, Ser. No. 735,165
4 Claims. (Cl. 158—125)



1. In a burner control system, a burner, a fuel supply conduit to said burner, first and second electromagnetically operated valves in said supply conduit arranged in series, said first valve being operative between fully open and fully closed positions and said second valve being operative between fully open and partially closed positions, said first valve having a normally fully closed position when de-energized and said second valve having a normally partially closed position when de-energized, and when in said partially closed position being effective to restrict the flow of fuel to the burner, a source of power, an energizing circuit for said valves including a first, high-temperature thermostat responsive to a drop in the temperature of the space being heated below a first, predetermined point to close and complete the energization and effect the opening of said first valve and a second, low-temperature thermostat responsive to a drop in the temperature of the space being heated below a second, lower, predetermined point to close and complete the energization and opening of said second valve but only if said first, high-temperature thermostat is closed, the circuit arrangement being such that said first valve is connected across the source of power through said first, high temperature thermostat and said second valve is connected across the source of power through said first and second thermostats in series, and a current limiting conductor connected across said second, low-temperature thermostat, said current limiting conductor having such resistance value as to permit sufficient energization of said second electromagnetically operated valve when said second thermostat is open to hold said valve open once it is open, while, on the other hand, restricting energization sufficiently when said second thermostat is open to prevent actuation of said second valve from its normal partially closed position to its fully open position, whereby when the space is being heated from a cold condition the maximum flow of fuel to the burner will persist until the space temperature has reached the point wherein said first, high-temperature thermostat opens, even though said second, low-temperature thermostat has previously opened at a lower space temperature.

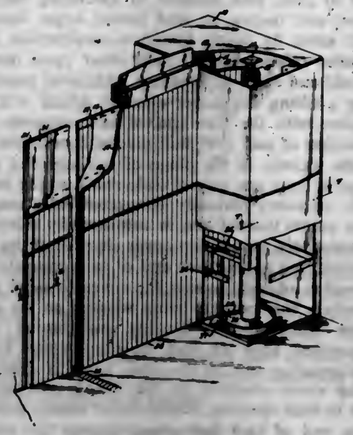
3,090,424
COILABLE PARTITION WITH DOORS
Clarence E. Carlo, Dubuque, Iowa, assignor to Dubuque Products, Inc., Dyersville, Iowa, a corporation of Iowa
Filed Dec. 16, 1960, Ser. No. 76,212
6 Claims. (Cl. 160—23)



1. A coilable partition for installation within a building, said partition comprising a coil box, a series of slat-like members connected in manner to provide a coilable wall structure having one end mounted in said coil box, slidable members connected to lower portions of each of said slat-like members, said slidable members being adapted to be received in a guiding recess by which movement of such sliding members is restricted, a series of hangers secured in spaced relation to the upper portions of certain said slat-like members, roller means carried by said hangers, track means for receiving said roller means and supporting said partition, said series of slat-like members having interfitting edges, each of said slidable members having a longitudinal offset providing a shoulder at one side and a notch at the opposite side whereby the shoulder of one slidable member engages the notch of the adjacent slidable member, a retractable door hinged to the free end portion of said partition, a pair of jamb strips and a separating lintel for said door, a series of slat-like members located above said lintel and between said jamb strips, said door being hinged below said lintel to one of said jamb strips.

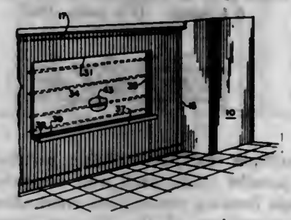
3,090,425
MULTIPLE WALL SIGHT AND SOUND INSULATING PARTITION
Clarence E. Carlo, Dubuque, Iowa, assignor to Dubuque Products Inc., Dyerville, Iowa, a corporation of Iowa
Filed Mar. 15, 1961, Ser. No. 95,951
6 Claims. (Cl. 160—25)

1. A coilable wall of the character described comprising the combination of a housing having an opening, a pair of reels journaled in said housing, a jointed curtain attached to each of said reels for winding and unwinding, said curtains extending through the opening in said housing into side by side relation and providing an air space therebetween, at least one of said curtains having a light and sight obstructing and sound insulating sheet attached thereto and disposed between said curtains when they are extended, said jointed curtains having overlapping portions at the joints thereby preventing vision and



obstructing passage of light therethrough, a buffer connected to the ends of said curtains remote from said reels, an overhead track, said curtains being individually suspended from said track, guiding means for the lower edges of said curtains, and means for imparting rotary motion to said reels to wind said curtains thereon.

3,090,426
COILABLE PARTITION WITH CHALK BOARD
Clarence E. Carlo, Dubuque, Iowa, assignor to Dubuque Products, Inc., Dyersville, Iowa, a corporation of Iowa
Filed Oct. 20, 1961, Ser. No. 146,517
9 Claims. (Cl. 160—25)



1. The combination of a housing having an opening, a roller journalled in said housing, a partition forming wall attached to said roller and coilable onto and uncoilable from said roller, said wall being composed of a plurality of individual elements, connecting means for said elements, certain of said elements having a cutout portion extending partially therethrough, a slot along the top and bottom of said cutout portion, such slot providing an extension of the inner surface of the cutout portion, a flexible sheet chalk board insert of a width greater than the cutout portion whereby the edges of the insert will extend into the slots at the top and bottom thereof, a retention strip along the ends of the cutout for securing the ends of said insert in place, an extruded removable chalk tray having a hook of a construction fitting into the slot along the lower side of the cutout portion.

3,090,427
UPWARDLY ACTING DOOR ASSEMBLY
Earl L. Stroup and Don P. Jones, Hartford City, Ind., assignors to Overhead Door Corporation, Hartford City, Ind.
Filed Apr. 12, 1957, Ser. No. 652,566
5 Claims. (Cl. 160—40)

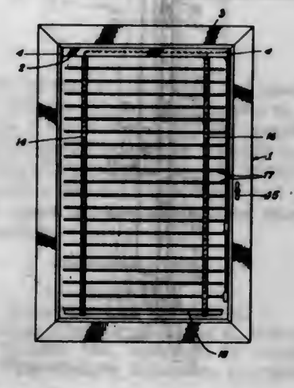


1. A vertically acting door assembly comprising frame members provided with inwardly facing jamb seals, a door comprising a plurality of horizontally articulated sections, track support members mounted on said door frame members in spaced relation to the jamb seals thereof, tracks comprising upright sections swingably mounted at their upper ends on said track support members, said door sections being provided with rollers coacting with said track including rollers disposed adjacent the lower edge of the bottom door section, said track supports and upright track sections having rearwardly facing recesses at their lower ends, thrust member brackets of outwardly facing channel section mounted on the lower ends of said support members at the rear of the recessed ends of said track sections, downwardly and forwardly inclined thrust members pivotally mounted on said brackets rearwardly of said recessed ends of said track sections, said brackets having vertical slots in the webs thereof, abutments for said thrust members provided with supporting bolts adjustably engaging said slots in said brackets, and springs acting to bias said track sections rearwardly.

3,090,428
OPERATING MEANS FOR VENETIAN BLINDS
Sigfrid Emanuel Lidin, 2 Gullmarsvagen, Johanneshov, Sweden
Filed June 26, 1962, Ser. No. 205,393
3 Claims. (Cl. 160—168)

1. In a Venetian blind, means defining a support slat, means defining a bottom slat, a plurality of intermediate slats between said support slat and said bottom slat, pairs of flexible means connecting said bottom slat with said support slat at both sides thereof and at least two horizontally spaced locations, a plurality of transverse means interconnecting said flexible means in pair for individually supporting said intermediary slats at spaced intervals, aligned means for pivotally mounting said support slat at both ends thereof, sleeve means rotatably mounted on one of said aligned means, a longitudinally extending recess in the upper portion of said lastmentioned aligned means, a depending projection within said sleeve means

which extends partly into said recess and is of less peripheral size than the width of the recess, thereby limiting the extent of rotatability of said sleeve means in relation to said lastmentioned aligned means, a circumferential groove at the outer end of said sleeve means, slots in said intermediary slats between the flexible members of each of said pairs of flexible means, said support slat having holes therethrough above said slots, and operating cords secured to said bottom slat and extending upwardly through said slots and holes and through said sleeve means in said recess one at each side of said depending



projection therein and further into said circumferential groove from which they depend one on each side of said sleeve means, whereby pull exerted in one of said depending cords causes said sleeve means to rotate until said projection clamps the pulled cord against the edge of said recess and thus causes the support slat to participate in continued rotation of said sleeve means to thereby tilt said intermediary slats, while pull exerted in both cords simultaneously and equally causes the blind to be raised without change of the angular position of said support slat and intermediary slats regardless of the degree of said angular position.

3,090,429

FLAP COVER DEVICES FOR CLOSING OPEN SPACES SUCH AS SHIPHOLD HATCHWAYS, RAILWAY CARS, AND THE LIKE

Henri Kammermans, Paris, France, assignor to International MacGregor Organization (I.M.G.O.), a body corporate of Monaco

Filed Oct. 20, 1960, Ser. No. 63,754
Claims priority, application France Oct. 24, 1959
5 Claims. (Cl. 160—188)



1. A remote controlled closure device for horizontal top openings in stationary and travelling open-top enclosed spaces such as hatchways in ship decks, roof apertures in buildings and in rolling vehicles, each opening being closed by at least one cover panel comprising an even number of hingedly interconnected panel sections forming a row of which that extreme panel section which is adjacent an end edge of said opening is pivotally connected to said end edge and at least the opposite extreme panel section is provided with side wheels at its free end for continuous bearing and rolling engagement with the lateral edges of said opening, said panel sections being adapted to close said opening by extending horizontally thereover and resting on said lateral edges thereof and to open same by being folded accordionwise in vertical parallel relationship to each other upon moving towards said end edge, at least one additional panel section forming a tilting flap cover element which is in pivotal connection with the free end of said opposite extreme panel section of said row, said pivotal connection remaining in the vicinity of the plane of said opening and consisting of at least one pair of slide-rest forming intermediate link members pivotally connected each one at two separate points thereof and in substantially sidewise relation respectively to said flap cover element at the adjacent end thereof and to said free end of said opposite extreme panel section adjacent to said flap cover element, each said intermediate link member being adapted on the one hand to move along and in bearing engagement with the corresponding edge of said opening while keeping a fixed orientation and on the other hand to alone support said flap cover element in the raised position thereof relative to said opening, lateral roller means provided on the free end of said flap cover element for rolling engagement with the edges of said opening when said element is in its substantially lowered horizontal position, at least one independently controlled power actuator means carried by one of said intermediate link members and operatively connected to said flap cover element for rotating the latter independently of said row through an angle of about 90° about its pivotal mount to swing it from a substantially vertically raised position to a horizontal position in continuation of said row and vice versa.

3,090,430

METALLIC DUAL THICKNESS PARTITION

Clarence E. Carle, Dubuque, Iowa, assignor to Dubuque Products, Inc., Dyersville, Iowa, a corporation of Iowa

Filed May 8, 1962, Ser. No. 193,342
6 Claims. (Cl. 160—196)



2. A multiple thickness coilable partition of spaced generally parallel walls, each wall comprising members having hinge forming connections interlocking with hinge forming connections of the adjacent members of the same wall and disposed along a longitudinal center line, the connections of each wall extending toward the opposite wall, and said hinge forming connections of one wall being located in spaced relation to the hinge forming connections of the other wall and disposed along the same longitudinal center line.

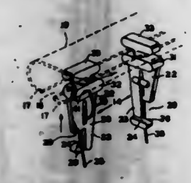
3,090,431

DRAPERY SUPPORTING AND PLEATING APPARATUS

Thomas A. Stubblefield, Vista, Calif., assignor of one-third to James F. Brooks, Garden Grove, and of one-third to John H. Hancock, Anaheim, Calif.

Filed Mar. 29, 1961, Ser. No. 99,112
4 Claims. (Cl. 160—345)

1. A combination glide and pin element for draperies, which comprises a plastic body having a fulcrum portion and also having a dependent portion, pin-seat means provided on said dependent portion in spaced relationship from said fulcrum portion, said pin-seat means extending laterally from said dependent portion, glide means provided on said body above said fulcrum portion to slidingly support said body from a drapery track, a resilient pin pivotally mounted on said fulcrum portion, said pin having a first portion adapted to be supportingly connected



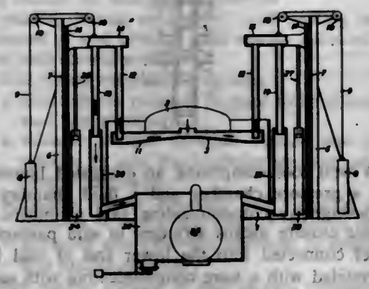
to a drapery, said pin also having a second portion adapted to pivot freely on one side of said pin-seat means, and means on said body to prevent movement of said second pin portion to the other side of said pin-seat means except upon flexing of said second pin portion around the distal end of said pin-seat means, whereby said second pin portion is resiliently maintained in locked condition on said other side of said pin-seat means.

3,090,432

MANUFACTURE OF ARTICLES FROM FIBROUS MATERIAL

Charles Henry Mayne, Woodford Green, England, assignor to Hawley Products Company, St. Charles, Ill.

Filed Aug. 15, 1960, Ser. No. 49,798
Claims priority, application Great Britain Aug. 25, 1959
5 Claims. (Cl. 162—393)



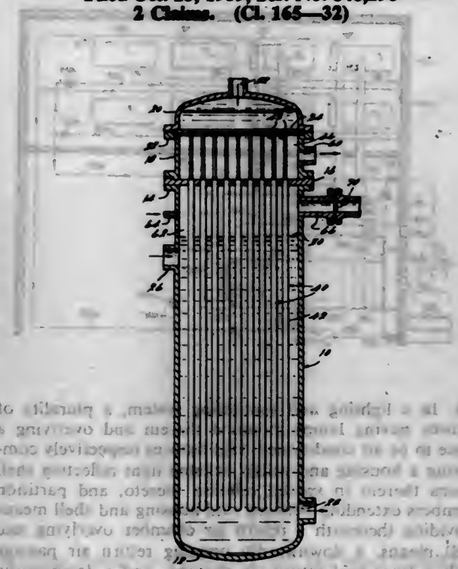
1. An apparatus for molding bodies from fibrous material comprising a tank adapted to hold a slurry of said fibrous material, a mold upon which said fibrous material is to be deposited, a hollow U-shaped cradle for supporting said mold, co-linear partially hollow horizontal stub arms terminating in vertical slide means, the hollow portion of said stub arms being connected with said hollow U-shaped cradle, a hollow vertical arm arranged telescopically to engage a hollow vertical tube in vacuum-tight relationship, said hollow vertical arm being connected with the hollow portion of said horizontal stub arm, supporting columns provided with guideways, the vertical slide means of said horizontal stub arms being arranged to slide therein enabling said stub arm, vertical arm, cradle and mold to move vertically as a unit with respect to said tank, and a vacuum source connected with said hollow vertical tube, said vacuum source, vertical tube, vertical arm, stub arm and cradle forming a vacuum system for providing a relatively lower pressure in said mold.

3,090,433

HEAT EXCHANGER

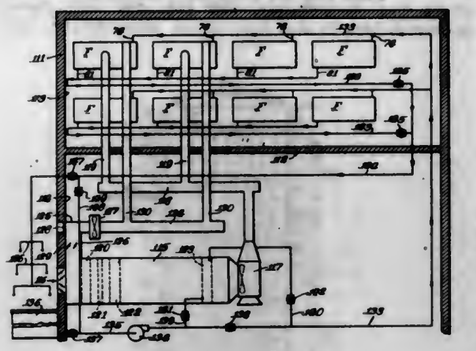
Alfred Amorosi, Birmingham, and John J. Morabito, Grosse Pointe, Mich., assignors to Atomic Power Development Associates, Inc., Detroit, Mich., a corporation of New York

Filed Oct. 23, 1959, Ser. No. 848,298
2 Claims. (Cl. 165—32)



1. A heat exchanger for the exchange of heat between two liquids which react to generate high pressure gases when mixed, comprising a tank having an inlet for one of said liquids at its upper end, a tube sheet extending across said tank below said inlet, a second tube sheet extending across said tank in spaced relation to and below said first tube sheet, a series of tube assemblies each comprising an outer tube supported by said second tube sheet and extending therefrom downwardly into said tank and an inner tube supported by said first tube sheet and extending therefrom downwardly into said outer tube in concentric relation thereto, said outer tubes being closed at their lower ends and communicating at their upper ends with the space between said tube sheets, said inner tubes being open at their lower ends and terminating adjacent the lower ends of said outer tubes, said inner tubes communicating at their upper ends with said inlet, said tank having an outlet for said one liquid leading from the space between said tube sheets, said tank being adapted to contain a body of the other of said liquids therein at a predetermined level below said second tube sheet and having an inlet for the other liquid below said second tube sheet and an outlet therefor at the lower end of said tank, pressure surge dissipator means comprising a body of an inert gas contained by said tank above the level of said other liquid, an inlet in said tank above the level of said other liquid for maintaining said body of inert gas at a predetermined pressure, a further outlet from said tank, said further outlet also being located above the level of said other liquid, and a pressure relief diaphragm normally closing said last-mentioned outlet and adapted to rupture upon exposure to a substantially increase in the pressure in said tank to provide an outlet for the reaction products of the liquids in the event of a tube break.

3,090,434
COMBINATION LIGHTING AND VENTILATING FIXTURE
Benjamin S. Benson, Jr., Arlington Heights, and Robert S. Geocaris, Broadview, Ill., assignors, by mesne assignments, to Thomas Industries, Inc., Louisville, Ky., a corporation of Delaware
Filed Feb. 5, 1960, Ser. No. 6,948
9 Claims. (Cl. 165—50)



1. In a lighting and ventilating system, a plurality of fixtures having lamps mounted therein and overlying a space to be air conditioned, said fixtures respectively comprising a housing and water jacketed light reflecting shell means therein in spaced relation thereto, and partition members extending between said housing and shell means providing therewith a return air chamber overlying said shell means, a downwardly opening return air passage leading from said return air chamber and a downwardly opening air supply chamber closed to said return air chamber; a trunk conduit having an atmospheric air intake opening, a blower having its intake connected to said conduit, the latter having therein a preheater and a cooling coil and a reheater disposed in the order stated between said opening and said blower, means for delivering air from said blower to said air supply chambers of said fixtures, means for drawing air through said air return passages and chambers of said fixtures and delivering it to said trunk conduit and to atmosphere optionally, and means for optionally circulating water through said shell means and reheater and shunting the water from said shell means around said reheater.

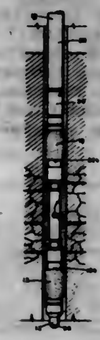
3,090,435
METHOD FOR CONSOLIDATING INCOMPETENT FORMATIONS
John K. Kerver, Warren E. Holland, and Weldon O. Winsauer, Houston, Tex., assignors, by mesne assignments, to Jersey Production Research Company, Tulsa, Okla., a corporation of Delaware
Filed Feb. 5, 1959, Ser. No. 791,318
5 Claims. (Cl. 166—29)

1. A method for consolidating an incompetent subsurface earth zone containing water pierced by a well under control with a hydrostatic column of aqueous fluid which comprises displacing said aqueous fluid from the region of said incompetent zone upwardly in said well with a low fluid loss weighted solids-free, water-in-oil emulsion having a density greater than that of the aqueous fluid to form a body of said weighted emulsion in said well adjacent said incompetent zone, displacing a portion of said body upwardly in said well with a hydrolyzable liquid halide of silicon, said liquid halide of silicon having a density greater than that of said aqueous fluid and said body, and then forcing said liquid halide of silicon into said incompetent zone, said body being nonreactive with said aqueous fluid and with said liquid halide of silicon



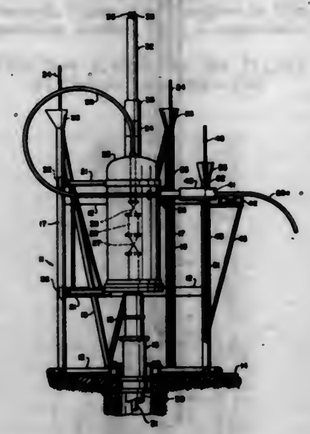
whereby said liquid halide of silicon is hydrolyzed only in said incompetent zone to consolidate said zone.

3,090,436
WIRE LINE HYDRAULIC FRACTURING TOOL
George E. Briggs, Jr., Houston, Tex., assignor to Halliburton Company, a corporation of Delaware
Filed Oct. 6, 1959, Ser. No. 844,670
11 Claims. (Cl. 166—63)



1. A well tool comprising an elongated housing providing a pressure chamber and a fluid chamber and a fluid passageway communicating said chambers, a displaceable closure means arranged in said passageway, a mandrel connected into the lower end of said housing and provided with a bore communicating with said fluid chamber, upper and lower packer members arranged on the outer wall of said mandrel, expansive housings arranged on the outer wall of said mandrel between said packers for expanding said packers into engagement with the wall of the well bore responsive to fluid pressure, said wall of said mandrel provided with ports communicating said mandrel with the interior of said expansible housings, blowout means arranged in the wall of said mandrel between said expansible housings, said blowout means adapted to rupture at a predetermined pressure in said mandrel, means arranged in said pressure chamber for generating pressure within said chamber, pressure releasing means arranged in said housing and operable from the earth's surface, pressure equalizing means provided in said tool for equalizing the well bore pressure below the lower packer member with that above the upper packer member when said packer members are expanded against the wall of said well bore and means connected to said housing for raising and lowering said housing.

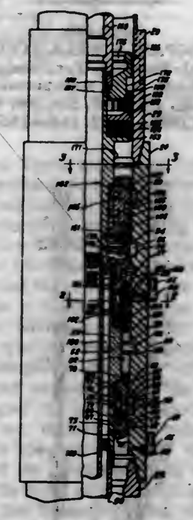
3,090,437
UNDERWATER WELLHEAD FLOW LINE CONNECTOR
Ronald L. Geer, Houston, Tex., assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware
Continuation of abandoned application Ser. No. 835,931, Aug. 25, 1959. This application Nov. 9, 1961, Ser. No. 152,713
13 Claims. (Cl. 166—66.5)



1. A pipeline coupling unit comprising
(*a*) first and second mating members positionable in spaced or coupled relationship and having flow passageways therethrough and adapted to be positioned initially in spaced relationship and approximate coaxial alignment,
(*b*) said first member being provided with a sealing surface around its flow passageway for receiving a sealing surface of said second member
(*c*) sealing means on one of said sealing surfaces adapted to seal between said sealing surfaces of the first and second members,
(*d*) said second member comprising
a fixed tubular member adapted to be aligned with said first member,
a slidable tubular member outside and slidable relative to said fixed tubular member and concentric therewith,
actuating means engaging said slidable tubular member to move said tubular member between retracted and extended positions to engage said first mating member,
(*e*) said sealing surface of said second member being located on the extendable end portion of the slidable member, and
(*f*) aligning means carried by said slidable member and disposed radially from said sealing surface of the second member and engageable with the first member whereby said first and second members are movable from approximate to substantial alignment to permit co-engagement of the sealing surfaces.

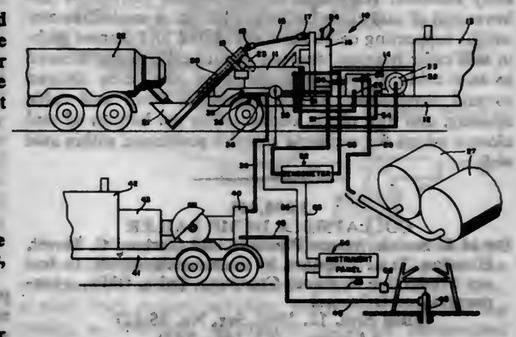
3,090,438
MULTIPLE FLOW CONDUCTOR SUSPENSION APPARATUS
George Max Rhodes, Dallas, Tex., assignor, by mesne assignments, to Otis Engineering Corporation, Dallas, Tex., a corporation of Delaware
Filed Oct. 29, 1958, Ser. No. 770,385
16 Claims. (Cl. 166—75)

1. A well tool system including: an outermost tubular member having a plurality of longitudinally spaced sets of selector and lock recesses in which each of said sets of recesses is of a different cross-sectional configuration from each of the others of said sets of recesses; a plurality of well tools having dependent portions disposed in telescoped spaced relation relative to one another and said outermost tubular member, each of said well tools having selector and lock means projecting outwardly therefrom and of a configuration conforming to a selected one of said sets of recesses in said outermost tubular member, the selector means of each of said well tools being freely



movable outwardly of the well tool and being biased outwardly, said well tools being releasably secured to said outermost tubular member by said selector and lock means, said selector and lock means of each of said well tools being receivable in a selected set of said selector and lock recesses of said outermost tubular member whereby each well tool may be positioned and locked in a selected position in said internal tubular member upon downward movement through the outermost tubular member.

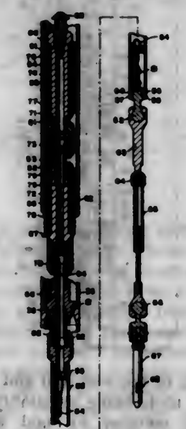
3,090,439
CONTROL OF WELL FORMATION FRACTURING OPERATIONS
George V. Copland and Edward L. Groner, Duncan, Okla., assignors to Halliburton Company, a corporation of Delaware
Filed June 6, 1960, Ser. No. 34,224
4 Claims. (Cl. 166—75)



1. Apparatus for performing a fracturing operation in a well formation, comprising in combination: a well head,

means for pumping a mixture of a liquid carrier and a propping agent into said well head, means for continuously measuring the rate of flow of said mixture, means for continuously measuring the pressure of said flowing mixture at the well head, and means for continuously multiplying together said measurements to obtain a product proportional to the hydraulic power input into the well, and means for continuously displaying an indication of said product at a location remote from the well head.

3,090,440
PUMPABLE WELL TOOL
Edward B. Lagucki, Houston, Tex., assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware
Filed Aug. 10, 1960, Ser. No. 48,685
4 Claims. (Cl. 166—155)



1. A well tool adapted to be pumped down one of at least two strings of pipe positioned within a well, said string of pipe having a lower open end and having stop means positioned therein to prevent the passage of a well tool therethrough, said well tool comprising a body member of a diameter small enough to pass through said pipe string, at least a portion of said body member being of a size to engage and be stopped by the stop means of said pipe string, a tool carrier secured to the top of said body member, said tool carrier having sealing element means carried thereon of substantially the same diameter as the pipe string for propelling the well tool through the pipe string in a stream of fluid flowing therethrough, a flexible cable housing secured to the lower end of said body member, releasable closure means carried by the lower end of said cable housing, a length of small-diameter weight supporting cable normally stored and carried within said cable housing, one end of said cable being secured to said cable housing and the other end being secured to said closure means and extendible from said cable housing, and tool means connected to the bottom of said closure means for engaging a device positioned within said well.

3,090,441
COLLAPSIBLE DUMP BAILER
David E. Sealuk, Mount Pleasant, and Garland C. Terrel, Houston, Tex., assignors, by mesne assignments, to Jersey Production Research Company, Tulsa, Okla., a corporation of Delaware
Filed Sept. 12, 1960, Ser. No. 55,427
4 Claims. (Cl. 166—162)

1. A dump bailer adapted to be lowered in a well bore on a wireline comprising a plurality of vertically extensible, collapsible, telescopically connected members forming chambers for initially containing material to be expelled therefrom and dumped in said well bore; releasable means arranged on the lower end of the lowermost telescopic member adapted to initially retain said expellable material in said chambers; and means for releasing said releasable material retaining means to permit said material to be expelled from at least all but one of said chambers upon collapse of said telescopic members.

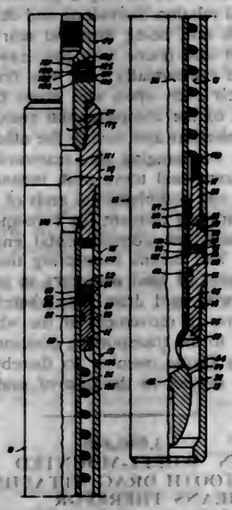


3,090,442
DEVICE FOR SUPPORTING A CLOSURE WITHIN A WELL PIPE
Chudleigh B. Cochran and James D. Mott, Houston, Tex., assignors to Cicero C. Brown, Houston, Tex.
Filed Oct. 24, 1958, Ser. No. 769,435
16 Claims. (Cl. 166—192)



1. A plug for closing the lower end of a tubing comprising, a mandrel, movable dog means carried by the mandrel, means mounted on the mandrel holding the dog means in extended position, a releasable connection between said holding means and said mandrel, means including pressure responsive means releasing said releasable connection upon being subjected to a predetermined pressure, and pressure operated means preventing the holding means from releasing the dog means until said predetermined pressure has been reduced to a second predetermined pressure.

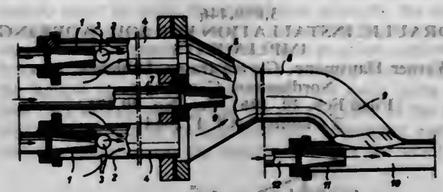
3,090,443
WELL TOOLS
James H. Bostock, Dallas, Tex., assignor to Otis Engineering Corporation, Dallas, Tex., a corporation of Delaware
Filed Nov. 3, 1958, Ser. No. 771,282
23 Claims. (Cl. 166—224)



1. A well flow control device including: an outer tubular member; a valve member movably mounted in the said tubular member for longitudinal movement therein and having a longitudinal flow passage formed therein; means sealing between said tubular outer member and said valve member, said flow passage of said valve member communicating with the interior of the tubular outer member above and below said seal means; means on said outer tubular member below said seal means and on said valve member below said flow passage engageable upon movement of said valve member longitudinally of said outer member to close off flow of fluids through said valve member; biasing means in said outer member engaging said valve member and biasing said valve member toward such closed position, said valve member having an area thereon exposed to the pressure of fluids flowing through said valve member, said pressure of fluids flowing through said valve member acting on said area of said valve member against said force exerted by said biasing means to move said valve member longitudinally in said outer member to a position opening said passage of said valve member to permit flow therethrough, said area of said valve member being downstream of the valve means whereby when said valve member is in closed position, pressure of fluids upstream of said valve acting on said valve member coacts with said biasing means to hold said valve member in closed position.

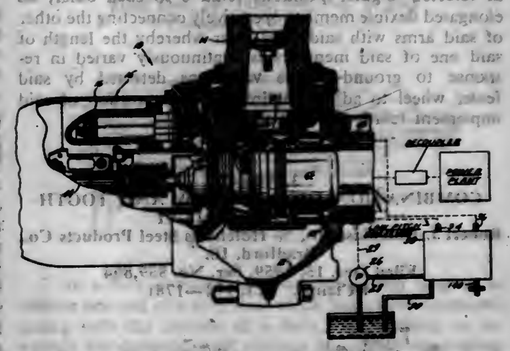
ERRATUM
For Class 168—7 see:
Patent No. 3,090,718

3,090,444
MULTI-STAGE FOAM GENERATOR FOR EXTINGUISHING FIRES
Edoardo Bandiroli, Milan, Italy, assignor to Bergomi Societa per Azioni, Milan, Italy
Filed Apr. 11, 1961, Ser. No. 102,270
Claims priority, application Italy May 10, 1960
2 Claims. (Cl. 169—15)



1. A multi-stage foam generating apparatus for producing fire-extinguishing foam comprising; a first foam generating stage including at least two parallel elongated foam-producing chambers, each having an inlet end and an outlet end, injector means for introducing foam forming liquid into the inlet end of each chamber, means for admitting air around the injectors at the inlet end of each chamber for foam producing purposes, a funnel-shaped common chamber having a large inlet end and a foam restricting outlet opening opposite thereto, and otherwise closed to the atmosphere, the outer end of each foam-producing chamber extending into the large inlet end of the funnel-shaped chamber and spaced from the axis thereof, at least one further stage including an injector axially located in the funnel-shaped chamber between the outlet ends of the foam-producing chambers for injecting liquid in the form of a jet impinging on the foam disgorging from the foam-producing chambers for homogenizing and accelerating the foam and directing it through the foam-restricting opening of the funnel-shaped common chamber.

3,090,445
SIMULTANEOUS FEATHER AND PITCH LOCK ACTUATOR
Richard L. Fischer, Suffield, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed Dec. 19, 1960, Ser. No. 76,747
5 Claims. (Cl. 170—160.21)



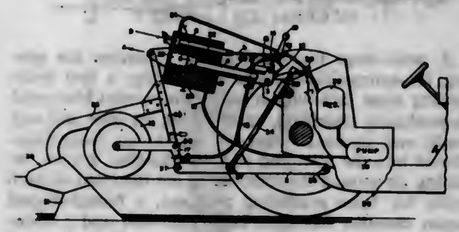
1. In an engine driven propeller having a decoupler device interposed between the engine and propeller the combination comprising variable pitch propeller blades, a pitch lock device including independent coordinating means, a feathering mechanism including independent coordinating means, overriding means for actuating the pitch lock device and operable independently of said pitch

lock coordinating means, said independent feather coordinating means including a control valve for advancing the pitch to a higher blade angle, said control valve producing a signal, means responsive to said signal for controlling said overriding means, when the control valve fails to advance the pitch to a higher blade angle.

3,090,446
HYDRAULIC INSTALLATION FOR SOIL-WORKING IMPLEMENTS

Werner Hausmann, Gartenstrasse, Uthleben, near Nordhausen, Germany

Filed Feb. 20, 1961, Ser. No. 90,271
2 Claims. (Cl. 172—4)

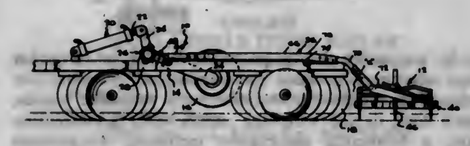


1. In a hitch interconnecting an agricultural implement and a tractor, in combination, two generally elongated link members articulated to said implement and pivotally connected to said tractor at locations spaced one above the other, at least one of said link members being extensible and provided with a hydraulic cylinder and a differential piston displaceable within said cylinder for varying the length of said one of said members, a source of fluid under pressure operatively coupled with said cylinder; a fluid-control valve for regulating the pressure applied to said piston; manually operable regulating means for adjusting said valve, said regulating means including a first lever manually displaceable about a substantially fixed fulcrum relative to said tractor and link means interconnecting said valve and said first lever; another lever having two arms of unequal length fulcrumed to said implement; a feeler wheel journaled to the longer one of said arms and engaging the ground; and transmission means including a third lever angularly displaceable relative to said first lever about said fulcrum, means for releasably indexing said first and third levers in selected angular positions relative to each other, an elongated flexible member operatively connecting the other of said arms with said third lever whereby the length of said one of said members is continuously varied in response to ground-surface variations detected by said feeler wheel to adjust continuously the position of said implement relative to said surface.

3,090,447
COMBINATION DISC HARROW AND TOOTH DRAG ATTACHMENT

Robert J. Hotchkiss, Jr., % Hotchkiss Steel Products Co., Bradford, Ill.

Filed Dec. 15, 1959, Ser. No. 859,804
4 Claims. (Cl. 172—178)

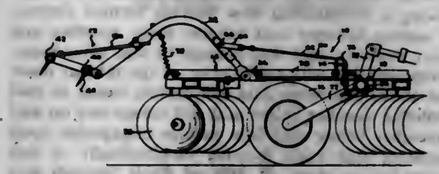


1. The combination with a disc harrow including a frame having a forward end and a rearward end, a pair of transporting wheels positioned transversely of said frame between the forward and rearward ends thereof and normally spaced above a ground surface, a wheel-carrying element connecting said wheels together, means rotatively connecting said element to said frame about a transverse horizontal axis for pivotal movement of said wheels from the normal position to a position in which said wheels are in a transporting position on said ground surface, means operatively connected to said element for effecting the movement of said wheels from the normal position to the transporting position, and a cross frame member on the rearward end of said harrow frame, of a tooth drag attachment including at least two drawbars and a tooth unit including at least two tooth-carrying bars each having a plurality of teeth arranged in spaced relation therealong and depending therefrom, said tooth unit being disposed rearwardly of the rearward end of said frame with the drawbars disposed so as to extend horizontally over the frame and bear intermediate their ends upon said cross frame member and having one of the complemental ends adjacent said wheel-carrying element and having the other of the complemental ends overhanging the rearward end of said frame and adjacent said tooth unit, means eccentrically connecting said one complemental ends of said drawbars to said wheel-carrying element for fore-and-aft swinging movement of said one complemental ends about said horizontal axis, and means connecting the other of the complemental ends of said drawbars to said tooth unit for movement with said drawbars, whereby said drawbars in the course of movement of the wheels from the normal position to the transporting position will fulcrum about said cross frame member to thereby elevate said tooth unit with respect to the disc of said harrow.

3,090,448
COMBINATION WHEEL-MOUNTED DISC HARROW AND TOOTH DRAG ATTACHMENT WITH TENSION MEANS THEREFOR

Robert J. Hotchkiss, Jr., % Hotchkiss Steel Products, Bradford, Ill.

Filed Jan. 26, 1960, Ser. No. 4,815
2 Claims. (Cl. 172—178)



1. The combination with a disc harrow including a frame having a forward end and a rearward end, a pair of transporting wheels positioned transversely of said frame between the forward and rearward ends thereof and normally spaced above a ground surface, a wheel-carrying element connecting said wheels together, means rotatively connecting said element to said frame about a transverse horizontal axis for pivotal movement of said wheels from the normal position to a position in which said wheels are in a transporting position on said ground surface, means operatively connected to said element for effecting the movement of said wheels from the normal position to the transporting position, to a tooth drag attachment including at least two drawbars and a tooth unit including at least front and rear tooth-carrying bars each having a plurality of teeth arranged in spaced relation therealong and depending therefrom, said tooth unit being disposed rearwardly of the rearward end of said frame with the drawbars disposed so as to extend over the frame and having one of the complemental ends adjacent said frame and having the other of the complemental ends adjacent said tooth unit, means connecting said one complemental ends of said drawbars to said frame for pivotal movement about a horizontal axis parallel to said horizontal axis of said wheel-carrying element, means pivotally connecting said other complemental ends of said drawbars to the front tooth-carrying bar of said tooth unit, adjustable brace means interconnecting each drawbar to the rear tooth-carrying bar to maintain the tooth unit in fixed relation to said other complemental ends of said drawbars, snubbing means connecting the rearward end of said frame to said drawbar and lying substantially coextensive with said frame in the normal position of said wheels and becoming activated to yieldingly restrain upward movement of said drawbars when said wheels are moved to transporting position, at least one crank arm fixedly secured to said wheel-carrying element, and tension means connected at one end to said crank arm and connected at its other end to said drawbars whereby said drawbars in the course of movement of the wheels from the normal position to the transporting position will elevate said tooth unit with respect to said harrow.

3,090,449
LIFT FOR AGRICULTURAL IMPLEMENT

Gerald G. Ward, Naperville, Ill., assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey

Filed Dec. 26, 1961, Ser. No. 162,129
3 Claims. (Cl. 172—316)



1. In an implement attachment for a tractor having a source of fluid under pressure, a tool-carrying frame having means thereon for connection to the tractor in draft-receiving relation, a pair of crank axles having longitudinally spaced parallel axle sections rockably mounted on the frame and wheel-carrying arm sections on opposite sides of the frame, said arm sections being swingable upon rocking said axle sections relative to the frame to raise and lower the latter, a rockable member affixed to each axle section, a one-way hydraulic power unit extending between said rockable members including a cylinder pivotally connected to one of said rockable members and a piston rod pivotally connected to the other, said rod being extendible under pressure of fluid received from said source to rock said rockable members in opposite directions to raise the frame and retractable upon release of the pressure on the fluid to lower the frame and stop means on the frame engageable with said rockable members after a predetermined retraction of said piston rod to limit the extent to which the frame can be lowered.

3,090,450
IMPACT DRILL

Charles Fulop, 131 Skyview Drive, Seven Hills Village, Ohio

Filed Mar. 16, 1960, Ser. No. 15,482
3 Claims. (Cl. 175—147)

1. An impact drill, comprising in combination, a housing including an electric motor encased therein; a spindle driven by said motor, journaled in said housing; a mandrel immovably mounted on the spindle; a tool holding hollow head slidably mounted on the mandrel and free to reciprocate longitudinally thereof, means mounted on the mandrel and engaged with the head to prevent relative rotation therebetween; an anvil disc immovably mounted on the spindle, spaced inwardly of the mandrel, having first and second end surfaces faced toward and away from the head member, respectively, the anvil having a plurality of radially spaced bores therethrough, parallel to the spindle axis, and a plurality of balls embedded in its second surface positioned between the bores; a ram member slidably mounted on the spindle between the tool holding head and the anvil disc, having a plurality of radially spaced studs loosely fitted through the anvil bores, whereby the ram is keyed to the spindle for rotation therewith but free to float longitudinally thereof, between a first position, against the first end surface of the anvil, and a second position, against the hollow head, the length of the ram studs being such that they extend beyond the second end face of the anvil when the ram is in its first position; a hammer member slidably mounted on the spindle between the anvil and

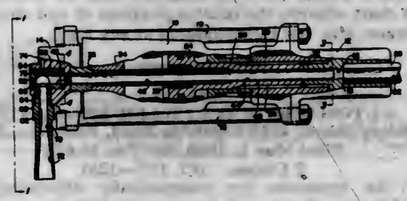


the motor driven end of the spindle, free to reciprocate longitudinally thereof but keyed to the housing against rotation with the spindle. said hammer having a plurality of sharply inclined cam teeth arranged in a circle, adapted to ride on the anvil balls; a coil spring mounted on the spindle between the motor driven end thereof and the hammer, and normally acting to bias said hammer against the anvil, said hammer cam teeth being free to ride upon the anvil balls when the spindle is rotating, whereby the hammer is caused to move axially of the spindle away from the anvil, against the biasing action of the spring, and then returned thereagainst, when the high point of the cam teeth pass the balls, in sharp impact to strike the ram studs when the ram is in its first position, to throw the ram to its second position, in hard impact against the free floating tool holding head member, to sharply displace same longitudinally of the spindle mandrel.

3,090,451
DUSTLESS DRILL

Martin Worman, Phillipsburg, N.J., assignor to Ingersoll-Rand Company, New York, N.Y., a corporation of New Jersey

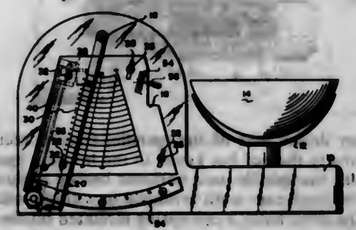
Filed Dec. 20, 1960, Ser. No. 77,143
7 Claims. (Cl. 175—213)



1. In a fluid operated percussive rock drill adapted to receive one end of a drill steel which has a bore communicating with the interior of a hole being drilled, an assembly for removing drill cuttings by suction comprising, a tube in said rock drill communicating with the bore in said drill steel to receive drill cuttings from the latter, a member having a passageway extending partly therethrough slidably receivable in and removable from the rock drill, said member being adapted to engage said tube to prevent movement of said tube relative to said member and communicate said tube with the passageway

in said member, an ejector connected to said rock drill with the longitudinal axis of the ejector extending at an angle with respect to the longitudinal axes of the member and tube so as to communicate with the passageway in said member and engage said member to prevent slidable movement of said member from the rock drill until said ejector is at least partially disconnected from the rock drill, and means communicating said ejector with a source of pressurized fluid to provide for flow of fluid therethrough and induce fluid flow through the bore in the drill steel, the tube, and the passageway in said member.

3,090,452
PERCENTAGE INDICATING SCALE
George W. Armstrong, 284 E. Dayton Drive, Fairborn, Ohio
Filed Feb. 21, 1958, Ser. No. 716,619
3 Claims. (Cl. 177—41)



1. In a percentage indicating weighing apparatus for a sample of material to determine the percentage of the total weight of a fractional portion thereof, a weight pan, an indicator arm swingable in response to movements of the pan caused by the placing therein of a sample or the like, a chart over which the indicator arm swings, said chart comprising a plurality of percentage graduated scales arranged in spaced relation lengthwise of the indicator arm and all of said scales having a common zero line with which the indicator arm registers when the pan is unloaded, each said graduated scale being graduated from zero to 100 and the 100 indications on said scales being so arranged that as the indicator arm moves across the chart it registers percentages successively therewith, and means operable for shifting said chart in the direction of the said zero line thereon whereby the indicator arm can be caused to register exactly with one of the said 100 marks when it is positioned any place between the two extreme 100 marks when the pan is loaded, there being indicator means for indicating the adjusted position of said chart whereby the relative positions of said chart and indicator arm can be reproduced at any time.

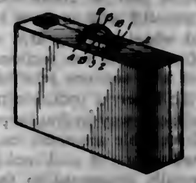
3,090,453
AUTOMATIC SCALE FILLER APPARATUS
Sidney Rosen, 4119 Fordleigh Road, Baltimore, Md.
Filed May 2, 1960, Ser. No. 26,028
2 Claims. (Cl. 177—120)

1. An apparatus for automatically dispensing and weighing powder, granular materials, tablets, capsules, or the like, comprising, a dispensing mechanism including a vibratory mounted chute type tray having a bridge portion over the top thereof, a divider element depending from said bridge portion to the chute surface of said chute type tray and extending substantially the length thereof for dividing said tray into fast and slow feed aisles, means to adjustably secure said divider element to and along said bridge portion so as to simultaneously adjust the respective widths of said fast and slow aisles, and a hopper for feeding material to be dispensed into said fast and slow aisles; means including a scale for automatically weighing said material being dispensed by said chute type tray, means for automatically sensing the position of said scale of said weighing means a first time and for shutting off the material being dispensed by said fast feed aisle when a predetermined amount of material has been dispensed and weighed by said weighing means and for



simultaneously reducing the intensity of vibration of said chute type tray, and means for automatically sensing the position of said scale of said weighing means a second time when the net weight of material to be dispensed has been reached to halt vibration of said chute type tray and thereby dispensing by said slow aisle.

3,090,454
SCALE LUGGAGE HANDLE
Clayton L. Farrar, 4222 Waban Hill, and Gordon V. Marlow, 110 E. Main St., both of Madison, Wis.
Filed May 11, 1960, Ser. No. 28,338
8 Claims. (Cl. 177—131)

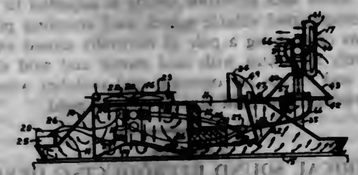


1. The combination of a luggage unit having a flat upper surface; a pair of normally registered and interengaged members, the first of which is fixed on the upper surface of the luggage and the second is fixed upon the first for rotation around a vertical axis located at the centers of the members; and normally inoperative weighing means disposed within said first member and rendered operative by rotating the second member with respect to the first into weighing position; and a luggage handle fixed to said second member.

3,090,455
PLENUM CHAMBER TYPE GROUND EFFECT MACHINE WITH SELF-PROPULSION AND STEERING MEANS
Walter A. Crowley, Royal Oak, Mich., assignor, by mesne assignments, to Carwil Enterprises, Incorporated, Daytona Beach, Fla.
Filed Sept. 29, 1958, Ser. No. 763,919
20 Claims. (Cl. 180—7)

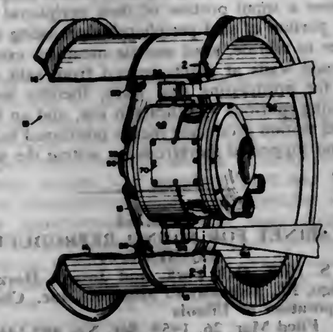
16. A vehicle adapted to be raised from a surface by gas pressure and travel and be steered at low altitude

represented by a perimetrical gas escape gap relative to said surface, said vehicle including a body having an upwardly extending downwardly open hollow underside for gas, said hollow underside being in communication under said body with the atmosphere when the body is raised over the surface to be traveled, and means for vertically lifting, horizontally propelling and steering the vehicle, said means including pressurizing means on the vehicle and communicating with said hollow underside for maintaining gas under pressure in said hollow underside and in cushion under said body for lifting the vehicle upward only in the region of ground effect and supporting the vehicle into a horizontally idle hovering position with said



body forming with said surface said perimetrical gas escape gap which gap under given load on the vehicle has magnitude varying with gas pressure then available in total from said pressurizing means for lifting the vehicle in view of amounts of said gas escaping from the hollow underside to the atmosphere, said first mentioned means further including steering and horizontal propulsion means on the vehicle for steering and horizontally propelling the vehicle through the air above said surface while the supply of gas to said hollow underside and in cushion under said body is continued from said pressurizing means to support said body above said surface in a perimetrical lift gap forming relation to said surface.

3,090,456
ELECTRICALLY POWERED WHEEL
Herbert A. Blenkle, Englewood, N.J., assignor to Fairchild Stratos Corporation, a corporation of Maryland
Filed Apr. 4, 1961, Ser. No. 100,744
10 Claims. (Cl. 180—10)



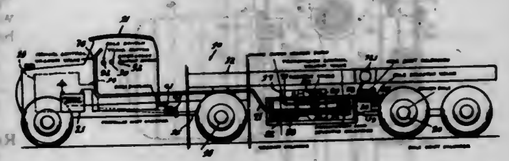
5. A vehicle wheel comprising a drive axle, a hub and rim rotatably carried by said axle, a housing, said axle being journalled through the center of said housing, an electric motor, a hydrostatic pump and a plurality of hydrostatic motors all mounted within said housing at spaced points around said axle, gear means drivingly connecting said electric motor to said pump, an annular distributor valve plate for connecting said hydrostatic units for the flow of fluid therebetween whereby said hydrostatic pump drives said hydrostatic motors through said valve plate, a planetary gear coupling the output from said hydrostatic motors to said axle, means on each of said hydrostatic units for varying its displacement, and cam ring within said housing having a cam slot for each of said hydrostatic units, means for rotating said cam ring through a limited angle about the axis of rotation of said axle, and means carried in said cam slots for actuating said displacement varying means upon rotation of said cam ring.

3,090,457
CROP HARVESTING MACHINE
Marion G. Amick, % Red Lion Farm Inc., St. Georges Hundred, Middletown, Del.
Filed Apr. 21, 1961, Ser. No. 104,682
2 Claims. (Cl. 180—14)



1. A crop picking frame unit comprising a rectangular prestressed bottom portion, vertical side frame portions and supporting wing members one of each being secured to each of said side frames, a tractor with a frame having means for supporting said respective wing ends at various levels with respect to the side of the tractor, an end wheel journalled at an end of said frame unit, drive means for said wheel, and said rectangular bottom portion of the frame unit being formed with open spaces including worker supporting seats and foot rests, said seats being arranged in predetermined positions for picking rows of low growing crops planted on a row for row pattern conforming to said frame unit spaces and worker seats, frame supporting end wheel, and tractor wiau, said means for supporting said respective wing ends comprising a vertically movable plate with a T-section having vertical pin openings therein for pivotally securing a respective wing end thereto.

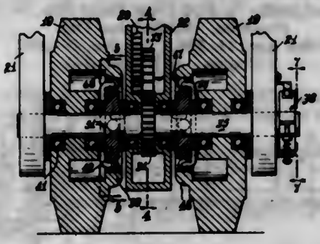
3,090,458
CONTROL FOR DUAL ENGINE VEHICLES
Lloyd J. Wolf, 4580 Bordeaux St., Dallas, Tex.
Original application June 13, 1956, Ser. No. 591,183, now Patent No. 3,027,962, dated Apr. 3, 1962. Divided and this application Nov. 15, 1961, Ser. No. 152,517
18 Claims. (Cl. 180—14)



5. A tractor-trailer vehicle comprising a tractor having an engine and a transmission connected to the driving axle thereof, a trailer having an engine, a throttle valve therefor and a transmission drivably connected to an axle of the trailer and including a hydraulic power circuit means and having a driving range and a neutral, means responsive to the speed of one of the axles adapted to respectively condition the trailer transmission for power flow and for neutral below and above a predetermined speed of said one axle, and other means responsive to said one axle speed adapted to return the throttle valve from an original to idling position when the trailer trans-

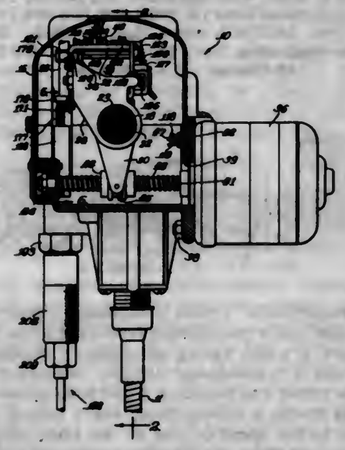
mission shifts to neutral and to move the throttle valve to its original position when power flow through the trailer transmission is resumed.

3,090,459
HAND DRAWN VEHICLE WITH POWER ASSIST
John Scudder, 723 W. 81st St., Chicago, Ill.
Filed July 21, 1959, Ser. No. 828,634
10 Claims. (Cl. 180—19)



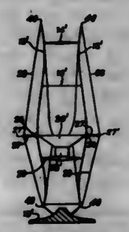
8. Power drive mechanism for intermittently driving a hand drawn vehicle of a character including a supporting wheel and a draft handle, an axle mounting said wheel, a reversible electric motor, an electric circuit for connecting said motor to a source of electric current, a normally open on-off switch in said electric circuit manually actuable to close the circuit for operating the motor in forward or reverse directions, a bi-directional clutch actuable during operation of the motor to connect the motor to said wheel for driving the wheel, and a normally closed switch in said circuit operable in response to a predetermined axle torque speed to open the circuit and stop the motor so as to disengage the clutch and permit free wheeling of the wheel.

3,090,460
SPEED CONTROL DEVICE FOR AN AUTOMOTIVE VEHICLE
Ralph R. Teetor, Hagerstown, Ind., assignor to Perfect Circle Corporation, Hagerstown, Ind., a corporation of Indiana
Filed July 17, 1959, Ser. No. 827,745
21 Claims. (Cl. 180—82.1)



1. In a speed control device for an automotive vehicle having a throttle control element, said device including an operating member movable with said throttle control member, an actuating member for moving said operating member, drive means including a reversible motor connected to said actuating member and operable to move said actuating member in opposite directions, means for coupling said operating member to said actuating member including an electromagnet and an armature carried by said actuating member for securing said operating member thereto, and a governor responsive to the speed of said vehicle for controlling said motor to maintain said vehicle at a predetermined speed and including a governor spring and means for adjusting said spring to vary said predetermined speed, the improvement comprising means for preventing coupling of said members and movement of said actuating member in a direction toward the idle position when said governor spring is adjusted to a certain predetermined vehicle speed, said coupling preventing means comprising a pair of normally closed switches respectively in circuit with said motor and said electromagnet, and means for opening said switches when said spring is adjusted to said higher vehicle speed.

3,090,461
ELECTRICAL SOUND REPRODUCING DEVICES
Vivian C. Gray, 49 Brighton Road, Crawley, England
Filed Aug. 14, 1957, Ser. No. 678,157
Claims priority, application Great Britain Aug. 20, 1956
3 Claims. (Cl. 181—31)

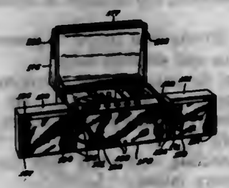


1. An electrical sound reproducing device comprising two substantially parallel opposed walls of thin resilient material, said walls being smoothly and oppositely curved and of inflected contour and being spaced apart by a distance less than their superficial dimensions to provide an acoustical chamber extending therebetween open substantially throughout its periphery, means supporting said walls over a small portion of their peripheral edges, the greater portion of said peripheral edges being unattached and free to vibrate, strut and tie members extending between said walls at points spaced from said supporting means for prestressing said walls, thereby substantially eliminating spurious vibrations in use, and an electrically operated motion producing means positioned between said walls and supported therefrom for setting the walls in vibration.

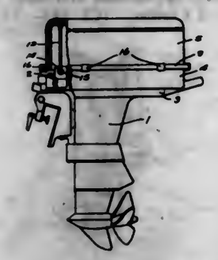
3,090,462
CABINET FOR SOUND REPRODUCING EQUIPMENT
Robert S. Huff, Oak Park, and Joseph Horzick, West Chicago, Ill., assignors to Motorola, Inc., Chicago, Ill., a corporation of Illinois
Filed Mar. 26, 1959, Ser. No. 802,146
3 Claims. (Cl. 181—31)

1. Equipment for reproducing stereophonic sound including in combination, a center housing and stereophonic electronic equipment housed thereby, said center housing have a base, a plurality of upright portions and at least a partially open top, said center housing further having a hinge mounted lid to enclose the top thereof and to provide access to said equipment housed therein, left and right loudspeakers, a left enclosure housing said left loudspeaker and a right enclosure housing said right loudspeaker, said enclosures being of a size and shape to match said center housing when in non-operational

position adjacent said upright portions of said center housing to provide a harmonious unitary cabinet when said equipment is not in use, detachable hinge means for supporting each of said enclosures in first positions in close proximity to upright portions of said center housing and permitting pivotal movement thereof in variable positions outwardly of said center housing, said hinge means being constructed of electrically conductive material and serving as electrical connections between said electronic equipment and said left and right loudspeakers with said enclosures attached to said center housing, said enclosures being separable from said center housing by detaching said hinge means for spacing said enclosures from said center housing, and respective electric cords for connecting said left and right loudspeakers and said electronic equipment with said enclosures detached and spaced from said center housing.



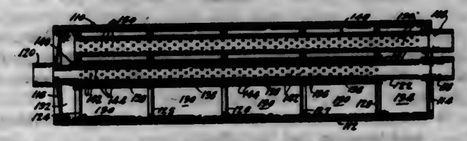
3,090,463
ENGINE VACUUM SOUND BARRIER
John D. Yanda, Bethlehem, Wheeling, W. Va.
(15 NE. 193rd Terrace, Miami 62, Fla.)
Filed Feb. 15, 1960, Ser. No. 8,611
4 Claims. (Cl. 181—33)



1. A sound retaining enclosure for internal combustion engines comprising in combination an engine, means for producing a vacuum, a pair of similar cover members detachably positioned over said engine, one of said members being positioned over the second of said members, resilient means spacing said members apart and sealing off the space therebetween, said second member having an opening therethrough, a tubular hose connector mounted on said second member closing said opening, and a hose connected to said connector and to said means for producing a vacuum for providing a vacuum in said sealed space for preventing the passage of sound waves through said cover members.

3,090,464
SYSTEM AND APPARATUS FOR SOUND-ATTENUATION OF GAS STREAMS
Floyd E. Deremer, Livonia, Mich., assignor to Oldberg Manufacturing Company, Grand Haven, Mich., a corporation of Michigan
Filed Aug. 8, 1958, Ser. No. 753,984
6 Claims. (Cl. 181—57)

1. A muffler for use with the exhaust gas streams from dual manifolds of an internal combustion engine of a vehicle, the combination of an elongated chamber having end closures, each of said end closures having an inlet opening, exhaust gas conveying pipes connecting the exhaust manifolds with the inlet openings arranged to conduct streams of exhaust gases from the engine through the openings in the end closures into the chamber, a first tubular gas passage means in said chamber registering with said inlets adapted to receive the streams of gases entering the respective ends of the chamber whereby to blend the gases of the streams, a second tubular gas passage means disposed substantially parallel with the first gas passage means in said chamber, an exhaust gas outlet in registry with the second gas passage means, an intermediate shell surrounding said first gas passage means, the walls of the tubular gas passage means and said intermediate shell being formed with a plurality of open areas



to accommodate transverse flow of gases from the first to the second gas passage means, annularly shaped means positioned within and spaced lengthwise of the intermediate shell forming a plurality of high frequency sound attenuating zones, a plurality of transversely arranged spaced walls in said chamber forming transverse passages through which gases flow from the first to the second gas passage means, one of said walls forming with an end closure a low frequency sound attenuating zone, at least one of said tubular gas passage means being in communication with the low frequency sound attenuating zone, said open areas in said gas passage means and intermediate shell forming acoustic couplings with the adjacent regions in the chamber, and an outlet pipe connected with said exhaust gas outlet for conveying exhaust gases from the chamber.

3,090,465
SWIMMING POOL LADDER
George L. Smith, Frontenac, Mo.
(13 Outer Ladue, St. Louis 31, Mo.)
Filed Nov. 12, 1959, Ser. No. 852,520
5 Claims. (Cl. 182—52)



1. A swimming pool accessory comprising in combination, a swimming pool ladder and an accessory item connected thereto, said ladder having a hollow rail and a hollow grab rail continuous therewith, the said hollow rail and said hollow grab rail being of a cross sectional dimension for grasping by a human hand, means for securing the ladder to a swimming pool with the hollow rail extending downwardly into the pool, said hollow rail having a fitting connected thereto, and in communication with the interior thereof, said fitting providing means for connection with said accessory item, the said hollow grab rail having an end position remotely from said fitting and having means by which the hollow grab rail may be con-

nected to the suction side of a pump, said hollow rail and grab rail being leakproof from the suction receiving end of the grab rail to said fitting, and step means attached to said hollow rail.

3,090,466
SLOPE SUPPORT COMPENSATORS FOR LADDERS
Allen J. Wright, 1229 Latham Square Bldg., Oakland, Calif.
Filed July 5, 1961, Ser. No. 121,968
1 Claim. (Cl. 182—202)



In a slope compensator for ladders and the like, including a tubular housing having depending legs, and a cross member arcuately connecting the upper ends of the legs,

a continuous string of elements normally slidable in said housing and including

a flexible stringing element passing through the entire string of elements and having terminal ends,

a support leg for each depending leg and each slidable in said housing,

clutch means comprising an upper thrust member cooperative with each end of the string of elements,

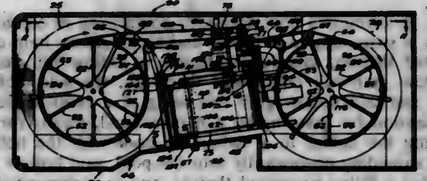
a resilient cupped disc member interposed between each upper thrust member and support leg, with the flexible element passing through the upper thrust member and cupped disc members, with the terminals connected to the respective legs,

with the legs mutually cooperating in movement of the string within the housing through the weight of one leg as the other leg is urged to retract, and

with the cupped discs being expanded diametrically through opposed pressures between the upper thrust members and the support legs to engage the interior of the housing when the legs are subjected to equal loads,

said cupped disc members each comprising a plurality of axially spaced cupped discs having a central hub, spacing rings slidable in the housing and interposed between the peripheral portions of the spaced discs for mutual cooperation, said upper thrust member being counterbored in the undersurface for cooperation solely with the peripheral portion of the contacting disc.

3,090,467
AUTOMATIC CHECKSTAND
Wayland H. Crawford, San Gabriel, Calif., assignor to Modern Village Stores, Inc., El Monte, Calif., a corporation of California
Filed Feb. 6, 1959, Ser. No. 791,678
12 Claims. (Cl. 186—1)



9. In combination in a check stand:

an elongated frame providing a receiving end and a delivery end;

means providing a checking station intermediate said ends;

a rotary receiving table at said receiving end;

a rotary delivery table at said delivery end and spaced from said receiving table;

conveyor means at said checking station and disposed in the space between said tables to receive articles from said receiving table, said conveyor means and tables providing top surfaces at substantially the same level;

means for driving said conveyor means to pass articles thereon to said delivery table;

drive means for rotating said receiving table;

drive means for rotating said delivery table;

a drive wheel for each of said tables;

a drive shaft;

a belt connecting said shaft with the drive wheel of said delivery table;

clutch means in said shaft;

a shaft extension beyond said clutch means;

a belt connecting said shaft extension with the drive wheel for said receiving table;

means to disconnect said clutch means to stop said receiving table;

said disconnecting means including a stop device across a portion of said receiving table to be energized by an article on said receiving table; and

draft means connecting said stop device with said clutch means.

3,090,468
DISK BRAKE CONSTRUCTION FOR VEHICLES
Nikolaus von Rucker, Stuttgart, Germany, assignor to Firma Dr. Ing. h.c. F. Porsche KG
Filed Oct. 24, 1960, Ser. No. 64,529
Claims priority, application Germany Nov. 13, 1959
6 Claims. (Cl. 188—73)



1. A disk brake construction for vehicles provided with a relatively stationary part, comprising brake disk means, one-piece brake clamp means surrounding said brake disk means and provided with brake engaging means on both sides of said brake disk means and with hydraulic brake actuating means therefor, abutment means supported from said relatively stationary part, and means supporting said brake clamp means on said relatively stationary part including a leaf spring resiliently mounting the same, said leaf spring being automatically tensioned so as to abut against said abutment means when the brake is released.

3,090,469
SELF-ADJUSTING BRAKE DEVICE
Thomas J. Buckner, 85 Manor Drive, Newark, N.J.
Continuation of abandoned application Ser. No. 71,231, Nov. 23, 1960. This application Mar. 21, 1962, Ser. No. 186,576
5 Claims. (Cl. 188—79.5)

1. In a wheel brake, a relatively stationary back plate, a rotary drum, at least one brake shoe pivoted to the back plate within the drum and shiftable toward and from the drum, means to actuate said shoe, a friction lining carried by the shoe and engageable with the drum and subject to wear, a cam lever pivoted to the back plate with said shoe, a spring associated with the cam lever and constantly urging the same toward said shoe and drum, a clearance pin fixed to the back plate near the free end of the cam lever, a sleeve carried by the cam lever and engageable over the clearance pin and having a bore larger than the clearance pin, an eccentric cam pivoted to said sleeve and cam lever and having a cam



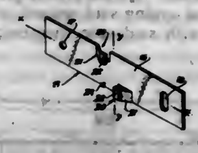
edge engaging said shoe, and a second spring associated with said cam and cam lever and serving to urge the cam constantly into engagement with the shoe, whereby wear on said lining is compensated for automatically by said eccentric cam and the desired clearance between the lining and drum is automatically maintained constant.

3,090,470
LOCKING DEVICE FOR SHOPPING CARTS
Jack Abrams, Studio City, Calif., assignor to The Concepts Co., Beverly Hills, Calif., a partnership
Filed Aug. 3, 1960, Ser. No. 47,283
5 Claims. (Cl. 188—110)



1. In a shopping cart of the nesting type including a wheeled frame and a basket supported by said frame, a device for ready attachment to the underside of said cart, said device comprising: an auxiliary wheel pivotably supported by said device, said auxiliary wheel being pivotally movable in response to its own weight from a first position in which the lowermost surface of said auxiliary wheel lies substantially within the plane tangent to the lowermost surfaces of the cart wheels to a second position a predetermined distance below said first position; means mounting said auxiliary wheel for rotation; and a locking mechanism associated with said auxiliary wheel for selectively locking said auxiliary wheel against rotation when said auxiliary wheel is in said second position, said locking mechanism including a disc mounted on the means mounting said auxiliary wheel, said disc defining a plurality of peripheral slots therein, a spring biased lever arm pivotally mounted to said device and normally urged towards said disc for engagement in one of the said slots, and means for preventing said lever arm from entering one of said slots unless said auxiliary wheel is in said second position.

3,090,471
FURRED WALL CONSTRUCTION
Joseph W. Schneller, Eggertsville, N.Y., assignor to National Gypsum Company, Buffalo, N.Y., a corporation of Delaware
Filed June 15, 1959, Ser. No. 820,154
2 Claims. (Cl. 189—35)



1. A clip adapted to secure a furring member to a supporting member, said clip comprising a base portion adapted to be mounted on a supporting member, a pair of opposed ears bent outwardly from one side of said base portion and projecting toward each other generally axially of a first axis of said base portion and being spaced apart on opposite sides of said first axis, with the free ends of said ears generally facing and being spaced apart equally on opposite sides of a second transverse axis of said base portion extending substantially perpendicular to said first axis, said ears being adapted to overlie a portion of a furring member and the spacing between said ears being at least equal to the width of a furring member when measured along a line between the closest adjacent portions of said ears, and a locking tab bent outwardly from said one side of said base portion, said locking tab being arranged substantially opposite one of said ears, being spaced on the opposite side of said second axis from said one ear, and having a free end facing said one ear and adapted to engage an edge of a portion of a furring member, whereby a furring member may be inserted between said ears when tilted to pass between the closest adjacent portions of said ears, and may be received into the spacing between said one side of said base portion and said ears, as well as into locking edgewise engagement with said free end of said tab, when rotated to a position substantially perpendicular to said first axis.

3,090,472
DRIVE MECHANISM FOR WASHING MACHINE
Donald A. R. Morrison, Glen Ellyn, Ill., assignor to General Electric Company, a corporation of New York
Filed June 27, 1961, Ser. No. 119,887
5 Claims. (Cl. 192—12)

1. In a washing machine having a tub within which clothes are washed and centrifugally dried, combination tub driving and braking means, including:

structure fixed to said tub for supporting the same for rotation about an axis;

an annular clutch plate concentric with said tub axis;

spring means arranged to exert a predetermined, substantially uniform axial effort on said clutch plate for urging said clutch plate into frictional driving engagement with said supporting structure;

a driving member concentric with said axis of rotation;

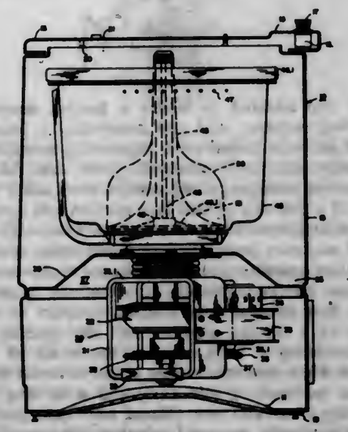
a hub concentric with said clutch plate and rotatable relative thereto;

a clutch mechanism mounted on said driving member for rotating said hub, said mechanism being of the direction responsive type to transmit minimum rotational effort to said hub in one direction of rotation and maximum rotational effort thereto in the other direction of rotation;

a first drive arm extending radially from said hub in parallel spaced relation to said clutch plate;

a second drive arm extending from said clutch plate;

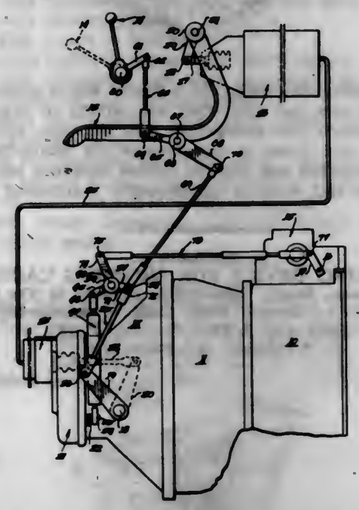
means providing a driving connection between said plate and said second arm while permitting movement of said arm relative thereto;
means providing a driving connection between said first and second arms;
a stop member fixed relative to said second arm, said arm having means to engage said stop member to preclude rotation of said clutch plate;
spring means for urging said second arm laterally into engagement with said stop member;



and a motor for rotating said driving means optionally in said one or the other direction;
the mechanical relationship between said first and second drive arms being such that the limited rotational effort of said clutch mechanism on said hub cooperates with said spring means to maintain said second arm and said stop member in engagement to prevent rotation of said clutch plate, and the said maximum rotational effort in the other direction of rotation opposes said spring means to effect retraction of said second drive arm from said stop member to free said clutch plate for rotation.

3,090,473
MOTOR VEHICLE TRANSMISSION CONTROLS
William J. Askins, Park Ridge, Ill., assignor to The Frank G. Hough Co., a corporation of Illinois
Filed Aug. 4, 1960, Ser. No. 47,445
10 Claims. (Cl. 192—13)

8. In a transmisison control arrangement for a motor vehicle having a hydraulic torque converter and a master clutch with said converter having a device which has a shaft rotatable to one position to lock up the input and output of the converter and to another position to provide converter action of said converter, a second shaft fixedly carried in said motor vehicle, a first cylindrical member journalled on said second shaft, said first cylindrical member having a plurality of projections extending axially from one end thereof, a hand lever rotatably mounted in the operator's compartment of said motor vehicle, first linkage means connected between said hand lever and said first cylindrical member, second linkage means connected between said first cylindrical member and said shaft of said device, said first and second linkage means being formed so that when said hand lever is moved to one position said first linkage means is moved to rotate said first cylindrical member to move said second linkage means to rotate said shaft of said device to said one position, and so that when said hand lever is moved to a second position said first linkage means is moved to rotate said first cylindrical member to move said second linkage means to rotate said shaft of said device to said another position, means connectable to said master clutch and selectively operable to two positions to operate said master clutch to a declutched condition in one position and a clutched condition in the other position, a second cylindrical member rotatively carried on said second shaft adjacent said first cylindrical member, said second cylindrical member having slots formed in one end thereof in cooperation with the projections on said first cylindrical member, third linkage means connectable to said master clutch and connected to said second cylindrical member for rotating said second cylindrical member responsive to operation of said last mentioned means to one position corresponding to the clutched condiiton of said master clutch and to a second position corresponding to the declutched condition of said master clutch, said projections of said first cylindrical member and said slots of said second cylindrical member being formed so that said first cylindrical member is rotated responsive to rotation of said second cylindrical member to said second position thereof whenever said hand lever is positioned in said one position and said device is operatively conditioned in said one position.

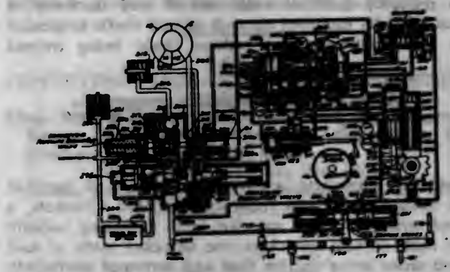


10. In a transmission control arrangement as claimed in claim 8 wherein said master clutch is provided with a clutch brake, lever means connected between said second cylindrical member and said clutch brake for operating said clutch brake when said means for operating said master clutch is operated to operate said master clutch to the declutched position.

3,090,474
TRANSMISSION
Oliver K. Kelley, Bloomfield Hills, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application Apr. 18, 1958, Ser. No. 731,569, which is a continuation of application Ser. No. 317,095, Oct. 27, 1952. Divided and this application Mar. 11, 1960, Ser. No. 14,328
5 Claims. (Cl. 192—85)

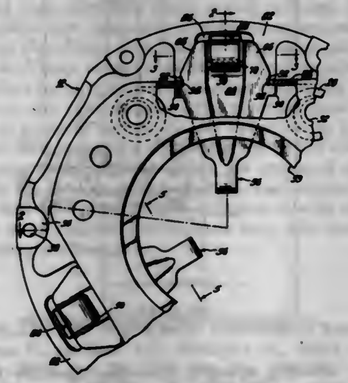
1. A transmission comprising in combination, a driving member connected by a torque-establishing device to a driven member; a source of fluid pressure; a first fluid pressure motor connectible to the source for operating the torque-establishing device; a governor which maintains a fluid pressure which is a measure of the speed of

rotation of the driven member; and means normally tending to maintain constant the pressure in said first motor, said means including a valve movable in opposite direction a second fluid pressure motor in addition to said means, said second motor having a fluid connection with the first motor, a force-transmitting connection between the second motor and the valve so that the pressure in the



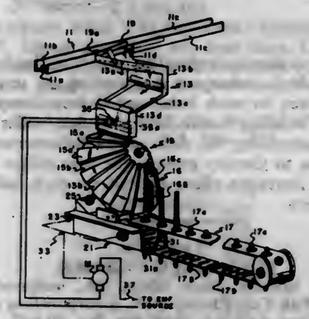
second motor urges the valve in the direction to increase the pressure in the first motor, a third fluid pressure motor for interrupting the force-transmitting connection, and a fluid connection between the governor and the third motor to that at a predetermined speed of rotation of the driven member the third motor prevents the second motor from exerting force on the valve.

3,090,475
CLUTCHES
Sidney U. Gatewood, Roseville, and Charles G. Koontz, Detroit, Mich., assignors to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Filed May 19, 1960, Ser. No. 30,278
6 Claims. (Cl. 192—99)



1. In a clutch having a pressure plate, a cover plate adapted to be secured to an engine flywheel, a plurality of circumferentially spaced lugs formed on said pressure plate and extending axially with respect to the axis of rotation of said flywheel, a driven plate adapted to be arranged between said pressure plate and said flywheel, a plurality of circumferentially spaced coil springs extending between said cover plate and said pressure plate for biasing said pressure plate into driving engagement with said driven plate, said cover plate having a plurality of circumferentially spaced recesses, each of said recesses having a first wall in substantial parallelism with said pressure plate and a second wall substantially perpendicular thereto, the first wall of each recess having an opening for reception of one of said lugs, a plurality of circumferentially spaced release levers, each of said lugs having a groove for reception of the radially outer end of one of said levers, said second wall of each recess having an opening defined in part by an edge forming a fulcrum for one of said levers so that movement of the inner ends of said levers towards said pressure plate disengages said driven plate, a metal clip including a body portion having generally perpendicular side flange portions extending from said body portion, whereby said flange portions are adapted to engage said cover plate arranged between the side edges of the opening in said first wall of each recess and the associated lug for preventing noise incident to relative movement therebetween.

3,090,476
BOBBIN HANDLING ARRANGEMENT
Grady H. Sanders, Spartanburg, S.C., assignor to Deering Milliken Research Corporation, Spartanburg, S.C., a corporation of Delaware
Filed Oct. 11, 1960, Ser. No. 61,915
16 Claims. (Cl. 198—33)

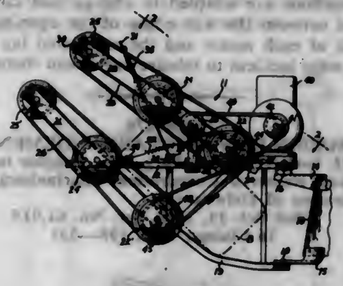


1. A bobbin reorienting and transfer arrangement comprising a first horizontal conveyor adapted to convey bobbins lying in flat substantially horizontal position thereon, a second horizontal conveyor adapted to receive and hold bobbins in a vertical position thereon, and means disposed in intermediate flow relation between the output from said first conveyor and the input to said second conveyor for reorienting the flat substantially horizontal bobbins to a vertical position and transferring said bobbins in substantially vertical position to said second conveyor, said intermediate means for reorienting and transferring bobbins comprising a conical member having multiple bobbin holding recesses thereon open at the larger base end of said conical member for direct longitudinal sliding discharge of bobbins therefrom, said conical member being rotatable about an axis disposed at an angle to the horizontal.

3,090,477
BALE CONVEYOR
Otto W. Luck and James H. Hollyday, New Holland, Pa., assignors to Sperry Rand Corporation, New Holland, Pa., a corporation of Delaware
Filed Oct. 5, 1960, Ser. No. 60,717
2 Claims. (Cl. 198—128)

1. A bale thrower mountable on the discharge end of a hay baler to receive discharged bales and traject them distantly from the baler, said thrower comprising an upper and a lower conveyor co-extensive and engageable respectively with the top and bottom sides of each bale discharged from the baler, each conveyor having a plurality of high speed power driven rollers spaced relative to each other and successively engageable with each bale and including a first roller adjacent the baler and at least one other roller more remote therefrom, means rotating the first roller in each conveyor at a given speed and the other roller of each conveyor at a faster

speed whereby to progressively increase the application of throwing force to each bale, the space between said first roller and said remote roller of each conveyor being such relative to the lengths of said discharged bales that when the bales engage the remote rollers portions of the bales are in engagement with the first rollers, the rollers in the upper conveyor being driven at substantially the



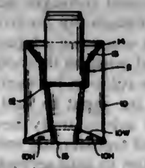
same speed as the corresponding rollers in the lower conveyor and both conveyors cooperating in imparting a throwing force to each bale, and means interposed between said rotating means and said first roller of each conveyor permitting the first rollers to overrun the rotating means to thereby prevent the first rollers from retarding the throwing effect exerted on each bale by the second rollers.

3,090,478

CONTAINER CARRIER

Richard B. Stanley, Park Ridge, Ill., assignor to The Kartridge Pak Co., Chicago, Ill., a corporation of Iowa

Filed Aug. 19, 1960, Ser. No. 50,647
5 Claims. (Cl. 198—131)



1. A container carrier assembly comprising an outer shell open at the top and having an upwardly offset bottom wall located adjacent the base thereof and provided with a central opening, an insert fixed within said shell and providing an upwardly opening socket bordered by a support floor and upwardly flaring side wall structure that has locating engagement within said shell adjacent the upper end thereof, said insert having a stub depending from said floor and projecting in locked locating engagement through said bottom wall opening, said stub terminating closely adjacent the plane of the base of said shell.

3,090,479

SPROCKET FOR ENDLESS PALLET-TYPE CONVEYOR

Robert F. Sayler, Conemaugh Township, Somerset County, Pa., assignor to United States Steel Corporation, a corporation of New Jersey

Filed Mar. 16, 1961, Ser. No. 96,271
5 Claims. (Cl. 198—189)

1. In an endless conveyor including an endless chain made up of alternately arranged male and female pallets, each of said male pallets including a load-bearing surface and a flange projecting normal to said load-bearing surface, each of said female pallets including a load-bearing surface and a pair of spaced flanges projecting normal to said load-bearing surface, said flange and said pair of flanges being pivotally interconnected at the adjacent ends of said male and female pallets, a pair of supporting rollers rotatably mounted on each of said interconnected sets of flanges, and a trackway for supporting said rollers, the improvement therewith of a transversely extending rotatable shaft mounted adjacent each end of said trackway, a sprocket fixedly mounted on each of said shafts tangential with said trackway, said endless chain being trained



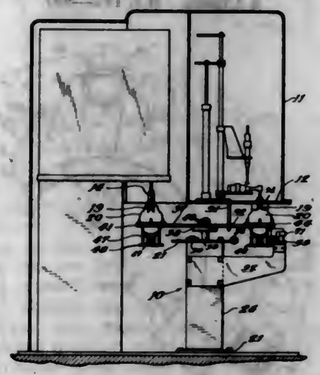
around said sprockets, a first series of spaced sprocket teeth extending radially from each of said sprockets, a second series of spaced sprocket teeth extending radially from each of said sprockets, the sprocket teeth of said second series being shorter than and arranged alternately with the teeth in said first series, said sprocket teeth being adapted to engage said pairs of rollers sequentially upon rotation of said sprockets, and means for driving one of said shafts to rotate one of said sprockets and thereby engage said rollers with said sprocket teeth to drive said conveyor.

3,090,480

SAMPLE CAN HANDLING MECHANISM

William D. Egner, Schenectady, and Gordon L. Romine, Scotia, N.Y., assignors to the United States of America as represented by the United States Atomic Energy Commission

Filed Oct. 29, 1952, Ser. No. 317,502
3 Claims. (Cl. 198—209)



1. A remotely operable turntable assembly for handling radioactive material comprising a protective housing including a horizontal partition subdividing a portion thereof into an upper relatively uncontaminated zone and a lower relatively contaminated zone; a turntable disc within the lower zone mounted for rotational and vertical movement; a series of notches arranged at spaced intervals around the periphery of the turntable disc; at least one cradle supported by the turntable disc and arranged to receive a container; remotely operable pneumatically actuated means consisting of an air cylinder having a vertically movable piston connected with and supporting the turntable disc; said piston being constructed and arranged to raise and lower the turntable disc; a dowel pin depending from the horizontal partition and engageable with one of a series of openings in the turntable disc to prevent rotation thereof when in its raised position; a bearing plate supported below the turntable disc; a plurality of bearing blocks mounted on said bearing plate and arranged to limit downward movement of and to rotatably support the turntable in its lowered position; and turntable rotating means operable when the turntable is in its lowered position, said rotating means comprising a pawl engageable with said notches in the turntable disc and pneumatically operable means connected in driving relationship with the pawl.

3,090,481

CONVEYING MECHANISM AND FEED MEMBER THEREFOR

Hans Biel, Neuffen, Wurttemberg, and Hans Hornung, Beuren, Wurttemberg, Germany, assignors to Hans Sickinger, Bloomfield Hills, Mich.

Filed Aug. 9, 1960, Ser. No. 48,382
Claims priority, application Germany Aug. 17, 1959
6 Claims. (Cl. 198—221)



1. In a conveying mechanism for feeding objects intermittently along a surface and having reciprocating means extending underneath said surface, at least one pivot secured to said reciprocating means and having an axis extending transversely to the direction of movement of said means, at least one feed member having a bore and two arms perpendicular to and on opposite sides of said bore, one of said arms having a feeding surface, a slot formed in said other arm and extending from the outer edge of the lower side of said other arm to said bore in a direction such as to permit said feed member to be fitted in a downward direction for mounting said feed member with said bore over said pivot, a stop member fixed to and movable with said reciprocating means and extending outwardly therefrom, said feed member being adapted to engage said stop member when said feed member is in said feeding position, said stop member then being adapted to prevent said feed member from pivoting under the influence of pressure exerted by said objects to be fed upon said feed member, and a weight carried by the other arm of said feed member greater than the weight of said first arm with the feeding surface thereon, said weight tending to turn said feed member into engagement with said stop member so as normally to maintain said feed member in said feeding position.

3,090,482

CIGARETTE PACKAGE CONSTRUCTION

George U. Sandacz, 313 Arlington N., Niles, Ohio

Filed Jan. 28, 1959, Ser. No. 789,590
8 Claims. (Cl. 206—41)



1. A combined cigarette package and ash receiver, comprising an oblong receptacle for cigarettes which is of the "crush-proof" variety in that it is made of relatively stiff material, said receptacle having wide front and rear walls and side walls connecting the front and rear walls and also having bottom and top walls, an auxiliary side wall outwardly of each side wall forming thin wide elongated recesses therewith which open at opposite side edges of and extend lengthwise of one of said wide walls, an additional relatively stiff wall overlying said one wide wall and having its lower end pivotally connected to said receptacle adjacent to its bottom wall so that the upper portion of said additional wall may be swung away from its position overlying said one wide wall to dispose it at an angle to the latter, said additional wall having side marginal portions extending angularly therefrom to respectively and slidably fit edgewise within said elongated recesses, a flexible strip connected to and extending between each of said marginal portions and said one wide wall and forming flexible side webs between the two when said additional wall is in its angular relation to thus provide the ash receiver, said marginal portions acting to tuck respective flexible strips into respective elongated recesses for out-of-the-way storage when said additional wall is in its said overlying position.

3,090,483

CARTON FOR CELLULOSIC PRODUCT

Arthur F. Altree, Hinsdale, Ill., Saul Bass, Los Angeles, Calif., and Morton Goldsholl, Highland Park, Ill., assignors to Kimberly-Clark Corporation, Neenah, Wis., a corporation of Delaware

Filed Aug. 22, 1962, Ser. No. 218,674
3 Claims. (Cl. 206—57)



1. A break-apart dispensing package comprising a rectangular carton having bottom, top, side and end walls of sheet material, a line of weakening disposed in a plane medially of said top and bottom walls and completely encircling said carton, a pair of lines of weakening branching out from and symmetrically of said medial line to define a "wrap-around" area comprising a pair of generally U-shaped strip-like removable panels, one on each side of said medial line of weakening, whereby the manual breaking of said carton into half portions along said medial line results in two identical open half portions and manual removal of the associated strip-like panel from each half portion results in an article dispenser having wall portions equal to one half the unbroken carton height and remaining wall portions of lesser height to facilitate access to the carton interior.

3,090,484

ARTICLE PACKAGE

William M. Schell, 211-213 W. Schiller St., Chicago 10, Ill.

Original application May 9, 1958, Ser. No. 734,195. Divided and this application Dec. 16, 1960, Ser. No. 76,188
1 Claim. (Cl. 206—80)

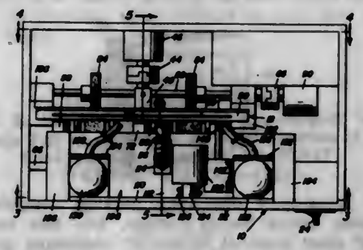
A display package for a soft compressible article, comprising a relatively rigid flat base member, a rigid tubular frame of substantial length having one end on said base member and its other end opening away from the base member, said frame being of less area than said base member and positioned to leave a margin of substantial width of the upper face of said base member surrounding said frame, a soft article of less height than said frame on the base member and entirely within and protected by the frame, and a transparent plastic film

overlying and closing said other end of said frame and intimately contacting the frame side wall entirely about the frame and secured flatly to said margin of the base



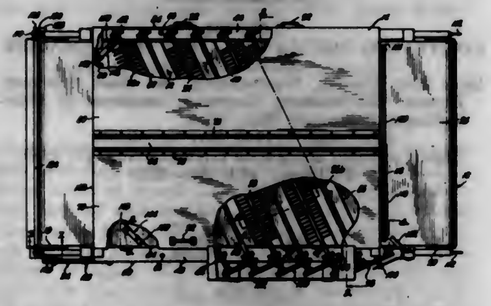
member around said frame, whereby said frame and base are maintained in unitary assembly and the film must be disrupted to provide access to said article.

3,090,485
CURRENCY DETECTOR
Albert N. Moore, Richmond, Va., assignor of ten percent to Wilbur Bernstein, Richmond, Va., and ten percent to Bernard H. Goldstein
Filed July 7, 1961, Ser. No. 122,442
8 Claims. (Cl. 209—75)



1. A detecting device for paper currency or the like comprising, operational conditioning means for receiving currency, material testing means responsive to reception of currency within said operational conditioning means for subjecting the currency to material quality tests, signal means operatively connected to said material testing means for issuing reject signals in response to the presence of unfit currency, reject means operatively connected to the signal means for rejecting unfit currency upon receipt of a reject signal from the signal means, pattern detecting means operatively connected to the signal means and operational conditioning means operative to sense predetermined patterns established on the currency by the material testing means and printing thereon for signalling the presence of counterfeit and unfit currency through the signal means, denominational selector means operatively connected to the pattern detecting means operative to produce reject signals in the signal means in response to the presence of currency other than a selected denomination, indicating means operatively connected to the pattern detecting means and signal means for indicating acceptance of currency as genuine and the denomination thereof, said material testing means including liquid applying means for moistening a portion of the currency, and electrical conductivity sensing means for detecting a predetermined amount of conductivity of a moistened portion of the currency, said material testing means further including, eraser means engageable with an inked part of said moistened portion of the currency to test ink retentivity thereof by rendering said inked part light transmissive if counterfeit.

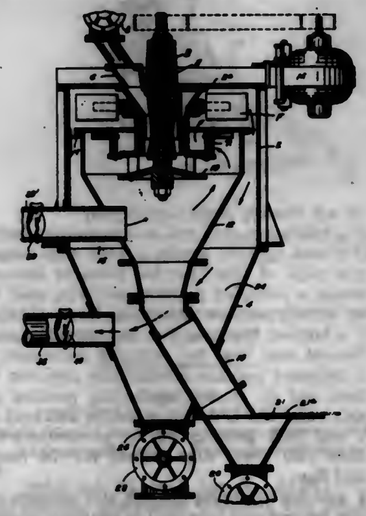
3,090,486
APPARATUS FOR SEPARATING MEAT FROM BONES
Ralph S. Zeberth, Kansas City, Mo., and Harry J. Friend, Miami, and Adoniram J. Churchill, Opa-Locka, Fla., assignors to Gordon Johnson Company, Kansas City, Mo., a corporation of Missouri
Filed Feb. 1, 1960, Ser. No. 5,815
8 Claims. (Cl. 209—90)



1. Apparatus of the kind described comprising in combination, a continuous belt conveyor having an upwardly-facing, horizontal surface for receiving and advancing an admixture of meat and bones, each consisting of particles of various sizes and shapes; rotary side delivery separating mechanism above said surface including a toothed reel disposed to engage the admixture and rake the bones out of the meat while permitting the latter to continue to advance; means coupled with the reel for rotating the same in a direction to cause the teeth thereof to project the bones oppositely to the direction of advancement by the conveyor; baffle structure behind said reel and disposed for deflecting the projected bones whereby the same continue to gravitate to said surface; and means supporting the reel obliquely to said direction of advancement whereby the bones are deposited alongside the conveyor.

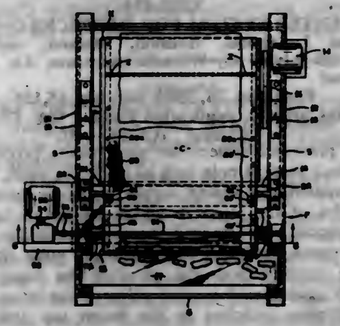
3,090,487
METHOD AND APPARATUS FOR SIZING SOLID PARTICLES
William T. Doyle, Dorchester, Boston, Mass., assignor to Sturtevant Mill Company, Dorchester, Boston, Mass., a corporation of Massachusetts
Filed Apr. 5, 1962, Ser. No. 186,820
8 Claims. (Cl. 209—139)

4. In a separator, the combination of an outer closed casing having a cone with its apex at the bottom and a drum above said cone, said drum including a top wall portion, an inner closed casing composed of a cone with its apex at the bottom and a drum above the cone, said drum including a top wall portion, said inner closed casing being spaced from the outer casing and defining a chamber therebetween, normally closed valve means controlling discharge from the bottom of each of said casings, an outlet port formed in the top wall portion of the drum of the inner casing, a vacuum fan mounted between the top wall portion of the inner drum and the top wall portion of the outer drum, said outlet port formed in the top wall portion of the drum of the inner casing providing an inlet to said vacuum fan and forming the sole communication between the chambers defined by said casings, driven shaft means projecting through the top wall of the outer casing and within the inner casing, a centrifugal distributor plate mounted on the lower end portion of said shaft and spaced from the top wall portion of the drum of said inner casing, a rotary sizing device positioned within the inner casing above the distributor plate, tubular means fixed to the centrifugal distributor plate and connecting the vacuum fan and rotary sizing device to provide a uniform continuous rotation of the parts, means discharging finely divided solid material into said inner casing and upon said distributor plate for centrifugal dispersion, air inlet means connected to the inner chamber at a point below the distributor plate for providing air for movement by said fan through the material centrifugally dispersed by said centrifugal distributor plate and said sizing device for discharge out



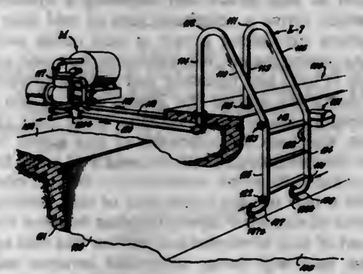
of said outlet port in the inner casing into said vacuum fan for discharge from said fan into the chamber between the inner and outer casings together with the fines entrained thereby, valve means controlling the air inlet means to regulate the rate of air flow through said fan for obtaining a selective size separation of said finely divided solid material, and an air outlet means connected with the outer casing for discharging the air delivered to the outer casing.

3,090,488
FILTER BELT REGULATING MEANS AND PROCESS
Thomas R. Komline, Gladstone, and Aden R. Sirles, Mendham, N.J., assignors to Komline-Sanderson Engineering Corporation, a corporation of New Jersey
Filed Mar. 15, 1960, Ser. No. 15,199
11 Claims. (Cl. 210—77)



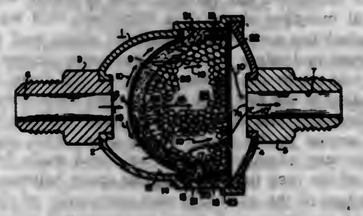
10. The process of maintaining a resiliently stretchable flexible filter belt in substantially wrinkle-free condition during its movement through an endless circuit around a plurality of relatively spaced rotary rolls, comprising the steps of confining the opposite side edges of the belt to movement in predetermined paths spaced apart a distance equal to the belt width, to thereby maintain the belt laterally extended, observing any relative displacement of said side edges in the direction of the belt movement through its said circuit, and varying the length of the path traversed by one said side edge to counteract said relative displacement.

3,090,489
LADDER WITH INTEGRAL WATER SUPPLY
George L. Smith, 13 Outer Ladue, St. Louis, Mo.
Filed Oct. 24, 1960, Ser. No. 67,447
10 Claims. (Cl. 210—169)



1. Accessory apparatus for a swimming pool comprising as a complete functional unit and in combination, a ladder structure having at least a part thereof of hollow form, said part of hollow form being constructed to have at least a portion thereof disposed within a pool when the ladder is set up for use, a liquid pumping and filtering mechanism operatively coupled with said part of hollow form for effecting movement of liquid therethrough, and means for establishing communication between the interior of said part and the exterior thereof through which movement of fluid may be effected for the performance of a desired function, and said pumping and filtering mechanism being positioned for operation in relatively close proximity to said ladder structure to provide said complete functional unit wherein the mechanism is conveniently accessible to and readily controlled by a user of the apparatus.

3,090,490
FILTER-DRIER COMBINATION
William C. Yocum, Mount Lebanon, Pa., assignor to Superior Valve & Fittings Co., Pittsburgh, Pa., a corporation of Pennsylvania
Filed Oct. 31, 1960, Ser. No. 66,193
4 Claims. (Cl. 210—299)



1. A filter-drier combination for connection into lines conveying fluids comprising a housing for flow of fluid therethrough, said housing having an inlet for flow of fluid thereinto and an outlet for flow of fluid therefrom,

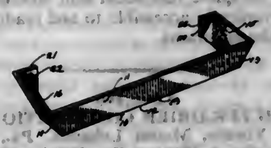
a substantially hemispherically shaped screen having a nose and a radially disposed substantially flat peripheral portion, said screen being disposed substantially transversely of the longitudinal axis of said housing and transversely of fluid flow therethrough, extending from the longitudinal axis radially to and being in engagement with an inside wall of said housing, and being positioned with said nose rearwardly of said inlet and pointed toward that part of said housing having said inlet, a filter layer of fibers disposed substantially transversely of the longitudinal axis of said housing and substantially transverely of said flow of fluid therethrough and extending from said longitudinal axis radially to and into engagement with an inside wall of said housing, said filter layer being on the outlet side of said screen, including a portion adapted to be substantially hemispherically shaped to substantially conform to said screen and including a cylindrical portion which forms a peripheral part of said filter member and which runs along a part of said inside wall of said housing, spring means in engagement with said cylindrical portion to urge and maintain said portion in contact with and completely around the inside wall of said housing, said spring means acting radially upon said cylindrical portion, a well on the outlet side of said screen for collection of filtered foreign particles, said well being formed by said radially disposed substantially flat peripheral portion, by a part of said inside wall of said housing and by a portion of said filter layer extending between the peripheral part of said hemispherical portion and said cylindrical portion, said well being interposed between said screen and said spring means, a substantially flat member pervious to passage of fluid therethrough disposed on the outlet side of said filter layer and transversely of said longitudinal axis of said housing, said flat member extending to and being in engagement with the inside wall of said housing, said filter layer and said flat member forming a chamber, a desiccant material in said chamber.

3,090,491

RECORD HOLDING AND STORING RACK

George W. Bohr, 561 Bayshore Drive, Apt. 7, Fort Lauderdale, Fla.

Filed June 6, 1961, Ser. No. 115,155
3 Claims. (Cl. 211—40)



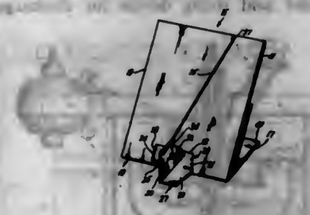
1. As an article of manufacture a one-piece rack of sheet material for holding square record jackets comprising an elongated flat vertical front retaining wall in the general marginal shape of a trapezoid, said wall having elongated top and bottom parallel edges and relatively divergent end edges located at the same degree of angle with respect to the bottom edge of the front wall and extending to the top edge thereof, end walls connected to the divergent end edges of the front wall in planes at right angles to the plane of the front wall, and means on the rear edges of each of said end walls for attachment of the rack to a support, the space between the bottom edges of the end walls and rearwardly of the bottom edge of the front wall being unobstructed to permit the introduction of polygonal shaped record holding jackets therein so that said jackets can be obliquely supported in stacked position with adjacent edges thereof resting against the inner sides of the divergent end walls of said rack.

3,090,492

SELF-ERECTING ADVERTISING DISPLAY ASSOCIATED WITH SHIPPING CONTAINERS

Daniel Goldstein, New York, N.Y., assignor to Schenley Industries, Inc., New York, N.Y., a corporation of Delaware

Filed Aug. 17, 1960, Ser. No. 50,244
3 Claims. (Cl. 211—73)



3. A self-erecting display comprising

(*a*) a base adapted to rest on a supporting surface,

(*b*) a back member having a lower edge hinged to the rear edge of said base for swinging movement between a collapsed position overlying said base and an erected position upstanding from said base,

(*c*) a holding flap hinged to and extending rearwardly beyond said base for swinging movement between a collapsed position substantially coplanar with said base and an erected upstanding position about an axis transverse to the hinge axis of said back member,

(*d*) said back member having an aperture extending from said lower edge thereof for the reception of said flap,

(*e*) said flap extending through said aperture and laterally beyond said base wall in coplanar relation therewith in said collapsed position,

(*f*) formations on said holding flap and one side of said back member engageable with each other when said back member and holding flap are erected to hold the same erected, said formations including abutment portions on said flap and the rear side of said back member engageable to limit rearward swinging movement of said back member to its erected position, and

(*g*) resilient means comprising a resilient tension member having its opposite ends connected to said flap and back member respectively spaced from the hinge axis of said flap and back member and extending transverse of both of said hinge axes and urging said back member and said flap toward their erected positions with said formations in engagement.

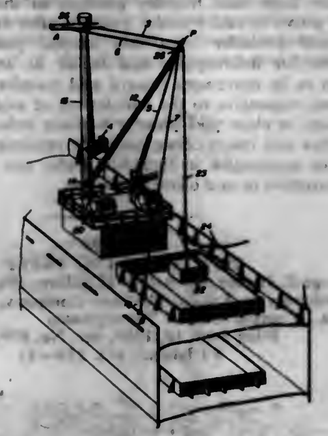
3,090,493

PREVENTER SYSTEM FOR DERRICKS ON SHIPS

Christian Landtman, Helsinki, Finland, assignor to Wärtsilä-yhtymä Oy-Wärtsilä-koncernen Ab, Helsinki, Finland

Filed Oct. 26, 1960, Ser. No. 65,155
Claims priority, application Finland Oct. 27, 1959
4 Claims. (Cl. 212—3)

1. A preventer system for ship booms pivotally connected to a vertical pole such as a loading mast, said preventer system comprising supporting ropes arranged on both sides of the plane in which the boom top moves when topped, characterized thereby that it has one guy fixed between the boom top and a guy point situated on the line running from the pivot of the boom perpendicularly against said moving plane of the boom top and one preventer attached to the boom top and running therefrom as separate branches to two preventer points on the same side of the movement plane of the boom top, whereby the preventer is attached in such a way to the boom top and to said two preventer points that, when topping the boom, the one preventer branch is shortened and the other correspondingly lengthened so as to make



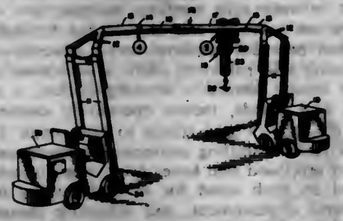
the displacement of the boom possible without loosening or altering the preventer and the guy.

3,090,494

LIFT TRUCK ATTACHMENTS

Hans Thiele, Kassel-Ansefeld, Germany, assignor to Spinnfaser Aktiengesellschaft, Kassel-Bettenhausen, Germany

Filed July 22, 1960, Ser. No. 44,593
Claims priority, application Germany July 29, 1959
8 Claims. (Cl. 212—13)



1. Load transferring apparatus comprising a mobile, industrial lift truck with a lift on the front of said truck, means for raising and lowering said lift, a load-bearing member, a hinge pivotable in the vertical direction connecting said load-bearing member to said lift, means on said load-bearing member spaced from said hinge for additionally supporting said load-bearing member, and means on said load-bearing member for holding a load.

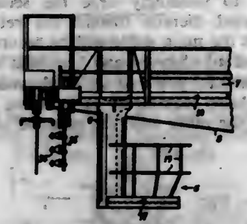
3,090,495

OPERATOR'S CAB FOR TRAVELLING CRANES

Robert Douglas Mutch, Baie d'Urfe, Quebec, Canada, assignor to Dominion Bridge Company, Limited, Montreal, Quebec, Canada

Filed Oct. 14, 1960, Ser. No. 62,619
12 Claims. (Cl. 212—18)

1. In an overhead crane including a main girder and a crane walk alongside the said main girder, an operator's cab suspended from the said main girder the said cab comprising a vertically disposed tubular structural member secured adjacent its upper end to said main girder, the said tubular member having an access opening at its upper end, a horizontally disposed operating platform secured to the outer surface of the said tubular member adjacent its lower end, a vertically extending elongated access opening in the surface of the said tubular member and extending upward from the said operating platform, and rungs within said tubular member permitting operator move-



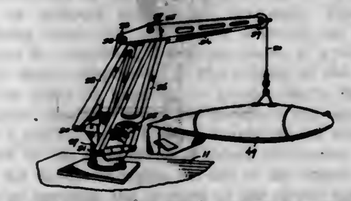
ment through said tubular member between said crane walk and said operating platform.

3,090,496

VESSEL-CARRIED LEVEL-LUFFING CRANE

Paul C. Vertrees and Claus G. Hackenberger, Tacoma, Wash., assignors to Tacoma Boatbuilding Co., Inc., Tacoma, Wash., a corporation of Washington

Filed Apr. 6, 1961, Ser. No. 101,267
18 Claims. (Cl. 212—35)



1. A ship-carried level-luffing crane comprising, in combination with a sea-going ship, a mount exposed above the deck of the ship and journaled therefrom for rotation about a vertical axis, a boom arm, forward and aft upright links pivoted at their lower ends to the mount and at their upper ends to an end portion of the boom, said links being dimensioned and placed so that swing movement of the links about said mount pivots as an axis imparts level-luffing travel to the free end of the boom, a hoist line, sheaves on the boom arm guiding said hoist line, power means located above deck for luffing the boom arm, and power means located below deck for operating said hoist line and for turning the mount so as to slue the crane.

3,090,497

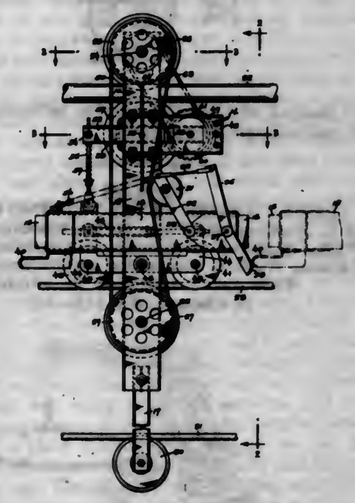
DIFFERENTIAL SLACK LINE CARRIER

Merrill W. Hite, Seattle, Wash., assignor to Washington Iron Works, Seattle, Wash., a corporation of Washington

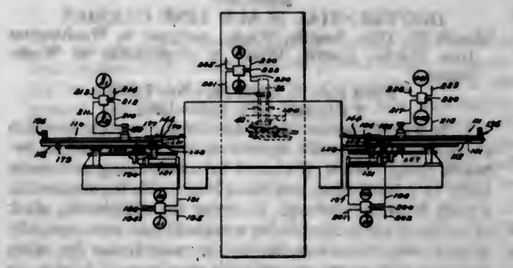
Filed Feb. 8, 1960, Ser. No. 7,348
5 Claims. (Cl. 212—128)

1. In a cable system of the described character in which a main carriage tracks upon a main cable extending between cable towers, is caused to travel along said main cable by a haul cable, and has a hoist cable for supporting a load from the carriage, a carrier for distributing slack in the hoist cable comprising a main frame, two vertically spaced swing-frames carried by the main frame for swing movement about transverse horizontal axes, a driving set of principal and secondary complementary sheaves one carried by the main frame and the other by one of said swing-frames so as to both track upon the main cable one from above and one from below in opposing relation, a haul-powered set of principal and secondary complementary sheaves one carried by the main frame and the other by the other swing-frame so as to both track upon the

haul cable one from above and one from below in opposing relation, a respective spring acting upon each of said swing-frames to yieldingly urge the secondary sheave which is carried thereby toward the related principal sheave so that the main cable will be securely gripped by the driving set of sheaves and the haul cable securely gripped by the haul-powered set of sheaves, complementary pulley wheels secured so as to rotate in unison one with one and the other with the other of said two principal sheaves, an endless drive belt trained about said pulley wheels, a belt tightener for said drive belt, a pulley wheel journaled to turn about the swing axis of the first said swing-frame, a gear fast to the last-named pulley wheel and meshing a gear fast to the secondary sheave of the driving set of sheaves, and an endless drive belt trained about the last-named pulley wheel and a pulley wheel secured so as to rotate in unison with said principal sheave of the driving set of sheaves.

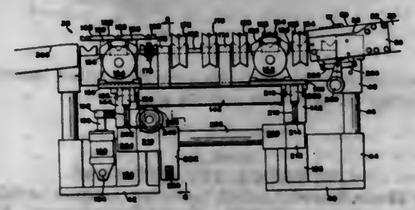


3,090,498
LOADING AND UNLOADING APPARATUS
Harry A. Palmer, Birmingham, Mich., assignor to Kelsey-Hayes Company, Detroit, Mich., a corporation of Delaware
Filed July 20, 1959, Ser. No. 828,214
3 Claims. (Cl. 214—1)



1. Loading and unloading apparatus for a work support comprising means for unloading work from said support including an unloader, means for moving said unloader to and from a work transfer position adjacent said support, means for loading work on said support including a loader movable to and from said transfer position, means operated by the movement of said unloader for initiating movement of said loader toward said transfer position prior to full withdrawal of said unloader from said transfer position so that said loader will arrive at said transfer position after full withdrawal of said unloader from said transfer position, control means for interrupting said loader at an intermediate point in its movement toward said transfer position, and means responsive to the withdrawal of said unloader far enough to clear said transfer position before said loader reaches said intermediate point for rendering said control means inoperative so that said loader can move without interruption to said transfer position.

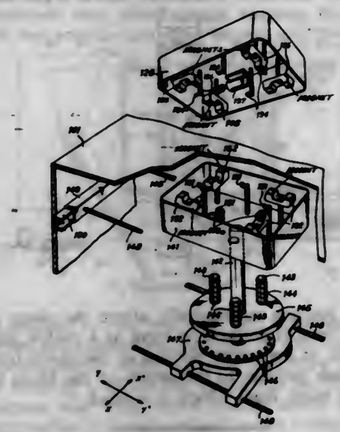
3,090,499
PIPE HANDLING TABLE
George E. Hieber and Arthur H. Billow, Waynesboro, Pa., assignors to Landis Machine Company, Waynesboro, Pa., a corporation of Pennsylvania
Filed Sept. 10, 1959, Ser. No. 839,225
5 Claims. (Cl. 214—1)



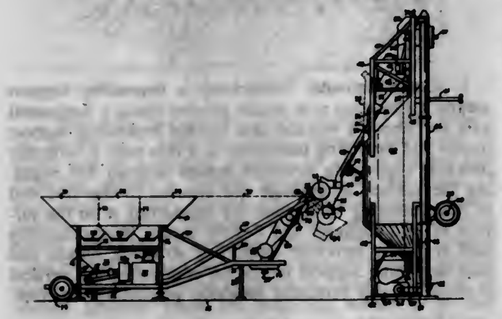
1. Work handling apparatus for transferring elongated workpieces to and from work stations at a predetermined level comprising a plurality of stands positioned in aligned relation between said working stations, sets of rollers mounted on each of said stands for vertical shifting movement between said level and a lower level, means for rotating said rollers to carry a workpiece supported thereon axially toward a working station, a motor on one of said stands, means operatively connecting the rollers on each of said stands to said motor for simultaneous vertical shifting movement between said predetermined level and said lower level, work transfer means mounted on each stand for vertical shifting movement and lateral displacement, and actuating means for sequentially raising said rollers to said predetermined level, raising said work transfer means to said predetermined level, lowering said rollers to deposit a workpiece on said work transfer means, laterally shifting said work transfer means in horizontal straight line motion at said predetermined level, raising said rollers to said predetermined level to engage a workpiece carried by said work transfer means, and lowering said work transfer means whereby said workpiece is constantly maintained at said predetermined level.

3,090,500
REMOTE-CONTROLLED MANIPULATING APPARATUS
Guy Cherel, Clamart, and Henri Forey, Paris, France, assignors to Commissariat a l'Energie Atomique, Paris, France
Filed Jan. 14, 1960, Ser. No. 2,446
6 Claims. (Cl. 214—1)

1. In or for a closed chamber having a roof made of a non-magnetic material, an operating means for a manipulative means operating in the chamber comprising: a first box half movably mounted on the outside surface of the said roof; a plurality of control means rotatably mounted inside the said first box half; a second box half movably mounted inside said chamber adjacent the roof thereof in proximity to said first box half for magnetic cooperation therewith; a plurality of operating means rotatably mounted inside the said second box half; and aligned first and second magnet means provided on each of said control means and on each of said operating means respectively, establishing a plurality of magnetic couplings through the roof of the chamber between said control means and said operating means, rotary movement of each of said control means producing through said magnetic coupling corresponding rotary movement of said aligned operating means for actuating a plurality of devices of a manipulative means housed within said chamber.

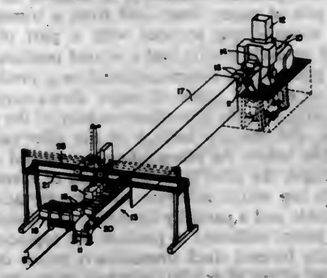


3,090,501
CEMENT MIXING PLANT
John A. Auld, Erie, Pa., assignor to Erie Strayer Company, Erie, Pa., a corporation of Pennsylvania
Filed Mar. 23, 1959, Ser. No. 801,010
3 Claims. (Cl. 214—2)



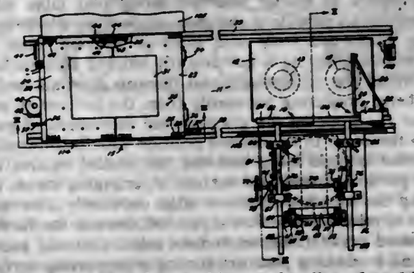
1. A cement dispensing device comprising a vertically extending silo, frame means supporting said silo in a vertical position, the lower end of said silo tapering to an opening at one side thereof and the upper end being inclined at an angle of approximately forty-five degrees toward one side, a cement batcher and a generally inverted, conical shaped surge hopper having walls independent of the walls of said silo supported on said silo above said inclined end, a vertical conveyor, hopper means at the lower end communicating with said conveyor, said conveyor conveying material from said hopper means to said hopper at the top thereof, weighing means for weighing predetermined amounts of said material in said cement batcher, said hopper having an overflow opening therein, and means connecting with said opening the inside of said silo for returning an excess of material therefrom to said silo, the material from said silo returning to said hopper through said opening at the bottom thereof.

3,090,502
APPARATUS FOR HANDLING STACKS OF BRICKS
Rudolf N. Gunzelmann, Grobe Vieren 20, Bremen, Germany
Filed Sept. 18, 1958, Ser. No. 761,908
Claims priority, application Germany Nov. 9, 1957
5 Claims. (Cl. 214—6)



1. A conveying device comprising a frame, a plurality of pairs of grippers extending downwardly from the frame, lifting means for raising and lowering the frame, drive means for operating the lifting means at a plurality of speeds, means responsive to the raising of the frame causing the pairs of grippers to grasp objects between them, feelers disposed below the grippers and separated vertically a distance equal to the height of the object to be grasped by the grippers, and means responsive to the upper of the feelers engaging the top of the object or the lower feeler touching the support of the object for causing the drive means to operate the lifting means at a reduced speed.

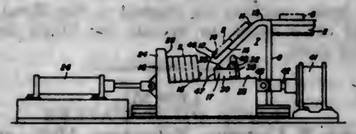
3,090,503
PAPER SHEET STACKER
Frederick B. Curtenius, Kalamazoo, Mich., assignor to The Kalamazoo Paper Company, Kalamazoo, Mich., a corporation of Michigan
Filed Nov. 10, 1960, Ser. No. 68,427
11 Claims. (Cl. 214—6)



1. In apparatus for stacking a plurality of multi-sheet piles of paper sheets successively on one another to form a stack of sheets in which the edges of the separate piles form a smooth, even side of the stack extending perpendicularly with respect to the surfaces of the separate sheets, the combination including: horizontally adjustable pile-guiding means located on a fixed support adapted, upon sliding a pile of trimmed paper sheets along a table top located immediately below the pile-guiding means into contact with the means, to guide the pile accurately into a predetermined location; a stacking table located beneath the pile-guiding means movable upwardly and downwardly in a vertical direction, but essentially immovable in a lateral direction, the stacking table being

adapted to support a skid upon which a plurality of piles of trimmed paper sheets can be stacked; a piler table comprising a pair of table undercarriage sections separably securable to one another and including separably abutting co-planar table top sections secured on the undercarriages, the undercarriages with the respective top sections being adapted to travel independently of one another when unsecured to one another and the table being adapted to travel in a direction essentially perpendicular to the line of abutment of the top sections between a first position wherein it is adapted to receive a trimmed pile of paper sheets slid from a trimming table onto its abutting top sections with a part of the pile supported on each section and a second position wherein, with the pile-guiding means adjusted to a predetermined position, an edge of a pile of paper sheets supported on the piler table is in the immediate vicinity of the pile-guiding means and the top surface of the piler table top is immediately below the pile-guiding means and above the stacking table, the piler table being free of members supporting its top which interfere with the elevation of the stacking table and a partially formed stack of sheets thereon to an extent sufficient to position the topmost sheet of the partially formed stack immediately below the separable sections of the piler table top; and means to raise and lower the stacking table.

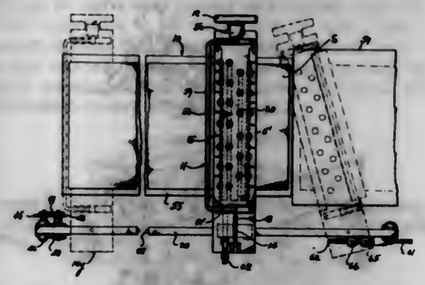
3,090,504
APPARATUS FOR STACKING SLAB-LIKE ELONGATED ARTICLES ON EDGE
Roscoe C. Britton, 4401 Vermont Court, Gary, Ind., and George Carse, Box 1093, Cedar Lake, Ind.
Filed Feb. 24, 1960, Ser. No. 10,599
15 Claims. (Cl. 214—7)



1. An apparatus for stacking elongated articles comprising, in combination with a table over which the articles are moved in a sidewise direction and discharged successively from an edge thereof, of a plurality of transfer pedestals at spaced intervals along said table edge cooperating to provide a common support on which each article discharged from said table is received, each of said pedestals having a downwardly sloping skid surface over which the articles received thereon gravitate and a fixed ledge projecting outwardly from the bottom of said surface for stopping the gravitational movement of each article thereover in an inclined position with its lower edge supported on said ledge and one side resting against the lower portion of said skid surface, disengaging means for moving the said article lower edge outwardly over said ledges to release the article supported thereon for further downward gravitational movement relative to said pedestals, and a stacking platform having a supporting surface at a level below said ledges on which the articles released from said pedestals are received in a vertical position with their said lower edges supported on said platform surface.

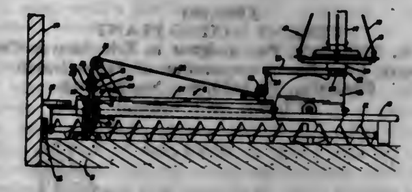
3,090,505
UNSTACKER
Gile A. Mead and Ingvald Dale, Hoquiam, and George E. Davis, Aberdeen, Wash., assignors to Lamb Grays Harbor Co., Inc., Hoquiam, Wash.
Filed Aug. 7, 1961, Ser. No. 129,585
9 Claims. (Cl. 214—8.5)

1. An unstacker comprising a stack separation blade adapted to be advanced edgewise into a stack of paper sheets for the removal of that portion of the stack which is above the blade from that portion which is below it, a pusher plate movable with the blade and engageable with an edge portion of the stack above the blade, said pusher plate being pivotably supported for adjustment from a



horizontal position substantially above the plane of the blade to a vertical position to serve as a pusher plate for the removal of the upper portion of the stack from the lower portion incident to the return of the blade to that side of the stack from which it entered.

3,090,506
LEVELING STRUCTURE
Floyd E. Buschbom, Long Lake, Minn., assignor to Vandale Corporation, Long Lake, Minn., a corporation of Minnesota
Filed July 21, 1960, Ser. No. 44,508
15 Claims. (Cl. 214—17)

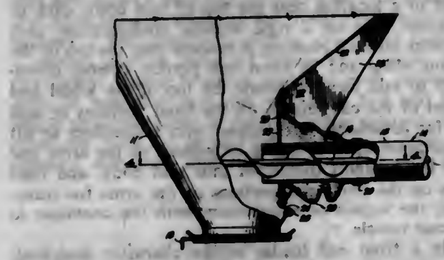


1. A silo unloader comprising a depending support means, a gathering arm means pivoted about a horizontal axis and about a vertical axis to said depending support means and extending therefrom to a free end, a vertically movable supporting structure means adapted for engaging the surface of ensilage and secured to the free end of said gathering arm means for supporting it on the surface of said ensilage, and flexible means interconnecting said vertically movable supporting structure means and said depending support means for controlling the vertical position of said vertically movable supporting structure.

3,090,507
ADJUSTABLE CONVEYOR MOUNTING FOR STORAGE STRUCTURES
Gerald A. Gutekunst, Independence, and Kenneth L. Jensen, Kansas City, Mo., assignors to Butler Manufacturing Company, a corporation of Missouri
Filed Nov. 1, 1960, Ser. No. 66,602
7 Claims. (Cl. 214—17)

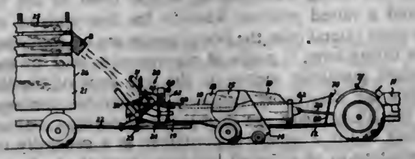
1. Structure for mounting a conveyor tube to the inclined side wall of a storage tank hopper and permitting extended angular movement of the conveyor tube relative to said side wall with one end of the tube within the hopper, comprising a vertical conveyor mounting plate having side, top and bottom edges and disposed internally of the hopper and having a vertically elongated aperture therein through which the conveyor tube extends, the

conveyor tube terminating at one end inwardly of the plate, means pivoting said conveyor tube to said plate for movement about a horizontal axis, said hopper wall having a vertically elongated opening through which the conveyor tube extends and having upper and lower edges and side edges spaced sufficiently to permit movement of the conveyor tube therebetween between the limits of angular movement, combined shroud and plate support



means secured to said side wall and extending inwardly therefrom and connecting the edges of said opening with the corresponding edges of said mounting plate, said means forming a blister-like projection on the inside of said hopper side wall, and a flexible sleeve having one end surrounding a portion of and sealed to the exterior of said conveyor tube and the other end sealing around the aperture end of said mounting plate.

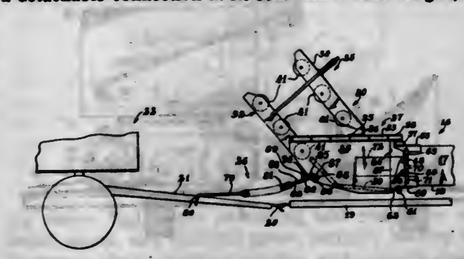
3,090,508
CONVEYOR
William M. Muth, Jr., Akron, and James H. Hollyday, New Holland, Pa., assignors to Sperry Rand Corporation, New Holland, Pa., a corporation of Delaware
Filed Sept. 23, 1960, Ser. No. 57,976
7 Claims. (Cl. 214—42)



1. Bale trajecting means, means mounting said trajecting means on a baler for lateral swinging movement to either side of a neutral position, an engine driving said trajecting means, a throttle for regulating the speed of said engine, means biasing said throttle toward closed position, a control member mounted on said trajecting means for swinging movement therewith, and a control cable extending from said control member to said throttle and holding the throttle against said biasing means in an opened position when the trajecting means is in said neutral position, the distance between said control member and said throttle progressively decreasing upon swinging of said trajecting means on either side of said neutral position thereby releasing the throttle to progressively lower the speed of said engine and reduce the distance bales will be trajected by the trajecting means.

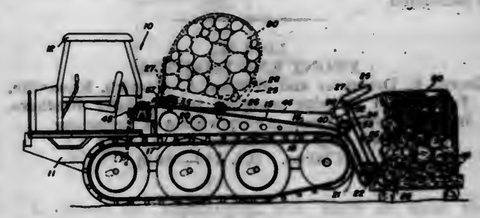
3,090,509
WAGON GUIDE ARM FOR BALE THROWER AND ADJUSTING MEANS THEREFOR
Charles H. Muehlhausen, Shelbyville, Ill., assignor to Oliver Corporation, Chicago, Ill., a corporation of Delaware
Filed Mar. 19, 1962, Ser. No. 180,731
4 Claims. (Cl. 214—42)

1. In apparatus for baling hay and the like comprising: baling means arranged and adapted to be transported in a forward direction, to compress hay into a bale and to move the same rearwardly into a bale chamber; a bale thrower pivotally supported on said bale chamber rearwardly thereof to rotate about a vertical axis and arranged and adapted to convey a bale received from said bale chamber and throw it into a following wagon having articulate connection to said baling means through a tongue on the former; and a wagon guide arm having a detachable connection at its rear end to said tongue, an



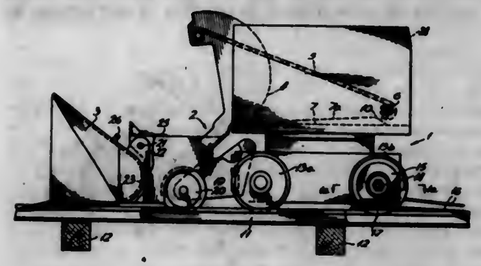
intermediate resilient section and a forward section connected to said bale thrower for causing it to pivot in accordance with the position of said wagon; the improvement which comprises means for variably positioning said forward section of said wagon guide arm relative to said bale thrower to effect a corresponding change in the downward force exerted by said intermediate resilient section on said tongue to accommodate different terrain conditions.

3,090,510
LOG LOADING MACHINE
William B. Nodwell, Calgary, Alberta, Canada, assignor to Robin-Nodwell Mfg., Ltd., Calgary, Alberta, Canada
Filed May 23, 1960, Ser. No. 31,060
5 Claims. (Cl. 214—85.1)



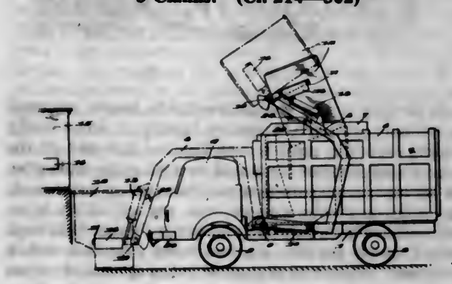
1. A loading device comprising guide means mounted on a vehicle; said guide means having a downwardly depending terminal portion overhanging one end of the vehicle; a skip adapted for travel on said guide means between an inner transportation position and an outer loading position; a winch; a cable, one end of which is attached to the winch, the free end being threaded through apertured means on the skip and being provided with a stop element adapted to engage with the apertured means to prevent the free end of the cable from unthreading therefrom; and connecting means on said skip adapted to releasably secure the free end of the cable to the skip; the skip being arranged for travel from its loading position to its transportation position under the winding-in action of the cable through, in the unloaded condition, the cooperative engagement of the stop element and the apertured means, and in the loaded condition, the cooperative engagement of the secured said free end of the cable, passed restrainingly over a load to be carried, and said connecting means.

3,090,511
MECHANICAL LOADERS
Kenneth Edward Denham, Bullfinch, Western Australia, Australia, assignor to Great Western Consolidated No Liability, Melbourne C.I., Victoria, Australia, a company of Victoria
Filed Aug. 1, 1960, Ser. No. 46,824
7 Claims. (Cl. 214—140)



1. An improved mechanical overshot loader, particularly for use in the sinking of mine passages having an inclination to the horizontal from about 30° to about 50°, said loader comprising a wheeled body, a pair of bucket arms, one positioned on each side of said body, a bucket mounted on the forward ends of said bucket arms, the rear end portion of each bucket arm being curved for providing a curved rolling surface, at least one lifting chain having one end secured to the front portion of said lifting arms, a take-up drum on the rear of said body to which the other end of said lifting chain is attached, and two parallel longitudinally extending guideways, one along each side of said body and on which the curved rear end portions of said bucket arms roll, said guideways having a profile with an apex therein near the rear end of the guideways at a point just before the end of the normal rolling path of said bucket arms, whereby when the bucket arms are rolling on said guideways they pivot around said apexes and the movement of the bucket for emptying it is facilitated.

3,090,512
FRONT END LOADERS
George R. Dempster and William A. Herpich, Knoxville, Tenn.; said Herpich assignor to Dempster Brothers, Inc., Knoxville, Tenn., a corporation of Tennessee
Filed Aug. 7, 1958, Ser. No. 753,696
8 Claims. (Cl. 214—302)



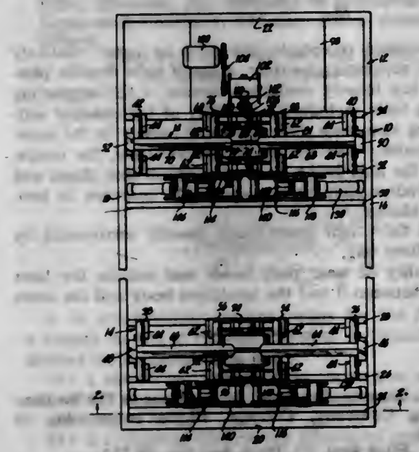
2. In a front end loader of the character described, the combination with a motor vehicle of the type having a body adapted to receive material therein and having in front of the body an operator's cab with wheels on opposite sides thereof near the front end thereof, of a loading mechanism comprising a pair of rigid lifting arms each having a rigid end portion pivotally mounted on said vehicle for swinging movements about a substantially horizontal axis located rearwardly of said cab, and each arm having a separate end portion rigid with the first-mentioned end portion and spaced from said pivotal mounting on the vehicle, means for swinging said lifting arms about said axis between a lowered position in which said last-mentioned end portion of said arms extend forwardly to a location below the tops of said wheels and in front of said cab and a raised position in which said last-mentioned end portions of said arms extend upwardly to a location near the top of said body, each of said arms being of a rigid angular configuration such that, in its lowered position, it extends over the top of the adjacent wheel and its front end portion extends downwardly to said location below the top of the wheel and in front of the cab, means on the front portions of said arms for detachable engagement with a container to lift the container upon swinging movement of the arms and dump the contents therefrom into said body, and rigid means on the front end portions of the arms for transmitting the impact of engagement with the container to the motor vehicle.

7. In a front end loader of the character described, the combination of loading mechanism comprising a pair of lifting arms movable between a lowered position wherein the lifting arms extend to the front of the vehicle and a raised position wherein the lifting arms extend over the vehicle, mounting means for the lifting arms at one end thereof, a torque tube connecting the arms together at the opposite end thereof, means for turning the torque tube relative to the arms, a container, means supported by the torque tube and movable therewith for holding the container in spaced bearing relation with respect to the torque tube.

8. In a front end loader of the character described, the combination with a motor vehicle of the type having a body provided with an opening in the top thereof adapted to receive material therein, of a pair of lifting arms pivotally mounted on the vehicle for swinging movement between a lowered position wherein the free ends of the lifting arms extend to the front of the vehicle and a raised position wherein the free ends of the lifting arms extend over the body; power means for swinging the lifting arms in paths of movement to said lowered and raised positions; means on the free ends of the lifting arms for detachably engaging a separable container when the lifting arms are in a lowered position and cooperating to lift a separable container in a generally upright position to an elevated location above the body and to invert the container to dump the contents thereof into the body; a bracket member mounted on and movable with each lifting arm and including a bearing surface projecting inwardly from the lifting arm, and support members on the body at opposite edges of the top opening and spaced inwardly from the paths of movement of the arms, said bracket members and support members being in position to be aligned in abutting relation when the lifting arms are in the raised position to support the weight of the separable container and to stabilize the free ends of the lifting arms during the time that the container is being inverted.

3,090,513
PIPE SUPPORTING AND TURNING ASSEMBLY
William B. Handwerk and Edward L. Pangborn, Tulsa, Okla., assignors to Cross-Perrault Equipment Corporation, Tulsa, Okla., a corporation of Oklahoma
Filed Aug. 22, 1960, Ser. No. 51,067
3 Claims. (Cl. 214—340)

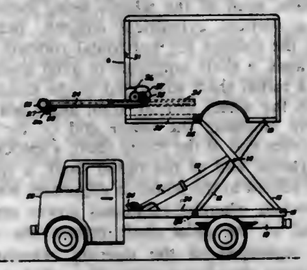
1. In a supporting and turning apparatus, an elongated subframe; an elongated frame supported in spaced, elevated, parallel, overlying relationship to said subframe; a plurality of supports coupled with said frame for supporting an elongated cylindrical object deposited thereon; a pair of first arms movably coupled with said subframe on one side thereof, one adjacent each end of said subframe; a fluid ram coupled with said subframe and each first arm for moving each first arm between a first position projecting above said frame and a second position retracted below said frame; first over-center toggle structure coupling each first arm with its respective ram; a pair of second arms movably coupled with said subframe on the side opposite said one side thereof, one adjacent each end of said subframe and aligned with said first arms; a fluid ram coupled with each of said second arms and said subframe for moving said second arms between a first position projecting above said frame and a second position retracted below said frame; second over-center toggle structure coupling each second arm with its respective ram, the respective first and second toggle structures being in the over-center positions thereof when the arms are in said first positions; a drive roller coupled with said subframe adjacent one end thereof



and positioned substantially below the frame with a portion of its periphery elevated above said frame; a prime mover drivingly coupled with said drive roller for driving the latter; and a second roller coupled with said subframe adjacent the other end thereof and positioned to have a portion of its periphery elevated above said frame whereby said first arms are moved to said second position and an elongated cylindrical object deposited on said supports of said frame against said second arms, said first arms being returned to said first position and cooperating to retain said object therebetween, the periphery of said driving roller engaging with the periphery of the object and thereby rotating the object and the second roller similarly engaged with the object, said second arms being subsequently moved to said second position permitting removal of said object from said supports of said frame.

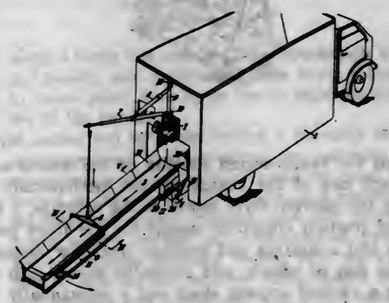
3,090,514
LOAD CARRYING VEHICLE
William C. Black, Sr., 276 Tennele Ave., Jersey City, N.J., and Paul A. Cresci, Boulevard and Grape Sts., Vineland, N.J.
Filed Sept. 12, 1960, Ser. No. 55,590
2 Claims. (Cl. 214—512)

1. A load carrying vehicle comprising a chassis, a body overlying said chassis, fluid operated elevating mechanism comprising arms and a hydraulic ram including a cylinder and piston cooperating with said arms for raising said body above said chassis, valve means for releasing fluid from said cylinder when said valve means is opened to interrupt elevation of said body, a solenoid for opening said valve, an electrical circuit including said solenoid and a source of electrical energy, switch means for making and breaking said circuit, a bumper on said body, supporting means for said bumper and said switch means, said supporting means being connected to said body and inclined both to the horizontal and vertical relative to said body, yieldable means connecting said bumper to said support-



ing means, and means connecting said bumper to said switch means, said yieldable means normally holding said bumper in circuit breaking position, said yieldable means yielding to pressure exerted either horizontally or vertically on said bumper to close said switch means thereby to energize said solenoid and open said valve.

3,090,515
MEANS FOR LOADING AND DISCHARGING BULK LOADS
John Crowther, Coed-y-Castell, Gannock Park, Deganwy, Wales, assignor to Concrete Carrying Company Limited, Manchester, England, a British company
Filed July 5, 1960, Ser. No. 40,949
3 Claims. (Cl. 214—522)



1. Means for discharging bulk loads of solid materials from a vehicle, comprising a main conveyor disposed in the vehicle for feeding the material to the rear of the vehicle, a secondary conveyor in the form of a unit movable in a space beneath the main conveyor in the vehicle and adapted to be drawn out therefrom, a swivel bracket on the vehicle adapted to be engaged by the inner end of the secondary conveyor when drawn out and to support said end below the main conveyor so as to receive material therefrom, and a jib swingably mounted on the vehicle body for supporting the outer end of the secondary conveyor.

3,090,516
PANEL HANDLING AND TRANSPORTING MACHINES
Dale R. Seymour and Thomas F. Poe, Albuquerque, and Henry Heyman, Pojoaque, N. Mex.; said Heyman assignor to said Seymour and said Poe
Filed June 16, 1961, Ser. No. 117,655
7 Claims. (Cl. 214—654)

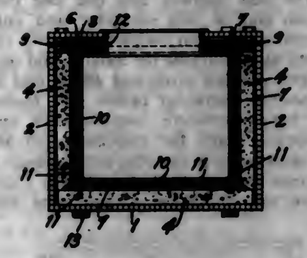
1. A motorized vehicle for transporting panel cargo comprising an elongated chassis, independently steerable

and driven pairs of wheels at the forward and rear ends of said chassis, panel rack means vertically slidably supported on the elongated edges of said chassis and adapted to be lowered to pick up cargo when said chassis is moved laterally, and to transport said cargo when said rack is elevated and the chassis is propelled in a longitudinal or curved path, each of the wheels being journaled in the end of a vertical cylindrical column, bearing means attaching the column for horizontal rotation to a corner of the chassis, a shaft supported in axial alignment in the column, a radial shaft supported in the column in alignment with the wheel journal, right angle gear means cooperatively engaging the lower end of the axial shaft with the inner end of the radial shaft, a sprocket mounted on the exterior end of the radial shaft, a sprocket nonrotatably affixed to the wheel in alignment with the radial shaft sprocket, whereby rotational power applied to the upper end of the axial shaft rotates the radial shaft sprocket regardless of the steering orientation of the wheel, a drive chain connecting the radial shaft sprocket with the wheel sprocket, a traction drive motor and a steering drive motor provided for and supported on each end of the chassis, means mechanically connecting the axial shafts of the two wheel and column assemblies at each end of the vehicle for synchronized rotation, mechanical coupling means connecting the traction drive motor to said axial shafts for torque delivery thereto, means mechanically coupling the upper ends of said



columns for synchronized steering of the wheels at the said each end of the vehicle, means mechanically connecting the steering drive motor to the columns, a steering and traction controller means for the front pair of wheels and a steering and traction controller means for the rear pair of wheels, said controller means each comprising a vertical column shaft and a substantially horizontal control handle rotatably supported on the upper end of the column shaft, said column shafts being rotatably supported on the rear end of the chassis in side by side relationship, a sprocket and a switch disc affixed to one another and rotatably supported on a lower portion of each of the vertical column shafts, a driven and a driving sprocket supported on a vertical shaft on the front portion of the vehicle with the driven sprocket in engagement with the means mechanically coupling the upper ends of the columns for synchronized steering, the driving sprocket and the sprocket connected to the switch disc being coupled together by a chain whereby steering motion of the front wheels causes corresponding motion of the switch disc, a pair of electrical contacts arcuately spaced apart on a peripheral portion of a lateral face of the disc and supported at right angles to the disc to provide opposed contact elements, a contactor arm affixed to the control column shaft and extending between said contacts, means biassing said contact arm to a midposition between the contacts whereby steering motion of the front wheels is accompanied by rotation of the control handle on the steering control column.

3,090,517
INSULATED CONTAINER
Willard L. Morrison, Lake Forest, Ill., assignor to Liquefreeze Company, Inc., New York, N.Y., a corporation of New York
Filed Feb. 2, 1960, Ser. No. 6,326
1 Claim. (Cl. 220—9)

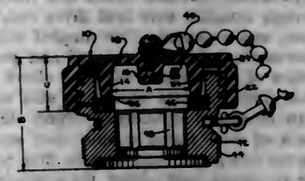


An insulated receptacle including an outer relatively rigid, self-supporting housing, a liquid tight flexible plastic liner bag loosely contained therein, a self-supporting insulating body including a plurality of independent self-supporting insulating slabs contained loosely in the housing and loosely surrounding the plastic liner, the insulation and the liner being free to change in size, shape and position independent of one another in response to temperature change,

a rigid fluid tight inner lining loosely surrounded by the liner bag,

a plurality of wear pads inside and outside the liner bag between it and the insulation body and the inner liner.

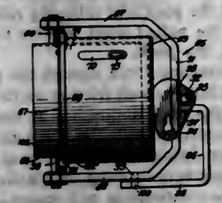
3,090,518
CLOSURE
Harold L. Norway, Evanston, Ill., assignor to The Bastian-Blessing Company, Chicago, Ill., a corporation of Illinois
Filed Sept. 27, 1960, Ser. No. 58,711
2 Claims. (Cl. 220—39)



2. In combination with an externally coarse threaded conduit fitting end portion having an internal shoulder spaced from the open end thereof and facing outwardly, an annular resilient sealing member resting on the shoulder with the outer surface thereof spaced a predetermined distance from the open end of said fitting portion, a closure comprising an integrally formed plastic body of semi-rigid resilient material having a top wall, an internally threaded outer skirt depending from the periphery of the top wall having a heavy thread on the inner surface thereof extending substantially the full depth thereof engageable with the heavy thread on the fitting portion and external hand grip rib members extending longitudinally along the outer surface of the outer skirt over the length of said thread reinforcing said outer skirt, said ribs extending longitudinally over said skirt a distance less than the length of the skirt and terminating in radially tapered ends adjacent to said top wall, an inner skirt formed by converging walls depending from the top wall concentric to and spaced inwardly from said outer skirt and telescoping freely into said fitting portion through said open end in alignment with said sealing member, said inner

skirt extending a major portion of the length of the outer skirt but from said top wall distance greater than said predetermined distance to provide clearance at all times between said top wall and the upper end of said conduit fitting portion and terminating in an axially directed rounded sealing surface to engage said sealing member in sealed relationship under torque induced compression, said top wall between said skirts resiliently transmitting the axial pressure between said shoulder and said fitting portion that is exerted through said resilient sealing member, said skirts and a tightened threaded engagement between the heavy threads on the outer skirt and on said fitting portion.

3,090,519
HOPPER OUTLET CONSTRUCTION
Clarence J. Koranda, Western Springs, and William E. Fritz, Hinsdale, Ill., assignors to Enterprise Railway Equipment Company, Chicago, Ill., a corporation of Illinois
Filed Feb. 29, 1960, Ser. No. 11,648
3 Claims. (Cl. 220—46)



1. In combination, closure means for the opening of a hopper having a vacuum chamber for handling finely divided lading comprising:

(*a*) a cylindrical elongated nozzle section at one end of the vacuum chamber for receiving endwise thereof a suction hose,

(*b*) a cylindrical closure cap telescoped over said hose receiving nozzle section to close off the same and protect the surface thereof to be overlaid by the suction hose from contamination,

(*c*) a radial flange on said nozzle section adjacent the open end of said closure cap,

(*d*) a resilient gasket between said radial flange and the juxtaposed end of said closure cap,

(*e*) pivot pins secured to and extending outwardly from diametrically outer sides of said nozzle section on the side of said radial flange away from said closure cap,

(*f*) a bail in the form of a one piece yoke including parallel arms rotatably mounted at one end on said pivot pins and extending along said nozzle section and joined at the other end by a rigid uninterrupted connecting portion spaced from the closed end of said closure cap in its closed position, and

(*g*) a pair of cams rotatably mounted on opposite sides of said connecting portion of said bail on the side thereof away from said closure cap to swing on an axle normal to a plane containing the axis of swinging movement of said bail for engaging said closed end of said closure cap and retaining it in closed position and in tightly fitting relation to said resilient gasket.

3,090,520
CONTAINER CARRIER
Ted W. Waerthner, San Lorenzo, Calif., assignor to Fiberboard Paper Products Corporation, San Francisco, Calif., a corporation of Delaware
Filed Apr. 11, 1960, Ser. No. 21,459
6 Claims. (Cl. 220—112)

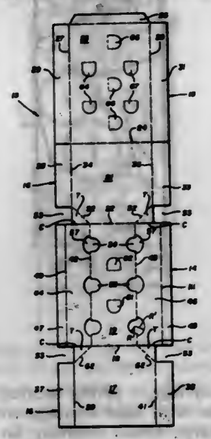
1. In a side loading container carrier the combination comprising:

a generally rectangular bottom panel having two pairs of opposing edges;

a pair of end wall panels hingedly connected to one pair of opposing edges of said bottom panel;

carrier top structure hingedly secured to said end wall panels to form a tubular structure with said bottom panel and end wall panels;

said carrier top structure comprising a generally rectangular intermediate panel having two pairs of opposing edges, said intermediate panel hingedly secured at one pair of opposing edges to said end wall panels, the width of said intermediate panel being less than the width of said end wall panels, and a top extension panel hingedly connected to each of the other opposing edges of said intermediate panel



along a hinge line and free from connection with said end panels, said extension panels being thereby free to rotate about their hinge line to facilitate side loading of the carrier;

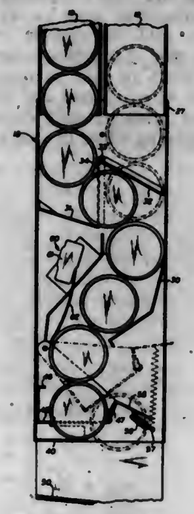
said carrier top structure having a plurality of spaced apart apertures disposed along the junctures of said extension panels and said intermediate panel and traversed by the adjacent hinge line, said apertures having first and second sections, said first sections disposed wholly within said intermediate panel, said second sections disposed within said top extension panels, said second sections being larger than said first sections and contiguous with a first section; and

means for securing said extension panels in a downwardly extending operative position.

3,090,521
VENDING MEANS
Charles Fazekas, Charlotte, N.C., assignor to Pneumafil Corporation, Charlotte, N.C., a corporation of Delaware
Filed Dec. 5, 1958, Ser. No. 778,491
1 Claim. (Cl. 221—6)

Vending apparatus for selectively delivering a single item from a plurality of such items, said apparatus comprising: a multicompartment storage chute within which the items to be vended are tiered; an aligning engaging lip at the lower edge of said chute; a vend mechanism aligned and engaged with said chute by said lip; a switch pivoted at an upper part of and within said vend mechanism, said switch tending to extend on a line between said compartments forming an extension thereof within said vend mechanism; a stop lip on said switch extending into one of the compartments in said storage chute when said switch is aligned with said partition wall; an orienting chamber beneath said switch in said vend mechanism

permitting only the contents of one of said compartments to pass; a depletion detector in said chamber indicating the presence or absence of an item; a delivery carriage pivoted in said vend mechanism; an item stop on said carriage; an item guide at the front of said carriage; an item receiving predischarge platform beneath said carriage reeciving a single item and retaining same prior to discharge by pivotal movement of said carriage; a bracket



secured to said carriage; a spring secured to said bracket and biasing same with said carriage to a non-delivery position; a discharge chute receiving an item delivered by said carriage from said platform; and carriage moving means permitting selective movement of said carriage, whereby upon movement of said carriage an item which has previously been stored in said storage chute will be discharged from said delivery chute.

3,090,522
NAPKIN DISPENSER
Ernest F. Hohwart, 19381 Sussex, Detroit, Mich.
Filed July 3, 1961, Ser. No. 121,393
1 Claim. (Cl. 221—33)



A sheet dispenser for dispensing sheets at least one at a time from a pack of sheets comprising

a box having substantially vertical side walls and oppositely angled angular bottom members leading downwardly and inwardly from said side walls toward one another and joining one another in a V-shaped bottom wall forming a trough having a bottom apex; said bottom members having an upwardly facing friction surface;

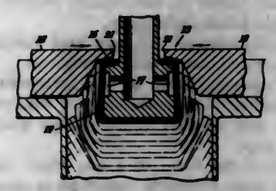
a roller having a cylindrical periphery in said box lying in said trough bearing toward said bottom members friction surface; said roller exerting force against each said bottom member in a narrow radial portion substantially normal to said bottom members friction surface at points spaced from said trough apex; said roller as so bearing concentrating force in a small area to develop maximum friction points between said roller and said bottom members friction surface;

a pack of sheets of U-shaped configuration being positionable in said box under said roller; said pack having straight ends upstanding abutting said box side walls and an intermediate curved portion engaging said V-shaped bottom wall friction surface at relatively small area high friction tangential locations; said roller lying in the intermediate curved portion of a pack of sheets exerting force radially through the sheets engaging the sheets with the friction surface of said V-shaped bottom wall preventing the pack of sheets from moving relative to said box;

manual lifting pull on one end of at least the innermost sheet, tensioning the pulled end of the sheet on a tangent relative to said roller below the bearing radii of said roller thereby lifting said roller out of bearing engagement and causing said roller to roll thereby transferring the tension of the manual pull to the other unpulled end of the sheet on a tangent of said roller; the tensioning pull on the sheet causing it to move away from the pack on a tangent of said roller eliminating frictional engagement between the pulled sheet and the pack and relieving roller radial bearing force on the pulled sheet relative to said roller, said box, and the pack;

said roller exerting force though the pack against said V-shaped bottom wall friction surface on radii of said roller as the pack diminishes as sheets are manually pulled therefrom with the force radially exerted by said roller being directed normal to said angular bottom members forming said V-shaped bottom wall so that the relationship and action is preserved from a full pack of sheets to the last sheet.

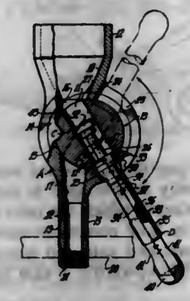
3,090,523
CUP SEPARATORS
Percival James Packman, Twyford, England, assignor to Packman Machinery Limited, Twyford, England, a company of Great Britain
Filed Mar. 9, 1961, Ser. No. 94,511
2 Claims. (Cl. 221—36)



1. Apparatus for extracting individually and in succession pleated cups from a nest of such cups, comprising a holder for the nest of cups, a suction head having parallel opposite side faces with suction orifices formed therein, means for moving the suction head into and out of the nest, a pair of opposed jaws positioned upon said holder, a pair of opposed pressure bars on said holder spaced at 90° in relation to said jaws, alternately operative means for actuating said jaws and pressure bars to move them inwardly respectively in timed relationship and for permitting their alternate outward movement, said jaws when moved inwardly being operative to deform the cups to oval shape and to press the innermost said cup against said opposite side faces of the suction head, while the pressure bars are permitted to move outwardly with the correspondingly outwardly deformed portions of the cups, said pressure bars when moved inwardly in engagement with the cups then being operative to restore the deformed cups except for said innermost cups to their

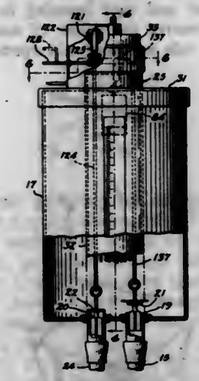
normal configuration, while the jaws are permitted to move outwardly with the portions of the cups engaged by them.

3,090,524
SHOT AND POWDER MEASURING DISPENSER
Lyle S. Corcoran, 6116 Hollywood Blvd., Hollywood 28, Calif.
Filed Sept. 22, 1960, Ser. No. 57,704
7 Claims. (Cl. 222—46)



1. An adjustable shot and powder measuring dispenser comprising: a casing including a hopper at its upper end, a discharge nozzle at its lower end, and an annular boss integrally joining said hopper to said discharge nozzle and having an internal wall defining a core chamber of circular cross section, said hopper having at its lower end a throat communicating with said chamber and said nozzle having at its upper end a mouth communicating with said chamber; a rotary core having a peripheral wall fitted to said chamber and having a diametral bore; a plug fitted in said diametral bore, a measuring pocket of which said plug provides the bottom, being defined in one end of said bore and having at its peripheral wall a mouth adapted to register selectively with said hopper throat in a loading position and with said nozzle mouth in a discharge position; and handle means attached to the periphery of said core and projecting radially therefrom; said boss having an eccentric side at a greater distance from the axes of said hopper and nozzle than the distance between said axes and the opposite side of the casing, said casing having in said eccentric side thereof an arcuate slot through which said handle means extend for vertical movement for oscillating said core between said discharge and loading positions, said casing, at the respective ends of said arcuate slot, defining stops for engagement by said handle means to determine said positions; said plug being slidably fitted in said diametral bore; said handle means comprising a handle lever of sleeve form secured at one end to the periphery of said plug in registration with the end of said bore opposite said pocket, said handle lever projecting radially from the core and having diametrically opposed longitudinally extending slots in respective sides thereof, a dial tube secured in the forward end of said handle lever and projecting rearwardly therein in coaxial relation thereto, said tube having a linear micrometer scale thereon, a stem secured to said head and projecting rearwardly through said dial tube, a knob secured to the rear end of said stem and having respective sides exposed in the respective longitudinal slots of said handle lever, and a micrometer skirt on said knob, projecting forwardly therefrom in telescoped relation to and in threaded engagement with said dial tube, said skirt having at its forward end, indicator means cooperating with said linear scale to indicate the volume of said measuring pocket as determined by the setting of said plug which in turn is determined by the threaded adjustment of said skirt on said dial tube.

3,090,525
METERING SYSTEM FOR ELECTRICALLY CONDUCTIVE FLOWABLE MATERIALS
Frank R. Hinds, Shaker Heights, and Henry O. Pommer, Euclid, Ohio, assignors, by mesne assignments, to Martin-Marietta Corporation, Chicago, Ill., a corporation of Maryland
Filed Jan. 6, 1961, Ser. No. 81,007
6 Claims. (Cl. 222—64)

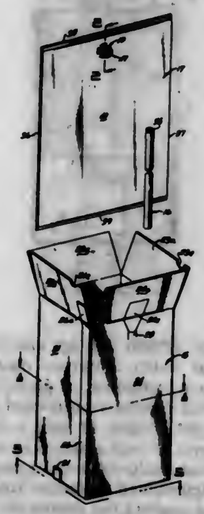


1. A metering system for an electrically conductive flowable material which comprises means for conveying said material to a container, a plurality of electrically conductive sensing elements positioned at predetermined distances from the bottom of said container to control the maximum level of said material in said container and a plurality of electrically conductive sensing elements positioned at predetermined distances from the bottom of said container to control the minimum level of said material, the vertical spacing between the ends of said minimum level sensing elements providing volume increments within said container which are fractions of the volume increments between the ends of the maximum level sensing elements, circuit selector means which permit the formation of a circuit through one of said maximum level sensing elements whereby the accumulation of quantities of said material in said container to the level of said selected maximum sensing element will stop the flow of additional quantities of material into said container, means for discharging said accumulated material from said container, and second circuit selector means which permit the formation of a circuit through one of said minimum level sensing elements so that when the level of said material drops below said selected minimum sensing element the discharge of material will cease.

3,090,526
DISPOSABLE-TYPE DISPENSING CONTAINER PACKAGE
Robert S. Hamilton and Robert J. Curie, Columbus, Ohio, assignors to The Corrugated Container Company, Columbus, Ohio, a corporation of Ohio
Filed Apr. 20, 1961, Ser. No. 104,411
4 Claims. (Cl. 222—105)

1. A disposable-type dispensing container package comprising an outer protective box and an inner collapsible bag disposed within and protected by the outer box, said box having an upper end formed by overlapping inner and outer closure flaps and side walls at right angles thereto, said bag having a dispensing outlet with a cooperating closure unit which are disposed directly adjacent the top of the box, said closure unit comprising a collar

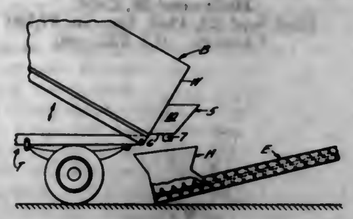
sealed to said bag at said dispensing outlet and a removable cap and nozzle member which can be mounted on said collar, the nozzle thereof being adapted to receive a flexible dispensing tube, said box having a pull-out tab with portions at right angles to each other which are positioned in an outer closure flap and an adjacent side wall of the box, removal of the tab exposing an opening in the side wall of the box and an opening in the outer closure flap, the inner closure flaps having an opening formed therein beneath the said opening in the outer closure flap, said opening in the inner closure flaps being adapted to receive the tube when attached to said cap and nozzle member and said opening in the side wall being adapted to receive the collar of said closure unit, said opening in the side wall and said opening in the inner



closure flaps communicating by means of a slit, said opening in the side wall converging toward its lower end for receiving and embracing the closure collar, and the closure flaps including two inner closure flaps which meet at inner edges which have cooperating notches for forming the other opening, and the slit connecting the openings being between said inner edges, said collar of said closure unit having an outwardly projecting peripheral flange which projects beyond the edges of said collar-receiving opening in the side wall to serve as a stop for preventing complete outward pulling of the collar through said opening when used as a pouring spout, said opening formed by said notches being smaller than said closure and nozzle member to prevent complete pulling out of said member through said opening when used as a dispensing nozzle.

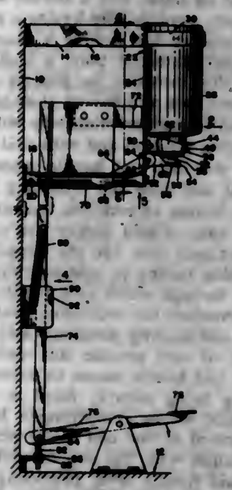
3,090,527
TRUCK MOUNTED HOPPER
Joseph T. Reusch, Makoti, N. Dak.
Filed Apr. 13, 1959, Ser. No. 805,857
1 Claim. (Cl. 222—176)

In combination, a dump truck having an end gate with a material discharge opening therein and gate means for opening and closing same, a separate hopper which includes side frame structure defining a material inlet opening in the side of said hopper, top frame structure connected to said side frame structure and extending outwardly therefrom, a bottom portion having a material outlet opening therein, said bottom portion being hingedly connected to said side frame structure for free swinging movement towards said inlet opening, and side wall structure made of collapsible material extending between and connected to said top frame and said bottom portion, and means for mounting said hopper on said end gate comprising guide means mounted on said end gate on both sides of said discharge opening providing vertically disposed guide slots, and tongue means carried by said side frame structure and adapted for insertion into said slots for free sliding cooperative engagement therewith, and



stop means for limiting the downward movement of said tongue means whereby said hopper is normally retained in an operative position in which the inlet opening thereof is opposed to and in flow communication with the discharge opening of said end gate and wherein said tongue means are free to slide upwardly if said hopper is pushed from below.

3,090,528
MECHANICALLY OPERATED FLUID DISPENSING DEVICE
Ronald Ellis, Battersea, London, England, assignor to Sterling Drug Inc., New York, N.Y., a corporation of Delaware
Filed Oct. 27, 1960, Ser. No. 65,370
8 Claims. (Cl. 222—179)



1. A squeeze bottle dispenser comprising a support adapted to be mounted at a predetermined height from a floor, means on said support for attachment of a squeeze bottle thereto, a spout on the squeeze bottle in position to supply material from the bottle to the hands of the operator of the dispenser, with the bottle in position on the support, a removable cap for the spout, movable means for attachment to the cap, movable means for applying pressure to said squeeze bottle, and foot-operated means connected to said cap attachment means and said bottle pressure means and including means operating the latter in sequential operation with the cap attachment means to first open the spout and then apply pressure to the squeeze bottle to express a portion of the

contents thereof onto the operator's hands, and means to release the pressure applying means from the bottle, and to return the cap attachment means to original position, closing the spout.

3,090,529
LIQUID CONTAINER CLOSURE AND DISPENSING MEANS
Elmer Lipman, 550 Woodland Drive, South Lyon, Mich.
Filed Mar. 13, 1961, Ser. No. 95,148
1 Claim. (Cl. 222—209)



Container closure and liquid dispensing apparatus for selectably sealably closing a container during shipping and storage to prevent leaking and evaporation and for selectably permitting container communication to atmosphere to permit liquid dispensing during use comprising a cap demountably mountable on a container neck having a wall exerting sealing force towards a container neck top; said cap having an axial aperture through said wall; dispensing means on said cap communicating with said cap aperture, a hollow stem disposable in a container neck opening having a bottom liquid conducting portion for leading to a container bottom and a top socket portion surrounded by an annular flange for resting on the top of a container neck as a support element for said stem and as a sealing element between said cap wall and a container neck top, a spring disposed in said socket, an axially hollow plunger disposed in said socket resting on said spring and urged upwardly thereby to effect sealing relationship with said cap wall in communication with said cap wall aperture to establish communication between said stem and said cap dispensing means to atmosphere to effect delivery of container liquid for use, and an easily removable sealing disc disposed between said stem flange and said cap bottom wall depressing said plunger against said spring and sealing off communication between said stem and said cap during periods of shipping and storage; said sealing disc being easily removable by removing said cap from a container; said device upon removal of said sealing disc and remounting said cap on a container automatically conditioning itself for use with said spring urging said plunger into sealing relationship with said cap and said stem flange sealing between said cap and a container neck top; said dispensing means including said cap having a hollow transverse bore above said wall; a hollow tubular insert in said bore having outer and inner flanges sealing with said bore and a reduced intermediate portion between said flanges spaced from said bore creating a chamber therebetween, and a transverse aperture in said insert adjacent said outer flange communicating between said chamber and the hollow interior of said insert; said cap wall axial aperture communicating with a container as stated and also leading to said chamber intermediate said insert flanges; said cap body having a top cavity; a depressable bulb on said cap over said top cavity; said top cavity communicating through said hollow insert to atmosphere; manual depressing of said bulb expelling the air in said top cavity through said hollow insert venturi wise past said insert transverse aperture leading to said chamber to draw liquid from a container via said chamber, said wall aperture, and said liquid conducting means to expel combined air and liquid in a spray from said insert.

3,090,530
AIR FLOW CONTROL FOR PRESSURE FEED CONTAINERS
Donald J. Peeps, Rossford, Ohio, assignor to The De Vilbiss Company, Toledo, Ohio, a corporation of Ohio
Filed June 27, 1960, Ser. No. 38,853
8 Claims. (Cl. 222—400.7)

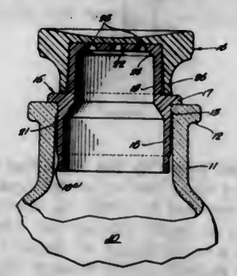


1. A container assembly for supplying material under air pressure to a spray device, of the type having a container, a head member to which the container is detachably connected, an outlet through the head member for the delivery to a spray device of material from the container, and air passage means through the head member terminating immediately above the container for the entry and venting of air to and from the top portion of the container above the level of the material; said container assembly being characterized by the combination with said air passage means of a self-acting inlet valve opening under the pressure of air to admit air to the container, a manually operated relief valve communicating with the air passage means and when in open position venting the air passage means to the atmosphere, and a supplemental self-acting relief valve in the air passage means between the manually operated relief valve and the container and of a composition and structure providing a degree of resistance to opening, when the manually operated relief valve is in open position, which permits opening of the supplemental relief valve by air under pressure within the container for venting substantially all of such air therefrom but which resists opening of said supplemental relief valve by the momentum of material splashing thereagainst or by head pressure arising from jarring or tilting of the container assembly, said self acting relief valve and self-acting inlet valve being located at the end of the air passage terminating immediately above the container and when in closed position sealing the air passage means from the container.

3,090,531
DISPENSING CLOSURE
Norwood Weaver, Bryn Mawr, and Ralph T. Starr, Whitemarsh, Pa., assignors to John Wagner & Sons, Inc., Hatboro, Pa., a corporation of Pennsylvania
Filed May 2, 1961, Ser. No. 107,107
4 Claims. (Cl. 222—545)

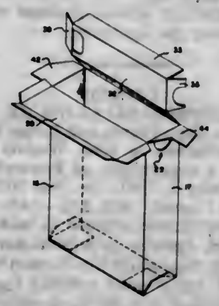
1. A dispensing closure adapted to be removably positioned in the neck opening of a container comprising: a one-piece integral dispensing top formed of resilient distortable material and a cover member therefor, said top including an external radially projecting annular flange portion adapted to engage against the end surface of the neck of said container when said dispensing closure is in said opening, said dispensing top also including first and second axially spaced annular skirt portions disposed in coaxial alignment at respectively opposite sides of said annular flange portion, said first annular skirt portion being of approximately cylindrical external shape and adapted to be inserted into the container opening, said first skirt portion having an outer diameter adjacent said flange slightly greater than the diameter of said container neck

opening and tapering away from said flange to maintain said dispensing top sealed in position in said container with a predetermined restraining force, said second annular skirt portion being of approximately cylindrical external shape and projecting from the flange portion in a direction opposite said first annular skirt portion and coaxial therewith, said second annular skirt portion having an end wall extending across the outer end thereof and provided with at least one opening therein through which material may be dispensed from said container, and said cover member having an imperforate top wall portion adapted to overlie the end wall of said second annular skirt portion and having an annular side wall portion of



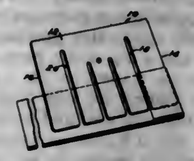
approximately cylindrical internal shape adapted to frictionally engage about and form a seal with said second annular skirt portion to maintain said cover member in position on said dispensing top with a predetermined restraining force, the diameter of the annular side wall portion of the cover member and said second skirt portion of the dispensing top being correlated to the diameters of said first wall portion of the dispensing top and the container neck opening so that the restraining force maintaining the cover member in position on the second annular skirt portion of the dispensing top is less than said predetermined restraining force maintaining said first skirt portion of the dispensing top within said container opening.

3,090,532
METERING DISPENSING CARTON
John Robson, Chicago, Ill., assignor to Reynolds Metals Company, Richmond, Va., a corporation of Delaware
Filed Aug. 8, 1960, Ser. No. 48,049
2 Claims. (Cl. 222—456)



1. A dispensing carton formed from a one-piece folded blank having cut portions and a plurality of orthogonal fold lines defining rectangular longitudinally extending opposed face panels and side panels, a top panel extending transversely from the top edge of one face panel and progressively a first support panel, a partition panel and a second support panel extending from the top edge of the other face panel, the first and second support panels when said carton is formed extending longitudinally in face to face engagement with the upper inner surfaces of their respective face panels and said partition panel extending transversely and below said top panel to define a wall of a top measuring compartment, one of said side panels having a dispensing outlet means at said measuring compartment, said partition panel having a measuring opening of predetermined configuration formed therein by a substantially central cut-out extending from the partition panel edge adjacent the other of said side panels with portions of said partition panel remaining on either side of said cut out, a first support flap connected to the spaced outer edges of said partition panel on either side of said measuring opening and extending toward said top panel, a second support flap connected to the edge of said partition panel at said one of said side panels and extending toward said top panel, the first and second support panels and the first and second support flaps providing a four-sided support for said partition panel to maintain the predetermined position thereof when the material in the carton is supported thereby during the measuring step, said second support flap having an opening therein in alignment with said dispensing outlet means, said dispensing outlet means having a removable tab.

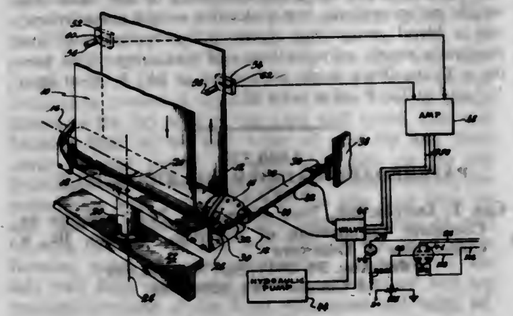
3,090,533
DRAPERY PLEATING DEVICE
Julian J. Claeys, 24030 Deanhurst, and Lillian Beatrice Francis, 24040 Deanhurst, both of St. Clair Shores, Mich.
Filed Mar. 21, 1961, Ser. No. 97,305
4 Claims. (Cl. 223—35)



1. A device for making pleats in drapery material and the like comprising a flat sheet member of rectangular configuration; a first pair of parallel slots in said sheet having open ends opening through one edge of the sheet and closed ends spaced from an opposite edge of the sheet, said first pair of slots being parallel to the two remaining edges of said sheet, each of such first pair of slots spaced from its respective adjacent edge a predetermined distance to define an arm around which said material may be folded embracing the arm to form a pleat, said first pair of slots being spaced from each other a distance greater than the spacing between either slot and the respective adjacent edge of the sheet; a second pair of parallel slots in said sheet having open ends opening through one edge of the sheet and closed ends spaced from an opposite edge of the sheet, said second pair of slots spaced from each other a predetermined distance less than the distance each of said first pair of slots is spaced from its respective adjacent edge; and an aperture in said sheet adjacent the closed ends of said second pair of slots and positioned centrally therebetween.

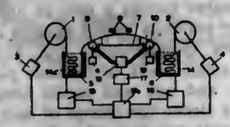
3,090,534
WEB GUIDE CONTROL
Joseph C. Frommer, Cincinnati, Ohio, and Ulrich R. Furst, Bellevue, Wash., assignors to Electric Eye Equipment Co., Danville, Ill., a corporation of Delaware
Filed Mar. 24, 1959, Ser. No. 801,503
20 Claims. (Cl. 226—21)

7. In a system in which a web is steered to keep same centered as it passes through a machine having scanners scanning the edges of the web, a comparison amplifier for comparing signals from said scanners and providing differential current outputs which includes a pair of signal channels each having at least a cathode follower stage with the cathodes connected together, and a pair of amplifier stages driven respectively by the cathode follower stages, the cathode follower stages connected for providing maximum degeneration when the signal inputs



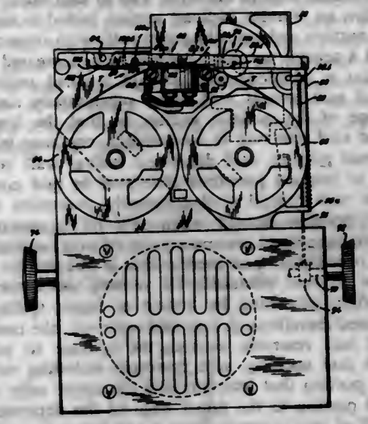
are equal and minimum degeneration when the signal inputs are unequal whereby to increase the sensitivity of response of said amplifier stages substantially in the latter instance, and the output circuits of said amplifier stages having said current outputs flowing therein.

3,090,535
APPARATUS FOR MAINTAINING A PREDETERMINED QUANTITY OF AN ELONGATED MEDIUM AT A PREDETERMINED ZONE
Derek Hurst, Acton, London, and Peter David Havard, Twickenham, England, assignors to Electric & Musical Industries Limited, Hayes, England, a company of Great Britain
Filed Nov. 23, 1959, Ser. No. 854,875
Claims priority, application Great Britain Nov. 26, 1958
5 Claims. (Cl. 226—26)



1. Apparatus for maintaining a predetermined quantity of an elongated medium at a predetermined zone comprising driving means for driving said medium into or out of a predetermined zone, supply means for feeding said medium to or withdrawing said medium from said zone, selecting means for selectively operating said driving means to move said medium into or out of said zone and to condition said supply means to withdraw said medium from or feed said medium to said zone, sensing means responsive to the quantity of said medium in said zone, and control means for said supply means responsive to said selecting means and said sensing means to initiate operation of said supply means in a sense to remove medium from said zone when the amount of medium therein exceeds a predetermined quantity and when said driving means is operative to move medium into said zone, and to initiate operation of said supply means in a sense to feed medium to said zone when the amount of medium therein is less than a predetermined quantity and when said driving means is operative to move medium out of said zone, and means, operative only after operation of said supply means in a particular sense has been initiated in response to both said selecting means and said sensing means, for maintaining such operation in response to said sensing means but independently of said selecting means.

3,090,536
TAPE RECORDER
Benjamin B. Kleinerman, 261—62 Langston Ave., Glen Oaks, N.Y.
Filed Sept. 17, 1959, Ser. No. 840,578
2 Claims. (Cl. 226—48)



1. In a tape recorder having a transducer head and a capstan adapted to drive a recording tape past said transducer head, a pressure arm extending opposite said transducer head and said capstan, means mounting said pressure arm for pivotal movement toward and away from an operating position adjacent said transducer head and said capstan, pressure roller means positioned on said pressure arm to press said recording tape into driving engagement with said capstan only when said pressure arm is in said operating position, pressure pad means on said pressure arm, means mounting said pressure pad means for movement relative to said pressure arm toward and away from said transducer head, means biasing said pressure pad means toward an engagement position sufficiently near said transducer head to press said recording tape thereagainst when said pressure arm is in said operating position, said biasing means being effective in response to retraction of said pressure arm from said operating position to maintain said pressure pad means in said engagement position during an initial phase of said retraction whereby to brake the motion of said recording tape during said initial phase, and means arranged to limit movement of said pressure pad means toward said transducer head whereby to terminate said initial phase after said pressure roller means has ceased to press said recording tape into driving engagement with said capstan in response to said retraction of said pressure arm.

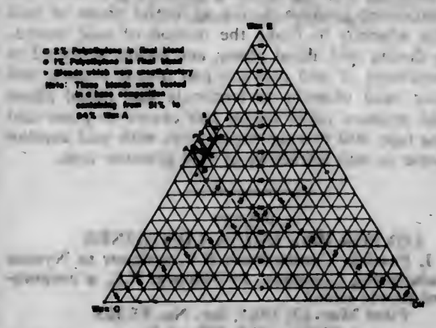
3,090,537
LID FOR HOT DRINK CONTAINER
Joseph J. Pasciak, Cumberland, R.I., assignor to Nyman Manufacturing Company, Providence, R.I., a corporation of Rhode Island
Filed Mar. 13, 1961, Ser. No. 95,323
1 Claim. (Cl. 229—1.5)



In a hot drink container having a liquid receiving body portion that terminates at the uppermost end thereof in

an annular beaded lip, a lid member for enclosing said body portion including a wall construction that is defined by an outer raised peripheral edge that forms an annular groove on the underside thereof for engaging the lip of the body portion when said lid member is inserted thereon, an intermediate annular horizontal portion joined to the lowermost edge of the inner wall of said raised peripheral edge, an annular inclined section joined to said horizontal portion and extending upwardly with respect thereto, and a central reservoir defined by a depressed central wall that is interconnected to said inclined section, the slope of said central wall being substantially similar to the slope of the inclined section, so that the lowermost point of said reservoir is substantially coplanar with said horizontal portion, said depressed central wall being resistant to internal pressures generated in said container, wherein said central wall constantly maintains the depressed position thereof when said lid is mounted on said container, the lowermost point of said reservoir having an opening formed therein that is adapted to relieve pressure in said container by venting gases therefrom and further providing for return of liquid spillage that had passed therethrough into said reservoir, the configuration of said reservoir causing the spillage to gravitate through said opening, said reservoir including an upper beaded portion that interconnects the upper edge of said inclined portion to the upper edge of the depressed central wall of said reservoir, said upper beaded portion elevating the height of the reservoir so as to prevent the spillage entering therein through said opening from overflowing onto the adjacent area of said wall construction and collecting thereon, and said reservoir being exposed at the upper end thereof when said lid is mounted on said container in the position of use thereof, so that said opening is always open for venting said gases and for draining said spillage.

3,090,538
WAX COMPOSITION HAVING NON-FLAKING CHARACTERISTICS FOR USE IN COATING FIBROUS MATERIALS
William J. Stout, Wilmington, Del., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey
Filed June 27, 1961, Ser. No. 119,806
22 Claims. (Cl. 229—3.1)



15. A container for packaging liquid formed from a fibrous sheet material and provided with an adherent non-flaking moisture resistant coating, said coating being a hydrocarbon composition comprising essentially from 42% to 84.5% of relatively low melt point paraffin wax having a melt point between 125° F. and 132° F., viscosity at 210° F. of between 37 and 41 seconds, and a tensile strength at 40° F. of from 275 p.s.i. to 325 p.s.i., the tensile strength at 40° F. being at least 25 p.s.i. higher than the tensile strength at 70° F.; from 5% to 25% relatively high melt point paraffin wax having a melt point between 148° F. and 154° F., viscosity at 210° F. of from 40 to 46 seconds, and a penetration at 100° F. of from 13 to 19; from 5% to 30% microcrystalline wax having a penetration at 110° F. of from 60 to 80, a viscosity at 210° F. of from 70 to 79 seconds, and an adhesion value of from 30 to 120; and from 0.5% to 3.0% polyolefin wax selected from the group consisting of low molecular weight polypropylene, low molecular weight polyethylene, and a blend comprising atactic polypropylene and low molecular weight polyethylene; said wax composition having a Tinius-Olsen angle of fracture at 36° F. of at least 11° and at 73° F. of at least 20°.

3,090,539
PAPERBOARD CARRIER FOR FRANGIBLE ARTICLES
Gus J. Dorofachuk, New Brunswick, N.J., assignor to Container Corporation of America, Chicago, Ill., a corporation of Delaware
Filed Aug. 30, 1961, Ser. No. 134,989
14 Claims. (Cl. 229—40)



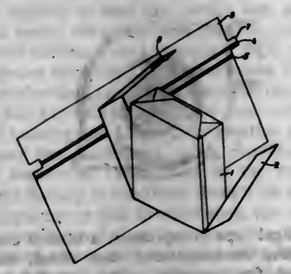
1. A multi-trip, reusable carrier for a plurality of frangible articles such as eggs comprising, in combination: a tray member having a pair of abutting tray elements presenting mutually facing cavities defining article receiving pockets therebetween; and a sling member formed from a single blank of foldable paperboard having top, bottom, and side wall panels hingedly interconnected to form a sleeve for receipt of said tray member; said sling side wall panels having hingedly attached to opposite end edges thereof a pair of inwardly extending end wall panels engageable with opposite sides of said tray member to retain and position said tray member within said sling member; said sling top wall panels being overlapped in detachable interlocking relation with each other and including a pair integrally formed cooperating handle elements.

3,090,540
HINGED COVER CARTON
Edwin L. Arneson, Morris, Ill., assignor to Federal Paper Board Company, Inc., Bogota, N.J., a corporation of New York
Filed Dec. 23, 1957, Ser. No. 704,608
9 Claims. (Cl. 229—44)



1. A carton formed from a one piece paperboard blank which is cut and creased to provide a connected series of panels forming the walls of the carton when erected, said carton comprising a bottom wall panel, front and back wall panels hinged to oppostie edges of the bottom wall panel, side wall forming flaps hinged to opposite side edges of the bottom, front and back wall panels and extending therefrom in overlapped side wall forming relation, the side wall flaps on the bottom and back wall panels having cooperating slits and tongues adapted to be interengaged to hold the same in side wall forming relation, the side wall flaps on the front wall panel being adhesively secured over the side wall flaps on the bottom and back wall panels, and a cover section comprising connected top and front cover forming panels hinged to the top edge of the back wall panel, side wall forming flaps on the side edges of said top and front cover forming panels, the side wall flaps on the top forming panel of said cover having locking tongues for cooperation with locking slits in the side wall flaps on said back wall panel to initially hold the panels in wall forming relation, the side wall flaps on the front cover forming panel being in overlapping relation with the side wall flaps on the top cover forming panel and top marginal portions of the front wall panel and being adhesively secured to the side wall flaps on the top cover forming panel, said front wall panel having latching tongues extending from the lateral edges adjacent the top margin thereof and said cover section having latching slots for cooperation with said latching tongues when the cover section is closed whereby said carton may be initially set up in completely closed condition and the cover section may be hinged to open position by forcing the locking tongues on the top cover side wall flaps out of engagement in the slits in the side wall flaps on the back wall panel and thereafter the cover section may be hinged to closed position and held by engagement of said latching tongues in said latching slots.

3,090,541
CIGARETTE WRAPPER BOX
František Janda, Prague, Czechoslovakia, assignor to Závody V.I. Lenina Plzen, narodni podnik, Plzen, Czechoslovakia
Filed Nov. 29, 1960, Ser. No. 72,513
Claims priority, application Czechoslovakia Apr. 9, 1960
2 Claims. (Cl. 229—51)



1. A package for a batch of cigarettes comprising in combination
(*a*) an inner wrapper of flexible material completely embracing a conventional batch of cigarettes assembled in prismatic shape;
(*b*) a one-piece stiffening frame folded from a strip of relatively rigid material to form two side panels, a bottom panel and a top panel, said panels covering, respectively, the sides and the bottom and top surface of the inner wrapper, the end of said top panel extending to the top edge of the adjoining side panel and terminating in a tongue hinged thereto along a fold, said tongue initially lying in contact with the lower surface of said top panel but adapted to swing outwardly to a position at right angle to said top panel;
(*c*) an outer wrapper of flexible material embracing said stiffening frame with said wrapped batch of cigarettes; and
(*d*) a tearing tape in the outer wrapper located below but proximate to the said top panel permitting to remove the top portion of the outer wrapper to expose said top panel for bending the same away from and again back to the top surface of the inner wrapper to gain access and to protect, respectively, the batch of cigarettes, and to insert the outwardly swung tongue between said inner wrapper and said adjoining side panel.

3,090,542
CLOSURE CAP FOR WAXED PAPER CUP
Ruth S. Miller, 3945 Connecticut Ave., Washington, D.C.
Filed July 6, 1962, Ser. No. 207,953
4 Claims. (Cl. 229—51)

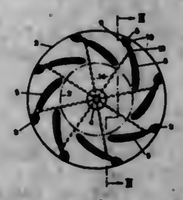


1. A closure for waxed cups having a rolled edge about their upper open ends, comprising:
a flanged cap adapted to seat in the open end of said cup and consisting of (1) a pie shaped member having two straight sides, and a flange on said curved third side; (2) a flat round member having a peripheral flange generally similar to the shape of the rolled edge of the cup on which it seats, said round member having a pie shaped piece cut away therefrom, the area of said pie shaped member being greater than the area of the pie shaped piece cut away from said round member, said pie shaped member being disposed above said round member so as to cover the pie-shaped opening in said round member and (3) a rivet passing through both of said members and securing them to one another while permitting said pie shaped member to rotate and slide on the surface of said round member when said round member is held in engagement with the cup, the flange on said round member being thinned adjacent said cut away portion to facilitate said sliding movement;
and means for breaking the seal between said cap and said cup to permit imbibition of the liquid contents of said cup comprising a tear string knotted at both ends, having one end passing through said cap and at least a portion of the string between said knotted ends being disposed beneath the peripheral flange on said cap and between said flange and the rolled edge on said cup.

3,090,543
RADIAL FLOW IMPELLERS FOR CENTRIFUGAL PUMPS OR FANS
Jan C. Busquet, Hengelo, Netherlands, assignor to Koninklijke Machinefabriek Gebr. Stork & Co. N.V., Hengelo, Netherlands
Filed Dec. 8, 1960, Ser. No. 74,717
Claims priority, application Netherlands Dec. 24, 1959
4 Claims. (Cl. 230—114)

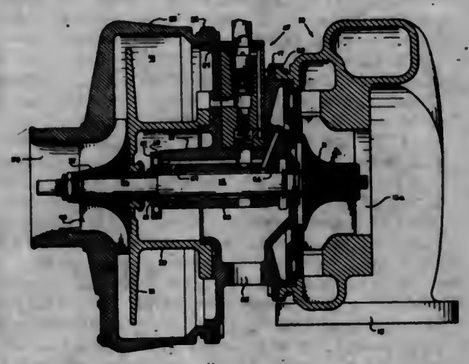
1. A radial flow impeller for a centrifugal pump or the like comprising at least one rotatable supporting plate, blades secured to said plate, each blade including a fixed

leading part rigidly secured to the rotatable supporting plate and an adjustable trailing part angularly movable relative to a radius of the impeller, pivot means supporting said adjustable blade part on said plate, said pivot means including a first element fixed to said supporting plate and an opposed second element fixed to the leading portion of said trailing part radially inwardly of said



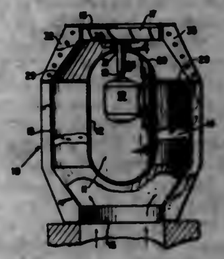
first element, said first element having a substantially larger radius of curvature than said second element and engaging the second element on a single line contact only for reduction of friction during relative rotation of the elements, and an inflatable bellows bearing against the leading portion of said adjustable blade part to move the part in a direction opposite motion caused by centrifugal action.

3,090,544
AIR LUBRICATED BEARING
William E. Woollenweber, Jr., Columbus, and Riccardo A. Bozzola, Indianapolis, Ind., assignors to Schwitzer Corporation, Indianapolis, Ind., a corporation of Indiana
Filed May 2, 1962, Ser. No. 191,786
11 Claims. (Cl. 230—116)



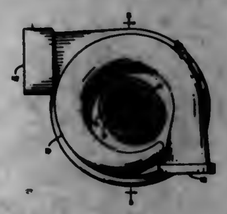
1. A lubricating system for an internal combustion engine turbocharger wherein the turbocharger includes an air compressor driven by a turbine rotated shaft supported by spaced bearings: said system comprising means providing lubricating fluid passages to said bearings, means providing an air inlet passage exposed to the pressure generated by the compressor, means providing an oil inlet passage communicating with a source of lubricating oil under pressure, and a unitary control valve responsive to the air pressure generated by the compressor for selectively controlling communication of said air inlet passage or said oil inlet passage with said lubricating fluid passages as said air pressure generated by the compressor varies substantially above or below a predetermined value.

3,090,545
FANS
Billy L. Bristol, Silvis, Ill., assignor to Ametek, Inc., New York, N.Y., a corporation of Delaware
Filed Jan. 6, 1961, Ser. No. 81,157
7 Claims. (Cl. 230—117)



1. Apparatus comprising in combination, a hollow tubular casing with a walled passage extending transversely therethrough; a first plate attached to a passage wall in parallel spaced relation thereto; a horizontally disposed member parallel with a through axis of said passage, fixed to said first plate and forming a first trough-like track along said first plate; another plate attached to said passage wall in spaced relation to said first plate and forming an inverted trough-like track aligned with said first trough-like track; a plate having a motor fixedly mounted thereon and arranged so that its longitudinal edges are received within said trough-like tracks; and anti-friction means between said motor mounting plate and said trough-like tracks.

3,090,546
PRESSURIZED OIL SEAL FOR ROTATING MACHINERY
William E. Woollenweber, Jr., Columbus, Ind., assignor to Schwitzer Corporation, Indianapolis, Ind., a corporation of Indiana
Filed Dec. 29, 1960, Ser. No. 79,244
1 Claim. (Cl. 230—132)



In a centrifugal type compressor, a bladed compressor wheel, a housing encompassing said wheel, said wheel being mounted for rotation within said housing by means of a driven shaft extending exteriorly of said housing, a hub area formed in said housing accommodating said shaft, said housing having annular spaced interior flanges extending radially away from the axis of said compressor wheel and shaft to provide an annular diffuser passage outboard of the compressor wheel blade edges, pressurized oil sealing means for preventing the migration of oil from the exterior to the interior of said housing through said hub area, said oil sealing means comprising a bearing sleeve carried by said shaft and extending within said hub area, said sleeve having an annular groove on its outer surface, spaced sealing rings carried by said sleeve on opposite sides of said groove whereby the space between said rings including the cavity defined by said groove cooperate with the adjacent

hub area housing surface to define a pressure chamber, and means for providing a positive pressure in said chamber independently of the static pressure in said housing comprising a pressure pick-up fitting having a passage therethrough, said passage having an intake end and an outlet end with its outlet end communicating with said chamber, said fitting being mounted within said housing so as to extend into said diffuser passage with the intake end of said passage facing the direction of air movement from the compressor wheel blades whereby the static pressure in said chamber has a component of its total magnitude resulting from the conversion into static pressure of the kinetic energy of air leaving the compressor wheel blades, and means for adjustably positioning said fitting to vary the angle of attack of said passage intake end with relation to the direction of air movement through said diffuser passage.

3,090,547
MULTI-STAGE RADIAL SLIDING VANE PUMP
Renan Moreira, 125 SE. 12th St., Miami, Fla.
Filed June 12, 1962, Ser. No. 201,835
6 Claims. (Cl. 230—158)



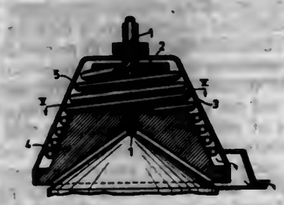
1. A multi-stage radial sliding vane pump comprising; a cylindrically-shaped housing having a first chamber therein of circular cross section relative to a first center line, each end of said housing having an axially-extending, rigid, annular projection therein within said first chamber forming a second chamber of circular cross section relative to a second center line, said second center line being radially displaced relative to said first center line, said projection being of a radial thickness such that the radially outward edge thereof defines a circle having a third center line disposed between said first and second center lines, said projections confronting one another and having a space therebetween; and a cylindrically-shaped rotor rotatably mounted in said housing and adapted for rotation relative to said third center line, said rotor being provided with a first series of transverse radial slots in the outer periphery thereof and having in each end thereof an annular chamber defining a center disk therebetween, the radially inward axially-extending walls of the chambers being provided with a second series of transverse radial slots, said center disk being adapted for rotational movement in the said space relative to said projections whereby there is formed between the outer periphery of said rotor and said housing a first fluid path, and between the radially inward axially-extending walls of said rotor and the projections a second fluid path, said fluid paths having maximum and minimum radial dimensions at diametrically opposed points in said housing, said paths being substantially coplanar with said first path being circumferentially arranged about said second path; and a series of vanes slideably disposed in said radial slots, said housing being provided with a first intake and first outlet port communicating with the maximum and minimum radial dimensions of said first path and a second intake and second outlet port communicating with the maximum and minimum radial dimensions of said second path.

3,090,548
ACCESSORY DRIVE MECHANISM
Walter E. Sargeant, Clawson, and James E. Wilson, St. Clair Shores, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed May 15, 1961, Ser. No. 110,169
8 Claims. (Cl. 230—271)



1. In a vehicle engine cooling system, a fan unit for cooling said engine, said fan unit comprising a power input member driven by said engine at speeds proportional to engine speed, a fan support housing rotatable at variable speeds of rotation with respect to said power input member, fan blades carried by said housing for rotation therewith, said housing enclosing a chamber, a rotatable member disposed in said chamber and driven by said power input member, a U-shaped permanent magnet ring disposed within said chamber for transmitting torque from said rotatable member to said housing in response to rotation of said rotatable member by said power input member, a magnet shunting ring carried by said permanent magnet ring and extending between the arms of said U-shaped permanent magnet ring, said shunting ring being formed of a temperature sensitive magnetic material characterized by its ability to vary its permeability with changes in temperature normally encountered in the normal operation of said engine, said shunting ring becoming increasingly magnetic with a drop in temperature and less magnetic with a rise in temperature, said permanent magnet ring being formed of magnetic material characterized by its ability to maintain a substantially constant flux density within the normal range of temperature encountered in operation of said engine.

3,090,549
CENTRIFUGE APPARATUS
Selahaddin Rastgeldi, Skeppargatan 57, Stockholm, Sweden
Filed Feb. 24, 1958, Ser. No. 716,989
Claims priority, application Sweden Mar. 8, 1957
5 Claims. (Cl. 233—26)



4. A centrifuge for continuously separating the solid components of a fluid dispersion in accordance with their density or size comprising a rotor having an axial inlet,

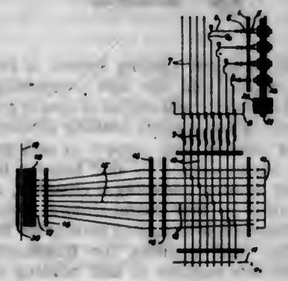
a flexible tube of substantially uniform diameter helically wound on the rotor with one open end thereof disposed in said inlet for continuously receiving said fluid dispersion, the other end of said tube being open and disposed on the periphery of said rotor for continuously discharging said dispersion, means on the rotor in pressure contact with said tube at spaced points along its length to form spaced permanently formed communicating chambers in said tube throughout its length, and means for rotating said rotor about its axis.

3,090,550

MACHINES FOR THE PREPARATION OF CARDS FOR JACQUARDS

Gabriel Servillat, Saint-Cyr au Mont d'Or, France, assignor to Société des Mécaniques Verdol, Lyon (Rhone), France, a French limited liability company

Filed May 31, 1962, Ser. No. 199,147
Claims priority, application France June 6, 1961
9 Claims. (Cl. 234—54)



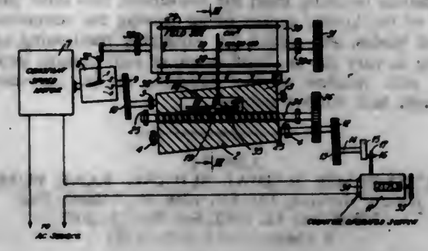
1. A machine for the preparation of cards for Jacquards comprising in combination card punching means; substantially vertical feeler needles adapted to be selected by a master card to cause selective operation of said card punching means; vertically slidable feeler needle controlling members to which said feeler needles are individually suspended, said feeler needle controlling members being selectively movable between an inoperative position for which said feeler needles are spaced from the master card and an operative position for which said feeler needles engage said master card and are selected thereby; disengageable retaining members disposed in successive parallel rows, each of said retaining members being associated with one of said feeler needle controlling members to retain same at said inoperative position; a carriage movable in front of said parallel rows of retaining members, substantially transversely thereto; means to move said carriage continuously at a substantially constant speed to cause same to effect an operative stroke in front of said rows of retaining members; electromagnets supported by said carriage to selectively actuate said retaining members during the operative stroke of said carriage to cause said retaining members to permit said feeler needle controlling members to come to said operative position, said electromagnets forming on said carriage a row obliquely disposed with respect to said parallel rows of retaining members in order that during operative stroke of said carriage said electromagnets pass successively and not simultaneously in front of the retaining members of each row of same and that all said retaining members may be regularly swept and selectively actuated in succession; and energizing means to selectively energize said electromagnets during operative stroke of said carriage in unison with passage of said electromagnets in front of said retaining members and in accordance with a reading-in information corresponding to the pattern to be woven by means of the cards perforated by said machine.

3,090,551

AUTOMATIC DOSE COMPUTER

Robert G. Baker, 17 Nobert Road, Agincourt, Ontario, Canada; Henry P. Webb, 37 Brightwood St., Downsview, Ontario, Canada; and Harold E. Johns, 24 Anderson Ave., Toronto, Ontario, Canada

Filed Feb. 26, 1960, Ser. No. 11,287
Claims priority, application Canada Mar. 5, 1959
3 Claims. (Cl. 235—61)



1. A dose computer for a radiation machine comprising a first rotatable tapered roller, a constant speed motor for driving said first roller through a gear box at one of a plurality of constant speeds, a second rotatable tapered roller arranged in axially parallel side-by-side relationship with said first roller and complementary thereto, a counter driven by said second roller, coupling means for connecting said rollers, said coupling means being linearly displaceable between said rollers and comprising a pair of balls in rolling contact with each other and in rolling contact with said rollers, means for setting said coupling means at a desired distance from the ends of said rollers, an indicator carried by said coupling means, a logarithmic scale calibrated in accordance with the characteristics of said radiation machine and a chosen radiotherapy technique, said indicator being movable over said logarithmic scale, the radii of each of said rollers being determined by the equation

$$f(x)=\frac{D}{1+e^{-cx}}$$

wherein c is a constant, D is the distance between the axes of the rollers less the separation between the peripheral faces of the rollers and $f(x)$ is the radius of one of the rollers at an axial distance x from an origin located at the centre of that roller.

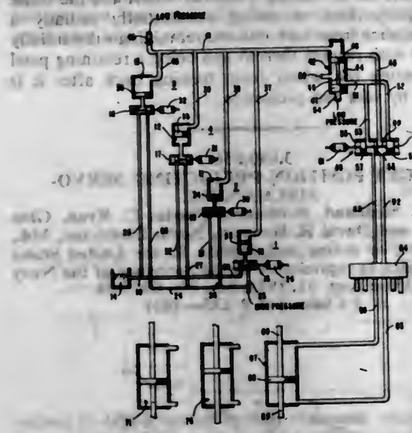
3,090,552

CONTROL SYSTEM

Jerry W. Raider, Endicott, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed July 3, 1961, Ser. No. 121,415
7 Claims. (Cl. 235—61)

1. Fluid operated positioning apparatus responsive to timed electrical signals, comprising: a cylinder of precalibrated capacity for containing fluid, having an entrance and an exit; a feed piston disposed within said cylinder, drive means responsive to certain of said signals operatively related to said feed piston for driving the same to move the fluid contained therein out said exit; an accumulating cylinder and a driver piston having a shaft for connection to a load; fluid conducting means interconnecting the exit of said precalibrated cylinder and said accumulating cylinder; and valve means operatively related with said fluid conducting means and responsive to the pressure of said fluid for blocking the flow of said fluid at the end of transference of a precalibrated amount thereof.

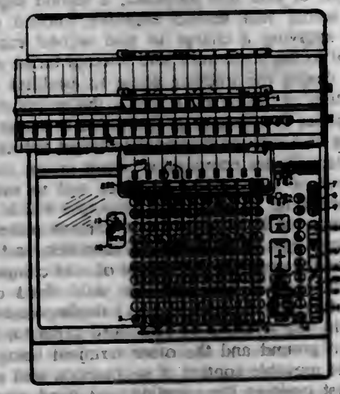


3,090,553

CARRIAGE SHIFTING AND TABULATING MECHANISMS

William S. Gubelmann, deceased, late of Convent, N.J., by Walter S. Gubelmann, executor, Oyster Bay, N.Y.; said Walter S. Gubelmann assignor to Realty and Industrial Corporation, a corporation of Delaware

Original application Nov. 6, 1958, Ser. No. 194,273, now Patent No. 2,969,177, dated Jan. 24, 1961. Divided and this application Oct. 31, 1960, Ser. No. 67,449
34 Claims. (Cl. 235—63)



1. In a machine having a shiftable carriage; a step-by-step feed means fixed on said carriage for movement therewith; traversing means for shifting said carriage and comprising a rotatable shaft, a lever means secured intermediate its ends to said shaft for cooperating with said feed means to shift said carriage one step leftward for each 180-degree revolution of said shaft in a first direction, and one step rightward for each 180-degree rotation of said shaft in a second direction, opposite said first direction, a first gear train and a second gear train connected with said shaft for rotating said shaft respectively in said first direction and said second direction; a rotatable driving unit for operating said traversing means, said driving unit comprising spaced first and second free running coaxial drive gears, each said drive gear comprising a single step interconecting two plane discoidal faces directed toward the interspace between said drive gears, said first drive gear being meshed with said first gear train and said second drive gear being meshed with said second gear train, a 360-degree revolution of a said drive gear serving to turn said shaft 180 degrees, and a single unit coupling means connected at all times with said driving unit for rotation therewith, said coupling means comprising a single step interconnecting two plane discoidal faces on each end thereof for coupling contact alternately with said first and second drive gears, said coupling means being shiftable axially for selectively coupling said first drive gear or said second drive gear with said drive unit for rotation of the coupled drive gear by said drive unit for shifting said carriage by at least one step, the number of steps corresponding to the number of rotations of said driving unit.

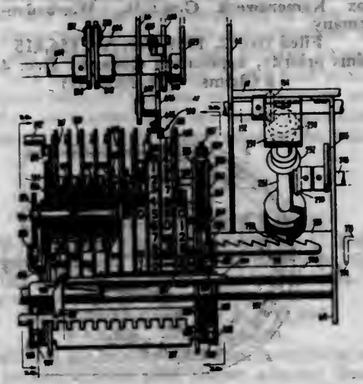
5. In a machine having a shiftable carriage; the combination of a step-by-step feed means fixed on said carriage; a traversing means comprising a rotatable shaft, lever means secured to said shaft and cooperating with said feed means to shift said carriage, and gear means for rotating said shaft in one direction and in the opposite direction; a rotatable driving unit for operating said traversing means, said driving unit comprising a pair of free running coaxial drive gears meshed with said gear means, one said drive gear for effecting rotation of said shaft in said one direction and the other said drive gear for effecting rotation of said shaft in said opposite direction in a 360-degree revolution of a said drive gear, each said drive gear comprising a single step interconnecting two plane discoidal faces directed toward the interspace between said drive gears, and a coupling means mounted coaxially with and between said drive gears on said driving unit for rotation therewith, said coupling means comprising a single step interconnecting two plane discoidal faces on each end thereof for mating contact alternately with the corresponding said faces of said first and second drive gears, said coupling means being shiftable axially for coupling said drive gears selectively one at a time with said driving unit.

3,090,554

CALCULATING MACHINE

Arthur J. Malavasco, Hayward, Calif., assignor to Friden, Inc., a corporation of California

Filed May 18, 1961, Ser. No. 110,960
11 Claims. (Cl. 235—63)



8. In a calculating machine for performing short cut multiplication having

an accumulator,

a reversible drive means for said accumulator for selectively operating the accumulator additively or subtractively,

means for shifting said accumulator relative to said drive means,

sign character control means for adjusting the drive means to operate said accumulator in a selected sign character direction or in a reverse sign character direction,

power-driven means for cyclically operating said actuating means and shifting means,

a multiplier storage mechanism having a plurality of differentially settable elements shiftable ordinally as a unit for controlling multiplying operations,

manual means for successively setting said elements in sequence and escaping said storage mechanism one order,

and a positive and a negative multiply key,

the combination which comprises

means for adjusting the settable element of a selected order from a set position backwardly to a "0" position or forwardly to a "10" position,

mechanism for shifting said differentially settable elements to bring successive elements into the selected position,

means responsive to the adjustment of a settable element to a "0" or "10" position for controlling the operation of said shifting means and said shifting mechanism,

positionable means for setting said sign character control means,

control means for controlling the positioning of the positionable means to a selected direction position whenever the operative settable element is positioned to represent a value of one magnitude and to a reverse direction position when positioned to represent a value of another magnitude,

control means for controlling the operation of the adjusting means to affect adjustment of the selected one of said settable elements toward its "0" position whenever the operative settable element is positioned to represent a value of said one magnitude and toward its "10" position when positioned to represent a value of said other magnitude, and

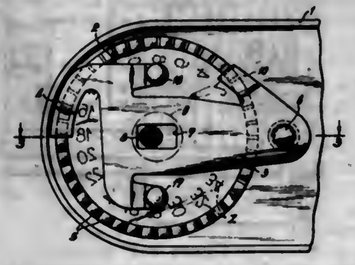
means operated by the adjustment of the selected element toward its "10" position for adjusting the adjacent higher element one step toward a higher value position.

3,090,555

COUNTER FOR CAMERAS AND THE LIKE

Hans Heil, Wiesbaden-Freudenberg, Germany, assignor to Adox Kamerawerk G.m.b.H., Wiesbaden-Biebrich, Germany

Filed Dec. 2, 1959, Ser. No. 856,815
Claims priority, application Germany Dec. 4, 1958
8 Claims. (Cl. 235—91)



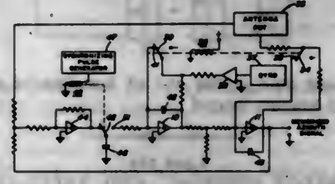
1. For use in a counter, a leaf spring oscillatably mounted on a given axis and having a pair of springy projections angularly spaced from each other about said axis, one of said projections extending at a substantial distance from said axis and movable substantially circumferentially with respect thereto and being an advancing pawl for advancing a counter wheel and the other of said projections extending substantially radially a shorter distance from said axis and remaining substantially stationary with respect thereto and being a retaining pawl for preventing the wheel from turning back after it is advanced by said one projection.

3,090,556

TARGET POSITION PREDICTING SERVO-MECHANISM

Melvin P. Siedband, Baltimore, Charles C. Ryan, Glen Burnie, and David R. Houston, North Linthicum, Md., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Filed Aug. 31, 1959, Ser. No. 837,308
1 Claim. (Cl. 235—183)



In a system for predicting the position of a target, the combination of a first amplifier, a first capacitor connected across said first amplifier, first circuit means for applying a charge to said first capacitor proportional to the ratio at which a selected target is moving at a given time during a tracking phase, a second amplifier coupled to the output of said first amplifier, a second capacitor connected across said second amplifier, second circuit means for applying a charge to said second capacitor proportional to the position of said selected target at said given time during the tracking phase to establish a reference position of the target, whereby the output of said second amplifier is a voltage proportional to target position moving at a rate proportional to target velocity, an antenna potentiometer comparator circuit means coupled to the output of said second amplifier and to said antenna potentiometer for providing an output which is the difference between the output of said antenna potentiometer and the output of said second amplifier, and third circuit means for coupling the output of said comparator to the input of said first amplifier, said third circuit means including a third capacitor and a single-pole double-throw switch, one terminal of said third capacitor being connected to ground and the other terminal being connected to the movable contact of said switch, said switch having a first position for coupling said third capacitor to said comparator circuit and a second position for connecting said third capacitor to said first amplifier.

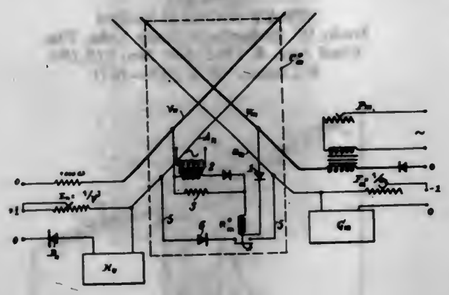
3,090,557

LEAST COST CONSUMPTION AND PRODUCTION COMPUTER

Robert Levi, 21 Rue d'Amsterdam, Paris, France

Filed July 26, 1961, Ser. No. 127,040
4 Claims. (Cl. 235—185)

1. A computer comprising first and second potential bars corresponding respectively to production and consumption, first and second current bars corresponding respectively to production and consumption, the production potential and current bars constituting a pair, the consumption potential and current bars constituting a pair, a first connection connecting said potential bars and including in series a voltage source, a relay coil and a unidirectional conductor, a second connection connecting said current bars and including in series a unidirectional conductor and a relay switch operatively disposed with



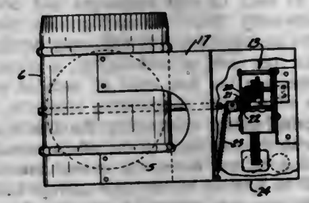
respect to and operated by said relay coil, means for applying a variable potential to the consumption potential bar, means for applying adjustable potentials to both said current bars, and means for indicating the potentials on said current bars.

3,090,558

SPRING LOADED HEAT SAVING DEVICE

Frank R. Vaughn, Madison, Wis., assignor to Albert H. Bartels, Leo T. Schmit, and Pat Feeney, all of Pierre, S. Dak.

Filed July 3, 1959, Ser. No. 824,818
3 Claims. (Cl. 236—1)



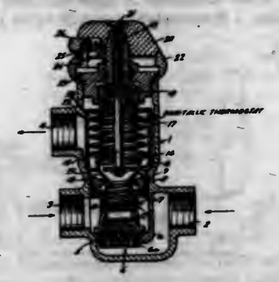
1. In a heat saving unit for use in conjunction with an electrically actuated burner having an electrical control circuit, a burner stack, a damper pivotally mounted within said stack for movement between open and closed positions, a reversible motor having excitation and control windings connected to said damper in rotational driving relation and having said excitation winding continuously energized when connected to a source of power, said motor being constructed and arranged to reverse itself when its control circuit is closed, a room thermostat connected to said motor control winding to utilize the same as a control circuit to be opened and closed at different room temperatures, a switch mechanism connected with said damper and moving between open and closed positions with the movement of said damper, said switch mechanism adapted to be connected in the electrical control circuit of such a burner in circuit closing and opening relation and being constructed and arranged to close the circuit to the burner when said damper is opened and to open the circuit to the burner when said damper moves away from open position, and resilient mechanism connected with said damper and urging the same toward open position whereby said damper will open in appreciably less time than it will close to thereby effect a heat saving.

3,090,559

THERMOSTATIC MIXING VALVE

Friedrich Bayer, Dellinghofen, Westphalia, Germany, assignor to Friedrich Grohe Armaturenfabrik, Hemer, Westphalia, Germany

Filed May 10, 1961, Ser. No. 109,110
Claims priority, application Germany May 11, 1960
11 Claims. (Cl. 236—12)



1. A valve for proportionally mixing a warmer and a cooler fluid so that the resultant fluid mixture is maintained at a substantially constant temperature, comprising a housing defining an internal mixing chamber and having a first inlet for admitting the cooler fluid, a second inlet for admitting the warmer fluid, and an outlet for permitting evacuation of the fluid mixture from said chamber; a regulating member axially reciprocably mounted in said housing and having a central bore communicating only with said first inlet and with said chamber so that the cooler fluid may flow through said bore and into said chamber; stationary supporting means provided in said housing and defining with said member an annular passage whose cross-sectional area is variable in response to axial movements of said member, said passage communicating only with said second inlet and with said chamber so that the warmer fluid may flow through said passage and into said chamber to form a fluid mixture with the cooler fluid; first resilient means for biasing said member in a direction to increase the area of said passage and to thereby increase the rate of flow of warmer fluid to said chamber; and second resilient means provided in said chamber for biasing said member in a direction to reduce the area of said passage and to thereby reduce the rate of flow of warmer fluid to said chamber, said second resilient means coaxial with said member and comprising at least one bimetallic thermostat which is fully accommodated in said chamber and whose bias upon said member increases in response to a rise in temperature of the fluid mixture in said chamber whereby the area of said passage and the rate of flow of warmer fluid are reduced automatically in response to a rise in the temperature of the fluid mixture.

3,090,560

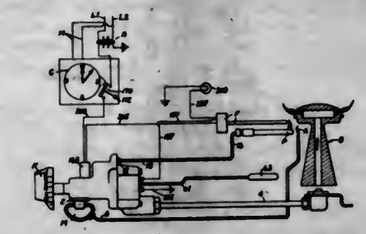
GAS REGULATOR APPARATUS

Walter H. Holzboog, Clayton, and Harold C. Reinhart, Ferguson, Mo., and Stanwood E. Marr, Jr., Granite City, Ill., assignors to Micro Controls, Inc., St. Louis, Mo., a corporation of Ohio

Filed Feb. 29, 1960, Ser. No. 11,907
9 Claims. (Cl. 236—68)

1. Regulated gas heating apparatus, comprising a space heating burner, a main pilot burner adjacent thereto, a gas supply means, a constantly burning auxiliary pilot burner connected to said gas supply means adapted to light said main pilot burner adjacent said heating burner, a flame switch adapted to be closed upon heating and which is in heat-exchange relation with said main pilot burner, a body forming a gas chamber having a gas inlet

adapted for connection with said gas supply means, first gas outlet means in the body adapted for connection with said heating burner, a second gas outlet means in the body adapted for connection with said main pilot burner, a first valve controlling gas flow through said first gas outlet means, electrical control means for said first valve forming a series circuit connection with said flame switch and adapted when energized to open said first valve from a closed position, a thermostatic control valve in said cham-



ber adapted for opening action in response to fall in space temperature engendered by the heating burner and adapted for closing action upon increase of said temperature, said thermostatic valve being adapted to receive gas from said inlet and to control flow to both outlet means, a supply controlling flow through said inlet, and a current supply switch connected in series circuit with said flame switch and said electrical control means of the first valve, said supply switch being adapted to close when said supply valve is turned on.

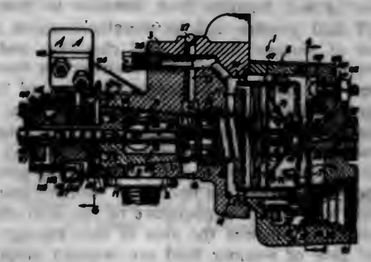
3,090,561

GAS SAFETY REGULATOR APPARATUS

Walter H. Holzboog, Clayton, and Harold C. Reinhart, Ferguson, Mo., assignors to Micro Controls, Inc., St. Louis, Mo., a corporation of Ohio

Continuation of application Ser. No. 830,810, July 31, 1959. This application Apr. 10, 1961, Ser. No. 105,255

14 Claims. (Cl. 236—68)



1. Gas control and safety apparatus comprising a main burner and a constantly burning pilot burner, a hollow casing having an inlet and an outlet, a manual control valve and a regulator control valve, said main burner being in a space to be heated, said pilot burner being continuously supplied with gas from a supply line and said main burner being supplied with gas from said supply line in series flow through both said manual control valve and said regulator valve, a flame switch in heat-exchange relationship with the pilot burner adapted to close when the pilot burner is lighted, a safety valve connected in series flow with said manual control and regulator control valves between said regulator control valve and said outlet, said safety valve being adapted to control the flow of gas through said outlet, gradually operative thermostatic means adapted when heated to open said safety valve and when cool to close it, and an electric heater element for said thermostatic means, said heater element being connected to receive current when said flame switch is closed, said manual control valve, regulator control valve, safety valve, thermostatic means and electric heater element being located in said casing.

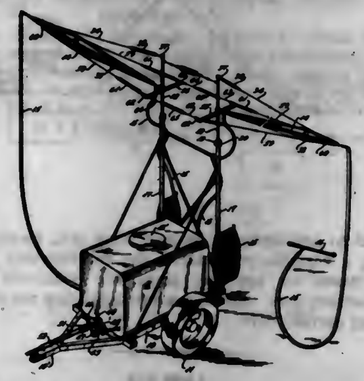
3,090,562

SPRAY RIGGER BOOM

Irwin W. Richardson, Lady Lake, Fla.

Filed Aug. 6, 1962, Ser. No. 215,196

6 Claims. (Cl. 239—167)



1. A portable antenna type spray device comprising a supporting structure, a pair of posts mounted in spaced relation on said supporting structure, each post including a lower fixed portion and an upper telescopic portion rotatably connected to the lower portion, a crossarm fixed to each of the upper portions, a boom rotatably connected to each of said crossarms and normally extending outwardly therefrom in opposite directions, a first resilient means connecting the upper portions of said posts to the free ends of said booms, a second resilient means connecting the free ends of each of said booms to the free ends of the cooperating crossarm, and intermediate spring means connecting the free ends of one crossarm with the free ends of the other crossarm whereby when one of the booms is moved laterally spring tension will be applied by multiple springs including the second resilient means on the side opposite the movement, the intermediate spring means and the second resilient means of the opposite boom.

3,090,563

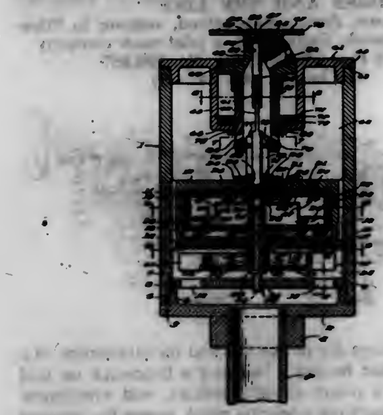
ROTARY SPRINKLER

Robert G. Chessebore, Los Angeles, Calif., assignor to Febco, Inc., Los Angeles, Calif., a corporation of California

Filed Aug. 27, 1962, Ser. No. 219,601

12 Claims. (Cl. 239—206)

1. In a rotary irrigating sprinkler, a hollow body having inlet means affording connection of the interior of said body with a source of water under pressure, a rotary fluid coupling means in said body comprising a rotatable driving component, a rotary driven component and means comprising devices adapted to employ water received from said inlet means for converting rotation of said driving component into rotation of said driven component, power means in said body operative to convert the force exerted by water entering said body from the source to which the sprinkler is connected into rotation of said fluid coupling driving component with resultant application of rotative driving force to said driven component of said fluid coupling, a rotatable discharge nozzle means mounted on said hollow body and connected to said fluid coupling driven component for rotation deriving from rotation of said fluid coupling driven component, and means in said hollow body effective to conduct water



from said power means to said nozzle means in all positions of rotation of both of said power means and of said nozzle means.

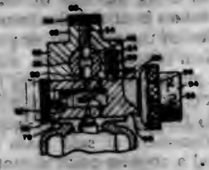
3,090,564

SPRAYING DEVICE WITH DILUTION CONTROL

Robert A. Gilmour, Box 70, Somerset, Pa.

Filed Feb. 21, 1961, Ser. No. 90,788

5 Claims. (Cl. 239—318)



1. In a spraying device of the type which includes an elongated conduit, the wall of which defines a fluid inlet end for receiving a supply of pressurized fluid, a fluid outlet end, an internal bore which has a portion of relatively restricted diameter intermediate said ends so as to form a suction zone, and a suction passage communicating through the wall with the suction zone for introducing fluid into said suction zone, said spraying device further including adjustable orifice means associated with said suction passage for selectively positioning different-sized orifices across said passage, the improved construction for said adjustable orifice means which comprises a cylinder having a longitudinal axis and a plurality of longitudinally spaced groups of different-sized passageways extending transversely therethrough, the extremities of said passageways of each group being circumferentially spaced from each other; and means mounting said cylinder transversely of said suction passage for rotation about the longitudinal axis of said cylinder and for longitudinal movement along said axis whereby one end of each of said passageways through said cylinder may be placed in register with said suction passage.

3,090,565

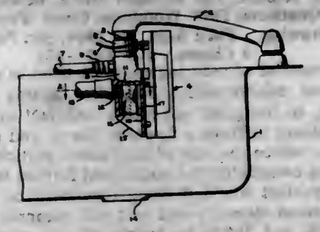
ANTI-SPLASH OUTLET CONDUIT

Dale H. Brown, Scotia, N.Y., assignor to General Electric Company, a corporation of New York

Filed Oct. 23, 1961, Ser. No. 146,839

1 Claim. (Cl. 239—542)

A generally vertically extending liquid outlet conduit including an upper inlet opening and a lower outlet opening, said inlet opening being formed in the side of said conduit and said outlet opening extending from the bottom of said conduit, and a U-shaped foraminous member positioned in said conduit with the open side of said U facing said inlet opening and defining with said inlet opening an enclosed open ended channel within said conduit, said conduit having projections extending inwardly from its inner surfaces against said foraminous member



whereby said foraminous member is held in spaced relation to the inner surfaces of said conduit, said foraminous member being positioned relative to said inlet opening so that most of the liquid passing from said inlet opening impinges on said member, the positioning of said foraminous member with the open side of said U facing said inlet opening providing an unimpeded passage through said conduit from said inlet opening to said outlet opening.

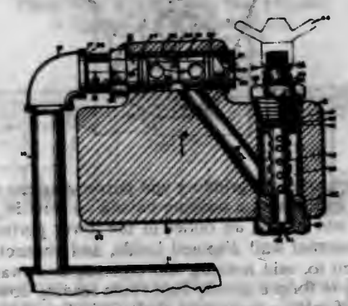
3,090,566

SELF-ARIGHTING SPRINKLER HEAD

Horace S. Snyder, 3245 S. 6th E., Salt Lake City, Utah, and David J. Ganchoff, Box 53, Trenton, Utah

Filed Feb. 15, 1962, Ser. No. 173,509

10 Claims. (Cl. 239—587)



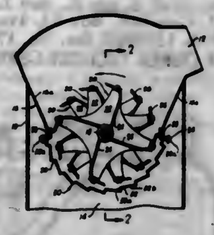
1. A self-arighting sprinkler head including, in combination, a horizontally disposed, swivel coupler having a horizontal axis, said swivel coupler being hollow, open at one end, closed at the remaining end, provided with a perforated region medially disposed between said ends, and adapted for coupling to an aligned, rigid mouth of an external fluid source at said open end; an eccentric bearing block provided with a horizontal, eccentrically disposed bore, said bearing block being eccentrically journalled upon said swivel coupler over said perforated region thereof for rotation about said horizontal axis, said eccentric bearing block being provided with a vertical, rotator stem bore proximate said closed end of said swivel coupler, said eccentric bearing block also being provided with a passageway interconnecting said eccentrically disposed bore and said vertical, rotator stem bore; bearing means disposed within said rotator stem bore; a rotator stem having a perforated portion communicating with said passageway, said rotator stem being journalled within said bearing means; and a water discharge head affixed to said rotator stem and adapted to rotate without obstruction with respect to said swivel coupler,

the center of gravity of the eccentric bearing block and all that is affixed thereto to rotate therewith about said horizontal axis of said swivel coupler being disposed below said horizontal axis thereof.

3,090,567
SIZE REDUCTION OF METAL PARTICLES
Robert J. Schafer, 150 Meadow Drive, Berea, Ohio, and Max Quatinetz, 5821 Woodman Court, Parma, Ohio
No Drawing. Filed Sept. 19, 1960, Ser. No. 56,647
4 Claims. (Cl. 241—22)

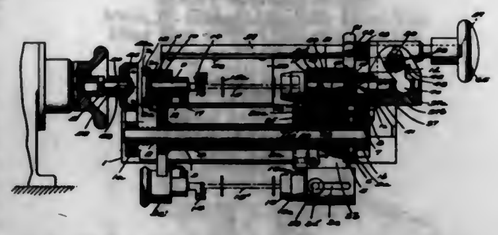
1. A method of reducing metal particles to a size below about one micron which comprises mixing said metal particles, an inorganic salt and a sufficient quantity of a liquid diluent to form a flowable slurry, and milling said slurry to reduce the size of said metal particles, said salt consisting essentially of a compound formed from at least one polyvalent ion and being composed of more than two chemical elements and said salt comprising between about 5% and 300% by weight of said metal particles, and said diluent being chemically inert to said metal particles and said salt and comprising between about 50% and 300% by weight of the total metal particles and salt.

3,090,568
APPARATUS FOR GRINDING AND PULVERIZING EAR CORN AND THE LIKE
Earnest M. Wetmore, Box 307, Tonkawa, Okla.
Filed June 27, 1960, Ser. No. 38,810
3 Claims. (Cl. 241—73)



1. Apparatus for grinding and pulverizing ear corn and the like comprising a housing having an inlet in one side thereof and having an outlet in the lower portion thereof; an internal wall disposed inside, and connected at its upper end to, said housing and tapering downwardly and inwardly to form a gravity feed chute leading downwardly from said inlet; a horizontal shaft extending through said internal wall and rotatably journaled therein; a horizontal, generally cylindrical rotor inside said gravity feed chute and coaxially keyed to said shaft for rotation therewith, said rotor comprising a plurality of cutter heads each including a support member of generally four-cusped, hypocycloidal configuration, and a blade secured to each cusp thereof, said cutter heads each being keyed to said shaft in circumferentially-offset relation to the next adjoining cutter head whereby the blades of adjoining cutter heads are spaced from each other approximately 30° around the periphery of said rotor; a pair of breaker bars extending parallel to said shaft and to each other and secured to said inner wall at two of its lower edges, said breaker bars being located generally in the horizontal plane containing said shaft and closely adjacent the cirlar path described by said rotating cutter heads whereby said ears of corn may be entrapped between said cutter heads and said breaker bars during rotation of said shaft; and a semi-cylindrical, longitudinally corrugated, perforated screen disposed coaxially beneath said rotor with each of its longitudinal edges secured to said lower edges of said internal wall adjacent said breaker bars.

3,090,569
AUXILIARY ATTACHMENT FOR LAYER WINDING MACHINES FOR WINDING COILS ON RELAY CORES AND THE LIKE
Willi Bonhausen, Zurich, Switzerland, assignor to Micafil A.-G., Zurich, Switzerland, a joint-stock company
Filed June 25, 1962, Ser. No. 204,857
11 Claims. (Cl. 242—9)

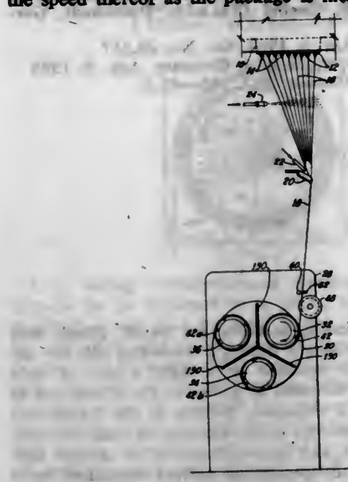


1. A supplementary device adapted for attachment to a winding machine having a bed and a headstock on said bed including a rotary driving member, said supplementary device comprising a bearing stand, means for securing said bearing stand in place on the bed of said machine, a main support member having laterally extending arms at opposite ends thereof, means mounting said main support member on said bearing stand for displacement along and rotation about an axis parallel with and laterally to one side of a projection of the axis of the rotary driving member of the machine, a pair of rotatable core supporting means mounted on the arms of said main support member for rotation on axes disposed 180° apart about and parallel to the axis of rotation of said main support member so as to bring the axis of each said rotatable core supporting means in alternation into coincidence with the axis of rotation of the rotary driving member upon rotation of said main support member, each said rotatable core supporting means including a dog for mounting the corresponding core and means for coupling the core supporting means to the rotary driving member of the machine upon displacement of said main support member along its axis, and a counter-point mounted on said bearing stand for longitudinal displacement along an axis coincident with the axis of rotation of the rotary driving member of the machine for cooperation with each of said core supporting means and for displacing said main support member in such direction as to effect a rotary driving coupling between one of said core supporting means and the rotary driving member of the machine.

3,090,570
METHOD AND APPARATUS FOR FORMING AND COLLECTING FILAMENTS
Cecil R. Cunningham, Anderson, S.C., Marshall D. Weiss, Riverside, R.I., and Robert Z. Schreiber, Anderson, S.C., assignors to Owens-Corning Fiberglas Corporation, Toledo, Ohio, a corporation of Delaware
Filed Dec. 29, 1958, Ser. No. 783,432
16 Claims. (Cl. 242—18)

11. Apparatus of the character disclosed, in combination, a frame, an indexable head journaled on said frame, a plurality of winding collets journally supported on said head, means for indexing said head to bring said collets successively to a winding station, driving means individual to each collet for rotating the same, each of said collets being adapted to support a collector upon which a textile element is to be wound to form a package, a traverse means for distributing the textile element on the collector in overlapping helixes, said traverse means being rotatable and reciprocable, means effective to transfer the textile element into engagement with the succeeding collector as it is moved into position at the winding station, means for initiating rotation of the collets, means for varying

the speed of the collet and collector at the winding station during a winding operation to progressively reduce the speed thereof as the package is increased in size by



winding the element on the collector, and braking means for rapidly decreasing rotation of the completed package at the time of indexing the head to effect a fracture of the element adjacent the package.

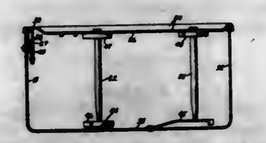
3,090,571
WINDING APPARATUS
Hans Lohest, Hansgeorg Schrader, and Wolfgang Weber, Remscheid-Lennep, Germany, assignors to Barmer Maschinenfabrik Aktiengesellschaft, Wuppertal-Oberbarmen, Germany
Filed Apr. 17, 1956, Ser. No. 578,638
Claims priority, application Germany Apr. 20, 1955
4 Claims. (Cl. 242—45)



1. A variable speed motor comprising means forming a magnetic field system including circumferentially spaced field poles and a cooperating magnetic reflux body defining air gaps with said poles, an eddy current armature having a sleeve portion of electrical conducting material disposed in said air gaps in position exposed to magnetic fields extending between said body and said poles, said armature and field system being mounted for relative turning movement about a rotary axis, said sleeve portion of said armature comprising an electrical conductor having variant conductivity in the axial direction of said sleeve, and means operable to adjust the relative axial relationship of said eddy current armature with respect to the reflux body in order to vary the operating speed of said motor.

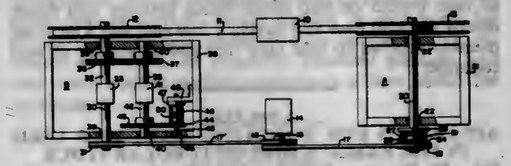
3,090,572
TOILET TISSUE HOLDING AND DISPENSING DEVICE
Walter W. Metcalf, deceased, late of Greenwich, N.Y., by Helen S. Metcalf, administratrix, Greenwich, N.Y., assignor to Stevens & Thompson Paper Company, Greenwich, N.Y., a corporation of New York
Filed Mar. 1, 1960, Ser. No. 12,030
6 Claims. (Cl. 242—55.3)

5. A toilet accessory for disposition within the reach of a person utilizing a toilet adjacent a surface including in combination a mounting plate for supporting said accessory on said surface, an elongated spindle mounted on said mounting plate in cantilever manner and perpendicular thereto, a full roll of toilet tissue of predetermined radius supported by said spindle on the central axis thereof, a second elongated spindle identical to said first spindle and fixedly mounted on said mounting plate in cantilever manner in spaced relation with said first spindle and parallel thereto, a frame attached to said mount-



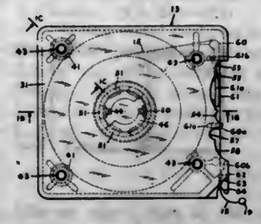
ing plate, a side of said frame parallel to said second spindle and spaced therefrom a distance less than the radius of said full roll of toilet tissue, and the spacing between said first and second spindles being less than the diameter of said full roll of toilet tissue so that a second full roll of toilet tissue identical to the first roll cannot be supported by said second spindle on the central axis thereof due to the interfering presence of said first roll and said side.

3,090,573
TAPE REEL DRIVE
Mitchel J. Matovich, Jr., Sunnyvale, Calif., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Nov. 9, 1961, Ser. No. 151,405
4 Claims. (Cl. 242—55.12)



1. Apparatus for maintaining constant tension on a tape mounted between and secured to first and second spaced reels comprising first and second rotatable shafts on which the first and second reels are respectively mounted, first drive means engaging the tape for the transfer thereof from one of said reels to the other, a drive transmitting means rotatably mounted on said second shaft, second drive means connected to said drive transmitting means for the rotation thereof, a slip clutch for transferring a constant torque from said transmitting means to said second shaft, a third rotatable shaft in axial relationship to said first shaft and operatively connected to said second drive means, a one-way clutch for transferring torque from said third shaft to said first shaft when said first shaft is rotating in a direction to wind tape onto the first reel, a fourth rotatable shaft located adjacent to said first shaft and connected thereto for rotation therewith, a fifth rotatable shaft in axial relationship to said fourth shaft, a one-way clutch for transferring torque from said fourth shaft to said fifth shaft when said first shaft is rotating in a direction to remove tape from said first reel, and means connected to said fifth shaft for maintaining braking torque on said first shaft when said first shaft is rotating in a direction to remove tape from said first reel.

3,090,574
MAGNETIC TAPE MAGAZINE
Daniel P. Doncaster, Rye, N.Y., and Benjamin B. Bauer and Abraham A. Goldberg, Stamford, Conn., assignors to Minnesota Mining & Manufacturing Company, St. Paul, Minn., a corporation of Delaware
Filed May 18, 1959, Ser. No. 814,025
2 Claims. (Cl. 242—55.13)



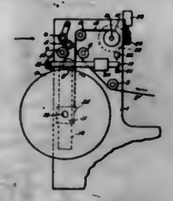
1. In a cartridge for magnetic tape and the like, the combination of a shallow box-like container having a flat base and sides extending, centrally disposed cylindrical journal means on said base inside said container, spool means in said container having hub means rotatably mounted to said journal means and provided on only one side thereof with laterally extending flange means in spaced apart relation to said container base, a flat cover for said container having a central opening therein providing access to said hub means, means extending inwardly from said cover for maintaining said flange means in closely spaced relation to said cover, friction means engaging said hub means, means cooperating with said container base and with said friction means for urging the latter axially outwardly with respect to said container to hold said spool means releasably against rotation in said container, a roll of tape wound on said spool means between said flange means and said base and having a free end, and a terminal member secured to said tape free end externally of said container.

3,090,575
APPARATUS FOR HANDLING MANDRELS USED IN THE FABRICATION OF TUBULAR STOCK
John W. Drayton, Waterloo Ave. and Sugartown Road, Berwyn, Pa.
Filed June 29, 1960, Ser. No. 39,623
6 Claims. (Cl. 242—66)



1. Apparatus for winding material about a mandrel including, support means, means for placing an end portion of the material across said support means, means for pre-heating a mandrel, means for depositing said pre-heated mandrel on said end portion so that the end portion curls toward said mandrel, means for initially wrapping said curled portion at least partially about said mandrel and remaining in continuous engagement with said portion until said initial wrapping is completed, and means for rotating said mandrel for winding said material thereon.

3,090,576
ROLL SLITTING AND REWINDING MACHINES
Karl Röder, Darmstadt-Eberstadt, Germany, assignor to Maschinenfabrik Goebel G.m.b.H., Darmstadt, Germany
Filed Apr. 6, 1960, Ser. No. 20,317
Claims priority, application Germany Apr. 9, 1959
4 Claims. (Cl. 242—67.1)



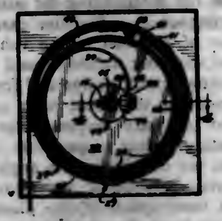
1. A roll rewinding machine for paper, plastic and other webs comprising a frame, a rewinding roll for the strips of web and mounted on a shaft, a pair of slide bearings slidably mounted in guides in the frame and in which the shaft is mounted, pulleys in the frame and having means connected to the bearings to raise or lower the rewinding roll, and means operative by contact with the winding roll to operate the pulleys dependent upon the amount of web wound on the rewinding roll to adjust the position of the bearings in the frame.

3,090,577
LINE REEL WITH BRAKE
Stanley G. Lewandowski, 4535 Larch St., San Diego, Calif.
Filed Jan. 31, 1962, Ser. No. 170,030
8 Claims. (Cl. 242—96)



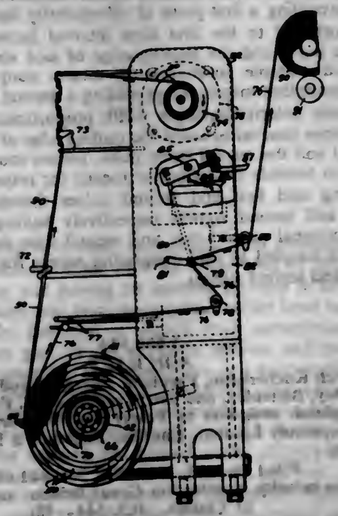
1. A line reel comprising a one piece rectangular wire frame having a top, bottom and two sides, an elongated loop formed in the top of said frame and extending longitudinally of said top, said elongated loop formed at an angle of approximately 45° with the plane of the rectangular frame, a pair of aligned circular loops each at approximately mid-height on the sides of the rectangular frame, means for securing said frame to a frame handle consisting of the two extremities of said frame extending perpendicularly downward from the center of the bottom of the frame, the outer ends of said extremities reversely bent and extending upwardly and outwardly in a diverging manner, a crank comprising a horizontal shaft portion rotatably supported within the aligned circular loops, one end of said shaft extending beyond the frame, said one end bent so as to extend approximately perpendicular to the shaft between the aligned loops and substantially in alignment with the adjacent side of the frame, said end terminating in an outwardly extending portion parallel to the shaft, a handle rotatably and slidably secured on the outwardly extending portion, and a groove through the inner end of the handle of sufficient width and depth so as to accommodate both the perpendicular portion of the shaft and the adjacent side of the frame so as to prevent relative movement therebetween.

3,090,578
SPRING COUNTERBALANCE MECHANISM
Eugene T. Olson, 2905 Lincoln NE., Minneapolis, Minn.
Filed June 7, 1961, Ser. No. 115,360
3 Claims. (Cl. 242—107.5)



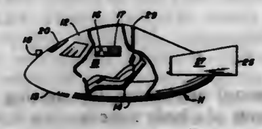
1. A spring counterbalance comprising, a housing adapted to be mounted to a frame structure, a shaft mounted across said housing, a reel rotatably secured on said shaft and having two similar and substantially circular reel discs secured in spaced relation on said shaft and a plurality of flat and narrow braces secured across the outer edges of said reel discs whereby said discs and said braces define an open space between said shaft and said braces, an anchor pin secured across said reel discs adjacent the outer edges thereof, a stiff but flexible metal weight strap wound externally upon said braces having one end secured to said anchor pin and the other end protruding exteriorly of said housing in a free end adapted for attachment to a substantially heavy weight, and a stiff but flexible recoil spring wound about said shaft and secured at one end thereto and at the other end to one of said braces, said recoil spring further being confined to said open space and further having a width substantially the distance between said reel discs.

3,090,579
APPARATUS FOR TREATING FIBERS
Carl J. Russo, Newark, and Alexander L. Trifunovic, Wilmington, Del., and Henry A. Sinski, Aldan, Clifton Heights, Pa., assignors to Joseph Bancroft & Sons Co., Wilmington, Del., a corporation of Delaware
Original application Dec. 21, 1959, Ser. No. 861,001, now Patent No. 2,997,747, dated Aug. 29, 1961. Divided and this application Jan. 18, 1961, Ser. No. 83,506
3 Claims. (Cl. 242—128)



1. Apparatus for extracting a yarn from a core package in which a continuous core of crimped fibers is wound together with a separating and confining tape in successive convolutions with adjacent convolutions of said core separated by the interposed tape, comprising an unwinding spindle carrying said package and adapted to turn as the package is unwound, means withdrawing the yarn from said core as the core is exposed at a delivery point, tape feed means connected to withdraw said tape from said package for thereby exposing said core at the point of removal of said tape, drive means for said tape feed means and means responsive to variations in tension of said withdrawn yarn to control the actuation of said tape feed means for advancing said tape at a rate to maintain said yarn at a substantially constant tension.

3,090,580
SPACE AND ATMOSPHERIC RE-ENTRY VEHICLE
Alan B. Kehlet, Newport News, Va., Dennis F. Hanson, Silver Spring, Md., and William W. Petynia, Houston, Tex., assignors to the United States of America as represented by the Administrator of the National Aeronautics and Space Administration
Filed Apr. 13, 1962, Ser. No. 187,446
14 Claims. (Cl. 244—1)
(Granted under Title 35, U.S. Code (1952), sec. 266)



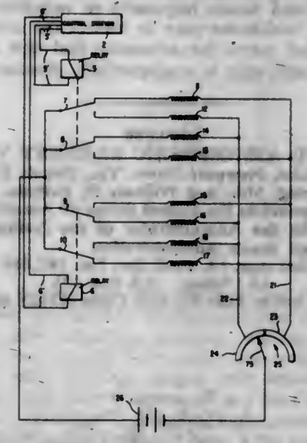
9. A space vehicle capable of atmospheric maneuvering comprising in combination a lenticular body having an upper convex surface and a lower convex surface, aerodynamic control members pivotally connected to said upper convex surface, means located in said body for pivotally moving said members from an inoperative, retracted position to an operative, extended position, and said lower convex surface comprising a heat shield for said body.

3,090,581
FLYING CAR
Elmer Elmarson, 7 Eastern Parkway, Farmingdale, N.Y.
Filed Aug. 12, 1959, Ser. No. 833,334
10 Claims. (Cl. 244—2)



1. A vehicle capable of cruising on land and in the air comprising a body, a plurality of wheels mounted under the body to support the vehicle while on the ground, means for supplying power to the wheels for cruising on the ground, front and rear propellers mounted on the body to provide for take-off and cruising power when in the air, and a pair of pivotally mounted wings secured on the body and being adjustable as to the angles to the horizontal for take-off and cruising positions for the wings, said propellers being connected to receive power from the power supplying means and the wings forming a wing extending from the front propeller to the rear propeller with a bridging element to receive the pressure between the propellers.

3,090,582
REMOTE CONTROL AND STABILIZING APPARATUS
Horst Senger, Echterdingen, near Stuttgart, Wurttemberg, Germany, assignor to Bolkow-Entwicklungen Kommanditgesellschaft, Ottobrunn, near Munich, Bavaria, Germany
Filed Jan. 15, 1959, Ser. No. 786,997
Claims priority, application Germany Jan. 15, 1958
12 Claims. (Cl. 244—14)

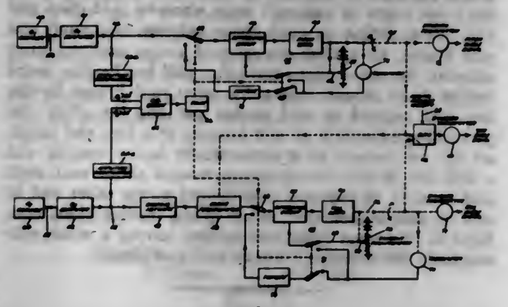


12. A control mechanism for steering and stabilizing the movements of a body traveling in a fluid medium, said body being generally symmetrical about its longitudinal axis and being steerable in any direction relative to its path of movement, said body being essentially non-rotatable about its longitudinal axis during steering movements, but having limited rolling movement in opposite directions about its longitudinal axis for stabilizing the body relative to its path of movement, comprising a plurality of movable steering elements on said body for reacting with said fluid medium to control movements of said body, motive means for moving said steering elements relative to said body, means on said body for receiving steering control signals from a control station remote from said body, automatically acting stabilizing means on said body for providing a stabilizing control effect dependent upon the angular position of said body about its longitudinal axis with respect to a desired stabilized position, and means operatively connected with said motive means as well as with said receiving means and said stabilizing means to effect movement of each said steering element only in dependence upon the condition of both said receiving means and said stabilizing means, said last-mentioned means providing movement of said steering elements to only respective positions thereof which tend to produce a rolling moment tending to roll the body to maintain a desired stabilized position.

3,090,583
SYSTEM AND METHOD FOR DETERMINING THE ATTITUDE OF A SPACE VEHICLE
Eugene Behun and Ray E. Crenkwright, Fort Wayne, Ind., Jerry D. Griffith, Alexandria, Va., Kenneth F. Moore, Marathon Shores, Fla., and Robert E. Stalcup, Champaign, Ill., assignors to International Telephone and Telegraph Corporation
Filed Feb. 8, 1960, Ser. No. 7,432
27 Claims. (Cl. 244—14)

1. The method of determining the attitude of a space vehicle with reference to a first line extending vertically from the center of a planet to the vehicle comprising the steps of: scanning the planet from said vehicle in two mutually perpendicular planes; and for each scan determining the time interval between the instant when half of a planet scan has occurred and the instant when the scan coincides with the line defined by the intersection of the scanning planes.

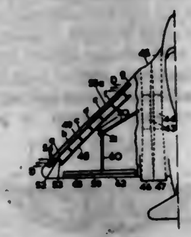
21. A system for determining the attitude of a space vehicle with reference to a first line extending vertically from the center of a planet to the vehicle comprising: first and second scanning means in said vehicle for generating two narrow search beams and for simultaneously continuously rotating the same with constant angular velocity in two mutually perpendicular planes; and a pair of computing means respectively coupled to said scanning means for computing the angle through which each beam moves between a line midway between its point of initial interception of the planet and its point of final departure from the planet and a second line defined by the intersection of said planes; each of said computing means comprising means responsive to the respective beam for generating a stepped signal having a width proportional to the beam intercepting planet, means coupled to the respective scanning means for providing



first and second index pulses responsive to the respective beam sequentially passing first and second points equally angularly spaced on either side of the line defined by the intersection of said planes, means coupled to said stepped signal generating means for differentiating said stepped signal, means coupled to said index pulse providing means for differentiating said index pulses, first bistable multivibrator means coupled to said differentiating means for providing a first pulse of one polarity having a width proportional to the first time interval between the first index pulse and the leading edge of said stepped signal, second bistable multivibrator means coupled to said differentiating means for providing a second pulse of the opposite polarity having a width proportional to the second time interval between the trailing edge of said stepped signal and the second index pulse, means coupled to each of said bistable multivibrator means for respectively integrating said first and second pulses thereby providing first and second signals respectively having amplitudes proportional to said first and second time intervals, and means coupled to said integrating means for adding said first and second signals.

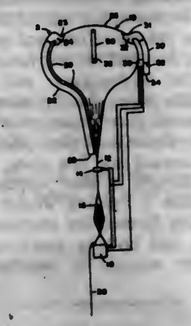
3,090,584
AIRCRAFT
Dietrich Kuchemann, Farnham, Surrey, Geoffrey Michael Lilley, Bletchley, and Eric Cyril Maskell, Farnborough, England, assignors to Power Jets (Research and Development) Limited, London, England, a British company
Filed Dec. 23, 1959, Ser. No. 861,699
Claims priority, application Great Britain Aug. 15, 1956
11 Claims. (Cl. 244—42)

1. An aircraft having an aerodynamic lift member with a leading portion including leading and tip edges which is swept in relation to the normal direction of flight of the aircraft and from which in a given region air flowing over said leading portion is shed therefrom as a vortex sheet in forward flight, and comprising lips in, and extending along, at least part of one of said edges to define in said region slot shaped fluid discharge outlet means, and a combination of co-operating members in-



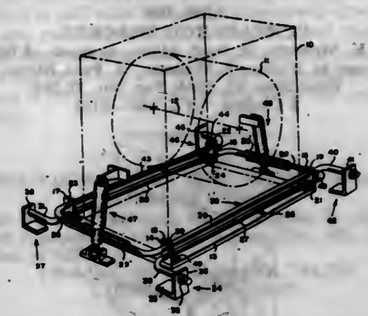
cluding nozzles for ejecting a powerful gaseous jet from the discharge means, and means for moving the nozzles to adjust the direction in which the jet is blown, the discharge means and the combination of members being so disposed in relation to the "in flight" vortex sheet as to direct the ejected gaseous jet to stimulate the shedding of and enlarge and strengthen the vortex sheet.

3,090,585
INTERRUPTED ASCENT BALLOON
David A. Church, Coon Rapids, Minn., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed June 22, 1961, Ser. No. 119,262
14 Claims. (Cl. 244—99)



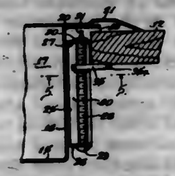
1. In a balloon system, an inelastic film envelope, a first duct communicating with an upper part of the envelope interior and having an opening exposed to the atmosphere below said part at a predetermined level below the top of the envelope, a second duct communicating with an upper part of the envelope interior and having an opening exposed to the atmosphere at a predetermined level below the first-mentioned opening, the envelope being otherwise closed to the atmosphere, means for closing the first duct on the elapse of a period of time after the system has reached and floated at the altitude determined by the location of the opening in the first duct, and means for initiating reascent of the system when the first duct is closed to enable the system to ascend to the altitude determined by the location of the opening in the second duct.

3,090,586
MACHINE MOUNTING
Roy F. Schwegler, Davenport, Iowa, and Kenneth H. Wolverton, Moline, Ill., assignors to Ametek, Inc., New York, N.Y., a corporation of Delaware
Filed Jan. 4, 1961, Ser. No. 80,639
9 Claims. (Cl. 248—20)



2. Apparatus comprising in combination, a platform; a housing mounted on said platform; a rotatable member within said housing that normally is subjected to unbalanced loads; mounting means fixed to a supporting floor; brackets at the four corners of said platform; hole means within each bracket aligned with hole means within another of said brackets; torsion bar arrangements having leg means of one arrangement passing through the aligned hole means of certain of said brackets and the leg means of another arrangement passing through the aligned hole means of certain other of said brackets; arm means at the free ends of each leg means connected to one of said mounting means for supporting said platform at a desired distance from said floor, said torsion bar arrangements having a natural period of vibration substantially below the normal rotative speed of said rotatable member; and shock absorber means between said housing and floor.

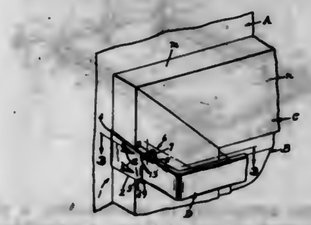
3,090,587
FASTENING DEVICE
Stanley O. Peterson, Wisconsin Rapids, Wis., assignor to Preway Inc., a corporation of Wisconsin
Filed Aug. 10, 1961, Ser. No. 130,613
2 Claims. (Cl. 248—27)



2. A built-in appliance having a casing locatable within a recess in a cabinet with portions of the cabinet surrounding the casing, comprising, a flange attached to the casing for spanning portions of the surrounding cabinet, a plurality of casing side walls, and means on said side walls for securing the casing to the cabinet comprising, a fastener frame of longitudinal extent attached to the casing side wall to lie between the casing and the cabinet, a threaded member rotatably mounted on said frame and extending generally normal to an exposed surface of the appliance with an exposed head engageable by a tool, a clamp lug threaded on said threaded member, and a flange on the frame at one side of said threaded member extending for substantially the length thereof for engagement by the clamp lug as it is swung due to rotation of the threaded member to hold the clamp lug in position behind the surrounding cabinet whereby the clamp lug

can be moved tightly against the cabinet and press said flange against the cabinet with the space at the side of the threaded member opposite the flange being free of obstruction for location of the clamp lug in retracted position extending generally parallel to the casing wall.

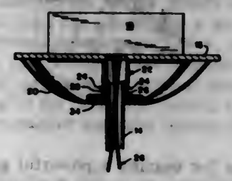
3,090,585
CURTAIN ROD BRACKET
Gerald K. Monette, St. Paul, Minn., assignor of fifty percent to Wallace J. Monette, St. Paul, Minn.
Filed June 23, 1960, Ser. No. 38,269
2 Claims. (Cl. 248—216)

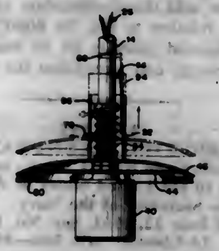


1. A curtain rod bracket for use in the placement of curtain rods adjacent a window of the type having marginal casings secured to the inner face of the wall adjacent the window, said bracket comprising a generally flat side flange, said side flange being adapted for positioning generally vertically against the side edge of said casing in general normality to the wall, a generally flat vertically disposed marginal anchoring flange integrally connected to the rear edge of said side flange in general normality therewith, said marginal anchoring flange being adapted to be disposed intermediate the wall and said casing, a first curtain rod coupling element carried by said side flange at the front thereof, said side flange also defining integrally formed anchoring prongs projecting in the direction of the extension of said anchoring flange, said anchoring prongs lying in a common plane which is generally parallel to the plane of said anchoring flange and being generally normal to said side flange, said prongs being adapted to be driven in the side edge of the window casing, said side flange defining an intermediately spaced upper slot extending downwardly from the upper edge of said side flange and a lower slot spaced vertically below and in general vertical alignment with said upper slot, and an extension attachment removably secured at one of its end portions to said side flange in general normality therewith, said extension attachment comprising a generally flat vertically disposed extension plate one end portion of which defines a pair of vertically spaced downwardly opening hooks adapted to coact with said upper and said lower slots so as to removably secure said extension attachment to said side flange, said one end portion of said extension plate also defining laterally extending abutments adapted to dispose said extension plate in generally rigid normality with said side flange, and the other end portion of said attachment bracket defining a curtain rod coupling element disposed in general alignment with said first coupling element of said side flange.

3,090,589
PIVOTAL SUPPORT MEANS FOR PENDANT LIGHTING FIXTURES INCLUDING GLOBE ATTACHING MEANS
Stephen Schaefer, Flushing, N.Y., assignor to McPhilben Manufacturing Co., Inc., Brooklyn, N.Y., a corporation of New York
Filed May 5, 1960, Ser. No. 27,184
7 Claims. (Cl. 248—318)

5. A pendant lighting fixture having an upper pivotal support section for mounting adjacent a ceiling, or the like, and a lower lamp holding section separated from said support section by a thin rigid length of tubular support shaft, said fixture comprising a support bracket for connection to the ceiling and having a depending tubular portion, the inner surface of which is cylindrical, said tubular portion having a pair of diametrically opposed circumferentially elongated substantially rectangular apertures in the walls adjacent the lower end thereof, a tubular fixture support shaft having a cylindrical outer surface and an outside diameter smaller than the inside diameter of said support bracket tubular portion, the upper end of said tubular fixture support shaft being disposed within the lower end of said depending tubular portion and in sufficient radial spaced relation so that angular movement therebetween is permitted, pivotal





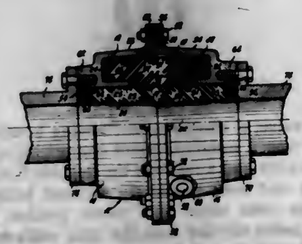
support means extending in diametrically opposite directions and located in the upper end of the support shaft, said support means extending into and engaging said rectangular apertures, first and second horizontally disposed globe holding plates at the lower end of said support shaft, said first plate being fixedly secured to said support shaft, said second plate being movable axially along said support shaft above said first plate, means biasing said second plate toward said first plate, said plates being complementarily formed at their opposing surfaces for holding therebetween a lighting fixture covering globe, said first plate being formed for insertion thereof into a globe to be held, and holding means to maintain said plates in separated relation to facilitate lamp section maintenance.

3,090,590
STAND FOR SUPPORTING A CONTAINER IN ADJUSTED POSITIONS
Frank Hester, Morton Grove, Ill., assignor to Weather-Bloc Company, Inc., Chicago, Ill., a corporation of Illinois
Filed May 22, 1961, Ser. No. 111,853
4 Claims. (Cl. 248—346)



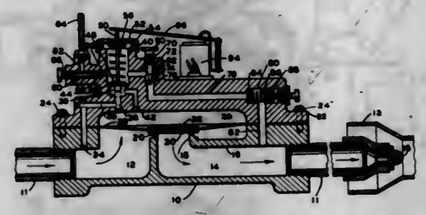
1. A stand for supporting a container in adjusted position, comprising a base having a concave surface on which a container is supported, a movable member having an outer section engaging the neck of said container, said movable member having an inner surface engaging the undersurface of said concave surface of said base to permit said movable member to be manually moved to support said container in a plurality of tilted positions.

3,090,591
FLOW CONTROL VALVE
John Robert Clarkson, Palo Alto, Calif., assignor, by mesne assignments, to The J. R. Clarkson Company, a corporation of California
Filed Dec. 22, 1958, Ser. No. 782,039
11 Claims. (Cl. 251—5)



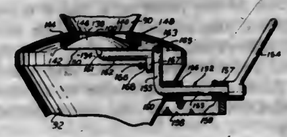
1. A flow control valve comprising a thick-walled substantially cylindrical tube consisting of rubber-like elastomeric material and having rigidly circumferentially supported axially spaced end regions and an unsupported circumferentially compressible central region; an annular thick walled constrictor element of elastomeric material separable from said tube and surrounding said tube central region in uninterruped band of surface to surface contact therewith; a rigid casing surrounding said tube and element, means fixing the ends of said tube to said casing, and selectively operative means for causing said element to exert a circumferentially uniform radially directed compressive force upon said tube within said band.

3,090,592
STEPPED-OPENING DIAPHRAGM GAS VALVE
Thomas P. Fleer, Affton, Mo., assignor, by mesne assignments, to White-Rodgers Company, a corporation of Missouri
Filed May 18, 1959, Ser. No. 813,863
5 Claims. (Cl. 251—30)



1. In a diaphragm gas valve, a main valve body having a first chamber formed therein, a main fuel inlet passageway leading to said first chamber, a main fuel outlet passageway leading from said first chamber, and a main valve controlling said outlet passageway, a cover member for said valve body, a second chamber formed in said cover member, a flexible diaphragm forming a dividing wall between said first and second chambers and being operatively connected to said main valve, means biasing said valve in a closed position, means forming a first communicating passageway connecting said first and second chambers, and means forming a second communicating passageway leading from said second chamber to atmosphere, a two-position pilot valve operative to alternately close and open each of said communicating passageways as it is moved back and forth from its one position to the other, means forming a branch of said second communicating passageway leading from a point in said second communicating passageway between said pilot valve and atmosphere to a point in said main fuel outlet passageway downstream from said main valve, and a normally closed check valve in said branch communicating passageway arranged to open when the pressure in said branch communicating passageway is greater than that in said main fuel outlet passageway.

3,090,593
SHUT-OFF VALVE FOR CEMENTITIOUS PRESSURE VESSELS
George M. Pro, Leawood, Kans., assignor to Air Placement Equipment Company, Kansas City, Mo., a corporation of Missouri
Filed Dec. 18, 1958, Ser. No. 781,322
2 Claims. (Cl. 251—87)

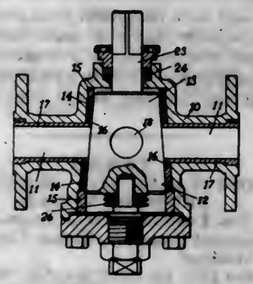


1. In a machine for handling particulate material, the combination of a pressure hopper for said material having a material inlet port and an annular seat in the hopper adjacent the port; a valve in the hopper having a convex outer face shaped substantially in conformity with a sector of a sphere, said outer face normally bearing against the seat in closing relationship to the port; a shaft carried by the hopper for rotation relative thereto about an axis spaced from said port; an arm; and means mounting said arm on said shaft for movement relative to the latter, said arm being secured to the valve for moving the latter along a circular path to and from a position clearing and thereby opening the port as the shaft is rotated, said arm being swingable relative to the shaft about an axis disposed angularly with respect to the axis of rotation of the shaft and in a direction to move said valve toward the seat when the valve is closed, whereby pressure in the hopper holds the valve tightly against the seat, said seat being resilient whereby material becoming lodged between the seat and the valve when the latter is closed is pressed into the seat by said pressure in the hopper acting on the valve, thereby maintaining a seal around the seat.

3,090,594
VALVES HAVING SEALING MEANS RESTRAINED AGAINST AXIAL EXPANSION
Terence John Floyd, Wellington, England, assignor to Audley Engineering Company Limited, Shropshire, England
Filed Dec. 19, 1960, Ser. No. 76,668
Claims priority, application Great Britain Jan. 5, 1960
8 Claims. (Cl. 251—183)

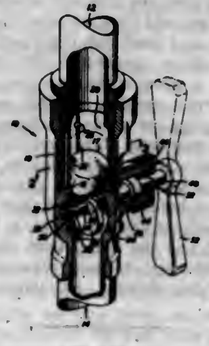
1. A fluid controlling valve having in combination a hollow body provided with an internal socket of circular cross-section, and with a pair of coaxial fluid inlet and outlet ports extending from opposite sides respectively of a portion of said socket intermediate the ends thereof, a rotatable and axially movable closure member in the form of a frusto-conical plug mounted coaxially within said socket in spaced relationship thereto, and provided with a transverse fluid passage for establishing communication between said ports when said plug occupies an open position, sealing means mounted within said hollow

body in contact with the outer peripheral surface of said plug, and consisting of a synthetic resin material having a low coefficient of friction, means isolating said sealing means from said inlet and outlet ports, and resilient means acting on said plug in the direction for urging it into constant contact with said sealing means so that expansion



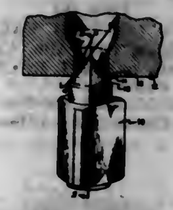
or contraction of the latter in a radial direction relative to the rotational axis of said plug will be accompanied by small axial movement of said plug, said sealing means being shaped and supported within said hollow body so as to be restrained against expansion in a direction parallel with the adjacent parts of the outer peripheral surface of said plug.

3,090,595
CAM ACTUATED BALL VALVE
Reginald Arthur Blyth, deceased, late of 7 St. Andrews Garden, Toronto 5, Ontario, Canada, by Walter Harris, executor, Markdale, Ontario, Canada
Filed June 23, 1960, Ser. No. 38,392
1 Claim. (Cl. 251—258)



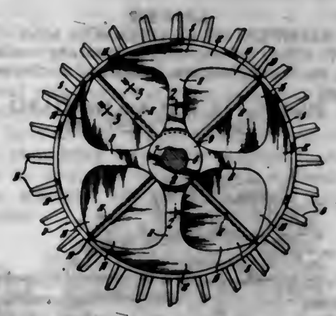
A valve comprising a casing having a through bore with an inlet and an outlet end, a valve seat on said bore facing the inlet end thereof, a valve adapted to seat on said valve seat, means for displacing said valve from said seat manually from the outside of said casing, a sleeve for said bore extending from adjacent said valve seat towards the inlet end of said bore, said sleeve having guide means extending inwardly of the surface thereof adapted to guide the movement of said valve longitudinally of said sleeve and sphere shaped stop means comprising a shoulder on the inside of said guide means for preventing said valve from moving out of said bore, said sleeve also having an inside diameter formed to permit fluid to pass therethrough and consequently through said bore when said valve is lifted from said seat, said sleeve also being screw threaded into said bore and being internally threaded at its end adjacent said inlet end for receiving a threaded pipe.

3,090,596
RUBBER TIPPED NEEDLE VALVE
Robert T. Gifford, Yellow Springs, Ohio, assignor to Vernay Laboratories, Inc., Yellow Springs, Ohio, a corporation of Ohio
Filed Dec. 16, 1960, Ser. No. 76,359
3 Claims. (Cl. 251—333)



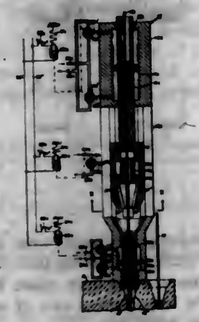
1. In a valve, a valve element having a valve seat, and a resilient tipped needle element comprising a rigid body having a socket and a resilient tip element having a shank secured in said socket, said tip element being generally conical, the apex angle of a minor portion of said tip at its base being smaller than the apex angle of the major portion of said tip, said tip element engaging said seat on said major portion thereof, whereby for a given diameter of said rigid body and a given diameter of said seat a greater amount of resilient material is provided between said rigid body and said seat thereby providing a more effective seal.

3,090,597
TURBINE WHEEL
Robert H. Aspinwall, Indianapolis, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Aug. 20, 1962, Ser. No. 217,873
4 Claims. (Cl. 253—39)



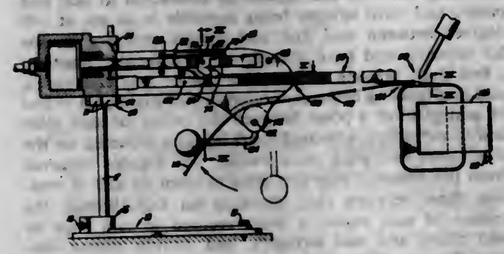
1. A turbomachine rotor element comprising, in combination, a shaft, a disk on the shaft, and blades on the disk, the disk comprising a plural number of disk sectors together constituting a full disk; each sector having a hub in relatively non-rotatable engagement with the shaft, a web extending radially from the hub, a rim sector at the perimeter of the web, and blades extending from the rim sector; the several hubs being juxtaposed on the shaft, the webs being in overlapping contact relation to block leakage through the disk, and the rim sectors being slightly spaced from each other.

3,090,598
HYDRAULIC JACK FOR THE PRESTRESSING OF CONCRETE REINFORCEMENTS
Odilo Paul, Durmentingen, Wurttemberg, Germany, assignor to Max Paul & Sohne Maschinenfabrik, Durmentingen, Wurttemberg, Germany, a corporation of Germany
Filed Feb. 6, 1961, Ser. No. 87,335
Claims priority, application Germany Feb. 9, 1960
9 Claims. (Cl. 254—29)



1. A hydraulic jack adapted for the stressing of an elongated tensionable element anchored at one end to a structure provided with releasable anchor means for said element remote from said one end, comprising a tubular housing positionable to surround a projecting portion of said element while bearing with a forward extremity upon said structure, hydraulic locking means for said element at the forward extremity of said housing adapted to cooperate with said releasable anchor means at said structure, hydraulic tensioning means for said element mounted rearwardly of said locking means, and hydraulic clamping means in said housing secured to said tensioning means at a location between the latter and said locking means and operable independently of said tensioning means for releasably engaging said element.

3,090,599
POWER-ACTUATED BANDING TOOL
Bernhardt B. Weiss, Los Angeles, and Clayton D. Running, Manhattan Beach, Calif., assignors to Paris Precision Products, a partnership
Filed July 18, 1961, Ser. No. 124,925
9 Claims. (Cl. 254—51)



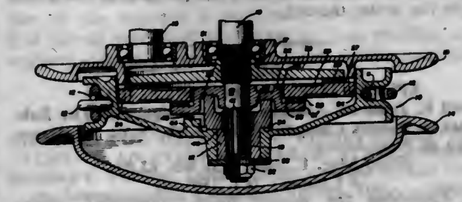
4. A banding machine comprising: a frame including an elongated forwardly directed housing; an elongated ram slidably mounted in the housing and projectable forwardly therefrom; banding strap guide means carried on the forward portion of the ram; means for selectively locking banding strap against movement relative to the housing; and selectively operable power means for impressing on said ram a forwardly directed force of predetermined strength, including a member movably carried by the frame for reciprocating longitudinal movement generally parallel to the axis of ram movement.

3,090,600
VEHICLE LOAD RETAINER
Arthur D. Smith, 900 Winifred St., Jackson, Mich.
Filed Aug. 31, 1960, Ser. No. 53,099
1 Claim. (Cl. 254—116)



A load retaining brace comprising, in combination, a tubular body member, first and second members telescopingly received within the opposite ends of said body member and slidably supported therein, spring means within said body member longitudinally biasing said first member outwardly therefrom, a pair of lever members pivotally mounted at one end to said body member on diametrically opposite sides thereon on a common pivot axis, a U-shaped bridge member interconnecting said levers remote from said lever pivot end, a pair of links pivotally attached at one end to said levers intermediate the pivot axis thereof and said bridge and pivotally connected at the other end to said second member whereby pivoting of said levers longitudinally positions said second member and relative to said body member, said bridge engages said body member after the pivot axis of said one end of said links has passed through a straight line connecting the pivot axis of said link's other end and said common pivot axis of said levers thus providing an overcenter locking of said levers, pivotally mounted shoe members affixed to the outer ends of said first and second members, a plurality of longitudinally spaced holes defined in diametrically opposed relation on opposite sides of said second member, a pin mounted on said other end of each of said links projecting toward each other and selectively receivable within said holes constituting the pivot connection between said links and second member and spring means interposed between said other ends of said links maintaining said pins within said holes.

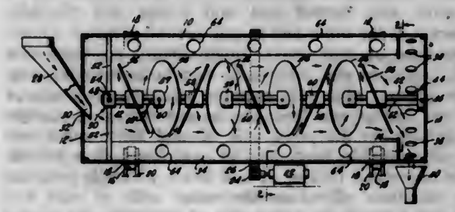
3,090,601
HOIST BRAKE
Erford E. Robins, North Tonawanda, N.Y., and Frank H. Heyden, Jr., Charlotte, N.C., assignors to Columbus McKinnon Corporation, Tonawanda, N.Y.
Filed Nov. 29, 1960, Ser. No. 72,361
4 Claims. (Cl. 254—169)



1. In combination with a hoisting device including a frame and a handwheel shaft responsive to rotation in opposite directions to lower or hoist a load, a cam fixed to said shaft, a handwheel rotatably mounted on said cam and including abutment means engageable with the cam for directly connecting the handwheel to the shaft for hoisting a load, a cam plate rotatably mounted on the shaft adjacent the cam with such two elements having cooperable cam surfaces effective to shift the cam plate axially of the shaft away from the cam in response to relative rotation between the cam and cam plate, a brake plate carried by said frame in surrounding relation to said shaft and fixing the same against rotation relative to the shaft while permitting of axial movement relative thereto, a friction plate, lost motion means fixing said fric-

tion plate to said shaft for limited rotation only relative thereto, said friction plate being disposed on that side of the brake plate remote from the cam plate, spring means operating between the cam and cam plate constantly urging the cam plate against the brake plate to lightly effect sandwiching of the brake plate between the friction and cam plates, said abutment means on the handwheel being engageable with said cam plate in the direction of rotation thereof corresponding to load lowering to rotate the cam plate relative to the cam and thereby release the brake plate from braked engagement by said friction and cam plates.

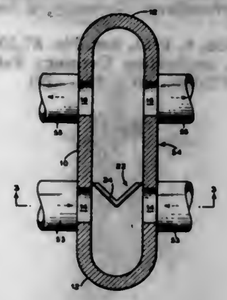
3,090,602
CONTINUOUS DRY BLENDER
Louis A. Benton, Middlesex, N.J., assignor to Johns-Manville Corporation, New York, N.Y., a corporation of New York
Filed May 6, 1957, Ser. No. 657,143
2 Claims. (Cl. 259—3)



1. A continuous dry blender for mixing materials comprising, a mixing cylinder mounted for rotation about its substantially horizontally disposed longitudinal axis, means for rotating said cylinder, inlet means at one end of said cylinder for receiving material to be mixed, outlet means at the other end of the cylinder, a plurality of longitudinal flights on the inner wall of said cylinder for lifting and dispersing material, a plurality of spaced discs, means supporting said discs along the longitudinal axis of said cylinder, successive discs being out of parallel a substantial amount, and the space between successive discs being substantially free of structure which would impede the flow of material as it drops between the discs to the bottom of the cylinder, whereby the material has a back-and-forth motion generally parallel to the longitudinal axis as it travels from the inlet of the cylinder to the outlet thereof.

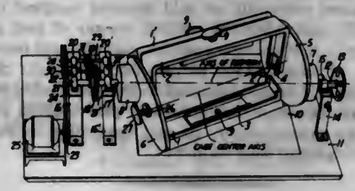
3,090,603
APPARATUS FOR MIXING FLUIDS
Lowell E. Johnson, Alliance, Ohio, assignor to The Babcock & Wilcox Company, New York, N.Y., a corporation of New Jersey
Filed Mar. 1, 1960, Ser. No. 12,014
6 Claims. (Cl. 259—4)

1. Apparatus for mixing fluids comprising means forming a vessel having a pair of fluid inlets opening to one portion of said vessel and a fluid outlet opening to another portion of said vessel, means supplying a stream of fluid to each of said inlets for flow through said vessel to said outlet with the stream of fluid supplied to one of said inlets having a unit heat content different from the unit heat content of the stream of fluid supplied to the other of said inlets, and fluid mixing means in said vessel disposed across the flow path of said inlet fluid streams and comprising two adjacent rows of oppositely arranged sloping plate members extending longitudinally of said vessel, the plate members of each row being arranged side-by-side in spaced relation and staggered with respect to the plate members of the other row to form opposed and staggered fluid flow passages arranged to sub-divide each of said inlet streams of fluid into a multiplicity of streams and to effect interleaving of the inlet streams so divided and intimate mixing thereof as they pass to said outlet and thereby provide a substantially uniform heat content of the mixed



streams upon discharge through said outlet, with the plate members of each row having their longitudinal axes disposed in a common imaginary plane having the same slope relative to the longitudinal axis of said vessel as the corresponding plate members.

3,090,604
LIQUID MIXER
Delbert Wheeler, 2408 Harrison St., Topeka, Kans.
Filed Feb. 15, 1961, Ser. No. 89,431
5 Claims. (Cl. 259—81)

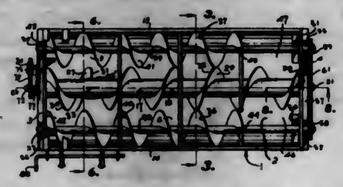


1. A liquid mixer comprising: a cage having a pair of axially spaced end plates, a first stringer extending between and attached to the periphery of said plates, a second stringer extending between and attached to the periphery of said plates at a position substantially 120 degrees removed from said first stringer, a third stringer extending between and adjustably connected to said end plates, said third stringer being movable in an arc of 240 degrees between said first and second stringers, means for securing said third stringer in its adjustable position, a first shaft housing mounted on one of said end plates, said first housing being connected to said plate on a radius of said plate at a point between the center of said plate and its periphery, a second shaft housing mounted on the other said end plate on a radius 180 degrees removed from the radius of said first plate to form an axis of rotation there between that intersects an axis through the centers of said plates, a drum secured in said cage by said plates and said stringers, and driving means connected to one of said shaft housings to rotate said cage about said axis of rotation and thereby transmit motion to said cage.

3,090,605
FEED MIXER
James V. Copeland, Greensburg, and Benjamin R. Weier, Mullinville, Kans.
Filed Aug. 9, 1961, Ser. No. 130,311
7 Claims. (Cl. 259—104)

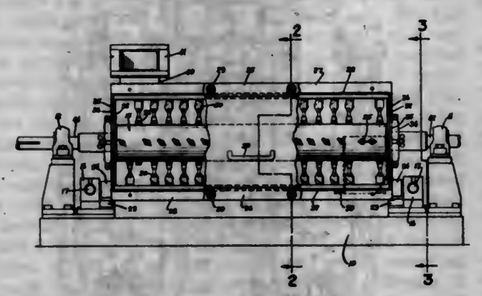
1. Apparatus for mixing feeds and the like comprising, a hopper adapted to contain feed materials to be mixed

and screw conveyor means therein adapted to operate submerged beneath the mass of feed material to produce movement of said feed materials in said hopper, said hopper having a rounded bottom, opposed side walls and spaced front and rear end walls connected with said bottom and side walls to define a mixing chamber having a trough-like portion at the bottom and extending longitudinally between said end walls, a first horizontal screw conveyor along said bottom longitudinally of said trough-like portion, an upper horizontal screw conveyor in said chamber spaced above said first horizontal screw conveyor and extending longitudinally of said chamber, and driving means operatively connected to said upper conveyor to rotate same whereby said upper conveyor moves



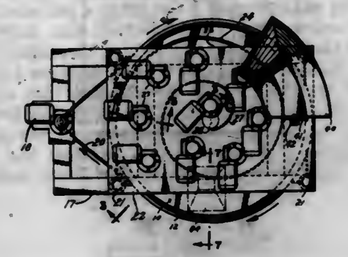
feed materials in the upper portion of said mass of feed to an area adjacent said rear end wall, said first screw conveyor having flight portions of opposite spiral extending respectively from the front and rear end walls and terminating in ends adjacent to each other in an area of convergence of the feed materials moved by said flight portions, said area being between the front end wall and the longitudinal center of said chamber, said driving means being operatively connected to said first conveyor to rotate same to move feed from said end walls in said trough-like portion to said area of convergence to force feed materials moved by said opposed flight portions together in a compressing action squeezing the feed materials outwardly and upwardly for movement by said upper conveyor back toward said rear end wall.

3,090,606
ROTARY MIXING DEVICE
William B. Burnet, Minneapolis, Minn., assignor to The Strong-Scott Manufacturing Company, Minneapolis, Minn., a corporation of Minnesota
Filed Sept. 11, 1959, Ser. No. 839,536
6 Claims. (Cl. 259—109)



1. A mixing device comprising, a frame, bearings secured to said frame, a mixing rotor journaled in said bearings, track means secured to said frame and extending transversely of said mixing rotor, track followers secured to said track for axial movement relative thereto, stops on said tracks near said rotor, shell halves pivoted to said track followers, flanges on the edges of said shell halves, and means for sealing said shell halves around said mixing rotor when said track followers are engaging said stops.

3,090,607
CEMENT MIXER
Milton W. Johnson, 6620 N. Willamette Blvd., Portland, Oreg.
Filed Aug. 1, 1961, Ser. No. 128,464
11 Claims. (Cl. 259—175)

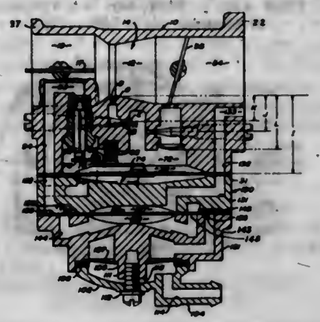


8. A constant flow cement mixer comprising a rotating pan having a planar bottom, a circumferential upstanding side wall, and a center opening, a stationary wall positioned so as to be upstanding from said pan bottom and curving in a horizontal plane, said stationary wall beginning adjacent said pan wall and curving in a generally spiral-like fashion and terminating at the center portion of said pan, said stationary wall cooperating with said pan to form a curving passageway, said passageway beginning adjacent said pan wall and bending in a progressively sharper curve to terminate at the center portion of the pan, means to continuously feed material to be mixed to the beginning portion of said passageway, a plurality of mixing units disposed in said passageway, rotational movement of said pan causing a conveyor-like movement of the bottom portion of said passageway so as to move the material continuously through the passageway and thus through the mixing units and to the center opening to effect a continuous discharge of mixed material out the center opening, the beginning of said passageway having its inside wall diverging from the outer side wall and toward the center of said pan, means to feed a portion of said material to said passageway at the narrower part of said divergent portion, and means to feed another portion of said material to said passageway adjacent said inner wall near the end of said divergent portion so that said other portion of the material is positioned to one side of said first named portion of said material, thus enabling more uniform mixing of said two portions of the material.

3,090,608
METHOD FOR DELIVERING COMBUSTIBLE MIXTURE TO AN INTERNAL COMBUSTION ENGINE
Bernard C. Phillips, Toledo, Ohio, assignor to The Tillotson Manufacturing Company, Toledo, Ohio, a corporation of Ohio
Original application June 4, 1956, Ser. No. 589,170, now Patent No. 2,841,372, dated July 1, 1958. Divided and this application June 2, 1958, Ser. No. 739,254
3 Claims. (Cl. 261—41)

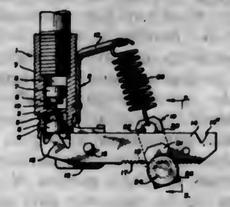
1. A method of controlling the delivery of liquid fuel from a flexible walled, unvented fuel chamber in a charge forming device to a mixing passage solely by aspiration wherein the charge forming device embodies main and secondary fuel delivery outlets opening into the mixing passage including connecting passageways from the fuel chamber to the main fuel outlet and to the secondary fuel outlet, which consists in controlling flow of liquid fuel from a supply into the fuel chamber by the varying position of the flexible wall responsive to pressures in the mixing passage for delivery into the mixing passage through either the main or secondary outlets, and establishing a restricted region in the passageway connecting

the fuel chamber with the main outlet whereby capillary action and surface tension of the liquid fuel adjacent the restricted region forms a liquid seal to block move-



ment of fuel in the passageway connecting the fuel chamber with the main outlet when fuel is delivered through the secondary outlet into the mixing passage.

3,090,609
AUTOMATIC VALVES
James B. Godshalk, West Pikeland Township, Chester County, and George Muhler, Philadelphia, Pa., assignors to Fox Products Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed June 3, 1960, Ser. No. 33,773
7 Claims. (Cl. 267—1)



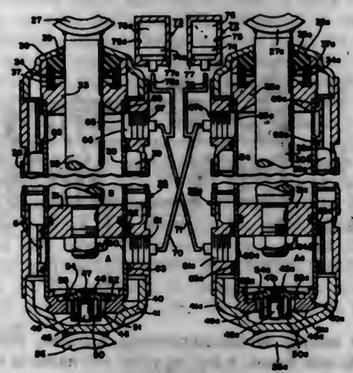
1. An adjusting device comprising
an actuating arm adapted to be pivoted to a body and to extend laterally therefrom;
a spring supporting member adapted to be secured to the body and to be spaced from said arm axially of the body,
said arm having an elongated edge on the side thereof opposite from said supporting member;
a tension spring having one end attached to said supporting member,
said spring extending toward said arm and at least generally in the plane of pivotal movement of said arm;
a carrier member including at least one portion disposed beside said arm and directed at least generally toward said spring;
a rotary adjusting member rotatably mounted on said carrier and having a peripheral portion disposed in rolling engagement with said elongated edge of said arm,
said adjusting member being disposed with its axis of rotation extending transversely relative to said arm,
the other end of said spring being connected to said portion of said carrier and said spring being operative to maintain said peripheral portion of said adjusting member in engagement with said elongated edge of said arm and to bias said arm pivotally in one direction;
means operatively arranged to restrain said rotary member against undesired rotation, and
means whereby said adjusting member can be rotated manually to cause said adjusting member, and therefore said other end of said spring, to travel along said actuating arm.

3,090,610
POWER SPRING
Oscar E. Johansson, Fair Lawn, N.J., assignor to Sandvik Steel, Inc., Fair Lawn, N.J., a corporation of New York
Filed July 24, 1961, Ser. No. 126,233
5 Claims. (Cl. 267—1)



1. A self-contained and self-supporting power spring adapted to be easily and quickly installed and removed comprising, outer and inner strips of a flexible and resilient material wound spirally in adjacent overlying coils, fastening means connecting the outer and inner strips and the overlapping portion of the outer strip to each other to form an enclosing band constituting a keeper, the wound coils of the inner strip constituting a power spring enclosed and held by said keeper, and the outer strip extending between the overlying outer coils of the power spring and beyond said fastening means a distance greater than 90° of the wound coils to provide a bridle for holding the overlying outer coils spaced from each other.

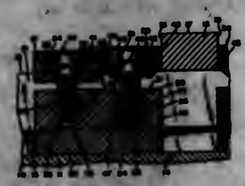
3,090,611
ANTI-ROLL CONTROL SYSTEM
Harold E. Schultze, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Oct. 28, 1960, Ser. No. 65,742
4 Claims. (Cl. 267—11)



1. A control system on a vehicle having a frame and an axle which constitute sprung and unsprung assemblies, respectively, said system being adapted to counteract transverse roll of the sprung assembly relative to the unsprung assembly, including in combination, a pair of spaced apart cylinders and connected to one of said assemblies, a solid piston reciprocable in each cylinder and

including an actuating rod extending from the cylinder and connected to the other of said assemblies, first conduit means connecting one end of one cylinder with the opposite end of the second cylinder, second conduit means connecting the corresponding one end of the second cylinder with the corresponding opposite end of the first cylinder, first and second pressure accumulators in connection with said first and second conduit means respectively, hydraulic fluid reservoir means for said cylinders, first valve means in the corresponding one end of each of said cylinders providing for exhaust of fluid from the respective corersponding one end to the reservoir means on hydraulic fluid pressure increase therein in predetermined pressure value above the minimum pressure value of the respective pressure accumulator in connection with the respective said one end undergoing a fluid pressure increase therein, and second valve means in said corresponding one end of each of said cylinders under the fluid pressure influence of the pressure accumulator in connection therewith providing substantially for free flow of hydraulic fluid from the reservoir means to the respective one end.

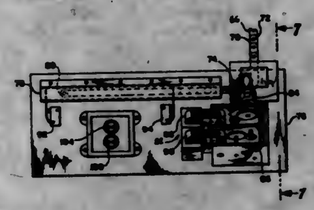
3,090,612
HOLD DOWN CLAMP
Warren B. Rouse, 885 E. Jessamine, St. Paul, Minn.
Filed Apr. 25, 1960, Ser. No. 24,444
5 Claims. (Cl. 269—91)



1. In a hold down clamp for use on a bed formed with a face on which work to be machined may be placed and having an inverted T-shaped slot therein formed with a vertical section extending through said face and having spaced side walls and a horizontal section disposed below said vertical section and providing ways having downwardly facing shoulders, the combination of a tailpiece overlying said bed, an inclined cam member formed on said tail piece, an inverted T-shaped positioning member disposed within said slot, a base on said positioning member received in said horizontal section of said slot and a stem on said positioning member received in said vertical section, means for drawing said positioning member upwardly against said shoulders and said tailpiece downwardly against said bed, a headpiece overlying said slot, a jaw on said headpiece disposed at one end thereof for engagement with an edge of the work, an inclined cam member at the other end of said headpiece co-acting with the cam member on said tailpiece to urge said jaw toward the work when the headpiece is moved toward the bed, a journal pivoted to said stem for swinging movement about a horizontal axis, threads formed in said journal normal to the axis of said journal and a bolt extending through said headpiece and screwed into the threads in said journal and serving to draw said headpiece toward said bed.

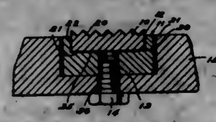
3,090,613
WINDOW STRUCTURE
Paul E. Bechtold, 26 Kayweed Road, Port Washington, N.Y.
Filed Jan. 28, 1959, Ser. No. 789,712
2 Claims. (Cl. 268—99)

1. For use in a window structure for a roof opening in a building, a window actuating means adapted to be mounted on said structure for raising and lowering the window, said window actuating means comprising an electrical circuit and an operator drivably associated with said circuit and adapted to be connected with the window to raise and lower the window upon energization of said circuit, said circuit including a geared-down motor, said operator including a chain and a longitudinally extending guiding track, said chain having a first portion thereof disposed within said guiding track and a second portion projecting from said guiding track and disposed at substantially a right angle to said first portion, said first and second portions defining a plane, the remote end of said second portion being adapted for connection with the window, said chain being longitudinally displaceable in said guiding track, said chain being distortable in the



plane of said first and second portions but relatively inflexible in a direction angularly of said plane, said motor being driveably connected to said chain at the juncture of said first and second portions to impart movement thereto upon energization of said circuit to raise and lower the window, said circuit including a pair of switches each of which includes a movable contact arm, a striking pin projecting laterally from said chain and being movable therewith, each of said arms being in the path of travel of said pin so that said pin will engage one of said arms to deenergize said circuit upon attainment of a predetermined limit of opening of said window and said pin will engage the other of said arms to deenergize said circuit upon attainment of a closed position of said window, and said circuit further including a switch for selectively energizing and deenergizing said circuit.

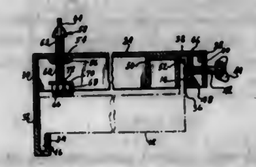
3,090,614
MOUNTABLE AND DISMOUNTABLE GRIP AND HOLDER ASSEMBLY
Harold P. Freeman, 27677 Doreen St., Farmington, Mich., and James P. Freeman, 23541 Lee Baker Drive, Southfield, Mich.
Filed Mar. 16, 1961, Ser. No. 96,291
2 Claims. (Cl. 269—273)



1. An easily accurately mountable and easily dismountable grip and holder member assembly particularly suitable for automated production lines wherein workpieces are automatically handled and machined comprising a tungsten carbide grip having a serrated face portion for gripping a workpiece by being pressed thereagainst with force so as to imbed therein, a bottom portion opposite said face portion and a peripheral edge portion between said serrated face portion and to said bottom portion; a holder member for said grip having a face portion including a grip receiving socket defined by a counter-sunk area adapted to lie below said grip bottom portion and upstanding side walls rising above said holder member socket counter-sunk area adapted to surround

said peripheral edge portion; and a permanent bonding element such as a weld disposed between said grip bottom and peripheral edge and said holder member socket counter-sunk area and upstanding side walls fixedly interconnecting said grip and holder member together with said grip serrated face portion extending above said holder member socket side walls; said holder member having a back portion opposite to and lying in a plane parallel to its said face portion having a threaded aperture for receiving a threaded bolt therein for accurately mounting and securing said grip and holder member assembly on a machine workpiece handling element.

3,090,615
MASONRY BUTT GAUGE
Morricy W. May, 26 Van Dyke Road, East Longmeadow, Mass.
Filed Nov. 14, 1960, Ser. No. 68,835
2 Claims. (Cl. 269—305)



1. A gauge for work supported on a table of a cutting machine in combination with a table having downwardly and upwardly flanged front and back edges, respectively, said gauge having end structures with flange engaging means, and means associated with each flanged edge engaging means for exerting a force to drive the associated flanged edges and flanged edge-engaging means together to lock the ends of the gauge to the table, at least one end structure of the gauge having an end plate with a leg portion terminating in a hook providing a slot for receiving the associated downwardly extending flanged edge, the gauge having a vertically extending threaded opening extending through the body of the gauge, and a clamp bolt rotatively engaging the opening and movable axially against the table to move the gauge upwardly therefrom and simultaneously drive the downwardly extending flanged edge and walls of the slot against one another to lock the gauge to the table, the clamp bolt having a nut at the end thereof and a C-shaped member surrounding the nut having an opening in one part thereof to pass the bolt, the C-shaped member being freely movable on the nut and having an unbroken surface for engaging the table to prevent marring thereof.

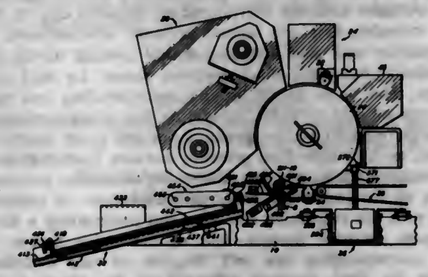
3,090,616
SHEET HANDLING CONTROL APPARATUS
Rolf W. Eichler, 97 W. Church St., Fairport, N.Y., and Roger H. Eichorn, 91 Horizon Drive, and John Rutkus, Jr., 2128 Baird Road, both of Penfield, N.Y.
Filed July 2, 1959, Ser. No. 824,657
8 Claims. (Cl. 271—3)

1. In a xerographic apparatus wherein xerographic images are formed on a rotating xerographic drum,

sheet feed means positioned with respect to said xerographic drum for seriatim feeding of sheet material into contact with said xerographic drum,

sheet pick-off means mounted adjacent said xerographic drum for separating sheet material from said xerographic drum,

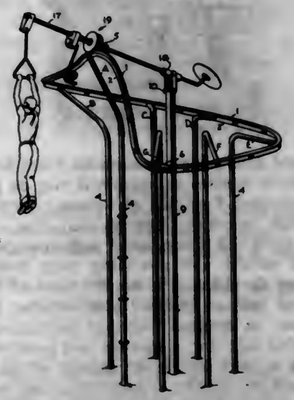
programmer means operatively connected to said sheet feed means and said sheet pick-off means for sequentially operating said sheet feed means to feed sheet material into contact with said xerographic drum in registration with a xerographic image previously formed thereon and to operate said sheet pick-off means in timed relation to the operation of said sheet feed means whereby the leading edge of



a sheet of material is stripped from said xerographic drum,

and means to initiate the operation of said programmer means.

3,090,617
REPEATING EXERCISING DEVICE
George Hjelte, 4468 Dundee Drive, and Miles H. Baer, 9406 Goebel Ave., both of Los Angeles, Calif.
Filed Apr. 2, 1962, Ser. No. 184,200
9 Claims. (Cl. 272—44)



1. A repeating exercising device comprising:

a continuous closed track means having a downward slope from a starting position to an end position and an upward return slope from the end to the starting position;

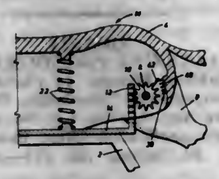
a vehicle means positioned to engage said track means and travel by gravity when under load from said starting position to said end position; and

biasing return means for moving said vehicle means from said end position to said starting position upon load removal.

3,090,618
BOUNCING HOBBY HORSE WITH LEG ACTION
Barry Brent, 43 Regal Road, Toronto, Ontario, Canada
Filed May 21, 1959, Ser. No. 814,827
2 Claims. (Cl. 272—53.2)

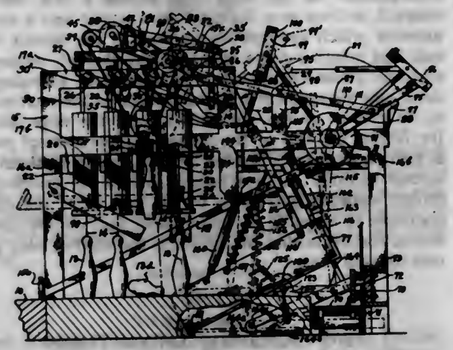
1. A bouncing hobby horse comprising a mount having legs which are oscillable thereon between back and forth positions in emulation of the gait of an animal; structure supporting said mount at an elevation for movement relating thereto of which the principal component is an up

and down motion; drive structure operating between said legs and said supporting structure synchronizing the back and forth oscillations of the legs with the up and down motion of the mount, and biasing means urging said mount upwardly and said legs towards one of their two positions aforesaid and being yieldable permitting said



mount to be thrust downwardly; said drive structure comprising at least one rotatable axle engaging and linking at least one pair of legs, a driving element and a driven element operably engaged therewith; one of said elements being carried by said axle and the other being connected to said supporting structure; said driving and driven elements consisting of a rack and a pinion.

3,090,619
MECHANICAL PIN SETTER
Franklin D. Plant, 11028 SE. 176th St., Renton, Wash.
Filed June 9, 1961, Ser. No. 116,136
8 Claims. (Cl. 273—44)



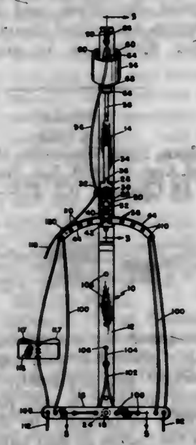
1. In combination with a ten pin bowling alley; a pin setting mechanism comprising a frame structure mounted across said alley over the pin spotting area thereof, a cross-shaft mounted horizontally and for oscillation in said frame structure, means operable for effecting forward and rearward oscillations thereof, a succession of lever arms, corresponding to the number of pins used in play, fixedly mounted on and extending radially from said cross-shaft for simultaneous oscillation thereby between forwardly and rearwardly leaning limits of travel, a second succession of lever arms, paired with the first mentioned lever arms but freely pivoted on said cross-shaft for independent oscillation thereon between forwardly and rearwardly leaning limits of travel, pin resetting pull links corresponding to and pivotally attached at their upper ends to the free ends of the second mentioned succession of lever arms to depend therefrom, each pull link having a latch bar at its top end and a pin resetting cord attached to its lower end and extended therefrom to the upper end of the corresponding bowling pin as spotted on the alley for play; each of said cords being of such length that the knocking down of the pin to which it is attached will cause the pin resetting pull link to which it is attached to be swung to a position at which a latching connection of the latch bar at its upper end with the upper end of the corresponding lever arm of the first mentioned succession of lever arms will be effected when the latter is energized by the cross-shaft for rearward swinging from its forward leaning position, thus to effect the lifting of the downed pin from the spotting area.

3,090,620
BOWLING BALL
James W. Consolloy, Pennington, N.J., assignor to The Electric Storage Battery Company, a corporation of New Jersey
Filed Apr. 4, 1958, Ser. No. 726,433
3 Claims. (Cl. 273—63)



2. A bowling ball of standard size and shape comprising, in combination, a pair of half cores of a substantially incompressible material aligned with respect to each other to form a substantially spherical center core, interlocking passages in said center core, and an outer shell of a different substantially incompressible material, the material of said outer shell filling said passages and uniting said inner core to said outer shell, said inner core exerting an outward stress on said outer shell to form a substantially incompressible unit.

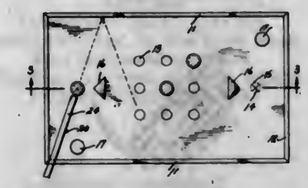
3,090,621
CARRIER MEANS FOR ATTACHING APPARATUS TO THE HUMAN BODY
Rudolph Heinrich Heimers, Friedreich Otoman Heimers, and Siegfried Immanuel Heimers, all of 1222 Pepper Drive, El Cajon, Calif.
Filed July 29, 1960, Ser. No. 46,179
9 Claims. (Cl. 273—95)



1. Carrier means for attaching apparatus to the human body, comprising: a rigid, elongated, upwardly extending supporting member; a waist engaging yoke pivotally and resiliently mounted on the lower end of said supporting member; a neck engaging yoke longitudinally adjustably mounted on the upper portion of said supporting member; said neck engaging yoke being generally transversely adjustable to space said supporting member

clear of the wearer's head; flexible, body-engaging cords interconnecting said yokes and having securing means for connection of the cords across the body; said securing means being a plate-like element attached to certain of said cords; and clamping means on the upper end portion of said supporting member to receive and hold a linear member which is to be attached to the body.

3,090,622
MAGNETIC GAMES
Edouard M. Sire, 461 6th Ave., New York, N.Y.
Filed Apr. 27, 1961, Ser. No. 104,206
6 Claims. (Cl. 273—126)



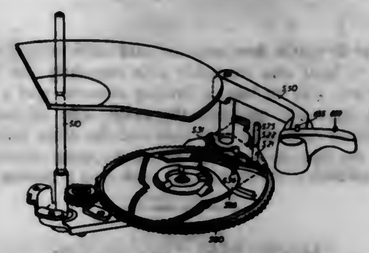
5. A magnetic game comprising a board, opposite and parallel side rails on said board, a plurality of substantially centrally disposed marks on said board totalling nine marks divided into three parallel rows and jointly assuming a square-like formation, a plurality of markers in the form of disks adapted to be propelled across said board by being banked off said side rails whereby said marks may be caused to be covered by said disks, means affording magnetic attraction between said marks and said disks so as to enable said disks to be accurately lined up over said marks, and stick means for striking and propelling said disks, said means affording magnetic attraction comprising permanent magnets embedded in said board and comprising said marks, said board embedded magnets all being of the same polar disposition and fixed in said board, and permanent magnets embedded in said disks and adapted to be attracted to and magnetically engaged and arrested by said board embedded magnets, and all of said board embedded magnets being of the same polar distinction, said disks being flat, and all of the magnets embedded therein being flat and of the same polar disposition as said board embedded magnets.

3,090,623
GAMES
Patrick J. Dugan, 2188 Woodville Road, Toledo, Ohio
Filed Apr. 1, 1959, Ser. No. 803,533
18 Claims. (Cl. 273—142)



11. A game apparatus comprising: a support base, a wheel rotatably pivoted in said support base having a plurality of pockets and a plurality of uniformly sized balls for random location in said pockets; said pockets being substantially rectangular in shape and having a depth less than the radius of said balls, a circumferential width less than twice the radius of said balls, and a radial length less than three times the radius of said balls, whereby only one ball can rest in each pocket, said pockets being arranged adjacent each other in a circle in a horizontal plane on said wheel and separated by partitions, a raceway for said balls affixed to said support base concentric and contiguous to and inclined downwardly toward said wheel, and projection means at the outer ends of said partitions projecting a distance less than one half the radius of said balls above the horizontal plane of the top edges of said pockets for obstructing the piling of balls between two or more balls located in adjacent pockets when said balls enter said pockets from said raceway while said wheel is rotating.

3,090,624
MAGAZINE PHONOGRAPHS
Hans Christian Hansen, 14 Christianholmsvej, Klampenborg, Copenhagen, Denmark
Filed Aug. 7, 1956, Ser. No. 602,589
Claims priority, application Great Britain Aug. 8, 1955
47 Claims. (Cl. 274—10)



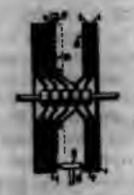
37. A phonograph having a turntable and a pick-up including stylus means, comprising a record-size feeler arrangement on the tone arm having a first member adapted to drop over the edge of a record and a second member which engages the surface of the record when said first member drops over the edge thereof, means operatively connected with said tone arm for swinging the same into engagement with the surface of the next record to be played in the direction toward the edge thereof for feeling the size of the record, remote control means in said phonograph operable by engagement between said second member and the record surface for interrupting further outward movement of the tone arm, and means operative in response to operation of said remote control means for depositing the stylus in the start-of-play position on said record.

3,090,625
PHONOGRAPHIC APPARATUSES
Hans Christian Hansen, 14 Christiansholmsvej, Klampenborg, Denmark
Filed Feb. 8, 1960, Ser. No. 7,351
Claims priority, application Great Britain Feb. 9, 1959
20 Claims. (Cl. 274—15)



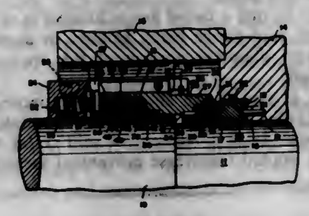
1. In a phonograph having a power driven turntable and a tone arm including stylus means in combination: a tone arm structure including an arm extending below the tone arm, means connecting said arm and said tone arm for swinging said tone arm together with said arm, means supporting said arm for tilting movement in a direction substantially perpendicular to its direction of swinging, means operable to raise the tone arm in response to tilting of said arm in one direction, means supporting said tone arm structure for swinging movement, a trigger mechanism having a member reciprocable in response to termination of playing of a record, an elongated spindle extending between adjacent said turntable spindle and the end of said tiltable arm which is remote from its pivot point, means for reciprocating said elongated spindle in response to the reciprocation of said trigger mechanism member, cam means operable in response to reciprocation of said spindle to tilt said arm whereby said spindle is brought into engagement with the surface of said arm, means for retaining said spindle in said reciprocated position, means for rotating said spindle in said reciprocated position to cause swinging of said tone arm structure by the engagement between said spindle and said arm surface, the surface of said arm having an extension transverse to its direction of tilting sufficiently to retain said arm in tilted position during the swinging movement of said tone arm to a predetermined exterior position.

3,090,626
BISTABLE STORAGE DISC
Walter G. Wadey, Wynnewood, Pa., assignor to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Filed Oct. 3, 1960, Ser. No. 60,107
13 Claims. (Cl. 274—42)



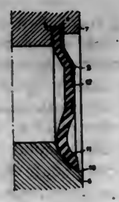
1. A bistable storage device comprising: a recording disc; mounting means; and normally stressed resilient means connected between said mounting means and said recording disc for normally holding said recording disc in an axially displaced position with respect to said mounting means.

3,090,627
TANDEM SEAL
Harry Tankus, Wilmette, Ill., assignor to Crane Packing Company, Morton Grove, Ill., a corporation of Illinois
Filed Dec. 21, 1959, Ser. No. 860,881
4 Claims. (Cl. 277—85)



1. A rotary mechanical seal for relatively rotatable members, said seal including a seal seat on one member, an axially movable sealing washer means encircling the other member, a retainer fixed to the said other member, said sealing washer means having a recess therein opening upon the other member, a reaction ring substantially closing off the recess, a radially distortable sealing ring disposed in the recess and providing a seal between the sealing washer means and the said other member, a spreader ring adjacent the radially distortable ring and adapted to distort said distortable ring upon the application of axial pressure to the spreader ring, spring means compressed between the reaction ring and the spreader ring to apply axial pressure to said spreader ring, said reaction ring having a recess therein opening upon the said other member, a radially distortable sealing ring disposed in the recess in the reaction ring and providing a seal between the reaction ring and the said other member, a second spreader ring adjacent the last mentioned radially distortable sealing ring and adapted to distort said distortable ring upon the application of axial pressure to the second spreader ring, and spring means compressed between the retainer fixed to the said other member and the second spreader ring to apply axial pressure to said second spreader ring.

3,090,628
BEARING WITH FLEXIBLE SEALING MEANS
Luciano Giulietti, Turin, Italy, assignor to RIV Officine di Villar Perosa Societa per Azioni, Turin, Italy
Filed Apr. 8, 1957, Ser. No. 651,320
Claims priority, application Switzerland June 14, 1956
3 Claims. (Cl. 277—94)

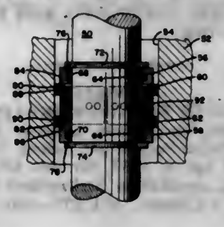


1. In an oil-tight bearing having a first bearing member and a concentric second bearing member, with said first bearing member being formed with a radially-extending annular groove having a bottom wall and first and second side walls, and said second bearing member being formed with a sloping annular surface, a bearing seal unit disposed between said bearing members, said seal unit being formed with an annular elastic body having a rigid annular reinforcement disposed along one side of its axially outer portion, all of the radially outer portions of said body and said reinforcement substantially coinciding and extending into said groove but terminating at a distance short of said bottom wall, whereby an annular clearance between said bottom wall and said seal unit is established and maintained, the radially inner portion of said elastic body which is free from said reinforcement overlying and bearing against said sloping surface, said reinforcement bearing against one of the side walls of said groove and said body resiliently bearing against the other side wall of said groove, whereby said seal unit does not impose a load in a radial direction upon said first bearing member.

3,090,629
FLUID SEAL
Arthur L. Lee and Arthur B. Coval, Columbus, Ohio, assignors to Consolidated Coal Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Mar. 16, 1960, Ser. No. 15,476
2 Claims. (Cl. 277—95)

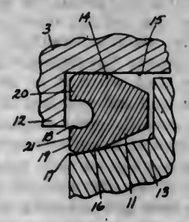
1. A fluid seal adapted to prevent leakage of fluid between a fixed housing member and a rotating shaft, said seal comprising first and second annular members disposed about said shaft, said first and second annular members being axially spaced from each other on said shaft, stop means on said shaft to limit axial movement of said annular members away from each other, first and second resilient static seal means disposed between said shaft and said first and second annular members respectively to nonrotatably secure said annular members to said shaft and to sealing engage said annular members

to said shaft to thereby provide a fluid seal between said annular members and said shaft, each of said annular members having a radially extending, polished, planar surface, said annular member polished, planar surfaces facing each other and being axially spaced from each other, a first seal ring disposed between said first and second shaft engaging annular members and abutting said first annular member polished, planar surface, a second seal ring disposed between said first and second shaft engaging annular members and abutting said second annular member polished, planar surface, said first and



second seal rings being formed of self-lubricating plastic material and having their outer peripheries in engagement with said fixed housing member, and resilient means urging said seal rings axially apart and radially urging each of said seal rings into static sealing engagement with said fixed housing member, said axial urging of said seal rings causing said first and second seal rings to slidingly engage said first and second shaft engaging annular member polished, planar surfaces respectively to form running fluid seals between said annular members and said first and second seal rings.

3,090,630
HIGH PRESSURE JOINT
Fred Gasche, Erie, Pa., assignor to Autoclave Engineers, Inc., Erie, Pa., a corporation of Pennsylvania
Filed Jan. 7, 1960, Ser. No. 1,118
1 Claim. (Cl. 277—171)



A high pressure flange joint, comprising two joint members each with a flange, means for clamping the flanges together short of metal-to-metal contact with each other, one of said members having a projection and an axially facing annular surface surrounding said projection, the other of said members having a groove surrounding said projection with an annular surface at the bottom of the groove in opposed relation to and axially spaced from said first annular surface, said members defining a gasket recess, said annular surfaces converging toward each other in a radially outward direction at an acute angle, an annular gasket of resilient metal clamped between said surfaces, the inside diameter of the gasket being larger than the outside diameter of the projection and the outside diameter of the gasket being less than the inside diameter of the groove whereby the gasket is free to float and assume the position required for sealing, said gasket having at its center opposed narrow annular lands with axially extending solid metal in direct thrust transmitting relation between the lands, said lands converging toward each other in a radially outward direction at an acute angle and respectively presented toward and mating with one and the other of said surfaces, and the inner edge of the gasket being exposed to the internal operating pressure to expand the gasket radially to maintain the sealing engagement with said lands, in case said surfaces on the joint members should separate.

3,090,631
MECHANICAL ACTUATOR
Vaino A. Hoover, 2100 S. Stoner Ave., Los Angeles, Calif.
Filed Jan. 7, 1958, Ser. No. 707,626
2 Claims. (Cl. 277—174)



1. Sealing apparatus for a longitudinally movable rod element in an enlarged opening of a housing having a base and a cover separable therefrom; said sealing apparatus comprising:

first plate to be located in the opening and secured to the housing,

said first plate being detachably engaged with the cover of said housing,

said first plate having a circular opening therein, said opening at one end having a reduced diameter portion, whereby to provide a radial shoulder intermediate the faces of said first plate;

said reduced diameter portion of the circular opening of said first plate comprising the portion of said first plate in closest proximity to said rod element,

a second plate removably clamped to said first plate on the face thereof adjacent the larger diameter portion of the opening therein,

said second plate having a central opening of substantially the diameter of the reduced diameter portion of the opening in said first plate, whereby to provide a circular channel with side walls formed of opposed surfaces of said shoulder and said second plate,

and a collar having an opening to slideably receive the rod element,

said collar having a cylindrical portion extending axially of and between said element and said reduced diameter portion of said first plate opening, said cylindrical portion having an outer diameter less than the diameter of the reduced diameter portion of the opening in said first plate,

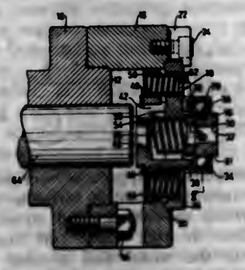
said collar having a radial flange located in said circular channel, said flange being smaller in diameter than the larger diameter portion of the opening in said first plate,

the faces of said flange abutting the opposed surfaces of said radial shoulder and said second plate, whereby to prevent axial movement of said collar while permitting limited transverse movement thereof.

3,090,632
CHUCK
Einar Peedu, Bromma, Sweden, assignor to Ulvsunda Verkstader Aktiebolag, Bromma, Sweden, a corporation of Sweden
Filed Dec. 23, 1960, Ser. No. 78,136
Claims priority, application Sweden Dec. 28, 1959
9 Claims. (Cl. 279—1)

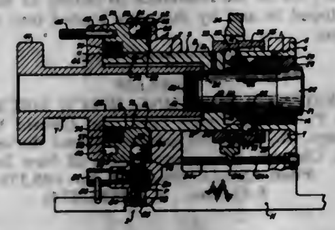
1. A chuck for holding a workpiece comprising an annular collet member having an internal cylindrical surface, a central opening into which a workpiece may be inserted axially of said opening, a ball cage mounted in said opening coaxially thereof, a plurality of balls mounted in said cage around said opening to engage and

roll on said cylindrical surface axially thereof as the workpiece enters said opening, said balls being normally positioned in said cage so that the distance between diametrally opposed balls is less than the outside diameter of the workpiece at the end thereof which is inserted in said chuck, whereby upon insertion of the workpiece in the



chuck, said balls will roll on said cylindrical surface axially thereof thereby to produce an elastic deformation of said collet member in a radial direction to cause the balls to exert a radial inwardly directed gripping force on the workpiece, and stop means for limiting the distance which the workpiece can be inserted into said opening.

3,090,633
INDEX MECHANISM FOR CHUCKS
Lawrence Farnsworth, Racine, Wis., assignor of one-half to Max M. Seft, Racine, Wis.
Filed Apr. 26, 1962, Ser. No. 190,403
9 Claims. (Cl. 279—5)



1. An index mechanism for a chuck of the type having a housing and a spindle assembly rotatably mounted in said housing and adapted to grip a workpiece for rotation therewith, said mechanism comprising; a generally cylindrical member secured to said spindle assembly, a series of balls rigidly mounted circumferentially around said member with adjacent balls abutting against one another to form a generally V-shaped space between each pair of adjacent balls, and a plunger shiftably mounted on said housing and having a portion insertable tightly into said space between adjacent balls and into engagement therewith to thereby prevent rotation of said mechanism and assembly relative to said housing.

3,090,634
BABY CARRIAGE CONVERTIBLE TO CRADLE
James Alan Hesketh, Lawrence, Mass., and Herbert Rubin, New York, N.Y.; said Hesketh assignor to said Rubin
Filed Jan. 29, 1960, Ser. No. 5,475
3 Claims. (Cl. 280—31)

1. A baby carriage comprising a body, wheels, a rocker extending transversely of the carriage at one end, a rocker extending transversely of the carriage at the other end, means pivotally mounting said rockers for movement between a raised position and a lowered position, means to fix the rockers in either the raised position or the lowered position, the rockers in their raised position projecting approximately horizontally beyond the ends of the body and acting as bumpers for said carriage, the rockers



in their lowered position coming beneath the wheels for a cradle action, and short stub axles for carrying the wheels, said axles being formed integrally with and constituting extensions of the rockers.

3,090,635
TRANSPORTING DOLLY FOR SHEET MATERIAL
Melvin I. Masterson, Jr., 1708 Seabright Ave., Long Beach, Calif.
Filed Feb. 15, 1962, Ser. No. 173,384
1 Claim. (Cl. 280—47.13)



A transporting dolly for sheet material consisting of, an elongated bed,

said bed having an indentation therein extending the length thereof to receive part of one edge of a sheet material supported thereon, said indentation being open at both ends, integral side edges of said bed bent downwardly to provide a shaft supporting structure,

a shaft mounted in said downwardly bent edges adjacent one end of said bed, a wheel journaled on each end of the shaft,

and a lug projecting horizontally from one end of said bed and integral with said bed, said lug being at the end of the bed adjacent the wheels, and said lug being arranged in substantially the same horizontal plane at the bottom of said indentation.

3,090,636
DOLL STROLLER
Roman V. Rutkowski, South Bend, Ind., assignor to South Bend Toy Manufacturing Co., Inc., South Bend, Ind.
Filed Mar. 19, 1962, Ser. No. 180,775
3 Claims. (Cl. 280—47.38)

1. A stroller comprising a chassis having two pairs of crossed legs, said pairs lying in two planes, respectively, which are spaced apart and parallel, the legs of each pair being connected together intermediate the ends at the crossing thereof, the forwardly disposed lower extremities of one leg of each pair being connected together by a first crossbar, the rearwardly disposed lower extremities of the other leg of each pair being connected together by a second crossbar, a wheel mounted on the lower extremity of each of said legs, two elongated flat horizontally extending side rails arranged in a common horizontal plane and being spaced apart and parallel, one of said rails being connected at its opposite ends between the upper ends of one pair of said legs, the other of said

rails being connected at its opposite ends between the upper ends of the other pair of said legs, each rail having between its ends an upstanding post thereon, a rigid U-shaped body frame having two parallel side arms which are spaced-apart by substantially the same distance as said side rails and are connected together at one end by a third crossbar, a fabric body having opposite lateral substantially parallel sides and a bottom, said body sides being suspended from the inner sides of said side arms,



respectively, said side arms each having an aperture in the underside thereof and between the ends thereof, said body frame being mounted on said chassis with said side arms resting on and engaging said rails throughout their lengths, respectively, and extending in parallelism therewith, the aperture in each side arm frictionally receiving the post of the respective rail, whereby said body frame is secured to said chassis and said side rails are secured against relative movement toward and away from each other.

3,090,637

CASTERED WIRE DOLLY

John W. Black, Prairieville Township, Barry County, Mich., assignor to Pemco Wheel Company, Kalamazoo, Mich., a corporation of Michigan

Filed Dec. 17, 1959, Ser. No. 860,243
4 Claims. (Cl. 280—79.1)



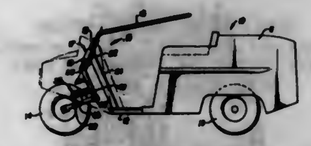
1. A castered dolly comprising: a pair of similar, elongated members arranged in similar, spaced and substantially superimposed rectangles defining a pair of substantially parallel planes; a plurality of similar, rigid elements secured to, and extending substantially perpendicularly between said members, said elements being arranged in a plurality of spaced groups, one group being located at each of the corners of said rectangles and including two elements located on opposite sides of the corner, one end of each element in said corner groups of elements extending through and beyond one of said planes in a direction away from the other of said planes; a plurality of plate type casters, each including a substantially flat plate having openings aligned with the elements of a said corner group and receiving the extended ends thereof; and means securing said extended ends of said group of elements with respect to said plate, said casters each including a rotatable wheel and means supporting same below said plate for swiveling movement about a vertical axis, said last-named means being secured to said plate at a point offset sidewardly from said elements, the upper surface of each caster being substantially flat.

3,090,638

CART STEERING WHEEL SUSPENSION

Kristof C. Somhegyi, Santa Monica, Calif., assignor to Dynapower Systems Corporation, Los Angeles, Calif., a corporation of Delaware

Filed Apr. 16, 1962, Ser. No. 187,839
6 Claims. (Cl. 280—92)



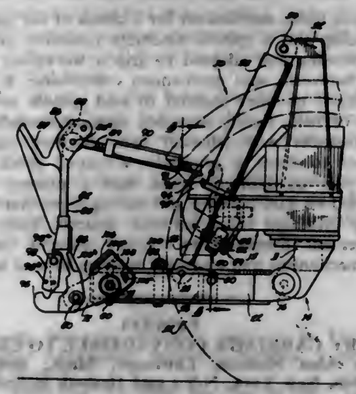
1. Cart suspension apparatus, comprising a ground wheel, cart steering structure turnable about a bearing axis for turning the wheel, said structure including a fork, and links through which cart imposed loading is transmitted to the wheel and pivoted with respect to the respective fork legs and about a first transverse pivot axis to allow the wheel to move up and down relative to the cart and fork, said structure also including extensions respectively integral with the work and at least one link, said extensions projecting into transversely spaced apart and overlapping relation, and elastomeric body means carried by and between transversely spaced portions of said extensions, said portions and said body means being offset from and at one side of said transverse axis so that said portions subject said body to shear in response to said wheel movement, whereby said body transmits only a portion of cart imposed loading and in shear for resisting pivoting of said links with respect to said fork, said body having positions in which essentially all of the resistance to flexing of said linkage is developed in and by the body loaded into shear configuration.

3,090,639

IMPLEMENT ATTACHING HITCH MECHANISM

Eugene P. Virtue, Tinley Park, and Donald W. Moyer, Chicago, Ill., assignors to International Harvester Company, Chicago, Ill., a corporation of New Jersey

Filed Apr. 24, 1961, Ser. No. 105,172
5 Claims. (Cl. 280—474)



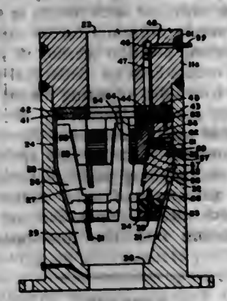
1. In a hitch mechanism for supportably and detachably fastening an earthworking implement to a tractor, the combination, comprising: a pair of generally fore-and-aft extending laterally spaced-apart draft links mounted at the forward ends thereof on the tractor for lateral and vertical swinging; means extending between the rearward ends of said draft links and selectively connectible therebetween for permitting limited lateral swinging of said draft links or for restraining the lateral swinging thereof; a rigid upper link member pivotally mounted at a forward end thereof on the tractor for lateral and vertical swinging; a pair of intermediate links connected one each to a respective rearward end portion of said draft links and extending rearwardly therefrom; said intermediate links being pivotally connected to the respective draft links on a laterally extending horizontal axis and being rotatable in vertical planes relative to the respective draft links; each intermediate link being fashioned with a projection extending outwardly from one side thereof and toward one another, and having a downwardly facing bumper thereon; each said downwardly facing bumper having first and second surface portions in the same vertical planes as the respective draft links with the first portion being angularly disposed relative to the second portion; said first and second surface portions, upon rotation of said intermediate links in vertical planes relative to said draft links, being cooperatively engageable with the respective draft links for limiting said rotative movement of said intermediate links; and means including a yoke member interconnecting the rearward ends of said intermediate links and said upper link for effecting a coordinated movement of the rearward ends of said upper link and said intermediate links.

3,090,640

WELL CASING AND TUBING SUSPENSION ASSEMBLY

Lloyd G. Otteman, Nicholas B. Newman, and John A. Haeber, Houston, Tex., assignors to Shell Oil Company, a corporation of Delaware

Filed May 4, 1959, Ser. No. 810,741
6 Claims. (Cl. 285—3)



1. Apparatus for suspending a string of pipe within a well, said apparatus comprising a suspension body having an axial throughbore, a sloping-faced slip bowl being formed in said suspension body around a portion of the throughbore, a plurality of slip segments carried in circumferentially spaced relationship in said slip bowl in a normally retracted inoperative position and mounted for sliding movement along the sloping face thereof, the outer face of said slip segments sloping at the same angle as said slip bowl, the inner faces of said slip segments sloping in substantially the same direction, positioning means normally releasably connecting said slip segments to said suspension body in a retracted position out of the throughbore thereof, auxiliary slip means carried on the inner faces of said slip segments in circumferentially spaced relationship with each other, the inner faces of said slip means being vertical and serrated horizontally, second positioning means releasably connecting said slip segments and said slip means to hold said slip means in a retracted position, moving means carried within said suspension body in contact with said slip means for normally urging said slip means to an extended position, and slip segment actuating means carried by said suspension body and in contact with said slip segments for normally urging said slip segments downwardly along said slip bowl to release said first positioning means and subsequently to release said second positioning means on radial inward movement of said slip segments.

3,090,641

ADJUSTABLE SPLINED PINION

Robert J. Eminger, Kendallville, Ind., assignor to Fort Wayne Tool and Die, Inc., Fort Wayne, Ind.

Filed Dec. 14, 1960, Ser. No. 75,733
7 Claims. (Cl. 287—53)



1. In combination; an externally splined shaft; and an internally splined device for accommodating relative longitudinal motion of said shaft with respect to said device, said device comprising first and second relatively rotatable parts each having an internally splined portion with said shaft passing therethrough, said parts having adjacent facing surfaces which are respectively coaxial with said shaft, said first part surface having a first annular groove formed therein coaxial with said shaft, said second part surface having a second groove formed therein coaxial with said shaft and forming part of an annulus, said grooves being concentric and mutually defining a cavity, said first part having an opening therein communicating with said cavity, force transfer means in said cavity having one end engaging one end of said second groove and its other end facing said opening, and adjustable means in said opening and having a portion extending into said cavity and engaging the other end of said force transfer means whereby force exerted on said other end of said force transfer means is applied to said one end of said second groove thereby tending to rotate said second part with respect to said first part causing said splined portions to engage said shaft to prevent rotatable movement thereof with respect to said device.

3,090,642

BALL AND SOCKET JOINTS

Rudolf Gottschald, Osterrath, and Gottfried Maxeiner, Duesseldorf, Germany, assignors to Viktor Langen, Duesseldorf-Oberkassel, Germany

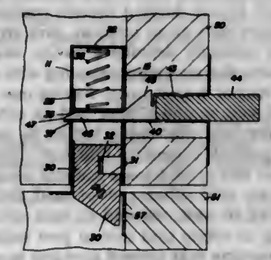
Filed Sept. 22, 1959, Ser. No. 841,534
Claims priority, application Germany Sept. 28, 1958
2 Claims. (Cl. 287—90)



1. A ball and socket joint comprising a socket, bearing members positioned within the socket, a ball head mounted within the bearing members, a pair of openings formed in said socket, a pin integral with said ball head projecting through one of the openings in the socket, projection means carried by the ball head on the side opposite from the pin, a cover plate closing the other opening in the

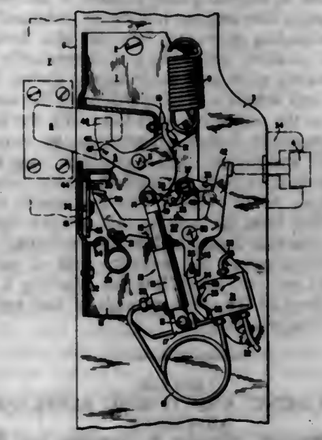
socket, a semi-spherical shaped plate mounted within the socket, an arcuate recess extending across said semi-spherical shaped plate a distance substantially equal to the diameter of the ball head, said projection means being positioned within the recess, a spring mounted between the cover plate and the spherical-shaped plate for biasing said plate against the projection means, the radial distance from the center of the ball head to the bottom wall of the ends of the arcuate recess being smaller than the radial distance from the center of the ball head to the medial portion of the bottom wall of the arcuate recess, the distance between the edge of the semi-spherical shaped plate and the cover plate being less than the difference between the radial distance from the center of the ball head to the bottom wall of the ends of the arcuate recess and the radial distance from the center of the ball bead to the medial portion of the bottom wall of the arcuate recess, whereby upon deflection of the pin, the spherical plate is pressed away by the projection means in the longitudinal direction of the pin until the edge of the spherical plate bears against the cover plate to thereby limit the deflection of the pin.

3,090,643
LATCH
Harry T. Barnes, Sr., San Antonio, Tex., assignor of one-half to Ima Jean Barnes, San Antonio, Tex.
Filed Dec. 20, 1960, Ser. No. 77,221
2 Claims. (Cl. 292—170)



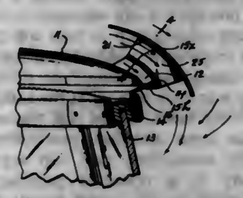
1. A push button latch comprising a housing having front, back, top and side walls, the front and back walls of said housing having aligned openings with the opening in the front wall being larger than the one in the back wall, a latch bolt positioned within said housing for slidable movement therein, said latch bolt comprising a casing having back and side walls and a rectangularly shaped tongue member secured between the back and side walls of said latch bolt casing and arranged to project therefrom, a ledge provided in said latch bolt casing and secured to the walls thereof, a coil spring interposed between said ledge and the top wall of said housing, the back wall of said latch bolt casing having an opening therein registerable with the opening in the back wall of said housing, an operating plunger engageable with said latch bolt, said plunger embodying a member having spaced cam surfaces thereon each of which terminate in a reduced end portion, each of said cam surfaces engaging said ledge at spaced points for compressing said spring between said ledge and top of said housing with the pressure being uniformly distributed over said ledge by said cam surfaces contemporaneous with the retraction of said latch bolt within said housing, the reduced end portion of said plunger moving through the opening in the back wall of said housing to retain said cam surfaces in proper engagement with said ledge for compressing said spring.

3,090,644
DOOR LOCK
Ernst J. H. Fiala, Sindelfingen, Kreis Boblingen, and Elmar Kafka, Esslingen (Neckar), Germany, assignors to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany
Filed Oct. 18, 1961, Ser. No. 145,818
Claims priority, application Germany Oct. 19, 1960
9 Claims. (Cl. 292—229)



3. A closure mechanism provided with latching means, comprising pivotal shifting means, hydraulically actuated pivotally arranged latch means, catch means for said latch means, hydraulic adjusting means, spring means, means operatively connecting said adjusting means and said spring means with said latch means in such a manner that said spring means normally forces said latch means into the door opening position thereof in which said hydraulic adjusting means is in an ineffectual position thereof and that said hydraulic adjusting means is moved out of said ineffectual position thereof by abutment of said latch means at said catch means and thereby forces said latch means against the force of said spring means into the door closing and latching position thereof, and means operative upon actuation of said shifting means for rendering said latch means inoperative and for returning said latching means into the door-opening position thereof.

3,090,645
HORIZONTAL DEFLECTOR
Hugh W. Shumaker, 517 S. Jackson, Moscow, Idaho
Filed Oct. 7, 1960, Ser. No. 61,191
1 Claim. (Cl. 296—91)



In combination, an automobile with a rear window, a rain gutter on said automobile and a wind deflector mounted on said rain gutter; said rain gutter including a horizontal flange portion and an integral upwardly and forwardly extending wall portion, said flange extending across said automobile above the rear window and secured in fixed relationship with the top of the automobile, said wall portion being substantially spaced from the top of the automobile and extending upwardly and forwardly from the free longitudinal edge of said flange and the width of said wall being at least twice the width of said flange whereby said wall completely overlies said flange and extends beyond the flange to overlie an adjacent portion of the top of the automobile, a plurality of mounting brackets secured to the upper surface of said wall, said wind deflector being mounted on said brackets in spaced relationship from said wall, said wind deflector overlying the automobile top and said wall and the forward edge of wind deflector being forward of the wall and the rearward edge being rearward of said rear window.

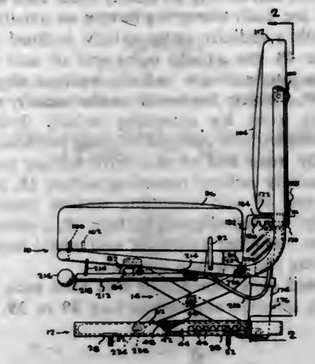
3,090,646
MEANS FOR SECURING CONVERTIBLE TOP FABRIC
Roy E. Johnson, Orchard Lake, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Sept. 9, 1960, Ser. No. 55,069
6 Claims. (Cl. 296—107)



1. Means for attaching top fabric to the rear bow of a convertible top mechanism comprising, a slot extending continuously along the length of said bow, said slot being bounded on one side by a depending inturned lip and on the other side by a rearwardly deformed groove spaced above the lower surface of said bow, said groove being bounded on one side by a horizontal lip projecting in the direction of said inturned lip, said top fabric embracing said lower surface of said bow and cooperating with said inturned lip to form a constriction in said slot, a cylindrical marginal edge on said top fabric disposed in said groove, a weatherstrip having a body portion abutting the lower surface of said bow outside said slot, said weatherstrip having an intermediate portion of generally U-shaped cross-section extending upwardly into said slot, and a cord element wedged between the legs of said intermediate portion causing the latter to expand horizontally sufficient to prevent withdrawal of both said intermediate portion of said weatherstrip and said cylindrical margin of said top fabric through said constriction.

3,090,647
AUTOMOTIVE SUSPENSION SEAT
William P. Moore, 1233 Rolleston St., Harrisburg, Pa.
Filed Oct. 28, 1960, Ser. No. 65,831
16 Claims. (Cl. 297—307)

16. A seat suspension device for a vehicle comprising a seat frame for said seat, said frame including a pair of laterally-spaced normally parallel side frame members, each of said frame members terminating in an upright extension, a seat back pivotally connected to said extensions adjacent their respective upper ends, means connecting the lower end of said seat back in a pivoted preselected position, a rigid member extending between and connected to said side frame members intermediate the ends thereof, a base frame for said suspension device, said suspension device including means pivotal and slidable relative to said seat and base frames, said last-named means extending between and connected with said frame members and said base frame, and resilient means extending between and connected to said extensions of said frame members and said base frame.



3,090,648
HEAD RESTS
Selma Sessions Snyder, 242 John St., Oakland, Calif.
Filed Jan. 2, 1962, Ser. No. 163,741
4 Claims. (Cl. 297—398)



1. In a head rest including a flexible element for securing the head rest to the back of a seat,
a base,
two sling supports each having a top and being spacedly mounted for free hinge movement in said base, and including movement limiting means limiting angular movement in either direction relative to the perpendicular,
a sling formed of flexible material and having its respective ends connected to the tops of said supports and spanning the space therebetween.
means for securing said base and sling support in assembled condition and simultaneously securing the assembled head rest to the back of the seat comprising passages provided through said supports intermediate the heights thereof, with the flexible element threaded through said passages and having a length to encompass the back of the seat.

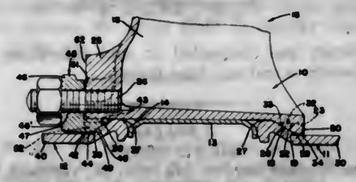
3,090,649
RIM AND WHEEL ASSEMBLIES
George Walther, Sr., Dayton, Ohio, assignor to The Dayton Steel Foundry Company, Dayton, Ohio, a corporation of Ohio
Filed May 11, 1960, Ser. No. 28,286
1 Claim. (Cl. 301—13)

In combination, a wheel having a felly surface on the ends of radially extending spoke members, interchangeable inner and outer rims having gutter flanges, an annular spacer band between said rims, and clamp lugs supported by bolts on the outer face of said spoke members; each wheel felly surface being substantially horizontal and uninterrupted throughout its length, said spacer band having a medial portion slidably engaging said

felly surface, each clamp lug having a radially oriented leg adapted to receive the bolts on said spoke members and having an axially inner face 61 on said radial leg, each clamp lug having an axially oriented leg with a radially outer axially inclined mounting surface 48, the axially outer end of said mounting surface intersecting a radially inclined aligning surface 49, a clamp lug notch on the radially outer side of said axial leg extending axially through said mounting surface and said aligning surfaces;

the axially inner end of said felly surface terminating in an axially inclined mounting surface 18, the axially inner end of said mounting surface intersecting a radially inclined aligning surface 19, a series of felly notches extending axially of said wheel through said mounting and aligning surfaces;

the opposed gutter flanges of said rims each having a radially directed aligning surface 29 or 39, the radi-



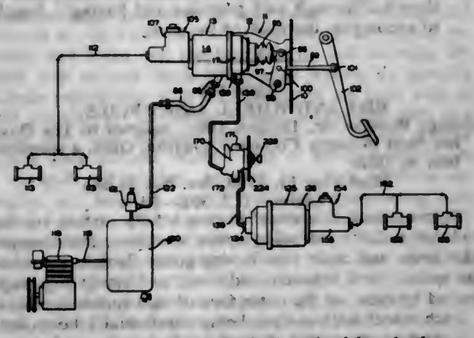
ally inner end of each aligning surface intersecting an axially inclined mounting surface 28 or 38, and a series of lugs extending axially of each said rim from said mounting surface past said aligning surface;

the aligning and mounting surfaces 29, 28 of said inner rim mating with the aligning and mounting surfaces 19, 18 at the inner end of said felly surface, said inner rim lugs engaging said felly notches, the spacer band seating between both of said rims, the mounting and aligning surfaces 38, 39 of said outer rim mating with the mounting and aligning surfaces 48, 49 of said clamp lugs, said outer rim lugs engaging said clamp lug notches, and the axially inner face 61 on the radial legs of said clamp lugs mating with the outer faces 62 of said spoke members when said clamp lugs are drawn into wedging engagement with said outer rim whereby said rims are aligned perpendicularly with respect to the rotational axis of the wheel.

3,090,650
BRAKE MECHANISM

William Stelzer, Bloomfield Hills, Mich., assignor to Kelsey-Hayes Company, Detroit, Mich., a corporation of Delaware

Filed Mar. 30, 1959, Ser. No. 802,834
8 Claims. (Cl. 303—6)

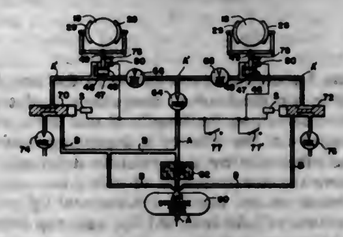


1. A vehicle brake mechanism comprising brake-applying means for effecting the operation of vehicle brakes by fluid pressure, a fluid line having one end connected to said brake-applying means, and pressure in which controls the operation of said brake-applying means to determine the degree of brake application, a pressure control valve mechanism connected to the other end of said fluid line and being operable for connecting it to a pressure source, a valve controlling communication through said line and having pressure responsive elements exposed to pressures respectively in said ends of said fluid line and acting in opposition to each other, force-transmitting means connected between said pressure-responsive elements and movable therewith in accordance with pressures in said ends of said fluid line to control said valve and thus control pressure in said one end of said line, means operative by pressure in said one end of said line and acting against the associated pressure-responsive element for exhausing pressure from said one end of said line when such pressure exceeds a predetermined ratio to pressure in said other end in said line, and means for varying the effectiveness of said pressure-responsive elements in opposing each other to change said predetermined ratio.

3,090,651
SAFETY DEVICE FOR HOISTING MECHANISMS

Bruce P. Clarke, Lennoxville, Quebec, Canada, assignor, by mesne assignments, to Ibis Enterprises Limited, Hamilton, Bermuda, a body corporate of Bermuda

Filed Apr. 12, 1961, Ser. No. 102,516
6 Claims. (Cl. 303—6)

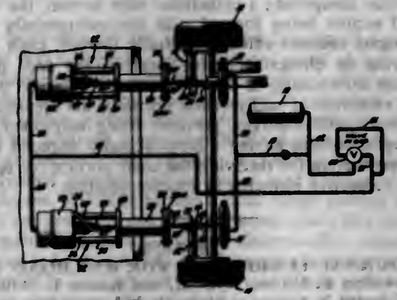


1. A safety device for a hoisting mechanism for lowering and raising at least one load carrying member within predetermined limits of travel comprising, at least two rotary braking drums connected to each other to be rotated simultaneously, each drum having braking means adapted to be applied to prevent rotation of said drums, a pressure fluid operated motor for each of said braking means to actuate said braking means, connecting means between each of said braking means and the associated motor to transmit motion from said motor to said braking means, a first conduit connected to conduct pressure fluid from a supply of pressure fluid to each of said motors to normally operate said motors, at least one check valve in said first conduit positioned upstream of said motors to prevent reverse flow of pressure fluid from said motors past said check valve, at least one relief valve in said first conduit positioned downstream of said check valve to release excessive pressure in the portion of said first conduit downstream of said check valve, a second conduit connected to conduct pressure fluid from a supply of pressure fluid at a pressure higher than the pressure of the pressure fluid in the last said portion of said first conduit into the last said portion of said first conduit, at least one control valve connected to said first conduit at a point downstream of said check valve and connected to said second conduit and to said relief valve to control the communication between said second conduit and said first conduit and said relief valve, said control valve adapted to prevent communication between said conduits and to permit communication between the last said portion of said first conduit and said relief valve when each of said braking means operates normally, and means operatively associated with said braking means and said load carrying member to actuate said valve to permit communication between said conduits and to prevent communication between said conduits and said relief valve whenever one of said braking means fails and whenever said load carrying member exceeds a predetermined limit of travel.

3,090,652
AUXILIARY SAFETY BRAKING SYSTEM

Victor Edward Hovell, 28 Nomahegan Court, Cranford, Union County, N.J.

Filed Nov. 23, 1959, Ser. No. 854,845
11 Claims. (Cl. 303—9)



1. An auxiliary brake applying mechanism adapted for use with a force applying brake lever and comprising an auxiliary brake operating rod having a lost motion operative association with the brake lever, spring means connected to said brake operating rod and compressible to a preloaded position to shift the rod to an inoperative position with respect to normal operation of the brake lever, diaphragm means connecting said diaphragm means with a source of fluid pressure, a housing having a first bore in constant communication with said conduit means, a first valve member in said first bore controlling a lateral passage in the housing, a second bore in said housing in constant communication with said first bore, a second valve member in said second bore, a third bore in communication with said lateral passage and with said diaphragm means, respectively, said housing having a pair of ports spaced from the point of communication between said first and second bores and spaced from each other and communicating with one another through said second bore with one port leading to the diaphragm means and the other port venting to atmosphere, valve springs urging said first and second valve members to positions respectively closing said lateral passage and opening the port leading to the diaphragm means with a force tending to shift the valve members to the aforesaid positions when the pressure of fluid falls below a predetermined safe operating level and said valve members being shifted against the action of the valve springs by the fluid pressure when it is above the predetermined safe operating level for opening said lateral passage to effect compression of the spring means by said diaphragm means and for closing the port leading to the diaphragm means whereby, upon failure of the pressure to below the predetermined safe operating level, the valve springs urge said first and second valve members to the aforesaid positions with the said one port leading to the diaphragm means communicating through the second bore with the said other port venting to atmosphere whereby to vent the diaphragm means and permit the spring means to expand and actuate the brake operating rod.

3,090,653
HAND TOOLS

Harry B. Stump, Charleston, W. Va., assignor to True Temper Corporation, Cleveland, Ohio, a corporation of Ohio

Filed July 2, 1959, Ser. No. 824,600
4 Claims. (Cl. 306—33)

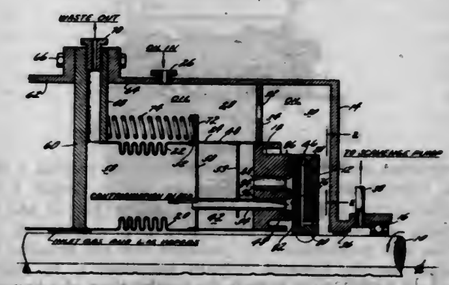


1. A metallic head with a handle receiving eye, a handle having an end portion in engagement with the head, said head having vertically extending ribs on the inner surfaces of the eye embedded by the engagement of the handle in the walls of the handle thereby forming a physical interlock between said eye and said handle, an opening extending through said handle, said opening communicating with the top and ends of said end portion of said handle, bonding material disposed in said opening and in said space between contiguous eye and handle portions and between adjacent ribs whereby the head is bonded to the handle and the ribs act as end walls for such bonded portions.

3,090,654
CONTROLLED-GAP SEAL WITH HYDRODYNAMIC-THRUST BEARING

David Wald, Santa Clara, Calif., Ralph S. Lombard, Rockfall, Conn., and Elwin F. La Moy, Eau Gallie, Fla., assignors to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware

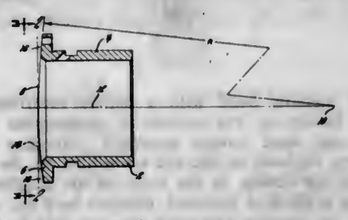
Filed May 12, 1961, Ser. No. 109,711
9 Claims. (Cl. 308—36.3)



9. In combination, a housing providing a seal chamber, a shaft extended through a wall of said housing into said chamber, a bearing between said shaft and said housing wall, a rotatable seal member in said chamber carried by said shaft having an annular seal face, a cooperating seal member nonrotatably carried by said housing including a seal face confronting said rotatable seal face, said nonrotatable seal face having three spaced concentric annular lands thereon forming three annular grooves therebetween and between the innermost land said shaft, means for supplying oil under pressure to said chamber for lubricating said bearing, a passageway connecting said chamber to the outermost of said grooves, means for admitting

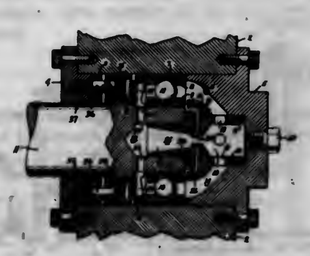
leakage blanket gas along said shaft to the innermost groove, means for connecting the intermediate groove to atmosphere, and a hydrodynamic-thrust bearing on the confronting faces of said rotatable seal face and the outermost of said lands for controlling the gap between said lands and the cooperating face of said rotatable seal member.

3,090,655
THRUST BEARING
William G. Dilworth, La Grange, Ill., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Oct. 14, 1960, Ser. No. 62,610
2 Claims. (Cl. 308—37)



1. In combination a flat thrust surface and a rotatable thrust bearing member cooperating therewith, said bearing member having an end thrust face engaging said flat thrust surface for rotation thereon, said end thrust face comprising a single convex cylindrical surface generated by a line rotated about an axis perpendicular to and intersecting the axis of rotation of said bearing member.

3,090,656
RECIRCULATING LUBRICATION SYSTEM
Paul Lewis, Scotia, and Keith L. Streifert, Schenectady, N.Y., assignors to General Electric Company, a corporation of New York
Filed Feb. 27, 1961, Ser. No. 92,022
4 Claims. (Cl. 308—187)



3. In a lubrication system, the combination of a housing, a rotor, bearing means for rotatably supporting said rotor in said housing, said bearing means including a plurality of rolling elements, means defining a cavity in said rotor, said cavity terminating at the end of said rotor and being substantially enveloped by said bearing means, an impeller for passing lubricant through said bearing means being located adjacent thereto, means having substantially stationary walls defining a passage extending from one side of the bearing means, a lubricant storage chamber connected between said passage and terminating adjacent the cavity in said rotor, pumping means defined by a tapered portion of said cavity for propelling lubricant from the last mentioned passage through said chamber and into said cavity, and means defining a passage extending radially through said rotor for passing lubricant from said cavity to said impeller.

3,090,657
MOTION-TRANSMITTING DEVICE
Alfred J. Diebold, Gary, Ind., assignor to The Anderson Company, a corporation of Indiana
Filed Aug. 29, 1960, Ser. No. 52,607
5 Claims. (Cl. 308—217)



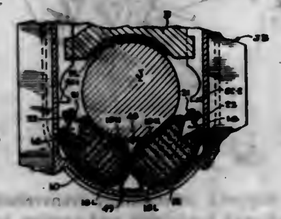
1. A cage for elongate rotatable bearing elements having spaced-apart toroidal portions connected by a shaft portion comprising a cylindrical tube section, the wall of said section being formed with circumferentially spaced elongate recesses extending axially thereof, each for receiving an elongate bearing element, the ends of each recess terminating in circumferentially enlarged portions for reception of said toroidal portions, the opposed edges between said enlarged portions being connected by an integral portion having a longitudinally disposed bearing recess therein for receiving the shaft portion for retaining the respective elements in relative position.

3,090,658
JOURNAL LUBRICATOR FOR RAILROAD CARS
Llewellyn E. Hoyer, Wyckoff, and Roeser L. Wilson and Edward R. Gorcyca, Mahwah, N.J., assignors to American Brake Shoe Company, New York, N.Y., a corporation of Delaware
Filed June 26, 1958, Ser. No. 744,811
5 Claims. (Cl. 308—243)



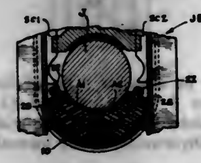
1. A lubricator for the journal and bearing of a railroad car and comprising, two elongated closed loop open-ended sleeves of woven wicking material, said sleeves being secured together at their adjacent inner sides along a restricted longitudinal center line to flexibly join the sleeves and produce upwardly and downwardly opening elongated V-channels between the adjacent inner sides of the sleeves respectively above and below said securement, a filler of woven wicking material arranged between said sleeves at their adjacent inner sides, said filler having an upper loose closed loop portion lying in the upper V-channel and a lower loose closed loop portion lying in the lower V-channel, individual pads of oil-absorbent material confined in each of said sleeves, said pads each having enlarged openings formed in the opposed faces thereof and extending but part way through the pad, narrow fabric webs secured to the upper and lower sides of said sleeves at the open ends thereof to maintain the pads in position within said sleeves, grommets affixed to and joining the inner sides of said sleeves, and members of material stiffer than the material comprising said sleeve being secured to the outer sides of said sleeves and projecting outwardly therefrom.

3,090,659
JOURNAL LUBRICATORS
Roeser L. Wilson, Mahwah, and Llewellyn E. Hoyer, Wyckoff, N.J., and Isaac E. Cox, Kirkwood, Mo., assignors to American Brake Shoe Company, New York, N.Y., a corporation of Delaware
Filed May 5, 1960, Ser. No. 27,192
13 Claims. (Cl. 308—243)



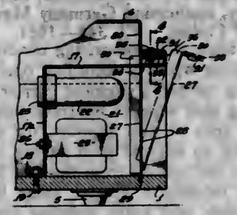
1. A lubricator for the journal and bearing of a railroad car and comprising two elongated outer sleeves of woven fabric wicking material, said sleeves having adjacent inner sides joined together along a restricted longitudinal center portion only whereby the unjoined portions of the adjacent inner sides of the sleeves afford upwardly and downwardly opening V-channels, a wicking filler arranged between and secured to said adjacent sides of the sleeves, said filler having a loose upper portion disposed in the upwardly opening V-channel and a like loose lower portion disposed in the downwardly opening V-channel, individual blocks of porous oil-absorbent material confined in each of said sleeves, said blocks each having upper and lower faces and each having an inner side and an outer side, said inner sides each having an inwardly directed projection thereon, said projections affording upwardly and downwardly opening substantially V-shaped recesses between the blocks affording ample room for the spreading of said portions of the wicking filler, and means maintaining said blocks in place within said sleeves.

3,090,660
JOURNAL LUBRICATORS
Llewellyn E. Hoyer, Wyckoff, and Edward R. Gorcyca, Mahwah, N.J., assignors to American Brake Shoe Company, New York, N.Y., a corporation of Delaware
Filed Sept. 11, 1962, Ser. No. 223,304
9 Claims. (Cl. 308—243)



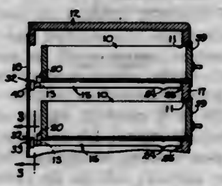
1. A lubricator adapted to be inserted beneath the journal in the journal box of a railroad car and comprising, a cover of woven wicking material shaped to afford a pair of pockets receiving unitary inserts of resilient, oil-absorbent material, said cover being inclusive of pile loops uniformly distributed throughout exposed surfaces thereof, the material affording said cover between said pockets having interposed therebetween a unitary center wick pad separately composed of bundled yarns vertically oriented to present bottom yarn loops to the bottom of the lubricator which is adapted to contact the deepest part of the oil reservoir in the journal box and to present exposed top yarn loops to the top of the lubricator for contacting the nadir portion of a railroad car journal.

3,090,661
ELECTRIC PHONOGRAPH STRUCTURE
William R. Hawkins, Panorama City, Calif., assignor to Newcomb Electronics Corp., Los Angeles, Calif., a corporation of California
Filed Nov. 14, 1960, Ser. No. 68,796
3 Claims. (Cl. 312—8)



3. In a phonograph structure including electric components: an open ended cabinet; wall means within the cabinet for defining a recess that opens at the open end of the cabinet; means in said recess for supporting said electric components; a removable apertured wall for covering said open end, said wall having an edge engaging a groove formed in the cabinet adjacent the open end; said wall having a longitudinal outwardly extending flange at an edge opposite the edge that engages the groove; said cabinet having a portion that overlies and parallels said longitudinal flange; said overlying portion being a flat strip, a trim strip extending lengthwise of said flange; said trim strip being of U-shaped cross-section, and having parallel legs, the flange and the overlying portion being disposed between the legs of the U; and means fastening the trim strip to the overlying portion of the cabinet.

3,090,662
DRAWER GUIDE
Carl J. Dargene, Rockford, Ill., assignor to Amerock Corporation, Rockford, Ill., a corporation of Illinois
Filed Mar. 14, 1961, Ser. No. 95,547
1 Claim. (Cl. 312—343)



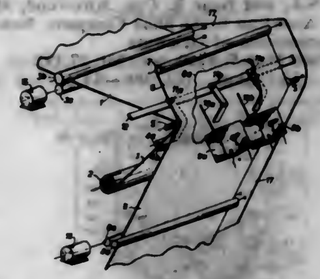
In a cabinet including front and rear frame members and a drawer sliding on an elongated guide secured at one end to said front member and extending horizontally into the cabinet toward said rear member with its other end adjacent the rear member, the combination with said cabinet of, a mounting bracket disposed adjacent said rear member and having a portion telescoping snugly with said other end, a stop formed on said bracket to abut against said guide and limit sliding of said bracket along the guide and away from said rear member, and a fastener having a headed end outside said rear member and a portion extending through the latter and projecting into said cabinet at the level of said bracket, a portion of said bracket adjacent said rear member being of substantial thickness relative to the length of said fastener and composed of material capable of receiving and gripping the projecting end of said fastener as the latter is driven through an embedded in both the rear member and the bracket whereby said fastener and said bracket support said other end of said guide on the rear member.

3,090,663
RECORDING APPARATUS WITH SPACED PIGMENT CARRIER

Johann Albrecht Schneider, Merzhausen, near Freiburg im Breisgau, and Benno Stroa, Freiburg im Breisgau, Germany, assignors to Fritz Hellige & Co. G.m.b.H., Freiburg im Breisgau, Germany, a German company

Filed Mar. 21, 1960, Ser. No. 16,612
Claims priority, application Germany Mar. 20, 1959
5 Claims. (Cl. 346—105)

1. Recording apparatus comprising means providing a linear support along which a recording operation can be effected, a record carrier, a pigment carrier, one of said carriers engaging said support by traversing an angular path having an apex at said support, the other of said carriers traversing an angular path having an apex adjacent said support and spaced from the first said apex, the latter said path defining a greater angle than the first said path and both said paths defining angles substantially less than one hundred and eighty degrees, driving means for driving said carriers along said paths at different relative speeds, spacing means for maintaining a spacing between said carriers at said apices, and a re-



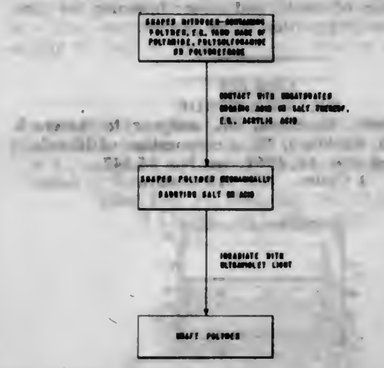
cording arm disposed substantially transversely of said support and adapted for urging said carriers against said support at said apices.

CHEMICAL

3,090,664
GRAFT POLYMERIZING AN UNSATURATED ORGANIC ACID OR SALT THEREOF ONTO A NITROGEN CONTAINING POLYMER SUBSTRATE

Edward T. Cline and David Tanner, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed Mar. 31, 1958, Ser. No. 725,115
16 Claims. (Cl. 8—115.5)



1. The process of forming a graft copolymer which comprises contacting a member of the group consisting of polymerizable unsaturated organic acids and the salts thereof with a substrate shaped from a nitrogen-containing polymer of the group consisting of polyamides, polysulfonamides, polyureas and polyurethanes activated by means of ultraviolet light having a radiation intensity of at least 4×10^{-3} watt/cm.^{2}, thereby chemically bonding the member of said group to the substrate.

3,090,665
REACTION MIXTURE OF FORMALDEHYDE-HYDRAZIDE-TRIAZONE FOR TREATING CELLULOSIC TEXTILES

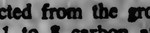
Warren N. Parsons, Lincoln, and George E. Mona, Pawtucket, R.I., assignors to Olin Mathieson Chemical Corporation, a corporation of Virginia

No Drawing. Filed July 7, 1959, Ser. No. 825,404
20 Claims. (Cl. 8—116.3)

7. A method for the impregnation of a textile, fabricated from a material selected from the group consisting of cellulose and regenerated cellulose, to render it resistant to wrinkling and creasing which includes the steps of impregnating the textile with an aqueous solution containing the ingredients (1) formaldehyde; (2) the reaction product of formaldehyde and a triazone of the formula



wherein R and R′ are selected from the group consisting of hydrogen, alkyl of 1 to 5 carbon atoms and hydroxyalkyl of 1 to 5 carbon atoms; and (3) a formaldehyde-hydrazide reaction product selected from the group consisting of (*a*) the reaction product of formaldehyde and a monohydrazide produced by the reaction of a monohydrazide, of the formula



wherein R is selected from the group consisting of hydrogen, alkyl of 1 to 8 carbon atoms and alkyl of 1 to 8 carbon atoms substituted by one of the groups hydroxyl and sulfhydryl and R′ is selected from the group consisting of hydrogen and



and formaldehyde in a molar ratio of formaldehyde to hydrazide of about 3:1 to 10:1, and (*b*) the reaction product of formaldehyde and a dihydrazide produced by the reaction of a dihydrazide, of the formula

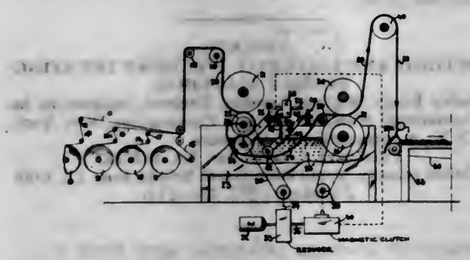


wherein R is selected from the group consisting of $(-CH_2-)_n$ wherein *n* is an integer having a value of 0 to 5 and alkylene of 2 to 6 carbon atoms interrupted by from 1 to 2 atoms selected from the group consisting of oxygen and sulfur, and formaldehyde in a molar ratio of formaldehyde to the dihydrazide of about 6:1 to 20:1; the total amount of said ingredients in the solution being at least 5 weight percent and the proportions of the ingredients in the solution being about 1 to 20 moles of formaldehyde, about 0.5 to 8 moles of the formaldehyde-triazone reaction product and about 1 mole of the formaldehyde-hydrazide reaction product; and heating the impregnated textile to dry it and provide a textile resistant to creasing and wrinkling.

3,090,666
ALKALINE SHRINKAGE OF COTTON FABRIC ON VIBRATORY CONVEYOR

Edward W. Jones, Waterville, N.Y., assignor to Elastic Fabric Co., Inc., New York, N.Y., a corporation of Delaware

Filed June 16, 1959, Ser. No. 820,813
2 Claims. (Cl. 8—125)

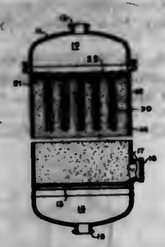


1. In a process for continuously producing a fabric having a high degree of stretchability and elasticity which comprises continuously feeding a running length of cotton fabric under tensionless conditions in all directions and in the form of a free loop through an alkaline bath at a rate sufficient to prevent any substantial shrinking of the fabric in said bath; vibratorily suspending said fabric while it shrinks after it leaves said bath to provide uninhibited shrinking thereof in all directions by continuously folding the fabric onto a long moving vibratory surface removed from any liquid surrounding, and carrying the folded fabric on the moving vibratory surface to a remote position.

3,090,667
GRANULAR BED CONTACTOR WITH EXTENDED SURFACE AND METHOD OF MAKING AND USING SAME

John Connellan, Hooton, England, assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware

Filed Jan. 18, 1960, Ser. No. 3,056
Claims priority, application Great Britain Jan. 20, 1959
10 Claims. (Cl. 23—1)



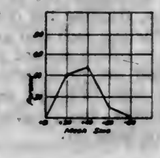
1. Apparatus for effecting contact between a fluid and granular solids which comprises: a tank; a stationary bed of granular contacting solids situated within a portion of said tank, said portion constituting a solids chamber and an adjoining portion of said tank constituting an antechamber, said bed having a surface directed toward said antechamber and being formed with a plurality of deep columnar depressions which project from said surface into said bed and provide additional extended bed areas for the flow of fluid between the bed interior and said antechamber; a mass of discrete bodies of inert material having diameters greater than the diameters of said contacting solids situated within each of said depressions so as to maintain said depressions in being and thereby to maintain the said additional areas extended, said discrete bodies providing a multitude of flow passages which are in communication with said antechamber and with the lateral boundaries of said depressions; and inlet and outlet means for said tank, one of which communicates with said antechamber and the other with said solids chamber for the flow of said fluid successively through said chamber and the bed.

10. Method of introducing a fluid into a stationary bed of granular contacting material which comprises the steps of flowing said fluid first through passages formed between discrete solid bodies of diameters larger than the granules of said contacting material, said bodies forming a layer of the surface of said stationary bed, thence through passages between additional discrete bodies also of diameters larger than said granules and arranged as substantially columnar projections which extend from said surface layer into the interior of said stationary bed in lateral contact therewith, and thence laterally from said projections into the said bed, the total entry surface of said bed adjoining said projections being greater than the cross sectional area of said bed, whereby said fluid enters the bed over an extended surface.

3,090,668
METHOD OF MAKING GRANULAR CALCIUM ARSENATE

Lewis P. Harris, Detroit, Mich., assignor to The Sherwin-Williams Company, Cleveland, Ohio, a corporation of Ohio

Filed Nov. 5, 1958, Ser. No. 772,075
2 Claims. (Cl. 23—33)



1. The method of making granular calcium arsenate having an average particle size substantially the same as the particle size of the calcium carbonate from which said calcium arsenate is made, which comprises reacting solid granular calcium carbonate having an average particle size in the range of from 2 to 100 mesh, with an amount of H_3AsO_4 in the range of from 10% to 100% of the equivalent weight of arsenic acid theoretically required to convert all of the calcium carbonate to calcium arsenate and from 2.9% to 30% by weight of the total batch weight of water, maintaining the reaction mass under agitation during the period when carbon dioxide is being released in the course of the reaction, and terminating such agitation at the stage of the reaction when the reaction mass begins to crumble, drying and recovering the granular calcium arsenate.

3,090,669
METHOD OF MAKING SYNTHETIC MICA

Philip S. Hemsinger, West Caldwell, and Thomas W. Weber, Woodbridge, N.J., assignors to Mycalex Corporation of America, Clifton, N.J., a corporation of New York

No Drawing. Filed Feb. 15, 1962, Ser. No. 173,370
33 Claims. (Cl. 23—110)

1. A method of making synthetic non-hydroxyl mica, comprising the steps of dissolving non-hydroxyl mica forming material in heated zinc borate glass and then cooling the resulting solution to cause said mica to precipitate out of solution.

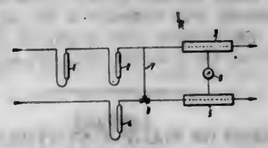
3,090,670
ZIRCONIUM DIOXIDE RECOVERY
Edgel P. Stambaugh, Montgomery, and Raymond A. Foos, Loveland, Ohio, assignors to National Distillers and Chemical Corporation, New York, N.Y., a corporation of Virginia
No Drawing. Filed June 18, 1959, Ser. No. 821,120
5 Claims. (Cl. 23—140)

1. A process for preparing a purified dioxide of a metal selected from the group consisting of zirconium, hafnium and mixtures thereof, which consist of heating for about 2 to about 60 minutes an aqueous acidic solution of said metal, said solution containing an acid selected from the group consisting of hydrochloric acid, hydrobromic acid, hydroiodic acid, nitric acid, sulfuric acid, and mixtures thereof and having an acid concentration of about 5 to 200 grams per liter, at a temperature at least above about 140° C., at a pressure of at least 50 p.s.i., and in absence of alkaline material to precipitate purified metal dioxide, and recovering said precipitated, purified metal dioxide.

3,090,671
METHOD OF RECOVERING SELENIUM AND/OR GERMANIUM FROM THEIR ORES
Sylvester Clingmon Buchanan, Mineral El Cubo, Guanajuato, Guanajuato, Mexico
No Drawing. Filed Feb. 6, 1959, Ser. No. 791,526
10 Claims. (Cl. 23—209)

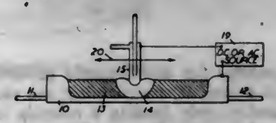
1. The method of recovering elements selected from the group consisting of selenium and germanium from their ores in which they are united with other elements and minerals, comprising the steps of comminuting the ore, immersing the comminuted ore in an aqueous alkali metal cyanide solution, grinding the ore while immersed in said solution to a fineness such that at least about 90% of the selenium or germanium present goes into solution, maintaining the ground ore in suspension in said solution for a period of at least 24 hours, separating the solution from the ore residue, and recovering the selenium and germanium by precipitation.

3,090,672
METHOD OF DETERMINING THE CONTENT OF DEUTERIUM HYDRIDE IN HYDROGEN
Johann von Grotthuss, deceased, late of Munich, Germany, by Elisabeth von Grotthuss, heir, Munich-Solln, Germany, and legal representative of Ina Maria von Grotthuss and Michael von Grotthuss, heirs, both of Munich-Solln, Germany, and Sibylle Sohler, heir, Jachenau, Forsthaus, Germany; Karl Jaeger, Pullach, Germany, and Heinz Karwat, Munich-Solln, Germany, assignors to Gesellschaft für Linde's Eismaschinen Aktiengesellschaft, Hollriegelskreuth, near Munich, Germany
Filed Dec. 7, 1959, Ser. No. 857,994
Claims priority, application Germany Dec. 8, 1958
16 Claims. (Cl. 23—232)



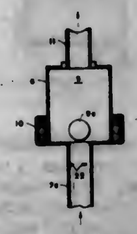
1. Method of determining the content of HD, in addition to para-hydrogen, in a hydrogen sample by measuring thermal conductivity, which comprises adapting the concentration ratio of ortho- to para-hydrogen in said sample to equilibrium at the temperature of the thermal conductivity measuring means by passing the hydrogen sample over an ortho-para equilibrium-establishing catalyst substance at substantially room temperature, and then comparing the thermal conductivity of said hydrogen sample with the thermal conductivity of a reference stream of pure hydrogen having an exactly defined HD concentration, said concentration including the value zero, the concentration ratio of ortho- to para-hydrogen of which reference stream of pure hydrogen has also been adapted to equilibrium at the temperature of the thermal conductivity measuring means in the manner described above.

3,090,673
METHOD AND MATERIAL FOR HEAT TREATING FUSIBLE MATERIAL
Henley Frank Sterling, London, England, assignor to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware
Filed May 1, 1959, Ser. No. 810,422
Claims priority, application Great Britain June 12, 1958
2 Claims. (Cl. 23—273)



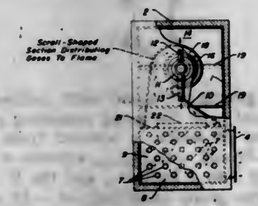
1. Apparatus for treating fusible material comprising a crucible containing said material to be treated, a heating current source connected by a first conductor to said crucible, an electrode immersed in said material and disposed in direct electrical contact with said material and connected by a second conductor to said source, said material completing the electrical circuit between said source, said crucible and said electrode, the heat generated in said material by the conduction of said current through said material causing the melting of said material surrounding said electrode, means for circulating a fluid for cooling through said crucible and said electrode, said crucible and said electrode being constructed of a metal having thermal and electrical conductivity equal to at least that of copper.

3,090,674
HEATING FLUIDS BY A SPINNING BODY
Ype Schaafsma, Amsterdam, Netherlands, assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware
Filed Feb. 23, 1961, Ser. No. 91,116
Claims priority, application Great Britain Mar. 21, 1960
10 Claims. (Cl. 23—277)



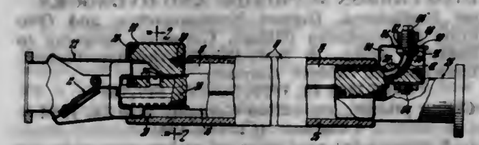
1. Apparatus for supplying heat to a fluid which comprises a reaction chamber, a supply conduit for said fluid debouching upwards into said chamber, outlet means for said chamber, a heating element situated within said chamber for heating said fluid by convection, said element having an axis of symmetry and being adapted to be freely suspended and rotated in a stream of said fluid entering the chamber from said conduit, and means for heating said heating element at a distance by electro-magnetic waves.

3,090,675
DIRECT FLAME INCINERATOR
Richard J. Ruff and William C. Verner, Detroit, Mich., assignors to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware
Filed May 4, 1962, Ser. No. 192,454
3 Claims. (Cl. 23—277)



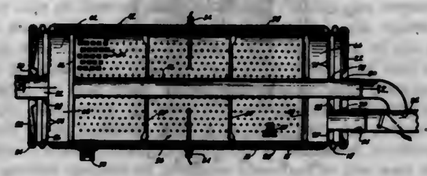
1. A direct flame incinerating apparatus for effecting the thermal combustion of oxidizable components in a waste gas stream, which comprises in combination,
(a) a confined furnace housing having a waste gas inlet and a combustion gas outlet,
(b) at least one burner means projecting through one end of said housing and having nozzle means emitting a short compact cylindrically shaped flame pattern into said housing,
(c) fuel and air supply means connecting to said burner means,
(d) volute-shaped gas distributing means positioned in the end of said furnace housing and around each of the burner nozzle means,
(e) said volute-shaped distributing means having tangential inlet means connecting to said waste gas inlet to said housing and gas discharge port means positioned in axial alignment with the flame discharge nozzle means of said burner means, and
(f) partitioning means within said housing forming gas passageway means to said gas outlet from said housing for conducting resulting combustion gases from the interior thereof.

3,090,676
CATALYST FEED CONTROL DEVICE FOR CATALYTIC CONVERTERS
Ralph S. Johnson, Rochester, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Nov. 21, 1960, Ser. No. 70,579
3 Claims. (Cl. 23—288)



1. A catalytic converter apparatus comprising an elongated casing having a gas inlet at the front end and a gas outlet at the rear end, a catalyst bed disposed within and extending substantially throughout the length of the casing, a catalyst particle reservoir disposed above the catalyst bed at the gas inlet end thereof and having a passage for conveying particles to said gas inlet end of the catalyst bed, a second reservoir for exhausted catalyst particles above the catalyst bed at the gas outlet end thereof and communicating with said gas outlet end of the catalyst bed, first means for supporting said catalyst bed in said casing whereby the gas flow between said gas inlet and outlet passages passes through the catalyst bed in a direction from the gas inlet to the gas outlet so as to urge the catalyst particles to move along the bed to the second reservoir, and second means located between the second reservoir and the catalyst bed for controlling the rate of catalyst particle flow from said bed to said second reservoir, said second means including a device for adjusting the degree of communication between said bed and said second reservoir.

3,090,677
CATALYTIC CONVERTER
George E. Scheitlin and Charles F. Draut, Columbus, Ind., assignors to Arvin Industries, Inc., Columbus, Ind., a corporation of Indiana
Filed Mar. 9, 1961, Ser. No. 94,607
9 Claims. (Cl. 23—288)

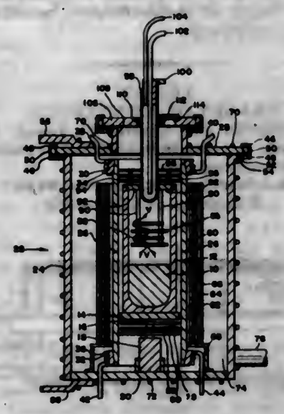


1. In a catalytic converter for removing noxious pollutants from an exhaust gas stream, an outer shell having its ends closed by a pair of end caps, wall-forming means mounted within said shell inwardly from each of said end caps, the wall-forming means adjacent at least one of said end caps being perforated to form a sound attenuating chamber adjacent at least one end of said shell, gas inlet and outlet conduits carried in said end caps and wall-forming means and disposed in open communication with the interior of said shell adjacent its opposed ends, means mounted in said shell and forming a conversion chamber adapted to hold a catalyst for removing the noxious pollutants from the exhaust gases, said means having a pair of opposed perforated wall surfaces spaced from the adjacent wall portions of said shell, an inlet duct connected to one of said pair of wall surfaces and an outlet duct connected to the other of said pair of wall surfaces, one end of said inlet duct being in open communication with the inlet conduit and connected to the adjacent wall portion of said shell and the opposite end of said inlet duct being connected to a first baffle plate extending between said shell and conversion chamber, one end of said outlet duct being in open communication with said outlet conduit and connected to the adjacent wall portion of said shell and the opposite end of said outlet duct being connected to a second baffle plate extending between said shell and conversion chamber, said opposite ends of said inlet and outlet ducts being connected to said first and second baffle plates at points spaced from said shell, and means forming a by-pass passage operatively interconnecting said inlet and outlet conduits whereby the exhaust gases may pass through the converter without passage through the catalyst.

3,090,678
METHOD OF REFINING SILICON
John G. Lewis and Harold A. Ohlgren, Ann Arbor, Mich., assignors, by mesne assignments, to American Metal Products Company, Detroit, Mich., a corporation of Michigan
Filed Feb. 24, 1960, Ser. No. 10,717
2 Claims. (Cl. 23—293)

2. A process for purifying impure silicon metal comprising placing impure silicon to be purified in a distillation zone, reducing the pressure in said zone to a pressure of about 1 to 10 microns of mercury absolute, supplying argon to said zone and maintaining the pressure in said zone between about 1000 to 30,000 microns of mer-

cury absolute, outgassing said zone with argon concurrently with heating said zone to a temperature of about 2000 to 2500° F., further heating said zone to a temperature of about 3500 to 4500° F. so as to vaporize said silicon, contacting the resulting vapor with a condensing surface at a temperature to condense the silicon and above the condensation temperature for the impurities, and recovering purified silicon from said surface.

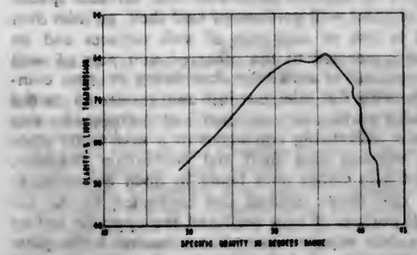


3,090,679

PROCESS FOR PREPARING AQUEOUS SILICATE SOLUTIONS

Ernest J. Tauch, Cleveland, Ohio, assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed July 21, 1961, Ser. No. 125,762
2 Claims. (Cl. 23—312)



1. A process for the preparation of aqueous sodium silicate solutions from solid sodium silicate glass, said process comprising

(*a*) dissolving enough of said silicate glass in water under steam pressure of from about 20 to about 100 lbs. per square inch to form a solution having a specific gravity of from 32° to 38° Bé.;

and then

(*b*) evaporating water from said solution under reduced pressure until said solution has a specific gravity of at least 41° Bé.

3,090,680

GASOLINE COMPOSITION

Reid E. Sutton and John L. Bame, East Alton, Ill., assignors to Shell Oil Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Mar. 29, 1960, Ser. No. 18,257
6 Claims. (Cl. 44—69)

1. A gasoline composition consisting essentially of a mixture of hydrocarbons having an ASTM boiling range below about 400° F., an octane number-improving amount of tetraalkyllead and an octane number-improving amount of an aromatic chromium tricarbonyl co-antiknock agent corresponding to the formula $ACr(CO)_3$, wherein A is a monoaromatic compound corresponding to the formula



wherein the R groups are monovalent radicals, three of which are selected from the group consisting of —H and $—CH_3$, and one of which is selected from the group consisting of —H and $—C_nH_{2n+1}$, wherein *n* is a whole number of from 1 to 4 inclusive, and the R′ groups are selected from the group consisting of —H and $—CH_3$ when separate and $(—CH_2—)_4$ when taken together, the amount of said co-antiknock agent corresponding to from about 0.01 to about 0.25 gram of chromium contained in the co-antiknock agent per gram of lead contained in the tetraalkyllead, said mixture of hydrocarbons containing (1) no more than 50% by volume of aromatics, (2) no more than about 30% by volume olefins, (3) no more than about 20% by volume each of isoparaffins and aromatics boiling above about 300° F., (4) no more than about 10% by volume each of normal paraffins having 5 to 6 carbon atoms per molecule and naphthenes boiling above about 300° F., and (5) essentially no normal paraffins having greater than 6 carbon atoms per molecule, and further characterized as having an equivalent amount of co-antiknock antagonists (A_E) not exceeding $50+0.75N$ wherein A_E and N are defined as hereinbefore in the specification.

3,090,681

METHOD OF REDUCING SURFACE IGNITION REQUIREMENTS

Ralph B. Thompson, Hinsdale, Joseph A. Chenicek, Prairie View, and Wayne J. Faust, Arlington Heights, Ill., assignors, by mesne assignments, to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

No Drawing. Filed Feb. 13, 1958, Ser. No. 714,970
3 Claims. (Cl. 44—76)

1. Gasoline of reduced surface ignition requirements in a spark ignition engine containing from about 0.0001% to about 1% by volume of an aryl phosphorus thiodihalide.

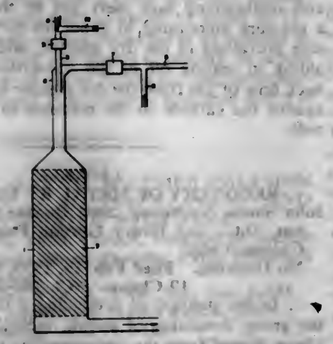
3,090,682

CONVERSION OF GASEOUS HYDROCARBONS INTO CARBON MONOXIDE AND HYDROGEN

Ernst Bartholomé, Helmut Nonnenmacher, and Otto Frey, Ludwigshafen (Rhine), Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

Filed June 22, 1955, Ser. No. 517,346
Claims priority, application Germany June 26, 1954
4 Claims. (Cl. 48—196)

1. A process for production of carbon monoxide and hydrogen by a flameless reaction between a hydrocarbon gas and oxygen which comprises mixing in a mixing zone a preheated hydrocarbon-containing gas with a preheated O_2-containing gas in an amount insufficient for complete combustion of the hydrocarbon in said hydrocarbon-containing gas, said mixing being done at a gas velocity sufficiently low and with a volume ratio of O_2 in said O_2-containing gas to said hydrocarbon-containing gas sufficiently high to support, in the absence of the addition of steam to said gases, a stable flame in said mixing zone at said gas velocity and said volume ratio, passing the mixed gases from said mixing zone into an enlarged zone void of solids, preventing pre-ignition of said gases in said mixing zone at said velocity and at said volume ratio and also in said enlarged zone by adding to said O_2-containing gas prior to mixing thereof with said hydrocarbon-containing gas an amount of steam sufficient to prevent formation of a stable flame in said mixing zone if the gases are ignited, and then contacting said mixed gases with a catalyst promoting the incomplete combustion of said hydrocarbon gas into primarily carbon monoxide and hydrogen, with the further proviso that the hydrocarbon-containing gas prior to mixing with said O_2-containing gas has a volume ratio of steam to said hydrocarbon-containing gas ranging from zero to a ratio substantially less than the volume ratio of steam to O_2-containing gas resulting from said adding of steam to said O_2-containing gas.

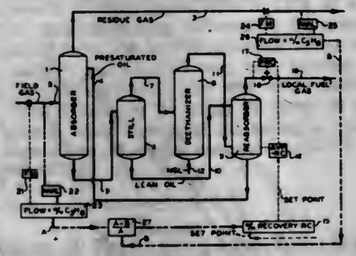


3,090,683

CONTROL OF ABSORBER PRODUCT

Donald E. Berger, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Filed July 12, 1960, Ser. No. 42,376
12 Claims. (Cl. 48—196)



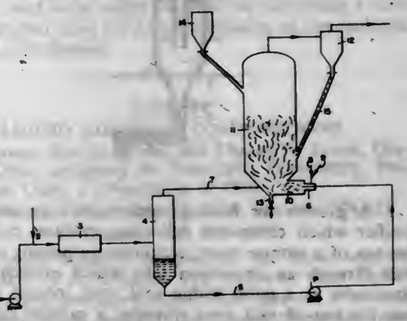
1. A method of controlling the percentage of propane recovery from a natural gas in an absorption system, comprising passing the field gas into an absorber, establishing a first signal representative of the rate of flow of said field gas into said absorber, establishing a second signal representative of the percentage of propane in said field gas as it passes into said absorber, establishing a third signal representative of the rate of flow of propane into said absorber responsive to the product of said first signal and said second signal, injecting a partially presaturated absorber oil into said absorber to contact said field gas and absorb certain components of said field gas, removing the unabsorbed gases as residue gas, withdrawing from said absorber the rich absorber oil, passing said rich absorber oil into a still and therein separating the absorbed gases from said rich absorber oil, passing the gases thus obtained in said still to a deethanizer, removing in said deethanizer ethane and lighter gases and some propane as overhead, passing the lean absorber oil from said still into a reabsorber, passing at least a portion of said overhead from said deethanizer into said reabsorber and into contact with said lean absorber oil, establishing a fourth signal representative of the pressure of the overhead of said reabsorber, establishing a fifth signal representative of the vapor pressure of a standard sample of propane and lean oil, said standard sample being located in the liquid phase in said reabsorber, establishing with a differential vapor pressure controller a sixth signal representative of the differential vapor pressure between said standard sample and the partially saturated absorber oil from the reabsorber, controlling the pressure of said overhead of said reabsorber responsive to said sixth signal and a setpoint on said differential vapor pressure controller, establishing a seventh signal representative of the rate of flow of said residue gas, establishing an eighth signal representative of the percentage of propane in said residue gas, establishing a ninth signal representative of the rate of flow of propane in said residue gas responsive to the product of said seventh signal and said eighth signal, establishing a tenth signal representative of the ratio of the difference between said third signal and said ninth signal to said third signal, controlling said setpoint on said differential vapor pressure controller responsive to said tenth signal in such a manner that the pressure of said overhead of said reabsorber is increased, resulting in a greater amount of propane absorbed in the lean oil in said reabsorber upon an increase in said ratio.

3,090,684

CONVERSION OF OILS WITH AMOUNTS OF OXYGEN INSUFFICIENT FOR COMPLETE COMBUSTION FOR THE FORMATION OF CARBON MONOXIDE AND HYDROGEN

Helmut Nonnenmacher, Ludwigshafen (Rhine), and Ernst Bartholomé, Heidelberg, Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

Filed Sept. 4, 1957, Ser. No. 681,945
Claims priority, application Germany Sept. 8, 1956
3 Claims. (Cl. 48—212)



1. A process for the production of a gas consisting essentially of carbon monoxide and hydrogen from mineral oils wherein said mineral oils are reacted with amounts of oxygen which are insufficient for complete combustion which process comprises:

(1) thermally treating said mineral oil to separate the oil into a vaporous and a nonvaporuos fraction, the vaporous fraction constituting more than one-third by weight of the total,

(2) reacting the nonvaporous fraction in a flame

(*a*) with at least 0.9 cubic meter of oxygen per kilogram of the nonvaporous fraction where said vaporous fraction is up to one-half by weight of the total initial material,

(*b*) with at least 1.2 cubic meters of oxygen per kilogram of the nonvaporous fraction where said vaporous fraction is more than one-half

and up to two-thirds by weight of said total initial material, and

(c) with at least 1.5 cubic meters of oxygen per kilogram of the nonvaporous fraction where said vaporous fraction is more than two-thirds by weight of the total initial material, said quantities of oxygen being measured at normal temperature and pressure, and

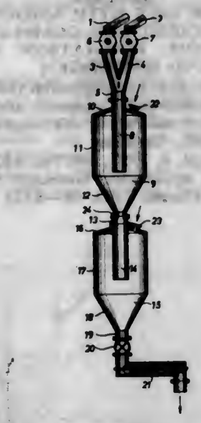
(3) thereafter leading the substances thus formed in said nonvaporous fraction-oxygen reaction and said vaporous fraction simultaneously into a fluidized layer of reaction catalyst at a temperature of from about 700° to 1200° C. wherein a further reaction takes place between said mineral oil and oxygen and whereby a synthesis gas is produced consisting essentially of carbon monoxide and hydrogen.

3,090,685

METHOD FOR CHARGING DRY GASIFIERS WITH CALCIUM CARBIDE

Walter Pechtold, Knapsack, near Cologne, Andreas Carstensen, Hermulheim, near Cologne, and Lambert Meyer, Bruhl-Kierberg, Germany, assignors to Knapsack-Griesheim Aktiengesellschaft, Knapsack, near Cologne, Germany, a corporation of Germany

Filed Mar. 11, 1960, Ser. No. 14,235
Claims priority, application Germany Mar. 14, 1959
2 Claims. (Cl. 48—216)



1. A process for feeding calcium carbide into a dry gasifier which comprises delivering calcium carbide to the top of a storage zone, continuously passing said carbide through an immersion tube which extends to and terminates at a point within said zone located well below the top of said zone whereby a carbide column is established in said zone which has a definite resistance to gas back flow through said column, continuously discharging the carbide from said tube into the portion of said zone below said point of tube termination, permitting the calcium carbide to gravitate from said storage zone to the top of a control zone at a discharge rate which permits a build up of the carbide in the lower part of the storage zone up to the discharge end of said immersion tube, passing said carbide feed to the top of said control zone through a second immersion tube which extends to and terminates at a point within and well below the top of said control zone whereby a carbide column is established in said zone which has a definite resistance to gas back flow through said column, continuously discharging the carbide from said tube into the portion of the control zone below said point of tube termination, withdrawing the carbide from the bottom of said control zone at a rate which permits a build up of the carbide in the lower part of said control zone up to the discharge end of said immersion tube, the rate of delivery of carbide to the storage zone corresponding to the rate of withdrawal of carbide from said control zone, introducing an inert gas above the levels of the carbide confined in said two zones, maintaining said inert gas in the storage zone at a pressure amounting to about 40–60% of the overpressure prevailing in the dry gasifier, and maintaining said inert gas in the control zone at a pressure amounting to about 60–90% of the overpressure prevailing in the dry gasifier, said inert gas pressure aiding in sealing off of the immersion columns against back flow of gas from the dry gasifier by exerting pressure against the carbide in the columns to compact said carbide.

3,090,686

RECOVERY OF METAL BY USE OF LEAD

John Simon Nachtman, 2801 Quebec St. NW., Washington, D.C., and Henry Gordon Poole, 1000 16th St., Golden, Colo.

No Drawing. Filed Feb. 19, 1958, Ser. No. 716,033
19 Claims. (Cl. 75—84)

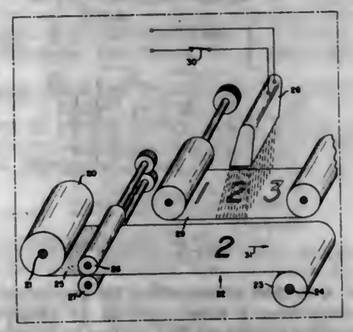
1. In the method of producing a metal selected from the group consisting of cobalt, nickel, molybdenum and alloys thereof from the corresponding metal sulfides, heating the metal sulfide with lead in a non-oxidizing atmosphere at a temperature of from about 1100° C. to below about 1450° C. whereby a reduction reaction takes place between the metal sulfide and lead to produce the purified metal.

3,090,687

PHOTO-CHEMICAL PRINTING

Elliot Berman, Dayton, Ohio, assignor to The National Cash Register Company, Dayton, Ohio, a corporation of Maryland

Filed Nov. 6, 1957, Ser. No. 694,802
2 Claims. (Cl. 96—48)



2. A process for printing including the steps of

(a) providing a record sheet base member coated with solid particles of a chemical compound interspersed with pressure-rupturable liquid-solvent-containing capsules, the compound assuming a distinctive color hue when irradiated with ultra-violet light while in liquid solution, said solvent being volatile and a solvent for the particles;

(b) rupturing the capsules to release the solvent and thereby dissolve the particles; and

(c) before the solvent evaporates irradiating the dissolved coating of particles with a pattern of ultra-violet light to depict data in the distinctive color, the evaporation of the solvent leaving the compound fixed in the distinctively colored pattern, where colored, and fixed in the uncolored form where not irradiated with the ultra-violet light.

3,090,688

METHOD FOR MAKING DRIED SOUR CREAM

Peter P. Nomick, Robert H. Bandes, and Ingmar B. Eggen, all of Chicago, Ill., assignors to Beatrice Foods Co., Chicago, Ill., a corporation of Delaware

No Drawing. Filed Jan. 19, 1960, Ser. No. 3,254
1 Claim. (Cl. 99—56)

The process of preparing sour cream comprising heating skim milk to about 235° F. for six seconds, cooling to about 71° F., inoculating with a lactic acid and diacetyl producing culture, incubating for about 14 hours at 71° F. and then mixing with melted butter oil in an amount to produce an 18% butter fat product, heating to about 130° F., homogenizing at about 2000 p.s.i., and spray drying, whereby a powdered sour cream is produced which is of excellent flavor.

3,090,689

AQUEOUS VINYL ACETATE POLYMER EMULSION CONTAINING N-n-BUTYLBENZAMIDE AND FOOD PRODUCT COATED WITH SAME

Pierre Amedee Tillet, Lyon, France, assignor to Societe des Usines Chimiques Rhone-Poulenc, Paris, France, a corporation of France

No Drawing. Filed Feb. 4, 1960, Ser. No. 6,641
Claims priority, application France Feb. 6, 1959
8 Claims. (Cl. 99—166)

1. A composition for application to food products to form a peelable self-supporting film thereon serving as protection against fungal attack which comprises an aqueous emulsion of a polymer selected from the class consisting of polyvinyl acetate and copolymers of vinyl acetate and vinyl chloride which contains N-n-butylbenzamide.

3,090,690

TANK PROTECTIVE OILS

Knapel F. Schiermeier, Alton, Ill., assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Oct. 21, 1960, Ser. No. 63,959
3 Claims. (Cl. 106—14)

1. An improved tank protective oil composition consisting essentially of from about 10% to 15% of an oil-soluble alkali metal petroleum sulfonate in the molecular weight range of from 350 to 900 and from about 4% to 6% of a partially ammoniated fatty acid selected from the group consisting of oleic acid and tallow fatty acid having a TBN–E value in the range of about 20 to 50, and the balance being a mineral oil having a viscosity index of from 15 to 48 and a viscosity at 100° F. SUS of from 450 to 600.

3,090,691

METHOD OF PREPARING CERAMIC-LIKE ARTICLES

Donald E. Weyer, Midland, Mich., assignor to Dow Corning Corporation, Midland, Mich., a corporation of Michigan

No Drawing. Filed Nov. 9, 1960, Ser. No. 68,146
6 Claims. (Cl. 106—39)

1. A method which comprises heating a mixture of from .1 to 30% by weight of an organosiloxane having per silicon atom a total of from 1 to 3 inclusive substituents selected from the group consisting of hydrogen atoms and organic radicals which are attached to the silicon through silicon-carbon linkages which organic radicals are composed of carbon and hydrogen atoms, any remaining atoms in said radicals being selected from the group consisting of oxygen and nitrogen atoms, there being no more than 18 atoms exclusive of hydrogen per organic radical and from 70 to 99.9% by weight of a ceramic material having a softening point above 800° C., said ceramic material being essentially free of materials which volatilize below 800° C., at a temperature from above 500° C. to 1550° C. until a ceramic article is obtained.

3,090,692

HYDRAULIC CEMENT ADDITIVES AND CEMENT COMPOSITIONS CONTAINING SAME

Thomas M. Kelly, Chagrin Falls, and Richard C. Mielenz, Beachwood, Ohio, assignors, by mesne assignments, to Martin-Marietta Corporation, Chicago, Ill., a corporation of Maryland

No Drawing. Filed Nov. 6, 1959, Ser. No. 851,269
10 Claims. (Cl. 106—92)

1. An additive composition for incorporation in hydraulic cement mixes consisting essentially of between about 1 and 20 parts by weight of a carbohydrate selected from the group consisting of monosaccharides having 5 to 6 carbon atoms and disaccharides which are multiples of said monosaccharides, between about 5 and 30 parts by weight of a water-soluble chloride, between about 1 and 10 parts by weight of a water-soluble short chain alkyl amine, and between about 1 and 10 parts by weight of a water-soluble organic ethylene oxide condensation product formed by condensing ethylene oxide with a second organic compound having a functional group, said chloride being selected from the group consisting of alkali metal chlorides, alkaline earth metal chlorides and ammonium chloride, and said carbohydrate comprising an amount at least about as great as the amount of said alkyl amine and at least about as great as the amount of said ethylene oxide condensation product.

3,090,693

MORTAR ADDITIVES

Thomas M. Kelly, Chagrin Falls, and Richard C. Mielenz, Beachwood, Ohio, assignors, by mesne assignments, to Martin-Marietta Corporation, Chicago, Ill., a corporation of Maryland

No Drawing. Filed June 27, 1961, Ser. No. 119,845
10 Claims. (Cl. 106—93)

6. A mortar mix consisting essentially of a hydraulic cement, sand, water and between about 0.1% and 1% by weight of the cement of an additive comprising between about 1 part and 5 parts by weight of waste sulfite liquor solids and between about ½ part and 5 parts by weight of a high viscosity grade short chain hydroxyalkyl cellulose; said waste sulfite liquor solids containing a compound selected from the group consisting of lignosulfonic acid and salts thereof.

3,090,694

LIQUID ADHESIVE COMPOSITIONS

Louis Perony, Eric G. Gibbs, and Charles O. Pyron, Dayton, Ohio, assignors to Protective Treatments, Inc., Dayton, Ohio, a corporation of Ohio

No Drawing. Filed Aug. 22, 1958, Ser. No. 756,512
13 Claims. (Cl. 106—177)

1. A liquid adhesive composition for liquid application to skin as an adherent film thereover with limited but prolonged pressure-sensitive tackiness for a smooth vinyl plastic sheet brought into contact therewith, comprising a film forming component, an adhesion producing component, a plasticizing component, and a liquid vehicle for admixture of said components selected from the group consisting of organic solvents and water, said film forming component being selected from the group consisting of vinyl polymers and copolymers, polyacrylic esters and polymers, polymethacrylic esters and polymers, cellulose acetate butyrate, ethyl cellulose, and compatible combinations thereof, said adhesion producing component being selected from the group consisting of polyacrylic esters and polymers, polymethacrylic esters and polymers, glycerol phthalate resins, abietic acid-glycerol resins and organic acid and phenol modifications thereof, amine-aldehyde resins, maleic anhydride resins, vinyl polymers and copolymers, polyphenyl esters, phenol resins, alkyd resins, and compatible combinations thereof, said plasticizing component being selected from the group

consisting of polymeric type and ester type plasticizers and being present in an amount up to 250% and 200% by weight, respectively, based on the weight of said film forming and adhesion producing components to provide after evaporation of the liquid vehicle an adherent film, the exposed surface of said film having a pressure-sensitive tackiness sufficient to adhere thereto a smooth vinyl plastic sheet and not exceeding approximately 250 grams measured as peel strength by the ASTM testing method D903–49 herein disclosed, in which one test surface is suitable material to which said adhesive composition will adhere more strongly than it does to said plastic sheet, and said tackiness of said exposed surface of said film for said plastic sheet being less than each of the cohesive strength of said film and the adhesiveness thereof to skin.

3,090,695

METHOD AND MEANS FOR PRE-SEALING WOOD SURFACES

George Otto Orth, Jr., Seattle, Wash., assignor to Buffelen Sales Co. Inc., Tacoma, Wash., a corporation of Washington

No Drawing. Filed Aug. 17, 1959, Ser. No. 833,982
4 Claims. (Cl. 117—8)

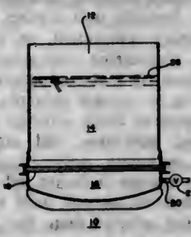
1. A method of finishing a surface of wood comprising the steps of providing 10 to 20 units of thermoplastic resin solids having the quality of softening at a temperature produced in the subsequent sanding step, 1 to 10 units of 150–200 mesh sanding grit and 70 to 90 units of organic solvent capable of dissolving the resin, mixing the aforementioned ingredients together to form a sealer solution, applying the sealer solution to the wood surface whereby the sealer solution penetrates into the wood, drying the solution to evaporate the organic solvent, sanding with an abrasive sheet having a grit coated surface of substantially the same fineness as said sanding grit at the rate of 50 to 250 lineal feet per minute the outer exposed portion of the dried residue of the solution remaining on said wood surface, continuing said sanding step at least until said outer portion of said dried residue becomes soft from friction generated heat and the rate at which said residue is transferred back and forth between said sheet and said surface reaches a state of equilibrium, separating said abrasive sheet from said surface, and allowing the residue to cool and harden on said wood surface.

3,090,696

FLUIDIZED BED COATING PROCESS FOR COATING WITH THERMOSETTING MATERIALS

Erwin Gemmer, Frankfurt am Main, Germany, assignor to Knapsack-Griesheim Aktiengesellschaft, Knapsack, near Cologne, Germany, a company of Germany

Filed Sept. 10, 1956, Ser. No. 608,726
Claims priority, application Germany Dec. 11, 1954
5 Claims. (Cl. 117—21)



1. The process of forming a coherent and adherent coating of thermosetting resin on the surface of an article comprising the steps of heating the surface of the article to a predetermined temperature below the melting temperature of the object, immersing the heated surface in a fluidized bed of free-flowing powder, said powder comprising at least 10% of a mixture of thermosetting resin and curing agent, maintaining said object in contact with said fluidized bed for a period of time sufficient to coat the article with the powdered mixture, removing said object from said bed, gradually raising the temperature of said surface from said predetermined temperature to an elevated temperature above said predetermined temperature, maintaining said elevated temperature of said surface for a time sufficient to cause some degree of reaction between the thermosetting resin and curing agent while the same are in a fused condition, and cooling the article to solidify the coating.

3,090,697

HEAT SENSITIVE MARKING PAPERS AND METHODS FOR MAKING SAME

William R. Lawton and Harry A. Smith, Nashua, N.H., and James N. Copley, North Chelmsford, Mass., assignors to Nashua Corporation, Nashua, N.H., a corporation of Delaware

No Drawing. Filed Feb. 13, 1961, Ser. No. 88,661
2 Claims. (Cl. 117—36.7)

1. A heat sensitive recording paper comprising a base sheet and a coating adherent thereto and obscuring a surface thereof, said coating comprising a continuous phase of a thermoplastic resin, which resin when taken by itself as a film is essentially transparent, and a dispersed phase of finely divided particles of a molecular compound distributed throughout said film and rendering the same opaque, said molecular compound consisting of an amine in combination with a halogenated aromatic hydroxy compound which is compatible with said resin, and being stable at normal conditions of temperature and humidity but dissociable at an elevated temperature to yield said amine and halogenated aromatic hydroxy compound, whereby upon heating said paper, said halogenated aromatic hydroxy compound and said resin coalesce and render said film transparent where heated.

3,090,698

PROCESS FOR IRRADIATING HIGH HYDROCARBON COATINGS ON METAL TO FORM POLYMERIC COATINGS AND RESULTANT ARTICLE

Alexander Thomas Wilson, Wellington, New Zealand, assignor to Standard Oil Company, Chicago, Ill., a corporation of Indiana

Filed Feb. 14, 1961, Ser. No. 89,318
7 Claims. (Cl. 117—62)



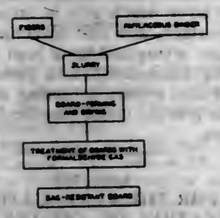
1. A process for producing solid state polymerized chemical coatings from non-volatile normally low melting point organic substances selected from the class consisting of heavy oils, waxes, fatty acids, and asphalts which comprises extending the chemical starting material in the form of a film on the surface of an oxidizable metal and subjecting it to ionizing radiation in the energy range of about 1,000 to 500,000 volts of cross-linking intensity approximating at least about 10 kilowatt hours per pound of product for a period of time sufficient to convert the starting material to a hardened coating.

3,090,699

SAG-RESISTANT FIBERBOARD AND METHOD OF MAKING SAME

Walter T. Bubon, East Hempfield Township, Lancaster County, Pa., assignor to Armstrong Cork Company, Lancaster, Pa., a corporation of Pennsylvania

Filed May 12, 1960, Ser. No. 28,547
7 Claims. (Cl. 117—62.2)



1. A method of rendering sag-resistant a fiberboard containing a gelled amylaceous binder which comprises treating said board with substantially dry formaldehyde gas until said binder in said board no longer gives the characteristic purple color on being tested with starch-indicating iodine solution.

3,090,700

FIBROUS WEB MATERIAL IMPREGNATED WITH LIGNIN-CONTAINING RESIN

Frank J. Ball and Joseph B. Doughty, Charleston, S.C., assignors to West Virginia Pulp and Paper Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed July 3, 1959, Ser. No. 824,773
6 Claims. (Cl. 117—66)

3. A method of making impregnated fibrous web material which comprises the steps of adding to an A stage resole alkali lignin in the free acid form to form a mutual solution of said resole and said lignin in a volatile solvent medium wherein the ratio by dry weight of said resole to said lignin is from about 2:1 to 1:6 and the pH of which is substantially less than that of said resole, impregnating fibrous web material with said solution, the said resole plus said lignin being from about 15% to about 60% by dry weight of the impregnated web, drying the impregnated web material to remove said volatile solvent medium, curing the dried impregnated fibrous web material at a temperature between about 200° F. and about 350° F. and at a pressure of from about 300 p.s.i. to about 6000 p.s.i. until said impregnated fibrous web material has developed a flexural strength of at least about 15,000 p.s.i., and discontinuing curing while said impregnated fibrous web material possesses substantial thermoplasticity as defined herein at a postforming temperature between about 200° F. and about 350° F. thereby providing an improved combination of postformability and flexural strength as compared with like employment of a corresponding amount of impregnant by dry weight using said resole per se.

3,090,701

METHOD OF PRECOATING AND COATING GLASS FIBERS AND ARTICLE PRODUCED THEREBY

William Shulver, Saylesville, R.I., and Gerald W. Guyer, Huntingdon, Pa., assignors to Owens-Corning Fiberglas Corporation, Toledo, Ohio, a corporation of Delaware

No Drawing. Filed Mar. 21, 1960, Ser. No. 16,138
6 Claims. (Cl. 117—76)

1. Coated strands comprising:

(*a*) a plurality of continuous glass fibers in a substantially parallel relationship and a coating system upon the surfaces of said fibers and consisting essentially of:

(1) a first coating adjacent to and in intimate engagement with said surfaces, and consisting essentially of the dried residue of a solution of a polyethylene derivative selected from the group consisting of ethylene glycol fatty acid esters and ethylene oxide condensates, and

(2) superimposed upon said first coating, an exterior second coating consisting essentially of the dried residue of a liquid dispersion of polytetrafluoroethylene.

3,090,702

PROTECTIVE COATING OF REFRACTORY METALS

Maurice R. Commanday, Los Angeles, and Peter J. Flambeck, Inglewood, Calif., assignors to Chromizing Corporation, Los Angeles, Calif., a corporation of California

No Drawing. Filed Jan. 23, 1961, Ser. No. 83,953
10 Claims. (Cl. 117—106)

1. The process of protectively coating a refractory base metal of the group consisting of molybdenum, tantalum, tungsten and columbium, and alloys of those respective metals, that includes heating the base metal at a temperature between about 1600° F. and 2200° F. in a non-oxidizing atmosphere and in contact with a powdered mixture of an inert solid diluent, a halogen source and both boron and silicon distributed in said mixture in condition from which the boron and silicon are diffusible into the base metal, and thereby diffusing silicon and boron into the surface of the base metal to form a continuous protective coating integrated therewith.

3,090,703

BORON PHOSPHIDE ARTICLES AND COATINGS

Bernard A. Gruber, Robert A. Ruehrwein, and Forrest V. Williams, Dayton, Ohio, assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

Filed Mar. 3, 1958, Ser. No. 718,516
13 Claims. (Cl. 117—127)



10. An abrasion and corrosion resistant turbine bucket suitable for use in high temperature combustion engines and having a base form of a metal selected from the group consisting of molybdenum, tungsten, and tantalum, and being coated with a coating comprising cubic crystalline boron phosphide.

3,090,704

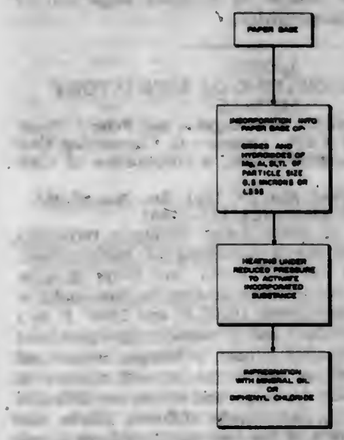
ANTISTATIC AND ANTISOILING AGENT AND PROCESS FOR TREATING SYNTHETIC LINEAR TEXTILE THEREWITH

Robert J. Collins and Robert G. Thompson, Kinston, N.C., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Feb. 14, 1961, Ser. No. 89,101
10 Claims. (Cl. 117—138.8)

6. The process which comprises applying to a synthetic linear polymer fiber a terpolymer prepared by polymerizing a mixture of (1) a vinyl monomer containing a curable group selected from the class consisting of methylol and epoxy groups, (2) a vinyl monomer containing an anionic group, and (3) a vinyl monomer selected from the class consisting of (*a*) acrylate and methacrylate esters of alcohols containing less than about 5 carbon atoms, (*b*) vinyl esters of aliphatic acids containing 2 to 4 carbon atoms, (*c*) 4 and 5 carbon aliphatic hydrocarbons containing two conjugated double bonds and (*d*) styrene.

3,090,705
IMPREGNATED PAPER TO SERVE AS A DIELECTRIC, ESPECIALLY IN CONDENSERS TO IMPROVE THEIR CRITICAL PERFORMANCE
Reinhold Miksits, Laxa, Sweden, assignor to Tervakoski Osakeyhtiö, Tervakoski, Finland
Filed Jan. 15, 1959, Ser. No. 787,052
Claims priority, application Germany Jan. 17, 1958
7 Claims. (Cl. 117—154)



1. A dielectric paper material having an improved power factor in the temperature range between 60 and 120° C., said material consisting essentially of:

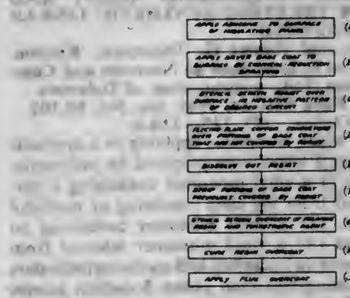
(*a*) a paper base;

(*b*) an active substance incorporated in said paper and selected from the group consisting of activated hydroxides, oxides and hydrated oxides of magnesium, aluminum, silicon and titanium, bentonite, and silicates of aluminum, which substance presents a large surface area and has predominantly colloidal particle sizes averaging 0.5 micron and less,

(*c*) mineral oil as impregnant capable of rendering the paper base dielectric and

(*d*) impurities initially contained in said impregnant and capable per se of causing energy loss in said dielectric material, said impurities being bound by said active substance, whereby their loss causing effect is substantially reduced.

3,090,706
PRINTED CIRCUIT PROCESS
Erwin E. Cado, Northbrook, Ill., assignor to Motorola, Inc., Chicago, Ill., a corporation of Illinois
Continuation of application Ser. No. 535,143, Sept. 19, 1955. This application July 3, 1959, Ser. No. 825,390
4 Claims. (Cl. 117—212)

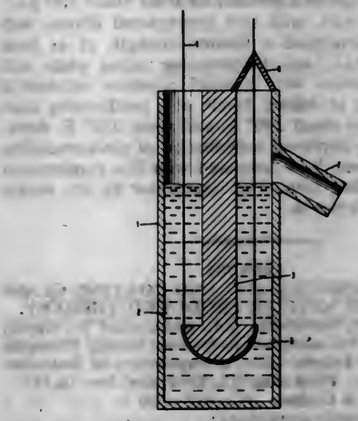


1. In a printed circuit assembly adapted for a soldering operation in which a face of the assembly is substantially entirely contacted with molten solder, said assembly including a relatively permanent insulating base and which has metallic wiring conductors applied on at least one surface of the base, the improvement comprising a patterned overcoat of melamine resin base material including a thixotropic agent extending over at least said one surface of the panel and over selected portions of the metallic conductors, said patterned overcoat being a hard adhesive layer which aids in retaining the conductors on said surface, and said melamine resin and said thixotropic agent giving said layer high thermal and electrical insulating characteristics to protect the assembly from heat and thus prevent loosening of said conductors by heat and to prevent undue electrical leakage between said conductors.

3,090,707
PROCESS FOR THE PURIFICATION AND DECOLORIZATION OF PRE-TREATED TECHNICAL SUGAR SOLUTION
Erich Mosbes, Leopoldsdorf, Marchfeld, Austria, assignor to Sugar Chemical Co. Etablissement, Vaduz, Liechtenstein, a company of Liechtenstein
Filed Sept. 15, 1959, Ser. No. 840,053
Claims priority, application Switzerland Sept. 23, 1958
9 Claims. (Cl. 127—46)

1. In a process of defecating and decolorizing pretreated sugar solutions, the improvement which comprises establishing ion exchange contact between said solution and an anion exchange material charged with anions selected from the group consisting of carbonate and sulfate, whereby at least a portion of the anions in the solution is replaced by a member of said anion group, establishing ion exchange contact between said solution and a cation exchange material charged with ammonium, whereby at least a portion of the cations in the solution is replaced by ammonium, precipitating the anions in the solution thereafter with an alkaline earth metal compound and removing the insoluble alkaline earth metal salts thus obtained.

3,090,708
PROCESS FOR CLEANING A RECORD CARRIER
John W. Wenner and Anton G. Wellbrock, Poughkeepsie, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed June 28, 1961, Ser. No. 120,264
1 Claim. (Cl. 134—15)



A process for treating magnetic recording tape of the type used in data processing and computer machines to provide said tape with nearly perfect reliability in the performance of its intended function, said process comprising the steps of:

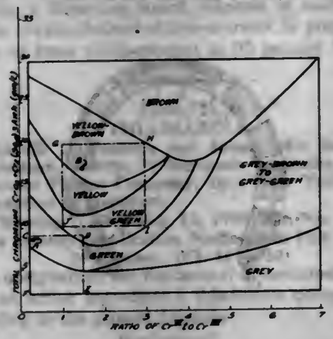
placing said magnetic recording tape in a body of mercury; and,

passing said tape longitudinally through said body of mercury to remove foreign particles from the surface of the tape and to condition the surface of said tape so as to inhibit the formation of further particles.

3,090,709
PHOSPHATE COATING OF METALS
John A. Henricks, Lakewood, Ohio, assignor, by mesne assignments, to The Lubrizol Corporation, Wickliffe, Ohio, a corporation of Ohio
No Drawing. Filed Aug. 10, 1953, Ser. No. 373,449
10 Claims. (Cl. 148—6.15)

9. A solution for forming a protective coating on metallic surfaces which comprises an aqueous acidic solution consisting essentially of about 0.1–0.4% zinc ion, at least 0.132 calcium ion, the weight ratio of the calcium ion to the zinc ion being in the range of 0.25–4.5, the phosphate ion and the nitrate ion, the weight ratio of nitrate ion to phosphate ion being in the range of 0.5–4.35.

3,090,710
METHOD AND SOLUTION FOR PRODUCING CHROMATE COATINGS ON ZINC AND ZINC ALLOYS
Ann Maureen Triggle, Ottawa, Ontario, Canada, and Herbert Arthur Henry Jenkins, Hounslow, England, assignors, by mesne assignments, to Hooker Chemical Corporation, New York, N.Y., a corporation of New York
Filed May 25, 1960, Ser. No. 31,640
Claims priority, application Great Britain May 27, 1959
7 Claims. (Cl. 148—6.21)

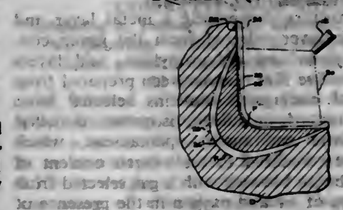


1. A chromating solution consisting essentially of water, chromium trioxide, and $Cr_2(SO_4)_3$, 6–7 H_2O, said solution containing a total content of hexavalent chromium calculated as CrO_3, and trivalent chromium calculated as anhydrous $Cr_2(SO_4)_3$, ranging from about 2 to about 30 gm./l., the weight ratio of said hexavalent chromium to said trivalent chromium ranging from about 0.2 to about 7.0, said solution having a pH ranging from about 1.8 to about 2.8.

3,090,711
PROCEDURE FOR SECONDARY RECRYSTALLIZATION
Dale M. Kohler, Middletown, Ohio, assignor to Armco Steel Corporation, Middletown, Ohio, a corporation of Ohio
No Drawing. Filed July 6, 1959, Ser. No. 824,915
5 Claims. (Cl. 148—111)

1. In a process of producing silicon-iron sheet stock characterized predominantly by an orientation of the crystals in which the cube faces thereof are substantially parallel to the surfaces of the sheet stock, and including the steps of producing a silicon-iron sheet stock which, after a primary recrystallization will be characterized by a substantial number of grains having their cubic faces so oriented, the production of said stock involving a final cold rolling treatment immediately preceding said primary recrystallization, the improvement which consists in that the said cold rolling treatment is characterized in the final part at least by the reduction of the silicon-iron sheet stock between rolls having a profilometer reading not greater than about 5 microinches before subjecting the stock so produced to a secondary recrystallization treatment at high temperatures.

3,090,712
METHOD OF PRESTRESSING A CRANKSHAFT AND CRANKSHAFT FORMED AS A RESULT THEREOF
Ernest V. Berry, 1717 E. Slauson Ave., Los Angeles, Calif.
Filed Feb. 2, 1960, Ser. No. 6,135
1 Claim. (Cl. 148—146)



A method of treating a metallic crankshaft to place the exterior surfaces of the fillets thereof permanently under compression to minimize fatigue failure, comprising:

(*a*) heating said crankshaft to a predetermined elevated temperature;

(*b*) rotating said crankshaft;

(*c*) discharging a plurality of streams of coolant onto said fillets for cooling the metal defining same during rotation of said crankshaft;

(*d*) continuing to cool the metal defining said fillets until the differential between said predetermined elevated temperature and that of the metal defining said fillets is such as to cause said metal defining said fillets to stretch beyond its yield point and permanently deform to have an external surface area greater than that said fillets initially had prior to said heating;

(*e*) allowing said crankshaft to return to room temperature; and

(*f*) continuing to cool said metal defining said fillets as said crankshaft returns to room temperature and said crankshaft contracts in volume, with said contraction placing the metal defining said permanently deformed fillets under compression.

3,090,713
COMPOSITION OF MATTER IN THE NATURE OF AN EXPLOSIVE
Frank Harold Fenix, Joplin, Mo., assignor of fifty percent to Glenn Cook, Arkansas City, Kans.
No Drawing. Filed June 19, 1958, Ser. No. 743,014
1 Claim. (Cl. 149—39)

An explosive consisting essentially of by weight of the total admixture, 60 to 98 parts of fertilizer grade, prilled, uncoated ammonium nitrate, 0.5 to 2 parts of powdered aluminum, 1.5 to 6 parts of ferric oxide, approximately 0.5 part of ground glass, about 0.5 part of calcium oxide, and one pint for each 100 pounds of said admixture of equal proportions of nitrobenzene, glycerine and toluene.

3,090,714
EXPLOSIVE
Frank Harold Fentz, Joplin, Mo., assignor of fifty percent to Glenn Cook, Arkansas City, Kans.
No Drawing. Filed June 19, 1958, Ser. No. 742,988
1 Claim. (Cl. 149—43)

An explosive consisting essentially of by weight of the total admixture, 60 to 94 parts of fertilizer grade, prilled, uncoated ammonium nitrate, 1 to 6 parts of powdered aluminum, 0.5 to 1 part of ground glass, 2 to 30 parts of a solid carbonaceous material selected from the group consisting of powdered coal and powdered charcoal, and approximately one pint for each 100 pounds of said total admixture of equal proportions of nitrobenzene, glycerine and toluene.

3,090,715
CHEMICALLY MODIFIED POLYDIOLEFIN RESIN AS AN ADHESIVE
Hadden Clark, Plainfield, James M. Throne, North Plainfield, and Ober C. Slotterbeck, Rahway, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware
Filed Aug. 25, 1958, Ser. No. 757,113
12 Claims. (Cl. 154—43)

1. A unitary structure comprising a metal layer and a polyolefin plastic layer selected from the group consisting of polyethylene and polypropylene, said layers having a cured adhesive film therebetween prepared from liquid polymers of conjugated diolefins selected from the group consisting of butadiene, isoprene, dimethyl butadiene, piperylene and methyl pentadiene, which polymers have been oxidized to an oxygen content of 0.1 to about 10% by air blowing with a gas selected from the group consisting of air and oxygen in the presence of an aromatic hydrocarbon solvent having a kauri-butanol value of at least 40, and subsequently cured in situ in the presence of a peroxide catalyst by subjecting the unitary structure to a temperature between 250–500° F.

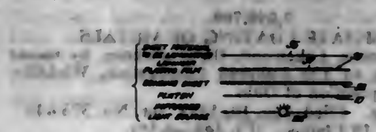
3,090,716
ADHESIVE TREATMENT AND ARTICLE OF MANUFACTURE
Bennie A. Stevens, Denver, Colo., assignor to The Gates Rubber Company, Denver, Colo., a corporation of Colorado
Filed Sept. 12, 1958, Ser. No. 760,688
12 Claims. (Cl. 154—52.1)



1. In a power transmission belt consisting in part of a rubber composition; a strain resisting member incorporated therein composed at least in part of polyethylene terephthalate polyester fibers, said strain resisting member bonded to the rubber portion by first treating said strain resisting member with an organic compound having a plurality of isocyanate groups and then chemically reacting a water based latex with the remaining available isocyanate groups of the isocyanate treated strain resisting member.

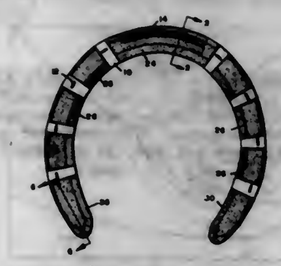
3,090,717
METHOD OF LAMINATING SHEETS
Walter A. Raczynski, Park Ridge, Martin R. Laven, Morton Grove, and Charles J. Voss, Jr., Elmhurst, Ill., assignors, by mesne assignments, to Ditto, Incorporated, Chicago, Ill., a corporation of Delaware
Filed Feb. 8, 1960, Ser. No. 7,384
5 Claims. (Cl. 156—272)

1. The method of laminating a flexible film to sheet material, said film having a thermoplastic coated surface, the steps which include the formation of a sub-assembly wherein the coated surface of the film is in contact with one surface of the sheet material, forming a complete assembly by adding to the sub-assembly an infrared absorbing heat generating sheet with the film being interposed between the sheet material and the said sheet, said sheet being capable of generating heat when exposed to infrared radiations, maintaining the elements of the complete assembly in fixed relationship and in a condition



of intimate and uniform contact with one another throughout their entire extent, and then subjecting said sheet to infrared radiations while the complete assembly is maintained in said fixed relationship and in said intimate and uniform contact, whereby to create a uniform pattern of heat emanating from the infrared absorbing heat generating sheet to cause the film to be bonded to the sheet material, without said infrared absorbing heat generating sheet becoming a part of the laminate.

3,090,718
FLEXIBLE CUSHIONED HORSE SHOE
Ellsworth A. Dixon, Savage, Md.
Filed Apr. 21, 1960, Ser. No. 23,695
7 Claims. (Cl. 168—7)



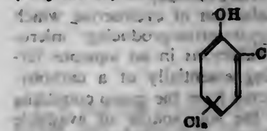
1. A shoe for race horses comprising: a U-shaped base formed of light weight metal, said base being of uniform thickness through most of its extent and having the usual nail holes; a narrow hardened metal toe piece having a plurality of integral spaced projections at one edge, said projections piercing and displacing the metal of said base and having their free ends riveted against the opposite side of said base, said toe piece providing a flange normal to said base, parallel thereto and spaced between the margins of said base; a body of rubber secured to said base, surrounding said toe piece on all sides and terminating short of the adjacent nail holes, said body being of uniform height above the outer surface of said base, but of less height than said toe piece and spaced bodies of rubber secured to said base between the nail holes in said base and between the nail holes adjacent the free ends of said U-shaped base and the said free ends of the base, said base having substantially plane surfaces adjacent said bodies of rubber to permit lateral expansion of said bodies under impact.

3,090,719
HIGH-STABILITY INSECTICIDE COMPOSITIONS, EMULSIFIABLE OR SOLUBLE IN WATER, OF N-MONOMETHYLAMIDE OF O,O-DIMETHYL-DITHIOPHOSPHORYLACETIC ACID
Franco Pinamonti, Milan, Italy, assignor to Montecatini Societh Generale per l'Industria Mineraria e Chimica, a corporation of Italy
No Drawing. Filed Apr. 25, 1961, Ser. No. 105,283
Claims priority, application Italy Apr. 28, 1961
7 Claims. (Cl. 167—22)

6. A liquid insecticide composition of O,O-dimethyldithiophosphorylacetic acid N-monomethylamide, having increased shelf life, said insecticide composition being at least water-emulsifiable, and containing a solvent consisting of a mixture of xylene, methylisobutylketone and Cellosolve acetate.

3,090,720
INSECT REPELLENT COMPOSITION AND METHOD
Eugene E. Kenaga, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed Aug. 5, 1960, Ser. No. 47,588
5 Claims. (Cl. 167—31)

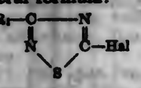
1. An insect repellent composition comprising an α-(alkylimino)-chloro-o-cresol having the structure



wherein R represents a lower alkyl group containing from 1 to 4 carbon atoms, inclusive, and n is an integer of from 1 to 2, inclusive, and in intimate admixture therewith, a dispersing agent, wherein in said composition, the α-(alkylimino)-chloro-o-cresol is present in an amount of from 0.001 percent to 95 percent by weight.

3,090,721
THIADIAZOLE
Jan Hendrik Uhlenbroek and Johan Dirk Bijloo, Van Houtenlaan, Weesp, Netherlands, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
No Drawing. Filed Feb. 13, 1959, Ser. No. 792,953
Claims priority, application Netherlands Feb. 13, 1958
29 Claims. (Cl. 167—33)

1. A composition for the control of nematode comprising as an active ingredient a thiadiazole compound corresponding to the general formula:



wherein Hal represents a halogen atom and R_1 represents a radical selected from the group consisting of phenyl and the radical R_2S wherein R_2 represents a radical selected from the group consisting of alkyl, alkoxy- alkyl, allyl, phenyl, methylphenyl, chlorophenyl, benzyl, chlorobenzyl and phenoxyethyl in a nematocidal effective amount, a surface active material and a nematocide adjuvant as a carrier therefor.

3,090,722
STABILIZATION OF ALIPHATIC MERCURY FUNGICIDES
Harris M. Baker, Glen Farms, Md., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Jan. 24, 1961, Ser. No. 84,496
21 Claims. (Cl. 167—42)

1. A fungicidal composition comprising as essential ingredients 1% to 15% by weight of a compound of the formula:

R—Hg—X

wherein
R is an aliphatic radical of 1 through 6 carbon atoms and
X is selected from the group consisting of phosphates, dicyandiamides, 8-hydroxyquinolinates, nitriles, mercaptides, hydroxy-substituted lower alkyl and alkylene mercaptans, hydroxides, lower alkyl sulfonamides, lower alkyl carboxylic acids and lower hydroxyalkyl carboxylic acids, said composition additionally containing from about 0.2% to 6% by weight of rhodamine B base and a sludge inhibiting amount of at least one compound selected from the group consisting of (1) di-alkanolamines wherein the alkanol has from 2 to 4 carbon atoms inclusive and (2) tri-alkanolamines wherein the alkanol has from 2 to 4 carbon atoms inclusive.

3,090,723
COMBATTING OF MOLLUSCS
Sebastien A. Pestac, 27 Rue Etienne, Viroflay, France
No Drawing. Filed Sept. 6, 1960, Ser. No. 53,897
Claims priority, application France Sept. 14, 1959
12 Claims. (Cl. 167—46)

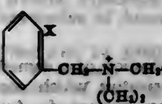
10. Method of combatting plant-destroying molluscs, which comprises applying to an area infested with molluscs a composition comprising a carrier, metaldehyde in an amount of about 0.1–10% by weight, and at least 0.5% by weight of a compound selected from the group consisting of chloral-ammonia, chloral-hydroxylamine, trichloracetaldoxamine, arabo-chloralose, gluco-chloralose, manno-chloralose, galacto-chloralose, chloral-urethane, chloral-formamide, monochloralcarbamide and dichloralcarbamide.

3,090,724
METHOD OF TREATING DERMATOLOGICAL CONDITIONS
Edward H. Bowen, Jr., Evanston, Ill., assignor to Baxter Laboratories, Inc.
No Drawing. Filed Jan. 3, 1961, Ser. No. 86,025
5 Claims. (Cl. 167—55)

1. In the treatment of patients afflicted with acne vulgaris the improvement which comprises administering to said patients d-thyroxine in an amount from about 2 to about 8 mg. daily.

3,090,725
PHOSPHORYLATED QUATERNARY AMMONIUM COMPOUNDS OF IMPROVED ORAL ABSORPTION
Frederick Charles Copp, Arthur McCoubrey, and John Evlyn Warner Billinghurst, London, England, assignors to Burroughs Wellcome & Co. (U.S.A.) Inc., Tuckahoe, N.Y., a corporation of New York
No Drawing. Filed Feb. 14, 1961, Ser. No. 89,126
Claims priority, application Great Britain Feb. 29, 1960
6 Claims. (Cl. 167—55)

1. A therapeutically acceptable phosphate ester of a quaternary ammonium compound which contains a benzylammonium cation having the formula



wherein X is selected from the class consisting of hydrogen, chlorine, bromine, methyl and nitro, and a pharmaceutically acceptable non-toxic carrier.

3,090,726

NOVEL COMPOSITION OF MATTER FOR TREATMENT OF NERVOUS DISORDERS

Frank M. Berger, Princeton, N.J., assignor to Carter Products, Inc., New York, N.Y., a corporation of Maryland

No Drawing. Filed June 24, 1957, Ser. No. 667,701
2 Claims. (Cl. 167—65)

1. A novel composition of matter for use in the treatment of nervous disorders containing as active ingredients, 2-methyl-2-n-propyl-1,3-propanediol dicarbamate and 2-diethylaminoethyl benzilate, the amount of said active ingredients being in the ratio from about 120 to 500 parts by weight of 2-methyl-2-n-propyl-1,3-propanediol dicarbamate per part of 2-diethylaminoethyl benzilate.

3,090,727

HAIR CONDITIONING METHOD

Phyllis Jean Carter, West Chester, Pa., assignor to Atlas Chemical Industries, Inc., Wilmington, Del., a corporation of Delaware

No Drawing. Filed Jan. 27, 1960, Ser. No. 4,885
4 Claims. (Cl. 167—87)

1. A method of rinsing hair which comprises applying to the hair a dilute aqueous solution of the reaction product of a hexitol epihalohydrin condensate containing from 1 to 4 halohydrin radicals per hexitol residue, provided that at least one of said halohydrin radicals contains a halogen atom selected from the group consisting of chlorine, bromine and iodine, and a stoichiometric excess of a C_{12} to C_{22} fatty acid diamide of diethylene triamine.

3,090,728

TITANIC ACID COMPLEXES OF HYDROXY ALIPHATIC CARBOXYLIC ACIDS ANTIPERSPIRANT COMPOSITIONS

Frank Milan Berger, Princeton, and Sophie L. Piechner, Metuchen, N.J. (both % Carter Products Inc., New Brunswick, N.J.)

No Drawing. Filed Feb. 20, 1957, Ser. No. 641,249
9 Claims. (Cl. 167—90)

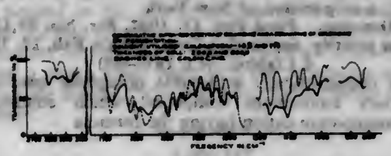
1. An antiperspirant composition comprising an oil-water emulsion vehicle having dissolved therein an antiperspirant agent selected from the group consisting of titanic acid complexes of hydroxy aliphatic carboxylic acids having from 2 to 6 carbon atoms and mixtures thereof, said composition having a pH in the range of about 2.5 to 5.

3,090,729

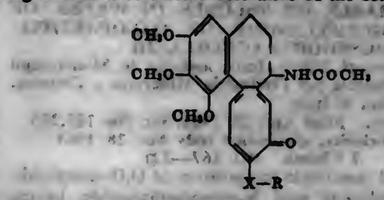
NOVEL COLCHICINE DERIVATIVES AND PROCESS FOR THEIR PRODUCTION

Paul Bellet and Leon Velluz, Paris, France, assignors to Roussel-UCLAF, Societe Anonyme, Paris, France, a corporation of France

Filed May 20, 1960, Ser. No. 30,684
Claims priority, application France May 22, 1959
9 Claims. (Cl. 195—51)



1. A process for the production of a demethylated derivative of a colchicine derivative which comprises the steps of preparing an aqueous culture of a fungal microorganism selected from the group consisting of Streptomyces, Fusarium, Curvularia, Corynebacterium, Cunninghamella, Aspergillus and Streptococcus, incubating the same until a vigorous growth occurs, adding to said growing culture a colchicine derivative of the formula:



wherein X is selected from the group consisting of sulfur and oxygen and R represents a lower alkyl, incubating the culture for a time sufficient to effect transformation of said colchicine derivative and recovering said transformed demethylated derivative of said colchicine derivative free from said starting colchicine derivative.

3,090,730

PROCESS FOR THE PRODUCTION OF CYCLOSERINE

Roger L. Harned, Terre Haute, Ind., assignor to Commercial Solvent Corporation, New York, N.Y., a corporation of Maryland

No Drawing. Filed Oct. 25, 1960, Ser. No. 64,732
9 Claims. (Cl. 195—80)

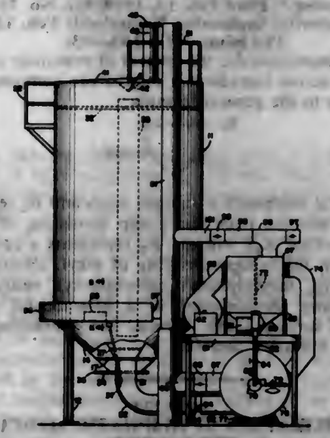
1. A process for the production of cycloserine which comprises growing the cycloserine-producing microorganism *Streptomyces orchidaceous* in an aqueous fermentation medium consisting essentially of a carbohydrate source, a material selected from the group consisting of urea, and ammonia as the sole source of available nitrogen, a magnesium source, a potassium source, a phosphate source, an iron source, a zinc source, a manganese source and water, wherein the ratio of carbohydrate to the available nitrogen in the nitrogen source is maintained at from about 10 to 1 to 20 to 1 under aerobic conditions.

3,090,731

PROCESS AND APPARATUS FOR CARBONIZING WOOD

Alvin R. Keil, Rochester, N.Y., assignor to Pfaudler Permutit Inc., Rochester, N.Y., a corporation of New York

Filed Aug. 31, 1959, Ser. No. 837,172
12 Claims. (Cl. 202—19)



1. A process for carbonizing wood in a retort comprising,

(*a*) burning a combustible fuel in a chamber in the presence of oxygen,

(*b*) adjustably controlling the supply of oxygen to the chamber to produce substantially oxygen-free gases at a selected carbonizing temperature, and

(*c*) passing said gases through said retort to heat and carbonize said wood.

3,090,732

CONSTRUCTION AND ARRANGEMENT OF WIPERS IN THIN-FILM EVAPORATORS

Dieter Piskwart, Cologne-Mulheim, Rudolf Schneider, Krefeld-Uerdingen, and Werner Strittmatter, Butzbach, Hesse, Germany, and Emil Graber, Zurich, Switzerland, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

Filed May 5, 1959, Ser. No. 811,099
Claims priority, application Germany May 7, 1958
15 Claims. (Cl. 202—236)



1. A thin-film evaporator apparatus comprising a drum means, and a plurality of vane means disposed within said drum means and mounted for rotation therewithin, said drum means having an inner wall evaporator surface adapted for maintaining a thin film of liquid to be evaporated thereon, said vane means being axially disposed in said drum means in sliding abutment with said evaporator surface along a portion of their radially outermost edges and in closely overlapping spaced relation to one another at an angle with respect to the plane of the radius of the drum at any point to form an overlapping vane arrangement annular in cross-section circumferentially closing off direct radial communication between the drum axis and said evaporator surface, whereby with respect to said evaporator surface said vane means are positioned such that any line passing radially from the axis of said drum means to said evaporator surface intersects at least one vane means.

3,090,733

COMPOSITE NICKEL ELECTROPLATE

Henry Brown, Huntington Woods, Mich., assignor to The Udylite Research Corporation, Detroit, Mich., a corporation of Michigan

Filed Apr. 17, 1961, Ser. No. 103,296
19 Claims. (Cl. 204—40)

1. A firmly bonded laminated corrosion-protective composite coating on a metal base susceptible to atmospheric corrosion comprising as its essential layers three adjacently bonded layers of electrodeposits, the lower layer of which consists essentially of nickel electroplate having a thickness of about 0.15 mil to about 1.5 mils and an average sulfur content less than about 0.03%, the intermediate layer of which consists essentially of an electroplate selected from the group consisting of nickel electroplate and nickel-cobalt alloy electroplate containing at least about 50% nickel, said intermediate layer having a thickness of about 0.005 mil to about 0.2 mil and an average sulfure content of about 0.05% to about 0.3%, and the upper layer of which consists essentially of an electroplate selected from the group consisting of nickel electroplate and nickel-cobalt alloy electroplate containing at least about 50% nickel, said upper layer having a thickness of about 0.15 mil to about 1.5 mils and an average sulfur content of about 0.02% to about 0.15%, said upper nickel plate containing a lower percentage of sulfur than said intermediate nickel layer, and a higher percentage of sulfur than said lower layer.

3,090,734

BATH FOR GALVANIC PRODUCTION OF MAGNETICALLY HIGH-GRADE COATINGS

Eberhard Zirngiebl, Cologne-Flittard, and Heinz Günter Klein, Cologne-Deutz, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Nov. 17, 1961, Ser. No. 153,231
Claims priority, application Germany Nov. 19, 1960
3 Claims. (Cl. 204—48)

1. A bath for electrolytic disposition of films having improved magnetic properties, comprising an aqueous solution of a salt of a metal selected from the group consisting of iron, cobalt, and nickel, and, as an additive to provide said improvement, a small but effective amount of trimethylborazane.

3,090,735

METHOD FOR MAKING A FIBER WITH REVERSIBLE DIMENSIONAL CHANGES

Leo Mandelkern, Silver Spring, and Donald E. Roberts, Greenbelt, Md., assignors to the United States of America as represented by the Secretary of Commerce

Filed Mar. 6, 1959, Ser. No. 797,818
4 Claims. (Cl. 204—154)

1. The method of making a reversible heat-sensitive responder comprising the steps of crosslinking a highly oriented polyethylene fiber by exposure to high energy ionizing radiation in the order of 2.7 to 1000 megareps, subjecting said fiber to a temperature in excess of the melting point of the fiber for a period sufficient to melt said fiber, and allowing the fiber to recrystallize.

3,090,736

INSOLUBLE POLYACRYLIC ACID SALTS AND METHOD OF PREPARING THE SAME

Robert N. Beshaw, Freeport, and Billy G. Harper, Lake Jackson, Tex., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

Filed Jan. 27, 1960, Ser. No. 5,059
10 Claims. (Cl. 204—154)

1. A process for the preparation of water insoluble cross-linked salts of polyacrylic acid comprising exposing to a total dose of high energy ionizing radiation of from about 0.001 megarad to about 50 megarads at an intensity of at least 0.27 megarad per hour an aqueous system containing from about 20 percent to about 80 percent by weight of water and correspondingly from about 80 percent to about 20 percent by weight of a salt of an acid selected from the group consisting of acrylic acid and polyacrylic acid, said salt being a member of the group consisting of the alkali salts, the alkaline earth metal salts and salts of the elements magnesium, tin, lead, nickel, zinc, cobalt, and cadmium.

3,090,737

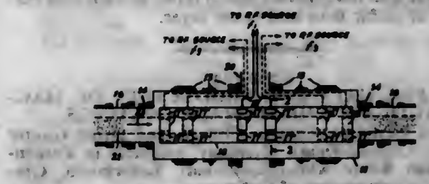
PLASMA HEATING APPARATUS AND PROCESS

George A. Swartz, Princeton Junction, N.J., assignor to Radio Corporation of America, a corporation of Delaware

Filed Feb. 24, 1960, Ser. No. 10,690
14 Claims. (Cl. 204—154.2)

1. In a method of heating a gaseous plasma radially confined in a reaction zone by a unidirectional magnetic field parallel to the axis of said zone; the improvement in said method comprising: applying a first varying electric field to said plasma transverse to said reaction zone,

and applying a second substantially oppositely phased varying electric field to said plasma transverse to said reaction zone and axially displaced from said first electric



field, each of said electric fields having a frequency substantially equal to a cyclotron resonance frequency of said plasma.

3,090,738

METHOD OF CURING ORGANOSILICON COMPOUNDS

Earl L. Warrick, Pittsburgh, Pa., assignor to Dow Corning Corporation, Midland, Mich., a corporation of Michigan

No Drawing. Filed Aug. 18, 1954, Ser. No. 450,793
4 Claims. (Cl. 204—158)

1. A method of curing organosilicon compounds which comprises subjecting an organosilicon compound of the formula

$$R_nSiY_{\frac{4-n}{2}}$$

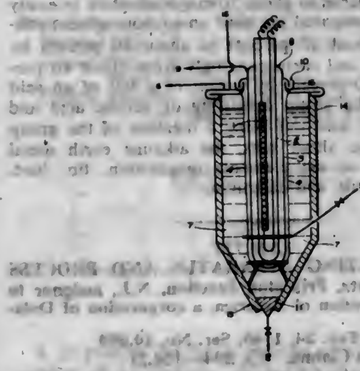
in which R is selected from the group consisting of monovalent hydrocarbon radicals and halogenated monovalent hydrocarbon radicals, Y is selected from the group consisting of oxygen atoms and divalent hydrocarbon radicals, and n has an average value of from 1 to 3 inclusive, at least a major portion of the R groups in said compound being aliphatic hydrocarbon radicals, to electromagnetic radiation of less than 3 A. in wave length until the desired cure is obtained.

3,090,739

METHOD OF PRODUCING NITROSO COMPOUNDS OR OXIMES

Yoshikazu Ito, Nagoya-shi, Aichi-ken, Japan, assignor to Toyo Rayon Kabushiki Kaisha, Tokyo, Japan, a corporation of Japan

Filed July 18, 1960, Ser. No. 43,440
Claims priority, application Japan July 20, 1959
5 Claims. (Cl. 204—162)



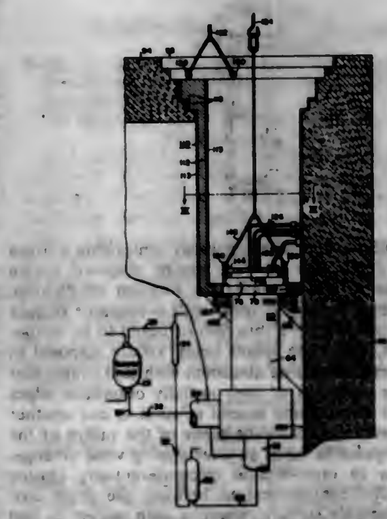
1. In a method of continuously producing a nitroso compound and an oxime, by reacting under irradiation of an actinic light in a reaction vessel having a wall separating said light from the reaction liquid, a nitrosation agent with a compound selected from the group consisting of alkanes and cycloalkanes having 5 to 10 carbon atoms to produce its corresponding nitroso compound and oxime, the improvement consisting of passing continuously sulfuric acid having a concentration above 4% down and along the outermost surface of the reaction vessel, said outermost surface being the wall through which the light passes and where the reaction liquid makes contact.

3,090,740

SEMIDIRECT EQUIPMENT MAINTENANCE

John R. Hooton, Trafford, William A. Webb, Verona, Robert G. McGrath, Churchill, and Woodrow E. Johnson, Pittsburgh, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed May 14, 1957, Ser. No. 659,003
8 Claims. (Cl. 204—193.2)



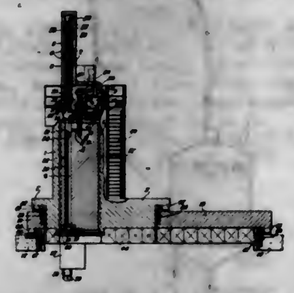
2. A radiation-shielding arrangement for use with radioactive equipment, said arrangement comprising in combination an access port member coupled to said equipment, a relatively stationary shielded wall structure mounted adjacent to said access port member, a relatively stationary shielded floor section having a portion shaped substantially to engage a portion of the outer periphery of said access port member, said floor section extending away from said access port member and being disposed at an angle to and in engagement with said wall structure, a portable shielded booth member having at least one upstanding wall section formed to provide a partial enclosure having a side opening engageable with said stationary wall structure so that said wall section and said wall structure cooperate to form an enclosure generally surrounding said access port meber at the operative position of said booth member, means for supporting said booth member at said operative position, a shielded complementary floor section secured to said upstanding wall section, said complementary floor section having an opening therein shaped so that the remainder of the outer periphery of said access port and said stationary floor section can be relatively closely fitted therein and substantially aligned with said complementary floor section at said operative position, said complementary floor section and said stationary floor section extending in substantially the same plane at said operative position so that said floor sections when so aligned together form a substantially continuous floor of said enclosure, and said continuous floor surrounding said access port member.

3,090,741

MANIPULATING MACHINES FOR NUCLEAR REACTORS

Sydney Fawcett, Hale Barnes, England, assignor to the United Kingdom Atomic Energy Authority, London, England

Filed June 24, 1958, Ser. No. 744,180
Claims priority, application Great Britain June 24, 1957
3 Claims. (Cl. 204—193.2)



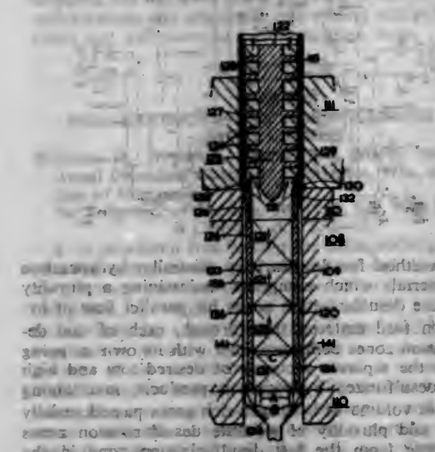
1. For discharging a fuel element from a nuclear reactor, a machine of massive construction so as to form part of the gamma ray shielding of the reactor and comprising a fuel element storage chamber, means for withdrawing a fuel element from the core of a nuclear reactor and transferring it to the chamber, means for retaining the fuel element in the chamber, and means for circulating a heat transfer medium over a fuel element in the chamber and through a closed circuit in the machine in heat transfer contact with the massive parts of the machine, whereby the machine is caused to function as a heat sink and dissipate heat generated by the fuel element.

3,090,742

TEMPERATURE CONTROL MEANS FOR NUCLEAR REACTORS

Sydney Fawcett, Hale Barnes, England, assignor to United Kingdom Atomic Energy Authority, London, England

Filed June 19, 1959, Ser. No. 821,493
Claims priority, application Great Britain June 27, 1958
5 Claims. (Cl. 204—193.2)



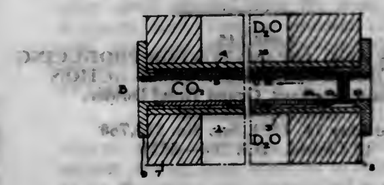
1. A nuclear reactor comprising a graphite moderator at least one channel extending through said moderator, at least one nuclear fuel element disposed within said channel, coolant for said moderator and fuel element, means defining two separate coolant passages within said channel, means for effecting coolant flow through said two coolant passages, one of said coolant passages comprising a fuel element coolant passage having a means for heat exchange between said fuel element and the coolant in said one coolant passage, the other of said coolant passages comprising a moderator coolant passage having means for heat exchange between said moderator and the coolant in the other of said coolant passages, and temperature sensitive control means controlled by the temperature of the coolant in one of said two coolant passages for adjusting the relative rates of flow of coolant in the two passages.

3,090,743

NUCLEAR REACTOR DUCT STRUCTURE

Lucien Alfille, Orsay, France, assignor to Commissariat a l'Energie Atomique, Paris, France

Filed Apr. 15, 1960, Ser. No. 22,617
9 Claims. (Cl. 204—193.2)



1. In a heterogeneous nuclear reactor having a moderator structure, a plurality of parallel canals within the moderator, combustible elements within the canals and a heat absorbing fluid in the canals absorbing the heat of fission of the combustible elements, walls for each of the canals comprising, from the interior toward the exterior of the canal, a monobloc vitreous silica guide tube having a smooth interior surface, means for absorbing transverse variations in dimension of said guide tube and a force tube, and means at at least one extremity of said guide tube for elastically absorbing longitudinal variations in dimension of said guide tube.

3,090,744

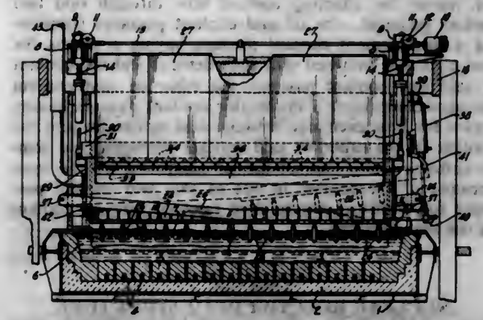
ELECTROLYTIC FURNACE FOR PRODUCING ALUMINUM HAVING A CRUST BREAKING APPARATUS

Paul Müller, Kusnacht, Zurich, Switzerland, and Johannes Schmitt and Hubert Wittner, Rheinfelden, Baden, Germany, assignors to Aluminium-Industrie-Aktien-Gesellschaft, Chippis, Switzerland, a joint-stock company of Switzerland

Filed Dec. 27, 1960, Ser. No. 78,346
Claims priority, application Switzerland Dec. 29, 1959
5 Claims. (Cl. 204—243)

1. In an electrolytic furnace for the production of aluminum with the use of a molten salt bath, the combination comprising a frame, anodes for said furnace, means supporting said anodes from said frame in two rows separated by a gap therebetween extending along the full length of the region occupied by said anodes and directly above the area where a crust is formed on the electrolyte, and a crust breaker comprising one or more substantially horizontal beams extending in and along substantially the full length of said gap and provided with substantially vertically downwardly directed teeth distributed substantially along the full length of said gap, and means supported from said frame for operating each beam substantially vertically at least at one end through successive strokes, comprising means for moving said beam during each stroke of a cycle from a position in which the teeth on the beam are located above the crust downwardly to a

position in which the teeth perforate and break the crust and for moving the beam during the next stroke of the



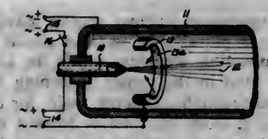
cycle upwardly to the first-mentioned position, and means for bringing the beam to rest in said first-mentioned position.

3,090,745

METHOD OF AND APPARATUS FOR PRODUCING REACTIONS UNDER ELECTRICAL ACTION

Bernhard Berghaus, Grand Hotel Dolder, Zurich, Switzerland

Filed May 18, 1959, Ser. No. 813,760
10 Claims. (Cl. 204—312)



1. Apparatus for carrying out chemical reactions between gaseous, vaporous, and finely dispersed fluid and solid substances, comprising a reaction receptacle with at least one nozzle for supplying the reacting substances in the form of a jet, at least one outlet member for the reaction products, at least one insulated electrode projecting into the reaction receptacle with at least one metallic surface arranged substantially concentrically with the axis of the jet discharged by the nozzle and at least partially surrounding the same, a counter-electrode, a source of voltage arranged between the electrode and its counter-electrode and operative to provide the first-mentioned electrode at least periodically with a negative voltage with reference to its counter-electrode, said voltage being of such magnitude that corpuscular rays are directed by the electrode upon the nozzle jet.

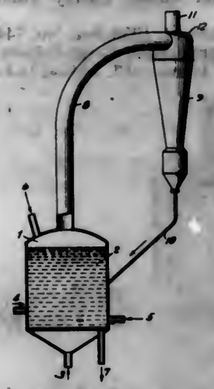
3,090,746

REMOVING CARBON DEPOSITS FROM A CYCLONE IN THE FLUID CRACKING OF HYDROCARBONS

Ferdinand Markert, Helmut Nonnenmacher, Willibald Funk, and Hermann Bieber, all of Ludwigshafen (Rhine), Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

Filed Sept. 22, 1959, Ser. No. 841,521
Claims priority, application Germany Sept. 25, 1958
6 Claims. (Cl. 208—48)

1. In combination with a process for producing gaseous olefines by cracking hydrocarbons in a fluidized layer reaction zone of solid particles at a temperature of between about 630° C. and 900° C. and in the presence of steam, said solid particles being entrained from the fluidized layer by the reaction gases and separated therefrom by centrifugal force in a cyclone zone and returned from the bottom of said cyclone zone to the fluidized layer reaction zone, and said cyclone zone being enclosed by side surfaces extending downwardly to an outlet for said return of solid particles and by a top covering surface which converges upwardly from said side surfaces into a gaseous outlet for the effluent reaction gases, a method of maintaining said cyclone zone free of carbon deposits which comprises:



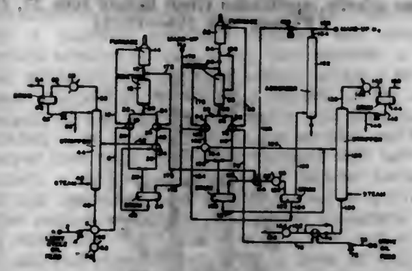
supplying the reaction gases containing entrained solid particles from said fluidized layer to the top of said cyclone zone such that at least part of said entrained particles are directed tangentially upwardly to first contact and rotate centrifugally along the inner portion of said converging top covering surface adjacent said gaseous outlet and then to spiral downwardly along the remaining portion of said top covering surface, thereby rubbing off carbon deposits which form on said top covering surface.

3,090,747

PROCESS FOR DESULFURIZATION OF DISSIMILAR HYDROCARBONS

Charles E. Slyngstad and Frank L. Lempert, Rutherford, N.J., assignors to The M. W. Kellogg Company, Jersey City, N.J., a corporation of Delaware

Filed June 5, 1959, Ser. No. 818,853
4 Claims. (Cl. 208—210)



1. A method for desulfurizing dissimilar hydrocarbon feed materials which comprises maintaining a plurality of separate desulfurization zones for parallel flow of hydrocarbon feed material therethrough, each of said desulfurization zones being provided with its own stripping zone for the separate recovery of desired low and high boiling desulfurized hydrocarbon products, maintaining a constant volume of hydrogen-rich gases passed serially through said plurality of separate desulfurization zones and recycle from the last desulfurization zone in the series to the first desulfurization zone in the series by passing sufficient additional hydrogen-rich gas to each

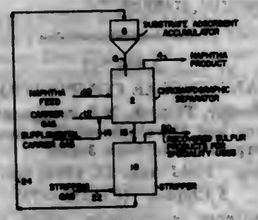
desulfurization zone in the series to provide the net hydrogen consumption requirements of each zone, recovering desulfurized hydrocarbon product material from hydrogen-rich gaseous material between each desulfurization zone in the series and heating the recovered desulfurized hydrocarbon product recovered from each zone to a sufficiently elevated temperature for passage to the stripping zone associated with each desulfurization zone by passing the recovered desulfurized hydrocarbon product in indirect heat exchange with product effluent removed from a desulfurization zone.

3,090,748

PROCESS FOR DESULFURIZATION EMPLOYING A NITRILE IMPREGNATED SUBSTRATE

George Guttner, Baton Rouge, Ralph Burgess Mason, Denham Springs, and Glen Porter Hammer, Baton Rouge, La., assignors to Esso Research and Engineering Company, a corporation of Delaware

Filed Nov. 17, 1959, Ser. No. 853,500
9 Claims. (Cl. 208—240)



1. An improved process for continuously removing small amounts of sulfur impurities from paraffinic hydrocarbon streams which comprises vaporizing said stream, passing said vaporous stream upwardly into a moving bed chromatographic adsorption separation zone, passing downwardly through said zone a finely divided substrate carrying a basic nitrogen containing adsorbent, passing an inert carrier gas into said zone, maintaining a temperature of from about 150° to 200° F. in said zone, withdrawing overhead a hydrocarbon stream substantially free of sulfur contaminants, passing downwardly a stream of substrate containing substantially all impurities adsorbed in said separation zone into a stripping zone, passing an inert stripping gas into said zone, stripping contaminants from said substrate and adsorbent, and cycling said purified substrate and adsorbent to said separation zone.

3,090,749

FIRE EXTINGUISHER COMPOSITIONS FOR METAL FIRES

William R. Warnock, Menominee, Mich., assignor to Ansul Chemical Company, Marinette, Wis., a corporation of Wisconsin

No Drawing. Filed Jan. 30, 1959, Ser. No. 790,045
6 Claims. (Cl. 252—2)

1. A powdered free-flowing fire extinguishing composition for extinguishing light metal fires and dischargeable as a stream from an extinguisher under pressure which comprises, by weight, 85 to 95 percent of an agent selected from the group consisting of powdered baked carbon and synthetic granular graphite and about 5 to 15 percent of an anti-caking agent which is a member selected from the group consisting of Attapulgus clay, talc, adsorptive magnesium silicate, bentonite and diatomaceous earth, the composition having a particle size range such that substantially all of it will pass through a 20 mesh sieve and not more than about 25 percent will pass through a 325 mesh sieve.

3,090,750

METHOD OF PRODUCING HEAT-STABLE GREASES

Charles R. Bergen, Schenectady, N.Y., and Warren W. Woods, Ponca City, Okla., assignors to Continental Oil Company, Ponca City, Okla., a corporation of Delaware

No Drawing. Filed May 19, 1960, Ser. No. 30,068
21 Claims. (Cl. 252—18)

1. A method of preparing a heat-stable grease which comprises:

(A) forming a colloidal dispersion which comprises about 1 to about 35 weight percent of an oil-insoluble metal compound, characterized in that the anion thereof is selected from the group consisting of hydroxide, carbonate, and mixtures of hydroxide and carbonate, about 2 to about 55 weight percent of an oil-soluble dispersing agent, and about 10 to about 97 weight percent oleaginous liquid vehicle, in a volatile solvent, said colloidal dispersion being characterized further in that the metal compound is formed in the presence of said dispersing agent and has a particle size of less than 5 microns;

(B) adding to the colloidal dispersion an acidic coupling agent, selected from the group consisting of diglycolic acid, 3-methyl glutaric acid, pelargonic acid, alkyl acid phosphates wherein the alkyl group contains from 3 to 8 carbon atoms, and a polyoxyalkylene dicarboxylic acid having the formula

$$HOOC(C_2H_4O)_xCOOH$$

wherein x has an average value of about 3.2, in an amount varying from about 30 to about 100 percent of the theoretical amount required to react with said metal compound;

(C) removing the volatile materials and thereby forming a grease.

3,090,751

LUBRICATING AND SEALING COMPOSITIONS

George F. Scherer, Oakland, and Otto T. Bierwagen, Alameda, Calif., assignors to Rockwell Manufacturing Company, Pittsburgh, Pa., a corporation of Pennsylvania

No Drawing. Filed Dec. 28, 1956, Ser. No. 631,019
12 Claims. (Cl. 252—21)

1. A lubricating and sealing composition consisting essentially of 45 to 80 parts by weight of an extremely low pour point lubricating mineral oil; 6 to 17 parts by weight of a polybutene having an average molecular weight from about 400 to about 12,000; and a bentonite-amine reaction product in sufficient quantity to render said composition of sufficient viscosity to perform an adequate sealing and lubricating function for use in lubricant-sealed valves over a temperature range of from −50° F. to +130° F.

3,090,752

INSTRUMENT LUBRICATING OIL

Theodore J. Peters, Somerville, John F. Collins, Elizabeth, and Albert Gathman, Belmar, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed Sept. 1, 1960, Ser. No. 53,351
8 Claims. (Cl. 252—33.4)

1. A lubricating composition suitable for use as an instrument lubricant having a viscosity of less than 12,000 cs. at −65° F. and more than 8 cs. at 130° F., a flash point above 365° F., and a pour point lower than −70° F., which comprises 2 to 15 wt. percent of an alkaline earth metal sulfonate, 0.1 to 1.0 wt. percent of a phenol which can be substituted with a maximum of 4 substituents selected from the group consisting of C_1 to C_8 alkyl radicals and C_1 to C_8 alkoxy radicals, and a major proportion of a diester blend, said diester blend comprising

(1) 50 to 65 wt. percent of a diester of a C_8 to C_{10} monohydric saturated alcohol and a C_8 to C_{12} dicarboxylic acid, and (2) 30 to 50 wt. percent of a mixture of diesters, said mixture comprising (*a*) 55 to 45 wt. percent of a diester of a C_9 to C_{11} monohydric saturated alcohol and a C_5 to C_7 dicarboxylic acid, and (*b*) 45 to 55 wt. percent of a diester of a C_8 to C_9 monohydric saturated alcohol and a C_5 to C_7 dicarboxylic acid.

3,090,753

ESTER OIL COMPOSITIONS CONTAINING ACID ANHYDRIDE

Alfred H. Matuszak, Westfield, George J. Allen, Roselle, and Stephen J. Metro, Scotch Plains, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed Aug. 2, 1960, Ser. No. 46,878
3 Claims. (Cl. 252—42.7)

1. A synthetic ester lubricating oil composition comprising a major proportion of carboxylic acid ester lubricating oil and about 0.001 to 5.0 wt. percent of pyromellitic dianhydride.

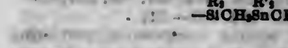
3,090,754

POLYSILOXANE LUBRICANT COMPOSITIONS

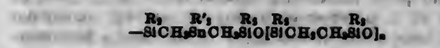
Harry M. Schiefer, Midland, Mich., assignor to Dow Corning Corporation, Midland, Mich., a corporation of Michigan

No Drawing. Filed Feb. 26, 1958, Ser. No. 717,574
2 Claims. (Cl. 252—49.7)

1. A composition of matter consisting essentially of (1) a fluid copolymeric siloxane having dibromophenyl and methyl groups attached to the silicon atoms thereof, there being no more than one dibromophenyl radical attached to any one silicon atom, any remaining organic radicals attached to the silicon atoms in said copolymer being phenyl, in said copolymer at least 50% of the total organic radicals being methyl and the dibromophenyl radicals being present in amount such that there is from 6 to 25% by weight bromine in the copolymer and (2) a tin compound selected from the group consisting of polymers of the unit formula



copolymers of the unit formula



and compounds of the formulae $[R_3SiCH_2]_3SnR'_3$,



and $[R_3SiO]_2SnR'_2$, in which tin compounds R is selected from the group consisting of phenyl and methyl radicals, *n* is an integer of at least 1 and R' is of the group consisting of phenyl and alkyl radicals of less than 6 carbon atoms, (2) being present in amount such that there is from 5 to 2% by weight tin in the combined weights of (1) and (2).

3,090,755

XEROGRAPHIC PROCESS TONER AND METHOD OF PRODUCING SAME

Andrew Erchak, Bernardsville, and John C. Van Dyk, Morris Plains, N.J., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York

No Drawing. Filed Dec. 31, 1958, Ser. No. 784,039
6 Claims. (Cl. 252—62.1)

1. A xerographic toner consisting essentially of particles of an average size of less than 25 microns of shellac pigmented with between about 2% and 20% pigment, said particles coated with a non-filming material having a higher melting point than said resin and selected from the group consisting of rubber, polyvinyl acetate, polystyrene, polyethylene, polyvinyl chloride, nylon, acrylic plastics and styrene butadiene synthetic rubber.

3,090,756

METHOD AND MEANS FOR INHIBITING FREEZING OF WETTED GRANULAR MATERIALS

Dale W. Kaufmann, Buffalo, N.Y., assignor to International Salt Company, Scranton, Pa.

No Drawing. Filed Dec. 3, 1956, Ser. No. 625,631
1 Claim. (Cl. 252—71)

The method for inhibiting freezing of a mass of wetted inert granular material comprising mixing into said material a mixture of a granular inert filler material and an anti-freeze salt and a substantial amount of an alkali metal iron cyanide and a compatible fatty acid derivative and a compatible sticking agent, to at least partially coat said granular material particles with an iron cyanide and salt mixture to retard the freezing together tendencies of treated material granules.

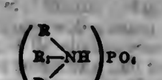
3,090,757

ANTIFREEZE COMPOSITION

Bernard H. Berger, Trenton, N.J., assignor to Cities Service Research and Development Company, New York, N.Y., a corporation of New Jersey

No Drawing. Filed Aug. 23, 1960, Ser. No. 51,275
5 Claims. (Cl. 252—75)

1. An antifreeze composition, which consists essentially of water soluble alcohol selected from the group consisting of monohydroxy aliphatic alcohols having from 1 to 6 carbon atoms and dihydroxy aliphatic alcohols having between 2 and 6 carbon atoms and which contains between about 0.1 and about 0.6 weight percent alkali metal mercaptobenzothiazole, between about 0.2 and about 1.0 weight percent alkali metal arsenite, between about 0.2 and about 2.0 weight percent alkali metal metaborate, and between about 0.2 and about 2.0 weight percent of an alkyl ammonium phosphate having the formula



wherein R, R_1 and R_2 are each selected from the group consisting of hydrogen and alkyl hydrocarbon radicals having between 1 and 6 carbon atoms and at least one of R, R_1 and R_2 is an alkyl hydrocarbon radical having between 1 and 6 carbon atoms.

3,090,758

VARNISH REMOVING HYDRAULIC FLUIDS

Thorkild F. Lonstrup and Thomas J. Matchett, Sarnia, Lambton, Ontario, and James H. Norton, Corunna, Lambton, Ontario, Canada, assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed Jan. 30, 1961, Ser. No. 85,485
1 Claim. (Cl. 252—77)

A hydraulic oil capable of removing varnish deposits from the surfaces of hydraulically operated machinery, comprising a major amount of a mineral oil, about 0.2 wt. percent of C_{16}–C_{18} monoalkyl amine and about 0.1 wt. percent of the condensation product of a molar proportion of mono-nonyl phenol and about 4 molar proportions of ethylene oxide.

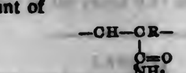
3,090,759

PROCESS FOR BREAKING EMULSIONS OF THE OIL-IN-WATER CLASS

Fred W. Jenkins, Los Angeles, Calif., assignor to Petrolite Corporation, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Dec. 4, 1958, Ser. No. 778,055
10 Claims. (Cl. 252—344)

1. A process for breaking an emulsion comprising an oil dispersed in a non-oily continuous phase in which the dispersed phase is not greater than about 20%, characterized by subjecting the emulsion to the action of a reagent containing a water dispersible polymer having a major amount of



units and having a molecular weight of at least about 40,000, wherein R is a member selected from the group consisting of hydrogen and lower alkyl.

3,090,760

LOW TEMPERATURE REGENERATION OF LEAD-CONTAMINATED CATALYSTS

George R. Lester, Des Plaines, Ill., assignor to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

No Drawing. Filed Apr. 8, 1960, Ser. No. 20,804
7 Claims. (Cl. 252—415)

1. A method of regenerating a solid catalyst containing from about 5% to about 50% by weight of lead and at least one metallic component selected from the group consisting of the metals in groups IB, VA, VIA and VIII of the periodic table and manganese, which comprises contacting said catalyst at a temperature below 221° F. with an anhydrous mixture comprising hydrogen chloride and free chlorine in a mol ratio of hydrogen chloride to chlorine within the range of about 0.1 to about 10, and continuing said contacting until the lead content of the catalyst is reduced to below about 4% by weight.

3,090,761

PROCESS FOR PREPARING A FOAMED SOLUTION OF POLYACRYLAMIDE EMPLOYING CO_2 AND PRODUCT PRODUCED THEREBY

Gerald R. Backlund, Maplewood, N.J., and Joseph F. Terenzi, Norwalk, Conn., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed June 24, 1959, Ser. No. 822,452
5 Claims. (Cl. 260—2.5)

1. A process comprising saturating an aqueous monomeric acrylamide solution, containing from about 7% to about 12% of said monomer, with carbon dioxide gas, introducing, into said gas-saturated solution a free radical polymerization catalyst and adiabatically polymerizing said acrylamide at a temperature below about 20° C. while continuing to maintain the solution in a carbon dioxide gas saturated state thereby producing a foamed polymeric solution of increased mobility having an intrinsic viscosity of at least 12 deciliters per gram.

3,090,762

AQUEOUS COATING AND IMPREGNATING PREPARATIONS COMPRISING ACRYLIC RESINS

Arthur Maeder, Therwil, and Georg Sulzer, Basel, Switzerland, assignors to Ciba Limited, Basel, Switzerland

No Drawing. Filed Sept. 18, 1959, Ser. No. 839,855
Claims priority, application Switzerland Aug. 2, 1957
5 Claims. (Cl. 260—21)

1. A process for dyeing and printing fibrous textile fabric with pigments, which comprises contacting the fabric with an aqueous composition of matter which contains a dispersed pigment and the following compounds as pigment-binders:

(A) an aqueous dispersion of a copolymer consisting of 60 percent by weight of isobornyl acrylate, 35 percent by weight of β-butoxy ethyl acrylate and 5 percent by weight of acrylic acid,

(B) an aqueous dispersion of hexamethylolmelamine allyl ether esterified with soya bean fatty acid, and

(C) a water-soluble methyl ether of a urea-formaldehyde condensation product containing per mol of urea more than 2 mols of formaldehyde,

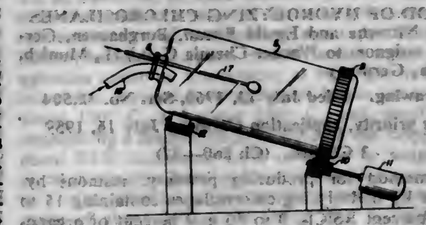
drying the material and heating to harden the composition applied; the components being used in the following proportions the parts being by weight calculated on the dry content of the components: per 100 parts of component (A) about 50 parts of component (B) and about 60 parts of component (C).

3,090,763

DRY BLENDING VINYL RESIN

Edward L. Hiller, Cuyahoga Falls, Ohio, assignor to The United States Stoneware Company, Tallmadge, Ohio, a corporation of Ohio

Filed Jan. 25, 1960, Ser. No. 4,406
4 Claims. (Cl. 260—23)



1. The process of converting into powder with a flow rate in excess of 5 cc. per second, a blend of a resin powder or aggregate and sufficient plasticizer to give a damp, particulate mass with a blend flow rate substantially less than 5 cc. per second, which resin is selected from the class consisting of pearl-type, extrusion-grade polymers of vinyl chloride, utilizing in the process a powdered additive selected from the class consisting of organic and inorganic solids so finely divided as to pass through a 150-mesh screen, said inorganic additives being amorphous as opposed to crystalline, and being no more than one-tenth of one percent soluble in water, and said organic additives being less than substantially 5 percent soluble in the plasticizer at room temperature, 5 parts of which organic additives when dispersed in 100 parts of said plasticizer form suspensions which are stable and remain opaque on standing; which process comprises mixing said additive and the plasticized resin and continuing the mixing until the mixture is converted into a finely divided powder with a flow rate in excess of 5 cc. per second.

3,090,764

INTUMESCENT MASTIC COATING

Wayne P. Ellis, Springfield, Pa., and Irvin John Steltz, Collingswood, N.J., assignors to Benjamin Foster Company, Philadelphia, Pa., a corporation of Delaware

No Drawing. Filed Dec. 26, 1957, Ser. No. 705,096
3 Claims. (Cl. 260—28.5)

1. An intumescent fire retardant mastic coating composition comprising an intumescing agent, a vehicle and a filler, said intumescing agent comprising about 20–65

percent by weight granular unexpanded vermiculite having a particle size of about 5–20 mesh, said filler being present in about 10–50 percent by weight, said vehicle comprising the remainder of the composition and including 20–40 percent by weight of a polymeric material, 20–60 percent by weight of a plasticizer and 10–35 percent by weight of a chlorinated resin, said polymeric material being selected from the group consisting of linear isobutylene polymer, isobutylene-styrene copolymer and isobutylene-isoprene copolymer, said plasticizer being constituted by a paraffin base petroleum distillation residue condensation product derived from a naturally contained high molecular weight viscous material precipitated from a warm propane solution of a residual paraffin base oil fraction which has undergone no thermal decomposition or chemical change beyond that induced by ordinary fractional distillation, said condensation product being characterized by an iodine number not substantially above 40, a softening point of between about 110° F.–200° F., an average molecular weight of at least about 1900 and at least 40 carbon atoms per double bond, said chlorinated resin being selected from the group consisting of chlorinated paraffin, chlorinated biphenyl, chlorinated polyphenyl and selected mixtures thereof.

3,090,765

METHOD OF HYDROLYZING CHLOROSILANES

Siegfried Nitzsche and Ewald Pirson, Burghausen, Germany, assignors to Wacker-Chemie G.m.b.H., Munich, Bavaria, Germany

No Drawing. Filed July 13, 1960, Ser. No. 42,504

Claims priority, application Germany July 16, 1959

3 Claims. (Cl. 260—37)

1. A method for producing powdery, resinous hydrolyzates by hydrolyzing chlorosilanes containing 15 to 100 mol percent $RSiCl_3$, 0 to 50 mol percent of organochlorosilanes selected from the group consisting of R_2SiCl_2, $RHSiCl_2$ and R_2HSiCl and 0 to 85 mol percent of inorganic chlorosilanes selected from the group consisting of $HSiCl_3$ and Si_nCl_{2n+2} where n is a positive integer, where each R represents an organic substituent bonded to silicon by C—Si bonding and is selected from the group consisting of alkyl, aryl and alkenyl radicals, employing an excess of water containing 1 to 50 percent by weight, based on the weight of chlorosilanes to be hydrolyzed, of a fine particle fume silica having an average particle size in the range of 3 to 100 millimicrons, with stirring during addition of the chlorosilane to the water-fume silica mixture.

3,090,766

GRAFT COPOLYMER OF A LINEAR POLYESTER CONDENSATION PRODUCT AND N-VINYL-3-MORPHOLINONE AND PROCESS OF MAKING SAME

George William Stanton, Williamsburg, Va., and Teddy G. Traylor, Concord, Calif., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

Filed Jan. 7, 1959, Ser. No. 785,383

6 Claims. (Cl. 260—45.4)

1. Dye-receptive graft copolymer composition comprised of (1) a fiber-forming, synthetic, linear polyester which is a condensation product of glycol and a dicarboxylic organic acid and contains recurring ester groups as an integral part of the main polymer chain separated by at least two carbon atoms having along its chain, as graft copolymerized substitutents thereon, up to about 20 weight percent, based on graft copolymer composition weight, of (2) polymerized N-vinyl-3-morpholinone.

3,090,767

DEVOLATILIZATION EXTRUSION METHOD FOR PREPARING A MONOVINYL AROMATIC RESIN-RUBBER BLEND

Joseph D. Colgan, Ozone Park, N.Y., and Harold E. Fife, Northford, Conn., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Nov. 15, 1957, Ser. No. 696,601

17 Claims. (Cl. 260—45.5)

1. A method for homogeneously blending (A) a non-rubbery resinous polymer of a monovinyl aromatic compound having the formula:



wherein X is a lower alkyl substituent of 1–4 carbon atoms and n is an integer of from 0 to 2, and (B) a different polymer selected from the group consisting of natural rubber and organic synthetic rubbers artifically produced and having properties to some extent similar to natural rubber to form a high impact thermoplastic resinous blend, which comprises mixing a solution of (A), in a volatile solvent and having not more than 75% by weight of polymer (A), and a liquid dispersion of (B) and devolatilizing and extruding said mixture thereby simultaneously blending and volatilizing the nonpolymeric content from said mixture, at a temperature of between about 110° C. and about 245° C. and at an absolute pressure of less than 200 millimeters of mercury in a period of less than about 5 minutes.

3,090,768

POLYVINYLCHLORIDE-CHLORINATED ISOOLEFIN-MULTIOLEFIN COPOLYMER BLEND AND METHOD OF MAKING SAME

Richard Louis Ray and Edward Allen Hunter, Baton Rouge, La., and John L. Ernst, Westfield, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed May 26, 1958, Ser. No. 737,498

7 Claims. (Cl. 260—45.5)

1. A composition comprising about 100 parts by weight of polyvinylchloride and about 0.5 to 50 parts by weight of a chlorinated rubbery copolymer of 85 to 99.5% of an isoolefin with 0.5 to 15% of a multiolefin, said copolymer containing at least 0.5 weight percent chlorine incorporated in its structure by a substitution-reaction but not more than about 1 atom of chlorine per double bond in the copolymer, said composition being capable of being cured at elevated temperatures to provide an end product with increased impact strength.

3,090,769

DYEABLE POLYPROPYLENE FIBERS CONTAINING POLYVINYL ACETAL RESINS

Harry W. Coover, Jr., and Frederick B. Joyner, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Feb. 4, 1960, Ser. No. 6,596

13 Claims. (Cl. 260—45.5)

1. Polypropylene fiber exhibiting excellent dye affinity, light and gas fastness and resistance to oxidation and weathering, said fiber containing about 1 to about 25% by weight, based on the fiber, of a polyvinyl acetal resin.

3,090,770

BLENDED POLYETHYLENE COMPOSITIONS OF IMPROVED CLARITY AND METHOD OF MAKING SAME

Razmic S. Gregorian, Silver Spring, Md., assignor to W. R. Grace & Co., Clarksville, Md., a corporation of Connecticut

No Drawing. Filed Apr. 26, 1960, Ser. No. 24,652

3 Claims. (Cl. 260—45.5)

1. A blended composition consisting essentially of polyethylene having a density in the range 0.91 to 0.97 and a minor amount, between about 0.01 to 10% by weight of said polyethylene, of crosslinked polyethylene having a density in the range 0.91 to 0.97.

3,090,771

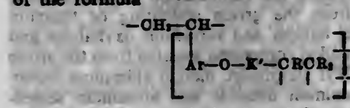
CHELATING MONOMERS AND POLYMERS

Gaetano F. D'Alelio, South Bend, Ind., assignor, by direct and mesne assignments, to Dal Mon Research Co., Cleveland, Ohio, a corporation of Delaware

No Drawing. Filed May 12, 1960, Ser. No. 28,559

20 Claims. (Cl. 260—47)

2. A polymer having a plurality of repeating units of the formula



wherein R' is a radical selected from the class consisting of hydrogen and methyl radicals; R is a radical from the class consisting of hydrogen and alkyl radicals of no more than 6 carbon atoms; Ar represents a divalent aromatic radical selected from the class consisting of divalent aromatic hydrocarbon radicals and the chloro, and fluoro derivatives thereof; K' is a divalent alkylene radical of at least 1 and no more than 8 carbon atoms in the linear chain between said valencies; and Am represents an aminoacid radical selected from the class consisting of aliphatic aminoacids, the metal and ammonium salts and lower alkyl and lower aryl esters thereof, said Am radical having the valence bond of said formula attached to an amino nitrogen in said radical, having no more than about 20 carbon atoms therein and having an amino group no farther than 2 carbon atoms away from a carboxylic group.

3,090,772

RESINOUS ADHESIVE RODS

Ernest M. Crowell, Beverly, Mass., assignor to United Shoe Machinery Corporation, Boston, Mass., a corporation of New Jersey

Filed July 10, 1959, Ser. No. 826,152

1 Claim. (Cl. 260—75)



As a new article of manufacture, a thin, flexible, nontacky thermoplastic adhesive rod of substantially uniform cross section from about 1/16" to about 3/16" in thickness, said rod being composed essentially of amorphous resin and being formed by extruding a stream of molten adhesive and plunging it into cool water directly after extrusion to solidify it in amorphous condition, said adhesive consisting essentially of a linear work-orientable resinous copolyester of terephthalic and isophthalic acids in the molar ratio of from 70:30 to 90:10 with 1,4 butanediol, said resin being characterized in having a crystal melting temperature of from about 170° to about 200° C. and a second order transition temperature of from about 20° to about 40° C.

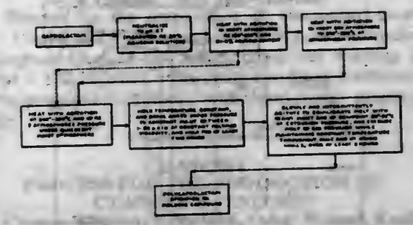
3,090,773

CAPROLACTAM POLYMERIZATION

Patrick V. Papero, Jr., Hopewell, and Orvill E. Snider, Petersburg, Va., and Raymond J. Duggan, West Seneca, N.Y., assignors to Allied Chemical Corporation, a corporation of New York

Filed Jan. 28, 1958, Ser. No. 711,566

9 Claims. (Cl. 260—78)



1. Process for polymerizing epsilon-caprolactam to a polymer of relative viscosity in formic acid of at least about 25, measured upon washed, dried polymer in aqueous 90% formic acid at 25° C. and concentration of 11 grams per 100 cc. of solvent, in which process water is the sole reactive additive and which process further comprises bringing the caprolactam starting material to pH 5.7 as measured in water solution of 20% lactam concentration, within a range of deviation not more than 2.0 milliequivalents of neutralizing agent per kilogram of lactam; heating a solution of said lactam and water with agitation under an atmosphere of inert gas at about atmospheric pressure to temperature in the range between about 180° C. and about 230° C., and simultaneously establishing a concentration of water in the range between about 0.1% and about 2.0% of water by weight of the reaction mixture; then heating the resulting reaction mixture with agitation to polymerizing temperatures in the range of about 240° C. to about 290° C. under an atmosphere of inert gas at about atmospheric pressure; then continuing the heating in the range 240°–290° C. with agitation to a washed, dried polymer relative viscosity in 90% formic acid of at least 25; at latest just before the extrusion phase of the period of heating at 240°–290° C., providing a gas atmosphere having higher water vapor pressures than said first mentioned atmosphere, said water vapor pressures ultimately reaching a level value which is maintained for at least 2 hours, in the range between about 1 and about 50 pounds per square inch absolute with temperature likewise maintained constant within about ±2° C. during at least these last 2 hours before extrusion; and extruding under gas pressure over a time period of at least about 3 hours polymer at the desired final viscosity from the resulting polymer melt, said polymer melt being equilibrated with moist inert gas with dewpoint, at extrusion pressure, of about 90° C. to about 95° C. and said melt being maintained at temperature constant within about ±2° C. throughout the melt and at the walls of the reaction vessel.

3,090,774

SEPARATION OF POLYMER FROM SOLVENT

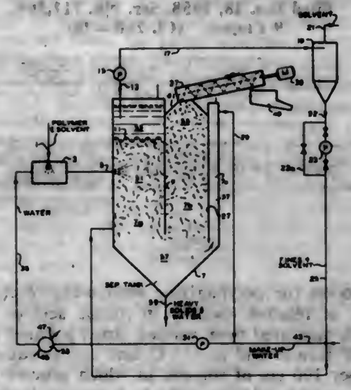
Jack S. Scoggin, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Filed June 16, 1960, Ser. No. 36,647

7 Claims. (Cl. 260—85.3)

1. In the separation of solid polymer from a slurry comprising said solid polymer having a density less than that of water, a liquid diluent of lower density than the densities of said polymer and liquid water, the improvement comprising passing said slurry into a first separation zone having an upper end portion, an open lower end portion, and a perforate zone intermediate said upper end portion and said lower end portion and at a level below

and spaced from said perforate zone, separating said liquid diluent from said polymer by passing said liquid diluent upwardly through said perforate zone and retaining said polymer adjacent the underside thereof, with-



drawing liquid diluent from said upper end portion and passing solid polymer and water through said open lower end portion into a second separation zone, and withdrawing polymer from the upper portion and water from the lower portion of said second separation zone.

3,090,775

PROCESS FOR CURING FLUOROCARBON ELASTOMERS WITHOUT FOAMING THEREOF

John F. Smith, Brandywine Hundred, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Apr. 7, 1960, Ser. No. 20,540
1 Claim. (Cl. 260—87.7)

A process for preventing foaming of a fluorocarbon elastomer during curing by heating at a temperature between about 100° C. and 200° C., said fluorocarbon elastomer being selected from the group consisting of a vinylidene fluoride-hexafluoropropene copolymer containing from about 30 to 70 percent by weight of vinylidene fluoride and from about 70 to 30 percent by weight of hexafluoroprene and a vinylidene-hexafluoropropene-tetrafluoroethylene copolymer containing from about 3 to 35 percent by weight of tetrafluoroethylene units, the balance being vinylidene fluoride and hexafluoropropene units with the weight ratio of vinylidene fluoride units to hexafluoropropene units having a value ranging from 2.33:1 to 0.667:1, said fluorocarbon elastomer containing a curing agent selected from the group consisting of about 2 to 8 parts by weight of an organic peroxide which is stable at temperatures below 50° C. and about 0.5 to 3 parts by weight of the carbamate of an alkylene diamine having from 2 to 6 carbon atoms, which process comprises incorporating into said fluorocarbon elastomer prior to heating about 15 parts by weight of magnesium oxide and about 15 parts by weight of calcium oxide.

3,090,776

POLYMERIZATION OF OLEFINS USING AN ALUMINUM HALIDE AND AN ORGANOMETALLIC COMPOUND AS CATALYST

Gaetano F. D'Alelio, South Bend, Ind., assignor, by direct and mesne assignments, to Dal Mon Research Co., Cleveland, Ohio, a corporation of Delaware

No Drawing. Filed Mar. 31, 1958, Ser. No. 724,879
6 Claims. (Cl. 260—93.7)

1. The process of polymerization, capable of producing solid polymers thereby, comprising the step of polymerizing a normal-olefin selected from the class consisting of ethylene, propylene and butene-1 with a catalyst comprising the reaction product of (1) an aluminum halide and (2) at least one organometal of the formula $M(R)_n$ wherein M is a metal selected from the class consisting of Ti, Zr, V, Nb, Ta, Cr, Mo, W and Ce, R is a hydrocarbon radical and n is a numerical value greater than two and corresponds to the valency of M, the ratio of said catalyst components being 0.01 to 100 parts by weight of aluminum halide per part by weight of said organometal.

3,090,777

REMOVAL OF CATALYST FROM OLEFIN POLYMERIZATION PRODUCTS

Donald H. Anderson, Glen Mills, and Alfred Hahn, Jr., Lansdowne, Pa., assignors to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

No Drawing. Filed May 3, 1961, Ser. No. 107,306
7 Claims. (Cl. 260—93.7)

1. In a process wherein olefinic hydrocarbon is polymerized in an inert reaction medium by means of a catalyst system comprising the combination of (1) a metal halide selected from the group consisting of titanium halides, vanadium halides and vanadium oxyhalides and (2) an aluminum alkyl compound selected from the group consisting of trialkyl aluminum, dialkyl aluminum monohalide, alkyl aluminum dihalide and aluminum sesquihalide, and wherein the reaction product is soluble in the reaction medium, the method of separating catalyst components from the reaction mixture which comprises admixing the reaction mixture with a finely divided agent selected from the group consisting of carbonates, bicarbonates, hydroxides and oxides of alkali metals and alkaline earth metals, the amount of said agent added to the reaction mixture being in excess of the amount of said metal halide on a weight basis, admixing the dispersion with water in amount sufficient to destroy the catalyst but insufficient to solubilize said agent, whereby acidic material formed is neutralized by said agent and solid particles containing said agent and the catalyst residue are obtained, and separating the solid particles from the reaction medium solution.

3,090,778

PRODUCTION OF POWDERED POLYETHYLENE

Paul Ehrlich, Hampden, Mass., and Dennis E. Wade, Texas City, Tex., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Sept. 26, 1962, Ser. No. 226,473
10 Claims. (Cl. 260—94.9)

1. A process for the production of ethylene polymers in powdered form in a tubular reaction zone at elevated temperatures and pressures in the presence of a free-radical-generating initiator for the polymerization, said process comprising cooling the polymerization reaction mixture in said tubular reaction zone, withdrawing said cooled polymerization mixture from said tubular reaction zone, reducing the pressure of said cooled polymerization mixture and recovering said ethylene polymers in a powdered form at a temperature below the melting point of the polymer as the product of the process.

3,090,779

METHOD OF EXTRACTING PROTEIN AND LIPID FROM RAW VEGETABLE MATERIALS

Israel Harris Clayton, London, England, assignor to C.C.D. Processes (N.Y.) Ltd., New York, N.Y., a corporation of New York

No Drawing. Filed Aug. 26, 1959, Ser. No. 836,053
Claims priority, application Great Britain July 8, 1959
2 Claims. (Cl. 260—112)

1. A method of treating a raw vegetable material comprising, hammermilling said vegetable material in an aqueous liquid, present in a liquid-to-solid ratio of at least two-to-one, for a very short period of time ranging from about two-thirds of a second to about ten seconds, at a tip speed of at least about 4,000 feet per minute whereby high speed multiple rapidly repeated hydrodynamic shock waves disrupt the natural cell structure of said material and discharge the cell contents into the aqueous liquid while leaving the residual solid material predominantly larger than cell size and whereby the proteins and lipids discharged from the cells are rendered singularly mutually reactive, alkalizing the aqueous liquid to dissolve the proteins whereby in the presence of the lipids the two will combine to form a protein-lipid complex which remains dissolved, thereafter acidulating the aqueous liquid to the isoelectric point for the protein whereby to precipitate the newly-formed protein-lipid complex, partially dewatering the complex by gravity separation to leave at least enough of said aqueous liquid to form a paste and then substantially completely dewatering said complex azeotropically by adding a volatile non-polar organic liquid inert to the complex and having a boiling point not in excess of 150° C. and which organic liquid forms an azeotrope with water, and by heating to a temperature high enough to evaporate the residual water along with a portion of the organic liquid, the amount of organic liquid added being sufficient to leave a residual amount of liquid when the complex is substantially completely dewatered, whereby to avoid stabilization of said complex.

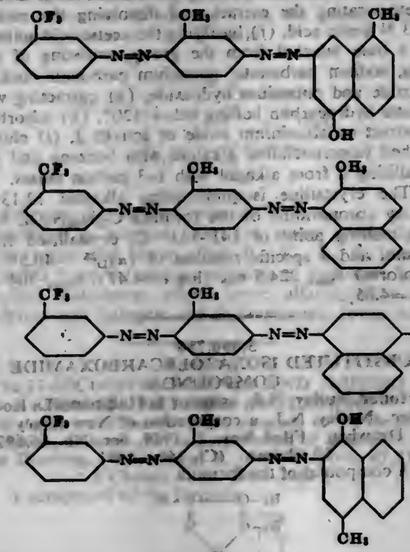
3,090,780

DISAZO DYES

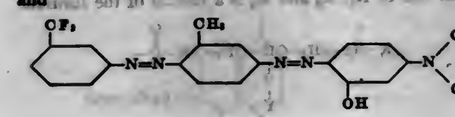
Ermanno Gastaldi, Milan, Italy, assignor to Azienda Colori Nazionali Affini Acna S.p.A., Milan, Italy, a corporation of Italy

No Drawing. Filed Apr. 14, 1960, Ser. No. 22,124
Claims priority, application Italy Dec. 15, 1959
6 Claims. (Cl. 260—186)

1. A disazo dye, insoluble in water, selected from the group consisting of dyes of the formulae:



and



3,090,781

PROCESS FOR THE PRODUCTION OF 16α-METHYL-6-HYDROCARBON 17,20,20,21-BIS METHYLENE DIOXY STEROIDS

John Fried, Plainfield, Anthony N. Nestle, Elizabeth, and Glen E. Arth, Cranford, N.J., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Filed June 13, 1960, Ser. No. 35,415
4 Claims. (Cl. 260—239.55)

1. Process for the preparation of 16α-methyl-6α-ethynyl - 17α,20,20,21 - bis-methylenedioxy-3-ethylenedioxy-5α-pregnane-6β-ol-11-one which comprises reacting 16α-methyl - 17α,20,20,21 - bis-methylenedioxy-3-ethylenedioxy-5α-pregnane-6,11dione with acetylene magnesium halide.

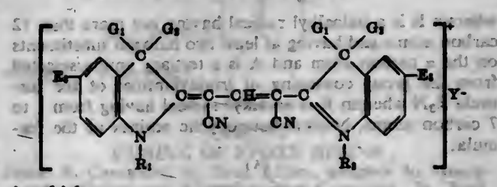
3,090,782

PROCESS FOR THE PRODUCTION OF CYANINE DYESTUFFS

Max Coenen, Grulten, Rhineland, Oskar Weissel, Krefeld-Urdingen, and Walter Wunder, Leverkusen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Mar. 4, 1959, Ser. No. 797,057
Claims priority, application Germany Mar. 6, 1958
7 Claims. (Cl. 260—240.6)

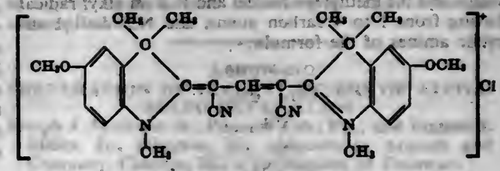
1. A cyanine dyestuff of the formula



in which

R_1, R_3, G_1, and G_3 are each lower alkyl,
E_3 is a radical of the group consisting of hydrogen, lower alkyl, lower alkoxy, and halogen, and
Y^- is an anion.

3. A cyanine dyestuff of the formula



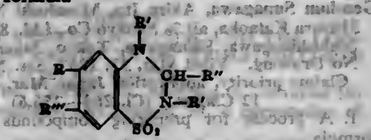
3,090,783

DIHYDROBENZOTHIADIAZINES

Harry L. Yale, New Brunswick, N.J., assignor to Olin Mathieson Chemical Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed June 12, 1962, Ser. No. 201,811
14 Claims. (Cl. 260—243)

1. A compound selected from the group consisting of bases of the formula



wherein R is a member selected from the group consisting of hydrogen, lower alkyl, halo, halo(lower alkyl), lower alkoxy, lower alkyl sulfonyl, monocyclic carbocyclic aryl (lower alkyl)-sulfonyl and cyano; one R' is hydrogen and the other R' is a member of the group consisting of amino (lower alkyl), lower alkylamino(lower alkyl), di(lower alkyl)-amino(lower alkyl), phenyl(lower alkyl)amino-(lower alkyl), piperidino(lower alkyl), pyrrolidino(lower

alkyl), piperazino(lower alkyl), 4-(hydroxy-lower alkyl)-piperazino(lower alkyl); R'' is a member of the group consisting of hydrogen, lower alkyl, halo(lower alkyl), phenyl(lower alkyl), phenylmercapto(lower alkyl), phenoxy(lower alkyl) and phenyl(lower alkyl)mercapto-(lower alkyl); and R''' is a member of the group consisting of hydrogen and sulfamyl; and non-toxic acid addition salts of said bases.

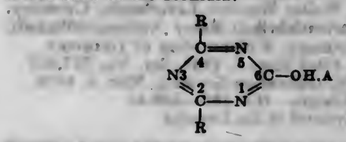
3,090,784

TERTIARY AMINE SALTS OF 2,4-BIS-HALOALKYL-6-HYDROXY-1,3,5-TRIAZINES

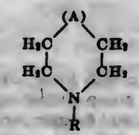
Ehrenfried H. Kober, Columbus, Ohio, assignor to Olin Mathieson Chemical Corporation, a corporation of Virginia

No Drawing. Filed June 4, 1959, Ser. No. 817,988
13 Claims. (Cl. 260—247.5)

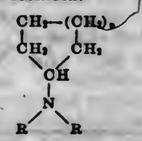
1. 2,4-bis-haloalkyl - 6 - hydroxy-1,3,5-triazine tertiary amine salts of the formula:



wherein R is a haloalkyl radical having not more than 12 carbon atoms and having at least two halogen substituents on the α carbon atom and A is a tertiary amine selected from the group consisting of trialkylamines of the formula R_3N wherein R is an alkyl radical having from 1 to 7 carbon atoms, N-alkyl heterocyclic amines of the formula:



wherein A is selected from the group consisting of oxygen, sulfur and the methylene radical and R is an alkyl radical having from 1 to 4 carbon atoms, and N,N-dialkyl alicyclic amines of the formula:



wherein *n* is an integer of from 1 to 2 and R is an alkyl group having 1 to 4 carbon atoms.

6. 2,4-bis-trichloromethyl - 6 - hydroxy-1,3,5-triazine N-methylmorpholine salt.

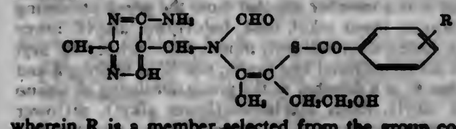
3,090,785

NEW PROCESS FOR PREPARING ACYLATED THIAMINE

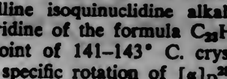
Genshun Sunagawa, Akira Ito, Masatoshi Nagawa, and Mitsuru Katsuka, all % Sankyo Co., Ltd., 888 1-chome, Nishishinagawa, Shinagawa, Tokyo, Japan

No Drawing. Filed Mar. 13, 1961, Ser. No. 94,975
Claims priority, application Japan Mar. 14, 1960
12 Claims. (Cl. 260—256.6)

1. A process for preparing compounds having the formula



wherein R is a member selected from the group consisting of hydrogen, halogen, methyl and nitro which comprises reacting thiamine under alkaline conditions with compounds having the formula



wherein R has the same meaning as above.

3,090,786

PREPARATION OF NITROSAMINES

Dewey Robert Levering, Fairfax, Wilmington, and Lucien G. Maury, Brookside, Newark, Del., assignors to Hercules Powder Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Nov. 5, 1954, Ser. No. 467,227
14 Claims. (Cl. 260—293)

1. In the nitrosation of a secondary amine, the improvement comprising reacting nitric oxide with said secondary amine as the nitrosating agent therefor at a pressure of at least 20 p.s.i.

3,090,787

ISOQUINUCLIDINE ALKALOID AND THE PRODUCTION THEREOF

Ulrich Renner, Riehen, near Basel, and Daniel A. Prins, Oberwil, Basel-Land, Switzerland, assignors to Geigy Chemical Corporation, Ardsley, N.Y., a corporation of Delaware

No Drawing. Filed Mar. 4, 1960, Ser. No. 12,699
Claims priority, application Switzerland Mar. 5, 1959
7 Claims. (Cl. 260—294.3)

1. Process for the obtention of isoquinuclidine alkaloid from plants of the genus Conopharyngia comprising (*a*) extracting the root and stem bark of *Conopharyngia durissima* Stapf, with alkanol of 1–3 carbon atoms and concentrating the extract, (*b*) stirring the concentrated extract into an aqueous solution of alkanoic acid of 1–3 carbon atoms, the aqueous solution having a normality of between 1 and 3, (*c*) removing the solids which have separated, (*d*) defatting the clear solution with petroleum ether and then extracting it with chlorinated lower alkane, (*e*) evaporating the extract and dissolving the residue in 1–3 N acetic acid, (*f*) basifying the acetic acid solution with a base selected from the group consisting of ammonia, sodium carbonate, potassium carbonate, sodium hydroxide and potassium hydroxide, (*g*) extracting with aromatic hydrocarbon boiling below 120°, (*h*) adsorbing the extract on aluminium oxide of activity I, (*i*) eluting adsorbed isoquinuclidine alkaloid with benzene and (*k*) crystallising it from alkanol with 1–3 carbon atoms.

7. The crystalline isoquinuclidine alkaloid 12.13-dimethoxy coronaridine of the formula $C_{23}H_{30}N_2O_4$, having a melting point of 141–143° C. crystallised from methanol and a specific rotation of $[\alpha]_D^{25}$ —40.5° (in chloroform) λ_{max} 224.5 mμ (log ε=4.47), λ_{max} 304 mμ (log ε=4.05).

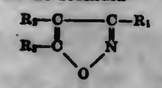
3,090,788

SUBSTITUTED ISOXAZOLECARBOXAMIDE COMPOUNDS

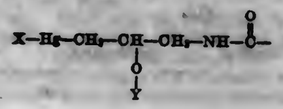
Max Hoffer, Nutley, N.J., assignor to Hoffmann-La Roche Inc., Nutley, N.J., a corporation of New Jersey

No Drawing. Filed Nov. 2, 1960, Ser. No. 66,697
10 Claims. (Cl. 260—299)

1. A compound of the formula



wherein one of R_1, R_2 and R_3 is a radical of the formula



wherein X is a therapeutically acceptable anion and Y is lower alkyl, and the other two of R_1, R_2 and R_3 are chosen from the group consisting of lower alkyl and hydrogen.

3,090,789

2-AMINO-4,6-DINITROBENZOTHIAZOLE

Joseph W. Dolan, Jr., Bayside, and Roy A. Pizzarello, Mount Vernon, N.Y., and Robert Eisenbrod, Englewood, N.J., assignors to Interchemical Corporation, New York, N.Y., a corporation

No Drawing. Original application Sept. 25, 1957, Ser. No. 686,046. Divided and this application Nov. 17, 1960, Ser. No. 69,795
2 Claims. (Cl. 260—305)

1. 2-amino-4,6-dinitro-benzothiazole.

3,090,790

2,4,5,7,8 - PENTAVINYL - 1,3,6 - TRIOXACYCLOOCTANE AND PROCESS FOR ITS PRODUCTION

Robert Arnold Braun, Newark, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Nov. 15, 1961, Ser. No. 152,639
2 Claims. (Cl. 260—338)

1. 2,4,5,7,8-pentavinyl-1,3,6-trioxacyclooctane.

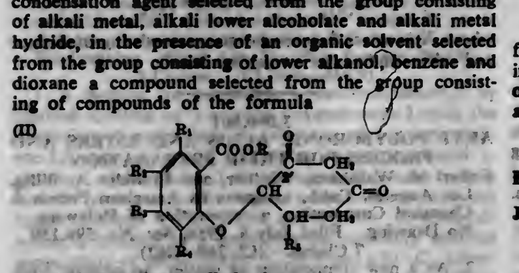
3,090,791

SYNTHESIS OF GRISEOFULVIN AND ANALOGUES, AND INTERMEDIATES THEREFOR

Arnold Brossi and Emilio Kyburz, Riehen, Switzerland, assignors to Hoffmann-La Roche Inc., Nutley, N.J., a corporation of New Jersey

No Drawing. Filed July 18, 1961, Ser. No. 124,780
Claims priority, application Switzerland July 25, 1960
9 Claims. (Cl. 260—346.2)

1. A method for the production of spirocyclic compounds which comprises cyclizing by treatment with a condensation agent selected from the group consisting of alkali metal, alkali lower alcoholate and alkali metal hydride, in the presence of an organic solvent selected from the group consisting of lower alkanol, benzene and dioxane a compound selected from the group consisting of compounds of the formula



and their enol lower alkyl ethers,

wherein R is selected from the group consisting of hydrogen and lower alkyl, R_1, R_2, R_3, R_4 are selected from the group consisting of hydrogen, lower alkyl, halo-lower alkyl, lower alkoxy, nitro, hydroxy and halogen and R_5 represents lower alkyl.

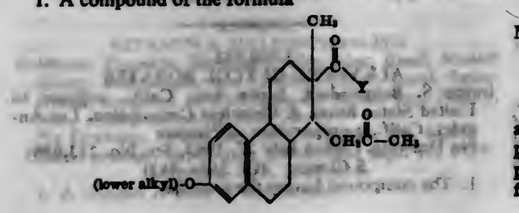
3,090,792

16,17-SECOESTRATRIENES AND D-HOMO STEROIDS DERIVED THEREFROM

David A. Tyner, Glenview, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

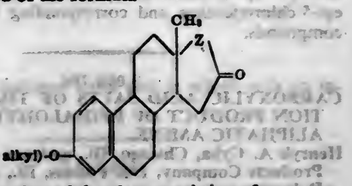
No Drawing. Filed Aug. 8, 1960, Ser. No. 47,910
8 Claims. (Cl. 260—348)

1. A compound of the formula

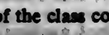


wherein Y is a member of the class consisting of hydrogen and hydroxyl.

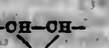
4. A compound of the formula



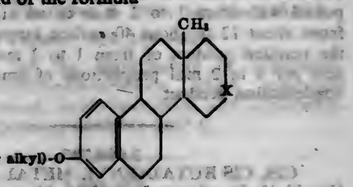
wherein Z is a member of the class consisting of



and



7. A compound of the formula



wherein X is carbonyl.

3,090,793

CURING OF EPOXY RESINS

James S. Casement, St. Paul, Minn., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

No Drawing. Filed Nov. 28, 1958, Ser. No. 776,724
6 Claims. (Cl. 260—399)

1. A mercaptan-containing polyester prepared by esterifying the hydroxyl group of a mercapto-alcohol containing less than 11 carbon atoms with the carboxyl groups of a polycarboxylic acid containing at least 18 carbon atoms.

3,090,794

PREPARATION OF DIALKYL ESTERS OF ALPHA-SULFO FATTY ACIDS

Joseph J. McBride, Jr., Panama City, Fla., and Eugene J. Miller, Jr., Wheaton, Ill., assignors to Armour and Company, Chicago, Ill., a corporation of Delaware

No Drawing. Filed Aug. 23, 1962, Ser. No. 218,845
6 Claims. (Cl. 260—400)

1. A method for preparing dialkyl esters of alpha-sulfo fatty acids, comprising reacting an alpha-sulfo fatty acid with a slight theoretical excess of an olefin having from about 2 to 8 carbon atoms in the presence of at least 0.01 mole of iron pentacarbonyl per mole of alpha-sulfo fatty acid, and recovering the ester.

3,090,795

ESTERS OF CARBOXYLIC ACIDS AND THE CONDENSATION PRODUCTS OF EPIHALOHYDRIN AND AN ALIPHATIC AMINE

Henryk A. Cyba, Chicago, Ill., assignor to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

No Drawing. Original application June 12, 1958, Ser. No. 741,463. Divided and this application Aug. 11, 1960, Ser. No. 48,811
14 Claims. (Cl. 260—404.5)

1. An ester of a carboxylic acid of from about 6 to about 50 carbon atoms per molecule and the condensation product of from 1 to 2 mols of an epihalohydrin compound with from 1 to 2 mols of an aliphatic amine having from about 12 to about 40 carbon atoms per molecule,

said epihalohydrin compound being selected from the group consisting of epichlorohydrin, 1,2-epi-4-chlorobutane, 2,3-epi-4-chlorobutane, 1,2-epi-5-chloropentane, 2,3-epi-5-chloropentane and corresponding bromo and iodo compounds.

3,090,796

CARBOXYLIC ACID SALTS OF THE CONDENSATION PRODUCT OF EPIHALOHYDRIN AND AN ALIPHATIC AMINE

Henryk A. Cyba, Chicago, Ill., assignor to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

No Drawing. Original application May 23, 1958, Ser. No. 737,211. Divided and this application Aug. 11, 1960, Ser. No. 48,812
6 Claims. (Cl. 260—404.5)

1. A salt of a carboxylic acid of from about 6 to about 50 carbon atoms per molecule and of the condensation product of from 1 to 2 mols of an epihalohydrin compound with from 1 to 2 mols of an aliphatic amine of from about 12 to about 40 carbon atoms, said salt being the reaction product of from 1 to 2 mol proportions of acid per 1 to 2 mol proportions of amine group in the condensation product.

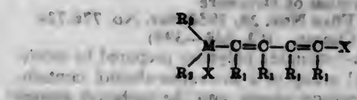
3,090,797

CIS, CIS BUTADIENYL METAL HALIDES

Harold H. Freedman, Brookline, Mass., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Nov. 28, 1960, Ser. No. 71,899
10 Claims. (Cl. 260—429)

1. (4-halo-1,3 butadienyl)-organo metal halide compounds corresponding to the following representation:



wherein R_1 and R_2 represent moieties selected from the group consisting of hydrogen, alkyl, aryl and halogen, hydroxyl and cyano substituted alkyl and aryl moieties; X represents a halogen selected from the group consisting of chlorine, bromine and iodine; and M is a metal selected from the group consisting of tin, lead, and germanium, and mercury in at least its bivalent form.

3,090,798

TETRAALKYLACETOACETIC THIOLESTERS

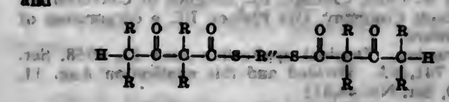
James C. Martin, Kingsport, Tenn., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Feb. 29, 1960, Ser. No. 11,496
6 Claims. (Cl. 260—455)

1. A thiolester of a 2,2,4,4-tetraalkylacetoacetic acid having a formula selected from the group consisting of



and



where R is an alkyl radical having 1 to 4 carbon atoms, R' is hydrocarbon selected from the group consisting of alkyl radicals having 1 to 16 carbon atoms and phenyl radicals, and R'' is an alkylene radical having 2 to 16 carbon atoms.

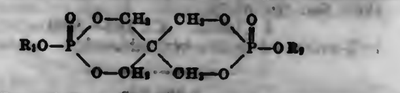
3,090,799

PENTAERYTHRITOL ESTERS OF PHOSPHORIC ACIDS AND COMPOSITIONS CONTAINING THE SAME

Ottmar Wahl, Baden-Baden, and Herbert Grabhöfer, Cologne-Flittard, Germany, assignors to Agfa Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Nov. 15, 1960, Ser. No. 69,289
Claims priority, application Germany Nov. 17, 1959
9 Claims. (Cl. 260—461)

9. A compound of the group consisting of pentaerythritol esters of phosphoric acids having the general formula:



in which R_1 and R_2 is a radical of the group consisting of alkyl having up to 20 carbon atoms, alkyl having up to 20 carbon atoms and a carbon atoms substituent of the group consisting of alkoxy and cyano radicals, phenyl, and phenyl having a substituent of the group consisting of alkyl, halogen and alkoxycarbonyl radicals.

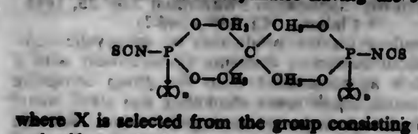
3,090,800

PHOSPHORUS CONTAINING BIFUNCTIONAL ISOTHIOCYANATES AND PROCESS THEREFOR

Rudi F. W. Rätz, Hamden, Conn., assignor to Olin Mathieson Chemical Corporation, New Haven, Conn., a corporation of Virginia

No Drawing. Filed Aug. 17, 1962, Ser. No. 217,549
7 Claims. (Cl. 260—461)

1. Bifunctional isothiocyanates having the structure



where X is selected from the group consisting of oxygen and sulfur, and n is an integer less than 2.

3,090,801

ARYL POLYBORONIC ACIDS AND ESTERS AND PROCESS FOR THEIR PREPARATION

Robert M. Washburn, Whittier, and Franklin A. Billig, Los Angeles, Calif., assignors to American Potash & Chemical Corporation, a corporation of Delaware

No Drawing. Filed July 6, 1956, Ser. No. 596,159
7 Claims. (Cl. 260—462)

2. As a new composition of matter, an organic compound having an aromatic nucleus and at least two $-B(OH)_2$ radicals attached to said nucleus, said aromatic nucleus being selected from a class consisting of phenylene and phenenyl.

4. A process for the preparation of an arenepolyboronic acid ester comprising: contacting a compound of the formula $R(Na)_n$ where R is selected from the class consisting of phenyl, phenylene, phenenyl, biphenylyl, naphthyl, tolyl, zylyl, nitrophenyl, N,N-diethylaminophenyl, bromophenyl, chlorophenyl and lower alkoxyphenyl substituents and n is 2 to 3 with a borate ester of the formula $(R'O)_3B$ wherein R' is selected from the class consisting of lower alkyl and phenyl, at least one mole of borate ester being provided for each mole of said Na.

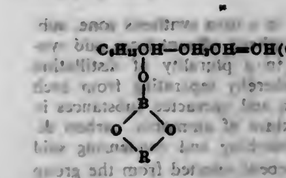
3,090,802

ALKYLENE GLYCOL BORATES

Irving S. Bengelsdorf, Santa Ana, Calif., assignor to United States Borax & Chemical Corporation, Los Angeles, Calif., a corporation of Nevada

No Drawing. Filed July 27, 1962, Ser. No. 213,058
5 Claims. (Cl. 260—462)

1. The compound having the formula



where R is an alkylene radical of 2 to 3 carbon atoms in length and containing a total of 2 to about 20 carbon atoms.

3,090,803

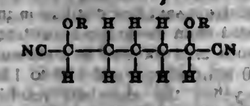
GLUTARALDEHYDE DICYANOHYDRIN AND ACYL DERIVATIVES THEREOF

Harry A. Stansbury, Jr., South Charleston, and Howard R. Guest, Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed July 29, 1957, Ser. No. 674,628
3 Claims. (Cl. 260—465.4)

1. Glutaraldehyde dicyanhydrin.

2. Chemical compounds having the formula:



wherein R is an alkyl carboxylic acid acyl radical containing from 2–10 carbon atoms.

3,090,804

PROCESS FOR PREPARING 1-CYANOBUTADIENE-1,3

Kurt Sennewald, Knapsack, near Cologne, Klaus Born, Hermülheim, near Cologne, and Heinrich Rohberg, Efferen, near Cologne, Germany, assignors to Knapsack-Griesheim Aktiengesellschaft, Knapsack, near Cologne, Germany, a corporation of Germany

No Drawing. Filed Apr. 21, 1960, Ser. No. 23,636
3 Claims. (Cl. 260—465.9)

1. A process for preparing 1-cyanobutadiene-1,3 by thermal splitting of 1-acetoxy-1-cyanobutene-2 with the formation of equimolecular quantities of 1-cyanobutadiene-1,3 and acetic acid comprising vaporizing liquid 1-acetoxy-1-cyano-butene-2 by atomizing the same with a current of inert gas having a temperature within the range of about +700° C. to about 1000° C. suddenly within a fraction of a second to the necessary splitting temperature of about +450° C. to about 650° C., allowing the splitting reaction to proceed during a residence time of between 0.5 to 10 seconds while the splitting temperature is maintained, precooling the gaseous product mixture flowing off to a temperature within the range of about +20° to about 70° C. by spray-quenching with at least one substance selected from the group consisting of water and aqueous acetic acid, washing the cooled gas by means of at least one substance selected from the group consisting of water and water containing acetic acid, separating 1-cyano-butadiene-1,3 product from acetic acid by azeotropical distillation with water, condensing the distillate, and drawing off 1-cyano-butadiene-1,3 product from the aqueous phase.

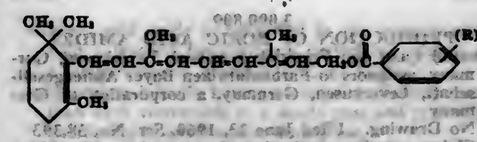
3,090,805

VITAMIN A HALOBENZOATES

Balthasar Hegedüs, Binningen, Otto Isler, Basel, Rudolf Rüegg, Reinhingen, and Gottlieb Ryser, Basel, Switzerland, assignors to Hoffmann-La Roche Inc., Nutley, N.J., a corporation of New Jersey

No Drawing. Filed July 20, 1960, Ser. No. 44,002
Claims priority, application Switzerland Sept. 15, 1959
3 Claims. (Cl. 260—476)

1. A vitamin A ester of the formula:



in which R is a halogen atom and in which n is an integer from 1 to 3.

3,090,806

PROCESS FOR THE MANUFACTURE OF N-CYCLOHEXYLSULFAMATES

Hachiro Yamaguchi and Akira Nakatsuchi, Urawa-shi, Japan, assignors to Nitto Chemical Industry Co., Ltd., Tokyo, Japan, a corporation of Japan, and Zaidan Hojin Nitto Rikagaku Kenkyusho, Urawa-shi, Japan, an incorporated body of Japan

No Drawing. Filed Dec. 8, 1959, Ser. No. 858,010
8 Claims. (Cl. 260—501)

1. A process for the manufacture of cyclohexylammonium N-cyclohexylsulfamate which comprises heating diammonium imidodisulfonate and cyclohexylamine at the temperature of 70° to 200° C.

3,090,807

ISOMERIZATION OF SATURATED ALIPHATIC CARBOXYLIC ACIDS

Gerhard Illing, Neuleiningen, and Nikolaus von Kutepow, Karlsruhe-Rüppurr, Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

No Drawing. Filed July 27, 1959, Ser. No. 829,521
Claims priority, application Germany July 31, 1958
11 Claims. (Cl. 260—537)

1. A process for the isomerization of a saturated aliphatic carboxylic acid selected from the group consisting of alkanoic acids of 4 to 18 carbon atoms and alkanedioic acids of 4 to 12 carbon atoms which comprises heating said carboxylic acid with carbon monoxide under a pressure between 20 and 700 atmospheres and at a temperature between 150° and 300° C. in the presence of: (*a*) a metal carbonyl in which the metal is selected from the group consisting of the metals of the 6th, 7th and 8th groups of the periodic system, (*b*) an activator selected from the group consisting of oxides, chlorides, bromides and iodides of bismuth, antimony, titanium, boron, tin and iron, and (*c*) a halogen selected from the group consisting of chlorine, bromine and iodine.

3,090,808

PRODUCTION OF HALO-SUBSTITUTED CARBONYLIC COMPOUNDS

Morris S. Kharasch, Chicago, Ill., and Walter Nudenberg, Cedar Grove, N.J., assignors to Shell Oil Company, a corporation of Delaware

No Drawing. Filed Feb. 15, 1957, Ser. No. 640,309
6 Claims. (Cl. 260—539)

1. A process for producing omega-halogenated aliphatic carboxylic acids which comprises reacting

(1) cyclohexyl peroxide,

(2) a geminate organic polyhalide of 1 to 2 carbon atoms having at least one bromine, the remaining halogens being selected from the group consisting of bromine and chlorine,

(3) a redox reducing agent and

(4) a mineral acid.

3,090,809

PRODUCTION OF BORIC ACID AMIDES

Konrad Lang and Friedrich Schubert, Leverkusen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed June 23, 1960, Ser. No. 38,393
Claims priority, application Germany June 27, 1959
11 Claims. (Cl. 260—551)

1. Process for the production of boric acid amides which comprises reacting at a temperature of from about 130 to 300° C. a boron halogen compound selected from the group consisting of boron trihalides, boron trihalide ether addition compounds, and boron trihalide amine addition compounds, with a mixture of (A) a metal borohydride selected from the group consisting of alkali metal borohydrides and alkaline earth metal borohydrides, and (B) an amine having the formula

RR'N—H

wherein R and R' are each a member selected from the group consisting of alkyl, aryl and alkaryl, the alkoxy, halo, dialkyl amino and amino derivatives thereof, pyridyl, quinolinyl, and hydrogen, with the proviso that only one of R and R' can be hydrogen and where RR'N— can form a ring selected from the group consisting of piperidino, morpholino, piperazino, aminotriazolo, and carbazolo radicals, the molar ratio being at least 2 mols of said amine to one mol of said boron halogen compound, to thereby form a boron compound in which at least one of the valences of boron is connected to the nitrogen of said amine in substitution of the hydrogen atom and recovering said boron compound.

2. Process for the production of boric acid trisanilide which comprises reacting boron trifluoride tetrahydrofuranate with a mixture of sodium borohydride and aniline, said aniline being present in excess to said boron trifluoride tetrahydrofuranate, at a temperature of about 130–150° C., heating the reaction mixture till the evolution of hydrogen ceases and recovering the boric acid trisanilide thus formed.

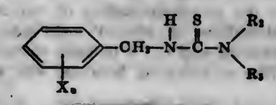
3,090,810

BENZYL THIOUREAS

Arthur Berger, Skokie, and Edeltraut E. Borgaes, Chicago, Ill., assignors to Baxter Laboratories, Inc., Morton Grove, Ill., a corporation of Delaware

No Drawing. Filed Jan. 11, 1961, Ser. No. 81,940
10 Claims. (Cl. 260—552)

1. An organic thiourea of the formula:



in which X is a member of the group consisting of halogen and lower alkyl group containing 1 to 3 carbon atoms, n is an integer from 1 to 3; R_2 is selected from the group consisting of alkyl groups containing 1 to 8 carbon atoms and allyl, and R_3 is selected from the group consisting of hydrogen and alkyl groups containing 1 to 6 carbon atoms.

3,090,811

SYNTHESIS OF UREA

Eiji Otsuka, Fujisawa-shi, Toru Takahashi, Kamakura-shi, and Hiroo Watanabe, Fujisawa-shi, Japan, assignors to Toyo Koatsu Industries, Incorporated, Tokyo, Japan, a corporation of Japan

Filed Oct. 17, 1960, Ser. No. 62,923
Claims priority, application Japan Oct. 23, 1959
5 Claims. (Cl. 260—555)

2. In a cyclic process for the synthesis of urea by heating ammonia and carbon dioxide at urea-forming temperatures and pressures in a urea synthesis zone, subjecting the resulting urea synthesis effluent from said synthesis zone to distillation in a plurality of distillation zones arranged in series, thereby separating from each other aqueous urea solution and unreacted substances in the form of a gaseous mixture of ammonia, carbon dioxide and water vapor, absorbing and condensing said gaseous mixture in an absorbent selected from the group consisting of water and aqueous urea solution, and returning the thus-obtained absorbate to said urea synthesis zone,

the improvement which comprises:

(*a*) subjecting the effluent from the synthesis zone successively to a first pressure distillation at a pressure of from 13 to 40 atmospheres and at 140 to 155° C., then to a second pressure distillation at a pressure of from 10 to 25 atmospheres at 140 to 155° C., and then to a third pressure distillation at from 1 to 3 atmospheres and 110 to 130° C.;

(*b*) absorbing the resulting gaseous mixture of ammonia, carbon dioxide and water vapor obtained from said first distillation in an absorbent selected from the group consisting of water and aqueous urea solution at a pressure of from 13 to 40 atmospheres and 130 to 150° C.; and

(*c*) recycling the absorbate resulting from (*b*) and having a high heat content into heat transfer contact with the effluent during said third distillation and further into the synthesis zone, thereby utilizing in said third distillation absorption heat transferred from said absorbate to said effluent.

3,090,812

METHOD OF PRODUCING ISONITROSOPROPIOPHENONE

Godfrey Wilbert, Carmel, N.Y., and Paul Seals, East Paterson, N.J., assignors to Nepera Chemical Co. Inc., Harriman, N.Y., a corporation of New York

No Drawing. Filed Sept. 24, 1959, Ser. No. 841,941
2 Claims. (Cl. 260—566)

1. In a process for the production of isonitrosopropiophenone by the catalytic reaction of propiophenone with an alkyl nitrite having 1 to 4 carbon atoms in the alkyl group employing an inert organic solvent reaction medium containing hydrogen chloride as catalyst, the improvement which consists in carrying out said reaction by employing as the reaction medium from about 0.3 to 1.0 volume of an aliphatic alcohol of from 1 to 3 carbon atoms per volume of propiophenone reacted, said solvent medium containing from about 0.4 to 0.6 mol of hydrogen chloride per mol of propiophenone, and continuously adding said alkyl nitrite to said aliphatic alcohol reaction medium over a period of from two to four hours while maintaining the reaction temperature between about 25° C. and 30° C. and then precipitating the isonitrosopropiophenone formed by the addition of water to the solvent reaction medium and then separating the precipitated isonitrosopropiophenone therefrom.

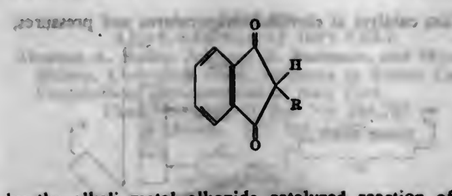
3,090,813

PROCESS FOR PREPARING ARYLINDANDIONES

Karl Geiger, Debbie Ferry, Seymour L. Shapiro, Hastings on Hudson, and Louis Freedman, Bronxville, N.Y., assignors to U.S. Vitamin & Pharmaceutical Corporation, a corporation of Delaware

No Drawing. Filed June 27, 1960, Ser. No. 38,717
6 Claims. (Cl. 260—590)

1. In the process of preparing a 2-arlyindandione of the formula



by the alkali metal alkoxide catalyzed reaction of the aldehyde, RCHO, and phthalide, the step of including in the reaction mixture an additional equivalent of alkali metal alkoxide, and at least one equivalent of ester, R_1COOR_2, wherein R is selected from the group consisting of α-naphthyl, phenyl and substituted phenyl, said substituents on the phenyl being selected from the group consisting of halo, alkyl and alkoxy R_1 is selected from the group consisting of hydrogen and C_1–C_3 alkyl, and R_2 is selected from the group consisting of C_1–C_4 alkyl.

3,090,814

PROCESS OF MAKING VINYL ARYL ETHERS

Donald J. Foster, South Charleston, and Erich Tobler, Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Apr. 12, 1960, Ser. No. 21,593
6 Claims. (Cl. 260—612)

1. Process for making vinyl aryl ethers which comprises reacting divinylmercury with an arylhydroxy compound wherein the substituents on the aryl radical, other than hydrogen and hydroxy, are selected from the group consisting of halogen and lower n-alkyl.

3,090,815

ISOMERIZATION OF ALKYLENE OXIDE

William I. Denton, Cheshire, Conn., assignor to Olin Mathieson Chemical Corporation, New Haven, Conn., a corporation of Virginia

No Drawing. Filed June 8, 1959, Ser. No. 818,516
6 Claims. (Cl. 260—632)

1. In the isomerization of an alkylene oxide containing 3 to 5 carbon atoms to the corresponding alcohol,

wherein said oxide is contacted in the gaseous state with a leached basic lithium phosphate catalyst at a temperature of about 250° C. to 350° C.,

said catalyst initially having an activity effecting more than 40% conversion in a single pass and gradually decreasing in effectiveness during use,

and wherein the said isomerization is interrupted for catalyst activation,

the process of restoring substantially the initial catalyst activity consisting essentially of contacting the catalyst after use in said isomerization with an aqueous liquid consisting essentially of at least 30% by weight of water and up to 70% by weight of a saturated aliphatic solvent composed of oxygen, hydrogen and up to six carbon atoms, selected from the group consisting of ethers, oxides, ketones, aldehydes, acids, alcohols and esters,

at a temperature of about 50° to 250° C. and at a pressure sufficient to maintain said aqueous liquid in the liquid phase, and removing the aqueous liquid from the said catalyst.

3,090,816

ISOMERIZATION OF ALKYLENE OXIDE

William I. Denton, Cheshire, Conn., assignor to Olin Mathieson Chemical Corporation, New Haven, Conn., a corporation of Virginia

No Drawing. Filed June 8, 1959, Ser. No. 818,557
9 Claims. (Cl. 260—632)

1. In the isomerization of an alkylene oxide containing 3 to 5 carbon atoms to the corresponding alcohol,

wherein said oxide is contacted in the gaseous state with a leached basic lithium phosphate catalyst at a temperature of about 250° C. to 350° C.

said catalyst initially having an activity effecting more than 40% conversion in a single pass and gradually decreasing in effectiveness during use,

and wherein the said isomerization is interrupted for catalyst activation,

the process of restoring substantially the initial catalyst activity consisting essentially of contacting the catalyst after use in said isomerization with a liquid saturated aliphatic solvent composed of oxygen, hydrogen and up to sixteen carbon atoms, selected from the group consisting of ethers, oxides, ketones, aldehydes, acids, alcohols and esters,

at a temperature of up to about 25° C. below the critical temperature of the said solvent and at a pressure sufficient to maintain said solvent in the liquid phase,

and removing the solvent from the said catalyst.

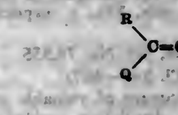
3,090,817

PARTIAL DEHYDROHALOGENATION OF HALOALKYLHALOBICYCLOALKENIC COMPOUNDS

Louis Schmerling, Riverside, Ill., assignor to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

No Drawing. Filed July 27, 1960, Ser. No. 45,551
18 Claims. (Cl. 260—648)

1. A process for the preparation of a halosubstituted bicycloalkadiene which comprises condensing a conjugated cycloalkadiene with a halo-olefin having the general formula



in which R is a haloalkyl radical, Q and Q' are radicals selected from the group consisting of hydrogen and halogen radicals, only one of said Q and Q' radicals being halogen, and R' is a radical selected from the group consisting of hydrogen, alkyl, halogen, haloalkyl, cycloalkyl and aryl radicals, thereby forming a haloalkylhalobicycloalkene, and partially dehydrohalogenating said alkene in the persence of a dehydrohalogenating agent selected from the group consisting of alkali metal hydroxides, alkaline earth metal hydroxides, alkali metal alkoxides and amines at a temperaure in the range of from about 50° to about 250° C. to form a halo-substituted bicycloalkadiene.

13. A 5-haloalkylidene-2-norbornene.

3,090,818

CHLOROFLUOROALKANE COMPOSITIONS

Laurence J. Long, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed May 11, 1960, Ser. No. 28,223
9 Claims. (Cl. 260—652.5)

1. A composition resistant to reaction with primary and secondary alkanols which consists essentially of a chlorofluoroalkane of the group consisting of trichlorofluoromethane, trichlorotrifluorethanes and tetrachlorodifluoroethanes and from about 0.1% to about 5% by weight of an olefinic compound of the group consisting of propylene, isobutylene, 1-butene, butadiene, isoprene, vinyl chloride, vinyl fluoride, and methyl methacrylate.

3,090,819

TRANSMETALATION PROCESS

Walter E. Foster, Baton Rouge, La., assignor to Ethyl Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed Feb. 24, 1959, Ser. No. 794,817
12 Claims. (Cl. 260—665)

1. A transmetalation process for preparing aliphatic polyolefin hydrocarbons containing at least 8 carbon atoms and organo alkali metal compounds simultaneously, which comprises reacting (*a*) a dialkali metal polyolefin compound containing at least 8 carbon atoms with (*b*) an active hydrogen-containing organic reagent capable of forming an alkali metal derivative thereof, selected from the group consisting of (1) aryl hydrocarbons, (2) acetylenic hydrocarbons, (3) cyclodienyl hydrocarbons, (4) aryl ethers, (5) aryl fluorides, (6) alkali metal salts of monocarboxylic acids containing between about 2 through 20 carbon atoms, and (7) substituted hydrocarbons, wherein the sole substituent is a nitrilo group; which reagents are free from functional groups which are reactive toward alkali metals, said dialkali metal polyolefin hydrocarbon being an octa to dodeca polyene and having an unsaturation ranging from dienes to tetraenes, said reaction being initiated at a temperature not greater than about 40° C. in a reaction medium consisting essentially of a solvent selected from the group consisting of ethers, acetals and tertiary amines; and recovering said polyolefin hydrocarbon and an alkali metal compound of said organic reagent as products of the reaction.

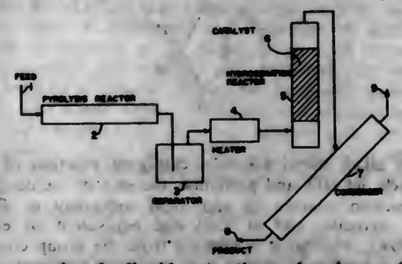
3,090,820

RECOVERY OF AROMATIC HYDROCARBONS

Harry M. Walker, Dickinson, Tex., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

Filed Nov. 21, 1960, Ser. No. 70,555
4 Claims. (Cl. 260—667)

1. The process for the recovery of valuable aromatic hydrocarbons from styrene distillation residues which comprises subjecting said residues to pyrolysis in the presence of steam and hydrogen at a temperature in the range from about 500° to about 1500° F. and a pressure in the range from about 300 to about 1500 p.s.i., hydrogenating the gaseous pyrolysis product in the presence of a hydrogenation catalyst at elevated temperatures and pressures,



and recovering the liquid aromatic product by condensation.

3,090,821

PREPARATION OF VISCOUS POLYMERS

Sterling E. Voltz, Brookhaven, Pa., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

No Drawing. Filed Apr. 6, 1959, Ser. No. 804,109
2 Claims. (Cl. 260—683.15)

1. Polymerization method for forming viscous polymers which comprises contacting 4-methylpentene-1, under polymerizing conditions including a temperature in the range of 0–150° C., with a dispersion in an inert organic liquid medium of a tin tetrahalide in combination with an alkyl aluminum halide compound selected from the group consisting of monohalides, sesquihalides and dihalides, the molar ratio of alkyl aluminum halide to tin tetrahalide being in the range of 0.1 to 10.

3,090,822

PREPARATION OF VISCOUS POLYMERS

Sterling E. Voltz, Brookhaven, Pa., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

No Drawing. Filed Dec. 18, 1959, Ser. No. 860,308
2 Claims. (Cl. 260—683.15)

1. Polymerization method for forming viscous polymers which comprises contacting 4-methylpentene-1, under polymerizing conditions including a temperature in the range of 0–150° C., with a dispersion in an inert organic liquid medium of a mercury halide in combination with an alkyl aluminum dihalide, the molar ratio of alkyl aluminum dihalide to mercury halide being in the range of 0.1 to 10.

ELECTRICAL

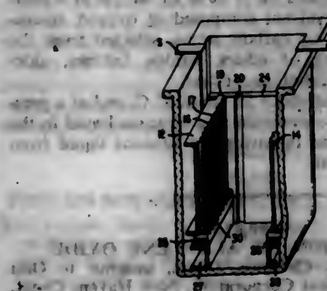
3,090,823

TANK FOR FORMING BATTERY ELEMENTS

Anthony Roach, Oakland, Calif., assignor, by mesne assignments, to Ford Motor Company, a corporation of Delaware

Filed Sept. 25, 1959, Ser. No. 842,261
4 Claims. (Cl. 136—62)

1. An apparatus for forming storage battery plates comprising a tank, means within the tank for supporting battery plates in a substantially vertical position, and at least two substantially identical contact bars within the tank for conducting electrical current to storage battery plates, said contact bars having upwardly diverging sloping notches formed of electrically conductive material and arranged to contact and support battery plates and a plurality of battery plates adapted to be placed in said tank and supported by said contact bars and said means for supporting battery plates in a substantially vertical position, said battery plates each having at least two integral tabs at their lower extremities for making electrical contact with said sloping notches of said identical contact bars.

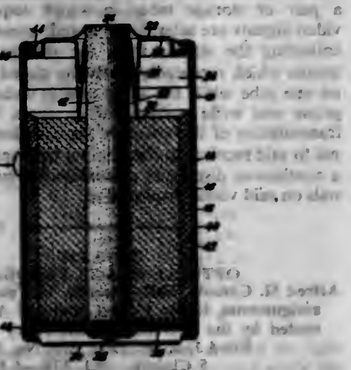


3,090,824

LEAK-RESISTANT DRY CELL

Thomas A. Reilly, Johnson B. Beckman, and Harry K. Bishop, Cleveland, Ohio, assignors to Union Carbide Corporation, a corporation of New York

Filed May 1, 1961, Ser. No. 106,765
6 Claims. (Cl. 136—107)



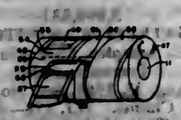
6. A leak-resistant dry cell comprising, in combination, a cup electrode of a consumable metal containing depolarizer mix, electrolyte and a central carbon electrode embedded within said depolarizer mix; a non-metallic jacket having a liquid-proof liner embracing said cup electrode; a metallic top closure and bottom plate locked to said jacket, said top closure having gas venting means therein; and an annular substantially cupped shaped cap below said top closure fitted over the top open end of said cup electrode and rigidly secured between said top closure and said cup electrode, said cap having a central tubular opening surrounding said carbon electrode and providing a free space between said tubular opening and said carbon electrode and an exudate chamber surrounding said tubular opening, said tubular opening being embedded within said depolarizer mix and defining a barrier which protects said carbon electrode from contact by liquid exudate from said cell, said tubular opening in conjunction with said gas venting means in said top closure providing a path for venting gas from said cell.

3,090,825

INSULATED CABLE

Victor F. Volk, Hastings on Hudson, N.Y., assignor to Anaconda Wire and Cable Company, a corporation of Delaware

Filed Dec. 29, 1959, Ser. No. 862,512
4 Claims. (Cl. 174—109)



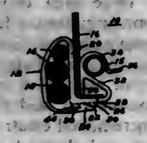
1. An electric cable comprising a conductor, insulating tapes wrapped helically around said conductor, electrically conducting material on one surface of said insulating tapes, said conducting material having a width less than the width of said insulating tapes and having side edges spaced inwardly from both edges of said tapes, at least one of said insulating tapes having said conducting material facing outwardly, said tape having a length free from conducting material, another directly overlying of said tapes having said conducting material facing inwardly and in electrical contact with said outwardly facing conducting material, said inwardly and outwardly facing conducting material forming a conducting layer around said cable, said other tape having a length free from conducting material, the combined length of tape free from conducting material exceeding the length of one turn of said tapes around said cable, said length free from conducting material of one of said tapes being in contact with said length free from conducting material of the overlying of said tapes, said tapes being disposed so as to form an electrical discontinuity in the cable layer formed by said inwardly and outwardly facing conducting materials.

3,090,826

WIRING FASTENER

Clarence W. Cochran, Belmont, Mass., assignor to United-Carr Fastener Corporation, Cambridge, Mass., a corporation of Delaware

Filed Jan. 26, 1960, Ser. No. 4,783
4 Claims. (Cl. 174—158)



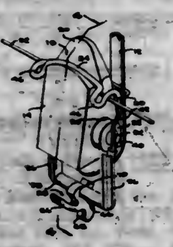
1. A resilient adjustable electrically non-conductive clamping device adapted to retain a plurality of wires or the like on a flanged support comprising a base, one end of said base curving backwardly upon itself forming a first loop having its distal end formed into a grooved hook locking member for cooperative snap engagement with camming shoulders formed on a substantially right angular extension of the other end of said base, said right angular extension curving backwardly on itself forming a second loop portion spaced from said first loop, a flexible flange retaining member projecting from said second loop cooperating with the base of said first loop to retain the clamping device in assembly on said flanged support.

3,090,827

FASTENING INSULATOR FOR TRANSMISSION LINES

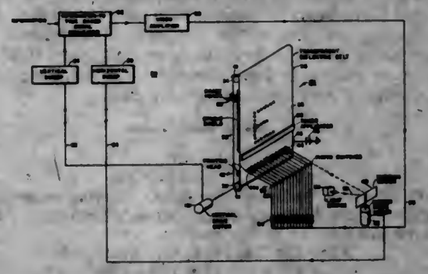
John Philip Mahaney, Blacksburg, Va., assignor to Virginia Plastics Company, Roanoke, Va., a corporation of Virginia

Filed Nov. 4, 1960, Ser. No. 67,250
13 Claims. (Cl. 174—172)



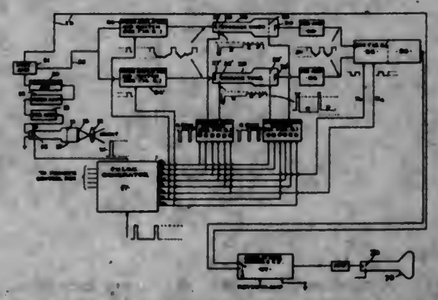
13. A combination hanger and clamp for transmission lines comprising an insulator body having a lateral channel in its top, an over-center clamp with a spring loop adapted to engage in said channel and an operating lever, and a grappling extension on said lever having a notch opening downwardly and spanning said channel in one position of said lever, and opening upwardly in another position of said lever.

3,090,828
SYSTEM FOR LARGE-AREA DISPLAY OF INFORMATION
George W. Bain, Fort Wayne, Ind., assignor to International Telephone and Telegraph Corporation
Filed Aug. 24, 1960, Ser. No. 51,666
14 Claims. (Cl. 178—6.6)



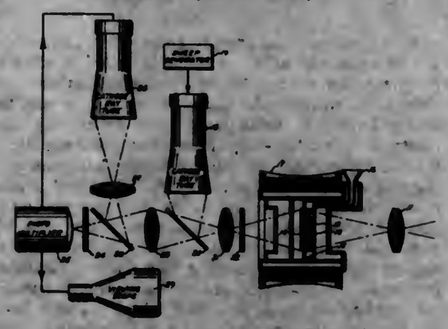
1. A system for large area two-dimensional display of information comprising: means for converting the information to be displayed into a time-based electrical signal; a relatively thin sheet of dielectric material; means including a plurality of electrodes in spaced apart alignment along one dimension of said sheet and cooperating therewith to form incremental electrostatic charges thereon in dot form when said electrodes are respectively energized; means for moving said sheet with respect to said electrodes along the other dimension of said sheet; switching means for sequentially coupling said electrodes to said converting means whereby said electrodes are respectively energized responsive to the instantaneous level of said signal; and means for applying charged toner material to said sheet after it passes said electrodes; said switching means comprising a plurality of photosensitive switching means respectively electrically coupling said electrodes to said converting means responsive to impingement of light thereon; and means for sequentially scanning said photosensitive means with a beam of light.

3,090,829
TELEVISION SYSTEM UTILIZING BEAM PULSING TO IMPROVE SENSITIVITY AT LOW LIGHT LEVELS AND COORDINATED MEANS TO ELIMINATE FLICKER AT THE KINESCOPE DISPLAY
Robert A. Lee, Timonium, and Camille S. Marie, Pikesville, Md., assignors to The Bendix Corporation, a corporation of Delaware
Filed Sept. 11, 1959, Ser. No. 839,428
8 Claims. (Cl. 178—6.8)



1. Television apparatus particularly adapted for low light level televising, comprising: a camera or signal pickup tube having a photocathode on which the scene or information to be televised is projected and a target to be charged by photoelectrons released from the photocathode, means for scanning the target with an electron beam to "read" the charge off the target and generate video signals, means for alternately gating the beam "on" and "off" while continuously televising to permit charge build-up on the target during "off" time and to read the built-up charge off the target during beam "on" time; a video receiver including a visual display cathode ray tube; an intermediate signal-storage system including a pair of storage tubes in which sequential bursts of video signals are alternately stored; means for alternately collecting the signals from the storage tubes including means which repeatedly reads the stored signal appearing on one tube while the other tube is undergoing the erase, prime and write portions of its cycle, thereby effecting transmission of the collected signals along a single channel to said receiver in the original time sequence to present a continuous display of discontinuous bursts of video signals on said visual display tube.

3,090,830
OPTICAL IMAGE FEEDBACK
Alfred H. Canada, Falls Church, Va., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Jan. 30, 1961, Ser. No. 85,940
5 Claims. (Cl. 178—6.8)

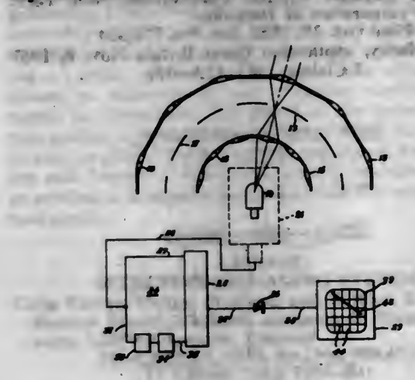


1. A device for converting a thermal image into a video image comprising: an imaging tube having a Faraday effect surface, a thermal sensitive surface, and a magnetic field surrounding said Faraday effect surface; means for scanning said Faraday effect surface with a polarized spot of light, means for converting light reflected from said Faraday effect surface into a negative image, means for projecting said negative image onto said thermal sensitive surface; and means for remote electrical viewing of said thermal sensitive surface while said negative image is projected onto said thermal sensitive surface.

3,090,831
SATELLITE MONITOR
Herman C. Schegler, 5519 Via del Valles, Terrance, Calif.
Filed Aug. 15, 1961, Ser. No. 131,690
4 Claims. (Cl. 178—6.8)
(Granted under Title 35, U.S. Code (1952), sec. 266)

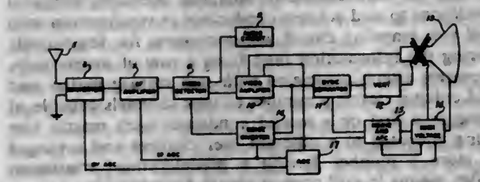
1. An astronomical instrument for monitoring objects in the celestial sphere, said instrument comprising a series of objective lens elements mounted in the form of a hemisphere, a series of corresponding projection lenses radially inwardly spaced from said objective lens elements, each of said projection lenses being in optical alignment with a corresponding objective lens element, an apertured member interposed between said series of objective lens elements and projection lenses, each of the apertures in said apertured member being in alignment with a corresponding objective lens element and projection lens to allow unrestricted passage of image carrying light therethrough,

a photosensitive device disposed at the geometric center of said hemisphere for receiving image carrying light from the lens systems and translating said light into electrical impulses, and means for discriminating between said elec-



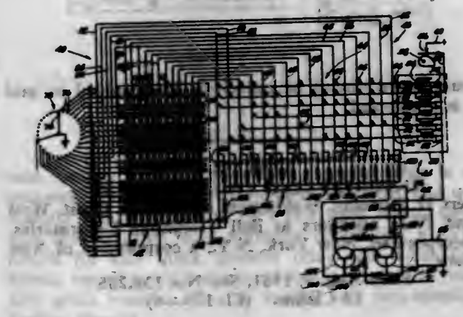
trical impulses such that the impulses created by light from relatively stationary objects are cancelled while the impulses from moving objects are allowed to pass to a display tube indicating the direction and velocity of the moving object.

3,090,832
NOISE CANCELLATION CIRCUIT
Earl C. Floyd, Westchester, Ill., assignor to Admiral Corporation, Chicago, Ill., a corporation of Delaware
Filed Jan. 30, 1961, Ser. No. 85,614
3 Claims. (Cl. 178—7.3)



1. In combination in a television receiver including means for producing a composite video signal having information components and periodic reference components from a received television signal, said reference components being greater in magnitude than said information components, said television signal being subject to undesired spurious components of greater magnitude than said reference components; a video amplifier and a load resistor therefor; means for applying said composite signal to said video amplifier; a noise inverter tube for inverting and cancelling said spurious components including an anode, a cathode and a control grid; a resistor connected between a point intermediate the ends of said video amplifier load resistor and said anode for coupling the output of said video amplifier to said noise inverter anode at reduced level; means for coupling said composite video signal to said cathode at a reduced level; means for applying a constant direct current bias to said control grid whereby said noise inverter tube only conducts on signals of greater magnitude than said reference components; control voltage means coupled to said video amplifier load resistor for developing a control voltage in accordance with the magnitude of said reference components; means in said video amplifier, and responsive to the conduction current in said video amplifier, coupled to said control voltage means for conveying information regarding changes in said conduction current thereto; and means for coupling said control voltage to said control grid whereby the conduction level of said noise inverter tube is automatically adjusted as the level of said composite video signal varies.

3,090,833
CODE TRANSLATING APPARATUS
Raymond E. Zenner, San Marino, Calif., assignor, by mesne assignments, to Victor Comptometer Corporation, Chicago, Ill., a corporation of Illinois
Filed Apr. 20, 1961, Ser. No. 104,377
6 Claims. (Cl. 178—26)

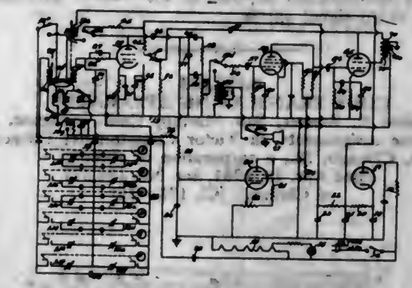


3. In apparatus for handling information in code, the combination of a plurality of signal conductors selectively energized by code signals, a potential source having a voltage bias relative to said conductors, a first impedance connected in series with said potential source, a plurality of second impedances connected between said first impedance and said respective conductors, means for completing circuits from said voltage source through said conductors selectively whereby the voltage drop across said first impedance is a function of the number of conductors through which circuits from said voltage source are established simultaneously, a trigger circuit including said first impedance and being connected between said potential source and all of said conductors to conduct through a predetermined path only when a circuit is established through at least one of said conductors, said trigger circuit including circuit means controlled by the voltage drop across said first impedance to effectively stop conductance through said path when the voltage drop across said first impedance exceeds a predetermined value in response to completion of circuits through a predetermined plurality of said conductors, and a safety circuit responsive to the current flow in said path.

3,090,834
INPUT CIRCUIT FOR INTERCOMMUNICATION SYSTEM
Arie Liberman, % Talk-A-Phone, 1512 S. Pulaski Road, Chicago, Ill.
Original application May 31, 1955, Ser. No. 512,206, now Patent No. 2,980,767, dated Apr. 18, 1961. Divided and this application Oct. 23, 1956, Ser. No. 617,713
6 Claims. (Cl. 179—2.5)

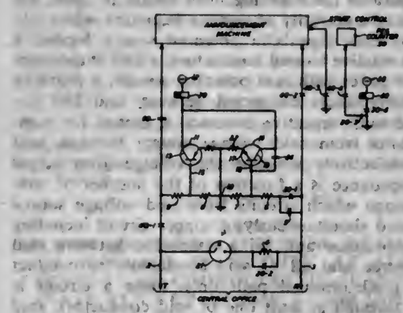
1. In a carrier intercommunication system which includes a plurality of stations and a power line interconnecting the stations and to which other loads may be connected, coupling means of the character described for connecting one of said stations to the line, comprising: a line coupling circuit for said station tuned to the carrier frequency; a choke having an impedance at carrier frequency, less than the impedance of said coupling cir-

cuit; and means for connecting said coupling circuit and said choke in series across said line, whereby the effect



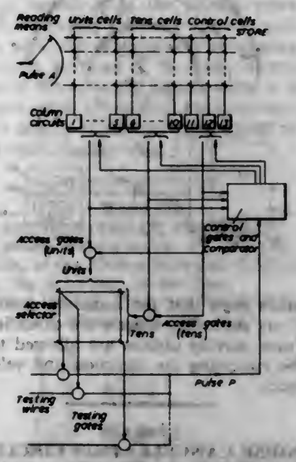
on said tuned circuit of capacitive loads added to said line is minimized.

3,090,835
INTERCEPTING TRUNK CIRCUIT
Robert D. Kroning, Wallington, and Joseph Orost, West End, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Aug. 9, 1961, Ser. No. 130,285
12 Claims. (Cl. 179—6)



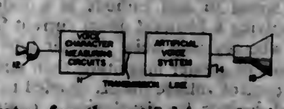
3. An intercepting trunk circuit for connecting the tip and ring conductors in a telephone line to an announcement machine comprising first and second conductors having first and second normally open contacts connecting said tip and ring conductors to said machine, first amplifying means connected to said second conductor being initially operative in response only to alternating signals appearing in said second conductor, second amplifying means connected to said first conductor, relay means connected to said first and second amplifying means responsive to the operation of either said first or second amplifying means, breakdown means connected across said first and second conductors for breaking down in response to the energization of said relay means by alternating signals appearing in said second conductor to present a low impedance to signals appearing in said first and second conductors, means operative in response to the energization of said relay means by said alternating signals for controlling said first amplifying means to be responsive to direct current signals appearing in said second conductor, and means responsive to the energization of said relay means for closing said first and second normally open contacts at a predetermined time after the energization of said relay means.

3,090,836
DATA-STORAGE AND DATA-PROCESSING DEVICES
Wincenty Bezdel, London, England, assignor to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware
Filed Oct. 29, 1958, Ser. No. 770,334
Claims priority, application Great Britain Nov. 8, 1957
7 Claims. (Cl. 179—15)



1. Electrical operational control equipment comprising a matrix of bi-stable storage cells provided with row conductors, column conductors, a row scanning device for repetitively scanning said row conductors and applying operating potential conditions thereto, individual column circuits for simultaneously applying operating potential conditions to said column conductors in synchronism with said row scanning circuit, column stores for temporarily storing the information read from a row of matrix cells, a control circuit associated with said storage matrix and said column stores, a number of user channels capable of being in a first or a second condition, each matrix row being allocated to a different user channel and arranged to store a number having a predetermined maximum value, means in said control circuit for precessing a number stored in any one of said matrix rows repetitively between two predetermined values during periodic scans of the matrix rows throughout any period in which the associated user channel is in a first condition, and for staticising a number in said row throughout any period in which the associated user channel is in a second condition, the precessing process and the value of the staticised number each having an operational significance.

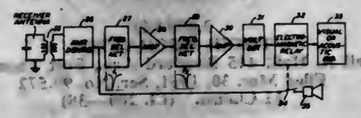
3,090,837
SPEECH BANDWIDTH COMPRESSION SYSTEM
William C. Dersch, Los Gatos, Calif., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Apr. 29, 1959, Ser. No. 809,694
5 Claims. (Cl. 179—15.55)



1. Apparatus for the artificial production of speech comprising means for analyzing a speech current to derive therefrom a plurality of amplitude control signals which are individually representative of the amplitude of said speech in a plurality of different frequency ranges,

means for deriving from said speech current a plurality of frequency control signals which are individually representative of the frequency of said speech in a plurality of different frequency ranges, a voice noise generator for generating a plurality of voice noise signals having the same characteristics as said speech current in a plurality of different frequency ranges, means for selectively passing a variable portion of said voice noise signals in response to variations in said frequency control signals, means for modulating the power of the passed part of said portion of said noise signals in response to variations in said amplitude control signals, and means for combining said frequency modulated, power modulated signals to produce a composite audio signal for the recreation of said speech.

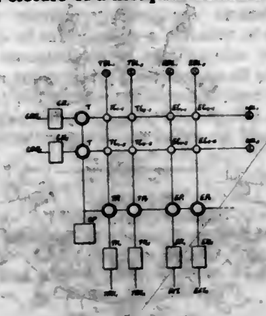
3,090,838
SELECTIVE SIGNALING SYSTEM
Colin Coates, Oxhey, Watford, and William E. Lardner, Harrow Weald, England, assignors to Westrex Company, Limited, London, England
Filed Apr. 15, 1958, Ser. No. 728,673
11 Claims. (Cl. 179—84)



1. A selective signaling system comprising a transmitter and a plurality of receivers, means at said transmitter for producing a signal of particular frequency, means at said transmitter for producing a plurality of signals of frequencies different from each other and from said particular frequency for identifying discrete receivers, means at said transmitter for alternately rendering said particular signal means or said different signal means effective to transmit the respective particular or different signals to said receivers, and frequency selective means at each of said receivers to pass said particular signal received thereat to produce an output signal with at least a predetermined level for simultaneously establishing non-operative conditions in all said frequency selective receivers, said means at said receivers identified by one of said different signals selectively rejecting said one different signal received thereat to produce an output signal with a level less than said predetermined level of said particular signal for selectively changing the non-operative condition at each of said receivers to an operative condition, said receivers normally being operative in the absence of signals of said particular frequency.

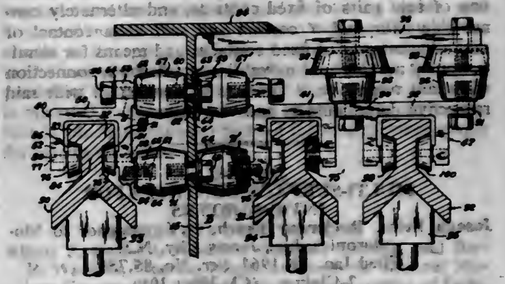
3,090,839
CORDLESS SWITCH BOARD
Sōhei Inaba, Tokyo, Shirō Kōno, Isezaki-shi, Gunma, Wakō Iwamura, Tokyo, and Tōru Mikami, Kiryu-shi, Gunma, Japan
Filed Apr. 12, 1960, Ser. No. 21,788
10 Claims. (Cl. 179—91)

1. In a cordless telephone switchboard for interconnecting selected first lines to selected second lines, and including an operator's line; a plurality of self locking operator's line connecting relays each operable when energized, to connect a respective associated first line to said operator's line; a plurality of self locking line interconnection relays equal in number to the total connection points between said first lines and said second lines and each operable, when energized, to connect its associated first line to its associated second line; normally open first push button switches each associated with a different first line and each effective, when selectively momentarily manually closed, to energize the associated operator's line connection relay; normally open second push button switches each associated with a different second line and each effective, when selectively momentarily manually closed, to energize the particular associated second hold relay associated with a first line then having its associated first hold relay energized; a quick transfer relay in said operator's line controlling the locking circuits of said operator's line connecting relays and energized immediately upon closure of a first push button switch, to open



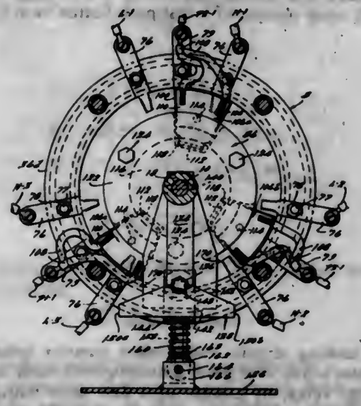
said locking circuit; and a slow transfer relay in said operator's line energized simultaneously with said quick transfer relay, by closure of a first push button switch; said slow transfer relay normally completing a locking circuit for said quick transfer relay and, when transferred, opening said last-named locking circuit to restore said first-mentioned quick transfer relay to restore said first-mentioned locking circuits.

3,090,840
CONDUCTOR BAR SUPPORT
Roy F. Dehn, Wickliffe, Ohio, assignor to The Cleveland Crane & Engineering Company, Wickliffe, Ohio, a corporation of Ohio
Filed June 4, 1958, Ser. No. 739,805
4 Claims. (Cl. 191—23)



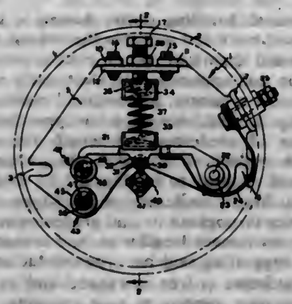
1. In a material handling device having a track, an apparatus on said track and movable therealong, electrical equipment on said apparatus and an electric current contact member on said apparatus and electrically connected to said electrical equipment, an electrical conductor system comprising: a rigid, elongated bar-type electric current conductor of predetermined length formed of a material which expands or contracts upon change in its temperature and adapted to be engaged by said contact member, means fixedly anchoring said bar-type conductor at only one point throughout its said predetermined length against bodily movement lengthwise, and means rollably engaging and supporting said bar-type conductor adapted so that the conductor is free to expand and/or contract without deformation relative to said engaging and supporting means but is fixed against lengthwise bodily movement.

3,090,841
TRANSFORMER CONTROL SWITCH
Clement C. Pionkowski, East Detroit, Mich., assignor to The Udylite Corporation, Detroit, Mich., a corporation of Delaware
Filed Nov. 23, 1959, Ser. No. 854,918
9 Claims. (Cl. 200—11)



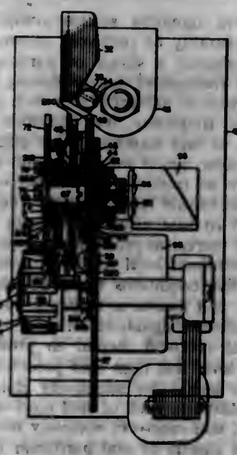
2. In a tap selector switch for controlling the output voltage of a three-phase transformer including three phase switches each comprising a series of fixed tap contacts, a common contact, and means for progressively connecting the common contact with one of said fixed tap contacts of said series of fixed tap contacts, the improvement comprising a Y and delta switching mechanism mechanically connected to the phase switches and operable when all of the common contacts have successively advanced through all of the respective fixed tap contacts of each of the series of fixed tap contacts, said switching mechanism comprising three pairs of fixed contacts each pair comprising a Y contact and a delta contact, three movable contacts each disposed adjacent to one of said pairs of fixed contacts, and alternately connectable with said Y contact and said delta contact of said adjacent pair of fixed contacts, and means for simultaneously moving said movable contacts from connection with said respective Y contacts to connection with said respective delta contacts and vice versa.

3,090,842
MULTI-SURFACE CONTACTS FOR INTERRUPTERS
Joseph Feins, Rockaway Beach, N.Y., assignor to Motoronics, Inc., Jersey City, N.J.
Filed Jan. 30, 1961, Ser. No. 85,750
2 Claims. (Cl. 200—30)



1. In a distributor which has a rotary cam member and a breaker plate as well as a contact arm member one end of which is pivoted to the breaker plate, a multi-surface contact arrangement consisting of an insulating member secured to the breaker plate and having a threaded hole, a threaded bolt screwed through said insulating member, a cup member having a threaded bore and being screwed upon a portion of said bolt which extends beyond said insulating member, antifriction means mounted on the contact arm member of the distributor being adapted for engaging the cam member of the same, resilient means interposed between said arm member and said cup member tending to swing the arm member toward the aforementioned cam member, a pair of parallel core members one of which is secured to said arm member while the other is secured to said breaker plate, a sleeve member attached to the outer side of each core member having a wall portion and a perforated head portion, and a retaining screw screwed through the head portion of each sleeve member into a core member, said core members being constructed and arranged for allowing a tangential engagement of said sleeve members with each other whenever said arm member is in a predetermined end position of its swinging movement.

3,090,843
TIMER MECHANISM
Mitchell A. Hall, 445 Romford Ave., Fort Thomas, Ky.
Filed Mar. 30, 1961, Ser. No. 99,572
11 Claims. (Cl. 200—38)

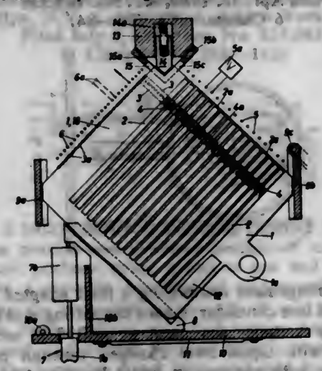


1. In a timing mechanism, the combination of switch means for opening and closing an electric circuit, and means including a movable member for controlling said switch means, a coin slide, a device reciprocable repeatedly by the coin slide to under certain conditions, produce a stepping advancement of said movable member, and means operated by manipulation of the coin slide for conditioning said device in advance of closing of the electric circuit, to predetermine the number of reciprocations required of said device to effect a single step advancement of the movable member.

3,090,844
ELECTRICAL SWITCHING APPARATUS
Benno Stroz, Freiburg im Breisgau, Germany, assignor to Fritz Hellige & Co., G.m.b.H., Freiburg im Breisgau, Germany
Filed July 12, 1960, Ser. No. 42,444
Claims priority, application Germany July 16, 1959
3 Claims. (Cl. 200—46)

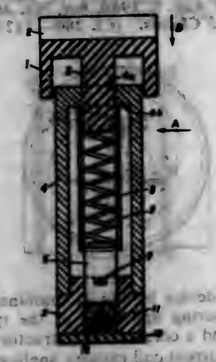
1. Electrical switching apparatus comprising a first set of contacts, a second set of contacts adapted to be placed

in electrical communication with contacts of the first set according to a preselected programme, a programme register, and a casing removably supporting said register, said register comprising a plurality of individual programme boards each having a first set of electrically conductive strips mutually insulated from one another, a second set of electrically conductive strips mutually insulated from one another and arranged transversely of those of the first set and a plurality of electrical connecting means connecting individual strips of the first set to preselected individual strips of the second set at points where they cross one another, the strips of the first set being otherwise



electrically insulated from the strips of the second set, said connecting means being arranged according to a programme which is different for each programme board of the register, means supporting said programme boards in parallel side-by-side relationship and slidably guiding said boards, and individual operating means associated with each programme board for sliding a selected one of said programme boards to bring the individual strips of the means associated with each programme board for bringing the first and second sets of contacts respectively, and locking means for releasably locking said register in its operative position in said casing.

3,090,845
THREAD CONTROL SWITCH
Karl Rütsche, Romanshorn, Switzerland, assignor to Oehler A.G., Au, Sankt Gallen, Switzerland, a corporation of Switzerland
Filed Nov. 25, 1960, Ser. No. 71,630
Claims priority, application Switzerland Nov. 27, 1959
6 Claims. (Cl. 200—61.18)



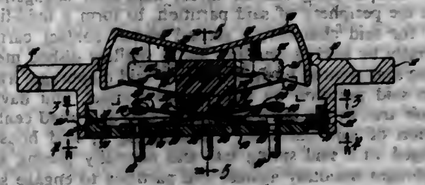
1. In a system for indicating a break in threads to be watched: a plurality of feeler members arranged in a row, a metallic casing of U-shaped cross section common to said feeler members and partially housing the same, said feeler members being movable independently of each other and being adapted to engage the threads to be watched, a plurality of metallic tubular members respectively associated with said feeler members and having that end which is adjacent the top of said casing in engagement with the respective adjacent feeler member, said tubular members respectively extending between the side walls of said casing, a plurality of spring means respectively mounted within said tubular members, and stationary conductor means common to all of said tubular members and electrically connected thereto, each of said tubular members contacting the bottom side of said casing when said feeler members are under no load.

3,090,846
TUMBLER SWITCH
Kazuma Tatetski, 21-chome Narutaki Harukicho, Kyoto City, Japan
Filed Aug. 4, 1960, Ser. No. 47,440
1 Claim. (Cl. 200—67)



A tumbler switch comprising, a frame, a flat spring carrying a movable contact, one end of the spring being attached to the frame, the frame having grooves located remotely from the last-mentioned end of the spring, the spring having shoulders adjacent to its opposite end and which shoulders engage with the grooves, the frame having an aperture located between the grooves, the spring having an end part extending through said aperture and projecting beyond the frame, a U-shaped loop member fitting over and embracing said end part of the spring, said U-shaped member having a rounded bight and having legs riveted to the spring, an inverted U-shaped shaft, a rocking button mounted on said shaft over the loop, the upper portion of the frame having spaced lugs in which said shaft is mounted, said button having a groove in its under surface in which the rounded bight of the loop member snugly fits belows the shaft.

3,090,847
CIRCUIT CONTROLLER
Albert J. Colautti, Windsor, Ontario, Canada, and Bert R. Wanless, Warren, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Aug. 1, 1960, Ser. No. 46,692
4 Claims. (Cl. 200—68)



1. A circuit controller comprising, in combination, a housing, a base secured to said housing and including a stationary contact, a movable contact arm secured adjacent one end thereof to said base, a contact mounted on said arm adjacent the free end thereof and normally held

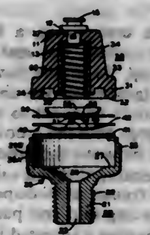
out of engagement with said stationary contact, said arm being of bimetallic construction and having one longitudinal portion thereof flexing in the direction of closure of said contacts upon heating of said arm, an actuator mounted on said housing and biased to neutral position, said actuator being engageable with said arm to close said contacts and heat said arm, and means on said one longitudinal portion of said arm interengageable with cooperating means on said actuator upon closure of said contacts to hold said actuator in a position to maintain said contacts in closed position, said one longitudinal portion of said arm flexing in said direction upon heating of said arm for a predetermined period of time to move said means on said arm out of engagement with said means on said arm out of engagement with said means on said actuator and release said actuator to permit said actuator to return to neutral position, said flexing movement of said arm in said direction tending to hold said movable contact in engagement with said stationary contact for a period of time sufficient to permit said actuator to return to neutral position before said arm moves said movable contact out of engagement with said stationary contact.

3,090,848

FLUID PRESSURE ACTUATED SWITCH

Peter S. Scholz, Cranford, N.J., assignor to Paragon Products Corporation, Newark, N.J., a corporation of New Jersey

Filed Nov. 6, 1959, Ser. No. 851,324
1 Claim. (Cl. 200—83)



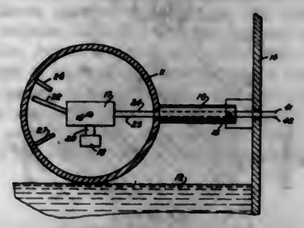
A fluid pressure operated switch comprising, in combination, means defining a housing including a fluid chamber of electrically conductive metal and an unrestricted bore leading into said chamber and arranged for connection to a source of fluid under pressure; a fixed electrically conductive metal partition extending across said chamber in electrical contact therewith and having a central portion formed with a plurality of relatively small diameter apertures for restricted flow of fluid therethrough, said partition constituting a first contact of said switch; a flexible imperforate diaphragm assembly superposed on said partition on the surface thereof away from said bore, and including a flexible diaphragm of dielectric material, having its periphery in fluid-tight engagement with said housing and in direct fluid-tight engagement with the periphery of said partition, to form a fluid-tight seal for said chamber, a second switch contact carried centrally by said diaphragm, and a shallow dished metal spring seat secured to the surface of said diaphragm away from said partition by said second contact, and having a base area of the order of that of said apertured central portion of said partition; a coil spring in said housing engaged with said spring seat and normally biasing said diaphragm smoothly against said partition to engage said first and second contacts; said partition limiting deflection of said diaphragm by said coil spring substantially to a position in which said first and second contacts are engaged; the central portion of said diaphragm, when the pressure of the fluid in said chamber acting through said flow restricting apertures against the diaphragm exceeds the force of said coil spring, moving away from said partition to disengage said contacts; and means engageable with said spring seat and limiting outward movement of the central portion of said diaphragm; said apertures restricting flow of fluid between said bore and said diaphragm to protect said diaphragm against the effect of sudden pressure increases in said fluid chamber.

3,090,849

LIQUID LEVEL RESPONSIVE SWITCH

Victor Coulin, Sofecles 342–B, Mexico City, Mexico

Filed Apr. 20, 1960, Ser. No. 109,235
6 Claims. (Cl. 200—84)



1. An arrangement comprising a float adapted to float on the liquid in a container; means supporting said float for substantially arcuate movement as said float moves up and down with liquid level changes, through positions which differ with changes in liquid level so that at any one liquid level said float will have a position and inclination different from the position and inclination of the float at any other level, said float having a first position and inclination when the liquid level is at a preselected height and a second position and inclination when the liquid level is lower than said preselected height by a predetermined extent; and switch means pivotally mounted in said float and adapted to be connected in an actuating circuit comprising a circuit contact and a contact component pivotally mounted in said switch means in a manner whereby said contact component is inclined at an angle with reference to said switch means and contacts said contact to close said actuating circuit when said float is in said second position and whereby said contact component is inclined at another angle with reference to said switch means and breaks contact with said contact to open said actuating circuit when said float is in said first position.

3,090,850

CONTROL APPARATUS

Ralph E. Young, Hutchinson, Minn.

Filed Aug. 8, 1960, Ser. No. 48,184
5 Claims. (Cl. 200—112)



1. A control device having in combination, an electrical power measuring apparatus of the type including a rotatable disc and a core and coil structure having a voltage coil and a current coil causing application to said disc of a torque proportional to the electrical power transmitted and related to the voltage impressed upon the voltage coil and the current flowing through the current coil,

a mechanical linkage connected with the disc to operate as the disc is turned, a tiltable carriage having a mercury switch thereon to be tilted with the carriage to perform a switching operation, said carriage being connected with said linkage to prevent rotation of the disc, but permit limited turning of the disc whereby to be tilted as the disc is turned and thereby operate the switch.

3,090,851

FLASHER SWITCH

Leopold Strauss, East Rockaway, and Harold L. Loew, Jackson Heights, N.Y., assignors to Ideal Corporation, Brooklyn, N.Y., a corporation of New York

Filed July 8, 1959, Ser. No. 825,681
11 Claims. (Cl. 200—113)



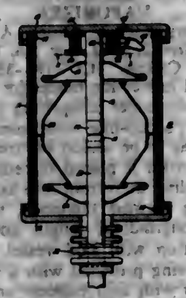
1. In a switch device, a switching member comprising a tension portion and a tongue portion of resilient material, said portions being united at one end thereof to constitute a movable free end of said member, means anchoring the respective other ends of said portions in relatively fixed positions with said tension portion under tension and said tongue portion under compression between the respective fixed ends and said free end, the fixed end of said tongue portion being cantilevered on its anchoring means, the tongue portion being held bent elastically between its ends into a reversely elastically curved formation which crosses the line of tension of said tension portion with a first part of said formation curved elastically in one direction only from said cantilevered end to said line of tension, so that said first part continuously exerts a moment urging said free end in the direction opposite to the direction of its bend, and with another part of said formation curved oppositely into and joined with said free end from the other side of said line; said portions normally coacting to bias said free end to one switching position, and being responsive to a change of their relative positions to switch said free end to another position.

3,090,852

GETTERING ARRANGEMENT FOR A VACUUM CIRCUIT INTERRUPTER

Allan Greenwood, Havertown, Pa., assignor to General Electric Company, a corporation of New York

Filed Feb. 11, 1960, Ser. No. 8,067
7 Claims. (Cl. 200—144)



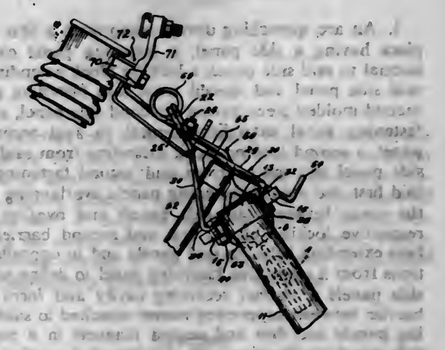
1. An alternating-current circuit interrupter of the vacuum-type having a predetermined rated continuous current, said interrupter comprising an evacuated envelope, a pair of separable contacts disposed within said envelope, a conductor for supplying current to said contacts, a getter element disposed within said envelope and operable when heated to a predetermined temperature to clean-up gases present within said envelope, means for heating said getter element to at least said predetermined temperature level during the flow of normal current through said vacuum interrupter comprising a saturable core of magnetizable material disposed about said conductor, a secondary winding inductively coupled to said core, and means for arranging said getter element to be heated by current flowing through said secondary winding, said core having magnetization characteristics that cause saturation of said core to occur at a level of current through said conductor not substantially exceeding the rated continuous current of the interrupter.

3,090,853

ADAPTER FOR SWITCH OPERATOR

Robert M. McDonald, Jackson, Mich., assignor to James R. Kearney Corporation, St. Louis, Mo., a corporation of Delaware

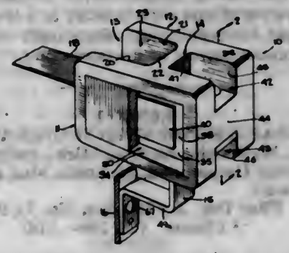
Filed Dec. 2, 1960, Ser. No. 73,283
3 Claims. (Cl. 200—114)



1. In a circuit interrupter type of tool for opening a high voltage circuit isolating device such as a disconnecting fuse, disconnecting switch, or the like, normally carrying line current and having a fixed current carrying member and a fixed energized terminal contact member connected therewith, a current carrying member movable into and out of engagement with said terminal and an eye for receiving a hook to move the movable member, said tool including a housing, separable contacts within the housing, conducting means electrically connected with one of said contacts and said eye, an insulated handle mounting said conducting means to move said means into said eye and separate said movable current carrying member from said fixed terminal member and subsequently separate said separable contacts on continued movement while said housing remains stationary with respect to said device, and a second conducting member connected with the other of said separable contacts and fixed with respect to said housing having spaced arms and a ring swiveled therebetween adapted to engage an anchor on said fixed members, the improvement adapting said tool for use on devices without an anchor to receive the swiveled ring comprising, a hook member adapted to engage said fixed current carrying member and anchor the tool thereto, divergent legs extending away from the hook member, lugs on the ends of said legs directed angularly with respect to the plane of the legs and secured to said spaced arms carrying said swiveled ring to thereby hold said housing stationary

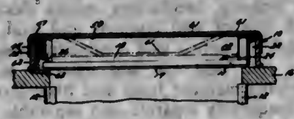
with respect to said device, said hook member and said lugs being spaced to fix the distance therebetween to properly locate said tool with respect to said device.

3,090,854
PERMANENT MAGNET BLOWOUT FOR A CONTACTOR
Frederick Kretzschmar, Nanuet, N.Y., assignor to Ward Leonard Electric Co., Mount Vernon, N.Y., a corporation of New York
Filed Nov. 21, 1960, Ser. No. 70,508
6 Claims. (Cl. 200—147)



1. An arc quenching device comprising a first molded piece having a side panel, a fastening panel extending normal to said side panel, a locking block extending from said side panel and spaced from said fastening panel, a second molded piece having a second side panel, a second fastening panel extending normal to said second side panel, a second locking block extending from said second side panel and spaced from said second fastening panel, said first and second fastening panels overlapping to span the space between said side panels and overlap with a respective locking block, first and second barrier members extending between said panels and in opposite directions from a respective fastening panel to define with said side panels a contact receiving cavity and form an arc barrier between supporting means attached to said fastening panels and first and second magnets in a respective side panel overlapping with a substantial portion of said cavity to provide a flux extending across said cavity to extinguish an arc created across separating current carrying contacts positioned in said cavity.

3,090,855
TRANSPARENT SWITCH BOOT
Milton Morse, 41 Hancock St., Riverdale, N.Y.
Filed Oct. 31, 1961, Ser. No. 149,110
2 Claims. (Cl. 200—168)



1. A hermetic boot for use in conjunction with a panel-mounted push-button control, having an outwardly extending generally rectangular frame, comprising: a mounting frame element and a boot element, said mounting frame element including first flange means slidably engageable with a portion of said rectangular frame, and second flange means lying in a plane substantially parallel to the plane of said first flange means, said boot element including a flexible member of configuration corresponding to that of said mounting frame element, and having groove means selectively engageable with said second flange means, and a continuous flange adapted to bear against an outwardly disposed surface of said panel upon engagement of said groove means with said second flange means, said boot element including a metallic frame member surrounding said resilient member in sealed relation.

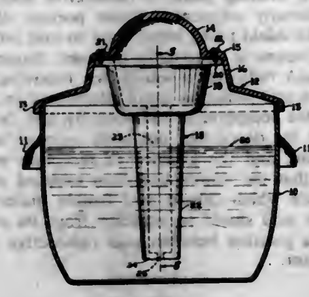
3,090,856
GAS TORCH LIGHTER
Hjalmer Rorvig, 342 Fillmore St. NE., Minneapolis, Minn.
Filed Oct. 13, 1959, Ser. No. 846,082
3 Claims. (Cl. 219—32)



1. A manually operated portable gas torch lighter comprising a hollow body member mounted on one end of an elongate handle member, a gas igniting resistance element mounted within said body member which heats to gas igniting temperature when an electric current is passed therethrough, said body member having an opening therein adjacent said element for admitting gas into said member, outwardly extending baffle means mounted on said member adjacent one side of said opening for directing gas thereinto, and a normally open switch in electrical circuit with said resistance element, said switch comprising a pair of spaced apart disconnected contact elements mounted on the outside of said member on the other side of said opening generally opposite said baffle means, said contact elements being capable of being engaged and bridged by the nozzle of a gas torch to close said circuit and heat said resistance element, said contact elements being positioned relative to said opening whereby the tip of said nozzle is directed towards said baffle and opening when the nozzle is in circuit closing engagement with said contact elements, and means for connecting said electrical circuit with a source of electric current.

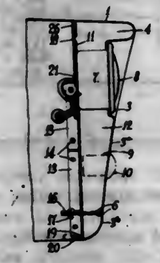
3,090,857
VAPORIZER
Walter J. Oberg, 8307 N. Elmore Ave., Niles, Ill.
Filed Nov. 2, 1961, Ser. No. 149,617
8 Claims. (Cl. 219—38)

2. An electrical immersion heater for use in a vaporizer including a fluid container comprising a removable cover for said container, a cup-like vessel removably connected to said cover so as to be sealed off from said fluid container when said cover is placed thereon, said vessel having a stem depending therefrom into said fluid container, said stem having formed therein a passage extending throughout its longitudinal length and terminating in open communication with said vessel, said stem at its lower extremity being provided with a restricted opening in communication with said passage and through which fluid to be vaporized is adapted to pass, said vessel and said stem being formed of non-corrosive insulated molded plastic heat conductive material, the material of said stem having molded therein a continuous coil of electrical resistance wire within said stem and convoluted about and in close proximity to the wall defining said passage,



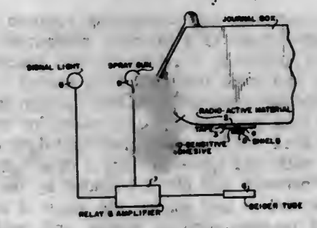
whereby the heat therefrom will vaporize only the fluid within said passage, and a conduit for said wire for connecting the same to an electrical power source.

3,090,858
BAFFLE FOR THE PROTECTION OF AUTOMOBILE HEADLIGHTS AND PARKING LIGHTS
James P. Hoffman, West Valley, N.Y.
Filed Feb. 9, 1961 Ser. No. 88,080
3 Claims. (Cl. 240—7.1)



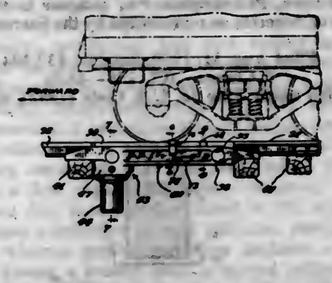
1. In combination, a front fender of a vehicle, said fender having a top wall, an outer side wall, an inner wall depending from the top wall and a front wall, said walls defining a fender chamber located above a front vehicle wheel, said front wall having near its lower end a rearwardly directed horizontal flange, a headlight unit supported within the fender chamber by said front wall, said headlight unit having a casing located behind said front wall, a headlight protecting baffle in the form of a plate conforming in outline and substantially conforming in dimensions to the cross-sectional outline and dimensions of said fender chamber, said baffle being supported within said fender chamber by the walls thereof in a substantially vertical transverse plane behind the casing of the headlight unit and with its edges adjacent to the walls of the fender chamber to define at the front end of the fender a chamber in which the headlight unit is positioned and which is occluded from the part of the fender chamber behind the baffle to present a physical barrier to debris picked up by the front vehicle wheel from the road surface and thrown forwardly toward said fender chamber, thereby to prevent its passage into the occluded chamber, the baffle having a rearwardly directed plate-like horizontal projection connected to the flange of the front wall of the fender chamber for supporting the baffle, said baffle being connected to and supported by the casing of the headlight unit, said baffle including spaced flange means provided at the edge portions thereof and extending angularly therefrom, said last-mentioned spaced flange means being connected to and supported by said inner wall of the front fender, said baffle including outwardly extending resilient sealing means secured to portions of the edge portion thereof and engaging the adjacent fender wall portions to provide an effective seal between the baffle and the wall portions of the fender, the lowermost portion of said baffle being spaced from the lowermost portion of said front wall of the fender.

3,090,859
OVERHEATED JOURNAL BOX DETECTION SYSTEM COMPRISING RADIOACTIVE SOURCE AND DETECTOR
Walter H. Rodin, 7536 S. Kingston Ave., Chicago, Ill.
Filed Dec. 27, 1956, Ser. No. 631,007
1 Claim. (Cl. 246—169)



In a railroad car, a journal box, a body of radioactive material on the under portion of the journal box, a shield adapted to absorb emanations from the radioactive material, and an adhesive having a fusion temperature of less than 400° F. between the shield and the journal box securing the shield under the radioactive material, whereby abnormal heating of the journal box may be detected by a radioactivity detector beneath its path.

3,090,860
APPARATUS AND METHOD FOR DETERMINING BEARING CONDITION OF RAILWAY CAR JOURNAL BOXES
Richard B. Stanley, Park Ridge, Ill., assignor, by mesne assignments, to Free-Roll Tester Corporation, Chicago, Ill., a corporation of Illinois
Filed Dec. 16, 1955, Ser. No. 553,602
6 Claims. (Cl. 246—246)



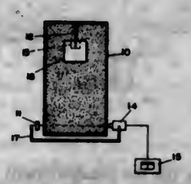
1. A device for the measurement of the operating characteristics of a railway car wheel which comprises a contact member located in a section of track and to be engaged by a railway car wheel passing thereover to move said contact member by the frictional resistance of said wheel, an electrical circuit, means connected to said contact member for varying an electrical current in said circuit, and indicating means connected to said electrical circuit for showing such current variations.

3,090,861
CELL FOR USE IN RADIATION ABSORPTION ANALYSIS
Edward O. Haenni, Bethesda, Md., assignor to the United States of America as represented by the Secretary of the Department of Health, Education and Welfare
Filed Jan. 28, 1960, Ser. No. 5,323
12 Claims. (Cl. 250—43)
(Granted under Title 35, U.S. Code (1952), sec. 266)



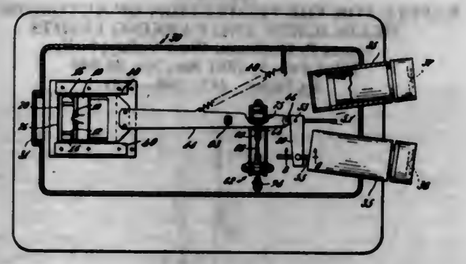
1. An absorption cell comprising opposed front and back window plates of a material transparent to a predetermined radiation, a relatively thin spacer between said front and back window plates having a generally centrally located aperture extending through said spacer, front and back pressure-applying means for forcing said front and back window plates into fluid-tight sealing engagement with said spacer so that a fluid-tight chamber is formed between said plates bounded by the periphery of the aperture in said spacer, the areas of contact between said pressure-applying means and said window plates being located outwardly of the periphery of the aperture in said spacer so that said window plates are free of obstruction to the passage of radiation therethrough at least throughout the area of the said plates which is coextensive with said fluid-tight chamber, means for establishing communication with said fluid-tight chamber solely through said spacer including one or more tubulate ports in the said spacer and one or more hypodermic needles cooperable with said one or more ports to deliver or withdraw fluid from said sealed chamber, and means for closing said means for establishing communication to said fluid-tight chamber, said spacer being made of a material sufficiently rigid and non-compressible to prevent collapse of said ports when pressure sufficient to form a fluid-tight seal between said spacer and window plates is applied to the latter.

3,090,862
RADIOACTIVE TEMPERATURE INDICATING DEVICES
Sigmund Berk, Philadelphia, Pa., assignor to the United States of America as represented by the Secretary of the Army
Filed Aug. 31, 1959, Ser. No. 837,304
7 Claims. (Cl. 250—43.5)
(Granted under Title 35, U.S. Code (1952), sec. 266)



6. A device for positively indicating whether a container-enclosed component has been previously subjected to critical temperatures comprising in combination therewith a shield releasably supported within said container and surrounded by said component, said shield having a recess adjacent an upper portion, a fusible material having a melting point substantially the same as the critical temperature of said component and secured within said recess, supporting means fixed to said container cooperating with said fusible material when the temperature is below said melting point, a radioactive source of radiation externally adjacent a lower portion of said container, said shield being impervious to said radiation, and detector means in externally opposed diametrical relation to said radioactive source for receiving said radiation when said radiation is not interrupted by said shield, whereby the reception of radiation by said detector indicates that the devce had not been exposed to a critical temperature, and the absence of reception of radiation indicates that the device had been exposed to a critical temperature which caused said fusible material to melt and allow said shield to separate from its support and fall into a position between said radioactive source and said detector.

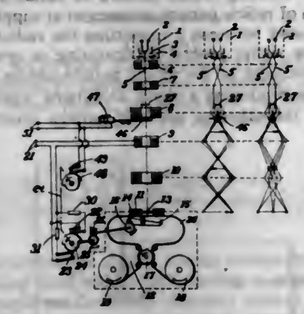
3,090,863
MONOCHROMATOR ADAPTED FOR USE IN THE ULTRA-VIOLET REGION
Paul M. McPherson, Acton, Mass., assignor to McPherson Instrument Corporation, Acton, Mass., a corporation of Massachusetts
Filed Jan. 31, 1962, Ser. No. 170,004
23 Claims. (Cl. 250—43.5)



1. Spectrometric apparatus comprising a housing; a concave diffraction grating within the housing; a stationary entrance aperture, said entrance aperture and the center of said grating defining an entrance optical axis; a stationary exit aperture, said exit aperture and the center of said grating defining an exit optical axis, the optical axes forming an acute angle at the grating; a mount for said grating which permits the grating both to rotate about an axis which is perpendicular to both of the optical axes and to translate in a straight-line towards and from said apertures, means for rotating said grating thereby to scan a spectrum at said exit aperture; cam and cam follower means one portion of which is attached to said mount and another portion of which is attached to said housing for producing a translation of said grating in response to its rotation appropriate for maintaining the spectrum always in focus on said exit aperture.

3,090,864
ELECTRON MICROSCOPE
Noboru Takahashi, Kofu-shi, Yamanashi-ken, and Kanichi Ashizawa, Tokyo, Japan, assignors to Kabushiki-kaisha Nihondenshi Kogaku Kenkyusho, Tokyo, Japan, a corporation of Japan
Filed June 15, 1961, Ser. No. 117,382
Claims priority, application Japan June 18, 1960
4 Claims. (Cl. 250—49.5)

1. An electron microscope comprising an electron gun for emitting an electron beam, an electron lens system composed of a converging lens, an objective lens, an intermediate lens and a projector lens which are disposed, stage by stage, along the advance direction of the electron beam, a fluorescent screen arranged in front of said electron lens system, means for energizing said intermediate lens with different energies as an electron microscopic image and diffraction pattern are obtained, and an iris device



disposed in front of said objective lens, and means for changing degree of opening said iris device as the electron microscopic image and diffraction pattern are obtained.

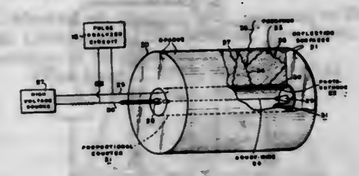
3,090,865
FLUOROSCOPIC INSPECTION APPARATUS
Justin G. Schneeman, 4726 Radford Ave., North Hollywood, Calif.
Filed Nov. 2, 1959, Ser. No. 850,412
15 Claims. (Cl. 250—52)



1. In a fluoroscopic inspection apparatus, the combination comprising:
a source of radiation for directing a beam of radiation horizontally;
a fluoroscopic image-producing means horizontally spaced apart from said source and in alignment with said beam;
an elongated frame positioned between said aligned source and image-producing means and supported on a surface for pivotal movement about a vertical axis to vary the angle at which said frame intersects a vertical plane including said source and image-producing means, the vertical axis of said frame being disposed in subetantially vertical alignment beneath said image-producing means and eccentrically with respect to said frame;
and a specimen support on said frame that is movable along said frame to intercept said beam between said source and said image-producing means, the angle of interception of a specimen with said beam being changeable by moving said frame pivotally about said vertical axis.

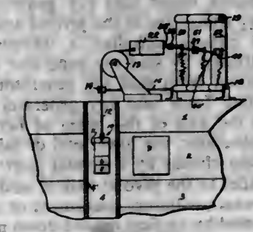
3,090,866
SPECTROMETER
Hezzie R. Brannon, Jr., Bellaire, Tex., assignor, by mesne assignments, to Jersey Production Research Company, Tulsa, Okla., a corporation of Delaware
Filed June 3, 1957, Ser. No. 663,023
3 Claims. (Cl. 250—71.5)

1. A gamma ray spectometer for use in well logging adapted to obtain a spectral analysis of the energies of gamma rays emanating into a borehole from subsurface formations comprising a large volume scintillator for intercepting and absorbing the total energy of gamma rays emanating from large volumes of the subsurface formations surrounding the borehole and producing light pulses of intensities linearly related to the energies of the intercepted gamma rays, a light sensitive proportional counter light coupled to said scintillator for detecting said light pulses and producing electrical pulses having amplitudes linearly related to the intensities of said light pulses



and therefore linearly related to the energies of the intercepted gamma rays, means for transmitting said electrical pulses to the earth's surface, a pulse height analyzer for analyzing said electrical pulses transmitted to the earth's surface and a recorder for recording the output of said pulse height analyzer to display a spectrum of pulses whose heights are linearly related to the energies of the gamma rays intercepted by the large volume scintillator.

3,090,867
METHOD OF AND APPARATUS FOR RADIOACTIVITY WELL LOGGING
Robert K. Swanson, Charles E. Jameson, and George W. Dingus, all of P.O. Box 1678, Pampa, Tex.
Filed Oct. 14, 1957, Ser. No. 690,090
5 Claims. (Cl. 250—83.3)



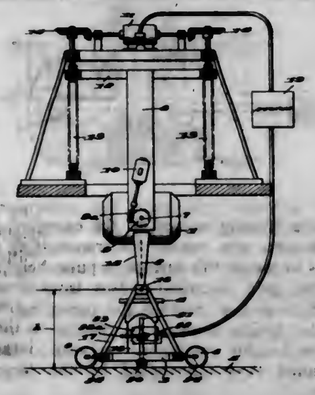
1. In combination w[illegible] a radiation receiving and detecting device adapted [illegible] be lowered into a bore hole and having a pulse o[illegible], a transistor pulse discriminating means comprising first and second transistor stages, wherein said first stage includes a first transistor having a first emitter, a first base and a first collector, a first resistance means connecting said first emitter to ground potential, a second resistance means connecting said first collector to a positive potential, a third resistance means connecting said first collector to said first base, and a first capacitance means connected at one side to said first base and connected at the other side to the output connection of said radiation detecting device, and wherein said second stage includes a second transistor having a second base, a second collector and a second emitter, a wire means connecting said emitter to ground potential, a fifth resistance means connecting said second collector to said source of positive potential, a sixth resistance means connecting said second base to said source of positive potential, a second capacitance means connecting said second resistance means to said sixth resistance means at points between said collectors and said resistance means, and wherein a third capacitance means connects said second collector to said first base.

3,090,868

DEVICE FOR A RADIATION PLANT COMPRISING RAY GENERATOR AND TREATMENT BED

Rolf Wideröe, Nussbaumen, near Baden, and Hermann Egger, Ennetbaden, Switzerland, assignors to Aktiengesellschaft Brown, Boveri & Cie., Baden, Switzerland, a joint-stock company

Filed July 6, 1959, Ser. No. 825,015
Claims priority, application Switzerland July 4, 1958
2 Claims. (Cl. 250—91)



1. Apparatus for radiation therapy comprising a support, a ray generator producing a beam of rays and mounted on said support for pivotal movement about a horizontal axis, a motor effecting oscillation of said ray generator about its pivotal axis, means mounting said support for raising and lowering movement in a plane perpendicular to the pivotal axis of said ray generator, a reversible servo motor for raising and lowering said support and said ray generator, a chassis under said ray generator movable along a trackway transverse to the pivotal axis of said ray generator, said chassis including a treatment bed for patients to be treated by said ray generator and towards which the radiation from said ray generator is directed, an arm depending from said ray generator in a direction parallel to the axis of the beam of rays emanating from said ray generator, the lower end of said arm being articulated to said chassis by a pivotal joint with a horizontal axis parallel to the pivotal axis of said ray generator whereby pivotal oscillatory movement of said ray generator accompanied by vertical up and down movement of said support therefor causes said chassis to be moved back and forth along said trackway, means resiliently mounting said chassis and bed for resilient movement in a vertical plane, means producing a variable control signal determined by the departure in height of said bed from a desired central position, and an amplifier to which said control signal is connected as input, the output from said amplifier being connected to said second reversible servo motor for varying the operating speed and direction thereof for raising and lowering said support in accordance with said control signal to maintain said bed at said desired central position when said ray generator is oscillated about its pivotal axis by said first motor.

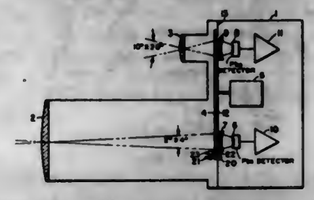
3,090,869

PHOTOSENSITIVE IMAGE MOTION DETECTOR

Robert W. Astheimer, Westport, Conn., assignor to Barnes Engineering Company, Stamford, Conn., a corporation of Delaware

Filed May 25, 1961, Ser. No. 112,687
6 Claims. (Cl. 250—203)

1. An instrument for producing an error signal corresponding to motion of a target image comprising in combination and in optical alignment a radiation detector, a reticle and mask combination and optical means for imaging a target onto the plane of the reticle, the reticle having thereon a repetitive pattern and mask combination comprising a moving reticle formed of bands inclined to the direction of reticle pattern movement at supplementary angles separated by areas transmitting the radiation used, two reference signal generators operating in synchronism with the movement of the reticle pattern across the mask aperture, one producing a signal at pattern repetition frequency and the other ta one-half pattern repetition fre-



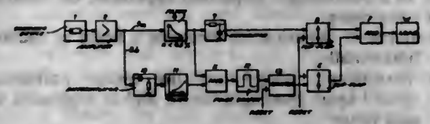
quency, whereby a signal from the radiation detector in the form of rectangular waves is produced, synchronous rectification means actuated by each of the reference signal generators, electronic processing circuits including limiters interposed between detector output and synchronous rectification input whereby the two synchronous rectifiers demodulate the signal producing demodulated signals proportional to the departure of target image from a center position on the reticle in two orthogonal directions.

3,090,870

DETECTION OF STAMPS ON DOCUMENTS

Horst Ruckert, Berlin-Wittenau, Germany, assignor to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware

Filed Aug. 9, 1961, Ser. No. 130,424
Claims priority, application Germany Aug. 18, 1960
7 Claims. (Cl. 250—219)



1. A circuit arrangement to determine the stamped condition of an envelope or document regardless of the background reflectance of the envelope as compared with the reflectance of a stamp having a certain number of reflectance variations below an optimum reflectance value comprising:

means to generate a signal voltage proportional to the successive reflectance values of a portion of said envelope on which a stamp may be normally placed;

means to apply said voltage simultaneously to the inputs of a first circuit having a first storage device and a second circuit having a second storage device including a bistable device;

means in said first circuit to store information in said first storage device only when said signal contains reflectance values lower than said optimum reflectance value for a predetermined time period;

a second means in said second circuit to store information in said second storage device only when said signal contains said certain number of variations in reflectance values exceeding a given range in a time period substantially equal to said first mentioned predetermined time period;

means connecting the output of each of said storage devices to an AND gate whereby the simultaneous occurrence of information in said devices produces a signal in the output of said AND gate to indicate the stamped condition of said envelope.

3,090,871

BATTERY CHARGING SYSTEM

Charles F. Germain, Box 6, Monroe, Ohio

Filed May 2, 1962, Ser. No. 191,989
3 Claims. (Cl. 307—10)



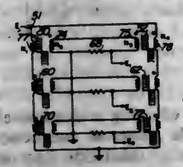
1. In combination with a towing vehicle provided with an operating electrical system having a generator and a voltage regulator; a battery charging system for an electrical system including a battery to be charged carried by a trailer towed by the vehicle comprising a battery charging circuit for interconnecting the electrical system of a trailer with a terminal of the voltage regulator supplying a battery charging voltage and a ground terminal, and a voltage measuring circuit for determining the charged condition of a battery connected thereto and for alternately determining the charging voltage of the system, said voltage measuring circuit including an electrical load resistance provided with an adjustable tap having a first terminal connected to said charging circuit and a second terminal connected to a grounded terminal of a towing vehicle through a switch means and a meter mechanism for providing a visual indication of the voltage of said charging system, said meter mechanism having a first terminal connected to said first terminal of said resistance and a second terminal connected to the adjustable tap of said resistance, said adjustable tap being positioned on said resistance to provide a meter indication proportional to the voltage of said charging system, said second terminal of said meter mechanism being connected to the adjustable tap of said resistance through a diode.

3,090,872

WAVEFORM TECHNIQUES

Lyle G. Thompson, Primos, Pa., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan

Filed Sept. 20, 1952, Ser. No. 310,602
34 Claims. (Cl. 307—88)



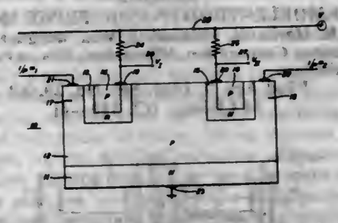
24. Time delay means comprising in combination, a saturable core reactor having a winding with two terminals, current limiting means connected in circuit with said winding, a pulsating electrical input energy source coupled to said circuits, output utilization means coupled to said reactor to utilize energy developed during saturation of said reactor whereby delay in application of energy to said utilization means is a function of the saturation energy applied to said reactor from said source by said current limiting means, at least one further winding on the saturable core reactor connected in series with said reactor winding to form a first series circuit, a plurality of other saturable core reactors coupled with a corresponding number of series windings in a second series circuit connected in parallel with the first series circuit, a further winding provided for each reactor, and a circuit connecting said further windings of a pair of corresponding reactors connected respectively in the first and second circuits and a load impedance device in series, said energy source being coupled across said parallel connected circuits and said utilization means being connected to said load device.

3,090,873

INTEGRATED SEMICONDUCTOR SWITCHING DEVICE

Ian M. Mackintosh, Stirling, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed June 21, 1960, Ser. No. 37,738
6 Claims. (Cl. 307—88.5)



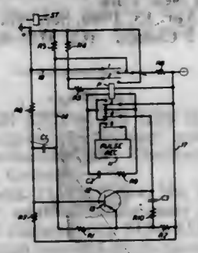
2. An integrated semiconductor switching device comprising a semiconductor body including a first zone of one conductivity type, a second zone of opposite conductivity type defining a PN junction with the first zone, a first pair of spaced zones each of the one conductivity type and contiguous with a limited portion of the second zone and forming a separate PN junction with the second zone, a second pair of spaced zones each of the opposite conductivity type and contiguous with a limited portion of a different one of the zones of the first pair, said body having no other zones, means for maintaining between said first pair of spaced zones and said first zone and between said second pair of spaced zones and said first zone a voltage which is less than the characteristic breakdown voltage of the therebetween included zones in the absence of a trigger pulse applied to said second zone, separate voltage means for applying voltage pulses to portions of said second zone remote from each other, and means for detecting output signals between said first zone and said pairs of spaced zones respectively.

3,090,874

RELAY PULSING CIRCUIT

Victor E. Rosene, Bloomfield, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

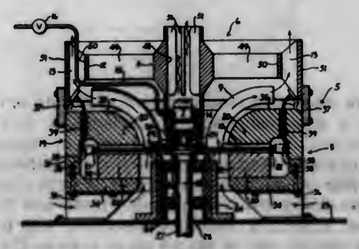
Filed July 26, 1961, Ser. No. 127,026
9 Claims. (Cl. 307—132)



1. A pulsing circuit comprising an electromagnetic relay having a primary winding and a secondary winding, means for applying current to said primary winding of a magnitude less than the normal operate value of the relay, means for applying current to said second-

ary winding, means for changing the direction of the current in said secondary winding whereby to aid the current in the primary winding and operate the relay or to oppose the current in the primary winding and release the relay, means including a capacitor for controlling initiation of the flow of current in said secondary winding, a first resistor, a second resistor, a third resistor, and means effective in turn during a single complete transition of said relay from released position to operated position for charging said capacitor through a first path, for discharging said capacitor through a second path, and for charging said capacitor through a third path, the effective resistance of said third path differing from that of said first path.

3,090,875
THERMOELECTRODYNAMIC PRIME MOVERS
Joseph R. Harkness, Milwaukee, Wis., assignor to Briggs & Stratton Corporation, Milwaukee, Wis., a corporation of Delaware
Filed Apr. 7, 1960, Ser. No. 20,662
14 Claims. (Cl. 310—4)



1. A prime mover comprising: an electric motor having an upright shaft; means providing a heat source substantially on the axis of the motor shaft and axially spaced to one side of the motor; a substantially annular thermopile electrically connected with the motor and axially spaced to said one side of the motor with its hot junctions disposed near the axis of the motor shaft to be exposed to heat from said source thereof and its cold junctions spaced outwardly of said axis from the hot junctions; and a fan driven by the motor, coaxial with the motor shaft and axially intermediate the motor and the thermopile, for moving cooling air across the cold junctions of the thermopile.

3,090,876
PIEZOELECTRIC DEVICES UTILIZING ALUMINUM NITRIDE
Andrew R. Hutson, Plainfield, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Apr. 13, 1960, Ser. No. 22,016
3 Claims. (Cl. 310—8)



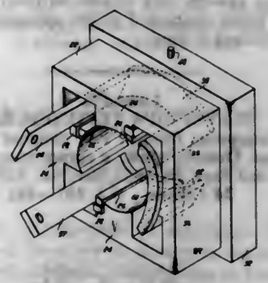
1. A piezoelectric device comprising at least one element consisting essentially of a single crystal of aluminum nitride and means for making electrode contact with the said element on two faces.

3,090,877
DYNAMOELECTRIC MACHINE
Donald H. Baumhart, Livonia, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Dec. 29, 1958, Ser. No. 783,353
4 Claims. (Cl. 310—154)



1. A dynamoelectric machine comprising a housing, a cylindrical split shell having an axial slot located to allow the shell to be compressed, a pair of permanent magnets, means engaging said split shell and said permanent magnets for holding said magnets within said split shell whereby said shell may be compressed, said split shell being positioned within and in engagement with said housing.

3,090,878
HIGH TEMPERATURE ELECTRICAL MACHINES
Henning Karlby, Pittsburgh, Pa., and William P. Caywood, Jr., Export, Pa. (both % Rockwell Mfg. Co., 400 N. Lexington Ave., Pittsburgh 8, Pa.)
Filed Sept. 26, 1955, Ser. No. 536,352
4 Claims. (Cl. 310—166)



1. A method of using a dynamo-electric machine having magnetizable material and conductive material and constructed free of insulation and other materials which are destructible by temperatures up to the expected range during normal operation comprising supplying a sufficient amount of operating power at a voltage of such low magnitude as to require no insulation to said machine while loading said machine during normal operation thereof to produce an alternating electrical current in the conductive material of a magnitude sufficient to produce losses in the machine which are transformed into heat with the rate of transfer of the heat produced by said losses to the rate of heat dissipation by the machine into its surrounding environment causing internal temperatures in the machine to be at least as great as 450° F. but not exceeding whichever of the following points occurs at the lower temperature: the melting point of the conducting material and the Curie limit of the magnetizable material.

3,090,879
VARIABLE SPEED MOTOR FOR WINDING APPARATUS
Hans Lobest, Remscheid-Lennep, Germany, assignor to Barmer Maschinenfabrik Aktiengesellschaft, Wuppertal-Oberbarmen, Germany
Filed Mar. 22, 1956, Ser. No. 573,264
Claims priority, application Germany Mar. 31, 1955
8 Claims. (Cl. 310—209)



1. A variable speed motor comprising an armature component having axially spaced apart magnetic path forming portions and a field component providing field poles angularly spaced apart with respect to the rotary axis of the motor, said field poles each comprising sections forming separate magnetic flux paths operatively associated with the armature component of the motor, said sections being spaced apart axially of the motor a distance substantially equal to the spacement of said path forming portions of the armature, and means to adjust the relative axial relationship of said components.

3,090,880
ELECTRICAL ROTATING MACHINES
Francois Henri Raymond, Saint-Germain-en-Laye, France, assignor, by mesne assignments, to Printed Motors, Inc., New York, N.Y.
Filed Oct. 21, 1957, Ser. No. 691,434
Claims priority, application France Nov. 7, 1956
14 Claims. (Cl. 310—268)



1. In a multipolar rotating electric machine, the combination of a disk-shaped rotor structure having a flat annular surface on one face thereof concentric with the axis of the rotor, a disk-shaped stator structure arranged on a common axis with said rotor structure and having a continuous single-plane annular surface facing the flat annular surface of said rotor structure, said annular surfaces being spaced apart to provide a planar air-gap between said structures, an electric winding mounted on said single-plane surface and comprising a plurality of flat conductors intimately secured to said single-plane surface and being angularly spaced about said common axis throughout the extent of said single-plane annular surface, a deposit of electrically insulating magnetic filler material bonded to the supporting surface of said winding and filling the gaps between said conductors to a depth flush with the outer faces of said flat conductors, said conductors being connected together in a closed winding to form an even number of magnetic poles spaced apart around said single-plane annular surface, alternate poles being of opposite polarity, and magnetic means located on the opposite side of said air-gap from said winding for closing the magnetic fields of said poles through said air-gap.

3,090,881
STORAGE TARGET ELECTRODE AND METHOD OF MANUFACTURE
Roger Paul Wellinger, Scotia, N.Y., assignor to General Electric Company, a corporation of New York
Filed May 19, 1960, Ser. No. 30,152
7 Claims. (Cl. 313—68)



1. A storage electrode comprising an annular support member, a taut membrane supported solely by said member and having a thickness of approximately 500 to approximately 1000 angstroms, said membrane consisting of a layer of interconnected granules of an homogeneous polycrystalline semi-conductive oxide characterized by substantially straight through electrical conductivity along the grain boundaries of said membrane, and a glassy phase of a material selected from the group consisting of the oxides and hydroxides of boron, silicon, calcium, strontium, barium, sodium, lithium, potassium, germanium and combinations thereof disposed in the interstices between said oxide granules, said glassy phase contributing to the tautness of said membrane and having no appreciable adverse effect on the electrical characteristics of said membrane.

3,090,882
ELECTRON GUN
Robert E. Beaway, Marion, Ind., assignor to Radio Corporation of America, a corporation of Delaware
Filed Apr. 13, 1960, Ser. No. 21,966
10 Claims. (Cl. 313—82)



1. An electron gun comprising axially aligned cathode, contol, screen, focusing, and accelerating electrodes next adjacent to each other in the order named; said screen electrode comprising a centrally apertured cup open toward said focusing electrode; said focusing electrode comprising a tubular member open at both ends; said accelerating electrode comprising a tubular member having a transverse end section adjacent said focusing electrode, said end section having an aperture therein; the diameter of said focusing electrode being larger than the diameter of said screen electrode cup and being at least approximately equal to the axial distance between the ends of said screen and accelerating electrodes closest to said cathode.

3,090,883
ELECTRIC HIGH PRESSURE DISCHARGE LAMPS
Arnold Bauer, Augsburg, Germany, assignor to Patent-Treuhand-Gesellschaft für Electrische Glühlampen MBH, Munich, Germany
Filed Aug. 11, 1960, Ser. No. 48,888
Claims priority, application Germany Aug. 14, 1959
25 Claims. (Cl. 313—113)

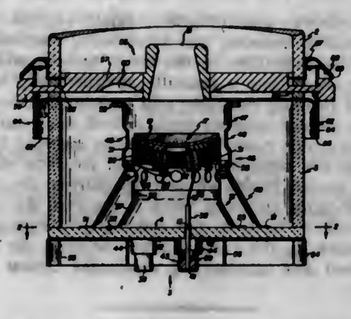
1. An electric high pressure discharge lamp having electrodes and an envelope therefor filled with gas selected from the group of rare gases, metal vapors and mixtures thereof will magnetic lacing and stabilizing of the discharge arc; the characteristic being that close to the discharge arc at least two magnet poles are so placed that,

alongside the discharge course for at least that particular part of the discharge course along which the arc discharge is to be laced and compressed, a non-homogeneous magnetic field is composed of strongly bent field lines essentially situated in areas traversing the discharge, said



lamp being further characterized by the fact that within the envelope is provided a metallic wall isolated electrically from the electrodes and so placed that the arc, laced-in magnetically from three sides, is magnetically pressed toward said wall.

3,090,884
ELECTRON GUN
George C. Morse, Woodside, Calif., assignor to Eitel-McCullough, Inc., San Bruno, Calif., a corporation of California
Filed Mar. 7, 1960, Ser. No. 13,020
6 Claims. (Cl. 313—256)



5. In an electron beam tube having an evacuated envelope, the combination comprising an end cap constituting a portion of the envelope wall and including a hollow dielectric cylindrical wall portion open at one end and a dielectric support plate portion closing the other end thereof, an electron emitting assembly mounted on said support plate, a focus electrode mounted on said support plate and operatively associated with the emitting assembly to focus electrons into a beam, and an apertured anode hermetically sealed to the open end of said end cap in operative relation to said emitting assembly to effect projection of a beam of electrons through the open end of the end cap.

3,090,885
ELECTRONIC HIGH FREQUENCY DUAL ELECTRON BEAM RETURN WAVE TUBE WITH CYCLOID BEAM
Rudolf Müller, Strasslach, Germany, assignor to Siemens & Halske Aktiengesellschaft, Berlin and Munich, a corporation of Germany
Original application Nov. 25, 1957, Ser. No. 698,576. Divided and this application Oct. 5, 1959, Ser. No. 844,562
Claims priority, application Germany Dec. 7, 1956
6 Claims. (Cl. 315—3.6)



1. A twin electron beam return wave tube, comprising means forming a decoupling system for the high frequency energy and a focusing system for the focused guidance of the electron beams in a single plane, said electron beams being propagated in opposite directions and periodically entering into mutually reciprocal action, said system comprising means for propagating said beams in mutually crossing static magnetic and electric fields which are directed transverse to the discharge direction, at least one of said electron beams being a cycloid beam.

3,090,886
ELECTRIC WAVE GENERATORS
Eric Albert Ash, London, England, assignor to International Standard Electric Corporation, New York, N.Y.
Filed June 6, 1960, Ser. No. 34,088
Claims priority, application Great Britain July 3, 1959
7 Claims. (Cl. 315—3.6)

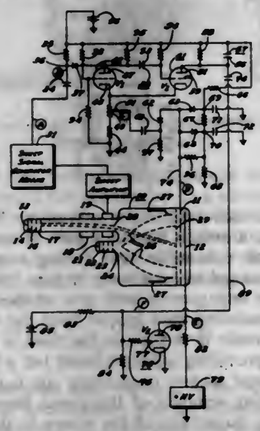


1. A travelling wave oscillator tube comprising a pair of parallel conducting surfaces, a plurality of resonant gratings parallel to one another and each joining the said conducting surfaces throughout a given length in a respective plane normal to the pair of surfaces, the gratings being apertured to form with the said surfaces a plurality of slow wave structures such that there is one structure having a forward mode of wave propagation of a given phase velocity at a given frequency and a second structure coupled to the first having a backward mode of wave propagation of the same phase velocity at the given frequency, electrode means for projecting electrons along the said given length to propagate forward wave oscillations in said first structure and backward wave oscillations in said second structure, said backward wave oscillations in said second structure causing amplification of said forward wave oscillations in said first structure and electrode means for collecting the electrons at the end of the given length, and an output wave feeder coupled to the forward wave propagating slow wave structure at the end adjacent the electron collector electrode means.

3,090,887
BACKGROUND IMPROVEMENT CIRCUIT FOR DIRECT VIEW STORAGE TUBE RADAR INDICATOR
Paul M. Cunningham and Kenneth L. Scott, Dallas, Tex., assignors to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa
Filed Jan. 15, 1960, Ser. No. 2,698
8 Claims. (Cl. 315—12)

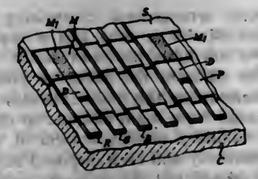
1. In a circuit for visually displaying a representation of a received signal comprising a direct-view storage tube

having a viewing screen, means including a writing gun for producing and impelling a pencil-like electron beam towards said viewing screen, means including a flooding gun for producing and impelling a flood of electrons continuously and uniformly over the entire viewing screen, a constant high value direct voltage source means for supplying a direct voltage to said viewing screen, storage mesh means interposed between said guns and said viewing screen, collector mesh means interposed between said guns and said storage mesh means, means for generating a sweep signal for deflecting said electron beam, an erase pulse generating means responsive to the operation of the sweep signal generating means for producing an erase



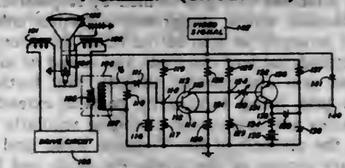
pulse at the termination of each sweep signal, means for supplying said erase pulse to said storage mesh means to momentarily increase the potential of said storage mesh means in a positive direction, said erase pulse generating means constructed to produce a second pulse after the termination of each sweep signal and before the initiation of the next subsequent sweep signal, and means responsive to said second pulses to substantially decrease the potential of said viewing screen below the threshold voltage necessary for collection of electrons derived from said flood of electrons during said erase pulse, said last-mentioned means further constructed to return the potential of said viewing screen above said threshold voltage before the initiation of said subsequent sweep signal.

3,090,888
CATHODE RAY TUBE VIEWING SCREEN FOR COLOUR TELEVISION
John Kenneth Oxenham, London, England, assignor to Sylvania-Thorn Colour Television Laboratories Limited, London, England, a British company
Filed Apr. 11, 1960, Ser. No. 21,517
4 Claims. (Cl. 315—12)



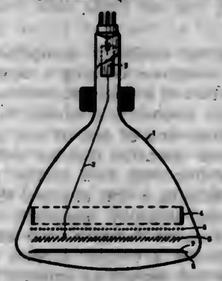
1. A viewing screen for colour television comprising a transparent base, a series of groups of colour stripes on said base, each said group comprising a plurality of parallel stripes emitting different colours, each colour stripe consisting of an activated cathodoluminescent phosphor, a plurality of indexing stripes on said base parallel to said colour stripes, each indexing stripe consisting of an inactivated cathodoluminescent phosphor, an electrically discontinuous coating of electrically conducting material over said indexing stripes, an electrically continuous coating of said conducting material over the remainder of said screen and a layer of high secondary electron emissivity over said coatings of conducting material.

3,090,889
ELECTRON BEAM INTENSITY CONTROL CIRCUIT
John Levinson, Morristown, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed May 3, 1960, Ser. No. 26,549
7 Claims. (Cl. 315—20)



5. In an electron beam device in which a beam is deflected in a pre-established pattern over a given area, means for blanking said beam both during retrace sweeps of said beam and when the speed of said deflection falls below a predetermined value comprising energizing means for developing said beam, means responsive to an energizing current for deflecting said beam, means for sampling said energizing current and producing a control voltage proportional to the rate of change of said energizing current, means responsive to said control voltage for producing a pre-established potential when said control voltage is of a predetermined polarity with respect to the reference potential, said last-mentioned means comprising a direct-current amplifier having an input directly coupled to said means for sampling said energizing current, said amplifier being biased to provide a potential at its output which is maintained at a predetermined value when the potential applied to said input is of said predetermined polarity with respect to said reference potential.

3,090,890
COLOR TELEVISION TUBE HAVING VENETIAN BLIND-TYPE GRID
Werner Veith, Munich, and Hinrich Heynisch, Grafelfing, near Munich, Germany, assignors to Siemens & Halske Aktiengesellschaft, Berlin and Munich, a corporation of Germany
Filed July 7, 1960, Ser. No. 41,395
Claims priority, application Germany Sept. 25, 1959
4 Claims. (Cl. 315—21)



1. An electron beam tube for reproducing color television pictures, having deflection and focusing means cus-

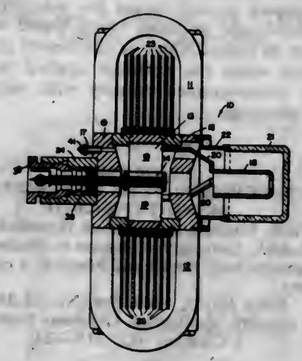
tomarily utilized in monotone picture tubes and having a cylindrical lens electrode, and having at least one grid arranged ahead of and extending in parallel with the picture screen, said grid consisting of relatively narrow metallic strips which are mutually spaced apart to form gaps therebetween and which are inclined to the tube axis in the manner of the slats of an incompletely opened Venetian blind so as to practically shut off continuity in the direction of the tube axis, wherein easily influenced electrons appear in the range of the Venetian blind grid which are upon the screen side thereof deflected from their path by the acceleration field of the screen electrode and thereby focused so that they are by color selection means which periodically affect the acceleration thereof successively pictured upon individual color strips of an elementary group of color strips of the screen which group is allocated to a gap formed by respectively neighboring metallic strips, comprising a further color selection grid arranged as seen in the beam direction in back of said cylindrical lens electrode and ahead of said Venetian blind grid and parallel thereto, said further color selection grid being formed of parallel extending tensioned wires not necessarily extending regularly with respect to the division of the Venetian blind grid and the elementary groups of the screen electrode and having a common potential connected thereto which is by a few volts different from that carried by the Venetian blind grid, whereby the slow electrons are in the range of the Venetian blind grid by a high frequency color selection voltage additionally connected to the color selection grid with different strength deflected to the screen electrode in accordance with the respective color strips of the elementary groups.

3,090,891

MAGNETRON CATHODE STRUCTURE

Robert W. Folsom, Waltham, Mass., assignor to Comtek, Inc., a corporation of Delaware

Filed June 28, 1961, Ser. No. 120,428
8 Claims. (Cl. 315—39.51)



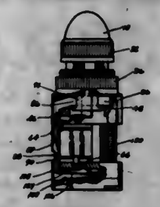
1. A magnetron oscillator comprising a multi-segmented anode resonator defining a central passageway, pole piece members of a magnetic material abutting opposite ends of said resonator, a tubular extension member joined to the outer end of one of said pole piece members, said tubular extension member defining a passageway communicating with said central passageway and wall structure defining a seat disposed therein, a unitary cathode electrode assembly removably disposed within said tubular extension member, said cathode electrode assembly comprising a tubular support member having disposed at one end thereof an emissive material, a hollow sleeve member coaxially disposed about an intermediate point of said support member and being joined thereto by a vacuum-tight seal, said sleeve member defining a flange portion adapted to mate with said seat when the latter is contacted and means for retaining under compression the contacting surfaces of said flange and seat to thereby effect a cold metal-to-metal vacuum seal.

3,090,892

INDICATING LIGHT ASSEMBLY

Earl F. Mekelburg, Wauwatosa, Wis., assignor to Square D Company, Detroit, Mich., a corporation of Michigan

Filed Dec. 16, 1957, Ser. No. 702,940
11 Claims. (Cl. 315—129)



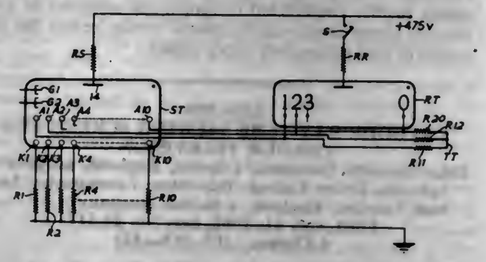
1. In an indicating light assembly, the combination comprising; a switch having a pair of spaced stationary contacts and a movable arm having a movable contact thereon arranged to selectively engage both contacts and normally in engagement with one of the stationary contacts, an insulating base spaced from the switch, a sleeve axially movable in a bore in the base, a lens carried by the sleeve providing a concealment for a bulb carried by the base, and means comprising an L-shaped member for preventing removal of the sleeve from the bore and transmitting movement of the sleeve to the arm carrying the movable contact when the sleeve is moved in the bore.

3,090,893

MULTI-ELECTRODE GLOW DISCHARGE TUBES

Donald Reaney, Long Eaton, England, assignor to Ericsson Telephones Limited, London, England, a British company

Filed Mar. 7, 1961, Ser. No. 94,020
Claims priority, application Great Britain May 16, 1960
11 Claims. (Cl. 315—135)



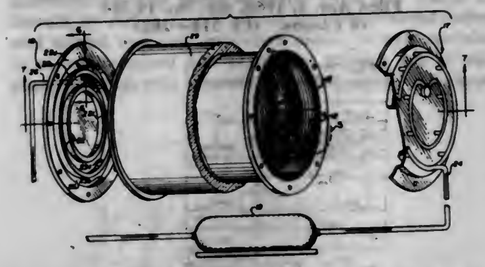
10. A circuit arrangement comprising a first multi-electrode glow discharge tube and a register tube, the first said tube having a common anode, a plurality of main cathodes adjacent the anode, a plurality of guide electrodes intermediate the main cathodes for transfer of a glow discharge from main cathode to main cathode, a plurality of auxiliary anodes associated with the main cathodes respectively and each disposed between the associated main cathode and the common anode, the register tube having a plurality of cathodes connected to the auxiliary anodes respectively of the first said tube, the circuit further comprising a common terminal and a plurality of resistors connecting the auxiliary anodes respectively to the common terminal.

3,090,894

CRYOGENIC MAGNETS

Richard F. Post, Walnut Creek, and Clyde E. Taylor, Livermore, Calif., assignors to the United States of America as represented by the United States Atomic Energy Commission

Filed Dec. 28, 1959, Ser. No. 862,433
11 Claims. (Cl. 317—158)



1. A cryogenic coil comprising at least one helical layer of conductor adapted for connection to a current source; and refrigeration means disposed in heat conductive relation to said layers of conductor and maintaining same at an operating temperature, T_o; said conductor of a material having a resistivity, $\rho(T_o)$, at said operating temperature, T_o, for which the ratio

$$\frac{\rho(T_o)}{\rho_o}\left[1+\frac{1}{\eta}\frac{T_h-T_o}{T_o}\right]$$

is significantly less than one, where ρ_o is the resistivity of copper at ambient temperature, η is the efficiency of said refrigeration means, and T_h is the heat rejection temperature of said refrigeration means; said operating temperature T_o being the temperature at which the curve of the ratio

$$\frac{\rho(T_o)}{\rho_o}\left[1+\frac{1}{\eta}\frac{T_h-T_o}{T_o}\right]$$

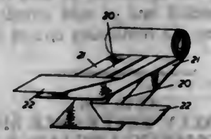
as a function of operating temperatures exhibits a minimum.

3,090,895

CAPACITORS

Michael Maurice James Hall, Stadhampton, Oxford, England, assignor to British Dielectric Research Limited, London, England, a company of Great Britain

Filed Feb. 16, 1959, Ser. No. 793,544
Claims priority, application Great Britain Feb. 19, 1958
4 Claims. (Cl. 317—260)



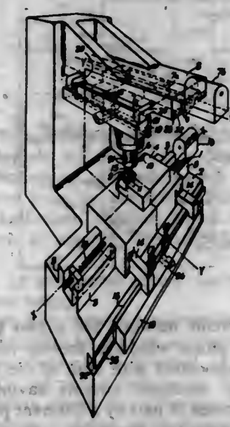
1. A wound capacitor having two axially staggered convolute electrodes, each formed of a sheet of a material having an electrically conductive surface selected from the group of such sheet materials consisting of metal foil, metallized paper and metallized plastics film, and having evergy raw edge of both electrodes lying outside the electric field of the capacitor, in which one longitudinal raw edge of one electrode protrudes from one end face of the roll, one longitudinal raw edge of the other electrode protrudes from the other end face of the roll, the other longitudinal raw edge of each electrode lies within the roll, each sheet being folded along a line extending lengthwise of and near to the longitudinal raw edge lying within the roll and along a second line extending lengthwise of and spaced further from said raw edge to cause that same raw edge to lie between two overlying parts of the same electrode and be screened thereby, and at least one of the electrodes is folded at an angle of about 45° to its longitudinal edges at at least one of its ends so that said end protrudes from the same end face of the roll as the protruding longitudinal edges of the electrode.

3,090,896

PLURAL MOTOR APPARATUS FOR CONTROLLING THE MOVEMENT OF AN OBJECT

Bertram V. Bowden, Hale, and Franz Koenigsberger and Joseph K. Royle, Stockport, England, assignors to National Research Development Corporation, a corporation of Great Britain and Northern Ireland

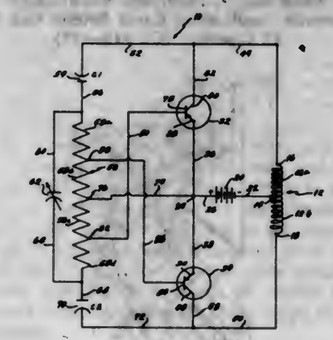
Filed May 7, 1959, Ser. No. 811,637
Claims priority, application Great Britain Oct. 29, 1954
12 Claims. (Cl. 318—19)



2. Apparatus for controlling a machine tool of the type which has at least two slides, a first slide and a second slide, and at least two slideways, a first slideway and a second slideway, upon which machine tool the first and second slides are respectively movable along a first path and a second path substantially at right angles to the first path, so as to provide relative movement between the tool of said machine tool and a workpiece in two orthogonal directions in a plane, a first slide-moving mechanism for moving the first slide along the first path, a second slide-moving mechanism for moving the second slide along the second path, a control system for controlling at least the first slide-moving mechanism, said control system comprising means for receiving control signals characteristic of a desired relative movement between the tool and the workpiece along the first path, means for indicating the position of the first slide along the first path and slide movement control means responsive to the signal receiving means and position indicating means for controlling the first slide-moving mechanism according to the said signals, the said apparatus further comprising displacement measuring means having at least one pair of co-operating measuring elements, one element of any such pair being attached to a first part and the other element to a second part, said two parts being included in a group of parts of the machine tool which provide a mechanical linkage from and including the second slideway on the one hand to the point of contact between the tool and the workpiece on the other hand, means for measuring relative movements between the said two elements of any one of said pairs of measuring elements resulting from those relative displacements, of the machine tool parts to which the said elements are attached, which result in relative

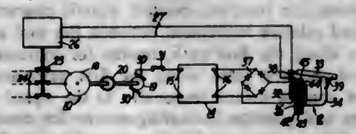
movement between the tool and the workpiece in the direction of the first path, means for generating correction signals characteristic of such relative movements between the said elements of the said one pair of measuring elements and means for applying those signals to the said control system associated with the first slide to modify the effect of the control signal receiving means and the position indicating means to the extent and in the sense required to compensate for the said displacements.

3,090,897
MOTOR CONTROL
John W. Hammann, 4855 Carter Ave., St. Louis 15, Mo.
Filed Apr. 16, 1959, Ser. No. 806,833
4 Claims. (Cl. 318—138)



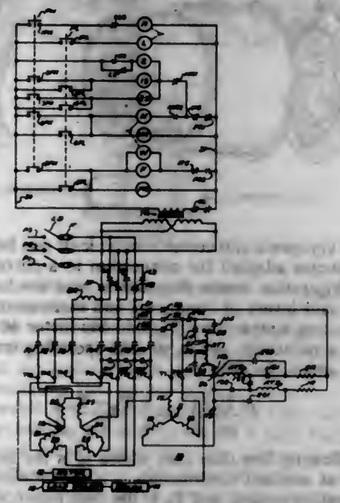
1. A control circuit network for a two phase motor having a pair of phase windings therein comprising an oscillator circuit associated with both of the motor windings, each of said oscillator circuits having a pair of tunable circuits formed in part by a different portion of the motor winding associated therewith, means connecting the tunable circuits in each oscillator circuit for push-pull operation, a source of energy connected to said oscillator circuits, and means in each of said oscillator circuits for changing the frequency of oscillation of the associated tunable circuits.

3,090,898
PROTECTIVE SYSTEM
Thaddeus F. Bellinger, West Allis, Wis., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Filed Aug. 2, 1961, Ser. No. 128,832
4 Claims. (Cl. 318—170)



1. A protective system for a synchronous motor having a field winding and having a starting means that is operable safely for a limited time that is a function of motor speed, comprising a relay having an inverse time delay characteristic and being operable to deenergize the motor after a time delay that is an inverse function of the energization of said relay, and an electrical network for coupling said relay to be energized by the field winding of the synchronous motor during starting, said network comprising the parallel combination of a capacitor and a resistor, said parallel combination connected to adapt the time delay characteristics of the relay to the voltage and frequency characteristics of the field winding for causing said relay to follow the heating of the starting means.

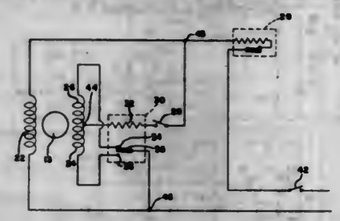
3,090,899
CONTROL CIRCUIT FOR A.C. MOTOR HOIST
Dorn L. Pettit, Wauwatosa, Wis., assignor to Square D Company, Detroit, Mich., a corporation of Michigan
Filed Apr. 1, 1960, Ser. No. 19,384
10 Claims. (Cl. 318—202)



1. A device for hoisting and lowering loads comprising a wound rotor motor having input terminals connected with polyphase motor windings, a source of polyphase voltages for energizing said motor windings, a multi-portion auto-transformer winding, resistors, a first circuit means operative to connect said auto-transformer portions across two leads of the polyphase source with a terminal of the motor connected to a tap between two of the portions of the auto-transformer winding and with one of said resistors in series with the two portions, a second circuit means operative to short out said auto-transformer portions and connect the resistors in parallel with each other in a circuit between a motor terminal and a lead from the polyphase source, means interposed in said circuit means and operative to render each of said circuit means operative and inoperative, and selection means controlling the operation of said means to thereby render any selected one of said circuit means operative while rendering the remaining circuit means inoperative.

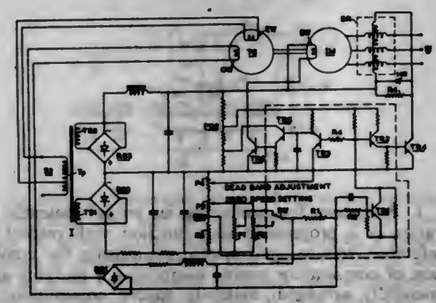
3,090,900
AUTOMATICALLY REVERSIBLE MOTOR FOR DOMESTIC APPLIANCE
James A. Porter and Leonard A. Stathelmans, Warren, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Jan. 14, 1960, Ser. No. 2,486
1 Claim. (Cl. 318—207)

In combination, a reversible motor having a main winding and having forward and reverse phase windings, circuit means for connecting said main winding to a source of current, first overload responsive means in said circuit means responsive to the flow of combined main winding current and phase winding current for interrupting the flow of current to said windings in response to a relatively long overload on said motor, second overload responsive means connected in series electrical flow relationship to said first overload responsive means and operable in response to a relatively short overload on said motor for changing the rotation of said motor, said second overload responsive means including a single pole, double throw switch for selectively connecting either of said phase windings to said source of current, and speed responsive switch means connected in series electrical flow relationship to said first overload responsive means for disconnecting said phase windings from said source of current at motor speeds above a predetermined value, said second overload responsive means being responsive to a predetermined flow of current through one of said phase windings only whereby to permit said double throw



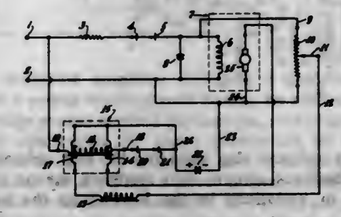
switch to move from a first position to a second position before changing the rotation of said motor from forward direction to reverse direction in response to a relatively short overload on said motor, said first overload responsive means serving thereafter to open the circuit to said second overload responsive means in the event the overload on said motor becomes relatively long whereby to permit said double throw switch to move from said second position to said first position for conditioning said motor to restart in the forward direction and said first overload responsive means also serving thereafter to reclose the circuit to said second overload responsive means to restart said motor in the forward direction.

3,090,901
MOTOR SPEED CONTROL SYSTEMS
Norman Harry Shaw, Kidsgrove, Stoke-on-Trent, England, assignor to The English Electric Company Limited, London, England, a British company
Filed June 7, 1960, Ser. No. 34,520
Claims priority, application Great Britain June 25, 1959
7 Claims. (Cl. 318—209)



1. A speed control system for an alternating current electric induction motor having a squirrel cage rotor and a stator having running winding means and braking winding means, comprising in combination, speed determining variable impedance means in the electric power supply circuit to said motor, first control means for predetermining the effective impedance of said impedance means, and second control means responsive to the speed of the motor for automatically varying the said effective impedance of said impedance means in a corrective sense in accordance with a negative speed error of the motor speed and for simultaneously energizing said braking winding and automatically altering the effective impedance of said impedance means to such a value that the motor is substantially de-energised if the speed error of the motor becomes positive.

3,090,902
MOTOR CONTROL CIRCUIT UTILIZING A HALF WAVE MAGNETIC AMPLIFIER
Alfred A. Wolf, Dallastown, Pa., assignor to Fidelity Instrument Corporation, York, Pa., a corporation of Pennsylvania
Filed July 25, 1960, Ser. No. 45,068
1 Claim. (Cl. 318—331)



In a self-saturable magnetic amplifier circuit to automatically regulate the speed of a direct current motor, the motor having an armature and a field winding and being powered from an alternating current power source through a half-wave rectifier which supplies pulsating direct current to saturate the amplifier, the circuit including

a source of adjustable direct current speed control reference voltage,

an auxiliary high impedance saturation control winding in the amplifier to control saturation of the amplifier connected between a terminal of the armature and the D.C. reference voltage so that the voltage of the winding equals the difference between the armature voltage and the said reference voltage, and

a power winding in the amplifier connected between the power source and the armature,

the improvements comprising

an auxiliary low impedance saturation control winding in the amplifier to control saturation of the amplifier directly connected in series with said armature and adapted to carry the current of the motor armature,

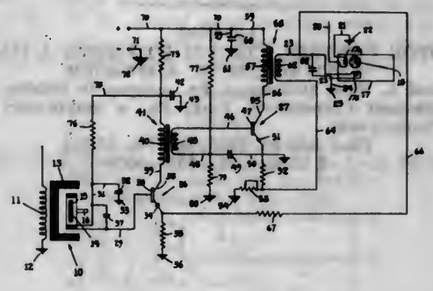
a filter capacitance connected in series between the low impedance winding and the armature so that it is across the armature and the low impedance winding, and

a high reactance device serially connected with the high impedance winding.

3,090,903
TRANSISTOR AMPLIFIER AND MOTOR LOAD USING CONDUCTIVE CIRCUIT FEEDBACK
Knud J. Knudsen, Middlebury, Conn., assignor to Lewis Engineering Company, Naugatuck, Conn.
Continuation of application Ser. No. 656,782, May 3, 1957. This application July 13, 1960, Ser. No. 43,701
8 Claims. (Cl. 318—448)

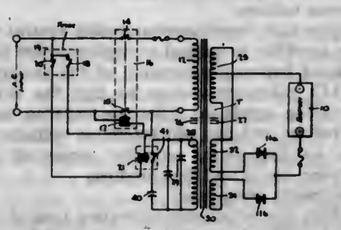
1. A transistor amplifier having a transistor and a common-emitter circuit therefor, including an input circuit connected between the base and emitter of the transistor and including means providing an output circuit; an isolating type output transformer having primary and secondary coils and having its primary coil connected in said output circuit; a resistor connected to the emitter of the transistor, said resistor being in series in the said input and output circuits; means connected to an intermediate point on said series resistor and connected to the secondary coil of said output transformer, providing positive, current feedback without phase shift with respect to said

secondary coil, through an unbroken conductive circuit from said secondary coil; an unbroken variable conductive motor load circuit connected with the transformer secondary coil, said load circuit including the transformer



secondary coil and also including the said unbroken conductive feedback circuit, said feedback means being responsive to variations in the loading of the said load circuit.

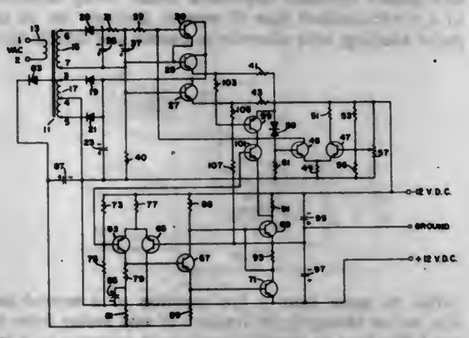
3,090,904
BATTERY CHARGER
Henry E. Jensen, Norristown, Pa., assignor to C & D Batteries, Inc., Conshohocken, Pa., a corporation of Pennsylvania
Filed Jan. 12, 1959, Ser. No. 786,144
6 Claims. (Cl. 320—22)



2. In a battery charger, a power source, a transformer energized from said power source and having a resonant circuit as part thereof including a winding and a capacitor, an output winding magnetically coupled to said winding of said resonant circuit adapted for electrical connection with a battery to be charged, means for changing the resonance of said resonant circuit through a change in the capacity thereof whereby to increase the voltage output of said circuit and therefore the charging rate of said battery, and a timer for controlling said resonance changing means.

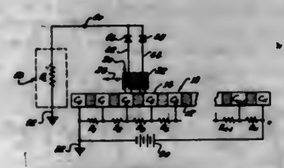
3,090,905
POWER SUPPLY OVERLOAD PROTECTOR
Robert J. Ehret, Los Altos, Calif., assignor to Ampex Corporation, Redwood City, Calif., a corporation of California
Filed Aug. 13, 1959, Ser. No. 833,503
4 Claims. (Cl. 323—22)

1. In combination with a regulated power supply having three output terminals with a first terminal being negative with respect to a second terminal and a third terminal being positive with respect to the second terminal and having a current-passing element in series with one of the first and third terminals; an overload protection circuit comprising a first variable conductance device coupled between a control element of the current-passing element and the first terminal, a voltage divider connected between the first and second terminals with an intermediate point coupled to a control element of the first variable conductance device for normally biasing the device in a nonconductive state, means connected in series with the current-passing element for sensing the value of current flow and altering the effect of the biasing of the first variable conductance device to provide conduction thereof at a predetermined value of current flow, a second variable conductance device coupled between the



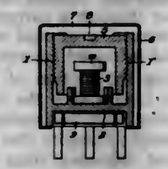
control element of the current-passing element and, through a first resistor, the first terminal, and bias means coupled to the second variable conductance device for normally biasing the device in a nonconductive state, said bias means including an element sensitive to overload conditions between the second and third terminals to altar the state of the second variable conductance device to one of conduction, conduction of the first and second devices thereby decreasing the current-passing ability of the current-passing element.

3,090,906
STEP FUNCTION GENERATOR
Roy Donald Jablonsky, Altadena, Calif., assignor to Giannini Controls Corporation, Duarte, Calif., a corporation of New York
Filed Oct. 24, 1960, Ser. No. 64,453
4 Claims. (Cl. 323—43.5)



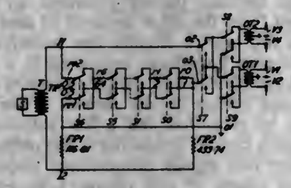
1. A system for producing an output potential that varies as a progressive step function with respect to a reference voltage, said system comprising the combination of commutator means comprising a plurality of sequentially arranged, mutually spaced commutator segments, means for supplying to the segments respective potentials having a selected polarity with respect to the reference voltage and increasing progressively in value in one direction, brush means movable relative to the commutator means to engage the segments sequentially, said brush means comprising a plurality of mutually spaced brush elements having respective contact surfaces, the longitudinal dimension of the surface of each element being insufficient to bridge the space between adjacent segments in any position of the brush means, and the overall longitudinal dimension of the surfaces of all elements being sufficient to bridge the space between adjacent segments, an output terminal connected to all the brush elements in parallel, and a unidirectional device connected in series with at least each of the brush elements of less than highest potential in such polarity as to pass current of said polarity toward the terminal.

3,090,907
INTERMEDIATE FREQUENCY TRANSFORMER
Hisao Maeda, 13 Shiba-Koen, Minato-ku, Tokyo-to, Japan
Filed May 11, 1960, Ser. No. 28,318
Claims priority, application Japan May 25, 1959
1 Claim. (Cl. 323—76)



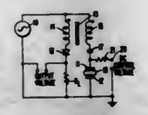
In an intermediate frequency transformer comprising, essentially, a spool-shaped, high-frequency magnetic core, about which is wound a coil, and a high-frequency magnetic cylinder which covers, in the manner of a canopy, the said magnetic core, and which can be raised or lowered relative to the said magnetic core to vary the inductance of the said coil; the combination of said assembly with a tuning capacitor which is supported within the bottom of the base of said assembly.

3,090,908
ELECTRIC CONVERSION CIRCUITS
Dennis James Mynall, Rugby, England, assignor to Associated Electrical Industries Limited, London, England, a British company
Filed Oct. 19, 1960, Ser. No. 63,536
Claims priority, application Great Britain Dec. 24, 1959
7 Claims. (Cl. 323—79)



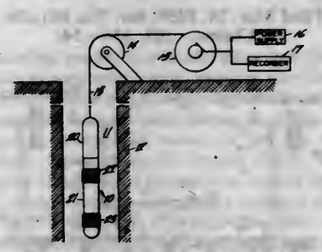
1. An electric conversion circuit of the nature referred to, comprising first and second terminals for the connection of an energizing supply for the circuit, a tapped resistance arrangement and a first fixed resistance connected in series between said terminals, said arrangement having an effective tapping point that is adjustable to vary that fraction of its resistance which is included between the tapping point and said fixed resistance, the effective tapping point being adjustable in accordance with the value of an input quantity, a first output terminal connected to a point electrically between the electrically adjacent ends of said first fixed resistance and the tapped resistance arrangement, a second output terminal connected to the other end of the tapped resistance arrangement, a third output terminal connected to said tapping point, and a second fixed resistance connected between said tapping point and the remaining end of the first fixed resistance.

3,090,909
SIGNAL TRANSLATING DEVICE
Harry W. Mathers, Endicott, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 22, 1958, Ser. No. 782,212
3 Claims. (Cl. 323—89)



1. A magnetic amplifier including a control winding path and a power winding path having an alternating current voltage source applied thereacross, said control winding path comprising the series connection of a control winding on a saturable magnetic core, a ferroelectric element, means for applying a direct current control voltage across said ferroelectric element, and a capacitor in said control winding path for blocking said direct current control voltage from said alternating current source, said direct current control voltage determining the change in charge across said ferroelectric element during each half cycle of said alternating current voltage and thereby the current flow through said control winding path, said power winding path comprising the series connection of a power winding on said saturable magnetic core, a rectifier device and a load device.

3,090,910
SYSTEM FOR MEASURING BY INDUCTION THE CONDUCTIVITY OF A MEDIUM
James H. Moran, Danbury, Conn., assignor to Schlumberger Well Surveying Corporation, Houston, Tex., a corporation of Delaware
Filed May 21, 1959, Ser. No. 814,914
18 Claims. (Cl. 324—6)



1. Apparatus for measuring the conductivity of a medium having a randomly varying magnetic permeability comprising, means including a transmitter inductor disposed in said medium for establishing in said medium a magnetic field having a strength which varies from an initial value to a final value at a rate which remains substantially constant for all values of permeability, a receive inductor disposed in inductive relationship with said field and spaced from said transmitter inductor, and means coupled to said receiver inductor for electrically sensing when the voltage induced in said receiver inductor attains a predetermined absolute value, said predetermined value being the same for a range of values of permeability, whereby the effect of said randomly varying permeability on the accuracy of the measurement is rendered negligible.

3,090,911
METHOD OF ELECTROMAGNETIC PROSPECTING BY TRANSMITTING FROM TWO SPACED POINTS ELECTROMAGNETIC FIELDS OF THE SAME SHAPE

James Duncan Crone, 187 Murdoch Ave., Noranda, Quebec, Canada

Filed May 18, 1961, Ser. No. 110,974
9 Claims. (Cl. 324—6)

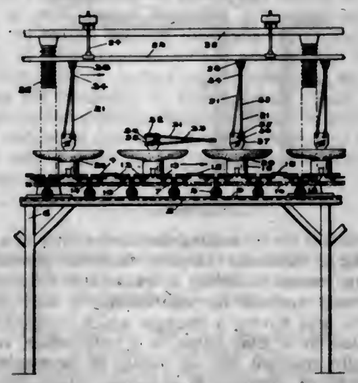


1. A method of geophysical prospecting comprising the steps of propagating a first primary electromagnetic field from station A, measuring the inclination of the electromagnetic field that is the resultant of said first primary electromagnetic field and any other electromagnetic field induced thereby at station B, station B being spaced from station A, propagating a second primary electromagnetic field from adjacent station B, said second primary electromagnetic field having its principal axis substantially parallel to the principal axis of said first primary electromagnetic field previously propagated from station A, said first primary electromagnetic field and said second primary electromagnetic field having the same shape, measuring the inclination of the electromagnetic field that is the resultant of said second electromagnetic field and any other electromagnetic field induced thereby adjacent station A, and comparing the inclinations measured at stations A and B as an indication of a conductor anomaly.

3,090,912
INSULATOR TESTER

George M. Ruoff, Parkersburg, W. Va., assignor to A. B. Chance Company, Centralia, Mo., a corporation of Missouri

Filed Mar. 24, 1959, Ser. No. 801,496
8 Claims. (Cl. 324—54)



6. A method of testing insulators without interruption comprising

(1) placing each insulator to be tested on a continuous, moving horizontally disposed belt having first electrode means movable with said belt adjacent the lower surface of each insulator,

(2) supporting the lower end of an elongated second electrode adjacent the upper surface of each insulator on said belt,

(3) transporting each insulator by said moving belt along the path of an extended fixed high potential conductor with the upper end of said elongated second electrode retractably positioned in close enough proximity to said fixed high potential conductor to create an electrical discharge between said first and said second electrodes, said discharge lying along a path of high resistance on the exterior of a sound insulator being tested but along a path of comparatively low resistance passing through a defective insulator being tested, whereby the current flowing is considerably increased through the low resistance path,

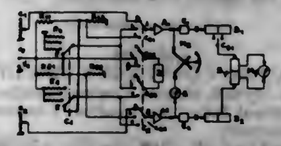
(4) passing said increased current flowing through a defective insulator through a current responsive device producing retraction of said second electrode in response to said increased current, and

(5) without stopping the motion of said continuous belt and without interrupting the testing of sound insulators, removing defective insulators and sound insulators and sound insulators that have completed the test cycle and replacing them with additional insulators to be subjected to the same test cycle.

3,090,913
IMPEDANCE MEASURING APPARATUS

Marcel Louis Boyer, Chatillon-sous-Bagneux, France, assignor to L'Electronique Appliquee, Paris, France

Filed July 15, 1959, Ser. No. 827,340
Claims priority, application France July 17, 1958
7 Claims. (Cl. 324—57)



1. Apparatus for measuring the impedance value and the phase angle of an unknown impedance comprising, in combination, a source of oscillations comprising a generator having one terminal thereof grounded, an input network energized from the other terminal of said generator and including two branch circuits, one branch circuit including a reference impedance embodied in a first fixed resistance voltage divider and the other branch circuit including a second voltage divider formed of the unknown impedance to be measured and a first standard impedance, said branch circuits producing at the outputs of said voltage dividers two signals proportional respectively to the impedance values of said reference impedance and said unknown impedance, two identical amplification channels controlled by said signals of said branch circuits, respectively, a ratiometer connected to be energized between symmetrical points on said two channels for indicating the ratio of the amplified signals in said two channels, a phase meter having two inputs energized respectively from the outputs of said amplification channels and indicating the relative phase shift between the signals in said two channels produced by the unknown impedance connected in one of said branch circuits, a third voltage divider formed of fixed-resistances of different resistance values from said first fixed-resistance divider, a second standard impedance of a different value from said first standard impedance, and a multiple-contact switch for establishing in one position thereof the connections of said first and second dividers in said branch circuits and, in another position thereof connecting said second fixed-resistance divider in said other branch circuit instead of said second voltage divider, and simultaneously connecting said unknown impedance and said second standard resistance in a fourth voltage divider connection in said one branch circuit, and disconnecting said first fixed-resistance divider, said unknown impedance and said second standard resistance being reversed in positions in said fourth voltage-divider connection from the positions occupied by said unknown impedance and said first standard impedance in said second voltage divider connection.

3,090,914
ELAPSED TIME INDICATOR

Daniel M. Kabak, Yonkers, N.Y., assignor to American Machine & Foundry Company, a corporation of New Jersey

Filed Jan. 3, 1961, Ser. No. 80,346
2 Claims. (Cl. 324—68)



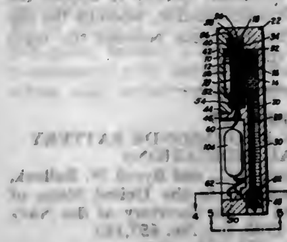
2. In a mercury coulometer for measuring and indicating the elapse of time during which a fixed current is applied thereto of the type including a housing having a first internal chamber, a filter adapted to prevent the passage of mercury, except electrolytically, separating said chamber into an anode section and cathode section, said cathode section having an elongated tubular member adapted to receive and concentrate a predetermined portion of mercury for measurement, a body of mercury substantially filling said anode section, and electrolyte solution filling the remainder of said anode section and said cathode section, contacts extending into each said section, illuminating and voltage regulating apparatus for said coulometer comprising, a second internal chamber in said housing for receiving voltage regulating components therein, said housing having indicia selectively positioned on the outer surface thereof, said tubular member being disposed proximate the inner wall of said second chamber in association with said indicia, a gas discharge device positioned in said second chamber adjacent said tubular member, light from said discharge device being effective to illuminate the level of mercury in said tubular member and said indicia, a source of voltage for energizing said coulometer, voltage regulating means for said coulometer disposed in said second chamber and connected to said source of voltage and said contacts, said regulating means including said discharge device connected in shunt across said voltage source, the discharge device being operative to illuminate said tubular member and said indicia and establish a source of constant voltage for said coulometer.

3,090,915
ELAPSED TIME INDICATOR

Dimitri G. Soussloff, Weston, Siegfried Godel, Norwalk, Theodore Descovich, Springdale, and Ralph E. Davis, Westport, Conn., assignors to American Machine & Foundry Company, a corporation of New Jersey

Filed Jan. 3, 1961, Ser. No. 80,347
8 Claims. (Cl. 324—68)

1. A mercury coulometer for measuring and indicating the elapse of time during which a fixed current is applied thereto, comprising a housing having a hermetically sealed internal chamber, a filter impermeable to mercury, except electrolytically, separating said chamber into an anode section and a cathode section, said filter being rigidly fixed within said housing and having means for forming a fluid-tight seal therewith, a body of mercury substantially filling said anode section, an electrolyte solution filling the remainder of said chamber, a transparent tubular

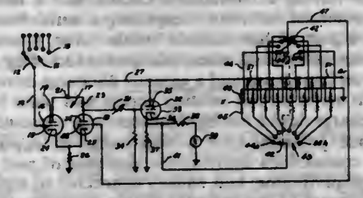


member formed within said housing and connecting with said cathode section for receiving and concentrating a predetermined portion of mercury, an electrode extending into each of said sections, and means sealed within said housing connected to said electrodes for converting a source of electricity into a constant current.

3,090,916
MULTIPLE RANGE MEASURING SYSTEM FOR NON-LINEAR INPUT SIGNALS USING FEEDBACK GAIN CONTROL MEANS TO PROVIDE A LINEAR RESPONSE

Joseph Gill, Bridgeville, Pa., assignor to Hagan Chemicals & Controls, Inc., Pittsburgh, Pa., a corporation of Pennsylvania

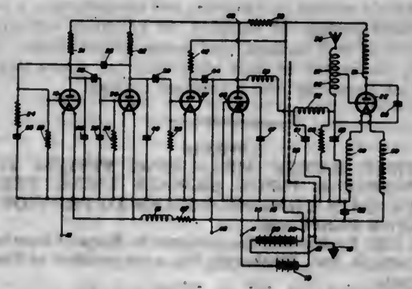
Filed May 26, 1961, Ser. No. 113,019
1 Claim. (Cl. 324—115)



A monitoring system to provide an output proportional to a direct current input signal, varying non-linearly over the total range of the condition to be monitored and varying substantially linearly with respect to given increments of such range, comprising means to amplify such direct current input signal, a meter having a full scale range with a given output signal thereacross, means to feed such amplified signal to said meter, means for each given increment of such total range to neutralize given increments of input signal equal to the increment related to the maximum value of the signal for the prior increment and to adjust the gain of the system for each increment so that for the maximum value of remaining signal for such increment, such given output signal will be provided to effect full scale indication on the meter, said means comprising a plurality of feed back networks corresponding to each given increment of such range, each network having an output resistance, means to connect any one of said networks into circuit to feed the output signal through said selected output resistance to develop an output voltage thereacross, a portion of said output resistance defining a feed back resistance, the ratio between the value of the output resistance and said portion of the output resistance determining the gain of the system, an additional resistance connected in series with said feed back resistance and a fixed source of potential, said amplifying means comprising a differential amplifier having two sections each

having an input, means to connect the direct current input signal to one of said inputs and means to connect to the other of said inputs, the voltage developed across said feed back resistance due to the output signal thereacross and the voltage across said additional resistance caused by said fixed source of potential, thereby to oppose the input signal to effect such neutralization, whereby the signal to be amplified is the difference between the input signal and the feed back voltage.

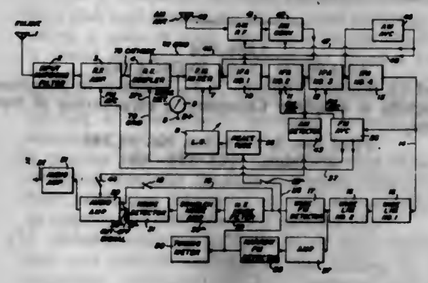
3,090,917
TRANSMITTER FOR RADIO-SONDE BATTERY POTENTIAL INDICATIONS
John H. Kuck, Washington, D.C., and Byrell W. Bullock, Silver Spring, Md., assignors to the United States of America as represented by the Secretary of the Navy
Filed Mar. 26, 1946, Ser. No. 657,183
3 Claims. (Cl. 325—133)



1. In a radio sonde having a transmitter including an oscillator having a modulation circuit, and a battery, a battery potential indicator comprising a multivibrator including a pair of hot cathode triode tubes, a source of plate potential for said tubes, said source including a plate battery, an impedance and a gaseous discharge device connected in series circuit relation across said plate battery, said discharge device having a substantially constant anode to cathode potential over a wide range of applied potentials, connections applying the potential of said device to said multivibrator, said battery connected to supply the heating current of the cathodes of said multivibrator, a resistor connected in series circuit relation between said battery and said multivibrator, said resistor dropping the applied potential to such a point that the multivibrator is sensitive to variations in cathode potential whereby variations in battery potential vary the frequency of said multivibrator, and connections impressing the variable frequency of said multivibrator on said modulation circuit.

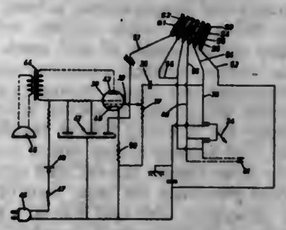
3,090,918
FM-AM RECEIVER
Lawrence B. Arguimbau, Binghamton, N.Y., assignor to McIntosh Laboratory, Inc., Binghamton, N.Y., a corporation of New York
Filed Oct. 9, 1958, Ser. No. 766,322
2 Claims. (Cl. 325—348)

1. A squelch circuit for an FM superheterodyne receiver unresponsive to multiplex channel signals, comprising a mixer, means for applying an FM carrier to said mixer, a local oscillator, means for coupling said local oscillator to said mixer, an I.F. amplifier coupled in cascade to said mixer for deriving I.F. signal from said mixer, said I.F. amplifier having a predetermined bandwidth, a limiter coupled in cascade to said I.F. amplifier, said limiter having a bandwidth greatly in excess of said predetermined bandwidth, a frequency detector coupled in cascade with said limiter, said frequency detector having a bandwidth greatly in excess of said predetermined bandwidth, a high pass filter coupled in cascade to said frequency detector, said high pass filter designed to pass frequencies higher than one-half said predetermined bandwidth but within the pass band of said limiter and of said frequency detector, means for detecting the output of said filter to derive a control signal, an audio amplifier



coupled in cascade to said frequency detector, and means for decreasing the gain of said audio amplifier in response to increase of said control signal, wherein said predetermined bandwidth is approximately 150 kc. and the bandwidths of said frequency detector and limiter are approximately 1 mc.

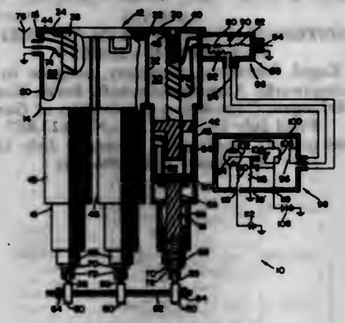
3,090,919
AUDIO-AMPLIFIER-RADIO TUNER COMBINATION AND LOW DRAIN TUNER THEREFOR
Arthur K. Tateishi, 32 River St., Toronto, Ontario, Canada
Filed July 27, 1959, Ser. No. 829,719
24 Claims. (Cl. 325—356)



1. In combination an audio amplifier, a radio tuner characterized in that its drain requirements are sufficiently low that it can be parasitically connected to the amplifier to be completely powered thereby without significant alteration of the operating conditions of the amplifier while the amplifier forms a host therefor, and when so powered providing from an audio frequency modulated radio frequency input an audio frequency signal for such host audio amplifier, and means for releasably interconnecting said audio amplifier and tuner to pick off from said audio amplifier a tuner power supply voltage for powering the tuner and to deliver an audio frequency signal from said tuner to said audio amplifier.

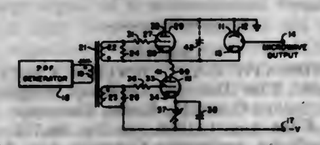
3,090,920
CAVITY TYPE TUNER
Martin W. Levine, Boston, Mass., assignor to General Electronic Laboratories, Inc., Cambridge, Mass., a corporation of Massachusetts
Filed Jan. 12, 1960, Ser. No. 1,943
7 Claims. (Cl. 325—468)

1. In a cavity type tuner, the combination of a housing of electrically conductive material to form a resonator cavity having two ends, a fixed support member of dielectric material extending inwardly of the cavity with respect to one of the ends, a conductor electrically grounded on the housing and wound about said fixed support member, an electrically conductive element in the form of a cylin-



drical tube mounted in the cavity for movement from the other end in a direction to circumscribe the conductor, and insulating means between said tube and housing and between said tube and conductor to prevent electrical engagement therebetween.

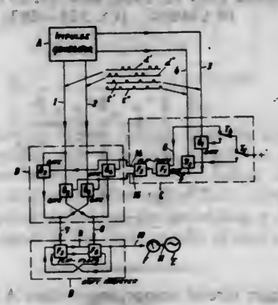
3,090,921
MICROWAVE PULSING CIRCUIT
Sol Boles, Bronx, and Charles R. Kenny, Purdy's Station, N.Y., assignors to General Precision Inc., a corporation of Delaware
Filed Nov. 10, 1958, Ser. No. 772,808
8 Claims. (Cl. 328—65)



1. A pulse-modulating circuit for a microwave generator comprising, a source of pulse signals, phase-splitting means actuated thereby and simultaneously emitting two output signals having opposite phases, a first variable impedance connected in shunt with the anode-cathode circuit of a microwave generator, a second variable impedance connected in series with the anode-cathode circuit of said microwave generator, a source of direct-current power connected to said second variable impedance, coupling means applying one of said two output signals to control said first variable impedance, and coupling means applying the other of said two output signals to control said second variable impedance.

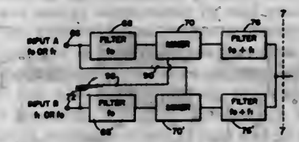
3,090,922
ELECTRICAL SYNCHRONIZING ARRANGEMENT
Hans Diggelmann, Bern, Switzerland, assignor to Hasler A.G., Bern, Switzerland
Filed Dec. 19, 1960, Ser. No. 76,967
Claims priority, application Switzerland Dec. 19, 1959
8 Claims. (Cl. 328—72)

1. Electrical synchronizing arrangement for adjusting the periodicity of a periodic signal to phase equality with another periodic signal, comprising, in combination, impulse generator means capable of producing two distinct periodic sequences of pulse groups, said sequences having the same frequency, but being offset in phase relative to each other, said generator means having two main outputs for delivering separately said sequences, respectively, said generator means being further capable of producing at least one separate sequence of periodic single pulses having a fixed predetermined time relationship with respect to said pulse groups, and at least one separate output for delivering said single pulses; electrically controllable change-over switch means having a first and a second input respectively connected with said main outputs of said generator means, and at least one output, and being capable of changing, in response to the application of a control pulse, between a condition in which said first input is connected with said output thereof, and a condition in which said second input is connected with said output



thereof; output means for delivering output pulses appearing at said output of said change-over switch means; and control means connected between said switch means and said separate output of said generator means, for receiving said single pulses, and capable of change between an idle condition and an operative condition, said control means, when in operative condition, responding to the first one of said single pulses received after such change to operative condition, by applying said control pulse to said switch means for causing a change between said conditions thereof, whereby the periodicity of output pulses appearing at said outputs of said switch means is varied.

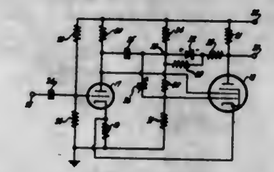
3,090,923
LOGIC SYSTEM, USING WAVES DISTINGUISHABLE AS TO FREQUENCY
Hermann P. Wolff, Millbrook, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Feb. 17, 1958, Ser. No. 715,739
10 Claims. (Cl. 328—93)



5. In a logic system in which waves distinguishable as to frequency represent different information, first and second input terminals for information-representing waves, a filter for selecting a wave component of frequency f_0 connected to one of said input terminals, a first mixer connected to the output of said filter and also to said second input terminal, a filter for selecting a wave component of frequency f_0 connected to the second of said input terminals, a second mixer connected to the output of said last-mentioned filter and also to said first input terminal for producing sum and difference components, and filter means for selecting a wave component of a predetermined one of said sum and difference frequencies connected to the output terminals of said mixers, whereby an input wave of frequency f_0 applied to one of said input terminals and an input wave of frequency f_1 applied

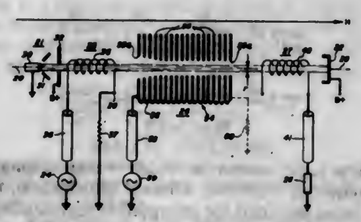
to the other of said input terminals are necessary in order to produce an output wave of a predetermined frequency at the output of said filter means.

3,090,924
IMPROVED HIGH-SENSITIVITY TRIGGER CIRCUITS
Norman T. Seaton, Berkeley, Calif., assignor to Beckman Instruments, Inc., Fullerton, Calif., a corporation of California
Filed Dec. 31, 1956, Ser. No. 631,773
10 Claims. (Cl. 328—203)



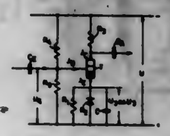
1. A trigger circuit comprising a class A linear vacuum tube stage, a vacuum tube cathode follower stage, said stages having a common cathode resistor conducting substantially all of the cathode current from both of said stages, nonlinear coupling means connecting said two stages together in a regenerative circuit loop having a loop gain that varies between a value greater than one and a value smaller than one, means biasing a control grid of one of said stages to a fixed potential for regulating the sum of the currents conducted by said stages, and direct-coupled negative feedback means including a nonlinear asymmetrical resistance element and controlling the control grid potential of the other of said stages for regulating the current conducted by the latter of said stages alone.

3,090,925
PARAMETRIC AMPLIFIER
Robert Adler, Northfield, Ill., and Glen Wade, Menlo Park, Calif., assignors to Zenith Radio Corporation, a corporation of Delaware
Filed Sept. 17, 1958, Ser. No. 761,609
17 Claims. (Cl. 330—4.7)



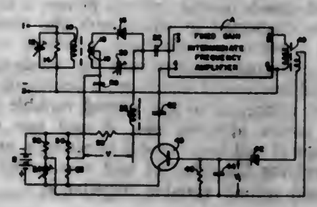
1. Apparatus for parametrically amplifying signal energy which comprises: means for projecting an electron beam along a predetermined path; means for developing on said beam a space-charge wave corresponding to input-signal energy at a predetermined frequency; means for propagating a driving-signal wave externally of and alongside said beam path at a frequency different from said predetermined frequency and having a propagation constant for said driving-signal wave to deliver energy from said driving-signal wave to said space-charge wave with said propagation constant being substantially different from the propagation constant of any space-charge wave produced on the beam corresponding to said driving-signal frequency; and means for extracting amplified signal energy from said beam.

3,090,926
TRANSISTOR AMPLIFIER WITH TUNNEL DIODE IN EMITTER CIRCUIT
Walter Engel, Nurnberg, Germany, assignor to Siemens-Schuckertwerke Aktiengesellschaft, Berlin-Siemensstadt and Erlangen, Germany, a corporation of Germany
Filed July 13, 1961, Ser. No. 123,867
Claims priority, application Germany July 15, 1960
3 Claims. (Cl. 330—24)



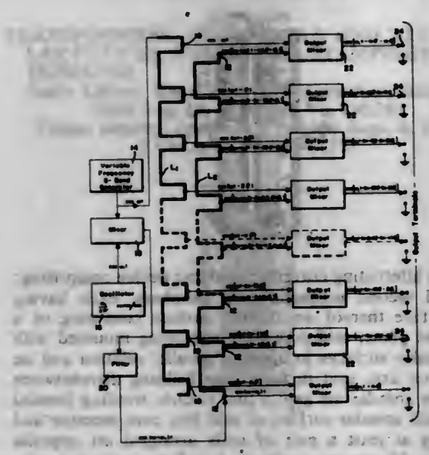
1. A transistor amplifier, comprising two voltage supply leads, a transistor having an emitter circuit connected to one of said leads, a collector circuit connected to said other lead, a negative feedback coupling connected in said emitter circuit and comprising an ohmic resistor and a tunnel diode connected in parallel to said resistor, said tunnel diode having a current-voltage characteristic with a negative portion, and said resistor having a linear current-voltage characteristic matched to said tunnel diode characteristic so as to intersect said negative portion, a base on said transistor for receiving an input signal voltage applied to said base and said feedback coupling.

3,090,927
AUTOMATIC GAIN CONTROL CIRCUIT
Willy Minner, Ulm (Danube), Germany, assignor to Telefunken G.m.b.H., Berlin, Germany
Filed Aug. 1, 1960, Ser. No. 46,571
Claims priority, application Germany Aug. 14, 1959
9 Claims. (Cl. 330—29)



1. In a tuned high frequency transistorized amplifier having a rectified output comprising a gain control potential and having a four-terminal transmission network connected to the input to the amplifier, said network having in a series branch a diode rectifier controlled by a D.C. control voltage delivered by a control transistor connected to receive said gain control potential and to deliver said control voltage to said diode rectifier forward-biasing the latter in the absence of a signal input voltage to the network and in the presence of a small input signal voltage, and for reverse-biasing said diode rectifier in the presence of substantial increase in the input signal voltage, the improvement comprising means connected in parallel with said diode rectifier for neutralizing the residual series resistance and capacitance thereof when the diode is fully reverse-biased.

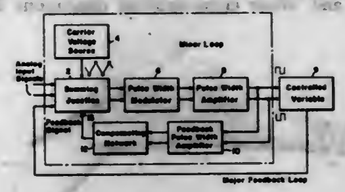
3,090,928
APPARATUS FOR GENERATING PLURALITY OF SIGNALS HAVING VARIABLE PHASE DIFFERENCE
William R. Welty, Fullerton, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Filed Jan. 2, 1958, Ser. No. 706,857
7 Claims. (Cl. 331—38)



1. An apparatus for producing a plurality of output signals of the same frequency, successive ones of said signals having a determinable phase difference, said apparatus comprising means for generating a first microwave energy signal of a predetermined frequency; first and second delay lines each having first and second extremities, respectively; means for applying said first microwave energy signal of a predetermined frequency to said first extremity of said first delay line; means for generating a second microwave energy signal of a frequency which differs from said predetermined frequency by a fixed number of cycles per second; means for applying said second microwave energy signal to said second extremity of said second delay line; means for coupling energy from said first delay line at *m* spaced points therealong numbered in ascending sequence towards said second extremity from the point nearest said first extremity wherein *m* is an integer no less than two; means for coupling energy from *m* points along said second delay line, said *m* points being numbered in ascending sequence towards said second extremity from the point nearest said first extremity of said second delay line and being spaced to provide intervals therebetween that are proportional to the electrical distance between corresponding points of said first delay line thereby to provide *m* pairs of points along said first and second delay lines; and means responsive to the microwave energy appearing at each pair of the *m* pairs of points along said first and second delay lines for producing *m* output signals each of a frequency equal to said fixed number of cycles per second and having a determinable phase difference from the remaining output signals.

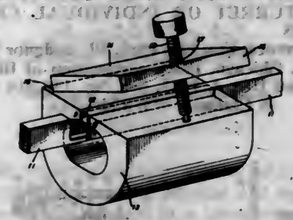
3,090,929
CONTROLLER CIRCUITRY WITH PULSE WIDTH MODULATOR
Francis T. Thompson, Verona, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Dec. 18, 1959, Ser. No. 860,575
8 Claims. (Cl. 332—9)

1. Control circuitry comprising a pulse width modulator including input means and having an output of fixed frequency and minimum pulse width, feedback amplifying means for amplifying the pulsed portion of said output, said amplifying means having respective input and output circuits, a coupling circuit connecting the modulator output to the input circuit of the amplifying means for passing the pulsed portion of modulator output and reject-



ing the D.C. portion of that output, whereby the amplifying means amplifies only the pulse waveform, and compensating means coupled to the output circuit of the amplifying means and responsive to the D.C. component of the amplified pulse waveform for providing a direct current feedback signal to the input means of said modulator.

3,090,930
VARIABLE GYROMAGNETIC WAVE TRANSMISSION DEVICE
Frank A. Dunn, Fairhaven, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 26, 1957, Ser. No. 705,297
1 Claim. (Cl. 333—24.1)



A microwave guiding channel, an element of magnetically polarizable material coupled to said channel, said material exhibiting gyromagnetic properties at the frequency of wave energy supportable by said guiding channel; means for establishing a magnetic polarizing field through said element comprising first and second oppositely polarized magnetized pole pieces on opposite sides of said element; and a variable magnetic flux leakage path shunting said magnetic field, said flux leakage path comprising a plate of magnetic material, one end of said plate being hinged at one of said pole pieces by magnetic force, and a screw of magnetically inert material engaging a threaded aperture in said plate with one end of said screw in contact with the other of said pole pieces, whereby the distance of said plate from said other pole piece is variable by rotation of said screw in said threaded aperture to vary the magnetic field through said element.

3,090,931
WAVEGUIDE ELBOW
Enrique A. J. Marcatili, Fair Haven, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Mar. 8, 1962, Ser. No. 178,290
9 Claims. (Cl. 333—98)

1. In a guided wave transmission system supportive of wave energy in a first preferred mode of wave propa-

gation and in at least a second, higher order mode of wave propagation;

an elbow for changing the direction of propagation of said wave energy from a first direction of propagation to a second direction of propagation comprising;

a pair of tapered transition sections whose axes intersect and whose cross-sectional dimensions increase



from a first value at a smaller end to a second larger value in the region of intersection, and

an ellipsoidal reflecting surface passing through the point of intersection of said axes and having its foci located at the smaller ends of said sections.

3,090,932

TUNER WITH SINGLE KNOB CLUTCHABLE TO EITHER TURRET OR INDIVIDUAL CHANNEL VERNIERS

James A. Torrence, Franklin Park, Ill., assignor to Motorola, Inc., Chicago, Ill., a corporation of Illinois

Filed Dec. 4, 1961, Ser. No. 156,914
6 Claims. (Cl. 334—51)



3. In a tuner for a television receiver having channel selecting means and a plurality of cam screws for presetting a fine tuning element, the combination of a rotatable sleeve and a sleeve gear mounted thereon, a first rotatable member engageable with the cam screws for adjustment thereof, a second rotatable member operating the channel selecting means, said rotatable sleeve and sleeve gear being mounted concentrically with said first rotatable member, a clutch located on the interior end of said sleeve to mutually engage said sleeve and first member, a drive gear mounted on said second rotatable member and in engagement with said sleeve gear, a spring biasing said clutch in engagement, and a single knob on said first rotatable member and operable from without the receiver to impart torque by said first rotatable member to said rotatable sleeve and said second rotatable member, said knob being depressible against said spring to disengage said clutch, said first rotatable member further being axially operable by said knob so that when said knob is depressed to disengage said clutch, said first rotatable member will be caused to positively engage a cam screw to provide adjustment thereof while said second rotatable member remains stationary.

3,090,933

A.C. TRANSDUCERS AND VARIOMETERS

Jacques Henry-Baudot, Antony, France, assignor, by mesne assignments, to Printed Motors, Inc., New York, N.Y.

Filed Sept. 15, 1958, Ser. No. 761,143
Claims priority, application France Nov. 13, 1957
5 Claims. (Cl. 336—120)



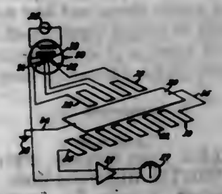
1. An alternating current transducer device comprising: first and second magnetic core members, each having on one face thereof an annular surface consisting of a single flat plane, said core members being mounted with said annular surfaces in opposed parallel relation and on a common axis, said surfaces thus defining therebetween a narrow annular air gap; a first electric winding bonded flat to said annular surface of said first core member and including at least a pair of coils arranged on opposite sides of said common axis, each coil comprising a plurality of turns wound about a common coil axis and covering a separate sectorial portion of the annular surface of said first core member, adjacent coils being oppositely wound with respect to each other and all coils being serially connected; a second electric winding bonded flat to said annular surface of said second core member and including a plurality of coils equal in number to a multiple of the number of coils in said first winding, the coils of said second winding being equally distributed about said common axis and each comprising a plurality of turns wound about a common coil axis and covering a separate sectorial portion of the annular surface of said second core member, adjacent coils of said second winding being oppositely wound and all being serially connected in a common circuit and means for varying the coupling between said first and second windings.

3,090,934

REDUCTION OF UNWANTED COUPLING BETWEEN TRANSFORMER MEMBERS OF POSITION-MEASURING TRANSFORMERS

Clair L. Farrand, Bronxville, N.Y., assignor to Inductosyn Corporation, Carson City, Nev., a corporation of Nevada

Filed Dec. 26, 1957, Ser. No. 705,156
5 Claims. (Cl. 336—129)



1. A position-measuring transformer having relatively movable input and output inductively related windings, each winding being distributed over an area, one of said windings overlying the other throughout a certain area, said input and output windings having a close spacing establishing a substantial magnetic coupling between

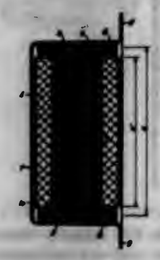
them and whereby the potential distribution of the windings acts to electrostatically couple the windings together, an electrostatic shield comprising an imperforate metallic sheet of non-magnetic electrically conducting material, said sheet extending throughout the area between the windings, and a bond of insulating material between said sheet and one of said windings.

3,090,935

TRANSFORMERS, CHOKE-COILS AND ALL SIMILAR DEVICES, AND SPECIAL STAMPINGS USED THEREFOR

Emile Lekens, Kapelstraat 197, Aartselaar, Belgium

Filed Aug. 10, 1959, Ser. No. 832,743
Claims priority, application Belgium Sept. 4, 1958
1 Claim. (Cl. 336—212)



An induction device, comprising, in combination, an inner core consisting of a stack of superposed iron stampings of the same size and having elongated rectangular bodies and angularly converging front and rear ends of gradually diminishing cross-section, a winding tightly enclosing said rectangular bodies, a paper cover tightly enclosing said winding, whereby said winding with said paper cover has the form of an elongated rectangular body with said angular front and rear ends extending beyond the rectangular body, and an outer core consisting of two similar stacks of iron stampings, the iron stampings of the two stacks of the outer core extending perpendicularly to the iron stampings of the stack of the inner core, the two stampings of the outer core having elongated body portions tightly engaging the opposite sides of said rectangular body, and further having end portions extending at right angles to said body portions and enclosing said front and rear ends of the iron stampings of the inner core stack, said end portions having gradually diminishing lengths contacting said front and rear ends and corresponding to said front and rear ends, whereby said end portions of the iron stampings of the outer core stacks constitute a continuation of said front and rear ends of the iron stampings of the inner core stack and whereby the width of said outer core is substantially equal to the combined thickness of said inner core and said winding, said outer core having two parallel side surfaces and two parallel end surfaces extending perpendicularly to said side surfaces, a slot separating the stacks of the outer core being located in the middle of each of said end surfaces, and a prismatic housing tightly enclosing said outer core and having inner surfaces in contact with the side and end surfaces of the outer core.

3,090,936

ELECTRICAL CONNECTOR

Frederick L. Maltby, 1417 Edge Hill Road, Abington, Pa.

Filed Dec. 24, 1959, Ser. No. 861,933
6 Claims. (Cl. 339—210)

1. A fanning strip comprising an elongated base of insulating material, the forward and rear edges of said base being tapered inward toward the bottom of said base, said base having a plurality of transverse grooves in its top surface each adapted to receive an electrical conductor equipped with a standard connecting lug of the type secured to a conductor by conductor gripping means extending upward from the lug to the rear of the connecting portion with the connecting portion of said lug projecting beyond said groove and with a shoulder on said connecting portion abutting against the side of said base, and



a cover of insulating material for said base, said cover having a pair of downwardly extending lips tapered to mate with the tapering edges of said base in a dove-tail fit and holding said cover on said base, the forward lip on said cover being adapted to rest on the connecting portions of the lugs projecting from said base and retaining said lugs in said base.

3,090,937

ELECTRICAL CONNECTOR WITH CONTACT RETENTION SLEEVE

John T. Keith, Los Angeles, Calif., and Fredrick G. Maston, Scottsdale, Ariz., assignors to Cannon Electric Company, Los Angeles, Calif., a corporation of California

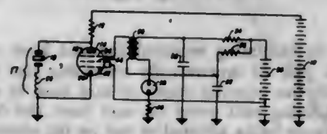
Filed Oct. 10, 1960, Ser. No. 61,477
2 Claims. (Cl. 339—217)



2. A first connector element adapted to contain a first contact terminal for making physical and electrical contact with a mating terminal in a complementary second connector element and in which said first terminal includes an intermediate mounting section, a rearwardly disposed stop element, and a forwardly disposed resiliently contractible retainer means having a normal diameter greater than that of the mounting section and being contractible to a diameter no greater than the mounting section, said first connector element comprising a molded insulation body having a bore therethrough opening at a forward end and at a rearward end, a metallic sleeve comprising a cylinder entirely formed with a continuous annular wall and molded into said insulation body in a position to line a portion of said bore, the material of the insulation body having a direct, intimate and permanent bond with substantially the entire outer surface of said sleeve, the inner surface of said sleeve defining an intermediate constricted annular neck portion of a diameter to lodge the mounting section of said first terminal, an annular shoulder portion extending radially outwardly from the forward end of the neck portion and facing forward and adapted to restrain the retainer means on such terminal against rearward axial dislodgment, and a flared entrance ramp portion extending from the rearward end of the neck portion rearwardly and having a smaller angle relative to the axis of the bore than said annular shoulder portion, said ramp portion providing a cam surface to constrict the retainer means on such terminal for sliding entrance into the neck portion whereby such terminal may be advanced so that the retainer means slides through the neck portion and expands to its

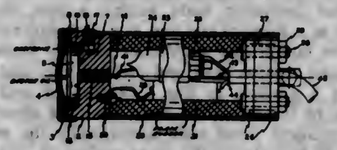
normal diameter upon reaching the said shoulder portion, the rear end of said sleeve presenting a rearwardly facing annular abutment surface exposed within the bore adapted for engagement by the rearwardly disposed stop element on the first mentioned terminal.

3,090,938
UNDERWATER BEACON
William B. Huckabay and William H. Parker, Dallas, Tex., assignors, by mesne assignments, to Rayflex Exploration Company, Richardson, Tex., a corporation of Texas
Filed Aug. 31, 1959, Ser. No. 837,010
4 Claims. (Cl. 340—5)



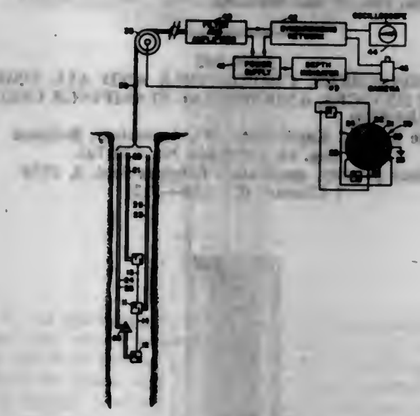
4. In a beacon for marking a position in a body of water, a transmitter system for sending time-spaced pulse type signals through the water for an extended period of time, comprising an acoustical signal transmitting resonating network; a cold cathode gas-filled trigger tube having an anode, cathode and trigger grid; said network being connected across the anode and cathode of the trigger tube and forming a primary discharge circuit; a primary power supply connected to the anode of the trigger tube; a secondary, lower voltage, power supply; and a secondary discharge circuit connected to the secondary power supply and to the trigger grid of the trigger tube for momentarily energizing said trigger grid at time-spaced intervals and sequentially firing the trigger tube, whereby said network is activated at corresponding time-spaced intervals for transmitting said pulses, said secondary discharge circuit including capacitance means arranged to be charged by the secondary power supply, and means for intermittently imposing the charge of the capacitance means on the trigger grid of the trigger tube for firing the trigger tube.

3,090,939
TESSELLATED ELECTROMECHANICAL TRANSDUCER ELEMENT
Frank Massa, Cohasset, Mass., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed May 13, 1953, Ser. No. 354,862
2 Claims. (Cl. 340—9)



1. An electromechanical transducer element adapted for use in a hydrophone in connection with underwater sound systems, said element comprising a circular disc, said disc including a central hexagonal plate and six peripheral plates surrounding said central hexagonal plate, a thin layer of Corprene insulation disposed between matching faces of the plates included in said disc, each peripheral plate comprising a partial hexagon having three adjoining hexagonal sides of dimensions the same as the sides of said central hexagonal plate and an arcuate side joining the ends of two of its hexagonal sides and whose radius is approximately twice the length of one of said hexagonal sides, and said central and peripheral plates forming a tessellated pattern.

3,090,940
WELL LOGGING
Charles B. Vogel, Houston, Tex., assignor to Shell Oil Company, a corporation of Delaware
Filed June 27, 1958, Ser. No. 745,118
4 Claims. (Cl. 340—18)

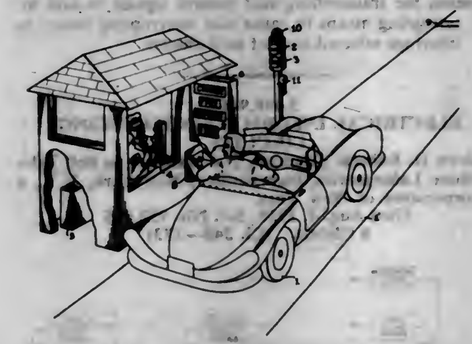


1. An apparatus for seismic velocity borehole logging comprising: a first and second receiver vertically spaced along said borehole; transmitter means for producing an acoustical impulse at a point vertically spaced from said first and second receivers; circuit means connecting both said transmitter means to a power supply located at the surface and said first and second receivers to a recording means located on the surface, said circuit means including a multi-conductor cable, a first pair of conductors of said cable being connected to said first receiver, a second pair of conductors of said cable being connected to said second receiver, a third pair of conductors of said cable being connected to said transmitter, said first pair of conductors being disposed in both a balance and substantially parallel untwisted relationship with respect to said second pair of conductors and said third pair of conductors being disposed in both a balanced and substantially parallel untwisted relationship with respect to said first and second pair of conductors.

2. An apparatus for simultaneously transmitting at least a portion of at least two individual electrical signals over a single multi-conductor cable comprising: a multi-conductor cable having six individual conductors disposed in a hexagonal spacing; all said individual conductors being disposed in a substantially parallel untwisted relationship; a first transmission circuit formed by a first pair of diametrically opposed conductors in said cable; a second transmission circuit formed by a second pair of conductors in said cable, said second pair of conductors being located on the corners of the hexagon adjacent one of the conductors of the first pair; one of said signals being transmitted over the first circuit and the other of said signals being transmitted over the second circuit.

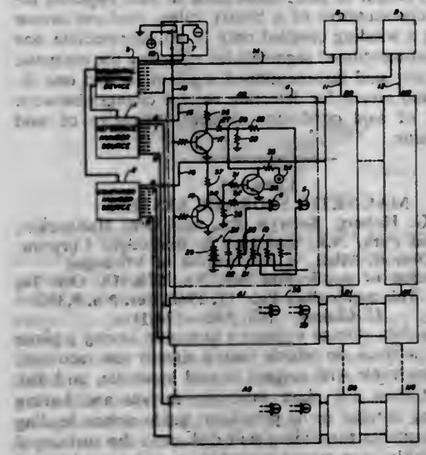
3,090,941
TOLL COLLECTING DEVICE
Lemuel R. Breese, Galion, Ohio, assignor to North Electric Company, Galion, Ohio, a corporation of Ohio
Filed Dec. 12, 1957, Ser. No. 702,371
20 Claims. (Cl. 340—31)

1. In a toll collecting system adapted for use with facilities requiring a toll payment having receiving means for receiving toll payments of various species, signal means operative to generate signals representative of the number of each species received by said receiving means, comparison means comprising a plurality of network circuits, each of which is connected to represent a different one of said species, register means operative to register on the different network circuits in combination the toll payment required, totalizing means connected to said signal means operatively controlled by said signals to determine the value of the payment received including means operative to register on said different network circuits in combination the toll payment deposited, indicator



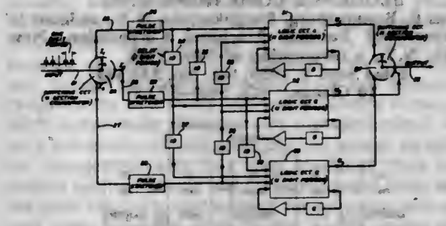
means for providing a check signal operatively controlled by said different network circuits in combination responsive to registration thereon of a total deposited toll which is equal in amount to the required toll, and further means connected to said network circuits operatively controlled to energize said network circuits responsive to the registration thereon of a deposited toll which is greater than said required toll to enable said indicator means.

3,090,942
NUMBER COMPARISON AND DISPLAY CIRCUITS
Otto O. Gruenz, Jr., Livingston, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 18, 1958, Ser. No. 781,387
13 Claims. (Cl. 340—146.2)



1. Apparatus comprising a first pair of indicating devices each representing an identical item of information, a second pair of indicating devices both representing a different item of information, each of said first and said second pair of indicating devices being initially inactive, a first source of information, a second source of information, a first means connecting said first source of information to one indicating device of said first pair and to one indicating device of said second pair, a second means connecting said second source of information to the other indicating device of said first pair and to the other indicating device of said second pair, means including said first means responsive to the receipt of a predetermined item of information from said first source of information for activating said one indicating device of said first pair, and means including said second means responsive to the receipt of an information item from said second source of information when said information item corresponds to said predetermined item of information for activating said other indicating device of said first pair and for deactivating said one indicating device of said first pair.

3,090,943
SERIAL DIGITAL DATA PROCESSING CIRCUIT
Willard D. Lewis, Mendham, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed May 31, 1957, Ser. No. 662,740
4 Claims. (Cl. 340—172.5)

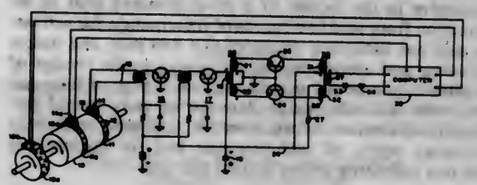


1. In a high speed compound logic circuit for processing digital signal information supplied in successive digit periods, first and second logic circuits for processing digital information at digital input repetition rates of one digit every two digit periods, a signal source supplying digital information in successive digit periods, said digital signals being grouped in accordance with their occurrence in two interleaved sets of digit periods, first and second input circuits, a first switching means for applying the first of said groups of input signals only to said first input circuit and for applying the second of said groups only to said second input circuit, circuit means connecting both of said input circuits to both of said logic circuits for coupling said first and second groups of input signals to both of said logic circuits, said circuit means including delay circuit means for synchronizing the arrival of digital signal information at each logic circuit from said two input circuits, and a second switching means synchronized with said first switching circuit for converting the outputs from said two logic circuits into serial digital output signals in successive digit periods.

3,090,944
TIMING PULSE GENERATOR
Jacob J. Kellaoha, Huntingdon Valley, and James W. Peghiny, Philadelphia, Pa., assignors to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Filed Sept. 12, 1958, Ser. No. 760,679
16 Claims. (Cl. 340—172.5)

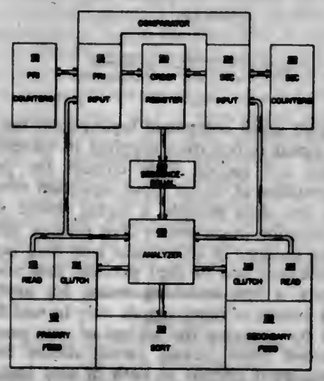
1. A noise insensitive pulse generator comprising means having a plurality of spaced magnetic portions along a surface thereof; a magnetic transducer head adjacent said means and responsive to relative motion between said magnetic portions and said head to produce an alternating signal of a single cycle for each of said magnetic portions; and pulse shaping means coupled to said head for producing pulses from said alternating signals and suppressing intervening noise signals, said pulse shaping

means including an amplifying circuit connected to receive said alternating signals from said head, an output transformer having primary coil means connected to receive outputs from said amplifying circuit, secondary coil



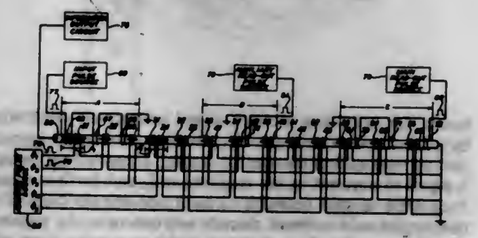
means and a core with a substantially rectangular hysteresis loop, and means operative in conjunction with the coercivity of said core for establishing a minimum value of amplified signal sufficient to produce an output signal in said secondary coil.

3,090,945
SEQUENCE COMPARING UNIT
Thomas E. Brandenburg, Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Sept. 8, 1959, Ser. No. 838,689
10 Claims. (Cl. 340—172.5)



1. A sequence unit for repetitively comparing data received in digit pulse form from plural sources, selected ones of which may subsequently be interrupted in response to the results of the comparison, comprising:
a plurality of counters, one for each order of data received from each source;
means to reset said counters;
means to set said counters to values corresponding to the digit pulse values received from said sources;
means for interrupting the data transmission from selected ones of said sources;
input means for each order for selectively receiving digit pulses from the sources when said sources are uninterrupted and for receiving digit pulses from the uninterrupted sources and the counters associated with the interrupted sources when selected ones of said sources are interrupted;
said input means including comparison means for generating comparison values;
an order register having a plurality of orders comprising means to store said comparison values;
means connecting each order of said input means to an associated order of said order register;
a sequence-equality indicating circuit coupled to said order register;
means for shifting comparison values from said order register in order of significance into said sequence-equality indicating circuit, said sequence-equality indicating circuit being adapted to lock to a state representative of the first unequal comparison value received by it so as to be nonresponsive to subsequent unequal comparison values supplied thereto, and including means to issue a control signal indicating the receipt of said comparison values;
means for transmitting said control signals to said interrupting means to cause said interrupting means to interrupt selected ones of said sources.

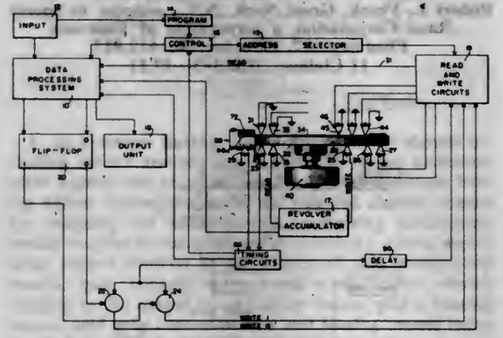
3,090,946
ELECTRICAL INFORMATION HANDLING CIRCUITS
Andrew H. Bobeck, Chatham, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Aug. 4, 1958, Ser. No. 752,905
6 Claims. (Cl. 340—173)



2. An information storage cell comprising an electrical conductor element having a magnetic tape helically wound therearound, said tape being normally magnetized in one direction, said tape being capable of assuming stable magnetic states in the opposite direction in discrete portions thereof when said portions are at least a minimum length as determined by the magnetic interactions of the magnetization of the remainder of said tape and said discrete portions, means for setting more than two immediately adjoining segments of said tape each being less than said minimum length to said stable state in said opposite direction representative of a binary value, read-out means including a winding coupled only to an intermediate one of said last-mentioned segments for reversing the magnetic state of only said last-mentioned segment to said one direction, and means for detecting voltage changes between the ends of said conductor element indicative of said binary value.

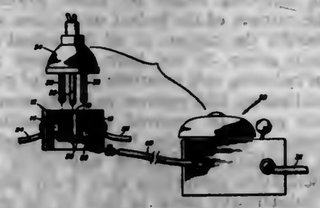
3,090,947
MAGNETIC STORAGE SYSTEM
George G. Hoberg, Berwyn, Pa., and Otto Hohnecker, Midland Park, N.J., assignors to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Continuation of application Ser. No. 616,318, Oct. 16, 1956. This application Feb. 17, 1960, Ser. No. 9,392
15 Claims. (Cl. 340—174.1)

1. In a data storage system; a turntable having a plane magnetic surface on which timing signals are recorded; a disk removable with respect to said turntable, said disk having at least one plane magnetic surface and having positioning notches in its periphery; guide means leading to said turntable for sliding said disk onto the surface of said turntable; stop means mounted on said turntable and adapted to cooperate with the positioning notches in the periphery of said disk to control its location and angular orientation; thrust means for urging said disk against said stop means; clamp means for clamping said disk on said turntable, said thrust means and clamp means being retractable below the turntable surface during the slide-on portion of the disk-positioning operation, said guide means, stop means, thrust means and clamp means being cooperatively adapted to effect positioning of said disk on said turntable in substantially the same precise position previously occupied by said same disk with respect both to the center of the disk and to its angular orientation; means for rotating said turntable and the clamped disk; means for dynamically braking and stopping said turntable at an indexed position so related to said stop means



and so aligned with said guide means as to facilitate rapid removal of said disk from, and placement of a succeeding disk on, said turntable; transducer means for recording information on the plane magnetic surface of said disk and for reading the recorded information therefrom; and means for utilizing said turntable-recorded timing signals to control the timing of said recording by said transducer means.

3,090,948
RECEPTACLE PLUG TO PROTECT APPLIANCE THEFT
Norman C. Cremer, 402 Random Road, Baltimore, Md.
Filed Oct. 31, 1961, Ser. No. 149,114
3 Claims. (Cl. 340—280)



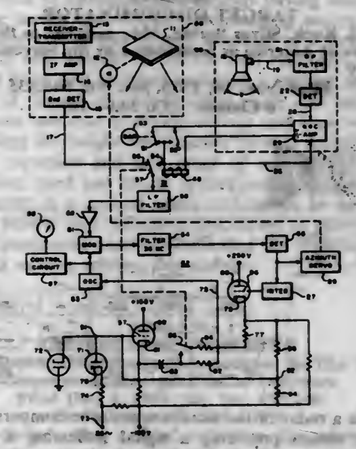
1. In combination, a socket having a hot wire terminal and a ground wire terminal for connecting to hot and ground conductors, respectively, of an electric power main, said socket having a pair of openings therein for receiving spaced contact pins and an aperture extending therein, means including a resilient leaf spring attached to said hot wire terminal and located directly below said aperture, a contact blade engageable by said leaf spring, a warning device connected to said contact blade and to said ground terminal, and a plug for said socket having a pair of spaced contact pins for making contact with said hot wire and ground wire terminals and an actuator plunger for passing through said aperture in said socket for depressing said leaf spring so as to interrupt the circuitry between the hot wire terminal and said alarm device, whereby when said plug is removed from said socket, the circuitry between said hot wire terminal and said alarm device is completed to give an indication of the removal of said plug.

3,090,949
ILLUMINATED WARNING DEVICE WITH SWITCH-OPERATING MECHANISM
Don M. Hallerberg, Los Angeles, Calif. (2009 Sunna Drive, San Pedro, Calif.)
Filed May 22, 1961, Ser. No. 111,806
14 Claims. (Cl. 340—366)



1. In an illuminated warning device, in combination, a housing, a lamp mounting plate removably carried in said housing, latch means on said lamp mounting plate and said housing to removably retain said lamp mounting plate in a predetermined position of assembly relative to said housing, an operating rod extending into said housing, and through said lamp mounting plate, and mounted for reciprocatory and rotary movement relative thereto, said latch means being disengaged by a predetermined one of such movements of said operating rod, means on said rod for engagement with said lamp mounting plate in one rotated position of said rod for moving said lamp mounting plate relative to said housing for retrieving and seating said lamp mounting plate therein, switch means carried by said housing and operated by reciprocation of said rod relative to said lamp mounting plate, and a member attached to said rod at the forward end thereof and manually engageable from the front of said housing for reciprocating and turning said rod.

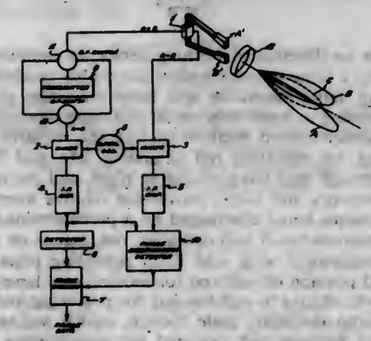
3,090,950
LOW ALTITUDE DOPPLER SYSTEM
Robert A. Flower, White Plains, N.Y., assignor to General Precision, Inc., a corporation of Delaware
Filed Aug. 19, 1960, Ser. No. 50,774
9 Claims. (Cl. 343—8)



1. A Doppler radar system comprising, an aircraft microwave transmitter-receiver-antenna emitting energy beamed at a target and receiving Doppler information,

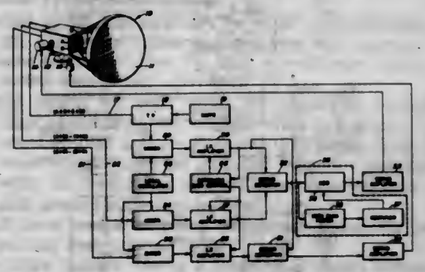
tracking and conversion means for converting Doppler information into navigational data, a second antenna and receiver positioned for receiving only the echoes of said energy from said target and emitting Doppler information, and switch means operated by the output signal of said second antenna and receiver, said switch means when unoperated connecting said transmitter-receiver-antenna to said tracking and conversion means and when operated connecting said second antenna and receiver to said tracking and conversion means.

3,090,951
MONOPULSE RADAR SYSTEM
Walter W. Mieher, Mineola, N.Y., assignor to Sperry Rand Corporation, a corporation of Delaware.
Filed Dec. 20, 1950, Ser. No. 201,780
14 Claims. (Cl. 343—16)



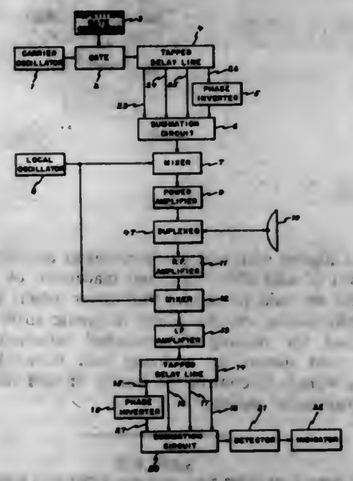
1. In a radar system for accurately pointing at and ranging on a target, a pair of antennas having overlapping receptivity patterns, means connected to said antennas to obtain a sum reference voltage from the signals received by said antennas, means connected to said antennas to obtain a difference voltage between the signals received by said antennas and phase detector means connected to said sum and difference means to determine the phase difference between the sum and difference voltages.

3,090,952
TARGET DISCRIMINATOR
John H. Kuck, Silver Spring, Md., assignor to the United States of America as represented by the Secretary of the Navy
Filed Nov. 14, 1955, Ser. No. 546,835
6 Claims. (Cl. 343—16)



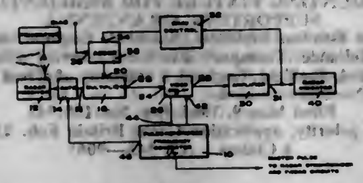
1. In a radar of the simultaneous lobe comparison type having means providing a signal indicating a tracking error, a target discriminator for reducing the error in tracking multiple targets in formation, comprising, means for separating the relatively high frequency components from the relatively low frequency components of the signal indicating an error in tracking, means for rectifying said high frequency components, and means for adding said rectified high frequency components to said error signal, the sum of said rectified signal and said error signal producing a signal for altering the pointing of said radar.

3,090,953
PULSE BURST COMPRESSION RADAR
Robert L. Frank, Great Neck, N.Y., assignor to Sperry Rand Corporation, a corporation of Delaware
Filed Sept. 27, 1956, Ser. No. 612,915
11 Claims. (Cl. 343—17.1)



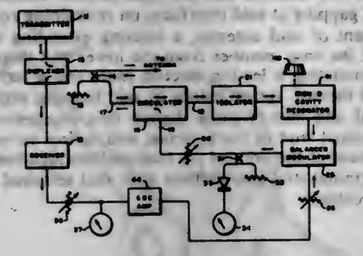
1. A pulsed radar system comprising a transmitter and receiver, said transmitter including means for producing recurrent groups of pulsed oscillations, said groups occurring at the radar repetition rate, said means for producing including means for phase shifting at least one of the carriers of the pulsed oscillations within each group whereby the carriers of all the pulsed oscillations within each group do not have the same phase, and means for radiating said recurrent groups of phase shifted pulsed oscillations; said receiver including means to compress each group of received pulsed oscillations into a predominant single pulse having an amplitude substantially equalling the inphase summation of all the pulsed oscillations comprising each group and having a duration substantially equal to each of the pulsed oscillations comprising each group, said means to compress comprising first and second phase demodulating means each adapted to receive the groups of received phase shifted pulsed oscillations at first inputs thereto and first and second reference signals at second inputs thereto, said first and second reference signals having a quadrature phase relationship; first and second delay means each having a plurality of outputs for increasingly delaying a respective one of the outputs of said first and second demodulating means by incremental amounts each substantially equal to the time separation between the pulsed oscillations comprising said groups, each said output producing a respectively delayed output of said first and second demodulating means, first and second summing means respectively connected to the outputs of said first and second delay means, first and second rectifying means each connected to the output of a respective one of said summing means and third summing means adapted to receive the outputs of said first and second rectifying means.

3,090,954
RADAR SYSTEM
James H. Brown, Richardson, Tex., assignor, by mesne assignments, to Ling-Temco-Vought, Inc., Dallas, Tex., a corporation of Delaware
Filed Mar. 24, 1959, Ser. No. 801,493
11 Claims. (Cl. 343—17.1)



1. In a system having means for receiving signals including spaced discrete pulses and intervening undesired noise signals and providing electrical output signals having values representative of the received signals, means for reducing the noise signals comprising multiplying means coupled to the output of the receiving means, signal delay means coupled to the output of said multiplying means, gain control means and a utilization device coupled to the output of said delay means, and a biasing means, said gain control means and biasing means being coupled to an input of said multiplying means.

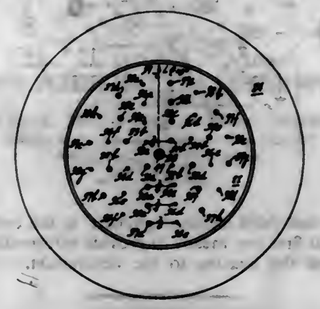
3,090,955
TEST INSTRUMENT FOR DOPPLER RADAR SYSTEMS
Theodore Hubka, Briarcliff Manor, and Arthur C. Blumenfeld, Brewster, N.Y., assignors to General Precision, Inc., a corporation of Delaware
Filed Apr. 28, 1960, Ser. No. 25,302
2 Claims. (Cl. 343—17.7)



1. Test equipment for checking the operation of a radar transmitter and receiver, comprising, means for collecting a portion of the energy emitted by said transmitter, a modulator, means for applying the energy so collected to said modulator, circuit means for connecting the output of said receiver to said modulator, means included in said circuit means for controlling the amount of energy from said receiver which is applied to said modulator, means for applying the output of said modulator to the input of said receiver, means for controlling the amount of energy from said modulator which is applied to the input of said receiver, and means for measuring the output of said receiver.

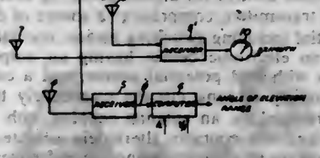
3,090,956
STEERABLE ANTENNA
Oakley M. Woodward, Jr., Princeton, and John Bruce Rankin, Cranbury, N.J., assignors to Radio Corporation of America, a corporation of Delaware
Filed Dec. 23, 1960, Ser. No. 77,979
14 Claims. (Cl. 343—100)

11. An antenna for transmitting or receiving comprising at least one pair of conductive members spaced apart a distance up to one-half wavelength at an operating frequency and defining a radial waveguide having a circular aperture, means within said waveguide for producing an omnidirectional radiation pattern, a first plurality of means



in said waveguide for producing a corresponding plurality of rosette patterns each comprising an even number of lobes, the number of lobes in one of said rosette patterns being different from the number in another of said rosette patterns.

3,090,957
AIRCRAFT GUIDING SYSTEM
Damian Albanese, Irvington, Frederick Beisel, Jr., Nutley, John Kearney, Pequannock, and Eugene Norton, Jr., Park Ridge, N.J., assignors to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland
Filed Nov. 12, 1959, Ser. No. 852,254
8 Claims. (Cl. 343—112)

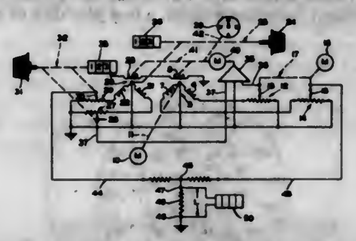


1. An aircraft guiding system to determine the angle of elevation, the range and direction of an aircraft relative a source of radiation, said aircraft having height determining means and velocity determining means, comprising first and second spaced antennas in a first plane carried by said aircraft to receive said radiation, means to derive from said received radiation a voltage equal to the rate of change of said elevation angle and means to derive from said rate of change voltage and from voltages representing the height and velocity of said aircraft, said angle of elevation and said range of said aircraft from said source, third and fourth spaced antennas carried by said aircraft in a second plane orthogonal to said first plane to receive said radiations and means to derive from said last-mentioned received radiations the direction said aircraft is moving relative said source.

3,090,958
COURSE LINE COMPUTER
Milton Brown, Glen Rock, N.J., assignor to The Bendix Corporation, a corporation of Delaware
Filed Dec. 9, 1959, Ser. No. 858,440
10 Claims. (Cl. 343—112)

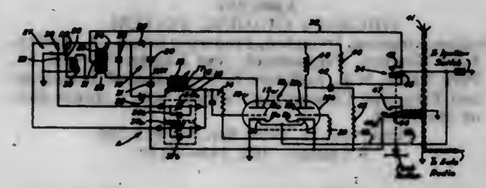
5. A device using a fixed reference for solving the bearing of a course to a destination, comprising first means having an output voltage representing the product of the range and the sine of the bearing of such device relative to the reference, second means having an out-

put voltage representing the product of the range and the sine of the bearing of the destination relative to the



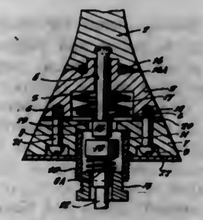
reference, and third means responsive to the output voltages of said first two means to provide information representative of the bearing to the destination.

3,090,959
REMOTE DOOR CONTROLLER
George H. Marmont, Los Angeles, Calif., assignor, by mesne assignments, to The Dalton Foundries, Inc., Warsaw, Ind., a corporation of Indiana
Filed Aug. 6, 1956, Ser. No. 602,336
3 Claims. (Cl. 343—225)



1. In remote control for a door actuating device, a control signal transmitter, comprising: a source of direct current potential including switching means; oscillator means including an electronic device having an output circuit connection with said potential source, and a control circuit; a plurality of tank circuits respectively tunable to different frequencies; an antenna coupled with said electronic device; and contacts alternately actuated by said switching means at a predetermined fixed frequencing rate for successively connecting said tank circuits into the control circuit of said electronic device to cause alternate oscillation periods of said oscillator means at each of said frequencies, the change from one frequency to the other being at said predetermined fixed rate.

3,090,960
MOUNTING FIXTURE FOR RESILIENTLY SUPPORTING AN ANTENNA
Douglas Gordon Ingledew, Sheffield, England, assignor to Reliance Transport Electrical Service (Sheffield) Limited, Sheffield, England, a company of Great Britain and Northern Ireland
Filed May 9, 1961, Ser. No. 108,943
Claims priority, application Great Britain Feb. 21, 1961
4 Claims. (Cl. 343—906)



2. A mounting joint for a radio antenna comprising an antenna, a centrally bored electrical insulating supporting base member therefor, a centrally bored intermediate member rigidly secured to the base member and having a central hollow spigot and socket fitment with and permitting rotational movement of the antenna, a stud depending from and retaining said antenna to the intermediate member and constituting a termianl and extending through the bore of the intermediate member and into the bore of the base member, intermeshing cam surfaces at the interfaces of the antenna and the intermediate member permitting gapping at said interfaces on restraining rotational movement of said antenna, a housing extending into the bore of the base member from the lower end thereof and accommodating a lead-in electric cable and a terminal at the end thereof, spring means in said housing urging said terminal and lead-in cable therein into engagement with the terminal stud of the antenna, and spring means in an elargement of the bore of the intermediate member urging said terminal stud into contact with said terminal of said lead-in cable.

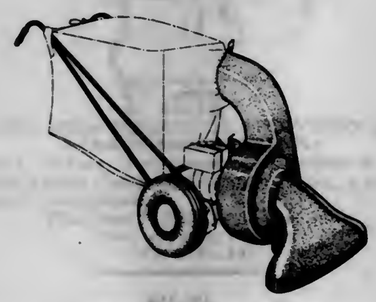
DESIGNS

MAY 21, 1963

195,247
BRUSH HEAD FOR A FLOOR TREATING MACHINE BRUSH DISK ASSEMBLY
Carl R. Flaks, 2011 W. Fullerton Ave., Ingleside, Ill.
Filed Apr. 25, 1961, Ser. No. 64,893
Term of patent 7 years
(Cl. D9—2)



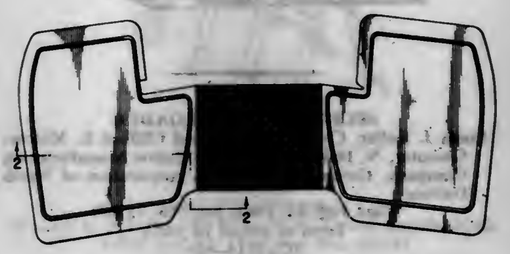
195,248
VACUUM CLEANER
Edwin F. Oblinger, Springfield, Ohio, assignor to Parker Sweeper Company, Springfield, Ohio, a corporation of Ohio
Filed May 8, 1961, Ser. No. 65,050
Term of patent 14 years
(Cl. D9—2)



195,249
FOUNTAIN BRUSH
Joseph Vallis, 353 Cortleigh Blvd., Toronto, Ontario, Canada
Filed Feb. 23, 1962, Ser. No. 68,930
Term of patent 14 years
(Cl. D9—2)



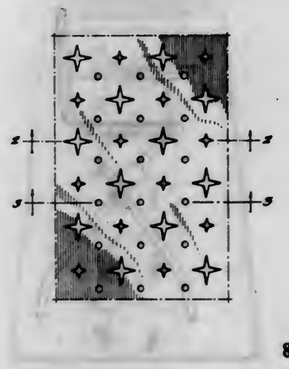
195,250
FRONT FLOOR MAT FOR AUTOMOBILES AND THE LIKE
Leo P. Canick, 1042 Ridgecrest Drive, Wooster, Ohio
Filed Aug. 23, 1962, Ser. No. 71,429
Term of patent 14 years
(Cl. D9—6)



195,251
DRINKING WATER DISPENSER FOR PETS
Bruce A. Ogilvie, Highland, Calif., assignor of one-half to James Linn Rodgers, Whittier, Calif.
Filed Jan. 29, 1962, Ser. No. 68,551
Term of patent 14 years
(Cl. D12—2)



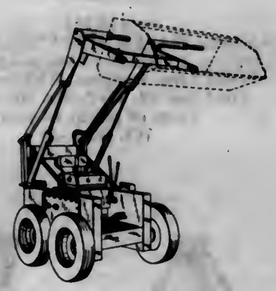
195,252
HARDBOARD PANELING OR THE LIKE
Daniel R. Nikolich, Palatine, Ill., assignor to Edward Hines Lumber Co., a corporation of Delaware
Filed Jan. 8, 1962, Ser. No. 68,213
Term of patent 14 years
(Cl. D13—1)



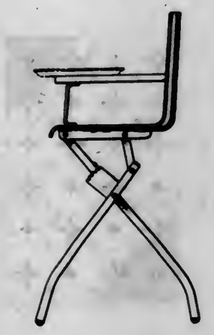
195,253
LOG CABIN
Charles G. Rist, Rte. 2, Box 115, Fallston, Md.
Continuation of design application Ser. No. 58,892, Jan. 4, 1960. This application Jan. 2, 1962, Ser. No. 68,353
Term of patent 14 years
(Cl. D13—1)



195,254
SELF-PROPELLED LOADER
Louis J. Keller, Cyril N. Keller, and Clifford E. Melroe, Gwinner, N. Dak., assignors to Melroe Manufacturing Company, Gwinner, N. Dak., a corporation of North Dakota
Filed July 25, 1962, Ser. No. 71,050
Term of patent 14 years
(Cl. D14—3)



195,255
CHAIR
Francis L. Elliott, 525 S. Spring St., and Donald H. Bernhardt, 5118 Memory Lane, both of Evansville, Ind.
Filed Feb. 12, 1962, Ser. No. 68,768
Term of patent 14 years
(Cl. D15—1)



195,256
CHAIR
Erik Andersen and Palle Pedersen, Arhus, Denmark, assignors of one-half to Moroddi, Inc., Long Beach, Calif., a corporation of California, and one-half to A/S Randers Mobelfabrik, Randers, Denmark, a corporation of Denmark
Filed Apr. 2, 1962, Ser. No. 69,534
Term of patent 14 years
(Cl. D15—1)



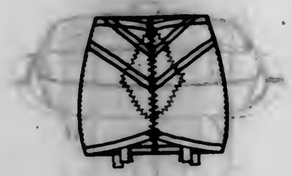
195,257
CHAIR
Erik Andersen and Palle Pedersen, Arhus, Denmark, assignors of one-half to Moroddi, Inc., Long Beach, Calif., a corporation of California, and one-half to A/S Randers Mobelfabrik, Randers, Denmark, a corporation of Denmark
Filed Apr. 2, 1962, Ser. No. 69,535
Term of patent 14 years
(Cl. D15—1)



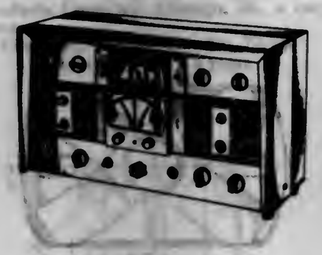
195,258
LACING HOOK
Fredrick F. Fredensburg, Inglewood, Calif., assignor to Mutual Engineering & Mfg. Co., Los Angeles, Calif., a partnership
Filed Sept. 21, 1962, Ser. No. 71,795
Term of patent 14 years
(Cl. D17—2)



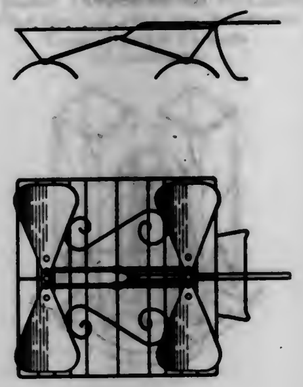
195,259
GIRDLE
Mario Laguzzi, Long Island City, N.Y., assignor to Peirette Corsets, Inc., New York, N.Y.
Original design application Jan. 31, 1962, Ser. No. 68,593, now Patent No. Des. 193,776, dated Oct. 9, 1962. Divided and this application July 11, 1962, Ser. No. 70,876
Term of patent 14 years
(Cl. D20—2)



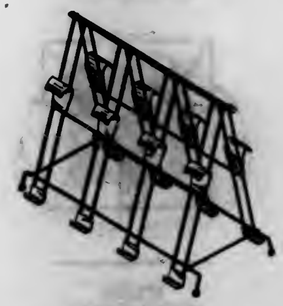
195,260
ELECTRICAL TESTING INSTRUMENT
John T. Armbruster, Niagara Falls, N.Y., assignor to American Optical Company, Southbridge, Mass.
Filed Oct. 12, 1961, Ser. No. 67,654
Term of patent 14 years
(Cl. D26—5)



195,261
ULTRA HIGH FREQUENCY TELEVISION AND RADIO INDOOR ANTENNA
Robert J. McAuley, Northboro, Mass., assignor to Parker Metal Goods Company, Worcester, Mass., a corporation of Massachusetts
Filed Sept. 7, 1961, Ser. No. 66,635
Term of patent 14 years
(Cl. D26—14)



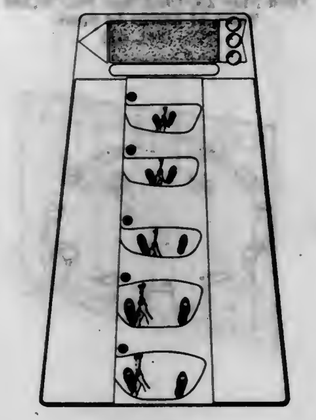
195,262
SHOE RACK
David C. Crawford, Cincinnati, Ohio, assignor to Elco Products Company, Chicago, Ill., a corporation of Delaware
Filed Sept. 7, 1962, Ser. No. 71,602
Term of patent 14 years
(Cl. D33—3)



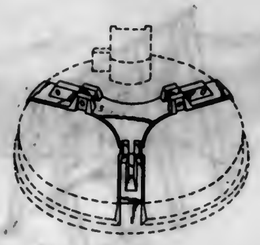
195,263
BOWLING PIN DOLL
Russell A. Pulcifer, 628 Oakdale St., Grand Rapids, Mich.
Filed Apr. 24, 1961, Ser. No. 64,881
Term of patent 14 years
(Cl. D34—4)



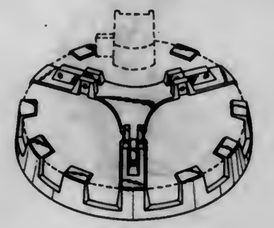
195,264
GOLF PRACTICE DEVICE
Charles R. Miller, Detroit, Mich., assignor to Peninsular Distributing Company, Detroit, Mich., a corporation of Michigan
Filed July 20, 1962, Ser. No. 70,992
Term of patent 14 years
(Cl. D34—5)



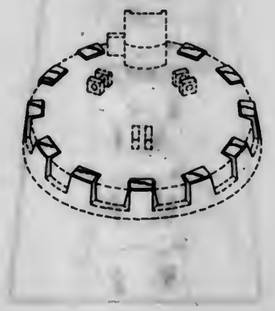
195,265
LIFTING MAGNET
David E. Scott, Royal Oak, Mich., assignor to Square D Company, Park Ridge, Ill., a corporation of Michigan
Filed May 28, 1962, Ser. No. 70,307
Term of patent 14 years
(Cl. D41—1)



195,266
LIFTING MAGNET
David E. Scott, Royal Oak, Mich., assignor to Square D Company, Park Ridge, Ill., a corporation of Michigan
Filed May 28, 1962, Ser. No. 70,308
Term of patent 14 years
(Cl. D41—1)



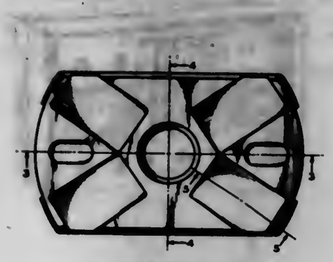
195,267
LIFTING MAGNET
David E. Scott, Royal Oak, Mich., assignor to Square D Company, Park Ridge, Ill., a corporation of Michigan
Filed May 28, 1962, Ser. No. 70,309
Term of patent 14 years
(Cl. D41—1)



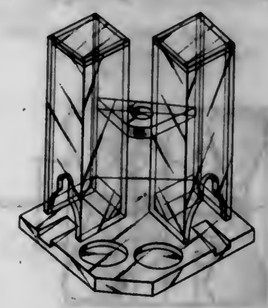
195,268
CASSEROLE OR THE LIKE
John E. Reed, Glen Ellyn, and Robert O. Ernest, Oak Park, Ill., assignor to Sunbeam Corporation, Chicago, Ill., a corporation of Illinois
Filed Dec. 15, 1961, Ser. No. 67,920
Term of patent 14 years
(Cl. D44—1)



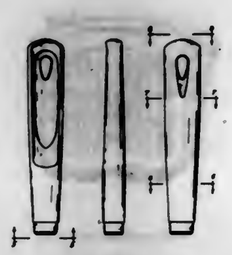
195,269
SANDWICH SERVER
George W. Bergauer, 945 Marias Drive, Bellefontaine Neighbors, Mo.
Filed Dec. 5, 1962, Ser. No. 72,736
Term of patent 14 years
(Cl. D44—10)



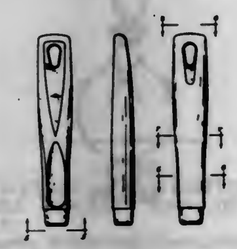
195,270
COMBINATION SUGAR PACKET DISPENSER, CONDIMENT AND FLOWER HOLDER
Charles A. Gant, 6319 Champlain Ave., Chicago, Ill.
Filed Mar. 6, 1961, Ser. No. 64,249
Term of patent 14 years
(Cl. D44—24)



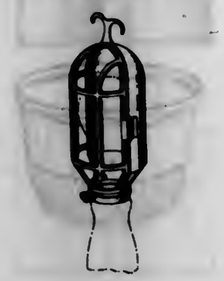
195,271
HANDLE FOR KITCHEN TOOLS OR SIMILAR ARTICLES
Austin H. Munson, Arlington Heights, Ill., assignor to Ekco Products Company, Chicago, Ill., a corporation of Delaware
Filed Dec. 4, 1962, Ser. No. 72,711
Term of patent 14 years
(Cl. D44—29)



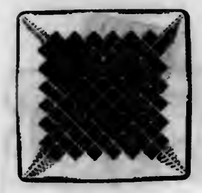
195,272
HANDLE FOR KITCHEN TOOLS OR SIMILAR ARTICLES
Austin H. Munson, Arlington Heights, Ill., assignor to Ekco Products Company, Chicago, Ill., a corporation of Delaware
Filed Dec. 4, 1962, Ser. No. 72,712
Term of patent 14 years
(Cl. D44—29)



195,273
TROUBLE LIGHT GUARD
Leonard Broder, 55 Cromwell St., Providence 7, R.I.
Filed Nov. 20, 1961, Ser. No. 67,620
Term of patent 14 years
(Cl. D48—16)



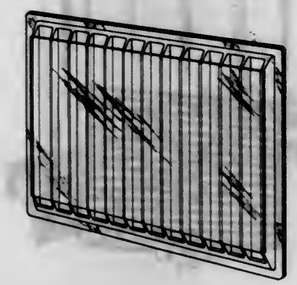
195,274
LIGHTING FIXTURE DIFFUSER
Heinrich Gantenbrink, Menden, Kreis, Iserlohn, Germany, assignor to Prescolite Manufacturing Corporation, Berkeley, Calif., a corporation of California
Filed Sept. 2, 1960, Ser. No. 62,001
Term of patent 14 years
(Cl. D48—16)



195,275
TABLE LAMP
Donald G. Weiss, Briarcliff Manor, N.Y., assignor to Institute for the Crippled and Disabled, New York, N.Y., a corporation of New York
Filed Apr. 16, 1962, Ser. No. 69,716
Term of patent 14 years
(Cl. D48—20)



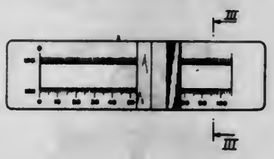
195,276
DISPENSING RACK FOR TUBULAR CONTAINERS
Albert C. Engelmann, 81 Irving Ave., Providence 6, R.I.
Filed Dec. 8, 1961, Ser. No. 67,841
Term of patent 14 years
(Cl. D52—2)



195,277
COIN DISPENSING MACHINE OR SIMILAR ARTICLE
Otis E. Hoffman, Watertown, Wis., assignor to Brandt Automatic Cashier Company, Watertown, Wis., a corporation of Wisconsin
Filed Dec. 4, 1961, Ser. No. 67,790
Term of patent 14 years
(Cl. D52—6)



195,278
RULE FOR MEASURING STAMPS OR THE LIKE
Peter J. Di Primio, 235 Mitinger Ave., Greensburg, Pa.
Filed Mar. 28, 1961, Ser. No. 64,520
Term of patent 7 years
(Cl. D52—6)



195,279
WALL HUNG CLOTHES HAMPER OR SIMILAR ARTICLE
William D. Taylor, Wooster, Ohio, assignor to Rubbermaid Incorporated, Wooster, Ohio, a corporation of Ohio
Filed Apr. 24, 1962, Ser. No. 69,836
Term of patent 14 years
(Cl. D58—4)



195,280
JUG
Ted F. Bodenheimer, Kansas City, Mo., assignor to Owens Plastics Company, Kansas City, Mo., a corporation of Missouri
Filed Dec. 4, 1962, Ser. No. 72,717
Term of patent 14 years
(Cl. D58—5)



195,281
BOTTLE
Jean-Jacques Guerlain, Paris, France, assignor to Guerlain, Inc., New York, N.Y., a corporation of New York
Filed Jan. 31, 1963, Ser. No. 73,393
Term of patent 14 years
(Cl. D58—8)



195,282
PACKAGING CUP FOR FOOD PRODUCTS OR THE LIKE
Howard H. Kalow, Berea, Ohio, assignor to Wilson Plastics, Inc., Sandusky, Ohio, a corporation of Ohio
Filed Mar. 26, 1962, Ser. No. 69,419
Term of patent 14 years
(Cl. D58—17)



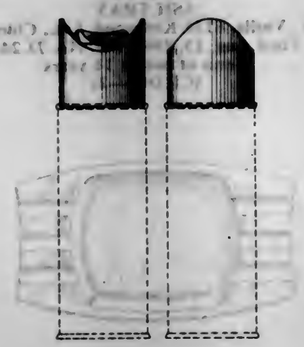
195,283
PACKAGING CUP FOR FOOD PRODUCTS OR THE LIKE
Howard H. Kalow, Berea, Ohio, assignor to Wilson Plastics, Inc., Sandusky, Ohio, a corporation of Ohio
Filed Mar. 26, 1962, Ser. No. 69,423
Term of patent 14 years
(Cl. D58—17)



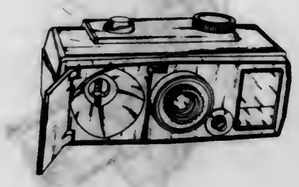
195,284
ROLL-ON DISPENSER
Ira H. Miller, Lambertville, Mich., assignor to Owens-Illinois Glass Company, Toledo, Ohio, a corporation of Ohio
Filed Mar. 7, 1961, Ser. No. 64,171
Term of patent 14 years
(Cl. D58—26)



195,285
COMBINED CLOSURE AND DISPENSER FOR A PRESSURE PACKED CAN OR SIMILAR ARTICLE
Philip H. Sagaria, Bridgeport, Conn., assignor to Valve Corporation of America, Bridgeport, Conn., a corporation of Connecticut
Filed Dec. 27, 1961, Ser. No. 68,081
Term of patent 14 years
(Cl. D58—26)



195,286
COMBINED CAMERA AND FLASH GUN
Richard J. Olson, Linn, and Frank A. Zagara, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed Mar. 23, 1962, Ser. No. 69,393
Term of patent 7 years
(Cl. D61—1)

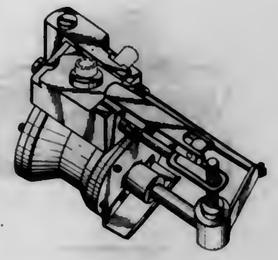


195,287
VENTILATING FAN
John Kenneth Downing, Ilkeld, England, assignor to Vent-Axia Limited, London, England
Continuation of design applications Ser. No. 67,236, Oct. 24, 1961, and Ser. No. 67,237, Oct. 24, 1961. This application July 31, 1962, Ser. No. 71,122
Claims priority, application Great Britain June 5, 1961
Term of patent 14 years
(Cl. D62—4)

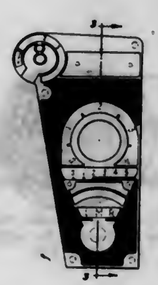
195,288
KEY PUNCH
James V. Simone, 502 Sherbrook Drive, High Point, N.C.
Filed Sept. 7, 1962, Ser. No. 71,597
Term of patent 14 years
(Cl. D64—11)



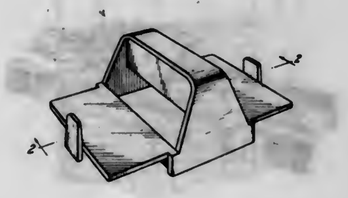
195,289
COMBINATION PUMP AND MEDICINE AND WATER PROPORTIONER FOR POULTRY OR THE LIKE
Nat Cordia, Crown Farm, Silver Lake, Wis.
Filed Apr. 18, 1960, Ser. No. 60,231
Term of patent 14 years
(Cl. D65—1)



195,290
CONTROL PLATE FOR SEWING MACHINE OR THE LIKE
Jiro Kosugi, Tokyo, Japan, assignor to Janome Sewing Machine Co. Limited, Tokyo, Japan
Filed July 5, 1962, Ser. No. 70,807
Term of patent 14 years
(Cl. D70—2)



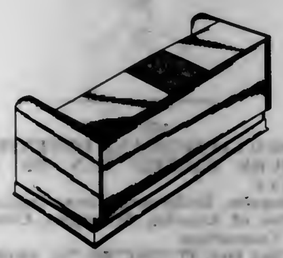
195,291
PAPER HOLDER OR THE LIKE
John A. Helgesen, 900 Boulevard Drive, Belpre, Ohio
Filed May 17, 1962, Ser. No. 70,182
Term of patent 14 years
(Cl. D74—5)



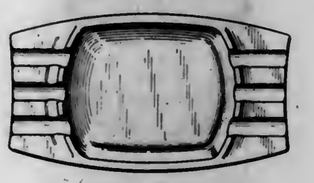
195,292
CLIP FOR A WRITING INSTRUMENT OR SIMILAR ARTICLE
Bertram A. Strauss, 177—33 Edgerton Road, Jamaica 32, N.Y.
Filed Nov. 2, 1961, Ser. No. 67,349
Term of patent 14 years
(Cl. D47—17)



195,293
SERVICE COUNTER FOR BANKS
Francis C. Kegel, Kenmore, N.Y., assignor to APF Industries, Inc., Buffalo, N.Y., a corporation of New York
Filed July 11, 1961, Ser. No. 65,876
Term of patent 14 years
(Cl. D80—2)



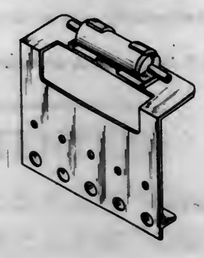
195,294
ASH TRAY
Paul V. Vasile, 6134 Kirkwood Ave., Chicago, Ill.
Filed Aug. 13, 1962, Ser. No. 71,243
Term of patent 14 years
(Cl. D85—2)



195,295
PLASTIC SHEET MATERIAL
John R. Ellefson, Mendenhall, Pa., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed June 6, 1962, Ser. No. 70,441
Term of patent 14 years
(Cl. D87—3)



195,296
COMBINED FILTER SILENCER AND VALVE BRACKET FOR AN AQUARIUM
Allan H. Willinger, 56 Gail Drive, New Rochelle, N.Y.
Filed Sept. 11, 1961, Ser. No. 66,683
Term of patent 14 years
(Cl. D91—2)











LIST OF PLANT PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 21ST DAY OF MAY, 1963

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

Ecke, Paul. Poinsettia plant. 2,259, 5–21–63, Cl. 47—60.
Ecke, Paul. Poinsettia plant. 2,260, 5–21–63, Cl. 47—60.
Ecke, Paul. Poinsettia plant. 2,261, 5–21–63, Cl. 47—60.

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APF Industries, Inc.: *See*—
Kegel, Francis C. 195,293.
A/S Randers Mobelfabrik: *See*—
Andersen, Erik, and Pedersen. 195,256.
Andersen, Erik, and Pedersen. 195,257.
American Optical Co.: *See*—
Armbruster, John T. 195,260.
Andersen, Erik, and P. Pedersen, ½ to Moreddi, Inc., and ½ to A/S Randers Mobelfabrik. Chair. 195,256, 5–21–63, Cl. D15—1.
Andersen, Erik, and P. Pedersen, ½ to Moreddi, Inc., and ½ to A/S Randers Mobelfabrik. Chair. 195,257, 5–21–63, Cl. D15—1.
Armbruster, John T., to American Optical Co. Electrical testing instrument. 195,260, 5–21–63, Cl. D26—5.
Bergauer, George W. Sandwich server. 195,269, 5–21–63, Cl. D44—10.
Bernhardt, Donald H.: *See*—
Elliott, Francis L., and Bernhardt. 195,255.
Bodenheimer, Ted F., to Owens Plastics Co. Jug. 195,280, 5–21–63, Cl. D58—5.
Brandt Automatic Cashier Co.: *See*—
Hoffman, Otis E. 195,277.
Broder, Leonard. Trouble light guard. 195,273, 5–21–63, Cl. D48—16.
Cordis, Nat. Combination pump and medicine and water proportioner for poultry or the like. 195,289, 5–21–63, Cl. D65—1.
Crawford, David C., to Ekco Products Co. Shoe rack. 195,262, 5–21–63, Cl. D33—3.
Cusik, Leo P. Front floor mat for automobiles and the like. 195,250, 5–21–63, Cl. D9—6.
Di Primio, Peter J. Rule for measuring stamps or the like. 195,278, 5–21–63, Cl. D52—6.
Downing, John K., to Vent-Axia Ltd. Ventilating fan. 195,287, 5–21–63, Cl. D62—4.
Du Pont de Nemours, E. I., and Co.: *See*—
Ellefson, John R. 195,295.
Eastman Kodak Co.: *See*—
Olson, Richard J., and Zagara. 195,286.
Ekco Products Co.: *See*—
Crawford, David C. 195,262.
Munson, Austin H. 195,271.
Munson, Austin H. 195,272.
Ellefson, John R., to E. I. du Pont de Nemours and Co. Plastic sheet material. 195,295, 5–21–63, Cl. D87—8.
Elliott, Francis L., and D. H. Bernhardt. Chair. 195,255, 5–21–63, Cl. D15—1.
Engelmann, Albert C. Dispensing rack for tubular containers. 195,276, 5–21–63, Cl. D52—2.
Ernest, Robert O.: *See*—
Reed, John E., and Ernest. 195,268.
Flaks, Carl E. Brush head for a floor treating machine brush disk assembly. 195,247, 5–21–63, Cl. D9—2.
Fredensburg, Fredrick F., to Mutual Engineering & Mfg. Co. Lacing hook. 195,258, 5–21–63, Cl. D17—2.
Gant, Charles A. Combination sugar packet dispenser, condiment and flower holder. 195,270, 5–21–63, Cl. D44—24.
Gantenbrink, Heinrich, to Prescolite Mfg. Corp. Lighting fixture diffuser. 195,274, 5–21–63, Cl. D48—16.
Guerlain, Inc.: *See*—
Guerlain, Jean-Jacques. 195,281.
Guerlain, Jean-Jacques, to Guerlain, Inc. Bottle. 195,281, 5–21–63, Cl. D68—6.
Helgesen, John A. Paper holder or the like. 195,291, 5–21–63, Cl. D74—5.
Hines, Edward, Lumber Co.: *See*—
Nikolich, Daniel R. 195,252.
Hoffman, Otis E., to Brandt Automatic Cashier Co. Coin dispensing machine or similar article. 195,277, 5–21–63, Cl. D52—4.
Institute For The Crippled and Disabled: *See*—
Weiss, Donald G. 195,275.
Janome Sewing Machine Co. Ltd.: *See*—
Kosugi, Kiro. 195,290.
Kegel, Francis C., to APF Industries, Inc. Service counter for banks. 195,293, 5–21–63, Cl. D60—2.
Keller, Cyril N.: *See*—
Keller, Louis J. and C. N., and Melroe. 195,254.
Keller, Louis J. and C. N., and C. E. Melroe, to Melroe Mfg. Co. Self-propelled loader. 195,254, 5–21–63, Cl. D14—3.
Kosugi, Kiro, to Janome Sewing Machine Co. Ltd. Control plate for sewing machine or the like. 195,290, 5–21–63, Cl. D70—2.
Kulow, Howard H., to Wilson Plastics, Inc. Packaging cup for food products or the like. 195,282, 5–21–63, Cl. D58—17.
Kulow, Howard H., to Wilson Plastics, Inc. Packaging cup for food products or the like. 195,283, 5–21–63, Cl. D58—17.
Laguzzi, Mario, to Poirette Corsets, Inc. Girdle. 195,259, 5–21–63, Cl. D20—2.
McAuley, Robert J., to Parker Metal Goods Co. Ultra high frequency television and radio indoor antenna. 195,261, 5–21–63, Cl. D26—14.
Melroe, Clifford E.: *See*—
Keller, Louis J. and C. N., and Melroe. 195,254.
Melroe Mfg. Co.: *See*—
Keller, Louis J. and C. N., and Melroe. 195,254.
Miller, Charles R., to Peninsular Distributing Co. Golf practice device. 195,264, 5–21–63, Cl. D34—5.
Miller, Ira H., to Owens-Illinois Glass Co. Roll-on dispenser. 195,284, 5–21–63, Cl. D58—26.
Moreddi, Inc.: *See*—
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Andersen, Erik, and Pedersen. 195,257.
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Munson, Austin H., to Ekco Products Co. Handle for kitchen tools or similar articles. 195,272, 5–21–63, Cl. D44—29.
Mutual Engineering & Mfg. Co.: *See*—
Fredensburg, Fredrick F. 195,258.
Nikolich, Daniel R., to Edward Hines Lumber Co. Hardboard paneling or the like. 195,252, 5–21–63, Cl. D13—1.
Oblinger, Edwin F., to Parker Sweeper Co. Vacuum cleaner. 195,248, 5–21–63, Cl. D9—2.
Ogilvie, Bruce A., ½ to J. L. Rodgers. Drinking water dispenser for pets. 195,251, 5–21–63, Cl. D12—2.
Olson, Richard J., and F. A. Zagara, to Eastman Kodak Co. Combined camera and flash gun. 195,286, 5–21–63, Cl. D61—1.
Owens-Illinois Glass Co.: *See*—
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Parker Metal Goods Co.: *See*—
McAuley, Robert J. 195,261.
Parker Sweeper Co.: *See*—
Oblinger, Edwin F. 195,248.
Pedersen, Palle: *See*—
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Andersen, Erik, and Pedersen. 195,257.
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Poirette Corsets, Inc.: *See*—
Laguzzi, Mario. 195,259.
Prescolite Mfg. Corp.: *See*—
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Pulcifer, Russell A. Bowling pin doll. 195,263, 5–21–63, Cl. D34—4.
Reed, John E., and R. O. Ernest, to Sunbeam Corp. Casserole or the like. 195,268, 5–21–63, Cl. D44—1.
Rist, Charles G. Log cabin. 195,253, 5–21–63, Cl. D13—1.
Rodgers, James L.: *See*—
Ogilvie, Bruce A. 195,251.
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Taylor, William D. 195,279.
Sagarin, Philip H., to Valve Corp. of America. Combined closure and dispenser for a pressure packed can or similar article. 195,285, 5–21–63, Cl. D58—26.
Scott, David E., to Square D Co. Lifting magnet. 195,265, 5–21–63, Cl. D41—1.
Scott, David E., to Square D Co. Lifting magnet. 195,266, 5–21–63, Cl. D41—1.
Scott, David E., to Square D Co. Lifting magnet. 195,267, 5–21–63, Cl. D41—1.
Simone, James V. Key punch. 195,288, 5–21–63, Cl. D64—11.
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Scott, David E. 195,265.
Scott, David E. 195,266.
Scott, David E. 195,267.
Strauss, Bertram A. Clip for a writing instrument or similar articles. 195,292, 5–21–63, Cl. D74—17.
Sunbeam Corp.: *See*—
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Vallis, Joseph. Fountain brush. 195,249, 5–21–63, Cl. D9—2.
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Vasile, Paul V. Ash tray. 195,294, 5–21–63, Cl. D85—2.
Vent-Axia Ltd.: *See*—
Downing, John K. 195,287.
Weiss, Donald G., to Institute For The Crippled and Disabled. Table lamp. 195,275, 5–21–63, Cl. D48—20.
Willinger, Allan H. Combined filter silencer and valve bracket for an aquarium. 195,296, 5–21–63, Cl. D91—2.
Wilson Plastics, Inc.: *See*—
Kulow, Howard H. 195,282.
Kulow, Howard H. 195,283.
Zagara, Frank A.: *See*—
Olson, Richard J., and Zagara. 195,286.

LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 21ST DAY OF MAY, 1963

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

AAPCD Automotive, Inc.: *See*—
Mettersheimer, John H., Jr. 3,090,822.
ACF Industries, Inc.: *See*—
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Jeep, Charles W., Jr., Niemeyer, and Fitzgerald. 3,090,518.
Sowter, George R., and Eisenberg. 3,090,136.
Abbott Coin Counter Co. Inc.: *See*—
Jones, Donald W. 3,090,690.
Abbott, Mark, to Canadian Industries Ltd. Drawing of synthetic polymers. 3,090,077, 5–21–63, Cl. 18—48.
Abrams, Jack, to The Concepts Co. Locking device for shopping carts. 3,090,470, 5–21–63, Cl. 188—110.
Accurate Products Co., Inc.: *See*—
Roby, Robert L. 3,090,404.
Ackerman, Arthur. Apparatus for skiving abrasive bands for formation of abrasive belts therefrom. 3,090,167, 5–21–63, Cl. 51—34.
Ackles, Robert N., to A. M. Stackhouse. Process for foaming panels in situ. 3,090,078, 5–21–63, Cl. 18—59.
Adams, Cecil E., to American Brake Shoe Co. Dual direction relief or sequence type valve. 3,090,398, 5–21–63, Cl. 137—491.
Adler, Robert, and G. Wade, to Zenith Radio Corp. Parametric amplifier. 3,090,925, 5–21–63, Cl. 330—4.7.
Admiral Corp.: *See*—
Floyd, Earl C. 3,090,832.
Adox Kamerawerk G.m.b.H.: *See*—
Heil, Hans. 3,090,555.
Agfa Aktiengesellschaft: *See*—
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Pro, George M. 3,090,593.
Akaboshi, Michijiro, K. Uragami, and K. Okuma, to Kurashiki Rayon Co., Ltd. Apparatus for continuous measurement of degree of polymerization. 3,090,222, 5–21–63, Cl. 73—53.
Albanese, Damian, F. Beisel, Jr., J. Kearney, and E. Norton, Jr., to International Telephone and Telegraph Corp. Aircraft guiding system. 3,090,957, 5–21–63, Cl. 343—112.
Albany Felt Co.: *See*—
Chagnon, Zephir J., and Kelleher. 3,090,101.
Albertson, William C., Jr., to Erie Mop and Wringer Co. Mop. 3,090,059, 5–21–63, Cl. 15—119.
Alilie, Lucien, to Commissariat a l'Energie Atomique. Nuclear reactor duct structure. 3,090,743, 5–21–63, Cl. 204—193.2.
Allen, George J.: *See*—
Matuszak, Alfred H., Allen, and Metro. 3,090,753.
Allen, Joseph A., to Preway, Inc. Circulating hot air furnace. 3,090,374, 5–21–63, Cl. 126—110.
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Allis-Chalmers Mfg Co.: *See*—
Bellinger, Thaddeus F. 3,090,898.
Altree, Arthur P., S. Bass, and M. Goldsholl, to Kimberly-Clark Corp. Carton for cellulosic product. 3,090,483, 5–21–63, Cl. 206—57.
Aluminium-Industrie-Aktien-Gesellschaft: *See*—
Müller, Paul, Schmitt, and Wittner. 3,090,744.
Alwac International: *See*—
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Bouseu, Gabriel X. R. L. P. F. A. Neuville, and L. H. N. Saint-Frison, to Michelin & Cie. Elastic cables. 3,090,190, 5–21–63, Cl. 57—139.
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Briggs, Merle A. Apparatus for cutting and planting seed potatoes. 3,090,414, 5–21–63, Cl. 145—59.
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Brooks, Charles P., and H. F. Livers; said Livers assor. to said Brooks. Apparatus for forming holes in sewer mains. 3,090,260, 5–21–63, Cl. 77—14.
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Brooks, Kenneth R., to Ford Motor Co. Windshield wiper. 3,090,066, 5–21–63, Cl. 15—250.17.
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Brown, Henry, to The Udylite Research Corp. Composite nickel electroplate. 3,090,733, 5–21–63, Cl. 204—40.
Brown, James H., to Ling-Temco-Vought, Inc. Radar system. 3,090,954, 5–21–63, Cl. 343—17.1.
Brown, Milton, to The Bendix Corp. Course line computer. 3,090,958, 5–21–63, Cl. 343—112.
Bruner Corp.: *See*—
Rudelich, John. 3,090,996.
Buchanan, Sylvester C. Method of recovering selenium and/or germanium from their ores. 3,090,671, 5–21–63, Cl. 23—200.
Buchwald, Robert M., to General Motors Corp. Valve actuation means. 3,090,368, 5–21–63, Cl. 123—90.
Buckner, Thomas J. Self-adjusting brake device. 3,090,-469, 5–21–63, Cl. 188—79.5.
Budd, Larry J., to Pallet Devices, Inc. Apparatus handling methods. 3,090,177, 5–21–63, Cl. 53—196.
Budiong, Simeon, to F. J. Littrell Machine Co. Micro-feed adjusting mechanism. 3,090,250, 5–21–63, Cl. 74—600.
Budzich, Tadeusz, to The Weatherhead Co. Pump. 3,090,-312, 5–21–63, Cl. 103—37.
Budzich, Tadeusz, to The Weatherhead Co. Variable displacement pump. 3,090,313, 5–21–63, Cl. 103—37.
Buffelen Sales Co. Inc.: *See*—
Orth, George O., Jr. 3,090,695.
Bullock, Byrell W.: *See*—
Kuck, John H., and Bullock. 3,090,917.
Bulson, Walter T., to Armstrong Cork Co. Sag-resistant fiberboard and method of making same. 3,090,699, 5–21–63, Cl. 117—62.2.
Bundus, Robert H.: *See*—
Nosnick, Peter P., Bundus, and Eggen. 3,090,688.
Burbach, Henry E., and O. T. Hipp, to Combustion Engineering, Inc. Gas recirculation duct. 3,090,332, 5–21–63, Cl. 110—49.
Burgess, Peter J., to The General Electric Co. Ltd. Method of cold bonding metallic parts. 3,090,116, 5–21–63, Cl. 29—470.1.
Burgin, Kermit H., 50% to F. B. Clive. Boat propelling water jet nozzle. 3,090,346, 5–21–63, Cl. 115—12.
Burnett, William B, to The Strong-Scott Mfg. Co. Rotary mixing device. 3,090,606, 5–21–63, Cl. 259—109.
Burns, Arthur H., Jr., to Olin Mathieson Chemical Corp. Training cartridge. 3,090,309, 5–21–63, Cl. 102—41.
Burroughs Corp.: *See*—
Hoberg, George G., and Hohnecker. 3,090,947.
Johnson, Edward M. 3,090,302.
Thompson, Lyle G. 3,090,872.
Burroughs Wellcome & Co. (U.S.A.) Inc.: *See*—
Copp, Frederick C., McCoubrey, and Billinghurst. 3,090,-725.
Busch, Richard E.: *See*—
Christof, Chris A., Gearheart, and Busch. 3,090,298.
Buschbom, Floyd E., to Vandale Corp. Leveling structure. 3,090,506, 5–21–63, Cl. 214—17.
Busquet, Jan C., to Koninklijke Machinefabriek Gebr. Stork & Co. N.V. Radial flow impellers for centrifugal pumps or fans. 3,090,543, 5–21–63, Cl. 230—114.
Butler Mfg. Co.: *See*—
Gutekunst, Gerald A., and Jensen. 3,090,507.
Buttner, Paul: *See*—
Zink, Heinrich J., John, and Buttner. 3,090,259.
C.C.D. Processes (N.Y) Ltd: *See*—
Chayen, Israel H. 3,090,779.

C & D Batteries, Inc.: *See*—
Jensen, Henry E. 3,090,904.
Cado, Erwin E., to Motorola, Inc. Printed circuit process. 3,090,706, 5–21–63, Cl. 117—212.
Caha, Theophil A. Ground-working apparatus. 3,090,333, 5–21–63, Cl. 111—63.
Calpat Products, Inc.: *See*—
Handley, John R. 3,090,401.
Campman, Arthur R.: *See*—
Koppelman, Edward, and Campman. 3,090,406.
Canada, Alfred H., to United States of America, Navy. Optical image feedback. 3,090,830, 5–21–63, Cl. 178—6.8.
Canadian Industries Ltd.: *See*—
Abbott, Mark. 3,090,077.
Cannon Electric Co.: *See*—
Keith, John T., and Maston. 3,090,937.
Cantieri Riuniti Dell' Adriatico S.p.A.: *See*—
Costanzi, Nicolo. 3,090,338.
Carborundum Co., The: *See*—
Crawley, William P. 3,090,103.
Carlo, Clarence E., to Dubuque Products, Inc. Collable partition with doors. 3,090,424, 5–21–63, Cl. 160—23.
Carlo, Clarence E., to Dubuque Products, Inc. Multiple wall sight and sound insulating partition. 3,090,425, 5–21–63, Cl. 160—25.
Carlo, Clarence E., to Dubuque Products, Inc. Collable partition with chalk board. 3,090,426, 5–21–63, Cl. 160—25.
Carlo, Clarence E., to Dubuque Products, Inc. Metallic dual thickness partition. 3,090,430, 5–21–63, Cl. 160—196.
Carlsen, William R., to Michigan Tool Co. Tool head for finishing machine. 3,090,168, 5–21–63, Cl. 51—52.
Carlson, Olof B., to Consolidated Cigar Corp. Apparatus for applying tear tab to a web. 3,090 285, 5–21–63, Cl. 3—1.
Carr, James C., to General Electric Co. Method of installing grommets. 3,090,115, 5–21–63, Cl. 29—450.
Carr, Thomas E. Molded plastic pontoons. 3,090,339, 5–21–63, Cl. 114—66.5.
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Britton, Roscoe C., and Carse. 3,090,504.
Carstensen, Andreas: *See*—
Pechtold, Walter, Carstensen, and Meyer. 3,090,685.
Carter, Phyllis J., to Atlas Chemical Industries, Inc. Hair conditioning method. 3,090,727, 5–21–63, Cl. 167—87.
Carter Products, Inc.: *See*—
Berger, Frank M. 3,090,726.
Carullo, Paul A.: *See*—
White, Robert H., and Carullo. 3,090,109.
Carwil Enterprises, Inc.: *See*—
Crowley, Walter A. 3,090,327.
Crowley, Walter A. 3,090,455.
Casement, James S., to Minnesota Mining and Mfg. Co. Curing of epoxy resins. 3,090,793, 5–21–63, Cl. 260—899.
Castelli, Charles, to Johnson & Johnson. Container. 3,090,271, 5–21–63, Cl. 83—614.
Cavus Mfg. Corp.: *See*—
Beispel, Robert. 3,090,146.
Caywood, William P., Jr.: *See*—
Karlby, Henning, and Caywood. 3,090,878.
Cee Bee Mfg. Co., Inc.: *See*—
Loew, Theodore. 3,090,043.
Centre National de la Recherche Scientifique: *See*—
Maréchal, Robert G. A., and Croce. 3,090,281.
Chaffee, Lester F., Jr. to Sundstrand Corp. Multiple start screw machine. 3,090,283, 5–21–63, Cl. 90—11.62.
Chagnon, Zephir J., and R. R. Kelleher, to Albany Felt Co. Method of constructing a corrugator belt. 3,090,101, 5–21–63, Cl. 28—72.2.
Chambers, John. Swimming pool heater. 3,090,376, 5–21–63, Cl. 126—350.
Chance, A. B., Co.: *See*—
Ruoff, George M. 3,090,912.
Charbonneau, Allan P., to Cutler-Hammer, Inc. Helix forming means. 3,090,419, 5–21–63, Cl. 153—64.
Charvat, Vernon K., to The Osborn Mfg. Co. Brush and brush material. 3,090,061, 5–21–63, Cl. 15—159.
Chatham Mfg. Co.: *See*—
Smith, Alexander M., II. 3,090,099.
Smith, Alexander M., II. 3,090,100.
Chayen, Israel H., to C.C.D. Processes (N.Y.) Ltd. Method of extracting protein and lipid from raw vegetable materials. 3,090,779, 5–21–63, Cl. 260—112.
Cheeseboro, Robert G., to Febco, Inc. Rotary sprinkler. 3,090,563, 5–21–63, Cl. 239—206.
Chemetron Corp.: *See*—
Slattery, Robert E. 3,090,170.
Chenicek, Joseph A.: *See*—
Thompson, Ralph B., Chenicek, and Faust. 3,090,681.
Cherel, Guy, and H. Forey, to Commissariat a l'Energie Atomique. Remote-controlled manipulating apparatus. 3,090,500, 5–21–63, Cl. 214—1.
Chesebrough-Pond's Inc.: *See*—
Pellicone, Joseph S., Dejewski, and Pezza. 3,090,080.
Chiado, Paul S. Lightweight molded building slab. 3,090,165, 5–21–63, Cl. 50—445.
Chicago Rawhide Mfg. Co.: *See*—
Provensano, Alex P., Ward, and Crosland. 3,090,075.
Chisholm, James J., to Bausch & Lomb Inc. Interferometer using a diffraction grating. 3,090,279, 5–21–63, Cl. 88—14.
Chonka, Louis, ¼ to A. Szabo, and ¼ to G. Z. Szabo. Heavy duty shears. 3,090,121, 5–21–63, Cl. 30—251.
Chow, Weichien, and W. H. Fisher, to Sparton Corp. Horn construction. 3,090,849, 5–21–63, Cl. 116—142.
Christoff, Chris A., J. D. Gearheart, and R. E. Busch, to Clary Corp. High speed printing system. 3,090,298, 5–21–63, Cl. 101—93.
Chromising Corp.: *See*—
Commanday, Maurice R., and Plambeck. 3,090,702.
Church, David A., to United States of America, Navy. Interrupted ascent balloon. 3,090,585, 5–21–63, Cl. 244—99.
Churchill, Adoniram J.: *See*—
Zebarth, Ralph S., Friend, and Churchill. 3,090,486.
Ciba Ltd.: *See*—
Maeder, Arthur, and Sulser. 3,090,762.
Cities Service Research and Development Co.: *See*—
Berger, Bernard H. 3,090,757.
Claeys, Julian J., and L. B. Francis. Drapery pleating device. 3,090,533, 5–21–63, Cl. 223—35.
Clark, Cyrus V. Fishing keel. 3,090,153, 5–21–63, Cl. 43—43.13.
Clark, Hadden, J. M. Throne, and O. C. Slotterbeck, to Esso Research and Engineering Co. Chemically modified polydiolefin resin as an adhesive. 3,090,715, 5–21–63, Cl. 154—43.
Clark, Melville, Jr. Dynamically keyed musical instrument. 3,090,272, 5–21–63, Cl. 84—1.26.
Clarke, Bruce P., to Ibis Enterprises Ltd. Safety device for hoisting mechanisms. 3,090,651, 5–21–63, Cl. 303—6.
Clarkson, J. R., Co.: *See*—
Clarkson, John R. 3,090,591.
Clarkson, John R., to J. R. Clarkson Co. Flow control valve. 3,090 591, 5–21–63, Cl. 251—5.
Clary Corp.: *See*—
Christoff, Chis A., Gearheart, and Busch. 3,090,298.
Clayton Specialties, Inc.: *See*—
Walters, Clayton T. 3,090,850.
Cleveland Crane & Engineering Co., The: *See*—
Dehn, Roy F. 3,090,840.
Cline, Edward T., and D. Tanner, to E. I. du Pont de Nemours and Co. Graft polymerising an unsaturated organic acid or salt thereof onto a nitrogen containing polymer substrate. 3,090,664, 5–21–63, Cl. 8—115.5.
Clive, Frederick B.: *See*—
Burgin, Kermit H. 3,090,846.
Coates, Colin, and W. E. Lardner, to Westrex Co., Ltd. Selective signaling system. 3,090,838, 5–21–63, Cl. 179—84.
Cochran, Chudleigh B., and J. D. Mott, to Cicero O. Brown. Device for supporting a closure within a well pipe. 3,090,442, 5–21–63, Cl. 166—192.
Cochran, Clarence W., to United-Carr Fastener Corp. Wiring fastener. 3,090,826, 5–21–63, Cl. 174—158.
Coenen, Max, O. Weissel, and W. Wunder, to Farbenfabriken Bayer Aktiengesellschaft. Process for the production of cyanine dyestuffs. 3,090,782, 5–21–63, Cl. 260—240.6.
Colautti, Albert J., and B. R. Wanlass, to General Motors Corp. Circuit controller. 3,090,847, 5–21–63, Cl. 200—68.
Col-Cube, Inc.: *See*—
Johnson, Roy W., and Vaughn. 3,090,162.
Colgan, Joseph D., and H. E. Fife, to American Cyanamid Co. Devolatilization extrusion method for preparing a monovinyl aromatic resin-rubber blend. 3,090,767, 5–21–63, Cl. 260—45.5.
Collins, John F.: *See*—
Peters, Theodore J., Collins, and Gathman. 3,090,752.
Collins Radio Co.: *See*—
Cunningham, Paul M., and Scott. 3,090,887.
Collins, Robert J., and R. G. Thompson, to E. I. du Pont de Nemours and Co. Antistatic and antisoiling agent and process for treating synthetic linear textile therewith. 3,090,704, 5–21–63, Cl. 117—138.8.
Columbus McKinnon Corp.: *See*—
Robins, Erford E., and Heyden. 3,090,601.
Combustion Engineering, Inc.: *See*—
Burbach, Henry E., and Hipp. 3,090,332.
Commanday, Maurice R., and P. J. Plambeck, to Chromizing Corp. Protective coating of refractory metals. 3,090,702, 5–21–63, Cl. 117—106.
Commercial Solvent Corp.: *See*—
Harned, Roger L. 3,090,730.
Commissariat a l'Energie Atomique: *See*—
Alfille, Lucien. 3,090,743.
Cherel, Guy, and Forey. 3,090,500.
Compo Shoe Machinery Corp.: *See*—
Peterson, Evald O., Rodes, and Perry. 3,090,055.
Comstock, George E., 3d. to Potter Instrument Co., Inc. Ribbon tensioning mechanism for high speed printers. 3,090,299, 5–21–63, Cl. 101—100.
Comtek Inc.: *See*—
Folsom, Robert W. 3,090,891.
Concepts Co., The: *See*—
Abrams, Jack. 3,090,470.
Concrete Carrying Co. Ltd.: *See*—
Crowther, John. 3,090,515.
Condon, Robert S. Sharpening device for pencil leads. 3,090,358, 5–21–63, Cl. 120—96.
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Hummer, Herbert B., and Conklin. 3,090,320.
Connellan, John, to Shell Oil Co. Granular bed contactor with extended surface and method of making and using same. 3,090,667, 5–21–63, Cl. 23—1.
Conrad, Rene A. Egg drilling machine. 3,090,412, 5–21–63, Cl. 146—2.
Conrad, Vernon W. Log incising device. 3,090,120, 5–21–63, Cl. 30—165.
Consolidated Cigar Corp.: *See*—
Carlson, Olof B. 3,090,285.
Consolidation Coal Co.: *See*—
Lee, Arthur L., and Coval. 3,090,629.
Consolloy, James W., to The Electric Storage Battery Co. Bowling ball. 3,090,620, 5–21–63, Cl. 273—63.
Constantino, Constantine S., to Curtiss-Wright Corp. Engine lubrication and cooling system. 3,090,365, 5–21–63, Cl. 123—41.8.
Container Corporation of America: *See*—
Dorofachuk, Gus J. 3,090,539.
Kriepe, Frank J., and Mattheis. 3,090,065.
Continental Oil Co.: *See*—
Bergen, Charles R., and Woods. 3,090,750.

Cook, Glenn: *See*—
Fenix, Frank H. 3,090,713.
Fenix, Frank H. 3,090,714.
Coover, Harry W., Jr., and F. B. Joyner, to Eastman Kodak Co. Dyeable polypropylene fibers containing polyvinyl acetal resins. 3,090,769, 5–21–63, Cl. 260—45.5.
Copeland, James V., and B. R. Neier. Feed mixer. 3,090,605, 5–21–63, Cl. 259—104.
Copland, George V., and E. L. Groner, to Halliburton Co. Control of well formation fracturing operations. 3,090,439, 5–21–63, Cl. 166—75.
Copley, James N.: *See*—
Lawton, William R., Smith, and Copley. 3,090,697.
Copp, Frederick C., A. McCoubrey, and J. E. W. Billinghurst, to Burroughs Wellcome & Co. (U.S.A.) Inc. Phosphorylated quaternary ammonium compounds of improved oral absorption. 3,090,725, 5–21–63, Cl. 167—55.
Corbett, Herbert O., to National Distillers and Chemical Corp. Apparatus and process for high speed extrusion casting. 3,090,076, 5–21–63, Cl. 18—15.
Corcoran, Lyle S. Turret type reloading press. 3,090,276, 5–21–63, Cl. 86—33.
Corcoran, Lyle S. Shot and powder measuring dispenser. 3,090,524, 5–21–63, Cl. 222—46.
Corlew, Charles D. Internal combustion motor fuel injection system. 3,090,369, 5–21–63, Cl. 123—138.
Corrugated Container Co., The: *See*—
Hamilton, Robert S., and Curie. 3,090,526.
Corti, Ulrich A., F. Gassmann, and M. Weber. Motion measuring apparatus. 3,090,226, 5–21–63, Cl. 73—141.
Cosby, Kenneth W., to C. J. Philippe. Test apparatus and hydraulic systems. 3,090,221, 5–21–63, Cl. 73—40.
Costanzi, Nicolo, to Cantieri Riuniti Del'Adriatico S.p.A. Ship's hull formation. 3,090,338, 5–21–63, Cl. 114—56.
Coulin, Victor. Liquid level responsive switch. 3,090,849, 5–21–63, Cl. 200—84.
Coval, Arthur B.: *See*—
Lee, Arthur L., and Coval. 3,090,629.
Cox, Isaac E.: *See*—
Wilson, Robser L., Hoyer, and Cox. 3,090,659.
Coyne, John B. Apparatus for smoothing a coating on a surface of leather or the like. 3,090,351, 5–21–63, Cl. 118—223.
Craig, Francis A., and N. R. Pariatore, to International Cigar Machinery Co. Cigar wrapping machine and bander. 3,090,176, 5–21–63, Cl. 53—183.
Crane, Jack W., A. M. Best, W. J. Dwyer, and W. G. Searles, to Sperry Rand Corp. Harvester. 3,090,295, 5–21–63, Cl. 100—97.
Crane Packing Co.: *See*—
Tankus, Harry. 3,090,627.
Crane, Samuel P. Electrically insulated fringe fingers for making Christmas tree branches and method. 3,090,147, 5–21–63, Cl. 41—15.
Crawford, Wayland H., to Modern Village Stores, Inc. Automatic checkstand. 3,090,467, 5–21–63, Cl. 186—1.
Crawley, William P., to The Carborundum Co. Heat resistant fibrous products containing ceramic fibers and method of making the same. 3,090,103, 5–21–63, Cl. 28—78.
Crehore, Robert: *See*—
Korrell, Melvin H., and Crehore. 3,090,181.
Cremer, Norman C. Receptacle plug to protect appliance theft. 3,090,948, 5–21–63, Cl. 340—280.
Cresci, Paul A.: *See*—
Black, William C., Sr., and Cresci. 3,090,514.
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Maréchal, Robert G. A., and Croce. 3,090,281.
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Cronkwright, Ray E.: *See*—
Behun, Eugene, Cronkwright, Griffith, Moore, and Stalcup. 3,090,583.
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Lang, John J., Oman, and Cronin. 3,090,259.
Crose-Perrault Equipment Corp.: *See*—
Handwerk, William B., and Pangborn. 3,090,513.
Crosland, Howard C.: *See*—
Provensano, Alex P., Ward, and Crosland. 3,090,075.
Crowell, Ernest M., to United Shoe Machinery Corp. Resinous adhesive rods. 3,090,772, 5–21–63, Cl. 260—75.
Crowley, Walter A., to Carwil Enterprises, Inc. Hydro-air vehicle. 3,090,327, 5–21–63, Cl. 104—134.
Crowley, Walter A., to Carwil Enterprises, Inc. Plenum chamber type ground effect machine with self-propulsion and steering means. 3,090,455, 5–21–63, Cl. 180—7.
Crowther, John, to Concrete Carrying Co. Ltd. Means for loading and discharging bulk loads. 3,090,515, 5–21–63, Cl. 214—522.
Cunningham, Cecil R., M. D. Weiss, and R. Z. Schreffler, to Owens-Corning Fiberglas Corp. Method and apparatus for forming and collecting filaments. 3,090,570, 5–21–63, Cl. 242—18.
Cunnnigham, Paul M., and K. L. Scott, to Collins Radio Co. Background improvement circuit for direct view storage tube radar indicator. 3,090,887, 5–21–63, Cl. 315—12.
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Hamilton, Robert S., and Curie. 3,090,526.
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Curtis, William B., to Curtis-Scott Co. Surgical suturing instrument. 3 090,386, 5–21–63, Cl. 128—334.
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Constantino, Constantine S. 3,090,365.
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Charbonneau, Allan P. 3,090,419.
Cyba, Henryk A., to Universal Oil Products Co. Esters of carboxylic acids and the condensation products of epihalohydrin and an aliphatic amine. 3,090,795, 5–21–63, Cl. 260—404.5.
Cyba, Henryk A., to Universal Oil Products Co. Carboxylic acid salts of the condensation product of epihalohydrin and an aliphatic amine. 3,090,796, 5–21–63, Cl. 260—404.5.
Daco, Inc.: *See*—
Lindgren, Robert F. 3,090,213.
Dacus, Edward N., to Bill Jack Scientific Instrument Co. Accelerometer. 3,090,239, 5–21–63, Cl. 73—517.
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Anders, Ulrich W. P. 3,090,421.
Fiala, Ernst J. H., and Kafka. 3,090,644.
Stump, Eugen. 3,090,254.
Dale, Ingvald: *See*—
Mead, Glie A., Dale, and Davis. 3,090,505.
D'Alelio, Gaetano F., to Dal Mon Research Co. Chelating monomers and polymers. 3,090,771, 5–21–63, Cl. 260—47.
D'Alelio, Gaetano F., to Dal Mon Research Co. Polymerization of olefins using an aluminum halide and an organometallic compound as catalyst. 3,090,776, 5–21–63, Cl. 260—93.7.
Dal Mon Research Co.: *See*—
D'Alelio, Gaetano F. 3,090,771.
D'Alelio, Gaetano F. 3,090,776.
Dalton Foundries, Inc., The: *See*—
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Damgaard, Jorgen: *See*—
Juncker, Flemming G., Damgaard, Jacobsen, Henk, and Schmidt. 3,090,411.
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Davis, George E.: *See*—
Mead, Glie A., Dale, and Davis. 3,090,505.
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Davis, Ralph E.: *See*—
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Davis, James E., to General Motors Corp. Rotary actuator. 3,090,244, 5–21–63, Cl. 74—99.
Davis, James E., to Whirlpool Corp. Home appliance. 3,090,371, 5–21–63, Cl. 126—21.
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Deering Milliken Research Corp.: *See*—
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Sanders, Grady H. 3,090,476.
De Grazia, Joseph, to United States of America, Army. Waterproof seam. 3,090 047, 5–21–63, Cl. 2—275.
Dehn, Joseph W., Jr., R. A. Pizzarello, and R. Eltonhead, to Interchemical Corp. 2-amino-4,6-dinitrobensothiasole. 3,090,789, 5–21–63, Cl. 260—305.
Dehn, Roy F., to The Cleveland Crane & Engineering Co. Conductor bar support. 3,090,840, 5–21–63, Cl. 191—23.
Dejewski, Edwin N.: *See*—
Pellicone, Joseph S., Dejewski, and Pezza. 3,090,080.
Dempster Brothers, Inc.: *See*—
Dempster, George R., and Herpich. 3,090,512.
Dempster, George R., and W. A. Herpich; said Herpich assor. to Dempster Brothers, Inc. Front end loaders. 3,090,512, 5–21–63, Cl. 214—302.
Denham, Kenneth E., to Great Western Consolidated No Liability. Mechanical loaders. 3,090,511, 5–21–63, Cl. 214—140.
Denton, William I., to Olin Mathieson Chemical Corp. Isomerization of alkylene oxide. 3,090,815, 5–21–63, Cl. 260—632.
Denton, William I., to Olin Mathieson Chemical Corp. Isomerization of alkylene oxide. 3,090,816, 5–21–63, Cl. 260—632.
Deremer, Floyd E., to Oldberg Mfg. Co. System and apparatus for sound-attenuation of gas streams. 3,090,464, 5–21–63, Cl. 181—57.
Dersch, William C., to International Business Machines Corp. Speech bandwidth compression system. 3,090,837, 5–21–63, Cl. 179—15.55.
Descovich, Theodore: *See*—
Soussloff, Dimitri G., Godel, Descovich, and Davis. 3,090 915.
De Vilbiss Co., The: *See*—
Peeps, Donald J. 3,090,530.
Dewas, Raymond. Process for the formation of selvedges on looms. 3,090,405, 5–21–63, Cl. 139—124.
Dewey, Philip W.: *See*—
Shields, Stanley E., and Dewey. 3,090,283.
Diebold, Alfred J., to The Anderson Co. Motion-transmitting device. 3,090,657, 5–21–63, Cl. 308—217.
Dietert, Harry W. and R. L., A. L. Graham, and M. R. Kabel, to Harry W. Dietert Co. Apparatus for electrical moisture measurement. 3,090,091, 5–21–63, Cl. 22—89.
Dietert, Harry W., Co.: *See*—
Dietert, Harry W. and R. L., Graham, and Kabel. 3,090,091.
Dietert, Randolph L.: *See*—
Dietert, Harry W. and R. L., Graham, and Kabel. 3,090,091.
Differential-Diesel-Vadus (Furstentum Liechtenstein): *See*—
Glamann, Wilhelm. 3,090,194.
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Dixon, Wallace B. Toy camera. 3,090,158, 5–21–63, Cl. 46—228.

Dold, John F. Resuscitation device. 3,090,880, 5–21–63, Cl. 128—29.

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Doncaster, Daniel P., B. B. Bauer, and A. A. Goldberg, to Minnesota Mining & Mfg. Co. Magnetic tape magazine. 3,090,574, 5–21–63, Cl. 242—55.13.

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Freedman, Harold H. 3,090,797.
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Carlo, Clarence E. 3,090,425.
Carlo, Clarence E. 3,090,426.
Carlo, Clarence E. 3,090,430.

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Dudley, Earl A. Vegetation harvester. 3,090,138, 5–21–63, Cl. 37—2.

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Braun, Robert A. 3,090,790.
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Dykes, Roy L. and J. O., to Power-Trim Co. Specific wheel support means for a combination mower and trimmer. 3,090,186, 5–21–63, Cl. 56—25.4.

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Edwards, Donald W., to E. I. du Pont de Nemours and Co. Apparatus for severing fed strands and subsequent handling thereof. 3,090,268, 5–21–63, Cl. 83—100.

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Eichler, Rolf W., R. H. Eichorn, and J. Rutkus, Jr. Sheet handling control apparatus. 3,090,616, 5–21–63, Cl. 271—3.

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Emmerich, Michael. Window structure. 3,090,083, 5–21–63, Cl. 20—11.

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Fawcett, Sydney, to The United Kingdom Atomic Energy Authority. Temperature control means for nuclear reactors. 3,090,742, 5–21–63, Cl. 204—193.2.

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Fenix, Frank H., 50% to G. Cook. Explosive. 3,090,714, 5–21–63, Cl. 149—43.

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Ferris, John T., and G. A. Ulrich, to Bausch & Lomb Inc. Illuminated endoscope. 3,090,379, 5–21–63, Cl. 128—6.

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Lewis, Paul, and Streifert. 3,090,656.
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Schjolin, Hans O., Kern, and Parshall. 3,090,257.
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Gifford, Robert T., to Vernay Laboratories, Inc. Rubber tipped needle valve. 3,090,596, 5-21-63, Cl. 251—333.
Gill, Joseph, to Hagan Chemicals & Controls, Inc. Multiple range measuring system for non-linear input signals using feedback gain control means to provide a linear response. 3,090,916, 5-21-63, Cl. 324—115.
Gilmour, Robert A. Spraying device with dilution control. 3,090,564, 5-21-63, Cl. 239—318.
Giulietti, Luciano, to RIV Officine di Villar Perosa Societa per Azioni. Bearing with flexible sealing means. 3,090,628, 5-21-63, Cl. 277—94.
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Godshalk, James B., to Fox Products Co. Automatic poultry watering valve. 3,090,399, 5-21-63, Cl. 137—614.14.
Godshalk, James B., and G. Muhler, to Fox Products Co. Automatic valves. 3,090,609, 5-21-63, Cl. 267—1.
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Goldstein, Daniel, to Schenley Industries, Inc. Self-erecting advertising display associated with shipping containers. 3,090,492, 5-21-63, Cl. 211—73.
Goldstein, Myron. Method for separating knitted fabrics. 3,090,098, 5-21-63, Cl. 28—72.
Goodell, Murel G., W. F. Appelt, and F. A. Davis, to Alwac International. Elevated track and support structure therefor. 3,090,326, 5-21-63, Cl. 104—124.
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Hoyer, Llewellyn E., Wilson, and Gorcyca. 3,090,658.
Hoyer, Llewellyn E., and Gorcyca. 3,090,660.
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Zebarth, Ralph S., Friend, and Churchill. 3,090,486.
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Gorman, Charles F. Battery charging system. 3,090,871, 5-21-63, Cl. 307—10.
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Gottschald, Rudolf, to V. Langen. Method of making bushings for ball and socket joints. 3,090,079, 5-21-63, Cl. 18—59.
Gottschald, Rudolf, and G. Maxeiner, to V. Langen. Ball and socket joints. 3,090,642, 5-21-63, Cl. 287—90.
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Goyke, Gerhard. Slide frame. 3,090,145, 5-21-63, Cl. 40—152.
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Graham, Alexander L.: *See*—
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Gray, Vivian C. Electrical sound reproducing devices. 3,090,-461, 5-21-63, Cl. 181—31.
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Greeno, John R., and T. J. Dull. Helical wire trimming and forming mechanism. 3,090,417, 5-21-63, Cl. 140—92.7.
Greenwood, Allan, to General Electric Co. Gettering arrangement for a vacuum circuit interrupter. 3,090,852, 5-21-63, Cl. 200—144.
Gregorian, Razmic S., to W. R. Grace & Co. Blended polyethylene compositions of improved clarity and method of making same. 3,090,770, 5-21-63, Cl. 260—45.5.
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Gutekunst, Gerald A., and K. L. Jensen, to Butler Mfg. Co. Adjustable conveyor mounting for storage structures. 3,090,507, 5-21-63, Cl. 214—17.
Guttner, George, R. B. Mason, and G. P. Hamner, to Esso Research and Engineering Co. Process for desulfurization employing a nitrile impregnated substrate. 3,090,748, 5-21-63, Cl. 208—240.
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Hansen, Hans C. Magazine phonographs. 3,090,624, 5-21-63, Cl. 274—10.
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Harned, Roger L., to Commercial Solvent Corp. Process for the production of cycloserine. 3,090,730, 5-21-63, Cl. 195—80.
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Hausmann, Werner. Hydraulic installation for soil-working implements. 3,090,446, 5-21-63, Cl. 172—4.
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Heimers, Rudolph H., F. O. and S. I. Carrier means for attaching apparatus to the human body. 3,090,621, 5-21-63, Cl. 273—95.
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Heimers, Rudolph H., F. O., and S. I. 3,090,621.
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Hesketh, James A., and H. Rubin; said Hesketh assor. to said Rubin. Baby carriage convertible to cradle. 3,090,-634, 5-21-63, Cl. 280—31.
Hessinger, Philip S., and T. W. Weber, to Mycalex Corp. of America. Method of making synthetic mica. 3,090,669, 5-21-63, Cl. 23—110.
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Seymour, Dale R., Poe, and Heyman. 3,090,516.
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Hinds, Frank R., and H. O. Pommer, to Martin-Marietta Corp. Metering system for electrically conductive flowable materials. 3,090,525, 5-21-63, Cl. 222—64.
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Hoberg, George G., and O. Hohnecker, to Burroughs Corp. Magnetic storage system. 3,090,947, 5-21-63, Cl. 340—174.1.
Hoffer, Max, to Hoffmann-La Roche Inc. Substituted isoxazolecarboxamide compounds. 3,090,788, 5-21-63, Cl. 260—299.
Hoffman, James P. Baffle for the protection of automobile headlights and parking lights. 3,090,858, 5-21-63, Cl. 240—7.1.
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Hofmeister, Harry J., Jr.: *See*—
Kline, Charles M., Hofmeister, Hobbs, and Best. 3,090,133.
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Luek, Otto W., and Hollyday. 3,090,477.
Muth, William M., Jr., and Hollyday. 3,090,508.
Holt, Frederick W., Jr., C. H. Lorenz, and R. B. Reif, to The Brown-Bridge Mills, Inc. Electrostatic production of gummed web. 3,090,353, 5-21-63, Cl. 118—621.
Holsboog, Walter H., H. C. Reinhart, and S. E. Marr, Jr., to Micro Controls, Inc. Gas regulator apparatus. 3,090,-560, 5-21-63, Cl. 236—68.
Holsboog, Walter H., and H. C. Reinhart, to Micro Controls, Inc. Gas safety regulator apparatus. 3,090,561, 5-21-63, Cl. 236—66.
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Hooker Chemical Corp.: *See*—
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Hoover, Vaino A. Mechanical actuator. 3,090,631, 5-21-63, Cl. 277—174.
Hoppenstand, David, to Transport Industries, Inc. Double air chamber brake cylinder. 3,090,359, 5-21-63, Cl. 121—38.
Hopper, Lois H., to Munsingwear, Inc. Brassiere. 3,090,-387, 5-21-63, Cl. 128—498.
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Hotchkiss, Robert J., Jr. Combination wheel-mounted disc harrow and tooth drag attachment with tension means therefor. 3,090,448, 5-21-63, Cl. 172—178.
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Hoyer, Llewellyn E., and E. R. Gorcyca, to American Brake Shoe Co. Journal lubricators. 3,090,660, 5-21-63, Cl. 308—243.
Hoyer, Llewellyn E., R. L. Wilson, and E. R. Gorcyca, to American Brake Shoe Co. Journal lubricator for railroad cars. 3,090,658, 5-21-63, Cl. 308—243.
Hubacker, Earl F., to Whirlpool Corp. Home appliance. 3,090,209, 5-21-63, Cl. 62—180.
Hubka, Theodore, and A. C. Blumenfeld, to General Precision, Inc. Test instrument for doppler radar systems. 3,090,-955, 5-21-63, Cl. 343—17.7.
Huckabay, William B., and W. H. Parker, to Rayflex Exploration Co. Underwater beacon. 3,090,938, 5-21-63, Cl. 340—5.
Huff, Robert S., and J. Horzick, to Motorola, Inc. Cabinet for sound reproducing equipment. 3,090,462, 5-21-63, Cl. 181—31.
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Hulbert, John K., to Bell Aerospace Corp. Hydrodynamic propulsion system. 3,090,345, 5-21-63, Cl. 115—6.1.
Hummer, Herbert B., and E. W. Conklin, to Durametallic Corp. Seals for stuffing boxes and the like permitting thereof. 3,090,320, 5-21-63, Cl. 103—111.
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Weiss, Robert L., Hunt, and Davs. 3,090,063.
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Hurst, Derek, and P. D. Havard, to Electric & Musical Industries Ltd. Apparatus for maintaining a predetermined quantity of an elongated medium at a predetermined zone. 3,090,535, 5-21-63, Cl. 226—26.

Hurst, Howard L. Thermal head appliance. 3,090,045, 5–21–63, Cl. 2—7.

Hurwitz, Abraham, and W. J. O'Neill, to Hypro Diving Equipment Corp. Harness pack for free diving apparatus. 3,090,205, 5–21–63, Cl. 61—70.

Huston, John R., W. A. Webb, R. G. McGrath, and W. E. Johnson, to Westinghouse Electric Corp. Semidirect equipment maintenance. 3,090,740, 5–21–63, Cl. 204—193.2.

Hutson, Andrew R., to Bell Telephone Laboratories, Inc. Piezoelectric devices utilizing aluminum nitride. 3,090,876, 5–21–63, Cl. 310—8.

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Strauss, Leopold, and Loew. 3,090,851.

Illing, Gerhard, and N. von Kutepow, to Badische Anilin- & Soda-Fabrik Aktiengesellschaft. Isomerization of saturated aliphatic carboxylic acids. 3,090,807, 5–21–63, Cl. 260—537.

Inaba, Sōhei, S. Kono, W. Iwamura, and T. Mikami. Cordless switch board. 3,090,839, 5–21–63, Cl. 179—91.

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International Business Machines Corp.: *See*—
Brandenburg, Thomas E. 3,090,945.
Dersch, William C. 3,090,837.
Erchak, Andrew, and Van Dyk. 3,090,755.
Mathers, Harry W. 3,090,909.
May, Gordon H. 3,090,201.
Raider, Jerry W. 3,090,552.
Wenner, John W., and Wellbrock. 3,090,708.
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International Rectifier Corp.: *See*—
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International Research and Development Corp.: *See*—
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International Salt Co.: *See*—
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International Standard Electric Corp.: *See*—
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Beadel, Vincenty. 3,090,836.
Ruckert, Horst. 3,090,870.
Sterling, Henley F. 3,090,673.

International Teaching Machine Corp.: *See*—
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Albanese, Damian, Beisel, Kearney, and Norton. 3,090,957.
Bain, George W. 3,090,828.
Behun, Eugene, Cronkwright, Griffith, Moore, and Stalcup. 3,090,583.
Nashman, Alvin E., and Metsky. 3,090,240.

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Brewer, Claire N., and Smith. 3,090,069.

Isler, Otto: *See*—
Hegedüs, Balthasar, Isler, Ruegg, and Ryser. 3,090,805.

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Ito, Akira: *See*—
Sunagawa, Genshun, Ito, Nagawa, and Kataoka. 3,090,785.

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Iwamura, Wakō: *See*—
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Jablonsky, Roy D., to Giannini Controls Corp. Step function generator. 3,090,906, 5–21–63, Cl. 323—43.5.

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Janda, František, to Závody V. I. Lenina Plzeň, narodní podnik. Cigarette wrapper box. 3,090,541, 5–21–63, Cl. 229—51.

Jannarelli, Albert E., to Owens-Corning Fiberglas Corp. Process for the manufacture of coated fabric. 3,090,102, 5–21–63, Cl. 28—75.

Jeep, Charles W., Jr., E. W. Niemeyer, and J. B. Fitzgerald, to ACF Industries, Inc. Electric fuel pump. 3,090,318, 5–21–63, Cl 103—87.

Jenkins, Fred W., to Petrolite Corp. Process for breaking emulsions of the oil-in-water class. 3,090,759, 5–21–63, Cl. 252—344.

Jenkins, Herbert A. H.: *See*—
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Johnson, Roy E., to General Motors Corp. Means for securing convertible top fabric. 3,090,646, 5–21–63, Cl. 296—107.

Johnson, Roy W., and D. R. Vaughn, to Col-Cube, Inc. Machine and method for pelletizing field cured hay. 3,090,-182, 5–21–63, Cl. 56—3.

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Bousau, Gabriel X. R., Neuville, and Saint-Frison. 3,090,190.
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Morrison, Willard L., to Liquefreeze Co., Inc. Insulated container. 3,050,517, 5–21–63, Cl. 220—9.
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Bousso, Gabriel X. R., Neuville, and Saint-Frison. 3,090,190.

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Nonnenmacher, Helmut, and E. Bartholome, to Badische Anilin- & Soda-Fabrik Aktiengesellschaft. Conversion of oils with amounts of oxygen insufficient for complete combustion for the formation of carbon monoxide and hydrogen. 3,090,684, 5–21–63, Cl. 48—212.

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Novkov, Raymond E., to Manchester Machine & Tool Co. Obliquely shiftable cutting tool. 3,090,104, 5–21–63, Cl. 29—96.

Nowak, Leon J., Jr., and D. Kerwin, to B. G. Gump Co. Coffee cooling structure. 3,090,132, 5–21–63, Cl. 34—174.

Nosnick, Peter P., R. H. Bundus, and L. B. Eggen, to Beatrice Foods Co. Method for making dried sour cream. 3,090,688, 5–21–63, Cl. 99—56.

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Otsuka, Eiji, T. Takahashi, and H. Watanabe, to Toyo Koatsu Industries, Inc. Synthesis of urea. 3,090,811, 5–21–63, Cl. 260—555.

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Paris Precision Products: *See*—
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Pasciak, Joseph J., to Nyman Mfg. Co. Lid for hot drink container. 3,090,537, 5–21–63, Cl. 229—1.5.

Pastac, Sebastien A. Combatting of molluscs. 3,090,723, 5–21–63, Cl. 167—46.

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Paul, Max, & Sohne Maschinenfabrik: *See*—
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Paul, Odilo, to M. Paul & Sohne Maschinenfabrik. Hydraulic jack for the prestressing of concrete reinforcements. 3,090,598, 5–21–63, Cl. 254—29.

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Pechtold, Walter, A. Carstensen, and L. Meyer, to Knapsack-Griesheim Aktiengesellschaft. Method for charging dry gasifiers with calcium carbide. 3,090,685, 5–21–63, Cl. 48—216.

Peeda, Etnar, to Ulvsunda Verkstader Aktiebolag. Chuck. 3,090,632, 5–21–63, Cl. 279—1.

Peeps, Donald J., to The De Vilbiss Co. Air flow control for pressure feed containers. 3,090,530, 5–21–63, Cl. 222—400.7.

Peet, George W., and L. F. X. Gowen, to United States of America, Navy. Conductive explosive primer mixture and device. 3,090,310, 5–21–63, Cl. 102—46.

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Percival, William, to J. Goddard & Sons Ltd. Intermittent fountain feed polish applicator with composite head. 3,090,060, 5–21–63, Cl. 15—131.

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Teeter, Ralph R. 3,090,460.

Perry, Henry: *See*—
Peterson, Evald O., Rodes, and Perry. 3,090,055.

Peters & Russell, Inc.: *See*—
Ronsheim, Nelson. 3,090,343.

Peters, Theodore J., J. F. Collins, and A. Gathman, to Esso Research and Engineering Co. Instrument lubricating oil. 3,090,752, 5–21–63, Cl. 252—33.4.

Peterson, Evald O., J. A. Rodes, and H. Perry, to Compo Shoe Machinery Corp. Splitting machine. 3,090,055, 5–21–63, Cl. 12—16.5.

Peterson, Stanley O., to Preway Inc. Fastening device. 3,090,587, 5–21–63, Cl. 248—27.

Petrolite Corp.: *See*—
Jenkins, Fred W. 3,090,759.

Petsch, Harold A.: *See*—
Welby, Maxwell O., and Petsch. 3,090,067.

Pettit, Dorn L., to Square D Co. Control circuit for A.C. motor hoist. 3,090,899, 5–21–63, Cl. 318—202.

Petynia, William W.: *See*—
Keblet, Alan B., Hasson, and Petynia. 3,090,580.

Pezza, Lassaro: *See*—
Pellicone, Joseph S., Dejewski, and Pezza. 3,090,080.

Pfaudler Permutit Inc.: *See*—
Kell, Alvin R. 3,090,731.

Philbrick-Strickland Laminates, Inc.: *See*—
Strickland, Edward T. 3,090,172.
Strickland, Edward T., and Amos. 3,090,173.

Philippe, Carl J.: *See*—
Cosby, Kenneth W. 3,090,221.

Phillips, Bernard C., to The Tillotson Mfg. Co. Method for delivering combustible mixture to an internal combustion engine. 3,090,608, 5–21–63, Cl. 261—41.

Phillips Petroleum Co.: *See*—
Berger, Donald E. 3,090,683.
Scoggin, Jack S. 3,090,774.

Pidany, John: *See*—
McDermid, Malcolm, and Pidany. 3,090,409.

Pinamonti, Franco, to Montecatini Societa Generale per l'Industria Mineraria e Chimica. High-stability insecticide compositions, emulsifiable or soluble in water, of N-monomethylamide of O,O-dimethyldithiophosphorylacetic acid. 3,090,719, 5–21–63, Cl. 167—22.

Pinkwart, Dieter, E. Schneider, W. Strittmatter, and E. Gruber, to Farbenfabriken Bayer Aktiengesellschaft. Construction and arrangement of wipers in thin-film evaporators. 3,090,732, 5–21–63, Cl. 202—236.

Pionthkowski, Clement C., to The Udylite Corp. Transformer control switch. 3,090,841, 5–21–63, Cl. 200—11.

Pirson, Ewald: *See*—
Nitzsche, Siegfried, and Pirson. 3,090,765.

Pissarello, Roy A.: *See*—
Dehn, Joseph W., Jr., Pissarello, and Eltonhead. 3,090,789.

Plambeck, Peter J.: *See*—
Commanday, Maurice R., and Plambeck. 3,090,702.

Plant, Franklin D. Mechanical pin setter. 3,090,619, 5–21–63, Cl. 273—44.

Plechner, Sophia L.: *See*—
Berger, Frank M., and Plechner. 3,090,728.

Plock, Karl, K. Quest, and K.-H. Rusack, to B. Kaiser and R. Paula. System for hot-filling with carbon dioxide containing drinks. 3,090,293, 5–21–63, Cl. 99—275.

Pneumafil Corp.: *See*—
Fanekas, Charles. 3,090,521.

Poe, Thomas F.: *See*—
Seymour, Dale R., Poe, and Heyman. 3,090,516.

Pommer, Henry O.: *See*—
Hinds, Frank R., and Pommer. 3,090,525.

Poole, Henry G.: *See*—
Nachtman, John S., and Poole. 3,090,686.

Porsche, Dr. Ing. h.C.F., KG, Firma: *See*—
Von Rucker, Nikolaus. 3,090,468.

Porter, Glenn M., to National Distillers and Chemical Corp. Adjustable angle travelling saw. 3,090,260, 5–21–63, Cl. 83—473.

Porter, H. K., Co., Inc.: *See*—
Smith, Norman L. 3,090,112.

Porter, James A., and L. A. Staskelunas, to General Motors Corp. Automatically reversible motor for domestic appliance. 3,090,900, 5–21–63, Cl. 318—207.

Post, Richard F., and C. E. Taylor, to United States of America, Atomic Energy Commission. Cryogenic magnets. 3,090,894, 5–21–63, Cl. 317—158.

Potter Instrument Co., Inc.: *See*—
Comstock, George E., 3d. 3,090,299.

Power Jets (Research and Development) Ltd.: *See*—
Kuchemann, Dietrich, Lilley, and Maskell. 3,090,584.

Powell, William N. Air filter and humidifier. 3,090,179, 5–21–63, Cl. 55—233.

Power-Trim Co.: *See*—
Dykes, Roy L. and J. O. 3,090,186.

Preway, Inc.: *See*—
Allen, Joseph A. 3,090,374.
Nelson, Averd G. 3,090,375.
Peterson, Stanley O. 3,090,587.

Prins, Daniel A.: *See*—
Renner, Ulrich, and Prins. 3,090,787.

Printed Motors, Inc.: *See*—
Henry-Baudot, Jacques. 3,090,833.
Raymond, Francois H. 3,090,880.

Pro, George M., to Air Placement Equipment Co. Shut-off valve for cementitious pressure vessels. 3,090,593, 5–21–63, Cl. 251—87.

Protective Treatments, Inc.: *See*—
Pereny, Louis, Gibbs, and Pyron. 3,090,694.

Provenzano, Alex P., W. K. Ward, and H. C. Crouland, to Chicago Rawhide Mfg. Co. Extruder die. 3,090,075, 5–21–63, Cl. 18—12.

Pullman-Standard Car Mfg. Co.: *See*—
Shaver, Raymond M., and Hartwig. 3,090,160.

Pyroil Co., Inc., The: *See*—
Welby, Maxwell O., and Petsch. 3,090,067.

Pyron, Charles O.: *See*—
Pereny, Louis, Gibbs, and Pyron. 3,090,694.

Quatinets, Max: *See*—
Schafer, Robert J., and Quatinets. 3,090,567.

Quest, Karl: *See*—
Plock, Karl, Quest, and Rusack. 3,090,293.

RIV Officine di Villar Perosa Societa per Azioni: *See*—
Giulietti, Luciano. 3,090,628.

Raczynski, Walter A., M. R. Leven, and C. J. Voss, Jr., to Ditto, Inc. Method of laminating sheets. 3,090,717, 5–21–63, Cl. 156—272.

Radio Corp. of America: *See*—
Benway, Robert R. 3,090,882.
Swarts, George A. 3,090,787.
Woodward, Oakley M., Jr., and Rankin. 3,090,956.

Raider, Jerry W., to International Business Machines Corp. Control system. 3,090,552, 5–21–63, Cl. 235—61.

Rankin, Alexander B. C. Ultra-sonic flaw detection. 3,090,224, 5–21–63, Cl. 73—67.9.

Rankin, John B.: *See*—
Woodward, Oakley M., Jr., and Rankin. 3,090,956.

Rastgeldi, Selahaddin. Centrifuge apparatus. 3,090,649, 5–21–63, Cl. 233—26.

Ratz, Rudi F. W., to Olin Mathieson Chemical Corp. Phosphorus containing bifunctional isothiocyanates and process therefor. 3,090,800, 5–21–63, Cl. 260—461.

Raulins, George M., to Otis Engineering Corp. Multiple flow conductor suspension apparatus. 3,090,438, 5–21–63, Cl. 166—75.

Ray, Richard L., E. A. Hunter, and J. L. Ernst, to Esso Research and Engineering Co. Polyvinylchloride-chlorinated isoolefin-multiolefin copolymer blend and method of making same. 3,090,768, 5–21–63, Cl. 260—45.5.

Rayflex Exploration Co.: *See*—
Huckabay, William B., and Parker. 3,090,938.

Raymond, Albert E., to Minnesota Mining & Mfg. Co. Polyester printing roller. 3,090,106, 5–21–63, Cl. 29—132.

Raymond Development Industries, Inc.: *See*—
Koppelman, Edward, and Campman. 3,090,406.

Raymond, Francois H., to Printed Motors, Inc. Electrical rotating machines. 3,090,880, 5–21–63, Cl. 310—268.

Raymond International inc.: *See*—
Upson, Maxwell M. 3,090,204.

Realty and Industrial Corp.: *See*—
Gubelmann, William B. 3,090,563.

Reaney, Donald, to Ericsson Telephones Ltd. Multi-electrode glow discharge tubes. 3,090,893, 5–21–63, Cl. 315—135.

Reber, John, Jr., to Hamilton Watch Co. Indexing mechanism for a battery operated electric watch. 3,090,245, 5–21–63, Cl. 74—126.

Reese, David N., to Minneapolis-Honeywell Regulator Co. Condition responsive devices. 3,090,234, 5–21–63, Cl. 73—356.

Rehberg, Heinrich: *See*—
Sennewald, Kurt, Born, and Rehberg. 3,090,804.

Reif, Robert B.: *See*—
Holt, Frederick W., Jr., Lorens, and Reif. 3,090,353.

Reilly, Thomas A., J. R. Beckman, and H. K. Bishop, to Union Carbide Corp. Leak-resistant dry cell. 3,090,824, 5–21–63, Cl. 136—107.

Reimers-Getriebe KG: *See*—
Berens, Heinrich. 3,090,246.

Reiner Industries, Inc.: *See*—
Eckman, Gordon. 3,090,389.

Reiners, Walter: *See*—
Furst, Stefan, and Reiners. 3,090,178.

Reinhart, Harold C.: *See*—
Holsboog, Walter H., and Reinhart. 3,090,561.
Holsboog, Walter H., Reinhart, and Marr. 3,090,560.
Reliance Transport Electrical Service (Sheffield) Ltd.: *See*—
Ingledew, Douglas G. 3,090,960.
Renner, Ulrich, and D. A. Prins, to Geigy Chemical Corp. New isoquinuclidine alkaloid and the production thereof. 3,090,787, 5–21–63, Cl. 260—294.3.
Rensch, Joseph T. Truck mounted hopper. 3,090,527, 5–21–63, Cl. 222—176.
Reuther, Hubert G. Explosive. 3,090,306, 5–21–63, Cl. 102—22.
Reynolds Metals Co.: *See*—
Robson, John. 3,090,532.
Rheinmetall G.m.b.H., Firma: *See*—
Berger, Fritz. 3,090,311.
Rhodes, Charles J., deceased, and H. Ridgway (W. S. Rhodes and H. Ridgway, executors of said C. J. Rhodes), to Joseph Rhodes & Sons Ltd. Machines for cutting or shearing sheets or plates. 3,090,270, 5–21–63, Cl. 83—601.
Rhodes, Joseph, & Sons Ltd.: *See*—
Rhodes, Charles J., and Ridgway. 3,090,270.
Rhodes, William S.: *See*—
Rhodes, Charles J., and Ridgway. 3,090,270.
Richardson, Irwin W. Spray rigger boom. 3,090,562, 5–21–63, Cl. 239—167.
Ridgway, Harry: *See*—
Rhodes, Charles J., and Ridgway. 3,090,270.
Ritzerfeld, Gerhard: *See*—
Ritzerfeld, Wilhelm and G. 3,090,287.
Ritzerfeld, Wilhelm and G. Xerographic duplicating machine. 3,090,287, 5–21–63, Cl. 95—1.7.
Roach, Anthony, to Ford Motor Co. Tank for forming battery elements. 3,090,823, 5–21–63, Cl. 136—82.
Robbins, Bernard: *See*—
Keck, Harold P. 3,090,305.
Robbins, Jack W.: *See*—
Keck, Harold P. 3,090,305.
Roberts, Donald E.: *See*—
Mandelkern, Leo, and Roberts. 3,090,735.
Robertshaw-Fulton Controls Co.: *See*—
Houser, Roy W. 3,090,235.
Robin-Nodwell Mfg., Ltd.: *See*—
Nodwell, William B. 3,090,510.
Robins, Erford E., and F. H. Heyden, Jr., to Columbus McKinnon Corp. Hoist brake. 3,090,601, 5–21–63, Cl. 254—169.
Robson, John, to Reynolds Metals Co. Metering dispensing carton. 3,090,532, 5–21–63, Cl. 222—456.
Roby, Robert L., to Accurate Products Co. Inc. Pressure tube for traffic indicator. 3,090,404, 5–21–63, Cl. 138—119.
Rockwell Mfg. Co.: *See*—
Scherer, George F., and Bierwagen. 3,090,751.
Roder, Karl, to Goebel G.m.b.H., Maschinenfabrik. Roll slitting and rewinding machines. 3,090,576, 5–21–63, Cl. 242—67.1
Rodes, John A.: *See*—
Peterson, Evald O., Rodes, and Perry. 3,090,055.
Rodin, Walter H. Overheated journal box detection system comprising radioactive source and detector. 3,090,859, 5–21–63, Cl. 246—169.
Rodman, James P. Sausage cooker. 3,090,294, 5–21–63, Cl. 99—427.
Rolfe, Herbert E., Jr., to Evans Products Co. Cargo bracing equipment. 3,090,329, 5–21–63, Cl. 105—369.
Rolls, Glen D., to Textron Inc. Electrically commutated fluid motor. 3,090,362, 5–21–63, Cl. 121—63.
Romine, Gordon L.: *See*—
Egnor, William D., and Romine. 3,090,480.
Ronsheim, Nelson, to Peters & Russell, Inc. Cleat. 3,090,343, 5–21–63, Cl. 114—218.
Rorvig, Hjalmer. Gas torch lighter. 3,090,856, 5–21–63, Cl. 219—32.
Rosen, Karl I. J. Device for guided feeding of yarn to knitting machines. 3,090,215, 5–21–63, Cl. 66—132.
Rosen, Sidney. Automatic scale filler apparatus. 3,090,453, 5–21–63, Cl. 177—120.
Rosene, Victor E., to Bell Telephone Laboratories, Inc. Relay pulsing circuit. 3,090,874, 5–21–63, Cl. 307—132.
Ross Clarence J., to Lockheed Aircraft Corp. Continuous flow displacement pump. 3,090,325, 5–21–63, Cl. 103—238.
Ross, Donald S., to Itek Corp. Data processing system. 3,090,290, 5–21–63, Cl. 95—89
Rossi, Emil R. Egg top remover. 3,090,413, 5–21–63, Cl. 146—2.
Rouse, Warren B. Hold down clamp. 3,090,612, 5–21–63, Cl 269—91.
Roussel-UCLAF, Societe Anonyme: *See*—
Bellet, Paul, and Vellus. 3,090,729.
Royle, Joseph K.: *See*—
Bowden, Bertram V., Koenigsberger, and Royle. 3,090,896.
Rubin, Herbert: *See*—
Hesketh, James A., and Rubin. 3,090,634.
Ruckert, Horst, to International Standard Electric Corp. Detection of stamps on documents. 3,090,870, 5–21–63, Cl. 250—219.
Ruckstuhl, Jakob E., to Terlinden & Co. Method of making synthetic velvet-like knitted fabric. 3,090,097, 5–21–63, Cl. 28—72.
Rudelick, John, to Bruner Corp. Rotatable spindle valve. 3,090,396, 5–21–63, Cl. 137—375.
Ruegg, Rudolf: *See*—
Hegudes, Balthasar, Isler, Ruegg, and Ryser. 3,090,805.
Reuhrwein, Robert A.: *See*—
Gruber, Bernard A., Ruehrwein, and Williams. 3,090,703.
Ruff, Richard J., and W. C. Verner, to Universal Oil Products Co. Direct flame incinerator. 3,090,675, 5–21–63, Cl. 23—277.
Running, Clayton D.: *See*—
Weiss, Bernhardt B., and Running. 3,090,599.
Ruoff, George M., to A. B. Chance Co. Insulator tester. 3,090,912, 5–21–63, Cl. 324—54.
Rusack, Karl-Heinz: *See*—
Plock, Karl, Quest, and Rusack. 3,090,293.
Russo, Carl J., A. L. Trifunovic, and H. A. Sinski, to Joseph Bancroft & Sons Co. Apparatus for treating fibers. 3,090,579, 5–21–63, Cl. 242—128.
Rutkowski, Roman V., to South Bend Toy Mfg. Co., Inc. Doll stroller. 3,090,636, 5–21–63, Cl. 280—47.38.
Rutkus, John, Jr.: *See*—
Eichler, Rolf W., Eichorn, and Rutkus. 3,090,616.
Rütsche, Karl, to Oehler A.G. Thread control switch. 3,090,845, 5–21–63, Cl. 200—61.16.
Ryan, Charles C.: *See*—
Sieband, Melvin P., Ryan, and Houston. 3,090,556.
Ryser, Gottlieb: *See*—
Hegudes, Balthasar, Isler, Ruegg, and Ryser. 3,090,805.
Sabatini, John J., to The Bendix Corp. Starter drive. 3,090,242, 5–21–63, Cl. 74—7.
Sacco, Ernesto. Burner for liquid fuels. 3,090,420, 5–21–63, Cl. 158—36.
Sahagian, Edward H. Resilient wheels. 3,090,415, 5–21–63, Cl. 152—41.
St. Clair, Theodore A., to The Bastian-Blessing Co. Gas regulator. 3,090,402, 5–21–63, Cl. 137—791.
Saint-Frison, Louis H. N.: *See*—
Boussu, Gabriel X. R., Neuville, and Saint-Frison. 3,090,189.
Boussu, Gabriel X. R., Neuville, and Saint-Frison. 3,090,190.
Salisbury, Peter F., and T. F. Wichmann. Blood pressure measurement. 3,090,377, 5–21–63, Cl. 128—2.05.
Sandaca, George U. Cigarette package construction. 3,090,482, 5–21–63, Cl. 206—41.
Sanders, Grady H., to Deering Milliken Research Corp. Bobbin handling arrangement. 3,090,476, 5–21–63, Cl. 198—33.
Sandvik Steel, Inc.: *See*—
Johansson, Oscar E. 3,090,610.
Sargeant, Walter E., and J. E. Wilson, to General Motors Corp. Accessory drive mechanism. 3,090,548, 5–21–63, Cl. 230—271.
Sark, Astra. Manual pattern transfer device. 3,090,301, 5–21–63, Cl. 101—134.
Saunderson, Jason L., to Baird-Atomic, Inc. Automatic means for aligning spectrometer components. 3,090,278, 5–21–63, Cl. 88—14.
Saylor, Robert F., to United States Steel Corp. Sprocket for endless pallet-type conveyor. 3,090,479, 5–21–63, Cl. 198—189.
Schaafsma, Ype, to Shell Oil Co. Heating fluids by a spinning body. 3,090,674. 5–21–63, Cl. 23—277.
Schaeder, Johann A., and B. Streu, to Frits Hellige & Co. G.m.b.H. Recording apparatus with spaced pigment carrier. 3,090,663, 5–21–63, Cl. 346—105.
Schaefer, Stephen, to McPhilben Mfg. Co., Inc. Pivotal support means for pendant lighting fixtures including globe attaching means. 3,090,589, 5–21–63, Cl. 248—318.
Schafer, Robert J. and M. Quatinets. Size reduction of metal particles. 3,090,567, 5–21–63, Cl. 241—22.
Scheitlin, George E., and C. F. Draut, to Arvin Industries, Inc. Catalytic converter. 3,090,677, 5–21–63, Cl. 23—288.
Schenley Industries, Inc.: *See*—
Goldstein, Daniel. 3,090,492.
Schepler Herman C. Satellite monitor. 3,090,831, 5–21–63, Cl. 178—6.8.
Scherer, George F., and O. T. Bierwagen, to Rockwell Mfg. Co. Lubricating and sealing compositions. 3,090,751, 5–21–63, Cl. 252—21.
Schiefer, Harry M., to Dow Corning Corp. Polysiloxane lubricant compositions. 3,090,754. 5–21–63, Cl. 252—49.7.
Schlermeier, Knapel F., to Shell Oil Co. Tank protective oils. 3,090,690. 5–21–63, Cl. 106—14.
Schjolin, Hans O., L. N. Kern, and M. V. Parshall, to General Motors Corp. Transmission. 3,090,257, 5–21–63, Cl. 74—781.
Schlumberger Well Surveying Corp.: *See*—
Moran, James H. 3,090,910.
Schmerling, Louis, to Universal Oil Products Co. Partial dehydrohalogenation of haloalkylhalobicycloalkenic compounds. 3,090,817, 5–21–63, Cl. 260—648.
Schmidt, Benjamin F. Sand trapping sucker-rod for piston type oil well pump. 3,090,324, 5–21–63, Cl. 103—220.
Schmidt, Jørgen: *See*—
Juncker, Flemming G., Damgaard, Jacobsen, Henk, and Schmidt. 3,090,411.
Schmit, Leo T.: *See*—
Vaughn, Frank R. 3,090,558.
Schmitt, Johannes: *See*—
Müller, Paul, Schmitt, and Wittner. 3,090,744.
Schmittmann, Hans-Richard, to Farbenfabriken Bayer Aktiengesellschaft. Braided combined cordage. 3,090,277, 5–21–63, Cl. 87—8.
Schneeman, Justin G. Fluoroscopic inspection apparatus. 3,090,865, 5–21–63, Cl. 250—52.
Schneider, Rudolf: *See*—
Pinkwart, Dieter, Schneider, Strittmatter, and Gruber. 3,090,732.

Schneller, Joseph W., to National Gypsum Co. Furred wall construction. 3,090,471, 5–21–63, Cl. 189—35.
Scholl, William M. Article package. 3,090,484, 5–21–63, Cl. 206—80.
Schols, Peter S., to Paragon Products Corp. Fluid pressure actuated switch. 3,090,848, 5–21–63, Cl. 200—83.
Schrader, Hansgeorg: *See*—
Loheat, Hans, Schrader, and Weber. 3,090,571.
Schrank, Harry P. Tubeless tire with puncture sealing device. 3,090,416 5–21–63, Cl. 152—347.
Schreffler, Robert Z.: *See*—
Cunningham, Cecil R., Weiss, and Schreffler. 3,090,570.
Schröer, Carl J., and W. Bratumyl, to Kieler Howaldtswerke Aktiengesellschaft. Mounting hatch for submarine vessels. 3,090,341, 5–21–63, Cl. 114—201.
Schubert, Friedrich: *See*—
Lang, Konrad, and Schubert. 3,090,809.
Schuhmaschinen-Gesellschaft Hanke & Co. m.b.H.: *See*—
Lorenz, Werner. 3,090,056.
Schultze, Harold E., to General Motors Corp. Anti-roll control system. 3,090,611, 5–21–63, Cl. 267—11.
Schulze, Herman H., to Avco Corp. Snapping bars for corn picker snapping rolls. 3,090,388, 5–21–63, Cl. 130—5.
Schwartz, Ira to Technisservice Corp. Strand-crimping apparatus. 3,090,096, 5–21–63, Cl. 28—1.
Schwartzwalder, Karl, and A. V. Somers, to General Motors Corp. Method of making porous ceramic articles. 3,090,094, 5–21–63, Cl. 25—156.
Schwegler, Roy F., and K. H. Wolverton, to Ametek, Inc. Machine mounting. 3,090,586, 5–21–63, Cl. 248—20.
Schwitzer Corp.: *See*—
Woollenweber, William E., Jr. 3,090,546.
Woollenweber, William E., Jr., and Bozzola. 3,090,544.
Scoggin, Jack S., to Phillips Petroleum Co. Separation of polymer from solvent. 3,090,774, 5–21–63, Cl. 260—85.3.
Scoparino, Melchior. Action doll or like figurine. 3,090,156, 5–21–63, Cl. 46—118.
Scott, Kenneth L.: *See*—
Cunningham, Paul M., and Scott. 3,090,877.
Scudder, John. Hand drawn vehicle with power assist. 3,090,459, 5–21–63, Cl. 180—19.
Sealol, Inc.: *See*—
Kroekel, Rolf H. W. 3,090,403.
Searle, G. D., & Co.: *See*—
Tyner, David A. 3,090,792.
Searles, William G.: *See*—
Crane, Jack W., Best, Dwyer, and Searles. 3,090,295.
Seaton, Norman T., to Beckman Instruments, Inc. Improved high-sensitivity trigger circuits. 3,090,924, 5–21–63, Cl. 328—203.
Seft, Max M.: *See*—
Farnsworth, Lawrence. 3,090,633.
Senger, Horst, to Bolkow-Entwicklungen Kommanditgesellschaft. Remote control and stabilizing apparatus. 3,090,582, 5–21–63, Cl. 244—14.
Sennewald, Kurt, K. Born, and H. Rehberg, to Knapsack-Griesheim Aktiengesellschaft. Process for preparing 1-cyanobutadiene-1,3. 3,090,804, 5–21–63, Cl. 260—465.9.
Servillat, Gabriel, to Societe des Mécaniques Verdol. Machines for the prenaration of cards for jacquards. 3,090,550, 5–21–63, Cl. 284—54.
Seymour, Dale B., T. F. Poe, and H. Heyman; said Heyman assor. to said Seymour and said Poe. Panel handling and transporting machines. 3,090,516, 5–21–63, Cl. 214—654.
Shampaine Industries Inc.: *See*—
Fegan, Frank J., and Smith. 3,090,382.
Shapiro, Seymour L.: *See*—
Geiger, Karl, Shapiro, and Freedman. 3,090,813.
Shaver, Raymond M., and A. H. Hartwig, to Pullman-Standard Car Mfg. Co. Railway car roof hatch. 3,090,160, 5–21–63, Cl. 50—14.
Shaw, Norman H., to The English Electric Co. Ltd. Motor speed control systems. 3,090,901, 5–21–63, Cl. 318—209.
Sheldon, Gilbert J., and G. A. Ulrich, to Bausch & Lomb Inc. Focusing endoscope. 3,090,378, 5–21–63, Cl. 128—4.
Shell Oil Co.: *See*—
Connellan, John. 3,090,667.
Geer, Ronald L. 3,090,437.
Karasch, Morris S., and Nudenberg. 3,090,808.
Lagucki, Edward B. 3,090,440.
Montgomery, Norman E. 3,090,316.
Otteman, Lloyd G., Newman, and Haeber. 3,090,640.
Schaafsma, Ype. 3,090,674.
Schlermeier, Knapel F. 3,090,690.
Sutton, Reid E., and Bame. 3,090,680.
Vogel, Charles B. 3,090,940.
Sherwin-Williams Co., The: *See*—
Harris, Lewis P. 3,090,668.
Shields, Stanley E., and P. W. Dewey, to Standard Oil Co. Temperature measurement mechanism. 3,090,233, 5–21–63, Cl. 73—343.
Shulver, William, and G. W. Guyer, to Owens-Corning Fiberglas Corp. Method of precoating and coating glass fibers and article produced thereby. 3,090,701, 5–21–63, Cl. 117—76.
Shumaker, Charles S., to Kelsey-Hayes Co. Apparatus for rolling disks. 3,090,265, 5–21–63, Cl. 80—16.
Shumaker, Hugh W. Horisontal deflector. 3,090,645, 5–21–63, Cl. 296—91.
Shumaker, Lawrence E., to The Eversman Mfg. Co. Land leveling attachment for tractors. 3,090,141, 5–21–63, Cl. 37—180.
Shumway, Halsey D.: *See*—
McCutchen, Brunson S., and Shumway. 3,090,840.
Sickinger, Hans: *See*—
Biel, Hans, and Hornung. 3,090,481.
Sieband, Melvin P., C. C. Ryan, and D. R. Houston, to United States of America, Navy. Target position predicting servomechanism. 3,090,556, 5–21–63, Cl. 235—183.
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Muller, Rudolf. 3,090,885.
Veith, Werner, and Heynisch. 3,090,890.
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Engel, Walter. 3,090,926.
Simons, Jack. Applicator for liquids. 3,090,070, 5–21–63, Cl. 15—541.
Sinclair, Charles W., to Kelsey-Hayes Co. Method of making a brake drum. 3,090,114, 5–21–63, Cl. 29—447.
Singer-Fidelity, Inc.: *See*—
Mahler, Peter A. 3,090,216.
Sinski, Henry A.: *See*—
Russo, Carl J., Trifunovic, and Sinski. 3,090,579.
Sire, Edouard M. Magnetic games. 3,090,622, 5–21–63, Cl. 273—126.
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Slotterbeck, Ober C.: *See*—
Clark, Hadden, Thorne, and Slotterbeck. 3,090,715.
Slyngstad, Charles E., and F. L. Lempert, to The M. W. Kellogg Co. Process for desulfurination of dissimilar hydrocarbons. 3,090,747, 5–21–63, Cl. 208—210.
Smink, David E., and G. C. Terrel, to Jersey Production Research Co. Collapsible dump bailer. 3,090,441, 5–21–63, Cl. 166—162.
Smirl, Richard L., and M. J. Waclawek, to Borg-Warner Corp. Transmission. 3,090,255, 5–21–63, Cl. 74—732.
Smith, Alexander M., II, to Chatham Mfg. Co. Method of needle punching fabrics so as to interlace the fibers thereof. 3,090,099, 5–21–63, Cl. 28—72.2.
Smith, Alexander M., II, to Chatham Mfg. Co. Method of needle punching fibers to make needled fabrics or the like. 3,090,100, 5–21–63, Cl. 28—72.2.
Smith, Arthur D. Vehicle load retainer. 3,090,600, 5–21–63, Cl. 254—116.
Smith, Carl C., Jr.: *See*—
Brewer, Claire N., and Smith. 3,090,069.
Smith, George E., and B. Wolfe, to Bell Telephone Laboratories, Inc. Thermoelectric behavior of bismuth-antimony thermo-elements. 3,090,207, 5–21–63, Cl. 62—3.
Smith, George L. Swimming pool ladder. 3,090,465, 5–21–63, Cl. 182—52.
Smith, George L. Ladder with integral water supply. 3,090,489, 5–21–63, Cl. 210—169.
Smith, Harry A.: *See*—
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Smith, Horace V., to Metro Corp. Liquid sample pump assembly. 3,090,323, 5–21–63, Cl. 103—178.
Smith, John F., to E. I. du Pont de Nemours and Co. Process for curing fluorocarbon elastomers without foaming thereof. 3,090,775, 5–21–63, Cl. 260—87.7.
Smith, Norman L., to H. K. Porter Co., Inc. Method of determining leaks in lightning arresters and the like. 3,090,112, 5–21–63, Cl. 29—407.
Smith, S., & Sons (England) Ltd.: *See*—
Spencer, Dennis L. 3,090,397.
Smith, Samuel C., to Fan-Air Systems, Inc. Lumber drying apparatus. 3,090,130, 5–21–63, Cl. 34—50.
Smith, Walter H. B. Bolt action firearm with charger. 3,090,148, 5–21–63, Cl. 42—25.
Smith, William H.: *See*—
Fegan, Frank J., and Smith. 3,090,382.
Snider, Orvill E.: *See*—
Papero, Patrick V., Jr., Snider, and Duggan. 3,090,773.
Snyder, Horace S., and D. J. Gancheff. Self-arighting sprinkler head. 3,090,566, 5–21–63, Cl. 239—587.
Snyder, Kenneth E., to General Motors Corp. Transmission. 3,090,251, 5–21–63, Cl. 74—677.
Snyder, Selma S. Head rests. 3,090,648, 5–21–63, Cl. 297—398.
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Somers, Arthur V.: *See*—
Schwartzwalder, Karl, and Somers. 3,090,094.
Sosis, Paul: *See*—
Wilbert, Godfrey, and Sosis. 3,090,812.
Somhegyi, Kristof C., to Dynapower Systems Corp. Cart steering wheel suspension. 3,090,638, 5–21–63, Cl. 280—92.
Soussloff, Dimitri G., S. Godel, T. Descovich, and R. E. Davis, to American Machine & Foundry Co. Elapsed time indicator. 3,090,915, 5–21–63, Cl. 324—68.
South Bend Toy Mfg. Co., Inc.: *See*—
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Sowter, George R., and E. M. Eisenberg, to ACF Industries, Inc. Radar altimeter simulator. 3,090,186, 5–21–63, Cl. 35—10.4.
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Spelman, Rollin H., to The General Tire & Rubber Co. Radial cord truck tire. 3,090,417, 5–21–63, Cl. 152—354.
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Kline, Charles M., Hofmeister, Hobbs, and Best. 3,090,133.
Luek, Otto W., and Hollyday. 3,090,477.
Mieher, Walter W. 3,090,951.
Muth, William M., Jr., and Hollyday. 3,090,508.
Wadey, Walter G. 3,090,626.

Spickard, Lawrence J. Irrigation gate wall. 3,090,202, 5–21–63, Cl. 61—28.

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Square D Co.: *See*—
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Stackhouse, A. M.: *See*—
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Stalcup, Robert E.: *See*—
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Stambaugh, Edgel P., and R. A. Foos, to National Distillers and Chemical Corp. Zirconium dioxide recovery. 3,090,670, 5–21–63, Cl. 23—140.

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Shields, Stanley E., and Dewey. 3,090,238.
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Stanley, Henderson M., to Helmick Foundry-Machines Co. Pump liner. 3,090,319, 5–21–63, Cl. 103—103.

Stanley, Richard B., to The Katridg Pak Co. Container carrier. 3,090,478, 5–21–63, Cl. 198—131.

Stanley, Richard B., to Free-Roll Tester Corp. Apparatus and method for determining bearing condition of railway car journal boxes. 3,090,860, 5–21–63, Cl. 246—246.

Stansbury, Harry A., Jr., and H. R. Gueat, to Union Carbide Corp. Glutaraldehyde dicyanohydrin and acyl derivatives thereof. 3,090,803, 5–21–63, Cl. 260—465.4.

Stanton, George W., and T. G. Traylor, to The Dow Chemical Co. Graft copolymer of a linear polyester condensation product and N-vinyl-3-morpholinone and process of making same. 3,090,766, 5–21–63, Cl. 260—45.4.

Starr, Ralph T.: *See*—
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Stedman, Cecil K., to Statham Instruments, Inc. Motion sensing device. 3,090,288, 5–21–63, Cl. 73—515.

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Sterling, Henley F., to International Standard Electric Corp. Method and material for heat treating fusible material. 3,090,673, 5–21–63, Cl. 23—273.

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Stevens & Thompson Paper Co.: *See*—
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Stewart, Trigg, and J. L. Helminen, deceased (by V. I. Helminen, executrix). Underwater spear gun. 3,090,151, 5–21–63, Cl. 43—6.

Stimson, Glen H., to United-Greenfield Corp. Surface measurement apparatus and control. 3,090,171, 5–21–63, Cl. 51—165.

Stone, Morris D., and H. H. Talbot, to Kelsey-Hayes Co. Apparatus for rolling disks. 3,090,264, 5–21–63, Cl. 80—16.

Stoner, Eugene M., to Fairchild Engine and Airplane Corp. Hand guard construction. 3,090,150, 5–21–63, Cl. 42—71.

Stout, William J., to Sun Oil Co. Wax composition having non-flaking characteristics for use in coating fibrous materials. 3,090,538, 5–21–63, Cl. 229—3.1.

Straub, John C., to Bell Intercontinental Corp. Polishing method and device. 3,090,166, 5–21–63, Cl. 51—9.

Strauss, Leopold, and H. L. Loew, to Ideal Corp. Flasher switch. 3,090,851, 5–21–63, Cl. 200—113.

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Streu, Benno: *See*—
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Streu, Benno, to Frits Hellige & Co., G.m.b.H. Electrical switching apparatus. 3,090,844, 5–21–63, Cl. 200—46.

Strickland, Edward T. to Philbrick-Strickland Laminates, Inc. Contraction compensating work table. 3,090,172, 5–21–63, Cl. 51—237.

Strickland, Edward T., and H. C. Amos, to Philbrick-Strickland Laminates, Inc. Work support table. 3,090,173, 5–21–63, Cl. 51—237.

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Strong-Scott Mfg. Co., The: *See*—
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Stubblefield, Thomas A., ⅛ to J. F. Brooks, and ⅛ to J. H. Hancock. Drapery supporting and pleating apparatus. 3,090,431, 5–21–63, Cl. 160—345.

Stump, Eugen, to Daimler-Benz Aktiengesellschaft. Transmission. 3,090,264, 5–21–63, Cl. 74—710.5.

Stump, Harry B., to True Temper Corp. Hand tools. 3,090,-653, 5–21–63, Cl. 306—33.

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Stuver, Paul M. Fluid motor. 3,090,363, 5–21–63, Cl. 121—121.

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Sulkie, Thomas A. Rubber stamp device. 3,090,304, 5–21–63, Cl. 101—333.

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Sunbeam Corp.: *See*—
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Jepson, Ivar. 3,090,119.

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Antonsen, Donald H., and Hahn. 3,090,777.
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Swanson, Robert K., C. E. Jameson, and G. W. Dingus. Method of and apparatus for radioactivity well logging. 3,090,-867, 5–21–63, Cl. 250—83.3.

Swartz, George A., to Radio Corp. of America. Plasma heating apparatus and process. 3,090,737, 5–21–63, Cl. 204—154.2.

Sylvania Electric Products Inc.: *See*—
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Szabo, Gustav Z.: *See*—
Chonka, Louis. 3,090,121.

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Otsuka, Eiji, Takahashi, and Watanabe. 3,090,811.

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Tateishi, Arthur K. Audio-amplifier-radio tuner combination and low drain tuner therefor. 3,090,919, 5–21–63, Cl. 325—356.

Tateishi, Kasuma. Tumbler switch. 3,090,846, 5–21–63, Cl. 200—67.

Tauch, Ernest J., to E. I. du Pont de Nemours and Co. Process for preparing aqueous silicate solutions. 3,090,679, 5–21–63, Cl. 23—312.

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Techniservice Corp.: *See*—
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Teetor, Ralph E., to Perfect Circle Corp. Speed control device for an automotive vehicle. 3,090,460, 5–21–63, Cl. 180—82.1.

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Terrel, Garland C.: *See*—
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Textron Inc: *See*—
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Thompson, Francis T., to Westinghouse Electric Corp. Controller circuitry with pulse width modulator. 3,090,929, 5–21–63, Cl. 332—9.

Thompson, Lyle G., to Burroughs Corp. Waveform techniques. 3,090,672, 5–21–63, Cl. 307—88.

Thompson, Ralph B., J. A. Chenicek, and W. J. Faust, to Universal Oil Products Co. Method of reducing surface ignition requirements. 3,090,651, 5–21–63, Cl. 44—76.

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Thomson, Byron C., to Lamb Industries, Inc. Cane harvester and pilers and process for harvesting and piling cane. 3,090,185, 5–21–63, Cl. 56—17

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Trana, Valdemar E. Scraping assembly for road planer. 3,090,140, 5–21–63, Cl. 37—143.

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Traylor, Teddy G: *See*—
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Cyba, Henryk A. 3,090,796.
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Thompson, Ralph B., Chenicek, and Faust. 3,090,681.

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Valentine, Edward L. Method and apparatus for cleaning tanks. 3,090,393, 5–21–63, Cl. 134—169.

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Vaughn, Frank E., to A. H. Bartels, L. T. Schmit, and P. Feeney. Spring loaded heat saving device. 3,090,558, 5–21–63, Cl. 236—1.

Veith, Werner, and H. Heynisch, to Siemens & Halske Aktiengesellschaft. Color television tube having Ventian blind-type grid. 3,090,890, 5–21–63, Cl. 315—21.

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Vertrees, Paul C., and C. G. Hackenberger, to Tacoma Boatbuilding Co., Inc. Vessel-carried level-luffing crane. 3,090,-496, 5–21–63, Cl. 212—35.

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	17: 3,000,506		3,000,561		71: 3,000,756		462: 3,000,801	288—	170: 3,000,643		79: 3,000,908
	3,000,507	229—	167: 3,000,562		75: 3,000,757		3,000,802		239: 3,000,644		89: 3,000,909
	42: 3,000,508		206: 3,000,563		77: 3,000,758		464.4: 3,000,803	296—	91: 3,000,645	334—	6: 3,000,910
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	85.1: 3,000,510		342: 3,000,565		418: 3,000,760		476: 3,000,805	297—	207: 3,000,647		54: 3,000,912
	140: 3,000,511		567: 3,000,566	253—	39: 3,000,597		501: 3,000,806		208: 3,000,648		57: 3,000,913
	302: 3,000,512	240—	7.1: 3,000,566	254—	29: 3,000,598		527: 3,000,807	301—	13: 3,000,649		66: 3,000,914
	340: 3,000,513	241—	22: 3,000,567		51: 3,000,599		529: 3,000,808	308—	6: 3,000,650		3,000,915
	512: 3,000,514		73: 3,000,568		118: 3,000,600		551: 3,000,809		3,000,651		115: 3,000,916
	522: 3,000,515	242—	9: 3,000,569		169: 3,000,601		552: 3,000,810		9: 3,000,652	335—	183: 3,000,917
	654: 3,000,516		18: 3,000,570	280—	3: 3,000,602		555: 3,000,811	306—	33: 3,000,653		348: 3,000,918
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	46: 3,000,519		66: 3,000,575		175: 3,000,607		3,000,816	309—	36.3: 3,000,654		93: 3,000,923
	112: 3,000,520		67.1: 3,000,576	260—	2.5: 3,000,761		648: 3,000,817		37: 3,000,655		208: 3,000,924
221—	6: 3,000,521		96: 3,000,577		21: 3,000,762		652.5: 3,000,818		187: 3,000,656	339—	4.7: 3,000,925
	33: 3,000,522		107.5: 3,000,578		28: 3,000,763		665: 3,000,819		217: 3,000,657		34: 3,000,926
	36: 3,000,523		128: 3,000,579		28.5: 3,000,764		667: 3,000,820		243: 3,000,658		39: 3,000,927
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	84: 3,000,526		2: 3,000,581		45.4: 3,000,766		3,000,822		3,000,660	331—	9: 3,000,929
	106: 3,000,526		14: 3,000,582		45.5: 3,000,767	261—	41: 3,000,608	310—	4: 3,000,373	333—	24.1: 3,000,930
	176: 3,000,527		3,000,583		3,000,768	267—	1: 3,000,609		8: 3,000,376		93: 3,000,931
	179: 3,000,528		42: 3,000,584		3,000,769		3,000,610		154: 3,000,377	334—	51: 3,000,932
	209: 3,000,529		99: 3,000,585		3,000,770		11: 3,000,611		166: 3,000,378	336—	120: 3,000,933
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223—	35: 3,000,533	248—	20: 3,000,586		85.3: 3,000,774		305: 3,000,615		343: 3,000,662		217: 3,000,937
226—	21: 3,000,534		27: 3,000,587		87.7: 3,000,775	271—	3: 3,000,616	313—	66: 3,000,381	340—	5: 3,000,938
	26: 3,000,535		216: 3,000,588		98.7: 3,000,776	272—	44: 3,000,617		82: 3,000,382		9: 3,000,939
	48: 3,000,536		318: 3,000,589		2,000,777		53.2: 3,000,618		113: 3,000,383		18: 3,000,940
229—	1.5: 3,000,537		346: 3,000,590		3,000,777	273—	44: 3,000,619		264: 3,000,384		31: 3,000,941
	3.1: 3,000,538	250—	43: 3,000,561		94.9: 3,000,778		63: 3,000,620	315—	3.6: 3,000,385		148.2: 3,000,942
	40: 3,000,539		43.5: 3,000,562		112: 3,000,779		94: 3,000,621		3,000,386		172.6: 3,000,943
	44: 3,000,540		3,000,563		186: 3,000,780		128: 3,000,622		12: 3,000,387		3,000,944
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	116: 3,000,544		83.3: 3,000,567		347.5: 3,000,784		42: 3,000,626		39.51: 3,000,391		280: 3,000,948
	117: 3,000,545		91: 3,000,568		356.6: 3,000,785	277—	85: 3,000,627		129: 3,000,392		306: 3,000,949
	122: 3,000,546		203: 3,000,569		398: 3,000,786		94: 3,000,628		134: 3,000,393	343—	8: 3,000,950
	185: 3,000,547		219: 3,000,570		404.3: 3,000,787		95: 3,000,629	317—	153: 3,000,394		16: 3,000,951
	271: 3,000,548	251—	5: 3,000,601		409: 3,000,788		171: 3,000,630		260: 3,000,395		3,000,952
233—	26: 3,000,549		30: 3,000,602		405: 3,000,789		174: 3,000,631	318—	19: 3,000,396		17.1: 3,000,953
234—	54: 3,000,550		37: 3,000,603		338: 3,000,790	279—	1: 3,000,632		138: 3,000,397		3,000,954
235	61: 3,000,551		183: 3,000,604		346.2: 3,000,791		5: 3,000,633		170: 3,000,398		17.7: 3,000,955
	3,000,552		258: 3,000,605		348: 3,000,792	280—	31: 3,000,634		202: 3,000,399		100: 3,000,956
	63: 3,000,553		333: 3,000,606		399: 3,000,793		47.13: 3,000,635		207: 3,000,400		112: 3,000,957
	3,000,554	252—	2: 3,000,749		400: 3,000,794		47.38: 3,000,636		209: 3,000,401		3,000,958
	91: 3,000,555		18: 3,000,750		404.5: 3,000,795		79.1: 3,000,637		231: 3,000,402		226: 3,000,959
	153: 3,000,556		21: 3,000,751		3,000,796		92: 3,000,638		448: 3,000,403		306: 3,000,960
	185: 3,000,557		33.4: 3,000,752		420: 3,000,797		474: 3,000,639	320—	22: 3,000,404		
236—	1: 3,000,558		42.7: 3,000,753		455: 3,000,798	285—	3: 3,000,640	323—	22: 3,000,405	346—	106: 3,000,663

CLASSIFICATION OF DESIGNS

D 9—	2: 195,247	D15—	1: 195,255	D34—	5: 195,264	D48—	16: 195,273	D58—	8: 195,281	D66—	1: 195,289
	195,248		195,256	D41—	1: 195,265		195,274		17: 195,282	D70—	2: 195,290
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D13—	1: 195,252	D26—	5: 195,260		10: 195,269		6: 195,278	D61—	1: 195,286	D85—	2: 195,294
	195,253		14: 195,261		24: 195,270	D58—	4: 195,279	D62—	4: 195,287	D87—	3: 195,295
D14—	3: 195,254	D33—	3: 195,262		29: 195,271		5: 195,280	D64—	11: 195,288	D91—	2: 195,296
		D34—	4: 195,263		195,272						

U.S. DEPARTMENT OF COMMERCE

OFFICIAL GAZETTE of the UNITED STATES PATENT OFFICE

May 21, 1963 Volume 790 Number 3

TRADEMARKS

NOTICES

Examination

Pursuant to the provisions of Rule 341(c), an examination for persons seeking registration before the United States Patent Office as patent attorneys or agents will be held Tuesday, August 6, 1963.

With the exception of former patent examiners for whom the examination is waived, all persons recognized for practice before the Patent Office in patent cases must, pursuant to the noted rule, pass the examination. Those passing the examination do not thereby qualify for recognition for practice before the Patent Office in trademark cases. Recognition for practice in trademark cases is governed by Rule 2.12 of the Trademark Rules of Practice, which does not require the passing of an examination.

The examination will be given under the supervision of the Civil Service Commission, and may be taken in any of the cities of the country in which the Civil Service Commission regularly conducts examinations. Applications to take the examination must be directed to the Commissioner of Patents and filed in the Patent Office not later than July 5, 1963.

Application blanks may be obtained from the Clerk of the Patent Office Committee on Enrollment, Room 3718, Department of Commerce Building, Washington 25, D.C.

EDWIN L. REYNOLDS,
Chairman, Committee on Enrollment.

Apr. 12, 1963.

CONDITION OF TRADEMARK APPLICATIONS AS OF MARCH 31, 1963

Total number of applications awaiting action [excluding renewals and Sec. 12 (c)] 17,322
Date of oldest new application ..... July 2, 1962
Date of oldest amended application ..... July 11, 1962

J. H. MERCHANT, Director, Trademark Examining Operation

TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION	Oldest Application	
	New	Amended
(I) C. M. WENDT, Classes 8, 12, 13, 14, 15, 17, 19, 20, 21, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 39, 41, 42, 43, 44	7-3-62	7-11-62
(II) H. E. KASCHUB, Classes 1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 16, 18, 22, 37, 38, 40, 45, 46, 47, 48, 49, 50, 51, 52; Service Mark Classes 100, 101, 102, 103, 104, 105, 106, 107; Collective Membership Marks, Class 200; Certification Marks, Classes A and B	8-20-62	8-28-62
Renewals (All Classes)	3-5-63	3-19-63
Sec. 12 (c) Publications (All Classes)	3-12-63	

Applications filed during the month of March 1963—2,051

Registrations Issued ..... 378—No. 749,586 to No. 749,963
Renewals Issued 60

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, is mailed under the direction of the Superintendent of Documents, Government Printing Office, Washington 25, D. C., to whom all subscriptions should be made payable and all communications addressed; subscription price, $10.00 per annum, foreign mailing $3.75 additional; single copies, 20 cents each.

PRINTED COPIES OF TRADEMARK REGISTRATIONS are furnished by the Patent Office for 10 cents each. Address orders to the Commissioner of Patents, Washington 25, D.C.

MARKS PUBLISHED FOR OPPOSITION

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105.
As provided by section 31 of said act, a fee of twenty-five dollars must accompany each notice of opposition.

Class 1—Raw or Partly Prepared Materials

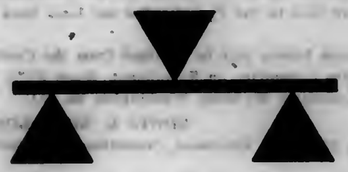
SN 147,579. High Temperature Materials, Inc., Boston, Mass. Filed June 25, 1962.

PYROFOAM

For Expanded or Intumesced Graphite.
First use on or about June 12, 1962.

Class 2—Receptacles

SN 121,780. Aerojet-General Corporation, Azusa, Calif. Filed June 12, 1961.



For Vessels Such as Tankage for Containment of Pressurized or Unpressurized Gaseous or Liquid Materials, and Tankage Liners.
First use July 11, 1958.

SN 136,108. CVT, Glen Ridge, N.J. Filed Jan. 19, 1962.

SHOE SHAGS

The word "Shoe" is disclaimed apart from the mark as shown.
For Containers for Shoes of the Fabric Bag Type.
First use Apr. 10, 1961.

SN 139,643. Lincoln Metal Products Corp., Brooklyn, N.Y. Filed Mar. 12, 1962.

BEAUTY-BIN

Owner of Reg. Nos. 624,249 and 673,003.
For Housewares—Namely, Pull Out Canisters.
First use Oct. 5, 1960.

SN 139,722. D. J. Alexander Corporation, Philadelphia, Pa. Filed Mar. 13, 1962.

LITTERETTE

For Waste Receptacles—i.e., Waste Cans for Indoor and/or Outdoor Use.
First use May 22, 1960.

SN 140,171. Nursery Metal Pots, Inc., San Francisco, Calif. Filed Mar. 19, 1962.

TREETAINER

Owner of Reg. Nos. 546,725, 649,119, and 707,940.
For Metal Pots for Trees, Plants, and Flowers.
First use Mar. 12, 1962.

SN 142,473. A. E. Westwood Limited, Birmingham, England. Filed Apr. 17, 1962.

WESCO

Owner of British Reg. No. 491,552, dated May 18, 1928.
For Hand Oil Cans for All Lubricating Purposes.

SN 142,861. David Harold Quinn, Washington, D.C. Filed Apr. 23, 1962.

STERI-CANTEEN

For Containers in the Nature of Canteens and Larger Bag Type Liquid Containers Made of Plastic, Rubber, and With or Without Cloth Cover.
First use June 1949.

SN 143,105. Consumer Bag and Packaging Corporation, Richmond, Va. Filed Apr. 26, 1962.

SUPERMARKET

For Paper Bags.
First use Feb. 14, 1962.

SN 143,107. Consumer Bag and Packaging Corporation, Richmond, Va. Filed Apr. 26, 1962.

SERVICE

For Paper Bags.
First use Mar. 7, 1962.

SN 147,051. Burn-Strauss, Inc., d.b.a. Woodpecker Woodware, Los Angeles, Calif. Filed June 15, 1962.



Applicant makes no claim to the word "Accessories" alone.
For Canisters, Bread, Recipe, and Cookie Boxes, Napkin Holders, Knife Racks, Salt and Pepper Shakers, Wall Hung Dispensers, Spice Bars and Cabinets, Fruit Bowls, Serving Trays, Spoon Racks, Paper Towel Holders, and Planters.
First use Jan. 10, 1962.

SN 149,219. Sonoco Products Company, Hartsville, S.C. Filed July 17, 1962.

SPIRO-PAC

For Multi-Ply Wound Composite Containers for Packaging Liquids and Semi-Solids.
First use May 22, 1962.

SN 149,359. Brookpark, Inc., Cleveland, Ohio. Filed July 19, 1962.

CUTLASS

For Plastic Dinnerware.
First use June 5, 1962.

SN 150,901. West Virginia Pulp and Paper Company, New York, N.Y. Filed Aug. 9, 1962.

PAPERCAN

For Paper Bags.
First use July 25, 1962.

SN 151,142. George Koch Sons, Inc., Evansville, Ind. Filed Aug. 14, 1962.

FLORAFOAM

For Floral Containers Made of Plastics, Metal, Ceramics, and Compositions Thereof.
First use Dec. 6, 1961.

SN 151,623. Thompson Industries, Inc., Phoenix, Ariz. Filed Aug. 21, 1962.

MIRA-CUP

For Plastic Drinking Cups.
First use Aug. 1, 1962.

SN 152,039. Geo. J. Ball, Inc., West Chicago, Ill. Filed Aug. 28, 1962.

PORTA-TUBS

For Containers Used in the Growing and Display of Plants.
First use on or before Oct. 24, 1960.

SN 152,053. Diamond National Corporation, New York, N.Y. Filed Aug. 28, 1962.

OVAL-TAINER

For Food Trays.
First use June 6, 1962.

SN 152,098. Stetson Corporation, Lincoln, Ill. Filed Aug. 28, 1962.

SUN VALLEY

Owner of Reg. No. 570,974.
For Plastic Dinnerware.
First use August 1949.

SN 152,136. Jersey Tab Card Corporation, Union, N.J. Filed Aug. 29, 1962.

I-DENTI-FILE

For Shipping and Storage Cartons.
First use July 1, 1960.

SN 152,259. Franklin P. Winesett, d.b.a. Winesett Bag Company, Oakland, Calif. Filed Aug. 30, 1962.

PIERCENE

For Bags Made of Plastic Sheet Material.
First use Aug. 29, 1952.

SN 152,312. Kennedy Car Liner and Bag Company, Incorporated, Shelbyville, Ind. Filed Aug. 31, 1962.



For Bags, Particularly Sewn, Multi-Wall Paper Bags.
First use on or about Mar. 26, 1962.

SN 152,328. Edward E. Pauer, d.b.a. Babylon Products Company, Waukesha, Wis. Filed Aug. 31, 1962.

BABYLON GARDEN

For Planter.
First use Jan. 25, 1962.

SN 152,556. American Can Company, Easton, Pa. Filed Sept. 6, 1962.

DIXIE

Owner of Reg. Nos. 120,264, 732,447, and others.
For Butter Chips, Hot Dog Holders and Trays Made of Paper, Plastic and Combinations of the Same.
First use on or before Apr. 24, 1960, on butter chips.

SN 152,557. American Can Company, Easton, Pa. Filed Sept. 6, 1962.

MIRA-GLAZE

Owner of Reg. No. 677,164.
For Cups, Plates, Dishes, Bowls, Butter Chips, Trays, Nestable Containers and Lids and Closures for the Same Made of Paper, Plastic, and Combinations of the Same.
First use June 16, 1958, on paper cups.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

SN 147,198. Gutman-Lann Glove Company, Inc., New York, N.Y. Filed June 19, 1962.

BAG-O-TRICKS

For Handbags.
First use June 11, 1962.

Class 4—Abrasives and Polishing Materials

SN 156,263. Bausch & Lomb Incorporated, Rochester, N.Y. Filed Oct. 31, 1962.

BAL-FOIL

For Lens Grinding Pads.
First use Oct. 23, 1962.

SN 156,984. Industrial Soap Company, St. Louis, Mo. Filed Nov. 9, 1962.

MEDALLION

For Floor Polish.
First use Oct. 13, 1962.

SN 156,986. Industrial Soap Company, St. Louis, Mo. Filed Nov. 9, 1962.

DIPLOMAT

For Floor Polish.
First use Oct. 13, 1962.

Class 6—Chemicals and Chemical Compositions

SN 146,360. Chemico Corporation, Baltimore, Md. Filed June 7, 1962.

WATER BUOY

For Chemical Compound for Purifying Water in Pools.
First use Dec. 13, 1961.

SN 146,595. The Dow Chemical Company, Midland, Mich. Filed June 11, 1962.

D.E.H.

Owner of Reg. No. 697,630.
For Epoxy Curing Agent.
First use May 12, 1959.

SN 146,820. Imperial Chemical Industries Limited, London, England. Filed June 13, 1962.

GENCLOR

Priority claimed under Sec. 44(d) on British Reg. No. 830,461, dated Feb. 6, 1962.
For Chlorinated Polyvinyl Chloride.

SN 146,978. Chem Lab Products, Incorporated, Downey, Calif. Filed June 15, 1962.

KEMEX

For Chemical Composition Containing a Chlorine-Releasing Substance (Among Other Substitutes) for Treating Swimming Pool Water.
First use Mar. 9, 1960.

SN 155,734. N.V. Philips-Duphar, Amsterdam, Netherlands. Filed Oct. 23, 1962.

CASORON

Owner of Dutch Reg. No. 136,739, dated Feb. 4, 1960; and U.S. Reg. No. 734,387.
For Fungicides and Herbicides.

SN 155,947. Swift & Company, Chicago, Ill. Filed Oct. 25, 1962.

FLEXIMET

Owner of Reg. No. 735,131.
For Alkali Metal and Alkaline Earth Metal Salts of Fatty Acids.
First use May 18, 1960.

SN 156,139. Mud Control Laboratories, Inc., Oklahoma City, Okla. Filed Oct. 29, 1962.

CONTROL E-B

Owner of Reg. Nos. 637,880, 728,753, and others.
For Oil Well Drilling Fluid Additives for the Breaking of Water in Oil Emulsions.
First use on or about May 29, 1962.

SN 156,602. Hercules Packing Corporation, Alden, N.Y. Filed Nov. 5, 1962.

ETCHON

For Colored Layout Dye Used in Machine Shops.
First use December 1961.

SN 156,987. Industrial Soap Company, St. Louis, Mo. Filed Nov. 9, 1962.

DIPLOMAT

For Room Deodorant Spray.
First use Oct. 13, 1962.

Class 8—Smokers' Articles, Not Including Tobacco Products

SN 148,963. Etablissements Genoud & Cie, Venissieux, Rhone, France. Filed July 13, 1962.

FEUDOR

For Lighters for Smokers, Their Detachable Parts and Accessories.
First use July 3, 1928; in commerce June 1962.

Class 9—Explosives, Firearms, Equipments, and Projectiles

SN 153,043. William R. Weaver, d.b.a. W. R. Weaver Co., El Paso, Tex. Filed Sept. 12, 1962.

WEAVER CHOKE

The word "Choke" is disclaimed apart from the mark.
For Firearm Chokes.
First use Nov. 15, 1940, on shotgun chokes.

Class 11—Inks and Inking Materials

SN 156,370. The Carter's Ink Company, Cambridge, Mass. Filed Nov. 1, 1962.

FIVE O'CLOCK

For Carbon Paper and Typewriter Ribbon.
First use Aug. 2, 1962.

SN 156,656. Quest Manufacturing Company, Chicago, Ill. Filed Nov. 5, 1962.

ELECTRIQUEST

For Carbon Paper.
First use Jan. 23, 1962.

Class 12—Construction Materials

SN 140,455. Inland Steel Company, Chicago, Ill. Filed Mar. 22, 1962.

TRI-STEEL

For Structural Steel Shapes—Namely, Beams and Channels Used Especially for Construction Purposes.
First use Feb. 12, 1962.

SN 145,416. Spurlock and Carter Company, Inc., Nashville, Tenn. Filed May 24, 1962.

Temprof

Owner of Reg. No. 633,627.
For Storm Windows, Storm Doors, Aluminum Awnings, Aluminum Shutters, and Ornamental Iron.
First use May 15, 1962.

SN 146,628. Keystone Alloys Company, Derry, Pa. Filed June 11, 1962.

KALLOYS

For Aluminum Products—Namely, Products for Improvement and Modernization of Homes Such as Storm Doors, Windows, Railing, and Siding.
First use on or about May 31, 1962.

SN 148,166. Farwell, Ozmun, Kirk & Company, St. Paul, Minn. Filed July 2, 1962.

CHORE-EASE

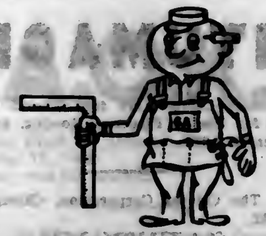
For Prefabricated Metal Parts Forming Gates for Farms, Ranches, and Suburban Homes.
First use Apr. 23, 1962.

SN 150,629. Security Aluminum Corporation, Compton, Calif. Filed Aug. 6, 1962.

hiLITE

Owner of Reg. No. 723,645.
For Windows and Glass Doors.
First use Sept. 1, 1961.

SN 151,581. General Aluminum Corporation, Carrollton, Tex. Filed Aug. 21, 1962.



For Aluminum Window Units and Parts Thereof, Weather Stripping and Hardware Therefor, Glass and Glazing Materials for Such Window Units, Storm Windows and Screens for Windows, Aluminum Siding, Both Horizontal and Vertical, Nails, Starter Strip, Utility Trim, Corner Fittings, Window Trim and Door Trim for Use With Such Siding.
First use on or about Aug. 30, 1957.

SN 154,360. Maintenance Products, Inc., Columbus, Ohio. Filed Oct. 2, 1962.

QUIKRETE

Owner of Reg. No. 391,990.
For Dry, Cementitious Pre-Mixes—Namely, Concrete Mix, Mortar and Masonry Mix, and Patching Mixes for Repairing and Patching Concrete and Cement Surfaces.
First use May 19, 1941, on high early strength concrete.

SN 156,431. Newco Aluminum Products Co., Inc., Malden, Mass. Filed Nov. 1, 1962.

NEWCO Pivot Control

The words "Pivot Control" are disclaimed apart from the mark as shown.
For Aluminum Windows.
First use Apr. 2, 1962.

SN 156,841. United States Plywood Corporation, New York, N.Y. Filed Nov. 7, 1962.

TRADE WINDS

For Wood and Lumber Products—i.e., Plywood.
First use Sept. 15, 1962.

SN 156,999. McGraw-Edison Company, d.b.a. Alrectic Division, Elgin, Ill. Filed Nov. 9, 1962.

OCT-O-QUAD

For Poles.
First use Nov. 3, 1961.

SN 157,221. Edward Hines Lumber Co., Chicago, Ill. Filed Nov. 14, 1962.

TWINKLEBORD

For Construction Materials—Namely, Hardboard.
First use Apr. 6, 1962.

SN 157,225. Koppers Company, Inc., Pittsburgh, Pa. Filed Nov. 14, 1962.

BITUMAGIC

For Bituminous Composition for General Waterproofing Purposes and for Use as Flooring, Roofing, and Insulation.
First use Oct. 12, 1962.

SN 157,458. The Celotex Corporation, Chicago, Ill. Filed Nov. 19, 1962.

SAFETONE

For Sound Absorbing Material, Especially in the Form of Tile or Panels.
First use Sept. 24, 1962.

SN 157,705. Johns-Manville Corporation, New York, N.Y. Filed Nov. 21, 1962.

VENTSULATION

For Built-Up Roofing Components, Particularly Insulating Boards and Felts.
First use at least July 17, 1962.

SN 157,808. Johns-Manville Corporation, New York, N.Y. Filed Nov. 23, 1962.

DEKERAN

For Asbestos-Cement Sheets or Panels, Marketed Particularly in the Marine Industry.
First use Aug. 31, 1962.

SN 157,876. Aluminum Manufacturing Corporation, Irving, Tex. Filed Nov. 26, 1962.

ALMACO

For Aluminum Doors, Windows, Walls, Rails, and Partitions.
First use May 30, 1958.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

SN 134,655. W. H. Mase Company, Peru, Ill. Filed Dec. 26, 1961.

SPLIT-LESS

For Nails.
First use Dec. 7, 1961.

SN 137,625. Grinnell Corporation, Providence, R.I. Filed Feb. 9, 1962.

G

Owner of Reg. Nos. 97,327, 243,479, and 243,955.
For Pipe Fittings.
First use at least as early as Jan. 19, 1962.

SN 138,279. Buffalo Eclipse Corporation, Buffalo, N.Y. Filed Feb. 20, 1962.

PENBERTHY

Owner of Reg. No. 396,418.
For Hardware and Plumbing and Steamfitting Supplies—Namely, Valves of the Following Types: Instrument, Bleed, Gage, Drain, Try, Relief and Reducers; Also Nipples, Flanges, Shields, Gaskets, Fittings, and Tri-Cocks.
First use Sept. 14, 1961; January 1935 in a different form.

SN 145,824. Calco Products, Inc., Elkhart, Ind. Filed May 24, 1962.

PORTOMODE

For Fiber Glass Water Closet.
First use May 14, 1962.

SN 147,999. Bruner Corporation, Milwaukee, Wis. Filed June 29, 1962.

BRU-CEX

Owner of Reg. No. 527,263.
For Containers for Containing Chemicals and To Be Connected to a Water Line for Mixing the Chemicals With the Water for Treating the Same.
First use Feb. 5, 1949.

SN 149,602. Schlage Lock Company, San Francisco, Calif. Filed July 23, 1962.

SCHLAGE

Owner of Reg. Nos. 539,861, 584,610, and others.
For Escutcheon Plates.
First use November 1961.

SN 150,034. Elkay Manufacturing Company, Broadview, Ill. Filed July 30, 1962.

CUISINE CONSOLE

Owner of Reg. Nos. 726,428 and 726,429.
For Sinks.
First use Mar. 9, 1962.

SN 150,035. Elkay Manufacturing Company, Broadview, Ill. Filed July 30, 1962.

Cuisine Console

Owner of Reg. Nos. 726,428 and 726,429.
For Sinks.
First use Mar. 9, 1962.

SN 151,059. The W. L. Jenkins Company, Canton, Ohio. Filed Aug. 13, 1962.

SUPERING

For Gongs, Gong Shells, Manual Fire Alarm Systems, Crane Gongs, Trip Gongs, Locomotive Bells, Foot Gongs, Roof Gongs, Fire Gongs, and Ambulance Bells.
First use July 30, 1962.

SN 151,060. The W. L. Jenkins Company, Canton, Ohio. Filed Aug. 13, 1962.

REITONE

For Gongs, Gong Shells, Manual Fire Alarm Systems, Crane Gongs, Trip Gongs, Locomotive Bells, Foot Gongs, Roof Gongs, Fire Gongs, and Ambulance Bells.
First use July 27, 1962.

Class 14—Metals and Metal Castings and Forgings

SN 146,052. Hunter Engineering Co., Riverside, Calif. Filed June 4, 1962.

Hunter ALUMINUM

The word "Aluminum" is disclaimed apart from the mark as shown. The drawing is lined for the color green.
For Sheet Aluminum in Coils, Prepainted Aluminum Sheet, and Aluminum Rod and Bar Stock.
First use Nov. 13, 1961.

SN 152,377. Continental Steel Corporation, Kokomo, Ind. Filed Sept. 4, 1962.

ECONO-FLEX

Owner of Reg. Nos. 642,794 and 721,227.
For Spring Wire.
First use Aug. 1, 1962.

SN 152,546. Metallgesellschaft Aktiengesellschaft, Frankfurt am Main, Germany. Filed Sept. 5, 1962.

VL 55

For Prealloy for the Production of Cast Iron With Spheroidal Graphite.
First use Jan. 17, 1959; in commerce Jan. 17, 1959.

Class 15—Oils and Greases

SN 126,812. Stewart-Warner Corporation, Chicago, Ill. Filed Aug. 28, 1961.

AOK

For Lubricants for Wheel Bearings.
First use Aug. 2, 1961.
Subj. to Intf. with SN 133,610 and SN 133,611.

SN 133,611. Pyroil Company, Inc., d.b.a. Master Specialty Company, La Crosse, Wis. Filed Dec. 7, 1961.

A.O.K.

For Starting Fluid for Internal Combustion Engines.
First use Aug. 15, 1961.
Subj. to Intf. with SN 126,812.

SN 143,498. The Alben Daniel Chemical Corporation, Washington, D.C. Filed May 1, 1962.

MICHELDYNE

For Fuel Oil Additive and Sludge Eliminator.
First use June 28, 1960.

SN 147,313. Rockwell Manufacturing Company, Pittsburgh, Pa. Filed June 20, 1962.

ROCKWELL

Owner of Reg. Nos. 553,232, 685,401, and others.
For Valve Lubricating Greases.
First use Dec. 13, 1945.

Class 17—Tobacco Products

SN 118,109. W. H. Snyder and Sons, Incorporated, Windsor, Pa. Filed Apr. 18, 1961.



No claim is made to the word "Palmas" except in combination with the mark as shown. Owner of Reg. No. 430,695.
For Cigars.
First use Mar. 21, 1961.

SN 140,971. Philip Morris Incorporated, New York, N.Y. Filed Mar. 28, 1962.

BEAUMONT

For Cigarettes.
First use Mar. 19, 1962.

SN 143,268. Regina Cigar Company, Inc., Philadelphia, Pa. Filed Apr. 27, 1962.

Topic

For Cigars.
First use May 1, 1916.

SN 150,678. Cope & Lloyd (Overseas) Limited, London, England. Filed Aug. 7, 1962.

ARIEL

Owner of British Reg. No. 11,841, dated Apr. 28, 1877.
For Cigarettes, Smoking Tobacco, Cigars, and Snuff.

SN 154,608. Liggett & Myers Tobacco Company, New York, N.Y. Filed Oct. 5, 1962.

CHESTER

Owner of Reg. Nos. 128,430, 216,263, and 695,189.
For Cigarettes.
First use Oct. 1, 1962.

SN 154,729. Lane Limited, New York, N.Y. Filed Oct. 8, 1962.

THREE MONKS

For Smoking Tobacco.
First use July 1962.

SN 156,779. The Universal Tobacco Company Limited, London, England. Filed Nov. 6, 1962.

TRIDENT

Owner of British Reg. No. 831,062, dated Feb. 20, 1962.
For Cigarettes.

SN 158,566. R. J. Reynolds Tobacco Company, Winston-Salem, N.C. Filed Dec. 5, 1962.

DANBURY

For Cigarettes.
First use Nov. 21, 1962.

Class 18—Medicines and Pharmaceutical Preparations

SN 146,596. The Dow Chemical Company, Midland, Mich. Filed June 11, 1962.

CANEX

For Preparation Used in the Treatment of Mange in Animals.
First use Mar. 30, 1936.

SN 155,426. Merck & Co. Inc., Rahway, N.J. Filed Oct. 18, 1962.

PENSTREP

The drawing is lined for blue but the mark is not limited to this color. Owner of Reg. No. 556,416.
For Antibiotic Preparation for Veterinary Use.
First use Sept. 17, 1962.

SN 155,457. Vitamix Pharmaceuticals, Inc., Philadelphia, Pa. Filed Oct. 18, 1962.

TROLPAYN

For Analgesic Spray for Relief of Muscular Aches and Pains.
First use Sept. 19, 1962.

SN 155,726. Lakeside Laboratories, Inc., Milwaukee, Wis. Filed Oct. 23, 1962.

ISATASE

For Laxative Medication.
First use July 23, 1962.

SN 155,764. The Wellcome Foundation, Ltd., London, England. Filed Oct. 23, 1962.

FEVOKINE

Owner of British Reg. No. 828,464, dated Dec. 11, 1961.
For Pharmaceutical Preparations and Substances Used in the Prevention and Treatment of Malaria.

SN 155,921. Husky Laboratory, Inc., Pullman, Wash. Filed Oct. 25, 1962.



For Vaccines and Biologicals for Animals.
First use July 15, 1960.

SN 156,257. American Cyanamid Company, Wayne, N.J. Filed Oct. 31, 1962.

RHULITOL

Owner of Reg. No. 400,665.
For Medicinal Preparation for the Treatment of Poison Ivy.
First use Oct. 6, 1942.

SN 157,400. Philips Roxane, Inc., New York, N.Y. Filed Nov. 16, 1962.

ACUTUSS-AS

For Expectorants in Tablet Form.
First use Aug. 31, 1962.

Class 19—Vehicles

SN 119,199. Flote-Aire Marine Corporation, Middlebury, Ind. Filed May 3, 1961.

KITTY KAT

For Boats.
First use August 1960.

SN 121,831. Keystone Railway Equipment Co., Chicago, Ill. Filed June 12, 1961.



The mark is lined for red, but no limitation as to the use of any specific color is intended.
For Railroad Hopper Car Door Frames, Hopper Car Door Locks, Covered Hopper Car Door Outlets, Railroad Freight Car Shock Control Units, and Freight Car Strap Anchors.
First use in May 1956.

SN 133,355. Arlo Industries, Inc., Mount Vernon, N.Y. Filed Dec. 5, 1961.

ATLAS

For Hoists Alone, for Assembly on Motor Trucks; and Telescoping Hoists Assembled on Motor Trucks as a Unit.
First use Oct. 3, 1961.

SN 133,719. Tularcloft, Inc., Tulare, Calif. Filed Dec. 8, 1961.

Tularcloft

For Safety Belts for Use in Vehicles.
First use Apr. 20, 1956.

SN 137,670. Sud-Aviation Societe National de Constructions Aeronautiques, Paris, France. Filed Feb. 9, 1962.

HORIZON

Priority claimed under Sec. 44(d) on French Reg. No. 500,262, dated Nov. 21, 1961 (Seine); Natl. Inst. No. 174,333.
For Air and Sea Vehicles, Apparatus and Devices—Namely, Aircraft and Airplanes, Especially Jet-Propelled Aircraft, Rotarywing Aircraft, Rotorcraft, Helicopters, Autogiros, Seaplanes and Flying Boats; Missiles; Boats, Especially Hydroplane Boats; Ships, Vessels, and Other Watercraft.

SN 141,244. Bilt-Rite Baby Carriage Co., Inc., Brooklyn, N.Y. Filed Apr. 2, 1962.



Owner of Reg. Nos. 230,702, 707,752, and others.
For Baby Carriages.
First use Nov. 9, 1961.

SN 152,155. Rembrandt Mobile Homes, Inc., Chambersburg, Pa. Filed Aug. 29, 1962.

REMBRANDT

For Mobile Homes and Travel Trailers.
First use on or about June 17, 1958.

SN 153,436. Union Oil Company of California, Los Angeles, Calif. Filed Sept. 18, 1962.

76

For Safety Seat Belts; Hydraulic Brake Repair Parts—Namely, Wheel Cylinder Kits, Master Cylinder Kits, Return Springs, and Bonded Brake Shoes.
First use May 23, 1962.

SN 154,833. Craig Systems, Inc., Lawrence, Mass. Filed Oct. 2, 1962.

GOAT

For General Utility Trailers.
First use July 18, 1961.

SN 158,585. Vander Wilt Manufacturing Company, Hospers, Iowa. Filed Dec. 5, 1962.

PERM-A-JUST

For Automatic Brake Adjuster.
First use July 21, 1962.

SN 158,781. Bonham Corporation, Provo, Utah. Filed Dec. 10, 1962.

GOTE

Owner of Reg. No. 693,755.
For Motor Scooters.
First use Sept. 8, 1958.

SN 159,190. Armstrong Hydraulics, Inc., Chicago, Ill. Filed Dec. 17, 1962.

LOAD-JUSTERS

For Shock Absorbers for Vehicles and Parts Thereof.
First use May 1962.

SN 159,579. Grand Specialties Company, Chicago, Ill. Filed Dec. 21, 1962.

JIFF-LIFT CADDY

For Hand Trucks.
First use Oct. 23, 1961.

SN 159,605. Pioneer Aerodynamic Systems, Inc., Manchester, Conn. Filed Dec. 21, 1962.

COMMANDER

For Aviation Equipment—Namely, Parachutes, Parachute Packs, Parachute Harnesses, Pilot Chutes, and Parts of All Such Equipment.
First use Dec. 4, 1962.

SN 159,606. Pioneer Aerodynamic Systems, Inc., Manchester, Conn. Filed Dec. 21, 1962.

PARA-COMMANDER

For Aviation Equipment—Namely, Parachutes, Parachute Packs, Parachute Harnesses, Pilot Chutes, and Parts of All Such Equipment.
First use Dec. 4, 1962.

Class 20 — Linoleum and Oiled Cloth

SN 158,127. Armstrong Cork Company, Lancaster, Pa. Filed Nov. 29, 1962.

SABRINA

For Plastic Tile.
First use Nov. 21, 1962.

Class 21 — Electrical Apparatus, Machines, and Supplies

SN 131,640. Acromag, Incorporated, Southfield, Mich. Filed Nov. 9, 1961.

ACRO-RELAY

Owner of Reg. Nos. 670,859 and 706,251.
For Multistage Magnetic Amplifier, Solid State Relay Circuit.
First use Mar. 13, 1961.

SN 132,698. Minneapolis-Honeywell Regulator Company, Minneapolis, Minn. Filed Nov. 24, 1961.

RANDOMATIC

For Control Panels Adapted for Use on Multi-Stage Furnaces.
First use at least as early as March 1961.

SN 135,865. The Kerite Company, New York, N.Y. Filed Jan. 8, 1962.

PERMASHIELD

For Insulated Wire and Cable.
First use Dec. 22, 1961.

SN 135,859. Process Heating Company, Seattle, Wash. Filed Jan. 15, 1962.

FLEX-HEAT

For Flexible Electric Resistance Heater in Cable Form.
First use in or about June 1961.

SN 138,827. A. C. Weber & Co. Inc., Chicago, Ill. Filed Feb. 28, 1962.

Speed-O-Trim

Owner of Reg. No. 620,773.
For Electric Scissors.
First use Dec. 27, 1961.

SN 143,267. Rambusch Decorating Company, Inc., New York, N.Y. Filed Apr. 27, 1962.

SHOVELITE

For Lighting Fixtures.
First use on or about Oct. 15, 1961.

SN 144,032. Robert N. Youger, d.b.a. E-Z-Hook Test Products, Covington, Ky. Filed May 7, 1962.

E-Z-HOOK

For Electrical Test Connectors, Clips, Adapters, and Probes.
First use June 30, 1954.

SN 144,425. The Tann Corporation, Detroit, Mich. Filed May 11, 1962.



The dark, jagged line matter in the accompanying drawing is for contrast or background purposes only, and is not intended to represent any particular shape or configuration.
For Electric Switches.
First use Apr. 11, 1962.

SN 144,775. Square D Company, Park Ridge, Ill. Filed May 16, 1962.

NOR/matic

For Static Electrical Control Systems for Performing Logic Functions To Control Resistance Welding Machines.
First use Feb. 20, 1962.

SN 145,024. The Associated Merchandising Corporation, New York, N.Y. Filed May 21, 1962.

AMC

Owner of Reg. No. 518,974.
For Lamps.
First use Mar. 5, 1962.

SN 145,155. The Pyle-National Company, Chicago, Ill. Filed May 21, 1962.

PARKMASTER

For Electrical Outdoor Lighting Fixtures and Parts Thereof.
First use Mar. 1, 1962.

SN 147,174. AEG-Elotherm G.m.b.H., Remscheid-Hasten, Germany. Filed June 19, 1962.

ELIRATOR

Owner of German Reg. No. 736,741, dated Jan. 4, 1962.
For Generators and Spark Erosion Machines and Parts Thereof.

SN 147,436. Brunswick Corporation, Chicago, Ill. Filed June 22, 1962.



For Ball Polishing Machines.
First use Feb. 23, 1960.

SN 148,112. Waukesha Motor Company, Waukesha, Wis. Filed June 29, 1962.

WAUKESHA
MOTOR CO

The drawing is lined for red. The term "Motor Co." is disclaimed apart from the mark as shown. Owner of Reg. Nos. 218,996, 640,005, and others.
For Engine Generator Units and Engine Alternator Units and Parts Thereof, and Engine Power Control Units Including Electric Switches for Use in Conjunction With Internal Combustion Engines To Make the Operation Automatic.
First use May 25, 1962.

SN 149,101. Lowell Manufacturing Company, St. Louis, Mo. Filed July 16, 1962.

MUSIC Flame

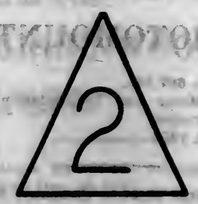
For Combination Loud Speaker and Gas Light Units.
First use May 4, 1962.

SN 149,423. Terra International Co., Ltd., New York, N.Y. Filed July 19, 1962.



For Batteries, Flashlights, and Lanterns.
First use February 1958 on batteries.

SN 150,112. Sprague Electric Company, North Adams, Mass. Filed July 30, 1962.



Owner of Reg. No. 509,806.
For Current Impedance Devices.
First use July 16, 1962.

SN 150,533. The Emerson Electric Manufacturing Company, St. Louis County, Mo., assignee of Day-Brite Lighting, Inc., St. Louis, Mo. Filed Aug. 6, 1962.

HOLIDAY

For Commercial and Industrial Lighting Fixtures.
First use Sept. 11, 1956.

SN 151,216. Elasco, Incorporated, Roxbury, Mass. Filed Aug. 15, 1962.



The mark comprises in a special design the small letter "e" overlapping the small letter "l".
For Power Supplies, Transformers, A.C. Regulators, D.C. Converters, Inductors, Reactors, Amplifiers, Components for Analog Computers, Transducers and Apparatus for Measuring Temperature, Voltage, and Resistance.
First use Apr. 18, 1960.

SN 151,850. Toledo Scale Corporation, Toledo, Ohio. Filed Aug. 24, 1962.

CONTIN-U-MATIC

For Commercial Dishwashing Systems Including Prescrap, Prewash, Wash and Rinse Sections and Auxiliary Equipment Such as Cabinets, Tanks, Doors, Conveyors, Racks, Waste Disposers, Motors, Pumps, Piping, Water Heaters, Valves, Spray Heads, and Electrical Controls.
First use May 21, 1962.

SN 153,115. Precision Specialties, Inc., Pitman, N.J. Filed Sept. 13, 1962.

DRAGSPARK

For Transistor Ignition System.
First use Aug. 10, 1962.

SN 153,590. Norbatrol Electronics Corporation, Pittsburgh, Pa. Filed Sept. 20, 1962.

NORBATROL

For Amplidynes, Bistable Amplifiers, and Uni-Directional Output Linear Power Controllers.
First use May 1960.

SN 157,202. The Emerson Electric Manufacturing Company, Los Angeles, Calif. Filed Nov. 14, 1962.

MOTOMOUNT

Owner of Reg. No. 667,541.
For Electrical Motor and Transmission Units Equipped With a Mounting Bracket.
First use June 14, 1957.

SN 157,614. General Electric Company, Schenectady, N.Y. Filed Nov. 20, 1962.

TRI 55 CLAD INTERNATIONAL

Owner of Reg. No. 387,225.
For Dynamoelectric Machines—Namely, Motors.
First use July 11, 1962.

SN 157,617. Sam S. Goldstein Industries, Inc., New York, N.Y. Filed Nov. 20, 1962.

AMERICANA STAR

For Electrically Operated Coffeemakers, Broilers, Toasters, and Electric Irons.
First use Sept. 30, 1962.

SN 157,629. Litton Systems, Inc., Beverly Hills, Calif. Filed Nov. 20, 1962.

WESTAR

Owner of Reg. No. 429,175.
For Radio Receivers and Television Receivers.
First use on or about Nov. 15, 1961.

SN 158,488. John R. Wiegand, d.b.a. Wiegand Mfg. Co., Valley Stream, N.Y. Filed Dec. 4, 1962.

ELECTRONIC SERVANT

For Interceptor Transformers for Opening Garage Doors.
First use October 1955.

SN 158,755. Wells Television, Inc., New York, N.Y. Filed Dec. 7, 1962.

WELLSTAR

For Remote Control Units for Television and Wireless Audio.
First use Nov. 1, 1962.

SN 159,064. Hawley Products Company, St. Charles, Ill. Filed Dec. 13, 1962.

KURVABOLIC

For Loudspeaker Acoustic Diaphragm.
First use Sept. 18, 1962.

SN 159,112. Parisian Novelty Company, Chicago, Ill. Filed Dec. 13, 1962.

FULL FORCE

For Storage Batteries.
First use Nov. 20, 1962.
Subj. to Intf. with SN 161,494.

SN 159,181. Yardney Electric Corporation, New York, N.Y. Filed Dec. 14, 1962.

PYGMY SEACEL

For Electric Batteries, Accessories and Parts Thereof.
First use Sept. 10, 1962.

SN 159,241. Interstate Engineering Corporation, Anaheim, Calif. Filed Dec. 17, 1962.

ALWAYS BEAUTY CLEAN

The drawing is lined to indicate the color red.
For Power Brush Attachment for Vacuum Cleaners.
First use Mar. 30, 1962.

SN 161,494. General Battery and Ceramic Corp., Reading, Pa. Filed Jan. 28, 1963.

FULL FORCE

For Automobile Batteries.
First use Dec. 11, 1962.
Subj. to Intf. with SN 159,112.

Class 22—Games, Toys, and Sporting Goods

SN 141,245. Bilt-Rite Baby Carriage Co., Inc., Brooklyn, N.Y. Filed Apr. 2, 1962.

BILT-RITE

Owner of Reg. Nos. 230,702, 707,752, and others.
For Doll Carriages.
First use Oct. 18, 1961.

SN 146,523. Styro Toy Corporation, McAllen, Tex. Filed June 8, 1962.

STYROBIRD

For Kite.
First use Apr. 6, 1962.

SN 146,670. Seneca Tackle Co., Inc., New York, N.Y. Filed June 11, 1962.

TWIST-MASTER

For Fish Lures.
First use Nov. 6, 1957.

SN 146,966. Horace Beaton, Phoenix, Ariz. Filed June 15, 1962.

BEN SOAKER

The name "Ben Soaker" is fanciful and is not the name of any living individual.
For Equipment Sold as a Unit for Playing a Card Game.
First use Mar. 27, 1962.

SN 147,437. Brunswick Corporation, Chicago, Ill. Filed June 22, 1962.

Owner of Reg. Nos. 405,749 and 716,072.
For Bowling Score Projecting Apparatus, Bowling Foul Detectors and Indicators, Bowling Lane Masking Units, Ball Storage Racks, and Ball Returns.
First use June 27, 1959.

SN 155,902. The Emporium Capwell Company, San Francisco, Calif. Filed Oct. 25, 1962.

For Archery Equipment—Namely, Bows, Arrows, and Quivers; Baby Exercisers; Baseballs; Baseball Bats; Footballs; Bowling Balls; Bowling Ball Bags; Bowlers' Hand Chalk; Boxing Gloves; Children's Scooters and Sleds; Dice; Dolls, Doll Clothes, and Doll Carriages; Educational Toys; Fishing Equipment—Namely, Fishing Creels, Fish Eggs Used as Bait, Fishing Lines, Fishing Reels, Fishing Rods, Fishing Floats, Plastic Self-Adjusting Casting Floats, Fish Hooks, Fish Net Leads, and Lead Sinkers for Fishing; Game Nets; Golf Bags, Golf Balls, Golf Clubs, and Golf Club Head Covers; Inflatable Life Rafts; Sleeping Bags for Camping; Paper Pushout Figures for Making Dolls or Animal Toys; Table Tennis Racquets, Balls, and Net; Skis; Snowshoes; Ice and Roller Skates; Toy Children's Christmas Stockings; Tennis Racquets and Tennis Balls; Toy Motor Boats, Wagons, and Automobiles; Toy Crayon Stencil Sets; Toy Drawing Equipment; Toy Pistols; Toy Surgical Instruments; Toy Tools and Toy Tool Chests; Toy Embroidery Sets; Toy Whistles; and Velocipedes.
First use Sept. 19, 1962.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

SN 106,348. Service Tool Die & Mfg. Co., Chicago, Ill. Filed Oct. 13, 1960.

For Special Design Power Driven Precision Cutting and Milling Machines, Special Design Tools and Dies and Holding and Shaping Fixtures for Cutting, Machining and Shaping of Metal Parts, and Special Design Tools Used for Checking, Determining and Maintaining Accuracy in Size and Shape of Metal Parts.
First use Oct. 7, 1960.

SN 129,145. Samuel M. Langston Co., Inc., Camden, N.J., assignee of Greenwood Engineering Company, Inc., Baltimore, Md. Filed Oct. 3, 1961.

GREENWOOD

For Corrugated Box Machinery.
First use at least June 1962.

SN 134,782. Atlanta Equipment Manufacturing Company, Atlanta, Ga. Filed Dec. 29, 1961.

PALLET MULE

The term "Pallet Mule" is disclaimed apart from the mark as shown.
For Pallet Lift Trucks.
First use on or about Dec. 4, 1961.

SN 136,760. The Grover Company, Detroit, Mich. Filed Jan. 29, 1962.

BRUSHOMATIC

For Pneumatic Dispatch Carrier Systems.
First use on or about Oct. 15, 1960.

SN 136,761. The Grover Company, Detroit, Mich. Filed Jan. 29, 1962.

MAGNEMATIC

For Pneumatic Dispatch Carrier Systems.
First use on or about Oct. 30, 1956.

SN 136,762. The Grover Company, Detroit, Mich. Filed Jan. 29, 1962.

DIALAMATIC

For Pneumatic Dispatch Carrier Systems.
First use on or about June 15, 1957.

SN 136,782. Lingk Water Conditioning Equipment, Inc., Libertyville, Ill. Filed Jan. 29, 1962.

LINGK

THE LINGK TO MODERN LIVING
INTEGRITY QUALITY SERVICE

The terms "Integrity," "Quality," and "Service," are hereby disclaimed apart from the composite mark as shown on the drawing.
For Water Softening Tank Units and Parts Thereof.
First use July 1, 1959.

SN 138,280. Buffalo Eclipse Corporation, Buffalo, N.Y. Filed Feb. 20, 1962.

PENBERTHY

Owner of Reg. Nos. 155,506 and 395,572.
For Machinery and Parts Thereof—Namely, Centrifugal, Rotary, Piston and Vane Pumps of the Sump, Water, Sewage, and Hydraulic Type; Jet Pumps of the Ejector, Eductor, Syphon, Injector, Exhauster, Cellar Drainer, and Aspirator Type; Fluid Heaters and Fluid Mixers.
First use Sept. 14, 1961; July 1, 1892, in a different form.

SN 138,897. Sunbeam Corporation, Chicago, Ill. Filed Mar. 1, 1962.

ACCENT

For Electric Shavers and Electric Floor Cleaning, Polishing and Conditioning Machines, Rug Scrubbing Machines and Parts Therefor.
First use Nov. 8, 1961, on electric floor cleaning, polishing, and conditioning machines.

SN 140,635. Canada Stamp and Stencil Company Limited, d.b.a. Vueline Marking Products, Toronto, Ontario, Canada. Filed Mar. 26, 1962.

VUELINE

Priority claimed under Sec. 44(d) on Canadian application filed Feb. 24, 1962; Reg. No. 129,304, dated Dec. 28, 1962.
For Stationery—Namely, Rubber Stamps and Stands Therefor.

SN 142,399. American Saw & Mfg. Company, Springfield, Mass. Filed Apr. 17, 1962.

SUPER-CUT

For Files, Rasps, Reamers, and Riffers.
First use Mar. 1, 1961.

SN 143,075. J. Wiss & Sons Co., Newark, N.J. Filed Apr. 25, 1962.

J. W. & S.

For Shears, Snips, Scissors, Trimmers, and Clippers and Garden Shears.
First use in or about 1940.

SN 144,895. Gottlieb Theodor Stoll, d.b.a. Festo-Maschinenfabrik, Esslingen am Neckar, Germany. Filed Apr. 17, 1962.

FESTO

For Machines and Parts Therefor—Namely, Stationary and Portable Woodworking Machines—Namely, Saws, Planers, Sanders and Shapers, Clamping Devices, Machine Feeding Devices and Controls, Machine Tools Operated Mechanically, Electrically, Hydraulically, and Pneumatically.
First use 1937; in commerce 1946.

SN 144,919. Anderson Corporation, Worcester, Mass. Filed May 18, 1962.

For Power-Driven Wire Brushes and Adaptors for Use Therewith, and Hole Saw.
First use Dec. 1, 1961.

SN 145,445. Cobe Sales, Inc., d.b.a. Van Gard, Kearny, N.J. Filed May 25, 1962.

VAN GARD

For Drills, Sanders, Jig Saws, and Circular Saws.
First use on or about Feb. 1, 1962.

SN 148,069. C. O. Oberg & Co:s Aktiebolag, Eskilstuna, Sweden. Filed June 29, 1962.

WASA

Owner of Swedish Reg. No. 102,708, dated May 11, 1962; and U.S. Reg. No. 602,320.
For Files and Rasps of All Types, Including Rotary Files.

SN 148,113. Waukesha Motor Company, Waukesha, Wis. Filed June 29, 1962.

WAUKESHA MOTOR CO

The drawing is lined for red. The term "Motor Co." is disclaimed apart from the mark as shown. Owner of Reg. Nos. 218,996, 640,005, and others.
For Internal Combustion Engines and Parts Thereof, Fuel Supply Systems Consisting of Fuel Cylinders, Automatic Check Valves for Said Cylinders, Fuel Conduits and Manifolds, Fuel Gauges, Automatic and Manual Fuel Shut-Off Valves, Excess Flow Valves, and Low Pressure Regulators.
First use May 29, 1962.

SN 148,660. The H. C. Shaw Company, Stockton, Calif. Filed July 9, 1962.

SHAW-LINE

For Agricultural Implements—Namely, Tractor A-Frames, Border Builders, Tractor Tool Bar Clamps, Cultivator Shanks, Disc Harrows, Disc Hillers, Ditchers, Dusters, Tool Bar Gauge Wheels, Tractor Mounted Fork Lifts, Furrowers, Furrower-Blockers, Harrows, Harvesting Equipment, Tractor Hitches, Mulchers, Pallet Lifters, Plows, Ridgers, Ridge Breakers, Scrapers, Sub-Soilers, Tool Bar Spacers, and Tractor Wheel Spacers.
First use on or about Apr. 1, 1962.

SN 148,826. Jas. H. Matthews & Co., Pittsburgh, Pa. Filed July 11, 1962.

"Duo-Life"

For Stamping and Embossing Dies.
First use May 1940.

SN 149,183. Savair Products Company, Warren, Mich. Filed July 16, 1962.

ISO-AIR

For Air Pressure Supply Systems Particularly a Unitary System Comprising an Air Compressor in Combination With Air Storage Tanks for Air-Operated Resistance Welding Guns.
First use Feb. 21, 1962.

SN 149,801. ACF Industries, Incorporated, St. Louis, Mo. Filed July 26, 1962.

RE-CARB

For Carburetor Overhaul Kits, Comprising Gaskets, Needle and Seats, Plungers, Vacuum Piston Springs, Metering Rods, and Metering Rod Jets.
First use May 11, 1960.

SN 150,584. Midwest Foil & Packaging, Inc., St. Paul, Minn. Filed Aug. 6, 1962.

WEB FORM

For Cartoning Equipment—Namely, Machines for Forming Cartons From Paperboard.
First use July 13, 1962.

SN 150,589. Mount Hope Machinery Company, Taunton, Mass. Filed Aug. 6, 1962.

Mount Hope

Owner of Reg. Nos. 510,918 and 651,169.
For Web and Sheet Handling, Guiding and Controlling Machinery and Controls—Namely, Scrays, Electrical Controls, Uncurlers, Tension Controls, Opening Equipment, Pneumatic Controls, Electronic Controls, Winders, Letoffs, Brakes and Clutches, Optical Controls, Web Viewers, Moisture Controls, Weft Stabilizers, Rolls, Rollers and Covers Therefor for Use in Association With Textile, Paper, Foil and Plastic Web Handling Machinery.
First use June 22, 1954, on scrays and electrical controls.

SN 150,704. Mask-O-Matic, Inc., Hawthorne, N.J. Filed Aug. 7, 1962.

DISPENS —O— PUNCH

For Tape Punching Assembly.
First use June 22, 1962.

SN 150,867. Goerlich's, Inc., Toledo, Ohio. Filed Aug. 9, 1962.

VALOR

For Exhaust Mufflers for Motor Vehicles.
First use Mar. 10, 1942.

SN 150,984. United States Rubber Company, New York, N.Y. Filed Aug. 10, 1962.

ROYALETTE

For Cutting Boards for Meat and the Like.
First use July 6, 1962.

SN 151,145. Marge's Mufflers, Inc., Omaha, Nebr. Filed Aug. 14, 1962.

MARGE'S

For Automobile Mufflers.
First use July 7, 1962.

SN 151,246. Midland-Ross Corporation, Cleveland, Ohio. Filed Aug. 15, 1962.

ADSERT

For Machines for Applying Sheets of Paper or Other Material to Printed Matter.
First use May 11, 1962.

SN 151,268. South Bend Lathe, Inc., South Bend, Ind. Filed Aug. 15, 1962.

Turn-nado

For Lathes.
First use July 27, 1962.

SN 152,561. Borg-Warner Corporation, Chicago, Ill. Filed Sept. 6, 1962.

DURA-FLUTE

Owner of Reg. Nos. 582,281, 685,523, and others.
For Coulter Blades, Discs for Agricultural Implements.
First use on or prior to Feb. 24, 1962.

SN 153,364. Abbey Automation Systems, Inc., Brooklyn, N.Y. Filed Sept. 18, 1962.

ABBEY-MATIC

For Electrically-Controlled Automatically Operated Work Load Conveyors.
First use February 1959.

SN 156,404. Graphite Metallizing Corporation, Yonkers, N.Y. Filed Nov. 1, 1962.

GRAPHALLAST

Owner of Reg. Nos. 265,826 and 592,959.
For Finished Low Friction, Tough, Abrasion- and Corrosion-Resistant Machine Bushings in Bearings To Be Operated Either Dry or Submerged, Especially When the Bearings Are Submerged in Salt Water, Liquors of the Paper Processing Industry, Tanning Baths, Dyes, Foodstuffs, or in Acids, Alkalies, or Solvents up to Approximately Fifty Percent Concentration.
First use Apr. 20, 1959.

SN 157,412. The Servco Company, Long Beach, Calif. Filed Nov. 16, 1962.

K-MILL

For Milling Cutters for Use in Subsurface Well Bores.
First use Oct. 23, 1962.

SN 157,890. Dymo Industries, Inc., Berkeley, Calif. Filed Nov. 26, 1962.

DYMO

Owner of Reg. Nos. 704,591 and 702,685.
For Embossing Machines for Embossing Plastics, Metals and the Like.
First use about April 1959.

SN 158,049. Blaw-Knox Company, Pittsburgh, Pa. Filed Nov. 28, 1962.

MEDART

For Machines for Straightening Bars and Tubes, Machines for Polishing Bars and Tubes, and Machines for Turning Bars and Tubes.
First use 1879.

SN 158,366. Parker Manufacturing Company, Worcester, Mass. Filed Dec. 3, 1962.

TROJAN

Owner of Reg. No. 218,687.
For Blades for Jig Saws and Saber Saws.
First use Sept. 29, 1949.

Class 24 — Laundry Appliances and Machines

SN 152,481. Wichita Precision Tool Company, Wichita, Kans. Filed Sept. 4, 1962.

ADJUSTA-FORM

Owner of Reg. No. 524,261.
For Garment Finishing Equipment for Removing Wrinkles From Fabric Garments.
First use Nov. 5, 1945.

SN 152,568. Detrex Chemical Industries, Inc., Detroit, Mich. Filed Sept. 6, 1962.

Baronet

For Dry Cleaning Machines.
First use Sept. 30, 1961.

Class 26 — Measuring and Scientific Appliances

SN 83,207. Daystrom, Incorporated (Texas corporation), Murray Hill, N.J., assignee of Daystrom, Incorporated (New Jersey corporation), Murray Hill, N.J. Filed Oct. 14, 1959.

ID-PAK

The drawing is lined for red, silver, and black.
For Constant Current Supply Unit for Use in Measuring Instruments.
First use Jan. 2, 1959.

SN 111,098. Photoptic Import Corp., New York, N.Y., assignee of P. Gossen & Co. Gesellschaft mit beschraenkter Haftung, Erlangen, Bayern, Germany. Filed Dec. 30, 1960.

GOSSEN

Owner of German Reg. Nos. 741,753 and 741,754, both dated Oct. 27, 1960.
For Articles of Photographic Equipment—Namely, Exposure Meters and Diaphragm Controls.

SN 128,338. Cooke Engineering Company, Alexandria, Va. Filed Sept. 21, 1961.

MICROTITER

For Titration Apparatus for Virological, Serological, and Immunological Laboratory and Field Use, Components Thereof, and Accessories Thereto.
First use Aug. 17, 1961.

SN 130,064. Genistron, Incorporated, Los Angeles, Calif. Filed Oct. 17, 1961.

THERMO-REF

For Thermocouple Reference.
First use Aug. 22, 1960.

SN 133,200. Automatic Marker Photo Corp., New York, N.Y. Filed Dec. 4, 1961.

MARKER MAKER

For Photographic Type Duplicating Machines.
First use in January 1960.

SN 134,959. Electromation Co., Venice, Calif. Filed Jan. 2, 1962.

SKIL-SCORER

For Device for Determining and Recording the Proficiency of Operators of Motor Vehicles.
First use Dec. 6, 1961.

SN 135,230. Robertson Photo-Mechanix, Inc., Chicago, Ill. Filed Jan. 4, 1962.

SPRITE

For Cameras and Parts Thereof.
First use Dec. 12, 1961.

SN 136,245. Chadwick-Helmuth Company, Monrovia, Calif. Filed Jan. 23, 1962.

SWEEP-SYNC

For Pulse Synchronizers.
First use Sept. 16, 1955.

SN 136,660. Jenaer Glaswerk Schott & Gen., Mainz, Germany. Filed Jan. 26, 1962.

SCHOTT

Owner of U.S. Reg. Nos. 360,716, 360,921, and 370,164.
For Scientific, Nautical, Surveying, Navigating, Photographic, Cinematographic, Optical, Weighing, Measuring, Measuring and Recording, Indicating, Indicating and Recording, Metering, Telemetering, Signalling, Checking (Supervision) Apparatus and Instruments; Timing Devices, Calculating and Computing Apparatus and Instruments; and Physical, Chemical, Optical and Electrotechnical Apparatus—Namely, Sextants, Compasses, Telescopes, Radar, Electronic Tubes, Density Balances, Vacuum Gauges, Viscometers, Measuring Cells, Oil Diffusion Pumps, Water Distillation Apparatus, Bacterial Filters, Bubble Chambers, Tracking Cameras, Laboratory Glassware, Lenses, Mirrors, and Filters; and Indicator Lamps and Radiation Equipment of All Kinds or Parts Thereof.
First use at least 1894; in commerce at least 1894.

SN 138,281. Buffalo Eclipse Corporation, Buffalo, N.Y. Filed Feb. 20, 1962.

PENBEATHY

Owner of Reg. Nos. 152,939 and 438,003.
For Measuring and Scientific Appliances—Namely, Liquid Level Gages and Indicating Devices of the Following Types: Reflex, Transparent, Chamber and Tubular; and Accessories Therefor—Namely, Illuminators, Protectors, Heaters and Scales; Also, Flow Indicators and Meters, Liquid Level Controls, and Parts Thereof.
First use Sept. 14, 1961; July 1, 1892, in a different form.

SN 140,262. Jenaer Glaswerk Schott & Gen., Mainz, Germany. Filed Mar. 20, 1962.

JENA GLASS

No claim to the word "Glass" is made apart from the mark as shown. Owner of U.S. Reg. Nos. 360,922, 658,047, and 659,550.
For Scientific, Nautical, Surveying, Navigating, Photographic, Cinematographic, Optical, Weighing, Measuring, Measuring and Recording, Indicating, Indicating and Recording, Metering, Parts for Telemetering, Signalling, Checking (Supervision) Apparatus and Instruments; Timing Devices, Calculating and Computing Apparatus and Instruments; and Physical, Chemical, Optical and Electrotechnical Apparatus—Namely, Sextants, Compasses, Telescopes, Radar, Electronic Tubes, Density Balances, Vacuum Gauges, Viscometers, Measuring Cells, Oil Diffusion Pumps, Water Distillation Apparatus, Bacterial Filters, Bubble Chambers, Tracking Cameras, Laboratory Glassware, Lenses, Mirrors and Filters; and Indicator Lamps and Radiation Equipment of All Kinds or Parts Thereof.
First use at least 1900; in commerce at least 1900.

SN 140,651. Debs Company, Canoga Park, Calif. Filed Mar. 26, 1962.

Astra

For Sunglasses.
First use Mar. 5, 1962.

SN 140,927. Deady Chemical Company, Kansas City, Kans. Filed Mar. 28, 1962.

SOLID-TROL

For Apparatus for Monitoring and Controlling the Chemical Concentration of Circulating Liquid Heat-Transfer Media in Heating and Cooling Systems.
First use Mar. 21, 1962.

SN 141,075. Jenaer Glaswerk Schott & Gen., Mains, Germany. Filed Mar. 29, 1962.

JENA

Owner of U.S. Reg. Nos. 360,922, 658,047, and 659,550.
For Scientific, Nautical, Surveying, Navigating, Photographic, Cinematographic, Optical, Weighing, Measuring, Measuring and Recording, Indicating, Indicating and Recording, Metering, Parts for Telemetering, Signalling, Checking (Supervision) Apparatus and Instruments; Timing Devices, Calculating and Computing Apparatus and Instruments; any of the Foregoing Goods Composed of or Comprising Glass, and Physical, Chemical, Optical and Electrotechnical Apparatus—Namely, Sextants, Compasses, Telescopes, Radar, Electronic Tubes, Density Balances, Vacuum Gauges, Viscometers, Measuring Cells, Oil Diffusion Pumps, Water Distillation Apparatus, Bacterial Filters, Bubble Chambers, Tracking Cameras, Laboratory Glassware, Lenses, Mirrors and Filters; and Indicator Lamps and Radiation Equipment of All Kinds or Parts Thereof.
First use at least 1894; in commerce at least 1894.

SN 141,153. Beckman Instruments, Inc., Fullerton, Calif. Filed Mar. 30, 1962.

THERMOTRAC

For Temperature Programmer for Monitoring Temperature Changes of Gas Chromatographic Apparatus According to Predetermined Time Schedules.
First use July 1961.

SN 141,232. Value Devices Company, Dallas, Tex. Filed Mar. 30, 1962.

TOUCH-O-MATIC

For Attachment for Driving a Height Gage.
First use Oct. 27, 1961.

SN 141,728. Intertech, Inc., North Haven, Conn. Filed Apr. 6, 1962.

INTERTECH

For Radiation Detection Instruments and Including Pulse Height Analysers, Dual Scalers, and Translators.
First use Dec. 16, 1959.

SN 141,810. Burmac Electronics Co., Inc., Rockville Centre, N.Y. Filed Apr. 9, 1962.



For Pulse Modulators and Pulse Components All Used in Electronic Equipment.
First use April 1959.

SN 142,017. Clary Corporation, San Gabriel, Calif. Filed Apr. 11, 1962.

ACCOUNT-O-PUNCH

For Recording Computing Apparatus.
First use Apr. 2, 1962.

SN 142,186. Grass Instrument Company, Quincy, Mass. Filed Apr. 13, 1962.



For Electroencephalographs, pH Meters, Tissue Impedance Meters, Frequency Analysers, Charts, Recording Paper, Indicating and Recording Electro-Medical and Mechanical Instruments and Parts for Scientific and Medical Research and Diagnostic Laboratories.
First use May 25, 1961.

SN 143,812. Drexel Enterprises, Inc., Hickory, N.C. Filed May 4, 1962.



For Laboratory Appliances for the Distribution of Light, Water, Vacuum, Gases and/or Electricity.
First use Apr. 9, 1962.

SN 143,818. The Gabriel Company, Cleveland, Ohio. Filed May 4, 1962.

SAFETY ISLAND

For Devices for Testing Shock Absorbers.
First use Feb. 19, 1962.

SN 144,788. Monroe L. Wexler, d.b.a. Penn Industries, Philadelphia, Pa. Filed May 16, 1962.

FORMAGAGE

For Contour Gauges.
First use Feb. 15, 1962.

SN 145,206. N.V. Optische Industrie "De Oude Delft," Delft, Netherlands. Filed May 22, 1962.



Owner of Dutch Reg. No. 78,258, dated Sept. 1, 1942.
For Optical, Photographic, and Cinematographic Apparatus, Devices, Instruments and Articles, Particularly Lenses, Prisms, Mirrors, Reflectors, Cameras, Film Cassettes, and Projecting Devices.

SN 145,207. N.V. Optische Industrie "De Oude Delft," Delft, Netherlands. Filed May 22, 1962.



For Optical, Photographic, Cinematographic, and Electronic Equipment—Namely, Lenses, Prisms, Mirrors, Telescopes, Periscopes, Microscopes, Spectroscopes, Stereoscopes, Still and Cinematographic Cameras, Viewers and Projectors, Photofluorographic Cameras, Panoramic Cameras, Night Cameras, Aerial Cameras, Film Cassettes, Light Measuring Equipment, Camera Control Equipment, Camera Stands, Photographic Film Processing Equipment, Image Converters, Image Intensifiers, Television Equipment.
First use on or about June 15, 1953; in commerce on or about June 15, 1953.

SN 145,347. General Aniline & Film Corporation, New York, N.Y. Filed May 24, 1962.

INSTANTRACE

For Light-Sensitive Photographic Paper.
First use December 1957.

SN 145,441. Botany Industries, Inc., d.b.a. Renauld of France, Reno, Nev. Filed May 25, 1962.

GALA

For Sun Glasses.
First use in January 1962.

SN 145,586. The Ohio Thermometer Company, Springfield, Ohio. Filed May 28, 1962.



For Thermometers, Barometers, and Rain Gages.
First use Dec. 29, 1939, on thermometers.

SN 146,083. Mandrel Industries, Inc., Houston, Tex. Filed June 4, 1962.



For Photoelectric Sorting Machines, Pneumatic Separators, and Associated Racks and Casings Necessary for Use of Said Equipment.
First use Apr. 26, 1962.

SN 146,836. Minneapolis-Honeywell Regulator Company, Minneapolis, Minn. Filed June 13, 1962.

GRADEMASTER

For Control Panels for Automatically Directing the Operation of Road Construction Equipment, Including Pavers, Graders, Excavating Equipment and the Like.
First use Mar. 14, 1962.

SN 147,678. Art Craft Optical Company, Inc., Rochester, N.Y. Filed June 26, 1962.

ART FLEX

Owner of Reg. No. 271,706.
For Ophthalmic Mountings and Parts Thereof.
First use May 15, 1962.

SN 148,852. Beckman Instruments, Inc., Fullerton, Calif. Filed July 5, 1962.

HALLEFEX

For Solid State Voltage Generators Adapted for Use in Instrumentation Devices To Provide an Output Signal Which Is a Function of an Electrical Input and a Magnetic Input.
First use June 1962.

SN 151,180. Viatec (Proprietary) Limited, Plumstead, Cape Province, Republic of South Africa. Filed Aug. 14, 1962.

VIATEC

Priority claimed under Sec. 44(d) on Republic of South Africa Reg. No. 62/0473, dated Feb. 15, 1962.
For Scientific Instruments Used for the Measurement of Density and Moisture Content of Soil.
First use May 13, 1961; in commerce Nov. 29, 1961.

SN 151,258. Rexall Drug and Chemical Company, d.b.a. Tupperware, Los Angeles, Calif. Filed Aug. 15, 1962.

MIX-N-STOR

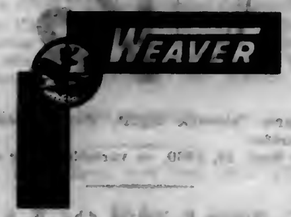
For Measuring Pitchers and Covers.
First use July 25, 1961.

SN 151,998. Einar E. Petersen, Long Beach, Calif. Filed Aug. 27, 1962.

AQUA-CAM

For Photographic Equipment—Namely, Underwater Cameras.
First use Feb. 16, 1956.

SN 153,037. William R. Weaver, d.b.a. W. R. Weaver Co., El Paso, Tex. Filed Sept. 12, 1962.



For Firearm Telescope Sights, Mounts, Lens, Caps, and Reticles Therefor.
First use Jan. 1, 1949, on sight mounts.

SN 153,038. William R. Weaver, d.b.a. W. R. Weaver Co., El Paso, Tex. Filed Sept. 12, 1962.



The word "Scope" is hereby disclaimed apart from the mark.
For Firearm Telescope Sights, Mounts, Lens, Caps, and Reticles Therefor.
First use June 15, 1947, on sights.

SN 153,041. William R. Weaver, d.b.a. W. R. Weaver, Co., El Paso, Tex. Filed Sept. 12, 1962.

WEAVER
PIVOT MOUNT

The words "Pivot Mount" are disclaimed apart from the mark.
For Firearm Telescope Sight Mounts.
First use Aug. 2, 1954.

SN 153,042. William R. Weaver, d.b.a. W. R. Weaver Co., El Paso, Tex. Filed Sept. 12, 1962.

TIP-OFF

For Firearm Telescope Sight Mounts.
First use Dec. 28, 1953.

SN 153,044. William R. Weaver, d.b.a. W. R. Weaver Co., El Paso, Tex. Filed Sept. 12, 1962.

V8

For Firearm Telescope Sights, Mounts, Lens, Caps, and Reticles Therefor.
First use Sept. 15, 1960, on variable power scopes.

SN 153,045. William R. Weaver, d.b.a. W. R. Weaver Co., El Paso, Tex. Filed Sept. 12, 1962.

V8

For Firearm Telescope Sights, Mounts, Lens, Caps, and Reticles Therefor.
First use Sept. 15, 1960, on variable power scopes.

SN 153,047. William R. Weaver, d.b.a. W. R. Weaver Co., El Paso, Tex. Filed Sept. 12, 1962.

RANGE FINDER RETICLE

The words "Range Finder Reticle" are disclaimed apart from the mark.
For Firearm Telescope Sight Reticules.
First use Oct. 15, 1947.

SN 153,378. Botany Industries, Inc., d.b.a. Renauld of France, Reno, Nev. Filed Sept. 18, 1962.

SPECTACULARS

For Sunglasses.
First use about January 1961.

SN 153,442. Agfa Aktiengesellschaft, Leverkusen-Bayerwerk, Germany. Filed Sept. 19, 1962.

VARIOMATOR

Owner of German Reg. No. 761,230, dated May 10, 1962; and U.S. Reg. No. 618,645.
For Optical, Photographic, and Film Devices, Particularly Developing, Copying, and Enlarging Apparatus.

SN 153,658. Lee Hunter, d.b.a. Hunter Engineering Company, St. Louis, Mo. Filed Sept. 21, 1962.

TUNE-A-LINE

For Wheel Aligning Apparatus.
First use July 6, 1962.

SN 154,984. Monroe Calculating Machine Company, Orange, N.J. Filed Oct. 11, 1962.

IQ-213

For Data Handling Office Machines Including Calculating Machines.
First use on or about Apr. 9, 1962.

SN 155,627. Mitchell Industries, Inc., Mineral Wells, Tex. Filed Oct. 22, 1962.



For Aircraft Guidance Systems and Specifically Aircraft Autopilots.
First use Apr. 13, 1960.

SN 155,668. Tokheim Corporation, Fort Wayne, Ind. Filed Oct. 22, 1962.

T

For Motor Fuel Measuring and Dispensing Apparatus, and Parts Thereof, Including Particularly Meters and Pumping Units Therefor.
First use Sept. 4, 1962.

SN 155,843. Justus Roe & Sons, Inc., Patchogue, N.Y. Filed Oct. 24, 1962.

COMET

For Steel Tape Measures.
First use February 1962.

SN 155,918. General Aniline & Film Corporation, New York, N.Y. Filed Oct. 25, 1962.

AQUA SET

For Underwater Cameras and Housings Therefor.
First use Aug. 23, 1962.

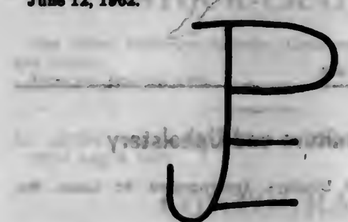
Class 27 — Horological Instruments

SN 128,035. Hamilton Watch Company, Lancaster, Pa. Filed Sept. 18, 1961.

BIGGS HAMILTON

The mark is not the name of a living individual. Owner of Reg. Nos. 203,657, 607,618, and others.
For Watches.
First use Mar. 6, 1961.

SN 146,747. Pe Jay Jewelers, Inc., New York, N.Y. Filed June 12, 1962.



For Watches and Watch Bracelets.
First use June 7, 1962.

SN 152,822. Palmer Sales Corporation, New York, N.Y. Filed Sept. 10, 1962.

Medco

For Watches.
First use Mar. 6, 1961.
Subj. to Intf. with SN 153,712.

SN 153,712. Medco, Inc., Kansas City, Mo. Filed Sept. 10, 1962.

Medco

For Watches.
First use Oct. 10, 1961.
Subj. to Intf. with SN 152,822.

Class 28 — Jewelry and Precious-Metal Ware

SN 139,250. Kurt Wayne, Inc., New York, N.Y. Filed Mar. 6, 1962.

WONDER-LOK

For Fastening Devices Sold as Parts of Complete Necklaces and Bracelets.
First use Feb. 1, 1961.

SN 139,819. Bracelets by Princess, Inc., New York, N.Y. Filed Mar. 14, 1962.



For Jewelry.
First use Feb. 15, 1962.

SN 142,454. The Robbins Company, Attleboro, Mass. Filed Apr. 17, 1962.

ROBBINS

For Industrial, Organizational, and Religious Jewelry.
First use March 1939.

SN 143,922. Beckerman & Lerner, Inc., New York, N.Y. Filed May 7, 1962.

B&L

For Precious Metal Jewelry—Namely, Finger Rings.
First use Jan. 1, 1954.

SN 147,964. Shreve, Crump and Low Company, Boston, Mass. Filed June 28, 1962.

SC&L CO

For Sterling Silver Flatware; Jewelry Composed of Sterling Silver, Gold or Platinum or Combinations and Alloys Thereof; Gold and Sterling Silver Novelties Composed of Combinations or Alloys of Silver and Gold, Such as Buckles, Key Chains, Compacts, Boxes and Containers for Jewelry and Other Articles.
First use in the year 1920 on jewelry.

SN 148,316. Frank Levy, New York, N.Y. Filed July 3, 1962.

F.L.

For Watch Cases and Bracelet-Attached Watch Cases.
First use July 5, 1952.

SN 151,493. Max Kraft, Brooklyn, N.Y. Filed Aug. 20, 1962.

G

Applicant's mark may be characterized as an oval hoop which is open at the top, or as a representation of a design bearing a similarity to the letter "G" when placed on its back.
For Ring Locks Which Are Used To Keep Two Rings Together When Worn on the Same Finger.
First use June 20, 1962.

Class 29 — Brooms, Brushes, and Dusters

SN 135,976. Horst Associates, Inc., Miami, Fla. Filed Jan. 17, 1962.

facute

For Floor Mop Blanket for Polishing Floors or Furniture.
First use Dec. 15, 1961.

SN 146,330. U.S. Mop Co., Cedar Rapids, Iowa. Filed June 6, 1962.

U.S. HOME PARTY

Applicant hereby disclaims the term "U.S." apart from the mark as shown.
For Mops and Mop Heads.
First use May 4, 1962.

SN 152,388. E Z Paintr Corporation, Milwaukee, Wis. Filed Sept. 4, 1962.

PRO-MITT

For Painter's Mitten.
First use Jan. 3, 1962.

SN 152,447. Sea-Wide Industries, Inc., Philadelphia, Pa. Filed Sept. 4, 1962.

BRUSH-EEZ

For Electrically Operated Toothbrushes.
First use Aug. 22, 1962.

SN 154,057. Pro-phy-lac-tic Brush Company, Florence, Mass. Filed Sept. 27, 1962.

DENTALUX

Owner of Reg. Nos. 57,064 and 183,147.
For Toothbrushes.
First use Sept. 7, 1962.

Class 30 — Crockery, Earthenware, and Porcelain

SN 152,808. Ben S. Loeb, Inc., New York, N.Y. Filed Sept. 10, 1962.

JOAN OF ARC

For Crockery and Earthenware—Namely, Baking and Serving Pieces, Salad Bowls, Salt and Pepper Shakers, Casseroles, and Mixing Bowls.
First use June 1959.

Class 31 — Filters and Refrigerators

SN 141,566. American Air Filter Company, Inc., Louisville, Ky. Filed Apr. 5, 1962.

ELECTRO-PAK

For Air Filters.
First use Mar. 8, 1962.

SN 149,573. Kisco Boiler & Engineering Co., St. Louis, Mo. Filed July 23, 1962.

HYDRO-SUL

For Water Conditioning Units.
First use June 15, 1962.

SN 151,056. Hummel Technical Products, Inc., New York, N.Y. Filed Aug. 13, 1962.



For Filters.
First use March 1955.

Class 32 — Furniture and Upholstery

SN 128,962. Blair Displays, Incorporated, St. Louis, Mo. Filed Oct. 2, 1961.

HALO-CEILING

For Display Counter Unit.
First use Apr. 10, 1961.

SN 139,862. Kay Manufacturing Corp., Brooklyn, N.Y. Filed Mar. 14, 1962.

SQUEAKPROOF

For Clips for Attaching Springs for Furniture.
First use Oct. 16, 1957.

SN 141,246. Bilt-Rite Baby Carriage Co., Inc., Brooklyn, N.Y. Filed Apr. 2, 1962.

BILT-RITE

Owner of Reg. Nos. 230,702, 707,752, and others.
For Children's Cribs, Youth Beds, High Chairs, Chifferobes, Dressers, Mattresses, Feeding Tables, Play Yards, and Play Pens.
First use June 15, 1961.

SN 143,190. Welsh Co., St. Louis, Mo. Filed Apr. 26, 1962.

PUN'KIN-SEAT

For Infants' Seater Adaptable for Use on a Chair, Sofa, Market Cart or Automobile.
First use Sept. 15, 1961.

SN 144,433. Cecil G. Allen, Brownsville, Tex. Filed May 14, 1962.

MERIT FRAMES

The word "Frames" is disclaimed apart from the mark as shown.
For Picture Frames.
First use Mar. 21, 1962.

SN 145,213. Rand Associates Inc., Boston, Mass. Filed May 22, 1962.

STOCK-CRAFT

For Store Fixtures—Namely, Counters, Display Stands, and Booths.
First use June 13, 1961.

SN 150,854. Contour Chair-Lounge Co., Inc., St. Louis, Mo. Filed Aug. 9, 1962.

CONTOURA

Owner of Reg. Nos. 520,737, 710,253, and others.
For Chairs.
First use April 1961.

SN 155,095. Novo Industrial Corporation, New York, N.Y. Filed Oct. 12, 1962.

STOWAWAY

For Folding High Chairs.
First use June 1, 1962.

SN 155,896. Drexel Enterprises, Inc., Drexel, N.C. Filed Oct. 25, 1962.

DESIGN FOR LIVING

For Bedroom, Dining Room, Living Room, and Occasional Furniture.
First use Oct. 5, 1962.

SN 155,903. The Emporium Capwell Company, San Francisco, Calif. Filed Oct. 25, 1962.



For Venetian Blinds, Book Ends, Cabinets, Furniture Cushions, Cedar Chests, Convertible Chair-Beds, Chairs, Slip Covers, Couches, Desks, Display Stands, Display Racks, Display and Serving Counters, Sets of Shelves and Shelving Units, Filing Cases, Picture or Mirror Frames, Gliders (Lawn or Porch), Hammocks Equipped With Supporting Frames, Mattresses, Mirrors, Vanity Pocket Mirrors, Pillows, Has-socks, Play Pens, Rubber Cushions, Divisional Folding Screens for Domestic Use, Window Shades, Bed and Furniture Springs, Sofas, Tables, Venetian Blind Assemblies, Beds, and Lounges.
First use Sept. 19, 1962.

SN 155,958. Aetna Steel Products Corporation, New York, N.Y. Filed Oct. 26, 1962.

AETNASTAK

Owner of Reg. No. 668,307.
For Library Steel Shelving Units.
First use Oct. 15, 1962.

SN 157,181. Woodcarv, Inc., Cincinnati, Ohio. Filed Nov. 13, 1962.

WoodCarv

For Kitchen Cabinets.
First use Oct. 9, 1962.

Class 33 — Glassware

SN 163,489. Pittsburgh Plate Glass Company, Pittsburgh, Pa. Filed Feb. 26, 1963.

SOLARBRONZE

Owner of Reg. No. 657,783.
For Plate Glass.
First use Sept. 21, 1962.

Class 34 — Heating, Lighting, and Ventilating Apparatus

SN 132,904. Dayton Electric Manufacturing Company, Chicago, Ill. Filed Nov. 28, 1961.

DAYTON

Owner of Reg. Nos. 551,799, 553,605, and 565,625.
For Fume Exhausters; Fan Blades; Fan Shutters; Gas Heaters Including Unit, Console and Wall Heaters; Gas and Electric Water Heaters; and Dehumidifiers.
First use 1939 on fan shutters.

SN 136,412. John Wood Company, Chicago, Ill. Filed Jan. 23, 1962.

SANI DUR

For Water Heaters.
First use Dec. 20, 1961.

SN 136,413. John Wood Company, Chicago, Ill. Filed Jan. 25, 1962.

SANI SUR

For Water Heaters.
First use Dec. 20, 1961.

SN 136,854. Wabash Power Equipment Co., Chicago, Ill. Filed Jan. 29, 1962.

WABASH POWER

For Industrial Boilers.
First use Dec. 30, 1961.

SN 143,704. Worthington Corporation, Harrison, N.J. Filed May 2, 1962.

ENDURAL

For Gas-Fired Warm Air Furnaces.
First use Apr. 13, 1962.

SN 144,211. Vsevold Michael Fredericksz, Houghton, Johannesburg, Republic of South Africa. Filed May 9, 1962.

TIN-A-LUM

Owner of South African Reg. No. 2303/60, dated June 25, 1960.
For Solders.

SN 144,688. Chemetron Corporation, Chicago, Ill. Filed May 16, 1962.

A R/C

No claim is made for exclusive use of the word "Arc." The drawing is lined for the color red.
For Welding Rods.
First use May 10, 1961.

SN 144,920. Arcos Corporation, Philadelphia, Pa. Filed May 18, 1962.

HI-VIS

For Arc Welding Electrodes.
First use Jan. 23, 1963

SN 145,437. Arvin Industries, Inc., Columbus, Ind. Filed May 25, 1962.

Arvin

Owner of Reg. Nos. 609,529, 514,371, and others.
For Barbecue Grills and Braziers.
First use Dec. 29, 1961.

SN 146,116. Specialloy, Inc., Chicago, Ill. Filed June 4, 1962.

CU-VERLAY

For Flux Protective Cover for Molten Metallic Bath.
First use May 2, 1962.

SN 147,173. AEG-Elotherm G.m.b.H., Remscheid-Hasten, Germany. Filed June 19, 1962.

ELIRATOR

Owner of German Reg. No. 756,741, dated Jan. 4, 1962.
For Ovens for the Processing of Work Pieces by Electrical Erosion, and Parts Thereof.

SN 149,410. Ruud Manufacturing Company, Kalamazoo, Mich. Filed July 19, 1962.

VARIMATIC

For Gas Fired Water Heaters.
First use June 1, 1962.

SN 149,562. General Hydronics Corporation, Oakland, Calif. Filed July 23, 1962.

HYDROSHADE

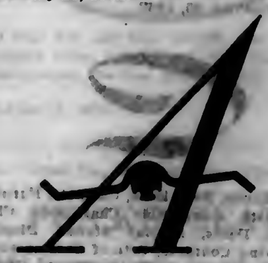
For Heat Exchanger—Namely, a Baffle With a Transfer Panel Adapted To Fit Within a Wall Opening.
First use Nov. 20, 1961.

SN 149,738. Goodwin, Dannenbaum, Littman & Wingfield Incorporated, Houston, Tex. Filed July 25, 1962.

MISTER SMOKESTACK

For Portable Barbecue Apparatus.
First use Apr. 20, 1962.

SN 149,752. Arrow Louver and Damper Corp., Brooklyn, N.Y. Filed July 25, 1962.



For Automatic Dampers.
First use June 27, 1962.

SN 149,923. Dover Corporation, Louisville, Ky. Filed July 27, 1962.

NEW-VENT

For Vented Heaters and Furnaces—Namely, Space Heaters, Recessed Heaters, Unit Heaters, Wall Furnaces, and Duct Furnaces.
First use Apr. 16, 1962.

SN 149,974. Walter Vallett Company, Detroit, Mich. Filed July 27, 1962.

HI-FIRE

For Water Heaters.
First use June 21, 1962.

SN 150,186. Geo. D. Roper Corporation, Kankakee, Ill. Filed July 31, 1962.

TEM-TROL

Owner of Reg. No. 645,111.
For Thermostatically Controlled Burners for Cook Stoves.
First use May 5, 1955.

SN 150,467. The Tappan Company, Mansfield, Ohio. Filed Aug. 3, 1962.

FABULOUS 400

For Cooking Apparatus—Namely, Ranges Heated by Gas or Electricity and Parts Thereof.
First use May 14, 1958.

Class 35—Belting, Hose, Machinery Packing, and Nonmetallic Tires

SN 136,473. Mid-States Distributing Company, Inc., St. Paul, Minn. Filed Jan. 24, 1962.

DURALON

Owner of Reg. No. 700,184.
For V-Belts and Fluid Transmission Hose.
First use Feb. 25, 1960, on belts.

SN 139,136. The Polymer Corporation, Reading, Pa. Filed Mar. 5, 1962.

BLUE-LINE

For Synthetic Resin Tubing and Hose, Particularly Adapted for Refrigerant Use and Other Industrial Fluid Use.
First use Jan. 9, 1962.

SN 146,444. The Albany Felt Company, Albany, N.Y. Filed June 8, 1962.

DURA-DRY

Owner of Reg. No. 639,105.
For Needled Corrugator Belts of Fiber Construction, Used on Corrugator Machines To Press Adhesive-Covered Sheets of Paperboard Together Until the Adhesive Dries, and To Dissipate the Moisture Evaporated Therefrom.
First use Feb. 20, 1962.

SN 154,035. Johns-Manville Corporation, New York, N.Y. Filed Sept. 27, 1962.

SINBAD

For Packings.
First use at least on or about Jan. 16, 1962.

SN 154,178. Thor Power Tool Company, Aurora, Ill. Filed Sept. 28, 1962.

LOSANT

Owner of Reg. No. 160,411.
For Rubber Hose, Rubber-Fabric Conveyor and Elevator Belting, and Rubber Lining for Chutes.
First use 1907.

SN 158,855. J. C. Penny Company, New York, N.Y. Filed Dec. 10, 1962.

FOREMOST

For Automobile Tires.
First use Oct. 17, 1962.

Class 36—Musical Instruments and Supplies

SN 125,518. London Records, Inc., New York, N.Y. Filed Aug. 7, 1961.

sound 4 monophonic

No claim is made to the word "Sound" or "Monophonic" apart from the mark as shown.
For Grooved Phonograph Records.
First use July 26, 1961.
Subj. to Intf. with SN 135,603 and SN 135,604.

SN 136,085. Warren E. Taylor, d.b.a. Triumph Records, Westwood, Mass. Filed Jan. 18, 1962.

TRIUMPH RECORDS

No claim is made to the word "Records" nor to the representation of a record, apart from the mark shown, for purposes of this registration.
For Phonograph Records.
First use Dec. 29, 1961.

SN 142,961. Namrah Records, Inc., Evanston, Ill. Filed Apr. 24, 1962.

RADIOETTES

For Phonograph Records for Use by Radio Stations.
First use Mar. 13, 1962.

SN 143,764. Sarkes Tarzian, Inc., Bloomington, Ind. Filed May 3, 1962.

TAPETTE

For Tape Recorders and Players, and Recording Tape Therefor.
First use Apr. 13, 1962.

SN 146,715. EBS Record Corporation, Philadelphia, Pa. Filed June 12, 1962.

KAREN

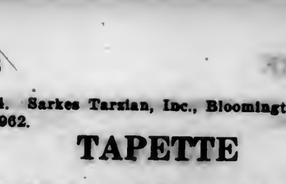
For Grooved Phonograph Records.
First use on or about Apr. 24, 1962.

SN 150,980. Tahiti Musique, Los Angeles, Calif. Filed Aug. 10, 1962.



Applicant disclaims any right to the word "Tahiti" except as the same is embodied in the mark for which registration is sought.
For Mechanically Grooved Phonograph Records of the Disc Type.
First use Feb. 1, 1962.

SN 157,046. Rue G. Barclay, d.b.a. Rue Publishing, Van Nuys, Calif. Filed Nov. 13, 1962.



For Phonograph Records.
First use Sept. 11, 1962.

SN 160,190. Gus Kahn Music Company, d.b.a. Rexford Records, Los Angeles, Calif. Filed Jan. 4, 1963.



The word "Record" is disclaimed.
For Phonograph Records.
First use Dec. 4, 1962.

SN 160,670. Shure Brothers Incorporated, Evanston, Ill. Filed Jan. 14, 1963.

GARD-A-MATIC

For Phonograph Pickup Cartridges.
First use on or about Nov. 19, 1962.

SN 162,335. Capitol Records, Inc., Los Angeles, Calif. Filed Feb. 8, 1963.

SILVER PLATTER SERVICE

For Phonograph Records.
First use Apr. 15, 1962.

SN 162,508. V-M Corporation, Benton Harbor, Mich. Filed Feb. 11, 1963.

SHADOWEIGHT

For Tonearms Used in Record Changers and Phonographs.
First use Jan. 22, 1963.

SN 162,592. The Seeburg Corporation, Chicago, Ill. Filed Feb. 12, 1963.



For Coin-Operated Remote Music Selector With Built-In Stereo Speakers for Use With Automatic Phonographs.
First use Aug. 17, 1962.

SN 162,647. Lectronics of City Line Center, Inc., Philadelphia, Pa. Filed Feb. 13, 1963.

IMF

For Loud Speakers, Phonograph Pick-Up Cartridges, and Tone Arms.
First use Jan. 15, 1963.

SN 163,186. United Artists Records, Inc., New York, N.Y. Filed Feb. 20, 1963.



For Mechanically Grooved Phonograph Records.
First use July 5, 1962.

SN 163,886. South Dakota Alumnae Chapter of Zeta Phi Eta, Vermillion, S. Dak. Filed Mar. 4, 1963.

DACOTAH VOICES

For Phonograph Records.
First use Nov. 30, 1962.

Class 37—Paper and Stationery

SN 146,697. Whiting-Plover Paper Company, Stevens Point, Wis. Filed June 11, 1962.



For Fine Paper and Printers' Stock.
First use Aug. 31, 1955.

Class 38—Prints and Publications

SN 147,387. The Miller Publishing Company, Minneapolis, Minn. Filed June 21, 1962.



Owner of Reg. No. 713,191.
For Reports Issued Periodically Based on Studies in the Field of Merchandising.
First use May 18, 1962.

SN 147,731. Hugo Gernsback, New York, N.Y. Filed June 26, 1962.



For Annual Magazine of Science Fiction.
First use on or about June 13, 1962.

SN 156,341. Time, Incorporated, New York, N.Y. Filed Oct. 31, 1962.

SPORTS ILLUSTRATED

For Weekly Magazine.
First use Aug. 16, 1954.

Class 39—Clothing

SN 63,964. Principle Plastics, Inc., Gardena, Calif. Filed Dec. 9, 1958.

DRIZZLE BONNET

Applicant disclaims the word "Bonnet" apart from the mark as shown. Owner of Reg. No. 599,380.
For Plastic Rain Hats.
First use Oct. 7, 1958.

SN 79,968. The Alligator Company, St. Louis, Mo. Filed Aug. 21, 1959.

PLATINUM LABEL

Owner of Reg. No. 384,991.
For Fabrics Suitable for Topcoats, Treated for Water-Repellency, and Sold Only in Wearing Apparel—Namely, Coats for Men and Women.
First use May 1949.

SN 79,969. The Alligator Company, St. Louis, Mo. Filed Aug. 21, 1959.

GOLD LABEL

Owner of Reg. No. 384,991.
For Fabrics Suitable for Topcoats, Treated for Water-Repellency, and Sold Only in Wearing Apparel—Namely, Coats for Men and Women.
First use February 1938.

SN 113,464. Winky Jrs., Inc., New York, N.Y. Filed Feb. 10, 1961.



For Women's Wear—Namely, Swim Suits, Beach Robes, Play Suits, Slacks, Skirts, Pedal Pushers, and Shorts.
First use Oct. 7, 1960; 1939 in substantially the same style.

SN 123,045. Stockton Manufacturing Company, Inc., Dallas, Tex. Filed June 28, 1961.

STOCKTON

For Pants and Slacks, Blouses, Shorts, Skirts, Sweaters, and Jackets.
First use May 29, 1946.

SN 125,017. Gertrude M. Dreyfus, Tenafly, N.J. Filed July 31, 1961.

Snoopy Juniors

For Ladies' Garments—Namely, Dresses, Skirts, and Blouses.
First use May 8, 1961.

SN 125,596. I. C. Herman & Company, Inc., New York, N.Y. Filed Aug. 8, 1961.

Famous Mills Brand

The word "Brand" is disclaimed apart from the mark as shown.
For Handkerchiefs.
First use July 7, 1961.

SN 125,994. Bobbie Brooks, Incorporated, Cleveland, Ohio, assignee of Abby Michael, Ltd., New York, N.Y. Filed Aug. 15, 1961.

ABBY MICHAEL LTD.

For Skirts, Blouses, Jackets, Pants, Dresses, and Shorts.
First use Apr. 19, 1956.

SN 127,346. Moran Shoe Company, Carlyle, Ill. Filed Sept. 6, 1961.

ANKLE ACTION

For Infants' and Children's Shoes, Boots, and Slippers.
First use Aug. 10, 1961.

SN 129,954. Maidenform, Inc., New York, N.Y. Filed Oct. 16, 1961.

HABANERA

The Spanish word "Habanera" is usually referred to as the name of a waltz tango. It also means a native of Havana.
For Foundation Garments.
First use Sept. 15, 1961.

SN 130,045. College-Town of Boston, Boston, Mass. Filed Oct. 17, 1961.

Strictly jr.

For Ladies' Junior Size Sportswear—Namely, Suits, Skirts, Blouses, Shorts, and Slacks.
First use Sept. 28, 1961.

SN 137,355. Mr. Arnold, Inc., New York, N.Y., assignee of Mr. Arnold Actualite, Inc., New York, N.Y. Filed Feb. 6, 1962.

MISSY ARNOLD

Owner of Reg. No. 646,130.
For Hats, Millinery Trimming, and Hat Linings.
First use Mar. 31, 1961.

SN 138,231. Ross of Florida, Inc., Lakeland, Fla. Filed Feb. 19, 1962.

DELORES

The drawing is lined for the color red. Owner of Reg. No. 715,843.
For Brassieres and Girdles.
First use July 28, 1956.

SN 139,212. W. W. Haffenden Ltd., Sandwich, England. Filed Mar. 6, 1962.

TRIDENT

Owner of British Reg. No. 752,339, dated Mar. 27, 1956.
For Bathing Caps and Swimming Caps.

SN 140,701. Samuel Martin, Jr., d.b.a. Samuel Martin (London) Ltd., Seattle, Wash. Filed Mar. 26, 1962.

LONDON DRY

For Rain Coats and Other Rainwear.
First use on or about Mar. 8, 1962.

SN 140,898. B. Altman & Co., New York, N.Y. Filed Mar. 28, 1962.

SLIMFIT

Owner of Reg. Nos. 199,303 and 540,754.
For Girdles, Garter Belts, and Pantie Belts.
First use Feb. 1, 1962.

SN 140,992. Sears, Roebuck and Co., Chicago, Ill. Filed Mar. 28, 1962.

WONDER S-P-A-N

For Elastic Fabric Used in Girdles, Brassieres, Panties, and Foundation Garments.
First use on or about Nov. 15, 1960.

SN 141,181. Huntingdon Mills, Inc., Philadelphia, Pa. Filed Mar. 30, 1962.

MR. H. ESQ.

For Men's and Boys' Sportswear and Swimwear—Namely, Sweaters, Knit Shirts, Swim Suits, and Cabana Sets.
First use Mar. 13, 1962.

SN 141,616. Hanes Hosiery Mills Company, Winston-Salem, N.C. Filed Apr. 5, 1962.

SHEERLOC

For Ladies' Hosiery.
First use Mar. 29, 1962.

SN 142,282. The Crown Corset Company, Bridgeport, Conn. Filed Apr. 16, 1962.

Spantrol

For Women's Girdles, Corsets.
First use Apr. 4, 1962.

SN 142,635. Henry B. Harrison, Brooklyn, N.Y. Filed Apr. 19, 1962.

STANDmold

For Shoes for Men, Women, and Children.
First use Nov. 15, 1954.

SN 142,965. Puritan Fashions Corporation, New York, N.Y. Filed Apr. 24, 1962.

Barnsville U.S.A.

Applicant disclaims the initial letters "U.S.A." except as part of the mark as shown. Owner of Reg. No. 744,527.
For Women's, Misses', and Junior Misses' Wearing Apparel—Namely, Dresses, Dress and Play Blouses, Shirts, Jackets, Coats, Slacks, Slack Suits, Shorts, Walk Shorts, Robes, Pajamas, and Bathing Suits.
First use Nov. 1, 1961.

SN 143,353. Danny Dare, Inc., Kansas City, Mo. Filed Apr. 30, 1962.

So big!

For Infants' Apparel—Namely, Pants, Shirts, Shorts, Jackets, Diapers, Diaper Sets, Overalls, and Undershirts; Children's Apparel—Namely, Overalls, Shirts, Rompers, Sunsuits, Slacks, Shorts, Jeans, Jackets, Shirts, Caps, Hats, Skirts, and Blouses.
First use Mar. 19, 1962.

SN 144,193. Savada Bros., Inc., New York, N.Y. Filed May 9, 1962.

EVEREADY

For Boys' and Young Men's Shirts and Pajamas.
First use Mar. 22, 1962.

SN 145,646. The Enro Shirt Company, Inc., Louisville, Ky. Filed May 14, 1962.

Foxcroft styled by Enro

Owner of Reg. Nos. 162,068, 722,865, and others.
For Men's and Ladies' Shirts, Pajamas, and Sport Shirts.
First use Feb. 15, 1962.

SN 145,737. Silver Knit Hosiery Mills, Inc., High Point, N.C. Filed May 29, 1962.

Pima Supreme

No claim is made to the word "Pima" apart from the mark as shown.
For Hosiery for Men, Women, and Children.
First use Apr. 17, 1962.

SN 146,186. P. H. Hanes Knitting Company, Winston-Salem, N.C. Filed June 5, 1962.

RIB-EYE

For Knitted Undergarments for Men, Women, and Children.
First use Oct. 31, 1961.

SN 146,207. North American Nutria Associates, Atlanta, Tex. Filed June 5, 1962. COLLECTIVE MARK.

NANA

For Finished Nutria Garments Made From Pelts Produced by Members of Applicant Association.
First use May 1, 1959.

SN 146,603. Harry S. Epstein, Inc., New York, N.Y. Filed June 11, 1962.

Pozzatti KNIT

No claim is made to the word "Knit" apart from the mark as shown.
For Women's Dresses, Skirts, and Blouses.
First use June 1960.

SN 147,238. John B. Stetson Company, Philadelphia, Pa. Filed June 19, 1962.

LEE

Applicant's wholly owned subsidiary is owner of Reg. Nos. 321,027 and 321,346.
For Men's, Women's, and Boys' Hats and Caps.
First use in 1903.

SN 147,354. Climatic Inc., Yonkers, N.Y. Filed June 21, 1962.

TOTE COTE

For the purpose of this registration only, and without waiving any common law rights, no claim is made to the word "Cote" apart from the mark as shown in the drawing.
For Men's and Women's Raincoats.
First use June 1, 1962.

SN 148,117. Acme-McCrary Corporation, Asheboro, N.C. Filed July 2, 1962.

TRUELOC

For Ladies' Hosiery.
First use June 19, 1962.

SN 148,650. Ponti Roma, Inc., New York, N.Y. Filed July 9, 1962.

PONTI ROMA

For Women's, Misses', and Children's Dresses.
First use May 1, 1962.

SN 149,062. Edison Brothers Stores, Inc., St. Louis, Mo. Filed July 16, 1962.

PRESENTATIONS

For Women's Shoes.
First use July 1, 1962.

SN 149,063. Edison Brothers Stores, Inc., St. Louis, Mo. Filed July 16, 1962.

PREDICTIONS

For Women's Shoes.
First use July 1, 1962.

SN 149,295. Kayser-Roth Corporation, New York, N.Y. Filed July 18, 1962.

WONDERLOC

For Ladies' Hosiery.
First use June 8, 1962.

SN 149,356. Bear Brand Hosiery Co., Chicago, Ill. Filed July 19, 1962.

THREADLOCK

For Ladies' Hosiery.
First use June 28, 1962.

SN 149,896. Volk Bros. Company, Dallas, Tex. Filed July 26, 1962.

VOLK'S COMMODORE

Owner of Reg. No. 526,288.
For Men's Shoes.
First use Mar. 14, 1962.

SN 150,823. Hugh L. Thompson, d.b.a. American Apron Co., Waco, Tex. Filed Aug. 8, 1962.

FIBERHIDE

For Aprons—Namely, Carpenters' Nail Aprons, Change Aprons for Hawkers, and the Like.
First use July 9, 1962.

SN 151,451. White Swan Uniforms, Inc., New York, N.Y. Filed Aug. 17, 1962.

SWAN STRETCH

Owner of Reg. Nos. 194,124 and 574,335.
For Nurses' Uniforms.
First use June 7, 1962.

SN 153,571. S. S. Kresge Company, Detroit, Mich. Filed Sept. 20, 1962.

JEAN

Owner of Reg. Nos. 164,063 and 407,199.
For Hairnets.
First use December 1919.

SN 153,812. The Puritan Sportswear Corp., Altoona, Pa. Filed Sept. 24, 1962.

AQUALURA

Owner of Reg. No. 729,220.
For Women's Sweaters.
First use Aug. 21, 1962.

SN 154,052. O'Shaughnessy, Dewes & Klein, Inc., New York, N.Y. Filed Sept. 27, 1962.

VALSHIRE

For Men's and Boys' Clothing, Shirts, Jackets, Sweaters, Hats, Hosiery, Underwear, Neckwear.
First use Aug. 15, 1962.

SN 154,556. CBS Imports Corp., New York, N.Y. Filed Oct. 5, 1962.

CABAS

For Pants, Outer Jackets, Raincoats, Swimsuits and Sports Shirts, T-Shirts, and Dress Shirts.
First use Dec. 8, 1959.

SN 154,785. Dolly Veice, Wyncote, Pa. Filed Oct. 8, 1962.

DOLLENET

For Hair Nets.
First use July 1, 1962.

SN 155,057. Florida Atlas Corporation, Windermere, Fla. Filed Oct. 12, 1962.

SMITTEN

For Mittens.
First use Sept. 11, 1962.

SN 155,098. The Parsons & Baker Co., Phoenixville, Pa. Filed Oct. 12, 1962.

MILL OF THE WEST

For Underwear—Namely, Infants' Shirts and Training Pants, and Girls' Shirts, Panties, and Vests.
First use July 2, 1962.

SN 155,441. Societe Rhodiaceta, Paris, France. Filed Oct. 18, 1962.

DROPNYL

Owner of French Reg. No. 488,385, dated May 25, 1960 (Paris); Natl. Inst. No. 145,162.
For Clothing for Men, Women, and Children—Namely, Robes, Two-Piece Suits, Coats, Underwear, Cardigans, Vests and Waist-Coats, Including Boots, Shoes, and Slippers.

SN 155,444. Societe Rhodiaceta, Paris, France. Filed Oct. 18, 1962.

DROPGAL

Owner of French Reg. No. 488,386, dated May 26, 1960 (Paris); Natl. Inst. No. 145,163.
For Clothing for Men, Women, and Children—Namely, Robes, Two-Piece Suits, Coats, Underwear, Cardigans, Vests and Waist-Coats, Including Boots, Shoes, and Slippers.

SN 155,649. Rand Rubber Company, Inc., Brooklyn, N.Y. Filed Oct. 22, 1962.

RANDSHEEN

Owner of Reg. Nos. 410,105, 649,783, and others.
For Baby Pants.
First use prior to Jan. 1, 1948.

SN 155,904. The Emporium Capwell Company, San Francisco, Calif. Filed Oct. 25, 1962.

For Fabric Anklets, Aprons, Infants' Bands; Bathing Apparel and Accessories—Namely, Swimming Trunks, and Bathing Suits; Belts, Bibs, Brassieres, Blouses, Booties, Brunch and Housecoats, Breeches, Jodhpurs, Boots, Shower and Make-Up Caps, Fireproof and Waterproof Clothing, Collars and Cuffs, Corsets, Shoes, Cushion Insoles, Heel Pads, Culottes, Halters, Sneakers, Coats; Cowboy Apparel—Namely, Chaparejos, Shirts, Hats, Neckerchiefs and Boots; Diapers, Diaper Covers, Diaper Panties, Dickeys, Dresses, Stocking Feet, Foundation Garments, Fur Garments, Galoshes, Rubbers, Garters, Garter-Belts, Girdles, Gloves, Grippers To Be Attached to Shoes, Gowns, Handkerchiefs, Hats, Hat Bodies, Heel Cushions or Linings, Heels and Soles, Hosiery, Insoles for Shoes, Jabots, Jackets, Jumpers, Knee Warmers, Mittens, Muffs and Mufflers, Neckties, Hair Nets, Overalls, Jeans, Coveralls, Panties, Pants, Play Suits, Pajamas, Petticoats, Slips, Raincoats, Scarfs, Shirts, Skirts, Shorts, Slacks, Smocks, Shawls, Stepins, Snowsuits, Stocking Protectors, Stoles, Suspenders, Sweaters, Suits, Turbans, Tuxedos, Underwear, Uniforms, Shoe Welting, Wraps for Men, Women, Boys, Girls, and Infants.
First use Sept. 19, 1962.

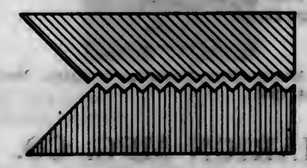
SN 155,945. Stephen-Rajki, Inc., Cleveland, Ohio. Filed Oct. 25, 1962.

TravelQueen

For Ladies' Coats.
First use May 21, 1962.

Class 40 — Fancy Goods, Furnishings, and Notions

SN 135,634. The Singer Manufacturing Company, New York, N.Y. Filed Jan. 11, 1962.



The drawing is lined for the colors green and red.
For Hand Sewing Needles; Needle Threaders; Needle Cases; Tracing Wheels; Bound Buttonhole Patterns; Buttons, Buckles and Clasps; Sewing Kits for Mending; and Stocking Darning and Embroidery Hoops.
First use Jan. 5, 1960, on needle threaders.

SN 155,905. The Emporium Capwell Company, San Francisco, Calif. Filed Oct. 25, 1962.



For Braids, Shoe and Belt Buckles, Buttons, Comb and Hand Mirror Sets, Beads in the Nature of Trimming, Non-Electric Hair Curlers, Pin Cushions, Elastic Braids, Fabrics Having Designs Stamped Thereon for Art Needlework, Ornamental Fasteners for Wearing Apparel, Breast Forms for Use in Wearing Apparel, Hat Feathers, Gimps, Shoe or Garment Laces, Tapes and Braids for Lacings, Medallions, Fabric Monograms, Needles for Hand Sewing and Knitting, Fabric Stamped With Designs for Needle Work, Ornaments for Wearing Apparel, Passementeries, Mending Patches, Transfer Patterns for Art Needlework, Pins for Needlework, Dress Shields, Hair Switches, Wigs Made of Human Hair for Personal Wear, Tapes in the Nature of Trimming for Upholstery and Wearing Apparel, and Fabric Trimmings for Upholstery and Wearing Apparel.
First use Sept. 19, 1962.

Class 41—Canes, Parasols, and Umbrellas

SN 150,659. Louis Weiss Umbrellas Inc., New York, N.Y. Filed Aug. 6, 1962.

Sun 'n Surf

For Beach and Garden Umbrellas, Beach Chair Umbrellas, Rain Umbrellas, and Parasols.
First use July 15, 1954.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 127,479. Howse, Mead & Sons, Inc., New York, N.Y. Filed Sept. 8, 1961.

TRAFALGAR TWIST

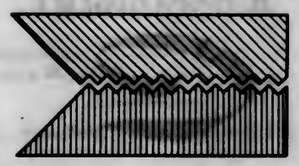
Applicant makes no claim of exclusive right to use the word "Twist" apart from the mark as shown.
For Woolen Piece Goods.
First use Sept. 25, 1959.

SN 131,970. Marion Manufacturing Company, Marion, N.C. Filed Nov. 14, 1961.

MARION MFG. CO.

For Textile Fabrics for Making Into Clothing, Table Cloths, Lamp Shades, Pillow Covers, Draperies, and the Like.
First use Jan. 1, 1910.

SN 135,635. The Singer Manufacturing Company, New York, N.Y. Filed Jan. 11, 1962.



The drawing is lined for the colors green and red.
For Textile Piece Goods, Suitable for Wearing Apparel, Household Furnishings, Draperies and Other Uses.
First use Jan. 13, 1959.

SN 138,153. Broadloom Imports, Inc., New York, N.Y. Filed Feb. 19, 1962.

BALMORAL

For Textile Carpets.
First use Jan. 19, 1962.

SN 143,954. Greenwood Mills, Inc., New York, N.Y. Filed May 7, 1962.

Fabric WITH THE CHARACTER OF QUALITY BY GREENWOOD

Applicant disclaims the wording "Fabrics With the Character of Quality."
For Piece Goods of Cotton or of Other Fibers and/or Blends Thereof for Making Into Shirts, Slacks, Jackets, Dresses, Blouses and Other Items of Wearing Apparel.
First use Feb. 15, 1961.

SN 148,762. Societe Rhodiaceta, Paris, France. Filed July 10, 1962.

DROPSAN

Priority claimed under Sec. 44(d) on French Reg. No. 504,375, dated Apr. 19, 1962 (Paris); Natl. Inst. No. 183,349.
For Textile Fabrics Used for Making Dresses, Suits, Coats, Underwear; and Bed and Table Covers.

SN 149,680. Tootal Broadhurst Lee Company Limited, Manchester, England. Filed July 24, 1962.

TEB-X-CEL

Owner of U.S. Reg. Nos. 354,658 and 643,659.
For Cotton Piece Goods, Rayon and Linen Fabrics.
First use Feb. 14, 1962; in commerce Feb. 14, 1962.

SN 151,345. Linton Tweeds Limited, Carlisle, Cumberland, England. Filed Aug. 16, 1962.

LINTON TWEEDS

Applicant disclaims the word "Tweeds" except in association with "Linton." Owner of U.S. Reg. Nos. 645,474 and 647,161.
For Piece Goods of Wool, Worsted or Hair, or Mixtures of These Materials.
First use 1919; in commerce 1919.

SN 153,646. The B. F. Goodrich Company, Akron, Ohio. Filed Sept. 21, 1962.

DURASEAL

For Carpet Cushion and Rug Underlay Having a Relatively Smooth Impervious Surface Finish Which Impedes the Passage of Dirt Particles Therethrough.
First use May 1962.

SN 154,020. Fielderest Mills, Inc., Spray, N.C. Filed Sept. 27, 1962.

IMPERIAL COLLECTION

For Bedspreads, Towels, Bath Cloths, Bath Mats.
First use May 30, 1962.

SN 154,492. Golding Bros. Company, Inc., New York, N.Y. Filed Oct. 4, 1962.

LANCELOT

For Draperies.
First use Sept. 25, 1962.

SN 154,646. Strong Hewat & Co., Inc., North Adams, Mass. Filed Oct. 5, 1962.

STRONG-HEWAT

Owner of Reg. No. 124,596.
For Woolen Piece Goods.
First use June 28, 1918.

SN 154,743. Mosse, Incorporated, New York, N.Y. Filed Oct. 8, 1962.

TILOWEB

For Textile Bath Towels.
First use Sept. 26, 1962.

SN 154,864. J. P. Stevens & Co., Inc., New York, N.Y. Filed Oct. 9, 1962.

STEVETEX

Owner of Reg. Nos. 511,773, 735,714, and others.
For Textile Fabrics of Synthetic Fibers.
First use July 23, 1962.

SN 154,935. Wellington Sears Company, New York, N.Y. Filed Oct. 10, 1962.

TOPSAIL

For Duck Piece Goods.
First use about Aug. 1, 1938.

SN 155,607. Graniteville Company, Graniteville, S.C. Filed Oct. 22, 1962.

THUNDERCORD

Owner of Reg. Nos. 673,584 and 736,486.
For All-Cotton Bedford Cord Used for Jackets, Coats, Pants and the Like.
First use Nov. 13, 1959.

SN 155,618. Klopman Mills, Inc., New York, N.Y. Filed Oct. 22, 1962.

LEAN ON KLOPMAN

Owner of Reg. Nos. 697,510 and 736,479.
For Greige and Finished Fabrics in the Piece of All Types for Use in Men's, Women's, and Children's Apparel.
First use Sept. 19, 1962.

SN 155,650. Rand Rubber Company, Inc., Brooklyn, N.Y. Filed Oct. 22, 1962.

RANDSHEEN

Owner of Reg. Nos. 411,407, 649,783, and others.
For Crib Sheets and Waterproof Sheeting.
First use prior to Jan. 1, 1948.

SN 155,670. United Merchants and Manufacturers, Inc., New York, N.Y. Filed Oct. 22, 1962.

PIMALON

For Combed Cotton Fabrics Consisting in Part or Entirely of Pima Cotton.
First use on or about Apr. 13, 1961.

SN 155,906. The Emporium Capwell Company, San Francisco, Calif. Filed Oct. 25, 1962.



For Bedspreads, Blankets, Comforters, Quilts, Sheets, Pillowcases, Quilted Mattress Protectors, Towels, Toweling, Wash Cloths, Pot Holders, Window Curtains, Shower Curtains, Drapes, Valances, Couch Throws, Textile Furniture Scarfs and Shawls, Textile Table Place Mats, Tablecloths and Napkins, Doilies, Textile Carpets and Rugs, Automobile Robes, Veiling, Textile Ribbons, Textile Fabrics, Including Buckram, Bunting, Canvas, Cheesecloth, Drilling, Duck, Elastic, Filter Cloth, Gauze, Lace, Window Shade Cloth, Waterproof Sheeting, Shelving and Shelf Edging, Stencil Cloth and Ticking, of Cotton, Silk, Wool, and Synthetic Fibers.
First use Sept. 19, 1962.

Class 43—Thread and Yarn

SN 146,307. National Plastic Products Company, Inc., Odenton, Md. Filed June 6, 1962.



For Polyolefin Yarns.
First use May 18, 1962.

SN 146,308. National Plastic Products Company, Inc., Odenton, Md. Filed June 6, 1962.



For Polyolefin Yarns.
First use May 21, 1962.

SN 151,192. Belding Heminway Company, Inc., New York, N.Y. Filed Aug. 15, 1962.

BEL-WAXED

Owner of Reg. Nos. 358,928 and 707,614.
For Cotton Threads.
First use Sept. 1, 1959.

SN 155,443. Societe Rhodiaceta, Paris, France. Filed Oct. 18, 1962.

DROPNYL

Owner of French Reg. No. 488,385, dated May 25, 1960 (Paris); Natl. Inst. No. 145,162.
For Threads and Yarns of Synthetic Fibers.

SN 155,446. Societe Rhodiaceta, Paris, France. Filed Oct. 18, 1962.

DROPGAL

Owner of French Reg. No. 488,386, dated May 25, 1960 (Paris); Natl. Inst. No. 145,163.
For Threads and Yarns of Synthetic Fibers.

SN 155,686. Carlton Yarn Mills, Incorporated, Cherryville, N.C. Filed Oct. 23, 1962.

FLAMED

For Yarns.
First use Sept. 17, 1962.

Class 44—Dental, Medical, and Surgical Appliances

SN 139,002. The Akwell Corporation, New York, N.Y. Filed Mar. 5, 1962.



For Prophylactic Rubber Articles for the Prevention of Contagious Diseases.
First use Feb. 26, 1962.

SN 139,502. Electrodyne Company, Inc., Norwood, Mass. Filed Mar. 5, 1962.

ELECTRODYNE

For Electromechanical and Electronic Instruments and Equipment for Diagnostic and Therapeutic Application in the Surgical, Medical, and Hospital Fields.
First use on or about Jan. 4, 1946.

SN 139,388. Curvlite Surgical Products, Jamaica, N.Y. Filed Mar. 8, 1962.

CURVLITE

For Surgical Appliances—Namely, Surgical Retractors, Tongue Depressors, Cheek Retractors, Deep Throat Depressors, Etc.
First use on or about Jan. 1, 1954.

SN 139,599. Continental Research, Inc., d.b.a. Diatomic Oxygen Research, Minneapolis, Minn. Filed Mar. 12, 1962.

EXHILARATOR

For Portable Oxygen Dispensing Apparatus.
First use Oct. 10, 1961.

SN 139,698. Unimed, Inc., Madison, N.J., by assignment and change of name from United Medical Products Company, Incorporated, Hopkins, Minn. Filed Mar. 12, 1962.

UNIMED

For Electrically Operated Sound Emitting Pacifying Device for Inducing Sleep.
First use Mar. 28, 1961.

SN 139,699. Unimed, Inc., Madison, N.J., by assignment and change of name from United Medical Products Company, Incorporated, Hopkins, Minn. Filed Mar. 12, 1962.

SLUMBER TONE

For Electrically Operated Sound Emitting Pacifying Device for Inducing Sleep.
First use Mar. 28, 1961.

SN 144,444. Battle Creek Equipment Co., Battle Creek, Mich. Filed May 14, 1962.

NUSAUNA

For Internally Heated Bath Cabinets and Parts Thereof.
First use Feb. 17, 1960.

SN 149,251. Beavers Dental Products Limited, Morrisburg, Ontario, Canada. Filed July 18, 1962.



For Dental Burs.
First use Feb. 26, 1962; in commerce Mar. 1, 1962.

SN 149,795. J. Wiss & Sons Co., Newark, N.J. Filed July 25, 1962.

WISS

Owner of Reg. No. 160,744.
For Personal Grooming Implements—Namely, Barber Shears, Nail Scissors, Cuticle Scissors, Nail Nippers, Cuticle Nippers, Clippers, and Bandage Scissors.
First use 1848.

SN 149,797. J. Wiss & Sons Co., Newark, N.J. Filed July 25, 1962.

WISS

Owner of Reg. No. 160,744.
For Personal Grooming Implements—Namely, Barber Shears, Nail Scissors, Cuticle Scissors, Nail Nippers, Cuticle Nippers, Clippers, and Bandage Scissors.
First use 1848.

SN 152,251. Revlon, Inc., New York, N.Y. Filed Aug. 30, 1962.

THE PRINCESS

For Trays Adapted for Manicure Implements.
First use Aug. 17, 1962.

SN 154,491. The Gillette Company, d.b.a. The Toni Company, Chicago, Ill. Filed Oct. 4, 1962.

ROLLER PERM

No claim is made to the word "Roller" apart from the mark as shown.
For Home Hair Wave Kit Including Hair Waving Lotion and End Tissues.
First use Sept. 12, 1962.

Class 45—Soft Drinks and Carbonated Waters

SN 147,305. Robert D. Pike, Jr., Sierra Madre, Calif. Filed June 20, 1962.

RIO RICKEY

The word "Rickey" is disclaimed apart from the mark as shown.
For Concentrate for Making Soft Drinks.
First use in December 1959.

Class 46—Foods and Ingredients of Foods

SN 120,804. Jolly Roger Dairy Products, Inc., Johnsville, Pa. Filed May 25, 1961.

JOLLY ROGER

Owner of Reg. No. 712,628.
For Ice Cream Products—Namely, Soft and Hard Ice Cream, Ice Cream Cones, Ice Cream Sandwiches, Italian Water Ice, Milk Chocolate Topping, Butter Scotch Topping, Hot Fudge Topping, Fruit Toppings Including Walnuts, Strawberries, Cherries and Pineapple Fruit Toppings, Fruits for Salads, Strawberry Flavored Syrup, Root Beer and Orange Syrups, and Chocolate Flavoring and Vanilla Extract.
First use Jan. 5, 1959.

SN 147,000. Gould Novelties, Inc., Elmont, N.Y. Filed June 15, 1962.

GOULD'S VITA-RICH

For Pet Food for Birds, Turtles, Chameleons, and Fish.
First use Oct. 1, 1952.

SN 147,829. Robert A. Johnston Company, Milwaukee, Wis. Filed June 27, 1962.

COUNTRY KITCHEN

For Candies.
First use on or about July 1, 1955.

SN 147,843. The Nestlé Company, Inc., White Plains, N.Y. Filed June 27, 1962.



BEANS
in every cup

For Instant Coffee.
First use May 6, 1960; Feb. 5, 1960, in a different form.

SN 154,112. Green Giant Company, Le Sueur, Minn. Filed Sept. 28, 1962.



Owner of Reg. Nos. 230,035, 688,067, and others.
For Frozen Vegetables.
First use Sept. 15, 1961.

SN 155,432. Nebraska Consolidated Mills Company, Omaha, Nebr. Filed Oct. 18, 1962.

COLOSSUS

For Flour.
First use at least as early as January 1939.

SN 155,434. Peter Pan Seafoods, Inc., Seattle, Wash. Filed Oct. 18, 1962.

FELINE FANCY

For Cat Food.
First use Apr. 12, 1962.

SN 155,436. Red & White Corporation, d.b.a. Hy-Top Products, Inc., Chicago, Ill. Filed Oct. 18, 1962.

HY-TOP

For Canned Vegetables.
First use Oct. 12, 1962.

SN 155,527. Spice Islands Company, South San Francisco, Calif. Filed Oct. 19, 1962.

REGIMENTAL

For Meat Sauce.
First use Oct. 8, 1962.

SN 155,528. Spice Islands Company, South San Francisco, Calif. Filed Oct. 19, 1962.

INDIA BRIGADE

For Chutney Sauce.
First use Oct. 8, 1962.

SN 155,943. The Seven-Up Company, St. Louis, Mo. Filed Oct. 25, 1962.

SEVEN UP

Owner of Reg. Nos. 252,350, 639,769, and others.
For Candy.
First use Mar. 1, 1919.

SN 156,199. Ventura Processors, Ventura, Calif. Filed Oct. 29, 1962.

GOLDEN-Y

Owner of Reg. No. 650,992.
For Fresh Oranges.
First use on or about March 1958.

SN 156,477. Cooperative Quality Marketing, Inc., Washington, D.C. Filed Nov. 2, 1962. COLLECTIVE MARK.

DAIRY BROOK

For Butter.
First use Oct. 19, 1962.

SN 156,508. Meat Industry Supplies, Inc., Northfield, Ill. Filed Nov. 2, 1962.

LIQUASORB

For Food Preservative Composed of Propylene Glycol, Methyl and Propyl Parabens and Sorbic Acid.
First use on or about June 14, 1962.

SN 156,705. ABC Vending Corporation, d.b.a. ABC Vending Corp., Long Island City, N. Y. Filed Nov. 6, 1962.



Owner of Reg. Nos. 384,733, 619,542, and others.
For Candied, Salted, and Buttered Popcorn.
First use on or about Dec. 1, 1950; on or about Nov. 1, 1950, as to "ABC Dee-Lish."

SN 156,706. ABC Vending Corporation, d.b.a. ABC Vending Corp., Long Island City, N. Y. Filed Nov. 6, 1962.

Mr. Dee-lish

Owner of Reg. No. 619,542.
For Candied, Salted, and Buttered Popcorn.
First use on or about Dec. 1, 1950; on or about Nov. 1, 1950, as to "ABC Dee-Lish."

SN 156,707. ABC Vending Corporation, d.b.a. ABC Vending Corp., Long Island City, N. Y. Filed Nov. 6, 1962.



Owner of Reg. Nos. 379,079, 599,436, and others.
For Candied, Salted, and Buttered Popcorn.
First use on or about Dec. 1, 1950; on or about Nov. 1, 1950, as to "ABC Dee-Lish."

Class 50 — Merchandise Not Otherwise Classified

SN 146,157. The Atlas Ladder and Supply Co., Inc., Baltimore, Md. Filed June 5, 1962.



The representation of the ladder in the mark is disclaimed.
For Ladders.
First use Jan. 19, 1962.

SN 147,550. Christensen & Cook, Lodi, Calif. Filed June 25, 1962.

MAGNA-MASTER

For Metallic Chart Board With Magnetic Indicia Thereon.
First use May 3, 1962.

Class 51 — Cosmetics and Toilet Preparations

SN 146,043. H. Goodman & Sons, Inc., New York, N.Y. Filed June 4, 1962.

GOODY

Owner of Reg. No. 238,896.
For Wave Set and Hair Conditioner.
First use on or about Feb. 21, 1962, on wave set; on or about Mar. 7, 1962, on hair conditioner.

SN 146,326. J. Strickland & Co., Memphis, Tenn. Filed June 6, 1962.



The word "Lipstick" is disclaimed apart from the mark as used herein. Owner of Reg. Nos. 357,200, 694,351, and others.
For Lipsticks.
First use Feb. 27, 1959.

Class 52 — Detergents and Soaps

SN 146,044. H. Goodman & Sons, Inc., New York, N.Y. Filed June 4, 1962.

GOODY

Owner of Reg. No. 238,896.
For Shampoo for Human Beings.
First use on or about Jan. 24, 1962.

SN 156,985. Industrial Soap Company, St. Louis, Mo. Filed Nov. 9, 1962.

MEDALLION

For All Purpose Cleaner.
First use Oct. 13, 1962.

SERVICE MARKS

Class 100 — Miscellaneous

SN 146,470. Crib, Tidy Di-Dy Diaper Service, Inc., Washington, D.C. Filed June 8, 1962.

CRIB

For Service of Renting Baby Diapers.
First use August 1945.

Class 101 — Advertising and Business

SN 147,241. TAB Engineers, Inc., Chicago, Ill. Filed June 19, 1962.

PDT

For Conducting Courses in the Field of Industrial Engineering, Designing, and Drafting.
First use May 2, 1962.

Class 102 — Insurance and Financial

SN 147,083. Brink's, Incorporated, Chicago, Ill. Filed June 18, 1962.



Owner of Reg. No. 643,998.
For Receiving Checks, Cashing the Same; Making Up Payrolls, Carrying Same or Other Moneys or Securities, Guarding and Protecting Same and Paying Payrolls; Handling Clearings; Selling Tickets; Handling Proceeds From Conventions, Exhibitions and Performances; Repairing Safes, Chests, Cash Protectors, and Similar Equipment.
First use Feb. 12, 1962.

TRADEMARK REGISTRATIONS ISSUED

PRINCIPAL REGISTER

Class 1—Raw or Partly Prepared Materials

749,586. 2M INTEGRATED MICA. Integrated Mica Corporation. SN 119,292. Pub. 3–12–63. Filed 5–4–61.

749,587. SAN-MAGIK. Julius M. Bleuenstein, d.b.a. San-Magik Research. SN 132,293. Pub. 3–5–63. Filed 11–20–61.

749,588. CAT JOY. Pet Care Inc. SN 132,366. Pub. 3–5–63. Filed 11–20–61.

749,589. POLYJET. Polypat Leathers, Inc. SN 135,704. Pub. 3–5–63. Filed 1–12–62.

749,590. AHDG. American Metal Products Company. SN 147,533. Pub. 3–5–63. Filed 6–25–62.

749,591. 3M. Minnesota Mining and Manufacturing Company. SN 148,406. Pub. 3–5–63. Filed 7–5–62.

749,592. ESTELLITE. Virginia Laminating Company. SN 149,615. Pub. 3–5–63. Filed 7–23–62.

749,593. QUICKEE. Floralife, Inc. SN 149,833. Pub. 3–5–63. Filed 7–26–62.

749,594. X59 AND DESIGN. Cabot Corporation. SN 150,390. Pub. 3–5–63. Filed 8–3–62.

749,595. TYTREL. E. I. du Pont de Nemours and Company. SN 150,402. Pub. 3–5–63. Filed 8–3–62.

749,596. CARNIVAL. Select Nurseries, Inc. SN 150,630. Pub. 3–5–63. Filed 8–6–62.

749,597. GOLDEN GLOW. Select Nurseries, Inc. SN 150,631. Pub. 3–5–63. Filed 8–6–62.

749,598. KATHLEEN. Select Nurseries, Inc. SN 150,632. Pub. 3–5–63. Filed 8–6–62.

749,599. PINK CLOUD. Select Nurseries, Inc. SN 150,633. Pub. 3–5–63. Filed 8–6–62.

749,600. KODAR. Eastman Kodak Company. SN 150,767. Pub. 3–5–63. Filed 8–8–62.

749,601. BUTACITE. E. I. du Pont de Nemours and Company. SN 150,858. Pub. 3–5–63. Filed 8–9–62.

749,602. SORBOLITE 325–X. Gus Dettelbach, Inc. SN 151,024. Pub. 3–5–63. Filed 8–13–62.

749,603. HERITAGE HOUSE. Heritage House Products, Inc., assignee of Seaboard Seed Co., Inc. SN 151,782. Pub. 3–5–63. Filed 8–23–62.

749,604. HERITAGE HOUSE AND DESIGN. Heritage House Products, Inc., assignee of Seaboard Seed Co., Inc. SN 151,784. Pub. 3–5–63. Filed 8–23–62.

749,605. RESCUE. Wyandotte Chemicals Corporation. SN 152,181. Pub. 3–5–63. Filed 8–29–62.

749,606. CREST-FOAM. Crest-Foam Corporation. SN 152,211. Pub. 3–5–63. Filed 8–30–62.

749,607. GRIOLIT. Emser Werke, A.G. SN 152,291. Pub. 3–5–63. Filed 8–31–62.

Class 2—Receptacles

749,608. S AND DESIGN. The Dow Chemical Company. SN 129,846. Pub. 3–5–63. Filed 10–13–61.

749,609. JAMESWAY AND LETTER J. Rockwood & Co., d.b.a. James Mfg. Co. CONSOLIDATED CERTIFICATE. SN 131,766, pub. 2–26–63, filed 11–10–61, Cl. 2; SN 133,017, pub. 2–26–63, filed 11–29–61, Cl. 12; SN 131,768, pub. 2–26–63, filed 11–10–61, Cl. 19; SN 131,767, pub. 2–26–63, filed 11–10–61, Cl. 23; SN 131,769, pub. 2–26–63, filed 11–10–61, Cl. 31; SN 131,770, pub. 2–26–63, filed 11–10–61, Cl. 34; SN 132,583, pub. 2–26–63, filed 11–22–61, Cl. 50.

749,610. BALLS UNLIMITED. Orange Products, Inc. CONSOLIDATED CERTIFICATE. SN 136,485, pub. 2–26–63, filed 1–24–62, Cl. 2; SN 136,486, pub. 2–26–63, filed 1–24–62, Cl. 13; SN 118,707, pub. 2–26–63, filed 4–26–61, Cl. 22; SN 136,487, pub. 2–26–63, filed 1–24–62, Cl. 23; SN 136,488, pub. 2–26–63, filed 1–24–62, Cl. 26.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

749,611. REMINGTON. C. F. Rumpp & Sons Incorporated. SN 152,442. Pub. 3–5–63. Filed 9–4–62.

749,612. GRAND PRIX. Swank, Inc. SN 152,457. Pub. 3–5–63. Filed 9–4–62.

Class 4—Abrasives and Polishing Materials

749,613. BEAUTY QUICK. Wilco Company. SN 149,987. Pub. 3–5–63. Filed 7–27–62.

Class 5—Adhesives

749,614. TABO AND DESIGN. United Shoe Machinery Corporation, assignee of Tabo Chemical Corp. SN 70,551. Pub. 3–5–63. Filed 3–30–59.

749,615. METYLAN. Henkel & Cie, GmbH. SN 129,209. Pub. 3–5–63. Filed 10–4–61.

Class 6—Chemicals and Chemical Compositions

749,616. THIXATROL. The Baker Castor Oil Company. SN 121,965. Pub. 3–5–63. Filed 6–14–61.

749,617. TELEPHONE POLE AND A HAND DESIGN. Chemical Research & Development Company. SN 122,915. Pub. 3–5–63. Filed 6–27–61.

749,618. CHLORSAVE. Adolph Kiefer & Company. SN 124,200. Pub. 3–5–63. Filed 7–18–61.

749,619. SULFAC. Pennsalt Chemicals Corporation. SN 125,242. Pub. 3–5–63. Filed 8–2–61.

749,620. CEDENEUNPUNKT. Vereinigte Papierwerke Schickedanz & Co. SN 131,436. Pub. 3–5–63. Filed 11–6–61.

749,621. SPILLAWAY. Yosemite Chemical Co., d.b.a. Yosemite Chemical Company. SN 133,348. Pub. 3–5–63. Filed 12–4–61.

749,622. PUR-CELLIN. Dragoco, Inc. SN 133,939. Pub. 3–5–63. Filed 12–13–61.

749,623. GREETING CARD-TAINERS. Biscayne Mfg. Co. Inc. SN 134,514. Pub. 3–5–63. Filed 12–22–61.

749,624. HELEX. Northern Helex Company, by change of name from Helex Company. SN 134,785. Pub. 3–5–63. Filed 12–27–61.

749,625. CATACARB. A. G. Eickmeyer. SN 135,841. Pub. 3–5–63. Filed 1–8–62.

749,626. PERMA-TINT. Murial Lane, Inc. SN 135,370. Pub. 3–5–63. Filed 1–8–62.

749,627. CLORPOL. Imperial Chemical Industries Limited. SN 144,501. Pub. 3–5–63. Filed 5–14–62.

749,628. STAND UP. Olin Mathieson Chemical Corporation. SN 146,209. Pub. 3–5–63. Filed 6–5–62.

749,629. MAXOCLOR. Imperial Chemical Industries Limited. SN 146,772. Pub. 3–5–63. Filed 6–11–62.

749,630. CLINPACT. Standard Brands Incorporated. SN 148,095. Pub. 3–5–63. Filed 6–29–62.

749,631. DETECTOGEN. Specific Serums Inc. SN 149,413. Pub. 3–5–63. Filed 7–19–62.

749,632. PLASMATROL. Specific Serums Inc. SN 149,414. Pub. 3–5–63. Filed 7–19–62.

749,633. CHLORTHION. Farbenfabriken Bayer Aktiengesellschaft. SN 149,926. Pub. 3–5–63. Filed 7–27–62.

749,634. BEWOPLAC. Becker & Company Limited. SN 150,008. Pub. 3–5–63. Filed 7–30–62.

749,635. DRIMALAN. Sandoz, Inc. SN 150,460. Pub. 3–5–63. Filed 8–3–62.

749,636. ARTISIL. Sandoz, Inc. SN 151,528. Pub. 3–5–63. Filed 8–20–62.

Class 10—Fertilizers

749,637. GOLF. Northrup, King & Co. SN 148,831. Pub. 3–5–63. Filed 7–11–62.

Class 12—Construction Materials

749,638. TRUSS-SKIN. M.P.H. Manufacturing Corporation, Inc. SN 32,965. Pub. 5–5–59. Filed 7–1–57.

749,639. SPARTAN AND DESIGN. Major Pool Equipment Corp. SN 143,542. Pub. 3–5–63. Filed 5–1–62.

749,640. CLL. International Minerals & Chemical Corporation. SN 143,834. Pub. 3–5–63. Filed 5–4–62.

749,641. RUCORAIL. Rubber Corporation of America. SN 144,890. Pub. 3–5–63. Filed 5–17–62.

749,642. CARE-FREE. General Aluminum Products, Inc. SN 145,072. Pub. 3–5–63. Filed 5–21–62.

749,643. EXPOSAIC AND DESIGN. Dixie Concrete Products, Inc. SN 146,278. Pub. 3–5–63. Filed 6–6–62.

749,644. EXPOSAIC. Dixie Concrete Products, Inc. SN 146,279. Pub. 3–5–63. Filed 6–6–62.

749,645. F AND DESIGN. Facade, Inc. SN 146,604. Pub. 3–5–63. Filed 6–11–62.

749,646. HARCOR K. Harbison-Walker Refractories Company. SN 146,722. Pub. 3–5–63. Filed 6–12–62.

749,647. ART-O-RAMA. Art-O-Rama, Inc. SN 150,670. Pub. 3–5–63. Filed 8–7–62.

749,648. AW AND DESIGN. Andersen Corporation. SN 150,910. Pub. 3–5–63. Filed 8–10–62.

749,649. USP AND DESIGN. United States Plywood Corporation. SN 150,983. Pub. 3–5–63. Filed 8–10–62.

749,650. TRI-ZEN. The Mints Company. SN 151,247. Pub. 3–5–63. Filed 8–15–62.

749,651. VESTAL AND DESIGN. Vestal Manufacturing Company. SN 151,278. Pub. 3–5–63. Filed 8–15–62.

749,652. EVANITE. Evans Products Company. SN 151,405. Pub. 3–5–63. Filed 8–17–62.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

749,610. CONSOLIDATED CERTIFICATE. See Class 2.

749,653. CONTOUR. American Radiator & Standard Sanitary Corporation. SN 103,003. Pub. 3–5–63. Filed 8–19–60.

749,654. PYROLITE. Akron Brass Company, assignee, by mesne assignments, of Akron Brass Manufacturing Company, Inc. SN 126,715. Pub. 3–5–63. Filed 8–28–61.

749,655. HANOVER AND SYMBOL OF STAR. Continental Copper & Steel Industries, Inc. SN 128,013. Pub. 3–5–63. Filed 9–18–61.

749,656. E-Z. E. H. Tate Company. SN 131,524. Pub. 3–5–63. Filed 11–7–61.

749,657. DANDEE. E. H. Tate Company. SN 131,525. Pub. 3–5–63. Filed 11–7–61.

749,658. WEAREVER. E. H. Tate Company. SN 131,526. Pub. 3–5–63. Filed 11–7–61.

749,659. U AND DESIGN. United Wholesale Building Supply Company. SN 134,292. Pub. 3–5–63. Filed 12–18–61.

749,660. EMPRESS. M & H Industries. SN 134,651. Pub. 3–5–63. Filed 12–26–61.

749,661. ALPSCO. William H. Almon, d.b.a. William H. Almon Co. SN 139,913. Pub. 3–5–63. Filed 3–15–62.

749,662. REDI-SEAL. Imperial-Eastman Corporation. SN 140,949. Pub. 3–5–63. Filed 3–28–62.

749,663. INSULRITE. The Lattimer-Stevens Company. SN 142,326. Pub. 3–5–63. Filed 4–16–62.

749,664. LYON. Lyon Metal Products, Incorporated. SN 144,512. Pub. 3–5–63. Filed 5–14–62.

Class 14—Metals and Metal Castings and Forgings

749,665. BESCAST. Bescast, Inc. SN 128,951. Pub. 3–5–63. Filed 10–2–61.

749,666. MICROTOPE GAUGE ACCURACY AND DESIGN. American Steel Corporation. SN 139,565. Pub. 3–5–63. Filed 3–12–62.

749,667. INTORQ. Inland Steel Company. SN 140,456. Pub. 3–5–63. Filed 3–22–62.

749,668. MASTER-DRILL. American Saw & Mfg. Company. SN 142,396. Pub. 3–5–63. Filed 4–17–62.

749,669. PLANAR. Atlantic Casting & Engineering Corp. SN 142,996. Pub. 3–5–63. Filed 4–25–62.

749,670. GRANALITE. Granite City Steel Company. SN 143,372. Pub. 3–5–63. Filed 4–30–62.

749,671. PALINEY. The J. M. Ney Company. SN 143,555. Pub. 3–5–63. Filed 5–1–62.

749,672. NEYDIUM. The J. M. Ney Company. SN 143,556. Pub. 3–5–63. Filed 5–1–62.

749,673. AIRKROMITE. E. W. Bliss Company. SN 143,793. Pub. 3–5–63. Filed 5–4–62.

749,674. CU-NEL. Calumet & Hecla, Inc. SN 143,929. Pub. 3–5–63. Filed 5–7–62.

749,675. ALLCAST. Apex Smelting Company. SN 144,036. Pub. 3–5–63. Filed 5–8–62.

Class 15—Oils and Greases

749,676. TRUXOYL. W. H. Barber Oil Company, assignee, by mesne assignments, of W. H. Barber Company. SN 103,318. Pub. 3–5–63. Filed 8–24–60.

749,677. PROPULL. Ralm Products, Incorporated. SN 130,301. Pub. 3–5–63. Filed 10–19–61.

749,678. ELOSLIP. Elox Corporation of Michigan. SN 147,192. Pub. 3–5–63. Filed 6–19–62.

Class 16—Protective and Decorative Coatings

749,679. BEHRTHANE. Behr Process Corp. SN 146,006. Pub. 3–5–63. Filed 6–4–62.

749,680. L & M. Longman and Martines, Inc. SN 150,701. Pub. 3–5–63. Filed 8–7–62.

749,681. OWATROL. The Flood Company. SN 151,673. Pub. 3–5–63. Filed 8–22–62.

Class 17—Tobacco Products

749,682. GRSS AND DESIGN. J. W. Fitzpatrick & Son, Incorporated. SN 137,226. Pub. 3–5–63. Filed 2–5–62.

749,683. BELAIR. Brown & Williamson Tobacco Corporation. SN 147,435. Pub. 3-5-63. Filed 6-22-62.

749,684. EUROPA. Petri Cigar Company, assignee, by mesne assignments, of Altamore Brothers, Inc. SN 148,560. Pub. 3-5-63. Filed 7-9-62.

749,685. LA GIOIA AND DESIGN. Petri Cigar Company, assignee, by mesne assignments, of Altamore Brothers, Inc. SN 148,562. Pub. 2-5-63. Filed 7-9-62.

Class 18 — Medicines and Pharmaceutical Preparations

749,686. INSTAGESIC. Colgate-Palmolive Company. SN 103,997. Pub. 1-24-61. Filed 9-6-60.

749,687. MOBIL-MIX. Sea Board Supply Company. SN 133,991. Pub. 3-5-63. Filed 12-13-61.

749,688. CENTROTON. Dr. A. Wander, S.A. SN 151,381. Pub. 3-5-63. Filed 8-16-62.

749,689. SUPER DRUGS AND DESIGN. The Kroger Co. SN 155,471. Pub. 3-5-63. Filed 10-19-62.

Class 19 — Vehicles

749,609. CONSOLIDATED CERTIFICATE. See Class 2.

749,690. GEM JR. National Research Associates, Inc. SN 129,781. Pub. 3-5-63. Filed 10-12-61.

749,691. SAFE-T-KING AND DESIGN. Shore-Calnevar, Inc., assignee of Frank Hall. SN 135,796. Pub. 10-23-62. Filed 1-15-62.

749,692. SAFETI-KING. Shore-Calnevar, Inc. SN 142,362. Pub. 10-23-62. Filed 4-16-62.

749,693. OMC AND DESIGN. Outboard Marine Corporation. SN 151,160. Pub. 3-5-63. Filed 8-14-62.

Class 20 — Linoleum and Oiled Cloth

749,694. MULTICOVER. Multicolor Gravure Corporation. SN 151,155. Pub. 3-5-63. Filed 8-14-62.

Class 21 — Electrical Apparatus, Machines, and Supplies

749,695. PYROXY. Nemo Labs, Inc. SN 128,079. Pub. 3-5-63. Filed 9-18-61.

749,696. ENCAPSULAYER. Photocircuits Corporation. SN 131,392. Pub. 3-5-63. Filed 11-6-61.

749,697. TEMPO. Gill Glass & Fixture Co. Inc. SN 134,606. Pub. 3-5-63. Filed 12-28-61.

749,698. THRIFTY SPOOL. Harold R. Swartzendruber, d.b.a. Major Products Company. SN 136,839. Pub. 3-5-63. Filed 1-29-62.

749,699. COMPACT-8. Anaconda Wire and Cable Company. SN 142,401. Pub. 3-5-63. Filed 4-17-62.

749,700. MICROKIT. P. R. Mallory & Co. Inc. SN 142,478. Pub. 3-5-63. Filed 4-4-62.

749,701. S AND DESIGN. Consolidated Systems Corporation. SN 142,796. Pub. 3-5-63. Filed 4-23-62.

749,702. SUPER SEW. Consolidated Sewing Machine Corp. SN 142,929. Pub. 3-5-63. Filed 4-24-62.

749,703. ACCURETCH. Electro-Mec Instrument Corporation. SN 148,375. Pub. 3-5-63. Filed 7-5-62.

749,704. FARVIS. Fernseh Gesellschaft mit beschränkter Haftung, Zweigniederlassung Darmstadt. SN 149,728. Pub. 3-5-63. Filed 7-25-62.

749,705. MONORUPTR. A. B. Chance Company. SN 150,019. Pub. 3-5-63. Filed 7-30-62.

749,706. ARVIN. Arvin Industries, Inc. SN 150,215. Pub. 3-5-63. Filed 8-1-62.

749,707. CI. Crystalonics, Inc. SN 150,231. Pub. 3-5-63. Filed 8-1-62.

749,708. SANI-MAGIC PRISCILLA. Air-Way Sanitizor, Inc. SN 150,302. Pub. 3-5-63. Filed 8-2-62.

749,709. MINI-MAGIC. Air-Way Sanitizor, Inc. SN 150,303. Pub. 3-5-63. Filed 8-2-62.

749,710. HOPSTRETCHER. The Gabriel Company. SN 151,044. Pub. 3-5-63. Filed 8-13-62.

749,711. AMP-FINE-Y-R. AMP Incorporated. SN 151,112. Pub. 3-5-63. Filed 8-14-62.

749,712. MISTER 'LECTRIC' AND DESIGN. Travco Plastics Co., Inc. SN 151,540. Pub. 3-5-63. Filed 8-20-62.

Class 22 — Games, Toys, and Sporting Goods

749,610. CONSOLIDATED CERTIFICATE. See Class 2.

749,713. CHEMWELD. American Machine & Foundry Company. SN 123,259. Pub. 3-5-63. Filed 7-3-61.

749,714. BEANY-COPTER. Mattel, Inc. SN 126,937. Pub. 3-5-63. Filed 8-30-61.

749,715. RACE 'N ROAD. Louis Marx & Company, Inc. SN 131,879. Pub. 3-5-63. Filed 11-6-61.

749,716. WISHBONE SUPER SKEG AND DESIGN. W. J. Voit Rubber Corporation. SN 132,619. Pub. 3-5-63. Filed 11-22-61.

749,717. REDI-FLIP. James A. Stecklein. SN 133,177. Pub. 3-5-63. Filed 12-1-61.

749,718. DOW-LEE. Dow-Lee Co. SN 133,773. Pub. 3-5-63. Filed 12-11-61.

749,719. UNICO. American Foreign Industries, Inc. SN 133,924. Pub. 3-5-63. Filed 12-13-61.

749,720. BOWLING BUTLER. George R. Noel. SN 133,981. Pub. 3-5-63. Filed 12-12-61.

749,721. TONKA AND DESIGN. Tonka Toys, Inc. SN 141,660. Pub. 3-5-63. Filed 4-5-62.

749,722. RANGER. Bear Archery Company. SN 142,075. Pub. 3-5-63. Filed 4-12-62.

749,723. EXER-GENIE. Exer-Genie, Inc. SN 142,699. Pub. 3-5-63. Filed 4-20-62.

749,724. ROLLO MATH. George Almashy, d.b.a. George Almashy Company. SN 142,993. Pub. 3-5-63. Filed 4-25-62.

749,725. CANADIAN BEAVER. St. Lawrence Manufacturing Co., Inc. SN 143,574. Pub. 3-5-63. Filed 5-1-62.

749,726. WILLY NILLY. Bar Zim Toy Mfg. Co., Inc. SN 143,714. Pub. 3-5-63. Filed 5-3-62.

749,727. ED-U-KIT. Ed-U-Cards Manufacturing Corporation. SN 143,728. Pub. 3-5-63. Filed 5-3-62.

749,728. TOP NOTCH. Wilson Sporting Goods Co. SN 143,898. Pub. 3-5-63. Filed 5-4-62.

749,729. A2000. Wilson Sporting Goods Co. SN 143,899. Pub. 3-5-63. Filed 5-4-62.

749,730. HAPPI-CHEW. Reliance International Mfg. Ltd. SN 144,100. Pub. 3-5-63. Filed 5-8-62.

749,731. HAPPI-TUG RING. Reliance International Mfg. Ltd. SN 144,101. Pub. 3-5-63. Filed 5-8-62.

749,732. HAPPI-LOOP. Reliance International Mfg. Ltd. SN 144,102. Pub. 3-5-63. Filed 5-8-62.

749,733. HAPPI-ROLL. Reliance International Mfg. Ltd. SN 144,103. Pub. 3-5-63. Filed 5-8-62.

749,734. FAMOUS PLAYER. Wilson Sporting Goods Co. SN 144,429. Pub. 3-5-63. Filed 5-11-62.

749,735. CHASE BACK. Milton Bradley Company. SN 146,160. Pub. 3-5-63. Filed 6-5-62.

749,736. MATCH POINT. Wilson Sporting Goods Co. SN 146,243. Pub. 3-5-63. Filed 6-5-62.

749,737. GREEN HI. Wilson Sporting Goods Co. SN 146,244. Pub. 3-5-63. Filed 6-5-62.

749,738. ACTIONFLEX. Holiday Mfg., Inc. SN 146,380. Pub. 3-5-63. Filed 6-7-62.

749,739. ACTIONROD. Holiday Mfg., Inc. SN 146,381. Pub. 3-5-63. Filed 6-7-62.

749,740. FLEX-A-PUTT. Dynamics, Ltd. SN 146,475. Pub. 3-5-63. Filed 6-8-62.

Class 23 — Cutlery, Machinery, and Tools, and Parts Thereof

749,609. CONSOLIDATED CERTIFICATE. See Class 2.

749,610. CONSOLIDATED CERTIFICATE. See Class 2.

749,741. REV-O-LOC. Rev-O-Loc Clutch Corporation. SN 100,863. Pub. 3-5-63. Filed 7-14-60.

749,742. DYNAVAC. William C. N. Hopkins, d.b.a. American Metal Products Company and American Metal Products International Co. SN 112,263. Pub. 3-5-63. Filed 1-23-61.

749,743. GAS COOL AND DESIGN. Aero-Test Equipment Company, Inc. SN 119,906. Pub. 3-5-63. Filed 5-15-61.

749,744. THE ORIGINAL YARD VAC AND DESIGN. Yard Vac, Inc. SN 126,062. Pub. 3-5-63. Filed 8-15-61.

749,745. V. Swingline Inc. SN 131,633. Pub. 3-5-63. Filed 11-8-61.

749,746. MINER. Miner Saw Works, Inc. SN 131,697. Pub. 3-5-63. Filed 11-9-61.

749,747. BALEWEL. East Chicago Machine Tool Corporation. SN 131,821. Pub. 3-5-63. Filed 11-13-61.

749,748. AMBRETTE CYCLO-MIXER. Ambrette Machinery Corp. SN 132,286. Pub. 3-5-63. Filed 11-20-61.

749,749. JUICERATOR. Acme Juicer Mfg. Co. SN 134,170. Pub. 3-5-63. Filed 12-18-61.

749,750. DEPLUTION. Ralph B. Carter Company. SN 134,941. Pub. 3-5-63. Filed 1-2-62.

749,751. BETTER BUILT TURBOMATIC AND DESIGN. Better Built Machinery Corp. SN 136,104. Pub. 3-5-63. Filed 1-19-62.

749,752. TRIMATIC. Bennett Marine, Inc. SN 139,378. Pub. 3-5-63. Filed 3-8-62.

749,753. CAL JET AND DESIGN. California Jet Marine and Air Research, Inc. SN 141,157. Pub. 3-5-63. Filed 3-30-62.

749,754. RIDGAL. The Ridge Tool Company. SN 142,451. Pub. 3-5-63. Filed 4-17-62.

749,755. MERCRUISER. Kiekhaefer Corporation. SN 144,075. Pub. 3-5-63. Filed 5-8-62.

749,756. KARBATE. Union Carbide Corporation. SN 144,205. Pub. 3-5-63. Filed 5-9-62.

749,757. ROCKET AND DESIGN. Coburn Manufacturing Company, Inc. SN 145,980. Pub. 3-5-63. Filed 6-1-62.

749,758. BURSA-FILL. Bursak Packaging Machinery Corp. SN 146,974. Pub. 3-5-63. Filed 6-15-62.

749,759. BURSA-PAK. Bursak Packaging Machinery Corp. SN 146,975. Pub. 3-5-63. Filed 6-15-62.

749,760. KOPY-AID. Edanbob Corporation. SN 147,273. Pub. 3-5-63. Filed 6-20-62.

749,761. CRESTLINE. West Coast Sewing Supply Co. SN 147,330. Pub. 3-5-63. Filed 6-20-62.

749,762. TUFTSEAL. Hamac-Hansella Aktiengesellschaft. SN 147,574. Pub. 3-5-63. Filed 6-25-62.

749,763. CRASHSAW. Nelson Douglas Lagere. SN 147,594. Pub. 3-5-63. Filed 6-25-62.

749,764. COLLECT-O-MATIC. Automatic Poultry Feeder Company. SN 147,657. Pub. 3-5-63. Filed 6-26-62.

749,765. OPTIDRESS. Precision Grinding Limited. SN 147,851. Pub. 3-5-63. Filed 6-27-62.

Class 24 — Laundry Appliances and Machines

749,766. QUICK-CLEAN CENTER. General Motors Corporation. SN 144,246. Pub. 3-5-63. Filed 5-10-62.

Class 26 — Measuring and Scientific Appliances

749,610. CONSOLIDATED CERTIFICATE. See Class 2.

749,767. AIM AND ARROW DESIGN. Hagan Chemicals & Controls, Inc. SN 113,014. Pub. 12-12-61. Filed 2-3-61.

749,768. ANKH. Ankh Laboratories, Inc. SN 117,988. Pub. 1-16-62. Filed 4-17-61.

749,769. MASTERMINDER. Charles E. McCracken. SN 142,519. Pub. 3-5-63. Filed 4-18-62.

Class 27 — Horological Instruments

749,770. TUFFY. L. Harris Company, Inc. SN 150,245. Pub. 3-5-63. Filed 8-1-62.

749,771. AUTUMN LEAVES. Benrus Watch Company, Inc. SN 152,198. Pub. 3-5-63. Filed 8-30-62.

Class 28 — Jewelry and Precious-Metal Ware

749,772. LK AND DESIGN. Lazare Kaplan & Sons, Inc. SN 147,476. Pub. 3-5-63. Filed 6-22-62.

749,773. GEN AND DESIGN. Gently Jewelry Manufacturing Co. SN 150,939. Pub. 3-5-63. Filed 8-10-62.

749,774. SFA AND DESIGN. Saks & Company. SN 150,973. Pub. 3-5-63. Filed 8-10-62.

749,775. RA IN DIAMOND DESIGN. Robert Altman Inc. SN 150,989. Pub. 3-5-63. Filed 8-13-62.

749,776. C WITHIN TRIANGLE DESIGN. Murray Caplan, d.b.a. Caplan & Company. SN 151,005. Pub. 3-5-63. Filed 8-13-62.

749,777. NBK. Nudelman, Bratt & Kushner, Inc. SN 151,073. Pub. 3-5-63. Filed 8-13-62.

749,778. ING. Leo Ingwer, d.b.a. Ingwer Jewelry Co. SN 151,139. Pub. 3-5-63. Filed 8-14-62.

Class 29 — Brooms, Brushes, and Dusters

749,779. ROLL-KLEEN. Office Specialties, Inc. SN 129,784. Pub. 3-5-63. Filed 10-12-61.

Class 31 — Filters and Refrigerators

749,609. CONSOLIDATED CERTIFICATE. See Class 2.

749,780. SAFE-AIRE. Walter Haertel Company. SN 129,938. Pub. 3-5-63. Filed 10-16-61.

Class 32 — Furniture and Upholstery

749,781. HARPER HOUSE COLLECTION AND DESIGN. The Maple House. SN 128,906. Pub. 3-5-63. Filed 9-29-61.

749,782. HIGH CROWN AND DESIGN. Dual Manufacturing and Engineering, Incorporated. SN 130,892. Pub. 5-8-62. Filed 10-30-61.

749,783. RONDINE AND DESIGN. S.A.F.F.A. S.p.A. Fabbriche Fiammiferi ed Affini. SN 138,659. Pub. 3-5-63. Filed 2-26-62.

749,784. ASP AND DESIGN. Aurora Steel Products Company. SN 144,440. Pub. 3-5-63. Filed 5-14-62.

749,785. PUBLICK HOUSE COLLECTION AND DESIGN. Heywood-Wakefield Company. SN 147,204. Pub. 3-5-63. Filed 6-19-62.

749,786. (See Class 38 for this trademark.)

Class 34 — Heating, Lighting, and Ventilating Apparatus

749,609. CONSOLIDATED CERTIFICATE. See Class 2.

749,787. ADD-A-LENS. Dazor Manufacturing Corp. SN 127,096. Pub. 3–5–63. Filed 9–1–61.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

749,788. STAR-RIDE II. O.K. Rubber Welders, Incorporated. SN 151,510. Pub. 3–5–63. Filed 8–20–62.

749,789. CENTURY. The Mansfield Tire & Rubber Company. SN 151,684. Pub. 3–5–63. Filed 8–22–62.

749,790. RIFFLEGRIP. The B. F. Goodrich Company. SN 151,816. Pub. 3–5–63. Filed 8–24–62.

749,791. WEATHERGARD. United States Rubber Company. SN 152,170. Pub. 3–5–63. Filed 8–29–62.

Class 36 — Musical Instruments and Supplies

749,792. THE STAR LINE AND DESIGN. Capitol Records, Inc. SN 100,757. Pub. 6–13–61. Filed 7–13–60.

749,793. PEDEX. William G. Sear, d.b.a. Protexorgan Company. SN 149,966. Pub. 3–5–63. Filed 7–27–62.

749,794. PALISADE AND DESIGN. Palisade Record Co. SN 150,447. Pub. 3–5–63. Filed 8–3–62.

749,795. DORSET. Strand Records, Inc. SN 151,620. Pub. 3–5–63. Filed 8–21–62.

749,796. COLPIX RECORDS AND DESIGN. Columbia Pictures Corporation. SN 152,566. Pub. 3–5–63. Filed 9–6–62.

749,797. DIMENSION AND DESIGN. Nevins-Kirshner Associates, Inc. SN 153,200. Pub. 3–5–63. Filed 9–14–62.

Class 37 — Paper and Stationery

749,798. LAVEX. Vereinigte Papierwerke Schickedanz & Co. SN 131,435. Pub. 3–5–63. Filed 11–6–61.

749,799. CHARGA-CHECK. Mangel Stores Corporation. SN 134,476. Pub. 3–5–63. Filed 12–21–61.

Class 38 — Prints and Publications

749,786. RM, ETC. Gellert-Wolfman Publishing Corp. SN 126,589. Pub. 3–5–63. Filed 8–24–61.

749,800. SILKWOOD. Yankee Artists, Inc. SN 120,464. Pub. 3–5–63. Filed 5–19–61.

749,801. E DESIGN. Eastern Press, Inc. SN 123,187. Pub. 3–5–63. Filed 6–30–61.

749,802. MEMOTUTOR. U.S. Industries, Inc. SN 131,781. Pub. 3–5–63. Filed 11–9–61.

749,803. CAMEO. Norcross, Inc. SN 133,982. Pub. 3–5–63. Filed 12–13–61.

749,804. HT IN POLYGON AND WING DESIGN. Hughes Tool Company, d.b.a. Hughes Tool Company, Aircraft Division. SN 134,231. Pub. 3–5–63. Filed 12–18–61.

749,805. UNION BANK AND DESIGN. Union Bank. SN 144,025. Pub. 3–5–63. Filed 5–7–62.

749,806. CASTLE AND DESIGN. Castle Ltd. SN 144,937. Pub. 1–1–63. Filed 5–18–62.

749,807. FOUR SQUARE AND DESIGN. The New English Library Limited. SN 149,586. Pub. 3–5–63. Filed 7–23–62.

Class 39 — Clothing

749,808. TOM TOM AND DESIGN. Manuel Archuleta, d.b.a. Tom Tom Symbolized Craft. SN 115,292. Pub. 3–5–63. Filed S.R. 3–10–61; Am. P.R. 12–4–61.

749,809. HANRO. Handschin & Ronus Aktiengesellschaft. SN 124,087. Pub. 5–22–62. Filed 7–17–61.

749,810. MARK DOWNES. Genesco Inc. SN 129,675. Pub. 3–5–63. Filed 10–11–61.

749,811. MASTER NET. Du Barry of Hollywood, Inc. SN 130,437. Pub. 3–5–63. Filed 10–23–61.

749,812. THOM McAN TWISTERS. Melville Shoe Corporation. SN 131,593. Pub. 3–5–63. Filed 11–8–61.

749,813. THE UNIFORM SHOE. Allure Shoe Corporation. SN 134,171. Pub. 3–5–63. Filed 12–18–61.

749,814. DEELON. Dee Sportswear, Inc. SN 143,606. Pub. 3–5–63. Filed 5–2–62.

749,815. LADY EXCELLO. Excello Shirts, Inc. SN 144,158. Pub. 3–5–63. Filed 5–9–62.

749,816. TAM 'N' TAFFY. Chas. Chipman's Sons Co., Inc. SN 146,466. Pub. 3–5–63. Filed 6–8–62.

749,817. WOOLAMATIC. Drummond Knitwear Co., Ltd. SN 146,473. Pub. 3–5–63. Filed 6–8–62.

749,818. ELEVEN EAST. Henry Rosenfeld Inc. SN 147,229. Pub. 3–5–63. Filed 6–19–62.

749,819. SPAVALDO. Fiorella's, Inc. SN 148,300. Pub. 3–5–63. Filed 7–3–62.

749,820. AUTUMN GLOW. Shelby Seamless Hosiery Mills, Inc. SN 148,661. Pub. 3–5–63. Filed 7–9–62.

749,821. SARONG. Sarong, Inc. SN 148,910. Pub. 3–5–63. Filed 7–12–62.

749,822. TIP-TOE. Bear Brand Hosiery Co. SN 148,946. Pub. 3–5–63. Filed 7–13–62.

Class 40 — Fancy Goods, Furnishings, and Notions

749,823. PERM-O-COMB. Eastern Seaboard Plastics, Inc. SN 143,114. Pub. 3–5–63. Filed 4–26–62.

749,824. FROSTY. Sta-Rite Ginnie-Lou, Inc. SN 147,324. Pub. 3–5–63. Filed 6–20–62.

749,825. READI-WIG. Les Wigs, Inc. SN 147,597. Pub. 3–5–63. Filed 6–25–62.

Class 42 — Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

749,826. HANRO. Handschin & Ronus Aktiengesellschaft. SN 124,086. Pub. 5–22–62. Filed 7–17–61.

749,827. JERSELINE. Staron Inc. SN 139,792. Pub. 3–5–63. Filed 3–13–62.

749,828. EXCELAIRE. John B. Ellison & Sons Co., Ltd. SN 141,420. Pub. 3–5–63. Filed 4–3–62.

749,829. CS AND DESIGN. Clark-Schwebel Fiber Glass Corporation. SN 141,501. Pub. 3–5–63. Filed 4–4–62.

749,830. NEVA-SHED. Fieldcrest Mills, Inc. SN 145,156. Pub. 3–5–63. Filed 5–21–62.

749,831. S'NO FOOLIN. Collins & Aikman Corporation. SN 148,145. Pub. 3–5–63. Filed 7–2–62.

749,832. ILEANNA. Fieldcrest Mills, Inc. SN 148,492. Pub. 3–5–63. Filed 7–6–62.

749,833. CORT DE BEAU. Fieldcrest Mills, Inc. SN 148,493. Pub. 3–5–63. Filed 7–6–62.

749,834. KEX WALK OFF. Callaway Mills Company. SN 148,709. Pub. 3–5–63. Filed 7–10–62.

749,835. BUDGET PACT. Triangle Manufacturing Company, Inc. SN 148,767. Pub. 3–5–63. Filed 7–10–62.

749,836. HOUSE OF BEAUTY. Triangle Manufacturing Company, Inc. SN 148,768. Pub. 3–5–63. Filed 7–10–62.

749,837. STERIL-FAB. Triangle Manufacturing Company, Inc. SN 148,771. Pub. 3–5–63. Filed 7–10–62.

749,838. GEMIKNIT. Merino Mills, Ltd. SN 148,827. Pub. 3–5–63. Filed 7–11–62.

749,839. SURF SET. J. P. Stevens & Co., Inc. SN 149,017. Pub. 3–5–63. Filed 7–13–62.

749,840. STORM BAN. J. P. Stevens & Co., Inc. SN 149,018. Pub. 3–5–63. Filed 7–13–62.

749,841. SURF SONG. J. P. Stevens & Co., Inc. SN 149,019. Pub. 3–5–63. Filed 7–13–62.

749,842. WIND LOCK. J. P. Stevens & Co., Inc. SN 149,020. Pub. 3–5–63. Filed 7–13–62.

749,843. BRAGGIN. The Springs Cotton Mills. SN 149,335. Pub. 3–5–63. Filed 7–18–62.

749,844. SPRINGATEEN. The Springs Cotton Mills. SN 149,337. Pub. 3–5–63. Filed 7–18–62

749,845. GAMBIT. The Springs Cotton Mills. SN 149,339. Pub. 3–5–63. Filed 7–18–62.

Class 44 — Dental, Medical, and Surgical Appliances

749,846. EB AND DESIGN. Eckstein Bros. SN 133,775. Pub. 3–5–63. Filed 12–11–61.

749,847. PYE. Pye Limited. SN 137,274. Pub. 3–5–63. Filed 2–5–62.

749,848. MARCONI. Marconi's Wireless Telegraph Company Limited. SN 143,848. Pub. 3–5–63. Filed 5–4–62.

749,849. WILLCO. Willco-Horgerate Medizinische Apparatebau GmbH. SN 144,122. Pub. 3–5–63. Filed 5–8–62.

749,850. P-D MEDICAMENTA VERA AND DESIGN. Parke, Davis & Company. SN 151,250. Pub. 3–5–63. Filed 8–15–62.

749,851. REVELATION. Western Auto Supply Company. SN 151,281. Pub. 3–5–63. Filed 8–15–62.

749,852. CARRY-AIR. Acme Protection Equipment Company. SN 151,385. Pub. 3–5–63. Filed 8–17–62.

749,853. FAIRFIELD. Parke, Davis & Company. SN 152,623. Pub. 3–5–63. Filed 9–6–62.

749,854. STRATFORD. Parke, Davis & Company. SN 152,823. Pub. 3–5–63. Filed 9–10–62.

749,855. SURGIFOAM. The Scholl Mfg. Co. Inc. SN 152,838. Pub. 3–5–63. Filed 9–10–62.

749,856. GARDS. Hospital Specialty Company. SN 153,085. Pub. 3–5–63. Filed 9–13–62.

Class 45 — Soft Drinks and Carbonated Waters

749,857. IFP. Blue Seal Extract Co., Inc. SN 121,970. Pub. 3–5–63. Filed 6–14–61.

749,858. HI-BALL HEALTH. Ulrich B. Buchanan. SN 134,093. Pub. 3–5–63. Filed 12–15–61.

749,859. COTT. Cott Beverage Corporation. SN 143,214. Pub. 3–5–63. Filed 4–27–62.

Class 46 — Foods and Ingredients of Foods

749,860. MINUET AND DESIGN. Staff Supermarket Associates, Inc. SN 73,625. Pub. 1–5–60. Filed 5–13–59.

749,861. PRIDE BURGER BALLS. Pride, Inc., d.b.a. Pride Packing Company. SN 122,112. Pub. 3–5–63. Filed 6–15–61.

749,862. BALADIN. Ouleva S.A. SN 123,829. Pub. 3–5–63. Filed 7–12–61.

749,863. PAKITA. Ouleva S.A. SN 123,832. Pub. 3–5–63. Filed 7–12–61.

749,864. LOYAL GENTRY AND DESIGN. Lily Lake Cheese Co., Inc. SN 125,516. Pub. 3–5–63. Filed 8–7–61.

749,865. FLAKE GARDEN. The Borden Company. SN 129,549. Pub. 3–5–63. Filed 10–9–61.

749,866. DIAMANTE AND DESIGN. Rice Growers Association of California. SN 129,980. Pub. 3–5–63. Filed 10–16–61.

749,867. PARISIAN AND DESIGN. Benon Parisian Fontana Bakeries, Inc., d.b.a. Parisian Bakeries and/or Parisian Baking Company. SN 130,499. Pub. 3–5–63. Filed 10–23–61.

749,868. SULTANA DESIGN. National Biscuit Company. SN 133,006. Pub. 3–5–63. Filed 11–29–61.

749,869. SUPER DUPER. S. M. Flickinger Co. Inc. SN 133,256. Pub. 3–5–63. Filed 12–4–61.

749,870. CITROLY. Ouleva S.A. SN 133,405. Pub. 3–5–63. Filed 12–5–61.

749,871. NORTON'S. Norton & McElroy Produce, Inc. SN 134,663. Pub. 3–5–63. Filed 12–26–61.

749,872. OLD MILL. Spaulding Bakeries Incorporated. SN 143,173. Pub. 10–30–62. Filed 4–26–62.

749,873. CAMPECHE-STAR. Congeladora de Golfo Del Campeche, S.A. SN 144,147. Pub. 3–5–63. Filed 5–9–62.

749,874. MILKANA. Margarine-Union Gesellschaft mit beschränkter Haftung. SN 145,101. Pub. 3–5–63. Filed 5–21–62.

749,875. PERT. Tri-Valley Packing Association. SN 145,636. Pub. 3–5–63. Filed 5–28–62.

749,876. REGAL "400." Ramo Inc., assignee of Sunshine Pecan Company. SN 145,976. Pub. 3–5–63. Filed 6–1–62.

749,877. OAT KRISPIES. Kellogg Company. SN 146,064. Pub. 3–5–63. Filed 6–4–62.

749,878. FAMILY PRIDE. Norbest Turkey Growers Association. SN 147,141. Pub. 3–5–63. Filed 6–18–62.

749,879. FIGURE CONTROL. Duffy-Mott Company, Inc. SN 147,710. Pub. 3–5–63. Filed 6–26–62.

749,880. CLINPACT. Standard Brands Incorporated. SN 148,096. Pub. 3–5–63. Filed 6–29–62.

749,881. BREAKFAST GOLD. Osceola Fruit Distributors, d.b.a. Carta Gold Company. SN 149,198. Pub. 3–5–63. Filed 7–17–62.

749,882. SWISS GARDEN. Schachtelkäse Fabrik AG. SN 149,774. Pub. 3–5–63. Filed 7–25–62.

749,883. ANN PAGE AND DESIGN. The Great Atlantic & Pacific Tea Company, Inc. SN 150,001. Pub. 3–5–63. Filed 7–30–62.

749,884. MEADOW BROOK. Weidner Canning Co., Inc. SN 150,827. Pub. 3–5–63. Filed 8–8–62.

749,885. REPRESENTATION OF A SHIP. Moore's Seafood Products, Inc. SN 151,349. Pub. 3–5–63. Filed 8–16–62.

749,886. AVOGATOR. South Florida Growers Association, Inc. SN 151,618. Pub. 3–5–63. Filed 8–21–62.

749,887. MESA VIEW. Western Meat Packers, Inc. SN 151,793. Pub. 3–5–63. Filed 8–23–62.

749,888. VIT-A-ZINE. Vit-A-Zine, Inc. SN 152,023. Pub. 3–5–63. Filed 8–27–62.

749,889. TREAT-PAK. General Foods Corporation. SN 152,058. Pub. 3–5–63. Filed 8–28–62.

749,890. BIG 5. Fruit Products Corporation. SN 152,296. Pub. 3–5–63. Filed 8–31–62.

Class 49 — Distilled Alcoholic Liquors

749,891. KENTUCKY BEAU AND DESIGN. Medley Distilling Company, d.b.a. Kentucky Beau Distilling Company. SN 125,067. Pub. 3–5–63. Filed 7–31–61.

749,892. CHINAMARTINI. Martini & Rossi Corporation. SN 131,056. Pub. 3–5–63. Filed 10–31–61.

749,893. CANADA'S DOMINION RARE. Foreign Vintages, Inc. SN 131,120. Pub. 3–5–63. Filed 11–1–61.

749,894. QUEBEC ROYAL. Foreign Vintages, Inc. SN 143,521. Pub. 3–5–63. Filed 5–1–62.

Class 50—Merchandise Not Otherwise Classified

749,609. CONSOLIDATED CERTIFICATE. See Class 2.

749,895. PLASTI-ART. Bert Hendriks. SN 132,044. Pub. 3-5-63. Filed 11-15-61.

749,896. "LIVING LAB" AND DESIGN. Ward's Natural Science Establishment, Inc. SN 133,036. Pub. 3-5-63. Filed 11-29-61.

Class 51—Cosmetics and Toilet Preparations

749,897. CLEAN GLOW. Viviane Woodard Corporation, by change of name from Viviane Woodard Cosmetics. SN 74,627. Pub. 10-4-60. Filed 5-27-59.

749,898. RAPTURE. Avon Products, Inc. SN 121,258. Pub. 3-5-63. Filed 6-2-61.

749,899. ILLICIT. Pierre d'Embrun, Ltd. SN 131,358. Pub. 3-5-63. Filed 11-6-61.

749,900. FORMALE AND DESIGN. Carmel Myers, Inc. SN 148,060. Pub. 3-5-63. Filed 6-29-62.

749,901. WINTERMINT. Stanley Home Products, Inc. SN 148,098. Pub. 3-5-63. Filed 6-29-62.

749,902. FACIL. The Mitchum Company. SN 148,741. Pub. 3-5-63. Filed 7-10-62.

749,903. TORSO. Male, Inc. SN 148,982. Pub. 3-5-63. Filed 7-13-62.

Class 52—Detergents and Soaps

749,904. GEE WHIZ. G. E. Smith, Inc. SN 127,502. Pub. 3-5-63. Filed 9-8-61.

749,905. DODANE. Witco Chemical Company, Inc. SN 131,442. Pub. 3-5-63. Filed 11-6-61.

749,906. MAC'S. Mac's Super Gloss Co. Inc. SN 133,389. Pub. 3-5-63. Filed 12-5-61.

749,907. MICRO-ZYME AND DESIGN. Great Lakes Biochemical Co., Inc. SN 145,545. Pub. 3-5-63. Filed 5-28-62.

749,908. SPEEDY-Q. Ross and White Company. SN 148,846. Pub. 3-5-63. Filed 7-11-62.

749,909. VON-SWEEP. Vonco Corporation, Inc., assignee of Vonco Products Co., Inc. SN 149,617. Pub. 3-5-63. Filed 7-23-62.

Service Marks

Class 100—Miscellaneous

749,910. THE UNSEEN HOST AND DESIGN. Admiral Sales Corporation. SN 121,156. Pub. 3-5-63. Filed 6-1-61.

749,911. AAI AND DESIGN. Aircraft Armaments, Inc. SN 131,641. Pub. 3-5-63. Filed 11-9-61.

Class 101—Advertising and Business

749,912. CONTROL-O-GRAM AND DESIGN. Heath-Stearns and Associates, Inc. SN 120,720. Pub. 3-5-63. Filed 5-24-61.

749,913. ARKLA AND DESIGN. Arkansas Louisiana Gas Company. SN 131,254. Pub. 3-5-63. Filed 11-3-61.

749,914. TELE-TAPE. Mailograph Company, Inc. SN 131,376. Pub. 3-5-63. Filed 11-6-61.

749,915. BBB AND DESIGN. Association of Better Business Bureaus, Inc. SN 152,560. COLLECTIVE MARK. Pub. 3-5-63. Filed 9-6-62.

749,916. FINDERHOOD. Finderhood, Inc. SN 152,686. Pub. 3-5-63. Filed 9-7-62.

Class 102—Insurance and Financial

749,917. DESIGN OF EAGLE SUPERIMPOSED ON A CAPITOL DOME AND CIRCULAR FIGURE. First Federal Savings and Loan Association of Akron. SN 126,187. Pub. 3-5-63. Filed 8-1-61.

749,918. NF AND TRIAD DESIGN. Continental Casualty Company. SN 129,466. Pub. 3-5-63. Filed 10-9-61.

749,919. SAVE A PIECE OF EVERY DOLLAR AND DESIGN. Watertown Federal Savings and Loan Association. SN 131,096. Pub. 3-5-63. Filed 10-31-61.

749,920. MR. PLANS AND DESIGN. Devon Plans Corporation. SN 133,227. Pub. 3-5-63. Filed 11-17-61.

Class 103—Construction and Repair

749,921. KM. Kerr-McGee Oil Industries, Inc. SN 124,098. Pub. 3-5-63. Filed 7-17-61.

749,922. MIDAS BRAKE SHOPS AND DESIGN. Midas, Inc. SN 134,036. Pub. 3-5-63. Filed 12-14-61.

749,923. HUGGY AND DESIGN OF A BEAVER. Arthur R. Huggins, d.b.a. H & H Builders. SN 148,189. Pub. 3-5-63. Filed 7-3-62.

Class 105—Transportation and Storage

749,924. L & N THE DIXIE LINE AND DESIGN. Louisville and Nashville Railroad Company. SN 142,202. Pub. 3-5-63. Filed 4-13-62.

749,925. PAMCO. Planned Auto Management Company. SN 147,306. Pub. 3-5-63. Filed 6-20-62.

Class 106—Material Treatment

749,926. NALOY. National Broach and Machine Co. SN 149,113. Pub. 3-5-63. Filed 7-16-62.

Class 107—Education and Entertainment

749,927. THE QUIET MEN. Louis Jacob Weerts, d.b.a. Roger Williams. SN 145,423. Pub. 3-5-63. Filed 5-24-62.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 4—Abrasives and Polishing Materials

749,928. M. E. Blumenfeld, d.b.a. Dry Gloss Manufacturing Company, Savannah, Ga. SN 136,192. Filed P.R. 1-22-62; Am. S.R. 9-24-62.

TRE-TED

For Cleaning and Polishing Pad Impregnated With a Polish.
First use on or about Apr. 13, 1961.

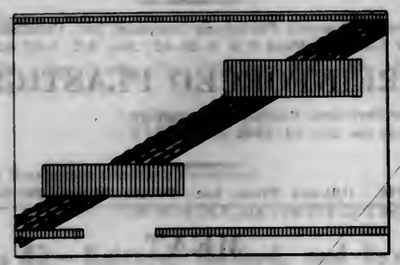
Class 6—Chemicals and Chemical Compositions

749,929. Genuine Parts Company, Atlanta, Ga. SN 87,223. Filed P.R. 12-14-59; Am. S.R. 11-5-62.



The drawing is lined for red, yellow, and black.
For Permanent Type Chemical Anti-Freeze for Use in Automotive Vehicles.
First use Aug. 28, 1959.

749,930. Animal Repellents, Inc., Griffin, Ga. SN 111,637. Filed P.R. 1-11-61; Am. S.R. 3-18-63.



The drawing is lined to indicate the color red.
For Snake Repellent and Poison.
First use Sept. 27, 1960.

749,931. Animal Repellents, Inc., Griffin, Ga. SN 111,638. Filed P.R. 1-11-61; Am. S.R. 3-18-63.

SNAKE-STOP

For Snake Repellent and Poison.
First use Sept. 27, 1960.

749,932. Cook Chemical Company, Kansas City, Mo. SN 117,460. Filed P.R. 4-10-61; Am. S.R. 12-7-62.



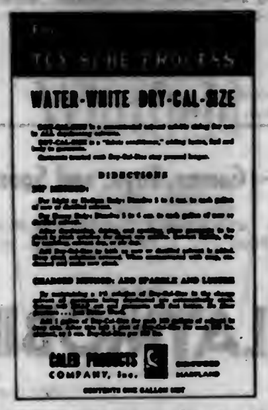
For Insecticides.
First use Mar. 10, 1961.

749,933. Lunsford-Alden, Rye, N.Y. SN 145,096. Filed P.R. 5-21-62; Am. S.R. 3-20-63.

PIN·TITE

For Brownish Biochemical Solution Used To Tighten the Tuning Pin of a Piano.
First use May 1, 1960.

749,934. Caled Products Company, Inc., Brentwood, Md. SN 151,195. Filed 8-15-62.



For Sizing Ingredient for Use in Solvents for Dry Cleaning Fabrics.
First use May 1951.

Class 16—Protective and Decorative Coatings

749,935. Klenk Epoxy Corporation, Detroit, Mich. SN 155,724. Filed 10-23-62.

KLENK'S

For General Purpose Epoxy Resin Paint, Marine Enamel, Appliance Enamel, Tub and Tile Finishes, and Thinners Therefor.
First use in July 1961.

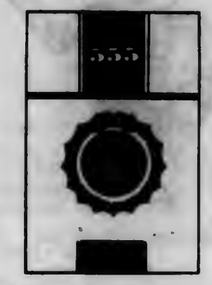
Class 17—Tobacco Products

749,936. Lane Limited, New York, N.Y. SN 142,718. Filed P.R. 4–20–62; Am. S.R. 3–25–63.

SHELBURNE

For Smoking Tobacco.
First use September 1961.

749,937. Ardath Tobacco Company, Limited, London, England. SN 150,669. Filed P.R. 8–7–62; Am. S.R. 3–23–63.



Owner of British Reg. No. 827,552, dated Nov. 16, 1961; and U.S. Reg. Nos. 41,324 and 137,538.
For Cigarettes.

Class 19—Vehicles

749,938. Charles W. Heppenstall, d.b.a. Heppenstall Industries, Delray Beach, Fla. SN 109,495. Filed P.R. 12–2–60; Am. S.R. 2–28–63.

SAF-T-KAR

For Automobiles.
First use Apr. 12, 1960.

Class 22—Games, Toys, and Sporting Goods

749,939. De Luxe Reading Corporation, Newark, N.J. SN 119,685. Filed P.R. 5–10–61; Am. S.R. 3–28–63.

PLAYMOBILE

For Toy Miniature Automobiles.
First use Feb. 20, 1961.

Class 26—Measuring and Scientific Appliances

749,940. Stanley C. Pearle, d.b.a. Contact Lens Clinic, Birmingham, Ala. SN 114,340. Filed P.R. 2–24–61; Am. S.R. 2–1–63.

VERILITE

For Contact Lenses.
First use Feb. 3, 1961.

749,941. Biorhythm Computers, Inc., New York, N.Y. SN 118,760. Filed P.R. 4–27–61; Am. S.R. 2–15–63.

CYCLGRAF

For Patterns To Be Used in Making a Graph To Compute the Three Cycles of Each Life, to wit, Sensibility, Intelligence, and Physical Strength.
First use Mar. 17, 1961.

Class 38—Prints and Publications

749,942. Fairchild Publications, Inc., New York, N.Y. SN 123,089. Filed P.R. 6–29–61; Am. S.R. 3–20–63.

Eye On the Markets

For Daily Column in a Newspaper.
First use May 9, 1960.

749,943. Ojibway Press, Inc., Duluth, Minn. SN 138,419. Filed P.R. 2–21–62; Am. S.R. 3–19–63.

ELECTRICAL ELECTRONIC PROCUREMENT

For Periodical Publications.
First use May 1960.

749,944. Ojibway Press, Inc., Duluth, Minn. SN 139,319. Filed P.R. 3–7–62; Am. S.R. 3–19–63.

INTIMATE APPAREL

For Monthly Trade Magazine.
First use February 1960.

749,945. Cleworth Publishing Company, Inc., Cos Cob, Conn. SN 140,237. Filed P.R. 3–20–62; Am. S.R. 3–22–63.

REINFORCED PLASTICS

For Periodical Published Bimonthly.
First use Mar. 14, 1962.

749,946. Ojibway Press, Inc., Duluth, Minn. SN 141,745. Filed P.R. 4–6–62; Am. S.R. 3–19–63.

MEAT

For Magazine Published Periodically.
First use January 1934.

749,947. Lane Magazine Company, Menlo Park, Calif. SN 145,377. Filed P.R. 5–24–62; Am. S.R. 3–20–63.

THE CHANGING WESTERN HOME

For Magazine Feature Appearing From Time to Time.
First use May 1, 1959.

749,948. Lane Magazine Company, Menlo Park, Calif. SN 145,378. Filed P.R. 5–24–62; Am. S.R. 3–20–63.

COMMUNITY ACTION IN THE WEST

For Magazine Feature Appearing From Time to Time.
First use Apr. 1, 1957.

749,949. Lane Magazine Company, Menlo Park, Calif. SN 145,379. Filed P.R. 5–24–62; Am. S.R. 3–20–63.

COUNTRY LIVING IN THE WEST

For Magazine Feature Appearing From Time to Time.
First use Feb. 1, 1957.

Class 39—Clothing

749,950. Bancroft Cap Company, Framingham, Mass. SN 113,260. Filed P.R. 2–8–61; Am. S.R. 3–1–63.

RAIN O' SHINE

For Military Fatigue Caps.
First use Jan. 11, 1961.

749,951. Associated Dry Goods Corporation, d.b.a. Stewart & Co., New York, N.Y. SN 128,945. Filed P.R. 10–2–61; Am. S.R. 2–27–63.

RUXTON

For Men's Clothing—Namely, Men's Suits and Sport Coats.
First use Feb. 3, 1959.

Class 40—Fancy Goods, Furnishings, and Notions

749,952. Gem-Dandy, Inc., Madison, N.C. SN 152,057. Filed 8–28–62.

BRA-FIT

For Elasticized Brassiere Extenders.
First use Sept. 10, 1958.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

749,953. Chicopee Mills, Inc., New Brunswick, N.J., assignee, by mesne assignments, of Chicopee Manufacturing Corporation, d.b.a. Chicopee Mills, Inc., New Brunswick, N.J. SN 143,719. Filed 5–3–62.

FABRICS WITH A FUTURE

For Fabrics for Sportswear, Outer Wear, and Under Wear.
First use Nov. 8, 1961.

Class 46—Foods and Ingredients of Foods

749,954. Ward Baking Company, New York, N.Y., assignee, by mesne assignment, of Johnston Pie Company, New York, N.Y. SN 117,106. Filed P.R. 4–4–61; Am. S.R. 3–23–63.

NOT JUST GOOD . . . BUT WONDERFUL!

For Frozen Dessert Pies.
First use Oct. 8, 1931.

749,955. The Rowntree Company Limited, Toronto, Ontario, Canada. SN 120,061. Filed P.R. 5–12–61; Am. S.R. 5–10–62.

COFFEE CRISP

Owner of Canadian Reg. No. 10,616, dated Sept. 16, 1938.
For Candy Confection in the Nature of a Cream Filled Biscuit.

749,956. Virginia Dare Confections, Inc., Baltimore, Md. SN 123,147. Filed P.R. 6–29–61; Am. S.R. 3–25–63.
For Candy.



First use on or about Mar. 13, 1961.

749,957. Alabama-Georgia Syrup Company, d.b.a. Alaga Syrup Company, Montgomery, Ala. SN 132,283. Filed P.R. 11–20–61; Am. S.R. 5–25–62.



For Pickles.
First use April 1957.

749,958. Kellogg Company, Battle Creek, Mich. SN 136,249. Filed P.R. 1–22–62; Am. S.R. 1–28–63.

GOODIES

For Dog Food.
First use Jan. 18, 1962.

749,959. J. Linwood Conselyea, d.b.a. Lin Conselyea, Medway, Ohio. SN 138,390. Filed P.R. 2–21–62; Am. S.R. 1–28–63.

BETTER BAR

For Candy Bars.
First use Nov. 13, 1961.

749,960. Tobin Packing Co., Inc., Rochester, N.Y. SN 138,556. Filed P.R. 2-28-62; Am. S.R. 3-14-63.

TWIN-TRAY

For Package Containing Frankfurts.
First use on or about Jan. 23, 1962.

749,961. Purity Stores, Inc., Burlingame, Calif. SN 139,679. Filed P.R. 3-12-62; Am. S.R. 3-1-63.

GOLDEN CUBE

For Margarine.
First use Aug. 8, 1955.

749,962. The Sugardale Provision Company, Canton, Ohio. SN 149,890. Filed 7-26-62.

EMBER-SMOKED

For Bacon, Smoked Ham, and Smoked and Fully Cooked Hams, Sold as Whole Hams or Half Hams.
First use on or about Jan. 22, 1953.

Class 48 — Malt Beverages and Liquors

749,963. Anheuser-Busch, Incorporated, St. Louis, Mo. SN 135,819. Filed P.R. 1-8-62; Am. S.R. 3-11-63.



The mark consists of the distinctively shaped bottle used as a container for applicant's goods.
For Beer.
First use Dec. 5, 1961.

TRADEMARK REGISTRATIONS RENEWED

163,766. UNITED PROFIT SHARING COUPONS AND DESIGN. Cl. 38. 1-23-23.
163,880. PRODUCT OF OTTERBURN MILL LTD. AND DESIGN. Cl. 42. 2-6-23.
165,965. DESIGN OF CROSS. Cl. 13. 3-27-23.
166,045. ALL IN ALL. Cl. 39. 3-27-23.
166,046. SUZANNE. Cl. 39. 3-27-23.
166,082. BRAN-NU AND DESIGN. Cl. 46. 3-27-23.
166,853. GORDON VERT AND DESIGN. Cl. 47. 4-17-23.
166,945. NOUVELLA. Cl. 42. 4-17-23.
167,387. BRAN FLUFFS. Cl. 46. 5-1-23.
167,519. PACIFIC. Cl. 12. 5-1-23.
167,520. PACIFIC. Cl. 12. 5-1-23.
167,558. FLAKO. Cl. 46. 5-1-23.
168,772. REPTEEN. Cl. 42. 5-29-23.
169,879. VELVETONE. Cl. 51. 7-3-23.
170,310. QUADRIGA. Cl. 42. 7-10-23.
170,594. FILTER-CEL. Cl. 31. 7-17-23.
170,653. SILK AND CACHEMIRE DUVETYNE 4703. Cl. 42. 7-17-23.
171,169. EATMOR. Cl. 46. 7-31-23.
171,606. BETHLEHEM. Cl. 12. 8-7-23.
172,437. STARTENA. Cl. 46. 8-28-23.
172,550. STILLMAN'S. Cl. 18. 9-4-23.
173,089. GREY-BARON. Cl. 46. 9-18-23.
173,130. TOYON. Cl. 46. 9-18-23.
399,519. BRYLSHAVE. Cl. 51. 1-12-43.
400,158. WELCOME SLEEVE. Cl. 44. 2-16-43.
400,230. LONDON. Cl. 3. 2-23-43.
400,554. FIGLIAMIA. Cl. 46. 3-16-43.
400,615. PHILCO. Cl. 2. 3-23-43.
400,738. PHILCO. Cl. 27. 3-30-43.
400,816. LUXITE. Cl. 40. 4-6-43.
400,817. DESIGN—GREEN BAND APPLIED TO A PENCIL. Cl. 37. 4-6-43.
400,820. LIFSEY'S VIM HERB AND DESIGN. Cl. 18. 4-6-43.
400,830. E-Z. Cl. 29. 4-6-43.
400,908. THE SHRINE MEMORIAL AND DESIGN. Cl. 2. 4-6-43.
400,943. PHILCO. Cl. 21. 4-13-43.
401,083. PHILCO. Cl. 16. 4-20-43.
401,118. PHILCO. Cl. 7. 4-27-43.
401,180. KENSITAS. Cl. 17. 4-27-43.
401,240. PHILCO. Cl. 26. 5-4-43.
401,385. VATOX. Cl. 18. 5-11-43.
401,553. ASTRALEEN. Cl. 42. 5-25-43.
401,680. NATIONAL. Cl. 37. 6-1-43.
401,691. STRATOSPHERE. Cl. 37. 6-1-43.
401,741. CELOTEX. Cl. 12. 6-8-43.
401,853. HEART OF KANSAS AND DESIGN. Cl. 46. 6-15-43.
402,085. SKYHEAT. Cl. 34. 6-29-43.
402,359. HACKMASTER. Cl. 23. 7-13-43.
402,391. INSULATEX. Cl. 33. 7-20-43.
402,479. NATIONAL. Cl. 26. 7-27-43.
402,504. RAPTURE BY CORO AND DESIGN. Cl. 28. 7-27-43.
402,577. POLYFLEX. Cl. 1. 8-3-43.
402,583. FLORATAINER. Cl. 2. 8-3-43.
402,606. RAYO-SEAL. Cl. 5. 8-3-43.
402,684. "BULL-DOG." Cl. 36. 8-10-43.
402,836. C & S CHEMICAL SUPPLY CO. ETC. Cl. 52. 8-17-43.
402,978. ALLANTOMIDE. Cl. 18. 8-24-43.
402,985. KITS. Cl. 46. 8-24-43.
403,023. FLUOROGRAPHIC. Cl. 6. 8-31-43.
403,035. BONCILLA. Cl. 51. 8-31-43.
403,150. HIGHLAND. Cl. 39. 9-7-43.

TRADEMARK REGISTRATIONS CANCELED

Section 8

216,677. TAMALPAIS. Cl. 37. 8-17-26.
349,393. WHITE CLIFF AND DESIGN. Cl. 46. 8-24-37.

The following registrations issued Apr. 2, 1957

643,414. CLEARON. Cl. 1.
643,416. BEAUTY QUEEN AND DESIGN. Cl. 1.
643,427. BRISMET. Cl. 2.
643,428. CALYPSO. Cl. 3.
643,430. CARBINOL. Cl. 6.
643,434. COLFOAM. Cl. 6.
643,436. AMMODEL. Cl. 6.
643,437. DEC. Cl. 6.
643,440. DIVASIL. Cl. 6.

643,442. NEMORAD. Cl. 6.
643,444. NEUTRANYL. Cl. 6.
643,446. WEST COAST FINISH. Cl. 6.
643,456. PELLIN. Cl. 6.
643,458. SARINE. Cl. 6.
643,461. TRONACARB. Cl. 6.
643,468. THUNDERBIRD. Cl. 9.
643,471. FAS-T. Cl. 10.
643,475. RAY VENT AND DESIGN. Cl. 12.
643,477. LAWN TRIM ETC. Cl. 13.
643,483. AUTO-PEP. Cl. 15.
643,487. COLUMBUS. Cl. 17.
643,492. PRESAY. Cl. 18.
643,494. MULFORD. Cl. 18.
643,496. JENIMIDE. Cl. 18.
643,498. NUCLITOL. Cl. 18.
643,499. NICOZINE. Cl. 18.
643,506. STASANIL. Cl. 18.
643,511. CO-SKIN AND DESIGN. Cl. 18.
643,514. ULTRA-GESIC. Cl. 18.
643,515. BE-DELTRA. Cl. 18.
643,516. FLUDRONASAL. Cl. 18.
643,517. INTRAFACT. Cl. 18.
643,518. BE-HYDELTRA. Cl. 18.
643,519. VI-RAD'NT. Cl. 18.
643,524. JOURAPHENE. Cl. 18.
643,528. V-M NUTRALL AND DESIGN. Cl. 18.
643,533. G ETC. AND DESIGN. Cl. 21.
643,538. MELODY QUEEN MQ AND DESIGN. Cl. 21.
643,547. SLIM-TONE EXERLOUNGER. Cl. 22.
643,549. FLEXITE. Cl. 22.
643,550. K AND DESIGN. Cl. 22.
643,560. ROLL-FORM AND DESIGN. Cl. 23.
643,566. FLEXI-MATIC. Cl. 23.
643,571. GYRO-SPIN. Cl. 24.
643,577. ORIENTEERING. Cl. 26.
643,578. SEALION AND DESIGN. Cl. 26.
643,579. STARK. Cl. 26.
643,581. EVA-PAK. Cl. 26.
643,591. CUBE-FREEZE. Cl. 31.
643,612. TELE VUE. Cl. 38.
643,614. HEAR THE VOICE OF HOLLYWOOD. Cl. 38.
643,620. LITTLE MISS RAYMODES. Cl. 39.
643,621. YOUNG 'N HEART. Cl. 39.
643,630. MISTER CRAVATE OF CALIFORNIA. Cl. 39.
643,634. DIAL-A-GIFT. Cl. 39.
643,639. MARELCO. Cl. 39.
643,640. CLOUD MASTER. Cl. 39.
643,642. GAIL EVANS. Cl. 39.
643,652. "TEXTRAW." Cl. 40.
643,653. EDUCATED COTTON. Cl. 42.
643,664. ADOLPHUS. Cl. 42.
643,665. BERKREST. Cl. 42.
643,666. BERKEASE. Cl. 42.
643,680. BELLA NAPOLI. Cl. 46.
643,682. WANOCA. Cl. 46.
643,685. BILLY BOY AND DESIGN. Cl. 46.
643,686. ALBA AND DESIGN. Cl. 46.
643,687. ALBA AND DESIGN. Cl. 46.
643,688. MICULT. Cl. 46.
643,706. LANTARCRUDO. Cl. 51.
643,707. POMP AND CIRCUMSTANCE. Cl. 51.
643,708. SUP-R ZIP. Cl. 52.
643,709. KRWOSH. Cl. 52.
643,711. KLEEN-O-MATIC. Cl. 52.
643,716. DOCTOR FIXIT. Cl. 101.
643,718. SPRINGFIELD NATIONAL BANK 1893 AND DESIGN. Cl. 102.
643,719. SPARK-L-ENE. Cl. 103.
643,725. KIDS KORRAL. Cl. 107.
643,727. MR. UNIVAX. Cl. 107.
643,728. THE PLAINSMAN. Cl. 107.
643,735. THORERFARBE. Cl. 1.
643,736. FLOWERS BY AIR AND DESIGN. Cl. 1.
643,741. PLAY-KIT. Cl. 22.
643,745. CLEAR-VUE. Cl. 26.
643,746. PUBLIC SERVICE ADVERTISING AND DESIGN. Cl. 38.
643,753. SPORTS EXTRA, ETC. AND DESIGN. Cl. 38.
643,754. SEAMLESS STRETCHONS. Cl. 39.
643,756. DRESS RIGHT ETC. Cl. 39.
643,757. RISE 'N WEAR. Cl. 42.
643,762. PETITE DONUT. Cl. 46.
643,767. FOAM-PAK ETC. AND DESIGN. Cl. 50.

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MAY 21, 1963

(Registered; Renewed; Canceled; Amended, Disclaimed, Corrected, etc.; New Certificates; 12c Publications.)

AMP Inc., Harrisburg, Pa. 749,711, pub. 3–5–63. Cl. 21.
Acme Juicer Mfg. Co., Lemoyne, Pa. 749,749, pub. 3–5–63. Cl. 23.
Acme Protection Equipment Co., South Haven, Mich. 749,852, pub. 3–5–63. Cl. 44.
Admiral Sales Corp., Chicago, Ill. 749,910, pub. 3–5–63. Cl. 100.
Advertising Council, Inc., The, New York, N.Y. 643,746, canc. Cl. 38.
Aero-Test Equipment Co., Inc., Dallas, Tex. 749,743, pub. 3–5–63. Cl. 23.
Aircraft Armaments, Inc., Cockeysville, Md. 749,911, pub. 3–5–63. Cl. 100.
Air Reduction Co., Inc., New York, N.Y. 643,434, canc. Cl. 6.
Air-Way Sanitizer, Inc., Toledo, Ohio. 749,708–9, pub. 3–5–63. Cl. 21.
Akron Brass Co., from Akron Brass Mfg. Co., Inc., Wooster, Ohio. 749,654, pub. 3–5–63. Cl. 13.
Akron Brass Mfg. Co., Inc.: *See*—
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Alchester Mfg. Co., Inc., Philadelphia, Pa. 643,754, canc. Cl. 39.
Allied Chemical & Dye Corp., New York, N.Y. 643,444, canc. Cl. 6.
Allure Shoe Corp., Miami, Fla. 749,813, pub. 3–5–63. Cl. 39.
Almashy, George, d.b.a. George Almashy Co., Brighton, Mich. 749,724, pub. 3–5–63. Cl. 22.
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Almon, William H., d.b.a. William H. Almon Co., Quincy, Mass. 749,661, pub. 3–5–63. Cl. 13.
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Altman, Robert, Inc., New York, N.Y. 749,775, pub. 3–5–63. Cl. 28.
Ambrette Machinery Corp., Brooklyn, N.Y. 749,748, pub. 3–5–63. Cl. 23.
American Beauty Macaroni Co.: *See*—
Kansas City Macaroni & Importing Co.
American Foreign Industries, Inc., San Francisco, Calif. 749,719, pub. 3–5–63. Cl. 22.
American Lead Pencil Co., to Venus Pen & Pencil Corp., New York, N.Y. 400,817, ren. 5–21–63. Cl. 37.
American Machine & Foundry Co., New York, N.Y. 749,713, pub. 3–5–63. Cl. 22.
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American Metal Products Co., Ann Arbor, Mich. 749,590, pub. 3–5–63. Cl. 1.
American Metal Products International Co.: *See*—
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American Potash & Chemical Corp., Los Angeles, Calif. 643,461, canc. Cl. 6.
American Radiator & Standard Sanitary Corp., New York, N.Y. 749,653, pub. 3–5–63. Cl. 13.
American Saw & Mfg. Co., Springfield, Mass. 402,359, ren. 5–21–63. Cl. 23.
American Saw & Mfg. Co., Springfield, Mass. 749,668, pub. 3–5–63. Cl. 14.
American Steel Corp., Detroit, Mich. 749,666, pub. 3–5–63. Cl. 14.
American Tobacco Co., The, New York, N.Y., to J. Wix & Sons, Ltd., London, England. 401,180, ren. 5–21–63. Cl. 17.
Anaconda Wire and Cable Co., Hastings on Hudson, N.Y. 749,699, pub. 3–5–63. Cl. 21.
Anchor Post Fence Co., Baltimore, Md., to John Wood Co., Chicago, Ill. 402,085, ren. 5–12–63. Cl. 34.
Andersen Corp., Bayport, Minn. 749,648, pub. 3–5–63. Cl. 12.
Anderson, Warren H., Amarillo, Tex. 643,728, canc. Cl. 107.
Anheuser-Busch, Inc., St. Louis, Mo. 749,963. Cl. 48.
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Ankh Laboratories, Inc., Fairborn, Ohio. 749,768, pub. 1–16–62. Cl. 26.
Apex Smelting Co., Chicago, Ill. 749,675, pub. 3–5–63. Cl. 14.
Archuleta, Manuel, d.b.a. Tom Tom Symbolized Craft, Albuquerque, N. Mex. 749,808, pub. 3–5–63. Cl. 39.
Ardath Tobacco Co., Ltd., London, England. 749,937. Cl. 17.
Arkansas Louisiana Gas Co., Shreveport, La. 749,913, pub. 3–5–63. Cl. 101.
Art-O-Rama, Inc., New Rochelle, N.Y. 749,647, pub. 3–5–63. Cl. 12.
Arvin Industries, Inc., Columbus, Ind. 749,706, pub. 3–5–63. Cl. 21.
Associated Dry Goods Corp., d.b.a. Stewart & Co., New York, N.Y. 749,951. Cl. 39.
Association of Better Business Bureaus, Inc., New York, N.Y. 749,915, pub. 3–5–63. Cl. 101.
Athey, Harold, Los Angeles Calif. 643,630, canc. Cl. 39.
Atlantic Casting & Engineering Corp., Clifton, N.J. 749,669, pub. 3–5–63. Cl. 14.
Aunt Jemima Mills Co., St. Joseph, Mo., to The Quaker Oats Co., Chicago, Ill. 167,387, ren. 5–21–63. Cl. 46.
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Barber, W. H., Oil Co., Minneapolis, Minn., from W. H. Barber Co., Minneapolis, Minn. 749,676, pub. 3–5–63. Cl. 15.
Barron-Gray Packing Co., San Jose, Calif., to Dole Corp., Honolulu, Hawaii. 173,130, ren. 5–21–63. Cl. 46.
Barron-Gray Packing Co., San Jose, Calif., to Dole Corp., Honolulu, Hawaii. 173,089, ren. 5–21–63. Cl. 46.
Barwick, E. T., Mills, Inc., Chamblee, Ga. 643,664, canc. Cl. 42.
Bar Zim Toy Mfg. Co., Inc., Jersey City, N.J. 749,726, pub. 3–5–63. Cl. 22.
Bates, C. J., & Son: *See*—
Bates, Hamilton C.
Bates, C. J., & Son, Inc.: *See*—
Bates, Hamilton C.
Bates, Hamilton C., d.b.a. C. J. Bates & Son, to C. J. Bates & Son, Inc., Chester, Conn. 400,816, ren. 5–21–63. Cl. 40.
Bear Archery Co., Grayling, Mich. 749,722, pub. 3–5–63. Cl. 22.
Bear Brand Hosiery Co., Chicago, Ill. 749,822, pub. 3–5–63. Cl. 39.
Becker & Co. Ltd., London, England. 749,634, pub. 3–5–63. Cl. 6.
Beecham Products Inc.: *See*—
County Perfumery Co., Inc., The.
Behr Process Corp., Santa Ana, Calif. 749,679, pub. 3–5–63. Cl. 16.
Bennett Marine, Inc., Detroit, Mich. 749,752, pub. 3–5–63. Cl. 23.
Benrus Watch Co., Inc., New York, N.Y. 749,771, pub. 3–5–63. Cl. 27.
Bereman, James H., d.b.a. Stillman Freckle Cream Co., to The Stillman Co., Aurora, Ill. 172,550, ren. 5–21–63. Cl. 18.
Berkshire Hathway, Inc., Providence, R.I. 643,665–6, canc. Cl. 42.
Bescast, Inc., Wickliffe, Ohio. 749,665, pub. 3–5–63. Cl. 14.
Bethlehem Steel Co., Bethlehem, Pa. 171,606, ren. 5–21–63. Cl. 12.
Better Built Machinery Corp., New York, N.Y. 749,751, pub. 3–5–63. Cl. 23.
Biorhythm Computers, Inc., New York, N.Y. 749,941. Cl. 26.
Biscayne Mfg. Co. Inc., Hialeah, Fla. 749,623, pub. 3–5–63. Cl. 6.
Bleuenstein, Julius M., d.b.a. San-Magik Research, Detroit, Mich. 749,587, pub. 3–5–63. Cl. 1.
Bliss, E. W., Co., Pittsburgh, Pa. 749,673, pub. 3–5–63. Cl. 14.
Bloch, Stanley L., Inc., New York, N.Y. 643,757, canc. Cl. 42.
Blue Seal Extract Co., Inc., Cambridge, Mass. 749,857, pub. 3–5–63. Cl. 45.
Blumenfeld, M. E., d.b.a. Dry Gloss Mfg. Co., Savannah, Ga. 749,928. Cl. 4.
Boncilla Laboratories, Inc., Indianapolis, Ind. 403,035, ren. 5–21–63. Cl. 51.
Borden Co., The, Chicago, Ill. 749,865, pub. 3–5–63. Cl. 46.
Bradley, Milton, Co., Springfield, Mass. 749,735, pub. 3–5–63. Cl. 22.
Breon, George A., & Co., New York, N.Y. 643,506, canc. Cl. 18.
Bristol Metal Products Corp., Bristol, Tenn. 643,427, canc. Cl. 2.
Brown & Williamson Tobacco Corp., Louisville, Ky. 749,683, pub. 3–5–63. Cl. 17.
Buchanan, Ulrich B., Hot Springs National Park, Ark. 749,858, pub. 3–5–63. Cl. 45.
Burkhardt, Frederic T., Holyoke, Mass., to Millers Falls Paper Co., Millers Falls, Mass. 401,691, ren. 5–21–63. Cl. 37.
Burlington Industries, Inc.: *See*—
Ely & Walker Dry Goods Co.
Bursak Packaging Machinery Corp., Jackson, Wis. 749,758–9, pub. 2–5–63. Cl. 23.
Burton-Dixie Corp., Chicago, Ill. 402,391, ren. 5–21–63. Cl. 32.
C & S Chemical Supply Co.: *See*—
Stuard, C. F.
Cabot Corp., Boston, Mass. 749,594, pub. 3–5–63. Cl. 1.

Caled Products Co., Inc., Brentwood, Md. 749,934. Cl. 6.
California Jet Marine and Air Research, Inc., Beverly Hills, Calif. 749,753, pub. 3–5–63. Cl. 23.
Callaway Mills Co., Lagrange, Ga. 749,834, pub. 3–5–63. Cl. 42.
Calumet & Hecla, Inc., Allen Park, Mich. 749,674, pub. 3–5–63. Cl. 14.
Calypso Bags, Inc., Miami, Fla. 643,428, canc. Cl. 3.
Caloric Appliance Corp.: *See*—
Caloric Stove Corp.
Caloric Stove Corp., to Caloric Appliance Corp., Philadelphia, Pa. 643,571, canc. Cl. 24.
Capitol Records, Inc., Los Angeles, Calif. 749,792, pub. 6–13–61. Cl. 36.
Caplan, Murray, d.b.a. Caplan & Co., Indianapolis, Ind. 749,776, pub. 3–5–63. Cl. 28.
Caplan & Co.: *See*—
Caplan, Murray.
Carrier Corp., Syracuse, N.Y. 643,430, canc. Cl. 6.
Carta Gold Co.: *See*—
Osceola Fruit Distributors.
Carter, Ralph B., Co., Hackensack, N.J. 749,750, pub. 3–5–63. Cl. 23.
Castle Ltd., Los Angeles, Calif. 749,806, pub. 1–1–63. Cl. 38.
Celite Products Co., Los Angeles, Calif., and New York, N.Y., to Johns-Manville Corp., New York, N.Y. 170,594, ren. 5–21–63. Cl. 31.
Celotex Corp., The, Chicago, Ill. 401,741, ren. 5–12–63. Cl. 12.
Champion Industries, Inc., South San Gabriel, Calif. 643,538, canc. Cl. 21.
Chance, A. B., Co., Centralia, Mo. 749,705, pub. 3–5–63. Cl. 21.
Chemical Research & Development Co., Minneapolis, Minn. 749,617, pub. 3–5–63. Cl. 6.
Chicopee Mfg. Corp.: *See*—
Chicopee Mills, Inc.
Chicopee Mills, Inc., from Chicopee Mfg. Corp., d.b.a. Chicopee Mills, Inc. 749,953. Cl. 42.
Chipman's, Chas., Sons Co., Inc., New York, N.Y. 643,642, canc. Cl. 39.
Chipman's, Chas., Sons Co., Inc., New York, N.Y. 749,816, pub. 3–5–63. Cl. 39.
Clark-Schwebel Fiber Glass Corp., New York, N.Y. 749,829, pub. 3–5–63. Cl. 42.
Cleworth Publishing Co., Inc., Cos Cob, Conn. 749,945. Cl. 38.
Coburn Mfg. Co., Inc., Muskogee, Okla. 749,757, pub. 3–5–63. Cl. 23.
Cody Mfg. Corp., Springfield, Mass. 643,468, canc. Cl. 9.
Cohn & Rosenberger, Inc., to Coro, Inc., New York, N.Y. 402,504, ren. 5–21–63. Cl. 28.
Cold Corp. of America, Chicago, Ill. 643,591, canc. Cl. 31.
Colgate-Palmolive Co., New York, N.Y. 643,707, canc. Cl. 51.
Colgate-Palmolive Co., New York, N.Y. 749,686, pub. 1–24–61. Cl. 18.
Collins & Aikman Corp., New York, N.Y. 749,831, pub. 3–5–63. Cl. 42.
Columbia Pictures Corp., New York, N.Y. 749,796, pub. 3–5–63. Cl. 36.
Compere, C. H., & Son: *See*—
V-M Nutri Food, Inc.
Congeladora de Golfo Del Campeche, S.A., Campeche, Mex. 749,873, pub. 3–5–63. Cl. 46.
Conselyea, J. Linwood, d.b.a. Lin Conselyea, Medway, Ohio. 749,959. Cl. 46.
Conselyea, Lin: *See*—
Conselyea, J. Linwood.
Consolidated Sewing Machine Corp., New York, N.Y. 749,702, pub. 3–5–63. Cl. 21.
Consolidate Systems Corp., Monrovia, Calif. 749,701, pub. 3–5–63. Cl. 21.
Contact Lens Clinic: *See*—
Pearle, Stanley C.
Continental Casualty Co., Chicago, Ill. 749,918, pub. 3–5–63. Cl. 102.
Continental Copper & Steel Industries, Inc., New York, N.Y. 749,655, pub. 3–5–63. Cl. 13.
Cook Chemical Co., Kansas City, Mo. 749,932. Cl. 6.
Cordes, Frederick W., New York, to R. C. Goddard, Albertson, N.Y. 400,158, ren. 5–21–63. Cl. 44.
Coro, Inc.: *See*—
Cohn & Rosenberger, Inc.
Corrao, Antonio, d.b.a. Universal Salad Oil Co., Brooklyn, N.Y. 400,554, ren. 5–21–63. Cl. 46.
Costa & Co.: *See*—
Costa, John.
Costa, John, d.b.a. Costa & Co., Stockton, Calif. 643,680, canc. Cl. 46.
Cott Beverage Corp., New Haven, Conn. 749,859, pub. 3–5–63. Cl. 45.
County Perfumery Co., Inc., The, Bloomfield, to Beecham Products Inc., Clifton, N.J. 399,519, ren. 5–21–63. Cl. 51.
Crest-Foam Corp., Flushing, N.Y. 749,606, pub. 3–5–63. Cl. 1.
Crystalonics, Inc., Cambridge, Mass. 749,707, pub. 3–5–63. Cl. 21.
Dare, Virginia, Confections, Inc., Baltimore, Md. 749,956. Cl. 46.
Dazor Mfg. Corp., St. Louis, Mo. 749,787, pub. 3–5–63. Cl. 34.
Dee Sportswear, Inc., Rockaway Beach, N.Y. 749,814, pub. 3–5–63. Cl. 39.
De Luxe Reading Corp., Newark, N.J. 749,939. Cl. 22.
D'Embrun, Pierre, Ltd., New York, N.Y. 749,899, pub. 3–5–63. Cl. 51.
De-Raef Corp., Kansas City, Mo. 643,688, canc. Cl. 46.
Dettelbach, Gus, Inc., Atlanta, Ga. 749,602, pub. 3–5–63. Cl. 1.
Devon Plans Corp., Boston, Mass. 749,920, pub. 3–5–63. Cl. 102.
Dixie Concrete Products, Inc., Winston-Salem, N.C. 749,643–4, pub. 3–5–63. Cl. 12.
Dole Corp.: *See*—
Harron-Gray Packing Co.
Dow Chemical Co., The, Midland, Mich. 749,608, pub. 3–5–63. Cl. 2.
Dow-Lee Co., Wichita, Kans. 749,718, pub. 3–5–63. Cl. 22.
Dragoco, Inc., Totowa, N.J. 749,622, pub. 3–5–63. Cl. 6.
Drummond Knitwear Co., Ltd., Maspeth, N.Y. 749,817, pub. 3–5–63. Cl. 39.
Dry Gloss Mfg. Co.: *See*—
Blumfeld, M. E.
Dual Mfg. and Engineering, Inc., Holyoke, Mass. 749,782, pub. 5–8–62. Cl. 32.
Du Barry of Hollywood, Inc., Los Angeles, Calif. 749,811, pub. 3–5–63. Cl. 39.
Duffy-Mott Co., Inc., New York, N.Y. 749,879, pub. 3–5–63. Cl. 46.
Du Pont de Nemours, E. I., and Co., Wilmington, Del. 749,595, pub. 3–5–63. Cl. 1.
Du Pont de Nemours, E. I., and Co., Wilmington, Del. 749,601, pub. 3–5–63. Cl. 1.
Durham, Alton P., d.b.a. Herb Products Co., Anderson, S.C. 400,820, ren. 5–21–63. Cl. 18.
Dynamics, Ltd., Denver, Colo. 749,740, pub. 3–5–63. Cl. 22.
Eagle Rubber Co., Inc., Ashland, Ohio. 643,549, canc. Cl. 22.
East Chicago Machine Tool Corp., East Chicago, Ind. 749,747, pub. 3–5–63. Cl. 28.
Eastern Press, Inc., New Haven, Conn. 749,801, pub. 3–5–63. Cl. 38.
Eastern Research Laboratories, Inc., Baltimore, Md. 643,514, canc. Cl. 18.
Eastern Seaboard Plastics, Inc., Newark, N.J. 749,823, pub. 3–5–63. Cl. 40.
Eastman Kodak Co., Rochester, N.Y. 749,600, pub. 3–5–63. Cl. 1.
Eaton Mfg. Co., Cleveland, Ohio. 643,560, canc. Cl. 23.
Eckstein Bros., Los Angeles, Calif. 749,846, pub. 3–5–63. Cl. 44.
Edanbob Corp., Chicago, Ill. 749,760, pub. 3–5–63. Cl. 23.
Ed-U-Cards Mfg. Corp., Long Island City, N.Y. 749,727, pub. 3–5–63. Cl. 22.
Eickmeyer, A. G., Prairie Village, Kans. 749,625, pub. 3–5–63. Cl. 6.
Electro-Mec Instrument Corp., Long Island City, N.Y. 749,703, pub. 3–5–63. Cl. 21.
Ellison, John B., & Sons Co., Ltd., Los Angeles, Calif. 749,828, pub. 3–5–63. Cl. 42.
Emser Werke, A.G., Domat/Ems., Switzerland. 749,607, pub. 3–5–63. Cl. 1.
Elox Corp. of Michigan, Troy, Mich. 749,678, pub. 3–5–63. Cl. 15.
Ely & Walker Dry Goods Co., St. Louis, Mo., to Burlington Industries, Inc., Greensboro, N.C. 170,310, ren. 5–21–63. Cl. 42.
Evans Products Co., Plymouth, Mich. 749,652, pub. 3–5–63. Cl. 12.
Evening Star Newspaper Co., The, Washington, D.C. 643,612, canc. Cl. 38.
Excello Shirts, Inc., New York, N.Y. 749,815, pub. 3–5–63. Cl. 39.
Exer-Genie, Inc., Los Angeles, Calif. 749,723, pub. 3–5–63. Cl. 22.
Facade, Inc., Dallas, Tex. 749,645, pub. 3–5–63. Cl. 12.
Fairchild Publications, Inc., New York, N.Y. 749,942. Cl. 38.
Fair Play Caramels, Inc., Johnson City, N.Y. 402,985, ren. 5–21–63. Cl. 46.
Farbenfabriken Bayer Aktiengesellschaft, Leverkusen-Bayerwerk, Germany. 749,633, pub. 3–5–63. Cl. 6.
Fernseh Gesellschaft mit beschrankter Haftung, Zweigniederlassung Darmstadt, Darmstadt, Germany. 749,704, pub. 3–5–63. Cl. 21.
Fieldcrest Mills, Inc., Spray, N.C. 749,833, pub. 3–5–63. Cl. 42.
Fieldcrest Mills, Inc., Spray, N.C. 749,832, pub. 3–5–63. Cl. 42.
Fieldcrest Mills, Inc., Spray, N.C. 749,830, pub. 3–5–63. Cl. 42.
Field-Ernst Envelope Co., San Francisco, Calif. 216,677, canc. Cl. 37.
Finderhood, Inc., New York, N.Y. 749,916, pub. 3–5–63. Cl. 101.
Fiorella's, Inc., New York, N.Y. 749,819, pub. 3–5–63. Cl. 39.
First Federal Savings and Loan Association of Akron, Akron, Ohio. 749,917, pub. 3–5–63. Cl. 102.
Fitzpatrick, J. W., & Son, Inc., Louisville, Ky. 749,682, pub. 3–5–63. Cl. 17.
Fivey, Robert E., Los Angeles, Calif. 643,736, canc. Cl. 1.
Flako Products Corp., New Brunswick, N.J., to The Quaker Oats Co., Chicago, Ill. 167,558, ren. 5–21–63. Cl. 46.
Flickinger, S. M., Co. Inc., Buffalo, N.Y. 749,869, pub. 3–5–63. Cl. 46.
Flood Co., The, Hudson, Ohio. 749,681, pub. 3–5–63. Cl. 16.
Floralife, Inc., Chicago, Ill. 749,593, pub. 3–5–63. Cl. 1.
Florin Chemical Corp., Philadelphia, Pa. 643,708, canc. Cl. 52.
Foam-Pak Corp., from Samuel Liss, Philadelphia, Pa. 643,767, canc. Cl. 50.
Foreign Vintages, Inc., New York, N.Y. 749,893–4, pub. 3–5–63. Cl. 49.
Forrest Knitting Mills: *See*—
Highland Knitting Mills.
Forstmann & Huffmann Co., to Forstmann & Huffmann Co. of Passaic, N.J., Passaic, N.J., to J. P. Stevens & Co., Inc., New York, N.Y. 166,945, ren. 5–21–63. Cl. 42.
Forstmann & Huffmann Co., Passaic, N.J., to J. P. Stevens & Co., Inc., New York, N.Y. 168,772, ren. 5–21–63. Cl. 42.

Forstmann & Huffmann Co., to Forstmann & Huffmann Co. of Passaic, N.J., Passaic, N.J., to J. P. Stevens & Co., Inc., New York, N.Y. 170,653, ren. 5–21–63. Cl. 42.
Forstmann & Huffmann Co. of Passaic, N.J.: *See*—
Frostmann & Huffmann Co.
Forstmann Woolen Co., Passaic, N.J., to J. P. Stevens & Co., Inc., New York, N.Y. 401,553, ren. 5–21–63. Cl. 42.
Fruit Products Corp., New York, N.Y. 749,890, pub. 3–5–63. Cl. 46.
Gabriel Co., The, Cleveland, Ohio. 749,710, pub. 3–5–63. Cl. 21.
Gellert-Wolfman Publishing Corp., New York, N.Y. 749,786, pub. 3–5–63. Cl. 38.
Gem-Dandy, Inc., Madison, N.C. 749,952. Cl. 40.
General Aluminum Products, Inc., Charlotte, Mich. 749,642, pub. 3–5–63. Cl. 12.
General Foods Corp., White Plains, N.Y. 749,889, pub. 3–5–63. Cl. 46.
General Mills, Inc., Minneapolis, Minn. 401,853, ren. 5–12–63. Cl. 46.
General Motors Corp., Detroit, Mich. 749,766, pub. 3–5–63. Cl. 24.
Genesco Inc., Nashville, Tenn. 749,810, pub. 3–5–63. Cl. 39.
Gently Jewelry Mfg. Co., New York, N.Y. 749,773, pub. 3–5–63. Cl. 28.
Genuine Parts Co., Atlanta, Ga. 749,929. Cl. 6.
Gill Glass & Fixture Co. Inc., Philadelphia, Pa. 749,697, pub. 5–3–63. Cl. 21.
Globe Novelty House, to Globe Novelty House, Inc., New York, N.Y. 400,230, ren. 5–21–63. Cl. 3.
Globe Novelty House, Inc.: *See*—
Globe Novelty House.
Goddard, Ruth C.: *See*—
Cordes, Frederick W.
Godefroy, Charles W., to Godefroy Mfg. Co., St. Louis, Mo. 169,879, ren. 5–21–63. Cl. 51.
Godefroy Mfg. Co.: *See*—
Godefroy, Charles W.
Goodrich, B. F., Co., The, Akron, Ohio. 749,790, pub. 3–5–63. Cl. 35.
Goodyear Tire & Rubber Co., The, Akron, Ohio. 402,608, ren. 5–21–63. Cl. 5.
Grace, W. R., & Co., New York, N.Y. 643,437, canc. Cl. 6.
Granite City Steel Co., Granite City, Ill. 749,670, pub. 3–5–63. Cl. 14.
Grant Co., The: *See*—
Ratner, Walter.
Great Atlantic & Pacific Tea Co., Inc., New York, N.Y. 749,883, pub. 3–5–63. Cl. 46.
Great Lakes Biochemical Co., Inc., Milwaukee, Wis. 749,907, pub. 3–5–63. Cl. 52.
Grosset & Dunlap, Inc., New York, N.Y. 643,741, canc. Cl. 22.
Growler Alarm Corp., New York, N.Y. 643,533, canc. Cl. 21.
H & H Builders: *See*—
Huggins, Arthur R.
Haertel, Walter, Co., Minneapolis, Minn. 749,780, pub. 3–5–63. Cl. 31.
Hagan Chemicals & Controls, Inc., Pittsburgh, Pa. 749,767, pub. 12–12–61. Cl. 26.
Hainick, Henry W.: *See*—
United Profit Sharing Corp.
Hall, Frank: *See*—
Shore-Calnevar, Inc.
Hamac-Hansella Aktiengesellschaft, Viersen, Rhineland, Germany. 749,762, pub. 3–5–63. Cl. 23.
Hammergren, Richard S., d.b.a. R.H. Laboratories, St. Paul, Minn. 643,492, canc. Cl. 18.
Handschin & Ronus Aktiengesellschaft, Liestal, Switzerland. 749,626, pub. 5–22–62. Cl. 42.
Hanschin & Ronus Aktiengesellschaft, Liestal, Switzerland. 749,809, pub. 5–22–62. Cl. 39.
Harbison-Walker Refractories Co., Pittsburgh, Pa. 749,646, pub. 3–5–63. Cl. 12.
Harris, L., Co., Inc., New York, N.Y. 749,770, pub. 3–5–63. Cl. 27.
Hear, Inc., Beverly Hills, Calif. 643,614, canc. Cl. 38.
Heath-Stearns and Associates, Inc., Chicago, Ill. 749,912, pub. 3–5–63. Cl. 101.
Helex Co.: *See*—
Northern Helex Co.
Hendrika, Bert, Sheldon, Iowa. 749,895, pub. 3–5–63. Cl. 50.
Henkel & Cie. G.m.b.H., Dusseldorf, Germany. 749,615, pub. 3–5–63. Cl. 5.
Heppenstall, Charles W., d.b.a. Heppenstall Industries, Delray Beach, Fla. 749,938. Cl. 19.
Heppenstall Industries: *See*—
Heppenstall, Charles W.
Herb Products Co.: *See*—
Durham, Alton P.
Heritage House Products, Inc., from Seaboard Seed Co., Inc., Pittsburgh, Pa. 749,602–4, pub. 3–5–63. Cl. 1.
Hess & Clark, Inc., Ashland, Ohio. 643,499, canc. Cl. 18.
Heywood-Wakefield Co., Gardner, Mass. 749,785, pub. 3–5–63. Cl. 32.
Highland Knitting Mills, d.b.a. Forrest Knitting Mills, to Highland Knitting Mills, Inc., Philadelphia, Pa. 403,150, ren. 5–21–63. Cl. 39.
Highland Knitting Mills, Inc.: *See*—
Highland Knitting Mills.
Holden, Margaret, Washington, D.C. 643,639, canc. Cl. 39.
Holiday Mfg., Inc., Hastings, Mich. 749,738–9, pub. 3–5–63. Cl. 22.
Hopkins, William C. N., d.b.a. American Metal Products Co., and American Metal Products International Co., Portland, Oreg. 749,742, pub. 3–5–63. Cl. 23.
Hospital Specialty Co., Cleveland, Ohio. 749,856, pub. 3–5–63. Cl. 44.
Huggins, Arthur R., d.b.a. H & H Builders, Overland Park, Kans. 749,928, pub. 3–5–63. Cl. 103.
Hughes Tool Co., d.b.a. Hughes Tool Co.-Aircraft Division, Houston, Tex. 749,804, pub. 3–5–63. Cl. 38.
Hughes Tool Co.-Aircraft Division: *See*—
Hughes Tool Co.
Imperial Chemical Industries Ltd., London, England. 749,629, pub. 3–5–63. Cl. 6.
Imperial Chemical Industries Ltd., London, England. 749,627, pub. 3–5–63. Cl. 6.
Imperial-Eastman Corp., Chicago, Ill. 749,662, pub. 3–5–63. Cl. 13.
Ingwer Jewelry Co.: *See*—
Ingwer, Leo.
Ingwer, Leo, d.b.a. Ingwer Jewelry Co., New York, N.Y. 749,778, pub. 3–5–63. Cl. 28.
Inland Steel Co., Chicago, Ill. 749,667, pub. 3–5–63. Cl. 14.
Integrated Mica Corp., Woodmere, N.Y. 749,586, pub. 3–12–63. Cl. 1.
International Minerals & Chemical Corp., Skokie, Ill. 749,640, pub. 3–5–63. Cl. 12.
Johns-Manville Corp.: *See*—
Celite Products Co.
Johnston Pie Co.: *See*—
Ward Baking Co.
Kansas City Macaroni & Importing Co., to American Beauty Macaroni Co., Kansas City, Mo. 171,169, ren. 5–21–63. Cl. 46.
Kaplan, Lazare, & Sons, Inc., New York, N.Y. 749,772, pub. 3–5–63. Cl. 28.
Keifer, Adolph, & Co., Glenview, Ill. 749,618, pub. 3–5–63. Cl. 6.
K4 Products Co., Olean, N.Y. 643,709, canc. Cl. 52.
Kellogg Co., Battle Creek, Mich. 749,877, pub. 3–5–63. Cl. 46.
Kellogg Co., Battle Creek, Mich. 749,958. Cl. 46.
Kentucky Bean Distilling Co.: *See*—
Medley Distilling Co.
Kerr-McGee Oil Industries, Inc., Oklahoma City, Okla. 749,921, pub. 3–5–63. Cl. 103.
Kiekhaefer Corp., Fond Du Lac, Wis. 749,755, pub. 3–5–63. Cl. 23.
Kilgore, Inc., Westerville, Ohio. 643,550, canc. Cl. 22.
Kleen-O-Products, Inc., Los Angeles, Calif. 643,711, canc. Cl. 52.
Klenk Epoxy Corp., Detroit, Mich. 749,935. Cl. 16.
Koch, George, Sons, Inc., Evansville, Ind. 402,583, ren. 5–21–63. Cl. 2.
Kops Bros., to Kops Brothers, Inc., New York, N.Y. 166,045, ren. 5–21–63. Cl. 39.
Kops Bros., to Kops Brothers, Inc., New York, N.Y. 166,046, ren. 5–21–63. Cl. 39.
Kops Brothers, Inc.: *See*—
Kops Bros.
Koska, M.: *See*—
Koska, Mykola.
Koska, Mykola, d.b.a. M. Koska, Philadelphia, Pa. 643,511, canc. Cl. 18.
Kroger Co., The, Cincinnati, Ohio. 749,689, pub. 3–5–63. Cl. 18.
Labline, Inc., Chicago, Ill. 643,745, canc. Cl. 26.
Lane Ltd., New York, N.Y. 749,936. Cl. 17.
Lane Magazine Co., Menlo Park, Calif. 749,947–9. Cl. 38.
Lattimer-Stevens Co., The, Columbus, Ohio. 749,663, pub. 3–5–63. Cl. 13.
Legere, Nelson D., Ottawa, Ontario, Canada. 749,763, pub. 3–5–63. Cl. 23.
Lea Wigs, Inc., Miami Beach, Fla. 749,825, pub. 3–5–63. Cl. 40.
Lily Lake Cheese Co. Inc., New York, N.Y. 749,864, pub. 3–5–63. Cl. 46.
Lincoln Rug Co., Inc., Newark, N.J. 643,719, canc. Cl. 103.
Liss, Samuel: *See*—
Foam-Pak Corp.
Longman and Martinez, Inc., Brooklyn, N.Y. 749,680, pub. 3–5–63. Cl. 16.
Louisville and Nashville Railroad Co., Louisville, Ky. 749,924, pub. 3–5–63. Cl. 105.
Lunsford-Alden, Rye, N.Y. 749,933. Cl. 6.
Lyon Metal Products, Inc., Aurora, Ill. 749,664, pub. 3–5–63. Cl. 13.
M & H Industries, Anaheim, Calif. 749,660, pub. 3–5–63. Cl. 13.
M.P.H. Mfg. Corp., Inc., Chicago, Ill. 749,638, pub. 5–5–59. Cl. 12.
Mac's Super Gloss Co. Inc., Los Angeles, Calif. 749,906, pub. 3–5–63. Cl. 52.
Mailograph Co., Inc., New York, N.Y. 749,914, pub. 3–5–63. Cl. 101.
Major Pool Equipment Corp., So. Kearny, N.J. 749,639, pub. 3–5–63. Cl. 12.
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Swartzendruber, Harold R.
Male, Inc., Highland Park, Ill. 749,903, pub. 3–5–63. Cl. 51.
Mallinckrodt Chemical Works, St. Louis, Mo. 643,442, canc. Cl. 6.
Mallory, P. R., & Co. Inc., Indianapolis, Ind. 749,700, pub. 3–5–63. Cl. 21.
Mangel Stores Corp., New York, N.Y. 749,799, pub. 3–5–63. Cl. 37.
Mansfield Tire & Rubber Co., The, Mansfield, Ohio. 749,789, pub. 3–5–63. Cl. 35.
Maple House, The, New York, N.Y. 749,781, pub. 3–5–63. Cl. 32.
Marconi's Wireless Telegraph Co. Ltd., London, England. 749,848, pub. 3–5–63. Cl. 44.
Margarine-Union Gesellschaft mit beschrankter Haftung, Hamburg, Germany. 749,874, pub. 3–5–63. Cl. 46.
Marino Lathing Supply Co., New Hyde Park, N.Y. 643,477, canc. Cl. 18.

Mark, Louis, & Co., Inc., New York, N.Y. 749,715, pub. 3–5–63. Cl. 22.
Martini & Rossi Corp., New York, N.Y. 749,892, pub. 3–5–63. Cl. 49.
Mattel, Inc., Hawthorne, Calif. 749,714, pub. 3–5–63. Cl. 22.
McCampbell & Co., Inc., New York, N.Y. 643,446, canc. Cl. 6.
McCracken, Charles E., Tulsa, Okla. 749,769, pub. 3–5–63. Cl. 26.
Medley Distilling Co., d.b.a. Kentucky Beau Distilling Co., Owensboro, Ky. 749,891, pub. 3–5–63. Cl. 49.
Melville Shoe Corp., New York, N.Y. 749,812, pub. 3–5–63. Cl. 39.
Merck & Co., Inc., Rahway, N.J. 643,440, canc. Cl. 6.
Merck & Co., Inc., Rahway, N.J. 643,494, canc. Cl. 18.
Merck & Co., Inc., Rahway, N.J. 643,496, canc. Cl. 18.
Merck & Co., Inc., Rahway, N.J. 643,515–18, canc. Cl. 18.
Merino Mills, Ltd., New York, N.Y. 749,838, pub. 3–5–63. Cl. 42.
Meyer, Herman, Drug Co., Inc., Garwood, N.J. 643,458, canc. Cl. 6.
Midas, Inc., Chicago, Ill. 749,922, pub. 3–5–63. Cl. 103.
Millers Falls Paper Co.: *See*—
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Millworth Converting Corp., New York, N.Y. 643,653, canc. Cl. 42.
Miner Saw Works, Inc., Columbia, S.C. 749,746, pub. 3–5–63. Cl. 23.
Minnesota Mining and Mfg. Co., Saint Paul, Minn. 749,591, pub. 3–5–63. Cl. 1.
Mints Co., The, Cleveland, Ohio. 749,650, pub. 3–5–63. Cl. 12.
Mitchum Co., The, Paris, Tenn. 749,902, pub. 3–5–63. Cl. 51.
Monsanto Chemical Co.: *See*—
Plax Corp.
Moore's Seafood Products, Inc., Milwaukee, Wis. 749,885, pub. 3–5–63. Cl. 46.
Multicolor Gravure Corp., Florence, Mass. 749,694, pub. 3–5–63. Cl. 20.
Mumm, G. H., & Cie Societe Vinicole De Champagne Succr. of New York, Inc.: *See*—
Societe Vinicole De Champagne.
Murial Lane, Inc., St. Louis, Mo. 749,626, pub. 3–5–63. Cl. 6.
Myers, Carmel, Inc., New York, N.Y. 749,900, pub. 3–5–63. Cl. 51.
National Biscuit Co., New York, N.Y. 749,868, pub. 3–5–63. Cl. 46.
National Broach and Machine Co., Detroit, Mich. 749,926, pub. 3–5–63. Cl. 106.
National Cash Register Co., The, Dayton, Ohio. 401,680, ren. 5–21–63. Cl. 37.
National Cash Register Co., The, Dayton, Ohio. 402,479, ren. 5–21–63. Cl. 26.
National Drug Co., The, Philadelphia, Pa., to Richardson-Merrell Inc., New York, N.Y. 401,885. Cl. 18.
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National Research and Chemical Co., Hawthorne, Calif. 643,436, canc. Cl. 6.
National Research Associates, Inc., Laurel, Md. 749,690, pub. 3–5–63. Cl. 19.
Nature Girl Undies, Inc., New York, N.Y. 643,634, canc. Cl. 39.
Nemo Labs, Inc., Belleville, N.J. 749,695, pub. 3–5–63. Cl. 21.
Nevins-Kirshner Associates, Inc., New York, N.Y. 749,797, pub. 3–5–63. Cl. 36.
New English Library Ltd., The, London, England. 749,807, pub. 3–5–63. Cl. 38.
Ney, J. M., Co., The, Bloomfield, Conn. 749,671–2, pub. 3–5–63. Cl. 14.
Nickol, Edwin F., Inc., Versailles, Ohio. 400,908, canc. Cl. 2.
Noel, George R., North Wales, Pa. 749,720, pub. 3–5–63. Cl. 22.
Norbest Turkey Growers Association, Salt Lake City, Utah. 749,878, pub. 3–5–63. Cl. 46.
Norcross, Inc., New York, N.Y. 749,803, pub. 3–5–63. Cl. 38.
Northern Helex Co., from Helex Co., Omaha, Nebr. 749,624, pub. 3–5–63. Cl. 6.
Northrup, King & Co., Minneapolis, Minn. 749,637, pub. 3–5–63. Cl. 10.
Norton & McElroy Produce, Inc., Glendale, Ariz. 749,871, pub. 3–5–63. Cl. 46.
Nudelman, Bratt & Kushner, Inc., New York, N.Y. 749,777, pub. 3–5–63. Cl. 28.
O.K. Rubber Welders, Inc., Littleton, Colo. 749,788, pub. 3–5–63. Cl. 35.
Office Specialties, Inc., Pawtucket, R.I. 749,779, pub. 3–5–63. Cl. 29.
Ojibway Press, Inc., Duluth, Minn. 749,943–4. Cl. 38.
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Olin Mathieson Chemical Corp., New York, N.Y. 749,628, pub. 3–5–63. Cl. 6.
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Osceola Fruit Distributors, d.b.a. Carta Gold Co., Kissimmee, Fla. 749,881, pub. 3–5–63. Cl. 46.
Otterburn Mill Ltd., Otterburn, England. 163,880, ren. 5–21–63. Cl. 42.
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Parisian Baking Co.: *See*—
Renon Parisian Fontana Bakeries, Inc.
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Parke, Davis & Co., Detroit, Mich. 749,853–4, pub. 3–5–63. Cl. 44.
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PATENTS

NOTICES

Board of Appeals Decisions Rendered in the Month of April 1963

Examiner affirmed	340
Examiner affirmed in part	60
Examiner reversed	73
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Foreign Patents Received in the Scientific Library as of April 30, 1963

Source	Date received	Highest number
Australia:		
(*Abstracts*)	Apr. 29, 1963	1969/61
(*Patents*)	Apr. 26, 1963	241,158
Austria	Mar. 11, 1963	225,650
Belgium	Oct. 16, 1962	573,100
Canada	Apr. 26, 1963	662,031
Czechoslovakia	Feb. 27, 1963	103,500
Denmark	Mar. 6, 1963	94,400
East Germany	Apr. 29, 1963	25,041
Egypt	Jan. 8, 1963	3,417
Finland	Mar. 25, 1963	32,695
France:		
(*Patents*)	Apr. 29, 1963	1,312,650
(*Medicaments*)	Apr. 29, 1963	1,350M
(*Additions*)	Apr. 29, 1963	79,600
Germany:		
(*Auslegeschriften*)	Mar. 25, 1963	1,142,320
(*Patents*)	Mar. 19, 1963	1,131,143
Great Britain	Apr. 19, 1963	923,000
India	Apr. 19, 1963	79,433
Ireland	Feb. 12, 1963	23,400
Italy	Aug. 8, 1962	607,400
Japan	Apr. 25, 1963	2,650/63
Netherlands	Apr. 12, 1963	104,313
Norway	Mar. 25, 1963	101,415
Pakistan	Aug. 20, 1962	111,190
Philippine Republic	Apr. 13, 1962	458
Poland	Apr. 29, 1963	46,694
Rumania	Apr. 8, 1963	42,038
Sweden	Mar. 11, 1963	182,204
Switzerland	Apr. 19, 1963	367,461
U.S.S.R.	Apr. 23, 1963	152,421

Australia: First 2,000 incomplete
Belgium: First printed 493,079/1950
Canada: First printed 445,931/1948
Czechoslovakia: Not received between 81,300/1952 and 91,901/1959
Finland: First printed 19,428/1941
First 500 incomplete
Hungary: First received 6,792/1896
Latest 140,582/1951
Ireland: Missing 1–10,000
Italy: First 248,000 incomplete
Rumania: First received 40,380/1957
U.S.S.R.: Not received between 2,496/1928 and 116,000/1958
Yugoslavia: First received 10,001/1933
Latest 16,461/1941

Order of Examination

Recent instructions to the Examining Corps include:

Cases in which practice requires that the Examiner act within 60 days, such as decisions on motion (M.P.E.P. 1105.06) and Examiner's answers (M.P.E.P. 1208), necessarily take priority over special cases without specific time limits. Such cases should be taken up for action at least 30 days before the 60-day period expires, to guarantee completion within the 60-day limit.

Shortened Statutory Period

Such a period has now been authorized (1) upon reopening a case consequent to a Quality Control review, (2) when restriction is required and the action does not include a rejection of any claim and (3) when multiplicity is the only ground of rejection relied upon.

Quality Control

The new Quality Control procedure will occasionally require further action in an application wherein the applicant already has been led to believe orally or otherwise that the prosecution has been closed by allowance or by some other action.

Change Notices 1—11 and 1—12, soon to be issued to all subscribers to the Manual of Patent Examining Procedure (3rd edition), include these changes in procedure.

HAROLD B. WHITMORE,
Apr. 17, 1963. *Superintendent of the Examining Corps.*

Affidavit under Rule 204(b)

For greater uniformity and avoidance of needless interferences, the following practice should be followed in instituting interferences which may involve senior party patentees.

In all cases where claims are copied from a patent, and the applicant's effective filing date is more than thirty days later than the patentee's filing date, the Examiner, before declaring an interference, shall require applicant to file an affidavit setting forth sufficient facts to make out a prima facie case for priority relative to the filing date of the patentee.

H. B. WHITMORE,
Apr. 30, 1963. *Superintendent of the Examining Corps.*

Disclaimers

2,988,285.—*William R. Shaffer*, Huntingdon, Pa. ROAD STRIPING MACHINE. Patent dated June 13, 1961. Dis-

New Applications Received During March 1963

Patents	7,252
Designs	462
Plant Patents	9
Reissues	24
Total	7,747

Issue

Patents	807	No. 3,090,961 to No.	3,091,767, incl.
Designs	29	No. 195,297 to No.	195,325, incl.
Reissues	4	No. 25,389 to No.	25,392, incl.
Total	840		

claimer filed Apr. 4, 1963, by the assignee, *Weld Industries, Inc.*

Hereby enters this disclaimer to claims 1, 2, 7, 8 and 9 of said patent.

3,034,223.—*Donald W. Lynch*, Louisville, Ky. CLOTHES DRYING MACHINE. Patent dated May 15, 1962. Disclaimer filed Feb. 25, 1963, by the assignee, *General Electric Company.*

Hereby enters this disclaimer to claims 1, 2, 3, 4, 5, 7, 8 and 9 of said patent.

Patents Available for Licensing or Sale

2,952,446. Heating and Cooling Alternator Valve. Melvin L. Holland, P.O. Box No. 211, Bellflower, Calif.

3,083,497. Satellite Toy, Display Article or the Like. Thomas E. Novak, 17 Ridge St., Brownsville, Pa.

3,083,504. Movable Figure Toy. Louis M. Abbott, 4437 N. Seeley Ave., Chicago 25, Ill.

3,085,610. Toy Carrier. Ann H. Vardan, P.O. Box 8044, Sacramento 18, Calif.

The following 3 patents are offered by Marlan E. Bourns, president, Bourns, Inc., 1200 Columbia Ave., Riverside, Calif.

2,510,060. Pulse-Time Modulation Circuits and Method.

2,754,716. Fastening Pin Having a Plurality of Resilient Fingers.

2,839,701. Vacuum Tube Pick-Up.

The following 3 patents are offered by E. Griffiths Hughes Limited, 225 Bath Road, Slough, Bucks, England.

2,594,385. Heating of Coffee Beans.

2,738,276. Aromatisation of Powders.

2,918,372. Process for the Production of a Coffee Extract in the Form of a Dry Powder.

General Electric Company is prepared to grant non-exclusive licenses under the following 23 patents upon reasonable terms to domestic manufacturers.

Applications for license under the following 2 patents may be addressed to: General Electric Company, Patent Counsel, Instrument Department, 40 Federal St., West Lynn, Mass.

2,856,584. Voltage Reference Level Variance Indicator.

2,897,445. Time Series Current Conversion.

Applications for license under the following 6 patents may be addressed to: General Electric Company, 1 River Road, Bldg. #53, Schenectady 5, N.Y.

3,070,962. Steam Seal Diverting Valve.

3,070,979. Compound Shaft Coupling.

3,075,104. Liquid-Cooled Rotor for a Dynamoelectric Machine.

3,076,428. Retractable Continuous Drive.

3,063,680. Flexible Drive-Shaft Assembly With Self-Aligning Bearings.

3,064,343. Compensating Device for Turbomachine Bucket Wheel.

Applications for license under the following 15 patents may be addressed to: Patent Counsel, Major Appliance Division, General Electric Company, Appliance Park, Louisville 1, Ky.

2,961,661. Combination Washer-Dryer.

2,970,777. Waste Disposal Apparatus.

2,986,910. Article Treating Machine With Pneumatically Operated Safety Interlock.

2,990,705. Article-Treating Machine With Fluid-Operated Switch Controls Therefor.

2,990,709. Washing Machine With Improved Clothes Agitator.

3,009,657. Sink Connection Support for Waste Disposal Apparatus.

3,012,332. Heat Storage Reservoir for Clothes Dryer.

3,019,380. Electro-Pneumatic Sequence Control System.

3,021,956. Vibration Isolating System.

3,026,700. Clothes Washing Machine Having a Suspension System Which Serves as a Liquid Seal.

3,026,701. Combined Washing and Centrifuging Machine With Vibration-Isolating Suspension System.

3,065,620. Washing Machine.

3,065,622. Bleach Agent Dispenser System for Washing Machines.

3,066,520. Washing Machine With Storage and Dispensing System for Granular Treating Agent.

3,067,303. Adjustable Water Level Switch.

PATENT EXAMINING CORPS

H. B. WHITMORE, Superintendent

PATENT EXAMINING OPERATIONS AND GROUPS	Oldest Application	
	New	Amended
CHEMICAL EXAMINING OPERATION—P. E. MANGAN, Director.		
GENERAL CHEMISTRY, GROUP 110—R. L. CAMPBELL, Supervisory Examiner	7-12-61	7-27-61
Inorganic and Organo-metal (formerly Div. 59)—M. A. Brindisi.		
Metallurgy (formerly Div. 3).		
Electrochemistry (formerly Div. 56)—J. R. Speck.		
GENERAL ORGANIC CHEMISTRY, GROUP 120—I. MAROUS, Supervisory Examiner	12-28-61	11-15-61
Heterocyclic (formerly Div. 6)—H. J. Lidoff.		
Specialized Organic Compounds (formerly Div. 38)—C. B. Parker.		
Medicines (formerly Div. 43).		
PETROLEUM CHEMISTRY, GROUP 130—J. S. BAILEY, Supervisory Examiner	12-6-61	10-20-61
Hydrocarbons (formerly Div. 31).		
Oxo- and Oxy-Derivatives.		
HIGH POLYMER CHEMISTRY, GROUP 140—M. STERMAN, Supervisory Examiner	5-8-61	4-26-61
High Polymer Preparation (formerly Div. 60).		
Mixed High Polymers and Natural Resins (formerly Div. 50).		
COMPOSITIONS AND MOLDING, GROUP 150—L. H. GASTON, Supervisory Examiner	10-9-61	10-17-61
Coating Compositions and Molding.		
Special Utility Compositions (formerly Div. 64)—J. Greenwald.		
COATING AND LAMINATING, GROUP 160—L. G. STONE, (J. REBOLD, Acting) Supervisory Examiner	10-13-61	10-2-61
Coating Methods and Apparatus (formerly Div. 25)—R. D. Nevius.		
Laminating and Stock Materials (formerly Div. 67).		
SPECIALIZED CHEMICAL ARTS AND INDUSTRIES, GROUP 170—W. B. KNIGHT, Supervisory Examiner	9-7-61	9-27-61
Specialized Chemical Arts (formerly Div. 63)—A. H. Winkelstein.		
Reactors and Miscellaneous Industrial Processes.		
CHEMICAL ENGINEERING, GROUP 180—G. D. MITCHELL, Supervisory Examiner	10-31-61	12-12-61
Gases, Liquids and Solids Separating (formerly Div. 32)—H. L. Martin.		
Distillation, Drying and Physical Processes.		
ELECTRICAL EXAMINING OPERATION—N. H. EVANS, Director.		
POWER, GROUP 210—M. L. LEVY, Supervisory Examiner	9-15-61	8-31-61
Generation and Utilization (formerly Div. 26)—O. L. Rader.		
General Applications (formerly Div. 48)—S. Bernstein.		
Conversion and Distribution (formerly Div. 71)—L. McCollum.		
Heating and Related Art (formerly Div. 76)—R. M. Wood.		
SECURITY, GROUP 220—S. BOYD, Supervisory Examiner	11-1-61	10-4-61
Chemical (formerly Div. 46).		
Electrical (formerly Div. 44)—C. L. Justus.		
Mechanical (formerly Div. 10).		
INFORMATION TRANSMISSION, GROUP 230—S. W. CAPELLI, Supervisory Examiner	10-19-61	10-12-61
Communications (formerly Div. 16)— R. H. Ross.		
Multiplexing Techniques (formerly Div. 77)—D. G. Redinbaugh.		
Facsimile and Related Art (formerly Div. 41)— R. Lake.		
INFORMATION STORAGE AND RETRIEVAL, GROUP 240—W. W. BURNS, Supervisory Examiner	8-25-61	9-7-61
Processing and Related Art (formerly Div. 68)—M. A. Morrison.		
Storage Devices and Related Art (formerly Div. 42)—I. Sragow.		
ELECTRONIC COMPONENT SYSTEMS AND DEVICES, GROUP 250—B. G. MILLER, Supervisory Examiner	9-21-61	9-18-61
Semi-Conductor and Space Discharge Systems and Devices (formerly Div. 51)—G. N. Westby.		
Electronic Component Circuits (formerly Div. 72)—A. Gauss.		
Wave Transmission Lines and Networks (formerly Div. 65)—H. K. Saalbach.		
RADIATION AND INSTRUMENTS, GROUP 260—F. M. STRADER, Supervisory Examiner	9-20-61	9-13-61
Optics (formerly Div. 73)—J. H. Pedersen.		
Radiant Energy (formerly Div. 54)—R. G. Nilson.		
Measuring (formerly Div. 74)—W. L. Carlson.		
ELEMENTS, GROUP 270—E. J. SAX, Supervisory Examiner	9-27-61	9-22-61
Conductors (formerly Div. 75)—J. P. Wildman.		
Switches (formerly Div. 37)—B. A. Gilheany.		
Miscellaneous (formerly Div. 78)—J. F. Burns.		

CONDITION OF PATENT APPLICATIONS AS OF MARCH 31, 1963

Total number of pending applications (excluding Designs)	192, 888
Total number of Design applications pending	5, 875
Total number of applications awaiting action (excluding Designs)	111, 125
Total number of Design applications awaiting action	2, 014
Date of oldest new application awaiting action	May 8, 1961
Date of oldest amended application awaiting action	April 26, 1961

EXPIRATION OF PATENTS

The patents within the range of numbers indicated below expire during May 1963, except those which may have been extended under the provisions of the Veterans Patent Extension Act (64 Stat. 316 as amended by 66 Stat. 321) and those which may have expired earlier due to shortened terms under the provisions of Public Law 600. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1963*

Patents ..... Numbers 2,990,611 to 2,991,291, inclusive

Plant Patents ..... Numbers 688 to 692 inclusive

PATENT EXAMINING OPERATIONS AND GROUPS (Continued)	Oldest Application	
	New	Amended
MECHANICAL ENGINEERING EXAMINING OPERATION—R. A. WAHL, Director.		
MATERIAL OR ARTICLE HANDLING AND DISPENSING, GROUP 310—A. BERLIN, Supervisory Examiner...		
Conveying and Loading (formerly Div. 4)—E. A. Faller.		
Handling.		
Dispensing (formerly Div. 35)—L. J. Dembo.		
METAL AND PLASTICS WORKING, GROUP 320—N. BERGER, Supervisory Examiner.....		
Metal-Working.		
Plastics Working (formerly Div. 15)—M. V. Brindisi.		
MANUFACTURING AND ASSEMBLING MISCELLANEOUS ARTICLES, GROUP 330—A. HORTON, Supervisory Examiner.....		
Combined Machines and Processes (formerly Div. 14)—W. A. Wiltz.		
Assembly and Special Article Making.		
MACHINE TOOLS, MECHANISMS, AND ELEMENTS, GROUP 340—F. BRONAUGH, Supervisory Examiner		
Comminuting, Abrading and Drilling.		
Cutting.		
Machine Elements and Mechanisms (formerly Div. 12)—B. G. Durham.		
Clutches, Shafting and Workholders.		
HARDWARE, TOOLS AND JOINTS, GROUP 350—T. HICKEY, Supervisory Examiner.....		
Hardware (formerly Div. 20)—J. D. Sears.		
Tools.		
Joints.		
FLUID HANDLING, GROUP 360—E. PAUL, Supervisory Examiner.....		
Fluid Handling and Valves (formerly Div. 30)—I. Weil.		
Baths, Closets and Fluid Conduits (formerly Div. 11)—E. V. Benham.		
POWER PLANTS, MOTORS AND PUMPS, GROUP 370—C. GAREAU, Supervisory Examiner.....		
Power Plants and Motors (formerly Div. 18)—A. Blum.		
Expansible Chamber Motors.		
Pumps (formerly Div. 9)—J. H. Branson.		
HEATING, COOLING AND VENTILATING, GROUP 380—P. PATRICK, Supervisory Examiner.....		
Burners and Heat Exchange.		
Cooling and Ventilation (formerly Div. 30)—R. A. O'Leary.		
GENERAL ENGINEERING AND INDUSTRIAL ARTS EXAMINING OPERATION—J. A. MANIAN, Director.		
AGRICULTURE, GROUP 410—A. RUEGG, Supervisory Examiner.....		
Animal (formerly Div. 5)—C. W. Robinson.		
Plant (formerly Div. 1)—A. G. Stone.		
CIVIL ENGINEERING, GROUP 420—B. BENDETT, Supervisory Examiner.....		
Buildings.		
Construction and Structures.		
Earth Working, Drilling and Mining.		
PHYSICS, GROUP 430—R. L. EVANS, Supervisory Examiner.....		
Photography, Sound and Lighting (formerly Div. 7)—E. G. Anderson.		
Indicators and Optics (formerly Div. 23)—L. Smilow.		
Measuring and Testing (formerly Div. 36)—J. P. Strizak.		
Geometric, Heat and Liquid Testing (formerly Div. 66)—L. Lisann.		
TEXTILES AND APPAREL, GROUP 440—R. C. MADER, Supervisory Examiner.		
Textiles.		
Apparel.		
TRANSPORTATION, GROUP 450—P. ARNOLD, Supervisory Examiner.....		
Rail Vehicles and Brakes (formerly Div. 34)—L. Quackenbush.		
Land Vehicles.		
Aeronautics and Ships (formerly Div. 22)—M. Buchler.		
FURNITURE AND RECEPTACLES, GROUP 460—W. COLE, Supervisory Examiner.....		
Furniture (formerly Div. 52)—C. A. Le Roy.		
Receptacles (formerly Div. 40)—E. J. Drummond.		
PRINTING, STATIONERY AND MATERIAL TREATMENT, GROUP 470—L. W. VARNER, Supervisory Examiner.....		
Printing (formerly Div. 17)—R. A. Leighey.		
Stationery (formerly Div. 53)—G. A. Ninas.		
Material Treatment.		
PERSONAL TREATMENT, ADORNMENT AND AMUSEMENT, GROUP 480—L. R. PRINCE, Supervisory Examiner.....		
Personal Treatment.		
Adornment and Amusement (formerly Div. 62)—D. B. Lowe.		
DESIGNS—J. A. MANIAN, Supervisory Examiner.....		
Industrial Arts (formerly Div. 31)—A. B. Hannah.		
Household, Personal and Fine Arts (formerly Div. 32)—E. Hunter.		
(CLASSIFICATION) GORECKI, G. A.—ARTS UNDERGOING RECLASSIFICATION AS LISTED UNDER CLASSIFICATION DIVISIONS.		
91. KENT, A. P. (acting).....		
92. GAUSS, H.....		
93. PURDY, W. F. (acting), Wire Working.....	5-3-62	3-1-62
94. BERLOWITZ, W., Motors, Fluid.....	7-6-62	7-29-62
96. ANGEL, C. D., (REZNEK, J., acting), Metallic Building Structures.....	12-11-61	12-19-61

DECISIONS IN PATENT AND TRADEMARK CASES

U.S. Court of Customs and Patent Appeals

IN RE J. F. MARE COMPANY, INC.

No. 6871. Decided January 16, 1963

[50 CCPA —; 311 F.2d 814; 136 USPQ 201]

1. TRADEMARK—CONFUSING SIMILARITY—SIDE-BY-SIDE COMPARISON OF MARKS NOT THE TEST.

"* * * side-by-side comparison is not the test. * * * We think it quite unlikely that ordinary purchasers of electrical lamps see the competitive goods and marks in juxtaposition. They are more likely, we think, to have some vague recollection of a previously encountered mark on the basis of which, confrontation by the other mark creates a false impression of common origin of the goods."

2. SAME—SAME—HERALDIC DESIGNS IN COMPOSITE MARKS.

"Appellant has discussed at some length the significance of differences in heraldic designs or escutcheons from the point of view of experts in heraldry. But there is no evidence in the record that the ordinary purchasers of electrical lamps are likely to be experts in heraldry or to have sufficient interest in heraldry that they would pay particular attention to the details of an heraldic design."

3. SAME—SAME.

"In appellant's mark, the crest (or coat of arms) background design serves to emphasize the word 'crest' in the composite 'Marcrest.' *Roman Meal Co. v. Roman Crest Foods, Inc.*, 49 CCPA 980, 300 F.2d 926, 133 USPQ 202. Here as in the *Roman Meal* case, the word portions of the marks are significant aspects of the marks. Appellant's mark prominently incorporates registrant's word 'crest' and also the concept of a background involving a 'crest' or 'coat of arms.' There is thus dual similarity."

4. SAME—SAME.

"While the word portions of the marks in issue, 'Marcrest' and 'Crest' are different, these verbal differences do not seem to us to be sufficient to distinguish the marks. Similarly, the specific differences in the pictorial portions of the respective marks do not seem to us to be sufficient to overcome the similarities of the marks. When the marks are then considered in their entireties, the totality of the impressions created in the minds of the average purchasers would, we think, be likely to cause confusion, mistake or deception of purchasers."

APPEAL from the Patent Office. Serial No. 58,106.

AFFIRMED.

Samuel B. Smith, Merriam, Smith & Marshall, J. Harold Kilooyne for appellant.

Clarence W. Moore (*George C. Roeming* of counsel) for the Commissioner of Patents.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, SMITH, and ALMOND, JR., *Associate Judges*

SMITH, *J.*, delivered the opinion of the court.

Appellant has appealed from a decision of the Trademark Trial and Appeal Board which affirmed the rejection of its application [1] for the registration of the composite mark reproduced below, for electrical lamps. The Board (at 130 USPQ 485) affirmed the Examiner's rejection [2] based on the composite mark, which is also reproduced below, of Registration No. 234,588 granted Nov. 1, 1927,

[1] Ser. No. 58,106, filed Aug. 29, 1958.

[2] The Trademark Trial and Appeal Board also affirmed the refusal of registration by the Examiner of Trademarks on the ground of likelihood of confusion with the mark of Registration No. 602,723. Since Registration No. 602,723 was cancelled on March 2, 1962, the refusal based thereon is now moot.

renewed Nov. 1, 1947, for "Electrical Lamps, Torcheres and Candelabra."

Since appellant's mark and the mark of Reg. No. 234,588 are for identical goods, namely electrical lamps, the only issue is whether or not the marks are so similar that confusion, mistake, or deception of purchasers is likely.

The drawings of the appealed application and of the reference registration show the respective composite marks as follows:



Applicant Reference Registration

Appellant contends that the differences between "Marcrest" and "Crest" and between the coats of arms in the background designs of the respective marks are sufficient to make confusion, mistake, or deception of purchasers unlikely. In making this contention, appellant relies on differences in the marks based on a detailed side-by-side comparison of the respective coats of arms of the marks and points out some similarity and much dissimilarity of detail. [1] But, as the Trademark Trial and Appeal Board noted, side-by-side comparison is not the test. *Rex Shoe Company, Inc.* v. *The Juvenile Shoe Corporation of America*, 47 CCPA 748, 273 F.2d 179, 124 USPQ 173. We think it quite unlikely that ordinary purchasers of electrical lamps see the competitive goods and marks in juxtaposition. They are more likely, we think, to have some vague recollection of a previously encountered mark on the basis of which, confrontation by the other mark creates a false impression of common origin of the goods.

[2] Appellant has discussed at some length the significance of differences in heraldic designs or escutcheons from the point of view of experts in heraldry.[5] But there is no evidence in the record that the ordinary purchasers of electrical lamps are likely to be experts

[5] These differences are set forth in appellant's brief as follows:

This application for registration sets forth an escutcheon of highly unique characteristics. The escutcheon consists of a shield shaped field with a diagonal stripe in the nature of a bar sinister extending from the upper left hand corner to the lower right edge across the field to divide it into substantially equal parts. Aligned swords are placed in the lower part of the field. Additional swords, triangularly placed, are found in the upper part of the field. Atop the shield is a helmet with a breast plate or mantle. Each of the helmet and the sides of the shield or escutcheon are outline-accentuated, and more or less framed by a design much in the form of an acanthus leaf. The entire configuration is topped by a crown which at once suggests a regal characteristic. Beneath the complete unique and significant design a scroll, on which the word "Marcrest" appears, outlines the lower portion and sets out appellant's brand name.

* * * * * * *

If prior Registration No. 234,588 be carefully considered, it will be seen that this too is an escutcheon, but the escutcheon is topped by a griffin. This creature of fable is of substantially the same size as the escutcheon itself. It is practically the most prominent part of the design. While indeed there is a band or stripe in the nature of a bar sinister that extends across the shield portion, this band is interrupted and divided by a scroll which substantially bisects the shield and the bank. The word "Crest" is centered on the dividing strip or band. Further than this, the shield has what appears to be a scale and hammer crossed in one corner and a torch in the other corner. The designs are highly different.

in heraldry or to have sufficient interest in heraldry that they would pay particular attention to the details of an heraldic design.

Appellant also has urged a distinction between the word portions "Marcrest" and "Crest." The term "crest," according to Webster's Third New International Dictionary, unabridged, 1961, includes numerous definitions thereof including "an escutcheon of arms" and "a complete coat of arms—not used technically." The same dictionary includes numerous definitions of "escutcheon," including "coat of arms" and "a decorative device or emblem resembling a coat of arms." Accordingly, the word "crest," as it appears in the mark of Registration No. 234,588, means "a coat of arms" and is used in an arbitrary sense with respect to its use on electrical lamps.

[3] In appellant's mark, the crest (or coat of arms) background design serves to emphasize the word "crest" in the composite "Marcrest." *Roman Meal Co.* v. *Roman Crest Foods, Inc.*, 49 CCPA 980, 300 F.2d 926, 133 USPQ 202. Here as in the *Roman Meal* case, the word portions of the marks are significant aspects of the marks. Appellant's mark prominently incorporates registrant's word "crest" and also the concept of a background involving a "crest" or "coat of arms." There is thus dual similarity.

While the design portions of the marks in issue relate to different coats of arms, we think the psychological impressions created by the marks on the average purchaser of electrical lamps would necessarily be about the same. As a rule, such purchasers do not have such clear recollections as to the details of a design mark that they could distinguish in the market place the design portions of the two marks.

We think the average purchaser would probably recall that the label had an illustration of a coat of arms but that whether its "crest" portion was a crown or a griffin would make little difference as long as the design was associated with the word "Crest." It is the word "Crest" in association with a coat of arms design which we think would identify the origin of the products as far as the average purchaser is concerned.

[4] While the word portions of the marks in issue, "Marcrest" and "Crest" are different, these verbal differences do not seem to us to be sufficient to distinguish the marks. Similarly, the specific differences in the pictorial portions of the respective marks do not seem to us to be sufficient to overcome the similarities of the marks. When the marks are then considered in their entireties, the totality of the impressions created in the minds of the average purchasers would, we think, be likely to cause confusion, mistake or deception of purchasers. We therefore affirm the decision of the Trademark Trial and Appeal Board.

AFFIRMED.

U.S. Court of Customs and Patent Appeals

IN RE FRANCES M. JOHNSON

No. 6911. Decided February 13, 1963

[50 CCPA —; 312 F.2d 832; 136 USPQ 472]

1. PATENTABILITY—PARTICULAR SUBJECT MATTER—"DUAL PURPOSE GARMENT."
The refusal of claims in an application entitled "Dual Purpose Garment," as unpatentable over the prior art, is affirmed.

APPEAL from the Patent Office. Serial No. 763,530.

AFFIRMED.

James W. Dent, Donald J. Rich, J. Warren Kinney, Jr., for appellant.

Clarence W. Moore (*Joseph F. Nakamura* of counsel) for the Commissioner of Patents.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, SMITH, and ALMOND, JR., *Associate Judges*

MARTIN, *J.*, delivered the opinion of the court.

This is an appeal from a decision of the Patent Office Board of Appeals affirming the Examiner's rejection of claims 1–3, the only claims of the application Serial No. 763,530, filed September 26, 1958 for Dual Purpose Undergarment.

Claims 1–3 read:

1. An under-garment comprising an elongate panel of light-weight, washable fabric having opposed side and end edges and inner and outer faces, elongate bands transversely spanning said inner face at opposite ends of the panel, and a pair of elastic strips one on each side thereof interconnecting opposite ends of the panel.

2. An under-garment comprising an elongate panel having opposed side and end edges and inner and outer faces, substantially rectangular elastic sub-panels transversely spanning the inner face of said panel at opposite ends thereof, and elastic strips each secured to, carried by and interconnecting opposite ends of the panel on opposite sides thereof, said strips adapted to extend around the hips with the inner face of the panel engaging the crotch of the wearer.

3. A dual purpose under-garment comprising an elongate panel having opposed side and end edges and inner and outer faces, an elongate sub-panel transversely spanning the inner face at each end of said panel for providing reinforced areas the entire width of said panel, elastic strips secured to and extending from opposite ends of the panel adapted to extend around the hips with the panel extending under and engaging the crotch of the wearer wherein the ends of said panel are disposed in the plane of said strips, said reinforced areas forming flat surfaces about which the anchoring tabs of a conventional sanitary pad may be folded in flatwise condition for disposing the pad flatwise throughout its length on the inner face of said panel, said reinforcing areas also forming flat surfaces for receiving pins by which the said anchoring tabs are securely though releasably secured to said areas.

Appellant's application describes a dual purpose undergarment which may be used and worn as an item of underwear or used as a holder for a sanitary napkin. The garment comprises an elongated main panel of lightweight washable fabric, shaped generally as a rectangle with opposed long concavely curved reinforced side edges and opposed shorter straight front and back reinforced end edges. An elongated substantially rectangular elastic band or sub-panel transversely spans the entire width of the inner face of each straight end of the main panel. In other words, a sub-panel is sewed to the inner face of the main panel on each longitudinal edge which corresponds to each end of the main panel. The two side edges of each of the sub-panels are coextensive with only a short portion of the two side edges of the main panel. A pair of elastic strips provides a loop on each side of the main panel, each loop extending from the front to the back end edge of the main panel. Appellant points out in her brief that the sub-panels provide a reinforcement for engagement by a fastening means when the garment is used as a support for a sanitary pad, "with the fastening means being available to the outside of the panel and not to the inside."

The references relied on by the Examiner and the Board are:

Des Rosiers, 1,110,674, September 15, 1914.
Ballard et al., 2,011,027, August 13, 1935.

The Des Rosiers patent discloses a catamenial bandage comprising a band of soft, impervious material. FIGURES 1 and 2 of the patent show the bandage to taper gradually from a front edge to a narrower back edge. FIGURE 2 indicates both edges to be reinforced by a hem. A catch is shown in said figures at each extremity of the front edge. Each of these catches engages one end of a strap. Each of the other end of the straps is attached to an extremity of the hem at the back edge. The straps, which are elastic, form a belt that can be worn around the waist of the wearer's body. An absorbent member can be secured to the bandage.

The Ballard et al. patent discloses a sanitary garment comprising an elongated strip having concavely shaped front, back and two side edges with a middle portion made of rubberized silk and end portions of open weave absorbent fabric. A pair of elastic straps provide a loop on each side of the elongated strip extending from the back edge to the front edge of the strip. The straps are worn about the waist just above the hips.

Claims 1–3 stand rejected as unpatentable over Des Rosiers or Ballard et al. The Examiner found every structural feature in appellant's claim 3, the most specific claim, to be disclosed by Des Rosiers. He considered the hems reinforcing the front and back edges of the Des Rosiers bandage to constitute the sub-panels as recited in the appealed claims which provide reinforced areas the entire width of the main panel. The Examiner similarly found claim 3 to be met by Ballard et al. The Board adopted the Examiner's position as its own.

Appellant points out that the claimed device is designed to be supported from the hips instead of from the waist as are the devices in the references. She contends that the references' devices are not designed to have the ends of a sanitary pad folded around reinforced areas as is the claimed device. It is argued that the devices in the references do not provide reinforced areas of the nature of elongated bands transversely spanning the inner face at the opposite front and back ends of a main panel.

It appears that appellant predicates patentability on two principal features; namely, the elongated sub-panel, spanning the entire inner face at each end of the panel, and the horizontal placement of the strips which encircle the body when in use, in relation to the ends of the panel.

As to the first feature, Des Rosiers teaches this structure not only in his FIGURE 2 but spells it out in his specification wherein he says:

* * * The front edge is reinforced by a hem, 3, of some elastic material, preferably flat webbing, and is provided at each extremity with a catch, 8—8', engaging with the elastic straps, 7—7', permanently attached to or in prolongation of a hem or reinforcement, 12, at the rear end of the device. * * *

The feature that the transverse sub-panels are placed on the "inner face of the panels" is found in FIGURE 1 of Des Rosiers. Furthermore, it is common practice to place a hem, whether reinforcing or otherwise, on the inner face of a garment. The limitation recited in claim 2 that these sub-panels sall be made of elastic material is also found in the above quoted portion of Des Rosiers' specification.

Coming now to the other feature, the placement of the encircling strips in relation to the ends of the panels, Des Rosiers teaches this structure in FIGURE 1. Therefore, a wearer of Des Rosiers' garment could just as readily wear the garment so that the bands would encircle the hips as the wearer of appellant's garment. It is true that the wearer of such a garment generally would want the panel to

engage the crotch and wearing the Des Rosiers garment in this fashion could require the shortening of the panel. However, the shortening of the panel in Des Rosiers' structure so that the wearer could place the bands around the hips and at the same time have the panel engage the crotch, surely would not amount to a modification of patentable significance.

Assuming *arguendo* that the pressure of the bands on the abdomen at a time when the garment would ordinarily be used adds to the distress of the user as appellant contends, the suggestion to wear the band around the hips so that the pressure would be eliminated would be self-evident.

Claim 3 recites the same features as claims 1 and 2. However, it also adds a functional reference to

> • • • said reinforced areas forming flat surfaces about which the anchoring tabs of a conventional sanitary pad may be folded in flatwise condition for disposing the pad flatwise throughout its length on the inner face of said panel, said reinforcing areas also forming flat surfaces for receiving pins by which the said anchoring tabs are securely though releasably secured to said areas.

It is obvious that Des Rosiers' structure could be used in the same manner which fact supports the conclusion that appellant has claimed nothing more than what one of ordinary skill in this art could have constructed with the teachings of Des Rosiers before him without the resultant structure having patentable distinction.

Since we find that the claimed subject matter is unpatentable over Des Rosiers, it becomes unnecessary to consider the Ballard et al. patent.

[1] In view of the foregoing we affirm the decision of the Board.

AFFIRMED.

PATENT SUITS

Notices under 35 U.S.C. 290; Patent Act of 1952

2,133,642, G. W. Pierce, Electrical systems; **2,133,643**, same, Electrical systems and apparatus; **2,133,645**, same, Electrical systems; **2,133,646**, same; **2,133,648**, same; **2,266,670**, same, Electromechanical vibrator apparatus, filed Apr. 15, 1954, D.C.N.J. (Newark), Doc. 296/54, *Helen Russell Pierce* v. *International Telephone Corporation*. Order restoring case to active list Nov. 30, 1962. Order granting defendant's motion for summary judgment Feb. 25, 1963. Same, filed June 21, 1954, D.C., M.D. Pa. (Scranton), Doc. 4983, *George Washington Pierce* v. *Standard Piezo*. Cause dismissed Mar. 11, 1963.

2,133,643. (See 2,133,642.)

2,133,645. (See 2,133,642.)

2,133,646. (See 2,133,642.)

2,133,648. (See 2,133,642.)

2,191,384. (See 2,476,738.)

2,191,385. (See 2,476,738.)

2,198,966. (See 2,476,738.)

2,266,670. (See 2,133,642.)

2,390,636, L. J. Biro, Writing instrument; **2,397,230**, same; **2,400,679**, same, Fountain pens; **2,416,996**, same, Writing instruments; **2,428,954**, R. W. Randolph, same; **2,454,666**, same, Ball-point writing instruments; **2,491,662**, L. J. Biro, Fountain pens, filed Dec. 6, 1962, D.C.N.J. (Newark), Doc. 1006/62, *The Parker Pen Company* v. *Northern Industrial Products, Inc. et al.* Consent judgment; patent held valid and infringed Feb. 27, 1963.

2,397,230. (See 2,390,636.)

2,400,679. (See 2,390,636.)

2,416,996. (See 2,390,636.)

2,428,954. (See 2,390,636.)

2,445,222, M. C. Fridolph, Body garment; **2,707,289**, E. S. Mayer, Girdles, filed Jan. 2, 1963, D.C., S.D.N.Y., Doc. 63/5, *Serong, Inc.* v. *Figure Builder Foundations, Inc.* Consent judgment; defendant enjoined Mar. 6, 1963.

2,445,222(a), M. C. Fridolph, Body garment, filed Mar. 19, 1963, D.C., S.D.N.Y., Doc. 63/776, *Serong, Inc.* v. *Willoform Manufacturing Co., Inc.*

2,454,666. (See 2,390,636.)

2,476,176. (See 2,476,738.)

2,476,738, F. Klumpp, Jr., Solderless blade for plug caps; **2,558,052**, same, Process of making solderless blades for electrical plug caps; **2,191,384**, W. P. Herman, Contact plug; **2,191,385**, same; **2,198,966**, same, Connector plug assembly apparatus; **2,276,176**, same, Apparatus for assembly of connector plugs (the last four patents included by counterclaim), filed July 31, 1957, D.C.R.I. (Providence), Doc. 2207, *Heyman Manufacturing Company* v. *Electrix Corporation*. Order holding claims 1 and 2 of Patent No. 2,476,738 valid and infringed by defendant; claims 4 and 6 of Patent No. 2,558,052 held valid but not infringed; claims 2 thru 6 and 8 of Patent No. 2,191,384 held valid and infringed by plaintiff; claims 2, 3 and 7 of Patent No. 2,191,385 held valid and infringed by plaintiff; claims 1, 3, 5, 6, 8, 9 and 11 to 16 of Patent No. 2,198,966 held invalid; claims 1, 2 and 3 of Patent No. 2,276,176 held valid but not infringed; plaintiff's amended complaint sustained as to Patent No. 2,476,738 but dismissed as to Patent No. 2,558,052; defendant's amended counterclaim sustained as to Patent Nos. 2,191,384 and 2,191,385 but dismissed as to Patent Nos. 2,198,966 and 2,276,176; defendant enjoined Nov. 17, 1961. Appeal and Cross Appeal filed Dec. 15, 1961 and Jan. 5, 1962, C.C.A., 1st Cir., Docs. 5929 and 5939, *HAP Corporation* v. *Heyman Manufacturing Company and vice versa*. Decree of District Court as to Patent No. 2,476,738 vacated and complaint dismissed with respect thereto; balance of said judgment affirmed (notice Jan. 11, 1963).

2,491,662. (See 2,390,636.)

2,551,229, M. G. Farnham, Cheese modifying enzyme product; **2,794,743**, same, Enzyme-containing powder and enzyme-modified product thereof, filed Oct. 5, 1962, D.C., W.D. Wis. (Madison), Doc. 3584, *Dairyland Food Laboratories, Inc. et al.* v. *Marschall Dairy Laboratories, Inc.* Consent decree; patents held valid and infringed Feb. 25, 1963.

2,558,052. (See 2,476,738.)

2,654,848, E. J. Schaefer, Submergible motor construction; **2,779,887**, same, Thrust bearing; **2,230,226**, same, Submersible motor construction, filed Feb. 18, 1963, D.C., E.D. Ark. (Little Rock), Doc. LR–63–C–11, *The Emerson Electric Manufacturing Company* v. *Franklin Electric Co., Inc.*

2,694,168, H. Q. North et al., Glass-sealed semiconductor crystal device; **2,768,646**, same, Methods of making germanium alloy semiconductors, filed Mar. 4, 1963, D.C.R.I. (Providence), Doc. 3095, *Hughes Aircraft Company* v. *General Instrument Corporation*.

2,767,289. (See 2,445,222.)

2,768,646. (See 2,694,168.)

2,712,507, B. K. Green, Pressure sensitive record material; **2,730,457**, Green and Schleicher, Pressure responsive record materials; **Re. 24,899**, B. K. Green, Oil-containing microscopic capsules and method of making them, filed Feb. 15, 1963, D.C., N.D. Ind. (Fort Wayne), Doc. 1425, *The National Cash Register Company* v. *Minnesota Mining and Manufacturing Company*.

2,712,638, D. L. Arenberg, Single-crystal ultrasonic solid delay lines using multiple reflections; **2,754,238**, same, Method of bonding and article thereby formed; **2,767,286**, same, Cement for bonding elements of a delay line with low transmission losses using mixtures of inorganic salts; **2,777,967**, Arenberg and Ashby, Ultrasonic delay lines; **2,823,355**, D. L. Arenberg, same; **2,826,744**, Arenberg and Ashby, Multiple made prison delay line; **2,851,894**, D. L. Arenberg, Means for determining crystal orientation and purity; **2,883,600**, same, Ultrasonic apparatus, filed Feb. 26, 1963, D.C.N.H. (Concord), Doc. 2377, *Arenberg Ultrasonic Laboratory, Inc.* v. *Richard D. Brew and Company, Incorporated*.

2,730,457. (See 2,712,507.)

2,749,729, H. C. Noe, Needle bed structure for warp knitting machines; **2,749,730**, same, filed Mar. 13, 1963, D.C.N.J. (Newark), Doc. 216/63, *Kidde Textile Machinery Corporation* v. *Mayer Textile Machinery Corporation et al.*

2,749,730. (See 2,749,729.)

2,782,900, E. Kaspar et al., Esters of 17a-hydroxyprogesterone; **2,907,440**, K. Junkmann et al., Injectable hormone preparations, filed Mar. 18, 1963, D.C., E.D. Mich. (Detroit), Doc. 23637, *Olin Mathieson Chemical Corporation* v. *S. J. Tutag & Company*.

2,754,238. (See 2,712,638.)

2,767,286. (See 2,712,638.)

2,777,967. (See 2,712,638.)

2,779,687. (See 2,654,848.)

2,784,294, G. L. Borell, Compensated relay and control system, filed May 10, 1962, D.C., N.D. Ill. (Chicago), Doc. 62c969, *Economics Laboratory, Inc.* v. *Counsel Laboratories*. Patent held valid; defendant enjoined Feb. 28, 1963.

2,784,743. (See 2,531,329.)

2,796,286, M. J. Berry, Bag, filed July 24, 1961, D.C., S.D.N.Y., Doc. 61/2603, *Morris J. Berry et al.* v. *Neppo-Smith Manufacturing Corporation*. Stipulation and order of dismissal without prejudice Mar. 4, 1963.

2,823,355. (See 2,712,638.)

2,836,744. (See 2,712,638.)

2,850,266. (See 2,654,848.)

2,851,894. (See 2,712,638.)

2,883,600. (See 2,712,638.)

2,896,503, P. S. Smith, Multi-camera image-production and control; **2,918,842**, same, Image-producing lens system and control; **2,918,843**, same, System for mosaic cinematography; **2,926,407**, G. W. Moffitt, Mosaic motion picture photography; **2,923,606**, P. S. Smith, Multi-cameras for mosaic photography; **2,931,290**, same, Mosaic photography, filed Feb. 19, 1963, D.C., S.D. Calif. (Los Angeles), Doc. 63/190–EC, *Smith Dieterich Corporation* v. *Cinerama, Inc. et al.*

2,918,842. (See 2,896,503.)

2,918,843. (See 2,896,503.)

2,925,625, D. W. Souza, Contrast color embossed plastics and method of production; **2,926,822**, same, Contrast color embossed plastics; **2,926,451**, same, Hand operated embossing tool; **2,926,945**, same, Embossable plastic assembly, filed Feb. 19, 1963, D.C., S.D. Calif. (Los Angeles), Doc. 63/195–HW, *Dyme Industries, Inc.* v. *Tapeprinter, Inc.*

2,943,389, Colten and Watson, Heating structure; **2,997,568**, Leipold and Evancich, same, filed June 12, 1962, D.C., S.D. Ind. (Indianapolis), Doc. 62–C–233, *Easy-Heat, Inc.* v. *Heated Concrete Products, Inc. et al.* Cause dismissed without prejudice Sept. 24, 1962.

2,965,799, Brooks and Strecker, Fluorescent lamp ballast; **2,965,998**, D. Lovinger, Inductive device, filed Nov. 13, 1961, D.C.N.J. (Newark), Doc. 947/61, *General Electric Company* v. *Universal Manufacturing Corporation*. Dismissed by stipulation Feb. 28, 1963.

2,965,998. (See 2,965,799.)

2,974,746, W. O. Baker, Grab rail construction; **Des. 187,224**, same, Diving board tower or the like; **Des. 187,475**, same; **Des. 187,523**, same, Swimming pool grab rail or the like, filed May 1, 1961, D.C., N.D. Ga. (Atlanta), Doc. 7583, *Swimquip, Inc. et al.* v. *Poolquip, Inc. et al.* Patents held valid and infringed; defendants enjoined (notice Mar. 5, 1963).

2,997,440. (See 2,753,360.)

2,998,497. (See 2,896,503.)

2,996,915, E. I. Klein, Table lighter, filed Aug. 22, 1962, D.C., S.D.N.Y., Doc. 62/2910, *E. M. Stevens Corporation* v. *Rosen Enterprises, Inc. et al.* Consent judgment; injunction granted Mar. 5, 1963.

2,996,822. (See 2,925,625.)

2,997,568. (See 2,943,389.)

3,008,451. (See 2,925,625.)

3,022,606. (See 2,896,503.)

3,025,923, H. Burnstein, Collapsible ladder, filed Feb. 19, 1963, D.C.N.J (Newark), Doc. 142/63, *Harry Burnstein et al.* v. *Win-Chek Industries, Inc.*

3,026,609, Z. Georg, Ferromagnetic, ceramic body with high quality at high frequency, filed Feb. 20, 1963, D.C., S.D.N.Y., Doc. 63civ.479, *Indiana General Corp. et ano.* v. *Krystinel Laboratories, Inc.*

Re. 23,422, F. R. Perry, Cleaning method and material therefor, filed Mar. 4, 1963, D.C., M.D. Tenn. (Nashville), Doc. 3414, *Agrashell, Inc.* v. *Block Walnut Processing Corp. et al.*

Re. 24,899. (See 2,712,507.)

Des. 183,895, E. J. Herbert, Magnifier, filed Mar. 6, 1963, D.C., S.D.N.Y., Doc. 63civ.616, *Edward J. Herbert, etc.* v. *Robert L. Weisberg, etc. et ano.*

Des. 187,224. (See 2,974,746.)

Des. 187,475. (See 2,974,746.)

Des. 187,523. (See 2,974,746.)

Des. 189,679, J. G. Buzzitta, Desk, filed July 25, 1961, D.C., S.D.N.Y., Doc. 61C2603, *Stow & Davis Furniture Company* v. *The Scott Frederic Co., et ano.* Dismissed by stipulation Mar. 5, 1963.

REISSUES

MAY 28, 1963

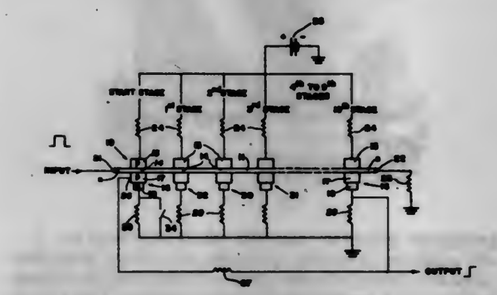
Matter enclosed in heavy brackets [ ] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates additions made by reissue.

25,389
SEMICONDUCTOR STEPPING SWITCH

Nicolas J. Harrick, Ossining, N.Y., assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Original No. 3,033,993, dated May 8, 1962, Ser. No. 12,094, Mar. 1, 1960. Application for reissue Sept. 24, 1962, Ser. No. 226,776

5 Claims. (Cl. 307—88.5)



1. A semiconductor stepping switch comprising an elongated semi-conductive body and a plurality of successively-arranged bistable switching elements on said body having the body in common as a base region, each of said switching elements having separate emitter and collector regions arranged at opposite sides of the base region, contacts to spaced points of the body and defining between them a line passing through the successive switching elements, each of said switching elements exhibiting the property of becoming conductive when free charge carriers are provided within its base region, and means for applying input pulses to the contacts connected to the body of such a polarity as to render non-conductive all of the switching elements and to establish a drift field along the body capable of transporting charge carriers in a predetermined direction through the body to the vicinity of one of the elements.

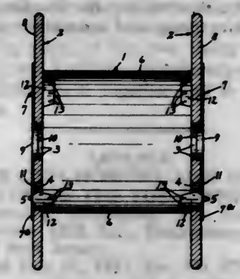
25,390
WINDING SPOOL

Frederick J. Bieber and Clarence L. Steinbeck, Minneapolis, Minn., assignors to Acrometal Products, Inc., Minneapolis, Minn., a corporation of Minnesota

Original No. 2,996,265, dated Aug. 15, 1961, Ser. No. 16,221, Mar. 21, 1960. Application for reissue Oct. 16, 1962, Ser. No. 232,643

3 Claims. (Cl. 242—118.61)

3. In a device of the class described, a tubular winding element having a generally circular cross section, diametrically enlarged parallel flange-like heads in abutting relationship with opposite ends of said winding element, said heads having central openings therein of considerably less diameter than that of said winding element, said central openings being concentric to each other and to said winding element, said heads intermediate their central openings and the periphery of said winding element having circumferentially spaced transverse hand receiving openings therethrough the radially outer surfaces of which are in substantial alignment with the interior surface of said winding element, clamping means associated with each of said heads and including circumferentially spaced plate-like portions overlying the axially outer surface of



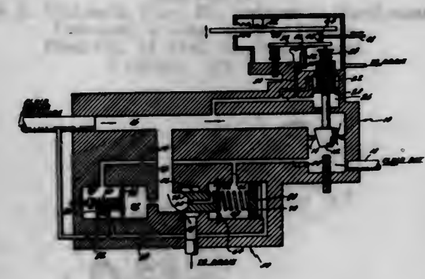
their associated heads and circumferentially spaced anchoring tongues integral with said circumferentially spaced plate-like portions which project through the circumferentially spaced hand-receiving openings in said heads, each of said tongues being rigidly secured to the adjacent end portion of said winding element.

25,391
PRESSURE REGULATING SYSTEM

Thomas P. Farkas, Bloomfield, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware

Original No. 2,957,488, dated Oct. 25, 1960, Ser. No. 611,339, Sept. 21, 1956. Application for reissue Aug. 4, 1961, Ser. No. 130,730

20 Claims. (Cl. 137—117)



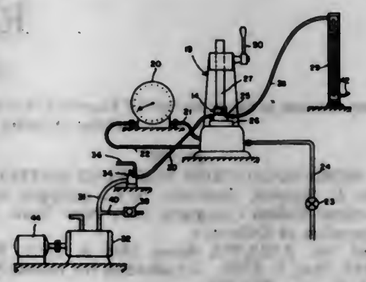
17. A flow regulating bypass valve for controlling the pressure drop across an orifice in a fluid flow line including a spring biasing said valve toward closed position, a fluid pressure actuated spring adjusting member, and means for applying a modulated fluid pressure to said member adapted to be dependent on the value of fluid pressure upstream from the orifice and the value of the pressure drop across the orifice.

25,392
METHOD OF CLASSIFYING AND MATCHING BELLOWS UNITS

Girard N. Conti, Mount Clemens, Mich., assignor to Holley Carburetor Company, Van Dyke, Mich., a corporation of Michigan

Original No. 3,036,456, dated May 29, 1962, Ser. No. 711,460, Jan 27, 1958. Application for reissue Sept. 20, 1962, Ser. No. 225,963
6 Claims. (Cl. 73—4)

4. A method of classifying a corrugated, spring equipped bellows or like axially flexible unit on the basis of the total effective area thereof, and of determining the rate of spring to be employed with the unit, comprising the steps of measuring the internal pressure of the unit as biased by said spring and predeterminedly loaded axially, changing the axial load of the unit while under said internal pressure, measuring the internal pressure and axial load of the biased unit under said altered internal pressure, determining the combined spring rate of said unit and its spring, and determining the spring rate of said unit alone by steps including the measurement of the internal pressure thereof as biased by the spring



under different axial loads, thereby enabling the rate of the spring alone to be ascertained.

PATENTS

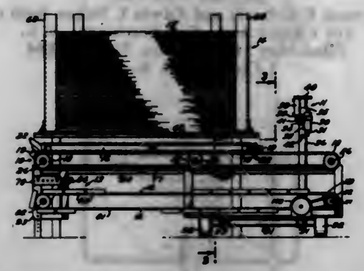
GRANTED MAY 28, 1963

GENERAL AND MECHANICAL

3,090,961
APPARATUS FOR FASTENING STRUCTURAL MEMBERS

Kenneth M. McRae, 238 Esther Court, Hayward, Calif., and Carl E. Hoover, 452 Ruth Court, San Leandro, Calif.

Filed July 21, 1961, Ser. No. 125,793
5 Claims. (Cl. 1—151)



1. An apparatus of the character described comprising conveying means for receiving structural members disposed in predetermined overlapping relationship and transporting said members along a path, fastener driving means disposed along said path for fastening such structural members together, said fastener means including a vertically movable hammer support member having a hammer assembly carried thereon, a first piston and cylinder for moving said conveyor in spaced increments, a second piston and cylinder for reciprocating said support member, said hammer assembly having a third piston and cylinder for actuation thereof, trigger means engageable with said hammer assembly for actuation thereof when said support member is moved downwardly a predetermined distance, and fluid pressure control means including a two-way valve for supplying pressure to said pistons and cylinders for actuating said conveying means while retracting said support member upwardly and alternately moving said support member downwardly while resetting said conveying means.

3,090,962
METHOD OF MAKING SHIRT AND LIKE COLLARS

Arthur William Lockwood, London, England, assignor to Trubenised Company (Registered Trust)

Filed May 11, 1960, Ser. No. 28,305
Claims priority, application Great Britain May 19, 1959
3 Claims. (Cl. 2—143)



1. A method of making a collar having one-piece face and back plies forming a collar top and a collar band and a two-piece lining comprised of a collar-top lining and a collar-band lining, said method comprising the steps of laying one piece of fabric forming the collar-band lining over the band portion of the face ply with one edge of said collar-band lining coinciding with the intended fold line of the collar, stitching an opposite edge of said collar-band lining to said face ply, laying a second piece of fabric forming the collar-top lining over the collar top portion of the face ply so that an edge of said collar-top lining extends across the intended fold line and overlaps said collar-band lining, stitching an edge portion of the superimposed face and back plies and said collar-top lining, turning the assembly to bring the collar-band and the collar-top linings between the outer plies while the overlapping parts of the two lining pieces are still unattached to one another, and thereupon stitching the overlapping lining parts together and to at least one of the outer plies.

3,090,963
CIRCULAR KNIT HOSIERY AND METHOD OF CLOSING THE TOE OPENING

Steven J. Wittman, Millington, N.J., assignor to West Orange Hosiery Mill, Inc., Hackettstown, N.J., a corporation of New Jersey

Filed July 26, 1957, Ser. No. 674,335
21 Claims. (Cl. 2—239)

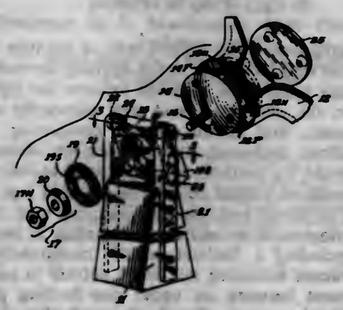


1. A circular knitted stocking including a foot portion knitted to shape and providing a transverse opening on the under side of the foot portion between a contoured toe pocket and adjacent instep portion, said toe pocket and instep portion having edges trimmed across the wales thereof and rolled courses adjacent the trimmed edges, and a chain over-edge line of stitching securing said trimmed edges without regard to an individual sewing stitch for an individual knitted loop relationship, the line of stitching encompassing said rolled courses.

3,090,964
HIP JOINT

Colin A. McLaurin, Cary, Ill., assignor to Northwestern University, a corporation of Illinois

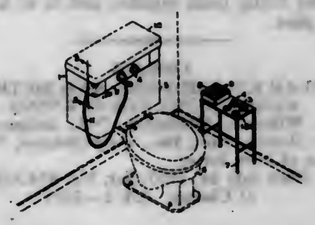
Filed Feb. 15, 1962, Ser. No. 173,468
7 Claims. (Cl. 3—15)



6. In combination, a pelvic socket havng an attachment face, a thigh section, and a hip joint connected between said pelvic socket and said thigh section and

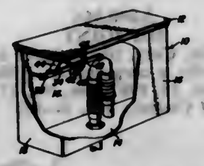
comprising a fixed element having an attachment face secured against the attachment face of said socket and having a shank projecting away from said attachment faces, an axle block engaged against said element in a concave-convex relationship thereto to enable engagement therebetween at various different positions of rotary adjustment, said axle block having a throughpassage receiving said shank with side clearance to accommodate such adjustment, releasable clamping facilities on said shank and engageable with said block to fix the block and element in any selected position of adjustment, said block having endwise removable axles projecting laterally from oposite ends thereof, releasable means retaining said axles against accidental removal, and rigid side straps fixedly secured to said thigh section and pivoted on said axles.

3,090,965
SANITARY DEVICE
Eugene Panza, 67 Avon Place, Springfield, Mass.
Filed June 20, 1962, Ser. No. 203,801
4 Claims. (Cl. 4—1)



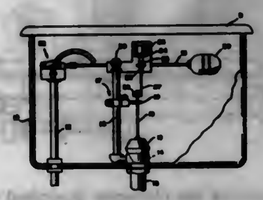
1. A sanitary device for attachment to a water box comprising an adjustable band assembly, inverted L-shaped members for attaching said band assembly to the top of the sides of the box, a brush chamber mounted on said band assembly, openings in said brush chamber for adapting brush members to be inserted therein, and a water means for cleansing said brushes within said brush chamber.

3,090,966
FLUSH TANK SIPHON
William G. Gould, 419 Howard St., San Angelo, Tex.
Filed Mar. 13, 1961, Ser. No. 95,251
3 Claims. (Cl. 4—50)



3. In combination with a flush tank of the type including a bottom wall having an outlet opening formed therein and a high water level, a siphon member for siphoning water from the interior of said tank outwardly of said outlet opening, said siphon member comprising a generally inverted U-shaped conduit member including a pair of upright leg portions communicated at their upper ends by means of a bight portion, one of said legs having means on its lower end sealingly securing said one leg to said bottom wall in said outlet opening, at least said one leg including a resilient, axially compressible section, and means mounting said bight portion in said tank for movement between an upper non-flushing position above said high water level and a lower flushing position below said high water level the other leg including a resilient axially compressible section and being engageable with the bottom wall for compressing the second-named section, said mounting means including a vertically swingable lever operable in the tank and having one end portion pivotally secured thereto and its other end portion pivotally connected to said bight portion for suspending the siphon member from said lever, a shaft journaled in the tank and extending transversely across the lever at an intermediate point and in vertically spaced relation thereto, an arm on an intermediate portion of the shaft cammingly engaged with the lever for swinging same downwardly for lowering the siphon member, a spring connected to said other end portion of the lever for swinging same upwardly, and an operating lever on one end portion of the shaft.

3,090,967
SOLENOID OPERATOR FOR TOILET FLUSH VALVES
Edward T. Erhardt and Edwin I. Oakes, both of 116 Chapel Ave., East Patchogue, N.Y.
Filed May 16, 1962, Ser. No. 195,184
1 Claim. (Cl. 4—57)

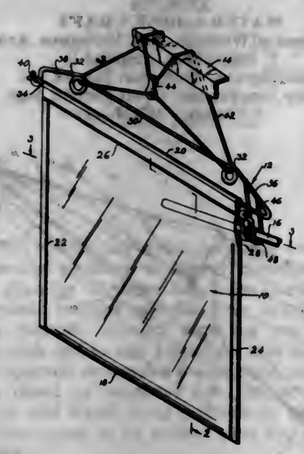


A toilet flush tank assembly comprising a tank having an outlet opening in the bottom thereof provided with a valve seat, a vertical overflow pipe near but spaced from the valve seat, a ball valve normally seating on the valve seat, a stem extending axially upward from the ball valve and having an enlarged upper extremity, a substantially vertical lifting rod having a substantially horizontal ring on the lower end thereof of smaller diameter than said enlarged extremity of the stem slidably mounted on the stem, a support having a solenoid including a plunger mounted therein with the axis of the plunger substantially vertical, the plunger having an eyelet in the lower extremity thereof, the upper end of the lifting rod being pivotally suspended from said eyelet, and adjustable means for securing said support to the overflow pipe at varying radial distances therefrom, said adjustable means comprising vertically spaced rows of horizontally spaced slots in said support, vertically spaced yokes having threaded parallel legs, the legs of each of the yokes being spaced apart at a distance greater than the distance between the inner juxtaposed ends of the slots in the rows of slots and smaller than the distance between the outer extremities of the slots, the yokes partially encircling the overflow pipe with the legs of each yoke extending through one of the slots in each of said rows, and nuts screwed on the extremities of the legs to clamp the support to the overflow pipe.

3,090,968
DISPOSABLE URINARY DRAINAGE BAG ASSEMBLY
Frank S. Buono, Garfield, N.J., assignor to Becton, Dickinson and Company, Rutherford, N.J., a corporation of New Jersey
Filed Aug. 17, 1962, Ser. No. 217,557
8 Claims. (Cl. 4—110)

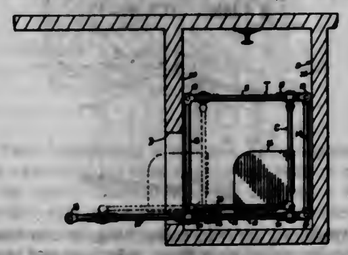
8. A urinary drainage bag assembly comprising: a disposable drainage bag having an envelope portion with an opening near the upper portion of one side thereof and having a tubular supporting hem extending transversely of the upper portion thereof; and a wire frame

having a supporting bar extending transversely of the upper portion thereof, a hanger bar of greater length than the supporting bar extending through the tubular hem of the urinary drainage bag and extending across the lower portion of the wire frame in parallel relationship to the supporting bar, a first side member integrally connected between one end of said supporting bar and hanger bar and being disposed at an outwardly inclined angle, a second side member integrally connected to the other



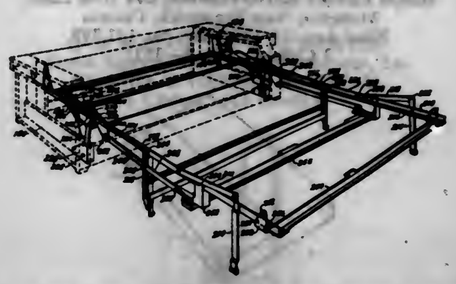
end of the supporting bar and extending downwardly at a similar outwardly inclined angle and terminating in an upwardly opening hook, said other end of the hanger bar terminating in a complementary portion releasably interengageable with said hook, and a wire bracket mounted on said first side member and said hanger bar and extending downwardly at a laterally inclined angle and terminating in a similarly U-shaped drainage tube guide disposed below said hanger bar.

3,090,969
TRAVELING CHAIR FOR SHOWER STALLS
John Edwin Maling, 470 Cotton St., Menlo Park, San Mateo County, Calif.
Filed Dec. 7, 1960, Ser. No. 74,406
3 Claims. (Cl. 4—145)



1. A traveling chair for a shower stall comprising a track composed of a long rail and a short rail, means for supporting said rails in an elevated position in a shower stall with the short rail extending from wall to wall inside the stall and the long rail extending through the door to the stall, a carriage adapted to ride said rails, said carriage having three flanged wheels rotatably mounted thereon with two of said wheels spacedly mounted on one side of said carriage to rotate in line and ride said long rail, one of said two wheels having a flange on each side thereof to guide said carriage on said long rail, and the third of said wheels being mounted on said carriage to rotate in a plane substantially parallel to and spaced from the plane of rotation of said two wheels adapted to ride the said short rail, and a seat on said carriage for supporting a person thereon.

3,090,970
SOFA BED
Richard A. Fisher, Minneapolis, Minn., assignor to The United States Bedding Co., St. Paul, Minn., a corporation of Minnesota
Original application July 29, 1953, Ser. No. 370,985. Divided and this application June 23, 1958, Ser. No. 743,770
4 Claims. (Cl. 5—55)



3. A sofa bed of the class described having a fixed frame and an extensible frame including a rear section pivotally attached to said fixed frame, a rear intermediate section pivotally attached to said rear section, a forward intermediate section pivotally attached to said rear intermediate section, and a forward section pivotally attached to said forward intermediate section, a pair of front attaching plates for attachment to a front part of the fixed frame, means pivoted on each of said attaching plates to control the movement of the rear and rear intermediate bed sections between sofa position and bed position, a locking pin extending laterally from each side of said forward section, a plate pivotally attached to the side of said forward section, a releasing pin extending laterally from each of said plates, a releasing bar extending laterally between each of said plates and connected thereto, a securing lever pivotally attached to the side of said rear intermediate section, said securing lever being provided with a pin receiving notch, and means for causing said securing levers to rotate as said extensible frame is folded to sofa position to engage and secure said pin within said notch, said releasing bar being adapted to rotate said plates and cause said releasing pin to cam said securing levers out of engagement with said locking pins.

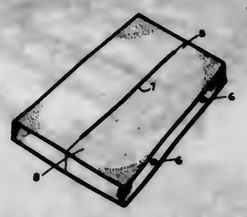
3,090,971
HOSPITAL BED-CHAIR
Benjamin R. F. MacDonald, 2740 Telegraph, Berkeley, Calif.
Filed May 16, 1960, Ser. No. 29,378
5 Claims. (Cl. 5—68)



5. In a hospital bed including at least a bedstead frame, a foldable spring frame formed of articulated hinged sections, and adjusting means carried by said bedstead frame

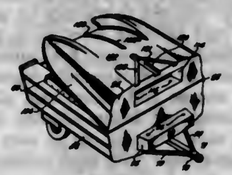
and operatively connected to the sections of said spring frame to selectively pivot the sections relative to each other whereby the spring frame may assume a variety of predetermined positions conducive to the well being and comfort of a patient occupying the bed, the combination comprising a second foldable spring frame formed of articulated hinged sections corresponding to the sections of said first spring frame and pivotally mounted and supported in overlying relation thereto for rotation between positions longitudinally and transversely of the first spring frame.

3,090,972
DOUBLE BED MATTRESS
Joseph Edward Alfred Pelletier, 244 West Lane, Moncton, New Brunswick, Canada
Filed Aug. 21, 1961, Ser. No. 132,799
2 Claims. (Cl. 5—352)



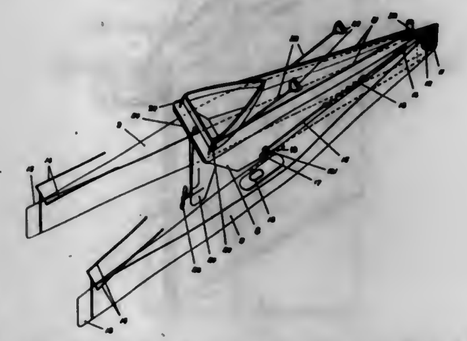
1. A mattress for a double bed comprising a pair of elongated sections, each section having side and end walls and arranged in side-by-side relation with the confronting side walls in abutting relation at their ends and offset inwardly intermediate their ends to provide an open gap between the sections for the circulation of air.

3,090,973
BOATS
Louis E. Levinson, Dallas, Tex., assignor to Intercontinental Manufacturing Company, Inc., Garland, Tex., a corporation of Texas
Filed Nov. 19, 1959, Ser. No. 854,034
8 Claims. (Cl. 9—1)



1. A boat convertible into a trailer and a shelter including: a rear section having a bottom and side and end walls extending upwardly from the bottom; a pair of wheel wells in said rear section; wheels mounted on the rear section for movement between retracted positions in which the wheels are wholly disposed in the wells and extended positions wherein the wheels project downwardly below the bottom of the boat; means for moving said wheels between said retracted and extended positions; a front section having a bottom and side and end walls extending upwardly from the bottom; means pivotally connecting upper ends of adjacent walls of the two sections whereby the front section may be pivoted upwardly from a fully extended position to a position overlying said rear section; draw bar means rigidly secured to said rear section and projecting forwardly of the rear section and beneath said front section when the front section is pivoted to fully extended position; and means for rigidly securing said draw bar means to the bottom of said front section when the front section is in fully extended position, said rear section having an end wall of said rear section extending upwardly to provide a transom, said front section being spaced from said transom when in closed position to leave said transom unobstructed by said front section whereby a motor may be secured to said transom when the front section is in closed position on said rear section.

3,090,974
WATER-BORNE CRAFT
Aleksander Wozniak, 174 Becontree Ave., Dagenham, England
Filed Sept. 6, 1960, Ser. No. 54,261
Claims priority, application Great Britain Sept. 9, 1959
6 Claims. (Cl. 9—1)



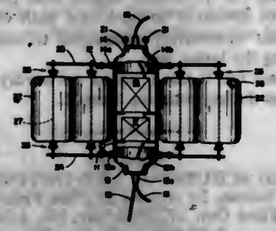
1. A water-borne craft comprising a pair of elongated buoyant components having intermediately positioned foot-holes adapted to be accommodated upon the two feet of the user to form a pair of ski components, a separate water craft unit forming a third component adapted to be positioned between said pair of components with the prows of the three components approximately coincident, and means at the prows of said three components connecting them coincidently for limited relative movement.

3,090,975
AMPHIBIOUS CARAVAN
Alfred Bernard Franks, 37 Delmar Parade, Glades Bay, Gladesville, near Sydney, New South Wales, Australia
Filed Nov. 24, 1961, Ser. No. 154,781
Claims priority, application Australia Nov. 24, 1960
1 Claim. (Cl. 9—1)



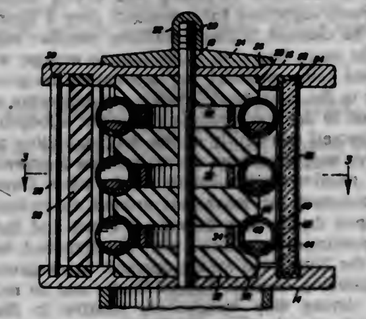
An amphibious caravan comprising, in combination, a caravan body including a floor, side, and end walls, and a roof, wheels beneath the floor, a pair of spaced posts having their inner ends pivotally connected substantially to the horizontal median line of said opposite side walls, and a pair of pontoons each having a top wall connected medially to the outer ends of each pair of related posts, whereby, when the pontoons are elevated the outer edge portions of the top walls thereof overlie and rest on the side portions of the top wall of the caravan body, and, when the pontoons are lowered the inner edge portions of the top walls thereof underlie the floor of said caravan body to support the latter above the surface of the water.

3,090,976
FLEXIBLE DEEP SEA BUOY
John K. Liu, Rochester, N.Y., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware
Filed Dec. 15, 1961, Ser. No. 159,530
3 Claims. (Cl. 9—8)



1. A buoy comprising a tubular cargo container, two spaced parallel platform structures encircling said container, a plurality of rubber-like bags distributed about said container between said platform structures, a stay extending centrally through each bag and flexibly attached at each end to said platforms, said bags being attached at opposite extremities to said stays, said bags containing a liquid of relatively low specific gravity, the quantity of said liquid being sufficient to give a net lift to said buoy equal to or greater than the gross weight of the buoy.

3,090,977
BUOY
Michael F. Murray, 381 Park Ave., Eugene, Oreg.
Filed Apr. 13, 1961, Ser. No. 102,889
9 Claims. (Cl. 9—8.3)



1. A buoy comprising a top and bottom plate, a lens assembly extending between the top and bottom plate and sealing the space enclosed thereby, and more than one means within said space for producing a luminescent glow in response to agitation caused by normal movement of water, said means being completely independent of any external power source.

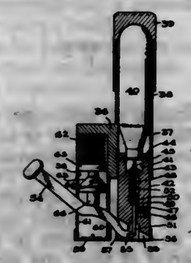
3,090,978
WATER SKI DEVICE
William H. Hanson, 1704 Spentz Drive, Rantoul, Ill.
Filed Sept. 7, 1962, Ser. No. 221,971
12 Claims. (Cl. 9—310)

1. A device for a ski including a base for attachment to the ski, a pair of hydrofoils, means movably mounting the hydrofoils on the base whereby the hydrofoils may be selectively moved to an extended position or to a retracted position, said hydrofoils in the extended position projecting a substantial distance on opposite sides of said



base and said hydrofoils in the retracted position substantially overlying one another.

3,090,979
QUICK FLOAT LIFE PRESERVER
Frank Segrest, 160 Fernhill, Lafayette, La.
Filed Apr. 3, 1961, Ser. No. 102,223
5 Claims. (Cl. 9—318)

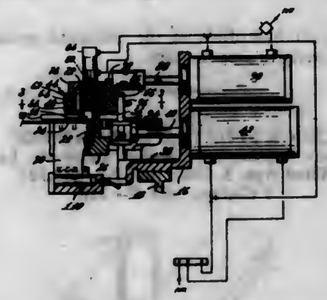


5. In a device for inflating a life preserver including an inflatable life preserver, a housing, spaced parallel chambers in said housing, a compressed gas capsule in a first one of said chambers, a needle in said first chamber for piercing said capsule, a conduit from said first chamber opening into the life preserver, a normally closed valve in said conduit, resilient means between said valve and said needle, a stem for said valve, a manually actuable lever engaging said stem, a slide in the second of said chambers, a spring in said second chamber engaging said slide, a port in said second chamber, a pellet in said port engaging said slide and holding said spring under compression and means on said slide engaging said lever.

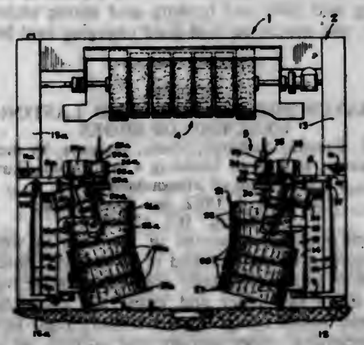
3,090,980
APPARATUS FOR SHAPING AND LASTING THE HEEL END OF SHOES
James L. Forma, Andover, Mass., assignor, by mesne assignments, to Lowell Molding Corporation, Lawrence, Mass., a corporation of Massachusetts
Filed Oct. 3, 1962, Ser. No. 229,265
19 Claims. (Cl. 12—12.5)

1. Shoe making apparatus of the kind in which the lasting margin of the heel end of an unlasted shoe upper is lasted-in and permanently secured by adhesive to an insole before the upper and insole are assembled with a last, and which comprises a stationary rigid form having a peripheral upper-shaping rear surface, of a shape complemental to that of the inner surface of the heel end portion of the upper of a shoe to be made, and a substantially flat, horizontal top face constituting a support for the heel-seat end of an insole, and wherein insole-positioning elements project upwardly from said top face of the form for cooperation with holes in the insole thereby to position the insole in exact predetermined relation to the form, and having wipers operative to wipe the adhesively coated lasting margin of an upper over and into adhering contact with the insole, in combination, a movable wiper carrier, means supporting and guiding said wiper carrier to move in a path substantially parallel to

the plane of the flat top face of the form, said wiper carrier being movable forwardly from a normal, rearward, inoperative position in which it leaves the form unobstructed so as to permit assembly of an insole and upper with the form to a forward, operative position such that a portion, at least, of said wiper assembly is disposed directly above the flat top face of the form, means operative to apply pressure to the upper thereby to conform it to said peripheral surface of the form, means operative, subsequent to the application of such upper-conforming pressure, to advance the wiper carrier to said operative position above the form while concomitantly causing the wipers to wipe the lasting margin of the heel end of the upper in over the insole while applying resilient downward pressure to the wipers, means operative thereafter to apply positive downward force to the wipers for a predetermined interval of time, and means whereby the application of said positive downward force is terminated before the wiper carrier is restored to its normal position.

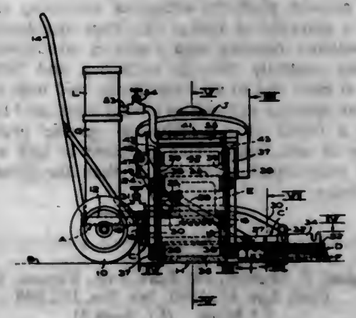


3,090,981
AUTOMOTIVE VEHICLE WASHING UNIT
James Vani, Chicago, and Albert J. Malpede, Midlothian, Ill., assignors to Service Metal Fabricators, Inc., Chicago, Ill., a corporation of Illinois
Filed Dec. 15, 1961, Ser. No. 159,542
12 Claims. (Cl. 15—21)



1. A washing device for washing portions of a vehicle during movement of said vehicle along a predetermined path of travel and comprising
(1) two pairs of brushes,
(2) means for supporting said pairs of brushes on respective sides of said path of travel,
(3) each of said pairs of brushes including
(a) one brush rotatably mounted for rotation around a substantially vertical axis, and
(b) another brush projecting below said one brush and rotatably mounted for rotation around an axis which projects upwardly and outwardly away from said path of travel at an acute angle to the vertical,
(4) said two brushes in each said pairs being pivotally mounted on said supporting means for swinging movement as a unit toward and away from said path of travel,
(5) means for yieldingly urging said pairs of brushes to pivot inwardly toward said path of travel,
(6) means operatively connected to said brushes for rotating the latter, and
(7) means for feeding liquid outwardly through said brushes during rotation thereof.

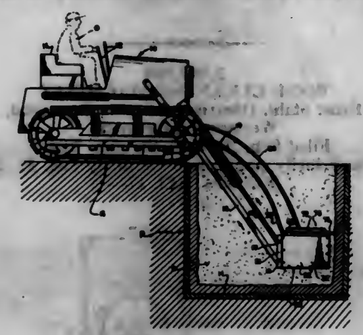
3,090,982
COMBINED SCRUBBING AND DRYING MACHINE
Kosmas Skinas, 23 Allison St., San Francisco, Calif.
Filed Oct. 17, 1960, Ser. No. 63,004
2 Claims. (Cl. 15—99)



1. In a combined scrubbing and drying machine: a main frame supported for movement over a floor or the like to be cleaned; a floor-scrubbing member supported from the main frame in a position to engage with the floor, and being mounted for longitudinal reciprocations relative to the main frame; means for delivering a cleaning liquid to the floor-scrubbing member; a looped drying mop disposed rearwardly of the floor-scrubbing member and being supported from the main frame to extend transversely relative to the length of the main frame, and being mounted for movement around an endless path; the looped drying mop defining a broad and flat lower reach positioned to engage with the scrubbed floor for drying the latter; and means operable to reciprocate the floor-scrubbing member longitudinally and to move the looped drying mop transversely relative to the main frame, whereby the floor will be dried by paths of movement of the drying mop crisscrossing the previous paths of movement of the floor-scrubbing member, as the main frame is advanced over the floor or the like; the means operable to actuate the floor-scrubbing member and the looped drying mop including a motor mounted in the hollow interior space defined by the looped drying mop to thereby provide a compact arrangement.

3,090,983
CARRIER AND MANIPULATOR FOR PNEUMATIC TOOLS
Frank Medrak, 1201 Henry St., Belle Vernon, Pa., and Albert Berardinelli, 166 Lincoln St., Cokeburg, Pa.
Filed Feb. 6, 1961, Ser. No. 87,393
2 Claims. (Cl. 15—104.1)

1. A device for cleaning walls and floors of a furnace pit located below ground level, comprising a crawler tractor movable on ground level, a pair of spaced parallel lifting arms pivotally carried by the tractor and tiltable in parallel vertical planes below the tractor to extend into the pit, a pair of spaced parallel plungers carried by the tractor, said plungers being axially extensible into the pit below ground level and retractable therefrom, a rectangular frame structure having spaced side walls, a front end wall and a rear end wall, said arms and plungers having lower ends pivotally attached at four spaced corner points to the rear end wall for raising and lowering the frame structure vertically and for tilting the frame structure around a horizontal axis in the pit, bearing race assemblies extending horizontally between said side walls, a carriage having depending bearing members riding on said bearing race assemblies, motor means for driving said carriage horizontally in opposite directions along said bearing assemblies, bracket members extending upwardly from said carriage, and a generally cylindrical tool supported on said bracket members, said tool having a working bit extending axially beyond the front wall of said frame structure for working against horizontal, vertical, and angular surfaces in said pit below ground level.



3,090,984
IMPLEMENT FOR OVERHEAD TOOL MANIPULATION
John M. Dunnigan, 1118 S. Campus, Ontario, Calif.
Filed Mar. 23, 1961, Ser. No. 97,895
9 Claims. (Cl. 15—235.4)



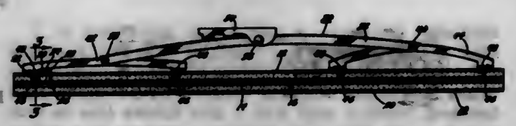
8. A plastering implement for overhead manipulation, comprising a plaster darby board having a flat surface for the smoothing of plaster surfaces, elongated handle means connected with the plaster darby board, swivel connection means interconnecting the darby board and the handle means, means comprising a harness worn by an operator, and means whereby the handle means and the darby board are supported from the harness for manipulation by the operator.

3,090,985
SPONGE MOP
Allan M. Baum, 545C Morris Ave., Springfield, N.J.
Filed May 2, 1961, Ser. No. 116,220
1 Claim. (Cl. 15—244)



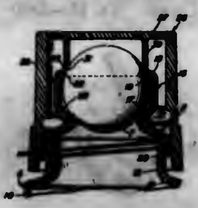
A sponge mop comprising,
(a) a rigid support having a generally tubular socket adapted to receive a handle,
(b) a generally flat rear surface on the support,
(c) a front surface on the support, a portion of the front surface being flat,
(d) the front and rear surfaces converging toward their bottoms and merging to define a convex bottom surface having a straight crest,
(e) a pair of generally parallel, flat, opposed end surfaces on the support,
(f) the end surfaces sharply merging with the rear surface but gradually merging with the flat portion of the front surface to define a pair of generally vertically arcuate front corner surfaces,
(g) an elasticised cover of compressible absorbent sponge material slightly smaller than the support and fitted over the front, rear, end, bottom and corner surfaces,
(h) a plurality of sockets in the external surface of the support,
(i) a T-shaped central enlargement in each of the last mentioned sockets, and
(j) pairs of booked enlargements on the inside of the cover complementary to the sockets in the external surface of the support and the central enlargement and adapted to engage therewith.

3,090,986
WINDSHIELD WIPER BLADE ASSEMBLY
Elmer E. Reese and Thomas E. Stark, Rochester, N.Y., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Aug. 18, 1961, Ser. No. 132,352
7 Claims. (Cl. 15—250.42)



5. A squeegee for a windshield wiper blade assembly including, an elongate resiliently flexible elastomeric body having a wiping portion, a flexible retention portion connected to said body, said retention portion being stiffer than said wiping portion and having a relatively wide back, a pair of laterally projecting marginal abutments on said retention portion, and an integral upstanding resilient latch having a width coextensive with said retention portion and spaced longitudinally from said abutments and adapted to interlock with a pressure applying superstructure.

3,090,987
DISPENSER
Herbert S. Ruekberg, Highland Park, Ill., assignor to Continental Can Company, Inc., New York, N.Y., a corporation of New York
Filed May 12, 1959, Ser. No. 812,747
1 Claim. (Cl. 15—572)



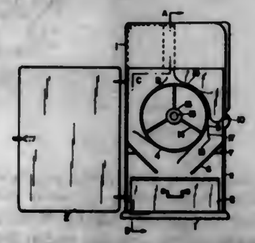
A roll dispenser comprising a resilient container having an integral neck portion of substantially uniform thickness, said neck portion including a lower generally cylindrical portion having external cap engageable threads, an upper generally cylindrical portion, an intermediate portion disposed between and connecting together said upper portion and said lower portion, said intermediate portion being inwardly bowed and presenting a lower annular seat, said upper portion terminating in an inwardly turned upper end presenting an upper annular seat spaced above said lower seat, a ball type applicator positioned partially within said neck portion and limited to movement other than rotary by said annular seats, said applicator having a diameter only slightly greater than that of said upper seat and said upper seat being resiliently deformable whereby said applicator may be snapped into place between said seats, said upper portion being spaced outwardly of said applicator and together with said applicator forming a fluid reservoir, and a cap telescoped over said neck portion and releasably threadedly engaged therewith, said cap having a downwardly projecting thin walled cylindrical member with an outwardly flared lower surface, said lower surface engaging said applicator and forming a seal therewith and the lower part of said cylindrical member being wedged between said applicator and said upper seat and being sealed relative to said upper seat, and said cap holding said applicator in pressure sealed contact with said lower seat.

3,090,988
DOOR CLOSING DOOR CHECKS
John A. Truhon, 16514 Blackstone, Detroit, Mich.
Filed Mar. 21, 1961, Ser. No. 97,336
2 Claims. (Cl. 16—66)



1. In a door check including a cylinder having a head at each end thereof, a piston reciprocable in said cylinder having a piston rod extending through one cylinder head, spring means in said cylinder constantly urging said piston toward the other cylinder head, the said cylinder and piston rod being connectable to a door frame and door in a manner to cause said piston to move in one direction and compress said spring responsive to manually opening said door, said spring causing said piston to move in the opposite direction after said door has been opened to close the same, said cylinder having a bleed in the other of said heads adapted to regulate the rate of the said spring closing of said door, an automatic hold-open and manual release means comprising a spring loaded sliding latch element carried by said one cylinder head biased toward said piston rod, said piston rod having a groove therein suitably located to receive said latch element when said door is swung fully open whereby to make said door check inoperative to close the same, and a single release button connected to said latch element extending from one side of said one cylinder head manually pushable to release said latch and permit said door check to function normally to close the door.

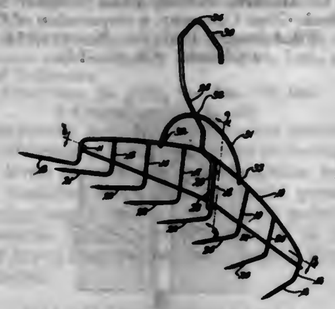
3,090,989
BONE CLEANING MACHINES
Ernst Stahl, Oberreusbach uber Remserod, Westerwald, Germany
Filed Feb. 10, 1960, Ser. No. 7,843
Claims priority, application Germany Feb. 11, 1959
7 Claims. (Cl. 17—1)



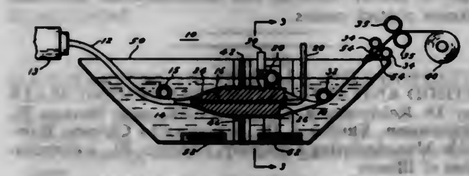
1. A bone-cleaning machine comprising side walls, a drum having an endless surface, said drum being mounted for rotary movement about a horizontal axis, a plurality of scraper strips mounted on said surface, one of said side walls having an opening, a hopper in the upper part of said opening, said hopper having at least one concave side, said concave side partially embracing a side sector of said surface of said drum, said hopper arranged for holding bones to be cleaned from material adhering thereto, said hopper having at least one opening in the lower part thereof, said hopper opening running parallel to the plane of rotation of said strips, and means for rotatably driving said drum in such direction that said scraper strips move substantially upwardly continuously over said opening in said hopper, said scraper strips being arranged for projecting through said openings in said hopper into the inside of said hopper when said strips move past said hopper in order to engage and to clean said bones therein, moving same continuously about during the cleaning process so that substantially all of the said material can be scraped off by said scraper strips.

3,090,990
SUSPENSION DEVICE
Lawrence F. Graper, Chicago, Ill., assignor, by mesne assignments, to Armour and Company, Chicago, Ill., a corporation of Delaware
Filed Jan. 29, 1960, Ser. No. 5,527
2 Claims. (Cl. 17—44.3)

1. A device for suspending bacon bellies during a smoke processing operation comprising a back member having a means for hanging said device to an overhead support and a plurality of spaced prongs rigidly secured to said back member and extending laterally from said member, said prongs being so arranged that the distance between the points of any two prongs is greater than the distance between the corresponding bases of any two prongs whereby insertion of said device into the flank end of a bacon belly causes a uniform reduction of the width of said flank end of said belly, said back member being arcuate shaped and curved in a direction toward said prongs whereby the flank pocket is substantially eliminated during said processing.



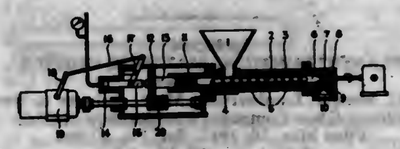
3,090,991
BIAXIAL ORIENTATION APPARATUS
Charles T. Hathaway, Springfield, Mass., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
Filed Jan. 3, 1961, Ser. No. 80,466
7 Claims. (Cl. 18—1)



1. Apparatus for continuously providing biaxial orientation in a tube of thermoplastic material comprising in combination liquid containing orientation bath and a cooling bath separated by a divider and positioned in tandem relationship having a submerged solid mandrel longitudinally disposed through an opening in said divider in both of said baths with the advance end of said mandrel located within said orientation bath, said mandrel exhibiting a continuous outside cross-sectional curvature with intercommunication between said baths through an annular orifice defined by the radial width between the periphery of the mandrel and the edge of the divider opening, said radial width being substantially equal to the predetermined thickness of said tube, an open bore exiting at the advance end of said mandrel for the introduction of liquid to the interior of said tube, said orientation bath and said liquid being introduced to the interior of said tube being maintained at a temperature at least as high as the glassy transition temperature of said material, and the cooling bath being maintained at a temperature less than said glassy transition temperature.

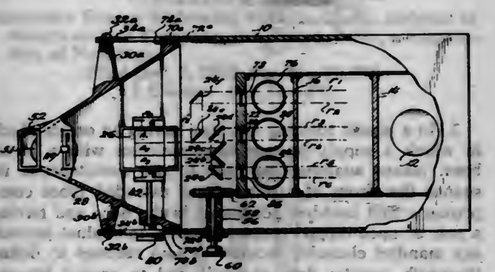
3,090,992
APPARATUS FOR THE MANUFACTURE OF FILAMENTS OR OTHER SHAPED STRUCTURES FROM THERMOPLASTS
Hans Schlachter and Oskar Kunze, Frankfurt am Main, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning, Frankfurt am Main, Germany, a corporation of Germany
Filed May 16, 1960, Ser. No. 29,510
Claims priority, application Germany May 21, 1959
2 Claims. (Cl. 18—12)

1. In an extruding apparatus for simultaneously producing a plurality of shaped structures from thermoplasts, a constant speed metering pump for each of the plurality of shaped structures which delivers liquid thermoplast to its particular outlet orifice, a rotary feed screw for delivering liquid thermoplast to the plurality of pumps at a constant pressure to maintain a substantially constant rate of flow from each outlet orifice, means to mount the feed screw for movement axially, variable speed driving means to rotate said screw from zero to a maximum speed corresponding to the rate of flow required for all of the pumps, said screw having a piston, a cylinder enclosing the piston, means for maintaining a fluid at a constant



pressure in the cylinder which acts on the piston and tends to move the screw in one direction, the thermoplast acting on the screw tending to move it in the opposite direction against the fluid in the cylinder, and a mechanical linkage connected to the screw and variable speed driving means and actuated by the axial movement of the screw to adjust the variable speed driving means in a range from zero to maximum speed whereby to adapt one or more of the constant speed metering pumps to be stopped without changing the constant pressure of the liquid thermoplast supplied to each metering pump by the screw.

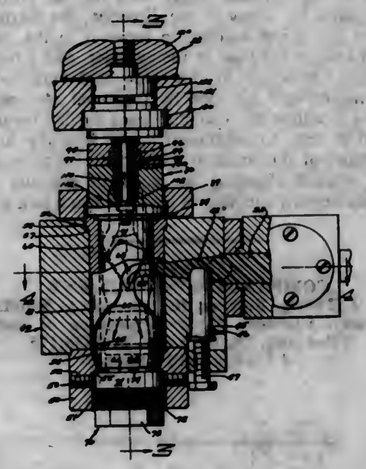
3,090,993
COMPARISON INSTRUMENT
William J. Tancig, Beecher, Ill., assignor to Standard Oil Company, Chicago, Ill., a corporation of Indiana
Filed Aug. 26, 1959, Ser. No. 836,175
2 Claims. (Cl. 88—14)



1. A colorimeter comprising an elongated light-tight enclosure having a first end and a second end, a light source mounted within said enclosure at said first end, a light image means pivotally mounted within said enclosure at said second end, a first light reflector mounted within said enclosure between said light image means and said light source adapted to reflect light emanating from said light source toward a first area on said image means, a second light reflector mounted within said enclosure between said light image means and said light source adapted to reflect light emanating from said light source toward a second area on said image means, a third light reflector mounted within said enclosure between said light image means and said light source adapted to reflect light emanating from said light source toward a third area on said image means, a color standards magazine having a first side and a second side, said color standards

magazine rotatably mounted within said enclosure such that said first reflector and said second reflector are on a first side of said color standards magazine and said light source is on said second side thereof, a plurality of color standards mounted within said color standards magazine such that as said color standards magazine is rotated, one of said color standards is positioned between said first reflector and said light source while another of said color standards is positioned between said second reflector and said light source, and a sample container compartment arranged to receive a sample and position said sample between said third reflector and said light source.

3,090,994
PLASTIC FORMING MACHINE ORIFICE STRUCTURE
Hans G. Stenger, Lambertville, Mich., assignor to Owens-Illinois Glass Company, a corporation of Ohio
Filed Mar. 20, 1961, Ser. No. 97,002
7 Claims. (Cl. 18—14)



2. In a plastic forming machine having an orifice block in which a supply passage communicates with a block bore, means adapting the bore to the simultaneous issuance therefrom of a plurality of extruded tubes comprising a first mandrel positioned in the bore and having a pair of open-topped recesses therein, individual secondary mandrel elements secured in said recesses to define therewith annular flow channels and to project beyond the recesses, respectively, separate orifice plates each cooperating with one of the projecting secondary mandrel elements to define an individual extrusion orifice therewith, and individual flow openings in said first mandrel for supplying separate streams of plastic material from the block supply passage to the mandrel recesses and hence to the individual orifices.

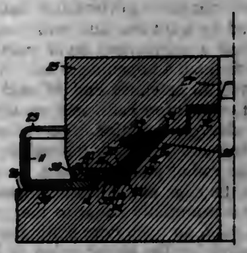
5. In a method of supplying plastic material to a plurality of extrusion orifices, the steps of initially dividing a supply stream of material into two substantially equal streams, flowing the two streams in a direction away from the orifices, merging the streams, reversing the direction of flow of the merged stream to effect flow toward the orifices, again dividing the merged stream into a plurality of individual streams, reversing the direction of flow of the individual streams to effect flow thereof from the orifices, again reversing the direction of flow to effect flow of the streams toward the orifices, and finally issuing the streams from the orifices, respectively.

3,090,995
EXTRUDER FOR PLASTIC TUBING
Donald L. Amsden, Toledo, Ohio, assignor to Owens-Illinois Glass Company, a corporation of Ohio
Filed June 1, 1961, Ser. No. 114,054
4 Claims. (Cl. 18—14)



4. Plastic tube forming apparatus comprising an orifice bushing and mandrel positioned relatively to provide an annular axially elongated passageway which plastic material is to enter as a preformed tube of predetermined wall thickness, tube forming and wall thickness dimensioning means axially inward from said passageway including axially spaced-apart generally radially disposed discharge orifice forming surfaces wherein the orifice provides both communication between said passageway and a source of supply of plastic material and constitutes the sole wall thickness control means.

3,090,996
METHOD AND APPARATUS FOR FORMING SEALS
Jerry D. Reichenbach, Carpentersville, and Warren W. Rasmussen, Elmhurst, Ill., assignors to Chicago Rawhide Manufacturing Company, Chicago, Ill., a corporation of Illinois
Filed Dec. 17, 1959, Ser. No. 860,146
3 Claims. (Cl. 18—36)



1. The method of forming a seal having a molded rubber-like sealing portion bonded to a metallic casing, said method comprising enclosing a marginal portion of said casing within a sealing portion shaping curing mold between flat co-acting radially offset pressure application areas, compressing said marginal portion between said pressure application areas to an extent that stock material used in forming said sealing portion will not flow beyond said areas along said casing out of said mold, the relative location of said pressure application areas being controlled to range from opposed marginal overlapping only to an extent that co-acting adjacent margins lie in the same plane to opposed marginal radial spacing of no greater than to afford only slight radial clearance therebetween whereby the inner edge portion of said marginal portion in its final position is radially offset into a plane which is at least substantially parallel to the remainder of said marginal portion with the thickness of the metal of said casing in the zone of displacement being reduced.

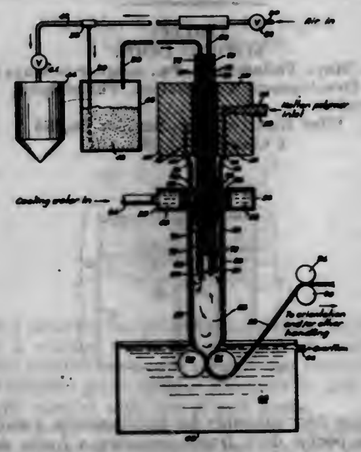
3,090,997
METHOD OF CONTINUOUS TREATMENT OF AS-SPUN BIREFRINGENT POLYAMIDE FILAMENTS
Tin-Yam Au, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Nov. 26, 1958, Ser. No. 776,466
3 Claims. (Cl. 18—48)

1. An improved method of continuous treatment of as-spun birefringent polyamide filaments to develop therein desired levels of tenacity, break elongation, resistance to fatigue combined with low relaxed cold growth, said method comprising a first step of drawing as-spun polyamide filaments, having a birefringence B, so that the ratio R_1 of drawn length to undrawn length is determined by the equation

$$R_1(1+22.2B+284B^2)=4.1\pm1.1$$

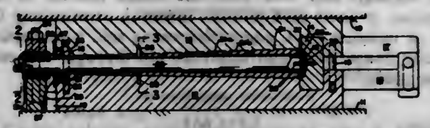
while maintaining the filaments at an elevated temperature lying between the second-order transition temperature and the force-to-draw transition temperature of the polyamide filaments, followed by a second step of heating the filaments to an elevated temperature lying between the force-to-draw transition temperature and a temperature at least 20° C. below the melting point of the polyamide filaments for a period of time of at least 1.0 second and then during said period of time, additionally drawing said polyamide filaments an amount sufficient to achieve the property levels of tenacity, break elongation and resistance to fatigue desired.

3,090,998
MANUFACTURE OF TUBULAR THERMOPLASTIC FILM
Herbert W. Heisterkamp, Cleveland, and Walter S. Ladegaard, Avon Lake, Ohio, assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Continuation of application Ser. No. 739,027, June 2, 1958. This application Apr. 17, 1961, Ser. No. 103,656
18 Claims. (Cl. 18—57)



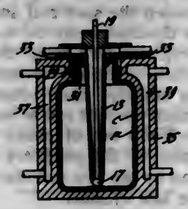
1. Method of producing film from a thermoplastic film-forming material which comprises extruding a fused thermoplastic film-forming composition generally downwardly through an orifice in the form of a seamless film tube; withdrawing said freshly extruded film tube generally downwardly away from said die; and continuously applying to said tube immediately after its extrusion an unconfined and free-flowing circumenveloping column of a liquid which is at a temperature beneath the fusion temperature of said film-forming composition.

3,090,999
METHOD FOR MAKING A HAND GRIP
James A. Karns, Akron, Ohio, assignor to Fawick Flexi-Grip Co., a corporation of Ohio
Filed Sept. 23, 1957, Ser. No. 685,517
1 Claim. (Cl. 18—59)



In the method of forming a plastic covering over an end of an elongate tubular shaft during the formation of a hand grip thereon, using an elongate cavity in a mold provided with a molding-recess face at one end of the cavity with positioning means projecting from said face, the positioning means being separate from the shaft and grip and being located in the mold, the other end of the cavity being open, there being an opening in said end of the shaft adapted to receive the inner end of the positioning means with a snug fit; the steps which comprise placing plastic in the mold to cover said end of the shaft, placing the shaft in the mold with a portion projecting through the open end thereof, and then manually shoving the shaft toward said face in the closed end of the cavity until a portion of the shaft is brought into abutting relation with a surface of the positioning means before the entire length of the positioning means passes through the opening, thereby spacing the end of the shaft from said face and producing a covering of the plastic of predetermined thickness on the end of the shaft.

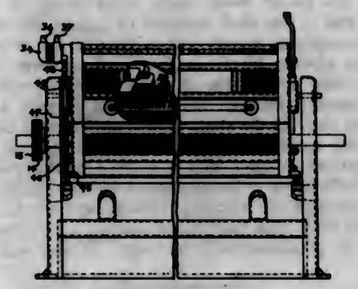
3,091,000
CONTAINER LINING
Alexander George Makowski, Fayville, Mass., assignor to American Can Company, New York, N.Y., a corporation of New Jersey
Filed Dec. 5, 1960, Ser. No. 73,578
2 Claims. (Cl. 18—59)



1. A method of internally lining a preformed container, which includes the steps of introducing a parison forming assembly, comprised of an axially passaged core pin having valve means at one end thereof and a head section at the opposite end formed with an annular flange on the underside thereof surrounding said core pin, into an injection mold cavity provided with an annular seating surface receiving said annular flange whereby said core pin is accurately centered with respect to said mold cavity, molding a thermoplastic parison about said core pin while said valve means is closed and said pin is so centered, controlling the temperature of said parison to maintain the same in semi-molten condition, introducing said core pin and semi-molten parison thereon through the neck of a container until the closed valve means is in contact and steadying relation with respect to the bot-

tom wall of said container and said annular flange on said head section is centered in coaxially spaced relation relative to the container neck to provide a fluid vent therewith, opening said valve means, introducing pressurized fluid through said head section and into said opposite end of said core pin axially therethrough in one direction and outwardly through said valve means and in an opposite axial direction between said core pin and parison to progressively inflate said parison from said one end to the opposite end thereof while porting said fluid through said vent until the entire interior of the container is lined with parison material, terminating the flow of inflating fluid, and withdrawing said head section annular flange from and said core pin through said container neck.

3,091,001
SAW TYPE COTTON GIN AND PROCESS FOR GINNING COTTON
William C. Pease III and Arvel L. Vandergriff, Columbus, Ga., assignors to Lummus Cotton Gin Company, a corporation of Georgia
Filed Feb. 24, 1959, Ser. No. 794,960
11 Claims. (Cl. 19—55)



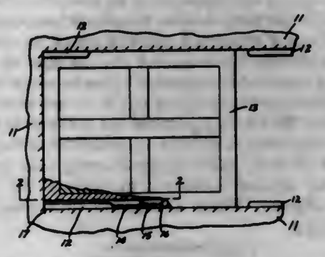
1. The combination with a cotton gin embodying a rotating saw cylinder disposed for operating upon a portion of the periphery of a seed roll in a roll box, of a shaft in the roll box extending the length thereof, members on the shaft projecting into the seed roll and effective to rotate the seed roll in said roll box, and means positively to rotate the shaft at a speed to provide rotational slippage between the seed roll and said projecting members and in a direction with the surface of the roll adjacent the saw cylinder turning in the same direction as the adjacent surface of the saw cylinder, said members on the shaft being effective upon rotation of the shaft at a greater speed than the seed roll to oscillate peripheral portions of the seed roll out of phase with each other, whereby that portion of the periphery of the seed roll being operated upon by the saw cylinder moves back and forth axially of the saw cylinder.

3,091,002
DEMOUNTABLE SHELTER
Laurence E. Nicholson, 404 2nd St., Anacortes, Wash.
Filed Nov. 21, 1958, Ser. No. 775,413
8 Claims. (Cl. 20—2)



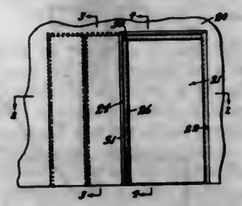
1. A demountable shelter component comprising elongated stringer element, an elongated rib spreader, having its length extending transversely of the length of said stringer element, pivot means mounting said rib spreader at one side of said stringer element for swinging between an expanded position disposed transversely of said stringer element and a collapsed position disposed substantially parallel to said stringer element, and a block secured to one of the sides of said rib spreader and spaced from said stringer element in a direction transversely of said rib spreader, forming between said block and said stringer element a socket for reception of the end portion of a rib spreader of another similar shelter component.

3,091,003
DEVICE FOR CLOSING SLIDING PANELS
William Douglas Nobes, Rochester, N.Y., assignor to The Caldwell Manufacturing Company, Rochester, N.Y., a corporation of New York
Filed Oct. 5, 1959, Ser. No. 844,253
5 Claims. (Cl. 20—19)



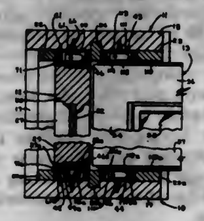
1. A sliding panel assembly comprising a jamb, a track attached to said jamb, a sliding panel slidably disposed in said track, and a closer, said closer comprising a torsion spring disposed within a case, said case containing a slider disposed at one end thereof, and a spiral rod, one end of which is fastened to said panel, said spiral rod passing through said slider whereby said slider, case and torsion spring rotate when said panel is moved, said spiral rod having flat areas at spaced points along its length, said flat areas preventing said rotation so as to hold said sliding panel in a variety of open positions.

3,091,004
SLIDING DOOR
James R. Mays, Philadelphia, Pa., assignor to Mays Equipment Development Corporation, Philadelphia, Pa., a corporation
Filed June 16, 1960, Ser. No. 36,588
1 Claim. (Cl. 20—19)



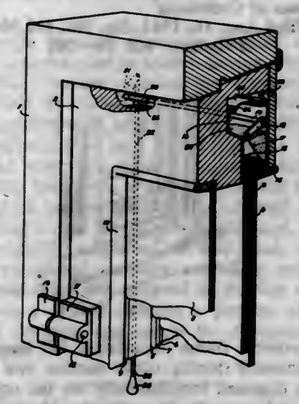
A sliding door assembly for installation in a wall comprising a pocket door frame including a frame defining the door opening and a door receiving pocket, and a door having track engaging means for the door to be supported in said frame, said frame comprising a split jamb adjacent the door pocket having an opening through which the door can pass to an opened or closed position, and a second jamb spaced from the split jamb, said split jamb having a first stationary upright on a first side of the plane of the wall, a second stationary upright on a second side of the plane of the wall opposite from the said first side and a swinging upright having a closed position wherein the said swinging upright holds and guides the door and having an open position wherein said door may be removed from said frame, hinge means connecting said swinging upright to said second stationary upright, said second jamb comprising a stationary upright member for said frame to receive the sliding door in a closed position, header means connected to said split jamb and second jamb comprising a first stationary header portion extending between said first stationary upright and said second jamb on said first side of the plane of the wall, a second stationary header portion extending between said second stationary upright and said second jamb on said second side of the plane of the wall, a swinging header portion having a closed position and an open position, and adapted in closed position to hold and guide the door, and in open position to extend out of contact with said door for said door to be removed from said frame, hinge means connecting said swinging header portion to said second stationary header portion, a track extending between said header portions and the second jamb and the end of the door pocket remote from the split jamb, said track receiving said track engaging means and being fixed relative to said wall for supporting said door, and latch means for holding said swinging upright and said swinging header portion in a closed position, said pocket lying in the plane of the wall and adjacent said frame in communicating relationship with the split in said split jamb and adapted to receive the door in an open positon, said pocket comprising a first wall fixedly connected to said first stationary upright, a second wall connected to the said second stationary upright, and an end wall extending from the said first wall to the said second wall and remote from said split jamb for said door to be received in said pocket in the extreme open position of said door.

3,091,005
VERTICALLY SLIDABLE TILTABLE SASH
Edward J. Woodhams, Texas Township, Kalamazoo County, Mich., assignor, by mesne assignments, to Michigan Equity Corporation, a corporation of Michigan
Filed May 5, 1960, Ser. No. 27,194
7 Claims. (Cl. 20—49)



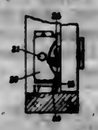
1. In a structure for pivotally and slidably supporting a sash in a window frame having a pair of spaced, substantially parallel jambs, the combination comprising:
An elongated guide member securable to, and substantially parallel with, one of said jambs;
An elongated slide member slidably supported upon and parallel with said guide member, said slide member being substantially shorter than the guide member;
A hinge device mounted upon said slide member adjacent one end thereof, said hinge device having means defining an arcuate gripping surface axially perpendicular to said slide member;
A trunnion rotatably engaged by said gripping surface;
Means supporting said trunnion upon the edge of said sash adjacent said slide member and near said one end thereof, said sash being pivotable with respect to said frame around the axis of said trunnion; and
Mechanism operatively associated with and connected to said hinge device and located radially outwardly of said gripping surface for adjusting the radial pressure between said trunnion and said surface, and thereby controlling the rotational movement of said trunnion with respect to said hinge device, whereby the pivotal movement of said sash is controlled.

3,091,006
WINDOWS
Ebbe Herlof Sahlertz, 111 Vester Voldgade, Copenhagen, Denmark
Filed Aug. 1, 1961, Ser. No. 128,571
Claims priority, application Denmark Aug. 4, 1960
2 Claims. (Cl. 20—53)



1. In a window construction comprising at least two plates of transparent material placed generally parallel to one another and defining a space therebetween, an airtight window frame disposed around said plates and pivotally mounted in a wall frame for movement into different vertical positions, a chamber extending along one horizontal side of said frame, an easy running granulate in said chamber in sufficient quantity for filling said space between said plates and passage means permitting the transfer of said granulate from said chamber to said space and from said space to said chamber, said passage means comprising a longitudinal slot defined in said frame and extending substantially the full length of said horizontal side and including means for opening and closing said passage means.

3,091,007
HINGED WEATHER STRIP FOR DOORS
Louis Viscolosi, 73 Unit St., Providence, R.I.
Filed Oct. 14, 1960, Ser. No. 62,749
1 Claim. (Cl. 20—67)



A weather strip for a door comprising a pair of substantially flat strips pivotally joined side by side by a hinged connection, one of said strips being fastened to said door and the other of said strips overlapping a crevice normally existing between said door and an ad-

joining door frame, resilient means for normally urging said other strip pivotally away from said crevice, a hood over said resilient means for limiting the pivotal movement of said other strip, a closure member pivotal on a pivot means attached to said adjoining door frame and having its pivot point located above the center of its mass and provided with two contact points, one contact point located above said pivot point for engagement with said strip fastened to said door, and the other contact point located below the pivot point for engagement with the other of said strips, whereby the mass of said closure member below said pivot point is opposed by said resilient means through the other of said strips.

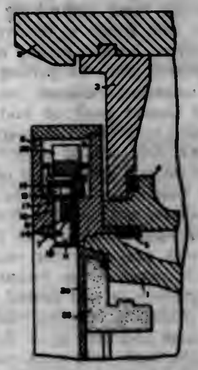
3,091,008
WEEP HOLE CONSTRUCTION FOR WINDOWS AND THE LIKE
Harry M. Riegelman, Rolling Hills, Calif., assignor to Security Aluminum Corporation, Compton, Calif., a corporation of California
Filed Aug. 16, 1961, Ser. No. 131,906
3 Claims. (Cl. 20—70)



1. In a window frame including a sill having an outwardly downward sloping upper surface and an upright fixed flange disposed longitudinally on the upper surface of said sill and generally laterally to said sloping surface, a weep hole construction comprising: at least one aperture provided within the lower surface of said fixed flange, said aperture meeting with the sloping upper surface of said sill; a longitudinally recessed channel provided in the outer surface of said flange and spaced apart a predetermined distance above an upper edge of said aperture; an undercut area provided below said channel in said flange; and flexible aperture sealing means substantially wider than the width of said aperture engaging said channel and seating within said undercut area to provide a pair of pivot axes about which said sealing means moves out of and into said aperture, one axis being adjacent to said channel and the other axis being adjacent said upper edge of said aperture, whereby the deflection resistance of said sealing means to liquid passing outwardly through said aperture is considerably less than the deflection resistance to materials attempting to pass inwardly through said aperture.

3,091,009
CENTRIFUGAL CORE LATCH FOR PIPE CASTING MACHINES
Paul L. Arnold and William A. Montgomery, Hayward, Calif., assignors to United States Pipe and Foundry Company, Birmingham, Ala., a corporation of New Jersey
Filed Oct. 20, 1960, Ser. No. 63,900
4 Claims. (Cl. 22—65)

1. A centrifugal core latching mechanism for use with horizontal cylindrical molds comprising a mold flange having a tapered bore into which a core having a frusto-conical outer periphery may be inserted, a multiplicity of radial ports extending from the bore to the outer periphery of the flange, a latching pin extending through each of said radial ports, said latching pin having a bevel on its radially inward end, which is adapted to co-operate with the frusto-conical outer periphery of said core to move said pin outward when the core is moved across it, stop means for limiting to a predetermined amount the extension of



the latching pins beyond the tapered bore surface of the mold flange, a spring bias means exerting a radially inward force on the latching pins at all times, and a centrifugal flyweight at each latching pin which forces the latching pin radially inward during mold rotation whereby the core is locked firmly in place.

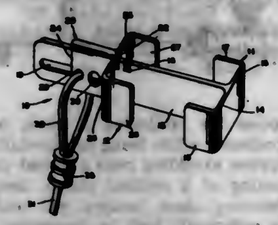
3,091,010
SEAT BELT BUCKLE
Frank L. Davis, College Point, N.Y.
(30 Mariners Lane, Northport, Long Island, N.Y.)
Filed Apr. 27, 1962, Ser. No. 190,576
8 Claims. (Cl. 24—77)



1. A seat belt buckle comprising
a frame of channel form having a back wall and upstanding parallel side walls,
said side walls having opposed triangular slots,
a release handle of channel formation having reversely extending side flanges entered between said side walls and having triangular slots corresponding to and in alignment with said triangular slots in the side walls when said handle is in closed position in the frame,
a locking bar having end portions of reduced width extending through said triangular slots in said side walls and side flanges and having a locking tongue at the free edge of the same opposed to the back wall of the frame,
a spring tensioning said locking bar toward said back wall of the frame and
a web end fitting insertable over said back wall between said side walls into position beneath said spring tensioned locking bar and having a locking recess disposed for entry of said locking tongue therein.

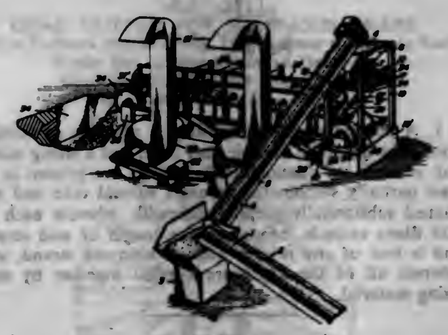
3,091,011
LOCKING MEANS
Robert C. Campbell, Jersey City, N.J., assignor of one-half to Paul A. Godby, Harrison, N.J.
Filed Dec. 16, 1960, Ser. No. 76,385
13 Claims. (Cl. 24—81)

1. A device for securing skis and the like comprising a flat strap, outwardly extending cross bars disposed on one end thereof, inwardly extending flanges disposed on said cross bars, said strap having a plurality of spaced notches therein opposite said cross bars, a U-shape member slidably disposed on said strap, a downwardly extending lug on said U-shape member for insertion in one of said notches to prevent sliding of said U-shape member on said strap, another cross bar and another flange disposed on each leg of said U member, said other flanges extending toward said first mentioned flanges to hold an



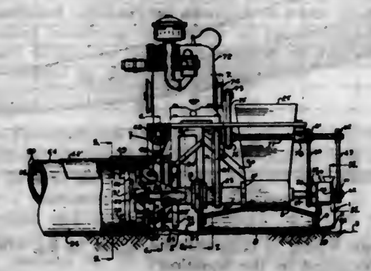
object therebetween, there being a longitudinal slot in said strap below said notches, the legs of said U member having openings therein in alignment with said slot, a flexible cable having an end threaded through one of said openings and said slot securing it to said U-shaped member, and a padlock threaded through another of said openings, said slot, and another end of said cable, to fix said U-shaped member with respect to said strap, and detachably lock said cable thereto, to permit the device to be secured about a fixed object.

3,091,012
METHOD AND APPARATUS FOR MAKING BRIQUETTES
William C. Bell, Raleigh, N.C., assignor of one-fourth to S. Perry Brown, Austin, Tex., and one-fourth to Paul M. Brown, Shreveport, La.
Filed Mar. 6, 1959, Ser. No. 797,715
6 Claims. (Cl. 25—2)



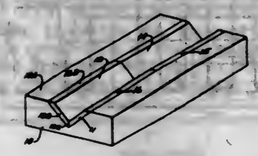
2. Apparatus for forming briquettes comprising means for applying pressure to increments of raw material and for shaping the same into elongated briquettes having lengths greater than their widths, a pervious briquette support, means arranged between said briquette shaping means and said pervious support for distributing the briquettes in a jackstraw pattern on said pervious briquette support in a bed having a depth greater than the length of the briquettes, a heating chamber, means for supporting said pervious briquette support in said heating chamber, means for passing heated gas through said pervious support and briquettes thereon in said heating chamber, and means for discharging briquettes from said pervious support out of said heating chamber.

3,091,013
APPARATUS AND METHOD FOR FORMING MONOLITHIC PIPE
Mott L. Robinson, Lakin, Kans.
Filed Dec. 27, 1960, Ser. No. 78,704
9 Claims. (Cl. 25—32)



1. In a pipe forming apparatus adapted to produce continuous concrete pipe in a ditch having a substantially semi-cylindrical bottom portion the combination of a frame movable in and along said ditch, means on said frame for guiding said apparatus in said ditch, a head rotatably supported on said frame, the axis of rotation of said head extending parallel to said ditch, a semi-cylindrical top half form of substantially the same diameter as the ditch bottom portion, said top half form being secured to said frame spaced above said head, a plurality of rollers rotatably supported on said head, said rollers presenting peripheral surfaces extending radially outwardly of said head and adapted to develop during said head rotation a section defining a portion of the leading edge of the pipe, and means for delivering concrete to said rollers.

3,091,014
CRADLE
Thomas W. Smoot, Bethel Park, and Donald F. Stock, Pittsburgh, Pa., assignors to Harbison-Walker Refractories Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed May 7, 1962, Ser. No. 192,760
8 Claims. (Cl. 25—153)

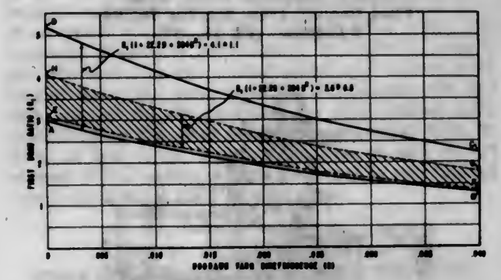


1. A composite setter construction comprising base means, support means substantially contiguously covering a portion of said base means, the support means being fabricated of high purity stabilized zirconia, and said base means fabricated of material selected from that group consisting essentially of high purity refractory oxide material capable of stabilizing cubic zirconia crystals.

3,091,015
DRAWING OF NYLON
Joseph Zimmerman, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Mar. 12, 1959, Ser. No. 799,054
15 Claims. (Cl. 28—72)

1. In the multiple-stage drawing of a polyamide strand,

the improvement comprising passing the strand into a first stage of drawing such that the ratio of drawn length

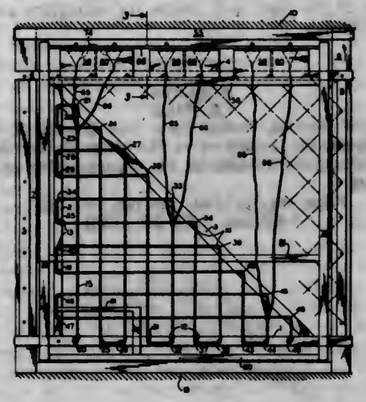


to undrawn length is constant and equal to R_1, and R_1 being determined by the equation

$$R_1(1+22.2B+284B^2)=3.6\pm0.5$$

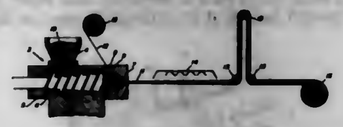
where B is the average birefringence per filament in the strand immediately prior to drawing, said first stage of drawing being followed by a second stage of drawing.

3,091,016
METHOD OF CONNECTING ROPE LENGTHS IN A NET
Eric L. Pedley and Philip Pedley, San Francisco, Calif., assignors to Pedley-Knowles & Co., San Francisco, Calif.
Filed Nov. 2, 1959, Ser. No. 850,246
4 Claims. (Cl. 28—75)



1. The method of making a rope net that comprises the steps of; laying rope lengths across each other in angularly extending relationship to each other and in engagement at their crossing points, separately coating a pair of strands of lashing filaments with relatively fluid plastics that include agents operative to activate hardening of said plastics only when the latter are brought together, then bringing said pair of strands together after said coating thereof with said plastics in substantially engaging relation whereby said plastics will be brought into contact with each other and at substantially the same time tightly lashing said lengths of rope together with said pair of engaged strands at each of said crossing points, and thereafter keeping said pair of strands together at each of said crossing points until said plastics have hardened.

3,091,017
RESILIENT FABRICS
Paul C. Wetteran, Mountain Lakes, N.J., assignor to Congoleum-Nairn Inc., Kearny, N.J., a corporation of New York
Original application Nov. 25, 1957, Ser. No. 698,477. Divided and this application Jan. 12, 1960, Ser. No. 2,078
9 Claims. (Cl. 28—75)



1. A process for producing a fabric having a high degree of resiliency while being substantially inextensible which comprises extruding onto a thread core a smooth, uniform coating of a resilient plastic composition containing a blowing agent, heating said coated core to a temperature sufficiently high to decompose said blowing agent thereby foaming said plastic composition into a resilient coating on said core, weaving said foamed coated core with other threads into a fabric and heating said woven fabric to soften said resilient coating to bind said threads together at their point of contact.

3,091,018
PROCESS FOR COMBINING GLASS FIBERS WITH SYNTHETIC RESIN FIBERS AND PRODUCT THEREOF
Vernon C. Rees, Monroe County, Mich., assignor, by mesne assignments, to Johns-Manville Fiber Glass Inc., Cleveland, Ohio, a corporation of Delaware
Filed Dec. 27, 1956, Ser. No. 630,905
2 Claims. (Cl. 28—80)



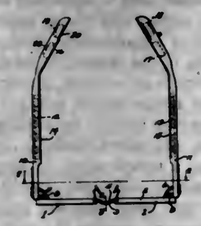
1. A bonded strand comprising: a plurality of continuous glass fibers, an organic fiber core, and a sizing material, wherein the continuous glass fibers are present in at least partially surrounding relation to said core and are aligned substantially parallel therewith, wherein each of said fibers extends throughout the length of said strand and is free of any reverse bends within the strand, and wherein all of the fibers are bonded together by said sizing material.

3,091,019
RESILIENT FABRICS OF EXPANDED CORE YARNS
Paul C. Wetteran, Mountain Lakes, N.J., assignor to Congoleum-Nairn Inc., Kearny, N.J., a corporation of New York
Filed Nov. 25, 1957, Ser. No. 698,477
14 Claims. (Cl. 28—80)



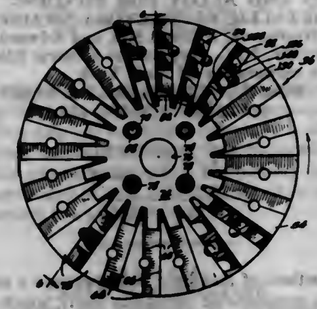
1. As an article of manufacture, a resilient, substantially inextensible composite strand having a diameter of from about 0.040 to about 0.400 inch, adapted to be woven, braided or otherwise made into a fabric, said composite strand comprising a fiber core having a tensile strength of at least 4 pounds and a diameter of about 0.010 to about 0.030 inch and a smooth coating of uniform thickness on the surface of said core of a resilient foamed plastic composition having a density of from about 6 to about 30 pounds per cubic foot.

3,091,020
EYEGLASS HEARING AID AND METHOD OF MANUFACTURE
Charles W. Strzalkowski, 824 N. 27th St., Milwaukee, Wis.
Filed July 30, 1957, Ser. No. 675,161
3 Claims. (Cl. 29—28)



1. A method of manufacturing an eyeglass temple to receive hearing aid components, which method comprises forming locating means in a blank, providing a series of templates having identical complementary locating means and respectively formed to guide cutting tools for performance of successive operations on the blank, sequentially applying the templates to the blank and cutting away portions of the blank guided by successive templates, the cutting including the removal of material from a number of different sides of the blank, different templates being used for each side, the complementary locating means on such template cooperating with the same locating means in the blank.

3,091,021
GEAR CUTTER FOR SKEW-AXIS GEARS
Oliver E. Saari, Schiller Park, Ill., assignor to Illinois Tool Works Inc., a corporation of Delaware
Filed May 9, 1958, Ser. No. 734,221
13 Claims. (Cl. 29—105)



1. A gear cutting device comprising a body having a plurality of generally radially aligned slots opening axially thereof, a like plurality of cutter blades respectively disposed in said slots and each having a plurality of teeth exposed substantially axially of said body, all of said blades being substantially identical, and common locating means disposed centrally of said body and abutted by said blades, said locating means spacing successive blades successively greater distances radially outwardly.

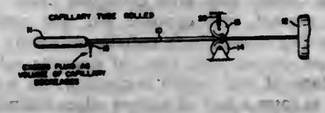
3,091,022
COLD-FORMABLE PREDOMINANTLY COBALT ALLOYS
William H. Faulkner, Kokomo, Ind., assignor to Union Carbide Corporation, a corporation of New York
No Drawing. Filed Mar. 25, 1959, Ser. No. 801,688
7 Claims. (Cl. 29—191.2)

3. A cold-formable cobalt alloy having a predominantly face-centered cubic crystal structure at room temperature, said alloy consisting essentially of cobalt together with iron and nickel, the minimum amounts of iron and nickel being defined by the following equation:

$$Fe+\sqrt{Ni}=4.7$$

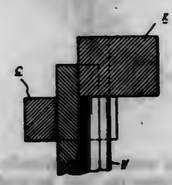
where Fe equals the percent by weight iron and Ni equals the percent by weight nickel, at least one of said elements being present in an amount of at least one percent, and up to a maximum amount of iron equal to 11 percent by weight and a maximum amount of nickel equal to 30 percent by weight, and the balance cobalt in a minimum amount of 70 percent by weight and incidental impurities.

3,091,023
METHOD OF MAKING A CAPILLARY TUBE FLUID FILLED TRANSMISSION SYSTEM
William L. Carlson, Jr., Bloomington, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Sept. 19, 1960, Ser. No. 57,006
6 Claims. (Cl. 29—400)



1. The method of making a thermostat element having a remote bulb connected by a fluid filled system to an actuator, which consists of attaching a bulb and an actuator to opposite ends of a length of tube, filling the bulb, tube and actuator with relatively noncompressible fluid, rolling the tube to reduce the cross-sectional area of the tube bore, and sealing the system to prevent fluid loss when the fluid in said bulb increases in volume.

3,091,024
METHOD OF MAKING FASTENER ELEMENTS FOR SLIDE FASTENERS
Roland J. Poux, Meadville, Pa., assignor to Talon, Inc., a corporation of Pennsylvania
Filed Sept. 13, 1960, Ser. No. 55,673
9 Claims. (Cl. 29—410)



1. The method of making a slide fastener element which comprises forming a strip of material into a cross section conforming substantially to the contour of an individual fastener element, cutting a blank from the end of the strip so as to provide a blank member having a pair of leg portions interconnected by a head portion, said head portion having a face on opposite sides thereof, reducing the thickness between the upper and lower surfaces of the leg portions thereof, increasing the thickness between the inner and outer surfaces of the leg portions,

and simultaneously deforming each face of the head portion so as to provide interlocking portions on each side thereof.

3,091,025
METHOD OF MANUFACTURING EXPANSION JOINTS
James P. Zallea, Wilmington, Del., assignor, by mesne assignments, to Zallea Brothers, Inc., Wilmington, Del., a corporation of Delaware
Filed May 20, 1958, Ser. No. 736,605
18 Claims. (Cl. 29—411)



1. The method of forming an external annular reinforcing and movement limiting unit comprising the step of turning up the longitudinally extending opposite sides of a rectangular sheet metal element into edge-abutting relation to thereby form a substantially straight elongated member of uniform generally ovoid shape in transverse section having an intermediate curved area and a pair of facing flat side wall areas extending convergingly radially outwardly from said intermediate curved wall area, the step of bending said member longitudinally and turning the opposite end portions thereof into opposed relation to thereby form a radially spilt hollow toroid having an intermediate curved wall area extending about the inner periphery thereof, and opposite flat side annular wall areas extending convergingly radially outwardly from said intermediate curved wall area on opposite sides of the median plane of said toroid respectively to meeting engagement to form a pair of narrow edges extending about the outer periphery of said toroid, and the step of fitting said toroid into a circular band and securing the narrow outer peripheral edges thereof to the inner face of said band.

3,091,026
METHOD OF MAKING WIRE
James S. Hill, Cranford, N.J., and Cecil S. Sivil, deceased, late of East Orange, N.J., by Blanche O. Sivil, executrix, East Orange, N.J., assignors, by mesne assignments, to Engelhard Industries, Inc., Newark, N.J., a corporation of Delaware
Filed Nov. 13, 1958, Ser. No. 773,637
3 Claims. (Cl. 29—419)



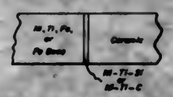
1. The method of making electrically conductive grain-growth controlled wire for use in high temperature operating devices comprising chemically cleaning numerous wires of substantially the same size and of the same substantially pure metal selected from the class consisting of platinum, palladium and rhodium, grouping and securing the wires into a compact bundle, heat treating the bundle at a temperature above the recrystallization temperature and below the melting temperature of the metal until the wires are bonded into a rod reducing the cross-section of the rod by hot working until the rod is a solid metal mass of substantially pure metal, and cold working the rod into wire.

3,091,027
METHOD AND COMPOSITION FOR ASSEMBLING TOGETHER REFRACTORY BODIES
Jacques Clair, Grenoble, France, assignor to Pechiney, Compagnie de Produits Chimiques et Electrometallurgiques, Paris, France, a corporation
No Drawing. Filed Nov. 19, 1959, Ser. No. 854,000
Claims priority, application France Nov. 20, 1958
5 Claims. (Cl. 29—472.7)

1. A process of assembling together refractory bodies of the class consisting of carbides, nitrides and borides of high melting point metals, consisting in the following steps: mixing together a powdered metal selected from the class consisting of titanium, zirconium, tungsten, molybdenum and tantalum, and a metalloid selected from the class consisting of carbon and boron, said metal and metalloid being mixed in substantially stoichiometric proportions for formation of the respective metal-metalloid compound; adding thereto an organic plastic binder which is liquid at ordinary temperatures selected from the group consisting of those that solidify by heating and in the cold by catalytic action, and which binder is capable of elimination by heating to a temperature of approximately 500° C., there being used a sufficient quantity of said binder so that the resultant paste has the plasticity of cement mortar used in masonry; coating the surfaces of the bodies to be assembled with this paste; assembling said bodies together; and thereafter heating the assembled parts to approximately 1900° C. to sinter the metal-metalloid mixture and thereby join said bodies together.

4. A novel heat-sintering paste for use in assembling together refractory bodies subjected to high temperatures comprising a mixture of a powdered metal selected from the class consisting of titanium, zirconium, tungsten, molybdenum and tantalum, and a metalloid selected from the class consisting of carbon and boron, said metal and metalloid being present in substantially stoichiometric proportions for formation of the respective metal-metalloid compound, and an organic plastic binder which is liquid at ordinary temperatures selected from the group consisting of those that solidify by heating and in the cold by catalytic action, and which binder is capable of elimination by heating to a temperature of approximately 500° C., there being used a sufficient quantity of said binder so that the resultant paste has the plasticity of cement mortar used in masonry.

3,091,028
METHOD AND ALLOY FOR BONDING TO NON-METALLIC REFRACTORY MEMBERS
John H. Westbrook, Ballston Spa, and Edward R. Stover, Schenectady, N.Y., assignors to General Electric Company, a corporation of New York
Filed Sept. 2, 1960, Ser. No. 53,652
9 Claims. (Cl. 29—473.1)



1. A method of making a bond between a metal member and a non-metallic refractory body which comprises placing said metal member selected from the group consisting of nickel, titanium, iron and iron base metals, and said body in a stack with an alloy 50 to 55 atomic percent titanium, 0.3 to 10 atomic percent of an element selected from the group consisting of silicon and carbon, and the balance being nickel interposed between said metal member and said body, heating the stack in a non-reactive atmosphere to a temperature at least equal to the melting point of said alloy and below the melting point of said member and said body to form in place a molten reactive alloy which wets the non-metallic refractory body, and cooling the stack to provide a bond capable of withstanding a temperature substantially equal to that at which the bond was formed.

6. An alloy which consists of 50 to 55 atomic percent titanium, 0.3 to 10 atomic percent of an element selected from the group consisting of silicon and carbon, and the balance being nickel.

3,091,029
BRAZING ALLOY APPLICATION METHOD
Charles L. Davis, Thousand Oaks, and James R. Blanchard and Chester S. Shiro, Canoga Park, Calif., assignors to North American Aviation, Inc.
No Drawing. Filed July 13, 1960, Ser. No. 42,583
4 Claims. (Cl. 29—496)

1. A method of brazing two articles together, each having a metal-containing surface area, the method comprising the steps of spraying a brazing composition upon said surface area of one of said articles to form a deposit of a thickness from about 0.1 mil to about 15 mils, said composition consisting essentially of one part brazing alloy particles of a size range which will pas sthrough from about a 40 to about a 200 mesh screen, from 0 to about 20 parts flux, and from 1 to about 20 parts of a liquid carrier vehicle having a viscosity of substantially not in excess of about 3 centipoises, said composition having a viscosity not in excess of about 3,000 centipoises and said particles being settleable in said composition, said spraying step being effected with a force sufficient to cause at least a portion of said alloy particles to contact said one article; heating said deposit to a temperature sufficient to melt said particles, thereby forming a film of brazing alloy; and contacting the other of said articles with said film to braze said articles together.

3,091,030
METHOD OF MAKING TRANSMISSION BELTS
Erhard Zumbrunnen, Magliaso, Lugano, Switzerland, assignor to Viso S.A., Magliaso, Lugano, Switzerland
Filed Sept. 15, 1959, Ser. No. 840,040
Claims priority, application Switzerland Sept. 18, 1958
3 Claims. (Cl. 29—527)



1. A method of making an endless transmission belt, comprising the steps of injection-molding around an elongated fibrous element in chilled condition a plurality of metallic beads at spaced locations, thereby forming several intermediate enlargements and a link joining the ends of said element together, and cold-pressing all of said beads on said element to a predetermined size.

3,091,031
CABLE SLITTING TOOL
Walter F. Grant, 610 Kentucky St., Bellingham, Wash.
Filed Dec. 4, 1961, Ser. No. 156,867
7 Claims. (Cl. 30—91)

1. A cable armor slitter comprising a generally tubular body for slidably receiving a cable, and means in said body for cutting the cable longitudinally or circumferentially, said means including a sleeve rotatably and slidably mounted in the body, a shank threadedly mounted for adjustment in said sleeve, a knife mounted on said shank, an operating knob on the sleeve, a keeper in the body for releasably securing the knife against rotation and in rotatably adjusted position, and means for engaging the knife with the keeper, said keeper including a member



in the body having intersecting slots therein, said knife comprising a disk engageable selectively in said slots.

3,091,032
FIXED RESTORATIVE DENTISTRY
Leo Hirshhorn, 4 Hartley Road, Great Neck, N.Y.
Filed June 13, 1961, Ser. No. 116,747
4 Claims. (Cl. 32—6)



1. In a dental restorative construction including a pair of movably linked restorative members, improved linking means comprising: a socket-forming member embedded in one of said restorative members and having a recess therein, a socket-engaging member disposed within said socket-forming member, and initially capable of limited rotational and translational movement within said socket-engaging member, a shaft extending outwardly of said socket-forming member and engaged with said socket-engaging member at one end thereof and at a second end thereof with a recess in the other of said restorative members, and means for rigidly fixing the position of said socket-engaging member within said socket-forming member after installation of said first and second restorative members within the mouth of the user.

3,091,033
DENTAL CLEANING TOOL, APPARATUS, AND METHOD
Irving A. Ellman, 1624 Sherborne Road, Valley Stream, N.Y.
Filed June 2, 1961, Ser. No. 114,449
16 Claims. (Cl. 32—58)



1. A dental cleaning tool comprising a straight tool bit having a shank portion at one end and a cleaning portion at the other end both having a common central axis, said cleaning portion comprising an elongated body symmetrical about said central axis and tapering substantially to a point at its end remote from the shank portion, said cleaning portion being constituted of between four and eight elongated smooth side portions symmetrically disposed about said central axis and forming at their junctions obtuse-angled corners, whereby when said tool bit is rotated about its axis at very high speeds and brought into contact with hard tooth deposits, ultrasonic vibrations

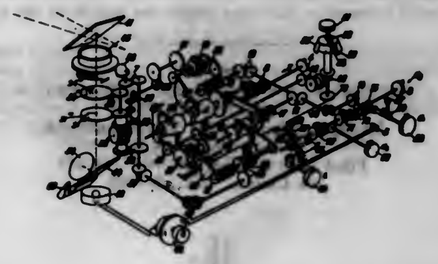
are imparted thereto leading to their rapid disintegration and removal without injury to the tooth or surrounding soft tissue.

3,091,034
DENTAL MIRROR
Vincent J. Piscitelli, 828 1st St., La Salle, Ill.
Filed Jan. 16, 1961, Ser. No. 83,353
19 Claims. (Cl. 32—69)



1. In a dental mirror, a nozzle receiving air from a source at increased pressure having an inlet at one end thereof and a plurality of outlet passages diverging from said inlet, a mirror on said nozzle in parallel relationship with said outlet passages, said outlet passages being disposed to project a fan-shaped air curtain over said mirror and in proximately spaced relationship to said mirror and conduit means extending beneath the mirror into proximately spaced relation to the ends of said outlet passages such as to conduct air from beneath the mirror by a vacuum created by said air curtain.

3,091,035
ORDNANCE SIGHT
Alfred Kuhlenkamp, Braunschweig, Germany, assignor to Mathema Corporation Reg. Trust, Vaduz, Liechtenstein, a corporation of Liechtenstein
Filed May 14, 1958, Ser. No. 735,322
Claims priority, application Germany Aug. 22, 1957
3 Claims. (Cl. 33—49)



1. Apparatus for aiming weapons intended to combat mobile aircraft targets comprising a control knob having positions determined by the location of the aircraft relative to the gun position, i.e. "aircraft approaching from the right," "aircraft approaching from the left" or "aircraft approaching from the front," a computing cam element connected to be operated by said knob, means for adjusting said cam element by the elevation gear of a sighting weapon, a manually operated coupling adapted to connect the azimuth mechanism of the weapon to the computing cam element after the target is picked up by the sighting apparatus, whereby the computing cam element continues to be driven governed by the azimuth mechanism, a follower positioned by said cam element in proportion to an angle between the plane of flight and the horizontal plane, a second computing cam element rotatable with the first cam element, a second follower cooperating with said second cam element, means displacing said second cam in proportion to the bearing angle of the weapon in the horizontal plane through said coupling, a sighting apparatus having a path of light and including two discs one of which is provided with a radially disposed slot and being rotatable by said second follower and the other of which is a transparent disc lying in said path of light and provided with a series of curves indicating aiming-off values, and means for rotating said transparent disc by both of said followers, a third computer cam element connected to be operated by the control knob, a third follower cooperating with and contacting the third computer cam element and turning in proportion to the bearing angle in the plane of flight, said sighting apparatus including a reflecting optical device to reflect light through the sighting apparatus, and an indicating device connected to indicate the position of the first-named follower.

3,091,036
DRAFTING MACHINE
Willi Pieper, Seestrasse 71, Kilchberg, Zurich, Switzerland
Filed Sept. 22, 1959, Ser. No. 841,540
5 Claims. (Cl. 33—79)



1. In a drafting machine, in combination, a parallel-motion linkage including a pivotal roller, an arm swingable about said roller, said arm being formed with two parallel passages extending tangentially from said roller, and an elongated transmission element in said passages connecting said roller with a remote head for angular displacement of the latter with respect to said arm upon a rotation of said arm about said roller; and unidirectionally effective brake means disposed in one of said passages and adapted to engage said element for at least limitedly retarding the rotation of said arm about said roller in one sense and permitting relatively unretarded rotation in the opposite sense, said brake means including wedge means frictionally engaging said element upon said rotation of said arm in said one sense.

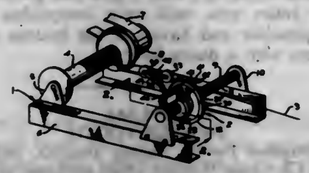
3,091,037
HIGH LIQUID LEVEL INDICATING GAUGE
Régent Pelletier, Rivière du Loup, Quebec, Canada
Filed July 3, 1961, Ser. No. 121,470
3 Claims. (Cl. 33—126.4)

1. A high liquid level indicating gauge, comprising: a flexible tubular member; clamping means located at spaced intervals along the axis of said member for closing the latter to form a plurality of containers arranged in a string intended to stand substantially vertically in a liquid to measure its maximum level; apertures through the wall of each container at the upper end thereof for the ingress and egress of the liquid; hanging means at one end of



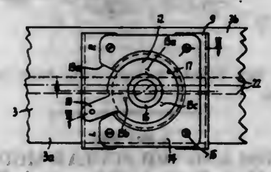
said member whereby said string of containers may be hung vertically in a liquid to measure its maximum level.

3,091,038
LINE SPOOLING AND MEASURING APPARATUS
Daniel Brand, 4349 S. Rockford Place, Tulsa 5, Okla.
Filed Dec. 4, 1961, Ser. No. 156,895
9 Claims. (Cl. 33—129)



4. In a well measuring apparatus,
(*a*) a support,
(*b*) a frame rotatably carried by said support,
(*c*) a driving wheel rotatable in said frame and adapted to have a line in a bight therearound,
(*d*) an arm fixed to said frame and extending therefrom,
(*e*) a guide means on the free end of the arm and positioned in coplanar relationship with said driving wheel whereby said guide means engages a line to be payed out over said wheel,
(*f*) a second arm pivotally mounted on said free end of the first-named arm and extending therefrom toward said wheel,
(*g*) a second guide means rotatably mounted on said second arm and engaging said line between the first-named guide means and said wheel, said second guide means engaging the line in opposed relationship to the first-named roller and said wheel,
(*h*) means biasing said second arm toward said wheel,
(*i*) brake means on said second arm engageable with the line on said wheel to hold said line thereon and movable to disengaged relationship in response to tension on the line moving the second arm away from said wheel, and
(*j*) means driven by said wheel for indicating the length of line payed thereover.

3,091,039
MARKING DEVICE FOR THE MOUNTING OF SKI BINDINGS
Hannes Marker, 37 Alpspitzstrasse, Garmisch-Partenkirchen, Germany
Filed Dec. 12, 1960, Ser. No. 75,340
Claims priority, application Germany Jan. 9, 1960
2 Claims. (Cl. 33—189)

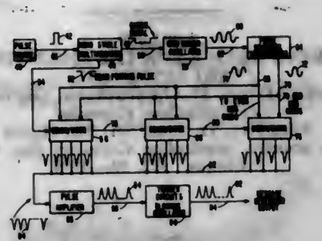


1. In a marking device for marking on the upper surface of a ski the positions of screw holes intended for securing a ski binding plate onto the ski, the combination comprising:
a rectangular base plate having substantially the same width as a ski and having means on its lower surface adapted to rest on the upper surface of a ski, said base plate having a central opening therethrough extending transverse to said lower surface, said central opening being relatively large and round and having an annular recess at its upper end;
a punch plate mounted in said central opening for axial movement therein in a direction transverse to said lower surface of said base plate, said punch plate having on its lower side three prick punches spaced apart from each other by an angle of 120 degrees, said punch plate having a flange at its upper end which flange is received in and is axially displaceable with respect to said recess;
abutment means on said base plate for limiting axial movement of said punch plate in said opening, the abutment means for limiting downward movement of said punch plate being so arranged that in the lowermost position of said punch plate said prick punches project below the plane of the lower surface of said base plate; and
means supporting said punch plate for pivotal movement with respect to said base plate and means for limiting pivotal movement of said punch plate to an arc of about 30 degrees in the plane of the base plate so that in the two end positions of said punch plate, none of the prick punches are disposed in the longitudinal centerline of the ski.

3,091,040
MESSAGE GENERATOR
Albert E. Schierhorst, Beltsville, Md., assignor to ACF Industries, Incorporated, New York, N.Y., a corporation of New Jersey
Filed Sept. 19, 1960, Ser. No. 56,940
4 Claims. (Cl. 35—10.4)

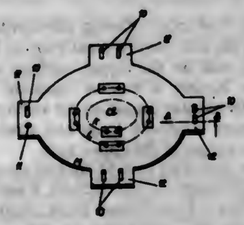
1. A coded message generator for producing a train of message pulses for display on the track maintenance console of a guidance system simulator, said generator including beam switching electron tube commutator means having a plurality of arrays of electrodes, said commutator having means for forming an electron beam, output means, switch means connecting selected ones of said arrays to said output means, means for remotely operating said switch means, means for causing said electron beam to pass from one array to the next, and means connecting said output means to said track maintenance

console, said connecting means being responsive to the electron beam for selectively producing an output pulse



of either of two binary values from each selected array of electrodes.

3,091,041
ATOM AND MOLECULAR MODELS
Hélène Marie Renée de Gaigneron de Marolles, 45 Rue Henri Heine, Paris, France
Filed Mar. 1, 1960, Ser. No. 12,118
4 Claims. (Cl. 35—18)



1. A model of a molecule of a substance comprising, a plurality of models of atoms of at least one element forming the molecule of said substance, each model of an atom comprising a planar body portion, means connected to said body portion representative of the valence of said atom having a plurality of holes representative of the absence of an electron in said atom in a position representative of an energy level, including the outermost energy level a plurality of upstanding pin members representative of electrons of said atom receivable in said holes, the last-mentioned means connected to said atom body portion being disposed peripherally of said body portion for joining said atom model with another atom model by insertion of said pin members upstanding in a respective hole in the means representative of the valence of said other atom to represent the type of bond formed between the atoms, thereby to represent a molecule of said substance with joined atom models.

3,091,042
FORM FITTING SHOE STRUCTURE
Francis M. Gilkerson, Box 405, Chesterfield, Mo.
Filed Apr. 4, 1960, Ser. No. 19,764
4 Claims. (Cl. 36—2.5)



1. A shoe comprising an upper, an outsole, and a full insole, said upper, outsole and insole being permanently secured together, said insole being contoured on its upper surface to substantially conform to a normal foot of appropriate size, and on its lower surface to complement the upper surface of the outsole, margins of the upper surface of the insole being substantially greater than the margins of the lower surface of the insole, the upper surface of the insole extending beyond the lower surface of the insole at a maximum in the region of the shank under the center of the longitudinal arch of the foot and tapering to minimums at the toe and heel ends of the insole, marginal portions of the insole being thicker than a comparable ordinary insole and the central portions being thinner, whereby the total volume of the insole is substantially equal to that of a comparable ordinary insole and the total volume of the shoe is substantially equal to that of a comparable ordinary shoe.

3,091,043
SPINNER ATTACHMENT FOR SHOES
Jimmie D. McCorkle, Amarillo, Tex.
(72nd CDS, APO 845, Box 1251, New York 11, N.Y.)
Filed Nov. 23, 1962, Ser. No. 239,690
4 Claims. (Cl. 36—8.3)



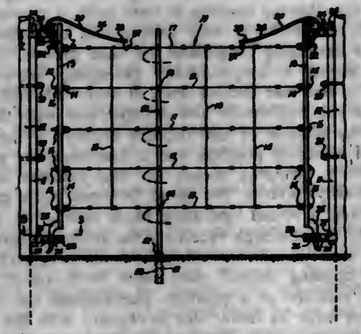
1. A spinner attachment for shoes, comprising a rigid sole plate having forward and rear ends, a centered spinner assembly mounted at the underside of the sole plate adjacent the forward end thereof, said spinner assembly comprising a stator fixed to the underside of the sole plate, a rotor disposed below said stator and journaled on said stator, there being cooperating annular grooves formed in the underside of said sole plate and the top side of said rotor, and ball bearings interposed between and engagingly held within said grooves throughout their entire area, said rotor comprising a resilient and compressible pad having a flat bottom surface for engagement with a dance floor.

3,091,044
DIGGER TOOTH
Vincent Stephen Penoto, Shaker Heights, and Henry L. Meyer, Cleveland Heights, Ohio, assignors to The Cleveland Trencher Company, Cleveland, Ohio, a corporation of Ohio
Filed Oct. 28, 1960, Ser. No. 65,817
5 Claims. (Cl. 37—142)



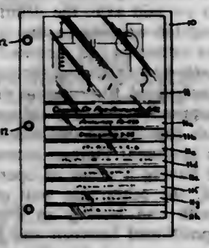
1. In an endless digging unit for a mobile excavating machine including a plurality of excavating buckets secured to the outer boundary of said unit and having digger teeth secured to the leading edges of said buckets and projecting forwardly therefrom, the digger teeth on said buckets being arranged so that the digger teeth on one bucket are spaced laterally of the digger teeth on the next following bucket so that substantially the entire transverse width of a trench to be excavated may be engaged by the digger teeth on a predetermined series of said buckets, each of said digger teeth comprising a base member secured to the respective bucket and having a projecting portion thereon, a detachable cutting tip member having a flattened blade-like tip and having a projecting portion, one of said projecting portions defining a socket and the other of said projecting portions defining a shank received in engaged relation in said socket, the interior of said socket being comprised of a plurality of surface sections disposed in abutting relation at their lengthwise edges and providing a generally polygonal shaped configuration in vertical section for said socket, said shank being of generally polygonal shaped configuration in vertical section but having a lesser number of surface sections as compared to the number of surface sections of said socket, said tip member being adapted to be selectively oriented into a plurality of rotatively angled positions about the lengthwise axis of said tip member, said plurality of positions being of greater number than said surface sections of said tip member, and means interlockingly securing said tip member to said base member.

3,091,045
ADJUSTABLE WIRE GATE
Tom G. De Vilbiss, Box 1026-3202 28th Ave. Pearsall, Tex.
Filed Mar. 21, 1962, Ser. No. 181,257
4 Claims. (Cl. 39—74)



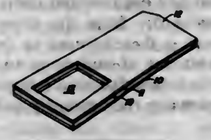
1. In a wire gate construction, the combination of a pair of aligned fence posts, a flexible wire gate, said wire gate comprising a gate post positioned on each side of the gate, a plurality of strands of wire extending transversely between said gate posts, each gate post having a tensioning bolt comprising an eye therein for each strand, lugs positioned upon the lower end of each gate post, spaced straps positioned on the lower end of each of said fence posts, said straps being engageable by said lugs, a vertical rod secured with and extending the full height of the gate and having one end particularly adapted to be removably inserted in the ground, said vertical rod being positioned medially of said gate posts and disposed closer to one of said gate posts than the other to provide a plurality of possible openings through said gate, each of said plurality of openings being of a different size than the remainder thereof, and latch means positioned substantially adjacent the top of each fence post, said latch means being engageable with an adjacent cooperating gate post, whereby that portion of said gate positioned and disposed on each side of said vertical rod is releasable from the latch means positioned on each of said fence posts to provide at least two of said different size plurality of openings and, upon removal of said vertical rod from its disposition with the ground, the gate in toto may be released at each of said gate ends from the latch means positioned upon each of said gate posts to provide another of said different size plurality of openings, which other opening extends completely transversely of said gate posts and completely therethrough.

3,091,046
FLIP FILE CARDS
Harold Engelstein, 733 Caffrey Ave., Far Rockaway, N.Y., and Stanley Engelstein, 45 Salem Road, Roslyn Heights, N.Y.
Filed July 5, 1960, Ser. No. 40,852
7 Claims. (Cl. 40—102)



5. A flip file card provided with transparent envelopes in staggered relation hinged to a backing, each envelope being constituted by two identical superposed panels of flexible material formed by folding a sheet in half and joining the ends thereof by a rib, and a strip interposed between the two panels in parallel with and adjacent said rib, said strip being joined by a spacer element to the underside of the top panel to provide a ledge for supporting the lower margin of an item inserted between said panels, the space between said spacer element and said rib of said panels providing a window for an indexing strip which may be readily inserted in the larger chamber between the two panels.

3,091,047
LAMINATED RECORD CARD
Henry C. Stechle, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed Jan. 3, 1961, Ser. No. 80,211
1 Claim. (Cl. 40—158)

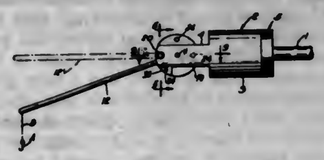


As an article of manufacture, a record card or the like comprising a plurality of united laminae having respective apertures in mutual registration, at least one of said laminae being formed of a photographic film base, said record card including a microfilm or the like positioned within said aperture and having a periphery configured substantially the same as said aperture periphery and formed so as to provide an interlocking abutting relation between said aperture periphery and said microfilm periphery, said microfilm being coalescently united to said film-base lamina.

3,091,048
FISHING POLES
Adam Theez, 4459 W. Washington Blvd., Chicago, Ill.
Filed Sept. 28, 1961, Ser. No. 141,367
2 Claims. (Cl. 43—15)

1. A standard fishing pole in combination with an attachment device to said in catching fish, said attachment device comprising a main cylindrical body having an arm extending from each side thereof, said body having an opening therein, the walls of said body forming said opening being internally threaded, a resilient, externally thread-

ed insert threadingly engaging the threads of said opening, an internally threaded ring forming an extension of the body and threadingly engaging the threads of said insert, said insert having a central opening therein to receive one end of the fishing pole so that said body becomes an extension of said pole, an axle mounted between the arms extending from said body, a drum mounted for rotation on said axle, the drum being hollow and having an elongated opening in the circumferential surface thereof, an extension rod mounted for pivotal movement on said axle and extending through said opening in the drum, a knob fixed for rotation on one side of said drum and interposed between the drum and one of said arms, said knob constituting one side wall of said drum and having an abutment thereon extending into the hollow drum and having a series of openings on the outer surface thereof, the other side wall of the drum being integral therewith and having an abutment thereon, a coiled spring positioned between and fixed to said abutments so that movement of said knob relative to said



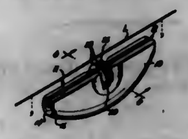
drum places tension on said spring, retractable pin means on one of said arms for selectively engaging one of said openings in the outer surface of the knob, a two piece lever extending through the other of said arms and into the interior of said drum, one piece of said lever slidably extending through said other arm and being adapted to have a portion thereof extend slightly into the drum to prevent rotation thereof when tension is applied to said spring, the second piece of said lever having a rounded portion which is located below and is engageable with said extension rod, the extension rod having means on one end thereof to attach a fishing line and hook thereto, whereby when a fish pulls on the line the extension rod is slightly rotated and engages and cams the second piece of said lever outwardly from the drum and the second piece of the lever is thereby used to force the said one piece of said lever out of said drum so that the drum is then permitted to rotate due to the tension on the spring and carry the extension rod upwardly and set the fish hook in the fish.

3,091,049
FISH LURE
Ben G. Reimers, 2826 11th St., Boulder, Colo.
Filed Sept. 29, 1958, Ser. No. 764,060
5 Claims. (Cl. 43—42.31)



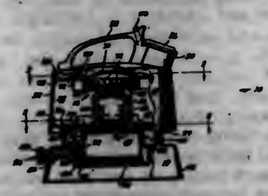
1. In a fish lure including a metallic body adapted to be connected with a fish line and a hook, said body having a leading portion and an elongated trailing portion which is convex on one side and concave on the other side, the improvement comprising a hollow, lightweight, hemispherical dome of smaller size than said body composed of plastic material and having an integral stem projecting centrally from the inner surface thereof, said body having a stem receiving opening in the trailing portion thereof and said stem being proportioned for engagement in tight fitting relation with said opening, the peripheral edge of said dome conforming to the contour of the corresponding trailing portion of said body so that said edge will substantially engage the surface of said body when said stem is inserted into said opening; and at least one particle loosely contained between said dome and said body and adapted to produce noise and vibration as said lure is moved through the water.

3,091,050
LINE RETAINING MEANS FOR FISHING LINE ACCESSORIES
Phares H. Metzler, 12999 Standering Lane, Seattle, Wash.
Filed Aug. 7, 1961, Ser. No. 129,655
10 Claims. (Cl. 43—44.88)



1. A fishing slip sinker comprising an elongated body having a longitudinally extending line-receiving groove in one side thereof opening at both ends, a rotatable line retainer positioned in said groove and rotatable about an axis extending lengthwise of said groove, said retainer having a longitudinally extending line-receiving groove in one side thereof open at both ends and having its open side registrable and deregistrable with the body groove by rotation of said retainer between a line-receiving and releasing position and a line-retaining position, respectively, gripping means on said retainer operable to manually revolve the same between such positions comprising a round operating knob having an opening centrally therethrough receiving the retainer therein and having a radial slot extending from its periphery to the central opening thereof, said knob being rigidly joined to said retainer at a position intermediate the ends of the latter with its radial slot in registry with the groove in the retainer, and there being a transverse slot in said body intersecting the line-receiving groove thereof to accommodate said knob, said knob extending outwardly beyond the sides of said body.

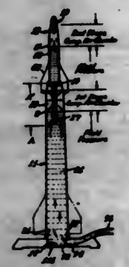
3,091,051
TOY
Marvin I. Glass and Gunars Licitis, Chicago, Ill.; said Licitis assignor to said Glass
Filed July 21, 1960, Ser. No. 44,334
8 Claims. (Cl. 46—14)



7. A toy whistling kettle comprising, in combination, a vessel member simulating a kettle, a base member simulating a heating unit and adapted to support said vessel member, means on each of said members engageable with one another when said vessel is supported on said base, sound-producing means within one of said members for producing a sound simulating that of water boiling in a whistling kettle, said sound-producing means being connected to said engaging means of said one member, energy storage means within the other of said members and

connected to said engaging means of said other member, interengagement of said engaging means being effective to connect said sound-producing means and said energy-storage means so as to cause a transfer of energy therebetween and actuate said sound-producing means.

3,091,052
MULTIPLE-STAGE PROJECTILE
John W. Ryan, 11027 Cashmere St., Bel Air, Calif.
Filed Apr. 10, 1959, Ser. No. 805,635
12 Claims. (Cl. 46—74)



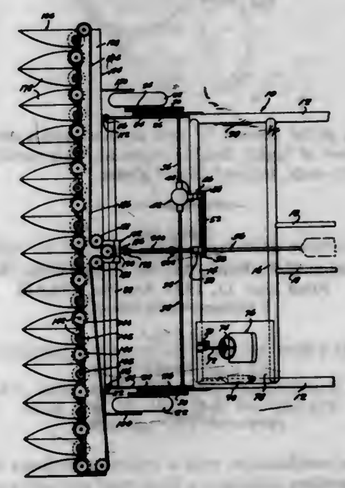
1. A multiple-stage projectile comprising: a first stage including a tubular body having a forward end having an opening therethrough and an open trailing end; a tubular member extending from said opening axially inwardly of said body to define an annular chamber within said tubular body and adjacent said forward end; said annular chamber being closed except for said tubular member, a second stage including a hollow body having a jet nozzle at one end thereof, said nozzle engaging said first stage in said opening whereby said jet opening registers with said first stage forward end opening; annular resilient sealing means around said opening and nozzle and engaging both at their juncture, releasable holding means releasably responsive to acceleration operatively associated with said first and second stage bodies for holding said bodies in engagement during pressurization of the projectile, holding said sealing means in compression to prevent loss of pressure, hollow launcher means having an open end dimensioned to freely detachably fit said open trailing end of said first stage for closure thereof, said launcher means having an inlet passage communicating with said launcher open end and being adapted to receive fluid under pressure; and manually operable releasable holding means operatively associated with said launcher means and said first stage for releasably holding said launcher and said first stage during pressurization of said projectile.

3,091,053
SELF-RUPTURING CONTAINER
Martin C. Growald, New York, N.Y., assignor of fifteen percent to Albert C. Nolte, Jr., New York, N.Y.
Filed Sept. 16, 1960, Ser. No. 56,382
8 Claims. (Cl. 46—116)



1. A simulated egg capable of hatching therefrom a toy animal, comprising a container member adapted to rupture upon application of a predetermined pressure, a collapsed envelope stored within said container member, said envelope forming the skin portion of a toy animal, and foamable material in an unexpanded state within said envelope, the quantity of said foamable material being sufficient to cause said envelope to expand into a toy animal when said material is expanded to provide a bulk sufficient to supply said predetermined pressure and rupture said container.

3,091,054
GRAIN RIPENING MACHINE
Arthur Gee, Rte. 3, Kalispell, Mont.
Filed Sept. 8, 1961, Ser. No. 136,929
6 Claims. (Cl. 47—1)



1. A grain ripening machine comprising a wheeled frame, a working assembly mounted on the forward end of the frame, said assembly comprising a pair of vertical axis rollers having compressible rings thereon in lateral contact with each other, and divider means in front of the rollers and having a vertical guide slot longitudinally aligned with the point of contact of the roller rings, and means carried by the frame and operatively connected to the rollers for rotating the rollers in opposite rearward directions relative to each other.

3,091,055
COLLAPSIBLE RAIN GUTTER BRACKET
Edward A. Hegedusich, 5921 Youngstown-Poland Road, Youngstown 14, Ohio
Filed Dec. 5, 1961, Ser. No. 157,165
9 Claims. (Cl. 50—9)

1. A hanger bracket for rain gutters for use in a system of such brackets, comprising:

(*a*) a quadrilateral linkage, with a first link having a first pivot at one end;

(*b*) a second link having an elongate slot near one end, received on said first pivot, and said second link being adapted for attachment to a building at its ends;

(*c*) a third link pivoted at its one end to the other end of said second link;

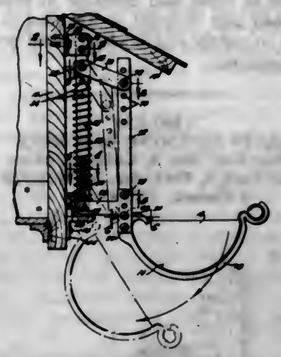
(*d*) a spring surrounding said second link, between said first and third links;

(*e*) a fourth link pivotally connecting said third link and the other end of said first link; and

(*f*) said other end of said first link being adapted for attachment to one end of a gutter-supporting saddle.

2. In combination with a system of brackets, each bracket being the type defined in claim 1:

(*a*) saddles secured to said brackets; and



(*b*) a gutter carried by said saddles, and a downspout elbow of highly flexible material, with metallic rings at its ends, secured to said gutter.

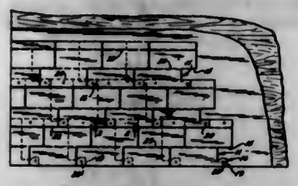
3,091,056
SHELTER
Gordon G. La Porte, Box 86, Tupper Lake, N.Y.
Filed Mar. 11, 1959, Ser. No. 798,647
5 Claims. (Cl. 50—48)



1. The combination with a structure enclosed by vertically extending sides and a fixed roof extending over the area between said sides, of a movable roof member comprising a substantially horizontally extending panel movable to different positions in each of which one portion overlies said fixed roof and a second portion projects beyond said structure over the adjacent area and beyond one of said vertically extending sides, and supporting means for said panel including pivotal mounting means for mounting said panel on said roof to pivot about a fixed vertical axis with said one portion overlying said roof and said second portion projecting beyond said structure, and vertically extending members having their upper ends fixed to said projecting second portion and having ground engaging bearing elements to sustain said projecting portion beyond said structure, said supporting means providing for movement of said panel about said vertical axis to position said projecting portion in any direction within the limits of movement of said panel and to provide shelter for said structure and adjacent area in that direction, and also to shield said roof by said overlying portion.

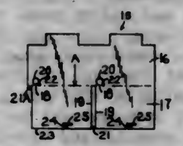
3,091,057
SHINGLED ROOF CONSTRUCTION
Floyd Leslie Worsham, Sr., 27 W. 9th St., Anniston, Ala.
Filed Feb. 1, 1960, Ser. No. 5,692
1 Claim. (Cl. 50—222)

A shingled roof construction comprising a series of rectangular overlapping shingles nailed to sheathing, each shingle having substantially parallel upper and lower edges and substantially parallel ends; a portion of the shingle at one end of the bottom edge being cut away forming a substantially right angular notch open at the bottom and said one end, the top and other end of said notch being parallel to the edges and ends of the shingle, the other end of said shingle being provided with a cut-out between the bottom and top edges thereof, the said boundary of said cut-out being substantially parallel to the ends of the shingle, the portion of the shingle forming the lower boundary of said cut-out being a nailing tab and the height of such tab at its inner end being substantially the same as the height of said right-angular notch with the upper edge of said tab gradually tapering toward said inner end, the free end of said tab terminating short of said other end of the shingle and being of a height greater



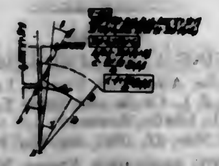
than the inner end of said tab, the upper edge of the free end of the tab of said shingle being aligned with the upper edge of a course of shingles immediately therebelow and nailed through the tab and the shingle immediately therebelow to the sheathing, the lower edge of the shingle overlying the upper edge of the lower course of shingles and the next adjacent shingle in the same course being received within said cut-out portion and said one end of said next adjacent shingle underlying the other end of said first mentioned shingle and overlying the tab thereof so that no nails are exposed.

3,091,058
SHINGLE MEANS
Thomas R. Patterson, 990 E. Rainbow Drive, Memphis, Tenn.
Filed Sept. 30, 1959, Ser. No. 843,416
1 Claim. (Cl. 50—225)



An interlocking strip shingle comprising a body portion, tabs projecting from a side of said body portion, said shingle being cut out between said tabs to separate said tabs, the opposite free ends of the shingle being formed to provide a said cut out separating the adjacent tabs of a plurality of said shingles when laid in end to end relation, the tabs being of greater width than the cut outs, a flap having an extension interlocking top portion formed adjoining to an uppermost margin of each said cut out separating said tabs, each of said flaps formed integral of a tab side and being cut from material of the shingle body portion, and a horizontally disposed slot formed in the material of each tab portion, each of said slots spaced from the lower margins of said tabs and spaced one from the other to correspond to the spaced relation between the flaps, each tab being slit intermediate of and adjoining to the lower length edge of the slot and thence downwardly through the lower edge of the tabs, and said slots providing an opening having a width and length adapted for inserting of said interlocking top portion of the flaps of those shingles of each underlying course in the slot openings of the said tabs of the next overlying course of shingles.

3,091,059
MEANS FOR GENERATING INVOLUTE GEARS
Peter H. Cleff, Newcastle-upon-Tyne, England, assignor to The Parsons and Marine Engineering Turbine Research and Development Association, Wallsend, England
Filed Sept. 20, 1960, Ser. No. 57,244
Claims priority, application Great Britain Oct. 9, 1959
7 Claims. (Cl. 51—32)



1. A machine for generating involute gear teeth on a work-piece, comprising a work-table adapted to carry said work-piece and mounted for continuous rotation about an axis, means for rotating said work-table continuously about said axis, a grinding wheel having an operative face defining a generatrix, a rotatable spindle carrying said grinding wheel, a spindle-holding member angularly movable about a main pivot axis normal to said generatrix and parallel to said work-table axis, a main slide slidable in a rectilinear path, rectilinear guides guiding said main slide with said rectilinear path coinciding with a radial line through said work-table axis, said spindle-holding member being journalled in said main slide, a retractor mechanism actuating said main slide, and means for correlating the angular movement of said work-table and said spindle-holding member plus the rectilinear movement of said main slide during the generation of one flank of a gear tooth, according to a relationship

$$\alpha_{OMM}=[(1+a_0/R_0)]\sin\beta_{OMM}-\beta_{OMM}$$

wherein R_0 is the base circle radius of said gear teeth,

a_0 is the distance of a datum position of said main pivot axis from said base circle,

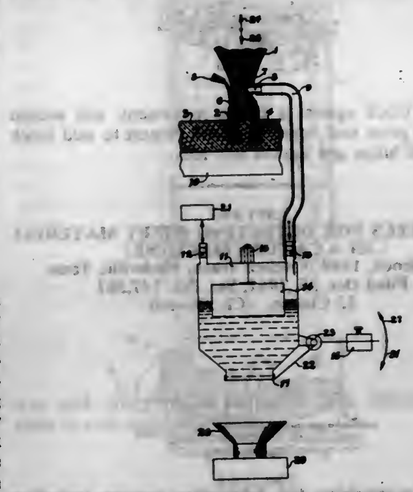
$-\alpha_{OMM}$ is the angular movement of said work-table in generating one flank of one gear tooth, and

$+\beta_{OMM}$ is the corresponding angular movement of said spindle-holding member,

and during indexing, for withdrawing said main pivot axis to a distance of R_0+a_0 plus the radial height of a gear tooth, from said work-table axis, for rotating said spindle-holding member through an angle $-\beta_{OMM}$, and returning said main pivot axis to said datum position, whilst said work-table rotates to bring another tooth flank into generating relationship with said operative face of the grinding wheel.

3,091,060
ULTRASONIC MACHINING
August Giegerich and Roland Sievers, Heppenheim an der Bergstrasse, Germany, assignors to Dr. Leitfeldt & Company, G.m.b.H., Heppenheim, Germany, a corporation of Germany
Filed June 25, 1958, Ser. No. 744,474
Claims priority, application Germany July 12, 1957
18 Claims. (Cl. 51—59)

5. In an apparatus for machining material, in combination, a support member for supporting the material to be machined; a vibratory machining member having a machining surface portion located opposite said support member and defining with the same a space for the material; means for introducing a machining slurry in liquid condition at atmospheric pressure into said space and between said machining surface portion of said machining member and the material being machined; and suction means communicating with said space for sucking the machining slurry out of said space for moving the machining slurry in a substantially continuous flow over said machining surface portion of said machining member at a less than atmospheric pressure, whereby the vibratory



movement of said vibratory machining member is not substantially impeded by said machining slurry within said space.

3,091,061
SANDING ATTACHMENT FOR PORTABLE ELECTRIC DRILLS
Paul L. Bahr, 1460 W. Liberty St., Hubbard, Ohio
Filed Aug. 30, 1962, Ser. No. 220,476
5 Claims. (Cl. 51—170)

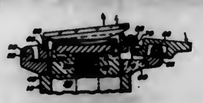


1. A sanding attachment comprising a T-shaped hollow body member, a bent shaft partially disposed in said T-shaped hollow body member and arranged to rotate therein, means secured to said bent shaft arranged to retain said bent shaft in said T-shaped body member, oppositely disposed transverse extensions on said T-shaped body member, an elongated flexible member having apertured ends and fasteners loosely securing said apertured ends of said elongated flexible member to the outer ends of said transverse extensions, a strip of flexible abrasive material and means for detachably securing said strip of flexible abrasive material to said flexible member between the ends thereof.

3,091,062
LENS DE-BLOCKING DEVICE
Jack M. Seddarth, Muskogee, Okla., assignor to Coburn Manufacturing Company, Inc., Muskogee, Okla., a corporation of Oklahoma
Filed Sept. 17, 1962, Ser. No. 224,033
7 Claims. (Cl. 51—277)

7. An apparatus for removing a sealed chucking block from the convex surface of a lens blank comprising upper and lower coaxial annular rings circumscribing said block, said upper ring in annular engagement with said convex surface of said blank, means rotatably mounting rings

with respect to said block, a hinge pivotally connecting said upper ring to said lower ring, a seat rigidly securing said block against a tilting movement, and second means to pivot said upper ring with respect to said block about said hinge and against said lens.

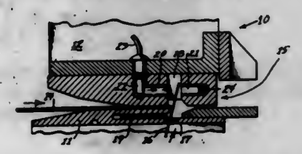


3,091,063

APPARATUS FOR DETECTING SHEET MATERIAL IN A CARTON MACHINE

Leo Brock, 1808 Natchez Trace, Nashville, Tenn.

Filed Oct. 25, 1961, Ser. No. 147,501
13 Claims. (Cl. 53—64)



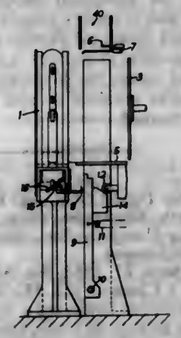
11. In a machine for fabricating cartons including means for feeding carton blanks therethrough and means for feeding opaque foil across the path of said blanks, electrical means for detecting the presence of foil in the path of said blanks, a signal means circuit, a first relay and energizing circuit, a second relay and energizing circuit, said relays being adapted to be energized by said detector means when foil is detected, a time delay switch controlled by said first relay to normally close said second relay circuit and open said signal means circuit when said first relay is energized, said time delay switch being adapted to open said second relay circuit and close said signal means circuit after said first relay has been deenergized by said detector means when the foil is undetected for a predetermined period.

3,091,064

APPARATUS FOR FILLING TRAYS WITH CIGARETTES OR ARTICLES OF SUBSTANTIALLY THE SAME SHAPE

James George Edward Hillman, Deptford, London, England, assignor to Molins Machine Company Limited, London, England, a British company

Filed Feb. 2, 1961, Ser. No. 86,660
Claims priority, application Great Britain Feb. 9, 1960
6 Claims. (Cl. 53—148)



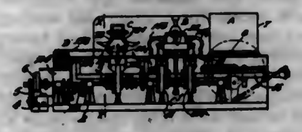
1. Cigarette collecting apparatus for use with slotted trays, comprising filler plates movable to enter and fill the slots in the end walls of a slotted tray, and having surfaces which, when the filler plates are in the slots, are substantially flush with interior surfaces of said end walls at one side of the slots and diverge toward the other sides of the slots to provide a converging guide for cigarettes pushed into the said tray so as to enter the wide end of the converging guide, and means to move the said plates into the slots before the cigarettes enter the tray.

3,091,065

PACKAGING AND PACKING MACHINE

Paul Louis Chelle, Alfortville, France; Louise G. Chelle, donee; Pierre J. L. Chelle and Marie T. J. Chelle, heirs of said Paul L. Chelle, deceased

Filed Nov. 21, 1960, Ser. No. 70,729
Claims priority, application France Nov. 19, 1959
11 Claims. (Cl. 53—171)



1. A machine for packaging and packing objects disposed side by side by pairs and packaged in two contiguous prismatic cells of square cross-section formed in a folded cardboard, the adjacent faces of said cells being constituted by the folded-back terminal portions of the cardboard, comprising, a base having an upper horizontal surface, a drive shaft mounted on said base; in succession on said base four working stations, the first station being a packaging cardboard station including a magazine mounted on said base, open at the bottom, and within which flat pieces of cardboard corresponding to the size of the packages to be made are stacked, the second station being a creasing and preforming station including crease-marking means for marking two series of three parallel crease-lines on each cardboard defining on said cardboard a central surface, four intermediate surfaces and two terminal surfaces, means for raising the terminal surfaces of the cardboard comprised between the outer crease-lines of said series and the edges of the cardboard which are parallel to said crease-lines and means for folding the raised terminal surfaces over the remaining part of the cardboard to obtain a preformed cardboard, the third station being a station for final forming of the packages and for introducing the pairs of objects in the formed packages including means for placing side by side two objects on the preformed cardboard between the inner crease-lines of said series, means for folding up the intermediate surfaces of the cardboard along the inner crease-lines of said series and means for folding back the terminal surfaces of the cardboard along the intermediate crease-lines of said series over the two objects and for simultaneously inserting the folded back terminal surfaces of said cardboard side by side between said two objects, the fourth station being a final packing station comprising a vertically movable platform, means for descending said platform step-by-step from its uppermost position level with the upper surface of the base for stacking up pairs of packaged objects thereon, means disposed laterally with respect to said base and level with said platform at its lowermost position for distributing packing containers in registered relation to said fourth station, means for loading the complete stacks into the packing containers, and means for maintaining the distributed packing container in the required position during the loading operation, said magazine, all of said

means, and said platform being carried by said base; transmission means respectively controlling all the means of said working stations from said drive shaft in the required sequential order for each working station; and means controlled by said drive shaft for mechanically conveying the cardboards step-by-step and one by one on the upper surface of the base from said magazine to said successive working stations.

3,091,066

LUMBER WRAPPING APPARATUS WITH GLUE APPLYING MECHANISM ASSOCIATED THEREWITH

Ugo M. Laurenzi, 3304 Ramona Ave., Sacramento, Calif.

Filed Jan. 17, 1961, Ser. No. 83,204
27 Claims. (Cl. 53—191)



1. A lumber wrapping apparatus for packaging select pieces of lumber comprising a dispensing section for cutting and dispensing sections of wrapping material including a cutting table having means adapted to rotatably mount a roll of wrapping material, feed means adapted to engage and feed wrapping material from said mounting means and cutting means adapted to cut a section from the wrapping material fed from said roll and a wrapping section including a wrapping table for receiving sections of wrapping material from said support table having means adapted to support a section of wrapping material in a substantially horizontally disposed position and means for folding said section of wrapping material about a stack of lumber placed on said section, said cutting means including means adapted to form a transverse cut through said wrapping material being dispensed from said roll and a series of blind transversely spaced and longitudinally extending cuts through said wrapping material on opposite sides of and communicating with said transverse cut in order to form a pair of top end flaps and opposite side flaps as well as a single bottom end flap on both ends of sections of wrapping material being dispensed from said roll, said cutting means comprising a cutting member having a substantially planar surface over which wrapping material from said roll is adapted to pass, a head movable toward and away from said planar surface and having a face generally paralleling said surface, a plurality of cutting blades projecting from said surface and toward said face and including a single blade and short laterally spaced blades extending at right angles to and from opposite sides of said single blade, said head being movable to a position with the outer edges of said blades contacting said surface whereby to cut wrapping material positioned between said head and backing member.

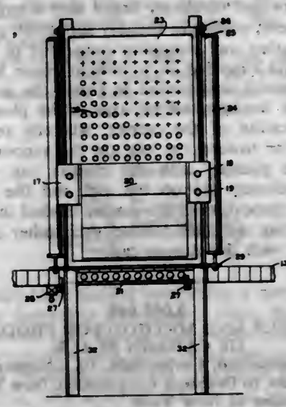
3,091,067

AUTOMATIC TABLET FILLER

Paul Ulicky and Benjamin A. Kloczak, Kenmore, N.Y., assignors to Strong-Cobb-Arner Co. Inc., Buffalo, N.Y., a corporation of New York

Filed Dec. 3, 1959, Ser. No. 857,203
4 Claims. (Cl. 53—244)

1. In a counting and packaging apparatus for tablets and the like including a frame and a conveyor system for conveying containers to and from said apparatus; a plate secured to said frame above said conveyer system, a perforated tray slidably resting on said plate, a hopper secured to said frame above said perforated tray, and power means comprising air cylinders for sliding said tray back and forth on said plate in a direction transverse to said conveyer system.

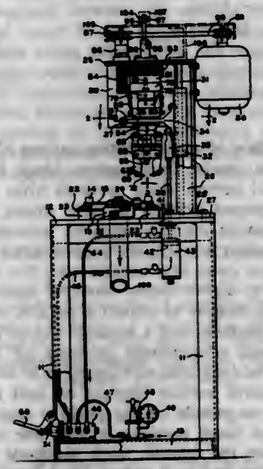


3,091,068

APPARATUS FOR SEALING CLOSURE CAPS TO FILLED VIALS

Walter A. Shields, Jamaica, N.Y. (38—09 24th St., Long Island City 1, N.Y.)

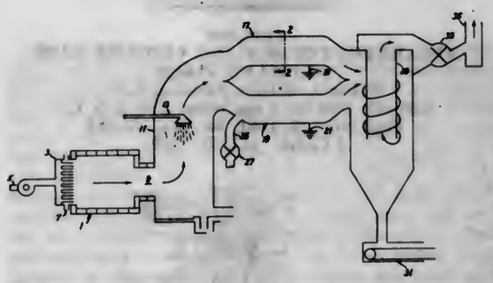
Filed Nov. 22, 1961, Ser. No. 154,252
1 Claim. (Cl. 53—349)



In apparatus for sealing closure caps to vials, means for supporting in upright position a vial having a closure cap placed thereon, a carrier reciprocally mounted to have movement in a vertical plane toward and away from said vial on the supporting means, a cylinder having ports at the opposite ends, a piston operatively mounted in the cylinder and connected to the carrier, valve mechanism connected in communication with a source of fluid pressure and connected to the ports of the cylinder and adapted to alternately control the flow of fluid pressure to said ports and cause reciprocation of the piston in the cylinder, a cam sleeve rotatably supported by the carrier and participating in the reciprocal movement of the carrier, sealing members pivotally mounted to move toward and away from each other and supported by the cam sleeve and having sliding movement independent of the

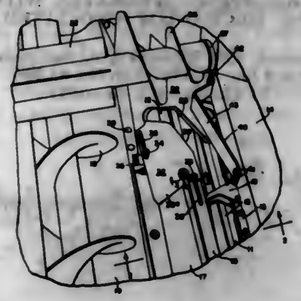
terminal movement of the cam sleeve toward the vial on the supporting means, cam followers carried by the sealing members and yieldingly urged into engagement with the cam sleeve, a plunger slidably supported and retained against rotation and rotatably connected to the sealing members and extended in a vertical plane between the sealing members, and means to rotate the sealing members around the longitudinal axis of the plunger during the reciprocation of the carrier, whereby reciprocation of the carrier toward the vial on the supporting means engages the plunger with the closure cap to forcibly retain the closure cap on the vial and the subsequent terminal reciprocation of the carrier toward the vial moving the sealing members toward each other into sealing engagement with the closure cap.

3,091,069
APPARATUS AND METHOD FOR PRODUCTION OF CARBON BLACK
Charles J. Brasefield, Carbondale, Ill., assignor, by mesne assignments, to Research Corporation, New York, N.Y., a corporation of New York
Filed Jan. 14, 1960, Ser. No. 2,495
6 Claims. (Cl. 55—5)



1. The method of agglomerating carbon black particles in the effluent smoke from carbon black furnaces and separating said carbon black particles from substantially all of the gaseous portion of said smoke, comprising dividing the smoke into two streams, passing one stream through a conduit wherein the carbon black particles in said one stream come into contact with first metallic surfaces having a higher work function than the carbon black particles thereby to impart a positive charge to the carbon black particles and a negative charge to the metallic surfaces and continuously drawing off the negative charges from said metallic surfaces so as to avoid accumulation of negative surface charges on said first metallic surfaces, the magnitude of the positive charge acquired by said carbon black particles in said one stream being dependent upon the relative work functions of said first metallic surfaces and said carbon black particles, passing the other stream through a conduit wherein the carbon black particles in said other stream come into contact with second metallic surfaces having a lower work function than the carbon black particles thereby to impart a negative charge to the carbon black particles and a positive charge to the metallic surfaces and continuously drawing off the positive charges from said metallic surfaces so as to avoid accumulation of positive surface charges on said second metallic surfaces, the magnitude of the negative charges acquired by said carbon black particles in said other stream being dependent upon the relative work functions of said second metallic surfaces and said carbon black particles, and thereafter mixing the two streams together to effect agglomeration of carbon black particles from the one stream with carbon black particles from the other stream with the size of the resulting agglomerates being dependent upon the magnitude of the charges carried by the respective particles from the two streams.

3,091,070
CORN HARVESTER
James D. Wilkins and Frank D. Jones, Moline, Ill., assignors to Deere & Company, Moline, Ill., a corporation of Delaware
Filed Jan. 27, 1960, Ser. No. 4,931
8 Claims. (Cl. 56—18)

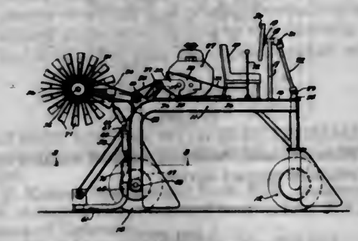


1. A crop harvester comprising: a main frame, panel structure on the frame defining a plant passage for successively receiving plants as the harvester advances and including a portion thereof inclined transversely downwardly from an upper and forward fore-and-aft extending edge adjacent to and defining one edge of the passage, a further portion thereof having an edge defining a rearward continuation of said fore-and-aft extending edge and extending diagonally rearwardly and downwardly therefrom, and a further portion having a forward fore-and-aft extending edge in opposed relation to the aforesaid fore-and-aft extending edge and defining the other edge of the passage and a rear diagonally rearwardly and downwardly extending edge oppositely disposed to the aforesaid rearward continuation of said fore-and-aft extending edge, said oppositely disposed diagonal edges thereby defining a rear diagonal extension of said stalk passage; mechanism supported by the frame effecting harvesting of a crop beneath the panel structure including at least one fore-and-aft extending harvesting roll positioned beneath the rear diagonal extension of the passage; a conveyor trough structure on the frame and at one side of the stalk passage disposed to receive material gravitating over the downward inclined transverse portion of the panel structure; and a transverse auger supported by the frame disposed above the diagonal extension of the passage, said auger being tapered from a relatively small end above the extension to a relatively large end above the conveyor trough.

3,091,071
TOBACCO CUTTING MACHINES
Robert C. Radcliffe, R.R. 2, Edgerton, Wis.
Filed Dec. 13, 1960, Ser. No. 75,607
1 Claim. (Cl. 56—23)

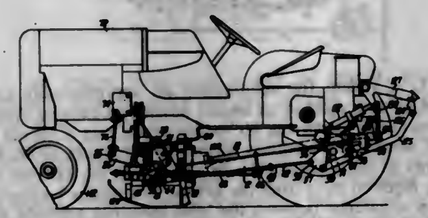
A device for cutting and windrowing at least two adjacent rows of grown tobacco plants at the same time, comprising a frame, a floor for said frame disposed at a height greater than the height of grown tobacco plants, a plurality of ground engaging wheels, means mounting said wheels on said frame in laterally spaced relation so as to straddle at least said two adjacent rows of plants, a source of power carried on top of said frame, means operatively connecting said source of power to at least one of said wheels for propelling said vehicle, a sickle bar having a plurality of cutting elements thereon, means

mounting said sickle bar behind the trailing edge of said frame transversely thereof, said sickle bar having a length sufficient to cut simultaneously the plants of at least said two adjacent rows, means operatively connecting said source of power to said sickle bar to actuate said cut-



ting elements, paddle means rotatably mounted above said sickle bar and impinging upon the tops of plants of said rows, said paddle means comprising paddles having plant engaging portions, said plant engaging portion being cooperatively inclined toward each other whereby to windrow cut plants impinged thereby into a single row.

3,091,072
TRACTOR MOWER
Paul H. Harrer, La Porte, Ind., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Filed July 8, 1960, Ser. No. 41,557
4 Claims. (Cl. 56—25)



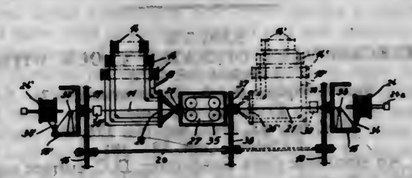
1. A mower mounting for a tractof having a wheeled front support and a pair of transversely spaced rear ground engaging wheels comprising: a rigid frame structure adapted to extend lengthwise in a forward direction from the space between said tractor rear wheels and terminate at its forward end to the rear of said tractor front support, pivot means at a rearward portion of said frame structure for connecting the latter to said tractor about a rearward transverse axis; adjustable connecting means at a forward portion of said frame structure for connecting the latter to said tractor in different positions of pivotal adjustment about said transverse axis; and a mower mechanism mounted at one side of said frame structure and extending laterally outward from a forward portion thereof, said mower mechanism including a mounting base fixedly connected with a forward portion of said frame structure and pivotally movable therewith as a unit about said rearward transverse axis; a cutter bar support connected with said mounting base for movement in unison therewith about said rearward transverse axis and for pivotal movement relative to said mounting base on a longitudinal hinge axis extending in right angle relation to said rearward transverse axis; a cutter bar secured to said cutter bar support in right angle relation to said longitudinal axis; and adjusting means connected to said frame structure and said cutter bar support for selectively positioning said cutter bar about said hinge axis.

3,091,073
ROTARY MOWER
Raymond K. Strasel, Windhrop Harbor, Ill., assignor to Jacobsen Manufacturing Co., Racine, Wis., a corporation of Wisconsin
Original application Sept. 9, 1957, Ser. No. 682,863, now Patent No. 2,955,402, dated Sept. 10, 1960. Divided and this application June 13, 1960, Ser. No. 35,469
9 Claims. (Cl. 56—25.4)



1. A rotary lawn mower comprising a mower housing including a depending and circular outer flange portion and a depending and circular inner baffle portion spaced radially inward from said outer flange portion and terminating at an elevation above the lower edge of said outer flange portion, said portions defining an annulus therebetween, said outer flange portion having an opening therein for the discharge of grass clippings from said annulus, a shaft rotatably mounted in said housing and extending and terminating within the confines of said inner baffle portion, a frusto-conical circular plate attached to said shaft at the smaller diameter end of said plate and with the larger diameter of said plate being of a diameter greater than that of said circular inner baffle portion to extend therebeyond and with the conical portion of said plate being disposed to extend beyond the plane of said inner baffle portion to overlap the latter, fan blades and cutter blades attached to the outer circumference of said plate and disposed between the upright planes of said portions, said cutter blades being pitched upwardly and said fan blades being disposed on the upper surface of said plate at the outer circumference thereof and extending upwardly therefrom and being pitched to face toward said outer flange portion with both said pitches arranged for blowing air radially outwardly and upwardly against the undersurface of said housing in said annulus to keep said clippings from clinging to said under surface.

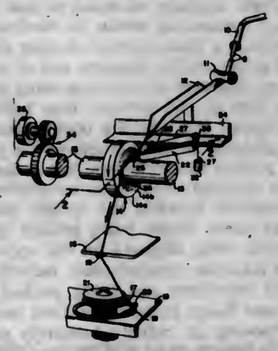
3,091,074
APPARATUS FOR PRODUCING COMMUNICATION CABLES
Georg Demmel, Berlin-Siemensstadt, Germany, assignor to Siemens-Schuckertwerke Aktiengesellschaft Berlin-Siemensstadt, Germany, a corporation of Germany
Filed Dec. 28, 1961, Ser. No. 162,888
Claims priority, application Germany Dec. 30, 1960
2 Claims. (Cl. 57—12)



1. Apparatus for producing electric communication cables by cabling individual cable elements about a core, comprising two terminal devices coaxially spaced from each other and each having a structure rotatable about the common axis, two drums journalled on said respective two structures for selective pay-out and pull-in operation, each drum being capable of accommodating either a supply of core or the cabled strand comprised of core and cable element layer, depending upon the rotary direction of said drums; a multiplicity of stationarily arranged

cable element supply means, twisting means for passing respective elements from said cable element supply means onto said core as the latter passes from one drum to said other drum, a third structure rotatable about said axis and a reversible cable pull device mounted thereon, cable element guiding means located on each side of said cable pull device for guiding cable elements adapted to surround said core from said cable element supply means into each end of said reversible cable pull device, and synchronous drive means connected with said three structures for simultaneously rotating them during the cabling operation about said axis, all three structures having the same sense of rotation, whereby the apparatus affords producing sequential layers of cable elements in sequential cabling passes with alternately reversed travel directions of the core.

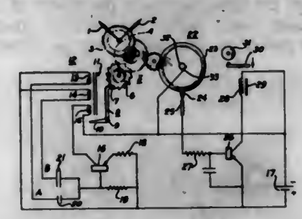
3,091,075
PAPER YARN APPARATUS
Kenneth Hamilton, Amsterdam, N.Y., assignor to Mohasco Industries, Inc., Amsterdam, N.Y., a corporation of New York
Filed Jan. 22, 1962, Ser. No. 167,674
8 Claims. (Cl. 57—32)



1. In a machine for making paper yarn, the combination of a rotary element, means for applying a coating of a solid compound to the surface of the element, means for advancing a strip of paper by twisting the strip into yarn and winding the yarn into a package, means for guiding the strip to cause it to travel with one face in contact with the coated surface of the element, and means for rotating the element at a rate such that its coated surface in contact with the strip travels at a surface speed different from that of the strip to transfer coating material to the strip by a rubbing action.

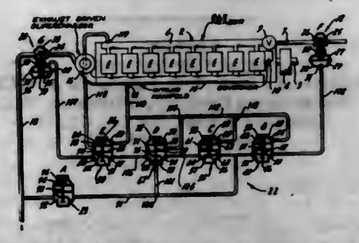
3,091,076
ELECTRICALLY OPERATED CLOCK WITH ALARM DEVICE
Robert Walter Reich, Rotackerstrasse 2, Freiburg, Germany
Filed July 31, 1961, Ser. No. 128,095
7 Claims. (Cl. 58—38)

1. An electronic clock comprising: D.C. current supply means; a transistor oscillator connected to said current supply means and having a coil as output circuit producing a magnetic field whenever oscillations are produced; a transmission gear driving the clock; means responsive to said magnetic field and driving said transmission means in response thereto; a rotatable contact device linked to said gear for common rotation; a stationary contact cooperating with said rotatable contact device; a transistor in common emitter configuration having its base connected to and controlled via said stationary contact; a magnetizable device connected to and controlled by the collector circuit of said transistor; and sound producing means actuated by said magnetizable



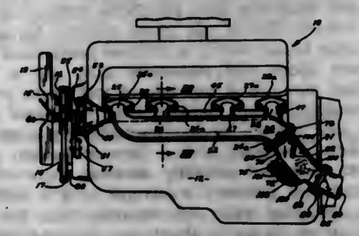
device whenever said stationary contact engages a contact of said rotatable contact device.

3,091,077
ENGINE CONTROL
Bruce G. Erickson and Adam J. Henriksen, South Milwaukee, Wis., assignors to Nordberg Manufacturing Company, Milwaukee, Wis., a corporation of Wisconsin
Filed Dec. 29, 1960, Ser. No. 79,410
29 Claims. (Cl. 60—13)



11. A system for maintaining an approximately constant air-fuel ratio in an engine having an exhaust driven supercharger supplying air to the engine and a source of fuel, comprising auxiliary means for supplying additional energy to the supercharger in addition to the exhaust energy received by it from the engine, and means responsive to an unbalance between the inlet manifold pressure and the rate of fuel being supplied to actuate the auxiliary means when the engine is subjected to a rapid load increase.

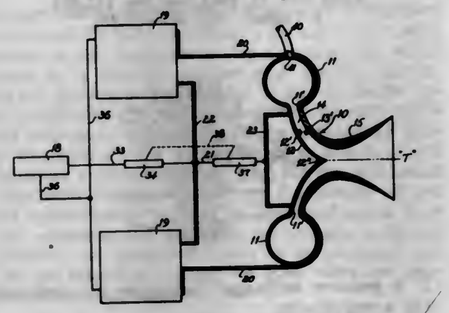
3,091,078
EXHAUST-GAS COMBUSTION DEVICE
Theodore A. Dworak, 703 Sherburne, St. Paul, Minn.
Filed May 5, 1960, Ser. No. 27,039
2 Claims. (Cl. 60—30)



1. An exhaust-gas burning device for a multi-cylinder internal combustion engine having in combination, an elongated tubular housing along one side of said engine having a combustion chamber therein, said combustion chamber having a discharge outlet at one end thereof, passages respectively connecting the cylinders in said engine and said housing, said passages having inlets opening into said cylinders and outlets discharging into said chamber,

an air passage connecting the atmosphere and each of said passages at points inwardly of said outlets, a second combustion chamber connected to said first chamber and having a straight passage therethrough and forming an extension of said first chamber and communicating with the atmosphere, a depending pouch in said second chamber, particles of refractory material in said pouch, a retaining screen overlying said pouch, a deflecting member in said second chamber extending in the direction of said pouch, and a cleanout plug for communication with said pouch.

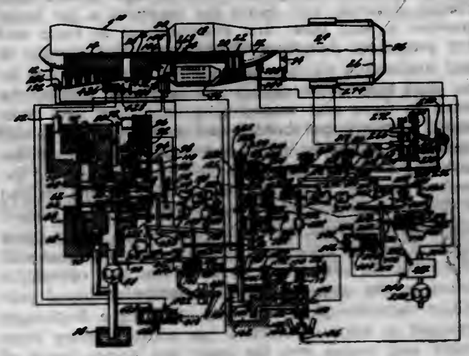
3,091,079
PROPULSION ENGINE WITH ELECTROMAGNETIC MEANS TO PRODUCE PROPELLANT ACCELERATION
Alfred E. Kunen, Massapequa Park, N.Y., assignor to Republic Aviation Corporation, Farmingdale, N.Y., a corporation of Delaware
Filed Mar. 17, 1959, Ser. No. 800,024
15 Claims. (Cl. 60—35.5)



7. An engine comprising a pair of spaced, arcuate electrodes concentrically disposed relative to the transverse center of the engine, the adjacent surfaces of said electrodes being disposed at an acute angle relative to the longitudinal centerline of the engine, an annular chamber for a propellant under pressure surrounding said electrodes, conduit means connecting the interior of the chamber to the space between the electrodes, an exhaust exit from the space between the electrodes concentric to the transverse center aforesaid, a pair of electrical circuits, one including a generator connected to one terminal of a capacitor and to one of the electrodes and the other including a connection between the other terminal of the capacitor and the other electrode, switching means in each of said circuits to make and break it, and a control interconnecting said switching means for sequential operation thereof in unison and opposition whereby the capacitor is charged by the generator and discharges across the electrodes to ionize the propellant in the space between the electrodes and accelerate it along said adjacent surface and out the exhaust exit to produce thrust on the engine.

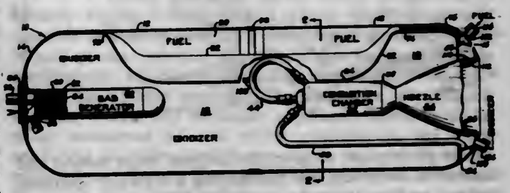
3,091,080
CONTROL SYSTEM FOR AFTERBURNING GAS TURBINE ENGINE
Hugh S. Crim, Glastonbury, and Ralph D. Ransom, Andover, Conn., assignors to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed Oct. 27, 1958, Ser. No. 770,253
15 Claims. (Cl. 60—35.6)

1. In a control system for a gas turbine engine having a variable area exhaust nozzle, speed sensor means positioned as a function of engine speed, first means actuated by said speed sensor means for controlling the area of said exhaust nozzle, means preventing speed actuated operation of said first means over a predetermined range of engine speeds above a predetermined engine speed, and second means actuated by said speed sensor means at a speed higher than said predetermined range of engine speeds for reducing the area of said exhaust nozzle as a function of an increase in engine speed at a speed higher than said predetermined range of engine speeds.



4. A variable area exhaust nozzle control system for a gas turbine engine, said system including speed sensor means positioned as a function of engine speed, means operatively connected with said speed sensor means for controlling the area of said nozzle and means responsive to compressor inlet temperature and conpressor inlet pressure for scheduling the area of said nozzle to change with changes in compressor inlet temperature and pressure.

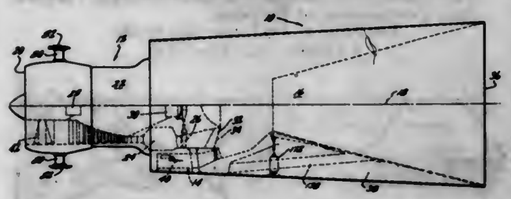
3,091,081
PREFILLED LIQUID ROCKET ENGINE
Ralph H. Alper, Fair Lawn, N.J., and Richard E. Biehl, Pearl River, N.Y., assignors to Curtiss-Wright Corporation, a corporation of Delaware
Filed Jan. 6, 1961, Ser. No. 81,081
8 Claims. (Cl. 60—35.6)



5. A rocket assembly comprising a vessel for storage of two liquid propellants, said vessel having a relatively rigid outer wall including opposed end wall portions and a cylindrical side wall portion interconnecting said end wall portions to provide said vessel with an outer shape which is substantially that of a right circular cylinder, said vessel also having a relatively flexible inner wall of generally tubular configuration and extending from one end wall portion to the other of said vessel to divide the interior of said vessel into an inner first compartment and an outer second compartment, said flexible inner wall having folds running longitudinally thereof to permit said wall to be expanded toward the outer wall of the vessel; first and second liquid propellants sealed within said inner first and said outer second compartments respectively; a thrust unit, comprising a combustion chamber and nozzle, supported within the inner first compartment of said cylindrical vessel such that both said chamber and nozzle are immersed in the liquid propellant of said inner first compartment, the nozzle portion of said

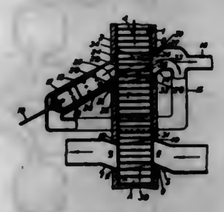
thrust unit having its discharge end disposed at and opening through one end of said cylindrical vessel, said thrust unit having a hollow wall structure to form a first passage for supplying said first propellant therethrough to said combustion chamber, the upstream end of said first passage being disposed adjacent to the downstream end of said nozzle; means providing a second passage for supplying said second propellant therethrough to said combustion chamber; and means for supplying a gas under pressure to said inner first compartment to force said first propellant therefrom through said first passage to said combustion chamber and to expand said flexible inner wall toward the cylindrical outer side wall of the vessel to force said second propellant from said outer second compartment through said second passage to said combustion chamber, said gas pressure supplying means including a tubular casing having a closed inner end extending into said vessel and having its other end secured to the end wall portion of the cylindrical vessel remote from the thrust unit, said other end of the casing being disposed over an opening in said last-mentioned end wall portion of the cylindrical vessel so that said opening is closed by the casing against the escape of liquid propellant therethrough, said casing including a diaphragm arranged to burst to admit a gas under pressure from within said casing into the inner first compartment of the vessel to pressurize the liquid propellant therein, said first and second compartments occupying substantially all the space within the cylindrical vessel other than that occupied by said casing and thrust unit.

3,091,082
COMBINATION TURBOJET AND RAMJET ENGINE
Philip P. Newcomb, Manchester, and Augustus Hasbrouck, Middletown, Conn., assignors to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed June 22, 1961, Ser. No. 118,830
3 Claims. (Cl. 60—35.6)



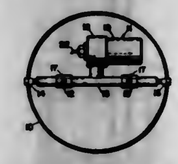
1. A powerplant of generally circular cross section and concentric about an axis and having a forward upstream end and an after downstream end and comprising a turbojet engine having a compressor, burner and turbine in forward-end to after-end axial alignment, an afterburner attached to the downstream end of said turbojet engine, a variable area convergent-divergent exhaust nozzle attached to and forming an outlet for said afterburner, air intake means surrounding said engine and including a forwardly directed inlet opening joined to conduit means communicating with said afterburner, means to block flow thru said inlet means such that said powerplant can be operated as a turbojet engine at low flight speeds, means to block flow thru said turbojet engine such that said powerplant can be operated as a ramjet engine at high flight speeds, means to supply fuel to said afterburner during both turbojet engine and ramjet operations, heat exchanger means forming part of said fuel supply means including ducting supplying cooling air to said exhaust nozzle, said convergent-divergent exhaust nozzle comprising a convergent stationary duct at its forward-end and a divergent stationary duct in axially spaced relation to said convergent duct at its after-end, said divergent duct having spaced walls forming an annular cavity at its forward-end and including apertures in the inner of said walls at its after-end, a first plurality of circumferentially positioned flaps pivotally attached to the after-end of said convergent duct, a second plurality of circumferentially positioned flaps pivotally attached at their forward-ends to the after-end of the flaps of said first plurality and slideably received in said divergent duct annular cavity at their after-ends, actuating means connected to said flaps of said first and second flap pluralities to cause said flaps to pivot in unison to form a variable area throat for said exhaust nozzle, and said cooling air ducting positioned and contoured to guide cooling air over at least one surface of each of said flaps and between the walls of said divergent duct for passage therefrom through said apertures into the interior of said divergent duct.

3,091,083
PRESSURE EXCHANGERS
Dudley Brian Spalding, 2 Vineyard Hill Road, London, England
Filed Nov. 16, 1961, Ser. No. 152,891
2 Claims. (Cl. 60—39.45)



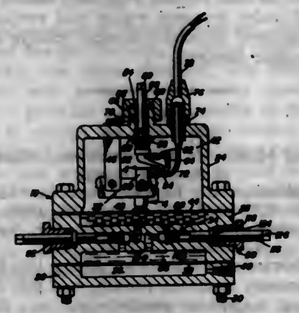
1. A pressure exchanger comprising in combination:
(*a*) a ring of cells,
(*b*) an end-plate structure adjacent each end of the cells,
(*c*) the end-plate structures having located therein first and second entry and extraction ports,
(*d*) means to effect relative rotation between the cell ring and the end-plate structures,
(*e*) the second entry and extraction ports operating at a higher pressure than the first entry and extraction ports,
(*f*) ducting to lead fluid to the cells via said entry ports and from the cells via said extraction ports.
(*g*) the end-plate structure adjacent one end of the cell ring having an additional entry port,
(*h*) the additional entry port being located adjacent the second entry port and separated by a land from the opening edge of this port,
(*i*) interconnecting ducting between the additional entry and the second extraction ports,
(*j*) the second extraction port being so located with respect to the additional entry port that a compression wave initiated at the opening edge of this port passes through a cell and reaches the opposite end of this cell when this end of the cell communicates with the leading portion of the second extraction port, and,
(*k*) the additional entry port, part of the extraction port and said interconnecting ducting being operable as a subsidiary higher pressure scavenging stage to extract fluid from the cells before the composition of the fluid has been affected by the fluid passing through the second entry port and to introduce said extracted fluid into the additional entry port, said fluid having properties which are more nearly equal to the properties of the initial contents of the cells before they reach the additional and second entry ports having regard to the direction of relative rotation, than to the fluid subsequently entering the cells of the pressure exchanger via the second entry port, but at a pressure substantially equal to the pressure of the fluid in the second entry port.

3,091,084
SOLID PROPELLANT CONTROL SYSTEM
Hans F. Eckhardt, Tustin, Calif., assignor, by mesne assignments, to PneumoDynamics Corporation, Cleveland, Ohio, a corporation of Delaware
Filed May 4, 1959, Ser. No. 810,602
1 Claim. (Cl. 60—39.47)



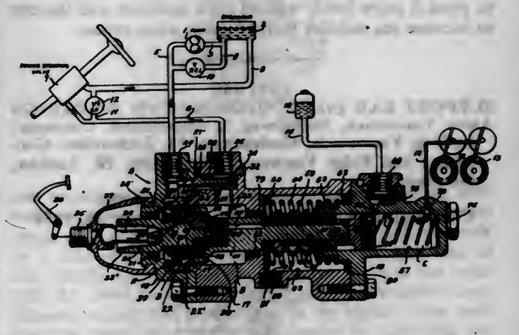
An apparatus to provide intermittent thrust stabilization in rockets and the like comprising: a gas generator, a solid propellant in said generator having a burning rate which increases as a function of increased pressure therein, means for igniting said propellant, a pair of similar opposed stabilization nozzles, means connecting each nozzle to said generator, each nozzle having individually associated therewith a valve responsive to gas flow from said gas generator and normally held open thereby, and means for selectively closing said valves, the closure of one of said valves thereby isolating its associated nozzle from said gas generator and increasing the pressure in the latter, whereby the propellant burns at an increased rate and the gas discharge through the other valve and associated nozzle is increased.

3,091,085
HYDRAULICALLY ACTUATED CONTROLLER
James W. Honedel, 915 Central Drive, Coulee Dam, Wash.
Filed Nov. 29, 1960, Ser. No. 72,395
6 Claims. (Cl. 60—54.5)



1. A controller comprising, sensing means exposed to an external variable force, control means actuatable by displacement thereof, and internal transmitting means operatively connected to the sensing means and control means for displacement by a preset amount in one direction in instantaneous response to increase of the external force on the sensing means beyond one value and displacement by said preset amount in the opposite direction instantaneously upon reduction of the external force below a second value, said transmitting means comprising a pair of separately sealed fluid filled chambers interconnected by a pair of flow passages, said chambers being respectively in contact with said external force sensing means and said control means, and flow blocking valve means operatively disposed in said pair of flow passages for directionally blocking free and continuous flow to cause simultaneous displacement of both chambers by said preset amounts in instantaneous response only to a predetermined pressure differential applied to the valve means by fluid in said chambers, said valve means comprising a pair of adjustable oppositely directed spring-biased, one-way valves interconnecting said chambers.

3,091,086
POWER HYDRAULIC BRAKE DEVICE AND SYSTEM
Robert E. Schwartz, Clayton, Mo., Roy P. Stahl, South Bend, Ind., and Edward J. Falk, St. Louis, Mo., assignors to Wagner Electric Corporation, St. Louis, Mo., a corporation of Delaware
Application Mar. 15, 1960, Ser. No. 15,221, now Patent No. 3,044,265, dated July 17, 1962, which is a continuation of application Ser. No. 497,272, Mar. 28, 1955. Divided and this application Nov. 3, 1961, Ser. No. 150,080
10 Claims. (Cl. 60—54.6)

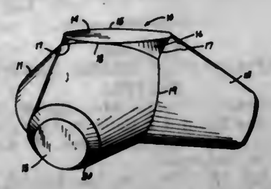


1. In a power hydraulic servo motor comprising a housing having a bore with a piston assembly therein movable in a work producing direction, a variable orifice in said piston assembly through which pressure fluid is continuously circulated, throttling means movable relative to said piston assembly to reduce the size of said variable orifice and establish a pressure differential to effect movement of said piston assembly in the work producing direction, and flange means on said throttling means responsive to the established pressure differential to oppose subsequent movement of said throttling means to reduce the size of said variable orifice.

3,091,087
BLOCKS FOR PROTECTING HYDRAULIC CONSTRUCTIONS
Pierre François Danel, La Tronche, France, assignor to Societe Grenobloise d'Etudes et d'Applications Hydrauliques, Grenoble, France, a corporation of France
Filed Nov. 10, 1959, Ser. No. 852,015
Claims priority, application France Nov. 14, 1958
5 Claims. (Cl. 61—4)

1. An artificial block for the construction of hydraulic structures such as dikes, jetties and the like, said block having a generally squat, massive form consisting essentially of a massive central body portion having a top surface forming the top of the block, and several massive protuberances located wholly below said top surface and all radiating generally horizontally from said body portion, said protuberances each being in the form of a truncated body of generally tapered configuration and with

cross-sections of substantial extent throughout its length and being joined to said body portion at its enlarged base, the enlarged bases of said protuberances joining said body portion along perimeters that are adjacent each other for the respective adjacent protuberances and having a substantially vertical dimension approximating the length of the vertical axis of said body portion so that the sides of said body portion are substantially enclosed by said



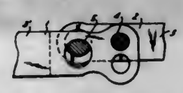
protuberances, and said top surface being disposed transversely to the vertical central axis of said body portion and of an area approximating the cross-sectional area of said body portion so that when the block is positioned upright on a hydraulic structure it is enabled to utilize a substantial portion of the pressures due to wave action to press it more firmly against such structure and thereby to increase the stability thereof under wave action.

3,091,088

SUPPORT BAR FOR UNDERGROUND WORKINGS

Aloys Vanwersch, Helderweg 7, Angermund, Germany; Ludwig Vanwersch, Roulleauxstr. 16, Eschweiler, Germany; and Peter Vanwersch, Rolandstr. 20, Aachen, Germany

Filed July 23, 1959, Ser. No. 828,985
Claims priority, application Germany July 25, 1958
10 Claims. (Cl. 61—45)



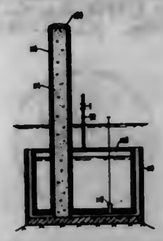
1. For use in a mine roof support, in combination, an elongated bar having a longitudinal plane of symmetry and being formed at one end portion thereof with a pair of apertures therethrough at least one of which being a circular aperture, said apertures having their axes located spaced from each other a given distance in said plane of symmetry, said one of said apertures being adapted to receive a swivel pin and the other of said apertures being adapted to receive a wedge, said bar being formed at the other end portion thereof with an aperture having an axis located in said plane of symmetry and a pair of circular swivel pin apertures of substantially the same diameter as said circular apertures at said one end portion and the axes of said additional circular swivel pin apertures being respectively located at opposite sides of said plane of symmetry and spaced from said one aperture at said other end portion said given distance, whereby when one bar is supported against a mine roof, a new bar may be connected thereto by placing a swivel pin in the circular aperture at the one end portion of the one bar and through one of said circular swivel pin apertures at the other end portion of the new bar and by then driving a wedge through the other aperture at the one end portion of said one bar and through said one aperture at the other end portion of said new bar and whereby the new bar, when bent under the load acting thereon, may be turned through 180° about its axis and reconnected to said one bar by placing the swivel pin through the other of said circular swivel pin apertures of the new bar.

3,091,089

METHOD AND MEANS FOR ERECTING LIGHTHOUSES, BREAKWATERS, BRIDGE-PIERS AND SIMILAR STRUCTURES

Robert Vilhelm Gellerstad, Skyttevagen 45, Lidingo 1, Sweden

Filed Aug. 15, 1958, Ser. No. 755,344
Claims priority, application Sweden Sept. 17, 1957
3 Claims. (Cl. 61—46)



2. Apparatus for building lighthouses and the like of substantially vertical cylindrical form comprising an assembly of a plurality of vertical telescopically arranged cylindrical elements, at least one of said elements being a buoyant caisson having sufficient buoyancy to float said assembly, means for reducing the buoyancy of said caisson to lower said assembly in a contracted state upon a water bed, means for vertically expanding said telescopic assembly with the lowermost extremity of the outermost cylindrical element in engagement with said water bed, conduit means for introducing a heavy filling aggregate within the lowermost cylindrical element when said assembly is in its expanded state, said outermost telescopic element being closed at its lower end and the innermost telescopic element being closed at its upper end, at least one vertical pipe extending upwardly from the closed upper end of said innermost element and in communication with the interior thereof, said pipe being closed at its upper end, a vertical column secured at its lower end to the closed end of said outermost element and extending upwardly in said vertical pipe, and means for introducing fluid under pressure within said vertical pipe to raise the innermost telescopic element relative to the outermost telescopic element.

3,091,090

PILE SHAFT

Ludwig Müller, 45 Wilhelmstrasse, Marburg (Lahn), Germany

Original application July 12, 1955, Ser. No. 521,571, now Patent No. 2,924,948, dated Feb. 16, 1960. Divided and this application Dec. 21, 1959, Ser. No. 860,872
12 Claims. (Cl. 61—53)

1. A prefabricated pile shaft for driving into the ground to be permanently anchored therein, said pile shaft comprising several lengthwise parallel rigid bars disposed to define a generally tubular open metal framework, joining means fixedly secured to said bars for securing the same in said generally tubular relationship, a hollow foot having a peripheral outline wider than the maximum peripheral outline of said framework fixedly secured to the leading end of the framework in alignment therewith, an abutment member secured within said framework at the end thereof secured to the foot, and an elongated pile driving member for driving the pile shaft into the ground, said driving member extending into said framework from the trailing end thereof slidable in reference to the framework and abutting with its leading end upon said abutment member whereby a longitudinally directed driving force applied to the trailing end of the driving member

is transmitted by said member directly to the leading end of the framework and to the foot secured thereto to exert



a downwardly directed pulling force at said leading end of the framework.

3,091,091

COOLING PACKAGE FOR BEVERAGES AND FOOD

Louis Ferrante, 124 Amherst Road, Valley Stream, N.Y.

Filed Apr. 17, 1961, Ser. No. 103,282
2 Claims. (Cl. 62—4)



1. A refrigeration or heating package, comprising an outer closed flexible envelope, a closed inner flexible envelope within the outer envelope, said inner envelope being filled with a liquid, said outer envelope being filled with a granular substance capable of reacting with the liquid to change the temperature thereof, said inner envelope having walls joined in a seam, a pair of buttons secured to said walls at said seam, said walls having thinned and weakened portions at the buttons, whereby the said portions are torn open when the buttons are grasped through sides of the outer envelope and are pulled apart in opposite directions to release said liquid from the inner envelope.

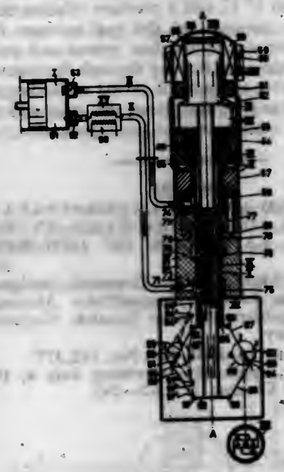
3,091,092

MULTI-STAGE REFRIGERATING ARRANGEMENT

Albert August Dros, Emmasingel, Eindhoven, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Filed May 15, 1961, Ser. No. 109,901
Claims priority, application Netherlands June 1, 1960
6 Claims. (Cl. 62—6)

1. A multi-stage refrigerating system in which each of two media perform a separated cycle, said media being alternately compressed and expanded whereby said media have different mean temperatures and the medium with the higher mean temperature at the area where it has at least substantially its lowest temperature being in heat-exchanging contact with the medium with the lower mean temperature at the area where this medium has substantially its highest temperature; comprising a cold gas refrigerator provided with a cylinder having a double acting piston and a displacer reciprocable therein for the cycle with the lower mean temperature, said piston and displacer having different mean temperatures during operation of said system; a refrigeration machine for the cycle with the higher mean temperature having compressor



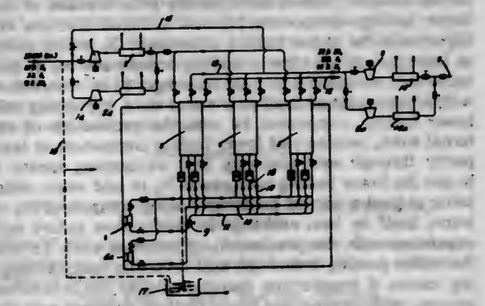
and an expansion space periodically communicating with said compressor, said cylinder defining said expansion space, said expansion space being bordered on one side by a side of said double acting piston, another side of said double acting piston bordering the space of the cycle with the lower mean temperature where substantial compression occurs, and the cycle with the higher mean temperature constituting the driving means for said cold gas refrigerator.

3,091,093

PROCESS FOR THE OPERATION OF REGENERATORS, PREFERABLY FOR USE IN THE LOW-TEMPERATURE RANGE

Rudolf Becker, Munich-Solln, Germany, assignor to Gesellschaft für Linde's Eismaschinen Aktiengesellschaft, Hollriegelskreuth, near Munich, Germany, a German company

Filed June 16, 1958, Ser. No. 742,378
Claims priority, application Germany June 22, 1957
3 Claims. (Cl. 62—12)



3. In a cyclical process for the operation of regenerators in a plant for the separation of gas mixtures by cooling to low temperatures and fractionating, the method

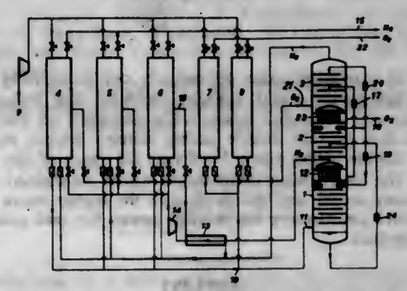
which consists essentially in the following sequence of step: a first period of leading a gas mixture through a regenerator from the warm end to the cold end of the same to cool the gas mixture and to load said regenerator with condensate; a second period of leading a scavenging gas through said regenerator from the cold end to the warm end of the same to remove the main part of the condensate, maintaining in said second period a sublimation ratio of from 0.8 to 1.4, an intermediate temperature difference less than 2° C. and a pressure relation of about 8:1 between the pressure of the gas mixture flowing through the regenerator in the first period and the pressure of the scavenging gas flowing through the regenerator in the second period; and a third period of leading a cold gas through said regenerator from the cold end to the warm end of the same to recool the regenerator.

3,091,094

PROCESS OF AND APPARATUS FOR SEPARATING GASES WITH COLD PRODUCTION BY WORK-PRODUCING EXPANSION OF LOW-BOILING PRODUCT

Rudolf Becker, Munich-Solln, Germany, assignor to Gesellschaft für Linde's Eismaschinen Aktiengesellschaft, Hollriegelskreuth, near Munich, Germany, a German company

Filed June 16, 1958, Ser. No. 742,377
Claims priority, application Germany July 4, 1957
5 Claims. (Cl. 62—24)



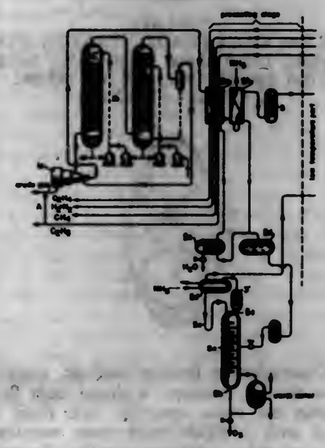
1. In a process for the separation of a gas mixture by liquefaction and rectification at relatively low temperatures, using a rectifying column arrangement with at least three stages 1–3 and reversing heat exchanging means 4–8 for cooling said gas mixture by heat exchange with separation products; the method which comprises separating the gas mixture in a preliminary first rectification stage 1 at a gas pressure above the pressure customary in a two stage process, particularly between 9 and 12 atmospheres absolute, into a substantially pure fraction of the lower boiling component N_2 and a liquid fraction enriched with the higher boiling component O_2, withdrawing at least part of said lower boiling component N_2 in gaseous form, warming it by heat exchanger 13 in counterflow with at least part of itself in a warm state, expanding said lower boiling component 14 with the production of external work, passing said lower boiling component at least partly through said reversing heat exchanging means 6 to put the lower boiling component N_2 in said warm state, using at least a part of the lower boiling component N_2 to warm itself by heat exchange in counterflow before said expansion with the production of external work 15 and thereafter passing it through said reversing heat exchanging means 5 transferring thereby cold to the separation process, withdrawing said liquid fraction enriched with the higher boiling component O_2 from said preliminary first rectification stage 1, passing it into a medium section of a second rectification stage 2, separating it therein into a substantially pure fraction of the lower boiling component N_2 and a liquid fraction enriched with the higher boiling component O_2, withdrawing 19, 20 at least part of said lower boiling fraction N_2 in liquid form as a washing liquid and passing it into the head of a third stage 3, withdrawing said liquid fraction enriched with the higher boiling component O_2 from the lower end of the second stage and passing it into a medium section of the third stage 3, separating it therein into a substantially pure fraction of lower boiling component N_2 and a substantially pure fraction of higher boiling component O_2, withdrawing the lower boiling component N_2 and at least part of the higher boiling component O_2 in gaseous form and passing them through said reversing heat exchanging means 5, 8, and withdrawing 22 part of the higher boiling component O_2 as a liquid.

3,091,095

PROCESS FOR THE DECOMPOSITION OF GASES LOW IN ETHANE, PREFERABLY FOR THE PRODUCTION OF PURE ETHYLENE

Hermann Linde, Munich-Solln, Germany, assignor to Gesellschaft für Linde's Eismaschinen Aktiengesellschaft, Munich, Germany, a German company

Filed Aug. 19, 1960, Ser. No. 50,760
Claims priority, application Germany Aug. 21, 1959
1 Claim. (Cl. 62—28)



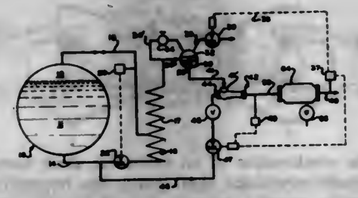
In the process of obtaining substantially pure ethylene from crude hydrocarbon gas mixtures, containing ethylene and having a low ethane content and a C_3 hydrocarbons content which is high relative to the ethane content, in a decomposition system in which the crude gaseous mixture is compressed whereby to separate out any CO_2 and H_2S contained in the crude hydrocarbon gas mixture, precooled whereby to liquefy the C_2 and higher hydrocarbons as well as amounts of C_1 and C_2 hydrocarbons corresponding to equilibrium conditions, and then the resulting condensate is fractionated using a refluxing liquid consisting mainly of C_2 hydrocarbons, the improvement which consists in increasing the yield of C_3 hydrocarbons and simultaneously improving the purity of the ethane fraction by returning to the crude gaseous mixture, prior to compression thereof, such an amount of the substantially pure ethane fraction produced in the decomposition system that in the stationary state the ethane concentration of the gas mixture supplied to the decomposition system is from about 5 to about 10% by volume thereby increasing, in the precooling stage, the amount of C_2 hydrocarbons-containing liquid necessary for completely liquefying by scrubbing the C_3, and higher, hydrocarbons.

3,091,096

DELIVERING VAPORS OF LOW BOILING LIQUIDS

John J. Rendez, Millington, and Donald L. Smith, Berkeley Heights, N.J., assignors to Air Reduction Company, Incorporated, New York, N.Y., a corporation of New York

Filed Apr. 7, 1959, Ser. No. 804,749
16 Claims. (Cl. 62—52)



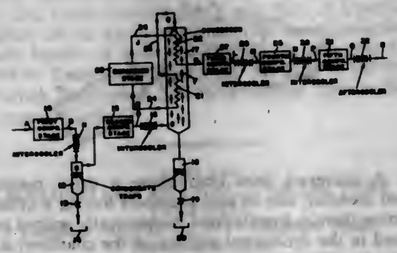
1. The method of delivering a low boiling liquefied gas at a predetermined thermodynamic condition at a desired delivery pressure comprising maintaining separate streams respectively, of a superheated vapor and a liquid of a low boiling liquefied gas at respective initial thermodynamic states at elevated pressures, delivering and admixing said streams to produce a resultant stream of the predetermined thermodynamic delivery condition at said desired delivery pressure, said streams being expanded substantially isenthalpically from said elevated pressures to said delivery pressure, and controlling the relative proportions of said superheated vapor and liquid streams to balance the available heat of said vapor stream with the required heating of said liquid stream to effect the change, respectively, of said liquid and vapor from their respective initial thermodynamic states to said thermodynamic delivery condition.

3,091,097

METHOD OF REMOVING IMPURITIES FROM A COMPRESSED GAS

David R. Friant, Cadiz, N.Y., assignor to Ingersoll-Rand Company, New York, N.Y., a corporation of New Jersey

Filed Aug. 11, 1960, Ser. No. 48,874
6 Claims. (Cl. 62—85)



1. A method of removing impurities from a compressed gas comprising the following steps in the order named, of:

(*a*) alternately compressing and cooling the gas a plurality of times to progressively increase its pressure each time the gas is compressed and to alternately increase and decrease its temperature at each increased pressure for causing condensation of some of the impurities that drain off each time temperature is decreased,

(*b*) passing the gas through locations to decrease the temperature in two steps at approximately constant pressure causing additional impurities to condense and drain off,

(*c*) moving the gas through a location where it absorbs heat,

(*d*) expanding the gas to decrease its pressure and temperature,

(*e*) moving the gas through a location where it absorbs heat,

(*f*) compressing the gas at least one time to increase its pressure and temperature, and

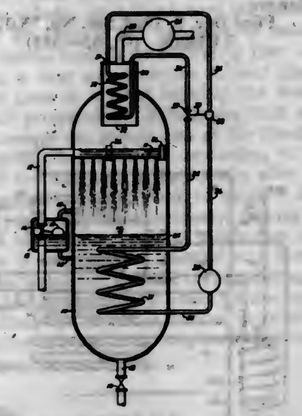
(*g*) cooling the gas at its increased pressure so the temperature of the compressed gas substantially corresponds to the temperature of the impure gas prior to processing.

3,091,098

VACUUM DEAERATOR

Herbert L. Bowers, Fair Lawn, N.J., assignor to Pfaudler Permutit, Inc., New York, N.Y., a corporation of New York

Filed May 4, 1961, Ser. No. 107,831
3 Claims. (Cl. 62—180)



1. A vacuum deaerator comprising a tank, means for maintaining a water level in said tank, an inlet for water to be deaerated cnonected with said tank, an outlet for deaerated water connected with said tank below said water level, a compartment located above said water level and having its lower portion in communication with said tank, a pipe connected with the upper portion of said compartment, a vacuum pump in said pipe, a condenser, an evaporator in said compartment, a compressor, a first conduit interconnecting said compressor and said condenser, a second conduit interconnecting said condenser and said evaporator, and a third conduit interconnecting said evaporator and said compressor.

3,091,099

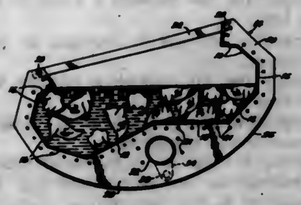
APPARATUS FOR CONTINUOUS CHILLING OF POULTRY

Allen W. Sharp, Ottumwa, Iowa, assignor, by mesne assignments, to Equity Financial Corporation, a corporation of Delaware

Filed Feb. 9, 1959, Ser. No. 792,054
7 Claims. (Cl. 62—376)

3. Apparatus for chilling eviscerated fowls comprising a support, an elongated, upwardly open tank adapted to contain water, said tank having its bottom wall formed

with a longitudinal, central portion extending above another portion of said bottom wall, said tank being mount-

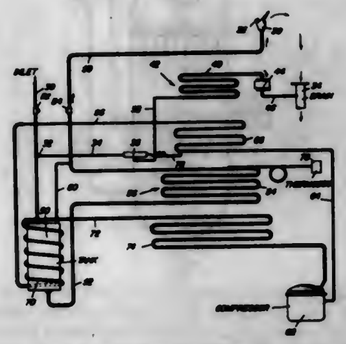


ed for transverse rocking movement on the support, and means for rocking the tank on said support.

3,091,100
WALL HUNG WATER COOLER WITH WATER COOLED CONDENSER

Egon Sorensen, Glen Riddle, Joseph G. Crost, Wallingford, and Frank Brown, Jr., Philadelphia, Pa., assignors to Sunroc Corporation, Glen Riddle, Pa., a corporation of Delaware

Filed Dec. 9, 1960, Ser. No. 75,017
7 Claims. (Cl. 62—395)



1. A wall mounted refrigerated drinking fountain comprising

(*a*) a cabinet adapted to be mounted upon a wall,

(*b*) a refrigerant circulating system in said cabinet,

(*c*) including a refrigerant circulating means,

(*d*) and a refrigerant condenser including a refrigerant condenser element,

(*e*) feed water inlet means and spill water outlet means for said cabinet,

(*f*) a feed water precooler comprising a water storage means,

(*g*) a tube-on-tube water refrigerating means separate from said storage means,

(*h*) a water drinking spout for said cabinet and a splash shield of substantial height for said spout projecting above said cabinet and adapted for mounting on a wall,

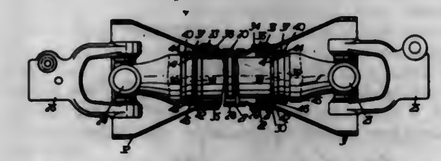
(*i*) means for delivering water from said inlet means to each of said water storage means, said water refrigerating means and to said drinking spout,

(*j*) means for serially placing refrigerant in heat exchange relation with said storage means and with said water refrigerating means.

3,091,101
MACHINERY GUARDS

Richard Leslie Atkinson, Bolton-by-Bowland, near Clitheroe, England, assignor to Atkinson's Agricultural Appliances Ltd., Clitheroe, England, a British company

Filed Apr. 28, 1961, Ser. No. 106,397
Claims priority, application Great Britain May 21, 1960
12 Claims. (Cl. 64—4)

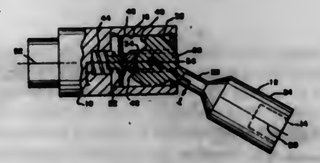


2. The combination of an extensible shaft comprising telescopically-associated shaft parts, the respective shaft parts having annular grooves of part-circular cross-section providing inner bearing races, telescopically-related guard sheaths surrounding said shaft parts and extending across the respective bearing races, anti-friction bearing means seated in said respective bearing races and adapted to be expanded circumferentially, a collar secured internally to each sheath and spaced from the respective bearing means in the direction telescoping said sheaths, a neck of lesser thickness than said collar bridging between said collar and said respective bearing means and integrating each with the other, said neck permitting flexure of said respective bearing means relative to said collar, and resilient means engaging circumferentially about said respective bearing means and constraining same to seat in said respective bearing races, the respective resilient means being adapted to be overcome by a sharp axial pull on the respective sheath in the direction telescoping said sheaths thereby to unseat said respective bearing means and permit withdrawal along the respective shaft part of said respective sheath together with said respective bearing means thus to expose said respective bearing race.

3,091,102
UNIVERSAL JOINT

Theodore E. Linderme, Detroit, Mich.; Dorothy E. Linderme, executrix of said Theodore E. Linderme, deceased

Filed Mar. 24, 1961, Ser. No. 98,253
2 Claims. (Cl. 64—8)

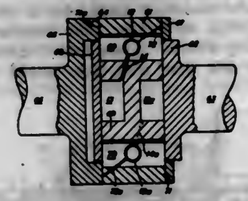


1. A universal joint comprising a drive member; a driven member; one of said members having a cylindrical chamber therein; longitudinal diametrically spaced grooves formed in the cylindrical surface of the chamber; a roller having its peripheral edge received in said grooves so that the roller can rotate about its axis and enjoy longitudinal movement within the chamber; a pocket extending from said chamber axially inwardly within said one member; a disc floatably positioned within the chamber between the pocket and roller; a compression spring disposed within pocket and engaged with the disc to urge same against an edge portion of the roller; a slot formed in the roller; the other end member having an end portion contoured to define two oppositely facing flat surfaces abutting against the surfaces formed by the slot; and a pivot pin extending through the roller and aforementioned end portion.

3,091,103
VIBRATION ISOLATING SHAFT COUPLING

Aubrey John Hutchinson Goodwin, Shandon, Scotland, assignor to Yarrow and Company Limited, Glasgow, Scotland

Filed May 5, 1959, Ser. No. 811,178
10 Claims. (Cl. 64—26)



5. A rotary coupling for isolating from a first body a periodic torque applied to a second body while at the same time transmitting to the first body a constant torque applied to the second body, which coupling comprises a first member for connection to one of the said bodies, a second member for connection to the other of the said bodies and rotatably mounted coaxially within the first member, a plurality of abutments extending inwards from the first member, a corresponding number of abutments extending outwards from the second member, the said inwardly and outwardly extending abutments being arranged alternately around the circumference of the inner member, a plurality of variable-volume fluid-filled containers interposed one between each pair of adjacent abutments with their directions of expansion and contraction extending substantially circumferentially with respect to the common axis of the first and second members, two vessels, each containing a fluid, a plurality of conduit means, one for each container, the effective cross-sectional area of each of which is less than the effective cross-sectional area of each of the said containers, each of which contains a body of fluid and each of which communicates with both the interior of one of the said containers and the interior of one of the said vessels, the conduit means communicating with every alternate variable-volume container communicating with one of the said two vessels and the remaining conduit means communicating with the other of the said two vessels, the masses of the said bodies of fluid contained in the conduit means, the dimensions of the conduit means, the apparent bulk modulus of the fluid in each of the two vessels and the degree of damping applied to the body of fluid contained in each of the said conduit means being such that, at a particular frequency of the periodic torque, the inertia reaction of the said bodies of fluid substantially balance the forces exerted on those bodies of fluid by the fluid in the vessels with which the condiut means containing those bodies of fluid communicate.

3,091,104
METHOD FOR SHAPING A GLASS TUBE PREFORM

Vaughan Morrill, Jr., 9747 Litzinger Road, Brentwood, Mo.

Filed May 5, 1958, Ser. No. 733,794
8 Claims. (Cl. 65—23)



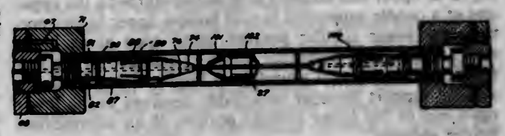
3. A method of producing a pipette the major length of which embraces aspirating and capillary tubes of different bore diameters separated by an intermediate chamber of larger diameter than such bores, such method including ensleeving a tube of glass over a mandrel having two cylindrical sections of different diameters defined by a zone of juncture, disposing a shell of destructible material on said mandrel adjacent such juncture of the mandrel sections with a portion of the shell body contacting the surface defining the juncture thereof to thereby retain the shell against movement longitudinally of said mandrel in one direction and with its outer surface spaced from the mandrel to define a space corresponding to the larger chamber diameter, said shell having included therein a mixing bead made of a material substantially unaffected by the action of acid and being of a diameter larger than the aspirating and capillary tubes of the pipette, applying heat to said tube to render it plastic, subjecting the interior of the tube to vacuum to constrict said tube to conform to the diameters of said mandrel and shell and only then moving the tube and mandrel axially of each other for a distance such that the mandrel is withdrawn from the tube bore in the direction of the larger cylindrical section and with said shell retained within the tube chamber and dissolving said destructible shell in acid.

6. The method of making a tubular glass article having a relatively smaller bore from a tubular glass blank having a relatively larger bore by shrinking the glass blank around a tubular mandrel which consists of: first ensleeving the tubular glass blank over the tubular mandrel; sucking air from a first end only of said tubular glass blank without sucking air outwardly from the other end; applying a heat source to the tubular glass blank to soften the glass at a point adjacent the first end of the blank and progressively shifting the heat source in a direction towards the second end of the blank to progressively soften the glass while continuing to suck air from the said first end only of the tubular glass blank to reduce the pressure in said blank to cause it to shrink around said mandrel; simultaneously flowing cooling fluid through the tubular mandrel throughout the heating operation to maintain the mandrel at a temperature lower than the temperature of the corresponding portions of the glass blank; and finally after relative cooling of the parts shifting the shrunken tubular glass article and mandrel relative to each other longitudinally to separate the article from the mandrel.

3,091,105
APPARATUS FOR SHRINKING TUBULAR GLASS BLANK

Vaughan Morrill, 9747 Litzinger Road, Brentwood, Mo.

Filed Oct. 12, 1959, Ser. No. 845,971
6 Claims. (Cl. 65—271)



1. Apparatus for use in forming a tubular glass article of relatively smaller bore from a tubular glass blank of relatively larger bore by shrinking it around a mandrel which comprises a first supporting assembly for supporting a first end of a tubular glass blank, a second supporting assembly for supporting a second end of a tubular glass blank, a tubular mandrel extending between the first and second supporting assemblies, means for providing communication between the atmosphere and the space between the mandrel and a glass blank assembled therearound at the said first end thereof, a source of heat for softening the glass in a tubular blank supported between the supporting assemblies and mounted for movement between the two supporting assemblies,

and means for introducing a cooling fluid through the end of the mandrel adjacent the first supporting assembly, said mandrel having an open discharge end adjacent the second supporting assembly and said second supporting assembly having a passageway extending longitudinally therethrough surrounding and extending beyond the discharge end of the mandrel forming an aspirating chamber so that fluid discharging from said mandrel produces an aspirating effect to cause air to be sucked through said passageway from the space between the mandrel and a tubular glass blank supported by the supporting assemblies.

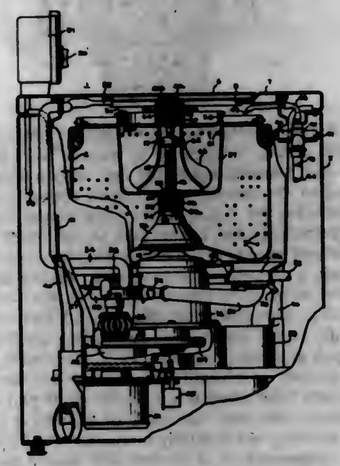
3,091,106
CANDELABRA
Brockway Crouch, 2233 W. Cumberland Ave., Knoxville 16, Tenn.
Filed June 10, 1959, Ser. No. 819,458
5 Claims. (Cl. 67—25)



3. In combination, a candelabrum for use in church decoration for a wedding comprising a plurality of spaced, vertical, tubular holder elements, each tubular element having a flattened intermediate portion, a hollow upper candle holding portion and a lower tubular portion open at its lower end, the upper hollow holder having an opening in its upper end adapted to pass therethrough the upper end of a candle supported in said hollow upper holder portion, the lower tubular portion being open at its lower end, an elongated connector pivotally clamped to the flattened portions of said plurality of holder elements, and a vertical support member detachably received in the lower open end of the lower tubular portion of an intermediate holder element.

3,091,107
CLOTHES WASHING MACHINE
John E. Rhodes, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Filed Mar. 26, 1962, Ser. No. 182,265
9 Claims. (Cl. 68—4)

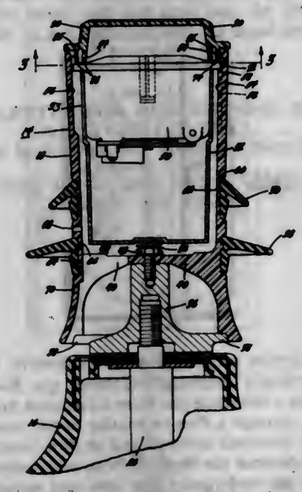
1. A vertical axis clothes washing machine comprising:
(*a*) liquid and clothes containing means including a relatively large rotatably mounted first clothes receptacle;
(*b*) means for rotating said first receptacle at high speed for the removal of liquid from clothes;
(c) agitator mounting means extending upwardly into said first receptacle and adapted to receive a relatively large first agitator which may be removably secured on said agitator mounting means for movement therewith;
(*d*) means for providing a motion to said agitator mounting means which effects a washing action by an agitator secured thereon;
(*e*) receptacle mounting means for a relatively small second clothes receptacle, said receptacle mounting means being secured to said first receptacle and positioned in said first receptacle about said agitator



mounting means and concealed by said first agitator when said first agitator is secured to said agitator mounting means;
(*f*) a relatively small substantially imperforate second clothes receptacle formed to be removably secured on said receptacle mounting means when said first agitator is removed; and
(*g*) a relatively small second agitator formed to be removably secured on said agitator mounting means when said first agitator is removed.

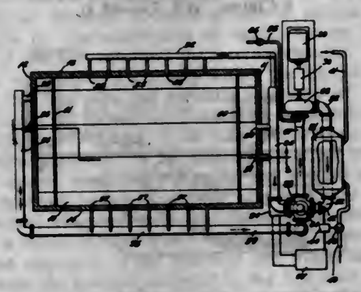
3,091,108
DISPENSING AGITATOR FOR WASHING APPARATUS
John C. Martin, Kettering, Robert F. Brubaker, Eaton, and Norman J. Bullock and Theodore O. Stetrad, Dayton, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed June 5, 1962, Ser. No. 200,277
8 Claims. (Cl. 68—17)

8. A multiple substance dispensing apparatus for a washing machine having a fluid filled tub and an agitating ring comprising, power operated means to selectively vertically reciprocate and rotate said agitating ring, fastening means for attaching said dispensing apparatus to said agitating ring for movement therewith, said dispensing apparatus including a generally vertical open-ended housing spaced at its lower open end from said agitating ring for directing a first substance to said tub when said agitating ring is reciprocated and having spaced ribs about the inside of the upper end of said housing, a fluid circulating ring recessed into said housing on the outer side thereof and movable with said agitating ring, a first container upwardly biasingly supported in said housing and having an aperture in an upper portion thereof for passing a second substance into the interior of said housing when said agitating ring is reciprocated, the spaced ribs of said housing facilitating the passing of said second substance, said housing having a pair of spaced openings on opposite sides of said fluid circulating ring below said aperture and connecting the interior of said housing with said tub below the level of the fluid in said tub, a second container centrifugally communicable with said first container for dispensing a third substance into said first container at the conclusion of the rotation of said agitating ring, cover means for retaining said housing and said first and second containers in assembled relationship, means for venting said second container to the atmosphere including ports in said second container and said cover means, and means for latching said cover means to said housing including a



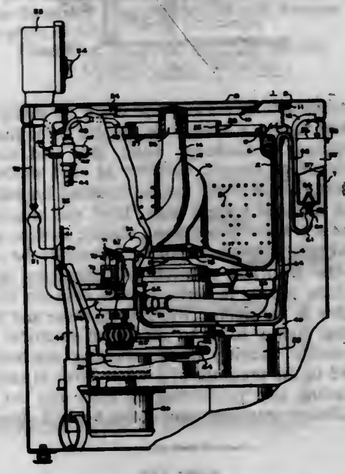
keeper recess in the upper end of said housing and a tang on said cover means having a flange extending into said keeper recess, said flange having a tapered edge extending from inside said recess radially inwardly of said recess, whereby relative rotation of said cover means and said housing will cam said tang inwardly to release said latch to facilitate vertical separation of said cover means from said housing.

3,091,109
CIRCULATING SYSTEM FOR CARPET DYE BECKS
Hubert L. Clement, Franklin, N.C., and John McNutt, Blue Bell, Pa., assignors to James Lees and Sons Company, Bridgeport, Pa., a corporation of Delaware
Filed Sept. 28, 1960, Ser. No. 59,061
5 Claims. (Cl. 68—177)



1. A piece dye kettle for the liquid treatment of pile fabrics and the like which comprises a liquid reservoir having side walls and end walls, a series of ports positioned in said side walls and end walls and substantially below the normal liquid level in the kettle, a header connected to said ports, a first liquid conduit connecting all of the ports on one side and one end, a second liquid conduit connecting all of the ports on the opposite end and opposite side, a high volume liquid pump, a motor for driving said pump, a third intake liquid conduit connected to said pump, a dye liquor intake conduit connected to said third intake liquid conduit, a fourth discharge liquid conduit connected to said pump, a heat exchanger in said discharge liquid conduit, and a four-way valve connecting all four of said conduits.

3,091,110
TREATING AGENT DISPENSER SYSTEM FOR WASHING MACHINES
John Bochan, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Filed Apr. 6, 1962, Ser. No. 185,699
9 Claims. (Cl. 68—207)



1. A washing machine comprising:
(*a*) container means for containing liquid and fabrics to be washed in the liquid;
(*b*) means for effecting washing of fabrics in said container means;
(*c*) recirculation pump means having first and second openings, said first opening being connected to said container means;
(*d*) first conduit means having one end connected to said second opening and having its other end connected to said container means;
(*e*) means for operating said pump means to provide a negative head at said second opening and a positive head at said first opening whereby said pump means is enabled to recirculate liquid from said container means back thereinto, said pump means being responsive to blockage of said second opening to provide an increased negative head thereat;
(*f*) a receptacle for liquid treating agent;
(*g*) second conduit means connected at one end to said receptacle and connected at its other end to said second opening, said second conduit means having a section intermediate its ends extending above the maximum liquid level which may be reached in said container means; and
(*h*) blocking means for blocking off said first conduit means at least partially at a predetermined time during operation of said fabric washing means and said pump means;
(*i*) said negative head being insufficient to draw treating agent from said receptacle through said second

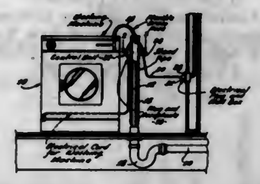
conduit when said first conduit is unblocked, said negative head being sufficient to draw treating agent from said receptacle through said second conduit and to discharge it into said container means when said first conduit is at least partially blocked.

3,091,111

WASHING MACHINE OVERFLOW CONTROL UNIT

Paul B. Cruse, 3641 Sepulveda Blvd., and Donald R. Crowell, 12426 Stanwood Place, both of Los Angeles, Calif.

Filed Aug. 20, 1962, Ser. No. 217,920
7 Claims. (Cl. 68—208)



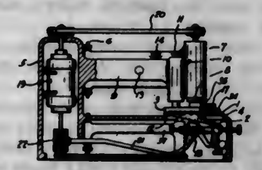
4. In combination: a stand-pipe drain; an electric washing machine having a drain tube adapted to be inserted in the stand-pipe to discharge water into said stand-pipe under control of electric circuitry in said washing machine; pressure responsive means mounted on said stand-pipe to be actuated upon a water level rise in said stand-pipe above a predetermined level; electric switching means coupled to said pressure responsive means to be actuated thereby; and electrical connections connecting said electric switching means in series circuit between said electric circuitry in the electric washing machine and a source of electrical energy so as to supply an electrical current to said electric circuitry in the washing machine to be interrupted in the presence of a water lever in said stand-pipe exceeding said predetermined level and cut off the water discharge into said stand-pipe by said drain tube.

3,091,112

MEANS FOR SPLITTING THE EDGES OF SOFT WORKPIECES

Eugenio Orlando, Via Ennio 33, Milan, Italy

Filed Dec. 8, 1959, Ser. No. 858,249
Claims priority, application Italy Dec. 9, 1958
6 Claims. (Cl. 69—16)



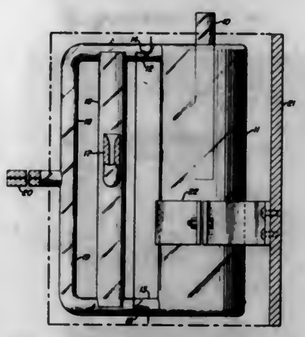
1. An apparatus for sectioning edges of soft pieces of leather, plastics and the like, said apparatus comprising a rotary disc knife, means connected with said disc knife for rotating it in one direction, an upper guiding element having a curved edge, means connected with said upper guiding element for supporting it in a position wherein said curved edge is parallel to and spaced upwardly and sidewise from a portion of the cutting edge of said rotary disc knife, a feed cone, means rotating said feed cone in a direction opposite to the direction of the knife, and means for adjustably supporting said feed cone below said disc knife in an inclined position wherein a curved portion of said feed cone is located below the space between said edges of the rotary disc knife and the upper guiding element, whereby the edge of a soft piece to be sectioned is subjected to pressure in a zone between said upper guiding element and said feed cone and to expansion in a space adjacent to the pressure zone and to the cutting edge of the rotary disc knife.

3,091,113

GAS DENSITY BALANCE EMPLOYING DIFFERENTIAL FLOW MEASUREMENT

Arvie Glenn Nerheim, Calumet City, Ill., assignor to Standard Oil Company, Chicago, Ill., a corporation of Indiana

Filed Sept. 4, 1957, Ser. No. 682,036
7 Claims. (Cl. 73—30)



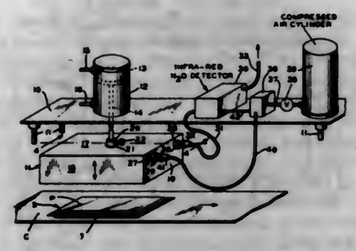
1. In a system for testing gases by density, including a pair of vertically displaced reference gas flow conduits withdrawing a reference gas from a common manifold and exhausting through a flow-restrictive outlet means, a sample conduit disposed between and in flow communication with said reference gas flow conduits, and means for introducing the gas undergoing test into said sample conduit, the improvement which comprises two detector means sensitive to rates of flow of gas, one disposed in each of said reference gas flow conduits, for determining differentials in rates of flow of reference gas through each of said conduits due to changes of flow of gas in said sample conduit toward one of the gas flow conduits, the changes in flow differentials caused by changes of flow of gas in said sample conduit being a measure of sample gas density.

3,091,114

METHOD AND APPARATUS FOR TESTING SEALED PACKAGES FOR LEAKS

Robert C. Webster, Madison, Wis., assignor to Air Reduction Company, Incorporated, New York, N.Y., a corporation of New York

Filed Dec. 17, 1959, Ser. No. 860,203
6 Claims. (Cl. 73—49.3)



1. In apparatus for detecting leaks in the sealed receptacle of a package which includes a product and an inert gas comprising nitrous oxide that are contained in the receptacle, said receptacle comprising a flexible, deformable, fluid impermeable sheet material, the combination comprising support means, a hood unit carried by the support means and movable toward and away from a selected part of the support means, said hood unit being open at one end, said hood unit including a bearing member within its confines and spaced from its open end, said package being adapted to be positioned in the open end of the hood unit between said selected part of the support means and the bearing member, said part of the support means and the bearing member being adapted upon predetermined movement of the hood unit toward said part of the support means to apply sufficient pressure to the package to effect discharge of inert gas from the interior of the receptacle through any leaks that may exist in the receptacle, and means communicating with the interior of the hood unit for detecting the presence of nitrous oxide in gas admitted into the hood unit.

3,091,115

APPARATUS FOR DETERMINING SOIL MOISTURE CONTENT

Oswald R. Roberts, 647 Mountain View Road, Altadena, Calif.

Filed Jan. 21, 1960, Ser. No. 4,165
2 Claims. (Cl. 73—73)



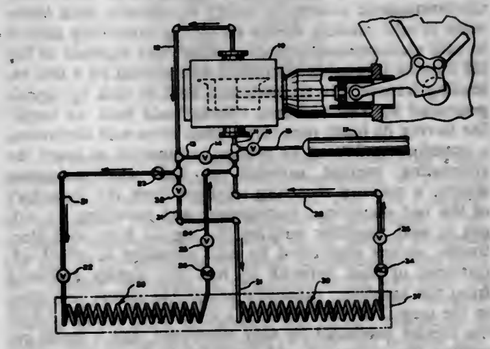
1. A moisture indicator comprising a first tube defining an internal chamber, a liquid-permeable section on the first tube for communication of liquid between the exterior of the first tube and the internal chamber therein, a scale tube disposed partially within the internal chamber of the first tube and partially exteriorly of the first tube, means for movably mounting the scale tube on the first tube for movement of the scale tube into and out of the internal chamber in the first tube and for providing a seal against atmosphere between the internal chamber in the first tube and the scale tube, said scale tube defining on internal chamber extending through the scale tube which is closed to atmosphere at the end of the scale tube disposed exteriorly of the first tube and which communicates with the internal chamber in the first tube through the portion of the scale tube disposed within the internal chamber in the first tube, a first vent in the first tube communicating between the internal chamber therein and the exterior thereof, a second vent in the portion of the scale tube disposed exteriorly of the first tube and communicating between the internal chamber in the scale tube and the exterior thereof, valve means for selectively sealing and opening each of the first and second vents, and indicia on the portion of the scale tube disposed exteriorly of the first tube for defining a predetermined initial volume of air in the internal chamber in the scale tube between the level of an indicating liquid in the internal chambers of the first tube and the scale tube and the closed end of the internal chamber in the scale tube and indicating the magnitude of such volume of air in the internal chamber of the scale tube relative to the initial volume of air therein responsive to changes in the level of an indicating liquid therein.

3,091,116

METHOD AND APPARATUS FOR TESTING HIGH PRESSURE COMPRESSOR COMPONENTS AND THE LIKE

William R. Crooks, Mount Vernon, Ohio, assignor to The Cooper-Bessemer Corporation, Mount Vernon, Ohio, a corporation of Ohio

Filed Mar. 26, 1962, Ser. No. 182,380
3 Claims. (Cl. 73—168)

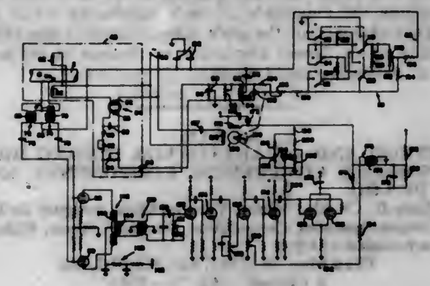


1. Apparatus for testing high pressure fluid compressors and like equipment under conditions and pressures at least equal to normal working conditions and pressures comprising,

(*a*) a suction line leading to the equipment under test,
(*b*) a discharge line leading from said equipment,
(*c*) an ultimate pressure load vessel,
(*d*) at least one intermediate pressure accumulator storage vessel,
(*e*) a source of gas under relatively low initial pressure,
(*f*) lines leading from said discharge line to all of said vessels,
(*g*) lines leading from all of said vessels to said suction line,
(*h*) a charging line leading from said source to said suction line,
(*i*) separately operable and closable valves in all said lines for selectively connecting and isolating said source of gas relative to said suction line and for selectively connecting and isolating said vessels relative to each other and fluid compressors and like equipment, and
(*j*) a pressure reducing valve interposed in the line between said ultimate pressure load vessel and said suction line,

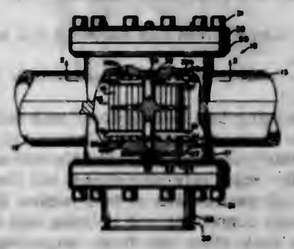
(1) disposed to reduce the high pressure of gas in said load vessel to a predetermined suction pressure for said equipment when said load vessel is connected to both said suction line and said discharge line in a high presusre circuit.

3,091,117
MEANS FOR EFFECTING INSTRUMENT PHASE ADJUSTMENT
Victor F. Head, Hatboro, Pa., assignor to Fischer & Porter Company, Hatboro, Pa., a corporation of Pennsylvania
Filed Oct. 21, 1958, Ser. No. 768,701
4 Claims. (Cl. 73—194)



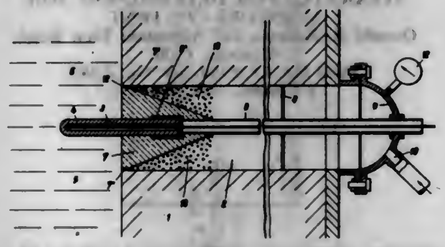
3. A flowmeter comprising a conduit for flowing liquid, electromagnetic means providing a magnetic field transverse to said conduit, means supplying alternating current to said electromagnetic means, electrodes exposed to liquid flowing through said conduit and located on a line extending transversely through said field to pick up signals generated by flow of liquid through said field, an amplifier having its input receiving signals from said electrodes, a transformer having its primary connected to carry the alternating current supplied to said electromagnetic means, a network receiving an input from the secondary of the last mentioned transformer and providing an output to said amplifier bucking the signals from said electrodes, means controlled by said amplifier to effect adjustment of said network to null the signals delivered from the amplifier, manually adjustable means providing in the output of said network a signal in quadrature with the signals produced by said electrodes, and a meter receiving the output of said amplifier to serve as a measuring means for the effect of adjustment of said means providing the quadrature signal.

3,091,118
VORTEX FLOW CONTROL DEVICE
Albert B. Hubbard, Woodstock, N.Y., assignor, by mesne assignments, to Rotron Manufacturing Co., Inc., Woodstock, N.Y., a corporation of New York
Filed Aug. 8, 1960, Ser. No. 48,226
11 Claims. (Cl. 73—230)



1. In a fluid flowmeter of the vortex-velocity type, a rigid casing, fluid flowing in said rigid casing, a vortex cage rotatably mounted in said rigid casing and rotated by said fluid flowing, an open end of said vortex cage, a feeder plate mounted in said casing adjacent said open end, blades formed on said feeder plate projecting toward said vortex cage, each of said blades being separated from adjacent blades, a shunt path for flow of fluid into said open end defined by the spaces between adjacent blades of said feeder plate and the hydraulic diameter of said shunt path being determined by the angles of the blades on said feeder plate.

3,091,119
TEMPERATURE MEASURING APPARATUS
Wilhelm Anton Fischer, Ratingen, near Duesseldorf, and Walter Schlitz, Beeri, Lower Rhine, Germany, and Harald Straube, Kapfenberg-Steiermark, Austria, assignors to Max-Planck-Institut fur Eisenforschung, a German company, and Phoenix-Rheinrohr Aktiengesellschaft Vereinigte Hutten- und Rohrenwerke, both of Dusseldorf, Germany
Filed Feb. 5, 1962, Ser. No. 171,091
Claims priority, application Germany Feb. 18, 1961
14 Claims. (Cl. 73—343)



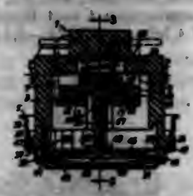
1. Apparatus for continuously measuring the temperature of iron and steel melts, comprising a melt vessel made of masonry and formed therethrough with a tubular passage, a detector head held in said passage, said head having at its front, inner end a refractory ceramic protective tube and also having a temperature measuring element housed within said tube, a plug of refractory material disposed between said tube and said masonry, and means disposed to prevent said plug from becoming sintered to said masonry.

3,091,120
THERMOSTATIC CHARGE FOR MOTOR SYSTEM OF EXPANSION VALVE AND METHOD OF CHARGING
Edward F. Kounovsky, Webster Groves, and Harold T. Lange, Huntleigh Village, Mo., assignors to Sporlan Valve Company, Inc., St. Louis, Mo., a corporation of Missouri
Filed July 23, 1959, Ser. No. 829,098
4 Claims. (Cl. 73—368.2)

1. A charge for a motor system of a thermostatic expansion valve comprising a motor system, a limited pressure charge in said motor system of volatile liquid and the vapor of the liquid, and a gas which is non-condensible throughout the range of temperature and pressures to which the motor system is to be subjected during use, the non-condensible gas raising the total pressure of the charge to a predetermined value selected to give a suitable limiting pressure at which the entire charge is in vapor phase.

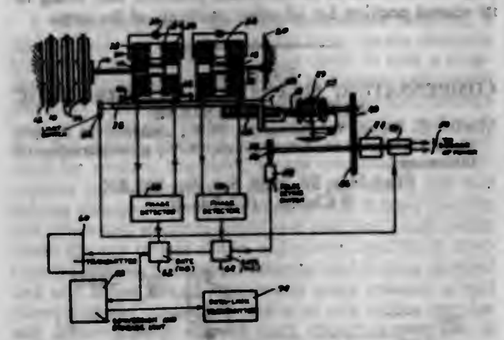
3,091,121
THERMOSTATIC CONTROLS
John O. Moorhead, Attleboro, Mass., assignor to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware
Filed Oct. 27, 1958, Ser. No. 769,627
22 Claims. (Cl. 73—378.3)

1. In a thermostatic control, a system comprising a movable member adapted for movement from and reverse movement to an initial position and spring return means arranged to deflect in accordance with movement from the initial position and to bias the system to return to said initial position, a snap-acting thermostatic member, and connecting means between said thermostatic member and said system arranged in response to temperature change and snap action to move the system from the



initial position against the return bias of said spring return means, said spring return means then exerting a return bias on said snap-acting thermostatic member, said spring return means of the system comprising a spring member having a reactive return force which decreases with deflection away from said initial position and increases with return movement toward said initial position.

3,091,122
AIRBORNE ELECTRO-MECHANICAL PRESSURE SENSORY AND TELEMETRY SYSTEM
Edward W. Pike, 7 St. Nicholas Drive, Shepperton, England; David S. Little, 35 Bogart Ave., Port Washington, N.Y.; and Frederick C. Melchior, 258 Riverside Drive, New York, N.Y.
Filed May 16, 1960, Ser. No. 29,466
6 Claims. (Cl. 73—398)



1. A pressure measuring system comprising a first and second detector coupled together at a predetermined separation distance, a pressure responsive sensor, a sensor armature coupled to said sensor to deflect in accordance with changes in pressure, a reference armature fixedly positioned and separated from the position of the sensor armature when said sensor armature is at the position responsive to zero pressure on the capsule by the same separation distance as said predetermined separation between detectors, means for driving said detectors past said armatures, said first detector adapted to generate a first signal as it passes said reference armature, said second detector adapted to generate a second signal as it passes said sensor armature, a source of electrical pulses, a utilizing network, means responsive to said first signal to pass said pulses to said utilizing network, and means responsive to said second signal to block transmission of pulses to said utilizing network.

3,091,123
PRESSURE GAUGE
John P. Locke, Michigan City, Ind., assignor to F. W. Dwyer Mfg. Company, a corporation of Illinois
Filed Jan. 23, 1962, Ser. No. 168,192
11 Claims. (Cl. 73—407)



1. A device for zero setting a gauge that includes translational-to-rotary motion-transforming-means comprising a helix mounted for rotation about its axis and a magnet for producing proportional rotation of said helix in response to translational movement of the magnet alongside the axis of the helix, an indicator connected to said helix for rotation therewith, a deflection spring carrying the magnet at a position to establish magnetically coupled relation to the helix, and a sense mechanism connected to deflect said spring in a direction to shift said magnet generally translationally alongside said axis, said device comprising a wishbone support having its free ends anchored and having its mid-point floating and equipped with mounting pivots to support said helix for rotation about said axis, and an adjustment mechanism engageable with said wishbone support adjacent said mid-point to stabilize the position thereof and operable in opposite directions to shift said helix along the direction of its axis to establish and maintain a zero-set position.

3,091,124
MEASURING PIPET
William M. Hiedman, 702 S. Magnolia, Tucson, Ariz.
Filed Nov. 2, 1960, Ser. No. 66,766
10 Claims. (Cl. 73—425.4)



1. A measuring pipet comprising a body including a barrel and a stopcock plug, said barrel and said plug having cooperating mating interior and exterior surfaces, respectively, a stem extending outwardly from said barrel and having a bore therethrough which communicates with

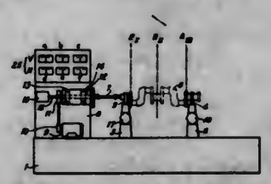
the interior surface of said barrel, a pipet tip extending away from said barrel and having a bore therethrough which communicates with the interior surface of said barrel in diametrically-opposed relation to said stem bore, said stopcock plug having a pair of plug bores extending therethrough, each of which intersects an axis of said plug, said plug bores being spaced axially apart along said plug at the portions intersecting said plug axis, passage means in one of said plug and barrel connecting an end of one of said plug bores to one of said stem bore and said pipet tip bore when said plug is in one circumferential position and connecting an end of the other of said plug bores to the same one of said stem bore and said pipet tip bore when said plug is in a second circumferential position, both of said plug bores being out of registry with both said stem bore and said pipet tip bore when said stopcock is in a third circumferential position.

3,091,125

METHOD AND APPARATUS FOR DYNAMICALLY DETERMINING UNBALANCE OF ROTORS

Gunther Budnick, deceased, late of Darmstadt, Germany, by Thea Budnick, nee Wujanz, heir, Darmstadt, Germany, Heinrich Hack and Reinhard Alffen, Darmstadt, and Ludwig Arras, Gross-Zimmern, Germany, assignors to Carl Schenck Maschinenfabrik G.m.b.H., Darmstadt, Germany, a corporation of Germany

Filed June 11, 1959, Ser. No. 819,732
7 Claims. (Cl. 73—462)



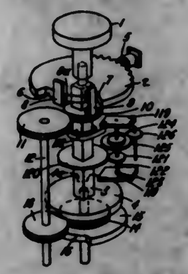
2. The method of sensing unbalance of rotors in two coordinate directions of at least two reference planes and transforming the measured unbalance values into two coordinate correction values applicable in another plane, which comprises the procedure of rotating the rotor to produce oscillations due to rotor unbalance, transducing the oscillations into respective alternating voltages indicative of unbalance in said respective reference planes, generating an alternating phase-reference voltage synchronous with the rotor rotation having a predetermined first phase position relative to the rotor, impressing the reference voltage and one of the transducer voltages upon a voltage multiplier and impressing the reference voltage and the other transducer voltage upon another voltage multiplier to obtain two product voltages which have each a direct-voltage component of reversible polarity, impressing each product voltage of positive polarity only upon one of two respective receiving means correlated to said two respective reference planes, whereby the response of the two receiving means is indicative of the unbalance correction required in one of the two coordinate radial directions in each of said respective reference planes when both product voltages are positive; and impressing, when the product voltages are negative, the larger one of the negative product voltages upon another receiving means, and simultaneously impressing said larger negative product voltage additively upon the receiving means for the reference plane of the smaller negative product voltage, whereby the response of the other receiving means is indicative of the unbalance correction required in the one of the two coordinate radial directions of the other plane, and duplicating the procedure while generating the alternate phase-reference voltage synchronous with rotor rotation at a second predetermined phase position displaced from the first.

3,091,126

ADJUSTABLE CLOCKWORK DRIVEN MECHANISM FOR MOVING AN ACTUATING MEMBER AT PRE-SELECTED TIMES FROM ONE LIMIT OF MOVEMENT TO ANOTHER

Tom Bowen, Hove, England, assignor, by mesne assignments, to S. Smith & Sons (England) Ltd., London, England, a corporation of England

Filed Jan. 19, 1960, Ser. No. 3,339
Claims priority, application Great Britain Jan. 21, 1959
27 Claims. (Cl. 74—3.54)



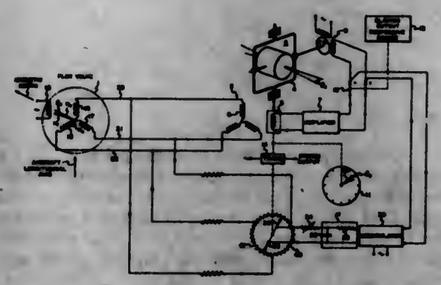
1. A control mechanism comprising first and second cams and cam follower means mounted to be positioned by the cams, the cams having datum positions, constant speed driving means connected to the cams, said cams having a single setting member by means of which the cams may be set away from their datum positions to differing extents, the constant speed driving means driving the cams back to their datum positions from their set positions, an actuating member operated by the cam follower means and movable thereby between first and second positions, means for determining the position of the actuating member solely by the positions of the cams, the actuating member being in its first position when one only of the cams is in its datum position, and being in its second position for all other positions of the cams.

3,091,127

COMPENSATING MEANS FOR GYROMAGNETIC REFERENCE SYSTEMS

Marila C. Depp, Brightwaters, N.Y., assignor to Sperry Rand Corporation, Great Neck, N.Y., a corporation of Delaware

Filed Mar. 27, 1959, Ser. No. 802,530
9 Claims. (Cl. 74—5)



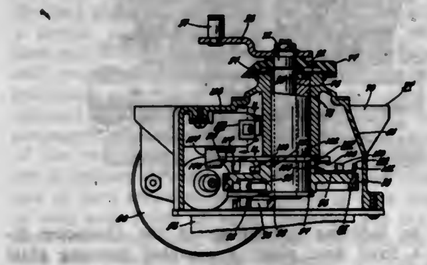
1. A gyromagnetic compass system for navigable craft comprising a directional gyro subject to continuous azimuthal rotation, a magnetic compass responsive to the earth's magnetic field for sensing a magnetic vector having a direction and a magnitude representative of the direction and strength of said field, signal transmission means coupled between said compass and said gyro for supplying a continuous error signal tending to maintain said gyro in a predetermined azimuthal relation with respect to the earth's magnetic vector sensed by said compass whereby the continuous azimuthal rotation of said gyro causes asynchronism of said azimuthal relation which is not entirely corrected by said continuous errer signal that tends to oppose said rotation, means responsive to said continuous error signal for providing a compensating signal in accordance therewith, and means responsive to said compensating signal and coupled to said signal transmission means for effectively altering the magnetic vector sensed by said compass in accordance with said compensating signal in a direction to increase said error signal whereby said predetermined azimuthal relation is effectively maintained with respect to the earth's magnetic vector.

3,091,128

WINDSHIELD WIPER MECHANISM

Delbert D. De Rees, Lake Orion, and Robert M. Fox, Detroit, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed June 12, 1961, Ser. No. 116,602
13 Claims. (Cl. 74—75)



1. Windshield wiper actuating mechanism including, a sleeve having an eccentric through bore, means rotatably journalling said sleeve for rotation about its axis, a rotatable driving member journalled on said sleeve and coaxial therewith, a shaft journalled within the eccentric through bore of said sleeve, means drivingly connected said shaft and said driving member, crank means connected to said shaft for rotation therewith, means constituting an interruptible driving connection between said sleeve and said driving member whereby rotation of said driving member will rotate said sleeve to rotate said shaft and crank means about the axis of said sleeve, and means operable to interrupt the driving connection between said driving member and said sleeve and simultaneously arrest rotation of said sleeve whereby continued rotation of said driving member will effect rotation of said shaft about its own axis to vary the throw of said crank means.

3,091,129

CHAIN AND SPROCKET DRIVE STRUCTURE

Georges Henri N. Bonnette, Rte. 2, Iberville, Quebec, Canada

Filed Mar. 3, 1961, Ser. No. 93,132
3 Claims. (Cl. 74—229)

3. In combination, a chain composed of a plurality of interchangeable links arranged in succession, each link comprising: an elongated body having two ends of substantially equal circular cross-sections; one of said ends curving upwardly and backwardly over said body through an arc of approximately 180° to form a hook; the other of said ends curving laterally and backwardly over said body through an arc of approximately 180° to form another hook; the inner diameter of said arcs being at least as great as the diameter of the circular cross-sections; said end curving upwardly extending generally in a vertical plane; said body having a central portion provided with a flat top surface normal to said vertical plane and inclined in relation to a line joining the centers of the arcs; a sprocket wheel for said chain comprising: a quadrilateral body having a predetermined thickness defining edge lateral surfaces; recesses cut-out of each corner of said body through said lateral surfaces and defining there-



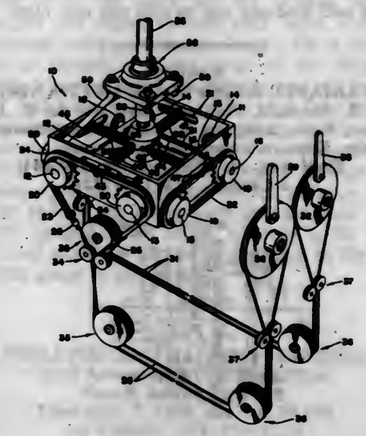
between abutting lands; triangular projections integral with, and projecting away from said lands; all said projections pointing in the same direction around the lateral surfaces whereby said chain engages said sprocket by having the flat top surface of one of its links abut one surface of a triangular projection and the lateral hook enter the adjacent recess of said body.

3,091,130

SINGLE LEVER CONTROL FOR MULTIPLE ACTIONS

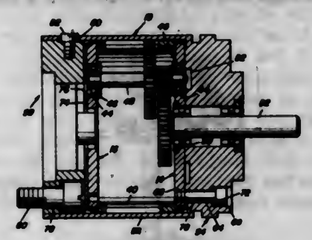
Frank S. Payerle, Akron, and Charles F. Gressard, Kent, Ohio, assignors to The Morse Instrument Co., Hudson, Ohio, a corporation of Ohio.

Filed June 27, 1960, Ser. No. 38,926
16 Claims. (Cl. 74—471)



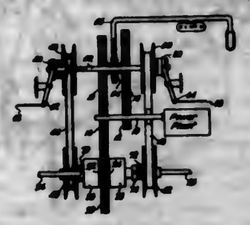
1. A single lever control mechanism for multiple actions, comprising, a frame, parallel pairs of shafts rotatably mounted in said frame perpendicularly to each other, control rods perpendicular to each other laterally movable in said frame, means interconnecting each control rod to a pair of said parallel shafts, said means adapted to rotate said pairs of shafts and maintain each said control rod parallel to its interconnected shafts, single lever means selectively to displace said control rods, and servient control means operatively connected with said shafts.

3,091,131
SPACER CAGE
Donald L. McNally, Grantsburg, Wis., assignor to McNally Bros. Machine & Gear Company, Inc., Grantsburg, Wis., a corporation of Wisconsin
Filed June 27, 1961, Ser. No. 119,965
5 Claims. (Cl. 74—606)



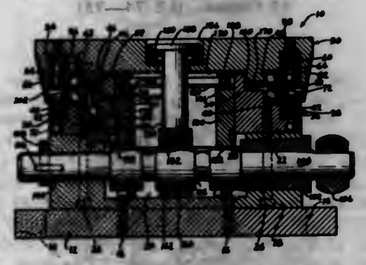
1. A spacer cage for rotatably mounting gears of a gear train in proper orientation relative to each other, said spacer cage comprising an elongated hollow sleeve including opposite end diametrically enlarged axially opening seats defined by encircling opposite thin walled end portions of said sleeve, a pair of opposite end plates seated in said seats and including outwardly bevelled outer peripheral edges, said thin walled end portions being inwardly deflected and enclosing said bevelled outer peripheral edges for maintaining said end plates captive within said seats, said end plates having bearing receiving openings formed therein at predetermined locations, a first end cap for one of said end plates including a generally marginal wall projecting laterally from the inner face of said end cap, said end cap overlying the outer face of said one end plate with said marginal wall encircling said hollow sleeve and projecting beyond the end thereof remote from said first end cap, a second end cap overlying the outer face of the other end plate and at least partially received within the confines of the free end of said marginal wall, means securing said second end cap in the free end of said marginal wall, and means securing said first end cap to said one end plate.

3,091,132
VARIABLE RATIO DRIVE MECHANISM
Alfred B. Mayfield, Halstead, and Marvin C. Darling, Burton, Kans., assignors to Davis Manufacturing, Inc., Wichita, Kans., a corporation of Kansas
Filed Aug. 11, 1958, Ser. No. 754,441
3 Claims. (Cl. 74—722)



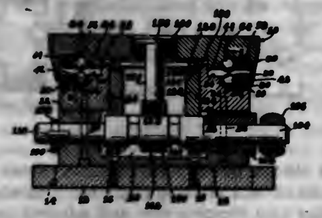
1. A variable ratio drive mechanism including, in combination, a power plant having a driving shaft; a pair of driven shafts; a primary power transmission train operably interconnecting said driving shaft and said driven shafts; secondary power transmission trains operably interconnecting said driving shaft and said driven shafts; planetary gear assemblies each having a sun gear, planet gears and a ring gear and coupling said power transmission trains with said driven shafts respectively, the sun gears of each of said planetary gear assemblies being driven by a corresponding secondary power transmission train, the planet gears of each of said planetary gear assemblies being driven by the primary power transmission train, and the ring gear of each assembly being rigidly mounted on the corresponding driven shaft and deriving its speed and torque from the sun and planet gears of its assembly; a clutch interposed in said secondary power transmission train for rendering the same inoperable; belt and variable pulley assemblies within each of said secondary power trains for varying the speed thereof; and manually manipulable control means coupled with the variable pulleys of said belt and pulley assemblies for altering the effective size of the pulleys.

3,091,133
INDEXING MECHANISM
John G. Hooger, Skokie, Ill., assignor to Thompson Designs, Inc., Franklin Park, Ill., a corporation of Illinois
Filed Sept. 8, 1960, Ser. No. 54,615
5 Claims. (Cl. 74—826)



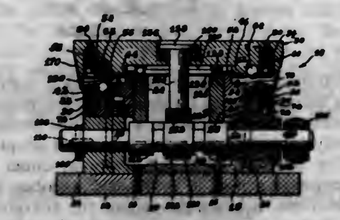
1. In an indexing mechanism of the character described, a fixed base plate, a movable indexing plate mounted on and overlying said base plate and rotatable thereon about a vertical axis, said indexing plate being movable vertically toward and away from said base plate in an axial direction between a lowered proximate position and a raised remote position, a circular row of spherical hardened steel balls of the precision ball bearing variety fixedly secured to the juxtapositioned face of each plate, all of said balls being of equal diameter, the balls of each row being equal in number, the adjacent balls of each row being in mutual tangential contact so that all of the balls in the row present a circular solid steel column encircling said vertical axis, the mean diameter of each row of balls being equal, the row of balls associated with the indexing plate being adapted to seat upon the row of balls associated with the base plate when the indexing plate is in its proximate position with each ball in a row tangentially contacting two adjacent balls in the other row, an actuating shaft for said indexing plate rotatably disposed on said base plate, a lifting cam on said shaft and effectively engageable with said indexing plate for raising and lowering the same, a locking cam on said shaft and effectively engageable with said indexing plate for drawing said plate downwardly to place the two rows of balls under compression when said indexing plate is in its proximate position, and a spring-pressed detent carried by one of said plates and engageable with the other plate, said detent being in the form of a pin having a rounded end, said other plate being formed with a circular row of detent holes, one for each ball in a row, said holes being positioned for selective register with said detent pin when said indexing and base plates are in corresponding positions of indexing, the rounded end of said detent pin being positioned for camming engagement with the edges of said detent holes during rotation of the indexing plate when the latter is in its remote position to the end that audible clicks may be emitted during such rotation, said detent pin being telescopically receivable in said detent holes when the indexing plate is in its proximate position.

3,091,134
INDEXING MECHANISM
Arnold M. Thompson, Wheaton, and Victor W. Gideon, Chicago, Ill., assignors to Thompson Designs, Inc., Franklin Park, Ill., a corporation of Illinois
Filed Dec. 7, 1961, Ser. No. 157,724
8 Claims. (Cl. 74—826)



1. An indexing mechanism comprising a base plate, an indexing plate positioned in opposed relation with the base plate and rotatable relatively to the latter about a central axis at right angles to the two plates, said base and indexing plates being relatively movable toward and away from each other in an axial direction between proximate and remote positions, means on each of the opposed faces of the plates defining a circular channel in concentric relation with said axis, the radii of curvature of the two channels being equal whereby the channels are in register throughout, an arcuate major circle sector row of hard spherical balls disposed in each channel, all of said balls being of equal diameter and the balls of each row being equal in number, the adjacent balls of each row being in mutual tangential contact, the rows associated with the two plates being adapted to interfit with each other when the plates are in their proximate positions with the balls thereof in mutual contact in a common plane, and a homogeneous hard bonding substance disposed within each channel and partially filling the same, a major portion of each ball being embedded in said bonding substance.

3,091,135
INDEXING MECHANISM
Arnold M. Thompson, Wheaton, Ill., assignor to Thompson Designs, Inc., Franklin Park, Ill., a corporation of Illinois
Filed Dec. 7, 1961, Ser. No. 157,753
8 Claims. (Cl. 74—826)



1. An indexing mechanism comprising a base plate, an indexing plate positioned in opposed relation with the base plate and rotatable relatively to the latter about a central axis at right angles to the two plates, said base and indexing plates being relatively movable toward and away from each other in an axial direction between proximate and remote positions, means on each of the opposed faces of the plates defining a circular channel in concentric relation with said axis, the radii of curvature of the two channels being equal whereby the channels are in register throughout, an arcuate major circle sector row of hard spherical balls disposed in each channel, all of said balls being of equal diameter and the balls of each row being equal in number, the adjacent balls of each row being in mutual tangential contact, the rows associated with the two plates being adapted to interfit with each other when the plates are in their proximate positions with the balls thereof in mutual contact in a common plane, and a reaction post interposed between the two balls of each row which are disposed at the opposite ends of the arcuate row, said reaction post making tangential contact with each of said two balls and having a portion thereof fixedly anchored to the bottom wall of the respective channel within which the row of balls is disposed.

3,091,136
SAW CHAIN FILING GAUGE
John H. Maier, 2636 SW. Marine Drive, Vancouver, British Columbia, Canada
Filed Aug. 16, 1960, Ser. No. 49,994
2 Claims. (Cl. 76—36)

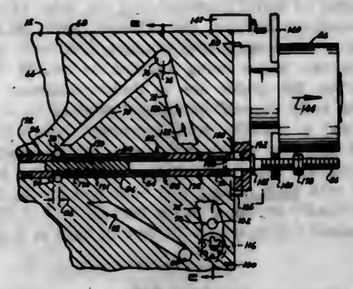


1. A saw chain filing gauge comprising a block having a passage extending longitudinally of the block and opening out from the bottom and the ends thereof, said passage being deep and wide enough to accommodate the cutter teeth and depth gauges of a saw chain and to permit movement thereof therethrough, said passage having an inner surface along which the outer ends of the cutter teeth move as said teeth travel through the passage, a pair of spaced transverse guide channels formed in and extending across the block and the passage thereof at filing angles and angled towards each other, each transverse channel being positioned to hold a file in the proper position to sharpen a cutter tooth of the chain when said tooth is moved along the passage into the transverse channel, and a notch formed in the top of the block and the longitudinal passage near an end thereof and having a bottom spaced from and opposed to the passage bottom, said notch bottom being spaced from the passage bottom a distance equal to the correct vertical distance between the outer ends of the cutter teeth and the outer ends of the depth gauges of the chain, whereby a file may be reciprocated along the bottom of the notch to file the end of a depth gauge at said notch.

3,091,137
DRILLING AND TAPPING MACHINE
Orvil Aronson, 34 Newberry Place, Grosse Pointe 36, Mich.
Filed Nov. 7, 1960, Ser. No. 78,199
15 Claims. (Cl. 77—32.3)

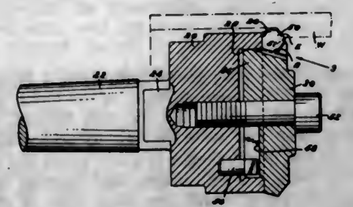
1. A power unit comprising two fluid cylinders; a piston in each cylinder subdividing same into a fluid space and a liquid space; passage means between the liquid spaces for causing powered movement of one piston by fluid pressure to effect movement of the other piston by hydraulic pressure, and vice versa; and piston-synchronized control means comprising a sleeve-shaft assembly movable as a unit for a predetermined distance to throttle fluid flow through the passage means from a relatively high rate to a relatively low controlled rate; the shaft in said assembly having a frictional fit within the sleeve, and the drive for the assembly being taken through the

shaft so that after the assembly has throttled the flow the shaft may be propelled along the sleeve to assume a new



position thereon in accordance with the length of the piston stroke.

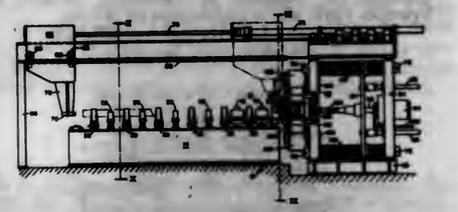
3,091,138
ROTATING CUTTER ASSEMBLY
Robert W. Berry, Jr., Ferndale, Mich., assignor, by mesne assignments, to Wesson Corporation, Ferndale, Mich., a corporation of Delaware
Filed Dec. 7, 1959, Ser. No. 857,845
9 Claims. (Cl. 77—58)



1. A boring cutter assembly combination comprising a circular body having a radial flat face, a separable circular body having radial faces positioned against said first body having a plurality of circumferentially spaced slots passing through said separable body in a direction perpendicular to the radial faces of said bodies, said slots being disposed parallel to a radius but spaced a negative distance therefrom at the circumference of the bodies, and a flat polygonal cutting insert in said slots, having a surface in flat contact with the root surface of said slot and a surface in flat contact with the radial flat surface of said first circular body and a plurality of cutting edges adjacent side surfaces normal to the flat insert, means to hold said insert in said slot, said insert being shaped geometrically to have a cutting surface disposed at an angle to the axis of the said bodies.

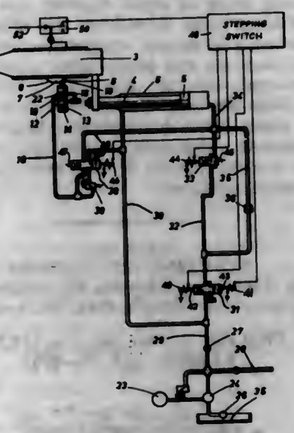
3,091,139
AUTOMATIC BILLET CENTER PUNCHING MACHINE
William Roland Jackson, Youngstown, Ohio, assignor to Fordees Corporation, Leetonia, Ohio, a corporation of Ohio
Filed Apr. 8, 1960, Ser. No. 20,862
6 Claims. (Cl. 78—9)

1. In a billet center punching machine, a horizontally disposed cylinder having a piston reciprocable therein, an elongated piercing ram having one end connected to said piston and adapted to be reciprocated by the piston along a straight line horizontal path, a cradle structure adapted to support a billet in alignment with said piercing ram whereby the end of the ram opposite said piston may be forced into an end of said billet at the center thereof, a single pair of opposing jaws at one end of the cradle structure for clamping only the end of said billet adjacent said piercing ram, means for conveying a billet onto said cradle structure at a point removed from the clamping jaws, means for pushing a billet along the cradle structure whereby said end of the billet adjacent the piercing ram will be moved between said pair of opposing jaws, means for actuating said opposing jaws whereby



they will always be at equal distances from the longitudinal axis of said piercing ram, and a tubular member surrounding said piercing ram and adapted to be moved into the space between said opposing jaws at the completion of a piercing operation whereby said end of the billet adjacent the piercing ram will be moved out of the space between said opposing jaws.

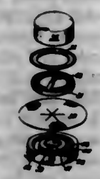
3,091,140
HYDRAULIC POSITIONING SYSTEM FOR GRIPPING HEADS OF FORGING MACHINES
Bruno Kralowetz, St. Ulrich, near Steyr, Austria
Filed Dec. 22, 1961, Ser. No. 161,529
Claims priority, application Austria Jan. 7, 1961
6 Claims. (Cl. 78—99)



1. A hydraulic positioning system which comprises a positioning member which is movable in two mutually opposite, predetermined directions, a hydraulic motor which is operatively connected to said member and adapted to be energized by pressure fluid selectively in either of two mutually opposite senses to move said member in either of said directions, a hydraulic circuit for energizing said hydraulic motor, said circuit comprising valve means electrically operable to control the energization of said motor and the sense in which it is energized, said system further comprising electrically energizable means for operating said valve means, limit switch means for controlling the energization of said electrically operable means, a plurality of adjustable cam means, each of which is arranged to operate said limit switch means in a predetermined position of said member, a feeler-controlled slide valve adapted to be connected in said circuit, a feeler

arranged to control said slide valve by a movement in a first direction, and a plurality of adjustable run-up members, each of which is associated with one of said cam means and has an oblique surface, said feeler and run-up members being arranged to be relatively moved in a second direction, which is transverse to said first direction, in response to a movement of said positioning member in either of said predetermined directions, each of said run-up members being arranged to engage said feeler with a predetermined point of its oblique surface when said positioning member is in the predetermined position in which the cam means associated with the respective run-up member operates said limit switch means, resilient means biasing said feeler in said first direction toward said run-up members, said slide valve being arranged to assume a neutral position when said feeler is engaged by said predetermined point of said oblique surface, said hydraulic circuit being arranged to energize said motor so as to move said positioning member to said predetermined position in response to a movement of said slide valve out of said neutral position when said slide valve is connected in said circuit.

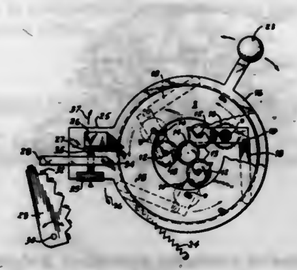
3,091,141
FABRIC-FACED BELT-BUCKLE AND FORMING DEVICE
William H. Decker, Chicago, Ill., assignor to Maxant Button & Supply Company, a corporation of Illinois
Filed Oct. 26, 1959, Ser. No. 848,579
10 Claims. (Cl. 79—5)



1. A device for effecting the interlocking nested assembly of a pair of dished base parts with a piece of fabric to form a fabric-faced product, the device comprising an elastic-material element recessed inwardly from one face to constitute a cavity substantially conforming with the contour of the larger base part, and a rigid pusher element recessed inwardly from one face to constitute a rim substaitially conforming with the contour of the smaller base part, the pusher element being adapted for repeated partial telescopic positioning in the elastic element, first, to depress into the elastic element the larger base part overlaid on the piece of fabric, and subsequently to depress into the elastic element the smaller base part to secure the interlocking nested positioning in the larger base part with the fabric perimeter interposed between the two base parts.

3,091,142
COIN SHAPED OBJECTS AND APPARATUS FOR MAKING SAME
Leslie Szikla, 300 W. 109th St., New York, N.Y.
Filed Dec. 14, 1959, Ser. No. 859,296
5 Claims. (Cl. 80—22)

1. A device for forming thickened edges on relatively thin articles comprising a support, at least three spaced apart axles mounted on said support, an element pivotally mounted on each of said axles, a roller for each of said axles mounted on its said element and connected to its axle by gearing, at least one of said rollers being grooved, said rollers being in the same plane, an area between said rollers adapted to receive an article to be treated, said article being held by said rollers, means for rotating said axles, a ring on said support, a link joining each said element with said ring whereby oscillation of said ring causes oscillation of each said element about its said axle, and urging means applied to said ring pressing said rollers against said article to cause said



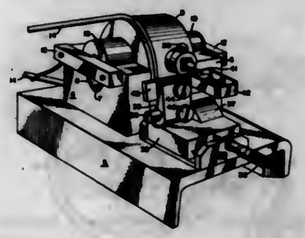
rollers to distort the edges of said article, said ring being rotatable about its center under the influence of said urging means, a switch on said ring, said switch having an actuator, a preselector having at least one bearing surface adjacent said actuator and mounted independently of said ring, said bearing surface adapted to contact said actuator as said ring rotates about its center, said switch adapted to turn off the device.

3,091,143
CLAMP MANIPULATING DEVICE
Homer E. Coy, South Bend, Ind., assignor to Ace Tool Engineering Co., Inc., South Bend, Ind., a corporation of Indiana
Filed Oct. 27, 1960, Ser. No. 65,521
6 Claims. (Cl. 81—9.3)



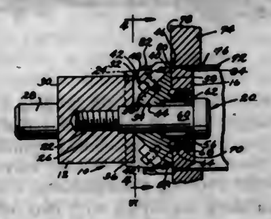
1. A device for expanding and holding a clamp consisting of a single loop of wire and radially extending ends, comprising a hollow elongated cylindrical barrel, an operating head on one end of said barrel, said head having a member forming a longitudinal track, a slot in said head paralleling said track with two offset portions, a stationary jaw at one end of said track and a movable jaw in said track at the other end thereof, said track maintaining said movable jaw in a constant angular relationship to said stationary jaw as it moves along the track, said jaws each having an inwardly and downwardly sloping wall forming a recess for holding an end of said clamp, the deepest portion of said recesses being offset from one another in the same direction as the offset portions of said slot, a pneumatic cylinder secured to the other end of said barrel, a piston in said cylinder, a linkage connecting said piston with said movable jaw movable in the direction of said head to operate said movable jaw, a spring in said cylinder for moving said piston in the direction away from said head to retract said movable jaw, a conduit for connecting said cylinder on the side of said piston opposite said spring with a source of compressed air, and a switch mounted on said device adjacent said cylinder for controlling the operation of said cylinder and piston.

3,091,144
METHOD OF CUTTING SUBSTANCES
Humberto Fernandez-Moran Villalobos, Villagatan 9–11, Stockholm, Sweden
Original application Oct. 6, 1954, Ser. No. 460,745, now Patent No. 2,961,908, dated Nov. 29, 1960. Divided and this application Jan. 5, 1960, Ser. No. 5,328
2 Claims. (Cl. 83—15)



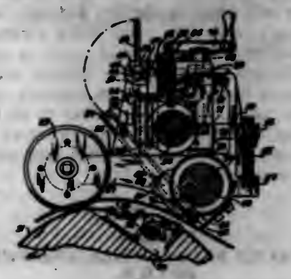
1. A method of producing sections of molecular thickness having dimensions of the order of 0.01–0.001 micron from macromolecular substances, which comprises cooling the substance to a temperature below about —180° C., cooling a holder for the substance to be cut to a temperature below about —180° C., mounting said substance to be cut on said holder, rotating said holder and the substance thereon adjacent a diamond knife having an edge thickness of at most 0.01 micron, allowing said holder to expand by heating to thereby cause feeding of said substance to said knife, and cutting said substance into sections at a rate of the order of 100 separate independent sections per second, the surrounding atmosphere being maintained between —15° C. and room temperature.

3,091,145
FLASH TRIMMING TOOL FOR NON-CIRCULAR TUBULAR MEMBERS
Alfredo Manganelli, Proctor, Vt., assignor to Vermont Marble Company, Proctor, Vt., a corporation of Vermont
Filed Mar. 15, 1960, Ser. No. 15,120
9 Claims. (Cl. 83—184)



1. A flash trimming tool for trimming the open end of a non-circular, tubular member, comprising a guide chuck having a similar non-circular through-bore terminating in a shearing edge for receiving and retaining said tubular member with the portion to be sheared extending beyond said edge, a rotatable shearing member of similar non-circular shape adapted to enter the portion of the member to be sheared, a pilot chuck of similar non-circular shape coaxially mounted adjacent to said shearing member and means disposed between the pilot chuck and shearing member to provide relative rotation therebetween, said pilot chuck being adapted to fit within the interior of the tubular member to support the same within the guide chuck so as to position the rotatable shearing means for cooperation with the guide chuck shearing edge, and axially extending and radially protruding slitting means carried by said shearing member adjacent said pilot chuck for slitting the tubular member upon insertion of the shearing member to provide for less than complete rotation of the shearing member during severance of the tubular member.

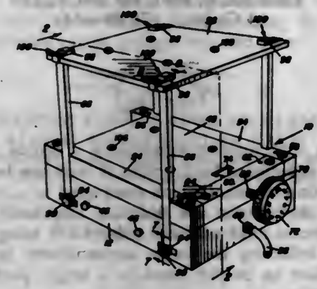
3,091,146
SELECTIVELY RELEASABLE OVERCENTER MEANS FOR SLITTER MECHANISM
Robert A. Bulk, Garfield Heights, Ohio, assignor to Harris-Intertype Corporation, Cleveland, Ohio, a corporation of Delaware
Filed Jan. 31, 1958, Ser. No. 712,419
10 Claims. (Cl. 83—433)



1. In a mechanism comprising a rotating cylinder having an axially extending gap in the periphery thereof and carrying sheet-like material, a device for slitting said sheet-like material, said device comprising a circular slitting knife adjacent said cylinder and having a slitting position with the periphery thereof substantially in engagement with said cylinder and where said gap periodically passes under said knife upon rotation of said cylinder, support means supporting said knife for rotation about an axis stationary with respect to said support means, means mounting said support means for movement in a first direction to move said knife toward said cylinder and toward said slitting position and for movement in a second direction to move said knife from said position and in a direction away from said rotating cylinder, stationary stop means adjacent said support means and engaged by a part on said support means when said knife is in said slitting position to limit said support means and knife against movement in said first direction, and means for selectively actuating said support means in its said first and second directions including releasable over-center means operatively connected to said support means for selectively and positively holding said part against said stop means thereby preventing movement of said support means and part away from said stop means in said second direction.

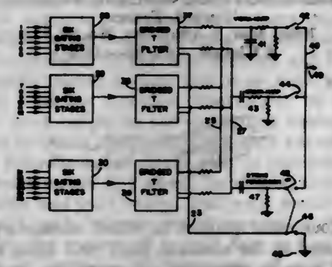
3,091,147
GUIDE MEANS FOR ADJUSTABLE HYDRAULIC PRESS
Walter V. Holl, 3621 N. Hereford Lane, Philadelphia 14, Pa., and Joseph J. Morrison, 33 King Ave., Marlton, N.J.
Filed July 31, 1959, Ser. No. 830,755
5 Claims. (Cl. 83—568)

1. A fitting press comprising a base, guides on the upper portion of said base, a platen seated between said guides and in overlying relation to said base for guided vertical and longitudinal movement with respect to the base and the guides, a micrometer adjustment screw carried by said guides, means operatively connecting said adjustment screw to said platen for longitudinally positioning said platen and accommodating relative vertical movement between the guides and the platen, extensible fluid motor means in said base and underlying said platen, and means operatively connecting the fluid motor means to the platen for elevating the platen under evenly and equally applied pressure from the motor means, said fluid motor means including a piston rod, an interlocked connection between said platen and said piston rod



locking said platen to said piston rod for vertical movement therewith while permitting relative longitudinal sliding movement of said platen with respect to the piston rod.

3,091,148
TONE COLOR CIRCUITS FOR ELECTRICAL ORGANS
Walter Munch, Jr., Covington, Ky., assignor to The Baldwin Piano Company, Cincinnati, Ohio, a corporation of Ohio
Filed Aug. 4, 1959, Ser. No. 831,636
7 Claims. (Cl. 84—1.19)



1. In an electrical organ having generators for producing complex oscillations and an output system, a percussive system comprising gating circuits coupled to said generators and actuable by playing key switches, bridged T amplifier circuits receiving the outputs of said gating circuits, a first header receiving the outputs of said bridged T amplifiers, an output header, and a linear filter means interposed between said first header and said output header.

3,091,149
WRESTPLANKS
Frank H. Walsh, West Hempstead, N.Y., assignor to Steinway & Sons, Long Island City, N.Y., a corporation of New York
Filed Nov. 20, 1959, Ser. No. 854,375
2 Claims. (Cl. 84—269)



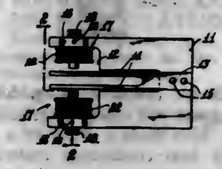
1. A wrestplank for use in a stringed instrument comprising a first outer working ply, a second outer working ply, and two median working plies, a tuning pin extending through said plies, the grain of said outer working plies being parallel with respect to the transverse dimension of the wrestplank, the grain of said median working plies being substantially perpendicular to each other and enclosing angles of about 45° with the grain of said first and second outer working plies respectively, whereby said tuning pin is substantially surrounded by and in engagement with end wood.

3,091,150
STRINGED MUSICAL INSTRUMENT FINGER BOARD
Peter P. Scesa, 4501 Holleyline, Santa Ana, Calif.
Filed Aug. 30, 1961, Ser. No. 134,897
1 Claim. (Cl. 84—293)



A string musical instrument such as a guitar or the like comprising a body and a finger board extending outwardly from said body and having bass and treble side edges, tense strings extending over the top of the finger board and adapted to be reached by the fingers of the left hand while the neck is being retained in the hand, said finger board being in section of continuously generally arcuate parabolic shape uniformly throughout the entire length of the finger board except for a slight tapering from the body to the free end, the bottom face thereof having an apex, said apex being offset with respect to a central axis and lying adjacent to the bass edge of the finger board and within the first quarter of the width thereof whereby the bottom face of the finger board will comfortably fit the crotch of the hand between the thumb and forefinger thereof.

3,091,151
ELECTROMECHANICAL OSCILLATORS
John A. Cunningham, Batavia Township, Kane County, Ill. (Rte. 1, Box 7, Batavia, Ill.)
Filed Nov. 18, 1960, Ser. No. 70,190
2 Claims. (Cl. 84—457)



1. In combination with a tuning fork, single pole electromagnet controlling the vibration of said fork, the pole faces of said electromagnets being located near the free ends of the tines of said tuning fork, and means to adjust the pole faces of the electromagnets toward and away from the tines to obtain the critical air gap to maintain an effective zero coefficiency of frequency versus temperature for the tuning fork.

3,091,152
VISUAL INSTRUCTING DEVICE
Elmer H. Bridges, East Kingston, N.H.
Filed Mar. 1, 1962, Ser. No. 176,524
4 Claims. (Cl. 84—478)

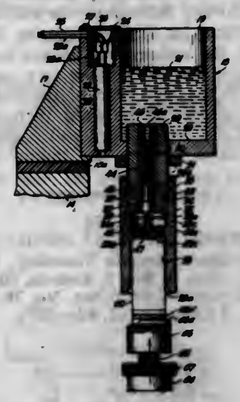
1. Indicating apparatus for use in combination with an organ console having at the top a finger keyboard, a for-

wardly projecting ledge supporting the finger keyboard, and a pedal keyboard at the base beneath the ledge situated out of sight of a player seated in playing position, comprising a device located adjacent the finger keyboard and bearing indicia having the same relative position to each other as the pedals of the pedal keyboard, means



for illuminating the indicia, and means located at the base of the console adjacent the pedal keyboard, said means being operative, by depression of the pedals, to effect illumination of the indicia on the said device above the said ledge, corresponding to the pedals depressed, so as to indicate to the player the position of the feet on the pedal keyboard below the ledge.

3,091,153
APPARATUS FOR TREATING AND SEALING RELOADED SHOT SHELLS
Dean W. Roper, 3100 N. 60th St.; Charles L. Davis, 6501 "X" St.; and Claude H. Wingrove, 5300 Leighton Ave., all of Lincoln, Nebr.
Filed Oct. 7, 1960, Ser. No. 61,296
11 Claims. (Cl. 86—17)



1. In apparatus for properly sizing, conditioning and sealing the casing and end crimp of reloaded shot shells, the combination with such a shell of a support member composed of heat conducting material and having a solid base and upstanding side walls forming a hollow space therein, a boss extending upwardly centrally of said base, a central tube member also of heat conductive material and having a cylindrical inside surface and connected with said boss whereby to stand upright between the side walls of said support member and define therewith a chamber surrounding the tube member, said tube having an inside diameter closely conforming to that of the casing but permitting insertion of the end of the casing therein and a length less than the length of said shell, ports in said tube communicating between said chamber and the interior of the tube, a melted coating and sealing material in said chamber, and heat supplying means connected with said support means whereby to heat the walls of said support means and tube member sufficiently to maintain said coating and sealing material in flowable condition.

3,091,154
REFLECTOMETER
Richard W. Hall, New Canaan, Conn., assignor to Barnes Engineering Company, Stamford, Conn., a corporation of Delaware
Filed Jan. 6, 1961, Ser. No. 81,137
4 Claims. (Cl. 88—14)



1. In a reflectometer comprising a source of optical radiation and means for forming at least one beam therefrom the improvement which comprises

(*a*) in combination and in optical alignment in at least one beam three mirrors, at least one being movable, and reflecting the beam consecutively in series to produce an output beam in a single predetermined direction,

(*b*) means for supporting a surface, the reflection of which is to be measured, in the beam between the first and the last of the three mirrors, and

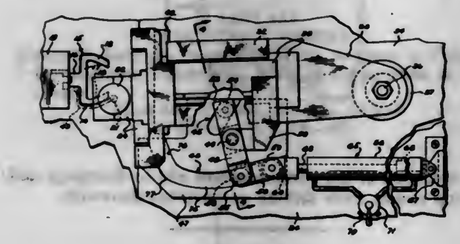
(*c*) means for rotating the last mirror and translating it to a position to receive reflected radiation from the surface to be measured and to reflect radiation in said predetermined direction whereby there is no change in the number of reflecting surfaces except for the addition of the surface, the reflectance of which is to be measured.

3,091,155
METHOD OF OBTAINING COLOURED IMAGES
Jean Robert Huet, 41 Rue de Richelieu, Paris I, France
Filed Mar. 1, 1961, Ser. No. 92,571
8 Claims. (Cl. 88—16.4)



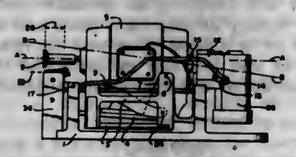
1. A four color process in which elementary images are produced at the standard black and white repetition rate, said process consisting in segregating an incoming beam of white light into four separate complex color components, interposing a first color filter and a second color filter simultaneously into the path of the white light to produce two adjacent color images in a picture space, thereafter interposing a third color filter and a fourth color filter simultaneously into the beam of white light to produce two adjacent color images in an adjacent picture space, repeating the aforementioned interposing of the said pairs of color filters into the beam of white light, the four color filters each being homogeneous and having light transmitting characteristics corresponding to complex color components determined as follows: the visible radiations taken as extending from 380–740 mμ being distributed into four groups, namely, a first group comprising the blue (440–500 mμ) and dark red (680–740 mμ) bands, a second group comprising the green (500–560 mμ) band, a third group comprising the yellow (560–620 mμ) band and a fourth group comprising the red (620–680 mμ) and violet (380–440 mμ) bands, each said complex color component built on fundamental color constituents consisting of the additive mixture of one fundamental constituent color with said color belonging to one of the four aforementioned groups and at least one subsidiary constituent color, said subsidiary color being added to each of said fundamental constituents of the filter and being from one of the two groups next to the group to which said fundamental constituent belongs, with exclusion of the opposite group containing the color which is complementary to said fundamental constituent color, said first and second mentioned filters corresponding to complex color components from groups one and three and the third and fourth filters corresponding to complex color components from groups two and four.

3,091,156
MECHANISM FOR MOVING AN ELEMENT ALONG AN IRREGULAR PATH
Earl B. Dickison, Indianapolis, Ind., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed Sept. 26, 1960, Ser. No. 58,385
9 Claims. (Cl. 90—13)



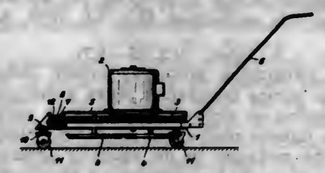
1. In an apparatus of the type described, a work holder, means for supporting said work holder, a member mounted on said supporting means for movement thereon in a first direction, a tool holder mounted on said member for movement therewith in said first direction and for movement relative thereto toward and away from said work holder in a second direction transversely of said first direction, track means on said supporting means, a lever connected pivotally intermediate the ends thereof to said member, follower means on the ends of said lever engaging said track means, and means for moving said follower means along said track means, said track means in cooperation with said follower means serving to guide said tool holder for movement in said first and said second directions in response to movement of said follower means along said track means.

3,091,157
KEY DUPLICATING MACHINE
Ernesto Minganti, Via S. Isaia 55/A, Bologna, Italy
Filed Feb. 2, 1961, Ser. No. 86,784
Claims priority, application Italy Feb. 4, 1960
1 Claim. (Cl. 90—13.05)



In a duplicating machine, including a base having a head at one end thereon, retaining means consisting of upper and lower clamp assemblies, each assembly including a stationary jaw and a spring-biased movable jaw urged in clamping position towards the stationary jaw to hold the blank key and the model key on said head, milling means, a single motor for driving the milling means, a follower assembly means for moving the follower assembly over the model key and the milling means over the blank key; the improvement comprising a suspension system pivotally mounting the milling means and the follower assembly and synchronizing the vertical and horizontal movements of said milling means with that of the follower assembly passing over the contour of the model key, said suspension system including a mobile frame on each side of said base frame which is mounted for longitudinal movement therealong, a U-shaped lever pivotally mounted at each end of the rear portion of said mobile frame which has its arms about said single motor, said follower assembly being mounted on the bight portion of said U-shaped lever to overlap said clamping jaws, a motor base having upstanding legs on its rear portion which is pivotally connected to the upper rear portion of the mobile frame at the upper ends of said legs whereby the weight of the motor distributed by the mobile frame urges the follower down onto the contour of the model key and also urges the milling means downwardly onto the surface of the blank key, an upper link at each side of said mobile frame, one of said upper links being pivotally connected at one end to the forward portion of the base frame, a support slidably mounted in said head, the other of said upper links connected to said slidable support in said head whereby pressure is exerted by said support on movement of said frame from right to left, a lower link at each side of said mobile frame, each of said lower links being pivotally connected to the forward portion of said mobile frame and one of said lower links being connected to said slidable support in said head, an index follower mounted on said head for controlling the vertical cutting movement of said milling means, a spacing link on each side of said motor connected to opposite sides of said mobile frame, and each pivotally connected to the forward portion of the U-shaped lever, said spacing links being always disposed vertically and opposite said index follower whereby the milling means is maintained in vertically spaced relation to said slidable support in the head for mounting the keys, the longitudinal movement of said support with associated milling means being reversible and said motor and milling means being pivotally movable away from said keys, and a cam bar and jaw links for pivotal connection of said bar to move the jaw assembly to open and closed position.

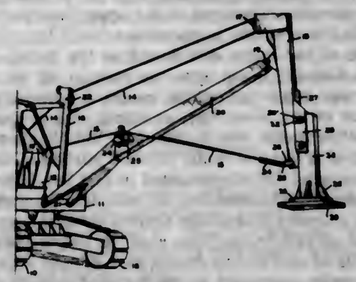
3,091,158
APPARATUS FOR SMOOTHING AND COMPACTING PLASTIC LAYERS
Fritz Bünger, Berlin-Schoneberg, and Horst Schücke, Munich, Germany, assignors to Dr. Alois Sommer, Hamburg-Wilhelmsburg, Germany
Filed Mar. 7, 1956, Ser. No. 570,140
Claims priority, application Germany Mar. 9, 1955
3 Claims. (Cl. 94—45)



1. In a power trowel adapted to compact and smooth a floor layer of deformable plastic material before setting, a horizontal frame member, a handle rigidly affixed to said frame member, a plurality of equal area trowel discs rotatably supported by said frame member and adapted

to rotate in a common horizontal plane about parallel vertical axes, said discs adapted to float upon the surface of the deformable plastic material to be surfaced for support of said frame member, each disc supporting an equal portion of the power trowel's weight, a motor centrally mounted upon said frame member and drive means interconnecting said motor and said discs for rotation of said discs upon energizing of said motor.

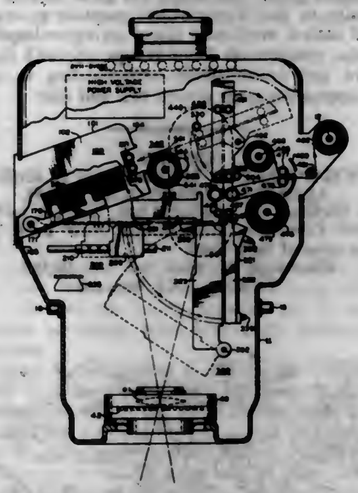
3,091,159
EARTH TAMPER
John L. Miller, 195 W. 17th St., Dubuque, Iowa
Filed July 31, 1959, Ser. No. 830,931
1 Claim. (Cl. 94—49)



An earth tamping machine comprising a vehicle, a boom pivoted at one end to said vehicle to extend outwardly therefrom, a substantially upright dip stick pivoted on the outer end of said boom at a point on said dip stick above its center portion to provide a short portion of said dip stick above said pivot point and a longer portion of said dip stick below said pivot point, a saddle mounted on the forward side of said longer portion of the dip stick, a post detachably secured in said saddle, a transverse tamping plate on the lower end of said post, a first windlass driven cable extending from said vehicle to the upper end of said short portion of the dip stick, a second windlass driven cable extending from said vehicle to the longer portion of said dip stick, so that when the first cable is wound on the windlass it will swing the dip stick on its pivot so far as permitted by the second cable and then raise the boom and the dip stick together and when the cables are unwound they will permit the boom and dip stick with the tamping plate to drop by gravity, the combined weight of the tamping plate, dip stick and boom creating a compacting force similar to that of a wielded hammer.

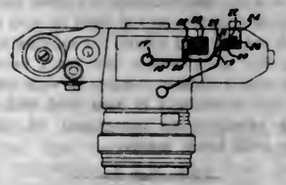
3,091,160
XEROGRAPHIC PLATE FEEDING AND SUPPORTING APPARATUS
Herbert E. Crumrine, Rochester, and Charles L. Huber, Byron, N.Y., assignors to Xerox Corporation, a corporation of New York
Original application June 3, 1957, Ser. No. 663,085. Divided and this application Dec. 24, 1958, Ser. No. 782,771
5 Claims. (Cl. 95—1.7)

1. In a xerographic processing system including a magazine for storing xerographic plates, a charging apparatus for placing an electrostatic charge on such plates, and a plate transfer mechanism for passing plates seriatim from the magazine to the charging apparatus, the combination of means for supporting a xerographic plate for exposure to a subject to form a latent electrostatic image of the subject thereon, said last-recited means comprising a backing plate arranged to position a xerographic plate in the focal plane of a camera, vacuum means operable to secure a xerographic plate to said backing plate, driving means for positioning a xerographic plate in juxtaposition to said backing plate, and means actuated by a xerographic plate in transit to effect



the operation of the vacuum means and to disengage said driving means from driving engagement therewith.

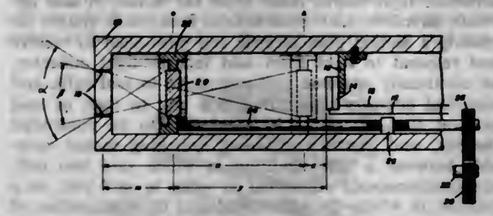
3,091,161
CAMERA INCORPORATING EXPOSURE MEASURING DEVICE
Saburo Matsumoto, Tokyo, Japan, assignor to Asahi Optical Industry Co., Ltd. (Japanese name: Asahi Kogaku Kogyo Kabushiki Kaisha), Tokyo, Japan, a corporation of Japan
Filed May 29, 1961, Ser. No. 113,198
Claims priority, application Japan June 18, 1960
8 Claims. (Cl. 95—10)



1. In combination with a camera including a main picture lens adapted to focus an image on a frame delineated focal plane, a light sensitive element of relatively small area movable between an advanced position substantially in registry with a small fraction of said focal plane and a retracted position spaced from said advanced position, a current meter electrically connected to said light sensitive element and including an indicator member disposed in the vicinity of said focal plane and a viewing lens focussed on said focal plane and affording a concurrent view of said indicator member, said image and the image intercept of said light sensitive element.

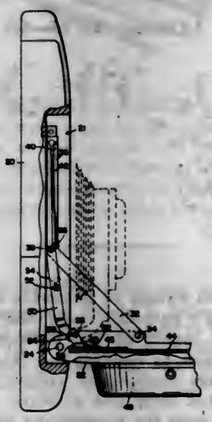
3,091,162
ZOOM PHOTOMETRIC SYSTEM
Allen G. Stimson, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed Aug. 6, 1962, Ser. No. 214,979
3 Claims. (Cl. 95—10)

1. In a camera having a photocell illuminatable by field light through an aperture, means for changing the effective field angle of the photocell while maintaining the illumination thereof substantially constant, said means comprising a light-transmitting and light-diffusing member mounted between said photocell and said aper-



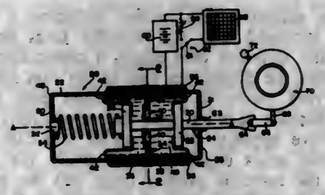
ture for receiving field light and for transmitting a portion thereof to said photocell, and means for moving said member back and forth between said aperture and said photocell.

3,091,163
FOLDING CAMERA
Robert T. Sullivan, Norwood, Mass., assignor to Polaroid Corporation, Cambridge, Mass., a corporation of Delaware
Filed Jan. 5, 1961, Ser. No. 80,931
1 Claim. (Cl. 95—40)



A folding camera comprising a camera body having an opening therein, a lens and shutter assembly operatively connected by expansible and collapsible means to said body within said opening, a substantially rectangular camera bed hingedly connected at one of its edges to said body along one side of said opening, said bed being movable about its hinged connection between a closed position wherein said bed substantially covers said opening and an open position wherein said bed extends substantially perpendicularly from said body, latch means for releasably retaining said bed in said closed position, a carrier element mounted upon said bed for linear movement thereon away from and toward said body from a position adjacent said opening, said lens and shutter assembly being mounted on said carrier element for movement therewith, a substantially straight erecting link pivotally attached at a first end thereof to said camera bed and having a pin extending from the second end thereof to slidably engage a slot on said body, said slot having an engagement portion at one end thereof into which said pin is resiliently urged by spring means when said bed is in said open position, a substantially straight disengagement link pivotally attached between its ends to said body, an actuating member pivotally mounted on said carrier element for movement therewith, an ear on said actuating member which engages the lower end of said disengagement link during movement of said carrier element, spring means urging said actuating member into a first position from which said actuating member may be pivotally moved in one direction only, said actuating member being moved about its pivotal mounting by engagement of said ear with said disengagement link during movement of said carrier element away from said body and said disengagement link being moved about its pivotal mounting by said actuating member during movement of said carrier element toward said body, said disengagement link having an upper end which is moved into engagement with a projection on said erecting link when said disengagement link is moved about its pivotal mounting by said actuating member, said pin being moved out of said engagement portion of said slot by movement of said erecting link through engagement of said projection by said disengagement link whereby said bed may be moved to said closed position upon movement of said carrier element to the end of said bed adjacent said opening.

3,091,164
PHOTOGRAPHIC APPARATUS
Edwin R. Brandt, Marblehead, Mass., assignor to Polaroid Corporation, Cambridge, Mass., a corporation of Delaware
Filed Sept. 26, 1960, Ser. No. 58,557
11 Claims. (Cl. 95—54)

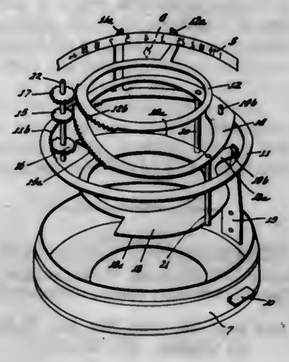


1. In a shutter mechanism in which the exposure time interval is a function of the speed of movement of a moveable member forming a portion of said shutter mechanism, a device for controlling the exposure time intervals comprising, in combination, a displaceable fluid the apparent viscosity of which is variable in accordance with the degree of magnetization thereof, movable means coupled with said movable member for moving said fluid, the speed of movement of said movable means being a function of said viscosity, and means for predeterminedly magnetizing said fluid for controlling the viscosity thereof so as to effect changes in said exposure time intervals.

3,091,165
PHOTOGRAPHIC CAMERA
Erwin Weller, Calmbach (Enz), Germany, assignor to Alfred Gauthier G.m.b.H., Calmbach (Enz), Germany, a corporation of Germany
Filed Aug. 26, 1959, Ser. No. 836,300
Claims priority, application Germany, Sept. 2, 1958
1 Claim. (Cl. 95—64)

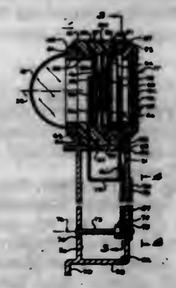
In a photographic camera, a diaphragm adjusting ring, a depth of focus adjusting arrangement comprising two oppositely turnable pointer rings having segment gear teeth thereon, a transmission gear drive means operable in response to adjustment of the diaphragm ring for oppositely turning said turnable rings, indicating pointers respectively projecting from the respective oppositely turnable pointer rings, said indicating pointers thereby being moved oppositely with respect to each other, a depth of focus or range adjusting ring having a distance scale thereon, said indicating pointers being movable over said distance scale, an annular segment gear separate from

said turnable pointer rings and constituting a part of said gear drive means, said two turnable pointer rings and the segment gear having parallel planes of motion, a fixedly located pivot means for said segment gear located eccentrically with respect to the axis of rotation of the turnable pointer rings, said segment gear being pivoted upon said eccentric pivot means and having a tooth portion formed about the eccentric pivot axis of the annular segment gear, said tooth portion being located diametrically opposite the fixedly located pivot means, said gear drive means operable in response to adjustment of said



diaphragm adjusting ring further including a cam ring coaxially arranged with the turnable rings and having diametrically opposite cam edges, a connecting arm extending from the diaphragm ring to the cam ring to turn the cam ring therewith, cam follower pins projecting from the annular segment gear and respectively engaging the respective opposite cam edges of said cam ring and pinion drive gears engaging respectively the gear segments of the turnable pointer rings and the gear tooth portion of the segment gear, a common shaft having its axis parallel to the axis of the turnable pointer rings, said pinion drive gears being fixed to said common shaft.

3,091,166
PHOTOGRAPHIC DEVICE RESPONSIVE TO BOTH INCIDENT AND REFLECTED LIGHT
Donald W. Norwood, 1470 San Pasqual St., Pasadena, Calif.
Filed Dec. 7, 1959, Ser. No. 857,959
10 Claims. (Cl. 95—64)



2. A photographic device comprising a body, a reflected-light acceptance system carried by said body and including a reflected-light collector facing in a first direction at a location to receive light approaching said device from a photographic scene offset in said first direction from the device, said system including a first photoelectric cell positioned to receive and respond to light from said reflected-light collector, an incident-light acceptance system carried by said body and including a translucent convex incident-light collector facing in a direction essentially the opposite of said first direction at a location to accept light approaching said device from a remote light source offset from the device in said opposite direction; said incident-light acceptance system including a second photoelectric cell positioned to receive and respond to light from said incident-light collector, an electrically operated unit responsive to said cells, and electrical circuitry connecting said unit to both of said cells at the same time in a relation to be controlled thereby, said circuitry including switching means operable between a first condition in which said two cells are simultaneously connected in series to said unit, in a relation in which the effect produced by energization of one cell adds to the effect produced by energization of the other cell, and two additional conditions in which said two cells respectively are connected separately in operational relationship to said unit to control it separately.

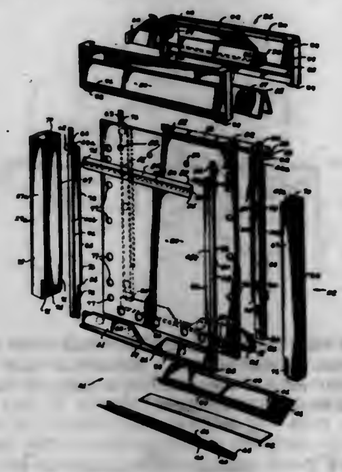
3,091,167
VISUAL SIGNAL FOR PHOTOGRAPHIC CAMERAS
Cameron B. Estes, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Original application Sept. 10, 1959, Ser. No. 839,104. Divided and this application June 20, 1962, Ser. No. 203,820
3 Claims. (Cl. 95—64)



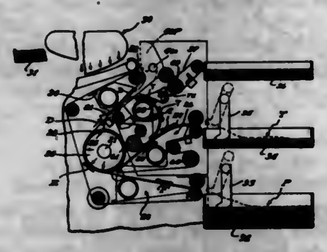
1. In a camera having an automatic exposure control system including a photocell and a member moved automatically under control of said photocell as a function of scene brightness to regulate the exposure of film in said camera, the combination comprising: means including an electric lamp and a source of electrical potential for said lamp for transmitting light to a viewing locus visible from outside of the camera; signal control means comprising a scale device disposed in cooperative relation with said transmitting means and moved by said member for modifying the light transmitted to said locus in accordance with the position of said member, said scale device having areas of contrasting light transmission defining scale indicia and having a path of movement intersecting the light transmitted to said locus; and a baffle having a pinhole aperture interposed between said lamp and the path of said scale device.

3,091,168
FILM HOLDER
Carroll C. Craig, 1614 Victory Blvd., Glendale 1, Calif.
Filed Oct. 9, 1959, Ser. No. 845,375
12 Claims. (Cl. 95—66)

1. A cut film holder comprising: a septum having front and rear sides, and bottom, side and top edges, said septum having apertures formed therethrough; a lower transverse member formed of front and rear transverse member portions attached together and to the septum by bosses extending through apertures in said septum at the lower end of said septum; an upper transverse member near the edge of said septum, said upper transverse member being formed of front and rear upper transverse member portions attached together and to the septum by means of bosses extending through apertures in said septum; interlocking means located adjacent either end of said upper transverse member near the respective side edges, each of said interlocking means including a front and rear locking portion which are attached together and to the septum by means of bosses extending through apertures in said septum; a guide portion rigidly mounted to a respective one of said interlocking means; and top frame means extending along the top edge of said septum, said top frame means having lugs which interlock with recesses in said interlocking means, said top frame means also having tabs which fit into relieved portions on said guide portions of said side frame means.

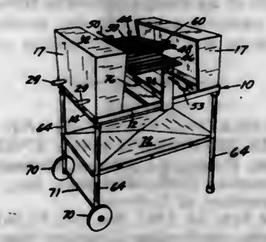


3,091,169
AUTOMATIC PHOTOPRINTING MACHINE
John Taini, Chicago, and Edwin S. Johnson, Glenview, Ill., assignors, by mesne assignments, to Ditto, Incorporated, Chicago, Ill., a corporation of Illinois
Filed June 29, 1960, Ser. No. 39,578
23 Claims. (Cl. 95—77.5)



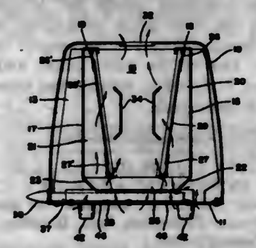
23. Automatic photoprinting apparatus for handling cut sheets of copy material individually and comprising a translucent exposure member having a light source associated therewith to provide an exposure path along said member, means including a feeder for sheets of copy material and a feeder for sheets of original material for feeding to said exposure path conjointly and in substantial registry a sheet of copy material and a sheet of original material, means for continuously moving said last named sheets along said exposure path and towards a delivery point, transfer means between said exposure path and delivery point for feeding only the exposed sheet of original material along a transfer path leading to the entrance to said exposure path, and control means responsive to the presence of sheet material moving from said exposure path towards said delivery point for disabling said feeder of original material and for actuating said feeder of copy material to feed a sheet thereof to arrive at said exposure path conjointly with the refed sheet of original material.

3,091,170
CHARCOAL BROILER
Raymond E. Wilson, 4163 Forrest Court, White Bear Township, Ramsey County, Minn.
Filed Apr. 13, 1959, Ser. No. 806,140
1 Claim. (Cl. 99—390)



A charcoal broiler comprising a supporting frame; a pair of spaced parallel guide flanges disposed on the top of said frame; a pair of vertically disposed opposed box-like reflector ovens slideably sitting on said frame between said guide flanges for movement toward and away from each other, the facing front sides of said ovens being open, and the rear sides, top surfaces and end walls thereof being essentially imperforate; a shallow fuel receptacle fixedly disposed at the bottom of each of said ovens of a depth to retain therewithin a layer of charcoal briquettes, said receptacles being bounded on the rear and ends respectively by the downward extensions of said rear and end walls, and on the front by an imperforate panel which extends across the front of said ovens and which joins said end wall extensions; said box-like ovens being otherwise free of mechanical interconnection with said guide flanges and said frame, and being removable therefrom for emptying said fuel receptacles simply by the act of lifting them upwardly with respect to said top of said frame; a pair of opposed spaced generally vertical supports disposed on said frame between and independently of said ovens and approximately parallel therewith; and a grill extending between said ovens rotatably carried by and between said supports independently of the movement of said ovens.

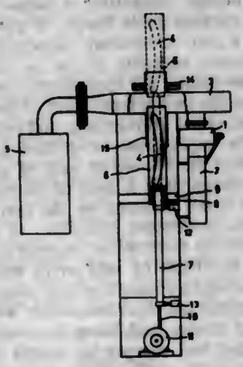
3,091,171
BROILER
David F. Cole, 513 Beechwood Drive, Mansfield, Ohio
Filed Sept. 15, 1960, Ser. No. 56,161
2 Claims. (Cl. 99—400)



1. An electric broiler comprising an outer substantially completely closed shell having feet which space the bottom thereof above a support surface, interior walls defining an

inner shell open at the top and bottom within said outer shell, a pair of electric radiant heating elements supported within and respectively adjacent opposed side of the inner shell, the top of the outer shell being provided with a slot for insertion of a meat holder between said heating elements, a removable drip tray beneath the inner shell to collect and contain fluids draining from meat being broiled therein, and a series of ports provided in the bottom of the outer shell about the drip tray for admittance of ambient air, convection currents being produced in operation of the broiler proceeding from said ports upwardly through the inner shell and over the heating elements to the top slot of the outer shell, with such upward circulation of air being effective to eliminate smoking of grease particles contacting the heating elements which would occur in a broiling operation without such flow of air.

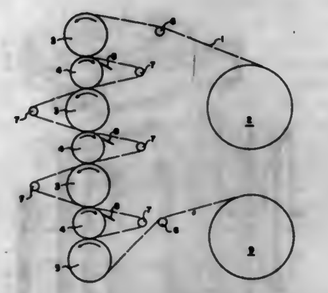
3,091,172
DEVICE FOR HEATING SAUSAGES AND THE LIKE BY VERY HIGH-FREQUENCY ENERGY
Max Wildemann, Hamburg-Lockstedt, Germany, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Feb. 24, 1961, Ser. No. 91,361
Claims priority, application Germany Mar. 8, 1960
7 Claims. (Cl. 99—427)



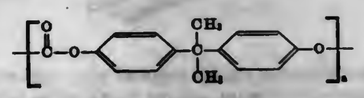
1. Apparatus for heating a food body of elongated form, comprising a hollow wave guide having a longitudinal axis, a source of high frequency energy connected to the wave guide at one end thereof, a wave energy terminating resistor connected to the wave guide at the other end thereof thereby to produce a travelling field through the wave guide, tubular container means transparent to high frequency waves and having a longitudinal axis, means for supporting the tubular container for passage through the wave guide with its longitudinal axis transverse to the longitudinal axis of the wave guide, means for moving the container along the longitudinal axis thereof through the wave guide, means for supporting a food body in the container for movement transverse to the longitudinal axis of the wave guide, and means for rotating the food body while moving the same transverse to the axis of the wave guide.

3,091,173
SYNTHETIC ARTICLE
Gawain B. Koch, Oley, Pa., assignor, by mesne assignments, to Polymer Processes, Inc., Reading, Pa., a corporation of Pennsylvania
Filed May 19, 1961, Ser. No. 111,217
1 Claim. (Cl. 100—162)

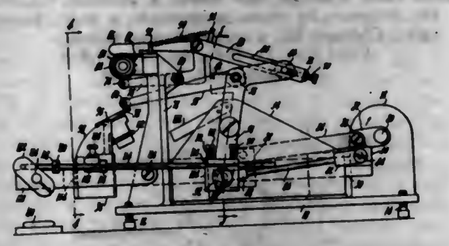
Apparatus for supercalendering paper comprised of a vertical stack of rolls and a frame means, said stack of rolls comprised of a series of alternate hard and soft rolls mounted for rotation and held in vertical alignment and touching relationship to each other by said frame means; means for feeding paper to be supercalendered into said stack of rolls and means for withdrawing paper after it has passed through said stack of rolls; drive means for



driving at least the lowermost roll of said stack of rolls; characterized in that at least a substantial outer portion of said soft rolls is comprised of a polyaryl carbonate having the structural formula:

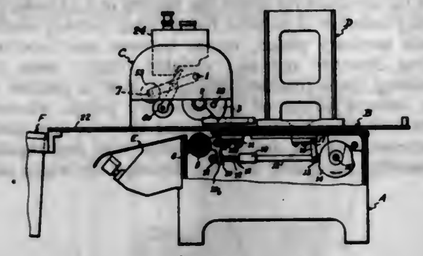


3,091,174
PRINTING MACHINE
Bertrand G. Harvey, Keene, N.H., assignor to Markem Machine Company, Keene, N.H., a corporation of New Hampshire
Filed Dec. 23, 1960, Ser. No. 78,122
11 Claims. (Cl. 101—41)



1. Apparatus for printing indicia on small, irregularly shaped articles comprising a printing medium reservoir, a printing die having an indicia configuration, an offset printing head mounted adjacent said printing die, means to transfer printing medium from said reservoir to said printing die in a smooth layer, and drive means including first means to rotate said offset head between a first position in alignment with said printing die and a second position in alignment with the article to be imprinted, second means operative when said offset head is in said first position to move said printing die in straight line motion toward said offset head to transfer printing medium from said printing die to said offset head and third means to move said offset head towards the article when said offset head is in said second position for application of the printing medium carried by said offset head to the article to be printed.

3,091,175
ADDRESSING MACHINE
Fernand G. Usselmann, 42 Avenue Le Nôtre, Sceaux, France
Filed May 22, 1959, Ser. No. 815,083
Claims priority, application France June 9, 1958
7 Claims. (Cl. 101—49)



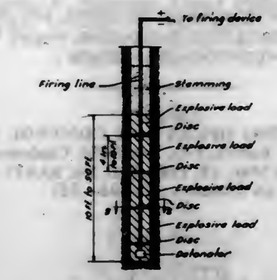
1. In a stencil printing machine, in combination, a rotatable backing cylinder, a rotatable printer segment extending over a portion of the circumference of said rotatable backing cylinder, means mounting said backing cylinder for reciprocation towards and away from the rotational path of said segment at one point of said path so as to be engageable by said segment during one portion of each revolution thereof, an inking roller rotatably supported adjacent to and radially inward of the rotational path of said segment at a point angularly spaced from said first point to be engaged by said segment during another portion of each revolution, means dispensing ink to said roller, motive means, a first drive from said motive means to said cylinder-mounting means to reciprocate said cylinder towards and away from said segment, means for sequentially feeding stencils between said segment and cylinder in contiguous relation with the surface being printed, a second drive from said motive means to said stencil feeding means synchronized with said first drive so as to feed said stencils at instants at which said cylinder is adjacent said segment, a third and a fourth drives from said motive means to said segment and roller respectively to rotate said segment and roller at corresponding peripheral velocities, whereby said segment will engage the roller during one portion of each revolution to receive ink therefrom and will transfer said ink through said stencil to said printing surface during another portion of each revolution.

3,091,176
PLASTIC PRINTING PLATES
James F. Wall, 614 Wolcott Hill Road, Wethersfield, Conn.
Filed Aug. 18, 1960, Ser. No. 50,456
2 Claims. (Cl. 101—395)



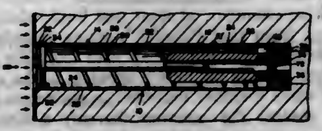
1. A printing plate having a printing surface at one side thereof and comprising a body of plastic material having imbedded therein a perforated reinforcing plate with holes therethrough at least as large as the thickness of said reinforcing plate, and a perforated barrier plate between said reinforcing plate and printing surface, said barrier plate being of a lesser thickness than the reinforcing plate and having holes therethrough substantially smaller than the holes of said reinforcing plate.

3,091,177
METHOD FOR LOADING A BORE HOLE
Carl E. Grebe, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Filed Aug. 11, 1960, Ser. No. 49,017
5 Claims. (Cl. 102—22)



3. A method for loading a bore hole which comprises:
(*a*) placing into a bore hole an electron conducting disc-like member having at least one plane the periphery of which is defined by a circle, said member having a maximum diameter smaller than that of the diameter of the said bore hole and said member being nonstructurally confining of an explosive blast,
(*b*) positioning said member so that the plane defined by the said periphery is substantially parallel to the cross section of said bore hole and substantially normal to the principal axis of said bore hole,
(*c*) introducing a predetermined amount of an explosive into said bore hole to fill said bore hole to a distance of from 4 inches to about 10 feet above said positioned disc,
(*d*) placing a second of said discs into said bore hole on top of said explosive and positioning said second disc with respect to the bore hole in the same manner as said first disc,
(*e*) introducing a second predetermined amount of said explosive into said bore hole thereby to fill said bore hole a distance of about 4 inches to about 10 feet above said second disc,
(*f*) continuing said alternate placing and positioning of said discs and said explosive into said bore hole until said bore hole is filled to a predetermined height,
(*g*) placing an initiator for said explosive into said bore hole during the loading of said hole,
(*h*) stemming said bore hole.

3,091,178
L. R. DETONATOR
Hiroshi Ono, Chicago, Ill., assignor to Webcor, Inc., Chicago, Ill., a corporation of Illinois
Filed Nov. 15, 1960, Ser. No. 69,319
6 Claims. (Cl. 102—70)



5. A detonating device for projectiles ejected by a fluid under pressure comprising:
a housing defining cylinder exposed to fluid under pressure at one end,
a primer secured within the housing,
a piston slidable in said cylinder subjected to said pres-

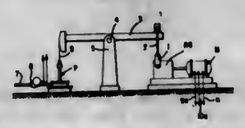
sure and having a firing pin driven thereby to strike the primer,

latch means normally holding the firing pin out of engagement with said primer,

inertia means freely slidable in said cylinder and responsive to acceleration of said housing by said fluid under pressure for releasing said latch means and said firing pin,

and means interengaging the piston and the inertia member urging them in opposition to said fluid pressure and acceleration, respectively.

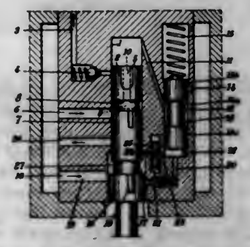
3,091,179
WELL PUMPING OPERATION CONTROL SYSTEM
Wilford Ray Echols, P.O. Box 1454, Coahoma, Tex.
Filed Mar. 15, 1961, Ser. No. 95,837
16 Claims. (Cl. 103—25)



1. A system for controlling the operation of a well pumping installation including a pump, a motor for operating said pump and a pumped fluid delivery conduit, said system comprising normal operation effecting means operatively connected to said motor and being responsive to predetermined flow of pumped fluid through said delivery conduit for maintining said motor in operation; cut-off means including an element movably mounted in said fluid delivery conduit in contact with fluid flowing therethrough and being immediately movable in response to discontinuance of said predetermined flow, and a cut-off device positively mechanically connected to said element and being movable simultaneously therewith immediately in response to discontinuance of said predetermined flow for overriding said normal operation effecting means and stopping said motor immediately; and means connected to said motor for automatically re-starting said motor at the end of a definite predetermined period of time following stopping of said motor by said cut-off means.

3,091,180
SELF REGULATING RECIPROCATING PUMPS IN PARTICULAR FOR THE INJECTION OF FUEL INTO ENGINES
Pierre Etienne Bessiere, 55 Boulevard du Commandant Charcot, Neuilly-sur-Seine, France
Filed May 17, 1962, Ser. No. 195,579
Claims priority, application France May 26, 1961
3 Claims. (Cl. 103—41)

1. A self regulating reciprocating liquid pump which comprises, in combination, a main pump including a main cylinder and a main piston mounted reciprocating in said cylinder to form therewith a variable volume main working chamber, at least one liquid delivery conduit starting from said cylinder working chamber, a first by-pass conduit starting from said cylinder working chamber and having an outlet opening to the outside, a regulating valve member mounted to cooperate with said outlet to control the opening thereof, a housing surrounding a portion of said regulating member which is slidable therein in piston-like fashion, said housing and said regulating member portion forming together a variable volume space, said regulating member being arranged to open said by-pass conduit outlet when said member reaches a given position with respect to said housing on every displacement thereof in the direction for which the volume of said variable volume space is increasing, an auxiliary reciprocating pump operatively connected with said main pump to work in synchronism therewith, said auxiliary pump including an auxiliary cylinder and an auxiliary piston mounted reciprocating in said auxiliary cylinder to form therewith a variable volume auxiliary working chamber, the displacements of said auxiliary piston with respect to said auxiliary cylinder in the direction for which the volume of said auxiliary working chamber is reduced being called delivery strokes of said auxiliary piston, means between said auxiliary working chamber and said variable volume space for connecting them together during at least a portion of every delivery stroke of said auxiliary piston, whereby the volume of said variable volume space is then made to increase, resilient means connected with said regulating member for urging it in the direction for which said

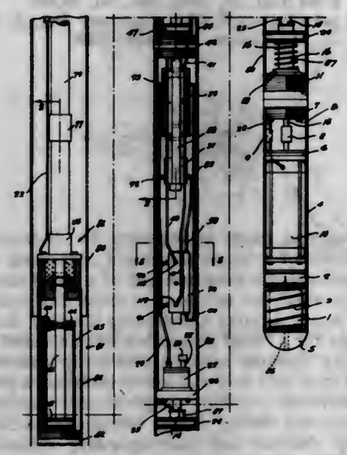


variable volume space is reduced, means, including a throttled passage, for varying the length of the displacements of said regulating member in one direction in response to variations of the speed of said pump so as to ensure the regulating action of said member, an inlet conduit opening into said auxiliary working chamber, means operative by said auxiliary piston for cutting off said auxiliary working chamber from said inlet conduit for a given position of said auxiliary piston moving on the delivery strokes, at the beginning thereof, a second by-pass conduit leading to the outside, and means operative by said auxiliary piston for placing said second by-pass conduit in communication with said auxiliary working chamber for a given position of said auxiliary piston moving on its delivery strokes so that said auxiliary working chamber is placed in communication with said second by-pass conduit before said auxiliary piston has reached the end of said delivery strokes.

3,091,181
DEEP WELL SUBMERSIBLE PUMPING UNIT
William C. Wolf, 1828 Churchill Way, Oklahoma City, Okla.
Filed Feb. 23, 1962, Ser. No. 175,003
3 Claims. (Cl. 103—45)

1. In a deep well submersible pump unit, an elongated housing adapted to be disposed in a well bore, a discharge conduit, a pump cylinder mounted on the top end of said housing and connected to said discharge conduit, said pump cylinder being open at its bottom end, an upwardly opening check valve in the pump cylinder, a piston in the cylinder below said first-named check valve and being provided with a second upwardly opening check valve, a driving cylinder in the housing, a driving piston in said driving cylinder, piston rod means connecting said pistons, a source of hydraulic fluid under pressure, a main control valve in said housing, a reciprocable valve element in said control valve, an operating cylinder on said control valve, a valve-operating piston in said operating cylinder connected to said valve element, respective vertically spaced auxiliary valves mounted in the housing below the driving cylinder, conduit means

connecting said source respectively through said auxiliary valves to the top and bottom portions of said operating cylinder, said auxiliary valves being provided with vertically spaced actuating plungers directed toward each other, an abutment member extending between said actuating plungers and having a portion extending axially through said driving piston, means biasing said abutment member into operating engagement with the lower of the actuating plungers, means coupling said portion to the driving piston when said driving piston is moved upwardly to a predetermined position, to elevate said abutment member into operating engagement with the upper actuating plunger beyond said predetermined position, whereby to alternately open said auxiliary valves and to reciprocate said valve-operating piston and the valve element responsive to reciprocation of said driving piston, and means to alternately admit hydraulic fluid from said source into said driving cylinder above and below said driving piston responsive to the reciprocation of said valve element, whereby to reciprocate said first-named piston.

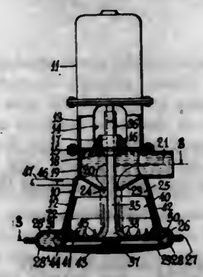


3,091,182
CENTRIFUGAL PUMPS
Victor F. Anderson and Russell G. Jobe, Pasadena, Tex., assignors to Shell Oil Company, New York, N.Y., a corporation of Delaware
Filed Dec. 8, 1960, Ser. No. 74,545
1 Claim. (Cl. 103—103)



A centrifugal pump comprising: a casing having an inlet opening and a discharge opening, a portion of the casing adjacent said discharge opening forming a fixed cut water, a first volute integral with said casing extending from said cut water around the inner periphery of the casing and discharging into the discharge opening, a molded resin second volute removably mounted in said casing to form a liner to said first volute, said second volute being crescent-shaped and contoured to fit closely to said first volute and to provide an inner surface in a continuing spiral therewith, a stainless steel cut water on said second volute, a rotatable impeller having a suction inlet adjacent its center operable in said casing and discharging liquid peripherally into said second volute, said impeller being of such diameter that it closely clears the inner surface of said second volute throughout a major portion of its length.

3,091,183
CENTRIFUGAL PUMP
James R. Nahrgang, Grand Island, N.Y. (4445 Central Ave., Indianapolis 5, Ind.)
Filed Feb. 23, 1960, Ser. No. 10,303
6 Claims. (Cl. 103—113)

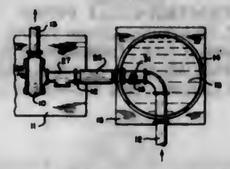


1. A liquid transferring apparatus for conveying a liquid which includes entrained gases and for separating said gases from said liquid comprising a housing, an annular rotor shell in said housing constructed and arranged to receive a liquid having entrained gases, said annular rotor shell having an upwardly converging wall and a substantially smooth circular bottom wall, motor means connected to and rotating said rotor shell, liquid inlet means communicating with said rotor shell directing liquid to flow toward the center of said substantially smooth circular bottom wall and to enter liquid in said rotor shell in the vicinity of the center thereof to thereby cause liquid from said liquid inlet means to enter said liquid in said rotor shell with a minimum of turbulence, liquid oulets in said side wall proximate said substantially smooth bottom wall permitting passage of liquids from said rotor shell, said liquid flowing outwardly from the center of said bottom wall toward said liquid outlets and toward said converging wall across said substantially smooth bottom wall with increasing linear velocity as a result of the rotation of said rotor shell, the rate of liquid being supplied to said rotor shell through said liquid inlet means maintaining said rotor shell filled to a sufficient depth so that the upper level of liquid in said rotor shell is above said liquid outlets and the rate of rotation of said annular rotor shell being of a magnitude to cause the velocity of outward liquid flow in said rotor shell to cause said entrained gases to be released from said liquid in said rotor shell while the contact between said liquid with said upwardly converging side wall minimizes turbulence of said liquid to thereby prevent re-entrainment of gases into said liquid in said rotor shell, and vent means permitting said released gases to escape from said rotor shell.

3,091,184
PUMP ANTI-CAVITATION DEVICE
Lonnie G. Wood, Lakeland, Fla., assignor to Smith-Douglass Company, Incorporated, Norfolk, Va., a corporation of Virginia
Filed Aug. 10, 1960, Ser. No. 48,781
8 Claims. (Cl. 103—113)

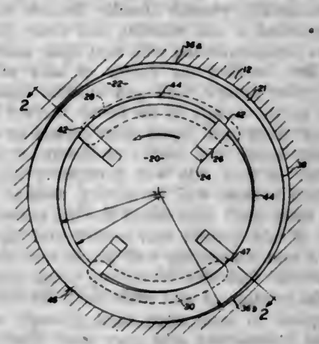
6. A pump anti-cavitation device for a centrifugal pump adapted to pump a slurry of solid material suspended in a liquid comprising a tank located adjacent the intake of the pump, said tank being open to the atmosphere and containing a body of liquid being pumped, the liquid within the tank being under atmospheric pres-

sure, a suction pipe line connected to the intake of the pump and extending substantially horizontally through the lower portion of the tank, the section of the pump suction pipe line within the tank being formed with at least one opening in the uppermost surface of said pipe, means for maintaining the liquid level in the tank a pre-



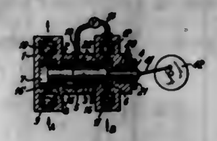
determined minimum height above the highest part of the pump shell, and means adapted to prevent the escape through the opening formed in the pipe line of any appreciable amount of the solid material contained in the slurry being pumped along the pipe line, whereby air contained in the liquid within said pipe line can escape therefrom through the opening formed therein.

3,091,185
REVERSIBLE PUMP
Walter R. Eames, Jr., Royal Oak, Mich., assignor to Eaton Manufacturing Company, Cleveland, Ohio, a corporation of Ohio
Continuation of abandoned application Ser. No. 625,397, Nov. 30, 1956. This application Feb. 6, 1961, Ser. No. 87,495
7 Claims. (Cl. 103—117)



1. A pump means comprising a housing having a chamber therein, a pair of members disposed within said housing chamber with one of said members being eccentrically positioned with respect to the other of said members and forming a pumping chamber therebetween, fluid intake and discharge ports being communicable with said pumping chamber, said other member having a limited degree of lateral freedom in said housing and having a portion in contact with said housing, said discharge port being disposed substantially circumferentially coincident with said chamber contacting portion of said other member, centrifugally responsive pumping elements carried by one of said members and frictionally contacting the other of said members, means for rotating said one member about an axis fixed with respect to said housing, the other of said members having an arcuate portion in contact with said housing, said arcuate portion having a single constant radius of curvature internal surface and a single constant radius of curvature external surface concentric with said internal surface, said other of said members being shiftable laterally with respect to the axis of rotation of said one member whenever the direction of rotation of said one member is reversed, and means including said pumping elements, said other of said members and said housing to cause said pump means to pump fluid under pressure to said discharge port when said rotor is rotated in either direction of rotation.

3,091,186
PUMPING METHOD AND PUMPS FOR SUSPENSIONS
Werner Hofmeister, Hamburg-Bahrenfeld, Harald Godenrath, Hamburg-Rahlstedt, and Georg Kindler, Hamburg-Wandsbek, Germany, assignors to Bran & Luebbe, Hamburg, Germany
Filed Sept. 29, 1960, Ser. No. 59,403
Claims priority, application Germany Oct. 2, 1959
11 Claims. (Cl. 103—204)

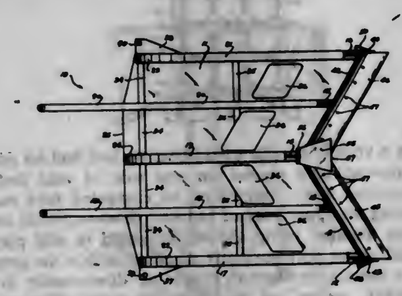


1. A metering pump arrangement for dispensing metered volumes of a liquid suspension containing proportionate amounts of a substance and of a liquid suspension medium in which the substance is suspended, comprising first wall means defining a first pump chamber having an inlet means for a liquid suspension and an outlet means, a separating chamber adjacent said pump chamber and having an inlet, said first wall means including a partitioning wall between said first pump chamber and said separating chamber having a first opening connecting said first pump chamber and said separating chamber, and another wall bounding said separating chamber and formed with a second opening; sealing means in said second opening; second wall means defining a second pump chamber having an inlet and an outlet for the liquid suspension medium only; a conduit means connecting said outlet of said second pump chamber with said inlet of said separating chamber and including a check valve; and movable pumping means including a first part located in said first pump chamber and in said separating chamber and passing through said first and second openings while slidingly engaging said sealing means, and a second part located in said second pump chamber, said first and second parts being connected for synchronous movement to alternately effect discharge from the respective pump chambers and being constructed and arranged so that said first part dispenses during a pressure stroke a metered volume of the liquid suspension from said first pump chamber and dispenses a given metered volume of the liquid suspension medium from said separating chamber through said first opening into said first pump chamber, and so that said second part dispenses during the suction stroke of said first part a given metered volume of said liquid suspension medium from said second pump chamber into said separating chamber to effect flow of suspension medium through said first opening into said first pump chamber so that the liquid suspension is prevented from flowing into said separating chamber and said substance is prevented from contact with said sealing means during both strokes of said first part.

3,091,187
BALLAST SLED FOR USE UNDER RAILROAD TRACKS
James W. Christoff, Minneapolis, Minn., assignor, by mesne assignments, to Mannix Co. Ltd., Calgary, Alberta, Canada
Filed Mar. 21, 1957, Ser. No. 647,523
2 Claims. (Cl. 104—7)

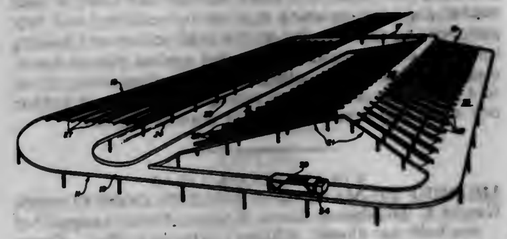
1. A sled device for spreading ballast under railroad tracks and ties, comprising a generally flat framework

adapted to be drawn along between the roadbed and the ties while supporting the weight of said ties and a span of track, said framework comprising a plate and supporting means to space the plate above the bottom of the device so that a substantial portion of the ballast passes under said plate, and ballast levelling means comprising a pair of main blades each pivotally mounted on said framework to be movable into a depending position in which its lower edge lies in a plane below the plane of said plate, the pivotal axis of each such blade extending



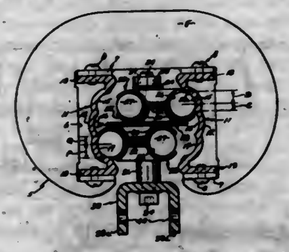
transversely outwardly and rearwardly from a position adjacent the longitudinal centre line of the sled to an edge thereof, and a central blade pivotally mounted on said framework to be movable into a depending position in which its lower edge lies in a plane below the plane of said plate, said central blade extending transversely across the sled in the area between the inner ends of said main blades and overlapping said ends whereby to form a continuous levelling structure extending uninterruptedly across the full transverse extent of the device.

3,091,188
TRANSFER SYSTEM
Fred B. Graham, 70 Upland Road, Kentfield, Calif.
Filed Oct. 14, 1960, Ser. No. 62,718
12 Claims. (Cl. 104—29)



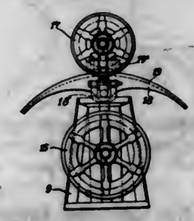
1. A system for transferring cargo in large containers comprising a trestle network having a plurality of portions, each of said portions comprising a plurality of separate lanes, a first transfer-way interconnecting one end of all the lanes of both portions, a second transfer-way interconnecting the other ends of all said lanes to form a plurality of complete and interconnected loops on said trestle network, one of the portions of said network being disposed above one terminal area and another of the portions of said network being disposed above another terminal area, and a transfer vehicle disposed to travel on said trestle network, said transfer vehicle being adapted to receive and deliver containers from and to one of said terminal areas below the trestle network when the transfer vehicle is in one of said lanes.

3,091,189
CONVEYOR
Francis N. Becker, Cleveland, Ohio, assignor to Becker Crane & Conveyor Co., Cleveland, Ohio, a corporation of Ohio
Filed Aug. 25, 1959, Ser. No. 835,996
9 Claims. (Cl. 104—94)



1. An article conveyor, comprising a guide track, an article trolley member having means defining at least two endless ball races thereon and disposed in parallel spaced relation to each other, a plurality of balls in each of said races, said guide track having at least a pair of ball receiving grooved trackways formed one above the other on opposite sides thereof and extending longitudinally therealong in parallel spaced relation one to the other, said trolley member being movably carried within said guide track with the balls of one of said races being received within one of said trackways, and the balls of the other of said races being received within the other of said trackways, said balls in each of said races rotatably moving over its associated trackway while moving along said endless race to thus convey said trolley member along said drive track.

3,091,190
CABLE-WAY
Frido Cruciani, 6 Via Vesalio, Rome, Italy
Continuation of application Ser. No. 729,738, Apr. 21, 1958. This application Apr. 30, 1962, Ser. No. 193,049
Claims priority, application Italy Apr. 27, 1957
9 Claims. (Cl. 104—115)

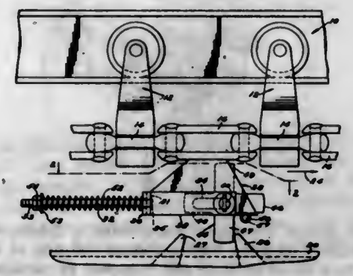


1. In a cable-way, a tower-like derrick having a bottom end member supported on a base member, meshing gear teeth on the members operatively connecting the members, one of the members being curved to facilitate rocking of the derrick.

3,091,191
CARRIER DRIVING DEVICE FOR CONVEYOR SYSTEMS
Nick Fur, Burlington, Ontario, Canada, assignor to Jervis B. Webb Company, Detroit, Mich., a corporation of Michigan
Filed Sept. 20, 1961, Ser. No. 139,407
7 Claims. (Cl. 104—172)

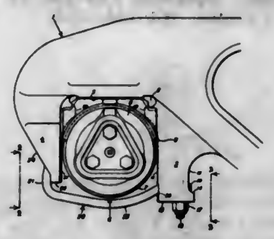
1. A device for use as one of a pair of drive elements for transmitting a driving force between the propelling means and a carrier of a conveyor system comprising a drive transmitting member, means mounting said mem-

ber for movement on an axis transverse to the direction of travel of said propelling means, said member having a plurality of arms spaced around said axis and extending outwardly therefrom, stop means for arresting movement of said member in positions in which one of said arms is placed to act as one of said drive elements, means supporting said drive transmitting member for motion relative to said stop means in response to increasing driv-



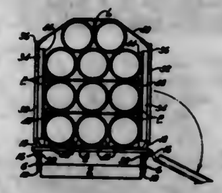
ing reaction on said one arm acting as a drive element between a normal position of engagement with said stop means and a second position in which said drive transmitting member is disengaged from said stop means for movement on said axis whereby said one arm acting as a drive element is moved out of engagement with the other of said pair of drive elements, and resilient means urging said drive transmitting member to the said normal position.

3,091,192
SIDE FRAME
Geoffrey W. Cope, Williamsville, N.Y., assignor to Symington Wayne Corporation, Salisbury, Md., a corporation of Maryland
Filed May 20, 1960, Ser. No. 30,674
8 Claims. (Cl. 105—221)



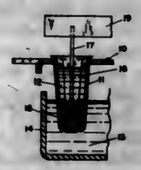
1. In a pedestal type side frame having a downwardly opening bearing-receiving opening bounded at sides by downstanding inner and outer legs, the combination of a horizontally disposed slot in said inner leg adjacent a lower end thereof and opening inwardly onto said opening, horizontally directed seat means fixed to said outer leg at an outer side thereof and above a lower extremity of a bearing in said opening, a retainer bar extending across and closing said opening below and having an upwardly concave intermediate portion facing a bearing in said opening, said retainer bar beyond said portion having a horizontally disposed inner leg slidable into said slot and a hooked outer leg engageable with said seat means on sliding of said bar longitudinally and said outer leg downwardly of said frame for supporing said bar on said frame for restraining relative movement therebetween, and a vertically directed bolt for locking said inner bar leg in said slot and thereby positively locking said hooked end in engagement with said seat means.

3,091,193
HINGED STAKE FOR FLAT-CAR LOADING
Hollis M. Thomas, deceased, late of Pleasant Grove, Utah, by Garland S. Thomas, administratrix, Pleasant Grove, Utah, assignor to United States Steel Corporation, a corporation of New Jersey
Filed Apr. 17, 1961, Ser. No. 103,960
3 Claims. (Cl. 105—386)



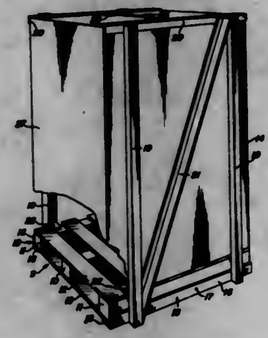
1. In a vehicle having a load-bearing bed and an open-end stake-receiving pocket on one side of said bed, a load-retaining stake comprising an elongated foot member having an upper part of reduced cross-sectional area, said foot member being slidably mounted in said pocket with said upper part normally disposed within the pocket and the remainder thereof projecting downwardly from the pocket, means on said foot member effective to resist removal of said foot upwardly out of said pocket, a bracket having a clevis formed on its lower end mounted with said clevis pivotally engaging said upper part of said foot in said pocket and the remainder thereof normally projecting upwardly of the pocket, said clevis and said upper part having aligned transverse holes therethrough, a pintle fitted in said aligned holes for pivotally connecting said bracket and said foot together, said foot being adapted to be lifted partially upwardly out of said pocket so that said bracket is free of said pocket, said bracket being pivotable about said pintle when free of said pocket between a first position extending transversely across said bed and a second position extending away from said bed at an angle more than 180 degrees from said first position, said clevis and said upper part having matching notches offset from said holes and extending inwardly from one side of said clevis and said upper part, said pocket having matching holes in opposite sides thereof aligned with an directed normal to said matching notches, a locking pin removably fitted through the holes in said pocket and said matching notches for securing said foot member and said bracket within said pocket and locking said foot member and said bracket against pivotal movement relative to each other, and a post extending from said remainder of said bracket upwardly of said vehicle bed when said bracket is in said normal position.

3,091,194
METHOD OF MAKING A FROZEN CONFECTION
Gerald E. Dickinson, Coeur d'Alene, Idaho, assignor of one-half to Coeur d'Alene Creamery, Inc., Coeur d'Alene, Idaho, a corporation of Idaho
Filed Nov. 28, 1960, Ser. No. 72,024
6 Claims. (Cl. 107—54)



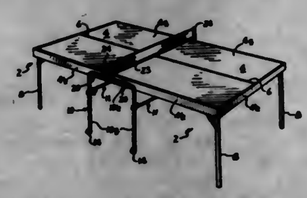
5. The method of coloring a frozen confection which comprises: immersing a handle member portion which carries a fluid soluble coloring matter in a body of edible susbtance which is fluid at normal temperatures; effecting dispersal of the coloring matter by agitation; and subjecting the body to refrigeration until the whole is in a solidly frozen state about the handle.

3,091,195
PALLET SUPERSTRUCTURE
Ralph W. Kenyon, 1201 Stassen Way, and Dan A. Regan, 902 Crescent Drive, both of Grandview, Wash.
Filed Apr. 7, 1961, Ser. No. 101,416
2 Claims. (Cl. 108—53)



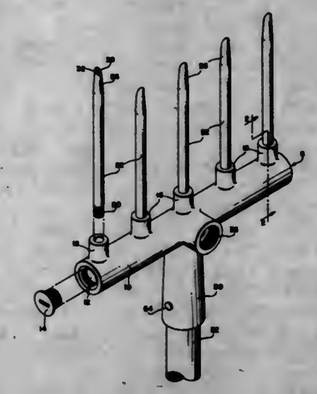
1. A container comprising a pallet forming the base of the container, a pair of parallel side frames overlapping and connected to opposite sides of the pallet, said pallet including a pair of longitudinally extending spaced stringers which are rectangular in cross section and connected by spaced transversely extending deck boards on top of the stringers, said deck boards having the outer ends thereof terminating flush with the outer edges of the stringers, each side frame including a member L-shaped in cross section extending substantially the entire length of one of said stringers and surrounding its lower outer corner whereby the one stringer is positioned on top of the L-member, a pair of spaced vertical posts secured to the outer side of said L-member, each post being orientated so as to correspond with a space between a pair of adjacent spaced deck boards, a flat laterally extending projection on each post slightly narrower than said space and projecting into said space to overlap said one stringer, means connecting the upper ends of the posts together, said means being adapted to receive superimposed loads, and means extending between and releasably connecting the upper ends of the side frames.

3,091,196
TABLE TENNIS TABLE
James C. Hirsch, Highland Park, Ill., assignor to Klauber Games, Inc., Chicago, Ill., a corporation of Illinois
Filed Jan. 12, 1962, Ser. No. 165,897
8 Claims. (Cl. 108—112)



1. A table tennis table assembly comprising: a pair of table halves having table tops which form a table tennis table when positioned in horizontal juxtaposed relation, and leg support structure for supporting said table halves in said horizontal juxtaposed relation and also in a storage position where the table halves extend upwardly and inwardly to form a pyramid structure, said leg structure comprising leg-forming portions on each side of the table halves, said leg-forming portions resting on the floor in the normal playing position of the table and supporting at least the inner ends of said table halves in a horizontal playing position, means for supporting each of said table halves for pivotal movement upon said leg structure about horizontal transversely aligned pivot axes positioned substantially outwardly of the inner ends of the table halves involved when in a horizontal playing position and at substantially fixed elevations near the upper extremities of said leg-forming portions of the leg structure, and stop means located outwardly of the pivot axes of each table half for engaging the bottom end portions of the associated table half when the outer end thereof is pivoted upwardly and inwardly beyond the vertical, to hold the table half in an upwardly and inwardly inclined position independently of the other table half.

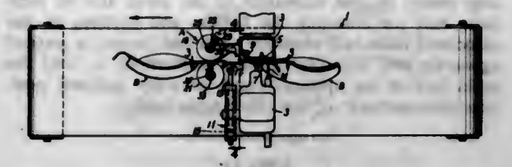
3,091,197
FERTILIZER APPLYING DEVICE
William P. Henry, Seattle, Wash., assignor of fifty percent to Darrell J. Nash, Seattle, Wash.
Filed Feb. 13, 1959, Ser. No. 793,078
1 Claim. (Cl. 111—7.1)



A fertilizer applying device, comprising: a tubular metal header having an interior fertilizer receiving chamber and closure means therefor; said header having a plurality of aligned tine positioning interiorly threaded bosses communicating with said chamber, said bosses being spaced apart along the length of said header and positioned to lie in a common plane; a plurality of substantially straight tubular tines each having a threaded end; said tines threadedly secured in said bosses and in communication with said fertilizer receiving chamber, said tines having at their ends opposite their threaded ends a discharge end having uniformly machined extreme ends; a hose receiving boss formed as part of said header and disposed at right angles to the plane of said tines; a handle receiving socket disposed substantially in the midportion of said header, fixedly secured to the same and substantially in the plane of the tines and on the opposite side from said tines, and a handle secured in said socket and lying in the approximate plane of said socket, the forward ends of said tines terminating in a tapered exterior portion adjacent the discharge ends of said tines and said tine bosses having tine engaging threads in their upper portions adjacent said header and a guide bore in the bottom portions of said tine bosses having a diameter

greater than the outside threaded diameter of said threaded tines and supporting said tines against bending.

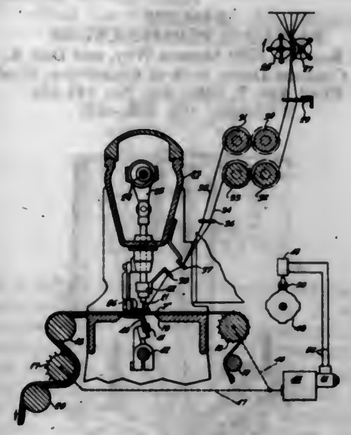
3,091,198
APPARATUS FOR CLOSING FILLED BAGS
George T. Lanz, Kirkwood, Mo., assignor to Ralston Purina Company, St. Louis, Mo., a corporation of Missouri
Filed Dec. 13, 1960, Ser. No. 75,610
8 Claims. (Cl. 112—11)



1. In an apparatus for closing open-mouthed filled bags, said apparatus comprising a conveyor adapted to convey filled bags in upright position one after another through a sewing station, a sewing machine mounted in fixed position at said station for horizontal operation of its needle to stitch the tops of the bags, said sewing machine having means for feeding the tops of the bags therethrough, a sewing thread cutter for cutting the chain of thread trailing a sewn bag after the trailing end of the bag top exits from the sewing machine, said cutter being offset from the line of stitching, and means for moving the chain into position for being cut by the cutter; means for supporting the top of each bag as it exits from the sewing machine and for holding taut the chain of thread between the sewing machine and the trailing end of the bag top to maintain said chain in position for engagement by said means for moving the chain into position for being cut by the cutter, said bag top supporting means comprising a pair of rolls mounted on the exit side of the sewing machine in position for gripping the tops of bags exiting from the sewing machine in the stitched zone of the bags, said rolls being rotatable on generally vertical axes and being relatively movable toward and away from one another, means biasing said rolls toward one another for gripping bag tops, and means for continuously driving said rolls at a speed greater than the speed at which the bag tops are fed through the sewing machine by said bag top feeding means.

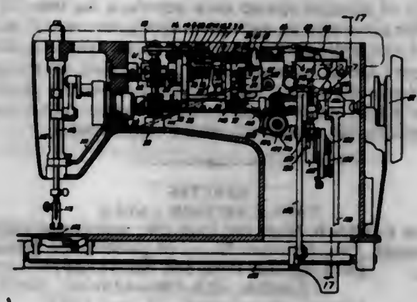
3,091,199
METHOD AND APPARATUS OF TUFTING PILE FABRIC
Hyde W. Ballard, West Chester, Pa., assignor to James Lees and Sons Company, Bridgeport, Pa., a corporation of Pennsylvania
Filed Feb. 9, 1959, Ser. No. 792,019
4 Claims. (Cl. 112—79)

1. In a tufting apparatus for tufting stitches through a moving backing fabric including at least two rows of longitudinally spaced needles in longitudinally offset relationship along the fabric, a feed roll on one side of the needles for moving the fabric through the tufting zone, and a take-up roll on the other side of the needles for moving the tufted fabric, the improvement for producing alternating areas of dense pile projections and intermediate areas of less dense pile projections in transversely staggered relationship across the fabric which comprises variable speed driving means operatively connected to said feed roll and said take-up roll for varying the speed of such rolls and pattern control means operatively connected to said driving means, said pattern control means including a first speed control section and a second speed control section having relatively greater speed control than



said first section, each of said speed control sections providing uniform speed for the fabric when either of said sections is in operation during any tufting cycle.

3,091,200
PATTERN CAM ARRANGEMENT FOR SEWING MACHINES
Toshiyuki Fukunaga, Tokyo, Japan, assignor to Sanshin Jiguzagu Mishin Seizo Kabushiki Kaisha, Tokyo, Japan, a corporation of Japan
Filed Sept. 7, 1961, Ser. No. 136,534
Claims priority, application Japan Sept. 14, 1960
23 Claims. (Cl. 112—158)



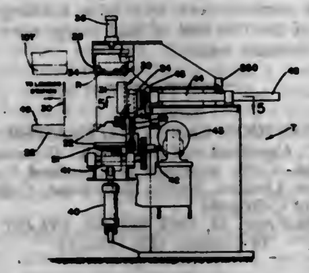
1. In a sewing machine, in combination, a magazine; a plurality of pattern cams located in said magazine, each of said pattern cams having a plurality of cam tracks; selector means for moving a selected cam of said pattern cams from said magazine to an operative position; drive means for driving a selected cam in said operative position; cam follower means including a plurality of cam followers, each cam follower having an engaging position for engaging a cam track of a selected cam in said operative position so as to be oscillated by the same; and a plurality of movable sewing elements respectively connected to said cam followers and actuated by the same under control of said cam tracks of a selected cam in said operative position.

3,091,201
METHOD OF MAKING ROLLER GUIDES
James W. Gourley, Jr., La Habra, Calif., assignor to Axelson Fishing Tackle Mfg. Co., Newport Beach, Calif., a corporation of California
Filed Aug. 20, 1959, Ser. No. 835,119
5 Claims. (Cl. 113—116)



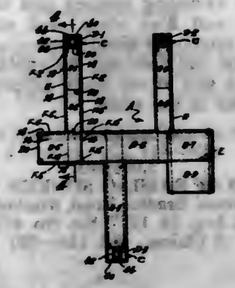
1. A method of manufacturing a roller guide frame for fishing rods, which comprises forming two elongated and aligned openings in a flat sheet metal member, providing rolled beads on said member around said openings, and forming the mid-portion of said sheet metal member into a generally U-shape, said last-named step being performed by providing a female die having a recess therein shaped generally correspondingly to the desired exterior shape of the finished body portion of said member, providing a male die having a shape corresponding to the inner surface of the finished body portion of said member, said male die having pilot portions thereon shaped generally correspondingly to said openings and adapted to be inserted therethrough upon introduction of said male die into said female die, disposing said sheet metal member over said recess in said female die, and introducing said pilot portions through said openings into said female die and introducing said male die into said female die to effect forming of said mid-portion of said member into said U-shape.

3,091,202
RING PROCESSING APPARATUS
Eugene L. Mackey, Fairview Park, Ohio, assignor to The Yoder Company, Cleveland, Ohio, a corporation of Ohio
Filed Mar. 29, 1960, Ser. No. 18,430
1 Claim. (Cl. 113—127)



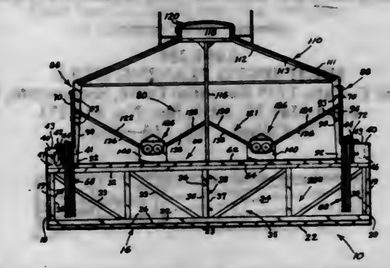
In apparatus for forming drop-center wheel rims; means for orienting a gap in circularized stock, an index table for moving such circularized stock in oriented position through various working operations, loading means for said index table to place such oriented stock upon the table, said loading means comprising a support, means vertically to reciprocate said support to lift such circularized stock from said orienting means to a position to be clamped upon said index table, a gap gauging blade pivotally mounted on a non-rotatable portion of said index table, and means to position said gap gauging blade in such gap of such stock while on said loading support, vertical movement of said support raising said gap gauging blade whereby said gauging blade constitutes a means to maintain such stock in oriented position and to set the gap therein when such stock is clamped to the index table.

3,091,203
CONCRETE FLOATING WHARF STRUCTURES
Ernest M. Usab, Long Beach, Calif.
(100 De La Guerra Road, San Rafael, Calif.)
Filed Oct. 27, 1958, Ser. No. 769,801
22 Claims. (Cl. 114—.5)



1. A first concrete float unit adapted to be attached and held in a substantially fixed position relative to a second float unit by resilient elongate metallic fastening members to provide a horizontal load bearing surface comprising: a hollow concrete box having a bottom surface adapted to be normally submerged in a body of water and a normally upwardly facing horizontal top surface connected by a straight side surface extending upwardly from said bottom to said top surface; a concrete flange of substantial width projecting outwardly from said top surface on at least said one straight side of said box and providing an extension of said top surface; and a plurality of spaced passage-defining means extending through said concrete flange and alignable with passage-defining means formed in said second of said float units, with said passage-defining means when said straight sides of said first and second float units are adjacently disposed being capable of having said fastening members disposed therein to hold said first and second float units together separated by a distance slightly greater than the combined width of both of said flanges.

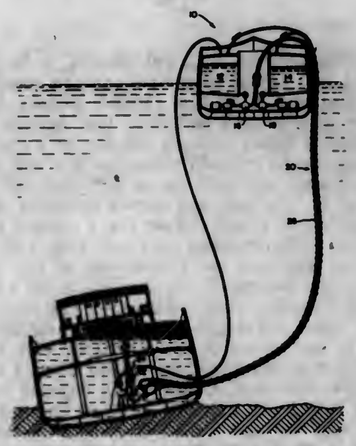
3,091,204
SHALLOW-DRAFT CARGO VESSEL WITH CAPTIVE AIR SPACES
Hugh E. Pickrell, Jr., Vancouver, Wash., assignor to R.P.T.Z. Patco Inc., Portland, Oreg., a corporation of Oregon
Filed Sept. 12, 1960, Ser. No. 55,208
5 Claims. (Cl. 114—26)



1. A shallow-draft cargo vessel comprising an elongated hull with bottom and sides defining an elongated first cargo-carrying space along the bottom of the vessel, a hori-

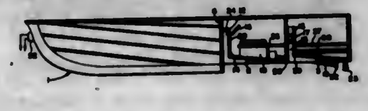
zontal fluid-tight partition spaced vertically above said bottom and extending between the sides of the hull and closing off the top of said first cargo-carrying space, an upright longitudinally extending fluid-tight bulkhead joined to the hull and extending upwardly from each side of the hull and said partition, an upright transversely extending fluid-tight bulkhead joined to the hull and extending upwardly from said partition adjacent each end of the hull, said bulkheads defining the side and end limits of a second cargo-carrying space disposed above said first cargo-carrying space, a fluid-tight floor for said second cargo-carrying space extending between said bulkheads above said partition, said floor along each side of the hull being spaced a substantial distance above said partition and the underside of said floor and the topside of said partition along each side of the vessel defining an elongated captive air space in the vessel.

3,091,205
METHOD OF RAISING SUNKEN VESSELS
William Watson, Bradlee Road, Marblehead, Mass.
Filed Aug. 16, 1957, Ser. No. 678,554
2 Claims. (Cl. 114—50)



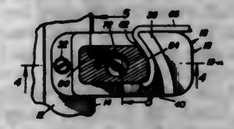
1. The method of imparting buoyancy to a sunken ship comprising the steps of pumping a fluid resin into a water-filled compartment of the ship from a salvage vessel, through a first hose, the hydrostatic pressure in the compartment being substantially above atmospheric pressure, pumping a fluid catalyst capable of acting on the resin to form a closed cell buoyant foam into the ship from the salvage vessel through a second hose, mixing the catalyst with the resin, and injecting the mixture into the water in the compartment to generate a buoyant foam displacing the water from the compartment by expansion.

3,091,206
HIGH SPEED PLANING HULL
Richard C. Cale, 1129 Swanston Drive, Sacramento, Calif.
Filed May 27, 1959, Ser. No. 816,171
10 Claims. (Cl. 114—66.5)



1. A planing hull comprising a plurality of transverse steps recessed into the planing surface, each of said steps being angularly inclined toward the stern of said hull, the width of said steps being substantially less than the width of said planing surface, venting means for reducing the negative pressure created by each of said steps, means for closing at least one of said venting means, adjusting means for varying the angle of inclination of one of said steps, control means for actuating said adjusting means, said control means being responsive to pressure changes at the bow of said hull.

3,091,207
WATER SKI TOW ROPE CLAMP
Charles H. Songer, Pine Bluff, Ark., assignor to Songer Manufacturing Company, Incorporated, a corporation of Arkansas
Filed July 10, 1961, Ser. No. 122,796
3 Claims. (Cl. 114—199)



1. In combination with a boat transom, a water ski tow rope clamp, said clamp comprising a mounting base including means mounting said base on said transom for rotation about an upstanding axis, an elongated wedge member pivotally secured at one end to said base for movement about an axis generally paralleling the axis of rotation of said base, an arcuate abutment wall projecting laterally from said base and including a concave abutment surface facing and disposed on the side of the axis of rotation of said wedge member remote from the axis of rotation of said base, the free end of said wedge member including an arcuate convex abutment face confronting said abutment surface, said arcuate abutment wall having one end thereof disposed closer to the axis of rotation of said wedge member than the other end thereof and engageable with said wedge member for wedging engagement of a tow rope between said one end and said wedge member, means yieldably urging said wedge member toward a position with said abutment face engaging said abutment surface on said one end of said abutment wall, and coacting abutment means on said wedge member and said base limiting swinging movement of the free end of said wedge member away from said abutment wall.

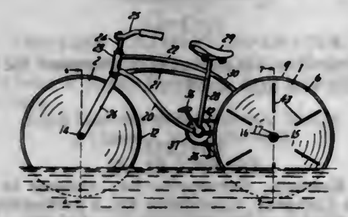
3,091,208
PONTOON-CARRYING CAMPER
Nathaniel C. Copeland and Michael C. Copeland, North Hollywood, Calif., assignors to Copeland Engineering Enterprises Limited, North Hollywood, Calif., a corporation of California
Filed Apr. 12, 1961, Ser. No. 102,427
18 Claims. (Cl. 115—1)



1. A transportation appliance adapted to be transported on a vehicle with overland running gear, and floated therefrom for water transportation, comprising: a substantially-rectangular load-carrying platform including upwardly-extending sides; a pair of elongate hulls; and a pair of boom means affixed to said hulls individually, and pivotally attached to opposite sides of said platform, whereby to position said elongate hulls below said platform and

above the bottom of said overland running gear to support said platform above water and positioned above said platform when on said wheeled vehicle.

3,091,209
WATER TRICYCLE
Harry Lelbermann, Watervliet, Mich.
Filed Nov. 4, 1960, Ser. No. 67,332
6 Claims. (Cl. 115—2)



1. A tricycle usable on a hard surface and on water, comprising air chambered front and rear wheels, the rear wheels comprising rims and conical side walls fixedly connected thereto, the rims of the rear wheels being of equal and substantial width and having axially spaced annular ribs thereof and having axially spaced tire seats at the ends thereof, the side walls of the rear wheels projecting outwardly beyond the rims to provide outer walls for said tire seats, the rim of said front wheel being provided with a plurality of side by side tire seats, the side walls of said front wheel projecting outwardly beyond the rim to constitute the outer walls for the outer tire seats thereon, tires arranged in said tire seats, the tires on said front wheel being disposed in side by said lateral supporting relation to each other, inwardly tapering propeller blades disposed radially and in angularly spaced relation on the outer side walls of said rear wheels with their outer edges in inwardly spaced relation to the peripheries thereof, a rear axle, said rear wheels having tubular hubs sleeved upon and connected to said rear axle, said front wheel having an axle projecting laterally therefrom and to which the side walls of said front wheel are fixedly connected, a tubular driven shaft sleeved upon said rear axle between said hubs and drivingly connected thereto, a driven sprocket disposed centrally on and drivingly connected to said driven shaft, a frame including laterally spaced rearwardly projecting members provided with bearings for said driven shaft, a steering shaft mounted on the front end of said frame provided with handle bars on its upper end and with a yoke embracing said front wheel and on which said front wheel axle is rotatably mounted, a seat mounted on said frame forwardly of said rear wheel, and a driving shaft mounted on said frame disposed transversely thereof and provided with pedals and with a sprocket and a sprocket chain connecting said sprockets, the floating capacity of said wheels being such that the tricycle is operable in water, said tires constituting tread members when the tricycle is operated on a hard surface.

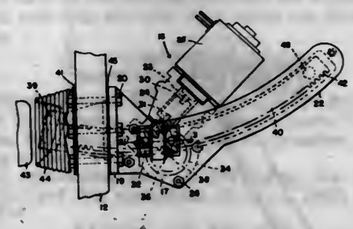
3,091,210
MARINE PROPULSION FIN
Frank Akutowicz, 2007 Harvey Road, Wilmington 3, Del.
Filed Sept. 22, 1961, Ser. No. 140,100
2 Claims. (Cl. 115—28)

1. In a marine propulsion fin of the traveling wave type, including within its envelope a fore and aft axis of oscillation together with a rotatable helical shaft, the novel combination characterized by inclination of the helical shaft with respect to the axis of oscillation, the centerline of the shaft having the form of a helix wrapped



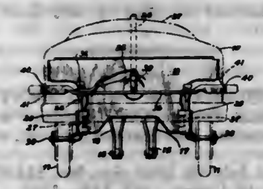
on a cone, the vertex of said cone lying on the axis of oscillation.

3,091,211
ELEVATOR FOR OUTBOARD MOTOR
Oscar C. Hansen, Detroit, Mich., assignor to Ferro Stamping Company, Detroit, Mich., a corporation of Michigan
Filed Jan. 9, 1961, Ser. No. 81,364
8 Claims. (Cl. 115—41)



1. In combination, a boat, an outboard motor at the stern of said boat, a pivot mounting having a horizontal axis between said outboard motor and boat, a power lift mechanism for pivoting said outboard motor in a vertical plane about said horizontal axis, said lift mechanism being mounted on the transom of said boat independently of the outboard motor and including a hollow housing connected to the inner wall of the transom, a movable rack and pinion in said housing, said pinion being in mesh with said rack, said rack being adapted to be moved through an arcuate path in a vertical plane extending lengthwise of said boat, one end of said rack extending through an opening provided in said transom, a bumper on said one end of the rack directly opposite the outboard motor, a drive motor, a drive connection between said drive motor and said pinion, and remote control means in the bow of said boat for energizing said drive motor to move said rack through said arcuate path to an extended position, thereby urging the bumper against the outboard motor and pivoting said outboard motor about the horizontal axis of said pivot mounting with respect to said boat.

3,091,212
TOY AUTOMOBILE DIRECTION INDICATOR
Herbert J. McCauley, 731 W. Ferry St., Buffalo, N.Y.
Filed Jan. 22, 1962, Ser. No. 167,541
4 Claims. (Cl. 116—50)



1. In an occupant-propelled toy vehicle, a pair of laterally spaced steerable ground wheels and a steering wheel for controlling the same, steering mechanism connecting between said steering wheel and said steerable wheels

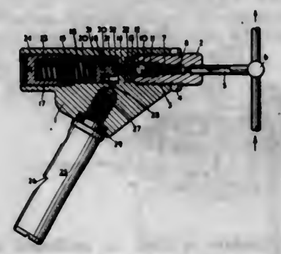
including a cross link adapted to move lengthwise in a direction transversely of the vehicle upon steering movement, direction indicating extensions at opposite ends of said cross link, said vehicle including lateral body panel portions having perforations in registry with said cross link whereby upon steering movement in a given direction the end extension of said cross link at said side of the vehicle is projected through the body panel perforation to provide a turn signal.

3,091,213

FLUID PRESSURE OPERATED WARNING DEVICE

Dennis Ford Mackell and Malcolm Stewart Wells, Yeovil, Somerset, England, assignors to Normalair Limited, Yeovil, England

Filed Jan. 14, 1960, Ser. No. 2,441
Claims priority, application Great Britain Jan. 22, 1959
6 Claims. (Cl. 116—70)



1. A fluid pressure operated warning device in communication with a pressure source, comprising a first body member, a shoulder within said first body member dividing said body into first and second compartments communicating with one another by way of a hole formed by said shoulder member, a second body member communicating with said fluid pressure source and positioned in said first compartment, a first chamber housing within said second body member, a ball valve seatable on said hole formed by said shoulder, spring means engaging a wall of said first chamber and said ball valve and urging said ball valve into a seating position with said hole, a piston assembly including a piston, flexible seal, stop and rod slidable in said second compartment, a second chamber formed on one side of said piston adjacent said shoulder member, said rod passing through said hole formed by said shoulder and engaging said ball valve, variable resilient means in said second compartment engaging said piston assembly for urging said ball valve away from said hole with a force exceeding said spring means and fluid pressure acting upon said ball valve, when said fluid pressure is below a predetermined value, adjustable flow regulating means for permitting substantially constant fluid flow at a given setting from said first chamber to said second chamber, and means communicating with said second chamber actuated by said fluid for emitting noise.

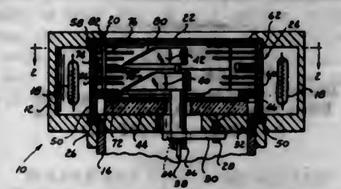
3,091,214

MULTICOLOR INSTRUMENT

Leslie J. Hoffman, Orange, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware

Filed July 18, 1961, Ser. No. 124,977
10 Claims. (Cl. 116—129)

1. In a multicolor instrument a pair of pointers, a dial face carrying indicia, means mounting said pointers for movement relative to said indicia to cooperate with said indicia, means for illuminating the respective pointers with light of different colors and means for positioning said pointer illuminating means relative to said pointer



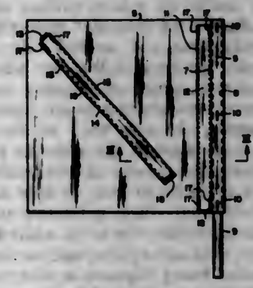
to cause said illuminating means to illuminate the respective pointers with light of different colors.

3,091,215

TRAFFIC FLAG

Jack M. Kenmore, Cornopolis, Pa., assignor to Safety Aids Company, Cornopolis, Pa., a partnership

Filed Aug. 28, 1961, Ser. No. 134,193
1 Claim. (Cl. 116—173)



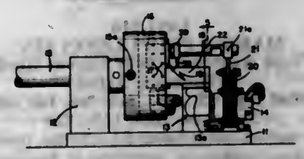
A traffic flag comprising a flat flexible sheet of heavy gauge plastic sheet material having a rectangular body in the color and shape of a traffic flag, a staff-receiving tunnel extending along one edge of said body, a first elongated narrow pocket extending parallel to and adjacent said tunnel and having at least one open end, a second elongated narrow pocket extending across one of the diagonals of said body and having at least one open end, and an elongated flat reinforcing stay dimensioned to fit selectively in said pockets whereby, when the stay is in said second pocket, said body is extended for maximum visibility when the flag is unfurled and whereby, when the stay is in said first pocket, the flag can be furled by winding said body around a staff in the staff-receiving tunnel.

3,091,216

MACHINE FOR INTERMITTENT APPLICATION OF ADHESIVE

Arthur L. Scotti, Belmont, Mass., assignor to Prod-O-Matic, Inc., Cambridge, Mass., a corporation of Massachusetts

Filed Apr. 5, 1961, Ser. No. 100,939
5 Claims. (Cl. 118—406)



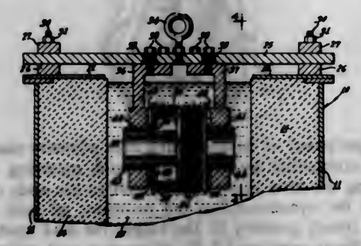
1. A machine for the intermittent application of adhesive comprising in combination, an adhesive delivery member having a rigid convex top surface, said top surface having an orifice and conduit means for connecting said orifice with a source of adhesive supply under pressure and a rotatable cylindrical metal shell which has at least one perforation and is in contact with the said top surface containing said orifice; said orifice and perforation being registerable upon rotation of said shell, said cylindrical shell being so positioned as to surround said adhesive delivery member.

3,091,217

HOT-DIP COATING APPARATUS

Harvey W. Seymour, Belle Vernon, Pa., assignor to American Chain & Cable Company, Inc., a corporation of New York

Filed Mar. 16, 1960, Ser. No. 15,456
4 Claims. (Cl. 118—420)



1. In apparatus for hot-dip coating extended flexible articles of ferrous metal with aluminum, said apparatus including a refractory crucible for containing a bath of molten aluminum and exterior guiding means for directing a moving length of said ferrous article downwardly into and upwardly out of said bath, a sinker roll assembly for guiding the article beneath the surface of said bath comprising a mounting plate spanning the rim of said open crucible, clamping means on said crucible for releasably securing said mounting plate to the rim of said crucible, a pair of brackets attached to and extending downwardly from said mounting plate and adjustably secured thereto to permit varying the spacing between said brackets, a pair of opposed journal bearings having an outer surface of polygonal cross section flanged at one end and an inner bearing being nonrotatably mounted in opposed apertures of corresponding polygonal shape in the lower end portions of the respective brackets with their flanges against the inwardly facing sides of the opposed brackets, each of said journal bearings being made up of four contained segmental elements which together form a substantially cylindrical bearing, a substantially cylindrical spindle loosely fitted at its opposite ends in the bearing surfaces of the respective opposed journal bearings for rotation therein, at least two supporting discs cemented coaxially to said spindle with the outermost discs positioned closely adjacent the respective journal bearings, and a substantially cylindrical pulley drum member cemented about the peripheries of said discs between said brackets, said journal bearings, spindle, discs and pulley drum member being formed from bonded silicon carbide and being in normal operation at least partly submerged in said bath of molten aluminum.

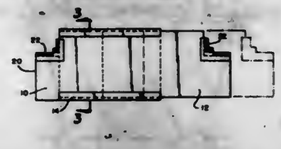
3,091,218

PAINTER'S SHIELD

George P. Wilson, 2480 Encinal Drive, and Julius H. Specht, 2488 Encinal Drive, both of Walnut Creek, Calif.

Filed Feb. 23, 1961, Ser. No. 91,035
4 Claims. (Cl. 118—505)

1. A painter's shield comprising a pair of flat elongated sheet members each having spaced side edges and an end edge connecting the adjacent ends of said side edges together, the juncture of one side edge with one end edge of each member being cutaway to form an irregularly shaped notch conformably shaped to fit the profile of a door or window jamb molding, the edges of said notch



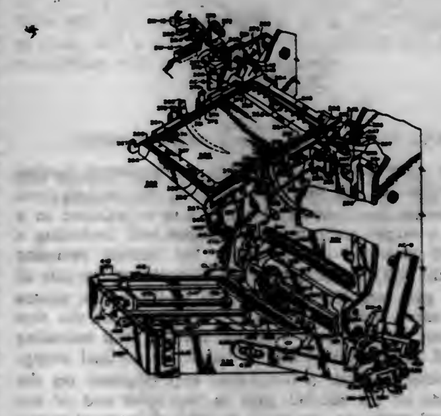
being provided with tabs arranged in side by side abutting relation, said members being telescopingly connected together so that they may be placed on a door or window sill with each of the notches receiving the adjacent jamb molding and with the tabs lying along the faces of the molding.

3,091,219

XEROGRAPHIC DEVELOPING APPARATUS

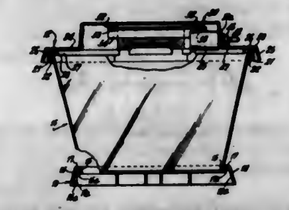
Herbert E. Crumrine, Rochester, and Charles L. Huber, Byron, N.Y., assignors to Xerox Corporation, a corporation of New York

Original application June 3, 1957, Ser. No. 663,085. Divided and this application Dec. 24, 1958, Ser. No. 782,774
4 Claims. (Cl. 118—637)



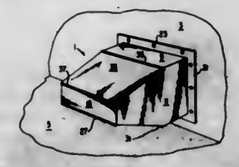
1. An apparatus for developing electrostatic latent images on xerographic plates including a base plate assembly having inlet and outlet connections for xerographic developing material, a development electrode assembly including a development electrode and having inlet and outlet connections for developing material that are aligned with the corresponding connections of the base plate assembly, means on said development electrode assembly for securing a xerographic plate thereon in operative relation to the development electrode, means for moving the development electrode assembly into and out of operative relation with the base plate assembly, means operable when the development electrode assembly is out of operative relation with the base plate assembly for positioning a xerographic plate on the development electrode assembly, and means operable when the development electrode assembly is in operative relation with the base plate assembly for maintaining said operative relation for a predetermined time period.

3,091,220
AQUARIUM ASSEMBLY
Allan H. Willinger, 56 Gail Drive, and Harding W. Willinger, 16 Stoney Run, both of New Rochelle, N.Y.
Filed Aug. 10, 1959, Ser. No. 832,747
3 Claims. (Cl. 119—5)



1. An aquarium tank comprising a body composed of transparent plastic material having a bottom and side walls, said side walls being formed with an inwardly directed curvature forming concave outer walls whereby when said tank is filled with liquid, the lateral pressure upon said side walls causes them to assume planar positions to prevent optical distortion caused by wall curvature.

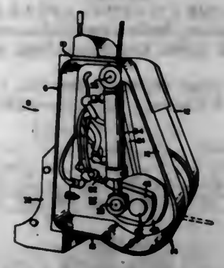
3,091,221
ANIMAL HATCH
Alan F. Worm, 1838 Dome St., Raton, N. Mex.
Filed Nov. 2, 1961, Ser. No. 149,748
8 Claims. (Cl. 119—19)



1. An animal hatch comprising an enclosure having top, bottom and side walls and a closed end, and an open end opposite the closed end adapted to be secured to a wall of a larger enclosure, the bottom wall including a first gate mounted on the hatch for vertical swinging movement about a horizontal axis disposed on the side of the first gate opposite the open end of the hatch, means on the hatch limiting downward movement of the first gate when the first gate is closed, the top wall including a second gate mounted on the hatch for vertical swinging movement about a horizontal axis disposed on the same side of the second gate as the open end of the hatch, and means on the hatch limiting downward movement of the second gate when the second gate is closed, the first gate being beneath the second gate so that an animal can enter the hatch by pushing up the first gate, after which the first gate falls closed behind the animal, and can leave the hatch by standing on the closed first gate and pushing up the second gate, after which the second gate falls closed behind the animal.

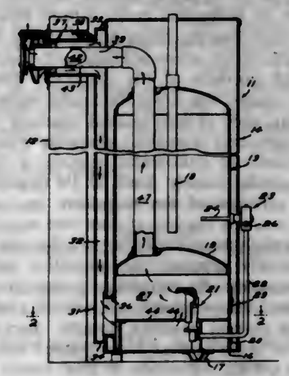
3,091,222
LOAD MOVING MECHANISM
Michael W. Pastore, Simsbury, Conn., and Raymond H. Holbrooke, Agawam, Mass., assignors to Pippin Construction Equipment, Inc., White River Junction, Vt., a corporation
Filed Dec. 6, 1960, Ser. No. 74,040
2 Claims. (Cl. 121—63)

1. A hydraulically-actuated device for providing mechanical rotary motion from rectilinearly actuated cylinders comprising, a frame, a drive shaft rotatable relative to said frame, a double-acting single-rod end cylinder pivotally mounted adjacent its upper end on said frame at each side of said frame and a piston in each said cylinder, a crank arm pivotally connected to each said piston, a pin disposed on each said crank arm and actuated by the rod end of each of said pistons, said crank arms being keyed together by means of said drive shaft for rotation as an integral unit, a cam fixed to each of said crank arms and to said drive shaft, a four-way three position metering valve connected to each of said cylinders, each said metering valve being positioned adjacent one of said cams and including a plunger adapted to con-



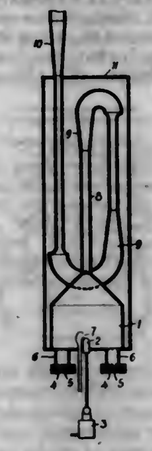
tact the periphery of its respective cam whereby each said valve is controlled by said cams, said metering valves controlling the flow of hydraulic fluid to the ends of said cylinders for synchronizing the positions of said valves with the rotary position of the respective said crank arm and the linear position of the respective said cylinder, a pair of four-way three-position control valves linked to said metering valves, and manually operable means for reversing the direction of flow of hydraulic fluid from said control valves to said metering valves for effectuating the forward or reverse rotative action of said drive shaft.

3,091,223
SEALED VENT WATER HEATER
John J. Vitale, La Porte, Ind., assignor to Bastian-Morley Co., Inc., La Porte, Ind., a corporation of Indiana
Filed Feb. 27, 1961, Ser. No. 91,976
2 Claims. (Cl. 122—17)



1. A water heater comprising an upright cylindrical water storage tank having a bottom wall recessed from its lower end, a support base sealingly secured to the lower end of said tank to define a sealed chamber underlying said bottom wall, a burner mounted upon said base within said chamber, a flue gas outlet pipe in communication with said chamber at said bottom wall and terminating exteriorly of the tank, conduit means defining an air inlet passage communicating with said chamber through said tank in the region thereof disposed between said bottom wall and support base, a baffle plate mounted horizontally within said chamber spaced above said base plate and having an opening through which said burner extends above said baffle plate, said baffle plate disposed adjacent said inlet passage and adapted to separate inlet air flow into two air streams respectively above and below said baffle plate, and an outside atmosphere flue pipe assembly defining a pair of passages respectively communicably connected to said outlet pipe and conduit means.

3,091,224
DEVICE FOR INTERMITTENT COMBUSTION
John Anders Rydberg, Stockholm, Sweden, assignor to Aktiebolaget Gustavsbergs Fabriker, a corporation of Sweden
Filed Dec. 6, 1956, Ser. No. 626,667
Claims priority, application Sweden Dec. 16, 1955
2 Claims. (Cl. 122—24)



1. A fuel combustion and fluid heating system comprising a hot gas generator and a heat exchanger for transferring heat from hot gases produced by said generator to a fluid to be heated, said generator including a combustion chamber having air supply openings, non-return valve means controlling said openings, and controllable pump means intermittently supplying fuel directly into said combustion chamber at a frequency lower than the resonance frequency of the system and less than 50 periods per second, said heat exchanger including at least one discharge duct in communication at one end with said combustion chamber, the ratio of the length to the diameter of said duct being at least 180:1 and the cross-sectional area of said duct being small relative to the volume of the combustion chamber to achieve high velocity of the gases flowing through the duct, said duct including at least two generally linear portions which are joined successively in the direction of gas flow by a diffuser followed by a duct bend portion.

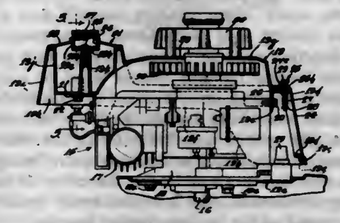
3,091,225
INITIATING AND CONTROLLING UNDERGROUND COMBUSTION
Theodore W. Legatski, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Dec. 29, 1958, Ser. No. 783,447
7 Claims. (Cl. 122—156)

1. Apparatus for heating a subterranean formation containing carbonaceous matter from a bore hole penetrating said formation comprising, in combination, a first tubular member having the lower end thereof closed, a second tubular member having the lower end thereof closed disposed within and along the axis of said first tubular member, said second member being disposed at a spaced distance from said first member thereby providing an annulus therebetween having completely closed ends, a body of metal having a boiling point between about 1200° and 2450° F. disposed in and partially filling said annulus at a lower end thereof, said body of metal being present in an amount sufficient upon boiling to substan-



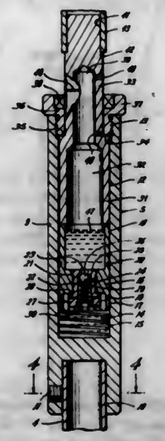
tially vaporize and fill said annulus with condensing metal vapor, a closure member closing the end of said second tubular member at an upper end of said annulus, means supported by said closure member for heating said metal which is so adapted as to provide a combustion area in a position adjacent to the lower end of said annulus and said body of metal so as to effect vaporization of same, and a vent in said closure member and in communication with said combustion area.

3,091,226
COMBINED ENGINE SHROUD AND FUEL RESERVOIR
Ivar Jepson, Oak Park, Ill., assignor to Sunbeam Corporation, Chicago, Ill., a corporation of Illinois
Filed Nov. 2, 1960, Ser. No. 66,864
9 Claims. (Cl. 123—41.65)



1. A combined fuel reservoir and shroud for an internal combustion engine comprising a die cast shroud having side walls and a top wall for partially enclosing an engine, assembly means for securing said shroud to said engine, an upwardly facing depression cast in the top wall of said shroud, fluid conduit means connected to the bottom of said depression, a plate member positioned across said depression to form a liquid tight chamber therein, a filling opening in said plate member provided with a cap removably secured to said plate in obstructing relation to said opening, and assembly means retaining said plate in sealed engagement with said shroud, said assembly means being insertable into said filling opening for engagement with said shroud and being positioned entirely within said chamber beneath said cap.

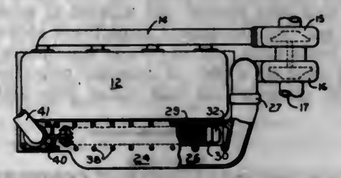
3,091,227
AUTOMATIC VALVE CLEARANCE ELIMINATOR
Joe L. Neil, Pampa, Tex., assignor to Panhandle Industrial Company, Pampa, Tex., a corporation of Delaware
Filed Apr. 9, 1962, Ser. No. 185,956
2 Claims. (Cl. 123—90)



1. An automatic valve clearance eliminator comprising a pair of relatively slidable telescoping parts having aligned pushrod receiving connections thereon respectively adapted for rigidly connecting them respectively with two aligned sections of a pushrod between which the eliminator is adapted to be interposed, such parts including cooperating guide and slide means and stop means limiting the relative telescoping movement of said parts and preventing them from disengaging each other, one of said parts including a cylinder, uni-directional motion-retarding means on said parts restricting them to extremely slow movement in a first direction to move said pushrod connections closer together while permitting them to move rapidly in the opposite direction relative to one another, and including a piston in said cylinder separate from said slide but positioned in force transmitting relation thereto to be urged thereby in said first direction, and means biasing said parts toward movement in said opposite direction relative to one another, said guide and slide means having thereon spaced pairs of cooperating bearing areas resisting misalignment of said parts in any one direction, said pairs having surfaces in engagement at any one time spaced longitudinally of the relative sliding movement of said parts and said pairs being spaced also in a direction normal to the direction of said relative sliding movement, the first-mentioned spacing being at least as great as the last-mentioned spacing.

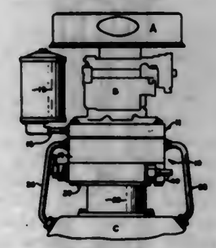
3,091,228
ENGINE WITH TURBOCHARGER AND AFTERCOOLING
Carl R. Maxwell, Washington, Ill., assignor to Caterpillar Tractor Co., Peoria, Ill., a corporation of California
Filed Apr. 17, 1961, Ser. No. 103,376
1 Claim. (Cl. 123—119)

In an internal combustion engine having an in line bank of cylinders, an elongate intake manifold with passages communicating with said cylinders, a supercharger for compressing and directing air to the manifold, and an aftercooler comprising an elongate tube bundle in said manifold, the improvement which comprises said manifold having an upper and lower portion communicating only through said tube bundle, said upper portion receiving air from the supercharger, and said lower portion communicating with said passages, and baffle means



on opposite sides of the tube bundle to confine the air to a generally downward path therethrough.

3,091,229
MEANS AND METHOD FOR IMPROVING COMBUSTION IN INTERNAL COMBUSTION ENGINES
Robert B. Nevin, Lakewood, Calif.
(4325 Pepperwood St., Long Beach, Calif.)
Filed Aug. 7, 1961, Ser. No. 129,904
13 Claims. (Cl. 123—119)

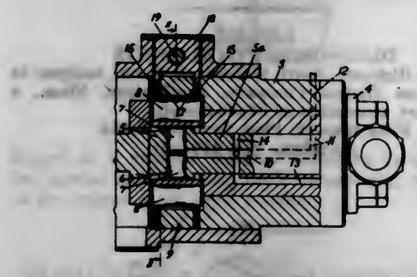


1. A device effective to provide improved combustion in internal combustion engines, comprising:
a housing interposed in the conduit between the carburetor and the engine inlet, and through which the combustible mixture is drawn by the suction of the engine;
an expansion chamber in the housing into which said combustible mixture expands;
a heating and mixing section in said housing through which said combustible mixture is also drawn, said heating and mixing section having a plurality of passages therethrough of convergent-divergent cross section with imperforate walls and with passages for heating medium around each passage;
tubes supplied with heated fluid connected to said passages for heating medium;
and an outlet portion leading the heated and mixed fuel mixtures to the engine inlet manifold.

3,091,230
LIQUID FUEL PUMPS FOR INTERNAL COMBUSTION ENGINES
Fraser Mackie Evans, Ickenham, Uxbridge, and Kenneth Albert Walters Kemp, Ealing, London, England, assignors to C.A.V. Limited, London, England
Filed May 4, 1961, Ser. No. 107,854
4 Claims. (Cl. 123—139)

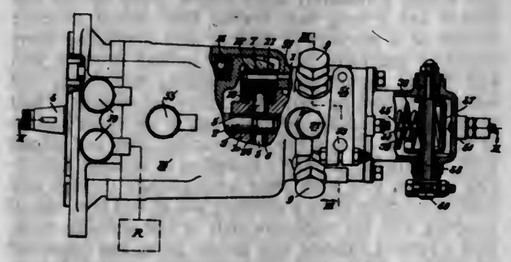
1. A liquid fuel pump of the kind specified for supplying fuel to an internal combustion engine, and comprising in combination a rotary cylindrical distributor provided with an axial passage and with fuel inlet and outlet passages extending outwardly from the axial passage, a head which is provided on one end of said distributor so as to be rotatable therewith, and which has a transverse bore in constant communication with the axial passage in said distributor, at least one plunger mounted in the transverse bore in said head, an annular cam which surrounds said head, and through the medium of which

said plunger is movable inwardly during rotation of said distributor, at least one subsidiary cam ring which also surrounds said head, and has an inner peripheral cam surface through the medium of which the outward movement of said plunger is limited, and movable means en-



gaging said cam ring, and operable from the exterior of the pump for imparting angular adjusting movement to said cam ring about the axis of said distributor so as to vary the distance through which said plunger is movable outwardly.

3,091,231
FUEL INJECTION PUMPS
Jean René Girandon, Rueil-Malmaison, France, assignor to Societe Industrielle General de Mecanique Appliquee, S.I.G.M.A., Paris, France, a society of France
Filed Sept. 6, 1961, Ser. No. 136,234
Claims priority, application France Mar. 12, 1959
8 Claims. (Cl. 123—140)



1. A fuel injection pump which comprises in combination, a frame forming a casing, a fixed body in said casing, a driving shaft journalled about an axis fixed with respect to said body, one of the two last mentioned parts being provided with at least one cylindrical housing transverse to said axis, a piston slidable in said housing so as to form therewith a pumping chamber, a cam carried by the other of said two parts, said cam being operatively conneced with said piston for imparting a reciprocating movement thereto in said housing in response to rotation of said shaft with respect to said body so as to produce a given number of pumping reciprocations of said piston during every revolution of said shaft, said body being provided with a cylindrical bore coaxial with said shaft, a distributing rotary valve fitting slidably in said bore, said valve being operatively connected with said shaft so as to be driven by it, a fuel tank, a plurality of fuel injectors, the number of said injectors being equal to said given number, said body being provided on the one hand with intake conduits each opening at one end into said bore and communicating at the other end with said fuel tank and on the other hand with delivery conduits each opening at one end into said bore and communicating at the other end with one of said fuel injectors respectively, said distributing valve being provided with distributing passages for placing, during every revolution of said shaft, said pumping chamber in communication with said delivery conduits successively and cyclically for respective time intervals and with distributing passages for placing said pumping chamber in communication with said intake conduits during time intervals occurring between said first mentioned time intervals, said distributing valve being further provided with discharge passages for periodically and cyclically short-circuiting the outflow of fuel through said delivery conduits, a member in said casing coaxial with said distributing valve and mounted to cooperate therewith for successively closing and opening said discharge passages, during every period for which one of said delivery conduits is in communication with said pumping chamber, said distributing valve and said member being movable relatively to each other both in the direction of said axis and by rotation about said axis, said discharge passages being arranged so that a relative axial movement between the two elements consisting respectively of said valve and said member produces a variation of the portion of every cycle of operation for which said discharge passages remain closed, whereas a relative movement of rotation between said two elements varies the phase of the cycle of operation with respect to the revolution of such shaft, a single speed governor mounted on said shaft, and means including a lost motion connection in the axial direction operatively connecting said governor to one of said two elements for producing in response to an increase of speed of said shaft first at lower speeds a relative rotation between said valve and said member to vary such phase of the cycle of operation without substantial relative axial displacement between said valve and said member and then at higher speeds a relative axial displacement between said valve and said member to vary the portion of the cycle of operation for which the discharge passages remain closed.

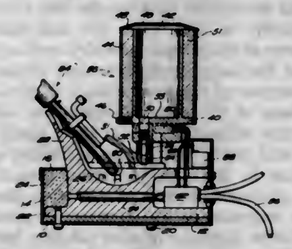
3,091,232
LATCHING MEANS FOR FRENCH DOORS
Robert C. Allen, Jr., Trotwood, and Lawrence J. Miller, Dayton, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed May 19, 1960, Ser. No. 30,363
2 Claims. (Cl. 126—190)



1. In combination with an oven casing defining an oven liner having an opening, a guide rod fixed relative to said casing beneath said oven liner, left and right-hand vertically pivotable doors for closing said opening, a slidable element slidably mounted on said guide rod, a pair of door support arms loosely interconnectably related to each other and to said slidable element at one end thereof and to each of said doors respectively at the other end thereof whereby movement of one of said doors initiates slightly trailing movement of the other of said doors, said left-hand door having a first outer panel having a first inwardly turned peripheral flange, said right-hand door having a second outer panel having a second inwardly turned peripheral flange in juxtaposition to said first flange when said doors are closed, an interlocking bushing on said first flange having an inwardly conical portion in juxtaposition to said second flange when said doors are closed and having a cylindrical port at the conically inner end of said conical portion, said bushing being normally immovable relative to said first flange, an interlock pin on said second flange in generally horizontally coplanar relationship to said bushing and normally immovable relative to said sec-

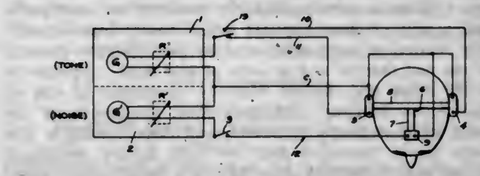
ond flange, said interlock pin having a conical nose portion engageable with said inwardly conical portion of said interlock bushing during said movement of one of said doors to channel said interlock pin toward said port, and said interlock pin having a round lock portion coextensive with said port and adapted to enter into closely fitting engagement with said port when said doors are closed, thereby to align said doors both horizontally and vertically.

3,091,233
ADHESIVE DISPENSING APPARATUS
Robert B. Dunlap, Medway, Mass., assignor to Jacob S. Kamborian, West Newton, Mass.
Filed Aug. 3, 1960, Ser. No. 47,284
2 Claims. (Cl. 126—343.5)



1. An adhesive dispensing apparatus comprising: a receptacle; a bowl in the upper surface of the receptacle for retaining a supply of molten adhesive, and from which a quantity of the molten adhesive may be picked up by an applicator; first heating means located in the receptacle adjacent the bowl for maintaining the adhesive in the bowl molten; a container for a quantity of solid adhesive positioned above the receptacle, said container including a cavity having a bottom wall; a conduit extending downwardly from the bottom wall toward the bowl for conducting molten adhesive from the cavity to the bowl; adjustable valve means in the conduit for regulating the rate of flow of molten adhesive therethrough; and second heating means positioned below said bottom wall and adjacent said valve means for melting the solid adhesive in the cavity from the bottom and maintaining the adhesive molten during its passage through the conduit.

3,091,234
METHOD FOR TESTING HEARING ACUITY
James F. Jerger, Wilmette, Ill., assignor to Northwestern University, Evanston, Ill., a corporation of Illinois
Filed Jan. 18, 1960, Ser. No. 3,165
8 Claims. (Cl. 128—2.1)



1. The method of testing a person for sensori-neural hearing loss by the degree to which air-conducted tones are masked by white noise delivered by bone conduction directly to the cochlea of the ear under test which comprises:

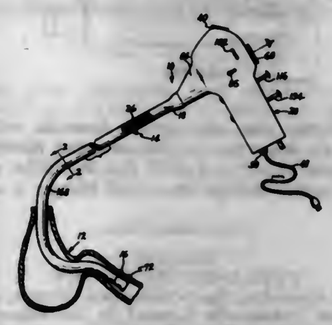
delivering air-conducted pure tones to the ear under test and increasing the intensity of each said tone to threshold level;

delivering white noise of fixed intensity to the skull by bone-conduction at a point midway between the ears of said person;

then increasing the intensity of each said pure tone to threshold level in the presence of said white noise;

and indicating the intensities of each said pure tone.

3,091,235
DIAGNOSTIC INSTRUMENTS
Oscar W. Richards, North Woodstock, Conn., assignor to American Optical Company, Southbridge, Mass., a voluntary association of Massachusetts
Filed June 15, 1960, Ser. No. 36,426
5 Claims. (Cl. 128—6)



5. A device of the character described comprising a probe embodying a long, thin and flexible tubular structure having a relatively short hollow fitting on one end thereof and a long, thin flexible fiber optical structure formed of a plurality of flexible light-conducting fibers extending internally through said tubular structure into said fitting, gimbal means interjoining said fitting and tubular structure for permitting lateral adjustment of said fitting in all directions independently of the major portion of the length of said tubular structure, first and second pairs of wire-like members extending in adjacent side-by-side relation with each other longitudinally through said tubular structure along a common side of said fiber optical structure with the respective ends of said wire-like members separated adjacent said hollow fitting and connected in pairs to substantially right-angularly related diametrically opposite sides of said respective fitting and gimbal means, the opposite ends of said wire-like members being accessible for manipulation adjacent the opposite end of said tubular structure whereby longitudinal movement of one wire-like member relative to the other of each of the respective pairs thereof will produce lateral adjustment of said hollow fitting independently of said tubular structure and because said wire-like members are in adjacent side-by-side relation along a common side of said fiber optical structure flexing of said tubular and fiber optical structures may be effected substantially without introducing relative longitudinal movement of said wire-like members or imparting lateral movement of said hollow end fitting.

3,091,236
RESUSCITATOR
Guy J. Delbert, 748 Findley Ave., Zanesville, Ohio
Filed June 16, 1960, Ser. No. 36,617
2 Claims. (Cl. 128—29)

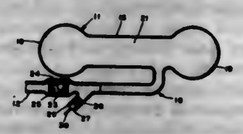
1. A resuscitator for humans comprising a face mask of a configuration for encasing the nose and mouth of a human face, a resilient bulbous member having an internal cavity in communication and contiguous with said mask for supplying media to and withdrawing the media from said mask and the mouth encased therein, said mask and bulbous member being of a continuous

resilient sheet material which has a thickened edge portion forming a bead stiffening around said mask and a



tongue of a resilient material extending cross-wise of the interior and from said mask for retaining the mouth of the human in an open position.

3,091,237
FACIAL MUSCLE AND TISSUE CONDITIONING DEVICE
Clawson N. Skinner, 2108 Elray Drive, Whittier, Calif.
Filed May 16, 1960, Ser. No. 29,455
2 Claims. (Cl. 128—60)



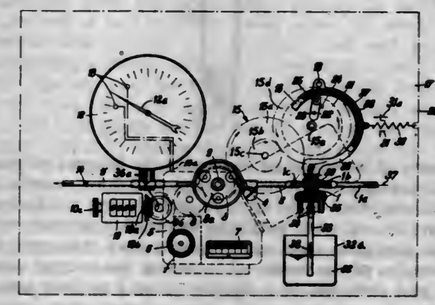
1. A facial muscle conditioning device comprising a pair of identical blanks of supple film-thin sheet plastic material having smooth-surfaced faces, said blanks each having generally circular enlargements at their opposite ends interconnected by a relatively narrow strip having generally parallel opposite lateral edges, a long narrow strip extending from one lateral edge of said narrow strip and integral therewith, all edges of said two blanks being in direct registry with one another and being bonded together throughout their peripheral rim edges except transversely of said last mentioned long narrow strips, thereby to provide an inflatable envelope and an attached small diameter long flexible air inlet tube extending laterally from one bonded edge thereof, said envelope being of a size to be received in the oral cavity between the exterior of the closed teeth and the juxtaposed surfaces of the facial muscle complex with said air inlet tube extending outwardly between the lips, said envelope being alternately inflatable and deflatable with slightly pressurized air to alternately tension and relax the facial muscles to exercise the facial muscles while providing a flow of nutrient blood therethrough.

3,091,238
HERNIA SUPPORT
Alexander De Bogory, Sr., 327 SW. 29th Road, Miami, Fla.
Filed Oct. 4, 1961, Ser. No. 142,964
8 Claims. (Cl. 128—95)



8. In a hernia support for a person; an expansionable waist encircling band, an expansionable leg encircling band, an expansionable strip disposed between and joining said bands limiting the spaced apart relation thereof, said bands being adapted to be normally in spaced apart relation in use, and an elastic strap disposed in tension between said waist band and said leg band, said strap being adapted to be fastened to said bands and arranged to overlie the abdominal area of a person crossing the vertical center line thereof said strap being provided with a detachable adhesive seal whereby said seal is adapted to adhere to the abdominal area upon removal of said strap.

3,091,239
APPARATUS FOR INTRAVASAL INJECTION OF GASEOUS AND LIQUID MEDIA
Wilhelm Moeller, Wilhelmshöher Allee 5, Kassel, Germany
Filed Aug. 25, 1959, Ser. No. 835,894
Claims priority, application Germany Aug. 25, 1958
9 Claims. (Cl. 128—214)



1. An insufflator comprising, in combination, at least one source of fluid to be insufflated; a pump; motor means comprising an infinitely variable transmission for driving the pump at variable rates of speed; valve means comprising at least one adjustable plug; first conduit means for connecting the source with said valve means; second conduit means for connecting said valve means with the pump; third conduit means for delivering measured quantities of fluid at predetermined pressures from said pump into a patient's body; and an operative connection between said motor means and said plug for adjusting the latter whereby to alternately admit fluid from the source into said second conduit means, said operative connection comprising a transmission driven by the motor means, a disc rotated by said last mentioned transmission, a follower roller swingably mounted on said disc and rotatable therewith, a swingable cam in the path of said roller, a gear segment coupled with said cam, toothed means fixed to said plug and meshing with said segment for moving the plug in one direction when the cam is moved by said roller, and resilient means for moving the plug in the opposite direction when the cam is released by said roller.

3,091,240
HYPODERMIC SYRINGE AND VENTABLE CLOSURE MEANS
Robert K. McConnaughey, 5220 Parkway Drive, Chevy Chase 15, Md., and Milton J. Cohen, Washington, D.C. (7111 Connecticut Ave., Chevy Chase, Md.)
Filed Dec. 29, 1958, Ser. No. 783,256
9 Claims. (Cl. 128—218)

1. A container which has a transparent cylindrical portion communicating with an opening at one end and which is adapted to be filled or emptied by increasing or reducing its internal volume, said container having ventable closure means consisting of a floating piston mounted reciprocally in said transparent cylindrical portion of

said container, said floating piston including an annulus with a central cylindrical opening coaxial with said cylindrical portion of said container and an elastic membrane closing said central cylindrical opening of said floating piston said membrane being perforated, said membrane and each perforation therein being so dimensioned that each said perforation will remain closed to seal said transparent cylindrical portion against the passage of liquid, gaseous or powdered materials when subjected to positive or negative pressures within said container that are less than those created by actuation of the



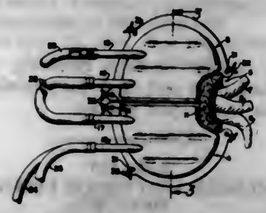
means of increasing or decreasing the internal volume of said container in a manner adapted to draw material into said container or to eject its contents but is adapted to open inward when subjected to negative pressure within said container equal to or greater than that created by actuation of the means of increasing the internal volume of said container in a manner adapted to draw material into said container and to open outward when subjected to positive pressure within said container equal to or greater than that created by actuation of the means of decreasing the internal volume of said container in a manner adapted to eject its contents.

3,091,241
VAGINAL TAMPON
William R. Kellett, Menasha, Wis., assignor to Kimberly-Clark Corporation, Neenah, Wis., a corporation of Delaware
No Drawing. Filed Aug. 26, 1959, Ser. No. 836,081
2 Claims. (Cl. 128—270)

1. A compressed vaginal tampon adapted for easy insertion and expansion within the vaginal cavity under normal conditions of use and for absorbing and retaining catamenial fluid while maintaining a normal ecological balance in the cavity during menses, said tampon comprising, as the fluid absorbing and retaining means, a compressed absorbent body, and as means for maintaining said normal ecological balance, glyceryl triacetate, said glyceryl triacetate being present at least in the outer peripheral area of said body in the amount of from about 0.25 percent to 5.0 percent by weight based on the total weight of said body, said tampon being non-toxic, non-irritating, and non-spermicidal in use.

3,091,242
APPARATUS FOR LOCAL HYPOTHERMIA
Alfred L. Johnson, Jr., Inglewood, and Robert B. Wister, Manhattan Beach, Calif., assignors to The Garrett Corporation, Los Angeles, Calif., a corporation of California
Filed Apr. 4, 1960, Ser. No. 19,738
1 Claim. (Cl. 128—402)

Apparatus for local temperature change of a body organ comprising complementary sections which when assembled have an interior surface formation conforming to the exterior shape of said organ for enclosing the same, each of said sections being formed of double, thin, sheet metal walls connected at their edges and at portions therebetween and spaced apart to form passageways for the circulation of a heat transfer fluid therethrough, the juxtaposed edges of said sections being shaped to provide an opening therethrough for the passage of body conduits attached to said organ when the same is enclosed by said assembled sections, a thermally insulating coating on the exterior surfaces of said sections to insulate the heat trans-



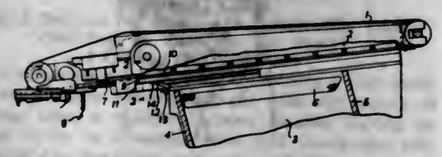
fer fluid from normal body temperature, flexible tubing means interconnecting the passageways in said sections to permit independent movement of said sections to uncover portions of said organ as desired, means for circulating a heat transfer fluid through said passageways and interconnecting means, and a heat conducting cushion of sponge material mounted on the interior surface of the assembled sections to compensate for variations between the size and shape of the organ and the interior conformation of said sections.

3,091,243
SELF-EXTINGUISHING CIGARETTE
Frank C. Guida, 144 Harryel St., Pittsfield, Mass.
Filed Jan. 11, 1961, Ser. No. 82,106
1 Claim. (Cl. 131—4)



A self-extinguishing cigarette comprising a cylindrical roll of smoking tobacco, a cylindrical paper covering for said tobacco, a hollow tube formed of a polyolefin compound which has been expanded, said tube being slidably disposed about the periphery of said paper and snugly encompassing the same, said tube being enclosed by aluminum foil on the inside and outside surfaces thereof, whereby upon a burning portion of said cylindrical roll encountering said expanded tube said expanded tube will contract about the burning portion and extinguish said burning portion.

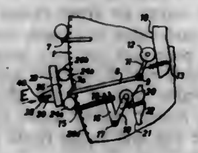
3,091,244
TOBACCO-MANIPULATING APPARATUS
Desmond Walter Molins, London, England, and Francis Auguste Maurice Labbé, Orleans, France, assignors to Molins Machine Company Limited, Deptford, London, England, a company of Great Britain
Filed Nov. 30, 1959, Ser. No. 856,131
Claims priority, application Great Britain Dec. 5, 1958
14 Claims. (Cl. 131—84)



1. Tobacco manipulating apparatus comprising an air pervious conveyor, side guides forming a trough through

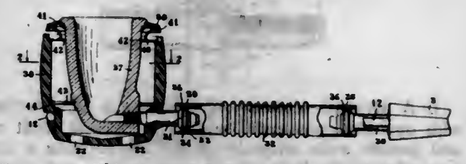
which the conveyor moves, wall means defining a passage leading to one side of the conveyor, a suction chamber at the side of the conveyor opposite to the passage to draw air through the conveyor and the passage to impel tobacco introduced into the passage to flow through the passage to the conveyor to build up a continuous tobacco filler thereon and hold it to the conveyor which conveys it between the side guides, said wall means comprising side walls spaced apart laterally of the conveyor and extending thereto and a downstream end wall and an upstream end wall spaced apart in the direction of movement of the conveyor, the downstream end wall being spaced from the conveyor for the conveyor to carry the tobacco filler past it out of the passage and leave a gap between the filler and the downstream end wall, and closure means located adjacent said downstream end wall and the conveyor substantially to close said gap, the side guide being recessed to provide an enlarged portion of the trough adjacent the filler and the closure means being shaped to extend into the enlarged portion of the trough, said closure means having an aperture part movable with respect to the conveyor and lightly in contact with the surface of the tobacco filler at least when air is flowing through the passage and the conveyor, to accommodate itself to variations in the depth of the tobacco filler.

3,091,245
MEANS FOR WRAPPING CONNECTING LEAVES AROUND THE ABUTMENT REGIONS OF ASSEMBLIES COMPRISING CIGARETTES AND FILTER PLUGS
Willy Rudszinat, Hamburg-Lohbrügge, and Herbert Berlin, Hamburg, Germany, assignors to Hauni-Werke Körber & Co., K.G., Hamburg-Bergedorf, Germany
Filed Dec. 23, 1960, Ser. No. 78,027
Claims priority, application Germany Dec. 28, 1959
10 Claims. (Cl. 131—94)



1. Means for wrapping a connecting leaf around the abutment regions of an assembly of rod-shaped articles arranged in end to end abutting relation, comprising a rotary transfer drum having a series of grooves for receiving partially assembled rod-shaped articles and connecting leaves, a rotary wrapping drum having end walls, a plurality of boundary bars dividing said wrapping drum into a series of wrapping spaces, an arcuate guide member adjacent said wrapping drum engageable with said assembly so that relative movement between said rotary wrapping drum and said arcuate guide member will cause the wrapper leaf to be wrapped around said assembly, means for transferring said assembly from said transfer drum to said wrapping drum, a lever secured to each end of each of said boundary bars, means pivotally mounting said levers on the end walls of said wrapping drum, an arm projecting from each of said levers, cam follower means mounted on said arms, cam means stationarily mounted for engagement with said cam follower means, and means biasing said cam follower means toward engagement with said cam means, said cam means being so shaped as to cause movement of the boundary bar trailing the assembly in a direction away from said adjacent wrapper leaf being wrapped during the final portion of the wrapping procedure.

3,091,246
SMOKERS' PIPES
Jean Mahieux, 1 Place Rhin et Danube, La Garenne Colombes, France
Filed July 29, 1960, Ser. No. 46,269
6 Claims. (Cl. 131—195)



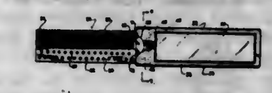
3. A tobacco pipe including a mouth piece, a bowl having a circular section and a shank connecting the mouth piece to the bowl, the shank comprising a hollow tubular element having a smoke duct therein, and a pair of members diverging outwardly from said tubular element and from the mouth piece toward the bowl, the outer end of said members being joined by means of a semi-circular portion, said members and said portions comprising a stirrup, said bowl comprising an outer bowl part, and an inner bowl part spaced inwardly from said outer bowl part, said outer bowl having at least one hole formed through the bottom thereof, a crown carrying the upper outwardly flaring edge of the inner bowl and overlying the upper edge of the outer bowl and a washer carrying said crown by means of resilient lugs and maintaining the upper portion of the inner bowl centered in the outer bowl, the lower portion of the outer bowl having a horizontal external groove therearound adapted to receive said stirrup semi-circular portion, said outer bowl having a radially inwardly displaced portion from said external groove and providing an internal shoulder adapted to seat a bottom washer to maintain the lower portion of said inner bowl in spaced relation to said outer bowl.

3,091,247
STEEL CLIP FOR HOLDING COILED HAIR
Robert E. Davis, Sr., and Robert E. Davis, Jr., both % Southland Sox Co., Fort Payne, Ala.
Filed Dec. 14, 1960, Ser. No. 75,841
1 Claim. (Cl. 132—41)



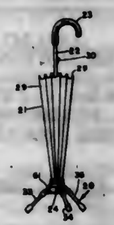
A tensioned steel clip for holding a coil of hair on a hollow cylinder during treatment of said coil, said clip including a flat thickened portion at one end bent upon itself to form a hook to embrace the wall of the hollow cylinder at one end thereof and a flat bar, integral with said hook, coextensive in length with the hollow cylinder to which the clip is to be applied, the free end of said flat bar being twisted at substantially a right angle and bent downwardly at substantially a right angle providing an angularly disposed extension adapted to embrace the opposite end of the hollow cylinder, said extension having in the edge thereof facing the cylinder a plurality of spaced teeth for selective engagement with the wall of the hollow cylinder, said flat bar being so tensioned and twisted that any pressure exerted thereon to bias said flat bar toward the hollow cylinder will pivot said extension in a direction to bring any selected tooth into firmer locking engagement with the cylinder wall and means projecting from said angular extension for applying manual force to flex said bar to effect engagement and disengagement of any of said teeth with the wall of the cylinder.

3,091,248
COMB BRUSH AND CASING ASSEMBLY
Leo Strauch, 1733 160th St., Whitestone, N. Y.
Filed Oct. 12, 1961, Ser. No. 144,787
3 Claims. (Cl. 132—103)



1. A personal accessory, comprising a tubular casing with opposite open ends, said casing having front rear and bottom walls integrally joined and forming a structure substantially triangular in cross section, and a comb-brush member slidably disposed in said casing, said member having an elongated back extending along said bottom wall when the member is retracted in the casing, flexible teeth integral with said back defining a comb, and a plurality of rows of bristles secured in said elongated back and extending laterally thereof to frictionally engage the front wall when the member is retracted in the casing, said bottom wall having a ridge thereon for guiding said back in sliding movement into and out of the casing, a stop element formed inside of one of the walls, a triangular plate integral with the back of said member and extending perpendicular thereto for engaging said stop element to limit outward sliding movement of said member from the casing, said casing serving as a handle for said member when said member is extended from the casing, a mirror on the front wall of said casing and a removable nail file on the bottom wall of the casing.

3,091,249
UMBRELLA WITH STAND
Rose M. O'Neil, 292 Butman Road, Lowell, Mass.
Filed Aug. 17, 1960, Ser. No. 50,238
10 Claims. (Cl. 135—16)



5. In combination with an umbrella, a portable umbrella stand comprising a tripod head secured to the umbrella tip; tripod legs foldably connected to said head to swing from an inoperative folded position in substantial parallelism with the umbrella handle rod and overlying the exterior face of said umbrella through an arcuate path of about one hundred thirty-five degrees toward the umbrella tip to an unfolded, operative position forming an umbrella supporting tripod and resilient, yieldable latching means on said stand for detachably retaining said legs in said operative, or said inoperative, position.

3,091,250
DEVICE FOR PREVENTING THE FREEZING-IN OF AIR VENT VALVES
László Heller, László Forgo, and Mihaly Horváth, all of Budapest, Hungary, assignors to Licencia Talalmanyokat Ertekesito Vallalat, Budapest, Hungary
Filed Jan. 27, 1961, Ser. No. 85,341
4 Claims. (Cl. 137—202)

1. In a heat exchanger of the type described and the like, the combination of:

(a) a casing having a peripheral wall and a top;

(b) said wall having a through radial passage near said top;

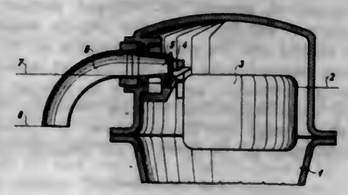
(c) an outlet pipe extending frictionally into said passage and inclined continuously downwardly from its inner end to its outer end;

(d) a round bored tube in said casing extending inwardly from said outlet pipe in endwise tight abutment therewith;

(e) the lower portion of the bore of said tube being pocketless and inclined smoothly continuously downwardly from the inner end to the outer end of said tube and merging smoothly and pocketlessly with the bore of said outlet pipe;

(f) the inner end of said tube being shaped to form a valve seat;

(g) a float in said casing arranged for floating on water



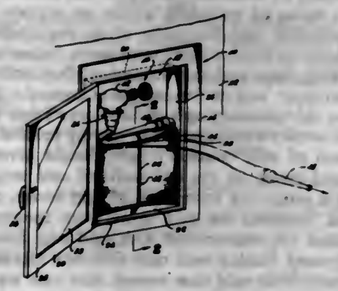
therein and moving vertically in accordance with the rise and fall of the water;

(h) a valve operatively coupled to said float, and positioned and adapted relative to said valve seat to be seated upon said valve seat and thereby ordinarily block said tube bore upon use of said float and to be unseated from said valve seat upon fall of said float;

(i) said pipe having the outer end extending downwardly to a level below the lowest level of said tube to ensure water runoff from said tube and to ensure trapping of warm air from casing in said tube and pipe when said valve is closed; and

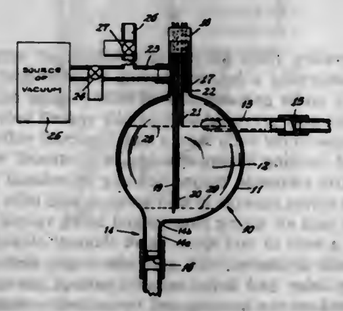
(j) said tube bore and the pipe bore being shaped to ensure a trickle runoff, without accumulation therein from said valve seat of water drops trapped when the valve is closed and of water forced between the closed valve and seat as the result of excess pressure in the casing.

3,091,251
FIRE HOSE CABINET
J. Benedict Hughey, Santa Barbara, Calif., assignor to Standard Fire Hose Company, Santa Monica, Calif., a corporation of California
Filed Nov. 14, 1961, Ser. No. 152,342
6 Claims. (Cl. 137—355.28)



1. A fire hose cabinet comprising: a collapsible fire hose adapted in its collapsed condition to be folded into short lengths aligned with and parallel to one another; a mounting frame; a pan secured to said frame and representing a rear, top and bottom, and side cabinet walls, the depth of said cabinet from front to rear being just slightly greater than the width in cross section of said hose in its collapsed condition, said pan receiving said hose in its collapsed and folded configuration with the inner edges of said lengths abutting said rear wall; and elastic cord means mounted on said pan and extending in a stretched condition away from said rear wall and transverse to said lengths over the outer edges of said lengths for yieldably urging the central portions of the same against said rear wall and thereby releasably retaining said hose within said cabinet in its collapsed and folded condition.

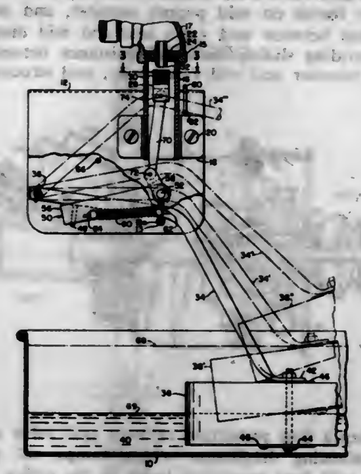
3,091,252
LIQUID TRANSFERRING APPARATUS
Richard De Forest Jones, P.O. Box 113, Kent, Conn.
Filed Aug. 22, 1961, Ser. No. 133,232
9 Claims. (Cl. 137—392)



1. A liquid milk transferring system comprising means forming a chamber, inlet and outlet means communicating with said chamber, means for controlling the flow of liquid milk into and out of said chamber to maintain a lower liquid milk level and an upper liquid milk level in said chamber and additional means for setting a higher upper liquid level in said chamber for whenever a cleaning liquid is being flowed into and out of said chamber.

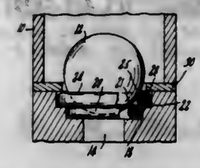
3,091,253
FLOAT-CONTROLLED VALVE FOR POULTRY-WATERING APPARATUS AND THE LIKE
John J. Austin, Box 187, Topsfield, Mass.
Filed Nov. 6, 1961, Ser. No. 150,553
5 Claims. (Cl. 137—418)

1. A snap-acting float-controlled valve comprising, in combination; a U-shaped valve casing, a fluid inlet pipe terminating in a valve seat and adjustably secured to the exterior of the casing, a valve member slidably mounted in said inlet pipe for reciprocation along a center line for selective engagement with said valve seat to close said inlet, a bell-crank pivotally mounted on said center line in said casing and having an interior arm inside said casing and an exterior arm outside said casing, a link pivotally connecting said valve member with said exterior arm, a stem pivotally mounted on said casing, a float carried by said stem, a tension spring connected at its opposite ends to said stem and to said interior arm, said spring being arranged upon lowering of said stem to snap said bell-crank to a first position to withdraw said valve member from said seat, and upon raising of said stem to snap said bell-crank to a second position to extend said exterior arm and said link rectilinearly along said



center line to lock said member in sealing engagement with said seat.

3,091,254
DUAL SEATING BALL CHECK VALVE
Enrique L. Kilayko, Cambridge, Mass., assignor to Precision Chemical Pump Corporation, Waltham, Mass., a corporation of Massachusetts
Filed Nov. 24, 1961, Ser. No. 154,699
3 Claims. (Cl. 137—516.29)

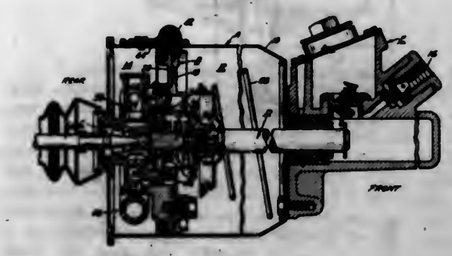


1. In a check valve having a port: sealing means comprising a ball movable toward and away from said port, said ball having a diameter substantially larger than the largest dimension of said port; seating means positioned between said ball and said port comprising inner and outer circular rings of an elastomeric substance having a hardness in the range of 50–70 durometer and having respectively inner and outer circular sealing surfaces; inner and outer seating cavities embracing said seating means; said sealing surfaces having sequentially decreasing diameters progressively remote from said ball; said surfaces being arranged for contact with said ball in a sequence progressively remote from said ball on movement from said ball toward said port, such that when said ball strikes said inner surface it overlies in spaced relation said outer surface; said inner surface having a seating angle in the range of 57–60 degrees and said outer surface having a seating angle in the range of 38–41 degrees.

3,091,255
ANTI-FLUTTER POPPET DEVICE
Dale S. Wahlstrom, South Bend, Ind., assignor to The Bendix Corporation, a corporation of Delaware
Filed Dec. 1, 1960, Ser. No. 73,061
3 Claims. (Cl. 137—620)

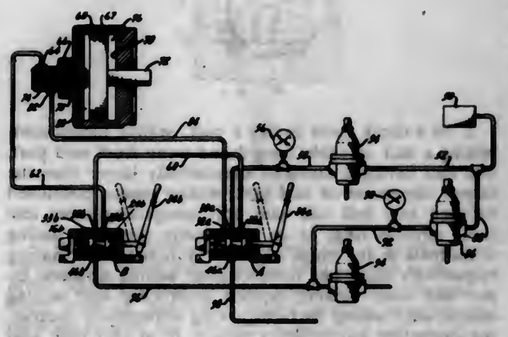
1. In a control valve: a valve body having an annular fixed valve seat therein, a poppet member for abutment with said valve seat, said poppet being fluid pressure re-

sponsive, a diaphragm fastened between said poppet member and said valve body which substantially balances the pressure forces on said poppet member, and structure positioned between said valve seat and said diaphragm and providing sliding frictional resistance between said poppet member and said valve body, said structure also



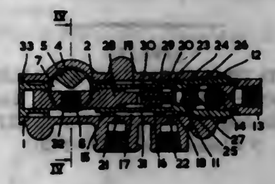
providing a flow restriction between said valve seat and said balancing diaphragm which damps out pressure waves, said flow restriction being of the orifice type to effectively damp out pressure surges while permitting quick response of said diaphragm to changes in pressure at said valve seat.

3,091,256
CHUCK CONTROL CIRCUIT
Robert E. Becker, Logansport, Ind., assignor to Logansport Machine Co., Inc., Logansport, Ind., a corporation of Indiana
Filed Sept. 6, 1960, Ser. No. 53,985
5 Claims. (Cl. 137—622)



1. A fluid control system for use with a chucking cylinder or the like including a source of fluid pressure and a valving system connected thereto, said valving system including a first valve and a second valve, each having a reciprocal valve member movable between a first and second station, each of said valves being connected to said source of fluid pressure, a first fluid conduit connected to said first valve and a second fluid conduit connected to said second valve, said valve members being movable between a first position in which said first fluid conduit is connected to exhaust and said second fluid conduit is connected to the source of fluid pressure, and a second position in which the pressure supplied to said second fluid conduit is reduced from the pressure supplied when the valve members are in the first position, said valve members being movable to a third position in which said first fluid conduit is connected to said source of fluid pressure and said second fluid conduit is connected to exhaust.

3,091,257
AIR SUSPENSION SYSTEMS FOR VEHICLES
Donald H. Ballard, Lincoln, England, and Albert E. Ellis, Wadeville, Germiston, Republic of South Africa, assignors to Clayton Dewandre Company, Limited, Lincoln, England
Filed Aug. 29, 1960, Ser. No. 52,569
Claims priority, application Great Britain Aug. 28, 1959
2 Claims. (Cl. 137—627.5)



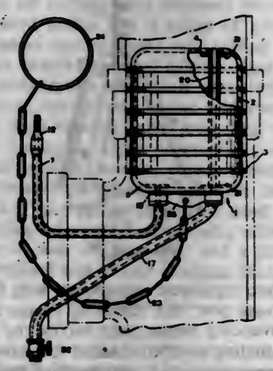
1. A leveling valve for use in a vehicle air suspension system comprising a housing having an inlet port at one end for air under pressure and an inlet passage connected to said inlet port provided with axially spaced valve seats, a valve element for each seat, a slidable spool valve member in said housing having one end in abutment with one of said valve elements, means defining an exhaust passage and an air spring passage in said housing, said inlet passage leading to said air spring passage and being valved by said elements, a bore in said spool valve element closed at one end by said abutment with said one valve element and open at its other end to the exhaust passage, an operating arm pivoted on the housing and operatively connected to said spool valve, so that as said arm is moved in one direction it successively displaces said elements from said valve seats and when moved in the other direction it opens said one end of the bore to connect said air spring passage to exhaust, the pivotal mounting of said operating arm comprising a rotatable member journaled at axially spaced portions on said housing and the connection of said rotatable member to said spool valve member being a crank connection disposed between said journaled portions, and means axially slidably mounting longitudinally spaced portions of said spool valve member in said housing at opposite sides of said crank connection so that said crank connection is longitudinally disposed between two slidably mounted portions of said spool valve member.

3,091,258
HOSE ACCUMULATOR
Ralph T. Marette, Cleveland Heights, Ohio, assignor to The Weatherhead Company, Cleveland, Ohio, a corporation of Ohio
Filed Feb. 5, 1960, Ser. No. 6,897
4 Claims. (Cl. 138—30)



1. An accumulator comprising a tubular casing, a resilient liner extending over the inner wall of said casing, a flexible diaphragm within said casing, said diaphragm being joined laterally to said resilient liner and extending longitudinally thereof, said diaphragm separating the interior of said casing into a fluid chamber and a gas chamber, closure means at each end of said casing, said closure means including fitting means at one end of said casing, said fitting means having a passage to admit fluid into said fluid chamber.

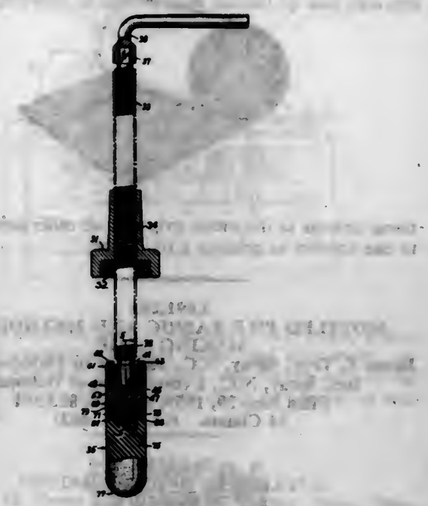
3,091,259
INFLATABLE PLUMBER'S TEST PLUG WITH DRAIN
Louis F. Alessio, 10732 S. Mason, Chicago Ridges, Ill.
Filed May 6, 1960, Ser. No. 27,439
2 Claims. (Cl. 138—90)



1. A test plug comprising a cylindrical resilient hollow body having first and second end wall portions as well as a side portion, an air hose in communication with the interior of said body being extended from the second one of said end wall portions, a drain hose secured to said second end wall portion, a rigid conduit extending through said body and connected to said drain hose, a pair of ring members having circular portions encompassing end portions of said air hose and of said drain hose adjacent said second end wall portion and having also straight portions extending from said circular portions and partially overlaying each other and having registering holes, and a chain link extending through the registering holes in the straight portions of said ring members for pivotally joining the overlaying sections of the straight portions of said ring members so as to collapse said pair of ring members upon pulling the chain link, thereby partially collapsing an end wall portion of said resilient hollow body.

3,091,260
PIPELINE STOPPING TOOL
William T. Milanovits, Crestwood, and Thomas Milanovits, Richmond Heights, Mo., assignors to M. L. Mfg. Co., Manchester, Mo., a corporation of Missouri
Filed May 31, 1960, Ser. No. 32,677
5 Claims. (Cl. 138—94)

2. A pipeline stopping tool comprising a threaded nut, a screw part threaded therethrough, said screw part having on one side of the nut a part adapted for turning of the screw part, a keeper head upon the end of the screw part on the other side of the nut, a stopper consisting of a nonresilient head adapted to notate and transversely swivel on said keeper head, said nonresilient head having an endwise annular conical socket and a central threaded boss extending therefrom, said stopper also including an attachable and detachable resilient plug having an annular resilient conical end forming an opening and adapted to be received in said conical end of the nonresilient head and to surround said boss, said opening in the resilient plug containing an anchored threaded nut adapted to be threaded to and from said threaded boss.



3,091,261
FLEXIBLE CONDUIT
Russell B. Waddell, Jr., Waynesville, N.C., assignor to Dayco Corporation, a corporation of Ohio
Filed Dec. 26, 1958, Ser. No. 783,034
4 Claims. (Cl. 138—122)



1. A flexible reinforced conduit comprising a first resilient self-supporting circumferential reinforcing member having a plurality of axially spaced plastic-coated helical coils, a flexible elastomeric tube embracing and partially surrounding said coils to provide contacting surfaces and form corrugations in said tube, the remaining portions of said tube depending between said coils and extending to the plane of the inner surface of said coils, said corrugations bonded to the outermost portions only of said coils with the remaining contacting surfaces of corrugations and coils left unbonded, and a second resilient self-supporting circumferential reinforcing member having a plurality of axially spaced plastic-coated helical coils surrounding said tube and axially alternating with the coils of said first member, said tube bonded to the innermost portions only of the coils of said second member.

3,091,262
METAL-FIBER REINFORCED RESIN LAMINATE
Chase Donaldson, Mount Vernon, N.Y., assignor to Darworth Incorporated, Simsbury, Conn., a corporation of Connecticut
Filed Aug. 19, 1957, Ser. No. 678,803
2 Claims. (Cl. 138—143)

1. A rigid, walled tube comprising a plurality of laminations, at least one of which embodies a metal foil strip having adhered thereto individual strands of fiberglass, all of which strands are unidirectional and in closely

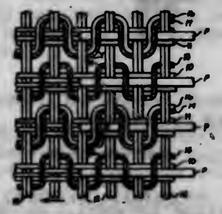
spaced parallel relation to one another, and a cured thermosetting resin permanently bonding said unidirectional strands to the metal strip and all other laminations to one another to produce a rigid tube.



3,091,263
MOTTLED PILE FABRIC AND METHOD OF MAKING SAME

James E. Troy, Spray, N.C., assignor to Fieldcrest Mills, Inc., Spray, N.C., a corporation of Delaware

Filed June 29, 1959, Ser. No. 823,391
14 Claims. (Cl. 139—402)



1. The method of making pile fabrics which comprises weaving a base of groups of warps and wefts, concurrently raising and shogging a single pile yarn over alternate groups of warps and shogging a pair of pile yarns, each of a different color and differing in color from said single pile yarn, over each intervening group of warps between said alternate groups, and looping said pile yarns under certain alternately spaced wefts at one side of the respective groups of warps and under certain intervening wefts between said alternately spaced wefts at the other side of the respective groups of warps to form pile loops of varying appearance over the face of the fabric.

9. A cut pile fabric comprising a base formed of groups of warp yarns interwoven with weft yarns, one pile yarn looped beneath alternate weft yarns between each adjacent pair of groups of warp yarns and extending from the base in the form of tufts, a pair of other pile yarns looped beneath intervening weft yarns between said alternate weft yarns and extending from the base in the form of tufts between each adjacent pair of groups of warp yarns, and each of the pile yarns between any adjacent groups of warp yarns being of a different color than the other pile yarns between the respective adjacent groups of warp yarns.

3,091,264
WIRE TYING TOOL

Verne A. Stanford, Costa Mesa, Calif., assignor to Soule Steel Company, San Francisco, Calif., a corporation of California

Filed Mar. 2, 1960, Ser. No. 12,465
5 Claims. (Cl. 140—118)

1. In a wire tying device for tying a twisted loop of wire around a workpiece the combination of: a wire delivery jaw; a wire receiving jaw; an operating shaft; means carried adjacent one end of said shaft mounting said jaws for pivotal movement relative to each other to relatively spread and closed positions; guides means carried by said delivery jaw for guiding a length of tie wire along said jaw into registry with the outer end of said wire receiving jaw; means on the outer end of said receiving jaw for engaging the free end of a tie wire delivered from said delivery jaw; wire advancing means carried by said delivery jaw operable upon actuating to advance a tie wire

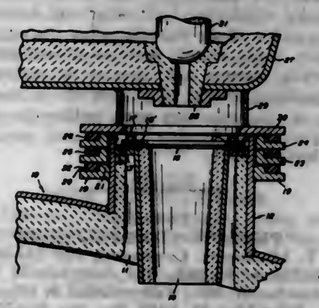


toward and into registered engagement with the outer end of said receiving jaw; and actuating means connected to said wire advancing means and carried by one of said jaws; said actuating means mounted for movement in response to pressure exerted thereagainst by pressing the tool against the workpiece to be tied from a first position to a second position to actuate said wire advancing means.

3,091,265
VACUUM-SEALED FLEXIBLE PORT UNION

Clarence P. Ulstad, McCandless Township, Allegheny County, Pa., assignor to United States Steel Corporation, a corporation of New Jersey

Filed June 22, 1961, Ser. No. 118,852
3 Claims. (Cl. 141—383)

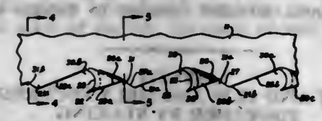


1. A vacuum-sealed connection between a receiving vessel and a delivery vessel adapted to be lowered thereon, comprising an upstanding neck on the receiving vessel, a bearing ring fixed on the neck intermediate its ends and a plurality of alternating sealing and intermediate bearing rings loosely surrounding said neck and forming a stack on said first-mentioned bearing ring, said delivery vessel having a bottom port and a bearing surface extending around said port, said bearing surface being dimensioned to make flatwise engagement with the topmost ring of said stack, without the necessity of exact alinement of the port and the neck.

3,091,266
SAW BLADE

Paul R. Nelson, 1306 Meyerson Ave. SE., Canton, Ohio

Filed June 13, 1960, Ser. No. 35,690
1 Claim. (Cl. 143—133)

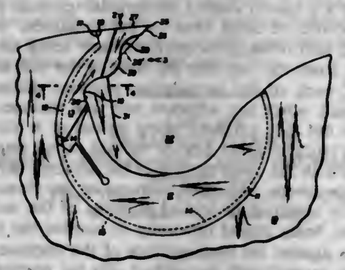


A saw of the character described, comprising; an elongate metallic blade including a cutting edge along one longitudinal side thereof; said cutting edge having a series of oppositely set cutting teeth disposed thereon at longitudinally spaced points and a series of gullets disposed between adjacent cutting teeth; said cutting teeth including oppositely beveled concave cutting edges substantially arcuate in configuration alternately oppositely offset from the longitudinal axis of said blade; said cutting edges of said cutting teeth having their projecting tips rounded and further having a depth substantially equal to the depth of said gullets; recesses between each said gullet and cutting tooth forming depth teeth for controlling the cutting depth of said cutting teeth; said depth teeth having a convex leading edge and further being offset to the projecting edges of said cutting teeth; and a handle secured to one longitudinal end of said elongate blade.

3,091,267
SAW BIT

Joseph F. Fiezell, Brooklyn, N.Y., assignor to R. Hoe & Co., Inc., New York, N.Y., a corporation of New York

Filed Jan. 29, 1958, Ser. No. 711,850
1 Claim. (Cl. 143—141)



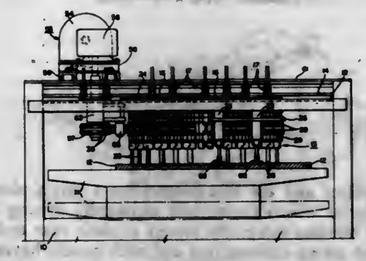
In an insertable bit saw, a tooth comprising a cutting edge defined by plane inner and outer surfaces and guiding surfaces comprising a reverse curve continuing generally the plane of the inner surface, the first part of which reverse curve is a concave substantially circular arc and the second part of which is a convex substantially circular arc, the two said arcs blending together smoothly and tangentially for guiding and bending the chip without bodily deflecting the same, and each subtending an angle of about 60° about its center of curvature.

3,091,268
CONTOURING MACHINES

Richard B. Luckenbach, 1011 Woodside Ave., Secane, Delaware County, Pa.

Filed Aug. 14, 1961, Ser. No. 131,214
10 Claims. (Cl. 144—144)

1. In a contouring machine, a work support, a plurality of elements disposed normal to said work support, members connecting said elements to form therewith an endless chain, means to support and guide said elements for movement serially through a predetermined endless path, a plurality of friction pads carried by said elements

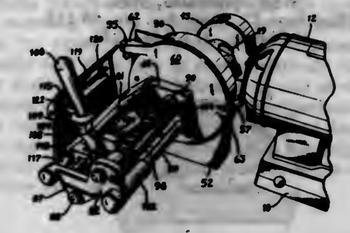


at spaced locations along the length of said chain, a flexible belt encompassing said chain and frictionally engaging a plurality of said pads, and means for driving said belt in an endless path to effect movement of said elements.

3,091,269
FOOD HANDLING APPARATUS

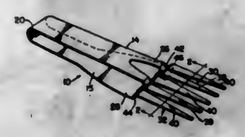
Richard H. Burns and Richard S. Hartley, Troy, Ohio, assignors to The Hobart Manufacturing Company, Troy, Ohio, a corporation of Ohio

Filed Nov. 16, 1960, Ser. No. 69,755
9 Claims. (Cl. 146—78)



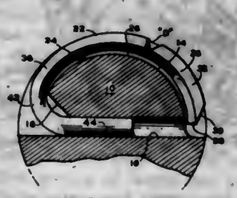
8. Apparatus for cutting vegetables and the like into pieces of predetermined dimension, comprising a housing having a discharge opening at the bottom thereof and having an aperture through one side thereof, a rotary cutoff knife adapted to move past said aperture within said housing, drive means connected to rotate said cutoff knife past said aperture, a stationary cutter member including a plurality of blades supported in predetermined spaced relation, means removably mounting said cutter member in said aperture providing for discharge of material passing said blades into said housing past said cutoff knife, a guideway for material to be cut extending outwardly from the exterior of said housing and aligned with the lower portion of said aperture for guiding material thereon into said stationary cutter member, a pusher member supported for movement toward and away from said cutter member along said guideway to force material thereon through said cutter member and past said blades, a driving member removably mounted in position extending along said guideway, a manual engaging pressure responsive driving connection between said pusher member and said driving member operative to move said pusher member under power toward said cutter member, and means connecting said driving member to said drive means coordinating the cyclic movement of said cutoff knife with feed stroke movement of said pusher member for cutting into predetermined lengths the cut pieces of vegetable passing from said stationary cutter member.

3,091,270
ENGLISH MUFFIN SPLITTER
Frederick W. Sampson, Kettering, Ohio (1300 Springhill Ave., Dayton 19, Ohio)
Filed Sept. 7, 1961, Ser. No. 136,533
7 Claims. (Cl. 146—203)



1. A splitter and the like comprising a single piece of sheet material which forms two outwardly sprung relatively flat handles integrally joined at their rear ends by a U-shaped spring construction and each handle having an integral tine construction at the front end of said handle, said tine constructions each having at least one main tine body which is relatively flat, and extend in a direction substantially parallel to its respective handle, said main tine bodies having intercrossing constructions between the front ends of said handles and said main tine bodies, one of said tine constructions having at least two of said main tine bodies, in which one of said main tine bodies is dovetailed between two of said main tine bodies.

3,091,271
SELF-LOCKING THREADED FASTENER HAVING A RESILIENT WIRE LOCKING MEMBER
David Samiran, 51 Mercury Court, West Springfield, Mass.
Filed June 27, 1960, Ser. No. 39,115
2 Claims. (Cl. 151—25)



1. A self-locking threaded fastener comprising a threaded stem, means forming a recess in an arc of substantially 180° within said stem and constituted by removal of a helically continuous thread portion, a resilient wire locking member generally complementary in cross section to said fastener thread and proportioned to fit within said recess and having an outer edge which extends slightly beyond the thread diameter of said threaded stem and an inner edge having a clearance from the base of said recess to provide radially inward biasing of said locking member as said threaded stem is screwed within a companion threaded member, said locking member forming a frictional connection with said companion threaded member and effecting an off-center skew force on said stem imposing binding effort on the threaded engagement of said fastener with its threaded member, a radial passage in said stem which is enlarged by angularly tapering the radial passage at its intersection with said recess, a smoothly bent portion of said locking member which curves inwardly toward the center of said threaded fastener to be disposed within the enlarged portion of said radial passage, an extension of said wire locking member received within said radial passage for fastening said locking member to said threaded fastener, and a trailing end portion of said locking member having an inclined face forming a clearance from the companion threaded member, said trailing end and smoothly bent portion of said locking member being of smaller width in cross section than the corresponding widths of its adjacent threads on said threaded fastener, a lip having a flange constructed integrally along one lateral side of said locking member at the extremity of said locking member and tapered to provide a maximum width at said extremity, said lip being disposed to define an upwardly turned crest which engages the threads of said companion threaded member to depress said extremity.

3,091,272
NUT AND CLIP ASSEMBLY SECURED TOGETHER BY STAKING
Alexander S. Patten, Birmingham, Mich., assignor to Multifastener Spring Division, Inc., Bedford, Mich.
Filed June 25, 1958, Ser. No. 744,375
2 Claims. (Cl. 151—41.75)

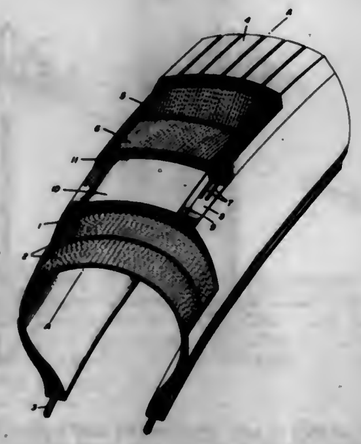


1. In a clip nut assembly having a polygonal nut having opposing parallel side surfaces and a sheet metal clip to which the nut is secured, the clip including a pair of substantially planar legs joined by a bight portion, said legs having lateral edges extending generally at right angles to the bight portion and the legs being generally parallel to receive therebetween a panel upon which the nut assembly is to be positioned, the nut being superimposed on one of the clip legs in flatwise contact therewith, the nut and the one leg having registering apertures, said one leg underlying and abutting substantially the entire adjacent nut surface, and the parallel side surfaces of the nut being adjacent and substantially parallel, respectively, to the corresponding lateral edges of the one clip leg, the combination therewith of a pair of parallel linear slots in the one clip leg substantially vertically aligned with the nut side surfaces and of less length than the nut side surfaces, each of said slots defining, respectively, with the adjacent parallel clip leg lateral edge a rectangular portion joined only at fore-and-aft bend lines to the remainder of the one clip leg, said rectangular portions each being arcuately deflected from the one clip leg toward the nut so that the edge of each of the rectangular portions defined by the slot snugly abuts the adjacent nut side surfaces, and each of the nut side surfaces being staked at a plurality of locations lying to either side of the nut center into firm engagement with the undersurface of the adjacent deflected portion, respectively, and those portions of the planar clip leg originally abutting the staked portions of the nut side surfaces also being staked upwardly to confine the staked nut surfaces against the undersurface of the displaced clip leg portions, respectively, the staked clip leg portions being joined to the clip leg at the juncture of the displaced leg portion and the remainder of the clip leg so that the nut is retained against torque displacement by the rectangular portions and is retained against displacement from the clip by flatwise nut-to-clip leg contact and by the plurality of staked nut surfaces.

3,091,273
PNEUMATIC TIRE HAVING A SEPARATE AND REMOVABLE TREAD AND A COMPLEMENTARY CARRYING CARCASS
Carlo Bottasso, Milan, Italy, assignor to Pirelli S.p.A., Milan, Italy
Filed Feb. 9, 1960, Ser. No. 7,623
Claims priority, application Italy Feb. 10, 1959
3 Claims. (Cl. 152—187)

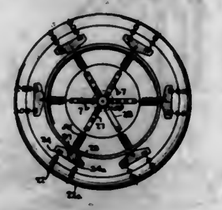
1. In a pneumatic tire of the type having a separate and interchangeable tread ring and a carcass adapted to receive said tread ring, wherein said tread ring contains internal reinforcements adapted to resist tension, and

wherein the carcass is designed to follow the small torsional movements in the plane of the wheel which are imparted to it by the tread ring during the movement of the vehicle, the improvement wherein the reinforcement in the tread ring is composed of at least two layers of rubberized and substantially inextensible cords oriented in two directions crossed with respect to the mid-circumferential plane of the tire, the cords of each layer being



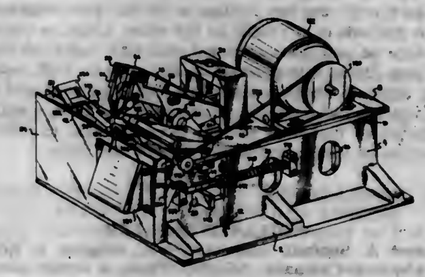
all parallel to one another and inclined with respect to said plane at an angle ranging from 5° to 20°, said tread ring having at the side edges of its inner surface two continuous longitudinal ridges of approximately rectangular cross-section, said inner surface of said tread ring between said ridges being substantially smooth, the outer surface of the carcass, in the portion whereon the tread ring is received, having a profile complementary to that of the inner surface of the tread ring.

3,091,274
TRACTION DEVICE
Harold J. Winkelspecht, Cooper and Warren Sts., Beverly, N.J.
Filed Dec. 19, 1960, Ser. No. 76,714
8 Claims. (Cl. 152—218)



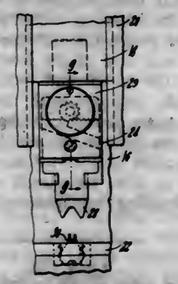
1. A traction device for a wheel, including a rim and a tire casing, journaled by an axle comprising: at least one lug secured to one side of said rim; an elongated chain extendable across said casing; means for removably securing one end of said chain to said lug; a self-limiting compression spring one end of which is secured to the other end of said chain; anchoring means axially mounted to end of said axle and adapted to removably secure the other end of said spring in position.

3,091,275
CRIMPING MACHINE
Charles R. Mentzer, Harrisburg, Pa., assignor to AMP Incorporated, Harrisburg, Pa.
Filed Jan. 27, 1960, Ser. No. 3,044
5 Claims. (Cl. 153—1)



4. Crimping apparatus for crimping open-U type connectors comprising, a fixed anvil, a crimping die movable relatively towards and away from said anvil, a pair of bending arms disposed on opposite sides of said crimping die and having tip portions normally extending beyond said die towards said anvil, portions of said arms being held frictionally against the sides of said crimping die whereby said arms are normally movable with said die but said die is movable relative to said arms when said arms are held against movement, said arms being resiliently biased inwardly towards said die, stop means for preventing movement of said arms during a terminal portion of the stroke of said die towards said anvil, and camming means acting between said die and said arms, said camming means functioning to permit said arms to move by virtue of their resilient tendencies, relatively inwardly and their tips to move relatively towards each other during said terminal portion of said stroke, and said camming means causing said arms subsequently to move apart whereby, during said stroke, said bending arms bend the sidewalls of said terminal inwardly, and said crimping die thereafter bends said sidewalls downwardly to crimp said terminal onto a wire.

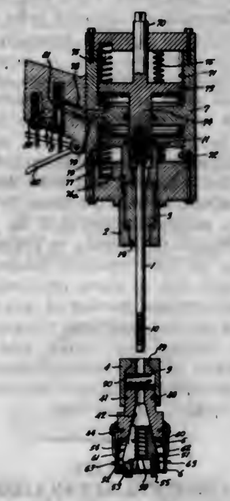
3,091,276
CRIMPING APPARATUS
Charles A. Aquillon, Newtonville, Mass., assignor to Ark-Les Switch Corporation, Watertown, Mass., a corporation of Massachusetts
Filed June 19, 1961, Ser. No. 118,035
8 Claims. (Cl. 153—1)



1. In a machine for fastening an electrical connector to both the bared wire and insulation of a piece of insulated wire, said machine having a ram movable toward an anvil which holds a connector therein for fastening to a piece of insulated wire which has been bared and said ram carrying a wire-connection forming tool and an insulation-gripper forming tool which fasten corresponding parts of a connector to a wire held by the anvil,

an improved means for adjusting the position of said tools carried by said ram, comprising a slanted face on each of said tools, a pair of wedges with corresponding slanting faces positioned next to said slanted tool faces, a horizontal face with teeth thereon on each wedge, a spur gear journaled in said ram engageable with portions of said teeth on one wedge, a second gear engageable with portions of the teeth on the other wedge, a horizontal face on said ram carrying a rack with stub-teeth thereon engageable with portions of said teeth on both wedges, and separate knobs for rotating said spur gear and said second gear whereby the positions of said wedges may be adjusted so that their slanted faces are next to different portions of the corresponding slanted tool faces.

3,091,277
PORTABLE DIMPLER
Hubert A. Schmitt, Auburn, Wash., assignor to Boeing Airplane Company, Seattle, Wash., a corporation of Delaware
Filed Oct. 24, 1960, Ser. No. 64,397
8 Claims. (Cl. 153—21)

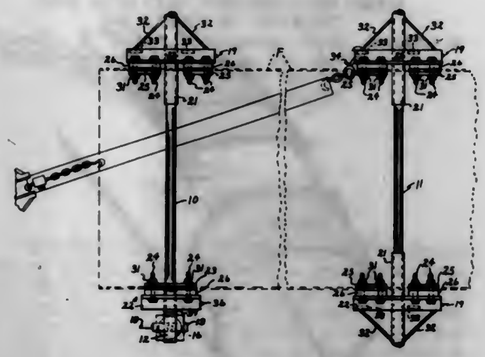


1. Dimpler apparatus comprising a housing having a pressure resistant annular pad forming one end thereof, an annular punch disposed in the housing and freely slidable in the pressure resistant pad for movement relatively into and out of the housing, a clamping piston mounted coaxially with the punch for movement relatively toward and away from said end of the housing, a mandrel extending through the punch and having one end portion thereof detachably engaged with the piston for movement therewith, a die detachably engaged with the mandrel to clamp a workpiece against the pressure resistant pad under the action of the piston, and punch actuator means operable to drive the punch relatively out of the housing into dimpling engagement with the clamped workpiece.

3,091,278
APPARATUS FOR SUPPORTING A VEHICLE FRAME FOR STRAIGHTENING
Allen V. Padgett, Birmingham, Ala., assignor to J. P. Company, Inc., a corporation of Alabama
Filed Feb. 24, 1960, Ser. No. 10,711
10 Claims. (Cl. 153—32)

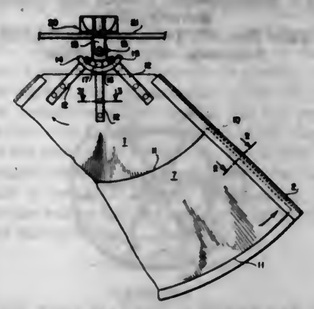
1. In apparatus for supporting a vehicle frame for straightening in which the frame has depending elements on the under surface thereof,

(*a*) an elongated guide member,
(*b*) means to support said guide member adjacent the ends thereof beneath said frame,
(*c*) support brackets mounted for free longitudinal sliding movement along said guide member,
(*d*) upwardly opening clamp members carried by said support brackets in position to receive and clamp said depending elements whereby said vehicle frame



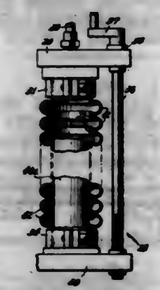
is secured to and supported by said support brackets while said support brackets are adapted for free movement along said guide member,
(*e*) a power puller, and
(*f*) means to attach said power puller to at least one of said support brackets to move the same and transmit force effecting straightening of said vehicle frame.

3,091,279
METHOD AND APPARATUS FOR FORMING CONICALLY SHAPED ARTICLES
Robert A. O'Neill, Felton, Calif., assignor to Lockheed Aircraft Corporation, Burbank, Calif.
Filed May 4, 1960, Ser. No. 26,863
17 Claims. (Cl. 153—60)



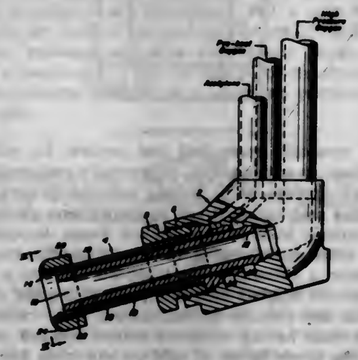
1. The method of forming a conically shaped article from flat sheet material which comprises the steps of inserting at least a portion of a blank sheet between the forming rolls of a bending machine, rotatably and pivotally securing said sheet at an anchor point without said rolls, and passing said sheet between said rolls as it pivotally rotates about said point.

3,091,280
CORRUGATED TUBING
Joseph W. Yowell, Hillspoint Road, Westport, Conn., and Donald B. Miner, Orange Center Road, Orange, Conn.
Original application Feb. 28, 1957, Ser. No. 643,055, now Patent No. 3,019,820, dated Feb. 6, 1962. Divided and this application May 15, 1961, Ser. No. 110,164
6 Claims. (Cl. 153—73)



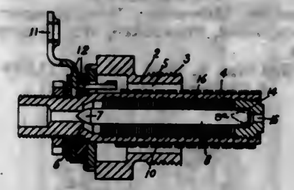
1. The method of forming internal pressure corrugated tubing from a tubing which has corrugated side walls having a plurality of flat, spaced, coaxial portions lying generally in equispaced radial planes and inner and outer connector portions connecting together said flat portions, with the inner connector portions being substantially flat and the outer portions circular, which includes the steps of elongating the tubing to cause the flat spaced portions to be radially inwardly diverging; subjecting the interior of said corrugated walls of the tubing to a fluid pressure sufficient to permanently curve outward the said diverging flat portions of the walls and cause said permanently curved portions to constitute substantially continuations of the curves of the outer circular connector portions and simultaneously contracting the tubing.

3,091,281
SCARFING BURNER TORCH TIP
William F. Clark, Jr., Birmingham, Ala., assignor to United States Steel Corporation, a corporation of New Jersey
Filed Apr. 19, 1960, Ser. No. 23,191
1 Claim. (Cl. 158—27.4)



In a scarfing torch tip adapted to be fitted into the nozzle of a scarfing torch, said scarfing torch tip including an elongated body portion having rearward and forward ends and at least one fluid passageway extending between said end the improvement therewith of a wear ring circumferentially disposed around said body portion adjacent said forward end, said wear ring having an inside diameter slightly larger than the outside diameter of said body portion whereby a clearance space for relative expansion of said body portion and said wear ring is defined between said body and said ring, the axial length of said wear ring being substantially less than the axial length of said body portion, said wear ring being made of a wear resistant material, and a circumferential flange on said body portion surrounding said forward end thereof and extending over the forward face of said wear ring, the outer periphery of said flange being curved rearwardly a short distance of said wear ring and secured thereto, said flange being made of a material softer and of higher thermal conductivity than said wear ring.

3,091,282
MEANS FOR FACILITATING THE STARTING OF AN INTERNAL COMBUSTION ENGINE
Thomas Curzon, London, England, assignor to C.A.V. Limited, Acton, London, England
Filed Sept. 23, 1959, Ser. No. 841,740
2 Claims. (Cl. 158—28)

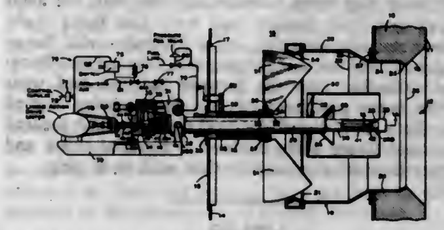


1. Means for facilitating the starting of an internal combustion engine, comprising in combination a hollow cylindrical body part having at least one of its ends closed, a liquid fuel gasifier in the form of a tube which has an inlet portion secured to the closed end of said body part, and which extends through said body part in coaxial relationship thereto, a fuel inlet valve mounted within the inlet portion of said tube at a position adjacent the closed end of said body part, and provided with a controlling stem which is contained in said tube, and which is supported by the end of said tube remote from said valve, an electrically heatable coil mounted on and surrounding said tube, and at least one outlet whereby gasified and superheated fuel can flow from the interior of said tube through the last mentioned end of the latter, said tube and stem being made respectively of metals having different coefficients of expansion such as will enable said valve to open when said tube and stem are heated by said coil, and the internal surface of said tube being helically grooved to increase the area over which said surface is exposed to fuel admitted to the interior of said tube by said valve.

3,091,283
LIQUID FUEL BURNER
John H. Kidwell, Canton, Ohio, assignor to The Babcock & Wilcox Company, New York, N.Y., a corporation of New Jersey
Filed Feb. 24, 1960, Ser. No. 10,682
12 Claims. (Cl. 158—76)

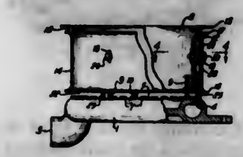
12. A liquid atomizer comprising a whirl chamber having a restricted discharge orifice adapted to effect mechanical atomization of a liquid fuel, means for supplying a liquid fuel into said whirl chamber for discharge through said orifice, means including a combustion controller for regulating the flow of said liquid fuel to said atomizer, means for supplying fluid into said chamber to assist atomization of said liquid fuel, a valve means for controlling the flow of said assisting fluid to said whirl chamber, and a regulating means responsive to said combustion controller for opening said valve means to supply said assisting fluid to said whirl chamber when the fuel

flow falls below a predetermined quantity to provide combination fluid-mechanical atomization of said liquid fuel and for closing said valve means to stop the supply of



said assisting fluid when the fuel flow exceeds said predetermined quantity to provide mechanical atomization of said liquid fuel.

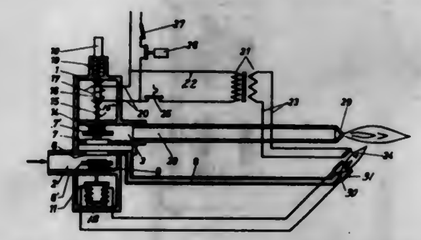
3,091,284
GAS BURNER
Adolf J. Burklin, Milwaukee, Wis., assignor to A. O. Smith Corporation, Milwaukee, Wis., a corporation of New York
Filed Mar. 8, 1960, Ser. No. 13,599
5 Claims. (Cl. 158—106)



2. A gas burner, comprising a gas supply manifold having a gas inlet and a series of spaced gas discharge orifices in the upper surface thereof, a discharge nozzle disposed in each orifice and projecting above said manifold, means for supplying gas to said manifold, a pair of parallel plates spaced above said manifold and said plates being spaced apart to provide a mixing chamber therebetween disposed in alignment with said discharge nozzles on said manifold, the edges of the plates above the parallel portion thereof being disposed in spaced relation and being curved outwardly from the longitudinal axis of the plates and in the same direction, means for adjusting the spaced relationship of one of the outwardly curved edges with respect to the other outwardly curved edge to control the intensity, shape and direction of the burner flame, and means for maintaining said chamber in alignment with said nozzles.

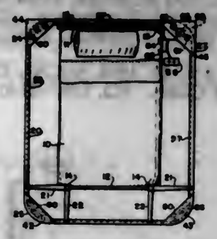
3,091,285
GAS BURNER SAFETY AND REGULATOR CONTROL VALVE SYSTEM
Richard Hasen, Osnabruck, Germany, assignor to G. Kromschroder Aktiengesellschaft, Osnabruck, Germany
Filed Aug. 23, 1961, Ser. No. 135,406
Claims priority, application Austria Aug. 24, 1960
7 Claims. (Cl. 158—131)

1. In a gas burner safety control valve system, a valve case having a gas inlet and a gas outlet adapted to be connected with a main burner, a pair of spaced partition walls arranged transversely within said case between said inlet and said outlet, said walls having aligned passageways therein and defining a pilot gas supply chamber having an outlet opennig adapted to be connected with a pilot burner, a spring-biased normally closed safety control valve arranged at the passageway nearest said gas inlet to control the flow of gas therethrough, a second spring-biased normally closed valve arranged coaxially with said safety control valve at the passageway nearest said gas outlet adapted to control the flow of gas therethrough to a main gas burner, control means responsive to heat from a pilot burner to hold said safety control valve open, a valve stem coaxially and slidably extending through said second valve and having engaging means affixed to the lower end thereof, extending laterally therefrom and adapted to engage the lower surface of said second valve, electromagnetic means for moving said valve stem upwardly so that the engaging means engages and opens said second valve, and manually operable means for forcing



said valve stem downwardly to permit closing of said second valve and so that the engaging means engages and opens said safety control valve, the arrangement being such that when said control means and said electromagnetic means are energized, depression of said manually operable means moves said engaging means to permit closing of said second valve then engages and opens said safety control valve and subsequent release of said manually operable means permits said engaging means to engage said second valve to re-open while said safety control valve is held open by said control means.

3,091,286
REMOTELY CONTROLLED SICK BED CURTAINS
Mads P. Madsen, Brewster, Putnam County, N.Y.
Filed Aug. 8, 1962, Ser. No. 215,649
3 Claims. (Cl. 160—331)



1. A remotely controlled bed curtain for sick beds comprising, in combination, a generally rectangular curtain track support frame having rounded corners, means supporting said curtain track support frame above a sick bed, a curtain track having a lower flange disposed completely about and hanging from said curtain track support frame, a curtain having a top portion and a leading edge, curtain support elements fixed at regular intervals along the top portion of said curtain, said curtain support elements having members extend upward on either side of the lower flange of said curtain track and having rollers rotatably mounted inside the upward extending members riding on the lower flange of said curtain track, a leading edge curtain drive element slidably mounted on said track and attached to the upper portion of the leading edge of said curtain, outwardly facing pulleys disposed at the corners of said curtain track support frame, an endless drive cord, said pulleys supporting said drive cord at about the height of said curtain support elements and said leading edge curtain drive element, said endless drive cord being fixed to said leading edge curtain drive element, a drive pulley engaging said endless drive cord, a reversing electric motor driving said drive pulley, and a remotely situated switch activating said reversing electric motor in either direction, said drive pulley moving said endless drive cord about said curtain track support frame drawing said leading edge curtain drive element about said track opening and closing said curtain.

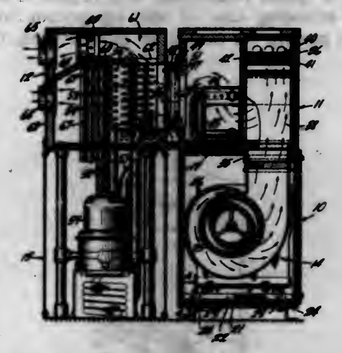
3,091,287
APPARATUS FOR EQUIPPING TRANSPORT VEHICLES WITH TEMPORARY DOOR CLOSURES
Francis E. Willoughby, Potter, Nebr., assignor to Willoughby Manufacturing Company, Potter, Nebr., a corporation of Nebraska
Filed Aug. 12, 1959, Ser. No. 833,358
2 Claims. (Cl. 160—368)



1. The combination with a transport vehicle having an inner wall surface interrupted by a door opening, of a pair of support bracket assemblies adapted to hold a retaining bar in horizontal position across said door opening and against the inside wall of the vehicle, each said bracket assembly including a base member mounted within a recess in the wall surface to one side of the opening, a retractable bar holding member including a vertically disposed outer bar holding flange, pivot means connecting said holding member with said base member on a vertical pivot axis within the recess, said axis being so located as to provide for swinging movement of said holding member between a first position in which said holding member, including said holding flange, is substantially wholly within the recess and a second position in which the holding member projects from the recess with the holding flange spaced inwardly of the plane of the wall surface thus to provide a gap between the flange and the wall plane in which a portion of the bar can be inserted, said pivot means so constructed as to permit limited displacement of said holding member in a direction parallel to the pivot axis, and a stop lug interposed in the path of pivotal movement of said holding member between said first and second positions, said lug of a length that it can be cleared by the displacement of said holding member in a direction parallel to said pivot axis.

3,091,288
HIGH PRESSURE AIR CONDITIONING SYSTEM
Burdell S. Williams, Larchmont, N.Y., assignor to Hi-Press Air Conditioning of America, Inc., New York, N.Y.
Filed Feb. 16, 1960, Ser. No. 9,069
6 Claims. (Cl. 165—48)

1. A high pressure air conditioning system comprising a plurality of separable sections each including an airtight housing and selected components of the system mounted within the housing, means for securing the sections in closely adjacent relation to form a compact unit, fan means mounted within a first section having an outlet duct leading to a second, adjacent section to supply air at high pressure thereto, divider means in the second section forming a central passage to receive air from the fan duct, sound absorbing baffle means disposed within the second section to distribute the air from the central passage uniformly over the entire width of the section, means forming corresponding openings in the second and third section housings extending substantially the entire width of the sections, sealed passage means connecting the openings in the second and third section housings, cooling coil means in the third section having at least one coil intercepting all the air passing through the passage means, said cooling coil means having vertical fin members to permit equalization of air pressures throughout the height of the opening and comprising at least two cooling coils, the first of the cooling coils being adjacent to and covering substantially the entire opening and the second cooling coil being adjacent to the first cooling coil, means for controlling the two cooling coils independently, high pressure air outlet means from the third section adapted to be connected to high pressure piping, said high pressure outlet means including at least two outlet ports and heat insulating divider means extending across the width and length of the third section forming a compartment spaced



from the opening in the third section housing and having an opening communicating with the first coil of the cooling coil means, heating coil means within the compartment intercepting the flow of air therethrough, at least one of the outlet ports providing an outlet for warm air from the compartment and at least one other outlet port providing a simultaneous outlet for cool air after passing through the second cooling coil of the cooling coil means, wherein the sealed passage means comprises two L-shaped members, each having one leg parallel to and affixed to the outer surface of the housing wall about the periphery of one of the openings and having another leg projecting perpendicularly outwardly from the outer surface, which leg is slightly displaced laterally from the corresponding leg of the member at the periphery of the other opening, and a compressible gasket within the inner corner of at least one of the members adapted to be compressed by the outer edge of the projecting leg of the other member.

3,091,289
BASEBOARD RADIATORS AND ELEMENTS THEREOF
Richard Weinstein, Brooklyn, N.Y., assignor to Slant/Fin Radiator Corporation, Richmond Hill, N.Y., a corporation of New York
Filed Sept. 30, 1959, Ser. No. 843,571
2 Claims. (Cl. 165—55)

1. In heating construction, in combination with the floor and wall of a space to be heated, baseboard radiator construction, said radiator construction comprising a substantially horizontally extending pipe formed of heat transmissive material, said pipe being carried by said wall, a multiple of fins in the form of separate sections of sheet material formed with openings therethrough substantially centrally thereof, said fins being mounted on said pipe by means of said openings and being positioned in axially spaced relationship along said pipe, said fins

having bottom edges inclined upwardly at an angle with respect to the horizontal, said pipe being mounted adjacent said floor and said wall and the corner of said fins at the lowermost portion of said inclined bottom edges being positioned closely adjacent said floor at a position closely adjacent said wall, said radiator construction having a rear cover member secured to said wall and having a bottom edge commencing substantially in line with said lowermost portion of said bottom edges of said fins and extending upwardly beyond the uppermost extent of said fins and turning inwardly in a top portion lying above and at least part way across said fins to terminate in a horizontally extending edge, and a front cover member for said pipe and fin assembly, said front cover member commencing at its lower edge substantially in line with the upper end of said inclined bottom edge of said fins and extending upwardly throughout the vertical height of said fins and terminating in a horizontal edge in spaced relationship with respect to said horizontally extending edge of said top portion to provide an outlet passage for heated air therebetween, the lower



edge of said front cover member being spaced above said floor whereby cold air currents flowing across said floor may flow transversely across beneath said inclined bottom edges of said fins with the lower most coldest air engaging the lowermost portion of said fins to produce a substantially uniform flue effect of air being heated and caused to flow upwardly throughout the depth of said fins, said fins being spaced from said front and back cover members and each of said fins being formed with a body portion and a pair of side portions extending throughout the height of said fin along opposite sides thereof, the first of said side portions extending from said body portion at an obtuse angled bend and the second of said side portions extending from the first of said side portions at a right angled bend, to terminate in an end face substantially engaging the side portion of the next adjacent fin, the material of said side portions for a portion of the height thereof, at either side of, and inclusive of said right angled bend, being removed to form openings surrounded by the material of and extending through said fins for the flow of air therethrough.

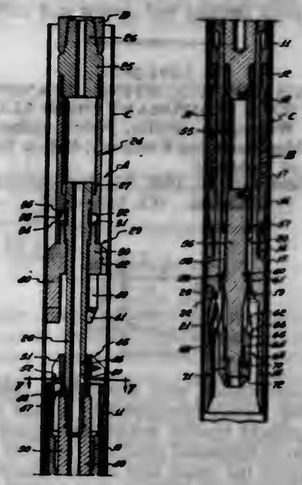
3,091,290

WELL BORE MILLING APPARATUS

Earnest H. Clark, Jr., Downey, Calif., assignor to Baker Oil Tools, Inc., Los Angeles, Calif., a corporation of California

Original application Mar. 25, 1958, Ser. No. 723,839, now Patent No. 3,005,493, dated Oct. 24, 1961. Divided and this application Feb. 18, 1960, Ser. No. 13,415
14 Claims. (Cl. 166—55)

2. In apparatus for disintegrating a well tool set in a well conduit disposed in a bore hole, the well tool having a passage therein: a mandrel adapted to be connected to a tubular running-in string and lowered in the well conduit to the well tool; cutter means secured to said mandrel and engageable with the well tool to disintegrate the same progressively in a downward direction in response to rotation of the tubular running-in string and mandrel; a pilot secured to said mandrel for reception



in the passage to center the cutter means with respect to the well tool; means on said pilot adapted to be coupled to the well tool below the point at which said cutter means commenced disintegrating the well tool to elevate the well tool in the well conduit; and means on said pilot for expanding and holding said expandible means laterally outwardly while said cutter means is engaging and disintegrating the well tool.

3,091,291

PREVENTION OF GYPSUM SCALE FORMATION IN WATER FLOOD METHOD OF OIL PRODUCTION

Paul A. Little and Marvin Gambill, Hobbs, N. Mex., assignors to United Chemical Corporation of New Mexico, Hobbs, N. Mex., a corporation of New Mexico

No Drawing. Filed Jan. 6, 1960, Ser. No. 687
5 Claims. (Cl. 166—9)

1. The method of altering the surface of an oil formation underground in oil well flooding operations, which comprises, incorporating in flood water about 10–10,000 parts per million of a compound selected from the group consisting of ammonium carbonate, ammonium carbamate and mixtures thereof, the said amount being in excess over that necessary to precipitate as carbonate any calcium present in solution in the flood water, passing such solution into an oil well, forcing it into and through the earth formation penetrated by said oil well, thereby to react with gypsum in said formation and to deposit thereon a surface layer of calcium carbonate, and returning such solution to the surface.

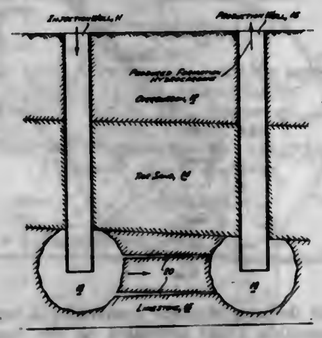
3,091,292

RECOVERING HYDROCARBONS FROM SUBSURFACE FORMATIONS

Paul F. Kerr, New York, N.Y., assignor to Texaco Inc., a corporation of Delaware

Filed Feb. 12, 1959, Ser. No. 792,904
16 Claims. (Cl. 166—11)

1. A method of producing hydrocarbons from a subsurface hydrocarbon-containing formation in contact with an underlying contiguous limestone formation, said hydrocarbon-containing formation and said limestone formation each being penetrated by at least one common injection well and at least one common production well, which comprises fracturing said limestone formation in the vicinity of said injection well and in the vicinity of said production well, introducing a mineral acid whose calcium salt is water soluble via said injection well and said production well into the fractured limestone formation adjacent



the wells to react with the limestone therein to form a zone of high permeability, introducing a hot displacing fluid via said injection well into said hydrocarbon-containing formation and said fractured, acid-treated limestone formation to displace in situ hydrocarbons from said hydrocarbon-containing formation toward said production well, and producing the resulting displaced hydrocarbons from said hydrocarbon-containing formation via said production well.

3,091,293

PLUGGING DEVICE FOR WELLS

Dale L. Fry, Hobbs, N. Mex., assignor, by mesne assignments, to Dresser Industries, Inc., Dallas County, Tex., a corporation of Delaware

Filed July 10, 1959, Ser. No. 826,328
8 Claims. (Cl. 166—123)



1. In a drillable bridge plug, a tubular support; upper and lower anchor members on the support arranged to be expanded into engagement with a well casing; expander members disposed on the support for expanding the anchor members outwardly into engagement with the casing; a closure member closing the bore through the support and located above the anchor members when the anchor members have been expanded into engagement with the casing; an upwardly extending portion of the support extending above the closure member; and threads arranged interiorly of the extension, arranged to receive exteriorly threaded latching segments of a running tool.

3,091,294

PLUG FOR WELL FLOW CONDUCTORS

George W. Evans and John R. Land, Duncan, Okla., assignors to Halliburton Company, Duncan, Okla., a corporation of Delaware

Filed Nov. 9, 1960, Ser. No. 68,271
11 Claims. (Cl. 166—193)



1. A well tool for closing the flow passage of a well flow conductor having a pair of longitudinally spaced oppositely facing shoulders, said well tool including: a mandrel, seal means on opposite ends of said mandrel for sealingly engaging internal surfaces of said well flow conductor; stop means on said mandrel engageable with one of said shoulders of said flow conductor for limiting movement of said well tool in the flow conductor in one direction and latch means carried by said mandrel and engageable with the other of said shoulders of said flow conductor for preventing movement of said well tool in the opposite direction in the flow conductor, said stop means and said latch means being disposed between said seal means.

3,091,295

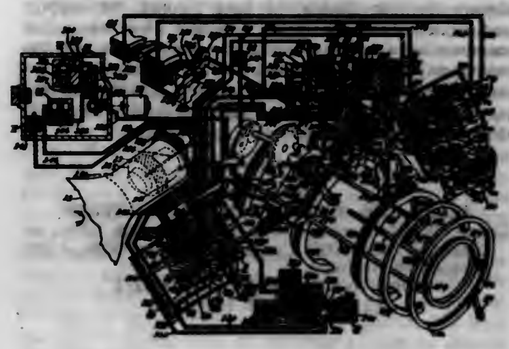
VARIABLE PITCH PROPELLER ASSEMBLY FOR MULTI-POWER PLANT AIRCRAFT

Roy C. Bodem and Roy H. Brandes, Dayton, Richard A. Hirsch, West Milton, Edward H. McDonald, Tipp City, and Carl F. Wood, Dayton, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Original application Mar. 19, 1956, Ser. No. 572,348, now Patent No. 2,986,220, dated May 31, 1961. Divided and this application Aug. 13, 1959, Ser. No. 840,486
7 Claims. (Cl. 170—160.31)

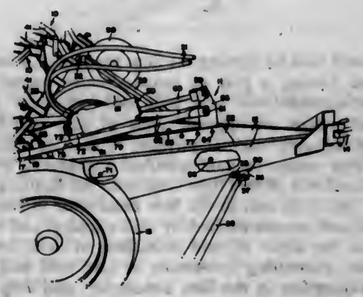
2. In a variable pitch propeller controlled by a fluid pressure system, a feathering pump reservoir rotatable with the propeller and containing a quantity of fluid, pressure developing means disposed in said reservoir operable independent of propeller rotation, and pressure regulating means connected to said pressure developing means for controlling the output pressure thereof comprising a pressure responsive throttle valve and centrifugally responsive means disposed in said reservoir and

operatively connected with said valve for opposing movement thereof under the urge of fluid under pressure where-



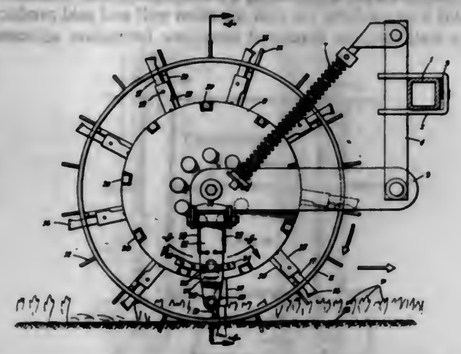
by the output pressure of said pressure developing means will be proportional to propeller speed.

3,091,296
HYDRAULIC WHEEL DRAWBAR
William V. Lohrman, Davenport, Iowa, and William E. Knapp, Los Angeles, Calif., assignors to Deere & Company, Moline, Ill., a corporation of Delaware
Original application Jan. 26, 1959, Ser. No. 788,827, now Patent No. 2,995,385, dated Aug. 8, 1961. Divided and this application Mar. 16, 1961, Ser. No. 96,329
4 Claims. (Cl. 172—456)



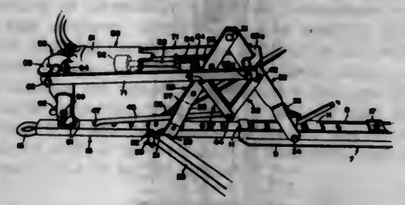
4. In an agricultural implement having a part to be moved in two stages between two positions, mechanism for moving said part from one position to another, comprising an extensible and retractable power means, a pair of pivotally mounted arms on which said power means is carried, motion transmitting means connecting one of said arms with said part, a first stop means engageable with the other of said arms whereby extension of said power means acts to shift said one arm and the associated part in one direction from one of their positions partway towards their other position, a second stop means disposable in a position adjacent said one arm to hold the latter against regressive movement out of the position to which it is moved, whereby retraction of said power means acts to shift said second arm away from said first stop means, a third stop means engagable with said other arm to hold the latter in the position to which it is moved away from said first stop means by retraction of said power means, whereby a subsequent extension of said power means acts to shift said first arm and said associated part the rest of the way into their other position.

3,091,297
PLANT THINNER
Albert J. Matteoli, Sacramento, and Alvin N. Rocksvold, Woodland, Calif.; said Rocksvold assignor to said Matteoli
Filed May 14, 1962, Ser. No. 194,428
8 Claims. (Cl. 172—546)



1. A plant thinning machine comprising a supporting frame, a rotatable wheel journaled on the frame and adapted to move over the ground surface adjacent a row of plants, an arm pivoted to the wheel on an axis substantially parallel with the axis of the wheel, means yieldably holding the arm in a fixed position with respect to the wheel whereby the wheel and arm will normally rotate as a unit, the arm projecting beyond the periphery of the wheel, a thinning hoe mounted on the outer end of the arm and adapted to enter and leave the ground with the rotation of the wheel, a yieldable stop means mounted on the frame and normally projecting into the path of travel of the arm as it travels with the wheel and enters the ground, whereby the rotary travel of the arm with the wheel will be interrupted and the hoe dragged for a predetermined distance through the ground in substantial parallelism with the ground surface, and means mounted on the wheel and effective to push the stop means out of the path of travel of the arm after such hoe has travelled such predetermined distance through the ground.

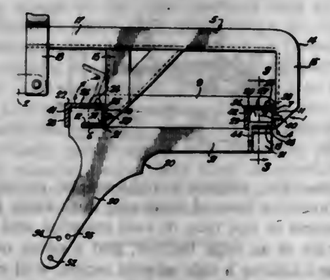
3,091,298
DISK HARROW ANGLING AND STRAIGHTENING MEANS
Leslie W. Johnson, Moline, and Perry Ford, Rock Island, Ill., assignors to Deere & Company, Moline, Ill., a corporation of Delaware
Filed Sept. 14, 1961, Ser. No. 138,087
4 Claims. (Cl. 172—580)



1. In a disk harrow, a drawbar, a pair of members slidable in opposite directions on said drawbar, a pair of generally vertically disposed arms hingedly connected together at their upper ends, means pivotally connecting the lower ends of said arms to said members, respectively, a power unit including a cylinder and a retractable and extensible piston rod, means pivotally connecting the outer end of the piston rod to one of said arms, a cylinder

attaching arm pivoted to the forward end of said drawbar, means connecting said cylinder to said attaching arm, and means including strap means lying substantially in the plane of the piston rod for connecting the cylinder with the other arm, said strap means including a pair of straps disposed on opposite sides of said cylinder, and a first transverse shaft means connecting the forward ends of said straps to said cylinder attaching arm and a second transverse shaft means connecting the rear ends of said straps to said one of said arms.

3,091,299
FRAME AND MOUNTING MEANS FOR AN AGRICULTURAL IMPLEMENT
James E. Truelove, Vernon, Ala., assignor of one-half to R. E. Bostick, Vernon, Ala.
Filed Oct. 27, 1961, Ser. No. 148,113
3 Claims. (Cl. 172—656)



1. An agricultural implement comprising, a rectangular frame having front and back rails, each rail having a horizontal flange and a vertical flange at the forward edge of the horizontal flange, the vertical flanges having rows of openings therein extending longitudinally of the rails, plow-foot supporting shanks each including a supporting leg and a head beam, mounting arms carried by the head beam at spaced horizontal positions equal to the spacing between the front and back rails, the arms having seating surfaces to rest upon the horizontal flanges of the rails to hang the shanks from the frame, locating pins projecting from the arms for insertion into selected openings in the rows in the rails to hold the shanks against movement lengthwise of the rails, locking rails pivotally mounted on the frame to overlie the shank mounting arms when resting on the frame rails to lock the arms against removal from the frame.

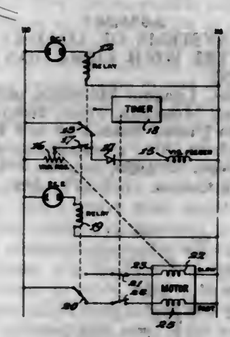
3,091,300
DRILL BIT WITH IMPROVED CORE DESTROYING MEANS
Otto Hammer, Dallas, Tex., assignor to Dresser Industries, Inc., Dallas, Tex., a corporation of Delaware
Filed Oct. 5, 1960, Ser. No. 60,688
5 Claims. (Cl. 175—333)

1. In a drill bit comprising a hollow body having a connection for a drill stem at its upper end and a cutter carrying leg extending downwardly from a predetermined position on its circumference, a downwardly and inwardly extending cutter bearing on said leg adjacent its lower end, and a generally frusto-conical cutter, with cutter teeth on its outer conical surface, journaled on said bearing and disposed with its larger end radially outermost from the bit axis, the improvement which comprises said cutter terminating at its inner extremity short of the bit axis and cutting teeth on said extremity directed axially of the cutter with cutting extremities separated from each other by relief areas, the cutting extremities having an aggregate area exposed axially of the cutter less than the aggregate area separating the cutting extremities which cutting extremities in rotation define a surface whose elements form a greater angle with the cutter axis than the cutter axis does with the



bit axis for engaging the core which would be left by the other teeth of said cutters at the center of a bore being drilled by said bit.

3,091,301
AUTOMATIC FEED RATE COMPENSATION FOR AUTOMATIC WEIGHING SYSTEM
Leslie F. Stone, Bellwood, Ill., assignor to The Richardson Company, Melrose Park, Ill., a corporation of Ohio
Filed Nov. 24, 1961, Ser. No. 154,575
4 Claims. (Cl. 177—1)

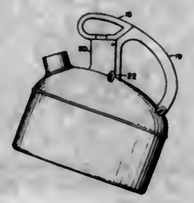


1. In a feed rate compensation system for automatic repeated weighing of an established amount of material the combination of:
(1) a weighing device,
(2) means for feeding material to said weighing device,
(3) a timer setting a final slow feed rate period of operation of said means for feeding material, and
(4) means actuated by said weighing device during the final slow feed rate period of operation for varying during a succeeding final slow feed rate period of operation the feed rate of said means for feeding material to said weighing device.

3,091,302
WATER-KETTLE
Albert W. Wolven, Eemestraat 44 II, Amsterdam Zuid 2, Netherlands
Filed Feb. 2, 1959, Ser. No. 790,684
1 Claim. (Cl. 177—149)

A weighing kettle, comprising; an enclosed container member having a spout aperture formed therein at one side of a top of said container; a carrying handle spaced from said spout aperture toward the opposite side of said top and held to said enclosed container by a securing means at an inward portion of said carrying handle; a

weighing mechanism comprising a spring and a movable balance handle; guide means for said movable balance handle positioned intermediate said carrying handle and said spout aperture and having a slot formed therein to receive said balance handle; the edges of said slot receiving said inward portion of said carrying handle, said securing means also securing said guide means to said enclosed container; said inward portion of said carrying handle having a hook projection extending into said slot; said

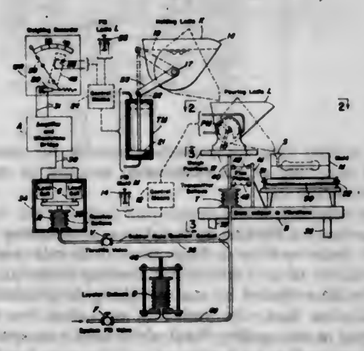


spring having a first end hooked to said projection and a second end secured to said balance handle; said slot in said guide means restricting movement of said balance handle to a vertical line when said enclosed container is tilted to receive a load through said spout aperture, whereby the moment of the load striking the bottom of the container and the accumulation of the load in the container maintains the effective center of gravity of the composite in said vertical line through said weighing means.

3,091,303
WEIGHING SYSTEMS OF LOAD-CELL ELECTRONIC TYPE WITH VIBRATION DAMPENING MEANS

Amaziah J. Moses, Lookout Mountain, and Granville B. Scanland, Signal Mountain, Tenn., assignors, by mesne assignments, to United States Pipe and Foundry Company, Birmingham, Ala., a corporation of New Jersey

Filed Nov. 17, 1958, Ser. No. 775,674
10 Claims. (Cl. 177—208)

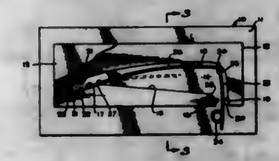


1. A system for accurately weighing a mass of material wherein said mass and its environs are subjected to undesirable vibration, said system comprising a vessel adapted to receive the material to be weighed, a weigh platform capable of imparting a gravitational weight force supporting said vessel, a base underlying and supporting said platform and being subjected to vibration, means for transforming said gravitational weight force to a hydraulic force, said means comprising a hydraulic force transmitter supported by said base and being directly connected to said weight platform, a hydraulic force receiver located at a point remote from the area subjected to vibration, said receiver being shielded from said vibration, resilient means establishing a hydraulic connection between said transmitter and said receiver, fluid level compensating means connected to said hydraulic connection for regulating the amount of fluid in the system, strain gauge type load cell means positioned at said vibration-free point for transforming said hydraulic force to an electronic signal, means connecting said strain gauge load cell means to said hydraulic force receiver for effecting conversion of a hydraulic force to an electronic signal, signal amplifying means for intensifying the load cell output signal, and instrument means connected to said signal amplifier being activated by said amplified signal for providing an accurate indication of the total weight of said platform.

3,091,304
SCALE

Stuart D. Noble, Los Angeles, Calif., assignor of ten percent to Vernon D. Beehler, Los Angeles, Calif.

Filed Oct. 16, 1961, Ser. No. 145,047
4 Claims. (Cl. 177—229)



1. A scale for relatively light-weight objects comprising a mounting base of relatively thick sheet material having a recess in one face of said material and extending outwardly at an edge thereof, and a cover overlying said face and closing a side of said recess, wall elements forming said recess comprising a lower wall element having an outer end extending outwardly and downwardly of the recess and an inner end, an upper wall element having an outer end extending outwardly and downwardly at a location spaced from said first outer end forming a downwardly extending opening for said recess, and an inner end of said upper wall element at a location spaced from the inner end of said lower wall element and forming therewith a pocket, and a spring comprising a single length of spring material having an inner end formed in an anchoring loop impressed in said pocket, said spring having an object supporting arm extending from said recess through said end opening to the exterior, and a weight-sensitive reach of said spring connecting said loop to said arm.

3,091,305
HYDRAULICALLY OPERATED PORTABLE SCAFFOLD

Edgar C. Pickard, Glenshaw, Pa., and William R. Jackson, Youngstown, and George A. Grappo, East Palestine, Ohio, assignors to Fordees Corporation, Leetonia, Ohio, a corporation of Ohio

Filed Apr. 28, 1961, Ser. No. 106,310
9 Claims. (Cl. 182—141)

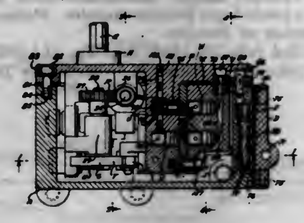


6. Apparatus for elevating or lowering a substantially horizontal platform comprising a base, a plurality of vertically-expandable hydraulic cylinder devices interposed at spaced points between the base and the platform, each of said hydraulic cylinder devices having the same volumetric capacity, hydraulic pumping means for supplying fluid under pressure to said hydraulic cylinder devices, a plurality of hydraulic pump-motors each having an inlet port adapted to be connected to said hydraulic pumping means, an outlet port for each pump-motor connected to an associated one of said hydraulic cylinder devices, gear means operatively connected to each pump-motor and adapted to be rotated by a flow of fluid under pressure between said inlet and outlet ports, a separate hydraulic pump-motor having an inlet port adapted to be connected to said hydraulic pumping means, an outlet port for the separate pump-motor, gear means operatively connected to said separate pump-motor and adapted to be rotated by a flow of fluid under pressure between the inlet and outlet ports, each of said plurality of hydraulic pump-motors and said separate hydraulic pump-motor being circumferentially spaced about a common axis, gear means rotatable about said common axis and arranged to operatively engage the gear means of each of said pump-motors whereby all of the pump-motors will deliver fluid under pressure at the same rate, and the valve means for selectively connecting said hydraulic pumping means to the inlet ports of said plurality of pump-motors to cause each pump-motor to deliver fluid under pressure at the same rate to its associated hydraulic cylinder to expand all of the cylinders in synchronism, said valve means being adapted to selectively connect said hydraulic pumping means to the inlet port of said separate hydraulic pump-motor whereby the separate hydraulic pump-motor will drive the plurality of hydraulic motors to expel fluid from all of said cylinders at the same rate to retract the hydraulic cylinders in synchronism and lower said platform.

3,091,306
LUBRICATION PUMP

Thomas R. Thomas, New York, N.Y., assignor to Auto Research Corporation, Dover, Del., a corporation of Delaware

Filed Aug. 6, 1959, Ser. No. 832,091
10 Claims. (Cl. 184—27)

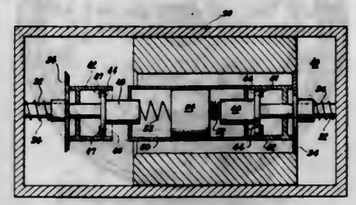


1. A central reversible lubricant gear pump for a distributing system having an outlet to said system comprising a rectangular housing for the pump and reservoir, a recess on the exterior of one wall of said housing receiving an inlet strainer, a removable cover on said wall closing off said inlet strainer, an adjacent wall also being removable and carrying a bearing for a pump drive shaft and a pump drive shaft in said bearing, said adjacent wall being provided with an outlet to said system, a gear pump unit in said housing comprising clamping members carrying inlet and outlet passageways leading from the strainer to the gear pump and from the gear pump to the outlet, and spring seated check valves in said passageways and a pump plate clamped between said clamping members, said pump plate having intermeshing gears operatively driven by said shaft, one of said clamping members having an overflow passage normally feeding the pump discharge back to the housing, and reciprocable valve means automatically and manually operable to cut off said discharge back to the housing and force it to said outlet to the system.

3,091,307
IMPACT VIBRATION DAMPER AND CONTROL MEANS THEREFOR

James B. Tiedemann, Lawrence, Kans., and Donald E. Wall, Minneapolis, Minn., assignors to The Kansas University Endowment Association, Lawrence, Kans., a corporation of Kansas

Filed Oct. 16, 1961, Ser. No. 145,313
7 Claims. (Cl. 188—1)



1. A vibration damper comprising a casing adapted for attachment to a body subject to vibrations, a reactive mass slidably fitted within said casing, said mass having a central passage therethrough, mounting means secured to said casing, valve means resiliently positioned on said mounting means on either side of said reactive mass in spaced apart relation with respect to the end walls of said casing, said valve means each being adapted to close off one end of said central passage when said reactive mass slides against the valve means, control means for varying the distance between said valve means in accordance with the amplitude of vibrations to which said body is subjected, said control means including shut-off means fixed to said mounting means, ports in said shut-off means for passage of fluid therethrough and means for periodically closing off said ports, hollow valve positioning means fitted in gas-tight relation about said shut-off means, a hollow cylinder fitted within said central passage, extension means on said shut-off, means slidably extending into either end of said cylinder and a heavy mass slidably fitted within said cylinder and resiliently connected to said extension means, means whereby movement of said pistons into said hollow cylinder will displace fluid therein and cause said hollow cylinder to move relative to said heavy mass toward said valve positioning means and whereby contact of said hollow cylinder with one of the valve positioning means will cause movement of its associated valve toward the end wall of said casing and entrance of fluid between said shut-off means and said valve positioning means through said ports will result in retention of the valve positioning means until these means are again moved by said hollow cylinder.

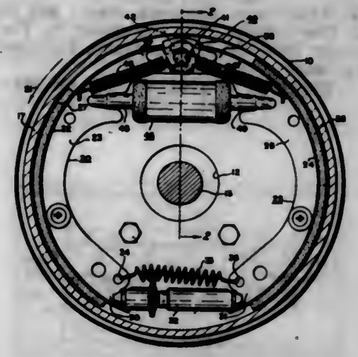
3,091,308
ANCHOR MEANS FOR BRAKE SHOES

Edward L. Nash, Ferndale, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Apr. 18, 1960, Ser. No. 23,070
9 Claims. (Cl. 188—78)

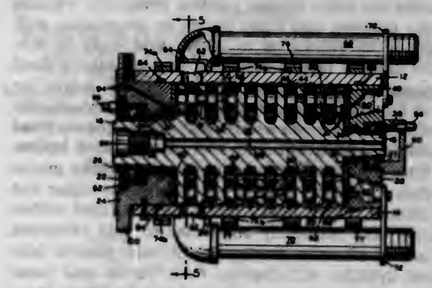
1. In a brake mechanism, the combination of, a backing plate, a plurality of brake shoes for cooperation with a brake drum slidably supported on said backing plate, means connecting adjacent ends of the brake shoes at one end thereof, fluid motor means for moving the brake shoes into engagement with a brake drum, rotatable anchor means between opposite adjacent ends of the brake shoes and carried by said backing plate, and resilient means normally holding said opposite ends of said brake shoes in engagement with said anchor means, said anchor means having rounded surfaces on each of opposite sides thereof engaged by the said opposite ends of said brake shoes, the

said opposite ends of said brake shoes each having a rounded surface engageable with one of said rounded



surfaces on said anchor means and continuously divergent therefrom from a line of contact therebetween.

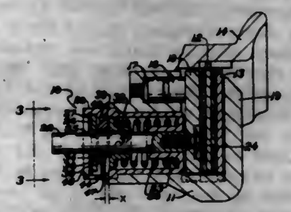
3,091,309
FLUID DYNAMOMETER
Robert S. Sheldon, West Hartford, Conn., assignor to Kahn & Company, Inc., Wethersfield, Conn., a corporation of Connecticut
Filed May 8, 1961, Ser. No. 118,481
7 Claims. (Cl. 188—90)



1. In a dynamometer, the combination of: a stator comprising a plurality of axially spaced annular plates; a rotor provided with a plurality of axially spaced disks whereby said disks have surfaces opposed to and spaced from the surfaces of said plates; each of said plates and disks provided with radially spaced axial apertures through which fluid introduced into the dynamometer is adapted to flow; respective apertures in the plates being arranged in rows and axes through said rows being disposed substantially parallel to the axis of rotation of said rotor; respective apertures in the disks being also arranged in rows and the axes through respective apertures of the disks being inclined with respect to the corresponding axes associated with the plates thereby causing the majority of opposing apertures in adjacent plates and disks to be misaligned to provide substantially constant power dissipation for any rotational position of the rotor as fluid passes through the apertures from the plates to the disks.

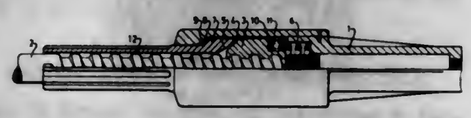
3,091,310
BRAKE RETRACTOR MECHANISM
Billy N. Smith and Walter J. Le Blanc, Troy, Ohio, assignors to The B. F. Goodrich Company, New York, N.Y., a corporation of New York
Filed May 10, 1962, Ser. No. 193,684
1 Claim. (Cl. 188—196)

Brake retractor mechanism comprising a rod, means for supporting said rod in a brake torque frame for axial displacement in one direction in response to actuation of the brake to engage its braking members, a retractor spring surrounding said rod, a collar slidable on said rod and engaged with one end of said retractor spring, a rigid locking plate embracing said rod, said locking plate having a surface directed toward said collar so that the collar engages only a localized region of the locking plate and exerts leverage thereon so that the locking plate is thereby normally biased by said collar and retractor spring to a canted position in which said locking plate frictionally engages said rod, said retractor



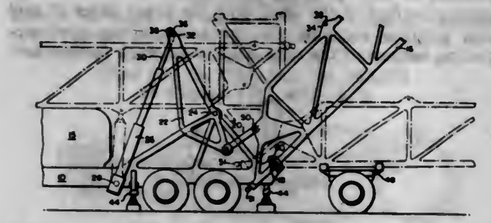
spring having an anchorage at a fixed position relative to the torque frame and acting against said collar and said locking plate to urge said rod toward a retracted position when the associated brake is released, and a stop engageable with a localized region of said rigid locking plate at a predetermined position of the rod in said torque frame to exert leverage on said rigid locking plate opposite the leverage exerted by said collar and spring for straightening said locking plate from said canted position to release it from frictional engagement with said rod whenever the axial displacement of said rod during an actuation of the brake exceeds a pre-established limit.

3,091,311
AUTOMATICALLY SINGLE-ACTING SLACK ADJUSTERS FOR VEHICLES
Nils Börje Lennart Sander, Malmo, Sweden, assignor to Svenska Aktiebolaget Bromsregulator, Malmo, Sweden, a corporation of Sweden
Filed July 19, 1962, Ser. No. 211,008
Claims priority, application Sweden July 20, 1961
5 Claims. (Cl. 188—196)



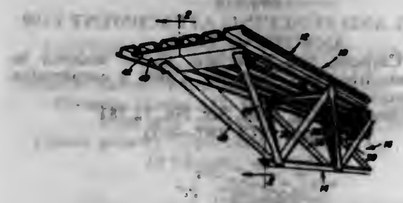
1. An automatically single-acting brake slack adjuster for vehicles, comprising, in combination, a two-part brake rod, one part of said two-part brake rod being tubular and the other being threaded and axially movable in said tubular rod part, and mechanism connecting said two rod parts and comprising a nut rotatably engaging said threaded rod part, a member rotatable about the longitudinal axis of said two-part brake rod in relation to said two parts thereof, two abutments facing in opposite directions on said rotatable member, abutments on said tubular rod part and on said nut, coacting each with one of said abutments on said rotatable member for transmitting brake power between said tubular rod part and said nut on said threaded rod part through said rotatable member, a spring interposed between said tubular rod part and said nut for normally holding said nut with said abutment thereon engaged with said coacting abutment on said rotatable member, said coacting abutments on said tubular rod part and said rotatable member as well as said coacting abutments on said rotatable member and said nut forming friction clutches between said tubular rod part and said rotatable member and between said rotatable member and said nut, respectively, and both said friction clutches being normally held engaged by said spring between said tubular rod part and said nut.

3,091,312
VEHICLE MOUNTED DERRICK
Wayland B. Woody, 1136 Crane Road, Merl G. Scott, P.O. Box 1101, and Marvin L. Jones, 525 Doucette, all of Pampa, Tex.
Filed June 10, 1959, Ser. No. 819,469
3 Claims. (Cl. 189—11)



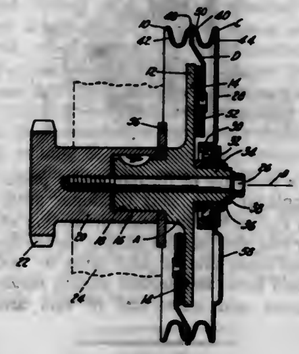
1. A truck mounted derrick comprising, in combination; a vehicle, a derrick, a truss pivotally mounted on a first axis on said vehicle, power means for pivoting said truss, a link pivotally connecting said truss with said derrick; bearing means for releasably supporting said derrick on said vehicle for pivotal movement about a second axis, and means for releasably securing said derrick on said truss for pivotal movement about said first axis, said derrick being adapted to be pivotally supported alternatively by said truss or said bearing means.

3,091,313
LONG SPAN DECK MEMBER
Dan L. Colbath, 4707 Cedar Springs Road, Dallas 19, Tex.
Filed Mar. 13, 1958, Ser. No. 721,203
1 Claim. (Cl. 189—37)



A long span deck unit of the self-sustaining truss-type comprising an upper chord member, a lower chord member and an open web fixedly interconnecting said upper chord member and said lower chord member, said upper chord member consisting solely of an elongated straight sheet metal deck forming member comprising a plurality of flat, elongated deck members disposed in side-by-side relation and lying in a common plane, said open web being secured directly to said deck forming member, said deck forming member having longitudinal extending, transversely spaced convolutions whereby bending of said deck forming member from its plane is resisted, said open web including V-shaped struts extending between and secured directly to said upper chord member and said lower chord member and said open web including diagonal members in pairs extending diagonally from the top of each V-shaped strut to the lower chord member at the location of the next V-shaped strut, transverse seat forming end plates disposed at opposite ends of said upper chord member and secured to the underside of said troughs, and upwardly and longitudinally sloping diagonal members extending between said end plates and ends of said lower chord member, said lower chord member being shorter than said upper chord member.

3,091,314
CLUTCH MECHANISM AND THE LIKE
Gene P. Baynes, Green Island, Troy, N.Y., assignor to The Bendix Corporation, Troy, N.Y., a corporation of Delaware
Filed Jan. 30, 1961, Ser. No. 85,919
17 Claims. (Cl. 192—104)

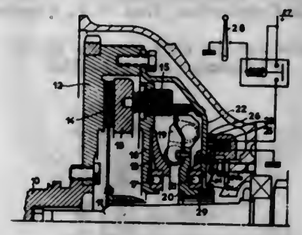


1. In self-actuating clutch mechanism and the like: a generally disk shaped member having opposite side friction surfaces rotatable about an axis of revolution; an annular outer member having an inside surface positioned radially outwardly of said disk shaped member; a pair of friction producing members respective ones of which are positioned on opposite sides of said disk shaped member with their radially outer ends having a point of bearing against said inside surface of said annular outer member and the radially inner end of said friction members having a friction producing surface for engaging the adjacent surface of said disk shaped member, each friction member having a center of gravity and being inclined to said disk shaped member so that the line of centrifugal force from its center of gravity is off center with respect to said point of bearing of the friction member on said annular outer member, the friction members on opposite sides of said disk-shaped member being inclined in opposite axial directions when disengaged from said disk-shaped member; and means transmitting biasing force in an axial direction between the friction members on opposite sides of said disk shaped member.

3,091,315
CENTRIFUGAL CLUTCHES
Jean Maurice and Michel Rist, Paris, France, assignors to Societe Anonyme Francaise du Ferodo, Paris, France, a corporation of France
Filed Mar. 17, 1959, Ser. No. 799,899
Claims priority, application France Nov. 26, 1955
6 Claims. (Cl. 192—105)

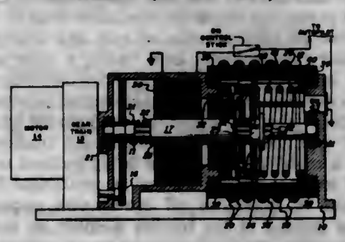
1. A centrifugal clutch comprising a driving unit, a driven assembly adapted to be driven by said driving unit through frictional engagement, a weight carrier supported free in rotation by said driving unit and being axially stationary, a transfer assembly axially movable with respect of said driving unit for controlling said frictional engagement between said driving unit and said driven assembly, weights carried by said carrier and adapted to push axially said transfer assembly so that said frictional engagement is centrifugally dependant upon the rotational speed of said carrier, and coupling

means for selectively frictionally coupling said carrier to said driving unit, said coupling means having a rearwardly axially projecting central boss of said carrier, said boss being axially stationary and having a rear end portion an annular member located on the rear side of said unit and surrounding said boss, friction linings between said member and said unit having a frictional area extending substantially in a plane perpendicular to the



clutch axis, a plurality of flexible radial plane arms substantially coplanar with said frictional area, angularly spaced from each other and each presenting an inner end and an outer end, first headed uniting means for positively attaching said inner end of said arms to said rear end portion of said boss, and second uniting means for positively attaching said outer end of said arms to said member.

3,091,316
OVERRIDABLE CLUTCH MECHANISM
Raymond A. Huffman, Jericho, N.Y., assignor to Sperry Rand Corporation, a corporation of Delaware
Filed Sept. 16, 1960, Ser. No. 56,567
6 Claims. (Cl. 192—150)



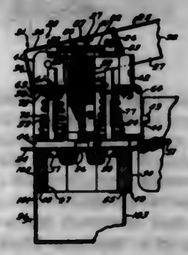
1. A torque limiting clutch mechanism comprising a pair of toothed clutch members, a torque sensitive means including a pair of elements which experience a relative axial displacement under rotative stress, a resilient means connected to oppose said axial displacement, one of said clutch members being axially and rotationally fixed with respect to one of said pair of elements, means transmitting axial displacement of the other of said pair of elements to the other of said clutch members to disengage said clutch members, said other torque sensitive element being movable in a direction opposite the direction of said displacement independently of said other clutch member and means independent of said torque sensitive means for engaging said clutch members.

3,091,317
DISPLAY AND DELIVERY STAND
George A. Just, Bronxville, N.Y., assignor to The Grand Union Company, East Paterson, N.J., a corporation of Delaware
Filed Aug. 22, 1960, Ser. No. 51,083
2 Claims. (Cl. 193—38)

1. In an article-supporting stand, a pair of tracks arranged in parallel relation and in inclined positions on said stand, and track spacing means extending transversely of the tracks beneath the same and detachably engageable therewith intermediate the ends of the tracks to hold the tracks in predetermined spaced relation, said track spacing means being in the form of an elongated strip of material presenting an upwardly facing track-supporting surface with track-holding elements projecting above said upwardly facing track-supporting surface of the strip and having extremities facing in opposite directions and spaced from said upwardly facing track-supporting surface of the strip, each of the tracks presenting an upwardly facing article-supporting surface extending lengthwise of the track, said tracks each having opposite side portions extending downwardly below said article-supporting surface of the track with the lower edges of said side portions engaging the upwardly facing track-supporting surface of the strip, said tracks each further having a downwardly facing opening located between the lower edges of said side portions of the track and presenting spaced oppositely projecting flanges bearing against the upper track-supporting surface of the strip, said track spacing means and tracks being relatively movable in a direction at right angles to the track-supporting surface of the strip intermediate the ends of the track into positions wherein the flanges on the lower edges of the side portions of said tracks are located adjacent the oppositely facing extremities of the track-holding elements, the flanges on the lower edges of the side portions of the tracks being movable over the upwardly facing track-supporting surface of the strip into and out of positions wherein said flanges project beneath the extremities of the track-holding elements and serve to hold the tracks in said predetermined spaced relation.



3,091,318
CUTTING AND PUNCHING ATTACHMENT FOR EMBOSSING TOOL
Victor B. Carboni, San Francisco, Calif., assignor to Dymo Industries, Inc., Berkeley, Calif., a corporation of California
Filed Nov. 30, 1960, Ser. No. 72,781
6 Claims. (Cl. 197—6.7)



6. In a tape embossing machine having a body and tape embossing dies, means for actuating said dies and longitudinally advancing said tape upon each embossing operation; the combination therewith of a cutting and punching mechanism on said body forwardly of said embossing dies, said mechanism including:

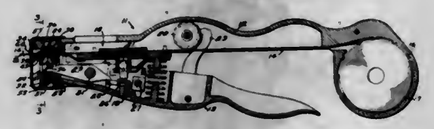
a longitudinal channel therein for receiving tape as it advances through said machine,

a cut-off die for reciprocation on a plane normal to said channel and having unactuated and actuated positions respectively retracted from said channel and extending therethrough,

a hole punch die adjacent said cut-off die for reciprocation in a plane normal to said channel and having unactuated and actuated positions respectively retracted from said channel and extending therethrough,

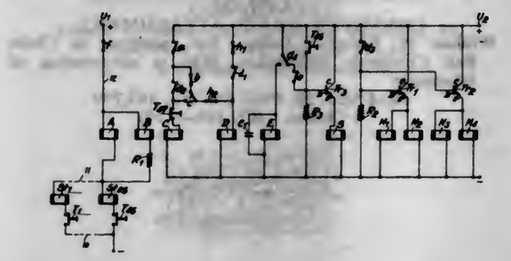
and manually operable die actuating means operatively coupled to said cut-off die and to said hole punch die for moving same between said unactuated and actuated positions.

3,091,319
TAPE MARKING TOOL AND CUT-OFF MECHANISM
Robert W. Sanders, Pleasant Hill, and Louis J. Vironda, El Cerrito, Calif., assignors to Dymo Industries, Inc., Berkeley, Calif., a corporation of California
Filed Jan 23, 1962, Ser. No. 168,034
15 Claims. (Cl. 197—6.7)



15. In a marking tool of the character described, the combination comprising a first elongated member adapted to carry a strip of material for longitudinal movement therein, a second elongated member pivotally connected to said first member adjacent the forward ends thereof, dies carried by said first member and adapted to selectively contact the strip, means for actuating a pair of said dies when said members are pivoted towards each other, a strip shear element operatively carried by said first member, means for actuating said element when said members are pivoted towards each other, and control means operatively carried by said second member for selectively engaging said shear actuating means on said die actuating means to allow operation of only one of said latter two means when said members are pivoted towards each other.

3,091,320
CONTROL CIRCUIT ARRANGEMENT FOR ELECTRIC TYPEWRITER
Theodor Mertin, Wilhelmshaven, Germany, assignor to Olympia Werke AG, Wilhelmshaven, Germany
Filed Apr. 10, 1962, Ser. No. 186,491
Claims priority, application Germany Apr. 10, 1961
10 Claims. (Cl. 197—13)



1. Control circuit arrangement for an electric typewriter having electromagnetically actuatable type levers and key operated selector switches for selecting the type lever to be actuated, comprising, in combination,

a. main electromagnet means for actuating any of the type levers depending upon depression of a corresponding key and including a plurality of electrical selector means individually actuatable by the corresponding selector switch for causing respectively corresponding type levers to be actuated;

b. first control relay means for causing, upon energization thereof, energization of said main electromagnet means;

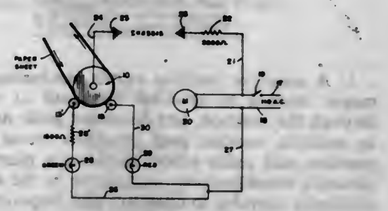
c. main relay means arranged to be energized simultaneously with the actuation of any single one of said plurality of electrical selector means, and for causing, upon energization thereof, energization of said first control relay means;

d. electrical means for deenergizing said first control relay means immediately after a type lever has been actuated by said main electromagnet means;

e. second control relay means connected to be energizable when said main relay means and said first control relay means are simultaneously in energized condition and including means for deenergizing said first control relay means while simultaneously holding said second control relay means energized, after said first control relay means is deenergized, as long as said main relay means is in energized condition after energization of said second control relay means; and

f. electrical means operable in parallel with said main relay means for preventing energization of said first control relay means by said main relay means when more than one of said electrical selector means is energized simultaneously.

3,091,321
PAPER END INDICATOR FOR TYPEWRITERS
William J. Ashworth, New Albany, Miss., assignor to Artnell Company, Chicago, Ill., a corporation of Delaware
Filed Nov. 16, 1961, Ser. No. 152,777
2 Claims. (Cl. 197—189)



1. A paper end position indicator means for typewriters having a rotatable platen and front and rear paper-feed rollers normally urged toward contact with the platen, said means comprising

(*a*) an electrical circuit having a source of electrical energy,

(*b*) an electrically conductive circumferential surface on said platen and means connecting said surface to one side of said electrical circuit

(1) said front and rear feed rollers being electrically conductive and engageable with the conductive surface of the platen and being connected by parallel respective leads to the other side of said electrical circuit

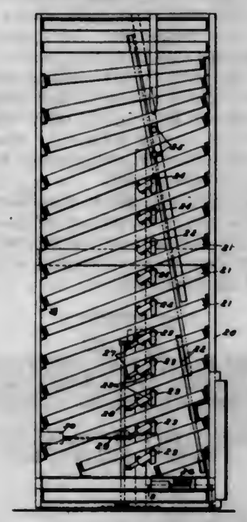
(2) said feed rollers each completing said electrical circuit through said platen and its respective lead except when separated from contact with the platen by an interposed sheet of paper,

(*c*) a signal light connected serially in each feed roller lead and energized independently upon contact of the respective feed roller with said platen upon passage of the end of said paper sheet beyond said respective feed roller, and

(*d*) means in the rear feed roller lead electrically responsive to the energization of the signal light in

the front feed roller lead for extinguishing the signal light in the rear feed roller lead when the electrical circuit through both said leads is completed.

3,091,322
CONVEYOR JUNCTION REGULATING MECHANISM
Russell Hector, Novi Township, Herman Schlottmann, Detroit, and Robert J. Ebbert, Rochester, Mich., assignors to Control Design and Fabricate, Inc., Farmington, Mich., a corporation of Michigan
Filed July 9, 1959, Ser. No. 825,946
25 Claims. (Cl. 198—31)



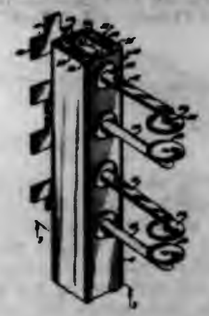
1. A conveyor junction switch mechanism comprising means tending to establish one path of article travel through the junction, and dominant guide means adapted to establish another path of article travel through the junction, said guide means including a plurality of guide elements simultaneously engageable by the article and individually movable to operative and inoperative positions.

3,091,323
EGG HANDLING EQUIPMENT
Otto C. Niederer, Jr., Bear Tavern Road, and Herbert O. Niederer, Church Road, both of Titusville, N.J.
Filed Mar. 9, 1961, Ser. No. 94,615
5 Claims. (Cl. 198—33)



3. Egg handling means comprising a pair of chains arranged in parallel relation, sprockets about which said chains pass, one of said sprockets being driven to move said chains in a predetermined direction and at the same speed, rollers supported by said chains and extending in parallel relation transverse to the direction of movement of the chains, the ends of said rollers benig of larger diameter than the middle portions of the rollers, a plate positioned beneath the rollers and engaged by the larger portions of said rollers so that the rollers are caused to rotate as they are advanced by said chains, said rollers being spaced apart a distance sufficient to permit eggs supported thereby to project downwardly between the middle portions of the rollers, egg lifting means carried by said plate and located beneath the middle portions of said rollers in position to engage the downwardly projecting portions of eggs supported by the rollers, and means for supplying eggs to said rollers.

3,091,324
PACKAGE SORTER
Robert G. Brown, Clarksville, and Harold J. Rosenberg, Silver Spring, Md., assignors to Rabinow Engineering Co., Inc., Takoma Park, Md.
Filed Apr. 26, 1961, Ser. No. 105,644
14 Claims. (Cl. 198—38)



11. In a code device for a conveyor system, a member, and means mounting said member for movement in a constrained path, at least one spindle, means rotatively connecting said spindle to said member for rotational adjustment to stepped positions about an axis of rotation, detent means engaging said spindle to releasably retain said spindle in each rotational stepped position, a code element, means connecting said code element to said spindle and retaining said code element in a plane which is substantially parallel to and laterally spaced from said axis so that rotational adjustments of said spindle place said code element in different code positions always to the side of said spindle and corresponding to the stepped positions of said spindle, and a code means interrogated by said code element of said spindle by contact with the same as said member is moved in said constrained path.

3,091,325
CONVEYOR CHAIN ATTACHMENT
William W. Klemme, Dallas, Tex., assignor to Chain Belt Company, Milwaukee, Wis., a corporation of Wisconsin
Filed Mar. 30, 1962, Ser. No. 183,799
4 Claims. (Cl. 198—174)



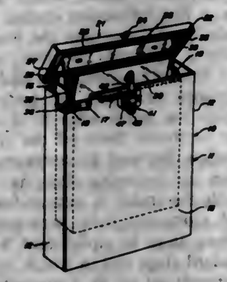
1. In a conveyor chain comprising a series of bushing links and pin links, each pin link comprising a pair of spaced side bars having holes in opposite ends thereof and pins extending through said holes, each pin having means at each end thereof and removable at least at one end thereof for assembling and securing said bars on the pins with the corresponding ends of the adjacent bushing links turnable on the pins between said bars, each bar having a centrally disposed lug extending laterally away from the chain in a plane beneath the pin link, and a hollow, cast wearing shoe having a lower rectangular wearing face and a smaller rectangular central upper opening, said opening and the ends of said shoe being dimensioned to receive said lugs of said side bars individually and prior to their assembly on said pins and being removable from the pin link only upon disassembly of the link by removal of the pins of the link.

3,091,326
SHEEP PELT CLAMP
Francis G. Connick, Downers Grove, John A. Brendle, La Grange, and Eldon J. Strandine, Chicago, Ill., assignors to Swift & Company, Chicago, Ill., a corporation of Illinois
Filed Mar. 23, 1960, Ser. No. 17,196
3 Claims. (Cl. 198—180)



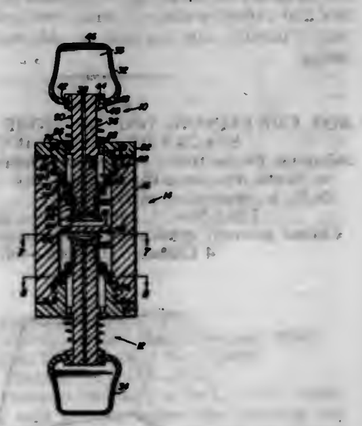
1. Apparatus for gripping and moving sheet-like material, said apparatus comprising: an endless conveyor belt, said belt having an opening therein; a clamp member secured to said conveying means, said clamp member having a recessed base positioned within said opening and an upstanding wall generally transverse to the direction of motion of said conveying means, said wall being at an acute angle to said base and forming a channel therebetween; toggle means pivotally mounted with respect to said base generally opposite said wall, said toggle means having an edge thereof extendable to within said channel whereby sheet material may be gripped therebetween; closing means associated with said conveying means for pivoting the toggle means toward said base to thereby force said edge toward said channel; an opening means associated with said conveying means spaced in the direction of motion from said closing means, said opening means adapted for pivoting said toggle away from said base thereby removing said edge from said channel to release the sheet material.

3,091,327
RECEPTACLE FOR STORING FILM AND THE LIKE
Gerald J. Lalley, 3516 Madison, Bellwood, Ill.
Filed May 11, 1961, Ser. No. 109,312
2 Claims. (Cl. 206—1)



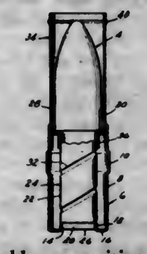
1. A container comprising an outer rectangular normally vertical receptacle having an upper open end, a rear side and a front side, a second rectangular receptacle disposed within said outer receptacle, said second receptacle having an upper opening, being substantially shorter in height, than said first receptacle and being adapted to support in an upright position a plurality of sheet like members which project upwardly from said upper opening, said shorter second receptacle being adapted to slide vertically within said first receptacle, a cover for said first receptacle, hinge means connecting said cover to a rear side of said first receptacle whereby the cover may be lifted by an operator from a closed to an open position relative to said open end, a flanged member connected to said cover adjacent said hinge means and in the closed position projecting downwardly into the first receptacle, and in the open position for engaging the upper ends of sheet members to urge them in a direction toward said front side, lifting elements connected to opposite sides of said second receptacle, means connecting said lifting elements to said cover substantially close to the front side of said first receptacle, whereby when said cover is opened said lifting elements lift said second receptacle upwardly to a position whereby said sheet like members project outwardly from the upper open end, means on said second receptacle projecting upwardly from the second receptacle during the open position of said cover and engaging said flanged member to limit the open position of said cover whereby said cover is held in a substantially upright position urged by the weight of the second receptacle toward the upper open end, whereby when an operator releases said cover the same is closed positively and tightly by the weight of said second receptacle.

3,091,328
CONTACT LENS REMOVER AND CARRIER
Priscilla A. Leonardos, 11 Bluebird Lane, Atkinson, N.H.
Filed Mar. 2, 1961, Ser. No. 92,821
7 Claims. (Cl. 206—5)



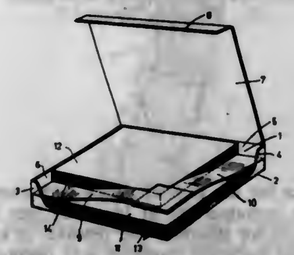
1. A device for use in conjunction with contact lenses comprising a container for at least one lens having an opening therein for insertion and removal of said lens, a removable cap normally covering said opening and for sealing said container, a handling member having a concave surface adapted to fit the convex outer surface of said one lens for picking up same, means connecting said member to said cap, said connecting means embodying a shaft splined to said cap and extending slidingly therethrough, said shaft and member having aligned bores and a suction producing and releasing means connected to said bore.

3,091,329
COSMETIC MASS HOLDER
Sol Levine, Bantam, Conn., assignor to Dorset-Rex, Inc., Thomaston, Conn., a corporation of Connecticut
Filed Aug. 15, 1960, Ser. No. 49,728
2 Claims. (Cl. 206—56)



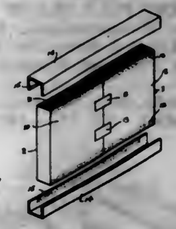
2. A cosmetic holder comprising an integrally formed tubular casing having an outer wall and an apertured end wall with a concentric upstanding lip parallel to and spaced from the outer wall defining a seat; an integrally formed tubular mass container extending coaxially within said casing outer wall and having a supporting column provided with a reduced neck portion having a closed end wall fixed in said lip and an expanded cosmetic mass receiving cup at the opposite end extending outwardly of said casing adapted to retain and fixedly support a cosmetic mass in a fixed position relative to the casing, said supporting column being provided with a spiral track; and a tubular sleeve disposed between said casing outer wall and mass container and slidable longitudinally therebetween, said sleeve having a reduced neck portion at its inner end overlying the supporting column and being dimensioned so as to closely engage the cosmetic mass receiving cup to support the sleeve precisely relative to said cup thereby to prevent contact between a cosmetic mass mounted in said cup and said sleeve, a follower on said sleeve engaged in the track of the columnar portion for movement outwardly and inwardly of the casing in response to rotation to protect and expose a cosmetic mass received in said holder, and a tubular cap engaged on the outer wall of said casing.

3,091,330
BOX CONTAINING ONE OR MORE SUPERPOSED STACKS OF FLAT OBJECTS
Johannes Petrus Roks, Eindhoven, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Nov. 2, 1960, Ser. No. 66,793
Claims priority, application Netherlands Nov. 7, 1959
4 Claims. (Cl. 206—60)



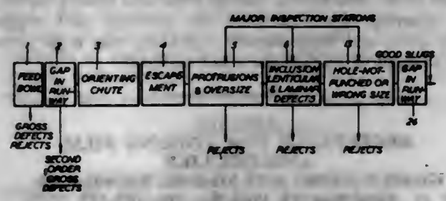
1. A box comprising a plurality of discrete superposed stacks of flat objects, one of said stacks of objects being of substantially less transverse dimension than the corresponding dimensions of the interior of said box, a filling means having a first portion intermediate said stacks and second portion supported on top of the uppermost object of the smaller stack and an intermediate portion bearing obliquely against the sides of said smaller stack and the adjacent interior side wall of said box.

3,091,331
PACKAGE
Jean M. Peeters, St. Laurent, Quebec, Canada, assignor to Canadian Pittsburgh Industries Limited, Toronto, Ontario, Canada
Filed June 22, 1956, Ser. No. 593,214
3 Claims. (Cl. 206—62)



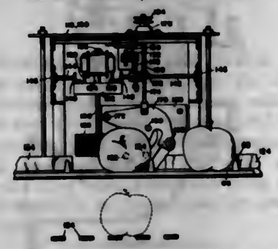
1. As a shipping package, a stack of glass sheets in laminated arrangement, a packaging member of corrugated fibreboard wrapped around said stack to envelope tightly the opposed faces and one set of opposite edges of said stack whereby to form a sub-assembly with said stack, and a pair of channel members of corrugated fibreboard each covering one of the remaining, otherwise exposed edges of said stack and projecting beyond those opposite edges of said sub-assembly formed by the first packaging member, said packaging members having bends extending parallel to the direction of extent of the corrugations therein.

3,091,332
INSPECTING OR SORTING APPARATUS
Leslie Kearton Parker, Lynwood, England, assignor to Aluminium Laboratories Limited, Montreal, Quebec, Canada
Filed Sept. 24, 1959, Ser. No. 842,134
Claims priority, application Great Britain Sept. 25, 1958
15 Claims. (Cl. 209—75)



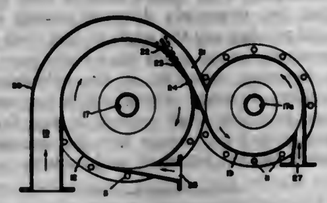
1. Apparatus for inspecting aluminium slugs of disc-like shape and having a central aperture therein, comprising an inclined runway down which the slugs are rolled one by one, a first inspection station for removing slugs having a diameter greater than the standard diameter and comprising a rotatable member arranged with its axis of rotation extending parallel to and spaced from the runway a distance such that the periphery of said member will engage the upper edge of slugs having an over-size diameter to throw them off the runway, a second inspection station disposed downstream with respect to said first station for removing slugs having lenticular defects or in which the metal is non-uniform and comprising a pair of elongated coils arranged above and below the runway so as to be equidistant from the adjacent edges of standard slugs and in which voltages are induced by eddy currents set up by a magnetic field in the adjacent parts of the slug passing thereby, and means responsive to non-uniformity in the voltages induced in the two coils for removing a defective slug passing the coils at that instant, and a third inspection station disposed downstream with respect to said second station for removing slugs having non-standard apertures therein and comprising a pair of coils arranged on either side of the runway with their centres lying on an axis which is intersected by the aperture in the slug as it passes thereby, means for energising one coil with alternating current, and means responsive to a non-standard voltage induced in the other coil as a slug with a non-standard aperture crosses the said axis for removing that slug.

3,091,333
MACHINE FOR SEPARATING ARTICLES ACCORDING TO SIZE
William T. Blake, Canandaigua, N.Y., assignor to Tew Manufacturing Corporation, Fairport, N.Y., a corporation of New York
Filed Jan. 3, 1961, Ser. No. 80,392
14 Claims. (Cl. 209—82)



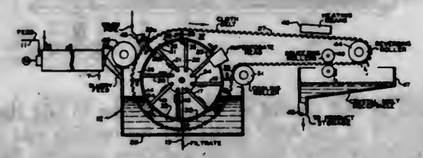
1. An article sizing machine comprising means including a compartmented belt for receiving and conveying articles in separated succession, brush means for ejecting an article of predetermined size from said belt, electrical circuit means including a plurality of photoelectric cells positioned to correspond substantially with each of a pair of dimensions of a light image projected on said cells from an article on said belt, for response to the lengths of said dimensions, means for amplifying current transmitted by said cells, and relay means controlled by said amplifying means and cells for actuating said ejecting means to eject an article of predetermined size.

3,091,334
CENTRIFUGAL SEPARATION METHOD AND MEANS
Thomas R. Morton, Bonne Terre, Mo., assignor to Denver Equipment Company, Denver, Colo., a corporation of Colorado
Filed July 20, 1959, Ser. No. 828,115
27 Claims. (Cl. 209—211)



5. In centrifugal separation apparatus of the cyclone separator type, two elongated hollow casings defining separate treatment chambers, generally circular in cross-section, each casing having a separate peripheral feed inlet, a separate outlet for an inner, axially discharging lighter fraction and another separate outlet for an outer, heavier fraction, and means associated with said casings for directing a pulp feed into at least two streams of size segregated pulp constituents flowing in a common plane toward the respective inlets of said casings, including conduit means in said common plane for said streams, and flow dividing means mounted in said conduit means adjacent a first casing for separating said streams so as to direct one flow as the pulp feed in one size range to one said chamber and a second flow as the pulp feed in a different size range to the other said chamber.

3,091,335
APPARATUS AND METHOD FOR CONTINUOUS SEPARATION OF SOLIDS FROM LIQUIDS
Howard W. Goard, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Mar. 30, 1961, Ser. No. 99,595
1 Claim. (Cl. 210—71)

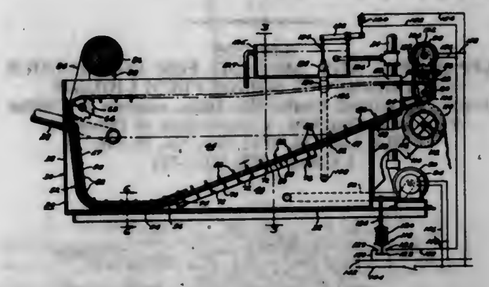


An apparatus for continuously separating solids from a liquids-solids slurry comprising: a rotary filter having imperforate heads spaced apart by an endless perforate filter medium spaced externally from an impervious drum; spaced partition members connecting said drum and said filter medium so as to form separate filter segments; drain conduits connected to the edge of said filter segments; means for alternately supplying fluid to and withdrawing fluid from said drain conduits; means to rotate said drum; a reversing roller located external of said drum and positioned so that said filter medium passes from said drum and over said roller; a receptacle disposed below said reversing roller; heating means positioned proximate to said filter medium and between said drum and said reversing roller for supplying heat sufficient only to fuse finely divided solids previously deposited on said filter medium as it is rotated through the slurry feed in said rotary filter; a cooling means located proximate to the drum recontact point of said filter medium, said cooling means adapted to cool said heated filter medium; and squeezing roller means disposed about said filter medium between said reversing roller and said cooling means; said reversing roller adapted to cause fused finely divided solids to drop from said medium into said receptacle; said squeezing roller means adapted to separate the remaining melted solids from said filter medium and pass the former into said receptacle.

3,091,336
FILTER APPARATUS
Gene Hirs, 17206 Greenview Road, Detroit, Mich.
Filed Mar. 27, 1961, Ser. No. 98,498
3 Claims. (Cl. 210—111)

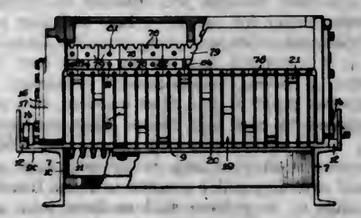
1. In a filter apparatus including a tank, a wall within and dividing said tank into an upper inlet chamber for liquid to be filtered and a lower outlet chamber for filtered liquid, said wall having an opening therein establishing communication between said inlet chamber and said outlet chamber, a liquid-pervious support carried by the wall at said opening, a liquid-pervious looped belt having a lower portion disposed within said inlet chamber to travel along said wall over said support and a return portion overlying said inlet chamber, actuatable drive means for advancing said belt, a disposable sheet of filter media guided by said belt on the underside thereof down into said inlet chamber, along said wall, and out of said tank, the improvements of a pump having its inlet in communication with said outlet chamber to withdraw filtered liquid there-

from, control means responsive to a predetermined clogging of the filter media portion overlying said liquid-pervious support, means interposed between the outlet of said pump and the lower chamber for storing a reserve of liquid, a normally closed valve interposed between said storage means and said lower chamber, and means ac-



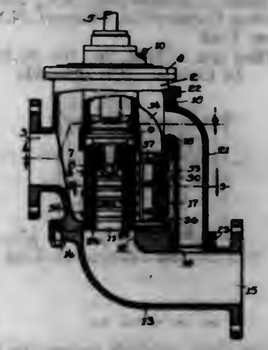
tuated by said control means in response to said clogged condition of said filter media (1) for opening said valve to introduce stored liquid into said lower chamber, thereby increasing the pressure in said lower chamber, and (2) for actuating said drive means to advance said belt and said media to position a fresh portion of said media over said liquid-pervious support.

3,091,337
COMMINUTING DEVICE
Carl H. Nordell, Crystal Bay, Nev., assignor of fifteen percent each to Louise N. Millspaugh and Annie N. Kaspar, both of Palm Springs, Calif.
Filed Nov. 9, 1959, Ser. No. 851,641
3 Claims. (Cl. 210—173)



1. A sewage comminuting device comprising a stationary screen, a frame reciprocably mounted adjacent said screen and adapted to traverse said screen, a reversible cutting cylinder rotatably mounted in said frame for removing sewage solids from said screen, means for causing said frame to traverse said screen, means for continuously rotating said cutting cylinder alternately in each of two opposite directions, cutting teeth having two oppositely disposed cutting edges mounted on said cutting cylinder and engageable with one surface of said screen, a single thin flat comb immovably mounted on said frame and having a forward surface adjacent said cutting cylinder, said comb having a rearward surface as well, said comb lying along a plane in which the longitudinal axis of said cutting cylinder lies, which plane also intersects the rearward and forward surfaces of said comb, notches of uniform cross section in the forward surface throughout their depth in said comb, said notches having oppositely disposed cutting edges, said teeth being adapted to mesh with the notches of said comb when said cylinder is rotated in either direction, the edges of said notches and the edges of said cutting teeth being disposed to cooperate to comminute sewage solids as said cutting cylinder rotates alternately in each of said two opposite directions, switch means operable to reverse the direction of movement of said frame, and means carried by said frame to operate said switch means at predetermined points in the travel of said frame in each direction to reverse the direction of travel of said frame and the direction of rotation of said cutting cylinder.

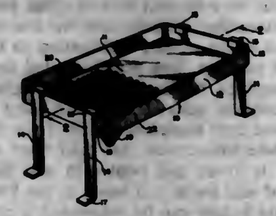
3,091,338
ALTERNATING COMMINUTOR
Carl H. Nordell, Crystal Bay, Nev., assignor of fifteen percent each to Louise N. Millspaugh and Anne N. Kaspar, both of Palm Springs, Calif.
Filed Nov. 9, 1959, Ser. No. 851,823
2 Claims. (Cl. 210—174)



1. A vertical comminuting device for comminuting sewage solids in a sewage stream comprising a housing having an inlet and an outlet, a hollow cylindrical screen having a vertical longitudinal axis and vertically spaced horizontal slots leading to the interior of said screen, said screen being rotatably mounted in said housing and substantially filling the cross section of the outlet of said housing, a motor for rotating said cylindrical screen in opposite directions, means for reversing the direction of rotation of said cylindrical screen alternately through at least one complete revolution in opposite directions, a single flat comb fixedly and vertically mounted in said housing having a forward surface adjacent said cylindrical screen and having a rearward surface, said comb lying along a plane in which the longitudinal axis of said cylindrical screen lies, which plane also intersects the rearward and forward surfaces of said comb, said comb having notches of uniform cross section in the forward surface throughout its depth, said notches having oppositely disposed cutting edges, a plurality of cutting teeth connected to said screen and aligned with said notches in said comb, said teeth having two oppositely disposed cutting edges, the edges of said notches and the edges of said teeth cooperating to comminute sewage solids when said screen is rotated in either direction, whereby as the cylindrical screen rotates in either direction sewage solids are comminuted and reduced to a size small enough to pass through the slots in said cylindrical screen into the interior of said screen, thence out the outlet of said housing.

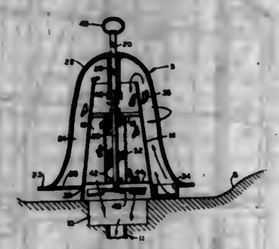
3,091,339
FOOD CLEANER TYPE STRAINER PAN
Maria V. Marra, 8011 18th Ave., and Lucian De Bonis, 8791 19th Ave., both of Brooklyn, N.Y.
Filed Oct. 19, 1959, Ser. No. 847,394
1 Claim. (Cl. 210—232)

A food cleaner type strainer pan comprising a pan having a bottom and an upwardly-extending side wall, legs detachably connected to the side wall and bottom of the pan at the opposite sides thereof to support the pan above a sink surface, said pan bottom having an enlarged opening therein, a tapered colander removably supported in said opening and depending from the bottom of the pan a distance less than the length of said legs, said colander having circumferentially-spaced openings extending about the top thereof, a strainer plug having a closed bottom and a side wall tapered to fit the upper end of the colander, said plug side wall having circumferentially-spaced openings so positioned as to be aligned



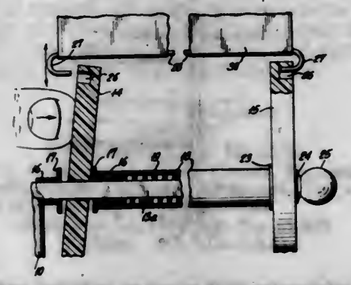
with said colander openings, said strainer plug when placed in the colander with openings out of alignment with said colander top openings causes water to be retained in the pan for soaking the food and when openings of the strainer plug are put in alignment with said colander top openings permits the rinse water to be drained off, said plug being removable from the colander to permit the waste to be passed into the colander to be retained therein.

3,091,340
PORTABLE LEAF TRAP FOR SWIMMING POOLS
Andrew L. Pandini, 180 Los Cerros Drive, Greenbrae, Calif.
Filed June 5, 1959, Ser. No. 818,353
5 Claims. (Cl. 210—354)



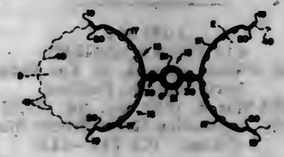
5. A rotary leaf sweeper adapted to sweep up leaves from the immediate vicinity of the main drain line of a swimming pool and to entrap said leaves comprising a dome-like cover having an annular bottom wall, a relatively small opening in said bottom wall disposed in laterally offset relation to the longitudinal axis of said cover, an open-ended tube disposed in substantially axial alignment with said inlet, said tube having its lower end supported by the bottom wall of said pool in surrounding relation to the inlet of said drain line and having its upper end extending a substantial distance within said cover past said annular bottom wall of said cover, shaft and shaft bearing means interconnecting said tube and said cover enabling rotative movement of said cover about a longitudinal axis of said inlet, screen means disposed within said tube operable to remove leaves and other pool debris from water flowing between said opening and said inlet, and impeller means carried by said shaft means and disposed in the path of flow of the water passing between said opening and said inlet operable to effect directional changes in said flow and thereby impart rotary movement to said cover.

3,091,341
DISPLAY RACK
George H. Jantzen, New York, N.Y., assignor to Steinthal Sample Co., Inc., New York, N.Y., a corporation of New York
Filed Jan. 8, 1962, Ser. No. 164,724
6 Claims. (Cl. 211—47)



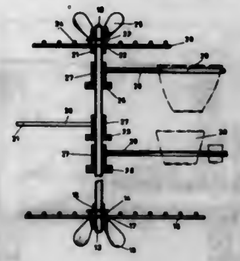
1. A display rack for exhibiting sample swatches, which comprises an upright support, an arm connected to and extending outwardly from said support, a pair of end plates carried on said arm, each of said end plates having an outer surface which contains a groove extending around the plate adjacent its outer edge and at least one of said plates being slidable on the arm for maintaining said plates in spaced relation relative to each other, and a swatch supporting member extending between the spaced plates at the outer edges thereof, said swatch supporting member having portions at opposite ends thereof which fit into the grooves in the outer surfaces of the end plates.

3,091,342
RECEPTACLE SUPPORT AND HOLDER
Craven H. Crump, 219 37th St., Newport News, Va.
Filed July 18, 1961, Ser. No. 124,929
1 Claim. (Cl. 211—71)



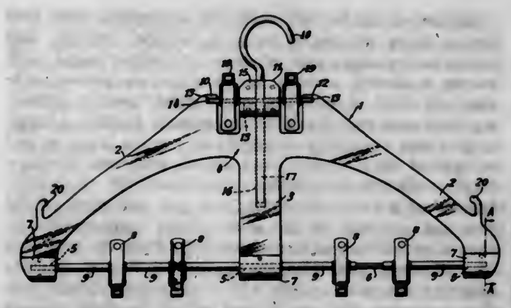
Holder means for two vertically corrugated cans, said means being attachable to a cylindrical upright, said means comprising a pair of straps of resilient metal, each having a central arcuate upright-engaging portion substantially 180° in length, a short straight portion extending from each end of said central arcuate portion, a longitudinal arm extending outwardly in a curve from an end of each of the straight short portions, each arm having a length sufficient to embrace substantially 90° of circumference of a vertically corrugated can, and parts of the free end portions of the arms having substantially U-shaped protuberances spaced inwardly from the free ends of said arms, and attaching means for fixedly securing said straps to said upright with said central arcuate portions engaging said upright and one of the short straight portions of one strap in face contact with one of the straight portions of the other strap, and the other of said one of said short straight portions of said one strap being in face contact with the other of said short straight portions of the other strap, said attaching means being disposed on said short straight portions; two of said protuberances facing one another and the other two of said protuberances facing one another when said attaching means is disposed on said short straight portions.

3,091,343
REFRIGERATOR SHELF ACCESSORY
Herbert A. Neumann, % Canadian Research and Development Foundation, 1434 Queen St. W., Toronto, Ontario, Canada
Filed Oct. 27, 1961, Ser. No. 148,142
2 Claims. (Cl. 211—74)



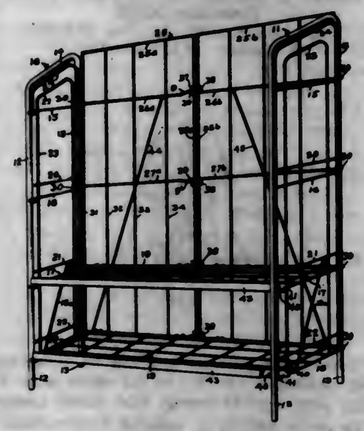
1. A refrigerator shelf accessory including vertical rod means; means for the detachable attachment of said rod to said shelf; said detachable attachment means including a lower stop member; upper and lower plain washers and nut means assembled on said rod means; said upper washer being assembled between said stop member and the upper surface of said shelf; said lower washer being co-operable with the undersurface of said shelf and said nut means being threadedly assembled to the lower end of said rod, and adapted to co-operate with said stop member to compress said shelf between said upper and lower washers; at least one bush slidable and rotatable upon said rod; each of said bushes supporting at least one arm extending normal to the axis thereof; each of said arms terminating in a container support member; vertically adjustable means upon said rod for the support of said bushes; and a second detachable attachment means located at the upper end of said rod, co-operable with a second shelf in said refrigerator for the support of said rod.

3,091,344
CLOTHES HANGERS
Howard William Bullock, 45 The Ridgeway, North Harrow, England
Filed Mar. 6, 1962, Ser. No. 177,827
Claims priority, application Great Britain Mar. 22, 1961
2 Claims. (Cl. 211—113)



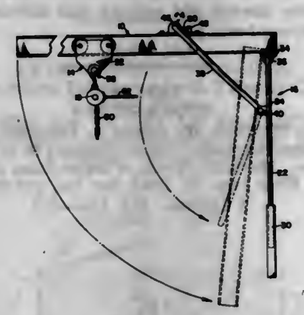
1. A clothes hanger comprising a substantially coplanar trifurcated member having two arms extending outwardly and downwardly from a central portion, the third arm extending downwardly from said central portion, the ends of said three arms being substantially colinear, grooves in the said ends, a first length of wire, said first length of wire being located with its ends in the said grooves in the ends of said two arms and with an intermediate part thereof located in the said groove in the end of said third arm, three detachable cleats fitting over said wire and each secured to the said end of one of said three arms to hold said wire in position, a plurality of clothes pegs, said clothes pegs being mounted on said first length of wire, means on said wire to maintain said pegs in the required spaced relationship, three upwardly extending trifurcations on said central portion, a groove in each of said upwardly extending trifurcations, the three said grooves being substantially co-linear, a second length of wire located in said three grooves in said upwardly extending trifurcations, a fourth detachable cleat secured to the middle trifurcation to hold said second wire in position, two pegs mounted on said second wire between said trifurcations, the middle trifurcation being substantially coaxial with said third arm of said frame, a blind hole extending axially from the upper end of said middle trifurcation into said third arm, a metal rod having its lower end located in said blind hole, the upper end of said metal rod being in the form of a hook by which said hanger can be suspended, a circumferential groove round an intermediate portion of said metal rod, said second wire having an intermediate part thereof engaging in said circumferential groove, to retain said metal rod in position in said blind hole but allow it to be rotated so that said hook can be rotated into any desired position.

3,091,345
FOLDABLE DISPLAY DEVICE
Francis D. Hoose and James Michael Melvin, Elwood, Ind., assignors to Monticello Manufacturing Corporation, Elwood, Ind.
Filed July 25, 1960, Ser. No. 45,168
5 Claims. (Cl. 211—149)



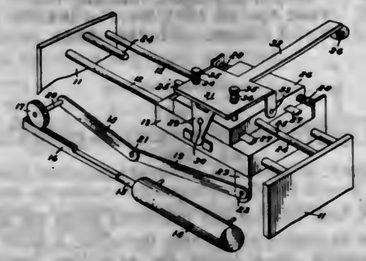
1. A display device comprising a pair of end members; a pair of back frame members hinged by opposite vertical ends to respective back vertical ends of said end members; hinge means interengaging adjacent vertical ends of said frame members; said hinge means comprising a vertically disposed wire at each of said adjacent frame ends; horizontally disposed wires in each of said frames; an end portion of a horizontal wire of one frame being fixed to the vertical wire of that frame and extending therefrom to engage pivotally the vertical wire of the other frame; a horizontally disposed wire of said other frame being fixed to the vertical wire of said other frame and extending freely across the vertical wire of said one frame by an end portion, thereby limiting hinging of said frames in one direction by reason of said other frame horizontal wire end portion bearing against the vertical wire of the one frame; and a shelf removably carried in part at least by said end members across said end members on those sides of which said wire portion extends from one frame over the vertical wire of the other frame and restraining the frames from hinging both at their post ends and their adjacent ends.

3,091,346
COTTON GIN LIFT DEVICE
Preston W. Yawn, 612 S. Adams St., Canton, Miss.
Filed Aug. 22, 1961, Ser. No. 133,124
6 Claims. (Cl. 212—9)



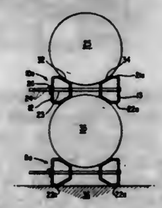
1. A cotton gin breast lift comprising an elongated I-beam having one end adapted to engage the gin stand above the breast thereof, an inverted substantially U-shaped support means for supporting the outer end of said I-beam, a carrier on said I-beam, a hoist suspended from the said carrier, breast attachment means carried by the hoist for connection to a gin breast, said inverted substantially U-shaped support means including a pair of widely spaced legs, said legs embodying vertical lower end portions, converging intermediate portions, vertical upper end portions and a transverse bight portion, bracket means secured to the outer end portion of said I-beam for pivotally attaching the outer end of said I-beam to said bight portion of said support, a brace extending between the said converging intermediate portions of said legs and the upper portion of said I-beam in spaced relation to said bracket means, and means releasably connecting the upper end of said brace to the top surface of said I-beam.

3,091,347
DEVICE FOR LOADING AND UNLOADING PRODUCTION PARTS
Francis J. Sehn, Bloomfield Hills, and Maurice M. Clemons, Birmingham, Mich.; said Clemons assignor to said Sehn
Filed Dec. 23, 1959, Ser. No. 861,490
2 Claims. (Cl. 214—1)



1. A device for loading or unloading parts from a press or like machine comprising a stationary frame, longitudinal guide means on said frame, a longitudinally reciprocable carriage mounted on said guide means, an element longitudinally displaceably mounted on said carriage, a pickup arm pivotally mounted on said element, means for reciprocating said carriage between end positions along said guide means, means at either end of the travel of said carriage for arresting the longitudinal travel of said element before an end position of said carriage is reached, and means responsive to the relative movement of said element in either longitudinal direction relative to said carriage for actuating said pickup arm in the same direction about its pivotal axis.

3,091,348
ROLL STACKING DEVICE
William J. Neuhauser, Jefferson County, Ky., assignor to Reynolds Metals Company, Richmond, Va., a corporation of Delaware
Filed Nov. 14, 1960, Ser. No. 69,139
1 Claim. (Cl. 214—10.5)



A roll stacking device for supporting and spacing one roll above another in a free-standing vertical stack, said device likewise being adapted for supporting the lowermost roll of such a stack, comprising a rigid elongated member, a pair of support blocks retained in alignment along said member, means for varying the spacing between blocks, each of said blocks having a long end wall, a short end wall, upper and lower inclined walls sloping outwardly away from said elongated member and interconnected at their innermost ends by said short end wall, and flattened portions substantially parallel to said elongated member interconnecting said long end wall and the outermost ends of said inclined walls, the corresponding flattened portions of said blocks on one side of the elongated member providing laterally spaced supports for stabilizing the stacked rolls when the device is employed beneath the lowermost roll of the stack, the blocks being disposed along said rigid member with their short end walls facing each other, whereby the corresponding inclined walls of said blocks thereby define upper and lower substantially V-shaped roll-receiving portions of the device, that portion formed by the lower inclined walls of the blocks being adapted to rest on opposite sides of the lower roll of a pair to be stacked without contact between said roll and the elongated member, and the upper inclined walls providing a roll-receiving portion to receive and support the upper roll free of contact with said lower roll.

3,091,349
VEHICLE PARKING INSTALLATION
Anton Roth, Hochstadter Landstrasse, Hanau (Main), Germany
Filed Oct. 10, 1961, Ser. No. 144,170
Claims priority, application Germany Oct. 11, 1960
5 Claims. (Cl. 214—16.1)

1. A parking installation for a vehicle having front wheel means and rear wheel means, said installation comprising, in combination:

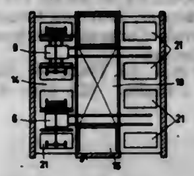
(*a*) building means defining an approach aisle for movement of said vehicle in a predetermined direction and stall means on a level vertically spaced from said aisle,

(1) said building means including a floor in said aisle for movement thereon of said vehicle and
(2) a section of said floor being movable in said predetermined direction;

(*b*) an elevator vertically movable in said building means between said level and a loading position horizontally adjacent said aisle;

(*c*) a transfer carriage insertable under said vehicle between the front and rear wheel means thereof;

(*d*) guide means for guiding movement of said transfer carriage transversely of said predetermined direction between said elevator in the loading position thereof and a portion of said floor adjacent said section, said portion and said section being spaced

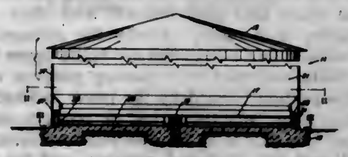


from each other in said predetermined direction, and for preventing movement of said transfer carriage in said predetermined direction when said carriage is on said floor portion; and

(*e*) two claw means mounted on said carriage for simultaneous respective movement in opposite directions parallel to said predetermined direction for engagement with said wheel means when said vehicle is positioned over said floor portion and one of said wheel means stands on said freely movable floor section,

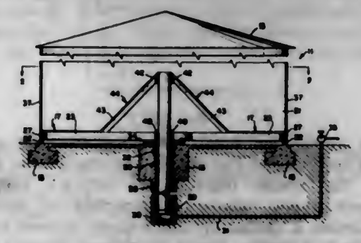
(1) said claw means each having wedging top face means for lifting an engaged wheel means from said floor during movement of the claw means away from said carriage.

3,091,350
STORAGE BIN
Walker L. Wellford, Jr., P.O. Box 2834, Memphis 2, Tenn., and Robert G. Jorgensen, P.O. Box 4776, Memphis 7, Tenn.
Filed May 9, 1960, Ser. No. 27,828
6 Claims. (Cl. 214—17)



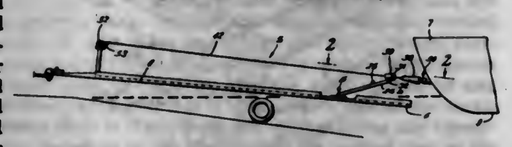
1. In storage bin means, a substantially cylindrical covered tank body, a base underlying said tank body, a turnable floor having apertures and rotatably supported spaced above said base adjacent the lower end of said body, said floor and tank body thereabove defining a bin area, support means seated on said base and connected to the lower end of said tank body supporting said body from said base, roller means mounted on said base inwardly of said support means, said floor including a peripheral channel about its outer periphery, said channel having a lower substantially horizontal flange supported on said roller means to support the periphery of said floor while maintaining the rotatable character of said floor, shield means connected to said tank body adjacent its lower end, said shield means extending downwardly inwardly of said roller means, an upstanding flange extending upwardly from said floor means closely adjacent to and outwardly of said shield means, said upstanding flange and said shield means cooperating to guide material from said bin area onto said floor and away from said roller means, material from said bin area dropping through the apertures in said floor onto said base, an annular ring depending from said floor toward said base, a plurality of inwardly extending angularly disposed deflectors fixed to said ring beneath said floor, means for rotating said floor, and conveyor means sunk in a pit beneath said floor, said deflectors being angled in a trailing direction relative to the direction of floor rotation, rotation of said apertured floor maintaining a base agitation of material in said bin area to prevent packing and arching thereof and moving said deflectors to urge material toward said pit.

3,091,351
STORAGE BIN
Walker L. Wellford, Jr., James A. Farnham, and Henry L. Carson, Memphis, Tenn., assignors to J. E. Dilworth Co., Inc., Memphis, Tenn., a corporation of Tennessee
Filed Mar. 27, 1962, Ser. No. 182,780
3 Claims. (Cl. 214—17)



1. In a storage structure, a shell member defining a storage cavity therein, a foundation supporting said shell member and closing the bottom thereof, a rotatable unloader floor disposed in the bottom of said cavity within said shell member and serving to support the material stored in said cavity, means to rotate said floor, said floor having a plurality of apertures therein adapted to dislodge and pass material stored in said cavity downwardly through said floor as said floor is rotated, means disposed beneath said floor to carry off the stored material dislodged by said floor, and a central hydraulic bearing for vertically supporting said floor on a body of fluid to thereby facilitate rotation thereof, said hydraulic bearing including means for lifting and lowering said floor by hydraulic pressure during installation, maintenance, and repair of said storage structure.

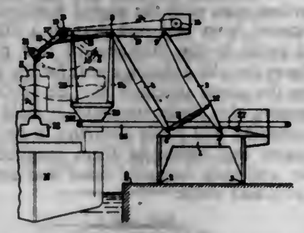
3,091,352
BOAT LOADING GUIDE
Henry J. Vitable, Houston, Tex., assignor of one-half to Barnett B. Magids, Houston, Tex.
Filed Apr. 21, 1961, Ser. No. 104,698
3 Claims. (Cl. 214—85.1)



1. A boat loading and unloading guide for aligning a boat to be loaded on a trailer including, a guide track to be mounted on a trailer for extending longitudinally thereof, a member mounted in said track and movable therein longitudinally of the trailer, an arm extending upwardly from said member and inclined towards the rear of the trailer, a female socket pivotally mounted on

the upper end of said arm, a male member for telescopically fitting in said female socket and having a means for connecting a cable on one end and for engaging a boat on the other end, a cable for securing to said male member and extending through said female socket, reel means on the trailer for winding and unwinding said cable means whereby said male member and female socket may be moved longitudinally of the trailer along said guide track as the boat is loaded and unloaded on the trailer, and means for retaining said male member telescoped in said female socket as the boat is loaded on and unloaded off the trailer.

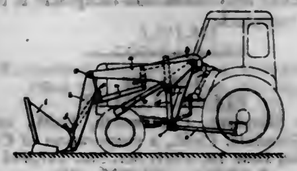
3,091,353
RETRACTABLE UNLOADER
Pierre Jean-Marie Théodore Allard, 3 Rue de Constantine, Paris, France
Filed Apr. 19, 1960, Ser. No. 23,322
Claims priority, application France Sept. 23, 1959
8 Claims. (Cl. 214—89)



1. An unloader for the unloading of ships, comprising: a movable base member displaceable longitudinally of a ship to be unloaded, a beam system including a plurality of beams pivotably mounted by the lower end portions thereof on said base member to be rocked in a transverse vertical plane, an upper structure carried by the upper end portions of the beams of said beam system for movement therewith to be extended and retracted thereby toward and away from said ship; pendulum arm means connected to said upper structure for swinging movement in the direction of said vertical plane between first and second positions; cable means including a first reach extending longitudinally of said arm means in all positions thereof and a second reach depending from the free end portion of said arm means; grab-bucket means suspended from said second reach, said grab-bucket means being adapted to be lowered into and raised from a hold of said ship with said upper structure extended and said arm means in said first position; load receiving means carried by said upper structure and positioned below the free end portion of said arm means in said second position thereof; winch means carried by said upper structure and connected to said cable means for operation of said grab-bucket means; power operated means connected to said arm means for moving said arm means selectively between said first and second positions; and further power operated means for selectively extending and retracting said upper structure.

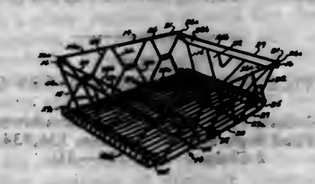
3,091,354
LOADING DEVICES FOR MOUNTING ON VEHICLES
Frederick Webster, Meltham, Huddersfield, England, assignor, by mesne assignments, to David Brown Tractors Limited, Meltham, Huddersfield, England, a company of Great Britain
Filed Sept. 10, 1957, Ser. No. 683,985
Claims priority, application Great Britain Sept. 15, 1956
5 Claims. (Cl. 214—140)

1. In a tractor, a frame, a pair of main lifting arms each of which is pivoted at one of its ends on said frame, a pair of secondary arms each of which is pivoted on the other end of one of said main arms, a bucket pivotally mounted directly on and between said secondary arms, means for actuating said lifting arms to swing in a predetermined direction for selectively raising said bucket to first and second positions where said bucket is respectively disposed to discharge forwardly of the tractor and to discharge rearwardly of the tractor, an inextensible link removably pivotally connected to one of said main arms intermediate the ends thereof and to that one of said secondary arms which is pivoted on said one main arm to determine the angular relation between said main and secondary arms, an extensible hydraulic cylinder assembly removably pivotally connected between said one secondary



arm and said bucket and being extensible to tilt and thereby effectuate discharge of said bucket when the latter is in said first raised position, said hydraulic cylinder assembly and said inextensible link being selectively mutually interchangeable for pivotally mounting the inextensible link between said bucket and said one secondary arm in place of said hydraulic cylinder assembly to establish a fixed angular relationship between said bucket and said secondary arm and further for pivotally mounting said hydraulic cylinder assembly between said ones of said main and secondary arms enabling said hydraulic cylinder assembly by extension thereof to swing said secondary arms outwardly from said main arms to tiltably effectuate discharge of said bucket when in said second raised position.

3,091,355
TIERABLE AND NESTABLE RECEPTACLE WITH HINGED GATE MEMBER
Theodore R. Mutto, Shaker Heights, Ohio, assignor to Mid-West Metallic Products, Inc., Cleveland, Ohio, a corporation of Ohio
Filed May 16, 1960, Ser. No. 29,398
15 Claims. (Cl. 220—19)



1. A receptacle adapted for tiering with other like receptacles, including a rigid frame comprising a bottom portion, means defining upper edges spaced above said bottom portion, side wall portions rigidly connecting said bottom portion and upper edges, tiering position support means including a plurality of upper tiering support portions rigid with said upper edges and a plurality of lower tiering support portions rigid with said bottom portion, said lower tiering support portions being located substantially vertically beneath said upper tiering support portions, said lower tiering support portions of an upper receptacle being positioned to rest vertically down upon said upper tiering support portions of a lower like receptacle in tiering position with like parts of said upper receptacle subtantially vertically aligned above like parts

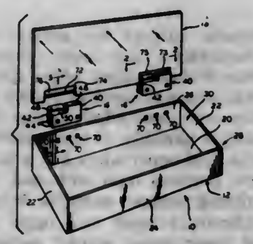
of the lower receptacle; a movable wall adapted to extend at least partially over an open side of said rigid frame; and connecting means operatively connecting said movable wall and said rigid frame so that said movable wall is movable relative to said frame between a side open position uncovering said open side and permitting loading and unloading articles on said bottom portion through the open side and a side closed position at least partially covering said open side to block removal of the articles through said open side, lock means responsive to tiering position engagement between upper and lower like receptacles for locking the movable wall of one of these receptacles in said closed position against movement in an outward direction to said open position, said movable wall being locked only when said receptacle is tiered with another like receptacle.

3,091,356
FLUSH CLOSURE
Gideon Mac Simpkins, Chatsworth, Calif., assignor to Airaterra, Glendale, Calif., a corporation of California
Filed June 16, 1961, Ser. No. 117,644
7 Claims. (Cl. 220—25)



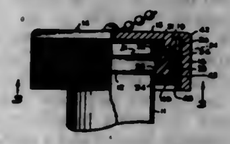
1. A flush-type closure adapted to be releasably mounted in an opening in a structure providing an undercut anchoring surface, comprising a housing receivable in said opening having an inner end wall, a locking pin mounted centrally of said housing for limited axial movement and for rotative movement, a plurality of radially extending latch legs pivotally mounted at their inner ends on said locking pin for pivotal movement in planes containing the pivotal axis of the locking pin, the free ends of said legs projecting through said housing in extended position for engagement with the anchoring surface, when said locking pin is in its inner position, spring means interposed between the inner end wall of the housing and said legs yieldably urging said locking pin outwardly of said housing thereby to retract said legs, and interengaging means on said housing and said locking pin for releasably securing said locking pin in innermost position.

3,091,357
DEVICE FOR HINGING COVERS ON CONTAINERS
Martin Weinhart, 7109 Keeler Ave., Lincolnwood 46, Ill.
Filed Sept. 5, 1961, Ser. No. 136,034
2 Claims. (Cl. 220—31)



2. A container structure comprising a receptacle defining an open top and a side wall structure, a closure for closing the receptacle top with the closure including a pintle structure along one edge thereof that is spaced from the closure along its mid portion and connected to the closure at its ends, and a device for hinging the closure to said receptacle, said device comprising a channel shaped member defining a pair of spaced parallel walls spaced to be received over one end of the receptacle side wall structure, and a web portion with said walls projecting from the same side of said web portion, protuberance means projecting from the inner surface of one of said walls for locking engagement with the side wall of the receptacle when the side wall structure of the receptacle is received between said walls, said device further including a pair of fingers projecting from the other side of said web portion, said fingers being spaced from each other longitudinally of said member a dimension that is at least equal to the thickness of said pintle structure, one of said fingers being disposed adjacent one end of said web portion and the other of said fingers being disposed adjacent the other end of said web portion, said one finger having its end portion angled in the direction of said other web portion edge and said other finger having its end portion angled in the direction of said one web portion edge, with the angled portions of said fingers being spaced from said web portion a dimension that is at least equal to the thickness of said pintle structure, said fingers thereby defining a seat for the pintle structure, whereby the pintle structure may be applied to said seat by disposing the pintle structure at right angles to said walls, inserting said pintle structure in the space between said fingers that separates them longitudinally of said member, and then swinging same into substantial parallelism with said walls.

3,091,358
CLOSURE
Gideon Mac Simpkins, Chatsworth, Calif., assignor to Airaterra, Glendale, Calif., a corporation of California
Filed Dec. 20, 1960, Ser. No. 77,264
14 Claims. (Cl. 220—46)

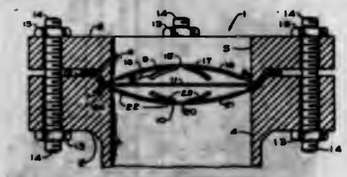


1. A conduit closure, comprising a cap having an end wall and an axially projecting cylindrical collar wall, the inner surface of said collar wall having a recessed section, an annular gasket within said cap adapted to receive the end of a conduit, and an arcuate cam element extending partially around said gasket and interposed between the gasket and the collar wall of the cap, said cam element having an arcuate, gasket-engaging inner surface and an arcuate collar wall-engaging outer surface extending nonconcentrically relative to its inner surface, said cam element normally being positioned adjacent and partially received within said recessed area of the collar wall, said cap and cam element being relatively rotatable for a limited distance whereby to enable said cam element to be forced radially inward to compress said gasket against the conduit.

3,091,359
SAFETY PRESSURE RELIEF DEVICE
Loren E. Wood, Kansas City, Mo., assignor to Black, Sivalls & Bryson, Inc., Kansas City, Mo., a corporation of Delaware
Filed Mar. 24, 1961, Ser. No. 98,035
5 Claims. (Cl. 220—89)

1. A safety pressure relief device comprising,
a base member,
a hold-down member,

a first crowned rupture member,
a second crowned rupture member,
a resilient sealing membrane,
said resilient sealing membrane being positioned between said first crowned member and said second crowned member,
said first crowned member being positioned with respect to said second crowned member with its convex side away from said second crowned member,



the convex side of said second crowned member being away from said first crowned member,
both said first and second crowned members being perforate to allow pressure fluids to pass therethrough to be exerted against said sealing membrane, and
means securing said base member to said hold-down member with said first crowned rupture member, said second crowned rupture member and said resilient sealing membrane being positioned between said base member and said hold-down member.

3,091,360
NESTABLE CUP
Bryant Edwards, Oak Park, Ill., assignor to Illinois Tool Works Inc., a corporation of Delaware
Filed Oct. 29, 1958, Ser. No. 769,057
10 Claims. (Cl. 220—97)



1. A one-piece nestable circular cup of thin walled plastic construction and of a size to be gripped and lifted by one hand, comprising a recessed bottom and a sidewall integral therewith, said sidewall being joined to said recessed bottom at a circumferential bottom margin and tapering generally upwardly and outwardly therefrom in diverging relation to an upper margin defining an open upper end, said upper margin having a rim of predetermined axial extent which is of sufficient increased thickness relative to the thickness of the thin plastic sidewalls to lend required lateral strength at said open upper end, said sidewalls having circumferential stacking ring means formed therein, positioned below said upper margin and having an axial extent greater than the axial extent of the thickened rim portion, said stacking ring means having at its lower extremity circumferentially disposed externally projecting shoulder means and having at its upper extremity circumferentially disposed internal shoulder means of smaller minimum diameter than the maximum diameter of said external shoulder means and spaced upwardly from said recessed bottom, said internal shoulder means adapted to form a shelf to coact with the complementary external shoulder means of a like container to positively limit the extent of telescopic association of said containers, at least circumferentially spaced portions of said stacking ring means located beneath and providing a support for said internal shoulder means, said support converging toward the cup axis from bottom to top sufficiently to increase lateral strength of the stacking ring means and to increase radial extent of the internal shoulder means, and at least one of said shoulder means having separate means associated therewith for cooperation with a shoulder means of a nested cup to provide a circumferentially discontinuous area to assure air communication between completely nested cups and consequent freedom of individual cup separation from a stack, the inherent flexibility of the thin plastic material of the cup in combination with the aforesaid structural features serving to impart resilient action to a stack of nested cups without jamming when such cups are subjected to axial pressure.

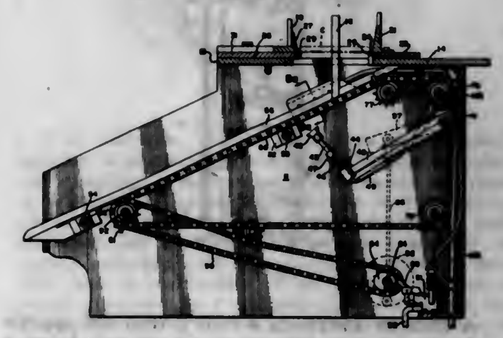
3,091,361
CONTAINERS
Paul F. Gawron, Rimmon Road, Woodbridge, Conn.
Filed Mar. 6, 1961, Ser. No. 93,475
1 Claim. (Cl. 220—97)



A container comprising a body portion and opposite end walls joined thereto, one of said end walls having a depressed area disposed inwardly of a first surrounding flat surface lying in a plane normal to the longitudinal center of the container and said area having an outer edge defined by one axially extending bordering flange, the other end wall having an outwardly projecting area disposed outwardly from a second surrounding flat surface lying in a plane parallel with said first flat surface and said projecting area having an outer edge defined by another bordering flange projecting axially outwardly from the second flat surface and the outside dimension of the other flange defining said projecting area being sufficiently less than the inside dimension of the flange bordering said depressed area whereby the flange bordering projecting area of the container will fit snugly into the depressed area of another container of duplicate construction to frictionally interlock therewith and to firmly couple one container to another whereby the containers may be tilted at a substantial angle to the vertical without separating, said depressed area being provided with an inner peripheral edge defining an opening therethrough, a peripherally continuous lip connected to said inner peripheral edge and projecting axially outwardly therefrom, said lip having an axial dimension less than said one bordering flange, a trough defined between said lip and bordering flange, a removable closure cap surrounding said lip and closing said opening, the other bordering flange dimensioned so that the projecting area of the other end wall of the container is spaced from the second surrounding flat surface at a distance substantially equal to the axial distance between the outer surface of the closure cap and said first surrounding flat surface whereby the projecting area of the

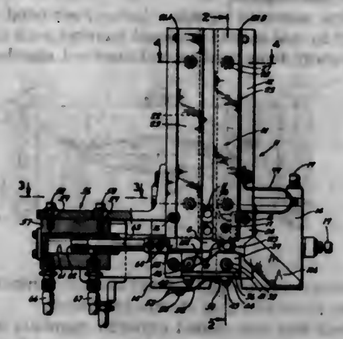
container is adapted to extend into the depressed area of said container of duplicate construction and abut its cap, the outwardly projecting area being spaced radially inwardly and axially outwardly of the second surrounding flat surface, an inner flange connected to the periphery of the outwardly projecting area and projecting axially outwardly therefrom, a radial flange connected between the axially outer ends of the other bordering flange and the inner flange, said inner flange being so dimensioned that it will snugly engage the periphery of the cap of said container of duplicate construction so as to frictionally interlock therewith and said radial flange will have bearing contact with the depressed area of said container of duplicate construction.

3,091,362
MOLDED PULP ARTICLE DENESTING MACHINE
David B. Robinson, Plattsburgh, N.Y., assignor to Diamond National Corporation, New York, N.Y., a corporation of Delaware
Filed July 25, 1960, Ser. No. 45,033
16 Claims. (Cl. 221—36)



1. Apparatus for denesting tightly nested articles of molded pulp comprising magazine means for receiving and supporting a stack of tightly nested, inverted rectangular molded pulp containers, said magazine means having a lower aperture, a pair of spaced support plates having spaced, opposed lips for supporting a stack of containers in said magazine means, said lips being spaced apart a distance slightly less than the width of said containers, a pusher plate slidable on one of said support plates in a direction generally perpendicular to a side of a container on said support plates, said pusher plate being thinner than the container, means for moving said pusher plate between a first position in which a leading edge of said pusher plate is withdrawn from contact with a container resting on said support plates and a second position in which the leading edge of said pusher plate extends beyond the edge of said aperture and contacts the container, said pusher plate having a width relatively smaller than the length of the side of the container contacted thereby, elongated support means underlying said magazine means for receiving containers therefrom, suction cup means, means for moving said suction cup means past said elongated support means into engagement with the underside of a container and for retracting said suction cup means and depositing said container on said support means, and an endless, driven chain having a run thereof lying generally in the plane of said elongated support means, said chain having means thereon at spaced intervals for engaging containers deposited on said elongated support means.

3,091,363
POSITIONING FIXTURES
Adolph V. Klaucnik, 1020 Glenview Road, Glenview, Ill.
Filed Mar. 14, 1960, Ser. No. 14,769
3 Claims. (Cl. 221—243)



1. A positioning fixture for sequentially feeding workpieces having peripheral corners and flats formed thereon one by one from a generally vertical magazine to a work station wherein a machining operation is to be performed, and subsequently ejecting said workpieces from said work station comprising means defining a first guideway constituting said magazine, spaced upper and lower guide members defining a second generally horizontal guideway having the work station disposed intermediate the ends thereof, said second guideway extending from one end of the first guideway, a positioning member reciprocable horizontally in first and second directions in said second guideway between said one end of said first guideway and said work station, said positioning member having an end surface formed with a notched configuration affording an inclined surface for engaging a peripheral flat of a workpiece to maintain a predetermined angular orientation of said workpiece between the guide members in said second guideway during movement in said first direction, the spacing of said upper and lower guide members being such as to enable the workpieces to be confined closely therein against rotation, block means mounted in said lower guide member presenting a surface which is part of said second guideway, resilient means biasing said block means upwardly toward a position wherein said surface of the block means is coplanar with and is part of the lower guide member of said second guideway, said block means being movable downwardly from said second guideway by engagement of a corner of an unaligned workpiece therewith to thereby permit said unaligned workpiece to be rotated into said predetermined angular orientation incidental to movement thereof within said second guideway in coordination with movement of said positioning member in said first direction, by forcing the unaligned workpiece into contact with the upper guide member, thereby rotating the unaligned workpiece and avoiding jamming of said workpieces in said second guideway, and a plurality of spring retaining means engageable with spaced portions about the boundary of a workpiece for retaining a workpiece in fixed axial position at said work station in the second guideway.

3,091,364
CONTAINER-DISPENSER FOR SALMON EGGS AND THE LIKE
Merrill S. Ayres, 4306 Edgemont St., Boise, Idaho
Filed Dec. 9, 1959, Ser. No. 858,389
2 Claims. (Cl. 221—256)

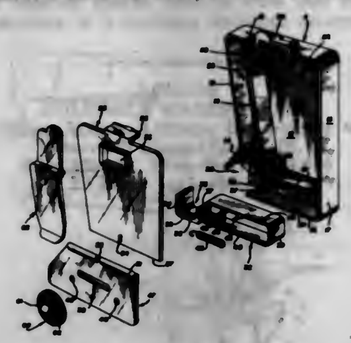
1. A combination salmon egg container and dispenser comprising

a supply chamber for a plurality of salmon eggs,

dispensing means including a dispensing chamber for receiving one salmon egg at a time,

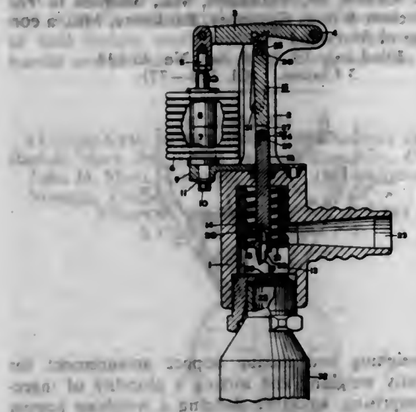
plunger means joined to the dispensing chamber including a chamfered surface adjacent to the dispensing means,

guide means including a collimating chute extending between the chamfered surface and the supply chamber to direct salmon eggs to the dispensing chamber, and



means for simultaneously moving the dispensing chamber to the exterior of the container and the chamfered surface to compressively hold a salmon egg about to be delivered to the dispensing chamber and discharge a previously delivered salmon egg through the dispensing chamber.

3,091,365
PRESSURE RELEASING MEANS
Henry Leonard Horner, Yeovil, and Humphrey A. S. Hamlin, Montacute, England, assignors to Normalair Limited, Yeovil, England
Filed May 17, 1960, Ser. No. 29,690
Claims priority, application Great Britain Feb. 19, 1960
4 Claims. (Cl. 222—5)



1. Gas release means for use with a gas pressure source having a bursting disc, comprising the combination of:

a piercing pin having means to pierce said disc and means to permit flow of gas from said source when the disc is pierced;

a compression spring coaxial with said pin and urging said pin away from a cocked position and toward the disc;

a body housing the spring and pin, and having two spaced upstanding arms;

a U-shaped lever pivotably connected by its open end to the spaced arms and pivotably movable between said spaced arms, said lever having its closed end remote from said pin and disc;

a link member disposed between the legs of said lever, said link member having one end pivotably connected to the piercing pin and the other end pivotably connected to the lever adjacent the closed end of said lever, an imaginary line connecting the ends of the link member passing close to the lever pivots to provide a small offset when the pin is in the cocked position;

expansible means to control the movement of said pin;

and a catch arm having one end pivotally connected to the spaced upstanding arms and the other end pivotably connected to the expansible means, the said catch arm defining a cutaway portion, for engagement with the closed end of the lever, substantially midway between the ends of the catch arm, the lever being substantially at right angles to and engaged by the catch arm at the cutaway portion when the pin is in its cocked position;

movement of the expansible means by a predetermined amount causing the catch arm to release the lever from the cutaway portion, thereby allowing the lever to rotate about its open end and increase the amount of said offset, and further allowing the pin to pierce the disc by the urging of said spring.

3,091,366
BEER DISPENSER
Thomas A. Hutsell, Sedro Woolley, Wash. (1220 Carpenter St., Mount Vernon, Wash.)
Filed July 18, 1960, Ser. No. 43,626
7 Claims. (Cl. 222—36)



1. A beer dispenser of the type intended for the dispensing of accurately measured quantities of beer and depositing the beer in serving glasses under conditions of controlled turbulence to control foaming, comprising: a measuring cylinder having a substantial top and base and an intermediate cylinder wall of sheet material; a piston disposed for reciprocation in said cylinder and having a coaxial piston stem tube and bypass valve; fluid operated diaphragm means mounted upon said piston stem tube for sequential control of said bypass valve and a coaxially positioned valve stem operatively connecting said diaphragm means and said bypass valve; check valve disc secured on said piston stem and disposed for reciprocation with said piston and having a separate top

plate removably secured thereto; a piston return fluid operated bellows disposed around said piston stem, secured at its bottom to the top of said cylinder and at its upper end between said valve disc; an annular passageway for beer disposed spirally around said measuring cylinder and utilizing the sheet material cylinder of said measuring cylinder as the inner wall of said passageway and means for varying the usable length thereof; cooling means for controlling the temperature of beer left in said cylinder and said passageway between dispensing periods; a beer discharge nozzle and a fluid actuated outlet valve therefor; a dispensing cycle counter and means connected to said piston disposed to operate said counter each time a serving of beer is drawn; a source of gas under pressure to operate said fluid pressure operated means; a charging valve means controlling the distribution of said gas under pressure.

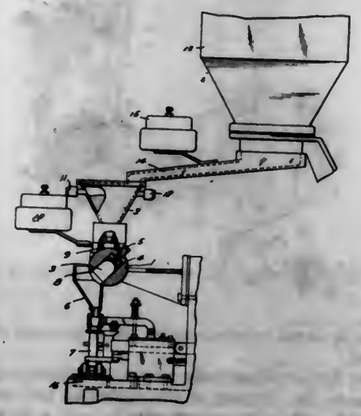
3,091,367
TWO-PART DISPENSING CAP WITH REGISTERABLE OPENINGS
Leslie B. Fredrickson, 3509 43rd Ave. S., Minneapolis 6, Minn.
Filed May 25, 1960, Ser. No. 31,645
2 Claims. (Cl. 222—48)



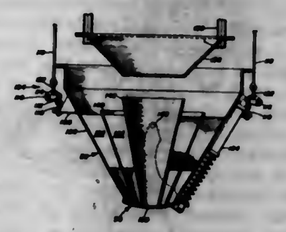
1. A dispensing cap adapted to fit over an opening of a container comprising concentric and relatively circumferentially slidably disposed inner and outer tubular members, an apertured top on a single one of the members, an upwardly spring biased plunger slidably disposed through the top aperture and having a valve engaging and radially enlarged portion inside the cap with a depending and outer peripheral flange, each member having an aperture which extends circumferentially slightly less than ninety degrees and axially extends a substantial portion of each member's axial length such that a spray may be passed therethrough, the inner member having a radially outwardly extending flange on its axial end opposite said top and adapted to circumferentially slidably and axially support the outer member, a first one of the members having a circumferentially continuous groove opening toward a second one of the members and with a notch axially extending from the groove toward the first one member axial end adjacent said top, the notch being diametrically opposite the first one member aperture, the second one member having a radially inwardly extending pin adapted to slide in the groove and notch, and each member having separate indicator means visible from the top side of the cap and each having a predetermined circumferential relation to the member apertures for indicating alignment thereof.

3,091,368
POWDER MEASURING DEVICE
Robert Sidney Harley, Independence, Carl Leon Miller, Kansas City, and Clarence Eugene North, Independence, Mo., assignors to Remington Arms Company, Inc., Bridgeport, Conn., a corporation of Delaware
Filed Mar. 1, 1961, Ser. No. 92,673
4 Claims. (Cl. 222—56)

1. A powder measuring device comprising a hopper having a gravity flow discharge means at its bottom, a cylindrical drum rotatably mounted under said discharge means, a measuring chamber defined by a diametral chamber extending substantially perpendicular to the axis of rotation of said drum, said chamber having a hemispherical bottom of substantially the same diameter as said chamber defined in an adjustably positioned plug which is movable in said chamber to vary the volume of said chamber, a case at least partially surrounding said drum provided with an opening communicating between said discharge means and an open end of the said measuring chamber, means to rotate said drum between a position in which the open end of the diametrally extending chamber is in communication through said opening with said discharge means and a position in which said open end is downwardly disposed to dump a charge contained in said chamber, electro-mechanical vibrating means operatively connected to said case to assure positive and consistent filling of said measuring chamber, and means for maintaining a controlled height of powder in said hopper.

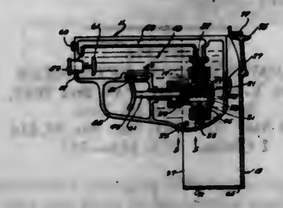


3,091,369
WEIGHING AND MIXING HOPPER
Walter J. Sackett, Sr., Baltimore, Md., assignor to The A. J. Sackett & Sons Company, Baltimore, Md., a corporation of Maryland
Filed July 19, 1960, Ser. No. 43,838
3 Claims. (Cl. 222—77)



1. A weighing and mixing hopper arrangement for automatically weighing and mixing a plurality of ingredients, comprising, structure defining a weighing hopper having a plurality of coaxially arranged inverted truncated shaped open-ended cones defining chambers therebetween for successively receiving said plurality of ingredients, said cones having their upper ends spaced longitudinally from each other and their lower ends terminating substantially in a common arcuate surface, discharge valve means including a pivotally mounted arcuate shaped closure member for closing off all the lower ends of said cones so that said chambers can receive ingredients from above, with said cones being so arranged that the innermost cone when filled will spill ingredients therefrom over into the next outermost cone and successively to adjacent outer cones when ingredients are fed thereto, fulcrum means for suspending said weighing hopper at spaced intervals around the outer periphery thereof, and scale means coupled to said fulcrum means for weighing the ingredients of said cones the structure being such that when said arcuate closure member is withdrawn, said ingredients are discharged simultaneously and substantially in separate coaxial columns from said chambers and intermixed in a common discharge column therebelow.

3,091,370
FOLDABLE WATER PISTOL
Hilman Weiner, Chicago, Ill., assignor to Marvin I. Glass, Chicago, Ill.
Filed Mar. 31, 1960, Ser. No. 19,056
3 Claims. (Cl. 222—79)



1. A foldable toy water pistol comprising a barrel section and an elongated handle section, said barrel section including a fluid reservoir, a discharge opening in said barrel section, and a pumping means in said barrel section operable to discharge fluid from said reservoir out said discharge opening, said handle section comprising a generally hollow body having an opening along one side wall portion and an opening along the top wall portion thereof, means pivotally connecting said barrel section with said handle section so that a portion of said barrel section is always received within said generally hollow body and providing for relative movement of said barrel and handle sections between an operative position, wherein said barrel section is projecting from said handle section at generally right angles thereto, and a folded position wherein said barrel section is disposed lengthwise of said handle section to close said openings in the handle and provide a generally rectangular unit.

3,091,371
AUTOMATIC SCOOPING DISPENSING DEVICE
Rudolf Marx, 261 Thrift St., San Francisco, Calif., and John H. Marx, Concord, Calif. (10 Dickenson Drive, Moraga, Calif.)
Filed Oct. 28, 1959, Ser. No. 849,293
2 Claims. (Cl. 222—170)



1. An automatic material scooping and dispensing device comprising a base, a receptacle mounted on the base to contain the material to be dispensed, material receiving and dispensing means supported by the base comprising a tube communicating between the interior and exterior of the receptacle and including a scoop movable through the material in said receptacle between material receiving and dispensing positions, metering means adjustably associated with said scoop and comprising a gate being in all positions of the scoop within the receptacle and movable relative to the scooped end of the tube from outside the receptacle to selectively vary the effective area of the scoop.

3,091,372
COMPRESSION SPRAYER
Victor S. Tidd, Lowell, Mich., assignor to Root-Lowell Manufacturing Co., Lowell, Mich., a corporation of Ohio
Filed Oct. 27, 1960, Ser. No. 65,403
11 Claims. (Cl. 222—401)



1. A compression sprayer having a tank for containing a spray solution to be dispensed and a pump for generating air pressure in the tank, a discharge tube projecting through an opening in the head of the tank to adjacent the bottom of the tank, and a grommet for effectively sealing the discharge tube in the tank and so constructed and arranged as to provide an inner seal within and subjected to the air pressure in the tank, said grommet having an elongated body portion provided with a longitudinal internal bore conformably receiving and retaining the discharge tube and a downwardly and outwardly tapered external surface for effecting tight sealing engagement with the encompassing portion of the head of the tank defining said opening when subjected to the air pressure in the tank.

3,091,373
WHISKEY POURER OR SIMILAR DEVICE
Samuel Kirschenbaum, 1347 Ocean Ave., Brooklyn, N.Y.
Filed Apr. 25, 1961, Ser. No. 105,316
4 Claims. (Cl. 222—420)



1. A pouring device for use in conjunction with a bottle for liquids including a neck portion, said device comprising: a first outer element and a second inner ele-

ment, said first outer element including an annular flange member, a first outer tube supported by said flange member and a second concentric inner tube supported in spaced coaxial relation with respect to said outer tube; said second inner element including a first cylindrical member of first diameter, a second cylindrical member of second diameter less than said first diameter, and a plurality of supporting finger members defining a plurality of radially arranged openings interconnecting said first and second cylindrical members, said second cylindrical member being open at a lower end thereof; and means for supporting said first outer element and said second inner element in coaxially aligned relation.

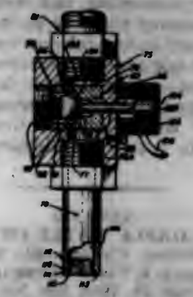
3,091,374
LIQUID METERING DEVICE
Gilbert Schwartzman, Scarsdale, N.Y., assignor to Gildomatic Corporation, Yonkers, N.Y.
Filed July 28, 1960, Ser. No. 45,851
1 Claim. (Cl. 222—448)



A device for metering liquid comprising a container having a threaded neck portion, a body received in said neck portion and having an end wall provided with a valve opening therethrough, a valve member extending through and beyond said opening for closing said opening, spring means engaging said body and said valve member normally urging said valve member to close said opening, flange means secured to said body, an internally threaded cap threadedly engaging said threaded neck portion and being engageable with said flange to form a seal, said cap having an aperture therein, said valve member closing said aperture when said spring is under compression and being relatively movable away from said aperture when said cap is moved away from said body, said flange means including a peripheral flange having a beveled end, said cap having a beveled internal filet formed therein for engagement with said beveled end, said flange means extending outwardly of said body and forming a stop for said body, said neck portion having the end thereof engaged by said flange means, said end wall being conical, said valve member having an enlarged conical portion engageable with said conical end wall, said cap having means thereon for preventing complete removal of said cap from said container.

3,091,375
VISCOUS LIQUID APPLICATORS
John P. Fox, Arcadia, Calif., assignor to The Aro Corporation, Bryan, Ohio, an Ohio corporation
Original application Nov. 20, 1959, Ser. No. 854,310. Divided and this application Oct. 31, 1960, Ser. No. 66,165
3 Claims. (Cl. 222—479)

1. In a viscous liquid dispensing device for use with a valved flow housing, the combination comprising a hollow tip, a plug fixed in the tip at the end thereof remote from the housing, a sloping inner wall at the end of the tip containing the plug, a slanting outer surface on the extreme edge of the plug, the inner wall and the outer surface defining a distributing channel at the end of the tip, and a plurality of notches in the periphery of the plug defining in combination with the tip interior



a number of conducting veins connecting the tip interior to the distributing channel.

3,091,376
GARMENT FORM RETAINERS
Frank Y. Sherbondy, P.O. Box 7021, San Antonio 10, Tex.
Filed Mar. 27, 1961, Ser. No. 98,416
1 Claim. (Cl. 223—71)

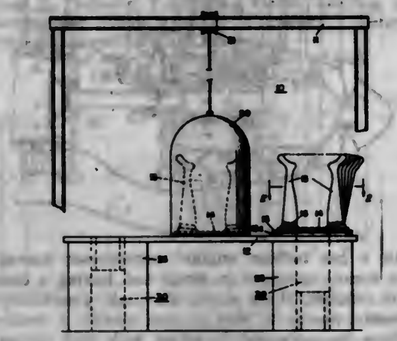


A form retainer for a coat garment, said garment having overlapping front portions with at least one buttonhole on one portion, and at least one button on the other portion, said retainer comprising an elongated flat rectangular body of yieldable material for insertion between the overlapping front portions of the garment, said body being cut whereby an elongate flap is coupled to said body by a connection integral with said flap and said body, said flap being swingable outwardly from said body about an axis defined by said connection, said flap being positioned inwardly of an end of said body and adapted to engagement in said buttonhole, said body also having at least two button receiving openings therein spaced longitudinally from said flap from one another, and from the ends of said body, each said opening comprising a circular aperture in said body and a series of straight slits in said body extending radially from said circular aperture and having one end opening directly into said circular aperture, said slits being equally arcuately spaced from one another around said aperture, the majority of said slits being angularly disposed to the longitudinal axis of said body, all said slits terminating at least substantially equidistantly from the center of the said circular aperture, said flap comprising a generally semi-circular lower portion and generally rectangular wing tabs extending upwardly and outwardly from said lower portion on opposite sides of said connection, said openings being longitudinally aligned and centered on a longitudinal axis of said body passing substantially centrally through said flap.

3,091,377
FORM MOVEMENT CONTROL SYSTEM
Grant H. Brewin, Souderton, Pa., assignor, by mesne assignments, to Proctor Hydro-Set Company, Montgomeryville, Pa., a corporation of Pennsylvania
Filed Nov. 24, 1959, Ser. No. 855,038
13 Claims. (Cl. 223—76)

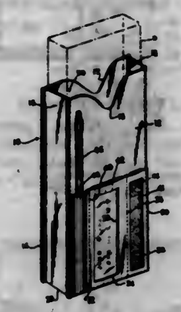
1. In a hosiery-treating machine, a carriage movable in a horizontal plane, a plurality of vertical hosiery forms

pivotally mounted at predetermined spaced locations on the same said carriage for movement about a horizontal axis to a tilted loading position, means for sequentially moving at least one of said forms from vertical position to the tilted position at a loading station, and means for advancing said carriage, said last-named means including



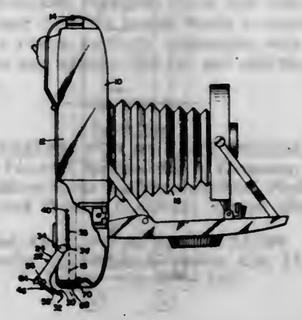
means sequentially engaging said forms for automatically returning said one form to its vertical position while concurrently advancing said carriage by the loading station only a distance corresponding with the predetermined spacing between adjacent forms on said carriage to move a succeeding one of said forms on said carriage to the tilted position at the loading station.

3,091,378
CLIP-ON CASE FOR SCORE RECORDING DEVICES
John O'Dwyer, 61—25 182nd St., Flushing, N.Y.
Filed Aug. 3, 1961, Ser. No. 129,152
3 Claims. (Cl. 224—26)



2. Means for carrying a score recorder, comprising an elongated open end casing having rectangular front, rear, side and bottom panels joined together at their adjoining edges, another panel secured to the front panel, said other panel having at least one rectangular opening therein, said other panel being secured to the front panel at spaced parallel lines to define a plurality of pockets for carrying pencil, sandpaper and the like, and a U-shaped leaf spring disposed on the rear panel for supporting the casing on an article of clothing, said spring having a curved outer leg covered by a pocket formed by two fabric strips joined together at their edges.

3,091,379
PHOTOGRAPHIC APPARATUS
Donald R. Bishop, Westwood, and Louis O. Bruneau, Weston, Mass., assignors to Polaroid Corporation, Cambridge, Mass., a corporation of Delaware
Filed Aug. 15, 1960, Ser. No. 49,636
9 Claims. (Cl. 225—89)

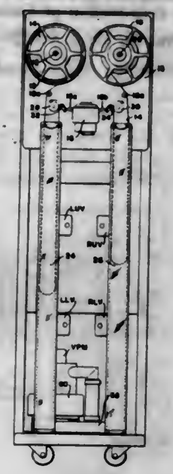


1. In a photographic apparatus wherein photographic sheet materials are processed, said apparatus having a passage formed therein from which portions of said sheet materials may be drawn, the combination with said apparatus of pivotal means comprising a transverse member including a longitudinal edge for severing portions of said sheet materials and at least one predeterminedly disposed aperture, said pivotal means being mounted on said apparatus adjacent said passage for movement between a closed position wherein said member covers said passage and an open position wherein said member is to one side of said passage, second pivotal means mounted for movement on said first pivotal means, said second pivotal means comprising a transverse bar including at least one finger-like projection predeterminedly disposed for engaging and extending through said aperture, at least one engagement means comprising a shoulder-shaped surface carried by said apparatus, said engagement means being in the path of movement of said finger-like projection, said pivotal means being locked in said closed position when said finger-like projection is in engagement with said shoulder-shaped surface whereby a portion of said sheet materials may be drawn against and severed by said longitudinal edge, said finger-like projections being releasable from said shoulder-shaped surface by pivotal movement of said second pivotal means.

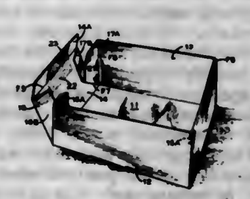
3,091,380
DRIVING MEANS FOR MAGNETIC TAPE
John P. Harris, Wappingers Falls, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Aug. 25, 1960, Ser. No. 51,851
4 Claims. (Cl. 226—50)

1. In a tape transport, a pair of rotary tape reels, first and second means located between said reels for applying constant tension to a tape passing between said reels, a tape processing unit located between said first and second tension means, a rotary tape driving capstan associated with each of said constant tension means, means for selectively driving one of said tape driving capstans in a direction to pull tape from its associated constant tension means and deliver the same to said tape processing

unit, and means for disabling the other of said capstans whereby its associated constant tension means is operative on tape beyond said tape processing unit as the principal force adapted to pull tape beyond said unit.

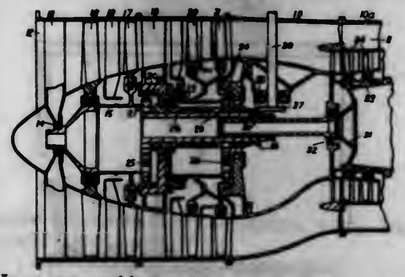


3,091,381
BOX CONSTRUCTION
Sidney Conescu, 188 Beach 147th St., Neponsit, N.Y.
Filed Sept. 18, 1961, Ser. No. 138,968
4 Claims. (Cl. 229—31)



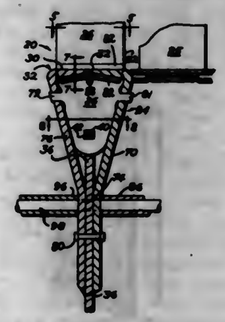
1. An open end box construction comprising a blank of sheet material forming a center panel having opposed side and end panels connected thereto along fold lines, corner flaps connected along fold lines between adjacent side and end panels, each of said corner flaps having a diagonal fold line extending from the juncture of the connected side and end panel, an end flap connected along a fold line to each end panel, said end flaps each being adapted to be reversely bent inwardly of said box in the folded position of said blank, and said side panels and their connected end flaps having a central portion thereof coated on the inner side of said blank with a pressure contact cement so that in the folded position of said blank the coated portion of each end panel and connected flap adhere to one another upon the application of pressure thereon, each of said corner flaps are adapted to fold inwardly of said box in the folded position of said blank about its respective diagonal fold line, and each of said corner flaps on the outer side of said blank being coated with a layer of pressure contact cement so that in the folded position of said blank the coated portion of each flap is disposed in position to adhere to one another.

3,091,382
GAS TURBINE ENGINES
Thomas Shelley, Breaston, Derby, England, assignor to Rolls-Royce Limited, Derby, England
Filed Sept. 15, 1961, Ser. No. 138,384
Claims priority, application Great Britain Sept. 29, 1960
11 Claims. (Cl. 230—116)



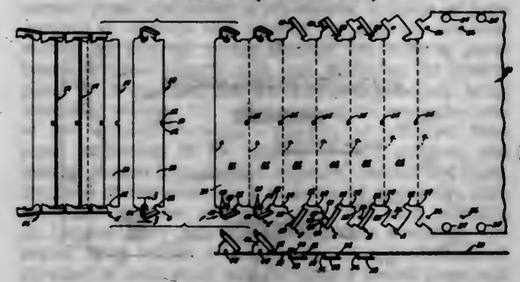
1. In a gas turbine engine: compressor means and turbine means arranged in series and having a common axis of rotation; shaft means drivingly connecting said compressor means to said turbine means; a multi-stage axial-flow fan arranged in series with said compressor means and said turbine means, said multi-stage axial-flow fan having an axis of rotation displaced laterally from and parallel to the common axis of rotation of said compressor means and said turbine means; and means drivingly connecting said multi-stage axial-flow fan to said shaft means, said last-mentioned means including reduction gearing having a first part for driving at least one stage of said multi-stage axial-flow fan and a second part for driving at least another stage of said multi-stage axial-flow fan.

3,091,383
BLADED ROTOR FOR FLUID MACHINES
Edward A. Stalker, Bay City, Mich., assignor to The Stalker Corporation, a corporation of Michigan
Filed Feb. 14, 1957, Ser. No. 640,197
9 Claims. (Cl. 230—134)



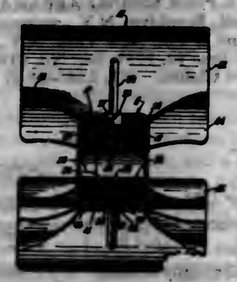
1. In combination in an axial flow compressor rotor, a radially extending blade support disk having blade securing means, a plurality of axial flow blades spaced peripherally about said disk with their spans extending in the general radial direction, the inner end of each said blade having an aperture therethrough from one side thereof to the other, said securing means passsing through said aperture securing said blade to said disk, and rim means including a pair of conically dished plates having center sections in abutment with said disk and diverging outer sections with inwardly turned rim flanges secured in said rotor in lateral supporting relation to each said blade on the peripheral sides thereof at localities spaced outward from said aperture in said blades with said blades extending radially therethrough for guiding fluid between said blades from front to rear of said rotor and for supporting said blades against displacement by lateral forces.

3,091,384
BLOWER WHEEL BLADE CONSTRUCTION AND METHOD OF ASSEMBLY
Vincent N. Delaney, Torrington, Conn., assignor to The Torrington Manufacturing Company, Torrington, Conn., a corporation of Connecticut
Filed Mar. 17, 1960, Ser. No. 15,688
12 Claims. (Cl. 230—134)



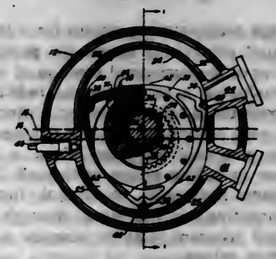
1. A blower wheel of the centrifugal type comprising, a hub structure rotatable about a central axis, a plurality of longitudinal air moving blades rotatable with said hub structure, said blades being arranged in an annular series about said hub structure with the longitudinal axes thereof generally parallel to said central axis and with the opposite ends of said blades disposed respectively in two axially spaced radial planes, a flange on each end of each blade extending forwardly and radially outwardly with respect to the associated blade, means defining an axially outwardly opening notch in each end of each blade rearwardly of the associated flange, and an axially inwardly directed tab on the forward portion of each of said flanges, each of said tabs having an axially inwardly opening notch in the inner end thereof which engages in interfitting relationship the notch in the corresponding end of the next adjacent blade to link together adjacent blades and prevent relative circumferential and axial displacement therebetween.

3,091,385
BLOWER WHEEL
Everett D. Wiseman, Columbus, Ind., assignor to Vernco Corporation, Columbus, Ind., a corporation of Indiana
Filed Nov. 24, 1961, Ser. No. 154,635
10 Claims. (Cl. 230—134)



1. A blower wheel comprising,
(*a*) a hub having an axially extending shaft-receiving opening,
(*b*) said hub having an annular passage in open communication with a plurality of circumferentially spaced passages extending outwardly therefrom to the circumference of said hub on chordal segments of said hub, and
(*c*) a plurality of blade elements, each of which is provided with a pair of blades interconnected at one of their ends by a web,
(*d*) the web of each of said elements being disposed within said annular passage and the pairs of blades on said elements being disposed in adjacent pairs of said plurality of circumferentially spaced openings to retain said blade elements in said hub with their blades projecting outwardly from said hub,
(*e*) said blade elements having beads formed in their webs and blades matingly engageable with grooves formed in said annular passage and said plurality of passages.

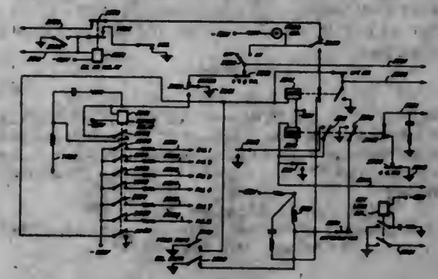
3,091,386
COOLING SYSTEM FOR ROTARY MECHANISMS
Hanns-Dieter Paschke, Neckarsulm II, Germany, assignor to NSU Motorenwerke Aktiengesellschaft, Neckarsulm, Germany, and Wankel G.m.b.H., Lindau (Bodensee), Germany
Filed Apr. 13, 1960, Ser. No. 21,989
Claims priority, application Germany Apr. 23, 1959
7 Claims. (Cl. 230—145)



1. A rotary mechanism for fluid motors, rotary fluid pumps, rotary combustion engines or the like, comprising an outer body having a multi-lobed cavity coaxial therewith, a shaft member having an eccentric portion disposed within said cavity and having an axis parallel to the cavity axis and eccentric thereto, a hollow rotor mounted on said eccentric and disposed within the cavity for rotation relative to the cavity and to the eccentric portion and having a plurality of circumferentially-spaced apex portions having sealing cooperation with the peripheral wall of the cavity to form a plurality of working chambers between the rotor and the outer body that contain a working fluid and that vary in volume upon relative rotation between the rotor and the outer body, the rotor being radially symmetrical about its axis and having one more apex portion than the cavity has lobes, a cooling system comprising an inlet passage substantially parallel to the axis of the cavity for supplying a cooling liquid to the rotary mechanism, a second passage communicating with the inlet passage for supplying the cooling liquid to the hollow interior of the rotor, the cooling liquid being carried by centrifugal force to the radially outer surface of the hollow interior of the rotor during rotor rotation, a stationary member extending radially outwardly from the axis of the outer body cavity into the hollow interior of the rotor and having a radius smaller than the radius of the hollow interior of the rotor and having a radial passage open at its periphery, an outlet passage substantially parallel to the axis of the cavity and communicating with the radially inner end of the radial passage, the radial passage being at least intermittently immersed in the cooling liquid distributed by centrifugal force around the radially outer surface of the hollow interior of the rotor, the cooling liquid being

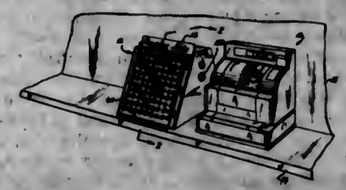
forced by centrifugally generated pressure radially inward through the radial passage and into the outlet passage, whereby the cooling liquid is continuously introduced into and removed from the hollow interior of the rotor.

3,091,387
CARRIAGE PROGRAMMING SYSTEM
Robert A. Locke, Easton, Conn., assignor to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Filed May 31, 1961, Ser. No. 113,777
12 Claims. (Cl. 234—13)



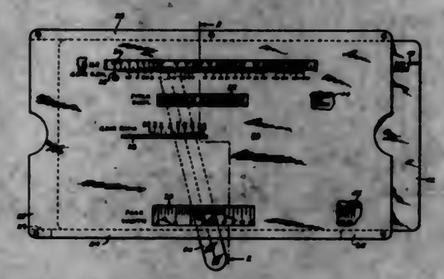
1. A carriage programming system for a typewriter-to-code output unit comprising means for producing a first signal indicative of the horizontal position of said carriage, means for producing a second signal indicative of the vertical line position of said typewriter, a plurality of program relays, said second signal being connected to sequentially energize said program relays, a plurality of function relays including relays connected for initiating various carriage horizontal movement functions, and means for connecting said first signal through the contacts of an energized program relay to energize a desired one of said function relays.

3,091,388
CHANCE DEVICE FOR ENCOURAGING PUBLIC SUPERVISION OF A CASH REGISTER
Arthur Pace, 1528 Drexel Ave., Miami Beach, Fla.
Filed July 28, 1961, Ser. No. 127,698
19 Claims. (Cl. 235—7)



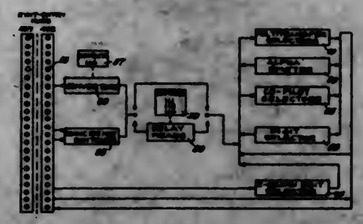
1. In combination a cash register and an illuminated visual chance device, said cash register including a cash drawer and a means sensing position of said drawer, said chance device including a bank of electric lights, an unchecked rotary driven selector switch which stores an appreciable amount of angular momentum upon actuation thereof to continue idling rotation for several seconds after driving of said switch is stopped, an electric motor for driving said selector switch, circuit means for connecting said motor through said cash drawer position sensing means to a source of electric power so as to energize the motor upon opening of the cash drawer, and circuit means for successively momentarily connecting the sundry electric lights in the bank through the selector switch to said source of electric power so as to energize one light after another when the selector switch is rotated and so that when the motor is deenergized the selector switch will continue to turn for several seconds before coming to rest whereby the flickering of the lights and the prolonged flickering operation of the bank of lights will draw the public's attention to the opening of the cash drawer.

3,091,389
SLIDE RULE GEAR SELECTOR
Ralph Wilson, Bayside, Wis., assignor to The Falk Corporation, Milwaukee, Wis., a corporation of Wisconsin
Filed Jan. 5, 1961, Ser. No. 80,835
5 Claims. (Cl. 235—61)



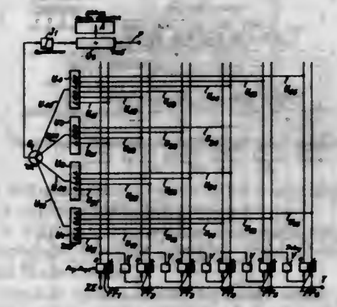
1. A selector for gears having a predetermined involute tooth form comprising, in combination: a pair of members movable with respect to one another; one of said members having first, second and third windows and a narrow slot with a logarithmic gear r.p.m. scale adjacent the first window and a logarithmic gear ratio scale adjacent the narrow slot; a logarithmic horsepower scale and a logarithmic pitch diameter scale and a logarithmic face width scale on the other of said members, a portion of said horsepower scale underlying said first window and viewable therethrough, a portion of said pitch diameter scale underlying said second window and viewable therethrough and a portion of said face width scale underlying said third window and viewable therethrough; and a pointer member arranged for pivotal and sliding movement relative to said pair of members, said pointer member having a visible center line adapted to overlie selected portions of said pitch diameter and face width scales and a pivot pin arranged within said narrow slot; said scales being laterally and longitudinally aligned and the lengths of successive logarithmic cycles on each of said scales being calibrated to permit selection of gears in accordance with preselected surface durability rating formulae.

3,091,390
DATA PROCESSING APPARATUS
James P. Hassett, Brooklyn, N.Y., assignor to Walter R. Greenmun & Co., New York, N.Y., a firm
Filed June 10, 1959, Ser. No. 819,373
4 Claims. (Cl. 235—61.6)



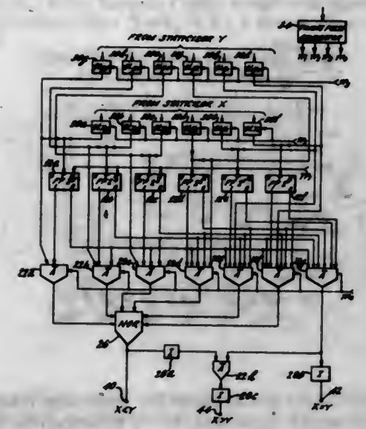
3. For use in conjunction with equipment for processing selectively punched multi-column cards and including selectors controlling the routing of punch impulses and operable, when impulsed selectively, to transfer to selectively direct such routing; data processing apparatus for augmenting the selector capacity and functional flexibility of the associated tabulator, said apparatus comprising, in combination, a source of electric power independent of the associated tabulator; a power supply component connected to said source; a plurality of selectors each having a common hub, a normal hub, and a transfer hub, the common hub normally being connected to the normal hub and being connected to the transfer hub when the selector is picked up; a removable control panel containing a pre-selected number of hubs grouped in sections and adapted for selective interconnection by external wiring through the hubs to panel board terminals aligned with each hub when the control panel is in position, the panel board terminals being internally wired to the components of the apparatus; one of said sections including a plurality of exit-entry hubs equal in number to the number of card columns, and another section including the common, normal, and transfer hubs of the selectors; a plurality of convertors each associated with one of said selectors and each including an impulse entry hub and switch means selectively operable, upon receipt of an impulse of a predetermined duration at such entry hub, to close a circuit from said power supply component supply to a selector in circuit with an output hub of the convertor for transfer of such in-circuit selector; a third section of said control panel including the convertor hubs; a plurality of delay means each associated with a selector and having input and output hubs and each operable, when connected in circuit between a convertor and a selector, to delay pick-up of the selector, upon receipt of an impulse to the convertor during one cycle, until the following cycle; a fourth control panel section including the selector pick-up hubs and the delay means hubs; whereby the delay means may be selectively externally wired in or out of circuit with a selector pick up and a convertor for delayed selector pick up in the first case or immediate selector pick-up in the second case; a start-interlock circuit for connecting said power supply component to said source and including first normally open switch means closed responsive to an impulse from the associated tabulator, and second normally open switch means in a starting relay circuit of the associated tabulator and closed responsive to connection of said power supply component to said source; a plurality of multitransfer selectors each including ten rows of transfer contacts at ten positions in each row, and a ten position row of input hubs, each multitransfer selector having a pick-up hub adapted for external wiring to the output hub of an associated convertor; and a two-column digit selector arranged to convert numerical information from two card columns into a single indicative pulse representing the combination of the numerical information from the two columns; said digit selector including a first bank of ten relays each having ten sets of transfer contacts arranged in a row, and one hundred output hubs each associated with a set of transfer contacts, the transfer contacts being connected in parallel in columns of ten each; and a second bank of relays each having transfer contacts for connecting a selected one of said transfer contacts columns to the power supply; a two-level stepping switch including a first arm connected to each relay of said first bank in sequence in each cycle and a second arm connected to each relay of said second bank in sequence in each cycle; means for applying an impulse from one card column to said first arm at a selected time; and means for applying an impulse from another card column to said second arm at a selected time; whereby to connect a selected one of said one hundred hubs to transmit a combined impulse.

3,091,391
METHOD AND ARRANGEMENT FOR CHECKING THE CONFORMITY OF SIGNALS WITH A CODE SYSTEM
Hugo Reichert, Wilhelmshaven, Germany, assignor to Olympia Werke AG, Wilhelmshaven, Germany
Filed Apr. 10, 1961, Ser. No. 101,827
Claims priority, application Germany Apr. 11, 1960
9 Claims. (Cl. 235—153)



6. In a circuit arrangement for processing information data represented respectively by bit combinations in terms of a binary code of n code elements, in combination, input means for receiving and storing coded information data and comprising n bistable input elements respectively assigned to the n code elements and delay elements connected between consecutive register elements, each of said input elements having an input and a first and a second output for delivering, respectively, the two different bits alternatively adapted to constitute the particular code element; four AND-circuit means respectively assigned to four different bit combinations selected from a portion of said binary code so as to constitute a binary-decimal excess code representing digital information, two of said selected bit combinations representing the digit values 0 and 9, respectively, one of the two other ones of said selected bit combinations being parts of n-element bit combinations according to said binary-decimal excess code representing digits ranging between 1 and 4 and being a common characteristic thereof, and the remaining one of said selected bit combinations being parts of n-element bit combinations according to said binary-decimal excess code representing digit values ranging between 5 and 8 and being characteristic thereof, said AND-circuit means having each a plurality of inputs respectively connected with those of said outputs of said input elements which are assigned to deliver the bits constituting the selected bit combination assigned to the respective AND-circuit means, each of said plurality of AND-circuit means delivering at its output a signal only when from said input means a bit combination is delivered to said plurality of AND-circuit means which is identical with the selected bit combination assigned to the particular AND-circuit means; output means connected with the outputs of said plurality of AND-circuit means for storing an output signal whenever any one of said AND-circuit means delivers a signal and for delivering said output signal upon application thereto of a release signal; and means for applying a release signal to said output means, so that the delivery of said output signal indicates that a bit combination representing information data in terms of a code of n code elements and applied to said input means contains a selected bit combination assigned to at least one of the AND-circuit means, respectively, and therefore is in conformity with that portion of the particular n-element code which constitutes a binary-decimal excess code representing digital information.

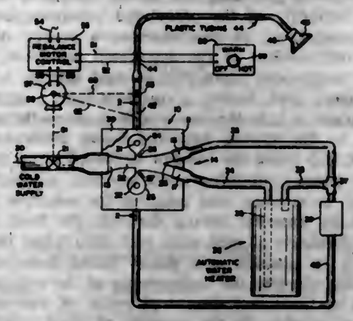
3,091,392
BINARY MAGNITUDE COMPARATOR
Michael C. Arya, Haddonfield, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed June 20, 1960, Ser. No. 37,485
13 Claims. (Cl. 235—177)



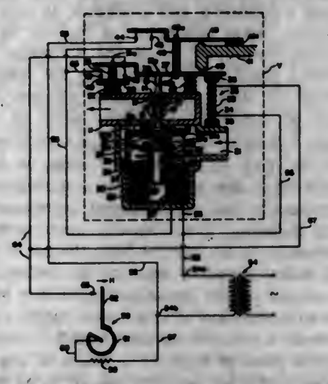
1. A device for comparing two multidigit binary quantities and for providing an indication when the magnitude of a first of said quantities is less than the magnitude of the second of said quantities, each digit being represented by an electrical signal of one of two values depending upon the binary value, said device comprising: a plurality of means each connected to receive the electrical signals representing a different pair of binary digits of like significance and to provide a first output signal representing the exclusive sum of said pair of binary digits and a second output signal which is the complement of said first output signal; a like plurality of gates each associated with a different one of said sum output providing means; means coupling each said first output signal and the electrical signal of like significance of the second of said quantities to the associated one of said gates; means coupling each said second output signal to the ones of said gates of lesser significance; and means for detecting an output from any one of said gates as the desired said indication.

3,091,393
FLUID AMPLIFIER MIXING CONTROL SYSTEM
Hubert T. Sparrow, Edina, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed July 5, 1961, Ser. No. 122,001
10 Claims. (Cl. 236—12)

4. In a water mixing control system comprising: a fluid amplifier having an inlet and two outlets; said fluid amplifier further having two control ports for application of water pressure to switch water at said inlet between said outlets; a source of cold water connected to said inlet and switched between said outlets by said amplifier; a hot water tank connected to a first of said outlets to alter the temperature of said water as said water passes through said hot water tank; connection means joining a second of said outlets and said hot water tank to intermix the water flow from said second outlet with the water from said hot water tank; and said intermixed water connected to an outlet pipe through means responsive to the temperature of said intermixed water to alter the water pressure at said control ports to cause said fluid amplifier to switch in response to said temperature responsive means; said fluid amplifier switching said inlet water between said outlets to control said intermixed water in said outlet pipe in response to the temperature responsive means.

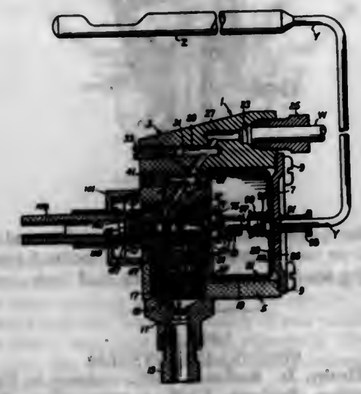


3,091,394
HEATING SYSTEM CONTROL WITH ANTICIPATING MEANS
Hubert T. Sparrow, Edina, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Dec. 12, 1960, Ser. No. 75,221
13 Claims. (Cl. 236—68)



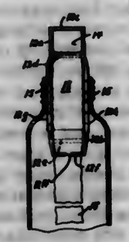
1. A control system comprising a power source; regulating means for controlly the supply of energy to a space to maintain said space at a predetermined condition; first power means for actuating said regulating means to a position to supply a minimum amount of energy to said space; second power means arranged to also actuate said regulating means between a plurality of additional operating positions including said minimum supply position, an intermediate position and a full on position; condition responsive means for sensing the condition of said space and movable between "satisfied" and "unsatisfied" positions; third power means for artificially affecting said sensing means to cause it to move towards its satisfied position when said third power means is energized; all three of said power means being arranged to be first energized when said sensing means moves to its unsatisfied position; control means operable by said second power means when said regulating means reaches said intermediate position to first directly connect said first power means with said power source and then disconnect said first power means from said condition responsive means, to thereby reduce the power flowing through said third power means and thus reduce the effect it has on said condition responsive means.

3,091,395
THERMOSTATIC GAS VALVE
Bradley C. Douglas, Kirkwood, Mo., assignor to Micro Controls, Inc., St. Louis, Mo., a corporation of Ohio
Filed Jan. 4, 1962, Ser. No. 164,237
13 Claims. (Cl. 236—99)



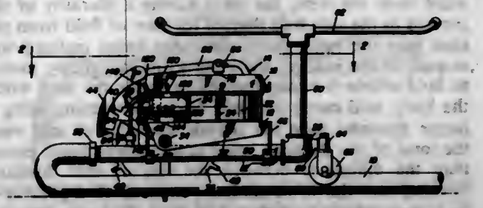
1. A thermostatic gas valve comprising a body having a gas chamber, an inlet into said gas chamber, an outlet, a threaded passage in said body communicating with said gas chamber, a rotatable tubular member threaded into the threaded passage in said body, a threaded passage in said tubular member, a stem threaded into the passage in said tubular member, said stem having a cavity opening into said gas chamber, a seat on the inner end of said stem, port means connecting said cavity with said outlet, and a thermostatically controlled valve member movable to and from said stem and having means adapted to be engaged with said seat.

3,091,396
WICK ASSEMBLY
Kenneth M. Curtin, Evansville, Ind., assignor to The Vanderburgh County Society for Crippled Children and Adults, Inc., Evansville, Ind., a corporation of Indiana
Filed Sept. 20, 1961, Ser. No. 139,505
3 Claims. (Cl. 239—47)



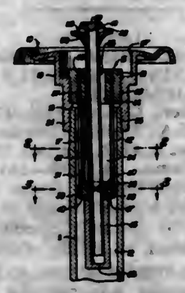
1. A wrapping arrangement for a wick disposed on a framework having side members and a first and a second cross member extending laterally from said side members, where said wick has a free end wrapped around said first cross member of said framework, where said wick thereafter extends to and around said second cross member of said framework, and where said wick thereafter extends to engage its said free end in the region of said first member.

3,091,397
SELF-PROPELLED SPRINKLER
John Wynstra, Lynden, Wash., assignor to Lynden Metal Craft Co., Inc., a corporation of Washington
Continuation of application Ser. No. 735,202, May 14, 1958. This application July 10, 1962, Ser. No. 208,880
6 Claims. (Cl. 239—183)



1. A self-propelled lawn sprinkler comprising:
(*a*) a carriage including a main frame;
(*b*) a diaphragm motor on said main frame, with a diaphragm element spanning most of the width of said main frame;
(*c*) conduit means delivering water under pressure to said carriage and to said diaphragm motor;
(*d*) a water flow control mechanism on said main frame including a two-position snap action valve actuated by movement of the said diaphragm element to deliver water under pressure to said motor during a power stroke and vent said motor during a return stroke;
(*e*) drive means for said carriage including a lever element pivotally attached to said frame at one end, with carriage driving pawl mechanism at the other end, the said drive means further comprising an actuating connection between the diaphragm element of said motor and an intermediate part of said lever element; and
(*f*) means resiliently loading said diaphragm element to move same through a return stroke when said chamber is vented by said water flow control mechanism.

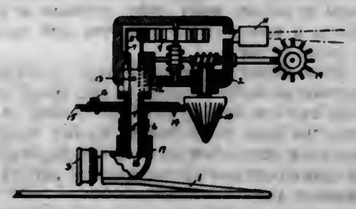
3,091,398
LAWN SPRINKLER WITH GYRATORY STEM
John O. Hruby, Jr., Burbank, Calif., assignor, by mesne assignments, to Rain Jet Corp., Burbank, Calif., a corporation of California
Filed Apr. 12, 1962, Ser. No. 187,130
4 Claims. (Cl. 239—206)



1. A lawn sprinkler comprising a body adapted to be mounted atop a water supply riser, the body having an upper end and a lower end and an inside surface defining a cavity formed therein, the body having an upper end opening for discharge of water from said cavity, a stem arranged longitudinally in the cavity and extending upwardly beyond said discharge opening, means on the

lower end portion of the stem engageable with said body for preventing removal of the stem out through said discharge opening, the stem being rotatable on its axis and gyratable around in the cavity with the axis of the stem being inclined with respect to the vertical axis of the cavity, a head on the upper end portion of the stem for deflecting water from said discharge opening radially outward from the stem, the body having a plurality of slits formed in the side wall thereof for flow of fluid from said riser into the body cavity, said slits being inclined with respect to the radii of the body to impart rotary motion to fluid within the body thereby to gyrate the stem within the body, said cavity and said discharge opening being of larger diameter than the outside diameter of said stem, the total of the slit sizes being at least three times greater than the difference between the size of said discharge opening and the cross-sectional area of that portion of said stem which is disposed in said discharge opening, whereby the inlet capacity to said cavity is greater than its outlet capacity, and the slits being at least three in number and spaced apart uniformly around the sprinkler body.

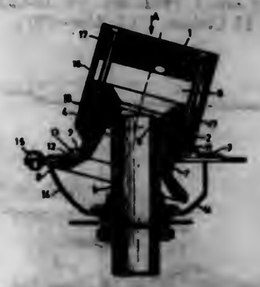
3,091,399
ADJUSTABLE PATTERN SPRINKLER
William P. Kennedy, 304 Freyer Drive, Marietta, Ga.
Filed Jan. 16, 1963, Ser. No. 251,955
5 Claims. (Cl. 239—231)



1. A cam-controlled pattern sprinkler, including a base, a fluid entry to a reduction geared water motor within a revolvable and tiltable distribution head in association with said base, a jet producing nozzle for fluid distribution mounted upon said head and moving therewith, a variable contour pattern cam stationed upon said base, a revolving cone mounted upon said distribution head and driven by said water motor with the sides of said cone contacting the contour of said cam and causing said distribution jet to revolve and vary the speed of revolution and the degree of tilt of said jet in accordance to the position of said cone on the contour of said cam.

3,091,400
DISH-WASHING MACHINE HAVING A ROTARY WOBBLE SPRAYING APPARATUS DRIVEN BY A MOMENT OF MOMENTUM
Michel Claude Aubert, Geneva, Switzerland, assignor to Frame S.A., Freiburg, Switzerland
Filed Mar. 9, 1962, Ser. No. 178,690
3 Claims. (Cl. 239—261)

1. A rotary wobble spraying device for dish washer apparatus comprising a generally cup shaped base member having a radially inwardly extending ring portion at the open end thereof, an axially extending conduit secured to said base member at one end and projecting beyond said ring member, a bearing seat at the other end of said conduit, a hollow body member overlying said conduit having an elongated inwardly converging bore receiving said conduit, a bearing seat in said bore operatively associated with the bearing seat of said conduit, an annular recess in the exterior surface of said body member for receiving said ring portion and an outwardly flared skirt subtending said body member for engaging the underside of said ring portion, the outside diameter of said body member and the inside diameter of said ring portion being unequal for providing a narrow gap there-



between during operation of said body member, and means supported on said base member having inclined apertures for ejecting wash liquid and rotating said body member.

3,091,401
SPRINKLING SYSTEM
John O. Hruby, Jr., Burbank, Calif., assignor to Rain Jet Corporation, Burbank, Calif., a corporation of California
Filed Feb. 19, 1962, Ser. No. 173,958
2 Claims. (Cl. 239—276)

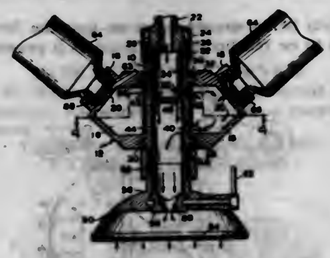


1. A sprinkler system adapted to extend along a mounting surface, and comprising a flexible hose having a thickened portion on its outside extending substantially throughout the length of the hose, the thickened portion having a flat surface of substantially uniform width and being perpendicular to a radius of the hose and having two side shoulders meeting the side edges respectively of said flat surface, the circumferential extent of said thickened portion being less than a quadrant of the circle of the outside of the hose, the hose having a series of openings spaced apart along the medial line of said flat surface and with the axis of each opening being normal to the plane of said flat surface, a longitudinally extending series of sprinklers secured in said openings respectively, each sprinkler having means defining a shoulder seated flush against said flat surface and having an inlet open to the inside of the hose and an outlet disposed outwardly beyond said flat surface, and a longitudinally extending series of hose supports spaced apart along the length of the hose, each support having means for attachment thereof to said mounting surface, two arms extending circumferentially of the hose from said attachment means to abutment against said side shoulders respectively, thereby to prevent rotation of the hose in the supports.

3,091,402
TOILETRIES DISPENSER FOR SHOWER
Harold Vernon Palmer, 6192 La Jolla Mesa Drive, La Jolla, Calif.
Filed Apr. 17, 1962, Ser. No. 188,032
9 Claims. (Cl. 239—315)

1. A toiletries dispenser for a shower, comprising: a substantially cylindrical water conducting barrel having means at one end thereof for attachment to the water supply pipe of a shower and outlet means at the other end;

a turret axially rotatably mounted on said barrel and having a plurality of holder portions each to receive



and hold a closed container of toiletry substance;
said barrel having an inlet port;
and ports in said turret communicating from said holder portions to said barrel for selective alignment with said inlet port by rotation of said turret, whereby toiletry substance may be selectively dispensed to enter the water conducting barrel intermediate the ends thereof.

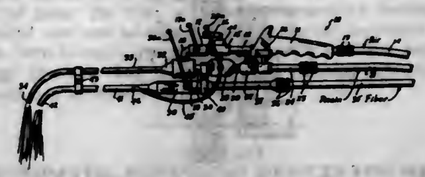
3,091,403
MULTIPLE PURPOSE SPOTTING GUN
Henry A. Schraber, 226 E. 6th St., and Roger O. Barrows, 4118 Lombard St., both of Duluth, Minn.
Filed May 20, 1957, Ser. No. 660,148
3 Claims. (Cl. 239—413)



1. A drycleaner's spotting gun comprising a gun head having an elongated high velocity nozzle terminating in one end in an orifice, an evacuating tube within said gun head terminating at one end within the high velocity nozzle and directed toward the orifice thereof and terminating at its other end outwardly of the gunhead in a suction opening, a pressurized fluid inlet line communicating with the nozzle at a position remote from the orifice, a concentric tubular chamber surrounding the elongated high velocity nozzle and terminating adjacent the orifice thereof in an outwardly flared annular opening, an inlet line communicating with the concentric tubular chamber for supplying steam thereto, and valve means in each of the inlet lines controlling the flow of pressurized fluid and steam to the gun head.

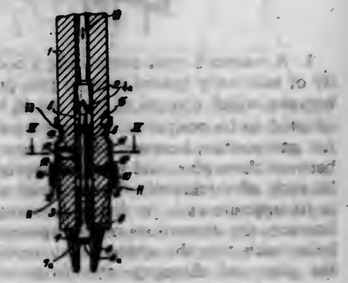
3,091,404
SPRAY GUNS FOR FORMING REINFORCED PLASTIC STRUCTURES IN SITU
James B. Winn, Jr., Wimberley, Tex., assignor to The Archillichic Co., Dallas, Tex., a corporation of Texas
Filed Feb. 7, 1961, Ser. No. 87,629
7 Claims. (Cl. 239—413)

1. A spray gun for use in forming fiber reinforced plastic structures in situ, said gun being a portable and bodily manipulable entity and comprising in combination a pair of conduits for conveying two different kinds of plastic material, a junction member connecting said conduits together whereby to mix the two different kinds of plastic material together, a mixed plastic material conveying pipe extending from said junction member and



terminating in an inwardly tapered jet, a housing enclosing said pipe and providing a chamber around said jet, a mixed plastic material delivery tube extending from said housing and terminating in a discharge nozzle, and means for delivering compressed air into said chamber for discharging mixed plastic material through said delivery tube.

3,091,405
FUEL INJECTION VALVE
Heinrich Knapp, Leonberg-Silberberg, Rudolf Krauss, Stuttgart-Weil im Dorf, and Joachim Heiser, Bernhausen, near Esslingen, Germany, assignors to Robert Bosch Gesellschaft mit beschränkter Haftung, Stuttgart, Germany
Filed June 11, 1962, Ser. No. 201,578
Claims priority, application Germany June 15, 1961
9 Claims. (Cl. 239—453)

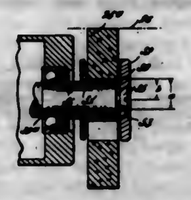


1. A valve comprising a valve body having an axial bore therein and opening at one end of said body to define a valve seat, a needle valve slidably mounted in said bore and having a valve member engageable with said valve seat, and a substantially U-shaped spring with the closed end thereof being bent, the open end of said spring being attached to said valve body and the bent closed end engaging said valve member to urge the same against said valve seat to close the valve.

3,091,406
WINDING MACHINE
Samuel L. Abbott, Wilton, N.H., assignor to Abbott Machine Co., Inc., Wilton, N.H., a corporation of New Hampshire
Filed Apr. 11, 1957, Ser. No. 652,268
1 Claim. (Cl. 242—35.5)

A traveling spindle winding machine of the type in which a winding unit including quick traversing yarn-traversing means, which includes a rotatable drum, travels along a non-traveling package-drive roll, the winding unit including a tire for driving the traversing means from the non-traveling drive roll, characterized by a pulley interposed between an inner diameter portion of the tire and

the drum, said inner diameter portion of the tire having a greater effective radius than that of the pulley, the ratio between the effective radius of the pulley and the radius of the rotatable drum of the traversing means



being substantially as small as or smaller than the ratio between the effective inside and outside radii of the tire, and the surface speed of the drum being substantially as great as or greater than the surface speed of the drive roll.

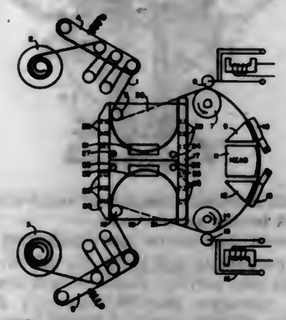
3,091,407
CREEL SPACER
Samuel B. Snyder, Drums, Pa.
Filed May 5, 1961, Ser. No. 108,152
2 Claims. (Cl. 242—54)



1. A weaver's creel comprising a body having a plurality of uniformly spaced parallel pins projecting therefrom between which courses of yarn are to be wound, a spacer adapted to be positioned between a pair of adjacent pins for interposition between adjacent courses of yarn wound between these pins, said spacer comprising a flat rectangular strip of a relatively thin material and having recesses in its opposite ends for loosely receiving said pins therebetween, the dimensions of said spacers and their recesses being such that the spacers may readily slide axially of the pins and disengage therefrom when the overlying course of yarn is removed but are prevented from lateral removal from said pins by engagement of said recesses on said pins, the dimensions of said spacers and recesses being such that adjacent spacers may be placed in end-to-end alignment with their adjacent recesses engaged upon a common pin.

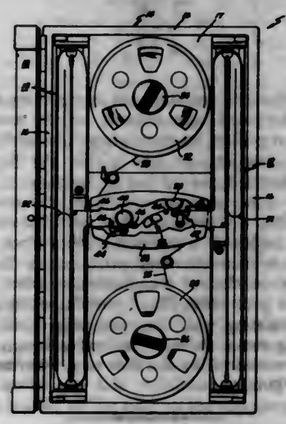
3,091,408
VACUUM BUFFER LOOP DEVICE FOR TAPE HANDLERS
Robert E. Schoeneman, Port Washington, N.Y., assignor to Potter Instrument Company, Inc., Plainview, N.Y., a corporation of New York
Filed July 22, 1960, Ser. No. 44,737
7 Claims. (Cl. 242—55.12)

3. In a tape handling system with progressive control means including,
- a pair of reels for receiving and for paying out tape,
- a transducer head,
- a tape loop storage means to provide a predetermined tension in a tape between one of said reels and said head,
- tape driving means to drive tape in at least one direction between said reels, and
- a vacuum chamber on one side of said head, said vacuum chamber comprising,
- means forming an enclosure having a tape receiving opening, and
- means including a plurality of ports within said vacuum chamber,
- vacuum means connected to each of said ports to exert a pull on one side of a tape loop in said chamber,
- said ports being spaced apart so that the first of said ports to be reached by said loop as it penetrates into



said chamber is traversed by said loop and vented to the other side of said loop as said penetration increases and a vacuum pull is still exerted on said one side from another of said ports after said loop is beyond said first port,
- whereby the magnitude of pull on said tape decreases at a predetermined irregular rate as the depth of penetration of said tape loop increases to a depth beyond said first port.

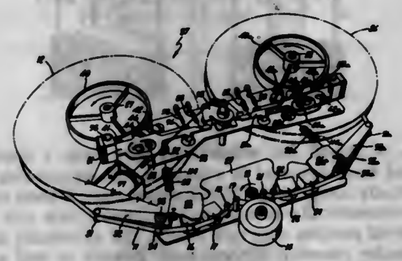
3,091,409
TAPE STORAGE DEVICE
Kenneth Stewart Goodale, Los Altos, Calif., assignor to Ampex Corporation, Redwood City, Calif., a corporation of California
Filed Dec. 29, 1960, Ser. No. 79,251
10 Claims. (Cl. 242—55.12)



1. A storage device for a tape loop, comprising: a pneumatic vessel defining an elongated tape-storage channel with at least one bend; means for feeding said tape loop into a first end of said channel with said loop lying generally in the plane of said bend and with the two shanks of said loop substantially separated at said first end of said channel; means for establishing an air pressure differential with a gradient decreasing from said first

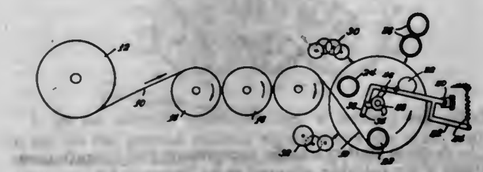
to the second end of said channel for drawing said loop tautly toward said second end of said channel and around said bend; and means for establishing an air pressure differential with a gradient decreasing toward a point intermediate the inner and outer peripheries of said bend for separating the two shanks of said tape loop at said bend.

3,091,410
TAPE TENSIONING DEVICE
Maurice W. Widener, San Jose, Calif., assignor to Ampex Corporation, Redwood City, Calif., a corporation of California
Filed Mar. 1, 1961, Ser. No. 92,567
9 Claims. (Cl. 242—55.12)



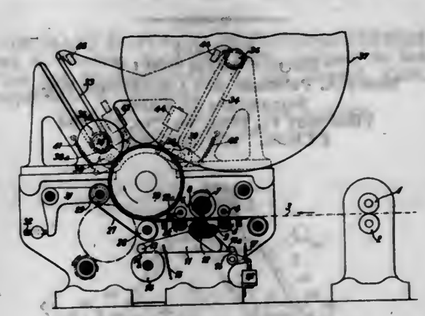
1. A tape tensioning device for use with a transport of the class wherein a tape is pulled by a capstan from a supply reel, said device comprising: means mounted on said transport for pressurized frictional braking engagement with said supply reel; means coupled to said braking means for urging said braking means into said pressurized engagement with said reel; and an arm pivotably mounted on said transport and coupled to said braking means so as to relieve the pressure of said braking means on said reel when pressure is applied in a first rotational direction to said arm, said arm extending to engage said tape at a point spaced from said reel and substantially perpendicular to the radius of said reel at said point so as to receive a component of the tension of said tape with said component acting in said first rotational direction on said arm, said component being a function of the angle defined by said tape and said arm, so that said angle is changed as said tape is unwound from said reel and the restraining force applied by said braking means to said reel is progressively decreased to maintain the tension of said tape at a constant value.

3,091,411
CUTOFF MECHANISM FOR A FILM REWINDER
Harold L. Hearns, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Filed Mar. 21, 1960, Ser. No. 16,422
2 Claims. (Cl. 242—56)



2. A rewind machine for winding a film of thin and limp material upon a core and having a rotatable reel for supporting a plurality of cores and a cage assembly including a plurality of rollers for clamping upon a core while it is being wound with said film, a cutoff means for said film, a pair of arm members for supporting said cut-off means transversely of said film, a cam means mounted upon said reel and engageable by said arms, and a resilient means for maintaining the arms in engagement with said cam means, said cam means being adapted to cause movement of said arms so that the cut-off means will be moved away from said film and being further adapted to allow said resilient means to move said arm members so as to sever the film at a point somewhere between a wound core and an unwound core after the unwound core has been brought into engagement with said film and the cage assembly has moved toward clasping relationship upon said unwound core.

3,091,412
AUTOMATIC REWINDING DEVICES FOR WEBS OF PAPER AND THE LIKE
Louis Jean Chambon, Paris, France, assignor to Societe d'Etudes de Machines Speciales, Paris, France
Filed June 20, 1960, Ser. No. 37,506
Claims priority, application France June 29, 1959
11 Claims. (Cl. 242—56)

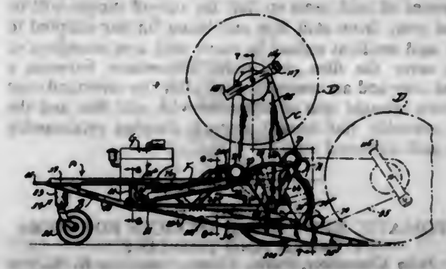


1. A rewinding device for receiving a web of paper or the like and rewinding it upon separate mandrels in successive reels comprising a framework, a severing device for severing the web, at least one endless suction conveyor adapted to receive the web after it leaves the severing device and perforated over a part only of the periphery, means responsive also to a predetermined diameter of rewound web on one such mandrel for initiating effective severing action of the severing device, means for transferring the new end of the web, formed by severing, from the severing device to the suction conveyor, at least two guide channels provided in said framework and in which said mandrels are caused to travel so that these mandrels may engage the periphery of said suction conveyor, whereby the web is severed at the end of the rewinding operation, the new end of the web formed by the severance is presented to the perforated part of the conveyor periphery so as to be drawn by the suction thereagainst and to be conveyed thereby to the periphery of a mandrel bearing on the surface of the conveyor.

3,091,413
REEL TRAILER
George L. Leithiser, Columbia, Pa. (R.D. 3, York, Pa.)
Filed Mar. 11, 1957, Ser. No. 645,301
5 Claims. (Cl. 242—86.7)

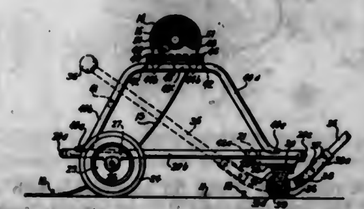
1. In a vehicle for lifting and supporting cable reels and controlling the rotation thereof, the combination of a supporting chassis, a movable frame mounted upon the chassis for lifting and lowering cable reels from a deck or the ground into an elevated position and vice versa on an axis laterally transverse to the chassis, hydraulic means mounted on the chassis to control such movements of the reel through said movable frame, hydraulic means

mounted on said chassis and movable frame to effect rotation of the reel in either direction about its axis while elevated upon the chassis for cable tensioning and unwinding purposes, and hydraulic pressure control means



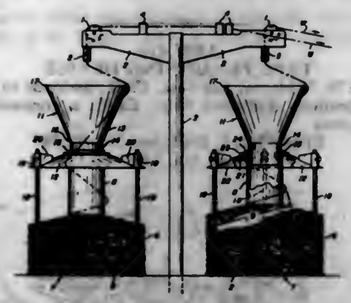
located in the last hydraulic means to apply desired torque to the reel under the influence of pulling of cable from the reel for the purpose of tensioning the cable to prevent sag and whip thereof.

3,091,414
POOL COVER DOLLY
Henry A. Patnaude, 831 Los Molinos Way, Sacramento 25, Calif.
Filed May 17, 1961, Ser. No. 110,794
1 Claim. (Cl. 242—86.52)



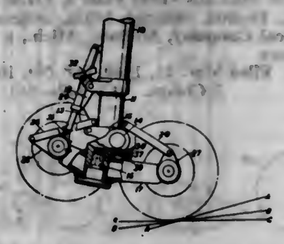
A dolly for the handling of swimming pool covers comprising a lower frame having front and rear portions, a pair of aligned wheels at the rear of said frame, a caster wheel mounted at the front of said frame, an upper frame mounted on said lower frame, said upper frame comprising a pair of spaced horizontally disposed parallel members vertically spaced from said lower frame, each of said spaced horizontally disposed parallel members including upwardly inclined members secured adjacent the front and rear portions of said lower frame, a pair of spaced parallel transverse brace members secured to said horizontally disposed parallel frame members, bearings mounted on each of said transverse brace members intermediate the ends thereof and in longitudinally aligned relation, a cradle pivotally supported by said bearings for rocking movement to either side of the longitudinal axis of said upper frame, and a pair of closely spaced parallel rollers mounted on said cradle, a plate rotatably mounted on said lower frame, a pair of spaced parallel ears depending from said rotatable plate, an axle extending between said spaced parallel ears, said wheel being rotatably mounted on said axle intermediate the ends thereof and spaced inwardly from each of said parallel ears, a tongue having a handle at one end and a pair of arcuate bars secured to the other end, said arcuate bars including spaced parallel free end portions, each having T-slots therein adjacent the ends thereof, the parallel end portions of said arcuate bars engageable with said axle on opposite sides of said wheel and between said wheel and said parallel ears, said axle seating in said T-slots.

3,091,415
WIRE PAY-OFF
Peter S. Magus, Pittsburg, Calif., assignor to United States Steel Corporation, a corporation of New Jersey
Filed Mar. 7, 1961, Ser. No. 93,960
9 Claims. (Cl. 242—128)



1. A pay-off for withdrawing wire from a bundle of coiled wire supported in a position with its axis extending vertically comprising a funnel-shaped conical hood mounted concentrically relative to said bundle axis and in an inverted position over said bundle, and a conically shaped expander mounted concentrically relative to said axis in a position above said hood, said expander having a conically shaped outer surface of increasing diameter in an upward direction over which convolutions of wire being withdrawn from said bundle travel and are expanded thereby, said hood having a conical inner surface of decreasing diameter in an upward direction for engaging tangled convolutions of wire elevated from said bundle and an inner peripheral edge defining a circular opening having a diameter intermediate the diameters of the upper and lower ends of said expander and through which the wire travels during upward movement thereof, the wire convolution expanding action of said expander operating to hold the wire being withdrawn from said bundle against said peripheral edge during its movement through said opening.

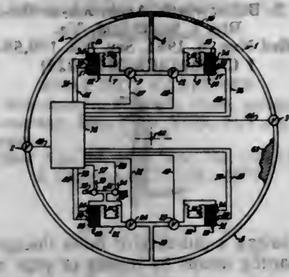
3,091,416
BOGIE UNDERCARRIAGES FOR AIRCRAFT
Richard N. Knights, Hucclecote, and Angus R. Pitt, Arthur A. J. Willitt, and Sidney W. H. Wood, Cheltenham, England, assignors to Dowty Rotol Limited, Cheltenham, England, a British company
Filed Feb. 23, 1961, Ser. No. 91,223
Claims priority, application Great Britain Feb. 29, 1960
7 Claims. (Cl. 244—50)



1. A main undercarriage component for aircraft comprising a leg member adapted at its upper end for mounting on an aircraft, a rigid bogie having multiple wheel assemblies mounted on transverse rotational axes spaced one behind the other, an intermediate member by which the bogie is attached to the leg member, the intermediate member including a pivotal joint with the leg member having an axis transverse to the longitudinal direction of

the aircraft and a pivotal joint with the bogie having an axis which perpendicularly intersects the plane containing the axes of the wheel assemblies at a position between said axes, and a steering motor interposed between the intermediate member and the bogie, said steering motor being operable to turn the bogie both ways from a longitudinal direction about its pivotal joint with the intermediate member.

3,091,417
MASS TRANSFER ATTITUDE-CONTROL FOR SPACE VEHICLES
Russell S. Mikuch, Redwood City, Calif., assignor to American Radiator & Standard Sanitary Corporation, New York, N.Y., a corporation of Delaware
Filed Dec. 19, 1960, Ser. No. 76,573
14 Claims. (Cl. 244—76)



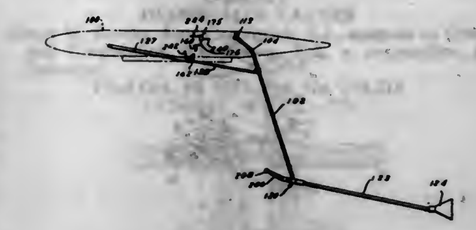
1. A mass transfer attitude-control device comprising: first and second spaced liquid storage reservoirs interconnected by a liquid conduit; a control valve disposed in said conduit intermediate said first and second reservoirs; first and second expansible chambers respectively disposed in said first and second reservoirs; first and second vapor-generators respectively communicating with said first and second expansible chambers; means for selectively activating said first and second vapor-generators and means for actuating said control valve.

3,091,418
AIRCRAFT ALIGHTING GEAR
Angus R. Pitt, Cheltenham, England, assignor to Dowty Rotol Limited, Cheltenham, England, a British company
Filed Apr. 24, 1961, Ser. No. 105,090
Claims priority, application Great Britain Apr. 26, 1960
4 Claims. (Cl. 244—103)



1. In an aircraft undercarriage, a landing leg which in use on the ground extends rigidly from the main body of the aircraft along a generally upright longitudinal axis, a bogie frame pivotally connected to the lower end portion of the landing leg, a pair of wheels arranged in tandem on the bogie frame for rotational contact with the ground during such use, a strut having a longitudinal axis extending intermediate the rotational axes of the wheels and pivotally connected at one of its end portions to one of said landing leg and said aircraft main body and at the other of its end portions to the bogie frame, and brake means connected with each of the wheels and including a torque resisting element on the front wheel attached to the landing leg and a torque resisting element on the rear wheel attached to the bogie frame, at least one of said landing leg and said strut having resilient means thereon providing for limited movement of the pivotal connection between the bogie frame and the respective leg or strut member parallel to the longitudinal axis of said member, and the longitudinal axis of said strut being inclined at such an angle with the longitudinal axis of the landing leg that, within the limits imposed by said resilient means during use, the effective ground contact point of the rear wheel remains on a line extending through the rotational axis of the front wheel at an angle of about 85–95 degrees with the longitudinal axis of the landing leg, said strut longitudinal axis intersecting said line substantially at the mid-point thereof between said rotational axis and said contact point so that said wheels will be substantially equally loaded at all times during such use.

3,091,419
AIRCRAFT IN-FLIGHT REFUELING SYSTEM
James K. Mosher, Pasadena, Calif., assignor to Schmitz Tool and Manufacturing Co., San Gabriel, Calif., a corporation of California
Filed Jan. 14, 1957, Ser. No. 633,903
2 Claims. (Cl. 244—135)

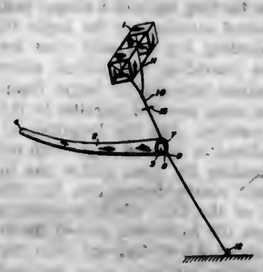


1. In an in-flight refueling system for an aircraft having a tank and means to carry a refueling system adapted for connection to the tank, the improvements comprising a refueling drogue; means comprising a system of rigid articulated pipe sections adapted to provide a flow connection between the tank in the aircraft and the drogue, the articulated system being constructed and arranged for extension into a position wherein the drogue is rigidly extended to a position outwardly and rearwardly of the aircraft, the articulated system being collapsible into a folded position within the aircraft; means including a hydraulic actuator for positively moving the articulated pipe system between extended and retracted positions; and means whereby in collapsed position of the system a bending stress is maintained in one of the pipe sections whereby when said stress is released it acts to provide an impulse against the aircraft, tending to urge the articulated pipe system outwardly toward extended position.

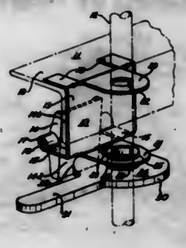
3,091,420
CAPTIVE SELF-LIFTING APPARATUS
André Deguin, 42 Jacob St., Paris 6e, France
Filed May 31, 1961, Ser. No. 113,747
3 Claims. (Cl. 244—155)

1. A self-lifting device comprising a kite; a holding rope attached to said kite; a generally tubular elongated flexible wind sock having an inlet opening at one end thereof and an outlet opening at the other end thereof; rigid means defining said inlet opening; two rings mounted on said rigid means diametrically opposite from one another; said holding rope being adapted to freely extend

successively through said rings whereby said wind sock is freely movable about said rope so that under the influence of the wind, the kite and the wind sock mutually cooperate to keep the device in the air.



3,091,421
CLAMP
August B. Wolbers, 6390 Monitor St., Pittsburgh 17, Pa.
Filed Jan. 11, 1962, Ser. No. 165,533
7 Claims. (Cl. 248—41)



1. A clamp for use with hospital beds and the like in combination with a pole member comprising a face member adapted to engage an outer portion of a bedframe, a back member adapted to engage an inner portion of a bedframe, said face member having arm means adapted to extend below and across the lower portion of a bedframe, said back member being pivotally supported on said arm means whereby a portion of said bedframe is disposed between said face and back members, said face member having flange means adapted to engage a top portion of said bedframe, said face member having projecting portions disposed in spaced relation one above the other with axially corresponding openings therein, said pole member extending through said openings, said back member having a lower portion extending below said pivotal support and a locking member mounted on said face member swingable to simultaneously engage said lower portion of the back member and said pole member whereby said back member is pivoted into engagement with said inner portion of a bedframe and said pole member is bound in said openings.

3,091,422
BAG HOLDER
Jack W. Hobbs, 3371 Waterside Drive, Akron 19, Ohio
Filed Jan. 8, 1962, Ser. No. 164,916
5 Claims. (Cl. 248—101)

2. A device for holding bags, comprising a generally rectangular base, an elongated rib extending laterally away from the medial portion of said base, a series of longitudinally extending half-round beads on either side of said rib, and a clasp bar hingedly attached to one end of



said rib and overfitting said rib in frictional engagement with said rib beads.

3,091,423
HOOK AND PEG HOLDING MEANS FOR BOARDS AND WALLS
Arthur B. Butterworth, Ashbrook-on-the-James, Rte. 2, Smithfield, Va.
Filed Nov. 6, 1961, Ser. No. 150,554
1 Claim. (Cl. 248—225)



A board having a plurality of holes therein to receive article supporting means by means of pegs on the support means, and a resilient bushing in each hole having a central passage therethrough at least as long as the depth of the hole in the board to grip and hold the peg, said bushing being compressed throughout its length against its hole in the board when it receives its peg and against the peg throughout the length of the bushing.

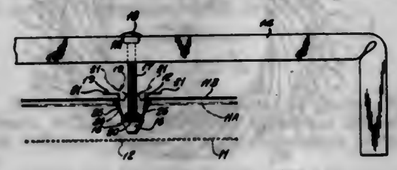
3,091,424
WALL BRACKET FOR FLOWER POTS
Norbert A. Yegge, 409 Main St., McHenry, Ill.
Filed Mar. 28, 1961, Ser. No. 98,807
1 Claim. (Cl. 248—313)



A wall bracket for flower pots of the type having a conical body, an inner frusto-conical surface, and an outer annular cylindrical collar at the top having a lower outer annular shoulder, comprising a sheet metal body having an upper narrow portion of uniform width and a lower laterally enlarged end portion for engaging the flower pot at widely spaced points, said enlarged portion having at its lower front end a pair of forwardly bent supporting flanges at right angles to the body for engaging below said annular shoulder, said supporting flanges being tapered forwardly on their inner sides to permit the conical body to be received between the tapered portion of said flanges when said flanges engage below said annular shoulder to support the pot, said body also having at its lower end a lower backwardly bent right angle flange, between said tapered supporting flanges and adapted to engage a wall

on which the bracket is mounted, said body also having at its upper end a backwardly turned right angle flange for spacing the body from the wall a distance equal to the length of the lower right angle flange, said body also having an upwardly extending tab at its end with an aperture for a supporting nail or the like, and a sheet metal slider mounted slidably on said narrow portion, and comprising a slider body provided with a pair of guide flanges, one on each side of the slider body extending backwardly, and said guide flanges being bent toward each other to retain the slider on the narrow portion, said slider having at its lower end a pair of diagonally, laterally, and downwardly extending fingers, said fingers extending downwardly at a point forwardly of the enlarged portion of said body, and being tapered downwardly on their rear sides to cause the fingers to fit against the inner frusto-conical surface of the pot at its upper end to retain the pot on the bracket against any movement.

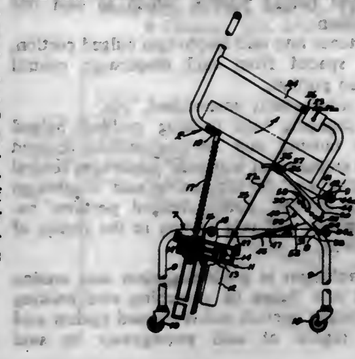
3,091,425
SNAP NUT FASTENER
Frank Van Steenhoven, Newark, Ohio, assignor to Holophane Company, Inc., New York, N.Y., a corporation of Delaware
Filed Apr. 27, 1961, Ser. No. 106,134
2 Claims. (Cl. 248—327)



1. A fastener element for in situ insertion in an aperture of a backing plate and the like, comprising an elongated outwardly threaded member and inwardly threaded nut member, a spring member, said outwardly threaded member and said nut member being in threaded engagement, said spring member and said nut member providing complementary mounting means for permitting rotational movement of said spring member about the longitudinal axis of said threaded members, said complementary means being formed to restrain relative axial movement between said spring member and said nut member, said spring member providing outwardly diverging portions and recessed support areas at the end of said outwardly diverging portions, said nut member being smaller in width than the distance between said outwardly diverging portions, whereby said nut member and said diverging portions may be inserted in the backing plate aperture and passed therethrough to position said recessed support areas of said spring member to snap onto the backing plate.

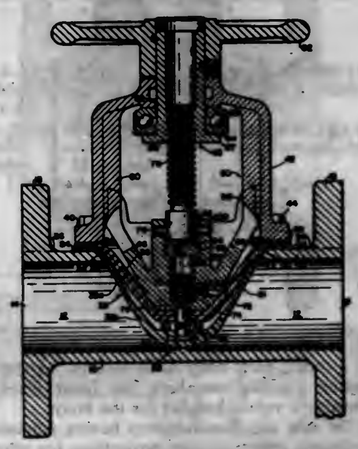
3,091,426
ADJUSTABLE CHAIR
George A. Bogart, Cleveland, Ohio, assignor of forty-nine percent to Arthur J. Klein
Filed May 8, 1961, Ser. No. 108,620
7 Claims. (Cl. 248—393)

1. An adjustable chair having a seat frame with a front portion and a base frame with a front portion for supporting the seat frame, reversible tilting means for moving the seat frame toward and away from the base frame and including connecting means for hingeably connecting the front portion of the seat frame with the front portion of the base frame including a pivotal connection on the upper front portion of the base frame and a pivotal connection on the lower front portion of the seat frame, the pivotal connections being generally vertically aligned when the seat frame is in its normal collapsed position, means for reversibly actuating said tilting means effective to move said connecting means to tilt said seat frame and to carry the front portion thereof in



an arcuate path forwardly of and above the front portion of the base frame and move the lower front seat frame pivotal connection in a direction forwardly of the pivotal connection on the base frame whereby the pivotal connections are not vertically aligned.

3,091,427
DIAPHRAGM VALVES
Henry W. Boteler, East Greenwich, R.I., assignor to Grinnell Corporation, Providence, R.I., a corporation of Delaware
Filed Oct. 10, 1961, Ser. No. 144,215
9 Claims. (Cl. 251—77)



1. A diaphragm valve comprising:

(I) a body having:
(A) a passageway therethrough,
(B) an opening on one side of said passageway,
(C) a flange around said opening,
(D) a diaphragm seating on the surface of said passageway,

(II) a flexible diaphragm having:
(A) a peripheral portion mounted on said flange,
(B) a central bulged portion which in one position of the valve:
(1) extends into said opening,
(2) engages said seating,
(3) is substantially unstretched,

(III) a stretchable, flexible resilient backing cushion member having:

(A) a peripheral portion mounted on said diaphragm peripheral portion,

(B) a central bulged portion which in said one valve position:

(1) extends into said diaphragm bulged portion,

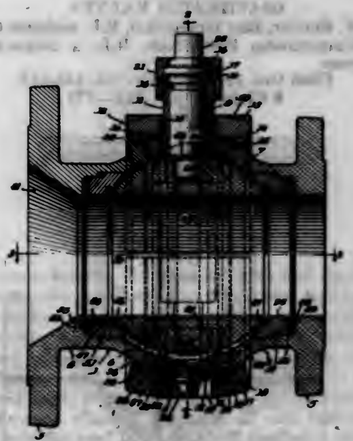
(2) is spaced from said diaphragm central bulged portion,

(3) is substantially unstretched,

(IV) means engaging said backing cushion bulged portion for moving said backing cushion bulged portion into engagement with said diaphragm central bulged portion and for squeezing said diaphragm and backing cushion central bulged portions between said means and said seating in the region of said passageway,

whereby said diaphragm is pressed against said seating in the region of said flange by stretching said backing cushion central bulged portion and is pressed against said seating in the region of said passageway by said squeezing.

3,091,428
BALL VALVE WITH MULTI-PART BODY
John P. Magos, Wilmette, Ill., assignor to Crane Co., Chicago, Ill., a corporation of Illinois
Filed Nov. 20, 1961, Ser. No. 153,608
4 Claims. (Cl. 251—315)



1. In a ball valve construction;

(*a*) a multi-part body with hollow axially aligned ported cup-like members, the latter when aligned forming a valve chamber for the body;

(*b*) the said cup-like members having adjoining edges including outer annular projections for effecting the joinder of said members;

(*c*) a rotatable ported spheroidal closure member for the valve chamber;

(*d*) a loop-formed member rigidly fixed between said cup-like members in fluid sealing abutting relation thereto;

(*e*) the said loop-formed member having a substantially continuous axially aligned bore therethrough snugly engaged by said outer annular projections of said cup-like members when said joinder of the cup-like members is effected;

(*f*) stem actuating means for the said closure member;

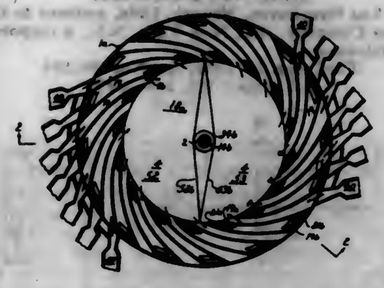
(*g*) oppositely disposed axially aligned annular seats in the cup members for engagement by the said closure member in opening and closing the valve;

(*h*) the said loop-formed member having an outer radially extending hollow portion for journalling said stem actuating means and inhibiting the inward movement axially of the said stem actuating means;

(*i*) the said cup-like members having oppositely disposed annular portions having edges with annular outwardly inclined surfaces for effecting the attachment thereof;

(*j*) and divided coupling means comprising clamp segments and retaining bolting therefor for engaging said outwardly inclined surfaces to draw the cup-like members toward each other and effect said joinder.

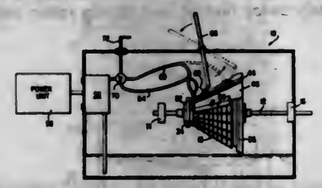
3,091,429
TURBINES
Oscar Theimer, 35 Fort Washington Ave., 4B, New York, N.Y.
Filed June 8, 1960, Ser. No. 34,766
3 Claims. (Cl. 253—39.15)



1. A rotor structure for a turbine comprising two parallel and spaced rotor discs having therebetween a plurality of rotor blades, which are spaced from each other and extend in subtantially radial direction from the outer periphery to the inner rotor periphery and in axial direction from one of the rotor discs to the other rotor disc, said blades defining power medium rotor canals terminating in open ends located at the outer rotor periphery and at the inner rotor periphery, respectively, said power medium rotor canals being spaced from each other and defining therebetween cooling medium rotor canals provided with opposite sealed ends at the inner and outer rotor periphery respectively, said cooling medium rotor canals having openings constituting an inlet opening for a cooling medium located near the inner rotor periphery and an outlet opening for said cooling medium located near the outer rotor periphery, said cooling medium rotor canals communicating directly with the atmosphere through said openings in said rotor discs.

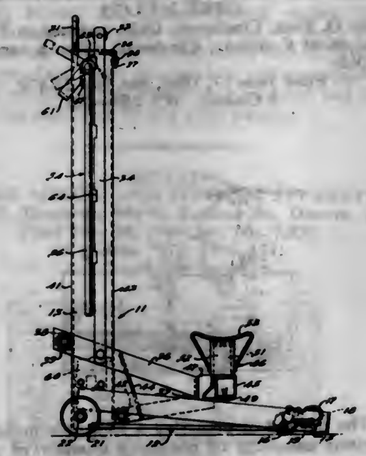
3,091,430
VARIABLE SPEED TRANSMISSION
Donald L. Thomas, 513 S. Elm St., New London, Iowa
Filed Sept. 25, 1961, Ser. No. 140,385
4 Claims. (Cl. 253—137)

1. A variable speed drive comprising a housing, a frusto-conical transmission member mounted within said housing for rotation about its axis, said transmission member having a plurality of circumferentially extending annular grooves in its outer periphery and a plurality of radial vanes extending axially across each groove to divide each groove into a circumferentially extending series of pockets, a stationary guide element complementary in shape to the outer surface of said frusto-conical member mounted in said housing and overlying a portion of a peripheral surface of said frusto-conical member in sliding engagement therewith, said guide element having a pair of guide members thereon, each guide member extending in a direction normal to the circumferential extent of said grooves from one end of said frusto-conical member to the other, a distributor member mounted on each of said guide elements for sliding movement on the guide element, means for sliding said distributors along their



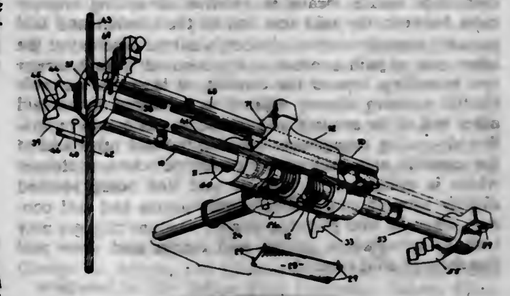
respective guide elements to locate the distributors in alignment with a selected one of said circumferential grooves in said frusto-conical member, and nozzle means in said guide members for discharging a generally tangential stream of fluid under pressure from one of said distributors into the circumferentially extending series of pockets aligned therewith to thereby drive said frusto-conical member in rotation about its axis.

3,091,431
JACK
Lyle L. Arnes and Bernard J. Zimmerman, Racine, Wis., assignors, by mesne assignments, to Walker Manufacturing Company, Racine, Wis., a corporation of Delaware
Filed Apr. 17, 1959, Ser. No. 807,116
6 Claims. (Cl. 254—2)



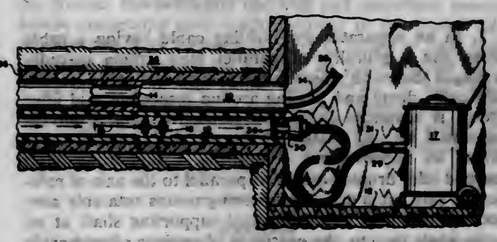
1. In a jack, a base, a column extending upwardly from said base, a pump and reciprocable fluid motor within said column, a lifting frame movably mounted on said column, tension link means connecting the upper end of said reciprocating motor with said lifting frame, a pump handle having a portion rotatably mounted at the upper end of said column, means connecting said pump handle portions with said pump, safety detent means rockably mounted on said pump handle portion, detent surfaces on said tension link means, and spring means urging said detent into engagement with said surfaces.

3,091,432
LOAD MOVING DEVICE
Guy Norman Chartier, 2251 Eglinton Ave. E., Scarborough, Ontario, Canada
Filed May 8, 1961, Ser. No. 108,399
8 Claims. (Cl. 254—69)



1. In combination with a jack comprising a leg; a hollow body slidably mounted on the leg, said body having a jaw-like, load engaging projection protruding substantially perpendicular to the leg; means actuating said hollow body for selective travel along said leg; and a load carrying member rotatably mounted on said body, the member having a cable engaging end portion and an oppositely-disposed, load engaging end portion; a foot mounted on one end of the leg, said foot having a heel portion and a toe prtion separated by an apertured sole portion aligned with the cable engaging portion, said toe portion cooperating with said load engaging projection to spread objects apart or move them together when the body is moved on said leg by said actuating means.

3,091,433
VACUUM-ACTUATED APPARATUS AND METHOD FOR DRAWING LINES THROUGH A PIPE OR CONDUIT
Robert H. Riley, Jr., Towson, Md., assignor to The Black and Decker Manufacturing Company, Towson, Md., a corporation of Maryland
Filed Oct. 2, 1961, Ser. No. 142,324
8 Claims. (Cl. 254—134.4)



1. For use with a conduit having a pair of open ends, apparatus for threading a line through the conduit, comprising in combination, a portable electric vacuum cleaner of the wet pick-up type at one end of the conduit, nozzle means in relative air-sealing engagement between the said one end of the conduit and said portable electric vacuum cleaner, a carrier inserted at the other end of the conduit, and a line secured to said carrier, whereby said portable electric vacuum cleaner may be actuated to draw said carrier and said line secured thereto through said conduit, said carrier being drawn by the vacuum flush against said nozzle means, thereafter enabling said carrier and said line to be withdrawn from the conduit by removing said nozzle means from the conduit, and whereby the conduit

may be cleaned of moisture and debris ahead of drawing said carrier through the conduit.

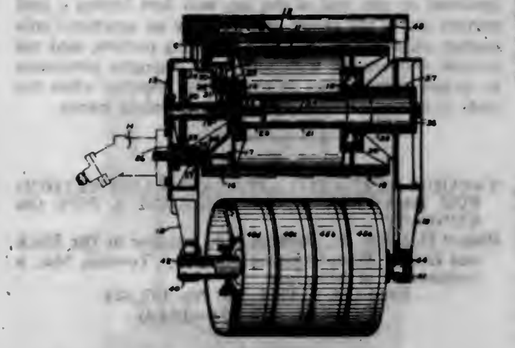
4. For use with a conduit having a pair of open ends, apparatus for threading a line through the conduit, comprising in combination, at least one portable electric vacuum cleaner of the wet pick-up type at one end of the conduit, first nozzle means in relative air-sealing engagement between the said one end of the conduit and said portable electric vacuum cleaner, a carrier inserted at the other end of said conduit, a line secured to said carrier and extending beyond the conduit, at least one portable electric vacuum cleaner utilized as a blower at the said other end of the conduit, and second nozzle means in relative air-sealing engagement between the said other end of the conduit and said portable electric vacuum cleaner which is utilized as a blower, said line being pinched slightly between said second nozzle means and said conduit, whereby said portable electric vacuum cleaners may both be actuated to propel said carrier and draw said line through said conduit.

3,091,434

FAIRED CABLE DRIVE SYSTEM

Dean S. Moultor, Timonium, Md., assignor to Martin-Marietta Corporation, a corporation of Maryland

Filed Sept. 11, 1961, Ser. No. 137,119
9 Claims. (Cl. 254—175.5)



1. In an apparatus for hoisting cable having a cable drum and a plurality of parallel idler drums spacedly arranged therewith whereby the pass of said cable leaving said cable drum and passing around respective said idler drums is advanced from said respective idler drums in sequential spacing axially of the periphery of said cable drum, an improvement comprising a supporting shaft for said idler drums positioned parallel to the axis of rotation of said cable drum and bearing means rotatably connecting said idler drums to said supporting shaft at an acute angle thereto, the centroids of sections of said cable passing between said idler drums and said cable drum being substantially in parallel alignment with a plane passing through said axis of rotation of said cable drum and the longitudinal axis of said supporting shaft.

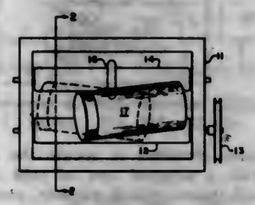
3,091,435

ROTARY-OSCILLATORY DEVICE FOR MIXING, TUMBLING, COMMINUTING, AND THE LIKE

David W. Pease, Orlando, Fla., assignor to Curtiss-Wright Corporation, a corporation of Delaware

Filed Jan. 30, 1961, Ser. No. 85,782
3 Claims. (Cl. 259—72)

1. A rotary-oscillatory tumbling device, comprising in combination a cradle, an idler roller supported by said cradle and having a horizontal longitudinal axis, a driven roller of the same diameter as said idler roller and supported by said cradle and having a longitudinal axis parallel with said idler roller axis, said rollers being in the same horizontal plane and having their axes spaced apart approximately two roller diameters, said driven roller being adapted to be driven with its top surface turning in a direction away from said idler roller, a generally cylindrical barrel element having a diameter approximately twice that of said driven roller and having



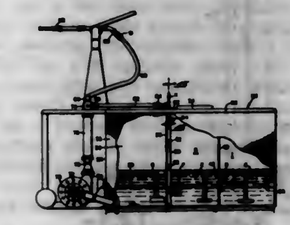
a longitudinal axis and adapted to be rotated by said driven roller, said barrel being supported at one end by both said rollers, and means raising the remainder of said barrel and preventing it from contacting the surface of said idler roller and maintaining said barrel axis always angularly disposed to said roller axes in such a manner that when said driven roller is rotated with its top surface turning away from said idler roller said barrel is rotated about its angularly disposed axis and is translated alternately back and forth in the generally axial direction with its ends alternately contacting said idler roller.

3,091,436

METHOD FOR PRODUCING A SPRAYABLE FIBRE MULCH

Charles O. Finn, Cincinnati, Ohio, assignor to The Finn Equipment Company, Cincinnati, Ohio, a corporation of Ohio

Filed June 17, 1960, Ser. No. 37,470
3 Claims. (Cl. 259—95)



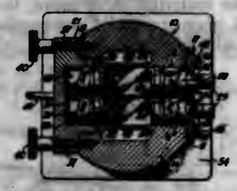
1. The method of preparing a sprayable mulch slurry comprising the steps of placing a quantity of partially dried compacted wood pulp and a quantity of water in a chamber, agitating the said compacted wood pulp and the water in said chamber so as to loosen and separate the fibers of said compact wood pulp to form a slurry, then passing the slurry into another chamber and continuously agitating said slurry in said other chamber and simultaneously and continuously recirculating said slurry through a circuit connected between said chambers until the compacted wood pulp has been substantially disintegrated into separate fibers and said fibers are thoroughly mixed in suspension with said water thereby providing an available sprayable supply of slurry of uniform consistency in said circuit.

3,091,437

MIXER

Kenneth D. Johnson, Vienna, and Roland T. Talton, Jr., and Newton F. Spraggins, Falls Church, Va., assignors to Atlantic Research Corporation, Fairfax County, Va., a corporation of Virginia

Filed Apr. 4, 1960, Ser. No. 19,950
12 Claims. (Cl. 259—104)



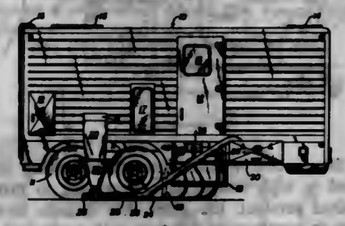
1. Laboratory mixer for small batches comprising an integral body member having a centrally located recess therein opening in the top of said body member and extending downward therefrom forming a mixing chamber, said body member being formed on the outside with a planiform face laterally of said mixing chamber and formed with a cylindrical passage extending inwardly from said planiform face to said mixing chamber, the horizontal overall area dimensions of said body member being significantly larger than the corresponding dimensions of said mixing chamber so that the body member is thick walled and the cylindrical passage of significant length, a removable head fitting said passage, its inner end forming part of a wall of said mixing chamber, coaxial bearing sockets opening into said mixing chamber from opposite sides, those at one side extending into said head and terminating in closed ends, those at the remote side extending through the wall of said body member opening at the outside thereof, mixing blade units comprising journals in said bearing sockets, mixing elements between said journals within said mixing chamber and extensions projecting beyond the remote bearing sockets having coupling elements at their outer ends, a block rigidly united with the outer end of said head, said block having a planiform face about said head in surface engagement with said planiform face of the body member, and means for securing said block to said body member.

3,091,438

MOBILE MIXING AND PUMPING APPARATUS

Calvin D. Hembree, 900 S. Jackson St., Denver, Colo.

Filed Feb. 10, 1960, Ser. No. 7,830
16 Claims. (Cl. 259—151)



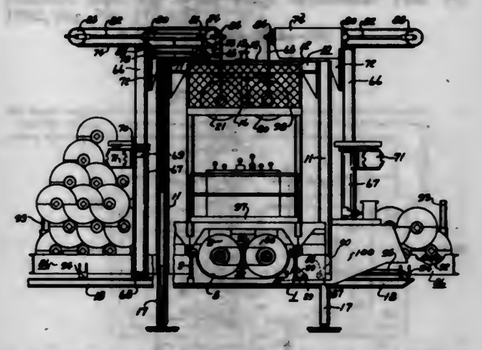
1. In mobile mixing and pumping apparatus, an enclosure, at least one liquid storage container mounted in the enclosure, at least one storage bin for dry ingredients also mounted in the enclosure having a bottom closure which is permeable to gaseous flow, means mounted in said enclosure operatively interconnected beneath the enclosure and adapted to force a gaseous flow through said permeable bottom closure to thereby maintain dry ingredients in a dry, aerated condition preventing agglomeration, a mixer inclusive of first conduit means operatively interconnected with said liquid storage container and adapted for liquid removal from said liquid storage container and for moving conducted liquid in aspirating relation to a second dry ingredients conduit means of the mixer which is in conductive relation with the storage bin, third conduit means opening from said mixer adapted to conduct a mixture of dry ingredients and liquid from the point of aspirating relation to a mixing receptacle carried by the mobile apparatus, means opening from the mixing receptacle and adapted to conduct said slurry to a well to be lined, and a prime mover in driving interconnection with pumping means operatively interconnected with the first, second and third conduits for inducing the flow of liquid, dry ingredient discharge and the resulting slurry and said aerating gaseous flow.

3,091,439

AUGER MINING MACHINE

George L. Adams and Charles T. Govin, Salem, Ohio, assignors to The Salem Tool Company, Salem, Ohio, a corporation of Ohio

Filed June 20, 1960, Ser. No. 37,490
10 Claims. (Cl. 262—26)



1. An auger mining machine comprising a frame, a rotatable mining assembly carried by said frame and providing a uniform location to rotate and move the augers along said frame in mining, a spaced pair of parallel track members located beneath said frame for movement upon the ground, independently operated and controlled power means connecting each track member to the frame for moving each track member in either direction to steer and move the frame along the ground, an auger storage rack along one side of said frame, latch means to hold said auger storage rack to said frame, and support means on said auger storage rack engaging said track members to carry the same along with said frame to maintain the augers at a uniform location.

3,091,440

CUTTER-LOADERS FOR MINING MINERALS

William Gillespie, Glasgow, Scotland, assignor to Mavor & Coulson Limited, Glasgow, Scotland

Filed Nov. 29, 1960, Ser. No. 72,369
4 Claims. (Cl. 262—30)



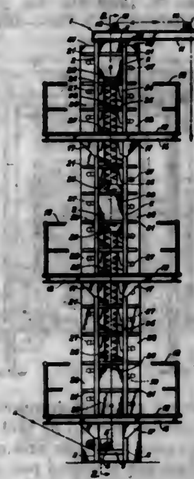
1. A cutter-loader of the type in which the work of cutting from a mineral seam is done by endless chains equipped with cutting tools driven to travel in endless paths around supporting jibs, the cutter-loader comprising, in the order stated from front to rear, a single leading jib at about mine floor level for a cutter-chain to

under-cut the mineral seam, a transverse conveyor also at about floor level for the mineral and gummings left behind said jib following the work of said cutter-chain, said conveyor being of the helical-worm gummer type in which the worm rotates within a casing and conveys gummings and small mineral matter across and beyond the machine, and a trailing assembly of superposed jibs for a transverse loader chain at about floor level and for one or more cutter-chains reaching from above said loader chain nearly to mine roof level, the loader chain being driven to discharge inwards towards and beyond the machine the mineral cut down by the one or more cutter-chains above.

3,091,441
APPARATUS FOR HEATING AND STRETCHING OF FABRICS

Gilbert V. Kallgren and Winchel J. Goodwin, Akron, Ohio, assignors to Blaw-Knox Company, Pittsburgh, Pa., a corporation of Delaware

Filed Feb. 2, 1961, Ser. No. 86,728
3 Claims. (Cl. 263—3)



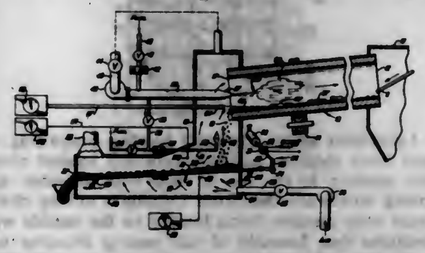
1. An industrial oven of the tower type comprising an upright supporting structure; means at one end of the structure for the admission of a moving web; means at the other end of the structure for the withdrawal of the web; means for guiding the web therebetween in a substantially vertical plane; horizontal channels forming part of the supporting structure, said channels extending normally to the plane of the web at the edges of its path of travel; insulating panels carried by such channels, said insulating panels extending vertically in free-standing relation to the remainder of the supporting structure; and, between the insulating panels, a plurality of stacked heating units on each side of the path of travel of the web, each of said heating units taking the form of a self-contained box with means therein for supplying a combustible mixture of gas and air, burning the gas, and continuously removing products of combustion at the rear of the box.

3,091,442
KILN CONTROL METHOD AND APPARATUS

John R. Romig, Rialto, and Joseph H. Herz, Redlands, Calif., assignors to California Portland Cement Co., Los Angeles, Calif., a corporation of California

Filed Mar. 14, 1961, Ser. No. 95,697
19 Claims. (Cl. 263—32)

1. In the process where calcareous and argillaceous materials are formed into clinker by treatment with hot gas flowing upstream in a rotary kiln, the materials undergoing calcination, fluidization and exothermic reaction while they move downstream through different zones in the kiln and the materials moving downstream in response to kiln rotation and local fluidization in said fluidization zone, changes in the downstream movement of materials in response to said fluidization tending to disturb said heat transfer in such manner as to amplify the tendency for materials to so move, the steps that include passing a main stream of combustible and air into the kiln for flaming combustion therein and for upstream

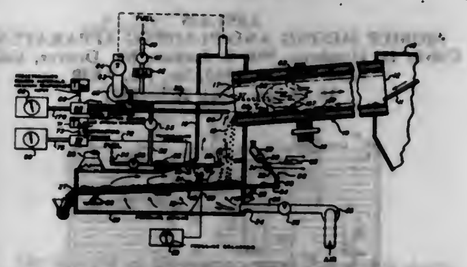


hot gaseous flow in heat transfer relation with materials in said exothermic reaction zone, said fluidization zone and said calcination zone, and adjusting said flaming combustion by effecting increased or decreased heating of said air prior to said combustion to vary said heat transfer in such manner as to counter said amplified tendency for materials to so move, said increased or decreased heating of the air prior to combustion being carried out by controllably combusting a side stream of combustible for controllably heating and changing the temperature of the air before it flows into the kiln.

3,091,443
KILN AUTOMATIC CONTROL METHOD AND APPARATUS

Joseph H. Herz, Redlands, and John R. Romig, Rialto, Calif., assignors to California Portland Cement Co., Los Angeles, Calif., a corporation of California

Filed Apr. 17, 1961, Ser. No. 115,058
23 Claims. (Cl. 263—32)

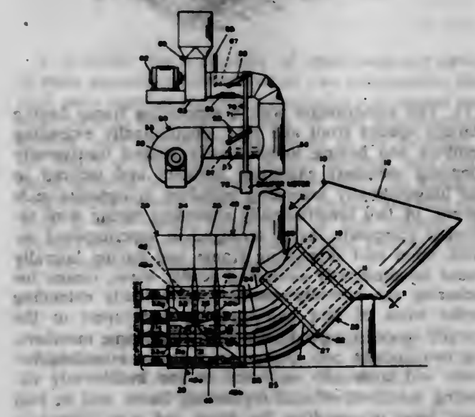


1. In the process wherein materials flowing in a kiln are heated to high temperature necessary to production of a desired product, the steps that include flowing an air stream in combustion relation with main fuel to produce hot gas flowing in the kiln to heat the materials therein, effecting primary and secondary preheating of air forming said stream and prior to use of the air for main fuel combustion, whereby air temperature fluctuations result from said primary preheating, the materials within a predetermined region of the kiln having materials temperature fluctuations, said air and materials temperature fluctuations having an ultimately adverse effect upon the heating of said materials to said high temperature, said secondary preheating being effected by combustion of auxiliary fuel for heating air flowing to the kiln, obtaining correction values corresponding to said air and materials temperature fluctuations, and using said values to control said secondary preheating to counter said adverse effect on the heating of said materials to said high temperature.

3,091,444
KILNS

Charles Dean Tinker, Granville Township, Licking County, Ohio, assignor to Ohio Kilns, Inc., Granville, Ohio, a corporation of Ohio

Filed Feb. 3, 1958, Ser. No. 712,808
7 Claims. (Cl. 263—48)

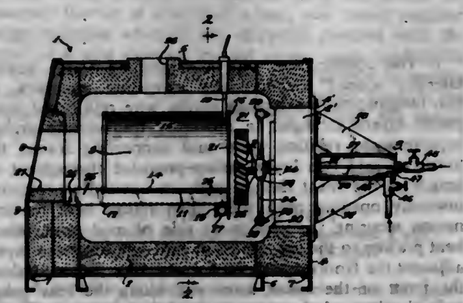


1. A sintering furnace comprising a combustion chamber; a hopper for supplying a combination of fuel and material to be sintered; a plenum chamber positioned beneath said combustion chamber and in gaseous communication therewith; a conduit connected to said hopper, passing through said plenum chamber, and leading from the lower part of said hopper for supplying mixed fuel and raw material from said hopper to said combustion chamber and means for drawing air through said plenum chamber from said combustion chamber around the portion of said conduit positioned in said plenum chamber.

3,091,445
COMBINED FURNACE HEATER AND CIRCULATOR

John J. Toney, Meadville, Pa., assignor to Sunbeam Equipment Corporation, Meadville, Pa., a corporation of Delaware

Filed Oct. 22, 1959, Ser. No. 847,921
4 Claims. (Cl. 263—43)

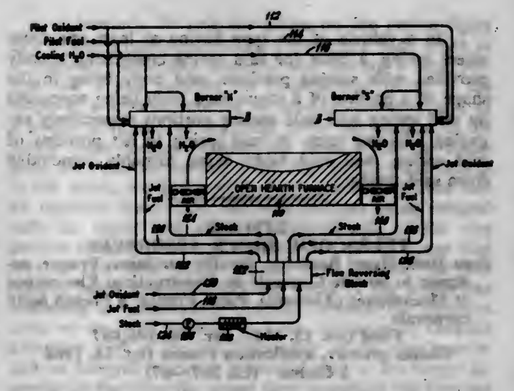


1. In an industrial furnace having an open ended heat treating chamber defining means therein, a side wall of said furnace having an opening therein for moving said chamber defining means when assembled into and out of said furnace, said side wall opening being closed by removable wall closure means, a combined heater and fan unit for heating the furnace atmosphere and circulating it through said chamber defining means, said unit comprising a rotatably mounted hollow shaft extending through said closure means, the inner end of said shaft having fan blades and radially disposed hollow arms thereon which are positioned inside said furnace, jet reaction burners on the outer ends of said arms, and means connected to the outer end of said shaft outside of said furnace for supplying said burners with an air-fuel mixture to heat said atmosphere and rotate said fan blades.

3,091,446
METHOD FOR THE HEATING OF INDUSTRIAL FURNACES

George H. Smith, Berkeley Heights, N.J., assignor to Union Carbide Corporation, a corporation of New York

Continuation of application Ser. No. 61,619, Oct. 10, 1960, which is a continuation of application Ser. No. 610,553, Sept. 18, 1956. This application Feb. 19, 1962, Ser. No. 176,490
6 Claims. (Cl. 263—52)



1. The method of heating an industrial furnace with a main fluid hydrocarbon fuel stock and furnace air comprising forming a substantially stoichiometric mixture of fluid fuel and oxidant; burning said mixture in a combustion zone; during the operation, continuously discharging the hot products of said combustion as a stream at a velocity greater than 0.5 Mach number into a treating zone into which a stream of fluid hydrocarbon fuel stock is injected continuously during operation; preheating and atomizing said stream of fluid hydrocarbon fuel stock in said treating zone; during the operation, continuously discharging the resultant preheated and atomized stream into said industrial furnace; and there burning said resultant streams with air provided externally of the combustion and treating zones.

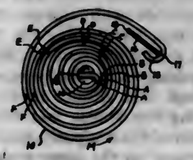
3,091,447
SPRING

Arthur W. Donkin, Chicago, Ill., assignor to Conve-Trol, Inc., Chicago, Ill., a corporation of Delaware

Filed Apr. 19, 1961, Ser. No. 104,179
10 Claims. (Cl. 267—1)

1. A coil spring, the adjacent coils thereof, when unwound, lying eccentric to each other and having points of closest proximity and circumferentially spaced points of maximum spacing with the points of closest proximity

disposed substantially on an involute curve having its inception at the innermost coil and opening toward the



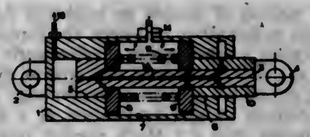
outermost coil in a direction in which the spring is adapted to be wound from its inner end.

3,091,448
SPRING LIFTER
Fred W. Kieffer, 259 Gardenia Drive, Memphis, Tenn.
Filed July 5, 1961, Ser. No. 121,932
2 Claims. (Cl. 267—60)



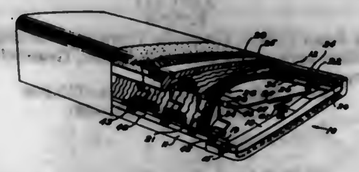
2. In a vehicle of the type having at least one front wheel spring, a lifter for said spring comprising a body provided with seating portions, said body being in the shape of a portion of a screw, said body being supported by said spring with said seating portions respectively engaging adjacent turns of said spring to lift portions of said spring, and said body being turnably removable from said spring.

3,091,449
TELESCOPIC SHOCK ABSORBERS
Jean Rene Henri Boutefoy, Neuilly-sur-Seine, France, assignor to Societe Generale de Constructions Electriques et Mecaniques (Alsthom), Paris, France, a French body corporate
Filed Oct. 23, 1961, Ser. No. 146,807
Claims priority, application France Oct. 26, 1960
1 Claim. (Cl. 267—67)



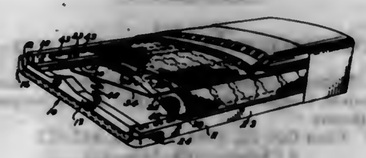
A telescopic shock absorber comprising an outer casing, shoulders in said casing defining a chamber in the centre of said casing, an inner rod slidable within said casing, the central part of the said inner rod being reduced to form axially separated shoulders, two pistons located around said inner rod and within said chamber and being slidable on said inner rod and in said casing, a source of fluid under pressure outside said casing, a conduit connecting said source to said outer casing for conveying said fluid into said chamber to urge said pistons apart and enabling it to return to the said source, a slide valve case arranged in said conduit and a slide valve movable in the slide valve case in order to open a passage of variable section in said conduit for said fluid, movement of said slide valve being caused by the differential action exerted by the pressure of the said fluid in said source and by the pressure of the said fluid in said chamber.

3,091,450
SUPPORTING SPRING ASSEMBLY FOR SEATS
Clair S. Reed, Wayne, Mich., assignor to Van Dresser Specialty Corporation, Warren, Mich., a corporation of Michigan
Filed Apr. 6, 1962, Ser. No. 185,543
18 Claims. (Cl. 267—86)



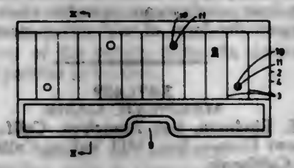
13. The combination with a supporting frame having laterally spaced front and rear longitudinally extending members and having longitudinally spaced transversely extending members extending between and secured to said longitudinally extending members at opposite ends thereof, of two longitudinally extending spring wire reinforced composite layers arranged in superimposed relation upon said supporting frame and having laterally spaced longitudinally extending border wires, means for anchoring the laterally spaced longitudinally extending border wires of said two superimposed layers to the laterally spaced longitudinally extending frame members, and two upright coil springs respectively extending between and terminally anchored to the transversely extending members of said supporting frame and to said lower layer intermediate the front and rear thereof to support the lower and upper layers at opposite ends of said supporting frame.

3,091,451
SUPPORTING SPRING ASSEMBLY FOR SEATS
Clair S. Reed, Wayne, Mich., assignor to Van Dresser Specialty Corporation, Warren, Mich., a corporation of Michigan
Filed May 31, 1962, Ser. No. 198,955
20 Claims. (Cl. 267—102)



1. The combination with a supporting frame having laterally spaced longitudinally extending members, of two longitudinally extending spring wire reinforced composite layers arranged in upwardly transversely arched superimposed relation upon said supporting frame, the lower of said two layers being provided throughout its length at the front thereof with an upwardly projecting inwardly opening preformed open return bent portion, means securing the uppermost side of said open return bent portion to the uppermost of said superimposed layers adjacent the front edge thereof, and means provided along the front of the lower layer and along the rear longitudinal edges of the superimposed layers for anchoring such layers to the laterally spaced longitudinally extending members of said supporting frame.

3,091,452
HOLDER FOR PLURALITIES OF OBJECTS
Kenneth Hobbs, Bassett, Southampton, Hants, England, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Feb. 9, 1960, Ser. No. 7,565
Claims priority, application Great Britain Mar. 9, 1959
3 Claims. (Cl. 269—68)



1. A holder for a plurality of semi-conductor devices in mass production constituted of two substantially identical parts together forming a multiplicity of spaced apertures forming the holding means for said semi-conductor devices, said apertures being spaced in the direction of the length of the holder by a unit distance, said holder being adapted for longitudinal movement, an elongated longitudinal channel located in said holder, and said apertures in said holder terminating in said channel, said channel being provided with longitudinal grooves adapted for accommodating a stop member.

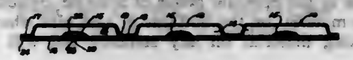
3,091,453
AQUATIC AMUSEMENT DEVICE
Sherman A. Bennett, 186 Elm Drive, Bayshore, N.Y.
Filed Aug. 19, 1960, Ser. No. 50,653
3 Claims. (Cl. 272—1)



1. An amusement device for use upon a body of water comprising an elongated open-ended tunnel member tapering from one end to the other end, said one end being bowed toward the other end and shaped to a scoop, the other end of said member being shaped to a nozzle, said tunnel member being positionable in an upwardly-sloping direction over said body of water with the underside of said member above and adjacent the surface of said body of water, the upper side of said member remote from the surface of said body of water, the scoop submerged below and adjacent the surface of said body, and the nozzle adjacent to and spaced above said body of water, and means exteriorly of and on the upper side of said tunnel member between the scoop and nozzle for insertion therein of a hand of a user, said tunnel member being operable when in the aforesaid position with the hand of a user inserted in said means upon application of a forward stroke of the user's hand thereto to receive water through the scoop, convey said water through the tunnel member, and eject said water through the nozzle in a form of a stream.

3,091,454
SOUNDING GAME MAT
Joney Sam, 1031 Stanyan St., San Francisco, Calif.
Filed Mar. 29, 1962, Ser. No. 183,587
6 Claims. (Cl. 273—1)

1. A portable, foldable sound producing mat for playing the game of hopscotch comprising in combination, a flexible sheet of air tight material, means attached to the upper surface of said flexible sheet forming a plurality of resilient air filled cells spaced apart in a predetermined pattern thereon, air passage openings in said flexible sheet and located generally centrally within said air



cells, a sound producing whistle means mounted on said sheet at each of said openings within a said air cell, whereby the pressure applied to a cell during the playing of a game on said mat forces air from the cell through its associated sound producing means.

3,091,455
BOWLER'S LIFT RING
Haig A. De Mire, 17361 Roseland Ave., Southfield, Mich.
Filed Aug. 25, 1961, Ser. No. 133,824
2 Claims. (Cl. 273—54)

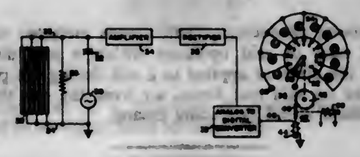


1. A bowler's lift ring for fitting on the pinkie finger of a bowler's hand, comprising a one-piece body made of a resilient, rubber-like material and having a ring portion and a pad portion; the ring portion being in the shape of a tapered tube of an internal diameter and of a length to fit and substantially cover the portion of the pinkie finger located between the point where the finger joins the palm to the first joint, that is, the joint closest to the palm; the pad portion having an upper face and an opposite lower face, the ring portion being integral with the upper face and the internal wall of the ring portion merging with and forming part of the upper face for the full axial length of the ring portion; the pad portion being approximately the width of the finger and extending a considerable distance beyond the opposite ends of the ring portion to form an integral forward extension part at the small diameter of the ring portion and an integral rearward extension part at the larger diameter of the ring; the upper face, including the forward extension part and the rearward extension part, being of a length and shape to form full length contact with the inside surface of the finger for the full axial length of the ring and also including and slightly beyond the first joint and a portion of the palm of the hand up to a point approximately aligned with the knuckle joint of that finger; the lower face of the pad being shaped to correspond, without distortion, to the surface curvature of a bowling ball for full face to surface contact therewith.

3,091,456
AUTOMATIC PINFALL DETECTING APPARATUS FOR BOWLING GAME
George H. Brodie, Pepper Pike, Ohio, assignor, by mesne assignments, to Cleveland Trust Co., trustee, Cleveland, Ohio
Filed Sept. 15, 1961, Ser. No. 138,349
12 Claims. (Cl. 273—54)

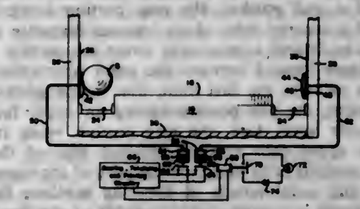
1. In a bowling game, apparatus for determining the number of pins knocked down on an alley comprising a plurality of parallel electrical conducting strips positioned on said alley beneath said pins, each of said strips extending for the entire length of the pin deck on which the pins are positioned, a source of variable amplitude voltage having a pair of output terminals, means coupling

one of said terminals to alternate ones of said conducting strips, means coupling the other of said terminals to the remaining ones of said conducting strips whereby the conducting strips coupled to the respective terminals will function as the opposite plates of a single capacitor, conducting material on the bottoms of said pins whereby the conducting material on any standing pin will effect a



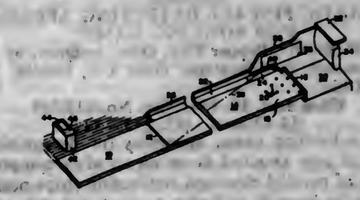
bridging capacity effect across two or more of the conducting strips to vary the total capacitance of the single capacitor formed by the strips, means for measuring a change in total capacitance of the strips in response to a change in the number of standing pins, and means for visually indicating said change in capacitance to thereby also indicate the number of standing pins.

3,091,457
BOWLING GAME APPARATUS
Everett K. Mentzer, Struthers, and Ernest C. Webb, Bay Village, Ohio, assignors, by mesne assignments, to The Cleveland Trust Co., a banking institution, trustee, Cleveland, Ohio
Filed Nov. 2, 1961, Ser. No. 149,664
12 Claims. (Cl. 273—54)



1. In a bowling alley having a pin deck and at least one kickback at the side of the pin deck, the combination of means for detecting a ball which strikes the kickback and rebounds to knock down pins comprising electrical switch means actuable by a ball which strikes the kickback, and electrical utilization apparatus responsive to actuation of the switch means for indicating the fact that the ball has left the alley before knocking down pins.

3,091,458
BOWLING GAME APPARATUS
Vernon C. Becks, Westlake, Ohio, assignor, by mesne assignments, to The Cleveland Trust Co., trustee, Cleveland, Ohio
Filed Mar. 19, 1962, Ser. No. 180,694
7 Claims. (Cl. 273—54)



1. In a bowling alley having a pin deck and a kickback at at least one side of the pin deck, the combination of means for detecting a ball which strikes the kickback and rebounds to knock down pins, comprising a member mounted on said kickback for reciprocating movement in a direction parallel to the long transverse dimension of the alley, said member being positioned to engage a traveling bowling ball which leaves the alley whereby the ball will cause the member to move in a direction away from the end of the alley opposite the pin deck, spring means urging the member toward said end of the alley, and limit switch means actuable when the member moves against the force of said spring means.

3,091,459
MAGNETIC GAME
George E. Lindaman, San Francisco, Calif., assignor to Mag-Powr Games, Inc., Mill Valley, Calif., a corporation of California
Filed Oct. 5, 1959, Ser. No. 851,487
9 Claims. (Cl. 273—88)



1. In a game played with magnetized players adapted to be slideably moved over a game board under influence of operating magnets moved beneath said game board, the combination comprising: a plurality of magnetized player units visually delineated into first and second opposing teams of players; said player units each comprising a bar magnet provided with a flat base portion for supporting said bar magnet in upright position for slideable movement along the surface of a game board; the north and south poles of the bar magnets comprising the players of said first team arranged similarly and with the north pole of each situated adjacent the base portion of the player, whereby the players within said first team are magnetically repellent to each other in upright position; the north and south poles of the bar magnets comprising the players of said second team arranged similarly and with the south pole of each situated adjacent the base portion of the player, whereby the players within said second team are magnetically repellent to each other and magnetically attractive to the players of said first team in upright position; and at least one operating magnet provided to manipulate each team from the underside of the game board, said operating magnets for opposite teams disposed with their north and south poles in vertically opposite polarity so that each said operating magnet is magnetically attractive to only the players of the team it is respectively adapted to manipulate.

3,091,460
GAME DEVICE
David G. Maldonado, P.O. Box 3372, Lowell, Ariz.
Filed Aug. 3, 1960, Ser. No. 47,230
6 Claims. (Cl. 273—95)



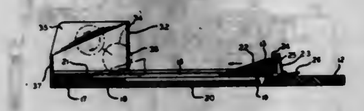
1. A game device comprising a ball-like member including a flexible closure and a filler of granular material thereby forming a ball-like device conformable to the surface which it engages, and an attachment for each foot of a person in the form of paddles to bat the ball-like device back and forth between the feet without engagement by the hand thereby developing coordination of the feet and exercising the leg muscles, said attachment for each foot including a pair of rigid paddles disposed in spaced parallel relation and disposed along each side of the foot, resilient straps interconnecting the top and bottom edges of the paddles for extending over and under the foot of the person using the device thereby attaching the paddles to the feet.

3,091,461
GAME APPARATUS
Le Roy M. Taylor, 4476 S. Cherokee, Englewood, Colo.
Filed May 5, 1961, Ser. No. 107,975
1 Claim. (Cl. 273—95)



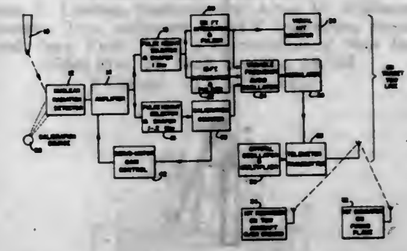
Game apparatus comprising a flat target, a plurality of flat player station discs adapted to be disposed around and spaced from the target, a similar plurality of projectiles adapted to be laid upon and driven from the station discs to the target, and a similar plurality of bats for driving the projectiles toward the target, said projectiles comprising elongated rectangular cross section bodies having conical ends thereon, the sides of the body having numerals thereon dictating the number of times a related player is entitled to drive a projectile from his station disc to the target, the station discs, the projectiles, and the bats being arranged in individual sets of similar appearance differing in appearance from the other sets.

3,091,462
BALL PROJECTING TOY
Eugene M. Harberts, Yorkville, Ill.
Filed June 15, 1960, Ser. No. 36,212
11 Claims. (Cl. 273—96)



1. A ball projecting toy comprising, a frame, a slideway extending longitudinally on the frame and a striker guidedly mounted thereon, means including a cage mounted to straddle the forward end of the slideway for catching a ball therein and adapted for positioning the ball astride the forward portion of the slideway, the upper surface of the striker being inclined upwardly from its forward edge, the slideway being adapted for guiding the forward edge of the striker under the positioned ball, and means for propelling the striker forwardly adapted for propelling the striker under the ball in sliding frictional contact therewith thereby imparting an upward and back spin motion to the ball, said positioning means and cage being so shaped, positioned and adapted as to be normally out of the path of the ball during its said upward spinning motion.

3,091,463
MISSILE SCORING SYSTEMS
Martin J. Cohen, West Palm Beach, and Henry C. Gibson, Jr., Palm Beach, Fla., assignors to Franklin Systems, Inc., West Palm Beach, Fla., a corporation of Florida
Filed Dec. 22, 1958, Ser. No. 781,954
22 Claims. (Cl. 273—102.2)



1. A system for scoring hits of missiles upon a target, the missiles being provided with a source of nuclear radiation, said system comprising a nuclear radiation detector at said target of the type which produces a number of pulses in a predetermined time as a function of the distance from the radiation source, a hit indicator, and means coupling said radiation detector and said hit indicator for causing said hit indicator to respond to radiation detected by said detector only upon the production from said detector of at least a predetermined number of pulses in a predetermined length of time, corresponding to a predetermined radiation threshold level.

3,091,464
GAME
George T. Birdsall, R.F.D. 2, and Thomas A. Bergstrom, Walnut Hill Road, both of Bethel, Conn.
Filed Jan. 27, 1961, Ser. No. 85,388
5 Claims. (Cl. 273—108)



1. A game comprising a board having a flat smooth elongate substantially horizontal playing surface along which playing pieces may be propelled by pushing the same from a player's position at one end of the board to travel free in a substantially straight line toward the other end thereof; a target at said other end of the board formed of ferromagnetic material; and permanently magnetized playing pieces adapted to magnetically attach themselves to the ferromagnetic target when brought into magnetic proximity thereto by said straight line movement directly to said target, said target and playing piece being sufficiently rigid to cause rebound of the playing piece when it strikes said target with too much force.

3,091,465
BALL IMPELLING DEVICE
Ernest B. Ogdon, 3416 Fay Ave., Culver City, Calif.
Filed Aug. 29, 1961, Ser. No. 134,620
5 Claims. (Cl. 273—129)

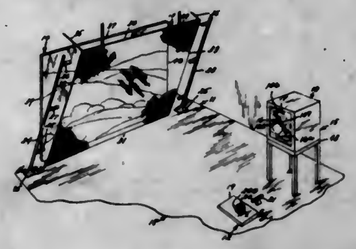
1. A ball impelling device comprising, in combination: a shaft; a tube telescopically receiving one end of said shaft and including a lateral slot; a paddle means; actuating means comprising a paddle bracket secured at one end to said paddle means and having its other end extending through said slot and pivotally connected to the

lower end of said shaft, the lower edge of said slot serving as a fulcrum for said paddle bracket to cause pivoting movement of said paddle bracket upon inward telescoping movement of said shaft in response to downward pressure thereon to move said paddle means whereby a



ball in front of said paddle means is impelled thereby; and a spring in said tube biasing said shaft in an upward direction to cause outward telescoping movement thereof to return said shaft to its initial position after cessation of said downward pressure.

3,091,466
COMPUTER-TYPE GOLF GAME
Maximilian Richard Speiser, 245 104th St., New York 25, N.Y.
Filed June 8, 1960, Ser. No. 34,812
4 Claims. (Cl. 273—184)



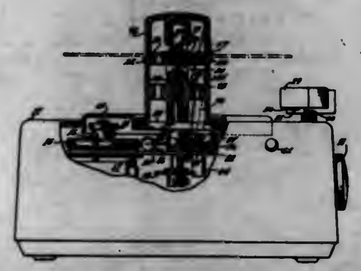
1. In a golf game including means for producing a pulsing electrical signal upon commencement of flight of a ball from a starting position, and arresting said signal upon contact of said ball with a screen disposed within the path of flight of said ball, improved means for closely estimating the length of projected trajectory of said ball in the absence of said screen, by assuming said projected trajectory to be along two straight intersecting lines, said means comprising: a computer system having first delay means for commencing operation of said computer a first fixed period of time after commencement of said flight of said ball, during which period said ball is assumed to be traveling along one of said straight lines, second means for computing the elapsed time of flight in relatively small increments for a second fixed period of time commencing after operation of said delay means, and during which period said ball is assumed to remain traveling on said above-mentioned straight line, and third means commencing operation after said second fixed period of time has elapsed for computing elapsed time in relatively greater increments, during which period said ball is assumed ot be traveling along the other of said straight lines; and means for translating computed periods of time into visible indicia.

3,091,467
DEVICES FOR SUPPORTING MAGNETIC TRANSDUCER HEADS ON MAGNETIC RECORDING AND REPRODUCING MACHINES
Sakae Fujimoto, Chofu, Japan, assignor to Riken Kogaku Kogyo Kabushiki Kaisha and Nihon Denki Bunka Kogyo Kabushiki Kaisha, Tokyo, Japan, both corporations of Japan
Filed Oct. 11, 1960, Ser. No. 61,947
Claims priority, application Japan Oct. 14, 1959
2 Claims. (Cl. 274—4)



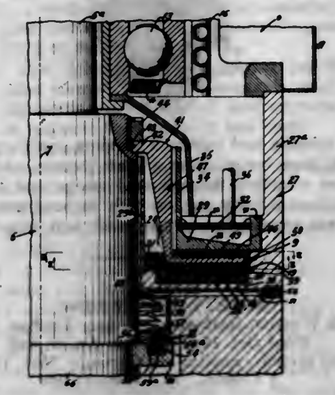
1. In a recording and reproducing machine of the type using a record medium having a magnetizable material on which intelligence is recordable and reproduceable along a spiral path, a recording and reproducing head comprising a transducer, means for moving said transducer along a spiral path relative to said record medium, magnetizable material for recording intelligence on said record medium and alternatively for reproducing intelligence record on said record medium, said transducer head comprising a seat for said transducer, means for adjusting said head on said seat relative to a reference mark in assembling said head and for positioning said head at a predetermined start position relative to said record medium comprising, a positioning arm fixed to said seat extending therefrom, said arm having a notch for releasably receiving a fixed member therein for holding said seat in a fixed position for adjusting said transducer in said seat at a desired position relative to said reference mark, and means for fixing said transducer head in said adjusted position in said seat.

3,091,468
TONE ARM STOP SYSTEM FOR AUTOMATIC RECORD CHANGERS
Edward J. Sperber, Philadelphia, Pa., assignor to Radio Corporation of America, a corporation of Delaware
Filed Jan. 11, 1952, Ser. No. 265,971
15 Claims. (Cl. 274—10)



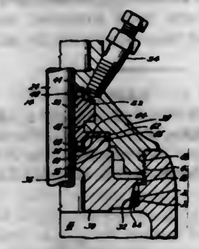
15. In an automatic record changer of the type including a turntable, a record centering spindle for receiving a stack of records to be supported above said turntable, said spindle being rotatable with said turntable, and automatic record changing mechanism, the combination of a record sensing element in said spindle, said element positioned to be engaged and held in a retracted position within said spindle by records supported above said turntable and mounted to move to a second position extending radially from said spindle in the absence of records supported above said turntable, and means responsive to said element in said second position to disable said automatic record changing mechanism.

3,091,469
SEAL
Richard J. Matt, South Euclid, Ohio, assignor to Thompson Ramo Wooldridge Inc., Cleveland, Ohio, a corporation of Ohio
Filed Mar. 4, 1959, Ser. No. 797,196
5 Claims. (Cl. 277—1)



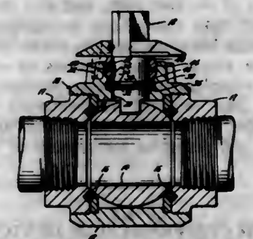
1. The method of preventing leakage past a liquid seal including an annular sealing chamber surrounding a rotating shaft and receiving an annular impeller attached to the shaft for forcing liquid outwardly in the chamber to form a pressure seal, the method comprising the steps of providing a fluid backing for the liquid in the chamber during relatively slow rotational speeds of the rotary member adequate to provide sufficient sealing pressure in the liquid, and solidifying the liquid during periods of non-rotation of the rotary member.

3,091,470
PRESSURE LOADED BONNET ASSEMBLY
Clifford E. Anderson and Louis F. Eckert, Jr., Houston, Tex., assignors to ACF Industries, Incorporated, New York, N.Y., a corporation of New Jersey
Filed July 1, 1960, Ser. No. 40,417
10 Claims. (Cl. 277—73)



1. A closure assembly for a pressure vessel comprising a pressure vessel having a circular opening, a portion of the wall of the opening forming a sealing surface, a closure member having a sealing surface positioned in the opening with the sealing surface opposed to the cylindrical surface, a pressure actuated metal sealing ring positioned between the sealing surface of the closure member and the sealing surface of the opening, retaining means disengageably secured to the wall of the opening axially outward of the sealing surface, said closure member and said retaining means having spaced opposed surfaces, means forming a seal about the periphery of said opposed surfaces, a passage in the retaining means communicating with the space between said opposed surfaces, means in said passage to permit the injection of a pressurizing medium from the exterior to said space to force the closure member axially inward forming an initial seal between the sealing ring and the surfaces it contacts.

3,091,471
PACKING BOX ASSEMBLY
Clifford C. Lawless, Stafford, and Alton M. Williamson, Houston, Tex., assignors to ACF Industries, Incorporated, New York, N.Y., a corporation of New Jersey
Filed Mar. 17, 1960, Ser. No. 15,562
2 Claims. (Cl. 277—112)



1. A packing box structure including a body portion formed with a cylindrical bore therethrough, a rotatable cylindrical stem having a smooth outer surface extending through said bore, the wall of said cylindrical bore being formed with a concentric enlarged chamber extending outwardly through said body portion and terminating at its inner end in an annular shoulder, packing in said bore supported on said shoulder, threads formed at the outer end portion of the wall defining the enlarged chamber, a stem nut having internal threads for engaging the outer threaded portion of the enlarged chamber, said stem nut being provided with a central opening of the approximate diameter of said stem and being telescoped over said stem, said stem nut engaging said packing at its lower end portion to compress the latter into sealing contact with said shoulder, bore and stem, the wall of said stem nut being formed with a plurality of radially extending apertures, said apertures opening at their outermost points within the threaded area of said stem nut, plastic inserts pressed into said apertures, said inserts protruding inwardly to form a chord between the outermost points of said aperture and protruding outwardly tangentially with the crest of said threads, said inserts being formed of resilient deformable plastic material having a high rate of recovery from compression, said stem confining the inner protrusion of said inserts and being centered thereby, and the internal threads of said enlarged chamber contacting and deforming the outer protrusion of said inserts causing the inserts to act as a functional drag on the stem nut to prevent its free rotational movement and displacement.

3,091,472
METAL GASKETS
George T. Balfe, Farmington, Mich., assignor to Detroit Gasket & Manufacturing Company, Detroit, Mich., a corporation of Michigan
Filed May 24, 1960, Ser. No. 33,075
2 Claims. (Cl. 277—206)



1. A gasket formed of two complementary planar plies of thin flexible resistantly resilient sheet metal having registering service openings therethrough, each ply having a planar flange portion immediately adjacent to and surrounding certain of said service openings and bent

up out of the plane of the ply at an obtuse angle with respect to such plane, said planar flange portions of the two plies surrounding said service openings being complementary and projecting in opposite directions away from the combined plane of the two plies and toward the said service openings, each of said flange portions being resistingly resilient and yieldable to be brought into back-to-back planar engagement with its complementary flange portion within the combined plane of the two plies, a heat resistant plastic coating covering the opposed surfaces of the two plies, said two plies being secured together back-to-back at spaced apart points in proximity only to the outer perimeter of the gasket spaced from the planar flange portions of the two plies, and said two plies being free from each other throughout the entire area that includes the service openings and the flange portions thereabout with the planar flange portions of one ply being free from the complementary flange portions of the other ply to move and respond independently thereof and without restraint by the other ply except as the same is restrained by said points of securement of the two plies together.

3,091,473
LENGTH COMPENSATION DEVICE FOR QUICK-CHANGE CHUCKS
Otto Bilz, Holderlinweg 61, Esslingen (Neckar), Germany
Filed Oct. 10, 1961, Ser. No. 144,258
Claims priority, application Germany Oct. 26, 1960
4 Claims. (Cl. 279—76)



1. In a quick-change chuck having a shaft and an axial bore within said shaft, a tool socket for receiving the shaft of a reduction cone or tool having an annular groove, said tool socket having radial bores, locking members within said radial bores adapted to engage into said annular groove, a locking sleeve rigidly secured to said chuck shaft and slidable in the axial direction relative to said tool socket for maintaining said locking members in the engaging position, means for connecting said tool socket to said chuck shaft comprising a compensating spring within said axial bore of said chuck shaft, said tool socket being slidable in the axial direction within said chuck shaft against the action of said compensating spring, said locking sleeve and said tool socket having axially extending grooves in the adjacent wall surfaces thereof, driving elements disposed within said axial grooves and connecting said locking sleeve with said tool socket for transmitting rotary movements from said locking sleeve to said tool socket, and a bolt passing through said axial bore of said chuck shaft and connecting said tool socket to said compensating spring.

3,091,474
CHUCK FOR DRIVE SHAFTS
Richard D. Boutros, Fairport, and Milton Dykman, Brighton, N.Y., assignors to Mixing Equipment Co., Inc., Rochester, N.Y., a corporation of New York
Filed Nov. 23, 1960, Ser. No. 71,328
8 Claims. (Cl. 279—97)

1. A chuck for drive shafts and the like comprising a body portion formed with a bore for reception of a driven shaft and a shank concentric with said bore for connection with driving means, said body portion having therein an opening extending transversely of and intersecting said driven shaft bore eccentrically of the axis thereof, a wedge



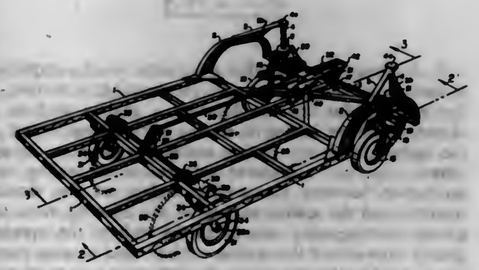
in said opening and having a gripping surface projecting into said bore for gripping a shaft therein, and a screw extending rotatably through said wedge and threadedly engaged in said body portion with its head pressing said wedge into gripping engagement with said driven shaft.

3,091,475
SAFETY SKI BINDING
Heinrich Wunder, Rothschwaige, near Dachau, Germany
Filed Oct. 10, 1960, Ser. No. 61,660
Claims priority, application Germany Nov. 17, 1959
9 Claims. (Cl. 280—11.35)



3. A safety ski binding for releasably connecting a ski boot to a ski, comprising:
a metallic gripping jaw mounted for pivoting about a vertical axis and having a portion engaging the forward end of the sole of the ski boot, and
an elastic body of substantial extension longitudinal of the binding mounted on said jaw and having a vertical surface facing the forward end of the sole of the ski boot, said body being large in relation to the size of said metallic gripping jaw and yieldable in all horizontal directions and affording substantial one-sided elastic deformation and substantial yielding to one-sided pressure and initial rocking of the ski boot prior to rocking of said gripping jaw about said vertical axis upon excessive movement of the ski boot out of alignment with the ski.

3,091,476
FOUR WHEEL FARM CART
Francis W. Blake, Rural Route, Hereford, Colo.
Filed Mar. 27, 1961, Ser. No. 118,208
2 Claims. (Cl. 280—43.13)



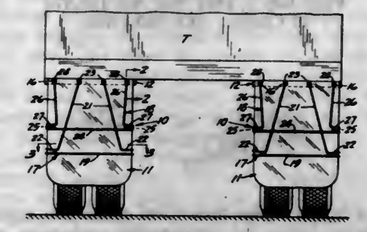
1. In combination:
(A) a cart body;
(B) a cross-bar mounted on said cart body;
(C) a rotatable shaft mounted for rotation parallel to said cross-bar;
(D) a pair of wheel units fixed on opposite sides of said cart body, each of said wheel units including,
(*a*) a post fixed on said cross-bar and extending vertically therefrom,
(*b*) a rotatable coupling means mounted on said post and having first and second opposed coupling elements,
(*c*) first linkage means connecting said first coupling element with said rotatable shaft for reciprocating movement of said coupling means in response to rotation of said shaft,
(*d*) a wheel,
(*e*) second linkage means connecting said second coupling element with said wheel,
(*f*) said first and second linkage means being pivotally connected to said first and second coupling elements,
(*g*) a rotatable coupling unit mounted in alignment with said post,
(*h*) arm means connected between said rotatable coupling unit and said wheel, said arm means being pivotally connected to said unit,
whereby rotation of said rotatable shaft causes reciprocation of said coupling member on said post and in turn reciprocating movement of said wheel, and whereby said wheel is simultaneously pivotal with respect to said post.

3,091,477
TROLLEYS, BOGIES AND THE LIKE FOR FACILITATING THE HANDLING AND MOVEMENT OF ARTICLES AND PARTICULARLY HEAVY ARTICLES
George B. Johnstone, 16 Tudor Road, Hunt's Cross, Woolton, Liverpool, England
Filed Oct. 24, 1960, Ser. No. 64,407
Claims priority, application Great Britain Dec. 24, 1959
3 Claims. (Cl. 280—46)



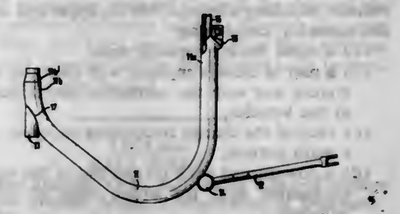
1. A trolley apparatus comprising at least one bogie, a trackway for said bogie, a load-carrying platform mounted on said bogie for longitudinal movement relatively thereto, a roller carried by the bogie, an inverted ramp on the underside of said load-carrying platform and resting on said roller, means retaining the load-carrying platform on the bogie and for guiding said relative longitudinal movement, a manual control lever, a pivot on the load-carrying platform for said control lever, an operative connection between said lever and the bogie for effecting said relative longitudinal movement between the bogie and the load-carrying platform, said relative longitudinal movement being translated by said roller and ramp into a vertical movement of the carriage relative to the bogie and an impetus to movement of the trolley on its bogie under the control of said control lever, a leg, a pivotal support on the load-carrying member for said leg, an operative connection between said leg and the bogie and a stop at the end of the bogie trackway positioned so as to be engaged by said leg whereby the latter is caused to effect said relative movement between the bogie and load-carrying platform to lower said platform and bring the trolley to rest.

3,091,478
MUD FLAP STABILIZER
Andrew Ambli, 2360 W. County Road, St. Paul, Minn.
Filed June 26, 1962, Ser. No. 205,292
7 Claims. (Cl. 280—154.5)



1. A mud flap stabilizer device for use with an elongate, generally rectangular-shaped mud flap of the type formed of flexible material, and being swingably supported adjacent its upper end from a vehicle body rearwardly of and in close proximity to a vehicle wheel mounted tire, said stabilizer device comprising
a stabilizer frame member formed of single piece construction and including an elongate transverse portion engageable in transversely extending relation with a mud flap intermediate the ends thereof,
a pair of edge gripping portions each being integrally formed with one end of said transverse portion for gripping the vertical longitudinal edges of the mud flap intermediate the ends thereof,
a pair of leg portions each being integrally formed with one of said edge gripping portions and extending vertically upwardly therefrom and each terminating adjacent the upper marginal edge of the mud flap,
a pair of attachment elements each being integrally formed with the upper terminal end of one of said leg portions for cooperative engagement with securing means for securing said frame member to the vehicle body in clamped relation against the mud flap.

3,091,479
CYCLE FRAMES
Alan P. Oakley, Bramcote, England, assignor to The Raleigh Cycle Co. Limited, a corporation of Great Britain
Filed Sept. 16, 1960, Ser. No. 56,494
Claims priority, application Great Britain Sept. 22, 1959
4 Claims. (Cl. 280—281)



1. A tubular frame for velocipedes comprising a tubular arcuate main frame having an elongated hole therein, an additional tubular frame of smaller external diameter than the inner diameter of said main frame, said additional frame extending through said hole substantially in alinement with an end portion of said arcuate main frame, the latter having a reduced diameter remote from said hole, said reduced portion closely fitted to said additional frame, said frames being united at said hole and to said reduced portion.

3,091,480
UNIVERSAL COUPLING UNIT FOR VEHICLES

Frederick Daniel Rugg, East Bridgewater, Mass., assignor to Inertia-Matic, Inc., Watertown, Mass., a corporation of Massachusetts

Filed July 7, 1961, Ser. No. 122,574
10 Claims. (Cl. 280—438)



1. In a tractor-trailer fifth-wheel connection supported on a tractor frame, the combination comprising a skid plate, skid plate pivot shaft connections projecting from opposite sides of said skid plate, a pair of elongate bracket members directly supporting said shaft connections projecting from opposite sides of said skid plate, and a plurality of universal couplings connected directly between each of said bracket members and said frame, each of said universal couplings comprising a pair of bearing cups having opposed curved complementary bearing faces, a ball member disposed between said bearing faces and movable thereover, a first cup bracket coupling one of said cups with one of said elongated bracket members, a second cup bracket coupling the other of said bearing cups with said frame whereby said elongated bracket members are universally movable with respect to said frame, and means for limiting relative movement between said cups.

3,091,481
TOWING CABLE ASSEMBLY

William M. Fearn, Box 203, Kodiak, Alaska

Filed Sept. 29, 1961, Ser. No. 141,660
3 Claims. (Cl. 280—480)



2. A towing cable assembly for establishing connection between a towing vehicle and a towed vehicle, each of vehicles including a bumper having upper and lower edges, the assembly comprising:

(*a*) a cable having opposite ends;

(*b*) a pair of clamps engaged with the cable at the ends thereof and with the respective connection elements of the vehicles;

(*c*) each of the clamps comprising an upper jaw having a main portion;

(*d*) a downturned hook on one end of the main portion engageable with the upper edge of one of said bumpers;

(*e*) the main portion being formed intermediate its ends with an opening of a size such that the cable is freely slidable therethrough and a cable clamping slot communicating with the opening of a size restrictive to sliding of the cable;

(*f*) the lower jaw, including an under side, comprising a main portion having an upturned hook on one end thereof engaging the lower edge of the bumper;

(*g*) the main portion of the lower jaw being formed with a closed longitudinal slot adjacent to its other end;

(*h*) the main portion of the upper jaw having a T-shaped arm adjacent to its other end;

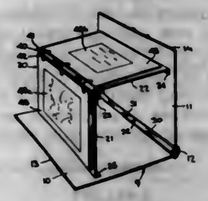
(*i*) the T-shaped arm of the upper jaw comprising a stem narrower than the slot of the lower jaw and a crosshead on the stem wider than the lower jaw slot, the stem extending through the lower jaw slot with the crosshead engaged with the under side of the lower jaw; and

(*j*) cable end securing means on the main portion of the lower jaw, said cable extending from said last-named means through said clamping slot in the upper jaw whereby the upper and lower jaws are secured in clamping engagement with the bumper.

3,091,482
PORTFOLIO

Caesar Anthony Cirigliano, 146 Somerset Ave., Fairfield, Conn.

Filed Sept. 19, 1961, Ser. No. 139,305
4 Claims. (Cl. 281—33)



1. Display unit comprising an outer binder, an inner binder, each said binder comprising a pair of rectangular panels having end edges of the same width and side edges of the same length and hingedly connected to each other along respective adjacent end edges, the remaining end edges of said panels of said inner binder being hingedly connected to the respective panels of said outer binder, all of the hinge connections being parallel to each other, said binders being foldable on their hinge connections to closed condition in which the panels are all parallel to each other with the hinge connection between the adjacent edges of the respective inner binder panels proximate to the hinge connection between the adjacent edges of the respective outer binder panels and with the inner binder panels between the outer binder panels, said binders being further foldable on their hinge connections to display condition in which successive panels are generally perpendicular to each other and each inner binder panel is parallel to the outer binder panel other than the one to which it is hingedly connected, means for releasably maintaining said binders in their display condition, and means for mounting display sheets on said inner binder within said sheet turnably attached adjacent an edge thereof to said inner binder at the hinge connection of said inner binder panels so that said sheets may be turned to overlie both of said inner binder panels.

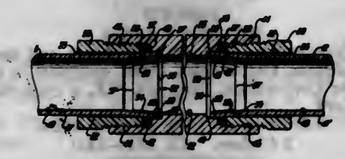
3,091,483
FLEXIBLE PIPE CONNECTION HAVING LINE PRESSURE ACTUATED SEALING MEANS

John O. Hruby, Jr., Burbank, Calif., assignor to Rain Jet Corporation, Burbank, Calif., a corporation of California

Filed Mar. 28, 1960, Ser. No. 18,147
3 Claims. (Cl. 285—95)

3. A pipe connection structure comprising a cylindrical pipe of synthetic resin having substantially the physical properties of polyethylene and having an annular end surface, a fitting formed of rigid material and having inside surfaces defining an open-ended passage extending through the fitting, the fitting comprising a tubular body portion and an annular nut portion in axial alignment

with the body portion, the fitting passage extending through said body and nut portions, coupling means on the body and nut portions for interconnecting said portions, the fitting having an annular recess formed therein open to and concentric with said passage and spaced axially inward from one end of the passage, said recess being defined by an annular shoulder surface on said nut portion, a stop surface and an annular radially inward facing surface between said shoulder and stop surfaces, said shoulder surface facing in a direction axially inward of the fitting with respect to said one end of the fitting passage, said stop surface facing toward said shoulder surface, a separate expander member in the pipe adjacent said end surface of the pipe, whereby the end portion of the pipe is expanded and flared radially outward to extend into said recess, the expanded and flared end por-



tion of the pipe having a portion of a greater radial extent than the radial extent of said annular shoulder surface and said greater radial portion being of an axial extent less than the axial distance between said stop shoulder and said annular shoulder surface, the pipe being movable axially inward of the fitting passage to an abutment position in which at least one of said expander member and said end surface of the pipe abuts said stop surface and the outside surface of the pipe is spaced from said annular shoulder surface, and the pipe being movable in response to fluid pressure within the pipe and fitting passage in a direction axially outward of the fitting passage from said abutment position to sealing position in which said end surface of the pipe is spaced from said stop surface and the outside surface of said end portion of the pipe is in circumferentially continuous engagement with said annular shoulder surface.

3,091,484
UNIVERSAL TYPE SWIVEL FITTING FOR AN ELECTRICAL FIXTURE

Richard Laupot, 72 Arleigh Road, Great Neck, N.Y.

Filed Feb. 3, 1960, Ser. No. 6,403
1 Claim. (Cl. 285—164)



A coupling for accommodating electrical wiring for an electrical fixture comprising, in combination, a hollow elongated female member containing a central aperture, a hollow elongated male member having a bridge extending upwardly from and between the sides of the central portion of said male member, said bridge containing a single threaded aperture, said female member fitting over said male member forming a hollow shell with the bridge member adjacent the female member, a clevis having a neck containing a channel therethrough and having a hollow circular portion at one end of said neck, said circular portion having an upper flat surface and a lower circular wall extending from both sides of said neck, said lower circular wall of said clevis having a bottom portion formed at an angle and having the bottom portion contain a notch aligned with the channel in the neck of said clevis, said female member having a forwardly disposed end with a flat undersurface engaging the upper flat surface of the circular portion of said clevis, said male member having a forwardly disposed end having an upper partially circular edge formed at an angle engaging the bottom of the lower circular wall of said clevis, the upper flat surface of said clevis containing a central depression and the flat undersurface of said female member having a raised pivot engaging the central depression rotatively securing said clevis between the forwardly disposed ends of said male and female members, a swivel containing a longitudinal channel therethrough and having a forwardly disposed sleeve portion, the rearwardly disposed ends of said male and female members forming a cylindrical cavity, the sleeve portion of said swivel fitting within the cylindrical cavity, said sleeve portion having a stop projection extending laterally, said male and female member within the cylindrical cavity containing a circumferential groove with the stop projection extending into the circumferential groove, holding the sleeve portion within the cylindrical cavity, and a threaded member extending through the aperture in said female member engaging the threaded aperture in the bridge member, said threaded member being operative to clamp said swivel and said clevis between said male and female members.

3,091,485
LOCKING BRACKET FOR SCAFFOLDING BRACE BARS

George Wilbert Jackson, 1848 W. 1st Ave., Vancouver, British Columbia, Canada

Filed Aug. 23, 1962, Ser. No. 219,819
7 Claims. (Cl. 287—53.5)



1. In a locking bracket having a tubular body attachable to a scaffolding upright, said body having a slot in the under side, a latch having one end forming a finger grip portion and the other end forming a nose, the locking bracket body having an open outer end through which the latch is freely insertable and removable and the nose portion of the latch being adapted for projection outwardly through the slot in the bracket body, and spring means normally holding the latch in the bracket body with the nose thereof projecting outward through the slot and the finger grip portion projecting outward through the open end of the body, said latch being adapted to have the nose portion thereof retracted within the bracket body by pressure on the finger grip portion.

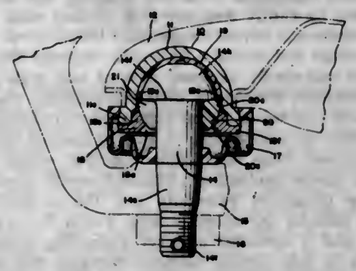
3,091,486
BALL JOINT

Max P. Baker, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed July 14, 1960, Ser. No. 42,909
2 Claims. (Cl. 287—87)

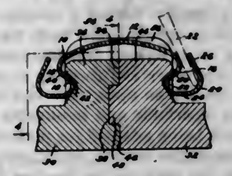
1. In a ball joint assembly necessarily having a curved head with a lateral flange adjacent to integral stud means and a partially spherical socket complementary thereto as fitted with a rigid semi-spherical polyeterafluoroethylene plastic-resin low-friction laminate means located radially and directly intermediate only the curved head and the socket as well as having an annular cover attached directly only to the socket to provide an annular space therewith adjacent to the stud means in a location remote from said polytetrafluoroethylene plastic-resin low-friction laminate

means, the combination therewith of an acetal resin bearing member substantially annular though decidedly oversized in shape fitted against the lateral flange of the curved head, said bearing member structurally having a lateral slot completely to split the annular shape thereof and to permit compression thereof radially as well as axially in the annular space though in resilient engagement directly only between said cover as well as said flange and stud means simultaneously to provide a low friction bearing surface impact and shatter resistant for



easy turning contiguously complementary with said rigid polytetrafluoroethylene plastic-resin low-friction laminate means as well as to provide spring-like resilience as a backlash take-up for sudden force transmissible axially of said stud means, said split annular bearing member of acetal resin having substantial dimensional stability over a range in temperature between —40° F. and 250° F. irrespective of moisture conditions to complement said polytetrafluoroethylene plastic-resin low-friction laminate means in combination therewith.

3,091,487
CLIP
William H. Gallagher, 19161 Oakfield, Detroit 35, Mich., and George La Fleur, 1190 Mason, Dearborn 8, Mich.
Filed Apr. 14, 1960, Ser. No. 22,304
2 Claims. (Cl. 287—130)



1. A spring clip for use with a flange having oppositely directed beaded marginal edges overhanging opposite sides of the flange, comprising: an upwardly bowed and resistingly downwardly deflectable spring web provided with transverse relatively rigid legs integral with opposite ends of the web and extending below and away from the web, each leg having a pair of consecutive reversely curved sections of substantially equal radii with one section being an integral extension of the end of the web and forming a concave flange bead surrounding channel opening inwardly beneath the web toward the opposite leg and the second section forming a convex surface facing the opposite leg to bear against a flange over which the clip is received at the underside of the beaded edge of such flange, the radius upon which said upwardly bowed web is formed being substantially greater than the radii of said reversely curved sections of each leg, one leg having a third section forming an integral extension of the second section and extending outwardly beyond the end of the web from beneath the first and second sections and curving upwardly and extending inwardly terminating spaced outwardly adjacent the end of the web to define with the other sections an upwardly opening lever catch portion for removably receiving and engaging one end of a first class lever arm having a fulcrum in the area of the adjacent end of the web for enabling the leg to be flexed outwardly by flattening flexure of the web to allow springing embracement of the clip over a flange or removal therefrom, said upwardly bowed web being of sufficient resiliency in relation to the rigidity of the legs that spreading apart of the legs can occur substantially only through flattening flexure of the web, and said clip adapted to be sprung into embracing relation upon a flange with the bowed web somewhat flattened to tension the legs grippingly against opposite sides of such flange at the underside of the beaded marginal edges of the flange.

3,091,488
ROTARY LATCH
John L. Vander Sande, North Hollywood, and Benjamin Carl Beehner, Los Angeles, Calif., assignors to Camloc Fastener Corporation, Paramus, N.J., a corporation of New York
Filed Jan. 18, 1960, Ser. No. 2,880
2 Claims. (Cl. 292—241)

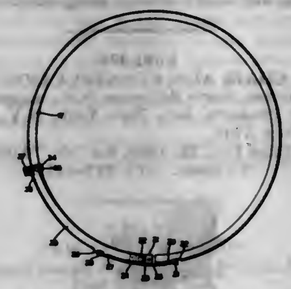


2. A rotary latch fastener for securing two members together and comprising a knob pivotally mounted on one of the members, a cam plate secured on the back of the knob and having a cam slot extending inwardly from one edge thereof and formed with a lower edge and a substantially straight upper cam edge, the back of the knob having a recess underlying said slot, the upper and lower edges of the slot extending beyond and overhanging the walls of the recess to allow said edges to engage the head of a keeper pin having a shank carried by the second member, said edge extending inwardly beyond the central median line and being substantially perpendicular to said median line when the axis of the pin passes beyond said line so that a self-locking action is effected when the shank of the headed pin reaches the inner end of the slot.

3,091,489
CONTAINER SEALING RING
Harold G. Vaughn, Warren, Ohio, assignor to The Ohio Corrugating Company, Warren, Ohio, a corporation of Ohio
Filed Apr. 15, 1958, Ser. No. 728,668
7 Claims. (Cl. 292—256.69)

1. A sealing ring device for a container of the open-head type having a peripheral bead and a container cover having a bead-engaging flange, said device comprising a split clamping ring having spaced ends and having a channel-shaped transverse cross section engageable with said bead and flange when the latter are assembled, a lever pivotally connected to said ring near one of said ends, said lever also being of channel-shaped cross section and curved longitudinally to conform to the curvature of the ring, so as to fit snugly about the exterior of the ring when swung into engagement therewith, a flexible spring metal strap arranged to span the gap between the ring ends and fixed rigidly at one end to an intermediate portion of the lever, the other end of said flexible strap being normally disconnected from the other end of the

ring, and means for detachably connecting the other end of said flexible strap to the other end portion of the ring, whereby when the lever is swung inwardly into contact with the ring the flexible strap conforms to the periphery



of the ring pressing firmly against the end portions of the ring and forcing them inward against the rim flange of the cover and the peripheral bead of the container, so that the ring effectually seals the entire perimeter of the cover.

3,091,490
DETENT MECHANISM FOR SECURING A KNOB TO A DOOR LATCH
Murray E. Williams, Grand Rapids, Mich., assignor to Dexter Industries, Inc., Grand Rapids, Mich., a corporation of Michigan
Filed Aug. 8, 1960, Ser. No. 48,156
2 Claims. (Cl. 292—352)



2. In a latch mechanism having a knob and a sleeve normally receiving said knob for transferring torque from said knob to said latch mechanism, a system for detachably securing said knob to said sleeve comprising: a shank member normally fixed with respect to said knob and engageable axially with said sleeve, said shank member having a discontinuity in the wall thereof and a notch axially aligned with said discontinuity providing cam surfaces diverging to increased width to the end of said shank; detent means slidably mounted in said sleeve for movement transversely to the axis of said sleeve and having a projecting portion of substantially uniform thickness tapering outwardly with respect to said sleeve to reduced width in a plane normal to the axis of said sleeve to define edges engageable with said cam surfaces and receivable in said discontinuity; and biasing means urging said detent toward engagement with said discontinuity.

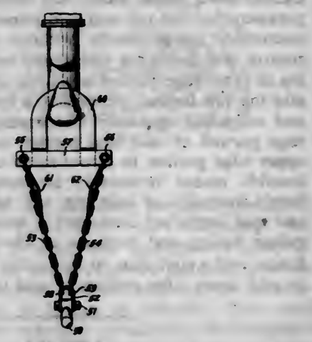
3,091,491
SYMBOL CHANGING DEVICE
Benjamin H. Adler, 11843 W. Olympic Blvd., Los Angeles, Calif.
Filed Apr. 7, 1958, Ser. No. 726,981
2 Claims. (Cl. 294—22)

1. In a device for changing the symbols on a motion picture display sign, an outer elongated tube having a transverse handle at its lower end and an arm at its upper end, an inner telescoped member of about the same length as the tube held against axial movement within the tube but having free movement within a limited angle of rotation and having at its lower end a transverse U-shaped handle and at its upper end an arm cooperating with the first-mentioned arm to approach each other when the two handles are moved together, symbol engaging members at the ends of the two arms, concaved inwardly to provide a claw-like grip, said U-shaped handle on the inner telescoped member having its two parallel portions spaced to receive the fingers of the operator be-



tween them, whereby when the first handle is supported in the palm of the operator's hand the U-shaped handle may be moved nearer or farther away by pressure of the fingers against a chosen one or the other of the two spaced parallel portions of the second handle with a consequent closing or opening of the two grasping arms.

3,091,492
SELF-HOOKING TAIL CHAIN
Joseph K. D. Young, 1713 D Ave., Douglas, Ariz.
Filed Jan. 22, 1962, Ser. No. 168,585
2 Claims. (Cl. 294—81)

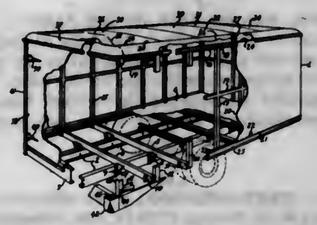


2. A device for connecting a hoist chain to a ladle eye, said device including an assembly comprising suspension means and hook means pivotally carried by said suspension means for swinging movement in a single plane, said hook means having elongated shank means and being balanced about its pivotal connection to said suspension means so that said shank means projects laterally away from the vertical when said hook means is suspended from said suspension means, an elongated rigid bar, substantially rigid means fixed to said bar for receiving the hook of a hoist chain, and flexible means connecting said suspension means to longitudinally spaced points on said bar and biassing the assembly comprising said hook means and suspension means to a position in which said shank means extends transversely with respect to said bar when said assembly is suspended beneath said bar.

3,091,493
VEHICLE BODY STRUCTURE FOR A TRUCK OR SEMI-TRAILER
William C. Rivers, P.O. Box 2239, Jacksonville, Fla.
Continuation of application Ser. No. 645,775, Mar. 13, 1957. This application Nov. 17, 1960, Ser. No. 70,081
16 Claims. (Cl. 296—28)

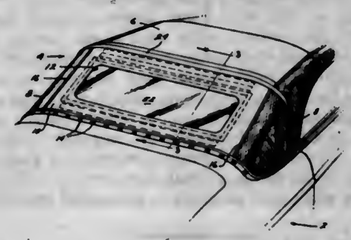
1. In a van body, a plurality of upstanding wall posts, a respective side wall lintel extending across and joined to

the upper ends of said posts along each side of said body, end wall lintels joining said side wall lintels, each said lintel having an upwardly facing substantially flat and horizontal top and an outwardly facing side portion disposed outwardly of said posts, a sheet material skin lying against said outward faces of said lintel side portions and outwardly of said posts and having an upper edge portion joined to the respective said lintel, a top rail preassembled into the plan configuration of said joined lintels, said top rail extending along said lintels, said top rail having a substantially horizontal planar base portion disposed substantially parallel to and supported on said top of said lintels and extending horizontally outwardly of the plane of said skin to an outer edge disposed spacedly outwardly of the skin and lintels and having a downturned drip and



rub flange spaced outwardly of the skin to provide a space therebetween joined along said outer edge whereby said preassembled top rail and said joined lintels may be preassembled independently without precise dimensional control and thereafter connected, said base portion having an inner edge portion overlying said top of said lintels, said top rail further comprising a body portion joined to and extending upwardly and inwardly from said inner edge portion of said base portion and terminating at its upper edge portion in a roof-rafter-connecting flange, releasable means removably attaching said rail to said lintels inwardly of said top rail whereby said top rail and said lintels are connected in watertight relation, roof rafters having end portions attached to said connecting flange, and a roof skin on said rafters overlying and fixed to said upper edge portion of said top rail body portion.

3,091,494
REAR WINDOW PANEL FOR CONVERTIBLE AUTOMOBILE TOPS
Louis I. Cohen, New Bedford, Mass., assignor to Hattie I. Cohen, New Bedford, Mass.
Filed Aug. 26, 1960, Ser. No. 52,223
6 Claims. (Cl. 296—137)



1. In combination with a foldable top secured to a vehicle body along its lower edge and having a rear section with a first window opening therein, a window panel disposed inwardly of said rear section, said window panel having a second opening in registration with said first opening, a window closure panel stretchable along one edge thereof, and means for releasably securing said window closure panel to said window panel in closing relation to said openings, said means comprising a first metal strip secured to said closure panel along one edge thereof and a second metal strip attached to said window panel, said first and second metal strips adapted to be releasably coupled together under tension along adjacent edges.

3,091,495
CHAIR ARM CONSTRUCTIONS
Henry Fleischer, North Bellmore, N.Y., assignor to Finkel Outdoor Products, Inc., New York, N.Y., a corporation of New York
Filed Dec. 28, 1960, Ser. No. 79,044
5 Claims. (Cl. 297—116)



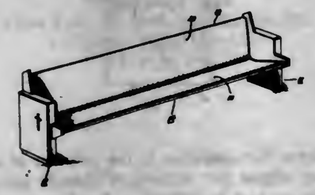
1. A chair arm construction comprising, in combination, a pair of tubular members in side by side relation, one of said members being bent at its front end to form a substantially closed ring, a tubular sleeve fixedly mounted on the other of said tubular members, a tubular supporting member mounted for pivotal movement on said sleeve, said supporting member being bent at its front end to form a substantially closed ring, locking means on said sleeve and means on said supporting member for engaging said locking means to position said supporting member in one of two predetermined positions, in the first of which positions said closed ring at the forward end of said supporting member is disposed in a substantially vertical plane and in the second of which said closed ring is positioned in a substantial horizontal plane.

3,091,496
VEHICLE SEATS WITH SAFETY HARNESS
James Sydney Bentley, London, England, assignor to Teleflex Products Limited, London, England, a British company
Filed Sept. 12, 1960, Ser. No. 55,204
Claims priority, application Great Britain Sept. 9, 1960
1 Claim. (Cl. 297—386)



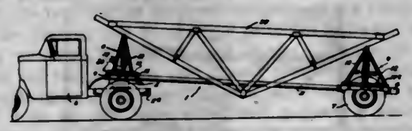
In combination with a vehicle having a chassis, a safety seat adapted to be installed in said vehicle and connected to said chassis, comprising a frame structure including a pair of reinforced L-shaped side frame members, a plurality of rigid tubular transverse frame members with their ends secured to said L-shaped frame members to hold the same in spaced apart relation with one of said transverse frame members connecting the upper portions of the L-shaped frame members and another transverse frame member secured to the front portions of said L-shaped frame members, at least one of said tubular frame members being provided with a slot, longitudinally extending connecting members secured to the lower portions of said L-shaped frame members adapted to space said frame structure from the floor of said vehicle and to couple the same to said chassis, upholstery secured on said frame structure completely enclosing the same to form front and back cushion surfaces defining a seat, and a safety harness device secured to said frame structure and concealed within said upholstery, said device including a tubular housing mounted within one of said tubular frame members and having a slot adapted to register with the slot in said frame member, a spring re-wind shaft rotatably mounted in said housing, a harness reel secured to said shaft, a harness strap wound on said reel and affixed thereto with its free end extending through the slots in said housing and tubular member and through a corresponding slot in said upholstery, and inertia locking means within said housing for locking said reel when said strap is subjected to sudden impact movement.

3,091,497
PEW CONSTRUCTION
Raymond Joseph Houser, 1018 Pelham Drive, Fort Wayne, Ind.
Filed July 12, 1961, Ser. No. 123,451
4 Claims. (Cl. 297—450)



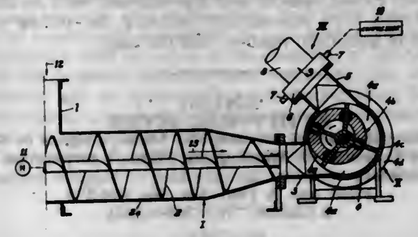
1. A pew construction comprising: two spaced, parallel, upstanding pew ends, each of said pew ends having three recesses formed therein generally defining an L; top, center and front elongated members spanning said pew ends and having their ends respectively seated in said recesses and supported thereby; a first sheet of relatively thin rigid plastic material having top and front marginal edges respectively secured to said top and front elongated members, said first sheet having a curved portion engaging said center elongated member and being supported thereby to define seat and back rest portions; and a back formed of another sheet of relatively thin rigid plastic material having top and bottom marginal edges respectively secured to said top and center elongated members and defining a closed cavity with said back rest portion.

3,091,498
SIDE DUMPING TRAILER
Wayne M. Goodwin, Dallas, Tex., assignor to Baras Lumber and Manufacturing Company, Dallas, Tex., a corporation of Texas
Filed May 21, 1962, Ser. No. 196,076
4 Claims. (Cl. 298—8)



1. In a trailer device,
an elongated central frame member,
a front frame member attached to the central frame member;
a rear frame member attached to the central frame member;
a pair of load supporting members pivotally attached to the front and rear frame members,
arranged to pivot outwardly thereof;
each such support member including a horizontal member,
a vertical member,
angularly extending members secured to the horizontal member,
and a longitudinal member rotatably attached to the frame member to which the lower end of the vertical member and the angularly disposed members are secured;
pressure actuated expansion means attached between the vertical members of each front and rear pair of pivoted load supporting members;
and spring means attached between said vertical members,
arranged to return the load supporting members to upright position after being pivoted outwardly by the expansion means.

3,091,499
CONVEYING ARRANGEMENT FOR PULPY MATERIALS
Wilhelm Ponndorf, Kassel, Germany, assignor to Ponndorf Maschinenfabrik K.G., Kassel-Bettenhausen, Germany
Filed Jan. 12, 1961, Ser. No. 82,280
Claims priority, application Germany Jan. 13, 1960
4 Claims. (Cl. 302—50)

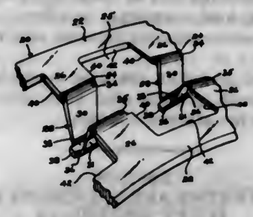


1. An arrangement for conveying porous materials of pulpy consistency, particularly for conveying wet brewers' grains and the like, said arrangement comprising, in combination, a source of pulpy material; a worm conveyor for continuously transporting and for simultaneously compressing a stream of material from said source; a pneumatic conveyor comprising an elongated tube and nozzle means for introducing at least one blast of a compressed gasiform medium into and for thereby advancing the material through said tube; and pump means of the positive displacement type disposed between said worm conveyor and said pneumatic conveyor for transferring compressed material form said worm conveyor to said pneumatic conveyor by overcoming the back pressure of fluid and solid substances in said pneumatic conveyor and for simultaneously preventing at all times the flow of compressed gasiform medium from said tube to said worm conveyor.

3,091,500
ANTIFRICTION BEARING
Ralph Altson, New York, N.Y., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Jan. 5, 1961, Ser. No. 80,868
4 Claims. (Cl. 308—217)

1. In an antifriction bearing, a pair of relatively rotatable race rings engaged by a plurality of circumferentially arranged rolling elements therebetween, an annular cage between and radially spaced from both race rings, said cage having pockets receiving the rolling elements in circumferentially spaced relation, axially spaced cylindrical end rings on said cage, circumferentially spaced cross bars connected at their ends to said end rings,

each cross bar being positioned between adjacent rolling elements, each of said cross bars having an end portion axially coextensive and conforming in curvature with one of the cylindrical end rings, walls on adjacent cross bars in guiding engagement with a rolling element therebetween, said walls having bearing surfaces parallel to the cage axis and tangentially engaging the rollers to support



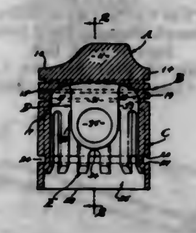
the cage in radially spaced relation to both race rings, the intermediate portion of each cross bar having a U-shaped portion extending from the cross bar generally radially of the cage, and a lug on each U-shaped portion laterally extending into closely spaced relation with the adjacent rolling element, said lugs and said walls on adjacent cross bars demountably securing the rolling elements in assembled relation with the cage.

3,091,501
FIFTH WHEEL DEVICE
Clarence R. Satrum, Minneapolis, Minn., assignor to Ho-Boy Corporation, Minneapolis, Minn., a corporation of Minnesota
Filed Apr. 3, 1961, Ser. No. 100,233
6 Claims. (Cl. 308—222)



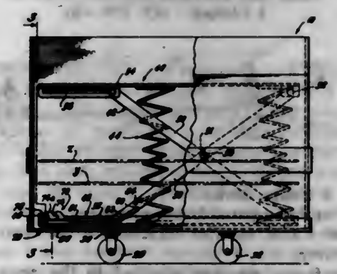
1. In a fifth wheel device of the type comprising upper and lower coupling plates disposed in superimposed relation, the upper plate having a king pin depending therefrom and extending into a recess in the lower coupling plate to detachably and rotatably interconnect the plates for relative rotation therebetween about a substantially vertical axis defined by said king pin, a bearing and coupling structure including a roller support plate member having a centrally located opening therethrough and having an upturned peripheral flange to thereby define a shallow receptacle, said support plate being interposed between said coupling plates so that said king pin extends through said opening, a substantially flat roller positioning element mounted on said support member and having a centrally located aperture therein for receiving said king pin therethrough whereby said roller positioning element is supported for free rotation around the king pin, said roller positioning plate member having a plurality of elongate slots formed therein and arranged in radially extending relation with respect to the axis of rotation of the coupling plates, said slots being alternately arranged with respect to each other substantially throughout the area of the roller positioning element, the latter being of a size approximating the size of confronting faces of said coupling plates, a plurality of elongate rollers each being loosely positioned in one of said slots in complete disconnected relation from said positioning plate member and each roller being freely revolvable about its longitudinal axis, each of said rollers being slightly smaller than its associated slot to thereby permit said roller to be readily removed from its loosely disposed position within its associated slot, and means for mounting said roller support member on one of said coupling plates whereby said rollers define a uniform rolling bearing for said one coupling plate to thereby facilitate relative rotation of said plates.

3,091,502
THERMALLY BALANCED PISTON
Richard W. Cass, Huntington Park, Calif., assignor to Harvey Aluminum (Incorporated), Torrance, Calif., a corporation of California
Filed Aug 15, 1960, Ser. No. 49,763
2 Claims. (Cl. 309—9)



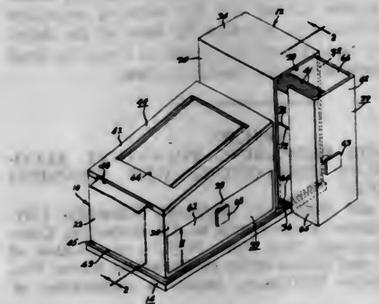
1. A piston for operation in the cylinder of an internal combustion engine and wherein it absorbs heat from the burning gases and including, a head portion and surrounding ring portion of substantially heavy cross-section, a skirt portion of substantially light cross-section and depending from the head portion and a lower terminal end portion separate from the said skirt portion, and circumferentially spaced longitudinal axially disposed ribs contiguous with all of said portions and extending from the head and ring portion and along said skirt portion and joining the separate end portion to the skirt portion, said ribs being thin-shaped and adapted to dissipate heat from all of said portions and into surrounding fluids and whereby there is heat conduction from the head and ring portion downwardly toward the said end portion of the piston.

3,091,503
FLOATING PLATFORM LOCK-DOWN MECHANISMS FOR SPOOLER TROUGHS AND DOFF TRUCKS
James Glenn Fisher, Box 350, Hartwell, Ga.
Filed Mar. 30, 1961, Ser. No. 99,384
11 Claims. (Cl. 312—71)



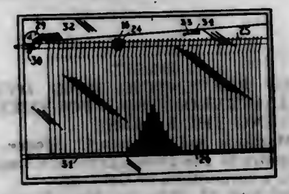
1. A textile handling apparatus including a receptacle having an open top, side and end walls and bottom forming means, a floating support means in the receptacle embodying a follower platform and supporting spring means for and constantly urging the platform upwardly, the platform being movable from a fully elevated position to at least two lowered positions and being securable in each of said lowered positions, a lock-down mechanism for the support means comprising cooperating latch and keeper elements, one element being operatively coupled with the platform and the other element being supported by said bottom forming means, said elements being adapted to move relatively to one another into a coupled platform securing relationship upon movement of the platform to a first one of said two lowered positions, means for guiding one of said elements into said coupled relationship with the other element while the platform is moving downwardly into said first one of said lowered positions, and means for effecting uncoupling of the latch and keeper elements while the platform is moving downwardly beyond said first one of said lowered positions to the second one of said lowered positions.

3,091,504
RECIPE CABINET
McWhite Harnsberger, 23 E. Wynnewood Road, Wynnewood, Pa.
Filed Feb. 20, 1961, Ser. No. 90,301
1 Claim. (Cl. 312—231)



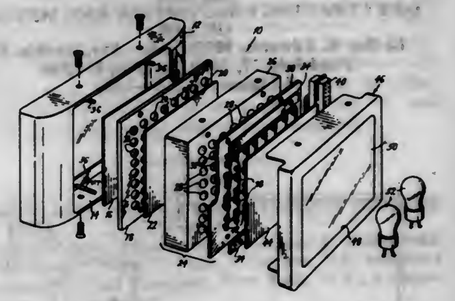
A cabinet consisting of front and rear sections, said front section including a front wall, a rear wall of greater height than said front wall, side walls connecting said front and rear walls, a memorandum pad assembly supported at an inclined angle on the upper edge of said front, rear and side walls and means defining a drawer opening in one of said side walls, said rear section comprising spaced front and rear walls of greater height than said rear wall of said front section, an end wall connecting said front and rear walls, means defining an upright drawer opening in said rear section opposite said end wall, a tray for supporting said front and rear sections with the rear wall of the front section and the front wall of the rear section in abutting relation, a drawer movably mounted in each of said drawer openings in said front and rear sections, said drawer comprising a generally rectangular front panel, an end panel connected to an end edge of said front panel and projecting generally transversely thereof, at least one side panel connected to one of the longitudinal side edges of said front panel coextensive in length therewith and projecting generally transversely thereof in the same direction as said end panel, said side panel being co-extensive in depth with said end panel, and an elongated retaining member connected at one end to the other of said longitudinal side edges of said front panel and at its other end to said side panel, said retaining member adapted to retain cards in the drawer and permit viewing thereof while in the drawer, the end of said drawer opposite said end panel being open to permit insertion and removal of cards therethrough.

3,091,505
MEANS OF RECORDING AND/OR DISPLAYING PHYSICAL MAGNITUDES
Paul Bernard Reaser, New Orleans, La. (19901 Nordhoff, Northridge, Calif.)
Filed Aug. 29, 1960, Ser. No. 52,513
3 Claims. (Cl. 346—29)



1. A hydromagnetic recording system comprising in combination, a sensing member embodying a bellows, a precision spring, means associating said spring with said bellows for conjoint action therewith, said bellows and said spring being expandible in response to changes in a variable condition, a connecting tubing attached to one end of the bellows, a precision cylindrical tubular element, said tubing connecting said bellows and said tubular element, a magnetic piston in the form of a ceramic magnet in said element, said system being fluid filled, said piston being positionally responsive to said sensing member in accordance with the ratios of the diameters of the bellows and the magnetic piston, means supporting said tubular element, and an appreciable length thereof being free of attachment, a magnetic member external and closely adjacent to said tubular element and magnetically coupled to said piston for movement therewith, and a recording element coupled to said external magnetic member.

3,091,506
DATA RECORDER
James C. Brown, Lancaster, Calif., and Lloyd M. Boustwell, Kirkwood, Mo., assignors to McDonnell Aircraft Corporation, St. Louis County, Mo., a corporation of Maryland
Filed June 13, 1960, Ser. No. 49,115
8 Claims. (Cl. 346—107)



1. A recorder device comprising a film housing, a film positioned in the housing, a first colored filter positioned adjacent to said film, means for producing illumination images in preselected areas of the film, said last named means including a mounting member positioned adjacent to the first colored filter and having a plurality of holes extending therethrough in optical communication with different preselected areas of the film through said filter, a gas filled bulb capable of producing light when energized positioned in each of said holes, individual signal generating means connected to each of said bulbs and capable of energizing said associated bulbs to produce light in

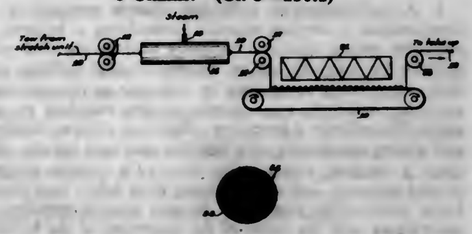
response to a preselected external electrical condition, a second colored filter positioned adjacent to the mounting member on the opposite side thereof from the film and in optical communication with the gas filled bulbs in the holes, and means for partially ionizing the gas in the bulbs including a light source positioned adjacent to said second filter, said light source being positioned to produce illumination in said holes and to thereby partially ionize the gas in the gas filled bulbs, said first colored filter having a different color than the second colored filter.

CHEMICAL

3,091,507
METHOD OF PREVENTING RING DYEING IN AQUAGEL ACRYLONITRILE POLYMER FIBERS BY STEAMING THE FIBERS

Stanley A. Murdock and Thomas C. Spence, Concord, Calif., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

Filed Aug. 27, 1956, Ser. No. 606,500
5 Claims. (Cl. 8—130.1)

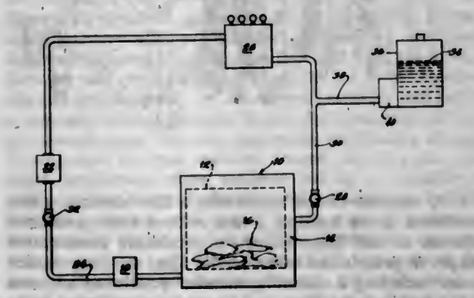


1. A conditioning method for improving the dyeability of wet salt-spun and stretched so as to be at least partially oriented fibers comprised essentially of fiber-forming acrylonitrile polymers that contain in the polymer molecule at least about 85 weight percent of polymerized acrylonitrile which method comprises subjecting said fibers, while they are in aquagel form and under positive, non-elongating tension in an incompletely free-to-shrink condition, to steam under an absolute pressure between about 20 pounds per square inch and a higher pressure less than that under which said aquagel fibers would dissolve for a period of time between about 0.5 second and 0.5 hour; then drying said treated fibers.

3,091,508
DRY CLEANING COMPOSITION AND METHOD OF USE

Le Roy B. Edwards, 9022 Karlov Ave., Skokie, Ill.

Filed July 27, 1959, Ser. No. 829,584
8 Claims. (Cl. 8—142)



7. In a method of dry cleaning textile materials in an organic dry cleaning solvent system which includes the steps of washing the textile material in a dry cleaning solvent system by circulating the solvent system through a washer containing the textile material, filtering the dry cleaning solvent after passage through the washer, and returning the filtered dry cleaning solvent system to the washer, wherein the dry cleaning solvent system consists essentially of an organic solvent as a base, 0.25–10 parts by weight of detergent per 100 parts by weight of solvent, 0.2–10 parts by weight of a polyhydric alcohol polymer per 100 parts by weight of solvent, and 0.5 parts by weight of water per 100 parts by weight of the dry cleaning composition, the improvement of continuously introducing a concentrate of the detergent and polyhydric alcohol polymer in the proportions present in the dry cleaning composition to the dry cleaning solvent system during the dry cleaning operation in an amount to correspond to about the amount removed from the dry cleaning solvent system during the dry cleaning operation thereby continuously to maintain the level of the detergent in the dry cleaning solvent system at about the level originally present in the dry cleaning system.

3,091,509
METHOD FOR PREPARING POLYVINYL ALCOHOL FIBERS EMPLOYING WET SPINNING TECHNIQUES

Teruo Suda and Sadamaru Miyazaki, Kurashiki City, Japan, assignors of one-fourth to Air Reduction Company Incorporated, New York, N.Y., a corporation of New York, and three-fourths to Kurashiki Rayon Co., Ltd., Okayama Prefecture, Japan, a corporation of Japan

No Drawing. Filed Apr. 4, 1960, Ser. No. 19,479
Claims priority, application Japan Apr. 7, 1959
11 Claims. (Cl. 18—54)

1. The method of preparing polyvinyl alcohol fibers which comprises forming an aqueous polyvinyl alcohol spinning solution containing polyvinyl alcohol in an amount suitable for wet spinning of fibers and containing an additive selected from the group consisting of sodium carboxymethyl cellulose, sodium alginate and gum arabic in the amount of 2 to 30% by weight based on the weight of the polyvinyl alcohol in said solution and sufficient to improve the dyeing properties of fibers formed from said solution, and wet spinning said solution into a coagulating liquid effective to coagulate said polyvinyl alcohol in said solution to form fibers.

5. The method of claim 1, wherein said coagulating liquid is an aqueous sodium sulfate solution.

3,091,510
PROCESS OF PREPARING LINEAR TEREPHTHALATE POLYESTER STRUCTURES

Eugene B. McCord and Paul T. Scott, Kinston, N.C., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Mar. 16, 1962, Ser. No. 180,355
7 Claims. (Cl. 18—54)

1. The process of preparing a structure having a potential for spontaneously and irreversibly extending in length upon heating which comprises forming the structure by extruding a molten linear terephthalate polyester through an orifice, cooling the extruded structure until it solidifies, pulling the structure away from the extrusion orifice to orient it within the birefringence range of 0.01 to 0.06, and subsequently heating said structure at a temperature above about 65° C. while the structure is held at constant length.

3,091,511
PROCESS OF DEODORIZING

Edward J. Calhoun, Lake Success, N.Y., assignor to Pharmaceutical Food & Drugs Associates, Inc., New York, N.Y., a corporation of New York

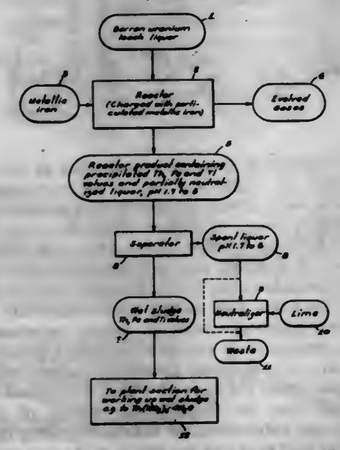
No Drawing. Filed Oct. 9, 1961, Ser. No. 143,532
3 Claims. (Cl. 21—55)

1. The process of deodorizing offensive odors arising from malodorous substances which comprises contacting the said malodorous substance with an ester selected from the class consisting of phenyl salicylate and the salicylic acid ester of p-acetylaminophenol.

3,091,512
THORIUM RECOVERY FROM BARREN URANIUM LEACH LIQUORS

Richard A. Mock and William N. Vanderkooi, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

Filed Dec. 15, 1959, Ser. No. 859,817
4 Claims. (Cl. 23—14.5)



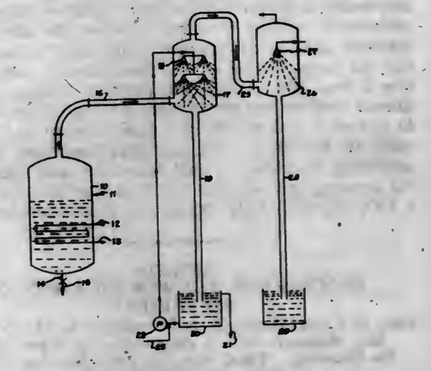
1. In a process for recovering thorium values from acidic barren uranium leach liquor containing thorium, ferric iron and phosphate in aqueous solution, said phosphate being held in a form soluble in the presence of thorium, the improvement which comprises bringing the said barren leach liquor into intimate contact with a bed of metallic iron substantially in the absence of air and for a time sufficient whereby phosphate is transformed from said soluble form so that a sludge containing thorium phosphate is precipitated, and separating the thorium phosphate containing sludge from the so-processed barren leach liquor.

3,091,513
FLUORINE RECOVERY

William R. Parish, Bartow, Fla., assignor to Swift & Company, Chicago, Ill., a corporation of Illinois

Filed Aug. 1, 1960, Ser. No. 46,770
6 Claims. (Cl. 23—153)

1. A process for the recovery of fluorine compounds from vapors produced by the concentration of aqueous phosphoric acid, said vapors containing water vapor and fluorine compounds mainly in the form of HF and SiF_4, which comprises: vaporizing constituents of said aqueous phosphoric acid under a vacuum of at least about five inches of mercury to produce vapors containing mainly water and substantial amounts of HF and SiF_4, scrubbing said vapors while maintaining said vacuum with an aqueous fluorine-compound-absorbing liquid at an elevated temperature substantially that of said vapors, said aqueous fluorine-compound-absorbing liquid being capable of absorbing said HF and SiF_4 so as to form a fluosilicic acid solution having a concentration of at least 5%, whereby the condensation of the water vapor is substantially avoided, and recovering said fluosilicic acid in said aqueous fluorine-compound-absorbing liquid.



3,091,514
PRODUCTION OF DEAD BURNED MAGNESIA

Earl Leatham, Wexford, and Albert H. Pack, Pittsburgh, Pa., assignors to Harbison-Walker Refractories Company, Pittsburgh, Pa., a corporation of Pennsylvania

No Drawing. Filed Mar. 17, 1961, Ser. No. 96,375
7 Claims. (Cl. 23—201)

1. In a method of making dense dead burned magnesia from a magnesium chloride brine containing at least about 10 grams of $MgCl_2$ per liter, the steps comprising spraying the brine into the upper end of a tower while passing upwardly a heated gas inert to magnesia, the gas being at a temperature between about 1700° and 2200° F. in an amount such that in passing through the tower the $MgCl_2$ of the brine is decomposed to HCl and caustic calcined MgO from which all free and substantially all chemically combined water are driven off, briquetting the caustic calcined magnesia, and thereafter heating the briquettes to at least about 2700° F. and thereby producing dense dead burned magnesia.

3,091,515
METHOD FOR PRODUCING TITANIUM DIOXIDE PIGMENTS

Horace F. Dantro, Perth Amboy, Anthony T. Kalinowski, Colonia, and Walter T. Siuta, Metuchen, N.J., assignors to National Lead Company, New York, N.Y., a corporation of New Jersey

No Drawing. Filed Sept. 14, 1961, Ser. No. 137,993
7 Claims. (Cl. 23—202)

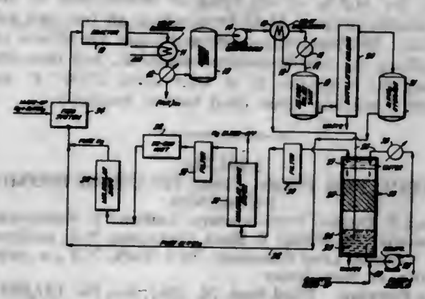
1. A two stage process for producing a TiO_2 pigment of high purity and color brightness from titaniferous iron materials comprising the steps of: digesting said titaniferous iron material in concentrated sulfuric acid to form an initial digestion cake, dissolving said initial digestion cake in aqueous media to produce an initial titanium sulfate iron sulfate solution, the ratio of digestion cake to said aqueous media being adjusted such that the concentration of said initial sulfate solution is from 80 to 180 grams per liter TiO_2, reducing the iron values in said solution to the ferrous state, heating said solution in the presence of nuclei to precipitate an initial titanium hydrate having a

filtering rate of from 1.0 to 2.0 grams TiO_2 per second, deliquoring said initial titanium hydrate to produce an initial filter cake having from 40% to 60% solids, digesting said initial filter cake in concentrated sulfuric acid in the ratio of from 1.3 to 2.5 parts sulfuric acid for each part filter cake on a TiO_2 basis to form a final digestion cake, dissolving said final digestion cake in aqueous media to produce a final titanium sulfate solution, filtering the undissolved residues from said solution, the ratio of final digestion cake to said aqueous media being adjusted such that the concentration of said final titanium sulfate solution is from 200 to 300 grams per liter, heating said final filtered titanium sulfate solution in the presence of nuclei to hydrolyze and precipitate a final titanium hydrate substantially free from color degrading impurities, and then separating to produce a final filter cake, washing, bleaching, treating and calcining said final filter cake to produce a TiO_2 pigment of high purity and color brightness.

3,091,516
PROCESS FOR THE PURIFICATION OF TELLURIUM
John B. Conn, Westfield, N.J., assignor to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey
No Drawing. Filed Nov. 25, 1960, Ser. No. 71,402
6 Claims. (Cl. 23—209)

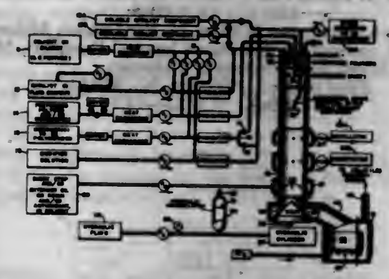
1. A process of preparing elemental tellurium of a high degree of purity which comprises intimately contacting impure tellurium with an amount of zinc in excess of the amount of zinc required to form soluble zinc telluride in a solution of alkali metal hydroxide of sufficient strength to prevent precipitation of zinc telluride, oxidizing said telluride ion with an oxidizing agent selected from the group consisting of a halogen and oxygen to form crystals of tellurium and recovering the solid tellurium thus formed.

3,091,517
METHOD FOR RECOVERY AND RECYCLING HYDROGEN AND SILICON HALIDES FROM SILICON DEPOSITION REACTOR EXHAUST
John P. Short, Garland, and James L. Fischer, Dallas, Tex., assignors to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware
Filed Nov. 25, 1959, Ser. No. 855,327
9 Claims. (Cl. 23—210)



1. The method of recovering and purifying hydrogen and silicon halides from a gaseous mixture containing those substances and hydrogen halide which comprises cooling the gaseous mixture to a sufficiently low temperature to condense those components of the mixture boiling at a higher temperature than said silicon halides, compressing and cooling the remaining components of said gaseous mixture to condense a major portion of said silicon halides therefrom, bubbling the uncondensed gas through a body of liquid caustic maintained at a pH greater than about 12 to prevent precipitation of solid silicon materials, passing the uncondensed gas from said liquid caustic countercurrent through a downflowing caustic solution having a pH greater than about 12 to prevent precipitation of solid silicon material, and finally removing water vapor and oxygen from said uncondensed gases to leave substantially pure hydrogen.

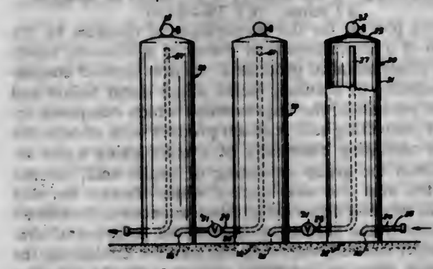
3,091,518
CONTINUOUS POLYMERIZATION APPARATUS
Austin E. Kiser, Pontiac, Oskar E. H. Klopfer, Clawson, and Oliver W. Burke, Jr., Grosse Pointe Park, Mich., assignors, by direct and mesne assignments, to Continental Oil Company, Ponca City, Okla., a corporation of Delaware
Filed Nov. 6, 1957, Ser. No. 694,757
5 Claims. (Cl. 23—285)



1. Polymerization apparatus comprising an inlet end, a mixing zone, an outlet end and a polymerization zone intermediate said mixing zone and said outlet end, said ends and zone being all aligned along the same longitudinal axis forming an elongated straight tube, fluid conduit means discharging into said apparatus upstream of said polymerization zone for feeding reaction constituents under pressure into said mixing zone comprising at least catalyst and monomer material, means for mixing said reaction constituents in said mixing zone, a pressure controlled valve at said outlet comprising a generally conically shaped head, the apex of which is disposed on said longitudinal axis for dividing the stream of polymer formed in said polymerization zone and guiding it toward the walls of said tube and the outlet, said apparatus being closed except for said feeding means and said pressure controlled valve to permit the interior of said apparatus to be maintained at an elevated pressure fixed by said pressure controlled valve.

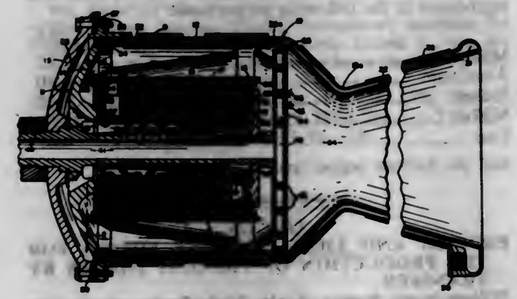
3,091,519
REACTION CHAMBER SYSTEM
Philip G. Hebner, Seattle, Wash., assignor to The Chemithon Corporation, Seattle, Wash., a corporation of Washington
Filed Mar. 2, 1959, Ser. No. 796,398
4 Claims. (Cl. 23—285)

1. A reaction device consisting of at least two identical reactors in series, said reactors each having an outlet and inlet means wherein the outlet means of one of said reactors connects to the inlet means of the other of said reactors, each of said reactors consisting essentially of a substantially vertical chamber having a base and a top and only three openings therein, the ratio of the internal length of said chamber to the internal periphery thereof being greater than unity, a liquid inlet means positioned in one of said openings at the lowermost portion between the ends of the longitudinal axis of said chamber and terminating near the base thereof for introducing a liquid reaction mixture into said chamber, a liquid outlet means positioned in another of said openings of said chamber and having an intake portion near the top of said chamber for removing the liquid reaction mixture from the chamber, and an exhaust valve secured in the third of said openings, said chamber being adapted



to be filled to the level of said intake portion of said liquid outlet means with said liquid reaction mixture, said outlet means further including a conduit having an effluent end remote from said intake portion, said effluent end functioning as an inlet means for the next reactor in the series.

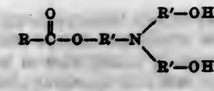
3,091,520
RADIAL OUTFLOW CATALYTIC PACK
Floyd A. Newburn, Woodland Hills, Calif., assignor to North American Aviation, Inc.
Filed Dec. 19, 1958, Ser. No. 783,641
3 Claims. (Cl. 23—288)



1. A catalytic screen pack assembly comprising a forward support plate, a rear support plate spaced from and in parallel alignment with said forward support plate, a series of co-extensive abutting alternate catalytic and inert annular screens parallel to and in the space between said support plates, said series comprising at least one catalytic screen adjacent said plates for preventing a fluid by-pass thereat, means laterally holding said screens between said support plates, and a constant velocity fluid inlet means at the inner annular periphery of said screens for passing a substantially constant fluid flow radially through said screens to the exterior periphery thereof.

3,091,521
GASOLINE COMPOSITION
Chiau-wei Liao, Beachwood, Ohio, assignor to The Standard Oil Company, Cleveland, Ohio, a corporation of Ohio
No Drawing. Filed May 3, 1960, Ser. No. 26,437
2 Claims. (Cl. 44—66)

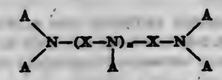
1. A gasoline for minimizing carburetor deposits containing a deposit minimizing amount within the range of 0.001 to 1.0 weight percent of a compound selected from the formula:



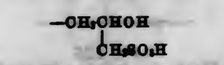
wherein R represents a radical selected from the group consisting of alkyl, alkenyl and alicyclic radicals containing from 7 to 21 carbon atoms and R′ is an alkyl radical containing up to 5 carbon atoms.

3,091,522
METHOD AND COMPOSITION FOR IMPROVING SOIL
John B. Hemwall, Long Beach, Calif., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed Apr. 27, 1959, Ser. No. 808,902
10 Claims. (Cl. 71—1)

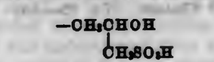
1. The method of enhancing the growth of plants in soil which comprises, adding to the soil in which the plant is growing a small amount of an iron chelate of a chelating agent having a formula corresponding to the following:



wherein, X represents a central spacer moiety selected from the group consisting of alkylene and cycloalkylene radicals which interpose 2–3 carbon atoms between the indicated nitrogen atoms; A represents a moiety selected from the group consisting of —CH_2COOH,



as the free acid, alkali metal and ammonium base salts; at least one and not more than two of the A positions being occupied by a



group; *n* is an integer in the range 0–4, and maintaining the amount of said composition at a level of about 0.01 to 100 parts per million of chelated iron thus added in the soil.

3,091,523
PROCESS OF PRODUCING HIGH-NITROGEN, LOW-CHLORIDE NITRAPHOSPHATE COMPLETE FERTILIZERS
Joseph A. Smith, Richmond, and Stanford R. Young, Hopewell, Va., assignors to Allied Chemical Corporation, New York, N.Y., a corporation of New York
No Drawing. Filed Aug. 22, 1960, Ser. No. 50,883
5 Claims. (Cl. 71—37)

1. The process of producing high-nitrogen, low-chloride nitraphosphate complete fertilizers which comprises: step 1, treating phosphate rock with an acid from the group consisting of nitric acid and mixtures of nitric and phosphoric acid containing at least 50% nitric acid in the proportions of from about 8 to about 20 equivalents of acid per mol of P_2O_5 in the phosphate rock; step 2, incorporating potassium sulfate in the acidulated mixture in amount to produce a final product containing from about 8% to about 14% K_2O and ammoniating the acidulated material employing from about 0.6 to about 0.8 mol of ammonia per equivalent of acid and enough water so that the ammoniated material leaving the ammoniation treatment contains about 20% to about 30% by weight of water, the ammoniation being carried out at a rate

of 1.5% to 3% per minute based upon the total ammonia introduced into the acidulated mixture until 50% to 60% of the total ammonia is added, then at below 0.8% per minute based upon said total ammonia until 70% to 80% of said total ammonia is added, and completing the addition of the ammonia at a rate not exceeding about 3% per minute based upon said total ammonia; and step 3, drying the resultant miture to produce a fertilxizer containing not more than about 2% by weight of water.

3,091,524
METALLURGICAL PROCESS

Arthur F. Johnson, Boulder, Colo., assignor to Strategic Materials Corporation, Buffalo, N.Y., a corporation of New York

No Drawing. Filed Oct. 23, 1959, Ser. No. 848,197
4 Claims. (Cl. 75—24)

1. In a process for upgrading molten basic slags containing desired metals by removing unwanted impurities therefrom, the improvements which comprise;

(*a*) contacting said slag with a molten alloy within an electric furnace and at a suitable smelting temperature;

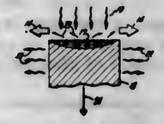
(*b*) carbonaceously reducing into said alloy as much of the desired metal as is required to simultaneously reduce said unwanted impurities from said slag; and

(*c*) blowing an oxygen-containing gas into the alloy to reoxidize at least a major portion of the desired metal back into the slag and retaining a major portion of impurities in the metal, whereby said slag is freed of unwanted impurities with only a small loss of the desired metal.

3,091,525
DEOXIDATION OF REFRACTORY METAL

Charles d'A. Hunt, Orinda, Calif., assignor to Stauffer Chemical Company, New York, N.Y., a corporation of Delaware

Filed May 1, 1959, Ser. No. 810,338
13 Claims. (Cl. 75—84)



1. A process for removing an oxygen impurity from a high melting temperature refractory metal selected from the group consisting of hafnium, molybdenum, tungsten, columbium and tantalum which comprises steps of heating said refractory metal in a highly evacuated atmosphere to form a molten pool of solvent metal, selecting a purifying solute metal having a greater affinity than said solvent metal for said oxygen from the group of metals consisting of zirconium, titanium, columbium and tantalum, said solute metal forming with said oxygen a compound having a substantially greater volatility than said solvent metal whereby said compound readily vaporizes out of said solvent metal pool in said highly evacuated atmosphere, incorporating within said molten pool of solvent metal a minor amount of said solute metal sufficient to combine with a substantial amount of said oxygen, said solute metal being not more than 10^4 more volatile than said solvent metal to cause it to remain within said pool long enough to form said compound with a substantial amount of said oxygen, and maintaining said pool at a temperature high enough to readily vaporize out said compound and low enough to substantially retain said solvent metal in said pool.

3,091,526
HIGH-PURITY TITANIUM PRODUCTION

Robert M. Fowler, Niagara Falls, and Arnold R. Gahler, Lewiston, N.Y., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Jan. 8, 1957, Ser. No. 632,970
4 Claims. (Cl. 75—84.5)

1. In a process for the preparation of titanium by the reaction of a stoichiometrical excess of a titanium halide and an alkali metal to produce a reaction product consisting essentially of titanium metal, alkali metal halide and titanium subhalide, the improvement which comprises intimately contacting said reaction product with an aqueous solution consisting essentially of a complexing agent selected from the group consisting of oxalic acid, tartaric acid, citric acid and salts thereof which liberate the acid anions in solution dissolved in dilute aqueous hydrochloric acid whereby the formation of a stable complex of titanium ion is effected; removing the solution containing the complexed titanium ion from contact with the titanium metal; washing the titanium metal whereby residual complexing agent is substantially removed; and drying the washed titanium metal.

3,091,527
COPPER BASE ALLOYS PARTICULARLY SUITED FOR PRECISION RESISTANCE

Daniel D. Pollock, Lansdale, Pa., assignor to Leeds and Northrup Company, Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Filed Jan. 27, 1961, Ser. No. 85,220
14 Claims. (Cl. 75—159)

1. A precision resistance alloy having a low temperature coefficient of resistance composed of the following ingredients in the following proportions:

	Percent by weight
Manganese	10.92
Aluminum	4.30
Indium	2.00
Nickel	1.63
Iron	0.075

and the balance copper and incidental impurities.

3,091,528
PROCESS AND LIGHT-SENSITIVE SHEETS FOR THE PRODUCTION OF PIGMENT IMAGES BY TRANSFER

Willem Marie Buskes, Venlo, Netherlands, assignor, by mesne assignments, to Chemische Fabrik L. van der Grinten N.V., Venlo, Netherlands, a limited-liability company of the Netherlands

Continuation of application Ser. No. 341,198, Mar. 9, 1953. This application Aug. 19, 1958, Ser. No. 756,744
19 Claims. (Cl. 96—28)



1. A photographic process for the production of a pigment image on a receiving surface, which comprises imagewise exposing to actinic light a sheet comprising a support carrying adherently but transferably over only one of its sides a composite structure consisting essentially of visually perceptible pigment matter linked to a sensitive organic colloid material containing a compound which upon exposure to actinic light materially alters an adhesion power possessed by said material upon a wetting thereof, said compound being selected from the group consisting of light-sensitive diazo compounds and light-sensitive azido compounds, at least pigment matter containing parts of said structure being adherable to said receiving surface with a strength greater than that of

their adherence to other parts of the sheet, and thus being transferable bodily from said support to said receiving surface, by a wetting of said structure followed by a pressing of said receiving surface against the outer surface of said structure and a separation of said receiving surface from said outer surface; by said exposing subjecting said material imagewise to said light until said light has divided said structure imagewise into two distinct groups of latent image portions respectively lying in the exposed and the relatively unexposed areas of said structure and so differing in their adhesion powers that the image portions of one of said groups, including at least in part the portions of said pigment matter located in the corresponding areas of said structures, are selectively adherable to said receiving surface, and selectively transferable, as aforesaid; after said exposing wetting said structure and rendering pigment matter containing parts of one only of said groups of latent image portions more adhesive to said receiving surface than to the other parts of said sheet; then pressing said receiving surface against said outer surface; and thereafter separating said receiving surface from said outer surface and thereby selectively severing and transferring from the other parts of said sheet at least parts of said one group of image portions, including at least in part the portions of said pigment matter located inthe corresponding areas of said structure, in the form of a pigment image obtained in adherence to said receiving surface without further development.

3,091,529
PROCESS AND LIGHT-SENSITIVE SCREEN-SHEETS FOR THE PRODUCTION OF PIGMENT IMAGES BY TRANSFER

Willem Marie Buskes, Venlo, Netherlands, assignor, by mesne assignments, to Chemische Fabrik L. van der Grinten N.V., Venlo, Netherlands, a limited-liability company of the Netherlands

Continuation of application Ser. No. 341,197, Mar. 9, 1953. This application Aug. 19, 1958, Ser. No. 756,745
23 Claims. (Cl. 96—28)



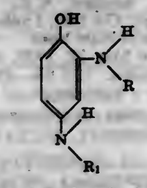
1. A photographic process for the production of a pigment image on a receiving surface, which comprises imagewise exposing to actinic light a light sensitive sheet, said sheet comprising a support carrying adherently but transferably over only one of its sides a composite structure consisting essentially of a reflectographic light screen and photographically light-sensitive material linked to the light impervious parts of said screen, said material being substantially free of grains that scatter said light and comprising a colloidal binder and a compound which upon exposure to said light materially alters an adhesion power of said binder, said screen being composed of a myriad of light impervious screen parts interspersed with screen areas pervious to said light, said screen parts comprising visually perceptible pigment matter, at least pigment matter containing parts of said structure being adherable to said receiving surface with a strength greater than that of their adherence to said support, so as to be transferable bodily from said support to said receiving surface, and the adherability thereof to said receiving surface being substantially changeable imagewise by imagewise exposing said material to actinic light so that the exposure forms in the exposed and the relatively unexposed areas of said structure, respectively, distinct groups of latent image portions possessing at least as to pigment matter containing parts thereof materially different degrees of adherability to said receiving surface; after the exposure pressing said receiving surface against the image side of said sheet and rendering at least pigment matter containing parts of one only of said groups more strongly adherent to said receiving surface than to the other parts of said sheet; and thereafter separating said receiving surface from said image side and thereby selectively severing and transferring from the other parts of said sheet at least parts of said one group of latent image portions, including pigment matter of said screen parts contained in said one group, in the form of a pigment image obtained in adherence to said receiving surface without further development.

3,091,530
PHOTOGRAPHIC PRODUCTS, PROCESSES AND COMPOSITIONS

Milton Green, Newton Highlands, Meroe M. Morse, Boston, and Myron S. Simon, Newton Center, Mass., assignors to Polaroid Corporation, Cambridge, Mass., a corporation of Delaware

Filed Dec. 21, 1959, Ser. No. 861,127
8 Claims. (Cl. 96—29)

1. A photographic process which comprises the steps of underexposing a photosensitive silver halide emulsion with respect to its A.S.A. exposure index to produce therein a latent image having an exposure gradient in the toe region of the A.S.A. density versus log exposure curve of said silver halide emulsion; developing said emulsion with an aqueous alkaline solution of a silver halide developing agent of the formula:



wherein one of R and R_1 is a hydroxybenzyl group, and the other of R and R_1 is hydrogen, and the diaminophenol nuclear substituted halogen derivatives thereof; contacting unexposed and undeveloped silver halide therein with a silver halide solvent to form an imagewise distribution of soluble silver complex; transferring at least part of said imagewise distribution, by imbibition, to a superposed image-receiving material containing a silver precipitating agent; and there precipitating transferred soluble silver complex to provide a silver print of full pictorial density to said image-receiving material.

3,091,531
HARDENING GELATIN-SILVER HALIDE LITHOGRAPHIC OFFSET PRINTING PLATES

Thomas E. Callear and Merrill W. Killick, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Feb. 23, 1961, Ser. No. 90,924
8 Claims. (Cl. 96—33)

1. The method of preparing a lithographic printing plate having good lithographic ink receptivity and durability, which comprises forming by exposure and development in a gelatino silver-halide emulsion layer of unhardened gelatin a hardened gelatin image, transferring the unhardened gelatin portions of said emulsion layer to a lithographic printing plate which will repel greasy printing inks when wet with water, wetting the surface of the printing plate and transferred gelatin image with a solution containing approximately 4–10% of tannic acid and approximately 10–20%, based on the weight of the tannic acid, of a sulfonic acid salt selected from the group consisting of the water-soluble salts of 1-naphthol-8-sulfonic acid, 2-naphthol-7-sulfonic acid and p-phenol-

sulfonic acid, and then wetting the surface of the printing plate with water and placing it in an offset printing press.

3,091,532

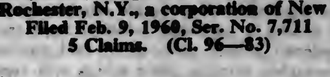
VESICULAR IMAGE PHOTOGRAPHY PROCESS WITH POLYKETONE PHOTOGRAPHIC FILMS

John D. Michaelsen, Los Gatos, Calif., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

No Drawing. Filed Dec. 30, 1960, Ser. No. 79,584
8 Claims. (Cl. 96—48)

1. A photographic process comprising:

exposing a film containing a polyketone of the monomer having the structural formula:



where R is selected from the group consisting of methyl, ethyl and propyl, and R^1 is selected from the group consisting of secondary and tertiary propyl, butyl and pentyl to image defining light effective to de-polymerize the polyketone in the exposed area of the film; and

vaporizing the monomer with heat to form a refractive image in the exposed area of the film.

3,091,533

DEVELOPER COMPOSITION FOR A LIGHT SENSITIVE LITHOGRAPHIC PLATE

George R. Hodgins, Seaford, N.Y., assignor to Litho Chemical and Supply Co. Inc., Lynbrook, Long Island, N.Y., a corporation of New York

No Drawing. Filed May 22, 1958, Ser. No. 736,966
2 Claims. (Cl. 96—49)

2. A developer for a light-sensitized lithographic plate comprising the following constituents in substantially the following proportions:

Water	17 gallons, 86 ounces.
Gum arabic solution 14° Baumé	3 gallons, 15 ounces.
Wetting agent 10% aqueous solution by weight	4 gallons, 20 ounces.
Phosphoric acid 85% aqueous solution, by weight	315 milliliters.
An alcohol selected from the group consisting of n-hexyl alcohol, n-heptyl alcohol, n-octyl alcohol, 2-octanol and decanol	15.9 ounces.
A developer-promoting substituted phenol selected from the group consisting of p-chlorophenol, pentachlorophenol, 2,3,4,6-tetrachlorophenol, 2-chloro-4-phenyl phenol, 2,4,6-trichlorophenol, 2,4,5-trichlorophenol and o-phenyl phenol	16.6 ounces.

3,091,534

STRIPPING FILM FOR IMPROVED EMULSION

Gale F. Nadeau, Carl F. Smith, and Clemens B. Starck, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

Filed Feb. 9, 1960, Ser. No. 7,711
5 Claims. (Cl. 96—83)



1. A stripping film comprised of

(1) a cellulose acetate temporary support,

(2) a stripping layer selected from the group consisting of glue and gelatin on one surface of said temporary support,

(3) a composite permanent support on the stripping layer consisting of

(*a*) a cellulose nitrate layer and

(*b*) a cellulose acetate butyrate layer, said cellulose nitrate layer being positioned adjacent and on a surface of the stripping layer, and

(4) a light-sensitive silver halide emulsion layer on said composite permanent support.

3,091,535

PHOTOGRAPHIC FILM ELEMENT WITH ANTIHALATION LAYER

Clifford E. Milner, Jr., Rochester, N.Y., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Dec. 31, 1959, Ser. No. 863,085
6 Claims. (Cl. 96—84)

1. A translucent photographic print film comprising

(1) transparent hydrophobic copolymer film base,

(2) a translucent layer on one surface of the base comprising dispersed finely divided particles of an inert inorganic white pigment having an average particle size in the range 0.1 to 2.0 microns in a water-permeable macromolecular organic colloid of high molecular weight as a binding agent, there being 30 to 50%, by weight, of colloid and 50 to 70%, by weight, of said pigment,

(3) a photographic silver halide emulsion layer on the translucent layer, and on the other surface of the base

(4) an antihalation layer comprising a water-permeable colloid binding agent, bleachable colloidal antihalation material and finely divided particles of the white pigment and having the particle size defined in layer (2), said antihalation layer having a coating weight of 40 to 80 mg. per sq. dm. of colloid, there being present about 50 to 70% of the white pigment and about 0.25 to 10% of the antihalation material, based on the colloid.

3,091,536

PHOTOGRAPHIC FILMS COMPRISING A SYNTHETIC RESIN SUPPORT

Vincenzo Rusignuolo and Luciano Lucchetti, Terni, Italy, assignors to Montecatini Societa Generale per l'Industria Mineraria e Chimica, Milan, Italy, a corporation of Italy

No Drawing. Filed Jan. 5, 1959, Ser. No. 784,869
Claims priority, application Italy Jan. 10, 1958
16 Claims. (Cl. 96—87)

11. As a new article of manufacture, a photographic film comprising a support formed of crystalline polypropylene consisting prevailingly of isotactic macromolecules, an outer layer of gelatin containing a silver halide and, disposed between the outer layer and support, and anchoring the two together, at least one intermediate layer at least one of which consists essentially of a strongly adhesive binder having a composition selected from the following (*a*) a mixture of a low molecular weight polypropylene consisting prevailingly of atactic polypropylene containing substituent group selected from the group consisting of sulfonic, chloro, and chlorosulfonic groups in a proportion such that the total combined sulfur in the polypropylene is from 0.5% to about 5% by weight and the total combined chlorine is not higher than 10%, with a polymer selected from the group consisting of polystyrene, polyalkyleneimines, polyamides and copolymers of styrene and maleic anhydride; and (*b*) the low molecular weight polypropylene containing the substituent groups as recited under (*a*).

3,091,537

HARDENING OF PHOTOGRAPHIC LAYERS

Donald M. Burness, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed May 4, 1959, Ser. No. 810,571
6 Claims. (Cl. 96—111)

1. A photographic element comprising a layer which contains gelatin and bis-(2,3-epoxypropyl)-methyl propyl ammonium paratoluene sulfonate as a hardener for the gelatin.

3,091,538

HIGH PROTEIN WHEAT PRODUCT AND METHOD OF PRODUCING THE SAME

Tewfic Zacharia, Beirut, Lebanon, assignor to Proto, International Hygienic Food Co., a collective company of Lebanon

No Drawing. Filed Apr. 11, 1960, Ser. No. 21,090
7 Claims. (Cl. 99—90)

1. A wheat product of high protein content and good baking properties when made into a dough, comprising defatted soya flour and wheat endosperm in which starch has been removed therefrom in an amount from about 5 to about 85% by weight of the starch initially present in the endosperm by contacting said endosperm with water, the defatted soya flour being in an amount from about 10 to 80 parts per 100 parts of the endosperm based on dry weight basis.

3,091,539

METHOD OF PRODUCING CHEESE

Toichi Chikuma, Kawagoe City, Japan, assignor to Goro Chikuma, Chiba City, Japan

No Drawing. Filed Dec. 2, 1960, Ser. No. 73,204
Claims priority, application Japan July 10, 1960
3 Claims. (Cl. 99—116)

1. A method of producing casein which comprises the steps of coagulating milk to prepare a curd, adding a starter and a coagulator, then freezing the resulting product at a temperature below freezing, subjecting said frozen curd to melting in warm water, and then compressing to dehydrate.

3,091,540

GARNET GEMSTONES

James W. Nielsen, Berkeley Heights, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

No Drawing. Original application Aug. 25, 1959, Ser. No. 836,008. Divided and this application Sept. 7, 1961, Ser. No. 136,443
7 Claims. (Cl. 106—42)

1. A single crystal gem of the garnet structure consisting essentially of a compound represented by the formula $Y_3Ga_5O_{12}$ and at least one additive selected from the group consisting of Cr_2O_3, Co_3O_4, mixtures of TiO_2 and Co_3O_4, Mn_2O_3, NiO and mixtures of Fe_2O_3 and Co_3O_4, said additive being present in an amount within the following range

	Percent
Cr_2O_3	0.10–12
Co_3O_4	0.001–2
TiO_2	0.10–10
Mn_2O_3	0.01–3
NiO	0.01–0.1
Fe_2O_3	0.01–1

the said percentage being the ratio of the number of mols of additive to the sum of the number of mols of additive and gallium oxide employed in preparing the said crystal.

3,091,541

METHOD FOR MAKING WATER-SOLUBLE SHEET FILM

Martin E. Rowley, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed July 12, 1961, Ser. No. 123,440
6 Claims. (Cl. 106—187)

1. A flowable film-forming solution essentially consisting of a water soluble cellulose derivative selected from the group consisting of cellulose acylate alkali metal sulfates and cellulose alkyl ether alkali metal sulfates, the acyl and alkyl groups of which contain 1–4 carbon atoms, and a solvent mixture essentially consisting of 2–30% water and 98–70% of an organic solvent selected from the group consisting of lower aliphatic alcohols containing 1–4 carbon atoms, methylene chloride, acetone and their mixtures, capable of producing a transparent, water-soluble film upon evaporation of the solvent from a layer of the solution.

3,091,542

INSOLUBILIZATION OF WATER-SOLUBLE CELLULOSE ETHERS

Arthur W. Anderson, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Sept. 20, 1960. Ser. No. 57,110
8 Claims. (Cl. 106—188)

1. A composition of matter consisting essentially of a water-soluble cellulose ether and about 1 to 30% by weight of a diglycidyl ether of a polyoxyalkylene glycol containing about 2 to 20 oxyalkylene units, each of which units contains two to three carbon atoms.

3,091,543

PAVING COMPOSITIONS AND METHODS OF MAKING THE SAME

Edmund O. Rhodes, Pittsburgh, Pa., assignor to Curtiss-Wright Corporation, a corporation of Delaware

Filed July 23, 1959, Ser. No. 829,041
4 Claims. (Cl. 106—279)

1. A method of making paving cement, comprising in combination the steps of mixing at room temperature approximately 90% of distilled coke-oven tar having a softening point of 33° C. with approximately 10% of finely ground bituminous coal, heating said mixture in an autoclave without pressure to approximately 400° F. to remove water and low-boiling distillates, then heating said mixture under approximately 20 p.s.i. pressure to approximately 600° F., maintaining said mixture under said pressure at a temperature between 600° F. and 620° F. for approximately one hour to fully digest said coal in said tar and to form a homogeneous composition thereof, cooling said composition to approximately 400° F., releasing said pressure, and recovering the digestion product.

3,091,544

CRYSTALLINE SOLID SOLUTIONS WITH SILICON DIOXIDE STRUCTURES AS HOST COMPONENTS

Franz Hund, Krefeld-Urdingen, and Walter Delsmann, Krefeld, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Aug. 1, 1960, Ser. No. 46,378
Claims priority, application Germany Aug. 5, 1959
12 Claims. (Cl. 106—288)

1. A crystalline solid solution having a silica structure which consists of a compound selected from the group consisting of silicon dioxide, aluminum phosphate, and boron phosphate as a host component and which contains as a guest component at least one oxide of an element selected from the group consisting of pentavalent phos-

phorus, arsenic and vanadium, as well as compounds selected from the group consisting of oxides and fluorides of metals having a valence of at most four, which have an ionic radius between 0.23 A. and 0.98 A. with a statistical average ionic radius of the incorporated cations of 0.26 A. to 0.59 A., the ratio of the sum of the added cations to the sum of the added anions being about 1:2, while preserving a statistical electronic neutrality in the lattice.

3,091,545

INK COMPRISING A METHACRYLATE POLYMER AND A NITROALKANE SOLVENT AND VINYL CHLORIDE POLYMER PRINTED THEREWITH

George M. Adams, Palos Heights, Ill., assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Filed June 4, 1958, Ser. No. 739,684
19 Claims. (Cl. 117—38)

10. A non-offsetting, non-blocking ink for printing on plasticized vinyl chloride film plasticized with a solvent extractable plasticizer, said ink consisting essentially of pigment, a solid methacrylate polymer selected from the group consisting of methyl methacrylate homopolymer, ethyl methacrylate homopolymer, and copolymers of methyl methacrylate and ethyl methacrylate, and as a volatile organic solvent for the methacrylate polymer a nitroalkane.

3,091,546

TWO COMPONENT PRINTING INK AND METHOD

Charles Schmall, Chicago, Ill., assignor to Continental Can Company, Inc., New York, N.Y., a corporation of New York

No Drawing. Filed Apr. 11, 1961, Ser. No. 102,133
11 Claims. (Cl. 117—45)

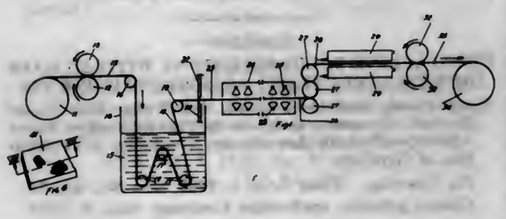
1. The method of providing a dry, hard, nonbrittle coating film upon metal, competent of withstanding a temperature in excess of 400 degrees F. without significant discoloration, which comprises applying a first coating of a solution of an alkyd resin having organic monobasic acid modification and being itself non-drying, applying thereover and while the first coating is in wet form, a second coating of themosetting amine-aldehyde resin in solution in a strong solvent compatible with the modified alkyd resin, whereby the coatings become blended, and heating to expel solvents and effect polymerization of the amine-aldehyde resin.

3,091,547

METHOD OF IMPARTING A PERMANENT FORM TO RESIN-IMPREGNATED WEBBING

Robert T. Jones, Barrington, Ill., assignor to Jones Products Company, Barrington, Ill., a corporation of Illinois

Filed Jan. 8, 1959, Ser. No. 785,616
9 Claims. (Cl. 117—65.2)



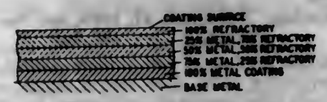
1. In a method for preparing an article comprising a woven webbing impregnated with a thermoplastic, resinous composition wherein the webbing is first impregnated with a plastisol resinous composition, the impregnated webbing is then heated to fuse the resinous composition and convert it to a state in which, while still hot, it is dimensionally stable but easily deformed permanently by mechanical means, and wherein the impregnated webbing is substantially cooled to set the resinous composition, the steps which include: deforming the hot fused resinous composition mechanically prior to cooling it to shape the article accurately to a predetermined dimension; and then cooling the dimensioned article while out of contact with solid surfaces to avoid further deformation of the resinous composition.

3,091,548

HIGH TEMPERATURE COATINGS

Harold Phillips Dillon II, Indianapolis, Ind., assignor to Union Carbide Corporation, a corporation of New York

Filed Dec. 15, 1959, Ser. No. 859,591
5 Claims. (Cl. 117—70)



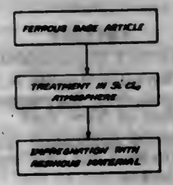
1. An article of manufacture adapted for exposure to extreme high temperature oxidation, erosion and thermal shock which comprises a base material having a dense lamellar composite coating of metal and refractory material adherently bonded thereto, such composite coating consisting of at least five layers wherein the innermost layer next to the object contains the greatest volume percent of metal, the outermost layer contains the greatest volume percent of refractory material, and wherein the composition in volume percent of each constituent in a given layer does not vary more than 25 volume percent from the composition in volume percent of the same constituent in an adjacent layer.

3,091,549

RESINOUS COATING OF SILICONIZED IRON

Jerome J. Kanter, Palos Park, Ill., assignor to Crane Co., Chicago, Ill., a corporation of Illinois

Filed May 18, 1960, Ser. No. 29,775
8 Claims. (Cl. 117—75)



1. The method for producing a corrosion resistant ferrous article which comprises contacting a ferrous base article with a siliconizing reagent containing silicon tetrachloride at elevated temperatures and for a time sufficient to inoculate the outer portions of said article with silicon and form a porous surface, and impregnating the silicon inoculated porous surface of the article with a synthetic resinous material.

3,091,550

ADSORBENT COMPOSITIONS AND METHOD OF COATING THEREWITH

Ernest G. Doying, Lakewood, Ohio, assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Sept. 24, 1958, Ser. No. 762,902
6 Claims. (Cl. 117—76)

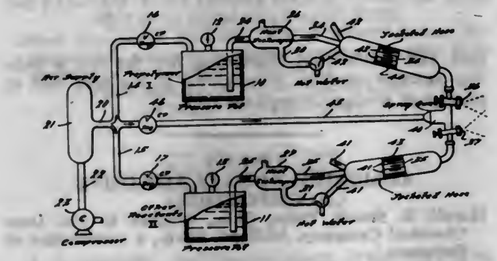
1. A method of forming adsorbent coatings on semi-rigid surfaces, which method comprises forming a mixture of thixotropic consistency from 100 parts by weight in the aggregate of activated carbon and of a desiccant selected from the group consisting of synthetic zeolite, silica gel and alumina, from 5 to 20 parts of water-insoluble, water-dispersible binder selected from the group consisting of methyl cellulose, hydroxyethyl cellulose, polyvinyl acetate, polyvinyl chloride, polystyrene and styrene-butadiene copolymers about 350 parts of water, applying said mixture over aforesaid semi-rigid surface and drying said coated surface at a temperature less than the degrading temperature of the binder.

3,091,551

PROCESS OF SPRAYING A POLYETHER-BASED POLYURETHANE FOAM

Earl J. Robertson, Trenton, Mich., assignor to Wyandotte Chemicals Corporation, Wyandotte, Mich., a corporation of Michigan

Filed Nov. 25, 1960, Ser. No. 71,826
13 Claims. (Cl. 117—105.5)



1. A method of coating a solid surface with a stable rigid polyether-based solvent-blown polyurethane foam which comprises spraying:

(*a*) a polyoxyalkylene addition product of a polyhydric alcohol having from 2–6 hydroxyl groups inclusive, having a molecular weight between about 270 and 1200 and an equivalent weight between about 90 and 300;

(*b*) a tetra(hydroxyalkyl)alkylene diamine having a molecular weight between about 220 and 400 and an equivalent weight between about 55 and 100;

(*c*) an organic polyisocyanate;

(*d*) a wetting agent;

(*e*) a blowing solvent; and

(*f*) a catalyst selected from the group consisting of triethylene diamine, dibutyltin diacetate, dibutyltin dilaurate, dibutyltin di-2-ethylhexoate, stannous octoate, stannous oleate, and mixtures of the foregoing; and impinging the spray, said spray containing a maximum of 0.5% by weight of added water, as an intimate mixture upon a common solid surface whereby substantially immediate foaming and adherence of foam is effected on said common surface, the following further conditions being maintained:

(*g*) the over-all NCO/OH equivalent ratio being between about 0.8/1 and 1.2/1;

(*h*) the ratio of respective equivalents of said tetra(hydroxyalkyl)alkylene diamine to said polyoxyalkylene addition product of a polyhydric alcohol being between about 0.75/1 and 6/1;

(*i*) the average equivalent weight of said polyoxyalkylene addition product of a polyhydric alcohol and said tetra(hydroxyalkyl)alkylene diamine combined being between about 80 and 130; and

(*j*) the separation of said tetra(hydroxyalkyl)alkylene diamine and said organic polyisocyanate until commencement of spraying.

3,091,552

PROCESS FOR INCREASING THE RESISTANCE OF POLYACRYLONITRILE FIBERS TO DISCOLORATION

Vera Isabella Furness, Coventry, England, and Hector Douglas Mackenzie, Mhlambanyati, near Mbabane, Swaziland, assignors to Courtaulds Limited, London, England, a British company

No Drawing. Filed Apr. 28, 1961, Ser. No. 106,181
Claims priority, application Great Britain May 6, 1960
4 Claims. (Cl. 117—138.8)

1. A process for increasing the resistance of polyacrylonitrile fibres to discoloration, comprising applying to the never-dried fibres in an aqueous medium a reducing agent which has no adverse effect on the fibre.

3,091,553

PROCESS FOR THE PRODUCTION OF A MOISTURE-PERMEABLE FILM OF PLASTIC MATERIALS

Tsunetaka Matsumoto, Ikutaka, Kobe, and Norio Kato and Keizo Sumitani, Kanaiwa, Kanazawa, Japan, assignors to Sanzen Seishi Kabushiki Kaisha, Kanaiwa, Kanazawa, Japan

No Drawing. Filed Nov. 20, 1961, Ser. No. 153,705
Claims priority, application Japan Nov. 25, 1960
13 Claims. (Cl. 117—138.8)

1. A process for the production of a moisture-permeable film of a plastic material which comprises:

(*a*) uniformly and discontinuously adhering to the surface of a film of plastic material fine particles of a solvent for the plastic material, the viscosity and the surface tension of the solvent being adjusted to effect said uniform and discontinuous adhesion; and

(*b*) heating the film with the solvent particles adhered thereto, thereby to effect dissolution of the plastic material at the loci on the film where said particles are adhered with resultant increase in the moisture-permeability of the film.

3,091,554

OXIDATION RESISTANT CELLULOSIC PELLICLE AND PROCESS FOR THE MANUFACTURE THEREOF

Charles M. Rosser, Wallingford, and Richard A. Glinski, Clifton Heights, Pa., assignors to American Viscose Corporation, Philadelphia, Pa., a corporation of Delaware

No Drawing. Filed July 1, 1960, Ser. No. 40,149
8 Claims. (Cl. 117—144)

1. A method of improving the oxidation resistance of a non-fibrous cellulosic pellicle which comprises impregnating said pellicle with a reducible compound of a metal selected from the group consisting of gold, silver and copper, reducing said compound of a metal to precipitate a colloidal metal in situ within said pellicle, and treating said pellicle with an alkali metal borohydride solution at a weight ratio of about 1 part borohydride to from 2 to 50 parts cellulose.

3,091,555

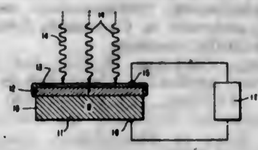
METHOD FOR FORMING LOW REFLECTANCE COATINGS OF CRITICAL THICKNESS ON SILICON SOLAR ENERGY CONVERTERS

Robert L. Smythe, Dallas, Tex., assignor to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware

Filed Sept. 8, 1960, Ser. No. 54,618
13 Claims. (Cl. 117—201)

1. A method for treating a device for converting solar energy into electrical energy comprising immersing an element of silicon having a P-type layer and an N-type layer into a solution of nitric acid, hydrofluoric acid, and

water, which solution contains less than about 0.5% nitric acid by volume, for a period of time according to color correlation sufficient to form a silicon monoxide



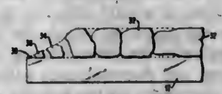
coating having a thickness of ¼ wavelength for light within a preselected wavelength range on the surface of said P-type layer.

3,091,556

METHOD FOR IMPROVING THE SHARP TRANSITION OF SUPERCONDUCTIVE FILMS

Marianne E. Behrndt, Whittier, Calif., and Gary R. Glodd and Merlyn H. Perkins, Saugerties, and Donald S. Weed, Hurley, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Nov. 25, 1959, Ser. No. 855,451
8 Claims. (Cl. 117—213)



1. A method for improving the sharp transition from the superconductive state to the resistive state of a thin layer of superconductive material comprising the steps of heating a substrate onto which a superconductive thin layer is to be deposited to a temperature between 70° C. and 110° C., maintaining said substrate at a temperature within such range, and then depositing thereon by vapor deposition a layer of superconductive material having a thickness of about 1000–10,000 angstroms.

3,091,557

METHOD OF CLEANING VULCANIZING MOULDS FOR THE MANUFACTURE OF RUBBER OBJECTS

Wilhelmus Adrianus Aloysius Heijmans and Carolus Gerardus Venis, both of Eindhoven, Netherlands, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Dec. 19, 1960, Ser. No. 76,474
Claims priority, application Netherlands Dec. 17, 1959
5 Claims. (Cl. 134—1)

1. A method of cleaning metallic vulcanizing molds for rubber products comprising heating the inner wall of said mold for a period of time and at a temperature so that any rubber that has adhered to the mold at least partly dissociates therefrom, and further supplying water to said mold and subjecting said mold to an ultrasonic cleaning treatment in said water while said mold is still hot.

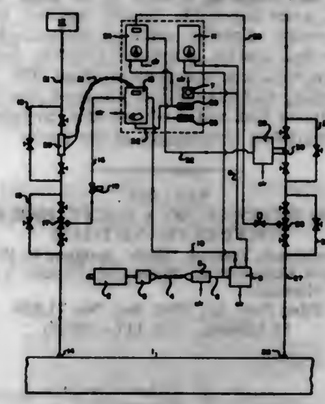
3,091,558

METHOD OF PICKLING

Eli Shay, Warren, Ohio, assignor to The Wean Engineering Company, Inc., Warren, Ohio, a corporation of Ohio

Original application Oct. 30, 1957, Ser. No. 693,369, now Patent No. 3,000,385, dated Sept. 19, 1961. Divided and this application Sept. 30, 1960, Ser. No. 59,531
3 Claims. (Cl. 134—15)

1. The method of pickling a product of great length which passes continuously through a pickling tank at variable speeds, which method comprises measuring the rate at which the product passes through the tank, determining therefrom the area rate of passage of product through the



tank, and continuously discharging into the tank a pickling agent in amounts proportional to the area rate of passage of product through the tank.

3,091,559

AMMONIUM NITRATE EXPLOSIVE COMPOSITION

Harold E. Staudt, Tulsa, Okla., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Jan. 5, 1959, Ser. No. 784,900
3 Claims. (Cl. 149—60)

1. An explosive composition consisting essentially of an admixture of from 55 to 97 percent by weight of particulate ammonium nitrate having a particle size of from about 8 to 100 mesh, from about 3 to 54 percent by weight of Diver's liquid, and from 0.3 to 6 percent by weight of water and containing in admixture from about 0.12 to 5 percent, based on the weight of the Diver's liquid plus the weight of water present, of a thickening agent consisting of a water soluble gum which is capable of forming a sol when admixed with water.

3,091,560

TIRE CORD ADHESION

Alfred L. Miller, Cranford, Francis P. Baldwin, Colonia, and Samuel B. Robison, Roselle, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

Filed Mar. 26, 1959, Ser. No. 802,105
3 Claims. (Cl. 154—52)



1. A process for treating nylon-containing fibrous material which comprises coating said material with a first layer of a carbon black-free latex comprising 0.5 to 20 parts by weight of a brominated isoolefin-multiolefin copolymer and about 0.5 to 50 parts by weight of a phenolic-aldehyde resin in 100 parts by weight water, said brominated copolymer comprising 85 to 99.5 weight percent C_4 to C_9 isoolefin and 15 to 0.5 weight percent C_4 to C_{10} multiolefin and containing at least about 0.5 weight percent bromine but not more than about 3 atoms combined bromine per double bond in the copolymer, drying said coated material, coating the dried material with a second layer of a cement consisting of about 1 to 25 weight percent of said brominated copolymer and about 5 to 80 parts by weight of carbon black per 100 parts brominated copolymer in C_5 to C_9 hydrocarbon solvent, and redrying said material to produce a coated material having improved adhesion to isoolefin-multiolefin rubbery copolymers.

3. The product of claim 1.

3,091,561

METALIZED FLATTENED GLASS STRAND AND METHOD OF MANUFACTURING

Alfred Marzocchi, Manville, and S Martin Billett, Esmond, R.I., assignors to Owens-Corning Fiberglas Corporation, a corporation of Delaware

Filed Sept. 11, 1957, Ser. No. 683,358
3 Claims. (Cl. 154—53.6)



3. A metalized, continuous-filament strand comprising a multiplicity of continuous glass filaments arranged in compacted, substantially parallel relationship and bonded together by a binder, a thin metal coating around only those portions of the peripheries of the outermost filaments which are adjacent only a substantial portion of the periphery of the strand, said coating extending continuously substantially over the entire lengths thereof, the filaments adjacent the remaining substantial portion of the periphery of said strand being entirely uncoated around their peripheries and over their lengths, and a thick, light transmissive, plastic coating over the entire outer surface of the strand and over the entire length thereof, said metal coating being visible through said plastic coating.

3,091,562

MARKING PLASTIC COVERS

Joseph C. Berlepsch, Jr., Orange, and Cornelius J. Crowley, New Haven, Conn., assignors to The Seamless Rubber Company, New Haven, Conn., a corporation of Connecticut

Filed Oct. 16, 1958, Ser. No. 767,589
5 Claims. (Cl. 156—245)



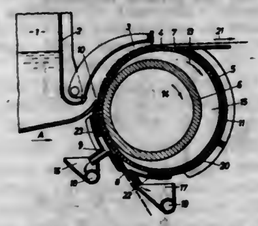
3. A process for making an athletic ball having a protected marking in the outer surface of the cover comprising the steps of preshaping at least a portion of the cover from a mass of thermoplastic resin dispersed in resilient plasticizer by heating the mass in a mold to a temperature high enough to permit preshaping and then cooling the preshaped portion of the cover, forming a thin, relatively transparent film by heating a thermoplastic resin dispersed in plasticizer to a temperature below the temperature necessary to fuse completely the thermoplastic resin and then cooling the dispersion in a thin film, the total area of the transparent film being less than the overall area of the outer surface of the cover, printing a marking in mirror image on the surface of the thin film, placing the side of the thin film having the marking printed thereon against the outer curved surface of the cover portion and the preshaped cover portions against the outer surface of a bladder, heating the assembly in a mold with the bladder inflated at a temperature high enough to fuse completely the thermoplastic resins of both the cover and the film to produce a mutual blend of the film with the outer surface of the preshaped cover so that the film loses its separate identity without distorting the marking on the film by flow of the thermoplastic resins within the mold, and cooling the cover to solidify it, thereby to produce an athletic ball in which the film is an integral part of the cover and not discernible to an observer.

3,091,563

METHOD OF AND APPARATUS FOR QUICKLY AND SAFELY WITHDRAWING WATER FROM FIBER SUSPENSIONS

Heribert Meyer, Chillicothe, Ohio, assignor to J. M. Voith G.m.b.H., Heidenheim (Brenz), Germany

Filed Aug. 10, 1959, Ser. No. 832,657
Claims priority, application Germany Aug. 14, 1958
16 Claims. (Cl. 162—217)



1. In the method of withdrawing large quantities of liquid from a dilute suspension, especially fiber suspension, for producing a fiber web in a web-forming zone of a foraminous or perforated hollow cylinder, the steps of: delivering the suspension to said web-forming zone on the outside of the cylinder, creating a reduced pressure on the inside of said cylinder in said web-forming zone, varying said reduced pressure from a minimum to a maximum continuously and steadily and in the direction of movement of the web being formed while maintaining said reduced pressure constant at any line extending across the width of said web being formed, exerting said reduced pressure on said suspension over said web-forming zone to withdraw liquid from the suspension into said cylinder, and discharging the drained-off liquid from the inside of said cylinder through the perforations thereof and across the entire width thereof.

3,091,564

INSECTICIDAL COMPOSITIONS

Heinz Frensch, Frankfurt am Main, Maximilian Czech, Hofheim, Taunus, and Ludwig F. Emmel, Bergen-Enkheim, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany, a corporation of Germany

No Drawing. Filed June 14, 1960, Ser. No. 35,887
Claims priority, application Germany June 19, 1959
2 Claims. (Cl. 167—30)

1. An insecticidal composition, comprising a mixture of one part of 1,2,3,4,7,7-hexachloro-bicyclo-[2,2,1]-heptene-(2)-bis-(5,6-oxymethylene)-sulfite and from three to five parts of 2,2-bis-(4'-chlorophenyl)-1,1,1-trichlorethane as active ingredient.

3,091,565

INSECTICIDAL COMPOSITIONS CONTAINING O,O - DIMETHYL - O - (3 - METHYL - 4 - NITROPHENYL) - THIONOPHOSPHATE

Shinichi Suzuki, Sakai City, and Kuniyoshi Fujii, Yoshihiko Nishizawa, and Tadaomi Kadota, Toyonaka City, Japan, assignors to Sumitomo Chemical Company, Ltd., Higashi-ku, Osaka, Japan, a corporation of Japan

No Drawing. Filed Aug. 19, 1960, Ser. No. 50,573
Claims priority, application Japan Sept. 23, 1959
8 Claims. (Cl. 167—30)

4. A method of killing insects which comprises contacting the insects with an insecticidal quantity of O,O-dimethyl-O-(3-methyl-4-nitrophenyl) thionophosphate.

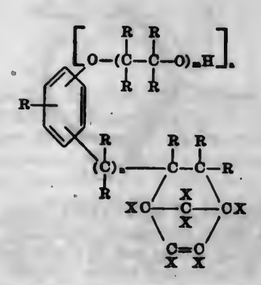
3,091,566

INSECTICIDAL COMPOSITIONS CONTAINING POLYOXYALKYLENE GLYCOL MONOETHERS OF PHENOLIC DERIVATIVES OF HALOCYCLOALKANES

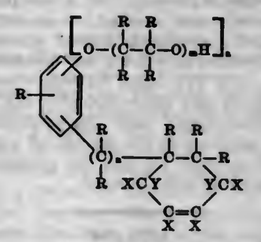
Louis Schmerling, Riverside, and Herman S. Bloch, Skokie, Ill., assignors to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

No Drawing. Filed Apr. 26, 1961, Ser. No. 105,562
6 Claims. (Cl. 167—30)

1. An aqueous insecticide containing from about 0.01% to about 20% by weight of a compound selected from the group having the generic formulae:



and



in which the R substituents are independently selected from the group consisting of hydrogen and alkyl radicals containing from 1 to about 6 carbon atoms, the X substituents are independently selected from the group consisting of hydrogen, halogen and alkyl radicals containing from about 1 to about 6 carbon atoms, at least one X being halogen, the Y substituents are independently selected from the group consisting of hydrogen, haloalkyl and alkyl radicals containing from 1 to about 6 carbon atoms, *a* is an integer from 1 to 2, *m* is a number of from 2 to about 20 and *n* is an integer of from 0 to about 8.

3,091,567

ENCAPSULATING AGENTS WITH CONTROLLED WATER REPELLENCY

Otto B. Wurzburg, Wallingford Station, William Herbst, North Plainfield, and Hubert M. Cole, Belmar, N.J., assignors of one-half to National Starch and Chemical Corporation, and one-half to Firmenich Incorporated, both of New York, N.Y., both corporations of Delaware

No Drawing. Filed Feb. 17, 1961, Ser. No. 89,933
12 Claims. (Cl. 167—42)

1. A method for entrapping water-insoluble substances which comprises making an aqueous dispersion of an encapsulating agent which forms water-repellent films upon drying, emulsifying in said dispersion the substance to be entrapped, and then drying the emulsion, producing particles which permit a slow, gradual release of the entrapped substance in the presence of moisture.

3,091,568

THERAPEUTIC PHTHALIMIDINES FOR RELIEVING COUGH AND PRODUCING ANESTHESIA

Oscar Bub, Ludwigshafen (Rhine), Germany, assignor to Knoll A.-G., Ludwigshafen (Rhine), Germany, a company of Germany

No Drawing. Filed May 6, 1960, Ser. No. 27,257
Claims priority, application Germany, May 8, 1959
3 Claims. (Cl. 167—55)

1. In a process of relieving cough, the step which comprises orally administering to a patient suffering from cough between about 10 mg. and about 120 mg. of the compound selected from the group consisting of 2-(2'-diethylamino ethyl)-3-phenyl phthalimidine and its pharmaceutically acceptable acid addition salts.

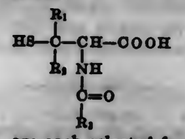
3,091,569

MUCOLYTIC-N-ACYLATED SULFHYDRYL COMPOSITIONS AND PROCESS FOR TREATING ANIMAL MUCUS

Aaron Leonard Sheffner, Evansville, Ind., assignor to Mead Johnson & Company, Evansville, Ind., a corporation of Indiana

No Drawing. Filed Aug. 26, 1960, Ser. No. 52,040
12 Claims. (Cl. 167—58)

1. A mucolytic process which includes the step of contacting animal mucus with an N-acylated sulfhydryl compound having the formula



wherein R_1 and R_2 are each selected from the group consisting of hydrogen and lower alkyl and R_3 is selected from the group consisting of lower alkyl and phenyl.

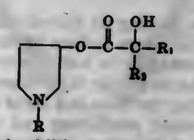
3,091,570

ANTIDEPRESSANT: 3-PYRROLIDYL GLYCOLATES

John H. Biel, Milwaukee, Wis., assignor to Lakeside Laboratories, Inc., Milwaukee, Wis., a corporation of Delaware

No Drawing. Filed Aug. 8, 1960, Ser. No. 47,897
4 Claims. (Cl. 167—65)

1. The method of inducing central nervous system stimulation and an antidepressive effect in a human which comprises administering to the human a compound of the formula



and nontoxic acid addition salts thereof wherein R is a member of the group consisting of hydrogen, lower alkyl, phenyl and phenyl-lower alkyl, R_1 is a member of the group consisting of phenyl, thienyl, pyridyl, cyclohexyl, cyclopentyl, cyclohexenyl, cyclopentenyl and cyclopentadienyl, and R_2 is a member of the group consisting of phenyl, cyclopropyl, cyclobutyl, cyclopentyl, cyclopentenyl, cyclohexenyl, cyclopentadienyl and thienyl.

3,091,571

EPIDEMIOLOGICAL ANTIMALARIAL PREPARATION AND METHOD OF ITS FORMATION

Martin E. Pollinger, Scarsdale, N.Y., assignor to Burroughs Wellcome & Co. (U.S.A.) Inc., Tuckahoe, N.Y., a corporation of New York

No Drawing. Filed Sept. 5, 1961, Ser. No. 136,195
Claims priority, application Great Britain Sept. 30, 1960
5 Claims. (Cl. 167—65)

1. A composition of approximately 45 to 55 parts of 2,4 - diamino-5-(p-chlorophenyl) - 6 - ethylpyrimidine and approximately 35 to 50 parts of 8-(4-amino-1-methylbutylamino)-6-methoxyquinoline, and a pharmaceutically acceptable carrier.

3,091,572

GENTAMYCIN AND METHOD OF PRODUCTION

George M. Luedemann, Bloomfield, and Marvin J. Weinstein, East Brunswick, N.J., assignors to Schering Corporation, Bloomfield, N.J., a corporation of New Jersey

Filed July 16, 1962, Ser. No. 211,153
14 Claims. (Cl. 167—65)

1. A method which comprises cultivating a microorganism of the group consisting of *Micromonospora purpurea* and *Micromonospora echinospora* in an aqueous nutrient medium under aerobic conditions until a composition of matter having substantial antibiotic activity is produced.

2. A method according to claim 1, wherein the organism is *Micromonospora purpurea* NRRL 2953.

3. A method according to claim 1, wherein the organism is *Micromonospora echinospora* NRRL 2985.

4. A method according to claim 1, wherein the organism is *Micromonospora echinospora* var. *ferruginea* NRRL 2995.

5. A method according to claim 1, wherein the organism is *Microsmonospora echinospora* var. *pallida* NRRL 2996.

9. A composition of matter effective in inhibiting the growth of gram-positive, gram-negative and acid-fast bacteria, selected from the group consisting of gentamycin and salts thereof, said gentamycin being a basic organic substance having the following elementary analysis: C=50.20%, H=8.52%, N=13.47%, O=27.81%, with no other elements present, that has a specific optical rotation as measured by the D line of sodium at 25° C. of 146° in water at 1% concentration, is very soluble in water aqueous acidic media, methanol, and acetone and substantially insoluble in ether, benzene and halogenated hydrocarbons; is transparent to ultra-violet light in the range of 220–400 millimicrons; has an infrared absorption spectrum when suspended in hydrocarbon oil in solid form substantially as shown in FIGURE 1; has a melting point of about 102°–108° C. with decomposition; has a molecular weight of about 543 as determined ebullioscopically in methanol; and has an antibacterial spectrum including the bacteria enumerated in Tables VIIA and VIIB.

3,091,573

QUICK ACTING INSULIN PREPARATION

Jørgen Schlichtkrull, Broenshoj, Denmark, assignor to Novo Terapeutisk Laboratorium A/S, Fuglebakkevej, Copenhagen, Denmark

No Drawing. Filed July 29, 1958, Ser. No. 751,636
Claims priority, application Denmark May 12, 1958
2 Claims. (Cl. 167—75)

1. A quick-acting insulin preparation suitable for injection into human beings, and characterized by being stable even during prolonged storage and by compatibility with insulin crystal suspensions having a protracted effect, consisting of a sterile solution of pig insulin in an aqueous injectable medium, said preparation having a pH-value of about 7 to 8 and containing ions of at least one metal selected from the group consisting of zinc, cobalt, nickel, and cadmium, in an amount of at least $5 \times A \times 10^{-3}$ but less than $13 \times A \times 10^{-2}$ milliequivalents per litre, wherein A represents the number of international units of insulin per millilitre of the preparation.

3,091,574

TABLET DISINTEGRANTS

Vincent Coletta, Westfield, and Robert B. Warfield, Irvington, N.J., assignors to Bristol-Myers Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Sept. 5, 1961, Ser. No. 135,800
15 Claims. (Cl. 167—82)

1. A tablet comprising a mixture of: (*a*) a water soluble material; (*b*) from about 2% to about 10% of an insoluble carboxylic cation exchange resin; and (*c*) from about 2% to about 10% of an insoluble quaternary ammonium anion exchange resin.

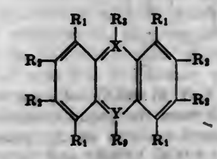
3,091,575

METHOD OF PREPARING Δ^1 STEROIDS

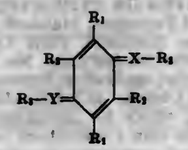
Louis I. Feldman, Spring Valley, and Chester E. Holmlund, Pearl River, N.Y., and Norma L. Barbacci, Montvale, N.J., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed June 6, 1961, Ser. No. 115,094
20 Claims. (Cl. 195—51)

1. A method for the improvement of fermentation processes containing a 1,2-dehydrogenating microbial system for the production of 1,2-dehydro steroids in which destruction of $\Delta^{1,4}$-3-keto steroids is inhibited which comprises adding as inhibitors a member selected from the group consisting of compounds containing chromium, molybdenum and tungsten and compounds containing the ortho and para quinonoid structure in the oxidized and reduced state of the formulas:



and



wherein X and Y are atoms selected from the group consisting of oxygen, nitrogen and sulfur, R_1 is selected from the group consisting of hydrogen, carboxylic acid, hydroxyl and halogen groups, R_2 is selected from the group consisting of hydrogen, hydroxyl and dimethylamino and R_3 when present is a member of the group consisting of hydrogen, methyl and p-hydroxyphenyl.

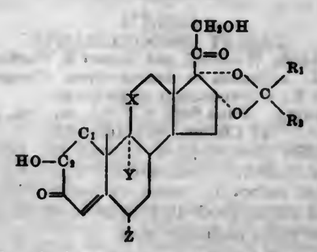
3,091,576

METHOD OF 2-HYDROXYLATING PREGNENES AND PREGNADIENES WITH STREPTOMYCES GRISEUS

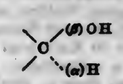
Louis I. Feldman, Spring Valley, N.Y., Neil E. Rigler, Ridgewood, N.J., Chester E. Holmlund, Pearl River, N.Y., and Barbara E. Nielsen, Ridgewood, N.J., assignors to American Cyanamid Company, Stamford, Conn., a corporation of Maine

No Drawing. Filed Apr. 27, 1962, Ser. No. 190,799
4 Claims. (Cl. 195—51)

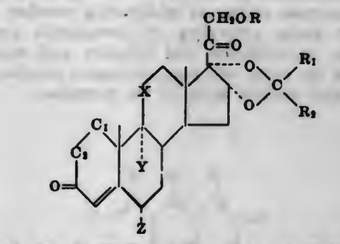
1. A process of preparing compounds having the formula:



wherein C_2—C_1 is a divalent radical selected from the group consisting of —CH_2—CH_2— and —CH=CH— radicals, X is a radical selected from the group consisting of



and O=C< radicals, Y and Z are selected from the group consisting of hydrogen and halogen atoms and R_1 and R_3 are lower alkyl radicals which comprises subjecting to oxidative fermentative conditions a steroid of the formula:



wherein R_1, R_2, X, Y, Z and C_2—C_1 are as defined above and R is selected from the group consisting of hydrogen and lower alkanoyl radicals in the presence of *Streptomyces griseus* (ATCC 13968) and recovering said compound therefrom.

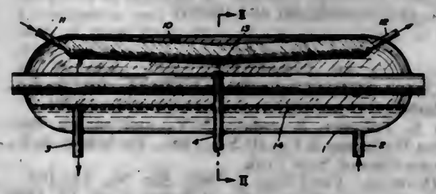
3,091,577

DEVICE FOR THE EXTREME PURIFICATION OF WATER OR OTHER LIQUID

Michel Pequignot, Malakoff, France
(184 Rue Nationale, Paris 13, France)

Filed May 25, 1959, Ser. No. 815,378
Claims priority, application France June 4, 1958
4 Claims. (Cl. 202—189)

1. A distilling device for purifying water to an impurity content less than 1 microgram per liter comprising a cylindrical vessel supporting the water to be purified having a horizontal axis, an admission tube mounted in said vessel to admit water therein, an overflow tube mounted in said vessel and displaced both horizontally from and vertically above said admission tube for maintaining the surface of the water in said vessel at a predetermined level, a longitudinal tubular condenser of a material selected from the group consisting of water insoluble silica glass and quartz, said condenser being formed by a single tube having an input and an output for supplying cooling liquid continuously thereto mounted in said vessel above the level of the water, said condenser arranged in the form of a V to concentrate the condensed water thereat, a receiver tube mounted in said vessel



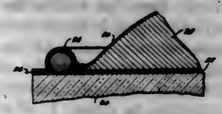
just below the apex of said V to collect the water condensed on said condenser and concentrated at the apex of said V, and an infrared heating means disposed above the level of the water for directing radiation onto and heating the surface of the water.

3,091,578

MECHANICAL BONDING LOCK

Robert D. Hetherington, La Crescenta, Calif., assignor to Electro-Optical Systems, Inc., Pasadena, Calif., a corporation of California

Filed June 19, 1961, Ser. No. 118,161
3 Claims. (Cl. 204—16)



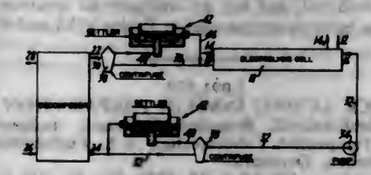
1. A method for contour ridging and, in successive platings, plating a flat base in a manner to insure interlocking the platings to each other and to the base, said method comprising the steps of: laying on a flat base a planar ridge-forming filament having a height greatly in excess of the final thickness of the platings and being of such a cross-section as to provide under surfaces angling down to said base to provide dove-tail recesses between the filament and the base; contouring said filament to be of the contour desired for the ridge; prime electroplating said base and said filament, such plating entering the dove-tail recesses under said filament; and further and thereafter separately electroplating said plated base and said plated filament, such second plating also entering the dove-tail recesses under said filament.

3,091,579

ELECTROCHEMICAL PROCESS AND APPARATUS WITH PURIFICATION OF MERCURY

Alexis G. Basilevsky, Sea Cliff, N.Y., assignor to Electrochemical Processes, Inc., New York, N.Y., a corporation of New York

Filed Mar. 2, 1960, Ser. No. 12,417
12 Claims. (Cl. 204—99)



1. An electrolysis system of the mercury cathode type for continuous electrolysis of a salt of a metal forming an amalgam with mercury with continuous purification of the mercury cathode which comprises, in combination, an electrolysis cell, a decomposing cell, a conduit connecting the amalgam discharge end of the electrolysis cell with the amalgam inlet end of the decomposition cell, a conduit connecting the mercury discharge end of the decomposing cell with the mercury inlet end of the electrolysis cell, a centrifuge connected in at least one of said conduits for receiving the fluid flowing therethrough, and a settling unit connected with each centrifuge for receiving a fraction of said fluid, said centrifuge being effective to separate the fluid which it receives into a heavier fraction and into a lighter fraction, and said settling unit being connected with the centrifuge to receive the lighter fraction therefrom.

3,091,580

CORROSION PROTECTION

Paul Shapiro, Chicago, and Lawrence V. Collings, Steger, Ill., assignors, by mesne assignments, to Sinclair Research, Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed July 30, 1958, Ser. No. 751,867
14 Claims. (Cl. 204—147)

1. In a system for cathodic protection where a ferrous metal object is made a cathode and exposed to an electrically conductive corrosive aqueous medium, the improvement which comprises adding to the corrosive aqueous medium a water-soluble salt of a metal selected from the group consisting of zinc, cadmium, manganese and mixtures of the same sufficient to make the medium at least about 0.0005 normal in the ion of said selected metal and impressing an electric current on the medium between anode and cathode, said current having a current density of about 1 to 50 milliamps. per square foot of ferrous metal surface to be protected, and a potential of about 0.2 to 1.5 volts between the anode and cathode to protect cathodically said ferrous metal against corrosion and being at least initially the minimum electric current required to liberate free metal from said salt.

3,091,581

FISSIONABLE FUEL CAPSULES AND METHOD OF MANUFACTURING SAME

Harold N. Barr and Louis Frank, Forest Park, Baltimore, Md., assignors to Martin-Marietta Corporation, a corporation of Maryland

Filed Mar. 3, 1958, Ser. No. 718,701
1 Claim. (Cl. 204—193.2)



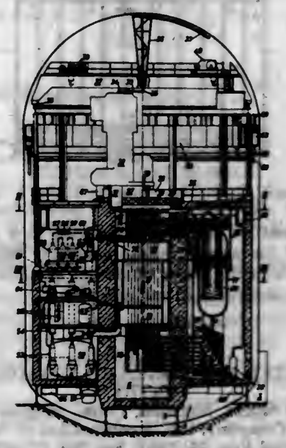
A fuel element for a nuclear reactor consisting of a cermet core of particles of an oxide of a fissionable metal uniformly dispersed and embedded in a continuous matrix of a material selected from the group consisting of aluminum, zirconium, molybdenum, zirconium carbide and molybdenum disilicide, the matrix material constituting at least about 50 percent of the volume of said core, and a seamless supporting envelope of essentially uniform thickness encasing said core and composed of a material as selected from said group selected for said continuous matrix, and said envelope being metallurgically bonded to said core.

3,091,582

NUCLEAR REACTOR SYSTEMS

Norman Bradley, Culcheth, near Warrington, England, assignor to United Kingdom Atomic Energy Authority, London, England

Filed Oct. 26, 1959, Ser. No. 848,720
Claims priority, application Great Britain Oct. 28, 1958
3 Claims. (Cl. 204—193.2)



1. A steam-cooled nuclear reactor installation comprising a reactor core structure penetrated by first, second and third groups of steam coolant conducting channels having steam inlets and steam outlets, nuclear fuel in the channels, first and second steam generating evaporators disposed external the core structure, said evaporators each having on one heat exchange side a feed water inlet and a generated steam outlet and on the other heat exchange side a heating steam inlet and a heating steam outlet, pipe means connecting the steam inlets of the first channel group in common with the generated steam outlets of the said evaporators, pipe means connecting the steam outlets of the said first channel group with the heating steam inlet of said first evaporator, pipe means connecting the heating steam outlet of said first evaporator with the steam inlets of the said second channel group, pipe means connecting the steam outlets of said second channel group with the heating steam inlet of the said second evaporator, pipe means connecting the heating steam outlet of the said second evaporator with the steam inlets of the said third channel group and means for supplying feed water to the feed water inlets of said first and second evaporators.

3,091,583

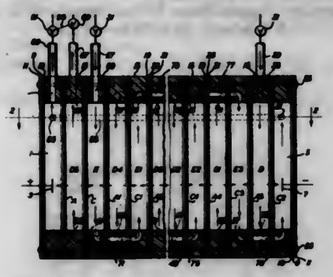
ELECTRODIALYSIS CELL

Joseph A. Schufle, Socorro, N. Mex., assignor to Aqua' Ionics, Inc., Albuquerque, N. Mex., a corporation of New Mexico

Filed Oct. 27, 1959, Ser. No. 848,958
3 Claims. (Cl. 204—301)

1. Apparatus for demineralizing water comprising a multi-compartmented cell providing a flow path for demineralized water and a separate flow path for enriched waste water, normally open inlets for supplying pressurized untreated water to each of said flow paths, each of said flow paths being closed and maintained under the pressure of the untreated water a valved outlet from each of said paths and means causing one of said valves

to open or close when the other of said valves is opened or closed whereby water will flow in said inlets when said valves are open and will stop flowing when said valves are closed, ion-exchange means separating the



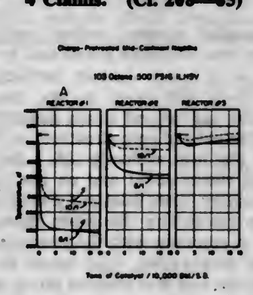
flow paths and an electrode positioned in a chamber at each end of the apparatus, the chambers being in communictaion with the water of one of the flow paths, for washing the electrodes in said chambers.

3,091,584

REGULATED HYDROGEN-TO-NAPHTHA MOL RATIO

Joe Kenneth Singer, Norwalk, Conn., assignor to Socony Mobil Oil Company, Inc., a corporation of New York

Filed Feb. 24, 1961, Ser. No. 91,465
4 Claims. (Cl. 208—65)



1. In the method of reforming naphtha in contact with platinum-group metal reforming catalyst in the presence of hydrogen which comprises in a plurality of reforming stages at reforming temperature, pressure, and liquid hourly space velocity contacting platinum-group metal reforming catalyst with charge naphtha containing not more than innocuous concentrations of sulfur, nitrogen and arsenic at a substantially constant mol ratio of added hydrogen-to-charge naphtha, separating reformer gas comprising hydrogen and C_1 and C_2 hydrocarbons from condensate comprising C_{5+} reformate, and recycling at least a portion of the aforesaid reformer gas to that reforming stage of the aforesaid plurality of reforming stages in which said charge naphtha first contacts the aforesaid catalyst, the predominant reaction in the early stages of the aforesaid plurality of reforming stages being endothermic and in the latter stages of the aforesaid plurality of reforming stages being exothermic, the improvement which comprises regulating the added hydrogen-to-charge naphtha mol ratio to not less than three and not more than seven in those stages of the aforesaid plurality of reforming stages in which the predominant reaction is endothermic and to at least eight in those stages of the aforesaid plurality of reforming stages in which the predominant reaction is exothermic.

3,091,585

METHOD OF PREPARING PETROLEUM FRACTIONS OF IMPROVED ODOR USING β-LACTONES.

George W. Ayers, Chicago, and William A. Krewer, Arlington Heights, Ill., assignors to The Pure Oil Company, Chicago, Ill., a corporation of Ohio

No Drawing. Filed May 3, 1961, Ser. No. 120,456
20 Claims. (Cl. 208—199)

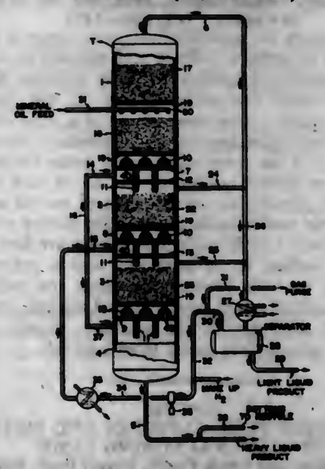
1. A method of preparing a petroleum fraction of improved odor, which comprises treating a mercaptan-containing petroleum fraction with a reagent consisting essentially of a β-lactone and an aqueous solution containing an alkali metal hydroxide.

3,091,586

HYDROFINING OF SHALE OIL

George F. Pappas, Westfield, and Donald D. MacLaren, Scotch Plains, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

Filed Dec. 15, 1959, Ser. No. 859,705
8 Claims. (Cl. 208—210)



1. In a process for hydrofining raw shale oil which remains partly in liquid phase under hydrofining conditions for decomposing nitrogenous organic components of the oil, the improvement which comprises vaporizing a light part of said oil as its remaining heavier liquid part is passed down through a bed of hydrofining catalyst in a first mixed phase zone under hydrofining conditions with H_2 treat gas passed up through said bed, passing vapors and treat gas from said bed to a vapor phase hydrofining zone containing hydrofining catalyst where said vapors are hydrofined free of liquid, flowing said heavier liquid part passed down through said first mentioned bed into a second mixed phase treating zone where said heavier liquid part passes down through a bed of hydrofining catalyst under hydrofining conditions and fresh treat gas passes countercurrently upward, and removing vapors with gas from an upper part of said second mixed phase zone in a manner which keeps them from admixing with the products of the other hydrofining zones.

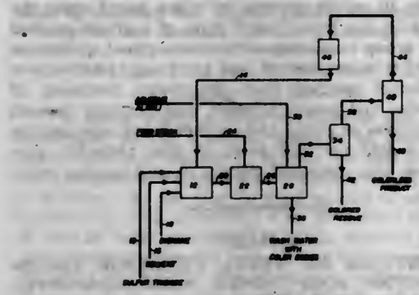
3,091,587

METHOD FOR TREATING HYDROCARBON MIXTURES

Donald L. Klass, Barrington, and Vincent Brozowski, Mundelein, Ill., assignors to The Pure Oil Company, Chicago, Ill., a corporation of Ohio

Filed Nov. 25, 1960, Ser. No. 71,665
20 Claims. (Cl. 208—293)

1. The process of decolorizing hydrocarbons which comprises contacting said hydrocarbons with sulfur trioxide complex and separating a substantially color-free product, said sulfur trioxide complex being a combination of sulfur trioxide with an organic agent having an atom



containing unshared electrons and capable of liberating sulfur trioxide at the decomposition temperature of the complex.

3,091,588

COMPOSITION AND METHOD FOR TREATING DRILLING FLUIDS

Fred W. Bishop, Lufkin, Tex., assignor, by mesne assignments, to Great Lakes Carbon Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Apr. 13, 1959, Ser. No. 805,675
10 Claims. (Cl. 252—8.5)

1. An aqueous hydratable clay-based drilling mud having improved high temperature viscosity control and gel strength characteristics and containing at least 1 lb./barrel of chlorinated lignin which is soluble in said mud, said chlorinated lignin being derived from a waste stream from the sulfate wood pulping process.

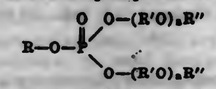
3,091,589

DRILLING FLUID

John S. Brukner, Houston, Tex., assignor to Texaco Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Mar. 15, 1961, Ser. No. 95,819
14 Claims. (Cl. 252—8.5)

1. An aqueous drilling fluid comprising clay dispersed in an aqueous phase and containing a minor amount in the range of from about 0.01 to 25 percent by weight of a non-ionic water soluble phosphate having the formula:



wherein R is an aliphatic hydrocarbyl group containing from 6 to 14 carbon atoms, R′ is a divalent aliphatic hydrocarbylene radical containing from 2 to 4 carbon atoms, R″ is a member selected from the group consisting of hydrogen and a lower aliphatic hydrocarbyl group containing from 1 to 5 carbon atoms, and *n* is an integer from 1 to 8.

3,091,590

HYDRAULIC FLUID COMPOSITION

Neal W. Furby and Charles D. Newman, Berkeley, Calif., assignors to California Research Corporation, San Francisco, Calif., a corporation of Delaware

No Drawing. Original application Aug. 28, 1953, Ser. No. 377,240. Divided and this application May 20, 1957, Ser. No. 660,054
1 Claim. (Cl. 252—78)

A power transmission fluid consisting essentially of 85 to 97% by weight of tetra-octyl orthosilicate and 3 to 15% by weight of dimethyl silicone polymer having a viscosity above 60,000 centistokes at 25° C.

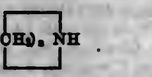
3,091,591

METHOD OF INHIBITING CORROSION

Norman Hackerman and Robert R. Annand, Austin, Tex., assignors to Texas Research Associates Corporation, a corporation of Texas

No Drawing. Filed May 16, 1960, Ser. No. 29,138
9 Claims. (Cl. 252—148)

1. A method for inhibiting the corrosion of ferrous metals in non-oxidizing alkaline and acidic corrodant systems, characterized by contacting such metals with at least one saturated cyclic imine of the formula



where *n* is an integer from 6 to 12.

3,091,592

HYDROUS OXIDE SOLS

Frederick T. Fitch, Baltimore, Moisés G. Sánchez, Glen Burnie, and Milton C. Vanik, Brookeville, Md., assignors to W. R. Grace & Co., New York, N.Y., a corporation of Connecticut

No Drawing. Filed Aug. 22, 1958, Ser. No. 756,547
8 Claims. (Cl. 252—301.1)

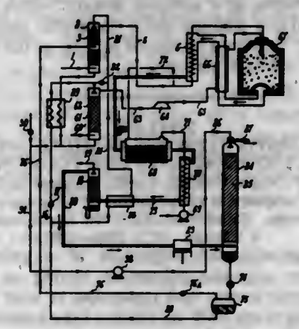
5. A hydrothermally stable concentrated hydrous oxide sol comprising up to 50% of spheroidal particles of colloidal dimensions and consisting essentially of a major portion of thoria having up to 10%, based on thoria, of urania distributed throughout the thoria and having a coating of inactivated silica in an amount sufficient to impart a negative charge to said particles, the thoria-urania to silica weight ratio being in the range of 10:1 to 1:1, said sol containing sufficient NaOH to maintain a pH of about 7.0–9.5 but being otherwise substantially electrolyte-free.

3,091,593

METHOD FOR PRODUCING MIXTURES OF HYDROGEN AND CARBON MONOXIDE

Marcel Jean, Paris, and Jacques Lelong, Mont-Saint-Aignan, France, assignors to Societe Chimique de la Grande Paroisse, Azote et Produits Chimiques

Filed Jan. 19, 1960, Ser. No. 3,308
Claims priority, application France Jan. 29, 1959
8 Claims. (Cl. 252—373)



1. A method for converting gaseous hydrocarbons into a mixture of hydrogen and carbon monoxide, comprising the steps of: washing a stream of a gas containing free oxygen with an aqueous washing liquid adapted to evolve carbon dioxide, thereby mixing said gas containing free oxygen with the carbon dioxide evolved from said aqueous washing liquid and yielding an aqueous washing liquid depleted of carbon dioxide, compressing the mixture of free oxygen containing gas and evolved carbon dioxide, mixing the gaseous hydrocarbons to be converted with said compressed gas mixture containing free oxygen and

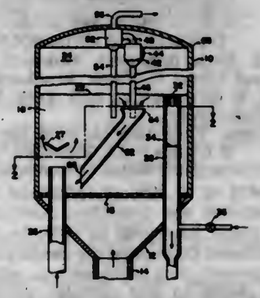
carbon dioxide, thereby obtaining mixed gases; submitting said mixed gases to a cracking operation, thereby obtaining converted gases; washing said converted gases with said aqueous washing liquid depleted of carbon dioxide, thereby absorbing carbon dioxide into said aqueous washing liquid; and recycling at least part of said aqueous washing liquid laden with carbon dioxide to said first mentioned washing step.

3,091,594

MIXING FINELY DIVIDED CONTACT PARTICLES IN A DENSE FLUID BED

Daniel S. Borey, Chatham, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware

Filed July 1, 1959, Ser. No. 824,426
6 Claims. (Cl. 252—417)



4. In a method of regenerating finely divided catalyst particles from a hydrocarbon conversion operation wherein catalyst particles are maintained in a dense fluidized condition in a regeneration zone by upflowing oxidizing gas and fouled catalyst particles to be regenerated are introduced into the lower portion only of said dense fluidized bed and at one side thereof and regenerated catalyst particles are withdrawn from the upper portion only of said dense fluidized bed, the improvement for minimizing afterburning which comprises circulating regenerated catalyst particles within said dense fluidized bed from near the region of withdrawal of regenerated catalyst particles to near the region of introduction of fouled catalyst particles as a confined stream within said dense fluidized bed and inclined to the horizontal between about 20° and 70° to obtain improved mixing of the fouled and regenerated catalyst particles.

3,091,595

CYANO-SUBSTITUTED POLYAMIDES AND THEIR USE AS CURING AGENTS FOR POLYEPOXIDES

Thomas F. Mika, Orinda, Calif., assignor to Shell Oil Company, a corporation of Delaware

No Drawing. Filed Mar. 22, 1956, Ser. No. 573,100
8 Claims. (Cl. 260—18)

1. A cyanoalkylated polyamide of a polycarboxylic acid and an aliphatic polyamine having at least two primary amino groups and possessing at least 12 carbon atoms having from 50% to 100% of the amine hydrogen replaced with $—CH_2CN$ groups.

3,091,596

WATER BEARING RESIN BINDERS, PROCESS FOR PREPARING SAME, AND SAND COATED THEREWITH

Bernard Freedman, Springfield, and Rodney M. Huck, Longmeadow, Mass., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed July 27, 1959, Ser. No. 829,508
22 Claims. (Cl. 260—19)

1. A one-phase liquid resin product adapted for coating foundry sands useful in producing shell molds and cores comprising in combination (*a*) an acid catalyzed novolac resin containing formaldehyde and a phenolic compound in proportions of from 0.5 to 0.8 mol of formaldehyde per mol of the phenolic compound, (*b*) from 9 to 30 weight percent of water based upon the resin product, (*c*) from 2 to 5 parts of a glycol selected from the group consisting of ethylene glycol, propylene glycol, and mixtures thereof, and (*d*) from 11 to 14 parts of an alcohol selected from the group consisting of methyl, ethyl and propyl alcohols, and mixtures thereof; the proportions of glycol and alcohol being expressed as parts by weight per 100 parts of total phenolic compound, free plus combined, present in said novolac resin.

3,091,597

COMPOSITIONS OF VINYL CHLORIDE HOMOPOLYMERS AND VINYL CHLORIDE-VINYL ACETATE COPOLYMERS

Harry P. Henriques III, Warren Township, Somerset County, N.J., assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Dec. 1, 1958, Ser. No. 777,202
10 Claims. (Cl. 260—31.4)

1. A composition comprising from about 15 to about 70 percent by weight of a vinyl chloride resin selected from the group consisting of vinyl chloride homopolymers, vinyl chloride-vinyl acetate copolymers and mixtures thereof wherein the vinyl chloride resin has a vinyl chloride content polymerized therein of at least about 86 percent by weight and a specific viscosity of from about 0.098 to about 0.141, from about 10 to about 30 percent by weight of a plasticizer, from about 0.2 to about 5 percent by weight of a stabilizer, and from 0 to about 75 percent by weight of an inorganic filler wherein the components are present in amounts such that the composition has a total roll-separating force of less than about 9000 lbs. and a residual indentation of less than about 10.5 percent.

3,091,598

POLY-α-OLEFINS CONTAINING THIOBISPHENOLS AND BUTYLATED HYDROXY TOLUENE

Frederick B. Joyner and Newton H. Shearer, Jr., Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Aug. 11, 1960, Ser. No. 48,809
12 Claims. (Cl. 260—45.95)

1. A solid poly-α-olefin composition comprising a solid poly-α-olefin prepared from an α-olefinic hydrocarbon having 2 to 12 carbon atoms containing a stabilizer combination comprising at least about .0001% by weight based on said poly-α-olefin of 2,6-di-tertiary butyl-4-methylphenol and at least about .001% by weight based on said poly-α-olefin of a thiobisphenol selected from the group consisting of 2,2'-thiobis(4-methyl-6-tertiary butylphenol) and 4,4'-thiobis(5-methyl-2-tertiary butylphenol).

3,091,599

VAPOR PHASE POLYMERIZATION OF FORMALDEHYDE

Henri Jean, Palaiseau, France, assignor to Compagnie de St. Gobain, Paris, France

No Drawing. Filed Sept. 15, 1959, Ser. No. 840,012
Claims priority, application France Sept. 24, 1958
14 Claims. (Cl. 260—67)

1. The method of polymerizing formaldehyde with the production of high polymers which comprises mixing vapors of formaldehyde with a catalyst vapor comprising a tertiary aliphatic amine in an inert atmosphere.

3,091,600

LINEAR AROMATIC ACID COPOLYESTERS MODIFIED WITH DIMER GLYCOLS HAVING 36 CARBONS

John R. Caldwell and Russell Gilkey, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Jan. 5, 1961, Ser. No. 80,733
18 Claims. (Cl. 260—75)

1. A linear highly polymeric spinnable and moldable copolyester having a melting point of at least 200° C. and an inherent viscosity of at least 0.4, said copolyester being essentially composed of constituents (A) and (B) as follows: (A) not over 20 mole percent of an aliphatic dicarboxylic acid containing 4 to 20 carbon atoms and at least 80 mole percent of an acidic material consisting of aromatic dicarboxylic acid selected from the group consisting of terephthalic, 4,4'-ethylene-dioxydibenzoic, 4,4'-diphenic and trans-cyclohexane-1,4-dicarboxylic acids, and (B) a glycol essentially composed of 98–65 mole percent of a glycol of 2–12 carbon atoms and 2–35 mole percent of a dimer glycol, said dimer glycol containing 36 carbon atoms and being the reduced dimer of an unsaturated fatty acid selected from the group consisting of linoleic acid and linolenic acid.

3,091,601

OLEFINIC COPOLYMERS

Frederick P. Reding, Charleston, and Charles W. McGary, Jr., South Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Sept. 20, 1957, Ser. No. 685,086
36 Claims. (Cl. 260—80.5)

7. The method for producing a solid cocrystalline copolymer of styrene, ortho-chlorostyrene, meta-chlorostyrene and para-chlorostyrene having a high degree of crystallinity over the entire composition range as determined by its X-ray diffraction pattern which comprises admixing styrene with a mixture of orthochlorostyrene, meta-chlorostyrene and para-chlorostyrene, together with a catalyst consisting essentially of a halide of a transition metal selected from the group consisting of group IV–B, group V–B and group VI–B of the periodic table and a compound selected from the group consisting of:

$$R—Al—R_2 \quad R—Zn—R_1 \quad R—Be—R_1 \quad R—Mg—R_1 \quad \text{and} \quad R—Li$$
$$\quad\quad R_1$$

wherein Al is aluminum, Mg is magesium, Zn is zinc, Be is berryllium, Li is lithium, R is a member selected from the group consisting of hydrogen, an aromatic hydrocarbon radical containing from 6 to 12 carbon atoms, a saturated aliphatic hydrocarbon radical containing 2 to 12 carbon atoms and a saturated cycloaliphatic hydrocarbon radical containing 3 to 12 carbon atoms, each of R_1 and R_2 is a member selected from the group consisting of hydrogen, a saturated aliphatic hydrocarbon radical containing 2 to 12 carbon atoms, a saturated cycloaliphatic hydrocarbon radical containing 3 to 10 carbon atoms and an aromatic hydrocarbon radical containing 6 to 12 carbon atoms, and halogen when no hydrogen is linked directly to the metallic nucleus, and heating the resulting mixture at a temperature of from 0° C. to 150° C. to cause the formation of a substantially crystalline copolymer of styrene, ortho-chlorostyrene, meta-chlorostyrene and para-chlorostyrene.

20. A solid cocrystalline copolymer of 3-methyl-1-butene and 4-methyl-1- pentene having a high degree of crystallinity over the entire composition range as determined by its X-ray diffraction pattern.

3,091,602

POLYMERIZATION SHORTSTOPPING

Glenn R. Hance and Harold O. Spang, Torrance, Calif., assignors to Shell Oil Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Dec. 5, 1960, Ser. No. 73,549
4 Claims. (Cl. 260—84.3)

1. A process for terminating the polymerization of a monomeric material in aqueous emulsion which comprises polymerizing a monomer mixture consisting essentially of butadiene and styrene in an aqueous emulsion comprising an emulsifier and a catalyst system selected from the group consisting of persulfate-catalyzed and redox sulfoxylated systems, then after the beginning of the polymerization and prior to the completion thereof adding to said emulsion a combination of substances consisting of (1) an alkali metal salt of a dialkyl dithiocarbamic acid and (2) hydrazine, substance (1) being added in amounts of from 0.03 to 0.15% by weight and substance (2) being added in amounts from 0.02 to 0.20% by weight, both substances based on the weight of monomer initially present in said emulsion.

3,091,603

CURE OF HALOGENATED BUTYL RUBBER

Irving Kuntz, Roselle Park, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed Dec. 18, 1959, Ser. No. 860,316
4 Claims. (Cl. 260—85.3)

1. An improved rubbery composition which comprises a rubbery chlorinated copolymer of 85 to 99.5 weight percent of C_4 to C_8 isoolefin and 15 to 0.5 weight percent of a C_4 to C_{14} multiolefin, said copolymer having a mol percent unsaturation of 0.5 to 20 and containing at least 0.3 weight percent chlorine but not more than about 1 atom of combined chlorine per double bond in said copolymer; and 0.1 to 15 wt. percent based on said copolymer of hexamethylene diamine carbamate.

3,091,604

METAL CHELATES OF VINYLIC COPOLYMERS CONTAINING A PLURALITY OF HYDROXY GROUPS

Herbert R. Lukens, Jr., El Cerrito, Calif., assignor to Shell Oil Company, a corporation of Delaware

No Drawing. Filed Dec. 22, 1958, Ser. No. 781,875
10 Claims. (Cl. 260—87.3)

1. The complex consisting of

(*a*) a ligand, consisting of an at least 50% hydrolyzed copolymer of a vinyl ester of a lower molecular weight alkyl carboxylic acid, and an acyclic alpha-monoolefinic hydrocarbon having from 10 to 40 carbon atoms, the ratio of ester to hydrocarbon being from 1:1 to 8:1, and said copolymer having an average molecular weight between about 400 and about 100,000; and

(*b*) the cation of a metal, said metal being selected from the group consisting of Groups IB, IIA, IIB, IIIA, IIIB, IVA, IVB, VA, VB, VIA, VIB, VIIB and VIII of the Mendeleef Periodic Table, and the lanthanide and actinide series.

3,091,605

OLEFIN POLYMERIZATION CATALYST PRETREATMENT

David C. Hull, Hugh J. Hagemeyer, Jr., and Marvin B. Edwards, Longview, Tex., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Jan. 18, 1960, Ser. No. 2,870
6 Claims. (Cl. 260—93.7)

5. In the polymerization of an α-olefin in liquid organic medium by means of a metal oxide catalyst effec-

tive to polymerize said α-olefin and including a reduced oxide of a metal selected from the group consisting of Group 5*a* and Group 6*a* of the Periodic Table, the improvement which comprises, prior to polymerization, effecting reduction of the metal oxide catalyst with hydrogen at a temperature in the range of about 400 to about 700° C., cooling said reduced oxide in the presence of hydrogen, slurrying, in the absence of hydrogen, said reduced metal oxide in a solvent suitable for the polymerization of said α-olefin, heating said slurry to a temperature in the range of about 200 to about 300° C. and distilling off water which forms.

3,091,606
ORGANOLITHIUM POLYMERIZATION INITIATOR PREPARED IN THE PRESENCE OF A SMALL AMOUNT OF SODIUM

Henry L. Hsieh, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed Nov. 21, 1960, Ser. No. 70,421
17 Claims. (Cl. 260—94.2)

1. A process for preparing a polymerization initiator composition which comprises contacting lithium with a monomer selected from the group consisting of conjugated dienes and vinylidene-substituted aromatic compounds in a medium of aliphatic monoether in the presence of sodium in an amount ranging from about 0.25 to about 5 weight percent based on lithium.

15. A process for preparing a polymer of a conjugated diene which comprises contacting a conjugated diene having 4 to 12 carbon atoms per molecule in a predominantly hydrocarbon medium with an initiator composition prepared according to process of claim 1, and recovering the resulting conjugated diene polymer.

3,091,607
POLYMERISATION OF ETHYLENE WITH A CATALYST ALUMINUM, A HALIDE OF TITANIUM OR VANADIUM AND A HALOGEN

Alaric Louis Jeffrey Raum, Teddington, England, assignor to The Distillers Company Limited, Edinburgh, Scotland, a British company

No Drawing. Filed July 6, 1959, Ser. No. 824,936
Claims priority, application Great Britain July 18, 1958
18 Claims. (Cl. 260—94.9)

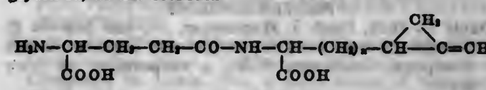
1. A process which comprises subjecting ethylene in a liquid vehicle to an elevated temperature, an elevated pressure and an inorganic activated catalyst system formed in a liquid vehicle from components (*a*) aluminum, (*b*) at least one member selected from the group consisting of titanium dihalide, titanium trihalide and vanadium trihalide and (*c*) an activator therefor, the activator being at least one member selected from the group consisting of halogen and an interhalogen compound.

3,091,608
PROCESS FOR THE PRODUCTION OF DERIVATIVES OF HYPOGLYCINE A

Albert Joseph Hermann Jöhl and Willy G. Stoll, Basel, Switzerland, assignors to Geigy Chemical Corporation, Ardsley, N.Y., a corporation of Delaware

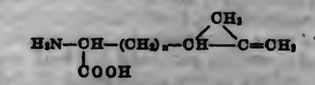
No Drawing. Filed Jan. 29, 1960, Ser. No. 5,370
Claims priority, application Switzerland Jan. 30, 1959
2 Claims. (Cl. 260—112)

1. A process for the production of a derivative of Hypoglycin A, of the formula

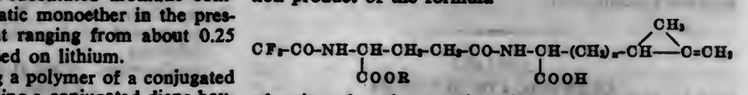


wherein *n* is an integer from 0 to 1, which comprises reacting a lower N-trifluoroacetyl-glutamic acid-α-monoalkyl ester of the formula

wherein R is a lower alkyl group, in an inert anhydrous organic solvent selected from the group consisting of tetrahydrofurane, dioxan and chloroform, in the presence of a tertiary amine selected from the group consisting of triethylamine and tributylamine and at a temperature of from −15° to 0° C. with a chloroformic acid ester selected from the group consisting of chloroformic lower alkyl esters and chloroformic benzyl ester to form a solution of the mixed anhydride of N-trifluoracetyl-glutamic acid-α-monoester and a member selected from the group consisting of lower alkoxy formic acid and benzyloxy formic acid; reacting the said solution with the aqueous solution of an alkali metal salt of a compound of the formula



wherein *n* has the meaning given above; and hydrolysing at a temperature ranging between 0° C. and room temperature in a water-miscible inert solvent the obtained reaction product of the formula



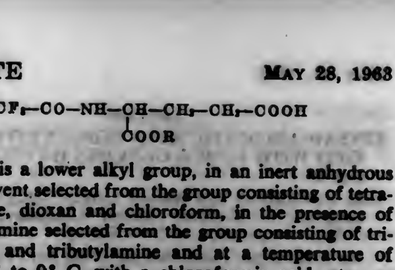
wherein *n* has the meaning given above, under alkaline conditions which preserve the peptide linkage.

3,091,609
NEW 16-SUBSTITUTED 1,3,5(10)-ESTRATRIENES

Robert E. Schaub, Paramus, and Martin J. Weiss, Oradell, N.J., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Dec. 20, 1961, Ser. No. 160,951
6 Claims. (Cl. 260—239.5)

1. A compound of the formula:



wherein R' is lower alkyl and R is a radical selected from the group consisting of lower alkylthio, isobutoxy, halogen, 3-lower alkoxy-17-oxo-1,3,5(10)-estratriene - 16-ylidenemethylthio and N[3-lower alkoxy-17-oxo - 1,3,5 (10)-estratrien - 16 - ylidenemethyl]azopentamethyleneimino radicals.

3,091,610
SULFA COMPOUNDS AND PROCESSES

Hermann Bretschneider and Wilhelm Klötzer, Innsbruck, Austria, assignors to Hoffmann-La Roche Inc., Nutley, N.J., a corporation of New Jersey

No Drawing. Filed Nov. 8, 1960, Ser. No. 67,879
Claims priority, application Switzerland Nov. 18, 1959
8 Claims. (Cl. 260—239.75)

1. 2 - lower alkoxy - 4 - (N_4-lower alkanoyl-sulfanilamido)-6-halo-pyrimidine.

5. A process comprising the steps of reacting 2-lower alkoxy-4,6-dihalo-pyrimidine with an approximately 2 molar proportion of an alkali metal salt of sulfanilamide at a temperature in the range of about 80° to about 120°

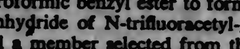
C., and recovering 2-lower alkoxy-4-sulfanilamido-6-halopyrimidine from the resulting reaction mixture.

3,091,611
ALKYLALKOXYALKYLHYDRAZONES

John C. Howard, Augusta, Ga., assignor to The Norwich Pharmacal Company, a corporation of New York

No Drawing. Filed Mar. 22, 1961, Ser. No. 97,442
8 Claims. (Cl. 260—240)

1. A compound of the formula:



in which:

R represents a radical selected from the group consisting of 5-nitro-2-furyl and p-nitrophenyl;
R_1 represents a radical selected from the group consisting of (lower)alkyl, carbamyl(lower)alkyl, and (lower)alkoxycarbonyl(lower)alkyl;
R_2 represents a C_1–C_3 alkyl group; and
R_3 represents a radical selected from the group consisting of 5-nitrofuryl, phenyl and p-nitrophenyl.

3,091,612
ALKYLATED METHYLOL BENZOGUANAMINE

James R. Stephens, Gary, Ind., assignor to Standard Oil Company, Chicago, Ill., a corporation of Indiana

No Drawing. Filed Aug. 7, 1961, Ser. No. 129,545
6 Claims. (Cl. 260—249.9)

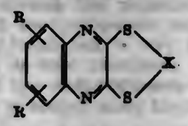
1. Tetrakis(alkoxymethyl)benzoguanamine wherein each alkoxy has from 1 to 3 carbon atoms and at least one alkoxy has a different number of carbon atoms than the others, said benzoguanamine being characterized by the non-crystalline state at ordinary temperatures.

3,091,613
2,3-DIMERCAPTOQUINOXALINE DERIVATIVES

Klaus Sasse, Cologne-Stammheim, Richard Wegler, Leverkusen, and Günter Unterstenhöfer, Opladen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed June 30, 1959, Ser. No. 823,825
Claims priority, application Germany July 10, 1958
7 Claims. (Cl. 260—250)

1. A compound of the formula



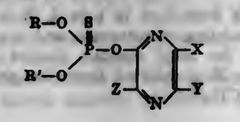
wherein R and R' each stand for a member selected from the group consisting of hydrogen, lower alkyl, halogen, nitro, lower alkoxy, aminocarbonyl, aminosulfonyl and carboxyl; X stands for a member selected from the group consisting of C═O, C═S, C═N-phenyl, S and S═O.

3,091,614
IMPROVEMENT IN PRODUCTION OF O,O-DIALKYL-O,-2-PYRAZINYL PHOSPHOROTHIOATE

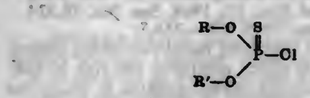
Bernard Miller, Princeton, N.J., and Malcolm Robbins Forbes, New Rochelle, N.Y., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Jan. 9, 1962, Ser. No. 165,257
4 Claims. (Cl. 260—250)

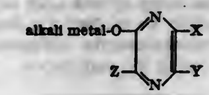
1. A method of preparing a phosphate ester of the formula



wherein R and R' each represent lower alkyl, and X, Y and Z each represent a member selected from the group consisting of hydrogen, halogen, phenyl and a lower alkyl, which comprises reacting dialkyl phosphorochloridothioate of the formula



with an alkali metal salt of a hydroxypyrazine of the formula



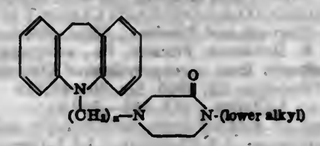
said reaction being made to take place in the presence of an inert solvent and in the presence of up to about 20 grams cuprous chloride (Cu_2Cl_2) catalyst per mole of dialkyl phosphorochloridothioate, and recovering the resulting phosphate ester of the general formula above, R, R', X, Y and Z in the reactant formulae having the same meaning given them in the product formula, supra.

3,091,615
DIBENZAZEPINYLALKYL PIPERAZINONES

John W. Cusic, Skokie, and Ernest Le Von, Morton Grove, Ill., assignors to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

No Drawing. Filed July 6, 1961, Ser. No. 122,111
4 Claims. (Cl. 260—268)

1. A compound of the formula



wherein *n* is an integer greater than 1 and less than 4.

3,091,616
1-ORTHO-TOLYLOXYETHYL-4-PHENYLPIPERIDINE AND ACID ADDITION SALTS THEREOF

Vladimir Petrow, Oliver Stephenson, and Alan Jeffery Thomas, London, England, assignors to The British Drug Houses Limited, London, England, a British company

No Drawing. Filed July 18, 1960, Ser. No. 43,289
Claims priority, application Great Britain July 20, 1959
3 Claims. (Cl. 260—294)

1. 1-ortho-tolyloxyethyl-4-phenylpiperidine.
3. 1-ortho-tolyloxyethyl-4-phenylpiperidine tartrate.

3,091,617
PROCESS FOR PREPARING 4,5-DIALKOXY-1,3-DIALKYL-2-IMIDAZOLIDINONES

William A. Burris, Rochester, N.Y., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Feb. 3, 1961, Ser. No. 86,873
5 Claims. (Cl. 260—309.7)

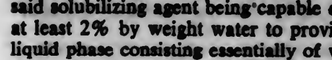
1. A process for preparing a 4,5-dialkoxy-1,3-dialkyl-2-imidazolidinone which comprises reacting a 1,3-dialkylurea with glyoxal in the presence of a lower alkyl monohydric alcohol and an acid at a pH of less than 4.

3,091,618
PROCESS OF PREPARING METAL-CONTAINING PHTHALOCYANINE SULFONIC ACIDS
Maurice H. Fleysher, Buffalo, and Walter E. Richards, Hamburg, N.Y., assignors to Allied Chemical Corporation, New York, N.Y., a corporation of New York
No Drawing. Filed Dec. 27, 1960, Ser. No. 78,324
5 Claims. (Cl. 260—314.5)

1. In the process of preparing metal-containing phthalocyanine sulfonic acids which comprises the step of contacting the metal-containing phthalocyanine in which the metal is from the group consisting of copper, cobalt, nickel, iron, vanadium, zinc and aluminum with a substantially anhydrous sulfonating agent from the group consisting of sulfuric acid, fuming sulfuric acid, chlorosulfonic acid and mixtures of said acids at a temperature within the range of 0° C. to 200° C., the improvement which consists in maintaining the sulfonation mass in an inert atmosphere during the sulfonation.

3,091,619
NITROGEN DERIVATIVES OF FLUOROALKYL SULFONIC ACID SULTONES
Hugh Harper Gibbs, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed May 1, 1958, Ser. No. 732,115
2 Claims. (Cl. 260—327)

1. A fluoroalkyl-3-fluoro-4-imino-2,2-dioxo-1,2-oxathietane having the structure



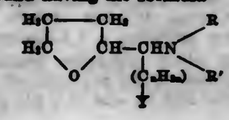
where R_f is a member of the class consisting of fluorine, perfluoroalkyl and omega-hydroperfluoroalkyl radicals, said alkyl radicals having from one to five carbon atoms.

3,091,620
PROCESS FOR PREPARING 3,8-DIHYDROXY-4,5,6,7-DIBENZO-1,2-DIOXACYCLOOCTANE
Murray G. Sturrock and Edwin L. Cline, Pittsburgh, and Kenneth R. Robinson, Pitcairn, Pa., assignors to Koppers Company, Inc., a corporation of Delaware
Filed Aug. 16, 1960, Ser. No. 49,929
3 Claims. (Cl. 260—340.3)

1. Method of making from substantially anthracene-free phenanthrene 3,8-dihydroxy-4,5,6,7-dibenzo-1,2-dioxacyclooctane comprising reacting ozone with said phenanthrene in a reactive liquid phase within a suspension medium, said suspension medium consisting essentially of 5–80% by weight water and 20–95% by weight of an organic solubilizing agent comprising a member selected from the group consisting of alkanols having from 2–4 carbon atoms, lower alkyl acetates, acetic acid, propionic acid, dioxane, chloroform and mixtures thereof, said solubilizing agent being capable of dissolving therein at least 2% by weight water to provide a single reactive liquid phase consisting essentially of water, phenanthrene and ozone, to form 3,8-dihydroxy-4,5,6,7-dibenzo-1,2-dioxacyclooctane.

3,091,621
ALPHA-ARYL OR ARALKYL TETRAHYDROFURFURYLAMINES
Robert L. Clarke, Bethlehem, N.Y., assignor to Sterling Drug Inc., New York, N.Y., a corporation of New York
No Drawing. Filed June 13, 1961, Ser. No. 116,666
14 Claims. (Cl. 260—347.7)

1. A compound having the formula



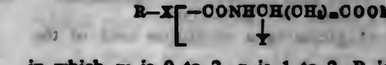
wherein R is a member selected from the group consisting of hydrogen and lower-alkyl having from one to six carbon atoms; R′ is a member selected from the group consisting of hydrogen, lower-alkyl having from one to six carbon atoms, cycloalkyl having from three to seven ring carbon atoms, oxaalkylene having from three to eight carbon atoms, benzyl, and benzyl substituted by from one to two members selected from the group consisting of lower-alkyl, lower-alkoxy, halogen and amino; Y is a member selected from the group consisting of cycloalkyl having from three to seven ring carbon atoms, naphthyl, phenyl and phenyl substituted by from one to two members selected from the group consisting of lower-alkyl, lower-alkoxy, halogen and amino; and n is a number from 0 to 2.

3,091,622
ETHYLENE OXIDE PRODUCTION
Martin L. Courter, Walnut Creek, and George J. Carlson, Berkeley, Calif., assignors to Shell Oil Company, New York, N.Y., a corporation of Delaware
Filed May 24, 1960, Ser. No. 31,298
3 Claims. (Cl. 260—348.5)

1. In the process for the production of ethylene oxide wherein ethylene is reacted with air at ethylene oxide-forming conditions in the presence of a silver catalyst, at a temperature of from about 150° to about 450° C. in a reaction system comprising a plurality of reaction zones, the combination of steps consisting essentially of dividing the effluence from the first reaction zone in said reaction system into two separate effluent streams of unequal volume, the smaller of said effluent streams comprising from about 10 to about 15% by volume of the total effluence from said first reaction zone, passing the larger of said effluent streams into a primary absorption zone, passing the smaller of said effluent streams into the second reaction zone of said reaction system, passing effluence from said second reaction zone into a separate intermediate absorption zone, selectively absorbing ethylene oxide in water in each of said absorption zones, thereby separating a normally gaseous phase comprising nitrogen, oxides of carbon and unconverted ethylene from a liquid phase comprising water and ethylene oxide in each of said absorption zones, passing said normally gaseous phase separated in said primary absorption zone into said first reaction zone, eliminating said gaseous phase separated in said intermediate absorption zone from the system, passing at least a part of said liquid phase formed in said intermediate absorption zone as auxiliary solvent into said primary absorption zone and distilling ethylene oxide from said liquid phase formed in said primary absorption zone.

3,091,623
REACTION PRODUCTS OF ISOCYANATO ESTERS AND ALCOHOLS
William J. Knox, Jr., and Charles V. Wilson, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
No Drawing. Original application July 30, 1956, Ser. No. 600,679, now Patent No. 3,038,804, dated June 12, 1962. Divided and this application Aug. 14, 1961, Ser. No. 129,897
3 Claims. (Cl. 260—404.5)

1. A compound adapted for use as a coating aid having the formula:



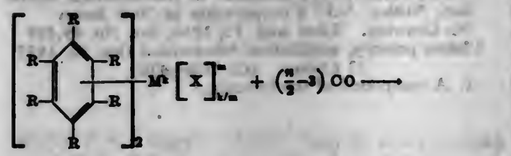
in which m is 0 to 2, n is 1 to 2, R is selected from the group consisting of saturated and unsaturated alkyls and aralkyls, the alkyl radicals thereof being of 8–18 carbon atoms, X is selected from the group of —O—, —CONHCH$_2$CH$_2$O—,

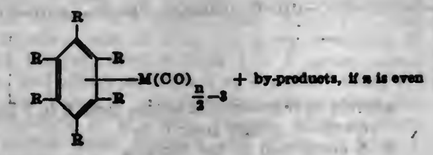


and —O(CH$_2$CH$_2$O)$_n$—, n being 1 to 10, Y is selected from the group consisting of H, the alkyls of 1 to 5 carbon atoms, —CH$_2$COOM and —CH$_2$—CH$_2$COOM and M is selected from the group consisting of Na, K, Li, NH$_4$, methylamine, ethylamine and hydroxylamine radicals.

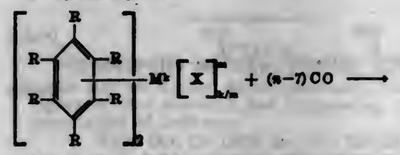
3,091,624
PROCESS FOR PRODUCING ARENE METAL CARBONYLS
Roy L. Pruett, Charleston, W. Va., John E. Wyman, Topsfield, Mass., and Leo Parts, Snyder, N.Y., assignors to Union Carbide Corporation, a corporation of New York
No Drawing. Filed Oct. 16, 1959, Ser. No. 846,804
10 Claims. (Cl. 260—429)

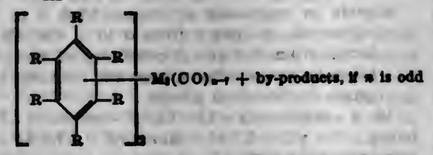
1. A process for the production of stable arene metal carbonyls comprising contacting at a temperature between about —50° C. and 350° C. a bis(arene hydrocarbon) metal compound with carbon monoxide under pressure, which process is represented by the equation:





and by the equation:

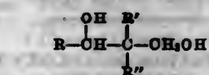




wherein:
(1) M is selected from the group consisting of vanadium, niobium, tantalum, chromium, molybdenum, tungsten, manganese, rhenium, iron, ruthenium, osmium, cobalt, rhodium and iridium;
(2) each R group is selected from the class consisting of hydrogen, lower alkyl, phenyl, phenyl lower alkyl and lower alkylphenyl;
(3) X is an anion selected from the group consisting of chloride, bromide, hydroxide, acetate, chloroacetate, tetraphenylboron, reineckate, tetrabromoaluminate and picrate;
(4) k is the ionic charge of the bis(arene hydrocarbon) metal moiety and has integral values selected from the group consisting of zero, 1 and 2;
(5) m is the ionic charge of the anion X;
(6) k/m is the number of anions bonded to the bis(arene hydrocarbon) metal moiety;
(7) n is an integer defined by the equation $n=G-A$;
(8) A is the atomic number of M;
(9) G is the atomic number of the next higher rare gas with respect to said metal M, and
(10) in the reaction product, each metal atom is bonded to only one arene organic group.

3,091,625
PREPARATION OF ORGANIC TITANATES
Robert Thomas Gladdorf, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Oct. 21, 1960, Ser. No. 63,977
2 Claims. (Cl. 260—429.5)

1. In a process for preparing organic solvent-soluble orthotitanic acid esters of 1,3-glycols, the improvement which comprises (*a*) reacting under anhydrous conditions 1 mole of titanium tetrachloride with at least two moles of a glycol having the structure



said glycol containing from 8 to 12 carbon atoms, R and R′ of said glycol being selected from the group consisting of hydrogen and acyclic alkyl groups, R″ is an acyclic alkyl group, said titanium tetrachloride being reacted with said glycol in an inert organic solvent selected from the group consisting of liquid alkane hydrocarbons and liquid aromatic hydrocarbons, (*b*) adding sufficient anhydrous ammonia to the reaction mixture produced by (*a*) to make said mixture basic, and then (*c*) contacting the reaction products of (*a*) and (*b*) with water forming aqueous and non-aqueous immiscible phases which are subsequently separated, and (*d*) recovering from the non-aqueous phase the orthotitanic acid derivative.

3,091,626
METHOD OF MAKING FERROUS CITRATE
Gustav H. Carlson, Detroit, Mich., assignor to R. P. Scherer Corporation, Detroit, Mich., a corporation of Michigan
No Drawing. Filed June 20, 1960, Ser. No. 37,039
9 Claims. (Cl. 260—439)

1. A method for preparing ferrous citrate having the empirical formula $C_6H_6O_7Fe$ which comprises mixing citric acid with an aqueous solution of a ferrous salt taken from the group consisting of ferrous sulfate, ferrous acetate, ferrous ammonium sulfate, and ferrous propionate, heating the mixture for a sufficient time to form and precipitate ferrous citrate while maintaining the pH of the mixture between 2 and 4 and separating the precipitate from the solution.

3,091,627
PREPARATION OF ALCOHOLS
Bernard Rudner, Pittsburgh, Pa., assignor to Koppers Company, Inc., a corporation of Delaware
No Drawing. Filed Aug. 15, 1960, Ser. No. 49,416
7 Claims. (Cl. 260—462)

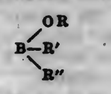
2. Method of making alcohols comprising reacting in an inert atmosphere and in the presence of a Lewis base selected from the group consisting of pyridine and 1,2-bis-(2-methoxyethoxy)ethane substantially stoichiometric quantities of an oxacarbocyclic having 2 to 57 carbon atoms and 1 to 3 oxygen-containing rings, each ring having only one oxygen atom and from 2 to 3 carbon atoms, said oxygen-containing rings being attached only to members selected from the group consisting of hydrogen, hydrocarbon, ether and ester radicals, with a compound of the formula R_3M, wherein R is a member selected from the group consisting of alkyl radicals of from 1 to 40 carbon atoms, aryl, aralkyl and cycloalkyl, and M is a member selected from the group consisting of boron

and aluminum, to form an ester of M, hydrolyzing said ester, and recovering from the reaction mixture a secondary alcohol having at least two carbon atoms more than the number of carbon atoms of an individual R substituent of said R_3M.

6. Method of making borates comprising reacting in an inert atmosphere and in the presence of an inert organic solvent substantially stoichiometric quantities of an oxacarbocyclic having up to 57 carbon atoms and up to 3 oxygen-containing rings, each ring having only one oxygen atom and from 2 to 3 carbon atoms, said oxygen containing rings being attached only to members selected from the group consisting of hydrogen, hydrocarbon, ether and ester radicals, and a compound of the formula R_3B, wherein R is a member selected from the group consisting of alkyl radicals of from 1 to 40 carbon atoms, aryl, aralkyl and cycloalkyl, to form a borate and recovering said borate from the reaction mixture.

3,091,628
TELOMERIZATION OF ALKOXY BORON COMPOUNDS
Simpson Douglas Sumerford and Walter James Porter, Jr., Baton Rouge, La., assignors to Esso Research and Engineering Company, a corporation of Delaware
Filed Feb. 23, 1961, Ser. No. 91,146
18 Claims. (Cl. 260—462)

1. A process for making alkoxy boron compounds which comprises reacting ethylene with a boron compound corresponding to the formula



wherein R is an alkyl radical and R′ and R″ are radicals selected from the group consisting of alkoxy, alkyl, hydrogen and halogen, at elevated temperatures in the presence of about 0.011 to 0.11 weight percent of a peroxidic initiator based on boron compound.

3,091,629
PREPARATION OF PHTHALONITRILES BY CATALYZED REACTION OF BENZONITRILE AND CYANOGEN
William L. Fierce, Crystal Lake, and Walter J. Sandner, Carpentersville, Ill., assignors to The Pure Oil Company, Chicago, Ill., a corporation of Ohio
No Drawing. Filed Sept. 7, 1960, Ser. No. 54,372
10 Claims. (Cl. 260—465)

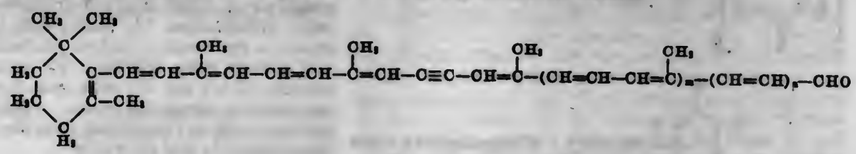
1. A method of preparing phthalonitriles which comprises contacting a gaseous mixture consisting essentially of benzonitrile, and cyanogen, with a catalyst consisting essentially of 0.05–5.0% wt. of a group VIII noble metal on a high-surface-area, refractory oxide at a temperature of about 500°–700° C., sufficient to cause reaction between the benzonitrile and cyanogen, and recovering phthalonitriles from the reaction effluent.

3,091,630
2-(DIMETHYLAMINOETHOXY)ETHYL TRIMETHOXYBENZOATE AND ITS HYDROCHLORIDE
Martin A. Davis, Montreal, Quebec, Canada, assignor to American Home Products Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed July 27, 1961, Ser. No. 127,164
3 Claims. (Cl. 260—473)

1 A compound selected from the group which consists of 2-(dimethylaminoethoxy)ethyl 3,4,5-trimethoxybenzoate and its hydrochloride salt.

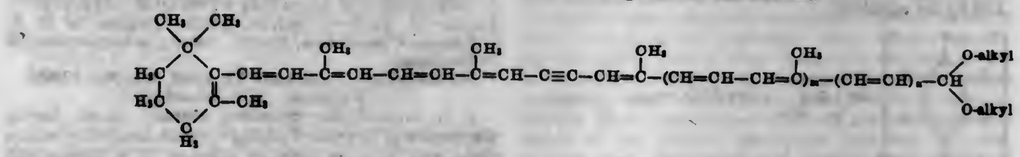
3,091,631
PRODUCTION OF ACETYLENIC CAROTENOID ALDEHYDES AND ACETAL INTERMEDIATES THEREFOR
Otto Isler, Basel, Herbert Lindlar, Reinach, Basel-Land, Marc Montavon, Basel, Rudolf Rüegg, Bottmingen, and Ulrich Schwieter, Basel, Switzerland, and Gabriel Saucy, Nutley, N.J., assignors to Hoffmann-La Roche Inc., Nutley, N.J., a corporation of New Jersey
No Drawing. Filed Aug. 15, 1960, Ser. No. 49,409
Claims priority, application Switzerland Oct. 18, 1957
27 Claims. (Cl. 260—476)

1. A compound of the formula



wherein *m* represents an integer from 0 to 3 and *n* represents an integer from 0 to 1.

9. A compound of the formula



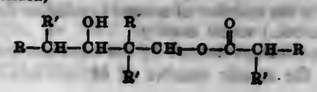
wherein *m* represents an integer from 0 to 3 and *n* represents an integer from 0 to 1, and alkyl is selected from the group consisting of straight chain aliphatic hydrocarbon groups and branched chain aliphatic hydrocarbon groups.

14. 1 - isopropoxy - 13 - (2,6,6 - trimethyl - 1 - cyclohexen - 1 - yl) - 2,7,11 - trimethyl - 1,7,9,11 - tridecatetraen-4-yn-3,6-diol.

23. A process which comprises reacting 1-lower alkoxy-2-methyl-3-hydroxy-1-penten-4-yne with orthoformic acid alkyl ester in the presence of an acid catalyst selected from the group consisting of mineral acids and arylsulfonic acids to obtain 1,1-dilower alkoxy-2-methyl-2-penten-4-yne.

3,091,632
PROCESS FOR THE PRODUCTION OF GLYCOL MONOESTERS FROM ALDEHYDES
Hugh J. Hagemeyer, Jr., and Howard N. Wright, Jr., Longview, Tex., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
No Drawing. Filed July 6, 1961, Ser. No. 122,104
7 Claims. (Cl. 260—476)

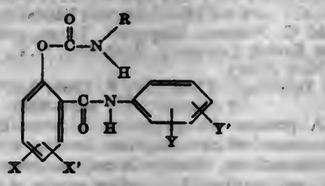
1. A process for the production of glycol monoesters of the formula,



wherein R and R′ are selected from the group consisting of lower alkyl, cycloalkyl and mononuclear aromatic hydrocarbon, which comprises contacting an aldehyde of the formula, RR′CHCHO, having from 4 to 10 carbon atoms with an alkali metal alkoxide catalyst, under dry, acid-free conditions, at a temperature of 65 to 105° C., at a catalyst concentration less than 2 weight percent based on the aldehyde and for a residence time less than 3 hours.

3,091,633
SUBSTITUTED AND UNSUBSTITUTED SALICYLANILIDE N-LOWER ALIPHATIC CARBONATOR
Richard E. Strube, Kalamazoo, Mich., assignor to The Upjohn Company, Kalamazoo, Mich., a corporation of Delaware
No Drawing. Filed Nov. 15, 1961, Ser. No. 152,658
5 Claims. (Cl. 260—480)

1. A compound of the formula:



wherein R is a member selected from the group consisting of alkyl of from 1 to 4 carbon atoms inclusive; and alkenyl of from 3 to 4 carbon atoms inclusive; X and X′ are members selected from the group consisting of hydrogen, halogen, alkyl of from 1 to 4 carbon atoms inclusive, and alkoxy of from 1 to 4 carbon atoms inclusive; and Y and Y′ are members selected from the group consisting of hydrogen, halogen, alkyl of from 1 to 4 carbon atoms inclusive, and alkoxy of from 1 to 4 carbon atoms inclusive.

3,091,634
RECOVERY OF NAPHTHENIC ACIDS
Douglas Bastow Archer, Barrancabermeja, Colombia, assignor to Esso Research and Engineering Company, a corporation of Delaware
Filed Oct. 29, 1959, Ser. No. 849,671
9 Claims. (Cl. 260—514)

1. A process for recovering naphthenic acids from aqueous solutions containing alkali metal naphthenates derived from the treatment of petroleum crude oil and distillates fractionated from the crude oil which consists essentially of contacting said aqueous solutions with an acid gas selected from the group consisting of CO_2 and SO_2 at atmospheric pressure to liberate a substantial portion of said naphthenates as naphthenic acid and thereafter adding a mineral acid to complete the liberation of the naphthenic acids.

3,091,635
ALKYLATION PROCESS
Herman D. Kluge, Fishkill, and Fred W. Moore, Wappingers Falls, N.Y., assignors to Texaco Inc., a corporation of Delaware
No Drawing. Original application Nov. 29, 1954, Ser. No. 471,920, now Patent No. 2,868,823, dated Jan. 13, 1959. Divided and this application Apr. 3, 1958, Ser. No. 726,038
2 Claims. (Cl. 260—515)

1. In a process for the direct alkylation of an acidically-reacting aryl compound selected from the group consisting of hydroxylated and carboxylated aryl hydrocarbons with an olefinic hydrocarbon, the improvement which comprises forming a homogeneous reaction mixture of the acidically-reacting aryl compound, the olefin, and a catalyst of the general formula $AlCl_2.RSO_3$ wherein RSO_3 stands for an alkane sulfonic acid residue, the mol ratio of the acidically-reacting aryl compound to olefin being between 2:1 and 6:1 and the mol ratio of acidically-reacting aryl compound to catalyst being between 1:0.01 and 1:0.3, carrying out the alkylation reaction with said mixture until an alkylated derivative of said acidically-reacting aryl compound is formed, and separating said alkylated derivative from the resulting mixture.

3,091,636
PROCESS FOR THE PRODUCTION OF TEREPHTHALIC ACID
Richard William Harold Benson, Harrogate, England, assignor to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain
No Drawing. Filed May 7, 1959, Ser. No. 811,548
Claims priority, application Great Britain Dec. 10, 1958
1 Claim. (Cl. 260—524)

A process for the production of terephthalic acid from para-xylene by oxidizing para-xylene in the liquid phase in acetic acid at a temperature in the range of 180–230° C. in the presence of bromine and a heavy metal catalyst selected from the group consisting of cobalt and manganese in further combination while maintaining an excess of oxygen in the reaction system with an oxygen content in the off-gases between 1% and 2% by volume and maintaining in the reaction system an oxidation inhibitor selected from the group consisting of copper and zinc, provided that when said inhibitor is copper it is present at a concentration of about 100 parts per million of the reaction mixture and when said inhibitor is zinc it is present at a concentration of about 1600 parts per million of the reaction mixture.

3,091,637
DUAL CYCLE UREA SYNTHESIS PROCESS
Lucien H. Cook, Port Washington, and Robert K. Fidler, Palisades, N.Y., assignors to Chemical Construction Corporation, New York, N.Y., a corporation of Delaware
Filed May 17, 1960, Ser. No. 29,613
5 Claims. (Cl. 260—555)

4. Process of urea synthesis comprising reacting first streams of ammonia and carbon dioxide in a molar ratio of about 6 to 1 at a pressure of 3500 p.s.i.g. and temperature of 365° F. to produce a first urea-containing stream, reducing the pressure of said first stream to about 260 p.s.i.g., heating said first stream to produce an off-gas rich in free ammonia, scrubbing said off-gas with liquid ammonia whereby said off-gas is recovered substantially free of carbon dioxide, combining said first stream of reduced free ammonia content with a second urea-containing stream, decomposing ammonium carbamate in the combined stream by heating at a temperature of 266° F. and pressure of about 250 p.s.i.g., separating a first off-gas containing ammonia and carbon dioxide from the combined stream, reducing the pressure of the residual combined stream to 15 p.s.i.g., decomposing the balance of ammonium carbamate in the residual combined stream by heating at a temperature of 200° F., separating a second off-gas containing ammonia and carbon dioxide from the final residual combined stream, said final residual combined stream consisting of product aqueous urea solution substantially free of process reactants, scrubbing and partially condensing said second off-gas by contact with a second aqueous ammonium carbamate solution at a temperature of about 135° F., further cooling and refluxing residual off-gas to a final temperature of 55° F. whereby carbon dioxide is substantially completely removed from the residual gas phase and a final residual second off-gas stream is recovered substantially free of

carbon dioxide, cooling a portion of said second aqueous ammonium carbamate solution to 130° F. and recycling said portion to said contact, compressing the balance of said second solution to about 250 p.s.i.g., contacting said second solution and said first off-gas with a first aqueous ammonium carbamate solution at a temperature of about 210° F., whereby said first off-gas is scrubbed and partially condensed, further cooling and refluxing residual first off-gas to a final temperature of 115° F. whereby carbon dioxide is substantially completely removed from the residual gas phase and a final residual first off-gas stream is recovered substantially free of carbon dioxide, cooling a portion of said first aqueous ammonium carbamate solution to 205° F. and recycling said portion to said contact, compressing the balance of said first solution, and combining said compressed solution with second streams of ammonia and carbon dioxide at a pressure of 3500 p.s.i.g. and temperature of 365° F., whereby said components react in an overall ratio of ammonia to carbon dioxide of about 4 to 1 to produce said second urea-containing solution.

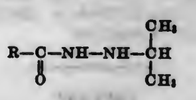
3,091,638

N,N'-DISUBSTITUTED HYDRAZINE DERIVATIVES

Hugo Gutmann, Birsfelden, Otto Straub, Bottmingen, and Paul Zeller, Neuallschwil, Switzerland, assignors to Hoffmann-La Roche Inc., Nutley, N.J., a corporation of New Jersey

No Drawing. Filed June 30, 1958, Ser. No. 745,276
Claims priority, application Switzerland July 3, 1957
12 Claims. (Cl. 260—557)

2. A compound corresponding to the formula



wherein R represents a member of the group consisting of cycloalkyl and methyl substituted cycloalkyl wherein the cycloalkyl group contains from 3 to 6 carbon atoms, inclusive.

3,091,639

N,N'-DI(TRIHALOMETHYLTHIO)-N,N'-DIACYL-HYDRAZIDE DERIVATIVES

Johannes T. Hackmann and Pieter Ten Haken, Herne Bay, England, assignors to Shell Oil Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Dec. 5, 1960, Ser. No. 73,520
Claims priority, application Great Britain Dec. 11, 1959
6 Claims. (Cl. 260—561)

1. N,N'-di(trihalomethylthio)-symmetrical N,N'-diacyl hydrazide of a saturated unsubstituted monocarboxylic acid of from 1 to 9 carbon atoms.

3,091,640

1-(4-METHOXYPHENYL)-1-DIMETHYLAMINO-2-PHENYL ETHANE, ACID ADDITION SALTS AND QUATERNARY AMMONIUM SALTS

Ernst Seeger and August Kottler, Biberach an der Riss, Germany, assignors to Dr. Karl Thomae, G.m.b.H., Biberach an der Riss, Germany, a corporation of Germany

No Drawing. Filed Feb. 4, 1960, Ser. No. 6,618
3 Claims. (Cl. 260—570.8)

1. A compound selected from the group consisting of 1-(4-methoxy-phenyl)-1-dimethylamino-2-phenyl-ethane, its acid addition salts with pharmacologically useful acids, and its quaternary salts with pharmacologically useful quaternizing radicals and ions.

3,091,641

PREPARATION OF TERTIARY AMINES

William M. Sweeney, Wappingers Falls, N.Y., assignor to Texaco Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Dec. 28, 1959, Ser. No. 862,060
6 Claims. (Cl. 260—583)

1. Process for the preparation of a tertiary amine which comprises reacting in the absence of molecular hydrogen a dialkylamine and an alkanone with carbon monoxide and water in the presence of from 1 to 3 wt. percent, based on the weight of the reaction mixture, of a catalyst selected from the group consisting of iron pentacarbonyl and biscyclopentadienyl diiron tetracarbonyl, at an elevated temperature and between about 200 and 375° F., and at a pressure of between about 500 and 6000 p.s.i.g.

3,091,642

PROCESS FOR PREPARING HEXAALKYL-1,3,5-CYCLOHEXANETRIONES

Ronald G. Nations, Kingsport, Tenn., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed May 9, 1960, Ser. No. 27,529
7 Claims. (Cl. 260—586)

1. A process for preparing a hexaalkyl-1,3,5-cyclohexanetrione which comprises heating a tetraalkyl-1,3-cyclobutanedione, wherein in each instance the said alkyl group contains from 1–4 carbon atoms, at from 90–375° C., in the presence of an alkoxide of an alkali metal and a monohydric aliphatic alcohol containing from 1–4 carbon atoms.

3,091,643

PREPARATION OF ω-HYDROPOLYFLUOROPERHALO- AND POLYFLUOROPERHALOOLEFINS, -KETONES, AND -CARBINOLS

Douglas W. Wiley, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Apr. 23, 1958, Ser. No. 730,266
20 Claims. (Cl. 260—595)

1. The process of preparing a polyfluoro-1-olefin which comprises reacting, at a temperature of from about 80 to about 150° C. and at a pressure up to about one atmosphere, a one molar proportion of an alkali metal alkoxide in suspension in an inert liquid with at least a one molar proportion of a lower alkyl ester of at least one acid from the group consisting of polyfluoroperhalocarboxylic and omega-hydropolyfluoroperhalocarboxylic acids, wherein the halo substituents are of atomic number 9–17 and wherein the radical attached directly to the carboxyl carbon has at least two chain carbons, the alpha carbon of which carries at least two members from the group consisting of fluorine and perfluorocarbon radicals and the beta carbon of which carries at least one fluorine radical.

8. The process of preparing polyfluoroketones which comprises reacting, at a temperature between about 20 and 100° C., a one molar proportion of an alkali metal alkoxide in suspension in an inert liquid with at least a two molar proportion of a lower alkyl ester of at least one acid from the group consisting of polyfluoroperhalocarboxylic and omega-hydropolyfluoroperhalocarboxylic acids, wherein the halo substituents are of atomic number 9–17 and wherein the radical attached directly to the carboxyl carbon has at least two chain carbons, the alpha carbon of which carries at least two members from the group consisting of fluorine and perfluorocarbon radicals and the beta carbon of which carries at least one fluorine radical, and acidifying the reaction product with a mineral acid.

16. The process of preparing polyfluorocarbinols which comprises reacting, at a temperature between about 20 and 100° C., a one molar proportion of an alkali metal alkoxide in suspension in an inert liquid with at least a two molar proportion of at least one member of the group consisting of polyfluoroperhaloloweralkyl and omega-hydropolyfluoroperhaloloweralkyl ketones wherein the halo substituents are of atomic number 9–17 and wherein the radicals attached directly to the carbonyl carbon have at least two chain carbons, each alpha carbon of which carries at least two members from the group consisting of fluorine and perfluorocarbon radicals and each beta carbon of which carries at least one fluorine radical, and acidifying the reaction product with a mineral acid.

3,091,644

ALDEHYDE SYNTHESES

Clyde Lee Aldridge, Baton Rouge, La., assignor to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed Aug. 21, 1958, Ser. No. 756,306
2 Claims. (Cl. 260—604)

1. In a process for converting an olefinic compound having *n* carbon atoms, *n* being an integer from 2 to 20, to a mixture comprising aldehydes having *n*+1 carbon atoms wherein said olefinic compound is reacted in the liquid state with carbon monoxide and hydrogen at elevated temperatures and pressures in the presence of about 0.01 to 0.2 mole of a cobalt oxo catalyst per liter of olefinic compound the improvement which comprises reacting said olefinic compound with carbon monoxide and hydrogen in the presence of about 0.1 to about 5 millimoles per liter of olefin of a modifier comprising an olefin soluble mercury salt of an organic acid.

3,091,645

BISPHENOL PREPARATION

Albert L. Rocklin, Walnut Creek, Calif., assignor to Shell Oil Company, a corporation of Delaware

No Drawing. Filed Nov. 2, 1959, Ser. No. 850,120
8 Claims. (Cl. 260—619)

1. A process for preparing bis(3,5-dialkyl-hydroxyphenyl)methane which comprises reacting together a dialkyiphenol wherein two of the three ring carbon atoms ortho and para to the hydroxyl group are each substituted with an alkyl radical having up to 8 carbon atoms and the third ring carbon atom of the three ring carbon atoms ortho and para to the hydroxyl group has a replaceable hydrogen atom, at least one of said alkyl radicals being a tertiary alkyl radical having at least four carbon atoms and being attached to an ortho ring carbon atom, and a 3,5-dialkyl-monohydroxybenzyl alcohol wherein each of the alkyl radicals has up to 8 carbon atoms and one of the alkyl radicals has at least four carbon atoms and is a tertiary alkyl radical, in a solvent consisting essentially of a monohydric alkanol wherein the hydroxylic carbon atom is attached to at least 2 carbon atoms, in the presence of a catalytic amount of base.

3,091,646

PREPARATION OF M-CRESOL BY A DEALKYLATION PROCESS

Gerd Lester, Pittsburgh, Pa., assignor to Koppers Company, Inc., a corporation of Delaware

No Drawing. Filed Apr. 18, 1960, Ser. No. 22,683
3 Claims. (Cl. 260—621)

1. A method of making m-cresol comprising heating a 4,6-di-t-alkyl-m-cresol at a temperature of 150°–275° C., in the presence of a catalytic amount of an aluminum aryloxide selected from the group consisting of phenoxide and lower alkyl phenoxide, until about two moles of isoolefin per mole of 4,6-di-t-alkyl-m-cresol are evolved, and recovering m-cresol from the reaction mixture.

3,091,647

PROCESS FOR THE PREPARATION OF ALKYLENE GLYCOLS

Gene E. Hamilton, Wilmington, Del. (% Sun Oil Co., P.O. Box 426, Marcus Hook, Pa.), Arthur B. Metzner, 1214 Spring Valley Road, Newark, Del., and John E. Ehrreich, 45 Clark St., Belmont, Mass.

Filed Feb. 19, 1960, Ser. No. 9,890
4 Claims. (Cl. 260—635)

1. A continuous process for producing an alkylene glycol which comprises vaporizing an alkylene oxide selected from the group consisting of ethylene oxide, propylene oxide and butylene oxide, contacting said hot vapor with an inert particulate contact mass to adsorb thereon the polymers of the oxide formed during vaporization, forming a mixture of steam and vaporized alkylene oxide in which the mol ratio of steam to alkylene oxide is between about 5 to 1 and 20 to 1, and contacting the mixture at a temperature in the range of 115 to 200° C. and at a pressure between about 20 p.s.i.a and 80 p.s.i.a. with an acidic ion exchange resin, said temperature and pressure being regulated such that the resultant alkylene glycol product remains essentially in the vapor phase.

3,091,648

VINYLIDINE FLUORIDE DERIVED COTELOMER OILS

Murray Hauptschein, Glenside, and Milton Braid, Philadelphia, Pa., assignors to Pennsalt Chemicals Corporation, Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Filed Nov. 26, 1958, Ser. No. 776,432
5 Claims. (Cl. 260—653.1)

1. Cotelomers of the formula $R(Z)_m(CH_2CF_2)_nQ$ where R is selected from the class consisting of perfluoroalkyl and perfluorochloroalkyl radicals having from 1 to 4 carbon atoms; where Z is a divalent radical derived from an olefin selected from the class consisting of perfluorochloro and perfluorochloro hydro monoolefins having from 2 to 4 carbon atoms and perfluoro and perfluorohydro monoolefins having from 3 to 4 carbon atoms; where *n* and *m* are integers, the value of *n*+*m* ranging from 4 to about 40, and the *n*:*m* ratio being in the range of from 95:5 to 75:25; and where Q is selected from the class consisting of hydrogen, iodine, fluorine and chlorine.

3,091,649

PREPARATION OF SATURATED HYDROCARBONS FROM AROMATICS

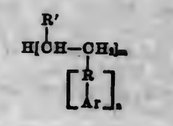
Abraham Schneider, Overbrook Hills, Pa., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

No Drawing. Filed June 30, 1960, Ser. No. 39,828
7 Claims. (Cl. 260—667)

1. Method of forming saturated hydrocarbon from a benzenoid hydrocarbon which comprises adding to the benzenoid hydrocarbon $AlBr_3$ and HBr in amounts, respectively, of at least two moles and at least one mole per mole of benzenoid hydrocarbon to form a hydrocarbon-insoluble complex, contacting the complex, in the form of a dispersion with a saturated hydrocarbon providing a tertiary hydrogen atom, with hydrogen at a pressure in the range of 50–1000 p.s.i.g. and a temperature in the range of 50–250° C. and sufficient to hydrogenate the benzene rings, and recovering saturated hydrocarbon reaction product from the reaction mixture.

3,091,650
TELOMERIZATION OF UNSATURATED HYDROCARBONS WITH ALIPHATIC-SUBSTITUTED AROMATIC HYDROCARBONS AND TELOMERIC PRODUCTS OBTAINED THEREBY
Donald D. Emrick, Shaker Heights, and David L. Beals, Newbury, Ohio, assignors to The Standard Oil Company, Cleveland, Ohio, a corporation of Ohio
No Drawing. Filed Dec. 7, 1959, Ser. No. 857,492
16 Claims. (Cl. 260—668)

6. A process for producing a liquid olefin telomer having a molecular weight within the range from 190 to about 35,000 and corresponding to the structure:



wherein R' is selected from the group consisting of hydrogen, aliphatic, aromatic and cycloaliphatic radicals, having from one to sixteen carbon atoms; R represents a bivalent aliphatic substituent having from one to twenty carbon atoms and Ar represents an aromatic nucleus, the total number of carbons atoms [R—Ar] being up to thirty, which comprises telomerizing a taxogen of the formula [R'CH=CH$_2$] having from about two to about twelve carbon atoms, at least 10 percent thereof comprising an olefin having from about three to about twelve carbon atoms, with a telogen of the formula [R—AR] in the presence of an organic peroxide free radical initiator capable of initiating the telomerization at a temperature within the range from about 40 to 175° C. under a pressure below about 5000 p.s.i.g., under which conditions an evolution of free radicals from the initiator is obtained.

3,091,651
PREPARATION OF 9-METHYLENE FLUORENE
Frederick J. Soderquist, Essexville, and Jerome H. Stickelmeyer and James L. Amos, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed Nov. 3, 1960, Ser. No. 66,895
4 Claims. (Cl. 260—668)

1. A method for the preparation of 9-methylene fluorene which comprises the steps of passing vapors of 9-methyl fluorene through a zone wherein contact is effected between said vapors and a dehydrogenation catalyst maintained at a temperature of from about 500° C. to about 850° C., recovering the products of the reaction, isolating therefrom the polymeric form of 9-methylene fluorene and thermally converting the said polymeric form of 9-methylene fluorene to 9-methylene fluorene.

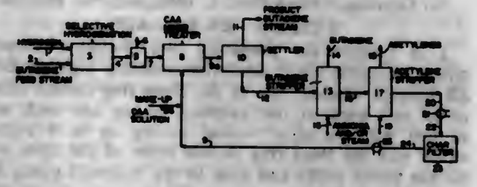
3,091,652
PREPARATION OF 9-METHYLENE FLUORENE
Frederick J. Soderquist, Essexville, Harold D. Boyce, Coleman, and James L. Amos, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed Nov. 3, 1960, Ser. No. 66,896
4 Claims. (Cl. 260—668)

1. A method for the preparation of 9-methylene fluorene which comprises the steps of passing vapors of 2-ethyl diphenyl through a zone wherein contact is effected between said vapors and a dehydrogenation catalyst maintained at a temperature of from about 550° C. to about 750° C., recovering the products of the reaction, isolating therefrom the polymeric form of 9-methylene fluorene and thermally converting the said polymeric form of 9-methylene fluorene to 9-methylene fluorene.

3,091,653
PROCESSES FOR PURIFYING CONJUGATED DIOLEFINS
Josef Nogradi, Cologne-Stammheim, Germany, assignor to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany
No Drawing. Filed Dec. 22, 1959, Ser. No. 861,222
Claims priority, application Germany Dec. 24, 1958
7 Claims. (Cl. 260—681.5)

1. A process for the purification of a conjugated diolefin without the formation of substantial amounts of diolefin polymers which comprises contacting the conjugated diolefin at a temperature between about 0° and about 80° C., in the absence of oxygen, with an alkali metal in an amount between 0.1 and 5 parts by weight per hundred parts by weight of the conjugated diolefin, together with a halogen-substituted hydrocarbon of the group consisting of chlorine-substituted and bromine-substituted araliphatic hydrocarbons free from nonbenzenoid halogen substituents, and chlorine-substituted and bromine-substituted saturated aliphatic and cycloaliphatic hydrocarbons, in such an amount that the ratio of atoms of the halogen in the halogen-substituted hydrocarbon to atoms of the alkali metal is between 1:1 and 2:1, and subsequently recovering the purified conjugated diolefin.

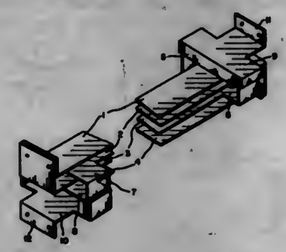
3,091,654
PARTIAL HYDROGENATION OF C$_4$ ACETYLENES PRIOR TO CAA PREWASH
William Newton Kestner, Baton Rouge, La., assignor to Esso Research and Engineering Company, a corporation of Delaware
Filed Aug. 24, 1960, Ser. No. 51,581
9 Claims. (Cl. 260—681.5)



1. A process for the removal of vinyl and alkyl acetylenes from a butadiene-bearing stream containing these components in minor proportions, which comprises selectively hydrogenating said butadiene-bearing stream under mild conditions to obtain removal of at least a major portion of the vinyl acetylene and only a minor proportion of the alkyl acetylenes, contacting the hydrogenated butadiene stream with that amount of a cuprous ammonium acetate solution to obtain a selective extraction of at least a major portion of the total acetylenes remaining in the hydrocarbon stream without extracting any substantial amount of the butadiene present therein, separating a spent CAA solution containing absorbed acetylenes, stripping this spent CAA solution to remove a substantial amount of the acetylenes, recycling stripped CAA solution to the extraction process, and recovering as a product from the process a butadiene raffinate stream having a reduced total acetylene content.

ELECTRICAL

3,091,655
HIGH-FREQUENCY CURRENT CONDUCTOR
Jacob Willem De Ruiter, Eindhoven, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed June 29, 1960, Ser. No. 39,596
Claims priority, application Netherlands July 3, 1959
2 Claims. (Cl. 174—32)



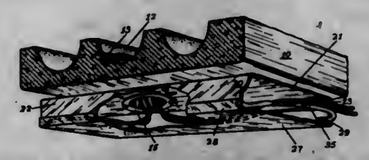
1. A high frequency current conductor assembly comprising a plurality of spaced, relatively insulated metal strips, each of said strips being T-shaped at one end and having end portions depending therefrom at right angles to the longitudinal axis of said strip, said other end of said T-shaped strip having a flange thereon extending perpendicular to the longitudinal axis of said strip but in a transverse plane to the plane of said end portions, said strips being stacked in an alternate relationship whereby the other end of each of said strips is juxtaposed to said T-shaped end of the adjacent strip and projects laterally beyond said T-shaped end, and a bracket located at each end of said current conductor assembly, said end portions being conductively connected to each other and to said bracket, said brackets each having mounting flanges extending subtantially co-planar to the flanges on the other end of said T-shaped strips and substantially perpendicular to the longitudinal axes of said metal strips.

3,091,656
TERMINAL ASSEMBLY
Raymond A. Lamoureaux, Jr., North Adams, Mass., assignor to Sprague Electric Company, North Adams, Mass., a corporation of Massachusetts
Filed Apr. 18, 1959, Ser. No. 806,690
2 Claims. (Cl. 174—52)



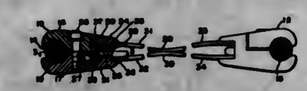
1. In an electrical component, a container, a closure member for closing said container, said closure member having a relatively non-yieldable portion and a relatively yieldable portion, a passageway through said non-yieldable portion and said yieldable portion, a terminal assembly mounted in said passageway, said terminal assembly having at least a first shoulder and a second shoulder separated by a shank, said shank being shorter than the uncompressed total thickness of said non-yieldable portion and said yieldable portion, an electrical connection secured to said first shoulder, said second shoulder being seated against said closure member, a second electrical connection secured to said terminal assembly, said first electrical connection and said second shoulder being so mounted on said closure member that seating said first electrical connection against said first shoulder holds said closure member under compression between said first electrical connection and said second shoulder, whereby said terminal assembly closes said passageway and said electrical connections are attached to said terminal assembly independently of the compression of said closure member.

3,091,657
WIRING DUCTS
John K. Stuessel, Dayton, Ohio, assignor to Flexiflor Electrical Systems, Inc., Dayton, Ohio, a corporation of Ohio
Filed Nov. 14, 1962, Ser. No. 237,499
2 Claims. (Cl. 174—68)



1. A metal duct construction comprising an elongated duct body having a duct bottom and duct sides, a cover for said duct body comprising a flat portion and narrow cover side walls for overlapping the side walls of said duct body, and spring bows disposed in said duct body, each spring bow extending transversely across the duct and having locking finger portions bent outwardly and passing through apertures in the side walls of the duct body, said duct cover having registering apertures in the cover sides for accommodating the fingers, whereby said cover may be locked in position and said bows may function as a support for wiring when said duct body is suspended upside down with the bottom of the duct above the cover.

3,091,658
CONDUCTOR SPACERS
Robert W. Harmon, Doylestown, Ohio, assignor to The Ohio Brass Company, Mansfield, Ohio, a corporation of New Jersey
Filed Feb. 13, 1961, Ser. No. 88,870
7 Claims. (Cl. 174—128)

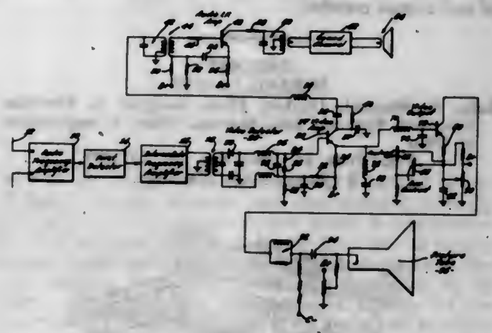


1. A spacer for holding two conductor cables in spaced lateral disposition while preventing separate rotational movement thereof, comprising a spacer bar and two conductor clamps, one at one end and one at the remaining end of the bar, each for connection to one of the cables and each conductor clamp comprising two body parts with opposed longitudinal cable receiving grooves adjacent the transversely outward extremity thereof, a first one of the body parts having a central part extending transversely inward and having pieces thereof spaced apart perpendicular to the plane of the cables, the spacer bar having bifurcate end parts thereof received between the two spaced pieces of the first body part, pivot means for the spacer bar comprising means carried by the first body part and extending at least through each of the bifurcate

end parts of the spacer bar, and screw fastener means extending between the two body parts for clamping the body parts together and upon a cable.

3,091,659
TELEVISION RECEIVER WITH TRANSISTORIZED VIDEO AMPLIFIER

Albert W. Mausman, Wheaton, Ill., assignor to Motorola, Inc., Chicago, Ill., a corporation of Illinois
Filed Feb. 27, 1961, Ser. No. 91,956
5 Claims. (Cl. 178—5.8)

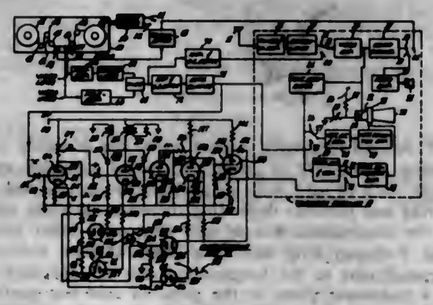


1. In a television receiver for utilizing a television signal having a video carrier amplitude modulated by video signals and a sound carrier frequency displaced from said video carrier and frequency modulated by audio signals, which television receiver includes a detector for producing detected video signals in a particular frequency range and for further producing an inter-carrier sound signal frequency displaced from said range and frequency modulated by the audio signals, and which further includes an audio channel and a video channel, the combination of: a video amplifier coupled to said detector and including a transistor having a first electrode coupled to said detector and further having a second electrode and a third electrode, first circuit means coupling said second electrode to said audio channel and including resonant network means coupled to a point of reference potential for establishing said second electrode substantially at the potential of said point of reference potential in the frequency range of said video signals, and second circuit means coupling said third electrode to said video channel and including resonant network means coupled to said point of reference potential for establishing said third electrode substantially at the potential of said point of reference potential at the frequency of said inter-carrier sound signal.

3,091,660
TELEVISION MAGNETIC TAPE REPRODUCING SYSTEM

William D. Houghton, Princeton, and Robert E. Morey, Hamilton Square, N.J., assignors to Radio Corporation of America, a corporation of Delaware
Filed Aug. 21, 1961, Ser. No. 132,854
9 Claims. (Cl. 178—6.6)

6. In a television magnetic tape reproducing system for use with a television receiver including switching means by which a television signal received over a communication path can be displayed by said receiver, a device for reproducing a television signal including vertical and horizontal synchronizing pulses from said magnetic tape, said synchronizing pulses being subject to variations in frequency introduced during the signal reproducing operation, means to apply said reproduced television signal from said device to said switching means in said receiver, means for separating said vertical and horizontal synchronizing pulses from said reproduced television signal and for feeding said vertical synchronizing pulses to said switching means, a synchronizing unit, means to apply said horizontal synchronizing pulses from said separating means to said synchronizing unit, said synchronizing unit comprising a pulse oscillator arranged to be triggered in response to said horizontal synchronizing pulses, a sawtooth wave generator coupled to said pulse oscillator and responsive to the pulse output thereof to produce a sawtooth wave, a first phase comparator for comparing said horizontal synchronizing pulses and said sawtooth wave and for producing a control signal determined by the phase difference therebetween, means to apply said control signal to said pulse oscillator to cause said pulse oscillator to have an operating frequency approximately equal to that of said horizontal synchronizing pulses, said pulse oscillator being responsive to said horizontal synchronizing pulses to be directly locked in frequency there-



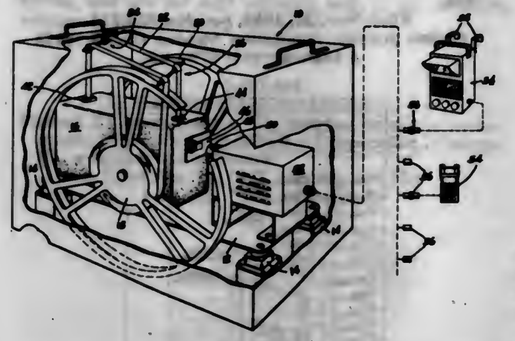
to, a second phase comparator for comparing said horizontal synchronizing pulses and said sawtooth wave and for producing a second control signal determined by the phase difference therebetween, means to apply said second control signal to said sawtooth wave generator to vary the slope of said sawtooth wave according to said second control signal, said sawtooth wave generator being responsive to said second control signal to produce said sawtooth wave having a constant peak-to-peak amplitude for variations in the frequency of the pulse output of said pulse oscillator, stabilizing means included in said pulse oscillator for maintaining said pulse oscillator immune to random noise and momentary voids in said horizontal synchronizing pulses, means to apply said sawtooth wave from said synchronizing unit to said switching means, said switching means being operative to cause said receiver to produce an accurate picture of said reproduced television signal in response to said vertical synchronizing pulses and said sawtooth wave.

3,091,661
ENTERTAINMENT SYSTEM

Constantin Alimanestiano, 2615 E. 74th St., Chicago, Ill.
Filed May 12, 1960, Ser. No. 28,614
3 Claims. (Cl. 178—6.8)

1. A portable entertainment system comprising: housing means; photographic projection apparatus mounted in said housing means and including a motion picture projector, a film delivery reel and a film take-up reel rotatably mounted on opposite lateral sides of said projector, and film guiding means for directing motion picture film from one of said reels to the other of said reels through said projector, said film guiding means including two sets of oppositely oriented rollers, each of said rollers having a cylindrical sprocket means associated therewith for controllably directing the transport of said film; television camera means mounted in said housing

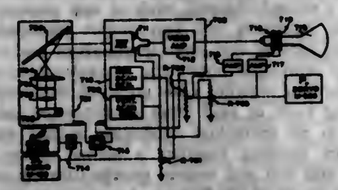
means for receiving the image projected by said apparatus and for generating an output indicative thereof; and



a plurality of individual television receiver means selectively connectable to said output.

3,091,662
METHOD AND MEANS FOR ALTERING APPARENT PERSPECTIVE OF IMAGES

Harold S. Hemstreet, Binghamton, N.Y., assignor to General Precision, Inc., a corporation of Delaware
Original application May 27, 1955, Ser. No. 511,488, now Patent No. 2,975,671, dated Mar. 21, 1961. Divided and this application Apr. 8, 1960, Ser. No. 26,924
3 Claims. (Cl. 178—7.2)

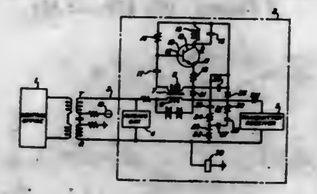


1. Apparatus for altering the apparent perspective of an image, comprising: signal generating means responsive to an applied image, said signal generating means having a pair of perpendicularly disposed scanning means and operative to produce video signals, means for generating sweep potentials to operate each of said scanning means, means for introducing a relative rotation between said applied image and said signal generating means, cathode ray tube means responsive to said video signals to produce an image, said cathode ray tube having a pair of perpendicularly-disposed deflection means responsive to sweep potentials synchronized with the scanning sweep potentials, means to vary the relative amplitudes between the potentials applied to one scanning means and one deflection means, and means to vary the relative amplitudes between the potentials applied to the other scanning means and both deflection means.

3,091,663
COIN BOX TELEMETERING ARRANGEMENT

Rembert R. Stokes, Springfield, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 20, 1960, Ser. No. 77,191
10 Claims. (Cl. 179—6.3)

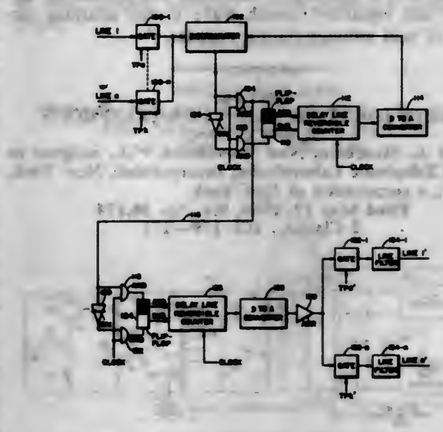
1. A telephone system including a coin operated telephone station, a coin receptacle associated with said station, a telephone line coupled to said station, signal generating means for applying a signal to said line, and control means for selectively activating said signal generating means, said control means including first switching means to condition said signal generating means for operation when coins in said receptacle have accumulated



to a predetermined height, second switching means operable to activate said signal generating means when said signal generating means are conditioned, and means to operate said second switching means.

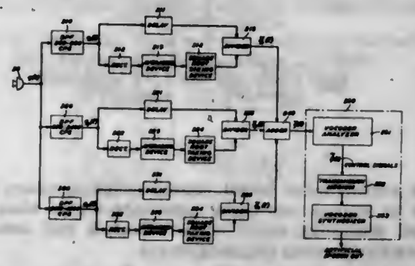
3,091,664
DELTA MODULATOR FOR A TIME DIVISION MULTIPLEX SYSTEM

William V. Tyrlick, Rochester, N.Y., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware
Filed Apr. 24, 1961, Ser. No. 105,122
9 Claims. (Cl. 179—15)



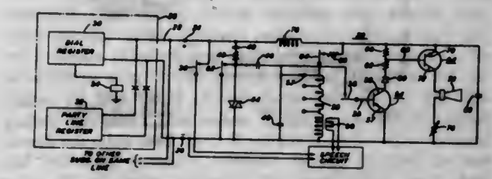
1. In a time division multiplex system having a given frame period, a plurality of analog signal sources, time multiplex means for sequentially sampling each of said sources each frame period, first means coupled to said time multiplex means, said first means including delay means having a delay equal to one frame period for sequentially comparing the relative levels of the time multiplexed samples of each individual analog signal applied thereto during successive frames to produce a momentary output signal having a respective one of first and second predetermined values in accordance with whether the level of the sample of that individual analog signal during a frame is greater or smaller than the level of the sample of that individual analog signal during the previous frame, second means for transmitting successive output signals to a receiving point, and third means including demultiplexing means at said receiving point having said successive output signals applied as an input thereto for reconstructing said analog signals in accordance with the respective values of each of said successive output signals.

3,091,665
AUTOCORRELATION VOCODER EQUALIZER
Manfred R. Schroeder, Gillette, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed June 3, 1960, Ser. No. 33,741
5 Claims. (Cl. 179—15.55)



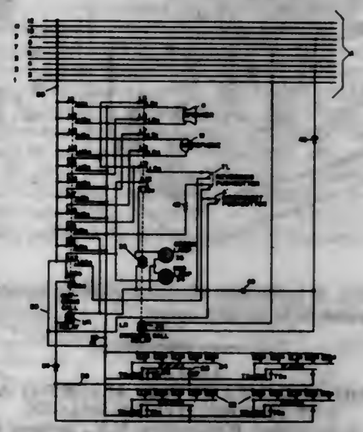
1. In a speech transmission system the combination that comprises a source of an incoming speech wave, means for obtaining a group of signals representative of the formants of said speech wave, means for selectively modifying the magnitudes of said formant signals by dividing each of said formant signals by the square root of its average absolute magnitude, means for combining said selectively modified formant signals to form an equalized speech wave, an autocorrelation vocoder comprising an analyzer terminal, a narrow-band transmission channel, and a synthesizer terminal, and means for applying said equalized speech wave to the analyzer terminal of said autocorrelation vocoder.

3,091,666
PARTY IDENTIFICATION FOR TELEPHONE SUBSTATIONS
Larned A. Meacham, New Providence, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed May 19, 1960, Ser. No. 30,174
8 Claims. (Cl. 179—17)



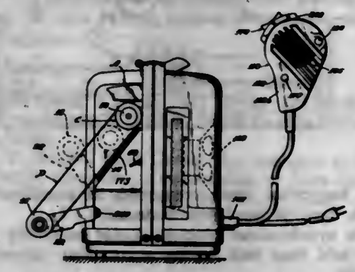
1. In a telephone system a central office including a party line register, a line extending from said central office, a plurality of subscriber stations connected to said line, each subscriber station including a speech circuit incorporating a speech amplifier, a call transmitter mechanism, a frequency selective ringer circuit responsive to a ringing frequency individual thereto, reproducer means connected to the ringer circuit to produce an audible signal in the presence of the individual ringing frequency transmitted thereto from the central office, means responsive to the call transmitter mechanism for directing the line current into said frequency selective circuit during operation of the mechanism and interrupting the flow of line current upon release of the mechanism thereby producing a signal in the frequency selective circuit, said signal corresponding to the fundamental frequency of the circuit, and means for coupling said signal to the speech circuit for transmission to the central office as an identification of the subscriber station of which the call transmitter mechanism was released.

3,091,667
INTERCOMMUNICATION SYSTEM
August Helge Norén, Sollentuna, Sweden, assignor to Aktiebolaget Gylling & Co., Stockholm-Grondal, Sweden
Filed Nov. 30, 1959, Ser. No. 856,215
Claims priority, application Sweden Dec. 9, 1958
4 Claims. (Cl. 179—40)



1. In an intercommunication system, a plurality of individual telephone stations, a central station, a common multiconductor cable interconnecting said individual stations and said central station, an amplifier in said central station, a D.C. current supply, said amplifier having a first and a second channel, each of said channels having two input terminals and two output terminals, means connecting each of said input terminals of said first channel to an individual conductor in said cable, said conductors forming together a first group of conductors, means connecting each of said input terminals of said second channel to an individual conductor in said cable, said conductors forming together a second group of conductors, said first and second groups forming together a first main group of conductors, means connecting each of said output terminals of said first channel to an individual conductor in said cable, said conductors forming together a third group of conductors, means connecting each of said output terminals of said second channel to an individual conductor of said cable, said conductors forming together a fourth group of conductors, said third and fourth group forming together a second main group of conductors, a microphone and a loudspeaker in each individual station, an incoming call relay and an outgoing call relay in each individual station, said incoming call relay, when actuated, connecting said microphone to said first group of conductors in the cable and said loudspeaker to said fourth group of conductors of said cable, said outgoing call relay, when actuated, connecting said microphone to said second group of conductors in said cable and said loudspeaker to said third group of conductors of said cable, call means in each individual station for initiating calls to other stations, said call means, when actuated, connecting the coil of said outgoing call relay to the poles of said current supply and connecting one conductor of said first main group of conductors to one pole of said current supply and connecting one conductor of said second main group of conductors to the other pole of said current supply, said incoming call relay having a magnetizing winding permanently connected between one conductor of said first main group and one conductor of said second main group, and a blocking impedance connected in series between said magnetizing coil of said incoming call relay and said conductor of said first main group, said blocking impedance being a rectifier having a resistance in its conductive direction which is high for small voltages, such as the speech voltage of the conductor to which the blocking impedance is connected, and low for high voltages, such as the actuating voltage of said incoming call relay.

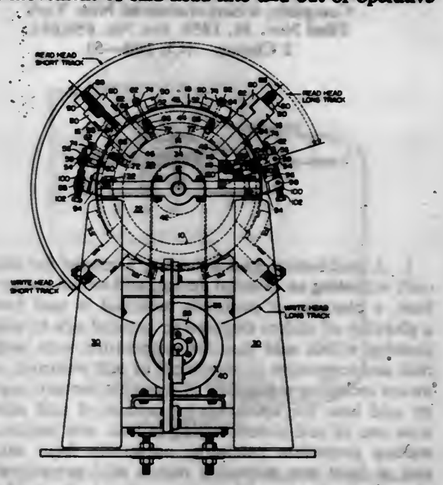
3,091,668
DICTATING MACHINE
Richard E. Trost, Dundee, Ill., assignor, by mesne assignments, to Victor Comptometer Corporation, Chicago, Ill., a corporation of Illinois
Filed Jan. 22, 1957, Ser. No. 635,295
8 Claims. (Cl. 179—100.2)



1. In a dictating machine, a belt magnetic record medium, means for freely demountably supporting the record medium for movement in a continuous path, driving means, a drive train connecting the driving means with the record medium for driving the latter in a forward direction, a transducer movable into and out of a transducing position relative to the record medium, means interconnecting the record medium and transducer for moving the latter transversely along the record medium when it is in said transducing position for tracing a path on the record medium, said transducer being also manually movable relative to the record medium when it is out of transducing position, a solenoid for establishing connection in the drive train, means for energizing said transducer, a hand piece remotely positionable relative to the remaining portion of the machine, circuit means for energizing said solenoid and transducer, circuit means for energizing said solenoid and de-energizing said transducer, a relay circuit for controlling each said circuit means, and switch means including a manipulable element in said hand piece for selectively controlling said relay circuits, said manipulable element constituting the sole manipulable means required for effecting the controlling functions mentioned.

3,091,669
MOUNTING DEVICE FOR A MAGNETIC TRANSDUCER HEAD
Harold M. Frederick and Isaac M. Sheaffer, Jr., Berwyn, Pa., assignors to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed May 14, 1957, Ser. No. 659,046
12 Claims. (Cl. 179—100.2)

1. Apparatus for retractibly mounting transducers in operative association with a drum type storage member comprising, a drum-like housing enclosing said storage member in co-axial relation therewith, said housing having an aperture therethrough and an elongated circumferential groove on its outer surface, said groove intersecting said aperture and having circumferential track portions on each side thereof, a head, and means adjustably mounting said head on said housing with a portion extending through said aperture in closed adjacency to the surface of said drum storage member, said last means comprising a support member having an arcuate face complementary to and engaging said tracks and movable longitudinally thereon, means pivotally mounting said support member on said housing for providing pivotal movement of said head into and out of operative association with said storage member, and means forming part of said pivotal mounting means operatively connected to said support member for adjusting the position of said support member circumferentially along said tracks.

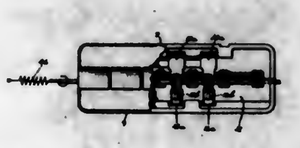


3,091,670
PHONE HOLDER
Bertie R. Hall, 6323 Knott Blvd., El Cerrito, Calif.
Filed Nov. 2, 1959, Ser. No. 850,175
8 Claims. (Cl. 179—156)



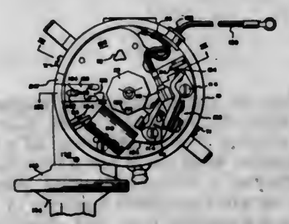
4. A holder for a telephone of the handset type comprising a cheek rest including a cheek plate of a length and width adapting it to fit the cradle of a handset type telephone support when not in use; a head band assembly bracket including a U-shape clamping portion adapted to straddle the aforementioned handgrip of a telephone, a bracket arm extending from said clamping portion in substantially a plane paralleling the median plane of said U-shaped clamping portion, and a mounting platform for a head band assembly in a plane substantially normal to the plane of said bracket arm and at an angle to an edge of said bracket arm; means for affixing said cheek rest and said bracket to the handgrip portion of a handset phone; a head band assembly pivotally secured to said mounting platform for swinging movement in substantially the plane of said platform, said head band assembly including a shank, a head band, and means adjustably securing said head band at one end to said shank; and means for limiting permissible swing of said head band assembly from a position of rest substantially in line with said cheek rest through an angle to a position of use.

3,091,671
PUSHBUTTON SWITCH WITH MECHANICALLY ACTUATED EXTENDED SLIDER
Philip Hutt, Milford, Conn., assignor to General Electric Company, a corporation of New York
Filed Nov. 30, 1959, Ser. No. 856,061
2 Claims. (Cl. 200—5)



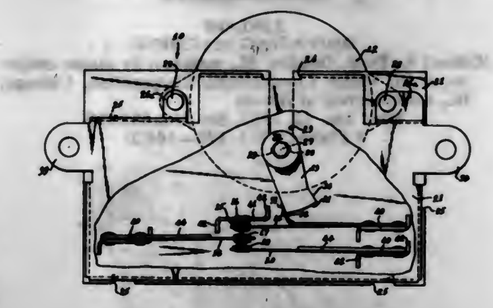
1. A pushbutton switch having a means for mechanically actuating an external device, said switch comprising a base, a plurality of pushrods mounted in said base, and a plurality of sliders disposed in parallel side-by-side relationship within said base for cooperation with said pushrods and responsive to movement of said pushrods, contact means including a plurality of movable contacts supported by said base for operation by certain of said sliders, at least one of said sliders having at least one motion transmitting projection extending outwardly from said base and at least one actuating recess, said projection being operatively connected to said external device, said actuating recess comprising an inclined edge disposed at an angle of approximately 45 degrees to the direction of motion of said one slider for coacting with an associated pushrod thereby to move said slider projection to an actuating position in response to depression of said pushrod to mechanically actuate an external device, and a vertical edge continuous from said inclined edge and disposed at an angle of approximately 90 degrees to the direction of motion of said one slider, said vertical edge forming a seat at the bottom of said recess to lock said one slider in said actuated position when said associated pushrod is in its innermost depressed position.

3,091,672
IGNITION DISTRIBUTOR
Ernst A. Longenecker, 411 S. Higby St., Jackson, Mich.
Filed Jan. 16, 1959, Ser. No. 787,253
18 Claims. (Cl. 200—31)



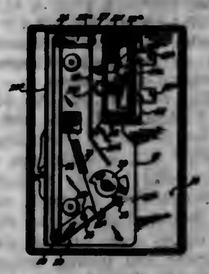
1. In an internal combustion engine ignition system, including a distributor having a drive shaft and a rotatably mounted primary circuit contact support plate, the improvement comprising a replaceable pretimed breaker point assembly fixable to the support plate, said assembly including a mounting plate, means releasably affixing and adjustably relating said mounting plate to the support plate, a pair of breaker points mounted on said mounting plate, and cam means rotatably mounted on said mounting plate having clutch means defined thereon for driving interconnection with the drive shaft, said cam means being rotated by the drive shaft and adapted to open and close said breaker points.

3,091,673
CYCLE TIMER
Joe Bowman, Greentown, Ind., assignor to Kingston Products Corporation, Kokomo, Ind., a corporation of Indiana
Filed June 8, 1960, Ser. No. 34,707
7 Claims. (Cl. 200—38)



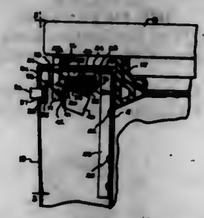
1. A sequential timer comprising in combination:
(a) a base of insulative material;
(b) a synchronous electric motor assembly secured to said base and having a rotatably driven output shaft;
(c) a single cam rotatably driven by said output shaft, and having a peripheral track with only two effective dwell heights spaced from each other by a relatively steep rise portion and a free fall portion;
(d) a plurality of biased flexible contact blades secured to said base in flatwise spaced relation to each other, one of said blades having a sharp-edged cam-follower projecting therefrom and engageable at its edge with said track at one of said dwell heights, and operative on said one blade to deflect all of said blades jointly against their respective biases in response to cam rotation; and
(e) a plurality of contacts and terminals operatively associated with said blades and defining therewith two switches, said one blade being common to said switches and being normally closed of its own bias against one of said contacts, and being movable therefrom and engageable with another of said contacts in response to rotation of said cam.

3,091,674
CONTROL APPARATUS
Arvel R. Harris, Pompano Beach, Fla., assignor to Ranco Incorporated, Columbus, Ohio, a corporation of Ohio
Filed July 15, 1960, Ser. No. 43,180
1 Claim. (Cl. 200—61.06)



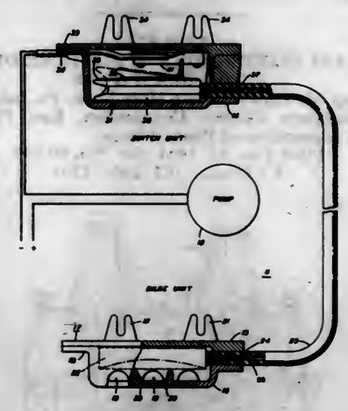
In a control apparatus of the type described, a frame comprising two opposed side walls joined by a yoke wall, a first lever L-shaped and pivoted adjacent one end of said frame to swing in a plane parallel to said side walls and the other leg thereof extending toward the opposite end of said frame and terminating short thereof, a second lever pivoted adjacent said opposite end of said frame to swing in a plane parallel to the plane in which said first lever swings and extending in a direction transversely of said other leg and space therefrom, an elongated condition responsive element attached to and interconnecting the ends of said levers which lie adjacent said yoke wall, a switch mechanism supported on said frame and including an operating member engaged by said other leg of said first lever, and a rotatable actuating and adjusting means disposed intermediate the end of said other leg and said second lever, said means including a cam surface engaged by said second lever for movement of said second lever about its pivot in response to rotation of said means and a member engaging and moving the end portion of said other leg during a portion only of the rotative movement of said means.

3,091,675
COMBINATION LATCHING AND SWITCH CONTROL ARRANGEMENT FOR ELECTRICAL APPLIANCES
George T. Sholtes, Fern Creek, Ky., assignor to General Electric Company, a corporation of New York
Filed Feb. 14, 1962, Ser. No. 173,229
5 Claims. (Cl. 200—61.62)



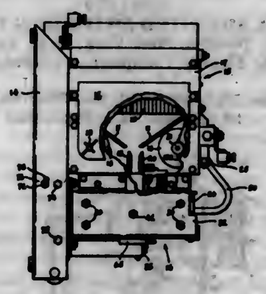
1. For use in an electric appliance having a cabinet, a closure member for said cabinet, and an electrical component which is to be de-energized when said closure member is open to provide access to said cabinet:
(a) a latch assembly support rigidly secured to said cabinet;
(b) a latch assembly pivotally mounted on said support;
(c) means biasing said latch assembly to a pre-determined position;
(d) a switch assembly rigidly mounted on said latch assembly, said switch assembly being adapted to control energization of said electrical component and biased to open position, said switch assembly having a member movable to a closed position wherein said switch assembly is closed;
(e) a striker member secured to said closure member and positioned to move substantially perpendicularly to the plane of movement of said latch assembly into engagement therewith, said striker member having a camming surface and a latching recess formed thereon;
(f) said camming surface being formed to engage said latch assembly as said closure member closes and pivot said latch assembly away from its predetermined position, said biasing means forcing said latch assembly toward said predetermined position into said recess when said closure member is fully closed, said striker member and said switch assembly being relatively positioned so that said switch assembly member is engaged by said striker member and is moved to its closed position only when said latch assembly is in said striker member recess; and
(g) manually operable means for moving said latch assembly away from its predetermined position thereby to release said striker member and allow opening of said closure member.

3,091,676
FLUID LEVEL CONTROL SYSTEM
Arthur H. Koster, R.D., Califon, N.J.
Filed Dec. 18, 1959, Ser. No. 860,510
5 Claims. (Cl. 200—83)



1. A pump control system comprising, in combination, a switch, first external pressure sensitive means comprising a sealed hollow flexible member forming an air chamber, said first means being located within a fluid container, second external pressure sensitive means responsive to a change in pressure in the chamber of said first means for controlling said switch, said second means comprising a sealed hollow flexible member forming an air chamber, said second means being located adjacent said switch, a hollow member forming an air passage communicating at one end with the interior of said first means and at the other end with the interior of said second means, said member being hermetically sealed to both said first and second means to form an air flow passage between said first and second means, said first and second means and said member defining a sealed air system, and means within said hollow member for impeding the flow of air therethrough whereby there is a finite delay in the response of said second means to a change in pressure in said first means.

3,091,677
SHOCKPROOF ELECTROMAGNETIC CONTACTOR
Theodore F. Rosing, Whitefish Bay, Wis., assignor to Cutler-Hammer, Inc., Milwaukee, Wis., a corporation of Delaware
Filed Oct. 5, 1960, Ser. No. 60,659
5 Claims. (Cl. 200—103)



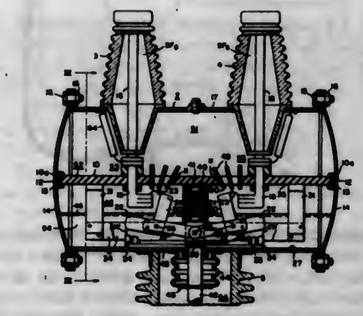
1. In a shockproof electric switch, a frame, rollers rotatably mounted on said frame, a pair of contact carrying carriages which are each supported and movable on said rollers with respect to said frame, an electromagnetic

coil carried by said frame, a pair of armatures respectively mounted on said carriages in line with said coil, and linkage means interconnecting said carriages so that the masses of said carriages and their armatures oppose each other under shock so that their positions are unaffected.

3,091,678
CIRCUIT INTERRUPTER STRUCTURE OF THE FLUID BLAST TYPE

Winthrop M. Leeds, Forest Hills Boro, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed Feb. 17, 1961, Ser. No. 90,009
6 Claims. (Cl. 200—150)

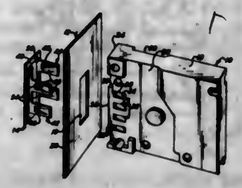


1. A circuit interrupter of the fluid-blast type including a tank containing a dielectric fluid, a baffle plate having a pair of exhaust openings disposed interiorly within the tank and dividing the tank into a pressure-generating chamber and an exhaust chamber, a pair of relatively stationary contacts supported by the baffle plate adjacent said pair of exhaust openings within the pressure-generating chamber, a relatively stationary bridging contact disposed within the pressure-generating chamber, said bridging contact forming a spaced pair of relatively stationary pressure-generating contacts, a pair of cooperable movable contact structures, each movable contact structure cooperating with one of said relatively stationary contacts and with one of said relatively stationary pressure-generating contacts to draw a pressure-generating arc and a serially related interrupting arc being drawn transversely across an exhaust opening, and the pressure generated within the pressure-generating chamber by the two pressure-generating arcs forcing fluid transversely across the interrupting arcs and through the pair of exhaust openings to thereby effect circuit interruption.

3,091,679
PANEL MOUNTED SWITCHING DEVICE

Alexander R. Norden, New York, N.Y., assignor to Federal Pacific Electric Company, a corporation of Delaware

Filed Feb. 19, 1959, Ser. No. 794,425
10 Claims. (Cl. 200—168)

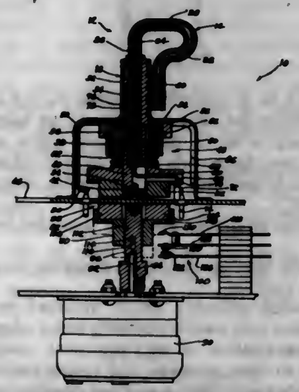


1. A switching device and a bracket for mounting the switching device to a panel having an opening at a switching device mounting region, said switching device comprising a casing with a generally planar front wall having an operating handle accessible thereat, said casing having recesses defined therein at the opposite sides thereof, and said bracket comprising a front plate having laterally spaced parts projecting rearwardly thereof, said parts having resilient detents extending inwardly thereof, said front plate being adapted for overlying engagement with the panel with said parts extending through said opening and along the opposite sides of said casing in the mounted position thereof, the latter being adapted to be retained in mounted position with said front wall adjacent the panel at the opening thereof by the engagement of said detents in companion recesses of said casing, the front wall of the casing and the rear surface of said front plate being in spaced parallel planes separated by the thickness of the panel when said detents are received in said recesses, said front plate defining a decorative trim plate for the switching device and having an opening for exposing said handle at the front of the panel, the detents of one of said parts being staggered with respect to the detents of the other part to register with correspondingly staggered recesses at the opposite sides of said casing.

3,091,680
ICE DETECTOR

Vernon E. Adrig, West Burlington, Iowa, assignor to Cook Electric Company, Chicago, Ill., a corporation of Delaware

Filed Oct. 28, 1960, Ser. No. 65,624
4 Claims. (Cl. 219—19)



2. In an ice detector, the combination comprising a stationary probe member, a rotary probe member rotatable adjacent said stationary probe member and adapted to be installed by the formation of ice between said members, a motor, a slip clutch connected between said motor and said rotary probe member, a switch operable in response to slipping of said clutch when said rotary probe member is stalled, a heater for melting ice from said probe members, and means operable by said switch for energizing said heater for a limited time so as to free said rotary probe member from ice after being stalled.

3,091,681
HEATER FOR BOWLING BALLS

Alan H. Mayer, 2024 S. Wabash Ave., Chicago, Ill.

Filed Apr. 3, 1961, Ser. No. 100,131
1 Claim. (Cl. 219—19)

The improvement of heating means for heating a bowling ball comprising an elongated electrically energizable heating element, said heating element having a transverse dimension less than the diameter of the finger-receiving opening in the bowling ball to enable said heating element to be inserted in said opening, elongated resilient gripping means attached to said heating element and of a length approximating the length of said heating element for gripping the walls of said finger-receiving opening to maintain the heating element in place when said element is positioned within said opening, handle means connected to said heating element, flange means of greater diameter than said finger-receiving opening in the bowling ball positioned intermediate the heating element and the handle means for limiting the insertion of the heating element within said finger-receiving opening, conductor means connected at one end to said heating element and extending through said handle means, and a terminal plug connected to the other end of said conductor means, said terminal plug being shaped to operatively fit within the cigarette lighter receptacle in an automobile for electrically connecting said heating element to the automobile battery.



3,091,682
HEATING UNIT WITH COLLAPSIBLE TERMINALS

Marvin E. Prather, Louisville, Ky., assignor to General Electric Company, a corporation of New York

Original application Mar. 31, 1960, Ser. No. 19,006, now Patent No. 3,051,818, dated Aug. 28, 1962. Divided and this application Apr. 17, 1961, Ser. No. 103,587
4 Claims. (Cl. 219—37)



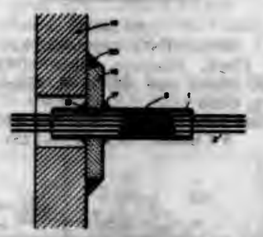
3. A metal sheathed heating element comprising an inner resistance coil embedded in a mass of electrical insulating material, and an outer metal sheath covering the insulation, the terminal ends of the heating element being compressible to facilitate the ease of bending the terminals about sharp curves, the compressible terminal ends including a collapsible tube which extends therethrough and is connected to the resistance coil at one end outside the area of the compressible terminal portion.

3,091,683
METHOD OF PASSING WIRE, CABLE SHEATH AND THE LIKE THROUGH A WALL

Pierre Marcel Paul Bonnard and Pierre Antoine Dujols, Paris, and Jean Robert Perilhou, Bourg-la-Reine, France, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Filed Apr. 13, 1959, Ser. No. 806,169
Claims priority, application France May 14, 1958
7 Claims. (Cl. 219—85)

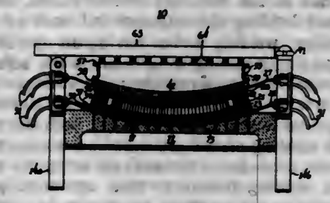
1. A method of forming a sealing plug within the interior of a tube in a discrete space remote from the open ends thereof; comprising providing a substantially vertical opening through a side wall of said tube whereby said discrete space within said tube and the space exterior of said tube are in communication, introducing molten sealing material to said discrete space within said tube through said opening and simultaneously supplying an inert cooling fluid to said space, and filling said space with said sealing material.



3,091,684
BRAZING APPARATUS

Joe F. Cochran, Fort Worth, Tex., assignor to General Dynamics Corporation, San Diego, Calif., a corporation of Delaware

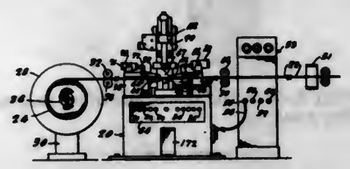
Filed July 13, 1961, Ser. No. 123,794
1 Claim. (Cl. 219—85)



An apparatus for fabricating a composite structure formed of component elements adapted to be brazed together by means of a suitable brazing material, said apparatus comprising, in combination, a barrier for enclosing said structure, said barrier including a peripheral frame member, an upper sealing sheet member positioned upon said frame and said structure and a lower sealing sheet positioned beneath said frame and said structure, means associated with said barrier for circulating an inert gaseous medium through said barrier and about said structure to protect said structure against atmospheric contamination, a base block for supporting and maintaining the contour of said structure, said base block being formed with a network of grooves on its upper surface and a plenum chamber within its interior, said plenum chamber being connected with said grooves through a plurality of passages, said plenum chamber also being connected with a source of coolant fluid, whereby said coolant fluid may be circulated through said plenum chamber, said passages and said grooves, means for exerting pressure against said structure and said barrier for maintaining positive contact between said structural elements and between said barrier members, said pressure means including an inflatable vessel expansible in a direction perpendicular to the surface of said structure and restraining means positioned adjacent said vessel for preventing movement of said vessel away from said structure, electrical resistance heating elements disposed adjacent said upper and lower barrier sheet members for heating said structure to the melting point of said brazing material, said heating elements being connected with a suitable source of electrical power, temperature-sensitive means associated with said power source and positioned adjacent said barrier sheets for controlling the temperature of said structure, and means for equally distributing the heat from said heating elements onto said structure, said heat distribution means including a relatively heavy plate of a material having high heat-transfer characteristics disposed between each

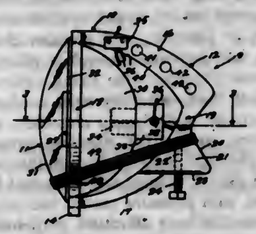
of said upper and lower barrier sheet members and said heating elements.

3,091,685
WELDING APPARATUS
William B. Clark, Maumee, Ohio (Walbridge Road, Walbridge, Ohio), and Albert R. Clark, 346 W. 5th, Perrysburg, Ohio
Filed July 31, 1959, Ser. No. 830,817
9 Claims. (Cl. 219—125)



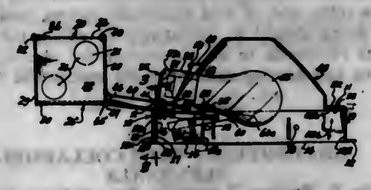
1. Apparatus for welding together the ends of two pieces of metal stock comprising means for seizing a first piece of metal stock, means for positioning a second piece of metal stock in line with the first piece and holding said second piece so positioned, a trimming device having an operative position for cutting off in matching contour the adjacent ends of the first and second pieces, means for bringing and holding the adjacent cut ends of the two pieces together, welding means having an operative position for applying a joining weld between the adjacent cut ends, a horizontally reciprocable main carriage movable in a transverse path generally parallel to the trimmed ends of the pieces of metal stock on which both the trimming device and welding means are mounted, means for moving the main carriage to successively bring the trimming device and welding means to their operative positions, and a supplemental carriage on the main carriage on which the welding means is carried and which is reciprocable independently of the main carriage, the reciprocable path of the supplemental carriage being substantially in line with the path in which the main carriage is moved.

3,091,686
PORTABLE LIGHT
Howard B. Loughead, 107 N. 5 Point Road, West Chester, Pa.
Filed Dec. 4, 1961, Ser. No. 156,655
1 Claim. (Cl. 240—8.18)



A portable light comprising a sealed beam type lamp unit including a reflector portion containing a filament and a lens portion, said lens portion and reflector portion being bulged away from one another and being joined by an annular external bead portion; a holder including an annular rim defining the front of the holder and having circumferentially spaced lugs projecting from a front side thereof and in which portions of the bead are received for detachably securing the lamp unit to the holder with the lens portion projecting from said front side of the rim and the reflector portion extending through and projecting from the opposite rear side of the rim, said holder including a rear part formed integral with said rim and disposed therebehind and in a plane substantially perpendicular to the plane of the rim, said rear part including a top portion extending rearwardly and downwardly from an uppermost part of the rim and forming a handle and a bottom portion extending rearwardly and upwardly from a lowermost part of the rim and merging with said top portion, a pair of front legs formed integral with and extending downwardly from circumferentially spaced portions of the rim and disposed on opposite sides of said rear part, a rear leg connected to and extending downwardly from said bottom portion of the rear part above and remote from said front legs, and means adjustably mounting said rear leg for varying the elevation of the rear leg relative to the front legs whereby the sealed beam unit is supported in the holder inclined upwardly at different angles.

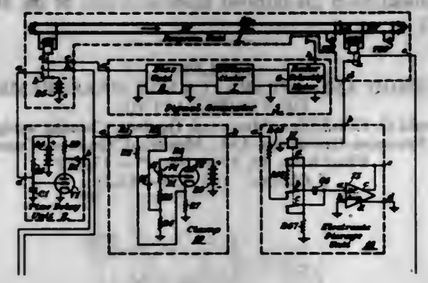
3,091,687
RECESSED LIGHTING FIXTURE HAVING A SEPARABLE PRE-WIRED SECTION
Robert A. Papedorf, Claremont, Calif., assignor to Emerson-Pryne Company, Pomona, Calif., a corporation of Delaware
Filed Mar. 14, 1960, Ser. No. 14,880
8 Claims. (Cl. 240—78)



8. A recessed light fixture comprising:
a rigid frame attachable to a building structure;
a splice box having an open side;
a rigid bracket mounting the splice box on the frame with the open side of the box facing the frame and spaced laterally therefrom, said bracket having an upwardly facing surface;
and an integral assembly made from a single unity sheet of metal and comprising a central portion of hollow, tubular shape forming a wireway with free edges substantially meeting on the underside thereof to form a longitudinally extending joint and a flat portion at each end extending upwardly from and generally transversely to said wireway, one flat end section forming a panel closing the open side of the splice box, and the other flat end section providing lamp socket mounting means, a lamp socket mounted on said other flat end section, and electrical conductors extending from the socket through the wireway to the splice box;
said longitudinal joint of the wireway being substantially parallel to and in engagement with the upwardly facing surface on the bracket.

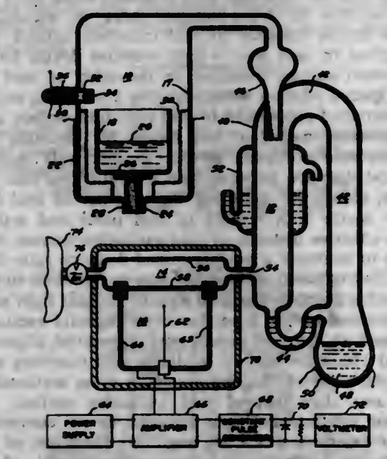
3,091,688
VALIDITY DETECTOR
James A. Cook, Jr., Wilkinsburg, Pa., assignor to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania
Filed Apr. 27, 1959, Ser. No. 809,191
11 Claims. (Cl. 246—182)

6. Apparatus for evaluating rolling resistance measurements made on railway cars moving in a stretch of track, comprising, in combination, means for generating a signal in accordance with the rolling resistance of a car moving in said stretch, storage means for storing an applied signal when actuated, means for applying said signal to said storage means, means controlled by said signal for actuating said storage means when said signal is within prescribed limits, and means for delaying the actuation of



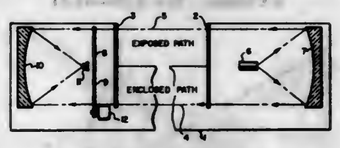
said storage means a predetermined time after a car enters said stretch.

3,091,689
ANALYTICAL PROCESS AND APPARATUS
Henry S. Spacil, Boston, Mass., assignor to Alloyd Research Corporation, Watertown, Mass., a corporation of Massachusetts
Filed Oct. 27, 1958, Ser. No. 769,890
12 Claims. (Cl. 250—43.5)



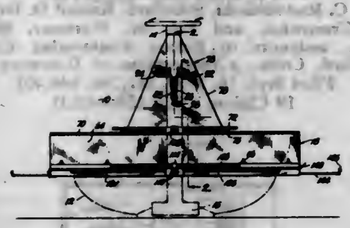
1. A system for analyzing a chemical sample for oxygen, said system comprising a vaporizing assembly, an evacuating assembly, a collecting assembly and a detecting assembly, said vaporizing assembly including a jacket, a crucible within said jacket, a predetermined quantity of a liquified inorganic material within said crucible, a radio frequency induction coil surrounding said jacket for maintaining said inorganic material liquified, said crucible presenting a surface in contact with said liquified inorganic material, said surface being composed of a material containing carbon having a radioactivity of from 0.1 to 1000 microcuries per gram of carbon, a heat insulating support between said jacket and said crucible, a radiation shield surrounding said crucible within said jacket, means within said jacket for propelling a specimen into said liquified inorganic material, said evacuating assembly including a mercury diffusion pump for exhausting gaseous products from said vaporizing system, said collecting system providing a conduit through which said gaseous products advance from said mercury diffusion pump and an auxiliary pump for continuously evacuating said conduit, said detecting system including a radioactivity counting unit contiguous with said conduit.

3,091,690
TWO PATH INFRARED GAS ANALYZER HAVING ONE ENCLOSED PATH
Thomas F. McHenry, South Norwalk, Conn., assignor to Barnes Engineering Company, Stamford, Conn., a corporation of Delaware
Filed June 16, 1960, Ser. No. 36,532
10 Claims. (Cl. 250—43.5)



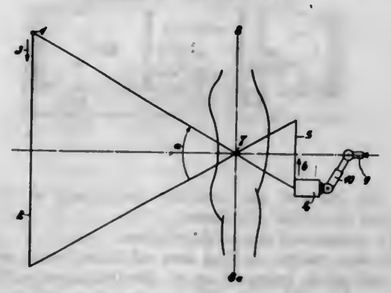
1. An infrared gas analyzer comprising in combination and in optical alignment,
(*a*) a source of infrared radiation,
(*b*) two paths, at least one of them being enclosed, said paths being of equal effective cross section and capable of having differing gas compositions,
(*c*) means for forming beams from said infrared source and for directing them through said paths,
(*d*) an infrared detector and two filtering means one of which passes a band of infrared radiation containing a strong absorption band of a predetermined chemical capable of existing in the vapor phase,
(*e*) means for imaging the two beams alternately through each filter onto the detector at a predetermined alternating frequency and A.C. responsive indicating means connected to the output of said detector and responsive to the frequencies of said alternation of the beams.

3,091,691
AORTOGRAPHIC MULTIPLE CASSETTE CHAMBER
Wilfred H. Snow, 222 Spruce, Leavenworth, Kans.
Filed Aug. 15, 1960, Ser. No. 49,690
8 Claims. (Cl. 250—58)



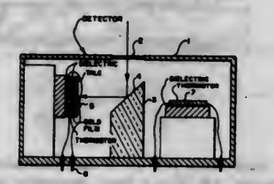
1. In an accessory for an X-ray machine including an elongated table, an X-ray unit operably coupled with a power source, and a movable support coupled with said source of X-rays for supporting the latter in various positions along and overlying relationship to said table; means coupled with said table for supporting a plurality of X-ray film carrying cassettes along the longitudinal extent of said table, said means including a trough extending longitudinally thereof along which said cassettes are shiftable; and switching means adapted to be mounted on said movable support and operably coupled with said means for supporting said cassettes and said source of X-rays for actuating the latter at preselected intervals responsive to the movement of said source over the longitudinal extent of said table.

3,091,692
APPARATUS FOR TOMOGRAPHIC FLUOROSCOPY WITH THE USE OF IMAGE AMPLIFICATION
Hansheinrich Verse, Hamburg-Fuhlsbuttel, Germany, assignor, by mesne assignments, to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Aug. 25, 1954, Ser. No. 452,024
Claims priority, application Germany Nov. 14, 1953
3 Claims. (Cl. 250—61.5)



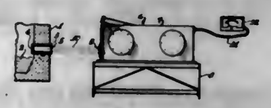
1. An X-ray apparatus for use in tomoscopy comprising an X-ray source, means moving said X-ray source in accordance with tomographic motion, a table adapted to accommodate a person to be X-rayed, means for rotating said table in a selected plane relative to the X-ray source and within the path of the X-rays, the rotational movement of said table being stopped at a selected position and the X-ray source moved in accordance with tomographic motion, a luminoscope operatively connected to said X-ray source, and a movable viewing tube system connected to said luminoscope, said movable viewing tube system including an ocular, said viewing tube system being moved only when said table has stopped rotating and the movement thereof is separate from the plane of movement of said table, and the direction of viewing through said ocular being independent of said tomographic motion.

3,091,693
SELECTIVE RADIATION DETECTOR AND FREE-AIR THERMOMETER
Andrew C. Rudomanski, Stamford, Russell D. De Waard, Old Greenwich, and Eric M. Wormser, Stamford, Conn., assignors to Barnes Engineering Company, Stamford, Conn., a corporation of Delaware
Filed Sept. 16, 1959, Ser. No. 840,401
19 Claims. (Cl. 250—83.3)



9. A device for measuring temperature of the atmosphere which is substantially unaffected by local heat conditions which comprises, in combination and in optical alignment means, for permitting infrared radiation in the form of a beam to enter the device, a selective detector system responsive substantially only to infrared radiation within the band of emission of the molecules of a selected gaseous component of the atmosphere, a reference black body maintained at a predetermined temperature, periodic occulting means for the infrared beam, said occulting means being provided with reflecting means for reflecting an image of the reference black body on the detector during occultation, said occulting means operating at a frequency sufficiently low so that the infrared detector is responsive thereto, whereby the infrared detector produces a periodic response comparing the temperature produced from the infrared beam with that of the black body.

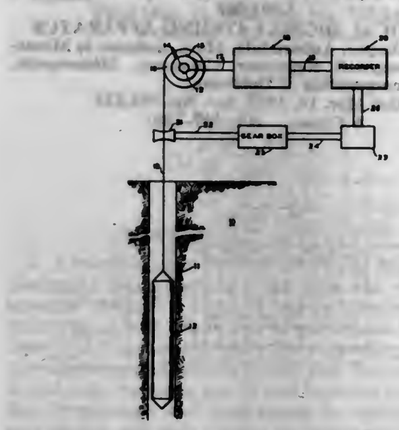
3,091,694
METHOD AND APPARATUS FOR MEASUREMENT OF TEMPERATURE
Harold C. Goodridge, Montreal, Quebec, Canada, assignor to Freeman-Goodridge Ltd., Montreal, Quebec, Canada
Filed Mar. 23, 1960, Ser. No. 17,010
5 Claims. (Cl. 250—83.3)



1. A device for measuring the temperature of a furnace charge by radiation from a predetermined radiation surface area which comprises a closed rectangular casing having end and side walls and a partition in parallel adjacent relation to one of said end walls, a lens mounted in said partition, a window in said end wall adjacent said partition in longitudinal alignment with said lens to permit passage therethrough of a radiation beam from said charge variable in cross-sectional area in accordance with the optical distance to said radiation surface area for reception by said lens, a light sensitive device having an excitation surface mounted on the other of said end walls in spaced relation thereto having a receiving area of a predetermined proportion to said radiation surface area, beam reflecting means in said casing for directing said beam onto said excitation surface to effectively increase the optical distance between said excitation surface and said lens, means for adjusting the position of said light sensitive device with respect to said other end wall to vary the effective distance of said excitation surface from said lens to maintain a predetermined distance ratio from said lens to excitation surface and lens to radiation surface area, a valve member mounted directly on said light sensitive device and having a portion overlying said excitation surface and an aperture in said portion in axial alignment with said excitation surface to define said receiving area, said aperture thereby having a smaller cross sectional receiving area than that of said excitation surface, and means for sighting said light sensitive device comprising a tubular extension extending angularly from one of said side walls and having an axis intersecting the axis of said light sensitive device, and a window in said extension in axial alignment with the axis thereof.

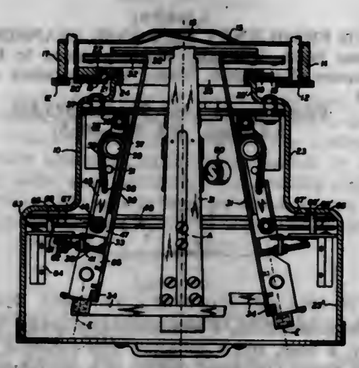
3,091,695
MULTIPLEX RADIOACTIVITY WELL LOGGING SYSTEM
Glen Peterson, Tulsa, Okla., assignor to Well Surveys, Inc., a corporation of Delaware
Filed Nov. 8, 1954, Ser. No. 467,346
9 Claims. (Cl. 250—83.6)

5. A multiplex well logging system comprising in combination a subsurface unit, a surface measuring unit, a single conductor cable electrically connecting elements of the subsurface unit to elements of the surface unit and adapted to raise and lower the subsurface unit in the well, said subsurface unit having an elongated housing, a plurality of detecting elements in said housing adapted to produce electrical signals proportionally related to the respective parameters that are to be measured, at least one dynamic modulator having a vibrating armature also disposed in said housing that is adapted to convert said detection signals to alternating current signals, at least two condensers having one plate of each mounted on said armature and adapted to be moved by the armature with respect to the other plates, means for simultaneously driving said armature in two planes which are at right angles to each other, means forming



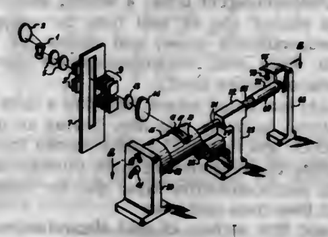
an element of the surface measuring unit for supplying driving power over the single conductor cable to said driving means, and impedance matching means for connecting the output of said modulator to the single conductor cable.

3,091,696
COLLIMATOR
Leonard F. Peyser, White Plains, N.Y., assignor to Howdon Videx Products Corporation, Mount Vernon, N.Y., a corporation of New Jersey
Filed May 17, 1960, Ser. No. 29,764
13 Claims. (Cl. 250—105)



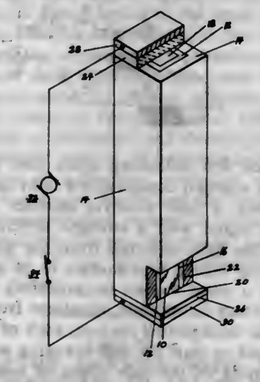
1. An X-ray collimator comprising a housing, two pairs of collimator bars, a plurality of aperture plates carried by each said bar and spaced therealong, and means mounting the said pairs of bars in the housing for movement in two axial planes at right angles to each other, whereby each said pair of bars adjustably defines the opposite sides of a rectangular radiation beam, the said mounting means for a bar comprising a linkage supporting the said bar for swinging movement about a center located on the collimator axis and above the collimator housing, and in which the said linkage comprises an arm pivotally supported from the housing at one end and pivotally supporting the bar at its other end, and cam means for swinging the bar about its axis of pivotal attachment to the said arm in predetermined angular relationship thereto.

3,091,697
PHOTOMULTIPLIER CONTROL CIRCUIT
Bernard H. Armbrecht, Hyattsville, and John E. Malloy, Cheverly, Md.; said John E. Malloy assignor to Ethel D. Armbrecht, Hyattsville, Md.
Original application Mar. 3, 1955, Ser. No. 491,882, now Patent No. 2,972,925, dated Feb. 28, 1961. Divided and this application Feb. 15, 1961, Ser. No. 99,016
5 Claims. (Cl. 250—207)



1. In a radiation-measuring system the combination, comprising: a photomultiplier tube provided with a plurality of dynodes connected by a resistance network, an anode, and a photo cathode; said system including a first voltage regulator tube having a plurality of control grids one of which is connected to said anode said photomultiplier tube providing an output signal proportional to the incident light striking said photo cathode whereby a series of voltages substantially linearly proportional to a series of absorbance units of a standard step wedge may be produced; and further regulatory means for automatically varying the resistance of said network in relation to the incident light striking said cathode to thereby provide a substantially linear function of said voltages over a wider range of absorbance units, said further regulatory means comprising a second regulator tube responsive to the output voltage of said photomultiplier tube and connected to a control grid of said first voltage regulator tube.

3,091,698
PHOTOSENSITIVE LIGHT AMPLIFIER AND REGENERATIVE ELEMENT
Joseph T. McNaney, 8548 Boulder Drive, La Mesa, Calif.
Filed Aug. 10, 1961, Ser. No. 130,636
6 Claims. (Cl. 250—213)



1. A light radiation sensitive light regenerative storage element comprising:
(a) an electroluminescent layer having first and second surfaces on opposite sides thereof;
(b) a photoconductive layer having first and second surfaces on opposite sides thereof;
(c) a first light transparent electrode intimately joined with said second surface of said electroluminescent layer;

(*d*) a second light transparent electrode intimately joined with said second surface of said photoconductive layer;

(*e*) a tube of electrically conductive material having first and second ends; and

(*f*) a light conducting fiber within said tube having a predetermined index of refraction, a first end extending to said first end of said tube for supporting said electroluminescent layer, a second end extending to said second end of said tube for supporting said photoconductive layer, and means for conducting light from said electroluminescent layer to said photoconductive layer;

(*g*) said last stated means including a light conducting material jacketing said fiber having an index of refraction less than said predetermined index for controlling the reflection of light through said fiber to said photoconductive layer and for light insulating said fiber from said tube;

(*h*) said first surface of said electroluminescent layer being optically coupled with the entire first end of said fiber and connected operatively with the entire first end of said tube;

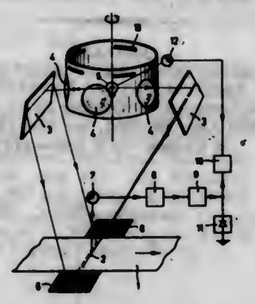
(*i*) said first surface of said photoconductive layer being optically coupled with the entire second end of said fiber and connected operatively with the entire second end of said tube.

3,091,699

PHOTOELECTRIC DEVICE FOR INDICATING SPOTS ON A SURFACE

Martin Hammar, Solna, Sweden, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Filed Aug. 31, 1960, Ser. No. 53,139
Claims priority, application Sweden Oct. 15, 1959
7 Claims. (Cl. 250—219)



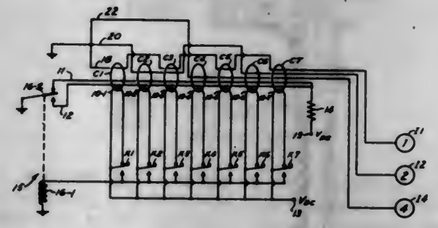
1. A device for indicating spots and the like on a surface to be scanned comprising a light source for lighting the surface, a light sensitive member for generating an electrical signal with a strength depending upon the intensity of the light reflected from the surface, a background surface behind said surface to be scanned, means for effecting a point-shaped reciprocating scanning light across the surface in opposite directions from the scanned surface to the background surface, each of said scannings being arranged to start on said scanning surface and terminating outside of the side edges of said surface, said scanning outside of said side edges being arranged to take place against a background which, when indicating dark spots, has greater reflection power than said scanning surface, and when indicating light spots, has less reflection power than said surface, an indicating member, a differentiating member, said electric signal being fed to said indicating member through said differentiating member and said indicating member is arranged to be actuated by pulses of a polarity which is opposite to the polarity of the pulses generated by said differentiating member when said scanning passes one of said side edges.

3,091,700

ELECTRICAL DIGITAL CODING APPARATUS

Samuel D. Harper, Auburndale, Mass., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Filed Mar. 10, 1959, Ser. No. 798,532
6 Claims. (Cl. 307—88)



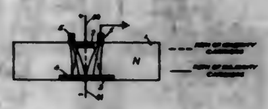
6. An encoding apparatus comprising a plurality of magnetic core devices, a short circuited winding on each of said core devices, a plurality of switches arranged one each to be in series with each of said short circuited windings, means connected to each of said core devices to couple an electrical signal thereto and being adapted to change the flux state of the core, electrical switching means connected to said last named means to activate said means, said switching means being adapted to be activated by any one of said plurality of switches, sense winding means coupled to each core device, and indicating means connected to each of said sense winding means to indicate when any core device has its flux state changed.

3,091,701

HIGH FREQUENCY RESPONSE TRANSISTORS

Hermann Statz, Waltham, Mass., assignor to Raytheon Company, Lexington, Mass., a corporation of Delaware

Filed Mar. 26, 1956, Ser. No. 573,842
5 Claims. (Cl. 307—88.5)



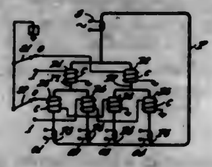
1. In combination, a semiconductive device having an emitter, a base, and a collector, said collector having a voltage source connected thereto of a magnitude adapted to produce a multiplication of current carriers arriving at it from said emitter, biasing means connected between said emitter and said base, a signal source connected to said emitter, and an output circuit connected to said collector, said device having its emitter contact positioned substantially in line with the path of a substantial number of said multiplied carriers as said multiplied carriers travel to a base contact attached to said base region so as to cause said multiplied carriers to travel substantially parallel and in opposing direction to carriers injected at said emitter whereby a substantial drift velocity is superimposed on the random diffusion motion of said injected carriers while said injected carriers are traversing across said base region from said emitter to said collector region thereby enabling a high frequency signal to be derived from said output circuit.

3,091,702

MAGNETIC CONTROL DEVICE HAVING SUPERCONDUCTIVE GATES

Albert E. Slade, Cochituate, Mass., assignor to Arthur D. Little, Inc., Cambridge, Mass., a corporation of Massachusetts

Filed Mar. 31, 1958, Ser. No. 725,048
4 Claims. (Cl. 307—88.5)



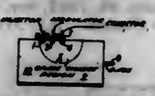
2. A magnetic control device comprising magnetic flux-conducting means forming a flux path with at least two branches therein, a body of superconductive material embracing at least one of said branches, said body being capable of transition between a flux-supporting and a flux-nonsupporting state, means in said path for inducing flux in said path, means in one of said branches for detecting flux therethrough, and input means for applying a magnetic field to said body thereby to change said body from flux-nonsupporting state, said input means being controllable to reduce said field and allow said body to change to flux-nonsupporting state, thereby to substantially impede flux in the same branch as said body.

3,091,703

SEMICONDUCTOR DEVICES UTILIZING CARRIER INJECTION INTO A SPACE CHARGE REGION

Hermann Statz, Wayland, Mass., assignor to Raytheon Company, a corporation of Delaware

Filed Apr. 8, 1959, Ser. No. 804,913
10 Claims. (Cl. 307—88.5)



9. An electrical translation device comprising a body of semiconductive material including a radially-disposed internal collector electrode, a modulating electrode in contact with said body, an injecting electrode in contact with said body, said modulating and injecting electrodes being positioned so as to be included within a space charge region established in the vicinity of said collector electrode.

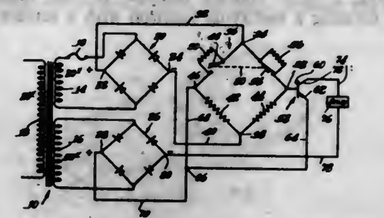
3,091,704

BRIDGE CIRCUIT CONTROL MEANS WITH GANGED SWITCHES EFFECTING LEAKAGE COMPENSATION

Nelson P. Barbor and James W. Appelgren, Rockford, Ill., assignors to W. F. and John Barnes Company, Rockford, Ill., a corporation of Illinois

Filed Jan. 21, 1960, Ser. No. 3,946
13 Claims. (Cl. 307—88.5)

9. A switch construction suitable for use in a moist environment comprising a pair of switches, means mechanically interconnecting said switches whereby when one switch is closed the other is open and vice versa, a four-cornered electric bridge circuit incorporating said switches respectively between the first and second and the first and fourth corners and including impedance arms between the second and third and the third and fourth corners, means applying a direct current potential across the first and third corners, a transistor having a base, a collector, and an emitter, means connecting said base to the second corner of said bridge circuit, means connecting the emitter to the fourth corner of said bridge circuit, direct current power supply means for said transistor connected to said emitter and said collector, and controlled means incorporated between the transistor direct current



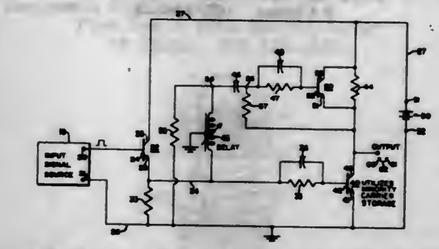
power supply means and the collector, whereby the condition of unbalance of said bridge controls the conduction of said transistor which in turn controls the operation of said controlled means.

3,091,705

PULSE FORMER UTILIZING MINORITY CARRIER STORAGE FOR STRETCHING OUTPUT AND DELAYER CONTROLLING SAID OUTPUT DURATION

Abraham Levine, St. Petersburg, Fla., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Filed Jan. 28, 1960, Ser. No. 5,219
8 Claims. (Cl. 307—88.5)



1. Pulse forming apparatus of the class described comprising: first and second semiconductor means each having input and output electrodes; delay means having first and second terminals; input signal means; circuit means connecting said input signal means to the input electrodes of said first semiconductor means and to the first terminal of said delay means; circuit means connecting the second terminal of said delay means to the input electrodes of said second semiconductor means, whereby said second semiconductor means is energized after said first semiconductor means is energized, and deenergized after said first semiconductor means is deenergized; resistance means; a source of energizing potential; circuit means connecting said resistance means and the output electrodes of said first semiconductor means in series relationship across said potential source; and means connecting the output electrodes of said second semiconductor across said resistance means.

3,091,706

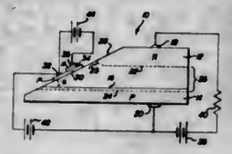
SEMICONDUCTOR DEVICES WITH IMPROVED CARRIER INJECTION TO ALLOW INCREASED FREQUENCY RESPONSE (SPACISTORS)

Jerome M. Lavine, Waltham, Mass., assignor to Raytheon Company, Lexington, Mass., a corporation of Delaware

Filed May 16, 1960, Ser. No. 29,346
14 Claims. (Cl. 307—88.5)

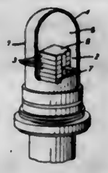
2. A semiconductor device comprising a body of semiconductive material having a first portion of one con-

ductivity type and a second portion of a different conductivity type to form a rectifying junction between said portions, an ohmic contact member on said first body portion, an ohmic contact member on said second body portion, a third contact member of one conductivity type forming a rectifying junction with a surface of said



semiconductor body within the space-charge region produced in said body upon the application of a reverse bias potential between said ohmic contact members, and a fourth contact member of conductivity type opposite to that of said third contact member forming a rectifying junction with said third contact member.

3,091,707
PIEZOELECTRIC DEVICES UTILIZING ZINC OXIDE
Andrew R. Hutson, Plainfield, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Apr. 7, 1960, Ser. No. 20,572
6 Claims. (Cl. 310—8)



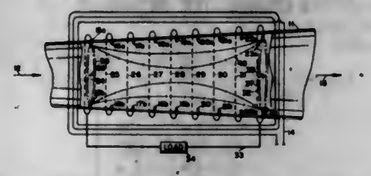
1. A piezoelectric device comprising at least one element consisting essentially of a single crystal of zinc oxide of a maximum room temperature conductivity of 10^{-8} ohm^{-1} cm.$^{-1}$ and means for making electrode contact with the said element on two faces.

3,091,708
CIRCUIT ELEMENT TRANSDUCER
Wilbur T. Harris, Woodbury, Conn., assignor to The Harris Transducer Corporation, Woodbury, Conn., a corporation of Connecticut
Original application Mar. 14, 1956, Ser. No. 571,462, now Patent No. 2,978,597, dated Apr. 4, 1961. Divided and this application Sept. 30, 1960, Ser. No. 59,710
2 Claims. (Cl. 310—8.2)



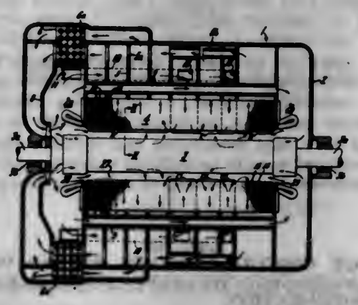
1. In a transducer, a three-terminal sandwich comprising an intermediate conductive layer, two outer conductive layers spaced by piezoelectric ceramic means on opposite sides of said intermediate layer, and a mechanically resonant structure comprising a bendable element in the form of a substantially closed ring, to one side of which one side of said sandwich is bonded.

3,091,709
HALL CURRENT GENERATOR
Richard J. Rose, Reading, Mass., assignor to Avco Corporation, Cincinnati, Ohio, a corporation of Delaware
Filed Mar. 28, 1960, Ser. No. 18,033
10 Claims. (Cl. 310—11)



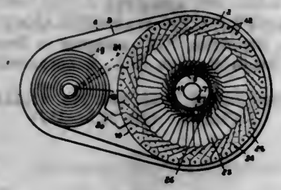
1. In combination in a Hall current generator employing a high velocity stream of electrically conductive gas for generating electricity, a duct for conveying the gas stream, an electrically conductive coil adjacent said duct for conducting electricity and establishing a magnetic field through said duct normal to the direction of gas flow, a plurality of electrically insulated electrodes supported by said duct in electrical communication with the gas stream, said electrodes being disposed on opposite sides of said duct and arranged in pairs on axes perpendicular to both the magnetic field and the gas stream, the first pair of said electrodes being interconnected, the last pair of said electrodes also being interconnected, a load circuit interconnecting the first and last pairs of said electrodes, and an electrical interconnection between said electrodes of each pair intermediate said first and last electrode pairs.

3,091,710
GAS-COOLED DYNAMOELECTRIC MACHINE WITH ASYMMETRICAL FLOW
Allan C. Shartrand and Albert J. Otteson, Scotia, N.Y., assignors to General Electric Company, a corporation of New York
Filed Aug. 30, 1961, Ser. No. 134,966
5 Claims. (Cl. 310—57)



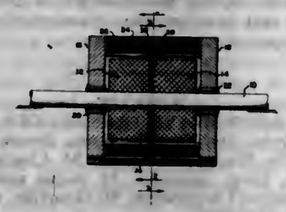
1. In a gas-cooled dynamoelectric machine, a rotor having fan means disposed at only one end thereof, a stator core defining an air gap with the rotor periphery and also defining a plurality of uniform axially spaced radial cooling passages opening into said air gap, said radial passages comprising a first group of passages at the fan end of the stator core, a second group of passages disposed at the other end of the stator core, and a third group of passages disposed between said first and second groups, first conduit means supplying said first group of passages from the fan end of the air gap, second conduit means including longitudinal pipes supplying said second group of passages from the opposite end of the air gap, and third conduit means supplying said third group of passages radially from the stator periphery, the stator length occupied by each of said first, second and third groups of passages being selected to substantially equalize the pressure along the axial length of the air gap.

3,091,711
PRINTED CIRCUIT MOTOR
Jacques Henry-Baudot, Antony, France, assignor to Printed Motors Inc., New York, N.Y.
Filed Apr. 15, 1960, Ser. No. 22,586
Claims priority, application France May 4, 1959
9 Claims. (Cl. 310—68)



1. An electric rotating machine of the axial airgap type comprising a thin sheet-like insulating carrier, a multipolar field winding of low impedance to alternating current including flat conductors with input connections mounted on one portion of said carrier, a transformer integral with said machine including a secondary winding of flat conductors with output connections carried by a second portion of said carrier and connected to the said field winding input connections, said transformer including a primary winding having a magnetic circuit coupled to said secondary winding.

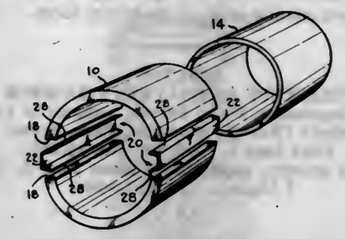
3,091,712
VIBRATORY APPARATUS
Bart A. Galbraith, 310 W. Salem Ave., Roanoke, Va.
Filed Dec. 23, 1960, Ser. No. 77,959
8 Claims. (Cl. 310—81)



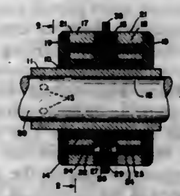
1. A rotary machine for selectively operating in either a mechanically balanced or unbalanced condition comprising: a pair of rotary dynamo electric machines spaced from each other, one of said machines being designed for higher speed operation than the other; a pair of weights, one mounted eccentrically on the rotary portion of each said machine; means linking the rotary portion of said machines permitting limited movement therebetween, such that said weights are 180° apart creating a balanced rotary structure or less than 180° apart from such position creating an unbalanced structure; and means for separately energizing said machines.

3,091,713
CERAMIC MAGNET MOUNTING STRUCTURE
Edward Latta, Owosso, Mich., assignor to Controls Company of America, Schiller Park, Ill., a corporation of Delaware
Filed Sept. 24, 1959, Ser. No. 841,978
3 Claims. (Cl. 310—154)

1. Magnet mounting structure comprising, a tubular field shell, a plurality of thin tubular segment magnets each having an outside radius substantially equal to the inside radius of the field shell wall, each longitudinal edge on each magnet being substantially parallel to and spaced from a longitudinal edge of another magnet, and expansive channel means mounted in the space between the magnets, said channel members having side members compressed between the longitudinal edges of said magnets to exert a force on the magnets of a greater magnitude at the radially inner surface of the edge than at the radially outer surface of the edge of the magnet.



3,091,714
COLLECTOR RING ASSEMBLY WITH FIELD WINDING DISCHARGE AIR GAP
Evert H. Jernberg, St. Paul, and Roger K. Bergquist, Maple Plain, Minn., assignors to Electric Machinery and Manufacturing Company, Minneapolis, Minn., a corporation of Minnesota
Filed June 8, 1960, Ser. No. 34,729
10 Claims. (Cl. 310—232)



9. In a collector ring assembly for rotating electrical machines, an annulus of insulating material, juxtaposed spaced collector rings mounted on said annulus, aligning electrodes attached to said rings and having facing closely spaced discharge tips forming therebetween a spark gap, the combination of a sleeve constructed of a ceramic material and encircling the protruding ends of said electrodes and said spark gap and isolating said spark from the air surrounding said machine.

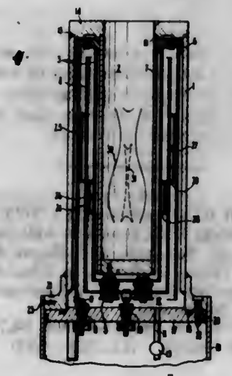
3,091,715
AXIAL AIRGAP ROTARY MACHINES
Jacques Henry-Baudot, Antony, Seine, France, assignor to Printed Motors Inc., New York, N.Y.
Filed July 27, 1961, Ser. No. 127,207
Claims priority, application France Aug. 3, 1960
4 Claims. (Cl. 310—268)



1. A two-face printed-circuit winding for an electric rotary machine of the kind comprising two sets of half-turn conductors intimately adhering on the opposite annular faces of an insulating disc-shaped carrier, said con-

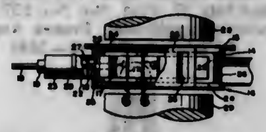
ductors being so shaped as to complete the electrical pattern of the winding by face-to-face connections between the ends thereof, wherein each half-turn conductor is provided with a longitudinally extending slot in at least the mid part thereof and said slot is filled in by a magnetic material, said conductors being contiguous for covering the complete annular areas of the carrier faces.

3,091,716
WELL-TYPE IONISATION CHAMBER
Jacques Engelmann, Paris, France, assignor to Commissariat à l'Energie Atomique, Paris, France
Filed June 1, 1960, Ser. No. 33,259
Claims priority, application France June 8, 1959
7 Claims. (Cl. 313—146)



1. A well-type ionisation chamber comprising a spaced double-walled cylindrical body forming a well, a plate mounting for said body, a fluid seal between said body and said plate, a cylindrical high-voltage electrode, a cylindrical low-voltage electrode, said electrodes being spaced from each other and coaxial with and spaced from and between said walls, movable means for varying the distance between said electrodes along the axis of said body with minimum distance in the vicinity of the central region of said body, means for rigidly securing said electrodes with respect to said walls of said body, fluid-tight electrical connections through said plate for said electrodes and an ionizable gas sealed within said spaced double walls.

3,091,717
CATHODES FOR MAGNETICALLY-CONFINED GLOW DISCHARGE DEVICES
Sherman L. Rutherford, Palo Alto, and Arthur B. Francis and William A. Lloyd, Sunnyvale, Calif., assignors to Varian Associates, Palo Alto, Calif., a corporation of California
Filed Dec. 23, 1960 Ser. No. 78,058
19 Claims. (Cl. 313—181)



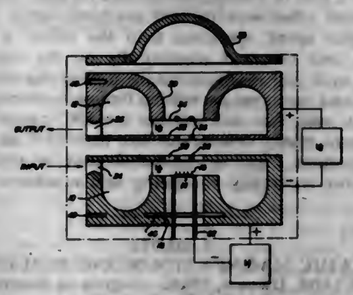
1. A sputter cathode structure for glow discharge apparatus including, means forming a cathode structure subject in use to erosion by ion bombardment for sputtering of cathode material, said cathode structure having a grid portion with surface regions thereof disposed at glancing angles of incidence to the bombarding ion trajectories for enhancing erosion of said grid portion by increasing cathode sputtering therefrom, said cathode structure being subjected in use to uneven erosion and sputtering by ion bombardment such that a certain region is subjected to more intense erosion than another region of said cathode structure, and means providing increased density of said cathode structure in the region of more intense erosion than in the region of less intense erosion thereby increasing the operating lifetime of said cathode structure while conserving cathode material.

3,091,718
CONSTANT LUMEN MAINTENANCE LAMP
Joel Shurgan, Brooklyn, N.Y., assignor to Duro-Test Corporation, North Bergen, N.J., a corporation of New York
Filed July 8, 1960, Ser. No. 41,621
3 Claims. (Cl. 313—222)



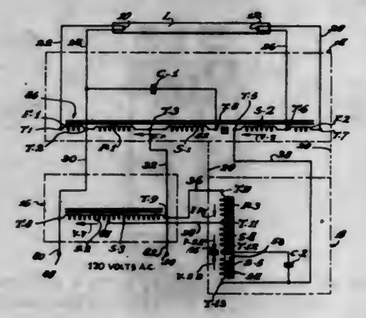
1. In a lamp comprising a metallic filament within an envelope, a gaseous compound within said envelope selected from the group consisting of hydrogen chloride, hydrogen bromide and hydrogen iodide, said envelope formed of a material containing silica which has substantially the same or greater permeability to hydrogen as fused silica, thereby the hydrogen is able to diffuse out through said envelope upon disassociation from said gaseous compound.

3,091,719
MICROWAVE TRANSDUCER
Walter P. Dyke, McMinnville, Oreg., Joseph E. Henderson, Seattle, Wash., and Francis M. Charbonnier, McMinnville, Oreg., assignors, by mesne assignments, to Field Emission Corporation, McMinnville, Oreg., a corporation of Oregon
Filed Apr. 14, 1959, Ser. No. 806,334
9 Claims. (Cl. 315—5.41)



1. A microwave transducer comprising a resonator apertured for the passage of an electron beam therethrough, electrical energy input and output means for said resonator, field emission cathode means positioned to direct across said resonator a beam of electrons, and means for effecting field mission in the form of electron bunches directly upon emission from said field emission cathode and at a frequency in resonance with said resonator.

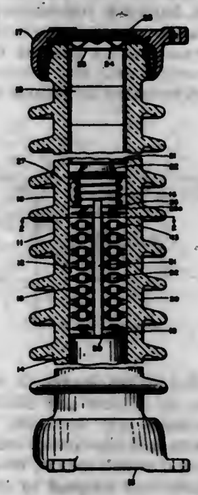
3,091,720
BALLAST APPARATUS WITH DIMMING CONTROL
Elmer J. Huberty, Chicago, Ill., assignor to Advance Transformer Co., Chicago, Ill., a corporation of Illinois
Filed July 3, 1961, Ser. No. 121,414
22 Claims. (Cl. 315—98)



1. A device of the character described which includes a ballast for igniting and operating a gaseous discharge lamp adapted to be energized by a source of A.C. power and adapted to be connected with a variable output transformer, a peaking transformer connected with the ballast and adapted to be connected with the variable output transformer, said ballast including a high leakage reactance transformer with first primary and first secondary windings loosely coupled and the windings having leads for connecting the same to the said lamp, the peaking transformer including second primary and second secondary windings loosely coupled and with the second primary winding having leads for connecting same to be energized by the variable output transformer with a voltage that varies inversely as the voltage to be applied across the lamp, and with the second secondary winding having means for generating a peak therein and being connected in series with said first secondary winding and having an auto transformer connection with that lead of said second primary winding adapted to be connected to the variable output transformer, whereby the peak amplitude generated in said second secondary will vary inversely as the R.M.S. voltage applied to said lamp.

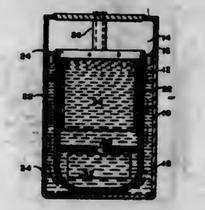
3,091,721
LIGHTNING ARRESTER AND GAP UNIT WITH CAPACITIVE GRADING
Arnold G. Yost, Barberton, Ohio, assignor to The Ohio Brass Company, Mansfield, Ohio, a corporation of New Jersey
Filed Dec. 7, 1954, Ser. No. 473,653
10 Claims. (Cl. 317—70)

1. A spark gap for lightning arresters and the like comprising a plurality of metal discs stacked one above the other, each disc having a plurality of peripherally arranged projections extending alternately in one direction and then in the other from the body of the disc and forming on the one side a recess arranged to cooperate with a similar recess in a next adjacent disc in one direction and on the other side an arc face for cooperating with a similar arc face on a next adjacent disc in the other direction, and columnar spacers of resistive material received in opposed recesses between pairs of adjacent discs of equal resistance as between each pair of all of the pairs of discs to form a uniform grading arrangement between the discs for voltages of line frequency and columnar spacers each comprising a solid cylindrical body of high dielectric material received in opposed recesses of at least one but not all of the pairs of discs, the said discs of the



last named pairs of discs having a capacitance at least several times the capacitance of the remaining pairs of discs, all for decreasing the proportion of voltages across the pairs of discs having spacers of high dielectric material and increasing the voltage across the remaining pairs of discs for voltages having steep wave fronts.

3,091,722
ELECTRONIC ASSEMBLY PACKAGING
Richard A. Borowiec, Buffalo, Ernest V. Ruda, East Amherst, and Edward S. Rusiniak, Buffalo, N.Y., assignors to Sylvania Electric Products Inc., a corporation of Delaware
Filed June 21, 1961, Ser. No. 118,585
8 Claims. (Cl. 317—100)

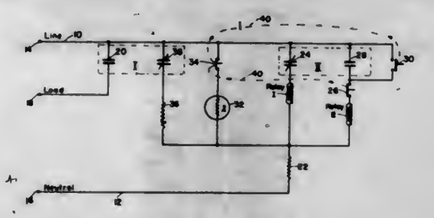


1. For packaging an electronic assembly, a sealed outer container, an inner container, sealed except for a vent hole therein, supported within said outer container. and a liquid completely filling said inner container and partially filling said outer container to a level which insures immersion of said vent hole regardless of the attitude of said outer container.

3,091,723
PHOTOSENSITIVE CONTROL CIRCUIT
Lawrence B. Stein, Jr., Hingham, and Robert G. McDonald, North Weymouth, Mass., assignors to Sigma Instruments, Inc., a corporation of Massachusetts
Filed June 5, 1961, Ser. No. 114,928
7 Claims. (Cl. 317—124)

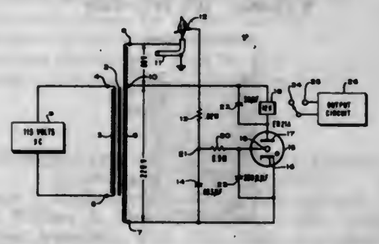
1. A control device comprising current supply means having a pair of terminals, load means connected to one

said terminal, first switch means in series with said load to connect and disconnect said load to said other terminal, first control means connected between said terminals and adapted to operate said first switch means, variable resistance means connected in parallel with said first control means and having a resistance which varies in accordance with some external physical phenomenon, said variable resistance means adapted to automatically energize and de-energize said first control means in accordance with predetermined conditions of said physical



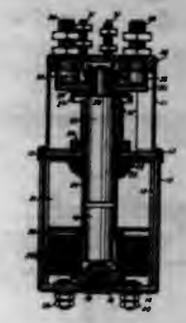
phenomenon, second switch means in series with said first control means to connect and disconnect said first control means between said terminals, second control means in parallel with said first control means and adapted to operate said second switch means, first manual switch means in series with and adapted to energize and de-energize said second control means, said resistance means adapted to automatically de-energize said second control means upon the occurrence of a predetermined condition of said resistance.

3,091,724
FLAME DETECTION CIRCUIT
Philip Giuffrida, North Andover, and John Pratt, South Braintree, Mass., assignors to Electronics Corporation of America, Cambridge, Mass., a corporation of Massachusetts
Filed Mar. 8, 1960, Ser. No. 13,604
3 Claims. (Cl. 317—149)



1. A flame detection circuit comprising a transformer having primary and secondary windings, said secondary winding having first and second outer terminals and a tap, a glow discharge trigger tube having an anode, a cathode, and a starter electrode, means to connect the cathode of said tube to the first outer terminal of said transformer, means including a relay coil to connect the anode of said tube to said transformer tap, a capacitor having two terminals, means to connect one terminal of said capacitor to the first outer terminal of said transformer, a device which conducts unilaterally in the presence of a flame, means including a resistance to connect said device between the other terminal of said capacitor and the second outer terminal of said transformer and with such polarity that in the presence of flame there is a net flow of electrons from the second outer terminal of said transformer to the other terminal of said capacitor, a resistance connected between the other terminal of said capacitor and said starter electrode and a capacitor connected between said starter electrode and said cathode.

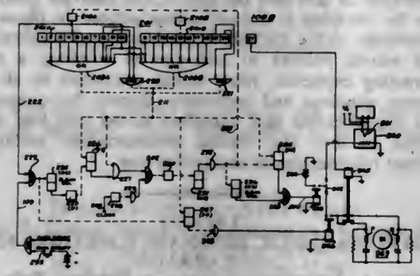
3,091,725
ELECTRO-MAGNETIC DEVICE
William D. Huston, Rochester, N.Y., assignor, by mesne assignments, to American Radiator & Standard Sanitary Corporation, New York, N.Y., a corporation of Delaware
Filed Aug. 28, 1958, Ser. No. 757,724
8 Claims. (Cl. 317—171)



5. An electrically operated device comprising a hollow casing made of paramagnetic material, an armature slidably mounted in said casing, an electrical coil means mounted within said casing and surrounding said armature, a permanent magnet mounted in said casing but spaced axially from said coil means, a spring connected to said armature and constantly urging said armature away from said permanent magnet to a first position spaced therefrom, means for supplying current to said coil means to create a magnetic flux in one direction which cooperates with the magnetic force continuously exerted by said permanent magnet to move said armature to a second position against the resistance of said spring, said permanent magnet having sufficient force to retain said armature in said second position after it has been moved thereto although said coil means be subsequently disconnected from said current supplying means, said armature, when in said second position closing a magnetic circuit from one pole of said magnet through said armature and said casing back to the other pole of said magnet, means for supplying current to said coil means to create therein a magnetic flux in a direction to oppose the holding force of said permanent magnet thereby to enable said spring to move said armature back to said first position, and means connecting said permanent magnet, said coil means, and said armature in a closed magnetic circuit when current is supplied to said coil means.

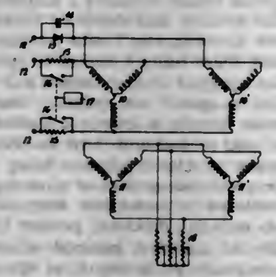
3,091,726
GENERATOR FOR PRODUCING SERVOMOTOR CONTROL-PULSE TRAINS
Wallace B. Jakacki, Chalfont, and Kenneth G. Harple, North Wales, Pa., assignors to Leeds and Northrup Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Dec. 6, 1960, Ser. No. 74,119
29 Claims. (Cl. 318—21)

28. A system for controlling the position of a motor by producing pulses in number representative of the change of position desired comprising means for establishing the desired number of pulses to be applied to said motor, pulse-producing means, gating means connected to said first-named means for normally applying to said motor said desired number of pulses from said pulse-producing means, and means connected to said gating means for preventing the number of pulses to said motor



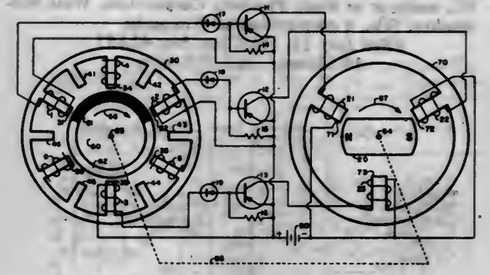
from exceeding a predetermined number in the event of failure of any single component of said system.

3,091,727
SYNCHRONIZING CONNECTIONS FOR DYNAMO-ELECTRIC MACHINES
Shafi-Uddin Ahmed Choudhury, Rugby, England, assignor to Associated Electrical Industries Limited, London, England, a British company
Filed Sept. 12, 1960, Ser. No. 55,333
Claims priority, application Great Britain Oct. 12, 1959
3 Claims. (Cl. 318—44)



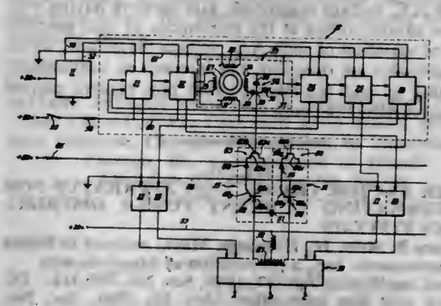
1. A system for operating in mutual synchronism dynamo-electric machines each having polyphase primary and secondary windings on relatively rotatable parts of the machine comprising a source of polyphase voltage, means connecting said course to the primary polyphase windings of said machines, means interconnecting the polyphase secondary windings on said machines, rectifier means included in the connection between one of the phases of said source and the primary windings of said machines whereby to introduce into said primary windings a direct component of current derived from said source, impedance means shunting said rectifier means to permit the flow of alternating current from said source into said primary windings, impedances included in series in the connection between the other phases of said source and said primary windings of said machine and switching means for short-circuiting said impedances after said source has been connected to said primary windings.

3,091,728
ELECTRIC MOTORS
Jimmie S. Hogan and Robert L. Hogan, both of Houston, Tex.; said Robert L. Hogan assignor to said Jimmie S. Hogan
Filed May 17, 1961, Ser. No. 110,798
12 Claims. (Cl. 318—138)



1. An electric motor comprising field coils suitably mounted for generating magnetic fields in selected areas, a permanently magnetized rotor suitably mounted for rotation within said magnetic fields, a power source including switching means for selectively energizing said field coils, pickup means for receiving an induced electric current to control said switching means, means to induce a current in said pickup means, and means suitably mounted for rotation with said rotor for controlling said pickup means.

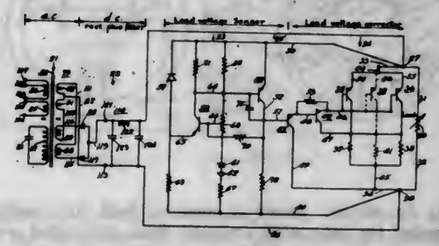
3,091,729
STATIC INVERTER
Edward M. Schmidt, Chicago, Ill., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Filed Mar. 6, 1959, Ser. No. 797,803
6 Claims. (Cl. 321—5)



5. In a polyphase static inverter for converting direct current voltage received over an input circuit into three phase alternating current voltage, the combination of three pair of controlled rectifier circuits; means for applying a direct current voltage to said rectifier circuits to energize the same; six magnetic shift registers coupled to said rectifiers in a predetermined manner; a timing pulse generator circuit coupled to said shift registers to effect operation thereof, each of said shift registers comprising a magnetic core, an input winding for magnetizing said core, an output winding for detecting a change in the direction of magnetization of said core and coupled both to one of said rectifier circuits and to an input winding of a succeeding shift register, a reset winding for coupling to said input circuit for establishing the initial direction of magnetization of each of said cores, and a shift winding coupled to said timing pulse generator cir-

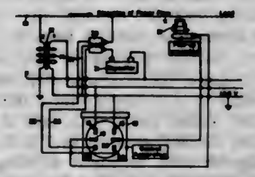
cuit for shifting the direction of magnetization of said core for thereby controlling the conduction of one of said rectifier circuits.

3,091,730
POWER SUPPLY APPARATUS
Rudolf Schumacher, Addison Township, Du Page County, Ill., assignor to Basic Products Corporation, West Milwaukee, Wis., a corporation of Wisconsin
Filed July 11, 1960, Ser. No. 42,157
18 Claims. (Cl. 321—16)



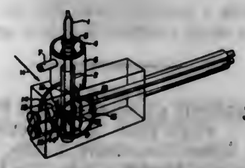
1. Regulating apparatus for supplying a certain D.C. voltage to an external load at a pair of terminals from an A.C. voltage source of nominal magnitude and frequency, irrespective of variations in such load within a specified range and irrespective of variations in such magnitude within a specified range comprising, a shunt circuit connected to said pair of terminals and being responsive to changes in the D.C. voltage across said terminals to conduct current in direct relationship to changes in said D.C. voltage of said load, and a network connected between such source and said terminals for supplying a substantially constant D.C. current of essentially full load value plus control currents at said D.C. voltage to said terminals irrespective of variations within the specified range of such A.C. voltage magnitude, said network having volt-ampere characteristics at the extremities of said specified range of variation of such A.C. voltage magnitude, which characteristics are drooping and intersect at substantially the value of said full load current plus control current and said certain D.C. voltage.

3,091,731
POWER FACTOR CORRECTION APPARATUS FOR ALTERNATING CURRENT POWER DISTRIBUTION SYSTEMS
Laurence B. Stein, Jr., Hingham, Mass., assignor to Sigma Instruments, Inc., a corporation of Massachusetts
Original application Jan. 27, 1959, Ser. No. 789,311. Divided and this application May 24, 1961, Ser. No. 112,390
6 Claims. (Cl. 323—102)



1. Power factor correction apparatus for an alternating current power supply line, comprising a saturable reactor having a plurality of current windings each having a magnetic core, and a control winding wound around all said cores, means for deriving a center-tapped voltage proportional to the line voltage and having a fixed phase relation thereto, a rectifier connected in series with each current winding, the rectifiers being connected to the center-tapped reference voltage, said rectifiers being connected to said current windings with polarities such as to provide push-pull full-wave current flow through said current windings, coupling means positioned close to one conductor of said line but electrically separate from said line for deriving a second voltage related in phase and magnitude to the current in said line and for applying said second voltage to said control winding, a phase correcting capacitor, relay means connected to all said current windings and responsive thereto for connecting and disconnecting said capacitor across said line in response to first and second predetermined voltage-to-current relationships in said power line.

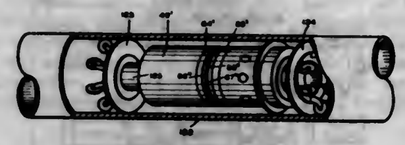
3,091,732
GYROMAGNETIC RESONANCE METHOD AND APPARATUS
Weston A. Anderson and James N. Shoolery, Palo Alto, Calif., assignors to Varian Associates, Palo Alto, Calif., a corporation of California
Filed June 5, 1958, Ser. No. 740,027
12 Claims. (Cl. 324—.5)



1. Gyromagnetic resonance apparatus including; means forming a probe having a cavity therein for containing a sample ensemble of gyromagnetic bodies and for immersing the sample ensemble in a polarizing magnetic field; said probe means including a plurality of structural elements for exciting and detecting gyromagnetic resonance of the gyromagnetic bodies contained within said probe means, there being a region of space within said probe means occupied by first, second and third materials of dissimilar magnetic susceptibility, said second and third materials forming a structural portion of said probe means, and said second and third materials of said two material probe structural portions being made up of a properly proportioned amount of paramagnetic and diamagnetic material to match the magnetic susceptibility of said two material structural portion to the magnetic susceptibility of said first material whereby said three material composite probe region of space is caused to have a substantially uniform magnetic susceptibility as seen from the sample ensemble of gyromagnetic bodies disposed within the probe cavity to prevent undesired magnetic field gradients within the sample.

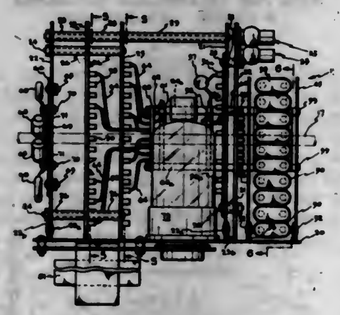
3,091,733
APPARATUS FOR DETECTING FLAWS IN ELONGATED MAGNETIC STRUCTURES
Robert E. Fearon and Warren G. Ownby, Tulsa, Okla., assignors to Electro Chemical Laboratories Corporation, Tulsa, Okla., a corporation of Delaware
Filed Mar. 5, 1957, Ser. No. 644,037
11 Claims. (Cl. 324—37)

1. In apparatus for testing magnetic pipe, the combination comprising a generally circular supporting member made of non-magnetic material and having a generally U-shaped slot extending around the periphery thereof, a generally U-shaped lining in said slot, said lining being made from a magnetic material, a pair of axially spaced, insulated coils wound around said member within said slot, a third coil wound around said member and disposed between the first and second coils, and a saturable mag-



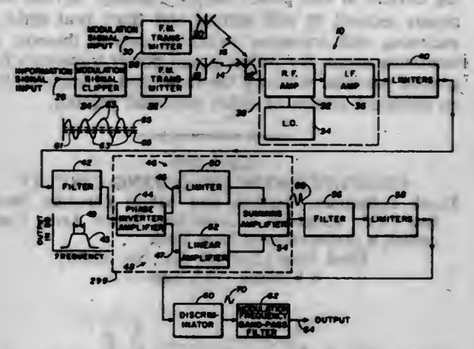
netic tape wound around the turns of said third coil in a direction generally radial with respect to said member.

3,091,734
TRANSCEIVER CONSTRUCTION
Henry B. Graves, Miami, Fla., assignor to Electronic Devices Corp., a corporation of Florida
Filed Nov. 7, 1960, Ser. No. 67,803
3 Claims. (Cl. 325—25)



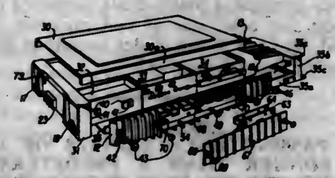
1. In a transceiver construction, the combination comprising, a multiple-channel transmitter unit, rotary switch mechanism selectively controlling the channel of transmission of said transmitter unit, a multiple-channel receiver unit, rotary switch mechanism selectively controlling the channel of reception of said receiver unit, a common chassis, means for mounting said transmitter unit and said receiver unit on said common chassis, a control unit, means for mounting said control unit on said common chassis, said rotary switch mechanisms of said transmitter and receiver units being in coaxial alignment, said control unit comprising a rotary shaft coaxial with and engaged with said rotary switch mechanisms for simultaneously controlling the channel selection of said transmitter and receiver units, said control unit comprising mechanism for stepwisely rotating said rotary shaft, an output inductor forming part of said transmitter unit and comprising a flat board of insulating material, a conductive spiral printed on one side of said board and a plurality of electrical taps conductively connected with said spiral at spaced intervals along its length, said taps being in the form of lugs extending through said board for external circuit connection at the side of said board opposite said spiral, said board having a central opening and being disposed in perpendicular relation to said rotary shaft with said shaft extending through said opening, said rotary switch mechanism controlling the channel of transmission of said transmitter comprising a plurality of switch channel selector terminals, and tap leads connected to said terminals and adapted to be connected to selected ones of said tap lugs in accordance with a predetermined transmission frequency channel desired for each step of rotation of said rotary shaft.

3,091,735
FREQUENCY MODULATION INTERFERING SIGNAL SELECTING SYSTEM
Richard K. Moore, Belmont, Mass., assignor to General Electronic Laboratories, Inc., Cambridge, Mass., a corporation of Massachusetts
Filed June 19, 1959, Ser. No. 822,712
16 Claims. (Cl. 325—47)



2. A frequency modulation electric signal system comprising means for transmitting two frequency modulation carrier signals in interfering frequency bands, frequency modulation receiving means in responsive relation to the carrier signals and including an intermediate frequency amplifier, wideband limiter, narrow band filter having a bandwidth substantially that of the intermediate frequency amplifier and a phase inverter, a pair of signal traversing channels coupled to the phase inverter, one of said channels including a signal amplitude limiter interposed in the path of the channel signals for changing the amplitude ratio of said two signals, the other of the channels including a linear amplifier interposed in the path of the channel signals, signal summing means coupled to both signal traversing channels, means coupled to the summing means for demodulating the signals from the summing means.

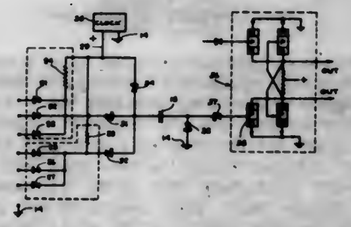
3,091,736
RADIO COMMUNICATIONS EQUIPMENT WITH SECTIONALIZED CHASSIS AND HEAT SINKS
Jack Germain, Chicago, Ill., assignor to Motorola, Inc., Chicago, Ill., a corporation of Illinois
Filed Feb. 27, 1961, Ser. No. 91,741
8 Claims. (Cl. 325—355)



6. Communications apparatus for installation in a vehicle having an electrical system to provide a two-way communications including in combination, a radio operating unit including receiver, power supply and transmitter units chassis sections, said receiver being completely transistorized for operation directly from the electrical system of the vehicle, said transmitter including high power amplifying elements, said power supply providing the operating voltages for said transmitter and having power transistor switching devices, first, second and third heat sinks, and housing means for enclosing said radio unit and having an open frame at its rearward end, said first heat sink being affixed to said rearward end of

said transmitter chassis unit and having a recessed cavity to house said high power amplifying elements, said first heat sink extending through said open frame of said housing means, said second and third heat sinks being affixed to opposing sides of the radio unit and having means for mechanically securing said chassis sections in assembled relation, said second and third heat sinks each having a recessed cavity for containing said power transistor switching devices of said power supply mounted therein, cover means secured to said second and third heat sinks for enclosing said transistor switching devices thereon, and insulating means for isolating said power transistors from ground potential whereby the radio unit is operable from an electrical system of either electrical polarity.

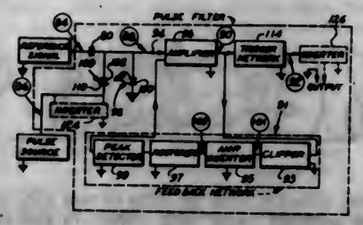
3,091,737
COMPUTER SYNCHRONIZING CIRCUIT
Jacob Tellerman, Bayside, and Albert Zarotsky, Brooklyn, N.Y., assignors to American Bosch Arma Corporation, a corporation of New York
Filed June 13, 1960, Ser. No. 35,567
6 Claims. (Cl. 328—72)



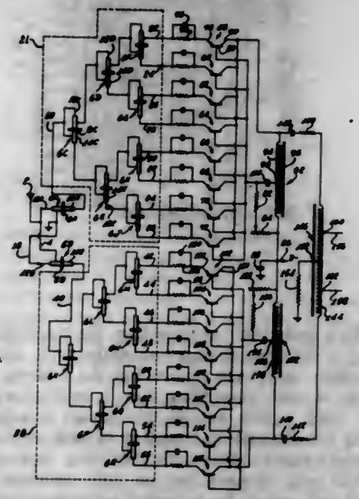
1. In a computer synchronizing circuit, a coincidence circuit including a plurality of input terminals, an output terminal and a reference terminal, a plurality of non-linear elements, said input terminals severally connected to one side of each of said non-linear elements, the other side of said non-linear elements connected to said output terminal, a source of synchronizing clock pulses connected between said output terminal and said reference terminal, a source of information pulses connected to each of said input terminals, a capacitor, a first diode connected between said output terminal and one side of said capacitor, a second diode connected between the other side of said capacitor and said reference terminal, the polarity of said diodes permitting charging of said capacitor by the output of said coincidence circuit, a third diode connected between said one side of said capacitor and said clock pulse source, a load connected to said reference terminal, a fourth diode connected between said load and said other side of said capacitor, the polarity of said third and fourth diodes permitting discharge of said capacitor through said load.

3,091,738
CIRCUIT PASSING ONLY SIGNALS OF DURATIONS LONGER THAN A PREDETERMINED VALUE DESPITE CHANGES IN SCAN SPEED
Matthew J. Reis, Bayside, and Carl M. Mengani, New York, N.Y., assignors to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed May 23, 1958, Ser. No. 737,312
17 Claims. (Cl. 328—111)

17. In a character recognition device in which information on a record medium is sensed by a scanning device at a rate of speed which may vary, the scanning device generating desired information signals representative of the information being scanned and undesired noise signals to be filtered, circuit means for discriminating between said information signals and said noise signals, and means for applying to said discriminating circuit means a reference signal representative of the rate of scanning speed of said scanning device for controlling said discriminating circuit means in accordance with the variable rate of scanning speed of said scanning device.



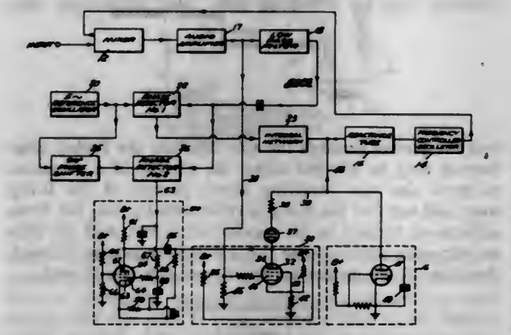
3,091,739
TRANSISTOR MULTICOUPLER WITH PLURAL OUTPUTS
William R. Smith-Vaniz, Norwalk, Conn., assignor to Trak Electronics Company, Inc., Wilton, Conn., a corporation of Connecticut
Filed July 15, 1960, Ser. No. 43,065
9 Claims. (Cl. 330—30)



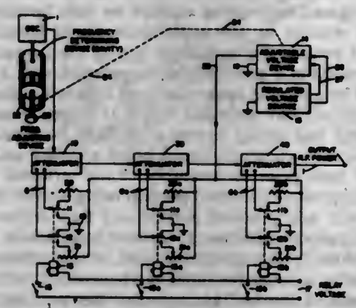
5. In a multicoupler arrangement, a source of input signals having a particular output impedance, a plurality of amplifier circuits, means for equally distributing said input signals to said plurality of amplifier circuits, circuit means for parallelly connecting the outputs of said plurality of amplifier circuits, an autotransformer connected to said circuit means and having a tap thereon, and feedback promoting means connected from said tap to said plurality of amplifier circuits for effecting a matching of said particular output impedance of said source with the input impedance of said multicoupler arrangement.

3,091,740
AUTOMATIC TRACKING CIRCUIT
William M. Murphy, Jr., Wellesley Hills, Mass., assignor to Raytheon Company, a corporation of Delaware
Filed June 17, 1957, Ser. No. 667,305
9 Claims. (Cl. 331—4)

1. A receiver of input signals comprising a frequency-controlled oscillator, frequency scanning means for varying the frequency of said oscillator within a prescribed range when in the frequency scanning condition, a fixed reference frequency generator productive of an audio frequency, means for combining said input signal and the output of said frequency-controlled oscillator to derive beat frequency signals of frequency varying over a given band, amplifier means responsive to a portion of said beat frequency band lying within an audio frequency range, scan disabling means responsive to output energy from said amplifier means for disabling said frequency scanning means, a low-pass filter supplied with energy from said amplifier means and having an audio frequency pass band smaller than that of said amplifier means, means including a phase comparator receptive of energy from said filter and from said reference frequency generator for deriving an error voltage during the presence of a coherent input signal, means for supplying said error voltage to said frequency-controlled oscillator frequency for locking said frequency-controlled oscillator to a frequency differing from that of said input signal by the frequency of said reference frequency generator.

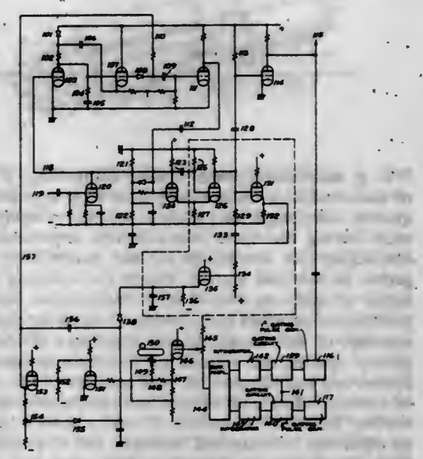


3,091,741
ATTENUATORS
Leo Cebura Eisman and Seymour Schiff, Rochester, N.Y., assignors to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware
Filed Apr. 18, 1957, Ser. No. 653,678
1 Claim. (Cl. 331—183)



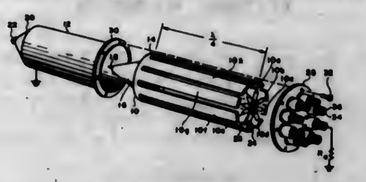
The combination comprising a microwave source with a frequency adjusting device, an attenuator for high frequency connected in the output of said source, said attenuator being responsive to a variable direct current to change the level of attenuation; a direct current voltage source connected to said attenuator, means for adjusting the voltage of said direct current voltage source; and common control means for changing said frequency adjusting device and said direct current voltage source, the incremental change in direct current per unit of frequency change being so selected as to produce uniform attenuation over a predetermined range of frequencies.

3,091,742
LIMITING CIRCUIT FOR A TIME MODULATOR
Bernard van Arragon, Delden, Overijssel, Netherlands, assignor to N.V. Hollandse Signaalapparaten, Hengelo, Overijssel, Netherlands, a Dutch corporation
Filed Sept. 14, 1959, Ser. No. 839,783
Claims priority, application Netherlands Sept. 15, 1958
15 Claims. (Cl. 332—9)



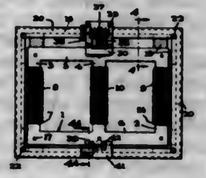
1. In a delay circuit responsive to a trigger pulse supplied by a trigger pulse source, by effecting a change of its output voltage after a delay determined in duration by the value of a control voltage, a system for limiting the control voltage to values corresponding to delays above a certain minimum duration comprising a trigger circuit, a first connection between said trigger circuit and the source of trigger pulses, means in the trigger circuit responsive to the voltage change occurring in said connection as a result of the occurrence of a trigger pulse by switching the trigger circuit over to the first one of its two possible conditions, a second connection between the trigger circuit and the delay circuit, means in the delay circuit for applying a voltage change to said connection substantially at the moment at which the delayed change in the output voltage of the delay circuit occurs, means in the trigger circuit responsive to said voltage change applied to said connection by swtiching the trigger circuit back to the second one of its two possible conditions, a capacitance means bridged by an impedance such that even during the largest possible delay period of the delay circuit it only loses a relatively small portion of its charge, a charging circuit for said capacitance means having a small time constant and comprising a voltage controlled electronic switch, a control connection between said electronic switch and a point in the trigger circuit the voltage of which has different values in the two possible conditions of the trigger circuit, said electronic switch being controlled by the output voltage of said control connection to break the charging circuit when the voltage applied to the said connection has the value occurring in the second condition of the trigger circuit and to close it when the voltage applied to the said control connection has the value occurring in the first condition of the trigger circuit, and a second electronic switch controlled by the voltage of the capacitance means and connecting when the said voltage differs less than to a certain extent from its quiescent value, a point in a circuit carrying the control voltage of the delay circuit to a point the voltage of which has a value which is substantially equal to the value of the control voltage for the delay circuit which sets the delay to its minimum value.

3,091,743
POWER DIVIDER
Ernest J. Wilkinson, Westwood, Mass., assignor to Sylvania Electric Products Inc., a corporation of Delaware
Filed Jan. 4, 1960, Ser. No. 433
6 Claims. (Cl. 333—9)



1. A microwave power divider comprising, a plurality of two-conductor transmission lines each approximately a quarter-wavelength long at the frequency of operation and each having the same characteristic impedance, means connecting like conductors of said transmission lines together at one end thereof, means for coupling an input signal to said one end of said transmission lines, a like plurality of resistors each having a resistance equal to the quotient of said characteristic impedance divided by the square root of the number of transmission lines, means connecting one terminal of said resistors to the other end of corresponding ones of said like conductors, means connecting the other terminals of said resistors together at an otherwise unconnected terminal, and a like plurality of output terminals connected to said other end of corresponding ones of said like conductors.

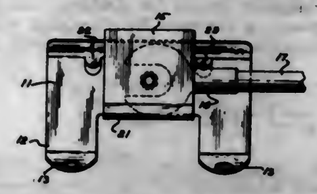
3,091,744
TRANSFORMER WITH MAGNETIC LEAKAGE SHIELD
Frederick C. Owen, 206 Fenton Place, Charlotte, N.C.
Filed Mar. 16, 1962, Ser. No. 180,257
12 Claims. (Cl. 336—87)



1. A transformer comprising, a core member, inductively related transformer windings wound on said core member, magnetic leakage flux shield means disposed about the perimeter of said core member in spaced relation, and separate means connected intermediate said core member and said shield means for forming a magnetic flux path between said shield and said core member and setting the transformer output current.

3,091,745
ELECTRICAL CONNECTOR
Edwin K. Williams, Indianapolis, Ind., assignor to Western Electric Company, Incorporated, a corporation of New York
Filed July 24, 1961, Ser. No. 126,011
3 Claims. (Cl. 339—32)

3. A sheet metal connector for receiving, holding and electrically contacting the thin portion of a C-lug, said sheet metal connector comprising a base sheet, a flap folded back upon a portion of said base sheet, the two facing layers of material forming a pocket for snugly receiving the thin portion of the C-lug, one of said layers of material having a dimple extending toward and engaging the other, and a tab punched from said base sheet close to a side of the pocket which is adjacent the folded edge thereof, said tab protruding from the same side of said base sheet as said flap and having its free end extending generally toward the folded edge of the pocket, such that a C-lug having its thin portion moved



into the pocket through the side opposite the folded edge thereof may be pivoted about the dimple in a direction to move the wire receiving shank portion of the C-lug over said tab and the C-lug is restrained by said tab from subsequent turning in the opposite direction, said tab also resisting extraction of the C-lug from the pocket through the side of the pocket to which said tab is adjacent.

3,091,746
ELECTRICAL CONNECTOR
Edward D. Winkler, Reading, Mass., assignor to Albert & J. M. Anderson Manufacturing Company, Boston, Mass., a corporation of Massachusetts
Filed July 28, 1960, Ser. No. 45,981
2 Claims. (Cl. 339—47)



1. An electrical connector comprising a hollow insulating housing having a connecting end and a cable end and adapted for longitudinal telescopic engagement with a second and identical connector, a rigid terminal member extended through the cable end in detached relation to the walls of the housing to present the contact end of the terminal member in operative relation to the connecting end, an elongated leaf spring carried by said housing in detached relation to the walls thereof and having a prestressed portion for resiliently urging the contact end of the terminal in a direction for cooperation with a terminal carried by a second connector, said hollow housing having a cylindrical bore provided with a U-shaped grooved portion, said leaf spring having a resilient U-shaped portion adapted to be yieldingly compressed inwardly and inserted in said bore prior to assembly of the terminal member, said compressed U-shaped portion being moved into alignment with said grooved portion and then released to engage the grooved portion to prevent longitudinal displacement of the spring, the contact end of said terminal member having a notch for latching engagement with the forward end of the leaf spring when the terminal member is subsequently inserted through the cable end of the housing to prevent longitudinal retraction of the assembled terminal member.

3,091,747
DISCONNECT PLUG FOR ELECTRIC DEVICE
Jan Salkiers, Oliemolenstraat, Drachten, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Apr. 12, 1960, Ser. No. 21,826
Claims priority, application Netherlands Apr. 23, 1959
2 Claims. (Cl. 339—61)

1. An improved disconnect plug for an electric device having a socketed end wall and a recess in said end wall opening into the socket and defining a shoulder surface on the interior side of said end wall, a deformable plug comprising a substantially hollow body of insulating material, said plug having a reduced end portion adapted to be sealingly received within said socket and said end portion terminating in a plug shoulder stop, resilient means normally urged outwardly from the axis of said plug embedded in said body, an extension of said resilient means protruding from said reduced portion remote from said shouldered stop, said extension of said resilient



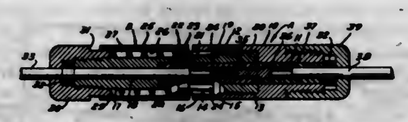
means being receivable in said recess when said plug is properly inserted in said socket whereby said shoulder stop is intimately engaged against the end wall of said device and the plug is thus sealingly and rigidly operatively secured with said device, pin socket means embedded in said body member centrally thereof, and a pair of longitudinally extending cavities within said body member intermediate said pin socket means and said spring means whereby said body is readily deformable within determined deformation limits.

3,091,748
ELECTRICAL CONNECTOR
Donald E. Takes and Mildred W. Boyd, Fort Worth, Tex., assignors to General Dynamics Corporation (Convair Division), San Diego, Calif., a corporation of Delaware
Filed Nov. 9, 1959, Ser. No. 851,886
5 Claims. (Cl. 339—65)



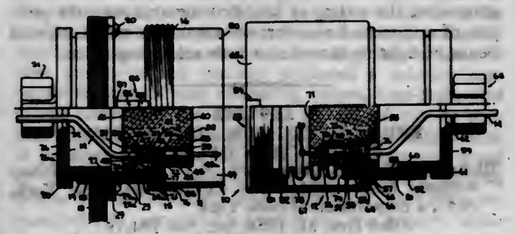
5. An electrical connector comprising a plug assembly mounted on one member to project forwardly of the member front surface in fixed angular relation to said member, a receptacle assembly mounted on another member for alignment with said plug assembly and receipt thereof, said plug assembly being mounted to maintain said fixed angular relation while at the same time being permitted limited free circumferential planar movement induced by entry into and abutment with said receptacle assembly to rectify initial misalignment between said plug assembly and said receptacle assembly when said mounting members are moved into a position of general proximity, said plug assembly being mounted for said movement by fastening means affixed to and extending through said one member and through oversize openings in said plug assembly, and means on said fastening means to prevent disengagement of said plug assembly therefrom.

3,091,749
CONNECTOR DEVICE
Gordon P. Felts, Palm Springs, Calif., assignor to Microdot Inc., South Pasadena, Calif., a corporation of California
Filed June 1, 1959, Ser. No. 817,164
2 Claims. (Cl. 339—75)



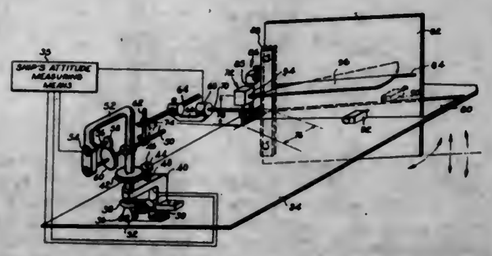
2. A two-part connecting device, comprising: a first part having an end opening socket with an inner wall portion of uniform diameter adjacent its bottom end and an inner wall portion adjacent its open end of inwardly increasing diameter; a second part having an end portion adapted for endwise insertion into a seated position in said socket, said end portion having a circumferential wall portion adapted to circumferentially slidingly enter the wall portion adjacent the bottom of said socket and an inclined circumferential wall portion adapted to face the inner wall portion adjacent the open end of said socket; electrical contacts insulatingly supported in said parts and adapted for separable interconnection when said portion is seated in said socket; a sleeve member inwardly of said end portion supported on said second part for reciprocable axial movements thereon and being biased towards said inclined circumferential wall; and fingers carried by said sleeve member adapted to wedge under its biased movement between said inclined circumferential wall and the inner wall portion adjacent the open end of said socket and acting to oppose separation of said parts and disconnection of said contacts.

3,091,750
ELECTRICAL CONNECTOR
James A. Long, Cahaba Heights, Austin L. Bush, Jr., Trussville, and Coultas D. Pears, Birmingham, Ala., assignors to Anderson Electric Corporation, Birmingham, Ala., a corporation of Alabama
Filed Oct. 29, 1959, Ser. No. 849,584
4 Claims. (Cl. 339—89)



1. A pressure-sealing electrical connector adapted for high altitude continuous operation at high temperatures comprising a first mating part and a second mating part, at least one of said mating parts including a cylindrical shell, a cylindrical insert and a partially deformable seal ring forming a seal between said shell and said insert, a bellows type seal mounted at one end in said first mating part, and an edge type seal mounted in said second mating part, said bellows type seal and said edge type seal being adapted to be placed in resilient pressure-sealing relation whereby, when said first mating part is mated with said second mating part, a seal is formed therebetween.

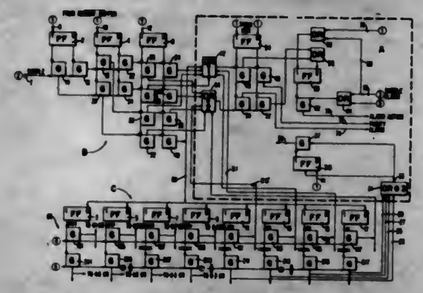
3,091,751
COMPUTING DEVICE FOR OPTICAL LANDING SYSTEMS
David R. Greenberg, Bellerose, N.Y., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed May 5, 1959, Ser. No. 811,164
9 Claims. (Cl. 340—26)



9. In an optical landing system for assisting a pilot in the landing of an aircraft on the flight deck of a carrier by displaying a beam of light to indicate a desired blade path, a stabilizing system for said beam of light which can be selectively conditioned to operate from different carriers and with respect to different aircraft, comprising: a base plate representative of a reference plane on the carrier; a first member representative of the desired glide path; mounting means supporting said first member to provide at least three degrees of freedom of movement with respect to said base plate; means enabling the setting of said first member to an angle with respect to said base plate representative of the glide path elevation angle with respect to the reference plane on the carrier; means enabling the setting of said first member about an axis perpendicular to said plate to an angle representative of the angle the carrier flight deck assumes with respect to the reference plane for that carrier; means enabling the setting of said first member toward and away from said base plate to represent the hook-to-eye distance for that aircraft; a fan shaped element to represent the fan shaped beam of light, said fan shaped element being settable by said first member in accordance with the desired glide path; a second member operatively associated to said first member; means for positioning said second member in accordance with the roll, pitch, heave and yaw displacements of said carrier which tend to unstabilize said beam of light; means including said fan shaped element for comparing the setting of said first member with the position of said second member; and means for stabilizing said beam of light in accordance with said comparison.

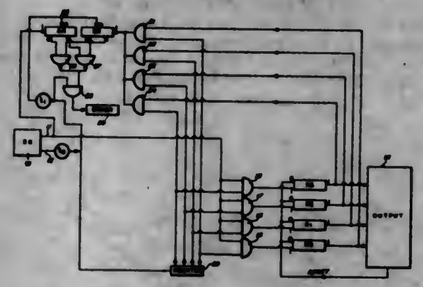
3,091,752
ERROR DETECTION CIRCUIT FOR INSTRUCTION DECODERS
Richard J. Randles, Rhinebeck, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 31, 1958, Ser. No. 784,187
5 Claims. (Cl. 340—146.1)

1. An error checking circuit comprising a first register for storing instruction words in binary form, a parity flip-flop for storing the parity bit associated with a stored word and representative of correct instruction storage, and an alarm flip-flop, the latter being set to its alarm-indicating state at the same time that an instruction word is stored in said first register and its associated parity bit is stored in said parity flip-flop, a first gating means for decoding in pulse form the instruction word stored in said first register, two OR circuits and a second register of bistable elements, one OR circuit coupled to said first gating means so as to receive as inputs those decoded pulses that represent an even parity instruction and the second OR circuit being coupled to said first gating means so as to receive gated pulses representative of an odd parity instruction word, said second register being coupled to the output circuits of said first gating means whereby



the operation of a single output circuit will set one of its bistable elements to its information-representing state at the same time that the remaining bistable elements of said second register are set to their respective non-information-representing state.

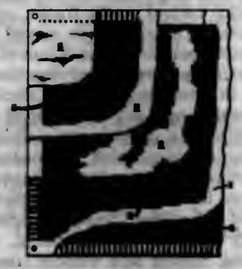
3,091,753
CHECKING CIRCUITRY FOR INFORMATION HANDLING APPARATUS
Samuel D. Harper, Auburndale, Mass., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Apr. 10, 1959, Ser. No. 805,465
15 Claims. (Cl. 340—146.1)



1. Checking apparatus for a data processor comprising an input digital signal source, a transfer circuit having an input and an output, said transfer circuit being adapted to transfer a plurality of bits of digital data, an output utilization circuit, means connecting the input of said transfer circuit to said digital signal source and the output of said transfer circuit to said output utilization circuit, a first bistable checking register connected to said signal source, a second bistable checking register connected to said output of said transfer circuit, said first and second registers being adapted to be set by each one of the like bits of digital data, and comparison means connected to said registers to produce an output signal indicative of a lack of bistable identity of output from said registers upon the transfer of each bit through said transfer circuit.

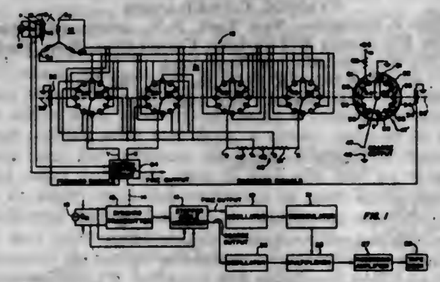
3,091,754
ELECTRIC MEMORY DEVICE
Edgar Henri Nasmo, 14 Rue Duc des Cars, Algiers, Algeria
Filed May 8, 1958, Ser. No. 733,970
2 Claims. (Cl. 340—173)

1. An electric memory device formed as a matrix of spark discharge cells comprising a fixed sheet of dielectric material normally impervious to a low readout potential, a layer of parallel conductors embedded in said dielectric sheet, a second layer of parallel conductors on one side of said dielectric sheet separated therefrom by a grid of insulating material whose openings are aligned with both layers of conductors, the conductors of one layer crossing those of the other layer to form a plurality of spark discharge cells at points in the dielectric sheet corresponding to the intersection points of said conductors and surrounded by the walls of said grid openings, means



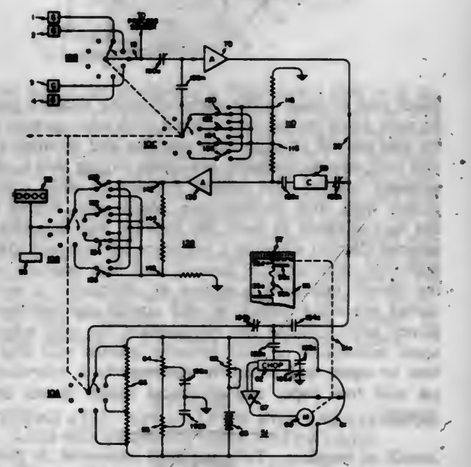
for applying a higher recording potential through said conductors to selected cells to pierce the dielectric, and means for applying a lower readout potential to the cells of said matrix whereby those cells having previously received a recording potential will discharge a spark between said conductors at their points of intersection and across the piercings of said dielectric sheet to indicate the first information of a binary code, the second information of said binary code being the non-passage of a reading current across those cells to which the recording potential has not been applied.

3,091,755
STEPPER ANGLE-MEASURING DEVICE
Medford D. Sumner and Robert O. Cox, Fort Worth, Tex., assignors to General Dynamics Corporation, San Diego, Calif., a corporation of Delaware
Filed Sept. 11, 1959, Ser. No. 839,318
5 Claims. (Cl. 340—187)



1. Apparatus for measuring angular rotation of a rotatable member comprising synchro transmitter means having a rotor driven by said rotatable member, the winding of said rotor being energized by a source of alternating voltage, and a stator with three stator terminals, a pair of input terminals, voltage divider means having taps thereon, switch means for establishing any one of a plurality of simultaneous connections of said voltage divider means between two stator terminals of said synchro transmitter means, one of said taps to one of said input terminals, and the other stator terminal of said synchro transmitter means to the other of said input terminals, said connections representing a plurality of predetermined angular segments through which said rotatable member moves, said taps being so spaced along said voltage divider means as to provide a first signal across said input terminals representing movement of said rotatable member in either direction within and from any one of said plurality of predetermined angular segments, switch control means connected to said input terminals and responsive to said first signal for producing a control signal to actuate said switch means to establish another of said connections as said rotatable member moves in either direction from any one of said plurality of predetermined angular segments to another, said switch control means comprising means for providing an output channel for said first signal, and means operatively connected to said switch means for producing a second signal representing the angular segments within which said rotatable member moves.

3,091,756
PROCESS VARIANCE LOGGING AND LIMIT ALARM SYSTEM
Walker B. Lowman, Columbus, Ohio, assignor to Industrial Nucleonics Corporation, a corporation of Ohio
Filed Jan. 6, 1958, Ser. No. 707,191
7 Claims. (Cl. 340—213)

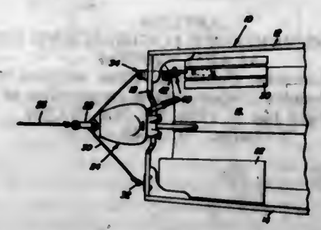


1. In a production process having a plurality of product makers, a product evaluation system comprising means for continuously measuring the process variations in the quality of a product produced by each of said makers, a monitor including means for computing the variance of said quality of the product produced a selector connected to each of said measuring means, time-controlled means controlling the operation of said selector to connect said measuring means to said monitor individually at predetermined intervals, means alternately connected by said selector to said monitor and to said measuring means for automatically and graphically indicating respectively the computed variance and the process variations of the quality of said product, and a process sensor connected to said selector, said process sensor having means to immediately advance said selector in the absence of information from said measuring means being monitored.

3,091,757
SIGNAL DEVICE FOR SKIING TOW ROPES
Kenneth G. Brock, 5840 Seminary Court, Oakland, Calif.
Filed Jan. 4, 1961, Ser. No. 80,678
2 Claims. (Cl. 340—213)

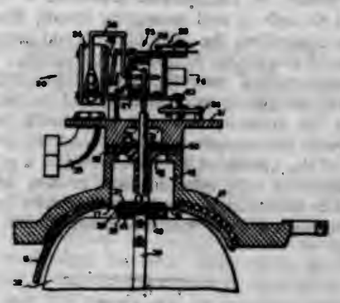
1. In combination with a boat having a transom with an opening formed therethrough, a signal assembly to

signal the driver of a boat that a skier has fallen and has let go of the tow rope, said signal assembly comprising an L-shaped actuator having a pair of angularly disposed arms and pivotally secured in said boat for movement about an axis extending transversely of said opening and the plane containing said arms and adjacent the inner section of said arms between a first position with one of said arms extending across said opening and its free end abutting the inner surface of said transom and the other of said arms projecting forwardly away from said transom and a second position with the free end of said one arm swung forwardly and away from engagement with said transom, an elongated bottom member having one end secured to the exterior of said transom a spaced distance from said opening, guide means carried by the exterior of said transom and disposed adjacent said opening, the



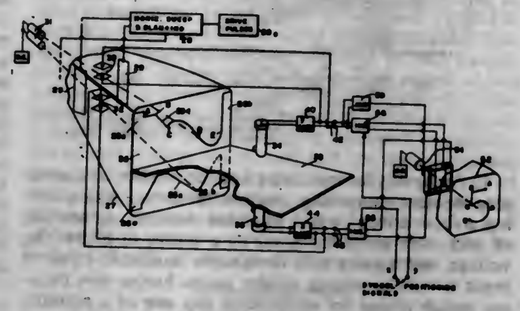
other end of said bridle member being slidably engaged by said guide means and aligned with said opening thereby and passed through said opening and secured to said one arm, means normally resiliently urging said L-shaped actuator toward said second position, a slide guide engaged with and reciprocable along said bridle member and adapted to have the forward end of a tow rope secured thereto whereby a rearward pull on said tow rope will urge said actuator toward said first position, a wiring circuit including a source of electricity, a normally closed actuating switch in said circuit and mounted adjacent said actuator for engagement by said other arm upon movement of said actuator toward said first position to open said switch in response to a rearward pull on said tow rope, and electrical alarm means in said circuit.

3,091,758
SIGNAL APPARATUS INDICATING FLOW THROUGH A PIPE, AVOIDING FALSE ALARMS DURING SURGES
Alfred G. Lewis, 558 Baluvelt Road, Pearl River, N.Y.
Filed Mar. 3, 1960, Ser. No. 12,531
1 Claim. (Cl. 340—239)



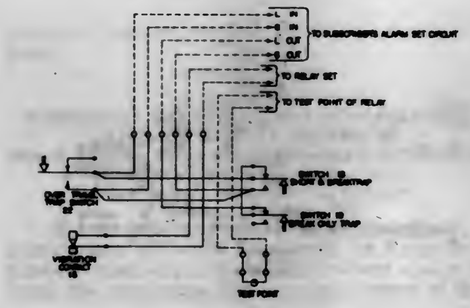
In a signalling apparatus of the character described, a frame adapted to be mounted on a pipe, a vane swingably mounted on the frame and extending into the pipe to be acted on by a fluid which may flow through said pipe, a finger element swingably mounted on the frame, a knuckle made of two U-shaped elements pivotally connected by an axis pin through the distal ends of said U-shaped elements; one of said U-shaped elements being attached to said vane and the other of said U-shaped elements being attached to said finger element, spring means for biasing said knuckle comprising a right hand and a left hand coil spring about said axis pin; each coil spring associated with said knuckle being stressable in torsion upon swinging movement of said vane whereby said vane is free to swing to a position substantially along the pipe without moving said finger element beyond a prescribed scope, a first switch carried on the frame; said first switch including an operating member to be moved by said finger to close said switch when said finger is moved by the movement of the vane in a predetermined direction; said switch being normally in open condition, an electrical relay, a source of electrical energy and an electrical signal device; said relay consisting of a second switch which is normally in open condition, a solenoid coil, a closed tubular casing of non-magnetic material extending through said coil and outwardly thereof in one direction, a magnetizable pole piece fixed to one end of said casing, a magnetizable tubular core slidably mounted in said casing, spring means within said casing, biasing said slidable core towards the outwardly extending end of said casing, a check valve within said tubular core, a liquid medium filling said casing; said check valve being closed when the slidable core is moved towards the pole piece, a spring biased armature normally spaced from said pole piece and adapted to be attracted thereto upon actuation of said solenoid coil when the slidable core is adjacent said pole piece: said second switch being adapted to be closed by the armature when the latter is attracted to said pole piece, and a circuit including said switches, solenoid coil, energy source and signal device, so connected that the first switch controls the actuation of the solenoid coil and the second switch controls the actuation of said signalling device; said liquid and spring within said casing having the character to delay the movement of the slidable core towards the pole piece a sufficient time to allow for any surges occuring in the pipe, thereby avoiding the closing of said second switch while the first switch is closed by such surges.

3,091,759
SYMBOL GENERATOR
William J. Shanahan, New York, N.Y., assignor to Skiatron Electronics & Television Corporation, New York, N.Y., a corporation of New York
Filed Dec. 16, 1958, Ser. No. 780,781
6 Claims. (Cl. 340—324)



1. In apparatus for generating concurrent x and y ordinate signals for tracing a symbol on a display, stationary mask means having two separated profile edges each of different varying contour with each having a base axis, said base axes being parallel, means for generating energy and for impinging same upon said mask means, means for imparting motion to said energy in a direction substantially parallel to said axes, means for imparting motion to said energy in a direction transverse to the first mentioned direction of motion to cause said energy to intercept both said profile edges continually during movement of said energy in the said first direction, means for focusing said energy in the region of said profile edges to a given dimension, the range of excursions of each profile edge away from said axis thereof being greater than said dimension of said energy source, and means responsive to interceptions of said energy with the said profile edges for simultaneously generating the said coordinate signals for said display.

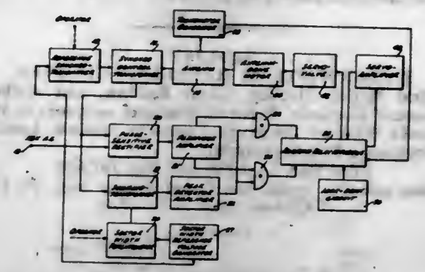
3,091,760
BURGLAR ALARM ACTUATOR
Le Roy C. Spenard, Port Washington, and David J. Armstrong, Garden City, N.Y., assignors to Holmes Electric Protective Company, New York, N.Y., a corporation of New York
Filed Mar. 28, 1960, Ser. No. 17,806
3 Claims. (Cl. 340—378)



1. A burglar alarm switch mechanism for a sliding elevator floor door comprising a casing for retaining said mechanism adjacent said door, a lever with a lever arm having one end pivotally fastened to the interior of said casing, contact means fastened to said lever arm for maintaining contact with said door, resilient means associated with said lever for urging said contact means outwardly of said casing, at least one switch fastened to said casing adjacent said lever, a member extending from said arm to actuate said at least one switch to turn in an alarm when said contact means is released outwardly from contact with said door, a device fastened to said lever arm for detecting vibrations transmitted through said roller from said door to said arm and for turning in an alarm upon the occurrence of such vibrations, an additional switch fastened to said casing near the end of said lever arm opposite said pivotally fastened end, means at the end of said lever arm opposite said pivotally fastened end for actuating said additional switch to turn in an alarm when said contact means is forced inwardly of said casing out of contact with said door.

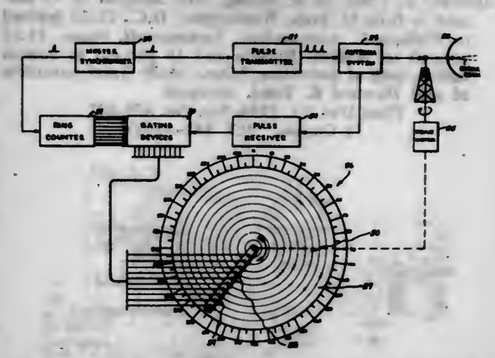
3,091,761
SECTOR SCAN CONTROL APPARATUS
Carl C. Gebhardt, Garden Grove, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Filed Aug. 12, 1960, Ser. No. 49,389
5 Claims. (Cl. 343—7.4)

1. In a radar system having a rotating antenna adapted to direct exploratory pulses in a plane passing through the axis of rotation of said antenna and having a fixed direction with respect to said antenna, an apparatus for controlling the scanning of a predetermined sector comprising means responsive to a reference alternating-current signal and mechanically coupled to said antenna for developing a first signal of a phase that is the same as that of said reference signal on one side of a radial line defining the center of said sector and that is of opposite phase on the remaining side thereof and of an amplitude that is a function of the angular distance from said radial line; means for producing a second signal that is of a unidirectional polarity and of an amplitude corresponding to the width of said sector; means responsive to said first and second signals for producing successive voltage indications when said first and second signals are of corresponding amplitudes; means responsive to said reference signal and



said first signal for producing a third signal that is at information level when said exploratory pulses are on one side of said radial line and a fourth signal that is at information level when said exploratory pulses are on the other side thereof; means for producing a fifth signal that is the conjunction of said successive voltage indications and said third signal; means for producing a sixth signal that is the conjunction of said successive voltage indications and said fourth signal; and means responsive to said fifth and sixth signals for successively reversing the direction of rotation of said antenna substantially at the time of occurrence of said successive voltage indications thereby to cause said antenna to scan said predetermined sector.

3,091,762
ELECTROSTATIC APPARATUS FOR MEASURING AND RECORDING TIME INTERVALS
Frederick A. Schwertz, Pittsford, N.Y., assignor to Xerox Corporation, a corporation of New York
Filed Feb. 4, 1957, Ser. No. 638,009
10 Claims. (Cl. 343—11)



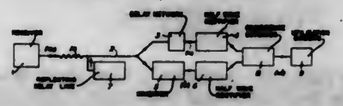
4. In a plan position indicator radar system wherein beamed pulses are transmitted by a scanning antenna which is in continuous rotation and wherein echo pulses are received by said antenna from reflecting objects in line with said beam, an electrostatic indicator comprising an insulating layer, an electrode structure including a radial arm rotatable about a point coincident with a cen-

ter of said layer and bearing a plurality of electrodes arrayed in serial alignment with a line extending radially from said center, said electrodes being spaced from said layer to define an air gap therebetween, means to rotate said arm in synchronism with said scanning antenna, a like plurality of dual-input gating devices whose outputs are connected to respective electrode means initiated by the transmitted pulse to supply timing pulses in sequence to one of said inputs of said devices, and means to supply echo pulses simultaneously to all of the other inputs of said devices to produce an output pulse of the device in which the echo pulse and the timing pulse are coincident, thereby causing a field discharge in said air gap at the electrode associated therewith.

3,091,763
RADAR SYSTEMS TO REDUCE CLUTTER

Wilfrid Sladen Mortley, Great Baddow, and Anthony Donald Slocombe, Felstead, England, assignors to Marconi's Wireless Telegraph Company Limited, London, England, a British company

Filed Dec. 24, 1958, Ser. No. 782,686
Claims priority, application Great Britain Aug. 15, 1958
7 Claims. (Cl. 343—17.1)

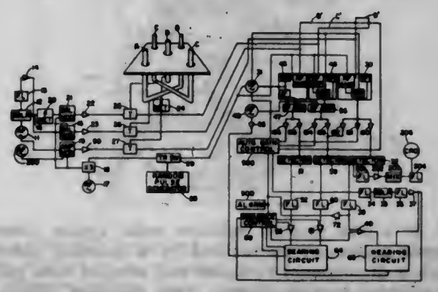


1. A pulsed radar system including a receiver, means connected to said receiver for producing from each received video signal pulse a signal wave form consisting of two successive voltage excursions of opposite polarity, means for applying the produced wave form to two channels one of which is adapted to invert input signals fed thereto and the other of which is adapted to delay input signals fed thereto, the amount of the delay being different from the transmitted pulse length and less than the duration of the produced signal wave form resulting from a desired received pulse, a coincidence detector connected to receive as its two inputs the outputs from the said two channels and means for utilizing the output from the coincidence detector.

3,091,764
ANTICOLLISION SYSTEM FOR SHIPS AND PLANES

Howard E. Tatel, Silver Spring, Md., assignor of 15 percent to Jules H. Sreb, Washington, D.C., 21.25 percent to William L. Abramowitz, Swampscott, Mass., 21.25 percent to William Epstein and 15 percent to Joseph Zallen, both of Brookline, Mass.; Molly Tatel, executrix of said Howard E. Tatel, deceased

Filed Dec. 21, 1956, Ser. No. 629,842
11 Claims. (Cl. 343—101)

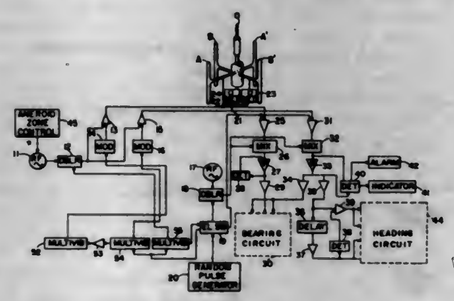


5. A method of avoiding collision between a plurality craft comprising randomly transmitting from each craft a radio signal of identical frequency, comprising the steps of altering such signal as received in response to a first angle between the reference line of the transmitting craft and a line between the transmitting craft and the receiving craft, receiving said signal and combining it with a local signal indicative of a second angle between the reference line of the receiving craft and the line between the transmitting craft and receiving craft and processing said signals so as to display both said angles.

3,091,765
ANTI-COLLISION SYSTEM FOR SHIPS AND PLANES

Howard E. Tatel, Silver Spring, Md., assignor of 15 percent to Jules H. Sreb, Washington, D.C., 21.25 percent to William L. Abramowitz, Swampscott, Mass., 21.25 percent to William Epstein and 15 percent to Joseph Zallen, both of Brookline, Mass.; Molly Tatel, executrix of said Howard E. Tatel, deceased

Filed June 13, 1957, Ser. No. 665,440
8 Claims. (Cl. 343—102)



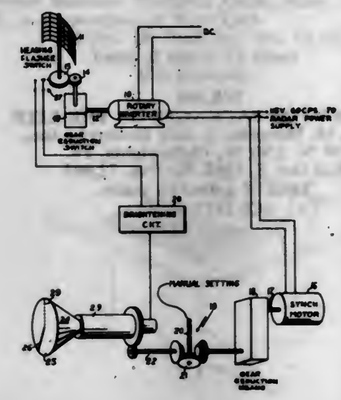
4. In a system of radio communication, means for providing two consecutive substantially equal time-length RF pulses, two separate antenna components, each fed by a separate one of said pulses, one of said components being horizontally isotropic and the other component being characterized in that the RF signal transmitted thereby is omnidirectionally constant in RF amplitude but has a phase angle which depends on the angle alpha formed by the line of sight to a receiver located elsewhere and a selected reference line at the transmitter, a plurality of receiver channels, one channel supplied by an isotropic antenna and a second channel supplied by an antenna which is characterized in that the phase angle of the signal it receives depends on the angle beta formed by the line of sight to a transmitter located elsewhere and a reference line at the receiver; means responsive to two channels for providing a signal proportional to said angle beta; means responsive to one channel for storing the first received pulse until said second pulse begins and means for processing both said pulses so as to yield a signal proportional to said angle alpha.

3,091,766
ANTENNA AZIMUTH TRANSMISSION SYSTEMS

Robert A. Frykland, Dedham, Mass., assignor to Raytheon Company, Lexington, Mass., a corporation of Delaware

Filed Jan. 12, 1960, Ser. No. 1,929
9 Claims. (Cl. 343—118)

7. In a drive system the combination comprising: first rotatable means; second means for driving said first means having alternating current output means; third rotatable means; a synchronous motor connected to said output means for driving said third means; and fourth means coupled between said synchronous motor and said third means for angularly adjusting the position of said third means.

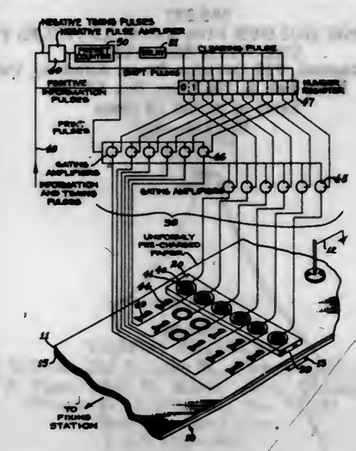


3,091,767
IMMEDIATE IMAGE FORMULATION PROCESS AND APPARATUS THEREFOR

John J. Kinsella, Rochester, N.Y., assignor to Xerox Corporation, a corporation of New York

Filed June 1, 1959, Ser. No. 817,349
7 Claims. (Cl. 346—74)

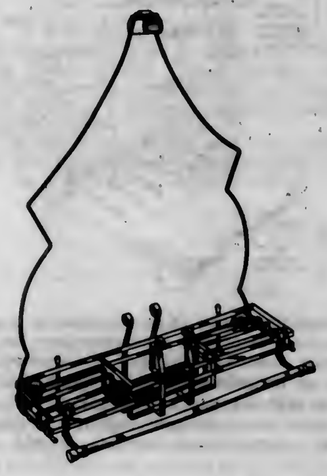
1. In a computer machine having an input system, an output system and means for carrying out mathematical functions comprising arithmetic elements and storage elements, the combination with said output system of character recording means comprising means to bring a raised electrode alphanumeric character face on the order of a few mils from an insulating web having coated thereon a thin electrically conductive layer, and means to apply an interior electric field between said character face and said conductive layer sufficient to produce an ionizing, non-sparking, field discharge between said character face and the surface of said conductive layer resulting in the removal of said conductive layer in a region corresponding to the face shape of said electrode thereby producing an immediately visible reproduction of said electrode on said web, said combination being capable of printing output at a sufficiently high rate to allow direct coupling to computational elements of said computer machine.



DESIGNS

MAY 28, 1963

195,297
HANGING HOLDER FOR BATH ARTICLES FOR USE WITH SHOWERS
Julius Raphael, 720 Devirian Place, Altadena, Calif.
Filed Feb. 8, 1962, Ser. No. 68,725
Term of patent 14 years
(Cl. D4—3)



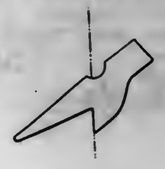
195,298
CHAIR ARM
Kenneth C. Kerr, 122 S. Riverside, Medford, Oreg.
Filed Dec. 12, 1961, Ser. No. 67,886
Term of patent 14 years
(Cl. D15—1)



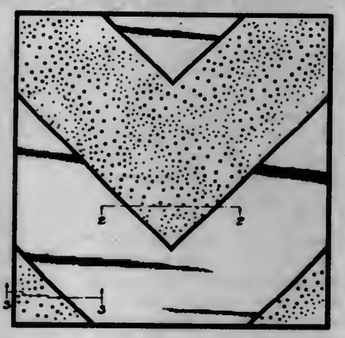
195,299
HANGER FOR PACKAGES OR THE LIKE
Joseph M. Margulis, % Jiffy Enterprise Inc., 150 N. 13th St., Philadelphia, Pa.
Filed Sept. 25, 1962, Ser. No. 71,848
Term of patent 14 years
(Cl. D17—12)



195,300
HANGER FOR PACKAGES OR THE LIKE
Joseph M. Margulis, % Jiffy Enterprise Inc., 150 N. 13th St., Philadelphia, Pa.
Filed Oct. 5, 1962, Ser. No. 72,005
Term of patent 14 years
(Cl. D17—12)



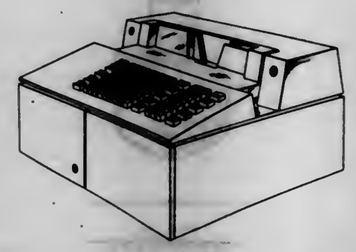
195,301
ACOUSTIC TILE
Toivo W. Alanpa and Glenn A. Norsted, Cloquet, Minn., assignors to Wood Conversion Company, St. Paul, Minn., a corporation of Delaware
Filed Apr. 24, 1961, Ser. No. 64,877
Term of patent 14 years
(Cl. D18—2)



195,302
CABLE STRIPPER OR SIMILAR ARTICLE
Richard M. Peters, Cloquet, Minn., assignor to Dix, Inc., Cloquet, Minn., a corporation of Minnesota
Filed Aug. 3, 1961, Ser. No. 66,237
Term of patent 14 years
(Cl. D22—3)



195,303
BANK TELLER TERMINAL
Edward R. Wiener, Rochester, Minn., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Oct. 15, 1962, Ser. No. 72,118
Term of patent 14 years
(Cl. D26—5)



195,304
HEADPHONE
John McLeod Little and James J. Nelson, both of Toledo, Ohio, assignors to Clevite Corporation, a corporation of Ohio
Filed May 19, 1961, Ser. No. 65,239
Term of patent 14 years
(Cl. D26—14)



195,305
LAPEL BUTTON
Jay C. Morris, Alexandria, Va., assignor to the United States of America as represented by the Secretary of the Army
Filed Sept. 27, 1962, Ser. No. 71,950
Term of patent 14 years
(Cl. D29—2)



195,306
TROPHY FIGURINE
Angelo Pane, Chicago, Ill., assignor to General Classics, Inc., a corporation of Illinois
Filed May 24, 1962, Ser. No. 70,256
Term of patent 7 years
(Cl. D29—23)



195,307
TROPHY FIGURINE
Marvin Kramer, 301 E. Lake St., Glenview, Ill., and Angelo S. Pane, 6148 N. Karlov Ave., Chicago, Ill.
Filed May 24, 1962, Ser. No. 70,258
Term of patent 7 years
(Cl. D29—23)



195,308
GAME TARGET UNIT
David H. Braun, Miami, Fla., assignor to All-Tech Industries, Inc., Hialeah, Fla., a corporation of Florida
Filed Apr. 19, 1962, Ser. No. 69,778
Term of patent 14 years
(Cl. D34—5)



195,309
HOLDER FOR CUPS
Keith B. Mount, New Providence, N.J., and Clark D. Sims, Huntington Station, N.Y., assignors to Lily-Tulip Cup Corporation, New York, N.Y., a corporation of Delaware
Filed July 25, 1962, Ser. No. 71,052
Term of patent 14 years
(Cl. D44—10)



195,310
OUTDOOR LIGHTING FIXTURE
Samuel J. Zagel, Chicago, Ill., assignor to Compco Corporation, Chicago, Ill., a corporation of Illinois
Filed Oct. 12, 1961, Ser. No. 67,053
Term of patent 14 years
(Cl. D48—31)



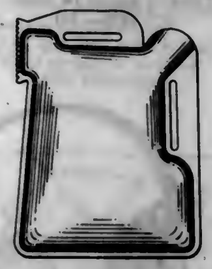
195,311
PAIR OF SPECTACLES
Albert G. McNeill, Maple Glen, Pa., assignor to Bachmann Bros., Inc., Philadelphia, Pa., a corporation of Pennsylvania
Filed May 24, 1962, Ser. No. 70,254
Term of patent 14 years
(Cl. D57—1)



195,312
BOTTLE
James R. McCollum, Downey, Calif., assignor to Glass Containers Corporation, Fullerton, Calif., a corporation of California
Filed Mar. 23, 1962, Ser. No. 69,396
Term of patent 14 years
(Cl. D58—9)



195,313
COLLAPSIBLE SPRINKLING CONTAINER
John C. Setecka, 1931 S. Austin Ave., Cicero, Ill.
Filed Apr. 9, 1962, Ser. No. 69,626
Term of patent 7 years
(Cl. D58—17)



195,314
SELF-SEALING CONTAINER CLOSURE
Floyd A. Terwilliger, 1264 Culver Road, Rochester, N.Y.
Filed Mar. 31, 1960, Ser. No. 59,967
Term of patent 14 years
(Cl. D58—26)



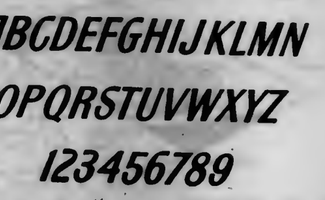
195,315
COMBINED BOTTLE CLOSURE AND LIQUID DISPENSER
Clifford R. Jennings, 148 Lincoln St., Hingham, Mass.
Filed Sept. 8, 1961, Ser. No. 66,648
Term of patent 14 years
(Cl. D58—26)



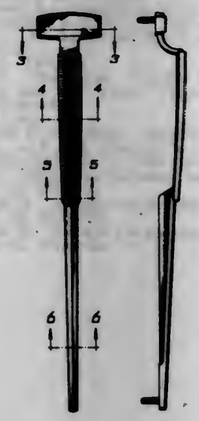
195,316
HOUSING FOR A TELETYPEWRITER OR THE LIKE
Manfred Karl Hegemann, Englewood, N.J., assignor to United Press International, Inc., New York, N.Y., a corporation of New York
Filed Oct. 29, 1962, Ser. No. 72,281
Term of patent 14 years
(Cl. D64—11)



195,317
TYPE FONT
Richard A. Neubert, Chicago, Ill., assignor to Continental Assurance Company, Chicago, Ill., a corporation of Illinois
Filed Mar. 27, 1961, Ser. No. 64,501
Term of patent 14 years
(Cl. D64—12)



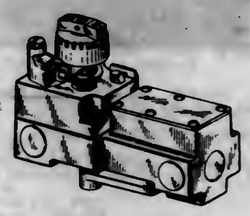
195,318
REFRIGERATOR DOOR HANDLE
Carl W. Sandberg, Bloomfield Hills, Mich., assignor to Whirlpool Corporation, a corporation of Delaware
Filed Apr. 13, 1962, Ser. No. 69,701
Term of patent 14 years
(Cl. D67—3)



195,319
HOLDER FOR PERFUME TESTING BLOTTERS
Pierre Magnin, 15 Ave. Mozart, Paris, France
Filed Mar. 7, 1961, Ser. No. 64,176
Term of patent 14 years
(Cl. D74—1)



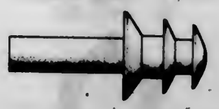
195,320
COMBINED SAFETY PILOT AND PRESSURE REGULATOR MANIFOLD GAS VALVE
Frederik J. Ages, Rolling Hills Estates, and William F. H. Purcell, Pasadena, Calif., assignors to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Apr. 17, 1961, Ser. No. 64,777
Term of patent 14 years
(Cl. D78—1)



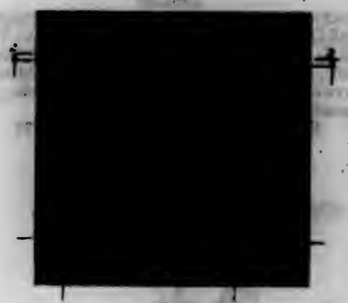
195,321
ELECTRIC FOOD WARMING STAND
R. Stuart Davis, Jr., Birmingham, Mich., assignor to Valor Enterprises Incorporated, Royal Oak, Mich., a corporation of Michigan
Filed Mar. 1, 1962, Ser. No. 69,032
Term of patent 14 years
(Cl. D81—10)



195,322
EAR PLUG OR SIMILAR ARTICLE
George M. Hill, Los Angeles, Calif., assignor to Sigma Engineering Co., Los Angeles, Calif., a co-partnership
Filed Apr. 10, 1961, Ser. No. 64,672
Term of patent 14 years
(Cl. D83—1)



195,323
PLASTIC SHEET MATERIAL OR SIMILAR ARTICLE
Harry A. Shortway, Glen Rock, and Peter Zevas, Newark, N.J., assignors to Congoleum-Nairn Inc., Kearny, N.J., a corporation of New York
Filed Mar. 20, 1961, Ser. No. 64,384
Term of patent 14 years
(Cl. D87—3)



195,324
AERATOR FOR FAUCETS
Karl Gloor, Teufenthal, Aargau, Switzerland, assignor to Aktiengesellschaft Karrer, Weber & Cie, Armaturenfabrik und Metallgiesserei, Unterkulm, Aargau, Switzerland
Filed Oct. 18, 1960, Ser. No. 62,524
Term of patent 14 years
(Cl. D91—3)



195,325
REVERSIBLE RUG OR SIMILAR ARTICLE
Alice P. Warner and Donald L. Warner, both of 1214 Grandview Ave., Glendale, Calif.
Filed June 1, 1961, Ser. No. 65,418
Term of patent 14 years
(Cl. D92—21)



LIST OF REISSUE PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 28TH DAY OF MAY, 1963

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

Acrometal Products, Inc.: *See*—
Bieber, Frederick J., and Steinback. Re. 25,390.

Bieber, Frederick J., and C. I. Steinback, to Acrometal Products, Inc. Winding spool. Re. 25,390, 5–28–63, Cl. 242—118.61.

Conti, Girard N., to Holley Carburetor Co. Method of classifying and matching bellows units. Re. 25,392, 5–28–63, Cl. 73—4.

Farkas, Thomas P., to United Aircraft Corp. Pressure regulating system. Re. 25,391, 5–28–63, Cl. 137—117.

Harrick, Nicolas J., to North American Philipps Co., Inc. Semiconductor stepping switch. Re. 25,389, 5–28–63, Cl. 307—88.5.

Holley Carburetor Co.: *See*—
Conti, Girard N. Re. 25,392.

North American Philips Co., Inc.: *See*—
Harrick, Nicolas J. Re. 25,389

Steinback, Clarence I.: *See*—
Bieber, Frederick J., and Steinback. Re. 25,390.

United Aircraft Corp.: *See*—
Farkas, Thomas P. Re. 25,391.

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Alaspa, Toivo W., and G. A. Norsted, to Wood Conversion Co. Acoustic tile. 195,301, 5–28–63, Cl. D18—2.

All-Tech Industries, Inc.: *See*—
Braun, David H. 195,306.

Bachmann Bros., Inc.: *See*—
McNeill, Albert G. 195,311.

Braun, David H., to All-Tech Industries, Inc. Game target unit. 195,306, 5–28–63, Cl. D34—5.

Clevite Corp.: *See*—
Little, John M., and Nelson 195,304.

Compco Corp.: *See*—
Zagel, Samuel J. 195,310.

Congoleum-Nairn Inc.: *See*—
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Neubert, Richard A. 195,317.

Davis, R. Stuart, Jr., to Valor Enterprises Inc. Electric food warming stand. 195,321, 5–28–63, Cl. D61—10.

Dix, Inc.: *See*—
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General Classics, Inc.: *See*—
Pane, Angelo. 195,306.

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McCollum, James R. 195,312.

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Hegemann, Manfred K., to United Press International, Inc. Housing for a teletypewriter or the like. 195,316, 5–28–63, Cl. D24—11.

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International Business Machines Corp.: *See*—
Wiener, Edward R. 195,303.

Jennings, Clifford M. Combined bottle closure and liquid dispenser 195,315, 5–28–63, Cl. D58—26.

Karrer, Weber & Cie, Armaturenfabrik und Metall-Giesserei, Aktiengesellschaft: *See*—
Gloor, Karl. 195,324.

Kerr, Kenneth C. Chair arm. 195,298, 5–28–63, Cl. D15—2.

Kramer, Marvin, and A. S Pane. Trophy figurine. 195,307, 5–28–63, Cl. D29—23.

Lily-Tulip Cup Corp.: *See*—
Mount, Keith B., and Sims. 195,309.

Little, John M., and J. J. Nelson, to Clevite Corp. Headphone. 195,304, 5–28–63, Cl. D28—14.

Magain, Pierre. Holder for perfume testing blotters. 195,319, 5–28–63, Cl. D74—1.

Margulis, Joseph M. Hanger for packages or the like. 195,299, 5–28–63, Cl. D17—12.

Margulis, Joseph M. Hanger for packages or the like. 195,300, 5–28–63, Cl. D17—12.

McCollum, James R., to Glass Containers Corp Bottle. 195,312, 5–28–63, Cl. D58—9.

McNeill, Albert G., to Bachmann Bros., Inc. Pair of spectacles. 195,311, 5–28–63, Cl D57—1.

Minneapolis-Honeywell Regulator Co.: *See*—
Ages, Frederik J., and Purcell. 195,320.

Morris, Jay C., to United States of America, Army. Lapel button 195,305, 5–28–63, Cl. D29—2.

Mount, Keith B., and C. D. Sims, to Lily-Tulip Cup Corp. Holder for cups. 195,309, 5–28–63, Cl. D44—10.

Neubert, Richard A., to Continental Assurance Co. Type font. 195,317, 5–28–63, Cl. D64—12.

Norsted, Glean A.: *See*—
Alaspa, Toivo W., and Norsted. 195,301.

Pane, Angelo, to General Classics, Inc Trophy figurine. 195,306, 5–28–63, Cl. D29—23.

Pane, Angelo S.: *See*—
Kramer, Marvin, and Pane. 195,307.

Peters, Richard M., to Dix, Inc. Cable stripper or similar article 195,302, 5–28–63, Cl. D22—3.

Purcell, William F. H.: *See*—
Ages, Frederik J., and Purcell. 195,320.

Raphael, Julius. Hanging holder for bath articles for use with showers 195,297, 5–28–63, Cl. D4—3.

Setecka, John C. Collapsible sprinkling container. 195,313, 5–28–63, Cl. D58—17.

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Sundberg, Carl W., to Whirlpool Corp. Refrigerator door handle. 195,318, 5–28–63, Cl. D67—3.

Terwilliger, Floyd A. Self-sealing container closure 195,314, 5–28–63, Cl. D58—26.

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Valor Enterprises Inc.: *See*—
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Whirlpool Corp.: *See*—
Sundberg, Carl W. 195,318.

Wiener, Edward R., to International Business Machines Corp. Bank teller terminal. 195,303, 5–28–63, Cl. D26—5.

Wood Conversion Co.: *See*—
Alaspa, Toivo W., and Norsted. 195,301.

Zagel, Samuel J., to Compco Corp. Outdoor lighting fixture. 195,310, 5–28–63, Cl. D48—31.

Zevas, Peter: *See*—
Shortway, Harry A., and Zevas. 195,323.

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PATENTS WERE ISSUED ON THE 28TH DAY OF MAY, 1963

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

ACF Industries, Inc.: *See*—
Anderson, Clifford E., and Eckert. 3,091,470.
Lawless, Clifford C., and Williamson. 3,091,471.
Schierhorst, Albert E. 3,091,040.

AMP Inc.: *See*—
Mentzer, Charles R. 3,091,275.

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Tatel, Howard E. 3,091,765.

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Adams, George L., and C. T. Govin, to The Salem Tool Co. Auger mining machine. 3,091,439, 5-28-63, Cl. 262—26.

Adams, George M., to Union Carbide Corp. Ink comprising a methacrylate polymer and a nitroalkane solvent and vinyl chloride polymer printed therewith. 3,091,545, 5-28-63, Cl. 117—38.

Adler, Benjamin H. Symbol changing device. 3,091,491, 5-28-63, Cl. 294—22.

Adrig, Vernon E., to Cook Electric Co. Ice detector. 3,091,680, 5-28-63. Cl. 219—19.

Advance Transformer Co.: *See*—
Huberty, Elmer J. 3,091,720.

Air Reduction Co., Inc.: *See*—
Rendos, John J., and Smith. 3,091,096.
Suda, Teruo and Miyazaki. 3,091,509.
Webster, Robert C. 3,091,114.

Airaterra: *See*—
Simpkins, Gideon M. 3,091,356.
Simpkins, Gideon M. 3,091,358.

Akutowicz Frank. Marine propulsion fin. 3,091,210, 5-28-63, Cl. 115—28.

Aldridge, Clyde L., to Esso Research and Engineering Co. Aldehydes synthesis. 3,091,644, 5-28-63, Cl. 260—604.

Alessio, Louis F. Inflatable plumber's test plug with drain. 3,091,259 5-28-63, Cl. 138—90.

Alffen, Reinhard: *See*—
Budnick, Gunther, Hack, Alffen, and Arras. 3,091,125.

Allmanestiano, Constantin. Entertainment system. 3,091,661, 5-28-63, Cl. 178—6.8.

Allard, Pierre J. T. Retractable unloader. 3,091,353, 5-28-63, Cl. 214—89.

Allen, Robert C., Jr., and L. J. Mitter, to General Motors Corp. Latching means for french doors. 3,091,232, 5-28-63, Cl. 126—190.

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Smith Joseph A., and Young. 3,091,523.

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Harrer, Paul H. 3,091,072.

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Alper, Ralph H., and R. E. Biehl, to Curtiss-Wright Corp. Prefilled liquid rocket engine. 3,091,081, 5-28-63, Cl. 60—35.6.

Altson, Ralph, to General Motors Corp. Antifriction bearing. 3,091,500, 5-28-63, Cl. 308—217.

Aluminum Laboratories Ltd.: *See*—
Parker, Leslie K. 3,091,332.

Ambli, Andrew. Mud flap stabilizer. 3,091,478, 5-28-63, Cl. 280—154.5.

American Bosch Arma Corp.: *See*—
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American Can Co.: *See*—
Makowski, Alexander G. 3,091,000.

American Chain & Cable Co., Inc.: *See*—
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American Cyanamid Co.: *See*—
Burris, William A. 3,091,617.
Feldman, Louis I., Molmlund, and Barbacci. 3,091,575.
Feldman Louis I., Rigler, Holmlund, and Nielsen. 3,091,576.
Miller, Bernard, and Forbes. 3,091,614.
Schaub, Robert E., and Weiss. 3,091,609.

American Home Products Corp.: *See*—
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American Optical Co.: *See*—
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American Radiator & Standard Sanitary Corp.: *See*—
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American Viscose Corp.: *See*—
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Soderquist, Frederick J., Boyce, and Amos. 3,091,652.

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Widener, Maurice W. 3,091,410.

Amsden, Donald L., to Owens-Illinois Glass Co. Extruder for plastic tubing. 3,090,995, 5-28-63, Cl. 18—14.

Anderson, Albert & J. M., Mfg. Co.: *See*—
Winkler, Edward D. 3,091,746.

Anderson, Arthur W., to The Dow Chemical Co. Insolubilization of water-soluble cellulose ethers. 3,091,542, 5-28-63, Cl. 106—186.

Anderson, Clifford E., and L. F. Eckert, Jr., to ACF Industries, Inc. Pressure loaded bonnet assembly. 3,091,470, 5-28-63, Cl. 277—73.

Anderson Electric Corp.: *See*—
Long, James A., Bush, and Pears. 3,091,750.

Anderson, Victor F., and R. G. Jobe, to Shell Oil Co. Centrifugal pumps. 3,091,182, 5-28-63, Cl. 103—103.

Anderson, Weston A., and J. N. Shoolery, to Varian Associates. Gyromagnetic resonance method and apparatus. 3,091,732, 5-28-63, Cl. 324—.5.

Annand, Robert R.: *See*—
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Aqua'Lonics, Inc.: *See*—
Schufle, Joseph A. 3,091,583.

Aquillon, Charles A., to Ark-Les Switch Corp. Crimping apparatus. 3,091,276, 5-28-63, Cl. 153—1.

Archer, Douglas B., to Esso Research and Engineering Co. Recovery of naphthenic acids. 3,091,634, 5-28-63, Cl. 260—514.

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Winn, James B., Jr. 3,091,404.

Ark-Les Switch Corp.: *See*—
Aquillon, Charles A. 3,091,276.

Armbrecht, Bernard H., and J. E. Malloy; said Malloy, assor. to E. D. Armbrecht. Photomultiplier control circuit. 3,091,697, 5-28-63, Cl. 250—207.

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Armbrecht, Bernard H., and Malloy. 3,091,697.

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Arnold, Paul L., and W. A. Montgomery, to United States Pipe and Foundry Co. Centrifugal core latch for pipe casting machines. 3,091,009, 5-28-63, Cl. 22—65.

Aro Corp., The: *See*—
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Aronson, Orvil. Drilling and tapping machine. 3,091,137, 5-28-63, Cl. 77—32.3.

Arras, Ludwig: *See*—
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Arya, Michael C., to Radio Corp. of America. Binary magnitude comparator. 3,091,392, 5-28-63, Cl. 235—177.

Asaki Optical Industry Co., Ltd.: *See*—
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Ashworth, William J., to Artnell Co. Paper end indicator for typewriters. 3,091,321, 5-28-63, Cl. 197—189.

Associated Electrical Industries Ltd.: *See*—
Choudhury, Shafi-Uddin A. 3,091,727.

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Au, Tin-Yam, to E. I. du Pont de Nemours and Co. Method of continuous treatment of as-spun birefringent polyamide filaments. 3,090,997, 5-28-63, Cl. 18—48.

Aubert, Michel C., to Frame S.A. Dish-washing machine having a rotary wobble spraying apparatus driven by a moment of momentum. 3,091,400, 5-28-63, Cl. 239—261.

Austin, John J. Float-controlled valve for poultry-watering apparatus and the like. 3,091,253, 5-28-63, Cl. 137—418.

Auto Research Corp.: *See*—
Thomas, Thomas R. 3,091,306.

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Gourley, James W., Jr. 3,091,201.

Ayers, George W., and W. A. Krewer, to The Pure Oil Co. Method of preparing petroleum fractions of improved odor using β-lactones. 3,091,585 5-28-63, Cl. 208—199.

Ayres, Merrill S. Container-dispenser for salmon eggs and the like. 3,091,364, 5-28-63, Cl. 221—256.

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Kidwell, John H. 3,091,283.

Bahr, Paul L. Sanding attachment for portable electric drills. 3,091,061, 5-28-63, Cl. 51—170.

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Ballard, Hyde W., to James Lees and Sons Co. Method and apparatus of tufting pile fabric. 3,091,199, 5-28-63, Cl. 112—79.

Bansard, Pierre M. P., P. A. Dujois, and J. R. Perilhou, to North American Philips Co., Inc. Method of passing wire, cable sheath and the like through a wall. 3,091,683, 5-28-63, Cl. 219—65.

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Baynes, Gene P., to The Bendix Corp. Clutch mechanism and the like. 3,091,314, 5-28-63, Cl. 192—104.

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Becker, Robert E., to Logansport Machine Co., Inc. Chuck control circuit. 3,091,256, 5-28-63, Cl. 137—622.

Becker, Rudolf, to Gesellschaft fur Linde's Eismaschinen Aktiengesellschaft. Process for the operation of regenerators, preferably for use in the low-temperature range. 3,091,093, 5-28-63, Cl. 62—12.

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Becks, Vernon C., to The Cleveland Trust Co., trustee. Bowling game apparatus. 3,091,458, 5-28-63, Cl. 273—54.

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Behrndt, Marianne E., G. R. Gledd, M. H. Perkins, and D. S. Weed, to International Business Machines Corp. Method for improving the sharp transition of superconductive films. 3,091,556, 5-28-63, Cl. 117—218.

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Nielsen, James W. 3,091,540.
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Wahlstrom, Dale S. 3,091,255.

Bennett, Sherman A. Aquatic amusement device. 3,091,453, 5-28-63, Cl. 272—1.

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Birdsall, George T., and Bergstrom. 3,091,464.

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Bilz, Otto. Length compensation device for quick change chucks. 3,091,473, 5-28-63, Cl. 279—76.

Birdsall, George T., and T. A. Bergstrom. Game. 3,091,464, 5-28-63, Cl. 273—108.

Bishop, Donald R., and L. O. Bruneau, to Polaroid Corp. Photographic apparatus. 3,091,379, 5-28-63, Cl. 225—89.

Bishop, Fred W., to Great Lakes Carbon Corp. Composition and method for treating drilling fluids. 3,091,588, 5-28-63, Cl. 252—8.5.

Black and Decker Mfg. Co., The: *See*—
Riley, Robert H., Jr. 3,091,433.

Black, Sivalls & Bryson, Inc.: *See*—
Wood, Loren E. 3,091,359.

Blake, Francis W. Four wheel farm cart. 3,091,476, 5-28-63, Cl. 280—43.13.

Blake, William T., to Tew Mfg. Corp. Machine for separating articles according to size. 3,091,333, 5-28-63, Cl. 209—82.

Blanchard, James R.: *See*—
Davis, Charles L., Blanchard, and Shira. 3,091,029.

Blaw-Knox Co.: *See*—
Kullgren, Gilbert V., and Goodwin. 3,091,441.

Bloch, Herman S.: *See*—
Schmerling, Louis, and Bloch. 3,091,566.

Bochan, John, to General Electric Co. Treating agent dispenser system for washing machines. 3,091,110, 5-28-63, Cl. 68—207.

Bodem, Roy C., R. H. Brandes, R. A. Hirsch, E. H. McDonald, and C. F. Wood, to General Motors Corp. Variable pitch propeller assembly for multi-power plant aircraft. 3,091,295, 5-28-63, Cl. 170—160.31.

Boeing Airplane Co.: *See*—
Schmitt, Hubert A. 3,091,277.

Bogart, George A., 49% to A. J. Klein. Adjustable chair. 3,091,426, 5-28-63, Cl. 248—393.

Borey, Daniel S., to Esso Research and Engineering Co. Mixing finely divided contact particles in a dense fluid bed. 3,091,594, 5-28-63, Cl. 252—417.

Borg-Warner Corp.: *See*—
Schmidt, Edward M. 3,091,729.

Borowiec, Richard A., E. V. Ruda, and E. S. Rusiniak, to Sylvania Electric Products Inc. Electronic assembly packaging. 3,091,722, 5-28-63, Cl. 317—100.

Bosch, Robert, Gesellschaft mit beschrankter Haftung: *See*—
Knapp, Heinrich, Krauss, and Heiser. 3,091,405.

Bostick, R. E.: *See*—
Truelove, James E. 3,091,299.

Boteler, Henry W., to Grinnell Corp. Diaphragm valves. 3,091,427, 5-28-63, Cl. 251—77.

Bottasso, Carlo, to Pirelli S.p.A. Pneumatic tire having a separate and removable tread and a complementary carrying carcass. 3,091,273, 5-28-63, Cl. 152—187.

Boutefoy, Jean R. H., to Societe Generale de Constructions Electriques et Mecaniques (Alsthom). Telescopic shock absorbers. 3,091,449, 5-28-63, Cl. 267—67.

Boutwell, Lloyd M.: *See*—
Brown. James C., and Boutwell. 3,091,506.

Boutros, Richard D., and M. Dykman, to Mixing Equipment Co., Inc. Chuck for drive shafts. 3,091,474, 5-28-63, Cl. 279—97.

Bowen, Tom, to S. Smith & Sons (England) Ltd. Adjustable clockwork driven mechanism for moving an actuating member at pre-selected times from one limit of movement to another. 3,091,126, 5-28-63, Cl. 74—3.54.

Bowers, Herbert L., to Pfaudler Permutit, Inc. Vacuum deaerator. 3,091,098, 5-28-63, Cl. 62—180.

Bowman, Joe, to Kingston Products Corp. Cycle timer. 3,091,673, 5-28-63, Cl. 200—38.

Boyce, Harold D.: *See*—
Soderquist, Frederick J., Boyce, and Amos. 3,091,652.

Boyd, Mildred W.: *See*—
Takes, Donald E., and Boyd. 3,091,748.

Bradley, Norman, to United Kingdom Atomic Energy Authority. Nuclear reactor systems. 3,091,582, 5-28-63, Cl. 204—193.2.

Braid, Milton: *See*—
Hauptschein, Murray, and Braid. 3,091,648.

Bran & Luebbe: *See*—
Hofmeister, Werner, Godenrath, and Kindler. 3,091,186.

Brand, Daniel. Line spooling and measuring apparatus. 3,091,038, 5-28-63, Cl. 33—129.

Brandes, Roy H.: *See*—
Bodem, Roy C., Brandes, Hirsch, McDonald, and Wood. 3,091,295.

Brandt, Edison R., to Polaroid Corp. Photographic apparatus. 3,091,164, 5-28-63, Cl. 95—54.

Braesefield, Charles J., to Research Corp. Apparatus and method for production of carbon black. 3,091,069, 5-28-63, Cl. 55—6.

Brendle, John A.: *See*—
Connick, Francis G., Brendle, and Strandine. 3,091,326.

Bretschneider, Hermann, and W. Klötzer, to Hoffmann-La Roche Inc. Sulfa compounds and processes. 3,091,610, 5-28-63, Cl. 260—239.75.

Brewin, Grant H., to Proctor Hydro-Set Co. Form movement control system. 3,091,377, 5-28-63, Cl. 223—76.

Bridges, Elmer H. Visual instructing device. 3,091,152, 5-28-63, Cl. 84—478.

Bristol-Myers Co.: *See*—
Coletta, Vincent, and Warfield. 3,091,574.

British Drug Houses Ltd., The: *See*—
Petrow, Vladimir, Stephenson, and Thomas. 3,091,616.
Brock, Kenneth G. Signal device for skiing tow ropes. 3,091,757, 5-28-63, Cl. 340—213.
Brock, Leo. Apparatus for detecting sheet material in a carton machine. 3,091,063, 5-28-63, Cl. 53—64.
Brodie, George H., to The Cleveland Trust Co. (trustee). Automatic pinfall detecting apparatus for bowling game. 3,091,456, 5-28-63, Cl. 273—54.
Brown, David, Tractors Ltd.: *See*—
Webster, Frederick. 3,091,354.
Brown, Frank, Jr.: *See*—
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Brown, James C., and L. M. Boutwell, to McDonnell Aircraft Corp. Data recorder. 3,091,506, 5-28-63, Cl. 346—107.
Brown, Paul M.: *See*—
Bell, William C. 3,091,012.
Brown, Robert G., and H. J. Rosenberg, to Rabinow Engineering Co., Inc. Package sorter. 3,091,324, 5-28-63, Cl. 198—38.
Brown, S. Perry: *See*—
Bell, William C. 3,091,012.
Brozowski, Vincent: *See*—
Klase, Donald L., and Brozowski. 3,091,587.
Brubaker, Robert F.: *See*—
Martin, John C., Brubaker, Bullock, and Stutrud. 3,091,108.
Brukner, John S., to Texaco Inc. Drilling fluid. 3,091,589, 5-28-63, Cl. 252—8.5.
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Bishop, Donald R., and Bruneau. 3,091,379.
Bub, Oscar, to Knoll A.-G. Therapeutic phthalimidines for relieving cough and producing anesthesia. 3,091,568, 5-28-63, Cl. 167—55.
Budnick, Gunther, deceased; by T. Budnick, nee Wujans, heir, H. Hack, R. Aiffen, and L. Arras, to Carl Schenck Maschinenfabrik G.m.b.H. Method and apparatus for dynamically determining unbalance of rotors. 3,091,125, 5-28-63, Cl. 73—462
Budnick, Thea: *See*—
Budnick, Gunther, Hack, Aiffen, and Arras. 3,091,125.
Bulk, Robert A., to Harris-Intertype Corp. Selectively releasable overcenter means for slitter mechanism. 3,091,146, 5-28-63, Cl. 83—433.
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Martin, John C., Brubaker, Bullock, and Stutrud. 3,091,108.
Bunger, Fritz, and H. Schucke, to Dr. A. Sommer. Apparatus for smoothing and compacting plastic layers. 3,091,158, 5-28-63, Cl. 94—45.
Buono, Frank S., to Becton, Dickinson and Co. Disposable urinary drainage bag assembly. 3,090,968, 5-28-63, Cl. 4—110.
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Kiser, Austin E., Klopfer, and Burke. 3,091,518.
Burklin, Adolf J., to A. O. Smith Corp. Gas burner. 3,091,284, 5-28-63, Cl. 158—106.
Burnes, Donald M., to Eastman Kodak Co. Hardening of photographic layers. 3,091,537, 5-28-63, Cl. 96—111.
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Goodwin, Wayne M. 3,091,498.
Burns, Richard H., and R. S. Hartley, to The Hobart Mfg. Co. Food handling apparatus. 3,091,269, 5-28-63, Cl. 146—78.
Burris, William A., to American Cyanamid Co. Process for preparing 4,5 - dialkoxy - 1,3 - dialkyl-2-imidazolidinones. 3,091,617, 5-28-63, Cl. 260—309.7.
Burroughs Corp.: *See*—
Frederick, Harold M., and Sheaffer. 3,091,669.
Greenberg, David R. 3,091,751.
Relis, Matthew J., and Mengani. 3,091,738.
Burroughs Wellcome & Co. (U.S.A.) Inc.: *See*—
Polinger, Martin E. 3,091,571.
Bush, Austin L., Jr.: *See*—
Long, James A., Bush, and Pears. 3,091,750.
Buskes, Willem M., to Chemische Fabriek Van der Grinten N.V. Process and light-sensitive sheets for the production of pigment images by transfer. 3,091,528, 5-28-63, Cl. 96—28.
Buskes, Willem M., to Chemische Fabriek Van der Grinten N.V. Process and light-sensitive screen sheets for the production of pigment images by transfer. 3,091,529, 5-28-63, Cl. 96—28.
Butterworth, Arthur B. Hook and peg holding means for boards and walls. 3,091,423, 5-28-63, Cl. 248—225.
C.A.V. Ltd.: *See*—
Curzon, Thomas. 3,091,282.
Evans, Fraser M., and Kemp. 3,091,230.
Caldwell, John R., and R. Gilkey, to Eastman Kodak Co. Linear aromatic acid copolyesters modified with dimer glycols having 36 carbons. 3,091,600, 5-28-63, Cl. 260—75.
Caldwell Mfg. Co., The: *See*—
Nobes, William D. 3,091,003.
Cale, Richard C. High speed planning hull. 3,091,206, 5-28-63, Cl. 114—66.5.
Calhoun, Edward J., to Pharmaceutical Foods & Drugs Associates, Inc. Process of deodorising. 3,091,511, 5-28-63, Cl. 21—55.
California Portland Cement Co.: *See*—
Hers, Joseph H., and Romig. 3,091,443.
Romig, John R., and Hers. 3,091,442.
California Research Corp.: *See*—
Furby, Neal W., and Newnan. 3,091,590.
Callear, Thomas E., and M. W. Killick, to Eastman Kodak Co. Hardening gelatin-silver halide lithographic offset printing plates. 3,091,531, 5-28-63, Cl. 96—33.
Camloc Fastener Corp.: *See*—
Vander Sande, John L., and Beehner. 3,091,488.
Campbell, Robert C., to P. A. Godby. Locking means. 3,091,011, 5-28-63, Cl. 24—81.
Canadian Pittsburgh Industries Ltd.: *See*—
Peeters, Jean. 3,091,831.
Carboni, Victor B., to Dymo Industries, Inc. Cutting and punching attachment for embossing tool. 3,091,318, 5-28-63, Cl. 197—6.7.
Carlson, George J.: *See*—
Courter, Martin L., and Carlson. 3,091,622.
Carlson, Gustav H., to R. P. Scherer Corp. Method of making ferrous citrate. 3,091,626, 5-28-63, Cl. 260—439.
Carlson, William L., Jr., to Minneapolis-Honeywell Regulator Co. Method of making a capillary tube fluid filled transmission system. 3,091,023, 5-28-63, Cl. 29—400.
Carson, Henry L.: *See*—
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Case, Richard W., to Harvey Aluminum (Inc). Thermally balanced piston. 3,091,502, 5-28-63, Cl. 309—9.
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Maxwell, Carl R. 3,091,228.
Chain Belt Co.: *See*—
Klemme, William W. 3,091,325.
Chambon, Louis J., to Societe d'Etudes de Machines Speciales. Automatic rewinding devices for webs of paper and the like. 3,091,412, 5-28-63, Cl. 242—56.
Charbonnier, Francis M.: *See*—
Dyke, Walter P., Henderson, and Charbonnier. 3,091,719.
Chartier, Guy N. Load moving device. 3,091,432, 5-28-63, Cl. 254—69.
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Chelle, Paul L. 3,091,065.
Chelle, Marie T. J.: *See*—
Chelle, Paul L. 3,091,065.
Chelle, Paul L., deceased; L. G. Chelle, donee; and P. J. L. and M. T. J. Chelle, heirs. Packaging and packing machine. 3,091,065, 5-28-63, Cl. 53—171.
Chelle, Pierre J. L.: *See*—
Chelle, Paul L. 3,091,065.
Chemical Construction Corp.: *See*—
Cook, Lucien H., and Fidler. 3,091,637.
Chemische Fabriek Van der Grinten N.V.: *See*—
Buskes, Willem M. 3,091,528.
Buskes, Willem M. 3,091,529.
Chicago Rawhide Mfg. Co.: *See*—
Reichenbach, Jerry D., and Rasmussen. 3,090,996.
Chikuma, Goro: *See*—
Chikuma, Toichi. 3,091,539.
Chikuma, Toichi, to G. Chikuma. Method of producing cheese. 3,091,539, 5-28-63, Cl. 99—116.
Choudhury, Shafi-Uddin A., to Associated Electrical Industries Ltd. Synchronising connections for dynamo-electric machines. 3,091,727, 5-28-63, Cl. 318—44.
Christoff, James W., to Mannix Co. Ltd. Ballast sled for use under railroad tracks. 3,091,187, 5-28-63, Cl. 104—7.
Cirigliano, Caesar A. Portfolio. 3,091,482, 5-28-63, Cl. 281—33.
Clair, Jacques, to Pechiney, Compagnie de Produit Chimiques et Electrometallurgiques. Method and composition for assembling together refractory bodies. 3,091,027, 5-28-63, Cl. 29—472.7.
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Clark, William B. and A. R. 3,091,685.
Clark, Earnest H., Jr., to Baker Oil Tools, Inc. Well bore milling apparatus. 3,091,290, 5-28-63, Cl. 166—55.
Clark, William B. and A. R. Welding apparatus. 3,091,685, 5-28-63, Cl. 219—125.
Clark, William F., Jr., to United States Steel Corp. Scarfing burner torch tip. 3,091,281, 5-28-63, Cl. 158—27.4.
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Clayton Dwandre Co. Ltd.: *See*—
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Cleff, Peter H., to The Parsons and Marine Engineering Turbine Research and Development Assn. Means for generating involute gears. 3,091,059, 5-28-63, Cl. 51—32.
Clement, Hubert L., and J. McNutt, to James Lees and Sons Co. Circulating system for carpet dye becks. 3,091,109, 5-28-63, Cl. 68—177.
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Penote, Vincent S., and Meyer. 3,091,044.
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Cochran, Joe F., to General Dynamics Corp. Brazing apparatus. 3,091,664, 5-28-63, Cl. 219—85.
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Dickinson, Gerald B. 3,091,194.
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Cohen, Louis I. 3,091,494.
Cohen, Louis I., to H. I. Cohen. Rear window panel for convertible automobile tops. 3,091,494, 5-28-63, Cl. 296—137.
Cohen, Martin J., and H. C. Gibson, Jr., to Franklin Systems, Inc. Missile scoring systems. 3,091,463, 5-28-63, Cl. 273—102.2.
Cohen, Milton J.: *See*—
McConnaughey, Robert K., and Cohen. 3,091,240.

Colbath, Dan L. Long span deck member. 3,091,313, 5-28-63, Cl. 189—37.
Cole, David F. Broiler. 3,091,171, 5-28-63, Cl. 99—400.
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Congoleum-Nairn Inc.: *See*—
Wetterau, Paul C. 3,091,017.
Wetterau, Paul C. 3,091,019.
Conn, John B., to Merck & Co., Inc. Process for the purification of tellurium. 3,091,516, 5-28-63, Cl. 23—209.
Connick, Francis G., J. A. Brendle, and E. J. Strandine, to Swift & Co. Sheep pelt clamp. 3,091,326, 5-28-63, Cl. 198—180.
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Donkin, Arthur W. 3,091,447.
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Kiser, Austin E., Klopfer, and Burke. 3,091,518.
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Latta, Edward. 3,091,713.
Cook Electric Co.: *See*—
Adrig, Vernon E. 3,091,680.
Cook, James A., Jr., to Westinghouse Air Brake Co. Validity detector. 3,091,688, 5-28-63, Cl. 246—182.
Cook, Lucien H., and R. K. Fidler, to Chemical Construction Corp. Dual cycle urea synthesis process. 3,091,637, 5-28-63, Cl. 260—555.
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Cope, Geoffrey W., to Symington Wayne Corp. Side frame. 3,091,192, 5-28-63, Cl. 105—221.
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Copeland, Nathaniel C. and M. C. 3,091,208.
Copeland, Michael C.: *See*—
Copeland, Nathaniel C. and M. C. 3,091,208.
Copeland, Nathaniel C. and M. C., to Copeland Engineering Enterprises Ltd. Pontoon-carrying camper. 3,091,208, 5-28-63, Cl. 115—1.
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Sanner, Medford D., and Cox. 3,091,755.
Coy, Homer E., to Ace Tool Engineering Co., Inc. Clamp manipulating device. 3,091,143, 5-28-63, Cl. 81—9.8.
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Magos, John P. 3,091,426.
Crim, Hugh S., and R. D. Ransom, to United Aircraft Corp. Control system for afterburning gas turbine engine. 3,091,080, 5-28-63, Cl. 60—35.6.
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Crowley, Cornelius J.: *See*—
Beriepech, Joseph C., Jr., and Crowley. 3,091,562.
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Crumrine, Herbert E., and C. L. Huber, to Xerox Corp. Xerographic plate feeding and supporting apparatus. 3,091,160, 5-28-63, Cl. 95—1.7.
Crumrine, Herbert E., and C. L. Huber, to Xerox Corp. Xerographic developing apparatus. 3,091,219, 5-28-63, Cl. 118—637.
Cruse, Paul B., and D. R. Crowell. Washing machine overflow control unit. 3,091,111, 5-28-63, Cl. 68—208.
Cunningham, John A. Electromechanical oscillators. 3,091,151, 5-28-63, Cl. 84—457.
Curtin, Kenneth M., to The Vanderburgh County Society For Crippled Children and Adults, Inc. Wick assembly. 3,091,396, 5-28-63, Cl. 239—47.
Curtiss-Wright Corp.: *See*—
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Davis, Robert E., Sr., and R. E. Davis, Jr. Steel clip for holding coiled hair. 3,091,247, 5-28-63, Cl. 132—41.
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Wilkins, James D., and Jones. 3,091,070.
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De Gaigneron de Marolles, Helene M. R. Atom and molecular models. 3,091,041, 5-28-63, Cl. 35—18.
Deguin, André. Captive self-lifting apparatus. 3,091,420, 5-28-63, Cl. 244—155.
De Mire, Haig A. Bowler's lift ring. 3,091,455, 5-28-63, Cl. 273—54.
Demmel, Georg, to Siemens-Schuckertwerke Aktiengeselschaft. Apparatus for producing communication cables. 3,091,074, 5-28-63, Cl. 57—12.
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De Ruiter, Jacob W., to North American Philips Co., Inc. High-frequency current conductor. 3,091,655, 5-28-63, Cl. 174—32.
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Dickson, Earl B., to Western Electric Co., Inc. Mechanism for moving an element along an irregular path. 3,091,156, 5-28-63, Cl. 90—13.
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Anderson, Arthur W. 3,091,542.
Grebe, Carl E. 3,091,177.
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Soderquist, Frederick J., Stickelmeyer, and Amos. 3,091,651.
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Zimmerman, Joseph. 3,091,015.

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Caldwell, John R., and Gilkey. 3,091,600.
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Estes, Cameron B. 3,091,167.
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Electronic Devices Corp.: *See*—
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Feldman, Louis I., N. E. Rigler, C. E. Holmlund, and B. E. Nielsen, to American Cyanamid Co. Method of 2-hydroxylating pregnenes and pregnadienes with streptomyces griseus. 3,091,576, 5–28–63, Cl. 195—51.

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Fisher, James G. Floating platform lock-down mechanisms for spooler troughs and doff trucks. 3,091,503, 5–28–63, Cl. 312—71.

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Fitch, Frederick T., M. G. Sanchez, and M. C. Vanik, to W. R. Grace & Co. Hydrous oxide sols. 3,091,592, 5–28–63, Cl. 252—301.1.

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Fox, John P., to The Aro Corp. Viscous liquid applicators. 3,091,375, 5–28–63, Cl. 222—479.

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Fredrickson, Leslie B. Two-part dispensing cap with registerable openings. 3,091,367, 5–28–63, Cl. 222—48.

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Furness, Vera I., and H. D. Mackenzie, to Courtaulds Ltd. Process for increasing the resistance of polyacrylonitrile fibers to discoloration. 3,091,552, 5–28–63, Cl. 117—138.8.

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Liu, John K. 3,090,976.
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Hutt, Philip. 3,091,671.
Prather, Marvin E. 3,091,682.
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Growald, Martin C., 15% to A. C. Nolte, Jr. Self-rupturing container. 3,091,058, 5-28-63, Cl. 46—116.

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Hull, David C., Hagemeyer, and Edwards. 3,091,605.

Hagemeyer, Hugh J., Jr., and H. N. Wright, Jr., to Eastman Kodak Co. Process for the production of glycol monoesters from aldehydes. 3,091,632, 5-28-63, Cl. 260—476.

Hall, Bertie R. Phone holder. 3,091,670, 5-28-63, Cl. 179—156.

Hall, Richard W., to Barnes Engineering Co. Reflectometer. 3,091,154, 5-28-63, Cl. 88—14.

Halliburton Co.: *See*—
Evans, George W., and Lan. 3,091,294.

Hamilton, Gene E., A. B. Metzner, and J. E. Ehrreich. Process for the preparation of alkylene glycols. 3,091,647, 5-28-63, Cl. 260—635.

Hamilton, Kenneth, to Mohasco Industries, Inc. Paper yarn apparatus. 3,091,075, 5-28-63, Cl. 57—32.

Hamlin, Humphrey A. S.: *See*—
Horner, Henry L., and Hamlin. 3,091,365.

Hammar, Martin, to North American Philips Co., Inc. Photoelectric device for indicating spots on a surface. 3,091,699, 5-28-63, Cl. 250—219.

Hammer, Otto, to Dresser Industries, Inc. Drill bit with improved core destroying means. 3,091,300, 5-28-63, Cl. 175—333.

Hansen, Oscar C., to Ferro Stamping Co. Elevator for outboard motor. 3,091,211, 5-8-63, Cl. 115—41.

Hanson, William H. Water ski device. 3,090,978, 5-28-63, Cl. 9—310.

Harberts, Eugene M. Ball projecting toy. 3,091,462, 5-8-63, Cl. 273—96.

Harbison-Walker Refractories Co.: *See*—
Leatham, Earl, and Pack. 3,091,514.
Smoot, Thomas W., and Stock. 3,091,014.

Harley, Robert S., C. L. Miller, and C. E. North, to Remington Arms Co., Inc. Powder measuring device. 3,091,368, 5-28-63, Cl. 222—56.

Harmon, Robert W., to The Ohio Brass Co. Conductor spacers. 3,091,658, 5-28-63, Cl. 174—128.

Harnsberger, McWhite. Recipe cabinet. 3,091,504, 5-28-63, Cl. 312—231.

Harper, Samuel D., to Minneapolis-Honeywell Regulator Co. Electrical digital coding apparatus. 3,091,700, 5-28-63, Cl. 307—88.

Harper, Samuel D., to Minneapolis-Honeywell Regulator Co. Checking circuitry for information handling apparatus. 3,091,753, 5-28-63, Cl. 340—146.1.

Harple, Kenneth G.: *See*—
Jakacki, Wallace B., and Harple. 3,091,726.

Harrer, Paul H., to Allis-Chalmers Mfg. Co. Tractor mower. 3,091,072, 5-28-63, Cl. 56—25.

Harris, Arvel E., to Ranco Inc. Control apparatus. 3,091,674, 5-28-63, Cl. 200—61.06.

Harris-Intertype Corp.: *See*—
Bulk, Robert A. 3,091,146.

Harris, John P., to International Business Machines Corp. Driving means for magnetic tape. 3,091,380, 5-28-63, Cl. 226—50.

Harris Transducer Corp., The: *See*—
Harris, Wilbur T. 3,091,708.

Harris, Wilbur T., to The Harris Transducer Corp. Circuit element transducer. 3,091,708, 5-28-63, Cl. 310—8.2.

Hartley, Richard S.: *See*—
Burns, Richard H., and Hartley. 3,091,269.

Harvey Aluminum (Inc.): *See*—
Cass, Richard W. 3,091,502.

Harvey, Bertrand G., to Markem Machine Co. Printing machine. 3,091,174, 5-28-63, Cl. 101—41.

Hasbrouck, Augustus: *See*—
Newcomb, Philip P., and Hasbrouck. 3,091,062.

Hassa, Richard, to G. Kromschroder Aktiengesellschaft. Gas burner safety and regulator control valve system. 3,091,285, 5-28-63 Cl. 158—151.

Hassett, James P., to Walter R. Oreamuno & Co. Data processing apparatus. 3,091,890. 5-28-63, Cl. 235—61.6.

Hathaway, Charles T., to Monsanto Chemical Co. Biaxial orientation apparatus. 3,090,991, 5-28-63, Cl. 18—1.

Hauni-Werke Korber & Co., K.G.: *See*—
Rudszinat, Willy, and Berlin. 3,091,245.

Hauptschein, Murray, and M. Braid, to Pennsalt Chemicals Corp. Vinylidine fluoride derived cotelomer oils. 3,091,-046. 5-28-63, Cl. 260—653.1.

Head, Victor P., to Fischer & Porter Co. Means for effecting instrument phase adjustment. 3,091,117, 5-28-63, Cl. 73—194.

Hearns, Harold L., to The Dow Chemical Co. Cutoff mechanism for a film rewinder. 3,091,411, 5-28-63, Cl. 242—56.

Hebner, Philip G., to The Chemithon Corp. Reaction chamber system. 3,091,519, 5-28-63, Cl. 23—285.

Hector, Russell, H. Schlottmann, and E. J. Ebbert, to Control Design and Fabricate, Inc. Conveyor junction regulating mechanism. 3,091,322, 5-28-63, Cl. 198—31.

Hegedusch, Edward A. Collapsible rain gutter bracket. 3,091,055, 5-28-63, Cl. 50—9.

Heijmans, Wilhelmus A. A., and C. G. Venis, to North American Philips Co., Inc. Method of cleaning vulcanizing moulds for the manufacture of rubber objects. 3,091,557, 5-28-63, Cl. 134—1.

Heiser, Joachim: *See*—
Knapp, Heinrich, Krauss, and Heiser. 3,091,405.

Helsterkamp, Herbert W., and W. S. Ladegaard, to The Dow Chemical Co. Manufacture of tubular thermoplastic film. 3,090,998, 5-28-63, Cl. 18—57.

Heller, László, L. Forgo, and M. Horváth, to Licencia Találmanyokat Ertekesito Vallalat. Device for preventing the freezing-in of air vent valves. 3,091,250, 5-28-63, Cl. 137—202.

Hembree, Calvin D. Mobile mixing and pumping apparatus. 3,091,438, 5-28-63, Cl. 259—151.

Hemstreet, Harold S., to General Precision, Inc. Method and means for altering apparent perspective of images. 3,091,662, 5-28-63, Cl. 178—7.2.

Hemwall, John B., to The Dow Chemical Co. Method and composition for improving soil. 3,091,522, 5-28-63, Cl. 71—1.

Henderson, Joseph E.: *See*—
Dyke, Walter P., Henderson, and Charbonnier. 3,091,719.

Henriksen, Adam J.: *See*—
Erickson, Bruce G., and Henriksen. 3,091,077.

Henriques, Harry P., III, to Union Carbide Corp. Compositions of vinyl chloride homopolymers and vinyl chloride-vinyl acetate copolymers. 3,091,597, 5-28-63, Cl. 260—31.4.

Henry, William P., 50% to D. J. Nash. Fertilizer applying device. 3,091,197, 5-28-63, Cl. 111—7.1.

Henry-Basdot, Jacques, to Printed Motors Inc. Printed circuit motor. 3,091,711, 5-28-63, Cl. 310—68.

Henry-Basdot, Jacques, to Printed Motors Inc. Axial airgap rotary machines. 3,091,715, 5-28-63, Cl. 310—268.

Herbst, William: *See*—
Wursburg, Otto B., Herbst, and Cole. 3,091,567.

Hers, Joseph H.: *See*—
Romig, John R., and Hers. 3,091,442.

Hers, Joseph H., and J. R. Romig, to California Portland Cement Co. Kiln automatic control method and apparatus. 3,091,443, 5-28-63, Cl. 263—32.

Hetherington, Robert D., to Electro-Optical Systems, Inc. Mechanical bonding lock. 3,091,578, 5-28-63, Cl. 204—16.

Hill, James S., C. S. Sivil, deceased (by B. O. Sivil, executrix), to Engelhard Industries, Inc. Method of making wire. 3,091,026, 5-28-63, Cl. 29—419.

Hillman, James G. E., to Molins Machine Co. Ltd. Apparatus for filling trays with cigarettes or articles of substantially the same shape. 3,091,064, 5-28-63, Cl. 53—148.

Himes, Glenn R., and H. O. Spang, to Shell Oil Co. Polymerization shortstopping. 3,091,602, 5-28-63, Cl. 260—84.3.

Hindman, William M. Measuring pipet. 3,091,124, 5-28-63, Cl. 73—425.4.

Hi-Press Air Conditioning of America, Inc.: *See*—
Williams, Burdell S. 3,091,288.

Hira, Gene. Filter apparatus. 3,091,836, 5-28-63, Cl. 210—111.

Hirsch, James C., to Klauber Games, Inc. Table tennis table. 3,091,196, 5-28-63, Cl. 108—112.

Hirsch, Richard A.: *See*—
Bodem, Roy C., Brandes, Hirsch, McDonald, and Wood. 3,091,295.

Hirshhorn, Leo. Fixed restorative dentistry. 3,091,032, 5-28-63, Cl. 32—6.

Hobart Mfg. Co., The: *See*—
Burns, Richard H., and Hartley. 3,091,269.

Hobbs, Jack W. Bag holder. 3,091,422, 5-28-63, Cl. 248—101.

Hobbs, Kenneth, to North American Philips Co., Inc. Holder for pluralities of objects. 3,091,452, 5-28-63, Cl. 269—68.

Ho-Boy Corp.: *See*—
Batrum, Clarence R. 3,091,501.

Hodgins, George R., to Litho Chemical and Supply Co. Inc. Developer composition for a light sensitive lithographic plate. 3,091,523, 5-28-63, Cl. 96—49.

Hoe, R., & Co., Inc.: *See*—
Fiesell, Joseph F. 3,091,267.

Hoeger, John G., to Thompson Designs, Inc. Indexing mechanism. 3,091,133, 5-28-63, Cl. 74—826.

Hoffman, Leslie J., to United Aircraft Corp. Multicolor instrument. 3,091,214, 5-28-63, Cl. 116—129.

Hoffmann-La Roche Inc.: *See*—
Bretschneider, Hermann, and Klötzer. 3,091,610.
Gutmann, Hugo, Straub, and Zeller. 3,091,638.
Isler, Otto, Lindlar, Montavon, Ruegg, Schwieter, and Saucy. 3,091,631.

Hofmeister, Werner, H. Godenrath, and G. Kindler, to Bran & Luebbe. Pumping method and pumps for suspensions. 3,091,186, 5-28-63, Cl. 103—204.

Hogan, Jimmie S. and R. L.; said R. L. Hogan, assor. to J. S. Hogan. Electric motors. 3,091,728, 5-28-63, Cl. 318—138.

Hogan, Robert L.: *See*—
Hogan, Jimmie S. and R. L. 3,091,728.

Holbrooke, Raymond H.: *See*—
Pastore, Michael W., and Holbrooke. 3,091,222.

Holl, Walter V., and J. J. Morrison. Guide means for adjustable hydraulic press. 3,091,147, 5-28-63, Cl. 83—568.

Hollandse Signaalapparaten, N.V.: *See*—
Van Arragon, Bernard. 3,091,742.

Holmes Electric Protective Co: *See*—
Spenard, Le Roy C., and Armstrong. 3,091,760.

Holmlund, Chester E.: *See*—
Feldman, Louis I., Holmlund, and Barbacci. 3,091,575.

Holophane Co., Inc.: *See*—
Van Steenhoven, Frank. 3,091,425.

Honodel, James W. Hydraulically actuated controller. 3,091,085, 5-28-63, Cl. 60—54.5.

Hoose, Francis D., and J. M. Melvin, to Monticello Mfg. Corp. Foldable display device. 3,091,345, 5-28-63, Cl. 211—149.

Hoover, Carl E.: *See*—
McRae, Kenneth M., and Hoover. 3,090,961.

Horner, Henry L., and H. A. S. Hamlin, to Normalair Ltd. Pressure releasing means. 3,091,365, 5-28-63, Cl. 222—5.

Horváth, Mihaly: *See*—
Heller, László, Forgo, and Horváth. 3,091,250.

Houghton, William D., and R. E. Morey, to Radio Corp. of America. Television magnetic tape reproducing system. 3,091,660. 5-28-63, Cl. 178—6.6.

Houser, Raymond J. Pew construction. 3,091,497, 5-28-63, Cl. 297—450.

Howard, John C., to The Norwich Pharmacal Co. Alkylalkoxyalkylhydrazones. 3,091,611, 5-28-63, Cl. 260—240.

Howdon Videx Products Corp.: *See*—
Peyser, Leonard F. 3,091,696.

Hruby, John O., Jr., to Rain Jet Corp. Lawn sprinkler with gyratory stem. 3,091,398, 5-28-63, Cl. 239—206.

Hruby, John O., Jr., to Rain Jet Corp. Sprinkling system. 3,091,401, 5-28-63, Cl. 239—276.

Hruby, John O., Jr., to Rain Jet Corp. Flexible pipe connection having line pressure actuated sealing means. 3,091,483, 5-28-63, Cl. 285—95.

Hsieh, Henry L., to Phillips Petroleum Co. Organolithium polymerization initiator prepared in the presence of a small amount of sodium. 3,091,608, 5-28-63, Cl. 260—94.2.

Hubbard, Albert B., to Botron Mfg. Co., Inc. Vortex flow control device. 3,091,118, 5-28-63, Cl. 73—230.

Huber, Charles L.: *See*—
Crumrine, Herbert E., and Huber. 3,091,160.
Crumrine, Herbert E., and Huber. 3,091,219.

Huberty, Elmer J., to Advance Transformer Co. Ballast apparatus with dimming control. 3,091,720, 5-28-63, Cl. 315—98.

Huck, Rodney M.: *See*—
Freedman, Bernard, and Huck. 3,091,596.

Huet, Jean R. Method of obtaining coloured images. 3,091,155, 5-28-63, Cl. 88—16.4.

Huffman, Raymond A., to Sperry Rand Corp. Overridable clutch mechanism. 3,091,316. 5-28-63, Cl. 192—150.

Hughes Aircraft Co.: *See*—
Gebhardt, Carl C. 3,091,761.

Hughey, J. Benedict, to Standard Fire Hose Co. Fire hose cabinet. 3,091,251, 5-28-63, Cl. 137—356.28.

Hull, David C., H. J. Hagemeyer, Jr., and M. B. Edwards, to Eastman Kodak Co. Olefin polymerisation catalyst pretreatment. 3,091,605, 5-28-63, Cl. 260—93.7.

Hund, Franz, and W. Delesmann, to Farbenfabriken Bayer Aktiengesellschaft. Crystalline solid solutions with silicon dioxide structure as host components. 3,091,544, 5-28-63, Cl. 106—286.

Hunt, Charles d'A., to Stauffer Chemical Co. Deoxidation of refractory metal. 3,091,525, 5-28-63, Cl. 75—84.

Huston, William D., to American Radiator & Standard Sanitary Corp. Electro-magnetic device. 3,091,726, 5-28-63, Cl. 317—171.

Hutsell, Thomas A. Beer dispenser. 3,091,366, 5-28-63, Cl. 222—36.

Hutson, Andrew R., to Bell Telephone Laboratories, Inc. Piezoelectric devices utilizing zinc oxide. 3,091,707, 5-28-63, Cl. 310—8.

Hutt, Philip, to General Electric Co. Pushbutton switch with mechanically actuated extended slider. 3,091,671, 5-28-63, Cl. 200—5.

Illinois Tool Works Inc.: *See*—
Edwards, Bryant. 3,091,260.
Saari, Oliver E. 3,091,021.

Imperial Chemical Industries Ltd.: *See*—
Benson, Richard W. H. 3,091,636.

Industrial Nucleonics Corp.: *See*—
Lowman, Walker B. 3,091,756.

Inertia-Matic, Inc.: *See*—
Rugg, Frederick D. 3,091,480.

Ingersoll-Rand Co.: *See*—
Friant, David R. 3,091,097.

Intercontinental Mfg. Co., Inc.: *See*—
Levinson, Louis E. 3,090,973.

International Business Machines Corp.: *See*—
Behrndt, Marianne E., Giedd, Perkins, and Weed. 3,091,556.
Harris, John P. 3,091,380.
Michaelsen, John D. 3,091,532.
Randles, Richard J. 3,091,752.

Isler, Otto, H. Lindlar, M. Montavon, R. Ruegg, U. Schwieter, and G. Saucy, to Hoffmann-La Roche Inc. Production of acetylenic carotenoid aldehydes and acetal intermediates therefor. 3,091,631, 5-28-63, Cl. 260—476.

J. P. Co., Inc.: *See*—
Padgett, Allen V. 3,091,278.

Jackson, George W. Locking bracket for scaffolding brace bars. 3,091,485, 5-28-63, Cl. 287—53.5.

Jackson, William R.: *See*—
Pickard, Edgar C., Jackson, and Grappo. 3,091,305.

Jackson, William R., to Fordees Corp. Automatic billet center punching machine. 3,091,139, 5-28-63, Cl. 78—9.

Jacobsen Mfg. Co.: *See*—
Strasel, Raymond K. 3,091,073.

Jakacki, Wallace B., and K. G. Harple, to Leeds and Northrup Co. Generator for producing servomotor control-pulse trains. 3,091,726, 5-28-63, Cl. 318—21.

Jantzen, George H., to Steinthal Sample Co., Inc. Display rack. 3,091,341, 5-28-63, Cl. 211—47.

Jean, Henri, to Compagnie de St. Gobain. Vapor phase polymerisation of formaldehyde. 3,091,599, 5-28-63, Cl. 260—67.

Jean, Marcel, and J. Lelong, to Societe Chimique de la Grande Paraisse, azote et Produits Chimiques. Method for producing mixtures of hydrogen and carbon monoxide. 3,091,593, 5-28-63, Cl. 252—373.

Jepson, Ivar, to Sunbeam Corp. Combined engine shroud and fuel reservoir. 3,091,226, 5-28-63, Cl. 123—41.65.

Jerger, James F., to Northwestern University. Method for testing hearing acuity. 3,091,234, 5-28-63, Cl. 128—2.1.

Jernberg, Evert H., and R. K. Bergquist, to Electric Machinery and Mfg. Co. Collector ring assembly with field winding discharge air gap. 3,091,714, 5-28-63, Cl. 310—232.

Jobe, Russell G.: *See*—
Anderson, Victor F., and Jobe. 3,091,182.

Jöhl, Albert J. H., and W. G. Stoll, to Geigy Chemical Corp. Process for the production of derivatives of hypoglycine A. 3,091,606, 5-28-63, Cl. 260—112.

Johns-Manville Fiber Glass Inc.: *See*—
Rees, Vernon C. 3,091,018.

Johnson, Alfred L., Jr., and R. B. Wister, to The Garrett Corp. Apparatus for local hypothermia. 3,091,242, 5-28-63, Cl. 128—402.

Johnson, Arthur F., to Strategic Materials Corp. Metallurgical process. 3,091,524, 5-28-63, Cl. 75—24.

Johnson, Edwin S.: *See*—
Taini, John, and Johnson. 3,091,169.

Johnson, Kenneth D., R. T. Talton, Jr., and N. F. Spraggins, to Atlantic Research Corp. Mixer. 3,091,437, 5-28-63, Cl 259—104.

Johnson, Leslie W., and P. Ford, to Deere & Co. Disk harrow angling and straightening means. 3,091,298, 5-28-63, Cl. 172—580.

Johnstone, George B. Trolleys, bogies and the like for facilitating the handling and movement of articles and particularly heavy articles. 3,091,477, 5-28-63, Cl. 280—46.

Jones, Frank D.: *See*—
Wilkins, James D., and Jones. 3,091,070.

Jones, Marvin L.: *See*—
Woody, Wayland B., Scott, and Jones. 3,091,312.

Jones Products Co.: *See*—
Jones, Robert T. 3,091,547.

Jones, Richard De Forest. Liquid transferring apparatus. 3,091,252, 5-28-63, Cl. 137—392.

Jones, Robert T., to Jones Products Co. Method of imparting a permanent form to resin-impregnated webbing. 3,091,547, 5-28-63, Cl. 117—65.2.

Jorgensen, Robert G.: *See*—
Wellford, Walker L., Jr., and Jorgensen. 3,091,350.

Joyner, Frederick B., and N. H. Shearer, Jr., to Eastman Kodak Co. Poly-α-olefins containing thiobisphenols and butylated hydroxy toluene. 3,091,598, 5-28-63, Cl. 260—45.95.

Just, George A., to The Grand Union Co. Display and delivery stand. 3,091,317, 5-28-63, Cl. 193—38.

Kadota, Tadaomi: *See*—
Suzuki, Shinichi, Fujii, Nishizawa, and Kadota. 3,091,565.

Kahn & Co., Inc.: *See*—
Sheldon, Robert S. 3,091,309.

Kalinowski, Anthony T.: *See*—
Dantro, Horace F., Kalinowski, and Siuta. 3,091,515.

Kamborian, Jacob S.: *See*—
Dunlap, Robert B. 3,091,233.

Kansas University Endowment Assn., The: *See*—
Tiedemann, James B., and Wall. 3,091,307.

Kanter, Jerome J., to Crane Co. Resinous coating of silliconized iron. 3,091,549, 5-28-63, Cl. 117—75.

Karns, James A., to Fawick Flexi-Grip Co. Method for making a hand grip. 3,090,999, 5-28-63, Cl. 18—59.

Kaspar, Anne N.: *See*—
Nordell, Carl H. 3,091,337.
Nordell, Carl H. 3,091,338.

Kato, Norio: *See*—
Matsumoto, Tsunetaka, Kato, and Sumitani. 3,091,553.

Kellett, William R., to Kimberly-Clark Corp. Vaginal tampon. 3,091,241, 5-28-63, Cl. 128—270.

Kemp, Kenneth A. W.: *See*—
Evans, Fraser M., and Kemp. 3,091,230.

Kenmore, Jack M., to Safety Aids Co. Traffic flag. 3,091,215, 5-28-63, Cl. 116—173.

Kennedy, William P. Adjustable pattern sprinkler. 3,091,399, 5-28-63 Cl. 239—231.

Kenyon, Ralph W., and D. A. Regan. Pallet superstructure. 3,091,195, 5-28-63, Cl. 108—53.

Kerr, Paul F., to Texaco Inc. Recovering hydrocarbons from subsurface formations. 3,091,292, 5-28-63, Cl. 166—11.

Kestner, William N., to Esso Research and Engineering Co. Partial hydrogenation of C_4 acetylenes prior to CAA prewash. 3,091,654, 5-28-63, Cl. 260—681.5.

Kidwell, John H., to The Babcock & Wilcox Co. Liquid fuel burner. 3,091,283, 5-28-63, Cl. 158—76.

Kieffer, Fred W. Spring lifter. 3,091,448, 5-28-63, Cl. 267—60.

Kilayko, Enrique L., to Precision Chemical Pump Corp. Dual seating ball check valve. 3,091,254, 5-28-63, Cl. 137—516.29.

Killick, Merrill W.: *See*—
Callear, Thomas E., and Killick. 3,091,531.

Kimberly-Clark Corp.: *See*—
Kellett, William R. 3,091,241.

Kindler, Georg: *See*—
Hofmeister, Werner, Godenrath, and Kindler. 3,091,186.

Kingston Products Corp.: *See*—
Bowman, Joe. 3,091,673.

Kinsella, John J., to Xerox Corp. Immediate image formulation process and apparatus therefor. 3,091,767, 5–28–63, Cl. 346—74.

Kirschenbaum, Samuel. Whiskey pourer or similar device. 3,091,373, 5–28–63, Cl. 222—420.

Kiser, Austin E., O. E. H. Klopfer, and O. W. Burke, Jr., to Continental Oil Co. Continuous polymerization apparatus. 3,091,518, 5–28–63, Cl. 23—285.

Klanecnik, Adolph V. Positioning fixtures. 3,091,363, 5–28–63, Cl. 223—243.

Klase, Donald L., and V. Brozowski, to The Pure Oil Co. Method for treating hydrocarbon mixtures. 3,091,587, 5–28–63, Cl. 208—293.

Klauber Games, Inc.: *See*—
Hirsch, James C. 3,091,196.

Klein, Arthur J.: *See*—
Bogart, George A. 3,091,426.

Klemme, William W., to Chain Belt Co. Conveyor chain attachment. 3,091,325, 5–28–63, Cl. 198—174.

Klopfer, Oskar E. H.: *See*—
Kiser, Austin E., Klopfer, and Burke. 3,091,518.

Klötzer, Wilhelm: *See*—
Bretschneider, Hermann, and Klötzer. 3,091,610.

Kluge, Herman D., and F. W. Moore, to Texaco Inc. Alkylation process. 3,091,635, 5–28–63, Cl. 260—515.

Knapp, Heinrich, R. Krauss, and J. Heiser, to Robert Bosch Gesellschaft mit beschrankter Haftung. Fuel injection valve. 3,091,405, 5–28–63, Cl. 239—453.

Knapp, William E.: *See*—
Lohrman, William V., and Knapp. 3,091,296.

Knights, Richard N., A. R. Pitt, A. A. J. Willitt, and S. W. H. Wood, to Dowty Rotol Ltd. Bogie undercarriages for aircraft. 3,091,416, 5–28–63, Cl. 244—50.

Knoll A.-G.: *See*—
Bub, Oscar. 3,091,568.

Knox, William J., Jr., and C. V. Wilson, to Eastman Kodak Co. Reaction products of isocyanato esters and alcohols. 3,091,623, 5–28–63, Cl. 260—404.5.

Koch, Gawain B., to Polymer Processes, Inc. Synthetic article. 3,091,172, 5–28–63, Cl. 100—162.

Koppers Co., Inc.: *See*—
Loston, Gerd. 3,091,646.
Rudner, Bernard. 3,091,627.
Sturrock, Murray G., Cline, and Robinson. 3,091,620.

Koster, Arthur H. Fluid level control system. 3,091,676, 5–28–63, Cl. 200—83.

Kottler, August: *See*—
Seeger, Ernst, and Kottler. 3,091,640.

Koumovsky, Edward F., and H. T. Lange, to Sporlan Valve Co., Inc. Thermostatic charge for motor system of expansion valve and method of charging. 3,091,120, 5–28–63, Cl. 73—368.2.

Kralowetz, Bruno. Hydraulic positioning system for gripping heads of forging machines. 3,091,140, 5–28–63, Cl. 78—99.

Krauss, Rudolf: *See*—
Knapp, Heinrich, Krauss, and Heiser. 3,091,405.

Krewer, William A.: *See*—
Ayers, George W., and Krewer. 3,091,585.

Kromschroder, G., Aktiengesellschaft: *See*—
Hasse, Richard. 3,091,285.

Ksionsak, Benjamin A.: *See*—
Ulicky, Paul, and Ksionsak. 3,091,067.

Kuhlenkamp, Alfred, to Mathema Corp. Reg. Trust. Ordnance sight. 3,091,035, 5–28–63, Cl. 33—49.

Kullgren, Gilbert V. and W. J. Goodwin, to Blaw-Knox Co. Apparatus for heating and stretching of fabrics. 3,091,441, 5–28–63, Cl. 263—3.

Kunen, Alfred E., to Republic Aviation Corp. Propulsion engine with electromagnetic means to produce propellant acceleration. 3,091,079, 5–28–63, Cl. 60—35.5.

Kuntz, Irving, to Esso Research and Engineering Co. Cure of halogenated butyl rubber. 3,091,603, 5–28–63, Cl. 260—85.3.

Kunze, Oskar: *See*—
Schlachter, Hans, and Kunze. 3,090,992.

Kurashiki Rayon Co., Ltd.: *See*—
Suda, Teruo, and Miyazaki. 3,091,509.

Labbe, Francis A. M.: *See*—
Molins, Desmond W., and Labbe. 3,091,244.

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La Fleur, George: *See*—
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Lalley, Gerald J. Recep acle for storing film and the like. 3,091,327, 5–28–63, Cl. 206—1.

Lamoureaux, Raymond A., Jr., to Sprague Electric Co. Terminal assembly. 3,091,556, 5–28–63, Cl. 174—52.

Lan, John R.: *See*—
Evans, George W., and Lan. 3,091,294.

Lange, Harold T.: *See*—
Koumovsky, Edward F., and Lange. 3,091,120.

Lanz, George T., to Ralston Purina Co. Apparatus for closing filled bags. 3,091,198, 5–28–63, Cl. 112—11.

La Porte, Gordon G. Shelter. 3,091,056, 5–28–63, Cl. 50—48.

Latta, Edward, to Controls Co. of America. Ceramic magnet mounting structure. 3,091,713, 5–28–63, Cl. 310—154.

Laupot, Richard. Universal type swivel fitting for an electrical fixture. 3,091,484, 5–28–63, Cl. 285—164.

Laurenzi, Ugo M. Lumber wrapping apparatus with glue applying mechanism associated therewith. 3,091,066, 5–28–63, Cl. 53—191.

Lavine, Jerome M., to Raytheon Co. Semiconductor devices with improved carrier injections to allow increased frequency response (spacistors). 3,091,706, 5–28–63, Cl. 307—88.5.

Lawless, Clifford C., and A. M. Williamson, to ACF Industries Inc. Packing box assembly. 3,091,471, 5–28–63, Cl. 277—113.

Leatham, Earl, and A. H. Pack, to Harbison-Walker Refractories Co. Production of dead burned magnesia. 3,091,514, 5–28–63, Cl. 23—201.

Le Blanc, Walter J.: *See*—
Smith, Billy N., and Le Blanc. 3,091,310.

Leeds, Winthrop M., to Westinghouse Electric Corp. Circuit interrupter of the fluid blast type. 3,091,678, 5–28–63, Cl. 200—150.

Leeds and Northrup Co.: *See*—
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Pelleck, Daniel D. 3,091,537.

Lees, James, and Sons Co.: *See*—
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Legatski, Theodore W., to Phillips Petroleum Co. Initiating and controlling underground combustion. 3,091,235, 5–28–63, Cl. 166—256.

Lehfeldt Dr., & Co., G.m.b.H.: *See*—
Siegerich, August, and Sievers. 3,091,060.

Leiberman, Harry. Water tricycle. 3,091,209, 5–28–63, Cl. 115—2.

Leithiser, George L. Reel trailer. 3,091,413, 5–28–63, Cl. 242—86.7.

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Jean, Marcel, and Leleng. 3,091,503.

Leonardon, Priscilla A. Contact lens remover and carrier. 3,091,238, 5–28–63, Cl. 206—5.

Lesten, Gerd, to Koppers Co., Inc. Preparation of M-cresol by a dealkylation process. 3,091,646, 5–28–63, Cl. 260—621.

Levine, Abraham, to Minneapolis-Honeywell Regulator Co. Pulse former utilizing minority carrier storage for stretching output and delayor contr lling said output duration. 3,091,705, 5–28–63, Cl. 307—88.5.

Levine, Sol, to Dorset-Rex, Inc. Cosmetic mass holder. 3,091,330, 5–28–63, Cl. 206—56.

Levinson, Louis E., to Intercontinental Mfg. Co., Inc. Boats. 3,090,978, 5–28–63, Cl. 9—1.

Le Ven, Ernest: *See*—
Custer, John W., and Le Ven. 3,091,615.

Lewis, Alfred G. Signal apparatus indicating flow through a pipe, avoiding false alarms during surges. 3,091,758, 5–28–63, Cl. 340—230.

Liao Chien-Wei, to The Standard Oil Co. Gasoline composition. 3,091,521, 5–28–63, Cl. 44—66.

Licencia Talalmanyokat Ertekesito Vallalat: *See*—
Heller, Laszlo, Fergo, and Horvath. 3,091,250.

Licitis, Gunars: *See*—
Glass, Marvin I., and Licitis. 3,091,051.

Linde, Hermann, to Gesellschaft fur Linde's Eismaschinen Aktiengesellschaft. Process for the decomposit on of gases low in ethane preferably for the production of pure ethylene. 3,091,095, 5–28–63, Cl. 62—28.

Linderme, Dorothy E.: *See*—
Linderme, Theodore E. 3,091,102.

Linderme, Theodore E., deceased; D. E. Linderme, executrix. Universal joint. 3,091,102, 5–28–63, Cl. 64—6.

Lindlar, Herbert: *See*—
Isler, Otto, Lindlar, Montavon, Ruegg, Schwieter, and Saucy. 3,091,631.

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Litho Chemical and Supply Co. Inc.: *See*—
Hodgkins, George M. 3,091,533.

Little, Arthur D., Inc.: *See*—
Slade, Albert E. 3,091,702.

Little, David S.: *See*—
Pike, Edward W., Little, and Melchior. 3,091,122.

Little, Paul A., and M. Gambill, to United Chemical Corp. of New Mexico. Prevention of gypsum scale formation in water flood method of oil production. 3,091,291, 5–28–63, Cl. 166—9.

Liu, John K., to General Dynamics Corp. Flexible deep sea buoy. 3,090,976, 5–28–63, Cl. 9—8.

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Rutherford, Sherman L., Francis, and Lloyd. 3,091,717.

Locke, John P., to F. W. Dwyer Mfg. Co. Pressure gauge. 3,091,123, 5–28–63, Cl. 73—407.

Locke, Robert A., to Sperry Rand Corp. Carriage programming system. 3,091,387, 5–28–63, Cl. 234—13.

Lockheed Aircraft Corp.: *See*—
O'Neill, Robert A. 3,091,279.

Lockwood, Arthur W., to Trubenised Co. (Registered Trust). Method of making shirt and like collars. 3,090,962, 5–28–63, Cl. 2—143.

Logansport Machine Co., Inc.: *See*—
Becker, Robert E. 3,091,256.

Lohrman, William V., and W. E. Knapp, to Deere & Co. Hydraulic wheel drawbar. 3,091,296, 5–28–63, Cl. 172—456.

Long, James A., A. L. Bush, Jr., and C. D. Pears, to Anderson Electric Corp. Electrical connector. 3,091,750, 5–28–63, Cl. 339—99.

Longnecker, Ernst A. Ignition distributor. 3,091,672, 5–28–63, Cl. 200—31.

Loughead, Howard B. Portable light. 3,091,686, 5–28–63, Cl. 240—8.18.

Lowell Molding Corp.: *See*—
Forma, James L. 3,090,989.

Lowman, Walker B., to Industrial Nucleonics Corp. Process variance logging and limit alarm system. 3,091,756, 5–28–63, Cl. 340—213.

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Rusignuolo, Vincenzo, and Lucchetti. 3,091,536.

Luckenbach, Richard B. Contouring machines. 3,091,268, 5–28–63, Cl. 144—144.

Luedemann, George M., and M. J. Weinstein, to Schering Corp. Gentamycin and method of production. 3,091,572, 5–28–63, Cl. 167—65.

Lukens, Herbert R., Jr., to Shell Oil Co. Metal chelates of vinylic copolymers containing a plurality of hydroxy groups. 3,091,604, 5–28–63, Cl. 260—87.3.

Lummus Cotton Gin Co.: *See*—
Pease, William C., III, and Vandergriff. 3,091,001.

Lynden Metal Craft Co., Inc.: *See*—
Wynstra, John. 3,091,397.

M.L. Mfg. Co.: *See*—
Milanovits, William T. and T. 3,091,260.

MacDonald, Benjamin R. F. Hospital bed-chair. 3,090,971, 5–28–63, Cl. 5—68.

Mackenzie, Hector D.: *See*—
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Mackey, Eugene L., to The Yoder Co. Ring processing apparatus. 3,091,202, 5–28–63, Cl. 113—127.

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Pappas, George F., and MacLaren. 3,091,586.

Madsen, Mads P. Remotely controlled sick bed curtains. 3,091,226, 5–28–63, Cl. 160—331.

Magida, Barnett B.: *See*—
Vitable, Henry J. 3,091,252.

Magna, Peter S., to United States Steel Corp. Wire pay-off. 3,091,415, 5–28–63, Cl. 242—128.

Magos, John P., to Crane Co. Ball valve with multi-part body. 3,091,428, 5–28–63, Cl. 251—315.

Mag-Powr Games, Inc.: *See*—
Lindman, George E. 3,091,459.

Mahieux, Jean. Smokers' pipes. 3,091,246, 5–28–63, Cl. 131—186.

Maier, John H. Saw chain filing gauge. 3,091,136, 5–28–63, Cl. 76—36.

Makowski, Alexander G., to American Can Co. Container lining. 3,091,000, 5–28–63, Cl. 18—59.

Malcolm, Stewart: *See*—
Maskell, Dennis F., and Malcolm. 3,091,213.

Maldonado, David G. Game device. 3,091,460, 5–28–63, Cl. 273—95.

Maling, John E. Traveling chair for shower stalls. 3,090,969, 5–28–63, Cl. 4—145.

Malloy, John E.: *See*—
Armbrecht, Bernard H., and Malloy. 3,091,697.

Malpede, Albert J.: *See*—
Vani, James, and Malpede. 3,090,991.

Manganelli, Alfredo, to Vermont Marble Co. Flash trimming tool for non-circular tubular members. 3,091,145, 5–28–63, Cl. 82—124.

Mannix Co. Ltd.: *See*—
Christof, James W. 3,091,187.

Marconi's Wireless Telegraph Co. Ltd.: *See*—
Mortley, Wilfrid S., and Slocombe. 3,091,763.

Maretta, Ralph T., to The Weatherhead Co. Hose accumulator. 3,091,258, 5–28–63, Cl. 138—30.

Markem Machine Co.: *See*—
Harvey, Bertrand G. 3,091,174.

Marker, Hannes. Marking device for the mounting of ski bindings. 3,091,039. 5–28–63, Cl. 33—189.

Marra, Maria V., and L. De Bonis. Food cleaner type strainer pan. 3,091,339, 5–28–63, Cl. 210—232.

Martin, John C., R. F. Brubaker, N. J. Bullock, and T. O. Stutrud, to General Motors Corp. Dispensing agitator for washing apparatus 3,091,108, 5–28–63, Cl. 68—17.

Martin-Marietta Corp.: *See*—
Barr, Harold N., and Frank. 3,091,581.
Monitor, Dean S. 3,091,434.

Marx, John H.: *See*—
Marx, Rudolf and J. H. 3,091,371.

Marx, Rudolf and J. H. Automatic scooping dispensing device. 3,091,371, 5–28–63, Cl. 222—170.

Marzocchi, Alfred, and S. M. Billett, to Owens-Corning Fiberglas Corp. Metallised flattened glass strand and method of manufacturing. 3,091,561, 5–28–63, Cl. 154—53.6.

Maskell, Dennis F., and S. Malcolm, to Normalair Ltd. Fluid pressure operated warning device. 3,091,213, 5–28–63, Cl. 116—70.

Massman, Albert W., to Motorola, Inc. Television receiver with transistorized video amplifier. 3,091,659, 5–28–63, Cl. 178—5.8.

Mathema Corp. Reg. Trust: *See*—
Kuhlenkamp, Alfred. 3,091,035.

Matsumoto, Saburo, to Asahi Optical Industry Co., Ltd. Camera incorporating exposure measuring device. 3,091,161, 5–28–63, Cl. 95—10.

Matsumoto, Tsunetaka, N. Kato, and K. Sumitani, to Sanesu Seishi Kabushiki Kaisha. Process for the production of a moisture-permeable film of plastic materials. 3,091,583, 5–28–63, Cl. 117—138.8.

Matt, Richard J., to Thompson Ramo Wooldridge Inc. Seal. 3,091,469, 5–28–63, Cl. 277—1.

Matteoli, Albert J., and A. N. Rockwold; said Rockwold assor to said Matteoli. Plant thinner. 3,091,297, 5–28–63, Cl. 172—546.

Maurice, Jean, and M. Rist, to Francaise du Ferodo, Societe Anonyme. Centrifugal clutches. 3,091,315, 5–28–63, Cl. 192—105.

Mayer & Coulson Ltd.: *See*—
Gillespie, William. 3,091,440.

Maxant Button & Supply Co.: *See*—
Decker, William H. 3,091,141.

Max-Planck-Institut fur Eisenforschung: *See*—
Fischer, Wilhelm A., Schutz, and Straube. 3,091,119.

Maxwell, Carl R., to Caterpillar Tractor Co. Engine with turbocharger and aftercooler. 3,091,226, 5–28–63, Cl. 123—119.

Mayer, Alan H. Heater for bowling balls. 3,091,681, 5–28–63, Cl. 219—19.

Mayfield, Alfred B., and M. C. Darling, to Davis Mfg., Inc. Variable ratio drive mechanism. 3,091,132, 5–28–63, Cl. 74—722.

Mays Equipment Development Corp.: *See*—
Mays, James R. 3,091,004.

Mays, James R., to Mays Equipment Development Corp. Sliding door. 3,091,004, 5–28–63, Cl. 20—19.

McCauley, Herbert J. Toy automobile direction indicator. 3,091,212, 5–28–63, Cl. 116—50.

McConnaughey, Robert K., and M. J. Cohen. Hypodermic syringe and ventable closure means. 3,091,240, 5–28–63, Cl. 128—218.

McCord, Eugene B., and P. T. Scott, to E. I. du Pont de Nemours and Co. Process of preparing linear terephthalate polyester structures. 3,091,510, 5–28–63, Cl. 18—54.

McCorkle, Jimmie D. Spinner attachment for shoes. 3,091,043, 5–28–63, Cl. 36—8.3.

McDonald, Edward H.: *See*—
Bodem, Roy C., Brandes, Hirsch, McDonald, and Wood. 3,091,295.

McDonald, Robert G.: *See*—
Stein, Laurence B., Jr., and McDonald. 3,091,723.

McDonnell Aircraft Corp.: *See*—
Brown, James C., and Boutwell. 3,091,506.

McGary, Charles W., Jr.: *See*—
Reding, Frederick P., and McGary. 3,091,601.

McHenry, Thomas F., to Barnes Engineering Co. Two path infrared gas analyzer having one enclosed path. 3,091,690, 5–28–63, Cl. 250—43.5.

McLaurin, Colin A., to Northwestern University. Hip joint. 3,090 964, 5–28–63, Cl. 3—15.

McNally Bros. Machine & Gear Co., Inc.: *See*—
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McNally, Donald L., to McNally Bros. Machine & Gear Co., Inc. Spacer cage. 3,091,131, 5–28–63, Cl. 74—606.

McNaney, Joseph T. Photosensitive light amplifier with regenerative element. 3,091,698, 5–28–63, Cl. 250—213.

McNutt, John: *See*—
Clement, Hubert L., and McNutt. 3,091,109.

McRae, Kenneth M., and C. E. Hoover. Method and apparatus for fastening of structural members. 3,090,961, 5–28–63, Cl. 1—151.

Meacham, Larned A., to Bell Telephone Laboratories, Inc. Party identification for telephone substations. 3,091,666, 5–28–63, Cl. 179—17.

Mead Johnson & Co.: *See*—
Sheffner, Aaron L. 3,091,569.

Melchior, Frederick C.: *See*—
Pike, Edward W., Little, and Melchior. 3,091,122.

Melvin, James M.: *See*—
Hoose, Francis D., and Melvin. 3,091,345.

Mengani, Carl M.: *See*—
Relis, Matthew J., and Mengani. 3,091,738.

Mentzer, Charles R., to AMP Inc. Crimping machine. 3,091,275, 5–28–63, Cl. 153—1.

Mentzer, Everett K., and E. C. Webb, to The Cleveland Trust Co. Bowling game apparatus. 3,091,457, 5–28–63, Cl. 273—54.

Merck & Co., Inc.: *See*—
Conn, John B. 3,091,516.

Mertin, Theodor, to Olympia Werke A.G. Control circuit arrangement for electric typewriter. 3,091,320, 5–28–63, Cl. 197—13.

Metzler, Phares H. Line retaining means for fishing line accessories. 3,091,050. 5–28–63, Cl. 43—44.88.

Metzner, Arthur B.: *See*—
Hamilton, Gene E., Metzner, and Ehrreich. 3,091,647.

Meyer, Henry L.: *See*—
Penote, Vincent S., and Meyer. 3,091,044.

Meyer, Heribert, to J. M. Voith G.m.b.H. Method of and apparatus for quickly and safely withdrawing water from fiber suspensions. 3,091,563, 5–28–63, Cl. 162—217.

Michaelsen, John D., to International Business Machines Corp. Vesicular image photography process with polyketone photographic films. 3,091,532, 5–28–63, Cl. 96—48.

Michigan Equity Corp.: *See*—
Woodhams, Edward J. 3,091,005.

Micro Controls, Inc.: *See*—
Douglas, Bradley C. 3,091,395.

Microdot Inc.: *See*—
Felts, Gordon P. 3,091,749.

Mid-West Metallic Products, Inc.: *See*—
Mutto, Theodore R. 3,091,355.

Mika, Thomas F., to Shell Oil Co. Cyano-substituted polyamides and their use as curing agents for polyepoxides. 3,091,595, 5–28–63, Cl. 260—18.

Miksch, Russell S., to American Radiator & Standard Sanitary Corp. Mass transfer attitude-control for space vehicles. 3,091,417, 5–28–63, Cl. 244—76.

Milanovits, Thomas: *See*—
Milanovits, William T. and T. 3,091,260.

Milanovits, William T. and T., to M.L. Mfg. Co. Pipeline stopping tool. 3,091,260, 5–28–63, Cl. 138—94.

Miller, Alfred L., F. P. Baldwin, and S. B. Robison, to Esso Research and Engineering Co. Tire cord adhesion. 3,091,560, 5–28–63, Cl. 154—52.

Miller, Bernard, and M. R. Forbes, to American Cyanamid Co. Improvement in production of O,O-dialkyl-O,2-pyrasinyl phosphorothioate. 3,091,614, 5–28–63, Cl. 260—250.

Miller, Carl L.: *See*—
Harley, Robert S., Miller, and North. 3,091,368.

Miller, John L. Earth tamper. 3,091,159, 5-28-63, Cl. 94—49.

Millspaugh, Louise N.: *See*—
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Nordell, Carl H. 3,091,338.

Milner, Clifford E., Jr., to E. I. du Pont de Nemours and Co. Photographic film element with antihalation layer. 3,091,535, 5-28-63, Cl. 96—84.

Miner, Donald B.: *See*—
Yowell, Joseph W., and Miner. 3,091,280.

Minganti, Ernesto. Key duplicating machine. 3,091,157, 5-28-63, Cl. 90—13.05.

Minneapolis-Honeywell Regulator Co.: *See*—
Carlson, William L., Jr. 3,091,028.
Harper, Samuel D. 3,091,700.
Harper, Samuel D. 3,091,753.
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Mitter, Laurence J.: *See*—
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Mixing Equipment Co., Inc.: *See*—
Boutros, Richard D., and Dykman. 3,091,474.

Miyasaki, Sadamaru: *See*—
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Mock, Richard A., and W. N. Vanderkooi, to The Dow Chemical Co. Thorium recovery from barren uranium leach liquors. 3,091,512, 5-28-63, Cl. 23—14.5.

Modrak, Frank, and A. Berardinelli. Carrier and manipulator for pneumatic tools. 3,090,983, 5-28-63, Cl. 15—104.1.

Moeller, Wilhelm. Apparatus for intravasal injection of gaseous and liquid media. 3,091,239, 5-28-63, Cl. 128—214.

Mohasco Industries, Inc.: *See*—
Hamilton, Kenneth. 3,091,075.

Moline, Desmond W., and F. A. M. Labbe, to Moline Machine Co. Ltd. Tobacco-manipulating apparatus. 3,091,244, 5-28-63, Cl. 131—84.

Moline Machine Co. Ltd.: *See*—
Hillman, James G. E. 3,091,064.
Moline, Desmond W., and Labbe. 3,091,244.

Monitor, Dean S., to Martin-Marietta Corp. Faired cable drive system. 3,091,434, 5-28-63, Cl. 254—175.5.

Monsanto Chemical Co.: *See*—
Freedman, Bernard, and Huck. 3,091,596.
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Montavon, Marc: *See*—
Isler, Otto, Lindlar, Montavon, Ruegg, Schwieter, and Saucy. 3,091,631.

Montecatini Societa Generale per l'Industria Mineraria e Chimica: *See*—
Rusignuolo, Vincenso, and Lucchetti. 3,091,536.

Montgomery, William A.: *See*—
Arnold, Paul L., and Montgomery. 3,091,009.

Monticello Mfg. Corp.: *See*—
Hoose, Francis D., and Melvin. 3,091,345.

Moore, Fred W.: *See*—
Kluge, Herman D., and Moore. 3,091,635.

Moore, Richard K., to General Electronic Laboratories, Inc. Frequency modulation interfering signal selecting system. 3,091,735, 5-28-63, Cl. 325—47.

Moorhead, John O., to Texas Instruments Inc. Thermostatic controls. 3,091,121, 5-28-63, Cl. 73—378.8.

Morey, Robert E.: *See*—
Houghton, William D., and Morey. 3,091,660.

Morrill, Vaughan, Jr. Method for shaping a glass tube preform. 3,091,104, 5-28-63, Cl. 65—25.

Morrill, Vaughan. Apparatus for shrinking tubular glass blank. 3,091,105, 5-28-63, Cl. 65—271.

Morrison, Joseph J.: *See*—
Holl, Walter V., and Morrison. 3,091,147.

Morse Instrument Co., The: *See*—
Payerle, Frank S., and Gressard. 3,091,130.

Morse, Meroe M.: *See*—
Green, Milton, Morse, and Simon. 3,091,530.

Mortley, Wilfrid S., and A. D. Slocombe, to Marconi's Wireless Telegraph Co. Ltd. Radar systems to reduce clutter. 3,091,703, 5-28-63, Cl. 343—17.1.

Morton, Thomas R., to Denver Equipment Co. Centrifugal separation method and means. 3,091,324, 5-28-63, Cl. 209—211.

Moses, Amasiah J., and G. B. Scanland, to United States Pipe and Foundry Co. Weighing systems of load-cell electronic type with vibration dampening means. 3,091,303, 5-28-63, Cl. 177—208.

Mosher, James K., to Schuls Tool and Mfg. Co. Aircraft in-flight refueling system. 3,091,419, 5-28-63, Cl. 244—135.

Motorola, Inc.: *See*—
Germain, Jack. 3,091,736.
Massman, Albert W. 3,091,659.

Müller, Ludwig. Pile shaft. 3,091,090, 5-28-63, Cl. 61—53.

Multifastener Spring Division, Inc.: *See*—
Patten, Alexander S. 3,091,272.

Munch, Walter, Jr., to The Baldwin Piano Co. Tone color circuits for electrical organs. 3,091,148, 5-28-63, Cl. 84—1.19.

Murdock, Stanley A., and T. C. Spence, to The Dow Chemical Co. Method of preventing ring-dyeing in aquagel acrylonitrile polymer fibers by steaming the fibers. 3,091,507, 5-28-63, Cl. 8—130.1.

Murphy, William M., Jr., to Raytheon Co. Automatic tracking circuit. 3,091,740, 5-28-63, Cl. 331—4.

Murray, Michael F. Buoy. 3,090,977, 5-28-63, Cl. 9—8.3.

Mutto, Theodore R., to Mid-West Metallic Products, Inc. Tierable and nestable receptacle with hinged gate member. 3,091,355, 5-28-63, Cl. 220—19.

NSU Motorenwerke Aktiengesellschaft: *See*—
Paschke, Hanns-Dieter. 3,091,386.

Nadeau, Gale F., C. F. Smith, and C. B. Starck, to Eastman Kodak Co. Stripping film for improved emulsion. 3,091,534, 5-28-63, Cl. 96—83.

Nahrgang, James R. Centrifugal pump. 3,091,183, 5-28-63, Cl. 103—113.

Nash, Darrell J.: *See*—
Henry, William P. 3,091,197.

Nash, Edward L., to General Motors Corp. Anchor means for brake shoes. 3,091,308, 5-28-63, Cl. 188—78.

National Lead Co.: *See*—
Dantro, Horace F., Kalinowski, and Sluta. 3,091,515.

National Starch and Chemical Corp.: *See*—
Wurzburg, Otto B., Herbst, and Cole. 3,091,567.

Nations, Ronald G., to Eastman Kodak Co. Process for preparing hexaalkyl-1,3,5-cyclohexanetriones. 3,091,642, 5-28-63, Cl. 260—586.

Nazare, Edgar H. Electric memory device. 3,091,754, 5-28-63, Cl. 340—173.

Neil, Joe L., to Panhandle Industrial Co. Automatic valve clearance eliminator. 3,091,227, 5-28-63, Cl. 123—90.

Nelson, Paul R. Saw blade. 3,091,266, 5-28-63, Cl. 143—138.

Nerheim, Arvie G., to Standard Oil Co. Gas density balance employing differential flow measurement. 3,091,113, 5-28-63, Cl. 73—30.

Neuhauser, William J., to Reynolds Metals Co. Roll stacking device. 3,091,348, 5-28-63, Cl. 214—10.5.

Neumann, Herbert A. Refrigerator shelf accessory. 3,091,343, 5-28-63, Cl. 211—74.

Nevin, Robert B. Means and method for improving combustion in internal combustion engines. 3,091,229, 5-28-63, Cl. 123—119.

Newburn, Floyd A., to North American Aviation, Inc. Radial outflow catalytic pack. 3,091,520, 5-28-63, Cl. 23—288.

Newcomb, Philip P., and A. Hasbrouck, to United Aircraft Corp. Combination turbojet and ramjet engine. 3,091,082, 5-28-63, Cl. 60—35.6.

Newman, Charles D.: *See*—
Furby, Neal W., and Newman. 3,091,590.

Nicholsen, Laurence E. Demountable shelter. 3,091,002, 5-28-63, Cl. 20—2.

Niederer, Herbert O.: *See*—
Niederer, Otto C., Jr. and H. O. 3,091,823.

Niederer, Otto C., Jr. and H. O. Egg handling equipment. 3,091,823, 5-28-63, Cl. 198—33.

Nielsen, James W., to Bell Telephone Laboratories, Inc. Garnet gemstones. 3,091,540, 5-28-63, Cl. 106—42.

Nihon Denki Buaka Kogyo Kabushiki Kaisha: *See*—
Fujimoto, Sakae. 3,091,467.

Nishizawa, Yoshihiko: *See*—
Suzuki, Shinichi, Fujii, Nishizawa, and Kadota. 3,091,565.

Nobes, William D., to The Caldwell Mfg. Co. Device for closing sliding panels. 3,091,003, 5-28-63, Cl. 20—19.

Noble, Stuart D., 10% to V. D. Beehler. Scale. 3,091,304, 5-28-63, Cl. 177—229.

Nogradi, Josef, to Farbenfabriken Bayer Aktiengesellschaft. Processes for purifying conjugated diolefins. 3,091,653, 5-28-63, Cl. 260—681.5.

Nolte, Albert C., Jr.: *See*—
Growald, Martin C. 3,091,053.

Nordberg Mfg. Co.: *See*—
Erickson, Bruce G., and Henriksen. 3,091,077.

Nordell, Carl H., 15% each to L. N. Millspaugh, and A. N. Kaspar. Comminuting device. 3,091,337, 5-28-63, Cl. 210—173.

Nordell, Carl H., 15% each to L. N. Millspaugh, and A. N. Kaspar. Alternating commutor. 3,091,338, 5-28-63, Cl. 210—174.

Norden, Alexander R., to Federal Pacific Electric Co. Panel mounted switching device. 3,091,679, 5-28-63, Cl. 200—168.

Norén, August H., to Gylling & Co., Aktiebolaget. Intercommunication system. 3,091,667, 5-28-63, Cl. 179—40.

Normalair Ltd.: *See*—
Horner, Henry L., and Hamlin. 3,091,365.
Maskell, Dennis F., and Malcolm. 3,091,213.

North, Clarence E.: *See*—
Harley, Robert S., Miller, and North. 3,091,368.

North American Aviation, Inc.: *See*—
Davis, Charles L., Blanchard, and Shira. 3,091,029.
Newburn, Floyd A. 3,091,520.

North American Philips Co., Inc.: *See*—
Bansard, Pierre M. P., Dujols, and Perilhou. 3,091,683.
De Ruiter, Jacob W. 3,091,655.
Dros, Albert A. 3,091,092.
Hammar, Martin. 3,091,699.
Heijmans, Wilhelmus A. A., and Venis. 3,091,557.
Hobbs, Kenneth. 3,091,452.
Roks, Johannes P. 3,091,330.
Snikkers, Jan. 3,091,741.
Verse, Hansheinrich. 3,091,692.
Wildemann, Max. 3,091,172.

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Jerger, James F. 3,091,234.
McLaurin, Colin A. 3,090,964.

Norwich Pharmacal Co., The: *See*—
Howard, John C. 3,091,611.

Norwood, Donald W. Photographic device responsive to both incident and reflected light. 3,091,166, 5-28-63, Cl. 95—64.

Novo Terapeutisk Laboratorium A/S: *See*—
Schlichtkrull, Jorgen. 3,091,573.

Oakes, Edwin I.: *See*—
Erhardt, Edward T., and Oakes. 3,090,967.

Oakley, Alan P., to The Raleigh Cycle Co. Ltd. Cycle frames. 3,091,479, 5-28-63, Cl. 280—281.

O'Dwyer, John. Clip-on case for score recording devices. 3,091,378, 5-28-63, Cl. 224—26.

Ogden, Ernest B. Ball impelling device. 3,091,465, 5-28-63, Cl. 273—129.

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Harmon, Robert W. 3,091,658.
Yost, Arnold G. 3,091,721.

Ohio Corrugating Co., The: *See*—
Vaughn, Harold G. 3,091,489.

Ohio Kiln, Inc.: *See*—
Tinker, Charles D. 3,091,444.

Olympia Werke A.G.: *See*—
Mertn, Theodor. 3,091,320.
Reichert, Hugo. 3,091,391.

O'Neil, Rose M. Umbrella with stand. 3,091,249, 5-28-63, Cl. 135—16.

O'Neill, Robert A., to Lockheed Aircraft Corp. Method and apparatus for forming conically shaped articles. 3,091,279, 5-28-63, Cl. 153—60.

Ono, Hiroshi, to Webcor, Inc. I.R. detonator. 3,091,178, 5-28-63, Cl. 102—70.

Oreamuno, Walter E., & Co.: *See*—
Hassett, James P. 3,091,390.

Orlando, Eugenio. Means for splitting the edges of soft workpieces. 3,091,112, 5-28-63, Cl. 69—16.

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Shartrand, Allan C., and Otteson. 3,091,710.

Owen, Frederick C. Transformer with magnetic leakage shield. 3,091,744, 5-28-63, Cl. 336—67.

Owens-Corning Fiberglas Corp.: *See*—
Marzocchi, Alfred, and Elliott. 3,091,561.

Owens-Illinois Glass Co.: *See*—
Amsden, Donald L. 3,090,995.
Stenger, Hans G. 3,090,994.

Ownby, Warren G.: *See*—
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Pace, Arthur. Chance device for encouraging public supervision of a cash register. 3,091,388, 5-28-63, Cl. 235—7.

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Padgett, Allen V., to J.P. Co., Inc. Apparatus for supporting a vehicle frame for straightening. 3,091,278, 5-28-63, Cl. 153—32.

Palmer, Harold V. Toiletries dispenser for shower. 3,091,402, 5-28-63, Cl. 239—315.

Panhandle Industrial Co.: *See*—
Neil, Joe L. 3,091,227.

Pansini, Andrew L. Portable leaf trap for swimming pools. 3,091,340, 5-28-63, Cl. 210—354.

Panse, Eugene. Sanitary device. 3,090,965, 5-28-63, Cl. 4—1.

Pappas, George F., and D. D. MacLaren, to Esso Research and Engineering Co. Hydrodining of shale oil. 3,091,586, 5-28-63, Cl. 208—210.

Papesdorf, Robert A., to Emerson-Pryne Co. Recessed lighting fixture having a separable pre-wired section. 3,091,687, 5-28-63, Cl. 240—78.

Parish, William, to Swift & Co. Fluorine recovery. 3,091,518, 5-28-63, Cl. 23—153.

Parker, Leslie K., to Aluminum Laboratories Ltd. Inspecting or sorting apparatus. 3,091,332, 5-28-63, Cl. 209—75.

Parsons and Marine Engineering Turbine Research and Development Association, The: *See*—
Cleff, Peter H. 3,091,059.

Parts, Leo: *See*—
Pruett, Roy L., Wyman, and Parts. 3,091,624.

Paschke, Hanns-Dieter, to NSU Motorenwerke Aktiengesellschaft and Wankel G.m.b.H. Cooling system for rotary mechanisms. 3,091,386, 5-28-63, Cl. 230—145.

Pastore, Michael W, and R. H. Holbrooke, to Pippin Construction Equipment, Inc. Load moving mechanism. 3,091,222, 5-28-63, Cl. 121—63.

Patnaude, Henry A. Pool cover dolly. 3,091,414, 5-28-63, Cl. 242—86.52.

Patten, Alexander S., to Multifastener Spring Division, Inc. Nut and clip assembly secured together by staking. 3,091,272, 5-28-63, Cl. 151—41.75.

Patterson, Thomas R. Shingle means. 3,091,058, 5-28-63, Cl. 50—225.

Payerle, Frank S., and C. F. Gressard, to The Morse Instrument Co. Single lever control for multiple actions. 3,091,130, 5-28-63, Cl. 74—471.

Pears, Coultas D.: *See*—
Long, James A., Bush, and Pears. 3,091,750.

Pease, David W., to Curtiss-Wright Corp. Rotary-oscillatory device for mixing, tumbling, comminuting, and the like. 3,091,436, 5-28-63, Cl. 259—72.

Pease, William C., III, and A. L. Vandergrift, to Lummus Cotton Gin Co. Saw type cotton gin and process for ginning cotton. 3,091,001, 5-28-63, Cl. 19—55.

Pechiney, Compagnie de Produit Chimiques et Electrometallurgiques: *See*—
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Pedley, Eric L., and P., to Pedley-Knowles & Co. Method of connecting rope lengths in a net. 3,091,016, 5-28-63, Cl. 28—75.

Pedley-Knowles & Co.: *See*—
Pedley, Eric L., and P. 3,091,016.

Pedley, Philip: *See*—
Pedley, Eric L., and P. 3,091,016.

Pesters, Jean, to Canadian Pittsburgh Industries Ltd. Package. 3,091,281, 5-28-63, Cl. 206—62.

Pelletier, Joseph E. A. Double bed mattress. 3,090,972, 5-28-63, Cl. 5—352.

Pelletier, Régent. High liquid level indicating gauge. 3,091,057, 5-28-63, Cl. 33—126.4.

Pennsalt Chemicals Corp.: *See*—
Hauptschein, Murray, and Braid. 3,091,648.

Penote, Vincent S., and H. L. Meyer, to The Cleveland Trencher Co. Digger teeth. 3,091,044, 5-28-63, Cl. 37—142.

Pequignot, Michel. Device for the extreme purification of water or other liquid. 3,091,577, 5-28-63, Cl. 202—189.

Perilhou, Jean R.: *See*—
Bansard, Pierre M. P., Dujols, and Perilhou. 3,091,683.

Perkins, Merlyn H.: *See*—
Behrndt, Marianne E., Giedd, Perkins, and Weed. 3,091,566.

Peterson, Glen, to Well Surveys, Inc. Multiplex radioactivity well logging system. 3,091,695, 5-28-63, Cl. 250—83.6.

Petrow, Vladimir, O. Stephenson, and A. J. Thomas, to The British Drug Houses Ltd. 1-ortho-tolyloxyethyl-4-phenylpiperidine and acid addition salts thereof. 3,091,616, 5-28-63, Cl. 260—294.

Peyser, Leonard F., to Howdon Videx Products Corp. Collimator. 3,091,696, 5-28-63, Cl. 250—105.

Pfaudler Permutit, Inc.: *See*—
Bowers, Herbert L. 3,091,098.

Pharmaceutical Foods & Drugs Associates, Inc.: *See*—
Calhoun, Edward J. 3,091,511.

Phillips Petroleum Co.: *See*—
Goard, Howard W. 3,091,335.
Haleh, Henry L. 3,091,606.
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Fischer, Wilhelm A., Schutz, and Straube. 3,091,119.

Pickard, Edgar C., W. R. Jackson, and G. A. Grappo, to Fordees Corp. Hydraulically operated portable scaffold. 3,091,305, 5-28-63, Cl. 182—141.

Pickrell, Hugh E., Jr., to R.P.T.Z. Patco Inc. Shallow-draft cargo vessel with captive air spaces. 3,091,204, 5-28-63, Cl 114—26.

Pieper, Willi. Drafting machine. 3,091,036, 5-28-63, Cl. 33—79.

Pipe, Edward W., D. S. Little, and F. C. Melchior. Airborne electro-mechanical pressure sensory and telemetry system. 3,091,122, 5-28-63, Cl. 73—398.

Pippin Construction Equipment, Inc.: *See*—
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Bottasso, Carlo. 3,091,273.

Piscitelli, Vincent J. Dental mirror. 3,091,084, 5-28-63, Cl. 32—69.

Pitt, Angus R., to Dowty Rotol Ltd. Aircraft alighting gear. 3,091,418, 5-28-63, Cl. 244—108.

Pitt, Angus R.: *See*—
Knights, Richard N., Pitt, Willitt, and Wood. 3,091,416.

Pneumo Dynamics Corp.: *See*—
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Polaroid Corp.: *See*—
Bishop, Donald R., and Bruneau. 3,091,379.
Brandt, Edison R. 3,091,164.
Green, Milton, Morse, and Simon. 3,091,530.
Sullivan, Robert T. 3,091,163.

Polinger, Martin E., to Burroughs Wellcome & Co. (U.S.A.) Inc. Epidemiological antimalarial preparation and method of its formation. 3,091,571, 5-28-63, Cl. 167—65.

Pollock, Daniel D., to Leeds and Northrup Co. Copper base alloys particularly suited for precision resistance. 3,091,527, 5-28-63, Cl. 75—159.

Polymer Processes, Inc.: *See*—
Koch, Gawain B. 3,091,173.

Ponndorf Maschinenfabrik K.G.: *See*—
Ponndorf, Wilhelm. 3,091,499.

Ponndorf, Wilhelm, to Ponndorf Maschinenfabrik K.G. Conveying arrangement for pulpy materials. 3,091,499, 5-28-63, Cl. 302—50.

Porter, Walter J., Jr.: *See*—
Sumerford, Simpson D., and Porter. 3,091,628.

Potter Instrument Co., Inc.: *See*—
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Poux, Roland J., to Talon, Inc. Method of making fastener elements for slide fasteners. 3,091,024, 5-28-63, Cl. 29—410.

Prather, Marvin E., to General Electric Co. Heating unit with collapsible terminals. 3,091,682, 5-28-63, Cl. 219—37.

Pratt, John: *See*—
Giuffrida, Philip, and Pratt. 3,091,724.

Precision Chemical Pump Corp.: *See*—
Kilayko, Enrique L. 3,091,254.

Printed Motors Inc.: *See*—
Henry-Baudot, Jacques. 3,091,711.
Henry-Baudot, Jacques. 3,091,715.

Proctor Hydro-Set Company: *See*—
Brewin, Grant H. 3,091,377.

Prod-O-Matic, Inc.: *See*—
Scotti, Arthur L. 3,091,216.

Proto, International Hygenic Food Co.: *See*—
Zacharia, Tewfic. 3,091,538.

Pruett, Roy L., J. E. Wyman, and L. Parts, to Union Carbide Corp. Process for preparing organo-metallic compounds. 3,091,624, 5-28-63, Cl. 260—429.

Pure Oil Co., The: *See*—
Ayers, George W., and Krewer. 3,091,585.
Pierce, William L., and Sandner. 3,091,629.
Klaas, Donald L., and Broscowski. 3,091,587.

R.P.T.Z. Patco Inc.: *See*—
Pickrell, Hugh E., Jr. 3,091,204.

Rabinow Engineering Co., Inc.: *See*—
Brown, Robert G., and Rosenberg. 3,091,324.

Radcliffe, Robert C. Tobacco cutting machine. 3,091,071, 5-28-63, Cl. 56—23.

Radio Corp. of America: *See*—
Arya, Michael C. 3,091,392.
Houghton, William D., and Morey. 3,091,660.
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Rain Jet Corp.: *See*—
Hruby, John O., Jr. 3,091,398.
Hruby, John O., Jr. 3,091,401.
Hruby, John O., Jr. 3,091,483.

Raleigh Cycle Co. Ltd., The: *See*—
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Ralston Purina Co.: *See*—
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Ranco Inc.: *See*—
Harris, Arvel R. 3,091,674.

Randles, Richard J., to International Business Machines Corp. Error detection circuit for instruction decoders. 3,091,-752, 5–28–63, Cl. 340—146.1.

Ransom, Ralph D.: *See*—
Crim, Hugh S., and Ransom. 3,091,080.

Rasmussen, Warren W.: *See*—
Reichenbach, Jerry D., and Rasmussen. 3,090,996.

Rauh, Alaric L. J., to The Distillers Co. Ltd. Polymerisation of ethylene with a catalyst aluminum, a halide of titanium or vanadium and a halogen. 3,091,607, 5–28–63, Cl. 260—94.9.

Raytheon Co.: *See*—
Fryklund, Robert A. 3,091,766.
Lavine, Jerome M. 3,091,706.
Murphy, William M., Jr. 3,091,740.
Stats, Hermann. 3,091,701.
Stats, Hermann. 3,091,703.

Reeser, Paul B. Means of recording and/or displaying physical magnitudes. 3,091,505, 5–28–63, Cl. 346—29.

Reding, Frederick P., and C. W. McGary, Jr., to Union Carbide Corp. Olefinic copolymers. 3,091,601, 5–28–63, Cl. 260—80.5.

Reed, Clair S., to Van Dresser Specialty Corp. Supporting spring assembly for seats. 3,091,450, 5–28–63, Cl. 267—86.

Reed, Clair S., to Van Dresser Specialty Corp. Supporting spring assembly for seats. 3,091,451, 5–28–63, Cl. 267—102.

Rees, Vernon C., to Johns-Manville Fiber Glass Inc. Process for combining glass fibers with synthetic resin fibers and product thereof. 3,091,018, 5–28–63, Cl. 28—80.

Reese, Elmer E., and T. E. Stark, to General Motors Corp. Windshield wiper blade assembly. 3,090,986, 5–28–63, Cl. 15—250.42.

Regan, Dan A.: *See*—
Kenyon, Ralph W., and Regan. 3,091,195.

Reich, Robert W. Electrically operated clock with alarm device. 3,091,076, 5–28–63, Cl. 58—38.

Reichenbach, Jerry D., and W. W. Rasmussen, to Chicago Rawhide Mfg. Co. Method and apparatus for forming seals. 3,090,996, 5–28–63, Cl. 18—36.

Reichert, Hugo, to Olympia Werke AG. Method and arrangement for checking the conformity of signals with a code system. 3,091,391, 5–28–63, Cl. 235—153.

Reimers, Ben G. Fish lure. 3,091,049, 5–28–63, Cl. 43—42.31.

Reiss, Matthew J., and C. M. Mengani, to Burroughs Corp. Circuit passing only signals of durations longer than a predetermined value despite changes in scan speed. 3,091,-738, 5–28–63, Cl. 328—111.

Remington Arms Co., Inc.: *See*—
Harley, Robert S., Miller, and North. 3,091,368.

Rendos, John J., and D. L. Smith, to Air Reduction Co., Inc. Delivering vapors of low boiling liquids. 3,091,096, 5–28–63, Cl. 62—52.

Republic Aviation Corp.: *See*—
Kunen, Alfred E. 3,091,079.

Research Corp.: *See*—
Brasefield, Charles J. 3,091,069.

Reynolds Metals Co.: *See*—
Neuhauser, William J. 3,091,348.

Rhodes, Edmund O., to Curtiss-Wright Corp. Paving compositions and methods of making the same. 3,091,543, 5–28–63, Cl. 106—279.

Rhodes, John E., to General Electric Co. Clothes washing machine. 3,091,107, 5–28–63, Cl. 68—4.

Richards, Oscar W., to American Optical Co. Diagnostic instruments. 3,091,235, 5–28–63, Cl. 128—6.

Richards, Walter B.: *See*—
Fleyaher, Maurice H., and Richards. 3,091,618.

Richardson Co., The: *See*—
Stone, Leslie F. 3,091,301.

Riegelman, Harry M., to Security Aluminum Corp. Weep hole construction for windows and the like. 3,091,008, 5–28–63, Cl. 20—70.

Rigler, Neil E.: *See*—
Feldman, Louis I., Rigler, Holmlund, and Nielsen. 3,091,576.

Riken Kogaku Kogyo Kabushiki Kaisha: *See*—
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Riley, Robert H., Jr., to The Black and Decker Mfg. Co. Vacuum-actuated apparatus and method for drawing lines through a pipe or conduit. 3,091,433, 5–28–63, Cl. 254—134.4.

Rist, Michel: *See*—
Maurice, Jean, and Rist. 3,091,315.

Rivera, William C. Vehicle body structure for a truck or semi-trailer. 3,091,493, 5–28–63, Cl. 296—28.

Roberts, Oswald R. Apparatus for determining soil moisture content. 3,091,115, 5–28–63, Cl. 73—73.

Robertson, Earl J., to Wyandotte Chemicals Corp. Process for spraying a polyether-based polyurethane foam. 3,091,-551, 5–28–63, Cl. 117—105.5.

Robinson, David B., to Diamond National Corp. Molded pulp article denesting machine. 3,091,362, 5–28–63, Cl. 221—36.

Robinson, Kenneth R.: *See*—
Sturrock, Murray G., Cline, and Robinson. 3,091,620.

Robison, Samuel B.: *See*—
Miller, Alfred L., Baldwin, and Robison. 3,091,560.

Robinson, Mott L. Apparatus and method for forming monolithic pipe. 3,091,013, 5–28–63, Cl. 25—32.

Rocklin, Albert L., to Shell Oil Co. Bisphenol preparation. 3,091,645, 5–28–63, Cl. 260—619.

Rockxvold, Alvin N.: *See*—
Matteoli, Albert J., and Rockxvold. 3,091,297.

Roks, Johannes P., to North American Philips Co., Inc. Box containing one or more superposed stacks of flat objects. 3,091,330, 5–28–63, Cl. 206—60.

Rolls-Royce Ltd.: *See*—
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Romig, John R.: *See*—
Hers, Joseph H., and Romig. 3,091,443.

Romig, John R., and J. H. Hers, to California Portland Cement Co. Kiln control method and apparatus. 3,091,-442, 5–28–63, Cl. 263—32.

Root-Lowell Mfg. Co.: *See*—
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Roper, Dean W., C. L. Davis, and C. H. Wingrove. Apparatus for treating and sealing reloaded shot shells. 3,091,-153, 5–28–63, Cl. 86—17.

Rosa, Richard J., to Avco Corp. Hall current generator. 3,091,709, 5–28–63, Cl. 310—11.

Rosenberg, Harold J.: *See*—
Brown, Robert G., and Rosenberg. 3,091,324.

Rosing, Theodore F., to Cutler-Hammer, Inc. Shockproof electromagnetic contactor. 3,091,677, 5–28–63, Cl. 200—103.

Rossner, Charles M., and R. A. Glinski, to American Viscose Corp. Oxidation resistant cellulosic pellicle and process for the manufacture thereof. 3,091,554, 5–28–63, Cl. 117—144.

Roth, Anton. Vehicle parking installation. 3,091,349, 5–28–63, Cl. 214—16.1.

Rotron Mfg. Co., Inc.: *See*—
Hubbard, Albert B. 3,091,118.

Rowley, Martin E., to Eastman Kodak Co. Method for making water-soluble sheet film. 3,091,541, 5–28–63, Cl. 106—187.

Ruda, Ernest V.: *See*—
Borowiec, Richard A., Ruda, and Rusiniak. 3,091,722.

Rudner, Bernard, to Koppers Co., Inc. Preparation of alcohols. 3,091,627, 5–28–63, Cl. 260—462.

Rudomanski, Andrew C., R. D. De Waard, and E. M. Wormser, to Barnes Engineering Co. Selective radiation detector and free-air thermometer. 3,091,693, 5–28–63, Cl. 250—83.3.

Rudszinat, Willy, and H. Berlin, to Hauni-Werke Korber & Co., K.G. Means for wrapping connecting leaves around the abutment regions of assemblies comprising cigarettes and filter plugs. 3,091,245, 5–28–63, Cl. 131—94.

Ruegg, Rudolf: *See*—
Isler, Otto, Lindlar, Montavon, Ruegg, Schwieter, and Sauey. 3,091,631.

Ruekberg, Herbert H., to Continental Can Co., Inc. Dispenser. 3,090,967, 5–28–63, Cl. 15—575.

Rugg, Frederick D., to Inertia-Matic, Inc. Universal coupling unit for vehicles. 3,091,480, 5–28–63, Cl. 280—438.

Ruisinaole, Vincenzo, and L. Lucchetti, to Montecatini Societa Generale per l'Industria Mineraria e Chimica. Photographic films comprising a synthetic resin support. 3,091,536, 5–28–63, Cl. 96—87.

Rusiniak, Edward M.: *See*—
Borowiec, Richard A., Ruda, and Rusiniak. 3,091,722.

Rutherford, Sherman L., A. B. Francis, and W. A. Lloyd, to Varian Associates. Cathodes for magnetically-confined glow discharge devices. 3,091,717, 5–28–63, Cl. 313—181.

Ryan, John W. Multiple-stage projectile. 3,091,052, 5–28–63, Cl. 46—74.

Rydberg, John A., to Gustavsbergs Fabriker, Aktiebolaget. Device for intermittent combustion. 3,091,224, 5–28–63, Cl. 122—24.

Saari, Oliver E., to Illinois Tool Works Inc. Gear cutter for skew-axis gears. 3,091,021, 5–28–63, Cl. 29—105.

Sackett, A. J., & Sons Co., The: *See*—
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Sackett, Walter J., Sr., to The A. J. Sackett & Sons Co. Weighing and mixing hopper. 3,091,369, 5–28–63, Cl. 222—77.

Safety Alloys Co.: *See*—
Kenmore, Jack M. 3,091,215.

Sahlertz, Ebbe H. Windows. 3,091,006, 5–28–63, Cl. 20—53.

St. Gobain, Compagnie de: *See*—
Henri, Jean. 3,091,599.

Salem Tool Co., The: *See*—
Adams, George L., and Govin. 3,091,439.

Sam, Jonay. Sounding game mat. 3,091,454, 5–28–63, Cl. 273—1.

Samiran, David. Self-locking threaded fastener having a resilient wire locking member. 3,091,271, 5–28–63, Cl. 151—25.

Sampson, Frederick W. English muffin splitter. 3,091,270, 5–28–63, Cl. 146—203.

Sanchez, Moises G.: *See*—
Fitch, Frederick T., Sanchez, and Vanik. 3,091,592.

Sander, Nils B., to Svenska Bromsregulator, Aktiebolaget. Automatically single-acting slack adjusters for vehicles. 3,091,311, 5–28–63, Cl. 188—196.

Sanders, Robert W., and L. J. Vironda, to Dymo Industries Inc. Tape marking tool and cut-off mechanism. 3,091,-319, 5–28–63, Cl. 197—6.7.

Sandner, Walter J.: *See*—
Pierce, William L., and Sandner. 3,091,629.

Sanner, Medford D., and E. O. Cox, to General Dynamics Corp. Stepper angle-measuring device. 3,091,755, 5–28–63, Cl. 340—187.

Sanshin Jigusagu Mishin Seiso Kabushiki Kaisha: *See*—
Fukunaga, Toshiyuki. 3,091,200.

Sansen Seishi Kabushiki Kaisha: *See*—
Matsumoto, Tsunetaka, Kato, and Sumitani. 3,091,553.

Sasse, Klaus, H. Wegler, and G. Unterstenhöfer, to Farbenfabriken Bayer Aktiengesellschaft. 2,3-dimercaptoquinoxaline derivatives. 3,091,612, 5–28–63, Cl. 260—250.

Satram, Clarence R., to Ho-Boy Corp. Fifth wheel device. 3,091,501, 5–28–63, Cl. 280—422.

Sauey, Gabriel: *See*—
Isler, Otto, Lindlar, Montavon, Ruegg, Schwieter, and Sauey. 3,091,631.

Scanland, Granville B.: *See*—
Moses, Amaziah J., and Scanland. 3,091,803.

Scesan, Peter P. Stringed musical instrument finger board. 3,091,150, 5–28–63, Cl. 84—298.

Schaub, Robert E., and M. J. Weiss, to American Cyanamid Co. New 16-substituted 1,3,5,(10)-estratrienes. 3,091,609, 5–28–63, Cl. 260—239.5.

Schenck, Carl, Maschinenfabrik G.m.b.H.: *See*—
Budnick, Gunther, Hack, Alfen, and Arras. 3,091,125.

Scherer, E. P., Corp.: *See*—
Carlson, Gustav H. 3,091,636.

Schering Corp.: *See*—
Landesmann, George M., and Weinstein. 3,091,572.

Schlerherst, Albert M., to ACF Industries, Inc. Massage generator. 3,091,040, 5–28–63, Cl. 35—10.4.

Schlitz Baymaur: *See*—
Minsaman, Leo C., and Schlitz. 3,091,741.

Schlachter, Hans, and O. Kamm, to Firmenpriv Hesshut Aktiengesellschaft vormals Maschinen Lauten & Bohning. Apparatus for the manufacture of filaments or other shaped structures from thermoplastics. 3,090,982, 5–28–63, Cl. 18—12.

Schlichtkrull, Jorgen, to Novo Terapeutisk Laboratorium A/S. Quick acting insulin preparation. 3,091,573, 5–28–63, Cl. 167—78.

Schlottmann, Herman: *See*—
Hester, Russell, Schlottmann, and Hubert. 3,091,232.

Schmall, Charles, to Continental Can Co., Inc. Two component printing ink and method. 3,091,546, 5–28–63, Cl. 117—45.

Schmerling, Louis, and H. S. Bloch, to Universal Oil Products Co. Insecticidal compositions containing polyoxyalkylene glycol monoethers of phenolic derivatives of halocycloalkanes. 3,091,566, 5–28–63, Cl. 167—30.

Schmidt, Edward M., to Borg-Warner Corp. Static inverter. 3,091,729, 5–28–63, Cl. 321—5.

Schmitt, Hubert A., to Boeing Airplane Co. Portable dimpler. 3,091,277, 5–28–63, Cl. 153—31.

Schneider, Abraham, to Sun Oil Co. Preparation of saturated hydrocarbons from aromatics. 3,091,649, 5–28–63, Cl. 260—667.

Schoenman, Robert H., to Potter Instrument Co., Inc. Vacuum buffer loop device for tape handlers. 3,091,408, 5–28–63, Cl. 242—55.12.

Schraber, Henry A., and R. O. Barrows. Multiple purpose spotting gun. 3,091,403, 5–28–63, Cl. 226—413.

Schroeder, Manfred R., to Bell Telephone Laboratories, Inc. Autocorrelation vocoder equaliser. 3,091,665, 5–28–63, Cl. 179—15.55.

Schucke, Horst: *See*—
Bunger, Fritz, and Schucke. 3,091,158.

Schulte, Joseph A., to Aqua'Leonics, Inc. Electrodialysis cell. 3,091,563, 5–28–63, Cl. 204—301.

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Meeker, James K. 3,091,419.

Schumacher, Rudolf, to Basic Products Corp. Power supply apparatus. 3,091,730, 5–28–63, Cl. 321—16.

Schutz, Walter: *See*—
Fischer, Wilhelm A., Schutz, and Straube. 3,091,119.

Schwartz, Robert E., R. P. Stahl, and E. J. Fulk, to Wagner Electric Corp. Power hydraulic brake device and system. 3,091,086, 5–28–63, Cl. 60—54.6.

Schwartzman, Gilbert, to Glidomatic Corp. Liquid metering device. 3,091,374, 5–28–63, Cl. 222—448.

Schwertz, Frederick A., to Xerox Corp. Electrostatic apparatus for measuring and recording time intervals. 3,091,-762, 5–28–63, Cl. 343—11.

Schwieter, Ulrich: *See*—
Isler, Otto, Lindlar, Montavon, Ruegg, Schwieter, and Sauey. 3,091,631.

Scott, Merl G.: *See*—
Woody, Wayland B., Scott, and Jones. 3,091,312.

Scott, Paul T.: *See*—
McCord, Eugene B., and Scott. 3,091,510.

Scotti, Arthur L., to Prod-O-Matic, Inc. Machine for intermittent application of adhesive. 3,091,216, 5–28–63, Cl. 118—406.

Seamless Rubber Co., The: *See*—
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Searle, G. D., & Co.: *See*—
Cusic, John W., and Le Von. 3,091,615.

Security Aluminum Corp.: *See*—
Riegelman, Harry M. 3,091,008.

Seeger, Ernst, and A. Kottler, to Dr. Karl Thomae, G.m.b.H. 1-(4-methoxyphenyl)-1-dimethylamino-2-phenyl ethane, acid addition salts and quaternary ammonium salts. 3,091,-640, 5–28–63, Cl. 260—570.8.

Segrest, Frank. Quick float life preserver. 3,090,979, 5–28–63, Cl. 9—316.

Sehn, Francis J., and M. M. Clemons; said Clemons assor. to said Sehn. Device for loading and unloading production parts. 3,091,347, 5–28–63, Cl. 214—1.

Service Metal Fabricators, Inc.: *See*—
Vani, James, and Malpede. 3,090,981.

Seymour, Harvey W., to American Chain & Cable Co., Inc. Hot-dip coating apparatus. 3,091,217, 5–28–63, Cl. 118—420.

Shanahan, William J., to Skiatron Electronics & Television Corp. Symbol generator. 3,091,759, 5–28–63, Cl. 340—324.

Shapiro, Paul, and L. V. Collings, to Sinclair Research, Inc. Corrosion protection. 3,091,580, 5–28–63, Cl. 204—147.

Sharp, Allen W., to Equity Financial Corp. Apparatus for continuous chilling of poultry. 3,091,099, 5–28–63, Cl. 62—376.

Shartrand, Alban C., and A. J. Otteson, to General Electric Co. Gas-cooled dynamoelectric machine with asymmetrical flow. 3,091,710, 5–28–63, Cl. 310—57.

Shay, Eli, to The Wean Engineering Co., Inc. Method of pickling. 3,091,558, 5–28–63, Cl. 134—15.

Sheaffer, Isaac M., Jr.: *See*—
Frederick, Harold M., and Sheaffer. 3,091,669.

Shearer, Newton H., Jr.: *See*—
Joyner, Frederick E., and Shearer. 3,091,598.

Sheffner, Aaron L., to Mead Johnson & Co. Nucolytic-N-acylated sulfhydryl compositions and process for treating animal mucus. 3,091,569, 5–28–63, Cl. 167—58.

Sheldon, Robert S., to Kahn & Co., Inc. Fluid dynamometer. 3,091,309, 5–28–63, Cl. 188—90.

Shell Oil Co.: *See*—
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Courter, Martin L., and Carlson. 3,091,622.
Hackmann, Johannes T., and Ten Haken. 3,091,639.
Himes, Glenn R., and Spang. 3,091,602.
Lukens, Herbert R., Jr. 3,091,604.
Mike, Thomas F. 3,091,595.
Rocklin, Albert L. 3,091,645.

Shelley, Thomas, to Rolls-Royce Ltd. Gas turbine engines. 3,091,382, 5–28–63, Cl. 230—116.

Shertendy, Frank Y. Garment form retainers. 3,091,376, 5–28–63, Cl. 223—71.

Shields, Walter A. Apparatus for sealing closure caps to filled vials. 3,091,064, 5–28–63, Cl. 53—349.

Shira, Chester S.: *See*—
Davis, Charles L., Blanchard, and Shira. 3,091,029.

Shultes, George T., to General Electric Co. Combination latching and switch control arrangement for electrical appliances. 3,091,675, 5–28–63, Cl. 200—61.62.

Shoolery, James N.: *See*—
Anderson, Weston A., and Shoolery. 3,091,732.

Short, John P., and J. L. Fischer, to Texas Instruments Inc. Method for recovery and recycling hydrogen and silicon halides from silicon deposition reactor exhaust. 3,091,517, 5–28–63, Cl. 23—210.

Shurgan, Joel, to Duro-Test Corp. Constant lumen maintenance lamp. 3,091,716, 5–28–63, Cl. 313—222.

Siemens-Schuckertwerke Aktiengesellschaft: *See*—
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Sievers, Roland: *See*—
Giegerich, August, and Sievers. 3,091,060.

Sigma Instruments, Inc.: *See*—
Stein, Laurence B., Jr. 3,091,731.
Stein, Laurence B., Jr., and McDonald. 3,091,723.

Simon, Myron S.: *See*—
Green, Milton, Morse, and Simon. 3,091,530.

Simpkins, Gideon M., to Airaterra. Flash closure. 3,091,-356, 5–28–63, Cl. 220—25.

Simpkins, Gideon M., to Airaterra. Closure. 3,091,358, 5–28–63, Cl. 220—46.

Sinclair Research, Inc.: *See*—
Shapiro, Paul, and Collings. 3,091,580.

Singer, Joe K., to Socony Mobil Oil Co. Regulated hydrogen-to-naphtha mol ratio. 3,091,584, 5–28–63, Cl. 208—65.

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Dantro, Horace F., Kalinowski, and Siuta. 3,091,515.

Sivil, Blanche O.: *See*—
Hill, James S., and Sivil. 3,091,026.

Sivil, Cecil S.: *See*—
Hill, James S., and Sivil. 3,091,026.

Skiatron Electronics & Television Corp.: *See*—
Shanahan, William J. 3,091,759.

Skinas, Kosmas. Combined scrubbing and drying machines. 3,090,982, 5–28–63, Cl. 15—99.

Skinner, Clawson N. Facial muscle and tissue conditioning device. 3,091,237, 5–28–63, Cl. 128—60.

Slade, Albert E., to Arthur D. Little Inc. Magnetic control device having superconductive gates. 3,091,702, 5–28–63, Cl. 307—88.5.

Slant Fin Radiator Corp.: *See*—
Weinstein, Richard. 3,091,289.

Slocombe, Anthony D.: *See*—
Mortley, Wilfrid S., and Slocombe. 3,091,763.

Smith, A. O., Corp.: *See*—
Burklin, Adolf J. 3,091,284.

Smith, Billy N., and W. J. Le Blanc, to The B. F. Goodrich Co. Brake retractor mechanism. 3,091,310, 5–28–63, Cl. 188—196.

Smith, Carl F.: *See*—
Nadeau, Gale F., Smith, and Starck. 3,091,534.

Smith, Donald L.: *See*—
Rendos, John J., and Smith. 3,091,096.

Smith-Douglass Co., Inc.: *See*—
Wood, Lonnie C. 3,091,184.

Smith, George H., to Union Carbide Corp. Method for the heating of industrial furnaces. 3,091,446, 5–28–63, Cl. 263—52.

Smith, Joseph A., and S. B. Young, to Allied Chemical Corp. Process of producing high-nitrogen, low-chloride nitraphosphate complete fertilizers. 3,091,523, 5–28–63, Cl. 71—37.

Smith, S., & Sons (England) Ltd.: *See*—
Bowen, Tom. 3,091,126

Smith-Vaniz, William R., to Trak Electronics Co., Inc. Transistor multicoupler with plural outputs. 3,091,739, 5–28–63, Cl. 330—30.

Smoot, Thomas W., and D. F. Stock, to Harbison-Walker Refractories Co. Cradle. 3,091,014, 5–28–63, Cl. 25—153.

Smythe, Robert L., to Texas Instruments Inc. Method for forming low reflectance coatings of critical thickness on silicon solar energy converters. 3,091,555, 5–28–63, Cl. 117—201.

Snikkers, Jan, to North American Philips Co., Inc. Disconnect plug for electric device. 3,091,747, 5–28–63, Cl. 339—61.

Snow, Wilfred H. Aortographic multiple cassette chamber. 3,091,691, 5–28–63, Cl. 250—58.

Snyder, Samuel B. Creel spacer. 3,091,407, 5–28–63, Cl. 242—54.

Societe Chimique de la Grande Paraisse, ayote et Produits Chimiques: *See*—
Jean, Marcel, and Lelong. 3,091,593.

Societe d'Etudes de Machines Speciales: *See*—
Chambon, Louis J. 3,091,412.

Societe Generale de Constructions Electriques et Mecaniques (Alsthom): *See*—
Boutefoy, Jean R. H. 3,091,449.

Societe Grenobloise d'Etudes et d'Applications Hydrauliques: *See*—
Danel, Pierre F. 3,091,087.

Societe Industricile General de Mecanique Appliquee S.I.G.M.A.: *See*—
Girandon, Jean R. 3,091,231.

Socony Mobil Oil Co.: *See*—
Singer, Joe K. 3,091,584.

Soderquist, Frederick J., J. H. Stickelmeyer, and J. L. Amos, to The Dow Chemical Co. Preparation of 9-methylene fluorene. 3,091,651, 5–28–63, Cl. 260—668.

Soderquist, Frederick J., H. D. Boyce, and J. L. Amos, to The Dow Chemical Co. Preparation of 9-methylene fluorene. 3,091,652, 5–28–63, Cl. 260—668.

Sommer, Dr. Aquis: *See*—
Bunger, Frits, and Schucke. 3,091,158.

Songer, Charles H., to Songer Mfg. Co., Inc. Water ski tow rope clamp. 3,091,207. 5–28–63, Cl. 114—199.

Songer Mfg. Co., Inc.: *See*—
Songer, Charles H. 3,091,207.

Sorensen, Egon, J. G. Crost, and F. Brown, Jr., to Suaroc Corp. Wall hung water cooler with water cooled condenser. 3,091,100, 5–28–63, Cl. 62—395.

Soule Steel Co: *See*—
Stanford, Verne A. 3,091,264.

Spacil, Henry S., to Alloyd Research Corp. Analytical process and apparatus. 3,091,689, 5–28–63, Cl. 250—43.5.

Spalding, Dudley B. Pressure exchangers. 3,091,083, 5–28–63, Cl. 60—39.45.

Spang, Harold O.: *See*—
Himes, Glenn R., and Spang. 3,091,602.

Sparrow, Hubert T., to Minneapolis-Honeywell Regulator Co. Fluid amplifier mixing control system. 3,091,393, 5–28–63, Cl. 236—12.

Sparrow, Hubert T., to Minneapolis-Honeywell Regulator Co. Heating system control with anticipating means. 3,091,394, 5–28–63, Cl. 236—68.

Specht, Julius H.: *See*—
Wilson, George P., and Specht. 3,091,218.

Speiser, Maximilian R. Computer-type golf game. 3,091,466, 5–28–63, Cl. 273—184.

Spenard, Le Roy C., and D. J. Armstrong, to Holmes Electric Protective Co. Burglar alarm actuator. 3,091,760, 5–28–63, Cl. 340—378.

Spence, Thomas C.: *See*—
Murdock, Stanley A., and Spence. 3,091,507.

Sperber, Edward J., to Radio Corp. of America. Tone arm stop system for automatic record changers. 3,091,468, 5–28–63, Cl. 274—10.

Sperry Rand Corp.: *See*—
Depp, Marlin C. 3,091,127.
Huffman, Raymond A. 3,091,316.
Locke, Robert A. 3,091,387.

Sporian Valve Co., Inc.: *See*—
Kounovsky, Edward F., and Lange. 3,091,120.

Spraggins, Newton F.: *See*—
Johnson, Kenneth D., Talton, and Spraggins. 3,091,437.

Sprague Electric Co.: *See*—
Lamoureaux, Raymond A., Jr. 3,091,656.

Sreb, Jules H.: *See*—
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Tatel, Howard E. 3,091,765.

Staadt, Harold E., to The Dow Chemical Co. Ammonium nitrate explosive composition. 3,091,559, 5–28–63, Cl. 149—60.

Staehle, Henry C., to Eastman Kodak Co. Laminated record card. 3,091,047, 5–28–63, Cl. 40—158.

Stahl, Ernst. Bone cleaning machines. 3,090,989, 5–28–63, Cl. 17—1.

Stahl, Roy P.: *See*—
Schwartz, Robert E., Stahl, and Falk. 3,091,086.

Stalker Corp., The: *See*—
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Stalker, Edward A., to The Stalker Corp. Bladed rotor for fluid machines. 3,091,383, 5–28–63, Cl. 230—134.

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Standard Oil Co. (Ohio), The: *See*—
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Liao, Chien-Wei. 3,091,521.

Standard Oil Co. (Indiana): *See*—
Nerheim, Arvie G. 3,091,113.
Stephens, James R. 3,091,612.
Tancig, William J. 3,090,993.

Stanford, Verne A., to Soule Steel Co. Wire tying tool. 3,091,264, 5–28–63, Cl. 140—118.

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Nadeau, Gale F., Smith, and Starck. 3,091,534.

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Statz, Hermann, to Raytheon Co. High frequency response transistors. 3,091,701, 5–28–63, Cl. 307—88.5.

Statz, Hermann, to Raytheon Co. Semiconductor devices utilizing carrier injection into a space charge region. 3,091,703, 5–28–63, Cl. 307—88.5.

Stauffer Chemical Co.: *See*—
Hunt, Charles d'A. 3,091,525.

Stein, Laurence B., Jr., to Sigma Instruments, Inc. Power factor correction apparatus for alternating current power distribution systems. 3,091,731, 5–28–63, Cl. 323—102.

Stein, Laurence B., Jr., and R. G. McDonald, to Sigma Instruments, Inc. Photosensitive control circuit. 3,091,728, 5–28–63, Cl. 317—124.

Steinthal Sample Co., Inc.: *See*—
Jantzen, George H. 3,091,341.

Steinway & Sons: *See*—
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Stenger, Hans G., to Owens-Illinois Glass Co. Plastic forming machine orifice structure. 3,090,994, 5–28–63, Cl. 18—14.

Stephens, James R., to Standard Oil Co. Alkylated methylol bensoguanamine. 3,091,612, 5–28–63, Cl. 260—249.9.

Stephenson, Oliver: *See*—
Petrow, Vladimir, Stephenson, and Thomas. 3,091,616.

Sterling Drug Inc.: *See*—
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Stickelmeyer, Jerome H.: *See*—
Soderquist, Frederick J., Stickelmeyer, and Amos. 3,091,651.

Stimson, Allen G., to Eastman Kodak Co. Zoom photometric system. 3,091,162, 5–28–63, Cl. 95—10.

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Smoot, Thomas W., and Stock. 3,091,014.

Stokes, Rembert R., to Bell Telephone Laboratories, Inc. Coin box telemetering arrangement. 3,091,663, 5–28–63, Cl. 179—6.3.

Stoll, Willy G.: *See*—
Jöhl, Albert J. H., and Stoll. 3,091,608.

Stone, Leslie F., to The Richardson Co. Automatic feed rate compensation for automatic weighing system. 3,091,301, 5–28–63, Cl. 177—1.

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Westbrook, John H., and Stover. 3,091,028.

Strandine, Eldon J.: *See*—
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Strasel, Raymond E., to Jacobsen Mfg. Co. Rotary mower. 3,091,073, 5–28–63, Cl. 56—25.4.

Strategic Materials Corp.: *See*—
Johnson, Arthur F. 3,091,524.

Straub, Otto: *See*—
Gutmann, Hugo, Straub, and Zeller. 3,091,638.

Straube, Harald: *See*—
Fuscher, Wilhelm A., Schytz, and Straube. 3,091,119.

Strauch, Leo. Comb brush and casing assembly. 3,091,248, 5–28–63, Cl. 132—103.

Strong-Cobb-Arner Co, Inc.: *See*—
Ulicky, Paul, and Kzionsak. 3,091,067.

Strube, Richard E., to The Upjohn Co. Substituted and unsubstituted salicylanilide N-lower aliphatic carbonator. 3,091,633, 5–28–63, Cl. 260—480.

Strzalkowski, Charles W. Eyeglass hearing aid and method of manufacture. 3,091,020, 5–28–63, Cl. 29—20.

Stuessel, John K., to Flexitor Electrical Systems, Inc. Wiring ducts. 3,091,657, 5–28–63, Cl. 174—68.

Sturrock, Murray G., E. L. Cline, and K. R. Robinson; said Robinson assor. to Koppers Co., Inc. Process for preparing 3,8-dihydroxy-4,5,6,7-benzo-1,2-dioxacyclooctane. 3,091,620, 5–28–63, Cl. 260—340.3.

Stutrud, Theodore O.: *See*—
Martin, John C., Brubaker, Bullock, and Stutrud. 3,091,108.

Suda, Teruo, and S. Miyazaki, ¼ to Air Reduction Co, Inc., and ¾ to Kurashiki Rayon Co., Ltd. Method for preparing polyvinyl alcohol fibers employing wet spinning techniques. 3,091,509, 5–28–63, Cl. 18—54.

Suddarth, Jack M., to Coburn Mfg. Co., Inc. Lens de-blocking device. 3,091,062, 5–28–63, Cl. 51—277.

Sullivan, Robert T., to Polaroid Corp. Folding camera. 3,091,163, 5–28–63, Cl. 95—40.

Sumerford, Simpson D., and W. J. Porter, Jr., to Esso Research and Engineering Co. Telomerization of alkoxy boron compounds. 3,091,628, 5–28–63, Cl. 260—462.

Sumitani, Keiso: *See*—
Matsumoto, Tsunetaka, Kato, and Sumitani. 3,091,553.

Sumitomo Chemical Co., Ltd.: *See*—
Suzuki, Shinichi, Fujii, Nishisawa, and Kadota. 3,091,565.

Sun Oil Co.: *See*—
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Sunbeam Corp.: *See*—
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Sunbeam Equipment Corp.: *See*—
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Sunroc Corp.: *See*—
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Suzuki, Shinichi, K. Fujii, Y. Nishisawa, and T. Kadota, to Sumitomo Chemical Co., Ltd. Insecticidal compositions containing O,O-dimethyl-O-(3-methyl-4-nitrophenyl)-thionophosphate. 3,091,565, 5–28–63, Cl. 167—30.

Svenska Bromsregulator Aktiebolaget: *See*—
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Sweeney, William M., to Texaco Inc. Preparation of tertiary amines. 3,091,641, 5–28–63, Cl. 260—583.

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Wilkinson, Ernest J. 3,091,743.

Symington Wayne Corp.: *See*—
Cope, Geoffrey W. 3,091,192.

Szikla, Leslie. Coin shaped objects and apparatus for making same. 3,091,142, 5–28–63, Cl. 80—22.

Taini, John, and E. S. Johnson, to Ditto, Inc. Automatic photoprinting machine. 3,091,169, 5–28–63, Cl. 95—77.5.

Takes, Donald E., and M. W. Boyd, to General Dynamics Corp. Electrical connector. 3,091,748, 5–28–63, Cl. 339—65.

Talon, Inc.: *See*—
Poux, Roland J. 3,091,024.

Talton, Roland T., Jr.: *See*—
Johnson, Kenneth D., Talton, and Spraggins. 3,091,437.

Tancig, William J., to Standard Oil Co. Comparison instrument. 3,090,993, 5–28–63, Cl. 18—14.

Tatel, Howard E., deceased; M. Tatel, executrix, 15% to J. H. Sreb, 21.25% to W. L. Abramowits, 21.25% to W. Epstein, and 15% to J. Zallen. Anti-collision system for ships and planes. 3,091,764, 5–28–63, Cl. 343—101.

Tatel, Howard E., deceased; M. Tatel, executrix, 15% to J. H. Sreb, 21.25% to W. L. Abramowits, 21.25% to W. Epstein, and 15% to J. Zallen. Anti-collision system for ships and planes. 3,091,765, 5–28–63, Cl. 343—102.

Tatel, Molly: *See*—
Tatel, Howard E. 3,091,764.
Tatel, Howard E. 3,091,765.

Taylor, Le Roy M. Game apparatus. 3,091,461, 5–28–63, Cl. 273—95.

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Tellerman, Jacob, and A. Zaretsky, to American Bosch Arma Corp. Computer synchronizing circuit. 3,091,737, 5–28–63, Cl. 328—72.

Ten Haken, Pieter: *See*—
Hackmann, Johannes T., and Ten Haken. 3,091,639.

Tew Mfg. Corp.: *See*—
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Texaco Inc.: *See*—
Brukner, John S. 3,091,589.
Kerr, Paul F. 3,091,292.
Kluge, Herman D., and Moore. 3,091,635.
Sweeney, William M. 3,091,641.

Texas Instruments Inc.: *See*—
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Short, John P., and Fischer. 3,091,517.
Smythe, Robert L. 3,091,555.

Texas Research Associates Corp.: *See*—
Hackerman, Norman, and Annand. 3,091,591.

Theimer, Oscar. Turbines. 3,091,429, 5–28–63, Cl. 253—39.15.

Thesz, Adam. Fishing poles. 3,091,048, 5–28–63, Cl. 43—15.

Thomae, Dr. Karl, G.m.b.H.: *See*—
Seeger, Ernst, and Kottler. 3,091,640.

Thomas, Alan J.: *See*—
Petrow, Vladimir, Stephenson, and Thomas. 3,091,616.

Thomas, Donald L. Variable speed transmission. 3,091,430, 5–28–63, Cl. 253—137.

Thomas, Garland S.: *See*—
Thomas, Hollis M. 3,091,193.

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CLASSIFICATION OF DESIGNS

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U.S. DEPARTMENT OF COMMERCE

OFFICIAL GAZETTE of the UNITED STATES PATENT OFFICE

May 28, 1963 Volume 790 Number 4

TRADEMARKS

NOTICES

Service by Publication

A petition to cancel each of the registrations identified below having been filed, and the notice of such proceedings sent by registered mail to each registrant at the last known address having been returned by the Post Office as undeliverable, notice is hereby given that unless the registrants listed herein, their assigns or legal representatives, shall enter an appearance within thirty days from the date of this publication, the cancelation will be proceeded with as in the case of default.

Granger Mfg. Co., Kansas City, Mo., Reg. No. 432,981, Canc. No. 8024.

Parfait, Incorporated, Chicago, Ill., Reg. No. 414,230, Canc. No. 8040.

Wm. Frans Beverage Co., Philadelphia, Pa., Reg. No. 441,934, Canc. No. 8045.

HORACE B. FAY, JR.,
Assistant Commissioner of Patents.

CONDITION OF TRADEMARK APPLICATIONS AS OF MARCH 31, 1963

Total number of applications awaiting action [excluding renewals and Sec. 12 (c)] 17,322
Date of oldest new application ..... July 2, 1962
Date of oldest amended application ..... July 11, 1962

J. H. MERCHANT, Director, Trademark Examining Operation TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION	Oldest Application	
	New	Amended
(I) C. M. WENDT, Classes 8, 12, 13, 14, 15, 17, 19, 20, 21, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 39, 41, 42, 43, 44	7-9-62	7-11-62
(II) H. E. KASCHUB, Classes 1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 16, 18, 22, 27, 37, 38, 40, 45, 46, 47, 48, 49, 50, 51, 52; Service Mark Classes 100, 101, 102, 103, 104, 105, 106, 107; Collective Membership Marks, Class 200; Certification Marks, Classes A and B	8-20-62	8-23-62
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Applications filed during the month of March 1963—2,051

Registrations Issued ..... 370—No. 749,964 to No. 750,333
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The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, is mailed under the direction of the Superintendent of Documents, Government Printing Office, Washington 25, D. C., to whom all subscriptions should be made payable and all communications addressed; subscription price, $10.00 per annum, foreign mailing $3.75 additional; single copies, 20 cents each.

PRINTED COPIES OF TRADEMARK REGISTRATIONS are furnished by the Patent Office for 10 cents each. Address orders to the Commissioner of Patents, Washington 25, D.C.

MARKS PUBLISHED FOR OPPOSITION

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105.

As provided by section 31 of said act, a fee of twenty-five dollars must accompany each notice of opposition.

Class 1—Raw or Partly Prepared Materials

SN 120,774. Celanese Corporation of America, New York, N.Y. Filed May 26, 1961.

DESIGNED FOR THE ENGINEER

ENGINEERED FOR THE DESIGNER

For Organic Polymeric Materials Suitable for the Production of Shaped Articles.
First use Feb. 20, 1961.

SN 133,793. Imperial Chemical Industries Limited, London, England. Filed Dec. 11, 1961.

ULSTRON

Owner of British Reg. No. 817,705, dated Mar. 2, 1961.
For Polypropylene Fibres.

SN 146,358. Harry T. Campbell Sons' Corporation, Towson, Md. Filed June 7, 1962.

CAMEL-BLACK

Owner of Reg. Nos. 537,358, 667,017, and others.
For Granulated Water-Quenched Slag, Useful by Its Customers for Roofing Granules, Abrasives, Aggregates for Terrazzo, Concrete, and Black-Top Seal Coats.
First use May 26, 1962.

SN 147,283. International Foam Corporation, Chicago, Ill. Filed June 20, 1962.

PINPOLY

For Polyurethane Flexible Foam Material Sold in Bulk Form for Use in Furniture and Automotive Upholstery and Bedding—Namely, Mattresses and Pillows.
First use May 28, 1962.

SN 147,443. Consolidated Thermoplastics Company, Los Angeles, Calif. Filed June 22, 1962.

AQUA POL

For Plastic Film for Industrial and Agricultural Purposes.
First use May 31, 1962.

SN 151,201. Corning Glass Works, Corning, N.Y. Filed Aug. 15, 1962.

CERCOR

For Cellular Ceramic Materials for Use as Raw Materials in the Industrial Arts.
First use on or about May 2, 1962.

SN 153,169. The General Tire & Rubber Company, Akron, Ohio. Filed Sept. 14, 1962.

GENFLO

Owner of Reg. No. 616,887.
For Synthetic Polymeric Material in Liquid for General Use in the Industrial Arts.
First use Nov. 22, 1954.

SN 153,498. McHutchison & Co., Ridgefield, N.J. Filed Sept. 19, 1962.

MAC-PAK

Owner of Reg. No. 729,004.
For Horticultural Products—Namely, Flowering Bulbs, Corms, Tubers, Roots, Plants, and Nursery Stock.
First use in or about January 1960.

SN 154,959. The Dow Chemical Company, Midland, Mich. Filed Oct. 11, 1962.

LEXEL

Owner of Reg. No. 398,620.
For Plastic Film and Sheeting.
First use on or about June 3, 1942.

SN 155,306. Gerald W. Epstein, d.b.a. John W. Shawvan Co., Forest Park, Ill. Filed Oct. 17, 1962.

SHAWVAN'S

For Grass Seed.
First use in 1955; at least as early as 1916 as to "Shaw-Van."

SN 157,500. The Charles C. Hart Seed Company, Wethersfield, Conn. Filed Nov. 19, 1962.

UP-GRADE

For Lawn Seed.
First use on or about May 10, 1962.

SN 159,037. The Atlantic Seed Company, Martinsville, N.J. Filed Dec. 13, 1962.

QUEEN'S PRIDE

For Mixed Grass Seed.
First use in October 1962.

Class 2—Receptacles

SN 125,971. Compagnie Generale des Gaz Liquefies Cogegal, Paris, France. Filed Aug. 14, 1961.

COGEGAL

Owner of French Reg. No. 493,782, dated Jan. 27, 1961 (Seine); Natl. Inst. No. 162,111.
For Fixed and Movable Metallic Containers and Reservoirs for Storing and Feeding Liquified and Compressed Gases.

SN 152,027. The C. W. Zumbiel Company, Cincinnati, Ohio. Filed Aug. 27, 1962.

barZan

For Protective Coating Composition Applied on Paperboard Cartons.
First use July 31, 1962.

SN 152,555. American Can Company, Easton, Pa. Filed Sept. 6, 1962.

COCKTAIL TIME

Owner of Reg. No. 632,877.
For Paper Cups.
First use Nov. 15, 1954.

SN 152,856. Weyerhaeuser Company, Tacoma, Wash. Filed Sept. 10, 1962.

COMMANDO

Owner of Reg. No. 742,971.
For Cartons, Particularly Paperboard Wraparounds, for Storing and Carrying a Number of Filled Beverage Bottles.
First use Nov. 29, 1961.

SN 153,428. Sonoco Products Company, Hartsville, S.C. Filed Sept. 18, 1962.

VELVET

For Cones and Tubes Adapted To Receive and Carry on Their Outer Surface Windings of Yarn or Other Material.
First use May 20, 1927.

SN 153,512. Premiums Infinite, Incorporated, d.b.a. Rutland Nurseries, Rutland, Vt. Filed Sept. 19, 1962.

AQUAMATIC

For Planters for Flowers or the Like.
First use Aug. 30, 1960.

SN 153,523. Tee-Pak, Inc., Chicago, Ill. Filed Sept. 19, 1962.

TITEN

For Plastic Film Containers—Namely, Bags and Tubes Made of Flexible Plastic Film.
First use Oct. 20, 1961.

SN 153,539. American Can Company, New York, N.Y. Filed Sept. 20, 1962.

ALUMACASK

For Metal Cans.
First use on or about July 3, 1962.

SN 153,630. Delaware Barrel and Drum Company, Inc., Wilmington, Del. Filed Sept. 21, 1962.

DELCAN

For Plastic Containers Such as Carboys and Drums, With or Without Overpacks.
First use Apr. 1, 1962.

SN 153,878. Harry and David, Medford, Oreg. Filed Sept. 25, 1962.

SOPHISTIGIFT

For Stamp and Tape Dispensers.
First use Oct. 30, 1960.

SN 153,923. Argos Products Company, Chicago, Ill. Filed Sept. 26, 1962.

ARGOS

For Traveling Bag for Tools and Supplies.
First use Oct. 25, 1952.

SN 153,966. Mallinckrodt Chemical Works, St. Louis, Mo. Filed Sept. 26, 1962.

DEAL-AR-PAK

Owner of Reg. No. 642,462.
For Group of Corrugated Shipping Cartons.
First use Aug. 29, 1962.

Class 4—Abrasives and Polishing Materials

SN 120,947. The Bell Company, d.b.a. Westley Industries, Cleveland, Ohio. Filed May 20, 1961.

Velvet

Owner of Reg. No. 659,186.
For Combined Cream Type Cleaner and Polisher for Automobiles.
First use on or about Jan. 1, 1952.

SN 137,390. Solitaire & Saponite Reunis, Levallois-Perret (Seine), France. Filed Feb. 6, 1962.

CORDOBA

Owner of French Reg. No. 490,549, dated Sept. 9, 1960 (Seine); Natl. Inst. No. 490,549.
For Polishes for the Maintenance of Furniture, Leather, and Shoes.

SN 142,142. Texize Chemicals, Inc., Greenville, S.C. Filed Apr. 12, 1962.

STAMPEDE

For Combination Wax and Finish.
First use Apr. 2, 1962.

SN 145,637. United States Pumice Supply Co., Los Angeles, Calif. Filed May 28, 1962.

TROPEY

The representation of the product used apart from the mark is disclaimed.
For Grease Trough Cleaner and Polisher.
First use Apr. 1, 1962.

SN 151,004. Cameo Inc., Toledo, Ohio. Filed Aug. 13, 1962.

SHOE COSMETIC

For Kits Containing Separate Packages of a Cleaning Preparation, a Coloring Material, and Wax, and Used for Treating Cloth or Leather Shoes, Belts, and Handbags.
First use Feb. 9, 1962.

SN 151,887. United States Borax & Chemical Corporation, Los Angeles, Calif., assignee of Columbia Wax Company, Glendale, Calif. Filed Aug. 27, 1962.

Carnaubrite

For Floor Care Preparation in the Nature of a Floor Polish or Wax.
First use Aug. 1, 1962.

Class 5—Adhesives

SN 119,911. American Heat-Seal, Inc., Milwaukee, Wis. Filed May 15, 1961.

ahs

For Heat Sealable Adhesives; Natural and Synthetic Fabric Mending Tapes and Patches Coated and/or Impregnated With Heat Sealable Adhesives for Use in the Repair and Construction of Garments.
First use Sept. 30, 1960.

SN 125,815. L. A. Dreyfus Company, South Plainfield, N.J. Filed Aug. 11, 1961.

LADCO

Owner of Reg. Nos. 612,859 and 640,836.
For Hot Melt Adhesives and Hot Melt Plasticisers of Thermoplastic Compounds Including Modified Resins, Elastomers and Waxes and Mixtures Thereof With or Without Fillers.
First use May 18, 1954.

Class 6—Chemicals and Chemical Compositions

SN 128,076. Monsanto Chemical Company, St. Louis, Mo. Filed Sept. 18, 1961.

SANTOSET

Owner of Reg. Nos. 386,739, 727,990, and others.
For Plasticisers for Use in the Modification of the Properties of Synthetic Resinous Compositions.
First use July 28, 1961.

SN 128,229. Allied Block Chemical Co., Pittsburgh, Pa. Filed Sept. 20, 1961.

SAN ⊕ PIL

For Sanitiser and Disinfectant.
First use September 1949.

SN 135,461. Fritz Schenker-Winkler, d.b.a. Kasper Winkler & Co., Alstetten, Zurich, Switzerland. Filed Jan. 9, 1962.

COLMAT

Owner of Swiss Reg. No. 87, dated Mar. 9, 1948.
For Inorganic or Organic Substances or Mixtures Thereof To Increase the Adhesion of Two Parts to One Another, Adhesives To Bond and To Produce Thin Surfacings and Coatings of All Types.

SN 142,140. Suburban Gas Co. of Kirkwood, Mo., Kirkwood, Mo. Filed Apr. 12, 1962.



For Petroleum Gas for Residential, Commercial, and Industrial Use.
First use May 5, 1961.

SN 142,835. Meyer Magid, d.b.a. The Magi-Dyes Co., Palo Alto, Calif. Filed Apr. 26, 1962.

FABRI-DYE

For Spray-Type Dyes for Fabrics.
First use Apr. 1, 1962.

SN 142,860. Puritan Compressed Gas Corporation, Kansas City, Mo. Filed Apr. 23, 1962.

PUREMADE

Owner of Reg. Nos. 426,111, 714,939, and others.
For Compressed Gases for Commercial and Industrial Use.
First use Mar. 29, 1962.

SN 143,630. Innovators, Inc., d.b.a. Clinton Laboratories, Los Angeles, Calif. Filed May 2, 1962.



For Stabilized Human Whole Blood Used in the Standardisation of Hemoglobin Analyses by Medical Laboratories.
First use Feb. 13, 1958.

SN 146,905. Robert S. Wise Company, Inc., Wichita, Kans. Filed May 31, 1962.

TOUCH-N-TRIM

For Lawn Edging Device Comprising a Bar of Wax Containing Grass Killing Chemicals.
First use Feb. 22, 1962.

SN 146,529. Tennessee Corporation, New York, N.Y. Filed June 8, 1962.

SOL-U-COP

For Emulsifiable Liquid Copper Fungicide.
First use Apr. 6, 1962.

SN 149,061. Hardman & Holden Limited, Manchester, England. Filed July 16, 1962.

MANOX

Owner of U.S. Reg. No. 632,986.
For Chemical Compositions Used in Industry, but not Including Chemical Compounds, for Applying Phosphate Coatings to the Surface of Metals or Chemicals for the Prevention of Corrosion of Metals.
First use 1931; in commerce Apr. 24, 1956.

SN 152,279. Robert Graham Carson, Memphis, Tenn. Filed Aug. 31, 1962.

U-D-TEK

For Preparation for Use in Water Tanks To Indicate Leaks in Toilet Tanks.
First use Aug. 24, 1962.

SN 152,441. Royal Bond, Inc., St. Louis, Mo. Filed Sept. 4, 1962.



For Arterial Fluid for Use in Embalming.
First use Apr. 10, 1962.

SN 153,435. Union Oil Company of California, Los Angeles, Calif. Filed Sept. 18, 1962.

76

Owner of Reg. No. 726,627.
For Rust Inhibitor, Anti-Leak, and a Composition for Inhibiting Rust, Stopping Leaks and Lubricating Water Pumps, All for Cooling Systems and Hydraulic Brake Fluid.
First use May 23, 1962.

SN 153,519. Societe des Usines Chimiques Rhone-Poulenc, Paris, France. Filed Sept. 19, 1962.

MIAVAL

Priority claimed under Sec. 44(d) on French Reg. No. 504,378, dated Apr. 19, 1962 (Paris); Natl. Inst. No. 183,352.
For Insecticides.

SN 157,490. The B. F. Goodrich Company, Akron, Ohio. Filed Nov. 19, 1962.

GELTROL

For Chemicals—Namely, Chemicals Adapted To Retard Deterioration of Rubber and Other Oxidizable Organic Substances.
First use Oct. 25, 1962.

Class 8—Smokers' Articles, Not Including Tobacco Products

SN 157,571. Park Sherman Inc., Roseland, N.J. Filed Nov. 19, 1962.

STA-PUT

For Ashtrays.
First use about Jan. 1, 1954.

Class 9—Explosives, Firearms, Equipments, and Projectiles

SN 158,449. Hercules Powder Company, Wilmington, Del. Filed Dec. 4, 1962.



For Electric Blasting Caps.
First use Oct. 18, 1962.

Class 10—Fertilizers

SN 148,778. Wonder Chemical Company, Inc., San Antonio, Tex. Filed July 10, 1962.

LOVING CARE

For Liquid Food for Plants, Root Stimulator and Starting Solution, Composed, Activated and Fortified Planting Media, and Leaf Polish and Cleaner.
First use June 4, 1962.

SN 153,107. Nelsen Steel and Wire Co., Franklin Park, Ill. Filed Sept. 13, 1962.

GREEN GARDE

For Soil Additive Containing Iron From Mill Scale.
First use in May 1962.

SN 155,551. The American Agricultural Chemical Company, New York, N.Y. Filed Oct. 22, 1962.

AGRI-VITA

Owner of Reg. No. 541,441.
For Granular Nitrogen-Containing and Phosphorus-Containing Fertilizer.
First use Aug. 21, 1961.

Class 11—Inks and Inking Materials

SN 143,366. Bell Intercontinental Corporation, New York, N.Y. Filed Apr. 30, 1962.

FR—CARBON PAPER—
(FULL RELEASE)

No claim of exclusive right is made to the wording "Carbon Paper" as the name of the goods herein. The wording "Full Release" is disclaimed apart from the mark shown. The lining shown in the drawing is an actual part of the mark and does not represent color.
For Carbon Copy Paper.
First use Mar. 22, 1962.

Class 12—Construction Materials

SN 109,330. Inland Steel Products Company, Chicago, Ill. Filed Nov. 30, 1960.

SLOPE BEAM

For Prefabricated Metal Buildings and Structural Components Therefor Which Buildings Employ Tapered Welded Girder Components.
First use in May 1959.

SN 132,403. Utility Products Manufacturing Company, Memphis, Tenn. Filed Nov. 20, 1961.

ALUMA-FORM

For Platforms Used To Support Electrical Transformers, Regulators, and Related Equipment.
First use at least as early as July 21, 1961.

SN 147,952. The Ohio Clay Company, Cleveland, Ohio. Filed June 28, 1962.

circle SQUARE

For Building Bricks.
First use at least as early as June 20, 1962.

SN 151,542. Tyler Refrigeration Corporation, Niles, Mich. Filed Aug. 20, 1962.

TYSULITE

Owner of Reg. Nos. 510,184, 560,287, 625,850, and 631,302.
For Polyurethane Insulation for Refrigerated Goods Cases.
First use June 1, 1962.

SN 151,686. Crown Chemicals of Michigan, Lincoln Park, Mich. Filed Aug. 2, 1962.

CCM

For Caulking Compounds.
First use June 12, 1962.

SN 151,727. Crown Chemicals of Michigan, Lincoln Park, Mich. Filed Aug. 23, 1962.

"CROWN-O-LASTIC"

For Caulking Compounds.
First use Mar. 1, 1962.

SN 152,115. Crown Chemicals of Michigan, Lincoln Park, Mich. Filed Aug. 29, 1962.

"MULT-I-SEAL"

For Caulking Compounds.
First use Aug. 10, 1962.

SN 152,968. Automatic Poultry Feeder Company, d.b.a. Big Dutchman, Zeeland, Mich. Filed Sept. 12, 1962.

ECON-A-FRAME

For Structural Steel Building Components—Namely, Column and Girder Sections, Ridge Vents, and Bridging Frames.
First use on or before Sept. 16, 1961.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

SN 137,066. Electro-Way Corporation, Los Angeles, Calif. Filed Feb. 1, 1962.

ELECTRO QUEEN

For Combined Swing Faucet and Dishwashing Fixture.
First use Nov. 9, 1961.

SN 140,878. National Manufacturing Co., Sterling, Ill. Filed Mar. 23, 1962.

BAKENAMEL

For Decorative and Protective Finish Applied to Builders' Hardware.
First use Mar. 13, 1962.

SN 142,349. Owens-Corning Fiberglas Corporation, Toledo, Ohio. Filed Apr. 16, 1962.



The drawing is lined for the colors red, blue, green, orange, and yellow. Owner of Reg. No. 733,476.
For Open-Weave Glass Fiber Textile Fabric for Insect Screening.
First use May 1957.

SN 150,036. Elkay Manufacturing Company, Broadview, Ill. Filed July 30, 1962.

SNAP-FAST

For Sinks.
First use Jan. 11, 1962.

SN 150,040. Federal Chain Company, Providence, R.I. Filed July 30, 1962.

FED

For Ornamental Chain.
First use on or about June 21, 1962.

SN 151,218. Finlof Bros., Burlingame, Calif. Filed Aug. 15, 1962.

HIjohn

For Raised Superimposed Toilet Seat for Invalids or the Like.
First use June 1960.

SN 153,137. Wear-Ever Aluminum, Inc., New Kensington, Pa. Filed Sept. 13, 1962.

WEAR-EVER PREFERRED

Owner of Reg. Nos. 45,726, 671,648, and others.
For Cooking Utensils.
First use July 25, 1962.

SN 153,172. Hoke Incorporated, Cresskill, N.J. Filed Sept. 14, 1962.

ROTO-BALL

For Valves.
First use on or about Mar. 20, 1962.

SN 153,173. Hoke Incorporated, Cresskill, N.J. Filed Sept. 14, 1962.

FLO-MITE

For Valves.
First use on or about Jan. 5, 1962.

SN 153,780. Link-Age Corporation, West Nyack, N.Y. Filed Sept. 24, 1962.



For Ball Joints for Linkages and Bearings.
First use Mar. 23, 1962.

SN 153,936. Carpenter-Hetzler Co., Los Angeles, Calif. Filed Sept. 26, 1962.

SANI-LAV

For Packing House Wash Basins.
First use Aug. 27, 1962.

SN 164,492. Chemex Corporation, New York, N.Y. Filed Mar. 13, 1963.

CHEMEX

Owner of Reg. Nos. 623,874, 705,991, and others.
For Coffeemakers.
First use Jan. 12, 1941.

Class 14—Metals and Metal Castings and Forgings

SN 129,040. Henry Racamier, Paris, France. Filed Oct. 2, 1961.

UNIONCLAD

For Metals—Namely, Steels and Their Alloys, in Raw, Semi-Processed and Processed Form, as Sheets, Plates, Tubes, and Bars and Composite Materials as Clad Plates and Sheets.
First use in March 1955; in commerce in 1959.

SN 133,934. Consolidated Zinc Corporation (Sales) Limited, London, England. Filed Dec. 13, 1961.



Priority claimed under Sec. 44(d) on British Reg. No. 827,206, dated Nov. 7, 1961.
For Anodes for the Cathodic Protection of Metals.

SN 135,490. Copper Range Company, New York, N.Y. Filed Jan. 10, 1962.



The words "Lake Copper" and the symbol for copper are disclaimed apart from the mark as shown.
For Copper Ingots, Bars, and Cakes.
First use Dec. 9, 1961.

SN 137,631. Worcester Pressed Steel Company, Worcester, Mass. Filed Feb. 12, 1962.

PRESTEEL

Owner of Reg. No. 512,186.
For Metal Stampings and Pressed Metal Parts.
First use Jan. 1, 1905.

SN 142,397. American Saw & Mfg. Company, Springfield, Mass. Filed Apr. 17, 1962.

LENOX MASTER DRILL

The word "Drill" is disclaimed apart from the mark as shown. Owner of Reg. No. 578,451.
For Drill Rod Steel.
First use Feb. 23, 1962.

SN 149,493. The Titan Industrial Corporation, New York, N.Y. Filed July 20, 1962.



QUEEN BRAND

Applicant hereby disclaims the exclusive right to the use of the word "Brand" apart from the mark as shown.
For Galvanized Steel Sheets.
First use July 11, 1962.

SN 149,501. United States Steel Corporation, Pittsburgh, Pa. Filed July 20, 1962.

MXI

Owner of Reg. No. 536,195.
For Free Machining Steel Bar Stock.
First use July 10, 1962.

SN 152,702. Jones & Laughlin Steel Corporation, Pittsburgh, Pa. Filed Sept. 7, 1962.

SAVOMATIC

For Steel Wire.
First use on or about July 26, 1962.

SN 153,621. Cerro Corporation, New York, N.Y. Filed Sept. 21, 1962.

VIKING

For Copper Tubing.
First use October 1949.

SN 153,743. Crucible Steel Company of America, Pittsburgh, Pa. Filed Sept. 24, 1962.

AUDIOLOY

For Alloys, Including Iron- and Nickel-Base Alloys for High-Permeability Applications in the Electronics Industry.
First use Jan. 15, 1962.

SN 153,769. Keystone Steel & Wire Company, Peoria, Ill. Filed Sept. 24, 1962.

FLEXOMATIC

For Upholstery Spring Wire.
First use Aug. 24, 1962.

SN 153,975. National-Standard Company, Niles, Mich. Filed Sept. 26, 1962.

CORROSTAN

For Wire.
First use Aug. 24, 1962.

Class 15—Oils and Greases

SN 137,671. Tenneco Corporation, Houston, Tex., assignee of Tenneco Oil Company, Houston, Tex. Filed Feb. 9, 1962.

TENNECON

Owner of Reg. No. 712,085.
For Gasoline.
First use Dec. 31, 1961.

SN 140,632. Callaway Mills Company, La Grange, Ga. Filed Mar. 26, 1962.

CALCO

For Journal Lubricator Pads.
First use Nov. 20, 1961.

SN 140,732. Archie W. Knudson, d.b.a. Insulube Products, Minneapolis, Minn. Filed Mar. 26, 1962.

INSULUBE

For Lubricating Oils.
First use on or about June 1, 1947.

SN 140,819. Callaway Mills Company, La Grange, Ga. Filed Mar. 27, 1962.

CREST

For Journal Lubricator Pads.
First use Feb. 20, 1962.

SN 142,270. Sun Oil Company, Philadelphia, Pa. Filed Apr. 16, 1962.

DURASUN

For Lubricating Oil.
First use Mar. 26, 1962.

SN 143,497. The Allen Daniel Chemical Corporation, Washington, D.C. Filed May 1, 1962.

ECONODYNE

For Fuel Oil Additive.
First use June 30, 1960.

SN 153,259. Dearborn Chemical Company, Chicago, Ill. Filed Sept. 17, 1962.

FUEL-MATE

For Fuel Oil Sludge Conditioner and Combustion Catalyst.
First use June 5, 1962.

SN 154,249. Imperial Refineries Corporation, St. Louis, Mo. Filed Oct. 1, 1962.

HEP

For Motor Fuel Oils, Lubricating Grease, and Solvent Naptha.
First use Mar. 20, 1946.

SN 154,250. Imperial Refineries Corporation, St. Louis, Mo. Filed Oct. 1, 1962.

TOPPER

For Motor Fuel Oils, Lubricating Grease, and Solvent Naptha.
First use Aug. 31, 1962.

Class 16—Protective and Decorative Coatings

SN 152,514. Hanson Equipment Company, South Beloit, Ill. Filed Sept. 5, 1962.

"PUMP LIFE"

For Liquid Coating for Metal Parts of Pumps or Other Mechanisms for Preventing Corrosion During Prolonged Periods of Non-Use.
First use Mar. 5, 1962.

SN 152,700. International Minerals & Chemical Corporation, Skokie, Ill. Filed Sept. 7, 1962.

VIT-GRIT

For Granulated Mineral Brick Coating.
First use Aug. 23, 1962.

SN 153,484. International Minerals & Chemical Corporation, Skokie, Ill. Filed Sept. 19, 1962.

VIT-GOBE

For Powdered Mineral Brick Coating.
First use Aug. 30, 1962.

SN 154,027. Hardlines Distributors, Inc., Norwood, Mass. Filed Sept. 27, 1962.

PERMALUX

For Paints, Varnishes, and Lacquers.
First use Sept. 15, 1962.
Subj. to Intf. with SN 152,368.

SN 154,274. Monsey Products Co., Philadelphia, Pa. Filed Oct. 1, 1962.

WEATHER-CHEK

For Asphalt Primer and Aluminum Coating.
First use March 1953.

SN 154,900. Interstate Enamel and Varnish Company, Indianapolis, Ind. Filed Oct. 10, 1962.

REALCOAT

Owner of Reg. No. 562,635.
For Aerosol Paints, Interior and Exterior Paints; Aluminum Paint; Gold Paint; Barn and Roof Paint; Hardwood Paste Filler in the Nature of Paint; Shingle Stain; Oil Stain; Liquid Paint Used as a Rust Inhibitor; Porch and Floor Enamel; Paint Primer and Sealer; and Paint Thinner.
First use Jan. 1, 1930.

SN 155,763. United Gilsonite Laboratories, Scranton, Pa. Filed Oct. 23, 1962.

ZAR·LAC

Owner of Reg. Nos. 696,989, 717,097, and 717,098.
For Film-Forming Coating Material To Be Used for the Same Purposes as Varnish.
First use Sept. 27, 1962.

SN 162,368. George Pica, d.b.a. Talon Paint Products Co., Jersey City, N.J. Filed Feb. 8, 1963.

Permalux

For Paints, Non-Yellowing Enamel.
First use Jan. 10, 1959.
Subj. to Intf. with SN 154,027.

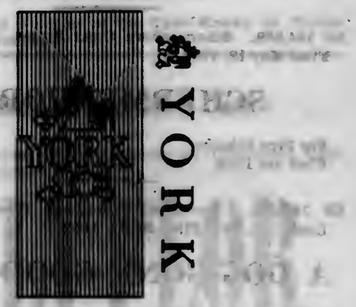
Class 17—Tobacco Products

SN 125,231. P. Lorillard Company, New York, N.Y. Filed Aug. 2, 1961.

YORK

For Cigarettes.
First use at least as early as July 26, 1961.

SN 126,241. P. Lorillard Company, New York, N.Y. Filed Aug. 18, 1961.



The drawing is lined for red.
For Cigarettes.
First use July 26, 1961.

SN 129,506. La Primadora Cigar Corporation, New York, N.Y. Filed Oct. 9, 1961.

LA PRIMADORA FALCON

Owner of Reg. No. 543,265.
For Cigars.
First use Sept. 29, 1961.

SN 139,045. DWG Cigar Corporation, Detroit, Mich. Filed Mar. 5, 1962.

EL TRELLES

Owner of Reg. No. 622,033.
For Cigars and Cigarillos.
First use Apr. 1, 1914, on cigars.

SN 144,986. Schermerhorn Cigar Stores, Inc., Chicago, Ill. Filed May 18, 1962.



Applicant hereby disclaims the words "Flake Mixture" apart from the mark as a whole.
For Pipe Tobacco.
First use June 1959; 1898 as to "Schermerhorn."

SN 144,987. Schermerhorn Cigar Stores, Inc., Chicago, Ill. Filed May 18, 1962.



For Pipe Tobacco.
First use June 1959; 1898 as to "Schermerhorn."

SN 144,988. Schermerhorn Cigar Stores, Inc., Chicago, Ill. Filed May 18, 1962.

SCHERMERHORN'S

For Pipe Tobacco.
First use 1898.

SN 148,358. Brown & Williamson Tobacco Corporation, Louisville, Ky. Filed July 5, 1962.

A DOG-GONE GOOD CHEW

Owner of Reg. No. 527,154.
For Chewing Tobacco.
First use in April 1948.

SN 149,425. Velasquez Nederland N.V., Veldhoven, Netherlands. Filed July 19, 1962.

Velasques

The mark is intended to be the name of the famous Spanish painter Velasquez (1599–1660).
For Cigars.
First use Mar. 9, 1953; in commerce Mar. 9, 1953.

SN 156,556. Brown & Williamson Tobacco Corporation, Louisville, Ky. Filed Nov. 6, 1962.

PIPE MAJOR

Owner of Reg. No. 247,045.
For Smoking Tobacco.
First use Mar. 22, 1928.

SN 156,751. N.V. Koninklijke Tabakfabriek, Koffiebranderij en Theehandel J. & A.C. Van Rossem, Rotterdam, Netherlands. Filed Nov. 6, 1962.



For Pipe Tobacco.
First use September 1960; in commerce March 1962.

SN 157,601. Brown & Williamson Tobacco Corporation, Louisville, Ky. Filed Nov. 20, 1962.

Coronet

For Cigarettes.
First use July 20, 1961.

Class 18—Medicines and Pharmaceutical Preparations

SN 111,932. Margaret B. Strauss, New York, N.Y. Filed Jan. 16, 1961.

ALLPYRAL

For Preparation for Use in the Prophylactic and Therapeutic Treatment of Allergies.
First use Nov. 25, 1960.

SN 122,344. Modern Products, Inc., Milwaukee, Wis. Filed June 19, 1961.



Applicant disclaims any exclusive right to the use of the letter "B" apart from the mark as shown. Owner of Reg. No. 397,961.
For Vitamin B Complex Product.
First use Mar. 6, 1941.

SN 151,050. Peter Hand Brewery Company, Chicago, Ill. Filed Aug. 13, 1962.

AQUA SOLVA

For Pharmaceutical Preparation Containing Vitamins and Antibiotics for Use as a Poultry and Livestock Feed Supplement.
First use October 1956.

SN 151,118. Atlas Chemical Industries, Inc., Wilmington, Del. Filed Aug. 14, 1962.

CARI-TAB

For Vitamin and Fluoride Preparation.
First use July 17, 1962.

SN 151,645. American Home Products Corporation, New York, N.Y. Filed Aug. 22, 1962.



The mark consists of an arrow design.
For Analgesic Preparation.
First use Oct. 1, 1930.

SN 152,006. Serval Pharmaceuticals, Inc., Fort Worth, Tex. Filed Aug. 27, 1962.



For Medicines and Pharmaceutical Preparations.
First use July 30, 1962.

SN 152,382. Ali Deheb, d.b.a. Fourche Valley Clinic, Plainview, Ark. Filed Sept. 4, 1962.

ALNORE

For Ointment for External Application to the Human Skin and Body for Relief of Skin Irritations.
First use July 27, 1962.

SN 154,704. Nion Corporation, Los Angeles, Calif. Filed Aug. 28, 1962.

B-NUTRON

For Vitamin Concentrate in Syrup and Tablet Form To Be Used in Treatment of Vitamin B Deficiency.
First use Aug. 4, 1939.

SN 155,501. Hales & Hunter Co., Chicago, Ill. Filed Oct. 19, 1962.



Owner of Reg. Nos. 72,115, 516,743, 737,466, and 737,467.
For Medicated Poultry Feeds and Feed Concentrates.
First use Jan. 2, 1962.

Class 19—Vehicles

SN 124,352. General Boats Corporation, Irvington, N.Y. Filed July 20, 1961.

PICNIC

For Boats.
First use June 1959.

SN 151,251. Parma Motors, Inc., Parma, Ohio. Filed Aug. 15, 1962.

POINTER

For Motorcycles, Motor Bikes, Auto-Scooters, and Parts Therefor.
First use Jan. 7, 1961.

SN 151,382. Willys Motors, Inc., Toledo, Ohio. Filed Aug. 16, 1962.

GLADIATOR

For Automotive Vehicles of the Type Known as Trucks.
First use July 19, 1962.

Class 20—Linoleum and Oiled Cloth

SN 157,602. Carthage Mills Incorporated, Cincinnati, Ohio. Filed Nov. 20, 1962.

POLY-FLOR

For Polyurethane Coated Felt Base Floor Covering.
First use Oct. 30, 1962.

SN 158,128. Armstrong Cork Company, Lancaster, Pa. Filed Nov. 29, 1962.

VISTELLE

For Plastic Tile.
First use Nov. 21, 1962.

SN 158,129. Armstrong Cork Company, Lancaster, Pa. Filed Nov. 29, 1962.

ROCHELLE

For Plastic Tile.
First use Nov. 21, 1962.

SN 158,380. Robbins Floor Products, Inc., Tuscumbia, Ala. Filed Dec. 3, 1962.

ROBBINETTE

Owner of Reg. Nos. 566,354 and 660,704.
For Floor Tile With a Polymeric Binder.
First use at least as early as September 1958.

SN 159,960. Congoleum-Nairn Inc., Kearny, N.J. Filed Dec. 31, 1962.

ESTEEM

For Plastic Coverings of the Smooth Surface, Resilient Type for Surfaces Such as Floors, Walls, Countertops, and the Like in the Form of Rolls, Rugs, and Tiles.
First use Dec. 3, 1962.

SN 161,137. American Biltrite Rubber Co., Inc., Trenton, N.J. Filed Jan. 22, 1963.

Amtico
PROMENADE

For Vinyl Flooring.
First use Nov. 19, 1962.

SN 161,138. American Biltrite Rubber Co., Inc., Trenton, N.J. Filed Jan. 22, 1963.

Amtico
PETITE

For Vinyl Flooring.
First use Nov. 1, 1962.

SN 161,140. American Biltrite Rubber Co., Inc., Trenton, N.J. Filed Jan. 22, 1963.

Amtico
CARTOON

For Vinyl Flooring.
First use Sept. 28, 1962.

SN 162,292. The Ruberoid Co., New York, N.Y. Filed Feb. 7, 1963.

RUBEROID

Owner of Reg. Nos. 50,919, 743,208, and others.
For Resilient Floor Tiles—Namely, Plastic-Asphalt Tiles, and Vinyl-Asbestos Tiles.
First use Nov. 1, 1960.

SN 162,501. Stix Products, Inc., New York, N.Y. Filed Feb. 11, 1963.

ADORN

For Plastic Wall, Shelf, and Table Top Covering.
First use Jan. 2, 1963.

SN 163,323. Congoleum-Nairn Inc., Kearny, N.J. Filed Feb. 25, 1963.

VINYLBEST

For Plastic Coverings of the Smooth Surface, Resilient Type for Surfaces Such as Floors, Walls, Countertops, and the Like in the Form of Rolls, Rugs, and Tiles.
First use December 1953.

Class 21—Electrical Apparatus, Machines, and Supplies

SN 92,246. James Myron Fulkerson, d.b.a. Fourjay Industries, Dayton, Ohio. Filed Mar. 7, 1960.



For Speaker Enclosures and Housings for Outdoor Lamps, Each Made of Plastic, and Housings for Outdoor Lamps, Each Made of Plastic.
First use Apr. 15, 1957.

SN 99,271. Appleton Electric Company, Chicago, Ill. Filed June 20, 1960.

INTENSO QUARTZLITE 500

Applicant disclaims the words "Quartzlite 500" apart from their use in the mark as shown. Owner of Reg. No. 605,068.
For Weatherproof Electric Lamp Housing Units and Fittings Therefor.
First use May 2, 1960.

SN 107,908. Arvin Industries, Inc., Columbus, Ind. Filed Nov. 7, 1960.

MEDALLION

For Radio Receiving Sets.
First use Aug. 16, 1960.

SN 113,927. Rheinstahl Hanomag Stahlbau Eggers & Friedrich Kehrhahn G.m.b.H., Hamburg, Germany. Filed Apr. 28, 1961.

GLIDE AWAY

For Moving Stairways.
First use Oct. 10, 1960; in commerce Oct. 10, 1960.

SN 123,575. Universal Research Corporation, Philadelphia, Pa. Filed June 21, 1961.

SPRAY-A-MATIC SYSTEM

The word "System" is disclaimed apart from the mark as shown.
For Electrical Floor Cleaning and Polishing Machine.
First use December 1960.

SN 126,538. Siemens & Halske Aktiengesellschaft, Munich, Germany. Filed Aug. 23, 1961.

PRODUCTOGRAPH

Owner of German Reg. No. 626,035, dated July 23, 1956.
For Automatic Industrial Production Control and Analysis Systems Comprised of Electronic Data Gathering and Analysis Equipment—Namely, Tele-Communication Systems, Electrical Supervisory and Control Systems, Electrical Time Measuring Equipment and Electrical Timers for Commercial, Industrial, and Office Use.

SN 132,846. Manley, Inc., Kansas City, Mo. Filed Nov. 27, 1961.

JEWEL

For Electrical Machines for Popping Popcorn for Use in Commercial Establishments.
First use July 1960.

SN 134,242. The Magnavox Company, Fort Wayne, Ind. Filed Dec. 18, 1961.

WINK-ALARM

For Delayed-Timing Component of a Clock-Radio, the Use of Which Enables a Relatively Short Interruption of the Radio-Alarm.
First use Oct. 16, 1961.

SN 134,409. Steamstir Corp., San Mateo, Calif. Filed Dec. 20, 1961.

STEAMSTIR

For Cooking Appliances and Electrical Heating Elements Therefor.
First use Sept. 15, 1961.

SN 134,410. Steamstir Corp., San Mateo, Calif. Filed Dec. 20, 1961.

STEAMSTIR

The applicant disclaims the designation "TM" as part of the mark.
For Cooking Appliances and Electrical Heating Elements Therefor.
First use Sept. 15, 1961.

SN 134,578. Thorn-AEI Radio Valves and Tubes Limited, London, England. Filed Dec. 22, 1961.

BRIMAR

Priority claimed under Sec. 44(d) on British Reg. No. 824,064, dated Aug. 10, 1961.
For Semi-Conductor Devices; Radio Apparatus and Television Apparatus, and Parts and Accessories Therefor.

SN 134,883. Goldpoint Industries, Inc., New York, N.Y. Filed Dec. 29, 1961.

Goldpoint
NATIONALLY RECOGNIZED BY CONSUMER ACCEPTANCE

The words "Nationally Recognized by Consumer Acceptance" are disclaimed apart from the mark as shown in the drawing.
For Electric Food and Liquid Mixers and Blenders.
First use Oct. 23, 1961.

SN 136,843. Thermasol Ltd., New York, N.Y. Filed Jan. 29, 1962.

THERMASOL

For Steam Bath Equipment.
First use Aug. 1, 1958.

SN 139,291. General Precision, Inc., Little Falls, N.J. Filed Mar. 7, 1962.

WELDBLOC

For Small Assemblies of Electronic Components—i.e., Nodules Wherein Printed Circuits and Miniature Circuitry Is Used.
First use Oct. 13, 1961.

SN 143,820. The Gamewell Company, Newton Upper Falls, Mass. Filed May 4, 1962.

MODUVAC

For Traffic Signal Electrical Actuator Control Devices.
First use on or about Oct. 6, 1961.

SN 144,901. Trans-Aire Electronics, Inc., Mineola, N.Y. Filed May 17, 1962.

Saxony

The mark consists of the word "Saxony."
For Transistor Radios.
First use Feb. 23, 1962.

SN 146,228. Teletype Corporation, Skokie, Ill. Filed June 6, 1962.

For Record Communication Equipment and Associated Apparatus—Namely, Apparatus Used for Transmitting Information and for Receiving and Recording Such Information.
First use Jan. 10, 1962.

SN 147,169. Wonstop Automotive Warehouse Co., Denver, Colo. Filed June 18, 1962.

ALPARTS

For Automotive Generators, Distributors, Starting Motors, Voltage Regulators, and Solenoids.
First use Jan. 20, 1961.

SN 150,563. Irvan Ferromagnetics Corporation, Van Nuys, Calif. Filed Aug. 6, 1962.

irvan

For Electrical and Electronic, Mechanical and Ferromagnetic Products, Particularly Mounting Hardware for Radio and Electronic Equipment, and Ferromagnetic Core Elements of Various Shapes and Sizes and Electrical Ceramic Components of Various Shapes and Sizes for Radio and Electronic Equipment.
First use on or about Sept. 1, 1961.

SN 151,416. Logan Electronic Corporation, East Boston, Mass. Filed Aug. 17, 1962.



For Potentiometer.
First use Dec. 22, 1961.

SN 151,766. Ling-Temco-Vought, Inc., Garland, Tex. Filed Aug. 23, 1962.

Vanguard

For Electronic Siren and Electronic Communication Equipment Capable of Use as a Public Address System, a Civil Defense Alert, and a Radio Relay or the Like.
First use May 18, 1962.

SN 153,413. Leecraft Manufacturing Co., Inc., Long Island City, N.Y. Filed Sept. 18, 1962.

SNAPLITE

For Electrical Sockets and Assemblies for Indicator and Signal Light Purposes.
First use May 31, 1962.

SN 153,499. Motorola, Inc., Franklin Park, Ill. Filed Sept. 19, 1962.

GOLDEN TUBE SENTRY

Owner of Reg. Nos. 513,987, 698,500, and others.
For Electrical Circuit Including a Resistor-Relay Forming a Thermally Operated Surge Control for Initially Limiting Current Flow to an Associated Radio or Television Circuit.
First use July 1958.

SN 153,501. Motorola, Inc., Franklin Park, Ill. Filed Sept. 19, 1962.

GOLDEN STEREO

The word "Stereo" is disclaimed. Owner of Reg. Nos. 513,987, 698,500, and others.
For Phonograph Record Changers.
First use July 1959.

SN 153,503. Motorola, Inc., Franklin Park, Ill. Filed Sept. 19, 1962.

GOLDEN

Owner of Reg. Nos. 513,987, 698,500, and others.
For Audio Frequency Selective Circuit for a Stereophonic Sound Reproduction System.
First use July 1959.

SN 153,533. Vapor Corporation, Chicago, Ill. Filed Sept. 19, 1962.

VAPOR

For Electric Door Operators.
First use Jan. 3, 1962.

SN 154,644. Standard Products Corporation, Brockton, Mass. Filed Oct. 5, 1962.

ELECTRA-CURL

For Electric Hair Curlers.
First use on or about Sept. 11, 1962.
Subj. to Intf. with SN 156,296.

SN 154,296. Landers, Frary & Clark, New Britain, Conn. Filed Oct. 30, 1962.

UNIVERSAL LECTRI-CURL

Owner of Reg. Nos. 340,236 and 111,952.
For Electric Hair Curler.
First use Sept. 27, 1962.
Subj. to Intf. with SN 154,644.

SN 160,428. New-Tronics Corporation, Cleveland, Ohio. Filed Jan. 9, 1963.

HUSTLER

For Radio Antennas.
First use June 15, 1962.

SN 160,486. Hi-G Incorporated, Windsor Locks, Conn. Filed Jan. 10, 1963.

HALF-PINT

For Relays.
First use Dec. 21, 1962.

SN 160,639. Hill-Shaw Company, Chicago, Ill. Filed Jan. 14, 1963.

VACULATOR

Owner of Reg. Nos. 236,964, 417,471, and others.
For Automatic Coffeemakers.
First use February 1961.

SN 161,351. The Mercoid Corporation, Chicago, Ill. Filed Jan. 24, 1963.



For Vacuum Operated Electric Switches, Pressure Operated Electric Switches, Float Operated Electric Switches, Mechanically Operated Electric Switches, Mercury Switches, and Magnetically Operated Electric Switches.
First use on or before Oct. 23, 1962.

Class 22 — Games, Toys, and Sporting Goods

SN 121,327. Seneca Tackle Co., Inc., New York, N.Y. Filed June 2, 1961.

WOB-L-RITE

For Fish Lures.
First use Jan. 1, 1950.

SN 127,869. Newfeld Limited, Ashford, Middlesex, England. Filed Sept. 14, 1961.

Bendy

For Foam Rubber Toy Figures and Animals.
First use in or about July 1949; in commerce in or about July 1949.

SN 151,601. Joseph E. Lopriani, d.b.a. Joe Lo Prinzi Enterprises, Portland, Oreg. Filed Aug. 21, 1962.

LADY BELL

For Dumbbells.
First use May 20, 1962.

SN 151,797. Amerace Corporation, New York, N.Y. Filed Aug. 24, 1962.

ACE

Owner of Reg. No. 694,872.
For Hard Rubber Bowling Balls.
First use Aug. 8, 1962.

SN 152,065. Ideal Toy Corporation, Hollis, N.Y. Filed Aug. 28, 1962.

HAUNTED HOUSE

For Accessories Comprising Playing Pieces and Three-Dimensional Playing Surface for a Board Game.
First use July 1, 1962.

SN 152,841. Spring-Go, Inc., Roseburg, Oreg. Filed Sept. 10, 1962.

SPRING-GO

For Child's Knee Spring Board.
First use Apr. 28, 1962.

SN 152,903. Louis Marx & Co., Inc., New York, N.Y. Filed Sept. 11, 1962.

OPERATION MOON BASE

For Toy Missile Set.
First use May 21, 1962.

SN 152,995. Tirzah U. Hopkins, d.b.a. Hopkins Fishing Company, Norfolk, Va. Filed Sept. 12, 1962.

HOPKINS'
NO=EQL LURES

Applicant disclaims any rights to use of the descriptive word "Lures" apart from the mark as shown.
For Fishing Lures.
First use Sept. 12, 1950.

SN 153,393. Evans Products Company, Plymouth, Mich. Filed Sept. 18, 1962.

EP

For Velocipedes and Other Wheeled Toys.
First use on or about Apr. 1, 1961.

SN 153,419. Bervil E. Morris, Fresno, Calif. Filed Sept. 18, 1962.

TRACERS

For Feathers for Arrows.
First use Aug. 25, 1961.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

SN 125,677. Marshall & Huschart Machinery Co., Chicago, Ill. Filed Aug. 9, 1961.



The words "Machine Tools" and "Marshall & Huschart Machinery Co. Chicago U.S.A." are disclaimed apart from the mark as shown. The drawing is lined for red and gold.
For Metal, Cutting, Pressing, Forming, Grinding, Boring, and Drilling Machinery.
First use June 28, 1946.

SN 130,411. Millard B Reaver, d.b.a. Lincoln Logotype Company, Fort Wayne, Ind. Filed Oct. 23, 1961.

LINCOLN LOGOS

The word "Logos" used separate and apart from the trademark is disclaimed.
For Rubber Type.
First use August 1960.

SN 132,401. The United Steel Companies Limited, Sheffield, England. Filed Nov. 20, 1961.

UNICASTER

Priority claimed under Sec. 44(d) on British Reg. No. B.826,875/61235, dated Oct. 27, 1961.
For Steel Plant Equipment—Namely, Continuous Casting Installation for Steel and Alloy Steels.

SN 133,302. The Navarre Corporation, Chattanooga, Tenn. Filed Dec. 4, 1961.

FLEX-SET

For Pre-Mix Vendors and Pre-Mix Counter Dispensers for Vending and Dispensing Non-Alcoholic Beverages.
First use Aug. 29, 1961.

SN 136,651. The Grover Company, Detroit, Mich. Filed Jan. 26, 1962.

SELECTOMATIC

For Pneumatic Dispatch Carrier Systems.
First use on or about Mar. 15, 1961.

SN 137,219. Entwistle Manufacturing Corporation, Providence, R.I. Filed Feb. 5, 1962.

CATERPULLER

For Machines for Pulling, Tensioning, and Feeding Wire, Cable, Rod, and Tubing.
First use Apr. 14, 1962.

SN 138,989. J. B. Bowden, d.b.a. Hobbs Automatic Tool Co., Hobbs, N. Mex. Filed Mar. 2, 1962.

SATELLITE

For Rotary Oil Well Drilling Instrumentation—Namely, Automatic Drilling Controls and Recording Instruments Including Deadline Tension-Sensing Device, an Air Motor Having a Valve and a Differential Gear Unit, a Controller Unit Actuated by the Deadline Tension-Sensing Device To Open the Air Motor Valve and a Drum Rotation-Sensing Unit Which When Actuated Reverses the Rotation of the Differential Gear Unit To Override the Air Motor To Close the Valve To Fully Apply the Brake.
First use Sept. 15, 1957.

SN 139,674. Power Tools Inc., Chicago, Ill. Filed Mar. 12, 1962.

TOPS POWER

For Radial Saws Operated by Electricity.
First use Dec. 15, 1961.

SN 139,675. Power Tools Inc., Chicago, Ill. Filed Mar. 12, 1962.

RETRACTO-GLIDE

For Radial Saws Operated by Electricity.
First use Dec. 15, 1961.

SN 140,159. Franz Morat G.m.b.H., Stuttgart-Vaihingen, Germany. Filed Mar. 19, 1962.

MORATRONIK

Owner of German Reg. No. 754,973, dated Nov. 13, 1961; and U.S. Reg. No. 709,778.
For Electrically Controlled Circular Knitting Machines and Parts Thereof.

SN 141,715. Edelbrock Equipment Company, Los Angeles, Calif. Filed Apr. 6, 1962.



For Manifolds, Valve Covers, Heads, Fuel Blocks, Throttles and Kits, and Other Speed and Power Equipment for the Automotive and Marine Industries.
First use Feb. 1, 1962.

SN 142,937. The Falk Corporation, Milwaukee, Wis. Filed Apr. 24, 1962.

A GOOD NAME IN INDUSTRY

For Fixed and Variable Speed Reducers and Increasers, Gears, Gear Drives, Backstops, Clutches, Bearings, Pillow Blocks, Overload Release Mechanisms for Transmissions, Couplings of the Rigid, Flexible, Brakewheel, and Controlled Torque Types, Vibration Dampeners and Detuners, Weldments, and Fabricated Metal Structures.
First use in 1930.

SN 146,343. Worthington Corporation, Harrison, N.J. Filed June 6, 1962.

MOORE

For Steam Turbines, Reduction Gears, and Base Plates for Turbine Units.
First use July 1, 1921.

SN 146,368. Empire Tool Company, Memphis, Mich. Filed June 7, 1962.

2C.A.

For Cutting-Off Blades Used on Automatic Screw Machines, Turret Lathes, Turning Lathes, and Cut-Off Machines for Cutting Off Any Type Material Produced on the Above Machines.
First use May 1, 1952.

SN 146,369. Empire Tool Company, Memphis, Mich. Filed June 7, 1962.

E.V.

For Cutting-Off Blades Used on Automatic Screw Machines, Turret Lathes, Turning Lathes, and Cut-Off Machines for Cutting Off Any Type Material Produced on the Above Machines.
First use May 1, 1948.

SN 149,203. Pneumafil Corporation, Charlotte, N.C. Filed July 17, 1962.

PNEUMAFILTER

Owner of Reg. Nos. 527,089 and 626,165.
For Auxiliary Equipment for Textile Machines—Namely, Apparatus for Removing and Collecting Foreign Matter From an Airstream Used in the Processing of Textiles, and the Components of Such Equipment.
First use in November 1961.

SN 149,355. Balcrank, Inc., Cincinnati, Ohio. Filed July 19, 1962.

FASTROL

For Machine Handles and Knobs.
First use June 7, 1962.

SN 149,477. Korody Marine Corporation, Hawthorne, Calif. Filed July 20, 1962.



For Machinery and Parts Thereof—Namely, Diesel Engines, Gears, Oil Seals, Piston Assemblies, Bushings, Bearings, Valves, Parts and Fuel Injectors.
First use October 1957.

SN 149,743. Hurst-Campbell, Inc., Glenside, Pa. Filed July 25, 1962.

SYNCRO/LOC

For Gear Shift Mechanisms.
First use on or about July 19, 1962.

SN 150,052. Ted J. Hamilton, Van Nuys, Calif. Filed July 30, 1962.

HAM-WHIRL-SEAT

For Seat for a Camera Dolly.
First use May 14, 1962.

SN 150,061. Imperial Knife Associated Companies, Inc., Providence, R.I. Filed July 30, 1962.

IMPERIAL TRIPLE CROWN

Owner of Reg. Nos. 539,856, 727,221, and others.
For Stainless Steel Flatware, Tableware and Kitchen Cutlery, Utensils and Tools.
First use June 1, 1962.

SN 150,062. Imperial Knife Associated Companies, Inc., Providence, R.I. Filed July 30, 1962.



Owner of Reg. Nos. 714,694 and 727,221.
For Stainless Steel Flatware, Tableware and Kitchen Cutlery, Utensils and Tools.
First use June 1, 1962.

SN 150,149. Binks Manufacturing Company, Chicago, Ill. Filed July 31, 1962.

AUTO-CYCLE

For Air Valve for Air Operated Pumps.
First use in or about August 1955.

SN 150,193. Southern Machinery Company, Greer, S.C. Filed July 31, 1962.

TIP-O-MATIC

For Yarn Spinning Machines and Control and Operating Mechanisms for Such Machines.
First use Oct. 20, 1961.

SN 150,202. United Shoe Repairing Machine Company, Boston, Mass. Filed July 31, 1962.

REPCO

Owner of Reg. Nos. 216,290, 239,517, and others.
For Machines, Tools and Parts Thereof for Use in the Repair of Boots and Shoes, Including Sole Sewing Machines, Sole Splitting Machines, Stock Fitting Machines, Heel Removing and Heel Attaching Machines, Sole and Heel Shaping Machines.
First use on about Jan. 1, 1933.

SN 150,290. Swingline Inc., Long Island City, N.Y. Filed Aug. 1, 1962.

23

For Stapling Machines.
First use June 18, 1962.

SN 150,343. Lee Hunter, d.b.a. Hunter Engineering Company, St. Louis, Mo. Filed Aug. 2, 1962.

TRIM-A-WATE

For Tool for Use in Applying to and Removing From Balancing Weights for Vehicle Wheels.
First use Oct. 20, 1954.

SN 150,652. Union Tank Car Company, Chicago, Ill. Filed Aug. 6, 1962.



For Sewage Treatment and Pumping Equipment and Parts Thereof.
First use Jan. 24, 1961.

SN 151,865. AIM Pump Corporation, Canoga Park, Calif. Filed Aug. 27, 1962.

AIM

For Air Compressor.
First use Apr. 30, 1962.

SN 151,869. American Powerstage Company, Houston, Tex. Filed Aug. 27, 1962.

POWERSTAGE

For Power Driven Hoists and Scaffolds and Accessory Supplies and Equipment for Scaffolds.
First use at least as early as Dec. 18, 1959.

SN 151,877. B & E Tooling & Machining Company, Glenview, Ill. Filed Aug. 27, 1962.

RAPIDRESS

For Tool Attachment for Use on Grinders.
First use in or about February 1962.

SN 151,884. Chris-Craft Corporation, Pompano Beach, Fla. Filed Aug. 27, 1962.

THERMOCON-DEVELVO

For Marine Engines and Cooling Systems Therefor.
First use July 3, 1962.

SN 151,909. Hawk Bilt Mfg. Corp., Vinton, Iowa. Filed Aug. 27, 1962.

HAWK BILT

For Farm Materials Spreaders.
First use Apr. 1, 1959.

SN 151,912. Hercules Powder Company, Wilmington, Del. Filed Aug. 27, 1962.

HERCO

For Machines for Placing, by Air Pressure, of Ammonium Nitrate Fuel Oil or Ammonium Nitrate Carbonaceous Material Combinations in Drill Holes in All Phases of Mining and Construction Blasting.
First use May 10, 1963.

SN 152,819. Joe Lowe Corporation, New York, N.Y. Filed Aug. 31, 1962.

SWEET MAK'R

Owner of Reg. No. 735,280.
For Dough Extruder and Panner.
First use July 27, 1962.

SN 152,817. Morse Chain Company, Ithaca, N.Y. Filed Sept. 10, 1962.

CHAIN-A-MATIC

For Pneumatic Roller Chain Tools and Accessories for Assembly and Disassembly of Roller Chain.
First use on or prior to Jan. 6, 1962.

SN 152,910. Otis Elevator Company, New York, N.Y. Filed Sept. 11, 1962.

ESCAL-AIRE

For Moving Stairways and Parts Thereof.
First use on or about Dec. 7, 1960.

SN 152,911. Page Engineering Company, Chicago, Ill. Filed Sept. 11, 1962.

WEDGEBAK

For Earth Excavating Dragline Buckets.
First use Aug. 15, 1962.

SN 153,075. Electronics Incorporated, Vermillion, S. Dak. Filed Sept. 13, 1962.

ELECTRO-MAGIC

For Electrically Powered Hydraulic Fork Lift and Gasoline Engine Powered Hydraulic Fork Lift.
First use June 15, 1962.

SN 153,087. Jorgensen Conveyors, Inc., Milwaukee, Wis. Filed Sept. 13, 1962.

J.C.I

For Industrial Conveyors—Namely, Fabric, Rubber and Metal Belts, Metal Conveyor Chains, Link Flights, Apron Conveyors, and Conveyor Parts.
First use Apr. 1, 1958.

SN 153,122. Schmieg Industries, Inc., Detroit, Mich. Filed Sept. 13, 1962.

CENTRI-LIFT

Owner of Reg. No. 367,948.
For Sewage Ejectors.
First use January 1959.

SN 153,154. Casalbi Company, Jackson, Mich. Filed Sept. 14, 1962.

HYDRA-VIBE

For Metal Finishing Tumbling Machines.
First use Aug. 15, 1962.

SN 153,174. The Frank G. Hough Co., Libertyville, Ill. Filed Sept. 14, 1962.

PAYLOSTATIC

Owner of Reg. Nos. 443,767, 717,528, and others.
For Hydraulic Transmission and Drive System for Motor Driven Vehicles.
First use Mar. 30, 1962.

SN 153,533. Vapor Corporation, Chicago, Ill. Filed Sept. 19, 1962.

VAPOR

For Pneumatic Door Operators and Door Treadles.
First use Jan. 2, 1962.

SN 153,741. The Conway Clutch Company, Cincinnati, Ohio. Filed Sept. 24, 1962.

Stationaire

For Friction Clutch.
First use Aug. 10, 1958.

SN 153,088. Philip Morris Incorporated, New York, N.Y. Filed Nov. 28, 1962.

DOUBLELIFE

Owner of Reg. No. 175,666.
For Razors, Razor Blades, Safety Razors, and Safety Razor Blades.
First use May 10, 1921.

SN 163,919. Goerlich's, Inc., Toledo, Ohio. Filed Mar. 8, 1963.

MONARCH

For Exhaust Mufflers for Motor Vehicles.
First use June 4, 1958.
Subj. to Intf. with SN 137,253 and SN 165,400.

Class 24—Laundry Appliances and Machines

SN 140,704. Matsushita Electric Industrial Co., Ltd., Kitakawachi-gun, Osaka, Japan. Filed Mar. 26, 1962.

National

Owner of Japanese Reg. No. 523,013, dated July 4, 1958; and U.S. Reg. No. 718,171.
For Electric Washing Machines.

SN 149,943. E. L. Mustee & Sons, Inc., Cleveland, Ohio. Filed July 27, 1962.

UTILATWIN

Owner of Reg. No. 718,213.
For Laundry Tubs.
First use Oct. 11, 1961.

SN 153,497. McGraw-Edison Company, Elgin, Ill. Filed Sept. 19, 1962.

ACE-O-TRONIC

For Dry Cleaning Apparatus for Wearing Apparel and the Like.
First use Apr. 3, 1962.

Class 26—Measuring and Scientific Appliances

SN 116,011. Fiske Associates, Inc., Bethel, Conn. Filed Mar. 20, 1961.

FISKE

For Precision Scientific Instrumentation—Namely, Cryoscopes and Osmometers.
First use June 25, 1942.

SN 130,817. Montgomery Ward & Co., Incorporated, Chicago, Ill. Filed Oct. 27, 1961.

DUAL STAT

For Thermostatic Devices for Air Conditioning Units.
First use Mar. 1, 1956.

SN 137,939. Pfaudler Permutit Inc., Rochester, N.Y. Filed Feb. 14, 1962.

NUCERITE

For Temperature Measuring Equipment Comprising Metallic Thermometer Well Having a Protective Ceramic Coating Applied Thereto.
First use Nov. 14, 1961.

SN 141,469. Photovolt Corporation, New York, N.Y. Filed Apr. 3, 1962.

MICROCORD

For Combination Electronic Voltage Meters and Recorders.
First use Feb. 14, 1962.

SN 154,296. Scale Specialties Inc., Boonton, N.J. Filed Oct. 1, 1962.

METRAMATIC

For Weight Checking Scales.
First use Aug. 27, 1962.

SN 154,541. Wayne-George Corporation, Newton, Mass. Filed Oct. 4, 1962.

DIGITAK

For Data Processing Apparatus.
First use May 17, 1962.

SN 154,737. The Magnavox Company, Fort Wayne, Ind. Filed Oct. 8, 1962.

MEDIA

For Electronic Data Processing Equipment.
First use July 18, 1962.

SN 154,825. Lab-Line Instruments, Inc., Chicago, Ill. Filed Oct. 9, 1962.

GRAPHICORDER

For Electro-Mechanical Device for Recording Data From and Monitoring Laboratory and Industrial Instruments.
First use Jan. 24, 1962.

SN 154,826. Lab-Line Instruments, Inc., Chicago, Ill. Filed Oct. 9, 1962.

MODU-LAB

For Environmental Test Chamber.
First use Aug. 27, 1961.

SN 155,395. Documat, Inc., Waltham, Mass. Filed Oct. 18, 1962.

DOCUMAT

For Microfilm Projection and Copying Apparatus, Microfilm Cameras, Photocopying Apparatus, and Parts Thereof.
First use Apr. 1, 1957.

SN 155,961. Ametek, Inc., New York, N.Y. Filed Oct. 26, 1962.

PLASTUF

For Pressure Gauges.
First use Sept. 15, 1962.

Class 27 — Horological Instruments

SN 140,706. Matsushita Electric Industrial Co. Ltd., Kitakawachi-gun, Osaka, Japan. Filed Mar. 26, 1962.

National

Owner of Japanese Reg. No. 564,070, dated Jan. 10, 1961; and U.S. Reg. No. 713,171.
For Time Pieces and Their Parts and Accessories—Namely, Timers, Time Switches, and Clocks.

Class 28 — Jewelry and Precious-Metal Ware

SN 151,038. Ferrara Bros., New York, N.Y. Filed Aug. 13, 1962.

14K

The term "14K" is disclaimed apart from the mark as shown.
For Gold Jewelry.
First use June 25, 1962.

SN 151,491. Egon Holzman, d.b.a. Holzman & Bradford, New York, N.Y. Filed Aug. 20, 1962.

The mark comprises the letters "E" and "H" in circular form.
For Pins, Earrings, Rings, Hair Ornaments, Trimmings for Sunglasses, Keychains, Pendants and Charms, Bracelets, Necklaces, Clasps, Clips, Pearl-Dividers, Cufflinks, Money-Clips, Etc.
First use Aug. 1, 1962.

SN 151,746. Four Aces Jewelry Corp., New York, N.Y. Filed Aug. 23, 1962.

4-A

For 14 Carat Gold Charms, Pins, Earrings.
First use Apr. 5, 1962.

SN 152,569. Duet Jewelry Co. Inc., New York, N.Y. Filed Sept. 6, 1962.

D 14K T

The term "14K" is disclaimed.
For Jewelry for Personal Wear Such as Rings, Bracelets, Charms for Charm Bracelets, Amulets, Necklaces and Other Similar Articles of Personal Wear.
First use July 1, 1962.

SN 153,930. M. Blau, New York, N.Y. Filed Sept. 26, 1962.

M-J-B

For Jewelry for Personal Wear or Adornment—Namely, Bracelets, Charms, Earrings, Brooch Pins, Necklaces, Pendants, and Clips.
First use Sept. 5, 1961.

SN 154,037. Wladek Kiang, New York, N.Y. Filed Sept. 27, 1962.

WK

For Fine Jewelry.
First use Aug. 15, 1962.

Class 30 — Crockery, Earthenware, and Porcelain

SN 161,216. Technical Porcelain and Chinaware Co., El Cerrito, Calif. Filed Jan. 22, 1963.

BLUE RIDGE CHINA U.S.A.

Any right to the notations "U.S.A." and "China" shown in the drawing and in the specimens is hereby disclaimed.
For Domestic, Household, and Restaurant China Dinnerware Used for Preparation and Serving of Food.
First use Sept. 20, 1962.

Class 31 — Filters and Refrigerators

SN 135,791. General Dynamics Corporation, Chicago, Ill. Filed Jan. 15, 1962.

JET CO_2 LD SHOT

For Apparatus Kit for Use in Cooling Trucks and Rail Cars by Spraying Liquid Carbon Dioxide Into the Interiors Thereof.
First use on or before Nov. 9, 1961.

SN 151,204. Corning Glass Works, Corning, N.Y. Filed Aug. 15, 1962.

CERCOR

For Filters for the Separation of Liquids From Gases.
First use on or about May 2, 1962.

SN 151,616. Rudd-Melikian, Inc., Hatboro, Pa. Filed Aug. 21, 1962.

ICE-A-CUP

For Cold Drink Dispensing Machine.
First use July 3, 1962.

SN 164,493. Chemex Corporation, New York, N.Y. Filed Mar. 13, 1941.

CHEMEX

Owner of Reg. Nos. 623,874, 705,991, and others.
For Filter Paper.
First use Jan. 12, 1941.

Class 32 — Furniture and Upholstery

SN 99,847. Royalmetal Corporation, New York, N.Y., assignee of Deluxe Metal Products Company, Warren, Pa. Filed June 28, 1960.

DELUXE

For Shelving, Cabinets, and Files.
First use 1926.

SN 113,947. Schnadig Corporation, Chicago, Ill. Filed Feb. 17, 1961.

COLONIAL CHARM

The word "Colonial" is disclaimed apart from the mark as shown.
For Household Furniture.
First use Jan. 6, 1961.

SN 132,556. Illinois Upholsterer's Supply Company, Inc., d.b.a. Bur-Lar Mfg. Co., Chicago, Ill. Filed Nov. 22, 1961.

ULTRA REST

For Mattresses and Box Springs.
First use Oct. 26, 1961.

SN 141,242. The Babee-Tenda Corporation, Shaker Heights, Ohio. Filed Apr. 2, 1962.

CRIB-A-LOUNGE

For Crib, Convertible to a Youth Bed, Then to a Junior Bed and Ultimately to a Lounge.
First use Jan. 31, 1962.

SN 142,073. BRS Products Company, Clifton Heights, Pa. Filed Apr. 12, 1962.

DOCTOR JACK'S HAPPY BACK

No claim is made to the word "Back" except in combination with the mark as shown.
For Cushion for Back Support.
First use Mar. 16, 1962.

SN 142,907. Wayniine, Inc., Chicopee Falls, Mass. Filed Apr. 5, 1962.

Trendaire

For Upholstered Living Room Furniture.
First use Nov. 27, 1961.

SN 147,103. The Globe-Wernicke Company, Cincinnati, Ohio. Filed June 18, 1962.

Design Guild

For Office Furniture—Namely, Desks; Table Units; Cabinet Units; Shelf Units; Filing Units; and Seating Units.
First use Apr. 26, 1962.

SN 153,633. Eastern Steel Rack Co., Boston, Mass. Filed Sept. 21, 1962.

AEROFORM

For Preformed Shelving.
First use March 1962.

SN 156,209. Amana Society, Amana, Iowa. Filed Oct. 30, 1962.

AMANA

For Walnut and Cherry Furniture for Residential and Business Use.
First use October 1932.

Class 34 — Heating, Lighting, and Ventilating Apparatus

SN 125,973. Compagnie Generale des Gaz Liquefies Cogegal, Paris, France. Filed Aug. 14, 1961.

COGEGAL

Owner of French Reg. No. 493,782, dated Jan. 27, 1961 (Seine); Natl. Inst. No. 162,111.
For Baking Ovens, Furnaces, Boilers, Industrial Dryers, Radiators, Stoves, Small Stoves for Campers; Blow-Torches for Heating, Soldering, Cutting, and Metal Working.

SN 138,116. Rheem Manufacturing Company, New York, N.Y. Filed Feb. 16, 1962.

COMMANDO

For Gas-Fired Water Boilers and Oil-Fired Water Boilers.
First use Jan. 8, 1962.

SN 149,346. Whirlpool Corporation, St. Joseph, Mich. Filed July 18, 1962.

TECTROL

For Apparatus for Controlling a Storage Environment as to Temperature, Humidity and Make Up of the Atmosphere—Namely, Gaseous Generators, Atmosphere Generators, Combustion Equipment, and Parts Thereof.
First use Apr. 26, 1962.

SN 151,106. Vapor Corporation, Chicago, Ill. Filed Aug. 13, 1962.

CIRC-U-LĀTIC

For Steam Generators.
First use May 22, 1962.

SN 151,366. Rheem Manufacturing Company, New York, N.Y. Filed Aug. 16, 1962.

DEMAND-O-MATIC

For Gas-Fired Water Heaters.
First use June 1, 1962.

SN 151,439. Stewart-Warner Corporation, Chicago, Ill. Filed Aug. 17, 1962.

STOW-PAC

For Air Conditioners.
First use at least as early as June 15, 1962.

SN 151,647. Ametek, Inc., East Moline, Ill. Filed Aug. 22, 1962.

SLYDE-OUT

For Industrial Type Fans.
First use June 21, 1962.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

SN 121,559. The B. F. Goodrich Company, Akron, Ohio. Filed June 7, 1961.

SUPER MILEAGE

Owner of Reg. No. 390,529.
For Unvulcanized Tire Tread Rubber.
First use about July 31, 1940.

SN 122,215. The Mansfield Tire & Rubber Company, Mansfield, Ohio, assignee of Pennsylvania Tire Company, Mansfield, Ohio. Filed June 16, 1961.

JeTread

Owner of Reg. Nos. 404,884, 428,549, and 502,434.
For Tread Rubber.
First use May 18, 1961.

SN 153,434. Union Oil Company of California, Los Angeles, Calif. Filed Sept. 18, 1962.

76

Owner of Reg. No. 728,546.
For Automotive V-Belts and Radiator Hose, and Grease Retainers for Wheel Bearings.
First use May 23, 1962.

SN 159,871. Carlisle Corporation, Carlisle, Pa. Filed Dec. 28, 1962.

ZEPHYR

Owner of Reg. No. 640,029.
For Bicycle Tires and Inner Tubes.
First use June 15, 1961.

Class 36 — Musical Instruments and Supplies

SN 123,667. MEGMB Hope Recordings, Altoona, Pa. Filed July 10, 1961.

MEGMB

For Grooved Phonograph Records.
First use Nov. 3, 1960.

SN 134,577. Thorn-AEI Radio Valves and Tubes Limited, London, England. Filed Dec. 22, 1961.

BRIMAR

Priority claimed under Sec. 44(d) on British Reg. No. 824,064, dated Aug. 10, 1961.
For Apparatus and Instruments for Recording and Reproducing Sound.

SN 138,590. Dawn Records, Inc., Bradley, Ill. Filed Feb. 26, 1962.

DAWN

For Phonograph Records.
First use July 20, 1961.

SN 153,504. Motorola, Inc., Franklin Park, Ill. Filed Sept. 19, 1962.

GOLDEN DUPLITRON

Owner of Reg. Nos. 513,987, 698,500, and others.
For Phonograph Pick-Up Cartridges.
First use August 1960.

SN 162,221. Amberg File and Index Company, Kankakee, Ill. Filed Feb. 7, 1963.

Platter-pak

Owner of Reg. No. 646,927.
For Phonograph Record Cases.
First use Sept. 26, 1955.

SN 162,849. Frank V. Mavec, d.b.a. Stanford Institute, Cleveland, Ohio. Filed Feb. 15, 1963.

SELF MOTIVATION

For Educational Voice Recordings for Mechanical Reproduction.
First use May 3, 1962.

SN 163,345. Esteem Associates Incorporated, Stillwater, Okla. Filed Feb. 25, 1963.

CENTURY 21 By ESTEEM

For Combination Phonograph and Filmstrip Projector.
First use Jan. 12, 1963.

SN 163,491. Radio Corporation of America, New York, N.Y. Filed Feb. 26, 1963.

DYNAGROOVE

For Grooved Phonograph Records.
First use at least as early as or on about Feb. 18, 1963.

SN 164,568. Sonola Accordion Company, Inc., Hoboken, N.J. Filed Mar. 13, 1963.

CAPRI

For Accordions.
First use January 1947.

Class 37 — Paper and Stationery

SN 120,611. Autographic Business Forms, Inc., South Hackensack, N.J. Filed May 23, 1961.

AUTOGRAPHIC BUSINESS FORMS

No claim is made to the exclusive right to use the words "Business Forms" apart from the mark shown. Owner of Reg. No. 444,627.
For Business Forms.
First use on or about Oct. 15, 1959.

SN 124,798. The Birge Company, Inc., Buffalo, N.Y. Filed July 27, 1961.

QUICK

For Wallpaper.
First use on or about June 29, 1953.

SN 141,820. Davee Company, New York, N.Y. Filed Apr. 9, 1962.

PETL-PAC

For Cut Wrappers.
First use January 1959.

SN 146,494. Lindenmeyr Paper Corporation, Long Island City, N.Y. Filed June 8, 1962.

SKYTEX

For Binding Papers.
First use Dec. 7, 1961.

SN 151,135. Joan W. Frank, Chicago, Ill. Filed Aug. 14, 1962.

DUPLI-NOTES

For Packaged Stationery, Consisting of Envelopes, Writing Paper With Interspersed Sheets of Carbon Paper, and Ball Point Pen.
First use in May 1961.

SN 153,889. Plough, Inc., d.b.a. St. Joseph Pencil Co., Memphis, Tenn. Filed Sept. 25, 1962.

ST. JOSEPH

Owner of Reg. Nos. 189,351 and 436,204.
For Lead Pencils.
First use Jan. 17, 1936.

Class 38 — Prints and Publications

SN 99,464. The Parents' Magazine's Education Press, Inc., New York, N.Y. Filed June 21, 1960.

THE NEW WONDER WORLD ENCYCLOPEDIA

Applicant makes no exclusive claim to the word "Encyclopedia" apart from the mark as shown.
For Series of Books.
First use in 1959; in 1932 as to the words "The New Wonder World."

SN 128,276. Richard Hudnut, Morris Plains, N.J. Filed Sept. 20, 1961.

DU BARRY BEAUTY PLAN

Applicant disclaims the words "Beauty Plan" apart from the mark as shown. Owner of Reg. Nos. 87,889, 285,779, and others.
For Combination of Phonograph Record and Printed Material Containing Instructions for Skin Care and Make-Up Techniques.
First use Aug. 21, 1961.

SN 129,080. Vernal M. Elliott, d.b.a. Peerless Tombs of America, Waterloo, Ill. Filed Sept. 27, 1961.

DAWN OF AGES

For Blueprints, Brochures, and Printed Mausoleum Development Programs.
First use May 6, 1960.

SN 129,689. National Railway Publication Company, New York, N.Y. Filed Oct. 11, 1961.

THE OFFICIAL GUIDE

For Railway Transportation Reference Periodical, Published Monthly.
First use in June 1897.

SN 129,690. National Railway Publication Company, New York, N.Y. Filed Oct. 11, 1961.

OFFICIAL RAILWAY GUIDE

For Transportation Reference Periodical, Published Quarterly.
First use in January 1912.

SN 130,294. National Railway Publication Company, New York, N.Y. Filed Oct. 19, 1961.

THE OFFICIAL GUIDE RAILWAYS

For Transportation Reference Periodical, Published Monthly.
First use in June 1900.

SN 130,295. National Railway Publication Company, New York, N.Y. Filed Oct. 19, 1961.

THE OFFICIAL GUIDE RAILWAYS

For Transportation Reference Periodical, Published Monthly.
First use in June 1900.

SN 138,946. Columbus Section of the American Chemical Society, Columbus, Ohio. Filed Mar. 2, 1962.

the CHEMICAL RECORD

For Professional News Publication, Distributed to Members of the Section, and to Other Similarly Organized Sections Throughout the Country.
First use Oct. 1, 1959.

SN 151,182. Washington Financial Reports, Inc., Washington, D.C. Filed Aug. 14, 1962.

WFR

For Weekly Report to Financial Institutions.
First use July 5, 1962.

SN 154,493. The Guider, Inc., Albany, N.Y. Filed Oct. 4, 1962.

GUIDER

For Magazine.
First use July 28, 1961.

SN 154,742. Meredith Publishing Company, Des Moines, Iowa. Filed Oct. 8, 1962.

BETTER HOMES AND GARDENS

Owner of Reg. Nos. 203,616, 721,355, and others.
For Monthly Magazine.
First use Aug. 21, 1962.

SN 155,969. Metro-Monitor, Inc., Port Washington, N.Y. Filed Oct. 12, 1962.

METRO MONITOR

For Printed Publication, Published at Regular Intervals, and Reporting Information Derived From Monitoring Radio and Television Programs—Namely, the Names of Advertisers, the Frequency of Their Advertisements, the Stations and Channels Used, Commercials and Records Played in Connection Therewith.
First use Mar. 20, 1961.

SN 155,179. Kent Norman Olson, Miller, S. Dak. Filed Oct. 15, 1962.

PADDY O'MALLARD

For Single Panel Cartoon Appearing in Daily and Weekly Newspapers at Irregular Intervals of About Once a Month.
First use Nov. 19, 1960.

SN 155,429. National Science Teachers Association, Inc., Washington, D.C. Filed Oct. 18, 1962.

VISTAS OF SCIENCE

For Series of Books Covering Scientific, Engineering and Technical Subjects Issued Periodically on an Irregular Basis.
First use Dec. 15, 1961.

SN 155,721. Ilford, Limited, Ilford, England. Filed Oct. 23, 1962.

ILFOCOLOR

For Photographic Prints.
First use May 31, 1962; in commerce Aug. 1, 1962.

SN 155,798. Fun Books, Inc., New York, N.Y. Filed Oct. 24, 1962.



For Soft-Cover Book, Issued and To Be Issued Bi-Monthly Containing Word Games, Cross-Word Puzzles With Funny Riddles, and Other Games and Puzzles.
First use Aug. 6, 1962.

SN 155,800. Howard E. Hall, d.b.a. Hall and Malling, Grand Rapids, Mich. Filed Oct. 24, 1962.

KOMPAK

For Catalogs and Catalog Sheets.
First use Sept. 10, 1962.

SN 155,809. The Klein Institute for Aptitude Testing, Inc., New York, N.Y. Filed Oct. 24, 1962.

PENETRATION

For Newsletter, Relating to the Subjects of Management, Marketing, and Selling.
First use June 1, 1962.

SN 155,814. Macfadden-Bartell Corporation, New York, N.Y. Filed Oct. 24, 1962.

SPORT MAGAZINE LIBRARY

For Books.
First use Sept. 27, 1960.

Class 39 — Clothing

SN 104,231. City Stores Company, New York, N.Y. Filed Sept. 12, 1960.

Stratford

Applicant claims use for the area comprising the States of Alabama, Connecticut, Delaware, Florida, Georgia, Kentucky, Louisiana, Massachusetts, Michigan, Missouri, New Jersey, New York, North Carolina, Ohio, Pennsylvania, and Tennessee.
For Men's and Boys' Clothing—Namely, Men's and Boys' Dress Shirts, Sport Shirts, Polo Shirts, Pajamas, Underwear, Hosiery, Neckwear, Mufflers, Sweaters, Gloves, Handkerchiefs, Belts, Braces, Swimwear, Robes, Hats, Trousers, Dungarees, Slacks, Suits, Coats, Sport Coats, Raincoats, Jackets, and Shoes.
First use Feb. 17, 1933.
Subj. to concurrent use proceeding with Reg. Nos. 514,512, 665,789, and 679,334.

SN 130,194. Essex Master Mold Company, Inc., Essex, Conn. Filed Oct. 18, 1961.

SNUG-LINED

For Plastic Overshoes.
First use Sept. 13, 1961.

SN 130,551. Robert Hall Clothes, Inc., d.b.a. Robert Hall Clothes, New York, N.Y. Filed Oct. 24, 1961.

Westerfield

Owner of Reg. Nos. 145,632 and 717,935.
For Men's Suits and Men's Outer Shirts.
First use on or about Sept. 3, 1954.

SN 131,434. Vereinigte Papierwerke Schickedans & Co., Nurnberg, Bavaria, Germany. Filed Nov. 6, 1961.

MOLTEX

Owner of German Reg. No. 710,808, dated Feb. 7, 1958.
For Lining and Padding Materials for Clothing, Diapers, Clothing Garments (Including Woven and Knitted Garments), Underwear; Articles From Paper and Cellulose as Substitutes for Textiles, Such as Handkerchiefs, Wiping Cloths, Polishing Cloths, Scrubbing Cloths, Diapers, and Inner Soles for Shoes.

SN 137,138. Jerks Socks, Inc., Cincinnati, Ohio. Filed Feb. 2, 1962.

JERKS I.D. SOCKS

Applicant disclaims the word "Socks" apart from the mark as shown.
For Men's Hosiery.
First use Jan. 8, 1962.

SN 138,320. Queen Knitting Mills, Inc., Philadelphia, Pa. Filed Feb. 20, 1962.

Queen Casuals

The word "Casuals" is disclaimed apart from the mark as shown. Owner of Reg. Nos. 632,731, 691,714, and others.
For Shorts, Slacks, Coordinates and Sets of Matching Slacks and Skirts, Sweaters and Blouses, Deck Pants, Pedal Pushers, Skirts, Blouses, Jackets, Robes, and T-Shirts.
First use Mar. 1, 1954.

SN 139,129. Patty Petite Inc., New York, N.Y. Filed Mar. 5, 1962.

PATTY PETITE

Owner of Reg. Nos. 412,614 and 424,128.
For Women's Dresses.
First use Aug. 21, 1959.

SN 140,353. Invincible Products Corporation, Chicago, Ill. Filed Mar. 21, 1962.

INVISANET

For Hair Nets.
First use in or about September 1945.
Subj. to Intf. with SN 142,936.

SN 140,772. Stadium Manufacturing Co., Inc., New York, N.Y. Filed Mar. 26, 1962.

PLEETWAY

Owner of Reg. No. 514,391.
For Men's, Women's, and Children's Wearing Apparel—Namely, Outer Shirts, Jackets, Pants, Shorts, Slacks, Slack Suits, Underwear, Sleepwear, and Loungewear.
First use prior to Aug. 30, 1949.

SN 144,947. E-Z Mills, Inc., New York, N.Y. Filed May 18, 1962.

TINY TREASURES

For Infants' Gift Sets, Consisting of Assorted Selections of One or More of the Following Articles of Infants' wear—Namely, Gowns, Kimonos, Sacques, Panties, Shirts, Booties, Diapers, Romper Sets, in Combination With One or More of the Following Articles—Namely, Crib Sheets, Receiving Towels, Wash Cloths, and Novelty Toys.
First use August 1957.

SN 149,294. Kayser-Roth Corporation, New York, N.Y. Filed July 18, 1962.

RUN AWAY

For Ladies' Hosiery.
First use June 8, 1962.

SN 149,357. Bear Brand Hosiery Co., Chicago, Ill. Filed July 19, 1962.

CHARLEVOIX

For Ladies' Hosiery.
First use June 28, 1962.

SN 149,403. Nino Gesellschaft mit beschrankter Haftung & Co., Nordhorn, Germany. Filed July 19, 1962.

BITEXA

Owner of German Reg. No. 744,970, dated Jan. 24, 1961.
For Woven Articles of Clothing for Outer Wear—Namely, Coats, Anoraks, Wind Jackets, Shorts, Shirts, Suits, Trousers, and Caps for Men and Women; Woven Articles of Clothing—Namely, Dresses and Skirts for Women.

SN 149,550. Exquisite Form Industries, Inc., New York, N.Y. Filed July 23, 1962.

LONGLASTIC

For Girdles.
First use June 19, 1962.

SN 149,583. Munsingwear, Inc., Minneapolis, Minn. Filed July 23, 1962.

MAGIQUE

For Women's Hosiery.
First use June 6, 1962.

SN 149,933. Irene Herbert's Pants Parlour, Tulsa, Okla. Filed July 27, 1962.

IRENE HERBERT'S PANTS PARLOUR

The word "Pants" is disclaimed apart from the complete mark as shown in the drawing.
For Women's Pants for Outerwear.
First use Apr. 2, 1962.

SN 150,625. Jack Schultz, Inc., St. Louis, Mo. Filed Aug. 6, 1962.

LORD NEWTON

The name "Lord Newton" is purely fanciful and is not intended as the name of any living person.
For Slacks.
First use about May 1962.

SN 150,742. Admiral Shoe Corporation, d.b.a. Mutual Shoe Sales Co., Manchester, N.H. Filed Aug. 8, 1962.

UNALITE

For Women's and Misses' Shoes.
First use July 25, 1962.

SN 151,369. Siro Fashions, Inc., New York, N.Y. Filed Aug. 16, 1962.

SHIRTMASTER BY SIRO

For Dresses.
First use Aug. 3, 1962.

SN 151,392. Blue Bell, Inc., Greensboro, N.C. Filed Aug. 17, 1962.

AIR-SWING

For Jackets.
First use Aug. 1, 1962.

SN 151,538. Sunshine Originals of Miami, Inc., Miami, Fla. Filed Aug. 20, 1962.

CASINO

For Men's, Boys', Children's, and Infants' Socks.
First use July 31, 1962.

SN 151,588. The House of Perfection, Inc., New York, N.Y. Filed Aug. 21, 1962.

LOUNGE-ALIKES

Owner of Reg. No. 700,205.
For Clothing Sets—Namely, Robes, Sportswear, Dusters, Pajamas, and Dresses for Women and Children.
First use Aug. 13, 1962.

SN 151,651. Beldoch-Popper, Inc., New York, N.Y. Filed Aug. 22, 1962.

THE SHOW-OFF

Owner of Reg. No. 404,994.
For Ladies' Dickies and Vests and Sweaters.
First use January 1942.

SN 151,653. Blair Fashions, Inc., Chicago, Ill. Filed Aug. 22, 1962.

SECRET HELPER

For Brassieres.
First use Aug. 6, 1962.

SN 151,655. Blair Fashions, Inc., Chicago, Ill. Filed Aug. 22, 1962.

STOWAWAY

For Girdles and Panty Girdles.
First use Aug. 6, 1962.

SN 151,778. Republic Mills Corporation, New York, N.Y. Filed Aug. 23, 1962.



For Panties.
First use Jan. 10, 1961.

SN 152,089. Puritan Fashions Corporation, New York, N.Y. Filed Aug. 28, 1962.

SHEASE
by
Ruth Walter

"Ruth Walter" is the name of a living individual whose consent is of record.
For Women's and Misses' Wearing Apparel—Namely, Dresses, Blouses, Skirts, Jackets, Coats, Slacks, Slack Suits, Shorts, Robes, Pajamas, and Bathing Suits.
First use July 3, 1962.

SN 152,256. Walker Dry Goods Company, Inc., Jasper, Ala. Filed Aug. 30, 1962.

TOP DOLLAR STORES

For Specially Made Small Kimonos.
First use Dec. 15, 1961.

SN 152,812. The May Department Stores Company, St. Louis, Mo. Filed Sept. 10, 1962.

BARRTON HALL

Owner of Reg. No. 365,863.
For Men's Suits, Hats, Caps, Raincoats, Topcoats, Sport Coats, Slacks, Shirts, Ties, Sweaters.
First use June 18, 1935, on men's suits, hats, and caps.

SN 152,904. Melville Shoe Corporation, New York, N.Y. Filed Sept. 11, 1962.

SNIP

For Shoes.
First use Sept. 6, 1962.

SN 152,909. Ortho-Vent Shoe Company, Inc., Salem, Va. Filed Sept. 11, 1962.

TENDER CARE

For Children's Shoes.
First use July 15, 1962.

SN 153,583. Melville Shoe Corporation, New York, N.Y. Filed Sept. 20, 1962.

MILES CENTURY PUMP

No registration rights are claimed for the word "Pump" apart from the complete mark. Owner of Reg. No. 621,367.
For Ladies' and Misses' Shoes.
First use prior to Sept. 1, 1960; Jan. 1, 1905, as to "Miles."

SN 153,691. Sears, Roebuck and Co., Chicago, Ill. Filed Sept. 21, 1962.

CLING-ALON

For Women's and Children's Hosiery.
First use on or about Apr. 5, 1961.

SN 153,953. Hayes Garment Company, Nashville, Tenn. Filed Sept. 26, 1962.

TOPKICK

For Fatigues.
First use October 1957.

SN 154,049. Natric Sales Co., Inc., New York, N.Y. Filed Sept. 27, 1962.

Modena



For Women's and Misses' Knitted Dresses, Suits, Sweaters, Pants, Bermuda Shorts, Skirts, Jackets, and Shirts.
First use Sept. 6, 1962.

SN 154,401. Cooper's, Incorporated, Kenosha, Wis. Filed Oct. 3, 1962.

THOROBRED

Owner of Reg. No. 736,071.
For Sport Shirts, Sweaters, Men's and Boys' Underwear, and Hosiery for Men, Women, and Children.
First use July 25, 1959.

SN 154,490. Franconia Ski Wear, Inc., Boston, Mass. Filed Oct. 4, 1962.



For Men's, Women's, and Children's Ski Pants, Ski Jackets, and Ski Sweaters.
First use Aug. 7, 1962.

SN 154,879. The Boosong Hosiery Mills, Inc., Asheboro, N.C. Filed Oct. 10, 1962.

TOWN DOLLS

For Ladies' Hosiery.
First use Sept. 27, 1962.

SN 154,903. The Lackawanna Pants Mfg. Company, Scranton, Pa. Filed Oct. 10, 1962.

TRICODA

For Men's Slacks and Walking Shorts.
First use Sept. 8, 1962.

SN 155,946. John B. Stetson Company, Philadelphia, Pa. Filed Oct. 25, 1962.

THE DRUMMOND

Owner of Reg. No. 399,055.
For Hats and Caps.
First use July 21, 1924.

SN 156,547. Amway Sales Corporation, Ada, Mich. Filed Nov. 5, 1962.

AMWAY

For Clothing—Namely, Hosiery.
First use on or about Oct. 24, 1962.

Class 40—Fancy Goods, Furnishings, and Notions

SN 138,042. O & V Associates, Toledo, Ohio. Filed Feb. 15, 1962.

Hide-A-Curl

For Hair Curling Clips.
First use Nov. 25, 1961.

SN 145,524. Paul T. Collins, Pasadena, Calif. Filed May 28, 1962.

Wrist Wand

For Clip for Applying a Jewelry Item Around the Wrist of a Person.
First use Apr. 15, 1962.

SN 148,936. Allied Felt Corporation, Bloomingdale, N.J. Filed July 13, 1962.

BEAN BAG
MENAGERIE

Applicant disclaims any trademark as such in the words "Bean Bag."
For Kit Containing Pieces of Pressed Wool Felt Cut in the Shape of Various Animals, Which the Purchaser of Such Kit Then Assembles.
First use in or about July 1961.

SN 148,937. Allied Felt Corporation, Bloomingdale, N.J. Filed July 13, 1962.

CHERUBooties

For Kit Containing Pieces of Pressed Wool Felt Cut in the Shape of Baby Shoes, Which the Purchaser of Such Kit Then Assembles.
First use in or about July 1961.

SN 153,021. R & R Import Company, Elmira, N.Y. Filed Sept. 12, 1962.

LES PARISIENNES

For Hairpins.
First use Mar. 25, 1960.

SN 153,312. Omas Co., Inc., Milwaukee, Wis. Filed Sept. 17, 1962.

DON-EX

For Shoe Laces.
First use July 30, 1962.

SN 153,438. Vulcanized Rubber and Plastics Company, Incorporated, Morrisville, Pa. Filed Sept. 18, 1962.

DURLON

For Combs for Human Hair.
First use Aug. 24, 1962.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 138,389. Collins & Aikman Corporation, New York, N.Y. Filed Feb. 21, 1962.

ILLUSION

For Pile Apparel Fabrics Simulating Mink.
First use Feb. 12, 1962.

SN 146,174. Dominion Trading Limited, Willemstad, Curacao, Netherlands Antilles. Filed June 5, 1962.

CORDTEX

Owner of U.S. Reg. Nos. 346,066 and 405,132.
For Fabrics Made From Natural and Synthetic Yarns and Combinations Thereof, for Use in the Manufacture of Corsets, Brassieres, Girdles, and for Various Other Purposes.
First use 1943; in commerce 1943.

SN 149,404. Nino Gesellschaft mit beschrankter Haftung & Co., Nordhorn, Germany. Filed July 19, 1962.

BITEXA

Owner of German Reg. No. 744,970, dated Jan. 24, 1961.
For Woven and Knitted Fabrics Made of Cotton, Rayon, and Other Synthetic Fibres; Drapes and Curtains; and Stiffening Piece Goods.

SN 149,977. Washington Manufacturing Company, Tennille, Ga. Filed July 27, 1962.



The drawing is lined for green.
For Textile Fabrics for Use as Boat Covers, Tents, Trailer Tops, Shoe Lining, Hunting Clothes.
First use Apr. 16, 1962.

SN 151,027. Durawall, Inc., New York, N.Y. Filed Aug. 13, 1962.

VYNDURA

For Vinyl Fabric for Making Wall Coverings, Upholstery Coverings, Luggage, and the Like.
First use May 8, 1962.

SN 151,926. Kellwood Company, Chicago, Ill. Filed Aug. 27, 1962.

KELLWOOD

For Bedding Products—Namely, Bed Spreads, Mattress Pads, and Quilts.
First use July 9, 1962.

SN 151,933. Levine & Co. Inc., New York, N.Y. Filed Aug. 27, 1962.

BALLERINA BATISTE

The word "Batiste" is disclaimed.
For Textile Fabrics in the Piece Used in the Manufacture of Blouses, Dresses, Lingerie, Jackets, and Shirts for Women and Girls.
First use Aug. 21, 1962.

SN 152,051. Curtain Corporation of America, New York, N.Y. Filed Aug. 28, 1962.

FABRICLASS

For Acetate Fabrics in the Piece, Acetate Curtains and Draperies.
First use Apr. 24, 1962.

SN 152,466. Tower Fabrics Company, Inc., New York, N.Y. Filed Sept. 4, 1962.

FOREVER FABRICS

"Fabrics" is disclaimed apart from the mark as shown.
For Decorative Fabrics, Draperies, and Slip Covers.
First use May 17, 1962.

SN 156,210. Amana Society, Amana, Iowa. Filed Oct. 30, 1962.

AMANA

For Woolen Blankets, Woolen Robes, Woolen Flannels, Woolen Suitings, Woolen Shirtings.
First use Sept. 5, 1931.

SN 156,250. Will Ross, Inc., Milwaukee, Wis. Filed Oct. 30, 1962.

PLASTI-TICK

For Pillow Covers, Mattress Covers, and Sheeting.
First use Oct. 9, 1962.

SN 156,273. Concord Textile Co., Inc., New York, N.Y. Filed Oct. 31, 1962.

SPAN SEAS'N

For Piece Goods of Cotton and/or Synthetic Fibers.
First use Sept. 10, 1962.

Class 43 — Thread and Yarn

SN 133,794. Imperial Chemical Industries Limited, London, England. Filed Dec. 11, 1961.

ULSTRON

Owner of British Reg. No. 717,706, dated Mar. 2, 1961.
For Synthetic Yarns and Threads Made Wholly or Substantially From Polypropylene Fibres.

SN 147,228. Roselon Yarns, Inc., Philadelphia, Pa. Filed June 19, 1962.

SPINLON

For Synthetic Yarns.
First use May 22, 1962.

SN 155,685. Carlton Yarn Mills, Incorporated, Cherryville, N.C. Filed Oct. 23, 1962.

CARLSPUN

For Yarns.
First use Jan. 6, 1954.

SN 155,687. Carlton Yarn Mills, Incorporated, Cherryville, N.C. Filed Oct. 23, 1962.

FLAMESPUN

For Yarns.
First use Sept. 13, 1962.

SN 155,688. Carlton Yarn Mills, Incorporated, Cherryville, N.C. Filed Oct. 23, 1962.

KLEENSPUN

For Yarns.
First use Oct. 10, 1962.

SN 156,369. Caron Spinning Company, Rochelle, Ill. Filed Nov. 1, 1962.

Caro-Vel

For Wool Yarn.
First use Aug. 15, 1962.

Class 44 — Dental, Medical, and Surgical Appliances

SN 140,709. Matsushita Electric Industrial Co., Ltd., Kitakawachi-gun, Osaka, Japan. Filed Mar. 26, 1962.

National

Owner of Japanese Reg. Nos. 318,461, dated July 7, 1939 and 523,013, dated July 4, 1958; and U.S. Reg. No. 713,171.
For Germicidal Lamps—Namely, Ultraviolet Lamps, Ozone Lamps, Infrared Lamps, All of Which Are Contained in Sealed Envelopes and Are Electrically Energized To Produce Energy of Different Wave Lengths, and Electric Medical Apparatus—Namely, Vibrators, Hearing Aids, and X-Ray Systems.

SN 147,878. Lewis Woolf Griptight Limited, Birmingham, England. Filed June 27, 1962.

GRIPTIGHT

For Pacifiers, Feeding Bottles, and Teats and Valves for Feeding Bottles.
First use July 1, 1924; in commerce Jan. 1, 1929.

SN 151,206. Corning Glass Works, Corning, N.Y. Filed Aug. 15, 1962.

CERCOR

For Surgical Masks.
First use on or about May 2, 1962.

SN 152,799. Kay-See Dental Manufacturing Company, Kansas City, Mo. Filed Sept. 10, 1962.

HYDRO-CAST

Owner of Reg. No. 648,366.
For Oral Tissue Treatment and Functional Impression Material.
First use during July 1960.

SN 157,793. The R. D. Grant Company, Cleveland, Ohio. Filed Nov. 23, 1962.

PAN-AID

For Bedpan With Patient Lifter.
First use Nov. 14, 1962.

SN 157,848. Rower Dental Mfg. Corp., Boston, Mass. Filed Nov. 23, 1962.

DENTAFIL

For Dental Cement Used as a Base for Dental Cavities.
First use Oct. 25, 1962.

SN 157,849. Rower Dental Mfg. Corp., Boston, Mass. Filed Nov. 23, 1962.

TEMPOFIL

For Temporary Dental Filling Material.
First use Oct. 25, 1962.

SN 157,850. Rower Dental Mfg. Corp., Boston, Mass. Filed Nov. 23, 1962.

TEMPODENT

For Cementing Material to Temporarily Cement Provisional and Final Bridge Work.
First use Oct. 25, 1962.

SN 157,872. Wilmot Castle Company, Rochester, N.Y. Filed Nov. 23, 1962.

POWERCLAVE

For Sterilizer.
First use Oct. 4, 1962.

SN 157,878. Bard-Parker Company, Inc., Danbury, Conn. Filed Nov. 26, 1962.

RTA

For Blades and Containers Therefor.
First use on or about May 26, 1961.

SN 157,929. Rotary Hospital Equipment Corporation, Buffalo, N.Y. Filed Nov. 26, 1962.

GENT-L-PULSE

For Facial Massage Masks and Associated Pulsators for Effecting the Operation of the Masks.
First use on or about Oct. 22, 1962.

SN 158,102. The Scholl Mfg. Co., Inc., Chicago, Ill. Filed Nov. 28, 1962.

BALL-O-FOOT

Owner of Reg. No. 618,804.
For Metatarsal Cushions.
First use Sept. 11, 1953.

SN 158,207. Acralite Co., Inc., Brooklyn, N.Y. Filed Nov. 30, 1962.

IMPACT

For Denture Material.
First use Oct. 5, 1962.

SN 158,298. Abbott Laboratories, North Chicago, Ill. Filed Dec. 3, 1962.

PEROCATH

For Arterial Catheter.
First use Sept. 25, 1962.

SN 158,299. Abbott Laboratories, North Chicago, Ill. Filed Dec. 3, 1962.

AEROTROL

For Controlled-Dose Nebulizer for Administration of Medicaments.
First use Oct. 8, 1962.

SN 158,300. Abbott Laboratories, North Chicago, Ill. Filed Dec. 3, 1962.

PEROSET

For Pressure Infusion Device for Intravascular Administration of Fluid.
First use Sept. 25, 1962.

SN 158,401. Amelia Trunadel, d.b.a. A-T Surgical Co., Holyoke, Mass. Filed Dec. 3, 1962.



For Surgical Belts.
First use January 1951.

Class 46—Foods and Ingredients of Foods

SN 99,488. Burger Family, Inc., Boise, Idaho. Filed June 22, 1960.

MAMA BURGER

For Hamburger Sandwiches and Hamburger Sandwich Seasoning.
First use on or about Apr. 23, 1960.

SN 99,489. Burger Family, Inc., Boise, Idaho. Filed June 22, 1960.

PAPA BURGER

Applicant claims no exclusive rights in "Burger" as the name of the goods identified herein.
For Hamburger Sandwiches and Hamburger Sandwich Seasoning.
First use on or about Apr. 23, 1960.

SN 99,490. Burger Family, Inc., Boise, Idaho. Filed June 22, 1960.

BABY BURGER

For Hamburger Sandwiches and Hamburger Sandwich Seasoning.
First use on or about Apr. 23, 1960.

SN 102,806. Suzy Bell Canning Co., Inc., Port Elizabeth, N.J. Filed Aug. 16, 1960.

DELSEA

For Canned Foods—Namely, Sweet Potatoes, Clams, Vegetables, Peppers, Soups, Pizza Sauce, Tomatoes, Tomato Puree.
First use August 1949.

SN 111,551. Fairfield Laboratories, Inc., Pasadena, Calif., assignee of Rawson Drug & Sundry Company, Inc., d.b.a. Raphil Co., Oakland, Calif. Filed Jan. 9, 1961.

CALORA

For Low Calorie Diet Food Concentrate.
First use Dec. 19, 1960.

SN 111,952. All-Purpose Gelatin Products, El Segundo, Calif. Filed Jan. 17, 1961.

ALL-PURPOSE

For Food Supplement Gelatin Contained in Edible Capsules.
First use on or about Apr. 7, 1959.

SN 112,283. Mallinckrodt Chemical Works, St. Louis, Mo. Filed Jan. 23, 1961.

TAC

For Food Additive Chemicals.
First use Oct. 19, 1960.

SN 114,010. Barth Levitt Products, Inc., d.b.a. Barth Levitt Products, Valley Stream, N.Y. Filed Feb. 20, 1961.

PAPAYOLA

For Acerola Concentrate for Making a Food Beverage.
First use in July 1960.

SN 115,595. Ralph Ettlinger, d.b.a. Ralph Ettlinger & Sons, Chicago, Ill. Filed Mar. 14, 1961.



The drawing is lined for the color green but no claim is made to said color.
For Grain Products—Namely, Grain Flour, Protein Concentrates, Ground Wheat, and Cooked Wheat and Grain Binders.
First use September 1958.

SN 127,268. The Robb-Ross Company, Sioux City, Iowa. Filed Sept. 5, 1961.

PANTRY PRIDE

Owner of Reg. No. 259,280.
For Pancake Flour, Honey, Peanut Butter, Imitation Vanilla Flavoring, and Table Syrup.
First use Mar. 1, 1928.

SN 130,313. John R. Thompson Co., d.b.a. The Red Balloon Coffee House, Chicago, Ill. Filed Oct. 19, 1961.

RED BALLOON

For Sauces for Use With Salads or Meats.
First use Aug. 29, 1961.

SN 130,341. M. H. Greenebaum, Inc., New York, N.Y. Filed Oct. 20, 1961.

CLASSIQUE

Owner of Reg. No. 703,819.
For Fan Wafers (Flat Rectangular Biscuits); Canned and Frozen Shellfish; Java Wings (Shrimp Cocktail Wafers); Pate Maison (Fresh Liver Paste); Tarragon Leaves and Canned Vegetables.
First use Sept. 25, 1959.

SN 131,140. Kirby Foods, Inc., Miami, Fla. Filed Nov. 1, 1961.



Owner of Reg. Nos. 547,679 and 657,835.
For Canned Beans.
First use Aug. 15, 1961.

SN 139,568. Beatrice Foods Co., Chicago, Ill. Filed Mar. 12, 1962.

LECITREME

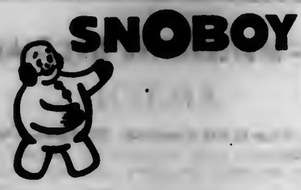
For Vegetable Oil Shortening Compound.
First use Dec. 7, 1961.

SN 143,248. C. J. Martin & Sons, Inc., Austin, Tex. Filed Apr. 27, 1962.

HI-TRATE

For Livestock, Dairy, and Poultry Feeds.
First use Nov. 20, 1956.

SN 143,816. Fine Foods, Inc., Seattle, Wash. Filed May 4, 1962.



Owner of Reg. Nos. 390,558, 653,839, and others.
For Fresh Fruits, Fresh Vegetables, Fresh Berries, Frozen Fresh Fruits, Frozen Fresh Berries, Frozen Fresh Vegetables, Frozen Fresh Fruit Juices, Frozen French Fried Potatoes, Dried Fruits, Raisins, and Shelled and Unshelled Nuts.
First use Mar. 1, 1946, on fresh fruits and vegetables; Apr. 9, 1926, as to "Snoboy" on fresh fruits.

SN 150,398. Frederick Joseph Carten, Westmount, Quebec, Canada. Filed Aug. 3, 1962.

HEEBEECHET

Owner of Canadian Reg. No. 119,695, dated Sept. 30, 1960.
For Dulse and Other Seaweed Used for Food Purposes.

SN 152,892. Hanan Products Co., Inc., Hicksville, N.Y. Filed Sept. 11, 1962.

WHIP DEELITE

The descriptive word "Whip" is disclaimed apart from the mark as shown.
For Vegetable Derived Whippable Product for Use as a Filling, Icing or Topping for Bakery Products.
First use Aug. 30, 1962.

SN 153,003. Kellogg Company, Battle Creek, Mich. Filed Sept. 12, 1962.

WHEAT KRISPIES

Applicant disclaims the right to the exclusive use of the word "Wheat" apart from the mark as shown. Owner of Reg. Nos. 145,422, 680,888, and others.
For Cereal Breakfast Foods.
First use on or about Oct. 3, 1932.

SN 153,179. Kal Kan Foods, Inc., Los Angeles, Calif. Filed Sept. 14, 1962.

KAL KAN BURGER ROUNDS

No claim is made to the words "Burger Rounds." Owner of Reg. Nos. 430,306, 715,581, and others.
For Canned Pet Food for Dogs and Cats.
First use Mar. 1, 1962; May 16, 1946, as to "Kal Kan."

SN 153,477. General Foods Corporation, White Plains, N.Y. Filed Sept. 19, 1962.

POUR-PAK

For Frozen Vegetables.
First use on or about Jan. 13, 1961.

SN 153,843. Victoria Avenue Citrus Association, Riverside, Calif. Filed Sept. 24, 1962.

EL SOBRANTE

"El Sobrante" are Spanish words meaning the residue or the surplus.
For Fresh Citrus Fruit.
First use Apr. 25, 1962.

SN 154,507. Duncan Coffee Company, Houston, Tex., assignee of J. B. Osgood Coffee Company, d.b.a. Osgood Coffee Company, Kansas City, Mo. Filed Oct. 4, 1962.

JBO

For Tea and Coffee.
First use in June 1909.

SN 155,502. Hales & Hunter Co., Chicago, Ill. Filed Oct. 19, 1962.



Owner of Reg. Nos. 72,115, 516,743, 737,466, and 737,467.
For Poultry Feeds and Feed Concentrates.
First use Jan. 2, 1962.

SN 155,505. Hales & Hunter Co., Chicago, Ill. Filed Oct. 19, 1962.



Owner of Reg. Nos. 326,688, 737,466, and 737,467.
For Dog Food.
First use Jan. 2, 1962.

SN 155,556. Paul F. Beich Co., Bloomington, Ill. Filed Oct. 22, 1962.



The drawing is lined for red.
For Candy.
First use Aug. 29, 1962.

SN 156,211. Amana Society, Amana, Iowa. Filed Oct. 30, 1962.

AMANA

For Bread, Buns, Cakes, Rolls, Hams, Bacon, Sausage.
First use September 1932.

SN 158,342. Holiday Foods, Inc., Waterloo, Iowa. Filed Dec. 3, 1962.



The words "Our Premium Quality" and "Brand" are disclaimed apart from the mark as shown. Owner of Reg. Nos. 658,368, 737,976, and others.
For Fruit Preserves, Smoked Oysters, Cheese, Cheese Spreads, Fruit Cake, and Anchovies.
First use November 1949.

SN 158,452. Hercules Powder Company, Wilmington, Del. Filed Dec. 4, 1962.



For Food Seasoning Composed Principally of Hydrolysed Vegetable Protein.
First use Oct. 16, 1962.

Class 48 — Malt Beverages and Liquors

SN 143,011. Century Brewery Corp., d.b.a. Monticello Brewery Co., Norfolk, Va. Filed Apr. 25, 1962.

MONTICELLO

For Beer.
First use May 1934.

SN 143,025. Hornell Brewing Co., Inc., Hornell, N.Y. Filed Apr. 25, 1962.

HORNELL

For Beer.
First use 1950.

Class 49 — Distilled Alcoholic Liquors

SN 144,061. Mr. Boston Distiller Inc., Boston, Mass. Filed May 8, 1962.

GOLDEN STILL

No claim of exclusive right is made to "Still" as used for gin.
For Gin.
First use May 2, 1934.

Class 50 — Merchandise Not Otherwise Classified

SN 122,556. Plan-It-Kit Company, Westport, Conn. Filed June 21, 1961.



The drawing is lined for the color red, but no claim is made to color.
For Kit for Arranging the Layout of the Contents of Rooms and Buildings, Consisting of a Template and Two or Three Dimensional Representations of Furniture or the Like.
First use May 20, 1961.

SN 136,225. Gasket Engineering Co., Inc., Kansas City, Mo. Filed Jan. 22, 1962.

KORKER

For Pads for Supporting Articles Such as Dishes, Pans, Glasses and the Like.
First use Jan. 2, 1962.

SN 151,061. Koffler Sales Corp., Chicago, Ill. Filed Aug. 13, 1962.

FIBER KING

Applicant disclaims the word "Fiber" apart from the mark as shown.
For Woven Coir Fiber Door Mats.
First use Jan. 9, 1950.

SN 153,151. Braco Engraving Company, St. Louis, Mo. Filed Sept. 14, 1962.

V.I.P.

For Rubber Printing Plates.
First use Mar. 20, 1962.

Class 51 — Cosmetics and Toilet Preparations

SN 646,680. The Olivo Co. Inc., Philadelphia, Pa. Filed May 8, 1958.

FORMULA #99

For purposes of registration only and without prejudice to its common-law rights, applicant disclaims the word "Formula" apart from the mark as shown.
For Hair Tonic, Cold Creams, Hair Pomade, Lanolin Cream, Hand Cream, Liquid Lanolin, Homogenised Lanolin, Nail Polish, Deodorant, After-Shave Lotion, Bath and Skin Lotion, Lanolin and Hormone Hair Cream.
First use in April 1932.

SN 149,291. Icilma Company Limited, London, England. Filed July 18, 1962.

ICILMA

Owner of British Reg. No. 681,945, dated Aug. 23, 1949.
For Hair Lotions, Hair Sprays, Hair Colourants, Preparation for Waving the Hair, Perfumes, Lipsticks, Skin Lotions, and Dentifrice.

SN 153,599. Shulton, Inc., Clifton, N.J. Filed Sept. 20, 1962.

SUN/STOP

For Sunburn Preventative.
First use Oct. 20, 1961.

SN 153,777. Lane Laboratories, Inc., Dearborn, Mich. Filed Sept. 24, 1962.

MIST-TRESS

For Hair Spray To Control and Hold Curls, Waves, and Sets.
First use Aug. 9, 1962.

SN 153,875. Funel Société Anonyme, Le Cannet, Alpes-Maritimes, France. Filed Sept. 25, 1962.

TEA FOR TWO

Priority claimed under Sec. 44(d) on French Reg. No. 1,093, dated June 7, 1962 (Cannes); Natl. Inst. No. 187,399.
For Perfume, Toilet Water, Cosmetic Lotions, Cosmetic Skin Creams, Lipsticks, Rouge, Face Powder, Hair Lotions, and Dentifrices.

SN 154,013. Columbia Research Corp., New York, N.Y. Filed Sept. 27, 1962.



For Oral Antiseptic and Deodorant Lozenge.
First use Sept. 20, 1962.

SN 154,569. Helene Curtis Industries, Inc., Chicago, Ill. Filed Oct. 5, 1962.

BRIGHT IDEA

For Pre-Toner Hair Bleach.
First use on or about Sept. 7, 1962.

SN 154,629. Roux Laboratories, Inc., New York, N.Y. Filed Oct. 5, 1962.



Owner of Reg. Nos. 311,636, 734,689, and others.
For Hair Coloring Preparation for Men.
First use Aug. 6, 1962.

SN 154,755. Merle Norman Cosmetics, Inc., Los Angeles, Calif. Filed Oct. 8, 1962.

WHITE PEARLS

For Cream Hair Rinse.
First use on or about Sept. 1, 1955.

Class 52 — Detergents and Soaps

SN 149,292. Icilma Company Limited, London, England. Filed July 18, 1962.

ICILMA

Owner of British Reg. No. 681,945, dated Aug. 23, 1949.
For Laundry Soap, Toilet Soap, Soap Powders, Non-Soapy Detergent Preparations for Domestic and Laundry Use and Shampoos.

SN 154,748. Merle Norman Cosmetics, Inc., Los Angeles, Calif. Filed Oct. 8, 1962.

PINK PEARLS

For Lotion Shampoo.
First use on or about Sept. 1, 1955.

SERVICE MARKS

Class 100 — Miscellaneous

SN 89,150. Friendship Homes, Inc., National City, Calif. Filed Jan. 18, 1960.

Friendship Homes, INC.

Exclusive property in the caduceus included in the mark is disclaimed apart from the mark.
For Rendering Technical Assistance to Operators of Nursing Homes for the Aged.
First use Nov. 18, 1959.

SN 114,429. C-E-I-R, Inc., Arlington, Va. Filed Feb. 27, 1961.

MEDIAMETRICS

For Evaluating or Measuring the Effectiveness of Advertising Media, Which May Include Conducting Surveys, Rating, Making Analyses and Recommendations for Others.
First use Oct. 31, 1955.

SN 118,287. Martin I. Robin, d.b.a. Bell Engineering Company, Chicago, Ill. Filed Apr. 20, 1961.

BELL

For Supplying Trained Personnel for Temporary Employment in the Fields of Designing, Drafting, and Contract Engineering.
First use Dec. 27, 1960.

SN 126,553. Thomas Earl Allgood, d.b.a. National Honor System, Salt Lake City, Utah. Filed Aug. 24, 1961.

NATIONAL

For Trailer Park and Trailer Tourist Information Services, Including the Furnishing of Parking Space, and Utilities for House Trailers and Recreational Facilities for Occupants of House Trailers, and the Furnishing of Travel Information to Trailer Tourists.
First use in or about June 1951.

SN 133,428. Universal Medical Laboratory Service, Inc., Chicago, Ill. Filed Dec. 5, 1961.

UNI-LAB SYSTEM

For Biological and Biochemical Tests for Physicians.
First use Oct. 1, 1961.

Class 101 — Advertising and Business

SN 62,931. Independent Retailers Syndicate, Inc., New York, N.Y. Filed Nov. 21, 1958.

S I T

For Retail Girls' Apparel Shop Services Conducted by Department Stores.
First use Jan. 13, 1954.

SN 116,887. The Headliners International, New York, N.Y. Filed Mar. 31, 1961.

Headliners

For Designing of Lettering for Use in Photoprocess Printing by Franchisees.
First use Apr. 9, 1959.

SN 122,105. Norstan Research & Development Company, Minneapolis, Minn. Filed June 15, 1961.

NORSTAN

For Leasing to Others and Operating an Amusement Device Which Simulates a Helicopter in Flight.
First use Aug. 1, 1960.

SN 130,099. No. 1–A District Agricultural Association of the State of California, San Francisco, Calif. Filed Oct. 17, 1961.

COW PALACE

For Promoting the Sale of Goods and Services of Others Through the Conduct of Competitive Sporting Events, Auctioning of Live Stock, Animal Exhibits, and Performances and Other Events.
First use about Aug. 1, 1961; November 1941 in a different form.

SN 131,775. Tele-Sound Productions, Inc., Washington, D.C. Filed Nov. 10, 1961.

TOP DOG

For Advertising and Promoting the Sale of Goods (and/or Services) of Others Through the Conduct of Contests and Writing of Advertising Script for Use on Radio, Television, and in Newspapers.
First use January 1961.

SN 142,103. Keuffel & Esser Company, Hoboken, N.J. Filed Apr. 12, 1962.

OPTICS AND METROLOGY

In this application no claim is made to the words "Optics" and "Metrology" apart from the mark shown, but applicant waives none of its rights therein.
For Consultation, Design, Development, and Research Services for Others in the Field of Optical, Mechanical, and Electronic Systems.
First use May 1960.

SN 144,558. George S. Swope, d.b.a. MPA Manplan Associates, Chicago, Ill. Filed May 14, 1962.

MANPLAN

For Management Position Evaluation for Other Business Firms.
First use Apr. 19, 1962.

SN 151,331. Jewel Tea Co., Inc., Melrose Park, Ill. Filed Aug. 16, 1962.

Jewel Food Stores

Applicant disclaims the words "Food Stores" except as used with the name "Jewel." Owner of Reg. Nos. 312,162, 564,836, and others.
For Retail Grocery Store Services.
First use on or before Mar. 20, 1934.

Class 102 — Insurance and Financial

SN 122,409. Wolverine Insurance Company, Federal Life and Casualty Company, Secured Insurance Company, Riverside Insurance Company of America, d.b.a. Tower Group, Battle Creek, Mich. Filed June 19, 1961.

WOLVERINE · Serving People · FEDERAL · SECURED · RIVERSIDE ·

The words "Insurance" and "Serving People" are disclaimed apart from the combination shown in the drawing.
For Insurance Underwriting Services.
First use December 1959.

SN 125,919. Hoosier Farm Bureau Life Insurance Company, d.b.a. Farm Bureau Insurance, Indianapolis, Ind. Filed Aug. 14, 1961.

Thrifty McBip

For Operating a Plan by Which Applicant's Policy-Holders May Pay Their Premiums on a Number of Policies With a Single Monthly Payment.
First use Mar. 27, 1961.

SN 153,531. The United States Life Insurance Company in the City of New York, New York, N.Y. Filed Sept. 19, 1962.

INSURANAMIC

The stippling of the drawing is to indicate shading.
For Analyzing and Computing the Insurance Needs of an Individual.
First use Sept. 12, 1962.

Class 105 — Transportation and Storage

SN 115,283. Aerovias Nacionales de Colombia, Bogota, Colombia. Filed Mar. 10, 1961.

THE ROUTE OF THE RED RUANAS

The word "Route" is disclaimed apart from the mark as shown in the drawing. The word "Ruana" means a poncho or a cloak.

For Airline Transportation Services for Cargo and Passengers Between the United States of America and Countries Foreign Thereto.

First use Oct. 13, 1957; in commerce Dec. 7, 1957.

SN 121,681. Texas Eastern Transmission Corporation, Shreveport, La. Filed June 8, 1961.



For Transportation and Storage of Natural Gas and Other Hydrocarbon Components for Others.

First use approximately Apr. 24, 1951.

SN 145,100. Manpower, Inc., Milwaukee, Wis. Filed May 21, 1962.

TRAVELPOWER

For Travel Services—Namely, Making Arrangements for Transportation, Lodging, Vehicle Rental, Conventions and Meetings and the Like.

First use June 26, 1960.

SN 152,128. Elite Tours & Travel Service Inc., New York, N.Y. Filed Aug. 29, 1962.

ELITE

For Arranging and Guiding Tours.

First use May 7, 1959.

Class 107 — Education and Entertainment

SN 87,907. The Professional Golfers' Association of America, Dunedin, Fla. Filed Dec. 23, 1959.



For Golf Tournaments in the United States Between British and American Professional Golfers.

First use in or about June 1927.

SN 114,976. Steven Lawrence Mallen, d.b.a. The Viva Tones, Chattanooga, Tenn. Filed Mar. 6, 1961.

The Viva Tones

For Instrumental Musical Entertainment Services.

First use July 13, 1959.

CERTIFICATION MARKS

Class B — Services

SN 152,617. The National Association of Insurance Brokers, Inc., New York, N.Y. Filed Sept. 6, 1962.



The mark certifies that the services performed are according to standards established by applicant.

For Services as Insurance Brokers.

First use December 1961.

TRADEMARK REGISTRATIONS ISSUED

PRINCIPAL REGISTER

Class 1 — Raw or Partly Prepared Materials

749,964. REZOSOL. E. F. Houghton & Co. SN 131,044. Pub. 3-12-63. Filed 10-31-61.

749,965. LEATHER-FLOC. Magnet Cove Barium Corporation. SN 135,214. Pub. 3-12-63. Filed 1-4-62.

749,966. POLYPAT. Polypat Leathers, Inc. SN 135,705. Pub. 3-12-63. Filed 1-12-62.

749,967. RUCOBLEND. Rubber Corporation of America. SN 135,716. Pub. 3-12-63. Filed 1-12-62.

749,968. CAMELFOAM. George Koch Sons, Inc., d.b.a. Bloomlife. SN 141,921. Pub. 3-12-63. Filed 4-5-62.

Class 2 — Receptacles

749,969. DRI-PLY. Ash Grove Lime & Portland Cement Co. SN 135,328. Pub. 3-12-63. Filed 1-8-62.

749,970. HENOCUP AND DESIGN. Henolite Products, Inc. SN 141,442. Pub. 3-12-63. Filed 4-3-62.

749,971. PROLON. Pro-phy-lac-tic Brush Company. SN 144,880. Pub. 3-12-63. Filed 5-17-62.

Class 5 — Adhesives

749,972. BOSTIK. United Shoe Machinery Corporation, assignee of B.B. Chemical Co. SN 126,428. Pub. 3-12-63. Filed 8-22-61.

749,973. PLIOGUARD. The Goodyear Tire & Rubber Company. SN 136,759. Pub. 3-12-63. Filed 1-29-62.

Class 6 — Chemicals and Chemical Compositions

749,974. EPT. Heyden Newport Chemical Corporation. SN 123,198. Pub. 3-12-63. Filed 6-30-61.

749,975. ACTRAGARD. Arthur C. Trask Company. SN 128,851. Pub. 3-12-63. Filed 7-12-61.

749,976. EPORAL. Roussel-UCLAF, by change of name from UCLAF. SN 131,904. Pub. 3-12-63. Filed 11-13-61.

749,977. DOKUMENTAL 303 DOCUMENTAL 303. Dr. Ing. Bruno V. Zychlinski. SN 123,546. Pub. 3-12-63. Filed 12-7-61.

749,978. CORROFILM. Associated Laboratories Inc. SN 138,619. COLLECTIVE MARK. Pub. 3-12-63. Filed 12-8-61.

749,979. VOLAMINE. Associated Laboratories, Inc. SN 138,620. COLLECTIVE MARK. Pub. 3-12-63. Filed 12-8-61.

749,980. TURFGARD. Velsicol Chemical Corporation. SN 135,645. Pub. 3-12-63. Filed 1-11-62.

749,981. DEADY AND DESIGN. Deady Chemical Company. SN 138,170. Pub. 3-12-63. Filed 2-19-62.

749,982. KEM-ZONE. Oilstate, Inc. SN 139,663. Pub. 3-12-63. Filed 3-12-62.

749,983. X-TERNOL. Oilstate, Inc. SN 139,664. Pub. 3-12-63. Filed 3-12-62.

749,984. TYZOIL. Oilstate, Inc. SN 139,665. Pub. 3-12-63. Filed 3-12-62.

749,985. MOKAL. Monsanto Chemical Company. SN 139,950. Pub. 3-12-63. Filed 3-15-62.

749,986. PROSLIK. The Procter & Gamble Company. SN 139,966. Pub. 3-12-63. Filed 3-15-62.

749,987. SALVO. Olin Mathieson Chemical Corporation. SN 141,970. Pub. 3-12-63. Filed 4-10-62.

749,988. VALCO. Valley Co-Op Oil Mill. SN 142,066. Pub. 3-12-63. Filed 4-11-62.

749,989. KEEVER AND DESIGN. The Keever Starch Company, d.b.a. The Keever Company. SN 144,074. Pub. 3-12-63. Filed 5-8-62.

749,990. UNICOR PSC. Universal Oil Products Company. SN 144,428. Pub. 3-12-63. Filed 5-11-62.

749,991. ONIGAS. The Onigas Company. SN 148,903. Pub. 3-12-63. Filed 7-12-62.

749,992. HUB. The Procter & Gamble Company. SN 150,183. Pub. 3-12-63. Filed 7-31-62.

749,993. COASTAL CAL JET AND DESIGN. Coastal Chemical Corp. SN 150,525. Pub. 3-12-63. Filed 8-6-62.

749,994. DEKATYL. E. I. du Pont de Nemours and Company. SN 151,026. Pub. 3-12-63. Filed 8-13-62.

749,995. SELECTROFOAM. Pittsburgh Plate Glass Company. SN 151,164. Pub. 3-12-63. Filed 8-14-62.

Class 10 — Fertilizers

749,996. RED BARN ETC. AND DESIGN. Chemical Enterprises, Inc. SN 127,905. Pub. 3-12-63. Filed 9-15-61.

749,997. SILVAMULCH. Weyerhaeuser Company. SN 138,997. Pub. 3-12-63. Filed 3-2-62.

749,998. SILVABARK. Weyerhaeuser Company. SN 138,999. Pub. 3-12-63. Filed 3-2-62.

Class 12 — Construction Materials

749,999. VICTORIAN AND DESIGN. Victorian Marble Products. SN 128,389. Pub. 3-12-63. Filed 9-22-61.

750,000. ENDURE-A-BILT. Endure-A-Lifetime Products, Inc. SN 150,238. Pub. 3-12-63. Filed 8-1-62.

Class 13 — Hardware and Plumbing and Steam-Fitting Supplies

750,001. SATURN. Shepherd Casters, Inc. SN 132,062. Pub. 3-12-63. Filed 11-15-61.

750,002. POWER GRIP. Dixon Valve & Coupling Company, assignee of Consolidated Controls Corporation. SN 132,129. Pub. 3-12-63. Filed 11-16-61.

750,003. DURANT. Durant Insulated Pipe Co., Inc. SN 132,228. Pub. 3-12-63. Filed 11-17-61.

750,004. HITCHIN' PLUG. Crawford Fitting Company. SN 132,816. Pub. 3-12-63. Filed 11-27-61.

750,005. BATH BAY. Cole-Sewell Engineering Co. SN 134,373. Pub. 3-12-63. Filed 12-20-61.

750,006. BILLINGS. Crescent Niagara Corporation, assignee of The Billings & Spencer Company. SN 135,171. Pub. 3-12-63. Filed 1-4-62.

750,007. PORT-O-LET. Leroy O. Eger, d.b.a. San-O-Let Company. SN 135,887. Pub. 3-12-63. Filed 1-16-62.

750,008. SEAGLAS. Sea-Chrome Inc. SN 137,169. Pub. 3-12-63. Filed 2-2-62.

750,009. FAULTLESS ETC. AND DESIGN. Faultless Caster Corporation. SN 142,481. Pub. 3–12–63. Filed 4–16–62.

750,010. USS. United States Steel Corporation. SN 143,471. Pub. 3–12–63. Filed 4–30–62.

750,011. PONY-LOX. Plas-Ties Company. SN 143,858. Pub. 3–12–63. Filed 5–4–62.

750,012. A-FD AND DESIGN. Aero-Flow Dynamics, Inc. SN 144,912. Pub. 3–12–63. Filed 5–18–62.

750,013. CALTUPCO. California Tubular Products Co. SN 145,922. Pub. 3–12–63. Filed 6–1–62.

750,014. THERM-O-DISC. Therm-O-Disc, Incorporated. SN 147,646. Pub. 3–12–63. Filed 6–25–62.

750,015. CORNELIUS IN OVAL DESIGN. The Cornelius Company. SN 152,982. Pub. 3–12–63. Filed 9–12–62.

Class 14—Metals and Metal Castings and Forgings

750,016. HALOMET. Max Henry Hoepli, d.b.a. M. H. Hoepli Company. SN 131,043. Pub. 3–12–63. Filed 10–31–61.

750,017. DI-NAMIC AND DESIGN. Accurate Manufacturing Co. SN 142,774. Pub. 3–12–63. Filed 4–23–62.

Class 15—Oils and Greases

750,018. SILVER SHIELD AND DESIGN. Western Tire Auto Stores, Inc. SN 135,074. Pub. 3–12–63. Filed 1–2–62.

Class 16—Protective and Decorative Coatings

750,019. MARVETHANE. The Sherwin-Williams Company. SN 150,283. Pub. 3–12–63. Filed 8–1–62.

750,020. WESTILE. West Chemical Products, Inc. SN 151,551. Pub. 3–12–63. Filed 8–20–62.

750,021. BUDGET. Armstrong Paint & Varnish Works, Inc. SN 152,193. Pub. 3–12–63. Filed 8–30–62.

Class 17—Tobacco Products

750,022. MAX ETC. AND REPRESENTATION OF A HUMAN MALE. St. James's Tobacco Company Limited. SN 146,929. Pub. 3–12–63. Filed 6–14–62.

Class 18—Medicines and Pharmaceutical Preparations

750,023. ATROBARB. Jenkins Laboratories, Incorporated. SN 48,287. Pub. 3–12–63. Filed 3–24–58.

750,024. TOPIDASE. Merck & Co., Inc. SN 106,927. Pub. 3–12–63. Filed 10–21–60.

750,025. PERMA-SOL. Commercial Solvents Corporation. SN 127,384. Pub. 3–12–63. Filed 9–7–61.

750,026. PERMA-DUAL. Commercial Solvents Corporation. SN 127,385. Pub. 3–12–63. Filed 9–7–61.

750,027. PERMA-D. Commercial Solvents Corporation. SN 127,387. Pub. 3–12–63. Filed 9–7–61.

750,028. PERMA-E. Commercial Solvents Corporation. SN 127,388. Pub. 3–12–63. Filed 9–7–61.

750,029. AMPAK. The Autometric Corporation, assignee of Autometric Corporation. SN 129,653. Pub. 1–22–63. Filed 10–11–61.

750,030. CHRONOSULE. White Laboratories, Inc. SN 141,139. Pub. 3–12–63. Filed 3–29–62.

750,031. CHRONOTAB. White Laboratories, Inc. SN 141,140. Pub. 3–12–63. Filed 3–29–62.

750,032. HALOANISONE. Laboratoria Pharmaceutica Dr. C. Janssen N.V. SN 146,730. Pub. 3–12–63. Filed 6–12–62.

750,033. VITCOLD. Beecham Proprietary Medicines Limited, d.b.a. Harwoods Laboratories. SN 148,132. Pub. 3–12–63. Filed 7–2–62.

750,034. PUSH BUTTONS AND DESIGN. T. R. Gibbs Medicine Company, Inc. SN 149,385. Pub. 3–12–63. Filed 7–19–62.

750,035. TOASTULES. M. R. Thompson, Inc. SN 149,894. Pub. 3–12–63. Filed 7–26–62.

750,036. HYDRO-CARDIOQUIN. The Purdue Frederick Company. SN 149,963. Pub. 3–12–63. Filed 7–27–62.

750,037. NEGRAM. Sterling Drug Inc. SN 150,114. Pub. 3–12–63. Filed 7–30–62.

750,038. NORLESTRIN. Parke, Davis & Company. SN 150,179. Pub. 3–12–63. Filed 7–31–62.

750,039. RANESTOL. Parke, Davis & Company. SN 150,180. Pub. 3–12–63. Filed 7–31–62.

750,040. BARBIDONNA. Mallinckrodt Chemical Works, assignee of Van Pelt and Brown, Incorporated. SN 150,479. Pub. 3–12–63. Filed 8–3–62.

750,041. BUTAGESIC. Laser, Inc. SN 150,568. Pub. 3–12–63. Filed 8–6–62.

750,042. CONTRAPAR. Burroughs Wellcome & Co. (U.S.A.) Inc. SN 150,850. Pub. 3–12–63. Filed 8–9–62.

750,043. AVENTYL. Eli Lilly and Company. SN 150,958. Pub. 3–12–63. Filed 8–10–62.

750,044. LIQUICAPS. Helene Curtis Industries, Inc., d.b.a. Curtis Pharmacals. SN 151,019. Pub. 3–12–63. Filed 8–13–62.

750,045. STREXATE. The S. E. Massengill Company. SN 151,244. Pub. 3–12–63. Filed 8–15–62.

750,046. MYAGEN. The Upjohn Company. SN 151,276. Pub. 3–12–63. Filed 8–15–62.

750,047. PROVEST. The Upjohn Company. SN 151,277. Pub. 3–12–63. Filed 8–15–62.

750,048. PHARAGESIC. Marion Laboratories, Inc. SN 151,498. Pub. 3–12–63. Filed 8–20–62.

Class 19—Vehicles

750,049. OPEN ROAD. Robin Motors. SN 141,886. Pub. 3–12–63. Filed 4–9–62.

750,050. M AND DESIGN. Moog Industries, Inc. SN 142,841. Pub. 3–12–63. Filed 4–23–62.

750,051. A-FD AND DESIGN. Aero-Flow Dynamics, Inc. SN 144,913. Pub. 3–12–63. Filed 5–18–62.

750,052. ATLAS. Atlas Supply Company. SN 145,025. Pub. 3–12–63. Filed 5–21–62.

750,053. AERO-CHIEF. Sterling Precision Corporation. SN 152,016. Pub. 3–12–63. Filed 8–27–62.

750,054. ARTIC-KAR. Capitol Refrigeration, Inc. SN 152,043. Pub. 3–12–63. Filed 8–28–62.

750,055. THE TADPOLE. BKC, Inc. SN 152,373. Pub. 3–12–63. Filed 9–4–62.

750,056. PRESS-TECTION. Badger Manufacturing Corporation. SN 153,244. Pub. 3–12–63. Filed 9–17–62.

750,057. ROLLAWAY. Litchfield Engineering, Incorporated. SN 153,299. Pub. 3–12–63. Filed 9–17–62.

Class 21—Electrical Apparatus, Machines, and Supplies

750,058. VA BOMAC AND DESIGN. Varian Associates. SN 123,381. Pub. 3–12–63. Filed 7–3–61.

750,059. SEALECTRO. Sealectro Corporation. SN 130,587. Pub. 3–12–63. Filed 10–24–61.

750,060. SEALECTRO AND DESIGN. Sealectro Corporation. SN 131,159. Pub. 3–12–63. Filed 11–1–61.

750,061. WATCHDOG TV. Bell Television, Inc. SN 133,129. Pub. 3–12–63. Filed 12–1–61.

750,062. AII (INSIGNIA). Automation Industries, Inc. SN 133,201. Pub. 3–12–63. Filed 12–4–61.

750,063. AGIECUT. A.G. fur Industrielle Elektronik A.G.I.E. SN 133,515. Pub. 3–12–63. Filed 12–7–61.

750,064. AGIEFORM. A.G. fur Industrielle Elektronik A.G.I.E. SN 133,516. Pub. 3–12–63. Filed 12–7–61.

750,065. AGIETAL. A.G. fur Industrielle Elektronik A.G.I.E. SN 133,517. Pub. 3–12–63. Filed 12–7–61.

750,066. POWERFLOOD. General Electric Company. SN 134,387. Pub. 3–12–63. Filed 12–20–61.

750,067. TOUCH 'N LOCK. Sunbeam Corporation. SN 134,495. Pub. 3–12–63. Filed 12–21–61.

750,068. HOME-MASTER. Western Tire Auto Stores, Inc. SN 134,709. Pub. 3–12–63. Filed 12–26–61.

750,069. GENCLAD. General Plastics Corporation. SN 134,733. Pub. 3–12–63. Filed 12–27–61.

750,070. MAGTRAK. Daystrom, Incorporated. SN 138,566. Pub. 3–12–63. Filed 2–23–62.

750,071. INSTALITE. Century Lighting, Inc. SN 138,704. Pub. 3–12–63. Filed 2–27–62.

750,072. COLOR FLAME. Duro-Test Corporation. SN 140,542. Pub. 3–12–63. Filed 3–23–62.

750,073. ENSIGN AND DESIGN. Admiral Corporation. SN 140,897. Pub. 3–12–63. Filed 3–28–62.

750,074. A AND DESIGN. Astrodata, Inc. SN 141,695. Pub. 3–12–63. Filed 4–6–62.

750,075. STYLORON. Globe Illumination Company. SN 142,812. Pub. 3–12–63. Filed 4–23–62.

750,076. A-FD AND DESIGN. Aero-Flow Dynamics, Inc. SN 144,914. Pub. 3–12–63. Filed 5–18–62.

750,077. ADAPTA-DATA. Jimmie L. Holman. SN 144,959. Pub. 3–12–63. Filed 5–18–62.

750,078. CAMBRIDGE. Simplex Wire & Cable Co. SN 146,425. Pub. 3–12–63. Filed 6–7–62.

750,079. COFFEE HOST. Holiday Inns of America, Inc. SN 148,382. Pub. 3–12–63. Filed 7–5–62.

750,080. POLISKRUBBER. Poliskrub Corporation. SN 151,356. Pub. 3–12–63. Filed 8–16–62.

750,081. DIRECTRON. Graphic Electronics, Inc. SN 152,301. Pub. 3–12–63. Filed 8–31–62.

750,082. AMPILLUME. AMP Incorporated. SN 152,364. Pub. 3–12–63. Filed 9–4–62.

Class 22—Games, Toys, and Sporting Goods

750,083. SPOT SHOT. The Spot Shot Company. SN 138,549. Pub. 3–12–63. Filed 2–23–62.

750,084. GOLD DUST AND DESIGN. Ruel Williford Reynolds. SN 138,655. Pub. 3–12–63. Filed 2–26–62.

750,085. BALLS O'FIRE. Pautske Bait Co. Inc. SN 143,264. Pub. 3–12–63. Filed 4–27–62.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

750,086. OBERG MACHINE COMPANY AND DESIGN. C. O. Oberg & Co:s Aktiebolag, assignee of Oberg Machine Company Aktiebolag. SN 113,355. Pub. 3–12–63. Filed 2–9–61.

750,087. FULLER. Fuller Tool Co. Inc. SN 126,752. Pub. 3–12–63. Filed 8–28–61.

750,088. SPREADER-ETTE. Gandy Company. SN 129,762. Pub. 3–12–63. Filed 10–12–61.

750,089. SPROCKET CUPS. Dakota Tractor & Equipment Company. SN 131,275. Pub. 3–12–63. Filed 11–3–61.

750,090. HELI-CAL. Helical Products Company, Inc. SN 131,961. Pub. 3–12–63. Filed 11–14–61.

750,091. SUNDSTRAND-AMERICAN. Sundstrand Corporation. SN 132,759. Pub. 3–12–63. Filed 11–24–61.

750,092. V AND DESIGN. Vickers Incorporated. SN 133,508. Pub. 3–12–63. Filed 12–6–61.

750,093. V AND DESIGN. Vickers Incorporated. SN 133,509. Pub. 3–12–63. Filed 12–6–61.

750,094. V AND DESIGN. Vickers Incorporated. SN 133,510. Pub. 3–12–63. Filed 12–6–61.

750,095. V AND DESIGN. Vickers Incorporated. SN 133,511. Pub. 3–12–63. Filed 12–6–61.

750,096. POWER DOME. Kiekhaefer Corporation. SN 133,797. Pub. 3–12–63. Filed 12–11–61.

750,097. HOME-MASTER. Western Tire Auto Stores, Inc. SN 133,846. Pub. 3–12–63. Filed 12–11–61.

750,098. A WITHIN A CIRCLE. American Iron & Machine Works Company, Inc. SN 134,079. Pub. 3–12–63. Filed 12–15–61.

750,099. SCULLY JONES. Scully-Jones and Company. SN 134,275. Pub. 3–12–63. Filed 12–18–61.

750,100. MIRA-MATIC. Mira-Pak, Inc. SN 134,335. Pub. 3–12–63. Filed 12–19–61.

750,101. S-J. Scully-Jones and Company. SN 134,684. Pub. 3–12–63. Filed 12–26–61.

750,102. MUNDIAL AND DESIGN. Zivi S.A. Cutelaria. SN 134,727. Pub. 3–12–63. Filed 12–27–61.

750,103. ALLIED MARINE. Allied Marine Equipment Corp. SN 134,870. Pub. 3–12–63. Filed 12–29–61.

750,104. BILLINGS. Crescent Niagara Corporation, assignee of The Billings & Spencer Company. SN 135,172. Pub. 3–12–63. Filed S.R. 1–4–62; Am. P.R. 1–7–63.

750,105. CHICAGO-LATROBE. United-Greenfield Corporation. SN 138,825. Pub. 3–12–63. Filed 2–28–62.

750,106. DISPERSONIC. Sonic Engineering Corporation. SN 139,434. Pub. 3–12–63. Filed 3–8–62.

750,107. PEGASUS. Bristol Siddeley Engines Limited. SN 140,918. Pub. 3–12–63. Filed 3–28–62.

750,108. REVELATION. Western Auto Supply Company. SN 141,138. Pub. 3–12–63. Filed 3–29–62.

750,109. TRAUB AND DESIGN. Firma Hermann Traub, Maschinenfabrik. SN 142,088. Pub. 3–12–63. Filed 4–12–62.

750,110. SPRA-DISK. Amchem Products, Inc. SN 142,675. Pub. 3–12–63. Filed 4–20–62.

750,111. GARDEN MATE. Merry Manufacturing Co. SN 142,838. Pub. 3–12–63. Filed 4–23–62.

750,112. HUSCO. Hydraulic Unit Specialties Company. SN 143,028. Pub. 3–12–63. Filed 4–25–62.

750,113. NITROPHYL. Rogers Corporation. SN 143,762. Pub. 3–12–63. Filed 5–3–62.

750,114. PNEUMAFLOW. Pneumatic Scale Corporation, Limited. SN 143,999. Pub. 3–12–63. Filed 5–7–62.

750,115. BELTCRETE. Oury Engineering Company. SN 144,088. Pub. 3–12–63. Filed 5–8–62.

750,116. CM AND DESIGN. Carrier Manufacturing Company. SN 144,143. Pub. 3–12–63. Filed 5–9–62.

750,117. SIV-O-TOPPER. Daniel LaMar Christy, d.b.a. Christy Machine Company. SN 144,322. Pub. 3–12–63. Filed 5–11–62.

750,118. SIV-O-SALTER. Daniel LaMar Christy, d.b.a. Christy Machine Company. SN 144,324. Pub. 3–12–63. Filed 5–11–62.

750,119. SIV-O-DUSTER. Daniel LaMar Christy, d.b.a. Christy Machine Company. SN 144,325. Pub. 3–12–63. Filed 5–11–62.

750,120. MANN'S RAPID-WEEDER. Mann Edge Tool Company. SN 144,515. Pub. 3–12–63. Filed 5–14–62.

750,121. RED SNAPPER. Toledo-Beaver Tools, Inc. SN 144,651. Pub. 3–12–63. Filed 5–15–62.

750,122. CEKAVAC. Christenssons Maskiner & Patenter AB. SN 146,168. Pub. 3–12–63. Filed 6–5–62.

750,123. FLEXIFORT. Lloyd Manufacturing Co., Inc. SN 147,475. Pub. 3–12–63. Filed 6–22–62.

750,124. CORNELIUS IN OVAL DESIGN. The Cornelius Company. SN 152,983. Pub. 3–12–63. Filed 9–12–62.

750,125. MULTI-STRAND. Blaw-Knox Company. SN 158,139. Pub. 3–12–63. Filed 11–29–62.

Class 24 — Laundry Appliances and Machines

750,126. THE FEATHERLIGHT. New York Pressing Machinery Corp. SN 138,801. Pub. 3–12–63. Filed 2–28–62.

750,127. SHOPPER'S FAIR. Mangel Stores Corporation. SN 151,955. Pub. 3–12–63. Filed 8–27–62.

Class 26 — Measuring and Scientific Appliances

750,128. TECAM AND DESIGN. Techne (Cambridge) Limited. SN 101,136. Pub. 3–12–63. Filed 7–19–60.

750,129. HI AND DESIGN. Howell Instruments, Inc. SN 111,603. Pub. 3–12–63. Filed 1–10–61.

750,130. ASCOTA. VEB Buchungsmaschinenwerk Karl-Marx-Stadt. SN 111,938. Pub. 3–12–63. Filed 1–16–61.

750,131. WEBBER MICRO ACCURATE GAGES AND DESIGN. The L. S. Starrett Company, assignee of Webber Gage Company. SN 112,182. Pub. 3–12–63. Filed 1–19–61.

750,132. MAGNETIC GRIP-SHIELD. The Dilley Manufacturing Company. SN 113,096. Pub. 3–12–63. Filed 2–6–61.

750,133. VARI-PUNCH. Varifab Incorporated. SN 120,263. Pub. 3–12–63. Filed 5–17–61.

750,134. LEE SPEC-HOLDERS. Lee Optical Company, Inc. SN 127,861. Pub. 3–12–63. Filed 9–14–61.

750,135. TELEMETROL. Daystrom, Incorporated (Texas corporation), assignee of Daystrom, Incorporated (New Jersey corporation). SN 127,912. Pub. 3–12–63. Filed 9–15–61.

750,136. MICROLUME. MicroScience Corporation. SN 130,931. Pub. 3–12–63. Filed 10–30–61.

750,137. PRESTOSEAL. Fred Wellman, d.b.a. Photo Products. SN 131,165. Pub. 3–12–63. Filed 11–1–61.

750,138. F/METER. Hico Corporation. SN 134,322. Pub. 3–12–63. Filed 12–19–61.

750,139. SENSATER. Martin-Decker Corporation. SN 135,809. Pub. 3–12–63. Filed 1–15–62.

750,140. DATAPULSE. Datapulse, Inc. SN 136,119. Pub. 3–12–63. Filed 1–19–62.

750,141. LANGUAGE MASTER. Bell & Howell Company. SN 141,807. Pub. 3–12–63. Filed 4–2–62.

750,142. DIAL-O-VERTER. Digitronics Corporation. SN 141,584. Pub. 3–12–63. Filed 4–5–62.

750,143. IMMUNOPHOR. LKB-Produkter Aktiebolag. SN 141,848. Pub. 3–12–63. Filed 4–9–62.

750,144. PERMA-COTE. Pacific Universal Products Corporation. SN 141,877. Pub. 3–12–63. Filed 4–9–62.

750,145. FIRE DETECTIVE. Dictograph Products Inc. SN 142,173. Pub. 3–12–63. Filed S.R. 4–13–62; Am. P.R. 12–28–62.

750,146. MILLIMITE. Thermo Electric Co., Inc. SN 142,378. Pub. 3–12–63. Filed 4–16–62.

750,147. TEX-O-CON AND DESIGN. Tex-O-Con Optics, Inc. SN 143,468. Pub. 3–12–63. Filed 4–30–62.

750,148. A-FD AND DESIGN. Aero-Flow Dynamics, Inc. SN 144,915. Pub. 3–12–63. Filed 5–18–62.

750,149. VERNON. Vernon Photographic Corp. SN 145,146. Pub. 3–12–63. Filed 5–21–62.

750,150. VAPO-THERM. Ametek, Inc. SN 146,871. Pub. 3–12–63. Filed 6–14–62.

750,151. THERM-O-DISC. Therm-O-Disc, Incorporated. SN 147,647. Pub. 3–12–63. Filed 6–25–62.

750,152. WM ETC. AND DESIGN. Waukesha Motor Company. SN 149,029. Pub. 3–12–63. Filed 7–13–62.

750,153. PERMA-CENTER. The Lyman Gun Sight Corporation. SN 150,426. Pub. 3–12–63. Filed 8–3–62.

750,154. SPECTROCHROM. Beckman Instruments, Inc. SN 150,746. Pub. 3–12–63. Filed 8–8–62.

750,155. WEATHER SECRETARY. Minneapolis-Honeywell Regulator Company. SN 150,882. Pub. 3–12–63. Filed 8–9–62.

750,156. V.I.P. Nautec Corporation, Duncan Parking Meter Division. SN 150,965. Pub. 3–12–63. Filed 8–10–62.

750,157. SAVOY. Imperial Camera Corp. SN 151,057. Pub. 3–12–63. Filed 8–13–62.

750,158. KALI-BOR. Talbot Tool Company Limited. SN 151,442. Pub. 3–12–63. Filed 8–17–62.

750,159. ROTOTRAY. Sawyers, Inc. SN 151,844. Pub. 3–12–63. Filed 8–24–62.

Class 27 — Horological Instruments

750,160. GL AND DESIGN. Gensler-Lee, Inc. SN 147,101. Pub. 3–12–63. Filed 6–18–62.

750,161. MONTRE ROYALE DE GENEVE. Montre de Sport Geneve S.A. (Geneva Sport Watch Ltd.). SN 148,451. Pub. 3–12–63. Filed 6–11–62.

Class 28 — Jewelry and Precious-Metal Ware

750,162. KENYA. Day & Frick, Inc. SN 135,182. Pub. 3–12–63. Filed 1–4–62.

750,163. WC AND DESIGN. Wm. Chalson & Co. Inc. SN 141,031. Pub. 3–12–63. Filed 3–29–62.

750,164. LSL. L. S. & L. Setting Co., Inc. SN 146,391. Pub. 3–12–63. Filed 6–7–62.

750,165. KREISLER. Jacques Kreisler Manufacturing Corporation. SN 147,877. Pub. 3–12–63. Filed 6–21–62.

750,166. EU AND DESIGN. Eugene Unger and Co., Inc. SN 147,871. Pub. 3–12–63. Filed 6–27–62.

750,167. SUPERPOSED HT. Herman Top, d.b.a. Top's Supplies. SN 148,104. Pub. 3–12–63. Filed 6–29–62.

750,168. 14 KC. K-C Jewelry Mfg. Co. Inc. SN 148,313. Pub. 3–12–63. Filed 7–3–62.

750,169. 14K AND DESIGN. Charles Haber, d.b.a. Haber Company. SN 148,618. Pub. 3–12–63. Filed 7–9–62.

750,170. TB AND DESIGN. Alan R. Tenen, d.b.a. Tenen Brothers. SN 148,672. Pub. 3–12–63. Filed 7–9–62.

750,171. DTC. Devon Trading Co. SN 149,171. Pub. 3–12–63. Filed 7–17–62.

750,172. DI-GOR. Di-Gor Earrings & Jewelry Mfg. Co., Inc. SN 150,537. Pub. 3–12–63. Filed 8–6–62.

750,173. RICHLINE. Ulrich Associates. SN 150,650. Pub. 3–12–63. Filed 8–6–62.

Class 29 — Brooms, Brushes, and Dusters

750,174. BB CO., INC. IN CIRCLE DESIGN. Boston Brush Company, Inc. SN 140,085. Pub. 3–12–63. Filed 3–19–62.

750,175. TEAM MATES. The Fuller Brush Company. SN 142,630. Pub. 3–12–63. Filed 4–19–62.

Class 31 — Filters and Refrigerators

750,176. A–FD AND DESIGN. Aero-Flow Dynamics, Inc. SN 144,916. Pub. 3–12–63. Filed 5–18–62.

750,177. GLASSAIRE. Filtration Products of Canada Limited. SN 145,178. Pub. 3–12–63. Filed 5–22–62.

750,178. SPARKLE CREAM. American Machine & Foundry Company. SN 145,315. Pub. 3–12–63. Filed 5–24–62.

750,179. HUSKY. The J. E. Porter Corporation. SN 145,598. Pub. 3–12–63. Filed 5–28–62.

750,180. GREAT BEAR AND DESIGN. Great Bear Spring Company. SN 145,939. Pub. 3–12–63. Filed 6–1–62.

750,181. CORNELIUS IN OVAL DESIGN. The Cornelius Company. SN 152,984. Pub. 3–12–63. Filed 9–12–62.

Class 32 — Furniture and Upholstery

750,182. BYRD AND DESIGN. Charles R. Byrd, Inc. SN 109,163. Pub. 3–12–63. Filed 11–28–60.

750,183. MODERN PANTRY. Erik Tandero, Inc. SN 142,754. Pub. 3–12–63. Filed 4–20–62.

750,184. DREAM-O-PEDIC AND DESIGN. American Bedding, Inc. SN 148,459. Pub. 3–12–63. Filed 7–6–62.

Class 34 — Heating, Lighting, and Ventilating Apparatus

750,185. CAROUSEL AND DESIGN. Halo Sales Corporation. SN 122,305. Pub. 3–12–63. Filed 6–19–61.

750,186. PROPMASTER. Acme Engineering and Manufacturing Corporation. SN 130,858. Pub. 3–12–63. Filed 10–30–61.

750,187. TUBEMASTER. Acme Engineering and Manufacturing Corporation. SN 130,861. Pub. 3–12–63. Filed 10–30–61.

750,188. DYNAMASTER. Acme Engineering and Manufacturing Corporation. SN 130,862. Pub. 3–12–63. Filed 10–30–61.

750,189. HOME-MASTER. Western Tire Auto Stores, Inc. SN 134,708. Pub. 3–12–63. Filed 12–26–61.

750,190. GENIE AIR VENTS HR AND DESIGN. Genie-Air, Inc. SN 138,196. Pub. 3–12–63. Filed 2–19–62.

750,191. ORIFLAMA. Calefones Heineken Sociedad Anonima Industrial y Comercial. SN 139,198. Pub. 3–12–63. Filed 3–6–62.

750,192. PLASTERVAC. Orthopedic Frame Company. SN 140,975. Pub. 3–12–63. Filed 3–28–62.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

750,193. CUSHION-GRIP. The Goodyear Tire & Rubber Company. SN 144,372. Pub. 3–12–63. Filed 5–11–62.

750,194. X-FLEX. Bowes "Seal Fast" Corporation. SN 150,997. Pub. 3–12–63. Filed 8–13–62.

750,195. TRACTIONAIRE. The Firestone Tire & Rubber Company. SN 151,039. Pub. 3–12–63. Filed 8–13–62.

750,196. LOADER-DOZER. The Firestone Tire & Rubber Company. SN 151,040. Pub. 3–12–63. Filed 8–13–62.

750,197. VITAFLEX. The Kelly-Springfield Tire Company. SN 151,233. Pub. 3–12–63. Filed 8–15–62.

Class 36 — Musical Instruments and Supplies

750,198. MMM AND DESIGN. M. M. Meason, Inc. SN 151,503. Pub. 3–12–63. Filed 8–20–62.

Class 37 — Paper and Stationery

750,199. CRAY-CILS. Standard Toycraft, Inc., by change of name from Standard Toykraft Products, Inc. SN 138,989. Pub. 3–12–63. Filed 3–3–62.

750,200. MEAD PAPERS READY-CUT AND DESIGN. The Mead Corporation. SN 148,278. Pub. 3–12–63. Filed 7–2–62.

750,201. PRESTO STICK. Eureka Specialty Printing Company. SN 148,881. Pub. 3–12–63. Filed 7–12–62.

750,202. GRAND WAY. The Grand Union Company. SN 149,077. Pub. 3–12–63. Filed 7–16–62.

Class 38 — Prints and Publications

750,203. INTERNATIONAL ADVERTISER. International Advertising Association, Inc. SN 113,341. Pub. 3–12–63. Filed 2–9–61.

750,204. THE PREDICT-A-MAT. Revlon, Inc. SN 120,668. Pub. 3–12–63. Filed 5–23–61.

750,205. AEROSPACE MANAGEMENT. Chilton Company. SN 122,160. Pub. 3–12–63. Filed 6–16–61.

750,206. ASA WITH A SINGLE HORIZONTAL LINE ABOVE AND BELOW THE LETTERS. American Standards Association, Inc. SN 126,841. Pub. 3–12–63. Filed 8–29–61.

750,207. U.S.A. INSIDE REPORT AND DESIGN. Parc Publishing Co., Inc. SN 127,255. Pub. 3–12–63. Filed 9–5–61.

750,208. U.S.A. INSIDE REPORT. Parc Publishing Co., Inc. SN 127,257. Pub. 3–12–63. Filed 9–5–61.

750,209. HANDLING & SHIPPING. The Industrial Publishing Corporation. SN 130,215. Pub. 3–12–63. Filed 10–18–61.

750,210. PBB ETC. AND DESIGN. Washington Square Press, Inc. SN 139,802. Pub. 3–12–63. Filed 3–13–62.

750,211. COTTON FARMING SUPPLEMENTAL CROPS AND STOCK. Walter F. Little, Jr., d.b.a. Cotton Farming. SN 140,737. Pub. 3–12–63. Filed 3–26–62.

Class 39 — Clothing

750,212. THE SHIRT WITH EYE APPEAL. J. Freeker & Son, Inc. SN 101,860. Pub. 3–12–63. Filed 8–2–60.

750,213. LERO ETC. AND DESIGN. Philip E. Shaouy. SN 118,818. Pub. 3–12–63. Filed 4–27–61.

750,214. BOWLETTES. Brunswick-Union Inc., by change of name from Brunswick Sports Products Company. SN 118,948. Pub. 3–12–63. Filed 5–1–61.

750,215. CONTROFLEX. The Strouse, Adler Company. SN 124,688. Pub. 3–12–63. Filed 7–25–61.

750,216. ANGEL SOLES. Maxwell Schneider. SN 128,764. Pub. 3–12–63. Filed 9–27–61.

750,217. DENNIS. Dennis Uniform Manufacturing Co. SN 129,927. Pub. 3–12–63. Filed 10–16–61.

750,218. MBS. Market Buying Service. SN 131,971. Pub. 3–12–63. Filed 11–14–61.

750,219. HONEY-WORTH. Honey-Worth Industries, Inc. SN 132,998. Pub. 3–12–63. Filed 11–29–61.

750,220. HANES AND DESIGN LINED FOR RED, BLACK AND GOLD. P. H. Hanes Knitting Company. SN 133,664. Pub. 3–12–63. Filed 12–8–61.

750,221. HANES AND DESIGN LINED FOR RED, BLACK AND GOLD. P. H. Hanes Knitting Company. SN 133,666. Pub. 3–12–63. Filed 12–8–61.

750,222. VIVALDI. Pauker Brothers. SN 134,266. Pub. 3–12–63. Filed 12–18–61.

750,223. BW AND DESIGN. Best Wear Hosiery Company. SN 135,960. Pub. 3–12–63. Filed 1–17–62.

750,224. SIGRID ELLEN. Sigrid Ellen, Inc. SN 140,187. Pub. 3–12–63. Filed 3–19–62.

750,225. KASH D'OR. Wales Manufacturing Company. SN 140,891. Pub. 3–12–63. Filed 3–27–62.

750,226. BETTI TERRELL. Betti Terrell, Inc. SN 141,387. Pub. 3–12–63. Filed 4–2–62.

750,227. GEORGE LONDON. Bowling Apparel, Inc. SN 141,698. Pub. 3–12–63. Filed 4–6–62.

750,228. MOVIE STARLET AND DESIGN. Movie Star, Inc. SN 141,741. Pub. 3–12–63. Filed 4–6–62.

750,229. PLAYON. International Latex Corporation. SN 142,161. Pub. 3–12–63. Filed 4–12–62.

750,230. SHIELD DESIGN. Chips 'N Twigs, Inc. SN 142,497. Pub. 3–12–63. Filed 4–18–62.

750,231. HIGHLIGHT. Genesco Inc., assignee of The Formfit Company. SN 144,950. Pub. 3–12–63. Filed 5–18–62.

750,232. AWARDSMAN. Goodman Knitting Co. Inc. SN 146,290. Pub. 3–12–63. Filed 6–6–62.

750,233. X'ANDRINI AND DESIGN. Seidler Cravats Inc. SN 146,668. Pub. 3–12–63. Filed 6–11–62.

750,234. CERTALDO'S. Fiorella's, Inc. SN 147,915. Pub. 3–12–63. Filed 6–28–62.

750,235. PERFETTA'S. Fiorella's, Inc. SN 148,301. Pub. 3–12–63. Filed 7–3–62.

750,236. MOON STAR AND DESIGN. Nikka Rubber Co., Ltd. SN 149,762. Pub. 3–12–63. Filed 7–25–62.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

750,237. ASTRO CLOTH. The Cantor-Greenspan Co., Inc. SN 141,497. Pub. 3–12–63. Filed 4–4–62.

750,238. MICRO-SHEER. Beacon Looma Inc. SN 142,480. Pub. 3–12–63. Filed 4–13–62.

Class 44—Dental, Medical, and Surgical Appliances

750,239. K–34. Jung Products, Inc. SN 131,288. Pub. 3–12–63. Filed 11–3–61.

750,240. TRANCAR. Air Logistics Corporation. SN 136,861. Pub. 3–12–63. Filed 1–30–62.

750,241. DUOCON. Howdon Videx Products Corporation. SN 145,186. Pub. 3–12–63. Filed 5–22–62.

750,242. TOPOGOMETER. Sopher Brothers, Inc. SN 148,240. Pub. 3–12–63. Filed 7–2–62.

750,243. COIF-AIRE. Philmont Manufacturing Company. SN 152,436. Pub. 3–12–63. Filed 9–4–62.

Class 45—Soft Drinks and Carbonated Waters

750,244. FIGURE CONTROL. Duffy-Mott Company, Inc. SN 149,723. Pub. 3–12–63. Filed 7–25–62.

Class 46—Foods and Ingredients of Foods

750,245. CAN'T STOP EATING 'EM. Jays Foods, Inc. SN 68,269. Pub. 3–12–63. Filed 2–24–59.

750,246. MAPLE FARM AND DESIGN. Scudder Syrup Co. SN 78,655. Pub. 3–12–63. Filed 7–29–59.

750,247. TOWN TALK. Robinson Syrup Company, Inc. SN 91,623. Pub. 3–12–63. Filed 2–25–60.

750,248. BREW-MAGIC. Southern Tea Company. SN 98,312. Pub. 3–12–63. Filed 6–2–60.

750,249. SLENDERELLA. Slenderella Enterprises, Inc., assignee, by mesne assignments, and change of name, of Slenderella Systems, Inc. SN 101,434. Pub. 5–15–62. Filed 7–25–60.

750,250. CYNOPEP AND DESIGN. Walter Herr, d.b.a. Cynopep Company. SN 101,782. Pub. 3–12–63. Filed 8–1–60.

750,251. SOL-U-PRO. Wilson & Co., Inc. SN 102,987. Pub 3–12–63. Filed 8–18–60.

750,252. FUL VALU. A. J. Pietrus & Sons Co. SN 108,376. Pub. 3–12–63. Filed 11–14–60.

750,253. READY DIET. The Borden Company. SN 110,660. Pub. 3–12–63. Filed 12–22–60.

750,254. CARANDO'S AND DESIGN. Peter Carando, Inc., d.b.a. Carando's, Inc. SN 111,160. Pub. 3–12–63. Filed 1–3–61.

750,255. FARMIX. Central Soya Company, Inc. SN 112,214. Pub. 3–12–63. Filed 1–23–61.

750,256. PEKAO AND DESIGN. Pekao Trading Corporation. SN 116,658. Pub. 3–12–63. Filed 3–28–61.

750,257. McCULLOUGH'S WILD BIRD SEED AND DESIGN. George W. Hill and Company, assignee of The J. Chas. McCullough Seed Company. SN 119,534. Pub. 3–12–63. Filed 5–8–61.

750,258. SPORT CLUB. R. B. Galloway. SN 119,957. Pub. 3–12–63. Filed 5–15–61.

750,259. DESIGN OF GROTESQUE HUMAN BAKER. Jewel Tea Co., Inc. SN 120,890. Pub. 3–12–63. Filed 5–26–61.

750,260. DESIGN OF GROTESQUE HUMAN BAKER WITHIN A SCROLL. Jewel Tea Co., Inc. SN 120,891. Pub. 3–12–63. Filed 5–26–61.

750,261. TATER TRIX. Ore-Ida Foods, Inc. SN 121,220. Pub. 3–12–63. Filed 6–1–61.

750,262. GONZALES AND DESIGN. Gonzales Tortilleria. SN 123,743. Pub. 3–12–63. Filed 7–11–61.

750,263. GOODIES AND DESIGN. Goodies Spud Chip Co. SN 123,744. Pub. 3–12–63. Filed 7–11–61.

750,264. RICH PLAN. Rich Plan Corporation. SN 123,765. Pub. 3–12–63. Filed 7–11–61.

750,265. GOOMIES. Betsy Ross Sales Co., d.b.a. Betsy Ross Company. SN 124,225. Pub. 3–12–63. Filed 7–18–61.

750,266. BRIGHAM'S. Brigham's, Inc. SN 125,797. Pub. 3–12–63. Filed 8–11–61.

750,267. TOM SAWYER AND DESIGN. Tom Sawyer Foods, Inc. SN 135,721. Pub. 3–12–63. Filed 1–12–62.

750,268. PROMOSOY. Central Soya Company, Inc. SN 136,535. Pub. 3–12–63. Filed 1–25–62.

750,269. JIMINY QUICK. Salada-Shirriff-Horsey Ltd. SN 136,821. Pub. 3–12–63. Filed 1–29–62.

750,270. RANCHER. Barzen of Minneapolis Inc. SN 137,109. Pub. 3–12–63. Filed 2–2–62.

750,271. SUN-E-BOY. Sun-E-Boy Brands, Inc. SN 137,284. Pub. 3–12–63. Filed 2–5–62.

750,272. TOY FONG. Yat Gaw Min Company, assignee of Lee & Lee Co. SN 140,462. Pub. 3–12–63. Filed 3–22–62.

750,273. DIET-LINE. Regan Distributors of Coachella Valley, Inc., d.b.a. Regan Distributors, Incorporated. SN 144,414. Pub. 9–25–62. Filed 5–11–62.

750,274. W BRAND AND LEAF DESIGN. Omstead Fisheries 1961 Limited. SN 145,724. Pub. 3–12–63. Filed 5–29–62.

750,275. KERNLAND AND DESIGN. Kern County Land Company. SN 151,335. Pub. 3–12–63. Filed 8–16–62.

750,276. PELLA. Swift & Company. SN 151,539. Pub. 3–12–63. Filed 8–20–62.

750,277. WILLWOOD. Williams & Woods Ltd. SN 152,544. Pub. 3–12–63. Filed 9–5–62.

750,278. DWARF DESIGN. Fred Usinger, Inc. SN 153,034. Pub. 3–12–63. Filed 9–12–62.

Class 47—Wines

750,279. SWISS MIST ETC. AND DESIGN. United Vintners, Inc., d.b.a. Italian Swiss Colony. SN 151,702. Pub. 3–12–63. Filed 8–22–62.

Class 49—Distilled Alcoholic Liquors

750,280. ALZOLA. Clara Obregon Marcet. SN 139,112. Pub. 3–12–63. Filed 3–5–62.

750,281. HCTOCS. Schenley Distillers, Inc. SN 140,297. Pub. 3–12–63. Filed 3–20–62.

750,282. ANCIENT SCOT. A. B. Grant & Co. Ltd., d.b.a. Allander Blending Co. Ltd. SN 150,337. Pub. 3–12–63. Filed 8–2–62.

Class 51—Cosmetics and Toilet Preparations

750,283. LOVELY LEGS. Lovely Legs, Inc. SN 94,677. Pub. 11–1–60. Filed 4–8–60.

750,284. GOOD UNTIL TAPS. Nu-Vita Products Inc. SN 97,410. Pub. 3–12–63. Filed 5–18–60.

750,285. LUCIENNE MERLE. Lucienne Felix, born Lafitte, d.b.a. Laboratoires Lucienne Merle. SN 121,185. Pub. 3–12–63. Filed 6–1–61.

750,286. SILVER NOTES. Avon Products, Inc. SN 128,784. Pub. 3–12–63. Filed 9–28–61.

750,287. LITTLE LAMB. Studio Girl-Hollywood, Inc. SN 133,180. Pub. 3–12–63. Filed 12–1–61.

750,288. JOMAR. Imogene Shepherd Cosmetics, Inc. SN 138,985. Pub. 3–12–63. Filed 3–2–62.

750,289. FROM A MISTY GARDEN. The Fuller Brush Company. SN 149,837. Pub. 3–12–63. Filed 7–26–62.

750,290. GOLDEN ACCENT. The Fuller Brush Company. SN 149,839. Pub. 3–12–63. Filed 7–26–62.

Class 52—Detergents and Soaps

7750,291. CONCO. Continental Chemical Co. SN 110,200. Pub. 7–25–61. Filed 12–14–60.

750,292. STANGARD. Stanley Home Products, Inc. SN 124,009. Pub. 3–12–63. Filed 7–14–61.

750,293. GARNET ETC. AND DESIGN. Paul K. Dwyer. SN 135,967. Pub. 3–12–63. Filed 1–17–62.

750,294. DIVERDOX. The Diversey Corporation. SN 137,614. Pub. 3–12–63. Filed 2–9–62.

750,295. EMERALD. John H. Breck, Inc. SN 137,892. Pub. 8–21–62. Filed 2–14–62.

750,296. FROM A MISTY GARDEN. The Fuller Brush Company. SN 149,838. Pub. 3–12–63. Filed 7–26–62.

750,297. DREAMCLEAN. Arthur B. Leigh. SN 151,495. Pub. 3–12–63. Filed 8–20–62.

Service Marks

Class 100—Miscellaneous

750,298. C–E–I–R. C-E-I-R, Inc. SN 114,430. Pub. 3–12–63. Filed 2–27–61.

750,299. HERTZ AND DESIGN. Hertz System, Inc. SN 119,281. Pub. 3–12–63. Filed 5–4–61.

750,300. HERTZ. Hertz System, Inc. SN 145,695. Pub. 3–12–63. Filed 5–29–62.

Class 101—Advertising and Business

750,301. TOY SOLDIER BUST DESIGN. I.L. Candy and Tobacco Company, Inc. SN 91,941. Pub. 3–12–63. Filed 3–1–60.

750,302. REPRESENTATION OF MAN. Cavanaugh Morris Advertising, Inc., d.b.a. United Breweries of America. SN 103,098. Pub. 3–12–63. Filed 8–22–60.

750,303. TEL-A-JOB. Thomas M. Koenig, d.b.a. Personnel Engineering. SN 140,563. Pub. 3–12–63. Filed 3–23–62.

Class 102—Insurance and Financial

750,304. NATIONAL SECURITY CONTROL SERVICE AND DESIGN. National Association of Schools and Publishers, Inc. SN 119,710. Pub. 3–12–63. Filed 5–10–61.

750,305. PREFERRED ETC. AND DESIGN. Preferred Insurance Company. SN 122,111. Pub. 3–12–63. Filed 6–15–61.

750,306. CMI MONOGRAM. Continental Mortgage Insurance, Inc. SN 140,100. Pub. 3–12–63. Filed 3–19–62.

750,307. H (MONOGRAM) AND DESIGN. Howard H. Hamroff. SN 141,440. Pub. 3–12–63. Filed 4–3–62.

Class 105—Transportation and Storage

750,308. TRANSWESTERN. Transwestern Pipeline Company. SN 112,505. Pub. 3–12–63. Filed 1–25–61.

Class 107—Education and Entertainment

750,309. "FROM THE PEOPLE." Radio Press International, Inc. SN 139,530. Pub. 3–12–63. Filed 3–9–62.

Collective Membership Mark

Class 200

750,310. LAMBDA CHI ALPHA. Lambda Chi Alpha Fraternity Incorporated. SN 103,168. Pub. 3–12–63. Filed 8–22–60.



SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 4 — Abrasives and Polishing Materials

750,311. The Bell Company, d.b.a. Westley Industries, Inc., Cleveland, Ohio. SN 120,951. Filed P.R. 5-29-61; Am. S.R. 2-25-63.

clean

For Liquid Combined Cleaner and Polisher for Automobiles.
First use on or about Jan. 1, 1952.

750,312. National Grinding Wheel Company, Inc., North Tonawanda, N.Y. SN 133,484. Filed P.R. 12-6-61; Am. S.R. 4-10-63.

QUIK-MOUNT

For Grinding Wheels.
First use Oct. 31, 1961.

Class 6 — Chemicals and Chemical Compositions

750,313. Paramount Chemical Corporation, d.b.a. Paramount Chemical Company, Montebello, Calif., by change of name from Drop Dead Company, Inc., d.b.a. Paramount Chemical Company, Los Angeles, Calif. SN 122,291. Filed P.R. 6-19-61; Am. S.R. 12-27-62.

PARAMOUNT SPRAY-ON INSTANT STARCH

For Aerosol Type Starch.
First use Apr. 19, 1961.

Class 12 — Construction Materials

750,314. Minnesota and Ontario Paper Company, Minneapolis, Minn. SN 141,336. Filed P.R. 4-2-62; Am. S.R. 3-13-63.

WILD HYACINTH

For Decorative Tileboard.
First use Mar. 9, 1962.

750,315. Minnesota and Ontario Paper Company, Minneapolis, Minn. SN 141,339. Filed P.R. 4-2-62; Am. S.R. 3-13-63.

PARQUET

For Decorative-Acoustical Tileboard.
First use Mar. 9, 1962.

750,316. Minnesota and Ontario Paper Company, Minneapolis, Minn. SN 141,340. Filed P.R. 4-2-62; Am. S.R. 3-13-63.

LUSTERWHITE

For Ceiling Tileboard.
First use Mar. 9, 1962.

Class 13 — Hardware and Plumbing and Steam-Fitting Supplies

750,317. Robert H. Kuecker, d.b.a. Kuecker Manufacturing Company, River Forest, Ill. SN 124,201. Filed P.R. 7-18-61; Am. S.R. 12-11-62.

KUECKER

For Automatic Door Bottoms.
First use about June 28, 1961.

Class 21 — Electrical Apparatus, Machines, and Supplies

750,318. The Macallen Company, Inc., Newmarket, N.H. SN 125,930. Filed P.R. 8-14-61; Am. S.R. 4-3-63.

FLAKEMICA

For Micaceous Plate Used for Making Electrical Insulatory Flatwork and Molding Stock.
First use Mar. 7, 1961.

Class 37 — Paper and Stationery

750,319. Greetings Unlimited Inc., St. Paul, Minn. SN 126,651. Filed P.R. 8-25-61; Am. S.R. 4-2-63.

Gift-Wrappings by ADRIANE

For Gift Wrappings of Lithographed Paper and of Metal Foil.
First use June 1, 1961.

Class 38 — Prints and Publications

750,320. A. Verner Nelson, d.b.a. A. Verner Nelson Associates, Chicago, Ill. SN 137,452. Filed P.R. 2-7-62; Am. S.R. 4-2-63.

EVALUATION ENGINEERING

For Bimonthly Magazine.
First use Jan. 3, 1962.

750,321. McGraw-Hill Publishing Company, Inc., New York, N.Y. SN 142,116. Filed P.R. 4-12-62; Am. S.R. 4-8-63.

THE MANUFACTURING NEWSLETTER

For Pamphlet Published Periodically.
First use Apr. 1, 1962.

750,322. Haire Publishing Company, New York, N.Y. SN 147,199. Filed P.R. 6-19-62; Am. S.R. 4-2-63.

Underfashions

For Department or Section of a Trade Publication.
First use Mar. 26, 1962.

Class 45 — Soft Drinks and Carbonated Waters

750,323. Helee, Incorporated, New Canaan, Conn. SN 102,561. Filed P.R. 8-12-60; Am. S.R. 4-10-63.

BOWMAN'S BRANCH WATER

For Drinking Water.
First use June 24, 1960.

Class 46 — Foods and Ingredients of Foods

750,324. Drew Chemical Corporation, New York, N.Y., by change of name from E. F. Drew & Co., Inc., New York, N.Y. SN 102,010. Filed P.R. 8-16-60; Am. S.R. 4-10-63.

ALL-CORN

For Margarine.
First use July 21, 1960.

750,325. International Refining and Packaging Corp., Paterson, N.J. SN 117,372. Filed P.R. 4-7-61; Am. S.R. 4-12-63.

LARD-PLUS-BRAND

For Hydrogenated, Deodorized Lard With Hydrogenated Oil Flakes and Oxygen Interceptor Added.
First use July 4, 1955.

750,326. J. R. Short Milling Company, Chicago, Ill. SN 124,290. Filed P.R. 7-19-61; Am. S.R. 2-4-63.

DŌ-STRENGTH

For Wheat Gluten Used as an Ingredient of Bread or Other Bread Products.
First use June 15, 1961.

750,327. W. T. Misenhimer, El Paso, Tex. SN 143,152. Filed P.R. 4-26-62; Am. S.R. 4-1-63.

MISENHIMER'S

For Candy.
First use Mar. 24, 1962.

750,328. Habitant Soup Company, Manchester, N.H. SN 151,317. Filed P.R. 8-16-62; Am. S.R. 2-28-63.



For Canned Pea Soup.
First use Jan. 2, 1962.

750,329. Ilca Simmenthal Meridionale S.p.A., Aprilia, Italy. SN 153,567. Filed 9-20-62.



The word "Invito" when translated into the English language means "invitation." Owner of Italian Reg. No. 159,787, dated July 12, 1962.

For Canned Spaghetti With Tomato Sauce.

750,330. Ilca Simmenthal Meridionale S.p.A., Aprilia, Italy. SN 153,568. Filed 9-20-62.



The word "Invito" when translated into the English language means "invitation." Owner of Italian Reg. No. 159,786, dated July 12, 1962.

For Canned Ravioli With Tomato Sauce.

750,331. Ilca Simmenthal Meridionale S.p.A., Aprilia, Italy. SN 153,569. Filed 9-20-62.



The word "Invito" when translated into the English language means "invitation." Owner of Italian Reg. No. 159,785, dated July 12, 1962.

For Canned Minestrone (Vegetable Soup With Noodles).

Class 52 — Detergents and Soaps

750,332. Chemical Corporation of America, Tallahassee, Fla. SN 113,491. Filed P.R. 2-13-61; Am. S.R. 4-5-63.

WAXFREE

For Floor Wax Remover.
First use Feb. 1, 1961.

Service Mark

Class 100 — Miscellaneous

750,333. Maurice J. O'Dowd, d.b.a. Michael James O'Dowd & Company, Kansas City, Mo. SN 109,617. Filed P.R. 12-5-60; Am. S.R. 3-11-63.

JUSTITHE

For Counseling Charitable Fund Raising Campaigns.
First use Oct. 10, 1960.

TRADEMARK REGISTRATIONS RENEWED

163,205. DIAMOND TOP AND DESIGN. Cl. 39. 1-2-23.
163,486. WEBLEY. Cl. 9. 1-16-23.
164,685. V-C-P. Cl. 6. 2-27-23.
165,252. BANGOR DAILY NEWS. Cl. 38. 3-6-23.
166,201. RUTLAND. Cl. 16. 3-27-23.
166,269. FLY-BANE AND DESIGN. Cl. 6. 3-27-23.
166,407. PROTOLIN. Cl. 6. 4-3-23.
167,037. TRICO. Cl. 29. 4-24-23.
167,192. HUDSON CREAM. Cl. 46. 4-24-23.
167,694. COKER'S PEDIGREED SEED BLOOD WILL TELL AND DESIGN. Cl. 1. 5-8-23.
167,736. CIDOL. Cl. 6. 5-8-23.
167,870. CELOTEX. Cl. 12. 5-8-23.
168,402. KYRO. Cl. 52. 5-22-23.
168,434. HONEYSENE. Cl. 18. 5-22-23.
168,803. SHELL GEAREX. Cl. 15. 5-29-23.
169,141. "WESTERN GIANT." Cl. 35. 6-12-23.
169,207. KING'S DELIGHT. Cl. 46. 6-12-23.
169,276. FEDERAL. Cl. 35. 6-12-23.
169,902. RUBBER SERVICE LABORATORIES RSL AND DESIGN. Cl. 6. 7-3-23.
169,955. ROXANE. Cl. 27. 7-10-23.
169,957. VANITY. Cl. 27. 7-10-23.
170,875. THE DOCTOR. Cl. 39. 7-24-23.
171,061. NASSAU. Cl. 27. 7-31-23.
171,443. PAN-DANDY AND DESIGN. Cl. 46. 8-7-23.
171,815. NIK-O-LOK. Cl. 25. 8-14-23.
171,839. KINGS FANCY. Cl. 46. 8-14-23.
172,370. STYLE-A. Cl. 32. 8-28-23.
173,615. RICHLAND. Cl. 46. 10-2-23.
173,708. ARTSPAR. Cl. 16. 10-2-23.
399,492. CAVEX AND DESIGN. Cl. 23. 1-12-43.
399,692. BACHELOR GIRL SOCKS. Cl. 39. 1-26-43.
399,727. ELFIN. Cl. 39. 1-26-43.
399,807. WASHINGTON W AND DESIGN. Cl. 23. 2-2-43.
399,986. OLD TOWN DUPLI-FORM. Cl. 11. 2-9-43.
400,092. KINOSAN AND DESIGN. Cl. 6. 2-16-43.
400,294. SPEEDMATIC. Cl. 23. 3-2-43.
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400,367. ADDRESSOZINC. Cl. 23. 3-2-43.
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401,464. BARKFORT. Cl. 46. 5-18-43.

401,526. ISO-FLOW. Cl. 34. 5-25-43.
401,585. DELINEATOR. Cl. 39. 5-25-43.
401,886. ADDRESSOGRAPH. Cl. 37. 6-15-43.
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402,412. MULTI-FLEX. Cl. 35. 7-20-43.
402,527. CINACOA. Cl. 46. 7-27-43.
402,760. ARCH-CRIMP. Cl. 23. 8-10-43.
403,072. CYCLOTENE. Cl. 51. 8-31-43.
403,073. PALATONE. Cl. 51. 8-31-43.

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643,888. SEMITROPE. Cl. 21.
643,889. STRIPLINE. Cl. 21.
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643,891. GROUND-MASTER. Cl. 21.
643,896. ADJUSTO PRO. Cl. 22.
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643,928. HIDDEN BEAUTY CLINIC. Cl. 38.
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643,934. COLONIAL COVERLET GUILD OF AMERICA AND DESIGN. Cl. 38.
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643,946. DAVY JONES. Cl. 39.
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643,956. BOYNTON ACCESSORIES ETC. AND DESIGN. Cl. 42.
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643,966. KING. Cl. 46.
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643,971. DIXIE QUEEN. Cl. 46.
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643,980. DROP-TOP. Cl. 50.
643,982. DANCE STANCE. Cl. 50.
643,984. LUMI-LITES. Cl. 50.
643,999. THE LIFE LINE AND DESIGN. Cl. 102.
644,003. OUTDOOR GUIDE. Cl. 107.
644,005. FIRE FLARE. Cl. 6.
644,006. TAILORED FOR YOUR TOOLING NEEDS. Cl. 6.
644,007. HERION. Cl. 21.
644,016. THREE ALARM RED. Cl. 51.

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414,996. MARKOMATIC. Cl. 23. 7-10-45. Adolph Gottscho, Inc., New York, N.Y. Amended to appear:

MARKOMATIC

641,787. HOLBROOK. Cl. 39. 2-19-57. Holbrook Hat Company, Perth Amboy, N.J. Corrected: In the statement, column 1, line 1, "New York" should be deleted and *New Jersey* should be inserted.

645,435. CASUAL CORNER. Cl. 39. 5-14-57. Casual Corner, Inc. Casual Corner Associates, Inc., New York, N.Y. Amended to appear:

CASUAL CORNER

653,188. SPREE. Cl. 52. 10-15-57. Colgate-Palmolive Company, New York, N.Y. Amended: In the statement, column 2, lines 1 and 2, the description of goods is deleted and *detergent* is inserted.

653,610. VOYAGER. Cl. 3. 10-29-57. Since 1868 Crescent Corporation, doing business as Crescent Corporation, New York, N.Y. Corrected: In the statement, column 1, before line 1, *Since 1868 Crescent Corporation, doing business as* should be inserted.

654,922. UNDERWRITERS' LABORATORIES, INC. LISTED. Cl. A. 11-19-57. Underwriters' Laboratories, Inc., Chicago, Ill. Amended: In the statement, column 2, lines 9 and 10 are deleted and *The certification mark is used upon the goods to indicate that representative samplings of the products conform to the safety standards established by the registrant.* is inserted and the drawing is amended to appear:

UNDERWRITERS' LABORATORIES, INC. LISTED

735,583. CALOR. Cl. 21. 8-7-62. "Calor" Appareils Electro-Domestiques, Societe Anonyme, Lyon, France. Amended: In the statement, column 2, lines 4 and 5, "electric hot plates, electric grilles" is deleted.

742,926. BALANCED. Cl. 21. 1-1-63. Balanced Foods, Inc., New York, N.Y. Corrected: In the statement, column 2, line 3, "651,350" should be deleted and *651,550* should be inserted.

744,426. CRESTLINE. Cl. 26. 1-29-63. H. A. Bohm & Company, Chicago, Ill. Corrected: In the statement, column 2, line 1, after "namely," *projectors* should be inserted.

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A.G. fur Industrielle Elektronik A.G.I.E., Losone, near Locarno, Switzerland. 750,063–5, pub. 3–12–63. Cl. 21.

AMP Inc., Harrisburg, Pa. 750,082, pub. 3–12–63. Cl. 21.

Accurate Mfg. Co., Chicago, Ill. 750,017, pub. 3–12–63. Cl. 14.

Acme Engineering and Mfg. Corp., Muskogee, Okla. 750,186–8, pub. 3–12–63. Cl. 34.

Addressograph-Mutigraph Corp., Cleveland, Ohio. 400,366–7, ren. 5–28–63. Cl. 23.

Addressograph-Multigraph Corp., Cleveland, Ohio. 401,886, ren. 5–28–63. Cl. 37.

Admiral Corp., Chicago, Ill. 750,073, pub. 3–12–63. Cl. 21.

Aero-Flow Dynamics, Inc., Corry, Pa. 750,012, pub. 3–12–63. Cl. 13.

Aero-Flow Dynamics, Inc., Corry, Pa. 750,051, pub. 3–12–63. Cl. 19.

Aero-Flow Dynamics, Inc., Corry, Pa. 750,076, pub. 3–12–63. Cl. 21.

Aero-Flow, Dynamics, Inc., Corry, Pa. 750,148, pub. 3–12–63. Cl. 26.

Aero-Flow, Dynamics, Inc., Corry, Pa. 750,176, pub. 3–12–63. Cl. 31.

Airborne Instruments Laboratory, Inc., Mineola, N.Y. 643,889, canc. Cl. 21.

Air Logistics Corp., Pasadena, Calif. 750,240, pub. 3–12–63. Cl. 44.

Ales, Paul, d.b.a. A and A Mfg. Co., to Mrs. Paul Ales, d.b.a. A and A Mfg. Co., Gordon, Ark. 399,492, ren. 5–28–63. Cl. 23.

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Ales, Paul.

Allander Blending Co. Ltd. : *See*—
Grant, A. B., & Co. Ltd.

Allergan Corp., Los Angeles, Calif. 643,980, canc. Cl. 50.

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American Machine & Foundry Co., New York, N.Y. 643,826, canc. Cl. 16.

American Machine & Foundry Co., New York, N.Y. 643,878, canc. Cl. 21.

American Varnish Co., Chicago, Ill. 173,708, ren. 5–28–63. Cl. 16.

Amchem Products, Inc., Ambler, Pa. 750,110, pub. 3–12–63. Cl. 23.

Ametek, Inc., Sellersville, Pa. 750,150, pub. 3–12–63. Cl. 26.

American Bedding, Inc., Baltimore, Md. 750,184, pub. 3–12–63. Cl. 32.

American Iron & Machine Works Co., Inc., Oklahoma City, Okla. 750,098, pub. 3–12–63. Cl. 23.

American Machine & Foundry Co., New York, N.Y. 750,178, pub. 3–12–63. Cl. 31.

American Standards Association, Inc., New York, N.Y. 750,206, pub. 3–12–63. Cl. 38.

Angelus Aircraft Inc., d.b.a. Pioneer Signalite Co., Los Angeles, Calif. 643,887, canc. Cl. 21.

Armstrong Paint & Varnish Works, Inc., Chicago, Ill. 750,021, pub. 3–12–63. Cl. 16.

Arnold, Clifford R., d.b.a. Arnold Health Equipment Co., New York, N.Y. 643,959, canc. Cl. 44.

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Ash Grove Lime & Portland Cement Co., Kansas City, Mo. 749,969, pub. 3–12–63. Cl. 2.

Associated Laboratories Inc., Lathrup Village, Mich. 749,978–9, pub. 3–12–63. Cl. 6.

Astrodata, Inc., Anaheim, Calif. 750,074, pub. 3–12–63. Cl. 21.

Atlas Supply Co., Newark, N.J. 750,052, pub. 3–12–63. Cl. 19.

Automation Industries, Inc., Torrance, Calif. 750,062, pub. 3–12–63. Cl. 21.

Autometric Corp. : *See*—
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Bangor Publishing Co., Bangor, Maine. 165,252, ren. 5–28–63. Cl. 38.

Barker Chemical Co., Chicago, Ill. 643,806, canc. Cl. 16.

Barsen of Minneapolis, Inc., Minneapolis, Minn. 750,270, pub. 3–12–63. Cl. 46.

Bavarian Brewing Co. Inc., Covington, Ky. 644,003, canc. Cl. 107.

Beacon Looms Inc., New York, N.Y. 750,238, pub. 3–12–63. Cl. 42.

Beckman Instruments, Inc., Fullerton, Calif. 750,154, pub. 3–12–63. Cl. 26.

Beecham Proprietary Medicines Ltd., d.b.a. Harwoods Laboratories, St. Helens, England. 750,033, pub. 3–12–63. Cl. 18.

Bell Co., The, d.b.a. Westley Industries, Inc., Cleveland, Ohio. 750,311. Cl. 4.

Bell & Howell Co., Chicago, Ill. 750,141, pub. 3–12–63. Cl. 26.

Bell Television Inc., New York, N.Y. 750,061, pub. 3–12–63. Cl. 21.

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Binney & Smith, Inc., New York, N.Y. 643,832, canc. Cl. 16.

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Blaney Bakeries, Inc., Philadelphia, Pa., to King Kullen Grocery Co., Inc., Westbury, N.Y. 401,464, ren. 5–28–63. Cl. 46.

Blaw-Knox Co., Pittsburgh, Pa. 750,125, pub. 3–12–63. Cl. 23.

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Bluegate Candle Co., Montara, Calif. 644,005, canc. Cl. 6.

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Borden Co., The, New York, N.Y. 750,253, pub. 3–12–63. Cl. 46.

Borg-Warner Corp., Chicago, Ill. 643,869, canc. Cl. 19.

Boston Brush Co., Inc., Boston, Mass. 750,174, pub. 3–12–63. Cl. 29.

Bowes "Seal Fast" Corp., Indianapolis, Ind. 750,194, pub. 3–12–63. Cl. 35.

Bowling Apparel, Inc., New York, N.Y. 750,227, pub. 3–12–63. Cl. 39.

Breck, John H., Inc., Springfield, Mass. 750,295, pub. 3–21–62. Cl. 52.

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Brigham's, Inc., Cambridge, Mass. 750,266, pub. 3–12–63. Cl. 46.

Briston Siddeley Engines Ltd., Filton, Bristol, England. 750,107, pub. 3–12–63. Cl. 23.

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Business News Publishing Co., Detroit, Mich. 643,937, canc. Cl. 38.

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Calefones Heineken Sociedad Anonima Industrial y Comercial, Buenos Aires, Argentina. 750,191, pub. 3–12–63. Cl. 34.

California Tubular Products Co., Los Angeles, Calif. 750,013, pub. 3–12–63. Cl. 13.

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Central Soya Co., Inc., Fort Wayne, Ind. 750,268, pub. 3–12–63. Cl. 46.

Century Lighting, Inc., New York, N.Y. 750,071, pub. 3–12–63. Cl. 21.

Chalson, Wm., & Co. Inc., New York, N.Y. 750,163, pub. 3–12–63. Cl. 28.

Chemical Corp. of America, Tallahassee, Fla. 750,332. Cl. 52.
Chemical Enterprises, Inc., Shreveport, La. 749,996, pub. 3–12–63. Cl. 10.
Chicago Daily News, Inc., The, Chicago, Ill. 643,936, canc. Cl. 38.
Childers Mfg. Co., Houston, Tex. 643,797, canc. Cl. 12.
Chilton Co., Philadelphia, Pa. 750,205, pub. 3–12–63. Cl. 38.
Chips 'N Twigs, Inc., Philadelphia, Pa. 750,230, pub. 3–12–63. Cl. 39.
Christenssons Maskiner & Patenter AB, Stockholm, Sweden. 750,122, pub. 3–12–63. Cl. 23.
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Cornelius Co., The, Anoka, Minn. 750,015, pub. 3–12–63. Cl. 13.
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Cox, Wilbur B.: *See*—
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Crawford Fitting Co., Cleveland, Ohio. 750,004, pub. 3–12–63. Cl. 13.
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Crescent Niagara Corp., Buffalo, N.Y., from The Billings & Spencer Co., Hartford, Conn. 750,006, pub. 3–12–63. Cl. 13.
Crescent Niagara Corp., Buffalo, N.Y., from The Billings & Spencer Co., Hartford, Conn. 750,104, pub. 3–12–63. Cl. 23.
Curtis, Helene, Industries, Inc., d.b.a. Curtis Pharmacals, Chicago, Ill. 750,044, pub. 3–12–63. Cl. 18.
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Dennis Uniform Mfg. Co., Portland, Oreg. 750,217, pub. 3–12–63. Cl. 39.
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Devon Trading Co., New York, N.Y. 750,171, pub. 3–12–63. Cl. 28.
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Dilley Mfg. Co., The, Cleveland, Ohio. 750,132, pub. 3–12–63. Cl. 26.
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Filtration Products of Canada Ltd., Scarborough, Toronto, Ontario, Canada. 750,177, pub. 3–12–63. Cl. 31.
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Formfit Co., The: *See*—
Genesco Inc.
Freezer, J., & Son, Inc., New York, N.Y. 750,212, pub. 3–12–63. Cl. 39.
Friedman, Donald L.: *See*—
National Technical Laboratories.
Friedman-Marks Clothing Co., Inc., Richmond, Va. 402,243, ren. 5–28–63. Cl. 39.
Fuller Brush Co., The, East Hartford, Conn. 750,175, pub. 3–12–63. Cl. 29.
Fuller Brush Co., The., East Hartford, Conn. 750,289–90, pub. 3–12–63. Cl. 51.
Fuller Brush Co., The, East Hartford, Conn. 750,296, pub. 3–12–63. Cl. 52.
Fuller, D. B., & Co., Inc., New York, N.Y. 643,957, canc. Cl. 42.
Fuller Tool Co. Inc., Whitestone, N.Y. 750,087, pub. 3–12–63. Cl. 23.
Galloway, R. B., Fort Worth, Tex. 750,258, pub. 3–12–63. Cl. 46.
Gandy Co., Owatonna, Minn. 750,088, pub. 3–12–63. Cl. 23.
General Electric Co., Schenectady, N.Y. 750,066, pub. 3–12–63. Cl. 21.
Gensler-Lee, Inc., San Francisco, Calif. 750,160, pub. 3–12–63. Cl. 27.
General Mills, Inc.: *See*—
Washburn-Crosby Co.
General Plastics Corp., Bloomfield, N.J. 750,069, pub. 3–12–63. Cl. 21.
General Tire & Rubber Co., The: *See*—
India Tire and Rubber Co.
Genesco Inc., Nashville, Tenn., from The Formfit Co., Chicago, Ill. 750,231, pub. 3–12–63. Cl. 39.
Genie-Air, Inc., Los Angeles, Calif. 750,190, pub. 3–12–63. Cl. 34.
Gibbs, T. R., Medicine Co., Inc., Washington, D.C. 750,034, pub. 3–12–63. Cl. 18.
Gilmore Shirts, Inc., New York, N.Y. 643,946, canc. Cl. 39.
Globe Illumination Co., Los Angeles, Calif. 750,075, pub. 3–12–63. Cl. 21.
Gonzales Tortilleria, Ontario, Oreg. 750,262, pub. 3–12–63. Cl. 46.
Goddles Spud Chip Co., Billings, Mont. 750,263, pub. 3–12–63. Cl. 46.
Goodman Knitting Co. Inc., Boston, Mass. 750,232, pub. 3–12–63. Cl. 39.

Goodman & Suss Clothes Corp., New York, N.Y. 400,392, ren. 5–28–63. Cl. 39.
Goodyear Tire & Rubber Co., The, Akron, Ohio. 749,973, pub. 3–12–63. Cl. 5.
Goodyear Tire & Rubber Co., The, Akron, Ohio. 750,193, pub. 3–12–63. Cl. 35.
Gottscho, Adolph, Inc., New York, N.Y. 414,996. Am. 7(d). Cl. 23.
Grand Union Co., The, East Paterson, N.J. 750,202, pub. 3–12–63. Cl. 37.
Grant, A. B., & Co. Ltd., d.b.a. Allander Blending Co. Ltd., Glasgow, Scotland. 750,282, pub. 3–12–63. Cl. 49.
Graphic Electronics, Inc., Lasalle, Ill. 750,081, pub. 3–12–63. Cl. 21.
Great Bear Spring Co., New York, N.Y. 750,180, pub. 3–12–63. Cl. 31.
Greaves, John A., Kansas City, Mo. 643,846, canc. Cl. 18.
Greetings Unlimited Inc., St. Paul, Minn. 750,319. Cl. 37.
H. & T. Mfg. Co.: *See*—
Knight, Edward B.
Haber, Charles, d.b.a. Haber Co., Far Rockaway, N.Y. 750,169, pub. 3–12–63. Cl. 28.
Haber Co.: *See*—
Haber, Charles.
Habitant Soup Co., Manchester, N.H. 750,328. Cl. 46.
Haire Publishing Co., New York, N.Y. 750,322. Cl. 38.
Halo Sales Corp., San Francisco, Calif. 750,185, pub. 3–12–63. Cl. 34.
Hamroff, Howard H., New York, N.Y. 750,307, pub. 3–12–63. Cl. 102.
Hanes, P. H., Knitting Co., Winston-Salem, N.C. 750,220–1, pub. 3–12–63. Cl. 39.
Hanson-Van Winkle-Munning Co., Matawan, N.J. 643,888, canc. Cl. 21.
Harwoods Laboratories: *See*—
Beecham Proprietary Medicines Ltd.
Helee, Inc., New Canaan, Conn. 750,323. Cl. 45.
Helical Products Co., Inc., Hermosa Beach, Calif. 750,090, pub. 3–12–63. Cl. 23.
Henolite Products, Inc., Phoenixville, Pa. 749,970, pub. 3–12–63. Cl. 2.
Herion, Erich, Stuttgart, Germany. 644.007, canc. Cl. 21.
Herr, Walter, d.b.a. Cynopep Co., Flushing, N.Y. 750,250, pub. 3–12–63. Cl. 46.
Hertz System, Inc., New York, N.Y. 750,299–300, pub. 3–12–63. Cl. 100.
Heyden Newport Chemical Corp., New York, N.Y. 749,974, pub. 3–12–63. Cl. 6.
Hico Corp., Watertown, Mass. 750,138, pub. 3–12–63. Cl. 26.
Hill, George W., and Co., Covington, Ky., from The J. Chas. McCullough Seed Co., Cincinnati, Ohio. 750,257, pub. 3–12–63. Cl. 46.
Hinckley Knitting Co. Ltd., The, Hinckley, Leicestershire, England. 643,952, canc. Cl. 39.
Hipp. Didisheim Co. Inc., to Winton Watch Co., Inc., New York, N.Y. 169,955, ren. 5–28–63. Cl. 27.
Hipp. Didisheim Co., Inc., to Winton Watch Co., Inc., New York, N.Y. 169,957, ren. 5–28–63. Cl. 27.
Hipp. Didisheim Co., Inc., to Winton Watch Co., Inc., New York, N.Y. 171,061, ren. 5–28–63. Cl. 27.
Hockaday Associates, Inc., New York, N.Y. 643,982, canc. Cl. 50.
Hoepli, M. H., Co.: *See*—
Hoepli, Max H.
Hoepli, Max H., d.b.a. M. H. Hoepli Co., New York, N.Y. 750,016, pub. 3–12–63. Cl. 14.
Holbrook Hat Co., Perth Amboy, N.J. 641,787, cor. Cl. 39.
Holiday Inns og America, Inc., Memphis, Tenn. 750,079, pub. 3–12–63. Cl. 21.
Holland-Racine Shoes, Inc.: *See*—
Meier, John, Shoe Co.
Holman, Jimmie L., Corpus Christi, Tex. 750,077, pub. 3–12–63. Cl. 21.
Honey-Worth Industries, Inc., Mauldin, S.C. 750,219, pub. 3–12–63. Cl. 39.
Houghton, E. F., & Co., Philadelphia, Pa. 749,964, pub. 3–12–63. Cl. 1.
Howdon Videx Products Corp., Mount Vernon, N.Y. 750,241, pub. 3–12–63. Cl. 44.
Howell Instruments, Inc., Fort Worth, Tex. 750,129, pub. 3–12–63. Cl. 26.
Hydraulic Unit Specialties Co., Waukesha, Wis. 750,112, pub. 3–12–63. Cl. 23.
I.L. Candy and Tobacco Co., Inc., Baltimore, Md. 750,301, pub. 3–12–63. Cl. 101.
Ilca Simmenthal Meridionale S.p.A., Aprilia, Italy. 750,329–31. Cl. 46.
Imperial Camera Corp., Chicago, Ill. 750,157, pub. 3–12–63. Cl. 26.
India Tire and Rubber Co., Akron and Mogadore, to The General Tire & Rubber Co., Akron, Ohio. 169,141, ren. 5–28–63. Cl. 35.
Industrial Publishing Corp., The, Cleveland, Ohio. 750,209, pub. 3–12–63. Cl. 38.
Infra Electronic Corp., Roseland, to McGraw-Edison Co., West Orange, N.J. 643 884–5, canc. Cl. 21.
International Advertising Association, Inc., New York, N.Y. 750,203, pub. 3–12–63. Cl. 38.
International Latex Corp., Dover, Del. 750,229, pub. 3–12–63. Cl. 39.
International Refining and Packaging Corp., Paterson, N.J. 750,325. Cl. 46.
Italian Swiss Colony: *See*—
United Vintners, Inc.
Jays Foods Inc., Chicago, Ill. 750,245, pub. 3–12–63. Cl. 46.
Jenkins Laboratories, Inc., Auburn, N.Y. 750,023, pub. 3–12–63. Cl. 18.
Jewel Tea Co., Inc., Melrose Park, Ill. 750,259–60, pub. 3–12–63. Cl. 46.
Jung Products, Inc., Cincinnati, Ohio. 750,239, pub. 3–12–63. Cl. 44.
K-C Jewelry Mfg. Co. Inc., New York, N.Y. 750,168, pub. 3–12–63. Cl. 28.
Kall Mfg. Co., Philadelphia, Pa. 643,783, canc. Cl. 6.
Kayser-Roth Corp.: *See*—
Black, Joseph, & Sons Co.
Keever Co., The: *See*—
Keever Starch Co., The.
Keever Starch Co., The, d.b.a. The Keever Co., Columbus, Ohio. 749,989, pub. 3–12–63. Cl. 6.
Kelly-Springfield Tire Co., The, Cumberland, Md. 750,197, pub. 3–12–63. Cl. 35.
Kern County Land Co., San Francisco, Calif. 750,275, pub. 3–12–63. Cl. 46.
Kickhaefer Corp., Cedarburg, Wis. 750,096, pub. 3–12–63. Cl. 23.
Kimel Shoe Co., Inc., Boston, Mass. 643,944, canc. Cl. 39.
King Steak Co., Philadelphia, Pa. 643,966, canc. Cl. 46.
Kings County Packing Co., Armona, to W. B. Cox, San Francisco, Calif. 169,207, ren. 5–28–63. Cl. 46.
Kings County Packing Co., Armona, to W. B. Cox, San Francisco, Calif. 171,839, ren. 5–28–63. Cl. 46.
Knight, E. Ben: *See*—
Knight, Edward B.
Knight, Edward B., d.b.a. E. Ben Knight, to H. & T. Mfg. Co., Penn Yan, N.Y. 168,434, ren. 5–28–63. Cl. 18.
Koch, George, Sons, Inc., d.b.a. Bloomlife, Evansville, Ind. 749,968. pub. 3–12–63. Cl. 1.
Koenig, Thomas M., d.b.a. Personnel Engineering, Rockford, Ill. 750,303, pub. 3–12–63. Cl. 101.
Koppers Co., Inc.: *See*—
Pennsylvania Coal Products Co.
Kreisler, Jacques, Mfg. Corp., North Bergen, N.J. 750,165, pub. 3–12–63. Cl. 28.
Kuecker Mfg. Co.: *See*—
Kuecker, Robert H.
Kuecker, Robert H., d.b.a. Kuecker Mfg. Co., River Forest, Ill. 750,317. Cl. 13.
Kullen, King Grocery Co., Inc.: *See*—
Blaney Bakeries, Inc.
LKB-Produkter Aktiebolag, Stockholm, Sweden. 750,143, pub. 3–12–63. Cl. 26.
Laboratories Lucienne Merle: *See*—
Felix, Lucienne.
Laboratoria Pharmaceutica Dr. C. Janssen N.V., Turnhout, Belgium. 750,032, pub. 3–12–63. Cl. 18.
Lambda Chi Alpha Fraternity Inc., Indianapolis, Ind. 750,310, pub. 3–12–63. Cl. 200.
Laxcafe Co., The: *See*—
Reife, Milton.
Laser, Inc., Crown Point, Ind. 750,041, pub. 3–12–63. Cl. 18.
Lee & Lee Co.: *See*—
Yat Gaw Min Co.
Lee Optical Co., Inc., Baltimore, Md. 750,134, pub. 3–12–63. Cl. 26.
Lehn & Fink Products Corp., Bloomfield, N.J. 401,915, ren. 5–28–63. Cl. 51.
Leigh, Arthur B., Lowell, Mass. 750,297, pub. 3–12–63. Cl. 52.
Le Jamtel, Lucien P. S. D., and C. M. J. M. Le Jamtel. 643,773, canc. Cl. 2.
Lilly, Eli, and Co., Indianapolis, Ind. 750,043, pub. 3–12–63. Cl. 18.
Linmar, Inc., Cambridge, Mass. 643,805, canc. Cl. 16.
Litchfield Engineering, Inc., Litchfield, Conn. 750,057, pub. 3–12–63. Cl. 19.
Little, Walter F., Jr., d.b.a. Cotton Farming, Memphis, Tenn. 750,211, pub. 3–12–63. Cl. 38.
Lloyd Mfg. Co., Inc., Warwick, R.I. 750,128, pub. 3–12–63. Cl. 23.
Lovely Legs, Inc., Little Falls, N.J. 750,283, pub. 11–1–60. Cl. 51.
Ludlow-Saylor Wire Cloth Co.: *See*—
Ludlow-Saylor Wire Co., The.
Ludlow-Saylor Wire Co., The, to Ludlow-Saylor Wire Cloth Co., St. Louis, Mo. 402,760, ren. 5–28–63. Cl. 23.
Lumay Coat Corp., New York, N.Y. 643,949, canc. Cl. 39.
Lyman Gun Sight Corp., Middlefield, Conn. 750,153, pub. 3–12–63. Cl. 26.
Macallen Co., Inc., The, Newmarket, N.H. 750,318. Cl. 21.
Magnet Cove Barium Corp., Houston, Tex. 749,965, pub. 3–12–63. Cl. 1.
Mallinckrodt Chemical Works, St. Louis, Mo., from Van Pelt and Brown, Inc., Richmond, Va. 750,040, pub. 3–12–63. Cl. 18.
Mangel Stores Corp., New York, N.Y. 750,127, pub. 3–12–63. Cl. 24.
Mann Edge Tool Co., Lewistown, Pa. 750,120, pub. 3–12–63. Cl. 23.
Marcet, Clara O., Miami, Fla. 750,280, pub. 3–12–63. Cl. 49.
Marion Laboratories, Inc., Kansas City, Mo. 750,048, pub. 3–12–63. Cl. 18.
Maritime Chemical & Repair Corp., Brooklyn, N.Y. 400,837, ren. 5–28–63. Cl. 52.
Market Buying Service, New York, N.Y. 750,218, pub. 3–12–63. Cl. 39.
Martin-Decker Corp., Long Beach, Calif. 750,139, pub. 3–12–63. Cl. 26.
Massengill, S. E., Co., The, Bristol, Tenn. 750,045, pub. 3–12–63. Cl. 18.
Mathieson, Olin, Chemical Corp., New York, N.Y. 749,987, pub. 3–12–63. Cl. 6.
McCullough, J. Chas., Seed Co., The: *See*—
Hill, George W., and Co.
McGraw-Edison Co.: *See*—
Infra Electronic Corp.
McGraw-Hill Publishing Co., Inc., New York, N.Y. 750,321. Cl. 38.

Mead Corp., The, Dayton, Ohio. 750,200, pub. 3–12–63. Cl. 37.
Meason, M. M., Inc., Washington, D.C. 750,198, pub. 3–12–63. Cl. 36.
Mechelotti, Emilio, Brooklyn, N.Y., to Standard Laboratories, Inc., Morris Plains, N.J. 400,092, ren. 5–28–63. Cl. 6.
Meier, John, Shoe Co., St. Louis, Mo., to Holland-Racine Shoes, Inc., Holland, Mich. 170,875, ren. 5–28–63. Cl. 39.
Merck & Co., Inc., Rahway, N.J. 750,024, pub. 3–12–63. Cl. 18.
Merry Mfg. Co., Edmonds, Wash. 750,111, pub. 3–12–63. Cl. 23.
Michigan Coin Lock Co., to The Nik-O-Lok Co., Indianapolis, Ind. 171,815, ren. 5–28–63. Cl. 25.
Micro Science Corp., Philadelphia, Pa. 750,136, pub. 3–12–63. Cl. 26.
Mid-South Industries, Inc., Columbia, S.C. 643,792, canc. Cl. 12.
Millerton Mfg. Co., Inc., Millerton, N.Y. 643,956, canc. Cl. 42.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn. 750,155, pub. 3–12–63. Cl. 26.
Minnesota and Ontario Paper Co., Minneapolis, Minn. 750,314–16. Cl. 12.
Mira-Pak, Inc., Houston, Tex. 750,100, pub. 3–12–63. Cl. 28.
Misenhimer, W. T., El Paso, Tex. 750,327. Cl. 46.
Missouri Insurance Co., d.b.a. Life Insurance Co. of Missouri, St. Louis, Mo. 643,999, canc. Cl. 102.
Monsanto Chemical Co.: *See*—
Rubber Service Laboratories Co.
Monsanto Chemical Co., St. Louis, Mo. 749,985, pub. 3–12–63. Cl. 6.
Montre de Sport Geneve S.A. (Geneva Sport Watch Ltd.), Geneva, Switzerland. 750,161, pub. 3–12–63. Cl. 27.
Moog Industries, Inc., St. Louis, Mo. 750,050, pub. 3–12–63. Cl. 19.
Morris, Cavanaugh, Advertising, Inc., Pittsburgh, Pa. 750,302, pub. 3–12–63. Cl. 101.
Movie Star, Inc., New York, N.Y. 750,228, pub. 3–12–63. Cl. 39.
National Association of Schools and Publishers, Inc., Wilmington, Del. 750,304, pub. 3–12–63. Cl. 102.
National Broadcasting Co., Inc., New York, N.Y. 643,941, canc. Cl. 39.
National Grinding Wheel Co., Inc., North Tonawanda, N.Y. 750,312. Cl. 4.
National Technical Laboratories, South Pasadena, Calif., to Donald L. Friedman, d.b.a. Thoro Chemical Co., Van Nuys, Calif. 401,408, ren. 5–28–63. Cl. 13.
Nautec Corp., Duncan Parking Meter Division, Chicago, Ill. 750,156, pub. 3–12–63. Cl. 26.
Nelson, A. Verner, d.b.a. A. Verner Nelson Associates, Chicago, Ill. 750,320. Cl. 38.
Nelson, A. Verner, Associates: *See*—
Nelson, A. Verner.
Nethercutt Laboratories, Los Angeles, Calif. 644,016, canc. Cl. 51.
New York Pressing Machinery Corp., New York, N.Y. 750,126, pub. 3–12–63. Cl. 24.
New York Toy & Game Mfg. Co.: *See*—
Rubin, Herbert.
Nikka Rubber Co., Ltd., Kurume City, Japan. 750,236, pub. 3–12–63. Cl. 39.
Nik-O-Lok Co., The: *See*—
Michigan Coin Lock Co.
Nu-Vita Products Inc., Pittsburgh, Pa. 750,284, pub. 3–12–63. Cl. 51.
Oberg, C. O., & Co.: S Aktiebolag, from Oberg Machine Co. Aktiebolag, Eskilstuna, Sweden. 750,086, pub. 3–12–63. Cl. 23.
Oberg Machine Co. Aktiebolag: *See*—
Oberg, C. O., & Co.: S Aktiebolag.
O'Dowd, Maurice J., d.b.a. Michael James O'Dowd & Co., Kansas City, Mo. 750,333. Cl. 100.
O'Dowd, Michael James, & Co.: *See*—
O'Dowd, Maurice J.
Oilstate, Inc., Tulsa, Okla. 749,982–4, pub. 3–12–63. Cl. 6.
Old Town Corp.: *See*—
Old Town Ribbon & Carbon Co., Inc.
Old Town Ribbon & Carbon Co. Inc., to Old Town Corp., Brooklyn, N.Y. 399,986, ren. 5–28–63. Cl. 11.
Omstead Fisheries 1961 Ltd., Wheatley, Ontario, Canada. 750,274, pub. 3–12–63. Cl. 46.
Onigas Co., The, Rhinelander, Wis. 749,991, pub. 3–12–63. Cl. 6.
Oregon Growers Cooperative Association, Salem, Oreg., to Dole Corp., Honolulu, Hawaii. 173,615, ren. 5–28–63. Cl. 46.
Ore-ida Foods, Inc., Ontario, Oreg. 750,261, pub. 3–12–63. Cl. 46.
Orthopedic Frame Co., Kalamazoo, Mich. 750,192, pub. 3–12–63. Cl. 34.
Oury Engineering Co., Wheaton, Ill. 750,115, pub. 3–12–63. Cl. 28.
Pacific Universal Products Corp., Pasadena, Calif. 750,144, pub. 3–12–63. Cl. 26.
Paramount Chemical Co.: *See*—
Paramount Chemical Corp.
Paramount Chemical Corp., d.b.a. Paramount Chemical Co., Montebello, Calif., from Drop Dead Co., Inc., d.b.a. Paramount Chemical Co., Los Angeles, Calif. 750,313. Cl. 6.
Parc Publishing Co., Inc., New York, N.Y. 750,207–8, pub. 3–12–63. Cl. 35.
Parke, Davis & Co., Detroit, Mich. 750,038–9, pub. 3–12–63. Cl. 18.
Pauker Brothers, New York, N.Y. 750,222, pub. 3–12–63. Cl. 39.
Pautzke Bait Co. Inc., Ellensburg, Wash. 750,085, pub. 3–12–63. Cl. 22.
Pedigreed Seed Co., to Coker's Pedigreed Seed Co., Hartsville, S.C. 167,694, ren. 5–28–63. Cl. 1.
Pekao Trading Corp., New York, N.Y. 750,256, pub. 3–12–63. Cl. 46.
Pennsylvania Coal Products Co., Petrolia, Pa., to Koppers Co., Inc., Pittsburgh, Pa. 401,050, ren. 5–28–63. Cl. 1.
Personnel Engineering: *See*—
Koenig, Thomas M.
Petro-Chem Development Co., Inc., New York, N.Y. 401,526, ren. 5–28–63. Cl. 34.
Philmont Mfg. Co., Englewood, N.J. 750,243, pub. 3–12–63. Cl. 44.
Photo Products: *See*—
Wellman, Fred.
Pietrus, A. J., & Sons Co., Sleepy Eye, Minn. 750,252, pub. 3–12–63. Cl. 46.
Pioneer Signalite Co.: *See*—
Angelus Aircraft Inc.
Pittsburgh Plate Glass Co., Pittsburgh, Pa. 749,995, pub. 3–12–63. Cl. 6.
Plas-Ties Co., Santa Ana, Calif. 750,011, pub. 3–12–63. Cl. 13.
Plough, Inc.: *See*—
Creolin Co., The.
Pneumatic Scale Corp., Quincy, Mass. 750,114, pub. 3–12–63. Cl. 23.
Poliskrub Corp., Chicago, Ill. 750,080, pub. 3–12–63. Cl. 21.
Polypat Leathers, Inc., Peabody, Mass. 749,966, pub. 3–12–63. Cl. 1.
Porter, J. E., Corp., The, Chicago, Ill. 750,179, pub. 3–12–63. Cl. 31.
Preferred Insurance Co., Grand Rapids, Mich. 750,305, pub. 3–12–63. Cl. 102.
Procter & Gamble Co., The: *See*—
Remmers Soap Co., The.
Procter & Gamble Co., The, Cincinnati, Ohio. 749,986, pub. 3–12–63. Cl. 6.
Procter & Gamble Co., The, Cincinnati, Ohio. 749,992, pub. 3–12–63. Cl. 6.
Projection Optics Co., Inc., Rochester, N.Y. 643,912, canc. Cl. 26.
Pro-Phy-Lac-Tic Brush Co., Florence, Mass. 749,971, pub. 3–12–63. Cl. 2.
Purdue Frederick Co., The, New York, N.Y. 750,036, pub. 3–12–63. Cl. 18.
Radio Press International, Inc., New York, N.Y. 750,309, pub. 3–12–63. Cl. 107.
Regan Distributors: *See*—
Regan Distributors of Coachella Valley, Inc.
Regan Distributors of Coachella Valley, Inc., d.b.a. Regan Distributors, Los Angeles, Calif. 750,273, pub. 9–25–62. Cl. 46.
Reife, Milton, d.b.a. The Laxcafe Co., Yonkers, N.Y. 643,852, canc. Cl. 18.
Remmers Soap Co., The, to The Procter & Gamble Co., Cincinnati, Ohio. 168,402, ren. 5–28–63. Cl. 52.
Ren Plastics, Inc., Lansing, Mich. 644,006, canc. Cl. 6.
Revlon, Inc.: *See*—
Revlon Products Corp.
Revlon, Inc., New York, N.Y. 750,204, pub. 3–12–63. Cl. 38.
Revlon Products Corp., to Revlon, Inc., New York, N.Y. 643,928, canc. Cl. 38.
Reynolds, Ruel W., Putnam, Tex. 750,084, pub. 3–12–63. Cl. 22.
Rich Plan Corp., Dallas, Tex. 750,264, pub. 3–12–63. Cl. 46.
Robin Motors, Los Angeles, Calif. 750,049, pub. 3–12–63. Cl. 19.
Robinson Syrup Co., Inc., Cairo, Ga. 750,247, pub. 3–12–63. Cl. 46.
Rockford Paint Mfg. Co., Rockford, Ill. 643,833, canc. Cl. 16.
Rogers Corp., Rogers, Conn. 750,113, pub. 3–12–63. Cl. 23.
Rohm & Haas Co., Philadelphia, Pa. 166,407, ren. 5–28–63. Cl. 6.
Ross, Betsy, Co.: *See*—
Ross, Betsy, Sales Co.
Ross, Betsy, Sales Co., d.b.a. Betsy Ross Co., Philadelphia, Pa. 750,265, pub. 3–12–63. Cl. 46.
Roussel-Uclaf, from Uclaf, Paris, France. 749,976, pub. 3–12–63. Cl. 6.
Rubber Corp. of America, Hicksville, N.Y. 749,967, pub. 3–12–63. Cl. 1.
Rubber Service Laboratories Co., Akron, Ohio, to Monsanto Chemical Co., St. Louis, Mo. 169,902, ren. 5–28–63. Cl. 6.
Rubin, Herbert, d.b.a. New York Toy & Game Mfg. Co., New York, N.Y. 643,896, canc. Cl. 22.
Rutland Fire Clay Co., to Rutland Fire Clay Co., Rutland, Vt. 166,201, ren. 5–28–63. Cl. 16.
St. James's Tobacco Co. Ltd., Milbank, London, England. 750,022, pub. 3–12–63. Cl. 17.
Salada-Shirriff-Horsey Ltd., Don Mills, Ontario, Canada. 750,269, pub. 3–12–63. Cl. 46.
San-O-Let Co.: *See*—
Eger, Leroy O.
Sawyers, Inc., Portland, Oreg. 750,159, pub. 3–12–63. Cl. 26.
Schenley Distillers, Inc., New York, N.Y. 750,281, pub. 3–12–63. Cl. 46.
Schindel, Morton, d.b.a. Weston Woods Studios, Weston, Conn. 643,939, canc. Cl. 38.
Schneider, Maxwell, Pittsburgh, Pa. 750,216, pub. 3–12–63. Cl. 39.
Scudder Syrup Co., Chicago, Ill. 750,246, pub. 3–12–63. Cl. 46.
Scully-Jones and Co., Chicago, Ill. 750,099, pub. 3–12–63. Cl. 23.
Scully-Jones and Co., Chicago, Ill. 750,101, pub. 3–12–63. Cl. 23.
Sea-Chrome Inc., Los Angeles, Calif. 750,008, pub. 3–12–63. Cl. 13.
Sealectro Corp., Mamaroneck, N.Y. 750,059–60, pub. 3–12–63. Cl. 21.

Seidler Cravats Inc., New York, N.Y. 750,233, pub. 3–12–63. Cl. 39.
Setting, L. S. & L., Co., Inc., New York, N.Y. 750,164, pub. 3–12–63. Cl. 28.
Shaouy, Philip E., New York, N.Y. 750,213, pub. 3–12–63. Cl. 39.
Shell Co. of California, San Francisco, Calif., to Shell Oil Co., New York, N.Y. 166,803, ren. 5–28–63. Cl. 15.
Shell Oil Co.: *See*—
Shell Co. of California.
Shepherd Casters, Inc., Benton Harbor, Mich. 750,001, pub. 3–12–63. Cl. 13.
Shepherd, Imogene, Cosmetics, Inc., Chicago, Ill. 750,288, pub. 3–12–63. Cl. 51.
Sherwin-Williams Co., The, Cleveland, Ohio. 750,019, pub. 3–12–63. Cl. 16.
Short, J. R., Milling Co., Chicago, Ill. 750,326. Cl. 46.
Simplex Wire & Cable Co., Cambridge, Mass. 750,078, pub. 3–12–63. Cl. 21.
Since 1868 Crescent Corp., d.b.a. Crescent Corp., New York, N.Y. 653,610, cor. Cl. 3.
Slenderella Enterprises, Inc., Long Island City, N.Y., from Slenderella Systems, Inc., Stamford, Conn. 750,249, pub. 5–15–62. Cl. 46.
Slenderella Systems, Inc.: *See*—
Slenderella Enterprises, Inc.
Sloan, Dr. Earl S., Inc., New York, N.Y., to Standard Laboratories, Inc., Morris Plains, N.J. 402,125, ren. 5–28–63. Cl. 18.
Smallman, I., & Sons Co., New York, N.Y. 643,777, canc. Cl. 3.
Sonic Engineering Corp., Stamford, Conn. 750,106, pub. 3–12–63. Cl. 28.
Soper Brothers, Inc., Houston, Tex. 750,242, pub. 3–12–63. Cl. 44.
South Texas Drywall Co.: *See*—
Clemonds, Albert B.
Southern Tea Co., Atlanta, Ga. 750,248, pub. 3–12–63. Cl. 46.
Speed Products Co., to Swingline Inc., Long Island City, N.Y. 400,294, ren. 5–28–63. Cl. 28.
Spot Shot Co., The, West Covina, Calif. 750,068, pub. 3–12–63. Cl. 22.
Stafford County Flour Mills Co., Hudson, Kans. 167,192, ren. 5–28–63. Cl. 46.
Standard Laboratories, Inc.: *See*—
Mechelotti, Emilio.
Sloan, Dr. Earl S., Inc.
Standard Toycraft, Inc., from Standard Toykraft Products, Inc., Brooklyn, N.Y. 750,199, pub. 3–12–63. Cl. 37.
Standard Toykraft Products, Inc.: *See*—
Standard Toycraft, Inc.
Stanley Home Products, Inc., Westfield, Mass. 402,057, ren. 5–28–63. Cl. 52.
Stanley Home Products, Inc., Westfield, Mass. 750,292, pub. 3–12–63. Cl. 52.
Starrett, L. S., Co., The, Athol, Mass., from Webber Gage Co., Cleveland, Ohio. 750,181, pub. 3–12–63. Cl. 26.
Stearns & Foster Co., The, Lockland, to The Stearns & Foster Co., Cincinnati, Ohio. 172,370, ren. 5–28–63. Cl. 52.
Sterling Drug Inc., New York, N.Y. 750,037, pub. 3–12–63. Cl. 18.
Sterling Precision Corp., New York, N.Y. 750,053, pub. 3–12–63. Cl. 19.
Stewart, Bonnie E., d.b.a. Stewart's Orange & Nut Shop, to J. Stewart, d.b.a. Stewart's Skippy Boy, Memphis, Tenn. 400,770, ren. 5–28–63. Cl. 46.
Stewart, Jessie: *See*—
Stewart, Bonnie E.
Stewart's Orange & Nut Shop: *See*—
Stewart, Bonnie E.
Stewart's Skippy Boy: *See*—
Stewart, Bonnie E.
Strouse, Adler Co., The, New Haven, Conn. 750,215, pub. 3–12–63. Cl. 39.
Studio Girl-Hollywood, Inc., Glendale, Calif. 750,287, pub. 3–12–63. Cl. 51.
Sunbeam Corp., Chicago, Ill. 750,067, pub. 3–12–63. Cl. 21.
Sun-E-Boy Brands, Inc., Brooklyn, N.Y. 750,271, pub. 3–12–63. Cl. 46.
Sunstrand Corp., Rockford, Ill. 750,091, pub. 3–12–63. Cl. 23.
Swift & Co., Chicago, Ill. 750,276, pub. 3–12–63. Cl. 46.
Swingline Inc.: *See*—
Speed Products Co.
Talbot Tool Co., Ltd., Brighton, England. 750,158, pub. 3–12–63. Cl. 26.
Tandero, Erik, Inc., New York, N.Y. 750,183, pub. 3–12–63. Cl. 32.
Techne (Cambridge) Ltd., Duxford, England. 750,128, pub. 3–12–63. Cl. 26.
Tenen, Alan R., d.b.a. Tenen Brothers, New York, N.Y. 750,170, pub. 3–12–63. Cl. 26.
Tenen Brothers: *See*—
Tenen, Alan R.
Terrell, Betti, Inc., Dallas, Tex. 750,226, pub. 3–12–63. Cl. 39.
Tex-O-Con Optics, Inc., Dallas, Tex. 750,147, pub. 3–12–63. Cl. 26.
Thermo Electric Co., Inc., Saddle Brook, N.J. 750,146, pub. 3–12–63. Cl. 26.
Therm-O-Disc, Inc., Mansfield, Ohio. 750,014, pub. 3–12–63. Cl. 13.
Therm-O-Disc, Inc., Mansfield, Ohio. 750,151, pub. 3–12–63. Cl. 26.
Thompson, M. R., Inc., New York, N.Y. 750,035, pub. 3–12–63. Cl. 18.
Thoro Chemical Co.: *See*—
National Technical Laboratories.
Tidewater Oil Co.: *See*—
Federal Rubber Co., The.
Toledo-Beaver Tools, Inc., Toledo, Ohio. 750,121, pub. 3–12–63. Cl. 23.
Tom Sawyer Foods, Inc., Los Angeles, Calif. 750,267, pub. 3–12–63. Cl. 46.
Top, Herman, d.b.a. Top's Supplies, New York, N.Y. 750,167, pub. 3–12–63. Cl. 28.
Traders Oil Mill Co., Fort Worth, Tex., to The Buckeye Cellulose Corp., Cincinnati, Ohio. 402,527, ren. 5–28–63. Cl. 46.
Transwestern Pipeline Co., Houston, Tex. 750,308, pub. 3–12–63. Cl. 105.
Trask, Arthur C., Co., Chicago, Ill. 749,975, pub. 3–12–63. Cl. 6.
Trico Products Corp., Buffalo, N.Y. 167,037, ren. 5–28–63. Cl. 29.
Trio Mfg. Co., Griggsville, Ill. 643,891, canc. Cl. 21.
Ulrich Associates, New York, N.Y. 750,173, pub. 3–12–63. Cl. 28.
Underwriters' Laboratories, Inc., Chicago, Ill. 654,922. Am. 7(d). Cl. A.
Unger, Eugene, and Co., Inc., New York, N.Y. 750,166, pub. 3–12–63. Cl. 28.
United Shoe Machinery Corp., from B.B. Chemical Co., Boston, Mass. 749,972, pub. 3–12–63. Cl. 5.
United States Rubber Co., New York, N.Y. 402,412, ren. 5–28–63. Cl. 35.
United States Steel Corp., Pittsburgh, Pa. 750,010, pub. 3–12–63. Cl. 13.
United Vintners, Inc., d.b.a. Italian Swiss Colony, San Francisco, Calif. 750,279, pub. 3–12–63. Cl. 47.
United-Greenfield Corp., Chicago, Ill. 750,105, pub. 3–12–63. Cl. 23.
Universal Oil Products Co., Des Plaines, Ill. 749,990, pub. 3–12–63. Cl. 6.
Upjohn Co., The, Kalamazoo, Mich. 750,046–7, pub. 3–12–63. Cl. 18.
Usinger, Fred, Inc., Milwaukee, Wis. 750,278, pub. 3–12–63. Cl. 46.
VEB Buchungsmaschinenwerk Karl-Marx-Stadt, Karl-Marx-Stadt, Germany. 750,130, pub. 3–12–63. Cl. 26.
Valley Co-Op Oil Mill, Harlingen, Tex. 749,988, pub. 3–12–63. Cl. 6.
Van Pelt and Brown, Inc.: *See*—
Mallinckrodt Chemical Works.
Varian Associates, Palo Alto, Calif. 750,058, pub. 3–12–63. Cl. 21.
Varifab Inc., High Falls, N.Y. 750,133, pub. 3–12–63. Cl. 26.
Velsicol Chemical Corp., Chicago, Ill. 749,980, pub. 3–12–63. Cl. 6.
Vernon Photographic Corp., Mount Vernon, N.Y. 750,149, pub. 3–12–63. Cl. 26.
Vestal, Maxine A., Engelwood, Colo. 643,978, canc. Cl. 50.
Vickers Inc., Detroit, Mich. 750,092–5, pub. 3–12–63. Cl. 23.
Victorian Marble Products, Spring Valley, Calif. 749,999, pub. 3–12–63. Cl. 12.
Wales Mfg. Co., Boston, Mass. 750,225, pub. 3–12–63. Cl. 39.
Warp Brothers: *See*—
Warp, Harold.
Warp, Harold, d.b.a. Flex-O-Glass Mfg. Co., and Warp Brothers, to Flex-O-Glass, Inc., Chicago, Ill. 401,404, ren. 5–28–63. Cl. 50.
Washburn-Crosby Co., to General Mills, Inc., Minneapolis, Minn. 171,443, ren. 5–28–63. Cl. 46.
Washington Iron Works, Seattle, Wash. 399,807, ren. 5–28–63. Cl. 23.
Washington Square Press, Inc., New York, N.Y. 750,210, pub. 3–12–63. Cl. 38.
Waukesha Motor Co., Waukesha, Wis. 750,152, pub. 3–12–63. Cl. 26.
Webber Gage Co.: *See*—
Starrett, L. S., Co., The.
Webley & Scott Ltd., Birmingham, England. 163,486, ren. 5–28–63. Cl. 9.
Wellman, Fred, d.b.a. Photo Products, Indianapolis, Ind. 750,137, pub. 3–12–63. Cl. 26.
West Chemical Products, Inc.: *See*—
West Disinfecting Co.
West Chemical Products, Inc., Long Island City, N.Y. 750,020, pub. 3–12–63. Cl. 16.
West Disinfecting Co., New York, N.Y., to West Chemical Products, Inc., Long Island City, N.Y. 166,269, ren. 5–28–63. Cl. 6.
West Disinfecting Co., New York, N.Y., to West Chemical Products, Inc., Long Island City, N.Y. 167,736, ren. 5–28–63. Cl. 6.
Western Auto Supply Co., Kansas City, Mo. 750,108, pub. 3–12–63. Cl. 23.
Western Tire Auto Stores, Inc., Chicago, Ill. 750,018, pub. 3–12–63. Cl. 15.
Western Tire Auto Stores, Inc., Chicago, Ill. 750,068, pub. 3–12–63. Cl. 21.
Western Tire Auto Stores, Inc., Chicago, Ill. 750,097, pub. 3–12–63. Cl. 23.
Western Tire Auto Stores, Inc., Chicago, Ill. 750,189, pub. 3–12–63. Cl. 34.
Westley Industries, Inc.: *See*—
Bell Co., The.
Weston Woods Studios: *See*—
Schindel, Morton.
Weyerhaeuser Co., Tacoma, Wash. 749,997–8, pub. 3–12–63. Cl. 10.
Wheeler, Earl F.: *See*—
Wheeler Mfg. Co.
Wheeler Mfg. Co., to Earl F. Wheeler, d.b.a. Wheeler Mfg. Co., Berkeley, Calif. 163,206, ren. 5–28–63. Cl. 39.

White Laboratories, Inc., Kenilworth, N.J. 750,030–1, pub. 3–12–63. Cl. 18.
Williams & Woods Ltd., Dublin, Ireland. 750,277, pub. 3–12–63. Cl. 46.
Wilson & Co., Inc., Chicago, Ill. 750,251, pub. 3–12–63. Cl. 46.
Winton Watch Co., Inc.: *See*— Hipp. Didisheim Co. Inc.
Yahnke, J. G., Co.: *See*— Yahnke, James G.
Yahnke, James G., d.b.a. J. G. Yahnke Co., Libertyville, Ill. 643,802, canc. Cl. 16.
Yat Gaw Min Co., from Lee & Lee Co., New York, N.Y. 750,272, pub. 3–12–63. Cl. 46.
Zivi S.A. Cutelaria, Porto Alegre, Brazil. 750,102, pub. 3–12–63. Cl. 23.
Zuercher, C. E., & Co., Inc., Chicago, Ill. 643,967, canc. Cl. 46.
Zychlinski, Dr. Ingo. Bruno V., Mittenwald/Obb, Germany. 749,977, pub. 3–12–63. Cl. 6.

U.S. GOVERNMENT PRINTING OFFICE: 0—1993

U.S. DEPARTMENT OF COMMERCE
OFFICIAL GAZETTE of the UNITED STATES PATENT OFFICE
June 4, 1963 Volume 791 Number 1

PATENTS
NOTICES

Board of Appeals Decisions Rendered in the Month of April 1963

Examiner affirmed	340
Examiner affirmed in part	60
Examiner reversed	73
Total	473

Affidavit under Rule 204(b)

For greater uniformity and avoidance of needless interferences, the following practice should be followed in instituting interferences which may involve senior party patentees.

In all cases where claims are copied from a patent, and the applicant's effective filing date is more than thirty days later than the patentee's filing date, the Examiner, before declaring an interference, shall require applicant to file an affidavit setting forth sufficient facts to make out a prima facie case for priority relative to the filing date of the patentee.

H. B. WHITMORE,
Apr. 30, 1963. *Superintendent of the Examining Corps.*

Adjudicated Patents

(C.A. Tex.) Johnson and Harvey Patent No. 2,438,173 (182—115), for portable collapsible scaffolding. Claims 1 and 2 *Held* infringed. *Up-right, Inc.* v. *Safway Products Inc. et al.*, 315 F.2d 23; 137 USPQ 180.

(C.A. Calif.) Jones Patent No. 2,561,986 (240—78) for recessed light fixture with separate outlet box, *Held* invalid. *Pressteel Co.* v. *Halo Lighting Products, Inc.*, 314 F.2d 695; 137 USPQ 25.

(C.A. Kans.) Mott Patent No. 2,590,065 (56—289) for mower structure. Claims 11 to 13 *Held* valid and infringed. *Mott Corp.* v. *Sunflower Industries, Inc. et al.*, 314 F.2d 872; 137 USPQ 288.

(C.A. Fla.) Mamo Patent No. 2,798,625 (214—84) for boat trailer, *Held* invalid. *Mamo* v. *Beverly Mfg. Co. et al.*, 315 F.2d 91; 137 USPQ 184.

(C.A. Ill.) Goldsmith Patent No. 2,825,384 (153—1) for method and apparatus for securing metal strips to fabric. Claims 12, 14, and 15 *Held* valid but not infringed. *Elgen Mfg. Corp.* v. *Ventfabrics, Inc.*, 314 F.2d 440; 137 USPQ 21.

Patents Available for Licensing or Sale

2,643,930. Cigarette Lighter. Walter S. Nisely, 118 N. Newberry St., York, Pa.

3,068,642. Drive Means for Land, Water and Aircraft. Wilhelm Schmidt, Dresden, Germany. Correspondence to: Michael S. Striker, 360 Lexington Ave., New York 17, N.Y.

3,072,812. Permanent Magnet Motor. Edward D. Gaddes, 3717 Crestview Drive, Nashville 12, Tenn.

3,082,554. Snow Shovel. Karl Steeb, 149 Harlem Ave., Buffalo 24, N.Y.

General Electric Company is prepared to grant non-exclusive licenses under the following 6 patents upon reasonable terms to domestic manufacturers.

Applications for license under the following patent may be addressed to: General Electric Company, Patent Counsel, Chemical and Metallurgical Division, One River Road, Schenectady 5, N.Y.

2,994,605. High Temperature Alloys.

Applications for license under the following 5 patents may be addressed to: General Electric Company, Patent Counsel, Instrument Department, 40 Federal St., West Lynn, Mass.

2,752,434. Magneto-Responsive Device.
2,752,538. Magneto-Responsive Device Control System.
2,961,407. Mixed Ferrite Composition.
3,031,591. Pressure Measuring Gage.
3,039,025. Humidity Sensitive Device.

Disclaimers

3,050,981.—*Helmut J. Schwarz*, Somerville, N.J. VAPORIZATION RATE MEASURING APPARATUS. Patent dated Aug. 28, 1962. Disclaimer filed Apr. 17, 1963, by the assignee, *Radio Corporation of America.*

Hereby enters this disclaimer to claims 1 through 10 of said patent.

3,079,481.—*Jo Emmett Jennings*, San Jose, Calif. MULTIPLE POSITION VACUUM SWITCH. Patent dated Feb. 26, 1963. Disclaimer filed Apr. 15, 1963, by the assignee, *Jennings Radio Manufacturing Corporation*, the inventor approving.

Hereby enters this disclaimer to all the claims of said patent.

Erratum

All references to Patent No. 3,090,860 to Richard B. Stanley, assignor to Free-Roll Tester Corporation, for Apparatus and Method for Determining Bearing Condition of Railway Car Journal Boxes, appearing in the OFFICIAL GAZETTE of May 21, 1963, should be deleted as the application was withdrawn from issue and the patent was not issued.

New Applications Received During April 1963

Patents	7,797
Designs	466
Plant Patents	9
Reissues	31
Total	8,303

Issue

Patents	1,060	No. 3,091,768 to No. 3,092,836, incl.
Designs	68	No. 195,326 to No. 195,393, incl.
Total	1,137	

Practice Under Rule 112

The following practice shall henceforth be followed by the Examining Corps in applying Rule 112, in the light of the notice entitled "New Examining Procedures" appearing at 781 O.G. 1, on August 7, 1962.

Any amendment after a second action upon the patentability of the invention as claimed shall be inspected immediately to determine whether such amendment is restricted to the rejection made, as required by Rule 112. If the amendment would require rejection on any new basis, as for example if it introduces any new limitation into any existing claim, or adds any claim including such a limitation, and the limitation is of such a nature that a further search would be required before it could be determined that such claim is or is not patentable, the amendment is to be treated as failing to comply with Rule 112.

In such a case applicant shall be notified promptly that the amendment has *not* been entered since it does not constitute a proper response under Rule 112. Such notification shall clearly point out the reason why the response is considered improper.

Where insufficient time remains in the original statutory period for response, and the amendment in question otherwise appears to be a bona fide attempt to advance the case to final action, and is substantially a complete response to the Examiner's action, as provided by Rule 135(c), applicant will be given a specified period (usually 20 days) in which to overcome the Examiner's objection.

Petition will lie from denial of entry of an amendment under the aforementioned condition and will be governed by all the requirements of Rule 181.

An applicant may ordinarily avoid nonentry of an amendment on this ground by including in his application at the time of filing, or after the first complete action, the most detailed claim that he would be willing to accept as well as the broadest claim to which he considers himself entitled.

Inasmuch as this practice presupposes an essentially complete first action, its application will ordinarily be deferred in any case where a new reference is cited in a subsequent action for any purpose other than to meet newly added limitations.

Pending further notice, to insure uniform and equitable application of the practice, every action holding a response improper under the circumstances indicated above must be submitted to, and approved by, the appropriate Group Supervisor.

EDWIN L. REYNOLDS,
First Assistant Commissioner.

May 21, 1963.

PATENT EXAMINING CORPS

H. B. WHITMORE, Superintendent

PATENT EXAMINING OPERATIONS AND GROUPS	Oldest Application: New	Oldest Application: Amended
CHEMICAL EXAMINING OPERATION—P. E. MANGAN, Director.		
GENERAL CHEMISTRY, GROUP 110—R. L. CAMPBELL, Supervisory Examiner	7-12-61	7-27-61
Inorganic and Organo-metal (formerly Div. 59)—M. A. Brindisi.		
Metallurgy (formerly Div. 3).		
Electrochemistry (formerly Div. 56)—J. R. Speck.		
GENERAL ORGANIC CHEMISTRY, GROUP 120—I. MARCUS, Supervisory Examiner	12-28-61	11-15-61
Heterocyclic (formerly Div. 6)—H. J. Lidoff.		
Specialized Organic Compounds (formerly Div. 36)—C. B. Parker.		
Medicines (formerly Div. 42).		
PETROLEUM CHEMISTRY, GROUP 130—J. S. BAILEY, Supervisory Examiner	12-6-61	10-20-61
Hydrocarbons (formerly Div. 31).		
Oxo- and Oxy-Derivatives.		
HIGH POLYMER CHEMISTRY, GROUP 140—M. STERMAN, Supervisory Examiner	5-8-61	4-26-61
High Polymer Preparation (formerly Div. 60).		
Mixed High Polymers and Natural Resins (formerly Div. 80).		
COMPOSITIONS AND MOLDING, GROUP 150—L. H. GASTON, Supervisory Examiner	10-9-61	10-17-61
Coating Compositions and Molding.		
Special Utility Compositions (formerly Div. 64)—J. Greenwald.		
COATING AND LAMINATING, GROUP 160—I. G. STONE, (J. REBOLD, Acting) Supervisory Examiner	10-13-61	10-2-61
Coating Methods and Apparatus (formerly Div. 35)—R. D. Nevius.		
Laminating and Stock Materials (formerly Div. 67).		
SPECIALIZED CHEMICAL ARTS AND INDUSTRIES, GROUP 170—W. B. KNIGHT, Supervisory Examiner	9-7-61	9-27-61
Specialized Chemical Arts (formerly Div. 63)—A. H. Winkelstein.		
Reactors and Miscellaneous Industrial Processes.		
CHEMICAL ENGINEERING, GROUP 180—G. D. MITCHELL, Supervisory Examiner	10-31-61	12-12-61
Gases, Liquids and Solids Separating (formerly Div. 32)—H. L. Martin.		
Distillation, Drying and Physical Processes.		
ELECTRICAL EXAMINING OPERATION—N. H. EVANS, Director.		
POWER, GROUP 210—M. L. LEVY, Supervisory Examiner	9-15-61	8-31-61
Generation and Utilization (formerly Div. 20)—O. L. Rader.		
General Applications (formerly Div. 46)—S. Bernstein.		
Conversion and Distribution (formerly Div. 71)—L. McCollum.		
Heating and Related Art (formerly Div. 76)—R. M. Wood.		
SECURITY, GROUP 220—S. BOYD, Supervisory Examiner	11-1-61	10-4-61
Chemical (formerly Div. 40).		
Electrical (formerly Div. 44)—C. L. Justus.		
Mechanical (formerly Div. 10).		
INFORMATION TRANSMISSION, GROUP 230—S. W. CAPELLI, Supervisory Examiner	10-19-61	10-12-61
Communications (formerly Div. 16)— R. H. Ross.		
Multiplexing Techniques (formerly Div. 77)—D. G. Redinbaugh.		
Facsimile and Related Art (formerly Div. 41)— R. Lake.		
INFORMATION STORAGE AND RETRIEVAL, GROUP 240—W. W. BURNS, Supervisory Examiner	8-25-61	9-7-61
Processing and Related Art (formerly Div. 68)—M. A. Morrison.		
Storage Devices and Related Art (formerly Div. 42)—I. Sragow.		
ELECTRONIC COMPONENT SYSTEMS AND DEVICES, GROUP 250—B. G. MILLER, Supervisory Examiner	9-21-61	9-18-61
Semi-Conductor and Space Discharge Systems and Devices (formerly Div. 51)—G. N. Westby.		
Electronic Component Circuits (formerly Div. 72)—A. Gauss.		
Wave Transmission Lines and Networks (formerly Div. 65)—H. K. Saalbach.		
RADIATION AND INSTRUMENTS, GROUP 260—F. M. STRADER, Supervisory Examiner	9-20-61	9-13-61
Optics (formerly Div. 73)—J. H. Pedersen.		
Radiant Energy (formerly Div. 54)—R. G. Nilson.		
Measuring (formerly Div. 74)—W. L. Carlson.		
ELEMENTS, GROUP 270—E. J. SAX, Supervisory Examiner	9-27-61	9-22-61
Conductors (formerly Div. 75)—J. P. Wildman.		
Switches (formerly Div. 37)—B. A. Gilheany.		
Miscellaneous (formerly Div. 78)—J. F. Burns.		

CONDITION OF PATENT APPLICATIONS AS OF MARCH 31, 1963

Total number of pending applications (excluding Designs)	192, 888
Total number of Design applications pending	5, 875
Total number of applications awaiting action (excluding Designs)	111, 125
Total number of Design applications awaiting action	2, 014
Date of oldest new application awaiting action	May 8, 1961
Date of oldest amended application awaiting action	April 26, 1961

EXPIRATION OF PATENTS

The patents within the range of numbers indicated below expire during May 1963, except those which may have been extended under the provisions of the Veterans Patent Extension Act (64 Stat. 316 as amended by 66 Stat. 321) and those which may have expired earlier due to shortened terms under the provisions of Public Law 600. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1963*

Patents	Numbers 2,900,611 to 2,901,201, inclusive
Plant Patents	Numbers 686 to 693 inclusive

PATENT EXAMINING OPERATIONS AND GROUPS (Continued)	Oldest Application	
	New	Amended
MECHANICAL ENGINEERING EXAMINING OPERATION—R. A. WAHL, Director.		
MATERIAL OR ARTICLE HANDLING AND DISPENSING, GROUP 310—A. BERLIN, Supervisory Examiner		
Conveying and Loading (formerly Div. 4)—E. A. Faller.		
Handling.		
Dispensing (formerly Div. 35)—L. J. Dembo.		
METAL AND PLASTICS WORKING, GROUP 320—N. BERGER, Supervisory Examiner		
Metal-Working.		
Plastics Working (formerly Div. 15)—M. V. Brindisi.		
MANUFACTURING AND ASSEMBLING MISCELLANEOUS ARTICLES, GROUP 330—A. HORTON, Supervisory Examiner		
Combined Machines and Processes (formerly Div. 14)—W. A. Wiltz.		
Assembly and Special Article Making.		
MACHINE TOOLS, MECHANISMS, AND ELEMENTS, GROUP 340—F. BRONAUGH, Supervisory Examiner		
Comminuting, Abrading and Drilling.		
Cutting.		
Machine Elements and Mechanisms (formerly Div. 12)—B. G. Durham.		
Clutches, Shafting and Workholders.		
HARDWARE, TOOLS AND JOINTS, GROUP 350—T. HICKEY, Supervisory Examiner		
Hardware (formerly Div. 20)—J. D. Sears.		
Tools.		
Joints.		
FLUID HANDLING, GROUP 360—E. PAUL, Supervisory Examiner		
Fluid Handling and Valves (formerly Div. 30)—L. Weil.		
Baths, Closets and Fluid Conduits (formerly Div. 11)—E. V. Benham.		
POWER PLANTS, MOTORS AND PUMPS, GROUP 370—C. GAREAU, Supervisory Examiner		
Power Plants and Motors (formerly Div. 18)—A. Blum.		
Expansible Chamber Motors.		
Pumps (formerly Div. 9)—J. H. Branson.		
HEATING, COOLING AND VENTILATING, GROUP 380—P. PATRICK, Supervisory Examiner		
Burners and Heat Exchange.		
Cooling and Ventilation (formerly Div. 30)—R. A. O'Leary.		
GENERAL ENGINEERING AND INDUSTRIAL ARTS EXAMINING OPERATION—J. A. MANIAN, Director.		
AGRICULTURE, GROUP 410—A. RUEGG, Supervisory Examiner		
Animal (formerly Div. 5)—C. W. Robinson.		
Plant (formerly Div. 1)—A. G. Stone.		
CIVIL ENGINEERING, GROUP 420—B. BENDETT, Supervisory Examiner		
Buildings.		
Construction and Structures.		
Earth Working, Drilling and Mining.		
PHYSICS, GROUP 430—R. L. EVANS, Supervisory Examiner		
Photography, Sound and Lighting (formerly Div. 7)—E. G. Anderson.		
Indicators and Optics (formerly Div. 23)—L. Smilow.		
Measuring and Testing (formerly Div. 36)—J. P. Strizak.		
Geometric, Heat and Liquid Testing (formerly Div. 66)—I. Lisann.		
TEXTILES AND APPAREL, GROUP 440—R. C. MADER, Supervisory Examiner.		
Textiles.		
Apparel.		
TRANSPORTATION, GROUP 450—P. ARNOLD, Supervisory Examiner		
Rail Vehicles and Brakes (formerly Div. 34)—L. Quackenbush.		
Land Vehicles.		
Aeronautics and Ships (formerly Div. 22)—M. Buchler.		
FURNITURE AND RECEPTACLES, GROUP 460—W. COLE, Supervisory Examiner		
Furniture (formerly Div. 32)—C. A. Le Roy.		
Receptacles (formerly Div. 40)—E. J. Drummond.		
PRINTING, STATIONERY AND MATERIAL TREATMENT, GROUP 470—L. W. VARNER, Supervisory Examiner		
Printing (formerly Div. 17)—R. A. Leighey.		
Stationery (formerly Div. 53)—G. A. Ninas.		
Material Treatment.		
PERSONAL TREATMENT, ADORNMENT AND AMUSEMENT, GROUP 480—L. R. PRINCE, Supervisory Examiner		
Personal Treatment.		
Adornment and Amusement (formerly Div. 62)—D. B. Lowe.		
DESIGNS—J. A. MANIAN, Supervisory Examiner		
Industrial Arts (formerly Div. 31)—A. B. Hannah.		
Household, Personal and Fine Arts (formerly Div. 32)—E. Hunter.		
(CLASSIFICATION) GORECKI, G. A.—ARTS UNDERGOING RECLASSIFICATION AS LISTED UNDER CLASSIFICATION DIVISIONS.		
91. KENT, A. P. (acting)		
92. GAUSS, H.	5-9-62	8-1-62
93. PURDY, W. F. (acting), Wire Working	7-6-62	7-23-62
94. BERLOWITZ, W., Motors, Fluid	12-11-61	12-19-61
95. ANGEL, C. D., (REZNEK, J., acting), Metallic Building Structures		

DECISIONS IN PATENT AND TRADEMARK CASES

U.S. Court of Customs and Patent Appeals

IN RE HERBERT J. KANDER

No. 6922. Decided February 18, 1963

[50 CCPA —; 312 F.2d 834; 136 USPQ 477]

1. PATENTABILITY—STATUTORY BASIS FOR REJECTION—35 U.S.C. 102(e) AND 103.

"Appellant • • • emphasizes that both the Kessler and Feldmeier patents issued after his filing date. This fact is, of course, irrelevant in view of 35 U.S.C. 102(e). The rejection here is necessarily predicated on that section plus section 103 which, in a situation such as this, is not concerned with the psychological aspects of inventing but rather with legal concepts involving hypothetical situations in which the prior art is assumed to include those things dealt with in section 102, including the disclosures of United States patents having filing dates earlier than the applicant's date of invention as provided in paragraph (e). No date earlier than his filing date is asserted by appellant and it is later by two or more years than the filing dates of Kessler and Feldmeier."

2. SAME—PARTICULAR SUBJECT MATTER—"GASKET FOR SANITARY FITTINGS."

The decision of the Board of Appeals, refusing the claims in an application entitled "Gasket for Sanitary Fittings" as unpatentable over the prior art, is affirmed.

APPEAL from the Patent Office. Serial No. 594,505.

AFFIRMED.

Marvin C. Soffen, Ostrolenk, Faber, Gerb & Soffen for appellant.

Clarence W. Moore (*S. Wm. Cochran* of counsel) for the Commissioner of Patents.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, SMITH, and ALMOND, Jr., *Associate Judges*

RICH, *J.*, delivered the opinion of the court.

This appeal is from the affirmance by the Patent Office Board of Appeals of the rejection of claims 24–28 of appellant's application Ser. No. 594,505, filed June 28, 1956, for "Gasket for Sanitary Fittings." No claims are allowed.

A "sanitary fitting" is one used, for example, in a piping system in the food processing or dairy industries. The appellant's specification is an elaborate description of the details of a simple gasket, which may be made of "Teflon," nylon, or neoprene, by machining or molding, to fit a typical, standard, preexisting fitting of the pipe union type. Such a fitting comprises the adjoining ends of two pipe sections, one of which has external threads and the other of which has an annular flange. An internally threaded nut or collar engages the flange and threads to draw the pipe-ends together after the fashion of all pipe unions, illustrations of which are to be found in any Merriam-Webster Webster's Dictionary of the past few decades. The pipe-ends of the standard fitting with which the gasket of the invention is to be used are oppositely beveled at 45° so as to have parallel surfaces.

Appellant's gasket is interposed between the beveled ends of the pipe so that the pipe-ends will necessarily be spaced somewhat apart, the gasket occupying the space end, by reason of its resiliency, making a tight joint. Consequently it will be in contact with the fluid stream in the pipe. To prevent accumulation of residual material at the joint when the pipe is cleaned by flushing it out with detergent or the like, it is desired that the inner surface of the gasket be of the

same diameter as the inner diameter of the pipe and flush therewith so a smooth wall is formed. One desideratum of such a structure is that the gasket should be "self-centering" in the fitting and this capacity of appellant's gasket is attributed to two facts: the outer diameter of the gasket is made the same as the inner diameter of the threaded portion of the nut—which would seem to suffice for centering. But, secondly, it is said that self-centering is assured by making the face of the gasket which mates with the externally beveled pipe-end of such form as to correspond to the shape of the pipe-end, which has a short radial face radially inwardly of its conical face. Thus, one face of the gasket has an inner radial seat and an outer 45° bevel. The opposite face of the washer has only a 45° bevel matching the bevel of the internally beveled pipe-end. The only other detail of construction is that the gasket is of such thickness that its outer cylindrical wall is at least as wide as the distance between two threads on the nut so that it cannot enter between the threads and get chewed up or move off center relative to the joint axis.

It seems unnecessary to set forth any of the claims, which are long and would show merely the above-recited features, described in various ways. The appealed claims except 27 and 28 are directed to the gasket per se while the latter define a "pipe joint" containing the gasket, reciting the coacting parts of both joint and gasket. Appellant does not assert the joint apart from the gasket to be any part of his invention.

The references relied on by both the Examiner and the Board are:

Kessler, 2,780,483, February 5, 1957, filed March 30, 1953.
Feldemeier, 2,786,696, March 26, 1957, filed June 21, 1954.
Deavs, 299,206, May 27, 1884.
Greenfield, 817,058, April 3, 1906.
Ramage, 1,027,565, May 28, 1912.

Kessler shows a gasketed joint for the same kind of service as appellant's joint but is relied on not so much for the invention disclosed as for the implications to be drawn from what the patent states as to the prior art. Such statements, however, do not appear to us to add anything to, nor to be as explicit as, appellant's own statements in his specification, repeated in his brief, as to the kind of known joint for which he designed his gasket. Kessler's gasket is made of neoprene.

Feldmeier is cited for its disclosure of a "Teflon" gasket in a sanitary coupling, its inner surface being flush with the inner wall of the pipe so as to be easily cleaned in place when the line is flushed out. The pipe-ends of this fitting, however, are in part square, and have the outer portions of their faces beveled at only 8°. A transparent cylindrical collar is held in place by flange plates and bolts and is used instead of a union nut. The collar centers the gasket.

Deavs, Greenfield, and Ramage are cited to show the conventionality of centering gaskets in threaded fittings by sizing their outer diameters to fit the inner diameter of the threaded portion of the nut or collar in a union type of joint. We would, if necessary, take judicial notice of the centering of a common garden hose washer in the same fashion.

Appellant's argument is very largely an effort to show how many changes would have to be made in the fitting and gasket of the Kessler invention to arrive at his structure. This is something of an evasion of the real issue in the case, if not a red herring. As above stated, the Kessler patent was not primarily relied on for its showing of

Kessler's invention. We find such arguments beside the point and hence unpersuasive.

[1] Appellant also emphasizes that both the Kessler and Feldmeier patents issued after his filing date. This fact is, of course, irrelevant in view of 35 U.S.C. 102(e). The rejection here is necessarily predicated on that section plus section 103 which, in a situation such as this, is not concerned with the psychological aspects of inventing[1] but rather with legal concepts involving hypothetical situations in which the prior art is assumed to include those things dealt with in section 102, including the disclosures of United States patents having filing dates earlier than the applicant's date of invention as provided in paragraph (e). No date earlier than his filing date is asserted by appellant and it is later by two or more years than the filing dates of Kessler and Feldmeier.

It appears to us that in designing the gasket herein claimed, constituting the subject matter sought to be patented, appellant has only done what would have been obvious to one of ordinary skill in the gasket art in view of the teachings of the prior art cited. Basically, the invention is the cutting or molding of a gasket, of suitable materials previously used in the same art for the same purpose, so as to fit accurately in an admittedly old joint, to center itself therein by reason of its accurate fit, and so as not to extend into the passage through the pipe. Such an invention clearly fails to meet the statutory prerequisite of unobviousness, without which it is not patentable.

[2] The decision of the Board is affirmed.

AFFIRMED.

[1] See "Commentary on the New Patent Act," by P. J. Federico, in 35 U.S.C.A. § 1 to § 110, at page 21.

PATENTS

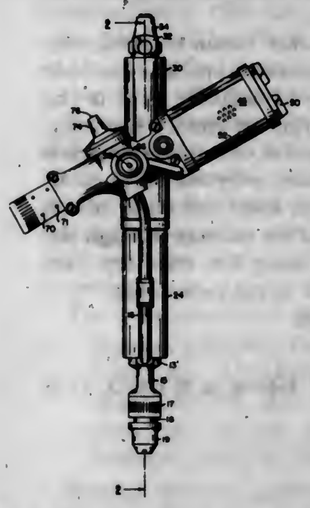
JUNE 4, 1963

GENERAL AND MECHANICAL

3,091,768
FLUID OPERATED TACKER

William E. Whitney, Belmont, Mass., assignor, by mesne assignments, to Plymouth Cordage Industries, Inc., Boston, Mass., a corporation of Massachusetts

Filed June 16, 1961, Ser. No. 117,662
17 Claims. (Cl. 1—44.4)



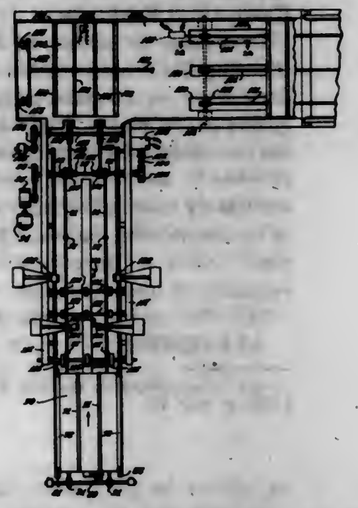
1. A tacker of the fluid pressure type having a housing, a barrel projecting therefrom, a hollow piston movable in the barrel, an elongated spring chamber formed in the housing in alignment with and outside the barrel, and a spring of greater length than the barrel secured at one end in said chamber and at the other within the hollow of the piston for retracting the piston and holding it normally in its initial position in the barrel.

3,091,769
APPARATUS AND METHOD FOR THE CONTINUOUS PRODUCTION OF HOGSHEADS AND THE LIKE

Harry Guthrie Bell, Jacob Douglas Gay, and Keith Gilmore Shaffer, Paris, Ky., assignors to The Gay-Bell Corporation, Paris, Ky., a corporation of Kentucky

Filed Nov. 1, 1955, Ser. No. 544,258
18 Claims. (Cl. 1—66)

1. In apparatus for manufacturing hogsheads from panels having hoops and hoops-and-liners temporarily secured thereto, loading mechanism for moving a stack of said panels, feed mechanism to receive the said stack from said loading mechanism, panel receiving supports beneath said feed mechanism, said feed mechanism including means to drop panels one by one from said stack onto said supports, first conveyor means to move a panel from beneath said stack on said supports, stapling means to drive staples through said hoops-and-liners into said panel as it is moved by said first conveyor means whereby to secure them permanently, second conveyor means to move said permanently stapled panel from said first conveyor means and said stapling means, a support table to receive the panel as moved by said second conveyor means, a drag to engage said panel and move it at right angles to its last line of movement, third conveyor means to effect continued movement of said panel, rotating saw blades to engage said panel as moved by said third conveyor means, and cam means to raise periodically said

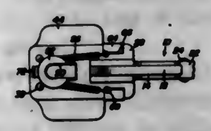


panel as the hoops and hoops-and-liners pass over said saw blades and to lower said panel after the hoops and hoops-and-liners have passed over said saw blades, whereby to form grooves in the panel below said hoops and hoops-and-liners and whereby to cut through said panel between successive hoops and hoops-and-liners.

3,091,770
EAR TAG PLIERS

Herman J. McMurray, Santa Barbara, Calif., assignor to said Herman J. McMurray and Neva B. McMurray, Santa Barbara, Calif., as joint tenants

Filed May 15, 1961, Ser. No. 110,222
9 Claims. (Cl. 1—220)



1. A tool for applying ear tags to the ear of an animal comprising a pair of jaws having planar facing surfaces, means movably interconnecting the jaws for movement of the jaws toward and away from each other, and means on each of the jaws for frictionally and resiliently gripping an ear tag thereon for retaining the ear tag against the inner surface of the jaws for positioning on opposite surfaces of an animal's ear in spaced relation thereto whereby the ear tags may be brought into engagement with the opposite surfaces of the ear for mounting

thereon, said means for holding an ear tag in position including a gripping member slidably mounted on the jaw, spring means interconnecting the gripping member and the jaw urging the gripping member towards the outer end thereof, said jaw having an aperture adjacent the outer end thereof receiving a projection on the ear tag whereby the ear tag will be releasably gripped frictionally between the gripping member and aperture.

3,091,771
EAR CUP ASSEMBLY FOR HELMETS

Guy T. Bixby, Littleton, Colo., assignor to Mine Safety Appliances Company

Filed Oct. 16, 1961, Ser. No. 145,352
4 Claims. (Cl. 2—3)



1. An ear cup assembly for the inside of a helmet, comprising an upright frame having inner and outer sides and front and back marginal portions, an ear cup supported by the inner side of the frame, an upright supporting member spaced from the outer side of the frame, four U-shape wire springs, each spring having one end above and the other end below said frame, means pivotally connecting the upper ends of the springs together on an upright axis, means in axial alignment with said first-mentioned means pivotally connecting the lower ends of the springs together, two of said springs diverging inward from said pivotal means toward said frame and the other two springs diverging outward toward said supporting member, means securing the central portions of the two inner springs to the frame at its front and back marginal portions, means securing the central portions of the two outer springs to the supporting member at its front and back, the springs urging the frame away from the supporting member, and flexible means limiting the distance the springs can spread the supporting member and frame apart.

3,091,772
WAISTBAND

Frederic Jean Marcel Hebras, 2 Ave. Desaix, Maison-Laffitte, France

Filed Oct. 5, 1959, Ser. No. 844,285
Claims priority, application France July 31, 1958
11 Claims. (Cl. 2—221)



1. In a garment having a slit, in combination, a waistband having a front band portion and a rear band portion, each of said band portions having an inner side and said front band portion having a free end and partially overlapping said rear band portion at the region of said slit so that said rear band portion comprises an overlapped section; an elastic band extending along the inner side of said front band portion, said elastic band having a first end connected to said rear band portion adjacent to said overlapped section and a second end connected to said front band portion so as to urge said rear band portion forwardly; a rigid bridge in the form of an inverted U straddling the rear band portion, said bridge having an outer leg connected with the free end of said front band portion and an inner leg located at the inner side of said rear band portion; and a second elastic band having a first end connected to the inner leg of said bridge and a second end connected to the inner side of said rear band portion for urging the front band portion rearwardly.

3,091,773
POCKET CONSTRUCTION

Hugh H. Andrews, Cheshire, Conn., assignor to Scovill Manufacturing Company, Waterbury, Conn., a corporation of Connecticut

Filed Mar. 17, 1961, Ser. No. 96,446
1 Claim. (Cl. 2—247)



A pocket comprising a garment piece, a single piece of patch pocket material of generally rectangular shape and having an elongated rectangular horizontal opening therein in the upper portion of said piece with the longitudinal edges of said opening hemmed and stitched, the material beyond the upper edge of said opening being folded along a horizontal line intermediate its length and stitched along such horizontal fold to provide a flap of double ply material with the free edge extending slightly below the top edge of the opening, said flap of double ply material being folded forwardly and downwardly to extend from a fold line immediately above the upper hemmed edge of said opening so as to overlie said opening, the front ply of said flap extending beyond said fold line to provide an edge, said pocket material as thus folded having all four edges of the perimeter folded underneath and upon itself, said single piece pocket material in such folded state being stitched to said garment piece along all four edges to provide the garment with a patch pocket having an overlapping flap whose side edges are held down by stitching.

3,091,774
MEANS FOR AND METHOD OF SEWING BUTTON LOOPS ON GARMENTS

David M. Shuler, 3 West Ave., South Norwalk, Conn.

Filed July 28, 1959, Ser. No. 830,125
2 Claims. (Cl. 2—266)



1. A button loop fastening and edge finishing device comprising: an elongated strip of fabric finishing material; and a unitary button loop tape in the form of a narrow elongated strip having a series of spaced button loops projecting from one edge of said narrow strip; said button loop tape being secured to said strip of fabric finishing material adjacent a longitudinal edge of said strip and disposed relative thereto so that said button loops extend inwardly of said longitudinal edge and in complete overlying contact with said strip of fabric finishing material.

3,091,775
DUAL STROKE TOILET FLUSH VALVE
Thomas C. Hinnenkirk, Hundred, W. Va., assignor to HYR Products, Inc., Hundred, W. Va., a corporation of West Virginia
Filed Mar. 23, 1962, Ser. No. 181,967
13 Claims. (Cl. 4—67)



1. Flush valve actuating mechanism for a toilet water tank comprising: a housing; means for connecting said housing to a toilet water tank, a toilet valve actuating lever pivotally at one end connected to said housing for movement in transverse relationship thereto from a downward position to an angularly upward position; first and second gear racks carried by said housing in longitudinally spaced relationship relative to the pivot axis of said lever and in operative alignment with said lever; pinion drive means carried by said housing in cooperative driving engagement with both gear racks operative to selectively move one of said gear racks to thereby pivot said lever to said upward position.

3,091,776
ROTARY SHOWER BRUSH
Paul L. Roberts, Rte. 3, Twin Falls, Idaho
Filed Mar. 27, 1962, Ser. No. 182,735
7 Claims. (Cl. 4—158)



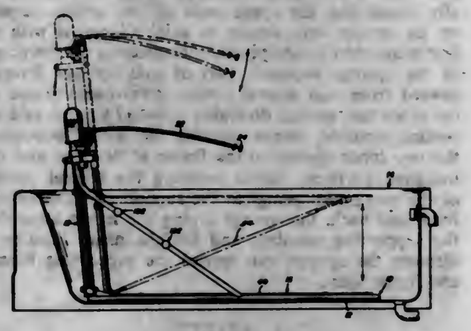
1. A shower apparatus comprising an enclosure, pairs of vertically aligned upper and lower bearings mounted in the enclosure, said lower bearings being rockable in a vertical plane, vertical drive shafts journaled in the upper bearings, vertical driven shafts removably journaled in said lower bearings in alignment with the drive shafts, cylindrical brushes mounted on the driven shafts for rotation therewith, means for actuating the drive shafts in unison, and means for operatively and detachably connecting said drive shafts to the driven shafts whereby said driven shafts may be swung out of alignment with said drive shafts and removed from said lower bearings.

3,091,777
SWIMMING POOL COVER
Raymond Pearlson, Hialeah, Fla.
(6400 SW. 129th Terrace, Miami, Fla.)
Filed July 27, 1960, Ser. No. 45,623
5 Claims. (Cl. 4—172)

1. A cover for a swimming pool having side, end and bottom walls comprising, an open rigid frame having side rails connected by transverse joists, the joists being below the tops of the side rails, a plurality of closely spaced hollow planks seated upon the joists, lying parallel to the side rails and filling the space between the side rails, groups of adjacent planks forming sections, tie down strips overlying the ends of the planks of each section and secured thereto to join the planks of each section into a unit, means hingedly connecting one section of plank adjacent the edge of the frame to the next adjacent section to permit raising and lowering the hinged section, means releaseably securing the hinged section to the frame, and pairs of hoists mounted on top of the pool walls having cables connected to the frame at opposed positions adjacent the frame ends.



3,091,778
HOIST FOR USE IN COMBINATION WITH BATHTUB
Carroll G. Gross, 3139 Juniper St., San Diego, Calif.
Filed Oct. 19, 1959, Ser. No. 847,123
2 Claims. (Cl. 4—185)



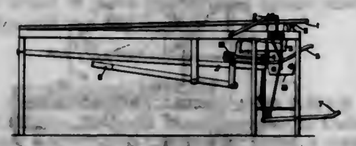
1. In combination, a bathtub; a self-contained, portable hoist for use by invalids and the like, said hoist comprising a stationary frame supported solely by the bathtub and which includes a bottom portion resting upon the bathtub and which includes a substantially vertical portion integrally connected to said bottom portion, said vertical portion including tubular members and a tubular stationary sleeve closed at its lower end and connected with and disposed substantially vertically from said bottom portion; a movable frame which includes a seat portion, rigidly attached to said movable frame, for supporting the weight of the bathtub user, and which includes at least two pairs of rollers rotatably supported by said movable frame, each said pair of rollers being located with one of said tubular members disposed between the rollers of said pair to confine movement of said movable frame in a direction parallel to said guide means; a tubular movable sleeve connected to said movable frame and slidably disposed within said stationary sleeve; a piston disposed within and slidable relative to said movable sleeve, the lower end of said piston resting upon the lower end of said stationary sleeve; means operable for introducing hydraulic fluid under pressure within said movable sleeve above said piston to thereby raise said movable frame; and an elongated arm connected to and hand actuable to operate said last-mentioned means.

3,091,779
MAT
Homer C. Lucas and Thomas W. Abel, both of 6421 Sunrise Drive, Norfolk 2, Va.
Filed June 16, 1961, Ser. No. 117,612
7 Claims. (Cl. 4—185)



1. A mat device comprising a plastic foam structure with apertures therein, suction members consisting of a stem with suction cups on its ends and strip means on said cups having a slit therein, said stem being disposed in said aperture, and pin means extending through slits to detachably secure the suction member to said structure.

3,091,780
MACHINE FOR UNCAPPING HONEYCOMBS IN SUPERS
Harry B. Smithson, Manson, Colo.
Filed Apr. 9, 1959, Ser. No. 805,228
6 Claims. (Cl. 6—12)

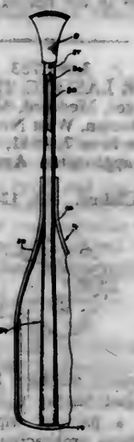


1. In honey extracting apparatus, a machine for uncapping honeycomb still in place within a plurality of frames mounted in spaced parallel relation within a hive super, comprising a runway adapted to slidably support the hive super, a knife carrier mounted for up and down movement below said runway, a plurality of pairs of knives projecting upward from said carrier and mounted thereon for longitudinal reciprocatory movement, means for raising said knife carrier to thrust said knives into the spaces between said frames with one pair of knives in each space, and means operable as the hive super is slid along said runway for reciprocating the knives.

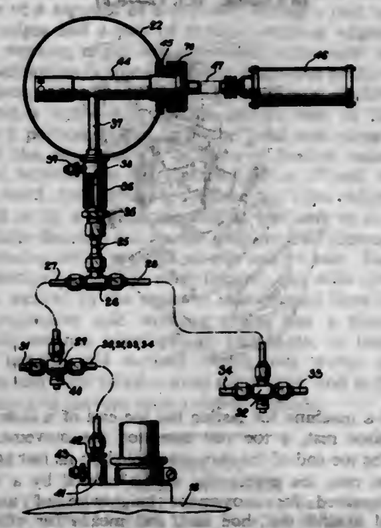
3,091,781
PADDLE AND METHOD OF MAKING THE SAME
William Wiskerd, Wilmette, Ill., assignor to Norton Manufacturing Corp., Chicago, Ill., a corporation of Illinois
Filed May 10, 1961, Ser. No. 109,190
5 Claims. (Cl. 9—24)

1. A craft propelling paddle or the like, comprising a blade consisting of two symmetrical opposed outwardly convex side walls of shape retaining sheet material united at their coincident edges to form a unitary hollow structure having a transverse substantially flat oval cross section throughout the major portion thereof beginning at the tip of the blade, the remainder of the blade having a shank of cylindrical cross section merging with said flat oval cross section, a loom comprising a manipulating portion extending beyond said shank and a hollow reinforcing portion extending into the interior of the blade substantially the entire length thereof, said reinforcing portion being conformed to lie tangent to the interior face of each side wall along the minor midplane of the blade and fitting between the same with a wedge fit, and means further securing said loom with respect to said blade.

4. A method of constructing a craft propelling paddle or the like, comprising the steps of forming a hollow blade portion of desired shape, said blade portion having a shank of cylindrical cross section, then pressing a hollow loom portion into the interior of said blade substantially the entire length thereof thereby deforming said loom portion from a circular cross section fitting to a fitting corresponding to the shank and side walls of the blade to form a press fit between the interior side walls of said blade and the walls of the loom portion enclosed within said blade.



3,091,782
APPARATUS FOR FLOTATION OF ARTICLES ON WATER
Joseph R. Schiavi, Old Greenwich, Conn., assignor to Aerotec Industries, Inc., Greenwich, Conn., a corporation of Connecticut
Filed June 11, 1962, Ser. No. 201,528
9 Claims. (Cl. 9—316)



1. Apparatus for the flotation of articles on water which comprises, an inflatable bag having means for attachment to the article to be floated, a container for liquefied gas under pressure, a squib in said container, an electric circuit comprising a detonating element for said squib, a battery and a pressure operated switch operable at a pressure of a few feet of water to close

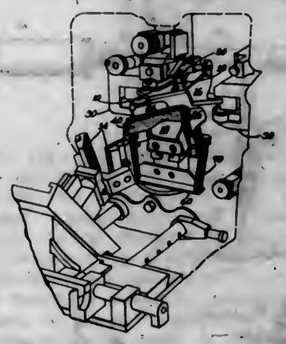
said circuit, and a connecting conduit from said container to said bag and comprising a frangible partition at the entrance of said conduit adjacent said container to confine said liquefied gas in said container under the pressure of said liquefied gas in the normal range of atmospheric temperatures.

3,091,783
APPARATUS FOR LASTING THE TOES OF SHOES
Walter A. Vornberger, Medford, Mass., assignor to Jacob S. Kamborian, West Newton, Mass.
Original application June 7, 1961, Ser. No. 115,405. Divided and this application Apr. 16, 1962, Ser. No. 187,849
7 Claims. (Cl. 12—7.1)



1. In an end lasting machine having a shoe support for supporting a last having a shoe upper and insole mounted thereon; a pair of wipers having forwardly divergent side surfaces embracing an end of the last; a bridging element mounted on one of said wipers rearwardly of its divergent surface extending laterally toward the other wiper; a sharp cutting edge located on the forward end of the bridging element; and drive means connected to the wipers for moving them forwardly toward the last and concomitantly moving the forward ends of the divergent surfaces inwardly across the last.

3,091,784
TOE LASTING MACHINES
Clifford C. Nichols, Brownstown, Ill., assignor to United Shoe Machinery Corporation, Flemington, N.J., a corporation of New Jersey
Filed Jan. 5, 1962, Ser. No. 164,456
10 Claims. (Cl. 12—8.2)



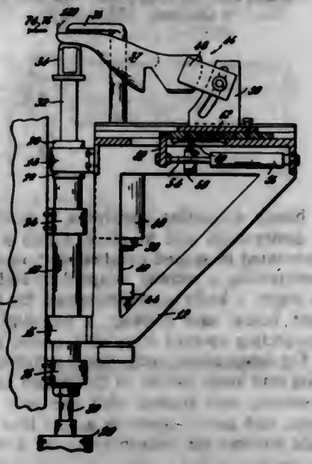
1. In a machine for lasting the toe end of a shoe having a shoe rest, a toe rest mounted for movement to clamp the toe end of the shoe assembled on its last against the shoe rest, toe embracing wipers carried by a wiper head mounted for movement heightwise of a shoe clamped against the shoe rest, and means for effecting such heightwise movement of the wiper head to cause the wipers to wipe the upper materials of a shoe clamped against the shoe rest around the toe end of the last, a toe band shaped to embrace the toe end of the shoe being lasted, and means for moving the toe band yieldingly upwardly, directly beneath the wipers, in response to the upward movement of the wipers with the wiper head.

3,091,785
SHOE MACHINES
John Rose Pope, Leicester, England, assignor to United Shoe Machinery Corporation, Boston, Mass., a corporation of New Jersey
Filed Jan. 11, 1960, Ser. No. 1,773
4 Claims. (Cl. 12—12)



1. An operative instrumentality for use in a shoe machine comprising a body portion formed of metal and a coating of vitreous enamel covering selected surface areas of the body portion.

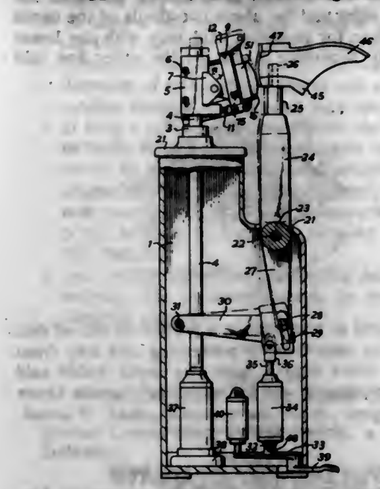
3,091,786
APPARATUS FOR LASTING POINTED TOE SHOES
Walter A. Vornberger, Medford, Mass., assignor to Jacob S. Kamborian, West Newton, Mass.
Original application Oct. 21, 1960, Ser. No. 64,033. Divided and this application Dec. 26, 1961, Ser. No. 162,099
8 Claims. (Cl. 12—12.4)



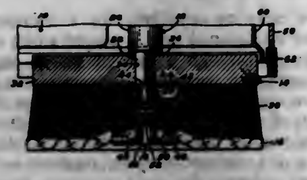
1. A toe lasting apparatus comprising: a support for supporting bottom side up a last having a shoe insole and upper mounted thereon; a pair of wipers mounted for movement across the insole to wipe the upstanding lasting margin of the upper down upon the insole, said wipers having in their retracted position diverging surfaces adapted to embrace the toe of the last; and means to cause the wipers to be moved forwardly towards the last and to be swung inwardly over the last about an axis that is forward of the point where said diverging surfaces meet to thereby wipe those side portions of the lasting margin that lie rearwardly of the toe end of the last.

3,091,787
LAST REMOVING MACHINE
Sidney Hawkes, Rushden, England, assignor to Fred Hawkes (N.V. Engineers) Limited, Rushden, England, a British company
Filed Dec. 11, 1961, Ser. No. 158,181
Claims priority, application Great Britain Dec. 15, 1960
7 Claims. (Cl. 12—15.1)

1. A last removing machine comprising a frame, a last support, movably mounted on said frame, a stripper device movably mounted on said frame, means operable to move said last support towards said stripper device, thereby to apply a lasted shoe on said last support against said stripper device, and means responsive to predetermined contact pressure between the lasted shoe and stripper device to move said stripper device relatively to said frame and said last support.



3,091,788
COMBINATION BRUSH AND WIPER
Stuart T. Shoars, Belmont, Mass., assignor to United-Carr Fastener Corporation, Cambridge, Mass., a corporation of Delaware
Filed Oct. 31, 1960, Ser. No. 66,389
2 Claims. (Cl. 15—4)



1. The combination of a separable fastener, a drive shaft having a rod portion at its extremity, a brush having bristles, and a cleaning pad, said brush having means for engaging said rod portion and said fastener including two elements, said two elements comprising a stud element formed on the end of said drive shaft and a socket element formed from a single piece of plastic material, said socket element comprising a tubular shank portion extending from a flange portion, said flange portion having a diameter greater than said shank portion, and said shank portion and said rod portion together having a length slightly greater than the height of said bristles, said socket element separably engaging said stud element and said flange portion engaging the underside of said cleaning pad whereby said cleaning pad is placed in abutting relation with said bristles.

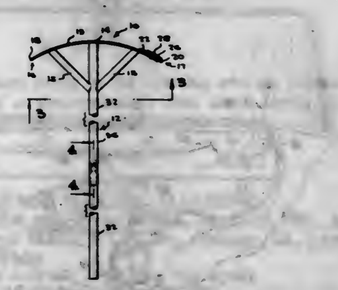
3,091,789
TOOTH BRUSH
Edward F. Harracz, 161 Pershing Ave., Clifton, N.J.
Filed Dec. 5, 1961, Ser. No. 157,090
3 Claims. (Cl. 15—27)

1. A tooth brush comprising a handle member terminating in a narrow head extruding longitudinally thereof and substantially in the plane thereof, said head being provided with two longitudinally aligned and spaced apart brush bristle groups disposed parallel to the longitudinal axis of the handle and head, the bristle tufts of which project in opposite lateral directions beyond and so as to overlap the long side margins of said head and toward each other with respect to the spaced apart inner ends of said groups, said head having means projecting



perpendicular to the head and adapted to support said bristle groups in connection with and in the aforesaid described relation to said head, and said head being further provided with a third bristle group, the bristles of which are disposed to project perpendicular to the plane of the head and intermediate the opposed inner ends of said two first mentioned brush bristle groups.

3,091,790
SNOW AND ICE REMOVAL TOOL
Lester A. Schroeder, 600 N. Douglas St., Appleton, Wis.
Filed June 1, 1962, Ser. No. 199,439
3 Claims. (Cl. 15—105)

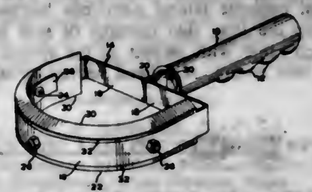


1. A tool for removal of snow and ice from roofs, comprising a working head of sheet metal in the general form of a segment of a cylinder, having a pair of curved side edges and a pair of straight working edges, one of said working edges being serrated, with teeth truncated at their apices in edges generally transverse to the opposite surfaces of the head, and the other of said working edges having a metal strip on the convex side of the head, with a portion spaced from the head and extending beyond the edge thereof, a strip of flexible material secured between the said spaced portion of said strip and said head, and extending beyond the outer edge of said metal strip, a handle secured at one end to said head, medially thereof, and on the concave side thereof, a pair of bracing struts secured at one end to said handle on diametrically opposite sides thereof, and with their other ends secured to the concave side of said head adjacent the respective said working edges, and a plurality of handle sections telescopically attachable, in tandem, to said handle, said sections having lock means arranged to prevent their relative axial movement, and lock means arranged to prevent their relative rotation.

3,091,791
MEAT SCRAPER
Frank Czapar, Jr., 4217 Swift Ave., San Diego, Calif.
Filed May 28, 1962, Ser. No. 198,075
5 Claims. (Cl. 15—245)

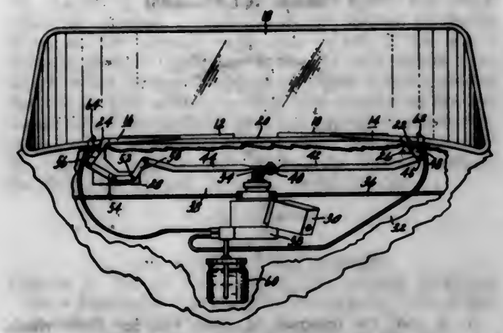
1. A meat scraper, comprising:
a handle;
a yoke of flat strip material fixed to said handle;
said yoke having a substantially U-shaped frame;
the portions of said yoke from said frame to said handle constituting torsion bars;

a scraper blade of soft, resilient material secured within said frame;



said blade having at least one scraper edge projecting beyond the edge of said frame and being coextensive therewith.

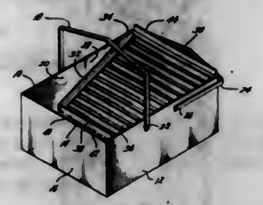
3,091,792
WINDSHIELD WIPER SYSTEM
Loren R. Gute, Fairport, N.Y., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Aug. 8, 1960, Ser. No. 48,132
9 Claims. (Cl. 15—250.17)



1. A windshield cleaning system having a wiper, an electric motor operable to move the wiper back and forth across the surface of a windshield and park said wiper in a predetermined position, an energizing circuit for said motor, a manual control in said energizing circuit having a first position for effecting continuous energization of said motor and a second position, automatically operable interrupter means connected in said energizing circuit so as to be energized concurrently with said electric motor when the manual control is in the second position for periodically making and breaking said energizing circuit to effect intermittent operation of said wiper, and automatic means operable to park said wiper when the energizing circuit for said motor is opened by said interrupter means.

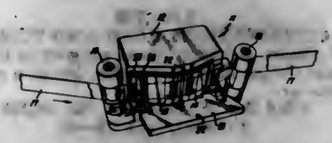
3,091,793
PAINT CONTAINER DEVICE
Richard E. Bentley, Jr., Denison, Tex., assignor to Texas Paint Supply Company, a corporation of Texas
Filed Oct. 7, 1960, Ser. No. 61,247
2 Claims. (Cl. 15—257.06)

1. A container device for liquid to be spread with a roller having a handle, said container device including a bottom, first and second sides, first and second ends, a first handle pivotally coupled to said first and second sides for movement over said first end, a second handle pivotally coupled to said first and second sides for movement over said second end, a tray having an upper and lower lip, said tray providing a uniform amount of paint to the roller, and guides mounted on each of said sides inside the container device and extending downwardly, at an acute angle with the top of said sides and along said sides from one end thereof, substantially less than the length of said sides and for about two-thirds of the depth of said container for receiving said tray with the lower lip of said tray providing a rest for the roller and said



upper lip adapted to abut against a portion of one of said container device ends thereby preventing said tray from being inserted more than a particular depth within said guides and providing a rest for said roller handle above said tray.

3,091,794
TAPE CLEANING APPARATUS
Albert F. Pillsbury, Jr., Palo Alto, Calif., assignor to Ampex Corporation, Redwood City, Calif., a corporation of California
Filed Feb. 21, 1961, Ser. No. 90,866
10 Claims. (Cl. 15—308)



1. A tape cleaning apparatus for a transport of the class wherein a tensioned tape is moved along a first predetermined path between a pair of spaced support elements, said apparatus comprising: means mounted on said transport and applying a predetermined force for urging said tape out of said first path between said elements and into a second predetermined path laterally displaced therefrom; and a non-resilient scraping member mounted on said transport and provided with a smooth tape-engaging surface for engagement with said tape in said second path, said member also being provided with a scraping blade defining an edge of said surface on the side thereof that is upstream with respect to the direction of tape motion on said second path; whereby an excess of tension in said tape overcomes said predetermined urging force and damage to said tape is avoided.

3,091,795
GROMMET
Gilbert G. Budwig, 3400 Bayside Walk, Mission Beach, Calif.
Filed Aug. 5, 1960, Ser. No. 47,748
5 Claims. (Cl. 16—2)



1. A grommet adapted to extend through and cover the margins of an opening in a panel member, comprising:

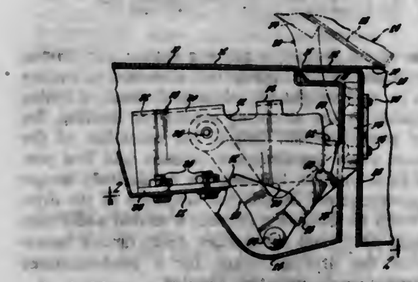
a. a pair of identical and mating ring elements adapted to cover the margins of said opening at opposite sides of said panel member;

b. at least a pair of identical arcuate tongues extending from the inner margins of said ring elements and having an external diameter corresponding to the diameter of and partially lining said opening and extending through and beyond said opening;

c. at least a pair of identical arcuate recesses extending partially through the inner margins of said ring elements to receive and circumferentially enclose the tongue of the mating ring element, there being a web overlying each of said recesses whereby the exposed surfaces of each ring element are continuous and annular;

d. and means operable, on forcing said tongues and recesses into interengagement, to secure said ring elements together.

3,091,796
DOOR HINGE AND HOLD OPEN
James D. Leslie, Birmingham, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Dec. 19, 1960, Ser. No. 76,683
5 Claims. (Cl. 16—142)



1. A hinge and hold open, comprising, in combination, a pair of pivotally connected hinge members movable relative to each other between open and closed positions, one of said hinge members including a pair of spaced walls receiving the other hinge member therebetween, with each wall being provided with a coplanar cantilever-like extension located in the path of swinging movement of said other hinge member and having a detent notch therein, said other of said hinge members including oppositely extending detent shoulder means spaced apart a distance greater than the distance between said extensions, said shoulder means being engageable with said extensions upon swinging movement of said other hinge member relative to one said hinge member to move said extensions apart and out of coplanar relationship with their respective walls as said shoulder means move relative thereto and into engagement with said detent notches to provide a hold open, said extensions returning to coplanar relationship with their respective walls upon engagement of said detent shoulder means with said notches.

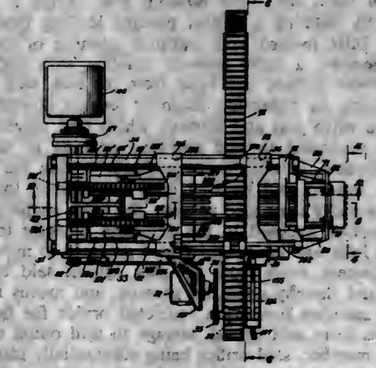
3,091,797
WINDOW STRUCTURE
Dwight M. Prosser, Mansfield, Ohio, assignor to Shiloh Tool & Die Manufacturing Company
Filed Apr. 26, 1961, Ser. No. 105,594
3 Claims. (Cl. 16—197)

1. A window component comprising a metal housing of channel-shaped cross-section; a spring-and-sheave assembly in the housing, said spring-and-sheave assembly extending lengthwise from one end of the housing to the other; an anchor for one end of the spring-and-sheave assembly at one end of the housing; and, at the opposite end of the housing, tongue-and-slot connections for holding in place the opposite end of the spring-and-sheave



assembly, the slots being in the housing and the tongues forming part of a sheave holder that itself forms part of the spring-and-sheave assembly.

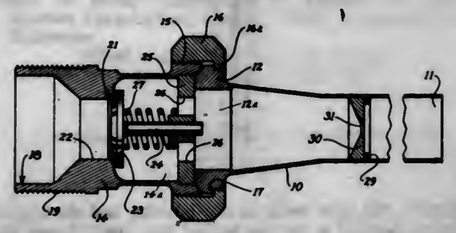
3,091,798
SAUSAGE MAKING MACHINE
Andrew H. Vodvik and Alvin Berzak, Madison, Wis., assignors to Oscar Mayer & Co., Inc., Chicago, Ill., a corporation of Illinois
Filed Jan. 29, 1960, Ser. No. 5,481
15 Claims. (Cl. 17—32)



1. In a machine for shaping sausage type meat products, an endless conveyor having a horizontal run with pockets thereon for supporting a plurality of roughly shaped links with their long axis in parallel spaced relation and for advancing the links in a direction laterally of their long axis, a molding head having a plurality of horizontal open ended molding cavities arranged with their long axes in spaced, parallel relation, means for mounting said molding head at one side of said conveyor run so that links positioned in the conveyor pockets are axially aligned by movement of the conveyor with the cavities in the molding head, pusher members mounted on the other side of said conveyor run in alignment with the cavities in the molding head and

movable across the conveyor to push the links into the molding cavities, end shaping and ejector members mounted on the opposite side of the molding head and having the end shaping portions movable axially in the cavities, means to move the pusher members into the cavities to compress the links between the pusher members and the end shaping and ejector members, and means to move the end shaping and ejector members through the cavities to return the shaped links to the conveyor pockets.

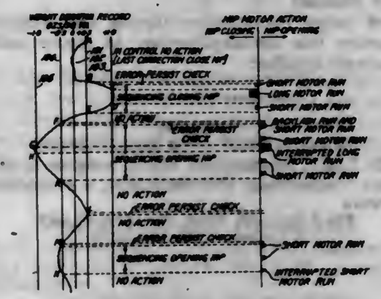
3,091,799
STUFFING HORN
Frank V. Cleri, Millbrae, Calif., assignor to The De Laval Separator Company, Poughkeepsie, N.Y., a corporation of New Jersey
Filed Nov. 3, 1960, Ser. No. 67,109
6 Claims. (Cl. 17—41)



1. A stuffing horn for ejecting meat emulsion under pressure into a tubular casing, said horn comprising an elongated tubular member having an emulsion entrance opening at one end and an emulsion outlet at the opposite end, the tubular member also having an outer peripheral surface on which the casing is adapted to be gathered for receiving emulsion from said outlet, said surface being adapted to form with said casing a gas escape passage from said outlet to atmosphere, a valve housing connected to the tubular member and having an emulsion inlet, the valve housing also having a valve seat partly defining a valved passage leading from the housing inlet toward said entrance opening of the tubular member, a valve element coacting with said seat and movable toward and away from the seat, said housing forming an expansion chamber located downstream from the valve seat and through which said valved passage is connected to said entrance opening of the tubular member, biasing means normally urging the valve element toward said housing inlet and against the seat to substantially close said passage, the valve element having a surface exposed to the emulsion pressure in said housing inlet and operable by said pressure to move the valve element away from the seat against said biasing means and thereby open the passage, and means in the tubular member forming a restricted orifice for flow of emulsion from said valved passage to said outlet of the tubular member, said orifice being substantially more restricted than said emulsion outlet to provide a sudden release of pressure on the emulsion in advance of said outlet.

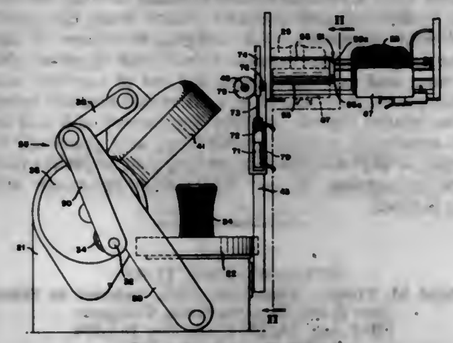
3,091,800
SHEET PRODUCING OR SHEET COATING APPARATUS
Eric Gordin Gould, Wylde Green, Sutton Coldfield, and John Biggs, Four Oaks, Sutton Coldfield, England, assignors to Dunlop Rubber Company Limited, London, England, a British company
Filed Apr. 14, 1960, Ser. No. 22,301
Claims priority, application Great Britain Apr. 22, 1959
11 Claims. (Cl. 18—2)

1. Apparatus for controlling the nip between the rolls of a sheeting calender to limit the variations in thickness of a sheet produced by the calender comprising gauging means for generating electrical signals which vary with variations in the weight per unit area of the calendered sheet, an electrically controlled driving means for drivable connection to a pair of rolls of a calender for adjusting the nip between said pair of rolls, an actuating means for the driving means connected to the gauging means and operable by electric signals received therefrom when the deviation in weight per unit area of the calendered sheet exceeds a predetermined first limit, a reversing means for the driving means in series between the actuating means and the driving means and responsive to the



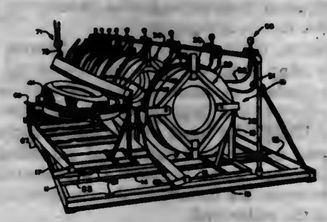
sense of the signal from the gauging means for driving the driving means in the appropriate direction to reduce a deviation in said weight of calendered sheet, a timing system operable by the actuating means for limiting, for a period of predetermined length, the actuation of the driving means when the deviation exceeds said first predetermined limit and for limiting, for a relatively longer period of predetermined length, the actuation of the driving means when the deviation exceeds a second and larger predetermined limit, and a sequence delay circuit operable to isolate the driving means for a predetermined period following each operation thereof.

3,091,801
AUTOMATIC CARCASS LOADER FOR TIRE PRESSES
Edward B. Erickson, Grosse Pointe, Mich., assignor to United States Rubber Company, New York, N.Y., a corporation of New Jersey
Filed Mar. 16, 1961, Ser. No. 96,289
4 Claims. (Cl. 18—2)



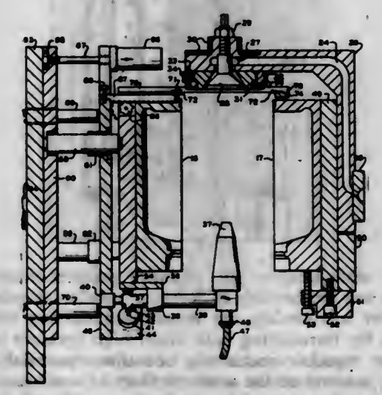
1. An expansible and collapsible tire carcass transfer chuck, comprising an elongated substantially tubular body composed of a plurality of coextensive parallel segments each of which is arcuate in cross-section and convex outwardly of said body, a pair of telescoping power members disposed parallel to said segments in the interior of said body as defined by said segments, said telescoping power members comprising a double-acting fluid pressure cylinder and a piston slidable reciprocally in said cylinder, a sleeve slidably surrounding said cylinder, said cylinder being provided with two longitudinal diametrically opposite slots, and a cross pin carried by said piston, the opposite ends of said cross pin extending through and riding along said slots and being connected to said sleeve, means fixedly connected to one of said segments at one end thereof and supporting the same for angular movement about an axis transverse to the longitudinal dimension of said one segment, first links connecting said power members individually to said one segment of said body, second links connecting said power members individually to the other segments of said body, said first and second links being connected to said cylinder and to said sleeve, whereby said power members are movably supported by said one segment while said other segments are movably supported by said power members, so that during expansion and collapse of the chuck upon corresponding telescoping motions of said power members the latter move radially away from and toward said one segment while said other segments move radially away from and toward said power members as well as out of and into edge to edge abutting relationship with said one segment, said one segment being so connected to said supporting means as to be disposed uppermost and concave downwardly when said body is inclined in a downward direction to define a slide surface which is stationary and permits a previously internally gripped tire carcass to slide from said body along fixed path.

3,091,802
MULTIPLE PNEUMATIC TIRE RETREADING STATION
Vaughn Rawls, Lima, Ohio, assignor to The Rawls Brothers Company, Lima, Ohio, a corporation of Ohio
Filed June 5, 1961, Ser. No. 114,887
3 Claims. (Cl. 18—2)



2. A multiple curing station for retreading pneumatic vehicle tires, said station comprising, means forming a plurality of spaced, parallel tracks, a mold carriage mounted on and guided by each adjacent pair of tracks formed thereby, a pair of opposed, cooperating, circular mold matrices mounted on each of said carriages, means on each of said carriages for mounting said pair of matrices for rotative movement on a horizontal front-to-rear axis between a generally vertically position with the axis of the tire being retreaded extending generally horizontally and a generally horizontal position with the axis of said tire extending generally vertically, a hinge connecting said pair of matrices at the rear thereof for opening said pair of matrices for insertion and removal of a tire being retreaded, the overall width of said carriage and the pair of mold matrices mounted thereon when in generally vertical position being substantially less than the diameters of said pairs of mold matrices, and adjacent pairs of said tracks being spaced a distance sufficient for side-by-side array of said carriages when said pairs of matrices are in generally vertical position but a distance insufficient for such array when adjacent ones of said pairs of matrices are in generally horizontal position, each of said carriages being independently movable back and forth on its associated pair of tracks, and heat-of said carriages is movable to one end of the travel ing means for said pairs of mold matrices whereby each thereof and the associated pair of matrices rotatable to horizontal position for removal or insertion of a tire while the others of said carriages rest at the other end of the travel thereof in side-by-side array for curing tires therein.

3,091,803
BLOW MOLDING APPARATUS
John N. Scott, Jr., Doyle L. Alexander, and Don L. Peters, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware
Filed Feb. 20, 1961, Ser. No. 90,390
6 Claims. (Cl. 18—5)

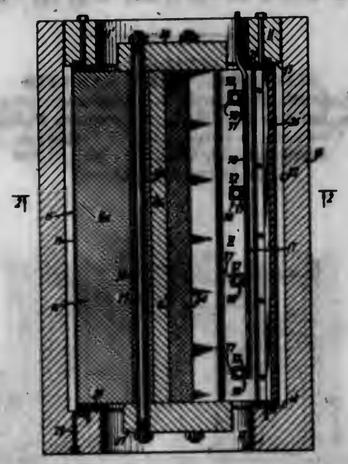


6. In apparatus for blow molding which includes a parison die positioned for downward extrusion along a path about the die center line, molding means offset below said die clear of the path followed by the parison being extruded, and means for severing and transporting the extruded parison to said molding means, the improvement comprising, in combination, first cutting and pinching means positionable on one side of the parison extrusion path, second cutting and pinching means positionable on the opposite side of said path, means linking said first and second cutting and pinching means to advance same simultaneously toward said center line cutting the upper end of the parison and gripping the severed end thereof when in a closed position at said center line, means for moving said first and second pinching means in closed position from said center line to said molding means and from said molding means back to said center line, and means for parting said first and second pinching means upon reaching said center line and positioning same on opposite sides of said parison path.

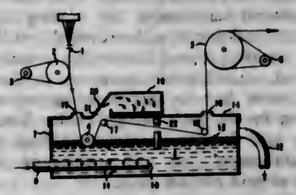
3,091,804
HYDROSTATIC PRESS FOR AN ELONGATED OBJECT
George Gerard, Yonkers, and Jacob Brayman, Staten Island, N.Y., assignors to Barogenics, Inc., a corporation of New York
Filed May 24, 1961, Ser. No. 112,385
10 Claims. (Cl. 18—5)

1. Apparatus for applying extreme pressure to an elongated object comprising a housing, a plurality of wedge-shaped pressure-multiplying anvil members within the housing forming an elongated pressure-multiplying structure having an outer surface portion and two end surface portions, each anvil member having a large area outer

surface forming a part of the outer surface portion of the structure, two end surfaces each forming a part of the end surface portions of the structure, and a small area inner surface forming, in conjunction with the corresponding inner surfaces of the other anvil members, an elongated central object receiving cavity, resilient pressure-transmitting means surrounding the outer surface portion of the pressure multiplying structure, means forming a seal between the resilient pressure-transmitting means and the housing to form an annular pressure-tight chamber surrounding the pressure-multiplying structure, means for introducing fluid under high pressure into the annular chamber, and a strip of resilient material located at the junction of the outer surfaces of each pair of adjacent anvil members to prevent extrusion of the pressure-transmitting means between the anvil members.

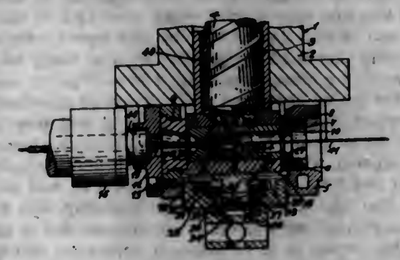


3,091,805
APPARATUS AND PROCESS FOR DRAWING YARN
Charles E. Dusenbury, Kinston, N.C., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Nov. 2, 1960, Ser. No. 66,851
6 Claims. (Cl. 18—8)



1. An apparatus for drawing one or more yarns of synthetic linear condensation polymer filaments comprising a rotatable feed roll, a horizontally disposed draw pin, and a draw roll adapted to be rotated at a higher surface speed than the feed roll so that yarn passing from the feed roll under the draw pin to the draw roll is drawn; means for maintaining a liquid bath in contact with the said draw pin; a stripper pin located above the said draw pin between it and the draw roll and positioned to establish an abrupt angle in the path of the yarn between the draw pin and the draw roll; means including the feed roll and the draw roll for passing the yarn at a high rate of speed in non-converging relation under the draw pin and through the liquid and thence upwardly over the stripper pin whereby the liquid taken up by the yarn from the bath leaves the yarn as a spray as the yarn passes over the stripper pin; and means for collecting the liquid spray.

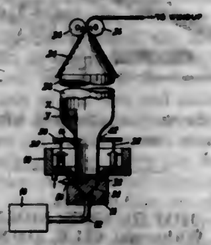
3,091,806
EXCESSIVE EXTRUSION PRESSURE PREVENTION APPARATUS
Robert A. Kerr, Lachine, Quebec, Walter L. Richardson, Pointe Claire, Quebec, and William R. H. Springford, Montreal, Quebec, Canada, assignors to Northern Electric Company, Limited, Montreal, Quebec, Canada, a corporation of Canada
Filed Aug. 30, 1961, Ser. No. 134,995
5 Claims. (Cl. 18—13)



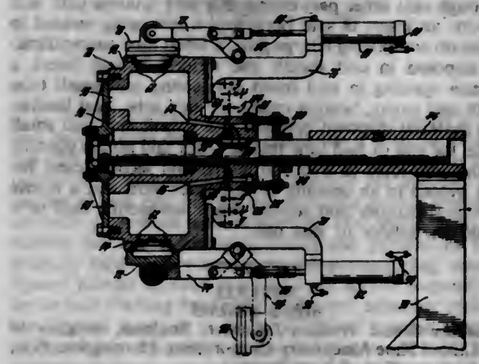
1. In an extrusion apparatus, an extruding head having an extrusion passage therein, comprising:
an extrusion cylinder in which a stock screw is rotated to force forming material into the extrusion passage through a first opening in such passage, the opening extending a predetermined distance outwardly from the extrusion cylinder,
a holder, in which extrusion tools are contained, disposed within and slidable in the passage in axial relation with the extrusion cylinder, so as to open and close the extended portion of the said opening so as to prevent or permit the flow of the forming material material therethrough respectively,
a yieldable means comprising:
a piston, disposed in a chamber formed in the extruding head directly opposite to the extrusion cylinder, in slidable engagement within the chamber and in axial relation with the extrusion cylinder, the head of the piston supporting the said holder, the piston rod extending into the chamber so as to leave a predetermined space between the bottom of the chamber and the end of the piston rod,
a shear pin extending traversely to the longitudinal axis of the piston rod through the piston rod, the ends being secured to the walls of the chamber, so disposed as to maintain the said holder to close the said first opening, consistent with a predetermined pressure within the passage and to yield when said pressure exceeds a predetermined limit so as to allow the said holder to drop and allow the forming material to escape through the extended portion of said first opening.

3,091,807
BIAXIAL ORIENTATION METHOD AND APPARATUS
Ernest F. Turner, Marietta, Ohio, and Peter H. Hofer, Berkeley Heights, N.J., assignors to Union Carbide Corporation, a corporation of New York
Filed Oct. 6, 1960, Ser. No. 60,976
8 Claims. (Cl. 18—14)

1. In a method for biaxially orienting thermoplastic film comprising extruding thermoplastic tubing and drawing and expanding the tubing in the machine and transverse direction, the improvement which comprises maintaining the extruded thermoplastic tubing essentially unexpanded for a distance from the die orifice and simultaneously subjecting the tubing to a cooling environment and peripherally contacting and frictionally heating the tubing with an annular knife-edge substantially equal in diameter to the die orifice in a plane parallel to and spaced said distance from said die orifice said distance being sufficient to permit the tubing to be cooled to within the orientation temperature range thereof.

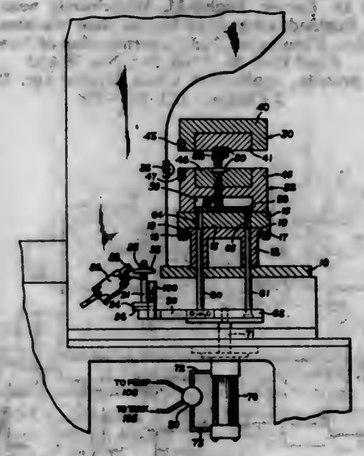


3,091,808
VACUUM FORMING DRUM
Vernon W. Dakin, New Lothrop, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Feb. 19, 1960, Ser. No. 9,738
7 Claims. (Cl. 18—19)



7. In a packaging machine for forming articles in a thermoplastic strip, a differential pressure actuated forming device comprising a freely rotatable drum, a plurality of circumferentially spaced depressions formed on the outer periphery of said drum, differential pressure creating means connected to said depressions from within said drum, independent drive means for feeding a thermally softened thermoplastic strip onto the outer periphery of said drum, said strip imparting rotative movement from said independent drive means to said drum, dual position clamping means attached to said drum and being engageable about said depressions in one position of drum rotation and being radially outwardly positionable away from said depressions in another position of drum rotation, said radially outwardly position providing a rotational assist for said independent drive means in rotating said drum, fluid motor means for actuating each of said clamping means, a high pressure fluid source connectable with said fluid motor means, a vacuum source connectable with said differential pressure creating means, and a negative and positive pressure control valve actuated by drum rotation and controlling operative connection between said differential pressure creating means and said vacuum source and said fluid motor means and said high pressure source.

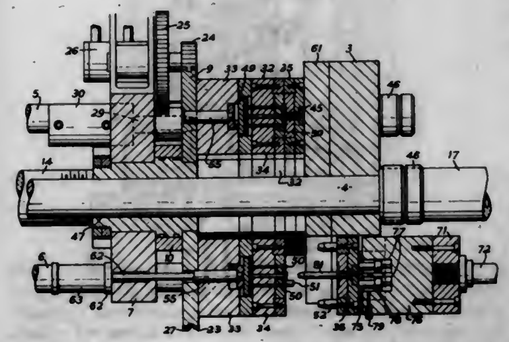
3,091,809
PLASTIC INJECTION MACHINE
Elmer D. Trueblood, Dayton, Ohio, assignor to Trueblood, Inc., Dayton, Ohio, a corporation of Ohio
Filed Dec. 22, 1960, Ser. No. 77,620
2 Claims. (Cl. 18—30)



1. In a plastic injection machine including a bed and a table guide on said bed with a shiftable table on said guide supporting a pair of spaced apart lower mold members for respective movement between a central injecting station and opposite ejecting stations adjacent the ends of said table guide, the improvement comprising knock-out pin supporting means at each of said ejecting stations positioned beneath said bed, upwardly extending knock-out pins for each of said ejecting stations supported at their lower ends directly to said pin supporting means, means in said guide and said bed at each of said ejecting stations defining openings supporting a substantial portion of the length of said pins for guided raising and lowering stripping movement therein with the upper ends of said pins received and supported in said table guide openings beneath said table in the lowered position thereof, means in said table defining openings beneath said lower mold members providing for the movement of the upper ends of said pins therethrough, said pins being proportioned to extend into operative engagement with said lower mold members through said table openings in the raised position thereof, a knock-out pin operating motor for each of said stations including a hydraulic piston motor having a fixed cylinder and a piston rod connected to said knock-out pin supporting means to effect said guided ejecting movement of said pins in said bed and table guide, a source of hydraulic fluid under pressure, a separate electric control valve for each of said motors, and a common control circuit for said valves including a first pair of limit switches for actuation in response to movement of said table into said ejection stations for the respective selection of said control valves to effect the ejection of a molded article from one of said lower mold members at the associated said station, a second pair of limit switches, one for each of said ejecting stations, having contacts connected to control the associated said control valve and positioned to be operated in response to the ejecting movement of said

piston rod to limit the extent of raising movement thereof, and a function selector switch in said circuit having a pair of selectable positions with contacts in the first of said selectable positions connected through said second pair of limit switches to provide for the raising and holding of said pins in a raised ejecting position and having further contacts in the second of said selectable positions providing for the raising followed immediately by the lowering of said knock-out pins.

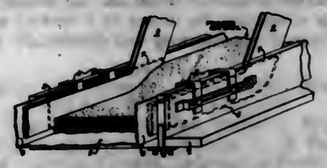
3,091,810
INJECTION MOULDING MACHINES
Edward D. Turner, Highfield, Whitchurch, near Aylesbury, England, assignor to United Shoe Machinery Corporation, Flemington, N.J., a corporation of New Jersey
Filed Dec. 30, 1960, Ser. No. 79,653
Claims priority, application Great Britain Apr. 12, 1960
2 Claims. (Cl. 18—30)



1. An injection molding machine comprising a headstock, a tailstock, horizontal bracing tie bars extending between the headstock and the tailstock, a mold set carrier plate rotatably mounted on one of said tie bars, means for moving the carrier plate toward and away from the headstock, an injector unit mounted at that side of the headstock opposite to the carrier plate and directed toward the carrier plate through an opening in the headstock, a magnetic device disposed laterally of the headstock and movable toward and away from the carrier plate to close and open successive mold units thereon, said magnetic device comprising at least one projecting electromagnet adapted to be energized by the operation of a switch effected by the closing movement of the carrier plate toward the headstock, and pusher means associated with the electromagnet and movable substantially concomitantly with the deenergizing of the magnet to insure the parting of the mold unit from the magnet.

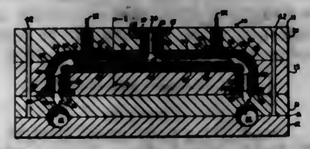
3,091,811
APPARATUS AND METHODS FOR MOLDING A FOAMING MATERIAL
Benjamin M. Hackert, Hillegom, Netherlands, assignor to N.V. Hollandsche Draad-En Kabelfabriek, Amsterdam, Netherlands, a limited-liability company of the Netherlands
Filed Nov. 24, 1958, Ser. No. 775,945
4 Claims. (Cl. 18—39)

1. A method of molding a foamable material which foams to form a porous mass, comprising supplying the said material continuously in a substantially horizontally moving trough, moving the lateral limits of the said trough at the place where the free foaming of the said material occurs in a substantially vertical plane so that the horizontal component of said movement has a speed which corresponds substantially with the horizontal speed at which the foaming mass is conveyed, and the vertical component of said movement has a speed which is at



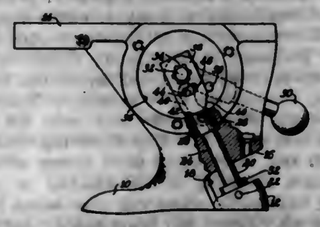
least equal to the vertical speed at which the surface of the foaming mass rises.

3,091,812
HOT RUNNER MOLD
Henry J. Witkowski, 621 E. 21st St., Erie, Pa.
Filed Sept. 5, 1958, Ser. No. 759,320
6 Claims. (Cl. 18—42)



5. A plastic molding die comprising an upper part and a lower part, said upper part being divided into an inner part and an outer part, a groove formed in said inner part, a groove in said outer part overlying said groove in said inner part, a cavity formed in said lower part, a bore through said inner part connecting said grooves with said cavity, an insert in said bore, said insert being welded to a sheath comprising a large tube, a small tube concentrically disposed in said sheath and welded to said insert, a nozzle opening in said insert connecting said small tube with said cavity, heating means for said tube, heat insulating material disposed between said sheath and said small tube, the end of said tube remote from said nozzle opening being connected to a second insert, said second insert being welded in an opening in said outer part, and a nozzle opening through said second insert connecting said tube with the outside of said die.

3,091,813
SHOE FORMS
Gordon Ernest Walker, Leicester, England, assignor to United Shoe Machinery Corporation, Flemington, N.J., a corporation of New Jersey
Filed Apr. 21, 1961, Ser. No. 104,706
1 Claim. (Cl. 18—46)



A composite shoe form comprising a forepart and a heel block having mutually contacting surfaces on which said parts are relatively slidable along a path inclined relatively to the longitudinal axis of the shoe form, a headed stem extending from the heel block, means mounting the stem for axial movement to transfer the heel block along said inclined path between a shoe form foreshortening position and a shoe form extending position, toggle

mechanism comprising an arm axially mounted for swinging movement and a link for partially advancing the heel block from its shoe form foreshortening position to its shoe form extending position, a cam incorporated in the arm and constructed and arranged to engage the head of the stem thereby to complete the advancement of hte heel block into its shoe form extending position and a pin and slot connection between the arm and the link in which the width of the slot is greater than the diameter of the pin and the slot is in the form of an arc struck from the axis of the arm and extended to permit a movement of the arm relatively to the link to disengage the cam from the head preparatory to the operation of the toggle mechanism to move the heel block from its extended position to its foreshortening position, the operation of the cam serving also to effect a relative movement of the pin and the slot widthwise of the slot such that a thrust exerted against the extended heel block is taken by the cam and not by the pin.

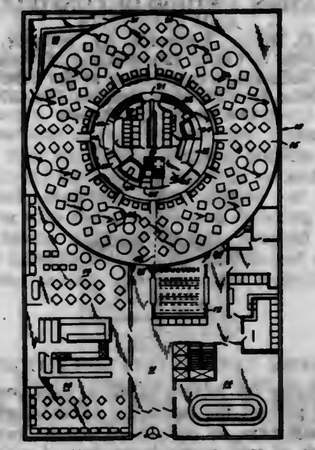
3,091,814
TEXTILE DRAFTING MECHANISM
Richard Haber, Stuttgart-Nord, and Friedrich Kübler, Stuttgart-Bad Cannstatt, Germany, assignors to SKF Kugellagerfabriken Gesellschaft mit beschrankter Haftung, Schweinfurt, Germany, a corporation of Germany
Filed Mar. 20, 1958, Ser. No. 722,673
Claims priority, application Germany Mar. 29, 1957
13 Claims. (Cl. 19—281)



1. Textile drafting mechanism comprising a series of top and bottom rolls defining therebetween a drafting field, a top roll carrier arm, pin means rigidly mounted in said carrier arm, and a guide arm assembly for one top roll having at one end portion pin-engaging means mounted on said pin means and supporting said guide arm assembly for lateral swinging movement parallel to said drafting field and restricting said pin-engaging means against pivotal movement on said pin means perpendicular to said drafting field, said guide arm assembly including top roll supports at the opposite end portion thereof mounted for swinging movement relative to said pin-engaging means perpendicular to said drafting field to displace the top roll into and out of engagement with the associated bottom roll, and said guide arm assembly including entirely self-contained bias means to urge said top roll supports toward the associated bottom roll.

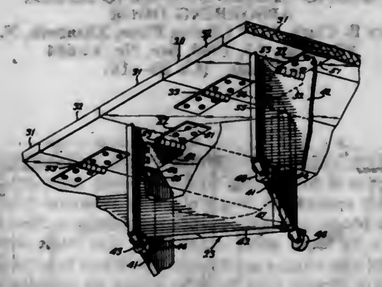
3,091,815
RESTAURANTS
Walter Krawiec, New York, N.Y.
(33—25 58th St., Woodside, Queens, N.Y.)
Filed Sept. 1, 1960, Ser. No. 53,556
1 Claim. (Cl. 20—1)

A food service structure comprising, an outer horizontal stationery service area having a relatively large substantially circular center cutout, a circular dining turntable fitting rotatably within said center cutout, said turntable having tables and chairs thereon and comprising, a dining area, means to rotate said center turntable at a relatively even rate of rotation, the upper horizontal surface of said turntable being in substantially the same plane as the upper surface of said outer horizontal service area, and means to permit the entrance to said turntable at one point about the periphery thereof, and means to permit the exit from said turntable at one point about the periphery thereof, said exit and said entrance points being in juxtaposition, said turntable having a substantially circular center opening and a stationary kitchen within said center opening, said kitchen being divided



into a plurality of individual service sections, each of said plurality of individual service sections to serve one portion of a meal, the rotation of said turntable being in timed relationship, whereby the tables thereon will be moved past a section of said kitchen when the food from that section is to be served.

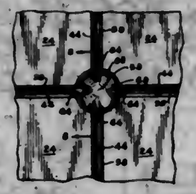
3,091,816
FOLDING STAGES
Charles H. Wetzel, Wayne, Pa., assignor to Wayne Iron Works, Wayne, Pa., a corporation of Pennsylvania
Filed Sept. 7, 1960, Ser. No. 54,415
8 Claims. (Cl. 20—1.123)



1. A folding stage comprising a platform consisting of an even number of platform boards arranged side-by-side in pairs, first hinge means in each pair interconnecting the adjoining side edges of the boards thereof to cause the adjoining side edges of the boards to fold upwardly upon folding thereof, a supporting structure for said platform comprising at least two series, each having a like number of upright panels pivotally connected in pairs on vertical axes for lateral folding and extension accordion-style corresponding to the pairs of platform boards, and means connecting the platform boards of each pair to the panels of the corresponding pairs including second hinge means for said platform boards affording said upward folding thereof and a pivotal connection affording said lateral folding of said upright panels, said panels being longer than the width of said boards to be disposed zig-zag when fully extended, said boards in the extended position thereof lying flat on the

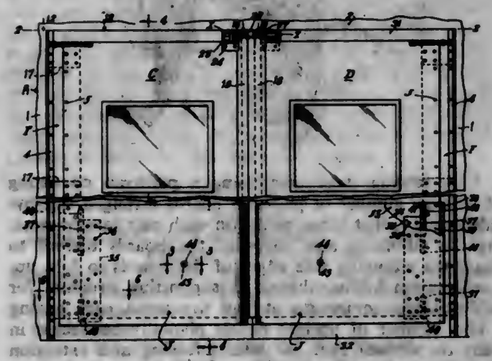
upper edges of said panels and operating as a structural unit to synchronize the movements of the panels in the separate series.

3,091,817
INSULATION, METHOD OF CONSTRUCTION, AND ELEMENTS
Cornelius D. Dooker, Louisville, Ky., assignor, by mesne assignments, to Conch International Methane Limited, Nassau, Bahamas, a corporation of the Bahamas
Filed June 25, 1958, Ser. No. 744,427
13 Claims. (Cl. 20—4)



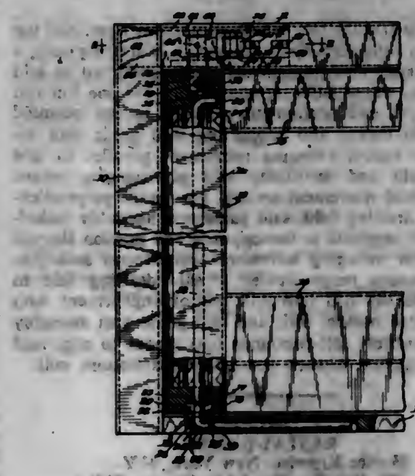
4. A member for joining panels at their corner intersections to prevent the formation of an opening therebetween responsive to relative movement between the panels, each of said panels being formed with a recess in the corner portion to confine a contiguous opening therebetween, said member comprising a composite block of resilient material dimensioned to be received within the opening in fitting relation and having a continuous base portion free of any openings and a top portion formed with a concave portion at the center, recesses formed in said top portion radiating outwardly from said concave portion to the lateral edges of the member at angles of about 90° to subdivide the top portion into separated sections capable of flexure with the panels upon joinder.

3,091,818
SPRING-CLOSED SWINGING SHOCK ABSORBING DOOR
Henry B. Clark, 1247 Clinton Place, Elizabeth, N.J.
Filed July 13, 1960, Ser. No. 42,664
1 Claim. (Cl. 20—16)



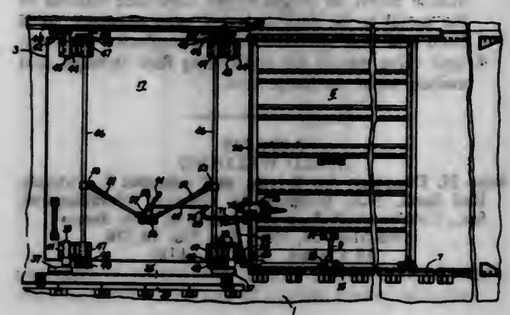
A spring-closed shock absorbing door including a door having angularly related edges, means comprising a strip of flexible strain-resistant material having one edge connected to said door and its other edge to be connected to the side margin of a door frame for hingedly connecting the door to a door frame along one of said edges to swing in each of opposite directions between open and closed positions, spring mechanism for closing said door including a bracket mounted on the door, a spiral spring having one end connected to said bracket and its other end connected to a spool rotatably mounted on the bracket, and a cable wound on said spool with one end to be connected to the top margin of the door frame, the force of said spring being close to uniform during extension and contraction of the spring, and a bumper on each side of the door comprising a substantially rigid sheet hingedly connected at one end to the door adjacent said hinged mounting of the door to swing on a vertical axis, each sheet being of a size and located on the door for engagement by a wheeled truck to open the door for passage of the truck through the door opening, a flexible connector passing freely through an opening in the door and connecting together said rigid sheets, and a resilient element interposed between each said sheet and said door and normally biasing the corresponding rigid sheet and the other rigid sheet from and toward the door, respectively, to absorb the shock incident to the bumping of a truck against the side of said rigid sheets, said hinged connection of each rigid sheet to the door comprising leaves rigidly secured respectively to the rigid sheet and the door and having complemental hinge knuckles, and a pintle inserted through said knuckles, and said door comprising a rectangular wooden frame having a thin metal facing sheet rigidly secured to each side thereof, and a light-weight cellular core rigidly secured to said frame and to said sheets.

3,091,819
DOOR CONTROL MECHANISM
James D. Wheeler and Pelham H. Anderson, Jr., Birmingham, Ala., assignors to Bruce Manufacturing Company, Harvey, Ill., a corporation of Delaware
Filed Sept. 20, 1960, Ser. No. 57,308
6 Claims. (Cl. 20—16)



1. The combination of a door frame having a side member and a header secured thereto, a spring biased door mounted in the said frame, a hinge pin mounted in the header and extending into the door for rotative movement therewith, an elastic block mounted in the said header having an angular extending edge portion, a braking shoe mounted upon the said block along the angular edge portion having an arcuate-shaped braking surface thereon, an arm on the hinge pin in engagement with the shoe on the said block and expansion means in the said block whereby the frictional relationship of the shoe and the arm is controlled.

3,091,820
DOOR LATCHING ARRANGEMENTS
Thomas C. Soddy, Downers Grove, Ill., assignor to American Seal-Kap Corporation of Delaware, New York, N.Y., a corporation of Delaware
Filed Aug. 16, 1961, Ser. No. 137,432
19 Claims. (Cl. 20—23)



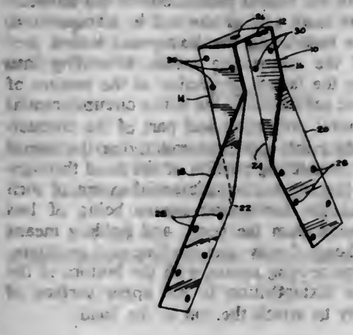
10. Combination door structure for an upright wall having an elongated door opening, comprising a main door mounted on the wall for sliding movement in a plane outward of the wall between an open position clear of the door opening and a closed position located in said plane and closing a portion of the door opening toward one end thereof, a flush door mounted on the wall for outward movement from a closed position within the door opening substantially flush with the wall and closing the remainder of the door opening, to a sliding position outward of said wall and for sliding movement on the outside of said wall to an open position clear of the door opening, an edge of said main door overlapping the adjacent edge of said flush door when both said doors are closed, an upright bolt slidably mounted on said flush door near the last-named edge thereof, a pocket on the wall below said flush door receiving said bolt when said flush door is closed, a member movable on said flush door in the direction of opening of said main door and engageable with the last-named edge of said main door when the latter is closed whereby to prevent such movement at that time, said bolt and said member being connected to each other whereby retraction of said bolt is prevented when said main door is fully closed and permitted when said main door is opened a predetermined amount.

3,091,821
BEADING FOR FINISHING STRUCTURAL EDGES
Herbert A. Cook, Jr., Auburn, N.Y., assignor to The Schlegel Manufacturing Company, Rochester, N.Y., a corporation of New York
Filed Mar. 30, 1960, Ser. No. 18,650
1 Claim. (Cl. 20—74)



A flexible adherent beading for finishing structural edges of automobile bodies and the like comprising a supporting strip formed by a continuous length of flexible resilient wire looped back and forth transversely of the strip to provide longitudinally spaced cross strands, flexible retaining strands passed through said cross strands to retain the same in parallel relation in said strip, said supporting strip being substantially U-shaped in cross section for closely conforming to and embracing said structural edges, pointed barbs struck up from said wire strands on the inner sides of the side walls of said supporting strip and projecting inwardly and upwardly toward the bight of said U-shaped supported strip for gripping said structural edges and immovably retaining said beading thereon, a tape strip closely fitting and enclosing the outer surfaces of the side walls and bottom of said supporting strip and having marginal portions wrapped inwardly around the marginal portions of said supporting strip and adhesively secured thereto and a flexible fabric facing strip closely fitting and enclosing said tape strip and having marginal portions wrapped inwardly around the inwardly wrapped margins thereof and adhesively secured thereto, with said barbs projecting therethrough.

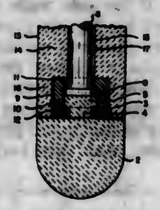
3,091,822
CONNECTOR FOR STRUCTURAL MEMBERS
Edmund J. Fleiters, Fremont, and Albert A. Klose and Elmer H. Schramm, Dayton, Ohio, assignors to Duralite of Ohio, Inc., Fremont, Ohio, a corporation of Ohio
Filed Dec. 14, 1959, Ser. No. 859,469
1 Claim. (Cl. 20—94)



In combination with a chord of a pitched roof truss and a structural plate on which said chord is supported, said chord laying at an angle which determines the pitch of the roof, a wind brace connecting said chord to said structural plate, said wind brace being made of a single straight strip of metal and comprising a cross web lying on and parallel to an upper edge of said chord, a pair of parallel legs, the longitudinal edges of which are perpendicular to the plane of said web and extend from edges of said web in a common direction, a pair of leg extensions integrally connected to ends of said legs along diagonal bend lines, said leg extensions extending in diverging directions with at least substantial portions of said leg extensions lying in a common plane which forms an angle with the longitudinal edges of said legs equal to said chord angle, said diverging extensions extending symmetrically with respect to a vertical plane through the chord and ending at substantial distances away from said chord plane and said chord, a plurality of holes in each of said leg extensions, fasteners extending through at least some of said holes in each of said leg extensions and fastening said leg extensions to a side of said structural plate at a point spaced a substantial distance from said chord plane to provide substantial lateral support

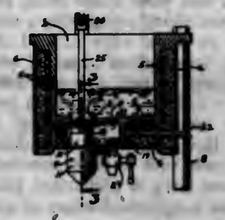
for said chord, and a hole in said web to receive an additional fastener for fastening said web to said chord.

3,091,823
STOPPER FOR A LADLE OR SIMILAR RECEPTACLE
Crawford B. Morton, Churchill, Pa., assignor to Vesuvius Crucible Company, Swissvale, Pa., a corporation of Pennsylvania
Filed June 22, 1960, Ser. No. 37,972
1 Claim. (Cl. 22—85)



A stopper for a ladle or similar receptacle comprising a refractory head having a body and having integral with the body and projecting upwardly therefrom a connecting portion having a lateral projection, a rod having at its bottom a lateral projection, the rod being superposed over the head with the lateral projections of the connecting portion of the head and of the rod in juxtaposition, connecting means embracing the juxtaposed lateral projections, part of the connecting means extending into position overlying the lateral projection at the bottom of the rod throughout substantially the entire circumferential extent of such lateral projection and part of the connecting means extending into position underlying the lateral projection of the connecting portion of the head throughout substantially the entire circumferential extent of such lateral projection, the connecting means being of less transverse dimension than the body, and holding means seated atop the head closely surrounding and maintaining in place the connecting means with the bottom of the holding means in juxtaposition to the upper surface of the body, whereby to attach the rod to the head.

3,091,824
METAL CASTING MEANS
Jack C. Mansbol, P.O. Box 186, Palmdale, Calif.
Filed Feb. 28, 1961, Ser. No. 92,239
1 Claim. (Cl. 22—85)



A metal casting machine, comprising:

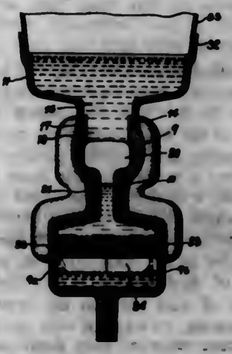
a. a crucible for molten metal defining a main chamber for molten metal and a collector chamber disposed below the main chamber;

b. a nozzle structure extending downwardly from said main chamber through and sealed from said collector chamber and terminating in a nozzle tip adapted for connection to a mold to receive the metal to be cast;

c. said nozzle structure defining a molten metal discharge bore leading downwardly from the bottom of said main chamber to said nozzle tip, and vent passages leading upwardly from said nozzle tip to the upper side of said collector chamber, whereby molten metal, in excess of the combined volume of the metal to be cast and said vent passages, spills from said vent passages into said collector chamber;

d. and valve means for controlling flow through said molten metal discharge bore.

3,091,825
MOLD WELDING
John H. Deppeler, Jr., Brielle, and Edmund J. Antcsak, Red Bank, N.J., assignors to Thermex Metallurgical, Inc., Lakehurst, N.J., a corporation of New Jersey
Filed Mar. 29, 1960, Ser. No. 18,336
15 Claims. (Cl. 22—116)

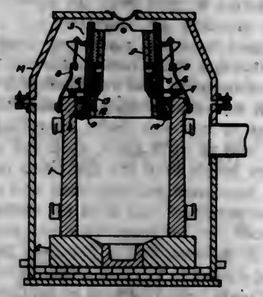


1. The combination of a crucible for holding an exothermic reactive mixture which results in a superheated molten metal for a mold, said crucible having an outlet, and a stack of discs in said outlet conjointly serving as a plug for said crucible adapted to be fused by the heat of reaction of said mixture to control the tap time of said crucible.

10. A mold for welding two metal parts together having a mold cavity for enclosing therein the end sections of said metal parts in aligned end to end spaced relationship, said mold having entrance gate means, exit gate means near the bottom of said mold cavity and discharge chamber means on the discharge side of said exit gate means in communication with said exit gate means, whereby molten metal initially discharged into said mold cavity preheats said metal parts, said entrance gate means being relatively dimensioned to cause flow through said entrance gate means at a greater rate than discharge through said exit gate means, said discharge chamber means being closed, whereby when said discharge chamber means is filled with preheating metal, said metal in said discharge chamber means automatically stops flow through said exit gate means.

3,091,826
HOT TOP SEAL
Henry C. Bigge, Bethlehem, Pa., assignor to Bethlehem Steel Company, a corporation of Pennsylvania
Filed July 7, 1959, Ser. No. 825,593
9 Claims. (Cl. 22—147)

1. In combination, an ingot mold, a hot top adapted to extend downwardly into the mold, and a seal between said ingot mold and said hot top, said seal comprising a bot-



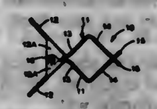
tom layer of fibrous refractory, a middle layer of plastic refractory and a top layer of another plastic refractory.

3,091,827
BUCKLE
Ben F. Raudrup, 423 Roberts Ave., Pleasant Hill, Calif.
Filed Feb. 2, 1959, Ser. No. 790,405
2 Claims. (Cl. 24—68)



1. In combination: an elongated strap adapted to surround an article, a buckle for tightening said strap on said article, comprising an elongated planar plate like generally rectangular member provided with a pair of parallel transversely extending openings spaced from one end of said member and defining a pair of parallel cross pieces, one end of said strap being formed with a closed loop passing through each of said openings and around the inner of said cross pieces, the opposite end of said strap being passed around said one end of said member and the outer of said cross pieces and through the opening nearest said one end of said member to provide an open loop having a free end, the end of said member opposite said one end being formed to provide a partially closed portion adapted to receive therein both thicknesses of said open loop when said member is in face to face engagement with said free end, said portion comprising a flange integral with said member and in spaced parallel relation thereto to provide a laterally outwardly directed opening adapted to receive said open loop therein, a locking element carried by said buckle and swingable about an axis parallel to said member from a position covering said opening to a position uncovering said opening.

3,091,828
CLAMP
Mary Soltis, 362 Soundview Ave., Stratford, Conn.
Filed Aug. 11, 1961, Ser. No. 130,992
1 Claim. (Cl. 24—87)



A flesh clamp for closing an incision in the carcas of a fowl or the like in preparation for cooking the same comprising a pair of similar hinged members, each of said members being formed of a metal blank bent along a pair of spaced transversely extending fold lines to define a Z-shaped member having a finger press portion, a jaw portion and a connecting intermediate portion, said finger press portion and jaw portion of the respective hinged members being oppositely bent at substantially right angles with respect to its connecting intermediate portion, said finger press portion of each blank provided with opposed integrally formed tabs bent at substantially right angles to the finger press portions of said blanks, aligned apertures formed in each pair of said opposed tabs, said members being disposed so that the tabs of one member overlie the tabs of said other member so that their respective apertures are disposed in alignment, a hinge pin extended through said aligned apertures, a spring means disposed between the finger press portions for normally urging said jaw portions to gripping position, said spring comprising a coil spring of spaced convolutions disposed about said hinge pin, and the end convolution of said spring terminating in opposed tail segments which maintains a bias on the respective finger press portions and which bias urges the respective jaw portions of said pair of members to a closed position, the respective jaw portions of each member being formed at its free end with a plurality of sharp teeth extending in the plane of the jaw portion, and the teeth of one jaw portion being staggered with respect to the teeth of the other jaw portion, and, said teeth are disposed relative to said finger press portions so that in the open position of the clamp the teeth are adapted to be normal to the parted flesh defining the incision to be closed so as to facilitate puncturing of the flesh.

3,091,829
CLAMP FOR CONNECTING TWO SUPERIMPOSED STEEL WIRE ROPE PARTS
Jan Martinus Heck, Plantage Middenlaan 74, Amsterdam, Netherlands
Filed Apr. 25, 1960, Ser. No. 24,275
Claims priority, application Netherlands Apr. 25, 1959
1 Claim. (Cl. 24—123)



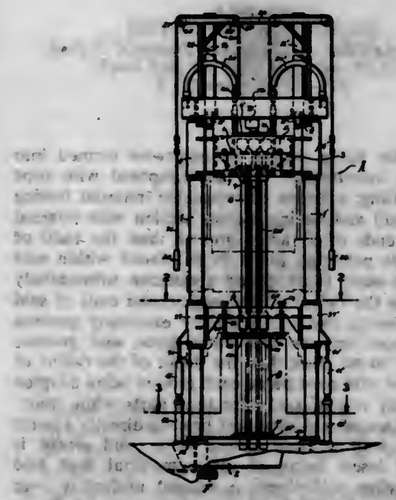
A clamp for being swaged or otherwise formed into a connecting member for two superimposed wire rope parts, comprising; a sleeve of swageable material having an interior wall and having a cross section with internal semicircular ends of a radius greater than the radii of said wire rope parts; an insert to be placed within said sleeve having outer faces spaced a distance substantially equal to twice the radius of the semicircular ends of said sleeve and having two longitudinally extending grooves formed in faces between said outer faces, said grooves being formed to no more than the depth of the radius of said respective wire rope parts; each groove being adapted to receive only one of said wire rope parts while maintaining a surface of said rope part bearing directly against said interior wall of said sleeve when said sleeve is swaged; said insert being of softer material than said sleeve and, when said sleeve is swaged uniformly over its length, adapted to fill up the space remaining between said rope parts and said interior wall of said sleeve after said rope part bears against said interior wall.

3,091,830
BUCKLES
Frank Bernard Harley, Englefield Green, Egham, England, assignor of one-half to Harley Patents (International) Limited, London, England, a company of Great Britain
Filed Aug. 13, 1959, Ser. No. 833,467
Claims priority, application Great Britain Aug. 19, 1958
8 Claims. (Cl. 24—170)



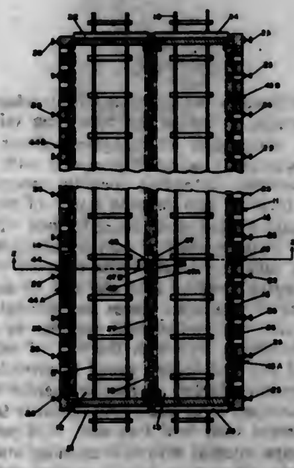
1. Strap gripping means comprising a body provided with an opening for receiving a strap, a pair of parallel strap gripping abutments carried by said body on opposite sides of said opening, one of said abutments being mounted for translational movement between a gripping position toward and a release position away from the other, said abutments having complementary gripping surfaces contoured to interfit and kink said strap between them when said one abutment is brought into its gripping position, an operating and locking member pivotally mounted on said body to swing in a limited arc in a plane perpendicular to the principal plane of said body, means on said operating and locking member which operatively engages said one abutment to translate it between its release and gripping positions, and a projection fixed on said one abutment and located to be yieldingly urged by the resistance of said strap to compression between said gripping surfaces into a position in the path of travel of said abutment engaging means, in which position said projection resists swinging movement of said abutment engaging means past said projection and consequently resists movement of said operating and locking arm and resulting translation of said abutment between its gripping and release positions.

3,091,831
CONDUIT BLOCK MAKING MACHINE
Paul E. Rauch, St. Louis County, Mo., assignor of one-half to John M. Mohan, St. Louis County, Mo.
Filed Mar. 6, 1961, Ser. No. 93,476
5 Claims. (Cl. 25—34)



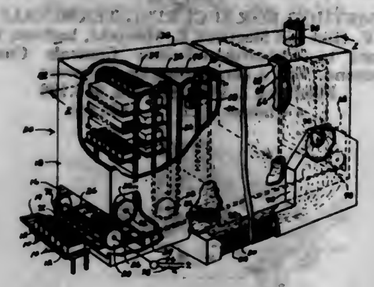
1. A conduit block making machine adapted for receiving a mold box for moldable material comprising a frame, a head mounted on said frame and adapted for reciprocal vertical travel therealong, prime moving means carried on head, a plurality of elongated, vertically presented shafts adapted for rotation by said prime moving means and carried by said head for downward extension therefrom, a plurality of elongated rod members supported from said head for movement therewith being in downward extension therefrom in normally axial parallelism with said shafts, said rod members being of less diameter than said shafts, each rod member being positioned between at least two shafts, a packing head carried on the lower end of each shaft, each rod member being of slightly less length than the combined lengths of each shaft and its associated packing head and means located spacedly downwardly of said head for engaging the lower end of the mold box for supporting and positioning same for reception at its lower end of the lower portions of said shafts and rod members when said head is in lowered position whereby upon upward travel of said head said shafts and rod members will be drawn through the moldable material for formation of openings therein extending from end to end of the block formed.

3,091,832
KILN
Charles D. Tinker, Rte. 1, Granville, Ohio
Filed Aug. 5, 1960, Ser. No. 47,836
7 Claims. (Cl. 25—142)



1. A kiln comprising
a pair of side by side twin kiln tunnels having an imperforate common wall between them formed of refractory material; and
each of said tunnels also having a floor, a roof and an outside side wall;
said common wall having an inlet level adjacent to its lower end and being formed at said inlet level as a serpentine refractory barrier between said tunnels thus providing a plurality of alternate stack inlets from each of said twin tunnels alternately interposed and being imperforate above said inlet level so that heated gases may not pass from one tunnel to the other; and
a plurality of separated stacks each connected to one of said inlets and extending upward through and enclosed by said common wall;
each said outside wall of each of said tunnels having a plurality of burners so positioned that they are spaced apart but that the burning gases issuing from all of said burners extend for substantially the entire length of said side walls.

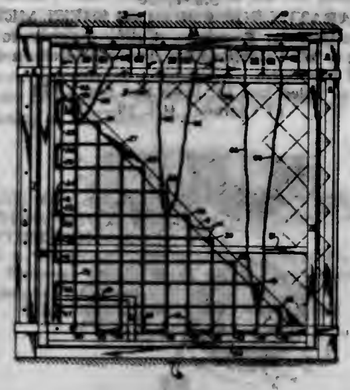
3,091,833
APPARATUS FOR CURING MOLDED BUILDING BLOCKS
John E. Kovach, Nutley, N.J., assignor to Bergen Machine & Tool Co., Inc., Nutley, N.J., a corporation of New Jersey
Filed May 4, 1960, Ser. No. 26,742
7 Claims. (Cl. 25—143)



1. Apparatus for curing molded building blocks including a housing having an entrance opening through which blocks are introduced into the housing, a conveyor in the housing movable up and down in the chamber along a tortuous path, the tortuous conveyor having holders for supporting the blocks and connections between the holders and the rest of the tortuous conveyor movable to maintain the blocks at a substantially constant orientation as they travel along the course of said tortuous conveyor, an accumulator conveyor outside of the housing and to which pallets loaded with blocks are delivered, the accumulator conveyor extending adjacent to said entrance opening, said tortuous conveyor having runs with substantial horizontal components of travel both to and from said entrance end, a portion of the path of the tortuous conveyor taking successive holders close enough to the accumulator conveyor at the entrance end opening for pallets on the accumulator conveyor to be displaced directly from said accumulator conveyor to a holder of the tortuous conveyor, means adjacent to said entrance end and around which the conveyor run toward the entrance end changes its direction of travel at said entrance opening end and moves away from said entrance opening, power driving mechanism for advancing the tortuous conveyor at a controlled speed, a discharge station at which blocks are removed from the tortuous conveyor and from the housing, and means for heating the blocks as they travel along the course of the tortuous conveyor in said housing.

3,091,834
APPARATUS FOR USE IN MAKING ROPE NETS
Eric L. Pedley and Phillip Pedley, San Francisco, Calif., assignors to Pedley-Knowles & Co., San Francisco, Calif.
Original application Nov. 2, 1959, Ser. No. 850,246. Divided and this application Sept. 20, 1961, Ser. No. 142,471
7 Claims. (Cl. 28—1)

1. Apparatus for making a rope net comprising; spaced frame members disposed in a vertical plane including projections thereon projecting from a lateral side thereof between which lengths of rope for said net are adapted to extend and over which said rope is adapted to be bent with certain of said lengths extending angularly across others thereof in substantially engaging relation at their crossing points, a carriage at one side of said frame members, means mounting said carriage for movement in a plane parallel with the plane in which said frame members are disposed, means on said carriage for separately supporting a pair of strands of fiberglass for withdrawal therefrom, means on said carriage for supporting a pair



of separate containers of fluid plastic, each container of said pair including guide means for guiding one of said strands through the body of fluid plastic adapted to be held therein and out of each container, means on said carriage adapted to support an operator thereon in a position for manually drawing said strands from said guide means and for lashing the lengths of rope adapted to be held on said frame members at their said crossing points.

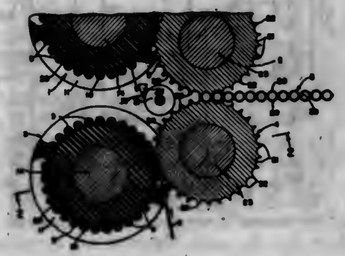
3,091,835
CAPACITOR MANUFACTURE
Felix S. Weiss, Chestnut Hill, Mass., assignor to Cornell-Dubilier Electric Corporation, South Plainfield, N.J., a corporation of Delaware
Original application Apr. 20, 1956, Ser. No. 579,679. Divided and this application Mar. 13, 1959, Ser. No. 799,377
7 Claims. (Cl. 29—25.42)



1. In a ceramic disc capacitor fabricating machine of the class wherein an advancing web of dispensable material serves as a carrier for the capacitor unit constituent elements and progressively formed subassemblies thereof during the sequential stages of the fabrication process, apparatus for effecting the insertion of prepared ceramic capacitor discs intermediate the extending deformed ends of a web mounted terminal wire subassembly comprising a stationary die block, a vertically reciprocable pressure pad arranged to compressively position the web material against the surface of said stationary die block, means for separating the extending deformed ends of said web mounted terminal wire subassembly, means for advanc-

ing a ceramic disc capacitor unit intermediate said separated deformed ends of said web mounted terminal wire subassembly and cyclically operable means for deactivating said separating means to permit the deformed ends of said web mounted terminal wire subassembly to compressively engage said advanced ceramic disc positioned therebetween.

3,091,836
APPARATUS FOR FORMING SHEET METAL
Boyd F. Thomas, Pasadena, Calif., assignor to Young Spring & Wire Corporation, Detroit, Mich., a corporation of Michigan
Filed Jan. 18, 1960, Ser. No. 2,972
17 Claims. (Cl. 29—33)



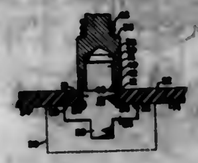
1. A core forming apparatus comprising a first set of mating rollers mounted on a frame, one of said first set of rollers having first re-entrant portions, the other of said first set of rollers having first protrusions complementary to said first re-entrant portions, each of said first protrusions being adapted to extend into and engage a corresponding first re-entrant portion so that when said one roller of said first set is rotated it will drive said other roller of said first set, each of said first protrusions and said first re-entrant portions when engaged being adapted to receive a first metal sheet therebetween to be formed, means to drive said one of said rollers, a second set of mating rollers mounted on a frame, one of said second set of rollers having second re-entrant portions, the other of said second set having second protrusions complementary to said second re-entrant portions, each of said second protrusions being adapted to extend into and engage a corresponding second re-entrant portion so that when said one roller of said second set is rotated it will drive said other roller of said second set, each of said second protrusions and said second re-entrant portions when engaged being spaced to receive a second metal sheet therebetween to be formed, and means to drive said one of said second set of rollers, the said one roller in said sets being spaced from each other to receive and force together said first and second formed metal sheets in pressure contact.

3,091,837
METHOD AND APPARATUS FOR MAKING FLEXIBLE BELTS
Dale B. McCormick, Detroit, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Mar. 23, 1960, Ser. No. 17,047
3 Claims. (Cl. 29—148.3)



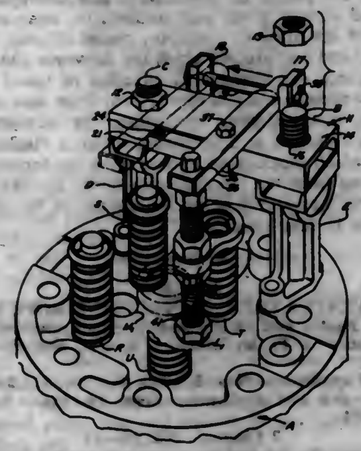
1. In the manufacture of an endless flexible belt of the type including a plurality of said sections connected in end-to-end relation, the method comprising forming each of said sections by rigidly connecting the opposite ends of a plurality of individual load-bearing cables to rigid connector bars, fixing one of said bars and moving the other of said bars relative thereto until substantially a predetermined equal tension is imposed on each of said cables, and forming a row of openings in each of said bars in a predetermined position relative to said cables under tension, and then joining said sections in end-to-end relation by means of said openings to thereby insure substantial equalization of loads borne by the cables.

3,091,838
METHOD FOR SECURING TERMINALS
Henry F. Hild and Siegfried E. Manecke, Indiana, Pa., assignors to Robertshaw-Fulton Controls Company, Richmond, Va., a corporation of Delaware
Filed Oct. 2, 1959, Ser. No. 844,100
4 Claims. (Cl. 29—155.55)



1. The method of securing a flanged terminal post in an apertured casing wall which comprises, positioning the terminal with the flange abutting against the casing wall and the terminal post projecting through the aperture and outwardly of the wall, simultaneously cutting and spinning the projecting portion of the terminal post away from the main body thereof until the spun portion engages the casing wall, and further cutting and spinning the projection portion while simultaneously peening the spun portion into evenly stressed engagement with the casing wall.

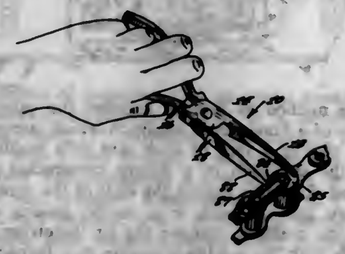
3,091,839
VALVE COMPRESSOR
Caleb V. Binkley, 247 Betz Road, Columbus, Ohio
Filed Sept. 18, 1961, Ser. No. 138,753
6 Claims. (Cl. 29—217)



1. For use with a cylinder head of a diesel engine having a rocker arm base, a pair of rocker arm studs and a plurality of valve springs, arranged symmetrically on said cup arm and cup to move downwards or upwards as bar, means for securing said base bar to said rocker arm

studs, a pivoted and sliding hold-down bar pivotally and slidably mounted on said base bar, a control screw adapted to have its lower end positioned to bear on said cylinder head and having its upper end rotatably secured in said hold-down bar, a valve spring cup arm and valve spring cup positioned on and threadedly secured on said screw, and means for rotating said screw and for causing said cup arm and cup to move downwards or upwards as desired.

3,091,840
ROLLER CHAIN SPRING PLIERS
Carl O. Anderson, 806 58th St., Brooklyn, N.Y.
Filed May 2, 1960, Ser. No. 26,370
1 Claim. (Cl. 29—225)



Roller chain pliers for removing a spring with a split end that overlies a link of a roller chain, from a post of the chain, comprising a pair of pivotally connected handles each having a shank portion and being movable toward the other in response to squeezing action on the handles, a stud pivotally connecting said handles, each of said shank portions terminating in a nose portion on the other side of said stud from the handle, the end of one said nose portions having an indent extending along the longitudinal axis of the nose portion with spaced ends formed by outer and inner wall portions for receiving and holding the end of a link under a split spring end as such split spring end is spread for removal, and the other nose portion terminating in a flange that is insertable into the indent adjacent the outer wall portion and spaced from the inner wall portion and being normal to the longitudinal axis of the nose portion with the indent when the flange is inserted in said indent, said flange being adapted to be forced between the spring and the roller chain post at the split spring end of a roller chain to spread such split spring end when an adjacent link end is retained in the indent with said link acting as a fixed abutment for said plier as it is closed.

3,091,841
TOOLS FOR HANDLING SPLIT RETAINING RINGS
Hugo Wurzel, New York, N.Y., assignor to Waldes Kohinoor, Inc., Long Island City, N.Y., a corporation of New York
Filed July 6, 1961, Ser. No. 122,213
9 Claims. (Cl. 29—229)



1. A pliers-type tool for handling split spring retaining rings comprising, in combination, a pair of elongated lever arms having handle ends, intermediate hub portions and tip ends terminating in working points, a pivot pin extending transversely through said hub portions and pivotally connecting said arms for relative angular motion, said hub portions having elongated slot-like openings through which said pivot pin extends, and longitudinally extensible linkage means interposed between and operatively interconnecting corresponding outer portions of the handle ends and said pivot pin for progressively projecting the pivot pin along said slots in the direction of said working points responsive to closing movement of the handle ends, thereby lengthening the handle ends and shortening the tip ends of the lever arms as effects automatic increase in the transmission ratio of the tool with closing of said handle ends.

3,091,842
METHOD OF ASSEMBLING A THREADED NUT IN NON-ROTATABLE ENGAGEMENT WITH A SUPPORT
Vincent A. Creamer, Belmont, Mass., assignor to United-Carr Fastener Corporation, Cambridge, Mass., a corporation of Delaware
Filed June 12, 1959, Ser. No. 819,924
1 Claim. (Cl. 29—432)

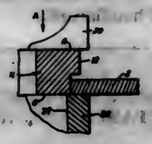


The method of attaching a flanged nut having a threaded barrel in non-rotatable engagement with a support, said support having outer surfaces and said support being of greater thickness than the length of the nut barrel comprising the steps of inserting the nut barrel into a bore formed in the support, so that the nut flange engages one outer surface of the support and the end of the barrel terminates intermediate the outer surfaces of the support, holding the flange from movement relative to the bore and against said outer surface of the support, inserting a barrel cutting tool with a plurality of longitudinal cutting ribs thereon into the support bore from the opposite side from which the barrel is inserted by forcing said ribs on said cutting tool into the other outer surface of the support surrounding the support bore, to cut a plurality of longitudinal grooves in the bore wall, and to cut attaching fingers from said end of the nut barrel and progressively force said fingers outwardly into the grooves cut in said support, inwardly of the face of the support where the splitting tool is inserted, whereby said nut is attached to said support and prevented from rotation when a screw threaded member is threaded into said nut barrel.

3,091,843
METHOD OF APPLYING STRESS RELIEVED FASTENERS
Plummer E. Dembia, Detroit, and Jerry H. Steward, Bloomfield Hills, Mich., assignors to Multifastener Corp., Redford, Mich.
Filed Apr. 14, 1960, Ser. No. 22,183
1 Claim. (Cl. 29—432)

In a method of securing to a planar portion of a panel a pierece nut having a rectangular pilot portion having sharp corners, opposed laterally projecting shoulders and

undercut grooves intermediate the shoulders and the pilot portion, the non-shouldered sides of the nut being planar and coextensive with the corresponding side of the pilot portion, the steps of interposing the panel between the nut and a die button having a bore of a cross section conforming generally to the size and contour of the nut pilot portion with the exception of radiused corners registering with the pilot portion corners, and, in a single uninterrupted motion, relatively moving the panel, the nut and the die button to perform the steps of (1) piercing the nut pilot portion through the panel (2) radiusing the nut pilot portion corners by shearing and extruding nut



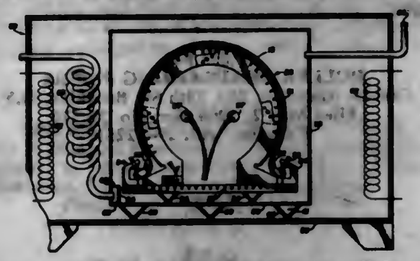
metal therefrom at the die button bore corners as the nut shoulders approach and bottom on the panel in opposition to the die button, and (3) swaging panel metal into the nut grooves by cooperation of the die button and the nut shoulders while simultaneously extruding substantially all of the nut metal so sheared from the nut corners between the nut and the panel while all of the nut pilot portion projecting beyond the plane of said panel portion projects into and is snugly confined by the die button bore.

3,091,844
METHOD OF MAKING FLEXIBLE JOINTS
Edward A. Laise, Leechburg, Pa., assignor to Allegheny Ludlum Steel Corporation, Brackenridge, Pa., a corporation of Pennsylvania
Filed May 16, 1960, Ser. No. 29,361
2 Claims. (Cl. 29—437)



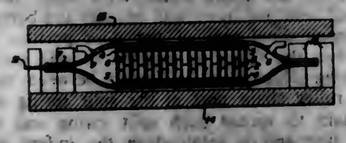
1. The method of forming a flexible joint between adjacent edges of two aligned longitudinally extending strips of metal having predetermined widths and thickness within the plane of at least one of said strips to facilitate passage of the joined strips through a rolling mill, comprising the steps of, forming complementary protruding portions having a dovetail shape with a relatively narrow base portion and being of a predetermined size on said adjacent edges, said protruding dovetail portions being in the planes of the respective strips and extending outwardly therefrom across the meeting edges of said strips, aligning and positioning said complementary dovetail portions of the adjacent meeting edges in interlocking engagement without increasing said predetermined widths of said strips, and deforming predetermined portions of the edges of at least some of said protruding dovetail portions adjacent the base portions only thereof on both sides of said strips and inwardly within the plane of said strips carrying said deformed protruding portions to provide a positive locking of said interlocking connection without an accompanying increase in thickness in the joint area while permitting slight relative movement between said interlocked protruding dovetail portions within the confines of the plane of the interlocked strips.

3,091,845
METHOD FOR MAKING HONEYCOMB PANEL
Hartley R. Herman, La Mesa, and Benjamin R. Alsobrook, Chula Vista, Calif., assignors to Rohr Corporation, a corporation of California
Original application Nov. 26, 1954, Ser. No. 471,394, now Patent No. 2,944,594, dated July 12, 1960. Divided and this application July 11, 1960, Ser. No. 48,797
4 Claims. (Cl. 29—471.1)



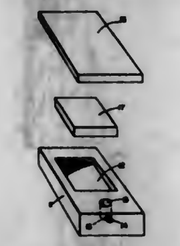
1. The method of brazing together the cellular core and skins of a honeycomb sandwich which comprises the steps of coating a face of each skin with brazing alloy; placing the sandwich in a fixture constructed to press the coated skin faces against the ends of the core; placing the fixture and sandwich in a muffle; passing an inert gas into the muffle to remove the air therefrom; placing the muffle with the sandwich therein in a furnace heated to a temperature above the melting point of the brazing alloy; passing a stream of hydrogen gas into the muffle while the sandwich is heating to the brazing temperature; removing the muffle with the sandwich enclosed therein from the furnace; and allowing the muffle and sandwich to cool to a temperature substantially below the melting point of the brazing alloy.

3,091,846
METHOD OF BRAZING
Scott L. Henry, Milwaukee, Wis., assignor to A. O. Smith Corporation, Milwaukee, Wis., a corporation of New York
Filed Mar. 21, 1958, Ser. No. 722,937
2 Claims. (Cl. 29—471.5)



2. In the method of brazing metal skin sheets to a cellular metal core having communication between adjacent cells of said core, the steps comprising forming a sandwich by placing a skin sheet on each face of said core with a layer of brazing material disposed between the core and each sheet, sealing the peripheral edges of said sandwich, alternately introducing a substantially non-oxidizing gas into said sandwich and withdrawing the same with the final withdrawal of gas serving to provide a vacuum within said sandwich whereby the components of said sandwich are forced firmly and uniformly together, heating said sandwich to a temperature sufficient to melt said brazing material, cooling said sandwich to allow solidification of the melted brazing material to bond said skin sheets to said core with said vacuum being maintained during said heating and cooling, and locating said sandwich between a pair of dies conforming to the contour of the sandwich and spaced apart a distance which is from .003 inch to .010 inch greater than the thickness of the sandwich during the cooling period to prevent warping and distorting of the sandwich during cooling while preventing excessively high die pressures on same.

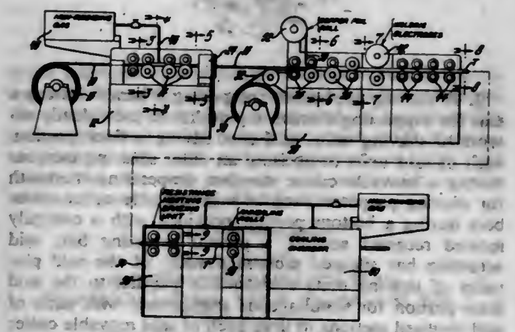
3,091,847
METHOD OF MANUFACTURE OF METAL ENCASED CORE MATERIAL
Ernest J. Peters, Santa Susana, Calif., assignor, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission
Filed Oct. 29, 1958, Ser. No. 770,454
4 Claims. (Cl. 29—471.5)



1. A method of manufacturing an article consisting of a core material completely encased in a metallic substance comprising (1) providing a first metallic member having at least a first surface, a second surface, and a third surface and containing a first aperture in a first portion of said member, a second aperture in a second portion of said member, and a perforation located in its third surface, said second aperture being connected to said perforation by a channel leading from said second aperture to said perforation and wherein said apertures connect said first surface to said second surface; a second metallic member designed to contact all points on said first surface which are located along the periphery of said apertures when placed in juxtaposition to said first member along said first surface; a third metallic member designed to contact all points on said second surface of said first member which are located along the periphery of said apertures when placed in juxtaposition to said first member along said second surface; and a core material which is stable at the bonding temperature of said members; (2) placing said core material in said first aperture, placing said second member in juxtaposition to said first member along said first surface, and placing said third member in juxtaposition to said first member along said second surface, said second member and said third member being placed so as to completely enclose said first aperture and said second aperture; (3) sealing said second member and said third member to said first member along the outer edges of the area of contact of said second member and said third member with said first member to form an assembled structure; (4) heating said assembled article to a temperature sufficient for bonding of said members; and (5) applying pressure to said heated assembled article in a direction normal to a plane passing through said first member and equidistant from said first and said second surfaces, said pressure being first applied along points at the outer edge of said structure adjacent a boundary line of said first aperture which is furthest removed from said second aperture, said points of pressure being progressively moved along the surface of said structure in the direction of said second aperture until the entire structure has been subjected to said pressure.

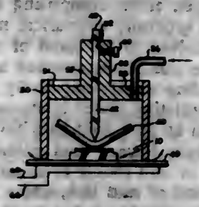
3,091,848
METHOD OF MAKING MULTI-WALLED TUBING
Bernard E. Frank, Rochester, N.Y., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Sept. 12, 1958, Ser. No. 761,749
4 Claims. (Cl. 29—471.7)

3. A method of making multi-walled steel tubing having concentric walls brazed to one another and a welded outer seam, said method comprising scarfing the edges of a first steel strip, continuously and longitudinally moving said first steel strip while transversely bending it into the shape of a tube with the scarfed edges thereof abutting one another to form a longitudinal seam, continuously and longitudinally moving a second steel strip at generally the speed of the tube formed from the first steel strip while transversely bending the second strip around said tube to form a composite tubing which includes an inner tube and a concentric outer tube, said second steel strip being about 10% to 30% wider than said first steel strip, said outer tube having abutting edges which form a longitudinal seam, continuously longitudinally feeding a strip



of brazing material at generally the speed of the composite tubing interjacent said tubes prior to the complete shaping of said second strip, said brazing material being from the group consisting of copper and copper base alloys, electrically welding said abutting edges of said outer tube, then roll-reducing said outer tube so as to elongate it and compress it into intimate circumferential contact with said inner tube, subsequently heating the composite tubing to a temperature of about 1850° F. to 2400° F. so as to simultaneously bond the tubes together and form a closed imperforate longitudinal brazed seam on said inner tube, annealing said composite tubing, and thereafter cooling said tubing.

3,091,849
METHOD OF BONDING MATERIALS
Jerrold Cohen, Costa Mesa, Calif., assignor to Pacific Semiconductors, Inc., Culver City, Calif., a corporation of Delaware
Filed Sept. 14, 1959, Ser. No. 839,807
3 Claims. (Cl. 29—472.9)



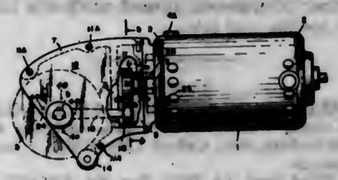
2. A method of thermo-compression bonding a gold-metal electrode to a silicon semiconductor crystal body including the steps of: placing the electrode in predetermined pressure contact with the semiconductor body; maintaining the contact area in a reducing atmosphere by introducing a reducing gas consisting essentially of a nonoxidizing compound of fluorine which will react with silicon dioxide to produce a volatile compound of silicon without attacking elemental silicon over the contact area; and heating said body to a temperature in the range from 320° C. to 360° C. for from ten seconds to 3 minutes.

3,091,850
ELECTRIC SHAVERS HAVING HINGEABLE SHEARING SECTION
Jacob L. Kleinman, New York, N.Y.
(217 Beach 71st St., Arverne, Long Island, N.Y.)
Filed Dec. 1, 1958, Ser. No. 777,364
2 Claims. (Cl. 30—43)



2. A shaving implement comprising a handle having a seat for supporting thereon a plurality of individually assembled shaving units, said seat having a floor portion, each of said units comprising an outer shearing member having a movable cutter member cooperating therewith for shaving purposes, each of said movable cutter members having a bottom portion provided with a centrally located recessed section, a pivotal actuating bar, said actuating bar situated cross-sectionally of the said plurality of shaving units substantially parallel to the said floor portion for simultaneous engagement with each of said recessed sections to urge each of said movable cutter members into cooperation with its respective outer shearing member for simultaneous operable action of the said individual shaving units for the said shaving purposes, and means for moving the said actuating bar.

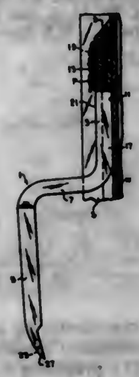
3,091,851
CAST CUTTER
Clarence R. Cummins, Erie, Pa., assignor of forty percent to Thomas B. Dempsey, Erie, Pa.
Filed May 28, 1962, Ser. No. 198,146
8 Claims. (Cl. 30—167)



1. A surgical cast cutter comprising an electric motor m the form of a generally cylindrical member of a size suitable to be received in the hand of a person, spaced, laterally extending side plates attached to one end of said motor and extending axially outwardly and downwardly therefrom, an oscillating cutter blade supported between said side plates on an axle, said axle having a rocker arm extending therefrom toward said motor, a link, a ball joint on one end of said rocker arm, said ball joint being received in one end of said link, and a cam fixed to the shaft of said motor, said cam being received in an opening in said link at the opposite end thereof from said ball joint whereby when said motor rotates, said cam oscillates said cutter blade.

3,091,852
PUTTY REMOVING TOOL
Mathew De Larber, 1924 Pestalozzi St., St. Louis 18, Mo.
Filed May 21, 1962, Ser. No. 196,206
10 Claims. (Cl. 30—172)

1. A putty removing tool comprising first and second bars connected by an offsetting portion, the first one of which bars has lateral teeth formed thereon adapted to scrape hardened putty, and the second one of which bars is adapted to be grasped by a hand, said first bar having substantially flat surface means extending laterally from



said teeth for substantially flat surface engagement with a window pane, the outer edges of said teeth being located in a generally flat plane extending substantially perpendicular to said flat surface means.

3,091,853
NOTCHING TOOL OF PUNCH-OUT TYPE
Jack Polayes, Westport, Conn., assignor to The Bar-Plate Manufacturing Co., Milford, Conn., a corporation of Connecticut
Filed Feb. 14, 1962, Ser. No. 173,253
6 Claims. (Cl. 30—229)



1. A tool for notching a side edge of work, comprising two arms pivotally connected intermediate their ends and forming at one end oppositely movable die blocks; die plates carried at their rear by said die blocks, respectively, and having front surfaces and opposing end surfaces, one of said plates being provided on its front surface with forward die formations having faces continuous with said end surface thereof and being spaced apart to define a die opening of predetermined notch shape and size, the other plate having on its front surface a forward punch formation projecting beyond said end surface thereof, and mating with said die opening on closing said die blocks by rocking said arms, and said one plate having on said end surface thereof spaced lug projections between which said other plate is guided during the opening and closing of said die blocks, with said lug projections having front faces continuous with said front surface of said one plate and defining rests for a side edge of work to be notched; and means provided at said other arm ends for rocking said arms to open and close said die blocks.

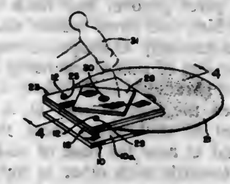
3,091,854
ADJUSTABLE GUIDED SLICING KNIFE
Edward G. Mannerberg, Brooklyn, N.Y., assignor to Henry J. Stolbach, New York, N.Y.
Filed Jan. 10, 1963, Ser. No. 250,508
4 Claims. (Cl. 30—283)



1. In a guided hand knife for slicing material into predetermined thicknesses including a knife handle, a knife blade having first and second flat sides and a cutting edge rigidly mounted on said handle, and an elongated slicing guide, the improvement comprising adjustment means mounting said slicing guide on said handle in parallel relation to said flat sides for movement through an adjustment path for determining thicknesses of material to be sliced, said adjustment means comprising a mounting block formed on said slicing guide including a handle-contacting face perpendicular to said flat sides having a transverse sliding surface formed therein perpendicular to said flat faces, and an extension protruding outwardly from the center of said handle-contacting face, said adjustment means further comprising a mounting block-contacting face formed at the forward edge of the bottom side of said knife and having a mating transverse sliding surface complementary to the sliding surface formed on the mounting block, a cavity formed in said handle in communication with said mounting block-contacting face and sized to receive said extension and to allow transverse movement of said mounting block and extension with said mating surfaces in sliding engagement, a threaded adjustment screw rotatably mounted in said handle perpendicular to said flat blade faces extending through said cavity, a mating threaded opening formed in said extension and positioned such that said adjustment screw, when threaded into said opening, maintains said stepped shoulders in intimate contact, and an adjustment knob secured to said screw for rotating same to adjust the position of said mounting block and said slicing guide with respect to said knife blade.

3,091,855
DISK CUTTER
Albert S. Hart, Box 242, West Road, Le Roy, Ohio
Filed Aug. 24, 1961, Ser. No. 133,702
11 Claims. (Cl. 30—359)

1. Apparatus for cutting an apertured disc from sheet material, comprising a base member, an upstanding punch on said base member, a male die having an opening for receiving said punch whereby said male die is adapted to be removably mounted on said base member and positioned thereon by said punch, a female die adapted to be advanced toward said base member for cooperation with said male die upon closing therewith to cut a disc from a sheet of material positioned therebetween, a punch die adapted to be advanced toward said base member and having a punch opening for receiving said punch and cooperating upon closing therewith to cut an aperture in said sheet material at a position substantially centrally of said disc, guide components on said base member, and



guide apertures in said female die and in said punch die for receiving said guide components whereby said female die and said punch die are adapted to be removably mounted on said guide components, said guide apertures cooperating with said guide components to align said female die with said male die and said punch opening with said punch during closing thereof.

3,091,856
ELASTIC THREAD LIGATURE
Marvin C. Goldstein, 950 W. Peachtree St. NW., Atlanta, Ga.
Filed July 14, 1960, Ser. No. 42,836
6 Claims. (Cl. 32—14)



1. In the method of changing the position of a misaligned tooth by exerting pressure against the tooth in the direction of the desired new position, the improvement comprising securing an elastic thread ligature in bearing relation with said misaligned tooth, said securement being effected by anchoring said elastic thread ligature to properly align teeth on opposite sides of said misaligned tooth, whereby said ligature is held under tension against said misaligned tooth in order to exert a continuing gentle force thereagainst, said ligature constituting an elastic core comprising at least one rubber strand, an inner cover wrapped thereabout in one direction and an outer cover wrapped over said inner cover in a different direction to minimize unraveling and also to insure that said core will be covered in the stretched position.

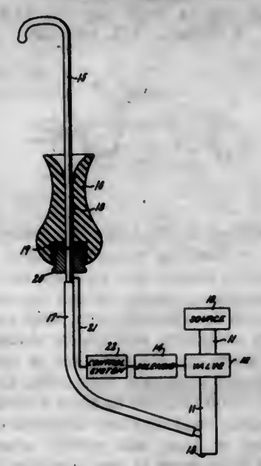
3,091,857
ORTHODONTIC DEVICE
James M. Rubin, 220 Central Park S., New York, N.Y., and Ronald W. Rubin, New York, N.Y. (620 W. 246th St., Riverdale, N.Y.)
Continuation of application Ser. No. 691,654, Oct. 22, 1957. This application Feb. 15, 1961, Ser. No. 89,469
6 Claims. (Cl. 32—14)



1. An orthodontic device having body means and cover means pivoted thereto, said body means comprising a substantially rectangular block having a first side, a

pivot groove extending the entire length in said first side near one edge thereof, a second side parallel to said first side, at least one arch wire groove extending the entire length in said second side parallel to said pivot groove, a third side between said first and second sides and parallel to said grooves, said third side being the side furthest away from said pivot groove, and latch means in said third side for latching said cover means, said cover means comprising a substantially U-shaped cover portion, the upper ends of the legs of said U extending at right angles to themselves and parallel to each other, a latch member extending between the legs of said U, a pair of arms extending parallel to each other from the lower ends of the legs of said U near the base of said U, and pivot arms extending towards each other at right angles from said arms, said pivot arms each being rotated 90° upon their own axis along the length thereof, said pivot arms riding in said pivot groove for pivoting said cover means with relation to said body means, said latch member adapted to engage said latch means for locking said cover means with relation to said body means.

3,091,858
SALIVA EJECTOR CONTROL SYSTEM
Arthur D. Misicka, 332 Lenox Road, Huntington Station, N.Y.
Filed June 2, 1961, Ser. No. 114,368
3 Claims. (Cl. 32—33)



1. A saliva ejector control system comprising a water-supply system having a primary water inlet, a water outlet, and an inlet intermediate said primary inlet and said outlet; an electrically conductive tube connected to said intermediate inlet of said water supply system for draining saliva from a person's mouth in response to water flow through said water supply system; a capacity-sensitive control system for controlling water flow through said water-supply system and including conductive means electrically coupled to said tube to cause the control system to allow water flow through said water-supply system when said tube is in the person's mouth and to interrupt water flow through said water-supply system when said tube is removed from the person's mouth.

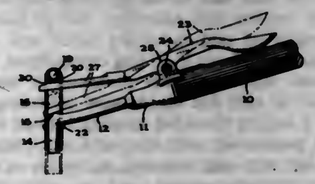
3,091,859
DENTAL SALIVA EJECTORS
Herbert A. Baughan, 106 E. Main St., Avon Park, Fla.
Filed July 19, 1961, Ser. No. 126,845
3 Claims. (Cl. 32—33)

1. A dental saliva ejector comprising a main suction tube adapted for connection with a source of vacuum, said main suction tube having a hook-like portion engageable over the lower incisor teeth and including an arcuate tube extension at the terminal end of said hook-like portion, said arcute tube extension having closed ends and adapted to rest on the floor of the mouth on the lingual side of the lower gum during use, portions of said arcuate tube extension defining spaced suction orifices inwardly of the closed ends thereof, a suction relief tube fixed on said main suction tube and said arcuate tube extension in generally superposed relation thereto, said suction relief tube terminating at one end outwardly of the mouth when the ejector is in an operative position and at the opposite end adjacent the ends of said arcuate



tube extension, an arcuate substantially horizontal tube section in communication with said main suction tube and in a plane generally parallel to the plane of said arcuate tube extension, first flexible tube sections telescopingly engaged over opposite ends of said horizontal tube section, second flexible tube sections telescopingly slidable on said first flexible tube sections and having portions thereof defining a plurality of perforations therein, a malleable wire element disposed within said horizontal tube section and said first and second flexible tubes whereby said flexible tubes can be flexed and held to conform to the mouth in the buccal and labial cheek folds, and an adjustable chin plate removably carried by the main suction tube.

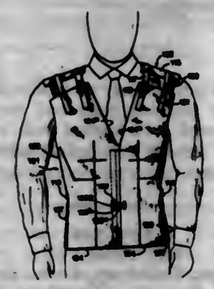
3,091,860
AMALGAM CARRIERS FOR USE BY DENTISTS
Herbert A. Baughan, 106 E. Main St., Avon Park, Fla.
Filed June 1, 1961, Ser. No. 114,179
6 Claims. (Cl. 32—60)



1. An amalgam carrier and applicator comprising a handle, a plunger head secured to the forward end of the handle and extending generally tranversely thereof and beyond one side of the same, a carrier sleeve slidably mounted upon the plunger head for reciprocation axially thereof, said carrier sleeve having one open end and portions defining a longitudinal slot through its side wall to receive a part of said handle, other portions of said carrier sleeve defining an opening through the side wall of the carrier sleeve diametrically opposite said longitudinal slot, a concave top end wall for the carrier sleeve closing the other end thereof and forming a spherical seat, a ball bearing element disposed within said seat, an operating lever pivoted upon said handle for swinging movement relative thereto and having a slender pin extension engaging movably through said slot and opening of the carrier sleeve and disposed between the

ball bearing element and said plunger head to cammingly engage the ball bearing element, and resilient means interconnecting said operating lever and handle to bias the handle in a direction to cause the open end of the carrier sleeve to be normally positioned forwardly of the leading end of said plunger head.

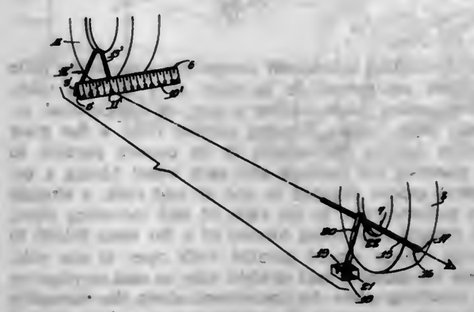
3,091,861
MEASURING CORSET ASSEMBLY FOR TAILORS' SHOPS
Ronald Methuen Jones, Sevres, France, assignor to Belle Jardiniere, Paris, France, a corporation of France
Filed Dec. 28, 1960, Ser. No. 78,973
Claims priority, application France Jan. 8, 1960
2 Claims. (Cl. 33—15)



1. Adjustable corset assembly for tailors' shops, adapted to be tried on a customer's body to determine the alterations to be made on a normal garment outline, to be traced on a cloth by means of a pattern corresponding to said corset assembly in its normal state, said corset assembly comprising, on the one hand a corset having a rear portion and two front portions, and, on the other hand, a neck and shoulder harness; said harness comprising: a neck and shoulder band having a middle band portion adapted to surround the rear part of the neck and two side band portions adapted to cover the upper side of the shoulders of the person for whom the garment is being made, two pliant inner front measuring strips articulated to the inner ends of said side band portions and adjustably connected to the inner upper edges of said front portions of the corset, respectively, two pliant outer front measuring strips articulated to the outer ends of said side band portions and freely hanging against the upper parts of said front portions of the corset, two pliant outer rear measuring strips articulated to the outer ends of said side band portions and adjustably connected respectively to the outer ends of the upper edge of said rear portions of the corset, and a pliant middle rear measuring strip articulated to the middle of said neck band and the middle of the upper edge of said rear portion of the corset.

3,091,862
ALIGNING DEVICE FOR ASSISTING IN CENTERING AN AUTOMOBILE STEERING WHEEL
Charles W. MacMillan, Rock Island, Ill., assignor to Bear Manufacturing Company, Rock Island, Ill., a corporation of Delaware
Filed May 27, 1959, Ser. No. 816,247
5 Claims. (Cl. 33—46)

4. A device for checking the straight-ahead position of the wheels of an automotive vehicle comprising, in combination, a portable target associated with a rear wheel of the vehicle and comprising a horizontally extending member disposed transversely of the rear wheel on the same surface as the wheel, said member having a ground-engaging lower edge portion, a front face and a rear face abutted against the tread of the rear wheel at the forward face of the wheel, an abutment secured to said member and extending rearwardly therefrom, said abutment including a straight-edge portion perpendicular to said member abutted against the outer side of the rear wheel, and a scale on said front face having a datum mark aligned substantially with said straight-edge portion, and a sighting assembly associated with the corresponding front wheel of the vehicle and comprising a base member rested on the same surface as the front wheel



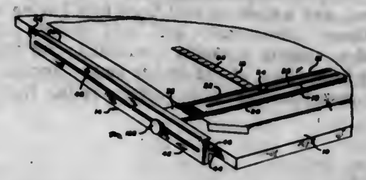
adjacent the outer side of the wheel, an arm pivotally mounted on said base member and extending upwardly therefrom, said arm being disposed substantially along the vertical center line of the front wheel and engaged with the outer side of the front wheel adjacent its upper end, said arm having an upwardly facing rest surface thereon located adjacent the midpoint of the front wheel, and an elongate sighting member rested on said rest surface and engaged with generally horizontally opposed portions of the outer side of the front wheel for sighting said target in a plane parallel to the plane of the front wheel.

3,091,863
WEAPON SIGHT
Herbert H. Mumsey, 192 Louvaine Drive, Kenmore, N.Y.
Filed Aug. 12, 1957, Ser. No. 677,538
3 Claims. (Cl. 33—47)



1. A weapon sight comprising a sight base having an inner surface adapted to rest flush against a weapon, an outer surface provided with a longitudinal groove closed at one of its ends and open at its opposite end, and a transverse passage extending through said base in subtantial alignment with the open end of the groove, the diameter of the outer end portion whereof being shorter than the diameter of the inner end portion to thereby create a shoulder between said end portions of the passage, a retaining member mounted for reciprocation in and adapted to slideably fill the outer end portion of said passage, said retaining member having an outstanding flange at its inner end slideably filling the inner end portion of the passage, and a coil spring disposed between the inner end of the retainer and the weapon to normally project the outer end of the retainer across the open end of the groove and the flange of the retainer into abutment with the shoulder of the passage.

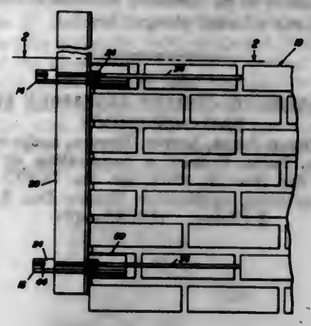
3,091,864
DRAFTING INSTRUMENT
Gerald E. Force, 1458 Columbia Road NW., Washington, D.C.
Filed May 25, 1960, Ser. No. 31,662
6 Claims. (Cl. 33—76)



2. A drafting instrument comprising a mounting plate for fixed securement to an edge of a drafting table, said mounting plate having a pair of longitudinal inwardly bent flanges forming parallel rails, a flat plate carriage having disc wheels at its corners parallel to the plane of the carriage and each wheel having a peripheral groove engaged in one of said rails, a straight edge perpendicular to the rails of said mounting plate, said straight edge being formed of a flat sheet folded to provide closely spaced parallel walls open at one side, means for securing said straight edge to said carriage on the mounting plate for movement along the mounting plate rails, a vertical liner having one end positioned between the parallel walls of said straight edge, a pivot stud at said end of the vertical liner and a pair of detents spaced 90° apart in an arc about said pivot stud, a second flat plate carriage having a central opening receiving said pivot stud and positioned within the straight edge between the parallel sides thereof, said second carriage having a semicircular slot ending in bent terminal flanges for wedging engagement with said pair of detents, disc wheels at the corners of said second carriage having peripheral grooves, one of said parallel walls of the straight edge having a pair of longitudinal parallel rails formed by flanges and bent inwardly to extend into the space between the walls of the straight edge, said peripheral grooves of the wheels of the second carriage engaging the straight edge rails, and means for securing said pivot stud of the vertical liner assembled in rotational engagement with said second carriage whereby said liner is movable from a covered position seated between the walls of and within said straight edge to an extended work position perpendicular thereto, the movements between said positions being limited by engagement of said detents on the liner with said terminal flanges on the second carriage.

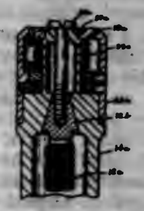
3,091,865
ANGLE IRON BRICK LAYING GUIDE
Alvin O. Ernst, P.O. Box 111, Bessie, Okla.
Filed Aug. 13, 1959, Ser. No. 833,476
4 Claims. (Cl. 33—85)

1. A brick laying corner guide comprising a pair of flat vertically spaced plates, said plates being alike in construction and having aligned slots therein, an elongated linearly straight angle iron extending between said plates and having flanges thereof extending through said slots, said slots being of a shape and dimensions in plan corresponding to the cross-section of the flanges of said angle iron, releasable fastening means slidably securing said angle iron to said plates, and securing means securing said angle iron adjacent a corner defined by the lower courses of a brick construction, each of said plates including a pair of sides on the perimeter thereof defining a right angle therebetween, said sides adapted for engagement with the corner bricks of said lower courses, said means securing said angle iron including an upstanding wall on each of said plates adjacent each of said slots, and setscrews extending through said upstanding walls engageable with the component flanges of said angle iron, said securing means including a pair of apertured projections within the marginal edges of the plates, rods overlying top surfaces of the plates and extending through the



apertures in said projections, said rods being in a plane parallel with the adjacent plate and terminally hooked at a first end thereof, said hooked ends being adapted to be anchored and secured between adjacent bricks of said lower courses spaced from said corner construction.

3,091,866
MICROMETER
Henry J. Kachergis, Waterbury, Conn., assignor to Scovill Manufacturing Company, Waterbury, Conn., a corporation of Connecticut
Filed Feb. 7, 1962, Ser. No. 171,685
9 Claims. (Cl. 33—167)



1. A micrometer gauge comprising:
(*a*) a frame having an anvil at one end;
(*b*) a threaded spindle aligned with said anvil;
(*c*) a barrel extending from the opposite end of said frame;
(*d*) a thimble rotatable on said barrel and connected to said spindle, said thimble having a reduced extension and providing a shoulder therebetween;
(*e*) a hollow sleeve rotatably mounted on said thimble and providing a space between it and the extension;
(*f*) a spring anchor ring releasably keyed to said extension;
(*g*) a coil spring positioned in said space and having its opposite ends connected respectively to said ring and said hollow sleeve; and,
(*h*) means for winding said spring and holding it in a tensioned state thereby imparting a pretensioned torque between said sleeve and said thimble.

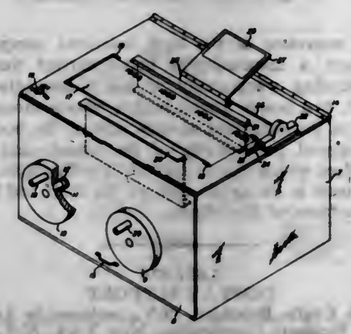
3,091,867
THREAD PITCH GAGE
Robert E. Ryan, Jr., Schenectady, N.Y., assignor to the United States of America as represented by the Secretary of the Army
Filed Nov. 30, 1960, Ser. No. 72,815
6 Claims. (Cl. 33—199)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A portable gage adapted for checking both the external threads formed on the breech end of a cannon tube and the internal threads formed within a breechring, the gage including a pair of contact-rods, a pair of guide-rods, a retainer block for securing one end of each said contact-rods and guide-rods, a housing for supporting the opposite ends of said contact-rods and guide-rods so as to permit relative sliding displacement of said housing along said contact-rods and guide-rods, said contact-rods and guide-rods being retained by said retainer block and housing so as to be disposed parallel relative to each other and so that said contact-rods are contactable with the major diameter surface of the external threads on the tube and the minor diameter surface of the threads in the



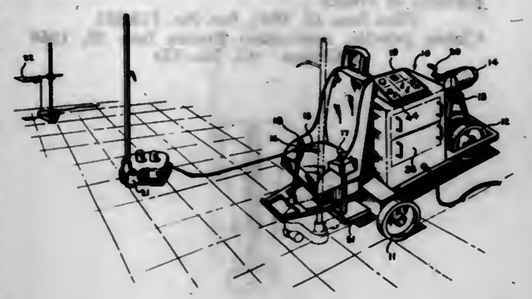
breechring whereby said guide-rods are disposed parallel to the longitudinal axis of the contacted threads, means for securing said housing to the tube, a carriage disposed for sliding displacement on said guide-rods, means for indexing said carriage to successive ones of the threads contacted by the gage, master means disposed between said housing and said carriage for representing the prescribed pitch of the one of the threads to which said carriage is indexed, and a dial indicator carried by said carriage, said dial indicator being disposed for contact with said master means for indicating any difference between the actual pitch of the thread to which said carriage is indexed and the prescribed pitch.

3,091,868
EDUCATIONAL DEVICE
Robert W. Fleckman, New York, and Joseph Opperman, Great Neck, N.Y., assignors to Educational Institute for Learning and Research, New York, N.Y., a membership corporation of New York
Filed Nov. 15, 1961, Ser. No. 152,684
5 Claims. (Cl. 35—21)



1. An educational apparatus for aiding the teaching of history comprising first and second reels, a paper tape having portions thereof calibrated according to and displaying successive dates, said tape being wound on said first and second reels, means for sequentially displaying said portions of said tape for the entry thereon of pictorial historical representations adjacent appropriate ones of said successive dates, and means for automatically attaching said pictorial historical representations to said tape.

3,091,869
GUIDED MISSILE TRAINING AND SIMULATION DEVICE
Wardlaw M. Hammond, Jr., Winter Park, Fla., assignor to Martin-Marietta Corporation, a corporation of Maryland
Filed Mar. 29, 1961, Ser. No. 99,200
10 Claims. (Cl. 35—25)



1. A guided missile training and simulation device using a three-dimensional display arrangement for providing a direct analog of missile movement throughout the simulated flight of the missile comprising a self-propelled carriage operative on a plane surface for carrying a human operator in the general direction of the target for the purpose of simulating the flight path of an aircraft, a self-propelled steerable missile position simulator operative on said plane surface, and a target disposed upon said plane surface, said missile simulator having vertically movable sighting point means for continuously representing the spatial position of the missile depicted by said simulator, said carriage having manually-operated missile control means for guiding said missile position simulator along said surface, a steerable wheel on said missile simulator capable of being turned about a vertically disposed spindle axis in response to steering commands from said missile control means, said sighting point means being mounted above said steering spindle axis and disposed at all times substantially upon the centerline of said axis throughout the range of movements of said sighting point means, said manually-operated missile control means also being effective to direct said sighting point means along the operator's sight line into impact with said target.

3,091,870
MAGNETIC-COHESION MODELS OF SCIENTIFIC AND MATHEMATICAL STRUCTURES
Harold L. Sangster, Boyds, Md. (R.D., Dickerson, Md.)
Filed Aug. 10, 1959, Ser. No. 832,715
10 Claims. (Cl. 35—30)



1. A model element comprising a body of solid material distributed about at least one axis and having an external completely closed surface defining about said axis a simple three-dimensional geometrical solid configuration; permanent magnetic means carried by said body for establishing predetermined permanent magnetic poles distributed continuously over the entire respective external surface portions of said body lying on opposite sides of a peripheral magnetically neutral zone which

is at the intersection of the said external surface with a median plane of said body that is perpendicular to said axis.

3,091,871
MOLDED BOOT
Roger Troncho, Coutras, France, assignor to Societe a responsabilite limitee dite: Societe d'Exploitation des Etablissements Baudou, Les Eglisottes, France, a corporation of France
Filed June 19, 1961, Ser. No. 118,053
Claims priority, application France June 22, 1960
2 Claims. (Cl. 36—72)



1. A safety boot comprising an upper provided with a plurality of short integral external parallel ribs extending in a direction substantially perpendicular to the median plane of said boot and disposed in a row extending from a point within the top portion of the front of the leg of the boot down over the instep covering portion thereof to a point adjacent the toe covering portion thereof, said ribs terminating short of the sides of said boot and said boot also comprising a group of short external parallel ribs positioned centrally of the ankle portion of each side thereof.

3,091,872
SHANK AND HEEL SEAT MEMBER FOR FOOTWEAR
Franz Baumann, Niedergoesgen, and Franz Zendron, Schoenenwerd, Switzerland, assignors to Bally's Shoe Factories Limited, Schoenenwerd, Switzerland
Filed July 11, 1960, Ser. No. 42,175
3 Claims. (Cl. 36—76)



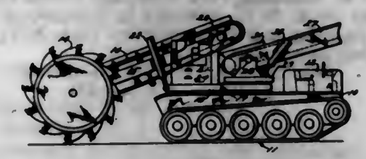
1. A shank and heel seat member for an insole for footwear, said member consisting essentially of a shaped substantially rigid thermoplastic portion, the thermoplastic being sufficiently soft to receive and retain lasting staples and tacks, said thermoplastic portion being adapted to extend along the length of the footwear from the heel to the beginning of a flexible ball member, said thermoplastic portion having the same shape and contour as the shape of the finished footwear in the portion corresponding to the shank and heel portion to the beginning of the forefoot, and a reenforcement extending along the central portion of both the top and bottom surfaces of said thermoplastic portion, said reenforcement being strands of substantially inextensible material embedded in said thermoplastic, a portion of said strands extending in the axial direction of the member and the remainder of said strands extending laterally of the member, said strands forming a screen-like mesh.

3,091,873
EARTH MOVING APPARATUS
Bernard B. West, P.O. Box 286, Mound City, Kans.
Filed Feb. 2, 1961, Ser. No. 86,662
1 Claim. (Cl. 37—143)



In an earth moving apparatus including a blade unit and at least two pairs of lugs arranged in spaced parallel relation with respect to each other and said lugs extending upwardly and rearwardly of said blade unit, a support member embodying a pair of spaced parallel arms, detachably connected to said lugs, said support member further including a horizontally disposed beam secured to said arms, a pair of spaced parallel legs extending forwardly from the outer ends of said beam and secured thereto, bearings connected to the lower end portions of the legs of the support member, an auger including a shaft extending through said bearings and having the portion adjacent one end thereof exteriorly of the adjacent leg, said auger further including a spiral blade on said shaft, and means for operating said auger, said means comprising a motor mounted on said support member, chain and sprocket means connecting said motor to said shaft one end portion, said auger being longer than said blade unit so that the ends of the auger project beyond the ends of the blade unit.

3,091,874
HIGH SPEED EXCAVATING MACHINE
Eugene E. Wuigk, Peoria, Ill., assignor to Caterpillar Tractor Co., Peoria, Ill., a corporation of California
Filed May 3, 1961, Ser. No. 107,450
2 Claims. (Cl. 37—190)

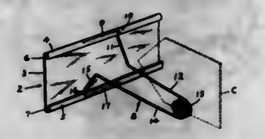


1. An excavator of the kind described comprising a mobile unit, a maneuverable boom carried thereby, a shaft extending transversely of the boom adjacent its outer end, two power driven bucket wheels mounted for rotation on the shaft one at each side of the boom, and buckets spaced peripherally of the wheels and having cutting edges which extend outwardly with respect to the boom at least as far as the ends of the shaft and the outermost surfaces of the wheels.

3,091,875
DISPLAY SUPPORT
Arthur S. Crafa, Brooklyn, N.Y., assignor to American Home Products Corporation, New York, N.Y., a corporation of Delaware
Filed Apr. 27, 1962, Ser. No. 190,554
8 Claims. (Cl. 40—11)

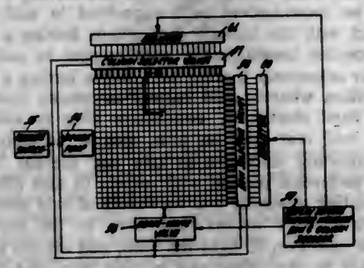
8. An advertising display support adapted for resilient engagement between the oppositely disposed grooves formed by the opposed flanges of a mounting member of generally C-shaped cross-section, said display support comprising: a continuous length of resilient wire material of substantially uniform cross-section forming a first straight leg adapted to be retained within one of the opposed grooves formed by the opposed flanges on a mounting

member of generally C-shaped cross-section, a second straight leg extending from said first leg at least a distance whereby said second leg is adapted to protrude out of the groove in which said first leg is retained, a third straight leg adapted to extend outwardly from the mounting member when the display support is mounted therein and generally reversely with respect to said first leg to form an acute angle therewith, a fourth straight leg extending from said third leg at an obtuse angle thereto in a direction generally perpendicular to a plane passing through the length of said first straight leg, a loop attached to the end of said fourth leg, said loop comprising at least two close resilient turns adapted to support therebetween a display device, a fifth straight leg extending from the other end of said loop to form an angle with said fourth leg in planes substantially parallel to the main plane of said



turns, said fifth leg also extending in a direction generally perpendicular to another plane passing through the length of said first leg, a sixth leg extending at an angle to said fifth leg in a direction adapted to extend inwardly toward the mounting member when the display support is mounted therein, and generally in a direction similar to that of said first leg, a seventh leg extending at an angle to said sixth leg in a direction adapted to extend into the other groove of the mounting member when the support is mounted thereon, and an eighth leg attached to the end of said seventh leg and extending in substantially parallel relationship with said first leg and in the opposite direction thereof and adapted to be retained within the other of the opposed grooves of the C-shaped mounting member, said first and eighth legs having at least portions thereof directly opposed.

3,091,876
DISPLAY DEVICE
Donald A. Cole, West Acton, Mass., assignor to Radio Corporation of America, a corporation of Delaware
Filed Sept. 6, 1960, Ser. No. 54,034
8 Claims. (Cl. 40—28)



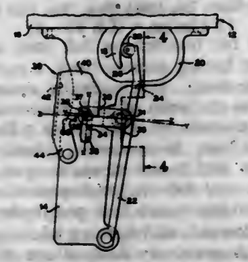
1. In a display device, the combination of a resolution element comprising a tubular member having a pair of openings therein, light producing means including an electroluminescent panel and a diaphragm, said diaphragm comprising a flexible membrane connected across one of said pair of openings, said membrane including electrically conductive material, and actuating means communicating with the other of said openings, said actuating means being capable of conditioning said diaphragm in either one of two different stable states in one of which said membrane contacts said electroluminescent panel for rendering said panel light producing.

3,091,877
DISPLAY DEVICE
Charles R. Lachsinger, Great Neck, N.Y., assignor to Norcross, Inc., New York, N.Y., a corporation of New York
Filed Mar. 3, 1961, Ser. No. 93,208
5 Claims. (Cl. 40—124.1)



1. A display device of flexible paperboard material comprising a pair of foldable panels, a flap extending outwardly from an edge of one of said panels and being foldable about a first fold line, a pair of spaced apart slits in said one panel and said flap with their axes extending perpendicular to and intersecting said first fold line, a tongue cut in said flap facing away from said first fold line, a second fold line in said flap substantially parallel to said first fold line and intermediate of said tongue and said first fold line, and elastic means received in said slits and said tongue for urging said flap outwardly about said second fold line to extended position from coplanar position, said elastic means being tensioned and stretched when said flap is folded inwardly coplanarly and juxtaposed with said one panel, said other panel being adapted to be folded over said flap for maintaining said flap in inwardly folded position and when said panels are separated said flap swinging outwardly about said second fold line in extended position by said elastic means.

3,091,878
AUXILIARY FIREARM TRIGGER WITH INTEGRAL SAFETY
Giulio V. Savioli, Westfield, Mass., assignor to the United States of America as represented by the Secretary of the Army
Filed May 24, 1962, Ser. No. 197,549
6 Claims. (Cl. 42—69)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. In a firearm, the combination including a trigger fingerpiece displaceable between a normal and a firing position, a trigger bar disposed for pivotal displacement between an extended and an actuated position responsive

to manual pressure applied thereagainst, means for transferring displacement of said trigger bar to the actuated position to said trigger fingerpiece for displacement to the firing position, lever and channel means arranged for cooperation with said trigger bar to releasably prevent displacement thereof from the extended position, a safety arranged to be manually actuated simultaneously with said trigger bar, and cooperating cam means in said safety and on said lever and channel means to release said trigger bar for displacement to the actuated position by actuation of said safety.

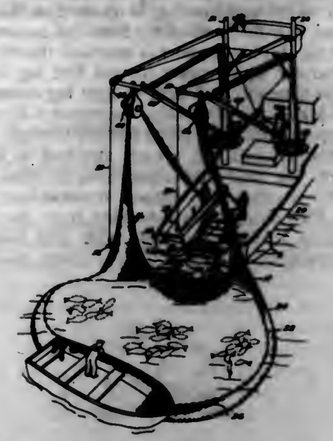
3,091,879
BRAILER APPARATUS FOR USE WITH A FISHING BOAT
Mario J. Puretic, 30514 Avenida Corona, San Pedro, Calif.
Filed July 24, 1961, Ser. No. 125,999
10 Claims. (Cl. 43—6.5)



2. Brailer apparatus for transferring netted fish from a net onto a fishing boat, comprising: a basket member movable between an open position and a closed position, said basket member including a normally closed bag having dumping means operable to open said bag to dump the contents of said basket member; a power-operated boom member on said boat operatively attached to said basket member for effecting vertical and horizontal movement of said basket member between a fish-receiving location within the confines of said net and a fish-discharging location over said boat; and means operatively associated with said basket member to move said basket member between its open and closed positions whereby said basket member may be moved into its fish-receiving location in an open position and thereafter closed to trap a portion of said netted fish, with said closed basket member thereafter being urged to said fish-discharging location and said dumping means then being operable to open said bag to dump said portion of fish onto said boat.

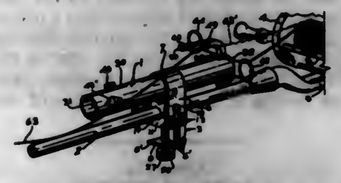
3,091,880
MEANS FOR RECOVERING FISH FROM A NET AND TRANSFERRING SAME ONTO A BOAT
Mario J. Puretic, 30514 Avenida Corona, San Pedro, Calif.
Filed Nov. 20, 1961, Ser. No. 153,539
12 Claims. (Cl. 43—8)

7. Apparatus for transferring fish onto a fishing boat from a seine net having pursing rings, a purse line and a float line, comprising: longitudinally extending tunnel means formed in the stern of said boat leading from an opening in the transom of said boat to a fish-discharging position on said boat; an upwardly inclined power-driven conveyor belt in said tunnel means to transfer fish from said opening to said fish-discharging position; power-operated net retrieving means that progressively raise and gather said net towards said opening whereby fish trapped in said net are progressively dumped out of said net into the lower end of said conveyor belt; pursing ring receiving means on the stern of said boat that temporarily receive said pursing rings during the raising and gathering of said net by said net retrieving means; and temporary net-support means on the stern of said boat engageable with said net during said raising and gathering of said net whereby said purse line may be removed from said pursing



rings, with the latter thereafter being transferred to said pursing ring receiving means.

3,091,881
SIGNALLING DEVICE
Gene E. Evans, 806 E. 12th St., Lawrence, Kans.
Filed Oct. 5, 1961, Ser. No. 143,112
4 Claims. (Cl. 43—17)



1. A fishing signal light for use with a fishing rod having a line thereon comprising, an electrically conductive tube having a rear and a front end, a battery in said tube, electrically conductive means contacting said tube adjacent the front end of said tube and having a socket therein, an incandescent bulb supported in said socket in contact with the battery, said means having a socket being movable longitudinally with respect to said tube, means for selectively locking said means having a socket in a position wherein said battery is remote from said bulb, a fixed electrically conductive plug in said tube adjacent said rear end, an arm, means resiliently, pivotally mounting said arm at one end thereof in said plug for reciprocal motion with respect to said tube, said arm extending upwardly and forwardly of said tube, electrically conductive means responsive to the reciprocal motion of said arm to light the bulb, and eyelets secured respectively to the other end of said arm and to said tube for guiding line in an offset path past said tube whereby variations in tension on said line reciprocates said arm.

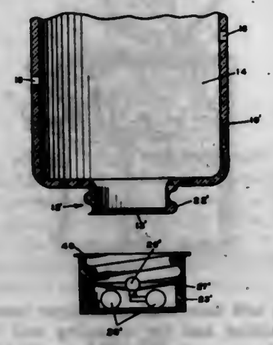
3,091,882
ILLUMINATED DECOY AND LURE FOR FISHING
Homer T. Dudley, 2819 N. Garrison, Tulsa, Okla.
Filed June 17, 1959, Ser. No. 13,975
1 Claim. (Cl. 43—17.5)

An illuminated fish decoy to be submerged in a body of water, comprising,

a one piece elongated body of transparent material having an exteriorly threaded neck portion at the lower end of said body,

a planar end wall integrally closing the lower end of said neck portion to form a large compartment in said body for live bait,

the side wall of said compartment being perforated for the circulation of water therethrough when the decoy is submerged,



a compartment having an opening at the upper end of said body for the introduction of live bait,

a removable closure for said opening,

a removable resilient cap forming a compartment and adapted to be threadably engaged with said neck portion and compressibly sealed against said body adjacent the upper end of said neck portion, and

a battery powered illuminating means retained within said removable cap and providing illumination directed upwardly through said end wall.

3,091,883
INTERCHANGEABLE LURE BODIES AND SINGLE SUPPORT MEANS THEREFOR
Harold H. Hufford, Warren, Ohio, assignor of one-half to Robert C. Sharpe, Warren, Ohio
Filed June 28, 1961, Ser. No. 120,438
4 Claims. (Cl. 43—42.08)



1. A lure comprising a fishing plug embodying body, head and tail portions, said body portion having a ventral surface and provided with at least one lengthwise keying groove, said head portion having spaced furcations defining an intervening keeper seat, an elongated adapter plate for said plug adjacent to and generally parallel with said ventral surface, said plate having a forward end provided with an angularly deflected vane, a median portion of said plate having a laterally bent lengthwise keying flange removably keyed to said keying groove, the rearward end of said plate having a lateral terminal portion provided with a slot, and a fish hook attaching and suspending bridle comprising a length of wire having a bent portion projecting through an opening in said plate and providing a first hook hanging eye, also having a hook-like bent portion projecting through the slot in the aforesaid terminal portion and providing a second hook suspending eye, the forward end portion of said wire being resilient and providing a yieldable finger, said finger terminating at a free forward end thereof in a laterally bent detent, said detent being releasably engaged in said keeper seat.

3,091,884
FISH LURE
Raymond G. Brownstein, 300 Fountain Ave., Ellwood City, Pa.
Filed July 10, 1961, Ser. No. 122,873
3 Claims. (Cl. 43—42.09)



1. A fishing lure comprising, in combination, a body, a hook harness, and fish hooks carried by said harness, said body having a forward end portion with a passageway extending longitudinally therethrough, and a rear portion integral with said forward portion and having upper and lower sections disposed on opposite sides of a slot extending between and opening on opposite sides and the rear end of said body, said slot being longitudinally aligned with said passageway, the rear end of said forward end portion defining the forward terminal wall of said slot, said harness comprising a flat metal body having an elongate main longitudinal section and wing projections extending from opposite sides of said main longitudinal section intermediate the ends of said main longitudinal section, the portion of said main longitudinal section extending forward of said wing projections extending through said passageway and having a front tip projecting beyond the forward end of said body, said wing projections and the other portions of said main longitudinal section being disposed in said slot, said wing projections engaging said wall and having tips projecting beyond opposite sides of said body, said main longitudinal section having a rear tip projecting beyond the rear end of said body, at least one of said fish hooks being attached to each of said tips of said wings and to said rear tip of said main longitudinal section, said front tip of said main longitudinal section having an aperture therein adapted to releasably receive a line fastening means.

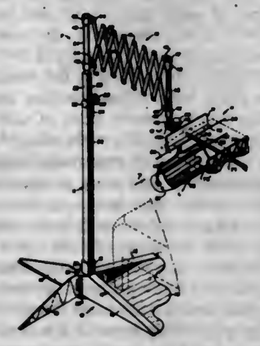
3,091,885
RELEASABLE FISH HOOK
George Ulsh, 7343 Windsor Mill Road at Rolling Road, Baltimore, Md.
Filed July 13, 1960, Ser. No. 42,606
1 Claim. (Cl. 43—42.52)



In a fish lure, a holding element for a fish hook having the hook positioned at one end of an elongated shank, the shank having an enlarged circular end portion on the end of the shank opposite the hook, said end portion being substantially larger than the shank, the holding element comprising, a unitary body portion of a pliable rubber-like material of predetermined elasticity having a channel-like aperture of substantially the same diameter as the shank and of smaller diameter than the enlarged end portion of the shank extending through one end and into the interior of the body portion, the holding element having a cavity therein of larger diameter than the channel and connected with the inner end of said channel to form a continuous circular shoulder about the inner edge of

the channel, the cavity being of substantially the same diameter as the diameter of the enlarged end of the shank and adapted to receive the same in a position to allow the enlarged end of the shank to rest against the shoulder formed by the inner end of the channel until an outward pull on the hook shank creates sufficient stress to expand the area of the pliable holding element surrounding the channel, the end of the holding element opposite the end carrying the channel opening being formed at an angle to the elongated axis of the channel and having a groove positioned inwardly from and adjacent the outer end thereof, and a thin spoon type fish bait having an aperture therethrough of substantially the same diameter as the groove and adapted to receive the outer end of the angled portion of the holding element about the groove for holding the same to the spoon type fishing bait.

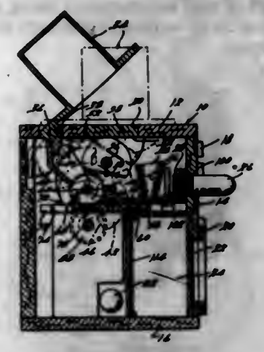
3,091,886
BOOK HOLDER
Donald W. Nutting, 1350 S. Grand Ave., Glenwood Springs, Colo.
Filed Aug. 28, 1961, Ser. No. 135,102
10 Claims. (Cl. 45—85)



1. In combination with a frame having an outstanding supporting arm, a book holder adapted to be carried at the base of the supporting arm, and comprising a T leg depending from the arm, a double-crotch U-clamp having one crotch embracing the arms of the T leg whereby to permit rotation of the clamp about the axis of the arms of the T leg, a lock bolt spanning the other crotch of the clamp and being adapted to bring the legs of clamp together to lock it upon the T leg, a shaft extending from the side of the bolt and between the legs and along the axis of the clamp, a flanged sleeve rotatably mounted upon the shaft with the flange thereof carrying a lamp holding means, a lockable sleeve telescopically mounted upon the first said sleeve and carrying a book holding means and means adapted to lock the second sleeve upon the first and to lock the first sleeve upon the shaft.

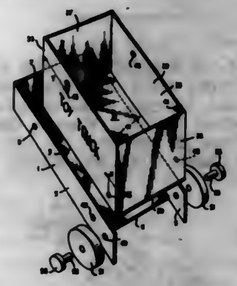
3,091,887
MAGIC CLOWN TOY BANK
John D. Shook, 8483 Burt Road, Detroit, Mich.
Filed Apr. 23, 1962, Ser. No. 189,478
3 Claims. (Cl. 46—4)

1. A toy bank comprising a three dimensional enclosure including a top having an aperture therein and a cover member pivotally mounted thereon and movable to and from a lowered position in overlying covering relationship over said aperture and a raised position spaced upwardly therefrom, a door disposed in said aperture and movable to and from a closed position and an open position angularly tilted inwardly from said enclosure, receiving means in said enclosure for receiving a coin sliding downwardly off said door during movement thereof toward said open position, releasing means for selectively releasing a coin in said receiving means enabling it to drop into a depository section within said enclosure, power means for moving said cover member and for opening



and closing said door while said cover member is in said lowered position and for actuating said release means when said cover member attains said raised position, actuating means for actuating said power means, and means for deactivating said power means at the completion of the cycle.

3,091,888
TOY TRUCK
Robert W. Patch, 4118 Woodbine St., Chevy Chase, Md.
Filed June 11, 1962, Ser. No. 201,628
14 Claims. (Cl. 46—17)



1. A toy truck comprising a chassis having a bottom and upstanding side edges, the side edges extending to the rear of the rear edge of the bottom, a truck body, rear wheels on the truck, and axle means on which the rear wheels are mounted, the axle means mounting the truck body on the side edges for vertical swinging movement about a horizontal axis disposed to the rear of the rear edge of the bottom.

3,091,889
FLYING DEVICES
Frank Zaic, Ridgewood, N.Y.
(16915 Kinzie St., Sepulveda, Calif.)
Filed Feb. 24, 1959, Ser. No. 794,900
9 Claims. (Cl. 46—79)

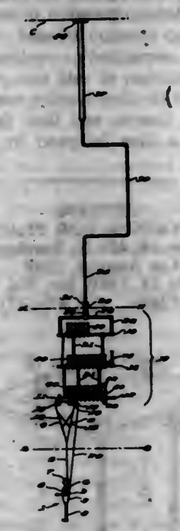
1. In a flying device, a plane elevating member movable between a predetermined high-speed non-lifting position and a range of low-speed lifting positions, a control vane member disposed in a plane normal to that of said plane elevating member and movable between a high-speed position substantially in the path of flight and a predetermined range of low-speed positions angularly disposed

with respect to the path of flight, resilient means connected to said elevating member urging it away from its said high-speed position, actuating means on said device disposed between and adapted for operatively connecting said elevating member and said control member, said actuating means being so proportioned and positioned that the movement of said control vane member within a



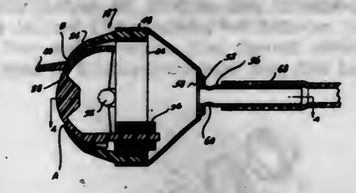
predetermined portion of its operative path in a direction towards its high-speed position will actuate said plane elevating member in a direction towards its said high-speed position, said plane elevating member being in its high-speed position when said control member is in its high-speed position, and stop means engageable with said plane elevating member at said high-speed position.

3,091,890
PUPPET AND ACTUATING MEANS THEREFOR
William R. Allen, 2029 N. Kenmore Ave., Los Angeles 27, Calif.
Filed Dec. 26, 1957, Ser. No. 705,183
11 Claims. (Cl. 46—126)



8. In a puppet apparatus, a puppet having rigid articulated members, a puppet actuating means comprising a keyboard means having a plurality of separately manually operable puppet member actuating devices each separately connected to separate portions of the puppet members to be actuated by the individual devices and each of said devices including a manually engageable operating key and a member operating cord extending from the portion of the puppet member to be actuated to the associated key, a separate means for suspending said puppet at a fixed distance below and from said keyboard means, and manually operable means for moving said puppet suspending means and said puppet as a unit in turning movements relative to said keyboard means in either direction about a vertical axial line while preserving the operative integrity of the puppet member actuating devices.

3,091,891
TEARING EYE
Harry Brudney, New York, N.Y., assignor to Dollac Corporation, Brooklyn, N.Y.
Filed Mar. 18, 1957, Ser. No. 646,678
2 Claims. (Cl. 46—135)



1. In a tearing eye doll, a unitary housing comprising a front shell and a rear casing joined to said front shell, a hollow, open-backed eyeball pivotally mounted within said housing, said front shell having an aperture and said eyeball being visible through said aperture and having leakage clearance exteriorly with the interior of said housing and with said aperture whereby liquid within said housing may leak around said eyeball and out of said housing through said aperture to effect simulated tears, said hollow eyeball forming part of a reservoir for liquid wherein said reservoir includes portions of said front shell and said rear casing, including means connected to said rear casing for effecting ingress of liquid from a liquid supply.

3,091,892
ANIMATED FIGURE
Oraleah L. Bailey, 7211 NW. 32, Oklahoma City, Okla.
Filed May 11, 1962, Ser. No. 194,126
14 Claims. (Cl. 46—149)

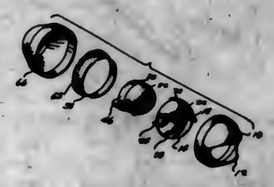


1. An animated figure, including: an upright body formed of resilient flat sheet material having a pair of integral laterally spaced-apart body supporting limbs each terminating in a blunt end; and handle means on said body projecting outwardly in substantially perpendicular relation with respect to the plane of the latter for manually positioning said body in alternate laterally tilted positions with the respective blunt ends alternately contacting a supporting surface thereby alternately supporting the figure on one limb with the other limb raised off the supporting surface while progressively moving said figure forwardly, said limbs each having resiliency permitting alternate individual pivoting movement of each said limb forward or rearward when contacting a supporting surface and supporting said body wherein the resilience of each said limb is capable of returning its respective blunt end forwardly to a plane co-incident with said body when the respective blunt end is raised off the supporting surface.

3,091,893
ROLLING AND SLEEPING EYE FOR DOLLS
Harry Brudney, New York, and Richard S. Turshen, Elmont, N.Y., assignors to Dollac Corporation, Brooklyn, N.Y.
Filed May 22, 1961, Ser. No. 111,522
5 Claims. (Cl. 46—168)

1. A rolling and sleeping eye for dolls comprising a front socket element having an aperture, a spherically

shaped shell within said socket, said shell having a transparent portion and an opaque portion, means for mounting said shell for rotation within said socket so as to expose either of said portions through said aperture, said shell being mounted on a horizontal axis to effect alternate exposure of said portions, an eyeball within said shell and mounted for pivoting on a vertical axis and being visible through said aperture when said shell is positioned with said transparent portion in front of said



eyeball, to simulate an open eye, said eyeball being concealed by said opaque portion when said shell is rotated to a position on said horizontal axis to bring said opaque portion in front of said eyeball to simulate a sleeping closed eye and a single weight carried by said eyeball normally below the horizontal pivotal axis of said shell whereby said single weight effects both rolling of said eyeball on said vertical axis by inertia and also pivoting of said shell on said horizontal axis by gravity.

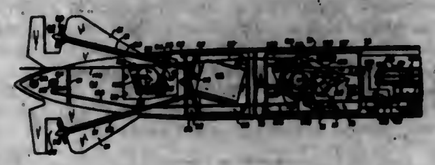
3,091,894
DOLLS' HEADS WITH ROTATING DOLLS' EYES
David Cohn, Pound Ridge, N.Y., assignor to Model Plastic Corporation, White Plains, N.Y., a corporation of New York
Filed Jan. 4, 1960, Ser. No. 248
5 Claims. (Cl. 46—169)



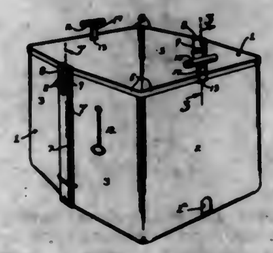
4. A doll's head of soft flexible resilient material, said head being formed with eye openings and provided with integral, inwardly extending, rearwardly opening eye sockets comprising inwardly extending annular flanges, said flanges surrounding said eye openings, said flanges being formed with opposed horizontally aligned axle openings which open toward each other and are spaced from the rear ends of the flanges, and rotating doll's eyes in said sockets having horizontally aligned axles fixed with respect to said eyes and rotatably received in said opposed horizontally aligned axle openings, and said flanges being temporarily deformable to permit the doll's eyes to be inserted through the inner open ends of the sockets and the axles to be received into said axle openings, and to permit the flanges, when released of deformation to hold the eyes rotatable therein.

3,091,895
TOY SUBMARINE
Benjamin Stopek, West Hempstead, N.Y., assignor to Ideal Toy Corporation, Hollis, N.Y., a corporation of New York
Filed July 21, 1960, Ser. No. 44,985
13 Claims. (Cl. 46—244)

7. A toy submarine comprising, in combination, a submersible hull structure; propeller means at the stern of the said hull structure; a selectively controlled electric motor in said hull structure; a dry cell battery within said hull structure; a series energizing circuit for said electric motor including said motor, said battery and a switch; an operating member for said switch projecting from said hull structure; a driving mechanism operatively interconnecting said motor and said propeller means; steering rudder means movably mounted at the stern of said hull structure; diving plane means movably mounted at the bow of said hull structure; an integral control cam member rotatably mounted in said hull structure and formed with plural cam surfaces; a steering lever pivotally mounted in said hull structure and operatively connected to said rudder means, said steering lever having an operating portion engaged with one of said cam surfaces; a diving lever pivotally mounted in said hull structure and operatively connected to said diving plane means, said diving lever having an operating portion engaged with a second of said cam surfaces; and stepping mechanism connected to said cam member and driven by said electric motor, said stepping mechanism, during operation of said electric motor, effecting step-by-step rotation of said cam member; said cam surfaces being respectively correlated in such manner that, during each rotation of said cam member, said rudder lever is operated to effect turning movements and then to steer a straight course, and then the diving lever is operated to effect a dive followed by surfacing of the submarine.

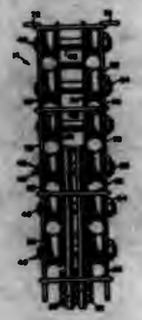


3,091,896
CONTAINER FOR PLANTS
Paul J. Howard, 458 N. Barrington Ave., Los Angeles, Calif.
Filed July 18, 1960, Ser. No. 43,575
1 Claim. (Cl. 47—37)



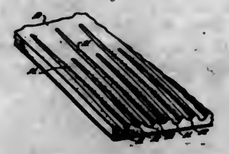
A container for plants, comprising: a pair of complementary container members having interengaging margins with overlapping portions extending across the bottom and vertically along opposite sides of said container; said overlapping portions having aligned openings therethrough; and a plurality of fastening devices, each including pointed heads disposed within said container and bendable legs extending loosely through said aligned openings, said heads of said fastening devices being adapted to be forced into soil filling said container members as said legs are pushed inwardly through said openings, to extract said legs from said openings thereby to separate said container members.

3,091,897
CABLE HOLD-DOWN ANCHOR DEVICE
Bror Hillberg, Franklin Park, Ill., assignor, by mesne assignments, to Superior Concrete Accessories, Inc., a corporation of Delaware
Filed Aug. 19, 1959, Ser. No. 834,827
2 Claims. (Cl. 50—130)



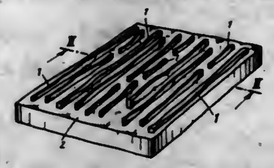
1. A hold-down anchor device for positioning the tensioning cables of a prestressed concrete girder within a girder form preparatory to concrete pouring operations, said hold-down anchor device comprising, in combination, a pair of spaced, generally parallel, side members, each side member including a vertically elongated flat plate of sheet metal stock and a pair of transversely spaced parallel vertical supporting rods extending along the marginal edge regions of the plate and overhanging the lower edge of the plate so as to present portions which depend below the plate, said rods being secured to the same side of the plate by welding a closely-wound helical coil of rod stock interposed between the depending portions of the rods of each plate and secured by welding thereto along axial lines of tangency, said coil being formed with an internally threaded bore adapted to receive therein the threaded end of a lag bolt whereby the side members may be secured to the base support of the girder form within the confines of the form, said side plates being formed with a series of opposed pairs of holes therein with the various pairs being spaced progressively along the side plates upwardly from said coil, a traction pin received through each pair of opposed holes and having its opposite ends projecting outwardly beyond the remote sides of said side plates, cable-engaging rollers in substantial vertical alignment mounted on the projecting portions of each end of the traction pins and adapted to overlie and tractionally engage a plurality of the tensioning cables so as to receive the upward thrust thereof and space the same from said base support at the points of contact therewith when the cables are drawn taut, a plurality of vertically spaced elongated struts, each disposed transversely of the adjacent vertical side edges of said plates and terminating at each of its ends in looped portions in substantial vertical alignment, said portions lying substantially in a plane common with the outer vertical faces of the cable-engaging rollers, said struts being secured to said plates and, in combination with said coil, serving to maintain the side members in their spaced parallel relationship, and a keeper rod extending through the aligned looped portions on each end of the struts and removably seated therein, said keeper rods, in combination with the adjacent side plates being adapted to confine therebetween the various cables so as to maintain the same in vertical register with said rollers.

3,091,898
GROOVED ROOFING
George Arthur Fasold, Mount Healthy, and Walton V. Leibrock, Wyoming, Ohio, assignors to The Philip Carey Manufacturing Company, Cincinnati, Ohio, a corporation of Ohio
Filed Dec. 21, 1956, Ser. No. 629,931
5 Claims. (Cl. 50—261)



4. An asphalt roofing shingle element adapted to be laid with other similar elements in overlapping courses to provide multiple layer coverage of the roof, each of said shingle elements having an exposed lower portion and a covered upper portion as laid, said element being provided with a plurality of spaced primary grooves of substantial depth impressed in the coating of said shingle and with secondary grooves of lesser depth intermediate said primary grooves, both said primary and secondary grooves being tapered progressively and being of greater width toward and normal to the lower edge of said shingle element, the upward displacement of the coating adjacent the margins of the primary grooves substantially increasing the effective thickness of the lower exposed portion of the element.

3,091,899
LIGHT TRANSMITTING BUILDING TILE, PLATE, BLOCK OR THE LIKE AND METHOD OF MAKING SAME
Hans Bördlein, Reith, near Hammelburg, Germany
Filed Nov. 23, 1959, Ser. No. 854,954
Claims priority, application Germany Nov. 26, 1958
2 Claims. (Cl. 50—265)

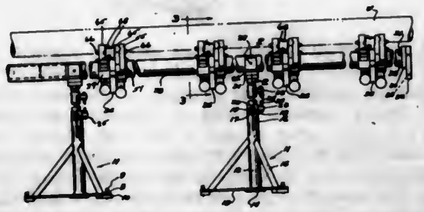


1. A building element comprising a plate of set binder material, said plate having a top face and a bottom face, and a plurality of light permeable glass strips of random length embedded in and traversing said plate on edge in a plane substantially perpendicular to the plane of said top and bottom faces, said strips occupying a substantial portion of said element, each of said strips having a height which is greater than the distance between said top and bottom faces and said strips being at least flush with one of said top and bottom faces and projecting from the other one of said top and bottom faces, whereby light passes between said top and bottom faces through said glass strips.

3,091,900
WORK SUPPORTING MEANS FOR CENTERLESS GRINDERS
George R. Whittenberg, Warren, Mich.
(8301 Lynch Road, Detroit 34, Mich.)
Filed Sept. 2, 1960, Ser. No. 53,725
6 Claims. (Cl. 51—236)

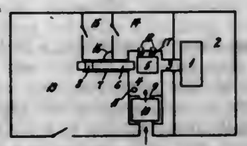
2. A fixture for use with a centerless grinding machine for the purpose of supporting a workpiece to be ground

by said machine, the fixture including a horizontal guide tube, a plurality of spaced standards supportably engaging said tube, a plurality of V-shaped bracket assemblies for supporting the workpiece, each bracket assembly comprising a reaction bracket secured to said guide tube, a pair of sleeves slidably mounted on said guide tube and bearing against opposite sides of said reaction bracket, an arm radially extending from each sleeve, the arms being disposed in a V-shaped formation with respect to each other, a roller mounted upon each arm, the rollers on both arms being adapted to support a workpiece in the gap between the two arms, means to adjust



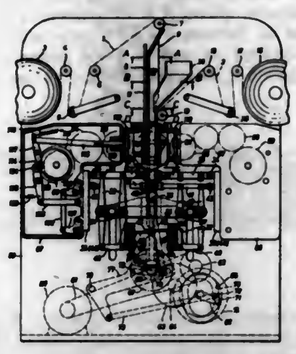
the angular position of each arm with respect to the other, said means including a pair of operable screw means adjustably interconnecting said reaction bracket with said arm mounting sleeves respectively, the means for adjusting the angular positioning of said arms including control plates depending respectively from each of said sleeves, said screw means including a first screw threadedly mounted on said reaction bracket operatively engaging one control plate, and a second screw threadedly mounted on the other control plate and operatively engaging said reaction bracket.

3,091,901
METHOD AND MEANS FOR PRODUCING ASEPTICALLY PACKAGED STERILE PLASTIC ARTICLES
Karl Oskar Lennart Silverstolpe, Skytteholmsvagen 26, Solna, Sweden
Filed Oct. 21, 1960, Ser. No. 65,251
2 Claims. (Cl. 53—22)



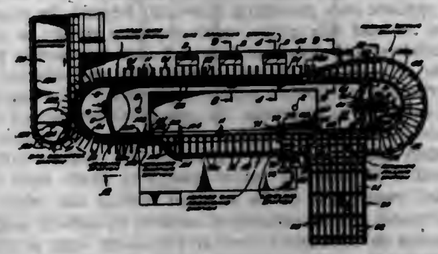
1. A method for producing aseptically packaged solid sterile articles of thermoplastic material comprising heating the thermoplastic material to a molding temperature which is above the temperature necessary for sterilization so as to effect sterilization of the thermoplastic material, molding the thermoplastic material into articles, introducing the molded articles while sterile into a sterile packaging chamber, blowing sterile air into said sterile packaging chamber to create a slight superatmospheric pressure therein as well as to keep said sterile packaging chamber in a sterile condition, enclosing the sterile molded articles while in said sterile packaging chamber into sterile envelopes so as to form sterile packaged articles, and removing said sterile packaged articles from said sterile packaging chamber.

3,091,902
METHOD AND DEVICE FOR FABRICATING BAG PACKAGES
Fritz Reinhardt, Schweicheln-Bermbeck uber Herford, Westphalia, and Alfred Grüfingholt, Stuttgart-Bad Cannstatt, Germany, assignors to Firma Fr. Hesser Maschinenfabrik - Aktiengesellschaft, Stuttgart - Bad Cannstatt, Germany, a corporation of Germany
Filed Apr. 14, 1960, Ser. No. 22,384
Claims priority, application Germany Apr. 17, 1959
10 Claims. (Cl. 53—28)



9. A packing method comprising continuously and successively modifying the shape of an elongated flat web by folding legs from a central portion of the web to impart a U-shape to the web, forming fins extending laterally from said central portion, and outwardly bending the free extremities of said legs; juxtaposing the lateral extremities of a second web to the outwardly bent extremities; welding said fins to fix the same, welding said extremities to connect said webs to form a closed tube, the welded extremities constituting additional fins, engaging and displacing said tube through the intermediary of said fins, transversely sealing said tube at determinable positions to form separate lengths, and charging said tube successively with material for the respective lengths.

3,091,903
RECEPTACLE FILLING APPARATUS
Edwin G. Kammerer, Stockton, Calif., assignor to Storrac, Inc., Los Angeles, Calif., a corporation of California
Filed Feb. 16, 1960, Ser. No. 9,030
39 Claims. (Cl. 53—260)



1. Apparatus for placing articles in receptacles, comprising: a plurality of hoppers each including a vertically extended hollow body; means at the lower end of said body for receiving and supporting a receptacle; a tiltable receiver at the upper end of said body movable from a horizontal article receiving position to a vertical dumping position; means for moving said hoppers in a continuous path; means disposed in the path of said hoppers for moving the receivers of successive hoppers into a horizontal position to enable loading of articles therein-

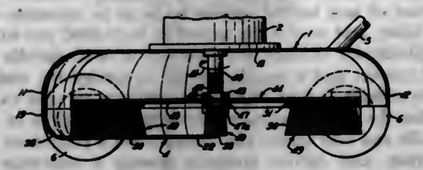
into; means disposed in the path of said hoppers for positioning said receivers of successive hoppers vertically to dump said articles into a receptacle at the lower end of said hoppers; and means disposed in the path of said hoppers for successively releasing said receptacles.

3,091,904
POULTRY PACKAGING APPARATUS
Milton A. Howe, Jr., Bedford, and Robert L. Dreyfus, Arlington, Mass., assignors to W. R. Grace & Co., Cambridge, Mass., a corporation of Connecticut
Filed Sept. 19, 1960, Ser. No. 56,808
6 Claims. (Cl. 53—390)



5. An apparatus for plumping and applying a wrapper to poultry comprising in combination a horizontal support adapted to firmly support the breast portion of said poultry, an upright concave headpiece attached to one end of said support adapted to hold the neck portion of said poultry, a movable plate having a recessed area on its face adapted to hold the legs of said poultry and movable with respect to said support, a spring means urging said movable plate towards said concave headpiece and said support, means for moving said movable plate in a direction opposite to force of said spring means, and a flexible rubber belt attached to one end to said headpiece extending over said movable plate and yieldingly held at its opposite end.

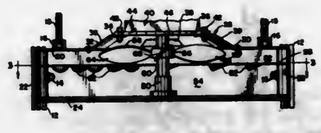
3,091,905
SAFETY POWER BRUSH TYPE LAWNMOWER
Thomas W. Aiken, Jr., 120 Ohio Ave., Glassport, Pa.
Filed Feb. 5, 1962, Ser. No. 171,316
8 Claims. (Cl. 56—25.4)



1. A safety power lawnmower adapted to be moved over a surface having vegetation growing thereon to cut such vegetation, said lawnmower comprising in combination:

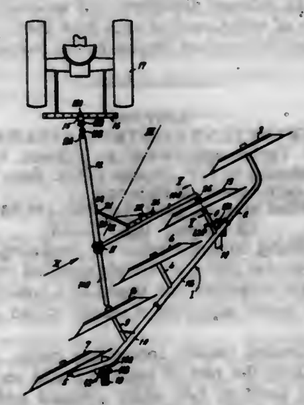
(*a*) housing means defining a hollow enclosure;
(*b*) ground engaging wheel means mounting said housing for movement over the surface with the bottom of said enclosure disposed in spaced relation to said surface;
(*c*) handle means projecting from said housing means to enable a user to push said housing means over the surface;
(*d*) grille means having openings therein and forming at least a portion of the bottom of said enclosure, said grille means being secured to said housing, whereby at least a part of the vegetation to be cut enters and projects through said openings;
(*e*) one edge portion of at least some of said openings being a cutting edge;
(*f*) a plurality of brush means;
(*g*) support means for rotatably mounting said brush means within said enclosure for brushing engagement with the cutting edges of said openings;
(*h*) power means for drivingly rotating said brush means within said enclosure whereby said brush means successively engage said cutting edges of said openings and cut the vegetation projecting therethrough; and,
(*i*) means carried within said enclosure and disposed in the path of movement of said brush means for dislodging from said brush means vegetation carried thereby.

3,091,906
POWER LAWN MOWER
Russell V. Hall, Post Box 23, Kinderhook, Ill.
Filed Apr. 30, 1962, Ser. No. 191,182
9 Claims. (Cl. 56—25.4)



1. In a power mower: a housing including a depending skirt portion; a partition within said housing providing upper and lower chambers therein; said partition being disposed between the top and bottom of said skirt portion; rotary driver means carried by said housing; said driver means having a rotary output shaft, rotary cutting means connected to said output shaft and disposed in said lower chamber; rotary impeller means connected to said output shaft and disposed in said upper chamber; said partition having a plurality of openings communicating said chambers.

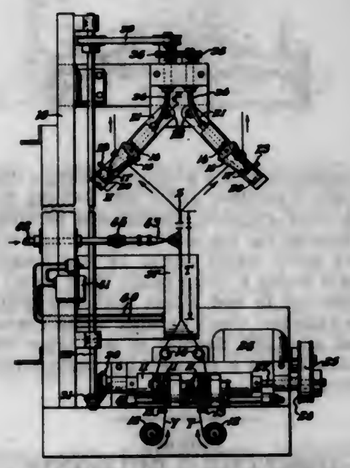
3,091,907
AGRICULTURAL IMPLEMENTS
Cornelis van der Lely, Zug, Switzerland, assignor to Patent Concern N.V., Willemstad, Curacao, Netherlands Antilles, a limited-liability company of the Netherlands Antilles
Filed Feb. 26, 1960, Ser. No. 11,368
Claims priority, application Netherlands Mar. 7, 1959
9 Claims. (Cl. 56—377)



1. An implement comprising a frame, ground working means coupled to said frame for performing ground working operations during movement of the implement,

a draw bar having opposite ends, connecting means connecting one of said ends of said draw bar and said frame and defining a vertically inclined pivot axis therebetween, and means coupled to the other end of said draw bar to maintain the same at a substantially constant elevation so that angular movement of said draw bar causes vertical displacement of said connecting means.

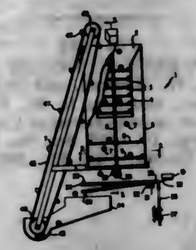
3,091,908
APPARATUS AND METHOD FOR FALSE TWISTING YARNS
George Alan Carruthers, Harleysville, Pa., assignor to Turbo Machine Company, Lansdale, Pa., a corporation of Pennsylvania
Filed May 21, 1962, Ser. No. 196,270
16 Claims. (Cl. 57—34)



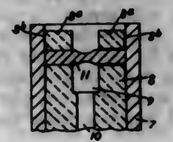
1. In a method of modifying thermoplastic heat-settable yarn filaments the steps which comprise pre-twisting a plurality of ends of said yarns together, tensioning them, passing them while twisted through a heating zone maintained at a heat-setting temperature, cooling the heat-set yarns in a twisted, tensioned condition, separating the ends of yarn continuously from one another by withdrawing said yarns in different directions, and automatically varying the rate of withdrawal of each yarn thereby maintaining substantially constant tension on the twisted yarns.

3,091,909
INTERMITTENT CONTROL APPARATUS
Winfred P. Taylor and Linton A. Tillman, Greensboro, N.C., assignors to J. P. Stevens & Co., Inc., New York, N.Y., a corporation of Delaware
Filed May 31, 1962, Ser. No. 199,087
18 Claims. (Cl. 57—34)

1. A slubbing control device for producing a variable composite yarn of plural separately supplied strands, comprising means supplying one strand at a constant rate,
feed roll means supplying a second strand at a higher rate,
signal actuated tension controlling means operatively controlling the rate of supply of said second strand at said constant rate when actuated and when deactuated releasing an excess thereof at said higher rate,
means actuating said tension controlling means in the absence of an interrupting signal,
means interrupting said signal in response to non-periodic electrical impulses, and
means supplying said non-periodic impulses.



3,091,910
FALSE-TWISTING DEVICES FOR FIBRES OR FILAMENTS
Henry Jack Steele, Moseley, Birmingham, England, assignor to Joseph Lucas (Industries) Limited, Birmingham, England
Filed Dec. 15, 1961, Ser. No. 159,672
Claims priority, application Great Britain Dec. 19, 1960
3 Claims. (Cl. 57—77.33)

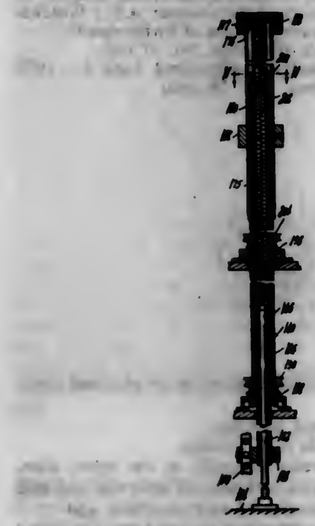


1. A false-twisting device for strands in the form of fibres or filaments, comprising in combination a rotatable hollow spindle, an elongated hollow cylindrical carrier which is made of resiliently expansible material, and which is withdrawably mounted coaxially within an end portion of said hollow spindle so as to be rotatable with the latter, and so that the strand to be twisted can extend longitudinally through the interiors of said spindle and said carrier, and a member which is carried by, and extends at least in part transversely relative to, said carrier so that the strand extending through the interiors of said spindle and said carrier can pass around a portion of said member, said carrier normally having a clearance between at least the major portion of its outer periphery and the adjacent inner peripheral portion of said spindle so that when the latter is rotated at a predetermined speed said carrier will be centrifugally expanded to provide an interference fit within said spindle, and thereby ensure that said carrier is rotatable at the same speed as said spindle.

3,091,911
SPINDLE FOR SPINNING MECHANISM
John Turner, Newton, Mass.
(4 Colbert Road, West Newton, Mass.)
Filed May 10, 1960, Ser. No. 28,096
3 Claims. (Cl. 57—130)

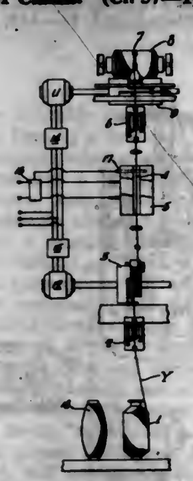
1. In a spinning frame, a bobbin-carrying spindle comprising a central fixed vertical rod mounted at its lower end on the frame, an inner tube vertically slidable on said rod and extending beyond the upper end thereof, a rotatable mid tube surrounding said inner tube, bearings between said mid tube and parts of said frame whereby said mid tube is held against axial movement, an outer tube surounding said mid tube and splined

thereto for rotation therewith, a bearing between the upper ends of said inner tube and outer tube whereby said



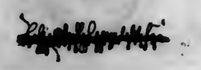
outer tube is moved axially by the inner tube, and means on the outer tube for holding a bobbin.

3,091,912
METHOD OF PROCESSING STRETCH YARN AND YARNS PRODUCED THEREBY
Nicholas J. Stoddard, Berwyn, and Warren A. Seem, Chester Springs, Pa., assignors to Lessona Corporation, a corporation of Massachusetts
Filed Apr. 19, 1957, Ser. No. 653,953
31 Claims. (Cl. 57—140)



1. The method of processing multifilament "torque stretch yarn" whose stretch characteristics have been set at a given temperature comprising the steps of continuously advancing the yarn, controlling the degree of tension in said travelling yarn in at least one portion of its continuous travel, said tension being below the breaking tension of the structural elements of the yarn, heating said yarn during said portion of its continuous travel to a temperature not substantially greater than said given temperature and correlating the controlled tension and the heat imparted to said yarn with the tensile force necessary to extend the yarn to the limit of its stretch characteristics and the tensile force necessary to extend the yarn to the yield point of the structural elements of the yarn to thereby control the physical characteristics in the reprocessed yarn.

3,091,913
VARIABLE DENIER COMPOSITE YARN
Frederick Cromwell Field, Jr., Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Original application Mar. 13, 1959, Ser. No. 799,128. Divided and this application Mar. 24, 1961, Ser. No. 98,209
13 Claims. (Cl. 57—140)



1. A multifilament yarn containing at least two groups of highly bulked filaments, one group comprising a plurality of filaments having an extensibility factor at least twice that of the remaining filaments, the filaments having the higher extensibility factor being intimately randomly variably interentangled with the remaining filaments and being distributed in variable concentrations randomly along the length of yarn.

3,091,914
BALANCE WHEEL FOR AN ELECTRIC WATCH
James H. Reese, Manheim, Pa., and Peter J. Serlemitsos, College Park, Md., assignors to Hamilton Watch Company, Lancaster, Pa., a corporation of Pennsylvania
Filed Nov. 1, 1961, Ser. No. 149,270
15 Claims. (Cl. 58—28)

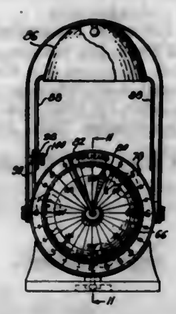


1. An electric watch having a balance wheel mounted on a balance staff, and a coil yieldably mounted on said balance wheel by resilient support means attached to said balance wheel and coil to permit resilient yielding movement of said coil in a plane perpendicular to the axis of said balance staff.

3,091,915
UNIVERSAL TIMEPIECE
Walter S. Pawl, 10490 Powder Mill Road, Adelphi, Md.
Filed Apr. 13, 1960, Ser. No. 21,926
2 Claims. (Cl. 58—44)

1. A universal timepiece comprising an annular hour and minute scale in a vertical plane, a central rotary globe map of the world on a horizontal axis with great circle hour lines radiating from the poles at 15° intervals to the inner edge of said annular scale to indicate the hour portion of the times in the corresponding time zones represented by said lines, a minute hand extending radially over said globe map to the minute portion of the annular scale to indicate the times in minutes after the respective hours indicated by the hour lines for the several time zones respectively, a clockworks operatively connected to rotate said globe map over an angular distance of one hour on the scale while rotating said minute

hand one complete revolution, said globe map being hollow, an interval ring gear in said annular scale, a clockworks in said hollow globe map, including a set of planetary drive gears for said globe map extending



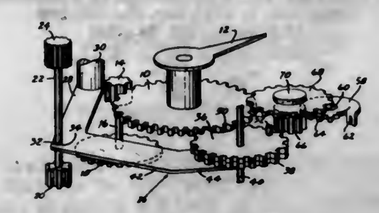
through peripheral slots spaced around the equator of the globe map to mesh with said internal ring gear, and a shaft extending through the south pole to operate said minute hand.

3,091,916

AUTOMATIC REGULATOR FOR A TIMEPIECE

John A. Van Horn, Lancaster, Pa., assignor to Hamilton Watch Company, Lancaster, Pa., a corporation of Pennsylvania

Filed May 19, 1960, Ser. No. 30,182
22 Claims. (Cl. 58—85.5)



1. In a timepiece comprising: time measuring means; time indicating means actuated by said time measuring means; time setting means having a setting and non setting position for setting said time indicating means to any position in its time indicating range; rate regulating means for regulating the rate of said time measuring means; automatic regulating means actuated by said time setting means for causing an unlimited adjustment of said rate regulating means; said automatic regulating means including an intermittent low-velocity drive means for providing said unlimited adjustment of said rate regulating means at a non-linear rate when said time setting means is adjusted at a linear rate; said drive means being movable into regulate and non-regulate positions and being coupled between said time setting means and said rate regulating means in its regulate position when said time setting means is in said time setting position, said drive means also being movable into a neutral position; said drive means being movable to its regulate position and in drive relationship with said time measuring means when said time setting means is moved to its time setting position; said drive means immediately beginning to move toward its neutral position when said time setting means is moved to its non-setting position; and said drive relationship between said time measuring means and said drive means being automatically terminated when said drive means is returned to its neutral position.

3,091,917

LUBRICATION OF TOTALLY ENCLOSED MECHANISMS

Helmuth Tannenberger, Geneva, Switzerland, assignor to Institut Dr. Ing. Reinhard Straumann A.G., Waldenburg, Switzerland, a corporation of Switzerland

Filed June 20, 1960, Ser. No. 37,188
Claims priority, application Switzerland June 22, 1959
6 Claims. (Cl. 58—90)



1. Means for lubricating members in an enclosed housing comprising:

(*a*) a lubricant in said housing;

(*b*) a reservoir within said housing;

(*c*) said lubricant being normally in the vapor state, and being free to pass between said reservoir and said members for lubrication of said members; and

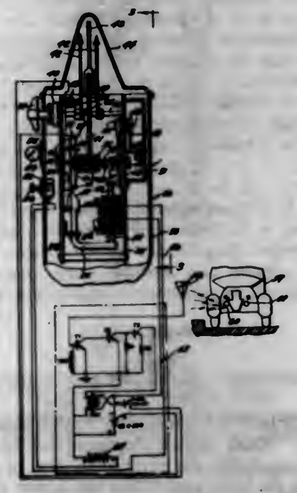
(*d*) said reservoir being made of a substance adapted to coact with said lubricant to impart to said lubricant a reduced vapor pressure in said reservoir whereby to prevent accumulations of excess liquid lubricant outside said reservoir.

3,091,918

PARKING METER CONTROL MECHANISM

Maynard H. Collins, 396 25th St., San Bernardino, Calif., and Wallace M. Todd, Rte. 1, Box 558, San Jacinto, Calif.

Filed June 21, 1960, Ser. No. 37,731
1 Claim. (Cl. 58—142)



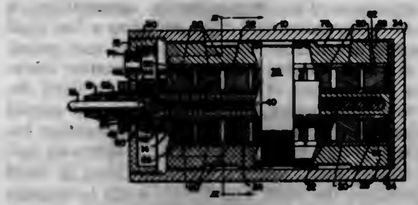
In a parking meter for a motor vehicle, the meter including an indicator swingable from a "zero" position to a position away from the "zero" position, spring means operatively connected to said indicator and biasing said indicator to the "zero" position, hand actuable means operatively connected to said indicator for moving it away from the "zero" position, and a clock escapement mechanism, a clutch including a first clutch element operatively connected to said mechanism and a second clutch element operatively connected to said indicator and movable into and out of engagement with said first clutch element, spring means operatively connected to said second element and biasing said second element into engagement with said first element, solenoid means engageable with said second clutch element and operable when actuated to move said second clutch element to the out of engagement position, radiant energy receiving means in circuit with said solenoid means and a source of electrical energy, said receiving means being operable to actuate said solenoid means responsive to the reception of radiant energy generated by an electrical circuit of a motor vehicle parked adjacent said meter, and a switch in circuit with said receiving means, source of energy, and said solenoid means, said switch being operable to closed position responsive to movement of said indicator to the away from "zero" position and operable to open position responsive to movement of said indicator to "zero" position.

3,091,919

OPERATOR WITH THERMOELECTRIC CONTROL

Ralph V. Coles, London, England, assignor to Robertshaw-Fulton Controls Company, Richmond, Va., a corporation of Delaware

Filed Apr. 4, 1960, Ser. No. 19,706
4 Claims. (Cl. 60—23)



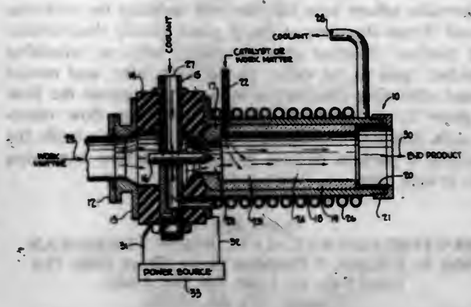
1. An actuator assembly comprising a thermally conducting envelope forming a heat sink to the ambient atmosphere, an elongated tubular container having a closed end, an open end, and a thermally conducting lateral wall, said container being coaxially aligned with said envelope, a diaphragm closing said open end of said tubular container, a mass of material expansible upon fusion filling said tubular container, a receptacle extending beyond said envelope and in substantial alignment with said tubular container at said diaphragm-closed end thereof, an actuating member within said receptacle and extending therebeyond at one end and substantially to said diaphragm at the other end thereof, resilient means within said receptacle retaining said actuator therein and effective to transfer diaphragm motion thereto, heat conducting means having substantially cylindrical cavity walls in thermal contact throughout the length of said tubular container, said heat conducting means comprising a plurality of insulated longitudinal sections, a series of semi-conductor heat pump elements in contact with said sections, respectively, being serially connected, heat conducting means in contact with opposite ends of said semi-conductor elements in each row thereof opposite said sections, means conducting heat from said heat conductor elements to said elevelope, and means energizing said heat pump elements alternatively in opposite polarities in a manner to transfer heat inwardly toward said tubular container for one polarity and outwardly toward said heat conducting members in the other polarity.

3,091,920

PLASMA FLAME HYPERTHERMAL EXOTHERMIC FURNACE WITH CATALYST AND COMBINATION THEREOF WITH AN INTERNAL COMBUSTION ENGINE

Leo Matvay, 6708 Culver Place, Los Angeles County, Calif.

Filed Nov. 16, 1959, Ser. No. 853,131
12 Claims. (Cl. 60—39)



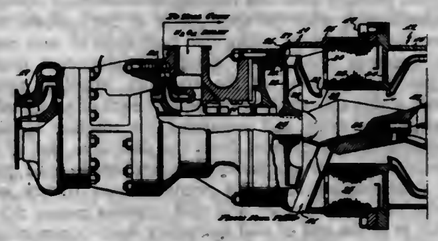
1. In combination an internal combustion engine, an engine exhaust system for said engine, an electric current generator driven by said engine, and a plasma flame, hyperthermal, exothermic furnace for treating the exhaust gases from said engine, said furnace comprising a housing having a hollow interior with intake and discharge ends, said intake end of said housing being interconnected with said exhaust system and receiving the exhaust gases from said engine, said furnace comprising a plasma flame generator portion and a reaction chamber portion, said generator portion receiving the gases entering through said intake end, first and second electrode means in said generator portion, means connected with said electric current generator for passing an electric arc between said electrodes to act upon at least a portion of the said gases entering through said intake opening to generate a plasma flame, said reaction chamber portion being disposed intermediate said generator portion and said discharge end and being interconnected with said generator portion and discharge end to receive the plasma flame and gases associated therewith and to discharge through said discharge end, catalyst means disposed in said reaction chamber portion to have functional contact with said plasma flame and gases to disassociate all or part thereof into constituent parts.

3,091,921

TURBOROCKET POWERPLANT INCLUDING TURBINE BYPASSING MEANS FOR A PORTION OF THE PROPELLANT

Robertson Youngquist, Morristown, and Hjalmar O. Pedersen, Morris Plains, N.J., assignors, by mesne assignments, to Thiokol Chemical Corporation, a corporation of Delaware

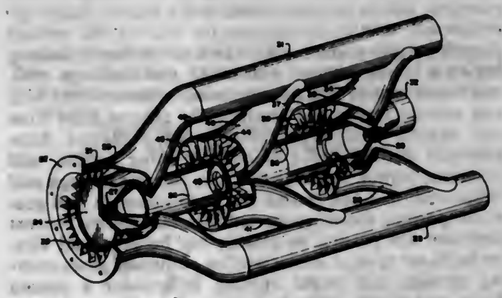
Filed June 24, 1957, Ser. No. 668,279
1 Claim. (Cl. 60—35.6)



A rocket powerplant utilizing a liquid oxidizer and a liquid fuel as propellants comprising an elongated casing

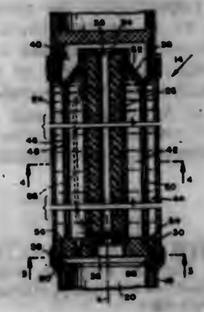
having a pair of disconnectible sections, one of said sections including a thrust chamber having axially extending coolant passages formed in its walls, a catalyst chamber including a catalyst formed at the rear end of said other section and communicating with said passages, means mounted in said other section for forcing the oxidizer through said passages into said catalyst chamber to effect the decomposition thereof into gases prior to its entry into the thrust chamber, said catalyst chamber comprising an annulus whose bore has one end defining the entrance to said thrust chamber to direct gases axially therewithin, said catalyst chamber communicating with an adjoining chamber open to the other end of said bore, and means in said adjoining chamber to separate and rejoin the flow of gases to said bore to effect a turbulent flow therethrough, said last-mentioned means comprising a baffle for directing a portion of said gases in a turbine bypassing path to said bore.

3,091,922
MULTI-STAGE PARALLEL FLOW TURBO-FAN
John A. Johnson, 9 Sheridan Drive, Short Hills, N.J.
Filed Feb. 12, 1960, Ser. No. 8,469
2 Claims. (Cl. 60—35.6)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. An assembly for use in combination with an internal combustion engine producing a jet exhaust, said assembly comprising a chamber having a port, a plurality of primary ducts communicating with said chamber and extending in divergent directions therefrom rearwardly of said port and terminating in parallelly extending passages open to the atmosphere, turbine means located within said chamber and driven by the jet exhaust from said internal combustion engine, a shaft driven by said turbine means and extending externally from said chamber remote from said port and within the space bounded by said parallelly extending passages, a plurality of secondary ducts arranged in groups within the space bounded by said primary ducts and between said shaft and said primary ducts in spaced relation in the direction of said parallelly extending passages, one end of each of said secondary ducts of each group communicating with an adjacent primary duct and meeting in a common opening communicating with the atmosphere at the opposite end thereof in a direction facing said port each of said common openings providing a separate independent intake for parallel operation of the assembly, impeller means located within the common opening of each of said groups of secondary ducts and connected for rotation by said shaft whereby jet exhaust from the discharge end of an associated internal combustion engine enters said port and upon passing into said primary ducts rotates said turbine means, said shaft and said impeller means drawing air in at the end of said secondary ducts communicating with the atmosphere for discharge into said primary ducts mixing atmospheric air with the jet exhaust to provide large volume, slow speed discharge of engine exhaust and compressed air from said primary duct means for propulsive effort.

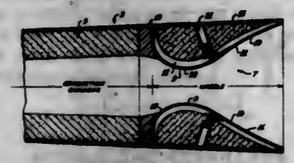
3,091,923
LIQUID PROPELLANT TANKAGE
Paul T. Barnes, China Lake, Calif., assignor to the United States of America as represented by the Secretary of the Navy
Filed Dec. 20, 1960, Ser. No. 77,253
3 Claims. (Cl. 60—35.6)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. In combination with a rocket motor of the liquid bi-propellant type including propellant tankage and pressurizing apparatus, the improvements, comprising; a series of concentric cylindrical walls including a first rigid wall, a second deformable wall surrounding and spaced from said first wall forming a first annular chamber therebetween to contain one of said propellants, a third deformable wall surrounding and spaced from said second wall forming a second pressurizable second chamber between the second and third walls, a fourth rigid wall surrounding and spaced from said wall forming a third chamber between the third and fourth walls to contain the other of said propellants, said first and third chambers each have an end closure having a propellant outlet, and means for pressurizing the second chamber to pressurize the propellants in the first and third chambers and expel same through the propellant outlets, said second and third walls each being constructed of metal of such ductility that it permanently deforms under decreasing volume of propellants in the first and third chambers said third wall adapted to deform to a fiqal position having its outer surface abutting said fourth wall and said second wall adapted to deform to a final position forming substantially diametrically opposed semi-cylindrical portions abutting said first wall and other substantially diametrically opposed flat collapsed substantially abutting portions extending in radial directions having folds at their outer ends.

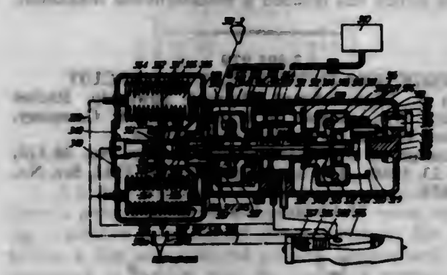
3,091,924
GASEOUS NOZZLE BOUNDARY
John G. Wilder, Jr., Los Altos, Calif., assignor to United Aircraft Corporation, a corporation of Delaware
Filed Dec. 15, 1960, Ser. No. 76,000
2 Claims. (Cl. 60—35.54)

1. A solid propellant rocket engine having a main combustion chamber with a discharge nozzle attached thereto, said combustion chamber having therein a first solid propellant which burns at a relatively high temperature, said nozzle being of a relatively light construction and normally unable to resist the temperature and pressure developed by said first solid propellant, an annular chamber surrounding said combustion zone, said annular chamber having a second solid propellant therein, said second solid propellant burning at a relatively low temperature and having clean gas characteristics by comparison with said first propellant, and perforations through said nozzle connecting said chamber containing the second solid propellant with the inner surface of the nozzle whereby the off gas from the said second solid propellant passes



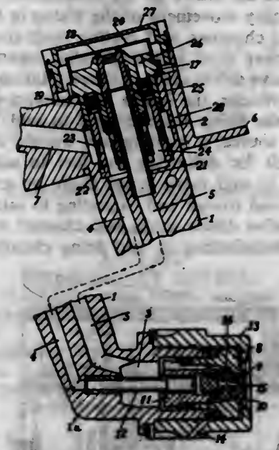
through said perforations into the main gas stream, forming a boundary layer in said discharge nozzle protecting the surface thereof and whereby the gas pressure from the second solid propellant exerts a pressure on the outside of the nozzle tending to counterbalance the pressure of the off gas from the first solid propellant and enabling the said relatively light nozzle to withstand the temperature and pressure of the first solid propellant.

3,091,925
GAS TURBINE ENGINE FUEL CONTROL WITH PLURAL SLEEVE VALVES
Gordon Cyril May, Derby, and Charles Gordon Morley, Ashbourne, England, assignors to Rolls-Royce Limited, Derby, England, a company of Great Britain
Filed July 22, 1958, Ser. No. 750,188
Claims priority, application Great Britain June 11, 1958
12 Claims. (Cl. 60—39.28)



12. A gas turbine engine fuel system for controlling the supply of pressurized fuel from a source thereof to the burners of a gas turbine engine comprising means providing a metering orifice, a conduit for supplying pressurized fuel from said source to said metering orifice at full pressure and through it to said burners, a chamber, a bellows mounted in said chamber and having two series arranged compartments with one partly evacuated, means for supplying the other compartment of the bellows with air at a pressure functionally related to the pressure of the inlet end of a compressor of the engine, a pair of passages communicating with said chamber and respectively adapted to be supplied with air at pressures functionally related to the pressures of the inlet and outlet ends of the compressor, a restriction in each said passage, a first axially movable mechanical connection which directly connects the bellows to the means providing the metering orifice and which extends through the chamber and into the said conduit, speed responsive means responsive to engine rotational speed, a second axially movable mechanical connection which directly connects the speed responsive means and the means providing the metering orifice, and means for effecting rotation of said first and second axially movable mechanical connections.

3,091,926
OIL BURNERS
Sidney C. Watkins, Burnley, England, assignor to Joseph Lucas (Industries) Limited, Birmingham, England
Filed Dec. 16, 1960, Ser. No. 76,180
Claims priority, application Great Britain Dec. 16, 1959
2 Claims. (Cl. 60—39.28)

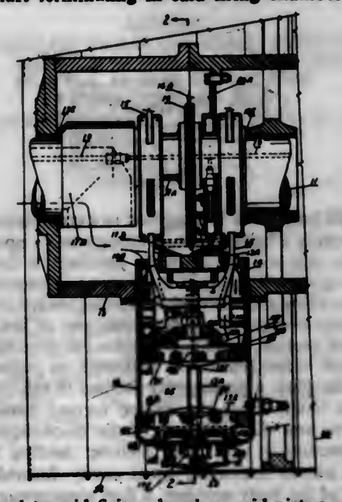


1. An oil burner for feeding fuel to a combustion chamber comprising a body member, an outwardly open cavity formed in one end of the body member, a detachable plug closing the open end of the cavity and provided with a bore extending therethrough inwardly toward the cavity and a raised portion about the outer end of the bore to form a seat portion, a resilient diaphragm of substantially dished form supported on the seat with its periphery secured to the plug, a passageway formed in the plug leading to the cavity from the spaced formed between the seat portion and the periphery of the diaphragm, a fuel inlet connection in said body member leading into the cavity, a second outwardly open cavity formed in the other end of the body member, a first passageway formed in the body member and having one end opening into the second cavity, a duct connecting the inner end of the bore in the plug to the other end of the passageway, a second passageway formed in the body member having one end opening into the first cavity, a nozzle in the second cavity having its inlet connected to the other end of the second passageway and its outlet facing the open end of the second cavity and spaced from the side wall thereof, and means forming a further chamber about the outer surface of the diaphragm in communication with the combustion chamber to subject the outer surface of the diaphragm to the pressure in the combustion chamber while its inner surface is subjected to the pressure of the fuel.

3,091,927
CYCLING SHAFT ASSEMBLY FOR INTERNAL COMBUSTION ENGINES
Leslie W. Beaven, 44 E. Washington St., Palatine, Ill.
Filed Nov. 7, 1960, Ser. No. 67,676
5 Claims. (Cl. 60—39.34)

1. A cycling shaft assembly for an internal combustion engine of the expansion-reaction type, the engine having a cycling shaft, a crankshaft, a crankcase journaled for rotation on said crankshaft, the crankcase carrying at least one outstanding cylinder, a crankpin on said crankshaft, a piston reciprocatable in said cylinder, a connecting rod reciprocatively connecting the piston to the crankpin, a rotary inlet valve in said piston, a rotary exhaust valve in said cylinder, the valves being arranged with suitable clearance therebetween their associated parts, the valves comprising the piston and cylinder heads respectively, a

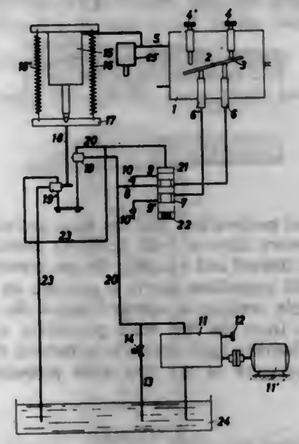
firing chamber being formed between the heads, an exhaust orifice on the cylinder, an exhaust bonnet for jetting the burned gases contra-spinwise for reaction from the orifice, the crankshaft having a hollow portion defining an air intake passage establishing communication between the outside atmosphere and the inside of the crankcase through which the intake air for combustion is drawn by the reciprocatory movement of the piston in the cylinder, into the firing chamber, said cycling shaft consisting of a stiff valve driver shaft in the cylinder, means to axially rotate said valve driver shaft in timed relation to the rotation of the cylinder, the intake and exhaust valves being common to the firing chamber and to said valve driver shaft, a fuel source, a rotating fuel trough, a channel in the crankshaft for delivering the fuel to said trough, a fuel channel in said valve driver shaft, an exit tube embodied with said trough and extending to said fuel channel in said valve driver shaft, said channel in said valve driver shaft terminating in said firing chamber for con-



veying fuel to said firing chamber, said piston acting as a valve element to admit fuel to the firing chamber, means responsive to said axial rotation of said rotary exhaust valve to release the exhaust gases of combustion from the firing chamber, the outer end portion of said stiff valve driver shaft having an axial hole therein and having means on the exterior thereof to receive and secure said exhaust valve thereto, a flexible ignition cam-shaft extending from, and secured at, the base of said hole, to permit said cam-shaft to flex therein, an ignition breaker box arranged coaxial with said cam-shaft, said box being pivotably adjustable for still-setting the ignition timing, said box being adjustably secured to said cylinder, the said cam-shaft extending through a clearance opening in the base of said box and piloted by a bearing arranged in the body of said box, said cam-shaft having an ignition timing cam rigidly secured to it for timing the incidence of make and break for ignition in said firing chamber, the outer end of said rigid valve driver shaft being somewhat loosely piloted by said exhaust valve rotor.

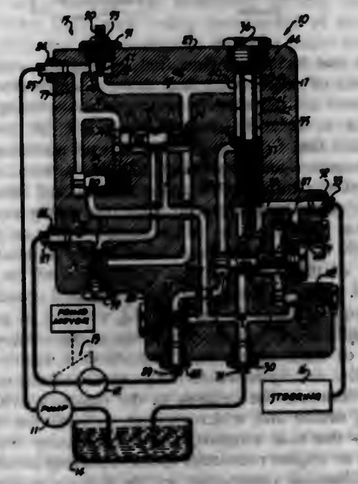
3,091,928
HYDRAULIC LOAD DEVICE
Berthold Thiele and Wilhelm Fey, Duesseldorf, and Siegfried Hendel, Hilden, Germany, assignors to Loewenhaus-enwerk, Duesseldorfer Maschinenbau A.G., Duesseldorf-Grafenberg, Germany
Filed Mar. 28, 1961, Ser. No. 98,877
Claims priority, application Germany Apr. 2, 1960
11 Claims. (Cl. 60—52)

1. In a testing apparatus having a load device the improvement including: a loading pump-motor connected to said device and having control means movable between two positions, in one position of said control means said loading pump-motor acting as a pump to deliver fluid to said device at a first rate, in the other position of said control means said pump-motor acting as as motor in response to fluid under pressure from said device at a



second rate; and actuating means connected to said loading pump-motor to move said control means to said one position when the fluid pressure at said load device is at a predetermined minimum and to move said control means to the other position when the fluid pressure at the load device has reached a predetermined maximum.

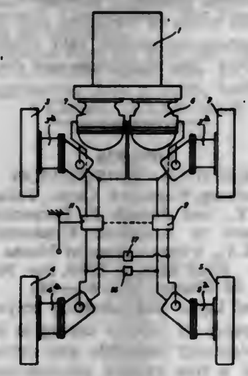
3,091,929
REGENERATIVE HYDRAULIC CIRCUIT
William J. Hipp, Mount Pleasant Township, Racine County, Wis., assignor to Webster Electric Company, Racine, Wis., a corporation of Delaware
Continuation of abandoned application Ser. No. 38,318, June 23, 1960. This application Oct. 16, 1961, Ser. No. 146,078
21 Claims. (Cl. 60—52)



20. In a hydraulic system for supplying fluid to a fluid operated device, two positive displacement pumps, means

including a common variable speed prime mover driving both of said pumps, and control valving connected to both pumps to receive output fluid therefrom, said control valving including means normally effective below a preselected speed of said prime mover to deliver the outputs of both pumps to said fluid operated device and further including means automatically operative above a predetermined speed of said prime mover for discontinuing the pumping function of one pump and for using excess fluid from the other pump to cause said one pump to operate as a fluid motor, thus assisting the prime mover in driving said other pump.

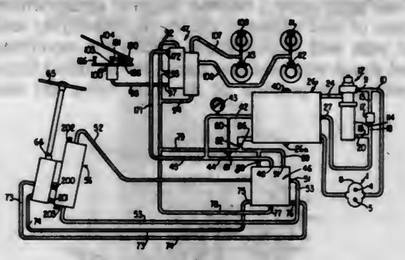
3,091,930
HYDRAULIC APPARATUS
Oswald Thoma, Grunwald, uber Munich, Germany, and Eric H. Bowers, Cheltenham, England, assignors to Dowty Hydraulic Units Limited, Cheltenham, England, a British company
Filed Aug. 9, 1960, Ser. No. 48,385
Claims priority, application Great Britain Aug. 14, 1959
12 Claims. (Cl. 60—53)



1. A hydrostatic power transmission to transmit power from a power source to a load and vice versa comprising a positive displacement pump driven by the power source, a first and a second positive displacement motor connected in parallel with the hydraulic output of the pump, a mechanical connection from each motor to the load, a clutch assembly in the mechanical connection with the first motor, a valve controlling the hydraulic connection to the first motor only, and pressure responsive means arranged to respond to hydraulic pressure at the first motor to cause the clutch assembly to engage when the first motor pressure is high and to disengage when the first motor pressure is low.

3,091,931
HYDRAULIC SYSTEM
Edward A. Rockwell, 167 Ashdale Place, Los Angeles, Calif.
Original application July 2, 1954, Ser. No. 440,894, now Patent No. 2,919,715, dated Jan. 5, 1960. Divided and this application Dec. 31, 1959, Ser. No. 863,277
12 Claims. (Cl. 60—54.5)

1. In a hydraulic control system including a reservoir, the combination comprising, a hydraulic circuit having a low pressure return for returning fluid to the reservoir, a normally closed bleeder at times having a connection to the fluid in said low pressure return, and means connected in said hydraulic circuit apart from said reservoir for maintaining a residual fluid pressure in the connection to said bleeder, said residual pressure being effective to force air and fluid in said bleeder connection through



said bleeder when the latter is open and connected to the return.

3,091,932
TIME DELAY DEVICE
Edmond F. Webb, Franklin, Mich., assignor to The Delman Company, Cookeville, Tenn., a corporation of Tennessee
Original application May 7, 1958, Ser. No. 733,621, now Patent No. 2,970,336, dated Feb. 7, 1961. Divided and this application Nov. 1, 1960, Ser. No. 66,578
2 Claims. (Cl. 60—54.5)

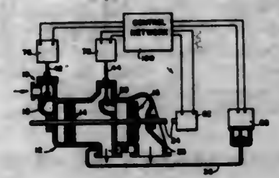


2. A time delay device including a housing having a partition wall therein to form a pair of chambers, each of said chambers having an opening therein, a reciprocating working member in each of said chambers being arranged at opposite sides of said wall to partition each chamber, a liquid disposed on both sides of said wall in contacting relation with said working members, the working member in the first of said chambers being fluid connected with a source of fluid under pressure through the opening in said first chamber for response to the flow of fluid into and out of said first chamber, a reciprocally movable actuating member in the second of said chambers movable through the opening in said second chamber and connected to the working member in said second chamber, resilient means in said second chamber for biasing said actuating member toward said wall, and a first and second valve means on said wall providing for a reversed flow of liquid therethrough at dissimilar rates, such that the flow to move said actuator member in a direction away from said wall is at a rate faster than the rate of flow in a reversed direction effected by said biasing means, with one of said valve means being operable to an open position by movement of the actuating member in said reversed direction.

3,091,933
CONTROL SYSTEM
James B. Wagner, Lynnfield, and Kenneth O. Straney, Danvers, Mass., assignors to General Electric Company, a corporation of New York
Filed Dec. 7, 1960, Ser. No. 74,425
32 Claims. (Cl. 60—67)

1. In an elastic fluid multi-stage turbine which includes a rotatably mounted output shaft, an inlet valve governing the flow of fluid to the turbine, an extraction conduit connected to an intermediate stage of the turbine, and an extraction valve governing the proportion of fluid which flows from said intermediate stage to a succeeding stage of said turbine; the combination comprising means responsive to the speed of said output shaft for generating a

first electric signal which is a function of said speed, means responsive to the pressure in said extraction conduit for generating a second electric signal which is a function of said pressure, means for modifying said first signal with said second signal, means for modifying said second signal with said first signal, the modified first signal controlling the position of the inlet valve, the modified



second signal controlling the position of the extraction valve, gating means which is enabled in response to a selected position of one of said valves for counteracting the modification of one of said signals with the other of said signals whereby during the enabling of said gating means, the position of the other of said valves is controlled by said one of said signals unmodified by the other of said signals.

3,091,934
HEADGATE APPARATUS
Ray T. Jacobs, Rte. 3, Box 220, Idaho Falls, Idaho
Filed Apr. 6, 1961, Ser. No. 101,121
6 Claims. (Cl. 61—29)



1. Headgate apparatus comprising a main body portion including a substantially rigid rectangular framework defining a central opening therethrough, said framework being adapted to span an associated ditch or the like, closure means supported by said main body portion and sealed with respect thereto for closing at least a portion of said opening, said closure means comprising an integral sheet of flexible water-proof material, inner frame members engaging said sheet of material for clamping the sheet of material in position relative to said main body portion, the part of said sheet of material extending outwardly of said main body portion defining a bottom flap portion and a pair of side flap portions joined with said bottom flap portion, reinforcing means connected to said bottom flap portion for rigidifying the bottom flap portion, a fastening means connected to each of said side flap portions for securing the side flap portions in operative closed position relative to said bottom flap portion with the side flap portions disposed at the side of the bottom flap portion remote from said framework, and fastening means on said main body portion and said reinforced bottom flap portion for maintaining the bottom flap portion in operative position relative to said main body portion.

3,091,935
ROCK TREATMENT
Frank Brown, Summit, and John H. Prichard, Springfield, N.J., assignors, by mesne assignments, to American Cyanamid Company, Wayne, N.J., a corporation of Maine
No Drawing. Filed Aug. 13, 1957, Ser. No. 677,824
8 Claims. (Cl. 61—36)

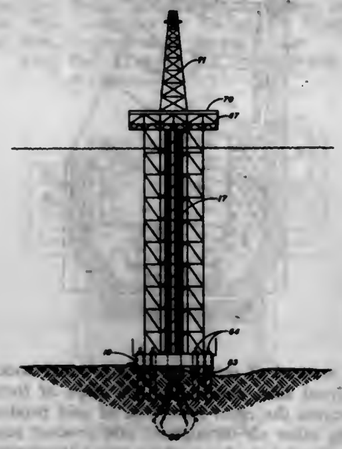
8. A method of stabilizing underground rock formations which form mine roofs which comprises: drilling a hole into a rock formation having zones of weakness and which is subject to failure in tension as well as shear, injecting under pressure into said hole and through said hole into the rock formation a formation adhesive resin which is liquid and self-curing at ambient temperatures, and which is selected ffom the group consisting of solutions of linear polyesters in liquid monomeric unsaturated polymerizable compounds containing an alpha-beta ethylenic linkage, said solutions also containing a peroxide type catalyst and a cobalt promoter, whereby said resin flows into and fills said zones of weakness and cures in position, thereby adhesively uniting said formation at the zones of weakness, and stabilizing said rock formation against roof falls.

3,091,936
RESINOUS COMPOSITION
Lennart A. Lundberg, Stamford, Conn., John C. Schlegel, Peekskill, N.Y., and Joseph E. Carpenter, Thatcher, Ariz., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine
No Drawing. Filed Mar. 4, 1959, Ser. No. 797,011
20 Claims. (Cl. 61—36)

1. A stabilized liquid thermosetting polyester resinous composition capable of rapidly curing at low temperatures to a substantially insoluble and infusible state in the presence of a free radical polymerization catalyst comprising: (1) an essentially linear polymerizable unsaturated polyester, prepared by reacting an α,β-ethylenically unsaturated dicarboxylic acid and an aliphatic diol; (2) a monomeric cross-linking agent for said (1) containing a $CH_2{=}C<$ group; (3) an inhibiting amount of a phenolic polymerization inhibitor; (4) a complementary promoter system of (*a*) from about 0.001 to 0.3% by weight of a cobalt salt, calculated as dissolved metallic cobalt, and (*b*) from about 0.05 to 1.0% by weight of a member selected from the group consisting of N,N-dialkylaryl tertiary amines and salts thereof; and (5) a complementary stabilizer system of (*c*) from about 1 to 100 parts per million by weight of a copper salt, calculated as dissolved metallic copper, and (*d*) from about 0.001 to 0.1% by weight of a member selected from the group consisting of guanidines, isomelamines, amidines, biguanides, guanylureas, pseudoureas, pseudothioureas, salts thereof, salts of quaternary ammonium hydroxides, and salts of quaternary phosphonium hydroxides, the amounts of said (*a*), (*b*), (*c*) and (*d*) being based on the total weight of said (1) and (2).

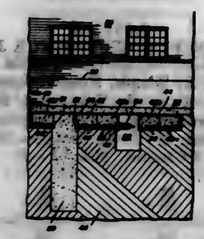
17. A method of stabilizing an underground rock formation having zones of weakness which comprises drilling a hole into said formation and injecting into said hole a liquid thermosetting polyester resinous composition comprising: (1) an essentially linear polymerizable unsaturated polyester, prepared by reacting an α,β-ethylenically unsaturated dicarboxylic acid and an aliphatic diol (2) a monomeric cross-linking agent for said (1) containing a $CH_2{=}C<$ group; (3) an inhibiting amount of a phenolic polymerization inhibitor; (4) a complementary promoter system of (*a*) from about 0.001 to 0.3% by weight of a cobalt salt, calculated as dissolved metallic cobalt, and (*b*) from about 0.05 to 1.0% by weight of a member selected from the group consisting of N,N-dialkylaryl tertiary amines and salts thereof; (5) a complementary stabilizer system of (*c*) from about 1 to 100 parts per million by weight of a copper salt, calculated as dissolved metallic copper, and (*d*) from about 0.001 to 0.1% by weight of a member selected from the group consisting of guanidines, isomelamines, amidines, biguanides, guanylureas, pseudoureas, pseudothioureas, salts thereof, salts of quaternary ammonium hydroxides and salts of quaternary phosphonium hydroxides; and (6) a free radical polymerization catalyst, the amounts of said (*a*), (*b*), (*c*) and (*d*) being based on the total weight of said (1) and (2), whereby said resinous composition flows into said zones of weakness and cures in position, thereby adhesively uniting said formation at said zones of weakness.

3,091,937
UNDERWATER FOUNDATION STRUCTURE AND METHOD THEREFOR
David P. Thompson, Fairfax, and Austin W. Earl, Atherton, Calif., assignors, by mesne assignments, to California Research Corporation, San Francisco, Calif., a corporation of Delaware
Original application June 21, 1954, Ser. No. 438,132, now Patent No. 2,935,854, dated May 10, 1960. Divided and this application July 1, 1959, Ser. No. 830,974
4 Claims. (Cl. 61—46.5)



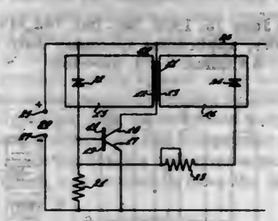
3. A support caisson detachably supporting an underwater foundation structure comprising a caisson member extending downwardly into land submerged under a body of water, a sleeve member surrounding said caisson adjacent the upper end thereof and in annular spaced relationship therewith, an integrally affixed collar member extending radially from the lower end portion of said sleeve member, said sleeve member extending upwardly from the upper end of said caisson, a cementitious material filling said caisson and the portion of said sleeve member extending above said caisson and the annular space between said sleeve member and said caisson and fixedly bonding said sleeve member to said caisson, and underwater foundation structure having an opening therein in alignment with and of radially greater dimension than said sleeve member and of radially less dimension than said collar member and receiving said sleeve member in vertically slidable telescoping relationship to place said foundation structure in detachable load supporting engagement on said collar member, said sleeve member terminating at its upper end within said body of water.

3,091,938
METHOD AND STRUCTURE FOR UNDERPINNING
Harry Schnabel, Jr., 6202 Crathie Lane, Bethesda, Md.
Filed July 27, 1960, Ser. No. 45,572
8 Claims. (Cl. 61—51)



1. A method of underpinning structures having an existing foundation wall resting on the earth comprising the steps of separately removing a plurality of relatively shallow earth sections from contiguous locations directly under the foundation wall, each of said earth sections having a length no greater than a self-supporting span of said wall, positioning a plurality of relatively shallow structural supporting means in contiguous end to end disposition in said locations in operative supporting relation to said wall, said positioning of each of said structural supporting means being in sequence to replace each of said removed earth sections while the wall is supported at both ends thereof, said end support being provided as the successive structural supporting means are positioned by unremoved earth and previously positioned structural supporting means, connecting said contiguous structural supporting means together by elongated reinforcing means, said structural supporting means comprising continuous horizontal members resistant to horizontal compression so that said members in addition to providing said end support before the connection of said elongated reinforcing means are converted by said connection into a continuous beam supporting said wall, and emplacing a plurality of piers of substantially greater depth than said structural supporting means at locations spaced apart a distance greater than said earth section length and supporting said beam directly under said wall.

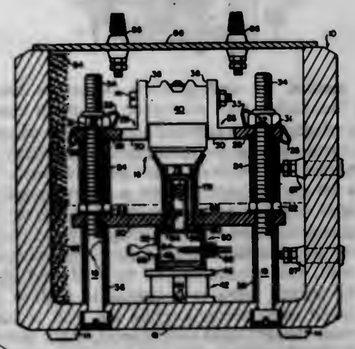
3,091,939
THERMOELECTRIC COOLER CIRCUIT WITH THERMAL ELECTRIC FEED-BACK ARRANGEMENT
John Baude, Milwaukee, Wis., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Filed Oct. 2, 1961, Ser. No. 142,417
14 Claims. (Cl. 62—3)



1. A thermoelectric cooling circuit comprising a source of electric power, a member comprising two complementary heat generating and absorbing materials, a current controlling device responsive to an electrical condition connected to said member and said source, said member being exposed to two temperature conditions, temperature sensing devices arranged to sense said conditions, means for connecting said sensing devices to said con-

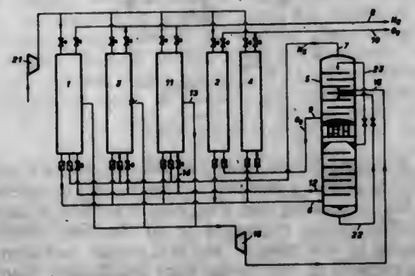
trolling device and to a source of electric power, said sensing devices being affected by the temperature of said conditions to control the electrical condition of said controlling device to control the flow of current through said controlling device and said member.

3,091,940
THERMOCOUPLE REFERENCE JUNCTION
Charles L. Feldman, Saxonville, Arnold C. Fields, Medfield, and John A. Bergin, Framingham, Mass., assignors to Joseph Kaye & Company, Inc., Cambridge, Mass., a corporation of Massachusetts
Filed Mar. 26, 1962, Ser. No. 182,312
8 Claims. (Cl. 62—3)



1. Means for producing a thermocouple junction reference environment, said means comprising, in combination, a container, a flexible wall on said container; a fluid medium within said container having a change of state temperature equal to the desired reference temperature; means on a wall of said container other than said flexible wall for receiving a thermocouple junction to be disposed within said container; thermoelectric means positioned at the exterior of said container and in thermal communication with the interior thereof for removing heat from said fluid medium contained within said container, and means actuated by the movement of said flexible wall for controlling said thermoelectric means for removing heat from within said container when the desired reference temperature has been established.

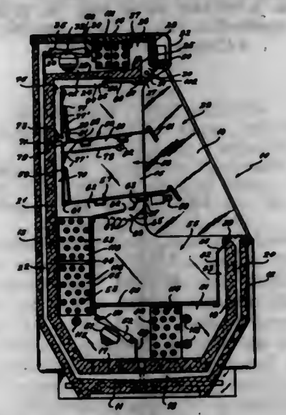
3,091,941
PROCESS AND APPARATUS FOR REFRIGERATION BY WORK-PRODUCING EXPANSION
Rudolf Becker, Munich-Solln, Germany, assignor to Gesellschaft für Linde's Eismaschinen Aktiengesellschaft, Hollriegelskreuth, near Munich, Germany, a German company
Filed June 16, 1958, Ser. No. 742,319
Claims priority, application Germany July 4, 1957
6 Claims. (Cl. 62—13)



1. In a process of refrigerating by the work performing expansion of a compressed gas, the method of heating the compressed gas in an arrangement of at least three cyclically alternated regenerators having heat storing masses before the work performing expansion of the gas, which comprises:

in a first period leading a gas through a regenerator of said arrangement from the warm to the cold end thereof to cool the gas and condense contaminants, in a second period leading a scavenging gas through said regenerator from the cold to the warm end thereof to remove a substantial part of the condensed contaminants from the heat storing mass thereof and in a third period warming the gas to be expanded and removing the remaining condensed contaminants from said heat storing mass by transferring to said gas at least a part of the heat stored in the heat storing mass of said regenerator by passing said gas in direct contact with said heat storing mass.

3,091,942
FOOD MERCHANDISER
Edgar V. Dickson, Ladue, and Theodore E. Weber, Afton, Mo., assignors to Hussmann Refrigerator Co., St. Louis, Mo., a corporation of Delaware
Filed Apr. 10, 1961, Ser. No. 101,782
8 Claims. (Cl. 62—89)

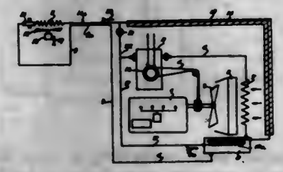


7. The method of refrigerating a product zone having an open front side, comprising the steps of forming an air wall across the open front side of said product zone, distributing other air throughout said product zone, cooling said other air to low refrigeration temperatures for preselected time intervals, defrosting the means for cooling said other air intermediate said time intervals, and continuously cooling said air wall to high refrigeration temperatures during defrosting of said means for cooling said other air.

3,091,943
REFRIGERATING UNIT, MORE PARTICULARLY FOR AIR COOLING
Alain Edouard Plegat, Asnieres, Seine, France, assignor to Societe Anonyme des Usines Chausson, Asnieres, France, a company of France
Filed Feb. 21, 1961, Ser. No. 90,876
Claims priority, application France Feb. 23, 1960
5 Claims. (Cl. 62—196)

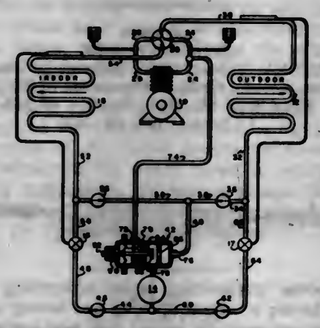
2. A compression refrigerating equipment particularly for air cooling an automotive vehicle having a combustion engine provided with a cooling radiator through which air is sucked by a fan, comprising a compressor for a coolant fluid, means for driving said compressor from said engine, a condenser connected at the output

of said compressor, said condenser being located in front of said cooling radiator and being provided at its lower part with a receiver for the condensed coolant issuing from said condenser, a duct leading from said receiver to an expansion valve and to an evaporator for the coolant fluid, a blower to blow air past said evaporator to the interior of the vehicle, said evaporator being connected to a second evaporator spaced from but in heat



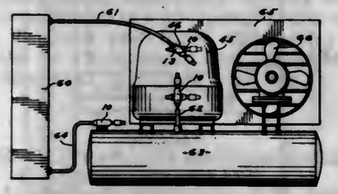
exchange relation to said condenser to promote condensation therein thus reducing the number of calories transmitted by said condenser to said cooling radiator of the engine, a duct leading from said second evaporator to the inlet of said compressor, a bypass duct connecting the output of the evaporator with the inlet of the compressor, and a valve mounted in said bypass duct for opening the duct to shunt said second evaporator.

3,091,944
HEAT PUMP SYSTEM
Dick Van Den Berge and Robert G. Miner, both of La Crosse, Wis., assignors to The Trane Company, La Crosse, Wis., a corporation of Wisconsin
Filed Oct. 31, 1961, Ser. No. 149,076
4 Claims. (Cl. 62—197)



1. A reversible cycle refrigeration system comprising: an indoor heat exchanger, an outdoor heat exchanger, conduit means for carrying liquid refrigerant connecting said indoor heat exchanger to said outdoor heat exchanger, expansion means operably associated with said heat exchangers, a compressor having a suction line and a discharge line, reversing means connected to said discharge and suction lines to reversibly connect said discharge and suction line to said heat exchangers for effecting flow of refrigerant through said system in either direction whereby said system may be operated on a cooling cycle with the outdoor coil functioning as a condenser or on a heating cycle with the outdoor coil functioning as a condenser or on a heating cycle with the indoor coil functioning as a condenser, a hot gas bypass line connected to said discharge line, and automatic pressure responsive valve means connected to said conduit means and said hot gas bypass line to restrict the flow of refrigerant from said indoor heat exchanger when the system is operating on the heating cycle and the temperature of the heat exchange medium passing through said indoor heat exchanger is below a predetermined minimum and to restrict the flow of refrigerant from said outdoor heat exchanger when the system is operating in the cooling cycle and the temperature of the heat exchange medium passing through said outdoor heat exchanger is below a predetermined minimum.

3,091,945
REFRIGERATION SYSTEMS
Stanley H. Morse, Adrian, Mich., assignor to Primrose Sales, Inc., Adrian, Mich., a corporation of Michigan
Original application Aug. 5, 1959, Ser. No. 832,883. Divided and this application May 31, 1962, Ser. No. 199,098
3 Claims. (Cl. 62—299)

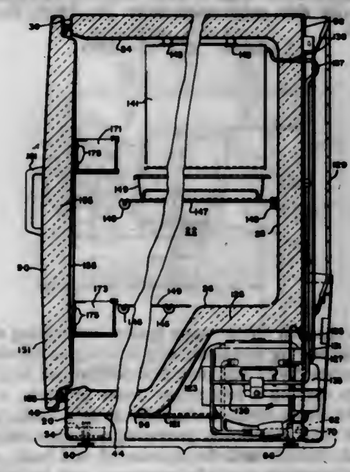


1. In a charged refrigeration system comprising a compressor unit having means thereon defining an opening extending outwardly of said unit, said compressor unit being adapted to contain a refrigerant under pressure, a valve including a valve body, a chamber in said body, a projection on said valve body providing communication between said chamber and the exterior of said body, means defining an opening on said compressor unit including an annular sealing surface lying in a plane generally perpendicular to the axis of the opening, said projection having a complementary annular sealing surface lying in a plane generally perpendicular to the axis of the passageway through said projection, an annular rib on one of said annular sealing surfaces closely adjacent but spaced radially from said opening, the radial width of said annular rib being a relatively narrow part of the radial width of said one annular surface, the other said annular sealing surface being formed with a complementary groove therein having a radial width greater than the width of said rib, a ring of deformable material positioned in and filling said groove radially, and means for drawing and holding said valve against said compressor unit to bring said rib into high unit pressure engagement with the ring providing a gas tight seal by manual finger force and permitting relative angular adjustment of said body relative to said refrigeration unit by manual force without losing refrigerant, said annular rib engaging said ring when the valve is in fixed operating position on said compressor unit and causing said ring to flow so that the annular sealing surfaces are in engagement in the areas surrounding said groove to provide rigidity to said valve, said means being independent of the angular position of said body relative to said refrigeration unit, whereby said body may be angularly positioned relative to said compressor unit in accordance with space limitations and requirements for the direction in which it is desired to have the first passageway extend.

3,091,946
CABINET AND PROCESS FOR MAKING SAME
Keith K. Kesling, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Oct. 6, 1958, Ser. No. 765,403
11 Claims. (Cl. 62—465)

1. An insulated cabinet including a single unitary seamless thin resilient sheet of plastic resin material ex-

tending continuously to form an inner liner portion and upright side wall portions extending substantially to the floor and a top wall portion joining the tops of the side wall portions and a bottom wall portion arched upwardly from the bottoms of the side wall portions and a front wall portion connecting the front edges of the inner liner portion and the side and top and bottom wall portions, reinforcing members bonded to the inner face of said sheet adjacent the corners of said bottom wall portion, a foamed insulation plastic material having rigidity and



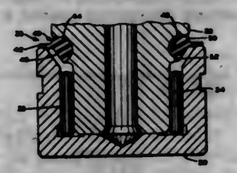
structural strength cast in the spaces between said inner portions and said wall portions and bonded to the adjacent surfaces of said sheet to reinforce the sheet and form a frameless self-sustaining unit of rigidity and structural strength, said reinforcing members being embedded in and supported by said insulation material and having inwardly extending blind holes therein from which the insulating material is excluded, and adjustable supports on the bottom of said cabinet having threaded portions extending in and threaded into said blind holes for supporting said cabinet.

3,091,947
DOUBLE UNIT SPIRAL SPRING DRIVE
Howard J. Thomson, 650 Ardmoor Drive, Birmingham, Mich.
Filed Aug. 8, 1960, Ser. No. 48,322
3 Claims. (Cl. 64—15)



1. A spring drive including a spring interconnecting a pair of substantially aligned shafts, said spring comprising a pair of adjacent spirally wound units containing a plurality of turns joined by an outer turn diagonally disposed thereacross, the ends of the spring being disposed at the center of the units, said pair of substantially aligned shafts having adjacent ends secured to the ends of said units.

3,091,948
UNIVERSAL JOINT SEAL
Robert C. Zeller, Defiance, Ohio, assignor to The Zeller Corporation, Defiance, Ohio, a corporation of Ohio
Filed Feb. 5, 1962, Ser. No. 171,170
7 Claims. (Cl. 64—17)



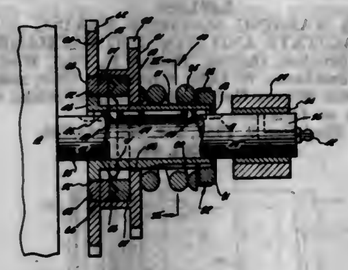
1. A universal joint comprising a cross member having a body and a trunnion extending outwardly therefrom and terminating in an end spaced from said body, a bearing cup encompassing said trunnion, bearing means between said trunnion and said cup, said member having an annular groove located adjacent the junction of said body and said trunnion and near an annular edge portion of said cup, said cross member having an annular ridge contiguous with said groove on the side thereof toward the end of said trunnion, a resilient sealing member comprising an annular base seating portion seated in said groove and an outwardly extending portion integral with said seating portion and extending at least to and in contact with the edge portion of said bearing cup, said resilient sealing member having a surface which, when subjected to lubricant pressure, urges said seating portion into said groove, and means for supplying lubricant through said trunnion to said bearing means in said bearing cup.

3,091,949
CLUTCH PLATE
William H. Sisk, Toledo, Ohio, assignor to Dana Corporation, Toledo, Ohio, a corporation of Virginia
Filed Sept. 30, 1960, Ser. No. 60,255
7 Claims. (Cl. 64—27)



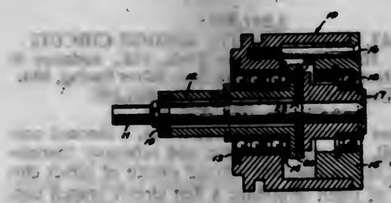
3. A power transmitting device comprising a driving member having a central opening and having a first and second circumferentially spaced slot; said second slot being of greater circumferential elongation than said first slot, a driven member disposed for rotation in said central opening and having a flange connected thereto for rotation therewith, said flange having a first slot similar in size to the first slot in said driving member and a second slot of greater circumferential elongation than said first slot, said driven member and said driving member disposed in spaced relationship with said slot of greater circumferential elongation in said driven member cooperating with said first slot in said driving member and said slot of greater circumferential elongation in said driving member cooperating with said first slot in said driven member, a reaction member having a central opening and being disposed for rotation on said hub, said reaction member having a plurality of circumferentially spaced slots similar in size to and cooperating with said first slots defined by said driving and driven members, and resilient means disposed in each of said cooperating slots whereby said resilient means act in series to transmit torque between said driving and driven members upon the relative rotation thereof.

3,091,950
PRELOAD RELEASABLE CLUTCH
George L. Desrosiers, Bakersfield, Calif., assignor to Painter Manufacturing Company, Bakersfield, Calif., a corporation of California
Filed Nov. 10, 1961, Ser. No. 151,476
4 Claims. (Cl. 64—29)



1. An overload clutch apparatus connected between a rotary drive shaft and a rotatable driven member and operatively connected to a rotary means laterally spaced from the drive shaft providing interruption of transfer of rotary motion to the driven member when the driven member is subjected to a predetermined load, the clutch apparatus comprising a flanged sleeve disposed concentric to the drive shaft, means for mounting the sleeve to the drive shaft to be secured from angular displacement relative thereto, a housing comprising the driven member and defining an axial bore, the housing being rotatably and slidably disposed concentric to the sleeve, the sleeve extending through the housing to an end spaced from the sleeve flange and the housing, a pair of annular mating convoluted clutch means disposed concentric to the sleeve within the housing bore, means for securing one of the clutch means from angular displacement relative to the sleeve flange, means for securing the other clutch means from angular displacement relative to the housing, a spring retainer means disposed peripherally of the end of the sleeve, a spring compressibly engaged between the housing and the spring retainer means for urging the housing axially of the sleeve toward the sleeve flange and for maintaining the clutch means in rotary motion transferring engagement, and torque transmitting means disposed peripherally of the housing operatively engageable with the rotary means laterally spaced from the drive shaft.

3,091,951
SLIP CLUTCH
Alexander Onyshin, 56 Ansonia Ave., Huntington, N.Y.
Filed June 16, 1961, Ser. No. 117,595
1 Claim. (Cl. 64—30)

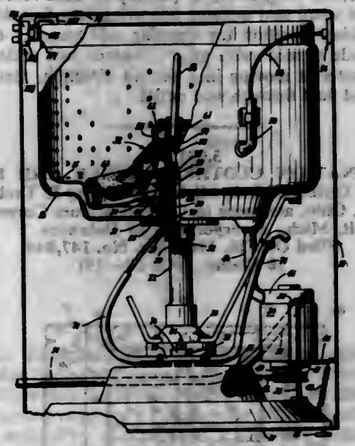


A slip clutch comprising, a housing, a pair of flanged bearings mounted within the front end of said housing, a hollow shaft rotatably mounted within said flanged bearings so as to allow said hollow shaft to extend from the front end of said housing, a flange secured to the rear of said hollow shaft, said flange having an annular recess therein, an annular shim mounted within said annular recess, a third bearing mounted within the rear end of said housing, a collar rotatably mounted within said third bearing, a fourth bearing mounted within the front end of said hollow shaft, a second shaft rotatably mounted within said fourth bearing and rigidly secured to said collar whereby said second shaft extends from the front end of said housing and extends beyond said hollow shaft and a saucer shaped spring mounted about said second shaft within said annular recess, said spring being preloaded by said annular shim.

3,091,952
NON-DRIP CANDLES
Ernest P. Black, West Chester, Pa., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey
No Drawing. Filed June 30, 1960, Ser. No. 39,786
15 Claims. (Cl. 67—22)

1. A candle having substantially non-drip characteristics composed mainly of a combustible porous core and a fusible, flammable solid having incorporated therein from 0.005% to 1% by weight fine, combustible fibers having a fiber length of 1/16 inch to 1/2 inch.

3,091,953
LAUNDRY APPARATUS HAVING LEAKAGE DETECTING MEANS
Burnette L. Hubbard, Haddonfield, N.J., assignor to Philco Corporation, Philadelphia, Pa., a corporation of Delaware
Filed Nov. 28, 1962, Ser. No. 240,626
9 Claims. (Cl. 68—12)

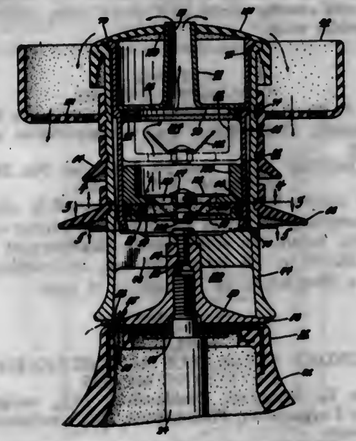


1. In a laundry machine, container means for fabric treating fluid, means operative sequentially to introduce fluid into and to drain fluid from said container means, and means operative, upon accidental leakage of fluid from said container means, to detect such leakage and to condition said last recited means to drain fluid from said container means and to prevent subsequent introduction of fluid into the latter.

3,091,954
FREE-PISTON PUMP FOR WASHING APPARATUS
Norman J. Bullock, Dayton, Robert F. Brubaker, Eaton, and Charles K. Billings, Dayton, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Dec. 26, 1961, Ser. No. 161,261
11 Claims. (Cl. 68—18)

11. In combination with a container adapted to contain fluid and an oscillating agitator in said fluid, means form-

ing a chamber having an inlet in communication with said fluid for receiving fluid from said container and an outlet for supplying said fluid, said chamber being connected for movement in response to the oscillation of said agitator, and free-floating valve means in communication with said inlet and substantially stationary relative to the



movement of said chamber, said valve means having an open position for passing a quantity of fluid received by said inlet when said agitator is moving in a first direction and a closed position for trapping said quantity of fluid on the side of said valve means towards said outlet when said agitator is moving in a second direction, thereby to force said fluid through said outlet.

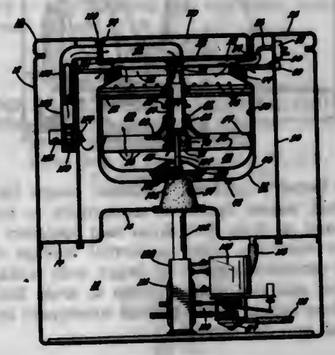
3,091,955

COMBINATION CLOTHES WASHER AND DRIER

John A. Taylor, Detroit, Mich., and Harvey R. Tuck, Trotwood, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Oct. 26, 1961, Ser. No. 147,844

10 Claims. (Cl. 68—19)



7. A dryer comprising container means for retaining items to be dried, said container means having a partition separating said container means into a drying portion and an air passage portion, air passage means in said partition interconnecting said drying portion with said air passage portion, drive means for rotating said container means for centrifuging liquids from said items to be dried, and means for effecting an air flow from said air passage portion through said air passage means to said drying portion, said drive means including means for reciprocating said container means concurrently with said air flow and after said centrifuging, thereby to bounce said items into air fluffing relationship with the air flow through said air passage means.

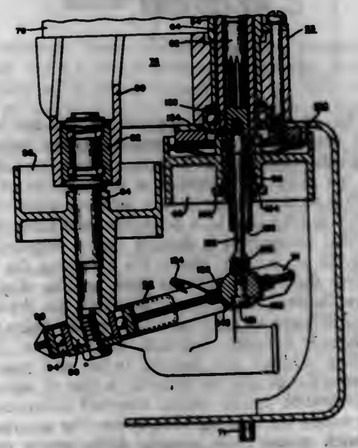
3,091,956

CLOTHES WASHING MACHINE HAVING A DRY TYPE AGITATE AND SPINNING MECHANISM

Byron L. Bruchen, Dayton, Thomas H. Fogt, West Carrollton, and James W. Light, Greenville, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Oct. 9, 1961, Ser. No. 143,756

9 Claims. (Cl. 68—23)



9. A variable grip ball socket comprising a ball alternately subjected to first and second movements, means for engaging said ball during said movements including a bearing means and a first cam means fixed for movement with said bearing means, means for retaining said bearing means in engagement with said ball including a support means and a second cam means fixed relative to said support means, and means connected between said support means and said first cam means for biasing said first cam means into engagement with said second cam means for moving said bearing means into tighter engagement with said ball when said ball is subjected to said first movement, said ball when subjected to said second movement frictionally engaging said bearing means to counteract the bias of said biasing means for disengaging said first and second cam means.

3,091,957

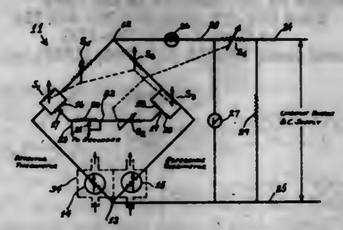
THERMAL CONDUCTIVITY BRIDGE CIRCUIT

William C. Hampton, Takoma Park, Md., assignor to American Instrument Company, Inc., Silver Spring, Md.

Filed Oct. 14, 1959, Ser. No. 846,295

10 Claims. (Cl. 73—27)

1. In a gas chromatography apparatus, a thermal conductivity cell, respective detector and reference thermistors in said cell, a constant voltage source of direct current, a pair of input terminals, a first circuit branch connected between said input terminals comprising a first adjustable resistance member and said detector thermistor connected in series, a second circuit branch connected between said input terminals comprising a second adjustable resistance member and said reference thermistor connected in series, said first and second adjustable resistance members having different settings corresponding to different temperature ranges, an indicating circuit branch, means connecting said indicating circuit branch between points on said first and second circuit branches electrically located respectively between the first adjustable resistance member and the detector thermistor and between the second adjustable resistance member and the reference thermistor, a third adjustable resistance member, means connecting said source to said input terminals through said third adjustable resistance member, whereby to define a bridge circuit wherein a signal current will be developed in said indicating circuit branch responsive to a relative change in thermal conductivity adjacent said detector and reference thermistors, and means mechanically



ganging said adjustable resistance members for simultaneous adjustment, said adjustable resistance members being variable in value in the same sense as they are simultaneously adjusted by said ganging means, said third adjustable resistance member being constructed and arranged to vary the voltage across said input terminals in accordance with and in the same sense as the adjustments of resistance of said first and second resistance members and in accordance with the expected values of resistance of the thermistors in said temperature ranges, whereby to maintain the watts dissipated in the thermistors substantially constant with the bridge circuit balanced at the various temperatures in said different temperature ranges.

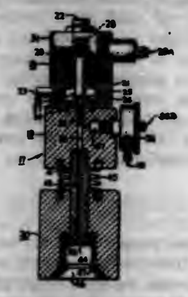
3,091,958

METHOD AND APPARATUS FOR PRESSURE TESTING AEROSOL CONTAINERS

Milton Robins, North Haven, Conn., assignor to Merrill F. Steward, North Haven, Conn.

Filed July 22, 1959, Ser. No. 828,855

10 Claims. (Cl. 73—45.2)



1. The method of testing pressure in a closed prepressurized container containing a gas at ambient temperature but unknown pressure greater than atmospheric, which comprises the steps of confining a test gas in a fixed volume at ambient temperature and at predetermined pressure greater than atmospheric, which fixed volume is small in comparison to that of the gas in the container to be tested, then bringing said test gas into pressure-responsive communication with said container gas, maintaining said pressure-responsive communication for a period of time sufficient to allow the pressure of said test gas to reach equilibrium with said container gas pressure, and measuring the resultant pressure of said test gas.

5. Apparatus for testing pressure in a closed container having a valved outlet, comprising an enclosure having a test-gas chamber provided with an inlet and an outlet, an adapter head having an opening for communication with said test-gas chamber outlet, means for moving said adapter head into gas-tight engagement with said container with said container outlet in communication with said opening, means for opening said test-gas chamber inlet to apply an external pressure to said chamber, means for closing said inlet after a predetermined pressure has been created in said chamber, means for opening said valved outlet of said container while said adapter head is in engagement with said container and for establishing pressure-responsive communication between said test-gas chamber and said container, and means for indicating the resultant pressure in said test-gas chamber.

3,091,959

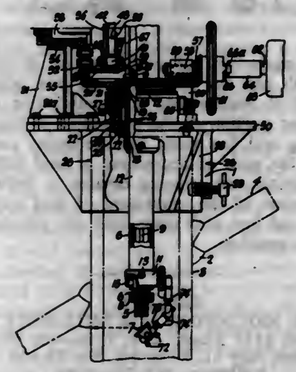
ULTRASONIC INSPECTION APPARATUS

Raymond Ford Haystock and Norman Frank Godwin, Culcheth, near Warrington, Russell Frank Lumb, Chanderton, and Michael Alan Williams, Culcheth, near Warrington, England, assignors to United Kingdom Atomic Energy Authority, London, England

Filed Aug. 29, 1960, Ser. No. 52,696

Claims priority, application Great Britain Sept. 9, 1959

9 Claims. (Cl. 73—67.8)



1. An ultrasonic inspection apparatus for weld joints of tubular bodies and comprising an ultrasonic test probe insertable within the tubular body, means restraining said probe against rotation, a reflector for reflecting ultrasonic signals emitted by said probe in a generally radial direction, means for rotating said reflector relative to said probe, means for imparting a feed motion to said reflector in the axial direction of said probe whereby to enable the weld joints to be inspected in a sequence of peripheral scans and indicator means to display ultrasonic echoes of said signals returned from the weld joints and reflected by the reflector onto the probe.

3,091,960

ARTICLE TENSIONING APPARATUS

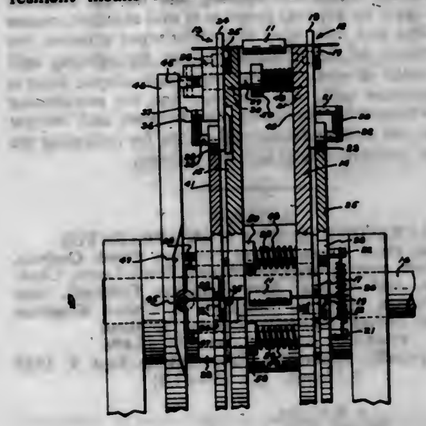
James C. Houda, Jr., Downers Grove, Ill., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York

Filed May 4, 1961, Ser. No. 107,852

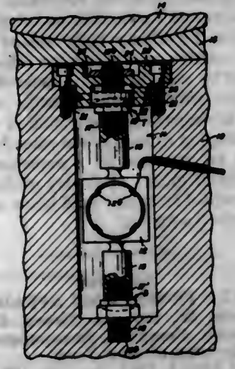
5 Claims. (Cl. 73—95)

1. An article tensioning apparatus comprising a pair of spaced gripping devices, a carrier for supporting said devices thereon for movement along a first path and for supporting one of said gripping devices for movement relative thereto toward and away from said other

gripping device along a second path perpendicular to said first path, means on said carrier for urging said gripping devices to closed positions for gripping an article at spaced points, resilient means for urging said one gripping device along said second path away from the other gripping device and from a normal first position on said carrier for applying tension to the article, a stationary cam arranged to permit axial movement of said one gripping device under the influence of said resilient means from the first position during a portion of the movement of said gripping devices along said first path and for returning said one gripping device to the first position and for maintaining it therein during another portion of the movement of the gripping devices along said first path, and stationary cam means mounted in the path of movement of said gripping devices for moving said gripping devices to open position during a portion of the movement of said gripping devices along said first path when said one gripping device is in said first position.

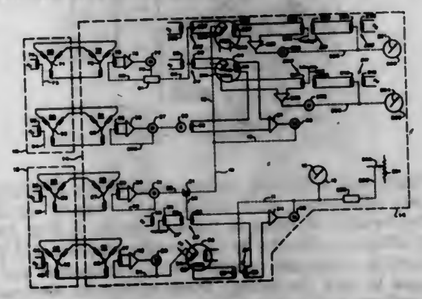


3,091,961
LOAD-CELL MOUNTING FOR MILL-ROLL CHOCK
Reinhart Piell, 1137 Maple Ave., Cornwells Heights, Pa.
Filed May 11, 1960, Ser. No. 28,438
2 Claims. (Cl. 73—141)



1. Means for mounting an elongated load cell in a socket extending downwardly into the top of a mill-roll chock and having a counterbored shoulder adjacent the upper end, comprising a thrust bearing for the lower end of the cell at the bottom of said socket, a closure for the socket seated on said shoulder and lying below the top of the chock, and a thrust bearing for the upper end of the cell carried by said closure and exposed on its lower face, said last-mentioned bearing including an adjusting screw extending upwardly through the closure so as to be accessible from above the chock.

3,091,962
ANGLE OF ATTACK COMPUTER
Alan S. Corson, Levittown, Cyrus Beck, Abington, and Louis S. Guarino, Hatboro, Pa.; said Corson and said Guarino assignors to the United States of America as represented by the Secretary of the Navy
Filed Dec. 29, 1959, Ser. No. 862,724
13 Claims. (Cl. 73—178)
(Granted under Title 35, U.S. Code (1952), sec. 266)



13. In an instrument panel for an aircraft, angle of attack indicator means, first means providing an output proportional to true airspeed TAS of the aircraft, second means providing an output proportional to vertical velocity H of the aircraft, first computer means connected to said first and second means computing the angle whose sine is the quotient

$$\frac{H}{TAS}$$

of said vertical velocity ouput H and said true airspeed output TAS to provide an output proportional to the flight path angle γ of the aircraft, third means providing an output proportional to the pitch angle θ of the aircraft, differential means connected to said third means and said first computer means subtracting said flight path angle output γ from said pitch output θ to provide an output proportional to the angle of the attack α_E of the aircraft relative to earth coordinates, fourth means providing an output proportional to the roll angle ϕ of the aircraft, second computer means connected to said differential means and said fourth means multiplying said angle of attack α_E relative to earth coordinates by the reciprocal of the cosine of said roll output

$$\frac{1}{\cos \phi}$$

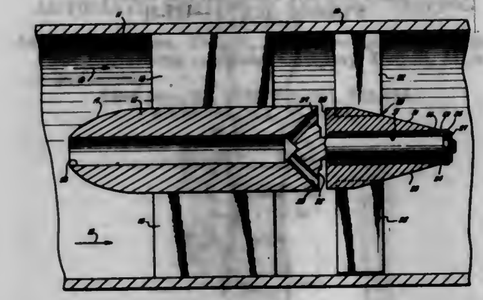
to provide an output proportional to the angle of attack α of the aircraft relative to aircraft coordinates, fifth means connecting said second computer means to said indicator means whereby said indicator means provides a display of the angle of attack α of the aircraft relative to aircraft coordinates.

3,091,963
DEVICE FOR MEASURING AND QUANTITY REGISTERING OF DRY MATERIALS
Elmer H. Betts, Millard, Nebr.
Filed Sept. 10, 1959, Ser. No. 839,137
1 Claim. (Cl. 73—218)

In a dry granular materials measuring and dispensing device, the combination of a casing having a chamber therein provided with entrance and exit passageways thereto, a shaft rotatably supported by said casing extending centrally through said chamber, power means on the casing for driving the shaft, rigid vanes secured to the shaft in the chamber, said vanes being endwise and laterally spaced from the surfaces defining said chamber, U-shaped sealing members for each of said vanes of a size which when applied to said vanes project beyond the side and outer edges of each of said vanes and engage the facing surfaces of said chamber, U-shaped metal plates secured to said vanes clamping said U-shaped sealing members in such position, and gusset plates welded to said vanes in right angled relation thereto, each gusset plate being welded to the facing sides of adjacent vanes.

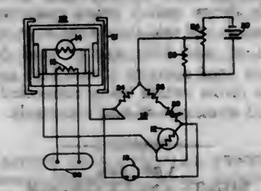


3,091,964
ROTOR SUSPENSION FOR FLOW METER
Edward E. Francisco, Jr., Woodland Hills, Calif., assignor, by mesne assignments, to Hydropolse, Incorporated, Scottsdale, Ariz., a corporation of New Mexico
Filed Sept. 6, 1960, Ser. No. 54,267
6 Claims. (Cl. 73—231)



1. In a rotor flow meter, a housing defining an interior passage for flow of fluids therethrough, said passage having an upstream end and a downstream end, a rotor support disposed within the passage and fixedly attached to the housing, the rotor support including a stud member extending from a downstream end of the support, the rotor support having an internal passage open to upstream fluid flow at an upstream end of the rotor support and extending toward the downstream end of the rotor support and a port extending from the downstream end of the support adjacent the stud member to communicate with the passage, a rotor hub, bearing means supporting the rotor hub on the stud for sliding movement along the stud and for rotation therearound in a plane transverse to the direction of fluid flow, said rotor hub having an upstream face that is smaller in cross-sectional area than the adjacent downstream face of the rotor support.

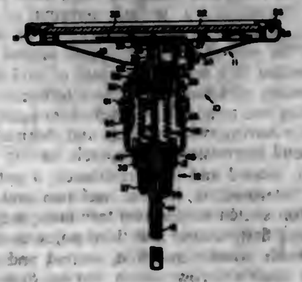
3,091,965
RADIO FREQUENCY HAZARD DETECTOR
William L. Strickland, Huntsville, Ala., assignor to the United States of America as represented by the Secretary of the Army
Filed May 27, 1960, Ser. No. 32,488
1 Claim. (Cl. 73—362)
(Granted under Title 35, U.S. Code (1952), sec. 266)



A rocket ignitor dangerous condition detector comprising: an electrical bridge comprising, a fixed resistance, a variable resistance and first and second thermistors, a first terminal of said fixed resistance attached to a first terminal of said variable resistance, a second terminal of said variable resistance attached to a first terminal of said first thermistor, a second terminal of said first thermistor connected to the first terminal of said second thermistor, the second terminal of said second thermistor being connected to a second terminal of said fixed resistance; a sensing element having two terminals; a power source having two terminals; a deactivated squib comprisin a bridge wire having two terminals and thermally coupled to said second thermistor; a receptacle having two terminals; a first, second and third resistance; a potentiometer having an intermediate contact and two end terminals; a push button switch having two terminals; a three throw switch having first, second and third poles, each comprising a moveable contact and first, second and third fixed contacts; a double throw switch having first thru sixth poles each comprising a moveable contact and two fixed contacts; the moveable contact of said first pole of said three throw switch being connected to a first fixed contact of said first pole of said double throw switch; the moveable contact of said second pole of said three throw switch being connected to said third fixed contact of said first pole of said three throw switch, to a first end terminal of said potentiometer, to a first terminal of said first resistance and to the connection between said thermistors; the moveable contact of said third pole of said three throw switch being connected to said first fixed contact of said second pole of said double throw switch; the moveable contacts of said first and second poles of said double throw switch being connected across said terminals of said sensing device; said moveable contacts of said third and fourth poles of said double throw switch being connected across the terminals of said power source; said moveable contacts of said fifth and sixth poles of said double throw switch being connected across the terminals of said bridge wire; said first fixed contact of said first pole of said three throw switch being connected to the first fixed contact of said third pole of said three throw switch; said second fixed contact of said first pole of said three throw switch being connected to the connection of said fixed resistor and thermistor; said second and third fixed contacts of said second pole of said three throw switch being connected to the first fixed contact of said third pole of said double throw switch; said second fixed contact of said third pole of said three throw switch being connected to the connection of said variable resistor and said thermistor; said third fixed contact of said third pole of said three throw switch being connected thru said second resistance to the second terminal of said first resistance, to said intermedlate contact of said potentiometer, and to the connection of said fixed resistor and said variable resistor; said second fixed contact of said first pole of said double

throw switch being connected to said second fixed contact of said third pole of said double throw switch; said second fixed contact of said second pole of said double throw switch being connected to said second contact of said sixth pole of said double throw switch; said first fixed contact of said fourth pole of said double throw switch being connected to said second end terminal of said potentiometer; said second fixed contact of said fourth pole of said double throw switch being connected thru said push button switch and said third resistance to said second fixed terminal of said fifth pole of said double throw switch; said first fixed contacts of said fifth and sixth poles of said double throw switch being connected respectively to separate said terminals of said receptacle.

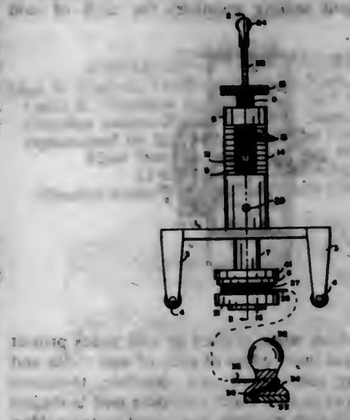
3,091,966
MULTI-ANGLE GAUGE
William D. Huston, Rochester, and Richard A. Beisheim, Spencerport, N.Y., assignors to Rochester Manufacturing Company, Inc., Rochester, N.Y., a corporation of New York
Filed Nov. 4, 1960, Ser. No. 67,287
7 Claims. (Cl. 73—362.2)



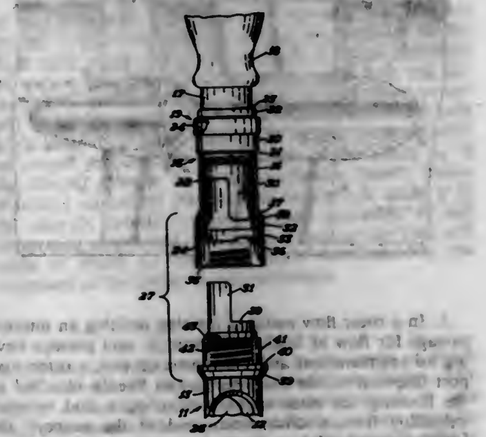
6. Apparatus comprising a support, a drive shaft journaled in said support, means for rotating said drive shaft, a head, a driven shaft journaled in said head, a flexible coupling connecting said drive and driven shafts to transmit torque from said drive shaft to said driven shaft, and means connecting said head and said support for angular adjustment of said head on said support about an axis extending at right angles to the axis of said drive shaft and comprising a guide member and a follower, one of the two last-named parts being secured to said head to move therewith, and the other of the two last-named parts being secured to said support, said guide member having a cam-type guide surface and said follower engaging and riding on said guide surface, and said guide surface being shaped to maintain a constant length of arc in said coupling as said head is adjusted angularly relative to said support.

3,091,967
SWIPE SAMPLER
William R. Hardlow, Livermore, Calif., Bruce B. Boecker, Naperville, Ill., and Ruben E. Johnson, Jr., Newark, Del., assignors to the United States of America as represented by the Secretary of the Air Force
Filed May 13, 1960, Ser. No. 29,121
2 Claims. (Cl. 73—425)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A swipe sampler for removing a contamination sample from a contaminated surface comprising a base assembly having an opening at its center portion, a vertical cylindrical housing mounted in the opening in said base assembly, a bored cylinder slidably mounted in the lower end of the cylindrical housing, a sampling head rotatably mounted on the lower end of the bored cylinder, a sample disc, means releasably retaining the sample disc in the sampling head, a compression spring mounted in the cylindrical housing and biased to hold the sample disc against the surface being sampled, means for adjusting a predetermined pressure of the compression spring, indicia on the cylindrical housing indicating the pressure exerted on the sample disc by the compression spring when the sample disc is against the surface being sampled, means for rotating the sample disc, means joined to base assembly and adapted for rolling the base assembly on the surface being sampled, and means adapted for ejecting the sample disc upon completion of the sampling operation.



3,091,968
SECTIONAL GRAIN SAMPLING PROBE
Peter J. Platzer, 2201 Essex Road, Minneapolis, Minn.
Filed May 17, 1960, Ser. No. 29,674
5 Claims. (Cl. 73—425.2)



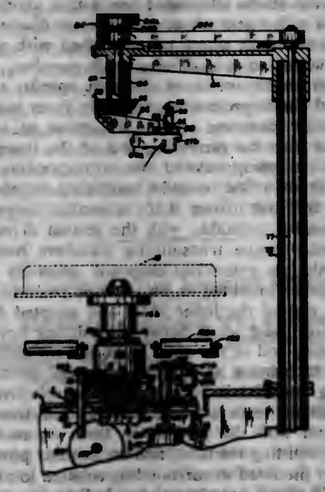
5. In a sectional sampling probe, comprising two pairs of coaxial tubes having axially spaced longitudinally alignable apertures and in which the inner tube of each pair is rotatable relative to the respective outer tube, means for uniting said two pairs of tubes in end-to-end relation with their apertures longitudinally alignable including a pair of coacting members disposed respectively within the radius of the inner tubes, said members at their respective outer ends formed for axially interdigitation only when the apertures of the inner tubes are so aligned to transmit rotary motion to the inner tubes, a pair of outer locking joint members disposed respectively on the outer end surfaces of the outer tubes and adapted to interlock on relative rotational movement only after said interdigitation is effected, and abutment means carried by said outer joint members and coacting to limit the extent of said relative rotational movement to longitudinally align the apertures of the outer tubes.

3,091,969
POWDER METAL SAMPLING DEVICE
Steve Romanchuk and Cyril R. Mills, Fort Saskatchewan, Alberta, Canada, assignors to Sherritt Gordon Mines Limited, Toronto, Ontario, Canada, a company of Ontario
Filed Apr. 4, 1961, Ser. No. 100,649
3 Claims. (Cl. 73—425.2)



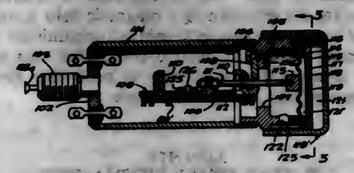
1. A sampling device which comprises an elongated, self-supporting body adapted to stand in a vertical position, a plurality of downwardly extending holes arranged in spaced, staggered relation along a face of said body to expose an entrance to a hole at each point along the length of said body defined by the uppermost and lowermost hole, said holes being adapted to receive and retain flowable material when standing in a vertical position.

3,091,970
AUTOMATIC UNIVERSAL BALANCE TESTING MACHINE
Joseph P. Lannen, Detroit, Mich., assignor to Micro-Poise Engineering and Sales Company, Detroit, Mich., a partnership
Filed Sept. 22, 1958, Ser. No. 762,414
8 Claims. (Cl. 73—483)

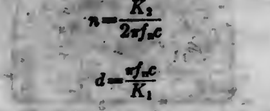


8. In a universal balance testing machine, the combination with a work carrier and a marking device spaced upwardly from said carrier to clear a workpiece on the carrier and formed with a plurality of chambers to receive differently colored liquid marking mediums, and including a plurality of pumps respectively having inlets thereto from the respective chambers and having outlets downwardly directed toward said carrier, of a plurality of actuators respectively taking effect on the respective pumps, means for gaging the moment of unbalance of a workpiece on said carrier, such means including a drive element, and means driven by such element for energizing one or more of said actuators according to the gaged moment of unbalance, whereby the piece is marked by one or more of said mediums to indicate said moment.

3,091,971
DAMPED VIBRATIONAL SYSTEMS
Cecil K. Stedman, Enumclaw, Wash., assignor to Statham Instruments, Inc., Los Angeles, Calif., a corporation of California
Filed Jan. 26, 1959, Ser. No. 789,138
28 Claims. (Cl. 73—515)



1. A damped vibrational system comprising a support, a mass, a spring connected to said mass and said support, a dashpot damper, means for yieldably coupling said mass and said dashpot damper, said means including said mass, dashpot and a second spring whereby the motion of said mass is shared between the dashpot and said second spring, said mass, said springs, and the damping coefficient of said damped system having the following relation



and

$$n=\frac{K_2}{2\pi f_n c}$$

$$d=\frac{\pi f_n c}{K_1}$$

where K_1 is the Hooke's law spring constant of the spring connecting said mass and said support, K_2 is the Hooke's law spring constant of the second spring and c is the damping coefficient, M is the mass and the natural frequency f_n in cycles per second is

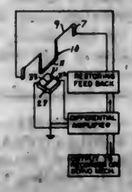
$$f_n=\frac{1}{2\pi}\sqrt{\frac{K_1}{M}}$$

and in which the values of n and d each have corresponding values that lie within the area bounded by the curves ABCD of FIG. 10 of the drawings forming a part of the specification of this application and in which the absolute value of the relative response of the mass is from about 1.05 to about .95 of the static response of said mass at all frequencies up to about the said natural frequency.

3,091,972
ACCELEROMETER
Alan R. Johnston, La Canada, Calif., assignor to California Institute Research Foundation, Pasadena, Calif., a corporation of California
Filed Jan. 24, 1961, Ser. No. 84,720
8 Claims. (Cl. 73—517)

5. An accelerometer, comprising: an acceleration sensing unit including, a bar, a pair of arms extending radially from said bar in a common plane, torsion elements extending coaxially in opposite direction from said arms and in parallelism with the axis of said bar, and support means for said torsion elements joined thereto at their

distal ends and applying tension thereto, whereby said bar forms a suspended pendulant mass adapted to move about the common axis of said torsion elements in response to acceleration forces applied in a direction perpendicular to the common plane defined by the axes of said torsion elements and said bar, said sensing unit being formed of fused quartz and the parts thereof being integrally connected, and a conductive coating on said



parts; a light source at one side of said mass; a diode photocell at the other side of said mass for detecting displacement of said mass in response to acceleration forces; means for establishing a magnetic field across said mass; and means responsive to said sensing unit for applying a current to the conductive coating of said sensing unit and along said mass thereby to produce a restoring force opposing said acceleration force.

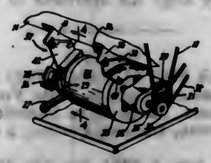
3,091,973
SHUTTER DRIVE MECHANISM
Russell E. Prentice, Smithtown, N.Y., assignor to Hycon Mfg. Company, Pasadena, Calif., a corporation of Delaware
Original application Aug. 27, 1957, Ser. No. 680,566, now Patent No. 2,980,004, dated Apr. 18, 1961. Divided and this application Dec. 27, 1960, Ser. No. 80,721
7 Claims. (Cl. 74—2)



1. A reciprocatory drive mechanism, comprising a frame, a driven member mounted on said frame for movement in opposite directions between given limiting positions, releasable latch means for latching said member in said limiting positions upon movement of the member to the positions, yieldable means acting between said frame and member for biasing the latter to a position between said limiting positions whereby when said member is latched in either of said limiting positions said yieldable means is tensed in a direction to propel said toward the opposite limiting position when said latch means are released and said yieldable means acts to arrest travel of said member toward said opposite limiting position, and means for additionally tensing said yieldable means in said latter direction when said member is latched in each of said limiting positions sufficient to effect propelling of the member when released to the opposite limiting position against the arresting action of said yieldable means.

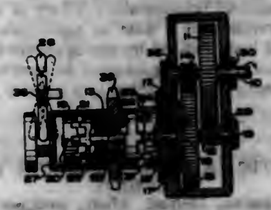
3,091,974
LAUNDRY APPARATUS
Richard H. Brill and Henry J. Biczel, both of Philadelphia, Pa., assignors, by mesne assignments, to Philco Corporation, Philadelphia, Pa., a corporation of Delaware
Filed May 22, 1961, Ser. No. 111,803
5 Claims. (Cl. 74—242.15)

1. In apparatus of the type having instrumentalities adapted to be driven by means of driving belts, the combination comprising a driving unit including a first shaft in driving engagement with one of said belts and a second shaft in driving engagement with another of said belts, and structure supporting said unit and including a pivot and a slidable connection, said pivot being incorporated in said structure for swinging movement of said unit to effect simultaneous displacement of both of said shafts



in directions transverse to their axes to adjust the tension of both of said belts, said slidable connection being incorporated in said structure for swinging movement of said unit to effect displacement of one of said shafts on an arc about the other of said shafts to adjust the tension of the one of said belts which is engaged by said one of said shafts.

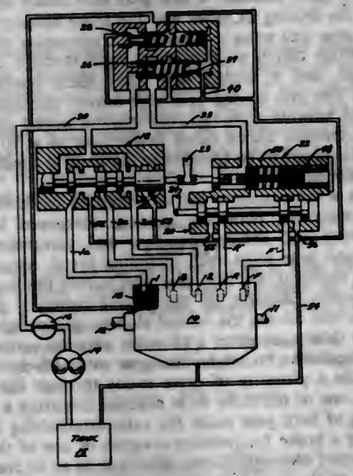
3,091,975
TWO SPEED TRANSMISSION
Charles J. Davis, Wichita, Kans., assignor to Davis Manufacturing, Inc., Wichita, Kans., a corporation of Kansas
Filed Oct. 26, 1960, Ser. No. 65,025
2 Claims. (Cl. 74—330)



1. A two speed transmission provided with a casing and including a driving shaft member therein and fitted with two gear wheels of different diameters; first and second driven shafts telescoped one within another, each being fitted with a gear wheel of a different diameter, each last mentioned gear wheel being meshed with a respective gear wheel on said driving shaft member, whereby said driven shafts rotate at different speeds; said first and second shafts projecting externally from said casing in a common direction beyond the plane of said gear wheels and with the projecting end of the inner one of the shafts extending beyond the corresponding end of the outer shaft; a first torque transmitting member rotatable with the first driven shaft; a second torque transmitting member rotatable with the second driven shaft, each of said torque transmitting members having jaw clutch teeth; an externally disposed generally annular clutch member mounted in an exposed position on said projecting end of the inner shaft and adapted for axial movement on said shaft between positions beyond the corresponding end of the outer shaft and for independent rotational movement about that axis, said clutch member having jaw clutch teeth engageable selectively with the jaw clutch teeth on said first torque transmitting member and with the jaw clutch teeth on said second torque transmitting member; and an annular power take-off member mounted in surrounding relation to and being fast to said clutch member and a hollow, generally cylindrical clutch housing member carried by and movable with said annular clutch member and enclosing the projecting end of the inner shaft and the clutch teeth

carried thereby as well as the clutch teeth on the annular clutch member disposed for cooperation therewith, and means for shifting the clutch member axially of said inner shaft in opposite directions for selectively and operatively engaging the jaw clutch teeth carried by said first and second shafts respectively, said last-mentioned means including an operator operated lever operatively engaged with said cylindrical clutch housing and operative to move the same axially of the inner shaft.

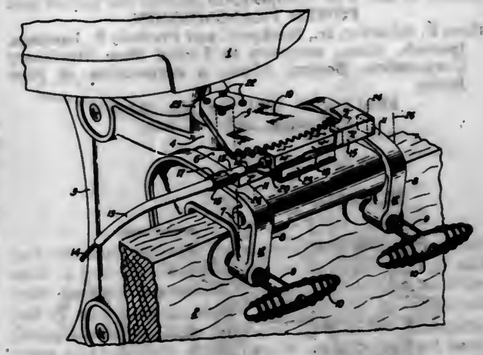
3,091,976
HYDRAULIC CONTROLS FOR POWER TRANSMISSION
Gordon W. Johnson, Peoria, LeRoy Lichtenstein, Morton, and Charles A. Ramsel, Gerald D. Rohweder, and Frank H. Winters, Peoria, Ill., assignors to Caterpillar Tractor Co., Peoria, Ill., a corporation of California
Filed Apr. 28, 1959, Ser. No. 809,535
5 Claims. (Cl. 74—364)



1. In controls for a transmission having a plurality of speed ratio trains and forward and reverse direction trains, wherein a separate actuator controls each train and a fluid motor is employed to energize each actuator, a source of fluid under pressure, and means to direct pressure from said source selectively to said fluid motors and thereby to select the trains to be employed for transmission of power, the improvement which comprises, a first selector valve in said pressure directing means associated with the speed ratio trains, a second selector valve associated with the direction trains, and means to prevent application of pressure through said second selector valve until pressure has reached the fluid motor of a speed ratio train.

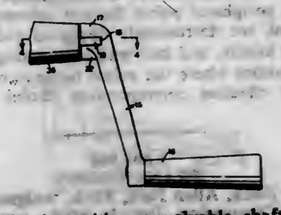
3,091,977
OUTBOARD MOTOR REMOTE STEERING CONTROL
Elmer C. Kiekhaefer, Cedarburg, Wis., assignor, by mesne assignments, to Kiekhaefer Corporation, Chicago, Ill., a corporation of Delaware
Filed Oct. 21, 1959, Ser. No. 847,722
1 Claim. (Cl. 74—501)

An outboard motor comprising a swivel bracket carrying the motor unit, a tilt bracket carrying the swivel bracket on a vertical steering axis, a clamp bracket adapted to be secured to the transom of a boat and carrying said tilt bracket for upward tilting of the motor pivotally on a horizontal tilt pin disposed transversely forward of the boat transom, a forwardly facing gear sector rigidly secured to said swivel bracket to turn with the motor upon the vertical steering axis in steering the motor, a rack meshing with said gear sector, means rigidly mounted on the top of said tilt bracket and supporting said rack for longitudinal reciprocation in a direction susbtantially parallel to said tilt axis, a push pull cable for actuating said rack to effect steering control of the motor and having a core member and an outer tubular sheath member reciprocable relative to each other,



means to secure one of said cable members to said rack, and means to secure the other of said cable members to the rack supporting means whereby relative reciprocation of said cable members will actuate said rack, and said cable approaching said cable securing means in a direction generally parallel to and adjacent said tilt pin whereby the cable flexes upon tilting of the motor on said tilt pin without interfering with the steering control of the motor.

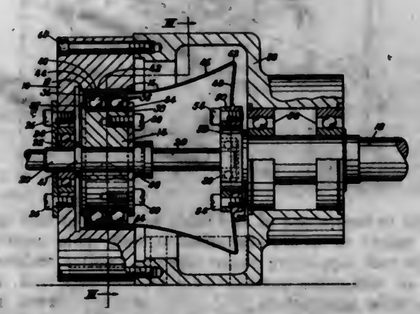
3,091,978
SWIVELLED CRANKS
Joseph Rubinstein, Newburgh, N.Y., assignor to General Slicing Machine Co., Inc., Walden, N.Y., a corporation of New York
Filed Feb. 9, 1961, Ser. No. 88,204
7 Claims. (Cl. 74—547)



1. In combination with a revolvable shaft having a tubular end, a crank having a forwardly extending handle at one end and a rearwardly extending boss at its other end, said boss provided with a channel in a direction across its rear face, at least one end of said channel being open through a side of said boss, a shank extending from within said channel into the tubular end of said shaft, said boss being pivotally secured to said shank about an axis substantially perpendicular to the direction of the length of said shank and capable of only rotary movement about said pivotal axis, a channel formation across said end of the shaft, a bearing element secured in said shaft end, said shank being through said bearing element, slidable lengthwise therein and extending beyond said bearing further into said tubular shaft end, spring means within said tubular end biasing said shank into said tubular shaft end, said shank having lateral shoulder formation extending into and engaged by said channel formation whereby the crank is held

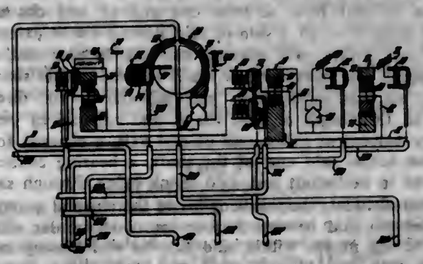
against pivotal movement in relation to said shank and upon manually pulling the crank to move the shank in a direction outwardly of said tubular shaft end, said shoulder formation will leave its cooperating channel formation whereupon the crank is capable of swivelling about said pivotal axis.

3,091,979
POWER TRANSMISSION
Hans F. Schaefer, Jr., Rockport, and Frederic B. Jennings, Ipswich, Mass., assignors to United Shoe Machinery Corporation, Boston, Mass., a corporation of New Jersey
Filed May 8, 1961, Ser. No. 108,600
15 Claims. (Cl. 74—640)



8. In a harmonic drive type transmission wherein a wave generator progressively radially deflects a flexible gear into engagement with a ring gear to effect rotation of a driven member; means mounting the flexible gear for rotation about an axis substantially common to the flexible gear and the ring gear, said mounting means extending along the axis and comprising a tubular extension flared outwardly from said axis, and an axially flexible planar end portion normal to the axis forming a driving connection between the extension and said driven member, the wall of said extension being of such thickness and axial flexibility that, as a consequence of the radial deflection, peripheral points thereon outwardly from said engagement are decreasingly displaced radially and increasingly axially, and said wall terminating substantially in the localities where the points undergo only axial displacement effecting corresponding flexure of said end portion.

3,091,980
TRANSMISSION
Robert L. Black, Allen Park, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Nov. 25, 1958, Ser. No. 776,303
37 Claims. (Cl. 74—752)



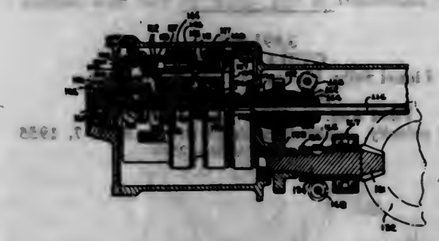
1. In a hydrodynamic brake, the combination of a rotor driven by source or torque and a stator coacting to define a fluid working circuit, means movable relative to the circuit and so arranged as to vary the resistant capacity of the brake, a source of fluid under pressure, and means responsive to torque demand for supplying the working circuit with fluid from the source at variable flow rates, and means for at times emptying said brake.

9. In a transmission, the combination of driving and driven members, planetary gearing interposed between the driving and driven members for providing a plurality of drive ratios therebetween, the planetary gearing comprising first and second gear units each including input, output, and reaction elements, the first gear unit having the input element thereof rotatable by the driving member, the second gear unit having the output element thereof rotatable with the driven member, brake means for preventing rotation of each gear unit reaction element in one direction so as to afford one drive ratio through the respective gear units, an intermediate clutch operative to drive connect the first gear unit output element and the second gear unit input element, a first gear unit clutch operative to join the driving member and the input element of the second gear unit so as to provide in conjunction with said intermediate clutch another drive ratio through the first gear unit, and a second gear unit clutch operative to join the first and second gear unit output elements so as to furnish another drive ratio through the second gear unit, the intermediate clutch being inoperative so as to permit the brake means to be effective in the neutral condition of the transmission.

12. In a transmission, the combination of driving and driven members, planetary gearing interposed between the driving and driven members and comprising first and second gear units each including input, output, and reaction elements, the first gear unit having the input element thereof rotatable by the driving member, the second gear unit having the output element thereof rotatable with the driven member, a plurality of ratio establishing devices operative to render the gear units effective so as to provide a plurality of drive ratios through the transmission, one of the drive ratio changes requiring a reconditioning of both gear units, the ratio establishing devices including a brake for resisting rotation of one of the gear unit reaction elements in one direction so as to condition said one of the gear units for one drive ratio, and means causing the operation of the ratio establishing devices to be so correlated that during said one drive ratio change requiring a reconditioning of both gear units the ratio establishing devices for producing said one drive ratio change are rendered effective prior to said one drive ratio change while the brake is rendered ineffective and at the time of said one ratio change only the brake is rendered effective.

3,091,981
EPICYCLIC GEARBOXES FOR TRANSMISSION MECHANISMS
Lucien Pérus, Billancourt, France, assignor to Regie Nationale des Usines Renault, Billancourt, France
Filed Dec. 14, 1960, Ser. No. 75,765
Claims priority, application France Dec. 16, 1959
8 Claims. (Cl. 74—759)

1. Epicyclic gearbox with coaxial input and output shafts disposed on the same side of the gearbox, for vehicles comprising a transmission wherein the gearbox proper is on the side opposite to the engine in relation to the final reduction gearing and the differential, said gearbox comprising a first planetary gear train, a second planetary gear train, a third planetary gear train, a first brake means connected to the second gear train for providing the reverse drive, a second brake means for yielding the first speed ratio drive, a third brake means for yielding the second speed ratio drive, said brake means each having a rotatable element, a single clutch means for yielding the direct drive and having a driven element and a driving element, said first and second planetary gear trains having a common planet-carrier coupled to said output shaft, to the annulus gear of said third planetary gear train and to the driven element of said clutch means, the driving element of which is coupled to said input shaft and to the annulus gear of said first planetary gear train, the sun gear of the latter being coupled



by a common shaft to the sun gear of said third planetary gear train and to the rotatable element of said third brake means, and the planet-carrier of said third planetary gear train being coupled to the rotatable element of said second brake means and, by a common shaft, to the sun gear of said second planetary gear train, the annulus gear of which is coupled to the rotatable element of said first brake means.

3,091,982
METHOD OF SETTING LOCK BOLTS
George Siebel, Anaheim, Calif., assignor to Olympic Screw & Rivet Corporation, Downey, Calif., a corporation of California
Original application Feb. 17, 1959, Ser. No. 793,797. Divided and this application Jan. 9, 1962, Ser. No. 165,161
7 Claims. (Cl. 78—46)



1. A method of setting a fastener which includes a bolt having a stem for passing through aligned openings of members to be joined and a head for bearing against a surface of the aligned members, and a collar for positioning over the stem and against the opposite surface of the aligned members, including the steps of:
inserting the stem through the aligned openings of the members to be fastened;
positioning the collar over the exposed end of the stem;
applying a compression force to the collar to compress the members together against the head of the bolt;
and while maintaining this compression force, swaging the collar into the stem by pulling a swaging ring over the collar in a direction away from the aligned members.

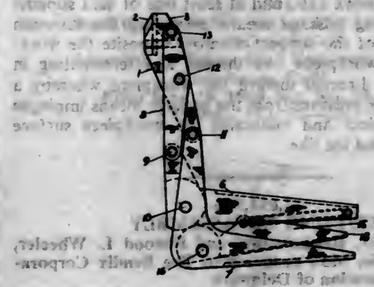
3,091,983
AUTOMOBILE BODY DENT REPAIR DEVICE
Charles Joseph Klus, 179 Palisade Ave., Garfield, N.J.
Filed Feb. 1, 1962, Ser. No. 170,480
1 Claim. (Cl. 81—15)

In a tool for removing dents from sheet metal including a lever, and a fulcrum block adapted to be engaged by an end portion of said lever, an upright lifting arm comprising an arm portion having a hole therethrough receivably engageable by an intermediate portion of said lever, a pin projecting from the lower end portion of said arm portion, a neck on said pin, a head on the end of said neck, a main shank having one end formed integrally with the lower end of said arm portion, an auxiliary shank, a ring on one end of said auxiliary shank, said ring having the opening therethrough of a size to receive



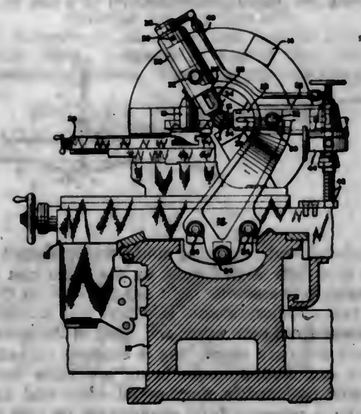
said pin head, said ring being conformably shaped to said neck, a first right angled hook on the other end of said main shank, and a second right angled hook on the other end of said auxiliary shank, said first and second hooks facing away from each other and lying in the same plane when said auxiliary shank ring is engaged on said neck, said first and second hooks being insertable separately into a hole provided in sheet metal when said auxiliary shank ring is removed from engagement on said neck.

3,091,984
AUTOMATIC LOCKING HANDLE MECHANISMS FOR TOOLS AND THE LIKE
Lajos Steiner, 2/1 Harriette St., Neutral Bay, New South Wales, Australia
Filed Nov. 6, 1961, Ser. No. 150,448
4 Claims. (Cl. 81—329)



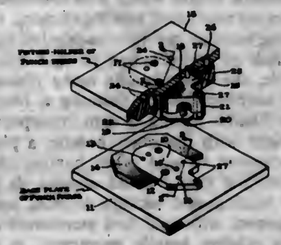
1. An automatic locking handle mechanism for tools and the like comprising a body member accommodating an operating handle means which is in continuous engagement with a spring motivated locking element, said handle means including handles pivotally connected together and an auxiliary link pivotally joined to said body member and one handle, the other handle being pivotally joined to said body member thereby forming a four bar linkage, said one handle having a cam incorporated about its point of pivot with the other handle, a pivot joining said locking element to said other handle, said locking element including a cam located around its pivot, and spring means biasing said locking element cam in continuous engagement with said first mentioned cam thereby prohibiting relative handle movement in one direction while allowing relative movement in the opposite direction.

3,091,985
FLUID OPERATED REST AND VIBRATION DAMPER FOR TURNING MACHINE
William D. Whalen, Cincinnati, Ohio, assignor to The R. K. Le Blond Machine Tool Company, Cincinnati, Ohio, a corporation of Delaware
Filed June 24, 1959, Ser. No. 822,485
3 Claims. (Cl. 82—38)



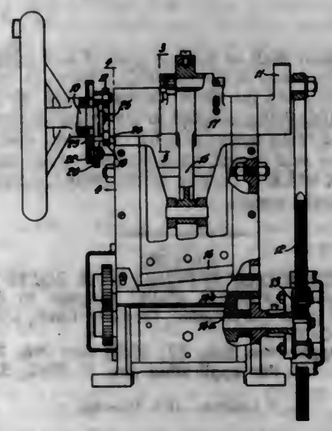
1. In a follow rest structure for a lathe; a bracket adapted for detachable connection with the lathe carriage and extending upwardly and partially about the work axis of the lathe and also extending longitudinally of the work axis from its point of connection with the carriage to the region of a tool on the carriage, bores in the bracket extending toward the said work axis, unitary support members reciprocable in said bores, means for supplying air under regulated pressure to the outer ends of said bores so as to urge the support members resiliently into direct supporting vibration damping engagement with a workpiece on said work axis, and at least one of said support members having passage means extending therethrough from the end of the support member opposite the workpiece to the workpiece end thereof and terminating in nozzle means directed toward the workpiece whereby a jet of air under pressure from the passage means impinges on the workpiece and maintains the workpiece surface free of chips and the like.

3,091,986
CUTTING DIE ASSEMBLY
John E. Tracey, Relsterstown, and Elwood L. Wheeler, Owings Mills, Md., assignors to The Bendix Corporation, a corporation of Delaware
Original application July 29, 1957, Ser. No. 674,927, now Patent No. 3,043,165, dated July 10, 1962. Divided and this application Oct. 23, 1958, Ser. No. 769,108
5 Claims. (Cl. 83—128)



1. In a cutting die assembly, a punch plate, a blade-holding block, a cutter blade affixed to the periphery of said block and having a recessed cutting edge adapted to telescope over said punch plate during the cutting operation, said recess providing the necessary clearance between the effective edge of said punch plate and said blade, a mounting plate adapted to support said blade-holding block and blade assembly, and means for backing up said blade comprising a hardenable plastic composition material secured to the periphery of said blade and the adjacent surface of said mounting plate.

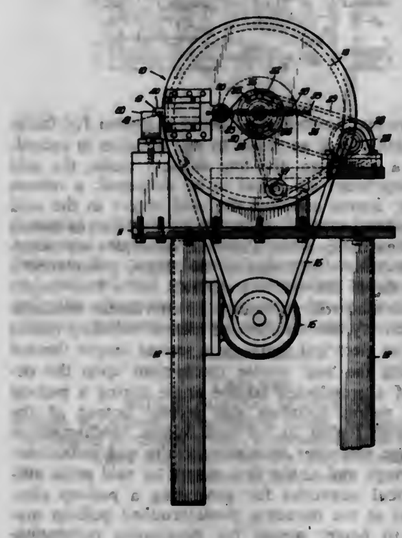
3,091,987
GUILLOTINES
Lionel Selby Wallis, 48 Lady Byron Lane, Knowle, England
Filed Aug. 21, 1956, Ser. No. 605,266
Claims priority, application Great Britain Sept. 7, 1955
5 Claims. (Cl. 83—250)



1. In a guillotine, a relatively stationary support, a continuously driven power input shaft rotatably mounted on said support, relatively fixed and reciprocable guillotine blades mounted on said support, a single revolution type clutch comprising a driven clutch member mounted on and eccentric with respect to said shaft, means directly connecting the reciprocable guillotine blade to said driven clutch member for translating eccentric rotation of said driven member to reciprocation of said reciprocable blade, a clutch drive member fixed on said shaft, a clutch pin disposed for movement between a clutch disengaged position and a clutch engaging position where it positively couples said driven clutch member to said clutch drive member, and means comprising cam means mounted on said shaft and operatively connected to said clutch pin for selectively causing such clutch engagement as to effect a single reciprocation of said reciprocable guillotine blade upon each predetermined number of revolutions of said shaft.

3,091,988
WIRE CUTTING MECHANISM
Albert Bonds, Cleveland, Ohio, assignor to Preformed Line Products Company, Cleveland, Ohio, a corporation of Ohio
Filed Mar. 22, 1957, Ser. No. 647,871
2 Claims. (Cl. 83—355)

1. A rotary cutter comprising a fly wheel adapted to be rotated about its axis, a hollow shaft drivingly connected to said fly wheel, motor means drivingly engaging said hollow shaft for rotating said fly wheel, a movable knife reciprocally mounted on said fly wheel, said knife having a cutting portion for projecting beyond the periphery of said fly wheel when said knife is extended, a relatively stationary cutting edge in a position with respect to said knife when extended to cut stock continuously advancing thereto, means for advancing stock to be cut along a path that is substantially parallel to the rotational axis of said fly wheel and cross-wise to the rotary path of movement of said knife, means normally urging said knife to a retracted non-cutting position, cam means coaxial with said fly wheel and in continuous engagement with said knife for selectively moving the cutting portion of said knife beyond the periphery of said fly wheel, a drive shaft member extending through said hollow shaft and having said cam means mounted thereon, means extending between said hollow shaft and said drive shaft for driving the latter, said means rotating said cam means in the same direction as said fly wheel at an angular velocity less than said fly wheel to move said knife in a projected position in a regular time sequence of at least more than one revolution of said fly wheel.

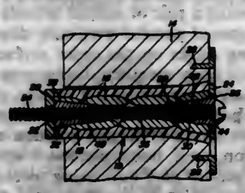


3,091,989
INSTRUMENT MOUTHPIECE
Joseph S. Marrano, 318 Milan Ave., Youngstown, Ohio
Filed May 6, 1960, Ser. No. 27,383
2 Claims. (Cl. 84—383)



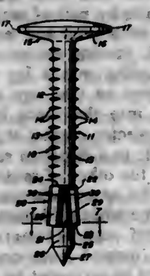
1. A mouthpiece for a single reed woodwind instrument, said mouthpiece having a cylindrical bore extending inwardly from one end thereof, the opposite end of said mouthpiece having a conventional reed lay, said mouthpiece having a cruciform passageway extending from said lay to said bore, said cruciform passageway having top, bottom, and side channels, said top channel extending from the tip of said mouthpiece and merging into said bore, said bottom channel extending from a point inwardly of the inner end of said bore outwardly to said lay.

3,091,990
HOLLOW TUBULAR SPIRALLY WOUND COVERED METALLIC ANCHOR
Harland E. McVittie, Chicago, Ill. (P.O. Box 986, Maitland, Fla.)
Filed Mar. 24, 1960, Ser. No. 17,326
4 Claims. (Cl. 85—2.8)



1. In an expansible anchor, the combination of a substantially tubular core comprising a set of spirally wound wires, a tubular jacket of resilient material enclosing said core, a pair of frusto-conical expanding members positioned in the respective end portions of the core and provided with axial bores, the bore of one of said expanding members being screw-threaded, an expanding screw rotatably extending through the bore of the other expanding member and through the intermediate portion of the core and threadedly engaging the member with the threaded bore, whereby when said screw is tightened said expanding members may be drawn together to radially expand the end portions of said core and the end portions of said jacket enclosing the same, an end plate disposed at one end of said core and projecting radially outwardly beyond the outer surface of said sleeve, one of the wires of said core being secured to said end plate, the other wires of the core being detached from the end plate, and anchor means on the end plate for preventing rotation thereof when said screw is tightened.

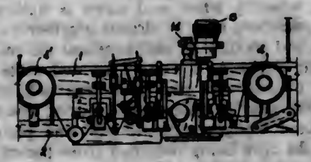
3,091,991
RAILROAD SPIKE WITH EXPANDING LOCKING SLEEVE
Meredith H. Baker, 6910 Eastondale Ave., Long Beach, Calif.
Filed June 28, 1960, Ser. No. 39,388
1 Claim. (Cl. 85—23)



In a lock track spike, a shank having a main body portion of cylindrical formation, diametrically opposed spaced apart rows of teeth which are arranged in superimposed relation on said main body portion, said teeth having sharp outer edges; a head on the upper end of the shank and said head being provided with diametrically opposed keyways adjacent its outer periphery, said spike further including a reduced section below said main body portion, the reduced section being shaped so that its upper portion is circular in cross-section while the lower portion

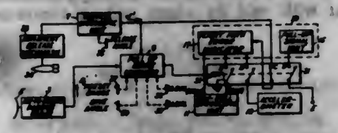
is elliptical in cross-section, the reduced section having a tapered formation so that the reduced section gradually increases in its cross-sectional area from top to bottom, shoulders defined adjacent the upper and lower ends of the reduced section; a cylindrical section below said reduced section, a pointed tip below said cylindrical section, and a locking means on said reduced section, said locking means comprising a pair of similar arcuate body members each having spaced parallel vertically disposed longitudinally extending ridges on the outer surfaces, the interior of each of said body members being provided with a recess substantially complementary to the configuration of the adjacent portion of said reduced section when said body members are in a normal position relative to said reduced section, said body members upon rotation of said shank a quarter of a turn being forced outwardly on said reduced section so as to expand into gripping engagement with the adjacent portions of a tie when said shank has been driven into said tie.

3,091,992
FILM SELECTION AND DRIVE MEANS IN A MULTIPLE FILM PROJECTOR
Vittorio Bertoni, 38 Via Frapolli, Milan, Italy
Filed Nov. 17, 1959, Ser. No. 853,491
Claims priority, application Italy Nov. 18, 1958
3 Claims. (Cl. 88—17)



1. In a multiple film projector, in combination, a plurality of pairs of film supporting means, the film supporting means in each pair being spaced from each other in a first direction and supporting the film movable in said first direction from one to the other of said film supporting means of said pair, and said plurality of pairs of film supporting means being arranged spaced from each other in a second direction substantially normal to said first direction so that said films are located in a plane; projector means having a pair of sections arranged spaced from and opposite each other and respectively on opposite sides of said plane; moving means operatively connected to said film supporting means for moving the same in said second direction so that any of said films may be selectively moved into the space between said pair of sections of said projector means, at least one of said sections being movable in a direction substantially normal to said plane toward the other of said other sections so that a film moved in the space between said sections will be engaged by the same when said movable section is moved toward the other of said sections and so that said film during movement thereof from one to the other of its support means may be projected by said projector means, said moving means comprising a pair of endless chains respectively located in two substantially parallel planes spaced from each other in said first direction and being operatively connected to said film supporting means for carrying the latter, a plurality of sprocket wheels engaging said endless chains for guiding the same, and drive means operatively connected to at least one of said sprocket wheels for turning the same about its axis, whereby by driving said endless chains only in one direction by said drive means any of said films may be selectively moved into the space between said pair of sections of said projector means.

3,091,993
DIVE-TOSS AIR-TO-GROUND DELIVERY SYSTEM
Paul L. Brink and Charles E. Graves, Indianapolis, Ind., and Clare D. McGillem, Flint, Mich., assignors to the United States of America as represented by the Secretary of the Navy
Filed July 3, 1957, Ser. No. 669,904
18 Claims. (Cl. 89—1.5)
(Granted under Title 35, U.S. Code (1952), sec. 266)



5. A dive-toss air-to-ground delivery system for facilitating the delivery of an object to a destination in accordance with a prechosen dive-toss delivery tactic, the said system comprising: an object to be delivered; a release mechanism; means coupling the said object to the said release mechanism; first, second, third, and fourth means for producing independent electrical quantities representing instantaneous slant-range to the target, instantaneous pitch attitude of the delivery aircraft on a first output thereof, yaw and roll attitudes, and curvilinear acceleration, respectively, the said second means including means producing an electrical signal on a second output thereof for actuating the said release mechanism upon the occurrence of a preselected release angle during a pull-up maneuver; means coupling said second output of the last-mentioned means to the said release mechanism; a pull-up range computer responsive to the said instantaneous slant-range and to the first output of said pitch attitude electrical quantities for generating a pull-up electrical signal at the instant a predetermined pull-up maneuver is to begin; means for developing perceptible flight-path-error indications; means passing the roll-attitude electrical quantity from the said third means to the said flight-path-error indicator; means for producing a perceptible indication of the instant when the predetermined pull-up maneuver is to begin; and means responsive to the said pull-up electrical signal for energizing the said pull-up indicating means and for rendering the aforesaid flight-path-error-indicating means unresponsive to the aforesaid pitch attitude electrical quantity through said second output from the said second means, and responsive to the said acceleration and yaw electrical quantities, respectively, such that the said flight-path-error-indicating means registers only the errors in roll and pitch during the dive portion and only the errors in yaw, roll and acceleration during the pull-up portion of the aforesaid dive-toss delivery tactic.

3,091,994
GUN TURRET
Åke T. G. Segerberg, Karlskoga, Sweden, assignor to Aktiebolaget Bofors, Bofors, Sweden, a corporation of Sweden
Filed Nov. 3, 1959, Ser. No. 850,604
Claims priority, application Sweden Nov. 20, 1958
5 Claims. (Cl. 89—36)

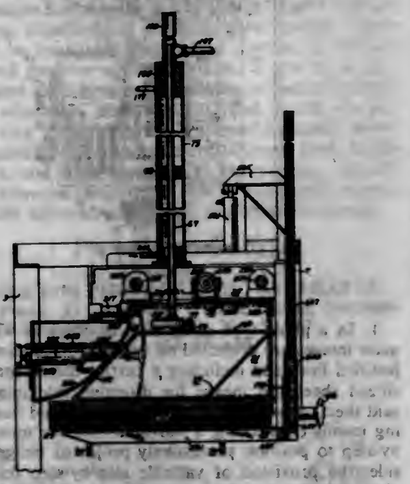
1. A protective turret for a gun with a gun barrel movable in elevation and traversing direction, said turret comprising a first shielding means in the form of two casings mounted for joint rotation about a common vertical axis also constituting the axis for traversing the gun barrel, each of said casings has a plane wall, said two walls facing each other spaced apart in parallel relation to define a slot therebetween, said slot extending in a vertical plane and being of a length at least equal to the elevational range of the gun barrel, a second shielding

means in the form of a ring member disposed in said slot in a vertical plane and of uniform width at least equal to that of the slot, each of said walls including a circular opening accommodating the circumferential margins of said ring member, said ring member being



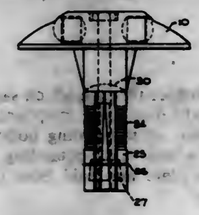
mounted rotatable jointly with the gun barrel about the horizontal elevational axis thereof, and sealing means between the circumferential rims of said ring member and each of said casings, said sealing means extending arcuately along the length of said slot in the direction of relative movement between said ring member and casings.

3,091,995
BOX FORMING MACHINE
Robert W. Allison, Kensington, Calif., assignor to Carol Packaging Machinery, Inc., a corporation of California
Filed Aug. 24, 1959, Ser. No. 835,699
17 Claims. (Cl. 93—53)



4. In a box forming machine, means for elevating from a loading position, a stack of collapsed boxes of the type having at one end, a pair of opposing inner flaps and a pair of opposing outer flaps; means for successively lifting individual boxes from such stack and expanding the same to partially open condition, said last means including a cylinder, a piston in said cylinder having a piston rod extending longitudinally of said cylinder and terminating at one end in a suction head, said suction head comprising a suction cup for engagement with the uppermost box of such stack means for driving said suction head into contact with said uppermost box, means for developing sub-atmospheric pressure in said suction head, means for developing a higher than atmospheric back pressure against said piston; and means following such contact for reducing the pressure above said piston to a value below said back pressure, whereby the resulting rebound of said piston to a position of balance will cause said suction head to move a limited distance upwardly to effect separation of the uppermost box from the stack in preparation for completion of the lifting operation.

3,091,996
MARKERS FOR ROADS
Robert Stuart Macrae, London, England, assignor of one-half to Garringtons Limited, Stafford, England, a British company, and one-half to Gydelite Limited, London, England, a British company
Filed Oct. 28, 1959, Ser. No. 849,342
Claims priority, application Great Britain Oct. 30, 1958
1 Claim. (Cl. 94—1.5)

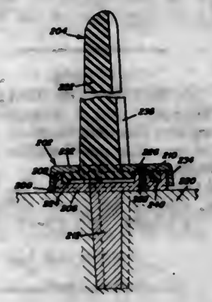


A road marker comprising:
(*a*) A generally dome-shaped head formed with a central opening therethrough and a recess in the upper surface of the head around the upper end of the central opening, the head having a substantially planar underside adapted to engage the road surface when the marker is in operative position on the road;
(*b*) A generally cylindrical boss extending downwardly below the underside of the head to an extent sufficient to permit the boss, when the marker is in operative position, to enter a prepared hole formed in the road, the boss having an axial passage therethrough registering with the opening in the head;
(*c*) Elements on said boss preventing rotation of the marker when the latter is in operative position on the road, the lower edge of the boss forming an abutment having a concave depression and the adjacent segment ends being rounded and rockably engaging the depression;
(*d*) A plurality of segments provided with external teeth and mounted loosely over the underlying portion of the bolt, said nut moving axially of the bolt upon rotation of the bolt to effect displacement of lower parts of the segments outwardly away from the bolt axis comprising anchoring means in alignment with said boss having its upper end in contact with said abutment and an axial passage aligned with the axial passage of the boss;
(*e*) Expanding means whereby parts of the anchoring means can be laterally expanded to engage the sides of the prepared hole in the road, said expanding means comprising a bolt extending through said opening and passages having a head disposed in said recess, and a nut cooperating with the bolt and the anchoring means and adapted, upon rotation of the bolt in one sense to effect lateral expansion of the anchoring means.

3,091,997
HIGHWAY PICKET AND REFLECTIVE MARKER
Ray H. Byrd, 2746 Parkridge, Shreveport, La.
Filed Jan. 19, 1960, Ser. No. 3,360
8 Claims. (Cl. 94—1.5)

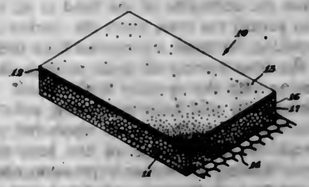
5. A highway marker comprising a base plate adapted to seat on a pavement, means for fastening said base plate

to said pavement, said base plate having a downwardly recessed top surface and a peripheral upstanding rim, a resilient vertically extending marker picket having a diametrically enlarged foot portion received in said recessed top surface and within said rim, a top plate having



an apertured top surface through which said marker picket slidably extends and a depending peripheral rim embracing said upstanding rim, an upstanding hollow boss on said base top surface within said upstanding rim, a fastener engaging said top plate and said boss for securing the former to said base.

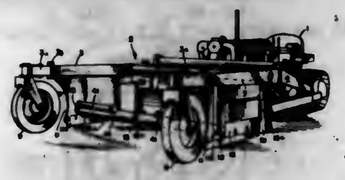
3,091,998
SYNTHETIC SKI SLOPE
Henry W. Wehr, Midland, and Norman J. Guziak, St. Charles, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Filed Nov. 2, 1959, Ser. No. 850,393
5 Claims. (Cl. 94—3)



1. A synthetic ski and like slope comprising
a base layer and having a skiing surface layer superimposed thereover, said base layer being an expanded flexible thermoplastic sheet,
said surface layer being of a thickness of at least about ⅛ inch and comprised of generally spherical smooth-surfaced particles having a diameter of from about 0.01 inch to about 0.375 inch, and an adhesive,
said adhesive securely bonding said particles to each other and to said base layer and
said generally spherical particles projecting above said adhesive to provide a skiing surface.

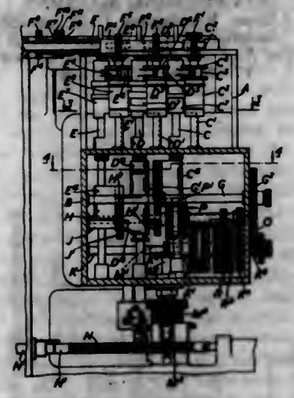
3,091,999
BASE SPREADER
Raymore D. MacDonald, Eureka, Ill., assignor to Ulmac Equipment Company, El Paso, Ill., a corporation of Illinois
Filed Jan. 7, 1960, Ser. No. 1,026
4 Claims. (Cl. 94—44)

3. A wheeled base spreading apparatus for attachment to a tractor having a dozer blade for effectively applying base aggregate of a substantially constant depth on a road bed comprising longitudinal frame members, means to connect the frame members to the tractor, adjustable cross beam members secured to the frame members, side panel members secured to the frame members, adjustable extension doors hinged at their forward edges to said side panel members, a sectional strike-off blade, a gate member hinged to each end of said sectional strike-off blade, said gate member being overlapped by the extension doors, and vertically adjustable means supporting



the sectional strike-off blade on said one of said cross beam members to evenly spread a layer of aggregate on the road bed including a rearward vertical portion connected to the rear of the strike-off blade for contact with the tractor dozer blade.

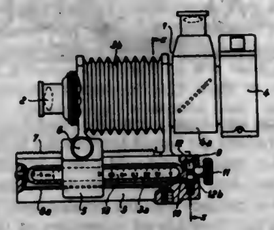
3,092,000
STEP BY STEP LINEAR FEED MECHANISM FOR PHOTO-TYPE COMPOSING MACHINES
Joseph Henry Williams, Reigate, England, assignor to The Monotype Corporation Limited, Fetter Lane, London, England
Filed Nov. 20, 1959, Ser. No. 854,336
10 Claims. (Cl. 95—4.5)



1. In a photo-type composing machine in which character images are projected on to a sensitized sheet to form justified lines and including a carrier means for said sensitized sheet and means for directing said images on to said sheet, one of said carrier means and said image directing means comprising a movable member movable step-by-step to position successively projected images side-by-side; the provision of variable step-by-step feed mechanism for moving said movable member, said mechanism comprising an output member, means connecting said output member to said movable member for movement as one therewith, a plurality of slide members, means for reciprocating said slide members with a constant stroke, a plurality of feed racks each reciprocable by one of said slide members, a plurality of selector members one associated with each slide member and the feed rack reciprocated thereby, means connecting said selector member to one of said slide member and feed rack for reciprocation therewith, means on said selector member adjustable to produce variable lost motion between said selector member and the other one of said slide member and feed rack, means for moving said adjustable means, a plurality of pinions one driven by each of said feed racks

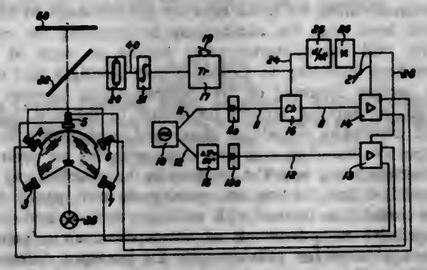
as the rack moves in one direction, differential mechanisms to combine the movements of the pinions, an output shaft to which the said combined movements are applied, and means for converting rotation of said output shaft intto linear movement of said output member.

3,092,001
ADJUSTABLE OBJECTIVE CAMERA
Werner Schlappi, Asslar, near Wetzlar (Lahn), Germany, assignor to Ernst Leitz Gesellschaft mit beschrankter Haftung, Wetzlar (Lahn), Germany
Filed Nov. 28, 1960, Ser. No. 72,088
Claims priority, application Germany Dec. 9, 1959
3 Claims. (Cl. 95—45)



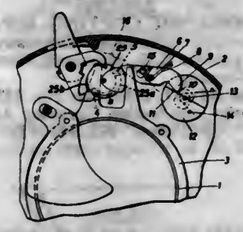
1. In a camera, an objective guide structure attached to a camera, an objective carrier slidably mounted on said guide structure, an objective lens detachably mounted on said objective carrier, indicator means on said objective lens and shaped to indicate the focal length of the lens, and actuating ring pivotally housed in said objective carrier, an adjustable scale member mounted on said guide structure and having a plurality of scales thereon representing objectives of different focal lengths which scales can be selectively moved into position to indicate the adjusted position of the objective, a gear train permanently and drivingly interconnecting said actuating ring and said adjustable scale member, and a cam on said actuating ring and engageable with said indicator means so that inserting objective lenses of different focal length will adjust said scale member to the position wherein the scale corresponding to the objective lens will cooperate with the adjusted position of the objective carrier.

3,092,002
SHUTTER FOR PHOTOGRAPHIC APPARATUS
Helmuth Frank, 33 Gotenweg, Wetzlar (Lahn), Germany
Filed Sept. 23, 1960, Ser. No. 57,987
7 Claims. (Cl. 95—58)



1. A shutter for photographic apparatus comprising a pair of shutter blades, an A.C. source, a first circuit connected with said A.C. source, a plurality of series connected electric magnets in said first circuit, phase shifting means in said first circuit displacing the phase of current as supplied by said A.C. source by 90°, amplifier means in said first circuit, a second circuit connected with said A.C. source, amplifier means and another plurality of series connected electric magnets in said second circuit, said second plurality of electric magnets being disposed in alternating spaced arrangement with said first plurality of electric magnets, and all of said magnets being spaced peripherally about said shutter blades.

3,092,003
RETARDING DEVICE FOR PHOTOGRAPHIC SHUTTER
Gerd Kiper, Unterhaching, near Munich, Germany, assignor to Agfa Aktiengesellschaft, Leverkusen-Bayerwerk, Germany, a corporation of Germany
Filed Mar. 30, 1961, Ser. No. 99,583
Claims priority, application Germany Apr. 14, 1960
26 Claims. (Cl. 95—63)

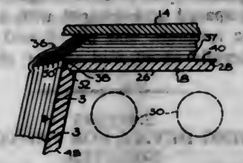


1. A retarding device for a photographic shutter having operating means for opening and closing it and a moving element connected to it characterized in that the exposure time provided by said shutter is a function of the speed of movement of said moving element, said retarding device comprising a retarding lever including driven and retarded ends, pivot means rotatably mounting said retarding lever with its driven end interposed in the path of said moving element for engaging said moving element to retard it and said shutter, a retarding mass, bearing means rotatably mounting said retarding mass in the path of said retarded end of said retarding lever, said retarding lever and mass having contacting surfaces which engage each other at a moment arms relative to their axis of rotation which vary during their contacting movement to cause the retarding force transmitted through said lever to vary during the operation of said shutter, and control means engaged with said retarding lever for varying the amount of initial interposition of said driven end of said retarding lever into the path of said moving element and the initial moment arm of said contacting surfaces relative to the axis of rotation of said retarding mass at the beginning of said contacting movement to vary its retarding effect upon said shutter whereby slower shutter speeds are provided with greater amounts of said interposition and smaller initial moment arms.

3,092,004
LIGHT BOX
Richard B. Lewis, Hermosa Beach, Calif., assignor to Thompson Ramo Wooldridge Inc., Canoga Park, Calif., a corporation of Ohio
Filed Feb. 23, 1960, Ser. No. 10,162
9 Claims. (Cl. 95—73)

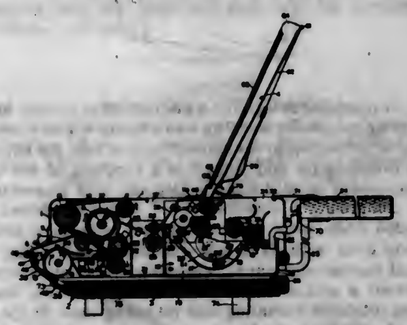
1. For use in a light box in which is supported a light-transmissive work plate, said work plate having a working surface upon which light-sensitive media may be placed and an illuminable surface designated for exposure to a light source, said work plate having at least one peripheral working edge designated for useful contact at its extremity with light-sensitive media, a structure comprising: a supporting member comprised of a light-transmissive material having one edge thereof con-

formed for close fitting abutment with the peripheral working edge of the work plate and a light-reflective coating applied to that surface of said supporting member



which is closest to the working edge of said work plate when said supporting member is placed in supporting relationship to said work plate.

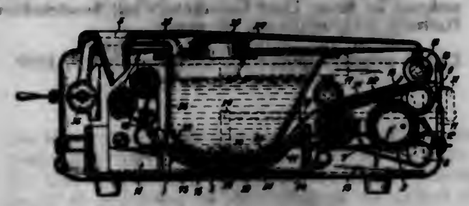
3,092,985
PHOTOGRAPHIC COPYING APPARATUS
Walter Limberger, Hamburg, Germany, assignor to Lumoprint Zindler K.G., Hamburg, Germany, a corporation of Germany
Filed July 17, 1959, Ser. No. 827,833
Claims priority, application Germany Aug. 16, 1958
15 Claims. (Cl. 95—75)



1. A photographic copying apparatus comprising a housing, a holder on said housing adapted to carry a stack of photosensitive blanks, exposure and developing means for said blanks in said housing, transport means in said housing for advancing successive blanks from said holder through said exposure and developing means, said housing being provided with an opening giving access to an uppermost blank of said stack whereby said uppermost blank can be manually brought into engagement with said transport means within the confines of said housing, closure means for covering said opening, said transport means comprising a pair of coaxial rollers rotatable about a horizontal axis and flanking said opening, guide means adjacent said rollers, and loading means resiliently urging said guide means into contact with said rollers, said holder being located substantially horizontally underneath said rollers in a position in which an edge of the uppermost blank is adjacent the lower surface of said rollers.

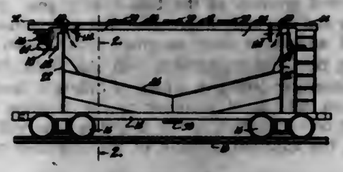
3,092,986
DEVICES FOR MAKING PHOTOGRAPHIC COPIES
Walter Limberger, Hamburg, Germany, assignor to Lumoprint Zindler K.G., Hamburg, Germany
Filed Feb. 5, 1960, Ser. No. 7,012
Claims priority, application Germany Feb. 24, 1959
6 Claims. (Cl. 95—77.5)

1. In a device for making copies, a receptacle for a bath of development liquid, guide means for negative and positive layer carriers extending to and through said bath along and spaced from the bottom of said bath receptacle, a pair of driven squeeze rollers adjacent the outlet end from said bath receptacle for pressing said layer carriers against each other in pulling them out of the development bath, a development liquid supply container disposed above said bath receptacle and having its bottom part within the confines thereof and in contact with the development liquid therein to form an upper boundary for the path of said layer carriers and an upper guide surface for one of said layer carriers through the bath receptacle, connection means providing communication between said



bath receptacle and supply container and having an opening that determines the liquid level in the bath receptacle, and means for interrupting said communication between the supply container and the bath receptacle said upper guide surface in contact with the development liquid, when considered in the direction of movement of the layer carriers, extending in a downwardly inclined direction at the inlet side and in an upwardly inclined direction at the outlet side.

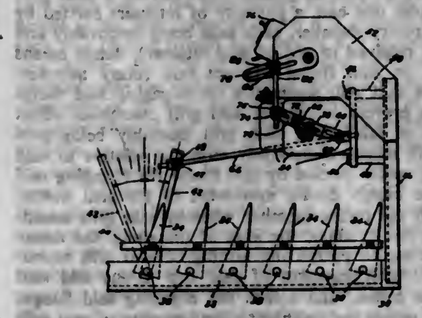
3,092,987
VENTILATING SYSTEM FOR BULK CARRIERS
Halbert Houston Boyd, Kansas City, Mo., assignor to Seaboard Allied Milling Corporation, Kansas City, Mo., a corporation of Massachusetts
Filed Sept. 13, 1960, Ser. No. 55,687
4 Claims. (Cl. 98—6)



1. In a bulk carrier, an enclosure provided with a top and a pair of opposed end members each having an opening therethrough, said enclosure being adapted to contain therein a bulk material having an uppermost level spaced from said top and below said openings; means on said members at the openings in the latter for intercommunicating the space between the top and said uppermost level with the atmosphere surrounding the enclosure; said intercommunicating means on each of said members including an L-shaped duct having a first tubular section mounted on the corresponding member and a second tubular section connected to the first section and depending therefrom in spaced relationship to the respective member, said first section having an open end communicating with the opening in the member and said second section having an opening therein spaced from the connection thereof with said first section; and means responsive to movements of atmospheric air relative to the enclosure for providing an air pressure differential between the openings in said members, said last mentioned means comprising an open top, hollow element, secured to the second section of the duct on one of said members and in communication with the opening in said second section and a turbine vent mounted on said element and in communication with the opening in the top thereof.

3,092,988
AIR SCREENS
Ernest F. Gygax, Glendale, Mo., assignor, by mesne assignments, to Universal Match Corporation, Ferguson, Mo., a corporation of Delaware
Filed Nov. 6, 1957, Ser. No. 694,985
11 Claims. (Cl. 98—36)

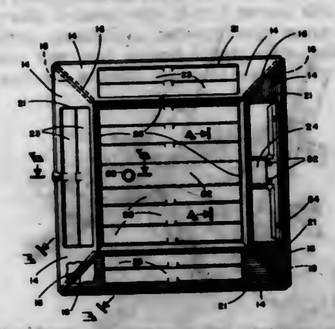
1. In a control device for a movable component of an air discharge assembly which can be moved to change the deflection of the air of an air screen and for the velocity-controlling member of said air screen, an electric motor that has a rotatable shaft and that has a potentiometer with a movable contact that is secured to said rotatable shaft and that moves whenever said shaft moves, a tapped resistance that has the taps thereof connectable to spaced points on said potentiometer to constitute a resistance bridge, a variable output transformer that has a control arm and that has its output connected to said velocity-controlling member, a link means extending between said control arm of said transformer and said shaft of said motor to enable rotation of said shaft to vary the output of said transformer, a second link means that is moved by said shaft of said motor and that is adapted



to extend to said movable component of air discharge assembly to move said movable component of said assembly, and a sensing device that senses changes which if not compensated for could result in undesired deflection of said air screen and that is connected to the taps of said tapped resistor and that selectively passes current through various of the taps of said tapped resistor to unbalance said resistance bridge, said motor responding to the unbalancing of said resistance bridge to rotate its shaft and thereby move said link means, said link means causing said velocity-controlling member to provide high velocity when said movable component of said air discharge assembly is in fully moved position.

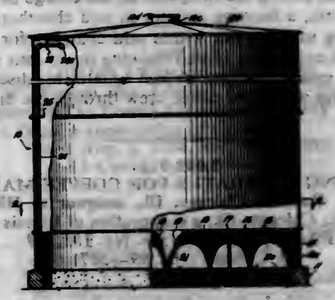
3,092,989
DIFFUSER
John Goettl, Phoenix, Ariz., assignor to McGraw-Edison Company, Milwaukee, Wis., a corporation of Delaware
Filed Mar. 10, 1960, Ser. No. 14,149
6 Claims. (Cl. 98—40)

5. A diffuser for delivering air from a ceiling outlet comprising: four congruent isoceles trapezoidal frame members disposed angularly adjacent to each other and forming an assembly having an inverted generally frusto-pyramidal shape; each frame member having an opening therein; first louvers pivoted in each of said openings; said diffuser having a square main opening between said frame members; and second louvers pivotally mounted in said main opening; said frame members all substantially identical parts; both of said first and second louvers substantially identical parts; adjacent portions of said frame members at said corners of said diffuser having folded hook portions directed away from each other; and a clip at each of said corners, said clip having a pair of folded hook portions directed toward each other and



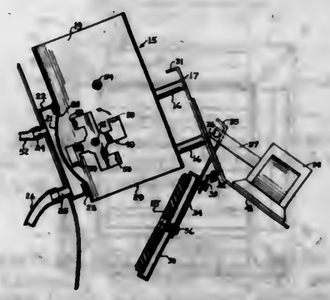
clipped over said hook portions of adjacent frame members thereby holding them together at the corners of said diffuser.

3,092,990
STORAGE STRUCTURE WITH BREATHING MEANS
Richard A. O'Dell, Independence, Mo., assignor to Butler Manufacturing Company, a corporation of Missouri
Filed June 2, 1961, Ser. No. 114,526
4 Claims. (Cl. 99—235)



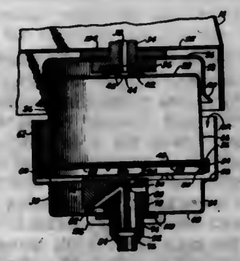
1. Apparatus for the storage and protection from decomposition of material subject to change due to contact with the atmosphere comprising a substantially gas-tight enclosure for said material having a main floor, a sub-floor spaced beneath the main floor, a plurality of elongated, arcuate tunnel elements having parallel longitudinal edges resting on the sub-floor and including end caps which have lower edges also engaging the sub-floor, said tunnel elements defining independent hollow compartments beneath the main floor, a fill between the main floor and sub-floor and encasing and covering the tunnel elements, gas communicating pipe elements serially connecting said compartments and forming a continuous conduit composed of said pipe elements and compartments, means connecting one end of said conduit with the interior of said enclosure and operable to permit flow of gas into said conduit through said one end and from said conduit into said enclosure upon expansion or contraction of the gas in said enclosure, and means connecting the other end of said conduit with the atmosphere.

3,092,011
COFFEE BREWER
William Gee, Jr., 936 Hillside Drive, Island Lake, Ill.
Filed Mar. 23, 1961, Ser. No. 110,597
8 Claims. (Cl. 99—287)



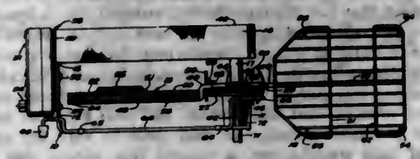
1. In an automatic coffee brewer the combination of a brewing chamber normally open at both ends and adapted to receive a charge of ground coffee through one open end thereof, said brewing chamber providing brewing liquid inlet ports and a coffee brew discharge port, an electrically operated valve means for sealing off the discharge port during the brewing of coffee in the brewing chamber; a pivotal closure for sealing the opposite open end of said brewing chamber prior to the reception of the ground coffee therein, means for pivoting said closure means into sealing position with respect to the opposite open end of said chamber, a source of heated brewing liquid, means for delivering the heated brewing liquid through the inlet ports into said chamber subsequent to the sealing of the opposite open end of said chamber and prior to and during the reception of the charge of ground coffee therein, a brewing agitator in said chamber, means for rotating said agitator within said chamber for mixing the ground coffee and heated brewing liquid into a coffee brew, and means provided by said agitator for discharging with a pump action the coffee brew through the discharge port.

3,092,012
BREWING APPARATUS FOR COFFEE MAKER
Edward J. Ruhnke, Chicago, Ill., assignor to Hill-Shaw Co., Chicago, Ill., a corporation of Illinois
Filed Apr. 6, 1961, Ser. No. 101,189
6 Claims. (Cl. 99—307)



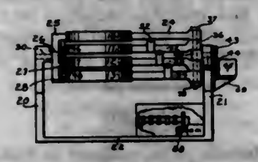
4. In a coffee maker including means for supplying hot water under pressure to a coffee cartridge, the combination of a cup-shaped coffee cartridge removably connectable to said supply means, water inlet means on the upper end of said cartridge communicating with said supply means, drain means detachably connected on the lower end of said cartridge, a cartridge holder for supporting said coffee cartridge, an infusion reservoir in said holder, having a discharge opening therein, said reservoir communicating with the atmosphere siphon discharge means in said reservoir associated with said discharge opening, overflow discharge means in said reservoir associated with said discharge opening, and means on said holder for removably securing said cartridge and holder in said coffee maker.

3,092,013
ROTARY BARBECUE GRILL
Arthur J. Koser, 1800 Radiance Drive, Bakersfield, Calif.
Filed Apr. 3, 1961, Ser. No. 100,196
11 Claims. (Cl. 99—397)



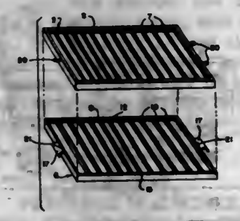
1. In a barbecue device, a frame, a rotary member mounted on said frame for rotation about a vertical axis, a plurality of grill assemblies each having a stud projecting from one end, a plurality of retainers carried by the said rotary member, each stud being removably and rotatably received in one of said retainers, flange means mounted on said frame adjacent said rotary member, means on said grill assemblies for engaging said flange means to prevent turning of said grill assemblies about the axes of said studs, each grill assembly being provided with means transversely mounted relative to said stud, trip means carried by said frame for engaging said transverse means during movement of the grill assemblies with the rotary member whereby said grill assemblies are turned about the axes of the studs, the flange having a gap to permit the turning of said grill assemblies by interengagement of said trip means and said transverse means, and means for engaging said flange-engaging means for completing the inverting of said grill assemblies upon further movement of said rotary member.

3,092,014
PANCAKE BAKING APPARATUS
Arthur J. Macchi, 216 Dutcher St., Hopedale, Mass.
Continuation of application Ser. No. 840,713, Sept. 17, 1959. This application Feb. 21, 1962, Ser. No. 176,857
10 Claims. (Cl. 99—423)



4. Baking apparatus comprising a top grill and lower grills vertically attached therebeneath which provide opposed pairs of first and second baking surfaces on juxtaposed, substantially parallel sides, the first baking surfaces being initially on the top sides of the lower grills and the second baking surfaces being initially on the under sides of the grills opposed to the first baking surfaces, a horizontal arm attached to each lower grill, a shaft mounted for revolution about a horizontal axis, means for rotating the shaft, a body carried by said shaft, a vertical axis pivot means on said body which supports the outer ends of said arms and provides for a separate lateral swinging of the arms and exposing the grills for the reception of batter and means for releasably holding the grills and their arms in a parallel displacement.

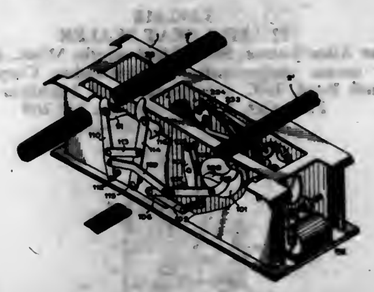
3,092,015
BARBECUE GRILL
Roy C. Tucker and Opal L. Tucker, both of 110 E. Short, Independence, Mo.
Filed Mar. 6, 1962, Ser. No. 177,329
1 Claim. (Cl. 99—446)



A barbecue grill of the character described, comprising a pair of rectangular grills nested one on top of the other, the top grill comprising a frame and a plurality of longitudinally spaced drip bars, each bar being trapezoidal in cross section, and the bottom grill comprising a frame and a plurality of longitudinally spaced trough bars, each one of the bars having one long side the same height as the said frame of which it is integrally formed, each one of said trough bars having a V-shaped depression therein, one side of the depression terminating in a rounded edge the same height as the said frame and the other side of the said depression terminating in a rounded upper edge of the side that is approximately three-quarters as high as that of the first mentioned side of the same trough bar to which it is parallel, the trough bars in the said bottom grill being so located that when the said top grill is placed thereon the drip bars of the said top grill will be over each space that is between each one of the trough bars in the said bottom grill, and a mechanism at each end of the said barbecue grill temporarily securing the said top grill to the said bottom grill, each mechanism embodying an inverted U-shaped hand lift having a long leg secured to the end of the frame of the said bottom grill, at least one headed lock pin secured to each end of the frame, each of said legs having at least one opening therein in vertical alignment with, and each receiving its aligned pins, the said headed lock pin projecting outward as to permit insertion in the opening in the long leg of the said inverted U-shaped hand lift when the said top grill is placed on the said bottom grill, the insertion of the said locking pin of the said top grill in the opening in the said long leg of the said inverted U-shaped hand lift being possible by reason of a difference in size of the two grills.

3,092,016
WIRE TYING MACHINE
Nöel Nebout, Montlucon, and Jean Missioux, Puteaux, France, assignors to Societe Aries, La Bougie B.G. & S.F.E.D.R. reunies, Paris, France, a company of France
Filed Feb. 1, 1960, Ser. No. 5,702
Claims priority, application France Feb. 19, 1959
6 Claims. (Cl. 100—7)

1. A machine for tying packages with wire, comprising, a horizontal platform having an opening therein defining a tying position, a twisting head mounted for rotation about a vertical axis beneath said tying position, said head having therein first and second axially-extending, diametrically-opposed radial slots, means operable to move a package on said platform to said tying position, a shaft journaled for rotation on an axis parallel with and adjacent said platform, a first crank arm having one end fixed to said shaft, a second crank arm pivoted at one end to the free end of said first crank arm, a pulley having a grooved rim and journaled on the free end of said second crank arm, a non-return wire-engaging device carried by said second crank arm, a length of wire extending to said second crank arm, through said wire-engaging device and about said pulley, first and second gripper means each positioned on a respective side of said vertical axis and between said head and said tying position, means associated with said head and operable to sever wire in said second slot, a motor, and driving connections between said motor and said head, said first and second crank arms, said gripper means, and said severing means to sequentially (*a*) pivot



said arms to move said pulley into said first slot, (*b*) to actuate said first gripper means to grip and hold the wire in said first slot, (*c*) to pivot said arms to effect revolution of said pulley and wire about a package at said position and movement into said second slot, (*d*) to actuate said second gripper means to grip and hold the wire in said second slot, to lower said pulley within said second slot, (*e*) to move said pulley out of said second slot, and (*f*) to rotate said twisting head to thereby first sever said wire and thereafter twist together the ends of said wire extending into said slots.

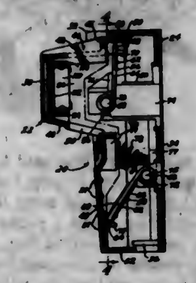
3,092,017
LIQUID EXPRESSING PRESS
Alfred W. French and Edward E. Potts, Piqua, Ohio, assignors to The French Oil Mill Machinery Company, Piqua, Ohio, a corporation of Ohio
Filed Aug. 2, 1960, Ser. No. 46,972
13 Claims. (Cl. 100—93)



12. In a continuous screw press of the character described the combination of a cage body having a discharge opening defined by a circular discharge ring, said cage body being constructed to hold therein material under mechanical pressures of as much as 10,000 p.s.i., means for exerting high mechanical pressure upon material within said body and simultaneously conveying the material through said body and said discharge opening, said means including a rotatable shaft and at least one pressure worm affixed thereto, drive means for rotating said shaft, means defining drainage openings in the walls of said cage body for passage of liquids expressed from the material to the exterior of said body, a stationary discharge collar inside said cage body coaxial with said shaft extending into said ring to define therebetween a discharge orifice, means mounting said discharge collar from said cage body maintaining said discharge collar normally stationary with respect to said rotatable shaft thereby reducing the power required to rotate said shaft and reducing frictional heat created in the material being

forced between said discharge collar and the walls of said cage body and thence through said ring, and means for heating said discharge collar to temperatures in the region of the combustion temperature of material being processed through said press to burn away hard plugs of pressed material from about said discharge collar to free such plugs and provide for subsequent continuous operation of said press and passage of the material being processed therethrough.

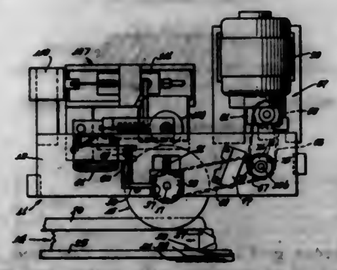
3,092,018
PLASTIC HEAT SEALER
Arthur Allen Turner, South Minneapolis, Minn., assignor, by mesne assignments, to Studebaker Corporation, South Bend, Ind., a corporation of Michigan
Filed Oct. 2, 1961, Ser. No. 142,268
7 Claims. (Cl. 100—93)



3. In heat sealing apparatus for use in sealing the open end of a thermoplastic bag, the improvement comprising a first housing having a wall section with a passage way formed therein to permit the insertion therethrough of the open end of a thermoplastic bag when said bag is held between the thumb and opposed finger of each hand, a second housing, a heater bar supported in said second housing in a position permitting alignment of said bag open end with said heater bar when the bag open end is inserted through said passageway, a pressure strip supported in the first housing in a predetermined position relative to said heater bar, and a pair of spaced-apart links each being pivotally connected to each housing for rotation in opposite directions relative to each other when the housings are moved toward each other to bring the pressure strip into heat-sealing engagement with said heater bar with said thermoplastic bag therebetween for sealing said bag open end in response to the application of hand pressure to said wall section.

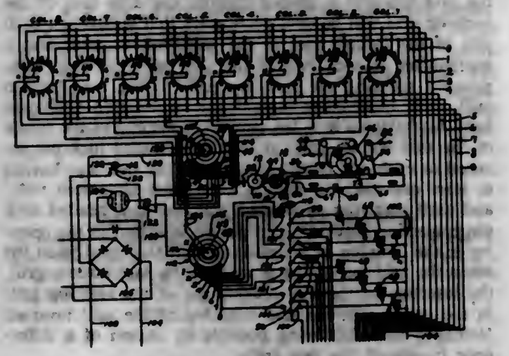
3,092,019
ARTICLE MARKING
John D. Van Buskirk, Southport, Conn., assignor to Van Buskirk & Co., Incorporated, Bridgeport, Conn., a corporation of Connecticut
Filed Nov. 23, 1956, Ser. No. 624,058
7 Claims. (Cl. 101—35)

1. A marking machine for marking on articles as they are moved past the same by a conveyor, which comprises a rotary printing drum having a predetermined, stationary, non-marking home position, and having a notched locking disk rotatable therewith; a locking tongue urged towards the disk and receivable in the notch when the drum is in non-printing home position; drive means for the drum including an electromagnetic clutch having an energizing circuit; a relay controlling the energizing circuit of said clutch; a cam rotatable by the drive means coordinately with said drum rotation, and having a local deviation corresponding to home position of the drum; detector means for sensing the presence adjacent said drum of an article to be marked and actuatable thereby to operated condition; electromagnetic means responsive to the operated condition of said detector means for withdrawing said locking tongue from said notch; means responsive to the operated condition of said detector means



for acting upon said relay to cause it to close the clutch circuit; and means including a switch operated by a follower cooperating with said cam for bypassing said relay and closing the clutch circuit except when affected by said local deviation when the drum is in home position.

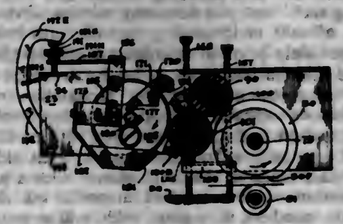
3,092,020
PRINTING APPARATUS CONTROL SYSTEM
Irvin W. Borstzin, Detroit, and John H. Eisenmann, Farmington, Mich., assignors to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed Sept. 13, 1960, Ser. No. 55,640
7 Claims. (Cl. 101—93)



1. In a printing system, a rotatable print wheel having printing elements spaced around the periphery thereof, a normally retracted electrically operated stop member operable when activated to stop said print wheel to position one of the print elements at a print line, a printing platen cooperable with said print wheel, electrically operated means controlling operation of said platen, a plurality of key operated switch members respectively representative of the printing elements on said print wheel and electrically connected to activate said stop member, only one of said switches being closable at a time, a second plurality of switch members respectively representative of the printing elements on said print wheel and connected respectively in circuit with said first plurality of switch members and with said electrically operated stop member, a rotary switch actuator rotatable in synchronized relation with said print wheel to successively actuate said second plurality of switch members, a rotary storage switch member electrically connected to said electrically operated means and to said key operated switch members and rotatable in synchronized relation

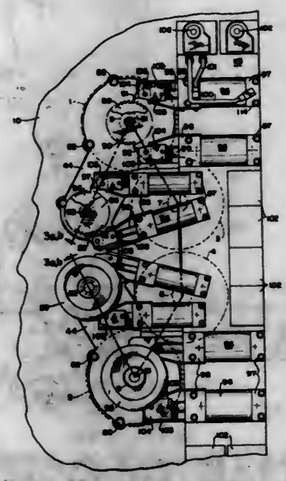
with said print wheel, a plurality of contact members cooperable with said rotary switch member, said plurality of contact members respectively representative of the printing elements on said print wheel and respectively electrically connected to said key operated switch members, a switch member controlling the circuit of said electrically operated stop member and also the circuit of said electrically operated means, said switch member normally closed in the circuit of said electrically operated stop member, and a timing cam operable to close said switch member in the circuit of said electrically operated means following the stopping of said print wheel by said stop member.

3,092,021
PRINTING MACHINES
John H. Gruver, Cleveland Heights, Ohio, assignor to Addressograph-Multigraph Corporation, Cleveland, Ohio, a corporation of Delaware
Filed Apr. 25, 1960, Ser. No. 24,346
2 Claims. (Cl. 101—216)



1. Rotary printing apparatus comprising a rotatable plate cylinder adapted to carry a printing plate, said plate cylinder being disposed opposite a support member for a sheet or the like to be printed, a rotatable intermediate form roller engageable with said printing plate to roll ink on to the printing plate, a frame supporting said form roller and being adjustable toward and away from the plate cylinder to vary the pressure contact between the form roller and the plate on the plate cylinder, an intermediate oscillating roller engaged with the form roller, another frame supporting the oscillating roller and being adjustably shiftable to vary the degree of pressure contact between said rollers independently of the adjustment between the form roller and the plate cylinder, said intermediate rollers being geared one to another to rotate in unison, and a freely rotatable fountain cylinder of hollow construction in engagement with the oscillating roller for relaying ink contained within the interior thereof to said oscillating roller, means for imparting a positive drive to one of said intermediate rollers whereby the plate cylinder and the fountain cylinder are driven thereby, said fountain cylinder comprising an inner sleeve formed with a predetermined pattern of openings which communicate with the interior of said fountain cylinder, a separate outer sleeve telescoped over said inner sleeve and formed with a pattern of openings arranged to register substantially with the first-named openings, means affording an ink absorptive porous member on said outer sleeve, said sleeves being circumferentially adjustable one relative to the other to vary the extent to which said openings are in registry and thereby the rate of feeding ink to said porous member, variantly settable vent means carried entirely by said fountain cylinder including an angled passageway for disclosing to a variable extent the interior of said fountain cylinder to the ambient atmosphere, said fountain cylinder being carried by a pivotally supported frame, and means to vary said frame on its support to thereby vary the degree of pressure contact between the fountain cylinder and the oscillating roller.

3,092,022
REGISTER CONTROL MECHANISM FOR A WEB-FED PRINTING PRESS
William B. Rayback, Lansdowne, Pa., assignor to Fred'k H. Levey Company, Inc., New York, N.Y., a corporation of New York
Filed Feb. 2, 1962, Ser. No. 170,688
5 Claims. (Cl. 101—248)

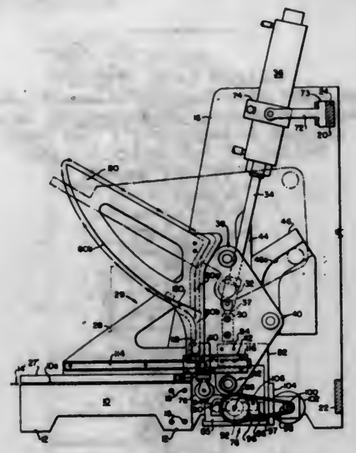


1. A web-fed rotary printing press unit for offset printing comprising:
(*a*) at least one plate cylinder and cooperating blanket cylinder supported on coaxially-extending parallel shafts rotatably supported by side-frames of the press unit,
(*b*) cooperating spiral gears keyed to the respective shafts and secured against longitudinal movement with respect to the side-frames,
(*c*) a drive shaft parallel to said supporting shaft,
(*d*) a spiral gear slidably keyed to said drive shaft and adapted to cooperate with, and drive, the spiral gear on the plate cylinder shaft,
(*e*) the shaft of the plate cylinder being adapted to be moved longitudinally with respect to the side-frames and the gear keyed thereto,
(*f*) automatic means adapted to move the drive shaft spiral gear longitudinally in small increments of predetermined magnitude along the drive shaft and thereby effecting rotation of the spiral gear keyed to the plate cylinder shaft to effect circumferential register adjustment, and
(*g*) automatic means for moving the plate cylinder shaft longitudinally in small increments of predetermined magnitude to effect longitudinal register adjustment.

3,092,023
LEATHER MARKING MACHINE
Max Hurwitz, Lynn, Mass., assignor to Maxam, Inc., Auburn, Maine, a corporation of Maine
Filed Dec. 2, 1959, Ser. No. 857,225
11 Claims. (Cl. 101—297)

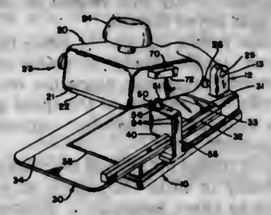
1. A leather marking machine comprising, in combination, a base member having a stock supporting surface formed thereon, upright side members secured to said base member rearwardly of said stock supporting surface, a movable carriage, said carriage being substantially the width of the space between said side members and including carriage side members, a cross piece extending be-

tween and secured to said carriage side members, a platen secured to said carriage side members, said platen being adapted to receive and support a marking die on one surface thereof, a plurality of cam followers secured to each of said carriage side members, means forming a plurality of cams secured to the inner surfaces of said upright side members, said cams and said cam followers cooperating to



limit the path of movement of said carriage with respect to said base between a first working position and second rest position and being operative to provide that the initial movement of said carriage out of said working position and final movement of said carriage into said working position will be in a straight line and at right angles to said stock supporting surface over a substantial distance, and means for moving said carriage along the path defined by said cams and cam followers.

3,092,024
CHECK CERTIFYING APPARATUS
John W. Wagner, Cleveland, Ohio, assignor to Whitaker Brothers & Company, Lakewood, Ohio, a partnership
Filed Dec. 18, 1961, Ser. No. 160,034
3 Claims. (Cl. 101—297)



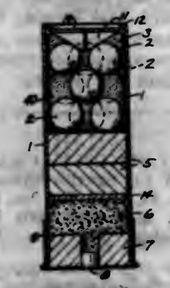
1. A sequentially operating check severing and ink depositing device comprising base means having on a portion thereof a flat surface area defined on both one and on an adjacent side by precisely disposed perpendicularly oriented curb means, said flat surface area having a perependicularly disposed aperture therein of a predetermined size and space a first predetermined distance from said one end and a second predetermined distance from said adjacent side, bearing means disposed on said base means adjacent said one end of said flat surface area, support means projecting from said base means and spaced over said aperture, said support means having slidably mounted in a bore thereof for reciprocation in a path perpendicular to said flat surface area a member which has a first end in register with said aperture, said first end having a shape complementary to the shape of said aperture and a size slightly smaller than the size thereof, said member having a convex end opposite said first end and an overall length slightly greater than the distance from the top of the support means to said aperture, resilient means biasing said convex end away from the support means bore and said first end toward said support means bore to provide a clearance between said first end and said aperture, arm means carrying inked raised characters normally spaced from said flat surface area, said arm means pivotally mounted in said bearing means for movement toward said area in a path defined by an arc lying in a plane perpendicular to said flat surface area and aparallel to the path of reciprocation of said slidably mounted member into a position of engagement of said characters with said flat surface area, camming means on said arm means in alignment with the convex end of said slidably mounted member for sliding tangential engagement therewith during pivot movement of said arm means toward said flat surface area, the distance between said camming surface and said characters being such that said camming surface advances the first end of said reciprocating member into said aperture immediately prior to engagement of said characters with said flat surface area, whereby a check having standard magnetic ink character recognition numbers printed thereon adjacent a straight side edge thereof may be positioned on said flat surface area with an end abutting said end curb means and said straight side edge engaging said adjacent side curb means with a predetermined portion of said standard magnetic ink character recognition numbers in register with said aperture, and said pivoted arm means may be moved into engagement with said check in such a manner that said predetermined portion of said magnetic ink character recognition numbers will be first severed from said check and subsequently ink from said characters will be deposited on said check.

3,092,025
DETONATING DEVICE
Joseph R. Hradel and Michael F. Hradel, Mount Pleasant, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Filed Aug. 11, 1960, Ser. No. 48,958
2 Claims. (Cl. 102—24)



1. A shaped charge receptacle for retaining a prepositioned shaped charge comprising; a molded cylindrical shell defining a forward shaped charge receiving compartment and a smaller diameter rearward extending tubular partially slotted initiator compartment, said compartments separated by an open annular opening but joined through a plurality of fins radially extending from said smaller diameter tubular initiator holding compartment and extending longitudinally to said shaped charge receiving compartment, one of said fins defining an opening therethrough, and, a lug extending from the front and along the axis of said cylindrical shell and defining an opening transverse of the axis of said shell.

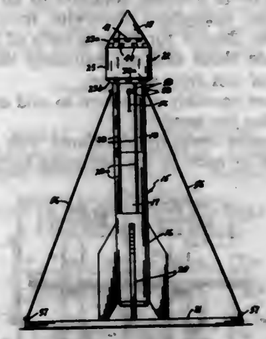
3,092,026
SHOT LOAD
Charles O. Williams, Hamden, and Charles F. Turner, Mount Carmel, Conn., assignors to Olin Mathieson Chemical Corporation, a corporation of Virginia
Filed Sept. 18, 1962, Ser. No. 224,378
8 Claims. (Cl. 102—42)



1. A shot cartridge comprising a case having a caliber of from about a 20 gauge shotshell to about a 10 gauge shotshell and having a tubular shell wall defining a cavity, a primed cartridge head closing one end of said case, a propellant charge in said cavity adjacent said primer, and a closure mounted at the opposite end of said case and yieldable upon ignition of said charge, a projectile load of relatively large and substantially spherical shot, all of a diameter smaller than said caliber, said shot being arranged in a column in said cavity adjacent said closure for forcing said closure open and projection from said case and through the bore of a shotgun of said gauge in columnar arrangement, a charge obturating means including at least one wad snugly fitted with said case in said cavity between said charge and load, a band of resinous plastic cushioning material softer than said shot extending between said obturating means and yieldable closure and disposed between said column and shell wall to be constrained by said wall to curl said band about said column in the form of a sleeve open at least at one end adjacent said closure and with a slit down the side, said slitted sleeve producing its own bias tending to uncurl said band free from said shot upon emergence from said shotgun bore, and a matrix of relatively fine particles of non-metallic cushioning material substantially completely filling the portion of the sleeve not occupied by the shot, whereby the load is adapted to be projected from said bore free from said sleeve and particles toward a target with a pattern improved in comparison with the pattern obtainable in the absence of one of said particles and sleeve.

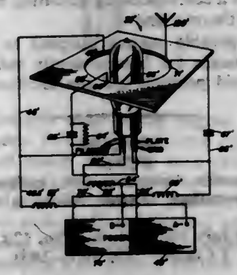
3,092,027
ROCKET-PROPELLED VEHICLE WITH PROPULSION ASSISTANT
Hollas K. Price, Box 701, Oak Hill, W. Va.
Filed Nov. 23, 1959, Ser. No. 854,884
6 Claims. (Cl. 102—49)

1. The combination of a rocket-type vehicle having a cylindrical fuselage with front and rear ends and abutment means intermediate said ends, an annular casing slidably positioned externally on said fuselage rearwardly of and in engagement with said abutment means, a laterally outwardly projecting guide bar extending longitudinally on the outer surface of said fuselage rearwardly from a point within said annular casing toward the rear end of the fuselage, a portion of said guide bar spaced rearwardly from its front end and disposed within said casing being interrupted to form a recess in the guide bar, and quick disconnect means for locking said casing against sliding rearwardly along the fuselage, said disconnect means comprising a ring mounted in said casing for rotation in a plane transverse to the axis of said fuselage, said ring passing through said recess in the guide bar and having an inner edge provided with a slot which is offset circumferentially of the ring from the



guide bar when the casing is locked on the fuselage but which is registrable with the guide bar upon rotation of the ring in the casing to permit rearward sliding of the casing along the fuselage, and means for rotating said ring.

3,092,028
OSCILLATOR
Ralph O. Robinson, Jr., Silver Spring, Md., assignor to the United States of America as represented by the Secretary of the Navy
Filed July 16, 1952, Ser. No. 299,123
9 Claims. (Cl. 102—70.2)



1. An oscillator arrangement for generating electromagnetic radiation, comprising, a conducting sheet having an aperture formed therein, a vacuum tube mounted in said aperture and including an anode, a grid, and a cathode, an electrical circuit including a power supply, circuit connections for connecting said anode, grid, and cathode to spaced points along the periphery of the aperture of said sheet and to said vacuum tube and power supply, the portions of said sheet located between said spaced points constituting distributed inductance and capacitance, and means for radiating the electromagnetic radiation generated by said oscillator arrangement.

3,092,029
FLUID PUMPING MECHANISM
Theodore L. Hanson, Kansas City, and Stewart L. Black, Independence, Mo., assignors to The Vendo Company, Kansas City, Mo., a corporation of Missouri
Filed Sept. 5, 1961, Ser. No. 135,849
7 Claims. (Cl. 103—11)

1. Fluid pumping mechanism comprising:
a support;
a plurality of individual pumps mounted on said sup-

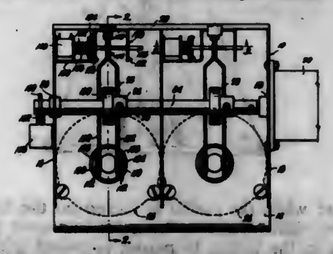
port and each having elongated, reciprocable actuating means thereon;

an elongated actuating element pivotally secured at one extremity thereof to each of said actuating means and extending transversely therefrom in one direction;

a rotatable drive member common to all of said elements and engageable therewith intermediate the extremities thereof for causing each of the elements to oscillate about said one extremity thereof during rotation of said drive member;

power means operably connected to said drive member for rotating the same;

shiftable means operably associated with the opposite extremity of each of the actuating elements remote



from said actuating means, each of said shiftable means being movable from a position clearing said opposite extremity of a respective actuating element during oscillation thereof to a location blocking oscillation of said opposite extremity of a corresponding actuation element whereby when each shiftable means is in said location thereof, rotation of the drive member causes said one extremity of the respective actuating element to be oscillated relative to said opposite extremity thereof and effecting reciprocation of a corresponding actuating means pivotally connected thereto; and

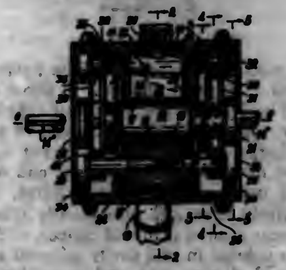
selectively operable means coupled to each of said shiftable means for independently shifting the latter between said position and the location thereof.

3,092,030
PUMP
William G. Wunder, Anderson, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed July 10, 1961, Ser. No. 122,720
1 Claim. (Cl. 103—103)



Apparatus for pumping molten metal from one level to a higher level adapted to be formed of relatively brittle non-metallic refractory materials comprising a longitudinal housing having a cylindrical passage therethrough, a rotor mounted on a shaft positioned within said cylindrical passage near the open-ended base of said housing, an outlet conduit communicating with said passage above said rotor, said rotor comprising a generally circular body defined by a circular periphery and upper and lower opposite faces, an opening in said lower face and extending into said body, said shaft extending into said body at the upper face and being fixed to said body, said shaft being formed of a nonmetallic refractory and having a metal core, said circular body having a reduced diameter portion at the upper end thereof, said reduced diameter portion and said passage forming an annular recess, and open-ended passages extending radially through said body from said opening to a plurality of locations around the periphery of said reduced diameter portion of said body, whereby when said rotor assembly is rotating in a molten metal bath the molten metal is drawn upwardly into said opening and thence impelled radially outwardly to said recess, and a longitudinal vane formed integrally with said housing extending from a point above said rotor to a point near to said outlet, said vane being operative to translate rotational to longitudinal movement within said housing.

3,092,031
ROTARY PISTON MECHANISM
Eliedoro Ponzar, 41 Via Sanvito Silvestro, Varese, Italy
Filed Jan. 31, 1962, Ser. No. 170,126
Claims priority, application Italy Jan. 31, 1961
6 Claims. (Cl. 103—129)

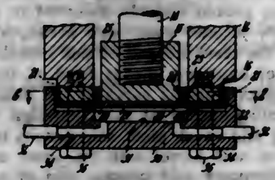


1. A rotary piston mechanism comprising a casing, a chamber of circular cross-sectional shape inside said casing and defining an axis, a plurality of piston forming vanes which are independently rotatable in said chamber about said axis to form a corresponding plurality of variable volume spaces therebetween in said casing, the number of said vanes in said plurality being odd, endless chain-type link means located outside said chamber about said axis including a plurality of link members chain-likely interconnected by a corresponding plurality of chain-like link pivots, the numbers of said link members and of said link pivots being twice the number of said vanes, the said link pivots including second pivots and first pivots alternatively located along said endless chain-type link means, means to connect each vane to one single second pivot for drivingly connecting said vanes to said link means at said second link pivots and to cause said second link pivots to follow a circular path having its center in said axis upon rotation of said vanes in said chamber, and guide means engaging each first link pivot to cause said first pivots to follow a not circular path about said axis as said second pivots follow said circular path, whereby the said vanes are caused to move relatively to one another during their rotational movement about said axis in said chamber to cyclically vary the volumes of said spaces, upon the cyclical variation of spacing between adjacent second link pivots along said circular path as the respectively intermediate first pivot follows the said not circular path.

3,092,032
PUMP
Harlan A. Bentzinger, Wayland, Mass., assignor to Precision Chemical Pump Corporation, Waltham, Mass., a corporation of Massachusetts
Filed Dec. 21, 1960, Ser. No. 77,424
2 Claims. (Cl. 103—150)

1. A pump head for a high pressure pump comprising a pump body with an annular seating surface thereabout, a piston pumping member having a rigid annular outer member positioned against said seating surface and

a central opening therewithin, a reciprocable pump rod, a rigid central member connected to and reciprocable by said pump rod positioned within the central opening of said annular member and an elastomeric material having the characteristics of an incompressible fluid interposed between an outer cylindrical surface of said central member and an opposed parallel concentric inner surface of said annular member with an axial dimension substantially greater by about the ratio of 2:1 than the



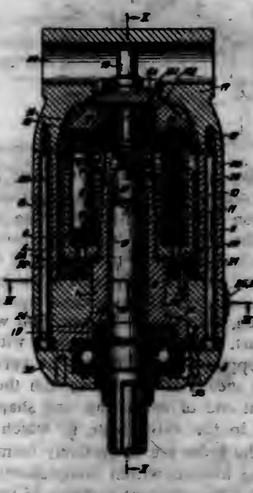
distance between said opposed surfaces and adhesively bonded to said opposed surfaces to stress said material primarily in shear during axial movement of said central member relatively to said annular member and a pump housing providing with said pumping member a pump chamber, and fastening means effective to clamp said pumping member at its annular member between said housing and said annular seating surface of said pump body.

3,092,033
DOUBLE ACTING PUMP
John C. Crandall, Odessa, Ector County, Tex.
Filed Aug. 26, 1960, Ser. No. 52,207
6 Claims. (Cl. 103—158)



1. A double acting pump for use in a well casing, comprising: adapter means releasably securable in said casing; tube means partially enclosing and reciprocable relative to said adapter means, said adapter means having an interface with said casing, having check-valve means at its upper end, and being secured in and packing off said interface with said casing at a point adjacent its opposite end; first valve means made up in said adapter means below said check-valve means for diverting fluid flow from said adapter means alternately into said casing above said adapter means through the upper portion of said tube means during downward reciprocation of said tube means relative to said adapter means and into said tube means during reciprocation of said tube means in said downward direction; said first valve means having a first closeable passage for diverting fluid flow into the lower portion of said tube means and a second closeable passage for diverting fluid flow into the upper portion of said tube means; and second valve means forming a part of the lower portion of said tube means for discharging fluid from said tube means into said casing below the upper end of said adapter means upon upward reciprocation of said tube means, said second valve means having a closeable passage permitting fluid flow from said first passage into said casing.

3,092,034
AXIAL PISTON ENGINES
Werner Bartholomäus, Berlin-Dahlem, Germany, assignor to Kämper-Motoren G.m.b.H., Berlin, Marienfeld, Germany
Filed Feb. 18, 1959, Ser. No. 794,195
6 Claims. (Cl. 103—162)

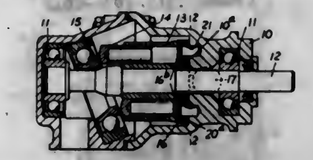


1. In an adjustable axial piston engine, a drive shaft, a cylindrical body having at least one cylinder therein, resiliently biased piston means in such cylinders, a pivot disk pivotly mounted adjacent said cylindrical body and engaged by said piston means, a central supporting tube disposed around said shaft and located adjacent the end of said cylindrical body remote from said pivot disk, a control disk engaging a peripheral portion of said central supporting tube and having separated inlet and discharge passageways for discharging and receiving fluid to and from said cylinder, bearing means rotatably supporting said shaft within said cylindrical supporting tube adjacent each end thereof, exterior bearing means on said cylindrical supporting tube adjacent one end thereof rotatably and tiltably supporting said cylindrical body thereon, and a non rigid drive coupling connected between said drive shaft and said cylindrical body, whereby to permit pendulum movement of the cylindrical body for adaptation and adjustment relative to said control disk and said pivot disk during rotation thereof.

3,092,035
FLUID PUMPS OR MOTORS
Frank George Freeman, Solihull, England, assignor to Joseph Lucas (Industries) Limited, Birmingham, England
Filed Feb. 15, 1960, Ser. No. 8,594
Claims priority, application Great Britain Feb. 20, 1959
2 Claims. (Cl. 103—162)

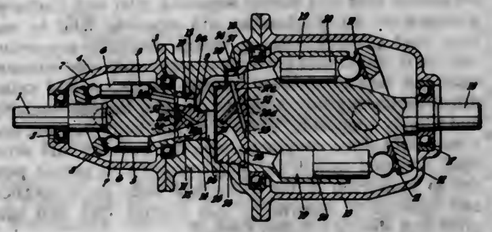
1. A device of the kind specified, comprising in combination a casing provided at one end with a fluid inlet

and a fluid outlet, a rotary cylindrical body part mounted within the casing with one end adjacent the said end of the casing, and provided with at least one cylindrical bore which extends longitudinally through the body part in spaced relationship to the axis thereof, a swash plate mounted within the casing adjacent the other end of the body part, a plunger slidably supported within the bore in the body part, and extending from the last-mentioned end of the latter for co-operation with the swash plate, a valve plate non-rotatably mounted within the casing between the first mentioned end thereof and the adjacent end of the body part, and provided at opposite sides respectively of the axis of the body part with a pair of arcuate apertures which communicate respectively with the fluid inlet and the fluid outlet, and which have a common centre of curvature coaxial with the body part so



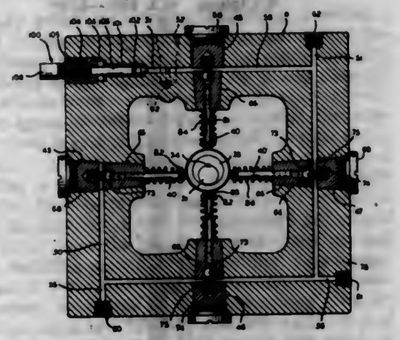
that, during rotation of the latter, the bore therein communicates alternately with the said apertures for controlling admission of fluid to, and discharge of fluid from, the said bore, the valve plate being also provided with a pair of holes which extend therethrough at diametrically opposite positions, relative to the axis of the body part, between the adjacent ends of the arcuate apertures respectively, and which, when in communication with the bore in the body part, enable fluid pressure within the said bore to act in opposite directions on the valve plate, and resilient sealing means arranged between the valve plate and the adjacent end of the casing, and shaped to bound the four areas in the valve plate in which the arcuate apertures and the holes are respectively formed, the sealing means being located within complementarily shaped grooves in one of the adjacent surfaces of the valve plate and casing.

3,092,036
HYDRAULIC PUMPS OR MOTORS
John P. Creighton, Castle Bromwich, England, assignor to Ford Motor Company Limited, London, England
Filed May 18, 1960, Ser. No. 29,948
1 Claim. (Cl. 103—162)



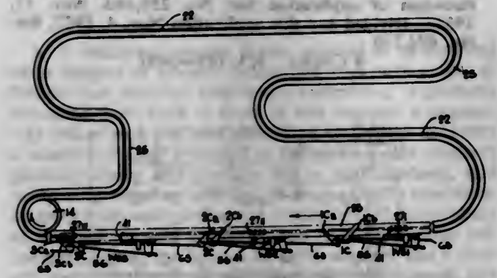
A hydraulic pump or motor comprising an elongated first housing, an elongated barrel mounted coaxially within said housing and rotatable relative to said housing, an additional housing portion fixed to the forward end of said housing, a distributor member formed with low and high pressure ports, said distributor member being mounted centrally within said additional housing portion and adjacent the forward end of said barrel with the inward end of the distributor member being formed to provide at least two reaction surfaces with one of said reaction surfaces in communication with the low pressure port and the other surface in communication with the high pressure port, O-rings surrounding said distributor member and providing an annular seal between the two reaction surfaces and said housing portion, said housing portion having a hollow interior portion defining free space adjacent each of said forward reaction surfaces of said distributor member to allow said distributor member to slide axially forward from said barrel and rotate about an axis perpendicular to said barrel, said barrel having pistons slidably mounted in passages circumferentially located about said barrel, a swash plate mounted to the rearward end of said barrel, said pistons having swivel mounting means fixed at their rearward ends, said pistons having shoes swivel mounted to said swivel mounting means at said rearward remote ends for engaging said swash plate, said pistons being adapted to rotate with said barrel with the shoes engaging said plate to reciprocate said pistons, one of said ports of said distributor member being tapered toward one of said free spaces, said barrel and distributor member forming second reaction chambers, said distributor member having additional passages communicating at their one ends with said high and low pressure ports and communicating at their other ends with said second reaction chambers.

3,092,037
HYDRAULIC PUMP MECHANISM
Stanley J. Rhodes, 2702 S. 46th St., Milwaukee, Wis.
Continuation of abandoned application Ser. No. 760,184, Sept. 10, 1958. This application Mar. 13, 1962, Ser. No. 180,934
11 Claims. (Cl. 103—174)



1. In a hydraulic pump including a rotatable cam, an annular cylinder block disposed radially about said cam to provide a centrally located supply chamber, said block having a plurality of bores with their respective axes coincident with a plane of rotation of said cam, said block having an outlet port lying in a plane coincident with said first mentioned plane, an outlet conduit extending from one of said bores across the remaining bores and terminating in an outlet between said one bore and the last of the successive ones of said remaining bores, and a plug in each of said bores terminating adjacent said outlet conduit and having a recess interiorly of said bore; the combination with a cylinder in each of said bores disposed between said outlet conduit and said supply chamber, said cylinder having an outlet valve seat adjacent said outlet conduit normally engaged by an outlet ball valve biased by a spring in the recess, said cylinder having diametrically opposed apertures, of a pin secured in one of said apertures and extending to a point adjacent the other of said apertures, said other of said apertures having an inlet valve seat therein, an inlet ball valve disposed between said inlet valve seat and said pin, an inlet groove in the outer periphery of said cylinder extending from said other aperture to said supply chamber, a piston in said cylinder engaging said cam, and a coil spring on said piston reacting between said cylinder and piston to bias said piston into engagement with said cam.

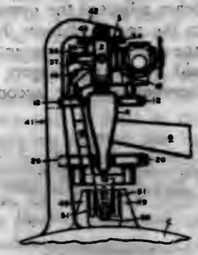
3,092,038
CONVEYOR SYSTEMS
Olaf J. B. Orwin, Quinton, Birmingham, England, assignor to Fisher & Ludlow Limited, Tipton, England, a British company
Filed June 14, 1961, Ser. No. 117,161
Claims priority, application Great Britain June 15, 1960
14 Claims. (Cl. 104—172)



1. A conveyor system of the kind specified characterised by the provision of a carrier track, a plurality of work stations spaced apart along the length of the carrier track, carrier arresting means at each of said work stations displaceable between carrier arresting and carrier advancing positions, a carrier operated control means located in advance of each of said work stations and adapted to be actuated by the passage of a carrier along the track, each of said control means comprising a carrier arresting control member and a carrier release control member operatively connected respectively to the carrier arresting means of the next in-rear and next but one in rear work station, the arrangement being such that advance of a carrier along the track to one of said control means to a station operates one of the said carrier arresting control members thereof to effect displacement of the associated arresting means at the work station next in rear of said control means from a carrier advancing to a carrier arresting position to preclude the advancement of a further carrier beyond said next in-rear work station, and also operates the carrier release control member of said control means to effect displacement of the associated carrier arresting means of the work station next but one in-rear of said control means from the carrier arresting to the carrier advancing position so as thereby to permit of the advance of a further carrier from said next but one in-rear work station to said next in-rear control means.

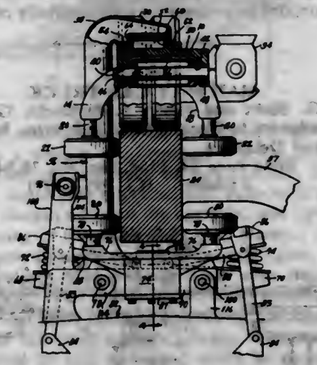
3,092,039
SUSPENDED RAILWAY SYSTEMS
Richard L. Lich, Ferguson, Mo., assignor to General Steel Industries, Inc., a corporation of Delaware
Filed July 28, 1958, Ser. No. 751,413
27 Claims. (Cl. 105—150)

1. In a railway truck, spring-supporting structure including wheels spaced apart longitudinally of the truck and adapted to roll on an upper surface of a rail and a rigid truck frame having an upper portion supported from said wheels and adapted to overlie the rail and a depending portion adapted to underlie the rail, first means on said spring-supporting structure at approximately the level of said wheels and arranged for engagement with opposite sides of the rail, and second means carried by said depending portion at a level substantially lower than said wheels and arranged for constant engagement with opposite sides of the rail, and rigid load-supporting structure spring-supported at a level higher than the rail on



said frame upper portion and extending transversely outwardly and downwardly therefrom and having a portion adapted to underlie the rail for rigid connection to a car body.

3,092,040
MONORAIL CONSTRUCTIONS
Sidney H. Bingham, 109 E. 35th St., New York, N.Y.
Filed Jan. 22, 1960, Ser. No. 4,042
8 Claims. (Cl. 105—150)

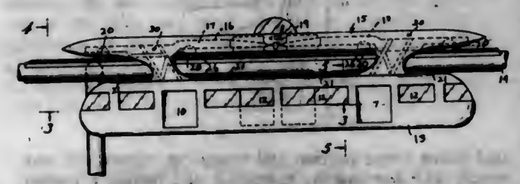


3. A suspension apparatus for supporting a monorail car for passage along a rigid track beam comprising hanger arm assemblies longitudinally spaced along and lying parallel to the vertical axis of said beam, main wheel assemblies and guide wheel assemblies mounted in vertically spaced relation on said hanger assemblies respectively, main and guide wheels journaled on said wheel assemblies for travel along the faces of said track beam, means spring suspending said car from said hanger arm assemblies below said beam, and a plurality of drag rods interconnecting said hanger assemblies to said car body at points spaced longitudinally of said beam, said drag rods extending longitudinally of said track beam and said car body and arranged to transmit all loads acting between said car body and said hanger arm assemblies longitudinally of said beam.

3,092,041
COACH AND SUSPENSION THEREFOR
Murel G. Goodell, Weldon F. Appelt, and Felix A. Davis, Houston, Tex., assignors, by mesne assignments, to Alwac International, Bahamas, British West Indies, a corporation of Panama
Filed Feb. 23, 1956, Ser. No. 567,100
6 Claims. (Cl. 105—153)

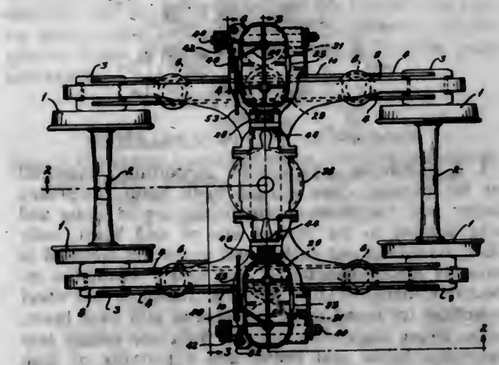
1. A suspension arrangement for suspending a coach for movement along an elevated track and for accommodat-

ing relative movement between the suspension and coach comprising a beam extending longitudinally of the coach, substantially the full length thereof, and in spaced relation thereabove, wheels mounted on said beam for movement along the elevated track, hanger hooks mounted pivotally on said beam adjacent the opposite ends thereof and connected to the coach adjacent the opposite ends thereof to connect the coach for movement along the track with said beam, said beam and hangers having a yieldable connection therebetween for accommodating any



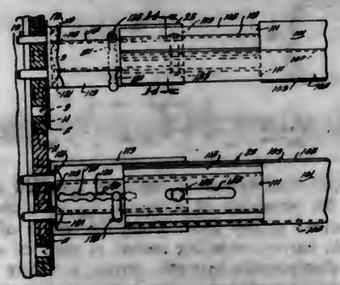
relative movement between said beam and hangers as the coach and beam move along the elevated track, said beam being formed of two longitudinally extending portions, a pivot construction having a substantially vertical pivot axis pivotally connecting the adjacent ends of said beam portions substantially midway between said hangers to provide for further flexibility in said beam to accommodate relative movement therein, said pivot construction including means to prevent relative movement of said beam portions in a direction longitudinally of said coach.

3,892,042
RAILWAY CAR TRUCK
Oliver G. Short and Henry S. Bieniecki, Granite City, Ill., assignors to General Steel Industries, Inc., a corporation of Delaware
Filed June 27, 1960, Ser. No. 38,943
3 Claims. (Cl. 105—197)



3. A railway vehicle truck comprising wheels, axles, framing supported by said axles, a transverse bolster pivotally supported on said framing at the center thereof to swivel about a vertical axis, first upright springs seated on said bolster and spaced transversely of the truck from the pivotal support of said bolster at both sides thereof, upright air springs seated on said bolster outwardly, transversely of the truck, from said first springs, said first upright springs being of suitable capacity to support the entire light load of the vehicle body whereby said air springs are required only to support increments of pay load in excess of the light load, and means for causing said air springs to provide support for such load increments in excess of the body light load, comprising normally closed valve means having exhaust outlets and connections with said air springs and a source of compressed air, said valve means being responsive to changes in the relative height of the bolster and a supported vehicle body, resulting from variations in the pay load of the body, for connecting said air springs with the air source when the height of the supported body decreases to less than a predetermined height and to connect the air springs with said exhaust outlets when the height of the body exceeds a predetermined height.

3,892,043
FREIGHT LOADING APPARATUS
Kenneth J. Tobin, Sarasota, Fla., assignor to Evans Products Company, Plymouth, Mich., a corporation of Delaware
Application Jan. 24, 1956, Ser. No. 561,826, now Patent No. 2,873,695, dated Feb. 17, 1959, which is a continuation of application Ser. No. 258,403, Nov. 27, 1951. Divided and this application Nov. 4, 1957, Ser. No. 694,249
4 Claims. (Cl. 105—369)



1. A crossbar for freight loading apparatus comprising an elongated body having a longitudinally extending tube secured thereto, a head slidably carried by one end of the body for longitudinal movement with respect to the body, and four axially projecting pins carried by the head and located on the corners of a square, said head comprising a U-shaped strap carrying said pins and having legs engaging the outside of the body, a longitudinally extending tube mounted on said strap extending in spaced parallel relation to said legs and interfitting with said longitudinally extending tube secured to the body and substantially preventing lateral movement of said head relative to said body.

3,892,044
PALLETIZED VEHICLE DECK
Frank G. Reed, 214 S. Robin Road, West Covina, Calif.
Filed Feb. 8, 1960, Ser. No. 7,254
3 Claims. (Cl. 105—369)



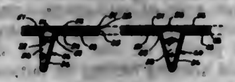
1. In a vehicle: a deck having a longitudinally extending, undercut channel formed therein; a rail resting flat on said deck over said channel; said rail being formed with a vertical bore, counterbored at both ends thereof; an inverted bolt extending upwardly through said bore with its head confined within said channel; and a pair of nuts threaded on said bolt, one within the confines of each of said counterbores, thereby to clamp said bolt firmly to said rail; said rail being bodily translatable along said channel and freely rotatable at any point along said channel about the axis of said bolt.

3,892,045
APPARATUS FOR CONTINUOUS RESTAURANT COUNTER PLACE MATS
William J. J. Gordon, Cambridge, Carleton S. Marden, Boston, and Charles Richard Sperry, Arlington, Mass., assignors to Linen Supply Association of America, Chicago, Ill., a corporation of Illinois
Filed May 31, 1961, Ser. No. 113,886
8 Claims. (Cl. 108—50)



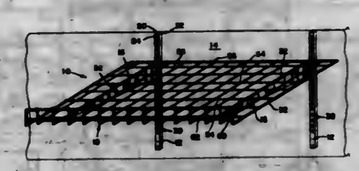
1. A restaurant counter device adapted to be mounted on a support at counter height and used with a roll of flexible mat material, said device comprising: a platform extending from back to front of said counter; a passageway below said platform extending from back to front; a closed container mounted at the back of said platform partially above and partially below said platform, said compartment having access door means on the side thereof away from said platform, a divider hinged horizontally at one side to said container and defining a clean roll compartment in the bottom of said container and a dirty roll compartment above said clean roll compartment, said divider having trough forming means on the opposite side thereof, a first opening in said dirty roll compartment, and a second opening communicating with said clean roll compartment and said passageway, whereby with said roll in said clean roll compartment said material may be drawn out through said second opening and passageway to the front of the platform, across the top of the platform and in said first opening to the dirty roll compartment; a spindle rotatably mounted in said dirty roll compartment, said spindle being removable from said compartment; means on said spindle to engage said material; and means engaging said spindle to rotate said spindle, said means including a coiled cord, a handle on the end of said cord, spring means urging said cord into the coiled position, a rotatable member with the cord engaging the rotatable member to rotate it as the cord is coiled and uncoiled, and a ratchet coupling the rotatable member and spindle.

3,892,046
PALLET FOR INDUSTRY
Louis Davidson, 24 Waterview Road, Oceanside, N.Y.
Continuation of application Ser. No. 624,882, Nov. 28, 1956. This application Jan. 26, 1960, Ser. No. 4,673
8 Claims. (Cl. 108—56)



1. A load-supporting pallet including a platform having a top part and at least one lower layer and made up of distinct planar sheets of material, legs spaced from one another transversely of the platform for supporting the platform from an underlying surface, the legs including hollow ridges formed of sheet material, each leg having panels connected together along a scoreline, and the panels having upper portions adjacent to the bottom of the platform, at least two panels of each leg extending downwardly away from the bottom of the platform when the leg is in operative position, the leg being of substantial fore-and-aft extent, means connecting each of the legs to the platform along an upper portion of one panel, grooves in the bottom of the platform and each of which is formed by displacement of material from the platform including the lower layer thereof, each groove opening downwardly and having the upper portion of the other panel extending into it, said upper portion of the other panel, being held by a side of the groove against lateral displacement in at least one direction, said lower layer extending intermediate the legs and across the lower side of the top part of the platform for substantially the full width of the transverse spacing of the legs and being attached to the top part at least in the center region of the transverse spacing between the legs and bracing the top part against bending at said center region between the legs where bending moment is a maximum, the opposite side edges of said lower layer intermediate the legs constituting sides of successive grooves.

3,892,047
SHELF STRUCTURE
Robert G. Chesley, Farmington, Mich., assignor to Chesley Industries Inc., Detroit, Mich., a corporation of Michigan
Filed Aug. 3, 1961, Ser. No. 129,036
2 Claims. (Cl. 108—137)

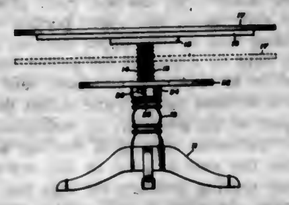


1. A shelf structure comprising a plurality of uprights securable to a wall; a shelf-support bracket detachably secured to each upright; each of said brackets having a substantially horizontal upper support edge with an elongated notch therein adjacent the uprights; said upper support edges lying in the same horizontal plane; a shelf including a generally rectangular wire-rod frame; a grillwork of angularly related spaced apart wire elements of smaller diameter than the frame wire-rod secured within said frame; said shelf being supported on the upper support edges of the shelf-support brackets with the frame wire-rod seated in said elongated notch to position the shelf surface in substantially parallel relationship with the upper bracket support edges; some of the wire elements of the grill-work extending in directions substantially parallel to said upper support edges; one of said last-mentioned wire elements overlying the upper support edge of each bracket; and detachable fastening means secured to the brackets and engaging said wire elements overlying the bracket edges to fasten the shelf to the bracket; said frame-rod seated in the bracket notch being shiftable along the length of the notch to permit shifting of the shelf to different positions along the bracket.

3,892,048
ADJUSTABLE TABLE
Karl G. Tiessenhausen, Fayetteville, N.Y., assignor to Louise B. Stickley, Fayetteville, N.Y.
Filed June 19, 1961, Ser. No. 118,189
2 Claims. (Cl. 108—138)

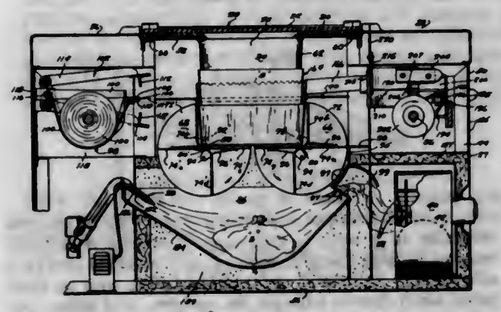
1. An adjustable table comprising a pedestal, an internally threaded nut fixed in said pedestal, a screw threaded in said nut, a table top fixed to the upper end of said screw, a lock nut threaded on said screw above said pedestal and rotatable on said screw into and out of locking engagement with the pedestal to lock said screw against rotation, said locking nut being formed with a hand wheel of substantial diameter extending radially from said screw below said table top, the upper portion

of said pedestal and said lock nut having inter-engaging means operable to limit free rotation of said lock nut to



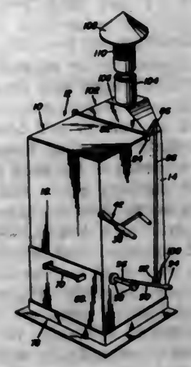
less than one revolution from locking position to unlock position and to yieldingly restrain rotation of said locking nut in a direction toward locking position.

3,092,049
INDIVIDUAL DISPOSAL UNIT
William H. Wood, Chicago, Ill., assignor to Ken-Lab. Inc., Walworth, Wis., a corporation of Delaware
Filed June 30, 1960, Ser. No. 40,095
8 Claims. (Cl. 110—9)



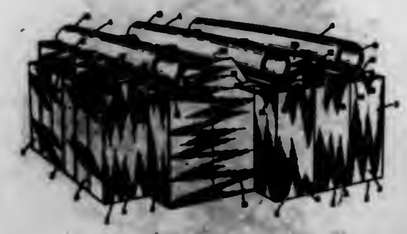
7. A waste disposal apparatus comprising a housing including a top wall having an opening therethrough, a bowl structure supported in said housing at a position directly below the opening in said top wall of the housing and including a pair of rotor mechanisms, with each of said rotor mechanisms including a plurality of vane members disposed to provide bottom and side wall forming portions of said bowl structure, means for rotating said rotor mechanisms together so as to place said bowl structure in communication with an underlying portion of said housing and to position said vane members in their bottom and side wall forming positions closing off said bowl from said underlying housing portion, a combustion chamber disposed in said housing in underlying relation to said rotor mechanisms and having inclined side and bottom forming walls terminating at their lower ends in closely spaced relation at a position generally centrally located with respect to said rotor mechanisms, a gas jet burner in said housing including a nozzle portion adjacent one end of the combustion chamber and directed toward and spaced from said centrally located, lower portion of said combustion chamber to direct a flame at a position directly beneath said bowl structure and at a position below the upper edges of said inclined walls, an exhaust fan in said housing having communication with said combustion chamber and with the atmosphere through a discharge vent in the housing, said fan being located adjacent the end of said combustion chamber opposite said one end, means defining an air intake opening in the upper portion of said housing located so that said fan is operable to draw air through said air intake opening, past said bowl structur and finally through a generally horizontal path located intermediate said rotor mechanism and said combustion chamber and in the general direction of said jet flame, to thereby provide sufficient oxygen to support combustion and to exhaust the gases to the atmoshpere while retaining a relatively cool condition for said bowl structure.

3,092,050
INCINERATOR
Dave J. Morgan, P.O. Box 820, Blackwell, Okla.
Filed Sept. 30, 1960, Ser. No. 59,765
3 Claims. (Cl. 110—18)



1. An incinerator comprising an upright hollow housing including opposite side, front and rear walls interconnected at adjacent edges, an ash compartment in the lower end of said housing and a discharge opening in said front wall in horizontal alignment with said ash compartment for removing ashes therefrom, grate means in said housing above said ash compartment for supporting trash to be burned, said grate means including movable grate sections generally rectangular in plan, said grate sections being rotatably mounted in said housing by means of integral support shafts rotatably supported from said housing for movement about generally parallel horizontally disposed axes, said shafts projecting outwardly of one side wall of said housing and having a pair of corresponding ends of a pair of generally parallel crank arms fixed secured thereto, a connecting link having its opposite ends pivotally secured between the free ends of said crank arms, an actuating lever operatively connected at one end to the outwardly projecting end portion of one of said shafts, said one side wall of said housing having an outwardly projecting keeper secured thereto defining an opening extending transversely of said one wall, a latch pin carried by the free end portion of said actuating lever registrable with said keeper opening and mounted for movement relative to said actuating lever and transversely of the plane in which said actuating lever is movable, means normally resiliently urging said latch pin toward an extended position for reception in said opening when axially aligned with the latter, lever means carried by the free end portion of said actuating lever engageable with said pin for moving the latter from an extended position to a retracted position from within said opening, said keeper including cam surfaces disposed on the opposite side of said opening from which said pin is approachable for engagement with and urging said pin toward a retracted position.

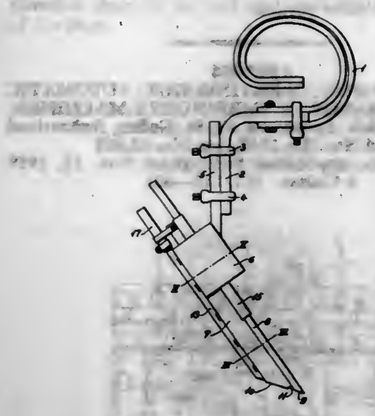
3,092,051
BASIC OPEN HEARTH ROOF CONSTRUCTION
George Shapona, Greenville, and Howard J. Brown, Clark, Pa., assignors to Sharon Steel Corporation, Sharon, Pa., a corporation of Pennsylvania
Filed May 27, 1960, Ser. No. 32,204
4 Claims. (Cl. 110—99)



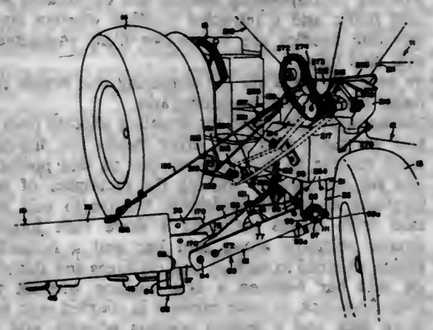
1. In an all basic furnace roof, a series of spaced brick-supporting and hold-down beams extending over the furnace and having opposite ends secured to opposite side walls of a furnace, a series of adjacent courses of solid, unnotched, basic material bricks, each brick having a metal casing for the four sides of the basic material of said brick, the casing being provided at its upper end with at least one beam-engaging hook, the hook being secured directly to one of the beams, each hook projecting upward from the side of the brick and being integral with the casing, each hook being engageable with and disengageable from one side of the beam, the series of courses of bricks being grouped in pairs of adjacent courses in which all of the bricks of one pair of courses are secured to one beam and all of the bricks in an adjacent pair of courses are secured to an adjacent beam, the bricks in one course of a pair of courses being in edge-to-edge surface abutment at one edge with edges of bricks in the adjacent course of the pair of courses, the bricks in said one course also being in edge-to-edge surface abutment at another edge with edges of bricks in another adjacent course of another pair of courses, each beam having an undersurface of substantial area extending in opposite directions from a plane passing through said edge-to-edge surface abutment of bricks in a pair of courses, the upper end of each brick in each course being engaged in surface-to-surface abutment with the undersurface of the beam to which the brick is secured, and said edge-to-edge surface abutment of the bricks in a course of one pair of courses with bricks in a course of another pair of courses holding said bricks in hooked engagement with the beams to which the bricks are secured, whereby each brick in every course is held down in position by its surface-to-surface abutment with the undersurface of the beam to which the brick is secured.

3,092,052
HARROW TOOTH FOR THE DISPENSING OF LIQUID AMMONIA INTO THE SOIL
Kaj Otto Andersen, Nyvang, near Skelskor, Denmark
Filed June 22, 1960, Ser. No. 38,011
Claims priority, application Denmark June 26, 1959
4 Claims. (Cl. 111—7)

1. A harrow tooth for the dispensing of liquid ammonia into the soil comprising a depending longitudinally disposed tooth body having a front portion, a rear face and laterally opposed side faces, a front bar, means releasably clamping said front bar along the front portion of said tooth body for adjustment longitudinally of said body, said front bar having a forwardly converging wedge shaped cross section extending laterally beyond both side faces of said tooth body, said wedge shaped cross section being formed by a pair of substantially flat faces and being substantially pointed at its lower end, and an ammonia tube attached to the rear face of said tooth body and spaced laterally inwardly of the opposed side faces of said body, said tube having a mouth at its lower end located directly behind said rear face adjacent the lower end thereof.



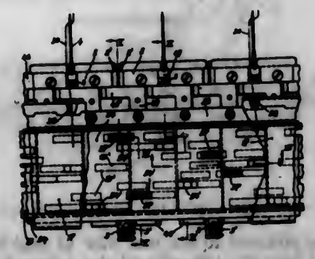
3,092,053
POWER DRIVEN HOE
Kenneth L. Kirkpatrick, Welland, Ontario, Canada, assignor to Deere & Company, Moline, Ill., a corporation of Delaware
Filed Nov. 4, 1959, Ser. No. 850,973
12 Claims. (Cl. 111—11)



1. A tree hoe attachment for a fore and aft extending farm tractor having a power take-off shaft at the rear, said tree hoe comprising a supporting member fixedly carried by the tractor forward of said power take-off shaft, a rotary tilling unit disposed generally transversely of the tractor, a support frame swingably connected at one end with the inner end of said tilling unit and swingably connected at the other end with said supporting member for movement about a generally fore and aft extending axis, means interconnecting said power take-off and said tilling unit for driving said tilling unit from said power take-off shaft, including a shaft disposed on the fore and aft extending axis of swinging of said support frame relative to said supporting member, a fertilizer hopper mounted on said supporting member, means including a wheel fixed to

said shaft for receiving granular fertilizer from said hopper and directing it to points in front of said tilling unit, and a distributor housing carried at least partially on said tilling unit and extending to said wheel to receive fertilizer therefrom, said housing having a discharge opening in its lower portion.

3,092,054
APPARATUS FOR CARRYING OUT AUTOMATIC REPEAT CHANGE IN EMBROIDERY MACHINES
Eduard Marschik, Poststrasse 18, St. Gallen, Switzerland
Filed Nov. 14, 1960, Ser. No. 68,567
Claims priority, application Switzerland Nov. 11, 1959
4 Claims. (Cl. 112—83)



1. In an embroidery apparatus wherein an elongated needle bar is provided with an array of needles extending in a direction generally transverse thereto for engagement with a fabric extending generally parallel to said needle bar and perpendicularly to said needles, the improvement which comprises:

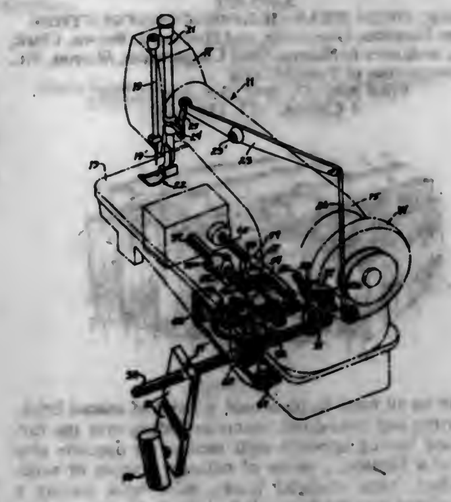
a plurality of needle carriages, each carrying a respective one of said needles and provided with a rack, displaceably mounted on said bar for individual movement in said direction between an extended position wherein corresponding needles are engageable with said fabric and a retracted position wherein corresponding needles are withdrawn from engagement with said fabric;

drive means on said bar for displacing said needle carriages between said positions; and

actuating means operable for coupling selected ones of said carriages with said drive means for displacement relative to said bar into one of said positions and for temporarily locking the remainder of said carriages against displacement relative to said bar, said drive means including a drive rack longitudinally shiftable along said bar and a respective pinion assigned to each of said carriages and shiftable on said bar between a first position wherein the respective rack of each carriage is coupled with said drive rack and a second position wherein said respective rack is decoupled from said drive rack, said actuating means including cam means for selectively shifting said pinions.

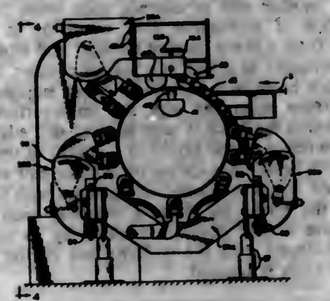
3,092,055
MEANS RESPONSIVE TO SEWING-MACHINE PRESSER-FOOT OPERATION FOR WORK-CONTROL POSITIONING OF NEEDLE BAR
Richard H. Heil, 3907 Estes Road, Nashville, Tenn.
Filed Sept. 17, 1956, Ser. No. 610,362
7 Claims. (Cl. 112—221)

1. Means for positioning the needle bar and thereby the needle of a sewing machine selectively in up work-freeing position or in down work-holding or pivoting position, comprising: first means connectable to presser-foot-operating mechanism, second means connectable to the needle-reciprocating mechanism, and third means connected to and operable by said first means and movable thereby from normal inoperative position in one direction



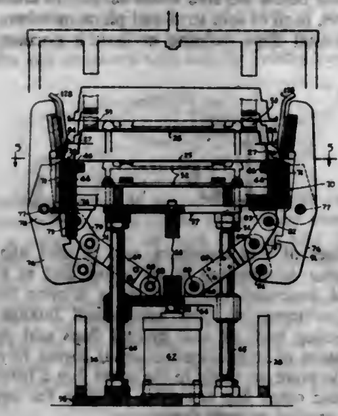
into engagement with said second means to move the needle bar to an up position and in an opposite direction into engagement with said second means to move the needle bar to a down position.

3,092,056
APPARATUS FOR FORMING WELDED HELICAL SEAM TUBING FROM METAL STRIP
Burl B. Olmsted, South Gate, Calif., assignor to American Pipe and Construction Co., Los Angeles, Calif., a corporation of Delaware
Filed Jan. 30, 1959, Ser. No. 790,210
5 Claims. (Cl. 113—36)



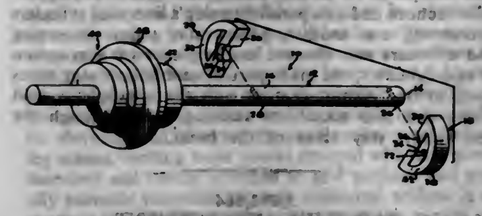
1. In apparatus for fabricating helical seam cylindrical tubing from metal strip by forming the strip into a helix and welding the seams including mandrel means for initially bending the strip, guide means engaged by the strip after being initially bent, comprising a support, a frame unit mounted on said support, a main arm structure pivotally adjustable on said frame unit about an axis parallel to the axis of the tubing being formed, secondary arm structures independently pivotally adjustable on said main arm structure about an axis parallel to the tubing being formed, and spaced from the pivotal axis of the main arm structure and rollers carried by said secondary arm structures remote from their pivotal axes.

3,092,057
CLINCHING MACHINE FOR DOOR OVERLAP FLANGES
Charles Warshkiel, Gary, Ind., assignor to The Budd Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Oct. 4, 1956, Ser. No. 613,983
10 Claims. (Cl. 113—54)



9. A device for bending over and clinching down an upstanding projection of an outer door panel upon a flange portion of an inner door panel comprising in combination, a fixed frame adapted to support said panels, a movable frame mounted on said fixed frame for movement along a vertical path adjacent to and spaced apart from said panels, a lever pivotally mounted on said movable frame for movement of said lever normal to said upstanding projection on said outer door panel, operating means for moving said lever and said frame in such a manner that one end of said lever travels along a path having a first portion directed inwardly toward said upstanding portion of said outer door panel and a second portion of said path having a motion directed downward relative to said flange of said inner door panel, and a tool bar carried by the one end of said lever adapted to engage the upstanding portion of said outer door panel in response to movement of said lever along said first portion of said path and subsequently to clinch said bent upstanding portion and said flange portion of said panels together in response to movement of said lever along said second portion of said path.

3,092,058
PIPE AND FLANGE ALIGNER
James S. Feeler, 3557 S. Saint Francis, Wichita 16, Kans.
Filed Jan. 8, 1960, Ser. No. 1,216
3 Claims. (Cl. 113—102)



3. A pipe and pipe flange aligner comprising a gradiently shoudered mandrel having an axial bore extending therethrough, a rod extending slidably through said bore, and a pair of shoes fixed on the rod at longitudinally spaced points along the rod, said shoes being diametrically opposed to each other and having arcuate outer surfaces which are in concentric relationship, said shoes being fixed to diametrically opposed sides of said rod, said shoes being semi-circular and having flat diametrical inner surfaces, said inner surfaces being formed with arcuate notches conformably receiving said rod, and studs threaded through the rod and into the inner surfaces of the shoes.

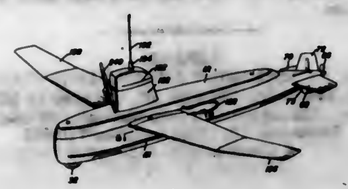
3,092,059
ASSEMBLY APPARATUS
Ernest A. Teach, Jr., Chicago, Ill., assignor to Motorola, Inc., Chicago, Ill., a corporation of Illinois
Filed Jan. 20, 1958, Ser. No. 710,057
9 Claims. (Cl. 113—126)



5. Apparatus for applying molten solder to substantially the entire underportion of a printed circuit assembly on a panel of insulating material, said apparatus including in combination, a container for housing molten solder, a body of molten solder in said container, rotary pump means submerged in the molten solder and adapted to impel fresh molten solder from the interior of the solder body upwardly into a scum-free flowing hump of molten solder which extends to a predetermined height above the solder that is not a part of the hump, means for confining the flow of molten solder to limit the hump to a predetermined configuration and to a width corresponding to the width of the printed circuit assembly to be soldered, baffling means positioned between said pump means and said confining means effective to distribute the flow of solder evenly with respect to said confining means for rendering the contour of the hump comparatively uniform and for reducing turbulence in the hump, supporting means extending over said container and past said hump for carrying a series of the printed circuit panel assemblies, and means for moving the printed circuit assemblies along said support means so that only the underportions of the assemblies are engaged in touching contact by the hump of molten solder, with the hump formation being of such configuration that molten solder is applied uniformly over the area of each assembly as it traverses the hump.

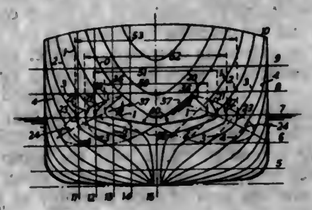
8. A positive displacement gear pump for forming a circulating mass of molten solder having an exposed top portion of a predetermined size, said pump including in combination, a pair of intermeshing cylindrical gears wholly submerged below the solder within said container, each gear rotatable about a horizontal axis and each having two axially extending half portions, each of said half portions having helically shaped solder-lifting teeth formed in the curved surface thereof and in contact with the solder body with the helices formed by said teeth in each of said half portions advancing outwardly in opposite directions axially of said cylindrical gear, and a pair of housing members extending axially and vertically of said gears, said housing members being effective to confine the solder mass propelled vertically by said gears and being spaced apart at their tops in a direction perpendicular to the axis of rotation of said gears to expose the top of the solder mass, said housing members being mounted adjustably with respect to one another so that the spacing between them and the area of exposed solder can be predetermined.

3,092,060
FLYING SUBMARINE
Donald V. Reid, 1315 Evergreen Ave., Wanamassa (Asbury Park), N.J.
Filed Jan. 17, 1958, Ser. No. 709,588
5 Claims. (Cl. 114—16)



1. A craft for traveling through two different fluid mediums comprising, supporting body means, buoyancy control means mounted within the body means for controlling the position of the body means within one of the fluid mediums in accordance with the pressure thereof, dynamic lift means operatively connected to the body means for controlling the position of the body means within the other fluid medium, supplemental buoyancy means operatively mounted within the dynamic lift means and selectively rendered operative to supplement the buoyancy control means when exposed to said one fluid medium and means for rendering the supplemental buoyancy means inoperative when the body means is disposed within said other fluid medium and propulsion means mounted in the body means operative to render the lift means effective when the supplemental buoyancy means is inoperative.

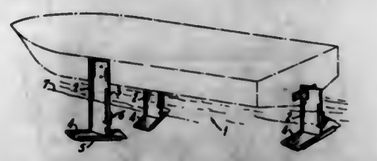
3,092,061
SHIP FORM
Nicolo Costanzi, Trieste, Italy, assignor to Cantieri Riuniti Dell' Adriatico S.p.A., Trieste, Italy, a Societa per Azioni of Italy
Filed Oct. 19, 1960, Ser. No. 63,675
Claims priority, application Italy June 30, 1960
2 Claims. (Cl. 114—56)



1. A ship's hull comprising a flow-guiding rib formed on both sides of the stern section of the hull symmetrically with respect to the longitudinal centre line of the hull, said rib merging smoothly into the hull at the forward end of the rib and extending rearwardly with a continuously increasing lateral projection from the hull but lessening overall width and terminating at its rear end in a transverse face, said rib being disposed mainly below the mean load water line and being slighly upwardly inclined both laterally and in the direction towards the stern so as to be parallel to the stream line flow when the ship is in motion.

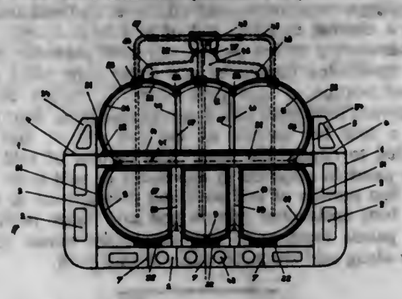
3,092,062
MECHANICAL CONTROL FOR SUBMERGED HYDROFOIL SYSTEMS
Daniel Savitsky, 3456 73rd St., Jackson Heights, N.Y.
Filed May 18, 1962, Ser. No. 195,818
5 Claims. (Cl. 114—66.5)

1. In combination with a water borne vessel, a passive self-compensating hydrofoil control system comprising a substantially vertical hydrofoil strut member and a hydrofoil plane, said vertical strut member being connected at its upper end to the hull of said vessel, said hydrofoil plane being disposed at the lower end of said strut member and operable to maintain a hydrodynamic lift of the vessel to a minimum submergence of the hydrofoil plane below the free water surface at cruise speed of the vessel, each of said strut and plane members having integral pivotal flaps defining at least a portion of the



trailing edges of said members, said pivotal flap of the strut member terminating at its lower end at a height above said hydrofoil plane which is greater than said minimum submergence, and mechanical linkage means interconnecting both of said pivotal flaps and operable, on application of unbalanced external forces to one flap causing it to pivot, to apply to the other flap a force acting to move said other flap toward a position for equalizing the forces applied to both flaps.

3,092,063
CONSTRUCTION OF LIQUEFIED GAS CARRIERS
René Leroux, Nantes, Loire Atlantique, France, assignor of one-half to Societe Anonyme des Anciens Chantiers Dubigeon, Nantes-Chantenay, France, a limited liability company of France
Filed Sept. 26, 1961, Ser. No. 140,858
Claims priority, application France Oct. 5, 1960
4 Claims. (Cl. 114—74)

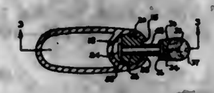


1. In a vessel designed for the transport of liquefied gases, in combination a hull including beams and stanchions as resistant structural elements and at least one tank composed of several horizontal cylinders with circular sections and axis parallel to ship's line, said cylinders intersecting one another, hollow stay tubes connecting said cylinders and situated in the planes of intersection of said cylinders, the inner part of said hollow stay tubes being in free communication with the atmosphere, said beams and said stanchions running freely through the said hollow stay tubes of the tanks.

3,092,064
SAIL SLIDE ARRANGEMENT
William N. Benedict, 145 Mohawk Place, Dearborn, Mich.
Filed Mar. 22, 1961, Ser. No. 97,552
3 Claims. (Cl. 114—112)

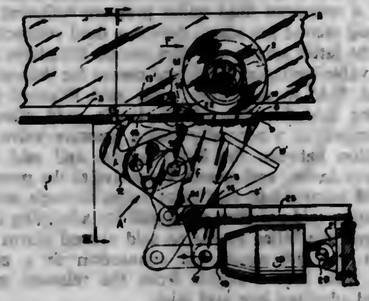
1. In a sailboat having an upright mast and a sail mounted for raisable and lowerable movement thereon,

the combination comprising a hollow track extending lengthwise along the mast, said track having a vertical slot extending substantially its entire length, the interior surface defined by the track being cylindrical in contour, a series of shoes slidably disposed within said track for vertical sliding movement therein, each of said shoes being substantially circular in horizontal section for horizontal pivoting in the track, a plurality of saddles, one for each shoe, said saddles being mounted at spaced points along the sail to secure said sail for raising and lowering



movement, a connector pin extending from each saddle to a corresponding one of the shoes, each connector pin having a rotary fit in at least one of said saddle and shoe, and a sleeve freely encircling each connector pin to rollably engage a portion of the track when the sail is obliquely angled to the vertical slot of the track, the diameter of the sleeve being less than the width of the slot to permit the connector pin and sleeve to pivot in a horizontal plane, the arrangement ensuring that the sail will move freely during raising and lowering.

3,092,065
MULTI-SECTION CLOSING OR LIFT-LOCK DEVICES HAVING RETRACTABLE BEARING MEMBERS
Henri Kammerman, Paris, France, assignor to International MacGregor Organization, a body corporate of Monaco
Filed Dec. 5, 1960, Ser. No. 73,694
Claims priority, application France Jan. 6, 1960
16 Claims. (Cl. 114—202)



7. In a movable closing device having multiple panels for open-top spaces having panel runways provided along edges of said space and sealing means adjacent said runways onto which said panels may be lowered for effecting sealing joints and from which they may be elevated to open the sealing joints, said panels having rollers movable over said runways and said runways having orifices into which said rollers may descend for lowering of the panels, pivoted members having surfaces movable upwardly and downwardly in said orifices and engageable by said rollers for elevating and lowering the panels relative to said sealing means, locking hook means integral with said pivoted members and fixedly attached to said surfaces and pivotally movable therewith through additional orifices in said runways into locking and unlocking positions, means associated with said panel members and engaged by said locking hook means when said panels are in their lowered positions to lock the latter on said sealing means, and means for moving said pivoted members and said locking hook means in unison.

3,092,066
METHOD OF HEATING SHIP WALLS AND A DEVICE FOR CARRYING OUT THE METHOD
Alfred Jönsson, Varmlandsgatan 17, Katrineholm, Sweden
Filed Jan. 30, 1961, Ser. No. 85,627
Claims priority, application Sweden Feb. 1, 1960
13 Claims. (Cl. 114—221)



1. A device for heating the walls of a ship's hull comprising a screening device adapted to be positioned around the ship and spaced from the sides thereof and adapted to extend down into the water below the level of the bottom of the ship and screening the water under at least a part of the ship from the water outside the screening device, and a heating device insertable between the screening device and the ship's hull for heating the water within the screening device.

3,092,067
TANDEM FAIRING
Wilfred Hugh Armstrong, Dartmouth, Nova Scotia, Canada, assignor to Her Majesty the Queen in right of Canada, as represented by the Minister of National Defence
Filed Mar. 27, 1961, Ser. No. 98,450
Claims priority, application Canada Aug. 31, 1960
11 Claims. (Cl. 114—235)



1. A turbulence inhibiting fairing assembly for use with non-streamlined submarine towing cables, which assembly comprises, in combination:

(i) A continuous streamlined fairing having;
- (*a*) an axis of symmetry substantially normal to the longitudinal axis of the cable, and a longitudinal axis substantially parallel to said cable,
- (*b*) a leading edge,
- (*c*) a trailing edge,
- (*d*) opposed side surfaces, interconnecting said edges, and spaced apart by an amount not exceeding the diameter of the said cable
- (*e*) a plurality of apertures, located adjacent the leading edge and extending, normal to the axis of symmetry, from one side surface to the other, and spaced along the longitudinal axis thereof,

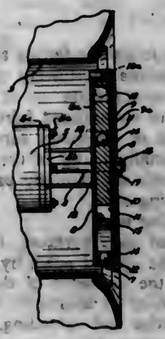
(ii) a plurality of U-shaped clips, each partially encircling said cable, and adapted hingedly to attach said fairing to said cable, and each constituted by;
- (*a*) a pair of arms integrally connected together at one end thereof by a curved portion,
- (*b*) an aperture on each arm, said pair of arms being adapted to receive therebetween, the opposed side surfaces of said fairing, adjacent the leading edge thereof, said curved portion having an internal radius sufficient to permit relative rotation between it and the said cable, and
- (*c*) a plurality of rivets, each adapted to attach a said clip to said fairing, said rivets passing through associated said apertures in said arms and associated said aperture in said fairing, and each having a head formed thereon after assembly.

3,092,068
HAND GRIP
Ivan F. Brownson, 16425 Otsego St., Encino, Calif.
Filed May 31, 1960, Ser. No. 33,358
15 Claims. (Cl. 115—6.1)



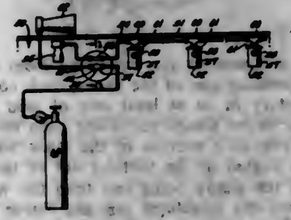
1. In a hand grip for a water ski tow rope and the like, the combination of: a relatively short length of hollow tubing of rigid material; and a pair of water tight transverse sealing walls in the tubing spaced a relative short distance from the adjacent tube ends respectively, the two cylindrical tube end portions being formed with two longitudinally aligned apertures respectively, each disposed between the adjacent sealing wall and the adjacent tube end, the pair of sealing walls providing a fluid tight chamber therebetween and providing a pair of pocket chambers at the two tube ends respectively.

3,092,069
BACK-UP WARNING DEVICE FOR VEHICLES
James W. Baird, 405 Center St., Grove City, Pa.
Filed June 29, 1962, Ser. No. 206,237
6 Claims. (Cl. 116—60)



1. A back-up warning device adapted for attachment to a vehicle wheel to turn with the wheel comprising a rim of material emitting an easily audible sound when struck a blow and means within the rim forming in the plane of the rim a channel terminating at the rim at one end of the channel and terminating in a pocket near but spaced from the rim at the opposite end of the channel and a ball in the channel, the ball being of material creating an easily audible sound when striking the rim, so that when the device turns upon backward movement of the vehicle the first mentioned end of the channel precedes the second mentioned end of the channel and the ball is by gravity and centrifugal force propelled against the rim when the channel is disposed downwardly from the axis of the rim, creating an easily audible sound, while when the device turns upon forward movement of the vehicle the second mentioned end of the channel precedes the first mentioned end of the channel and the ball rolls into the pocket when the channel is disposed downwardly from the axis of the rim, the ball being disposed in the intermediate portion of the channel between the ends thereof when the channel is disposed upwardly from the axis of the rim.

3,092,070
PILOT VALVE AND A SYSTEM OPERABLE IN CONNECTION THEREWITH
Ehrick H. Wright, Madison, N.J., assignor to Falcon Alarm Company Inc., Summit, N.J., a corporation of New Jersey
Filed Apr. 4, 1961, Ser. No. 100,606
5 Claims. (Cl. 116—106)



1. A fluid-controlled fire alarm system comprising a fire detector responsive to high temperatures incident to a fire, a first fluid-responsive audible fire alarm device, a source of pressure fluid, a fluid connection between said source of pressure fluid and said fire alarm device, means operable in response to the action of high temperature on said detector for releasing pressure fluid from said source into said connection for actuation of said fire alarm device, a second audible fire alarm device responsive to a fluid under a pressure greater than that available from the released pressure fluid while said released pressure fluid is being utilized to actuate said first fire alarm device, a source of fluid under pressure sufficient to operate said second fire alarm device, a fluid connection between the latter source and said second fire alarm device, a pilot valve having an inlet, and means for delivering the released fluid to said inlet while said released fluid is operating said first fire alarm device, said pilot valve also comprising a normally closed pressure valve in the connection between the latter source and said second fire alarm device, and means responsive to the pressure of the fluid admitted to said pilot valve through said inlet for opening said pressure valve and for admitting thereby fluid from the latter source to said second alarm device through the last mentioned connection at a pressure greater than that available from the released pressure fluid and admitted into said inlet.

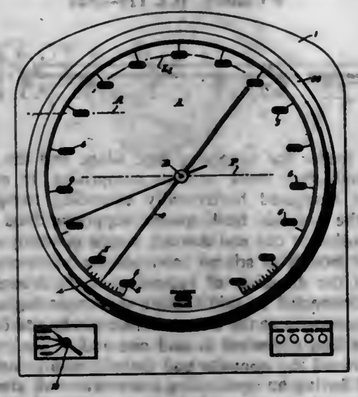
3,092,071
INDICATOR
James W. Simpson, Jr., and Reginald S. Arnold, Pittsfield, Mass., assignors to General Electric Company, a corporation of New York
Filed June 15, 1960, Ser. No. 36,298
2 Claims. (Cl. 116—129)

1. An indicator comprising a casing, a dial adjacent one end of said casing, a rotatable shaft extending through an opening in said dial, a pointer attached to one end of said shaft and movable therewith, a Geneva wheel in said casing attached to the other end of said shaft and movable therewith, said Geneva wheel having a plurality of circumferentially spaced slots therein, said slots opening toward said shaft, said Geneva wheel defining arcuate recesses between adjacent slots, a driver for said Geneva wheel comprising a rotatable shaft having one end extending through the other end of said casing, a pin attached to said shaft end for indexing said Geneva wheel by engaging said slots, a locking element attached to said shaft end for limiting movement of said Geneva



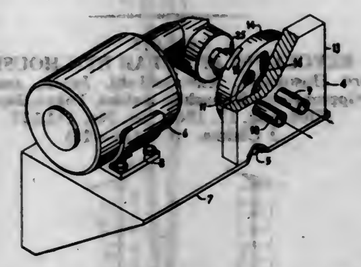
wheel by engaging said recesses, and the other end of said shaft being adapted for receiving movement from phenomena signified by said indicator.

3,092,072
LOAD INDICATING APPARATUS
Robert S. Steinel, Penllyn, Pa., assignor to Thiele Olsen Testing Machine Company, Willow Grove, Pa., a corporation of Pennsylvania
Filed July 31, 1961, Ser. No. 128,175
4 Claims. (Cl. 116—129)



1. Load indicating apparatus for indicating a plurality of load ranges, the apparatus comprising:
a frame having an annular reflecting surface;
a disk-like numeral made of light transmitting material mounted on said frame for rotation about a horizontal axis, the numeral plate being spaced from said frame in a direction along said rotational axis;
light means connected with said frame and disposed about the periphery of said numeral plate for transmitting illumination into the space between said frame and said numeral plate so that said reflecting surface will reflect the light through said numeral plate;
light transmitting means forming a plurality of sets of numerals on the face of said numeral plate, each set indicating load values for a load range, the numerals being disposed around the periphery of the plate and each numeral being located along a radius with the viewing axis of the numeral oriented transverse its radius, the locus of the numerals being an annulus;
a disk-like window plate spaced from said numeral plate in a direction along said rotational axis and fixedly interconnected with said frame, the window plate having a plurality of elongated openings exposing numerals and the numeral plate to view and the locus of the openings being an annulus coaxial with first said annulus and the numerals as viewed through the openings being in the normal reading position;
spacer ring made of light transmitting material extending around the periphery of said window plate and fixedly interconnected therewith;
a disk-like transparent member mounted on said spacer ring;
an annular-shaped ring extending between said frame and the periphery of said transparent member and forming a closure for said light means, said window plate and said numeral plate, the angular-shaped ring having a reflecting surface reflecting light from said light means through said light transmitting member onto the peripheral area of said window plate occupied by said windows; and
means to rotate said numeral plate to bring a single set of said numerals into alignment with said openings and thereby be exposed to view through said transparent member, the material of said numeral plate and the material of said numerals having different light transmitting characteristics so that as viewed there is different optical contrast between the numerals and the plate.

3,092,073
ROTARY VALVE FOR A MILK RELEASER
Lyall Thompson Conde, Sherrill, N.Y., assignor to Conde Milking Machine Company, Sherrill, N.Y., a corporation of New York
Filed Mar. 21, 1960, Ser. No. 16,585
3 Claims. (Cl. 119—14.08)

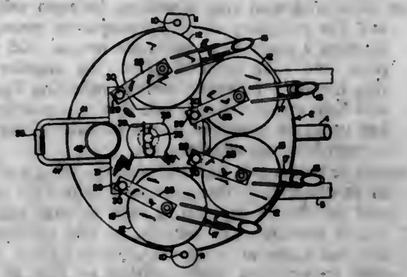


3. A vacuum operated releaser in a milking system with a rotary valve connected thereto, said valve comprising a plate having formed therethrough a vacuum inlet and an outlet, said plate being stationary; and a disc mounted for being rotated in juxtaposition with said plate, said disc having formed therein a vacuum port and an atmospheric pressure port, whereby the ports in said disc are alternately in communication with the outlet in said plate when the disc is rotated for applying vacuum to the said releaser, the alternate communication of said ports in said disc with said outlet in said plate being in predetermined timed order.

3,092,074
AUTOMATIC RELEASE MECHANISM FOR A MILKING APPARATUS
Erwin R. Johnson, Beloit, Wis., assignor, by mesne assignments, to Sta-Rite Products, Inc., Delavan, Wis., a corporation of Wisconsin
Filed June 17, 1960, Ser. No. 36,971
7 Claims. (Cl. 119—14.08)

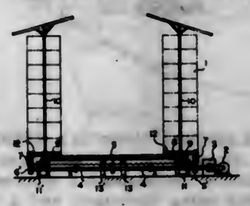
1. In an automatic release device for a milking apparatus, a cup having an open top and having an inlet open-

ing connected to an animal's teat, a vertical outlet tube having the upper end spaced above the bottom of the cup and having the other end providing communication with the exterior of the cup, a cover to enclose the open end of the cup, an annular float disposed within the cup and having a central opening to receive said outlet tube, a valve member disposed within the cup and engageable with the outlet opening to open and close the same, said valve member having a substantially smaller cross sectional area than the central opening in said float whereby in the closed position the valve will be disposed within



the central opening in the float, support means on the valve in selective contact with the float for holding the valve in the open position when the float is in the upper portion of the cup, a lifting member connected to the valve and extending substantially vertically through an opening in said cover, and means connected to the upper end of the lifting member and disposed solely on the exterior of the cup for raising the lifting member and thereby opening the valve to initially establish a vacuum through the cup to the animal's teat and start the flow of milk.

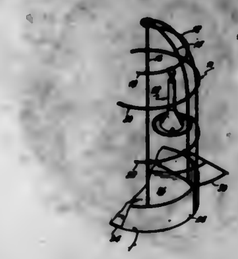
3,092,075
REVOLVING ANNULAR HEN HOUSE
Zenmaro Hosokawa, Kawaski-shi, Japan, assignor to Nippon Reizo Kabushiki Kaisha, Tokyo, Japan
Filed Aug. 17, 1961, Ser. No. 132,127
3 Claims. (Cl. 119—15)



1. In a revolving hen house including an annular floor and a plurality of cages supported thereon; the improvement comprising an annular rack fixed to said floor and depending therefrom, an annular track rail fixed to said floor and depending therefrom concentrically inwardly of said rack, a plurality of rollers supporting said track and floor means mounting said roller in an annular series, at least one spur gear, means mounting said gear in meshing relation to said rack, and power means for driving said spur gear engaged therewith.

3,092,076
BIRD PERCH
John C. Novello, 32 Coolidge St., North Bellmore, N.Y.
Filed Mar. 13, 1961, Ser. No. 95,278
5 Claims. (Cl. 119—26)

1. In combination with a cage, a parakeet toy in said cage, said toy comprising a casing, means detachably secured to said casing for swingingly supporting said casing, in said cage, a battery in said casing, a movable parakeet perch threadedly adjustably secured to and depending from said casing, a lamp extending into said casing, an electrically conductive spring disposed between and electrically contacting said lamp and said battery normally



urging said lamp and battery apart, said perch engaging said lamp so that upon movement of said perch towards said casing, said lamp is brought into electrical contact with said battery to complete an operative electrical circuit between said battery, said spring, and said lamp.

3,092,077
FEEDER FOR STOCK ANIMALS
Isaac Z. Smoker, Intercourse, and Aaron P. Beiler, Gap, Pa., assignors to Sperry Rand Corporation, New Holland, Pa., a corporation of Delaware
Filed Feb. 27, 1962, Ser. No. 176,048
4 Claims. (Cl. 119—52)

1. A feeder for supplying hay, silage and the like for steers and other stock animals comprising, in combination, an elongated horizontally extending trough from which the animals feed, means supplying feed to said trough adjacent one end thereof, means pivotally supporting said trough at spaced intervals for vibratory movement in the direction of extension of the trough, drive means connected to said trough and imparting an oscillating movement to the trough in its entirety and operative to cause feed deposited in said one end of the trough to move toward the opposite end thereof, said trough opposite end having an upstanding transverse wall closing the trough, said feed on being conveyed longitudinally through the trough engaging said upstanding wall and being prevented from discharging from said opposite end, the depth of the feed in the trough increasing after the feed has engaged said upstanding wall, and means stopping and starting said drive means.

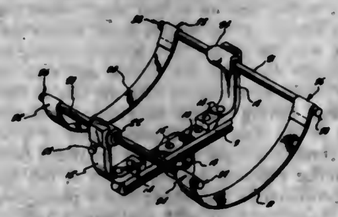
3,092,078
POULTRY WATER FOUNTAIN
George D. Geswick, Rte. 1, Box 240, Alpharetta, Ga.
Filed Nov. 15, 1961, Ser. No. 152,530
3 Claims. (Cl. 119—81)

1. A poultry water fountain comprising a water pipe including a downwardly directed discharge end, a control valve including a body mounted on the discharge end of said pipe and depending therefrom, said body having a chamber therein communicating with the water pipe for receiving water therefrom, said body including a valve seat in its lower end portion defining a water outlet opening communicating with the chamber, a valve member operable in the chamber and engageable with the seat for controlling the opening, a stem depending from the valve member, a pan suspended from said stem for receiving water from the valve and closing same by gravity, and resilient means for yieldingly resisting closing of the valve and for opening same, said means



comprising a connecting member fixed on the stem, a coil spring encircling the body and having one end attached to said connecting member, and means adjustably connecting the other end of the spring to the body.

3,092,079
GROOMING TABLE
Charles J. Strebel, 1628 10th Ave., Arcadia, Calif., and Theodore Markus, 17940 Valley Vista Blvd., Encino, Calif.
Filed Apr. 12, 1962, Ser. No. 186,884
9 Claims. (Cl. 119—103)



1. A grooming table, comprising:
(*a*) a table having a top surface,
(*b*) a vertical shaft carried by the table and extending above the top surface of the table,
(*c*) means for raising and lowering the vertical shaft,
(*d*) first and second elongated strap-carrying members carried by the vertical shaft disposed parallel to each other and parallel to the top surface of the table, and being rotatable about the longitudinal axis of the vertical shaft,
(*e*) first and second elongated flexible straps for supporting the underside of an animal between the strap-carrying members,
(*f*) each flexible strap having one end attached to the first strap-carrying member and one end attached to the second strap-carrying member, the straps being disposed substantially parallel to each other,
(*g*) means for selectively varying the distance between the first and second strap-carrying members, and
(*h*) means for selectively varying the distance between the first and second flexible straps.

3,092,080
RETRACTABLE WRITING INSTRUMENT
Charles K. Lovejoy, Atlanta, Ga., assignor to Scripto, Inc., a corporation of Georgia
Filed Mar. 16, 1955, Ser. No. 494,596
4 Claims. (Cl. 120—42.03)

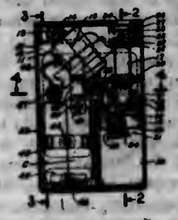
1. In a writing instrument of the type having a writing element housed within a barrel for sliding movement between rearwardly retracted and forwardly projected positions and a plunger with a rearwardly extending, spring latching lever carried thereon for sliding movement with said writing element within said barrel and with said spring latching lever biased laterally outward for releasably latching said writing element at said projected position by engagement with abutment means carried by said barrel, a pocket clip for said writing instrument having an end portion thereof fixedly mounted on said barrel, and a latch release lever housed by said pocket clip exteriorly of said barrel, said barrel having a slot therein extending slightly rearward of the rear end of said latching lever at said projected position, said pocket clip being mounted on said barrel forwardly of said slot and reaching rearwardly thereover with a clearance slot in its outer face and with its rear end extending laterally inward adjacent the rear edge of said barrel slot so as to form said abutment means thereat for engagement by said latching lever at said projected position, and said latch release lever being a rigid operating member having an operating knob portion extending laterally outward through said clearance slot and a rear end abutment lug portion extending laterally inward through said barrel opening and a rocking arm portion fulcrumed at its forward end against said barrel for lateral pivoting of said latch release lever with respect to said barrel and said pocket clip in an extent permitting engagement of said latching lever at said abutment means while providing for dislodgement thereof by lateral pressure applied at said operating knob portion.



3. In a writing instrument of the type having a writing element housed within a barrel for sliding movement between rearwardly retracted and forwardly projected positions and a plunger with a latching lever carried thereon for sliding movement with said writing element within said barrel and with said latching lever biased laterally outward for releasably latching said writing element at said projected position by engagement with abutment means carried by said barrel, a pocket clip for said writing instrument mounted on said barrel, and latch release means housed by said pocket clip exteriorly of said barrel, said barrel having a slot therein extending at least as far rearwardly as the latching portion of said latching lever at said projected position, said pocket clip being mounted on said barrel and reaching rearwardly over said slot and having a clearance slot therethrough at least in partial alignment with said barrel slot, said latch release means having an operating knob portion extending laterally outward through said clearance slot and a rear end abutment lug portion extending laterally inward through said barrel opening, said latch release means being

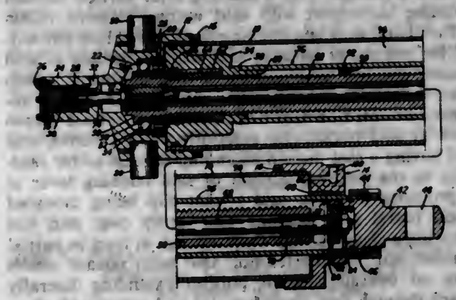
mounted for lateral movement through said pocket clip opening in an extent permitting releasable latching of said latching lever at said projected position while providing for dislodgement thereof by lateral pressure applied at said operating knob portion, the improvement of the latch release means being a rigid member having a rocking arm portion fulcrumed at one end thereof against said barrel for lateral pivoting of said latch release means with respect to said barrel and said clip.

3,092,081
SHARPENER
George R. Fraser, Portsmouth, N.H.
Filed Feb. 6, 1962, Ser. No. 171,515
11 Claims. (Cl. 120—95)



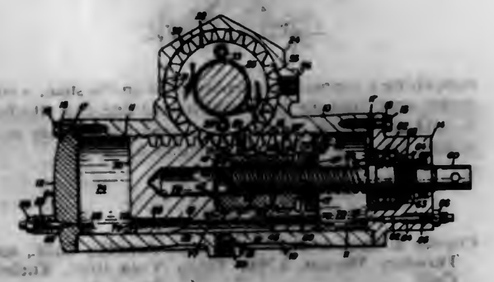
1. A sharpener for the end of an article comprising a frame, a supporting means for the article having a longitudinal axis, an article stop at the end of the supporting means having a hole, a motor mounted on the frame, a drive shaft driven by the motor having an axis, the two axes extending at an angle to each other in the region of about 15 to 45 degrees, the drive shaft having an end, a flexible driving means attached to the drive shaft and extending beyond the end thereof providing a free end and a laterally flexible portion between the free end and the drive shaft, an abrasive means including a body having an abrasive periphery, means mounting said body on the resilient drive means with the upper end of said body adjacent to the stop of the supporting means, limit means carried by the abrasive means and engaging the frame with the upper end of the abrasive periphery approximately in line with the hole of the supporting means and with the periphery of the abrasive means at an angle of about 9 degrees with respect to the axis of the supporting means when the limit means is engaged whereby the flexible portion of the resilient drive means is bent in an arc to resiliently press said abrasive means towards the supporting means axis.

3,092,082
ACTUATOR ASSEMBLY
Howard M. Geyer, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Oct. 30, 1961, Ser. No. 148,518
10 Claims. (Cl. 121—40)



1. An actuator assembly including, a cylinder, a reciprocable piston disposed in said cylinder, a rotatable member journalled in said cylinder and operatively connected to said piston such that piston movement is dependent upon rotation of said member, a torsion bar connected to rotate with said member, and coacting stop means on said piston and said torsion bar for precluding rotation of said torsion bar, and hence said member, in one direction so as to arrest movement of said piston at a plurality of predetermined positions.

3,092,083
PISTON FOR POWER STEERING SYSTEM
Richard H. Sheppard, 101 Philadelphia St., Hanover, Pa.
Filed Jan. 18, 1960, Ser. No. 3,081
7 Claims. (Cl. 121—41)

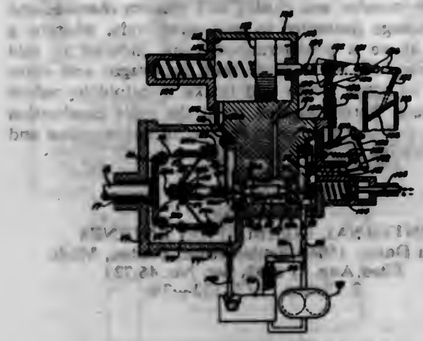


1. In combination, a housing having intersecting bores therein with their axes in planes at right angles to each other, a piston and an output shaft respectively in said bores, a pinion on the output shaft, a rack on the piston meshing with the pinion, said housing having an inlet port diametrically opposite the pinion and rack and leading to a restricted bore coaxial with the axis of the inlet port, said piston having therein an elongated distributing slot parallel to the axis of the piston and of a width equal to and communicating with said restricted bore, whereby to minimize pressure on the piston at the rack side, in which combination the piston has a passageway parallel to and communicating with said slot, a ball valve spring pressed to its seat at each end of the passageway, and a longitudinal adjustable, slender plunger at each end of the housing to engage the proximate ball and to force it off its seat against the pressure of its spring and the pressure of the fluid within the passageway as the piston moves within a chosen distance from either end of the piston bore in the housing.

3,092,084
GOVERNOR DEVICE
Robert H. Thorner, 8750 W. Chicago Blvd., Detroit, Mich.
Filed Sept. 30, 1957, Ser. No. 687,241
22 Claims. (Cl. 121—42)

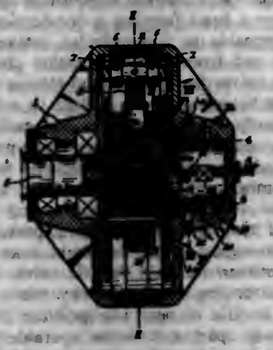
15. In a governor device for a rotating machine having control means to regulate the speed of rotation of said machine, the combination of means for effecting movement of said control means comprising, a pressure responsive member adapted to be connected to said control means for actuation thereof, a fluid circuit having a flow of fluid therethrough and communicating with said pressure responsive member, valve means including a movable valve member in said fluid circuit for controlling pressure therein acting on said pressure responsive member for effecting movements thereof, frictionless swingable means imparting rigidity in one direction acting to support said valve member for substantially frictionless movements in a direction transverse to said first-named direction by maintaining said movable valve member suspended within the fluid controlled thereby completely free of surface contact other than fluid contact

during operational movements thereof, a centrifugal device driven by said rotating machine and including substantially frictionless flyweight means to produce forces which vary as a function of the rotary speed thereof and acting on said supported valve member to effect speed responsive movements thereof for producing movements of said pressure responsive member with amplified forces for moving said control means, substantially frictionless biasing means opposing the forces produced by said flyweight means, said elements and means being so arranged that the cooperative speed-responsive movements



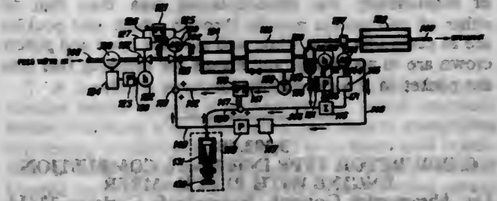
of said supported valve member, said flyweight means, and said biasing means are substantially frictionless and thereby respond substantially instantaneously and consistently to minute changes in said forces produced by said flyweight means caused by changes in the rotary speed of said machine to effect speed-controlling movement of said control means for maintaining within a predetermined variation a desired value of the speed of said machine, and reset means operably movable with said pressure responsive member and said control means and producing forces acting on said supported valve member to control said variation of the desired value of speed.

3,092,085
HYDRAULIC ENGINE
Claude Bataille, Ermenonville, France, assignor to Societe a responsabilite limitee dite: Ateliers de Poclain-Bataille & Fils, a French society
Filed Oct. 26, 1960, Ser. No. 65,044
Claims priority, application France Nov. 13, 1959
5 Claims. (Cl. 121—61)



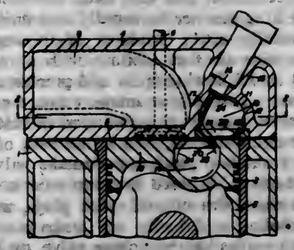
1. A hydraulic motor of the piston type comprising a rotating cylinder-block defining a plurality of main cylinders therein, a piping system supplying said main cylinders and comprising one supply pipe for each main cylinder, a distributor adapted to supply pressure fluid to said piping system, and a speed-changing device comprising shutting-off means for shutting-off at least one of said supply pipes of said piping system and means for selectively actuating said shutting-off means, the speed-changing device selectively determining the main cylinders to which the fluid is supplied.

3,092,086
FEED-WATER CONTROL FOR FORCED-CIRCULATION BOILERS
Paul Profos, Winterthur, Switzerland, assignor to Sulzer Freres, Societe Anonyme, Winterthur, Switzerland, a Swiss company
Filed July 15, 1959, Ser. No. 827,387
Claims priority, application Switzerland July 18, 1958
3 Claims. (Cl. 122—451.1)



1. In a once-through forced circulation boiler including a feed pump, a feed-water supply control valve, an evaporator, and a water separator, means to control the rate of supply of feed-water comprising means to develop a first signal representative of steam temperature in the evaporator, a valve controlling withdrawal of water from said separator, means to develop a second signal representative of the position of said last-named valve and indicative of the rate of water extraction through said last-named valve, means to develop a third signal representative of the rate of flow of steam out of said separator, means to develop from said second and third signals a fourth signal representative of the ratio of water extracted to steam delivered from said separator, and means to control the opening of said first-named valve in response to the difference between said first and fourth signals.

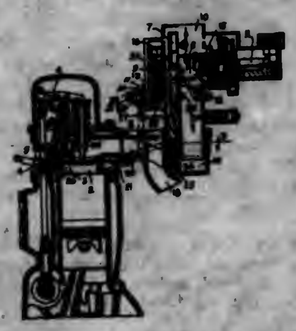
3,092,087
INTERNAL COMBUSTION ENGINES
George Allen Holt and John Christopher Hatton, Shoreham-by-Sea, England, assignors to Ricardo & Co., Engineers (1927) Limited, London, England, a company of Great Britain
Filed Dec. 15, 1960, Ser. No. 91,291
Claims priority, application Great Britain Dec. 31, 1959
12 Claims. (Cl. 123—32)



1. An internal combustion engine of the liquid fuel injection, compression ignition type comprising a cylinder

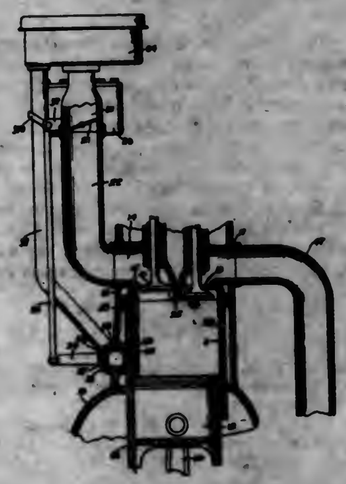
and cylinder head assembly, a piston arranged to reciprocate within the cylinder and to approach the cylinder head closely at the end of the compression stroke, a combustion pocket formed in each of said cylinder head and piston crown, one of said pockets being inverted relative to the other and both pockets being in direct communication with the cylinder space through their respective open mouths, said mouths having a cross-sectional area permitting at least substantially unrestricted flow of gases therethrough and being located at loci substantially displaced laterally from the axis of said cylinder, whereby during said compression stroke air is introduced into said pockets mainly from one side thereof to form an air charge therein, both of said pockets being so shaped as to impart in conjunction with the location thereof a natural state of rotation to the air introduced therein, the centers of volume of said pockets lying in substantially the same plane as the cylinder axis and the locus of one pocket mouth being nearer the cylinder axis than the locus of the other mouth, whereby said mouths overlap to a limited extent to provide a restricted throat of substantially less cross-sectional area than that of either of said pocket mouths through which said pockets are in communication while said cylinder head and piston crown are in proximity, and means for injecting fuel into the pocket in the cylinder head.

3,092,088
CARBURETOR TYPE INTERNAL COMBUSTION ENGINE WITH PRECHAMBER
Lev Abramovich Goosak, Naberojnaja Gorkovo 32/34, Apt. 49, Moscow; Garry Veldemarovich Evart, Prospekt Zhdanova 32, Apt. 65, Gorki; and Dmitrij Alexeevich Ribinsky, Opernaja ul. 25a, Apt. 4, Gorki; all of U.S.S.R.
Filed Dec. 8, 1959, Ser. No. 7,958
3 Claims. (Cl. 123—41.31)



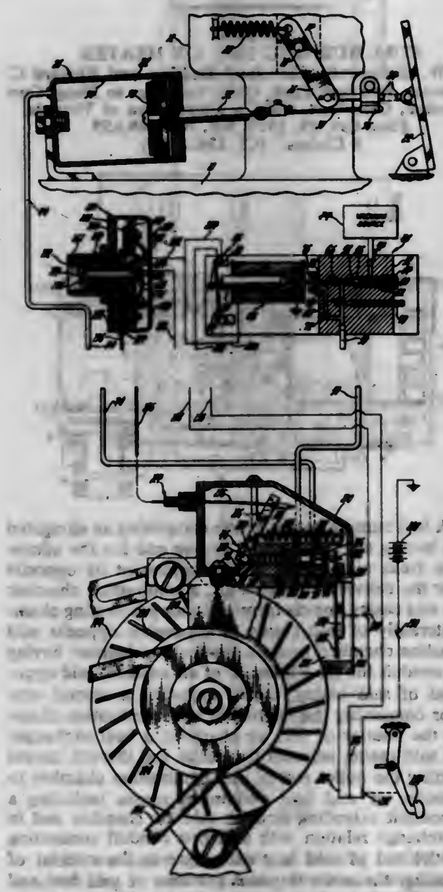
1. An internal combustion engine including a main combustion chamber, a prechamber, nozzle openings between said prechamber and said main combustion chamber disposed in a manner to rapidly and uniformly distribute chemically active products of incomplete combustion of a rich air fuel mixture with a resulting air factor of 0.4 to 0.7 flowing from said prechamber to said main chamber, a prechamber intake valve, a main chamber intake valve, a spark plug mounted in said prechamber with the electrodes disposed in the path of fuel mixture flowing from said prechamber intake valve, a baffle in said prechamber disposed between said nozzle openings and the electrodes of said spark plugs, water jacket means for cooling said baffle, an intake manifold connected to said main chamber intake valve, an intake passage connected to said prechamber intake valve, an exhaust manifold, means for conducting heat from said exhaust manifold to said intake passage to pre-heat the rich air fuel mixture flowing to said prechamber, a carburetor, a fuel mixing chamber in said carburetor connected to said intake manifold, a second mixing chamber in said carburetor connected to said intake passage, simultaneously operable throttle valves for controlling the flow of fuel mixture to said intake manifold and to said intake passage and a vacuum relief valve connected to said intake manifold, said relief valve comprising a valve member mounted in a valve body, adjustable spring means for urging said valve member toward closed position, a vacuum chamber in said body communicating with said intake manifold, a valve actuating diaphragm connected to said valve member and closing said vacuum chamber and an air passage connected to said valve body, whereby a vacuum above a predetermined value induced in said intake manifold will actuate said diaphragm and valve member to admit air to said intake manifold to reduce the vacuum therein as well as in the main combustion chamber and prechamber to reduce oil consumption and prevent fouling of said spark plug.

3,092,089
INTERNAL COMBUSTION ENGINES
John Dolza, 15000 Fenton Road, Fenton, Mich.
Filed Aug. 1, 1960, Ser. No. 46,721
2 Claims. (Cl. 123—76)



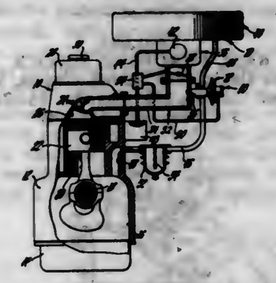
1. In a four-cycle internal combustion engine, a cylinder including a head forming a combustion chamber, a piston reciprocable in said cylinder, intake and exhaust passages to and from said combustion chamber, intake and exhaust valves for opening and closing said passages, a carburetor having a throat leading to said intake passage, a butterfly throttle valve in said carburetor throat and control means therefor, a scavenging port in the wall of said cylinder located to communicate with said combustion chamber only when said piston approaches its bottom dead center position, scavenging valve means opening and closing said scavenging port for admitting a flow of scavenging air to said combustion chamber, and a linkage between the said throttle valve control means and said scavenging valve whereby when said throttle valve is at its idle or near idle position the scavenging valve means is open, and means operable responsive to the pressures in said intake passage modifying the action of the linkage between the said throttle valve control means and said scavenging valve.

3,092,090
SPEED MAINTAINING MECHANISM
Kenneth L. Berninger, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Dec. 31, 1958, Ser. No. 784,270
4 Claims. (Cl. 123—103)



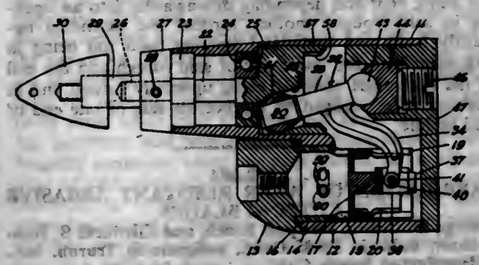
3. An engine speed controlling system comprising, a power servo adapted for connection to an engine speed control member and a pilot valve assembly having a movable pilot valve member operating to control fluid pressure delivered to said servo, said pilot valve assembly including speed setting means acting in a direction on said pilot valve member tending to increase engine speed and speed sensing and force supplying means connected to act on said pilot valve member in the opposite direction to said speed setting means, speed responsive means adapted to transmit speed signals to said speed sensing and force supplying means, a source of fluid pressure for said servo, means connecting said source to said servo through said pilot valve assembly, a fluid pressure shutoff valve in said connecting means, an electric circuit and source of energy therefor, and electromagnetic mechanism in said circuit and operative when electrically energized to open said fluid pressure shutoff valve and hold it open, a normally open switch in said circuit connected for operation to the closing position by said speed detecting and force supplying means when said speed detecting and force supplying means is moved to a predetermined position in opposition to the action on said speed setting means in response to signals received from said speed responsive means.

3,092,091
CRANKCASE EVACUATION SYSTEM
Thomas W. Bosley, Birmingham, Mich. (610 W. 6th St., Santa Ana, Calif.)
Filed Mar. 16, 1962, Ser. No. 180,135
20 Claims. (Cl. 123—119)



1. A crankcase evacuating system for an internal combustion engine having a crankcase and intake manifold means including a throttle valve, said system comprising evacuating conduit means adapted to connect said crankcase to said intake manifold means posteriorly of said throttle valve, and pressure operated control valve means in said evacuating conduit means controlling the flow of vapor therein from said crankcase to said intake manifold means, said control valve means being movable between a first position closing said evacuating conduit means and a second position opening said evacuating conduit means in response to a predetermined absolute pressure in said intake manifold means anteriorly of said throttle valve.

3,092,092
INTERNAL COMBUSTION ENGINE
August N. Savage, 696 Crescent Ave., Buffalo, N.Y., and John Pistor, 435 Ashford Ave., Tonawanda, N.Y.
Filed Oct. 27, 1959, Ser. No. 848,970
4 Claims. (Cl. 123—197)



1. In an internal combustion engine, casing means including a cylinder, a piston reciprocable therein and cooperating therewith to define a combustion chamber, an output shaft rotatably disposed adjacent to said cylinder and parallel to the axis thereof, a rocker member extending transversely between said piston and said shaft, said rocker member having one end portion thereof comprising a journal engaging rotatably in a bearing opening in the end of said shaft obliquely and eccentrically to the shaft axis, the axis of said journal being inclined to intersect the axis of said shaft at a point spaced axially from said journal, said rocker member having a spherical end formation concentric with said axis intersection, said casing means having a spherical

bearing seat coaxial with said shaft bearing against the spherical end formation of said rocker member to retain said journal in engagement with the end of said shaft, a member carried and guided by said piston for lineal sliding movement transverse to the piston axis and in the common plane of the piston and shaft axes, and a pivot connection comprising a pin through the other end of said rocker member and said piston carried slidable member, said pivot connection axis being at right angles to said common plane of the shaft axes.

3,092,093
BALL THROWING DEVICE
Floyd Davis, 6761 Terrell, Groves, Tex.
Filed Aug. 28, 1961, Ser. No. 134,211
1 Claim. (Cl. 124—4)



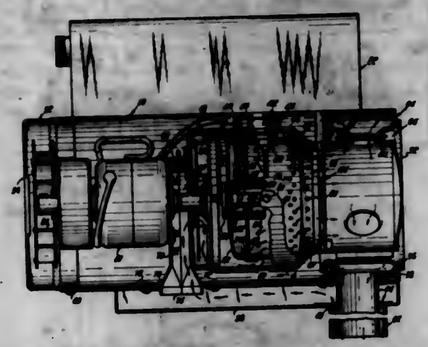
In a ball throwing device the combination of a stand, a pair of base runners in parallel relationship attached to the lower portion of opposite sides of said stand and extending horizontally a substantial distance from said stand, a paddle having a hinge transversely attached to the bottom side thereof at a point between the two ends of said paddle, the said hinge being attached to the upper edge of the stand, a rubber pad affixed to the upper side of one end of said paddle, a cup attached to the upper side of the other end of said paddle, a basket affixed to said stand at a point higher than said paddle, a plurality of balls placed therein, a discharge mechanism providing automatic loading of said balls within said cup, said discharge mechanism including a downwardly extending trough adjacent the bottom wall of said basket, a horizontal member pivoted at one end to the frame of said stand having a spring urging said horizontal member upwardly, a vertical rod extending upwardly from said horizontal member, said rod extending adjacent said trough to a point higher than the same, the end of said rod being bent and depending downwardly into an opening in said trough, another vertical rod extending upwardly from said horizontal member, said rod being in alignment with the lower end of said trough and the end of the horizontal member being upwardly turned and in position to be engaged by the bottom side of one end of said paddle.

3,092,094
FABRICATION OF WEAR RESISTANT ABRASIVE CUTTING BLADES
George O. Griffin, Newport Beach, and Ellsworth S. Hanshaw, Baldwin Park, Calif., assignors to Truarc, Inc., Huntington Beach, Calif.
Filed Mar. 14, 1960, Ser. No. 14,593
19 Claims. (Cl. 125—15)



1. An abrasive cutting blade comprising a core having two sides and an edge, said core having a concentrically disposed reduced portion thinner throughout than the unreduced portion thereof, said reduced portion defining corresponding annularly recessed and radially co-extensive depressions in the two sides of the core; hard facing material filling each of said depressions to provide hard material surfaces, said hard surfaces cooperating with the respective core sides to define core side surfaces, and abrasive cutting means other than said facing material attached to said peripheral edge, whereby the abrasive cutting blade is provided with wear resistant side surfaces.

3,092,095
FUEL BURNING HOT AIR HEATER
Fred W. Hetterscheidt, Cleveland Heights, and Richard C. Spooner, Fairview Park, Ohio, assignors to Hupp Corporation, Cleveland, Ohio, a corporation of Virginia
Filed Oct. 29, 1959, Ser. No. 849,659
6 Claims. (Cl. 126—110)

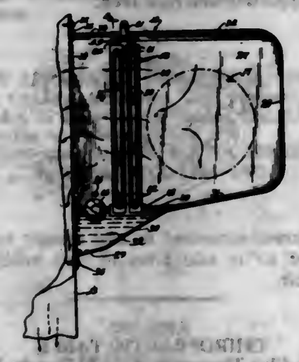


1. A fuel burning hot air heater comprising an elongated casing having an inlet opening at one end for the admission of fresh air and an outlet opening at its opposite end for the delivery of heated air, a combustion chamber within said casing, means forming an air pre-heating chamber externally of said casing in the region opposite said combustion chamber, said air pre-heating chamber having a first conduit for the admission of air adjacent said opposite end of said casing, means including a second conduit for connecting the interior of said combustion chamber to the interior of said air chamber, a heat exchanger within said casing adjacent the outlet end thereof, means connecting the outlet end of said combustion chamber to the interior of said heat exchanger, means including a third conduit extending through said air chamber and in heat exchange relation with said first conduit connecting the outlet end of said heat exchanger to the exterior of said casing, the outer terminal portions of said first and third conduits being juxtaposed, and a pair of motor driven blowers positioned adjacent the inlet end of said casing and the inlet end of said combustion chamber, respectively, to cause air to move separately through said casing and said combustion chamber.

3,092,096
FURNACE HUMIDIFIER
James P. Nott, 402 Custer, Evanston, Ill., and Louis D. Goddini, 1110 Lathrop, Forest Park, Ill.
Filed May 16, 1961, Ser. No. 110,415
2 Claims. (Cl. 126—113)

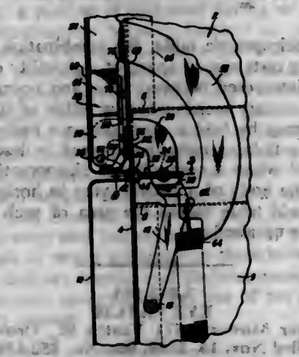
1. A humidifier for connection to an air heating system, said humidifier comprising:
a housing;
said housing having air inlet and outlet openings;
wick means located between said inlet and outlet openings;
said wick means comprising a plurality of non-intersecting, vertically disposed cord-like strands spaced apart a distance which permits the passage of air therebetween but which does not substantially exceed the thickness of a cord-like strand;

each of said strands being composed of a cotton center and a regenerated cellulose exterior;



and means for continuously dripping water on said wick means from above.

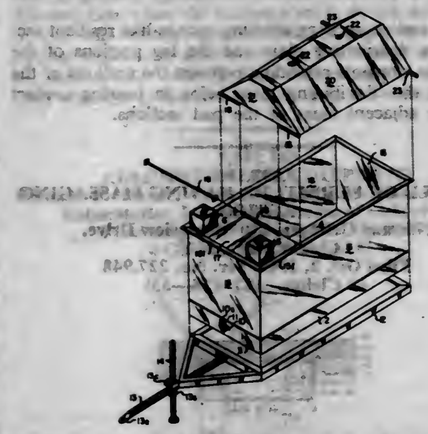
3,092,097
OVEN DOOR HINGE
Harold J. Moss, Cleveland, Tenn., assignor to Magic Chef, Inc., a corporation of Delaware
Filed Sept. 29, 1960, Ser. No. 59,402
2 Claims. (Cl. 126—194)



1. An enclosure comprising, a housing having a front face defining an access opening, first hinge member pivotally mounted in said housing on an axis generally parallel to said front face, a portion of said hinge member extending outwardly of said housing and having a hinging pivot thereon adjacent an edge of said access opening, adjusting means for pivotally adjusting and holding said hinge member about its pivotal axis whereby to adjust said hinging pivot toward or from said front face and hold the same in said fixed position, said adjusting means including means for securely locking said hinge member in a selected position of pivotal adjustment, and a door for said access opening pivotally mounted on said hinging pivot.

3,092,098
PORTABLE MELTING KETTLE
James M. Moore, 1125 Carlisle Ave., and George C. Ladman, 9851 Meeker Road, both of Dayton, Ohio
Filed Jan. 11, 1960, Ser. No. 1,648
1 Claim. (Cl. 126—343.5)

A device of the character described comprising, a horizontally disposed base plate, peripherally disposed side and end wall plates fixed to said base plate adjacent its marginal edges to define therewith a relatively shallow heat exchange chamber, a cover plate of good heat conducting material overlying and substantially covering said chamber and fixed marginally to the upper edges of said chamber wall plates, side and end wall panels secured to each other and to the marginal portions of said cover plate to define a melting kettle of which said cover plate forms a relatively flat and easily cleaned substantially unobstructed bottom, a combustion tube extending medially inwardly through one end of said heat exchange chamber for directing flames and burned gases longitudinally through said heat exchange chamber for heating said cover plate and thereby materials held by said melting kettle in contact therewith, baffle structure disposed adjacent the other end of said chamber transversely of the flow path of said flames and burned gases, said baffle structure comprising fire bricks downwardly insertably mounted in channels defined by spaced parallel sets of angle bars fixed in zig-zag orientation to said base plate and simulating in plan view the letter W for first dividing the gas and flame stream and then rearwardly deflecting the halves thereof, a pair of vertically disposed tubular flue

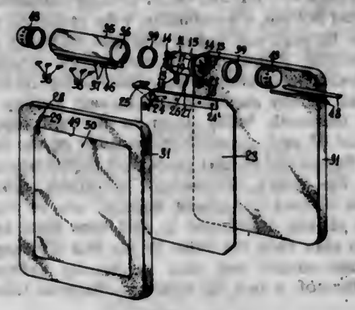


members one positioned in each corner of said melting kettle remote from said baffle structure and extending upwardly above the top of said melting kettle, means for quickly and easily detachably mounting a self firing fuel burner to said device with its flame directing portion in alignment with said combustion tube, a relatively large closure member for movably covering a major portion of the top of said melting kettle, said closure member having at least one vent opening therein and a movable element for opening and closing said opening, a fixed relatively small cover plate covering said kettle between said flue members, said relatively large closure member being hingedly connected along one edge thereof to an adjacent edge of said relatively small cover plate and cooperating therewith to substantially completely cover said kettle when horizontally disposed, said relatively large closure member serving, when swung upwardly into open position, as a baffle to deflect flue gases away from the zone above the kettle opening for improved worker protection and comfort, a jacket surrounding and spaced from the walls and bottom of said assembled kettle and chamber, and heat insulating material substantially filling the space therebetween.

3,092,099
KINESITHERAPY PAD
Thomas C. Berard, Silver Creek, N.Y., assignor to American Massage Sales and Manufacturing Corp., Silver Creek, N.Y., a corporation of New York
Filed Jan. 17, 1961, Ser. No. 83,274
4 Claims. (Cl. 128—33)

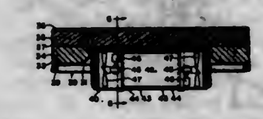
1. A kinesitherapy device comprising, in combination: a vibration producing electric motor including a stator

housing, a vibration distributing plate extending radially from the housing, rigid connector elements fixedly mounted directly upon said housing and each having radially projecting leg portions directly connected to said distributing plate, and a pad having support from the



housing and comprising abutting sponge-like resilient sections, the distributing plate and the leg portions of the connector elements extending between the sections of the pad and the distributing plate being in bearing contact with the adjacent faces of the pad sections.

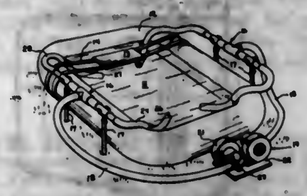
3,092,100
ARTICLE OF FURNITURE HAVING MASSAGING ACTION
Norman Oettinger, 210 Mapleview Drive, Cheektowaga, N.Y.
Filed Oct. 2, 1962, Ser. No. 227,948
10 Claims. (Cl. 128—33)



1. In an article of furniture having a massaging action, in combination: a rectangular frame; a supporting pad composed of inner and outer juxtaposed sections of cushioning material; a supporting sheet of flexible material interposed between the sections of cushioning material; an electric motor below the inner section of the supporting pad and having horizontally directed terminal shaft extensions; means carried by a shaft extension for effecting gyratory action of the motor; a casing enclosing the motor and adjoining the inner section of the supporting pad; means interposed between the motor and the casing for the support of the motor from the casing and for transmitting the gyratory action of the motor to the casing; a pair of clamping members suspended for support from the supporting sheet and encircling and supporting the casing as a support for the motor and as means for causing the gyratory action of the motor to be transmitted by the casing to the supporting pad; and a plurality of spring units supported by said frame and upon which the supporting pad freely rests.

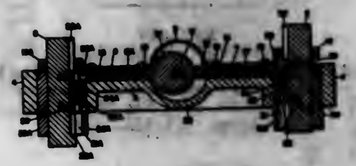
3,092,101
PORTABLE DEVICE FOR HYDROTHERAPY
Cecile M. Kinney, 5322 Hill St., Indianapolis 19, Ind.
Filed Mar. 19, 1962, Ser. No. 180,776
6 Claims. (Cl. 128—66)

1. A portable device for hydrotherapy comprising:
a first lightweight rigid elongated tube;
a flexible conduit coupled to said tube intermediate the ends of said tube;
a flexible tube connected to each end of said rigid tube, one end of each of said flexible tubes being adapted to be submerged in a reservoir of water;
means supporting said rigid tube;



and a blower connected to said conduit to provide a flow of air in said tubes to emit bubbles in said reservoir.

3,092,102
CHIROPRACTIC TABLE
Joseph Clay Thompson, 4126 El Rancho Drive, Davenport, Iowa
Filed Feb. 16, 1960, Ser. No. 15,784
9 Claims. (Cl. 128—70)



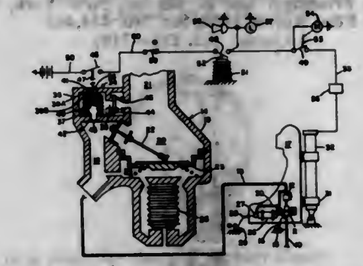
8. In a chiropractic table, the combination with fixed head and leg rests spaced apart, of a plurality of movable body rests interposed between them and normally at the same level, unitary means whereby either of the movable body rests may be held a short distance higher than the level of the adjoining rests and allowed to descend to the normal level when a conventional chiropractic thrust is applied to the body of a patient lying in horizontal position upon said table within the area of such body supported by the upraised rest.

3,092,103
EYE PATCH
Robert Lester Mower, 1571 Veatch St., Oroville, Calif.
Filed Nov. 13, 1959, Ser. No. 852,650
1 Claim. (Cl. 128—132)



An eye patch comprising a substantially imperforate cover sheet of soft material of generally oval shape and with portions thereof forming integral extensions at the long axis of the oval, a thicker substantially planar sheet having a central opening extending therethrough and made of cushioning material and of a form and with substantially integral extensions similar to and complementary with the cover sheet, the thickness of said cushioning sheet and the size of the opening therethrough being such as to permit nictation of the eye when the patch is applied thereover, adhesive means securing the two sheets together with the extensions of the cover sheet in registration with and secured to the extensions of the other sheet, and an adhesive carried by said cushioning sheet and the extensions thereof on the surface remote from the surface secured to the cover sheet for attaching the patch to the face of a user, said attaching surface of the cushioning sheet and the extensions thereof all lying in substantially a single plane.

3,092,104
SAFETY APPARATUS FOR OXYGEN SYSTEM
William B. Cassidy, Arlington, Tex., assignor, by mesne assignments, to Ling-Temco-Vought, Inc., Dallas, Tex., a corporation of Delaware
Filed Apr. 21, 1958, Ser. No. 729,829
16 Claims. (Cl. 128—142)



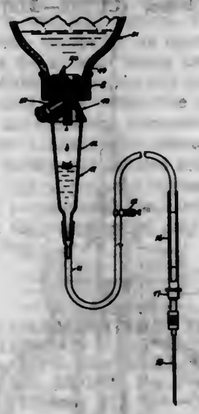
7. In combination with an oxygen regulator having a wall enclosing a demand chamber provided with outlet means for conducting oxygen from the chamber to a user and further having an oxygen inlet passage and a demand valve connecting and governing the flow of oxygen between said inlet passage and chamber, a safety device comprising: a portion of said wall having an orifice providing communication between ambient air and said demand chamber; a bellows having a free end facing and a second end mounted in fixed relation to said orifice, said bellows including means biasing said bellows to a collapsed position, upon equalization of pressure interiorly and exteriorly of said bellows, wherein said bellows free end is spaced from said orifice; and means providing restricted communication between the interior of said bellows and said oxygen inlet passage, said means being distinct from said demand valve and including a metering opening between said bellows and said inlet passage sufficiently small to retard equalization therethrough of pressure in the bellows interior and the inlet passage by a plurality of seconds upon an abrupt loss of oxygen pressure in the inlet passage.

3,092,105
RESPIRATORY MASKS
John Escott Gabb, Fair Oak, near East Leigh, England, assignor to Airmed Limited, Harlow, Essex, England
Filed May 3, 1960, Ser. No. 26,505
1 Claim. (Cl. 128—146)



The combination, comprising a support for attachment to a person's head; a breathing mask; levers pivotally mounted at their inner ends on said mask at each side thereof for simultaneous limited upward and downward swinging movements on said mask about an axis disposed above the center of pressure of the mask, said levers having forwardly extending portions and having lateral projections disposed at points spaced downwardly from a line joining the forward extremities of the levers and their pivotal attachments to the mask; said levers having arms which are cranked downwardly from said pivots forming angles with the forwardly extending portions of the levers; said projections being disposed at the ends of the arms remote from the pivots and being spaced apart less than the width of the mask and being adapted to seat upon the mask to limit the downward swinging movements of the levers; said projections being so spaced from the pivots that the projections lie approximately at the same level as the center of pressure of the mask when the levers are swung downwardly; limp tension members connected with said support at each side thereof; adjustable tensioning means connecting the outer ends of the tension members to the forwardly extending portions of the levers and comprising a short linking lever having means thereon pivotally receiving the forward ends of the levers and the forward ends of said limp tensioning members, whereby when the short linking lever is swung upwardly the mask will be pressed against the wearer's face by a pressure different than when the linking lever is swung downwardly; and said tension members slidably engaging said projections respectively on downward movement of said levers for locking said levers in their downwardly swung positions with the projections seated upon the mask.

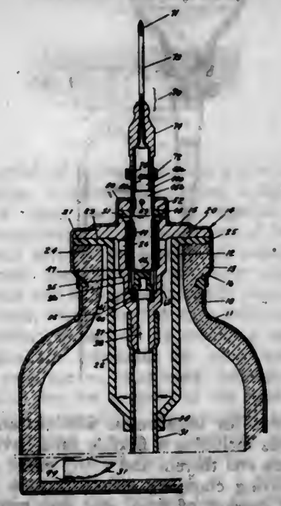
3,092,106
ADMINISTRATION EQUIPMENT
William F. Butler, Oakland, Calif., assignor to Cutter Laboratories, Inc., a corporation of California
Filed Aug. 4, 1958, Ser. No. 752,817
4 Claims. (Cl. 128—214)



1. Apparatus for intravenous administration of fluid, said apparatus including a flexible tube having a needle adapter at one end thereof and a drip meter at the other, said tube having clamping means thereon sealing said tube against passage of fluid, said drip meter including a transparent vessel having an adapter on a first end thereof secured to said flexible tube, whereby to provide for liquid-tight communication between said tube and meter, and a second opposite end having a closure member thereon adapted for use with a pierceable stopper mounted in the mouth of a flask of fluid to be administered, said closure member for said drip meter having a first passage extending therethrough whereby to provide communication with the interior of said transparent vessel, said closure member for said drip meter having a second passage extending from one side thereof partially through said closure member and extending toward the said first passage, said second passage terminating in an orifice adjacent the side of said closure, said orifice being normally exposed to the atmosphere whereby to

provide an air passage integral with the said closure member extending from a point adjacent one side of said closure member to the top of said closure member, said drip meter closure member having on the exterior end thereof an upright member of small cross-section having an end thereon adapted for piercing, the said passages extending through the said upright member longitudinally thereof and through the said end adapted for piercing; a pierceable stopper in sealing engagement about said upright member on said closure member; and a transparent flask containing fluid to be administered, the mouth of said flask being sealed by said stopper and said associated upright member, said flask and said drip meter being both under a partial vacuum relative to the outside atmosphere, the height of said flask and the length of said upright member being so proportioned that the said piercing end of the said member extends only slightly beyond the stopper sealing the mouth of the said flask and only a small fraction of the distance to the bottom of the said flask, the said first and second passages being of such a size at their most restricted points and the vacuum pre-existing within said flask being such that when the said flexible tube is temporarily obstructed, and said upright member pierces said stopper while the said flask is in an inverted position, the air pressure within the said transparent vessel is decreased sufficiently that fluid is drawn from the said flask and fills the said vessel about halfway.

3,092,107
HYPODERMIC INJECTION DEVICE
Nathan D. Froot, 119 Shirley Lane, White Plains, N.Y.
Filed Feb. 23, 1960, Ser. No. 10,173
2 Claims. (Cl. 128—216)



2. A liquid dispenser comprising a rigid container adapted to hold a reservoir of liquid to be dispensed in incremental quantities and a propellant gas in direct contact with the liquid to force the liquid out of the container, said container having a discharge opening at one end, a dip tube disposed in the container between said discharge opening and the opposite end of the container, liquid metering means connected to said discharge opening for dispensing predetermined incremental quantities of liquid through said opening, said metering means including an outlet passageway for the liquid and shiftable means on the exterior of the container for controlling the dispensing of the liquid through said passageway, said shiftable means being movable between a protracted position and a retracted position on the container, resiliently yieldable means urging the shiftable means to its protracted position, a hollow needle attached to and carried by said shiftable means, said needle extending outwardly from said shiftable means in the direction of its movement from the retracted to the protracted positions and having its hollow portion in communication with said passageway.

3,092,108
SYRINGES AND/OR HYPODERMIC NEEDLES, AND CARTRIDGES THEREFOR
Benjamin Friedman, 400 E. 6th St., New York, N.Y.
Filed Apr. 9, 1954, Ser. No. 424,463
1 Claim. (Cl. 128—218)



In a syringe for use with a cartridge having a puncturable plug in one end and a slidable plug in the other end, an elongated tubular barrel, a cap detachably secured to each end of said barrel forming therewith a chamber enclosing the cartridge, said cap at the end of the cartridge closed by the puncturable plug having an aperture providing access to the puncturable cap, a plunger slidably extended through the other cap to contact the slidable plug, said cap at the puncturable plug end of the cartridge having a hemispherical recess at the outer end of its aperture, a member threadedly engaged into the outer end of said recessed cap and having an aperture aligned with said aperture, a needle extended through said apertures, a hemispherical stop member secured on said needle and located within said recess holding said needle in an axially fixed position in which its inner end will be extended to puncture said puncturable plug as said member is threaded into said recess, a keyway slot formed in the end of said member facing said stop member, and a key formed on said stop member and extended into said slot holding said needle from rotating relative to said member.

3,092,109
CATAMENIAL APPLIANCE
Jeanette Elaine J. Mosier, Albuquerque, N. Mex.
(606 Ocean Blvd., Seal Beach, Calif.)
Filed May 9, 1960, Ser. No. 27,737
9 Claims. (Cl. 128—289)



1. A catamenial device comprising a section of material, a pair of loops of elastic material, said loops being secured to said section of material at opposite sides thereof, said loops each being of a suitable length to be received in stretched relation about a respective one of the

wearer's legs at the juncture thereof with the torso, a pad carried by said section of material, and a portion of material projecting from the upper face of said pad at and adjacent the rearward end thereof and sized for reception between the rectum and frenulum when the loops are received about the wearer's legs.

3,092,110
MUSCULAR THERMAL SUPPORT SHEATH
Maurice W. Dennehy, 1783 Hamlet St., San Mateo, Calif.
Filed July 3, 1962, Ser. No. 207,302
2 Claims. (Cl. 128—293)



1. In a muscular thermal support sheath:
(*a*) a resilient sheath dimensioned to be applied over the thigh of a wearer, and being contoured to enclose the thigh in embracing relation therewith;
(*b*) the sheath being made of a rubber product serving as an insulation to retain body heat which, in effect, causes adjacent muscle structure of the thigh to be more relaxed and less susceptible to pulling, strains and sprains;
(*c*) a front pad secured to the interior surface of the sheath in a position to support the quadriceps muscle group in the anterior aspect of the thigh;
(*d*) a rear pad secured to the interior surface of the sheath in a position to support the biceps or ham string muscle group in the posterior aspect of the thigh;
(*e*) both pads being made of a rubber product to provide directional support for their respective muscle group to restrain the muscles toward their normal or passive positions.

2. The muscular thermal support sheath, as defined in claim 1;
(*f*) and in which the inner surfaces of the sheath and the pads are covered with reinforcing linings providing buffers between the rubber of the sheath-pads arrangement and the wearer's skin to prevent the latter from directly contacting the rubber of the sheath-pads arrangement.

3,092,111
THERAPEUTIC METHOD FOR THE ABRASION OF THE HUMAN SKIN
Rose B. Saperstein, 643 S. Wilton Place, Los Angeles, Calif., and Werner K. Stiefel, P.O. Box 113, Oak Hill, N.Y.
No Drawing. Filed June 1, 1959, Ser. No. 817,037
12 Claims. (Cl. 128—355)

1. A method for the therapeutic abrasion of the human skin which comprises:
repeatedly rubbing the skin in a plurality of daily applications with a therapeutic composition having the characteristics of a paste, which comprises essentially a suspension of an inorganic abrasive which is characterized by a hardness greater than 7 as measured by Mohs' index, by being non-piezoelectric and by having a particle size within the range of about 125 microns to about 710 microns, in a non-oleaginous paste comprising a surface-active agent and a solvent therefor which is non-poisonous and non-irritating to the skin, and repeating the said daily applications until dryness, redness and desquamation of the skin occur, with interruptions of the daily applications at such times as the skin becomes irritated, until the irritation disappears.

3,092,112
THERAPEUTIC COMPRESS
Emanuel M. Zelony, 49 W. 57th St., New York 19, N.Y.
Filed Oct. 17, 1960, Ser. No. 62,999
2 Claims. (Cl. 128—403)



1. A method of producing a therapeutic head covering of elastomeric material comprising a crown having a top portion with a downwardly extending side portion integral with the periphery of said top portion which method comprises providing in matching relationship opposed sheets of elastomeric material for said top portion, sealing said sheets together peripherally except for an opening therein while providing a fin therearound, additionally sealing said sheets along spaced lines within the area bounded by the peripheral seal, said spaced lines defining a plurality of interconnected compartments, inflating said top portion with a liquid filler through the peripheral opening and hermetically sealing said liquid by sealing off said peripheral opening, providing opposed sheets of elastomeric material of substantially elongated configuration for said side portion, peripherally sealing said sheets together except for an opening along an edge while leaving a fin at least along another edge of the side portion, additionally sealing said sheets together along spaced longitudinal lines within the periphery to form compartments therebetween, hermetically inflating said side portion with a liquid filler through the opening of said one edge, flexing said inflated side portion about its transverse axis and joining the opposed short edges together to form a continuous rim, and then sealing said side portion to the periphery of said top portion along their respective fins.

3,092,113
COMBINED GARMENT AND COVERED STAY, AND METHOD OF MAKING THE LATTER
Leo Rossman, 377 S. Harrison St., East Orange, N.J.
Filed Dec. 23, 1960, Ser. No. 77,880
4 Claims. (Cl. 128—567)



1. A body encircling garment which when applied to the body has its upper edge at the waistline and has at least one stay secured thereto and extending lengthwise of the upper edge portion of the garment, said stay being formed of a single elongated strip of resiliently flexible material and having a main portion having approximately parallel longitudinal edges and two end portions disposed

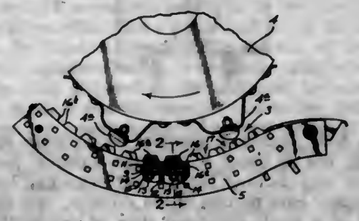
at obtuse angles to said main portion and at the same side thereof and extending longitudinally from said main portion and outwardly of the garment with one of said end portions disposed at the upper edge of the garment and the other end portion disposed below the waistline, providing for flexing of said end portions away from the skin of a wearer of the garment during body movements such as bending or stooping, said stay being secured to said garment at opposite ends of the stay.

3,092,114
SELECTION METHOD AND APPARATUS FOR INDEXING DOCUMENTS AND THE LIKE WITH EXTREME RAPIDITY
Frederick Jonker, Takoma Park, Md., assignor to Jonker Business Machines, Inc., a corporation of Delaware
Filed May 9, 1956, Ser. No. 583,774
4 Claims. (Cl. 129—16.1)



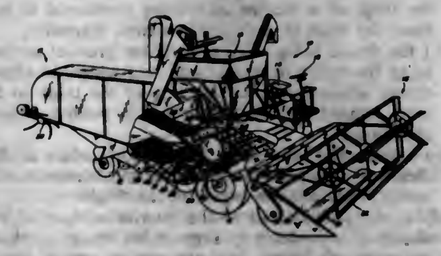
1. In a record selection apparatus for selecting from a plurality of decks of selectively edge-tabbed record cards those cards tabbed at specified positions, and in which each tab is provided with an opening capable of being engaged by a card tab hook, comprising: container means for supporting a plurality of decks of such cards in parallel aligned facing relation with the opposed faces of adjacent decks spaced from one another by spacers providing inter-deck spaces to dispose all of the card tabs in a rectangular array of rows and columns as viewed from above said tabs, a movable panel mounted parallel to the plane of the tab array, a plurality of card tab hooks symmetrically disposed and movably mounted individually on said panel for movement to and from card tab-selecting positions within the inter-deck spaces, means mounting said panel for movement in a direction carrying all of said hooks to and from tab-engaging positions, and means for moving said panel in a direction parallel to the planes of said cards to displace from their respective decks all of the cards whose tabs have been engaged by any of said hooks.

3,092,115
RASP TYPE THRESHING CYLINDER AND ELASTIC CONCAVE ELEMENTS
Robert M. Morgan, McMinnville, Oreg., assignor to R. M. Morgan Co., Portland, Oreg., a corporation of Oregon
Filed May 3, 1960, Ser. No. 26,535
3 Claims. (Cl. 130—27)



1. In a thresher, a concave including a curved base comprising a plurality of spaced stiff transverse bars spaced apart upon an arcuate sweep, a cylinder having mascerating and rubbing rasp-bars thereon, said cylinder being journalled for rotation within the sweep of said base, said transverse bars when in operative position being spaced a substantial radial distance from the sweep of the rasp-bar cylinder, elastic rubber-like coverings straddling the transverse bars of said base and occupying substantially all of the radial spacing between the rasp-bar cylinder and the transverse bars, said coverings having faces of substantial width lying substantially tangential to the path of rotation of the rasp-bars and being spaced circumferentially from adjacent faces, whereby grain being threshed may be compressed between the rasp-bars and thresher bars to rub and separate the surrounding pods without compressing and abrading the enclosed grains, unduly.

3,092,116
GRAIN DEFLECTOR AND LEVELER FOR COMBINES
Clark E. Stroburg and Eldon L. Stroburg, Blockton, Iowa
Filed Aug. 14, 1961, Ser. No. 131,129
4 Claims. (Cl. 130—27)

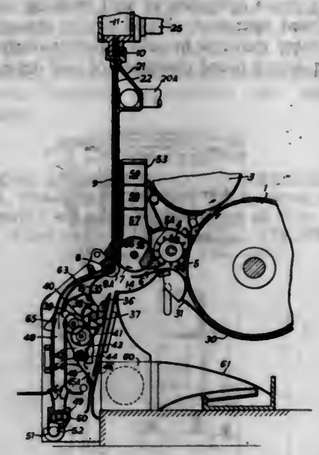


3. In combination in a combine having a threshing cylinder and a chaffer unit, a deflector unit suspended relative to the cylinder to receive grain discharged therefrom, said deflector unit including a vertically disposed backing member and at least one upwardly extended grain guide secured to the side of the backing member facing said cylinder for limiting the transverse movement of the grain, means for moving grain in a longitudinal path from the threshing cylinder to the chaffer unit including a grain pan having an upper surface mounted below said deflector unit for receiving grain from said cylinder and said deflector unit and conveyer means movable over and under said pan and longitudinally thereof, said conveyor means engageable with the upper surface of said grain pan and forming therewith grain confining means for limiting the transverse shifting of the grain moving in the longitudinal path.

3,092,117
WINNOWING APPARATUS FOR CIGARETTE-MAKING MACHINES
Francis Auguste Maurice Labbé, Paris, France, assignor to Molins Machine Company Limited, London, England, a British company
Filed May 3, 1961, Ser. No. 107,514
Claims priority, application Great Britain May 16, 1960
6 Claims. (Cl. 131—110)

1. In a cigarette-making machine of the kind in which cut tobacco is carried by a first airstream in the formation of a tobacco filler, and having winnowing apparatus comprising a picker roller arranged to remove tobacco from a carded roller and throw it into a second airstream whereby light particles are carried away by said second airstream while heavier particles continue to move substantially along their original path to strike against a wall and thereafter to fall by gravity; a rotatable sifting device

arranged to receive the falling particles and separate large particles and deliver them to a first outlet and permit smaller particles to pass through said sifting device to a



second outlet and means for delivering said smaller particles to said second airstream which carries the aforesaid light particles.

3,092,118
HAIR CURLERS
Carl L. Otto and La Nelle Burnham Otto, both of 956 5th Ave., New York 22, N.Y.
Filed Dec. 8, 1958, Ser. No. 778,671
13 Claims. (Cl. 132—40)



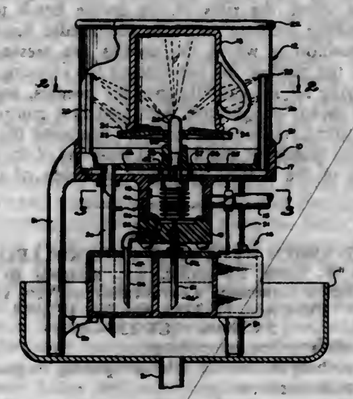
1. A device of the character described having separable supporting and retaining components, said supporting component comprising a hollow generally annular body at least the outer portion of which is comprised of elastically resilient sponge or foam like material adapted to receive a tress of hair wound thereon and said retaining component comprising a member of resilient material having two generally parallel legs connected by a U bend portion, for insertion into the bore of the aforesaid annular supporting component, at least a portion of said legs, when the legs are in normal position, spanning a distance greater than the bore of said body, whereby when said legs are inserted within said bore they will laterally and resiliently engage the wall of said bore, and at least one of said legs being connected by a return bend portion to provide a finger spaced from said leg, the space between said finger and said legs being so correlated to the thickness of the wall of said hollow body that when a tress of hair is wrapped around said body and the retaining component is inserted in the bore of the supporting component with said finger overlying the wound tress of hair, said finger will frictionally engage the wound tress of hair.

3,092,119
INITIALED CIGARETTE LIGHTER AND THE LIKE
Abraham Gold, Bronx, Herman Gold, Flushing, and Herman Bogin, Roslyn, N.Y., assignors to Gold Bros., Inc., New York, N.Y., a corporation of New York
Filed Nov. 1, 1960, Ser. No. 66,572
2 Claims. (Cl. 132—79)



1. A jewelry case in the form of a letter of the alphabet, comprising a hollow base having a top wall, a cap having an open end hinged thereat to the base to cover said top wall, said cap having an inturned edge at its open end, a lever pivotably mounted on said top wall and having a free end engageable with said inturned edge to hold the cap closed on the base, gear means rotatable in the base, said lever having another end engaging the gear means to turn the same when the cover is being opened, a support for a personal article having a rack gear engaged with the gear means and adapted to be elevated when the gear means is turned and the cap is being opened, said support being a cylindrical cup, a partition in the base guiding the cup in axial movement when the cap is being opened and closed, a cylindrical container for lipstick disposed in said cup for elevation and use when the cap is opened, there being spring means biasing the lever to hold the cap in a closed position, and other spring means biasing the gear means to hold the support in a lowered position in the base.

3,092,120
WASHER FOR CUPS AND THE LIKE
Harry B. Hilger, 3650 W. Slauson, Los Angeles, Calif., and Robert S. Hammett, 2312 Manhattan Ave., Manhattan Beach, Calif.
Filed Apr. 1, 1960, Ser. No. 19,265
13 Claims. (Cl. 134—47)



1. Washing apparatus of the character described, comprising an open top chamber, a support within said chamber for an object to be washed and movable in response to hand applied force, a water inlet, water flow control means beneath said chamber including a valve

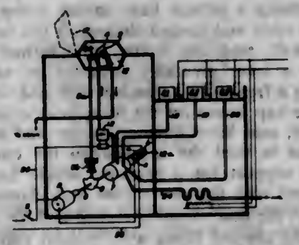
operable in response to movement of said support to pass water from the inlet for direction against said object, an additive liquid container beneath said chamber and control means, and means for elevating liquid from the chamber to mix with the water being so directed, the last mentioned means comprising means responsive to repeated movements of said support to communicate elevating suctions to the liquid in the container.

3,092,121

CLEANING MEANS AND MORE PARTICULARLY CLEANING OF HYPODERMIC NEEDLES OF SYRINGES

Kurt Bröge, Berlin-Grunewald, Germany, assignor to Firma Rud. A. Hartmann Gross-Apparate und Spezialmaschinen G.m.b.H. & Co., Berlin-Rudow, Germany

Filed May 18, 1961, Ser. No. 111,094
Claims priority, application Germany June 3, 1960
10 Claims. (Cl. 134—58)



1. An apparatus for the cleaning of hypodermic needles including supporting means, a distributing head having a plurality of nozzles, said supporting means being provided with slot means therein, a holder insertable into the slot means, and adapted to carry the needles to be cleaned, means for supplying cleaning medium and drying air medium to said head and nozzles, means pivotally mounting said distributing head to said supporting means for movement to three positions relative to said holder, first control means cooperating with said head to sequentially locate it at the three respective positions, namely, a charging position in which the head is a sufficient distance from said slot means to allow the insertion in and removal from the slot means of said holder, a central position in which the nozzles are located a short distance above the rims of the needle heads to permit the cleaning medium to clean the needle heads and a third position in which the nozzles are pressed on the rims of the needles for introducing the cleaning medium and drying air sequentially into the needles, and second control means cooperative with said first control means and in timed relation therewith for operating the medium supplying means for supplying at least one of the mediums at each of the central and third positions of the head.

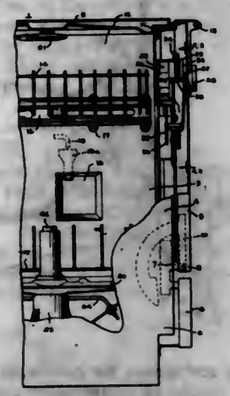
3,092,122

DISHWASHER WITH TIME CONTROLLED VENT

Lauren W. Guth, Louisville, Ky., assignor to General Electric Company, a corporation of New York

Filed Apr. 12, 1962, Ser. No. 187,064
5 Claims. (Cl. 134—58)

1. A dishwasher comprising:
(*a*) a chamber having a large opening to provide access thereto;
(*b*) closure means for said opening arranged to close said chamber during operation of said dishwasher and to be moved to open position when access to said chamber is desired;
(*c*) washing means for washing and rinsing dishes in said chamber;
(*d*) heat drying means for drying by evaporation dishes in said chamber;
(*e*) sequence control means controlling said washing means and said drying means, said control means causing timed operation of said washing means and then timed operation of said drying means;
(*f*) a member movable by said sequence control means at least during timed operation of said drying means;



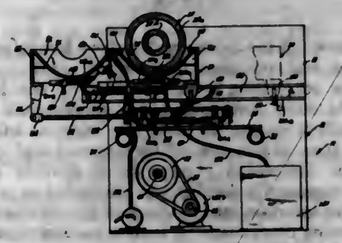
(*g*) vent means including an opening very small relative to said large opening; and
(*h*) a closure member for said vent means;
(*i*) said vent closure member and said member movable by said sequence control means being cooperable to cause opening of said vent closure member substantially after the start and before the end of said timed operation of said drying means and to cause closing of said vent closure member prior to the start of a subsequent timed drying operation.

3,092,123

ETCHING MACHINE

Jerome R. Harris, North Plainfield, N.J., assignor to Art Color Printing, Dunellen, N.J., a corporation

Filed Mar. 19, 1959, Ser. No. 800,439
16 Claims. (Cl. 134—61)



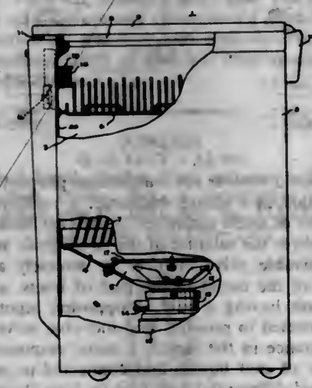
2. A machine for etching printing cylinders comprising a frame, a unitary trough member mounted on said frame and having side by side wells adapted to contain quantities of first and second etchants respectively, a carrier member adapted to support a printing cylinder above said trough member, means operatively engaging and mounting said carrier member for vertical movement relative to said trough member such that said printing cylinder may be subjected to the action of said etchants, raising and lowering mechanisms operatively connected to said carrier member for effecting vertical movement thereof relative to said trough member, means operatively engaging and mounting said trough member for lateral movement relative to said carrier member such that said printing cylinder may be subjected in succession to the action of said first and second etchants, shifting mechanisms operatively connected to said trough member for effecting lateral movement thereof relative to said carrier member, and means for coordinating said raising and lowering mechanisms and said shifting mechanisms.

3,092,124

TREATING AGENT DISPENSER ARRANGEMENT

Edward L. Flynn, Jeffersonville, Ind., assignor to General Electric Company, a corporation of New York

Filed Mar. 7, 1962, Ser. No. 178,105
5 Claims. (Cl. 134—93)



5. A dishwasher comprising:
(*a*) a tub;
(*b*) means for circulating water within said tub; and
(*c*) a dispenser arrangement comprising a base within said tub, a coiled spring of tubular construction secured at one end to said base, positioning means for holding said base within said tub substantially flat with said spring extending substantially vertically upward from said base and in a second position at a substantial angle about a horizontal axis from said first position, and moving means for moving said positioning means from said first position to said second position; said spring having its adjacent coils contiguous so as to form with said base a container when said base is in its first position, at least some of said coils becoming separated by gravity when said base is in its second position whereby the water circulated by said circulating means may enter between said coils to cleanse the interior of said spring and to cleanse said base.

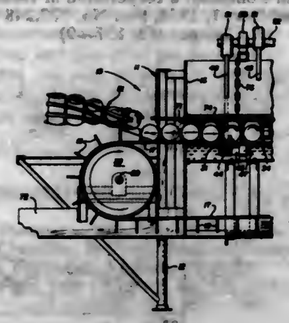
3,092,125

CONTAINER COOLING APPARATUS

Andrew H. Kinsey, P.O. Box 780, Winterhaven, Fla.

Filed Apr. 16, 1958, Ser. No. 728,926
7 Claims. (Cl. 134—125)

1. In apparatus for cooling containers, a trough adapted to contain cooling water therein, an endless conveyor having container engaging means mounted thereon, the upper run of said conveyor having a path of travel through the cooling water in said trough, means for delivering containers sequentially to the upper run of said conveyor, track means mounted within said trough having a substantial portion thereof below the surface of said cooling water, said track means serving to support said conveyor as it travels through said trough, and means for rocking said track means about an axis parallel to the longitudinal



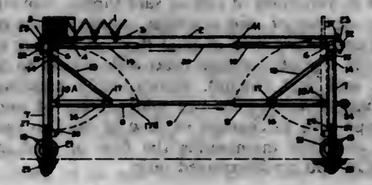
axis of the track means to thereby impart a rocking motion to the containers carried by the conveyor.

3,092,126

PORTABLE CAR PORT

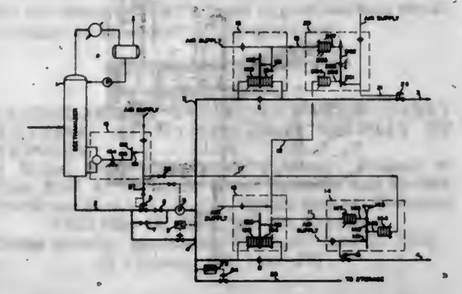
Audrey K. Smith, 2824 Raymond Ave., Stockton, Calif.

Filed June 8, 1959, Ser. No. 818,955
6 Claims. (Cl. 135—5)



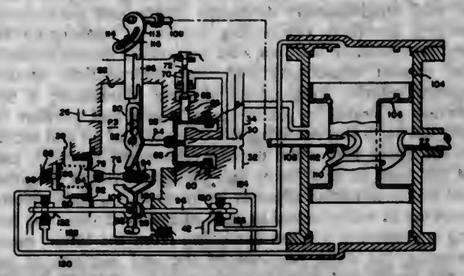
1. In a foldable roof-incorporating carport or the like, a knockdown frame comprising end portions, upper and lower longitudinally extending frame-end portion connecting members of separable section form and with the lower ones of said members located adjacent each frame side, each of said frame end portions comprising laterally spaced posts and an upper bar connecting said posts; each of said longitudinally extending frame end portion-connecting members comprising separable telescoping end and intermediate sections, and removable means retaining the related telescoping end and intermediate sections against relative longitudinal shifting movement; a boss portion provided by each upper frame end portion bar and having a seat receiving the outer end of an end section of the upper frame end portion connecting member, each of the posts of said frame end portion having a longitudinal slot terminating adjacent its lower end, a slide member working in and retained in each of said post slots and having a projecting portion extending from the latter, means pivoting the outer portions of the end sections of said lower frame end portion connecting members to the projecting portions of the related post slot-carried slide member, brace members pivoted at one end adjacent the upper end of each frame end portion-provided post, and pivot means detachably connecting the respective lower brace member ends to an intermediate end section portion of one of the lower frame end connecting members, whereby to maintain the latter in a plane adjacent the upper end of the related post slot when the frame is set up for use, while permitting the lower frame end portion-connecting members to drop to the plane of the lower ends of said post slots when the brace members have been disconnected from said last-mentioned pivot means.

3,092,127
PROPORTIONING STREAM FLOWS
Robert C. Bracken, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Dec. 1, 1958, Ser. No. 777,248
7 Claims. (Cl. 137—9)



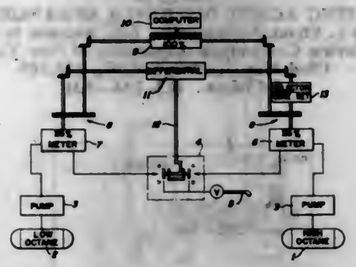
1. A method for supplying a fluid to a plurality of conduits from a common source and maintaining a predetermining ratio of fluid flow in said conduits which comprises removing from a source of supply, which can vary, a fluid, maintaining said fluid at a predetermined pressure, dividing and moving said fluid into a plurality of conduits, moving the fluid through one of said conduits at a predetermined recorded and controlled rate of flow, readjusting and controlling said rate of flow responsive to variations in rate of said supply, moving fluid through another of said conduits, automatically recording and controlling flow of fluid through another of said conduits in a predetermined ratio with respect to flow of fluid in said first conduit, automatically effecting said controlling of flow of fluid in said another of said conduits responsive to changes of flow of fluid in said first conduit and thus maintaining the flow of fluid in said conduits in said predetermined ratio.

3,092,128
BLEED VALVE CONTROL MECHANISM
James D. Pembleton, Oak Park, Mich., assignor to Holley Carburetor Company, Van Dyke, Mich., a corporation of Michigan
Filed Feb. 27, 1956, Ser. No. 568,013
13 Claims. (Cl. 137—81)



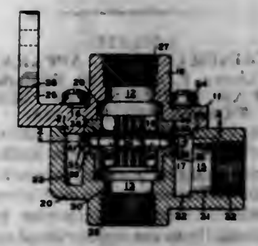
10. Servo mechanism for controlling the opening of a valve, comprising a servo motor, means for controlling the position of said motor comprising a movable member subjected to a force in one direction which is a function of the pressure differential between static ambient atmospheric pressure and a second pressure controlled by the valve, said movable member being subjected to a second force in the opposite direction which is a function of said second pressure and having a null position in which said motor is at rest and operable to actuate said motor in opposite directions while displaced from said null position in opposite directions, and means responsive to movement of said motor to vary the relative effectiveness of the forces developed by said aforesaid pressures independently of the values of said pressures.

3,092,129
LIQUID BLENDING CONTROL
William E. Steen, South Pasadena, Calif., assignor to A. O. Smith Corporation, Milwaukee, Wis., a corporation of New York
Filed Apr. 8, 1960, Ser. No. 20,852
2 Claims. (Cl. 137—100)



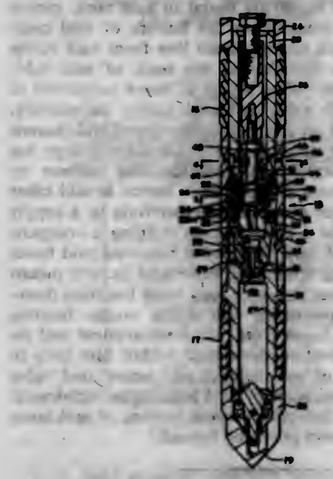
1. In a liquid blender for maintaining proportional flow of two liquids to a single discharge, a multi-port valve having a pair of inlets connected to the two liquids and an outlet to deliver the mixture of the two liquids and having a single movable valve member to inversely adjust the connection of the outlet to the pair of inlets, a differential gear unit having a pair of opposing inputs and an output connected to position said movable valve member as the difference in the inputs, a meter responsive to the flow of one of said liquids and connected to one of the inputs of said differential gear unit to drive the same, and a second meter responsive to the flow of the other of said liquids and connected to the other input of said differential gear unit to drive the same, one of said meter connections comprising an adjustable drive connected to be driven by the corresponding meter, a pair of series connected planetary transmissions connecting said adjustable drive to said differential gear unit, and a cone gear drive having an input connected to the adjustable drive and having a pair of separately adjustable outputs connected one each to each of said planetary transmissions to establish a plurality of presettable drive ratios between the corresponding meter and the differential gear unit.

3,092,130
DIAPHRAGM DOUBLE CHECK VALVE DEVICE
Ellis E. Hewitt, Ruffsdale, Pa., assignor to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania
Filed Dec. 23, 1960, Ser. No. 78,155
8 Claims. (Cl. 137—112)



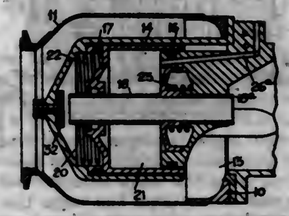
1. A double-check valve device for cutting off communication of one of two different sources of fluid under pressure upon a decrease in pressure of one of said sources relative to said pressure of the other of said sources comprising a casing formed with a cylindrical shuttle chamber of substantially constant diameter along its length, a pair of inlet port means disposed on opposite sides of and axially aligned with said chamber, a fluid supply outlet means communicating with said chamber, valve seat means provided on each of said inlet means communicating with said chamber, each of said valve seat means including a conical surface and an intersecting annular flat seat surface arranged normal to the axis of said conical surface to form a sharp circular edge, a flexible diaphragm having surface characteristics capable of being depressed by said sharp edge and having a lesser diameter than said chamber and greater than said sharp circular edge, said diaphragm being floatingly movable between said valve seats upon a pressure differential between the fluids in said inlet means and to initially seat on said flat annular surface associated with the source of fluid having the lower value of pressure with said sharp edge depressed in said surface and subsequently flexed to form a surface contacting seal with said conical surface so as to cut off communication of said one inlet means with said supply outlet means.

3,092,131
GAS LIFT VALVE
Charles Paul Lamb, Dallas, Tex., assignor to Merla Tool Corporation, Dallas, Tex., a corporation of Texas
Filed July 12, 1961, Ser. No. 123,473
3 Claims. (Cl. 137—155)



1. A gas lift valve comprising, a tubular housing, spaced seal means on the exterior of the housing defining therebetween an intermediate section of the housing, a main gas passageway through the housing having an inlet in said intermediate section and an outlet outside said intermediate section, a valve seat in said main gas passageway, a main valve member cooperable with the valve seat to control flow through the passageway, a boss carried by the housing and having an outer cylindrical surface concentric with the bore in said housing to provide an annulus therebetween, a motor piston in said annulus sealingly engaging said housing and cylindrical surface and having one endwise face exposed to said inlet, means connecting said valve member and piston together, a passageway extending through said valve member and piston and connecting means, a passageway extending through said boss and in fluid communication with the passageway through said piston, a pilot valve seat in said boss passageway, a pilot valve member cooperable with said pilot valve seat to control flow therethrough, a pilot gas passageway between said pilot valve seat and said intermediate section of the housing, said pilot gas passageway having a bleed section providing a pressure drop thereacross when the pilot valve member is in open position, means establishing fluid communication between the other endwise face of said piston and said pilot gas passageway between said bleed section and said pilot valve seat, and pressure responsive motor means for moving said pilot valve member between open and closed positions.

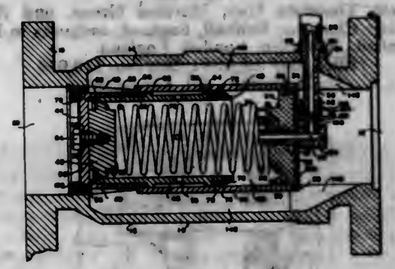
3,092,132
COMPRESSED AIR OR OTHER GAS CONTROL VALVES
Kenneth Theodore Guy, Marston Green, and Robert Walter Chandler, Solihull, England, assignors to Rotax Limited, Willesden, London, England
Filed May 15, 1961, Ser. No. 110,034
3 Claims. (Cl. 137—219)



1. Valve mechanism for controlling the flow of compressed air or other gas, and comprising in combination a hollow body, an inlet and an outlet rigid with, and extending outwardly from opposite sides respectively of, said hollow body, a cylindrical casing secured to said hollow body, and surrounded by said inlet which is coaxial with, and spaced from, said cylindrical casing, the latter being closed at its end remote from said hollow body, and being open at its other end, a cylindrical member integral wtih said hollow body, and extending therefrom into the open end of said casing in spaced relationship thereto, said cylindrical member being provided with ports for establishing communication between said inlet and said outlet, a first annular piston slidably mounted within said casing so as to divide the interior thereof into two compartments, and provided with a skirt which extends between the open end of said casing and said cylindrical member, and which is movable by said first piston to and from a position in which said ports are covered by said skirt, a first spring acting on said first piston in the direction for causing said skirt to cover said ports, valve means and passages through the medium of which the compartment of said casing nearest to said hollow body is communicatable alternately with said inlet and the ambient atmosphere, a tubular member which is supported by said hollow body and extends through said first annular piston, and which is axially movable between positions in which it interrupts and establishes communication between said outlet and the compartment of said casing furthest from said hollow body, a second annular piston which is rigid with, and extends outwardly from, said tubular member, and which has its outer periphery in slidable engagement with a complementary surface of said cylindrical member, and a second spring acting on said tubular member for moving the latter in a direction opposite to that of movement imparted to said first piston by said first spring so that pressure within the compartment of said casing nearest to said hollow body serves to move said first and second pistons in opposite directions respectively against the actions of said first and second springs for establishing communication between said inlet and said outlet and between the latter and the compartment of said casing

furthest from said hollow body, the adjacent cylindrical surfaces of said casing and the skirt of said first piston being disposed to provide between them a restricted annular space through which said inlet is communicatable with the last mentioned compartment of said casing.

3,092,133
FLUID REGULATING VALVE
Howard T. Clark, Shreveport, La., assignor, by mesne assignments, to Arkla Industries, Inc., Evansville, Ind., a corporation of Delaware
Filed Nov. 9, 1959, Ser. No. 851,716
3 Claims. (Cl. 137—220)



1. A fluid-regulating valve comprising: means defining an inlet fluid chamber; means defining an outlet fluid chamber substantially axial to and rearwardly of said inlet chamber;

sleeve means fixed substantially axially to said chambers, said sleeve means having at least one peripheral groove in the end adjacent said inlet chamber and being open at said end and having lateral ports therein near said end for passage of fluid from said inlet chamber through said open end and said ports into said outlet chamber;

piston means having its forward end exposed to fluid pressure within said inlet chamber and having a circumferential surface adjacent said end which engages said sleeve means adjacent the groove in said sleeve means, said piston means being axially slidable within said sleeve means so as to open and close said ports and forming within said sleeve means an intermediate chamber;

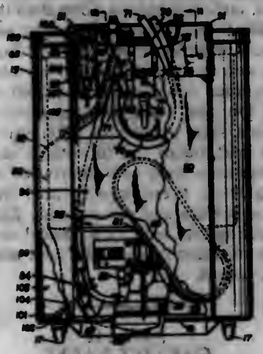
retainer ring means engaging the inner surface of said inlet chamber and mounted forwardly of said sleeve means and said piston means, said retainer ring means having at least two peripheral notches in the rear surface thereof facing the groove in said sleeve means thereby forming a plurality of axially spaced communicating concentric chambers adjacent said circumferential surface of said piston means;

a first fixed O-ring seal in the rearmost of said concentric chambers contacting throughout its entire circumference the groove in said sleeve means and the rearmost notch in said retainer ring means, said first O-ring seal being engageable by the forward end of said piston means;

a second fixed O-ring seal in the forward concentric chamber contacting throughout its entire circumference the inner surface of said inlet chamber, the open end of said sleeve means, the forward notch in said retainer ring means and a circumferential portion of the O-ring seal in the next rearward concentric chamber; and

means for delivering fluid pressure to said intermediate chamber whereby movement of said piston is responsive to fluid pressure differential across opposite ends thereof.

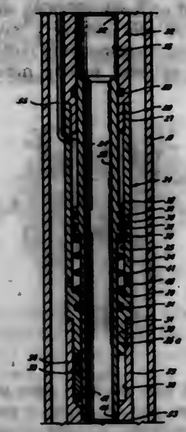
3,092,134
DRAIN AND INLET HOSE ARRANGEMENT FOR DISHWASHER
Charles M. Allen, Russell C. Geiger, and David A. Meeker, Troy, Ohio, assignors to The Hobart Manufacturing Company, Troy, Ohio, a corporation of Ohio
Filed Nov. 13, 1958, Ser. No. 773,599
3 Claims. (Cl. 137—355.17)



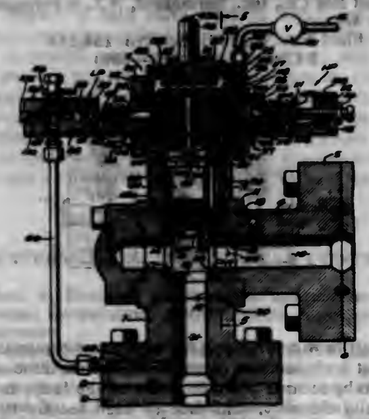
1. A dishwasher comprising an outer cabinet, a tank within said cabinet defining the washing chamber, means including a fill valve mounted adjacent the top of the back of said cabinet for supplying liquid to said tank, means including a pump mounted in the bottom of said cabinet for draining said tank, a drain line from said pump including a fixture mounted at the back of said cabinet adjacent said fill valve, a pair of hoses connected at one end to said fill valve and said fixture respectively, said cabinet having an opening in the upper end thereof receiving the other ends of said hoses therethrough for withdrawal therethrough from within said cabinet by longitudinal movement of said hoses, means at said other end of said hoses for connection respectively to a supply source of water and a drain, means defining a compartment in the back of said cabinet for receiving said hoses in a loop depending from said valve and fixture, means for guiding said hoses into such loop upon insertion thereof into said compartment, and guide means limiting withdrawal of said hoses from said compartment and including a curved portion positioned within said loop in the upper portion of said cabinet and below said valve and fixture for engagement by said hoses upon withdrawal of said other ends thereof to prevent kinking of said hoses in the fully withdrawn positions thereof.

3,092,135
FULL OPENING SAFETY VALVE FOR PIPE STRINGS
Joseph R. Brown and Chandleigh B. Cochran, Houston, Tex., assignors to Cicero C. Brown, Houston, Tex.
Filed Apr. 27, 1956, Ser. No. 581,167
14 Claims. (Cl. 137—458)

2. A safety valve for a pipe string extending into a well, comprising, a tubular body adapted to form a part of a pipe string within a well, means forming an annular valve seat in said body, a sleeve member slidable axially in the bore of the body, a flapper valve hinged to the side of the body adjacent said seat, means pivotally connecting the valve to the sleeve member operative by reciprocation of the sleeve member to move said valve between open and closed positions with respect to said seat, and control means operative in response to fluid pressure inside said pipe string within a pre-determined range to apply said fluid pressure to said sleeve member to hold said sleeve member in the valve-opening position, said control means including control elements automatically operable in response to fluid pressures in said pipe string above and below said range to release said sleeve member for movement to the valve-closing position.



3,092,136
FLUID PRESSURE OPERATED SHUT-OFF VALVE
Robert S. Wills, 4341 Olive, Long Beach, Calif.
Filed Nov. 23, 1959, Ser. No. 854,940
14 Claims. (Cl. 137—458)



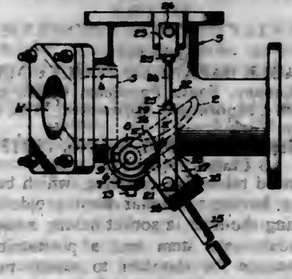
1. A fluid pressure operated shut-off valve for wells comprising: a main valve housing; means for supporting said housing in a fluid flow line; said housing having therein a fluid passage for the flow of well fluid therethrough and a main valve chamber; a main valve shiftably disposed in said chamber for movement into said fluid passage to close off the flow of well fluid therethrough; a passageway leading from said fluid passage to the main valve chamber at the opposite side of the main valve from said fluid passage; and pilot valve means interposed in said passageway and responsive to a change in fluid pressure in the fluid passage aforesaid for opening said passageway to permit fluid from said flow passage to flow into the valve chamber and shift said main valve to a closed position; said housing having a bore therein communicating with said chamber; said pilot valve means including a pilot valve support having a portion provided with a valve seat and extending into said bore and a portion projecting from said housing, a pilot valve stem carried by said latter portion; said passageway leading into said bore through said seat; and said stem having a head engageable with said seat to close said passageway.

3,092,137
DAMPER USING A GASEOUS FLUID
Herman Carel Anton van Eldik Thieme, Delft, and Cornelis Pieter Keizer, Vlaardingen, Netherlands, assignors to Arie Adrianus de Koning and Kornelis Kerstiaan Karel de Koning, both of Oud Beijerland, Netherlands
Filed May 13, 1960, Ser. No. 29,029
1 Claim. (Cl. 137—493)



A damper for use in a shock absorber system for controlling the flow of fluid medium therethrough linearly proportional to the force applied thereto, said damper comprising a cylindrical tubular one-piece housing defining upper and lower peripheral edges, upper and lower covers provided with shoulders in confining internal abutment with the respective upper and lower peripheral housing edges, said upper and lower covers being grooved inwardly of the housing to present oppositely facing bosses adapted for engagement and alignment of upper and lower spring members, said housing having a plurality of equally sized apertures symmetrically formed around the peripheral wall thereof and disposed above and below an internal double conical flow passage within said housing, a shaft secured at opposite ends thereof centrally to the oppositely facing bosses, a valve slidably mounted upon said shaft, said valve being provided with upper and lower shoulders providing second upper and lower bosses in opposed relationship to the first respective oppositely facing bosses, a helical spring surrounding the shaft between each one opposite facing boss and one said second boss, the external diameter of the bosses being substantially equal to the internal diameter of the springs whereby the springs are maintained in accurate longitudinal alignment with the housing and shaft to provide linear flow characteristics of the pressure difference as a function of the volume flow.

3,092,138
PIVOTED CHECK VALVE
Martin A. Lund and Joe Alcusz, Chicago, Ill., assignors to FMC Corporation, a corporation of Delaware
Filed Jan. 14, 1960, Ser. No. 2,368
2 Claims. (Cl. 137—514)



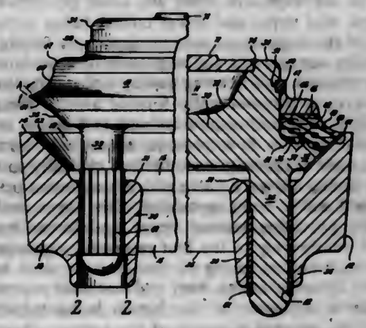
1. In combination with a fitting, a valve seat located in said fitting, a valve pivotally mounted in said fitting

to move toward and away from said valve seat, said valve being movable toward said valve seat by pressure of fluid flowing through said fitting, an arm extending angularly to said valve and operatively connected thereto, whereby said arm moves pivotally with pivotal movement of said valve, means on said arm resisting pivotal movement of said valve toward said valve seat, and means connected to said arm in such a manner as to move said first mentioned means relative to said arm in a direction away from said valve as said valve is moved toward said valve seat, whereby the resistance of said first mentioned means to movement of said valve toward said valve seat is increased throughout the range of movement of said valve as it approaches said valve seat, the increase in resistance to movement of said valve toward its closed position being effective to decrease the rate of movement of said valve, whereby the striking force of said valve against the valve seat is minimized.

3,092,139
VALVE WITH MEANS FOR CONTROLLING AND INDICATING WEAR

Otis Ned Rodgers, Wallace Fred Olson, and Walter Rand Wheeler, Jr., Oklahoma City, Okla., assignors to American Iron & Machine Works Company, Inc., Oklahoma City, Okla., a corporation of Delaware

Filed Apr. 14, 1960, Ser. No. 22,226
11 Claims. (Cl. 137—533.29)



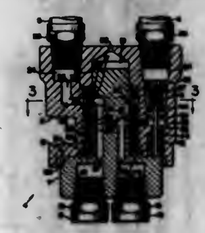
1. A valve comprising a seat ring and closure, said seat ring having an annular seat and having an eccentric guide bearing within and adjacent to the inner periphery of said annular seat, and said closure having an annular seating surface engaging said annular seat when the valve is closed, and having an eccentric guide stem cooperating with said bearing, said stem being spaced inwardly from the inner periphery of the seating surface of the closure a distance substantially equal to the distance of the bearing from the annular seat, whereby the flow of fluid through the valve is not divided by the stem or the bearing.

3,092,140
RELEASABLE BALANCED FLUID COUPLING

Robert W. Kenney, South Pasadena, Calif., assignor to A. O. Smith Corporation, Milwaukee, Wis., a corporation of New York

Filed Mar. 15, 1960, Ser. No. 15,215
3 Claims. (Cl. 137—594)

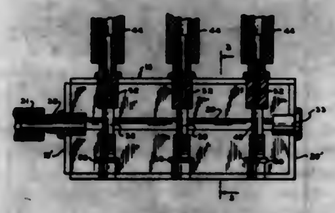
1. A balanced releasable coupling, which comprises a coupling plug having a tubular stem projecting axially of a positioning shoulder, a socket having a bore adapted to accommodate said stem and a positioning surface adapted to engage the shoulder to axially position the stem within the bore, said socket having a vent opening communicating with the bore to eliminate pressure between the base of the bore and the end of the stem, said stem and said socket each having at least one L-shaped passage terminating in a radial portion, said radial portions in the stem and the socket being axially aligned incident engagement of the positioning surface and shoulder, at least one of said members having an annular passage including the corresponding radial portion of the L-shaped passage, resilient sealing means disposed between the stem and bore on both sides of the radial portions of the passages and the annular passage to prevent fluid leakage therebetween, a valve closing the L-shaped passage in the socket, and an actuator means affixed to the valve and slidably journaled in the socket and engaging the positioning shoulder to hold the valve open incident assembly of the stem into the bore of the socket.



3,092,141
AIRFLOW CONTROL UNIT FOR AQUARIUMS

Ludwig Stark, Springfield, N.J., assignor to Springfield Tool and Die Co., Inc., Springfield, N.J., a corporation of New Jersey

Filed Nov. 22, 1961, Ser. No. 154,234
2 Claims. (Cl. 137—608)

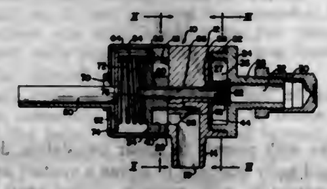


1. An air flow control unit for aquariums comprising a pair of flat body sections of substantially like dimensions adapted to be secured together at one of the faces thereof substantially unitarily, said face of each section having formed therein medially longitudinally a channel semicircular in cross-section, said semicircular channel, on so securing said sections together, defining a longitudinal air receiving passage in said unit for coupling at one longitudinal end thereof of the unit with a source of air under pressure, means engaging the body sections for closing the other end of said channel, complementary recesses formed in said faces of the body sections in spaced parallel relation transversely to the longitudinal axis thereof and opening into the longitudinal channel, said complementary recesses, on so securing said sections, together defining transverse air conduits for flow of air from the longitudinal air channel, tubular insert means engaging one end of the transverse conduits for connection of aquarium air tubes therewith, said means having a valve seat at its inner end, complementary threaded portions formed in the opposite ends of said transverse air conduits and needle valve stems threadedly and rotatably journalled in said threaded portions and disposed in said transverse air conduits, and adapted to cooperate with said seats for controlling the flow of air through said aquarium air tubes.

3,092,142
GAS COCK

James R. Willson, Greensburg, Pa., assignor to Robertshaw-Fulton Controls Company, Richmond, Va., a corporation of Delaware

Filed Sept. 11, 1959, Ser. No. 839,370
3 Claims. (Cl. 137—614.11)

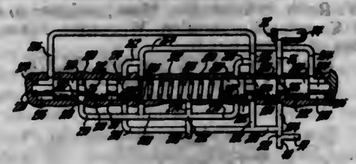


1. A fluid flow valve comprising in combination a gas cock having an inlet and an outlet for fluid fuel, a valve body between said inlet and said outlet for controlling the flow therebetween, said valve body having a front face and a rear face, an inlet port in said front face in communication with said inlet, a passage in said valve body providing communication between said faces, a rotary valve member in engagement with said front face, means for rotating said rotary valve member relative to said valve body, an arcuate groove formed in said rotary valve member, a rotary metering cam in engagement with said rear face for varying the effective area of said passage and a shaft interconnecting said rotary valve member and said metering cam for turning said metering cam with said rotary valve member, said rotary valve member being rotatable through a relatively wide angle with respect to said valve body in which said arcuate groove connects one end of said passage with said inlet port to provide unrestricted flow from said inlet port to said passage and to an extreme position in which said passage is closed from said inlet port, said metering cam cooperating with the other end of said passage to vary the effective area of said other end and thereby the flow rate to said outlet in response to the angular position of said rotary valve member with respect to said valve body.

3,092,143
INTERMITTENT PULSE VALVE CONTROL SYSTEM

Stephen A. Denman, Piqua, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application Nov. 5, 1958, Ser. No. 772,014, now Patent No. 3,052,217, dated Sept. 4, 1962, which is a division of application Ser. No. 684,154, Sept. 16, 1957, now Patent No. 2,976,946, dated Mar. 28, 1961. Divided and this application Mar. 1, 1961, Ser. No. 92,662
4 Claims. (Cl. 137—624.14)

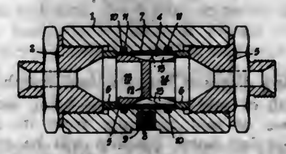


1. Means for producing pressure pulses in a fluid pressure control system for reducing hysteresis in said system, said means comprising a housing having a longitudinally extending chamber formed therein, a first valve received in one end of said chamber, a second valve received in the other end of said chamber, compressive spring means intermediate said valves, passage means for transmitting fluid pressure to intermediate portions of said valves and from one of said valves to said fluid pressure system, and means including ports and passages controlled by said valves for transmitting fluid pressure from the intermediate portions of said valves to the outer ends of each of said valves and for venting the outer ends of each of said valves in timed relation whereby said valves are caused to reciprocate in said valve chamber in opposite directions thereby causing said one valve to intermittently interrupt the supply of fluid to said fluid pressure system to cause pressure pulses in said fluid pressure system.

3,092,144
CONTROL VALVES

Jack Raymond Green, London, England, assignor to Vickers Research Limited, London, England, a company of Great Britain

Filed Feb. 10, 1960, Ser. No. 7,849
Claims priority, application Great Britain Feb. 27, 1959
15 Claims. (Cl. 137—625.3)



1. A control valve comprising a housing having an inlet formed by a first port and an outlet formed by a second port, a displaceable valve member having one side which constitutes a valve control surface, said displaceable valve member being designed sufficiently rigid to ensure that, in operation of the valve for a given range of pressures, said valve member deforms an amount proportional to the pressure differential across the valve member, the ends of said valve member being sealed relative to said housing and moveable relative to said housing, said valve member being moveable as a whole, a valve part having a plurality of first passageways which place one of said ports in communication with said one side of the valve member, said valve part also having a plurality of second passageways which place said one side of the valve member in communication with the other port, each first passageway including a first opening adjacent one side of the valve member and each second passageway including a second opening adjacent said one side of the valve member, the first openings being at least partly interspersed between the second openings, means to preclude flow from the inlet to the outlet except through said passageways, and means for applying a fluid of controlled pressure to the opposite side of said valve member to control the extent of displacement of said member from said part, thereby to control flow from the inlet to the outlet via the passageways and between the valve member and said part.

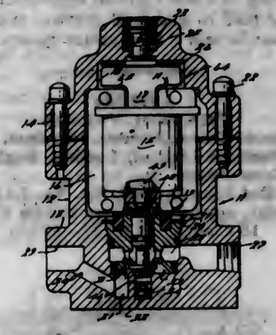
3,092,145
SOLENOID OPERATED VALVE

Edwin P. Brinkel, Royal Oak, Mich., assignor to Ross Operating Valve Company, Detroit, Mich., a corporation of Michigan

Filed Oct. 5, 1959, Ser. No. 844,428
2 Claims. (Cl. 137—625.27)

1. In combination, a poppet valve movable between first and second positions, a spring urging said poppet valve toward its first position, a solenoid having an armature energizable to move the poppet valve toward its second position, and an integral take-up unit freely and separably disposed between said armature and poppet valve and comprising a first member disconnected from said armature except for an abutting engagement which permits the armature to urge said first member in only one direction, said first member having a headed pin affixed thereto and extending from one end thereof, a

collar surrounding said pin and engaging said head, said collar being disconnected from said valve except for an abutting engagement which permits the valve to urge said collar in a direction opposite to that in which the armature may urge said first member, and a helical com-



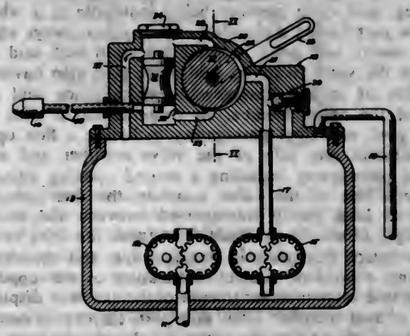
pression spring disposed between said member and collar, the length of said take-up unit being such that the travel distance of said armature from its deenergized position to its full home position will be greater than the travel distance of said valve between its two positions.

3,092,146

VISCOSITY AND FLOW CONTROL VALVE

Raymond B. Plass, Piedmont, Calif., assignor to Ray Oil Burner Co., San Francisco, Calif., a corporation of Nevada

Filed Mar. 13, 1961, Ser. No. 95,292
2 Claims. (Cl. 137—625.47)



1. A viscosity valve of the kind described comprising a valve body with a cylindrical cavity having an inlet in its cylindrical wall and two outlets therein at equal distances from opposite sides of the inlet, a disc substantially filling and rotatable in said cavity, said disc having a groove in its peripheral surface forming a tapered passage between the inlet and both of the outlets, and means to rotate the disc, said inlet being of substantially greater cross sectional area than said groove at its point of greatest cross section.

3,092,147

DEVICE FOR REGULARIZING THE DISTRIBUTION OF A FLUID

André Huet, 48 Avenue du President Wilson, Paris 16, France

Filed Apr. 19, 1960, Ser. No. 23,282
Claims priority, application France Apr. 21, 1959
1 Claim. (Cl. 138—37)

A fluid-distribution device adapted to have fluid flow therethrough in a predetermined direction, comprising, in combination, a main conduit and a plurality of secondary conduits mounted in parallel on said main conduit, each of said secondary conduits being connected to said main conduit by a coupling of convergent-divergent shape, said coupling containing a body of revolution having a gradually decreasing and then a gradually increas-



ing diameter with respect to linear translation down the center of said body whereby to define a venturi and being provided internally with radially spaced-apart coaxial partitions of frusto-conical shape and outwardly flared in the direction of flow of the fluid away from said main conduit.

3,092,148

STARTING JOINTS FOR CONTINUOUS WOUND VESSEL

Fred A. Carstens, Milwaukee, Wis., assignor to A. O. Smith Corporation, Milwaukee, Wis., a corporation of New York

Filed July 25, 1960, Ser. No. 44,928
1 Claim. (Cl. 138—151)



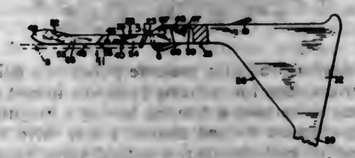
A cylindrical structure comprising a cylindrical metallic core, a plurality of layers of reinforcing sheet metal coil wrapped thereon with a starting edge extending longitudinally of said core, a metal blank fitted to said core and having a longitudinal edge facing said starting edge and corresponding thereto in thickness to provide a welding joint therebetween, and a fusion weld securing said edges together and to said core, said blank being tapered in thickness away from said weld to provide a gradual approach of substantial circumferential length for wrapping of successive layers upon the starting overlap of the previous layer.

3,092,149

PILE WIRES FOR LOOMS

Walter Y. Robb, Whitinsville, Mass., assignor to Crompton & Knowles Corporation, Worcester, Mass., a corporation of Massachusetts

Filed May 4, 1962, Ser. No. 192,578
3 Claims. (Cl. 139—46)



3. In a pile wire for a loom capable of weaving fabrics having an embossed effect as well as a plain effect with and without cut piles,

(*a*) a relatively thin, flat body member including a rear depending end thereof fixed stationarily with respect to the loom and an opposite forward end provided with a longitudinal slot, and

(*b*) a pile former forming part of said pile wire and having a rear portion extending into said slot and a forward portion operatively connected to the fabric being woven, the pile former being provided with or without a loop cutting blade as desired,

(*c*) said pile former and said body member forming a two-piece pile wire in which the pile former is stationary with respect to the body and removably attached thereto,

(*d*) said opposite end having a pair of longitudinal arms extending from said body to define said slot, said slot being vertically disposed between the arms and open-ended on three sides throughout the greater part of its length, the remaining length of the slot being closed at its upper end to form a slot of inverted U-shaped configuration extending said remaining length, and

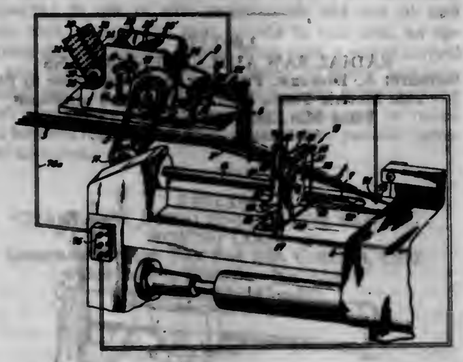
(*e*) said slot being so formed as to be able to receive individual pile formers of different heights.

3,092,150

WEAVING METHOD AND LOOM

Josef Birmans and Herbert Steinert, Velbert, Rhineland, Germany, assignors, by mesne assignments, to Raymond Dewas, Amiens, Somme, France

Filed May 26, 1960, Ser. No. 31,995
Claims priority, application Germany June 2, 1959
7 Claims. (Cl. 139—122)



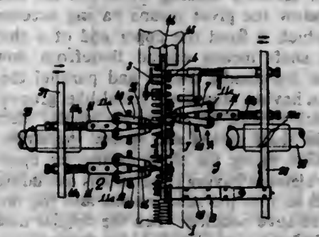
1. A loom in the form of a gripper loom comprising a slay swinging about pivots for executing forward and backward strokes and for picking different kinds of weft yarns, a number of weft yarn bobbins disposed on the same side of the loom, a picking member to grip the yarns, a selector device, and a weft yarn supply device, said selector device including weft yarn lancets and lancet selector means, and a patterning device, for selecting and controlling the weft yarns which are to be picked, said yarns being drawn off the weft yarn bobbins through yarn carrier eyelets for introduction into the shed during the backward stroke of the slay and being moved transversely of the warp for such introduction by said selector device and in such movement causing the removal of the weft yarns from a number of bobbins disposed separately from one another on the same side of the loom, the various kinds of weft yarn extending at least substantially straight from the eyelets to the fabric edge when positioned for use at the yarn catching station, the weft yarn lancets being so disposed and controlled as to bend the weft yarns not in use out of the yarn catching path into inoperative positions and so as to move the weft yarns from the inoperative positions into the yarn catching path straight position for picking in accordance with the patterning device, for the purpose of transfer to the picking member and for the purpose of an at least substantially straight draw off out of the eyelets and introduction into the shed when the lancets are in yarn catching path straight position, said lancets being so disposed that the at least substantially straight line formed by the weft yarn between the fabric edge and the nearest yarn support point is not greatly interrupted by the position of the lancets, said lancet selector means so moving the lancets at least approximately vertically downwardly that the weft yarns are brought into a stand-by position near the picking member when the lancets are in yarn-catching path-straight position, and for transferring the weft yarns, said weft yarn supply device having cam means and a weft yarn supply fork mounted for horizontal and vertical movement, said cam means so controlling said weft yarn supply fork, that said fork, when a lancet moves downwardly, first moves horizontally, then is moved vertically towards said picking member, and, in said such fork movement, offers the weft yarn to the picking members.

3,092,151

MACHINE FOR MANUFACTURING HAIR COMBS FROM METAL WIRE

Saburo Tsuramoto, 232 Kashima-cho, Higashiyodogawa-ku, Osaka City, Japan

Filed Feb. 23, 1960, Ser. No. 10,421
Claims priority, application Japan Oct. 10, 1959
6 Claims. (Cl. 140—71)



2. A machine for forming a bent wire hair comb from a wire bent into a zigzag shape having a series of oval-shaped heads and feet, comprising a work table having a plurality of shaping and supporting pins therealong for receiving a zigzag wire therearound, a head shaping pincer supporting member on one side of said table having at least one pair of head shaping pincers thereon for engagement around the pins on said table which are closer to the head shaping pincer supporting member, a foot shaping pincer supporting member on the other side of said table having at least one pair of foot shaping pincers thereon for engagement around the pins on said table which are closer to the foot shaping pincer supporting member, at least, said shaping pincers and said table being relatively movable transversely of the direction in which the pins extend along said table, said shaping pincer supporting members having means thereon engaging with said pair of pincers for closing said pincers around the pins when relative transverse movement of the shaping pincers and said table toward each other takes place, said table and said shaping pincer supporting members also being relatively movable in the direction in which the pins extend along said table for causing pairs of pincers to act on successive bends of wire, means engageable with the wire for closing the interval between pitches of the wire, and means associated with said table for removing wire from said pins after the pincers have shaped the wire.

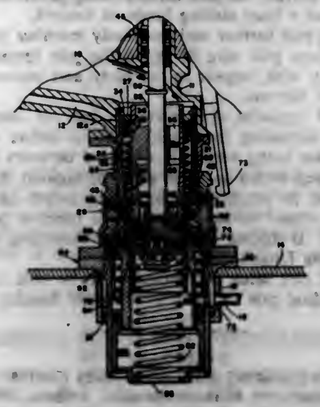
3,092,152
WIRE TWISTING AND CUTTING TOOL
Ted Neff, 20975 Shamrock Ave., San Bernardino, Calif.
Filed Apr. 17, 1961, Ser. No. 103,532
2 Claims. (Cl. 140—119)



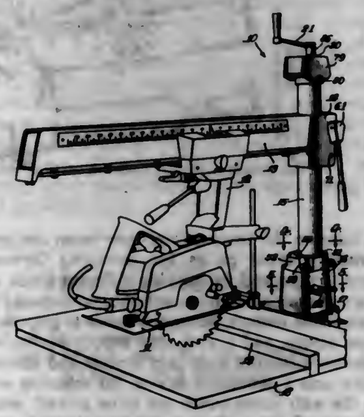
1. In a wire twisting tool and the like, a pair of parts, pivot means joining the parts together near their upper ends to form pliers, each part having a downwardly elongated portion to form handle means and each part having a gripping portion at its upper end to form movable coacting jaws for securely holding wires and the like, one of the parts below the pivot means having accommodating means to which is fixed the upper end of a shaft means and which shaft means extend therefrom downwardly intermediate the handle means and parallel thereto, the shaft means having elongated spiral-like grooves therein to form track means, an elongated tubular element surrounding the shaft means and spaced therefrom and designed to slide along the shaft means, an upper end of the tubular element having rider means extending into the track means so that the rider means and the tubular element have relative rotation when the tubular means slides along the shaft means; a hand grip means surrounding the lower end of the shaft means, an upper end portion of the grip means having bearing relationship with the tubular element for rotation thereon, means provided to allow slight shifting of the grip means axially along the tubular element; stop means for limiting the shifting of the grip means, tapered lock means having one tapered part thereof fixed to the lower end of the tubular element and the other tapered part thereof integral with the lower end of the grip means so that the grip means, when pulled, stays stationary with respect to the tubular element while the shaft means and the pliers rotate but, the tubular element rotates with respect to the grip means when the grip means is pushed and during this latter action the shaft means and the pliers remain stationary.

3,092,153
VENTED FILL NOZZLE AND ADAPTER THEREFOR
Ludwig T. Stoyke, Elyria, Ohio, assignor, by mesne assignments, to Lear, Siegler Inc., Santa Monica, Calif., a corporation of Delaware
Filed Apr. 4, 1960, Ser. No. 19,935
5 Claims. (Cl. 141—302)

1. A vented liquid fill nozzle comprising: means forming a liquid conduit; means forming a fume conduit; first valve means including a valve stem adapted to move along the axis of said liquid conduit and to close the end of said liquid conduit when said stem is in one extreme position; a slidable member including a web and a sleeve centrally located in said first conduit and slidingly engaging said valve stem, said slidable member defining the exterior portion of said first conduit; means attached to said valve stem adapted to mechanically engage said slidable member to cause said slidable member to move axially with said valve stem; said second conduit means being defined by a pair of coaxial thimbles closed at one end by said slidable member and adapted to be opened when said slidable member moves axially.

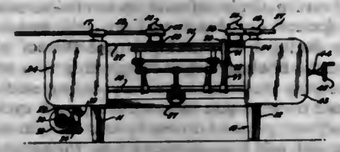


3,092,154
RADIAL SAW ADJUSTMENT MEANS
Gerhardt A. Dobslaw, Park Forest, Ill., assignor to Portable Electric Tools, Inc., a corporation of Illinois
Filed Mar. 28, 1960, Ser. No. 18,185
12 Claims. (Cl. 143—6)



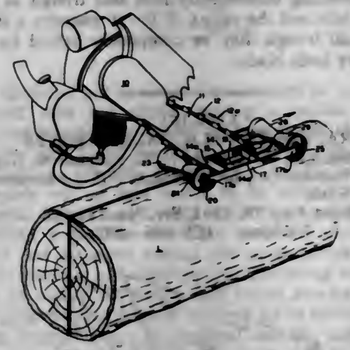
1. In a radial saw, the combination comprising: a support member having an axis; a movable member carried on the support member for movement about said axis; means on the support member defining three pairs of planar surfaces respectively converging toward three lines extending radially from said axis and spaced 45° apart in a plane perpendicular to said axis; a cylindrical element on the movable member extending radially to said axis; and means for urging said cylindrical element against said surfaces to cause the cylindrical element to center itself removably accurately therebetween.

3,092,155
HORIZONTAL BAND SAW
Aubrey A. Fowler, Jr., and Henry O. McKee, 203 Morro St., both of Fairmont, N.C.
Filed May 13, 1960, Ser. No. 29,051
4 Claims. (Cl. 143—19)



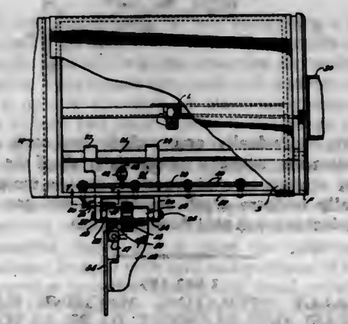
1. The combination of a horizontal band saw and a work supporting table having a work surface adjustable vertically and horizontally relative to said band saw, mounting means therefor comprising a pair of spaced frames, spaced parallel cross rods connecting said frames, a band saw carrying wheel slideably mounted on one of said cross rods, a cooperating adjustable idler wheel mounted in opposition to said band saw carrying wheel on said one cross rod, a motor connected to drive said band saw carrying wheel, an endless band saw blade carried by said wheels with an operating length horizontally disposed over said work surface, adjustable blade guide means slideably mounted on said frame, a pair of spaced parallel arms mounted on each of the cross rods, a second rod carried by each pair of said parallel arms in spaced relation to said cross rods, a pair of spaced parallel rails connected to said second rods and disposed transversely thereof, a work supporting table slideably mounted on said rails to be moved along the same, a link pivotally connected to one of said second rods and one of said cross rods, a segmental gear carried by said link, an operating shaft supported by said cross rods, a worm carried by said operating shaft in a manner to rotate said segmental gear, and an operating handle on said operating shaft whereby said work supporting table may be raised and lowered relative to said saw and remain parallel thereto at all times.

3,092,156
CHAIN SAW ATTACHMENT FOR SAWING ROUND LOGS
Ernest A. Hayden, P.O. Box 248, Callahan, Calif.
Filed June 3, 1960, Ser. No. 33,699
6 Claims. (Cl. 143—32)



1. In a lumber sawing attachment for power saws of the portable type whereby the portable saw may be used to cut logs into poles, posts or the like, the combination of a portable power driven chain saw having an elongated saw bar on which the cutting element of the saw rides, a frame, means for fixedly attaching said frame to said saw bar intermediate the ends of said saw bar so that said frame extends laterally to the sides and to the front and rear of the cutting element of the power saw, means for supporting said power saw on a log of substantially circular cross-section comprising a forward roller means and a rearward rollers means, means for rotatably attaching said forward roller means to the forward part of said frame ahead of said cutting element and means for rotatably attaching said rearward roller means to the rearward part of said frame behind said cutting element, said roller means being disposed on said frame such that said forward roller means rides astride the log in the direction of the saw cut and said rearward roller means straddles the saw cut made through the log.

3,092,157
THICKNESS GAUGE FOR MEAT SAW
William Lear, Fullerton, Calif.
(2540 E. 114th St., Los Angeles 2, Calif.)
Filed June 23, 1960, Ser. No. 38,181
10 Claims. (Cl. 143—174)

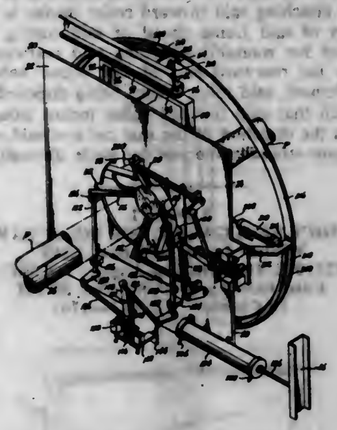


1. A thickness gauge for a meat cutting machine of the type having a frame on which are supported saw means and a table for meat to be cut by said saw, said gauge comprising: a gauge plate normally in a horizontal operative position on said table to hold said meat a predetermined distance away from said saw; means mounting said gauge plate for compound pivotal motion about first and second parallel axes and for translational motion along said axes; means associated with said first axis for making a coarse adjustment of the translational position of said plate to control the magnitude of said predetermined distance; means associated with said second axis for making a fine vernier adjustment of the translational position of said plate to further control the magnitude of said predetermined distance; and means for locking said plate in a retracted position off of said table to which said plate may be moved from said operative position by purely pivotal motion in any translational position of said plate.

3,092,158
POLE INCISING MECHANISM
Charles E. Ellerman, Olympia, and Victor C. Monahan, Tacoma, Wash., assignors to Cascade Pole Company, Tacoma, Wash., a corporation of Washington
Filed Apr. 1, 1959, Ser. No. 803,498
16 Claims. (Cl. 144—2)

1. An incising machine adapted to incising the curved, peripheral surface of a wood product varying substantially in diameter from end to end, comprising; in combination with means for axially and non-rotatively conveying the wood product at a predetermined level, a stationary base frame, laterally floating means on said base frame having an opening through which the wood product passes, individually acting wood product incising

means on said floating means, having a series of freely rotatable, individually casterable, and individually radially movable incising elements standing rearwardly of said floating means and arranged circumferentially about said wood product, and fluid actuated means associated with



and acting individually and radially on each of said incising elements, whereby substantially all of the curved, peripheral surface of said wood product is incised to a substantially uniform depth during a single pass of the wood product through said floating means.

3,092,159

CYCLICALLY OPERATING MACHINE HAVING AT LEAST ONE ELEMENT TO BE AUTOMATICALLY POSITIONED DURING EACH OF THE CONSECUTIVE CYCLES OF OPERATION OF THE MACHINE

Willi Ebner, 30 Schonnerstrasse, Todtnau, Black Forest, Germany

Filed May 26, 1959, Ser. No. 815,989
Claims priority, application Germany May 27, 1958
11 Claims. (Cl. 144—94)



1. In a cyclically operating machine which, during operation, carries out consecutive cycles of operation, in combination, an element whose position is to be determined during each of the consecutive cycles of operation of the machine; support means supporting said element for movement so that it can occupy different positions during the consecutive cycles of operation; drive means; adjustable transmission means operatively connected to said drive means and to said element for transmitting movement of the drive means to said element to move the latter from one position which it occupies during at least part of one cycle to another position which it occupies during at least part of the next cycle, said transmission means being adjustable to different extents for determining the extent to which said transmission moves said element, and said transmission means being driven by said drive means during each cycle along a working stroke and a return stroke; automatic connecting means automatically connecting said transmission means to said element during said working stroke of said transmission means and disconnecting said transmission means from said element during said return stroke of said transmission means so that said element can be moved by said transmission means only during said working stroke thereof at each cycle; automatic holding means cooperating with said element for holding the same stationary during said return stroke of said transmission means during each cycle; and automatic adjusting means driven by said drive means and cooperating with said transmission means for adjusting the latter during said return stroke thereof at each cycle of operation according to a predetermined program, so that the adjustment of said transmission means during one cycle determines the position to which said transmission means moves said element during the working stroke of said transmission means at the next following cycle.

3,092,160

APPARATUS FOR ORIENTING AND HALVING STRAWBERRIES

Kenneth R. Hartman and Alfred W. Gerrans, Saratoga, Calif.; said Gerrans assignor to said Hartman

Filed June 24, 1955, Ser. No. 517,778
5 Claims. (Cl. 146—73)



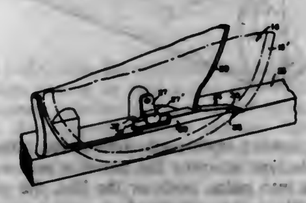
4. A device for orienting and halving strawberries comprising: a generally V-shaped trough conveyor; means operatively associated with said trough for causing reciprocation thereof whereby the strawberries are oriented; and a single power operated rotary knife blade disposed adjacent the discharge end of said trough, said rotary knife blade being in the vertical bisecting plane of said trough, with the axis of said rotary knife blade being disposed above the vertex of the V at a height thereabove sufficient to enable strawberries in said trough to pass beneath said axis, said rotary knife blade having a cutting portion extending downwardly into said trough at least to a point adjacent the vertex of the V whereby a strawberry in said trough may be completely halved by said single rotary knife blade.

3,092,161

SCRAPERS FOR SLICING MACHINES

Joseph Rabinstein, Newburgh, N.Y., assignor to General Slicing Machine Co., Inc., Walden, N.Y., a corporation of New York

Filed Aug. 29, 1961, Ser. No. 134,618
2 Claims. (Cl. 146—102)



1. In a slicing machine of the type having a cutting blade which moves continuously in one direction while the machine is in operation, and being provided with a

frame, a scraper positioned on said frame of the machine against that face of the blade which is in contact with a slice being cut away from the mass; said scraper being in wiping contact with said blade face and one end thereof extending substantially to the cutting edge of said blade, means on the machine affording an axis serving as a fulcrum contacting a surface of said scraper, about which fulcrum said scraper has some turning movement whereby said end of the scraper will move against said blade face; said scraper being intermediate the blade and said fulcrum, spring means releasably holding said scraper on the machine, biasing said scraper to turn on said fulcrum so that the said one end of the scraper is maintained against said blade face and the wiping relation between said scraper and blade is automatically maintained, and a blade housing secured to the frame on a ledge on such frame; said housing covering a portion of said blade face; said spring means and scraper in part, being within said housing; that part of the scraper which is outside the housing, being on the exposed part of the blade; said scraper resting on said ledge and slidable therealong; said housing being provided with a notch through which the scraper is fitted for longitudinal sliding movement; a wall of said notch serving as said fulcrum and said notch serving to guide said scraper in its movement to and from said spring means; said scraper being removable from the machine by merely a longitudinal sliding movement in one direction on said ledge and mountable into use position by merely a longitudinal sliding movement in the opposite direction on said ledge whereby said scraper becomes engaged by said spring means; said spring means being the only part of the machine engaging said scraper, and only the manual manipulation of said scraper being required to remove and mount it on the machine.

3,092,162

DRIVEN FASTENER NUT

Henrik S. Johnsen, West Medford, Mass., assignor to United-Carr Fastener Corporation, Cambridge, Mass., a corporation of Delaware

Filed May 18, 1960, Ser. No. 29,954
1 Claim. (Cl. 151—41.73)



A threaded nut device for attachment to an apertured support, said nut device having a hollow internally threaded barrel for receiving the threaded shank of a screw member, said barrel having an enlarged flange at one end and having a plurality of external support gripping fins at the other end of said barrel to be embedded into the material of a support, said support gripping fins each including a surface extending perpendicularly to said barrel and arranged around the outer periphery of the hollow barrel in non-overlapping relationship when viewed from an end of the barrel, said barrel also having a vertical groove adjacent each gripping fin to receive material of the support and a longitudinal shoulder adjacent each groove spaced circumferentially from said fin surface to engage a support and assist in holding the nut device against accidental removal therefrom, said fins being formed by material sheared from said barrel, each of said fins being inclined in a direction opposite to the hand of the internal thread, the portion of each of said fins adjacent said other end being inclined at substantially 60 degrees to the barrel axis and the fin portion adjacent said one end being inclined at substantially 45 degrees to the barrel axis, the free edge of each of said fins rising from the barrel surface to a high point intermediate of the fin.

3,092,163

ELASTOMERIC ANTI-SKID TRACTION DEVICE

Henry L. Bunker, Jr., Swarthmore, Pa., and Edward F. Lewis and William J. Powers, Jr., Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed Oct. 27, 1961, Ser. No. 148,090
10 Claims. (Cl. 152—221)



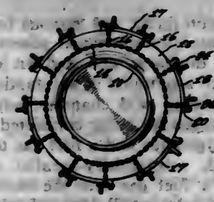
1. An anti-skid traction device comprising a plurality of elastomeric traction units adapted to provide an annular, flexible, anti-skid traction structure circumferentially surrounding a pneumatic tire, each said traction unit comprising a unitary structure of elastomeric material embodying at least two transverse crosslink bands extending between and joined at the respective ends thereof to a pair of generally arcuate spring-acting side linking means separably interlockable to form peripheral loops at the respective sides of the tire, and an open network tread section consisting of the respective mid-portions of said transverse crosslink bands and at least one patterned tread cross-member integral with said mid-portions of two adjacent transverse crosslink bands, said tread cross-member consisting of a plurality of spaced-apart cross-bands including at least two said cross-bands each extending between said adjacent transverse cross-link bands and integrally joining therewith at an acute angle at the respective ends of said bands of the cross-member.

3,092,164

TRACTION DEVICE FOR WHEELED VEHICLES

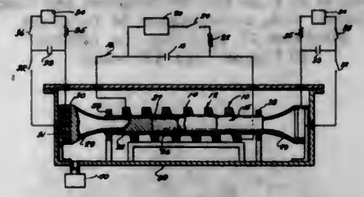
Joseph R. Le May, 714 6th St., Wyandotte, Mich.

Filed Apr. 9, 1962, Ser. No. 186,204
2 Claims. (Cl. 152—239)



2. In combination with a wheel, a tire on said wheel, a skid chain secured to said tire, and a plurality of traction devices secured to the periphery of said tire, said chain holding said devices in place, wherein each of said devices comprises a pair of parallel brackets curved to conform to the periphery of said tire and extending in a direction which is essentially perpendicular to the axis of said wheel, wherein each device includes a pair of parallel paddle-like lugs secured to both brackets adjacent opposite ends thereof, wherein each of said brackets has bent up end portions at opposite ends thereof, each device further including a plurality of pins, each pin extending between a corresponding end portion and a corresponding lug.

3,092,165
MAGNETIC FORMING METHOD AND APPARATUS THEREFOR
George W. Harvey, San Diego (La Jolla), Calif., assignor to General Dynamics Corporation, New York, N.Y., a corporation of Delaware
Filed Jan. 11, 1961, Ser. No. 82,070
10 Claims. (Cl. 153—2)



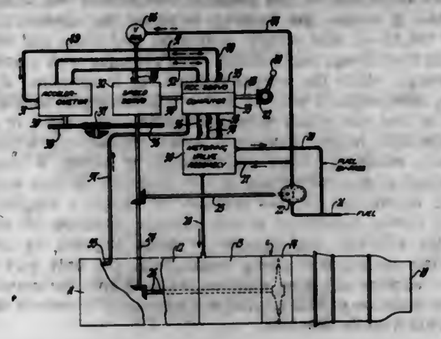
7. A method of forming a work piece, which method comprises positioning a work piece to be formed in a predetermined relation to a source of a magnetomotive force, providing a plasma of ionized material at the surface of the work piece, and producing a varying magnetic field at said source which is directed at said plasma and the surface of said work piece so that said magnetic field interacts with said plasma to force said plasma against said work piece, said field being made of such a configuration and intensity that the plasma acts upon the work piece to form the same in a desired manner.

3,092,166
SPACE HEATING METHOD AND APPARATUS
Thomas L. Shepherd, Essex Fells, N.J., assignor to Air Reduction Company, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 15, 1959, Ser. No. 859,624
6 Claims. (Cl. 158—11)



6. A combination liquid and gaseous fuel burner comprising an elongated, unobstructed combustion chamber having an open discharge end and an opposite closed end through which a plurality of substantially parallel gas passageways extend to said chamber, adjacent alternate ones of said passageways being connected respectively to sources of an oxygen gas and a fuel gas to deliver corresponding, spaced, substantially-parallel streams of an oxygen gas and a fuel gas into the closed end of said chamber directed substantially toward said chamber discharge opening, said gas streams merging with one another at an intermediate zone of said chamber, in a relatively high velocity combustion mixture of said oxygen gas and fuel gas and burning in a flame confined at least in part by the walls of said chamber, the parallel gas passageways being closely adjacent to one another with zones between them into which gas from the streams is drawn to form a relatively low velocity mixture of oxygen gas and fuel gas whose combustion forms anchoring flames contiguous with said gas streams effectively preventing extinction of the flame formed by combustion of said relatively high velocity combustion mixture, and a liquid delivery passageway extending substantially centrally through said closed end of said chamber having means for discharging a stream of liquid fuel therethrough toward said chamber discharge opening into said relatively high velocity gas mixture wherein said relatively high velocity mixture effectively atomizes said liquid stream to facilitate combustion thereof, and gas flow regulating means for the oxygen and fuel gas, the regulating means for the oxygen and fuel gas being independently adjustable for controlling the supply of oxygen gas for combustion with said liquid fuel by controlling the relative flows of said oxygen gas and fuel gas streams.

3,092,167
FUEL CONTROL DEVICE FOR A GAS TURBINE ENGINE
Arthur E. Brown, Milwaukee, and Edward C. Ehlke, Brookfield, Wis., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Sept. 11, 1958, Ser. No. 760,514
7 Claims. (Cl. 158—36.4)



1. A fuel control device for a gas turbine engine comprising, in combination, speed sensing means driven by the engine including speed output means representing actual engine speed, settable means providing a speed request, control input means actuated by the settable means providing an acceleration request, acceleration limiting means set by the speed output means and limiting the setting of the control input means in the increasing direction as a function of engine speed, acceleration sensing means driven by the engine including acceleration output means representing engine acceleration, rate of change of fuel flow controlling means coupled to the control input means and the acceleration output means and adjusted from a datum setting in response to the difference between the acceleration request from the control input and the acceleration, and displaceable fuel metering means controlled by the rate of change of fuel flow controlling means to increase and decrease fuel flow to the engine, the rate of displacement of the fuel metering means being substantially proportional to the departure of the rate of change of fuel flow controlling means from its datum setting, the metering means having an exponential characteristic of fuel flow with respect to displacement thereof.

3,092,168
CROSS LIGHTER FOR A GAS BURNER ASSEMBLY
Edward G. Phlaum, Kankakee, Ill., assignor to A. O. Smith Corporation, Milwaukee, Wis., a corporation of New York
Filed Aug. 6, 1959, Ser. No. 832,106
3 Claims. (Cl. 158—115)

2. In a gas burner having discharge ports, a cross lighter comprising upper and lower channel members facing each other and having corresponding flanges along one side thereof closing the same and remaining corresponding side and end flanges spaced in edge to edge relation to provide a continuous slot serving as a gas discharge port therefor, gas supply means for said cross lighter from the burner, projections extending internally of and inwardly from one of said channel members toward the other and



welded thereto to secure said members together, and a baffle strip in the mouth of said slot and positioned against said projections to control the velocity and direction of flow from said slot.

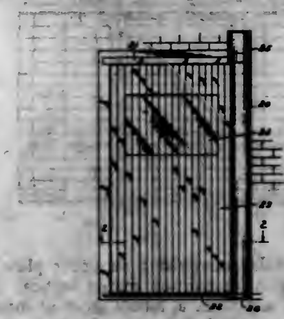
3,092,169
IGNITION CARRY-OVER
Harry C. Lohman, La Crosse, Wis., assignor to The Trane Company, La Crosse, Wis., a corporation of Wisconsin
Filed Oct. 2, 1961, Ser. No. 142,280
5 Claims. (Cl. 158—115)



2. A gas fired apparatus comprising: a plurality of elongated gas burners, said gas burners being substantially parallel to one another, means forming an inlet opening and an outlet opening in each of said burners, manifold means connected to each of said inlet openings to supply gaseous fuel thereto, an ignition carry-over operably associated with said burners to ignite a gaseous fuel issuing from said outlets, said ignition carry-over having tab means formed outwardly therefrom and leaving openings in said ignition carry-over, said tab means being secured to said burners, said openings being located over a portion of said outlets to receive gaseous fuel therefrom, scoop means secured in each of said burners adjacent said openings to divert gaseous fuel into said ignition carry-over, said ignition carry-over having a flame port adjacent said outlets, and means supporting a pilot burner adjacent said flame port to ignite gaseous fuel therefrom and thereby produce an ignition flame for said burners.

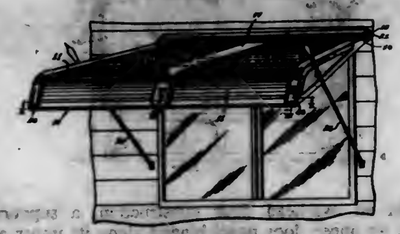
3,092,170
AUTOMATIC DOOR
William L. Ellis, Livonia, Mich.
(1709 Cherrywood, New Castle, Ind.)
Filed July 22, 1959, Ser. No. 828,246
14 Claims. (Cl. 160—30)

1. A door installation comprising a wall with a door opening, a continuous horizontal track having a spiral section at one side of said door opening and a connecting section extending above the door opening, a horizontally flexible sliding door, means suspended from both sections of said track supporting said door substantially across its entire width for alternating movement between said sections, a lower matching vertically aligned horizontal guide track engaged by at least a portion of the lower edge of said door throughout its movement, a vertical tubular pillar housing extending between the upper and lower spiral track sections having a vertical slotted opening for passage of the door and surrounding any portion of the door in rolled engagement with said spiral track sections, the upper and lower track sections and vertical pillar housing being constructed as a rigid C frame assembly, fixed means for pivotally mounting the upper and lower



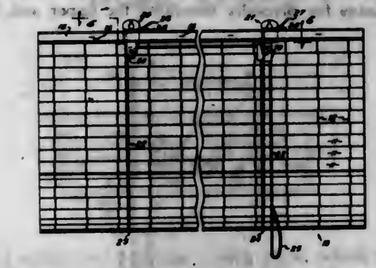
ends of said C frame on a vertical axis substantially coinciding with the centers of the respective upper and lower spiral track sections, and releasable means for holding the C frame in alignment with the door opening for normal door operation along said track sections while providing for emergency swinging movement of the entire door and C frame assembly about said pivotal axis in any closed or partially opened condition of the door relative to said track sections.

3,092,171
AWNING STRUCTURE
Daniel G. Dodds, Chicago, Ill., assignor to Kenron Awning and Window Corporation, Chicago, Ill., a corporation of Illinois
Filed Jan. 6, 1961, Ser. No. 81,042
12 Claims. (Cl. 160—49)



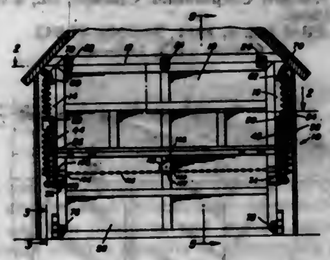
1. In an awning structure, a frame structure including at least one intermediate rail and parallel spaced side rails spaced to each side of said intermediate rail, said intermediate rail having generally C-shaped slots extending for the length thereof and opening to opposite sides thereof and terminating at the outer end portions thereof into uprights legs extending for the length thereof, said side rails having generally C-shaped slots therein conforming to the slots in said intermediate rail and opening toward the slots in said intermediate rail, awning panels slidable within said slots from the ends thereof, expansible retainers extending along opposite sides of said awning panels guiding said panels for slidable movement along said slots and compressed against the upright legs and walls of said slots to retain said panels thereto, and means securing said panels to said retainers prior to insertion of said panels within said slots.

3,092,172
PULLEY HANGER
James A. Anderson, Muskegon, Mich., assignor to Brenneman-Hartshorn, Inc., Cincinnati, Ohio, a corporation of Ohio
Filed Aug. 7, 1961, Ser. No. 129,635
6 Claims. (Cl. 160—133)



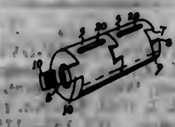
1. A hanger pulley comprising an upper plate, a U-shaped frame having a pair of spaced vertical legs at the lower end of said plate, a double grooved sheave rotatably mounted in said frame to receive two runs of a cord, the outer run making a 180° turn about said sheave and the inner run making a 90° turn about said sheave, guide flanges projecting laterally from each said vertical leg to confine said outer run to its groove and a guide flange projecting upwardly a substantial distance above said sheave and centrally of said sheave and on the side of said sheave from which the inner run leaves the top of said sheave to cooperate with said frame in confining said inner run to its groove.

3,092,173
OVERHEAD DOOR
Ervin A. Hostetler, R.D. 5, Millersburg, Ohio
Filed Oct. 3, 1956, Ser. No. 613,629
2 Claims. (Cl. 160—191)



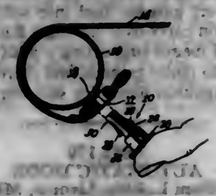
1. In an overhead door construction, a supporting frame, an upper door panel hinged along its upper edge to said supporting frame, a lower door panel hinged along its upper edge to the lower edge of said upper door panel, said door panel presenting inner and outer surfaces, and the hinged connection between the door panels being disposed on the outer side of said panels, bracket ears projecting inwardly from the inner sides of said lower door panels and extending laterally beyond the side of said panels, pivot pins, an elongated guide arm at each side edge of said supporting frame and pivotally secured at one end by a pivot pin to the adjacent side edge, a second set of pivot pins extending through said bracket ears and the other ends of the guide arms for pivotally connecting the latter to said lower door panel, said first named ends of said guide arms being slotted where said first-named pivot pins engage therewith for lost motion connection therebetween, and a tension spring connected to each one of said second pivot pins and extending therefrom to points of connection with the top of said supporting frame, said guide arms moving over a dead center position as said door is moved from a closed to an open position, said spring being so positioned and the door construction being constructed and arranged so that said springs counterbalance the weight of said door panels and lift upwardly thereon at all times.

3,092,174
ROLLER BLIND FOR CURVED WINDOWS AND THE LIKE
Stanley Pearson Winn, Torrens Park, South Australia, Australia
Filed Feb. 3, 1960, Ser. No. 6,539
Claims priority, application Australia Feb. 6, 1959
5 Claims. (Cl. 160—262)



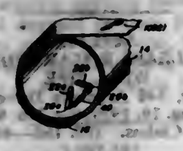
1. A roller blind for curved windows and the like comprising a curved shaft, a plurality of rollers rotatably supported end to end on said shaft, a tongue with parallel sides on one end of each roller and resilient walls defining a slot in the other end of each roller, said resilient walls being disposed symmetrically about a diametral plane but converging toward the slot mouth whereby each said slot is tapered to be wider at the base than at the mouth, said tongues being engaged each within the mouth of the slot in an adjacent roller, each mouth being narrower in its unstressed condition than the tongue it receives, whereby each tongue will be disposed within its corresponding slot with an interference fit thereby deflecting said resilient walls outwardly at the mouth of the slot, the base of each slot being spaced away from the end of the tongue engaged therein and the ends of adjacent rollers being spaced away from each other whereby the tongues are both slidable and tiltable within their engaging slots, a blind of flexible sheet material engaging said rollers, and means to rotate said rollers whereby said blind may alternatively be raised or lowered.

3,092,175
FASTENING DEVICE
Joseph F. Succio, Pelham Manor, N.Y., assignor to Edwin B. Stimpson Company, Inc., Brooklyn, N.Y., a corporation of New York
Filed Aug. 10, 1959, Ser. No. 832,789
1 Claim. (Cl. 160—390)



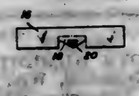
The combination of a tubular frame member having a perforation formed therein, a length of webbing having an opening and an eyelet disposed in said opening and secured to the webbing; and a fastener pin comprising a resilient, elongate, tubular body having a through longitudinal cut extending from one end of said pin to the other, said body having an integral, radially outwardly extending head at one end, a first portion of relatively small diameter at the other end, a second portion of intermediate diameter adjacent said head and disposed within said eyelet with said head engaging one side of said eyelet, the length of said second portion being substantially equal to the axial thickness of said eyelet, the nominal diameter of said second portion being slightly greater than the inner diameter of said eyelet to provide a pressure fit therein, an annular shoulder joining said first and second portions, a locking prong projecting from said first portion of said body at an angle to the axis thereof, the diameter of said first portion including said prong being not greater than the interior diameter of said grommet when said second portion is seated therein, the outermost end of said prong being the end closer to said head and being axially spaced from said shoulder whereby when inserted through said perforation in said frame member the latter is grasped between said shoulder and the outermost end of said prong, said prong being resilient to yield radially inwardly upon being pressed by hand through said perforation in said frame member, said prong springing back when the same has passed through the opening, thereby to lock the pin in said frame member.

3,092,176
WEB-TO-TUBE FASTENINGS
Hyman Kramer, 2764 E. 16th St., Brooklyn, N.Y.
Filed Dec. 24, 1958, Ser. No. 782,817
10 Claims. (Cl. 160—404)



1. In tubular-frame furniture construction, a fastening assembly comprising the combination of a tubular frame member having a relatively elongated opening in its wall which is defined in part by end lips spaced a predetermined axial distance apart, a webbing strip folded on itself so as to have overlying and folded-under end portions, a self-locking fastener of generally T-configuration including an elongated bar-like head portion having length corresponding substantially to the width of the webbing strip and including a longitudinal side edge over which the end portion of the webbing strip is folded and defining the line of fold between said overlying and folded-under portions, at least the other longitudinal side edge of said head portion being positioned to engage and press upon said folded-under end portion of the strip adjacent said line of fold, and a depending shank portion disposed in a plane extending substantially vertically through and from end to end of said head portion and projecting through both an opening in the folded-under end portion of the webbing strip and said tubing opening into the tubing interior, said shank portion comprising a pair of spring legs depending integrally from the middle length portion of the head portion and being spaced from one another throughout their entire length in the direction of the length dimension of said head portion and terminating in free ends whereby said legs may flex both in unison and relatively of one another, said legs incorporating inclined camming portions which are spaced apart a distance which is effectively greater than the distance between the end lips of the frame-member opening and abruptly angled, shoulder-forming locking portions which extend from said inclined camming portions also in the direction of the length dimension of said head portion and are spaced from the under surface of the head portion a distance corresponding substantially to the thickness of the wall of the frame member bounding its said opening, said camming and locking portions enabling said shank portion to contract in edgewise direction and thereupon, in expanding, to self-lock itself to the end lips of the opening responsively to insertion of the shank portion into said opening.

3,092,177
WEB-TO-TUBE FASTENINGS
Hyman Kramer, 2764 E. 16th St., Brooklyn 35, N.Y.
Filed Dec. 31, 1958, Ser. No. 784,280
3 Claims. (Cl. 160—404)



3. A fastener for securing an end portion of a flexible webbing strip arranged in doubled-over relation to the tubular frame member of a chair and the like provided with a generally elongated opening extending axially of said member, said fastener comprising an elongated bar-like head part having length corresponding substantially to the width of the webbing strip to be secured about a longitudinal side edge of which said strip is adapted to be doubled back on itself, and a prong-like shank part integral with and depending from the middle-length portion of said head part and being contained in a plane which extends longitudinally from end to end of said head part, said shank part terminating in a V point thereby to facilitate both its penetration of the webbing strip at a point set back from the end edge of the latter and its passage through said opening in the tubular frame member and being further provided with a locking barb comprising an area cut out from the pointed end of said shank part and which inclines sidewardly-upwardly away from the plane of said shank part and toward a longitudinal side edge of said head part, said locking barb serving the dual purpose of initially securing the fastener to the webbing strip end when preassembled thereto and thereupon, upon assembly of the fastener to the tubular frame member, of securing the fastener and thereby the webbing strip end portion to said tubular frame member.

3,092,178
AIR CONDITIONING UNITS
Bruce E. Birdsall, Cincinnati, Ohio, assignor to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware
Filed May 26, 1954, Ser. No. 432,458
19 Claims. (Cl. 165—1)



1. In an air conditioning unit, the combination of a coil, means for supporting said coil, means to discharge a stream of air in a substantially vertical direction adjacent the coil to induce a secondary stream of air through

the coil in heat exchange relation with a medium passing through the coil, vertically extending hollow means spaced above the discharging means adapted to receive the greater portion of the discharged stream, said means being of substantial depth and serving to discharge air therefrom at a velocity such that a tertiary stream of air is induced through the coil to mix therewith, and means for enclosing said unit including an inlet to permit air to be induced through the coil and an outlet to permit flow of mixed air from the unit.

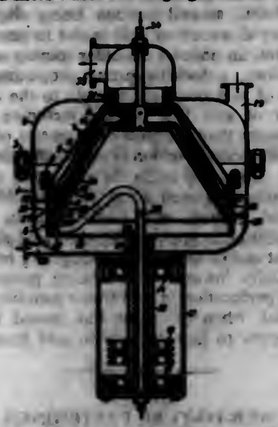
3,092,179
ELECTRO-OSMOTIC HUMIDITY CONTROL
Francis W. Leuch, Greenfield, Wis., assignor to A. O. Smith Corporation, Milwaukee, Wis., a corporation of New York
Filed Sept. 14, 1959, Ser. No. 839,771
7 Claims. (Cl. 165—60)



1. A combined heat exchange and humidity control device for conditioning air with a closed pressurized water system, a finned heat exchanger having a water conduit constituting a part of the water system, an electro-osmotic carrier disposed beneath the heat exchanger and including water accumulating means having an electro-osmotic diaphragm means generally in alignment with the finned heat exchanger to collect water or condensation from the heat exchanger, means to connect said water accumulating means to a water source for the selective removal and introduction of water, with respect thereto, said electro-osmotic diaphragm being positioned in relation to the finned heat exchanger whereby heating of the finned member is effective to evaporate water from the outer surface of the electro-osmotic diaphragm, and means to impress a direct current potential upon the electro-osmotic conduit unit to determine the movement of water into and from the accumulating means through said electro-osmotic diaphragm means and control the movement of water through said diaphragm in correspondence with said condensation or evaporation and to thereby regulate the humidity of the air.

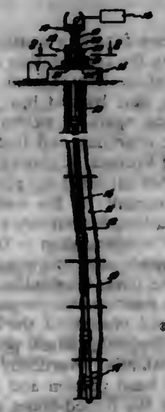
3,092,180
HEAT EXCHANGE APPARATUS
Sven Alfred Bertil Dahlgren, Bromma, Sweden, assignor to Aktiebolaget Separator, Stockholm, Sweden, a corporation of Sweden
Filed Sept. 1, 1959, Ser. No. 837,534
Claims priority, application Sweden Sept. 17, 1958
14 Claims. (Cl. 165—88)

1. A heat exchange apparatus of the centrifugal type comprising a stationary housing, a rotor mounted in the housing for rotation about an axis, a nest of coaxial conical partitions secured in the rotor for rotation therewith and defining a series of axially spaced rotor channels between the partitions, alternate rotor channels serving for flow of a heat-receiving medium while the other channels serve for flow of a heat-emitting medium, said alternate channels each having an inlet located near the rotor axis and an outlet at the peripheral portion of the rotor, said other channels having openings located at said peripheral portion and forming both inlets and outlets for said other channels, the housing having an inlet for admitting said heat-emitting medium into said other channels by way of said peripheral openings, means for feeding the heat-receiving medium to said inlets of said alternate channels, and means for discharging from the housing the



heat-receiving medium passing through said peripheral outlets of said alternate channels.

3,092,181
QUICK RELEASE ROTARY DRIVE FOR WELL PIPE
Ford I. Alexander, 340 Arbolado Drive, Arcadia, Calif.
Filed Aug. 10, 1959, Ser. No. 832,543
17 Claims. (Cl. 166—46)



1. The method of rapidly accelerating a pipe string stuck in a well, that includes applying torque at the well head for rotating the string to twist the string and place the string in torsion within the well, applying string weight at the well head to resist said torque application, and allowing the pipe at the well head to counter-rotate freely substantially faster than the string was rotated, whereby the pipe string rapidly untwists at different depths in the well.

3,092,182
BOREHOLE APPARATUS
Leon Blagg, Channelview, Tex., assignor to Schlumberger Well Surveying Corporation, Houston, Tex., a corporation of Texas
Filed June 19, 1959, Ser. No. 821,490
19 Claims. (Cl. 166—241)

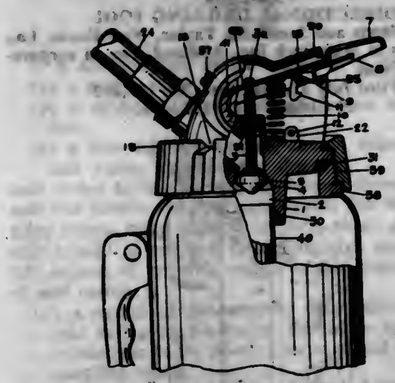
1. Apparatus for maintaining borehole equipment at a given position relative to the central axis of a borehole

comprising: a support member adapted for use in a borehole and having a guide section extending longitudinally relative to the borehole; a pair of mountings carried by said support member, one of said mountings being operatively associated with said guide section for movement relative to the other of said mountings; and a pair of



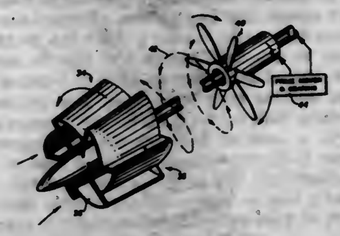
arms including adjacent portions pivotally connected to one another and opposed portions pivotally connected to respective ones of said mountings, the axes of at least two of the pivotal connections being nonparallel to one another, and one of said arms being formed of a bar of resilient material.

3,092,183
FIRE EXTINGUISHER
Arthur B. Guise, Marinette, Wis., and Clyde Forrester, Glenview, Ill., assignors to Ansul Chemical Company, Marinette, Wis., a corporation of Wisconsin
Filed May 21, 1959, Ser. No. 814,778
4 Claims. (Cl. 169—31)



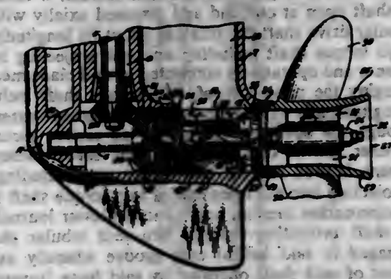
1. A fire-extinguishing apparatus comprising a container for storing fire-extinguishing agent under pressure, a removable head for sealing the mouth of said container, a union ring for removably securing said head to said container, said union ring having at least one notch in its periphery, said head having a bore and a discharge passage connected thereto, a hose connected to said discharge passage, nozzle means attached to said hose for controlling the flow of fire-extinguishing agent from said hose, movable sealing means in said bore to seal the interior of said container from said discharge passage, an actuating lever pivoted on said head for actuating said sealing means, latching means positioned beneath said actuating lever for automatically retaining said actuating lever and said sealing means in open position upon depression of said actuating lever to permit continuous discharge of fire-extinguishing agent from said container, a release lever connected to said latching means, said release lever being adapted to abut said union ring to retain said latching means in locked position and being movable within said notch in the union ring to permit release of said latching means.

3,092,184
THRUST AUGMENTATION FOR FLUID CURRENT PROPULSION MOTORS
Frederick M. Day, 2903 W. Palm Lane, Phoenix, Ariz.
Filed Apr. 7, 1960, Ser. No. 20,628
4 Claims. (Cl. 170—135.23)



2. A fluid-current thrust motor comprising a pitched multi-bladed propeller, an open end centrifugal fluid compressor coaxially disposed closely adjacent and superposed over the intake surface only of said propeller, and means for relatively rotating said propeller and said compressor at a relative speed sufficient to generate substantial fluid vortex action therebetween.

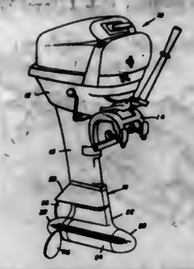
3,092,185
OUTBOARD PROPULSION UNIT EXHAUST SYSTEM
Charles F. Alexander, Jr., Oshkosh, Wis., assignor, by mesne assignments, to Kiekhaefer Corporation, Chicago, Ill., a corporation of Delaware
Filed July 5, 1961, Ser. No. 121,934
5 Claims. (Cl. 170—135.71)



1. In an outboard propulsion unit underwater assembly, a housing having a generally cylindrical horizontal bore which opens rearwardly of said housing and is adapted to receive exhaust gases from a downwardly extending passage in said housing, a bearing support member secured in said bore and having axially spaced end portions adapted to engage the bore wall, a propeller shaft rotatably supported within said bearing support member and extending rearwardly throught said bore opening, means within said housing to effect rotation of said shaft, a propeller having a hub mounted on said shaft rearwardly of said housing, said hub including rearwardly extending passage means generally aligned with said bore and terminating with a discharge opening and adapted to receive the exhaust gases from the bore for discharge through said opening, and baffle means within said bore

outwardly from the bearing support member and intermediate the end portions of said member to direct the flow of exhaust gases from the downwardly extending passage into the rearwardly extending propeller hub passage means with a minimum of turbulence and thereby reduce the absolute back pressure in the exhaust system.

3,092,186
VARIABLE PITCH PROPELLER MECHANISM
James K. MacLean, 19 Bales Ave., Willowdale, Ontario, Canada
Filed Jan. 4, 1962, Ser. No. 164,262
7 Claims. (Cl. 170—160.45)



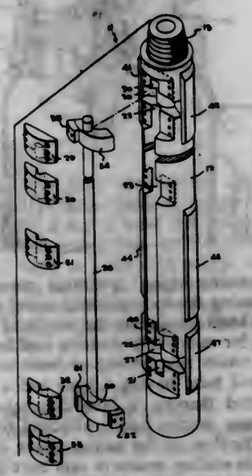
1. An outboard motor assembly comprising in combination an upper motor housing for containing a power source, mounting bracket means for mounting said assembly on the stern of a boat, a drive shaft housing depending from said motor housing and including a depending drive shaft terminating therebeneath, an underwater unit including a housing at the lower end of said drive shaft housing and disposed normal thereto and including a central section into which said drive shaft extends, a tubular drive shaft disposed normal to and operatively connected to said first mentioned drive shaft and journaled for rotation about its longitudinal axis in said central portion, a spinner at one end of said central section and secured to one end of said tubular drive shaft for rotation therewith, radial blade means journaled for rotation on said spinner normal to the axis of rotation thereof, a tubular torque shaft open at one end and disposed axially within said tubular drive shaft for rotation about its longitudinal axis, said torque shaft including one end projecting into said spinner and operatively connected to said blade means for changing the pitch thereof, said torque shaft including a longitudinally extending, helical cam groove extending through the open end thereof, a tail section secured to the other end of said central section, force transmitting means housed in said tail section and including a shaft projecting into the open end of said torque shaft for axial reciprocation therein, and a cam follower journaled on the shaft projecting radially into said tubular shaft and engaged in said helical cam groove whereby axial movement of said shaft operated by said force transmitting means in said tail section will cause a change of pitch of said blade means.

3,092,187
FARM IMPLEMENT
George D. Hunter and Donald A. Hill, Des Moines, Iowa, assignors, by mesne assignments, to Deere & Company, a corporation of Delaware
Filed Apr. 21, 1958, Ser. No. 730,018
11 Claims. (Cl. 172—297)

1. A cultivator adapted for mounting on a tractor body comprising: an inner section and an outrigger section, the inner section being connected to the side of and extending outwardly from the tractor and having an outer side adjacent to an inner side of the outrigger section, each of the sections having laterally disposed frames including transverse implement carrying tool bars normally aligned with one another and transverse rockshafts supported on the frames also normally aligned with one another, the rockshafts being effective upon movement to adjust the implements vertically; structure forming a vertically disposed pivot inclined rearwardly from its lower end and mounted on the forward end of the outer side of the inner section; structure on the inner side of the outrigger section mounting the outrigger section on the pivot, said structures being complementary to one another to permit swinging of the outrigger section about said pivot from a first position in which the tool bars and rockshafts are generally in alignment upwardly and forwardly to a second position in which the outrigger section is transversely disposed relative to the tractor body and is forward of the inner section; a pair of rockarms mounted on the adjacent ends of the respective rockshafts; means for connecting said rockarms whereby the rockshafts will operate in unison; means for connecting the rockarm on the outrigger section to the outrigger frame whereby the implements on the outrigger tool bar may be held against vertical adjustment irrespective of movement of the implements on the inner section; attaching means for connecting the inner and outrigger sections to one another for preventing swinging of the outrigger section about the pivot; and means for rocking the rockshaft on the inner section.

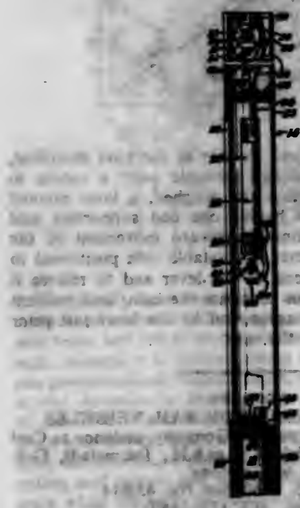


3,092,188
DIRECTIONAL DRILLING TOOL
Ralph J. Farris and James M. Taylor, New Iberia, La., assignors to Whipstock Inc., Midland, Tex., a corporation of Texas
Filed July 31, 1961, Ser. No. 129,203
19 Claims. (Cl. 175—76)



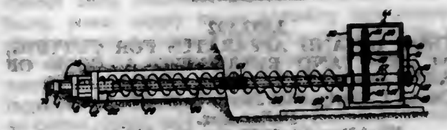
1. A well drilling device comprising, a tubular body adapted to be made up in a well drill string above but adjacent a bit, an upper abutment member and a separate lower abutment member, means mounting each of said members on the body for rotative movement with the body and for movement between a position outwardly of the periphery of the body to a retracted position nearer to the longitudinal axis of the body, and connecting means for said members for moving the upper member from its outermost position toward its retracted position and simultaneously moving the lower member from its retracted position toward its outermost position and vice versa.

3,092,189
CORE DEVICE
James F. Schultes, Woodbury, N.J., assignor to A. C. Schultes & Sons, Inc., Woodbury, N.J., a corporation of New Jersey
Filed Aug. 8, 1962, Ser. No. 215,603
5 Claims. (Cl. 175—77)



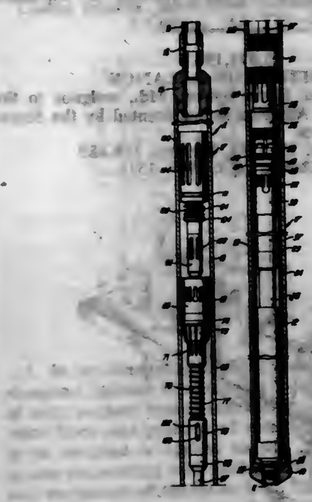
5. A soil sampling device including, in combination;
(*a*) a drilling line,
(*b*) a cylindrical casing affixed to one end of said line,
(*c*) a first tubular sampling means disposed within said casing longitudinally thereof,
said casing having an opening formed therein adjacent said first tubular sampling means, said first tubular sampling means being adapted to pivot about a transverse axis located at one end thereof through approximately 180 degrees of arc with respect to the longitudinal axis of said casing,
(*d*) a second tubular sampling means disposed within said casing longitudinally thereof in spaced apart relationship to the pivoting locus of said first tubular sampling means,
said casing having an opening formed therein adjacent said second tubular sampling means, said second tubular sampling means being adapted to pivot about a transverse axis located at one end thereof through approximately 180 degrees of arc with respect to the longitudinal axis of said casing,
(*e*) trigger means disposed within said casing and adapted to releaseably engage said second tubular sampling means at the end thereof opposite said transverse axis thereof,
(*f*) linkage means connecting said first tubular sampling means and said trigger means and adapted to release said trigger means from engagement with said second tubular sampling means upon pivotal movement of said first tubular sampling means.

3,092,190
LARGE DIAMETER EARTH DRILL
Charles Gruere, 21 Rue de Tehoran, Paris, France
Filed Apr. 4, 1960, Ser. No. 19,730
6 Claims. (Cl. 175—173)



1. A rotary large diameter rock drill comprising a rotary shaft of universally connected sections of predetermined unit lengths, a central lead drill carried by the forward end of said shaft, a tubular outer shaft substantially concentric of said first named shaft and of rigidly connected sections of corresponding unit lengths to provide for insertion and removal of shaft sections as needed, bearing supports for said first named shaft sections within the corresponding tubular shaft sections, a drill carried by the forward end of said tubular shaft of substantially greater diameter than said lead drill and tubular shaft, a spiral flight carried on the outside of said tubular shaft, and means to rotate said shafts separately to provide different speeds of rotation for said drills.

3,092,191
RUBBER SLEEVE CORE BARREL APPARATUS
Takashi Mori and Robert L. Peters, Salt Lake City, and Benjamin L. Austin, Ogden, Utah, assignors to Christensen Diamond Products Company, Salt Lake City, Utah, a corporation of Utah
Filed Nov. 7, 1960, Ser. No. 67,797
18 Claims. (Cl. 175—226)



1. In apparatus adapted to be secured to a tubular drill string for producing and retrieving a core in a bore hole: a driving structure adapted to be connected to the drill string and to a bit for cutting a core in the bore hole; an inner tubular member within and connected to said structure; an elastic sleeve on the exterior of said tubular member extending around the lower end of said tubular member and adapted to move upwardly thereinto around a core extending therewithin; pulling means in said tubular member connected to said sleeve; and means secured to said pulling means and extending upwardly

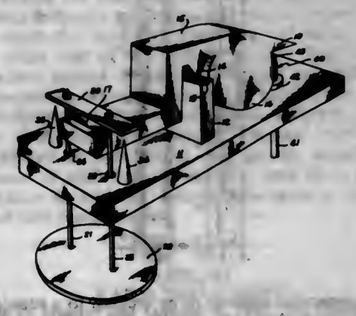
through the drill string to the top of the bore hole for preventing downward movement of said pulling means in the bore hole as the bit cuts the core and said driving structure and inner tubular member move downwardly in the bore hole.

3,092,192
METHOD OF AND APPARATUS FOR CUTTING, ENCASING AND RETRIEVING A CORE OF EARTH FORMATION FROM A WELL
Carrell L. Deely, 6210 North Central Expressway, Dallas, Tex.
Filed Dec. 14, 1959, Ser. No. 859,216
3 Claims. (Cl. 175—253)



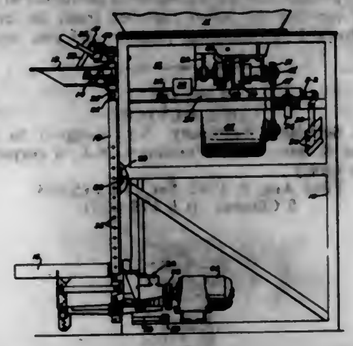
1. A core gripping means for use in a core barrel, which core gripping means comprises; an annular member, the inner diameter of which annular member is uniformly cylindrical throughout the length thereof, the outer portion of which annular member is frustro-conical in shape, longitudinal ribs formed on the outer surface of said annular member, which ribs form longitudinal grooves on the outer surface of said annular member, said annular member being split longitudinally with the edges thereof being step-cut and over-lapping, said annular member being made of a resilient material, a movable abutment mounted on the core barrel and being positioned between one of the edges of said annular member and one of said longitudinal ribs to selectively maintain said annular member in expanded condition.

3,092,193
SUBSTITUTION BALANCE
Horace A. Bowman, Silver Spring, Md., assignor to the United States of America as represented by the Secretary of Commerce
Filed Dec. 19, 1961, Ser. No. 160,680
13 Claims. (Cl. 177—151)



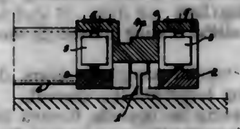
1. A substitution balance comprising a beam having a center knife, a terminal knife, and a counterweight, base means upon which said center knife pivots, a pan assembly suspended from a flat associated with said terminal knife, and means for arresting said beam, said arresting means comprising means rigidly attached to said base means for limiting the travel of said pan assembly, and means for rotating said beam until said pan assembly contacts said means for limiting its travel.

3,092,194
BAG PACKER AND WEIGHER
Robert P. Craig, Walnut Creek, and Lawrence E. Wehner, Antioch, Calif., assignors to Crown Zellerbach Corporation, San Francisco, Calif., a corporation of Nevada
Filed Feb. 6, 1959, Ser. No. 791,652
8 Claims. (Cl. 177—154)



1. In a bag packer and weigher of the kind described, a scale having a vertically movable part, a saddle to support a bag to be filled and weighed, a lever pivoted to said scale part and having one end supporting said saddle, a fixed stop limiting upward movement of the opposite end of said lever, a rotatable cam positioned to depress said opposite end of the lever and to release it against said stop, means to rotate the cam, and resilient means positioned for engagement by the lever just prior to its engagement with the stop.

3,092,195
WHEEL LOAD SCALE FOR RAIL VEHICLES
Achim von Petery, Darmstadt, Germany, assignor to Carl Schenck Maschinenfabrik G.m.b.H., Darmstadt, Germany, a corporation of Germany
Filed July 15, 1960, Ser. No. 43,014
3 Claims. (Cl. 177—163)

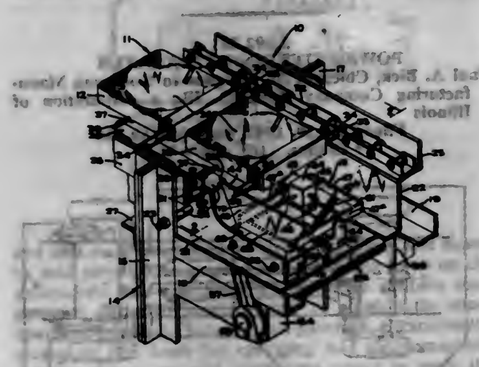


1. A wheel load scale for rail mounted vehicles comprising a frame in the shape of a saddle for lying transversely over a single rail of a track so as to be supported thereby at spaced points along the rail, said saddle having a recess for receiving the rail and also having wings disposed laterally on each side of the rail and located between said spaced points, load responsive cells supported on said wings, and a vertically movable wheel-supporting platform member overlying the rail in spaced relation thereto and extending laterally over the load cells to be supported thereby.

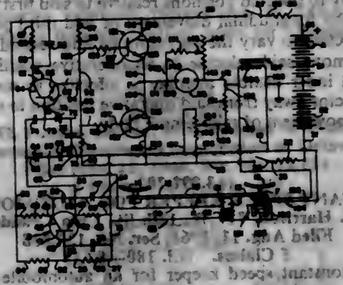
3,092,196
ADJUSTABLE SPRING-BALANCED SCALE
Charles E. Sheetz, Woodstock, Va., assignor to FMC Corporation, a corporation of Delaware
Filed Dec. 29, 1958, Ser. No. 783,269
1 Claim. (Cl. 177—170)

In a weight-grading machine, a scale comprising a scale beam, means mounting said scale beam for pivotal movement about a horizontal pivot axis, a spring having one end connected to said scale beam a fixed predetermined distance from said mounting means, a scale beam blade

carried by said scale beam on the other side of said mounting means, said scale beam blade being arranged to provide support for articles to be graded, a shaft rotatably mounted below said beam and fixed against axial movement with the axis of the shaft being substantially horizontal and normal to the pivot axis, a rod secured to and radially projecting from said shaft and having a distal end, said rod being movable upon rotational movement of said shaft between upper and lower positions with said distal end respectively spaced closer to and farther from said beam, means at one end of said shaft for fixing said shaft in a particular rotative position and indicating a predetermined weight range of said articles to be graded, the lower end of said spring being connected to and movable with said distal end of said rod with the spring being maintained under a different degree of tension between said beam and rod in each position of the rod to make the scale responsive to articles whose weights are within various predetermined weight ranges, said shaft being rotated in one direction to decrease the angle between the line of action of said spring with the plane that includes said pivot axis and the point of connection of the spring to the scale beam to make the scale responsive to lighter articles within said ranges and to increase the sensitivity of said scale while the ratio of said distance between said spring connection to said beam and said pivot axis to the distance between said blade and said pivot axis remains constant.



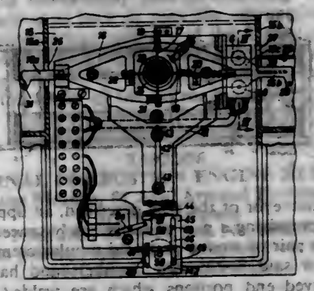
3,092,197
ELECTROMAGNETIC BALANCE
Howard W. Ecker, 703 W. Wheelock Parkway, St. Paul, Minn.
Filed Mar. 5, 1962, Ser. No. 177,470
4 Claims. (Cl. 177—210)



2. In an electric balance having a pivoted beam, a pan for the reception of the substance to be weighed connected to said beam, a magnetic counterbalancing device associated with said beam and having a core provided with an air-gap, a coil disposed in said air-gap, said coil and core being relatively movable, one thereof being fixed and the other being movable with said beam, said counterbalancing device exerting a counterbalancing force on said beam, a sensing device comprising a core having an air-gap and a coil in said air-gap, one thereof being fixed and the other movable with said beam, power supply means including two sources of direct current, a common conductor connecting the positive side of one source to the negative side of the other source, an electronic oscillator having a tuned resonant input circuit connected to said power supply means and an output circuit, said input circuit including the coil of said actuating device, the combination of

(a) an electronic counterbalancing system including
(b) a common circuit connected to the common conductor of said power supply means,
(k) branch circuits connected to the other terminals of said sources of direct current,
(e) an NPN transistor and a PNP transistor, said transistors having input and output elements,
(f) the ouptut elements of said NPN transistor being connected in said branch circuits,
(h) the coil of said counterbalancing device being energized by the current flowing in said common circuit,
(i) weight indicating means energized by the current flowing in said common circuit,
(j) and means for rectifying the output from said oscillator and connected to the input elements of said transistors.

3,092,198
AUTOMATIC WEIGHING SCALE
Rudolf Müller, Gruenwald, near Munich, Walter Simm, Opladen, and Friedrich Lienert, Dormagen, Germany, assignors to Agfa Aktiengesellschaft, Leverkusen-Bayerwerk, Germany
Filed Jan. 20, 1960, Ser. No. 3,591
Claims priority, application Germany Jan. 22, 1959
3 Claims. (Cl. 177—212)



1. In an automatic weighing scale, in combination, an elongated balance beam having a predetermined position of rest; support means supporting said beam for movement from said position of rest thereof when an article to be weighed is applied to said balance beam; spring means cooperating with said balance beam for opposing said movement of the latter from said rest position thereof; stressing means cooperating with said spring means for stressing the latter; electro-optical means sensing movement of said beam from said rest position thereof and controlling said stressing means to operate the latter for stressing said spring means in one direction to return said beam toward said rest position thereof and to move said beam through and beyond said rest position thereof and to then cause said stressing means to operate in a reverse direction to bring said beam back to said rest position thereof; speed reducing means cooperating with said stressing means for reducing the speed with which

the latter acts on said spring means; and means cooperating with said sensing means actuating said speed reducing means after said beam returns for the first time toward and moves through and beyond said rest position thereof.

3,092,199
SCALE
Ernst Kuhnle and Josef Schwarz, Balingen, Wurttemberg, Germany, assignors to Bizerba-Werke Wilhelm Kraut KG., Balingen, Wurttemberg, Germany
Filed Mar. 15, 1961, Ser. No. 95,936
Claims priority, application Germany Aug. 23, 1960
7 Claims. (Cl. 177—255)



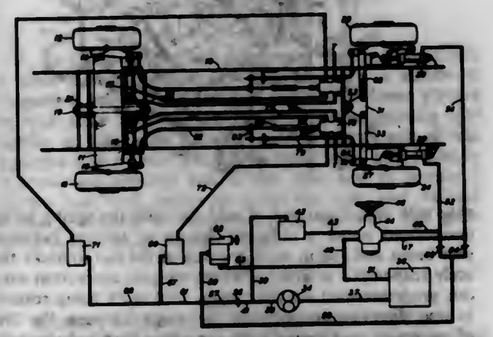
1. In a scale having a weighing platform guided parallel to itself by a system of parallel arms, connecting means each having a plurality of ends tiltably secured between the weighing platform and the system of parallel arms, at least one end of each of said connecting means having mounting means adapted to tilt said connecting means in any direction about itself, said connecting means normally occupying a stable position and each of said ends being tiltable momentarily to non-stable positions into any one of said directions in response to a sudden force applied to the platform, and being tiltable back to the stable position upon termination of the force.

3,092,200
WHEELED CONVEYOR
Lyal C. Chambers, 563 S. Diamond St., Mansfield, Ohio
Filed Jan. 19, 1961, Ser. No. 83,663
2 Claims. (Cl. 198—9.22)



1. In a conveyor of the type described, an upper frame assembly comprising a pair of transversely-spaced tubular members, a pair of similarly spaced tubular members disposed below said first-named members and having upwardly curved end portions which are welded at their upper ends to the lower surfaces of said first-named member, and tubular members extending transversely between said first-named members and having their ends welded to the inboard surfaces of said first-named members, and a lower frame assembly comprising a plurality of transversely-spaced tubular members and a plurality of longitudinally-spaced tubular members interconnecting the transversely spaced members, said transversely-spaced tubular members of said lower frame assembly being substantially parallel with said transversely-spaced tubular members of said upper frame assembly and being disposed in substantially a common horizontal plane with those portions of said second-named spaced tubular members of said upper frame assembly which extend between the upwardly curved end portions thereof, means for removably securing said lower frame assembly to said upper frame assembly, said means comprising threaded bushings in the ends of said longitudinally-spaced tubular members of the lower frame assembly, and bolts extending through the second-named tubular members of the upper frame assembly and into threaded engagement with said bushings, a motor supported by said lower frame assembly, a pair of spaced wheels mounted adjacent the front end of said upper frame assembly and driven by said motor, plates mounted adjacent the rear end of the upper frame assembly, brackets disposed adjacent said plates in planes parallel with the planes of said plates, a shaft mounted in said brackets, idler wheels supported on said shaft, and belts driven by said driven wheels, said belts running over said idler wheels and under said lower frame assembly, said brackets being mounted for pivotal movement relatively to said plates, whereby to adjust tension of said belts.

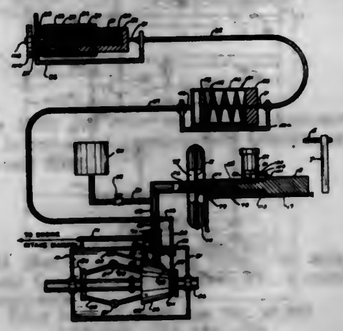
3,092,201
POWER STEERING APPARATUS
Paul A. Biek, Chicago, Ill., assignor to Goodman Manufacturing Company, Chicago, Ill., a corporation of Illinois
Filed Dec. 20, 1961, Ser. No. 160,806
9 Claims. (Cl. 180—79.2)



1. In powered remote positioning apparatus having provision for feeding back the position of a remote movable body to a control device for controlling the position of said body, the improvement comprising:
an elongated flexible coaxial cable having an inner flexible member slideable longitudinally relative to an outer flexible sheath;
said inner flexible member having one end connected to said remote movable body and the other end connected to a selector on said control device;
said outer sheath having a first portion fixed against longitudinal movement relative to said control device, a second curved flexible portion free to move transversely, and a third portion movable longitudinally to selected positions relative to said first portion;
whereby longitudinal movement of said third portion is effective to vary the curvature of said second portion to move said selector to an operative position, and said inner flexible member is effective to move said selector away from said operative position in response to movement of said remote body.

3,092,202
CONSTANT SPEED KEEPER FOR AUTOMOBILES
Lester E. Harrison, 717 W. 12th St., Casa Grande, Ariz.
Filed Aug. 11, 1961, Ser. No. 130,835
5 Claims. (Cl. 180—82.1)

1. A constant speed keeper for an automobile having an intake manifold, a carburetor, including a throttle and a throttle valve control rod, a drive shaft and a dashboard in the driver's compartment, mechanism for maintaining the engine at a constant predetermined desired speed comprising a governor mechanism driven from the automobile drive shaft, a diaphragm in a case connected to the engine intake manifold, a sleeve secured to said diaphragm, a plug having a stem resiliently operative in said sleeve, a lug on said throttle valve rod adapted to be contacted and held toward open throttle position by said plug, electro-magnetic means on said sleeve for holding the position of said plug as it extends from said sleeve toward said lug, a valve operating between said diaphragm



and said manifold having a valve plug opened and closed by said governor, a manual speed selecting knob on the automobile dash and connected through a resilient compensator sleeve to said governor to position the speed operating responsive range of said governor, electric switch means on said knob for operating said electromagnetic latching means on said diaphragm sleeve to vary the longitudinal position of the plug stem within said sleeve.

3,092,203
SOUND ABSORBING FIBROUS BOARD WITH PLASTIC FILM COVERING
Games Slayter and Willis M. Ross, Newark, and Jack T. Feld, Granville, Ohio, assignors to Owens-Corning Fiberglas Corporation, a corporation of Delaware
Filed June 30, 1960, Ser. No. 39,924
6 Claims. (Cl. 181—33)



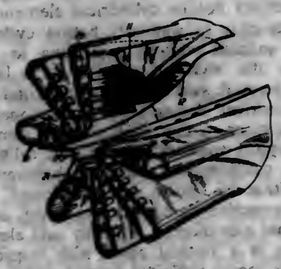
1. An acoustical panel unit comprising a resilient, bonded body of mineral fibers having a density of one to four pounds per cubic foot and having one face of uni-planar configuration, a flexible plastic film of one to six mils in thickness continuously adhered to said uni-planar face, said film being vibrationally responsive to sound energy impinged thereagainst to transmit such sound energy into the resilient body for attenuation.

3,092,204
SILENCER
Walter H. Powers, Racine, Wis., assignor to Walker Manufacturing Company, a corporation of Delaware
Filed Nov. 28, 1960, Ser. No. 72,124
4 Claims. (Cl. 181—36)



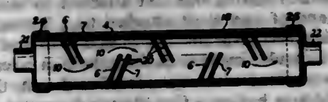
1. In a motor vehicle having a body with a passenger compartment and a large volume storage space separated from the compartment, a sound transmitting open ended tube opening into said passenger compartment at one end, said tube having an imperforate sidewall in the passenger compartment, said tube extending out of the passenger compartment and opening at its other end into said storage space located outside of the passenger compartment.

3,092,205
JET NOISE SUPPRESSOR NOZZLE
David Morris Brown, Alvaston, Derby, John Michael Storer Keen, Allestree, and Bertram Harry Urmston, Kingsway, England, assignors to Rolls-Royce Limited, Derby, England, a company of Great Britain
Filed Aug. 22, 1958, Ser. No. 756,659
Claims priority, application Great Britain Sept. 2, 1957
13 Claims. (Cl. 181—41)



1. A jet noise suppressor nozzle having a plurality of longitudinally extending, substantially radial, hollow lobes for the flow therethrough of hot gases from a jet pipe, the lobes being angularly spaced from each other in a circular arrangement, each lobe increasing in radial extent in a downstream direction from a communicating central area and having substantially radially-extending walls which are corrugated at least in part, the corrugations extending substantially longitudinally of the nozzle, and a lobulated frame each of whose lobules extends into and is secured to a lobe of the nozzle, the frame being disposed adjacent the centre of the nozzle.

3,092,206
INTERNAL COMBUSTION ENGINE SILENCERS
Rene Moreau, 81 Ave. Armand Huysmans, Brussels, Belgium
Filed Dec. 21, 1959, Ser. No. 860,938
Claims priority, application Belgium Dec. 29, 1958
6 Claims. (Cl. 181—68)



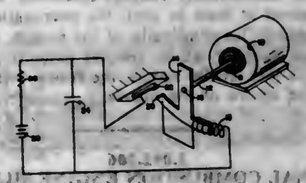
1. A silencer for internal combustion engines, comprising a casing, a plurality of double-walled baffles, and means for fixing the baffles in position within the casing, the casing being thus divided into a plurality of intercommunicating compartments by means of the baffles, the baffles being staggered so that exhaust gases from the engine must follow a sinuous course, and each of the baffles being constituted from a plane perforate wall and a plane imperforate wall, such walls being separated by a short distance whereby a chamber is formed between them into which the exhaust gases may expand.

3,092,207
REPLACEABLE LADDER RUNG
Marquand G. Larder, 62 Theodore Fremd Ave., Rye, N.Y.
Filed Oct. 19, 1961, Ser. No. 146,232
6 Claims. (Cl. 182—228)



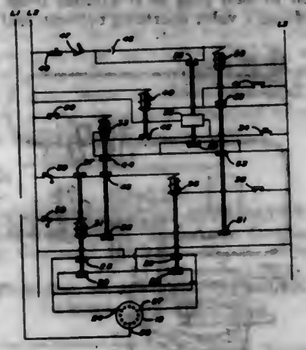
1. A rung assembly designed to replace a defective rung of a ladder which comprises a cylindrical rung containing at least in one end thereof a first diagonally cut-away substantially hollow cylindrical element, a second diagonally cut-away substantially hollow cylindrical element which extends without said rung to a distance equivalent to the width of the rail of a ladder with which it will be used, said first and said second diagonally cut-away cylindrical elements being positioned with respect to each other so that each element comprises one end of a two-piece substantially uniform cylinder, a coil spring under compression positioned between said elements and within the hollow portions thereof, means for moving the respective elements toward each other along the longitudinal axis thereof, whereby said elements will tend to move in a vertical plane with respect to each other and thus secure sufficient contact within said cylindrical rung.

3,092,208
ELECTROMECHANICAL ACTUATING DEVICE
Bernard J. Barr, R.F.D. 2, Mendota, Ill.
Filed Apr. 13, 1961, Ser. No. 102,904
1 Claim. (Cl. 185—40)
(Granted under Title 35, U.S. Code (1952), sec. 266)



An electromechanical actuating device comprising a cylindrical mechanism having constant speed movement, a spirally wound spring connected to one end of said mechanism, a rotatable shaft coaxially aligned with said mechanism and having one end attached to said spring, the other end of said shaft attached to a T-shaped arm, said arm disposed perpendicular to said shaft and adapted for limited angular movement thereabout, a solenoid operatively associated with one side of said arm, the other side of said arm having a first electrical contact attached thereto, said contact electrically connected through said solenoid to one end of a D.C. voltage source and one end of a capacitor, a second electrical contact adjacent said first contact and stationary with respect to said first contact and electrically connected through a resistor to the other side of said voltage source and to the other side of said capacitor, said arm disposed for movement to a first position responsive to the unwinding of said spring whereby said contacts are in contact with each other and to a second position responsive to the actuation of said solenoid whereby said contacts are separated from each other, said solenoid being actuated by the discharge of said capacitor.

3,092,209
SYSTEM FOR CONTROLLING MOVEMENTS OF ELEVATOR DOORS
Raymond A. Rugg, Maumee, Ohio, assignor to Toledo Scale Corporation, a corporation of Ohio
Filed Sept. 7, 1955, Ser. No. 532,843
2 Claims. (Cl. 187—52)

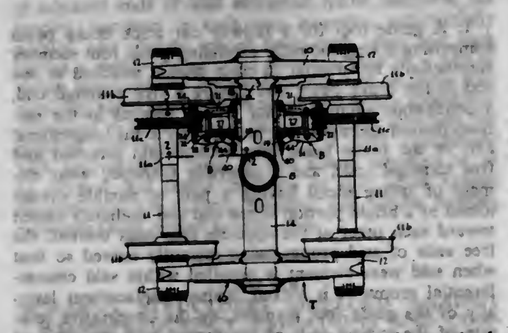


1. A system for controlling movements of elevator doors comprising, in combination, a motor, means, including a door closing relay, for causing said motor to turn in a door closing direction, means, including a door opening relay, for causing said motor to turn in a door opening direction, a start relay which when energized acts to condition circuits for simultaneously energizing said door closing relay and deenergizing said door opening relay, a safety relay which when energized acts to condition circuits for energizing said door closing relay and said start relay, said start relay and said safety relay acting when deenergized to decondition such respective circuits, a door adapted to open or close, a doorway, door operating mechanism driven by said motor, a sensitive edge on said door, a sensitive edge switch operated thereby, a photocell, means casting a beam of light across said doorway to impinge upon said photocell, said sensitive edge switch and said photocell being wired in series in a circuit for energizing said safety relay, whereby said safety relay is deenergized either by interference of an obstruction with said sensitive edge or by darkening of said photocell by an object in said doorway, means, including a short interval time relay, for momentarily delaying reenergization of said start relay upon reenergization of said safety relay, and means, including a timer, for establishing circuits for keeping said start relay energized after a predetermined period enduring for a plurality of seconds.

3,092,210
BRAKE FOR AIRPLANE-ARRESTING DEVICES
Sven-Erik Rennerström, Borjegatan 46, Norrköping 6, Sweden
Filed Apr. 13, 1960, Ser. No. 21,968
Claims priority, application Sweden May 29, 1959
2 Claims. (Cl. 188—1)

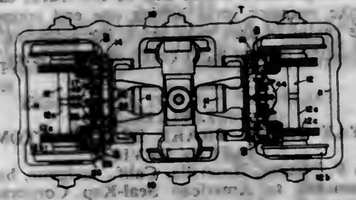
1. A brake assembly for arresting vehicles or the like comprising a wire for carrying the stress applied to one end portion thereof by the arrest of a vehicle, said wire having a major portion thereof stored in a stationary storage container in which it is arranged in like coil portions to be withdrawn coil portion by coil portion seriatim without disturbing remaining coil portions thereof, so as to minimize the inertia and stress in the wire especially at the start of an arrest when high speed acceleration of the wire is required, a guide element forwardly of said storage container through which said wire passes, a brake drum, a roller adjacent to said brake drum between the same and said guide element, both said roller and brake drum being disposed on parallel axes, said wire being wound by a plurality of turns around said brake drum and roller so as to be constrained by the latter to remain at approximately constant axial locations in said drum.

3,092,211
RAILWAY DISK BRAKES
Thomas M. Herbert, Huntingdon Valley, Pa., assignor to The Budd Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed June 23, 1960, Ser. No. 38,258
4 Claims. (Cl. 188—59)



1. In a disk brake for a railway truck having a wheel-axle assembly provided with a brake disk, the combination of: a support bracket adapted to be mounted on the truck frame at a point spaced longitudinally from the brake disk; a pair of brake shoes adapted to be disposed on opposite sides of said brake disk for braking the brake disk; a pair of substantially parallel, laterally-spaced, longitudinally-extending support arms for actuating said brake shoes, each of said support arms having one end pivotally connected to said support bracket and having its other end pivotally connected to the associated brake shoe via first pivot pin means; second pivot pin means mounted on said other end of one of said support arms at a point spaced laterally from the associated first pivot pin means; an operating lever pivoted at one end on said second pivot pin means and extending longitudinally and substantially parallel to said one support arm on the side away from the other support arm; a transverse pull link pivotally connected at its ends to medial portions of said operating lever and said other support arm whereby movement of said operating lever moves said pull link and said support arms; and means for moving said operating lever comprising a cylinder mounted on said one support arm on the side thereof adjacent to said other support arm and between said pull link and said support bracket, and an operating rod which extends through an aperture in said one support arm and is pivotally connected to said operating lever adjacent the other end thereof; said operating rod being operative upon actuation thereof to move said operating lever both to apply and to release the brakes, the axis of said cylinder and said operating rod being coincident and extending substantially perpendicular to said one support arm and said operating lever.

3,092,212
RAILWAY DISK BRAKES
Paul W. Gaenssle, Abington, Pa., assignor to The Budd Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Feb. 13, 1961, Ser. No. 88,746
2 Claims. (Cl. 188—59)



1. In a disk brake for a railway truck having a plurality of axles each supported by a pair of wheels, and a truck frame, the combination of:
a pair of transversely-spaced brake disks adapted to be mounted on one of said axles;
an elongated, brake support beam adapted to be rigidly secured at its ends to said truck frame whereby said brake support beam extends parallel to said one axle at substantially the same height;
a pair of transversely-spaced brake units each mounted on said brake support beam adjacent to a different one of said brake disks, each of said brake units comprising
a pair of brake shoes each disposed on a different side of the associated brake disk,
a pair of medially-pivoted, transversely-spaced, longitudinally-extending brake tong levers each pivotally connected at one end to a different one of said brake shoes and having its other end extending beneath said brake support beam,
a horizontal, longitudinal journal operatively connected to said brake support beam,
a brake frame mounted on said journal for limited pivotal movement about the axis thereof, said brake tong levers being medially pivoted on said brake frame,
a bell crank pivotally mounted on said other end of the inboard brake tong lever,
and a link pivotally connected at its ends to one end of said bell crank and said other end of the outboard brake tong lever for actuating said brake tong levers in response to actuation of said bell crank;
a transversely-extending, longitudinally-reciprocal, equalizer yoke beam disposed between said brake support beam and said one axle and having its ends spaced longitudinally from the other ends of said bell cranks, said yoke beam being movable between an inoperative position and an operative position wherein said yoke beam is closer to said one axle than when it is in its inoperative position;
a pair of longitudinal links connected at their ends to the ends of said yoke beam and to the other ends of said bell cranks for operating said bell cranks in response to movement of said yoke beam between said positions so that the brakes are applied and released upon movement of said yoke beam into and from its operative position;
a pair of pneumatically actuated, transversely-spaced brake cylinder actuators mounted beneath said brake support beam on opposite sides of the longitudinal center line of the truck, each of said actuators comprising
a longitudinal actuating rod connected at its free end to said yoke beam at a point spaced from the

center of said yoke beam, said actuating rod being operative to move said yoke beam in response to operation of each actuator whereby actuation thereof moves said yoke beam to its operative position

and a hand brake operator lever medially pivoted for pivotal movement in a vertical plane that contains the longitudinal center line of the truck, said hand brake operator lever having one end connected to the center of said yoke beam for actuating it upon actuation of said hand brake operator lever.

3,092,213

RAILWAY TRUCK BRAKE BEAM BOTTOM ROD SAFETY DEVICE

Reuben F. Nelson, Roseville, Calif., assignor, by mesne assignments, to American Seal-Kap Corporation of Delaware, New York, N.Y., a corporation of Delaware

Filed May 31, 1960, Ser. No. 32,973
4 Claims. (Cl. 188—210)



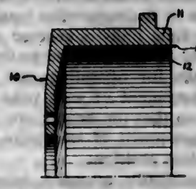
1. A safety device for a railway brake beam bottom connection rod, comprising a substantially flat body adapted to overlie and extend along an upwardly facing flat portion of a brake beam main member of angular cross section substantially throughout the width of said flat portion, inverted loops of rod material overlying, straddling and depending below said body, each loop including spaced upright legs and a cross bar engaging said body and inclined lengthwise of said body, said cross bars spacing the loops a predetermined distance apart, said cross bars being distortible lengthwise of said body to increase the distance between the legs of each loop to yieldingly accommodate a beam member between the legs, and upturned elements on the ends of said body constructed and arranged to embrace said spaced apart cross bars and to resist their distortion, there being an element depending from a side of the substantially flat body and having an inturned lip at its lower margin spaced from said body to underlie a part of a horizontal flange of the beam member and prevent upward movement of the safety device relative to the beam member.

3,092,214

FRICTION DEVICES

Clyde S. Batchelor, Trumbull, and Warren R. Jensen, Stratford, Conn., assignors to Raybestos-Manhattan, Inc., Passaic, N.J., a corporation of New Jersey

Filed Jan. 9, 1961, Ser. No. 81,454
8 Claims. (Cl. 188—218)



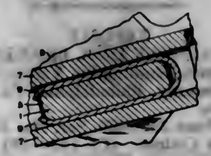
1. An aluminum brake drum comprising a cylindrical flange portion, a metallic friction track facing member having an average thickness of from about .002 to about .008 inch lining said cylindrical flange composed of metal of higher melting point, greater hardness, lower thermal conductivity and lower coefficient of thermal expansion than said brake drum, and a layer of high heat conductive metal selected from the group consisting of silver, copper, and alloys of said metals having a melting point and a thermal conductivity greater than said brake drum metal disposed between and in integrally bonded relationship with said aluminum flange surface and said high melting point metal friction track.

3,092,215

GUIDE FOOT FOR BRAKE BEAM

Andrew G. Haydu, Pittsburgh, Pa., assignor to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania

Filed May 12, 1960, Ser. No. 28,713
5 Claims. (Cl. 188—219.1)



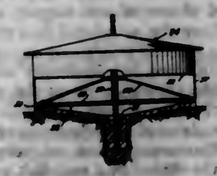
1. A guide foot for a railway car truck brake beam comprising a longitudinally extending guide foot member substantially rectangular in cross section attached at one end to the brake beam and having a free terminal end, a continuous circumferential groove formed in the surfaces thereof and extending transversely to the longitudinal axis of the brake beam intermediate said attached and free terminal ends, and a generally C-shaped wear element of spring metal having a pair of flexible prongs joined by a bright portion at one end and resiliently biased toward each other at the opposite free ends thereof, the free ends of said prongs being inwardly curved so that when said wear element is installed within said circumferential groove it is locked against displacement laterally of the guide foot member, by the cooperative relation of the curved ends of the prongs with the edge of said guide foot member under the tension developed in said wear element, said wear element having a thickness greater than the depth of said groove.

3,092,216

BUILDING STRUCTURES

Frank M. Tye, Jr., 4923 Clear Creek, Dallas 32, Tex.

Filed June 11, 1959, Ser. No. 819,718
8 Claims. (Cl. 189—3)



1. A building structure including: a base; a support column extending vertically upwardly from the base; and a plurality of vertically aligned sections disposed about said column and supported on said base, each section other than the lowermost being supported by an adjacent lower section, said lowermost section resting on said base, each of said sections comprising a wall and a supporting frame, said frame including an outer ring abutting and being secured to lower edge portions of the wall and a sleeve adapted to be slidably disposed about said central support column.

3,092,217

KIT ASSEMBLAGE STRUCTURE AND METHOD FOR OBTAINING SAME

Nicola Alloggio, 10 Piazza Duca d'Aosta, Milan, Italy

Filed June 15, 1960, Ser. No. 36,291
Claims priority, application Italy June 16, 1959
5 Claims. (Cl. 189—15.5)



1. A framework structure comprising, in combination, a plurality of elongated hollow frame members having each in the interior thereof opposite surface portions each defined by a pair of abutting faces converging toward each other at a given angle in a direction transverse to the elongation of said member, connecting means for connecting adjacent ends of said elongated frame members to each other and each comprising a central portion and at least two pairs of bracing members projecting from said central portion respectively into the interior of adjacent ends of said elongated frame members, the bracing members in each pair extending substantially parallel and slightly spaced from each other and each having a wedge-shaped cross section defined by a pair of wedge faces inclined toward each other at an angle substantially equal to said given angle; and means operatively connected to each of said pair of bracing members for pressing said wedge faces thereof in tight engagement with said abutting faces of said frame members so as to connect said frame members to each other against separation in longitudinal direction and against twisting movement with respect to each other.

3,092,218

BUILDING STRUCTURES SHIELDED AGAINST RADIO-FREQUENCY RADIATIONS AND COMPONENTS THEREOF

Richard H. Clay, Pittsburgh, Pa., assignor to H. H. Robertson Company

Filed June 1, 1959, Ser. No. 817,262
13 Claims. (Cl. 189—34)



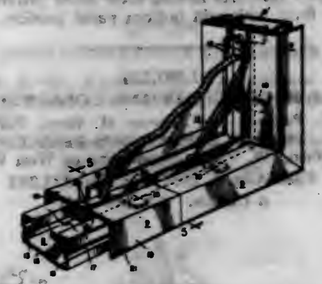
1. An insulated panel unit comprising a flat, imperforate metal inner facing sheet, a longitudinally corrugated metal outer facing sheet, and a rectangular frame comprised entirely of non-metallic materials to which said inner and outer facing sheets are secured to form a unit therewith, said frame comprising two spaced longitudinal members and at least two transversely extending members, the longitudinal members of the frame being of a height and size to fit within corresponding corrugations of the outer metal facing sheet and engaging the inner surfaces of the crests of the corrugations to support the same, the height of said transversely extending members being related to the depth of the corrugations in said corrugated sheet to engage and support the bottoms of the corrugations, said frame lying wholly within the outer and inner sheets, said corrugated sheet being affixed to said frame by means of non-metallic fasteners, said imperforate metal inner sheet being welded to metal clips secured to said frame and extending outwardly therefrom in contact with said inner sheet, said clips being disposed in opposition to the said crests of said corrugated metal outer facing sheet, whereby the metal-to-metal distance between said inner and outer sheets is less than an arcing distance for radio-frequency radiation to prevent thereby transfer of radio-frequency radiation through said inner and outer sheets.

3,092,219

BUILDING-PARTITIONS OR DIVIDERS

Royce O. Young, Chicago Heights, Ill., assignor to Unistrut Products Company, Chicago, Ill., a corporation of Illinois

Filed Nov. 16, 1959, Ser. No. 853,263
2 Claims. (Cl. 189—34)



1. A building-partition support comprising,

a. an anchoring element
of angular C-shaped cross-section having a flat base part with spaced transversely-disposed parallel parts disposing coplanar parts extending in inward opposition and terminating in flanges extending inwardly toward the base part and adapted to be anchored to a floor and wall,

b. a panel-mounting element
of E-shaped cross-section having the inwardly-extending medial part of a width to fit between the inwardly-extending flanges of the anchoring element and having a pair of parallel grooves disposed longitudinally inward from the exterior face of the medial part defining a panel-supporting part between the grooves,

c. a pair of flat bars
greater in width than the depth of the grooves removably positioned in the grooves and forming a seat between the bars for the edge of a panel resting on the medial part, and

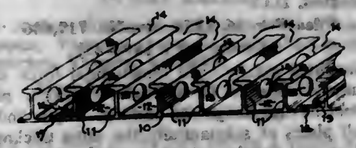
d. fasteners
for securing the elements in opposed nested relationship.

3,092,220

FLOOR CONSTRUCTION FOR REFRIGERATED ROADWAY VEHICLE

James J. Black, Cincinnati, Ohio, assignor, by mesne assignments, to Pullman Incorporated, a corporation of Delaware

Filed Dec. 3, 1959, Ser. No. 857,193
3 Claims. (Cl. 189—34)



1. A flooring section in the form of an elongated metal extrusion comprising a bottom panel portion, a plurality

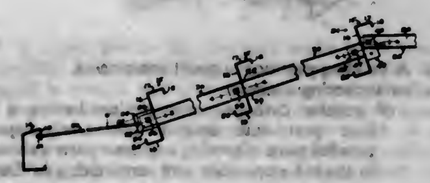
of webs extending longitudinally of said section from said bottom panel portion in spaced relationship to one another, said webs having flanges extending transversely therefrom at their ends in uniformly spaced relation to said bottom panel portion from which the webs respectively project, the edges of the flanges of adjacent webs being spaced from one another, a first joint member projecting upwardly from said bottom panel portion and longitudinally along one edge portion of said section, said first joint member being spaced from the adjacent web, a second joint member projecting upwardly and extending longitudinally along the opposite edge portion of said section, said second joint member being spaced from the adjacent web, said webs each having a plurality of longitudinal spaced apertures having their lower extremities substantially flush with said bottom panel portion.

3,092,221

METAL ROOF-SUPPORTING CONSTRUCTION

Robert L. Parsons and Grover H. Bays, Parkersburg, W. Va., assignors to Parkersburg-Aetna Corporation, Parkersburg, W. Va., a corporation of West Virginia

Filed Aug. 7, 1959, Ser. No. 832,293
6 Claims. (Cl. 189—36)



1. In a roof construction wherein the roof slopes downwardly in opposite directions away from a ridge, a plurality of purlins arranged at each side of said ridge and spaced from and parallel to each other and to said ridge, two of said purlins being arranged at opposite sides of said ridge and equidistantly spaced therefrom, said two purlins having webs perpendicular to the respective slopes of the roof and provided with sets of slots transversely of such webs, purlin ties connecting adjacent pairs of said purlins, horizontal purlin ties associated with each of said slots and extending between said two purlins, all of said purlin ties having webs lying in vertical planes, a tongue at each end of each horizontal purlin tie forming a continuation of the web thereof projecting through and fitting one of said slots, and means connecting said tongues to the respective purlin ties at the remote sides of said two purlins, the ends of the webs of said purlin ties at the remote sides of said two purlin ties abutting the webs thereof offset to one side of the respective slots.

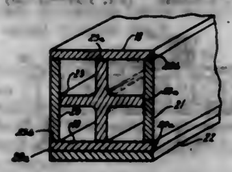
3,092,222

CRUCIFORM STRUCTURAL STEEL COLUMNS

Albert W. Heinle, Pittsburgh, Pa., assignor of twenty-five percent to William B. Jaspert, Upper St. Clair Township, Pa., and twenty-five percent to Frank P. Cyr, Washington, D.C.

Filed Feb. 26, 1958, Ser. No. 717,646
1 Claim. (Cl. 189—41)

An elongated axially rigid longitudinal force supporting column comprised of a single cruciform piece of rolled steel having flanges of uniform length and thickness, wall plates of substantially the same thickness and material as said flanges welded at substantially their mid points to the outer edges of said flanges to form a box-like column comprised of two pairs of opposed flat parallel plates, the plates of one pair being wider than, and extending over the ends of the other pair with the extending portions of said one pair welded to the ends of said other pair, the entire width of the wider plates being



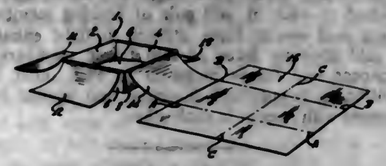
substantially equal to the widths of the aligned flanges of the cruciform piece plus the thickness of said other pair of plates whereby the welded plates present substantially flush surfaces at the junction of said one pair of plates with said other pair of plates.

3,092,223

CARRYING BAG

Leo T. Martin, Brooklyn, N.Y., assignor to Abercrombie & Fitch Company, New York, N.Y.

Filed July 11, 1960, Ser. No. 41,810
1 Claim. (Cl. 190—1)



A boot carrier comprising a collapsible bag having a bottom and four sides defining an open container, overlapping flaps integrally extending from each of said sides, respectively, the overlapping flaps completely enclosing the open portion of said container thereby defining an enclosed hollow space for a pair of boots, the inside facing surfaces of said sides, bottom and overlapping flaps comprising a water impervious material, a foldable mat attached to one of said flaps for accommodating a person in the standing position while changing footwear, said mat being wider and longer than the connected flap and attached at an intermediate edge portion to said flap, the mat portions extending beyond said intermediate edge portion being foldable inwardly along respective lines constituting imaginary extensions of two opposite edges of said connected flap, the folded mat being further foldable towards said intermediate edge, whereby when said mat is fully folded, it occupies approximately the same flat area as said connected flap, the mat being folded on the inside of said connected flap and all of said flaps being folded in overlapping position to close said bag, and strap means extending completely around said bag to maintain it in the closed condition.

3,092,224

COMBINED CARRYING BAG AND SEAT

Brian D. O'Neil, 300 Paseo de la Playa, Redondo Beach, Calif.

Filed May 24, 1962, Ser. No. 197,435
3 Claims. (Cl. 190—9)

1. In a combined carrying receptacle and seat, the combination of

first and second hollow structures each having a pair of spaced side walls joined by wall means extending transversely therebetween and forming a generally convex outer surface,

said side walls and wall means of each of said structures having free edges which join to define the open mouth of the hollow structure,

said first and second structures being of such size and shape that the free edges of one can be placed respectively in contact with the free edges of the other so that the two structures coact to form a closed receptacle for carrying articles;

hinge means connecting said first and second structures together for pivotal movement relative to each other generally about an axis parallel to like free edges of said structures and at right angles to said side walls;

a first generally U-shaped handle including a base and a pair of legs of equal length,

the legs of said first handle being each pivoted to a different side wall of said first structure adjacent said hinge means and being of such length as to be capable of extending along beside the side walls of said first structure to maintain said base in a position spaced outwardly from the edge of said first structure opposite said hinge means;

a second generally U-shaped handle including a base and a pair of legs of equal length,

the legs of said second handle being each pivoted



to a different side wall of said second structure at a point spaced from said hinge means toward the edge of said second structure opposite said hinge means,

the legs of said second handle being substantially shorter than the legs of said first handle and the relative lengths of the legs of said handles and the locations of their respective pivotal connections to said first and second structures being such that, when the free edges of said first and second structures are in contact, said handles can be pivoted to bring the bases thereof together so that both bases can be grasped for carrying the device as a closed receptacle;

the legs of said first handle and the legs of said second handle both being spaced apart by a distance greater than the width of said hollow structures, whereby both of said handles can be pivoted freely relative to said hollow structures; and

catch means on each of said legs of said first handle forming a pair of notches which open away from the legs of said second handle when the bases of said handles are disposed together,

said notches being spaced equally from the base of said first handle and spaced apart by a distance less than the length of the base of said second handle,

said first and second structures and said handles being adjustable to form a seat by first pivoting said structures away from each other, then pivoting said first handle until its legs extend past said hinge means and adjacent said second structure, then placing the free edges of said first structure upon the supporting surface, and then further pivoting said first and second structures relative to each other until said second handle can be disposed with its base engaged in said catch means, said first structure then constituting a seat with its convex surface facing upwardly and said second structure being braced in upwardly and rearwardly slanting position by said second handle to constitute a backrest with its convex surface facing upwardly and forwardly.

3,092,225

BOWLING EQUIPMENT CARRIER

Jerome S. Kivett, Kansas City, Mo., assignor to Regal Plastic Company, Kansas City, Mo., a corporation of Missouri

Filed May 23, 1960, Ser. No. 31,073
2 Claims. (Cl. 190—48)



1. A bowling equipment carrier comprising a pair of shell members, each of said members having a face, a top, a bottom and a pair of opposed sides, said members having abutting margins and coupled along common abutting margin portions for relative pivotal movement, said shell member defining an enclosed container when said margins are abutting; first retaining means on said shell members and disposed to receive a bowling ball thereon in supporting relationship to the latter when the container is closed; and a pair of second retaining means, each of said second retaining means comprising straps fixedly secured to the opposed sides of one of said shell members and a median arcuate portion carried by said straps and extending toward the face of said one shell member, said arcuate portion being spaced directly above said first retaining means and disposed to engage a bowling ball when carried by said bowling equipment carrier.

3,092,226

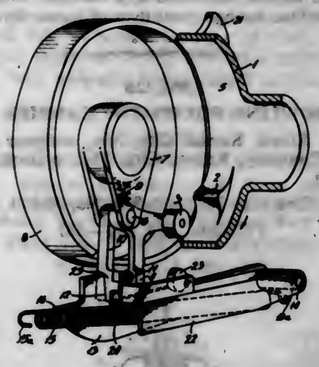
SAFETY DEVICE FOR TRIP DOG OPERATION IN HAY BALERS

George Arthur Williamson, Katandra West, via Tallygaroopna, Victoria, Australia (16 McCracken St., Shepparton, Victoria, Australia)

Filed July 5, 1960, Ser. No. 40,763
4 Claims. (Cl. 192—22)

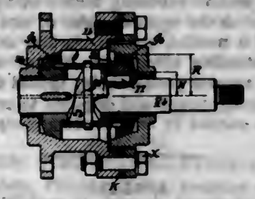
1. In a hay baler of the type having a needle actuating mechanism, a clutch for selectively driving the needle actuating mechanism, a trip dog for selectively coupling

said clutch and needle actuating mechanism and a safety device for said trip dog, said safety device comprising: a rocker arm operatively engageable with said trip dog to maintain said trip dog in a first inoperative position, a cam on said clutch for engaging said rocker arm to periodically displace the same out of operative engagement with said trip dog, means coupled to said rocker arm and defining a pivot axis about which said rocker arm pivots during the periodic displacement thereof, a trip



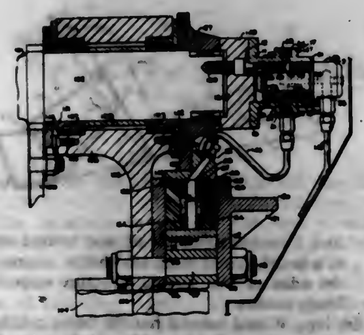
release lever operatively engaged with said trip dog to selectively maintain the same in said first position, said trip release lever being selectively displaceable out of engagement with the trip dog, said trip release lever being coupled to said means for pivoting about said axis during displacement thereof, said trip dog being adapted to couple said clutch and needle actuating mechanism in driving relation when said trip release lever and said rocker arm are displaced.

3,092,227
ONE-WAY CLUTCHES AND IN PARTICULAR FREE-WHEELS
Michel Dessier, "Bois Fleuri," Rue de Bellemont, Orgeval, France
Filed Dec. 14, 1961, Ser. No. 159,296
Claims priority, application France Dec. 14, 1960
5 Claims. (Cl. 192—41)



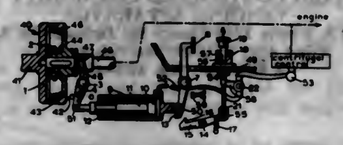
1. A free-wheel device which comprises, in combination, two units, a first one and a second one, mounted movable with respect to each other perpendicularly to one direction, said first unit comprising, fixed with respect thereto at least perpendicularly to said direction, two slideways perpendicular to said direction and facing each other, said second unit comprising, fixed with respect thereto, an oblique surface turned toward one of said slideways and an oblique surface turned toward the other of said slideways, respectively, said oblique surfaces, making each a given obliquity angle with respect to the corresponding slideway, respectively, and two wedging members each inserted between one of said slideways of said first unit and the oblique surface of the second unit that is turned toward said last mentioned slideway, each of said wedging members having one face thereof of the same shape as the slideway with which it is in contact and the other face thereof of the same shape as the oblique surface with which it is in contact, said units being arranged so that, for a virtual relative displacement thereof, the friction work is greater between each of said wedging members and the slideway against which it is bearing than between said wedging member and the oblique surface against which it is bearing, said angle of obliquity of each of said oblique surfaces being at least equal to the limit angle of friction of the corresponding wedging member with respect to said oblique surface, and said wedging members being disposed so that their respective reactions perpendicular to said slideways balance each other.

3,092,228
POWER PRESSES AND OTHER SIMILAR MACHINE TOOLS
Ronald Frederick Doykin, Birmingham, England, assignor to Hordern Mason & Edwards Limited, Birmingham, England, a British company
Filed Dec. 15, 1959, Ser. No. 859,716
7 Claims. (Cl. 192—85)



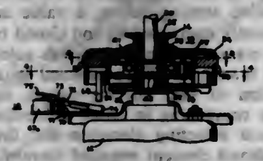
1. In a power press having movable tool carrying members mounted thereon operable from a continuously rotating flywheel freely rotatable on a driven shaft, the improvement comprising a driving clutch element, means to mount said driving clutch element on the flywheel, a driven clutch element on said driven shaft, means for keying said driven clutch element to said shaft, a first clutch member mounted on said flywheel, a second clutch member coaxial with said first clutch member and spaced axially therefrom with the driven clutch element between said clutch members, a plurality of bodies angularly disposed on said driven clutch element, each of said bodies having a bore therethrough substantially parallel to the axis of said shaft, said bodies extending substantially to the faces of said driving clutch members, the clearance between said bodies and said clutch members being the least amount to allow a substantially friction-free relative rotation therebetween, said second clutch member being supported along only its outer periphery from said flywheel and being spaced from the axis of said shaft providing an access space, manifold means mounted on said shaft, pressure conduits extending from said manifold means through said access space to said bodies and communicating with the bores of said bodies, said bores, conduits and manifold means being adapted to be filled with hydraulic fluid, swivel means for providing a supply of said hydraulic fluid under pressure to said manifold means while said manifold means may rotate and said swivel means may remain stationary, a pair of piston elements in the bore of each body, friction pads of substantial thickness exteriorly of each piston and positioned between the piston and the adjacent clutch members and confined in the bore, said structure providing for substantially immediate and substantially positive connection between the driven clutch element and the driving clutch element upon the application of hydraulic pressure in said swivel, manifold, conduit and bores whereby a minimum of heating is obtained and accurate control for the stoppage of the driven clutch element can be obtained without excessive inertia forces.

3,092,229
CONTROL MECHANISM FOR AUTOMOTIVE-VEHICLE CLUTCHES AND THE LIKE
Edmond Uher, Chemin des Mougins, Cap d'Antibes, France
Filed July 26, 1961, Ser. No. 127,033
Claims priority, application Germany July 29, 1960
5 Claims. (Cl. 192—103)



1. In an automotive vehicle, a mechanism for operating a clutch including an engine-controlled drive member and a driven member urged by spring means into mutual engagement; said mechanism comprising a clutch-disengaging element adapted to bear upon one of said members against said spring means, a clutch-operating pedal, a linkage connecting said element with said pedal for enabling disengagement of said clutch upon displacement of said pedal from a normal position, a servomotor with two relatively displaceable bodies in said linkage, resilient means stronger than said spring force tending to maintain said bodies in a predetermined relative position, latch means operable to hold said pedal in an off-normal position in which said clutch is disengaged upon said bodies occupying said predetermined relative position, centrifugal control means responsive to engine speed for progressively displacing said bodies from said predetermined relative position in a sense tending to withdraw said element from said one of said members, and manually actuatable means for rendering said latch means ineffectual and simultaneously disabling said control means.

3,092,230
CLUTCH CONTROL ARRANGEMENT
Robert R. Sisler, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Filed Mar. 16, 1961, Ser. No. 96,275
8 Claims. (Cl. 192—105)



1. A clutch comprising: coaxial driving and driven means; connecting means coaxial with and yieldingly driven by said driving means, said connecting means including means movable from a first position to a second position in response to centrifugal force at a predetermined speed, said movable means in said second position connecting said driving means to said driven means, said movable means having a stop section formed thereon, said stop section being in a first radial position when said movable means is in said first position and being in a second radial position when said movable means is in said second position; control means including a control member movable between an operative position and an inoperative position and means for so moving said control member, said control member in its inoperative position being removed from the rotary path of said stop section in either radial position of said stop section, said control member in its operative position being in the rotary path of said stop section when said stop section is in said first radial position thereby to prevent rotation of said connecting means and being out of the rotary path of said stop section when said stop section moves to said second radial position.

3,092,231
DIAPHRAGM AND WEAR SHOE ASSEMBLY FOR CLUTCH OR BRAKE
Kenneth E. Kneuss, Cleveland, Ohio, assignor to Fawick Corporation, Cleveland, Ohio, a corporation of Michigan
Filed June 29, 1961, Ser. No. 120,610
5 Claims. (Cl. 192—107)

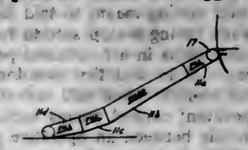


1. A diaphragm and wear shoe assembly comprising an annular hollow fluid-distensible diaphragm having an annular inside circumferential wall of rubber-like material, said inside wall having a plurality of circumferentially spaced segments at its radially inward side, each of said segments terminating at its opposite ends in circumferentially protruding interlock flanges which present radially outwardly facing shoulders, a plurality of rigid reinforcing plates embedded in said segments and respectively extending circumferentially from one interlock flange on the respective segment to the interlock flange on the opposite end thereof, and a plurality of wear shoes mounted on said segments at the radially inward side of the latter, each of said wear shoes having hooked opposite ends which snugly engage said shoulders on the respective segments.

3,092,232
INFLATABLE ESCAPE SLIDE
Leland D. Adams, Jr., Atherton, Calif., assignor to Survival Equipment Corporation, San Francisco, Calif., a corporation of New York
Filed Dec. 8, 1961, Ser. No. 157,990
4 Claims. (Cl. 193—25)

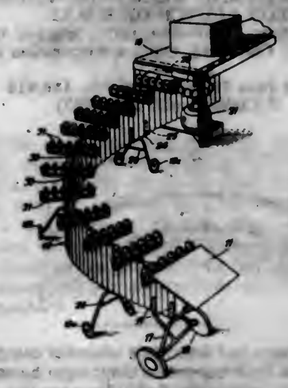
1. In a device of the character described, a pair of tubular inflatable side support members, two tubular inflatable end support members joining the ends of said side support members and adapted to hold the same in substantially parallel spaced relationship when they are inflated, a deformable fabric sheet secured along the intended upper edges of said side support members, said tubular inflatable side support members and tubular inflatable end support members being formed of fabric, the

intended upper and lower ends of said side support members being formed with the warp of the fabric extending laterally circumferentially around the member and the intermediate portion of said side support members being



formed with the warp of the fabric extending longitudinally thereof whereby the rigidity of said intermediate portion exceeds the rigidity of said upper and lower end portions.

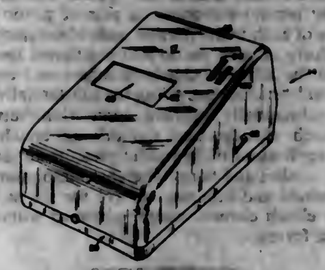
3,092,233
FLEXIBLE CONVEYOR
Oliver R. Titchenal, Rumford, R.I., assignor to St. Regis Paper Company, New York, N.Y., a corporation of New York
Filed Nov. 24, 1961, Ser. No. 154,468
11 Claims. (Cl. 193—35)



1. A conveyor construction comprising: a body portion formed of corrugated elongated strip material; supporting means for retaining such body portion with its corrugations in upright position, such body portion being flexible sideways to conform to various desired curved paths; and means for supporting at the upper edge of said body portion a series of groups of rollers, each group being rotatable about a horizontal axis normally positioned at right angles to said body portion.

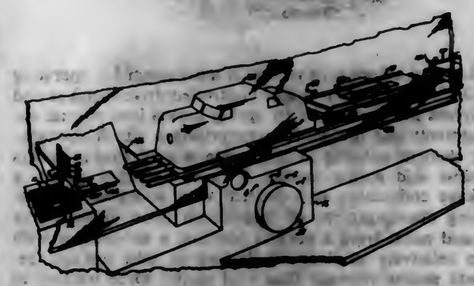
3,092,234
VENDING MACHINE FOR INSURANCE CONTRACTS
Robert N. Edwards, Chamblee, and Lawrence C. Reese, Sr., Atlanta, Ga., assignors to Policy-Matic Corporation of America, Atlanta, Ga., a corporation of Georgia
Filed Jan. 13, 1958, Ser. No. 708,559
3 Claims. (Cl. 194—7)

1. In a portable vending machine for automatically issuing individual forms containing a plurality of continuous webs arranged in superposed relation, one of said webs being defined by a plurality of sections each corresponding in length to an individual form and the other of said webs being defined by a plurality of sections each of lesser length than one of said first named sections and adapted to be aligned with a corresponding portion of said forms, the improvement comprising feeding means intermittently operable for separately advancing each of said webs a predetermined distance substantially equal to the length of one section, an electric motor for driving said feeding means, a power supply circuit including an electrical battery connected in series to said



motor for energizing the same, and a coin control switch electrically connected in series with said circuit having a pair of contacts which when electrically interconnected by a coin will close said circuit and actuate said motor.

3,092,235
COIN CONTROLLED COMMODITY VENDING APPARATUS
Robert S. Kemp, 1408 Dancy St., Jacksonville 5, Fla.
Filed Apr. 8, 1959, Ser. No. 805,837
8 Claims. (Cl. 194—10)



1. In a coin controlled commodity vending apparatus, a track, a dispensing station adjacent said track, an electric train on said track including an engine and commodity carrying cars, each of said cars carrying a respective commodity indexed element and an electrically controlled commodity dumping device having electrical contact elements, stationary electrically conducting elements at said station and respectively arranged to engage the respective contact elements of said dumping devices, a power supply, a relay having an actuating coil and including a normally open switch and a normally closed switch, a first circuit connected to said engine and to said power supply through said normally closed switch, a second circuit connected to one of said stationary elements and to said power supply through said normally open switch, a plurality of fixed detecting elements at said station each respectively arranged to engage a different commodity indexed element, a coin receiving and value sensing device, a value accumulating switch responsively connected to and closed by said sensing device, a manually operated circuit selector switch, a plurality of branch circuits connected to and selectable by operation of said selector switch, each of said branch circuits comprising in series connection a respective one of said detecting elements and the respective commodity indexed element engaged thereby when a car is at said station, said relay coil, said value accumulating switch and a second power supply, whereby a circuit is completed from said second power supply through said value accumulating switch, said selector switch, said relay coil and the selected one of said branch circuits thereby to actuate said relay.

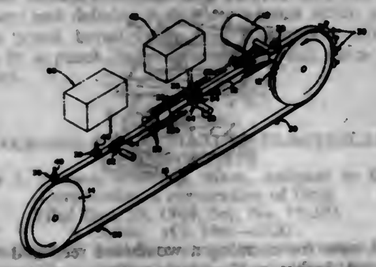
3,092,236
INK TRANSFER IMPRESSION-MAKING RIBBONS
Charles Campbell, New York, and Fred R. Berning, Huntington, N.Y., assignors, by mesne assignments, to Dynamic Process Co., Inc., New York, N.Y., a corporation of New York
Filed May 25, 1960, Ser. No. 31,714
12 Claims. (Cl. 197—172)



1. An impression-making ribbon adapted to be struck by keys of a machine for making an impression on a sheet of paper or the like, comprising a plurality of plies joined to each other, one of said plies being a narrow strip of material comprising a multitude of randomly arranged synthetic plastic fibers fused together and collectively defining said one ply, another of said plies comprising a narrow strip of woven material having high ink absorbent properties, said one and said another of said plies being impregnated with ink, said one ply being adapted to be in confronting relation with said sheet of paper.

7. A multi-ply ribbon adapted to be struck by keys of a machine for making a visible impression on a sheet of paper or the like, comprising a first ply being a narrow strip of material comprising a multitude of randomly arranged synthetic plastic fibers fused together and collectively defining said first ply, a second ply comprising a narrow strip of woven material having high ink absorbent properties, and a third ply comprising a thin synthetic plasticizer film impervious to ink, said first and second plies being impregnated with ink, said three plies being joined together, said first ply being adapted to be in confronting relation with said sheet of paper for imparting a uniformly inked impression thereto, said second ply being intermediate the first and third ply and defining an ink reservoir for said first ply, said third ply being adapted to be struck by said keys, and defining means for preventing any ink or dirt from clogging up said keys.

3,092,237
CONVEYOR ARRANGEMENT
Harry L. Miller, Susanville, Calif., assignor to Ways & Means, Inc., Susanville, Calif., a corporation of California
Filed Mar. 6, 1961, Ser. No. 93,417
3 Claims. (Cl. 198—19)



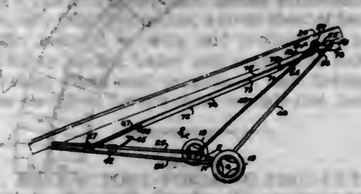
1. A conveyor arrangement for conveying an article to a processing station comprising a conveyor belt having a smooth surface and a rectilinear run, means for continuously advancing said conveyor belt, guide members at either side of said rectilinear run; a carrier element for the article to be conveyed having a magnet in the form of an inverted U, the shanks of said magnet having smooth frontal surfaces adapted for sliding contact with the smooth surface of said endless conveyor belt, a table plate mounted upon the back of said magnet and having smooth parallel side edges adapted for sliding contact with said guide members, and means for holding an article mounted upon said table plate; and a retractable barrier extending across said rectilinear run to positively bar temporarily further advance of said carrier element in a position wherein an article carried thereby may be properly operated on at said station while permitting the conveyor belt to continue its advance.

3,092,238
TRAY FOR MIXING MILLS
Werner Preiss, Duesseldorf, and Guido Fromandi, Leverkusen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany
Filed Sept. 18, 1959, Ser. No. 840,947
Claims priority, application Germany Oct. 27, 1958
6 Claims. (Cl. 198—197)



1. In a combination with a mixing mill having horizontally positioned mill rollers, a transversely extending tray mounted on a carriage for oscillatory movement with respect thereto, said tray and carriage being adapted to be inserted in the confined space directly beneath the rollers of said mixing mill, said tray having means defining a collecting channel at one end thereof, drive means for imparting oscillations to said tray causing it to carry out said oscillatory movements whereby material falling through the nip of said rollers is deposited on said tray and is conveyed therealong to said collecting channel for removal.

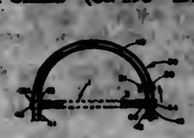
3,092,239
CARRIAGE FOR CORN AND HAY ELEVATORS
Martin Mayrath, 10707 Lennox Lane, Dallas, Tex.
Filed Jan. 19, 1961, Ser. No. 83,743
9 Claims. (Cl. 198—120.5)



1. A carriage for a conveyor, comprising an axle assembly, radius rods and supporting arms extending in opposite directions from said axle assembly and having means at the outer ends thereof for supporting a conveyor, said axle assembly comprising a galvanized tubular body, a spindle projecting into each end of said tubular body and fixed with respect thereto, each spindle having an end projecting from said tubular body, a wheel mounted on the end of each spindle, said radius rods and supporting arms comprising pairs of tubular supporting

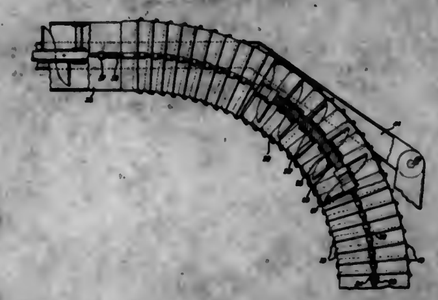
means for the conveyor, the tubular ends of one pair of such supporting means being transversely apertured to receive the respective spindles between said tubular member and said wheels, and collars fixed to said spindles between the respective ends of said one pair of supporting means and the associated wheel, the ends of the tubular members of the other pair of supporting means lying inwardly of and adjacent the respective ends of said one pair of supporting means and being transversely apertured at opposite sides to respectively receive said spindle and said tubular axle body, and snugly enclosing the end of the latter.

3,092,240
IDLER ASSEMBLY
Merle D. Tyler, Denver, James R. Hughes, Sedalia, and Edmund C. Bitzer, Golden, Colo., assignors to Hughes-Tyler Manufacturing Co., Denver, Colo., a corporation of Colorado
Filed May 2, 1960, Ser. No. 26,053
1 Claim. (Cl. 198—192)



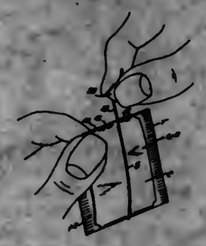
A belt conveyor idler assembly comprising, in combination, an inverted U-shaped idler support means and a pair of support braces slidable on the spaced apart legs of said support means, each support brace arranged to releasably and pivotally support a rotatable spring idler spindle, at least one of said support braces being telescoped over and slidable a substantial distance along said U-shaped member from a lower upright belt operation position to an upper position closer to the other support means in a slack idler position whereby an idler may be assembled or disassembled with said assembly, and means for locking said movable support means in belt operative position.

3,092,241
BULK TRUCK WITH FLEXIBLE CONVEYOR
Orville Louis Dubie, P.O. Box 671, Toccoa, Ga.
Filed Oct. 13, 1959, Ser. No. 846,119
5 Claims. (Cl. 198—213)



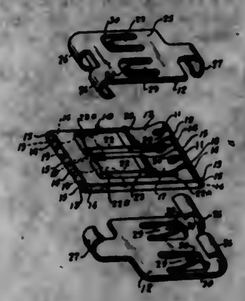
1. A driven multi-section screw conveyor comprising; rigid and flexible shaft sections rotatable within a housing, said shaft having secured by staking means thereto pluralities of first and second spaced sleeves, said first sleeves being staked to the rigid portion of said rotatable shaft and being of sufficient length to support a helical flight, each of said first sleeves further having a constant internal diameter throughout the entire length thereof, said second sleeves being staked to the flexible sections of said rotatable shaft and being of sufficient length to support a helical flight, said second sleeves further including center portions to provide a bearing surface through which the staking means pass, and end portions having a relatively larger internal diameter than the secured center portions for permitting increased flexibility of the rotatable shaft.

3,092,242
COMPRESSIBLE INFUSION PACKAGE
Hans O. Immerheiser, Elmont, N.Y., assignor to National Tea Packing Company, Inc., Long Island City, N.Y., a corporation of New York
Filed May 24, 1961, Ser. No. 112,250
2 Claims. (Cl. 206—5)



2. A compressible infusion package comprising an infusion bag, a suspending string stapled to the top of the infusion bag and provided with a finger tab at its free end, a cover sheet folded over the top of the infusion bag and defining two wings embracing the faces of the infusion bag, the fold of said cover being provided with an orifice for the loose reception of a portion of said string and being also provided with a slit for the tight reception of another portion of said string, the said string being loosely threaded through said orifice, being wound about to encircle the assembly of said folded sheet and infusion bag, and having its free end below said tab detachably received and anchored in said slit, the said folded sheet thereby serving the triple function of a packaging wrapper for the infusion bag held closed by said encircling and anchored string, a handhold for the bag in its infusion use and a means for compressing and squeezing the infused contents of said infusion bag.

3,092,243
REED CASES
Maurice E. Bruckmann, 1600 N. Edison Blvd., Burbank, Calif.
Filed Apr. 23, 1962, Ser. No. 189,578
7 Claims. (Cl. 206—13)



1. A case for carrying a woodwind reed and a reed supported thereby, said case comprising

(*a*) a reed supporting member being provided with a pair of spaced arms on at least one edge thereof,

(*b*) said arms being provided with axially aligned pin members,

(*c*) a resilient retaining member having a pair of axially aligned sockets receiving said pin members and a longitudinal slot spaced from said sockets whereby said retaining member is pivotally carried on said supporting member and is removable upon laterally compressing said retaining member,

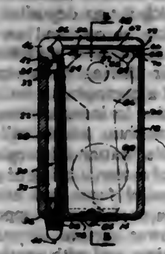
(*d*) said retaining member engageably overlying a portion of said reed,

(*e*) a cover overlying said reed and resiliently engaging said retaining member,

(*f*) said cover having means selectively securing said cover to said supporting member, and

(*g*) said cover having a resilient clamping means operable on securing said cover to said supporting member to engage said reed whereby to clamp said reed to said supporting member.

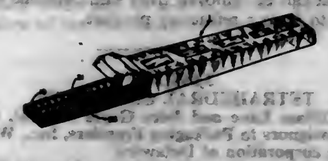
3,092,244
POCKET KEY CASE ASSEMBLY
Wayne T. McWhirter, 5025 N. 64th Ave., Glendale, Ariz.
Filed Oct. 20, 1961, Ser. No. 146,632
1 Claim. (Cl. 206—38)



A device of the character described comprising a flat hollow case having an open end, said case having first and second side walls, first and second end walls, and a top wall, a cover closing said lower end, and a spring clip mounted externally on said top wall and having a tongue extending downwardly along and bearing against the outer surface of a side wall, one of said end walls being formed with a bore opening through said bottom wall, and a pencil having a barrel fixed in said bore and having a writing tip extending below said top wall, said end wall being said second end wall, and a cover hinged at one end on said second end wall for closing the open end of the case, said second end wall having a notch in its lower end and the case side walls having pendant ears at opposite sides of the notch, said cover having a disc at said one end engaged in the notch and between said ears, and a pivot pin extending axially through the disc and engaged in said ears, a reduced diameter counterbore extending between said notch and said bore and defining a shoulder against which an end of the pencil barrel bears, said counterbore affording access by a punch for removing the pencil barrel from the bore.

3,092,245
PACKAGE FOR MINIATURE ELECTRICAL COMPONENTS
Arthur J. Polsson, Concord, Mass., assignor to Clevite Corporation, a corporation of Ohio
Filed Dec. 29, 1960, Ser. No. 79,393
1 Claim. (Cl. 206—45.31)

A package of miniature electrical components having a substantially cylindrical body and extending leads from each end of said body, each of said leads having a right angle bent with the terminal portions thereof parallel to each other; a pad of rigid plastic foam receiving and frictionally gripping the terminal portions of each lead, said pad having a substantially rectangular cross section and a groove extending peripherally around said pad for providing a relatively weakened cross section; an elongated box having top, bottom and side walls forming in combination a hollow enclosure of rectangular cross section with two end openings and a window-like opening in said top wall, first and second foldable end flaps integral with one of said walls, one of said flaps being located proximate to one end opening and the other flap being located proximate to the other end opening, each



flap having an end cover contiguous to the last named walls for closing each end opening, an intermediate member integral with said end cover and disposed parallel to the normal plane of said top and bottom walls and including two outwardly projecting ears located at opposite ends of said intermediate member and disposed within said enclosure parallel to the normal plane of said side wall and at right angle to the top and bottom wall and each of said flaps including a resilient abutment member constructed integral with the intermediate member and arranged in the same plane as the end cover; and a sheet of transparent material covering said window-like opening.

3,092,246
PACKAGE
John W. Harrison and Robert D. Lowry, Winchester, Mass., assignors to W. R. Grace & Co., Cambridge, Mass., a corporation of Connecticut
Filed Mar. 28, 1960, Ser. No. 17,905
4 Claims. (Cl. 206—45.33)

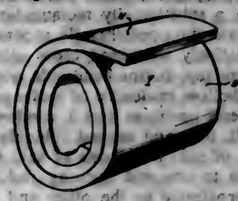


1. A package which comprises a product to be packaged, rigid means to support said product, said means having a plurality of separate, spaced projections extending laterally from said means, a cover sheet of heat shrinkable film material covering said product and having its edges tightly shrunk under said projections locking said cover sheet about said projections, and having its top portion shrunk to form a tight, wrinkle-free package.

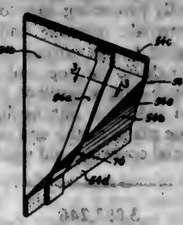
3,092,247
REFRACTORY-FORMING PRODUCTS
Richard K. Woodruff, Dundee, Ill., assignor to Refractory Products Company, Chicago, Ill., a corporation of Illinois
Filed Oct. 11, 1960, Ser. No. 61,967
2 Claims. (Cl. 206—46)

2. A refractory-forming unit which comprises a moldable mat and a non-porous plastic envelope loosely sealed around said mat in vapor-tight relation thereto, said mat comprising a plurality of felted refractory fibers including alumina fibers and an unset binder including colloidal silica, said binder being intermixed with said fibers so as to maintain said fibers in a coherent mass, and

said binder after setting maintaining said mat in a fixed shape at heats up to refractory temperatures, whereby said mat can be removed from said envelope and said binder set to form a refractory product.

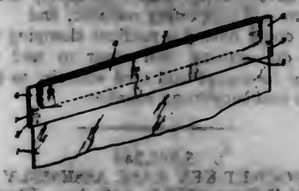


3,092,248
TETRAHEDRAL CONTAINER
George William Lane and John Gayle Sawicki, Omaha, Nebr., assignors to Packaging Frontiers, Inc., Waltham, Mass., a corporation of Delaware
Original application Dec. 20, 1955, Ser. No. 554,270, now Patent No. 2,966,021, dated Dec. 27, 1960. Divided and this application Nov. 3, 1960, Ser. No. 66,947
6 Claims. (Cl. 206—46)



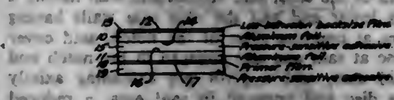
5. A filled package comprising a length of tubing formed from a web of flexible packaging material which is heat-sealable on one face, said web being formed into the tubing with its said one face on the inside of the tubing and with side margins of the web in inside-face-to-inside-face engagement and heat-sealed together throughout the length of the tubing to form an inside-face-to-inside-face external longitudinal seam for the tubing on the outside of the tubing, said tubing being transversely flattened at each end and having its opposite walls at its ends heat-sealed together in inside-face-to-inside-face relation at said ends to form flat inside-face-to-inside-face end seals for the tubing, said end seals lying in planes which extend longitudinally with respect to the tubing and at such an angle to one another that the package has the shape of a tetrahedron with four triangular faces and four longitudinal edges constituting the sides of said triangular faces, each edge extending from a respective end of one end seal to a respective end of the other end seal, said external longitudinal seam extending longitudinally of the package from a point intermediate the ends of one end seal on the outside of a first of said triangular faces to a point intermediate the ends of one of the longitudinal edges of the package constituting one of the sides of said first triangular face and also constituting one of the sides of a second triangular face of the package adjacent said first triangular face, said external longitudinal seam intersecting said one longitudinal edge at an oblique angle and then angling and twisting around said one longitudinal edge to said second triangular face and extending longitudinally of the package on the outside of said second triangular face to a point intermediate the ends of the other end seal of the package, said external longitudinal seam being folded over and lying substantially flat on the outside of said first and second triangular faces and said end seals and being constrained to lie substantially flat on the outside of said first and second triangular faces and said end seals by the angling and twisting thereof around said one longitudinal edge of the package.

3,092,249
CONTAINERS OR PACKAGES
Harold Eric Clegg-Jones, 12 Denmark St., Birmingham 19, England
Filed Mar. 30, 1961, Ser. No. 99,622
6 Claims. (Cl. 206—46)



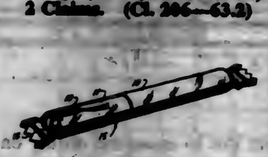
1. A package comprising a flexible bag-like container made of air- and water-impervious material, and means disposed in said container to be maintained substantially in the condition in which it was deposited in said container, said container having at one end an elongated mouth closed by an air sterilizing filter consisting of an elongated flat-sided strip of air-filtering water-repellant sponge-like material which is of a homogeneous texture and which has been pre-treated, prior to incorporating in the container, with a sterilizing medium which will be lethal to the growth of any viable matter intercepted in the filtering material, said strip of material being of greater length than width with flat parallel faces and being bonded by its side portions to the container at opposite sides of said mouth, with the lower surface directly exposed to the interior of the container and with another surface exposed to the outside atmosphere so that the only ingress of air into the container is through the filtering material.

3,092,250
PRESSURE SENSITIVE ADHESIVE TAPE IN WHICH THE ADHESIVE IS A MIXTURE OF SYNTHETIC RUBBER AND ACRYLATE
Andrew T. Knutson, White Bear Lake, and Melvin O. Kalleberg, Minneapolis, Minn., assignors to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware
Filed Aug. 1, 1960, Ser. No. 44,073
16 Claims. (Cl. 206—59)



6. Permanently tacky and pressure-sensitive adhesive tape, the adhesive coating of which remains rubbery even when exposed to 200° F. for 10 days, characterized by having an adhesive coating comprising a mixture of (1) 25–75 parts by weight of synthetic rubber which is bandable on a rubber mill and has a second order transition temperature below —20° C. and a Mooney viscosity of not more than 100, and (2) correspondingly 75–25 parts of a polymer of monomer comprising acrylic acid ester of nontertiary alkyl alcohol, the molecules of which alkyl alcohol have 1–14 carbon atoms, the average being 5–12 carbon atoms, at least a major proportion of said molecules having a straight carbon-to-carbon chain of at least four carbon atoms terminating at the hydroxy oxygen atom, said chain including at least one-half the total number of carbon atoms in the alcohol molecule.

3,092,251
PACKAGED ARTICLE
George A. Jaggers, Fort Worth, Tex., assignor to Mayfair Industries, Inc., Fort Worth, Tex., a corporation of Texas
Filed May 1, 1961, Ser. No. 106,843
2 Claims. (Cl. 206—63.2)



1. A wrapped package comprising:
(a) a narrow, elongated, generally cylindrical article;
(b) a generally cylindrical, longitudinally tearable wrapper enclosing said article, the ends of said wrapper extending beyond the ends of said article, each end of said wrapper having diametrically opposed end-wall portions disposed substantially in a single longitudinal diametral plane to provide an end closure having a sharp crease along each lateral edge;
(c) a pair of tear strips adjacent to the inner surface of said wrapper and extending entirely throughout the length thereof, said tear strips being disposed one on each side of said wrapper, those portions of the tear strips that are next to the sidewalls of said article being adjacent to but slightly offset from said diametral plane, the planes of said portions of said tear strips being disposed at substantial angles to said diametral plane, the ends of said tear strips being sandwiched between the respective opposed end-wall portions of said wrapper, lying substantially in said diametral plane, and being adjacent to the lateral edges of said end closures; and
(d) means adhesively sealing the opposed end-wall portions of the respective ends of the wrapper to each other and to the ends of the tear strips therebetween whereby a user may open the package by grasping one of the lateral edge portions of one of said end closures between the thumb and forefinger of one hand and the other of the lateral edge portions of said one end closure between the thumb and forefinger of the other hand with the ends of the tear strips between said fingers of the respective hands, longitudinally tearing said one end closure between the ends of said tear strips, and completing the opening of the package by ripping one of said tear strips through one side of said wrapper, the other of said tear strips reinforcing the other side of said one end closure to prevent severance of the grasped portion thereof from the wrapper.

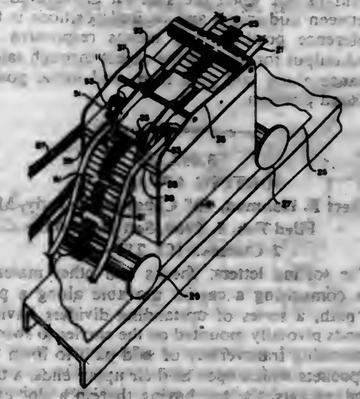
3,092,252
PACKAGE OF OUTER UNSTERILE AND INNER STERILE COVERS FOR ENCLOSING A SUBSTANTIAL PORTION OF AN OBJECT HAVING AN UNSTERILE SURFACE
Jacob L. Bruno, 5724 Moreland St. NW., Washington, D.C., and Walter W. Burns, 611 Main St., Greenport, Long Island, N.Y. (856 Warner Bldg., Washington 4, D.C.)
Filed May 22, 1961, Ser. No. 119,989
5 Claims. (Cl. 206—63.2)

1. A package which is designed to protect the mouth of a patient from contamination by bacteria or virus which may be on an operative object such as a clinical thermometer or the like, said package comprising in combination:
(a) an inner cover member having a chamber of a size and shape to enclose a substantial portion of an operative object such as a clinical thermometer, or the like, and protect the mouth of the patient from contact with the operative object,
(b) said inner cover having a closed end for insertion into the mouth of the patient and for holding the lower end of the operative object, which may be contaminated, out of contact with the patient's mouth and extending outwardly beyond the mouth opening,
(c) said cover being of an impervious material, and of a thickness to permit ready transfer of the body heat from the patient's mouth to the thermometer bulb,
(d) said material being flexible to permit it to be readily conformed to and in contact with the outer surface of the thermometer over a large area,



(e) an outer enveloping member having an opening indicating means and enclosing the inner cover member to enclose the same and to provide protection therefore, the
(f) inner cover member having an outer sterile aseptic surface for separating the operative object from contacting the mouth of the patient, thereby giving protection to the patient against bacterial and virus contamination in the patient's mouth, from the operative object, and
(g) said inner cover member when open lying in the outer enveloping member in a position to permit the ready insertion of the thermometer or other operative object without removing said cover member from the outer enveloping member, and without touching the part of the inner cover member which comes into contact with the patient's mouth to any contaminating surfaces.

3,092,253
COMPONENT CHECKER
Raymond J. Senger, Palo Alto, Calif., assignor to Develop-Amatic Engineering, a corporation of California
Filed Jan. 3, 1961, Ser. No. 80,446
3 Claims. (Cl. 209—81)



1. Apparatus for checking electrical components and for selecting those of said components having electrical

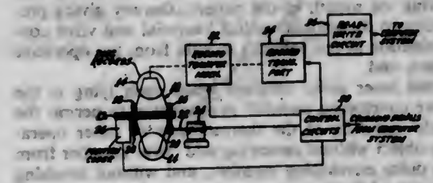
characteristics within a preselected range, said electrical components being transversely secured to a pair of spaced tapes to form a string of components; said apparatus comprising terminal means for receiving said electrical components individually in electrical contact, said terminal means adapted to be connected to a circuit of the type which determines whether the component in contact with said terminal is within said preselected range and which generates a first signal when said component is within said range and a second signal when the component is outside said range, means for receiving said first signal, means responsive to the receipt of said first signal for advancing said string of components whereby succeeding ones of said components are received by said terminals, means for receiving said second signal, and means responsive to the receipt of said second signal for separating from said string of components, that component in electrical contact with said terminals at the time of receipt of said second signal.

3,092,254

CONTROL APPARATUS

Ustav Germeus, Camden, N.J., assignor to Radio Corporation of America, a corporation of Delaware

Filed May 1, 1961, Ser. No. 116,219
19 Claims. (Cl. 211—1.5)



1. A system for positioning an object at any one of a plurality of discrete positions numbered consecutively around a closed path from a reference position along said path, said system comprising means for translating the position of the object into a first number representing its initial position in said path, comparison means for comparing said first number with a second number representing the desired position of the object in said path and for deriving an output which depends upon the difference therebetween, means for comparing at least portions of said first and second numbers and for modifying said output when the shortest distance along said path between said initial and desired positions is through said reference position, and means responsive to said modified output for moving the object through said shortest distance along said path from said initial position to said desired position.

3,092,255

SORTING APPARATUS

Robert F. Hohman, 135 Cabot St., Beverly, Mass.

Filed Feb. 5, 1960, Ser. No. 7,032
2 Claims. (Cl. 211—10)

1. For sorting letters, checks and other material, apparatus comprising a carrier movable along a predetermined path, a series of upstanding dividers having their lower ends pivotally mounted on the carrier to swing about axes extending transversely of said path to form therebetween pockets which open at their upper ends, a table top over the pockets, the top having therein a slot extending transversely of said path through which material may be inserted into the pocket beneath the slot, carrier followers mounted on the dividers respectively at one side thereof, and a track extending along said side of the dividers to guide the followers, the track having an offset



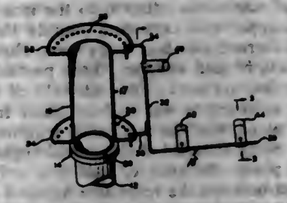
portion at said slot to cause the divider on one side of the slot to swing away from the divider on the other side of the slot, thereby to open the pocket beneath the slot.

3,092,256

PHONOGRAPH RECORD RACK

David Vernik, 845 Tyson Ave., Philadelphia, Pa.

Filed Dec. 1, 1960, Ser. No. 72,976
3 Claims. (Cl. 211—40)



1. A phonograph record rack comprising in combination a central pole, an adjustable support collar releasably secured to and telescoped upon said pole, a slidable spool shaped bracket revolvably telescoped upon said pole and supported by said collar, said bracket including vertically spaced, generally parallel upper and lower flanges each having formed therein a plurality of vertically aligned spaced openings, a plurality of L-shaped record hanger members having vertically spaced hook means releasably secured in complementary openings in said upper and lower flanges, said hanger members being of channel stock for retention of a phonograph record, said hanger members being revolvable about said pole and being pivotable about the vertical axis through said hook means.

3,092,257

COUNTER DISPLAY RACK

Fred H. Rountree, Carlyle, Ill., assignor to Morsa Shoe Company, Carlyle, Ill., a corporation of Delaware

Filed Apr. 24, 1962, Ser. No. 189,770
8 Claims. (Cl. 211—49)

1. A counter display rack for boxed infants' and children's shoes, boots and slippers comprising,

wire members bent to form a pair of upright base end standards,

a pair of upright back end standards, connected to loops by struts and to horizontal cross wires,

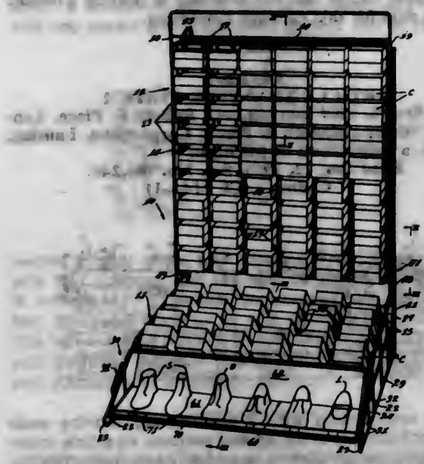
and plural sets of vertical pieces, each connected to said loops and cross wires to form compartments,

each said base end standard comprising a horizontal lower portion for engaging a support surface,

said lower portion terminating at one end in a first vertical base leg,

said lower portion terminating at its opposite end in an upwardly and rearwardly extending portion,

and, in turn, terminating in a second vertical leg spaced forwardly of said first vertical leg,



each said rack end standards including first and second vertical rack legs in register with the corresponding vertical base legs,

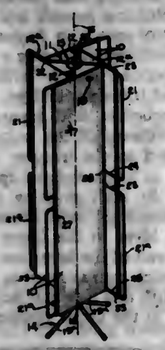
and a sleeve forming a socket receiving each set of corresponding first and second legs.

3,092,258

REVOLVING DISPLAY RACK

Theodore M. Bleed, Rockford, Ill., assignor to Commercial Wire Products Company, Rockford, Ill., a corporation of Illinois

Filed Apr. 26, 1961, Ser. No. 105,695
8 Claims. (Cl. 211—163)



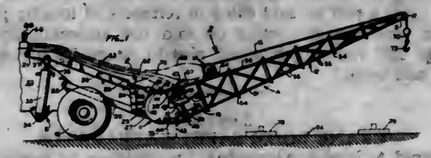
1. A revolving display rack having, in combination, a pair of generally rectangular open wire frames disposed in upright crossed relation to provide four wings projecting outwardly but movable relative to each other so as to be collapsible into a relatively flat package, an upright shaft rotatably supporting said frames for turning about an axis substantially coincident with the line of crossing of the frames, said wings being bent intermediate their vertical edges to dispose the inner marginal portions of the wings substantially radially and the outer marginal portions of adjacent wings substantially perpendicular to each other, four pairs of parallel channels with the channels of each pair secured to the angularly spaced faces of the adjacent ones of said wings with the grooves of the two channels opening toward each other in a common plane and with one bar of each pair disposed at the bend in its supporting wing, and four rigid display panels with opposite edges of each panel seated in the grooves of one pair of said channels and joining the adjacent frame wings rigidly together.

3,092,259

DETACHABLE HOISTING BOOM FOR POWERED VEHICLE

Alex O. Swanson, 171 La Serena Ave., Alamo, Calif.

Filed Aug. 28, 1961, Ser. No. 134,222
3 Claims. (Cl. 212—35)



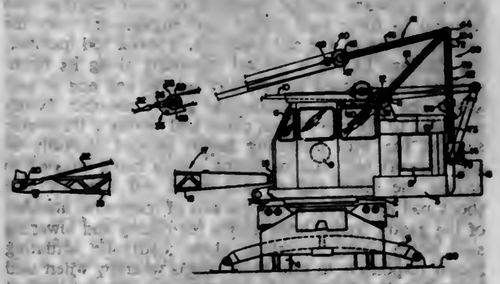
1. A boom attachment for a power driven scoop loader having a hydraulic drive and control system thereon, and having a vertically movable and tiltable scoop bucket thereon and in hydraulically driven relation with said hydraulic drive and control means; said boom comprising a base portion, means for detachably securing the boom base portion within the open side of the scoop bucket of such vehicle for movement therewith, a boom arm pivoted for lateral swinging movement on an outward portion of said boom base portion, a hydraulic cylinder operatively interconnecting the boom base member to the boom arm for lateral swinging movement of the boom arm relative to the boom base portion, a winch on the boom arm, hydraulic actuating means operatively connected to the winch, a hoisting cable wound on the winch and with a free end thereof running over the free end of the boom arm, means on the free end of the cable for hoisting engagement with objects to be manipulated by the boom, and hydraulic connections on said hydraulic cylinder and on said winch actuating means for operatively connecting said hydraulic cylinder and said hydraulic winch actuating means to the hydraulic drive and control system of the scoop loader for controlled actuation thereby.

3,092,260

BACK-HITCH GANTRY

George C. Noll and Paul E. Wesebaum, Elyria, Ohio, assignors to The Thew Shovel Company, Lorain, Ohio, a corporation of Ohio

Filed Apr. 14, 1961, Ser. No. 103,045
4 Claims. (Cl. 212—59)



1. A crane comprising a supporting frame structure, an operating cab in said supporting frame structure, a boom pivotally secured at one end of said frame structure, a back-hitch gantry at the opposite end of said frame structure, said back-hitch gantry comprising a hinge pin, a rigid frame pivotally interconnecting said hinge pin and

said frame structure, a pair of telescoping strut members connected to said hinge pin and said frame structure, each of said pair of telescoping strut members comprising upper and lower members adapted longitudinally to telescope one within the other, means to maintain said members parallel to each other at all positions of telescopic adjustment; and means to lock said members in extended and retracted position thus to lock said hinge pin in a raised and lowered position comprising locking pins for each of said pair of telescoping strut members, an operating rod interconnecting said locking pins for conjoint movement, cable means extending from said operating rod to said operating cab, means within said cab to exert a pull on said cable to release said locking pins, and spring means acting on said rod automatically to urge said rod and thus said pins to return upon release of said cable.

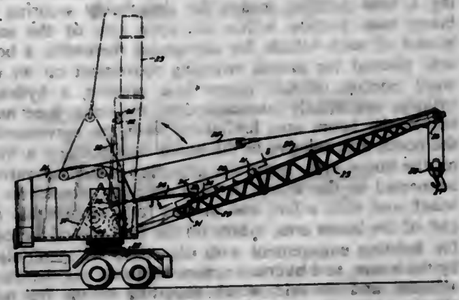
3,092,261

CRANE BOOM SAFETY APPARATUS

Harold A. Noble, Alexandria, Va., assignor, by mesne assignments, to Patent Resources, Inc., a corporation of New York

Filed Mar. 23, 1960, Ser. No. 17,059

10 Claims. (Cl. 212—59)



1. A crane boom retarding and stopping device comprising a cab and a boom pivotally mounted to said cab, a rail assembly, said rail assembly including a pair of opposed side walls, a base connecting said pair of side walls, and means connecting said rail assembly to said boom, a carriage slidably mounted along the length of said boom and said rail assembly, guide means within said rail assembly adapted to guide said carriage along the length of said rail assembly, brake shoes mounted and in opposite relation to one another and adapted to engage the opposed wall members of said rail assembly, hydraulic pressure means mounted on said carriage and adapted to force said brakes into engagement with the wall members of the rail assembly, a shock rod member, the carriage having a pivotal mounting along its upper surface and adapted to pivotally receive one end of said shock rod member, a triangular gantry member fixedly mounted to the cab of said crane and having a transverse support bar with mounting means located centrally of said support bar, said mounting means being adapted to engage the other end of said shock rod whereby said shock rod may pivot about the axis of transverse member of the gantry frame, hoist means for raising and lowering said boom along a vertical plane, hydraulic actuating means responsive to said hoist means whereby when said boom is being maintained stationary at a selected vertical position said hydraulic actuating means will act to apply pressure to said hydraulic pressure means for engagement of the brake shoes to the rail assembly of the boom for supporting the boom at said selected vertical position, said hydraulic actuating means being adapted to respond to the hoist means whereby when the hoist means is engaged for moving the boom upwardly or downwardly the brake shoe engagement is disengaged by the release of the hydraulic pressure, a spring cushion means mounted at the upper end of said rail assembly to provide a remote cushion stop for said carriage movement.

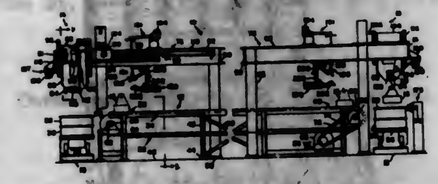
3,092,262

ARTICLE TRANSFER SYSTEM

Joe B. Brown, East Lansing, and Robert E. Place, Lansing, Mich., assignors to Planet Corporation, Lansing, Mich., a corporation of Michigan

Filed Jan. 12, 1959, Ser. No. 786,246

4 Claims. (Cl. 214—1)



1. In combination with a continuously moving main conveyor having laterally spaced portions an article transfer system, comprising a separate conveyor extending substantially perpendicularly to and positioned between said laterally spaced portions of the moving conveyor and a transfer device positioned at each end of said separate conveyor movable perpendicularly to the main conveyor and having no component of movement in the direction of movement of the adjacent portion of the main conveyor including a structural frame, tracks attached to said frame, a transfer carriage movably mounted on said tracks, a lift supported by the transfer carriage and movable vertically with respect thereto, a pair of rotatable hooks attached to said lift, actuating means for moving said transfer carriage on said tracks, for moving said lift vertically with respect to the transfer carriage and for rotating said hooks, control means for actuating said actuating means, and switch means controlling said control means in response to a plurality of predetermined conditions including a plurality of separate automatically operated switch structures for initiating movement of said transfer carriage, lift and hooks in a predetermined sequence, said separate switch structure for initiating movement of the transfer carriage including a lever pivoted to the transfer carriage having one end extending at an angle thereto operable to engage the transfer carriage to limit pivoting of the lever due to gravity, an abutment on said lift engageable with the other end of the lever in the upper position of the lift to pivot said one end of the lever out of engagement with the carriage, a switch cam secured to the lever for pivotal movement therewith and a switch actuated by said switch cam with the lift in the upper position thereof.

3,092,263

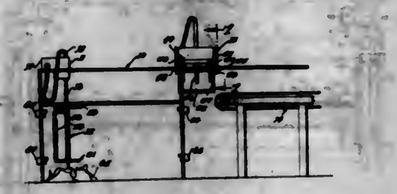
AUTOMATIC TOWEL FLATTENING DEVICE

Walter A. Beasley and Erwin P. Pollitt, Chicago, and Roy E. Smith, Villa Park, Ill., assignors, by mesne assignments, to F. W. Means & Company, a corporation of Illinois

Original application Aug. 13, 1959, Ser. No. 833,539. Divided and this application Aug. 25, 1961, Ser. No. 137,935

13 Claims. (Cl. 214—1)

1. A device for flattening towels or the like of a generally rectangular configuration with four corners, said device comprising: a pair of grippers; pickup means to grasp one towel at a time and thread said towel through one of said grippers in a given direction; operating means to open and close said one gripper; sensing means connected to said operating means to determine when the rearwardmost corner of said one towel, with respect to said direction of movement, reaches said one gripper and to close said gripper about said one corner; means to insert a second corner of said towel diagonally opposite said one corner into the second gripper and to close said



second gripper about said second corner; means to position said grippers with the said one and second corners in substantially the same horizontal plane whereby the two triangular portions of said towel at each side of a line between said corners hang down at opposite sides of said liner; and means to engage said portions and to move said portions into a common plane.

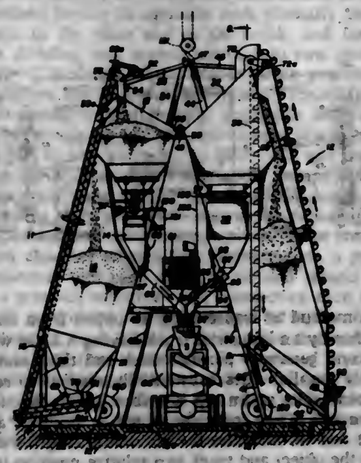
3,092,264

PORTABLE MATERIAL HANDLING APPARATUS

Robert C. Milek, 5502 N. 50th Ave., Omaha, Nebr.

Filed Dec. 9, 1959, Ser. No. 858,485

5 Claims. (Cl. 214—2)



1. In transportable material handling apparatus adapted for use in preparing batches of dry materials by weight, a pair of longitudinally extending material handling machines each having structure at one end thereof for supporting the machine on said structure in a first inclined upstanding use position, road wheels mounted on each of said machines at said one end thereof for rotatably supporting each machine on said wheels for movement between said first position and a second generally horizontal transportation position, and for supporting said one end of the machine on said wheels in said second position, means on each of said machines adjacent the other end thereof for independently connecting said machines to a tractor so as to be moved thereby on said wheels from one location to another when in said second position, means adjacent said other end of each of said machines for pivotally interconnecting the ends for rotatably moving the machines together between said second position, and said first position wherein the machines are inclined toward each other and said other ends are uppermost on the machines, and for maintaining in upstanding position each said other end by the other when said machines are in said first position, each of said machines being provided with a material storage compartment therein adjacent said other end and also being equipped with weigh-hopper structure for selectively receiving materials from the associated storage compartment, a pair of conveyor structures respectively carried by said machines for elevating materials to the respectively associated storage compartments when said machines are in said first position, control structures respectively associated with said machines for selectively controlling the flow of materials into said weigh-hopper structures, and a platform oriented in a generally horizontal position between said machines in said first position thereof and being removably connected with said machines, said platform defining an operator's station and being located above the wheel-equipped said one ends of said machines at an elevation sufficient to permit passage of a mobile cement mixer or the like thereunder.

3,092,265

POLE GRIPPING MECHANISM

Bruno Da Valle, 85 Tully Road, Los Gatos, Calif.

Filed Feb. 15, 1960, Ser. No. 8,541

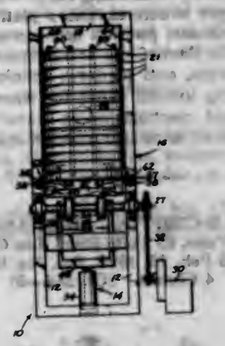
4 Claims. (Cl. 214—3)



4. In a pole guiding apparatus for use with poles having a wide range of sizes in the setting of such poles in holes formed in the ground, the combination of a boom mounted on a pole handling machine employed for setting poles of large size such as used in public utility lines, pole guiding apparatus mounted at the top end of said boom, a sheave also mounted at the top end of said boom for receiving a rope which is adapted to be tied to a pole for raising the pole to said pole guiding apparatus and for lowering the bottom end of said pole into the ground during the setting of said pole, said pole guiding apparatus comprising a pair of jaws for slidably engaging a pole therebetween, means for pivotally supporting said jaws on the top end of said boom so that said jaws extend laterally from the top end of said boom, said jaws each having elongated oval shape whereby said jaws are adapted to receive therebetween poles having a wide range of diameters, each of said jaws having a socket at the forward end thereof, each of said jaws also having a socket near the inner end thereof, friction reducing means positioned in said sockets and extending out of said sockets a short distance such that said friction reducing means at the forward ends of said jaws engages the pole as said pole is being moved between said jaws and said friction reducing means near the inner ends

of said jaws engage said pole as said pole slides between said jaws during the lowering of said pole into the hole in the ground with said cable when said boom is in substantially erect position.

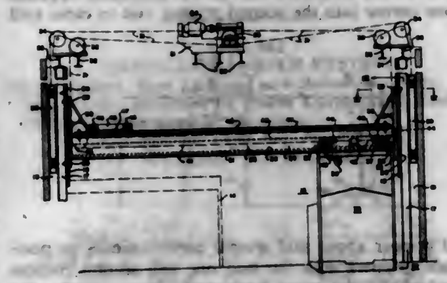
3,092,266
STACKER APPARATUS
Edwin W. DeKoning, 8205 SW. Hamziker, Portland, Oreg.
Filed July 18, 1960, Ser. No. 43,512
3 Claims. (Cl. 214—6)



1. Stacking mechanism for lumber comprising, a frame, means on the frame defining a path for boards with such boards traveling sidewise over and with ends on opposite sides of said path, opposed elongated holders mounted above and substantially paralleling said path, one on one side and one on the other side of said path, pivot means pivotally mounting the holders for movement between lowered and raised positions about axes substantially paralleling said path, said holders having lumber-supporting portions that project towards each other in a lowered position for the holders and that support the ends of boards in this position, said lumber-supporting portions swinging upwardly and away from each other in diverging arcs on pivotal movement of the holders from a lowered to a raised position, hoist means for lifting boards from said path and moving them between and then beyond said holders, said holders swinging from their lowered to their raised position to accommodate movement of boards therebetween and being constructed to return to their lowered position after boards move therebeyond, and end-aligning structure extending vertically upwardly from adjacent one of said holders constructed to align the ends of boards supported on said holders when such ends engage the structure, the lumber-supporting portions of said holders having a construction causing boards resting on the holders to tilt toward said end-aligning structure during movement of the holders from their lowered to their raised position.

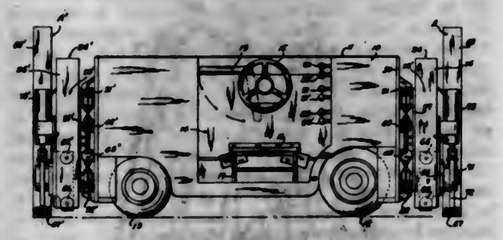
3,092,267
PARKING STRUCTURES
Milo Shutt, Alliance, Ohio, assignor to Union Industrial Co., Division of the Alliance Machine Co., Alliance, Ohio, a corporation of Ohio
Filed Jan. 10, 1958, Ser. No. 733,219
6 Claims. (Cl. 214—16.1)

1. A parking garage having spaced tiers of automobile receiving stalls opening on a common elongated vertical well, vertical guide means at each end of the well extending from top to bottom thereof, a horizontal bridge extending lengthwise of the well between said guide means and vertically elidable thereon, hoist means for raising said bridge on the guide means, a vehicle receiving cage depending from said bridge and horizontally movable there-



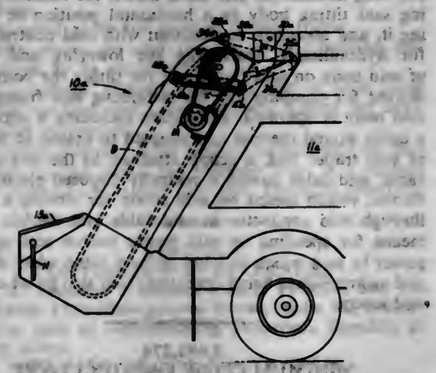
along and drive means for selectively moving the cage along the bridge.

3,092,268
INDUSTRIAL LIFT TRUCK
Chester H. Powers, Rocky River, Ohio, assignor to Otis Elevator Company, New York, N.Y., a corporation of New Jersey
Filed Oct. 13, 1958, Ser. No. 767,661
4 Claims. (Cl. 214—75)



1. A method of transferring an object from one place to another by an industrial truck having a body with first and second generally parallel sides and third and fourth generally parallel sides substantially normal to said first and second sides and a top side forming an elevated load platform and lifting forks connected to the body adjacent the first and second sides thereof comprising the steps of, placing the object and truck in a relative position in which the object is adjacent the third side of the truck, inserting lifting forks which extend substantially perpendicular to the length of said third side under the object from one side thereof, raising the object to a height higher than the top side of the truck, moving the forks with the object supported thereon transversely of the truck to position the object above the top side of the truck, lowering the forks to position the object on the top side of the truck, moving the truck to transport the object while so supported on the top side of the truck, inserting underneath the object from the opposite side of the object lifting forks extending substantially perpendicular to the fourth side of the truck while the object is supported on the top side of the truck, raising the forks to support the object at a height higher than the top side of the truck, moving the forks with the object supported thereon transversely of the truck to position the object beyond the fourth side of the truck, lowering the forks to rest the object on a support adjacent to the truck, and laterally withdrawing said forks from underneath the object.

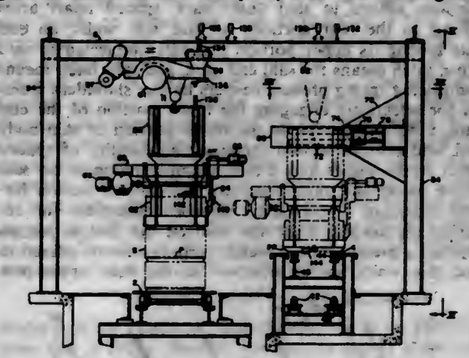
3,092,269
PACKER ASSEMBLY
Robert E. Brown, Scarsdale, and Cletus F. Bamber, Forest Hills, N.Y., assignors to City Tank Corporation, Corona, N.Y., a corporation of New York
Filed Apr. 28, 1959, Ser. No. 809,435
3 Claims. (Cl. 214—83.3)



2. A refuse truck comprising a storage body, a loader assembly on said truck including a refuse loader compartment having an opening leading to said storage body, a packer plate movable in said compartment through said opening, first linearly extensible and contractible hydraulic motor means having its opposite ends pivotally fixed, respectively, to the plate and to the truck, and including a piston dividing said motor means into two chambers, said ends of said first motor means being positioned to shift said plate upwardly and downwardly upon expansion and contraction, second linearly extensible and contractible motor means having its opposite ends pivotally fixed, respectively, to said plate and to said truck and including a piston dividing said second motor means into two chambers, said ends of said second motor means being positioned to shift said plate forwardly and rearwardly upon expansion and contraction, a pressure line connected with each chamber of said first motor means, a pressure line connected with each chamber of said second motor means, a pressure sensitive valve connecting each of said lines with control means for a source of hydraulic fluid under pressure, each of said valves, upon the occurrence in its associated line of pressure in excess of a predetermined amount, being effective to shift said control means to admit pressure to a line of the motor means not having said excessive pressure, whereby said plate is moved automatically and repetitively through an orbital path.

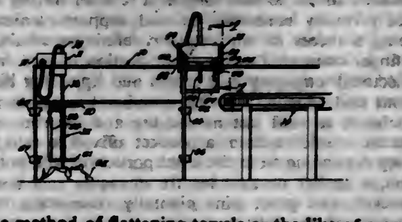
3,092,270
TRANSFER MECHANISM
Frank Slamar, Monroeville, and Alfred Teplitz, Pittsburgh, Pa., assignors to United States Steel Corporation, a corporation of New Jersey
Original application Sept. 9, 1958, Ser. No. 760,805, now Patent No. 3,019,577, dated Feb. 6, 1962. Divided and this application Oct. 25, 1960, Ser. No. 64,820
2 Claims. (Cl. 214—89)

1. Apparatus for handling bundles comprising a first conveyor, a second conveyor having its entry end adjacent the exit end of the first conveyor, a rail located above the conveyors and extending from the exit end of the first conveyor to the entry end of the second conveyor, a hoist mounted for movement on said rail, a roller assembly carried by said hoist with the axes of the rollers generally vertical, a lifter beneath and carried by said roller assembly, said lifter including a pair of movable jaws for engaging opposite sides of said bundle, means for moving said jaws toward and away from each other, an adjustable centering arm between said jaws and means for moving said centering arm transversely of the path of movement of said jaws, means for raising and



lowering said lifter, and a squaring stop located above the entry end of said second conveyor and adapted to receive said roller assembly.

3,092,271
AUTOMATIC TOWEL FLATTENING DEVICE
Walter A. Beaudry and Erwin P. Pollitt, Chicago, and Roy E. Smith, Villa Park, Ill., assignors, by mesne assignments, to F. W. Means & Company, a corporation of Illinois
Filed Aug. 13, 1959, Ser. No. 833,539
4 Claims. (Cl. 214—152)

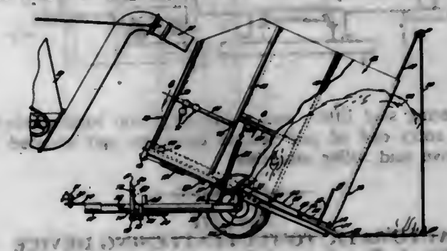


1. The method of flattening towels or the like of a generally rectangular configuration having four corners, said method including: the steps of grasping the towel at a random point therealong; encircling said towel; moving said point relative to said encirclement until the rearwardmost corner of said towel reaches said encirclement; grasping said corner; grasping the corner diagonally opposite said rearwardmost corner; holding said corners in a generally horizontal plane with the line of towel between the corners substantially taut whereby the portions of the towel at each side of said line hang down at each side of said line; engaging said portions of said towel; and moving said portions into a common plane.

3,092,272
AUTOMATIC STRAW AND CHAFF SAVER
Alois Weigel, Napoleon, N. Dak.
Filed Nov. 29, 1961, Ser. No. 155,648
1 Claim. (Cl. 214—501)

A straw and chaff saver comprising a horizontally disposed chassis including a pair of spaced parallel beams, an axle connected to the rear ends of said beams, ground engaging wheels connected to said axle, a horizontally disposed tongue affixed to said axle, a pair of spaced parallel vertically disposed support members affixed to said axle, a horizontally disposed rod affixed to said support members; a tiltable body including a frame having a pair of outer bars and intermediate bar and said bars having plates connected thereto, said plates having registering

apertures therein for the projection therethrough of said rod, said body further including a pair of spaced parallel vertically disposed side walls which have their lower portions affixed to said outer bars, spaced apart arms affixed to the rear portions of said side walls, an end gate having its upper portion hingedly connected to said arms, latch means for said end gate, and said latch means comprising spring pressed keepers having shoulders thereon for selectively engaging the lower portion of the end gate, a bottom section in the lower portion of said body and said bottom section including a plurality of spaced apart frame pieces and a base member mounted on said frame pieces and affixed thereto, said bottom section further including a rearwardly disposed crosspiece for engaging the keepers when the load on the bottom section reaches a predetermined weight, cross elements affixed to said side walls, spring members having their upper portions connected to said cross elements and their lower portions anchored to said beams; a plurality of adjustable counterweights connected to said body; locking means for said body, and said locking means comprising a support element affixed to said tongue, a retainer having its lower end pivotally connected to said support element, there being a recess in said retainer defining a retaining clip, a finger connected to the front portion of said frame for selectively engaging said recess and lip, a lug depending from said tongue, a spring member having its rear end anchored to said last named lug and its front end connected to said retainer, a bracket affixed to said retainer, a leg depending from the front portion of said bottom section, a pusher on said leg for engaging said last named bracket, and pivot pins pivotally connecting the front portion of the bottom section to the front portion of the frame.



3,092,273

SELF-LOADING AND DUMPING TRAILER

Arthur G. Schramm, 215 N. 20th St., Phoenix, Ariz.

Filed July 24, 1961, Ser. No. 126,208
6 Claims. (Cl. 214—504)



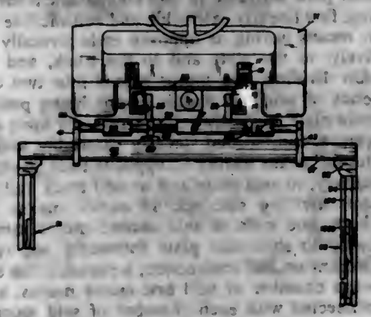
2. A self-loading and dumping trailer comprising a body frame, riding wheels supporting said frame, mechanism for raising and lowering said frame relative to said riding wheels including hydraulic cylinders and pistons, a power means on said frame, hydraulic jack means for raising and lowering the front end of said trailer frame, a body tiltably mounted on said frame to move from a horizontal riding position to a rearwardly tilted dumping position, control mechanism on the front end of said frame for producing oil under pressure from said power means, a control panel having means for directing oil under pressure to said hydraulic trailer frame raising and lowering mechanism and to said hydraulic jack means for raising and lowering the front end of said trailer frame, means, operating in conjunction with said hydraulic raising and lowering mechanism for tilting said bed on said frame, said means including a hook for engaging transverse portions of said hydraulic raising and lowering mechanism and hook means for latchably holding said tilting body in a horizontal position or releasing it, and means in conjunction with said control panel for hydraulically controlling the lowering and raising of said body on said frame and for tilting the body when desired for dumping and for stabilizing said frame when said body is operated, and means including a winch and a cable wound thereon and adapted to extend to the rear of said trailer bed, a scoop attached to the end of said cable, said cable having a centrally disposed electric conductor, switch means on said scoop for closing a circuit through said conductor in said cable and electric wiring means for speeding up said power source and applying power to said winch to wind up said cable when desired; said switch means being operative from said panel or from said scoop.

3,092,274

MINIMUM CLOSE CARTON CLAMP

Donald A. Harris, Vancouver, Wash., assignor to Hyster Company, Portland, Oreg., a corporation of Nevada

Filed Sept. 26, 1960, Ser. No. 58,373
1 Claim. (Cl. 214—620)



An attachment for a lift truck comprising

a frame for mounting on the truck to be elevated by a hoist on the truck;

said frame having a width not exceeding that of said truck;

a pair of load engaging members;

said frame including a pair of vertically spaced horizontally disposed guide tubes for each load engaging member;

each load engaging member having connections with a pair of slides slidably received by its guide tubes to provide for movement of said load engaging members from inner positions to outer positions;

each pair of guide tubes being slotted inwardly from the set of ends thereof closest the outer position of its load engaging member to pass the connections for its load engaging members during inward movement of the latter;

the slots of one pair of tubes extending inwardly an extent at least to the center of said frame so that the load engaging members may be moved to inward positions in contiguous relation with one another;

means for moving the load engaging members comprising a separate crosshead for each load engaging member and a separate first piston and cylinder unit for each load engaging member connected at one end to its load engaging member and at its opposite end to its crosshead;

said means including a separate second piston and cylinder unit for each load engaging member connected at one end to the associated crosshead and at its opposite end to said frame in overlapping relation to the associated first piston and cylinder unit;

the cylinders of all said piston and cylinder units being disposed at all times within the confines of said frame;

a horizontal guide rod secured to said frame;

a guide sleeve on said rod for each crosshead and secured to its crosshead;

each crosshead slidably engaging one of said guide tubes so that said crossheads are guided for horizontal movement;

and means whereby fluid under pressure may be supplied to said piston and cylinder units in a manner to contract or extend said load engaging members.

3,092,275

CONTAINER FOR BEVERAGES

Phillip E. Brunton, 3 Bermel Court, Yeoville, and Ian Morrison, 1210 Management House, Melle St., Braamfontein, both of Johannesburg, Transvaal, Republic of South Africa

Filed Mar. 27, 1961, Ser. No. 98,435
2 Claims. (Cl. 215—1)



1. A container of plastic material, consisting in a hollow body having a tapering neck, a duct substantially coextensive with the length of the body, integral with it and located alongside it, a web separating the body and the duct and discontinued between the neck and the duct, a port between the lower end of the duct and the cavity of the body close to the base of the latter, and a passage between the neck of the body and the upper end of the duct.

3,092,276

BABY NIPPLE

Charles H. Schanz, Chicago, Ill., assignor to The Kendall Company, Boston, Mass., a corporation of Massachusetts

Filed Apr. 17, 1961, Ser. No. 110,290
10 Claims. (Cl. 215—11)



9. A baby nursing assembly comprising a bottle having an externally threaded open end, a retaining screw cap having an internally threaded portion fitting and engaging the externally threaded end of said bottle, said screw cap having a radially extending top flange with a central opening therein, an integral baby nursing comprising a radially extending base flange, smaller in diameter than the threaded portion of said screw cap, the outer rim portion of said base flange being clamped between the top flange of said screw cap and said open end of said bottle, an upper vent edge surrounding a vent hole extending through the thickness of said base flange of said nipple situated adjacent to but inwardly of the clamped area of said outer rim portion, and centrally located on said base flange and covering an opening therein, an integral upstanding hollow teat having a milk outlet in the tip thereof, said teat projecting through the opening in said screw cap flange, said nipple being characterized in that from the upper surface of said base flange at least two separated nub portions project upwardly, no part of any said nub portions in certain effective areas being higher and at least part of each of said two nub portions being of the height of the formula:

$$h=(1\pm.2)(.007+.187d)$$

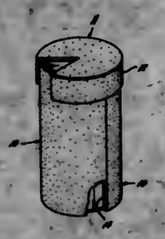
where h is the height in inches of the nub in the effective area and d is the shortest distance in inches from any point having the given height in the effective areas to the upper vent edge, said effective areas including three areas bordering a fourth and ineffective area, two of said areas having as side boundaries with said ineffective area, lines inclined toward said upper vent edges at an angle of 15° to and on each side of the line from the center of the nipple to the center of the vent edge and passing at the closest point to said vent edge at .006 inch outwardly thereof, other perimeter portions of said two areas being arcs of a circle through the center of said vent edge and concentric with said nipple flange edge and a line being the locus of points having the same distance from the vent edge as does the closest point of said teat and joining said respective arcs and said inclined lines, the third said effective area being a ribbonlike band one of whose side edges forms a common border with said fourth and ineffective area, being the locus of points about .1 inch from said vent edge, the other of whose side edges being a continuation of the border of said two effective areas, the locus of points having the same distance from the vent edge as does the closest point of said teat, the end edges of said band being the inclined lines, said nub portions projecting upwardly from said base flange creating between said base flange and the top flange of said screw cap a space bubble extending from the opening in said top flange adjacent to but short of said upper vent edge.

3,092,277

THERMAL JACKET FOR BEVERAGE CONTAINER

Jefferson K. Brim, 811 W. Louisiana, Midland, Tex.

Filed Oct. 7, 1960, Ser. No. 61,158
1 Claim. (Cl. 215—13)



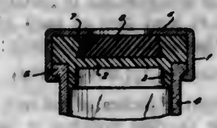
A thermal jacket for a beverage container comprising two identical semi-cylindrical body portions of an expanded polystyrene material, having each an integral bottom section, said body portions combining to form an open topped cylinder, tongue and groove means on each of said body portions and integral bottom sections for engagement with identical means on the other body por-

tion and integral bottom section, and a cap portion having a cylindrical flange extending outwardly therefrom and over said body portions at either the top or bottom thereof.

3,092,278
CAP FOR A CONTAINER FOR AN INJECTION LIQUID

Bertil Järnhäll, Södertälje, Sweden, assignor to Aktiebolaget Astra, Apotekarnes Kemiska Fabriker, Södertälje, Sweden, a company of Sweden

Filed Sept. 19, 1958, Ser. No. 762,039
Claims priority, application Sweden Sept. 20, 1957
1 Claim. (Cl. 215—37)



A cap for closing the mouth of a container for an injection liquid, which cap comprises a plastic material member which is resistant to the injection liquid and which is arranged for one side thereof to be placed within the mouth of the container to plug it closed; and which cap is characterized by having a recess in the outer face of said plastic material member, said recess having a substantially flat bottom and peripherally undercut sides; a self-sealing disc member provided in said recess, said self-sealing member being held positioned in said recess under compression and having its lower surface in compressed liquid tight face contact with the bottom of said recess; both of said members being puncturable by a cannula; and a retaining cover which is adapted to be secured about said cap and the neck of the container, and encloses the top and the outer peripheral wall of the cap, and is provided on its said top enclosing part with an opening through which a cannula can be thrust down into and through the cap, and characterized in that said opening in the cover is smaller than the top of the self-sealing member, so that said cover thus covers the peripheral top portion of the self-sealing member.

3,092,279
MEANS FOR PREPARING URINARY DRAINAGE COLLECTION BOTTLE

Stanford Shepley Stevens, 42 Scott St., Pawtucket, R.I.

Filed June 29, 1961, Ser. No. 120,784
1 Claim. (Cl. 215—38)



In combination a bottle having a neck and mouth with a cap for supporting and carrying a drainage tube, said cap including a flat top wall positioned over the mouth of said bottle, said top wall having an annular opening formed in the center thereof, the portion of the cap defining said opening terminating in a circular lip depending from the bottom surface of said top wall, a plurality of vent holes provided in said top wall on opposite sides of said annular opening, an annular side wall formed integrally with said top wall and arranged in concentric relation with said circular lip for encompassing said neck, an annular bead formed on the inner surface of said side wall at the free end thereof for engaging the neck of said bottle, an outwardly projecting tab formed on the free end of said side wall with said tab and bead being disposed in a common plane, said cap being formed of a heat shrinkable thermoplastic material whereby said cap will shrink into firm engagement with the mouth and neck of said bottle upon the bottle and cap being heated to a temperature of approximately 255° Fahrenheit for a period of approximately thirty minutes, and said circular lip engaging said tube for retaining said tube in said cap.

3,092,280
CROWN CAPS

Ralph Ewart Ford, Bedford, England, assignor to Fords (Finsbury) Limited, Bedford, England, a British company

Filed June 8, 1959, Ser. No. 818,753
Claims priority application Great Britain June 11, 1958
4 Claims. (Cl. 215—40)



1. A metal crown cap having a top portion and a corrugated skirt portion which is adapted to be crimped on to the rim flange around the neck of a bottle, said cap having an annular sealing gasket of a resilient sealing compound applied around the interior of the corner zone of the cap between the top portion and the skirt portion, wherein the compound is applied on to a coating, previously applied on the interior surface of the cap, of a material to which the compound does not adhere, the sealing gasket, the internal diameter of which is greater than the diameter of the bore of the neck of the bottle, being held in the cap by reason of the close surface contact existing between the compound and the coating but being free to move by slipping of the compound on the coating applied over the top and skirt portions of the cap.

3,092,281
SEALING DEVICE

Emil Davidson, Scarsdale, N.Y., assignor to Guild Molders, Inc., Elmsford, N.Y., a corporation of New York

Filed Nov. 1, 1960, Ser. No. 66,479
3 Claims. (Cl. 215—40)

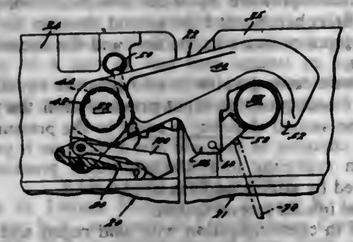


1. A device for providing a seal between a cap and the neck of a bottle comprising first and second annular and generally parallel sealing members, each of said sealing members having sealing surfaces facing in opposite directions for engagement respectively with the cap and the bottle, a flexible joining segment integrally formed with said sealing members and supporting same for independent movement of said members to accommodate irregularities in the cap and bottle respectively, and an integrally formed collar extending from one of said sealing members along the axis of said sealing device for engagement with the upper internal edge of said bottle neck for providing further sealing means between the bottle and the bottle cap.

3,092,282
AUTOMATIC CONTAINER TIE

Keith W. Tantlinger, Grosse Pointe Shores, and Richard T. Fujioka, Oxford, Mich., assignors to Fruehauf Trailer Company, Detroit, Mich., a corporation of Michigan

Filed Aug. 21, 1961, Ser. No. 132,619
2 Claims. (Cl. 220—1.5)

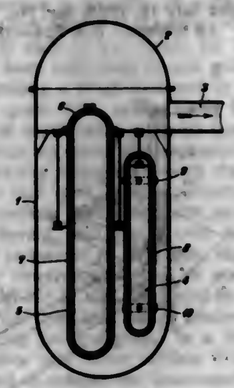


1. In a shipping apparatus comprising a pair of juxtaposed shipping containers having spaced parallel pins thereon, means for coupling the containers in said juxtaposed relationship comprising an arm rotatably coupled to one of the pins and having an end portion engageable with the other of the pins to preclude relative movement of the pins away from each other in a direction generally normal to the axis thereof, and means on said arms for conditioning the end portion of said arm for automatic engagement with the other of said pins comprising a latch for holding said arm in a ready-to-couple condition and cam means engageable with the container having the other of the pins for releasing said latch to permit said arm to move into engagement with the other of the pins.

3,092,283
MEANS FOR INSULATING ELEMENTS OF A LOW TEMPERATURE UNIT

Christian Tropp, Zurich, Switzerland, assignor to Sulzer Freres, S.A., Winterthur, Switzerland, a corporation of Switzerland

Filed July 20, 1961, Ser. No. 125,440
Claims priority, application Switzerland July 29, 1960
6 Claims. (Cl. 220—16)

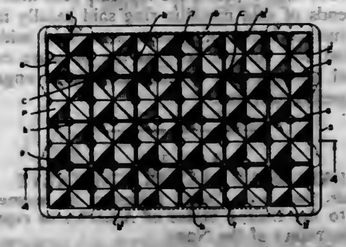


1. In an apparatus having a plurality of elements operating at low temperatures, an outer casing for each of said elements, said casings being formed of porous heat insulating material, and a vessel maintained at a vacuum of from 10^{-1} to 10^{-3} mm. of mercury containing said elements.

3,092,284
BEVERAGE BOTTLE CASES

Rodney W. Stout, 211 Chesney Lane, Webster Groves, Mo.

Filed Mar. 9, 1961, Ser. No. 94,616
5 Claims. (Cl. 220—21)

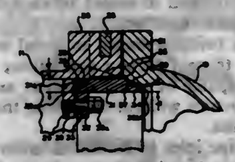


1. A beverage bottle case molded as an integral one-piece unit from a synthetic resin and comprising side walls, a bottom wall and a plurality of pocket-forming intersecting interior walls having upwardly presented top margins and being integrally joined to the bottom wall thereby defining bottle retaining pockets, the portion of the bottom wall within each pocket being inclined upwardly toward the center of the pocket in a series of marginally abutting triangular planes, said marginally abutting planes forming four upstanding ridges which lie in the same horizontal plane and radiate outwardly from the center to the corners of the pockets, said marginally abutting planes extending downwardly from the center of each pocket, so that the bottom wall within each pocket drains downwardly in all directions from the center, each interior wall being provided with a plurality of elongated parallel-sided square-topped slots extending upwardly from the bottom and terminating below said top margins, the undersurface of the bottom wall being integrally provided with a circular flange beneath each pocket and being substantially concentric with said pocket, said flange being sized to snugly engage the top of a beverage bottle, said bottom wall further having a plurality of ribs that radiate diagonally outwardly from the circular flange.

3,092,285
CLOSURE FOR PRESSURIZED VESSELS

Bradley G. Cox, Saginaw, Mich., assignor to Baker Perkins Inc., Saginaw, Mich., a corporation of New York

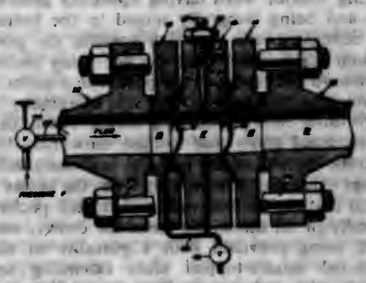
Filed Dec. 14, 1959, Ser. No. 859,432
5 Claims. (Cl. 220—46)



1. A housing having an opening bounded by a fixed marginal, annular radially disposed surface, said housing having an axially extending guide means radially inward of said radial surface; axially shiftable annular seal means mounted by said guide means radially inward of said radially disposed surface, said seal comprising a metallic ring with a radially outer, axially tapering, peripheral surface portion of decreasing diameter outwardly leading to its outer edge, and axially spaced inner and outer radial end surfaces; a closure door for said opening hinged to said housing at one side thereof and having a complementary, axially tapering, interior ring surface shaped to engage with the axially tapering surface of said metallic ring; means for pressurizing the interior of the housing; the annular radial surface bounding said open-

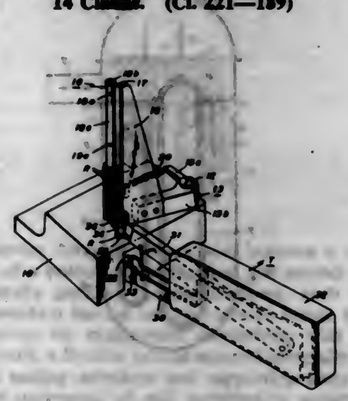
ing being located intermediate said axially spaced inner and outer end surfaces of the metallic ring and abutting with an annular radial surface on said closure door when the door is in closed position; and ring means of deformable material in engagement between the metallic ring and door and between the metallic ring and housing near the ends of said metallic ring said axially inner radial end surface being of greater area than said axially outer radial end surface so that the pressure condition within said housing acts to maintain sealed engagement of said tapering surfaces.

3,092,286
EXPLOSIVE DIAPHRAGM VALVE
Philip Duff, San Jose, Calif., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Nov. 28, 1960, Ser. No. 72,255
1 Claim. (Cl. 220—47)



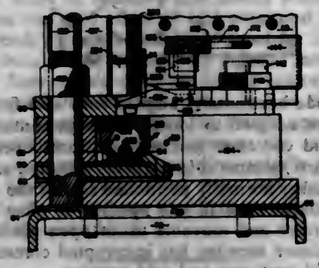
A quick opening valve for pressurized fluids comprising, in combination;
an input conduit,
an output conduit,
flange means integral with and extending from each of said input and said output conduits,
a first cylindrical valve section abutting said input conduit and in sealed relationship therewith to define a first chamber,
a second cylindrical valve section abutting said first valve section and in sealed relationship therewith to define a second chamber,
a third cylindrical valve section abutting said second valve section and in sealed relationship therewith to define a third chamber,
said sections being arranged in serial order so that the chambers thereof form a continuous tubular passage and are capable of being removed and replaced as a unitary structure without disturbing the input and output conduits,
a pressure pipe inlet in communication with said input conduit for admitting pressure into said first chamber,
a pressure control valve in said inlet pipe and actuated to slowly admit said pressure into the input conduit and the first chamber, said valve being actuated to cut off said pressure during removal and replacement of said sections,
a first diaphragm positioned between said first and second sections to separate the first chamber from the second chamber so that the second chamber receives additional pressure in excess of the pressure therein and in said first chamber,
said first diaphragm being in sealing relationship with the first and second sections and rupturable at a pressure less than designed input pressure,
a second diaphragm positioned between the second and third sections to separate the second chamber from the third chamber,
said second diaphragm being rupturable as the additional pressure in excess of the pressure therein and in the first chamber is applied thereto,
said first and second diaphragms being of concave-convex configuration and positioned concave to the direction of pressure flow,
a restricted pressure equalizer line connected between the first chamber and the second chamber for porting the input pressure to the first and the second chambers,
a pressure control valve in said pressure equalizer line for bleeding-off the input pressure until the pressure in the second chamber is equal to the pressure in the first chamber so that said first diaphragm is prevented from rupturing until the additional pressure is received by said second chamber,
a recess in said second section,
a bore in communication with said recess and smaller in diameter than the diameter of the recess,
a restricted aperture in communication with said bore and the second chamber,
a casing threaded into said recess,
an electroresponsive device carried by said casing and disposed within said recess, and
a pressure producing element confined within said bore and having one end disposed within the recess and receiving said electroresponsive device and operated thereby for producing said additional pressure, the other end of the pressure producing element being disposed at the junction of the aperture and the bore in proximate relationship with the second chamber,
said additional pressure being directed through said restricted aperture with sufficient force to rupture the second diaphragm, whereupon the pressure in the first and second chambers are unequalized an amount sufficient to cause the second diaphragm to rupture by the input pressure thereby allowing fluid flow through the valve.

3,092,287
DISPENSING APPARATUS FOR SPRING RETAINING RINGS
Hans Erdmann, Maplewood, N.J., assignor to Waldes Kohinoor, Inc., Long Island City, N.Y., a corporation of New York
Filed July 12, 1960, Ser. No. 43,270
14 Claims. (Cl. 221—189)



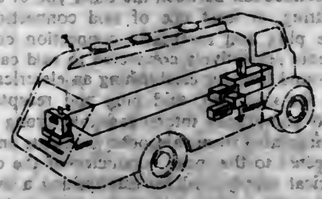
11. The combination of a dispenser for maintaining a supply of split spring retaining rings and a tool for withdrawing and assembling said rings one by one, said dispenser comprising a base, a rigid stack rod extending substantially normally upwardly from the base for disposing the supply of rings in column formation on said base, and a pocket in said base for receiving the endmost ring of said column lowering thereinto from said stack rod and positioning same in withdrawal-readiness position, said tool incorporating ring pick-up means which depends for its action on its ability to move against a face of a ring, and means mounting said stack rod for bodily retracting movement to an out-of-the-way position in which it exposes substantially the entire relatively upwardly disposed face of said ring to said tool responsively to thrust of a part of said tool against its lower end, thereby to render said endmost ring positioned in the ring pocket accessible to said pick-up means.

3,092,288
BAR FEED APPARATUS
Franklin D. Lakins, Nedrow, and Gerald B. Lanphere, Syracuse, N.Y., assignors to Lipe-Rollway Corporation, Syracuse, N.Y., a corporation of New York
Filed Sept. 10, 1958, Ser. No. 760,287
2 Claims. (Cl. 221—298)



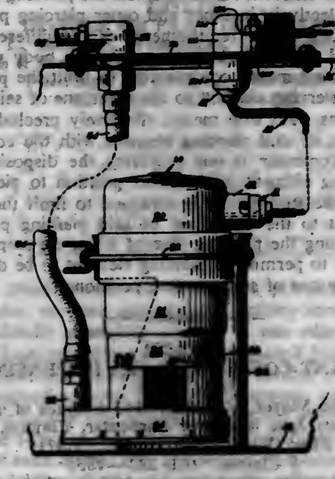
1. A bar feed machine for use in conjunction with bar working machines comprising an elongated frame, a plurality of heads fixed to said frame in spaced relation therealong, a bar feed guide tube for guiding stock bars to the bar working machine, said guide tube consisting of a lower concave section extending lengthwise of said frame and being mounted in said heads, means for adjusting said lower guide tube section vertically relative to said heads, said guide tube also including an upper cover section, each of said heads having means for positioning and supporting a plurality of stock bars in vertical stack formation above said guide tube, bar feed means mounted in each of said heads for feeding stock bars successively from said stack to said guide tube, said feed means comprising a block mounted in each head at one side of said guide tube, a separating finger carried by said block, said block being movable laterally toward and from said stack to move said separating finger into and out of supporting engagement with the next to the lowermost bar in said stack, a slide mounted in each of said heads intermediate said block and said guide tube at the like side thereof, said upper cover section of said guide tube being connected to said slide, said slide being movable laterally towards said stack in position to support the lowermost bar in said stack and to position said upper cover section over said lower concave section of said tube, said slide being movable in a direction from said stack to move said cover section from over said lower section, and to release the lowermost bar for descent into the lower section of said tube, the confronting surfaces of said block and slide being formed with confronting cam tracks, a cam bar slidably mounted in each of said heads and being operable upon sliding movement to simultaneously move said block and slide in opposite directions, means connecting said cam bars for movement in unison, and means for adjusting said separating finger vertically relative to said block.

3,092,289
ANTI-THEFT MEANS FOR FUEL DELIVERY TRUCK
John Walter Rentschler, 6221 Monmouth Ave., Ventnor, N.J.
Filed Aug. 12, 1960, Ser. No. 49,214
5 Claims. (Cl. 222—30)



1. Apparatus for preventing misdelivery of fluid in a fluid dispensing vehicle having a motor propulsion mechanism including an ignition system, a before and after delivery slip printing and recording meter and a power take off device from said propulsion mechanism for driving a fluid dispensing pump, comprising in combination, an electrical normally open switch attached to said meter for actuation thereby to closed position during the time between before and after delivery slip printing, an electrical normally open switch attached adjacent the power take off device for actuation to open position when said power take off device is operative, an electrical common conductor connecting one terminal of each of said switches, an electrical conductor connecting the other terminal of one of said switches with a ground on said vehicle and an electrical conductor connecting the other terminal of the other of said switches and a portion of said ignition system whereby to provide a series circuit to the vehicle ground to disable said ignition system and motor propulsion mechanism should misclosure take place of said switch operated by the power take off while said switch operated by the meter is closed.

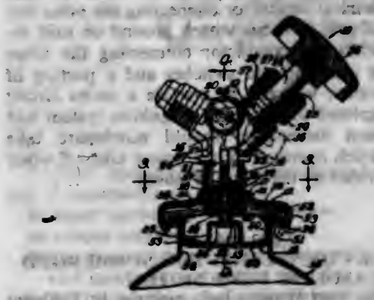
3,092,290
ELECTRICAL CONNECTION FOR SUBMERGED GASOLINE PUMP MOTOR
James C. Hoelle, Fort Wayne, Ind., assignor to Tokheim Corporation, Fort Wayne, Ind., a corporation of Indiana
Filed Oct. 7, 1959, Ser. No. 845,027
15 Claims. (Cl. 222—76)



1. Electrical connector means for a motor-pump unit having electrical and ground leads and mounted in a fuel

tank such as the gasoline tank of an automotive vehicle, comprising a tank connector fitting, an electrical cable for interconnecting said fitting and said motor-pump unit within the tank and having an inner conductor and an insulating sheath and an outer conductive cover, a connection between one end of said cable and said motor unit and a connection between the other end of said cable and said fitting, at least one of said connections being a separable plug and receptacle connection comprising outer elements respectively connected to said cable cover and to a ground lead for establishing an electrical ground connection for said unit, said plug and receptacle connection also comprising interengageable prong elements within and insulated from said outer elements and respectively connected to the inner conductor of the cable and to an electrical supply lead for establishing a live supply to said motor-pump unit, said outer elements being constructed and arranged to make initial electrical contact and to form an enclosure about the point of contact of said inner prongs prior to electrical engagement of said prongs during relative engagement movement of the plug and receptacle connection.

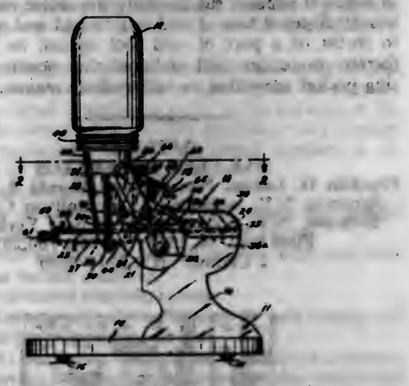
3,092,291
CAN TAPPING DEVICE
George E. Franck, Morton Grove, Ill., assignor to Imperial-Eastman Corporation, a corporation of Illinois
Filed Oct. 20, 1960, Ser. No. 63,908
6 Claims. (Cl. 222—83)



5. A tapping device comprising: a body member; a piercing element on the body member; means adjustably on the body member for connecting the body member selectively to different containers with the piercing element disposed selectively in inner and outer piercing positions corresponding to the requirements of the different containers; and releasable stop means on the body member and connecting means co-operating to limit the positioning of the piercing element to the outer one of said piercing positions, said stop means effectively precluding the engagement of said piercing element with the container when the container is one requiring the disposition of said piercing element in the inner position to pierce the same and the stop means is arranged to limit the piercing element to the outer one of said piercing positions and permitting the piercing thereof when the stop means is arranged to permit the piercing element to be disposed in the inner one of said piercing positions.

3,092,292
INSTANT COFFEE AND TEA DISPENSING MACHINE
Oscar Joseph Mayer, St. Louis, Mo., assignor of one-half to Dorothy Jane Mahaffey Carpenter, Clayton, Mo.
Filed Oct. 3, 1960, Ser. No. 59,871
5 Claims. (Cl. 222—185)

1. A dispensing apparatus comprising a base stand, a platform having an opening therethrough, a container for holding material to be dispensed, said container being in communication with said opening in said platform, a first closure member movable between retracted position and extended position, said first closure member being adapted to totally interrupt communication between said platform opening and said receptacle when in extended position, means actuating said first closure member, a second closure assembly removably fastened to said platform, said second closure assembly including a manually



movable slide horizontally aligned with said first closure member and adapted to totally interrupt communication between said container and said platform opening only when said first member is in retracted position, and a third closure member normally positioned against the underside of said platform beneath said opening to form a bottom closure therefor and movable to an open position when said first closure member has interrupted communication between said container and said opening.

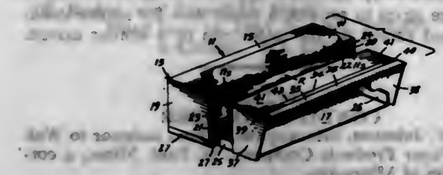
3,092,293
SHAMPOO ATTACHMENT FOR FLOOR POLISHER
Mark W. Helm, Canton, Ohio, assignor to The Hoover Company, North Canton, Ohio, a corporation of Ohio
Filed May 5, 1961, Ser. No. 108,170
4 Claims. (Cl. 222—481)



1. A dispenser comprising, a rigid body, means for attaching said body to the pouring spout of a detergent can, a closed end bore formed in said body for communication with the interior of said can, an opening formed in the side wall of said body leading from said bore to the exterior of said body, a flexible sleeve surrounding said body and having a wall normally closing said opening, liquid outlet means formed in said sleeve, and means for deforming said sleeve to remove said wall away from said opening to provide free communication between said opening and said outlet means.

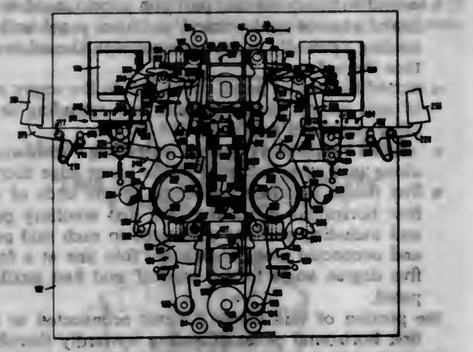
3,092,294
COMBINED CONTAINER AND DISPENSER
Harold N. Holcombe, York, Pa., assignor to The Mead Corporation, Dayton, Ohio, a corporation of Ohio
Filed Sept. 20, 1960, Ser. No. 57,222
4 Claims. (Cl. 225—47)

1. A combined container and dispenser for rolled web material, comprising a container of substantially rectangular parallelepiped shape and substantially square in transverse cross-section, said container being formed from a die cut blank of relatively stiff sheet material but readily bendable along scored lines dividing said blank into edge-joined container-wall-defining panels, three of said panels defining the large area top, rear and bottom walls of the container proper and a fourth panel integrally and hingedly connected edgewise to the bottom wall panel and defining a movable front closure for said container, all of said three panels having substantially square single end flaps bendable along scored lines into overlapping contiguity to define multiple ply end walls for said container,



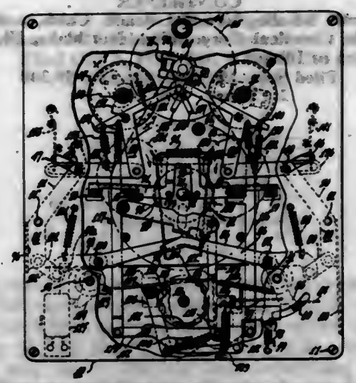
the flaps of the top panel being the outermost ply of each end wall, strips of adhesive tape fixedly joining portions of the free marginal edges of said outermost flaps to the adjacent ends of said bottom wall panel for rigidly holding said three panels in container defining inter-relations, the inner flaps of said end flaps having centrally disposed apertures, and hub members fitted in and held by said apertures in positions to enter the axially open ends of a roll of webbing to rotatably support the same without requiring a coaxial roll-supporting spindle within said roll, the inner hub-supporting flaps each being directly attached to the central one of said three panels for greater rigidity of the assemblage.

3,092,295
TAPE FEED MECHANISM
George A. Giammazzi, Vestal, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed June 5, 1959, Ser. No. 818,399
7 Claims. (Cl. 226—49)



1. In a machine for feeding records in web form having a record processing station, the combination comprising: a bidirectional rotatable drive capstan, means for selectively rotating said drive capstan in a predetermined direction, a pair of friction drive rollers mounted opposite each other in proximity to and in normally spaced relation with said drive capstan, actuating means selectively operable for projecting said friction drive rollers when in operating range of said actuating means into contact with said drive capstan, and means selectively operable to move said friction drive rollers out of operating range of said actuating means.

3,092,296
TAPE TRANSPORT MECHANISM
Dallas R. Andrews, Merchantville, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Dec. 1, 1960, Ser. No. 72,947
20 Claims. (Cl. 226—49)



1. In tape handling apparatus having tape drive means which is movable into and out of tape driving position, a mechanism for automatically moving said drive means into said tape driving position which comprises, in combination, a pair of rotatable means each for executing a cycle of rotation in a direction opposite to the direction of rotation of the other when actuated, and means operatively coupling said tape drive means to different ones of said pair of rotatable means for translating the rotation of said different ones of said pair of rotatable means alternately into movement of said tape drive means into said tape driving position.

10. In tape handling apparatus having tape drive means movable into and out of tape driving relationship, a control mechanism which comprises means for selecting a plurality of tape handling functions of said apparatus and having a sequence of operating positions each corresponding to a different one of said functions, and mechanical means coupling said selecting means and said tape drive means for advancing said selecting means between successive ones of said positions when said tape drive means moves out of tape driving relationship.

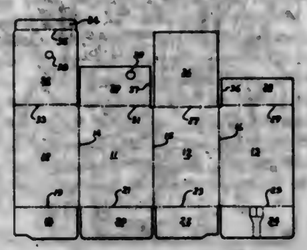
3,092,297
DIVIDER OR PARTITION MEANS
Joseph L. Bellerive, Westmount, Ill., assignor to E. J. Brach & Sons, Chicago, Ill., a corporation of Illinois
Filed Apr. 12, 1962, Ser. No. 187,074
12 Claims. (Cl. 229—28)



1. A divider blank for forming a plurality of article positioning recesses comprising a unitary sheet having a longitudinally extending side rib at one edge thereof, a second longitudinally extending rib spaced from said side rib, transversely extending end and divider ribs between said longitudinal ribs, generally transverse cuts between said longitudinal ribs separating said end and divider ribs from the adjacent parts of the sheet, longitudinal fold lines adjacent each of said side and second ribs accommodating relative folding of said end and divider ribs and the parts of the sheet between said end and divider ribs, longitudi-

nal fold lines between said end and divider ribs spaced from the first-named fold lines, and fold lines in said end and divider ribs intermediate their lengths.

3,092,298
CONTAINER
William R. Scholle, Newport Beach, Calif., assignor to Scholle Chemical Corporation, Northlake, Ill., a corporation of Illinois
Filed Sept. 29, 1960, Ser. No. 59,240
2 Claims. (Cl. 229—39)



1. A rectangular paperboard container comprising four side walls, flaps hinged to the ends of said side walls forming a top closure, and flaps hinged to the opposed ends of said side walls forming a bottom closure, a first one of said bottom forming flaps having a width equal to its side wall and a length equal to the adjacent side walls, an opposed pair of intermediate bottom forming flaps hinged to said adjacent side walls overlying said first flap, said intermediate flaps having a total length substantially equal to the width of said first flap, and an outermost flap hinged to the fourth side having an area substantially equal to that of said first flap overlying said intermediate flaps, and a tab hinged to the outermost edge of said fourth flap return bent and disposed between said first and said intermediate flaps forming a releasable bottom lock, and means formed in said fourth flap and one of said underlying intermediate flaps comprising aligned finger-hold apertures for facilitating release of said locking engagement.

3,092,299
EXPANDABLE BOTTOM FOLDED BLANK CARTON
Carl S. Hasselhoff, Glenn Gardens, Glen Burnie, Md., assignor to The Mead Corporation, Dayton, Ohio, a corporation of Ohio
Filed Feb. 23, 1961, Ser. No. 91,029
12 Claims. (Cl. 229—39)



1. An expandable bottom carton comprising a plurality of edge-joined wall panels disposed in a row and joined to define circumferentially continuous front, rear and end walls of said carton, a first closure panel hingedly connected marginally to one of said wall panels, a second closure panel hingedly connected marginally to the opposite wall panel, one of said first and second closure panels having a narrow tab along its free edge and the other closure panel having a tab-receiving shallow notch in its free edge, a pair of similarly shaped closure panels each one thereof being hingedly connected marginally to one of the remaining two of said wall panels and being deeply notched in one side thereof to define a pointed tab at the free edge of each of said similarly shaped closure panels, and relatively narrow hinge strips connecting the margins of said wall panels to the adjacent edges of said closure panels and otherwise unattached thereto, the dimensions of said closure panels and the locations of their notches and tabs being such that when said tabs and notches are interengaged as said closure panels are substantially coplanarly interleaved centrally of the expanded closure formed thereby the margins of said closure are automatically expanded peripherally beyond the walls of said carton by distances approximating the width of said hinge strips to provide a wider base for secure stacking of said carton on the upper rim of a similar carton.

3,092,300
CONTAINER DIVIDER
Ronald V. Johnson, Minneapolis, Minn., assignor to Waldorf Paper Products Company, St. Paul, Minn., a corporation of Minnesota
Filed May 22, 1962, Ser. No. 196,735
5 Claims. (Cl. 229—42)



5. A container having side and end walls and top and bottom walls and including an inner partition structure, the partition structure including,

a first supporting panel extending upwardly along one container end wall,

a horizontal partition panel generally parallel to said top and bottom container walls,

a first auxiliary vertical partition panel extending upwardly from said horizontal partition panel parallel to, and intermediate, the container end walls,

a vertical partition panel extending from top to bottom of said container in face contact with one surface of said first auxiliary panel,

a second auxiliary vertical partition panel hinged to the lower edge of said vertical partition panel and extending upwardly in face contact with the other surface thereof,

a second horizontal panel connected to the upper edge of said second auxiliary panel and extending to the other container end wall,

a second supporting panel extending downwardly along said other end wall to the lower edge thereof,

a first flange structure connected to the ends of said first horizontal panel and said first auxiliary panel and including portions connected to each said panel and connected along a diagonal fold line at a forty-five degree angle to the edge of said first auxiliary panel,

the portion of said flange structur econnected to said first horizontal panel extending upwardly therefrom along said container side walls,

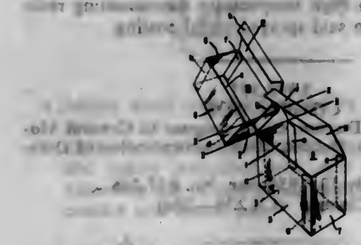
the portions of said flange structure connected to said first auxiliary panels extending parallel to, and inwardly of, said container side walls and extending in a direction toward said other container end wall,

a similar flange structure connected to the ends of said second horizontal partition panel and including portions connected to said second horizontal partition panel and extending downwardly therefrom inwardly of said side walls,

said last named flange structure also including flange portions connected to said second auxiliary panel and connected to said downwardly turned flange portions along diagonal lines of fold at a forthy-five degree angle to the line of fold connecting said flange structure to said second auxiliary panel,

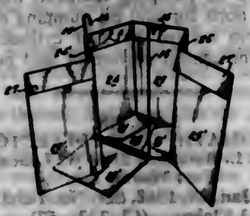
said flange portions connected to said second auxiliary panel extending parallel to said container side walls and toward said one container end wall.

3,092,301
CARTON
Bernard G. Solle, Odessa, Tex., assignor of one-half to Thomas I. Sheridan, Jr., Frank M. Donahoe, William F. Roden, and Ernest M. Schur
Filed June 16, 1961, Ser. No. 117,577
6 Claims. (Cl. 229—51)



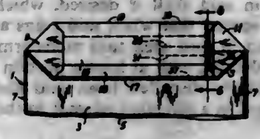
2. A carton having two separable receptacles formed from a single blank, said receptacles being substantially identical and each receptacle comprising a bottom panel, a front panel, a back panel, a first end panel, a second end panel, and a top panel; said back panel being formed integrally with said bottom panel on a line of intersection, said front panel being formed integrally with said bottom panel along a line of intersection, said first end panel being formed integrally with said bottom panel along a line of intersection, said first end panel being interconnected along corresponding edges spaced from said last mentioned line of intersection, said second end panel being formed integrally with the opposite edge of said bottom panel from said first panel, said top panel being formed integrally with said back panel along a line of intersection, and a flap formed integrally with said top panel along a line of intersection opposite said last mentioned line of intersection.

3,092,302
STORAGE CONTAINER
Martin A. McDermott, 3501 Farragut Road, Brooklyn, N.Y.
Filed Apr. 4, 1961, Ser. No. 100,693
4 Claims. (Cl. 229—52)



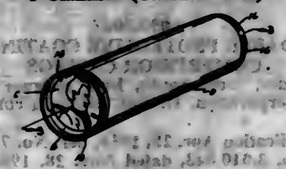
1. A storage container formed from a sheet of foldable material which comprises a body having side walls, a rear wall and a bottom which are joined together as part of a sheet and which define an opening in the front of the body, said side walls, rear wall and bottom each being formed of a double thickness of the sheet, said side walls and bottom containing folds located at the front opening of the body, and a U-shaped hanger located within said folds and extending around the bottom and sides of the front opening of the body.

3,092,303
BAG
Elden H. Woerner, Peoria, Ill., assignor to Bemis Bro. Bag Company, St. Louis, Mo., a corporation of Missouri
Filed Oct. 5, 1961, Ser. No. 143,246
1 Claim. (Cl. 229—62.5)



A bag having a pasted closure at one end thereof, said closure including inwardly directed end flaps at the corners of the bag at said one end thereof, a first side flap overlying the end flaps and a second side flap overlying the first side, one of said end flaps constituting a valve flap, a flat valve sleeve secured to the valve flap, said sleeve being constituted by a generally rectangular blank of sleeve material having a stripe of pressure-sensitive adhesive extending generally parallel to and adjacent a first of the four sides of the blank and a protective strip overlying the stripe of adhesive, said strip having a free end portion extending beyond a second side of the blank which is generally perpendicular to said first side, said blank together with the protective strip being folded to form the sleeve on two fold lines extending generally perpendicular to its said first side, with the stripe of adhesive and the protective strip on the inside of the sleeve and extending around the inside of the sleeve at one end of the sleeve constituting its outer end, said fold lines being so located that the margin of the blank along said second side of the blank and the opposite margin of the blank lie in overlapping relation extending generally centrally lengthwise of one face of the sleeve with the margin of the blank along the second side of the blank on the inside so that said free end portion of said protective strip projects laterally beyond said inside margin on the inside of the sleeve, and said sleeve having its said one face which includes the overlapping margins of the blank secured to the valve flap with the protective strip at the outer end of the sleeve and adapted to be removed after the bag has been filled through the sleeve by grasping its free end portion and pulling it, thereby to permit the outer end of the sleeve to be sealed by the adhesive, said strip preventing sticking of the sleeve and protecting the adhesive from becoming fouled by material with which the bag is filled prior to the removal of the strip.

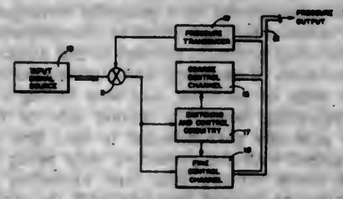
3,092,304
REUSEABLE COIN WRAPPER
Richard C. Kerrell, 1656 W. 223rd St., Torrance, Calif.
Filed Sept. 8, 1961, Ser. No. 136,862
3 Claims. (Cl. 229—87.2)



1. A reuseable coin holder for use in removably holding a specific number of coins of a particular diameter within the confines thereof including: a cylindrical shell

of a transparent, resilient polymerized resin which is of such internal diameter that said coins will be snugly held when disposed in stacked relationship therein and be visible from the exterior of said shell when so disposed; and a plurality of circumferentially extending and circumferentially spaced ribs on the interior end surfaces of said shell, said ribs being spaced from one another at least the thickness of one of said coins that is to be held in said shell, said ribs at each end being so disposed that said spaces therebetween are diametrically positioned in pairs relative to one another to permit edgewise insertion of said coins in said shell if desired, which ribs are so longitudinally spaced that when said coins are in stacked abutting contact in said shell said predetermined number are contained therein, with at least a portion of said coins being automatically dispelled from said shell when said shell is deformed in a direction normal to the longitudinal axis thereof.

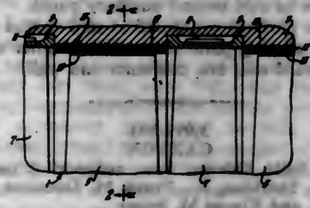
3,092,305
PRECISION PRESSURE GENERATOR SYSTEM
Stanley W. Bresenoff, Garden Grove, Calif., assignor to North American Aviation, Inc.
Filed Apr. 29, 1959, Ser. No. 809,697
7 Claims. (Cl. 230—2)



1. A precision pressure generator system for generating a pneumatic output pressure in response to an electrical input signal comprising first means for generating an electrical input signal, second means responsive to said output pressure for generating an electrical signal corresponding to the output pressure of said system, third means responsively connected to said first and second means for deriving the difference between said electrical input signal and said signal corresponding to the output pressure of said system, a course control pressure channel, a fine control pressure channel, said fine control pressure channel being connected to receive the output of said difference deriving means, switch means responsively connected to said third means for alternatively activating said coarse control pressure channel or said fine control pressure channel, said switch means being connected between said channels and said difference deriving means to alternatively activate said coarse control channel in response to outputs from said difference deriving means greater in magnitude than a predetermined minimum value or said fine control channel in response to outputs from said difference deriving means less in magnitude than said predetermined minimum value, and an output line, the outputs of said fine and coarse control pressure channels being fed to said output line.

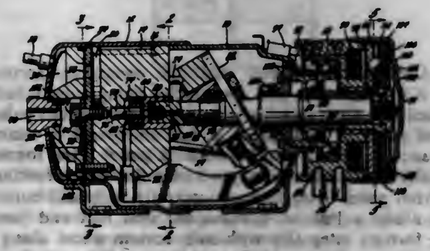
3,092,306
ABRADABLE PROTECTIVE COATING FOR COMPRESSOR CASINGS
Virgil K. Eder, Indianapolis, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Original application Apr. 28, 1958, Ser. No. 731,435, now Patent No. 3,010,843, dated Nov. 28, 1961. Divided and this application Jan. 27, 1961, Ser. No. 85,266
3 Claims. (Cl. 230—133)

1. A compressor housing adapted to be positioned about a rotor and having a readily machinable coating on the inner surface thereof, said housing comprising a metal annular member having a porous sprayed metal coating



on the inner surface thereof, the pores of said coating being filled with a high temperature thermosetting resin to seal the pores in said sprayed metal coating.

3,092,307
COMPRESSOR
John H. Heldorn, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed July 15, 1959, Ser. No. 827,346
2 Claims. (Cl. 230—206)

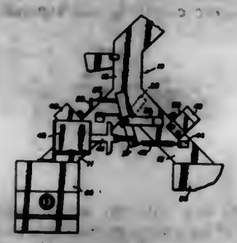


1. In a compressor, a casing, a cylinder block supported in said casing, said cylinder block having a bearing aperture and a plurality of cylinder bores formed therein, piston means operable in said cylinder bores, a drive shaft having its one end journalled in one wall of said casing, a wobble plate assembly carried by said shaft for actuating said piston means, a self-aligning bearing connection between said shaft and said cylinder block, said self-aligning bearing connection comprising a sleeve loosely surrounding the end of said shaft and disposed between the end of the shaft and said cylinder block, said sleeve having a hollow end portion projecting beyond the end of said shaft and provided with internal gear teeth, a complementary oil pumping gear disposed within said hollow end portion and cooperating with said gear teeth to form an oil pumping chamber, means forming inlet and outlet ports for said oil pumping chamber, and a fixed pivot pin carried by said cylinder block and extending into the central portion of said pumping gear.

3,092,308
AUTOMATIC COIN COLLECTOR
Carlton L. Barnhart, 2928 W. Lancaster, Fort Worth, Tex.
Filed Jan. 29, 1962, Ser. No. 169,195
3 Claims. (Cl. 232—57)

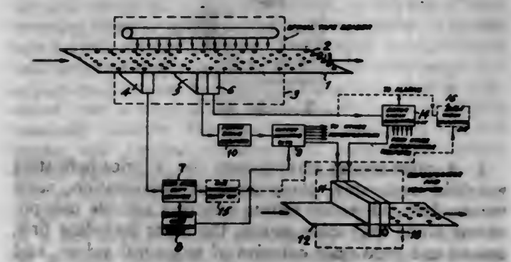
3. In an automatic coin collector,
a flat hollow chute having a vertical upper portion and diverging legs connected with the lower ends thereof,
a first shaft perpendicular to the plane defined by said legs and extending into said chute,
an upwardly directed elongate deflector mounted at one end thereof on said first shaft,

means limiting the pivotal movement of said deflector from one side of said vertical portion to the other,
a lateral pin rigidly mounted to move with said deflector,
a second shaft parallel with said first shaft,



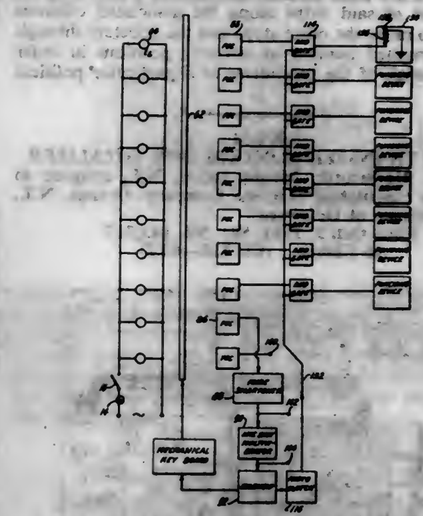
a ratchet wheel rotatably carried by said second shaft, and
a spring arm rotatably carried by said second shaft and rigidly connected with said ratchet wheel, an extending end of said spring arm being positioned to contact said lateral pin.

3,092,309
MESSAGE SORTER
Walter C. Berger and Walter J. Ives, both of Ottawa, Ontario, Canada, assignors to Northern Electric Company, Limited, Montreal, Quebec, Canada, a corporation of Canada
Filed Oct. 26, 1961, Ser. No. 147,884
4 Claims. (Cl. 234—3)



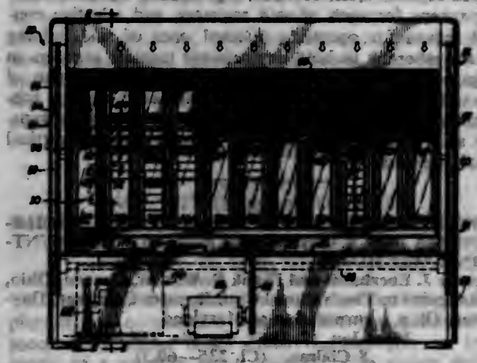
1. In a tape message sorter, a system for checking the reliability thereof, comprising in combination: an input tape to be sorted as to category of data recorded therein, a constant speed tape reading device for reading data from said input tape and having three reading positions therein, a plurality of reperforators for preparing individual output tapes sorted as to category, a plurality of sensing devices located adjacent to the output of said reperforators for reading said output tapes one character after the reperforation thereof, first means for the storage and code recognition of data read from the first of said three positions and for the selection of individual output reperforators, second means for energizing the reperforators in response to data read from the second of said three positions, comparing means to compare data read from the third of said three positions with data read from said sensing devices, said three reading positions being operable in timed relation such that the first and second of said three positions operate a sufficent number of characters apart to permit code recognition and reperforator selection to coincide with the energizing of the reperforators, and the third of said three positions operates one character after the second of said three positions.

3,092,310
DATA PROCESSING APPARATUS
Werner Flieg, Brookline, and Stanley Francis Fleissance, Newton Center, Mass., assignors to Invac Corporation, Waltham, Mass.
Filed Aug. 10, 1961, Ser. No. 130,547
13 Claims. (Cl. 234—52)



1. In apparatus comprising means for generating a plurality of electrical signals: means displaceable to determinable positions relative to the first said means for selectively altering said signals, means for locking the second said means in said positions, the third said means being responsive to one of said signals for performing a locking operation for a determinable period of time, recording means, gating means adapted for connecting the first said means to said recording means for actuating the latter with selected of said signals, and means responsive to the actuation of the third said means for conditioning said gating means to pass said signals to said recording means.

3,092,311
PARTY VOTING APPARATUS FOR VOTING MACHINE
Stanley W. Wilcox, Edward J. Crossland, and Robert B. McCaskill, Tulsa, Okla., assignors to Seismograph Service Corporation, Tulsa, Okla., a corporation of Delaware
Filed June 28, 1961, Ser. No. 120,251
26 Claims. (Cl. 235—54)



1. In a voting machine the combination of a plurality of side by side columns each containing a plurality of

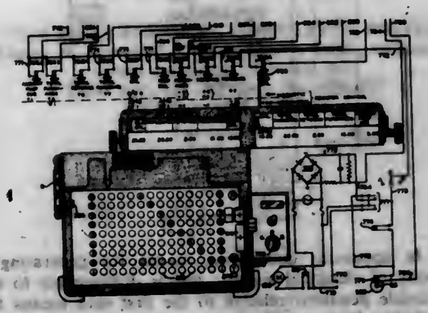
issues to be decided, a plurality of voting selectors, at least one for each issue, mounted for sliding movement along each column to selecting positions indicating the voter's choices, an elongated strip mounted for sliding movement along each column and carrying a plurality of spaced apart office stops for limiting movement of said selectors, and a party vote mechanism for simultaneously moving all of said strips along the associated columns in order to move the office stops and the selectors through a predetermined number of selecting positions in order to vote for all of the candidates of a particular political party.

3,092,312

VALUE TRANSFER CONTROL FOR TOTALIZER

James W. Dodsworth, Mount Tabor, N.J., assignor to Monroe Calculating Machine Company, Orange, N.J., a corporation of Delaware

Filed Oct. 9, 1961, Ser. No. 143,717
25 Claims. (Cl. 235—60.2)



1. In a machine of the class described having a plurality of crossfooter registers each provided with both add and subtract control devices, a plurality of vertical total registers each having add control devices, reciprocatory actuators therefor, and cyclic operating means; the combination therewith of means for taking totals from any of said registers and for transferring such totals to selective ones of said vertical total registers including universal means cooperable with said control devices in effecting selection of any register for a totalizing operation and in selection of a vertical total register for receiving amounts transferred in said totalizing operations, means settable by the total taking means for effecting an excursion of said universal means by the said cyclic operating means following a value adjustment of the actuators incident to a totalizing operation of a selected register, and wherein during said excursion the said universal means moves free of cooperation with all the said control devices and thereby releases any selected register from actuator engagement, selective holding means for each of said registers, and selective control means for operating selected ones of said holding means whereby to hold any selected transfer registers in engagement with the actuators during said excursion of the universal means, whereby said actuators upon a subsequent return from a value adjustment will act to transfer said value to any selected ones of the said vertical total registers.

3,092,313

TOTALIZER SELECTING AND CONTROL MECHANISMS FOR CASH REGISTERS AND ACCOUNTING MACHINES

George J. Eberhardt and Frank R. Werner, Dayton, Ohio, assignors to The National Cash Register Company, Dayton, Ohio, a corporation of Maryland

Filed Jan. 17, 1962, Ser. No. 166,848
8 Claims. (Cl. 235—60.3)

1. In a machine of the class described, having a plurality of sets of totalizer elements mounted on a shiftable line, and having a single set of amount actuators for said sets of totalizer elements the combination of a depressible selecting key for each set of totalizer elements; means including a positionable segment connected to the shiftable line and engageable with the depressed selecting key to shift the line and the totalizer elements thereon laterally with respect to the single set of actuators to aline the set of totalizer elements corresponding to said de-



pressed selecting key with the actuators; power-operated means controlled by the depressed selecting key to move the segment from a normal or starting position into engagement with the depressed key to aline the corresponding set of totalizer elements with the actuators; and means effective at the beginning and end of machine operation to positively restore the segment to its normal or starting position.

3,092,314

PRICE INDICATING WEIGHING APPARATUS

Ernst Kuhnle, Balingen, Germany, assignor to Bizerba-Werke Wilhelm Kraut KG, Balingen, Wurttemberg, Germany

Filed Oct. 6, 1960, Ser. No. 60,896
Claims priority, application Germany Oct. 14, 1959
4 Claims. (Cl. 235—61)



1. A price-setting arrangement for a price-indicating weighing apparatus, comprising, in combination, scale means, first and second setting members settable into positions along said scale means, the latter including first, second and third scale columns of numerical values, said first and said second columns being juxtaposed to form pairs of adjacent numerical values which are consecutive, said third column comprising first and second identical numerical sequences, said first setting member being settable into positions along said first and said second columns, said second setting member being settable into positions along said third column, unit-price viewing means on said weighing apparatus, and means for transmitting the numerical values indicated by said first and said second setting members to appear as an integer on said viewing means, said integer being composed of a first part comprising a numerical value of one of said pairs and of a second part comprising a value of one of said numerical sequences, said integer comprising the first numerical value of said pair when said second setting member is in a position along said first numerical sequence and said integer comprising the second numerical value of said pair when said second setting means is in a position along said second numerical sequence, said viewing means including first and second indicating members, said first indicating member being adapted to display said first part of the integer while said second indicating member is adapted to display said second part of the integer, said viewing means further including selector means for masking one

of said numerical values forming said first part of the integer depending upon the position of said second indicating member.

3,092,315

KEYBOARDS FOR POWER-OPERATED CALCULATING MACHINES

Sture Efraim Tegrell, Atvidaberg, Sweden, assignor to Aktiebolaget Atvidaberg Fack, Atvidaberg, Sweden, a joint-stock company of Sweden

Filed Oct. 11, 1960, Ser. No. 61,950
Claims priority, application Sweden Oct. 15, 1959
2 Claims. (Cl. 235—62)



1. In a motor driven calculating machine of the pinwheel type having ten numeral key levers and an escapement mechanism controlling the axial stepwise movement of a setting up rotor, the pinwheels of which are adapted to be set by the numeral key levers, in combination, a rotatably mounted toothed snatch roll driven by the machine drive motor, a coupling member pivotally mounted on each numeral key, each coupling member having teeth thereon adjacent said snatch roll, a control member positioned adjacent said coupling members on the side opposite said snatch roll, a first cam surface on the side of each coupling member opposite said control member, a second cam surface on each coupling member on the side facing said control member, a spring pressed member adapted to engage the first cam surface of the coupling member associated with a selected key lever as said lever is initially manually operated through a small portion of its total stroke, said member pressing said second cam surface against said control member and causing the toothed portion of said coupling member to engage said snatch roll to drive the associated key lever through the remainder of a full stroke, means operated by each key lever to set a rotor pinwheel to the corresponding numerical value, common means operated by any operated key lever to initiate operation of the escapement mechanism, means operated by the escapement mechanism for normally preventing movement of said control member away from said snatch roll, said means being operated during operation of the escapement mechanism and stepwise movement of the setting up rotor to permit said control member to move away from said snatch roll under urge of said spring pressed member thereby permitting an operated key lever to return to normal position, the associated coupling member being out of contact with said snatch roll during said return movement.

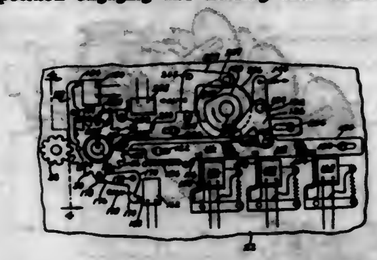
3,092,316

ITEM COUNTER

Irvin W. Bernstein, Detroit, Mich., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan

Filed Oct. 21, 1960, Ser. No. 64,019
7 Claims. (Cl. 235—91)

1. Counting apparatus for counting cycles of operation of a machine comprising a count wheel having a slip clutch connection with a cyclically operable driven means, a plurality of cam members radially and equally spaced on said wheel and representative of the units of a counting system, a stop member movable each cycle of operation between a normally retracted position and an effective position engaging between adjacent ones of a pair of said cam members to hold said wheel against rotation, a holder movable each cycle of operation from a normally effective position engaging and holding said wheel against



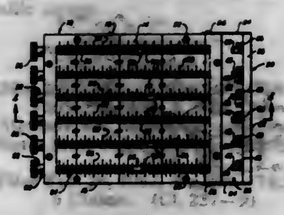
rotation to a wheel release position and return to the holding position prior to retraction of said stop member, a latch member normally latching said stop member in retracted position, and a control member operatively connected to and controlling operation of said latch member and actuated by successive ones of said cam members as said wheel rotates.

3,092,317

COUNTING DEVICE

Donald H. Viele, 755 John St., Camden, Ark.

Filed Dec. 1, 1960, Ser. No. 73,043
8 Claims. (Cl. 235—91)



1. A device for registering a count comprising a hollow housing having an elongated slot in one side thereof, said one side having a numerical scale marked off along said slot; a threaded shaft extending beneath and parallel to said slot and passing through opposing sides of said housing and rotatably journaled therein; an internally threaded sleeve threaded on said shaft between said opposing sides; a pointer-indicator secured to said sleeve and extending through said slot; a cam follower mounted on said housing; and cam means keyed to said shaft for rotation therewith, said cam means and cam follower having interlocking faces for restricting the rotation of said shaft to one direction only and means for retaining said cam means and cam follower disengaged from each other to permit rotation of said shaft in both directions.

3,092,318

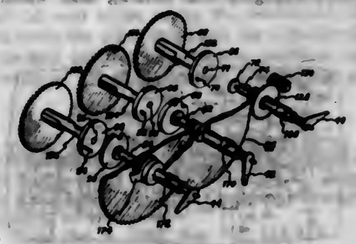
INDICATING DEMAND METER

Donald M. Ham, Rochester, N.H., assignor to General Electric Company, a corporation of New York

Filed Nov. 23, 1960, Ser. No. 71,353
16 Claims. (Cl. 235—104)

1. An indicating register for counting comprising: a first plurality of cooperative rotary indicating members of successively higher order which together give an indication of a quantity being counted; drive means driven in accordance with a quantity to be counted in each of

a plurality of successive intervals of time, said drive means having a second plurality of cooperative rotary indicating members of successively higher order corresponding to said first plurality of indicating members; and predetermined clutch means, including means between said first



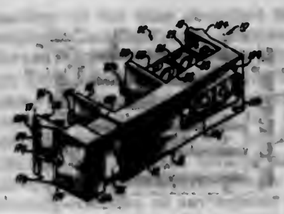
and said second plurality of indicating members for coupling said drive means to said indicating members whenever said drive means is driven in an interval in accordance with a quantity which equals the quantity indicated by said indicating member.

3,092,319

COUNTER FOR VOTING MACHINES

Hugh H. Bright, Tulsa, Okla., assignor to Seismograph Service Corporation, Tulsa, Okla., a corporation of Delaware

Filed June 28, 1961, Ser. No. 120,241
7 Claims. (Cl. 235—117)



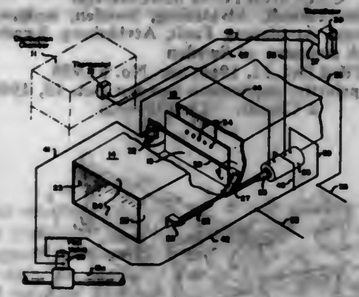
6. A removable counter for voting machines, comprising a casing having a front wall portion, a plurality of walls extending transversely away from said front wall and parallel to each other, attaching means on one pair of said walls at the ends thereof remote from said front wall for attaching the casing to the voting machine, a first shaft mounted upon said casing and extending parallel to said front wall, an operating ratchet mounted upon said first shaft and dimensioned to extend beyond said attaching means, a first gear mounted on said first shaft and meshing with a second gear, a second shaft mounted on said casing and carrying said second gear, detent means carried by said casing for positively indexing said second shaft in each of ten different operating positions, a units counter wheel and a tens counter wheel mounted upon said casing and each bearing consecutive numerals from zero to nine uniformly spaced along its periphery, opening defining means in said front wall between said first end wall and said first intermediate wall for permitting viewing of only one numeral on each counter wheel, said units counter wheel being mounted upon said second shaft, and transfer means acting between said counter wheels for turning said tens counter wheel through one tenth of a revolution only when the units counter wheel is advanced from the position wherein its nine numeral is visible through said opening defining means to the position where its zero numeral is visible.

3,092,320

COMBUSTION CONTROL WITH COMBUSTION AIR AND DRAFT DIVERSION AIR CONTROL SYSTEM

Dwight W. Powers, 8268 Perry Highway, Pittsburgh, Pa.

Filed Feb. 29, 1960, Ser. No. 11,590
9 Claims. (Cl. 236—9)



1. An automatically fired heating unit comprising a combustion chamber including burner means therein, combustion air inlet means including conduit means to said combustion chamber, combustion products exhaust conduit means, transducer means responsive to a condition affected by the heating unit, thermostat means responsive to combustion chamber temperature, a damper member pivotally mounted within said inlet means and swingable to open and substantially close said inlet means, solenoid means having movable armature means linked to and driveable to swing said damper member, fuel supply conduit means for supplying fuel to said burner means, fuel supply control means responsive to said transducer means through a switch closed by movement of said damper member to open position whereby fuel is supplied to said burner means only when both the transducer means is calling for heat and the damper member is in open position, said solenoid means being energized by either of said transducer means and said combustion chamber thermostat means whereby said armature means moves to open said damper member when either the transducer means is calling for heat or the combustion chamber thermostat means senses combustion taking place in the combustion chamber, and bias means operative to close said damper member upon deenergizing of said solenoid means whereby said damper member is closed only when both the transducer means ceases to call for heat and the combustion chamber thermostat means senses combustion has ceased therein.

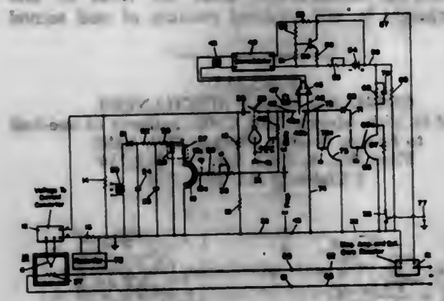
3,092,321

AUTOMATIC CONTROL SYSTEM OF THE CURRENT-SUMMING TYPE

Edward J. Cranch, Bryn Athyn, Elwood T. Davis, Havertown, and Ernst W. Veerhoeve, Ambler, Pa., assignors to Leeds and Northrup Company, Philadelphia, Pa., a corporation of Pennsylvania

Filed Sept. 14, 1959, Ser. No. 839,788
13 Claims. (Cl. 236—15)

1. An automatic control system for controlling the magnitude of a condition, comprising means responsive to the magnitude of said condition for producing a first current related in magnitude to that of said condition, means for producing a second current of magnitude related to a desired magnitude of said condition, resistance means connected to be traversed in opposite sense by said currents for development across said resistance of a potential difference of polarity corresponding with the direction of flow of the resultant current through said resitsance means and of magnitude proportional to the magnitude of said resultant current, means responsive to the potential difference across said resistance means for producing an output current which varies in sense and magnitude with the polarity and magnitude of said potential difference, a resistor having a movable contact, a connection for flow of said output current in one direction through a selected fraction of said resistor, means for regulating a final control agent adapted to vary the magnitude of said condition, means responsive to a condition-varying effect of



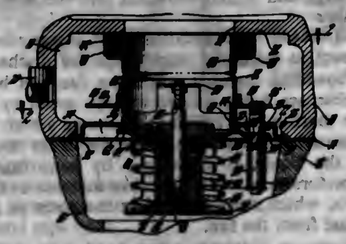
said agent for producing through said resistor current flow in the opposite direction and of magnitude related to said condition-varying effect of said agent, and means responsive to the direction and magnitude of the potential difference across said resistor for varying said means for controlling said agent for varying the application of said agent upon change in the magnitude of said condition and upon change in its effectiveness upon the magnitude of said condition.

3,092,322

BY-PASS VALVE THERMOSTAT

Adolf Schwarz, Lockport, N.Y., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Aug. 7, 1961, Ser. No. 129,799
3 Claims. (Cl. 236—34.5)



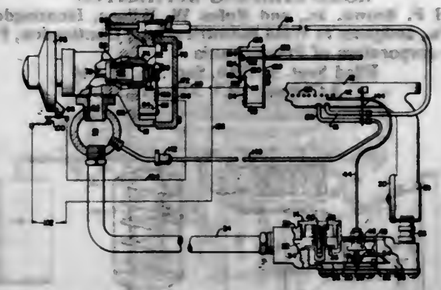
1. A by-pass valve thermostat comprising a frame having a peripheral supporting flange lying in a given plane, the said frame having a central conduit presenting a discharge outlet and a side by-pass opening in said flange determining paths of flow, a first valve element at one side of said plane and controlling said discharge outlet, a second valve element surrounding said conduit at the other side of said plane and controlling said by-pass opening, means yieldingly connecting said valve elements for joint movement of the latter, a motor having two relatively movable parts, one of said motor parts being fixed to said frame, the other of said motor parts being connected to one of said valve elements, and spring means retained by said frame and arranged to oppose relative movement of the motor parts when said first valve element is moved away from said discharge outlet by said motor due to subjection of the latter to an elevated temperature.

3,092,323

BURNER FUEL CONTROL SYSTEM

Clarence Wentz, Greensburg, Pa., assignor to Robertshaw-Fulton Controls Company, Richmond, Va., a corporation of Delaware

Filed Sept. 11, 1959, Ser. No. 839,351
8 Claims. (Cl. 236—68)



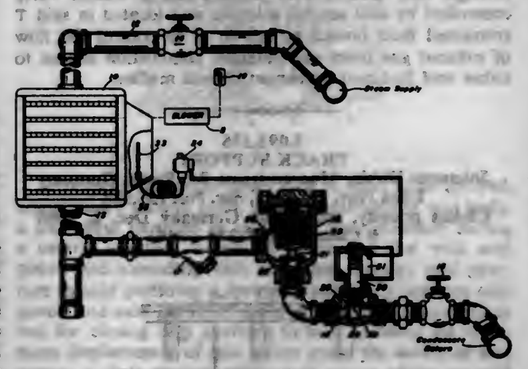
1. In a heating system having a main burner, the combination comprising, a controller pilot disposed adjacent said main burner, thermostatic valve means adapted for controlling flow to the main burner and being responsive to the flame of said controller pilot, said valve means being operable when open to permit fuel to flow to said burner and being operable when closed to prevent fuel flow to said burner, thermostatic means responsive to the temperature of the space being heated, heater actuated bimetallic means operatively connected to said thermostatic means and adapted for regulating flow to said controller pilot, and control means adapted for setting an indicated temperature and for varying the regulation of said bimetallic means.

3,092,324

MECHANISM FOR PREVENTING LOSS OF STEAM FROM A SPACE HEATER

Robert E. McClure, Jr., Mount Lebanon, Pa., assignor to United States Steel Corporation, a corporation of New Jersey

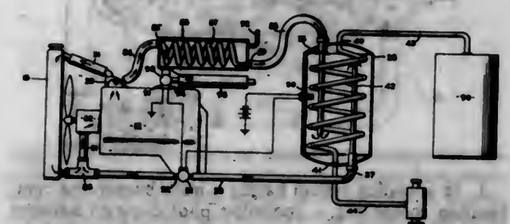
Filed Feb. 20, 1962, Ser. No. 174,559
6 Claims. (Cl. 237—9)



1. In a space heating installation which includes a steam heater, inlet and return pipes connected to said heater, and a trap in said return pipe providing an orifice to limit flow of condensate and live steam therethrough, the combination therewith of a mechanism for further preventing loss of live steam, said mechanism comprising a valve in said return pipe in series with said trap, said valve when closed providing an orifice of smaller cross-sectional area than the orifice in said trap and when open providing a passage of greater cross-sectional area than

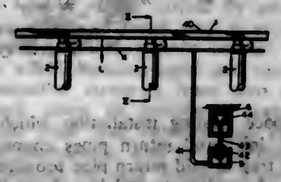
the orifice in said trap, and operating means for said valve for opening it when the air temperature adjacent the heater drops below a predetermined value and closing it when the temperature rises above a predetermined value.

3,092,325
ROAD STRIPING APPARATUS
Carl F. Brown, Jr., and Rufus W. Wilson, Huntingdon, Pa., assignors to Weld Industries, Inc., Huntingdon, Pa., a corporation of Pennsylvania
Filed Sept. 9, 1960, Ser. No. 55,044
3 Claims. (Cl. 237—12.3)



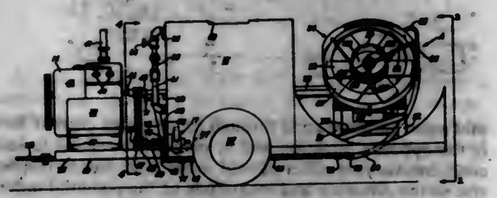
2. Road striping apparatus comprising a pair of fluid circuits connected in parallel including a first fluid circuit comprising an internal combustion engine and a water pump connected in series with a radiator, and a second fluid circuit comprising said internal combustion engine and said water pump connected in series with a first heat exchanger and a second heat exchanger, a T connected fluid branch circuit connected between said internal combustion engine and said first heat exchanger to allow exhaust gas to pass from said internal combustion engine into said first heat exchanger; a muffler attached to said T connected fluid branch circuit; a coiled finned tube in said first heat exchanger connected into said second fluid circuit; a third fluid circuit connected to pass through said second heat exchanger whereby fluid in said third fluid circuit is heated in said second heat exchanger by heated fluid in said second fluid circuit, a first solenoid, a second solenoid, and a thermostat electrically connected in series, a first valve controlled by said first solenoid and located so as to control fluid flow through said second fluid circuit, and a second valve controlled by said second solenoid and located in said T connected fluid branch circuit so as to control the flow of exhaust gas from said internal combustion engine to either said first heat exchanger or said muffler.

3,092,326
TRACK SUPPORT
Johannes Hohle, Moorenstrasse 24, Essen, Germany
Filed Nov. 30, 1961, Ser. No. 155,988
Claims priority, application Germany Dec. 2, 1960
8 Claims. (Cl. 238—119)



1. A track structure for a substantially horizontally displaceable load, comprising a substantially horizontal track-forming beam member, a plurality of substantially fixed supports spacedly positioned along said member, and a coupling individually joining each of said supports to said member; said coupling including a first part fastened to the respective support, a second part vertically movable relatively to said first part and fastened to said member, and balancing means including a counterweight normally maintaining said second part in an elevated position relative to said first part while being yieldable to a downward force equal to a fraction of the maximum downward stress exertable by said load upon said second part, said first and second parts being provided with co-operating formations positively limiting their relative displacement under the force of said counterweight in said elevated position of said second part.

3,092,327
ORCHARD SPRAY MECHANISM
Richard H. Fish, Morgan Hill, Calif., assignor of one-half to Evelyn Preston, Morgan Hill, Calif.
Filed Dec. 3, 1962, Ser. No. 241,754
8 Claims. (Cl. 239—77)

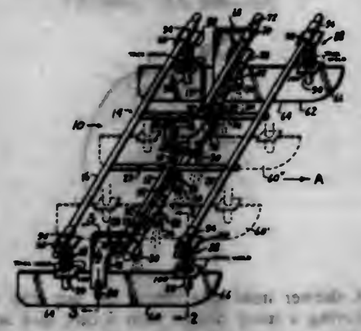


1. In an orchard spray mechanism,
(a) a supporting vehicle for travel along a path between rows of trees in an orchard,
(b) an upwardly inclined fan shaft journaled on the vehicle to rotate about an axis substantially at right angles to the path of vehicle travel,
(c) power drive means on the vehicle for rotating the fan shaft at high speed,
(d) a fan secured co-axially to the upper end of the fan shaft,
(e) a perforated, bowl-shaped member mounted co-axially on the upper, discharge side of the fan for rotation therewith,
(f) an insecticide liquid supply pipe mounted with a discharge end thereof directed into the bowl-shaped member
(g) and means for supplying liquid insecticide at low pressure to the liquid supply pipe for discharge into the bowl-like member while the fan and bowl-like member are being rotated at high speed by the fan drive shaft in a direction to discharge a high velocity air blast upwardly and outwardly from the fan,
whereby the liquid is discharged by centrifugal force through perforations in the bowl-like member in the form of droplets, which are entrained in the form of spray in the air blast from the fan.

3,092,328
SPRAYING APPARATUS
Ned T. Patterson and Gerald C. Francis, both % Francis Aviation, Capital City Airport, Lansing, Mich.
Filed June 25, 1962, Ser. No. 206,134
7 Claims. (Cl. 239—159)

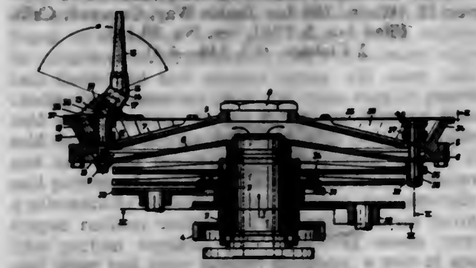
1. A moving spray apparatus comprising
(a) a supporting frame extending laterally with respect to the direction of movement of said frame,
(b) a spray bar carried by said frame and adapted for connection to a source of spray material under pressure,
(c) a plurality of laterally spaced spray nozzles carried in said spray bar for discharging spray material downwardly,
(d) a plurality of valve means each carried in said spray bar intermediate a pair of said laterally spaced

spray nozzles for independently regulating distribution to said nozzles, and
(e) a pair of vertically disposed ground engaging masks carried by said frame to define the lateral boundaries of the area being sprayed, and



(f) means for individually laterally adjusting said ground engaging masks to vary the width of the area being sprayed, and
(g) means independently respectively and resiliently urging the forward and rear ends of said masks downwardly.

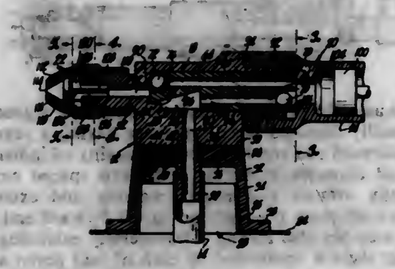
3,092,329
JET-NOZZLES
Johannes Twaroch, Vienna, Austria, assignor to Karl Schidl Armaturen- und Metallwarenerzeugung, Vienna, Austria, a corporation of Austria
Filed Dec. 5, 1961, Ser. No. 157,163
Claims priority, application Austria Apr. 28, 1961
5 Claims. (Cl. 239—227)



1. A controllable jet-nozzle, particularly for water plays, comprising
at least one nozzle,
a first pipe bend carrying said nozzle,
a second pipe bend,
said first pipe bend being rotatably mounted on said second pipe bend,
a body adapted to feed water through said second and first pipe bends to said nozzle,
said second pipe bend being rotatably mounted on said body, and
means for driving said first and second pipe bends independently from each other.

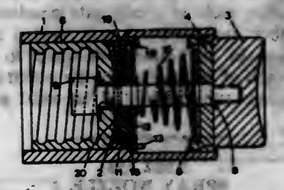
3,092,330
HAND PUMP FOR SPRAYING LIQUIDS
Stewart J. Ridenour, Raytown, and Asa Pickingpaugh, Kansas City North, Mo., assignors to Cook Chemical Company, Kansas City, Mo., a corporation of Missouri
Filed Feb. 12, 1961, Ser. No. 88,882
6 Claims. (Cl. 239—333)

1. In a fluid dispenser, a housing having a bore therethrough, presenting a fluid outlet at one end of the bore, there being a fluid inlet in the housing communicating with the bore and extending laterally therefrom; pump means coupled with the housing in register with the opposite end of the bore; an elongated core in the bore having a pair of longitudinally extending fluid ducts therethrough both communicating at one end thereof with said pump means, the opposite end of one of the ducts



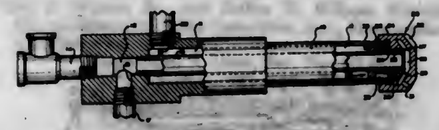
being remote from said one end of the bore and in communication with said inlet, the opposite end of the other duct being in communication with said outlet; a check valve at said one end of said one duct for blocking flow of fluid in the latter toward the inlet; and a check valve at said opposite end of the other duct for blocking flow of fluid in the latter toward said pump means.

3,092,331
SCENT SPRAYS
George Kleshak, 9 W. Heath Ave., London NW. 11, England
Filed June 12, 1962, Ser. No. 201,909
Claims priority, application Great Britain June 20, 1961
4 Claims. (Cl. 239—350)



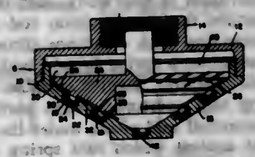
1. A spray device for liquid such as scent to be sprayed, comprising a tubular body, a piston movable in said body, a transverse partition in said body, said partition having a central aperture therein, a piston rod fast with said piston and extending with clearance through said aperture in said partition, a spring in said body between said piston and said partition, a valve member on said piston rod for closing said aperture in said partition on maximum displacement of said piston under the action of said spring, a plate against which said spring acting on said piston reacts, an absorbent pad between said plate and said partition, said partition having at least one radial groove in the surface thereof facing said pad, means abutting said surface of said partition and surrounding said piston rod for restricting the flow of liquid to be sprayed at all times while said valve is unseated to such liquid as will pass through said aperture, along said groove and beyond said means to charge said pad, said body having a lateral liquid discharge orifice leading from said pad to the exterior of said body.

3,092,332
ATOMIZING FUEL BURNER CONSTRUCTION
Herman H. Bichel and William Leigemann, Saginaw, Mich., assignors to The Wickes Corporation, Saginaw, Mich., a corporation of Michigan
Filed Apr. 4, 1958, Ser. No. 726,529
4 Claims. (Cl. 239—405)



1. In an atomizing fuel burner construction, a generally horizontally disposed nozzle member having a rear end and a forward end and including a plurality of individual, restricted diameter atomizing fluid ports spaced circumferentially around said nozzle member and extending therethrough from the rear end to the forward end, said nozzle member also having a transversely extending fuel chamber therein intersected by each of said ports; a fuel delivery tube connected to said nozzle member and extending through the rear end of said nozzle member axially inwardly of the rear ends of said ports to communicate with said fuel chamber for supplying the latter with fuel; an atomizing fluid delivery tube of greater diameter than said fuel delivery tube and spaced diametrically therefrom substantially concentrically receiving said fuel delivery tube and defining a chamber of relatively large volume therearound connected to said nozzle member and directly communicating with each of said ports for supplying the latter with atomizing fluid under pressure; and a swirling ring closing said chamber and having spaced, narrow, generally axially angular groves which speed the flow of the atomizing fluid forwardly and start it whirling, said ring being spaced rearwardly of the rear of said nozzle member and rear ends of said ports a predetermined distance to define a swirler chamber of substantial axial length between said ring and rear ends of said ports through the nozzle member surrounding the fuel delivery tube in which the whirling atomizing fluid can, with predetermined velocity in a predetermined space, pick up condensate condensing in said swirler chamber rearward of said ports, and entrain said condensate in said atomizing fluid to disperse it uniformly to each of said ports through which said atomizing fluid proceeds substantially in an axial path without whirling.

3,092,333
SPRAY NOZZLE
Battista Galotto, 45 Via L. Tolstoi, Milan, Italy
Filed Oct. 16, 1957, Ser. No. 690,480
5 Claims. (Cl. 239—491)



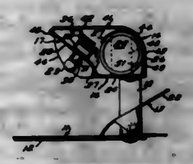
1. A fog nozzle comprising a hollow casing having a fluid inlet including a conical portion defining concentric rings of nozzle openings, a diaphragm within the casing, and concentric ridges on the diaphragm resting against the conical portion and partially blocking the nozzle openings at central portions of the latter, the ridges defining concentric annular grooves connected by passageways provided by the portions of the nozzle openings not blocked by said ridges.

3,092,334
SHOWER ATTACHMENT
Dana Petersen, 5104 N. Harbor Drive, San Diego 6, Calif.
Filed Sept. 19, 1961, Ser. No. 139,237
2 Claims. (Cl. 239—516)



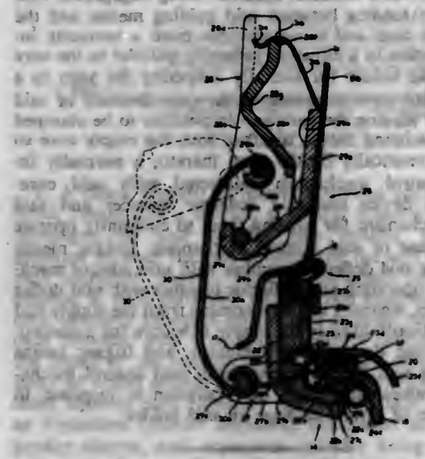
1. A shower head attachment for use with a shower head having a spray nozzle with a rim, said attachment comprising:
- a section of resilient sheet material having a curved apron-like lip;
- a pair of arms unitary with said lip and having their distal ends brought substantially together to define, with said lips, a hollow generally frusto-conical element; and
- a spring stop unitary with said lip between the proximal ends of said arms and extending into said frusto-conical element to snap over the rim of a spray nozzle of a shower head when said arms embrace an opposed portion of the shower head.

3,092,335
CLIP BOARD LIGHTING ATTACHMENT
Forrest H. Wilson, 150 Las Juntas Way, Concord, Calif.
Filed Jan. 3, 1961, Ser. No. 80,145
2 Claims. (Cl. 240—6.4)



1. A lighting attachment for a clip board or the like comprising a mounting bracket having an elongated horizontal bottom portion with a vertical side portion along one of its principal edges terminating in an arcuate top portion in overlying relation to the bottom portion, said bracket having an inclined portion projecting upwardly and outwardly from the other principal edge of said bottom portion with the extended longitudinal edge of said inclined portion being spaced from said arcuate top portion, said bottom portion and arcuate top portion being dimensioned to retentively receive a flashlight battery longitudinally therebetween, a reflector carried upon the outer surface of said inclined portion, a flashlight bulb socket mounted upon said reflector, a removable hood secured between the extended edge of said inclined portion and said arcuate portion to cover the space therebetween, said hood including two end portions disposed transversely adjacent the respective ends of said bracket to cover same, battery contact terminal means for conductively contacting batteries disposed in said bracket, electrical circuit means connecting said socket to said battery contact terminal means, and means for securing said bracket to a clip board in elevated relation thereto.

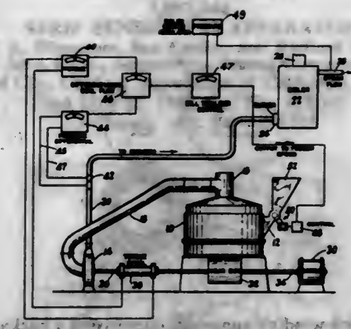
3,092,336
FLUORESCENT LUMINAIRE
Donald W. Harling, Milwaukee, and Philip B. Clark, Hales Corners, Wis., assignors to McGraw-Edison Company, Milwaukee, Wis., a corporation of Delaware
Filed Sept. 23, 1957, Ser. No. 685,438
8 Claims. (Cl. 240—25)



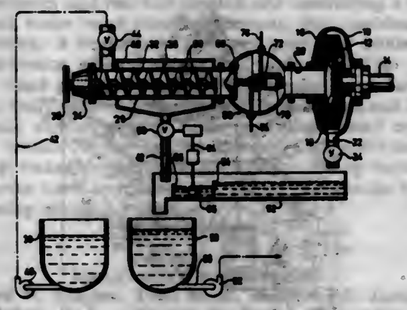
7. A globe assembly for a luminaire comprising, in combination, a longitudinally recessed globe member having an open end and a marginal outwardly extending flange portion surrounding said open end, said flange being subject to expansion and contraction in accordance with variations in temperature, means for supporting said globe member having a substantially different coefficient of expansion from said flange so that responsive to variations in temperature relative movement between said flange and said support means will occur and including interconnected inner and outer support members, said outer member having a portion disposed beneath said flange in mechanical supporting relation therewith and said inner member having a portion spaced from said portion of said outer member and forming therewith a substantially channel-shaped chamber, and generally U-shaped resilient sealing and cushioning means having a base portion engaging said supporting means between said inner and outer support members, a pair of spaced leg portions disposed between the opposite sides of said flange and said inner and outer support members and a web portion spaced from said base portion and extending between said leg portions, the space between said web and base portions allowing said resilient sealing and cushioning means to absorb said movement and prevent contact between said flange and said support means while providing a positive seal therebetween over a wide range of temperatures.

3,092,337
PULVERIZING SYSTEM WITH INDICATOR AND CONTROL
Robert C. Patterson, Chattanooga, Tenn., assignor to Combustion Engineering, Inc., New York, N.Y., a corporation of Delaware
Filed Aug. 10, 1959, Ser. No. 832,638
6 Claims. (Cl. 241—34)

1. In a pulverizing system for supplying a pulverized material to a desired location the combination of a pulverizing mill, means for feeding a material to the mill to be pulverized, an exhauster fan connected with the outlet of the mill and through which the air passing through the mill and the pulverized material leaving the mill introduced in this air are drawn, driving means for the fan including motor means operating said fan, means providing a signal responsive to and indicative of the air flow through the fan, means associated with the fan driving means including means providing a signal responsive and proportional to the work imparted to the exhauster fan by the motor means so as to provide an indication of said work, and means receiving these two signals and operative to produce an instantaneous and continuous signal indicative of the pulverized material flow.

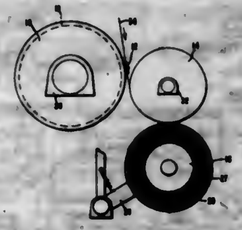


3,092,338
PULP REFINING APPARATUS
Rolf Bertil Reinhall, Lidingo, Sweden, assignor to Defibrator Aktiebolag, Stockholm, Sweden, a corporation of Sweden
Filed Apr. 15, 1960, Ser. No. 22,630
Claims priority, application Sweden Apr. 16, 1959
3 Claims. (Cl. 241—34)



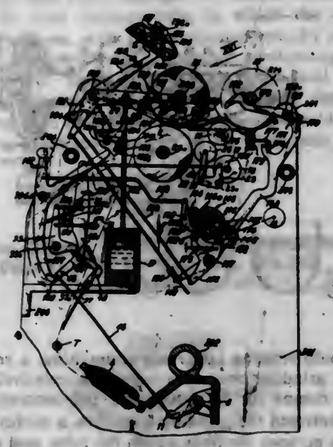
2. A pulp refining apparatus comprising, a refiner having two grinding members rotatable relatively to one another, means for introducing a pre-concentrated suspension between the grinding members, a perforated tube, a rotative acraper member within the tube, said tube being connected to the inlet side of the refiner, a casing arranged around the tube and having its wall spaced from the outside of the tube, said casing collecting fluid expressed from the inside of the tube through the perforations therein, a pump for feeding the suspension under pressure to the interior of the tube, means at the outlet end of the tube and between said end and the inlet of the refiner, for setting up regulatable counter pressure in the tube, the casing having an outlet, and means operative in the said outlet for developing a counter pressure within the casing around the perforated tube.

3,092,339
YARN WINDUP
Brendan Edward Hill, Jr., Kinston, and Leigh O'Neill Vanamon, Sr., Grifton, N.C., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Nov. 30, 1960, Ser. No. 72,768
5 Claims. (Cl. 242—18)



1. A yarn-winding apparatus comprising a package roll, a print roll driving the package roll and a reciprocating traverse guide through which yarn travels to the print roll, the latter having a low friction surface in a central zone bounded by zones having high friction surfaces, said high friction zones being located opposite the guide reversal points and having surface friction coefficients of at least 0.8, said central zone having a surface friction coefficient of 0.2–0.4.

3,092,340
YARN-PACKAGE WINDING MACHINE
Stefan Flirst, Monchen-Gladbach, Germany, assignor to Walter Reiners, Monchen-Gladbach, Germany
Filed Oct. 21, 1960, Ser. No. 64,197
Claims priority, application Germany Oct. 24, 1959
15 Claims. (Cl. 242—35.5)



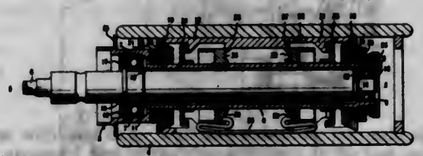
1. A yarn-package winding machine comprising winding means having a holder for a takeup spool core upon which the package is to be wound and yarn guiding means defining a yarn path to said holder; a spool-core conveying device for supplying an empty core to said holder; said spool holder having a releasable clamping device for journalling the empty core upon which the package is to be wound and for clamping the starting yarn end to the empty core; a feeler member movable in response to filling of the core with yarn on said holder; a doffer mechanism normally spaced from the core location of said holder and movable into engagement with the core on said holder for withdrawing a filled core therefrom; a yarn deflector member mounted beyond said yarn path at a location along the core-engaging travel path of said doffer mechanism for engaging the yarn extending to the withdrawn core, said deflector member being engageable with the yarn extending between said guiding means and the withdrawn core and being movable from a normally inactive position in a direction generally parallel to the core axis of said holder for laterally deflecting the yarn to a position near one axial end of the core location of said holder for placing the yarn end in position to be clamped by said clamping means together with the empty core so as to automatically fix the yarn thereto; a normally inactive control mechanism connected with said core-conveying device and said deflector member and said doffer mechanism for causing them to conjointly operate upon release of said control mechanism; linking means connecting said deflector member with said control mechanism for operating said deflector together with said doffer mechanism, whereby the yarn coming from the supply coil is automatically fixed to the empty new core for automatically starting the winding operation; and trigger means connecting said feeler member with said control mechanism to release the latter for operation in response to completion of a yarn package on said holder.

3,092,341
BRAKE DEVICE FOR THE REELS OF THREAD-WORKING MACHINES
Paul Aschwanden, Schwyz, Switzerland, assignor to Aktiengesellschaft Fr. Mettler's Sohne, Arth, Schwyz, Switzerland
Filed Dec. 5, 1961, Ser. No. 157,176
Claims priority, application Switzerland Dec. 6, 1960
3 Claims. (Cl. 242—36)



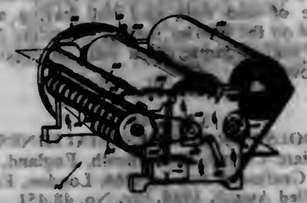
1. A brake device for the reels of thread-winding machines of the type comprising a frame, a reel and a grooved drum journalled on said frame and being in driving connection with said reel for guiding and driving the thread to-and-fro along said reel, said brake device comprising a main brake blade having a wedge shaped brake portion and a guide portion slidably mounted on said frame for moving said wedge shaped portion into operative position intermediate said drum and said reel, and an auxiliary brake blade, means pivotally supporting said auxiliary brake blade on said main brake blade, said auxiliary brake blade being movable with said main brake blade and engaging said reel in response to movement of said main brake blade, said means pivotally supporting said auxiliary brake blade on said main brake blade including a pair of arms each extending from one end of said auxiliary brake blade, and a pair of pivot pins one each disposed endwise of said main blade to pivotally support one said arm, and a pair of biasing springs one each secured with one end to the end of one said arm and with the other end to an anchor point disposed in fixed position relative to said auxiliary brake blade for biasing said auxiliary brake blade toward said reel.

3,092,342
RADIALLY EXPANDIBLE HOLDER FOR TUBULAR PACKAGES
Ivan Ulysses Jackson, Petersburg, Va., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Mar. 13, 1961, Ser. No. 95,181
5 Claims. (Cl. 242—46.2)



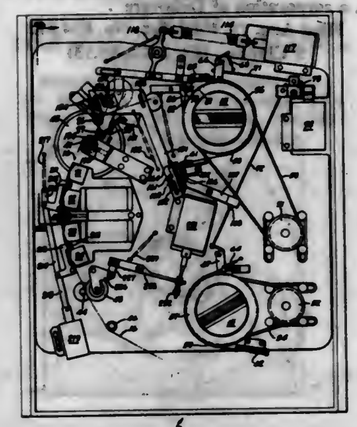
1. A chuck adapted to receive a tubular package, said chuck comprising a spindle, a tubular housing rotatably telescoped on said spindle, two bearing assemblies mounted between the said housing and the said spindle at each extremity thereof, retainers mounted on the said housing at each extremity thereof, two expander sleeves each slideably mounted on the said tubular housing and each provided with a peripheral surface tapered toward the center of the longitudinal axis of said chuck, a plurality of coiled springs positioned in compressed engagement between said expander sleeves and said retainers, an expansion cylinder moveably telescoped on said expander sleeves, said expansion cylinder being provided with tapered extremities adapted for slideable engagement with the corresponding peripheral surface of the said cylinder sleeves and to be held in position thereby, a circumferential shoulder projecting from the said expansion cylinder intermediate its ends toward the longitudinal axis of said chuck, a pair of holders mounted on said housing, said holders being adapted for slideable engagement with said shoulders to permit radial movement and to arrest axial movement of the said expansion cylinder, a pair of flanged collars projecting radially from the said expansion cylinder toward the said axis and a corresponding pair of flanged collars mounted on said housing and adapted for engagement with its corresponding flanged collar member mounted on said cylinder to restrict radial movement of the said expansion cylinder.

3,092,343
TAPE DISPENSER
George A. Beeril, North Arlington, N.J., assignor to Congoleum-Nairn Inc., Kearny, N.J., a corporation of New York
Filed Aug. 22, 1958, Ser. No. 756,732
3 Claims. (Cl. 242—55)



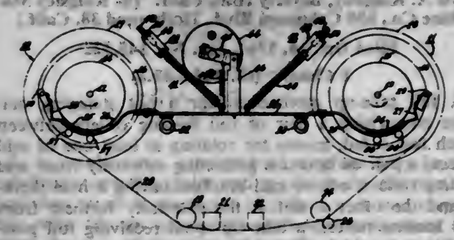
1. A pressure sensitive tape dispenser comprising a cradle for holding a roll of pressure sensitive adhesive tape, a thin flat guide for supporting and remaining in contact with the roll of tape, a peeler roll located in juxtaposition to the tape roll and in contact with said flat guide for peeling the tape from said tape roll at a substantially tangential angle to said tape roll, means for maintaining constant the distance between the peripheries of said peeler roll and said roll of tape, a wrap control idler roll for guiding the adhesive side of the tape in contact with said peeler roll, the frictional contact of said adhesive side of the tape with said peeler roll being sufficient to allow peeling of the tape from the roll by rotating said peeler roll and means for rotating said peeler roll thereby peeling the tape from the roll.

3,092,344
STRIP TENSIONING APPARATUS
Joseph A. Dinsmore, San Carlos, and Richard I. Sedden, Palo Alto, Calif., assignors to Ampex Corporation, Redwood City, Calif., a corporation of California
Filed May 11, 1961, Ser. No. 109,337
13 Claims. (Cl. 242—55.12)



1. In a tape transport of the class wherein a magnetic tape is pulled by a capstan from a supply reel and past a transducing head and wherein the tension in said tape is maintained by a tension sensing means engaging said tape between said reel and capstan and controlling a supply reel brake band tensioning means, the combination comprising: a brake band wrapped part way around a circumference of said supply reel and coupled to said brake band tensioning means, said brake band having substantially zero resistance to bending moments and substantially zero elongation under a predetermined maximum tension to be applied thereto; and anti-friction bearing means forming the operating coupling between said brake band and said tension sensing and brake band tensioning means.

3,092,345
BRAKING MECHANISMS
Richard W. Clayton, Toms River, and Arnel E. Jackson, Audubon, N.J., assignors to Radio Corporation of America, a corporation of Delaware
Filed Nov. 14, 1960, Ser. No. 68,894
13 Claims. (Cl. 242—55.12)



1. A brake mechanism for cooperation with a pair of rotatable reeling devices comprising a pair of brake mem-

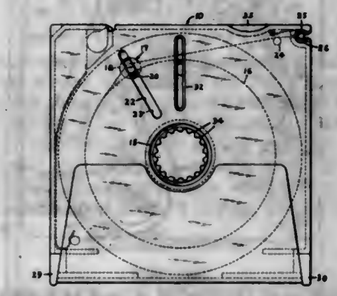
bers disposed for braking engagement with respective ones of said reeling devices, and a freely floating bar interconnecting said brake members and arranged for simultaneously expanding one of said brake members and contracting the other of said brake members for providing differential braking when said brake members are applied in said braking engagement.

3,092,346

MAGNETIC TAPE MAGAZINE

John D. Goodell, Greenwich, Barbara Ivins, Milford, and John C. Wistrand, Stamford, Conn., assignors to Minnesota Mining & Manufacturing Company, St. Paul, Minn., a corporation of Delaware

Filed Aug. 19, 1959, Ser. No. 834,812
5 Claims. (Cl. 242—55.13)



1. In tape reeling mechanism, the combination of a shallow container having parallel opposite walls, a hub journalled in said walls, means forming a tape access opening in said container, a tape having a portion reeled on said hub and an unreeled portion extending through said opening, tape guide means having superimposed opposed guide channels in substantial registry and of substantially the same width as said tape, and means mounting said tape guide means in said container for movement towards and away from said hub with one of said channels fitted over and guided by a peripheral part of said reeled tape portion and with a single wrap of said tape unreeled portion disposed in the other of said guide channels and guided thereby such that when the tape is being reeled on the hub the position of said guided tape unreeled portion is determined by said reeled tape portion.

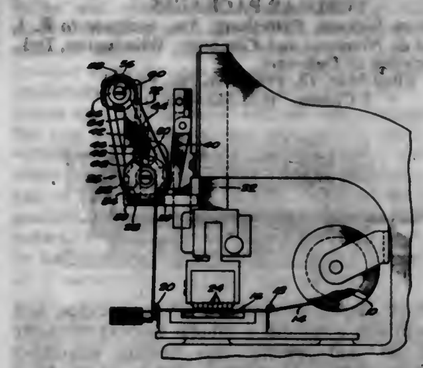
3,092,347

TAKE-UP MECHANISM FOR USE ON A ROLL LEAF HOT STAMPING MACHINE

Lewis A. Kingsley, Beverly Hills, Calif. (% Kingsley Machine Co., 850 Cahuenga Blvd., Hollywood 38, Calif.)

Filed Oct. 16, 1961, Ser. No. 145,322
1 Claim. (Cl. 242—67.2)

A foil take-up mechanism for a hot stamping machine comprising a pair of foil feeding rollers between which foil is fed, means for rotating at least one of said rollers, a pair of brackets projecting upwardly from said feeding rollers, one of said brackets having a hole therein and the other a slot at the extremity furthest from said feeding rollers, a take up spool receiving foil passing between said feeding rollers adapted at one extremity to be supported in said slot and having a protuberance thereon projecting into said hole, and a belt drive interconnecting said take-up spool and said driven roller permitting variation of the rate of rotation of the take-



up spool as foil accumulates thereon, said take-up spool having a slot therein communicating with one end thereof.

3,092,348

SPOOLS FOR BUSINESS MACHINES

George William Corran, Bexleyheath, England, assignor to Walter Grafton & Son Limited, London, England

Filed June 27, 1960, Ser. No. 38,967
Claims priority, application Great Britain June 26, 1959
6 Claims. (Cl. 242—74)

1. In a ribbon spool for a business machine, a one-piece, hollow cylindrical hub of molded plastic and open at opposite ends thereof for receiving a spindle therethrough, said hub having a circumferential wall of substantially C-shaped cross-section to provide a passageway into the hub between the free ends of and extending the entire length of said wall, said wall having a window therein opposite said passageway, said window having a prong member integral with a wall of the window and extending partially across said window in the general curved plane of said wall, said hub having a pair of chordal walls on the interior thereof extending from said free ends to said circumferential wall on opposite sides of said window.

3,092,349

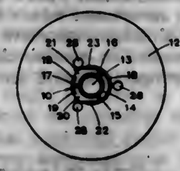
SPOOLS FOR BUSINESS MACHINES

George William Corran, Bexleyheath, England, assignor to Walter Grafton & Son Limited, London, England

Filed Aug. 9, 1960, Ser. No. 48,451
Claims priority, application Great Britain Aug. 11, 1959
5 Claims. (Cl. 242—74)

1. A one piece molded spool for a business machine, comprising, a hub, two parallel circular flanges spaced apart by said hub, said hub comprising an inner cylindrical wall extending between said flanges and having an axial length not exceeding the distance between the outer surfaces of said flanges, said inner cylindrical wall defining a bore adapted to receive a spool drive shaft, and an outer cylindrical wall coaxial with said inner cylindrical wall and spaced therefrom, but united therewith, by at

least one web lying in a plane parallel with the planes with which said flanges lie, said outer cylindrical wall having at east one aperture extending over the whole of the axial length thereof, a ribbon-engaging prong formed in-



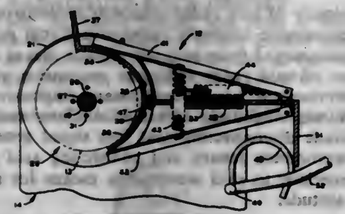
tegral with said outer wall and extending into said aperture around a part of the circumference of the hub and in a plane normal to the axis of the spool, parallel with, and midway between, the planes in which said flanges lie.

3,092,350

SCRAP WIRE COMPACTING APPARATUS

Eugene D. Thompson, Rte. 7, Box 612, Modesto, Calif.

Filed Oct. 25, 1960, Ser. No. 64,868
10 Claims. (Cl. 242—78)



1. A machine for compacting scrap wire, comprising a frame, a shaft mounted for rotation on said frame, a motor on said frame having an operative connection to said shaft for rotating same, a spindle demountably carried on said shaft for rotation therewith and formed for winding random lengths of scrap wire upon the spindle during said rotation, and means on said frame for guiding and shaping said wire into a compact roll, said means including a member having a concavely curved face confronting said shaft for engagement with the periphery of the wire roll, a pair of curved plates hinged on said member and movable toward and away from said shaft, and a spring resiliently urging said plates toward said shaft.

3,092,351

SPIN CAST FISHING REEL

Joseph C. Clark, Orlando, Fla., assignor to True Temper Corporation, Cleveland, Ohio, a corporation of Ohio

Filed July 21, 1960, Ser. No. 44,504
3 Claims. (Cl. 242—84.2)



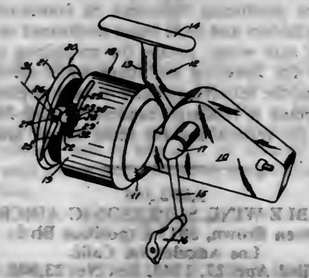
1. In a reel of the character described comprising a means forming a housing, spool means associated with said housing and adapted to retain a line wound thereon, a drum means having an end wall and a cylindrical side wall journalled for rotation in said housing coaxial with and adjacent said spool means and positioned to guide said line to and from said spool means, first lever means pivotably mounted off center on the end wall of said drum, said first lever means having at the periphery thereof a line engaging dog means, a second lever means counterbalancing said first lever means and pivotally mounted off center on the said end wall of the said drum, a connecting link pivotally connecting said first and second lever means, said drum means having an opening in the cylindrical side wall portion thereof, the rotation of said drum pivoting said first and second lever means on said end wall solely by centrifugal force and projecting the dog means through the opening in the said side wall into engagement with said line.

3,092,352

LINE PICKUP MECHANISM FOR A SPINNING REEL

Robert B. Ransom, Westerly, R.I. (N. Williams Road, Weekapaug, R.I.)

Filed Jan. 4, 1962, Ser. No. 164,283
4 Claims. (Cl. 242—84.21)



1. In a fishing reel having a spool and concentric line winder, means for attaching the reel to a rod, said means mounting a line winder for rotation about said spool on an axis extending substantially in the direction of the axis of the rod, means to rotate said winder, a line pickup finger, means to movable mount said finger on said line winder for movement toward and from the axis of the spool, and means weighting said pickup finger to swing said finger toward the axis of the spool under centrifugal force as said line winder is rotated relative to the spool to pick up the line and cause it to rotate with the winder to assemble the line on the spool.

3,092,353

DEVICE FOR MEASURING LIFT OF THE SWEPT BACK WING OF AN AIRPLANE

Leonard M. Greene, Chappaqua, N.Y., assignor to Safe Flight Instrument Corporation, White Plains, N.Y., a corporation of New York

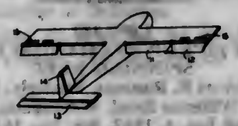
Filed Oct. 26, 1960, Ser. No. 65,143
19 Claims. (Cl. 244—1)



2. In combination, a swept back airplane wing having a shifting stagnation point and in which the direction of local flow of air in the region of influence of said stagnation point has an appreciable outboard component adjacent the skin of the wing and varies as a substantially exclusive function of lift, means angularly movable with respect to an axis having a substantial component normal

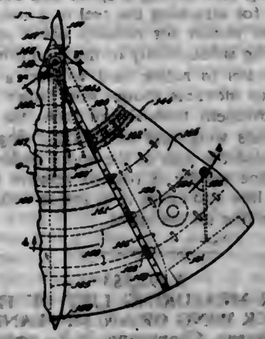
to the adjacent skin of the wing and having an angular orientation that is continuously responsive to the direction of local flow of air adjacent the skin of the wing in the region of influence of said stagnation point, and means controlled by said angularly movable means providing an output variable as a direct function of said angular movement.

3,092,354
AERODYNAMIC SYSTEM AND APPARATUS
Alberto Alvarez-Calderón, 3449 Rambow, Palo Alto, Calif.
Filed Aug. 8, 1960, Ser. No. 48,038
27 Claims. (Cl. 244—10)



2. In an airplane having wings the improvement comprising force producing cylinders in combination with flaps, said cylinders and flaps being positioned on the trailing edges of said wings, means for energizing said cylinders, means for lowering said flaps while elevating said cylinders into the relative air flow of said airplane whereby said airplane is rendered capable of high-lift such as that needed for vertical and for short takeoff and landing.

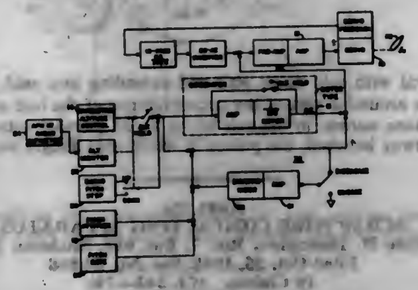
3,092,355
VARIABLE-WING SUPERSONIC AIRCRAFT
Owen Brown, 5013 Exposition Blvd., Los Angeles 16, Calif.
Filed Apr. 27, 1948, Ser. No. 23,642
9 Claims. (Cl. 244—43)



1. In an aircraft having a main body structure and right and left extensible, retractable wing members for its primary airborne sustentation, that modification, in combination, wherein an outwardly disposed segment of each such wing member, including the leading edge thereof, is of permanently rigid construction and wherein a flexible, fluidly inflatable, deformingly deflatable segment thereof—including an outermost skin portion thereof—is connected to said rigid segment.

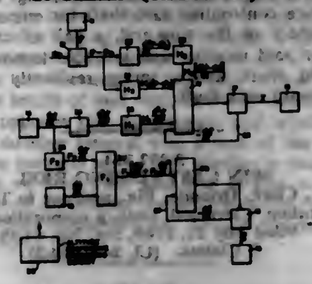
3,092,356
CONTROL APPARATUS
Robert F. Helfinstine, Anoka, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Dec. 4, 1959, Ser. No. 857,421
15 Claims. (Cl. 244—77)

15. In flight altitude maintaining apparatus for an aircraft having movable control elements to change altitude thereof and a servomotor means operating said control elements, in combination: a radar altimeter responsive first signal generator, thus responsive to one characteristic of altitude, generating a signal when the craft departs a predetermined extent from a desired altitude and connected to said servomotor means for operation thereof; a barometric altimeter responsive second signal generator, thus responsive to another characteristic of altitude, adapted for operating said servomotor means in-



dependently of said radar altimeter responsive generator, said barometric altimeter responsive signal generator being disconnected from said servomotor means during connection of said radar altimeter responsive generator to said servomotor means; and means responsive to a predetermined magnitude of radar altimeter sensed change in altitude disconnecting said first signal generator from said servomotor means and connecting said second signal generator to said servomotor means for maintaining craft altitude.

3,092,357
AUTOMATIC BLIND LANDING SYSTEMS FOR AIRCRAFT
Thomas Wright Prescott, Ravensden, and Frank Herbert Scrimshaw, Farnborough, England, assignors, by mesne assignments, to the Minister of Aviation in Her Majesty's Government of the United Kingdom of Great Britain and Northern Ireland, London, England
Filed July 11, 1962, Ser. No. 42,044
16 Claims. (Cl. 244—77)

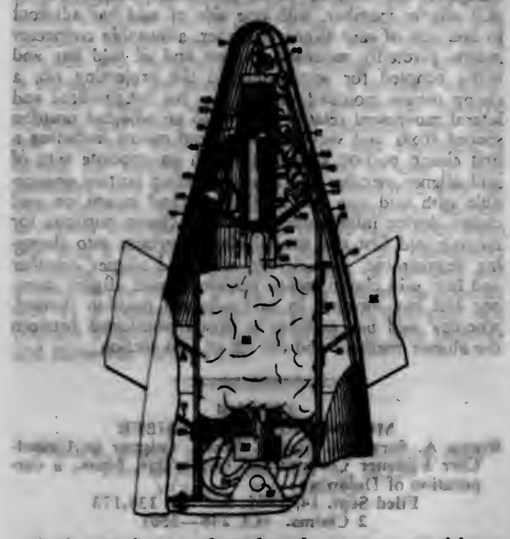


1. An aircraft automatic landing system having automatic pilot means including heading selector means for selection of a desired heading, signal controlled means for applying rudder, signal controlled means for applying aileron, rudder signal means affording a signal dependent on heading displacement from a selected heading and operative together with said rudder applying means to apply rudder at a rate proportional to such heading displacement, and aileron signal means affording two aileron signal components proportional respectively only to rate of change of bank angle and to rate of change of heading and being operative together with said aileron applying means to apply aileron; the system also having height responsive control means for rendering said automatic

pilot means operative at and below a predetermined low height to remove without undue banking any heading displacement from a selected heading and maintain substantial rudder applied at touch down.

8. An aircraft automatic landing system including signal controlled rudder applying means, signal controlled aileron applying means, means for selecting a desired heading, rudder signal means, aileron signal means and height responsive control means whereby at and below a predetermined low height just prior to touch down said rudder applying means are operative under the control of at least one signal from said rudder signal means to apply rudder at a rate dependent upon heading displacement from a selected heading, and said aileron applying means are operative to apply aileron under the control only of a signal from said aileron signal means which is dependent upon the sum of rate of change of bank angle and rate of change of heading displacement from a selected heading, said height responsive control means thus operative to remove without undue banking any heading displacement from a selected heading and maintain substantial applied rudder at touch down.

3,092,358
PARACHUTE PACK OPENER
James H. Potts, Jr., Silver Spring, and John L. Baldwin, Jr., Hyattsville, Md., assignors to the United States of America as represented by the Secretary of the Navy
Filed Sept. 20, 1961, Ser. No. 140,174
7 Claims. (Cl. 244—147)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A parachute pack and pack opener comprising a parachute housing, a parachute packed within said housing, an explosive pack opener, a pack opener housing secured to said opener, means detachably securing said opener housing to said parachute housing, said opener comprising a hollow sleeve, an explosive fitting secured to and extending within said sleeve, a bell-shaped member, a solid stem secured to said bell-shaped member, said stem extending within said sleeve, a plurality of tie-lines secured to said bell-shaped member and to said opener housing, said tie-lines being of such length so as to allow translation of said sleeve along said stem but preventing disengagement of said stem and said sleeve, means detachably securing said bell-shaped member to said parachute whereby when the explosive is detonated said opener housing is detached from said parachute housing, said sleeve is translated along said stem until said tie-lines tighten and said parachute is forcibly extracted from said parachute housing by the force of the explosion.

3,092,359
INFLATABLE KITES
Russell A. Pohl, Sioux Falls, S. Dak., assignor to General Mills, Inc., a corporation of Delaware
Filed Oct. 10, 1961, Ser. No. 144,166
5 Claims. (Cl. 244—154)



1. An inflatable kite formed from gas impervious material comprising an inflatable body portion, means for introducing gas into said body portion, a flexible sleeve for frictionally engaging said body portion when said body is inflated, and a plurality of inflated airfoils attached to said sleeve and extending longitudinally of said body portion.

3,092,360
POSITIVE LOCKING FAIRLEAD FOR ELECTRICAL CABLES
Walter L. Cook, Seattle, and Richard B. McKelvey, Bellevue, Wash., assignors to The Boeing Company, Seattle, Wash., a corporation of Delaware
Filed Feb. 8, 1962, Ser. No. 171,921
6 Claims. (Cl. 248—56)



1. The combination of a multisocket fairlead and a cooperating locking member for securing a plurality of elongated elements in transversely spaced relationship in an apertured object through which they extend, said fairlead comprising a plurality of interconnected circumferentially distributed pairs of members resiliently yieldable apart circumferentially to accommodate elongated elements pressed radially inwardly between the members of the respective pairs, and securing means carried at the outer ends of at least certain of said resiliently yieldable members, said securing means including elements resiliently urged radially outwardly but yieldable inwardly for insertion into the aperture substantially independently of resilient yielding action of said members, and said cooperating locking member comprising a plurality of substantially parallel extensions each having an end secured to a common base, said extensions being insertable between adjacent pairs of said members in abutment to the respective securing means thereby to prevent inward yielding of said securing means.

3,092,361
FAIRLEAD FOR ELECTRICAL CABLES
Walter L. Cook, Seattle, Wash., assignor to The Boeing Company, Seattle, Wash., a corporation of Delaware
Filed Feb. 8, 1962, Ser. No. 171,922
9 Claims. (Cl. 248—56)



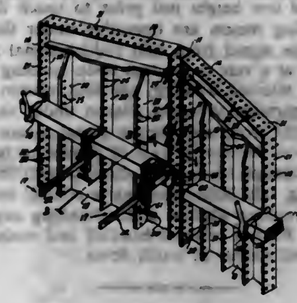
1. A fairlead for supporting a plurality of elongated elements in transversely spaced relationship in a panel opening through which they extend, comprising a plurality of circumferentially spaced pairs of resiliently acting gripping arms having inner end portions interconnected and having outer end portions projecting toward the periphery of the fairlead and resiliently deflectable apart circumferentially of said periphery to pass an elongated element therebetween, a plurality of locking elements releasably engageable with the edge of said opening to maintain positioning of the fairlead therein, and resiliently acting supports for said locking elements connected to the arms and urging the locking elements outwardly against the edge of the opening in respective spaces between pairs of gripping arms while permitting resiliently inward yielding thereof to allow forcible disengagement of the locking elements from the panel.

3,092,362
TANDEM SEAT ARRANGEMENT FOR BICYCLES
Edward A. Walsh, Wichita Falls, Tex.
(1334 Stratford, Parker, Fla.)
Filed May 1, 1961, Ser. No. 106,608
3 Claims. (Cl. 248—291)



1. A conversion kit for converting a single passenger bicycle, having a frame, into a two passenger bicycle for riding in tandem relation, a seat post socket positioned in the frame of said bicycle; said kit comprising a seat post adapted to seat in said seat post socket, said post being transversely apertured on one end thereof, said apertured end of said seat post having serrated faces on the opposite sides thereof with said aperture being located centrally of said serrated faces, a pair of apertured seat support bars, said seat support bars each having a serrated face on the apertured end thereof so the respective apertures will be located centrally of said serrated face, said serrations of said seat support bars being complemental with said serrations formed on said seat post, said apertures in said seat support bars being registerable with said aperture in said seat support post, and screw-threaded means positioned within said apertures to hold said seat support bars in binding engagement with said serrated face of said seat post.

3,092,363
ADJUSTABLE ALIGNER CLAMP FOR CONCRETE FORMS
Lyde S. McCracken, Des Moines, Iowa, assignor to Economy Forms Corporation, Des Moines, Iowa, a corporation of Iowa
Filed June 8, 1961, Ser. No. 115,691
2 Claims. (Cl. 248—316)



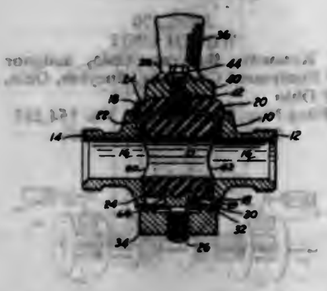
1. An adjustable clamping device for holding a section of a concrete form unit in a desired spaced relation with an aligner member having a portion thereof arranged opposite said section and other longitudinally spaced portions thereof anchored to said section, said section including a laterally projecting rib, said device including an elongated bar adapted to be positioned transversely of said aligner member, with one side of said bar adjacent to one side of said aligner member, adjustable connector means pivotedly mounted on one end of said bar and being adapted for securement to the projecting rib, a clamp means mounted on said bar for longitudinal and lateral movement relative thereto to an adjusted position spaced from said section, said clamp means including a first clamp portion engageable with an opposite side of said aligner member and a second clamp portion engageable with said one side of the bar, and means on said clamp device intermediate said two clamp portions for moving said first and second clamp portions into clamping engagement, respectively, with said aligner member and bar, said clamp means anchoring said aligner member and bar member in said adjusted position thereof, whereby said bar member is firmly positioned between the aligner member and the rib of said section.

3,092,364
MOUNTING FOOT MEMBER
Bruno A. Serafinas, Saugus, Mass., assignor to United-Carr Fastener Corporation, Cambridge, Mass., a corporation of Delaware
Filed Sept. 14, 1961, Ser. No. 138,173
2 Claims. (Cl. 248—350)



1. A mounting foot member for a device such as a telephone base unit, said foot member having a cushion body of flexible material for supporting a telephone base unit thereon and a fastener member assembled with said cushion body, said fastener member having a base portion located in a recess in said cushion body, a tubular nut member extending from said base portion into an aperture in the cushion body and snap fastener leg members also extending from said base portion into apertures in said cushion body, said leg members having yieldable portions extending beyond a top face of said cushion body to snap through apertures in a telephone base unit.

3,092,365
PLUG VALVE
Herman E. Knappe, Cedar Rapids, Iowa, assignor to Cherry-Burrell Corporation, Cedar Rapids, Iowa, a corporation of Delaware
Filed June 23, 1960, Ser. No. 38,339
3 Claims. (Cl. 251—309)



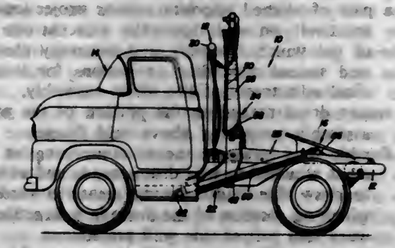
1. In a sanitary plug valve having a main body with a frustum-shaped seat therein and a flow passage extending through said body transversely to said seat, a valve plug adapted to be turnable in said seat, said plug comprising a hollow core of rigid, strong material, said core including parallel spaced apart end walls joined by a thin side wall the general exterior configuration of which is substantially the same as the plug, a shoulder extending from each of said end walls, rubber-like material covering and filling said core and extending over each end wall and surrounding each of said shoulders, a handle for turning said plug secured to one of said shoulders, and plug retaining means combined with the other shoulder, said plug having a passageway adapted to register with the flow passage in said valve body when said plug is turned to the open position, the passageway extending completely through one side of the plug and defined on one side by the valve body and on the opposite side by a central straight portion with diverging side portions whereby said plug can be used in both two-way and three-way valve bodies.

3,092,366
PNEUMATIC JACK
Frank R. Kobee, 1839 Macomber St., Toledo 6, Ohio
Filed Sept. 15, 1960, Ser. No. 56,256
3 Claims. (Cl. 254—93)



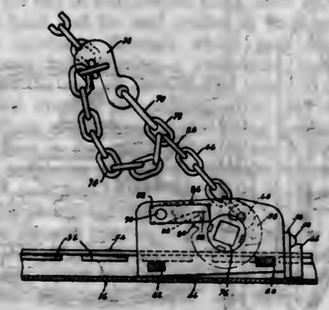
3. A pneumatic jack comprising an upper wall, a lower wall substantially parallel to said upper wall, a peripheral wall joining said upper wall and said lower wall to provide an air chamber, a tubular member extending upwardly from said upper wall, an air passageway extending longitudinally in said tubular member communicating with said air chamber and a plurality of fiber members secured to the upper surface of said upper wall.

3,092,367
FOLDING BOOM
Robert M. Selby, Nicollet, Minn.
Filed July 11, 1961, Ser. No. 123,205
9 Claims. (Cl. 254—139.1)



1. In combination with a truck tractor having a forward cab, a truck frame and a cab guard mounted rearwardly of said cab on the truck frame, a boom assembly comprising, folding upper and lower pivoted sections of a boom means pivotally mounted on the rear end of said truck frame for overhanging projection rearwardly and upwardly from the truck frame in a rigidly extended load sustaining position, power operated means mounted on the truck frame and operatively connected to the boom means lower section for pivotally retracting the boom means in an extended condition against the cab guard and subsequently operative in cooperation with the cab guard to further retract the boom means into a folded condition with the pivot means of said sections disposed adjacent said cab guard.

3,092,368
WINCH MECHANISM FOR VEHICLE TIE DOWN
Thomas E. McDowell, Oak Park, Ill., and Clifford C. Whiteford, Southfield, Mich.; said McDowell assignor to Brandon Equipment Company, Inc., Chicago, Ill., a corporation of Illinois, and said Whiteford assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Oct. 17, 1960, Ser. No. 63,106
3 Claims. (Cl. 254—164)



1. In tie down apparatus adapted for securing a vehicle to a freight car,
a channel member having:
a bottom wall,
side walls,
and an opposed inwardly extending flange on each of said side walls in spaced parallel relation to each other and to said bottom wall,
said flanges providing a plurality of uniformly longitudinally spaced projections in transversely aligned pairs,
a winch assembly including opposite sides disposed

between said flanges and projecting thereabove and with the winch normally bottomed in slidable relation on said bottom wall whereby the winch is adapted to be guided longitudinally along said channel member,

a pair of aligned opposite anchor projections respectively on said side walls adjacent one end of the winch assembly and normally clearing said spaced depending projections for longitudinal adjustment of the winch assembly,

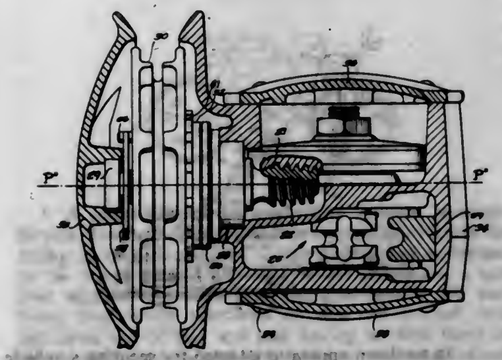
rotary drum means on the portion of the winch assembly projecting above said flanges,

flexible load-fastening means comprising an element attached to said drum means and adapted to draw the load-fastening means toward the winch on rotation of the drum in a direction toward said pair of side wall projections,

said side wall projections being engageable between respective longitudinally spaced pairs of said channel projections whereby to anchor the winch assembly against longitudinal displacement along the channel member after said flexible element attached to a vehicle has been tightened by said rotation of the drum,

and means adjacent to the opposite end of the winch assembly engageable under certain of the spaced projections and holding such opposite end of the winch assembly substantially against upward displacement during fastening element tightening rotation of the drum, said drum being mounted on an axis closer to said one end of the winch assembly than to said opposite end of the winch assembly, so that under tension of said fastening element pulling upwardly against said drum said opposite end of the winch assembly is deflected downwardly against said bottom wall.

3,092,369
HAND-OPERATED CHAIN HOIST
Charles Carroll, Danville, Ill., assignor to Duff-Norton Company, Pittsburgh, Pa.
Filed Jan. 6, 1960, Ser. No. 548
5 Claims. (Cl. 254—170)



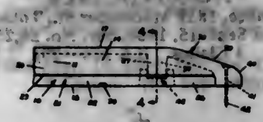
1. A manually operated hoist comprising, in combination, a housing, a sprocket, a chain wheel, a sprocket drive shaft, a chain wheel drive shaft, the sprocket and chain wheel shafts being at right angles to each other, a screw-type gear assembly having a single screw-type pinion and a single screw-type gear, the screw-type pinion being attached to the end of the chain wheel drive shaft and the screw-type gear being in mesh with said pinion and attached to the sprocket drive shaft, a hanging hook secured to the upper portion of the housing and mounted therein for rotation about a vertical axis, the chain wheel drive shaft being oriented between the hook and the sprocket drive shaft, the foregoing elements being oriented so that one plane passed through the hook vertical axis and perpendicular to the sprocket drive shaft would bisect the sprocket, and another plane passed through the hook vertical axis and perpendicular to the chain wheel drive shaft would pass through the meshing area between the screw-type pinion and screw-type gear whereby the hoist is balanced throughout the range of static and dynamic loading while the load and drive are applied in perpendicular planes.

3,092,370
WINCH UNIT
Harry M. Kennedy, Bucyrus, Ohio, assignor to The Superior Equipment Company, Bucyrus, Ohio, a corporation of Ohio
Filed Nov. 22, 1961, Ser. No. 154,281
9 Claims. (Cl. 254—185)



1. A winch unit comprising a shaft continuously driven in one direction, a drum mounted on said shaft for relative rotation, a brake disc and a clutch disc mounted on said shaft adjacent said drum with the clutch disc disposed between said drum and said brake disc, means for selectively engaging the brake disc or the clutch disc or for releasing both discs, said brake disc being carried on the shaft for relative rotation, said clutch disc being carried on the shaft for relative rotation by means of planetary gearing, said planetary gearing comprising a sun gear fixed to the shaft, a surrounding internal gear carrying the clutch disc, and planetary pinions between the two gears, said planetary pinions being carried by pins which extend therefrom in opposite directions and mechanically connect the brake disc to the cooperating drum as a unit.

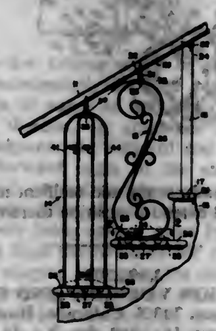
3,092,371
HIGHWAY SAFETY GUARD RAIL
Vagn A. Knudsen, North Burnaby, British Columbia, Canada, assignor to Graybar Precast Limited, British Columbia, Canada, a corporation
Filed Dec. 27, 1960, Ser. No. 78,439
3 Claims. (Cl. 256—13.1)



1. A highway safety guard rail comprising a plurality of sections disposed in end to end relation upon a road surface, each section having sloping side walls which diverge downwardly to a broad road engaging base, said side walls of each section defining a substantially inverted V-shaped channel, a transverse wall at each end of each section having its lower edge spaced above the base and having an inwardly inclined inner face, locking blocks supported upon the road surface and connecting the adjoining ends of the sections, each of the locking blocks being partly housed within the inverted V-shaped channels of adjoining sections and having a groove in which the adjoining transverse walls of the sections are received said locking blocks each having inclined side and grooves

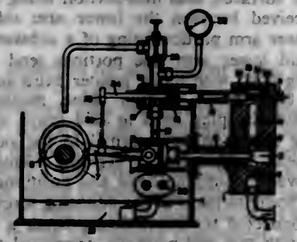
faces which coact with the abutting inclined faces on adjoining sections to align said sections and wedge them together against longitudinal lateral displacement.

3,092,372
RAILING
Harry T. Cougle, 1101 Herbert St., Philadelphia 24, Pa.
Filed Feb. 17, 1961, Ser. No. 89,964
2 Claims. (Cl. 256—22)



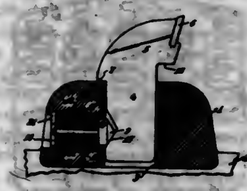
1. A railing for an indoor stairs having a flight of steps with treads having holes formed therein which received the dowel pin at the bottom of wood spindles, comprising a wood handrail, an ornamental ironwork scroll, a base plate fixedly connected to the bottom of said scroll and covering said holes in the tread of the step, said base plate having a pair of screw holes formed therein, a pair of screws positioned in said screw holes and fastening said base plate to said tread, an adapter tube fixedly connected to the top of said scroll, the top surface of the adapter tube fitting flush against the bottom of said handrail, said scroll having an adapter opening formed therein leading to the bore of said tube, and a screw positioned in said adapter hole and said tube and fastening said tube and scroll to said handrail.

3,092,373
HOMOGENIZER
Johannes B. van der Wheden, Nieuweramstel, Netherlands, assignor to Gebr. Stork & Co's Apparatenfabriek N.V., Amsterdam, Netherlands, a corporation of the Netherlands
Filed Feb. 23, 1960, Ser. No. 10,151
Claims priority, application Netherlands Feb. 23, 1959
2 Claims. (Cl. 259—96)



1. An emulsion homogenizer comprising a casing having a homogenizing chamber therein, an annular homogenizing member having a seat on one end thereof and being stationarily mounted in said chamber, said casing having an outlet opening therein through which said annular homogenizing member opens, a follower slidable in said casing in alignment with said homogenizing member and bearing against said seat, said follower being movable away from said seat under liquid pressure in said chamber exerted on said follower, a counter pressure exerting means mounted on said casing in spaced relationship thereto and including an axially movable pressure transmitting member, a removable coupling member between said pressure transmitting member and said follower, and weak spring means in said pressure exerting means urging said pressure transmitting member toward said coupling member with a force only sufficient to hold said follower on the seat of said homogenizing member when no liquid pressure in said chamber is exerted on said follower, whereby, when no hydraulic pressure is exerted on said pressure transmitting member, said coupling member can be removed by moving it against said spring means for separating it from said follower, and said follower can be slid out of said casing.

3,092,374
RESILIENT ENGAGEMENT DEVICE
Claude B. Krekeler, Cincinnati, Ohio, assignor to The Cincinnati Mine Machinery Co., Cincinnati, Ohio, a corporation of Ohio
Filed Feb. 6, 1958, Ser. No. 713,580
14 Claims. (Cl. 262—33)

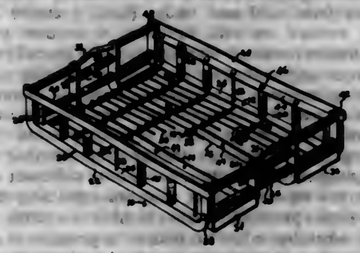


1. In a structure of the class described, a member adapted to be provided with a resilient engagement element, and a self-contained, pre-assembled resilient engagement structure comprising a head portion with a rearwardly extending control shaft of smaller cross sectional dimension and a washer element perforated to receive slidably the end of said control shaft, there being between the said head and the said washer at least one body of resilient substance through which said control shaft passes, said body having a cylindrical outer surface, means on the end of said control shaft to prevent its withdrawal through the perforation of said washer, the said resilient engagement device being located within a bore formed in the said member in which said body of resilient substance fits tightly enough to minimize entrance of fines and liquid within said bore, at least one of the aforementioned elements having a recess into which a portion of said body of resilient substance may move under pressure and means for holding the said resilient engagement device within said bore comprising means engageable with said member and bearing upon said washer.

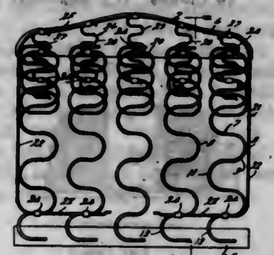
3,092,375
HEAT TREATING BASKET
Leon C. Bixby, 234 Elm St., Wellington, Ohio
Filed Jan. 27, 1961, Ser. No. 85,390
12 Claims. (Cl. 263—47)

6. In a heat treating basket, a support structure including a plurality of spaced substantially parallel support rods, a plurality of substantially parallel wire elements extending normal to said support rods, a plurality of connecting means on said wire elements encircling each of said support rods for fixing the rods thereto and

spacing means adjacent each of said connecting means including abutment means integrally added to said support rods which limit movement of the wires along the length of the rods.



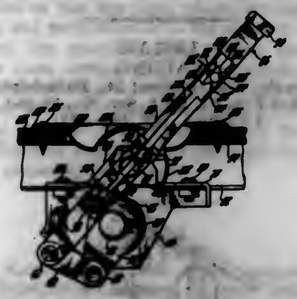
3,092,376
SPRING CUSHION CONSTRUCTION
Harvey Cash, Jr., Los Angeles, Calif., assignor to No-Sag Spring Company, Detroit, Mich., a corporation of Michigan
Filed July 6, 1961, Ser. No. 122,227
6 Claims. (Cl. 267—102)



1. In a spring cushion construction forming the back of a seat, a frame, a plurality of load bearing spring strips having edge loops joined by transverse straight portions spanning said frame, an arcuate border wire spaced from the top edge of said spring strips, filler sinuous spring strips applied to the ends of the load bearing spring strips for extending the lengths thereof different amounts to engage the arcuate border wire, and means securing the sinuous spring strips to the end loop of the load bearing spring strips.

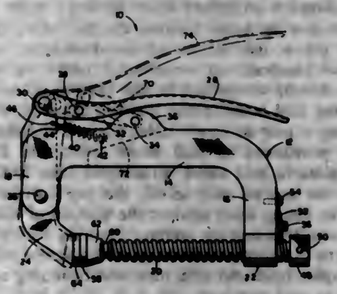
3,092,377
WINDOW REGULATOR
Alfonsas Arlauskas, Livonia, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Apr. 21, 1960, Ser. No. 23,741
4 Claims. (Cl. 268—121)

1. The combination comprising, a support, a vehicle window mounted on said support for movement between opened and closed positions, an operating member swingably mounted on said support, means operatively connecting said member to said window to move said window upon swinging movement of said member, a handle mounted on said member for swinging movement therewith as a unit and linear movement relative thereto between extended and retracted positions, resilient means biasing said handle to said extended position thereof wherein said handle is manually operable to swing said handle and member as a unit and thereby move said window, latch means operative upon movement of said handle to said retracted position thereof to retain said handle in said position against the action of said resilient means, and means operative upon movement of said handle to a position slightly beyond said retracted position to release



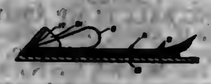
said latch means and permit said resilient means to move said handle to said extended position thereof.

3,092,378
COMBINATION VISE GRIP AND C-CLAMP
Albert W. Aulner, 703 S. Colorado, Hastings, Nebr.
Filed Sept. 16, 1960, Ser. No. 56,547
3 Claims. (Cl. 269—143)



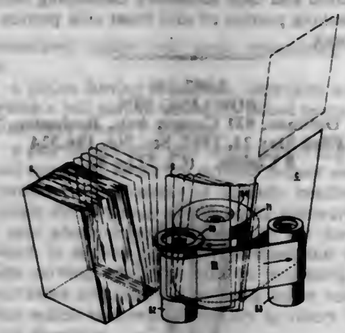
1. In a self-locking lever actuated clamp, the combination which comprises a C-shaped frame having a back with upper and lower arms, an adjusting screw threaded in the extended end of said upper arm, a gripping element mounted on said adjusting screw, said frame having a slot with parallel side walls therein extending through said lower arm portion and also through an adjacent portion of the back of said frame for dividing said lower arm and said portion of said back into two side portions, a movable clamping head having a mid-portion with parallel side surfaces, said mid-portion being snugly and slidably received between the lower arm side portions and said lower arm portion being of a substantial length whereby said lower arm side portions tend to provide the clamping head with much greater extra support than would the back frame portion alone, means pivotally attaching said clamping head to said lower arm portion for pivoting about an axis normal to the sides of said clamping head midportion, a gripping element carried by said movable clamping head and positioned to coact with the gripping element of the adjusting screw, a handle pivotally connected to the clamping head, a toggle link positioned with one end pivotally connected to the back of the frame and with its other end pivotally connected to said handle, said axis of pivoting of said clamping head being disposed at least as close to a line through the axis of said adjusting screw as to said handle-to-clamping-head pivotal connection, whereby there is no power loss across said clamping head.

3,092,379
DEVICE FOR FOLDING SHEETS OF PAPER AND THE LIKE
John R. Collier, Box 116, Moro, Ark.
Filed Apr. 19, 1962, Ser. No. 188,669
6 Claims. (Cl. 270—61)



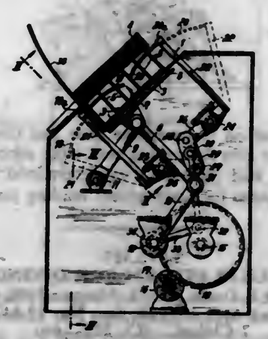
1. A device for folding sheets of paper and the like comprising a substantially flat base adapted to receive a stack of sheets of paper of substantially the same size to be folded thereon, an abutment member attached to said base adjacent the forward end of said base for abutting the forward edges of the stack of sheets of paper, a pair of vertical members attached to said base adjacent opposite sides of said abutment member, said vertical members being spaced apart by a distance only slightly greater than the width of the sheets of paper to be folded and adapted to receive the sheets therebetween in lateral alignment, and means adjacent said vertical members to provide a funnel-like opening for guiding the rearward edge of a sheet to be folded into alignment over the forward edge of the sheet.

3,092,380
APPARATUS FOR STACKING CUT FORMS AT HIGH SPEED
Theodore H. Anderson and Richard H. Harrington, Vestal, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Oct. 3, 1960, Ser. No. 60,019
12 Claims. (Cl. 271—71)



1. In an apparatus for stacking cut forms in a pocket, the combination of guide means for guiding each form in a predetermined path, means for advancing the forms successively forward along said path at one velocity, and endless means having closely arranged movable surfaces providing a nip disposed adjacent the terminal end of said guide means to snubbingly intercept each form as it exits without obstruction or interruption from the guide means and reduce its forward component of movement to zero while concurrently moving such form generally sidewise and on end and in a direction generally at right angles to its forward component of movement at a velocity slower than said one velocity toward the pocket thereby to cause successive forms to move in overlapping shingle-like relation toward the pocket and be caused to stack on such end on the pocket.

3,092,381
DEVICE FOR PILING UP SHEETS, BOOKLETS OR THE LIKE
Günther Schick, Neuffen, Wurttemberg, Germany, assignor to Hans Sickinger, Bloomfield Hills, Mich.
Filed Sept. 1, 1960, Ser. No. 53,440
Claims priority, application Germany Sept. 3, 1959
4 Claims. (Cl. 271—87)

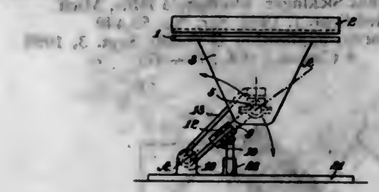


1. A device for piling up sheets, booklets or the like having a predetermined width wherein the sheets or the like are successively added to the bottom of the growing stack, comprising a piler, means for alternatively raising said piler in a piling direction to a raised position and lowering in the opposite direction to a lowered position, pile holder means, means for reciprocating said pile holder means transversely to said piling direction in accordance with said alternating raising and lowering of said piler, and feed means for successively feeding said sheets or the like in a generally horizontal feeding direction transversely to the extent of said predetermined width and to said piling direction above said piler in its lowered position, said piler comprising a set of pins extending in said piling direction and arranged to form a first plurality of rows spaced apart in a direction at right angles to the direction of movement of said feed means and a second plurality of rows spaced apart in the direction of movement of said feed means, said pins having upper ends for supporting said sheets or the like in said raised position and lower ends fastened on a common base, said pile holder means having spikes extending generally transversely to said piling direction and between said second plurality of rows, said feed means comprising a plurality of conveyor members arranged between said first plurality of rows, the total spacing between said conveyor members being sufficient to extend over substantially said entire predetermined sheet width.

3,092,382
JARRING MACHINE FOR FEEDING AND STRAIGHTENING STACKS OF PAPER
Gerhard Busch, Heidenkampsweg 48, Hamburg, Germany, and Willi Leuffer, Hohe Liedt 56, Hamburg-Langenhorn, Germany
Filed Aug. 29, 1961, Ser. No. 135,112
Claims priority, application Germany Sept. 1, 1960
16 Claims. (Cl. 271—89)

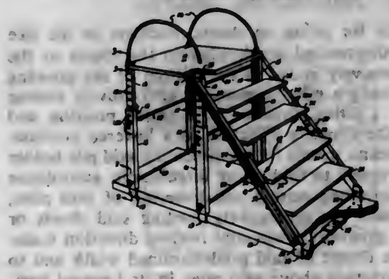
1. A jarring and feeding machine for straightening a stack of paper and transferring the straightened stack to a subsequently arranged paper processing machine comprising in combination: a table receiving an irregular stack of paper and having backing means for the paper arranged thereon, said table being resiliently supported on a table supporting plate; power operated means jarring said table relative to said table supporting plate; a universal joint carrying said table supporting plate for tiltable adjustment of said table supporting plate and said

table about two axes extending normally to each other; a rocker arm mounted with one end on the machine base for pivoting movement around a horizontal axis and serving to rotatably support said universal joint; power



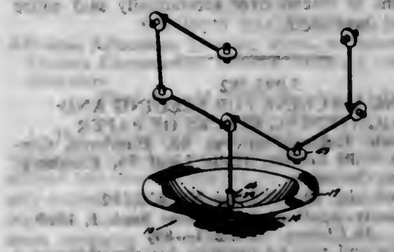
means mounted on the machine base and tiltably engaging said rocker arm for raising said table supporting plate together with said table to a predetermined height, and lowering the same to a convenient loading position.

3,092,383
ADJUSTABLE PLATFORM FOR DIVING BOARD
Bernard J. Dunn, Rte. 1, Morgan Hill, Calif.
Filed Apr. 4, 1960, Ser. No. 19,842
7 Claims. (Cl. 272—66)



6. In combination, a diving board and a vertically adjustable platform comprising a plurality of supports including vertically adjustable members, means for adjustably clamping such supports at various positions longitudinally along said board, and a diving platform mounted upon said vertically adjustable members.

3,092,384
BALANCING GAME
William L. Herse, 5 Elmwood Road, White Plains, N.Y.
Filed Apr. 5, 1960, Ser. No. 20,123
3 Claims. (Cl. 273—1)



1. A balancing skill game comprising a balanceable, rockable base having stable equilibrium and a plurality of identical, elongated playing elements having selective multi-position attachment means at their ends, said rockable base having an attachment means engageable with at least one end of any of said playing elements for securing said playing element thereto, the attachment means of said playing elements being operative to effect an unsymmetrical configuration of said elements by selective sequential attachments of playing elements to each other, wherein the center of gravity of said configuration is capable of maintaining said base in a balanced condition.

3,092,385
BOWLING BALL BUMP ABSORBERS
Jeff Corydon II, Akron, Ohio, assignor to Hush Bumper Service, Inc., Akron, Ohio
Filed Jan. 30, 1961, Ser. No. 85,858
9 Claims. (Cl. 273—47)



1. A bowling ball bump absorber comprising
(*a*) a hollow casing of relatively stiff, rubber-like material having an internal air chamber, said casing comprising
(*b*) a rear portion provided with means to mount said casing to an upstanding ball stop support and
(*c*) a forwardly-facing front wall with the air chamber located therebetween,
(*d*) said front wall comprising a protruding conical projection substantially terminating in a peak for initial ball contact and
(*e*) at least one portion flanking said peak on the lower side thereof set back from said peak and forming a secondary ball contact area
(*f*) with said protruding conical projection being capable of inward flexure under relatively heavy impact of an oncoming ball to cause primary cushioning contact of the ball at the peak of said conical projection and then secondary cushioning contact of the flanking portion of said front wall portion below said peak.

3,092,386
BOWLING PIN
Fred C. Dettmann, 821 Garson Ave., Rochester, N.Y.
Filed May 21, 1962, Ser. No. 196,324
8 Claims. (Cl. 273—82)



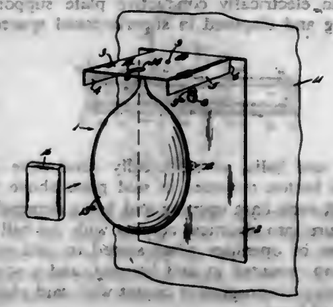
1. A bowling pin of composite construction comprising a high strength plastic core having a tapering outer surface extending to the region of smallest diameter of the neck of the pin and enlarging continuously from the lower end of said neck region, and having an external continuously further enlarging flaring configuration at the upper end above said neck region conforming substantially to the upper neck and tip end of a pin, and a high strength plastic shock ring disposed in the region of greatest diameter of the body portion of the pin having an external contour corresponding with the external contour of a standard pin in said region, and filler material of lesser density than the core and shock ring disposed about the body portion of the core below the upper end flaring configuration and within the shock ring, and said core upper end flaring configuration, shock ring and filler material having an external configuration closely corresponding to the shape of a standard pin.

3,092,387
BASKET BALL GAME
Adelbert Wagner, Burlington, N.J., assignor to J. Chein & Company, Burlington, N.J., a corporation of New York
Filed Apr. 20, 1962, Ser. No. 189,858
1 Claim. (Cl. 273—95)



A simulated basket ball game comprising, in combination:
(*a*) a platen having a smooth, unbroken surface over which a ball may be manually rolled rearwardly from a forward player's position,
(*b*) a pair of opposed side walls supporting the platen and extending above the surface thereof over a major portion of its length, to initially confine the ball within the platen area during its rearward travel,
(*c*) said platen having a generally flat forward area which is slightly upwardly inclined and a rear section curving upwardly with an increasing degree of curvature and terminating at its upper end in a section which is curved forwardly to direct the ball in said direction,
(*d*) said upper end section being rearwardly curved in transverse section so as to cause the rolling ball to remain generally in the central portion of the upper end section,
(*e*) a raised basket element above the forward end of the platen,
(*f*) a backboard on which the basket element is supported,
(*g*) an inverted U-shaped wire frame supporting the backboard,
(*h*) said side walls having openings receiving and supporting the lower ends of said frame and permitting forward and rearward movement thereof to an adjusted, fixed position,
(*i*) goal indicating means below the basket and including a lever engaged by the ball as it passes through the basket,
(*j*) and a counter actuated by said lever.

3,092,388
BALLOON GAME
Charles Wagenheim, 6074 Forrelena Drive, Los Angeles 46, Calif.
Filed Apr. 6, 1961, Ser. No. 101,111
3 Claims. (Cl. 273—102.1)



1. A portable game that can be stored in a compact form and comprising a foldable flat cardboard support for being secured to a positioning means and having a top flap movable to a position extending substantially normal to the remainder of said support, said top flap having a pair of edge flanges movable to a position extending downwardly therefrom to engage said support and aid said top flap in extending normally from the remainder of said support, a tack for engaging said support and protruding therefrom in the same direction as said top flap a distance below said top flap, a small article for being thrown at an object, and a plurality of balloons, said top flap having a balloon retaining section therein for engaging an inflated balloon to position a said balloon adjacent said tack by gravity so that the balloon can be burst by throwing said article at the balloon to force it against said tack when struck by said article.

3,092,389
GAME DISC
Joseph W. Smith, 1309 Pritchard Ave., Winnipeg 4, Manitoba, Canada
Filed Oct. 7, 1960, Ser. No. 61,223
1 Claim. (Cl. 273—128)

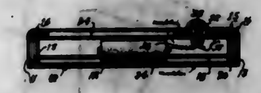


For use in playing a lawn bowling game, or the like, a disc comprising a substantially flat circular body formed from relatively light weight material, said body having a flat face at one side thereof, a concave face at the opposite side, and a convex peripheral edge on which it is adapted to be rolled, an insert of relatively heavy material embedded centrally in said one side of said body flush with said flat face thereof, and a shoulder-shaped handle provided centrally on and disposed entirely within the concavity of said concave face of said body to facilitate picking up thereof, said heavy insert at one side and the concavity at the opposite side of the body rendering the same unbalanced when standing on said convex peripheral edge whereby to laterally deflect the disc from a straight line path when rolled.

3,092,390
GAME DEVICE
Carl J. Super, 1531 Ave. G, Fort Madison, Iowa
Filed Apr. 13, 1961, Ser. No. 102,870
3 Claims. (Cl. 273—135)

3. In a game device, a housing of non-conductive material, a base of electrically conductive material mounted

in the lower portion of said housing, there being a plurality of spaced apart rows of openings in said base, a partition disposed between each of the adjacent rows and rising from said base, an electrically conductive ball member movable between each of the adjacent partitions and seatable in one of the openings of the associated row of openings, an electrically conductive plate supported in said housing and disposed in superimposed spaced rela-



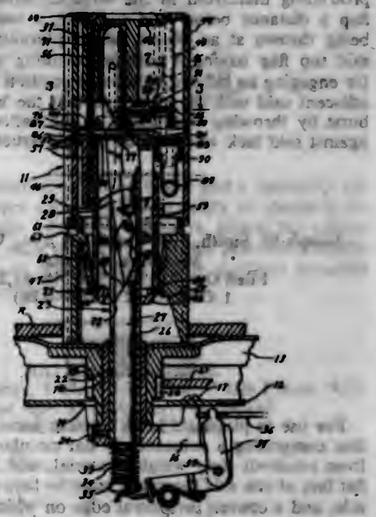
tion above said balls, an electrically conductive spring-biased push button mounted in said plate above and in registry with each base opening and being depressible by finger pressure into electrical contact with the ball of the adjacent row of openings when seated in said opening, a signal lamp mounted in said housing, and a source of electrical energy connected in circuit with said plate, said base, and said lamp.

3,092,391

SPINDLE ADAPTER

Donald John Hammerand, Chicago, Ill., assignor to Admiral Corporation, Chicago, Ill., a corporation of Delaware

Filed July 14, 1958, Ser. No. 748,217
2 Claims. (Cl. 274—10)



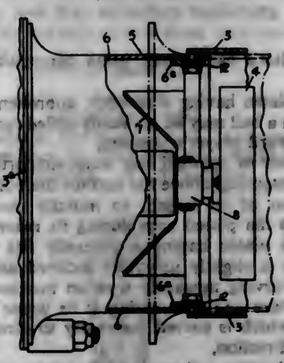
1. In a record player having a turntable and central spindle formed with a shoulder on which small center-hole records may be magazined and released to the turntable by a cyclically operated ejector at the shoulder, adapter means to provide magazine support for large center hole records from said spindle and derive motion from said ejector for release of successive lowermost magazined records to said turntable comprising a cylindrical body formed to receive the spindle therein and be thereby supported and to pass through large center hole records and with a pair of opposed magazine apertures upward of said body, a cap portion concentric with said body and disposed thereabove, two pivot pins, a magazine couple including a pivotally mounted record support member at each of the apertures, a record separator member pivotally mounted above each of said supports for movement relative to said apertures, each separator member and its corresponding support member being mounted on one of said pivot pins, the upper ends of said pins being supported by said cap portion, the lower ends of said pins being supported by said body, means to operate said supports and separators from said ejector comprising a guide member fixed to said body at the level of said ejector, a follower mechanism including a pair of cam pins slidably anchored to said guide member, a first closed cam slot on each of said supports, a second closed cam slot on each of said separators, said cam slots receiving said cam pins and being formed for moving said separators and/or said supports in opposite directions when said mechanism is moved, and a spring anchored to said guide and said follower mechanism to bias said mechanism to a normal position in association with said ejector between operations of said ejector for the supports of both of said magazine couples to be extended outward of the body to carry a plurality of records and the separators concurrently retracted within said body, said ejector when operated pressing on said follower mechanism and moving said separators outward of said spindle and between said bottom magazined record and remaining magazined records in advance of retraction of said supports within said magazine apertures to support the records above said bottom record before said bottom magazined record is released to said turntable by retraction of said supports within said magazine apertures.

3,092,392

LIQUID FUEL BURNING APPARATUS, A SEAL BETWEEN A STATIONARY CYLINDRICAL CASING AND A SUBSTANTIALLY CYLINDRICAL HOLLOW MEMBER

Richard Lucius Gold, Kings Heath, Birmingham, England, assignor to Joseph Lucas (Industries) Limited, Birmingham, England

Filed Nov. 14, 1960, Ser. No. 69,017
1 Claim. (Cl. 277—5)



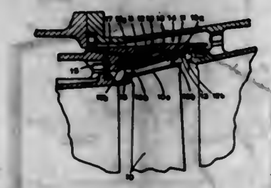
For use in a liquid fuel burning apparatus of the kind specified, means for effecting a seal between a stationary cylindrical casing and a substantially cylindrical hollow member supported coaxially with, and movable axially relative to, the casing, comprising in combination with the cylindrical casing and the substantially cylindrical hollow member, a sealing ring coaxial with, and in contact with a peripheral surface of, said casing, an intermediate ring situated coaxially between, and axially spaced from, said sealing ring and one end of said hollow member, means whereby said intermediate ring is pivotally connected to said hollow member on an axis in diametrical relationship to said hollow member, and means whereby said sealing ring is pivotally connected to said intermediate ring on another axis which is also in diametrical relationship to said hollow member, but which is at right angles to the pivot axis of said intermediate ring.

3,092,393

LABYRINTH SEALS

Frederick William Walton Morley, Leicester, and Wilfred Henry Wilkinson, Turnditch, Derby, England, assignors to Rolls-Royce Limited, Derby, England, a British company

Filed Jan. 8, 1959, Ser. No. 785,634
Claims priority, application Great Britain Jan. 20, 1958
15 Claims. (Cl. 277—16)



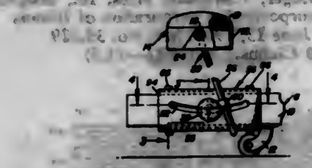
1. In apparatus comprising a rotor member and a stator member, the combination of a labyrinth seal carried by one of said members and which comprises a plurality of annuli of metal strip which are axially spaced apart from each other at their peripheral sealing edge portions, said portions being plane, and at least one sharp annular rib which is carried by the other of said members in sealing relationship with said annuli, said rib being more sturdily constructed so as to form its own path in the annuli if rubbing therebetween occurs.

3,092,394

AUTOMOBILE MECHANIC'S CREEPER WITH ADJUSTABLE HEADREST

Lawrence F. Burke, P.O. Box 231, Longview, Tex.

Filed May 23, 1962, Ser. No. 197,045
5 Claims. (Cl. 280—32.6)



1. An attachment for an automobile mechanic's creeper comprising, in combination, a pair of like adapter brackets each channel-shaped in cross-section and embodying a web provided with lateral lengthwise flanges, said flanges being adapted to straddle top and bottom surfaces of the creeper's platform and having setscrews for retaining the same in place, said web being provided with a longitudinal formed slot, a bolt and nut assembly, said nut being arranged against an interior side of the web, the shank extending through the slot and the head of the bolt being disposed on an exterior side of the web, clamps mounted on the respective bolts, each clamp having a socket member, a substantially U-shaped frame having a bight portion and lateral limbs, said limbs extending into and through the cooperating socket members, and a headrest swingably mounted on said bight portion.

3,092,395

CORRUGATED SHOPPING CART AND PARTS

Sol Mitty, Neil H. Mitty, and Jerald L. Mitty, all of 144—45 78th Ave., Flushing, N.Y.

Filed Dec. 14, 1961, Ser. No. 159,385
1 Claim. (Cl. 280—36)

A collapsible and reversible shopping cart comprising a box-like body having a rear panel, side panels and a sectional front panel, said panels having overlapping bottom flaps constituting a bottom panel, the sections of the front panel having overlapping long edges, said overlapping edges having aligned spaced slots, pronged pins in the slots for detachably fastening said overlapped edges to each other, a handle on the rear panel protruding upwardly therefrom, and a wheel assembly mounted on the bottom



panel, the mounting of the wheel assembly constituted by a fold in the flap on the rear panel adjacent the rear panel, the fold in the flap on the rear panel forming a triangular-shaped groove opening downwardly and wherein a tape closes the bottom opening in the groove.

3,092,396

TRAILER FRAME

Benjamin F. Thomas, R.D. 3, Greencastle, Pa.

Filed Mar. 10, 1961, Ser. No. 94,794
4 Claims. (Cl. 280—106)



1. A side beam for a trailer frame comprising an elongated channel deformed from a straight condition into an S shaped curve, and means for retaining the channel in deformed condition comprising a lower tension member attached to a flange of said channel along its concave edge from one end thereof, and an upper tension member attached to the other flange of said channel along its concave edge from the other end thereof.

3,092,397

VEHICLE LEVELIZING MECHANISM

Paul W. Dullaboun and Richard E. Hanslip, Toledo, Ohio, assignors to Mather Spring Co., Toledo, Ohio, a corporation of Ohio

Filed Sept. 11, 1959, Ser. No. 839,395
16 Claims. (Cl. 280—124)



1. A levelizing device for a vehicle having a leaf spring suspension between a wheel and a frame of the vehicle, the improvement comprising: movable means for engaging one end of said leaf spring, guide means for said movable means having a fixed downward and inward guide path relative to said frame and normally obliquely transverse of the line between the reaction points at the ends of said leaf spring so that movement of said movable means along said path varies the distribution of force on said leaf spring end and simultaneously changes the effective length of and the stress in said leaf spring, whereby decreasing the effective length of said spring increases the relative distance between said wheel and said frame and vice versa, reciprocating means for moving

said movable means along said guide means, and means responsive to a change in load on said vehicle to actuate said means for moving said movable means.

3,092,398
TRACTOR-TRAILER WHEEL STEERING ASSEMBLY
Gordon W. Droeske, 35560 Stevens Blvd., Eastlake, Ohio
Filed Aug. 18, 1961, Ser. No. 132,456
8 Claims. (Cl. 280—426)



3. A trailer for hauling heavy objects comprising a frame, a downwardly projecting trailer draw pin adapted to be locked in a tractor fifth wheel, pivotally mounted wheel means supporting said trailer spaced rearwardly of said draw pin, a cross frame, means pivotally connecting said cross frame to said draw pin, means on said cross frame adapted to lock said cross frame to such tractor fifth wheel for turning movement therewith, means interconnecting said wheel means and said cross frame for conjoint turning movement through a predetermined limited arc while not limiting complete turning movement of such tractor fifth wheel, frame means supporting said pivotally mounted wheel means, a cross bar connected to said frame means, and extensible links interconnecting the opposed ends of said cross bar and said cross frame member.

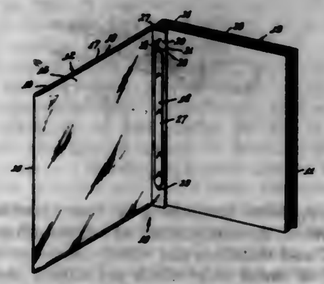
3,092,399
FIFTH WHEEL CONTROL DEVICE
Benjamin F. Hair, Dearborn, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Dec. 4, 1961, Ser. No. 156,888
4 Claims. (Cl. 280—438)



1. A truck, a trailer, and means for connecting said truck and trailer, said means including a fifth wheel pivotally mounted upon said truck, a kingpin carried by said trailer, latching means adapted to secure said kingpin to said fifth wheel, hydraulic stabilizing means interposed between said fifth wheel and said truck, said hydraulic means including a pair of hydraulic piston and cylinder assemblies situated fore and aft the pivot of said fifth wheel, the cylinders of assemblies being interconnected to a common valve device, said valve device having spring pressed valve means restricting fluid flow between said cylinders below a predetermined pressure limit, said valve means being connected to said latching means and adapted to permit free fluid flow when said latching means is in an unlocked position.

3,092,400
LOOSE-LEAF BINDER
Thomas R. Smith, Dighton, Mass., assignor of one-half to William Jamieson, Stratford, Conn.
Filed Nov. 27, 1959, Ser. No. 855,928
1 Claim. (Cl. 281—19)

A loose-leaf binder including a front cover comprising a transparent member being folded to form superimposed front and back portions providing a sheet-receiving pocket having a closed edge, the side of said pocket opposite said closed edge having the edges of said portions folded back to form a flap extending below the lower surface of the back portion of the member to form a binding margin therefor; a back cover comprising a cover portion underlying said transparent member and having flap means underlying said front cover flap, said flaps having apertures therein; and binder fastening means extending through the apertures in said front and back cover flaps



for retaining said flaps relative one another, the side of the pocket extending between the closed edge and the folded edge forming the flap being open to enable a sheet to be inserted into the pocket and extend for the full width of the pocket between said closed edge and folded edge whereby the sheet can be inserted without interference by said fastening means and said fastening means is concealed by said sheet.

3,092,401
MULTI-PLY FULLY-FASTENED CONTINUOUS-FORM STATIONERY
Donald J. Steidinger, Clarendon Hills, Ill., assignor to Uarco, Incorporated, a corporation of Illinois
Filed June 13, 1960, Ser. No. 35,629
20 Claims. (Cl. 282—11.5)



1. A manifolding assembly, comprising: a plurality of superposed record strips having transfer strips interleaved therewith, said transfer strips having longitudinal marginal edges spaced inwardly from the marginal edges of said record strips; and substantially longitudinal connecting means joining said record and transfer strips together in said manifolding assembly, at least one of said strips being joined to adjacent strips only at its opposite margins and being the sole connection between said adjacent strips, said one strip comprising a hinge element substantially equal in width to the width of said one strip to provide longitudinal flexibility for said manifolding assembly during writing operations thereon.

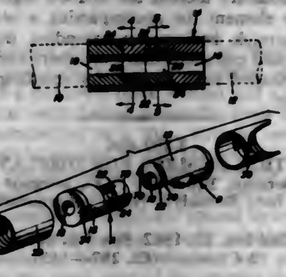
3,092,402
MEDIA OF EXCHANGE
Stanley F. Reed, Falls Church, Va., assignor to American Scientific Corporation, a corporation of Virginia
Filed Nov. 5, 1957, Ser. No. 694,619
1 Claim. (Cl. 283—57)

As media of exchange, the combination comprising: a series of related, light, durable, thin, self-supporting, plastic wafers, all of said wafers being of substantially the same size and having intricate physical surface characteristics that are visually identifiable, the front and reverse sides of each wafer being similar and each wafer having a generally square surface configuration, each wafer of said series corresponding to a predetermined extrinsic denomination, said intricate surface characteristics correlated to said denomination, each of said denominations



being indicated by similar deformations similarly oriented on each of the four edges of said square configuration, the deformations in each wafer of said series correlated to the deformations in every other wafer of said series in accordance with an ordered progression and the size of said deformations being in inverse relationship with respect to the extrinsic denomination associated therewith.

3,092,403
SYMMETRICAL COUPLING HAVING INTERLOCKING LUGS
Dale B. Gerdeman, 1041 5th St., Las Vegas, N. Mex.
Filed Nov. 25, 1959, Ser. No. 855,343
10 Claims. (Cl. 285—86)



1. A coupling for a pair of fluid conduits, said coupling consisting of a pair of like complementary components each having means at one end to be secured to one end of one of said conduits, each component comprising a unitary tubular cylindrical body including a main body portion having an axial opening therethrough and a radially thick wall, a connecting portion having in part the same wall thickness as said main body portion and having diametrically opposed radially and axially extending shoulders, a first arcuate surface portion having the same radius as the radius of the outer surface of the body portion and joining said shoulders at their outer extent and continuous with the axial length thereof, a second arcuate surface portion at the outer end of said connecting portion diametrically opposed to said first arcuate surface portion and concentric therewith, an opening concentric with both said surfaces having a smaller radius than said second arcuate surface and extending axially the full length of said second surface and axially aligned with the opening in said main body portion, said second arcuate surface joining the radially inner edge of said shoulders and extending one half of the axial extent thereof and forming an apertured lug at said outer end of said connecting portion, the inner surface of said lug being spaced from said main body portion and defining with the inner wall thereof a radially and axially extending recess of one half the axial length of said shoulders, the radial inner surface defining said recess being arcuate and of the same radius as that of said second arcuate surface whereby the lug of one component will be received in and fill the recess of the other component and will provide when assembled therewith a smooth cylindrical exterior surface for said components in their engaged relation, with the openings in the lugs aligned with and forming continuations of the aligned openings through said components, locking means surrounding and movable longitudinally upon at least one of said components and slidably engaging the exterior surface of the latter and movable between a retracted, unlocked position uncovering the lug of the other component and an advanced locked position overlying the lug of said other component.

3,092,404
PACKED SCREW THREADED GLAND TYPE TUBE COUPLING FOR THIN WALLED TUBING
Wallace MacWilliam, 363 Crest Road, Ridgewood, N.J.
Continuation of applications Ser. No. 683,852, Sept. 13, 1957, and Ser. No. 845,572, Oct. 9, 1959. This application Jan. 25, 1961, Ser. No. 85,956
4 Claims. (Cl. 285—334.4)



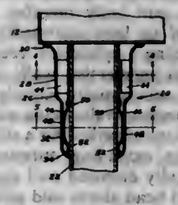
1. In combination, a tube of uniform thickness, a bead on the tube, a body member having a bore therein, a coupling member, means engaging the coupling member with the body member, and a sealing ring positioned over an end portion of the tube, the coupling member urging the bead against the body member, the improvement wherein said end portion of the tube is cylindrical and is of lesser diameter than the diameter of the tube on the other side of the bead, the bead thereby having a first radial wall at one side thereof adjacent said end portion of one area and a second radial wall at the other side of said bead of lesser area than that of said first radial wall, said bead having its inner walls in contact, said bead being of generally semi-circular configuration, said body member having an enlarged portion of the bore receiving the end portion of said tube, said body member having a further enlarged portion of its bore outwardly of said first enlarged portion forming a cylindrical recess for the sealing ring formed by two intersecting walls, one of said intersecting walls being substantially radially disposed and the other of said intersecting walls being substantially axially disposed, said body member having a still further enlarged portion of its bore extending outwardly at an obtuse angle from said axially disposed wall and providing a contact surface for said bead above said axially disposed wall, said contact surface holding the tube in firm engagement and thereby preventing rotation of the tube and providing a metal to metal seal, the sealing ring engaged between the end portion of the tube and the sealing recess axial wall thereby providing an O ring seal, the diameter of the opening in the coupling member being such as to provide a close fit with the surface of the tube opposite the end portion of lesser diameter, said coupling member having a tube engaging portion of an axial length at least four times the length of said second radial wall of lesser area against which it abuts.

3,092,405
PIPE COUPLING
Paul D. Wurzburger, Wickliffe, Ohio, assignor to The Weatherhead Company, Cleveland, Ohio, a corporation of Ohio
Filed Feb. 11, 1959, Ser. No. 792,507
5 Claims. (Cl. 285—341)



1. In a tube coupling including a metal tube, a body member having a bore adapted to be coupled in alignment with the end of the tube, a coupling member surrounding the tube and adapted to be drawn up toward the body, and a metal sleeve between and in engagement with the body and the coupling member and having a circumferentially continuous annular portion having an inner periphery surrounding the tube, said coupling including means acting to force said annular portion radially into the tube and simultaneously move the same forwardly toward the body member when the coupling member is drawn up toward the body member, the coupling having abutment means limiting forward movement of the tube during such movement of said annular portion; the improvement comprising tube cutting edges including forwardly facing teeth around said annular portion, said teeth having spaced crest portions and flank portions diverging rearwardly from each crest portion, each joined to the adjacent flank portion by a root portion, said crest portions, flank portions, and root portions intersecting the inner periphery of said annular portion in sharp cutting edges continuously joined together about the entire inner periphery of said annular portion, whereby said tube cutting edges cut into the surface of said tube and shear up an uninterrupted ridge of metal projecting radially around the entire periphery of said tube, said ridge of metal having serrations filling the spaces between said teeth and forming a fluid seal and holding said tube against axial separation from the body member.

3,092,406
HOLDER FOR SUPPORTING LEG
Emil Wasserstrom, Columbus, Ohio, assignor to N. Wasserstrom & Sons, Inc., Columbus, Ohio, a corporation of Ohio
Filed July 20, 1961, Ser. No. 125,500
2 Claims. (Cl. 287—20)



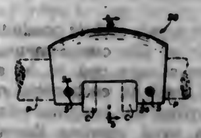
1. In a holder for securing a leg to the underside of a sink or the like, a bell-shaped tubular housing the larger end of which is fixed to the underside of said sink at a corner thereof, a gripping member positioned within said housing and including a split sleeve that is located within the larger portions thereof, a plurality of spacer elements joined to said sleeve and being defined by radially extending flanges that engage the inside surface of said housing for centrally locating said gripping member therein, and a plurality of spring fingers joined to said sleeve and depending therefrom, said leg extending between said fingers and through said split sleeve and being frictionally retained in said housing by the engagement of said spring fingers therewith.

3,092,407
TERMINAL FITTING
Charles Blonder, Baltimore, Md., assignor to Anchor Post Products, Inc., Baltimore, Md., a corporation of New Jersey
Filed Jan. 12, 1961, Ser. No. 82,299
4 Claims. (Cl. 287—54)



1. A coupling device, comprising, a tubular cap open at one end for receiving and terminating one end of a first structure, the opposite end of said cap having a transverse inner wall with a slot provided therein, means including a pair of complementary members, each said complementary member having a web and a transversely arranged tab, said web terminating in an intermediate portion offset angularly therefrom and then a restricted neck forming a shoulder between said web and transversely arranged tab and arranged substantially parallel and laterally offset from said web, said complementary member having an aperture provided therein, the tabs of said complementary members being received in said slot in said transverse inner wall of said cap and extending in opposite directions adjacent to and parallel to the inner wall of said cap, with said webs of said complementary members being spaced parallel with respect to each other when said shoulders thereof are abutted together, a ring shaped strap element for encompassing a second structure, and through bolt means extending through said apertures in said complementary members and connected to said ring shaped strap element for coupling said structures together.

3,092,408
CONNECTION MEMBER FOR DISPLAY RACKS
Aaron W. Berman, Brooklyn, N.Y., assignor to Aarving Displays, Inc., Brooklyn, N.Y., a corporation of New York
Filed Jan. 22, 1962, Ser. No. 167,861
3 Claims. (Cl. 287—113)



1. Member for releasably connecting longitudinally extending and aligned cylindrical horizontal pipes of movable garment racks and the like so as to maintain the racks in alignment, said pipes having coaxial end caps of enlarged diameter, said member comprising a heavy cast metal longitudinally extending body having a peripheral wall of greater diameter than said end caps, said body having a downwardly opening semi-cylindrical central recess of approximately the same diameter as said end caps and of length greater than the combined length of said end caps, said body having downwardly opening end recesses extending to the ends thereof and coaxial with said central recess and extending to and communicating therewith, the diameter of said end recesses being less than the diameter of said central recess, each end recess having an upper semi-cylindrical portion of approximately the same diameter as said pipes, the peripheral wall of each end recess extending below the peripheral wall of said central recess and said end recesses increasing in width in a downward direction, said member connecting said pipes with said end caps in said central recess and the peripheral wall thereof resting conformingly on said end caps, and with said pipes extending through said end recesses and the peripheral walls thereof resting conformingly on said pipes, said end recess peripheral walls extending below said pipes, said body having on one side thereof radial screw-threaded bores extending through the respective end recess peripheral wall below the horizontal diameter lines of said pipes and above the bottoms of said pipes, said member also comprising set screws screwed into said bores and retractably screwable into engagement against said pipes to prevent said member from being lifted from said pipes.

3,092,409
EGG OPENER AND HOLDER
Victor E. Murray, Cincinnati, Ohio, assignor of one-half to Joseph L. Bearlear, Cincinnati, Ohio
Filed Oct. 21, 1957, Ser. No. 691,289
1 Claim. (Cl. 294—1)



An egg holding device consisting of identical and unconnected cups each having a one-piece, resilient body formed with a relatively thick bottom and a circular, imperforate side wall flaring outwardly from the said bottom and terminating in a thin, circular mouth portion lying in a plane normal to the axis of the cup, the side wall of the cup becoming progressively thin as it recedes from the bottom and approaches the circular mouth portion, and a number of angularly spaced apart sets of egg gripping means each having a body raised from and of one piece with the body of the cup and projecting inwardly from the inner face of the circular mouth portion of the cup, each set of said gripping means consisting of a longitudinally spaced apart series of V-shaped corrugations formed in the body of the set and disposed parallel with the free edge of the mouth portion of the cup, and each corrugation having its inside face lying in a plane substantially parallel to the free end edge of the mouth portion of the cup.

3,092,410
STAMP HANDLING IMPLEMENT
Nick D. Diamantides, 2517 14th St., Cuyahoga Falls, Ohio
Filed May 1, 1961, Ser. No. 106,640
3 Claims. (Cl. 294—2)



1. A stamp handling implement including in combination a generally flat solid blade member having a slightly upturned spade end portion having an upper surface, slot means in said blade member extending in a lengthwise direction, a slide positioned on the upper surface of said blade member, pin means in said slot means and extending into said slide to control the sliding movement thereof, a music wire connected to said slide and extending to said upper surface of said spade end portion and looped around to form bearing means and returning to said slide, said bearing means extending transverse to the length of said implement, a roller mounted on said bearing means and engaging said upper surface of said spade end portion with said music wire exerting a small engagement force between said roller and said upper surface of said spade end portion, said upper surface of said spade end portion being unpolished, movement of said slide causing said roller to travel on said upper surface of said spade end portion to hold a stamp therebetween.

3,092,411
SPATULA
Peter S. Hardy, Trumbull, Conn., assignor to Peerless Aluminum Foundry Co., Inc., Bridgeport, Conn., a corporation of Connecticut
Filed July 14, 1961, Ser. No. 124,133
2 Claims. (Cl. 294—7)



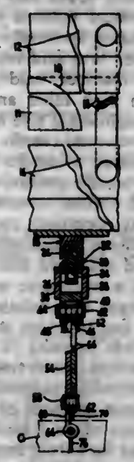
1. A spatula of the character described, comprising a blade member in the form of a slab of grained wood having longitudinal side edges substantially parallel to its grain direction, transverse forward and rearward edges, and a transversely extending rearward marginal portion having parallel upper and lower surfaces, there being a pair of identical notches opening to said rearward edge and extending forwardly therefrom in parallel relation to each other into said rearward marginal portion of said blade member, said notches being transversely spaced from each other and equally spaced inwardly from said longitudinal side edges and each having parallel inner and outer side walls substantially parallel to said grain direction, a handle member including a head portion and a handle portion extending rearwardly therefrom, said head portion comprising upper and lower rigid flanges having opposed parallel inner surfaces spaced apart a distance substantially corresponding to the thickness of said rearward marginal portion of said blade member, and a transverse wall integral with and connecting said flanges and defining therewith a recess open at its forward end in which said rearward marginal portions of said blade member is received, and a pair of circular cross-section transversely spaced rigid pins integral with and extending perpendicularly between said opposed parallel inner surfaces of said flanges and engaged in said notches of said blade member, said pins beings equally spaced forwardly from said transverse wall a distance no greater than the longitudinal dimension of said notches, the spacing of the transversely opposite inner sides of said pins from each other being less than the spacing of the transversely opposite inner walls of said notches from each other, and the spacing of the transversely opposite outer sides of said pins from each other being no greater than the spacing of the transversely opposite outer walls of said notches from each other, whereby said rigid pins transversely clamp said rearward marginal portion of said blade member disposed between said notches and imbed into said inner side walls of said notches through the inherent ability of wood to compress and expand.

3,092,412
GRAB HOOK
Norman B. Drake, 11050 Valdamere Drive, St. Louis, Mo.
Filed July 17, 1961, Ser. No. 124,520
6 Claims. (Cl. 294—66)



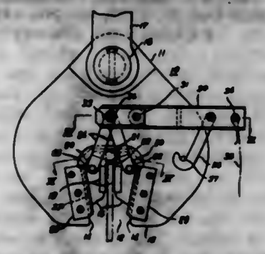
2. In a foldable grab hook, a tubular body, a plurality of flukes, each having a curvilinear hook portion projecting radially of the lower end of the tubular body and each having a shank portion extending loosely into the tubular body, a wedge nut having a downwardly divergent camming surface located axially of the tubular body and in expanding engagement with the curvilinear hook portions of the several flukes substantially in the zone of their convergence, a rod extended axially of the tubular body, and means on said rod engaging the tubular body, the wedge nut threadedly engaging the rod to expand the flukes outwardly and retain the flukes in relation to the tubular body, and the wedge nut selectively releasing the flukes upon threaded adjustment on the rod to permit movement of the hook portions into lateral adjacence incident to folding.

3,092,413
APPARATUS FOR GRIPPING AND SUPPORTING GLASS SHEETS
Charles R. Davidson, Jr., Tarentum, Pa., assignor to Pittsburgh Plate Glass Company, Allegheny County, Pa., a corporation of Pennsylvania
Filed Jan. 14, 1959, Ser. No. 786,722
3 Claims. (Cl. 294—86)



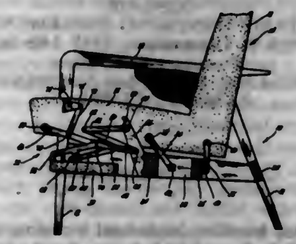
1. Apparatus for gripping a glass sheet suspended therefrom comprising a relatively heavy tong support member having attached thereto a frame member comprising an upper portion including a downwardly facing member having a bottom surface of a nonlinear configuration and a lower portion spaced below and attached to said upper portion and including an upwardly facing pointed member attached to said lower portion, a relatively light movable member having an upper surface shaped to conform to the bottom surface of said downwardly facing member and an angular lower surface, means attached to said movable member for guiding said movable member for vertical movement within said frame member between an upper position wherein its upper surface engages said bottom surface of said downwardly facing member in locking relation therewith and a lower position wherein its angular lower surface is supported in freely pivotable relation about a vertical axis defined by said upwardly facing pointed member, and tongs secured to said means attached to said movable member to hang downwardly therefrom, one of said surfaces engaging in locking relation having a projection mating with a recess in the other of said surfaces engaging in locking relation when said surfaces are engaged in locking relation with one another.

3,092,414
PILE PULLING TONGS
Daniel L. Janoff, Mount Lebanon Township, Allegheny County, Pa., assignor to Heppenstall Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Dec. 12, 1960, Ser. No. 75,154
8 Claims. (Cl. 294—110)



4. Pile pulling tongs comprising, in combination, a frame having a fixed size downwardly extending recess opening through the bottom thereof, said frame adapted to be connected to means for lifting said tongs without change in the overall height thereof or of said frame, said recess having downwardly converging sides, respective right and left hand opposed jaws slidable only along said sides respectively, means for guiding the sliding movement of said jaws, a lever pivotally connected to said frame, upwardly converging links pivotally connected together at their upper ends to said lever and respectively pivotally connected to said jaws at their lower ends, holding means operatively connected to said lever to hold said jaws in open pile-receiving position, said lever being independent of said means for lifting said tongs, and means for releasing said holding means.

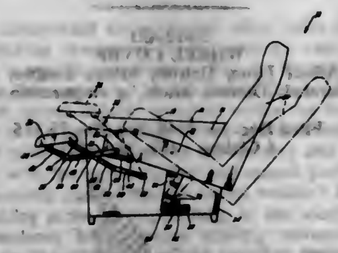
3,092,415
UNDERSLUNG LEG-REST CONTROL MEANS FOR RECLINING CHAIRS
Friditjof F. Schliephacke, Berlin-Schmargendorf, Germany, assignor to Anton Lorenz
Filed July 28, 1959, Ser. No. 830,012
3 Claims. (Cl. 297—89)



1. A reclining chair comprising a support frame, a body-supporting structure including a seat and back rest,

means mounting said body-supporting structure on the support frame for tilting movement to a reclining position in which the forward portion of the seat is raised and moved rearwardly relative to the support frame, a leg-rest, and a leg-rest linkage carrying the leg-rest and adapted to move the latter from a retracted underslung position beneath the seat to an extended position spaced forwardly of the seat, said leg-rest linkage including a pair of interconnected links connecting said leg-rest to the forward end portion of the seat, an actuating link pivotally mounted on the support frame and pivotally connected to one of the links of said pair of links and forming therewith a drag link mechanism to provide a rapid movement of the leg-rest through a long path of travel from its retracted position to its extended position in response to relatively short movement of the body-supporting structure, a chain of three links pivotally connected end-to-end, and pivotally interconnected with said pair of links for coordinated movement therewith, means pivotally connecting one end link of the chain to the leg rest, and means pivotally mounting the other end link of the chain, the chain of three links being free of direct connection with the body-supporting structure, and forming an unconstrained linkage as the leg-rest is moved to its extended position with said other end link of the chain providing a movable mount for the pivotal connection of the center link with said other end link and stop means engaging and immovably holding said other end link at the extended position of the leg-rest, whereby said pivotal connection of the center link is fixed at the reclining position to provide a constrained linkage supporting said leg-rest.

3,092,416
LEG-REST CONTROL LINKAGE FOR MULTIPLE POSITION CHAIR
Peter S. Fletcher, Delray Beach, Fla., assignor to Anton Lorenz, Boynton Beach, Fla.
Original application July 16, 1958, Ser. No. 747,748, now Patent No. 2,940,509, dated June 14, 1960. Divided and this application June 13, 1960, Ser. No. 35,674
9 Claims. (Cl. 297—89)



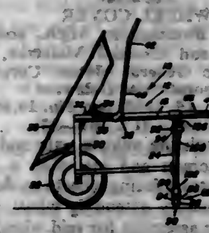
1. A multiple position reclining chair comprising a support frame, body-supporting means including a seat and back-rest mounted on the support frame for movement through a first motion phase from an upright sitting position to an intermediate, tilted sitting position, and through a second motion phase from said tilted sitting position to a fully-tilted position, a leg-rest, a leg-rest control linkage carrying the leg-rest and guiding the latter, said leg-rest control linkage including a leg-rest link pivotally mounted on said seat, and actuating means for elevating the leg-rest from a retracted position beneath the seat to an extended position forwardly of and substantially at the level of the front end of the seat when the body-supporting means moves through said first motion phase, and for maintaining the leg-rest in its extended position when the body-supporting unit is moved through the second motion phase, said actuating means comprising an actuating link pivotally mounted on the support frame and pivotally connected to said leg-rest link at an actuating pivot spaced below the pivotal mount of the leg-rest link on the seat, said actuating link rotating during the second motion phase substantially with said seat such that the actuating pivot moves in an arcuate path approximately concentric with the path of the pivotal mount of said leg-rest link on said seat.

3,092,417
ORTHOPAEDIC SEATING DEVICE
Fritz Drabert, Marienstrasse 37, Minden, Westphalia, Germany
Filed Oct. 12, 1959, Ser. No. 845,897
4 Claims. (Cl. 297—291)



1. An orthopaedic seating device comprising in combination a seat, means for supporting the seat above the floor, means mounting said seat for pivotal movement about a stationary axis in a backward direction in response to a backward movement by the user and in a forward direction in response to a forward movement by the user, a back-support arranged to extend down into the loin region of the user and having a protrusion for fitting and supporting this region of the user, pivots supporting said back-support on a horizontal pivotal axis for backward tilting movement in response to the user leaning backwards and for forward tilting movement in response to the user leaning forwards, arm support means rigidly attached on the one hand to the seat and on the other hand to the pivots, said arm support means lying closely adjacent to the horizontal plane which contains said horizontal pivotal axis, a torsion spring and means rigidly connecting said spring at one end to said back-support and at its opposite end to said arm support means.

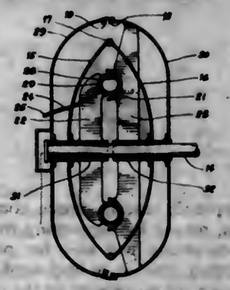
3,092,418
DUMPING WHEELBARROW
John Themascus, 1452 W. 69th St., Chicago 36, Ill.
Filed Jan. 22, 1960, Ser. No. 4,019
11 Claims. (Cl. 298—3)



1. A dumping wheelbarrow comprising a frame defining a longitudinal axis, a depending wheel rotatably supported from the forward portion of said frame parallel to said axis, an axle rotatably mounted on said frame, a barrow fixed to said axle for rotation therewith, said barrow being unbalanced forward of said axle whereby said barrow will normally be disposed in a forwardly tilted position, releasable means for retaining said barrow in a horizontal position, and a rigid arm rigidly secured to said axle for rotation therewith, said releasable means including a retractible means movably secured to said

frame, and biasing means normally urging said retractible means into engagement with said arm when said barrow is disposed in the horizontal position.

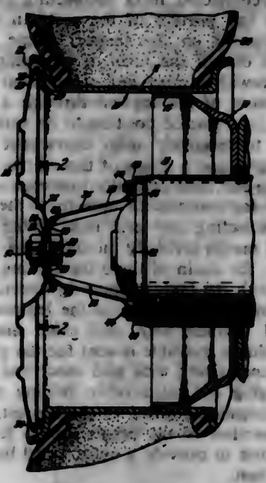
3,092,419
SELF-CLOSING AND SELF-OPENING HOLLOW OBJECTS
Ladislas Erdely, Paris, France, assignor to Pechiney, Cie de Produits Chimiques et Electrometallurgiques, Paris, France
Filed Sept. 16, 1960, Ser. No. 56,596
Claims priority, application France Sept. 18, 1959
11 Claims. (Cl. 301—1)



1. A wheel comprising an axle, separate hub members rotatably mounted on the axle for axial displacement in the direction toward and away from each other between closed and open positons respectively, wheel half-shells fixed on said separate hubs for movement therewith to form a closed wheel when in closed position and an open wheel for access to the interior thereof when in open position, an elastic member which is subject to dimensional change responsive to change in pressure to which the wheel is exposed, means in position operatively to be engaged by said elastic member for displacement toward and away from said elastic member upon change in dimension of said elastic member responsive to changes in pressure to which the wheel is exposed, and an operative connection between said means and said wheel half-shells whereby the shells are displaced between open and closed positions responsive to changes in dimension of said elastic member.

3,092,420
WHEEL COVER
Glenn A. Baldwin, Birmingham, Mich., and Thomas B. Frame, Syracuse, and Arnold J. Maletzke, Fayetteville, N.Y., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Apr. 25, 1960, Ser. No. 24,454
1 Claim. (Cl. 301—37)

In combination with the vehicle axle and a wheel assembly mounted thereon and including a laterally extending axially outwardly facing wheel rim flange merging into an axially outwardly extending wheel rim terminal flange, a wheel cover assembly for said wheel comprising, an annular cover member adapted to fit within said terminal flange in engagement with said axially facing flange, said cover member including a central axially dished concavity provided with a generally radially extending apertured flat bottom portion, a bracket member mounted on said axle and including an axially facing apertured base portion lying in a radial plane located adjacent to the radial plane of said axially facing wheel rim flange and normally spaced from the plane of said bottom portion, an apertured spacer member, interfitting means on said spacer member and base portion to prevent rotational movement therebetween, single bolt means extending through the apertures of said cover, said bracket and said spacer member to secure said central portion of said cover member to said spacer member and to said base portion of said bracket member to mount said cover member on said wheel and draw said bottom portion into engagement with said spacer member and resiliently hold said cover member against said axially facing wheel rim flange, the portion of said single bolt means located



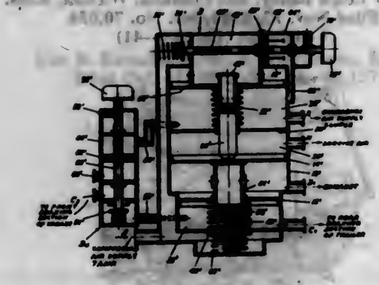
axially outwardly of said cover member being located within said concavity and axially inwardly of the axially outer surface of said cover member, and means located adjacent said securing means and interconnecting said spacer member and said cover member to prevent relative rotational movement therebetween, said last mentioned means including an extension on one of said members adapted to be received within a complementary shaped opening in the other of said members.

3,092,421
WHEEL COVER
George Albert Lyon, Detroit, Mich., assignor to Lyon Incorporated, Detroit, Mich., a corporation of Delaware
Filed Dec. 12, 1960, Ser. No. 75,375
4 Claims. (Cl. 301—37)



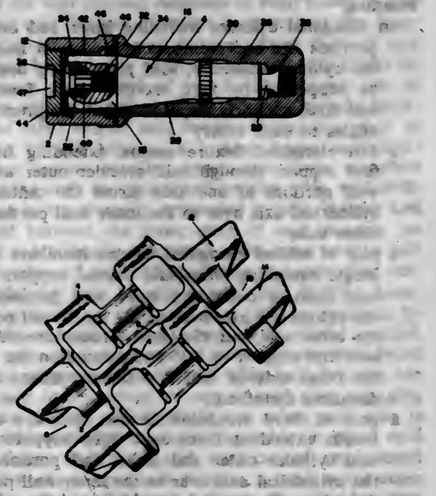
1. In a wheel structure including a wheel body having a central bolt-on flange receptive of attaching bolts to secure the same to a vehicle axle structure, a cover member for disposition over the outer side of the wheel including a portion to bear against a part of the wheel radially outwardly from said bolt-on flange, the cover member having a central bolt-on flange structure normally spaced a predetermined distance from the wheel body bolt-on flange and comprising a plurality of resiliently flexible bolt-on tab portions engageable by the attachment bolts and resiliently flexible axially inwardly relative to the cover member to be thereby placed under resilient tension and maintain the cover member firmly against said wheel portion, said tabs comprising radially inwardly extending resilient projections, said projections having partially struck out radially outwardly projecting attachment tongues resiliently flexible relative to the tabs on being drawn axially inwardly by the attachment bolts.

3,092,422
AUTOMATIC RELAY VALVE MEANS FOR PNEUMATIC BRAKING INSTALLATIONS
Giuseppe Alfieri, Milan, Italy, assignor to Fabbrica Italiana Magneti Marelli S.p.A., Milan, Italy, a firm
Filed June 23, 1960, Ser. No. 38,256
Claims priority, application Italy June 26, 1959
4 Claims. (Cl. 303—29)



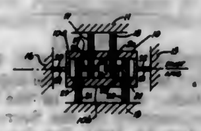
1. A compressed air automatic relay valve for pneumatic braking systems of towed vehicles comprising a housing, a partition mounted within the housing, a service brake line connected to one end of the housing, service piston means slidably mounted within the housing on one side of the partition, the service piston defining a first chamber with said one end of the housing and a second chamber with the partition, first and second ports formed in the housing connecting the towed vehicle's front and rear braking sections, respectively, to the second chamber, emergency piston means slidably mounted in the housing on the other side of the partition thereby defining a third chamber with the partition and a fourth chamber with the other end of the housing, an emergency air pressure supply line connected to the third chamber, a port formed in the housing for supplying compressed air to the fourth chamber, double acting valve means carried by the emergency piston adapted to be actuated by the service piston means, whereby upon movement of the service piston means in one direction the valve means is opened thereby allowing compressed air to flow from the fourth chamber into the second chamber to the front and rear braking sections of the towed vehicle, and upon movement of the service piston means in the opposite direction the compressed air exhausts from the braking sections to the atmosphere, first hand controlled brake release means operatively connected to the compressed air supply port for controlling the flow of compressed air to the front and rear braking sections of the towed vehicle, and second hand controlled brake release means operatively connected to one of the ports connecting one of the towed vehicle brake units to the second chamber, whereby when the first hand controlled brake release means is in an operative position, causing all the brake sections of the towed vehicle to be engaged, the second hand controlled brake release means may be actuated for selectively and independently releasing and applying a selected brake unit of the towed vehicle.

3,092,423
AGGRESSIVE DUAL PIN TRACK
Louis Speidel, Jr., Royal Oak, and Edward J. Gow, Jr., Oak Park, Mich., assignors to the United States of America as represented by the Secretary of the Army
Filed Apr. 25, 1961, Ser. No. 105,524
7 Claims. (Cl. 305—11)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. An endless track, embodying articulated track shoes, each shoe comprising first and second longitudinal sides, a pair of spaced bearing bosses each formed with a cavity therein secured to said first longitudinal side, dual axially spaced separate track pins, extending from said second longitudinal side of each of said shoes, each pin having one end extending into the cavity in the bearing bosses of adjoining shoes, said bearing bosses being formed to completely cover one end of said pin, sealing means disposed in the cavity of each of said bearing bosses between each said pin and its respective bearing boss to completely enclose the end of said pin within the confines of said bearing boss, said bearing bosses and pins occupying a space that insures a minimum of 40% of said first longitudinal side being used for full aggressive grousing, bearings disposed between each said pin and each said boss, each shoe having bearing bosses integrally formed on said second longitudinal side, fastening means engaging each of said last mentioned bosses for detachably securing said pins to said last mentioned bosses, said track pins comprising a body portion provided with knurls corresponding to knurls formed within said bosses on said second longitudinal side, said last mentioned means being formed by a stem provided with first and second portions threaded, respectively, to said body portion and to said last mentioned bosses, and locking means adapted to be disposed between said stem and said track pins to arrest all relative movement between said body portion and stem after said body portion has been drawn into engagement with said bosses by rotation of said stem.

3,092,424
SELF-COMPENSATED FLEXURE PIVOT
Charles I. Tiplitz, Cedar Grove, N.J., assignor to Kearfott Company, Inc., Little Falls, N.J., a corporation of New York
Filed Nov. 27, 1959, Ser. No. 855,816
3 Claims. (Cl. 308—2)



1. A self compensated flexure pivot, comprising in combination,

an elongated cylinder including inner and outer wall portions and end members extending at least across the cylinder diameter, said pivot being designed to be supported by first, second, third, fourth, fifth and sixth supports disposed about the pivot at right angles to each other;

a first elongated flexure means, extending from said first support through said cylinder outer and inner wall portions at one side across the center of the cylindrical axis over to the inner wall portion at the other side;

a pair of second elongated flexure members of equal length extending from said second support through said cylinder outer and inner wall portions across the cylindrical axis over to the inner wall portion at the other side, but displaced circumferentially from said first support by 90° and passing on the one and the other side of said first flexure means at equal distances therefrom;

a pair of third elongated flexure members of equal length extending from said third support through said cylinder outer and inner wall portions across the cylindrical axis over to the inner wall portion at the other side parallel to said first elongated flexure means but displaced circumferentially therefrom by 180°, passing on the one and the other side of said first elongated flexure means at equal axial distances from said first flexure means.

a pair of fourth elongated flexure members of equal length extending from said fourth support through said cylinder outer and inner wall portions across the cylindrical axis over to the inner wall portion on the other side, parallel to said pair of second elongated flexure members but displaced circumferentially therefrom by 180°, passing on the one and the other outer side of said first elongated flexure means at equal axial distances from said first means; and,

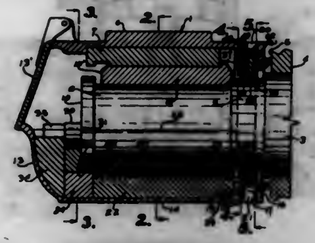
tensioned wires of equal length, extending from said fifth and sixth supports to that portion of opposite end members at the axis of the cylinder.

3,092,425
DIE SET BEARING RETAINER
Guy O. Conner, 1113 Mount Vernon Blvd., Cleveland Heights, Ohio
Filed Dec. 22, 1955, Ser. No. 554,782
22 Claims. (Cl. 308—6)

1. A die set comprising a leader pin and guide means, anti-friction bearing means interposed between said leader pin and guide means and in engagement therewith, said leader pin being reciprocally movable within said guide means and operable to move said bearing means relative to said leader pin, and variable pressure coupling means interconnecting said leader pin and bearing means to regulate the relative longitudinal movement between said leader pin and bearing means at all times when the leader pin is in guiding position within the guide.



3,092,426
RAILROAD JOURNAL BOX OILING STRUCTURE
Romney Leigh Bailey, 803 Franklin, Wichita, Kans.
Filed Nov. 17, 1960, Ser. No. 70,056
7 Claims. (Cl. 308—41)



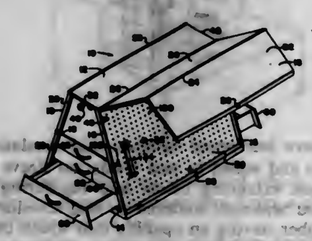
1. In a railway journal box for a railway axle having a journal, a bearing contained in said box and contacting said journal, said journal entering said box from the rear and having a cap collar at its outer end of greater diameter than the journal and projecting radially therefrom beyond the end of said bearing, said journal box having side walls and a forward wall and a bottom wall respectively spaced from the journal, the combination of: an oil absorbing member, means supporting said oil absorbing member against said journal along the underside thereof, a support block resting on said bottom wall forwardly of said oil absorbing member and closely spaced beneath said cap collar, said support block having a portion extending forwardly of said cap collar, a thrust bearing block on the forwardly extending portion of said support block and extending upwardly into axial alignment with said journal, and means maintaining said thrust bearing block in axial alignment with said journal, whereby said journal is limited in relative axial, vertical and lateral movement with respect to said box.

3,092,427
EXPANDED PISTON CUP ASSEMBLY
Harry J. Sadler, Minneapolis, and Ernest E. Cook, Anoka, Minn., assignors to Hypro Engineering, Inc., Minneapolis, Minn., a corporation of Minnesota
Filed May 3, 1961, Ser. No. 108,526
6 Claims. (Cl. 309—51)

1. An expanded piston cup assemblage comprising, a resilient piston cup having an upper riding portion and a base defining a recessed portion with inner side walls, a relatively stiffer backer encircling said piston cup rearwardly of said upper riding portion and having an outer diameter no greater than that of said upper riding portion, a rigid means lying within the upper riding portion of said resilient piston cup, and a distended biasing O-ring held outwardly by said rigid means in supporting relation against said inner side wall, whereby to maintain said upper riding portion in continual contact with the side wall of a cylinder, whereby said piston assemblage will cause substantial drawing forces as well as pressure forces during a pumping cycle.



3,092,428
TOOL BOX
Rex R. Kerschner, Rte. 4, Hutchinson, Kans.
Filed Oct. 31, 1960, Ser. No. 66,137
4 Claims. (Cl. 312—218)



1. A tool chest comprising, in combination, an elongated housing, said housing having a top, a bottom, sides, and frame members connecting each corner of said top with a like corner of said bottom, said sides tapering from said top to said bottom and hingedly connected to said top, each of said sides having an upper and lower section hingedly connected together, key type lock means carried by each of said lower sections of said sides to secure said sides to said bottom, two panels each having a plurality of perforations therethrough, one of said panels extending between said frame members at each side of said housing, said panels being covered by said sides and spaced therefrom, said housing having a shelf secured to said frame members and positioned between said top, said bottom and said panels and extending the entire length of said housing, a lid hingedly mounted on each end of said shelf to close the ends of said housing between said shelf and said top, each of said lids having an inwardly extending flange at each side thereof, an opening in each of said flanges, four mounting bolts, one of said bolts being positioned at the upper and outer corners of each of said panels, a helical spring surrounding the shank portion of each of said bolts and engaging said panel and the head of said bolts to urge said bolts outwardly, said bolts being urged inwardly through said openings in said flanges of said lids by said sides when closed to lock said lids, three vertically spaced drawers in each end of said housing between said shelf and said bottom, an elongated channel shaped member removably secured by mounting bolts to each side of each of said drawers, another channel shaped member secured by mounting bolts to the inside of said panel opposite each of said first-named channel shaped members, and elongated guides for said channel members, one of said guides being positioned between said channel members on each side of each of said drawers and said channel members on said panel, said guides having lips extending outwardly from each side at the top and bottom edges thereof, said guides receiving the edges of said channel shaped members in said lips, two hooks mounted on each of said guides, one of said hooks being positioned at one end of said guide and extending from one face thereof and the other of said hooks being positioned at the other end of said guides and extending from the other face thereof, said hooks being engageable with the mounting bolts for said channel members to limit travel of said guide and said channel members in operation, the inner end of each of said drawers having a hook thereon, said last named hooks being vertically aligned, said hooks on said drawers at one end of said housing facing one of said sides of said housing and said hooks on said drawers at the other end of said housing facing the other of said sides of said housing, a locking frame, said locking frame having parallel upper and lower members joined at the ends by spaced and parallel rods, said locking frame being pivotally connected to said bottom and said shelf between the inner ends of said drawers, an operator rod pivotally connected at its inner end to said lower member of said locking frame and extending outwardly through one of said panels, said locking frame being positioned so that said bars can be received by said hooks on said drawers when in the closed position to lock same, the outer end of said operator bar being positioned adjacent to said panel when said drawers are locked, said lower section of one of said sides engaging said outer end of said operator bar when said side is closed, said operator bar being movable to pivot said locking frame and move said bars out of engagement with said hooks to open said drawers, a hook at the outer edges of each of said lower sections of said sides, pins secured to said frame members and projecting inwardly to be engaged by said last named hooks when said lower sections of said sides are in the closed position, said tool chest being constructed and adapted so that said drawers can be locked when closed by moving said operator bar inwardly against said panel and said lids to said upper portion of said ends will be locked when said upper section of said sides are closed depressing said mounting pin and forcing the shank portion thereof through said openings in said flanges on said lids, and said sides can be held in position by said hooks thereon engaging said pins on said frame members and by said key locking means at the lower edges thereof, and said panels can receive hooks or the like to mount tools thereon.

3,092,429
CHASSIS SLIDE MECHANISM
George William Barnes, Inglewood, Calif., assignor to David Industries, a corporation of Nevada
Filed May 23, 1960, Ser. No. 31,180
6 Claims. (Cl. 312—333)



4. A sliding track arrangement for supporting an electronic chassis in a rack mounting said arrangement in-

cluding a pair of telescoping sliding mechanisms each comprising: an inner slide member adapted to be connected to the chassis; an outer slide member adapted to be connected to the rack; an intermediate slide member coupling said inner and outer slide members; first latching means mounted on said inner slide member and facing said intermediate slide member, comprising a pair of slideable first catches and a manually operable release lever positioned to slide said first catches, said intermediate slide member having a lug facing said inner slide member and positioned to be entrapped between said first catches when said inner slide member is extended with respect to said intermediate slide member; and second latching means mounted on said intermediate slide member and facing said inner slide member and including a second catch operable through apertures in said intermediate and outer slide members for locking said intermediate and outer slide members in an extended position with respect to each other, said second latching means including means responsive to closure of said inner slide member for disengaging said second catch from said outer member aperture; whereby withdrawal of the chassis from the rack locks all of said slide members in an extended position relative to each other, and whereby operation of said release lever permits closure of said inner slide member into said intermediate slide member, thereby permitting closure of said intermediate slide member into said outer slide member, said slide members telescoping to a nesting, closed position.

3,092,430
ELECTRICAL LEAD CONNECTORS
John W. Miller, P.O. Box 246, Camarillo, Calif.
Filed Oct. 12, 1961, Ser. No. 144,744
2 Claims. (Cl. 339—32)



1. An electrical lead connector comprising: an insulating casing; first and second elongated tubular members electrically secured together in side-by-side parallel relationship within said casing, said first member terminating at one end in a plug and at its other end in an open socket dimensioned to receive a plug identical to said first mentioned plug, the end of said second tubular member adjacent said first mentioned plug being open and dimensioned to receive a plug identical to said first mentioned plug, the opposite end of said second tubular member being connected to said electrical lead whereby an additional lead connector identical to said first mentioned lead connector may have its plug received in the end of said second tubular member adjacent said first mentioned plug and simultaneously receive said first mentioned plug in the corresponding second tubular member of said additional lead connector, an additional plug being receivable in said open socket at said other end of said first tubular member.

3,092,431
DETACHABLE PLUG CONNECTOR FOR SUBMERSIBLE APPARATUS
Donald L. Bilbrey, South Gate, Calif., assignor, by mesne assignments, to The Emerson Electric Manufacturing Company, St. Louis, Mo., a corporation of Missouri
Filed Mar. 14, 1960, Ser. No. 14,646
1 Claim. (Cl. 339—94)

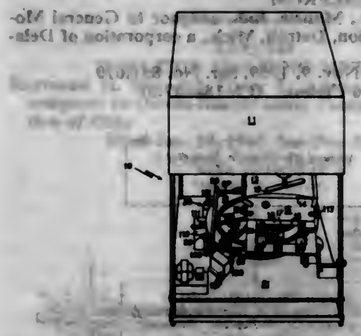
In a connector structure adapted to conduct electrical energy past a wall such as the wall of a submersible motor: said wall having a through aperture, an upper enlarged part of said aperture having a threaded portion, and said aperture having a shoulder between the enlarged threaded portion and the remainder thereof; a support member sealingly attached to one surface of the wall and underlying the portion of the aperture which is unthreaded; said member having an aperture registering with the wall aperture; an electrical conducting pin extending through said registering aperture and extending above and below said registering aperture; said pin having an enlarged shoulder located below said registering aperture; a sleeve of insulation material interposed between the pin and the wall of said registering aperture and having a portion extending above said registering aperture and being sealed to said wall of said registering aperture; a



metallic sleeve interposed between said insulation sleeve and said pin and sealed to said insulation sleeve and having a portion extending below said registering aperture engaging and sealingly soldered to said shoulder; a conductor member having an opening into which the portion of the pin extending above said registering aperture slides; the pin having a part of said portion that is not received in the opening; a tubular layer of resilient insulation material surrounding and contacting said part of said portion of the pin, said conductor member, and said portion of said insulating sleeve, and abutting said support member; said layer having a flange resting on said shoulder of the wall aperture; and a hollow member disposed over the layer and having a threaded section engaging the threads in the wall aperture, and a portion abutting the flange urging the flange against the shoulder.

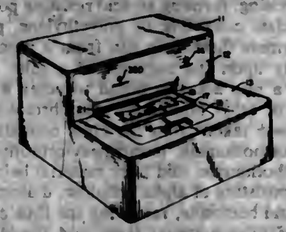
3,092,432
RECORDING APPARATUS
Robert A. Frykland, Dedham, Mass., assignor to Raytheon Company, Lexington, Mass., a corporation of Delaware
Filed Feb. 1, 1960, Ser. No. 5,804
8 Claims. (Cl. 346—8)

1. A system for stabilizing a recording platform mounted on a moving body capable of translational and rotational motions, said stabilizing system comprising, in combination, means for producing motions proportional to the orthogonal components of the translational motion of said moving body; means for combining said orthogonal components of motion into a single motion; means attached to said recording platform and responsive to said single motion for imparting said single motion to said recording platform whereby said platform is driven in translation; and means for rotatably orienting said



recording platform in response to the rotational motions of said moving body.

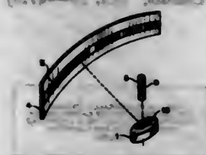
3,092,433
DEPOSITORY MACHINE COMBINED WITH IMAGE RECORDING MEANS
Luther G. Simjian, Greenwich, Conn., assignor to Universal Match Corporation, Ferguson, Mo., a corporation of Delaware
Filed July 22, 1960, Ser. No. 44,778
14 Claims. (Cl. 346—32)



1. A machine of the type described which includes:
first aperture means for receiving from a depositor an identifying deposit tag;
second aperture means for receiving documents such as checks, currency and the like which form the deposit;
means transferring a deposit tag received at said first aperture means into said machine;
validating means disposed in said machine for validating the deposit tag subsequent to its receipt in said machine;
image recording means for viewing the validated tag and for providing a documentary record thereof;
means causing documents fed at said second aperture means to come sequentially in view of said image recording means;

sensing and control means coupled to said validating means and said image recording means for sensing the transfer of a deposit tag into said machine and in response thereto actuating said validating means to validate the tag, and subsequently actuating said image recording means to record in sequence an image of the tag and each document fed into said machine;
means for returning the validated and recorded deposit tag to the depositor;
means for retaining the recorded documents as a deposit inaccessible to the depositor;
said sensing and control means also coupled to said returning means and said retaining means and actuating the same subsequent to the operation of said validating means and said image recording means.

3,092,434
DEVICE FOR THE RECORDING OF THE REPETITION RATE OF AN EVENT
Raymond Vinet, Paris, France, assignor to Electricite de France, Service National, Paris, France, a national public utility of France
Filed Nov. 30, 1959, Ser. No. 856,099
Claims priority, application France Dec. 18, 1958
9 Claims. (Cl. 346—107)



5. A measuring instrument for recording the time-integrated values assumed by a variable physical quantity over a given measuring interval comprising: an oscillating part which is continually responsive to said physical quantity, a stationary part, a photosensitive band rigidly connected to one of said parts, a source of constant intensity radiations capable of exposing at any instant a part of said photosensitive band and being rigidly connected to said other part, said oscillating part being so mounted in relation to said stationary part that said radiations from said source at each successive instant throughout said given measuring interval impinge upon a selected portion of said band in accordance with the then-existing position of said oscillating part, whereby any particular portion of said band may repeatedly have said radiations impinging thereupon during said given measuring interval as said physical quantity repeatedly assumes a corresponding value causing said oscillating part to move to a corresponding position and the total amount of radiation impinging upon any said portion is a function of the cumulative amount of time that said physical quantity assumes the particular corresponding value throughout said given measuring interval thereby causing a continuous spectrum comprising zones of varying opacity to be formed on said band.

CHEMICAL

3,092,435
PROCESS OF DYEING POLYETHYLENE AND POLYPROPYLENE MATERIALS
Marco Tommaderi, Milan, Italy, assignor to Azienda Coteri Nazionali Affini S.p.A., Milan, Italy, a corporation of Italy
No Drawing. Filed May 9, 1960, Ser. No. 27,471
Claims priority, application Italy May 11, 1959
23 Claims. (Cl. 8—4)

1. A method for the direct dyeing of a synthetic material obtained by polymerizing a mono-olefinic hydrocarbon, this process consisting essentially of treating a shaped article of said material with an anthraquinone dye containing an alpha substituent selected from the group consisting of alkylamino and cycloalkylamino groups, the alkyl portion thereof containing from 2 to 18 carbon atoms.

ERRATUM

For Class 8—8 see:
Patent No. 3,092,836

3,092,436

TANNING WITH LIGNIN SULFONIC ACID-CHROMIUM REACTION PRODUCT AND FATTY ACID SALTS

Robert G. Benner and John H. Pierce, Painesville, and John T. Chain, Chardon, Ohio, assignors to Diamond Alkali Company, Cleveland, Ohio, a corporation of Delaware

No Drawing. Filed Apr. 26, 1961, Ser. No. 105,563
16 Claims. (Cl. 8—94.26)

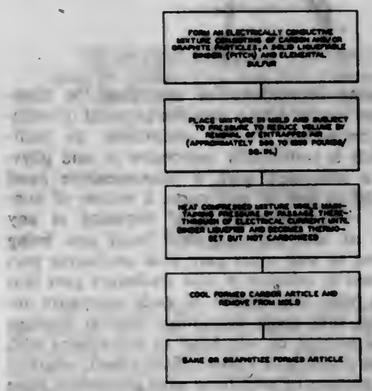
1. In the tanning of leather, the method which comprises subjecting the material to be tanned to a cationic compound selected from the group consisting of cationic salts of fatty amides, fatty amines, fatty amine esters and cyclic fatty amides in combination with an aqueous solution of a predominantly non-ionic, chromium-containing reaction product obtained by chemically reacting lignin sulphonic acid with a hexavalent chromium compound.

3,092,437

PROCESS FOR MAKING CARBON ARTICLES

Morris B. Carter, Columbia, Tenn., Robert C. Stroup, Fostoria, Ohio, Joseph J. Vaffa, Grand Island, N.Y., and Kenneth B. McGhee, Fostoria, Ohio, assignors to Union Carbide Corporation, a corporation of New York

Filed Dec. 18, 1958, Ser. No. 781,187
3 Claims. (Cl. 18—47.5)



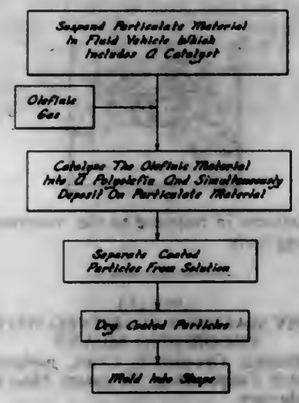
1. A process for making carbonaceous articles comprising forming an electrically conductive dry mixture containing carbonaceous materials consisting of from 8 to 16 parts by weight of carbon and of 50 to 100 parts by weight of graphite particles, together with from 22 to 35 parts by weight of a liquefiable binder material capable of polymerizing at a temperature below 400° C. and 6 to 25 percent by weight of said binder of finely divided elemental sulfur, placing said mixture in a mold while at a temperature below the liquefying temperature of said binder, subjecting said mixture to a pressure ranging from 500 to 1200 pounds per square inch to compress the same, and decrease the volume thereof by the removal of air entrapped therein, then increasing the temperature of said mixture while maintaining said pressure thereon by passing current therethrough to raise the temperature thereof to a temperature at which said binder material becomes thermoset but not carbonized, shutting off said current when said temperature has been reached, allowing the formed article to cool while in said mold, removing said formed article from said mold when said pressure falls below about 500 pounds per square inch, and baking said formed article to at least a carbonizing temperature.

3,092,438

PRODUCTION OF FILLED POLYOLEFIN MOLDING COMPOUND AND THE MOLDING OF ARTICLES THEREFROM

Rino Kruger, Jr., Muncie, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Nov. 9, 1959, Ser. No. 851,670
6 Claims. (Cl. 18—47.5)



3. In a method of making a battery plate separator, the steps comprising; forming an acid resisting polyolefin taken from the class consisting of polyethylene, polypropylene and copolymers thereof, in situ from a monomeric material directly upon the surfaces of a filler material suspended in a non aqueous liquid together with a catalyst consisting of ethyl aluminum sesquibromide and an organic titanate taken from the class consisting of tetra 2 ethylhexylorthotitanate, tetratridecylorthotitanate and tetralaurylorthotitanate, said filler material being taken from the class consisting of alpha cellulose, diatomaceous earth, silica gel and bentonite, removing the thus coated discrete particles of filler material from said liquid, forming the coated material into a mat and then sintering the mat to form a microporous battery separator consisting of a continuous phase of the polyolefin having the filler material in a dispersed phase therethrough.

3,092,439

METHOD FOR PRODUCING A REINFORCED EDGE APERTURE IN HEAT SHRINKABLE MATERIAL

John W. Harrison, Winchester, Mass., assignor to W. R. Grace & Co., Cambridge, Mass., a corporation of Connecticut

Filed Mar. 21, 1961, Ser. No. 97,307
7 Claims. (Cl. 18—48)



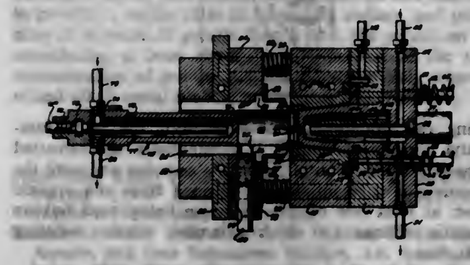
1. A method of forming an aperture of desired size and shape and having a thickened flexible edge in a heat shrinkable biaxially oriented film of a polymer of an olefin having 2 to 3 carbon atoms comprising the steps of: preforming an aperture of desired shape but smaller than the desired size in the film; applying heat to the film in a localized area about the preformed aperture thereby causing the aperture to increase in size with the edge of the film about the aperture shrinking back and forming a reinforced flexible ring around the aperture which is less oriented and thicker than the film, the flexible ring having a higher tear resistance than the film.

3,092,440

INJECTION MOLDING METHOD

Raymond H. Rex and Elmer L. Adams, Toledo, Ohio, assignors to Owens-Illinois Glass Company, a corporation of Ohio

Filed Jan. 20, 1960, Ser. No. 3,592
1 Claim. (Cl. 18—55)



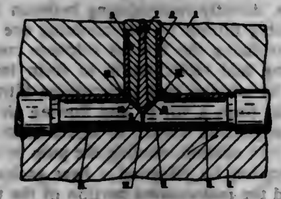
In a method of injection molding a cup-shaped article having peripheral side walls extending from an open end at one axial extremity of the article to a closed end at the other axial extremity, the steps of peripherally enclosing a central mold core in a surrounding outer mold to define therebetween a mold space conforming to the article except for the closed end thereof, the core having an end wall defining the inner surface only of the closed end of the article, depositing a measured charge of plasticized material in an enclosed feed passage axially aligned with the core end wall and spaced therefrom, said feed passage conforming in size and shape to the core end wall, displacing through said passage an injection piston having an end face fitting snugly in said passage and substantially conforming to said core end wall, displacement of said piston introducing the measured charge into the mold space and closing the mold space with the end face of the piston in confrontingly spaced relation to the end wall of the core, said core end wall and said piston end face defining therebetween that portion of said mold space filled with plasticized material which forms the closed wall of said article, retaining said piston end face, said outer mold and said core in their relative closed positions to at least partially chill said article, and thereafter retracting said piston and relatively moving said outer mold and said core to expose the article on said core.

3,092,441

PLASTIC MOULDING

Derk Bilderbeek, Arnhem, Netherlands, assignor to W. J. Stokvis Koninklijke Fabriek van Metaalwerken, Arnhem, Netherlands, a corporation of the Netherlands

Filed May 24, 1961, Ser. No. 112,382
Claims priority, application Netherlands May 25, 1960
4 Claims. (Cl. 18—55)



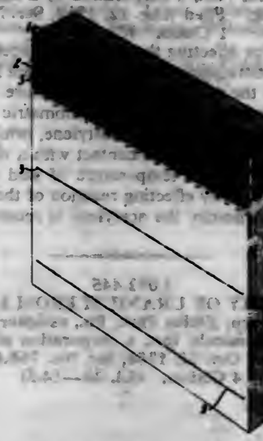
1. In a method of moulding a hollow thermoplastic article having walls and intersecting axes remote from and within said walls, the step of forming said article by distributing thermoplastic material to a mould from inside said article in the region of said intersecting axes remote from and within said walls.

3,092,442

TREATMENT OF AIR WITH ODOR REDUCTION

Milton J. Shoemaker, Madison, Wis., assignor to Research Products Corporation, Madison, Wis., a corporation of Wisconsin

Filed May 5, 1961, Ser. No. 107,978
9 Claims. (Cl. 21—63)



1. In the process of cooling and humidifying air, the steps comprising:

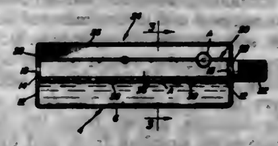
passing air through a water-wicking liquid-gas contact pad carrying in insoluble association therewith copper-8-quinolinolate in sufficient quantity to inhibit the formation of disagreeable odors, while continuously circulating water through the pad by wicking action.

3,092,443

DENTAL BURR HOLDER AND STERILIZER

Murray William Dietz, 426 Chestnut St., Meadville, Pa.

Filed Jan. 6, 1961, Ser. No. 81,051
4 Claims. (Cl. 21—87)



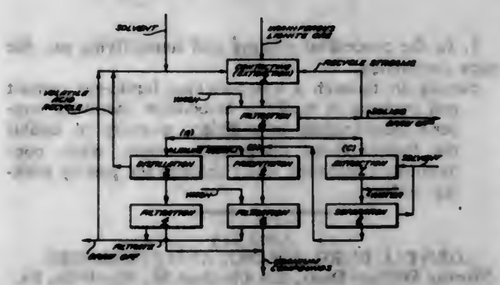
1. For use in enclosing and systematically storing a plurality of readily accessible magnetizable articles; a portable holder and sterilizer comprising a case made of non-magnetic material and having a receptacle portion adapted to be charged with a prescribed amount of sterilizing media, and a permanent magnet mounted for accessible use in said case, said magnet having surfaces for detachable anchorage of the articles thereon and also having handling means positioned exteriorly of the surfaces of the case, said magnet comprising a shaft mounted for rotation within the confines of said receptacle portion, said shaft being of a cross-section appreciably less than the cross-section of said receptacle portion and being disposed in a plane below the plane of the upper edges of said receptacle portion and a predetermined distance above the plane of the bottom of the receptacle

portion and functioning in part as a gauge indicative of the proper level of the sterilizing media and as such to enable the user to permit the lower half-portion of the shaft to contact the sterilizing media and the upper half-portion to assume a plane above the plane of the normal level of the sterilizing media.

3,092,444
PROCESS FOR REMOVING ACETYLENE FROM GASES
Johann G. E. Cohn, West Orange, and Alfred J. Haley, Jr., Colonia, N.J., assignors to Engelhard Industries, Inc., Newark, N.J., a corporation of Delaware
No Drawing. Filed Aug. 12, 1960, Ser. No. 49,118
1 Claim. (Cl. 23—2)

A process for effecting the removal of acetylene from a gas mixture containing oxygen and nitrogen in addition to the acetylene, the oxygen of the gas mixture being present in amount greater than the stoichiometric quantity required for reaction with the acetylene, which comprises passing the gas mixture into contact with a rhodium metal catalyst at an ignition temperature of said admixture of about 40° C. thereby effecting reaction of the oxygen with the acetylene whereby the acetylene is removed from the gas mixture.

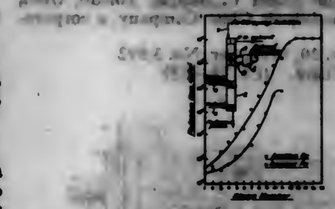
3,092,445
RECOVERY OF URANIUM FROM LIGNITE
Harold A. Green, Elkins Park, Pa., assignor to Air Products and Chemicals, Inc., a corporation of Delaware
Filed Oct. 21, 1958, Ser. No. 768,680
4 Claims. (Cl. 23—14.5)



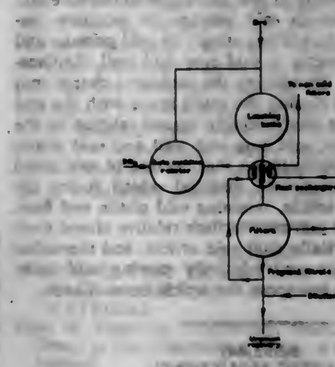
1. A process for recovering uranium values from mined lignite ores containing uranium which comprises contacting the uncalcined ore in comminuted state with an aqueous acidic solution containing at least 0.5 mol equivalents of a lower molecular weight carbon acid from the group consisting of carbonic and acetic acid to form a filterable slurry having a pH in the range of 2.3 to 6, separating the aqueous extract from the solids in the slurry, and recovering uranium from said extract.

3,092,446
SEPARATION OF PLUTONIUM FROM URANIUM
William W. Morgan, Wilson G. Mathers, and Robert G. Hart, Deep River, Ontario, Canada, assignors to Atomic Energy of Canada Limited, Ottawa, Ontario, Canada, a company of Canada
Filed Nov. 25, 1958, Ser. No. 776,280
2 Claims. (Cl. 23—14.5)

1. In the process of treating an aqueous nitric acid dissolver solution containing uranium, plutonium, and fission products by extracting the uranium and plutonium into a tributyl phosphate-diluent organic phase contaminated with dibutyl phosphate, stripping the plutonium from the organic phase by an aqueous nitric acid solution containing a reducing agent for Pu^{+4}, and then recovering the uranium from the organic phase in a plutonium stripping solution, the steps comprising passing the tributyl phosphate-diluent organic phase containing uranium, tetravalent plutonium and dibutyl phosphate, the dibutyl phosphate concentration being not substantially more than 0.001% by volume, in counter-current flow with the aqueous plutonium stripping solution, maintaining this counter-current flow until the plutonium-dibutyl phosphate complex is substantially all converted to the plutonium-tributyl phosphate complex and until the plutonium is substantially all stripped from the organic phase; at least one of the following being used (*a*) an aromatic diluent (*b*) hydroxylamine nitrate reducing agent.



3,092,447
TREATMENT OF URANIUM ORES FOR RECOVERY OF THE URANIUM CONTENT THEREOF
Denis Iver Legge and Maxwell Lipworth, Johannesburg, Transvaal, Republic of South Africa, assignors to Anglo-Transvaal Consolidated Investment Company Limited, Johannesburg, Transvaal, Republic of South Africa
Filed Aug. 3, 1959, Ser. No. 831,321
2 Claims. (Cl. 23—14.5)



1. A method for treatment of uranium ores comprising the continuous dissolution of the uranium from the ore by a single-stage leaching of the latter at a temperature of 50–90° C. with aqueous sulphuric acid containing dissolved ferric sulphate to form a pulp, filtering the pulp, directly recirculating between 35 and 65% of the resulting filtrate to the incoming ore to leach the latter and oxidizing the ferrous sulphate content of said filtrate during said recirculation to form ferric sulphate in solution by stirring said recirculated filtrate at a sufficient rate to form a vortex and flowing air and sulphur dioxide through said vortex to effect auto-oxidation of the ferrous iron content, cooling the pulp to about 40° C. prior to filtration by effecting a heat exchange between the pulp and the recirculated portion of the filtrate, diluting the balance of the filtrate not recirculated to the incoming ore and extracting uranium therefrom.

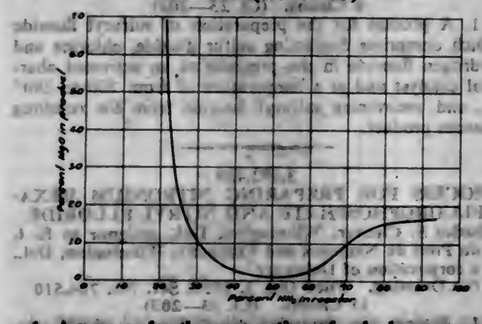
3,092,448
PROCESS FOR SEPARATING NIOBIUM AND TANTALUM
John H. Kennedy, Claymont, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Aug. 31, 1960, Ser. No. 53,050
5 Claims. (Cl. 23—15)

1. The process for separating niobium and tantalum from each other which comprises preparing a niobate-tantalate solution containing hydroxide ion in a concentration of at least about 0.01 molar; adding sodium ion and potassium ion to said solution in a concentration sufficient to provide a molar ratio of combined sodium and potassium to niobium of greater than 8 to 6, the potassium ion constituting at least about 50 mol percent of the total concentration of sodium ion and potassium ion, whereby mixed alkali metal niobate crystallizes from solution.

3,092,449
PROCESS FOR THE RECOVERY OF EUROPIUM FROM LOW GRADE EUROPIUM MIXTURES WITH OTHER RARE EARTHS
Kazimierz Josef Bril, Rua 4, 39 Jardim Elvira, Santo Amaro, and Jose Bolsanaras Madjar, Av. Adolfo Pinheiro, 4036 Bloco G, Apto. 12, both of Sao Paulo, Brazil
No Drawing. Filed July 13, 1959, Ser. No. 826,495
Claims priority, application Brazil July 22, 1958
6 Claims. (Cl. 23—22)

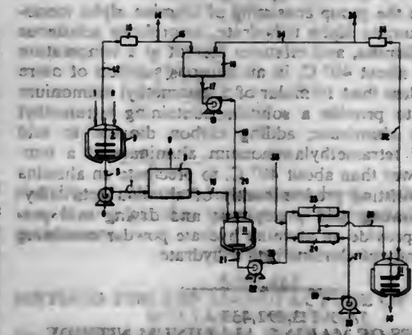
1. In a method of recovering europium values from low grade europium-containing mixtures with other rare earths wherein the amount of europium values is small relative to the other rare earths, the steps of adding an alkali metal sulfate selected from the group consisting of sodium sulfate and potassium sulfate to a solution in which the solubility of europous sulfate is not sufficiently low for a substantial portion of europous sulfate to precipitate therefrom, said solution containing rare earth sulfates and europium values in europous form in an amount sufficient to precipitate part of said rare earths in the form of rare earth-alkali metal-double sulfates, thereby coprecipitating said europium values in the form of europous sulfate with said part of said rare earth-alkali metal-double sulfates; and recovering a product containing an increased percentage of europium values as compared to the percentage of europium values in said original europium-containing mixture.

3,092,450
PREPARATION OF ANHYDROUS MAGNESIUM CHLORIDE
Valdemar J. Christensen, Pasadena, Calif., and Granville C. Egleson and Elwood L. Carlson, Lake Jackson, Tex., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Filed Dec. 27, 1960, Ser. No. 78,721
7 Claims. (Cl. 23—91)



1. A process for the preparation of anhydrous magnesium chloride which comprises; adding magnesium chloride to an agitated aqueous solution containing not more than 65 weight percent ammonia, maintaining ammonia concentration in the thus formed reaction mixture at from 35 to 65 percent by weight of solution throughout reaction in which magnesium chloride reacts with ammonia to form a precipitate of magnesium chloride hexammoniate, separating the precipitated magnesium chloride hexammoniate from the reaction mixture, and recovering anhydrous magnesium chloride from said hexammoniate.

3,092,451
RECOVERY OF ACRYLONITRILE CATALYST
Sterling N. Vlaev, Memphis, Tenn., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed July 2, 1959, Ser. No. 824,636
6 Claims. (Cl. 23—97)



1. In the process for the recovery of values from anhydrous catalyst after use in the synthesis of acrylonitrile, said used catalyst comprising a solution of cuprous salts in organic solvent and non-volatile by-products of the synthesis, the steps comprising recovery by volatilization of the major portion of the organic solvent, then heating the unvolatilized residue to a higher temperature in an atmosphere comprising hydrogen chloride to render the non-volatile by-products insoluble in said organic solvent and extracting cuprous chloride therefrom with organic solvent.

3,092,452
PRODUCTION OF LOW-SODA ALUMINA
Walter H. Gitzen, Belleville, Ill., assignor to Aluminum Company of America, Pittsburgh, Pa., a corporation of Pennsylvania
No Drawing. Filed Aug. 18, 1959, Ser. No. 834,387
4 Claims. (Cl. 23—143)

1. A method of removing soda from an aluminum compound containing soda and selected from the group consisting of alumina and alumina hydrate, comprising admixing with said compound boric oxide, heating said admixture at a temperature above 1100° C. but below the effective volatilization temperature of sodium borate to solubilize the sodium oxide contained in said aluminum compound, and subsequently leaching the heated admixture with a solvent for sodium borate.

3,092,453
PRODUCTION OF LOW-SODA ALUMINA
Walter H. Gitzen, Belleville, Ill., assignor to Aluminum Company of America, Pittsburgh, Pa., a corporation of Pennsylvania
No Drawing. Filed Aug. 18, 1959, Ser. No. 834,388
3 Claims. (Cl. 23—143)

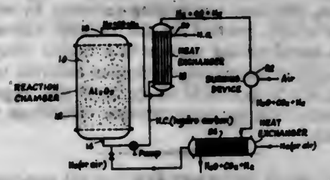
1. A method of removing soda from an aluminum compound containing soda and selected from the group con-

sisting of alumina and alumina hydrate, comprising admixing with said aluminum compound boric oxide and a fluoride mineralizer, heating said admixture at a temperature above 900° C. but below the effective volatilization temperature of sodium borate to solubilize the sodium oxide contained in said compound, and subsequently leaching the heated admixture with a solvent for sodium borate.

3,092,454
PREPARING ALUMINA BETA TRIHYDRATE
Louis C. Doelp, Jr., Glen Mills, Pa., assignor to Air Products and Chemicals, Inc., a corporation of Delaware
No Drawing. Filed Nov. 20, 1959, Ser. No. 854,271
3 Claims. (Cl. 23—143)

1. The method of preparing an alumina hydrate consisting predominantly of alumina beta trihydrate which includes the steps of: dispersing hydrated alumina selected from the group consisting of alumina alpha monohydrate, alumina alpha trihydrate, amorphous gelatinous hydrated alumina, and mixtures thereof at a temperature lower than about 40° C. in an aqueous solution of more than 1 but less than 10 molar of a tetramethyl ammonium hydroxide to provide a solution containing tetramethyl ammonium aluminate; adding carbon dioxide to said solution of tetramethylammonium aluminate at a temperature lower than about 40° C. to precipate an alumina hydrate consisting predominantly of alumina beta trihydrate; separating said precipitate; and drying said precipitate to provide an alumina hydrate powder consisting predominantly of alumina beta trihydrate.

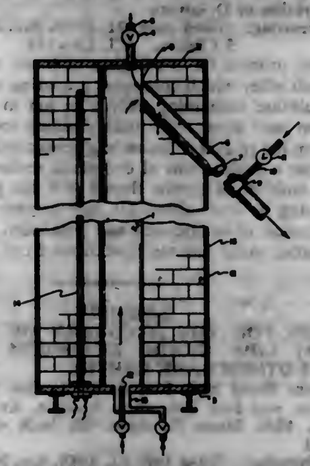
3,092,455
PROCESS OF MAKING ALUMINUM NITRIDE
René Antoine Páris, Lyon, and René Périères, La Tronche, France, assignors to Pechiney, Paris, France
Filed Feb. 11, 1960, Ser. No. 8,060
Claims priority, application France Feb. 13, 1959
13 Claims. (Cl. 23—192)



1. A process of making aluminum nitride comprising the steps of contacting aluminum oxide with a natural gas formed of hydrocarbons containing from 1 to 4 carbon atoms and in an amount to provide at least 3 atoms of carbon per molecule of Al_2O_3 and heating the materials to a temperature within the range of 1200° C. to 1750° C. whereby hydrocarbon is dissociated to form hydrogen which goes off as a gas and carbon which is retained by the aluminum oxide, introducing nitrogen into contact with the aluminum oxide-carbon in an amount corresponding to at least one mol of N_2 per mol of Al_2O_3, and heating to a temperature within the range of 1200° C. to 1750° C. to produce CO which goes off as a gas and AlN which is retained as a product.

3,092,456
IRON CHLORIDE COMBUSTION
Earl W. Nelson, Lynchburg, and Thomas J. Crowley, Amherst, Va., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine
Filed Dec. 23, 1959, Ser. No. 861,601
4 Claims. (Cl. 23—200)

1. In the manufacture of iron oxide wherein an iron chloride and oxygen are burned at 500°–1000° C. in a combustion zone in a continuous reactor thereby forming a reaction product consisting essentially of iron oxide particles, chlorine, unreacted oxygen, and unreacted iron chloride, the method of inhibiting formation of incrusta-



tions of iron oxide on the walls of the exit conduit of said reactor, which consists in chemically inactivating in said conduit at least part of said unreacted oxygen in said reaction product.

3,092,457
METHOD FOR PREPARING HIGH SURFACE AREA TITANIA
James W. Sprague, Streetsboro, Ohio, assignor to The Standard Oil Company, Cleveland, Ohio, a corporation of Ohio
No Drawing. Filed Nov. 4, 1960, Ser. No. 67,162
2 Claims. (Cl. 23—202)

1. A method for preparing a high surface area pure titania gel comprising the step of acetolyzing a titanic acid ester having an alkyl chain of 1 to 4 carbon atoms with 1 to 8 mols of glacial acetic acid per mole of ester, hydrolyzing the resulting product with water at a temperature so as to obtain a final mixture in the range of 5° to 25° C., drying the gel, and calcining the dry gel in air at 950° to 1250° F., and then cooling the same.

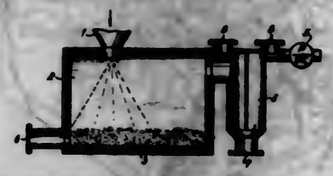
3,092,458
PROCESS FOR THE PRODUCTION OF SULFURYL FLUORIDE
Robert P. Rah, Ralph A. Davis, and Keith A. Allewede, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed Jan. 9, 1958, Ser. No. 707,845
6 Claims. (Cl. 23—203)

1. A process for the preparation of sulfuryl fluoride which comprises contacting sulfur dioxide, chlorine and hydrogen fluoride in the presence of an activated charcoal catalyst and at a temperature of from 200 to 280° C., and, recovering sulfuryl fluoride from the resulting gaseous product.

3,092,459
PROCESS FOR PREPARING NITRONIUM HEXAFLUOROPHOSPHATE AND NITRYL FLUORIDE
Charles S. Cleaver, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Oct. 1, 1958, Ser. No. 764,510
11 Claims. (Cl. 23—203)

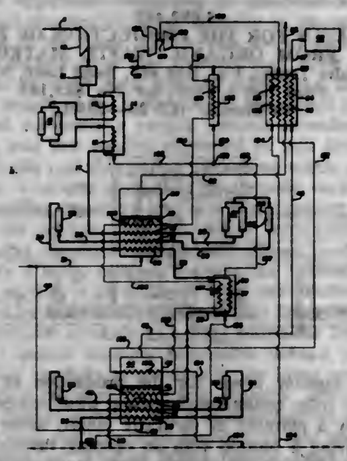
1. Process for preparing nitryl fluoride which comprises adding phosphorus pentafluoride to fuming nitric acid thereby forming nitronium hexafluorophosphate, drying said nitronium hexafluorophosphate, intimately mixing the dry nitronium hexafluorophosphate with an anhydrous alkali metal fluoride, heating and reacting in an inert atmosphere said dry nitronium hexafluorophosphate with said anhydrous alkali metal fluoride at a temperature within the range of 130–400° C., and separating nitryl fluoride as the resulting product.

3,092,460
PROCESS FOR DECREASING THE OXIDE CONTENT OF COMMERCIAL CALCIUM CARBIDE
Heinrich Röck, Trostberg, Upper Bavaria, Germany, assignor to Süddeutsche Kalkstickstoff-Werke A.G., Trostberg, Germany
Filed Apr. 13, 1961, Ser. No. 102,859
Claims priority, application Germany Apr. 22, 1960
2 Claims. (Cl. 23—208)

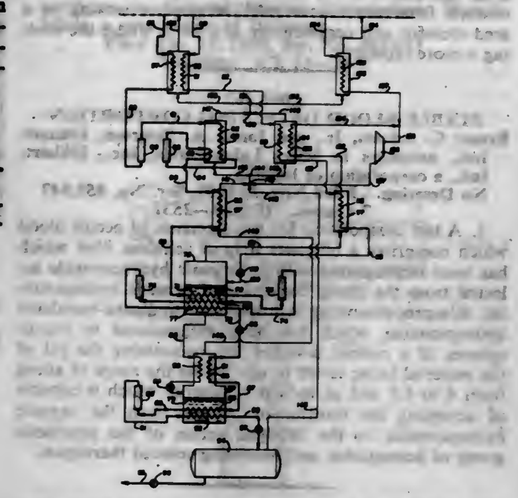


1. A process for decreasing the oxide content of commercial calcium carbide comprising producing a melt of calcium carbide in an electric furnace, tapping such melt, and subjecting said tapped melt outside said furnace at a temperature of about 1600 to 2000° C. to a vacuum in the range of about 1 to 100 mm. Hg, the higher vacuum corresponding to the lower Hg values in said range being employed at the lower temperatures, thereby reacting calcium oxide present as impurity with calcium carbide to form calcium vapor and carbon monoxide and removing said gases by said vacuum.

3,092,461
PROCESS FOR PRODUCING LIQUID HYDROGEN
Peter C. Vander Arend and Lee S. Gaumer, Jr., Allentown, Pa., assignors, by mesne assignments, to Air Products and Chemicals, Inc., Trexlertown, Pa., a corporation of Delaware
Filed Jan. 20, 1960, Ser. No. 3,670
18 Claims. (Cl. 23—210)

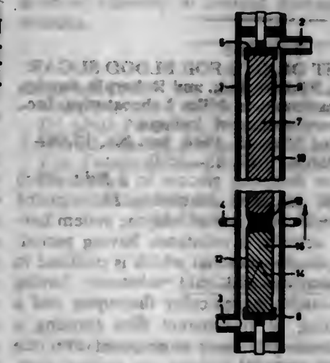


1. Process for producing liquid hydrogen of high para composition which comprises cooling hydrogen feed to provide liquid hydrogen, effecting catalytic conversion of ortho-hydrogen to para-hydrogen while cooling the hydrogen feed, the catalytic conversion taking place at a



plurality of different temperature levels including conversion in a plurality of stages at substantially constant temperature.

3,092,462
METHOD FOR THE MANUFACTURE OF RODS OF MELTABLE MATERIAL
Jan Goeriaan, Emmasingel, Eindhoven, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Jan. 16, 1961, Ser. No. 82,747
Claims priority, application Netherlands Jan. 28, 1960
5 Claims. (Cl. 23—223.5)



1. A method for growing by zone-melting a monocrystalline elongated body of meltable material in an atmosphere containing a constituent reactable with the body material to form a coating of the reaction product on exposed surfaces of the body, comprising providing an elongated body of the material having at one end a monocrystalline portion, providing around the body an atmosphere containing the said constituent, forming at the other end of the body a molten zone extending to the exposed body surfaces, advancing the molten zone through the body toward the said one end to form the coating by reaction between the melt and the reactable constituent whereby the first-formed coating portion tends to be irregular but gradually as the coating extends tends

to become more regular, and then advancing a molten zone through the body in the opopsite direction away from the said one end to grow a single crystal portion onward from the monocrystalline portion serving as a seed therefor and commencing at a point where the coating is more regular.

3,092,463
STABLE BLOOD DETECTING COMPOSITION
Ernest C. Adams, Jr., and James A. Peterson, Elkhart, Ind., assignors to Miles Laboratories, Inc., Elkhart, Ind., a corporation of Indiana
No Drawing. Filed Nov. 2, 1959, Ser. No. 850,047
7 Claims. (Cl. 23—253)

1. A test composition for the detection of occult blood which comprises a bibulous strip of cellulose fiber which has been impregnated with an organic hydroperoxide selected from the group consisting of cumene hydroperoxide, diisopropylbenzene hydroperoxide and para-menthane hydroperoxide, which has been encapsulated in microspheres of a colloid, a buffer for maintaining the pH of the material being tested to one within the range of about from 4 to 6.5 and an indicator material which is capable of accepting the transfer of oxygen from the organic hydroperoxide by the catalytic action of the prosthetic group of hemoglobin and becoming colored thereupon.

3,092,464
BLOOD DETECTING COMPOSITION
Ernest C. Adams, Jr., and James A. Peterson, Elkhart, Ind., assignors to Miles Laboratories, Inc., Elkhart, Ind., a corporation of Indiana
No Drawing. Filed Nov. 2, 1959, Ser. No. 850,115
7 Claims. (Cl. 23—253)

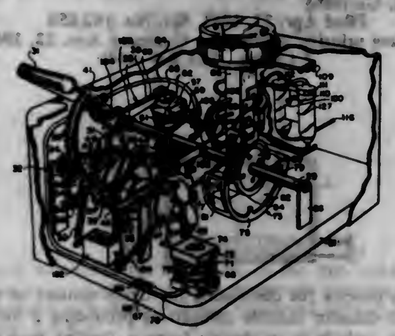
1. A test composition for the detection of blood which comprises in dry solid form a bibulous carrier upon which is impregnated an organic hydroperoxide selected from the group consisting of ethyl hydroperoxide and 1-hydroxycyclohexylhydroperoxide-1 and an indicator material which changes color in the presence of said organic hydroperoxide and blood.

3,092,465
DIAGNOSTIC TEST DEVICE FOR BLOOD SUGAR
Ernest C. Adams, Jr., Elkhart, Ind., and Robert R. Smeby, Cleveland, Ohio, assignors to Miles Laboratories, Inc., Elkhart, Ind., a corporation of Indiana
No Drawing. Filed Mar. 25, 1960, Ser. No. 17,501
10 Claims. (Cl. 23—253)

1. A test article for detecting glucose in a fluid which comprises a bibulous material containing impregnated therein a mixture which comprises an enzyme system having glucose oxidase activity, a substance having peroxidative activity, an indicator material which is oxidized in the presence of peroxide and said substance having peroxidative activity and changes color thereupon and a semi-permeable coating of transparent film forming a continuous smooth protective layer superposed over the impregnated bibulous material.

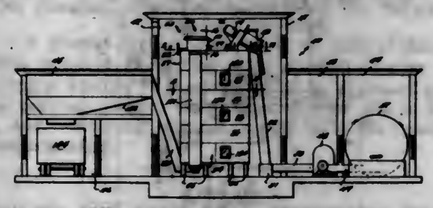
3,092,466
CARBON DIOXIDE ANALYZER CARTRIDGE ASSEMBLY
William M. Rand, Jr., Lincoln, Richard E. Rice, Arlington, Robert G. Shaver, Concord, and William E. Whitney, Belmont, Mass., assignors to Comstock & Wescott, Inc., Cambridge, Mass., a corporation of Massachusetts
Original application Nov. 10, 1958, Ser. No. 772,910, now Patent No. 2,035,903, dated May 22, 1962. Divided and this application Nov. 12, 1959, Ser. No. 855,486
2 Claims. (Cl. 23—255)

1. In the apparatus for determining the amount of carbon dioxide in a sample of an anesthetic gas stream, said apparatus having humidifying means for standardizing the relative humidity of said sample, absorbent means for absorbing the carbon dioxide from said sample so standardized in humidity, means for observing the change in the amount of said sample as the result of the removal of said carbon dioxide, and passageways adapted to transfer and control the flow of said sample through the above three means; the improvement thereof comprising, in combination: a replaceable humidifying cartridge as said humidifying means, a replaceable absorption cartridge as said absorption means, and a housing adapted to receive said cartridges and to provide for the passage of gas therethrough; each of said cartridges comprising a hollow, non-collapsible tubular body with conical end openings at both



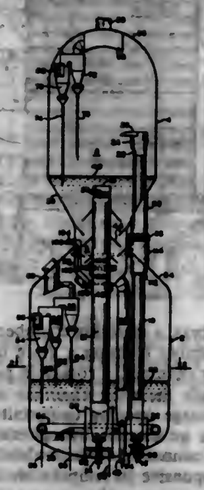
ends providing communication with the interior of said tubular body, said housing comprising a supporting member carrying four spring-loaded receivers in vertically-paired relationship, each pair of receivers being adapted to receive one of said cartridges and to close thereover, and each of said receivers having a conduit communicating with said passageways and adapted to register with one of said openings in a gas-tight manner, the pair of cartridges being joined by a spacing segment to maintain the cartridges in spaced, parallel relationship corresponding to the position of said receivers, said segment having an aperture adapted to register with otherwise interfering means associated with the housing, whereby placing the cartridges in incorrect gas circuits in said apparatus is made impossible.

3,092,467
APPARATUS FOR THE PRODUCTION OF FERTILIZER FROM ORGANIC WASTE MATERIALS
Andre Tompo, P.O. Box 407, Budd Lake, N.J.
Filed July 6, 1959, Ser. No. 825,145
10 Claims. (Cl. 23—259.1)



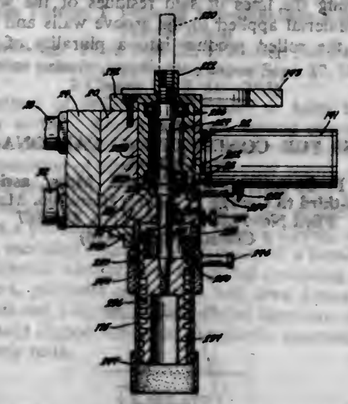
1. A digester tower for the production of organic fertilizer from comminuted organic waste material comprised by a plurality of vertically ranged tower sections each having a bottom with an opening therein, a conveyor for feeding the organic waste material to the uppermost tower section, a hopper on the uppermost tower section for holding bacteria containing material, a rotary valve between the bottom of the hopper and the uppermost tower section for feeding the bacteria containing material from the former into the latter, means for rotating said valve, transversely extending shafts positioned above the bottoms of the lower tower sections, agitator blades on said shafts, a motor drivably connected to said shafts for rotating same, rotary valves below the openings in the bottoms of the lower tower sections for force feeding the bacteria inoculated waste material from one tower section into the next lower tower section, means for rotating the latter valves, and a conveyor for removing the organic fertilizer from the lowermost tower section.

3,092,468
APPARATUS FOR HANDLING POWDERED MATERIAL
Charles E. Styngstad, Rutherford, N.J., and Gunther P. Eschenbrenner, Byram, Conn., assignors to The M. W. Kellogg Company, New York, N.Y., a corporation of Delaware
Filed May 9, 1961, Ser. No. 108,931
9 Claims. (Cl. 23—284)



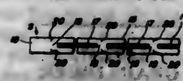
1. An apparatus comprising in combination a first cylindrical chamber of larger diameter in the upper portion than in the lower portion with the transition therebetween formed by a first frusto-conical baffle member sloped at an angle such that not more than about one half the length of the baffle slope is intercepted by a first elongated substantially vertical conduit extending therethrough, said first conduit supported by said first frusto-conical baffle and terminating thereabove within said first chamber, a second elongated substantially vertical conduit extending upwardly into said first chamber to form an annular section therewith which terminates within said conical transition section, said second conduit supported by a baffle member forming the bottom of said annular section, a plurality of open end third conduits supported by and extending downwardly from the bottom of said annular chamber to a level within the lower portion of a second chamber hereinafter defined, said first and second conduits terminating in the lower portion of said second chamber, said first chamber and conduits attached thereto supported by a second chamber of larger diameter than the maximum diameter of said first chamber through an inverted frusto conical head member which is attached at its minimum diameter to the minimum cylindrical section of said first chamber substantially above the bottom thereof.

3,092,469
MIXER
Lawrence L. Jaffe and George N. Wetzel, Dayton, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Apr. 27, 1959, Ser. No. 809,051
3 Claims. (Cl. 23—285)



1. Apparatus for mixing material such as polyurethane foam or the like including a mixing member and a casing member surrounding the mixing member, means for supporting one of said members in fixed relationship relative to the other of said members, means for rotating said other member in one direction, means for introducing the material to be mixed between said members, and means interposed between said one member and said supporting means for holding said one member in fixed relationship to said supporting means and automatically responsive to abnormal torque upon said one member during the rotation of said other member in said one direction for releasing said one member for rotation with said other member whereby to prevent damage to said means for rotating.

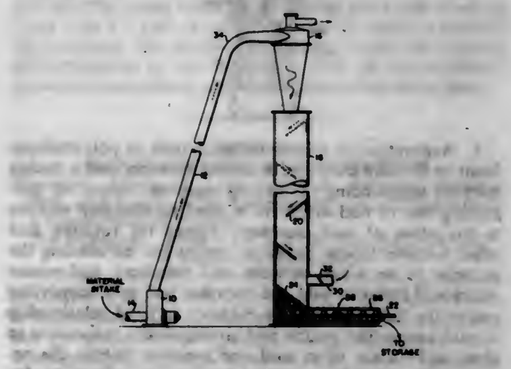
3,092,470
PREPARATION OF SHEET STOCK HAVING LONGITUDINAL EXTERNAL WEAKENINGS THEREIN AND PRODUCT THEREOF
Edward J. Ripling, Flossmoor, Ill., assignor to Continental Can Company, Inc., New York, N.Y., a corporation of New York
Filed July 29, 1959, Ser. No. 830,339
16 Claims. (Cl. 29—187)



1. The method of preparing narrow strips of material each having an internal discontinuity between surface laminations, the laminations being connected at the lateral edges of the discontinuity, which comprises preparing a billet of the material with a plurality of internal longitudinal channels spaced laterally from one another and from the longitudinal edges of the billet by portions of solid metal extending from face to face of the billet, said channels containing extensible weld-preventing material, said billet having a plurality of longitudinal external grooves at a roll-engaging face thereof, each of said grooves being located opposite one of the said solid metal portions, the parts of said solid metal portions beneath the roots of said grooves being effective to maintain integrity of the billet from side to side during rolling, placing a weld-preventing material on a wall of each groove, rolling the billet longitudinally whereby to cause

lateral closure of the grooves and reduction of the total thickness of the billet to that desired for the narrow strips wherewith the dimension of the residues of said weld-preventing material in the direction of the thickness of the strips is reduced coordinately with the reduction of such total thickness, and then applying forces to the rolled product whereby to over-stress and effect separation along the lines of said residues of the weld-preventing material applied to the groove walls and thereby separate the rolled product into a plurality of narrow strips.

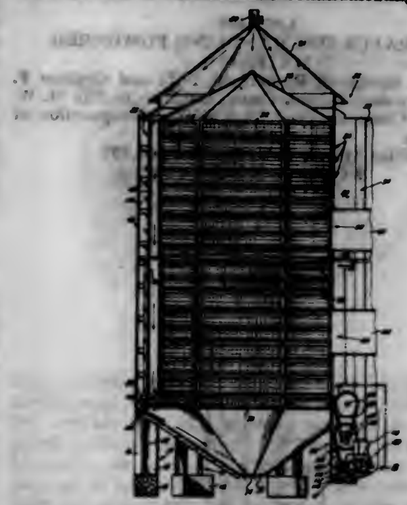
3,092,471
PROCESS FOR CONDITIONING CARBONACEOUS MATERIAL
Charles F. Stromeyer, Marblehead, Mass., assignor of one-third to George F. Ropes, Hamilton, Mass.
Filed Nov. 20, 1959, Ser. No. 854,387
1 Claim. (Cl. 34—10)



The method of treating hot freshly produced particles of charcoal to obviate spontaneous combustion, which comprises introducing the particles into a carrier stream of cool air, passing the particles and cool air through a tubular conduit until the air has absorbed a substantial amount of heat from the particles, separating the now-heated air from the particles, introducing the partially cooled particles into a vertical tower, permitting the particles to drop through the tower, tumbling the falling particles a plurality of times during their fall, admitting air adjacent the bottom of the tower as a countercurrent stream, and regulating the admission of the latter air to limit the velocity of the countercurrent stream.

3,092,472
GRAIN DRIER
Charles D. Figley, 1266 4th Ave. SE., Cedar Rapids, Iowa
Filed Nov. 23, 1959, Ser. No. 854,736
5 Claims. (Cl. 34—56)

2. In a grain drier construction, a plurality of foundation block members in a spaced circular pattern, a vertically disposed leg supported on each block member, a support block intermediate and spaced from two of said block members as a part of said circular pattern, a vertical panel of U-shaped cross section carried by said support block to define a front side, a respective column member in the space intermediate each adjacent pair of said legs and secured at opposite edges to adjacent legs and with two of said columns secured at one respective edge to respective opposite sides of said panel to define side members and form a central air chamber, a bottom floor in said chamber, an intermediate floor therein spaced above said bottom floor to divide said air chamber into an upper hot air chamber and a lower cold air chamber, said column members each having an inner wire mesh wall, a solid outer wall serving as a weather shield, and a wire mesh partition wall intermediate said inner and outer walls, the zone intermediate said inner wall and partition defining a grain flow chamber, the zone between said outer wall and partition defining an air flow chamber, air vents at the lower and upper ends of said outer wall, said hot air chamber adapted to receive a forced hot air flow, said cold air chamber adapted to receive a cold air flow, an inverted cone-shaped garner enclosing the top of said central air chamber and designed to direct the flow of grain into said respective grain flow chambers, a roof over said garner, a fill pipe in said roof, a hopper at the bottom of said columns communicating with said

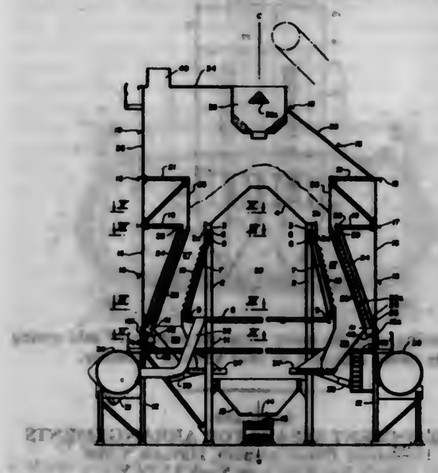


grain flow chambers, a metering chamber at the bottom of each column member forming a grain discharge opening in the grain flow chamber, a rotatable paddle-type metering wheel in each metering chamber adapted to rotate across said discharge opening to permit the discharge of grain therefrom, an electrically operated variable speed means operably connected to said wheels for rotating the same, means responsive to temperature in one of said air flow chambers and operably connected to an electrical control switch, said switch being actuated by said temperature responsive means and operatively connected to said variable speed means for activating the same whereby the speed of rotation of said wheels is respectively increased or decreased according to respective increases or decreases in temperature in said air flow chamber.

3,092,473
COOLER FOR SINTER AND THE LIKE
Victor F. Koontz, Connapolis, and John A. Anthes, Bethel Borough, Pa., assignors to Dravo Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Apr. 22, 1959, Ser. No. 808,039
9 Claims. (Cl. 34—164)

1. A sinter cooler comprising a structure having inner and outer spaced circular walls of truncated conical shape concentric about a vertical axis, said walls being of louvre-like construction for the passage of air therethrough, the annular space between the two walls being a sinter cooling space, a conical imperforate cover over the inner wall, the space within the inner wall and under said cover constituting an air plenum, means for supplying air under pressure to the air plenum, a shell around the outer wall and extending over and above the two walls and the conical cover over the inner wall, and air escape passage leading from the shell, a material receiving hopper

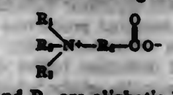
in the shell centered over the said conical cover for discharging material vertically onto the conical cover, means at the bottom of said space forming a circular series of contiguous hoppers having downwardly-converging side walls, said hoppers being located below the louvered circular walls, a vibratory conveyor extending radially in-



ward from beneath each of said hoppers for receiving material from the respective hoppers and conveying it toward the center of the structure, a central receiving hopper over which the said vibratory conveyors extend and over which they terminate, and a main conveyor below the receiving hopper for carrying away material discharged into the receiving hopper.

3,092,474
FUEL OIL COMPOSITION
Herman G. Ebner, Chicago, Ill., assignor to Standard Oil Company, Chicago, Ill., a corporation of Indiana
No Drawing. Filed Apr. 25, 1960, Ser. No. 24,214
14 Claims. (Cl. 44—66)

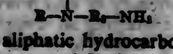
1. A fuel oil composition comprising a major amount of distillate fuel oil and from about 0.001 to about 5 weight percent of a betaine having the structural formula:



wherein R_1, R_2 and R_3 are aliphatic hydrocarbon groups containing from 10 to about 22 carbon atoms and R_4 is alkylene group containing from one to about 7 carbon atoms.

3,092,475
FUEL COMPOSITION
Eldon B. Cole, Tulsa, and Phillip M. Niles, Sand Springs, Okla., assignors, by mesne assignments, to Sinclair Research, Inc., New York, N.Y., a corporation of Delaware
No Drawing. Filed Dec. 22, 1958, Ser. No. 781,892
12 Claims. (Cl. 44—72)

1. A fuel oil composition consisting essentially of a distillate fuel oil and a small amount sufficient to effectively stabilize said oil against deterioration of an oil-compatible reaction product of about 20 to 95 weight percent of a fatty diamine having the structural formula:

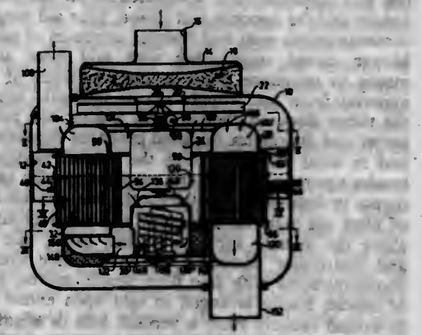


in which R is an aliphatic hydrocarbon chain of at least about 6 carbon atoms and R_3 is a divalent aliphatic hydrocarbon radical containing about 2 to 8 carbon atoms, and about 5 to 80 weight percent of an alkylene oxide of 2 to 4 carbon atoms.

3,092,476
METHOD OF MANUFACTURING A GRINDER OR HONE HAVING FINE CUSHIONY SURFACES
Yoshio Yatabe, 1 1-chome Jujo-nakahara Kita-ku, Tokyo, Japan
No Drawing. Filed Sept. 25, 1959, Ser. No. 842,361
Claims priority, application Japan Sept. 27, 1958
2 Claims. (Cl. 51—293)

1. Method of preparing a grinder or hone having a cushiony surface, which comprises mixing abrasive particles and particles of a synthetic resin selected from the group consisting of vinyl resins, polyester resins, and urea formaldehyde resins, putting said mixture into a mould, heating said mixture under pressure in said mould in order to obtain a pre-sintered moulded article, dipping said pre-sintered, moulded article into a mixture of a liquid monomeric material selected from the group consisting of vinyl monomers, polyester monomers nad urea formaldehyde monomers and polymerization catalyst therefore, and then heating said dipped article to completely polymerize said monomeric resin.

3,092,477
AIR CONDITIONING APPARATUS
Per-Oskar Persson, Hagavagen 22, Bromma, Sweden
Filed July 18, 1958, Ser. No. 749,467
Claims priority, application Sweden July 19, 1957
2 Claims. (Cl. 55—196)



1. An apparatus for drying air comprising, means defining a first passage for a stream of air to be dried, means defining a second passage for a regenerating stream, means for passing said streams through said passages, an annular rotor including an air-permeable mass of solid sorbent material mounted to move cyclically between said passages and having passages for the axial flow of said streams, the means defining the first passage including means to bring the air to be dried to pass through the rotor in one direction, the annular rotor having a central aperture forming part of said second passage, the means defining the said second passage including means to bring the regenerating stream to pass through said aperture in the same direction as the air to be dried and then back through the sorbent material of the rotor in the opposite direction, heating means for heating the regenerating stream to dry the sorbent material as it passes through the second passage, and motor means for moving the sorbent material, said motor means and said heating means being mounted in and coaxially with said aperture, said motor means being mounted in front of said heating

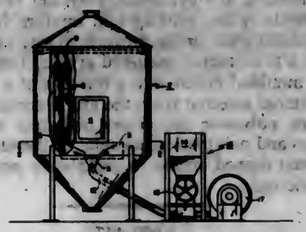
means in the direction of the passage of the regenerating stream through said aperture, whereby the regenerating stream will be preheated by said motor means and heated by said heating means prior to passing through the sorbent material of the rotor and whereby said motor means will be cooled by the passage of the regenerating stream thereover.

3,092,478

TUBE TYPE DUST COLLECTOR ARRANGEMENT

Tom R. Smith, Louisville, Ky., assignor to American Air Filter Company, Inc., Louisville, Ky., a corporation of Delaware

Filed May 31, 1960, Ser. No. 32,746
1 Claim. (Cl. 55—262)



A dust collector comprising a vertical housing having spaced gas inlet and gas outlet means, a filter tube header having a plurality of apertures disposed therein extending in a horizontal plane transverse said housing intermediate said gas inlet and gas outlet means, a plurality of spaced pervious filter tubes vertically suspended in said housing downstream of said header, each of said tubes having one end communicably connected to an aperture in said header and the opposite end closed, filter aid supply means communicating with said housing upstream of said header, blower means cooperating with said filter aid supply means to introduce finely divided particles of filter aid material from said supply means into said housing and the tubes disposed therein, and a filter aid particle disperser and distributor disposed in spaced relationship from and in axial alignment with the central portion of said header upstream thereof and cooperating with said blower means to disperse and distribute the finely divided particles of filter aid material uniformly and substantially equally along the interior surfaces of said tubes, said disperser and distributor including an open ended enclosure in communication with said filter supply means, a plurality of spaced blades arranged in said open ended enclosure to extend radially from a vertical axis in alignment with the central axis of said housing in the form of a rosette and curved to deliver filter aid material to said filter tubes in a dispersed solid cone shaped pattern to insure uniform and substantially equal application of the material along the interior surfaces of all of said tubes.

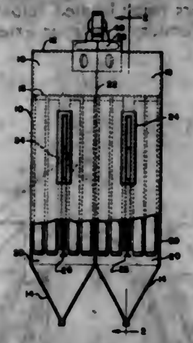
3,092,479

DOUBLE BAG FILTER

Carl W. Hedberg, 724 Watchung Road, Bound Brook, N.J.

Filed June 1, 1960, Ser. No. 33,169
2 Claims. (Cl. 55—341)

1. A gas filtering apparatus comprising a housing having a dirty gas inlet and a clean gas outlet, a plurality of double walled filters disposed within said housing between said dirty gas inlet and said clean gas outlet, each of said filters having an inner and an outer bag, means for suspending said bags within said housing, a plurality of elongate spring elements for maintaining a spaced relationship between the inner and outer bags of said filters, and an annular member of generally U-shaped cross-sectional configuration attached to the bottom of each of said filters, the upper terminal portion of said spring elements being attached to said means for suspending said bags within



said housing, and the lower terminal portion of said spring elements being attached to said annular member.

3,092,480

ENTRAINMENT SEPARATOR ARRANGEMENTS

Jeronimo Diaz-Compais, Havana, Cuba
(P.O. Box 370, New York 25, N.Y.)

Filed Sept. 17, 1958, Ser. No. 761,505
1 Claim. (Cl. 55—423)



An entrainment separator arrangement for systems which are adapted to handle a stream of vapor containing entrained liquids which comprises:

(*a*) upstanding walls defining the sides of the separator which are adapted to laterally contain a moving stream of vapor and entrained liquid material,

(*b*) six entrainment separator deflection baffles extending across a substantial proportion of the cross sectional flow area within said walls,

(*c*) each of said deflection baffles comprising a substantially flat metallic section which is upwardly inclined in a direction generally pointing from the inlet end of the separator toward the outlet end of the separator,

(*d*) two of said deflection baffles being immediately adjacent to each other and directly attached to one side of the separator and being inclined in one direction, two deflection baffles being immediately adjacent to each other and directly attached to the opposite side of the separator and being inclined in the opposite direction, and the two centrally positioned deflection baffles being inclined in opposite directions to each other and in an opposite direction to the next adjacent deflection baffles,

(*e*) the uppermost inclined portion of each of said deflection baffles merging into a downwardly projecting flange section which substantially reverses direction so as to form an acute angle with respect to the baffle to which it is attached, and

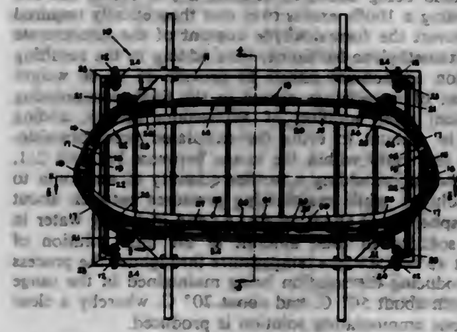
(*f*) the lower extremity of said downwardly projecting flange section containing an inwardly turned channel section which is shaped to collect and carry off separated liquid.

3,092,481

GLASS BENDING MOLD

Frank J. Carson, Toledo, Ohio, assignor to Libbey-Owens-Ford Glass Company, Toledo, Ohio, a corporation of Ohio

Filed Dec. 30, 1957, Ser. No. 705,916
4 Claims. (Cl. 65—288)



1. In apparatus for bending a glass sheet and forming a stress pattern in the sheet having peripheral areas in compression while central portions thereof are relatively free from tension stresses, a bending mold comprising a substantially continuous curved shaping rail, and a heat retaining member consisting solely of a bar enclosing an open area spaced inwardly from said shaping rail and spaced from a glass sheet when supported on said shaping rail, said bar having a curvature substantially corresponding to the curvature of the shaping rail.

3,092,482

MOLDS FOR BENDING GLASS SHEETS

Harold E. McKelvey, Rural Valley, Pa., assignor to Pittsburgh Plate Glass Company, Allegheny County, Pa., a corporation of Pennsylvania

Original application Jan. 4, 1956, Ser. No. 557,361, now Patent No. 3,000,143, dated Sept. 19, 1961. Divided and this application Oct. 12, 1960, Ser. No. 70,093
4 Claims. (Cl. 65—291)



1. A sectionalized mold for bending a glass sheet comprising

(*a*) a longitudinally disposed rigid central molding member having longitudinal ends and upper shaping surfaces;

(*b*) a sectionalized molding member comprising

(1) an intermediate section having longitudinally inner and longitudinally outer end portions and upper shaping surfaces, and

(2) an extremity section having longitudinally inner and longitudinally outer end portions and upper shaping surfaces,

said longitudinally inner end portion of said intermediate section being pivotally connected to a longitudinal end of said central molding member, and said longitudinally outer end portion of said intermediate section being pivotally connected to said longitudinally inner end portion of said extremity section, said sectionalized mold-molding member being longitudinally adjacent to said central molding member and movable into an extended position to receive flat glass and into a closed position wherein said upper shaping surfaces of the sectionalized molding member define a substantially continuous outline shaping surface conforming to the shape desired for the bent glass sheet;

(*c*) first hinge means including first pivot means pivotally attaching the longitudinally inner end portion of said intermediate section to a longitudinal end of said central molding member;

(*d*) second hinge means including second pivot means pivotally attaching the longitudinally outer end portion of said intermediate section to the longitudinally inner end portion of said extremity section, the center of gravity of said extremity section lying longitudinally outwardly of said second hinge means thereby securing said extremity section for rotation to an outward position relative to said intermediate section;

(*e*) weight means attached to said intermediate section and located on the longitudinally inner side of said first hinge means for urging the intermediate section into its closed position, said weight means having one end attached to said intermediate section and another end free to rotate in a substantially vertical plane from an upwardly disposed position in the open mold position to a downwardly disposed position in the closed mold position;

(*f*) a first cam member having one end secured to said central molding member and another end free to contact a cooperating second cam member, said free end of said first cam member extending from said secured end towards a longitudinal extremity of the mold;

(*g*) a second cam member having one end secured to said extremity section and another end in alignment with said free end of said first cam member and free to rotate into contact with said free end of said first cam member and extending from its secured end away from said longitudinal extremity of the mold; and wherein the secured ends of said first and second cam members are spaced apart longitudinally of said mold, said first and second cam members having lengths insufficient to contact each other in the extended position but sufficient to contact each other as the molding members move toward the closed position so that the first and second cam members cooperate for urging said extremity section to rotate into a closed mold position only after the intermediate section has moved substantially toward its closed position; and

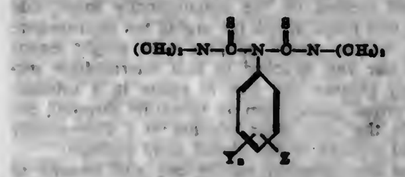
(*h*) stop means comprising separately mounted first and second stop elements each having an attached end and a free end, said attached end of said first stop element being attached to said intermediate section, said attached end of said second stop element being attached to said extremity section, and said free ends of said first and second stop elements free to rotate into abutting contact upon rotation of the intermediate and extremity sections to thereby inhibit movement of the extremity section beyond said outward position.

3,092,483
HERBICIDAL METHOD EMPLOYING 1-PHENYL-2,3-DIMETHYL-4-CHLORO-PYRAZOLONE AND SALTS THEREOF
Werner Parkow, Hamburg, Germany, assignor of one-half to Norddeutsche Affinerie, Hamburg, Germany, a corporation of Germany, and one-half to C. F. Spiess & Sohn, a partnership of Germany
No Drawing. Filed Feb. 27, 1961, Ser. No. 91,660
1 Claim. (Cl. 71—2.5)

The method for the control of weeds which comprises applying to the locus to be treated a herbicidally effective amount of a compound selected from the class consisting of 1-phenyl-2,3-dimethyl - 4 - chloro-pyrazolone-(5), 1-phenyl-2,3-dimethyl-4-chloro-pyrazolone-(5) hydrochloride, 1-phenyl-2,3-dimethyl - 4 - chloro-pyrazolone-(5) sulfate and 1-phenyl-2,3-dimethyl - 4 - chloro-pyrazolone-(5) trichloroacetate.

3,092,484
HERBICIDAL METHOD
Paul L. Salzberg, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Sept. 15, 1960, Ser. No. 56,116
3 Claims. (Cl. 71—2.6)

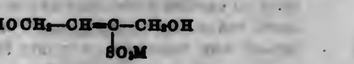
1. A method for the control of undesirable plant growth which comprises applying to the locus to be protected from said undesirable plant growth, in an amount sufficient to exert a herbicidal action, a substituted dithiobiuret of the formula:



where Y is selected fro mthe group consisting of hydrogen and halogen; *n* is a posiitve whole number less than 4; and Z is selected from the group consisting of hydrogen, nitro and alkyl of 1 through 4 carbon atoms.

3,092,485
PROCESS OF DEFOLIATING CHLOROPHYLLACEOUS PLANTS
William E. Deaglas, Los Angeles, Calif., assignor to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed June 29, 1961, Ser. No. 120,475
5 Claims. (Cl. 71—2.7)

1. The process of defoliating plants which consists of applying to the leaves of said plants at a rate sufficient to cause defoliation a compound having the following formula:

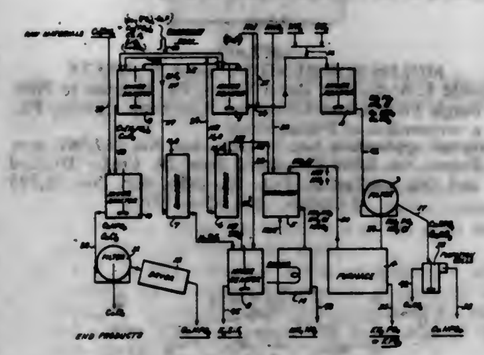


wherein M represents a member selected from the class consisting of ammonium and alkali metal.

3,092,486
PROCESS FOR PREPARING AN AMMONIATING SOLUTION CONTAINING UREA AND FORMALDEHYDE
Charles E. Waters, Petersburg, and Charles H. Hibbitts, Hopewell, Va., assignors to Allied Chemical Corporation, New York, N.Y., a corporation of New York
No Drawing. Filed Jan. 26, 1960, Ser. No. 4,620
1 Claim. (Cl. 71—30)

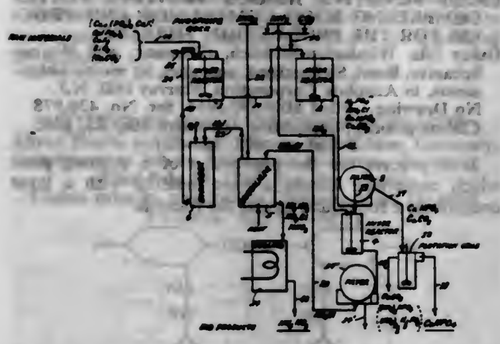
A process for the preparation of a clear aqueous ammoniating solution containing ammonia, ammonium nitrate, urea and formaldehyde which comprises adding ammonia to an aqueous urea-formaldehyde concentrate containing urea and formaldehyde in the form of methylolureas, said concentrate being 80 to 90% total solids calculated as urea and formaldehyde, the calculated urea:formaldehyde mol ratio in said concentrate being about 1:4–1:5, and said concentrate being substantially free of polymeric compounds and ring compounds, said ammonia being added to at least a 5% excess but not exceeding a 100% excess over that theoretically required to convert the formaldehyde content of the concentrate to hexamethylene-tetramine; then adding to the resulting solution ammonium nitrate to provide 25 to 60 weight percent of ammonium nitrate in the final ammoniating solution; after addition of ammonium nitrate, adding urea in amount to bring the calculated urea:formaldehyde mol ratio within the range between 1:1 and 2:1, and thereupon adding a further quantity of ammonia to the solution while maintaining pressures between about atmospheric and about 50 p.s.i.g.; and including water in said solution in total amount in the final solution of about 13%–15%, the temperature throughout the process of producing the solution being maintained in the range between about 50° C. and about 70° C. whereby a clear aqueous ammoniating solution is produced.

3,092,487
PROCESS FOR THE MANUFACTURE OF FERTILIZERS AND THE LIKE
Jacob I. Nevo-Hacohen, Allston, Mass., assignor of one-third to Robert H. Rines, Boston, Mass.
Filed Apr. 28, 1960, Ser. No. 25,384
7 Claims. (Cl. 71—37)



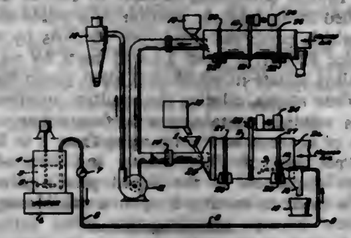
1. The process of producing a phosphate fertilizer having active fertilizer constituents of the order of fifty percent and higher and substantially devoid of calcium, comprising reacting phosphate rock with inorganic mineral acid to produce a product containing a substantial amount of calcium monophosphate, reacting a combination of ammonia and carbon dioxide with said calcium monophosphate product while controlling the proportions of said ammonia and said carbon dioxide to maintain the pH of the reacting mass between substantially 5 and 7, thereby producing a solution containing the principal portion of said phosphate as phosphate ions maintained in the water soluble state and precipitating the calcium as a carbonate, filtering out said calcium carbonate precipitate, and recovering the filtrate containing said phosphate ions in water soluble state and substantially devoid of calcium.

3,092,488
METHOD FOR PRODUCING PHOSPHATE FERTILIZERS
Jacob I. Nevo-Hacohen, Allston, Mass., assignor of one-third to Robert H. Rines, Boston, Mass.
Continuation of application Ser. No. 25,384, Apr. 28, 1960. This application June 13, 1960, Ser. No. 35,754
3 Claims. (Cl. 71—39)



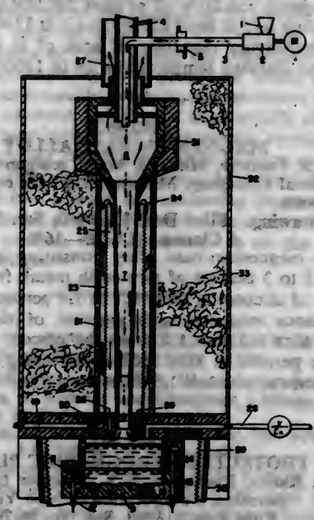
1. The process of producing a phosphate fertilizer having active fertilizer constituents of the order of fifty percent and higher and substantially devoid of calcium, comprising reacting phosphate rock with hydrochloric acid to produce a product containing a substantial amount of calcium monophosphate and calcium chloride, reacting a combination of ammonia and carbon dioxide with said product while controlling the proportions of said ammonia and said carbon dioxide to maintain the pH of the reacting mass between substantially 5 and 7, thereby producing a solution containing the principal portion of said phosphate as phosphate ions maintained in the water soluble state and containing ammonium chloride and precipitating the calcium as a carbonate, filtering out said calcium carbonate precipitate, adding further ammonia to the filtrate, and controlling the proportion of said further ammonia to raise the pH of the filtrate above 7 and precipitate out an ammonium phosphate salt while maintaining said ammonium chloride in solution.

3,092,489
PROCESS FOR PRODUCTION OF FERTILIZER PELLETS AND THE LIKE
Benjamin G. Smith, Cincinnati, Ohio, assignor to The Chemical and Industrial Corp., Cincinnati, Ohio, a corporation of Ohio
Filed Feb. 23, 1960, Ser. No. 10,366
5 Claims. (Cl. 71—64)



1. A continuous process for the formation of rounded pellets of substantially uniform size comprising providing a bed of nuclei of substance to be pelletized, in which bed said nuclei are in contact with each other, said nuclei having a particle size of at least about 40 mesh, said bed being located in a rotating chamber having vanes acting to elevate portions of said bed from the bottom of said chamber to a higher point therein and release said elevated portions so that they fall freely back to the bottom of said chamber, wetting localized portions only of said bed in the lower portion of said rotating chamber by direct application thereto of a water slurry of substance to be pelletized and immediately elevating and releasing said bed portions before an agglomerating action occurs to any substantial extent between the nuclei in the wetted parts thereof, while passing hot drying gases through said chamber, the said locally wetted portions of said bed separating into single coated nuclei and small groups of nuclei, of lesser size than the desired pellets, by reason of the agitation involved in the aforesaid elevation and release of the said portions of the bed, and the showering of the released portions of the bed downwardly through the said hot drying gases whereby the coated nuclei and groups of nuclei are dried to a non-agglomerating moisture content during their descent through said hot drying gases, and prior to the time they rejoin the bed at the bottom of said chamber, and whereby uncoated nuclei have their moisture content reduced so as to maintain the general moisture content of said bed at a value below the agglomerating point.

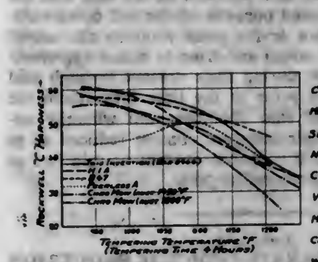
3,092,490
PROCESS AND APPARATUS FOR THE REDUCTION OF IRON ORE
James F. Edsle, Newtown Square, Pa., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey
Filed Jan. 30, 1961, Ser. No. 85,736
7 Claims. (Cl. 75—26)



1. A process for the reduction of iron ore comprising the steps of preheating iron ore having graded particle size distribution, passing the preheated ore through a reduction zone in a vertical downwardly tapered path in contact with graphite and reducing gas and reducing the ore to liquid particulate iron at a temperature in the range of from about 2400 to about 3000° F., while said ore is maintained in oscillating turbulent suspension in upwardly flowing reducing gas, the classification of charged ore particles of varying sizes undergoing reduction being such that the particles of greater size and density are suspended in the bottom area of the reduction zone and below the particles of lesser size and density due to a gradual reduction in gas velocity toward the top of the reduction zone, said liquid particulate iron passing downwardly to a collection zone below the reduction zone by virtue of

the increase in relative density effected by reduction and by agglomeration of the liquid iron.

3,092,491
HIGH STRENGTH ALLOY STEEL FOR ATMOSPHERIC AND ELEVATED TEMPERATURE SERVICE
Peter Payson and Alvin E. Nehrenberg, Pittsburgh, Pa., assignors to Crucible Steel Company of America, Pittsburgh, Pa., a corporation of New Jersey
Filed May 2, 1957, Ser. No. 656,561
3 Claims. (Cl. 75—126)



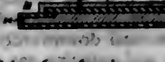
C	0.35	0.40	0.32	0.32	0.30
Mn	0.60	0.75	0.30	0.75	0.40
Si	1.0	0.30	0.30	0.40	0.60
Mo	—	—	—	0.50	0.50
Cr	3.0	4.00	3.00	3.00	4.00
V	0.25	0.5	0.25	0.25	—
Nb	0.5	—	—	0.50	1.0
Co	—	0.75	—	—	—
W	—	—	0.70	—	1.0

1. An alloy steel consisting essentially of about: 0.35 to 0.45% carbon, 0.3 to 1% manganese, 0.5 to 2% silicon, 2.5 to 4% chromium, 2 to 3% molybdenum, 0.1 to 0.5% vanadium, under 0.5% of nickel, balance substantially iron, characterized by a tensile strength in the quenched and tempered condition of at least 290,000 p.s.i. at room temperature and at least 150,000 p.s.i. at 1100° F., and by an accompanying reduction of area of at least 28% at room and elevated temperatures up to 1100° F.

3,092,492
MAGNESIUM-BASE ALLOY
George S. Foerster, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed Dec. 27, 1960, Ser. No. 78,317
4 Claims. (Cl. 75—168)

1. A magnesium-base alloy consisting of by weight from 0.1 to 3 percent of rare earth metal, from 0.01 to 1 percent of zirconium, from 0.1 to 1.4 percent of zinc and the balance magnesium, the percent of zinc being not greater than 0.5 plus 1.5 times the percent of zirconium and the percent of rare earth metal being not less than the percent of zinc less 1.5 times the percent of zirconium.

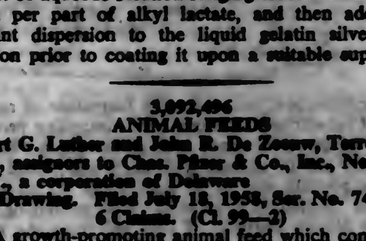
3,092,493
PROTECTED XEROGRAPHIC PLATE
Carl B. Kaiser, Rochester, N.Y., assignor to Xerox Corporation, a corporation of New York
Filed Feb. 2, 1961, Ser. No. 86,709
2 Claims. (Cl. 96—1)



1. A xerographic plate having a protective overcoating comprising:
(*a*) a metallic substrate,
(*b*) a photoconductive insulating layer comprising vitreous selenium overlying a central area of said substrate in between margin areas,
(*c*) an inert electrically insulating material overlying said margin areas, and
(*d*) a thin uniform film of insulating material comprising zinc sulfide with a thickness of ¼ to 2½ microns overlying said photoconductive layer and overlapping the common boundaries of said photoconductive layer and said inert electrically insulating material without contacting said metallic substrate so that said inert electrically insulating material prevents any reaction between said metallic substrate and said zinc sulfide.

3,092,494
LIGHT SENSITIVE AZIDES, PRINTING PLATES COMPRISING SUCH COMPOUNDS AND PROCESS FOR THE PRODUCTION THEREOF
Oskar Süs, Wiesbaden-Biebrich, Germany, and Werner Schaefer, Basel, Switzerland, assignors, by mesne assignments, to Azoplate Corporation, Murray Hill, N.J.
No Drawing. Filed May 19, 1954, Ser. No. 430,978
Claims priority, application Germany May 28, 1953
4 Claims. (Cl. 96—33)

3. A process for the production of a printing plate which comprises coating a base material with a layer comprising a compound having the formula



exposing the coated base to light under a master and treating the exposed base with a weakly alkaline solution.

3,092,495
LOWER ALKYL LACTATE COUPLER SOLVENTS
Aaron Ben-Ezra and E Scudder Mackey, Binghamton, N.Y., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed June 9, 1960, Ser. No. 34,890
7 Claims. (Cl. 96—100)

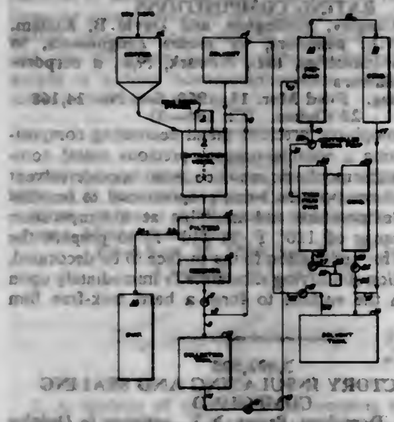
1. The method of incorporating in a light-sensitive gelatin silver halide emulsion, a color former fast to diffusion and capable of forming upon color development with a primary aromatic amino developing agent, a dye image selected from the class consisting of azomethine, indoaniline and phenazonium dye images, said color former containing a benzimidazole nucleus connected through its carbon atom in the 2-position to the residue of the color forming molecule which is reactive with the oxidation product of a primary developing agent and which contains a reactive group selected from the class consisting of a reactive methylene, ethanol and phenolic hydroxy group, said benzimidazole nucleus being substituted on one of the nitrogen atoms by an aliphatic hydrocarbon radical containing at least 10 carbon atoms and substituted in the benzene portion by a water solubilizing group which comprises dissolving 10 parts by weight of said color former in from 5 to 45 parts by weight of a lower alkyl lactate in which said alkyl group has from 1 to 3 carbon atoms, diluting the resultant solution with an aqueous solution containing a surface active agent, the amount of aqueous solution ranging from 2 to 8 parts by weight per part of alkyl lactate, and then adding the resultant dispersion to the liquid gelatin silver halide emulsion prior to coating it upon a suitable support.

3,092,496
ANIMAL FEEDS
Herbert G. Luther and John R. De Zeeuw, Terre Haute, Ind., assignors to Chas. Pfizer & Co., Inc., New York, N.Y., a corporation of Delaware
No Drawing. Filed July 18, 1958, Ser. No. 749,343
6 Claims. (Cl. 99—2)

1. A growth-promoting animal feed which comprises a standard, nutritionally balanced feed composition and a Rauwolfia-derived substance selected from the group consisting of Rauwolfia roots, concentrates thereof and reserpine, in a concentration between about 0.00005% and 0.05% by weight calculated as Rauwolfia root when said animal feed is for ruminants and between 0.003% and 0.5% by weight when said animal feed is for non-ruminants.

5. A growth-promoting animal feed which comprises a nutritionally-balanced feed composition and reserpine in an amount of at least sufficient to enhance the growth of the animal.

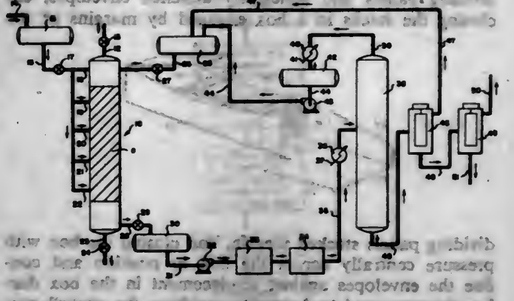
3,092,497
METHOD OF PRODUCING HOP EXTRACTS
Alfred Hoelle and Heinz Vollmar, Rheinfelden, Germany, assignors to Maria Brieax, Au-Hallertau, Germany
Filed July 18, 1960, Ser. No. 43,667
Claims priority, application Germany Mar. 11, 1960
5 Claims. (Cl. 99—50.5)



1. A process for producing hop extract comprising subjecting hops to the extracting action of a solvent selected from the group consisting of ether, alcohol, petroleum ether, hydrocarbons, chlorinated hydrocarbons and mixtures thereof, while simultaneously comminuting the hops whereby there is produced a dispersion of fine hop particles in said solvent and recovering the hop extract thereby formed.

3,092,498
PROCESS FOR OBTAINING A FLAVOR-BEARING FRACTION OF COFFEE
William V. White, Spring Valley, and Matthew Hamell, Orangeburg, N.Y., and Ellen Danielczik, Jersey City, N.J., assignors to General Foods Corporation, White Plains, N.Y., a corporation of Delaware
Filed May 27, 1960, Ser. No. 32,384
4 Claims. (Cl. 99—71)

1. The method of obtaining from roasted coffee a flavor-bearing fraction substantially free of caffeine and containing a minimum of non-aromatic oil which comprises wetting coffee with sufficient aqueous wetting liquor to saturate the bed of coffee and to form a superficially dry bed, said aqueous wetting liquor being selected from the group consisting of water and coffee extract, said aqueous wetting liquor being at a temperature of 32°–125° F., contacting the wetted coffee with sufficient flavor-extracting solvent, said solvent being a non-polar organic liquid having a boiling point below about 160° F., a substantial insolubility in water, a low solubility for water and a low solubility for caffeine under the conditions of extraction to extract from the coffee a flavor-bearing fraction substantially free of caffeine



and containing a minimum of non-aromatic oil and recovering flavor-bearing fraction from said extract.

3,092,499
METHOD OF MANUFACTURING MEAT PRODUCTS
Albert C. Gretler, Downers Grove, and Joseph C. Wilcox, Park Forest, Ill., assignors, by mesne assignments, to Armour and Company, Chicago, Ill., a corporation of Delaware
No Drawing. Filed Oct. 6, 1960, Ser. No. 60,783
15 Claims. (Cl. 99—109)

1. In a process for the manufacture of sausages wherein meat is comminuted and then extruded into a mold where it is subjected to the passage of an electric current to internally heat the same and to coagulate proteins therein, the steps of conditioning the comminuted meat for texture development by a procedure which includes holding it in an atmosphere having a temperature of from about 18° F. to about 50° F. until substantially all of the comminuted meat attains said temperature, vacuum mixing the thus chilled comminuted meat to form a mixture which is conditioned for extrusion, extruding the conditioned meat into a mold, and subjecting the meat while in the mold to an electric current to heat the same and to coagulate proteins therein whereby to set the texture of the extruded meat.

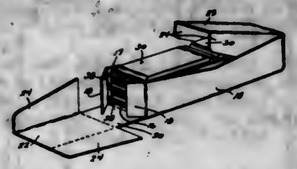
3,092,500
DOUBLE COATING OF FOOD PRODUCTS TO PREVENT MOISTURE LOSS
Havard L. Kell, Clarendon Hills, Ill., assignor, by mesne assignments, to Armour and Company, Chicago, Ill., a corporation of Delaware
No Drawing. Filed Mar. 19, 1959, Ser. No. 800,391
12 Claims. (Cl. 99—166)

1. The method of protecting a food product against change of moisture content comprising the steps of covering said product with a water miscible protein in a water carrier, solidifying the protein on the product to form an undercoat on said product, and dipping said coated product in a plastic dip solution including a vinylidene chloride copolymer as a major component to form a water and water vapor barrier over said undercoat.

3,092,501
METHOD OF PACKAGING FOOD AND THE RESULTING PACKAGE
Herbert H. Beck, Portage, and Kenneth J. Hall, Wisconsin Dells, Wis., assignors, by mesne assignments, to Armour & Company, Chicago, Ill., a corporation of Delaware
Filed May 4, 1959, Ser. No. 810,697
4 Claims. (Cl. 99—171)

1. The method of packaging foods in flexible non-toxic gas containing envelopes stacked in boxes for shipment

which method comprises adhesively attaching a substantial portion of the length of said envelopes to dividing panels projecting marginally beyond the envelopes, stacking the dividing panels and adhesively attached envelopes, enclosing the stacks in a box engaged by margins of the



dividing panels stacked therein, and closing the box with pressure centrally across the box to position and confine the envelopes against displacement in the box during shipment and to force the gas from the central portions of the envelopes to the end portions.

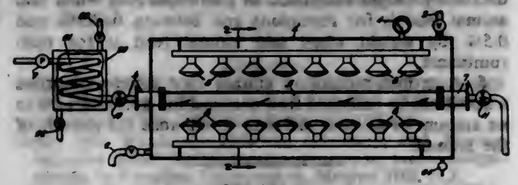
3,092,502
BREAD PACKAGE AND WRAPPER
Maurice D. Smith, Dallas, Tex., assignor to St. Regis Paper Company, New York, N.Y., a corporation of New York
Filed May 9, 1960, Ser. No. 27,736
6 Claims. (Cl. 99—172)



3. A loaf of bread wrapped in an outermost rectangular sheet of transparent heat-sealable sheet material and an innermost web of opaque wax paper of equal length and lesser width than the former, one longitudinal edge of said waxed sheet extending to approximately one longitudinal edge of the transparent sheet and the opposed longitudinal edge portion of the waxed sheet being spaced from the other longitudinal edge of the transparent sheet, said sheets being jointly wrapped about the loaf of bread with said waxed sheet adjacent to and the transparent sheet exteriorly thereof and with said spaced edge portion of the waxed paper extending transversely of and spaced from one end of the bread loaf, the longitudinal edge portion of the transparent sheet projecting beyond one end of the loaf of bread and folded and sealed thereat, the longitudinal edge portion of the combined sheets projecting beyond the opposite end of the loaf of bread and folded and sealed thereat, whereby when one end of the transparent sheet has been opened and a portion of the loaf of bread, extending into the waxpaper portion has been removed therefrom, the end of the transparent sheet can be crushed to a closed position and there remain due to the projection of the waxed paper into the transparent sheet.

3,092,503
METHOD AND APPARATUS FOR STERILIZING
Oscar S. Gray, West Forth, Ind.
Filed Aug. 30, 1960, Ser. No. 52,979
21 Claims. (Cl. 99—217)

1. The method which comprises subjecting an edible perishable material having an aqueous base, while in a confined zone boundaries of which are permeable to infrared radiation, to infrared radiation through an atmosphere of steam under superatmospheric steam pressure, said steam being in direct contact with said boundaries of said zone but out of direct contact with said material undergoing treatment, until said material is sterilized, and



then removing said material from said zone to a zone of lower temperature and substantially devoid of infrared radiation.

3,092,504
THERMOPLASTIC PRECIOUS METAL DECORATING COMPOSITIONS
Robert C. Langley, Millington, and David B. Kellam, Nutley, N.J., assignors, by mesne assignments, to Engelhard Industries, Inc., Newark, N.J., a corporation of Delaware
No Drawing. Filed Mar. 11, 1960, Ser. No. 14,168
23 Claims. (Cl. 106—1)

1. A thermoplastic precious metal decorating composition comprising a soluble organic precious metal compound and a thermoplastic medium as an organic solvent therefor, said composition being proportioned to be solid at normal temperature and meltable at a temperature within the range of 120° F. to 240° F. to prepare the composition for application to the surface to be decorated, the composition solidifying substantially immediately upon contact with the surface to form a hard tack-free film thereon.

3,092,505
REFRACTORY INSULATING AND SEALING COMPOUND
Raymond J. Demaison, Bronx, N.Y., assignor to Quigley Company, Inc., a corporation of New York
No Drawing. Filed Jan. 20, 1960, Ser. No. 3,497
4 Claims. (Cl. 106—99)

1. A high temperature resisting lightweight refractory insulating and sealing compound adapted to be mixed with water, said refractory compound comprising a mixture of solid dense high temperature refractory grains in finely divided form and of a lightweight fibrous porous plastic insulating refractory composition, said porous refractory composition comprising 5 to 30% by weight of mineral fibers, 20 to 40% by weight of refractory insulating porous particles, and 25 to 50% by weight of hydraulic setting cement, said porous particles being in the form of large grain size aggregates of lighter weight than any of the other ingredients of said porous refractory composition, said mixture being composed of 1 part by weight of said porous refractory composition and 3 to 7 parts by weight of said solid dense high temperature refractory grains, the melting temperature of said solid dense high temperature refractory grains being substantially greater than that of the porous refractory composition.

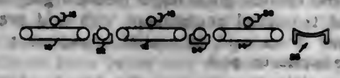
3,092,506
WAX COMPOSITIONS
Anna M. Sheldon, Ponca City, Okla., assignor to Continental Oil Company, Ponca City, Okla., a corporation of Delaware
No Drawing. Filed July 26, 1960, Ser. No. 44,293
10 Claims. (Cl. 106—270)

1. A paraffin wax composition stabilized against foam formation in the molten state consisting essentially of a paraffin wax containing a homogeneous dispersion of a small but effective foam inhibiting amount of a sodium salt of a mahogany sulfonate obtained by contacting a petroleum oil fraction having a viscosity between about 80 and 120 SUS at 100° F. with a sulfonating agent.

3,092,507
METHOD OF PIGMENTATION WITHOUT GRINDING AND PAINTS RESULTING FROM THIS METHOD
Léon Pejarowski, Colayrac-Saint-Cirq, Lot-et-Garonne, France
No Drawing. Filed Oct. 22, 1959, Ser. No. 847,914
Claims priority, application France Oct. 22, 1958
1 Claim. (Cl. 106—293)

A method for directly obtaining mineral pigments in a finely divided state and ready for use in the manufacture of emulsion paints, printing pastes and inks without grinding said method consisting in mixing aqueous solutions of soluble salts to obtain in situ an insoluble stiff gel of the proper particle size as a result of the double decomposition of said soluble salts, said stiff gel being selected from the group consisting of lithopone, zinc sulfide, barium sulfate, lime carbonate, barium carbonate, lead chromate and zinc chromate, and thereafter adding about 1% by weight of sodium hexametaphosphate which is surface-active and fluidises said gel.

3,092,508
METHOD OF TREATING COATED FIBERBOARD
William H. Barrett and John C. Hart, International Falls, Minn., assignors to Minnesota and Ontario Paper Company, Minneapolis, Minn.
Filed Sept. 20, 1960, Ser. No. 57,361
6 Claims. (Cl. 117—8)



1. A method of improving the cupping resistance of a porous and compressible cellulosic fiberboard dried in a hot air dryer comprising applying to at least one surface a film of aqueous heat settable decorative coating material and thereafter subjecting the surface coated fiberboard having a temperature of about 100° F. to about 170° F. to controlled flexing before complete setting of the said coating material with a curved surface while supporting the fiberboard along the edges thereof, then removing the board from the edge supports, and permitting the fiberboard to flatten.

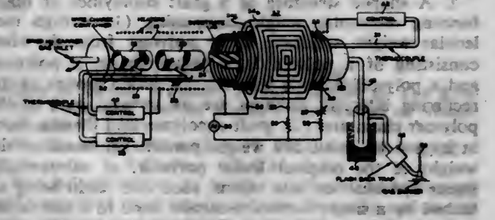
3,092,509
GLASS FIBER REINFORCED BATTERY SEPARATORS
Frank Booth and Michael Paul Laffan, Manchester, England, assignors to Oldham & Son Limited, Manchester, England, a corporation of Great Britain
Filed Aug. 13, 1958, Ser. No. 754,712
Claims priority, application Great Britain Aug. 22, 1957
2 Claims. (Cl. 117—76)

1. A process of manufacturing electric storage battery separator material from base material consisting of glass fibres bonded with a cured acid resistant thermosetting resin, comprising pasting one side of the bonded glass fibre base with a paste consisting of a thermoplastic resin powder which is a mixture of 10 parts by weight of particles having an average diameter of at least 10 microns and 1 part by weight of particles having an average diameter of from ½ to 1 micron, a thickening agent selected from the group consisting of carboxyalkyl celluloses, alignates, and acid-resistant resins, and a solvent for the thickening agent, forcing the paste into the base to impregnate the base uniformly with the paste, and heating the impregnated base to a temperature sufficient to evaporate the solvent for the thickening agent and to sinter together the thermoplastic particles to produce a sintered porous structure of



said synthetic resin powder extending throughout said bonded glass fibre base.

3,092,510
MAGNETIC DEVICES AND PREPARATION THEREOF
Frank H. Edelman, Philadelphia, Pa., assignor to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Filed Mar. 2, 1959, Ser. No. 796,681
15 Claims. (Cl. 117—93.2)

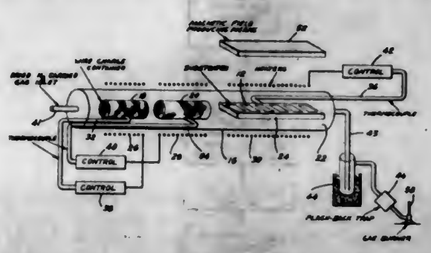


1. A method of producing a substantially isotropic magnetic device comprising heating at least one salt of β-diketone and a magnetically susceptible metal to a temperature sufficiently high to volatilize said metal salt but below the temperature at which the vapors of the salt decompose, heating a substrate to a temperature not below 380° C. and not greater than 500° C., passing a non-oxidizing carrier gas over the metal salt whereby vapors of the metal salt are admixed with the carrier gas and contacting said gaseous mixture with the heated substrate for a sufficient period of time to plate the substrate with a coherent isotropic film substantially free from pin holes, and applying a magnetic field to said substrate during the plating thereon of the isotropic film.

3,092,511
MAGNETIC DEVICES AND PREPARATION THEREOF
Frank H. Edelman, Philadelphia, Pa., assignor to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Filed Nov. 19, 1958, Ser. No. 775,038
16 Claims. (Cl. 117—107.2)

1. A method of producing a substantially isotropic magnetic device comprising heating compounds which are salts of β-diketone and a magnetically susceptible

metals to temperature sufficiently high to volatilize said metal compounds but below the temperature at which the vapors of the compounds decompose, heating a refractory substrate to a temperature not below 380° C., passing a non-oxidizing carrier gas over the metal compounds



whereby vapors of the metal compounds are admixed with the carrier gas and contacting said gaseous mixture with the heated substrate for a sufficient period of time to plate the substrate with a coherent isotropic film substantially free from pin holes and at least 1500 angstroms thick.

3,092,512

GRAFT COPOLYMER OF POLYMERIZABLE AMIDE AND NITROGENOUS CONDENSATION POLYMER, AND PROCESS FOR PREPARING SAME

Eugene Edward Magat and David Tanner, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed Oct. 13, 1958, Ser. No. 766,647
8 Claims. (Cl. 117—138.8)

1. A shaped structure of a graft copolymer of fiber-forming molecular weight comprising (1) a high molecular weight, synthetic linear polymer from the class consisting of a polyamide, a polyurethane, a polyurea and a polysulfonamide wherein the amido groups of the recurring interunit linkages are an integral part of the polymer chain and (2) graft copolymerized thereto, from at least 4 to about 200 weight percentage, based on the weight of the original linear polymer, of substantially linear hydrocarbon side chains, each side chain being attached by a single carbon-to-carbon bond to a catenarian carbon of the said linear polymer, each said side chain bearing as substituents for hydrogen radicals from the class consisting of (*a*) amido radicals bonded to the said side chain through carbonyl carbon, (*b*) amido radicals bonded to the said side chain through amide nitrogen, and (*c*) lactam radicals bonded to the said side chain through lactam nitrogen, with the proviso that any of the said substituents (*a*), (*b*) and (*c*) has a maximum carbon atom content of 6 and with the further proviso that there be at least one of the said substituents (*a*), (*b*) and (*c*) for every nine carbon atoms in the said side chains and being at least one carbon atom removed from the carbon atom of the said side chain which is linked to the said catenarian carbon.

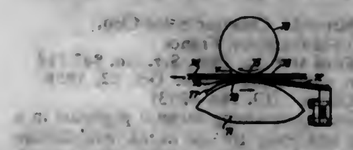
8. A process for producing the product of claim 1 which comprises intimately contacting (*a*) a shaped structure of high molecular weight synthetic linear polymer free of free-radical initiating peroxy sites from the class consisting of a polyamide, a polyurethane, a polyurea and a polysulfonamide wherein the amido groups of the recurring interunit linkages are an integral part of the polymer chain and (*b*) a fluid amide containing less than 9 carbon atoms and a single reactive aliphatic unsaturated bond until the said fluid has penetrated at least about 5% of the cross-sectional area of the said shaped structure, and heating the resulting mass in the presence of a free-radical initiator.

3,092,513

APPARATUS FOR APPLYING ADHESIVE TO CARTON BLANKS

Randolph McKim Browning, Providence, R.I., assignor to St. Regis Paper Company, New York, N.Y., a corporation of New York

Filed Aug. 7, 1958, Ser. No. 753,816
6 Claims. (Cl. 118—212)



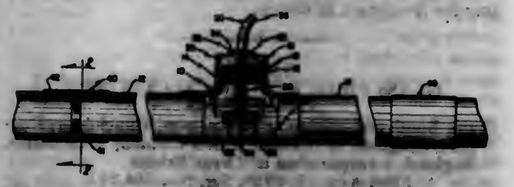
1. Apparatus for applying liquified adhesive to boxboard blanks comprising a plate cylinder having an adhesive applicator pad secured to the periphery thereof and protruding therefrom along only a portion of such periphery, means for applying such adhesive to said adhesive applicator pad for subsequent transfer to such blanks, a pressure roll parallel to and spaced from said plate cylinder for receiving such blanks therebetween, the spacing between said plate cylinder and said pressure roll providing tangential engagement of such blanks by said pressure roll and by said adhesive applicator pad, means for feeding such blanks between said plate cylinder and pressure roll at a predetermined speed, means providing rotation of said pressure roll at a peripheral speed substantially equal to and in the same direction as said speed of such blanks, means rotating said plate cylinder producing a significant speed differential between the peripheral speed of said adhesive applicator pad and said speed of such blanks, and resilient guide finger means urging such blanks into said tangential engagement with said pressure roll and away from said tangential engagement with said adhesive applicator pad.

3,092,514

METHOD AND APPARATUS FOR CLEANING AND THAWING FLOW LINES AND THE LIKE

Bill M. Tomberlin, Denver, Colo., assignor to Petro-Electronics Corporation, Denver, Colo., a corporation of Delaware

Filed May 25, 1959, Ser. No. 815,337
3 Claims. (Cl. 134—1)



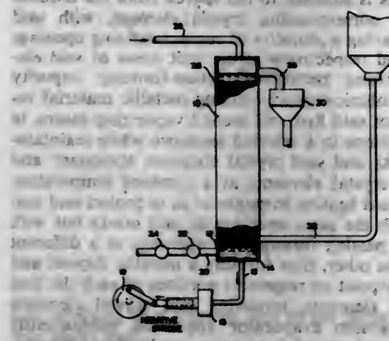
1. The method of reducing the viscosity of crude oil and precipitates thereof flowing in a tube comprising the steps of directing microwave energy through a wave guide connection in a flow tube in a direction parallel to the longitudinal axis of the tube, selectively controlling the frequency and wave length of the energy in accordance with the configuration and size of the tube whereupon the tube acts as a wave guide for the transmission of energy along the interior surface thereof to thereby produce a skin effect in the depolymerization of precipitates collecting on the interior surface along with the attenuation of the energy into heat by the organic fluids flowing therethrough, controlling the length of travel through the tube within a selected distance, and positioning a wave guide terminus between obstructions in the flow tube and the wave guide on at least one side of the wave guide to block the travel of microwave energy through the obstruction.

3,092,515

MOVING-BED LIQUID-SOLID CONTACTOR AND OPERATION THEREOF

Frederick P. Pike, Raleigh, N.C., and Eugene E. Erickson, Idaho Falls, Idaho, assignors to Research Corporation, New York, N.Y., a corporation of New York

Filed Sept. 14, 1959, Ser. No. 839,910
6 Claims. (Cl. 134—25)



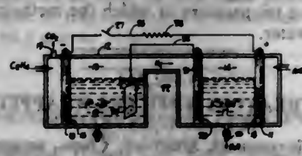
6. A method for essentially continuous countercurrent contact of a liquid with a subdivided and free-flowing solid dense enough to settle downward through the liquid which comprises supporting a column of the solids on a liquid permeable septum, supplying the liquid to the upper portion of the column, supplying solids to the lower portion of the column, and applying pulses to the liquid in said column from below said septum whereby on the positive stroke of each pulse a portion of solids suspended in the liquid is forced out of the upper portion of the chamber, a portion of the liquid is forced out of the lower portion of the chamber and a portion of the solids feed is caused to enter the chamber and on the negative stroke of each pulse a portion of the liquid is drawn into the upper portion of the solids bed, a portion is drawn down through the bed, and a portion is drawn through the septum into the lower part of the chamber below the septum.

3,092,516

ELECTROCHEMICAL REACTION APPARATUS

Robert A. Rightmire, Twinsburg, Ohio, assignor to The Standard Oil Company, Cleveland, Ohio, a corporation of Ohio

Filed May 6, 1960, Ser. No. 27,453
9 Claims. (Cl. 136—86)



1. In an electrochemical reaction apparatus having spaced electrodes adapted to be exposed respectively to a fuel and an antifuel, a pair of chemically incompatible ion conducting media independently disposed in the space between said electrodes, one of said ion conducting media adapted to desorb ions derived from said fuel and the other of said ion conducting media adapted to desorb ions derived from said antifuel, ion impermeable barrier means operably disposed between said pair of ion conducting media to isolate said media from each other and thereby prevent chemical interaction therebetween, and shunting means coacting between said pair of ion conducting media and across said barrier means to transfer the ions from one of said media to the other for electrochemical reaction at the interface between said barrier means and said other medium while maintaining said media isolated from each other.

3,092,517

NON-POROUS HYDROGEN DIFFUSION FUEL CELL ELECTRODES

Harry G. Oswin, Elmsford, N.Y., assignor to Leesona Corporation, Cranston, R.I., a corporation of Massachusetts

No Drawing. Filed Aug. 24, 1960, Ser. No. 51,515
4 Claims. (Cl. 136—86)

1. In a fuel cell comprising a housing, at least one fuel electrode, at least one oxidizing electrode and an electrolyte, the improvement wherein hydrogen is employed as the fuel and the fuel electrode is a non-porous palladium-silver alloy membrane.

3,092,518

ANODE FILM LAYER FOR GALVANIC CELLS

Nelson C. Cahoon, Fairview Park, and Margaret P. Korver, Brecksville, Ohio, assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Mar. 4, 1960, Ser. No. 12,659
18 Claims. (Cl. 136—146)

1. A method for producing an anode film portion of a separator medium galvanic cells, which method comprises suspending at least one water-swellable organic colloid in a volatile low molecular weight organic compound containing a readily hydrolyzed polymerized ester of an unsaturated alcohol, applying said suspension to a support and removing said organic compound by volatilization.

3,092,519

BATTERY SEPARATOR

Arthur R. Olson, Walpole, Mass., assignor to The Kendall Company, Boston, Mass., a corporation of Massachusetts

No Drawing. Filed Mar. 17, 1961, Ser. No. 96,382
1 Claim. (Cl. 136—146)

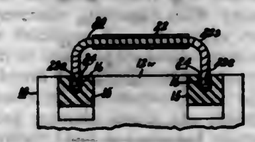
In a battery having an anode, a cathode, an electrolyte and a separator, said separator being thermally and chemically resistant to degradation in the presence of said electrolyte, said separator comprising a unified non-woven fibrous felt of polyacrylonitrile fibers assembled in planar overlapping relation and intermingled and interlocked to provide a low density coherent, soft felt, said felt having been heat treated at a temperature in excess of 200° C. but below the charring temperature of the fiber for a period of at least about two hours.

3,092,520

BATTERY STRUCTURE

John E. Bushkirk and James H. Childs, Muncie, Ind., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Mar. 5, 1959, Ser. No. 797,436
2 Claims. (Cl. 136—166)



1. In a portable battery structure including a casing of insulating material which contains an electrolyte corrosive to metal and hemp-like rope cord, the combina-

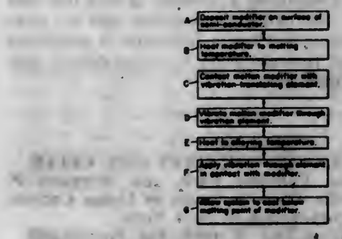
tion therewith of a completely flexible though acid-resistant handle composed exclusively of a polyester synthetic fiber which is the reaction product of terephthalic acid and a dihydric alcohol, said handle means having an exposed loop and opposite ends which ends are secured to the casing by an epoxy resin cement material.

3,092,521

METHOD OF PREPARING SEMI-CONDUCTOR JUNCTIONS

Robert G. Pohl, Chicago, Ill., assignor to The Rauland Corporation, a corporation of Illinois

Filed Apr. 5, 1956, Ser. No. 576,409
3 Claims. (Cl. 148—1.5)



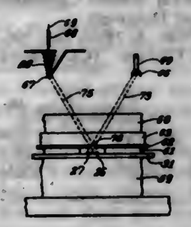
1. The method of preparing an alloy-type junction upon a selected surface of a semi-conductor comprising the following steps: depositing upon said surface a modifier having a melting point substantially below the melting point of said semi-conductor; heating at least a portion of said modifier to a temperature above the melting point of said modifier and below the melting point of said semi-conductor for a predetermined period to melt a portion of said modifier and dissolve a portion of said semi-conductor into said molten modifier to form a junction comprising an alloy of said modifier and said semiconductor; contacting said modifier with a vibration-translating element during at least a portion of said period when said modifier is heated above its melting point; subjecting said vibration-translating element to vibration at an ultrasonic frequency for a preselected portion of the time during which said element is in contact with said modifier; and further subjecting said vibration-translating element to vibration at a relatively low frequency for a preselected portion of the time during which said element is in contact with said modifier.

3,092,522

METHOD AND APPARATUS FOR USE IN THE MANUFACTURE OF TRANSISTORS

Carl Harry Knowles, Scottsdale, and Harry Da Costa, Phoenix, Ariz., assignors to Motorola, Inc., Chicago, Ill., a corporation of Illinois

Filed Apr. 27, 1960, Ser. No. 25,084
1 Claim. (Cl. 148—1.5)



A method of making die units for semiconductor devices from semiconductor crystal elements having a thin diffused layer at one face thereof, said method including the steps of placing a plurality of such crystal elements on a heating structure in a vacuum evaporator apparatus with said diffused layers of said elements facing first and second vaporizing means located at different positions in said apparatus, positioning said crystal elements angularly with respect to each other on said heating structure so that each said crystal element is in a position to receive vapor from said first vaporizing means at substantially the same angle of incidence and to receive vapor from said second vaporizing means at another angle of incidence which is substantially the same for each element, positioning a plurality of masks respectively at said crystal elements, so that each mask is adjacent to but spaced from the diffused layer of the corresponding crystal element, with said masks each having a plurality of contact-defining openings therein located respectively at die unit areas of said elements, vaporizing rectifying-junction-forming impurity material and ohmic-contact-forming metallic material respectively from said first and second vaporizing means in vacuum conditions in a selected sequence while maintaining said masks and said crystal elements stationary and heating said crystal elements at a constant temperature by means of said heating structure so as to project said materials through the same openings in said masks but with one material passing through the openings at a different angle from the other, thus forming a metallic deposit and an impurity deposit on respective portions of each die unit area of said elements, removing said crystal elements from said vacuum evaporator apparatus, subsequently placing each said crystal element in an alloying apparatus and in a heated zone thereof maintained at a constant temperature sufficient to cause alloying of said deposits with said crystal element to a depth therein less than the thickness of said diffused layer, and dividing said crystal elements into die units each having an alloyed impurity deposit thereon forming a rectifying contact and an alloyed metallic deposit thereon forming an ohmic contact.

3,092,523

METHOD OF DYEING ANODIZED ALUMINUM ARTICLES

Howard A. Fromson, Rogues Ridge Road, Weston, Conn.

No Drawing. Filed Apr. 14, 1961, Ser. No. 102,948
7 Claims. (Cl. 148—6.1)

6. The method of producing two tones on the anodized surface of an aluminum article, which comprises coating a predetermined part of the anodized surface of the article with an aqueous solution of methylcellulose having the properties of being soluble in water at room temperature and of gelling into insoluble form at elevated temperature, immersing the coated article in an aqueous dye bath at a temperature in the gelation range of the methylcellulose to cause the coating to gel into water insoluble form and at the same time to dye the exposed part of the anodized surface, and washing off with water the coating from said surface at the temperature at which the methylcellulose is soluble in water.

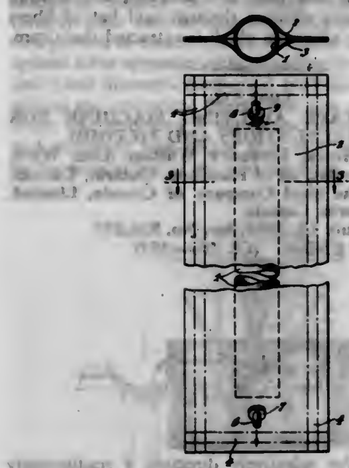
3,092,524

HEAT TREATING ARTICLES WRAPPED IN A METALLIC ENVELOPE

Julius L. Giovannucci, Stratford, Conn., assignor to National Distillers and Chemical Corporation, a corporation of Virginia

Filed Aug. 15, 1956, Ser. No. 604,098
11 Claims. (Cl. 148—13)

1. A metal object heat treating process including enclosing said metal object in an enclosure having a thin metal wall, exposing said enclosure externally to atmospheric pressure and exhausting the atmosphere from its interior, said wall being thin enough to be molded about said object to a substantial degree by the external atmospheric pressure, and while maintaining said enclosure exhausted, to a degree causing said wall to cling to said object, applying heat treating heat to the latter through said thin metal wall.



3,092,525

METHOD OF PRODUCING UNITARY NITROCELLULOSE GRAINS CAPABLE OF FRAGMENTATION UNDER PRIMER BLAST TO ORIGINAL GRANULES

Ralph L. Cook, Alton, Ill., assignor to Olin Mathieson Chemical Corporation, East Alton, Ill., a corporation of Virginia

No Drawing. Filed Sept. 30, 1960, Ser. No. 59,521
2 Claims. (Cl. 149—2)

1. A method for preparing a one-piece propellent powder charge which burns as a granular nitrocellulose propellent which comprises admixing nitrocellulose powder grains with a non-volatile liquid plasticizer selected from the group consisting of nitroglycerine, butane triol trinitrate, diglycol dinitrate, ethylene glycol dinitrate, dibutyl phthalate, dimethyl sebacate, dibutyl succinate, dibutyl adipate, triacetin, ethyl diphenyl phosphate, and tributyl phosphate, until said nitrocellulose powder grains contain between about 20 percent and about 50 percent by weight of said liquid plasticizer, separating the resulting nitrocellulose powder grains from excess liquid plasticizer, and subjecting the grains to a pressure between about 1,000 and about 10,000 pounds per square inch at ambient temperature until the grains adhere together to form a consolidated body of individual grains, said body being capable of fragmenting into individual grains when subjected to a primer blast.

3,092,526

AMMONIUM PERCHLORATE RESIN BASE PROPELLANTS

Joseph Philipson, Temple City, Calif., assignor, by mesne assignments, to Aerojet-General Corporation, Cincinnati, Ohio, a corporation of Ohio

No Drawing. Filed Feb. 5, 1951, Ser. No. 209,508
15 Claims. (Cl. 149—19)

1. A rapid burning solid propellent charge comprising about 70%–85% by weight based on the weight of the total propellant of ammonium perchlorate, about 30%–15% by weight based on the weight of the total propellant of a resin base fuel, said resin base fuel comprising the addition polymerization product of an unsaturated unsubstituted lower carboxylic acid ester and nitro-substituted lower alkyl ester of a lower alkenoic acid.

3,092,527

PROPELLANT MIXING

Willem Schaafsma, Los Altos, Calif., assignor to United Aircraft Corporation, a corporation of Delaware

No Drawing. Filed Oct. 25, 1960, Ser. No. 64,691
1 Claim. (Cl. 149—19)

A process for preparing a composite solid propellant containing a solid propellant material and a second normally solid oxidizer distributed therein comprising:

(*a*) initiating polymerization of a propellant material capable of being polymerized under the influence of heat whereby to form a viscous polymeric material;
(*b*) terminating the polymerization by freezing said viscous polymeric material to a friable solid;
(*c*) grinding said solid so formed;
(*d*) adding to the frozen ground solid so formed the said solid oxidizer in particulate form;
(*e*) and thereafter warming the mixture so formed to reinitiate polymerization to produce said solid propellant having said oxidizer therein.

3,092,528

DEFLAGRATING COMPOSITION

Frank Abraham Loving, Jr., Wenonah, N.J., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed Mar. 23, 1960, Ser. No. 18,220
2 Claims. (Cl. 149—41)

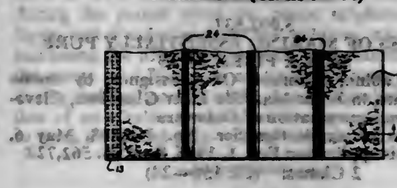
1. A deflagrating composition for underwater seismic exploration consisting essentially of a substantially oxygen balanced mixture of 21.6–61.9% sodium nitrate, 3.6–10.3% sulfur, 4.5–12.9% charcoal, 0.3–0.9% starch, 9–45% of potassium perchlorate and 5–25% of a granular metallic fuel selected from the group consisting of aluminum, magnesium, iron and ferrosilicon, said granular metallic fuel having a particle size within the range of at least about 5 microns and not more than 500 microns.

3,092,529

DUCT OR CONDUIT BLANK

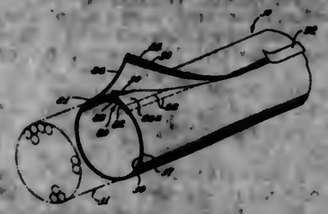
Arthur J. Pearson, Kansas City, Mo., assignor to Owens-Corning Fiberglas Corporation, a corporation of Delaware

Filed July 1, 1955, Ser. No. 519,323
4 Claims. (Cl. 154—44)



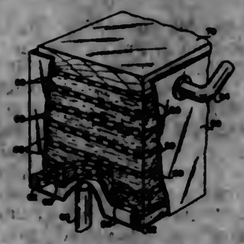
1. A self-supporting air conditioning conduit consisting of a self-sustaining, fibrous heat and acoustical insulating board adhered to one surface of a flexible sheet vapor barrier facing member, said board having a plurality of generally V-shaped cuts extending partially through the thickness thereof, which cuts are substantially parallel to one another and to opposed edges of said board, the board being deformed adjacent said cuts to define the conduit, a sealing member adhered to edges of said facing member which are abutting in such deformed condition, and a hardened coating composition adhered to the surface of said board opposite said facing member, said coating being effective to minimize the resistance to the flow of gases therealong.

3,092,530
HEAT PROTECTIVE SHEATHING
Walter A. Plummer, 3546 Crowsridge Drive, Shermun Oaks, Calif.
Filed Sept. 21, 1959, Ser. No. 841,297
3 Claims. (Cl. 154—44)



1. An article of manufacture comprising an inexpensive readily replaced tubular jacket-type sheath having a readily opened and closed seam extending from end to end thereof and suitable for enclosing costly cabling and the like closely adjacent firing areas of launching sites for missiles, spacecraft, rocket-engines and effective to protect such cabling from momentary high temperature rises associated with the blast of hot gases accompanying the launching operation, said jacket-type sheath comprising a thin highly flexible laminated main body strip having a width substantially wider than the circumference of cabling to be jacketed and protected thereby, said main body strip consisting of an inner layer of asbestos fabric and a fully exposed exterior layer of thin polished vacuum-deposited heat reflecting metal coextensive in size with and bonded directly to said inner layer of asbestos fabric, a pair of separable interlocking seam-forming strips of plastic extending along the opposite lateral edges of said main body strip and each having continuous interlocking tongue and groove portions mateable to provide a seam for said tubular sheath, said seam-forming strips having their remotely-spaced lateral edges secured to the asbestos fabric side of said sheath in a narrow band along both lateral edges of the sheath and spaced inwardly of at least one lateral edge thereof to provide a heat protective guard flap sufficiently wide to rest against and fully conceal said seam in the closed position thereof, whereby the cabling to be protected is completely encircled by said laminated sheath and with the integral guard flap thereof overlying the exterior side of said plastic seam to protect the same from radiant heat occurring at launching of a missile or the like from said launching site.

3,092,531
PROCESS OF MAKING ESSENTIALLY PURE SILICA FIBER BATS
Dominick Labino, Maumee, Ohio, assignor, by mesne assignments, to Johns-Manville Fiber Glass Inc., Cleveland, Ohio, a corporation of Delaware
Continuation of application Ser. No. 353,348, May 6, 1953. This application Feb. 1, 1956, Ser. No. 562,722
2 Claims. (Cl. 156—24)



1. A process for producing a fibrous bat of substantially pure silica, comprising forming a compacted bat of siliceous fibers consisting essentially of silica and an alkali metal oxide, the ratio of silica to said alkali metal oxide being in the order of about 4:1 and said fibers having a diameter less than 2½ microns, and flowing an aqueous leaching solution through said bat of fibers until substantially all of the alkali is extracted therefrom.

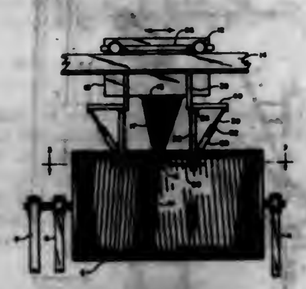
3,092,532
AUTOMATIC TAPE APPLYING MACHINE FOR SHEET METAL STRIPS AND METHOD
Michael Victor Swick, Frederick William Allen Ward, and James Douglas, all of Hamilton, Ontario, Canada, assignors to The Steel Company of Canada, Limited, Hamilton, Ontario, Canada
Filed July 13, 1959, Ser. No. 826,875
10 Claims. (Cl. 156—157)



1. A method for selectively directing a continuously produced metal strip from a first destination to a second destination with a minimum of stopping time, said method comprising the steps of: (*a*) stopping the strip, (*b*) clamping the strip by means of first and second clamps respectively located on opposite sides of a strip shear, which straddles the strip, and a taping device, aligned with said shear, which is located in a first position on one side of the strip, said first clamp being on the side of said shear and taping device adjacent the source of said incoming continuously produced strip and said second clamp being on the opposite side thereof, (*c*) shearing the strip, (*d*) moving outwardly, away from each other, both of said clamps so as to part the severed ends of the pieces of strip (*e*) moving said strip shear and taping device between the ends of the strip until the taping device reaches a second position at the other side of the sheared pieces of strip (*f*) moving said first clamp so that the end gripped by said clamp is in position for taping (*g*) moving a third clamp, also located on said opposite side which grips the trailing end of strip previously directed to said second destination, so that said last-mentioned end is in position for taping (*h*) moving the taping device so as to effect a taping stroke and apply a strip of tape to each surface of the pieces at the ends thereof and, past said one side thereof, so as to cause the strips of tape to join together, (*i*) severing said strips of tape adjacent said one edge so as to leave a portion of the outer ends of the strips of tape leading from the tape supply pressed together in the taping device.

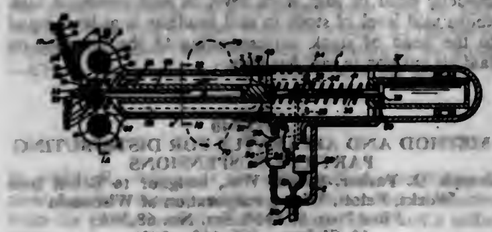
3,092,533
METHOD AND APPARATUS FOR MAKING A CONDENSED FILAMENTOUS MAT
Ralph Beehner, Louisville, Ky., assignor to American Air Filter Company, Inc., Louisville, Ky., a corporation of Delaware
Filed June 25, 1959, Ser. No. 822,846
7 Claims. (Cl. 156—167)

1. The method of making a filamentous mat, comprising: transversely reciprocating a furnace, from which separate glass filaments are discharged, axially back and forth along a drum; rotating the drum a multiplicity of times during each traverse of said furnace; gathering a first portion of said filaments, in a zone intermediate said furnace and said drum, into at least one substantially flat ribbon of separate filaments lying closely together relative to the spacing of the remaining portion of said filaments as they are discharged from said furnace; feeding said first portion of closely spaced filaments onto said drum in relatively closely spaced ribbon form; and simultaneously feeding the remaining portion of filaments directly from said furnace onto said drum adjacent said first portion of closely spaced filaments in relatively widely spaced form approximately equalling the spacing between individual filaments discharged from said furnace; axially slitting the cylindrical filamentous mat so formed on said drum and removing it therefrom to form a planar mat; and stretching said planar mat in a direction transverse to the general lay of the said filaments.



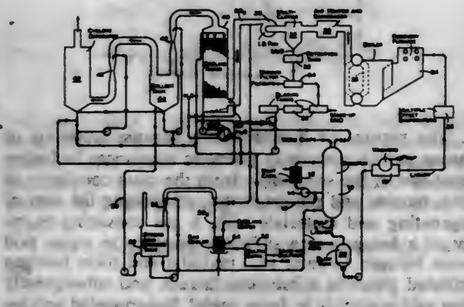
7. In apparatus for spinning filamentary material onto a rotating drum, a material melting furnace having a substantially straight-line row of orifices in its base wall through which filaments descend, means for moving said furnace in a reciprocatory path generally overlying the downturning face of said drum, filament displacing means, depending from said furnace for simultaneous movement therewith and disposed between said furnace and said drum, presenting a filament gathering surface substantially at a right angle to both said row and said filaments, means for selectively positioning said filament displacing means relative to said furnace to displace a portion only of said filaments out of a direct path from said furnace to said drum to form a substantially flat ribbon of closely spaced filaments relative to the spacing of the filaments as they issue from said furnace.

3,092,534
APPARATUS FOR APPLYING ADHESIVE TAPE
Frederick William Allen Ward, Hamilton, Ontario, Canada, assignor to Steel Company of Canada Limited, Hamilton, Ontario, Canada
Filed June 6, 1960, Ser. No. 34,047
6 Claims. (Cl. 156—505)



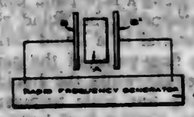
1. A device for applying a strip of adhesive tape to at least the upper surface of a piece of sheet material comprising: a body member; a generally U-shaped member having a taping head at the open end thereof and a shank portion arranged to have sliding engagement with the body member; said taping head having upper and lower tape applicator means yieldably urged together so as to form a bite at the entry faces thereof, said bite being located in the opening of the U-shaped member, and means for accommodating upper and lower tape supply sources whereby a strip of adhesive tape and a strip of control tape may be fed, respectively, with the adhesive surface of the adhesive tape facing the control tape, from said sources to said upper and lower applicator means, thence around the entry faces thereof, between the bite where the strips become joined together, and thence past the exit faces of the applicator means; means for moving said U-shaped member between a first position and a second position so as to effect a taping stroke; means for moving said U-shaped member from the second position to the first position so as to effect a return stroke; and clamping means attached to said body member, said clamping means adapted, when actuated, to grip the joined together strips of tape extending past the trailing faces of the tape applicator means whereby, during said taping stroke, the tapes are progressively withdrawn from said supply sources.

3,092,535
SULPHITE PULPING PROCESS
George H. Tomlinson II, Cornwall, Ontario, Canada, assignor to Howard Smith Paper Mills, Limited, Montreal, Quebec, Canada, a company of Canada
Filed Apr. 27, 1960, Ser. No. 24,927
10 Claims. (Cl. 162—36)



1. The method of preparing a chemical pulp from cellulosic raw material comprising impregnating the material with a magnesium bisulphite solution essentially free of excess sulphurous acid and initially in the range 2.5–5.0 pH, digesting the cellulosic material at a temperature between 160 and 200° C., for a predetermined digestion period while maintaining the pH of the solution as measured at room temperature at a value between 3.0 and 4.0 during the period when the major sulphonation of the lignin and dissolution from the cellulose takes place, and increasing the pH of the solution to a maximum value in the range of 4.75–6.5 as measured at room temperature during the final portion of the digestion period by the addition of an alkaline magnesium compound to the solution to form a defibred pulp without mechanical refining.

3,092,536
IMPREGNATION BY IMPLOSION
George F. Russell, 711 St. Helens Ave., Tacoma, Wash.
Filed Nov. 19, 1956, Ser. No. 623,236
4 Claims. (Cl. 162—50)



1. The herein described flash method of impregnating material of a cellular structure having a moisture content

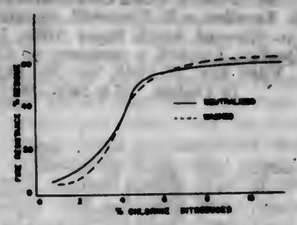
which comprises: heating the said material with radio frequency heat to cause the moisture content to create a vapor pressure within the material; and in immediately bringing an impregnating solution at a lower temperature than that of the vapor pressure, into contact with the surface of the material; whereby the vapor pressure will be collapsed which will immediately create a vacuum within the material and draw the solution into the material to fill the areas previously occupied by the said vapor pressure and thereby impregnate the material practically instantaneous with the solution, by the effect of implosion.

3,092,537

FLAMEPROOFING OF ORGANIC MATERIALS

Theodorus G. Brandts, Grand'Mere, Quebec, Canada, assignor to Consolidated Paper Corporation Limited, Grand'Mere, Quebec, Canada

Filed June 5, 1959, Ser. No. 818,462
14 Claims. (Cl. 162—159)



1. The process of flameproofing organic materials of a fibrous nature containing phenolic substances including at least one of the substances from the class consisting of lignins, tannins and phlobaphenes, comprising the step of halogenating said materials with, a gas consisting essentially of a halogen at a sufficient pressure to cause said gaseous halogen to enter said material and form halogen substituted phenolic substances therein, and subsequently drying said materials to form useful flameproofed articles containing said halogen-substituted phenolic substances.

3,092,538

METHOD AND APPARATUS FOR FEEDING STOCK TO PAPER MAKING MACHINE

Joseph D. Parker, Beloit, Wis., assignor to Beloit Iron Works, Beloit, Wis., a corporation of Wisconsin

Filed Nov. 9, 1960, Ser. No. 68,304
18 Claims. (Cl. 162—216)



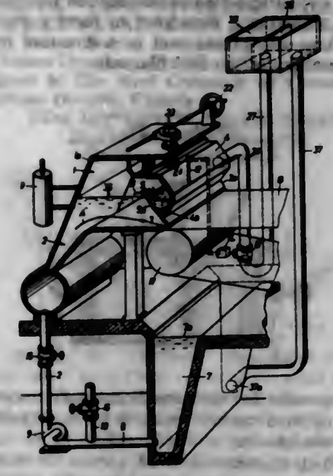
11. The method of improving distribution of particulate material in a liquid vehicle comprising: delivering the liquid vehicle along a flow path, generating fine scale turbulent flow patterns in the liquid vehicle, delivering the particulate material in a liquid carrier along a flow path, merging the flow paths of the particulate material and the liquid vehicle while the liquid vehicle is in a condition exhibiting fine scale turbulent flow patterns, and controlling the relative flow rates of the particulate material and the liquid vehicle so that said flow rates are substantially equal when said flow paths merge.

3,092,539

STOCK INLET FOR PAPER MAKING MACHINES AND THE LIKE

Karl Schmidt and Heinrich Fleig, Heidenheim, Germany, assignors to J. M. Voith G.m.b.H., Maschinenfabrik, Heidenheim (Brenz), Germany

Filed May 4, 1959, Ser. No. 810,652
Claims priority, application Germany May 8, 1958
8 Claims. (Cl. 162—259)



1. A stock inlet for paper-making machines and the like, comprising a closed headbox having spaced apart entrance means and discharge means for the passage of a flow of stock through said headbox and containing an air cushion under pressure above the level of the stock, an overflow edge disposed inside said headbox so that foam formed on the flowing stock in said headbox, together with small quantities of stock, is carried over said overflow edge and is thus prevented from entering said discharge means, gutter means associated with said overflow edge for collecting the overflowing foam and stock, said gutter means being disposed on the front wall of said headbox, drain pipe means for draining the collected foam and stock from said gutter means, and an overhead tank containing a level of stock, said drain pipe means being U-shaped and connected to said overhead tank, the level of stock in said overhead tank being above the level of said stock flowing through said headbox, so that the pressure in said drain pipe means corresponding to the geodetic head of said stock level in said overhead tank above said level of stock in said headbox is at least equal to the head of stock corresponding to the pressure on said air cushion in said headbox.

3,092,540

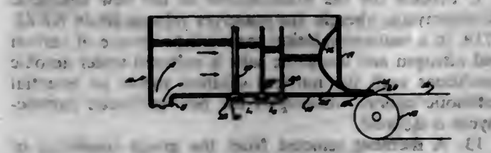
METHOD AND APPARATUS FOR DISTRIBUTING PARTICLE SUSPENSIONS

Joseph D. Parker, Beloit, Wis., assignor to Beloit Iron Works, Beloit, Wis., a corporation of Wisconsin

Filed Nov. 9, 1960, Ser. No. 68,303
10 Claims. (Cl. 162—343)

1. Apparatus for delivering a stock slurry to the forming surface of a papermaking machine in a condition exhibiting substantially uniform fiber distribution in the slurry comprising: a first transversely extending bank of a multiplicity of spaced abutments located in the flow path of the slurry for generating a uniform pattern of small scale turbulence of a first order magnitude in the slurry, the abutments in the first bank being relatively small sized and substantial in number to occupy from about 10% to about 90% of the cross-sectional area of

the slurry flow path, at least a second transversely extending bank of abutments located a distance approximately equal to from 2 to about 5 times the distance between the center-to-center points of a pair of adjacent abutments in the first bank whereby the second bank of abutments are located in the turbulent wake of the first bank of abutments, the abutments of said second bank being substan-



tially greater in number than and substantially smaller in size than those of the first bank for generating a uniform pattern of smaller scale turbulences in the slurry, and means for guiding the flow of slurry to the forming surface of the papermaking machine to permit partial decay of the turbulence before delivery of the slurry to the forming surface.

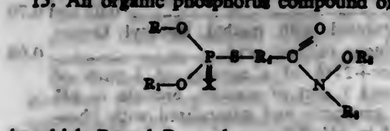
3,092,541

NEW CARBAMOYLALKYL PHOSPHORUS ESTER COMPOUNDS

Ernst Berger, Allschwil, Switzerland, assignor to Ciba Limited, Basel, Switzerland, a company of Switzerland

No Drawing. Filed Feb. 21, 1961, Ser. No. 90,636
Claims priority, application Switzerland Feb. 24, 1960
17 Claims. (Cl. 167—22)

15. An organic phosphorus compound of the formula



in which R and R_1 each represents a member selected from the group consisting of an alkyl radical containing at most 18 carbon atoms, a lower alkoxy lower alkyl radical and a cyclohexyl radical, R_2 represents a member selected from the group consisting of a hydrogen atom, an alkyl radical containing at most 4 carbon atoms and a radical of the formula



wherein R_3 represents an alkyl radical containing at most 4 carbon atoms, R_4 represents a member selected from the group consisting of a hydrogen atom and an alkyl radical containing at most 4 carbon atoms, R_4 represents a member selected from the group consisting of the group $-CH_2-$, the group $-CH_2-CH_2-$ and the group



in which R_5 represents an alkyl radical containing at most 4 carbon atoms, and X represents a member selected from the group consisting of an oxygen atom and a sulfur atom.

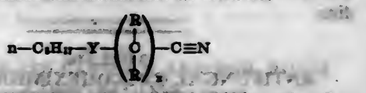
3,092,542

INSECT COMBATTING AGENT

Lyle D. Goodhue, Bartlesville, Kenneth E. Cantrell, Dewey, and Rector P. Louthan, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed Sept. 19, 1961, Ser. No. 139,067
13 Claims. (Cl. 167—22)

1. A method of repelling an insect which comprises subjecting said insect to the repelling action of at least one compound selected from the group of compounds having the structural characteristics as follows:



wherein Y is selected from the group consisting of —S— and



each R is selected from the group consisting of hydrogen, methyl, and ethyl, and x is an integer of from 3 to 6.

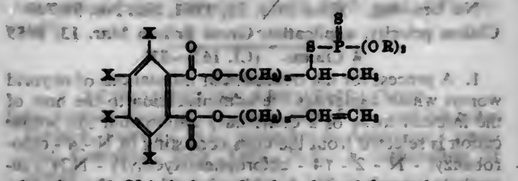
3,092,543

(O,O-DIMETHYLPHOSPHORODITHIO) ALLYL PHTHALATE PESTICIDAL COMPOSITIONS

Sidney B. Richter, Chicago, Ill., assignor to Velsicol Chemical Corporation, Chicago, Ill., a corporation of Illinois

No Drawing. Filed May 9, 1961, Ser. No. 108,726
12 Claims. (Cl. 167—30)

1. A compound of the formula



wherein each X is independently selected from the group consisting of hydrogen, chlorine and bromine atoms and unsubstituted lower alkyl and unsubstituted lower alkoxy radicals, R is an unsubstituted alkyl radical containing from 1 to 3 carbon atoms, and n is a whole number from 0 to 1.

3. 2-(O,O-diethylphosphorodithio)propyl allyl phthalate.

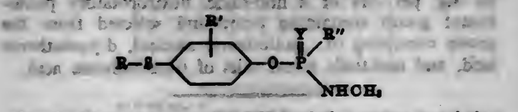
3,092,544

ORGANO PHOSPHOROUS NEMATOCIDE

Joyce D. Nault, Garden Grove, and Charles R. Youngson, Long Beach, Calif., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Nov. 3, 1961, Ser. No. 149,847
10 Claims. (Cl. 167—30)

1. An agronomical practice which comprises impregnating nematode infested soil with a nematocidal amount of a phosphorus compound corresponding to the formula



wherein R represents a member of the group consisting of methyl and ethyl, R' represents a member of the group consisting of hydrogen and methyl, R'' represent a member of the group consisting of methoxy and methylamino and Y represents a member of the group consisting of oxygen and sulfur.

3,092,545

METHOD OF CONTROLLING MICROORGANISMS WITH 4,6-DIAMINO-2-ETHYLTHIO-5-NITROSO-PYRIMIDINE

Thomas R. Williamson, Santa Clara, Calif., assignor to Stauffer Chemical Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Dec. 8, 1961, Ser. No. 158,115
1 Claim. (Cl. 167—33)

A method of effectively controlling microorganisms selected from the class consisting of bacteria and fungi

comprising contacting said microorganisms with an effective amount of 4,6-diamino-2-ethylthio-5-nitrosopyrimidine.

3,092,546
ANTIFUNGAL CYCLOHEXIMIDE STARCH INCLUSION COMPOSITIONS
Louis C. Schroeter and Gerald A. Boyack, Kalamazoo, Mich., assignors to The Upjohn Company, Kalamazoo, Mich., a corporation of Delaware
No Drawing. Filed Feb. 26, 1962, Ser. No. 175,795
10 Claims. (Cl. 167—42)

1. A solid cycloheximide-starch inclusion compound wherein the cycloheximide is present in the proportion of from about 5 to about 40% by weight.

3,092,547
METHODS OF TREATING OXYURID WORMS WITH QUATERNARY AMMONIUM COMPOUNDS
Geoffrey George Coker and Frederick Charles Copp, London, England, assignors to Burroughs Wellcome & Co. (U.S.A.) Inc., Tuckahoe, N.Y., a corporation of New York
No Drawing. Filed Mar. 28, 1961, Ser. No. 98,749
Claims priority, application Great Britain Mar. 13, 1959
4 Claims. (Cl. 167—53)

1. A process for the treatment of infestations of oxyurid worms which comprises the administration to the host of the infested locus of a quaternary ammonium salt whose cation is selected from the class consisting of N - 4 - chlorobenzyl - N - 2 - (4 - chlorophenoxyethyl) - N,N - dimethylammonium, N - 4 - chlorobenzyl - N - 2 - (4 - bromophenoxyethyl) - N,N - dimethylammonium and N - 4 - bromobenzyl - N - 2 - (4 - chloro - 2 - isopropyl - 5 - methylphenoxyethyl) - N,N - dimethylammonium cations and whose anion is that of a therapeutically acceptable acid in a dose range of 2.0 g. to 0.50 g.

3,092,548
METHOD OF TREATING PEPTIC ULCERS WITH PANTOTHENIC ACID
Albert G. Werton, Columbus, Ohio, assignor to The Warren-Teed Products Company, Columbus, Ohio, a corporation of Ohio
No Drawing. Filed Oct. 27, 1960, Ser. No. 65,256
5 Claims. (Cl. 167—55)

1. The method of treating gastrointestinal peptic inflammation and ulceration in humans which comprises administering to a person suffering therefrom at least 20 mg. per day of a non-toxic, dextrorotatory pantothenyl group containing compound selected from the group consisting of: pantothenyl alcohol, d-pantothenic acid, and non-toxic metal salts of d-pantothenic acid.

3,092,549
PROCESS OF AND COMPOSITION FOR COMBATING INFLUENZA VIRUS AND PROCESSES OF PREPARING THE ACTIVE CONSTITUENT THEREOF
André Georges Girard, Paris, France, assignor, by mesne assignments, to Roussel-UCLAF, S.A., Paris, France, a corporation of France
Filed Oct. 1, 1957, Ser. No. 687,387
Claims priority, application France June 21, 1957
2 Claims. (Cl. 167—65)

1. A method of combating influenza virus which comprises subjecting such organisms to a composition comprising not less than 0.5 g. of a member selected from the group consisting of 2-amino-3-arylimino-5-aryl-7-chloro-3,5-dihydrophenazine and acid addition salts thereof.

3,092,550
ANTIBIOTIC DANUBOMYCIN AND PROCESS FOR ITS MANUFACTURE
Ernst Gaumann, Zurich, and Walter Vesser, Binningen, Switzerland, assignors to Ciba Corporation, a corporation of Delaware
No Drawing. Filed Oct. 1, 1958, Ser. No. 764,591
Claims priority, application Switzerland Oct. 29, 1957
17 Claims. (Cl. 167—65)

1. Process for the manufacture of the new antibiotic danubomycin, wherein *Streptomyces griseus*, strain NRRL 2719, in a nutrient solution containing a source of carbon and nitrogen and inorganic salts is cultured under aerobic conditions until the nutrient solution shows an essential antibiotic action, whereupon the new antibiotic danubomycin is isolated.

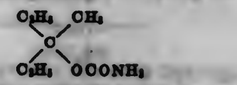
13. A member selected from the group consisting of the antibiotic danubomycin, a reddish substance having basic properties, being soluble in alcohols, ketones, esters, chlorinated hydrocarbons and aromatic hydrocarbons and practically insoluble in petrolether and water, forming with acids yellow salts of good-water-solubility, exhibiting in the U.V.-spectrum a band at 243 mμ with shoulder at 260 mμ, and showing in paper-chromatography the following Rf-values:

In n-butanol saturated with water	0.65
In n-butanol saturated with water+2% p-toluene sulfonic acid+2% piperidine	0.90
In methyl isobutyl ketone saturated with water	0.00
In 80% ethanol with 1.5% sodium chloride, paper impregnated with 0.95-molar sodium sulfate solution and 0.05-molar sodium bisulfate solution	0.5
In butanol/methanol/water, 4:1:2	0.67
In water saturated with methyl isobutyl ketone	0.05 and 0.70
In water saturated with methyl isobutyl ketone +1% p-toluene sulfonic acid	0.08
In 75% water+25% of a mixture of 3 parts of methanol and 1 part of acetone, brought to pH 10.5 with ammonia and neutralized with phosphoric acid to pH 7.5	0.05 and 0.70

and acid addition salts thereof, said danubomycin having been produced by the process of claim 1.

3,092,551
MEDICATION FOR PSYCHIC DISTURBANCES
Gilbert Ancel, Neuilly-sur-Seine, France, assignor to Société d'Études Scientifiques et Industrielles de l'Ile-de-France, Paris, France, a society of France
No Drawing. Filed Aug. 15, 1961, Ser. No. 131,482
Claims priority, application France Mar. 28, 1961
2 Claims. (Cl. 167—65)

1. An injection form medication for psychic disturbances comprising a solution of 1-ethyl-1-methyl-propyl carbamate having the formula:

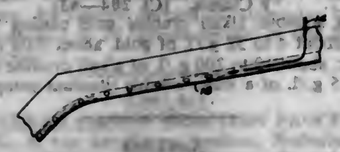


in isopropyl propyleneglycol ether.

3,092,552
OLIGODYNAMIC SILVER COMPOSITIONS AND USES
Isabella B. Romano, New York, N.Y., assignor of fifteen percent to Albert C. Nolin, New York, N.Y.
No Drawing. Filed May 19, 1958, Ser. No. 735,919
29 Claims. (Cl. 167—72)

1. An oligodynamic silver composition comprising a silver compound capable of yielding ionic silver in solution and a deoxidizing agent capable of reducing said silver compound to silver, said deoxidizing agent being present in sufficient amounts with respect to the silver compound as to reduce said silver compound in dilute solution to oligodynamic silver.

3,092,553
PHARMACEUTICAL PREPARATIONS AND METHOD AND APPARATUS FOR MAKING SAME
Carl E. Fisher, Jr., 946 Coolidge, Clawson, Mich., and Charles H. Wilson, 22613 St. Jean, St. Clair Shores, Mich.
Filed Apr. 11, 1960, Ser. No. 21,524
5 Claims. (Cl. 167—82)



1. The method of treating a vertebrate type animal which comprises administering orally a plurality of droplet size solid, substantially homogeneous spheroidal beads comprising a congealable sol and a pharmacologically active ingredient sufficient to give a pharmacological response upon ingestion and absorption,

said ingredient being uniformly distributed throughout said sol,

said droplet beads being made by the steps of directing an immiscible liquid in such a manner as to form a continuous stream,

directing a congealable sol having said pharmacologically active ingredient distributed uniformly therethrough through a fine orifice of a diameter not greater than the internal diameter of a size 18 hypodermic needle under pressure sufficient to form a fine uninterrupted filament,

directing the uninterrupted filament into the stream, maintaining the temperature of said stream of immiscible liquid below the congealing temperature of said congealable sol,

controlling the velocities of the stream relative to the filament as they move along in the path of the stream in such a manner as to cause the uninterrupted filament to move uninterruptedly in the direction of movement of the stream along the stream at a velocity sufficient to prevent substantial increase in cross section of the uninterrupted filament and thereafter to cause the filament to break up into elongated segments which quickly contract lengthwise into solid, substantially homogeneous spheroidal beads and thus provide spaces between the individual beads to prevent coalescing as the beads flow in the immiscible stream and thereafter gel.

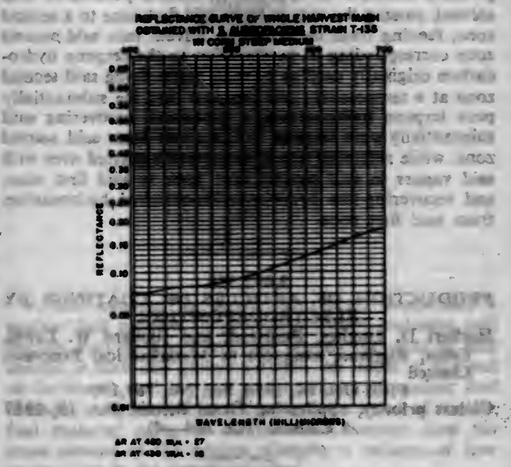
3,092,554
METHOD OF PRODUCING WATER-INSOLUBLE MINERAL SALTS
Karl Jenard, 14 Rue Greuze, Paris 16, France
No Drawing. Filed Jan. 28, 1959, Ser. No. 789,591
Claims priority, application France Oct. 28, 1958
7 Claims. (Cl. 167—86)

2. A method for producing a water-insoluble compound basic bismuth nitrate containing hydroxide, carbonate and basic nitrate of bismuth in selected proportions, comprising the steps of providing an aqueous acid solution of bismuth nitrate having a pH of about .1; rapidly pouring said acid solution into a dilute alkaline solution of ammonia containing carbonate ions and having a pH of about 9.6, to precipitate a water-insoluble compound basic bismuth nitrate; washing the precipitated compound basic bismuth nitrate with water, and drying the same under controlled conditions, while preventing said compound basic bismuth nitrate from undergoing excessive shock and compression loads.

3,092,555
RELATIVELY COLLAPSIBLE AEROSOL FOAM COMPOSITIONS
Roy H. Hern, 38 N. Jefferson St., Dayton 2, Ohio
No Drawing. Filed Apr. 21, 1958, Ser. No. 729,543
3 Claims. (Cl. 167—88)

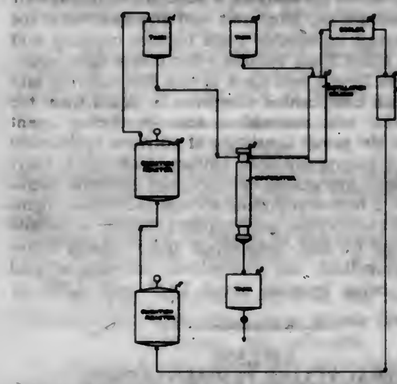
1. A composition for carrying a material, including hair dyes, pharmaceuticals, lubricants and shampoo, and for forming relatively collapsible foam bubbles carrying said material and which foam bubbles will collapse upon application and will form a non-foam drying film carrying said material, which composition comprises in liquid form for admixture with said material a foam-producing agent selected from the group consisting of ethylene cycloimido 1 alkyl bis (2 hydroxyethylene sodium alcoholate), alkyl dimethyl benzyl ammonium chloride, and ethylene cycloimido 1 alkyl 2 hydroxyethylene sodium alcoholate methylene sodium carboxylate, and mixtures thereof, a volatile aqueous solvent for said composition and a volatile foam-generating propellant, the non-volatile contents of said composition being between about 1.5% and 4.5% by weight.

3,092,556
TETRACYCLINE FERMENTATION
John Andrew Growich, Jr., New City, N.Y., and Nicholas Dodack, Rahway, N.J., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine
Filed Feb. 12, 1962, Ser. No. 172,394
5 Claims. (Cl. 195—80)



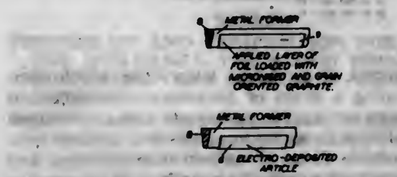
1. The process of producing tetracycline which comprises cultivating a strain of *Streptomyces aureofaciens* which produces tetracycline exclusively under submerged aerobic conditions in an aqueous nutrient medium containing assimilable surces of carbohydrate, nitrogen, and inorganic salts until substantial quantities of tetracycline are produced, said tetracycline-producing strain of *Streptomyces aureofaciens* being also characterized by its ability to impart to the whole harvest mash a color characterized by a reflectance curve, when plotted linearly, wherein the vertical distance between the reflectance curve and a straight line drawn through the reflectance curve intercepts at 400 mμ and 550 mμ is greater at 420 mμ than at 430 mμ.

3,092,557
PROCESS FOR THE PRODUCTION OF HIGHLY CONCENTRATED SOLUTIONS OF PEROXIDES OF TERPENE HYDROCARBONS FROM DILUTE SOLUTIONS OF SAME
Wilhelm Ester and August Seissner, Herne, Germany, assignors to Bergwerksgesellschaft Hibernia A.G., Herne, Germany, a German corporation
Filed June 23, 1959, Ser. No. 822,280
Claims priority, application Germany June 28, 1958
12 Claims. (Cl. 202—64)



1. A process for the concentration of terpene hydroperoxide solutions in a hydrocarbon solvent in which the solvent is the corresponding terpene hydrocarbon having higher vapor pressure than said hydroperoxide, which comprises the steps of passing a film of said hydroperoxide solution through a first zone at a temperature and pressure sufficient to vaporize at least a portion of said solvent, passing the vapors from said first zone to a second zone, feeding fresh hydrocarbon solvent into said second zone corresponding in composition to the terpene hydrocarbon originally used as solvent, maintaining said second zone at a temperature and pressure that the substantially pure terpene hydrocarbon is vaporized, recovering said substantially pure terpene hydrocarbon from said second zone, while returning any hydroperoxide carried over with said vapors to said second zone back to said first zone, and recovering the hydroperoxide-enriched hydrocarbon from said first zone.

3,092,558
PRODUCTION OF ARTICLES OR COATINGS BY ELECTRODEPOSITION
Herbert D. Hughes, Banstead, and Richard W. Lewis, Esher, England, assignors to Metachemical Processes Limited
Filed Oct. 14, 1958, Ser. No. 767,199
Claims priority, application Great Britain Oct. 15, 1957
8 Claims. (Cl. 204—4)

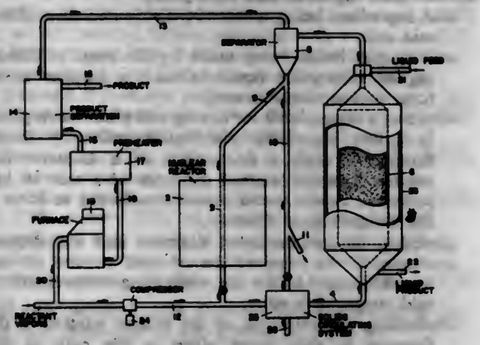


7. A method of electroforming a shaped nickel article which comprises:
(*a*) contiguously covering a face of a conductive mandrel with a foil of polyisobutylene loaded with graphite particles and prepared by rolling graphite-loaded polyisobutylene in a manner to orient the grains of said graphite, said graphite particles having a grain size of 0.1 to 25 microns;
(*b*) making the foil-covered mandrel face the cathode in a nickel plating bath until a self-supporting layer of nickel is deposited thereon; and
(*c*) separating said self-supporting layer from said foil covered mandrel face.

3,092,559
GOLD PLATING
Donald Gardner Foulke, Watchung, and Edwin Cornell Rinker, Morristown, N.J., assignors to Sel-Rex Corporation, Nutley, N.J., a corporation of New Jersey
No Drawing. Filed May 1, 1961, Ser. No. 106,541
9 Claims. (Cl. 204—43)

1. An aqueous alkali cyanide gold plating bath containing about 4 to 32 g./l. of gold, about 0.04 to 12 g./l. of silver, about 10 to 200 g./l. of alkali cyanide and about 0.05 to 5 g./l. of a water-soluble titanium compound.

3,092,560
NUCLEAR REACTOR LOOP FOR PARTICULATE RADIATION OUTSIDE CORE
Thomas A. Reiter, Chatham, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware
Filed Dec. 30, 1958, Ser. No. 783,764
5 Claims. (Cl. 204—154)

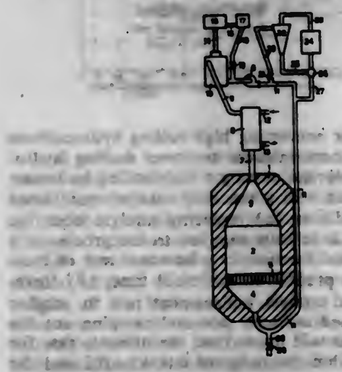


1. An irradiation process comprising activating finely divided fluidizable solids in a neutron activation zone by irradiation thereof with thermal neutrons at flux in the range of 10^9 to 10^{15} thermal neutrons per square centimeter per second, said solids comprising in the range of 5 to 100 weight percent of an element having an absorption cross-section for neutrons above 1 barn and producing an isotope that decays with the emission of neutron-free particulate and gamma radiation, then flowing the solids so activated into a chemical reaction zone separate from said neutron activation zone, maintaining said solids in a fluidized state in said chemical reaction zone by introducing into the base thereof a fluidizing gas consisting essentially of a gasiform chemical reactant, converting at least a portion of said chemical reactant in said reaction zone by neutron-free radiation from said solids, returning solids from said chemical reaction zone to said neutron activation zone, recovering said fluidizing gas from said chemical reaction zone and separating a product therefrom.

3,092,561
METHOD FOR PRODUCING ATOMIC HYDROGEN
Frederick W. Lampe, Baytown, Tex., assignor, by mesne assignments, to Esso Research and Engineering Company, Elizabeth, N.J., a corporation of Delaware
Filed Jan. 20, 1960, Ser. No. 3,563
5 Claims. (Cl. 204—154)

1. A method for preparing atomic hydrogen which comprises subjecting a mixture of hydrogen and a gaseous ionizing radiation acceptor having a proton affinity larger than the bond strength of the hydrogen molecule to ionizing radiation in the presence of a minor amount of hydrogen atom acceptor, said radiation acceptor being selected from the group consisting of helium, neon, argon, krypton, xenon, nitrogen, carbon monoxide, and mixtures thereof, the intensity of said ionizing radiation being within the range of about 0.12 to about 4200 watts per gram of said mixture and the total radiation dosage being within the range of about 0.36 to about 12,000 watt hours per gram of said feed mixture, said mixture containing from about 35 to 60 volume percent of said gaseous ionizing radiation acceptor and, correspondingly, from about 64 to about 30 volume percent of molecular hydrogen and from about 1 to 10 volume percent of said hydrogen atom acceptor.

3,092,562
NUCLEAR FISSION REACTION PROCESS
Bernard L. A. van der Schee, Arnhem, Netherlands, assignor to Stichting Reactor Centrum Nederland
Filed June 25, 1956, Ser. No. 593,672
Claims priority, application Netherlands June 25, 1955
3 Claims. (Cl. 204—154.2)



1. Process for the establishment of a self-sustaining nuclear fission reaction, comprising circulating the nuclear fuel, in the form of a rapidly settling suspension of a solid, fissile material in a carrier liquid in a continuous upward flow through a nuclear reactor vessel with substantially vertical inner walls, avoiding turbulence in the carrier liquid and permitting the suspended solid particles to freely settle with respect to the ascending carrier liquid and feeding the nuclear fuel suspension into the reactor vessel in a plurality of substantially vertical partial currents.

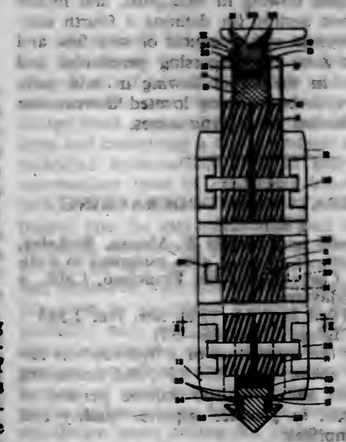
3,092,563
POLYMERIZATION PROCESS
Peter Joseph Vermeer James Agius, Abingdon, and Eric Bertram Evans, Stevenston, England, assignors to Esso Research and Engineering Company, a corporation of Delaware
No Drawing. Filed Jan. 28, 1960, Ser. No. 5,096
Claims priority, application Great Britain Oct. 12, 1955
8 Claims. (Cl. 204—158)

1. A method of producing oil-soluble copolymers which comprises exposing a mixture of 1 to 20 wt. percent of an unsaturated hydrocarbon amine containing 2 to 18 carbon atoms per molecule and about 80 to 99 wt. percent of an unsaturated polymerizable material selected from the group consisting of esters of unsaturated C_3 to C_4 carboxylic acids fully esterified with C_2 to C_{20} alkanols, and esters of saturated C_2 to C_4 carboxylic acids fully esterified with vinyl alcohol, to ionizing radiation comprising gamma rays of an intensity and for a duration sufficient to effect co-polymerization and within the dose rate of about 100 to 100,000 roentgens per minute and within a total dosage of 10×10^4 to 10×10^8 roentgens.

3,092,564
IRRADIATION OF WAX
Bertrand W. Greenwald, Portland, Conn., assignor to Cities Service Research and Development Company, New York, N.Y., a corporation of New Jersey
No Drawing. Filed Mar. 8, 1960, Ser. No. 13,436
3 Claims. (Cl. 204—162)

1. The process for improving the gloss stability of a wax coating composition consisting essentially of paraffin wax and containing between about 0.1 and about 50 weight percent microcrystalline wax which comprises subjecting said composition to between about 10^7 and about 10^9 roentgens of gamma radiation.

3,092,565
FUEL ELEMENTS FOR NUCLEAR REACTORS
David William Williams and Trevor Eyton Jones, Seascale, Cumberland, and Eric Arthur Crouch Crouch, Abingdon, England, assignors to United Kingdom Atomic Energy Authority, London, England
Filed July 28, 1960, Ser. No. 45,918
Claims priority, application Great Britain July 14, 1960
1 Claim. (Cl. 204—193.2)

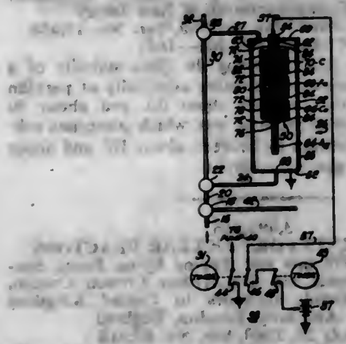


A fuel element for a nuclear reactor comprising a nuclear fuel member, a protective sheath enclosing said nuclear fuel member, end caps closing the ends of said sheath, at least one groove between the inside of the end of the sheath and the end cap, an insert of nuclear fuel material being located in said groove, the insert of nuclear fuel material being of smaller cross section than the cross section of the groove whereby a volume of free space exists in the groove.

3,092,566
STERILIZATION AND PURIFICATION APPARATUS
Robert L. Negas, West Chicago, Ill., assignor, by mesne assignments, to Water Processing & Chemical Co., Limited
Filed Feb. 18, 1960, Ser. No. 9,531
3 Claims. (Cl. 204—240)

1. Apparatus for sterilizing a liquid comprising metallic casing means, inlet means in said casing means, outlet means in said casing means to provide a flow path through said casing means, a composite electrode arrangement located in said casing means in said flow path and including a silver section, a copper section, a metallic sec-

tion, and a carbon section, means including said silver section for defining a first electrolytic zone for dispersing a germicidal product in the liquid flowing in said path, means including said copper section for defining a second electrolytic zone for dispersing an algaecidal product in the liquid flowing in said path, means including said metallic section for defining a third electrolytic zone for



dispersing a coagulant product for capturing non-organic particles in the liquid flowing in said path, and means including said carbon section for defining a fourth electrolytic zone that coacts with products of said first and second electrolytic zone for dispersing germicidal and algaecidal products in the liquid flowing in said path, said fourth electrolytic zone being located downstream of said first and second electrolytic zones.

3,092,567

LOW TEMPERATURE HYDROCRACKING PROCESS

Robert H. Kozlowski and Harold F. Mason, Berkeley, and John W. Scott, Jr., Ross, Calif., assignors to California Research Corporation, San Francisco, Calif., a corporation of Delaware

No Drawing. Filed Jan. 14, 1960, Ser. No. 2,363
4 Claims. (Cl. 208—57)

1. A process for the conversion of a hydrocarbon distillate feed boiling above about 300° F., and containing nitrogen compounds and 1 to 100 volume percent of aromatic compounds, to produce superior quality fuel products, which comprises:

a. hydrofining said feed by contacting said feed and at least 500 s.c.f. of hydrogen per barrel thereof with a sulfur-resistant hydrofining catalyst at a temperature of from about 450° to 800° F., a pressure of at least 300 p.s.i.g., and a liquid hourly space velocity of from about 0.3 to 5.0 whereby the nitrogen content of said feed is substantially reduced, with no more than a minor amount of aromatics saturation.

b. passing the resulting hydrofined product and at least 2000 s.c.f of hydrogen per barrel thereof into contact with an aromatics hydrogenation catalyst at a temperature of from about 300° to 700° F., a pressure of at least 300 p.s.i.g., and a liquid hourly space velocity of about 0.3 to 5.0, whereby at least 50% of the aromatics present are saturated.

c. passing the resulting hydrofined and hydrogenated product and at least 500 s.c.f. of hydrogen per barrel of total feed into contact with a hydrocracking catalyst at a temperature of from about 350° to 700° F. and a pressure of at least 400 p.s.i.g., whereby at least 50 volume percent of the resulting hydrocracked products boil below the initial boiling point of the feed, and

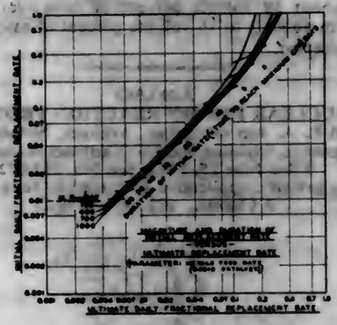
d. recovering from the hydrocracking step a product characterized by a low aromatics content, a high naphthene content, and a ratio of isoparaffins to normal paraffins that is higher than the theoretical thermodynamic equilibrium ratio.

3,092,568

METHOD FOR CRACKING HIGH BOILING HYDROCARBONS

Paul T. Atteridg, Upper Montclair, N.J., assignor to M. W. Kellogg Company, Jersey City, N.J., a corporation of Delaware

Filed Jan. 7, 1960, Ser. No. 1,051
9 Claims. (Cl. 208—113)



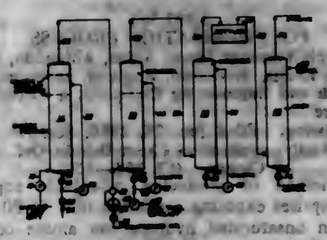
1. A method for converting high-boiling hydrocarbons containing metal contaminants to lower boiling hydrocarbons which comprises passing a high-boiling hydrocarbon feed in contact with a cracking catalyst maintained in a fluidized condition, (*a*) replacing catalyst when the hydrocarbon feed is initially supplied to the process at a predetermined initial fractional replacement rate of catalyst per day for a predetermined initial time, (*b*) thereafter reducing the catalyst replacement rate to another lower predetermined ultimate rate and carrying out the cracking process at said lower rate, the ultimate rate for step (*b*) being within the range of 0.004 to 0.2 and the catalyst replacement rate and time of use for step (*a*) being in accordance with the correlation of the ultimate catalyst replacement rate and metals feed rate according to the curves of FIGURE 5.

3,092,569

AIR SWEETENING

Charles O. Petty, % La Gloria Gas & Oil Co., P.O. Box 840, Tyler, Tex.

Filed Dec. 18, 1959, Ser. No. 860,601
6 Claims. (Cl. 208—204)



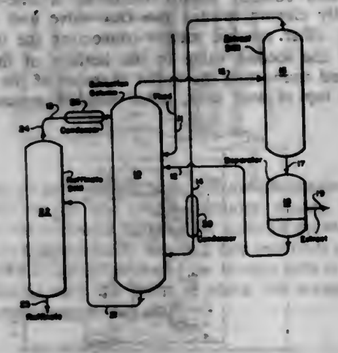
1. The method of sweetening a sour hydrocarbon naphtha containing a small quantity of sour components not exceeding 0.1% mercaptan, calculated as sulfur, comprising first washing the said sour naphtha with strong aqueous caustic solution to remove substantially all alkali soluble components, and then sweetening the residual alkali insoluble components in said naphtha by washing the same with a strong aqueous caustic solution containing from 0.1 to 10% of aromatic mercaptans and at least 2% of phenols in the presence of an oxygen-containing gas.

3,092,570

REMOVAL OF AROMATIC HYDROCARBONS FROM JET FUEL MIXTURES

Alfred W. Francis, Woodbury, N.J., assignor to Socony Mobil Oil Company, Inc., a corporation of New York

Filed Aug. 1, 1960, Ser. No. 46,678
6 Claims. (Cl. 208—323)



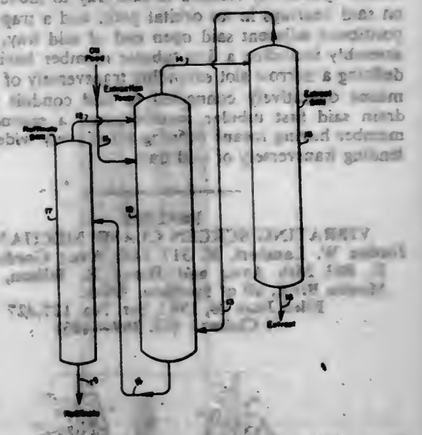
1. A process for removing aromatic hydrocarbons from nonaromatic hydrocarbons boiling at substantially the same temperature which comprises introducing a hydrocarbon charge containing a mixture of aromatic and nonaromatic hydrocarbons into an extraction zone at an intermediate level of said zone, introducting at least a substantial amount of carbon disulfide up to about 30% by weight of the hydrocarbon charge into the extraction zone near the top thereof, introducing methanol into the extraction zone near the bottom thereof in an amount at least equal to the amount of aromatics in the hydrocarbon charge, introducing a limited amount of about 1–10% by weight based on the methanol used of a material selected from the group consisting of water, ethylene glycol, glycerol and propylene glycol into the extraction zone at a level below but not substantially below the level at which the hydrocarbon charge is introduced into said extraction zone, taking the methanol, aromatic hydrocarbons and material selected from the group consisting of water, ethylene glycol, glycerol and propylene glycol overhead from said extraction zone to an extract distillation zone, removing substantially pure methanol vapor from the top of said extract distillation zone, condensing said methanol vapor and introducing the liquid methanol into the lower portion of said extraction zone, withdrawing the aromatic hydrocarbons and the material selected from the group consisting of water, ethylene glycol, glycerol and propylene glycol from the bottom of said extract distillation zone to a separation zone, withdrawing said material selected from the group consisting of water, ethylene glycol, glycerol and propylene glycol from the bottom of said separation zone and returning said material to the extraction zone, withdrawing aromatic hydrocarbons from the upper portion of said separation zone, taking the carbon disulfide and nonaromatic hydrocarbons from the bottom of said extraction zone to a raffinate distillation zone, removing substantially pure carbon disulfide vapor from the top of said raffinate distillation zone, condensing said carbon disulfide vapor and introducing the liquid carbon disulfide into the upper portion of said extraction zone, and withdrawing the nonaromatic hydrocarbons from the bottom of said raffinate distillation zone, substantially free of undesirable aromatic hydrocarbons.

3,092,571

SOLVENT REFINING LUBRICATING OILS WITH A DUAL SOLVENT SYSTEM

Alfred W. Francis, Woodbury, N.J., assignor to Socony Mobil Oil Company, Inc., a corporation of New York

Filed Sept. 2, 1960, Ser. No. 53,737
2 Claims. (Cl. 208—324)



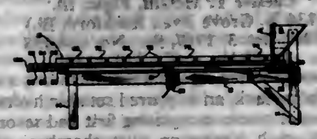
1. A process for removing aromatics, olefins, waxes and asphaltenes from hydrocarbon lubricating oil to provide an oil of increased stability and improved viscosity index which comprises: introducing a lubricating oil charge stock predominantly formed of paraffin hydrocarbons and containing a minor amount of the unstable and undesired hydrocarbons into an extraction zone at an intermediate level of said zone, introducing carbon disulfide in the amount of 1–50% by volume of the oil being treated into the extraction zone near the top thereof, introducing acetonitrile into the extraction zone near the bottom thereof, taking the acetonitrile and said unstable and undesired hydrocarbons overhead from said extraction zone to an extract distillation zone, removing substantially pure acetonitrile vapor from the top of said extract distillation zone, condensing said acetonitrile vapor and introducing the liquid acetonitrile into the lower portion of said extraction zone, withdrawing the unstable hydrocarbons from the bottom of said extract distillation zone, taking the carbon disulfide and stable hydrocarbon lubricating oil from the bottom of said extraction zone to a raffinate distillation zone, removing substantially pure carbon disulfide vapor from the top of said raffinate distillation zone, condensing said carbon disulfide vapor and introducing the liquid carbon disulfide into the upper portion of said extraction zone, and withdrawing the stable hydrocarbon lubricating oil from the bottom of said raffinate distillation zone, substantially free of undesirable unstable hydrocarbons.

3,092,572

AMALGAMATION TABLE

Grant W. Berggren, 404 N. 2nd St., Hamilton, Mont.

Filed Nov. 24, 1961, Ser. No. 154,706
1 Claim. (Cl. 209—66)



An amalgamation table for extracting precious metals from an ore comprising a frame, bearings secured to said

frame, and an amalgamation tray movably supported on said bearings, said tray having a bottom, side walls, an end wall at one end and being open at its other end, conduit means mounted in superimposed relation to said tray, said conduit means having wall portions defining openings therein to direct jets of fluid onto said tray, ore feeding means positioned over said one end of said tray, drive means operatively secured to said tray to move the same on said bearings in an orbital path, and a trap assembly positioned adjacent said open end of said tray, said trap assembly including a first tubular member having means defining a narrow slot extending transversely of said tray, means operatively connected to said conduit means to drain said first tubular member, and a second tubular member having means defining a relatively wider slot extending transversely of said tray.

3,092,573

VIBRATING SCREEN CLAMP MECHANISM

Jordan W. Lambert, E. 317 14th Ave.; Gordon Speas, E. 803 26th Ave.; and Harry E. Wilson, S. 2704 Manito Blvd., all of Spokane, Wash.

Filed June 26, 1961, Ser. No. 127,427
4 Claims. (Cl. 209—403)



3. A vibrating screen clamp mechanism adapted to secure the upturned edges of a screen to a peripheral framework, comprising:

side rails positioned along the inside surfaces of opposite sides of said framework, each rail being a channel member including a central web bounded by a first flange adapted to abut the adjacent upturned screen edge and a second flange adapted to abut the adjacent inside surface of the framework;

a plurality of individual brackets longitudinally spaced along the surface of the channel member web adjacent to and facing the framework;

individual shaft means having one end thereof releasably engaged with said respective brackets, said shaft means extending outwardly from the bracket with which it is engaged and being adapted to extend through an aperture formed through the framework;

a radially protruding cross pin secured to each of said shaft means at a location outward from the outside surface of said framework;

and an individual wedge adapted to be mounted on said individual shaft means, each wedge having a longitudinal aperture for reception of said shaft means and opposed tapered surfaces adapted to contact said cross pin and the outside surface of said framework, respectively.

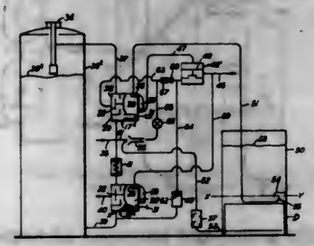
3,092,574

AUTOMATIC FLOW CONTROL MEANS FOR LIQUID TREATING APPARATUS

Chester T. McGill, Elgin, Ill.
(134 N. Grove Ave., Rockford, Ill.)

Filed Oct. 3, 1957, Ser. No. 688,058
28 Claims. (Cl. 210—130)

15. For water softening apparatus including a softener tank and a brine tank, an improved settable hydraulically operable control means comprising first and second automatic valves, each having an inlet chamber, an outlet chamber, a pressure chamber, a valve controlling communication between the inlet and outlet chambers, means subject to pressure in the pressure chamber connected with the valve normally holding the same open but closing the same automatically upon relief of pressure in the pressure chamber, means regulating communication between the inlet chamber and pressure chamber, a settable timer mechanism, and a pressure relief valve for the pressure chamber that is normally closed on a relief port but is connected to be automatically opened by the timer mechanism when set from off position and automatically closed again when the timer mechanism returns to off position, conduit means connecting the outlet chamber of the second valve with the inlet chamber of the first valve and with a source of raw water supply under pressure, said conduit means including a one-way valve normally closing toward the first valve and raw water source, other conduit means connecting the inlet chamber of the second valve to the bottom of the softener tank and connecting the outlet chamber of the first valve to the top of said tank, other conduit means for connecting the outlet chamber of the second valve with a service system, other conduit means connecting the relief port of the first valve with the brine tank to supply raw water thereto, other conduit means connecting the relief port of the second valve with a drain, a brine ejector to which raw water is supplied from the raw water supply source, other conduit means communicating with the brine ejector and brine tank for drawing brine from the latter to the brine ejector, other conduit means extending from the brine ejector for delivery of brine to the softener tank and including a shut off valve, other conduit means extending from the outlet chamber of the first valve and from the bottom of the softener tank to the drain, and valve means for shutting off flow in said conduit means, one of the two first mentioned valves having its settable timer mechanism operated in dependently of the settable timer mechanism on the other of said two valves for backwash and both of said valves having the settable timer mechanisms thereof set at the same time in a predetermined relationship to one another for regeneration.



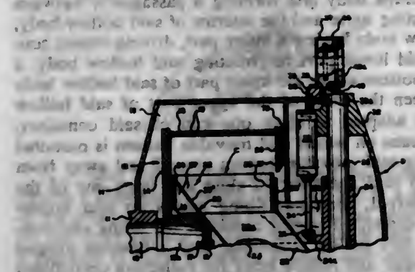
3,092,575

CENTRIFUGAL MACHINE STRIPPER KNIFE AND CONTROLLING MECHANISM

Bradley G. Cox, Saginaw, Mich., assignor to Baker Perkins Inc., Saginaw, Mich., a corporation of New York

Filed Dec. 9, 1959, Ser. No. 858,392
4 Claims. (Cl. 210—141)

1. In a centrifugal separator particularly for segregating liquids and solids; a housing; a separating basket having a perforate, peripheral wall on which solids collect and through which liquids are expressed; means for rotating said basket; a scraper carrying arm in said basket movable generally radially in a path of travel toward and away from the said wall of the basket in an initial stroke; electric circuit means including source of power means; motor means controlled by said electric circuit means for moving said scraper arm in said path; electric switch means, having actuatable switch element means in one position initiating movement of said motor means to move said scraper arm toward said wall and in another position initiating movement of said motor means to move said scraper arm away from said wall, connected in said circuit means; indexible means mounted to actuate said switch element means to one of said positions near one end of the stroke of said scraper arm; switch actuator means mounted to actuate said switch element means to the other of said positions near the opposite end of the stroke of said scraper arm; the switch means, and the indexible means and switch actuator means, being mounted by the arm and housing for relative movement; and means for automatically indexing said indexible means for varying the length of stroke of the scraper arm in additional strokes to vary the point at which the scraper reverses its travel toward said wall.

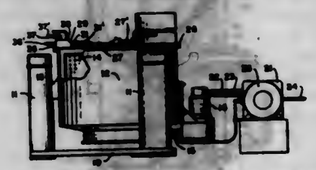


3,092,576

CENTRIFUGAL SEPARATORS

Edward A. Daubmann, East Moline, Ill., assignor to Ametek, Inc., a corporation of Delaware

Filed Feb. 18, 1959, Ser. No. 794,159
2 Claims. (Cl. 210—146)



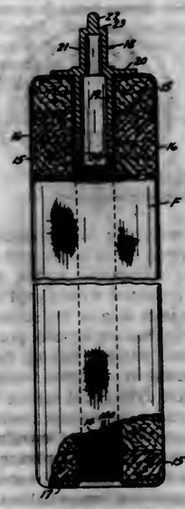
1. In a centrifugal separator having a stationary housing within which a rotatable basket is mounted, a closed hydraulic circuit including an hydraulic pump and motor means for rotating as well as stopping the rotation of said basket; an electric motor for operating said pump and motor means; a cover plate adapted to provide access to the interior of said separator; switch means within the circuit for said electric motor for de-energizing said electric motor when said cover plate is opened; an interlocking element; a cylinder mounted on the top of said housing; inter-communicating axially aligned relatively small and large cylindrical passages within said cylinder; a piston within said relatively large cylindrical passage; a rod connected to said piston and adapted to interlock with said cover plate to prevent its opening; a pair of freely floating pistons within said relatively small passage, all of said pistons being in successive axial abutting relation when the piston in said large cylindrical passage is in retracted position; means for connecting the one side of said hydraulic pump and motor means to the end of said cylinder at a port such that a hydraulic force is applied in line with said pistons; means for connecting the opposite side of said pump and motor means to said cylinder at a port in position to act on both of the pistons in said small passage when they are in their retracted positions; and a compression spring within said large passage and acting on the piston therein tending to move it to its retracted position.

3,092,577

PRESSURE LIQUID FILTERING DEVICE

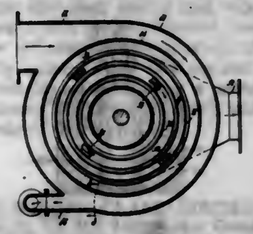
Olaf P. Sather, Duluth, Minn., assignor to Duluth Filter Company, Duluth, Minn., a corporation of Minnesota

Filed Jan. 27, 1960, Ser. No. 4,905
3 Claims. (Cl. 210—232)



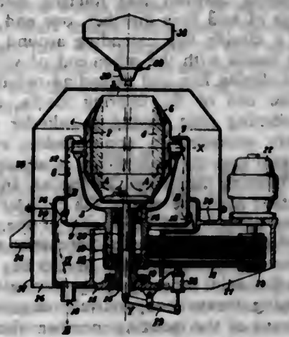
1. In a pressure liquid filtering device having a substantially closed shell having liquid outlet and a liquid inlet connected to a source of liquid under pressure and an indexing member within the shell extending thereacross and having engageable means for operatively positioning a filter element in working relationship, said filter element comprising: an elongated substantially uncompressible hollow core member having open ends, one of which is adaptable to be connected to such a liquid outlet in liquid-transmitting relation, said core member having openings therein bringing the interior of said shell into fluid-communicating relation with such liquid outlet when so connected, hollow circumferentially continuous filtering media concentrically surrounding the openings of said core member; a porous bag member enveloping said filtering media and securing and holding said filtering media in axially abutting and snug-fitting relation with a portion of the bag member disposed in close fitting relationship between said filtering media and the other surface of said core member, one end of said bag comprising a closing flap extending around one end of the filtering media with the other end of said bag overlapping said closing flap and extending radially inwardly over the one end of the filtering media, and an imperforate indexing plug having a cylinder shaped element slidably extending in non-threading relation into the end of said core member which is adjacent said one end of the filtering media and having an annular flange element formed near one end of the cylinder-shaped element bearing against said other end of the porous bag member and said filtering media thereunder whereby the flange frictionally holds the ends of the bag against the filtering media, said indexing plug having axially disposed engaging means cooperatively engaging the engageable means of the indexing member when said core member is so connected to such outlet to hold said core member in fluid communicating relation with said liquid outlet.

3,092,578
SCREENING APPARATUS
Madison Mott Cannon, Wellesley, Mass., George McKinstry Dick, Sherbrooke, Quebec, Canada, and Salomon Maury Salomon, Sharon, Mass., assignors to Bird Machine Company, South Walpole, Mass., a corporation of Massachusetts
Filed Jan. 16, 1959, Ser. No. 787,291
2 Claims. (Cl. 210—304)



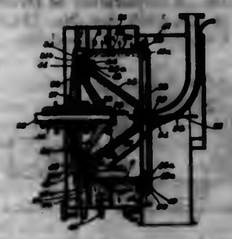
1. A device for screening liquid suspension having a screening chamber open at its upper end and enclosed by a generally vertical cylindrical screen wall, means for clearing the screen mounted within said screening chamber and adjacent the inlet face of the screen for movement thereacross, said device having an inlet portion in the form of a generally arcuate passage having two generally cylindrical radially spaced imperforate walls surrounding at least a portion of said cylindrical screen wall adjacent to and below its open end, said passage communicating with said chamber solely over the upper marging of said screen wall, said passage having an inlet opening disposed below the upper margin of the screen wall serving to introduce a stream of said suspension tangentially into said arcuate passage, and a trap outlet spaced from said inlet opening along the periphery of said passage and extending tangentially outwardly from said passage through the outer wall thereof and communicating with the space between said two imperforate walls and spaced below the upper margin of said screen wall, said trap outlet being arranged with respect to the tangential flow from the inlet to receive solid objects thrown outwardly by centrifugal force during flow of said suspension through said passage and to prevent said objects from entering said screening chamber.

3,092,579
EMPTYING SYSTEM FOR ROTARY CONTAINERS
Francesco Moretti, Terni, Italy, assignor to Officine Meccaniche e Fonderie A. Bosco Societa per Azioni
Filed Nov. 6, 1962, Ser. No. 235,753
Claims priority, application Italy Dec. 15, 1959
4 Claims. (Cl. 210—370)



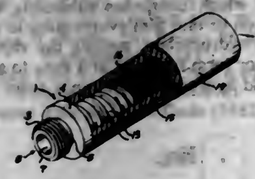
1. A centrifugal hydroextractor, comprising a container having a longitudinal axis and having a mouth at each end of said axis, said container having an inner perforated wall and an outer jacket spaced from said inner perforated wall and defining between said inner wall and outer jacket a collecting space, two hollow trunnions on opposite sides of said outer jacket, a hollow body having a fork-shaped upper part on which said trunnions are rotatably mounted, said trunnions projecting into the said upper part of said hollow body and forming a passageway between said collecting space and the interior of said hollow body, said hollow body having a lower part, driving means coupled to said lower part for rotating said hollow body, a movable bottom above the lower part of said hollow body and between the forks of the upper part of said hollow body and adapted to close one end of said container, closing means on which said movable bottom is mounted for moving said movable bottom toward and away from the end of said container to close and open one of the mouths thereof, container tilting means on said hollow body and connected to said container for tilting said container on said hollow trunnions, and a housing around said container and hollow body for collecting centrifuged material discharged through the mouths of said container when said container is rotated in the horizontal position with said mouths open.

3,092,580
CENTRIFUGAL MACHINES
Henry F. Irving, Saginaw, Mich., assignor to Baker Perkins Inc., Saginaw, Mich.
Original application Dec. 13, 1954, Ser. No. 474,940, now Patent No. 2,899,065, dated Aug. 11, 1959. Divided and this application Jan. 26, 1959, Ser. No. 789,031
3 Claims. (Cl. 210—376)



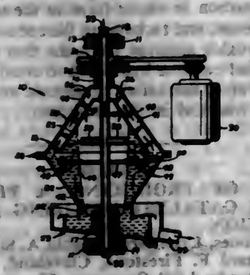
1. In a centrifugal machine; a wet housing; perforated separating drum means therein including a first end and a terminal end; means feeding a mixture, comprising liquid components which will pass through said drum means and solid components which will be retained on the interior peripheral surface, to said first end of said drum means; a dry housing adjacent the terminal end of said drum means; means for discharging the solid components retained on said drum means from the terminal end of said drum means to said dry housing; and deflector means mounted on said terminal end of said drum means including a first baffle spaced generally axially outward from the drum means having a section generally radially spaced outwardly from the terminal end of the drum means to receive solid components discharged generally radially from said drum means and inclined inwardly relative to the drum means, channeling the solids discharged in an axially inward direction to intermix the relatively wet solid components immediately adjacent the inner surface of said drum means with the drier solid components radially inward thereof; a second baffle, including a section disposed to receive solid components from the inwardly inclined section and located radially outwardly of said inwardly inclined section, inclined outwardly relative to the terminal end of said drum means to reverse the path of travel of the components and return them axially outwardly to said dry housing; and means for rotating said drum means.

3,092,581
FILTER ELEMENT
Myron L Jaffe, Waban, Mass.
(% Gibbs Ltd., 3390 Washington St., Boston 30, Mass.)
Filed Apr. 11, 1960, Ser. No. 21,247
8 Claims. (Cl. 210—510)



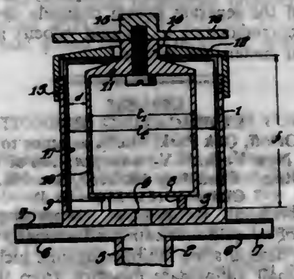
1. A filter construction comprising an elongated core having a passage extending from one end to a point short of the other end, said core having a spiral groove formed on the outer surface thereof intermediate said ends with a plurality of holes extending through said core from said passage to a radial innermost portion of said groove, a wire mesh cloth wrapped about and contracting ridges formed by said groove and covering in spaced relation said holes, a retaining wire wrapped about said cloth and securing it over said core, and a central portion of a porous sintered metal casing covering said grooves and wire cloth and contiguous with said wire cloth.

3,092,582
CENTRIFUGE
Robert F. Lacker, Hamilton, Ohio, assignor to The Black-Clawson Company, Hamilton, Ohio, a corporation of Ohio
Filed Mar. 20, 1959, Ser. No. 800,773
3 Claims. (Cl. 233—2)



1. A centrifuge for separating solid particles from a liquid slurry stock comprising, a generally conical rotatable basket having a closed bottom, a cone having an open base rotatably mounted within said basket and defining therewith an annular particle separating zone, drive means for rotating said cone and basket at a speed differential, spiral stock flighting fixed to said cone and interposed in said zone between said cone and said basket to cause said stock to travel toward the apex of said cone in response to relative rotation of said cone and basket, stock inlet means extending into the interior of said cone for delivery of said stock for outward flow into said separating zone, means in said basket defining a fiber discharge opening adjacent the apex thereof, a perforated separating screen fixed to rotate with said cone and extending outwardly within said basket and terminating in an outer periphery in spaced relation to the base of said cone and to the adjacent surface of said basket defining an annular opening between the interior of said cone and the interior of said basket, and means in said basket bottom defining an unrestricted liquid discharge opening positioned radially inwardly in relation to the periphery of said screen and operable to define a liquid wall in response to the rotation of said centrifuge which wall includes at least a portion of said screen.

3,092,583
APPARATUS FOR MEASURING DUST PARTICLES
Heinz Siegfried Wolff, % National Institute for Medical Research, Medical Research Council Laboratories, Holly Hill, Hampstead, London NW. 3, England, and Stanley Alec Roach, % Pneumoconiosis Research Unit, Medical Research Council, Llandough Hospital, near Penarth, Glamorgan, Wales
Filed Mar. 30, 1959, Ser. No. 802,780
Claims priority, application Great Britain Apr. 18, 1958
6 Claims. (Cl. 233—3)



1. Apparatus for separating dust particles of size between predetermined upper and lower limits from an air stream comprising coaxially disposed drum and core members mounted for rotation about their axes, said drum member having inlet and outlet openings in its ends, said inlet opening being coaxial with the drum, a disc-shaped member disposed outside the drum adjacent to the inlet end wall thereof, a portion of said core extending through said inlet opening in said drum end wall to define therewith an annular inlet for the drum and extending into the drum in spaced relation to the drum side wall to define therewith an annular passage extending from said annular inlet toward the other end of the drum, said disc-shaped member being coaxial with the inlet opening and having its adjacent end face extending substantially perpendicular to the drum axis in spaced relation with said drum end wall to define an annular clearance therewith communicating with said annular inlet, said clearance having such an axial width that rotation of the members at a predetermined speed causes air passing therethrough to rotate before entering the inlet thereby discharging particles of size larger than said upper limit, and means for inducing a flow of air into said inlet opening.

3,092,584
CENTRIFUGAL SEPARATION OF LIQUIDS CONTAINING FLOCCULATING SLUDGE
Stig Holger Bjarne Zachariasén, Stockholm, Sweden, assignor to Aktiebolaget Separator, Stockholm, Sweden, a corporation of Sweden
Filed Nov. 22, 1960, Ser. No. 71,051
Claims priority, application Sweden Dec. 8, 1959
1 Claim. (Cl. 233—32)

The method of separating a mixture of a liquid and flocculating sludge in a rotary centrifugal bowl having a separating chamber, a mixture inlet located centrally of said chamber at the region of the rotation axis, a separated sludge outlet leading outward directly from the outer periphery of the chamber and a separated liquid outlet leading from the inner part of the chamber, said method comprising the steps of feeding the mixture radially outward from the inlet to said chamber at a rate of Q cubic meters per second while dividing the mixture into

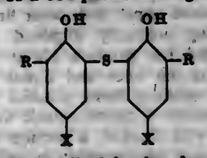
separately channeled radial streams which are N in number, N being greater than 20 but not exceeding 128, and which streams have an axial height of H meter, and simultaneously rotating the centrifugal bowl at an angu-



lar speed of W/sec. while fulfilling the conditions that WQ/4 is less than NH and the liquid pressure against the walls of the separate stream channels never exceeds a pressure corresponding to a liquid velocity in the channels of four meters per second.

3,092,585
LUBRICATING OILS
Harold D. Orloff, Oak Park, Mich., assignor to Ethyl Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed July 10, 1959, Ser. No. 826,105
7 Claims. (Cl. 252—48.4)

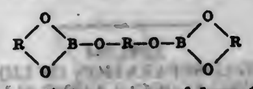
1. A lubricating composition comprising a major proportion of a liquid lubricating oil normally susceptible to oxidative deterioration inhibited against such deterioration by a small antioxidant quantity, from 0.001 up to about 5 percent, of a compound having the formula:



where R is an alkyl radical having from 3 to about 12 carbon atoms and which is branched on the alpha carbon atom, and X is halogen.

3,092,586
LUBRICANTS
Fred J. Dykstra, Detroit, Mich., assignor to Ethyl Corporation, New York, N.Y., a corporation of Virginia
No Drawing. Filed Nov. 19, 1958, Ser. No. 774,854
6 Claims. (Cl. 252—49.6)

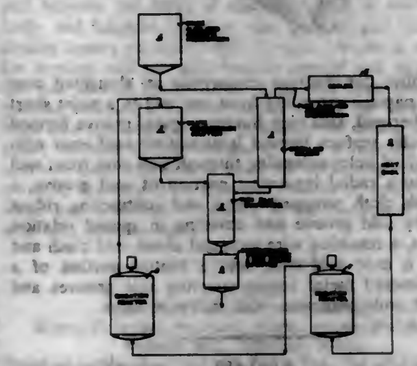
1. Liquid hydrocarbon crankcase lubricating oil normally subject to oxidative deterioration to which has been added from about 0.001 to about 1.0 weight percent of boron as a liquid tri(alkylene)biborate having the formula



wherein R is an alkylene group of from 2 to 6 carbon atoms in length and contains from 2 to about 20 carbon atoms.

3,092,587
PROCESS FOR THE PRODUCTION OF HIGH PERCENTAGE SOLUTIONS OF ORGANIC PEROXIDES
Wilhelm Ester and August Sommer, Herne, Westphalia, Germany, assignors to Bergwerksgesellschaft Hibernia Aktiengesellschaft, Herne, Germany, a corporation of Germany
Filed July 12, 1960, Ser. No. 42,440
Claims priority, application Germany July 22, 1959
13 Claims. (Cl. 252—426)

7. In the process for the production of a high percentage solution of an alkylated benzene hydrocarbon hydroperoxide in the corresponding alkylated benzene hydrocarbon as solvent from a low percentage solution of said peroxide in said hydrocarbon, wherein said alkylated benzene hydrocarbon is subjected to oxidation to form the corresponding hydroperoxide in low percentage solution having a peroxide content of from about 5 to 50%, the improvement which comprises subjecting said low percentage solution to thin film evaporation in a first zone to vaporize said hydrocarbon, passing the vaporized hydrocarbon in vapor form from the first zone to a second zone, contacting said hydrocarbon in vapor form in the second



zone with fresh hydrocarbon in liquid form, said fresh hydrocarbon corresponding to the hydrocarbon used as solvent, maintaining the temperature and pressure in the second zone sufficient to vaporize the hydrocarbon in the second zone, returning any peroxide carried over with said hydrocarbon in vapor form to the second zone back to the first zone, and recovering the concentrated high percentage peroxide solution from the first zone, the vaporized alkylated benzene hydrocarbon from the second zone being recovered, thereafter condensed and passed for use as starting material in the oxidation.

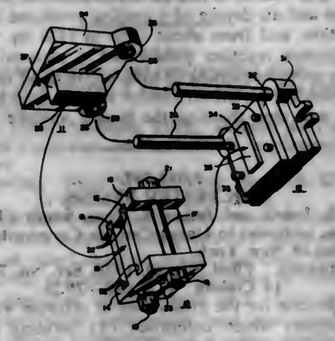
3,092,588
METHOD OF PRODUCING A PERMANENTLY ACTIVE CATALYST UTILIZING NEUTRON IRRADIATION
Arthur L. Jones, Lyndhurst, Harold A. Strecker, Bedford, and Richard F. Firestone, Cleveland, Ohio, assignors to The Standard Oil Company, Cleveland, Ohio, a corportion of Ohio
No Drawing. Filed Jan. 8, 1957, Ser. No. 632,958
2 Claims. (Cl. 252—432)

1. A method of making a catalyst which comprises forming a mixture of (1) silica, (2) an aluminum-containing compound, and (3) a boron-containing compound, and subjecting said mixture to the action of thermal neutrons of an intensity and for a time to change the boron by the nuclear capture of said neutrons and to drive the aluminum into the lattice of the silica by the kinetic impact resulting from said neutron capture and produce a solid having catalytic properties.

3,092,589
METHOD OF PREPARING A CATALYST USED IN THE POLYMERIZATION OF ETHYLENE
Gaetano F. D'Alelio, South Bend, Ind., assignor, by direct and mesne assignments, to Dal Mon Research Co., Cleveland, Ohio, a corporation of Delaware
No Drawing. Filed Nov. 6, 1957, Ser. No. 694,730
4 Claims. (Cl. 252—441)

1. The method of preparing a catalyst suitable for the polymerization of olefins to solid polymers which comprises the step of grinding under inert conditions at room temperature and ambient temperatures a mixture consisting essentially of Zr and $ZrCl_4$.

3,092,590
METHOD OF MAKING A NEUTRON-ABSORBING CALCIUM BORIDE BRICK
James W. Butler, 201 Elmira St. SW., Washington 24, D.C.
Filed Feb. 1, 1960, Ser. No. 6,079
5 Claims. (Cl. 252—478)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A method of making neutron-absorbing bricks which comprises mixing water with calcium boride powder to form a thick, dry mud-like substance, placing a portion of said mud-like substance into a mold, compressing said mud-like substance in said mold at a pressure of about one ton/in.^{2} to about two tons/in.^{2} to form a "green" brick, removing said "green" brick from said mold by disassembling said mold, placing said "green" brick into an unheated oven, applying heat slowly to said oven during a warmup time of about two hours to raise the oven to a baking temperature of about 600° C. and baking said brick at a temperature from about 600° C. to about 900° C. for about two to six hours, discontinuing the application of heat and allowing said temperature to return slowly to room temperature, said brick remaining in said oven until room temperature is reached.

3,092,591
METHOD OF MAKING DEGENERATIVELY DOPED GROUP III–V COMPOUND SEMICONDUCTOR MATERIAL
Morton E. Jones, Richardson, and Edward W. Mehal, Dallas, Tex., assignors to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware
Filed Mar. 21, 1960, Ser. No. 16,345
5 Claims. (Cl. 252—518)

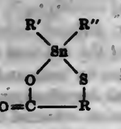
1. The method of making a group III—V compound semiconductor having a controlled degenerate conductivity determining impurity level therein formed of a first element and a second more volatile element, said method comprising the steps of providing a reaction chamber having at least a high temperature zone and a low temperature zone, heating in said high temperature zone a mixture of said first element and a doping agent effective to produce a degenerate conductivity determining impurity level in said compound semiconductor, said doping agent being provided in excess, providing in said low temperature zone an amount of said second element greater than that amount required to form a stoichiometric molten compound with said first element, controlling the temperature in said low temperature zone such that at least a portion of said second element vaporizes producing the vapor pressure of said second element in said reaction chamber required to combine with said first element and form a melt of said compound semiconductor significantly rich in the group III element, controlling the temperature in said high temperature zone such that said first element and doping agent mixture are maintained above the melting temperature of said compound for a time sufficient to assure reaction between said first and said second elements to form the melt of said compound semiconductor significantly rich in the group III element, establishing a temperature gradient through said melt, lowering the temperature of said high temperature zone while maintaining said temperature gradient to freeze said melt progressively from one end to produce the controlled degenerate conductivity determining impurity level between 10^{19} and 5×10^{19} carriers per cc. in said group III—V compound semiconductor.

3,092,592
PREPARATION OF CELLULAR POLYURETHANE PLASTICS
Günther Nischk, Leverkusen, Peter Hoppe, Troisdorf, Günther Braun, Leverkusen, and Hans-Willi Paffrath, Cologne-Deutz, Germany, assignors, by direct and mesne assignments, of one-half to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany, and one-half to Mobay Chemical Company, Pittsburgh, Pa., a corporation of Delaware
No Drawing. Filed July 9, 1957, Ser. No. 670,627
Claims priority, application Germany July 14, 1956
4 Claims. (Cl. 260—2.5)

1. In the manufacture of cellular polyurethane plastics by a process which comprises reacting an organic polyisocyanate with water and an hydroxyl polyester the improvement which comprises reacting an excess of an organic polyisocyanate based on the hydroxyl groups of said polyester with water and a polyester having terminal hydroxyl groups, an hydroxyl number of at least about 250, an acid number less than two and prepared by condensing a polyhydric alcohol comprising at least about 50 percent of a polyhydric alcohol containing at least three hydroxyl groups, with a mixture of carboxylic acids comprising oleic acid, an aromatic dicarboxylic acid and a saturated aliphatic polycarboxylic acid, the molar ratio of said aromatic dicarboxylic acid to said saturated aliphatic polycarboxylic acid being within the range of from about 1:0.3 to about 1:2.

3,092,593
PREPARATION OF POLYURETHANE FOAM
Leonard I. Nass, Oceanport, and Walter Alexander Stamm, Highland Park, N.J., assignors to Carlisle Chemical Works, Inc., Reading, Ohio
No Drawing. Filed May 8, 1959, Ser. No. 811,787
1 Claim. (Cl. 260—2.5)

In the preparation of polyurethane foam from organic polyisocyanates, polyethers containing hydroxyl groups, and water, the improvement which consists in incorporating in the reaction mixture about 0.02 to 1 percent by weight, calculated on said polyether of a 2,2-dihydrocarbontin-1-oxa-2-stanna-3-thia cycloalkanone of the formula



wherein R' and R'' are monovalent hydrocarbon radicals, and R is a divalent alkylene group.

3,092,594

POLYURETHANE RESIN OBTAINED FROM COAL TAR PITCH REACTION PRODUCTS AND PROCESS FOR PREPARING SAME

Herbert L. Heiss, New Martinsville, W. Va., assignor to Mobay Chemical Company, Pittsburgh, Pa., a corporation of Delaware

No Drawing. Filed Apr. 29, 1960, Ser. No. 25,558

17 Claims. (Cl. 260—2.5)

1. Plastics obtained by a process which comprises reacting an organic polyisocyanate with the reaction product of a coal tar pitch and a member selected from the group consisting of an alkylene oxide having 2 to 8 carbon atoms and an alkylene carbonate.

3,092,595

METHOD OF FORMING BODIES OF FRICTION MATERIAL

Frank W. Smith, Hackensack, Richard H. Gilbert, Ramsey, and Edgar F. Sewell, Wyckoff, N.J., assignors to American Brake Shoe Company, a corporation of Delaware

No Drawing. Filed Apr. 2, 1958, Ser. No. 725,779

4 Claims. (Cl. 260—3)

2. The method of forming bodies of friction material comprising the steps of preparing a dry mixture of particles consisting essentially of, by weight, up to 70 percent asbestos fiber, up to about 15 percent shredded soft rubber, up to about 25 percent pulverulent cashew nut shell derivative, up to about 70 percent of fillers including friction modifying agents, from about 10 to about 22 percent powdered thermosetting aldehyde condensed organic binder consisting essentially of a substantially water insoluble organic polymer and a curing agent to convert said organic polymer to the thermoset condition, coating substantially each water insoluble particle of said mixture with a liquid surface film consisting essentially of from about 5 to 50 percent by weight of an adhesive material selected from the group consisting of alkali metal salts of acrylic acid polymeric materials, polyacrylic acid amide, starches, glues, dextrin, carboxylated cellulose, shellacs, salts of polylignin sulfonates and mixtures thereof with the balance of said film consisting essentially of water, which film is sticky whereby said particles tend to adhere to each other, mixing said mixture of coated particles to form a low density mass having a uniform fibrous consistency, forming said low density mass into an elongated, coherent, partially densified, substantially stable body having a predetermined cross sectional configuration and dimension by passing said mass through an aperture having a configuration and dimension substantially identical to that of the cross section of said formed body while applying pressure to said mass, said elongated, coherent, partially densified body so-produced having sufficient mechanical strength to permit it to be handled unsupported and sufficient flexibility that it may be bent about a radius without breaking or cracking, removing substantially all the water from said aqueous surface film without substantially reducing the adhesive properties of the residual solid adhesive material and curing said binder by heat and pressure treatment to effect substantially full densification of said body, the solid residue of said adhesive material in said cured body remaining in the solid state during normal operating conditions to which said body may be subjected in service as a friction material.

3,092,596

COMPATIBLE TUNG OIL-UNSATURATED ALKYD RESIN COMPOSITIONS AND METHOD FOR PRODUCING THE SAME

Frank B. Root, Waterbury, Conn., assignor to the United States of America as represented by the Secretary of Agriculture

No Drawing. Filed Dec. 5, 1957, Ser. No. 700,920

34 Claims. (Cl. 260—22)

1. The process for preparing a coating composition hardenable by a Diels-Alder polymerization reaction and having increased compatibility with tung oil which comprises heating at a temperature of about from 100° to 150° C. a polyester reaction product of rosin, a glycol, and an unsaturated acid from the group consisting of fumaric and maleic acids, an antioxidant to prevent air oxidation and air drying of a coating produced from said composition, and from about 12% to 75% by weight of said polyester reaction product of a material selected from the group consisting of tung oil, tung oil fatty acids, methyl tungate, air-blown methyl tungate, and allyl eleostearate, and then thinning the heated mixture.

3,092,597

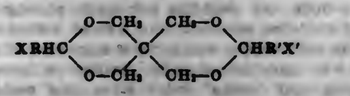
POLYESTER RESINS

Robert E. Leech and Julian K. Ross, South Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed July 18, 1958, Ser. No. 749,322

10 Claims. (Cl. 260—29.2)

1. A process for the production of resinous water soluble polyesters which comprises (1) forming an intermediate polyester condensate by heating and condensing at a temperature within the range between about 125° C. and 225° C. a mixture comprising (*a*) a spirobi(meta-dioxane) compound having the structure:



wherein R and R' are selected from the class consisting of divalent aliphatic radicals of the formula C_nH_{2n} wherein *n* is an integer from 2 to 18, and the cyclohexylene radical; and X and X', respectively, designate —COOR² radicals wherein R² designates a member of the class consisting of hydrogen and the alkyl radicals having one to fourteen carbon atoms; and (*b*) a member of the class consisting of the alkanediols of the structure

$$C_mH_{2m}(OH)_2$$

where *m* is an integer from 2 to 10 and the polyoxyalkylene diols of the structure

$$HOCH_2CHR^3(OCH_2CHR^3)_pOH$$

where R³ is of the class consisting of hydrogen and the methyl radical and *p* is an integer from 1 to 3, the said diol and spirobi(meta-dioxane) compound being reacted in the range of molar ratios of from 1:1 to 5:1, said diol having a boiling point higher than that of the by-product R²OH, removing the by-product R²OH as it is formed, and continuing the heating until substantially all formation and evolution of the R²OH has ceased; and (2) partially hydrolyzing said intermediate polymer condensate at a temperature within the range between about 60° C. and 100° C. with between about 10 percent and 100 percent by weight of water, based on the weight of intermediate polymer condensate, in the presence of a catalytic quantity of acid for a period of time between about 1 and 6 hours.

3,092,598

THERMAL STABILIZATION OF LATEXES OF HALOETHYLENE POLYMERS WITH CHLORINE DIOXIDE OR CHLORITES

Harold G. Hahn, Robert L. Vieger, and William J. Reich, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Aug. 14, 1958, Ser. No. 754,929

9 Claims. (Cl. 260—29.6)

1. A latex composition consisting essentially of (1) the aqueous emulsion polymerizate of a monomeric material composed essentially of at least one monomer selected from the group consisting of vinyl chloride and vinylidene chloride and (2) stabilizing amounts of a compound selected from the group consisting of chlorine dioxide and alkali metal chlorites.

3,092,599

COMPOSITION OF CHLOROETHYLENIC POLYMER LATEX WITH A CHLORATE AND OSMIUM TETROXIDE

Harold G. Hahn, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed May 9, 1960, Ser. No. 27,510

11 Claims. (Cl. 260—29.6)

1. A stabilized composition of a chloroethylenic polymer latex; said polymer being selected from the class consisting of vinyl chloride homo polymers, vinylidene chloride homo polymers, and copolymers of vinyl chloride and vinylidene chloride with each other and with other polymerizable compounds; and said composition containing minor proportions of a water soluble alkali metal chlorate and osmium tetroxide.

3,092,600

MODIFIED POLYVINYL ACETATE POWDERS AND COMPOSITIONS

Toshio Ozawa, Higashinada Ward, Kobe, Takao Yamashita, Kyoto, and Sigeo Hayashi, Hirakata, Japan, assignors to Kanegafuchi Spinning Co., Ltd., Tokyo, Japan

No Drawing. Filed Sept. 15, 1960, Ser. No. 56,092

Claims priority, application Japan Sept. 23, 1959

5 Claims. (Cl. 260—29.6)

1. Dry powder composition which comprises a spray dried powder of copolymer of vinyl acetate and about 0.3 to 10 molar percent of at least one mono-olefinic carboxylic acid of 3 to 4 carbons, an ammonium salt of a weak acid having a dissociation constant less than 10^{-1}, and at least one compound selected from the group consisting of zinc oxide, calcium oxide, zinc hydroxide and calcium hydroxide, said ammonium salt being present in an amount about 1 to 2 times the stoichiometric equivalent with respect to the acid monomer, and the amount of said compound being 0.5 to 2 moles per mole of ammonium salt.

3,092,601

LATEX COATING COMPOSITIONS

Wilbur M. Sullivan, Bloomfield, and Leonard A. Carlson, Murray Hill, N.J., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Original application Oct. 1, 1959, Ser. No. 843,635, now Patent No. 3,047,523, dated July 31, 1961. Divided and this application Nov. 30, 1961, Ser. No. 156,163

13 Claims. (Cl. 260—29.6)

1. A polyvinyl acetate latex composition for producing self-induced textured coatings consisting essentially of:

(*a*) a polyvinyl acetate latex having: a non-volatile content of from about 45 to about 65 percent by weight, a surface tension of at least about 48 dynes/cm., a pH within the range of from about 4 to about 8, and wherein the said polyvinyl acetate has a particle size of from about 0.75 to about 3.0 microns; and

(*b*) for every 100 parts by weight of polyvinyl acetate solids in said latex from about 20 to about 100 parts by weight of a liquid aliphatic hydrocarbon having a boiling point in the range of from about 110° C. to about 200° C.

3,092,602

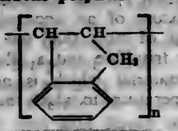
PLASTICIZING OF PHENOL RESINS

Hans Wille, Hans Schuhmann, and Karl Jellinek, Duisburg-Meiderich, Germany, assignors, by mesne assignments, to Koppers Company, Inc., a corporation of Delaware

No Drawing. Filed May 20, 1960, Ser. No. 30,465

3 Claims. (Cl. 260—31.8)

1. A composition for impregnating paper to make electrical laminates having improved dielectric properties and characterized by a maximum water absorption of one percent comprising a phenol-aldehyde resin containing an agent for imparting improved electrical properties, decreasing the tendency of the paper laminates impregnated with said resin to absorb water, and decreasing electrocorrosion consisting essentially of a mixture of a low molecular weight indene polymer having the formula:



wherein *n* is an integer having a value of from 2–4 and an ester selected from the group consisting of polyglycol-adipate and dibutylphthalate, said plasticizer being present in an amount of 0.5–1.0 weight part per part of said resin and containing from 0.5–2.0 parts of said indene polymer per part of said ester.

3,092,603

METHOD OF CONTINUOUSLY COAGULATING RUBBER LATICES WITH FRESH COAGULANT AND THE RESULTANT PRODUCT

Kjetil Gaasland and John D. Sutherland, Jr., Baton Rouge, La., assignors to Copolymer Rubber and Chemical Corporation, a corporation of Louisiana

Filed Dec. 30, 1958, Ser. No. 783,803

18 Claims. (Cl. 260—33.6)

1. In a method of continuously preparing rubbery polymers containing dispersed carbon black wherein a rubbery polymer while in the form of latex is mixed with an aqueous suspension of carbon black and the resultant mixture coagulated, the improvement comprising the steps of coagulating the mixture of latex and aqueous suspension of carbon black by addition of fresh coagulant substantially free of recycled serum to produce coagulum of the rubbery polymer containing carbon black dispersed therein, and separating the resultant coagulum from the serum, the mixture of latex and aqueous suspension of carbon black being coagulated continuously in a continuous commercial scale operation and the rubbery polymer being selected from the group consisting of natural rubber, polychloroprene, homo-polymers of conjugated diolefins, copolymers of conjugated diolefins and mono ethylenically unsaturated monomers copolymerizable therewith, and mixtures thereof.

9. In a method of continuously preparing oil-extended rubbery polymers containing dispersed carbon black wherein a rubbery polymer while in the form of latex is mixed with an emulsion of rubbery polymer processing oil and an aqueous suspension of carbon black and the resultant mixture coagulated, the improvement comprising the steps of coagulating the mixture of latex, oil emulsion and aqueous suspension of carbon black by addition of

fresh coagulant substantially free of recycled serum to produce oil extended coagulum of the rubbery polymer containing carbon black dispersed therein, and separating the resultant coagulum from the serum, the mixture of latex, oil emulsion and aqueous suspension of carbon black being coagulated continuously in a continuous commercial scale operation and the rubbery polymer being selected from the group consisting of natural rubber, polychloroprene, homo-polymers of conjugated diolefins, copolymers of conjugated diolefins and mono ethylenically unsaturated monomers copolymerizable therewith, and mixtures thereof.

3,092,604

CURABLE RESIN SYSTEM, CURED EPOXY RESIN, AND PROCESS OF FORMING THE SAME

Harold H. Levine, La Jolla, Calif., assignor to Narmco Industries, Inc., San Diego, Calif., a corporation of California

No Drawing. Filed Aug. 14, 1961, Ser. No. 131,086
14 Claims. (Cl. 260—37)

1. A curable resin system comprising a polyepoxide containing an average of more than one oxirane group per molecule and arsenic trisulfide.

5. A curable resin system comprising a substantially homogeneous mixture of an uncured polyepoxide containing an average of more than one oxirane group per molecule, arsenic trisulfide and a filler, said filler being a comminuted material which is nonreactive in said system at the temperatures to which the system is exposed.

3,092,605

COPOLYMER OF A MONOVINYL ETHER OF A GLYCOL AND N-VINYL-2-OXAZOLIDINONE AND RUBBER MADE BY VULCANIZING SAME

George B. Sterling and Robert L. Zimmerman, both of Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed May 8, 1961, Ser. No. 108,288
13 Claims. (Cl. 260—41)

1. A composition of matter comprising a copolymer containing in polymerized form between 50 percent and about 90 percent by weight of a monovinyl ether represented by the general formula

$$HO—(C_nH_{2n}O—)_xCH=CH_2$$

in which n is a positive integer from 2 to 4 and in which x is a positive integer from 1 to 3, and between about 10 percent and 50 percent by weight of a comonomer selected from the group consisting of N-vinyl-2-oxazolidinone and ring substituted alkyl derivatives thereof in which the alkyl group contains from 1 to about 4 carbon atoms.

3,092,606

FLAME-RESISTANT UNSATURATED POLYESTER-VINYLIDENE MONOMER REACTION PRODUCT CONTAINING THE DIMETHYL ESTER OF 2-HYDROXYISOPROPYL-PHOSPHONIC ACID

Heinrich Ruppert, Krefeld, Hermann Schnell, Krefeld-Uerdingen, and Leonhard Goerden, Uedt, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Sept. 28, 1959, Ser. No. 842,619
Claims priority, application Germany Sept. 30, 1958
1 Claim. (Cl. 260—45.4)

A flame-resistant, self-extinguishing plastic having a halogen content between about 5 and about 30 percent by weight of the plastic consisting of a polymerized mixture of

(*a*) a polymerizable, ethylenically unsaturated, halogen-substituted polyester condensation product of a polyhydric alcohol and a polycarboxylic acid and

(*b*) a polymerizable monomeric compound containing the vinylidene radical, which mixture had been polymerized in the presence of a peroxide catalyst, the said polymerizable mixture containing the dimethyl ester of 2-hydroxyisopropylphosphonic acid in an amount equivalent to between about 1 and about 10 percent by weight of the plastic.

3,092,607

TERNARY BLENDS OF POLYSTYRENE-POLYETHYLENE-CHLOROSULFONATED POLYETHYLENE AND PROCESSES FOR MAKING THE SAME

James A. Herbig and Ival O. Salyer, Dayton, Ohio, assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed May 11, 1959, Ser. No. 812,130
12 Claims. (Cl. 260—45.5)

1. Styrene polymer product containing a major proportion of styrene polymer and a minor proportion of ethylene polymer and chlorosulfonated polyethylene which together constitute from 1 to 30 weight percent based on total product, said styrene polymer being a normally solid high molecular weight polymer selected from the group consisting of styrene homopolymer and styrene copolymers containing at least 85 weight percent styrene and a comonomer selected from the group consisting of alpha-methylstyrene, vinyltoluene, acrylonitrile, ethyl acrylate, butyl acrylate, and methyl methacrylate, wherein said ethylene polymer is a normally solid, high molecular weight polymer selected from the group consisting of ethylene homopolymer and ethylene copolymers containing at least 85 weight percent ethylene and a comonomer selected from the group consisting of styrene, vinyl acetate, vinyl chloride, vinylidene chlorofluoride, and methyl methacrylate, and said chlorosulfonated polyethylene being prepared from polyethylene having a molecular weight of at least 6,000 prior to chlorosulfonation.

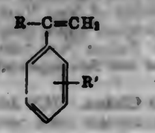
3,092,608

CURING EPOXIDIZED POLYBUTADIENE WITH A DICARBOXYLIC ANHYDRIDE, AROMATIC VINYLIDENE MONOMER, AND FREE RADICAL POLYMERIZATION INITIATOR

Murray H. Reich, Gene Newlin, and Charles A. Heiberger, Princeton, N.J., assignors to FMC Corporation, a corporation of Delaware

No Drawing. Filed Jan. 21, 1960, Ser. No. 3,714
11 Claims. (Cl. 260—45.5)

1. A curable resin composition comprising an epoxidized polybutadiene containing polymerizable double bonds and 1–15% by weight of epoxy oxygen; about 0.5 to 3 equivalents per epoxy oxygen of a dicarboxylic anhydride, of which at least 5% by weight is a dicarboxylic anhydride containing a polymerizable olefinic double bond; 5 to 50 parts, per 100 parts of epoxidized polybutadiene, of a monomer of the formula



wherein R and R' are each selected from the group consisting of hydrogen and the methyl radical; and 0.01–5%, by weight of unsaturated anhydride and monomer, of a free radical polymerization initiator having a decomposition point in the range of 75° to 175° C.

3,092,609

STABILIZER FOR STYRENE-ACRYLONITRILE COPOLYMERS

Oscar Kostelitz, Paris, and Georges Wetroff, Le Thillay, France, assignors to Pechiney Compagnie de Produits Chimiques et Electrometallurgiques, Paris, France

No Drawing. Filed Aug. 27, 1959, Ser. No. 836,326
Claims priority, application France Aug. 28, 1958
1 Claim. (Cl. 260—45.9)

A composition of matter the essential constituents of which are a styrene-acrylonitrile copolymer and, as a stabilizing agent, from 0.1 to 5%, based on the weight of copolymer, of N,N-bis(2-hydroxypropyl)allylamine.

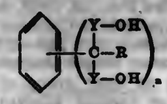
3,092,610

POLYEPOXY ETHERS OF POLYHYDRIC PHENOLS AND CURED PRODUCTS OBTAINED THEREFROM

Carl G. Schwarzer, Walnut Creek, Calif., assignor to Shell Oil Company, a corporation of Delaware

No Drawing. Filed June 23, 1958, Ser. No. 743,982
10 Claims. (Cl. 260—47)

1. Ethers of (*a*) phenols of the structure



wherein n is an integer from 2 to 3, R is a member of the group consisting of hydrogen and alkyl radicals containing from 1 to 12 carbon atoms, and Y is a phenylene radical, and (*b*) vic-epoxy substituted monohydric alcohols, said etherification taking place between the hydroxyl groups on the —YOH radicals and the OH group of the vic-epoxy-substituted monohydric alcohols, with substantially all of the said —YOH groups being so etherified.

3,092,611

HOMOPOLYMER AND COPOLYMERS OF VINYL CYANOACETATE

John W. Lynn, Charleston, W. Va., assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Sept. 15, 1959, Ser. No. 840,032
4 Claims. (Cl. 260—78.4)

1. A homopolymer of vinyl cyanoacetate.

3,092,612

COPOLYMERS PREPARATION PROCESS

Henry S. Makowski, Carteret, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed May 29, 1959, Ser. No. 816,696
2 Claims. (Cl. 260—88.2)

1. In a process for preparing a halogenated copolymer of ethylene and a higher alpha olefin comprising halogenating a copolymer of ethylene and propylene in the presence of an iron-containing material with a halogenating agent selected from the group consisting of chlorine, bromine, iodine, fluorine, dichloro dimethylhydantoin and N-bromo-succinimide at a temperature of 0° C. to 150° C. in an inert hydrocarbon diluent at a pressure of from atmospheric to 25 atmospheres; the copolymer of ethylene and propylene having been prepared from 40 to 60 mole percent ethylene and from 60 to 40 mole percent propylene in contact with the low pressure polymerization catalyst comprising a mixture of a reducing metal containing material and a reducible heavy transition metal compound, the improvement of preventing product degradation comprising adding from 0.1–6 g./l. of polymer solution of triethyl phosphate to the copolymer dissolved in an inert hydrocarbon diluent prior to the halogenation reaction.

3,092,613

POLYMERIZATION OF ACETYLENIC COMPOUND WITH ALKALI-METAL BOROHYDRIDE AND Ni OR Co SALT

George W. Kennerly, Darien, David S. Hoffenberg, Stamford, and James S. Noland, Greenwich, Conn., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed July 11, 1960, Ser. No. 41,787
20 Claims. (Cl. 260—94.1)

1. The method of polymerizing a polymerizable acetylenic compound having the general formula:

$$R—C\equiv C—H$$

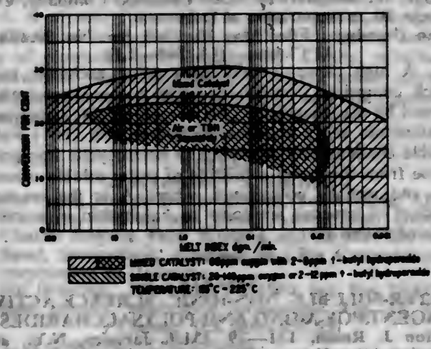
wherein R is a member selected from the group consisting of hydrogen, alkyl, alkenyl, aralkyl, aryl and alkaryl, comprising distributing said polymerizable compound and at least one metallic salt selected from the group consisting of nickel salts and cobalt salts, in a liquid reaction medium selected from the group consisting of water and organic solvents, adding to and incorporating in the resulting liquid mass an alkali-metal borohydride, wherein said polymerizable compound, metallic salt and borohydride are each at least partially soluble in said liquid reaction medium and wherein the addition of the alkali-metal borohydride into said liquid mass is completed before any appreciable polymerization of said polymerizable compound has occurred, thereafter allowing the polymerization of the said polymerizable compound to proceed to completion at a temperature above —20° C.

3,092,614

ETHYLENE POLYMERIZATION PROCESS

John F. Erdmann, Charleston, and Charles R. Welter, South Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York

Filed Feb. 15, 1962, Ser. No. 176,845
6 Claims. (Cl. 260—94.9)



1. In a bulk tubular reactor continuous process for polymerizing ethylene at a temperature between about 160° C. and 250° C. and a pressure above 15,000 p.s.i., the improvement which comprises conducting the polymerization reaction in the presence of a catalyst mixture comprising from about 50 to about 500 parts per million of oxygen and from about 1 to about 100 parts per million of tertiary butyl hydroperoxide, said catalyst concentration being on a molar basis based on the ethylene charged.

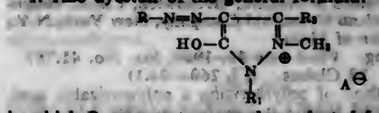
3,092,615

AZO DYESTUFFS CONTAINING A QUATERNIZED PYRAZOLONE RADICAL

Georges Raymond Henry Mingasson and Marcelle Henriette Ferrand, Paris, France, assignors to Compagnie Francaise des Matieres Colorantes, Paris, France, a French company

No Drawing. Filed June 29, 1960, Ser. No. 39,434
Claims priority, application France July 1, 1959
6 Claims. (Cl. 260—163)

1. Azo dyestuff of the general formula:



in which R represents a member selected from the group consisting of phenyl, naphthyl, methyl substituted phenyl, methoxy substituted phenyl, chloro substituted phenyl, and nitro substituted phenyl radicals, R_1 represents a member selected from the group consisting of the hydrogen atom and the phenyl radical, R_2 represents a member selected from the group consisting of methyl, phenyl and ethoxycarbonyl groups, and A represents a monovalent anion.

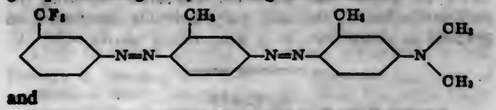
3,092,616

DISAZO DYES

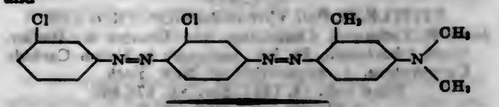
Ermanno Gaetani, Milan, Italy, assignor to Aziende Colori Nazionali Affini Acna S.p.A., Milan, Italy, a corporation of Italy

No Drawing. Filed Apr. 14, 1960, Ser. No. 22,126
Claims priority, application Italy Dec. 15, 1959
3 Claims. (Cl. 260—186)

1. A disazo dye, insoluble in water, selected from the group consisting of dyes having the formulae:



and



3,092,617

WEAKLY BASIC ANION EXCHANGE RESINS

Charles A. Feldt, Naperville, and George T. Kekish, Chicago, Ill., assignors to Nalco Chemical Company, Chicago, Ill., a corporation of Delaware

No Drawing. Filed May 20, 1960, Ser. No. 30,436
31 Claims. (Cl. 260—2.1)

1. A high capacity weak base anion exchange resin which comprises a water insoluble resinous condensate formed by the reaction of (A) a water soluble copolymer of ammonia and a glycerol halohydrin with (B) a water soluble condensation substantially heterocyclic free polyamine from the group consisting of water soluble secondary and tertiary polyamines, where A is the reaction product of aqueous ammonia to halohydrin in a molar ratio of 1:1 to 4:1.

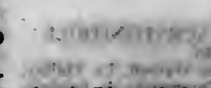
3,092,618

WATER-SOLUBLE NON-IONIC SURFACE-ACTIVE AGENTS OF MONO AND POLYSACCHARIDES

Milton J. Rosen, 131—29 231st, Jamaica, N.Y., and Irving Allan Kaye, 1417 E. 34th St., Brooklyn, N.Y.

No Drawing. Filed July 7, 1960, Ser. No. 41,266
14 Claims. (Cl. 260—209)

1. Non-ionic surface active agents containing the molecule of a carbohydrate selected from the group consisting of water-soluble, including colloidally soluble hexose-unit monosaccharides and water-soluble, including colloidally soluble hexose unit polysaccharides in which the hydrogen atom of at least one OH group of the carbohydrate is replaced by a group having the general Formula I



wherein R^1 stands for a member selected from the group consisting of aliphatic and cycloaliphatic hydrocarbon radicals, and R^2 stands for a member selected from the group consisting of hydrocarbon radicals and hydrogen; the number of said groups of Formula I being at least 1 in the whole molecule, and at most 2 calculated per hexose unit of the molecule, the aggregate number of carbon atoms of R^1 and R^2, calculated per hexose unit, being from 10 to 19 when said carbohydrate is a monosaccharide, and the aggregate number of carbon atoms of R^1 and R^2, calculated per hexose unit, being from 4 to 19 when said carbohydrate is a polysaccharide.

3,092,619

HIGH MOLECULAR CARBOHYDRATE ETHER CARBOXYLIC ACID ESTERS

Rudolf Köhler, Duesseldorf, and Hans-Hellmut Grun and Horst Koeche, Duesseldorf-Holthausen, Germany, assignors to Henkel & Cie G.m.b.H., Duesseldorf-Holthausen, Germany, a corporation of Germany

No Drawing. Filed Dec. 20, 1955, Ser. No. 554,146
Claims priority, application Germany Dec. 22, 1954
2 Claims. (Cl. 260—231)

1. A high molecular weight carbohydrate ether carboxylate containing an ester group of a free cellulose glycolic acid with an epoxide selected from the group consisting of ethylene oxide, propylene oxide, and glycide.

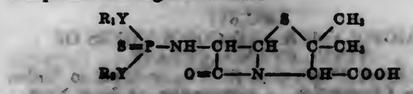
3,092,620

DERIVATIVES OF PENICILLANIC ACID

Thomas A. Sets, Groton, Conn., assignor to Chas. Pfizer & Co., Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Oct. 5, 1960, Ser. No. 60,545
5 Claims. (Cl. 260—239.1)

1. A compound selected from the group consisting of compounds having the formula:



and non-toxic salts thereof wherein each of R_1 and R_2 is selected from the group consisting of straight-chain and branched-chain alkyl groups containing 1 to 7 carbon atoms, substituted alkyl wherein the substituent is selected from the group consisting of lower alkoxy and chloro, phenyl, substituted phenyl wherein the substituent is selected from the group consisting of chloro and lower alkyl, and R_1 and R_2 when taken together are phenyl; and Y is selected from the group consisting of oxygen and sulfur.

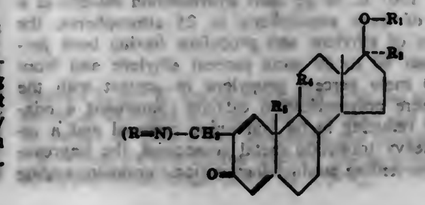
3,092,621

2-AMINO-METHYL ANDROSTANO DERIVATIVES

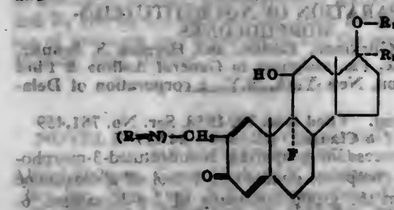
George De Stevens, New Providence, N.J., assignor to Ciba Corporation, a corporation of Delaware

No Drawing. Filed Mar. 6, 1961, Ser. No. 93,300
20 Claims. (Cl. 260—239.5)

20. A member selected from the group consisting of a compound having one of the formulae:



and



in which R_1 stands for a member selected from the group consisting of hydrogen and the acyl radical of an organic acid, R_2 stands for a member selected from the group consisting of hydrogen and an aliphatic hydrocarbon radical, R_4 stands for a member selected from the group consisting of methylene, carbonyl, hydroxy-methylene and acylated hydroxy-methylene, R_5 is a member selected from the group consisting of hydrogen and methyl, and the group (R=N)— stands for a member selected from the group consisting of N,N-di-lower alkyl-amino, N-cycloalkyl-N-lower alkyl-amino, N-lower alkyl-N-phenyl-lower alkyl-amino, N-hydroxy-lower alkyl-N-lower alkyl-amino, N,N-di-hydroxy-lower alkyl-amino, N,N-alkylene-imino, N,N-oxa-alkylene-imino, N,N-thia-alkylene-imino and N,N-aza-alkylene-imino, and acid addition salt thereof and a quaternary ammonium compound thereof.

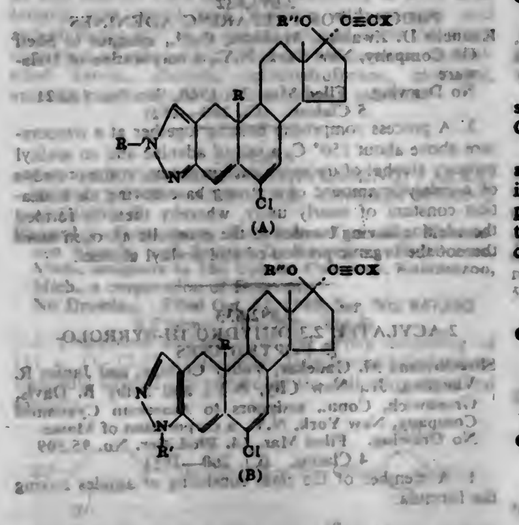
3,092,622

6-CHLORO-4,6-ANDROSTADIENO-[3,2-c]PYRAZOLES

Ralph F. Hirschmann, Scotch Plains, N.J., assignor to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Filed Dec. 1, 1961, Ser. No. 156,467
17 Claims. (Cl. 260—239.5)

1. A compound selected from the group of compounds having structural formulas A and B:



wherein X is selected from the group consisting of hydrogen, halogen and the trifluoromethyl group, R is selected from the group consisting of hydrogen and methyl, R′ is selected from the group consisting of hydrogen, lower hydrocarbon carboxylic acyl, alkyl, cycloalkyl, aryl and aralkyl, and R″ is selected from the group consisting of hydrogen, alkyl and lower hydrocarbon carboxylic acyl.

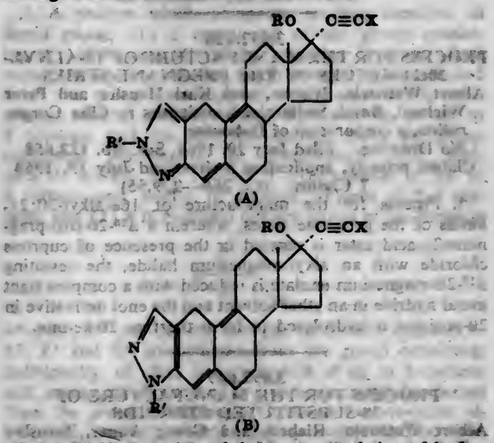
3,092,623

[3,2-c]PYRAZOLO-4,9-ANDROSTADIENES

Ralph F. Hirschmann, Scotch Plains, N.J., assignor to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Filed Dec. 1, 1961, Ser. No. 156,469
18 Claims. (Cl. 260—239.5)

1. A compound selected from the group of compounds having structural Formulas A and B:



wherein X is a member of the group consisting of hydrogen, halogen or the trifluoromethyl group, R is a member of the group consisting of hydrogen, alkyl or lower hydrocarbon carboxylic acyl, and R′ is a member of the group consisting of hydrogen, lower hydrocarbon carboxylic acyl, alkyl, cycloalkyl, aryl or aralkyl.

3,092,624

STEROL AND PIPERAZINE COMPLEXES AND PROCESS FOR THE PREPARATION THEREOF

Charles D. Robeson, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Apr. 26, 1962, Ser. No. 190,248
19 Claims. (Cl. 260—239.5)

1. A complex of a sterol and a piperazine compound selected from the group consisting of piperazine and C-methyl and C-ethyl substituted piperazines.

8. A process for making a complex of a sterol and a piperazine compound selected from the group consisting of piperazine and C-methyl and C-ethyl substituted piperazines, which comprises: admixing under substantially anhydrous conditions said sterol and said piperazine compound.

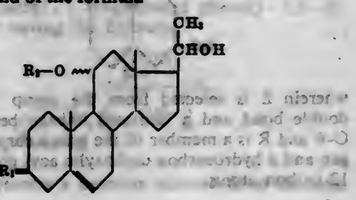
3,092,625

20-HYDROXY STEROIDS

Oskar Jeger, Zurich, Duilio Arigoni, Zofingen, Albert Wettstein, Riehen, and Georg Anner, Karl Heusler, Charles Meystre, Peter Wieland, and Jaroslav Kalvoda, Basel, Switzerland, assignors to Ciba Corporation, a corporation of Delaware

No Drawing. Filed Apr. 19, 1960, Ser. No. 23,157
Claims priority, application Switzerland Apr. 23, 1959
9 Claims. (Cl. 260—239.55)

1. A compound of the formula



in which R_1 is selected from the group consisting of ethylenedioxy, propylenedioxy and 1-thio-4-oxa-butylene, and R_2 is an acyl radical selected from those of lower fatty acids, monocyclic carbocyclic aromatic carboxylic acids, lower alkane sulfonic acids and monocyclic carbocyclic aromatic sulfonic acids and the wavy line in the 11-position represents a member selected from the group consisting of an α-oriented and a β-oriented linkage.

3,092,626

PROCESS FOR THE MANUFACTURE OF 16-ALKYL-20:21-KETOLS OF THE PREGNANE SERIES

Albert Wettstein, Riehen, and Karl Heusler and Peter Wieland, Basel, Switzerland, assignors to Ciba Corporation, a corporation of Delaware

No Drawing. Filed July 10, 1961, Ser. No. 122,658
Claims priority, application Switzerland July 19, 1960
7 Claims. (Cl. 260—239.55)

1. Process for the manufacture of 16α-alkyl-20:21-ketols of the pregnane series, wherein a Δ^{16}-20-oxo-pregnene-21-acid ester is reacted in the presence of cuprous chloride with an alkyl-magnesium halide, the resulting Δ^{17}-20-magnesium enolate is reduced with a complex light metal hydride in an ether solvent and the enol derivative in 20-position is hydrolysed to form the free 20-ketone.

3,092,627

PROCESS FOR THE MANUFACTURE OF 18-SUBSTITUTED STEROIDS

Albert Wettstein, Riehen, and Georg Anner, Jaroslav Kalvoda, and Charles Meystre, Basel, Switzerland, assignors to Ciba Corporation, a corporation of Delaware

No Drawing. Filed July 10, 1961, Ser. No. 122,659
Claims priority, application Switzerland July 19, 1960
18 Claims. (Cl. 260—239.55)

1. Process for the manufacture of 18-cyano-20-oxo-pregnane compounds, wherein 18-unsubstituted 20-hydroxy-20-cyano compounds of the pregnane series are heated to a temperature above 50° C. and below 150° C. with a compound yielding positive, monovalent iodine.

3,092,628

ALDOSTERONE ANTAGONISTS

Arthur E. Oberster, Garwood, Roger E. Beyler, Westfield, and Lewis H. Sarett, Princeton, N.J., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Filed May 29, 1959, Ser. No. 816,693
1 Claim. (Cl. 260—239.57)

3-(17β-hydroxy-16α-methyl-3,11-dioxo - 4 - androsten-17α-yl)propionic acid gamma-lactone.

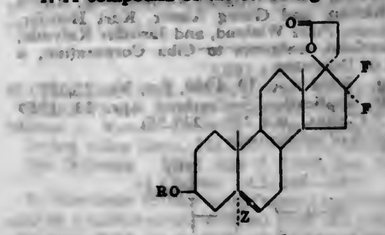
3,092,629

SPIROLACTONES

Albert Bowers and Pierre Crabbé, Mexico City, Mexico, assignors, by mesne assignments, to Syntex Corporation, a corporation of Panama

No Drawing. Filed Jan. 17, 1962, Ser. No. 166,949
12 Claims. (Cl. 260—239.57)

1. A compound of the following formula



wherein Z is selected from the group consisting of a double bond and a saturated linkage between C–5 and C–6 and R is a member of the group consisting of hydrogen and a hydrocarbon carboxylic acyl group of less than 12 carbon atoms.

3,092,630

PREPARATION OF N-SUBSTITUTED-3-MORPHOLONES

Samuel A. Glickman, Easton, and Herman S. Schultz, Lansdowne, Pa., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Dec. 19, 1958, Ser. No. 781,459
6 Claims. (Cl. 260—247.7)

1. The process of preparing N-substituted-3-morpholones which comprises condensing 1 mol of a dioxanone selected from the group consisting of 2-p-dioxanone, 6-methyl-2-p-dioxanone and 3,5-dimethyl-2-p-dioxanone with 1 to 5 moles of a primary hydrocarbon amine selected from the class consisting of alkyl, cycloalkyl and aryl primary amines at a temperature of 300–360° C. and a pressure ranging from atomspheric to 2000 p.s.i.g.

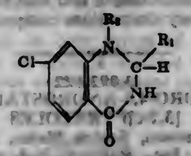
3,092,631

7-CHLORO-2-LOWER ALKYL-1,2,3,4-TETRAHYDRO-4-OXOQUINAZOLINES

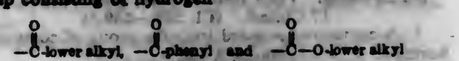
John Seng, Bound Brook, N.J., and Elliott Cohen, Mount Vernon, N.Y., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Jan. 18, 1961, Ser. No. 83,387
6 Claims. (Cl. 260—251)

1. A compound of the formula:



wherein R_1 is lower alkyl and R_2 is a member of the group consisting of hydrogen



—C-lower alkyl, —O-phenyl and —C—O-lower alkyl

3,092,632

PROCESS FOR PREPARING ADENINES

Kenneth D. Zwahlen, Modesto, Calif., assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Mar. 31, 1960, Ser. No. 18,821
5 Claims. (Cl. 260—252)

3. A process comprising heating together at a temperature above about 150° C. a salt of adenine and an aralkyl primary alcohol of up to ten carbon atoms, in the presence of a catalytic amount of a strong base having an ionization constant of nearly unity, whereby there is formed the adenine having bonded to the exocyclic nitrogen atom thereof the organic portion of said aralkyl alcohol.

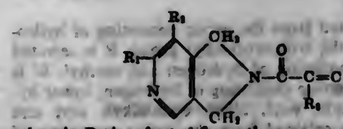
3,092,633

2-ACYLATED 2,3-DIHYDRO-1H-PYRROLO-[3,4-c]PYRIDINES

Shreekrishna M. Gadekar, Valley Cottage, and James R. Vaughan, Jr., New City, N.Y., and Selby B. Davis, Greenwich, Conn., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Mar. 14, 1961, Ser. No. 95,509
4 Claims. (Cl. 260—295)

1. A member of the class consisting of amides having the formula:



wherein R_1 is selected from the group consisting of hydrogen and methyl, R_2 is selected from the group consisting

of hydrogen, halogen, hydroxy, lower alkoxy, and amino, and R_3 and R_4 are each selected from the group consisting of hydrogen and lower alkyl, and the non-toxic acid-addition salts thereof.

3,092,634

NOVEL [NITRIC ACID ESTER] DERIVATIVES OF NICOTINIC ACID

Alfred Halpern, Great Neck, N.Y., assignor to Synergistics, Inc., New York, N.Y., a corporation of New York

No Drawing. Filed Aug. 24, 1959, Ser. No. 835,406
5 Claims. (Cl. 260—295.5)

1. A compound selected from the group consisting of the nitric acid ester of bis-(beta-hydroxyethyl)-amine nicotinate, bis-nitric acid ester of nicotinic acid-bis-(beta-hydroxyethyl)-amide and the pharmacologically acceptable acid addition salts of the last mentioned compound.

3,092,635

PROCESS FOR THE PREPARATION OF CRYSTALLIZED COMPOUNDS OF PYRROLIDINO-METHYL-TETRACYCLINE

Walter Siedel, Bad Soden (Taunus), Alfons Söder, Frankfurt am Main, and Willi Scheurich, Bad Soden (Taunus), Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany, a corporation of Germany

No Drawing. Filed June 3, 1959, Ser. No. 817,741
Claims priority, application Germany June 6, 1958
7 Claims. (Cl. 260—326.3)

1. The process for the manufacture of crystalline compounds of pyrrolidino-methyl-tetracycline, which comprises subjecting a suspension of crystalline pyrrolidino-methyl-tetracycline in an organic dispersing medium selected from the group consisting of hexane, cyclohexane, benzene, toluene, xylene, methylene chloride, chloroform, carbon tetrachloride, ethylene dichloride, ethyl bromide, chlorobenzene, bromobenzene, nitromethane and nitrobenzene, to the action of a solution of an acid selected from the group consisting of citric acid, tartaric acid, malic acid, malonic acid, succinic acid and cinnamic acid in a solvent selected from the group consisting of ethyl ether, ethyl acetate, acetone, methylethyl ketone, dioxane, tetrahydrofurane, methanol, ethanol, propanol and mixtures of said alcohols.

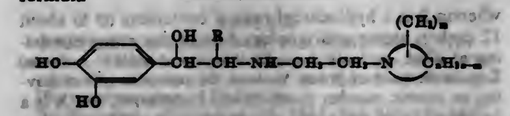
3,092,636

α-[2-(1 - ALKYLENEIMINO)ETHYLAMINO] - ALKANOPHENONES AND THE CORRESPONDING ALCOHOLS

Richard V. Heinzelman, Kalamazoo Township, Kalamazoo County, and Brooke D. Aspergren, Kalamazoo, Mich., assignors to The Upjohn Company, Kalamazoo, Mich., a corporation of Delaware

No Drawing. Filed Oct. 21, 1959, Ser. No. 847,682
9 Claims. (Cl. 260—326.5)

1. Compound selected from the group consisting of (1) α - {1 - [2-(1-alkyleneimino)ethylamino]alkyl}protocatechuyl alcohol represented by the following structural formula



wherein R is selected from the group consisting of hydrogen and lower-alkyl of from 1 to 4 carbon atoms, inclusive, *n* is an integer from 4 to 6, inclusive, and *m* is an integer from 0 to 2, inclusive; and (2) acid addition salts thereof.

2. α-{1-[2-(1-pyrrolidinyl)ethylamino]ethyl}protocatechuyl alcohol dihydrochloride.

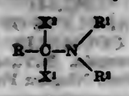
3,092,637

PROCESS FOR THE PREPARATION OF ACETALS AND KETALS OF N,N-DISUBSTITUTED CARBOXAMIDES

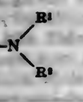
Morton Brown, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Feb. 27, 1961, Ser. No. 91,571
20 Claims. (Cl. 260—326.5)

1. A process which comprises reacting together, in liquid phase, (1) a compound of the group consisting of MOR^3 and $M'(OR^4)_2$, wherein: M is an alkali metal; M' is an alkaline earth metal; R^3 is selected from the group consisting of monovalent alkyl, aryl, alkaryl, aralkyl and cycloalkyl hydrocarbon of up to 8 carbons; and the R^4's are selected from the group consisting, individually, of monovalent alkyl, aryl, alkaryl, aralkyl and cycloalkyl hydrocarbon of up to 8 carbons and, jointly, of divalent alkylene of 2–4 carbons; and (2) a N,N-dihalo tertiary amine of the formula



wherein: X^1 and X^2 are halogen of atomic number 9–35; R^1 and R^2 are selected from the group consisting, individually, of alkyl and cycloalkyl of up to 8 carbons and, jointly, of alkylene of 2–6 carbons; and R is selected from the group consisting of hydrogen, monovalent alkyl, aryl, aralkyl, alkaryl and cycloalkyl hydrocarbon of up to 8 carbons and



R^1 and R^2 being as above.

15. The process of sequentially reacting, in an inert organic reaction medium, (1) N-formylpyrrolidine with oxalyl chloride and (2) then, in situ, with an alkali metal alkoxide.

3,092,638

SYNTHESIS OF 2-PYRROLIDONE

Hsiang P. Liao, Baltimore, and William B. Tuemmler, Catonsville, Md., assignors to FMC Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed July 17, 1961, Ser. No. 124,357
2 Claims. (Cl. 260—326.5)

1. An improved method of preparing 2-pyrrolidone in good yield which comprises reacting one mole of succinimide with at least two moles of hydrogen and 0.05–5 moles of ammonia in the presence of a catalytic amount of a hydrogenating metal selected from the group consisting of cobalt, nickel, ruthenium, palladium and platinum at a temperature of 60–350° C. and a pressure of 50–10,000 p.s.i.g.

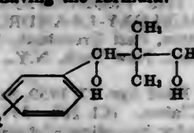
3,092,639

2,2-DIMETHYL-1-(SUBSTITUTED PHENYL)-1,3-DIHYDROXYPROPANES

Kurt Kulka, New York, N.Y., assignor to Fritzsche Brothers, Inc., New York, N.Y., a corporation of New York

No Drawing. Filed Dec. 2, 1960, Ser. No. 73,203
7 Claims. (Cl. 260—340.5)

1. A 2,2 - dimethyl - 1 - (substituted phenyl) - 1,3 - dihydroxypropane having the formula:



in which R represents a member selected from the class

consisting of an hydroxy group, a methylenedioxy group, a chlorine atom and two chlorine atoms.

2. 2,2 - dimethyl - 1 - (4,5 - methylenedioxyphenyl)-1,3-dihydroxypropane.

3,092,640

PROCESSES FOR PREPARING BIS(HYDROXYNEOPENTYLIDENE)

Gerald J. Mantell and Francis R. Gallaugher, Kansas City, Mo., and David Rankin, Kansas City, Kans., assignors to Spencer Chemical Company, Kansas City, Mo., a corporation of Missouri

No Drawing. Filed Feb. 1, 1961, Ser. No. 86,296
8 Claims. (Cl. 260—340.7)

1. A method of preparing bis(hydroxyneopentylidene) pentaerythritol by the condensation of pentaldol and pentaerythritol at an elevated reaction temperature employing an aqueous reaction medium.

3,092,641

DIELS-ALDER ADDUCTS OF PERCHLOROCOUMALIN

Edward Leon, Tonawanda, N.Y., assignor to Hooker Chemical Corporation, Niagara Falls, N.Y., a corporation of New York

No Drawing. Filed Apr. 30, 1958, Ser. No. 731,851
18 Claims. (Cl. 260—343.2)

1. A compound selected from the group consisting of the Diels-Alder mono- and di-adducts of perchlorocoumalin and, as the dienophile, an olefinic compound selected from the group consisting of lower alkadienes, lower cycloalkadienes having no more than two fused rings, methylacrylate, dimethyl fumarate, maleic acid, fumaric acid, ethylmaleic acid, itaconic acid, mesaconic acid, citraconic acid, and linoleic acid and the corresponding anhydrides of the acids, and mixtures thereof.

3,092,642

$\Delta^{9(14),22}$-3-ACETOXY-11-KETO-ERGOSTADIENE AND PROCESS FOR THE PREPARATION THEREOF

Roger J. Tull, Plainfield, and John M. Chemerda, Metuchen, N.J., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Filed July 29, 1957, Ser. No. 674,597
8 Claims. (Cl. 260—397.2)

8. $\Delta^{9(14),22}$-3-acetoxy-11-keto-ergostadiene.

3,092,643

PREPARATION OF ALLOPREGNANE - 20 - HYDROXY-3-ONE AND OF ALLOPREGNANE-3-20-DIONE

Jean Louis Paul Mainil, Boitsfort, Belgium, assignor to Societe Anonyme Olefin, Luxemburg

No Drawing. Original application Sept. 26, 1958, Ser. No. 763,431. Divided and this application June 12, 1962, Ser. No. 201,791
Claims priority, application Belgium Sept. 27, 1957
3 Claims. (Cl. 260—397.3)

1. A process for the preparation of allopregnane-20-hydroxy-3-one and of allopregnane-3-20-dione, said process comprising reacting amino-3α-allopregnane-20-ol and amino-3α-allopregnane-20-one with hypochlorous acid, treating the chloramine thus obtained with sodium ethylate to obtain the corresponding ketamine, and hydrolyzing the latter.

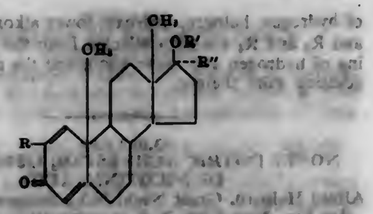
3,092,644

PROCESS FOR THE PRODUCTION OF 2-LOWER ALKYL-17β-ACYLOXY-1,4-ANDROSTADIENES

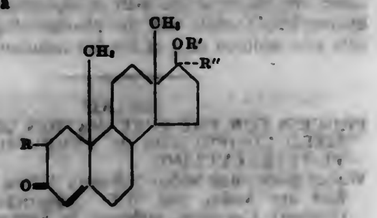
Raymond O. Clinton, East Greenbush, N.Y., assignor to Sterling Drug Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Apr. 27, 1959, Ser. No. 808,922
3 Claims. (Cl. 260—397.4)

1. The process for preparing a compound having the formula



wherein R represents a lower-alkyl radical, R' represents a carboxylic acyl radical, and R'' represents a member of the group consisting of hydrogen and lower-alkyl radicals, which comprises brominating a compound having the formula



and heating the resulting 2-brono compound with a dehydrohalogenating agent.

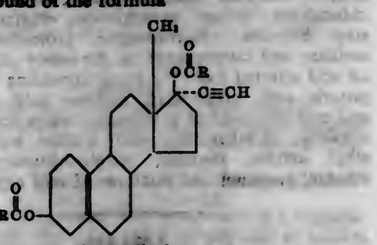
3,092,645

ESTERS OF 17α-ALKYNYLESTER-5(10)-ENE-3β,17β-DIOLS

Robert T. Nicholson, Glenview, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

No Drawing. Filed Dec. 28, 1961, Ser. No. 162,917
3 Claims. (Cl. 260—397.5)

1. A compound of the formula



wherein R is a lower alkyl radical.

3,092,646

ORGANOMANGANESE COMPOSITIONS

Geoffrey Wilkinson, 56B Perchester Terrace, London, England

No Drawing. Filed Mar. 15, 1960, Ser. No. 15,037
7 Claims. (Cl. 260—429)

1. The method of preparing a compound represented by the general formula:

$$(R_3Z)_3Mn(CO)_3X$$

wherein R is a hydrocarbyl radical containing up to about 12 carbon atoms and is selected from the group consisting of alkyl, cycloalkyl, aryl, alkaryl and aralkyl radicals, Z is an element of group V–A of the periodic system having an atomic number from 16 to 51, inclusive, and X is a halogen having an atomic number from 9 to 53, inclusive, which comprises reacting a dimeric manganese tetracarbonyl halide wherein the halogen has an atomic number from 9 to 53, inclusive, with a compound represented by the general formula:

$$R_3Z$$

wherein R and Z have the meaning hereinabove assigned.

3,092,647

PREPARATION OF DICYCLOPENTADIENYLIRON AND DICYCLOPENTADIENYLNICKEL

Charles L. Hobbs, Jr., Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Oct. 1, 1952, Ser. No. 312,658
9 Claims. (Cl. 260—439)

1. The process of preparing a compound from the class consisting of dicyclopentadienyliron and dicyclopentadienylnickel which comprises reacting an anhydrous halide of the corresponding metal with cyclopentadienyl sodium.

3,092,648

IMPROVEMENTS IN THE PREPARATION OF ALUMINUM HYDRIDE CONTAINING MATERIALS

Roland Köster, Mulheim (Ruhr), Germany, assignor to Studiengesellschaft Kohle m.b.H., Mulheim (Ruhr), Germany, a corporation of Germany

No Drawing. Filed Jan. 7, 1957, Ser. No. 632,653
Claims priority, application Germany Jan. 9, 1956
19 Claims. (Cl. 260—448)

1. Process for the preparation of a material substantially equivalent to aluminum hydride as a reactant and essentially consisting of AlH_3 and dialkyl aluminum halide, which comprises reacting a member selected from the group consisting of aluminum halides and mono-alkyl aluminum dihalides with a stoichiometric amount of a monomeric dialkyl aluminum hydride based on the applicable one of the equations

$$AlX_3+3R_2AlH \rightarrow AlH_3+3R_2AlX$$

and

$$2RAlX_2+3R_2AlH \rightarrow AlH_3+4R_2AlX$$

wherein R represents an alkyl radical and X represents a halogen, and recovering the solid reaction product formed.

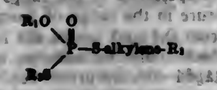
3,092,649

THIOPHOSPHORIC ACID ESTERS AND PROCESS FOR THEIR PRODUCTION

Gerhard Schrader, Wuppertal-Cronenberg, Germany, assignor to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Aug. 31, 1960, Ser. No. 53,072
Claims priority, application Germany Sept. 5, 1959
6 Claims. (Cl. 260—461)

5. A thiophosphoric acid ester of the following formula



wherein R_1 and R_2 stand for alkyl radicals having up to 4 carbon atoms, R_3 stands for cyano; and alkylene stands for lower alkylene having up to 4 carbon atoms.

6. A compound of claim 5 wherein alkylene stands for a lower alkylene radical having 1 to 2 carbon atoms.

3,092,650

PREPARING ESTERS OF PHOSPHINIC ACIDS

Joseph J. McBride, Jr., La Grange, and Ago Mais, Chicago, Ill., assignors to Armour and Company, Chicago, Ill., a corporation of Delaware

No Drawing. Filed Apr. 20, 1961, Ser. No. 104,265
9 Claims. (Cl. 260—461)

1. In a process for preparing esters of phosphinic acids, the steps of heating a substance selected from the group consisting of phosphinic acid and its chloride with an excess of an aliphatic higher alcohol at a reaction temperature of at least 160° C. in the presence of a basic esterification catalyst.

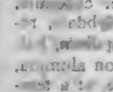
3,092,651

2-HYDROXYALKANE PHOSPHONATE AND POLYPHOSPHONATE HYDROXYALKYL ESTERS

Lester Friedman, Beachwood Village, Ohio, assignor to Weston Chemical Corporation, Newark, N.J., a corporation of New Jersey

No Drawing. Filed Apr. 11, 1962, Ser. No. 186,662
32 Claims. (Cl. 260—461)

1. A member of the group consisting of (1) a phosphonate having the formula



where R_1 is selected from the group consisting of hydroxy lower alkyl, hydroxy lower alkoxy lower alkyl and hydroxy poly lower alkoxy lower alkyl and R_2 is selected from the group consisting of hydroxy lower alkyl, hydroxy lower alkoxy lower alkyl and hydroxy poly lower alkoxy lower alkyl and (2) polymers of said phosphonates.

3,092,652

PREPARATION OF ARYLDIHALOBORANES AND POLY(DIHALOBORANO) BENZENES

David R. Stern, Fullerton, Lahmer Lynds, North Hollywood, and Robert M. Washburn, Whittier, Calif., assignors to American Potash & Chemical Corporation, a corporation of Delaware

No Drawing. Filed Jan. 16, 1959, Ser. No. 787,106
19 Claims. (Cl. 260—462)

1. A process for the preparation of compounds of the general formula $Ar(BX_2)_n$ wherein n is an integer between 1 and 3, X is halogen and Ar is selected from the class consisting of aryl and haloaryl comprising: forming a mixture of a Friedel-Crafts catalyst and a boron trihalide of the general formula BX_3, the molar ratio of said catalyst to said BX_3 being within the range 0.0374–0.0125, adding thereto a quantity of the compound of the formula ArH_n, heating the mixture so formed whereby to react said BX_3 and ArH_n to form said $Ar(BX_2)_n$ and gaseous HX and withdrawing said gaseous HX therefrom as said HX is formed.

16. The process of claim 1 wherein the $Ar(BX_2)_n$ so formed is reacted with a lower alkyl alcohol of the formula ROH where R is lower alkyl to form $Ar[B(OR)_2]_n$.

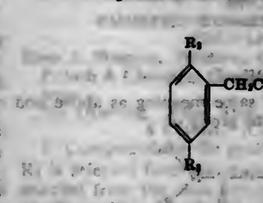
3,092,653

2-(SUBSTITUTED-BENZYL)-1,3-PROPANEDINITRILES

Raymond G. Wilkinson, Montvale, N.J., and Thomas L. Fields, Pearl River, N.Y., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Original application July 15, 1958, Ser. No. 748,589, now Patent No. 3,013,069, dated Dec. 12, 1961. Divided and this application Apr. 25, 1961, Ser. No. 105,281
2 Claims. (Cl. 260—465)

1. A compound of the formula:



wherein R_3 is selected from the group consisting of chlorine, bromine and iodine, and R_4 is lower alkoxy.

3,092,654

PREPARATION OF DICARBOXYLIC ACID NITRILES

Ralph Courtenay Schreyer, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed June 17, 1960, Ser. No. 36,702
3 Claims. (Cl. 260—465.8)

1. A process for the production of adiponitrile which comprises contacting 1,2-dicyanocyclobutane in the vapor phase, with hydrogen, and a hydrogenation catalyst selected from the group consisting of copper chromite, nickel chromite, cobalt chromite, cobalt molybdate, reduced nickel oxide, reduced cobalt oxide, rhodium, palladium, rhodium on aluminum oxide, nickel on alumina, and platinum and copper on aluminum oxide, at a temperature between 150° C. and 450° C. and at a pressure between 100 mm. of Hg and 1000 p.s.i.g. for between about 1 and about 20 seconds.

3,092,655

4,4,5,5 - TETRAFLUORO - 1,3 - CYCLOPENTANEDICARBOXYLIC ACID, ITS ESTERS, AND PREPARATION THEREOF

Wallace Raymond Brasen, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Dec. 14, 1960, Ser. No. 75,685
5 Claims. (Cl. 260—468)

1. A process for the preparation of 4,4,5,5-tetrafluoro-1,3-cyclopentanedicarboxylic acid which comprises contacting 5,5,6,6-tetrafluorobicyclo[2.2.1]-2-heptene with 50–85% aqueous nitric acid at a temperature between about 75 and 130° C.

3. 4,4,5,5-tetrafluoro-1,3-cyclopentanedicarboxylic acid.

4. Di-n-butyl 4,4,5,5-tetrafluoro-1,3-cyclopentane-dicarboxylate.

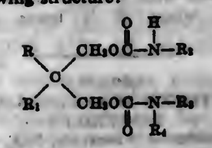
3,092,656

METHOD OF MANUFACTURING N-SUBSTITUTED 2,2-DISUBSTITUTED-1,3-PROPANEDIOL DICARBAMATE

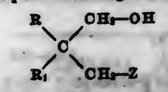
Leo S. Powell, Metuchen, N.J., assignor to Carter Products, Inc., New York, N.Y., a corporation of Maryland

No Drawing. Filed May 19, 1961, Ser. No. 121,274
1 Claim. (Cl. 260—482)

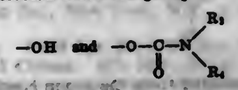
A novel process for the production of compounds having the following structure:



wherein R and R_1 are selected from the group consisting of hydrogen, lower alkyl, lower alkylene and lower alkyne radicals and; wherein R_2 is selected from the group consisting of lower alkyl, lower alkylene and lower alkyne radicals, and wherein R_3 and R_4 are selected from the group consisting of hydrogen, lower alkyl, lower alkylene and lower alkyne radicals, said method comprising reacting a hydroxy compodnd having the formula:



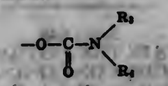
wherein R and R_1 have the same meaning as above and wherein Z is selected from the group of



wherein R_3 and R_4 have the same meaning as above, with the product obtained from the reaction of an alkali metal azide and an appropriate acyl halide



wherein X is selected from the group consisting of lower alkyl, lower alkylene and lower alkyne radicals, to form any of the desired N-substituted dicarbamates the molar proportions of the reactants in the above reaction being as follows: equal molar proportions of the hydroxy compound, acyl chloride and alkali metal azide when Z of the alcohol compound is



and two molar proportions of acyl chloride and two molar proportions of alkali metal azide for each molar proportion of the hydroxy compound when Z of the hydroxy compound is —OH.

3,092,657

VITAMIN A ESTER

Albert J. Forlano, Brooklyn, N.Y., assignor to Chas. Pfizer & Co., Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed May 17, 1961, Ser. No. 110,658
1 Claim. (Cl. 260—488)

Vitamin A α-methyl-α-ethyl-caproate.

3,092,658

CONTINUOUS SYSTEM FOR OXIDIZING SUBSTITUTED AROMATIC HYDROCARBONS AND PRODUCING CARBOXYLIC ACIDS

Richard H. Baldwin, Chicago, Ill., Charles A. Spiller, Jr., Maplewood, N.J., and Charles D. Kalfadelis, Hammond, Ind., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana

Filed Aug. 12, 1957, Ser. No. 677,594
6 Claims. (Cl. 260—524)

1. In a process for producing aromatic polycarboxylic acids by oxidizing polyalkyl aromatic hydrocarbons containing 1 to 3 carbon atoms in alkyl groups with molecular oxygen in the presence of a catalyst comprising in conjoint presence bromine and a heavy metal oxidation catalyst and in the presence of a liquid phase of saturated monocarboxylic acid containing 2 to 5 carbon atoms per molecule at a temperature in the range of from 320 to 440° F., a pressure in the range of from 50 to 500 p.s.i. for a time of from 0.1 to 3 hours, the improved method of operation which comprises effecting said oxidation in a continuous staged countercurrent reaction system containing at least two oxidation zone stages, introducing an amount of air in the final oxidation zone stage in an amount providing an excess of oxygen for oxidation in said final oxidation zone stage but less than required to give off-gases containing more than 8 volume percent oxygen, and introducing oxygen-containing off-gases from said final oxidation zone stage to a preceding oxidation zone stage together with an amount of air which will give less than 8 volume percent oxygen in the off-gases from said preceding stage.

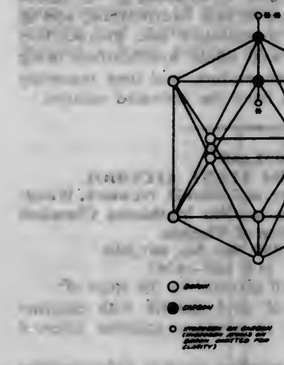
3,092,659

ORGANOBORON HYDROXY CARBOXYLIC ACIDS AND THEIR PREPARATION

Theodore L. Heying, Tonawanda, N.Y., assignor to Olin Mathieson Chemical Corporation, a corporation of Virginia

Filed Nov. 6, 1959, Ser. No. 851,473
10 Claims. (Cl. 260—535)

1. A process for the preparation of organoboron hydroxy carboxylic acids which comprises reacting successively with a material selected from the class consisting of alkali metal alkyls and alkali metal aryls, carbon dioxide and an aqueous solution of a mineral acid, an organoboron compound of the class $RR'B_{10}H_8(CR''CR''')$



wherein R and R′ are selected from the class consisting of hydrogen and an alkyl radical containing 1 to 5 carbon atoms and wherein one of R″ and R‴ is hydrogen and one of R″ and R‴ is a radical of the class



wherein R_1 is a bivalent saturated hydrocarbon radical containing 2 to 8 carbon atoms and R_2 is selected from the class consisting of a benzyl radical and alkyl radicals containing 1 to 6 carbon atoms the molar ratio of said material to said organoboron compound being within the range 0.1 to 10:1, separating aqueous and organic phases of the resulting mixture, hydrolyzing the organic phase by reaction with sufficient lower alkanol solution of an alkali metal hydroxide to provide 0.01 to 10 moles of alkali metal hydroxide per mole of said organoboron compound, and separating the free acid by treating the organic phase with an aqueous solution of a mineral acid.

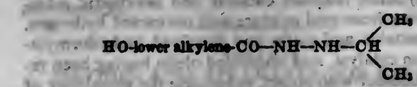
3,092,660

1-ACYL-2-ALKYL-HYDRAZINE DERIVATIVES

Hugo Gutmann, Birsfelden, Otto Straub, Bottmingen, and Paul Zeller, Neuallschwil, Switzerland, assignors to Hoffmann-La Roche Inc., Nutley, N.J., a corporation of New Jersey

No Drawing. Filed June 30, 1958, Ser. No. 745,275
Claims priority, application Switzerland July 3, 1957
7 Claims. (Cl. 260—561)

1. An acid hydrazide of the formula



wherein the lower alkylene group is a saturated aliphatic hydrocarbon radical having from 1 to 4 carbon atoms.

3,092,661

PREPARATION OF DICHLOROACETAMIDE FROM MALONITRILE

David H. Rosenblatt, 3609 Springdale Ave., Baltimore 16, Md., and Gordon H. Broome, 2909 E. Long Ave., Gastonia, N.C.

No Drawing. Filed June 5, 1962, Ser. No. 200,289
5 Claims. (Cl. 260—561)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A method of preparing dichloroacetamide which comprises adding aqueous malononitrile to a hypochlorite ion generating material, maintaining the pH of the reaction in the range 6–10 until it is complete and recovering the product.

3,092,662

PROCESS FOR THE CONTINUOUS PRODUCTION OF N - ISOPROPYL-N′-PHENYL - p - PHENYLENE DIAMINE

Hermann Holzrichter and Theodor König, Leverkusen-Bayerwerk, and Helmut Diericks, Leverkusen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

Filed Mar. 31, 1959, Ser. No. 803,235
Claims priority, application Germany Apr. 5, 1958
3 Claims. (Cl. 260—576)

1. In a process for the production of N-isopropyl-N′-phenyl-p-phenylene diamine from p-aminodiphenylamine, acetone and hydrogen in a liquid phase process in the presence of catalysts at elevated pressure and temperature, the improvement of carrying out the process continuously in a plurality of series-connected reaction zones, wherein into each reaction zone there is introduced a portion of the total quantity of acetone used in the process, the amount of acetone added in the first reaction zone being at least 1 mol per each mol of p-aminodiphenylamine, and the amount of acetone added in the subsequent reaction zones being at least about 0.25 mol of acetone per mol of p-aminodiphenylamine, the total amount of acetone employed being approximately 1.5–4 mols acetone per mol of p-aminodiphenylamine.

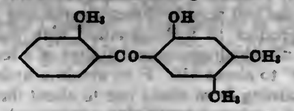
3,092,663

2-HYDROXY-2′,4,5-TRIMETHYLBENZOPHENONE

Lester N. Stanley, Delmar, N.Y., assignor to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Aug. 24, 1961, Ser. No. 133,563
1 Claim. (Cl. 260—591)

A composition of matter having the following formula:



3,092,664

ALKYLATED DECABORANE-ACETYLENIC HYDROCARBON REACTION PRODUCTS AND METHOD FOR THEIR PREPARATION

Sheldon L. Clark, Eggertsville, and Donald J. Mangold, Youngstown, N.Y., assignors to Olin Mathieson Chemical Corporation, a corporation of Virginia

Filed Dec. 11, 1958, Ser. No. 779,788
20 Claims. (Cl. 260—606.5)

11. $R_nB_{10}H_{10-n}(CR'CR'')$ wherein R is an alkyl radical containing 1 to 5 carbon atoms, *n* is an integer from 3 to 7, R′ is selected from the group consisting of hydrogen and an alkyl radical, R″ is selected from the group consisting of hydrogen, an alkyl radical, a monoalkenyl hydrocarbon radical, the total number of carbon atoms in R′ and R″ taken together not exceeding eight.

3,092,665

PHOSPHINE BORINES AND THEIR PREPARATION

Ross I. Wagner, Whittier, Calif., assignor to American Potash & Chemical Corporation, a corporation of Delaware

No Drawing. Filed Mar. 14, 1960, Ser. No. 14,553
8 Claims. (Cl. 260—606.5)

1. Compounds of the general formula $R_3P:BBr_3$ where R_3 is selected from the group consisting of two radicals selected from the class consisting of alkyl and cycloalkyl together with an aryl radical; each of said alkyl radicals having between one and twelve carbon atoms, the said R

groups together containing from eight to thirty carbon atoms.

3,092,666

PRODUCTION OF ALKYLATED BORANES

Leonard Haynes Long, Exeter, England, assignor to National Research Development Corporation, London, England, a British corporation

No Drawing. Filed Oct. 19, 1961, Ser. No. 146,352
Claims priority, application Great Britain Oct. 24, 1960
9 Claims. (Cl. 260—606.5)

1. A process for the preparation of an alkylated borane which comprises reacting at least one aluminum alkyl reactant selected from the group consisting of an aluminum trialkyl, $Al(Alk)_3$, and an aluminum alkyl halide, $Al(Alk)_mX_{3-m}$ wherein m is an integer of 1 to 2, with a hydride selected from the group consisting of sodium borohydride and lithium borohydride and a halide selected from the group consisting of a hydrogen halide and a boron trihalide.

3,092,667

PROCESS FOR THE RECOVERY OF METHANOL

Clarence R. Murphy, Allison Park, Pa., assignor to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware

Filed Oct. 9, 1959, Ser. No. 845,459
2 Claims. (Cl. 260—632)

1. A process for obtaining methanol which comprises oxidizing a gas selected from the group consisting of ethane, propane and butane with a gas containing molecular oxygen at a temperature of about 700° to about 900° F. to obtain an oxygenated mixture containing essentially formaldehyde, acetaldehyde, methanol, higher alcohols, acetone, acetals and ethylene and propylene oxides, removing formaldehyde by extraction with water and a portion of the acetaldehyde by fractionation from the oxygenated mixture and obtaining an oxygenated product containing in excess of about five percent by weight thereof of carbonyl-containing compounds consisting of acetaldehyde, acetone and acetals, directly subjecting said latter oxygenated product to hydrogenation with hydrogen in the presence of a hydrogenation catalyst at a temperature of about 300° to about 350° F. to obtain a hydrogenation product containing from about one to about three percent by weight of carbonyl-containing compounds, distilling from said hydrogenation product at a temperature of about 160° to about 170° F. a product consisting essentially of methanol and carbonyl-containing compounds, extracting said methanol product with water containing a basic reagent selected from the group consisting of sodium hydroxide, potassium hydroxide and calcium hydroxide and thereafter recovering by distillation at a temperature of about 147° to about 150° F. methanol from said extract.

3,092,668

ISOMERIZATION OF ALKYLENE OXIDE

Herman A. Bruson, North Haven, and William I. Denton, Cheshire, Conn., assignors to Olin Mathieson Chemical Corporation, New Haven, Conn., a corporation of Virginia

No Drawing. Filed May 2, 1960, Ser. No. 25,909
7 Claims. (Cl. 260—632)

1. In the isomerization of an alkylene oxide containing 3 to 5 carbon atoms to the corresponding alcohol,

wherein said oxide is contacted in the gaseous state with a leached basic lithium phosphate catalyst at a temperature of about 250° C. to 350° C.,

said catalyst initially having an activity effecting more than 40% conversion in a single pass and gradually decreasing in effectiveness during use,

and wherein the said isomerization is interrupted for catalyst activation,

the process of restoring substantially the initial catalyst activity consisting essentially of contacting the catalyst after use in said isomerization with a liquid hydrocarbon, containing at least six carbon atoms, selected from the group consisting of aromatic, paraffinic and saturated cyclic hydrocarbons, at a temperature of about 200° C. to about 25° C. below the critical temperature of said hydrocarbon, and at a pressure sufficient to maintain said hydrocarbon in the liquid phase, said liquid hydrocarbon being volatile at the said temperature, and then removing the said hydrocarbon from the activated catalyst.

3,092,669

GLYCEROL FROM ALLYL ALCOHOL

William I. Denton, Cheshire, and John D. Newkirk, Woodbridge, Conn., assignors to Olin Mathieson Chemical Corporation, a corporation of Virginia

Filed Dec. 24, 1959, Ser. No. 861,944
2 Claims. (Cl. 260—636)

1. In the manufacture of glycerol by the steps of:

(A) hypochlorination of allyl alcohol with chlorine in aqueous solution to produce aqueous glycerol chlorohydrins;

(B) hydrolysis of the aqueous glycerol chlorohydrins with sodium carbonate to produce aqueous glycerol; and

(C) separation of substantially anhydrous glycerol from the aqueous glycerol by vaporization of water and separation of salt;

the improvement of:

neutralizing the aqueous glycerol chlorohydrins from said hypochlorination (A) with an alkali selected from the group consisting of sodium hydroxide and sodium carbonate to a pH of about 4 to 5 and fractionally distilling the neutralized aqueous glycerol chlorohydrins to remove impurities overhead which distill out with water at temperatures up to the boiling point of water.

3,092,670

OXO PROCESS FOR THE PRODUCTION OF ALCOHOLS

Bernard H. Gwynn and Rex W. Smyth, Tarentum, Pa., assignors to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware

Filed Aug. 16, 1957, Ser. No. 678,712
6 Claims. (Cl. 260—638)

1. A process for producing alcohols which comprises reacting an olefin with hydrogen and carbon monoxide in the presence of a hydroformylation reaction catalyst at an elevated temperature and an elevated pressure to obtain a hydroformylation reaction mixture comprising an aldehyde having one more carbon than said olefin, unreacted hydrogen, carbon monoxide and olefin, dissolved hydroformylation reaction catalyst and polymeric material, removing from said mixture said unreacted hydrogen, carbon monoxide and olefin and dissolved hydroformylation reaction catalyst, said unreacted olefin having been removed by contact with steam, subjecting the remainder of said mixture to hydrogenation conditions to obtain an alcohol product, and thereafter recovering the alcohol from said alcohol product.

3,092,671

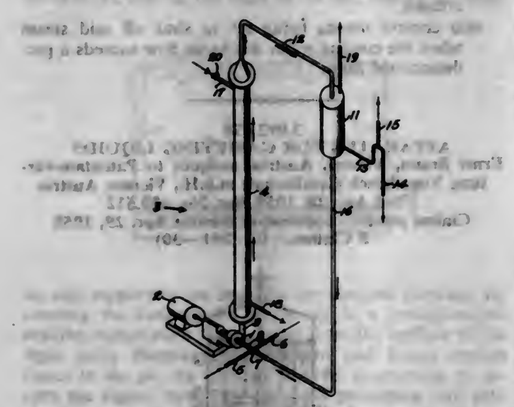
NITRATION OF AROMATIC HYDROCARBONS

Sidney Bruce Humphrey and David Roger Smeak, Joliet, Ill., assignors to United States Rubber Company, New York, N.Y., a corporation of New Jersey

Original application Nov. 29, 1957, Ser. No. 699,608. Divided and this application Nov. 16, 1960, Ser. No. 72,270
7 Claims. (Cl. 260—645)

1. A continuous method of nitrating aromatic hydrocarbons and partial nitration products thereof which

comprises thoroughly mixing a compound selected from the group consisting of aromatic hydrocarbons and partial nitration products thereof with a nitrating acid, impelling the resultant mixture through a heat exchanger under conditions of turbulent flow, continuously withdrawing said mixture from said heat exchanger, withdrawing a lesser portion of said mixture from the remainder of said mixture, recirculating said remainder to the initial mixing zone to absorb the heat of reaction and thereby control the reaction prior to impelling the mixture into said heat exchanger, and during recirculation introducing further quantities of said compound and said mixed acid into said initial mixing zone, the volume of said lesser portion being substantially equal to the volume of said further quantities.



3,092,672

DIARYLETHANES BY REACTION OF AROMATICS WITH CARBYL SULFATE

Donald L. Klass, Barrington, Ill., assignor to The Pure Oil Company, Chicago, Ill., a corporation of Ohio

No Drawing. Filed Dec. 2, 1960, Ser. No. 73,195
8 Claims. (Cl. 260—668)

1. The method of preparing compounds having two aromatic radicals connected by a hydrocarbon radical selected from the group of unsubstituted and substituted ethylene radicals comprising reacting an aromatic compound with a carbyl sulfate selected from the group of carbyl sulfate and homologues of carbyl sulfate in the presence of a Friedel-Crafts catalyst, said aromatic compound being free of substituents reactive in the reaction environment.

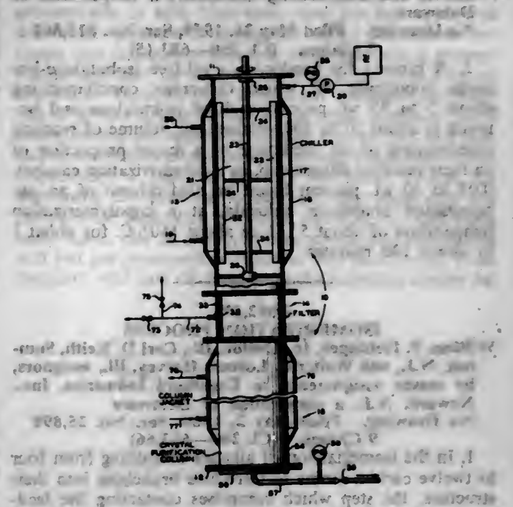
3,092,673

METHOD AND APPARATUS FOR CRYSTAL PURIFICATION

Elton E. Rush, McGregor, Tex., assignor to Phillips Petroleum Company, a corporation of Delaware

Filed Oct. 28, 1957, Ser. No. 692,750
4 Claims. (Cl. 260—674)

1. A continuous process for separating a crystallizable component from a liquid multi-component mixture which comprises cooling said mixture so as to crystallize said component, separating the crystals from the lower melting components of said mixture, passing said crystals through a purification zone as a uniform contiguous mass, passing a reflux liquid in countercurrent flow through said crystal mass, passing a fluid of controlled temperature in contact with the outer surface of the purification zone to maintain the region adjoining said surface at a substantially uniform temperature within the range of between about 30° F. below and about 60° F. above the temperature of the crystals entering said zone, varying the temperature of said region so that the temperature differential between the temperature of said fluid and the temperature of the column feed mixture is inversely proportional to the concentration of crystallizable component in the multi-component mixture, and recovering a purified crystal product from said zone.

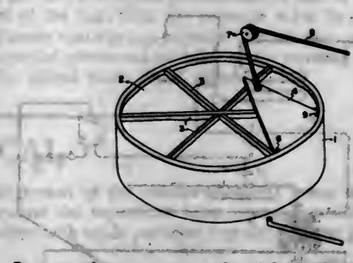


3,092,674

PROCESS FOR THE DEHYDROGENATION OF OLEFINS

William W. Bray, Jr., Scotch Plains, and Felix J. Pouzek, New Brunswick, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

Filed June 11, 1959, Ser. No. 819,647
5 Claims. (Cl. 260—680)



1. In a continuous process for dehydrogenating olefins to diolefins over a fixed bed of dehydrogenation catalyst wherein C_4 to C_6 olefin vapors are passed through the bed during the dehydrogenation reaction cycle and wherein an oxygen-containing gas is passed through said bed during the regeneration cycle to reactivate the catalyst, the improvement which comprises passing the vapors through a catalyst bed longitudinally divided into a plurality of sections that are parallel to the flow of vapors through said bed, determining the carbon dioxide content of the effluent gas in the several sections during regeneration and locating catalyst deactivating carbon mounding in a section of the catalyst bed by the presence of higher than normal carbon dioxide content in the effluent regeneration gas from said section, blanking off the section having carbon mounding therein during the dehydrogenation cycle thereby preventing further deactivation and opening said blanked-off section during the regeneration cycle thereby restoring the activity of the catalyst.

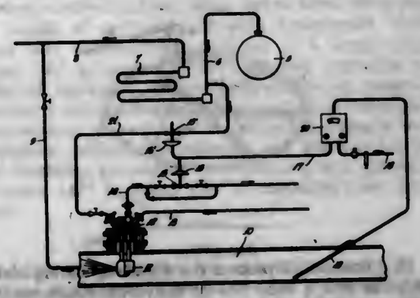
3,092,675
ISOOLEFIN-MULTIOLEFIN COPOLYMER OILS
Augustus B. Small, Westfield, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware
No Drawing. Filed May 26, 1959, Ser. No. 815,802
3 Claims. (Cl. 260—683.15)

1. A process for producing a gel-free isobutylene-isoprene copolymer oil which comprises copolymerizing about 5 to 95 wt. percent each of isobutylene and isoprene in about 10 to 500 volumes per volume of reacting comonomers of an admixture of a major proportion of an inert reaction diluent and, as a polymerization catalyst, 0.05 to 30 wt. percent based on said diluent of an uncomplexed aluminum chloride, at a copolymerization temperature of about 5° C. to about 150° C. for about 1 to about 100 minutes.

3,092,676
ISOMERIZATION PROCESS
William P. Hettinger, Jr., Dolton, Ill., Carl D. Keith, Summit, N.J., and Walter F. Lorenc, Harvey, Ill., assignors, by mesne assignments, to Engelhard Industries, Inc., Newark, N.J., a corporation of Delaware
No Drawing. Filed May 2, 1960, Ser. No. 25,890
9 Claims. (Cl. 260—683.66)

1. In the isomerization of alkanes containing from four to twelve carbon atoms to introduce branching into their structure, the step which comprises contacting the feedstock with a sulfided rhodium supported on alumina catalyst containing a minor amount of boria at an elevated temperature of about 650° F. to 1000° F., a pressure of about 200 p.s.i.g. to 1000 p.s.i.g., a hydrogen to alkane molar ratio of about 1:1 to 20:1, and a weight hourly space velocity of 0.5 to 20.

3,092,677
DESUPERHEATER
Paulsen Spence, Baton Rouge, La.; L. B. Dexter and O. C. Paulsen, co-executors of said Paulsen Spence, deceased
Filed Feb. 8, 1957, Ser. No. 639,150
4 Claims. (Cl. 261—16)



2. In a desuperheater system,
a main steam line,
a desuperheater in said line,
cooling-water-conducting means for conducting cooling water to and discharging a fraction of the flow of the same through said desuperheater into the main line,
said last-defined means including an exhaust connection external of the main line for conducting undischarged liquid cooling water away from said desuperheater and thus determining the amount of water discharged at said desuperheater,
means including a saturated-steam connecteion for conducting saturated atomizing steam to and spraying the same from said desuperheater into said main line to atomize the cooling water,
means for controlling the supply of cooling water sprayed from the desuperheater and including throttling means in said exhaust connection,
another throttling means for controlling the supply of saturated atomizing steam to said desuperheater,
and coordinated control means for said respective throttling means to throttle the supply of atomizing steam to said desuperheater when the quantity of cooling water sprayed from said desuperheater increases,
said control means being set to shut off said steam when the cooling water discharge flow exceeds a predetermined limit.

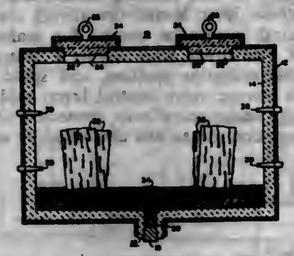
3,092,678
APPARATUS FOR GASIFYING LIQUIDS
Ernst Braun, Vienna, Austria, assignor to Patentverwertung Vogelbusch Gesellschaft m.b.H., Vienna, Austria
Filed Apr. 28, 1959, Ser. No. 809,512
Claims priority, application Austria Apr. 29, 1958
5 Claims. (Cl. 261—30)



1. An apparatus for gasifying liquids, comprising a vessel for containing the liquid to be gasified, a hollow body open at the top and at the bottom disposed in said vessel so as to subdivide the interior of the vessel into a substantially annular outer space and an inner space, said spaces communiacting at the top and the bottom of said hollow body, a gas distributing device rotating about a vertical axis and arranged coaxially with said hollow body, said gas distributing device comprising at least one channel open on one side and having a substantially symmetrical curved cross section with respect to its horizontal plane of rotation, said cross section tapering radially outwardly, means for supplying gas to the gas distributing device and means for rotating it at a speed sufficient to build up a vacuole in the liquid behind the channel, whereby part of the gas entering the liquid from said vacuole causes by mammoth pump effect a circulation of the liquid between the inner and outer spaces of said vessel and the remaining part of the gas entering from said vacuole circulating with the liquid.

3,092,679
PROCESS OF SOAKING INGOTS
Robert F. Dunn, Oakmont, and Clarence A. Bacchtel, New Kensington, Pa., assignors to Allegheny Ludlum Steel Corporation, Brackenridge, Pa., a corporation of Pennsylvania
Filed Mar. 6, 1962, Ser. No. 177,913
4 Claims. (Cl. 263—52)

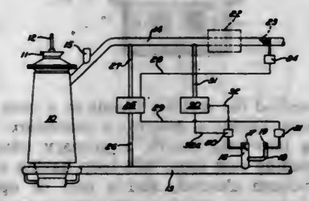
1. In the process of soaking an ingot of metal to a predetermined substantially uniform temperature in a soaking pit lined with refractory material and having a bottom drain therein, the combination comprising, covering the bottom of the pit with a layer of particles of anthracite tailings to a substantially uniform thickness of 12 to 16 inches while heating the pit to a temperature in the range of 1900° to 2350° F. to warm the refractory lining, said tailings having a predetermined particle size of less than 1¾ inch with from 90 to 95% of said tailings ranging from ¾ to 1¾ inch in particle size and the balance fines of less than ¾ inch in particle size, said tailings having an analysis comprising from 28 to 35 weight percent of fixed carbon and from 55 to 68 weight percent of ash and the balance substantially all volatiles and moisture, maintaining the temperature in the pit within said range to remove the volatiles and moisture from the tailings and effect a sintering of the fixed carbon and ash of the particles thereof in substantially the initial particle sizes of the tailings, placing the ingot in the pit, seating the ingot



on and supporting the ingot by the sintered particles, increasing the temperature of the pit to a predetermined soaking temperature where metal from the surface of the ingot drips downwardly therefrom and forms molten liquor in the pit, the sintered particles functioning to absorb the liquor therebetween while preventing any substantial penetration thereof to the refractory lined bottom of the pit, removing the soaked ingot from the pit, and draining the liquor through the bottom drain of the pit, the liquor carrying the sintered particles from the pit to thereby effectively clean the pit.

3,092,680
BLAST FURNACE CONTROL SYSTEM
Otto J. Leone, P.O. Box 24, West Newton, Pa.
Filed Nov. 25, 1957, Ser. No. 698,811
3 Claims. (Cl. 266—30)

1. In a control for a blast furnace or the like, in combination, a blast furnace, a gas line leading from the upper portion of said blast furnace, a blast air main leading to the lower portion of said furnace, a relief valve operatively connected to said gas line, a valve in said gas line to vary the opening therethrough, a normally closed main relief valve operatively connected to said blast main, an auxiliary relief valve operatively connected to said blast main, a differential pressure controller, means for impressing the respective pressures substantially in said blast main and gas line upon said differential pressure controller, a signal connection between said differential pressure controller and a proportioning operator for said valve in said gas line, a signal connection between said differential pressure controller and a proportioning operator for said auxiliary relief valve, means for operating at least one of said two last-mentioned valves in response to its said signal connection respectively, a top gas pressure controller, means for impressing the pressure in said gas line upon said top gas pressure controller, an on-off operator for said main relief valve, rate of change means operatively connecting said top gas pressure controller to said main relief valve operator, said rate of change means including means for

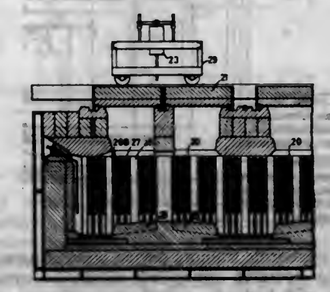


generating a magnetic signal force for said signal connections by physical movement thereof relative to a solenoid coil above a predetermined rate of change in said pressure in said gas line, magnetic response means to operate said on-off operator when said signal force has a predetermined magnitude corresponding to a rate above said predetermined rate, said magnetic response means being ineffective to operate said on-off operator when the rate of change in said pressure in said gas line is below said predetermined rate, and a high limit switch in said top gas pressure controller operatively connecting the same to said operator for said main relief valve, whereby an abnormal rate of change in the pressure in said gas line above said predetermined rate or the achievement of the high limit gas pressure value in said gas line will cause said top gas pressure controller to override said differential pressure controller by the opening of said normally closed main relief valve.

ELECTRICAL

3,092,681
ELECTRIC RESISTANCE FURNACES AND THE LIKE
Anders Ewert Malm, Hallstahammar, Sweden, assignor to Aktiebolaget Kanthal, Hallstahammar, Sweden, a corporation of Sweden
Filed Sept. 18, 1959, Ser. No. 840,932
Claims priority, application Sweden Sept. 22, 1958
2 Claims. (Cl. 13—22)

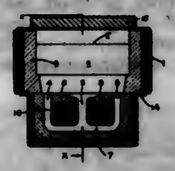
1. In a soaking pit furnace for thermal treatment in the air of steel, a furnace chamber, a heating source consisting of elongated, hairpin-shaped resistor elements containing molybdenum disilicide, $MoSi_2$, having the property of producing on their surface a layer containing silicon dioxide when heated to high temperatures, because of the action of the oxygen of the air, said elements each having a glow portion depending vertically into the furnace chamber, and each element having two lead-in electrodes extending to the exterior of the furnace chamber at a short distance from one another through a common opening so that the elements are replaceable individually while the furnace is functioning, the composition and arrangement of the resistor elements being such, that in operation the superficial layer containing silicon dioxide together with oxide particles deposited on the glow zone of



the elements after separation from the steel, becomes flowing and under the action of gravity flows slowly downwards along the length of the resistance elements, while a

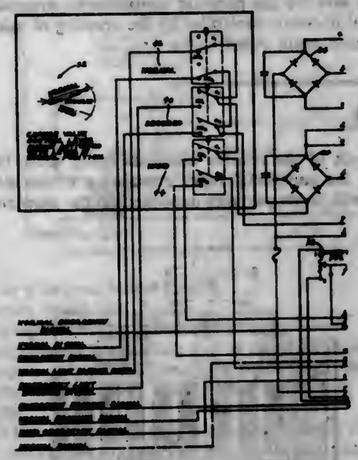
new superficial layer is being continuously formed, the excess simultaneously leaving the elements in the form of drops so that impurities adhered to the surface of the elements are removed.

3,092,682
SUBMERGED RESISTOR TYPE INDUCTION FURNACES AND METHODS AND PROCESSES THEREFOR
Manuel Tama, Morrisville, and Wilbur E. Shearman, Yardley, Pa., assignors to Ajax Magnethermic Corporation, Youngstown, Ohio, a corporation of Ohio
Filed Mar. 24, 1960, Ser. No. 17,312
13 Claims. (Cl. 13—29)

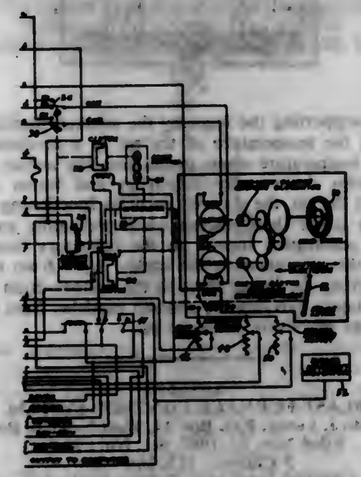


10. In a method for melting metals in a twin coil induction furnace having a hearth, a secondary melting loop opening into said hearth, a primary transformer assembly threading said loop, said loop having a central channel, a bottom channel, and a pair of oppositely spaced lateral channels, which consists in placing a charge of metal within the hearth, moving said metal from the hearth first at a relatively low temperature of the molten metal through the said central channel and then back into the hearth through the lateral channels at relatively increased melting temperatures of the molten metal therein.

3,092,683
DEVICE FOR SIMULATING THE KINESTHESIA OF SUBMARINE CONTROLS
Roy E. Murphy, Jr., Palo Alto, Calif., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Oct. 26, 1960, Ser. No. 65,242
3 Claims. (Cl. 35—10.2)



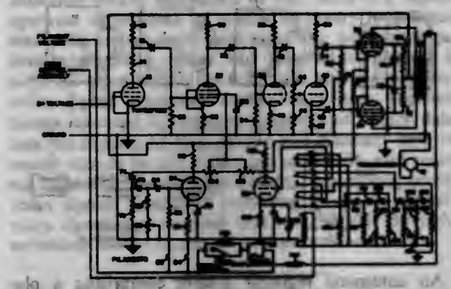
1. In a submarine training device, simulating apparatus for loading operator controlled submarine controls in accordance with hydrodynamic forces acting on said controls, said apparatus comprising simulated submarine steering means mounted within said training device, braking means operatively connected to said steering means for controlling the loading applied to said steering means, braking control means operatively connected to said steering means and said braking means whereby said braking control means provide an output which is proportional to the position of said steering means, said braking control means output being operatively connected to said braking means whereby the amount of braking applied to said steering means is proportional to the position of said steering means, said braking control means including an adjustably variable mechanical integration means operatively connected to said steering means, and simulated submarine stroke lever means operatively connected to said mechanical integration means for manual adjustment thereof, said stroke lever having a neutral position and a variable operating position, and speed reduction means and a change valve control lever, said speed reduction means being operatively connected to said mechanical integration means and controlled by said change



valve lever, a first variable clutch means and a second variable clutch means, said first clutch means being connected to the output of said integration means, said second clutch means being connected to the output of said speed reduction means, an output potentiometer, the outputs of said first and second clutch means being connected to said output potentiometer for control thereof whereby said potentiometer simulates a rudder movement, said change valve lever having a secure position, a normal position and a hand position, whereby operation of the change valve lever to its secure position locks the steering hand wheel in its position and operation of the change valve control lever to the hand position interconnects said speed reduction means to said output potentiometer means through said second clutch means whereby said handwheel has to be turned many more times to obtain a given simulated rudder movement than which would be obtained with the change-valve control lever in its normal position.

3,092,684
SONIC SIMULATOR
Burton L. Frankel, Beachwood, Ohio, assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Apr. 12, 1960, Ser. No. 21,844
2 Claims. (Cl. 35—10.4)

1. An underwater decoy noise simulator comprising a noise source operatively connected to mixing means, said mixing means being operatively connected to amplifying means and to an underwater sonic transducer, oscillator means operatively connected to said mixing means for modulation of said noise source output whereby said underwater sonic transducer simulates the noise of a submarine, said oscillator means comprising two different oscillators whose outputs are mixed together, said oscillators being interconnected with phase-shift means, whereby oscillations are sustained, one of said oscillators operat-



ing at a fixed frequency, the other oscillator operating at one of two different frequencies, and control means operatively connected to said second oscillator and said phase-shift means for said second oscillator wherein said control means can vary said phase-shift means for said second oscillator for a corresponding operating frequency change.

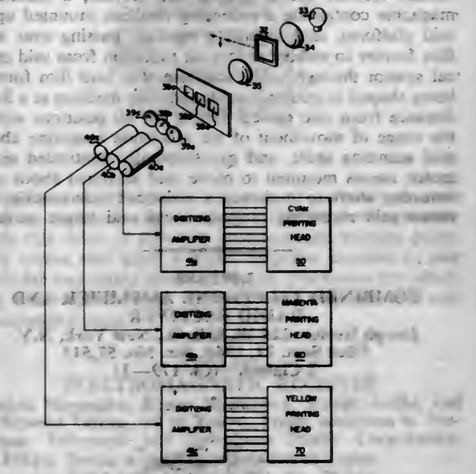
3,092,685
FLEXIBLE ELECTRIC CONDUCTOR
Loris Argento, 2544 Bogota St., Buenos Aires, Argentina
Filed May 12, 1961, Ser. No. 109,725
14 Claims. (Cl. 174—116)



1. In a readily solderable, extremely flexible electric conductor, a central continuous and incombustible nonconductive core and at least one electrically conductive relatively flat ribbon helically wound around said core, said wound around ribbon defining an outer surface, a layer of easily meltable solderable material coated on said outer surface, the melting point of said core being above the melting point of said layer whereby said conductor can be easily soldered without harming the conductor or core.

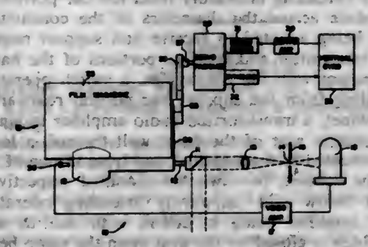
3,092,686
FACSIMILE APPARATUS FOR ENLARGING IMAGES IN COLOR
Reynold B. Johnson, Palo Alto, Calif., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Aug. 17, 1959, Ser. No. 834,208
2 Claims. (Cl. 178—5.2)

1. Apparatus for producing colored enlargements on a translucent display surface of a transparent colored input object comprising means for successively scanning incremental areas of said object to produce a beam of light having a color composition corresponding to the color composition of the scanned area of said object, a plurality of light filters corresponding to the primary additive colors, means for projecting different portions of said beam of light representing adjacent portions of said incremental area through said light filters, a plurality of light sensitive elements associated with said filters for converting the amounts of light passed by said different filters into corresponding control signals which are instantaneous measures of the color composition of the scanned area of said object, a plurality of adjacent printing heads for simultaneously printing on adjacent portions of said display surface in the three primary subtractive colors, each of said printing heads comprising a plurality of printing elements which are selectively movable



into contact with said display surface to deposit thereon a spot of ink of the associated primary subtractive color, and means for controlling the number of said printing elements actuated on a given printing stroke as a function of said control signals, each of said printing heads being controlled by the control signal from the primary additive color apparatus whose color is opposite to the primary subtractive color associated with that printing head.

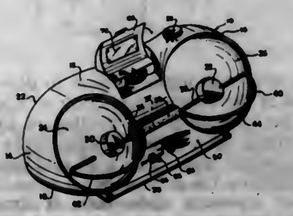
3,092,687
RECONNAISSANCE SYSTEM WITH A STABILIZED RECORDING MAGAZINE
John B. Cannon, Jr., 1856 N. Oak Lane, State College, Pa.
Filed Aug. 4, 1960, Ser. No. 47,429
3 Claims. (Cl. 178—6.7)



1. An optical reconnaissance system for reconnaissance vehicles, comprising rotatable, non-stabilized, scanning means mounted upon a rotatable scanning shaft, said shaft being attached to said vehicle and extending along an axis substantially parallel to the roll axis of said vehicle, said scanning means receiving and reflecting the radiant energy from a target while moving angularly thereto with said vehicle, an electro-optical system arranged along a common optical axis with said scanning

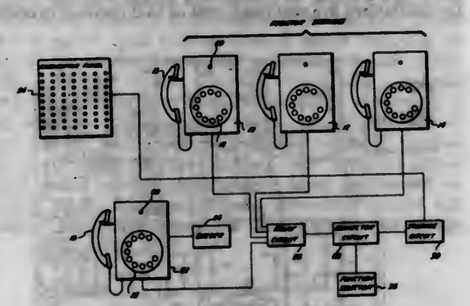
means, said electro-optical system receiving and converting the reflected radiant energy from said scanning means into an electrical output signal, a glow modulator lamp, the intensity of which is controlled by the output signal from said electro-optical system, an optical system mounted upon said scanning shaft and rotatable therewith to receive and redirect a sweep of radiation from said glow modulator lamp upon each rotation of said scanning means, a platform mounted for limited movement about said scanning shaft, said platform including a transversely slotted, barrel shaped film former, a recording magazine containing a recording medium mounted upon said platform, said recording medium passing over said film former to receive redirected radiation from said optical system through said transverse slot, said film former being shaped to maintain said recording medium at a fixed distance from said optical system for all positions within the range of movement of the recording magazine about said scanning shaft, and gyroscopically controlled servo motor means mounted to move said platform about said scanning shaft to maintain a stabilized relationship between said recording magazine and said target surface.

3,092,688
COMBINED TELEPHONE AMPLIFIER AND RADIO RECEIVER
Joseph Rector, 225 W. 86th St., New York, N.Y.
Filed Sept. 21, 1960, Ser. No. 57,513
2 Claims. (Cl. 179—1)



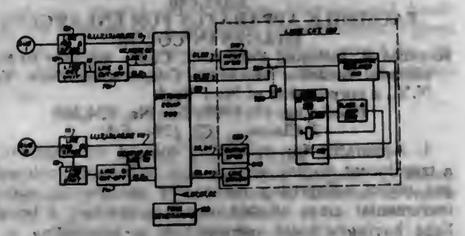
2. A telephone amplifier and radio comprising a cabinet having a substantially flat front wall and a rear wall, said front wall having spherically-curved, sound-producing concavities spaced apart for alignment of transmitter and receiver portions of a telephone handset therewith, a handset support pivotally connected to the cabinet for limited vertical swing movement in front thereof, said support having a central bar portion and rigid loops respectively extending outwardly from the bar portion in a lateral plane across the diameters of the concavities, said loops being adapted to receive and support respectively the transmitter and receiver portions of the handset in alignment with the concavities, a switch operating arm extending from the support bar portion rearwardly into the cabinet, a transistorized audio amplifier mounted in the cabinet in rear of the front wall thereof, a loudspeaker connected to the amplifier and lying in one of the walls of the cabinet, two switches mounted respectively above and below said rearwardly extending operating arm, said amplifier being in circuit with one of said switches which is closed by the arm upon the same being tilted under the weight of the handset upon the handset support, biasing means tending to keep the handset support elevated and the switch unoperated when free of the handset, a microphone lying in at least one of the concavities and connected to the amplifier, a radio set mounted in the cabinet and connected to the other of said switches and to said amplifier, said other switch being opened by said arm to disconnect the radio upon the handset weighting the handset support.

3,092,689
AUTOMATIC REGISTRAR
Stanley B. Sandstrom, Santa Ana, Calif., assignor to Edstan, Los Angeles, Calif., a partnership
Filed July 22, 1960, Ser. No. 44,714
8 Claims. (Cl. 179—2)



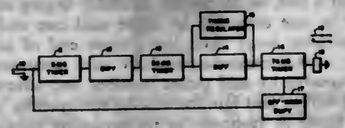
1. An automatic registrar system comprising a plurality of telephone stations, each station including an audible signaling device, a telephone type dial, a switch, and a light; a plurality of memory units, each unit including a plurality of latch relays each having two stable operating states, means for generating a continuous signal, means for generating an interrupted signal, the latch relays connecting one or the other or neither of the signal generating means to the output of each of the memory units according to the existing stable conditions of the latch relays in the unit, a selector circuit, relay means responsive to the operation of any of the switches at the telephone stations for connecting only an associated one of the dials to the selector circuit when a switch is operated, means including the selector circuit for connecting the audible signaling device and light at the telephone station in which the switch is operated to the output of one of the memory units in response to a group of digits dialed at the telephone station, a function selector circuit, means responsive to an additional digit dialed at the telephone station following said group of digits for setting the function selector circuit, and means including the selector circuit for connecting the function selector circuit to the latch relays of the selected memory unit, the function selector circuit setting the latch relays to any one of the possible combinations of stable states of the relays according to the value of said additional digit.

3,092,690
HIGH SPEED DATA TRANSMISSION SYSTEM
Emmuds A. Reiley, Glenview, Ill., assignor to Automatic Electric Laboratories, Inc., Northlake, Ill., a corporation of Delaware
Filed July 10, 1961, Ser. No. 120,900
8 Claims. (Cl. 179—2)



1. A communication system comprising: a plurality of subscriber stations each adapted to transmit and receive voice signals, and to transmit and receive binary data signals; switching means connected to one of said subscriber stations operated in response to one of said subscriber stations to extend circuit connections to a second one of said subscribers' stations; data regenerating means; voice signal repeating means including first amplification means, second amplification means, signal rectification means, and level determining means operated in response to rectified signals received from said first amplifier to control said second amplifier to increase or decrease magnitude of signals tansmitted from said amplifier; data detection means connected to said switching equipment operated in response to receipt of binary data signals to send said signals from said switching equipment to said data regenerating means, and operated in response to receipt of voice signals to send said voice signals to said voice signal repeating means; said data regenerating means operated in response to receipt of binary data signals to regenerate like signals and transmit said regenerated signals to said switching equpment; said voice signal repeating means operated in response to receipt of voice signals from said switching means to repeat said voice signals and transmit said voice signals through said switching means to one of said subscriber stations.

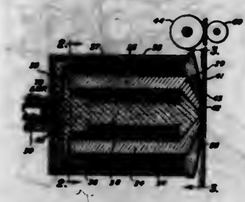
3,092,691
ELECTRONIC PULSE CORRECTION CIRCUIT
Robert V. Burns, Markham, and Robert T. Cleary, Lockport, Ill., assignors to Automatic Electric Laboratories, Inc., Northlake, Ill., a corporation of Delaware
Filed July 28, 1961, Ser. No. 127,567
8 Claims. (Cl. 179—16)



1. A pulse correcting arrangement for repeating a sequence of impulses with the output sequence of impulses having a desired duty cycle regardless of the duty cycle of the input sequence and regardless of the speed of the sequence, said arrangement comprising:
a first timing means for producing a first timing interval,
a second timing means for producing a second timing interval,
means for starting the first timing means in response to the beginning of an impulse in the input sequence,
means for starting the second timing means in response to the output of the first timing means at the end of the first timing interval,
a device and means for effectively connecting the device to the second timing means in response to the output of the first timing means at the beginning of the first timing interval to shorten the length of the second timing interval as a function of the time between said beginning of the first said impulse and said beginning of said succeeding impulses,
and means for producing output pulses equal in duration to the output of the second timing means in response to the output of the second timing means.

3,092,692
MAGNETIC TRANSCRIBER
Laszlo J. Javorik, Chicago, Ill., assignor to Zenith Radio Corporation, a corporation of Delaware
Filed July 13, 1959, Ser. No. 826,838
11 Claims. (Cl. 179—100.2)

1. A magnetic transcriber comprising: a magnetizable medium; a magnetic transcribing head having a plurality of magnetic structures defining a series of asymmetrical non-magnetic gaps positioned in transcribing registration with respect to said medium; at least one signal translating coil associated in inductive-coupling relation with each of said structures; means for interconnecting said coils in accordance with a first pattern of connections such that an excitation signal applied thereto develops magnetic flux fields of predetermined relative polarities across said gaps; means for interconnecting said coils in



accordance with a second pattern of connections such that an excitation signal applied thereto develops magnetic flux fields of different predetermined relative polarities across said gaps; a signal amplifier coupled to said coils for translating program signals; and means for effecting relative movement between said medium and said transcribing head.

3,092,693
ELECTROMAGNETIC RECEIVER
Toshio Hayanaka, Kenro Masuzawa, Ryozo Araki, and Kiyoshi Tajima, all of Tokyo, Japan, assignors to Nippon Telegraph and Telephone Public Corporation, Tokyo, Japan, a public corporation of Japan
Filed Dec. 12, 1960, Ser. No. 75,164
16 Claims. (Cl. 179—115)

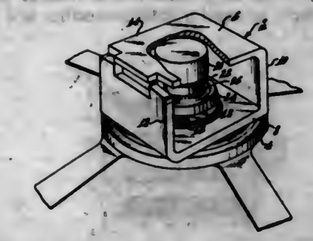


1. An unbalanced-type electromagnetic receiver comprising a conical diaphragm, an armature provided at the center portion on the concave surface side of said conical diaphragm and a magnetic circuit including a cylindrical inner pole juxtaposed the center portion on the convex surface side of said diaphragm to define an air gap therebetween and an outer pole arranged concentrically on the outside of said inner pole.

3,092,694
LOUDSPEAKER
Sylvester Walczak, Egg Harbor City, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Continuation of application Ser. No. 626,011, Dec. 3, 1956. This application Feb. 16, 1959, Ser. No. 793,631
13 Claims. (Cl. 179—115.5)

1. A magnetic structure for a loudspeaker comprising, in combination, a magnet element having a pole end, a centering-compression member engaged with said magnet element and disposed around said pole end, a yoke of magnetic material having a pole plate and a pair of side plates, said side plates both extending in the same direction, said pole plate having an aperture therein for receiving said magnet element pole end, said centering-compression member being disposed within said yoke on said pole plate, said magnet element also being disposed within said yoke with said pole end thereof centered by said centering-compression member with respect to said pole

plate aperture to define a voice coil air gap therein, and means engageable with said magnet element for advancing said pole end into said aperture and securing said magnet element and said centering-compression member



in assembled relationship in said yoke which comprises a member of magnetic material providing a back plate for said yoke and movable toward said front plate into engagement with said magnet element and into assembled relationship with said side plates.

3,092,695

NIGHT LIGHT WITH SWIVEL ELECTRICAL CONNECTOR

Ralph Abrams, Sharon, Mass., assignor to Cable Electric Products, Inc., Providence, R.I., a corporation of Rhode Island

Filed Aug. 11, 1960, Ser. No. 49,070
7 Claims. (Cl. 200—51)



1. A night light comprising a dielectric housing having a socket portion extending therefrom, a contact portion extending from said housing at right angles to said socket portion, a pair of contact blades mounted in said contact portion, each contact blade comprising an elongated contact portion reentrantly bent at the thrust end with the free end forming a spring contact portion, the other end of each blade being bent at right angles to form an inner contact area, said contact blades being mounted on a dielectric disc, said disc being rotatably mounted ing said contact portion, one of said blades having an electrical connection to the inner wall of said socket portion, a recess behind said disc, said electrical connection comprising a conductive strip extending vertically into said recess through a bottom wall thereof, the lower end of said strip extending laterally into said socket portion, a conductive coil spring surrounding the vertical portion of said strip in said recess and resiliently contacting the inner contact portion of said one of said blades, a switch mounted in said housing opposite said contact portion, the other of said blades having an electrical connection to one side of said switch, and a contact member in said housing having an electrical connection to the other side of said switch and having a resilient portion in axial alignment with said socket portion, said contact blades, contact member, electrical connections, and switch being locked in said housing by interengaging portions of said parts and said housing.

3,092,696

BELT TENSION INDICATOR AND ENGINE CUT-OFF

Wilmer T. Wallace, Hampton, Iowa

Filed Feb. 14, 1961, Ser. No. 89,283
5 Claims. (Cl. 200—61.18)



1. A belt tensioning indicator and engine cut-off for use with engines of the type having a normally tensioned endless belt for driving engine accessories and an electrical ignition circuit, said indicator and engine cut-off comprising an elongated guide member, mounting means secured to said guide member adapted to mount said guide member on an engine with one end of said guide member spaced from and in alignment with a section of an endless belt driven by said engine, an elongated thrust member engaged with said guide member for sliding reciprocating movement longitudinally of said guide member, the end of said thrust member corresponding to said one end of said guide member including laterally spaced guide means adapted to embrace the opposite sides of an endless belt and anti-friction means disposed between said laterally spaced guide means adapted to engage the surface of a belt, thrust means yieldably urging said thrust member in one direction to move said one end of said thrust member away from the remote end of said guide member, switch means carried by said mounting means and engageable by said thrust member and adapted to be disposed wtihin said ignition circuit for opening and closing the latter in response to reciprocating movement of said thrust member, said switch means including a movable actuator engageable by said thrust member, said thrust means comprising spring means carried by said switch means and yieldably urging said actuator toward said thrust member for engagement with and movement of the latter to move said guide means and anti-friction means in a direction to engage a belt section.

3,092,697

ARMING SWITCH

Jack Brothers, Succasunna, N.J., assignor to the United States of America as represented by the Secretary of the Army

Filed Sept. 14, 1961, Ser. No. 138,203
3 Claims. (Cl. 200—61.53)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. An arming switch for a projectile fuze comprising an externally threaded body for attachment to the projectile, there being an axial well in said body; an insulating sleeve fitted within said well; a contact body fitted within said sleeve, there being a diametrical slot in said contact body; a cam slider slidably mounted in said slot; a spring biased switch contact in said slider; a fixed contact disposed on the outer side of said contact body; a first means for normally locking said slider in an unarmed position within said slot, comprising a transverse

bore in the inner portion of said contact body, a transverse bore in the inner portion of said slider and a pair of inwardly biased detents slidably mounted in said transverse bore in said contact body and normally entering said transverse bore in said slider when said slider is in an unarmed position in said slot, said detents separating outwardly upon projectile spin to leave said transverse bore in said slider and free said slider for outward movement in said slot; a second means in said contact body for moving said slider outwardly in said slot to press said switch contact in said slider into contact with said fixed switch contact and a third means for preventing the return of said cam slider to its unarmed position in said slot.

3,092,698

ELECTRICAL OUTLET AND SWITCH

John H. Brennemann, 6 Quocnston Place, Princeton, N.J.

Filed Mar. 4, 1960, Ser. No. 12,790
14 Claims. (Cl. 200—67)



1. In a snap acting switch of the type comprising a stationary contact; a flexible arm to be actuated having a fixed end and free end portion; and a contact carried by said arm which is movable into and from engagement with said stationary contact; said flexible arm being formed from a strip of resilient material; a cover plate for said switch having an arcuate surface; and a knob mounted for movement along said arcuate surface, the free end of said arm being secured to said knob, the radius of said arcuate surface being slightly longer than said arm and the center of curvature of said arcuate surface being located to cause slight curvature of said arm when the knob is at either extreme position and maximum compression of said arm at a central position of said knob to effect reversal of the curvature of said arm and instantaneous opening or closing of said contacts.

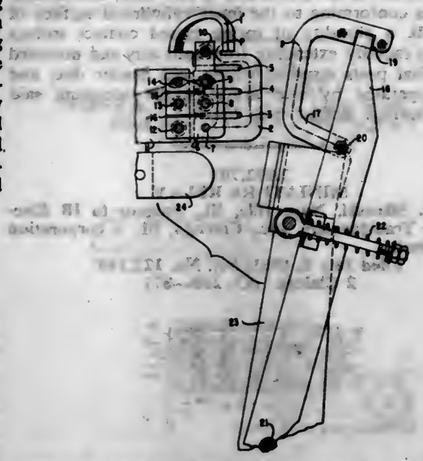
3,092,699

ELECTRODYNAMIC FORCE-COMPENSATION PRESSURE CONTACTS FOR CIRCUIT BREAKERS

André Latour, Grenoble, France, assignor to Ets Merlin & Gerin, Grenoble, France

Filed Dec. 17, 1959, Ser. No. 860,186
Claims priority, application France Dec. 23, 1958
9 Claims. (Cl. 200—87)

1. In an electric switch, the combination of a stationary and a movable contact, and of a stationary and a movable conductor respectively ending at said contacts and having respectively substantially rectilinear length portions extending parallel and close to each other when the switch is closed, said movable conductor constituting the carrying arm of said movable contact and being disposed in position to react magnetically in closed position of the contacts with said stationary conductor in a direction to urge said movable contact against said stationary contact, the two conductors, at least upon initial opening movement of the contacts and formation of an arc, forming with their ends, nearest to the contacts, said contacts and said arc, a loop, whereby the magnetic forces of the current tend to expand said loop and thus to repel the arc; at least one of said conductors including serially connected portions leading the current in successively opposite directions on opposite sides of the other conductor to its corresponding contact.



3,092,700

ELECTRICAL RELAYS

Irwin A. Cohen, Chicago, Ill., assignor to Automatic Electric Laboratories, Inc., Northlake, Ill., a corporation of Delaware

Filed July 7, 1960, Ser. No. 41,297
6 Claims. (Cl. 200—87)



1. In an electrical relay the combination comprising; a cylindrical shell closed at one end, a header disc forming a closure for the other end of said shell; a magnetic core transversely disposed within said shell, a coil assembly mounted on said core, means for sealing said coil assembly pole pieces of magnetic material attached to the ends of said core and extending transverse to the axis thereof, a window frame type armature surrounding said coil mounted for rotation about the axis of said shell and having side legs extending parallel to said axis and cross legs extending normal to said axis, said cross legs and said pole pieces having faces which magnetically cooperate upon energizing of said coil, permanent mag-

nets acting upon one of said cross-legs to aid in restoring said armature to normal position upon deenergizing of said coil, said magnets are mounted to two mounting bases attached to the closed end of said shell, said mounting bases conforming to the inner cylindrical surface of said shell, a plurality of spring biased contact springs generally radially extending from said axis and mounted to terminal posts disposed within said header disc, and means operated by said armature for actuating said contact springs against their bias.

3,092,701
MINIATURE RELAY
Frank J. Sikorski, Naperville, Ill., assignor to JB Electronic Transformers, Inc., Chicago, Ill., a corporation of Illinois
Filed July 6, 1961, Ser. No. 122,140
2 Claims. (Cl. 200—87)



1. A relay comprising a base of magnetic material, a coil core of magnetic material secured at one end to the base to provide an exposed end spaced from said base, an armature bracket of magnetic material extending away from the base, a balanced armature blade of magnetic material hinged to said bracket in a position to overlie the exposed end of said core, a coil form of insulated material on said core, a coil on said form, stationary and flexible contact members secured directly to said coil form in a position along at least one side of said armature, an actuator on said armature overlying said flexible contact member and adapted to engage and bend said flexible contact member when said coil is energized, means to limit the movement of said armature blade with respect to said bracket when said coil is deenergized, said core being formed to provide a longitudinally extending passage therethrough and through said base, a spring in said passage bearing with one end against said armature blade, and a member adjustable in said passage to support the opposite end of said spring.

3,092,702
MICROSWITCH RELAY
Neil E. Parsons, Addison, Ill., assignor to Automatic Electric Laboratories, Inc., Northlake, Ill., a corporation of Delaware
Filed Jan. 29, 1962, Ser. No. 169,314
3 Claims. (Cl. 200—104)



1. A telephone type relay including the usual heelpiece, electromagnet and armature, a bracket rigidly secured to said heelpiece, a plurality of microswitches mounted in said bracket in parallel relation to each other, a pair of bolts securing said microswitches in said bracket, one of said bolts passing through a single hole in the sides of said bracket, the other bolt passing through arcuate slots in each side of said bracket, said microswitches adjustable as a unit, relative to the armature, by moving said other bolt in its arcuate slots around said first bolt as a pivot point, a plurality of fingers on said armature, one for operating each of said microswitches, certain of said fingers independently adjustable relative to the associated microswitches.

3,092,703
ELECTRICAL SWITCH ASSEMBLY
Robert W. Fraser, Framingham, Mass., assignor to United-Carr Fastener Corporation, Cambridge, Mass., a corporation of Delaware
Filed July 7, 1960, Ser. No. 41,385
2 Claims. (Cl. 200—159)



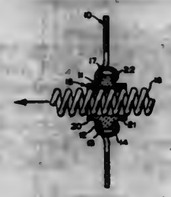
1. A switch assembly adapted to be snapped into a support and having an axially operable plunger, said switch assembly including an elongated snap fastener having a flange at one end, said plunger assembled within said snap fastener and having a portion extending through an aperture in said flange, said plunger also extending through and beyond an opposite end of said snap fastener spaced from said flanged end, said plunger being of a dimension to pass freely through said snap fastener and being assembled with the snap fastener only by a coil spring member interposed between a shoulder on the plunger and a portion of the snap fastener and a terminal contact member having a flange fitting over an end of the plunger adjacent to said opposite end, and an eyelet portion extending into said plunger and curled against an internal lip in the plunger.

3,092,704
RESISTANCE COATING FOR ARTICLES OF GLASSWARE AND THE LIKE
Charles M. De Weody, Roscoe L. Pearce, and Walter Mueller, Cumberland County, and Eugene A. Egizi, Camden County, N.J., assignors to Ace Glass Incorporated, Vineland, N.J., a corporation of New Jersey
Filed Dec. 28, 1959, Ser. No. 862,331
5 Claims. (Cl. 219—19)



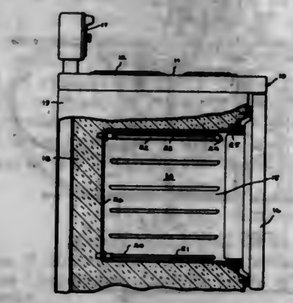
1. A heating unit comprising a container of glassware or the like having a surface thereof coated with an electrical resistance material, said coating being divided along a predetermined path to form separate conducting areas of an electric circuit, the periphery of said container adjacent the boundary of said coating being recessed on opposite sides to provide terminal grooves, separate coatings of a material of less resistance than said first-named coating, lining said grooves and electrically connected to respective conducting areas, and a support for said container comprising a body, and electrodes carried by said body engageable in respective terminal grooves in supporting engagement with said container.

3,092,705
BUSHING CONSTRUCTION IN AIR HEATING DEVICE
Wilford J. Rousseau, Jr., and Milton Osterman, St. Louis, Mo., assignors to Industrial Engineering & Equipment Co., St. Louis, Mo., a corporation of Missouri
Filed Dec. 26, 1961, Ser. No. 162,100
3 Claims. (Cl. 219—19)



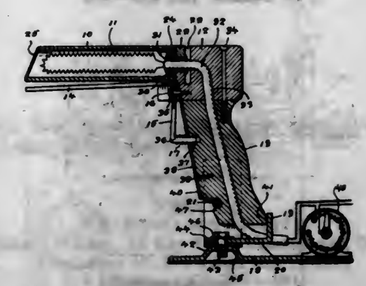
1. In an air heating device:
(*a*) a panel provided with an opening, said opening having its marginal portion displaced from the plane of said panel toward one side of said panel to provide a socket,
(*b*) a tubular bushing including a peripheral flange seated in said socket against said marginal portion, a peripheral dimension of said socket approximating the peripheral dimension of said flange, and
(*c*) a plurality of tabs struck out from said panel radially outwardly of said socket, the tabs having their ends integral with the panel adjacent the outermost periphery of said socket and having their free ends which are outwardly of the socket periphery reversed to overlap said flange so as to hold the flange in said socket and to secure the bushing to said panel.

3,092,706
DOMESTIC OVEN WITH OPTIMUM HEAT DISTRIBUTION
Roy D. Chisholm, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Filed Oct. 23, 1961, Ser. No. 146,979
6 Claims. (Cl. 219—20)



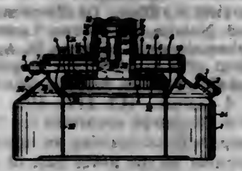
1. A high temperature domestic oven having an oven cavity formed by a box-like oven liner and an access door, the oven liner including at least three heating elements, a lower bake unit, an upper broil unit and a mullion heater wrapped around the oven liner adjacent the access door, a source of voltage, electric circuit control means for energizing the heater elements for normal cooking operations as well as for a high temperature heat cleaning cycle, the control means controlling the energization of said heating elements so that the three heating elements are energized during a high temperature cycle such that both the upper broil unit and the lower bake unit are energized at approximately one-fourth rated wattage, while the mullion heater is energized at rated wattage so as to maintain the oven at a sufficiently uniform temperature while distributing much of the source of heat energy away from the bottom wall of the oven so as to prevent fires and excessive smoking conditions.

3,092,707
SEAM PRESSER
Mildred B. Wirth, 4121 A St., Little Rock, Ark.
Filed June 7, 1960, Ser. No. 34,576
1 Claim. (Cl. 219—21)



The combination with a seam presser including a handle arranged in an upwardly sloping direction, a head on the upper end of the handle, and a horizontally disposed buck provided with a heat producing means projecting from said head remote from the lower end of said handle, of a support for said presser comprising a base plate, an L-shaped bracket having the long leg thereof arranged in superimposed spaced relation with respect to said base plate and connected thereto, the short leg of said bracket being vertical and above the long leg and providing a stop, a U-shaped member rising from the portion of said long leg adjacent the free end thereof, a support pin extending between the legs of said member intermediate the ends thereof, said handle being provided with a toe on the lower end remote from said buck and with a recess on the lower end portion thereof below said buck, said handle being normally supported in the upwardly sloping position with said pin received in said recess and with said toe bearing against said stop, said handle being removable from said support upon execution of movement from the horizontal position to a substantially vertical position to free said recess from said pin and to free said toe from engagement with said stop.

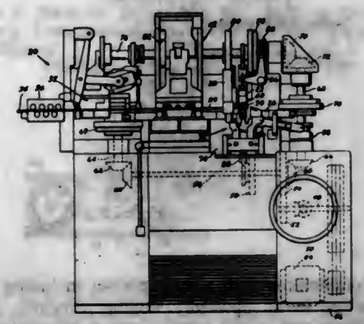
3,092,708
AIR MOISTENING APPARATUS
Otto Walther, Widenstrasse 22, Oberwil-Zug, Switzerland
Filed Apr. 11, 1960, Ser. No. 21,395
4 Claims. (Cl. 219—38)



1. An electrically heated humidifier comprising a container having a water chamber therein and an upper rim portion, a detachable perforated cover for the container mounted on the upper rim portion and having a clamping sleeve mounted thereon, a central hollow cylindrical member extending into the clamping sleeve and projecting into the container, a pair of diametrically opposed radial supporting rods extending from the rim portion to the

cylindrical member to support the latter, an electric heating element secured to the cylindrical member, and a wick secured to the heating element and suspended therefrom down into the water in the chamber.

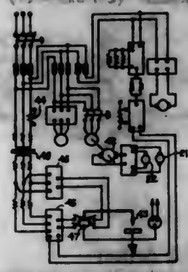
3,092,709
ATTACHMENT FOR A WIRE OR STRIP FORMING MACHINE
Werner Vogt and Ernest V. Cavagnaro, Torrington, Conn., assignors to The Torrington Manufacturing Company, Torrington, Conn., a corporation of Connecticut
Filed June 8, 1960, Ser. No. 34,798
14 Claims. (Cl. 219—56)



4. The combination in a cyclically operable wire or strip forming machine of, a bed, a mandrel connected with said bed and projecting outwardly therefrom so as to have a rear portion located adjacent said bed and a forward portion located some distance away from said bed, means for feeding a workpiece transversely of said mandrel to said rear portion thereof, a plurality of forming tools which are movable relative to said bed and which sequentially cooperate with said rear mandrel portion throughout a predetermined forming phase of each cycle of operation of the machine to progressively bend the workpiece around the said mandrel and into such a shape as to bring its two ends into juxtaposed abutting relationship after it is delivered to said rear mandrel portion by said feeding means and while it remains at the same axial position on said rear mandrel portion, means for moving a workpiece from the rear to the forward portion of said mandrel after the completion of said forming phase, and means for welding together the juxtaposed ends of a workpiece at the forward portion of said mandrel while another workpiece is bent around the rear portion of said mandrel by said tools.

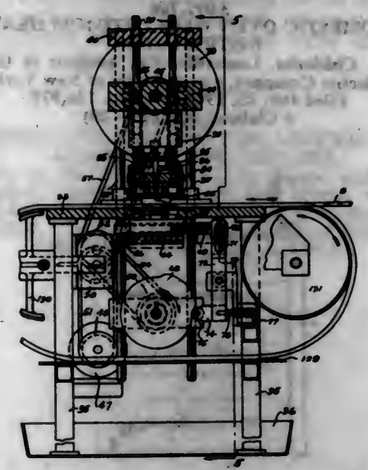
3,092,710
ELECTRO-SPARK (SPARK-EROSION) APPARATUS FOR PRECISION MACHINING OF METALS
George Maksarovich Kriltsov, 1st Basmannay per. 5/20, Apt. 156, and Natalia Ivanovna Lazarenko, Kotelnicheskaia naberezhnaia 1/15, korp. B, Apt. 70, both of Moscow, Union of Soviet Socialist Republics
Filed Oct. 5, 1960, Ser. No. 60,603
4 Claims. (Cl. 219—69)

1. An electrical discharge apparatus for the machining of metal, said apparatus comprising an upstanding frame, a receptacle mounted on the lower part of said frame at the front, said receptacle being open at the top and adapted to contain a liquid bath, a work table mounted on said frame above said receptacle and movable into and out of the bath in said receptacle, a horizontal arm slidably mounted on the upper end of said frame for forward and rearward movement and overhanging said table, means to move said arm, a carriage slidably mounted on the forward end of said arm for horizontal movement transversely thereof, a tool holder slidably mounted on said carriage above said table for vertical movement toward and away from said table, means for removably securing a tool electrode to said tool holder, a first motor for moving said carriage, a second motor for moving said tool holder, common manual means for moving said carriage and said tool holder, clutch means for selectively



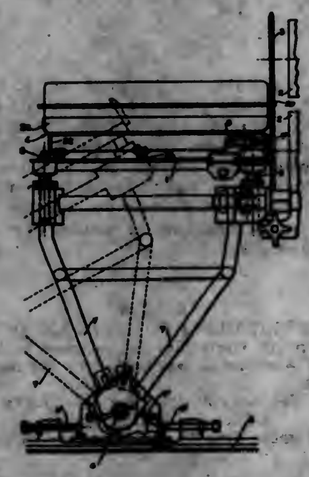
coupling said first or second motor or said manual means for movement of said carriage and tool holder, a pulse generator for controlling the operation of said first and second motors, a high voltage relaxation type pulse generator, a low voltage pulse generator and means including a switch for selectively connecting said high voltage or low voltage generators to said tool electrode and said work table.

3,092,711
MANUFACTURE OF HONEYCOMB CORE
Harry B. Bennett, Bloomfield Hills, and Hughes W. Vaughn, Garden City, Mich.; said Vaughn assignor of twenty percent to said Bennett
Filed Sept. 8, 1958, Ser. No. 759,562
23 Claims. (Cl. 219—81)



1. The method of making honeycomb core material which comprises positioning a pair of corrugated metal strips on a work surface with the corrugations extending vertically and at least one pair of crests in abutment, applying a pressure to the upper edges of said strips, positioning a welding electrode on one side of one of said abutting crests, moving a second electrode downwardly adjacent the other side of said other abutting crest, maintaining said second electrode out of contact with the other said abutting crest while it is moving downwardly, bringing said second welding electrode into contact with the other said abutting crest adjacent the lower edge thereof, moving said second electrode upwardly while it is in contact with said other crest, and supplying current to said electrodes only while said second electrode is moving upwardly and is in contact with said crest to thereby weld said crests together.

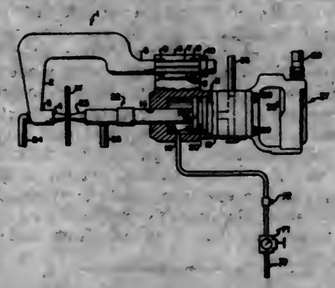
3,092,712
AUXILIARY APPARATUS FOR AUTOMATIC LINE WELDING, NOTABLY FUEL TANKS
Lucien Pérus, Billancourt, France, assignor to Regie Nationale des Usines Renault, Billancourt, France
Filed Feb. 10, 1961, Ser. No. 88,483
Claims priority, application France Feb. 23, 1960
5 Claims. (Cl. 219—81)



1. Auxiliary apparatus for automatically welding joints between two parts of a workpiece made of two halves, such as a fuel tank, characterized in that it comprises a table adjustable in position with respect to the welding rollers of the line welding machine, a jig for supporting the work to be welded, and a roller for guiding this jig, said guide roller having a vertical axis and being adjustably mounted on said table, said guide roller being adapted, in combination with a vertical plate solid with said table, to engage a corresponding edge of said jig, said line welding rollers engaging the edges of the two parts of the workpiece and causing by their rotation the movement of said workpiece and of said jig on said table.

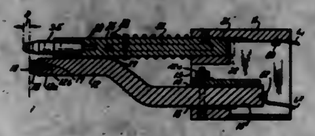
3,092,713
HAND WELDING GUN
Napoleon P. Boretti, Detroit, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Apr. 13, 1960, Ser. No. 21,996
6 Claims. (Cl. 219—89)

1. In welding apparatus having at least one movable electrode, piston means for moving said electrode, a cylinder in which said piston is reciprocably movable, a first inlet passage adjacent one end of said cylinder, a first conduit means connecting said first inlet passage to a source of high pressure fluid, pressure reducing valve means in said first conduit for reducing said high pressure fluid to a constant relatively low pressure, a second inlet passage adjacent the other end of said cylinder, second conduit means connected between said second inlet passage and said source of high pressure fluid, a solenoid valve mounted adjacent said cylinder and interposed between said second conduit means and said second inlet, and means to actuate said solenoid valve whereby high



pressure fluid enters said cylinder to move said piston toward said one end of said cylinder.

3,092,714
WELDING APPARATUS
Milton Hinden, 15 Bay Link, Massapequa, N.Y.
Filed June 15, 1961, Ser. No. 117,391
6 Claims. (Cl. 219—101)



1. A pin holding electrode device for holding a pin having shank and head portions during welding by the spot welding method comprising a conductive electrode, a bore beginning at the tip of said electrode and extending inwardly thereof, said bore adjacent said tip being of a diameter to provide clearance with respect to the shank of said pin but of lesser diameter than the head of said pin, the inwardly disposed portions of said bore being of enlarged diameter as compared with the diameter of the bore adjacent said tip, a permanent magnet carried in said bore in said enlarged diameter portion and insulator means interposed in said enlarged diameter portion of said bore having a central aperture co-axially located with and of a lesser diameter than the diameter of said bore adjacent said tip, whereby a pin having its shank portion inserted into said bore and through said aperture, and having the end of its head portion pressed against a workpiece will be maintained by said insulator means free from electrical connection with said electrode except at the junction of said tip and said head.

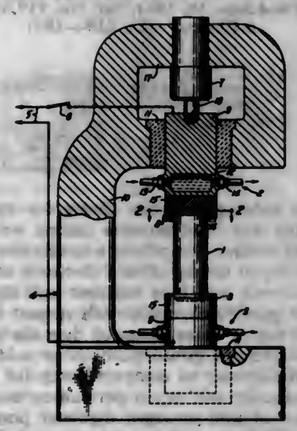
3,092,715
METHOD FOR MANUFACTURING FUSE LINKS
Harry H. Hallas, Newton, Mass., assignor to The Chase-Shawmut Company, Newburyport, Mass.
Filed May 6, 1960, Ser. No. 27,430
13 Claims. (Cl. 219—117)



1. A method for manufacturing fuse links for time-lag fuses comprising the steps of superimposing under

pressure upon a relatively thin sheet defining zones of reduced cross-sectional area and having a relatively large surface area and being made of a metal having a relatively high fusing point and a relatively high conductivity immediately adjacent one of said zones of reduced cross-sectional area a relatively thick overlay having a relatively small surface area and being made of a low fusing point metal in the nature of soft solder; and of passing an electric current through said sheet adjacent the interface between said sheet and said overlay, said current being sufficiently high and of sufficiently long duration to cause fusion of said overlay at said interface, and said current being sufficiently small and of sufficiently short duration to preclude fusion of said overlay at portions thereof remote from said interface.

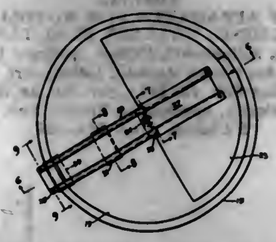
3,092,716
ELECTRIC RESISTANCE HEATING UNITS
Eugene J. Limpel, Thiensville, Wis., assignor to A. O. Smith Corporation, Milwaukee, Wis., a corporation of New York
Filed Apr. 3, 1961, Ser. No. 100,289
7 Claims. (Cl. 219—149)



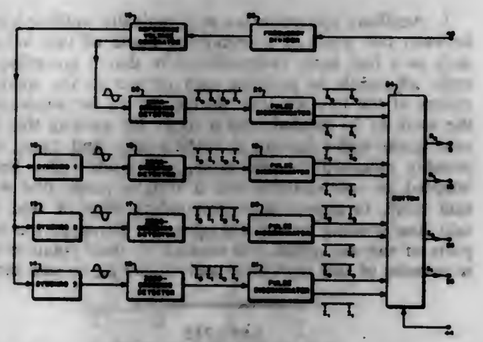
1. In a contact in a heat treating unit for resistance heating of a billet having the edges beveled to produce a ring contact area without substantial deformation thereof, a contact base, and a contact block of wear resistant material intimately attached to the contact base, said block having a recess with tapered walls and with an opening diameter greater than the end of the billet and a final diameter less than the billet to define a contact area receiving the beveled edge of the billet and establishing an initial narrow ring contact with the billet.

3,092,717
DISK COMPUTER
John M. Batchelder, 91 Albemarle Road, White Plains, N.Y.
Filed Apr. 8, 1953, Ser. No. 347,631
8 Claims. (Cl. 235—61.5)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A computer of the character described comprising a central disc, scale divisions on one side, other scale divisions on the opposite side, a first smaller disc rotatably mounted on one side of said central disc, scale divisions along the perimeter of said first smaller disc for cooperatnig with an index on said central disc, graphs on the face of said first smaller disc, a second smaller disc rotatably mounted on the other side of said central disc, other scale divisions along the perimeter of said second smaller disc for cooperating with an index on said central disc, other graphs on the face of said second smaller disc, a first half disc of smaller diameter than said first smaller disc rotatably mounted on said first smaller disc, a second half disc of smaller diameter than said second smaller disc rotatably mounted on said second smaller disc, an indicating arm mounted on said first half disc and constrained to rotate therewith, a second indicating arm mounted on the second half disc and constrained to rotate therewith, a graduated scale on said first indicating arm, a graduated scale on said second indicating arm, a graduated transparent scale member slidably mounted on said first indicating arm, a second graduated transparent scale member slidably mounted on said second indicating arm, and means to frictionally secure said discs to each other whereby one or more discs may be rotated without disturbing the position of one or more of the adjacent discs.

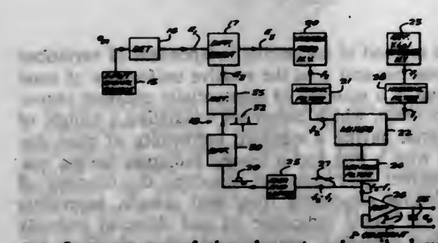


3,092,718
SYNCHRO SHAFT POSITION ENCODER
John R. Wallert, Hartsville, Pa., assignor to the United States of America as represented by the Secretary of the Navy
Filed Nov. 29, 1960, Ser. No. 72,533
8 Claims. (Cl. 235—154)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. In combination with a computer, a synchro shaft position encoder for transforming the position of a synchro shaft into a binary number, a synchro shaft and a reference shaft, first means responsive to rotation of said synchro shaft for generating a first sinusoid, second means connected to said first means for producing a first synchro pulse when said first sinusoid crosses the zero axis a first time and a second synchro pulse when said first sinusoid crosses the zero axis a second time, third means responsive to rotation of said reference shaft for generating a second sinusoid, fourth means connected to said third means for producing a first reference pulse when said second sinusoid crosses the zero axis a first time and a second reference pulse when said reference sinusoid crosses the zero axis a second time, encoder means connected to said second and fourth means receiving said first and second synchro pulses and said first and second reference pulses for transforming the phase difference between any one of said first or second reference pulses and any one of said first or second synchro pulses into digital form, said encoder means including corrector means providing a correction to the transforming function when said phase difference is defined by said first reference pulse and said second synchro pulse or said second reference pulse and said first synchro pulse.

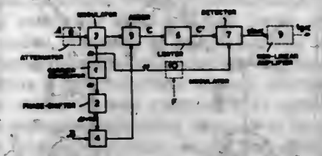
3,092,719
MEANS AND TECHNIQUES FOR PRODUCING A RECIPROCAL OF AN ELECTRICAL QUANTITY
Frank R. Bravenec, Houston, Tex., assignor to Halliburton Company, a corporation of Delaware
Filed Mar. 11, 1959, Ser. No. 798,706
2 Claims. (Cl. 235—193)



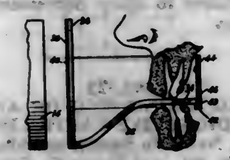
1. In a system of the character described wherein it is desired to obtain the mathematical reciprocal of a varying signal, the combination comprising, a source of said varying voltage, a variable frequency oscillation means, constant frequency oscillation means, mixing means coupled to both said variable frequency and said constant frequency means and functioning to derive a voltage output characterized by a beat frequency in accordance with the difference of said varying frequency source and said constant frequency source, means controlling said variable frequency means in accordance with both said variable signal and said beat frequency voltage, impedance means having a magnitude which varies inversely with respect to frequency, means applying said voltage output to the last mentioned means, and means indicating the voltage produced across said impedance means by said voltage output, said last mentioned voltage across said impedance means varying in amplitude in reciprocal relationship with respect to said varying voltage, said variable frequency source and said constant frequency source each comprising a multivibrator, and said means whereby said variable frequency source is controlled by said beat frequency voltage comprises means whereby said beat frequency voltage is first limited in amplitude, then differentiated and combined with said varying signal to produce a modified beat frequency voltage which together with said varying signal controls said variable frequency source.

3,092,720
DEVICE FOR PRODUCING AN OUTPUT SIGNAL PROPORTIONAL TO THE QUOTIENT OF THE AMPLITUDES OF TWO INPUT SIGNALS
Frederik Willem de Vrijer and Josué Jean Philippe Valeton, both of Eindhoven, Netherlands, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Apr. 22, 1957, Ser. No. 654,313
Claims priority, application Netherlands June 2, 1956
5 Claims. (Cl. 235—195)

1. An electrical circuit for producing an output voltage having an instantaneous amplitude proportional to the instantaneous amplitude of a first input signal divided by the instantaneous amplitude of a second input signal, the amplitude of said second signal being at least several times larger than that of said first input signal, said circuit comprising in combination: a generator for producing a carrier oscillation having a frequency which is large relative to the highest frequency of any component of either said first or said second input signals, a phase shifting network for shifting the phase of said carrier oscillation through 90°, first and second signal input means for said first and second input signals respectively, first and second modulator means coupled to said first and second signal input means respectively, said first modulator means having supplied thereto the unshifted carrier oscillation and said first input signal, said second modulator means having supplied thereto said second input signal and phase shifted carrier oscillation from said phase shifting network, adding means having supplied thereto the outputs of said first and second modulators and producing a resulting carrier oscillation of an amplitude proportional to the vectorial sum of the outputs of said first and second modulators, a limiter for maintaining the amplitude of said resulting carrier oscillations at a constant value, and a synchronized detector having supplied thereto the limited resulting carrier oscillation and the unshifted carrier oscillation, said detector producing a detected output voltage having an instantaneous amplitude proportional to the instantaneous amplitude of the first input signal divided by the instantaneous amplitude of the second input signal.

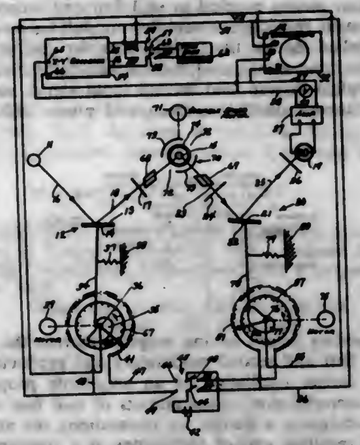


3,092,721
X-RAY FILM HOLDER AND AIMING ELEMENT
Fred M. Medwedeff, 1211 21st Ave. S., and William H. Knox, 2102 West End Ave., both of Nashville, Tenn.
Filed July 28, 1961, Ser. No. 127,671
11 Claims. (Cl. 250—70)



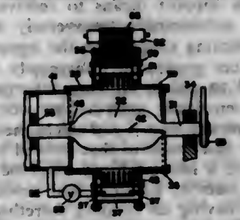
1. An X-ray film holder and aiming element comprising a support member arranged to be positioned at one end within the oral cavity of a patient and provided on said end with support means to receive an X-ray film and hold it substantially transversely to said support member, an aiming element on the opposite end of said support member positioned transversely to said member and arranged to aid in sighting the cone of an X-ray machine concentrically with a film when supported by said support means, and X-ray shield means substantially equal in area and shape to that defined by the perimeter of the cone of a normal X-ray machine and carried by said support member adjacent said aiming element, said shield means having an opening therethrough of a similar shape and area to that of a conventional X-ray film and positioned so that a line passing perpendicularly through the center of said opening also will pass substantially through the center of said film, whereby scattering of X-rays emanating from said cone when in use and contacting the patient with scattered X-rays will be minimized.

3,092,722
SPECTRO-PHOSPHORESCENCE MEASURING INSTRUMENT
Hugh K. Howerton, Silver Spring, Md., assignor to American Instrument Company, Inc., Silver Spring, Md.
Filed Feb. 25, 1960, Ser. No. 11,092
16 Claims. (Cl. 250—77)



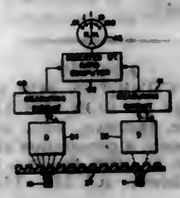
1. In an apparatus for measuring the phosphorescent response of a material independently of its fluorescent response, a source of monochromatic excitation radiation, a stationary sample cell adapted to contain the material and retain it in a stationary condition, means directing radiation from said source to said cell, an emission monochromator mounted in the path of phosphorescent emission from said cell, a photo-sensitive device mounted in a position to receive a selected spectral component of the phosphorescent emission from said monochromator, and means to introduce a time delay between the reception of a predetermined amount of radiation from said source by said cell and the reception of the resultant emission radiation from the cell by said monochromator, said time delay being sufficient to allow fluorescent emission to substantially decay.

3,092,723
DETECTION, METERING AND/OR ANALYSIS OF RADIOACTIVE PARTICLES
Robert E. Payne, Newtown Square, and Martin J. Cohen, King of Prussia, Pa., and Henry C. Gibson, Jr., Palm Beach, Fla., assignors to The Sharples Corporation, a corporation of Delaware
Filed Sept. 24, 1958, Ser. No. 762,966
15 Claims. (Cl. 250—83)



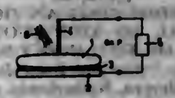
1. A process comprising rapidly concentrating in a locus of centrifugal force finely divided solid particles contained in a fluid medium, said concentration being effected apart from contamination of said particles with extraneous material during said concentration, and monitoring particles so concentrated for radioactivity.

3,092,724
MASS DISTRIBUTION ANALYZER
George B. Foster, Worthington, Ohio, assignor to Industrial Nucleonics Corporation, a corporation of Ohio
Filed July 27, 1959, Ser. No. 829,668
3 Claims. (Cl. 250—83.3)



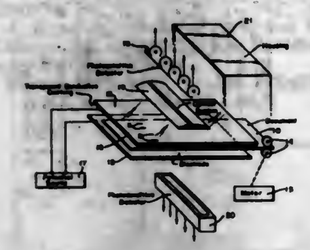
1. The method of measuring independent of variations in the mass per unit area the relative uniformity of mass distribution in a material of substantially constant chemical composition, which comprises irradiating a sample of said material having a standard uniformity of mass distribution with a first and a second radiation having mutually different characteristics, detecting the intensity of said radiations emanating from said sample, generating an electrical signal indicative of said detected intensity of said first radiation, generating another electrical signal indicative of the detected intensity of said second radiation, recording the ratio of said signals; replacing said sample with a material having an unknown uniformity of mass distribution and of substantially the same mass per unit area and substantially constant chemical composition as said sample, irradiating said material of unknown mass uniformity with said first and second irradiation having mutually different characteristics, detecting the intensity of said radiation from said sample, generating first and second electrical signals from said detected radiation, and deriving a ratio from said first and second signals; comparing said sample ratio with said last named ratio, and indicating any change in said ratio as representative of a change in the uniformity of the mass distribution of said material independent of variations in the mass per unit area.

3,092,725
BLOCKING-LAYER PHOTO-ELECTRIC CELL
Hermann Georg Grimmeiss, Aachen, Germany, and Hein Koelmans, Eindhoven, Netherlands, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Aug. 16, 1960, Ser. No. 50,010
Claims priority, application Germany Aug. 29, 1959
6 Claims. (Cl. 250—212)



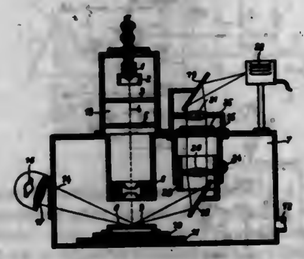
1. A semiconductor photocell responsive to visible radiation, comprising a body containing an active region consisting essentially of gallium-phosphide (GaP) and within the said active region adjacent zones of p-type and n-type conductivity forming a p-n junction, and contacts to spaced regions of the body at opposite sides of the said p-n junction, said body being arranged to receive the radiation on a surface thereof in the vicinity of the said p-n junction.

3,092,726
ELECTROLUMINESCENT MARK SENSING
George Richard Adams, Elkins Park, and Thomas R. Cleary, Drexel Hill, Pa., assignors to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Filed Dec. 31, 1956, Ser. No. 631,770
1 Claim. (Cl. 250—219)



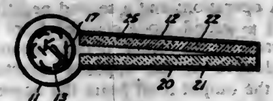
In an information sensing system, the combination of a document bearing a coded pattern of spaced electroluminescent phosphor marks, a pair of substantially parallel electrodes, a potential source connected to said electrodes for producing an electric field therebetween, roller means for moving said document into, through and out of said electric field, a plurality of photocells for detecting the light emitted from said encoded phosphor marks, said photocells being arranged to detect corresponding phosphor marks in given positions on said document, an optical system for focusing on said photocells the light emitted from said phosphors, and a light-tight housing enclosing said electrodes whereby phosphors on said document are excited only by said electric field.

3,092,727
APPARATUS FOR THE SIMULTANEOUS OBSERVATION OF AN INCANDESCENT SPOT AND A RELATIVELY COOL SURROUNDING AREA
Roland Leinhos, Oberkochen, Wurttemberg, and Klaus Koch, Aalen, Wurttemberg, Germany, assignors to Carl Zeiss, Oberkochen, Wurttemberg, Germany
Filed Feb. 6, 1961, Ser. No. 87,145
Claims priority, application Germany Feb. 6, 1960
6 Claims. (Cl. 250—226)



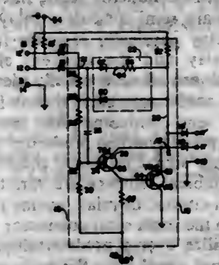
1. Apparatus for simultaneous observation of an incandescent spot and its surroundings, comprising a source of light of short wavelength, said wave length being shorter than the wave lengths of the principal emission from said incandescent spot, means to focus said light on the area under observation, said area including said incandescent spot, and means for observing said illuminated area, said observation means including a filter passing only light of said short wavelength, said filter being placed in the path of the observation rays.

3,092,728
LIGHT COLLECTING APPARATUS FOR PHOTOSENSITIVE DEVICE
John J. McMackin and Miller J. Parsolo, Brockway, Pa., assignors to Brockway Glass Company, Inc., Brockway, Pa.
Filed Mar. 15, 1961, Ser. No. 95,891
8 Claims. (Cl. 250—239)



1. Light sensitive means comprising a photocell sensitive to light impinging radially thereagainst, a generally cylindrical casing for said cell, and frame means comprising a radial extension of said cylindrical casing, said frame means having opposed relatively flat front and rear walls defining a light receiving area of substantial height and width, said front wall comprising an open frame and said front and rear walls being disposed at an acute angle having its vertex at the outer end of said extension, a flat plate of diffusing glass in said open frame front wall and a flat plate of diffusing glass against said rear wall, and opaque means at the rear side of said second flat plate for light reflectance, whereby light impinging externally on said front plate is diffused therein and transmitted to the space between said plates and thence reflected and refracted toward said cell so that light impinging on the entire area of the front plate is transmitted to said cell concentrated to a relatively narrow rectangle of light extending parallel to the axis of said cell.

3,092,729
BI-LEVEL AMPLIFIER AND CONTROL DEVICE
Seymour R. Cray, Minneapolis, Minn., assignor to Control Data Corporation, Minneapolis, Minn., a corporation of Minnesota
Filed Nov. 3, 1958, Ser. No. 771,428
5 Claims. (Cl. 307—88.5)



1. A bi-level circuit having two different stable output levels changeable from one level to the other level by application to the circuit of a control signal, the output voltage being less than the control signal voltage at one output level and greater than the control signal voltage at the other output level, and said output levels being separated by an unstable transitional zone occurring during transition between output levels, said circuit being connected to a source of D.C. potential and comprising voltage divider means connected across said source; a direct-current-coupled phase inverting amplifier having an output connected across said source and having an input connected to said voltage divider means and normally biased thereby to establish one of said output levels at which the output vol age bears a certain polarity relationship with respect to the control signal voltage; input terminal means coupled to the voltage divider means to receive said control signal and apply it to the input

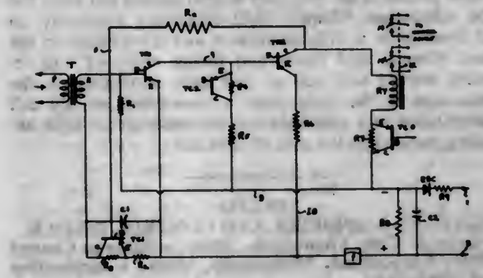
to the amplifier; a first negative feedback path including a first diode coupled from said output through part of the voltage divider means to said input and disposed to conduct current in one direction therebetween when said first output level bears said certain polarity relationship with respect to the input voltage to regulate said first output voltage to one level and maintain the amplifier within class A operation; and a second negative feedback path including a second diode coupled from said output through a portion of the voltage divider means to said input and conductive in the opposite direction to pass current when the output level bears the opposite polarity relationship with respect to the input voltage to regulate the second output voltage to the other level and maintain the amplifier within class A operation.

3,092,730

METHOD OF AND APPARATUS FOR TEMPERATURE-STABILIZING SEMI-CONDUCTOR RELAYS AND THE LIKE

William G. Rowell, 36 Greenwold Road, Quincy, Mass.

Filed Dec. 10, 1958, Ser. No. 779,407
17 Claims. (Cl. 307—88.5)



7. Apparatus for stabilizing and controlling the output signal of a main semi-conductor relay, having, in combination with the main semi-conductor relay, an auxiliary semi-conductor relay physically separate from the main semi-conductor relay and the inherent electrical characteristics of which are all substantially identical to those of the main semi-conductor relay, means for connecting the said auxiliary semi-conductor relay into an electrical circuit to provide predetermined minimum and maximum limits of a reference signal produced thereby in response to the action of ambient temperature variations upon the said auxiliary semi-conductor relay, means for feeding the reference signal to the main semi-conductor relay in order thereupon to stabilize over a predetermined temperature range the said output signal from the main semi-conductor relay, means for feeding a control signal to the input of the auxiliary semi-conductor relay, and means for feeding the resulting signal from the auxiliary semi-conductor relay to the main semi-conductor relay in order thereupon to modify the said output signal of the main semi-conductor relay.

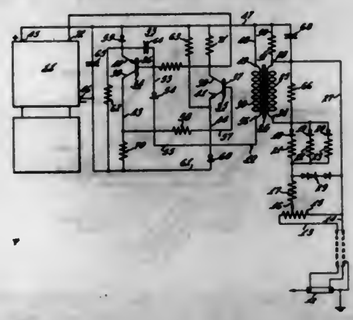
3,092,731

PULSE AMPLITUDE DISCRIMINATOR

John Baude, Milwaukee, Wis., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.

Filed Feb. 24, 1959, Ser. No. 794,965
14 Claims. (Cl. 307—88.5)

1. A triggering circuit responsive to a predetermined pulse amplitude comprising a source of electric oscillations, a transformer comprising a primary winding, said primary winding being connected across said source of oscillations, an adjustable impedance connected in shunt across said source of oscillations and said primary winding, a voltage responsive impedance means comprising a semiconductor having a very high voltage characteristic in one operating range and a very low voltage operating characteristic in another range, connected in series with



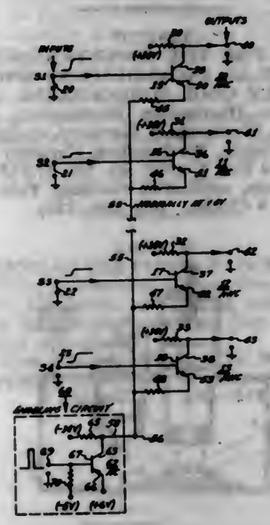
said primary winding for transmitting the oscillations of said source as a function of voltage amplitude, said adjustable impedance being varied to match the voltage responsive impedance means rating.

3,092,732

MAXIMUM SIGNAL IDENTIFYING CIRCUIT

Richard E. Milford, Glendale, Ariz., assignor to General Electric Company, a corporation of New York

Filed May 1, 1959, Ser. No. 810,485
8 Claims. (Cl. 307—88.5)



1. A circuit for identifying the one of a plurality of input signals which has the maximum voltage, comprising; a plurality of transistors, each having an emitter, a collector and a base electrode, means for applying each of said input signals to a different one of said base electrodes, a common terminal, a plurality of substantially equal resistors, each of said resistors being connected between said common terminal and a respective one of said emitter electrodes and an additional resistor, said additional resistor being connected to said common terminal for providing a path for current flow through any one of said emitter electrodes.

3,092,733

FOUR ZONE TRANSISTOR HAVING INTEGRAL DIODE FORMED ON BASE REMOTE FROM TRANSISTOR

Theodore J. Kaye, Jr., Franklin Park, and Richard H. Vogt, Chicago, Ill., assignors to The Rauland Corporation, a corporation of Illinois

Filed July 16, 1959, Ser. No. 827,654
4 Claims. (Cl. 307—88.5)



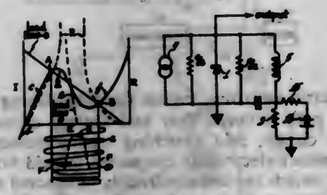
1. A semiconductor device comprising: a body of semiconductive material of predetermined conductivity type; an emitter junction within a first portion of said body; a zone having an intermediate heavily doped layer of said predetermined conductivity type between said body and a region of material of opposed type conductivity forming a collector junction within a second portion of said body; and a rectifying junction within a third portion of said body at a distance from said zone in excess of the diffusion length in said body.

3,092,734

AMPLITUDE LIMITER FOR A.C. SIGNALS USING A TUNNEL DIODE

Gerald E. Theriault, Haddon Heights, N.J., assignor to Radio Corporation of America, a corporation of Delaware

Filed Dec. 18, 1959, Ser. No. 860,387
2 Claims. (Cl. 307—88.5)



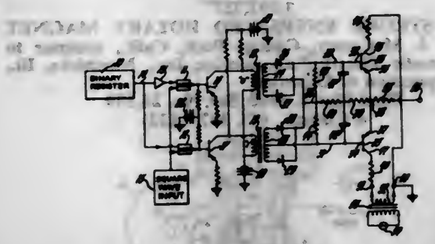
1. A signal limiting circuit comprising a voltage controlled semiconductor tunnel diode having an operating characteristic with two positive conductance portions separated by a negative conductance portion, means for biasing said diode to operate at a selected stable point on one of said positive conductance portions in the absence of applied signals, means for loading said diode to control oscillation when signals are applied thereto, means for applying signals to said diode to drive said diode through said negative conductance portion to a second stable point on the other of said positive conductance portions of said operating characteristic, whereby signals having peak-to-peak amplitudes greater than the difference between said stable points are clipped to levels substantially determined by said stable points, and an inductor connected in series with said diode for resonating said circuit to a frequency of said applied signals.

3,092,735

SWITCHING CIRCUIT FOR A LADDER TYPE DIGITAL TO ANALOG CONVERTER UTILIZING AN ALTERNATING REFERENCE VOLTAGE

James B. Ricketts, Jr., Milwaukee, Wis., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Mar. 28, 1960, Ser. No. 17,842
4 Claims. (Cl. 307—88.5)



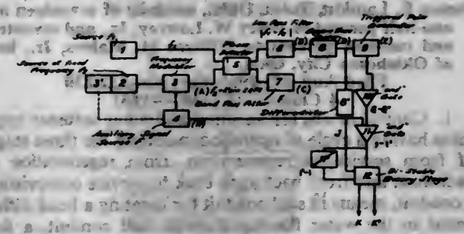
1. A switching circuit comprising first and second transistors each having base, emitter, and collector electrodes, the emitters of said first and second transistors being connected together at a juncture, a resistor having first and second terminals, said first terminal being connected to said juncture, first and second mutually exclusive and opposing unidirectional voltage sources, said first source being connected between the base of said first transistor and said second terminal, said second source being connected between the base of said second transistor and said second terminal whereby said first and second transistors are alternately conductive, a voltage source connected between the collector of said second transistor and a common point, the collector of said first transistor being connected to said common point, and output means connected between said juncture and said common point.

3,092,736

PLURAL SIGNAL FREQUENCY DETECTOR ABLE TO CONTINUOUSLY DISTINGUISH WHETHER FREQUENCY DIFFERENCE IS POSITIVE OR NEGATIVE

Herbert H. Ennyel, Paris, France, assignor to Lignes Telegraphiques et Telephoniques, Paris, France, a joint-stock company of France

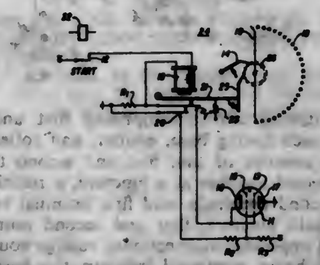
Filed Mar. 29, 1961, Ser. No. 99,278
Claims priority, application France Mar. 30, 1960
9 Claims. (Cl. 307—88.5)



1. In a circuit adapted to enable the determination to be made, in a continuous manner, of the sign of a difference between two quantities represented by the frequency of two continuous waves, one said continuous wave being modulated by an auxiliary signal, means to generate waves at different frequencies and means to generate an auxiliary signal, a phase-detector circuit receiving the waves and auxiliary signal from both said means and supplying signals to two filters, one said filter being tuned at the beat frequency of said two continuous waves and the other said filter being tuned at the frequency of said auxiliary

signal, two gate units of the "and" type which receive and compare the phase of the signal from the said filter which is tuned at the frequency of the auxiliary signal with the phase of the auxiliary signal, two shaping circuits which receive, as input, the output from the said beat frequency filter and shape said input into a control signal for operating said two gate units.

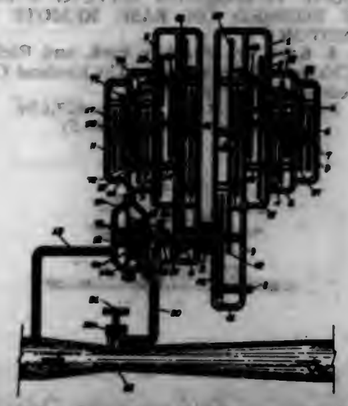
3,092,737
FULL STROKE ENERGIZED ROTARY MAGNET
Harold J. McCreary, Canoga Park, Calif., assignor to Automatic Electric Laboratories, Inc., Northlake, Ill., a corporation of Delaware
Filed May 3, 1960, Ser. No. 26,639
4 Claims. (Cl. 307—112)



1. In combination with an electromagnetic device having a magnet, an armature actuated by said magnet and first and second contacts controlled by said armature: a self interrupting arrangement for said magnet insuring completion of both the operating and release stroke of said armature, said arrangement comprising a source of potential, a bistable switching means having a control electrode, output electrodes, and a circuit including said output electrodes, said magnet, and said second contact, said first contact being arranged to operate near the end of said release stroke to connect said control electrode to said potential, said bistable switching means being switched to one of its states in response to the last mentioned connection to cause said magnet to be energized under the control of said output electrodes, and said second contact being arranged to operate near the end of the operating stroke of said device to switch said switching means to its other state and de-energize said magnet.

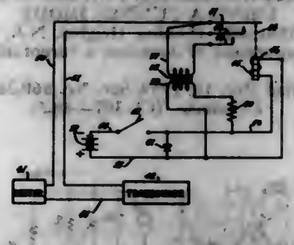
3,092,738
CONTROL FOR WATER SOFTENING APPARATUS
James E. Lamkin, Tulsa, Okla., assignor of seventeen and one-half percent to Wiley W. Lowrey, Jr., and seventeen and one-half percent to William M. Majors, Jr., both of Oklahoma City, Okla.
Filed Aug. 17, 1961, Ser. No. 132,230
4 Claims. (Cl. 307—118)

1. Control means for an automatic water softener apparatus having a cycle of operation including the three stages of from service to regeneration, from regeneration to backwash and from backwash back to service comprising: a conduit, means in said conduit for creating a head differential in the water flowing through said conduit, a first gear train including a driving means, a plurality of driven cam wheels mounted in series and switch means having followers riding said cam wheels for breaking and making electrical contact, a second gear train including a plurality of driven cam wheels mounted in series and switch means having followers riding said cam wheels for breaking and making electrical contact wherein said second gear train is connected to said driving means through a clutch, means responsive to variations in said head differential whereby said clutch is engaged and disengaged in response to said head differential thus driving said second gear train only when said clutch is engaged, said means including a flexible diaphragm operably connected with said means for creating a head differential and electrical interconnecting means between the switch means included in said first and



second gear trains whereby said cycle of operation is controlled by a combination of time and the quantity of water flowing through said conduit.

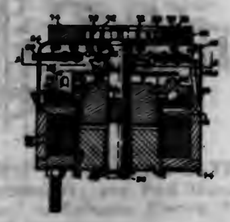
3,092,739
DRY CIRCUIT SWITCHING MEANS
Tenny Lode, Minneapolis, Minn., assignor to Rosemount Engineering Company, Minneapolis, Minn., a corporation of Minnesota
Filed Nov. 13, 1959, Ser. No. 852,869
7 Claims. (Cl. 307—137)



1. Electric switching means for establishing a low impedance path between first and second elements in an electrical circuit, said switching means including a first switch contact electrically connected to said first element, a second switch contact electrically connected to said second element, a source of electromotive force, a third switch contact, make and break means for first successively bringing said first and second switch contacts into mechanical connection with each other and bringing said third contact into electrical connection with said second contact and secondly successively disconnecting said third contact from said second contact and disengaging said first and second contacts from each other, and means to effectively connect said source of electromotive force between said first and third contacts.

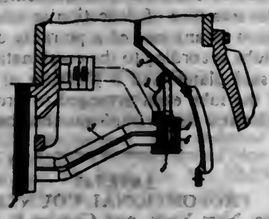
3,092,740
ROTARY STEPPING MOTOR
Gerald H. Leland, Dayton, Ohio, assignor to Lodex, Inc., a corporation of Ohio
Filed Jan. 12, 1959, Ser. No. 786,221
18 Claims. (Cl. 310—23)

1. In a stepping device, first and second relatively movable members having opposing surfaces, roller means interposed between said surfaces for rolling engagement therewith, the surface of said first member engaging said roller means at varying elevations relative to the surface of said second member, there being a continuous elevation gradient on said surface, yielding means biasing said roller means to a proximal extreme of said gradient with respect to the opposing surface, motive means for actuating said members one relative to the other to compress said roller means between said opposing surfaces thereby inducing said roller means to roll to a distal extreme of said gradient relative to the opposing surface, said motive means



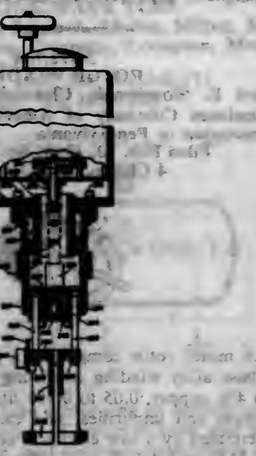
thereby inducing said members to move one relative to the other in the direction of said elevation gradient, structure for supporting said members one for movement along a path coincident with said elevation gradient and the other stationary relative to said path, and a switch including a first operator element operatively connected to said roller means and a second operator element mounted to engage said first operator element when said roller means is at one extreme of said elevation gradient and to disengage said first operator element when said roller means is at the opposite extreme of said elevation gradient.

3,092,741
DYNAMO-ELECTRIC MACHINERY
William D. Hornby, Newcastle-upon-Tyne, England, assignor to C. A. Parsons & Company Limited, Newcastle-upon-Tyne, England
Filed July 5, 1957, Ser. No. 670,043
Claims priority, application Great Britain July 6, 1956
6 Claims. (Cl. 310—54)



1. A stationary winding of a dynamoelectric machine, which winding comprises conductors housed in slots in a stator core, end portions of the conductors extending beyond said core at each end thereof, said end portions of the conductors being housed in a plurality of boxes of electrical insulating material, a cooling fluid being supplied to the boxes at one end of the conductors and collected in boxes situated at the other end of the conductors, and sealing means are provided for each conductor at the place where it enters the said boxes the sealing means comprising means for supplying a pressurised fluid to annular spaces between said conductor and the walls of the box, the pressure of the said fluid being greater than that of the cooling fluid.

3,092,742
MOTOR POSITIONING DEVICE
Paul E. Smith, Jr., Littleton, Mass., and Hans A. Dudler, Zurich, Switzerland, assignors to Cenval Corporation, Cambridge, Mass., a corporation of Massachusetts
Original application Apr. 19, 1956, Ser. No. 576,928, now Patent No. 2,948,839, dated Aug. 9, 1960. Divided and this application Feb. 18, 1960, Ser. No. 9,465
8 Claims. (Cl. 310—68)



1. In a positioner device of the type described a threaded shaft, means supporting said shaft for rotation and longitudinal movement, means for rotating said shaft, a nut threaded thereon adapted to be moved longitudinally by rotation of said shaft, means for restraining said nut from rotation, a sleeve member coaxial with said shaft, bearing means fixing said sleeve member to said threaded shaft, and spring means engaging said sleeve member for tensioning said shaft in a longitudinal direction, said sleeve member adapted to be moved longitudinally on longitudinal movement of said shaft against the tension of said spring means for engaging a switch mechanism.

3,092,743
A.C. MOTOR
Damon Van Utt, Essex, and Howard J. Sampson, Deep River, Conn., assignors, by mesne assignments, to Gisinal Controls Corporation, Duarte, Calif., a corporation of New York
Filed Dec. 17, 1959, Ser. No. 860,196
7 Claims. (Cl. 310—162)



1. An electric motor comprising a pair of opposed cylindrical magnetic field assemblies, each of said assemblies including an axial hub, a pair of pole pieces secured to opposite end portions respectively of the hub, each pole piece being in the general shape of a cup and having poles forming the cylindrical portion of the cup and projecting from the base of the cup toward the opposing field assembly, and a coil mounted on the hub and located within one of the cup-shaped pole pieces, the projecting

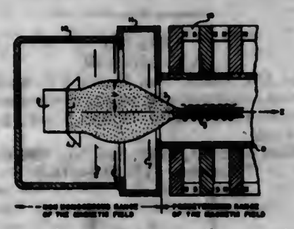
poles of each assembly extending between and in spaced relation to the projecting poles of the other assembly and defining a polar space between the assemblies, a magnetic rotor disposed for rotation within said polar space, a non-magnetic tubular shell closely surrounding both field assemblies and bearing against the poles thereof, and non-magnetic spacer means including teeth disposed between adjacent poles of the assemblies to maintain magnetic gaps between said assemblies.

3,092,744
ROTOR WINDING
Edward E. Stonebrook, Cleveland, Ohio, assignor to Aluminum Company of America, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Feb. 23, 1960, Ser. No. 10,476
4 Claims. (Cl. 310—211)



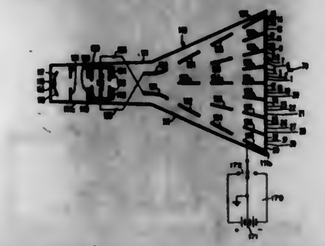
1. A motor rotor comprising a core and a cast aluminum base alloy winding consisting of 14 to 20% silicon, 0.5 to 4% copper, 0.05 to 0.3% titanium and the balance aluminum and impurities, said cast rotor winding being characterized by a low electrical conductivity of less than about 25% of I.A.C.S. on a volume basis and by substantial freedom from hot cracks.

3,092,745
MAGNETIC MEANS FOR FOCUSING AND DENSIFYING THE ELECTRON BEAM IN TRAVELING WAVE TUBES
Werner Veith and Paul Meyerer, Munich, Germany, assignors to Siemens & Halske Aktiengesellschaft, Berlin and Munich, Germany, a corporation of Germany
Filed June 24, 1959, Ser. No. 822,592
Claims priority, application Germany June 25, 1958
11 Claims. (Cl. 313—84)



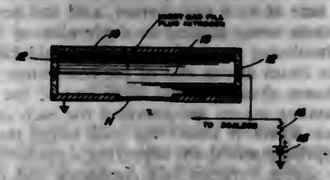
1. An electron beam-producing system for discharge tubes with a magnetic system for the guidance of a focused and densified electron beam, said magnetic system producing a predetermined magnetic field extending in the discharge direction over a major part of the discharge range, the cathode of said system being disposed in the non-homogeneous range of the magnetic field which precedes the predetermined range thereof as seen in the electron beam direction and emitting an electron beam with non-converging borders, a ring-shaped Wehnelt cylinder and at least one anode operatively spaced from said cathode, the magnetic field extending between the cathode and the predetermined range of said field passing through a maximum and a minimum and a magnetically soft cylindrically shaped ring disposed approximately coaxially with the electron beam within the region between the emitting cathode surface and the point of highest value of the magnetic field strength upon the system axis to increase the action of the magnetic field directly ahead of the end of the cathode.

3,092,746
CATHODE RAY TUBE FOR PROCESSING DIGITAL DATA
Edwin J. Sawara, Apalachin, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed July 18, 1960, Ser. No. 43,672
6 Claims. (Cl. 313—85)



1. A cathode ray tube for processing digital data comprising an electron gun including a cathode, a pair of plates positioned at an acute angle with the plane of the cathode for forming a sheet beam, said plates being spaced from said cathode, means for said plates being arranged for providing on-off control of the emission from said cathode, means for accelerating the electron beam, an electron lens system for developing a potential field for focusing the electron beam onto the face of the tube, said lens system comprising at least three apertured lenses positioned transversely to the electron beam, first apertured stop means positioned intermediate the first and second of said lens, second apertured stop means positioned intermediate the second and third of said lens, said stop means being positioned so as not to disturb the focusing field developed by said lens, a plurality of electron beam deflecting plates for controlling said beam to impinge at selected points on the face of the tube, said plurality of plates being positioned in spaced relation in a truncated-cone-like arrangement with a row of two deflecting plates forming the narrow end of the cone and being positioned adjacent the lens system, a row containing the largest number of deflecting plates positioned adjacent the face of the tube, said deflecting plates providing a transfer tree type of deflection in which the electron beam is routed to any one of a plurality of points on the face of the tube according to the combination of potentials applied to said plates, and a plurality of anode tabs on the face of the tube each arranged to provide an output when the electron beam impinges thereon.

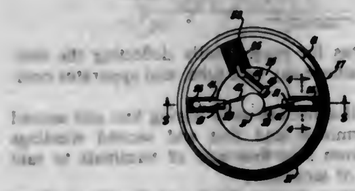
3,092,747
PROPORTIONAL COUNTER
Samuel Fine, New York, and Charles F. Hendee, Hartsdale, N.Y., assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Jan. 9, 1959, Ser. No. 785,828
3 Claims. (Cl. 313—93)



1. A radiation-detecting, gas-type proportional counter comprising a cathode electrode and an anode electrode

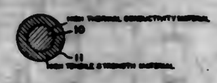
and between the electrodes a gas filling free of oxygen consisting essentially of an inert gas, means applying between the electrodes a potential at which, when external radiation is absorbed by the gas filling generating electron-ion-pairs by ionization, the said electrons and ions are accelerated toward the electrodes at a rate causing further ionization and multiplying the number of electrons and ions present by a Townsend avalanche, which electrons and ions when collected by the electrodes produce a current pulse whose magnitude is proportional to the energy of the absorbed external radiation, said potential also having a value at which the said proportional current pulse tends to be followed by a group of unwanted spurious afterpulses, and means for eliminating the said spurious afterpulses without substantially limiting the lifetime of the counter, said means comprising between 1% and 70% by volume of oxygen-free nitrogen gas added to the gas filling.

3,092,748
INDIRECTLY HEATED CATHODE
Herbert F. Dickson, Jr., and Paul Haas, Seneca Falls, N.Y., assignors to Sylvania Electric Products Inc., a corporation of Delaware
Filed Mar. 11, 1960, Ser. No. 14,470
6 Claims. (Cl. 313—270)



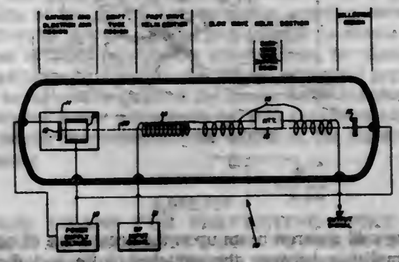
1. An indirectly heated cathode assembly adapted for use in an electron discharge device comprising an insulating support provided with a central longitudinal opening, radially spaced leads mounted upon said support extending partially across said central opening, and an indirectly heated cathode structure employing a metallic cathode base having a connector attached thereto and a heater partially enclosed therein with the free ends thereof extending outwardly from said base, a separate one of said leads being connected to each of said heater free ends and to said cathode connector to provide electrical contacts with said heater and cathode base and to suspend the structure across said central opening.

3,092,749
ELECTRON DISCHARGE DEVICE
Walter T. Millis, Owensboro, Ky., assignor to General Electric Company, a corporation of New York
Filed Apr. 15, 1960, Ser. No. 22,535
3 Claims. (Cl. 313—350)



1. A grid electrode for an electron discharge device having a thermionic cathode and an anode supported in an evacuated envelope and in mutually spaced relation thereto, means supporting the grid electrode between said cathode and said anode in close proximity to said cathode so that the grid is subject to being rendered electron-emissive during operation of the device, said grid electrode comprising a plurality of lateral wires mounted on said supporting means, said wires comprising a core of copper material and a cladding of high-tensile strength material completely encasing said core, the relative cross-sectional areas of said core and said cladding being in the range of about 1/6 to about 1/2 to effect cooling of said grid below electron-emissive temperatures and simultaneously to provide sufficient structural strength of said grid to withstand tensile stresses exerted thereon during fabrication and operation of the device.

3,092,750
TRAVELING WAVE TUBE
Hermann A. Haus and James A. Mullen, Milton, Mass., assignors to Raytheon Company, Lexington, Mass., a corporation of Delaware
Filed Oct. 22, 1959, Ser. No. 848,071
4 Claims. (Cl. 315—3.6)

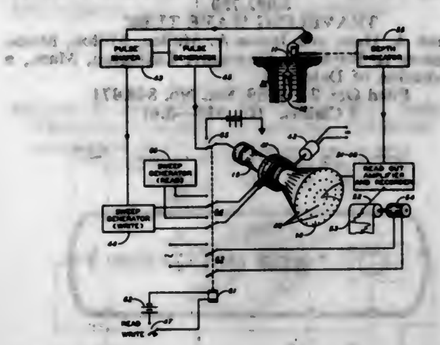


4. A traveling wave tube comprising an electron source; means for directing a beam of electrons from said source along an extended path, said electron beam having a first space charge wave traveling at a velocity greater than that of said electrons and a second space charge wave traveling at a velocity less than that of said electrons; helical delay line means being positioned adjacent said extended path and including first and second interconnected helical delay line sections, said second helical section including attenuation means for preventing backward wave oscillations within said traveling wave tube; means for propagating an electromagnetic wave along said first and second helical sections, the pitch of said first helical section being selected to provide an interaction between said electromagnetic wave and said first space charge wave and the pitch of said second helical section being selected to provide an interaction between said electromagnetic wave and said second space charge wave, the length of said first helical section being adjusted so as to reduce the noise associated with said electromagnetic wave to a minimum; output coupling means connected to said second helical section for removing said electromagnetic wave from said traveling wave tube.

3,092,751
PULSE ANALYZING
Calvin M. Clark, Fullerton, Calif., assignor to California Research Corporation, San Francisco, Calif., a corporation of Delaware
Original application June 28, 1957, Ser. No. 668,781, now Patent No. 2,968,724, dated Jan. 17, 1961. Divided and this application Sept. 28, 1959, Ser. No. 842,622
2 Claims. (Cl. 315—8.5)

1. The method of storing a discrete bit of information having a distinct characteristic on a storage surface of a cathode ray storage tube comprising the steps of generating a discrete pulse having a distinct amplitude representing the distinct characteristic of said bit of information, stretching said discrete pulse to a predetermined time duration while retaining said distinct amplitude, initiating a linearly sloping sawtooth waveform signal in synchronism with the initiation of said stretched pulse, the maximum amplitude of said sawtooth waveform being at least as large as the largest distinct amplitude of said information to be stored, comparing the amplitude of said stretched pulse to the amplitude along said saw-

tooth waveform, generating an electron beam within said storage tube, directing said electron beam toward said storage surface, rotating a deflection means about said electron beam and energizing said deflection to sweep said beam radially outwardly from the center of said storage surface in accordance with the position of said rotating deflection means, initiating the energization of said deflection means at the beginning of a discrete pulse, and



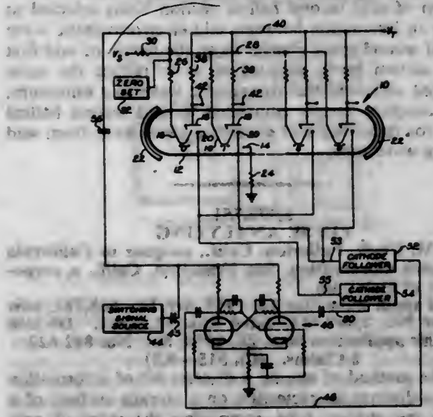
gating said electron beam upon the occurrence of equality in amplitude between the stretched pulse and the sawtooth signal initiated by the said discrete pulse initiating said deflection means energization to produce a portion of a trace on said storage surface at a distinct radial distance from the center of said storage surface in accordance with said distinct characteristic of said information.

3,092,752

DRIVE CIRCUIT FOR ELECTRONIC COUNTERS WITH MEANS TO PREVENT SPURIOUS SWITCHING

Roger W. Wolfe, South Plainfield, N.J., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan

Filed May 23, 1960, Ser. No. 30,966
4 Claims. (Cl. 315—8.5)



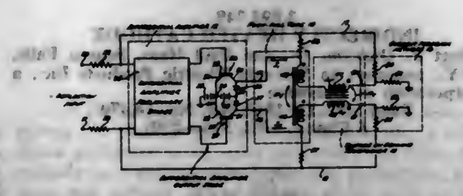
1. A counter circuit including a magnetron-type electron beam switching tube having a cathode and a plurality of groups of electrodes; each group including a target electrode which receives an electron beam and produces an output signal therefrom, a spade electrode which holds an electron beam on its associated target electrode, and a switching electrode which serves to switch an electron beam from one group of electrodes to the next; means providing a longitudinal magnetic field in said tube; said switching electrodes being connected in two sets with alternate electrodes being connected together; flip-flop driving means coupled to said sets of switching electrodes; and switching signal input means coupled both to said flip-flop and to the spade electrodes of said beam switching tube whereby a switching signal is applied to said flip-flop and to said beam tube at the same time; said signal rendering said beam tube temporarily difficult to switch during the time when said flip-flop is changing states to provide desired steady-state switching of the tube.

3,092,753

MAGNETIC DEFLECTION APPARATUS FOR CATHODE RAY TYPE TUBE

Werner Steiger, Newport Beach, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware

Filed Jan. 15, 1962, Ser. No. 166,330
8 Claims. (Cl. 315—27)



1. An apparatus for magnetically deflecting the electron beam of a cathode-ray type tube, said apparatus comprising:

(*a*) a push-pull deflection yoke having first and second pairs of terminals and first and second windings connected from said first pair of terminals to said second pair of terminals;

(*b*) a transformer having third and fourth windings connected from said second pair of terminals of said push-pull deflection yoke to a source of substantially fixed potential, said third and fourth windings being poled in the same direction whereby the mutual inductance therebetween is positive; and

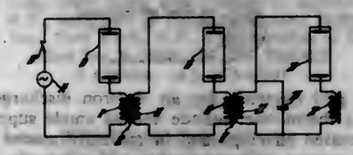
(*c*) means including a differential amplifier connected to said first pair of terminals of said push-pull deflection yoke and responsive to a deflection signal for producing a difference in current flow through said first and second windings of said push-pull deflection yoke and through said third and fourth windings of said transformer thereby to deflect said electron beam in accordance with said deflection signal.

3,092,754

FLUORESCENT LAMP CIRCUIT

Douglas L. Faiss, Flint, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Sept. 14, 1960, Ser. No. 55,956
6 Claims. (Cl. 315—97)



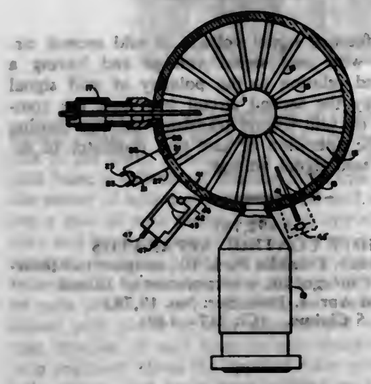
1. In a gaseous discharge tube system, a first series circuit comprising a discharge tube and the primary of a transformer, an alternating voltage source connected across said first series circuit, substantially all of the voltage from said source being initially applied across said tube permitting said tube to start, an increased portion of the voltage from said source being applied across said primary and a decreased portion of the voltage from said source being applied across said tube after said tube starts, the decreased portion of the voltage across said tube being sufficient to maintain conduction of said tube, and a second series circuit comprising a discharge tube and ballast means, said second series circuit being connected across the secondary of said transformer, the increased portion of the voltage across said primary causing an increased voltage across said secondary which is sufficient to start said second tube.

3,092,755

HIGH POWER VACUUM TUBES

David M. Goodman, 3843 Debra Court, Seaford, N.Y.

Filed Apr. 11, 1958, Ser. No. 727,969
9 Claims. (Cl. 315—158)



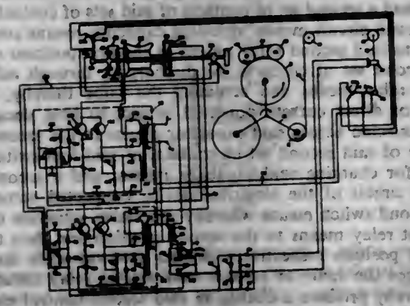
1. A high power vacuum tube, which is capable of providing a positive indication when it cannot operate properly, comprising a cathode element adapted to yield a copious supply of electrons which generates the useful output of the tube in combination with a supplementary fuse-like non-electron-emissive filament used solely for the purpose of conducting a test current, to determine the condition of vacuum within the tube, whereby the supplementary filament burns out to interrupt the test current when the tube has lost its vacuum.

3,092,756

SYNCHRONIZED CONTROL SYSTEM

Aubrey H. Smith, Kenosha, Wis., assignor to Eaton Manufacturing Company, Cleveland, Ohio, a corporation of Ohio

Filed Dec. 11, 1959, Ser. No. 859,013
11 Claims. (Cl. 317—6)



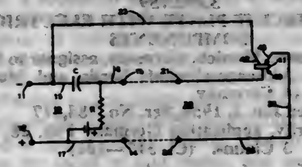
1. In a system having a variable speed master drive and a slave drive adapted to be coupled to a load and including an electro-magnetic coupling between the slave and the load and an electro-magnetic brake for the slave, the coupling and the brake each having a controlled excitation circuit to maintain the slave output in synchronism with the master, the combination comprising, means conditioning the brake excitation circuit to continuously activate the brake, other means operative in response to and during excitation of the coupling to disable the brake excitation circuit, individual means for generating a voltage proportional to the output speed of each drive respectively, means in said coupling excitation circuit for comparing the generated voltages, other means in said coupling excitation circuit for adjusting the excitation of the coupling in accordance with the compared differential voltage between said generated voltages to provide a coarse speed matching of the drives, a servo system coacting between the drives to provide a signal proportional to minute differences in speed between the drives, means for algebraically adding said signal to the voltage generated proportional to the output speed of the master drive and thereby superimpose a fine adjustment on said excitation adjustment means to synchronize the output of the slave with the master.

3,092,757

CIRCUIT MEANS FOR PREVENTING SPIKE OR SURGES AT THE OUTPUT OF A POWER SUPPLY

Aaron Rosenfeld, Jackson Heights, and Kenneth Kupferberg, Flushing, N.Y., assignors to Forbro Design Inc., New York, N.Y., a corporation of New York

Filed Aug. 1, 1958, Ser. No. 752,484
7 Claims. (Cl. 317—16)



1. A voltage clipping arrangement, for clipping voltage spikes at the output of a power supply, comprising, in combination, a sensing device having input terminals and output terminals and operable, responsive to sharp increases in the input voltage applied to its input terminals, to provide a potential across its output terminals proportional to the rate of increase of the input voltage; means for applying the power supply output voltage to be regulated to said input terminals; and a power absorbing device connected to said input terminals and said output terminals and triggered, responsive to a potential across said output terminals, to absorb sufficient power from said input terminals to reduce the spike voltage by an amount sufficient to maintain substantially constant the voltage applied to said input terminals.

4. A voltage clipping arrangement as claimed in claim 1 in which said power absorbing device comprises a transistor having a base electrode and an emitter electrode connected across said output terminals for biasing of said base electrode by the potential across said output terminals, and having its collector electrode and emitter electrode connected across said input terminals.

3,092,758

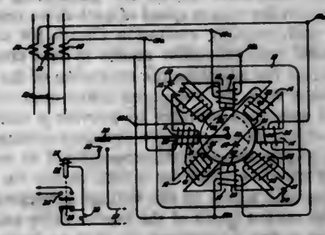
POLYPHASE ELECTROMAGNETIC PROTECTIVE RELAY

William C. Morris, Havertown, Pa., assignor to General Electric Company, a corporation of New York

Filed Sept. 12, 1960, Ser. No. 55,494
10 Claims. (Cl. 317—27)

1. An electromagnetic induction type relay responsive to predetermined magnitude relationships among three A.C. electric quantities comprising: a magnetizable stator

having a plurality of salient poles projecting therefrom; a magnetizable member spaced apart from the extremities of said poles to define therewith a plurality of gaps; a single current conducting rotor disposed for rotation through said gaps; and a plurality of magnetic flux producing windings on said stator energizable by the three electric quantities, respectively, for establishing magnetic fields in said gaps; at least one, but less than all, of the



windings which are energized by each one of the three electric quantities having associated therewith means for retarding the magnetic flux produced thereby; said rotor having driving torque induced therein by the interactions of said magnetic fields, and said windings being arranged whereby the three principal components of said driving torque are respectively proportional to the squared magnitudes of each one of said three electric quantities.

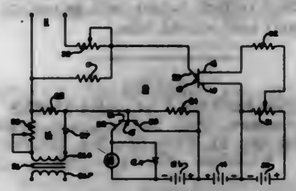
3,092,759
WIRED CIRCUIT PLATE WITH ELECTRICAL COMPONENTS
Friedrich Sommer, Munich, Germany, assignor to Siemens and Halske Aktiengesellschaft Berlin and Munich, a corporation of Germany
Filed Jan. 2, 1959, Ser. No. 784,517
Claims priority, application Germany Feb. 28, 1958
3 Claims. (Cl. 317—101)



1. A wired circuit plate having electrical components provided thereon on one side thereof, said components being according to a desired circuit scheme electrically interconnected by means of circuit wires looped through and deformed within holes which are preformed in said plate prior to the wiring thereof, whereby portions of said wires extending between holes are placed in firm intimate engagement with surface portions of said one side of the plate, and wherein the respective electrical components are provided with terminal wires which are extended through predetermined ones of said holes into engagement with the respective circuit wire portions looped therethrough for the purpose of soldering such terminal wires thereto, and a tubular member for clamping each of said looped wire portions in position within the corresponding hole.

3,092,760
SWITCHING CIRCUIT
Frank Alan Manners, and Terrence E. De Vinny, Cleveland, Ohio, assignors to Square D Company, Detroit, Mich., a corporation of Michigan
Filed Dec. 14, 1959, Ser. No. 859,357
9 Claims. (Cl. 317—148.5)

1. A transistorized circuit for controlling the energization of a relay coil energizable by current in accordance with a signal voltage, said circuit comprising a first circuit adapted for energizing a relay coil and including a first transistor operable for controlling the flow of current in said first circuit, a second circuit including a second transistor controlling the operation of said first transistor, means for applying a bias voltage to said second transistor, means for applying said signal voltage from a signal source to said second transistor, means



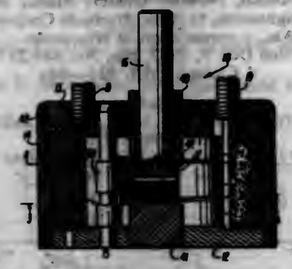
providing a reference signal voltage in said second circuit in series with said signal voltage and having a polarity in fixed relation to the polarity of said signal voltage, whereby the second circuit impresses the combined voltages on said second transistor thereby causing it to control the operation of said first transistor in accordance with said signal voltage.

3,092,761
REMOTE CONTROL APPARATUS
James A. Torrence, Franklin Park, Ill., assignor to Motorola, Inc., Chicago, Ill., a corporation of Illinois
Filed Apr. 4, 1960, Ser. No. 19,783
5 Claims. (Cl. 317—149)



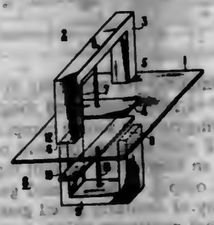
1. In a remote control system for operating two functions of an electrical device by means of pulsed signal energy, a receiver for the signal energy including in combination, signal translating and detecting means adapted to provide a output voltage in response to received pulse signal energy, first latching relay means coupled to said detecting means and having a plurality of sets of contacts each operable to first and second positions upon successive actuations of said first relay means produced by the output voltage from said detecting means, a first control circuit of the electrical device connected across a first set of contacts of said sets of contacts for control of the same, second relay means having switch means controlled thereby, second circuit means intercoupling said second relay means and a second set of contacts of said sets of contacts, said second circuit means including capacitor means connected to said second relay means in the first position of said second set of contacts for discharging through said second relay means and actuating the same thereby, a source of direct current potential subject to time decay and connected across said capacitor means in the second position of said second set of contacts of said first switch means for charging said capacitor means, and a second control circuit of the electrical device connected across said second switch means whereby successive actuation of said first relay means to the second position and then to the first position respectively charges said capacitor and discharges the same to actuate said second relay means and thereby produce a change in said second control circuit, and whereby single actuation of said first relay means to the first or second position controls said first control circuit.

3,092,762
ROTARY SOLENOID
Herbert C. Roters, Kew Gardens, N.Y., Willis A. Kropp, Rowayton, Conn., and George W. Haraszym, Forest Hills, N.Y., assignors to General Time Corporation, New York, N.Y., a corporation of Delaware
Filed May 9, 1960, Ser. No. 27,723
5 Claims. (Cl. 317—197)



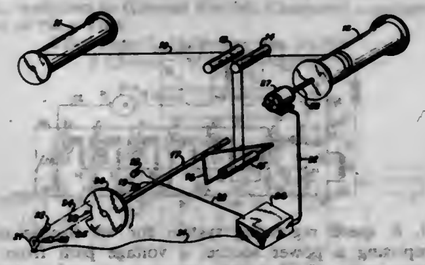
4. A rotary solenoid comprising, in combination, a shell having a base at one end and a cap anchored at the other end of the shell, a thrust plug mounted at the center of said base, a cylindrical bearing fitted into an opening at the center of said cap, said base and said cap each carrying a pair of pole pieces extending oppositely from said plug and bearing respectively and being in angular alinement, a shaft journalled in said bearing and carrying a rotor having opposed portions disposed between said pairs of pole pieces, a stop extending between two angularly alined pole pieces of said pairs at one edge thereof so that rotation of said rotor in one direction against said stop angularly alines the opposed rotor portions with said pole pieces, said rotor portions and pole pieces having flat opposed surfaces spaced to define slight air gaps when said rotor is rotated in said one direction against the stop, said opposed surfaces being canted with respect to said shaft so as to slope in said direction toward the central transverse plane of the rotor, and a coil mounted within said shell about said pole pieces and said rotor, said rotor being closely sandwiched between said thrust plug and said bearing so as to minimize end thrust of the shaft and maintain said air gaps between the rotor and said pole pieces.

3,092,763
MAGNETIC COUPLING THROUGH A PLANE WALL
Guy Cherel, Clamart, France, assignor to Commissariat a l'Energie Atomique, Paris, France
Filed Jan. 20, 1960, Ser. No. 3,668
Claims priority, application France Jan. 23, 1959
2 Claims. (Cl. 317—201)



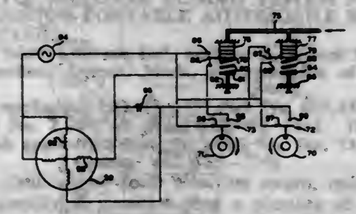
1. In a magnetic coupling through a plane wall, two identical assemblies located one on each side of the wall, each of said assemblies comprising a substantially horseshoe shaped magnet and a rectangular plate of soft iron secured to said magnet as an integral part thereof, the longer dimension of said plate being perpendicular to and lying substantially in the axis joining the poles thereof, the axes joining the poles of said magnets being substantially perpendicular whereby the magnetic field of each of the said magnets closes in said plate of said other assembly through the wall.

3,092,764
PHOTOELECTRIC TENSION SENSING MOTOR CONTROL CIRCUIT
Benjamin Cooper, Waynesboro, Va., assignor to General Electric Company, a corporation of New York
Filed June 8, 1961, Ser. No. 115,735
5 Claims. (Cl. 318—6)



1. In a system for transferring long fragile material from a first location to a second location at a rate determined by the speed of a motor, a dancer roll suspended by said fragile material between said first and said second location, a source of illumination, a source of voltage, a pair of photoelectric elements serially connected across said source of voltage, shutter means coupled to said dancer roll and interposed between said source of illumination and said photoelectric elements, said shutter means being effective to selectively enable illumination of said photocells in accordance with the position of said dancer roll, motor speed control means responsive to voltage to adjust the speed of said motor, and means controlled by the voltage appearing across one of said photoelectric elements for supplying the correct voltage to said motor control means to maintain the rate of transfer of said fragile material constant.

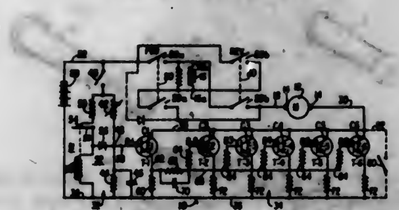
3,092,765
CONTROL MECHANISM
Daniel M. Vesper, Bartlesville, Okla., and Mark E. Larkin, Independence, Kans., assignors to Phillips Petroleum Company, a corporation of Delaware
Filed June 19, 1961, Ser. No. 117,982
6 Claims. (Cl. 318—207)



1. Control apparatus comprising a signal transmitter having an adjustable set point, a reversible motor having a drive shaft, means connecting said drive shaft to said set point to adjust same, a first pressure responsive switch which is actuated when the pressure applied thereto exceeds a first preselected value, a second pressure responsive switch which is actuated when the pressure applied thereto becomes less than a second preselected value which is less than said first preselected value, means to apply a common pressure to said first and second switches, means responsive to said first switch being actu-

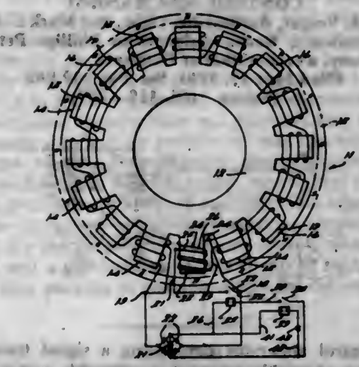
ated to energize said motor for rotation in a first direction, and means responsive to said second switch being actuated to energize said motor for rotation in a second direction.

3,092,766
SPEED REGULATING SYSTEM
Hans R. A. Hansen, Milwaukee, Wis., assignor to The Louis Allis Co., Milwaukee, Wis., a corporation of Wisconsin
Filed Mar. 1, 1960, Ser. No. 12,201
4 Claims. (Cl. 318—341)



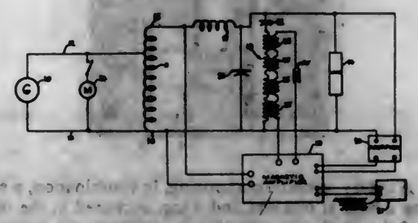
1. A speed regulating system for an electric motor comprising a power source, a voltage path from said power source through the armature of said motor, an electron flow device including an input electrode and and output electrode and a control electrode for selectively completing and interrupting said voltage path, a source of variable fixed bias including a charging capacitor across the input electrode and control electrode of said flow device for controlling the amount of cut-off bias applied to said electron flow device, and a source of cyclically varying signal applied across said input electrode and said control electrode for bucking said cut-off bias and for controlling said electron flow device to cyclically complete said voltage path.

3,092,767
GENERATOR AND REGULATOR
Edward A. Schilling, Drayton Plains, Mich., assignor to Syncro Corporation, Oxford, Mich., a corporation of Michigan
Filed July 14, 1960, Ser. No. 42,936
13 Claims. (Cl. 322—90)



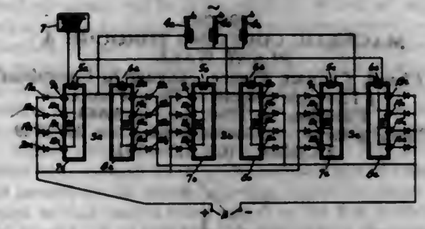
1. A regulated power supply system comprising a generator including first voltage generating winding means, a resonant network including another voltage generating winding means and a capacitor having first and second elements, and voltage-responsive means for shifting said system between a first condition in which said other voltage generating winding means and capacitance are in series across at least a portion of said first winding means, and a second condition in which said other voltage generating winding means and one of said capacitor elements are in series across at least a portion of said first winding means.

3,092,768
REGULATOR
Alexander Kusko, Newton Center, Mass., assignor, by mesne assignments, to Basic Products Corporation, Milwaukee, Wis., a corporation of Wisconsin
Filed Oct. 9, 1957, Ser. No. 689,217
4 Claims. (Cl. 323—66)



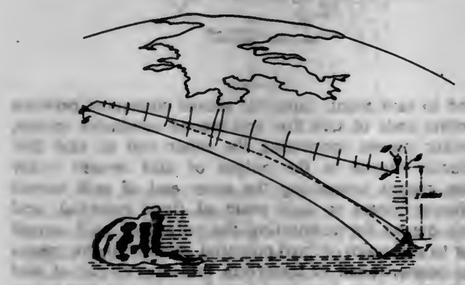
1. In a line voltage regulator; the combination including an electrical load means; a source of A.C. connected to said load means; reactor means connected in series with said load means and source; means for limiting voltage variations across said load means comprising poly-unit saturable reactor means having at least three saturable magnetic cores and at least three load windings connected in series in a phase and in shunt with said load means, each of said reactors having its load turns and core area related to the load turns and core area of the others so that twice during each cycle of A.C., each reactor unit will desaturate in a predetermined manner so as to provide a sinusoidal current wave form; and capacitor means connected across said poly-unit means.

3,092,769
MAGNETIC AMPLIFIER
William R. Miller, Erie, Pa., assignor to General Electric Company, a corporation of New York
Filed Mar. 30, 1959, Ser. No. 802,802
1 Claim. (Cl. 323—89)



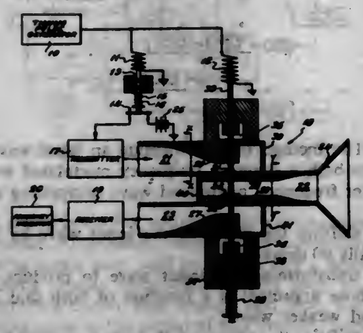
A magnetic amplifier for supplying direct current electrical energy of variably controlled magnitude to a load from an alternating current source comprising: a saturable magnetic core, a gate winding on said core serially connected between an alternating current input terminal and a direct current output terminal; said gate winding comprising a plurality of similarly poled gate winding legs of substantially equal resistance value, a rectifying element in series circuit with each of said gate winding legs, all of said rectifying elements being poled in the same direction with respect to said terminals, the resistance of each of said gate winding legs being substantially greater than the forward resistance of its associated series connected rectifying element; each of the rectifying element-gate winding leg series circuits being arranged in parallel to form said gate winding, the substantially equal resistance of said winding legs substantially equally distributing the load current between the rectifiers of said gate winding; and a control winding on said core arranged to conduct a direct current therethrough to control the magnetic flux density in said core to thereby control the magnitude of the direct current electrical energy supplied to the load.

3,092,770
EMERGENCY LONG RANGE COMMUNICATION SYSTEM
Leslie E. Shoemaker, 1000 Springfield Road, Annandale, Va.
Filed June 26, 1956, Ser. No. 594,073
5 Claims. (Cl. 325—4)
(Granted under Title 35, U.S. Code (1952), sec. 266)



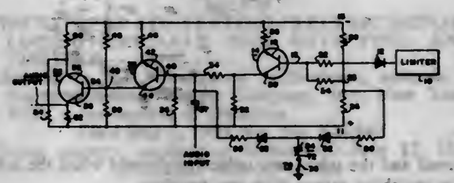
1. An emergency communication rocket comprising a propellant section having an extended skin on the forward end thereof; a radio relaying device having an antenna attached to its forward end and a parachute attached to the rear end, a cylindrical parachute casing smaller in diameter than said extended skin adapted to contain said parachute and slide inside said extended skin and means for temporarily fastening said radio relaying device to said casing and said extended skin.

3,092,771
BROADBAND TRANSMIT-RECEIVE DEVICE
Seymour B. Cohn, Palo Alto, Calif., assignor to Sperry Rand Corporation, a corporation of Delaware
Filed Dec. 28, 1954, Ser. No. 478,007
18 Claims. (Cl. 325—24)



1. A wave guide switching device including first, second and third wave guides, a first means including an aperture connecting said first and second wave guides, a second means including an aperture connecting said second and third wave guides, central conductor means mounted for passing through said apertures, said first and second means and said central conductor means constituting at least part of first and second coaxial lines, said first coaxial line connecting said first and second wave guides and said second coaxial line connecting said second and third wave guides, and shutter means mounted on said central conductor means and movable axially of said central conductor means, said shutter means being adapted to close either of said apertures.

3,092,772
CONTROL FOR NOISE SQUELCH CIRCUIT
Wayne D. Dalton and Archie A. McGee, Jr., Lynchburg, Va., assignors to General Electric Company, a corporation of New York
Filed June 7, 1960, Ser. No. 34,396
3 Claims. (Cl. 325—319)

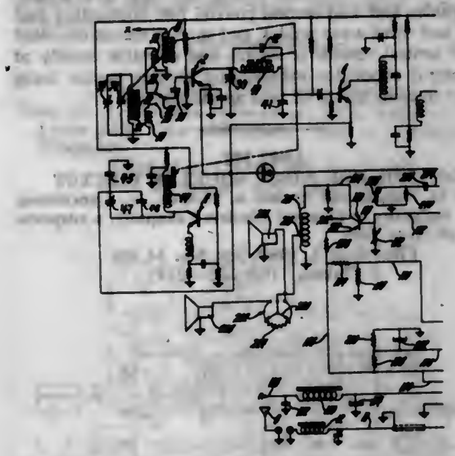


1. In a radio receiver including an active audio output stage, noise squelch means for maintaining said audio stage substantially at cutoff during the quiescent state of said receiver, a source of unidirectional potential having a positive and a negative terminal in circuit with said noise squelch means and said audio stage, one of said terminals being at ground potential, and means in circuit with said noise squelch means, said audio stage and said source for automatically selectively disabling said noise squelch means or enabling said audio stage in response to the reception of a chosen electrical signal, said last named means including means for activating said noise squelch means in the absence of said chosen signal to maintain said receiver quiescent whenever one of said terminals is at ground potential, and means for directly disabling said audio stage in the absence of said chosen signal when the other of said terminals is at ground potential, means to disable said means for activating and said means for disabling upon receipt of said chosen signal to condition said input receiver for reproduction of a transmitted signal.

3,092,773
SELECTIVE ANTENNA TUNING SYSTEM FOR A TRANSISTOR PORTABLE AUTOMOBILE RADIO RECEIVER
Leslie E. Scott, Kokomo, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Original application Oct. 10, 1957, Ser. No. 689,430, now Patent No. 2,984,743, dated May 16, 1961. Divided and this application Nov. 14, 1960, Ser. No. 73,473
3 Claims. (Cl. 325—370)

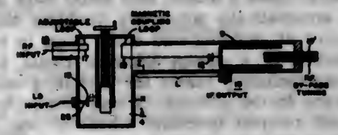
1. In combination, radio receiving means, radio frequency amplifying means, having a plurality of stages including antenna, radio frequency and oscillator, variable inductance means for simultaneously tuning each of these stages, a plurality of antenna means having different characteristics, switching means alternatively connecting the antennae to the radio frequency amplifying means, variable capacity means and inductance means electrically connected to one antenna means and to the switching means to form a tunable circuit which may be inserted alternatively in circuit for a part of the variable inductance tuning means when the switching means is placed in one position, said variable capacity being mechanically

connected to simultaneously move with said variable inductance means so that one tunable stage is capacity



tuned and the other two inductively tuned when the selector switching means is in one position.

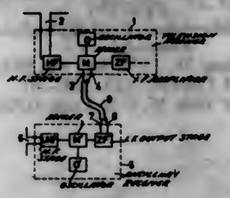
3,092,774
LOW NOISE CRYSTAL DIODE MIXER
Harry J. Peppiatt, Camillus, N.Y., assignor to General Electric Company, a corporation of New York
Filed Oct. 3, 1958, Ser. No. 765,111
8 Claims. (Cl. 325—445)



1. A low noise crystal mixer circuit comprising a resonant cavity tuned to incoming radio frequency energy input, a crystal diode mixer, a transmission line coupled to said resonant cavity, said mixer being positioned in said transmission line whereby radio frequency energy from said resonant cavity is transmitted to said mixer, means to inject local oscillator frequency energy to be propagated by said transmission line, said last-named means comprising means to prevent substantial loss of RF input energy, IF output means disposed at the output of said mixer, and open circuit image harmonic terminations means at said mixer whereby conversion may be effected with minimum conversion loss.

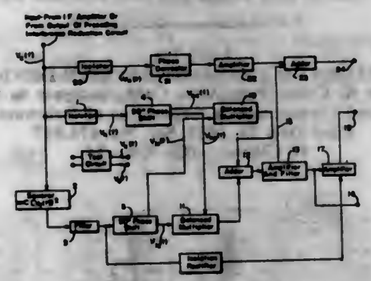
3,092,775
TELEVISION RECEIVER WITH ANCILLARY APPARATUS FOR RECEIVING FURTHER TELEVISION TRANSMISSIONS IN INITIALLY NOT PRESENT FREQUENCY BANDS
Walter Fütter, Aachen, Germany, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Nov. 23, 1959, Ser. No. 854,956
Claims priority, application Germany Dec. 23, 1958
2 Claims. (Cl. 325—461)

1. A signal receiver comprising means for receiving signals of a first frequency band, first mixer means for converting said signals of said first band to an intermediate frequency, means for receiving signals of a second frequency band, second mixer means for converting said signals of said second band to said intermediate frequency, and means connecting the output of said second mixer means continuously to the input of said first mixer means, said first mixer means comprising an amplifying device having an input electrode, tuning coil means having one end connected to said input electrode, impedance means connecting the other end of said coil to a point of fixed potential, said connecting means comprising a first conductor means having one end connected to the other end of said coil, second conductor means having one end con-



nected to said point, capacitor means connected between the other ends of said first and second conductor means, capacitor means connecting the other end of said first conductor means to the output of said second mixer means, means connecting the other end of said second conductor means to said point of fixed potential, and switch means for connecting the output of said second mixer to said point of fixed potential, said conductor means being proportioned to transform the short-circuit of said switch means into a no-load impedance at said first mixer means at frequencies of said first band.

3,092,776
METHOD AND APPARATUS FOR THE REDUCTION OF INTERFERENCE
Nello R. Castellini, 42 Bruce Road, Red Bank, N.J.
Filed Feb. 12, 1962, Ser. No. 172,443
24 Claims. (Cl. 325—474)



10. The method of transforming an input wave which includes both a stronger frequency modulated wave and a weaker frequency modulated wave comprising the steps of:

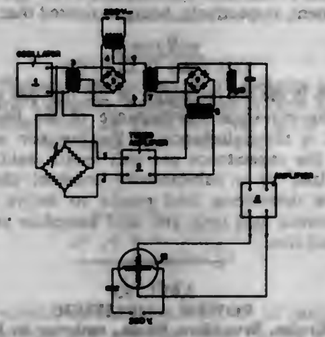
(*a*) shifting the phase of the input wave by substantially 90 degrees;

(*b*) transforming the input wave to produce a wave whose argument is a function of both said stronger and weaker waves;

(*c*) shifting the phase of the wave produced by step (*b*) by substantially 90 degrees;

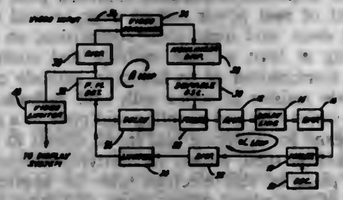
(*d*) multiplying the input wave by the wave produced by step (*b*) and also multiplying the waves produced by steps (*b*) and (*c*) and subtracting the resulting product waves from each other to thereby produce a difference wave in which the originally weaker wave is predominant in amplitude.

3,092,777
CIRCUIT ARRANGEMENT FOR USE IN PHASE-SENSITIVE CONTROL AMPLIFIERS
Georg Raeche and Gottfried Grunwaldt, Hamburg, Germany, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Jan. 23, 1959, Ser. No. 788,602
Claims priority, application Germany Feb. 13, 1958
5 Claims. (Cl. 328—133)



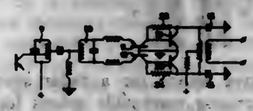
3. A phase sensitive control amplifier circuit comprising a first source of alternating voltage of a first frequency, a second source of alternating voltage of a second frequency higher than said first frequency, first modulator means connected to said first and second sources to provide an output voltage of said second frequency modulated with the voltage of said first frequency, a source of measuring values, means connected to said second source for converting said measuring values into a measuring voltage of said second frequency having a phase and amplitude dependent upon said measuring values, means amplifying said measuring voltage, and mixer means for mixing said modulated output voltage with said amplified measuring voltage to provide a control voltage of said first frequency having a phase and amplitude dependent upon said measuring value.

3,092,778
IMPROVED SWEEP INTEGRATOR SYSTEM
George Siomko, Philadelphia, Pa., assignor, by mesne assignments, to Philco Corporation, Philadelphia, Pa., a corporation of Delaware
Filed Dec. 7, 1959, Ser. No. 857,991
15 Claims. (Cl. 328—165)



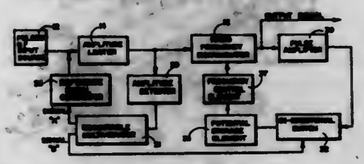
1. A sweep integrator system for processing signals having periodic components, said system comprising a recirculating signal loop, said loop including a delay means for causing signals circulating in said loop to have a predetermined transit time around said loop, said transit time being equal to the period of said periodic components of said signal to be processed, said loop including means for causing a signal at a substantially constant frequency to be circulated in said loop, means for causing a shift in the frequency of said circulating signal proportional to the instantaneous amplitude of an applied signal, means coupled to said loop for generating a signal having an instantaneous amplitude proportional to the instantaneous frequency of said recirculating signal at the point of coupling, means for receiving signals to be processed by said system, signal combining means having first and second inputs and an output, said second input being coupled to said signal generating means and said first input being coupled to said signal receiving means, said signal combining means providing an output signal of one polarity if the amplitude of the signal at the first input thereof exceeds a first value which is dependent upon the amplitude of the signal provided by said signal generating means and has an opposite polarity if the amplitude of the signal at said first input thereof does not exceed said first value, signal transfer means coupling said output of said signal combining means to said frequency shifting means to control the operation thereof, said signal transfer means having a higher gain for signals of one polarity than for signals of the opposite polarity.

3,092,779
CIRCUITS FOR CONVERTING ELECTRIC SIGNALS LOGARITHMICALLY FOR DETECTORS AND THE LIKE
Edmond de Niet, Eindhoven, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed July 3, 1959, Ser. No. 824,867
Claims priority, application Netherlands July 12, 1958
9 Claims. (Cl. 329—103)



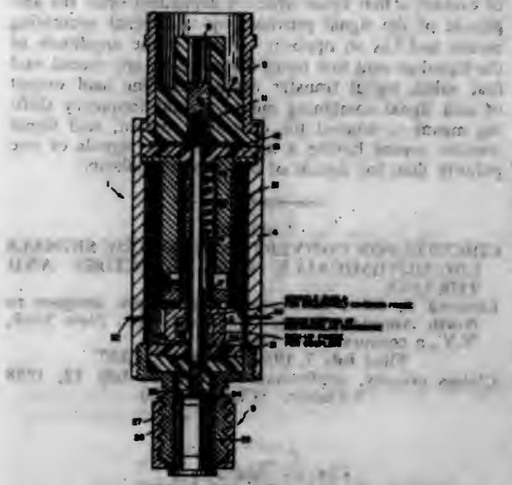
4. A balanced frequency detector comprising a pair of transistors, each transistor having an input electrode system, an output electrode system and a base electrode, said output electrode system being unbiased said base electrodes being connected directly together, means for applying a frequency modulated signal to said input electrode systems and derivation means connected to said output electrode systems for deriving therefrom the modulating portion of said frequency modulated signal.

3,092,780
FREQUENCY CONTROL SYSTEM FOR RADIO FREQUENCY DISCRIMINATORS
Benjamin Fisher, Whittier, Calif., assignor to North American Aviation, Inc.
Filed July 26, 1960, Ser. No. 45,343
13 Claims. (Cl. 329—139)



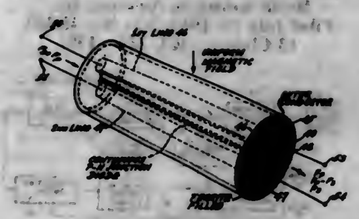
1. In combination a frequency discriminator, a source of pulsed signals coupled to the input of said discriminator, and means for automatically tuning said discriminator to a predetermined frequency comprising a reference signal generator having an output signal of a fixed frequency corresponding to said predetermined frequency, means for controlling the frequency of said discriminator, and means for coupling the output of said signal generator to the input of said discriminator and the output of said discriminator to said frequency controlling means during a predetermined time interval between successive intervals of pulsed signals from said pulsed signal source.

3,092,781
PROTECTIVE DEVICE FOR RADAR RECEIVING APPARATUS INCLUDING CRYSTAL DIODE DETECTOR MEANS
Theodore L. Kozal, 19 Wright Ave., Medford, Mass.
Filed Aug. 10, 1961, Ser. No. 130,688
10 Claims. (Cl. 329—162)



1. A protective device for a radar system receiving apparatus comprising waveguide means for mounting a mircowave frequency crystal diode detector, metallic probe means extending transversely to the axis of said waveguide means, metallic shielding means adapted to be translated interiorly of said waveguide means to encompass all lateral surfaces of said probe means exposed therein and electromechanical means adapted for the rapid removal of said shielding means from the waveguide interior.

3,092,782
SOLID STATE TRAVELING WAVE PARAMETRIC AMPLIFIER
Kern K. N. Chang, Princeton, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Nov. 2, 1959, Ser. No. 850,258
2 Claims. Cl. 330—4.6)

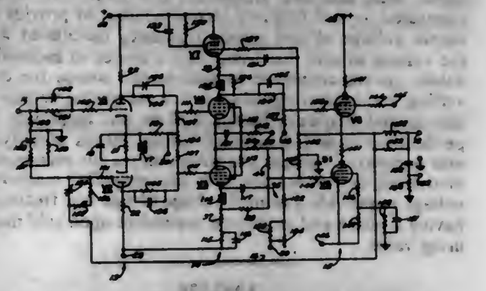


1. A traveling wave parametric amplifier comprising, in combination, an active transmission line including a baseplate of conducting material, a non-linear shunt capacitive reactance element in the form of a continuous P-N junction semiconductor diode mounted along one surface of said baseplate with the portion of said diode of one type of conductivity being in continuous electrical contact with said baseplate, a non-linear series inductive reactance element in the form of a strip of material mounted so as to be in continuous electrical contact with the portion of said diode of the other type of conductivity, means to apply a uniform magnetic field to said strip, the open area of said one surface of said baseplate being covered with a layer of insulating material, whereby said last-mentioned portion of said diode and said strip are insulated from said baseplate by said layer, means to apply energy of signal frequency and energy of pump frequency higher than said signal frequency between said strip and baseplate at one end of said line with the negative resistance and negative conductance produced by the non-linear interaction between said pump and signal frequencies in said inductive reactance element and said capacitive reactance element, respectively, being so related that

$$\frac{-R}{L}=\frac{-G}{C}$$

where —R is the net resistance of the line per unit length, —G is the net shunt conductance of the line per unit length, L is the inductance of the line per unit length, and C is the capacitance per unit length, said line being characterized by a substantially constant characteristic impedance therealong, and means to derive an output signal between said strip and said baseplate at the other end of said line.

3,092,783
POWER AMPLIFIER
Earl H. Krohn, Brookline, Mass., assignor to Krohn-Hite Laboratories, Inc., Cambridge, Mass., a corporation of Massachusetts
Filed July 30, 1958, Ser. No. 751,971
17 Claims. (Cl. 330—98)



1. A power amplifier comprising, an input stage for receiving at its input signals to be amplified, a power output stage having an input coupled to the output of said input stage and having an output furnishing the signal output of said amplifier, a negative feedback path coupling said output of said power output stage to said input of said input stage, said input stage comprising, an electron tube having at least a plate, cathode and control grid, the shunt combination of an inductor, cathode capacitor and cathode resistor in series with said cathode, a load resistor in series with and coupling said plate to a potential source, means for applying said input signals to the grid of said electron tube, means for deriving output signals from the plate of said electron tube for application to said input of said power output stage, said input stage being loaded by output capacity and the input resistance of the following stage, means for providing said input stage with a substantially flat frequency response below a first frequency, a decreasing frequency response from said first frequency to a second higher frequency, a substantially flat frequency response from said second frequency to a cutoff frequency, and a decreasing frequency response above said cutoff frequency, said last mentioned means being provided by arranging said input stage whereby said cutoff frequency is the reciprocal of the product of said output capacity with the parallel resistance combination of said load resistor, said input resistance and the plate resistance of said electron tube, whereby the product of the amplification factor of said electron tube with

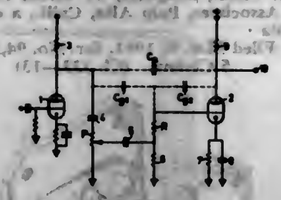
the impedance of said inductor at said first frequency is approximately equal to the sum of said load resistance and said plate resistance, whereby said cathode resistance is substantially equal to the impedance of said inductor at said second frequency, and further whereby the product of said cathode capacitor with said cathode resistor is substantially equal to the product of said output capacity with the resistance of said parallel resistance combination.

3,092,784
SQUELCH CIRCUIT
Robert L. Watters, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
Filed Nov. 28, 1956, Ser. No. 71,970
6 Claims. (Cl. 330—145)



1. In a squelch circuit for a receiver of carrier waves including at least one amplifier stage having a resonant load circuit, the combination with said amplifier stage of a tunnel diode device capable of operation in a high and a low impedance condition; means connecting said tunnel diode device in series with the resonant load circuit of said amplifier stage; means in circuit with said tunnel diode biasing said diode for operation in its high impedance condition; and means for applying a signal to said tunnel diode to change the operating condition thereof.

3,092,785
CIRCUIT ARRANGEMENT COMPRISING TWO SUCCESSIVE VALVE AMPLIFYING STAGES
Wilfried Aschermann, Hamburg-Harburg, Germany, assignor to North American Philips Company Inc., New York, N.Y., a corporation of Delaware
Filed Jan. 21, 1960, Ser. No. 3,829
Claims priority, application Germany Mar. 17, 1959
3 Claims. (Cl. 330—178)

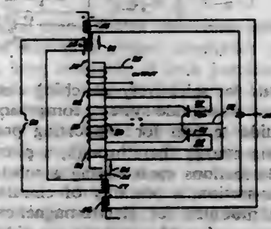


1. In a circuit of the type having first and second cascade connected amplifying devices each having an input electrode and an output electrode, and in which mutual interelectrode capacitances exist between the electrodes of said devices, means for coupling the output electrode of said first device to the input electrode of said second device, said coupling means comprising potentiometer circuit means connected to the output electrode of said first device, resistor means, means connecting said resistor means between the tap on said potentiometer and the input electrode of said second device, said resistor means having a value R determined by the expression:

$$R=\frac{C_o}{SC_{g1}}$$

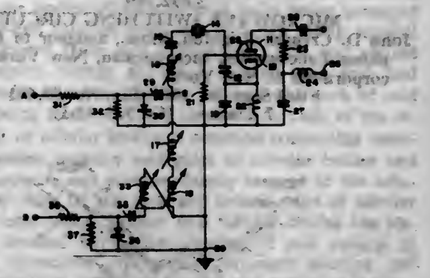
where C_o is the interelectrode capacitance between said output electrodes, C_{g1} is the interelectrode capacitance between the output electrode of said first device and the input electrode of said second device, and S is the mutual conductance of said second device, input circuit means connected to the input electrode of said first device, and output circuit means connected to the output of said second device.

3,092,786
D.C. TO A.C. CONVERTER
Robert T. Bayne, Santa Barbara, Calif., assignor, by mesne assignments, to Varo Inc Electrokinetics Div., Santa Barbara, Calif., a corporation of California
Filed Sept. 6, 1960, Ser. No. 54,308
5 Claims. (Cl. 331—113)



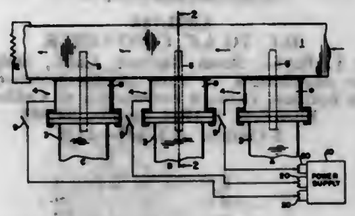
1. A converter comprising: magnetic circuits formed of a pair of cores of magnetic material, said material being characterized by a substantially rectangular hysteresis loop; respective inductive means linking the magnetic circuits; means cooperatively related to both magnetic circuits to cyclically vary the direction of flux therein; a first pair of coils linking the respective cores connected in series; a second pair of coils linking the respective cores connected in series; a source of D.-C. voltage coupled in series with said first pair of coils; a unidirectional current device coupled in series with said second pair of coils; and an output coil linking the magnetic circuits.

3,092,787
CRYSTAL CONTROLLED MULTIPLE FREQUENCY GENERATOR
Richard A. Pohlman and Donald F. Volkman, Cincinnati, Ohio, assignors to Avco Corporation, Cincinnati, Ohio, a corporation of Delaware
Filed July 21, 1960, Ser. No. 44,586
3 Claims. (Cl. 331—164)



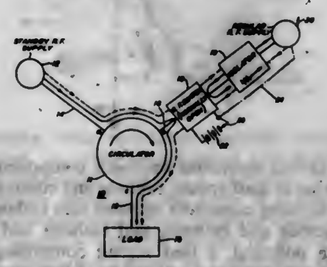
1. A crystal controlled oscillator comprising a vacuum tube having at least anode, cathode and control electrodes, voltage dividing capacitors between said cathode and control electrode and between said cathode and a point of reference potential, a tank circuit comprising a control crystal, a capacitor and a plurality of inductors connected in series between said control electrode and said point of reference potential, means including a first diode for shorting out at least one of said inductors, and means including a second diode for reflecting additional inductance into at least one of said inductors, each of said diodes having a cathode connected to said point of reference potential.

3,092,788
ELECTRONIC WAVEGUIDE SWITCH
Hugh C. Hanks, Jr., Towson, Md., assignor to Martin-Marietta Corporation, a corporation of Maryland
Filed Mar. 14, 1958, Ser. No. 721,556
3 Claims. (Cl. 333—1.1)



1. Apparatus for selectively switching electromagnetic energy within a waveguide system, comprising a common input waveguide section for supporting propagation of electromagnetic energy therethrough, a plurality of output waveguide sections each having a substantiallly rectangular cross-section, a plurality of circular waveguide sections each mounted for electromagnetically coupling a respective one of said output waveguide sections to said common input waveguide section, a plurality of rod-shaped ferrite elements, each of said ferrite elements having a circular cross-section and being coaxially mounted in a respective one of said circular waveguide sections, each said ferrite element projecting into said common waveguide section to provide coupling electromagnetic energy thereform into the associated said circular waveguide section, and means for selectively applying a magnetic field parallel to the axis of each said circular waveguide section and to the said ferrite element therewithin, said magnetic field having a magnitude sufficient for causing Faraday rotation of the electromagnetic energy coupled by the said ferrite element associated therewith, thereby to selectively control the switching and power division of electromagnetic energy from said common waveguide section into said output waveguide sections, the amount of electromagnetic energy coupled from said common waveguide section to said output waveguide sections being a function of the intensity of the parallel magnetic field applied to said ferrite element.

3,092,789
MICROWAVE SWITCHING CIRCUIT
John D. Cremin, Brighton, Mass., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Sept. 30, 1960, Ser. No. 59,601
7 Claims. (Cl. 333—1.1)



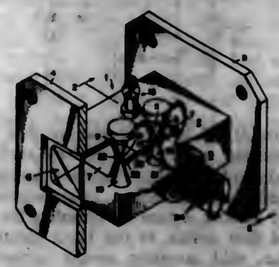
1. A high speed microwave switching circuit for connecting first and second radio-frequency supplies alternately to a common load while simultaneously absorbing the energy of the other supply, said circuit comprising a multibranch circulator with said first and second supplies and a usable load connected respectively to different branches thereof, an isolator interposed between said circulator and said second supply and exhibiting nonreciprocal attenuation in the direction from said circulator to said second supply, and means interposed between said circulator and said isolator and having a first reciprocally transparent state for directing energy from said second supply to said load while simultaneously directing energy from said first supply to said isolator for absorption therein, said means having an alternate reciprocally reflective state for directing energy from said second supply back to said isolator for absorption therein while simultaneously directing energy from said first supply to said load.

3,092,790
DIRECTIONAL FILTERS
Bernard W. Leake, Framingham, and Donald A. Macdonald, Natick, Mass., assignors to Raytheon Company, Lexington, Mass., a corporation of Delaware
Filed May 12, 1960, Ser. No. 28,787
7 Claims. (Cl. 333—10)



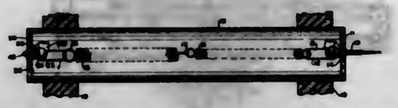
1. A directional filter comprising first wave conducting means, second wave conducting means cut off at a different frequency than said first for conducting waves over at least one closed path of given coupling coefficient, and a four-arm directional coupler having first and second pairs of arms coupled to said first and second conducting means respectively, the coefficient of coupling between arms of each pair being substantially equal to said given coupling coefficient whereby selected frequencies conducted in said first conducting means are cancelled.

3,092,791
MICROWAVE SWITCHING DEVICE HAVING MOVEABLE JUMPER FOR INTERNALLY SHORTING ELECTRODES OF T-R TUBE
Richard L. Hubbell, Arlington, and Frank A. Record, Danvers, Mass., assignors, by mesne assignments, to Varian Associates, Palo Alto, Calif., a corporation of California
Filed Mar. 8, 1961, Ser. No. 94,297
5 Claims. (Cl. 333—13)



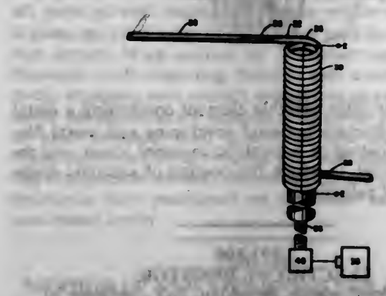
1. A microwave switching device comprising a metallic envelope filled with an ionizable atmosphere under reduced pressure, resonant elements including plural opposed conical electrode structures spaced within said envelope to define plural discharge gaps having axes in the direction of the discharge across the gaps, attenuating means including a metallic shorting bar member adapted to simultaneously contact a plurality of said electrode structures by moving into the gap from a direction transverse to the axes of said gaps, and electromechanical means to control movement of said shorting bar member.

3,092,792
ELECTRO-ACOUSTICAL DELAY LINE USEFUL FOR PRODUCING REVERBERATION IN ELECTRICAL MUSICAL INSTRUMENTS
Nathan I. Daniel, Wanamassa, N.J. (207 W. Sylvania Ave., Neptune City, N.J.)
Filed July 3, 1961, Ser. No. 121,431
6 Claims. (Cl. 333—30)



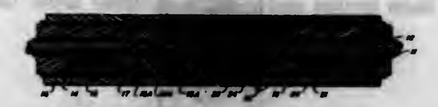
1. Apparatus for transmitting sound comprising opposed end supports, a sending piezoelectric crystal and a receiving piezoelectric crystal respectively connected to said supports, both of said crystals having flat bodies, and an elongated spring means connected to and between said flat bodies, the connection of said spring means to at least one of said flat bodies comprising a portion of said spring means fixedly secured to the said one flat body, said spring means consisting of at least one coil spring, said last-named connection comprising an end coil thereof which is adhesively secured to said one flat body and embraces an end portion thereof, a hook having a substantially planar floor on each of said end supports, and a rigid connecting element fixedly secured to the opposite end portion of said one flat body and being rotatably received by said hook and resting on and across said planar floor thereof whereby said rigid connecting element may rotate in the plane of said floor and in a plane perpendicular thereto but is restrained from twisting movement relative to said hook.

3,092,793
PHASE SHIFT APPARATUS ADJUSTABLE BY MOVEMENT OF DIELECTRIC SLUG
Carroll F. Augustine and Vincent J. McHenry, Farmington, and James Cheal, Inkster, Mich., assignors to The Bendix Corporation, a corporation of Delaware
Filed Sept. 28, 1959, Ser. No. 842,966
12 Claims. (Cl. 333—31)



1. A phase shifter comprising a coaxial cable having a center conductor and a coaxial shield for said center conductor with insulation therebetween, a circumference sector of said cable having a predetermined portion of the shield removed, a dielectric member having a predetermined dielectric constant movable in increments relative said conductive member to cover a total length of said conductive member corresponding to said total movement and movable in close proximity to said circumference sector of said cable having said shield portion removed, so that the flux lines from one portion of said member are substantially shielded from other portions of said conductive member but are unshielded from said flux modifying member.

3,092,794
COMPENSATED CABLE CONNECTOR
Thomas J. West, Bedminster, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Mar. 6, 1961, Ser. No. 93,551
7 Claims. (Cl. 333—97)



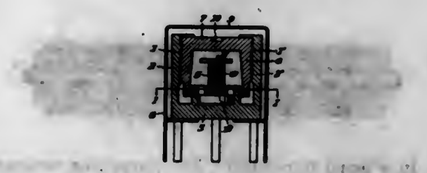
1. In a signal transmission line comprising sections of coaxial cable having a center conductor and an outer conductor, a joint assembly at each junction of said sections, said assembly comprising means for connecting said center conductors, said means tending to introduce unwanted shunt capacitance between said inner and outer conductors in the vicinity of said junction, and means to compensate for said capacitance including magnetizable material disposed within a protective housing about one of said center conductors, said housing being made of electrically conductive material and in electrical contact with said center conductor.

3,092,795
FOURFOLD ELECTROMAGNETIC TENSOMETER WITH ADJUSTABLE PRESTRESSING
Borivoj Dubsky, Prague, and Oldrich Straka, Rumburk, Czechoslovakia, assignors to Vyzkumny a zkusebni letecky ustav, Prague, Czechoslovakia
Filed Aug. 22, 1960, Ser. No. 50,904
Claims priority, application Czechoslovakia Aug. 26, 1959
6 Claims. (Cl. 336—30)



1. An electromagnetic tensometer comprising first and second pairs of tubular bodies of ferromagnetic material, the tubular bodies of each of said pairs being arranged in end-to-end relation with said first pair being parallel to and spaced from said second pair, first and second spaced apart casings extending around said first and second pairs of tubular bodies, respectively, each of said casings being fixedly secured to the outer ends of the related pair of tubular bodies, a common connecting member extending between said pairs of tubular bodies and having opposite end portions fixedly secured to the adjacent inner ends of said first and second pairs of tubular bodies, respectively, so that said tubular bodies are torsionally stressed by relative turning of said casings in opposite directions, orthogonally arranged exciting and pick-up windings extending through and around said tubular bodies so that an exciting current flowing through said exciting winding establishes a magnetic field which has a component at right angles to the turns of said pick-up windings only in response to torsional stressing of said tubular bodies, thereby to induce a voltage in said pick-up windings which is proportional to said torsional stressing, and means extending from said first and second casings for engagement with a test piece at spaced apart locations along the latter and operative to oppositely turn said first and second casings and thereby torsionally stress said bodies in response to changes in the distance along the test piece between said locations.

3,092,796
INTERMEDIATE FREQUENCY TRANSFORMER
Hisao Maeda, 13 Shiba-Koen, Minato-ku, Tokyo-to, Japan
Filed May 4, 1960, Ser. No. 26,811
Claims priority, application Japan May 7, 1959
1 Claim. (Cl. 336—135)



An intermediate high-frequency transformer comprising, in combination, a base made of an insulating material; two vertical support columns rigidly disposed on said base having arcuate inner surfaces lying in the same circle in diametrically opposed juxtaposition and having female screw threads on said inner surfaces; a spool-shaped magnetic core disposed concentrically inside said support columns; a lower flange at the bottom of said core fastened to said base; an upper flange on top of said core; said upper flange being substantially thinner than said lower flange; a coil wound about said core; a high-frequency magnetic cylinder having male outer screw threads and being screwed thereby to the female screw threads of said support columns, thereby adapted to be raised and lowered and enveloping in the manner of a canopy said core; means for raising and lowering said cylinder; and an outer shield enclosing the entire structure except for an opening on top and substantially in the center, to allow access to said means for raising and lowering said cylinder.

3,092,797
TELEVISION SWEEP TRANSFORMER WITH FILAMENT WINDING INSULATOR
Frank A. Wood, Elmhurst, Ill., assignor to Zenith Radio Corporation, a corporation of Delaware
Filed May 24, 1961, Ser. No. 112,257
4 Claims. (Cl. 336—198)



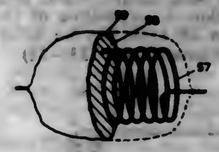
1. In a horizontal sweep transformer of a television receiver of the type having a core and a filament winding consisting of at least a single turn wound around the core, the improvement comprising, a one piece insulator for the filament winding including a first annular form having an internal bore dimensioned to accommodate said core and further having a first annular channel, a second annular form having an internal bore dimensioned to accommodate said core and further having a second annular channel of substantially the same configuration and dimension as said first annular channel, said first and second forms being nested together to define a double-walled raceway captivating said filament winding and to define a channel through which said core extends, and a flexible coupling between said first and second annular forms.

3,092,798
HALF-BRIDGE TEMPERATURE COMPENSATING DEFLECTION SENSOR
Paul Beckman, 944 Henrietta Ave., Huntingdon Valley, Pa.
Filed July 10, 1961, Ser. No. 122,848
5 Claims. (Cl. 338—2)



1. An electrical resistance-type strain gage having a frame comprising a longitudinally extending metallic center lead and a separate metallic frame member mechanically and electrically connected to one end of the center lead and extending laterally thereof, said lateral frame having a tubular portion extending along one side of the center lead substantially in the same longitudinal direction as the center lead, an electrical strain-responsive filament connected directly into said axially extending tubular portion and extending substantially parallel to said center lead, a lead connected to the other end of said filament and being disposed adjacent to said center lead, and a casing of cement enveloping the filament and leads to hold them together as a unit.

3,092,799
APPARATUS FOR DETECTING COMBUSTIBLE GASES HAVING AN ELECTRICALLY CONDUCTIVE MEMBER ENVELOPED IN A REFRACTORY MATERIAL
Alan Richard Baker, Sheffield, England, assignor, by direct and mesne assignments, to National Research Development Corporation, London, England
Filed Feb. 3, 1959, Ser. No. 790,935
Claims priority, application Great Britain Feb. 18, 1958
7 Claims. (Cl. 338—34)



1. An electrically heatable element comprising a metal filament, a refractory material enveloping said metal filament and a coating of a catalytic material about said refractory material, in which the coating of catalytic material consists of palladium.

3,092,800
ELECTRICAL RESISTOR
Helias Doundoulakis, Brooklyn, N.Y., assignor to Constantine A. Michalos, Fort Lee, N.J.
Filed Aug. 4, 1960, Ser. No. 47,549
8 Claims. (Cl. 338—143)

1. A mechanism for providing a variable contact for electrical devices comprising a toroidal configuration member having a continuous helical groove circumferentially inscribed around its surface to form a continuous path, electric input and output terminals, an electric extended element curved in said helical groove and connected at its ends to said electric input terminals, a movable contact supported above said electric extended element and electrically connected to said output terminal and in sliding contact with said electric extended element, and means for movement of said contact around a

circular path about the generating circle of said torus and for movement of said toroid about its axis, whereby



said sliding contact moves in a helical course around the toroid in a continuous movement.

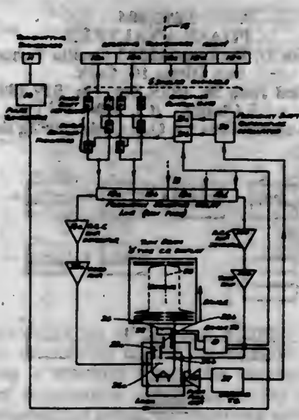
3,092,801
ADJUSTABLE ELECTRICAL INSTRUMENTS
Marian E. Bourns and Carl N. Boode, Riverside, and Edward D. O'Brien, Anaheim, Calif.; said Boode and said O'Brien assignors to Bourns, Inc., a corporation of California
Original application May 20, 1957, Ser. No. 660,247, now Patent No. 2,932,808, dated Apr. 12, 1960. Divided and this application Mar. 18, 1960, Ser. No. 17,727
8 Claims. (Cl. 338—180)



1. A variable resistor of the class described comprising means defining a cavity having an axis, said cavity being of uniform non-round cross-sectional configuration throughout its length, a wire wound resistance element positioned within the interior of said cavity so as to extend around said cavity, contact means of non-round configuration substantially identical to the cross-sectional configuration of said cavity and engaging substantially all parts of said resistance element within said cavity in a plane perpendicular to the axis of said cavity, said contact means being carried by a contact support, and a threaded shaft extending through said cavity and operatively engaging said contact support so as to cause movement of said contact support lengthwise of said cavity as said threaded shaft is turned, said contact support being prevented from rotating with said shaft by the sliding engagement of said non-round contact means on the resistance wire positioned on the inner surface of said non-round cavity.

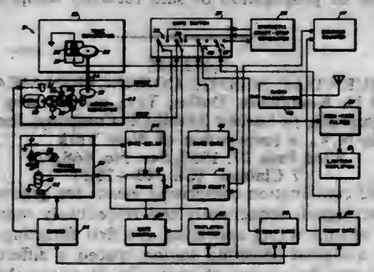
3,092,802
METHOD OF AND APPARATUS FOR ACOUSTIC POSITION FINDING
David Gordon Tucker, Burnt Green, England, assignor to National Research Development Corporation, London, England, a British corporation
Filed May 16, 1957, Ser. No. 659,691
Claims priority, application Great Britain May 16, 1956
21 Claims. (Cl. 340—3)

19. Apparatus for acoustic position finding comprising a transmitter, a receiver including a beam forming transducer array having spaced transducer elements connected with respective signal channels, amplifier means fed from said signal channels and connected to means for positionally indicating signal reception comprising range time base means and beam position indicating means, phase-shift elements having phase-shift characteristics variable as a function of frequency and connected in series with each other and to said channels at junctions between said phase-shift elements, and connected at both ends of said series with said amplifier means, modulator means in said channels between said transducer and said phase-shift elements, local oscillator means connected with said modulator means and including means for varying the frequency of at least one local signal output therefrom within a time interval equal to



the duration of each of said emitted pulse repeated a plurality of times within each pulse repetition period, said modulator means including means for selectively feeding a single side band of the resultant modulator carrier of the signal passing through each of said channels to the phase-shift element junctions whereby the phase-shift elements serve to swing said beam through a sector of said target containing medium in said time interval and for a corresponding number of times within each pulse repetition period.

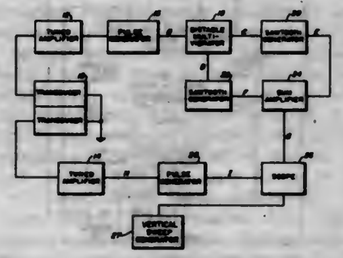
3,092,803
DIPPED SONAR DATA TRANSMISSION SYSTEM
Hubert G. Wolff, Jack Rogers, and Homer H. Da Mouda, San Diego, Calif., assignors to the United States of America as represented by the Secretary of the Navy
Filed Jan. 12, 1960, Ser. No. 2,082
8 Claims. (Cl. 340—3)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A telemetering system adapted to transmit and receive data comprising in combination an echo-ranging apparatus for generating a first pair of signals representing the range and bearing of a first target, a radio transceiver adapted for broadcasting said first pair of signals to a remote receiving station and receiving a second pair of signals representing the range and bearing of a second target transmitted from a remote sending station, a sonar data transmission transceiver interconnecting said echo-ranging apparatus and said radio transceiver for response

to said first and second pairs of range and bearing signals and for respectively indicating same during broadcast and reception thereof, and switch means connected to said sonar data transmission transceiver and radio transceiver for operating same for broadcasting said first pair of indicated range and bearing signals to a remote receiving station and receiving and indicating said second pair of range and bearing signals from a remote sending station.

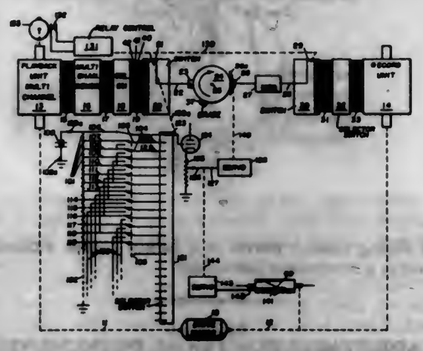
3,092,804
PHASE ANALYZER
Milton D. Papineau, 2303 Cecilia Terrace, San Diego 10, Calif.
Filed June 30, 1955, Ser. No. 519,289
5 Claims. (Cl. 340—6)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A bearing deviation indicator comprising transducer means responsive to received compressional wave energy for generating a plurality of cyclical electrical energy signals of equal amplitude but having a phase relation which varies in accordance with the direction of propagation of said compressional wave, rectifier means for developing a pulse train from each of said signals, multivibrator means response to the pulse train developed from one of said signals for producing a pair of square waves each at one half the frequency of said received compressional wave, parallel connected sawtooth generators connecting said multivibrator to a scanning amplifier for converting said pair of square waves into a single sawtooth wave of a frequency equal to the signal frequency, and indicating means responsive to the frequency output of said multivibrator means in combination with means responsive to the frequency of another of said pulse trains for indicating the phase relation between said one train and said other train to thereby indicate the direction of propagation of said received compressional energy.

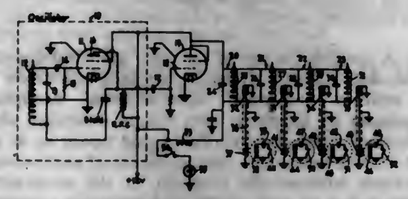
3,092,805
SEQUENTIAL SEISMIC CORRECTION MEANS
Gerard D. Koeljmans, Dallas, Tex., assignor, by mesne assignments, to Socony Mobil Oil Company, Inc., New York, N.Y., a corporation of New York
Filed June 27, 1957, Ser. No. 668,520
7 Claims. (Cl. 340—15.5)

1. The combination comprising means for generating at least two signals sequentially and respectively representative of seismic waves appearing at a first detecting station and at a second detecting station spaced a different distance from the source of said seismic waves than said first station, two constant voltage sources bearing a ratio one to the other in proportion to the ratio of the squares of the distances between the detecting stations and said source of seismic waves, adjusting means connected to a first of said voltage sources for adjusting the relative time occurrence of components of signals detected at said first station in dependence upon the product of the contsant voltage from the first of said sources and a preselected geometrical correction function for paths of seismic waves traveling from said source of seismic waves to said first detecting station, means operative intermediate sequential generation of said two signals for connecting said adjusting means to a second of said voltage sources to adjust the relative time occurrence of components of signals



detected at said second station in dependence upon the product of the voltage from the second of said voltage sources and said preselected function, and means for recording the adjusted signals.

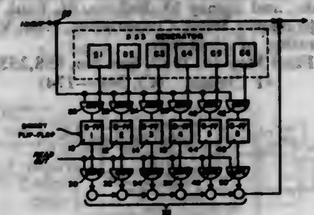
3,092,806
APPARATUS FOR INDICATING AN ABNORMAL CONDITION IN A VEHICLE WHEEL
Dwight L. Field, Forest, Ontario, Canada
Filed June 6, 1960, Ser. No. 34,298
6 Claims. (Cl. 340—58)



1. Apparatus for indicating an abnormal condition on a rotatable vehicle wheel comprising a parallel resonant circuit having a capacitor and an annular coil mounted on said wheel coaxially therewith, a switch in said circuit adapted to operate in response to said abnormal condition to cause a change in the impedance of said circuit, a second annular coil mounted on the vehicle adjacent the rotatable wheel and coaxially with said first coil to establish a continuous, substantially uniform, coefficient of coupling between said first and second coils, and means responsive to changes in impedance in said second coil due to operation of said switch to give an indication of said abnormal condition at a remote location.

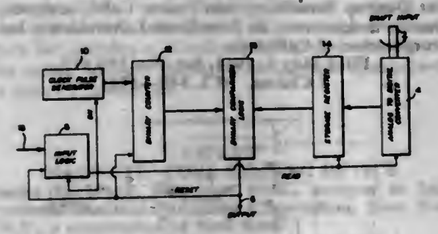
3,092,807
CHECK NUMBER GENERATOR
Roy W. Reach, Jr., Sudbury, Mass., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Nov. 24, 1958, Ser. No. 776,125
12 Claims. (Cl. 340—146.1)

1. Apparatus for generating a checking number for a plurality of information bits to be manipulated comprising a counter circuit having a plurality of stages and each being adapted to be selectively incremented according to a predetermined pattern for each bit position of the information manipulated, an accumulator, means responsive to the presence of a selected type of information bit for simultaneously connecting a plurality of said stages of said counter to said accummulator each time said selected bit



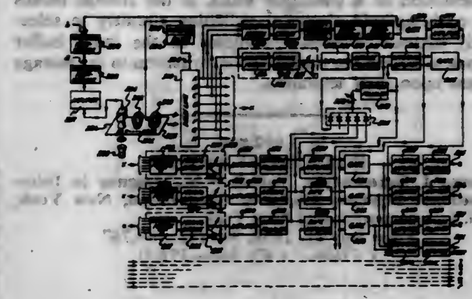
appears in said information bits, and means connected to said accumulator for transferring the contents of said accumulator with said information bits.

3,092,808
CONTINUOUSLY VARIABLE DIGITAL DELAY LINE
Henry J. Wychorski, Hyattsville, and Perry M. Roberts, West Hyattsville, Md., assignors to ACF Industries, Incorporated, New York, N.Y., a corporation of New Jersey
Filed May 18, 1959, Ser. No. 813,933
3 Claims. (Cl. 340—146.2)



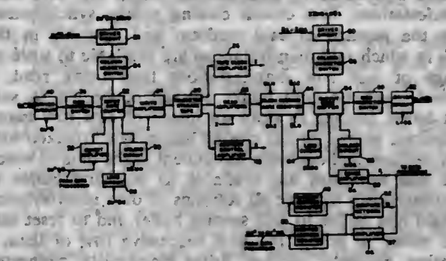
1. Delay line apparatus for providing variably delayed output pulses, comprising input logic means, clock pulse generator means responsive to the said input logic means for generating a train of equispaced electrical signals in which the time between signals represents the time segments which make up the total time delay of the delay line, counter register means responsive to the said clock pulse generator means for counting the electrical signals emanating from the clock pulse generator and for generating binary signals representative of the signals counted, analog to digital converter means for generating digital information representive of a variable analog quantity, storage register means responsive to the said converter means for storing the said digital information and providing binary signals representative of the stored digital information, comparison logic means responsive to the signals from the said counter register means and the said storage register means for generating an output signal upon the occurrence of similar signals from the counter and storage registers, means for supplying input pulses, means responsive to said input pulses for resetting said counter register means and said storage register means and initiating operation of said clock pulse generator means, and means responsive to said output signal for stopping the operation of the clock pulse generator, whereby the output signals have delays relative to the input pulses corresponding to the values of said analog quantity.

3,092,809
SPURIOUS SIGNAL SUPPRESSION IN AUTOMATIC SYMBOL READER
Philip E. Merritt, Menlo Park, and Carroll M. Steele, Mountain View, Calif., assignors to General Electric Company, a corporation of New York
Filed Dec. 29, 1958, Ser. No. 783,350
4 Claims. (Cl. 340—146.3)



3. In apparatus for receiving a plurality of different signals, for recognizing desired information signals, and for ignoring a spurious signal, the combination of: a plurality of information signal recognition circuits, one for each information signal, for receiving said signals and for producing recognition circuit output signals in response thereto; a plurality of information signal output lines, one for each information signal; a sensing circuit for sensing said recognition circuit output signals and normally operable in response thereto to produce an output signal on the signal output line corresponding to the received information signal; a spurious signal recognition circuit for receiving said signals and operable to produce an output signal in response to a received spurious signal; and means responsive to said output signal of said spurious signal recognition circuit for inhibiting output signals on all of said information signal output lines.

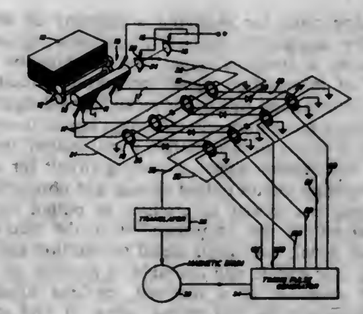
3,092,810
HIGH SPEED TAPE MEMORY SYSTEM
Lothar M. Schmidt, Glendale, Calif., assignor to General Precision, Inc., a corporation of Delaware
Filed May 26, 1958, Ser. No. 737,862
16 Claims. (Cl. 340—172.5)



3. In a memory system for storing data for use in data processing, the combination of storage means having a plurality of blocks for the storage of data and movable to different positions to provide a recording of information in the different blocks of the storage means and a reading of information from the different blocks of the storage means, input buffer means constructed to provide a static memory of a plurality of bits of information in a selected number of rows and a selected number of columns, means including electrical switching circuitry coupled to the

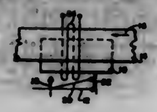
input buffer means first control circuitry coupled to said input buffer means for enabling said electrical switching circuitry selectively to activate different combinations of rows and columns in the buffer means to obtain the serial introduction of information to the buffer means for the storage of data in the storage means, and means including second electrical control circuitry coupled to the input buffer means and coupled to the storage means upon the presentation of a particular block in the storage means for enabling said electrical switching circuitry to selectively activate successive columns in the input buffer means to obtain the transfer of information to the storage means upon such activation.

3,092,811
DATA INPUT DEVICE
George J. Saxenmeyer, Vestal, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed July 21, 1958, Ser. No. 749,747
1 Claim. (Cl. 340—172.5)



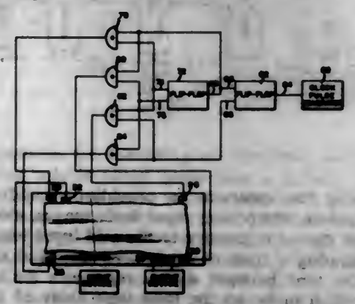
In combination, a sensing device for record medium in which data manifestations are contained in a plurality of rows and in which characters are represented by the permutation of manifestations in a column of said medium, said sensing device including medium advancing means to move said record medium through said sensing device whereby successive rows of data manifestations are periodically made available for sensing, a first buffer storage connected to said sensing means for said data manifestations, first circuit closing means synchronized with the passage of said medium and operable in the time in which said manifestations are available to store an image of said row manifestations then being read, a second magnetic core buffer storage connected to said first buffer storage to store an image of said row manifestations, second circuit closing means synchronized with said medium and operable subsequent to the time in which said manifestations are available to said first buffer to simultaneously transfer all columns of data manifestation in said first buffer to said second buffer and to reset said first buffer to accept the next successive row of data, a rotating magnetic storage drum electrically connected to said second buffer and containing a plurality of said storage locations for each column of data contained on said medium cyclically available to accept said data, said data storage device having a cycle time which approximates the time interval between the successive transfers of information to second buffer storage whereby any column in a row of data manifestations is available for transfer to a particular storage location on said data storage device during the cycle succeeding the transfer of data to said second buffer.

3,092,812
NON-DESTRUCTIVE SENSING OF THIN FILM MAGNETIC CORES
Thomas D. Rossing, St. Paul, Arthur V. Pohm, White Bear Lake, and Sidney M. Rubens, St. Paul, Minn., assignors to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Filed May 16, 1957, Ser. No. 658,258
41 Claims. (Cl. 340—174)



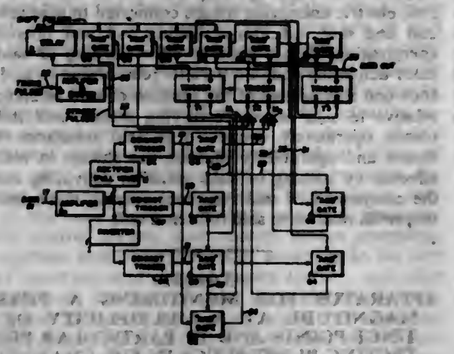
1. Magnetic core non-destructive sensing apparatus comprising a film of rectangular hysteresis loop type magnetic material exhibiting single domain properties and having remanent magnetization along a single easy magnetization axis lying in the plane of the film, a conductor in inductive relationship with said film for carrying interrogating current to cause flux to be induced in said film in a direction transverse to said axis, and means for sensing a change in said remanent magnetization due to said flux, the arrangement being such that said interrogating current when applied at least temporarily changes the amount of remanent magnetization along said axis to provide an indication of the existence of said remanent magnetization without destruction or reversal thereof.

3,092,813
MAGNETIC DEVICE
Kent Dastrup Broadbent, San Pedro, Calif., assignor, by mesne assignments, to Broadbent Laboratories, Inc., a corporation of California
Filed May 1, 1961, Ser. No. 106,612
5 Claims. (Cl. 340—174)



1. A magnetic device comprising an elongated magnetic medium having a pair of edge portions comprising areas extending longitudinally along the edges of said medium and an inner portion extending longitudinally along said medium between said edge portions, said edge portions having a magnetic hardness which is high relative to the magnetic hardness of said inner portion, said inner portion having a first state of magnetization; input means magnetically coupled to said magnetic medium at a first predetermined place thereof for establishing in said magnetic medium an area of a second state of magnetization; output means responsive to the state of magnetization of said magnetic medium at a second predetermined place thereof spaced from said first predetermined place by a continuous portion of said magnetic medium; and means magnetically coupled to said magnetic medium along said continuous portion thereof for moving the area of said second state of magnetization from said first predetermined place to said second predetermined place on said magnetic medium within said continuous portion thereof.

3,092,814
SIGNAL DECODING SYSTEM
Albert S. Hoagland, Palo Alto, Calif., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Aug. 29, 1956, Ser. No. 606,924
4 Claims. (Cl. 340—174.1)



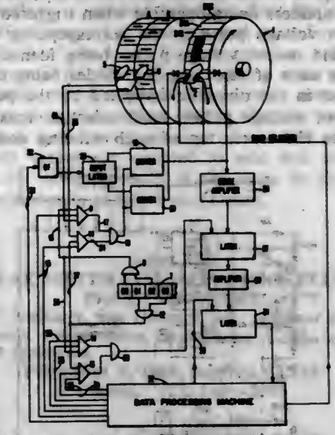
1. In a circuit for decoding positive and negative signals representing polarity changes, first sensing means responsive to positive signals exceeding a first amplitude, second sensing means responsive to negative signals exceeding said first amplitude, third sensing means responsive to positive and negative signals exceeding a second higher amplitude, means for simultaneous periodic sampling of said first, second and third sensing means, and means for deriving a decoded data signal from said sampling means whereby the larger of adjacent signals having like polarity is selected.

3,092,815
MAGNETIC CORE SENSING DEVICE
Charles G. Hinze, San Jose, Calif., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Aug. 26, 1957, Ser. No. 680,984
2 Claims. (Cl. 340—174.1)



1. A device for sensing indicia defined by material having a different magnetic reluctance than its environment comprising a first core member having a pair of spaced adjacently positioned pole tips, means upon said core member for energizing said member to produce a magnetic field extending normally directly from pole tip to pole tip, a second core member spaced in its entirety from said first core member and having a pair of pole tips located adjacent the pole tips of said first core member at opposite sides of the magnetic field established between the pole tips of said first core member, and a sensing winding upon said second core member operative to produce a signal in response to variations in the normal configuration of the magnetic field between the pole tips of said first core member as produced by the proximity, to the pole tips, of a magnetic material of different reluctance than its environment.

3,092,816
MAGNETIC DRUM STORAGE APPARATUS
Joseph P. Pawletko, Endicott, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed June 16, 1959, Ser. No. 820,622
1 Claim. (Cl. 340—174.1)



In a data processing machine,

(*a*) a cyclically movable storage medium containing a plurality of addressable locations,

(*b*) a transducer disposed adjacent said movable storage medium to record data and read data at preselected addressable locations passing adjacent said transducer in accordance with the address pertaining to said data,

(*c*) a first source for generating first timing signals wherein said timing signals occur at a frequency equal to the frequency of passage of said addressable areas adjacent said transducer and which occur for a fractional part of the time during which an addressable area is adjacent said recording transducer,

(*d*) a second source for generating second timing signals wherein said second timing signals have a frequency equal to the frequency of said first timing signals and which occur for a fractional part of the time during which an addressable area is adjacent said recording transducer and at a different point in time from said first series of timing signals,

(*e*) an address register for data indicative of the highest order digit of the address at which data is to be read or recorded,

(*f*) means connected to said highest order address register and responsive to predetermined data digits contained therein for gating data to be read or recorded with said first series of timing pulses,

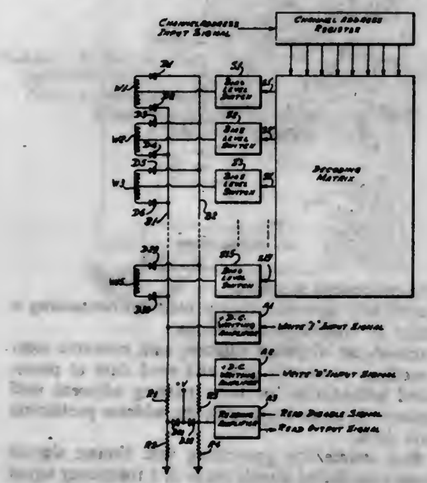
(*g*) and means connected to said highest order address register and responsive to predetermined data digits contained therein for gating data to be read or recorded with said second series of timing pulses,

(*h*) whereby sequentially related data is interlaced in said sequential address locations as a function of the highest order digit of said address register.

3,092,817
MAGNETIC READING/WRITING CIRCUIT AND CHANNEL SELECTOR THEREFOR
Henri B. Diamant, State College, Pa., assignor to HRB-Singer, Inc., State College, Pa., a corporation of Pennsylvania
Filed Mar. 7, 1961, Ser. No. 94,053
10 Claims. (Cl. 340—174.1)

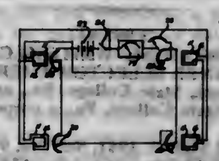
5. A magnetic reading/writing circuit comprising a plurality of magnetic reading/writing heads each con-

taining a center-tapped winding, one end of each winding being coupled through a corresponding coupling diode to a first bus conductor and the other end thereof being coupled through a corresponding coupling diode to a second bus conductor, a first writing amplifier direct coupled to said first bus conductor and a second writing amplifier direct coupled to said second bus conductor, each of said writing amplifiers being operable when triggered to apply an output voltage pulse to the corresponding bus conductor, said output voltage pulses being identical in polarity and each of said coupling diodes being connected to conduct in the direction indicated by the polarity of said output voltage pulses, head selection means direct coupled to the center tap of each winding and to both



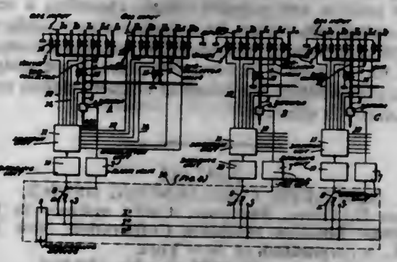
of said writing amplifiers, said head selection means being adapted to normally apply a back bias potential to each of said coupling diodes via the center tap of the corresponding winding and being operable to apply a forward bias potential to one pair of said coupling diodes in response to a head selection signal applied thereto, said back bias potential being greater in magnitude than either of said output voltage pulses and said forward bias potential being smaller in magnitude than either of said output voltage pulses, said output voltage pulses being operable to drive current through the corersponding half of any winding whose coupling diodes are forward biased by said forward bias potential and being blocked from all other windings by said back bias potential, and a reading amplifier direct coupled to one of said bus conductors.

3,092,818
VEHICLE LOAD INDICATOR
Joseph W. Potschka, Vancouver, British Columbia, Canada, assignor to Potschka Enterprises Ltd., Vancouver, British Columbia, Canada, a corporation of British Columbia, Canada
Filed Feb. 17, 1961, Ser. No. 89,966
4 Claims. (Cl. 340—198)



4. A load indicator comprising a flat reference coil, electric resistance-varying means including two relatively movable components, pivot means mounting said reference coil for swinging relative to one of said resistance-varying means components in response to variations in a load to be indicated, a flat indicator-activating coil connected in circuit with said reference coil, pivot means coaxial with said first pivot means and mounting said indicator-activating coil for turning with the other component of said resistance-varying means and relative to said reference coil, electric energizing means connected to said reference coil and said indicator-activating coil and operable by energization of said coils to effect turning of said indicator-activating coil into parallel relationship to said reference coil irrespective of the position of said reference coil relative to said resistance-varying means, and indicator means operatively connected to said resistance-varying means and operable to indicate the change in resistance effected by turning of said indicator-activating coil and the component of said resistance-varying means movable therewith relative to said reference coil.

3,092,819
APPARATUS FOR MONITORING A PHYSICAL MAGNITUDE AT A MULTIPLICITY OF DISTINCT POINTS AND IN PARTICULAR FOR DETECTING BURST SLUGS IN THE CHANNELS OF A HETEROGENEOUS NUCLEAR REACTOR
Roland Cochinal, Paris, France, assignor to Commissariat a l'Energie Atomique, Paris, France, an organization of France
Filed Mar. 31, 1960, Ser. No. 19,010
Claims priority, application France Apr. 2, 1959
5 Claims. (Cl. 340—213)

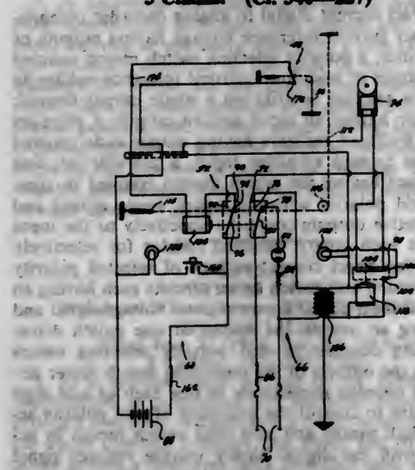


1. A device for quickly detecting when the value of a physical magnitude has reached a given alarm level at any point of a multiplicity constituted by N points forming m sub-groups including each n points

$$\left(m=\frac{N}{n}\right)$$

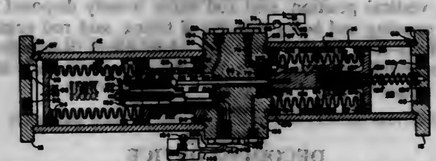
and for monitoring the value of said magnitude at a point where the alarm level has been reached, with a single threshold instrument responsive to a reaching of a predetermined alarm level by the value of said magnitude, with a plurality of magnitude-conveying paths forming a single converging network starting at said points and arriving in front of said single instrument, said network being adapted to allow the transmission of the value of said magnitude from each of said points to said instrument, and with a plurality of switching means acting on said paths to effectively switch, according to the control imparted thereon, all the points of any sub-group in said multiplicity or any point in any sub-group on said instrument, this device including in combination: at least one series of m control contacts each of which, when actuated, controls at least one of said switching means so as to subject said instrument to the action of said magnitude for one of said m sub-groups; a group of n control contacts each of which, when actuated, controls at least one of said switching means for subjecting said instrument to the action of said magnitude for one of said n points in each of said sub-groups; a particular control contact which, when actuated controls at least one of said switching means so as to subject said instrument to said magnitude for one particular point; at least one series of m holding relays for memorizing a given sub-group, the choice of a relay of such a series being effected by actuation of one of the m contacts of one said series of contacts; a group of n holding relays for memorizing a particular point, the choice of a relay of this group being effected by actuation of one of the n contacts of said group of contacts; a control member capable of operation, according to a first type of program, for cyclically actuating the m contacts of one said series of contacts, according to a second type of program, for actuating according to two interlaced cycles the m contacts of one said series of contacts and the n contacts of said group of contacts, and, according to a third type of program, for actuating according to two interlaced cycles the m contacts of one said series of contacts and said particular contact; control means, said control means operating, upon starting, said control member according to the first type of program, said control means further, and after the alarm level has been reached for a given sub-group, feeding one said series of holding relays and operating said control member according to the second type of program, said control means still further, and after the alarm level has been reached for a particular point, feeding said group of holding relays and operating said control member according to the third type of program, and control means also, under the effect of a positive human operation, cutting off the feed of current to the series of relays that were fed and to said group of relays and stopping the operation of said control member according to the third type of program; and sub-group and point selector relays, made operative by said control means after the alarm level has been reached respectively for a given sub-group and for a particular point and selected by the holding relays respectively of one series and of said group actually chosen, arranged to withdraw respectively said given sub-group from the second type of program and said particular point from the third type of program.

3,092,820
ALARM SYSTEM
William N. Garwick, Kankakee, Ill.
(1135 Cornelia St., Pomona, Calif.)
Filed June 12, 1959, Ser. No. 819,986
5 Claims. (Cl. 340—227)



3. In an alarm system, a first circuit including a first source of electrical current, a first normally open switch, an electrical signal device, and means to energize said signal device from said first source responsive to closure of said switch, a second circuit including a second source of electrical current, a second normally open switch, and a third normally closed switch, said second source, second normally open switch, and third normally closed switch being connected in circuit with said signal device, spring means urging said first and second switches toward closed position, a common severable, heat fusible element operatively connected to said first and second switches for holding both of the latter in open position, relay means controlling said third switch and opening same when energized, circuit means connecting said relay means to said first source through said first switch, whereby to open said third switch responsive to closure of said first switch, and a solenoid operatively coupled to said first and second switches for actuating both of the latter to closed positions independently of said spring means.

3,092,821
LEAK METER FOR DETECTING FLUID PRESSURE LEAKS
Egon E. Muehlner, San Diego, Calif., assignor to General Dynamics Corporation, San Diego, Calif., a corporation of Delaware
Filed Sept. 6, 1960, Ser. No. 54,282
2 Claims. (Cl. 340—238)

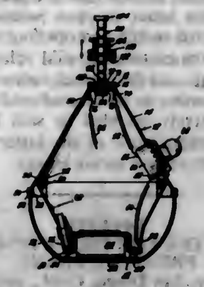


1. A differential pressure indicator comprising housing means, partition means having an orifice within said housing means for providing a pair of interconnected chambers, said chambers each being adapted to receive fluid pressure, an expansible chamber member in each of said chambers, said expansible chamber members each having an inner end secured to said partition means around said orifice and a movable end, each of said expansible chamber members being free to move independently of the other, a liquid within said expansible chamber members, valve means for closing said orifice to effect a normal substantially undeformed state of said expansible chamber members when one of said expansible chamber members is urged toward said partition means and for opening said orifice to effect a deformed state of said expansible chamber members when the fluid pressure in the chamber containing the other of said expansible chamber members exceeds the fluid pressure in the other chamber, said valve means comprising a metallic valve member carried by said one expansible chamber member for movement therewith and having an elongated portion therein, a ring-like member positioned within said orifice, said ring-like member being of electrical insulation material, and a metallic valve seat carried by said ring-like member and adapted to accommodate the end of said elongated portion to provide seating therefor, resilient means for urging said valve member toward said partition means to effect seating of said elongated portion, and electrical circuit means connected to said valve member and said valve seat for indicating said states.

3,092,822
SWIMMING POOL ALARM
Isidore Dorman, Whitestone, N.Y., assignor to Ideal Toy Corporation, Hollis, N.Y., a corporation of New York
Filed Sept. 11, 1961, Ser. No. 137,130
9 Claims. (Cl. 340—261)

1. In a swimming pool alarm comprising a buoyant hollow body, a source of electric power in said body, a

signal device mounted on said body, a pair of contact members electrically connected to said signal device and said source of electric power, said body having a top provided with an opening therein, said contact member being secured to said body in spaced relationship to each other and insulated from each other by said top, and a rod extended upwardly from within said body out of



said body through said opening, said rod including a collar, said collar resting above said top when said rod is in a vertical position, said rod being loosely disposed in said opening and being capable of tilting, said rod engaging both said contact members when tilted to complete an operative electrical circuit between said battery and said signal device.

3,092,823
DECODING DEVICE

Harold F. Martin, San Jose, Lloyd C. Tidball, Saratoga, and William A. Goddard, Monte Sereno, Calif., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York

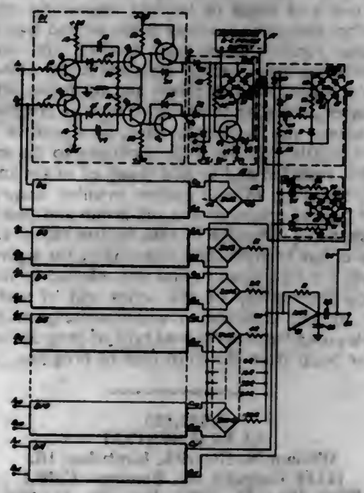
Filed Apr. 2, 1958, Ser. No. 725,978
7 Claims. (Cl. 340—347)

1. A decoding device comprising means for storing information to be decoded, a conversion table including a plurality of cards punched according to the decoded form of information, each column of each said card corresponding to different information, means responsive to a first signal for scanning said cards column by column, corresponding columns of said cards being scanned simultaneously, means for generating pulses equal in number to the number of said cards each time a column of said cards is being scanned, means for generating a second signal when a number of pulses corresponding to said information to be decoded have been generated, and means controlled by the number of said pulses generated when said second signal is generated for controlling the selection of a column of the several said card columns being scanned at that time, said selected column denoting indicia of the decoded form of the information to be decoded.

3,092,824
DIRECT CURRENT DIGITAL TO ANALOG DECODER

John M. Bentley, Glen Burnie, and James H. Brown, Severna Park, Md., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Filed Aug. 9, 1961, Ser. No. 130,430
13 Claims. (Cl. 340—347)

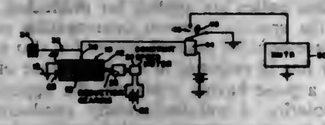


1. A direct current digital to analog decorder comprising: a direct current reference voltage having outputs of both polarities; a polarity selecting switch means coupled to both outputs of said direct current reference voltage to produce the selected polarity on a single output thereof; an amplifier having an input and an output; a plurality of binary weighted resistors having output ends coupled in common to said amplifier input; a plurality of digit switch means having the inputs thereto coupled in common to said polarity selecting switch single output and their respective outputs coupled respectively to the input end of one each binary weighted resistor for selectively switching the direct current voltage of selected polarity to said resistors; and switch driver circuits each having an input to receive a digital binary register voltage signal and each having an output, the output of one switch driver circuit being coupled to said polarity selecting switch means and the outputs of the remaining switch driver circuits being coupled respectively to one each of said digit switch means to control the switching of said polarity selecting switch means and said digit switch means in accordance with the digital binary voltage register signal combination whereby a direct current analog voltage is produced on the output of said amplifier of said digital binary voltage signal combination.

3,092,825
CODING APPARATUS

Robert L. Howard, White Bear Lake, and Rudolph B. Thoreson and John R. Winckler, Minneapolis, Minn., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Filed Dec. 5, 1961, Ser. No. 157,284
6 Claims. (Cl. 340—353)

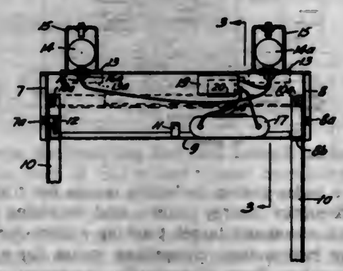


1. In an electrical coding apparatus,
a constant speed rotor having a coaxial right cylindrical surface consisting of electrically conductive and electrically non-conductive types of areas,
one type constituting the bulk of the surface,
the other type consisting of reference marking and first and second helical lines,
the lines being substantially coextensive lengthwise of the surface,
the first line intersecting the second line at a plurality of points.

3,092,826
COLLAPSIBLE BARRICADE FOR STREETS AND HIGHWAYS

Carl E. Klingner, Minneapolis, Minn., assignor to Warning Lites, Inc., Minneapolis, Minn., a corporation of Minnesota

Filed Apr. 21, 1958, Ser. No. 729,613
5 Claims. (Cl. 340—366)



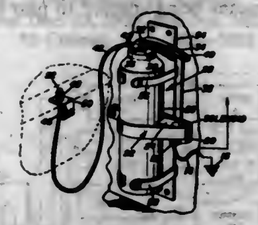
5. A barricade assembly comprising a hollow body with downwardly divergent side panels and a bottom panel forming an enclosure therewith, a pair of elongated legs pivotally mounted at the ends of said side panels adjacent the inside surface thereof and swingable upwardly into retracted position and downwardly into operative position, said bottom panel having leg receiving cut-away portions of a similar shape to the cross-sectional shape of the surrounded portion of the legs to combine with the pivotal mounting of said legs and hold the same in rigid operative position.

3,092,827
DISTRESS SIGNAL

Woodrow Wilson Pearce, 1923 Foothill Drive, Glendale 1, Calif.

Filed June 27, 1960, Ser. No. 38,816
5 Claims. (Cl. 340—366)

3. In a distress signal for use on an automobile, in combination, a pressurized dry chemical dispenser comprising a container charged with a ready-to-use dry chemical under constant pressure, the upper end of said container having a discharge neck provided with a normally closed valve, a chemical delivery hose communicatively connected at its intake end to said neck, support means removably mounting said container on a relatively stationary support surface, a valve opening trip lever having one end pivotally mounted on the container adjacent the discharge neck, a median portion of said lever being engageable with the closed valve for purposes of depressing and opening the valve when the lever is depressed, a solenoid, means for energizing said solenoid and means



mounting said solenoid on a median portion of said container, a rod paralleling the container and having an upper end operatively connected with an adjacent free end of the lever, the lower end of said rod being cooperable with and constituting a component part of the solenoid and being operable when the solenoid is either energized or deenergized as the case may be.

3,092,828
POLARIZATION MODULATION APPARATUS

Philip J. Allen, 8000 Marion St., North Forestville, Md.

Filed Apr. 28, 1961, Ser. No. 106,416
10 Claims. (Cl. 343—5)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. An electromagnetic wave operative device comprising, a dual mode circularly polarized transducer providing opposite sense circularly polarized coupling between an energy propagation medium and two separate signal ports, means for producing a radio frequency signal, means for splitting said signal into components having selected power ratio, means for applying said signal components independently to the separate signal ports of said transducer, and means which may include part of said last named means for modulating at least one of said signal components.

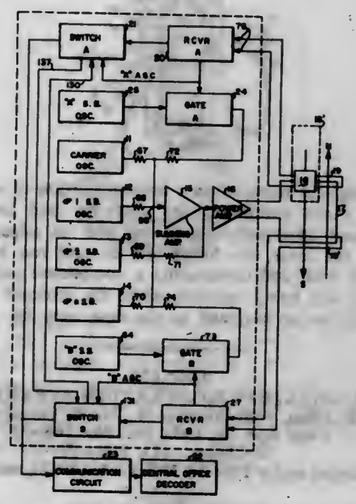
3,092,829
INTERROGATOR-RESPONDER SIGNALLING SYSTEM

Robert A. Kleist, Sunnyvale, Calif., assignor to General Precision, Inc., Binghamton, N.Y., a corporation of Delaware

Filed June 28, 1960, Ser. No. 39,295
8 Claims. (Cl. 343—6.5)

8. An interrogator-responder signalling system comprising an interrogator station, a responder device movable into spaced relation with the interrogator station, and a communication channel coupled between the interrogator station and a remote location, said interrogator station including a transmitter, at least two receivers, and a switching means associated with each of the receivers, said transmitter being operable to generate a carrier signal of a first frequency which is modulated by a plurality of sideband signals, said responder device including means for detecting the carrier signal and for generating a response signal of a second frequency modu-

lated in accordance with selected ones of the sideband signals, each of said receivers including a means for detecting the response signal and for passing audio signals corresponding to the sideband signals selected by and identifiable with the responder device, each receiver including a further means for passing another audio signal peculiar to and identifiable with the receiver, each of the switching means being coupled to pass signals from



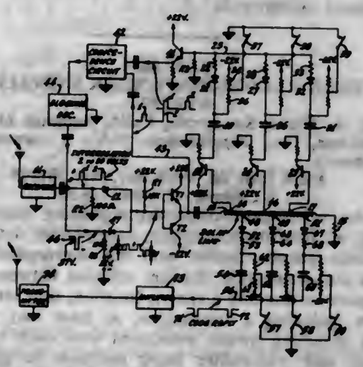
the respective receiver to the communication channel and being operable to pass said signals only when a response signal is received by the respective receiver, an interlocking means associated with and coupled between both said switching means whereby an operation of one of said switching means to pass signals to the communication channel inhibits the other of said switching means to prevent further signals being passed to the communications channel.

3,092,830

DECODER AND CODER CIRCUIT

Donald P. Clock, Granada Hills, and Guelino A. Lucchi, San Fernando, Calif., assignors to Radio Corporation of America, a corporation of Delaware

Filed Oct. 10, 1961, Ser. No. 144,120
10 Claims. (Cl. 343—6.8)



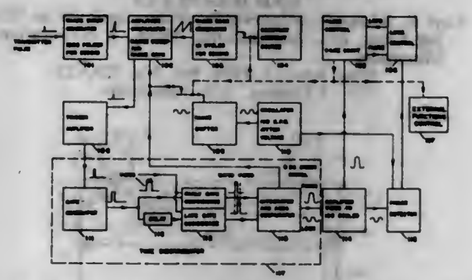
8. In radio apparatus which may receive interrogation pulses, means for decoding said interrogation pulses and for producing a reply code in response to said interrogation, said means for decoding and for producing said reply code comprising a delay line, means for applying said interrogation pulses with a certain polarity to said delay line, a uni-directionally conducting circuit connected to a tap point on said delay line for conducting only pulses of said certain polarity whereby said interrogation pulses appear at the output of said circuit with a certain amount of delay, circuit means to which said delayed interrogation pulses are applied for producing an output pulse if the spacing between interrogation pulses is a certain predetermined amount, means for also applying to said delay line in response to the occurrence of said output pulse a pulse having a polarity the opposite of said certain polarity, a uni-directionally conducting circuit connected to a tap point on said delay line for conducting only pulses of a polarity opposite to said certain polarity whereby said applied opposite polarity pulses appear at the output of said second circuit with a certain amount of delay to form the reply code.

3,092,831

AUTOMATIC RANGE TRACKING RADAR SYSTEM

William R. Mercer, Belmont, Mass., assignor, by mesne assignments, to Sanders Associates, Incorporated, Nashua, N.H., a corporation of Delaware

Filed May 17, 1954, Ser. No. 430,225
9 Claims. (Cl. 343—7.3)



1. In a radar system including means for transmitting radio frequency energy pulses and receiving reflected pulses, an automatic target tracking system for producing range information, comprising means for examining received pulses from a particular increment of a predetermined range to determine the presence of a target therein; scanning means for controlling said examining means continuously to effect a continuous examination of successive range increments; pause means responsive to received pulses having energy above a predetermined level for momentarily interrupting said scanning means to permit range indications from a particular range increment; and means for increasing the sensitivity of said pause means inversely to the rate of said interruptions.

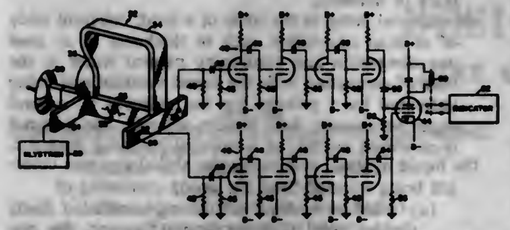
3,092,832

CLOSURE SIGNAL SYSTEM

Julius Schiffman, Huntington Woods, Mich., assignor to The Bendix Corporation, a corporation of Delaware

Filed Mar. 6, 1959, Ser. No. 797,629
8 Claims. (Cl. 343—8)

1. A signal system operative during relative movement between objects comprising means for emitting high frequency radiant energy beams, means for receiving the echoes of said beams, means for dividing a beam echo into components having a first phase difference upon relative opening movement between said objects, means for providing a second phase difference between echo components upon relative closing movement between said objects, means for emitting signals of different strengths when subject to echo components related by said second phase difference than when subject to echo components



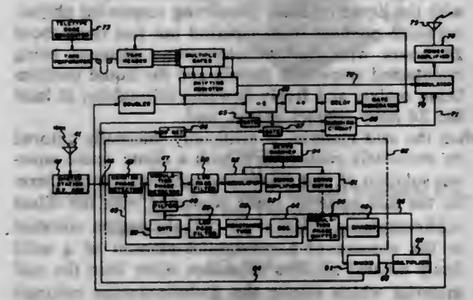
related by said first phase difference whereby relative opening and closing movements are distinguished.

3,092,833

CARRIER PHASE MODULATED DUAL PURPOSE COMMUNICATION SYSTEM

Alan H. Phillips, Syosset, N.Y., assignor to Sperry Rand Corporation, Great Neck, N.Y., a corporation of Delaware

Filed May 1, 1961, Ser. No. 106,850
12 Claims. (Cl. 343—105)



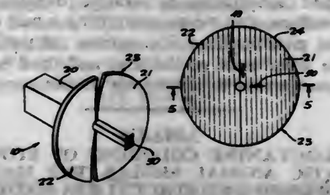
12. Means for receiving first and second pulsed Teletype signals, each of said pulsed signals containing a predetermined component of the same frequency, the frequency of said component being related to the Teletype character repetition rate, the carrier of each of said pulsed Teletype signals being repetitively phase shifted from one to the other of two quadrature phase values whereby the same phase values of each carrier recur at the frequency of said predetermined component, said means for receiving comprising first and second phase sensitive means for detecting respective ones of said first and second pulsed Teletype signals; each said phase sensitive means including a source of reference signal at the carrier frequency of a respective pulsed Teletype signal, and means for producing a quadrature relationship between the phase of said reference signal and one of said two phase values of the carrier of said respective pulsed Teletype signal; a source of third signals having the same frequency as said predetermined signal component, means connected to said first phase sensitive means and to said source of said third signals for synchronizing said third signals to said predetermined signal component of said first pulsed Teletype signal, phase shifting means connected to said source of said third signals for phase shifting said third signals, means connected to said second phase sensitive means and to said phase shifting means for synchronizing the phase shifted third signals to said predetermined signal component of said second pulsed Teletype signal, means for indicating the amount of phase shift introduced by said means for phase shifting, and means for separately demodulating each said first and second pulsed Teletype signals to extract the message data conveyed thereby.

3,092,834

SPLIT PARABOLIC RADAR ANTENNA UTILIZING MEANS TO DISCRIMINATE AGAINST CROSS-POLARIZED ENERGY

Joe G. McCann, Encino, Robert J. Stegen, Van Nuys, and William Falstrom, Encino, Calif., assignors, by mesne assignments, to Canoga Electronics Corporation, Van Nuys, Calif., a corporation of Nevada

Filed Dec. 23, 1958, Ser. No. 782,599
10 Claims. (Cl. 343—756)



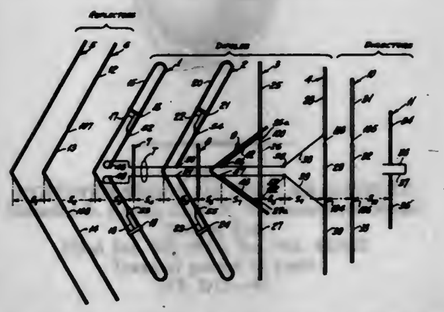
1. An aircraft radar antenna system comprising: a generally dish-shaped reflector split into halves at its center by a plane through its symmetrical axis with each half being rotated in opposite directions away from the other so that the intersecting obtuse angle formed by chords in a common plane subtending the arcs of each of said reflector halves in said common plane is increased so as to produce an antenna pattern having a main lobe broader in its H-plane than a perfect parabolic reflector of the same size; and means associated with said reflector to discriminate against electromagnetic energy received by said antenna system having a predetermined plane of polarization perpendicular to a plane through said split and through the symmetrical axis of said reflector.

3,092,835

MULTI-BAND RESONANT V ANTENNA

Joseph M. Jaytanie, Sherburne, N.Y., assignor to Technical Appliance Corporation, Sherburne, N.Y., a corporation of New York

Filed Oct. 4, 1960, Ser. No. 60,505
9 Claims. (Cl. 343—802)



9. An antenna system for two frequency bands of respectively low and high frequency, comprising a main dipole antenna section, a main reflector section mounted rearwardly of the said main dipole section, a main director section mounted forwardly of said main dipole section, said main dipole section comprising in spaced sequence forwardly of said main reflector section a first folded V-shaped dipole, a second folded V-shaped dipole, a first co-linear dipole-parasitic director array, a second co-linear dipole-parasitic director array, both said parasitic director arrays being mounted forwardly of said folded dipoles, the first co-linear array comprising first and third co-linear elements respectively in forward alignment with the end portions of said folded dipoles and constituting another half-wave dipole at the lower

frequency band, the second element of said first array being in alignment with the median sections of said folded dipoles and constituting a parasitic director for said median sections, the second co-linear array also comprising first and third co-linear elements in forward alignment with the end portions of said folded dipoles and constituting another half-wave dipole at the higher frequency band, the second element of said second array being in alignment with the median sections of said folded dipoles and constituting a parasitic director for said median sections, and means comprising a pair of tapered impedance matching feed line sections connecting respectively the inner ends of the first and third sections of each of said arrays to a common transmission line.

3,092,836

PHTHALOCYANINE COLORING OF STONE AND AQUATIC ANIMAL SHELLS, THE MATERIALS SO COLORED AND STRUCTURES MADE THEREFROM

James D. Boggus, Jasper, Ga., assignor to Marble Products Company of Georgia, a corporation of Georgia

No Drawing. Filed Sept. 2, 1960, Ser. No. 53,620
17 Claims. (Cl. 8—8)

1. A process for artificially coloring in its interior a body of a colorable naturally occurring material selected from the group consisting of whitestone, calcitic limestone, dolomitic limestone, dolomite, marble, granite, and aquatic animal shells which consists essentially of the step of

intimately contacting solid matter consisting essentially of said material with a liquid medium containing a phthalocyanine colorant therein,

an excess of the said liquid medium containing the phthalocyanine colorant over the quantity required to wet the surface area being intimately contacted with the body of material over at least fifteen minutes and for a period of time sufficient for the colorant to color the body internally and thereby produce an internally artificially colored body of the material,

the liquid medium containing the phthalocyanine colorant being mobile and capable of freely flowing during the entire period of time required for the phthalocyanine colorant to internally artificially color the body of material,

the material being in the form of a hard, coherent body of at least one-eighth inch in thickness in at least one dimension and containing natural water at the time of contacting with the liquid medium and being untreated by a process for the removal of natural water tenaciously held therein whereby the material is rendered useful as a colored building material,

the liquid medium containing the phthalocyanine colorant being selected from the group consisting of

(*a*) a liquid medium containing suspended finely divided solid phthalocyanine pigment, the pigment being insoluble in the liquid medium,

(*b*) a dilute acidic aqueous solution of phthalocyanine colorant soluble therein, and

(*c*) a solution in at least one organic solvent selected from the group consisting of normally liquid hydrocarbons, normally liquid halogenated hydrocarbons, and nitrobenzene of phthalocyanine colorant soluble therein,

when the material is artificially internally colored by intimately contacting it at ambient temperature with a liquid medium containing suspended phthalocyanine pigment, the material being intimately contacted with the liquid medium containing suspended phthalocyanine pigment over a period not less than about 24 hours with the phthalocyanine pigment being maintained suspended therein and the liquid medium being mobile and freely flowable throughout at least the 24 hour contact period, and

when the said material is artificially internally colored by intimately contacting it with a dilute acidic aqueous solution of phthalocyanine colorant soluble therein, the said material being contacted with the dilute acidic aqueous solution of phthalocyanine colorant in the absence of a substantial amount of a solid finely divided alkaline substance other than the said material which causes the phthalocyanine colorant to precipitate from the acidic aqueous solution.

DESIGNS

JUNE 4, 1963

195,326

COMBINED TOOTH BRUSH HOLDER, DRINKING GLASS HOLDER AND STERILIZING UNIT

Malcolm S. Meader, 3301 Woodbine St., Chevy Chase, Md.

Filed May 24, 1962, Ser. No. 70,263
Term of patent 14 years
(Cl. D4—3)



195,327

TOILET

Robert G. Lee, % Koehler Aircraft Products Co., 401 Leo St., Dayton, Ohio

Filed Aug. 4, 1961, Ser. No. 66,195
Term of patent 14 years
(Cl. D4—5)



195,328

SHELTER

Marvin V. Brooks, Denton, Tex., assignor to Olin Mathieson Chemical Corporation, a corporation of Virginia

Filed May 2, 1960, Ser. No. 60,411
Term of patent 14 years
(Cl. D13—1)



195,329

MOTOR GRADER

Paul B. Benner, Dean C. Klingaman, and Alfred W. Sieving, Decatur, Ill., assignors to Caterpillar Tractor Co., Peoria, Ill., a corporation of California

Filed May 4, 1962, Ser. No. 69,972
Term of patent 14 years
(Cl. D14—3)



195,330

WHEEL COVER

Roger E. Hughet, Royal Oak, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Feb. 5, 1962, Ser. No. 68,664
Term of patent 7 years
(Cl. D14—30)



195,331

COUNTER STOOL OR SIMILAR ARTICLE

Maurice P. Burke, 5140 N. Westmoreland Road, Dallas, Tex.

Filed Jan. 22, 1962, Ser. No. 68,402
Term of patent 14 years
(Cl. D15—8)



195,332
COMBINED FRAME AND DOOR FOR A RECESSED FIRE EXTINGUISHER CABINET
Albert W. Hattenhauer, Los Angeles, Calif., assignor to Standard Fire Hose Company, Santa Monica, Calif., a corporation of California
Filed Oct. 2, 1961, Ser. No. 66,926
Term of patent 14 years
(Cl. D16—2)



195,333
FIRE EXTINGUISHER OR SIMILAR ARTICLE
Oscar Doster, 49 Brixham Terrace, Toronto, Ontario, Canada
Filed May 17, 1962, Ser. No. 70,176
Term of patent 14 years
(Cl. D16—2)



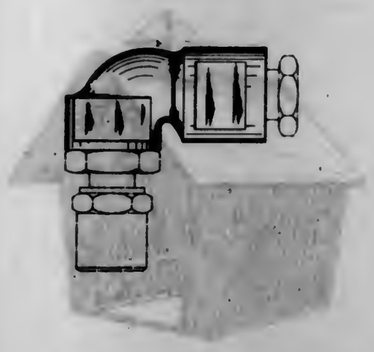
195,334
WALL BLOCK
Karl V. Brockman, Cleveland, Ohio, assignor to Stark Ceramics, Inc., Canton, Ohio, a corporation of Ohio
Filed Feb. 12, 1960, Ser. No. 59,380
Term of patent 14 years
(Cl. D18—2)



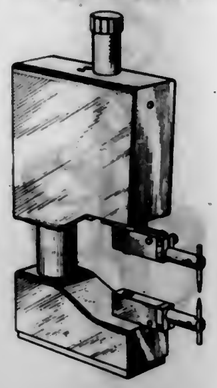
195,335
TILE
Donald R. Speaker, North Hollywood, Calif., assignor to Pomona Tile Manufacturing Company, Los Angeles, Calif., a corporation of California
Filed July 12, 1962, Ser. No. 70,894
Term of patent 14 years
(Cl. D18—2)



195,336
SUBMINIATURE COAXIAL CONNECTOR FITTING
Albert E. Powell, Old Greenwich, Conn., assignor to Micon Electronics, Inc., Garden City, Long Island, N.Y.
Filed Sept. 26, 1962, Ser. No. 71,857
Term of patent 14 years
(Cl. D26—1)



195,337
MINIATURE ELECTRONIC WELDING HEAD
Meredith M. Nyborg, Camarillo, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Filed Oct. 30, 1962, Ser. No. 72,317
Term of patent 14 years
(Cl. D26—1)



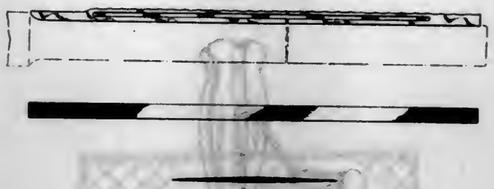
195,338
ELECTRIC SERVICE BOX OR THE LIKE
John R. Geisen, 113 Woodside Place, Fort Thomas, Ky.
Filed May 12, 1961, Ser. No. 65,137
Term of patent 14 years
(Cl. D26—13)



195,339
ELECTRIC SWITCH BUTTON
Wesley T. Sorenson, West Hartford, Conn., assignor to Sorenson Lighted Controls, Inc., West Hartford, Conn., a corporation of Connecticut
Filed Aug. 22, 1962, Ser. No. 71,417
Term of patent 14 years
(Cl. D26—13)



195,340
VENTILATED GUN SIGHT RIB
Arne Y. Graha, Warehouse Point, Conn., assignor to The Poly Choke Company, Incorporated, East Hartford, Conn.
Filed Mar. 28, 1962, Ser. No. 69,604
Term of patent 14 years
(Cl. D30—1)



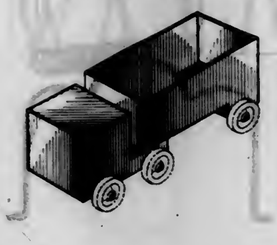
195,341
MOBILE BAR
Joseph A. Reymann, 403 Canton Road, Akron, Ohio
Filed Feb. 9, 1962, Ser. No. 68,743
Term of patent 7 years
(Cl. D33—19)



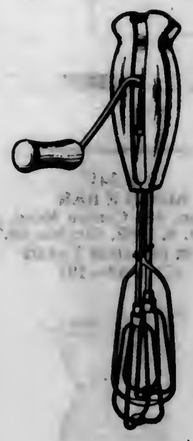
195,342
PLAYING CARD HOLDER AND DISPENSER
James T. Russell, 19460 Cranbrook Drive, Detroit, Mich.
Filed Dec. 28, 1962, Ser. No. 72,974
Term of patent 14 years
(Cl. D34—13)



195,343
TOY TRAILER TRUCK
Robert H. Crowle, Mount Prospect, and William G. Crowle, Deerfield, Ill., assignors to General Box Company, Des Plaines, Ill., a corporation of Delaware
Filed Mar. 12, 1962, Ser. No. 69,188
Term of patent 14 years
(Cl. D34—15)



195,344
EGG BEATER OR SIMILAR ARTICLE
Henning Waldemar Lindahl, Aamundstorp, Sweden
Filed Jan. 30, 1962, Ser. No. 68,570
Term of patent 14 years
Claims priority, application Sweden July 31, 1961
(Cl. D44—1)



195,345
SERVING TRAY SECTION
Willis A. Stageberg, Minneapolis, Minn., assignor to Plastics Inc., St. Paul, Minn.
Filed Nov. 22, 1961, Ser. No. 67,657
Term of patent 14 years
(Cl. D44—10)



195,346
COMBINED HANDLE AND BAIL FOR A CADDY OR THE LIKE
Kurt E. Christofferson, Norwich, Conn., assignor to The Artistic Wire Products Co. of Conn. Incorporated, Taftville, Conn., a corporation of Connecticut
Filed Dec. 17, 1962, Ser. No. 72,887
Term of patent 14 years
(Cl. D44—10)



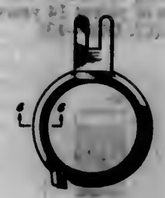
195,347
COMBINED CONDIMENT JARS OR THE LIKE AND STAND THEREFOR
Clara Virginia Eichelitz, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Filed Dec. 10, 1962, Ser. No. 72,781
Term of patent 14 years
(Cl. D44—22)



195,348
HANDLE FOR A CADDY OR THE LIKE
Kurt E. Christofferson, Norwich, Conn., assignor to The Artistic Wire Products Co. of Conn., Incorporated, a corporation of Connecticut
Filed Dec. 17, 1962, Ser. No. 72,886
Term of patent 14 years
(Cl. D44—29)



195,349
TRAVELER RING
Robert Edgar Pomeranz, P.O. Box 250, Sanford, N.C.
Filed Jan. 5, 1960, Ser. No. 58,933
Term of patent 14 years
(Cl. D47—5)



195,350
WALL LIGHT
Alexander Simkins, 221 Linden Blvd., Brooklyn, N.N.Y.
Filed May 16, 1962, Ser. No. 70,173
Term of patent 14 years
(Cl. D42—4)



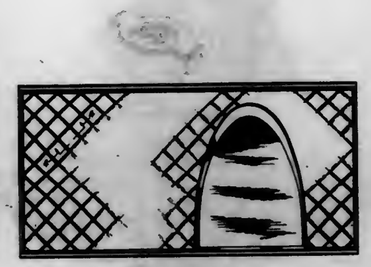
195,351
BACK PLATE FOR DRAWER PULLS AND THE LIKE
William Doyle Watt, Jr., Grand Rapids, Mich., assignor to Keeler Brass Company, Grand Rapids, Mich.
Filed May 14, 1962, Ser. No. 70,112
Term of patent 14 years
(Cl. D50—6)



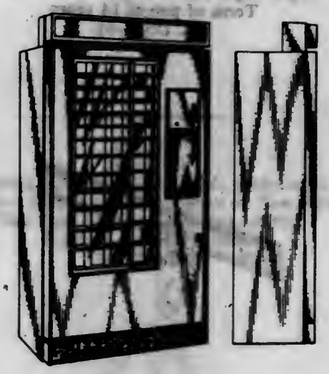
195,352
COMBINED FURNITURE HANDLE AND ESCUTCHEON THEREFOR
Thomas S. Cluck, 406-410 Grant Ave., San Francisco, Calif.
Filed May 21, 1962, Ser. No. 70,206
Term of patent 14 years
(Cl. D50—6)



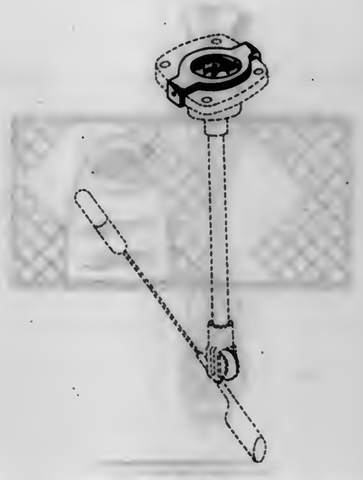
195,353
TISSUE DISPENSER
Danforth Cardone, Jr., Weston, Conn., and Alban Gifford Jackson, New York, N.Y., assignors to The Procter & Gamble Company, Cincinnati, Ohio, a corporation of Ohio
Filed Jan. 9, 1962, Ser. No. 68,238
Term of patent 14 years
(Cl. D52—2)



195,354
FOOD VENDING MACHINE OR SIMILAR ARTICLE
Melvin H. Boldt, Glenview, and Thurber H. Morrison, Evanston, Ill., assignors to Automatic Canteen Company of America, Chicago, Ill., a corporation of Delaware
Filed Nov. 9, 1961, Ser. No. 67,436
Term of patent 14 years
(Cl. D52—3)



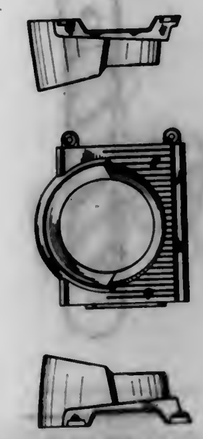
195,355
LIQUID LEVEL GAUGE
Paul B. Johnson, Garland, Tex., assignor to J. Y. Taylor Manufacturing Company, a corporation of Texas
Filed May 25, 1966, Ser. No. 60,723
Term of patent 14 years
(Cl. D52—6)



195,356
COMBINATION SQUARE HEAD AND RULE
Ernest Kezzler, 3525 Broadway, Chicago, Ill.
Filed Sept. 11, 1961, Ser. No. 66,694
Term of patent 14 years
(Cl. D52—6)



195,357
UNIT FOR A MODULAR INSTRUMENT PANEL FOR A BOAT OR THE LIKE
Richard J. McFadyen, Upper Montclair, N.J., assignor, by mesne assignments, to Aqua Meter Instrument Corporation, Roseland, N.J., a corporation of New Jersey
Filed Sept. 27, 1961, Ser. No. 66,883
Term of patent 14 years
(Cl. D52—6)



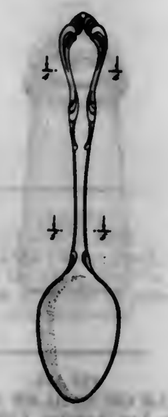
195,358
COMBINATION SQUARE
Ernest Kezzler, 3525 Broadway, Chicago, Ill.
Filed Nov. 13, 1961, Ser. No. 67,480
Term of patent 14 years
(Cl. D52—6)



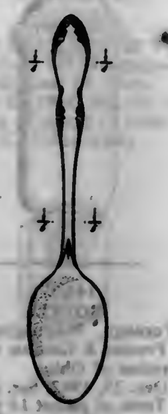
195,359
CALIPER RULER
Alfred Robbins, 55 Central Park W., New York, N.Y.
Filed Mar. 23, 1962, Ser. No. 69,395
Term of patent 14 years
(Cl. D52—6)



195,360
SPOON OR SIMILAR ARTICLE
Ellen B. Manderfield, Syracuse, N.Y., assignor to Oneida Ltd., Oneida, N.Y., a corporation of New York
Filed Nov. 21, 1962, Ser. No. 72,565
Term of patent 14 years
(Cl. D54—12)



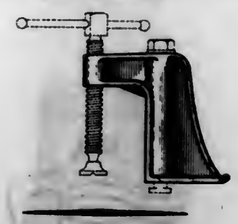
195,361
SPOON OR SIMILAR ARTICLE
Ellen B. Manderfield, Syracuse, N.Y., assignor to Oneida Ltd., Oneida, N.Y., a corporation of New York
Filed Nov. 21, 1962, Ser. No. 72,566
Term of patent 14 years
(Cl. D54—12)



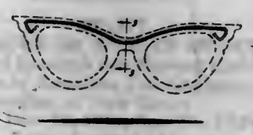
195,362
COMBINED PAINT STIRRER AND PRY BAR
Fred J. Geisler, 1619 S. Austin Blvd., Cicero, Ill.
Filed Mar. 8, 1961, Ser. No. 64,193
Term of patent 14 years
(Cl. D54—13)



195,363
CLAMP
Daniel V. Holman, 2440 Bennett Ave., Evanston, Ill.
Filed Oct. 25, 1961, Ser. No. 67,256
Term of patent 14 years
(Cl. D54—13)



195,364
EYEGLASS FRAME FRONT
John D. Baer, Attleboro, Mass., assignor, by mesne assignments, to The Univis Bishop Company, North Attleboro, Mass., a corporation of Massachusetts
Filed Nov. 13, 1961, Ser. No. 67,483
Term of patent 14 years
(Cl. D57—1)



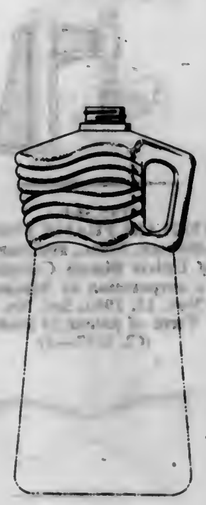
195,365
MONOCULAR HEAD-MOUNTED CATHODE-RAY TUBE VIEWER
Wendell R. Holt, Los Angeles, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Filed Dec. 26, 1961, Ser. No. 68,063
Term of patent 14 years
(Cl. D57—1)



195,366
BOTTLE
William Harold Baird, Red Bank, N.J., assignor to American Can Company, a corporation of New Jersey
Filed Dec. 21, 1961, Ser. No. 68,022
Term of patent 14 years
(Cl. D58—5)



195,367
JUG
Arthur Lonker, Philadelphia, Pa., assignor, by mesne assignments, to B. T. Babbitt, Inc., New York, N.Y., a corporation of New York
Filed Aug. 29, 1962, Ser. No. 71,489
Term of patent 14 years
(Cl. D58—5)



195,368
BOTTLE OR SIMILAR ARTICLE
Victor Koenigsberg, Franklin Square, N.Y., assignor to Colgate-Palmolive Company, New York, N.Y., a corporation of Delaware
Filed Sept. 17, 1962, Ser. No. 71,717
Term of patent 14 years
(Cl. D58—6)



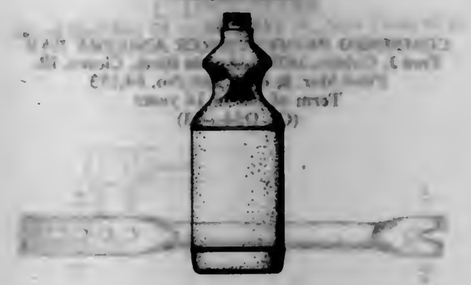
195,369
BOTTLE OR SIMILAR ARTICLE
Victor Koenigsberg, Franklin Square, N.Y., assignor to Colgate-Palmolive Company, New York, N.Y., a corporation of Delaware
Filed Sept. 19, 1962, Ser. No. 71,776
Term of patent 14 years
(Cl. D58—6)



195,370
BOTTLE OR SIMILAR ARTICLE
Alfred D. Sterger, Los Angeles, Calif., assignor to Purex Corporation, Ltd., Lakewood, Calif., a corporation of California
Filed Aug. 13, 1962, Ser. No. 71,257
Term of patent 14 years
(Cl. D58—8)



195,371
BOTTLE
Albert Henry Torongo, Washington Crossing, Pa., assignor to The Procter & Gamble Company, Cincinnati, Ohio, a corporation of Ohio
Filed Dec. 19, 1962, Ser. No. 72,903
Term of patent 14 years
(Cl. D58—8)



195,372
CLOSURE FOR BOTTLES OR THE LIKE
William Wortley, East Grinstead, Sussex, England, assignor to Wicanders (Great Britain) Limited, a company of Great Britain
Filed Aug. 10, 1961, Ser. No. 66,257
Term of patent 7 years
(Cl. D58—10)



195,373
STRONG BOX
Harry D. Dwyer, 3326 Cherry Road, Anderson, Ind.
Filed Oct. 16, 1961, Ser. No. 67,695
Term of patent 14 years
(Cl. D58—12)



195,374
CIGARETTE PACKAGE OR THE LIKE
Gary A. Gerber, 726 Huntington Road, Bridgeport 10, Conn.
Filed Aug. 22, 1961, Ser. No. 66,457
Term of patent 14 years
(Cl. D58—12.6)



195,375
DISPLAY PACKAGING CONTAINER
John Donald Bostrom, Niles, Ill., assignor to Poster Packing, Inc., Chicago, Ill., a corporation of Delaware
Filed Mar. 8, 1961, Ser. No. 64,186
Term of patent 14 years
(Cl. D58—12.6)



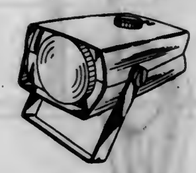
195,376
COMBINED MUG AND COVER THEREFOR
William M. Curtis, Painted Post, N.Y., assignor to Corning Glass Works, Corning, N.Y., a corporation of New York
Filed Sept. 7, 1961, Ser. No. 66,637
Term of patent 14 years
(Cl. D58—17)



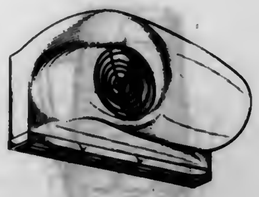
195,377
CLOSURE OR SIMILAR ARTICLE
Henry Wendland Frantzeb and Howard Carl Hill, Easton, Pa., assignors to American Can Company, New York, N.Y., a corporation of New Jersey
Filed Dec. 19, 1961, Ser. No. 67,967
Term of patent 14 years
(Cl. D58—26)



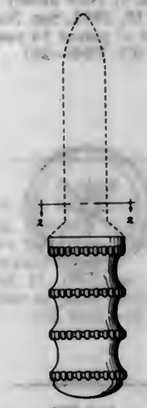
195,378
PHOTOGRAPHIC FLASH UNIT
Wallace A. Monson, Golden Valley, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed June 22, 1961, Ser. No, 65,683
Term of patent 14 years
(Cl. D61—1)



195,379
FAN HOUSING
John Maynard Morrison, Carss Park, near Sydney, New South Wales, Australia, assignor to Centrillo Pty. Limited, New South Wales, Australia
Filed Dec. 13, 1961, Ser. No. 67,899
Term of patent 14 years
Claims priority, application Australia Aug. 3, 1961
(Cl. D62—4)



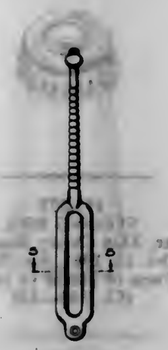
195,380
MISSILE BOOSTER
Stanley Lehrer, Pompton Lakes, N.J., assignor to Thiokol Chemical Corporation, Bristol, Pa., a corporation of Delaware
Filed Feb. 17, 1961, Ser. No. 63,969
Term of patent 14 years
(Cl. D71—1)



195,381
BUOYANT VEST
Edgar G. Baker, Carbondale, Pa., assignor to Gentex Corporation, New York, N.Y., a corporation of Delaware
Filed Jan. 8, 1962, Ser. No. 68,231
Term of patent 14 years
(Cl. D71—1)



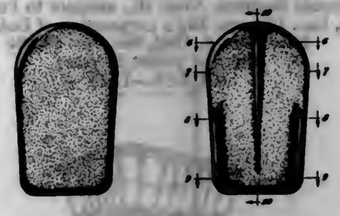
195,382
BOAT FENDER
Leo Jiranek, 10 Northway, Lucas Point, Old Greenwich, Conn.
Filed Mar. 7, 1962, Ser. No. 69,128
Term of patent 14 years
(Cl. D71—1)



195,383
PASSENGER AIRCRAFT
Lawrence B. Rollie, Chicago, Ill. (9241 N. Olcott, Morton Grove, Ill.)
Filed Apr. 2, 1962, Ser. No. 69,523
Term of patent 14 years
(Cl. D71—1)



195,384
SWIM BOARD
Roger A. Del Mar, Los Angeles, Calif., assignor to Aeroplastics Corporation, Venice, Calif., a corporation of California
Filed Jan. 16, 1961, Ser. No. 63,569
Term of patent 7 years
(Cl. D71—1)



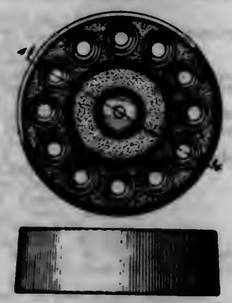
195,385
FOUNTAIN PEN NIB
Homer Theodore Green, Milton, Wis., assignor to The Parker Pen Company, Janesville, Wis., a corporation of Wisconsin
Filed May 18, 1960, Ser. No. 60,627
Term of patent 14 years
(Cl. D74—17)



195,386
GARMENT HANGER
John G. Warmuth III, Brooklyn, N.Y., assignor to Yankee Plastics, Inc., New York, N.Y., a corporation of New York
Filed Jan. 16, 1963, Ser. No. 73,203
Term of patent 14 years
(Cl. D60—8)



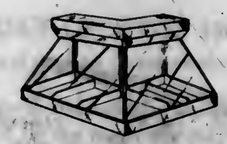
195,387
HOLDER FOR COLLETS
Harry F. Cygan, Berwyn, Ill., assignor of fifty percent to George W. Vahsa, Brookfield, Ill.
Filed Apr. 17, 1961, Ser. No. 64,776
Term of patent 14 years
(Cl. D60—9)



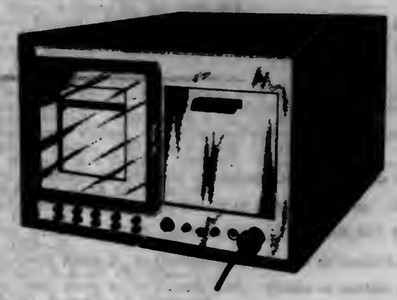
195,388
DISPLAY STAND
Robert G. Brunner, 131 Clyde, Evanston, Ill.
Filed June 20, 1962, Ser. No. 70,617
Term of patent 14 years
(Cl. D60—9)



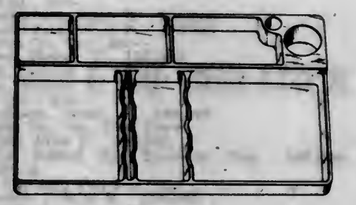
195,389
DISPLAY CASE OR SIMILAR ARTICLE
Joseph C. Graziano, 4315 N. Mulligan Ave., Chicago, Ill.
Filed Aug. 28, 1961, Ser. No. 66,508
Term of patent 14 years
(Cl. D60—11)



195,390
RECORDER FOR MONITORING BODY FUNCTIONS
Tommy N. Tyler, Littleton, Colo., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed July 13, 1961, Ser. No. 65,901
Term of patent 14 years
(Cl. D83—1)



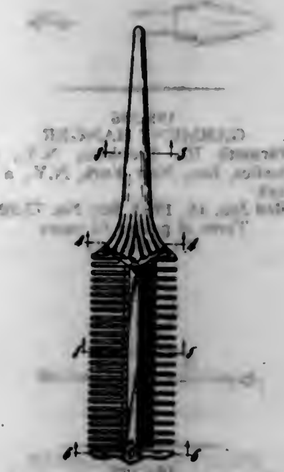
195,391
TRAY
Donald E. Parkison, 5118 California St., Omaha, Nebr.
Filed May 15, 1962, Ser. No. 70,149
Term of patent 14 years
(Cl. D83—1)



195,392
TRAY
Donald E. Parkison, 5118 California St., Omaha, Nebr.
Filed May 15, 1962, Ser. No. 70,150
Term of patent 14 years
(Cl. D63—1)



195,393
HAIR COMB
Albert Safianoff, Palos Verdes Estates, Calif., assignor to The Gillette Company, Boston, Mass., a corporation of Delaware
Filed Nov. 23, 1962, Ser. No. 72,585
Term of patent 14 years
(Cl. D66—8)









LIST OF DESIGN PATENTEES

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PATENTS WERE ISSUED ON THE 4TH DAY OF JUNE, 1963

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Boldt, Melvin H., and T. H. Morrison, to Automatic Canteen Co. of America. Food vending machine or similar article. 195,354, 6-4-63, Cl. D52—3.
Boetrom, John D., to Poster Packaging, Inc. Display packaging container. 195,375, 6-4-63, Cl. D58—12.6.
Brockman, Karl V., to Stark Ceramics, Inc. Wall block. 195,334, 6-4-63, Cl. D16—2.
Brooks, Marvin V., to Olin Mathieson Chemical Corp. Shelter. 195,328, 6-4-63, Cl. D12—1.
Brunner, Robert G. Display stand. 195,388, 6-4-63, Cl. D80—9.
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Koenigsberg, Victor. 195,369.
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Curtis, William M. 195,376.
Crowle, Robert H. and W. G., to General Box Co. Toy trailer truck. 195,343, 6-4-63, Cl. D34—15.
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Curtis, William M., to Corning Glass Works. Combined mug and cover therefor. 195,376, 6-4-63, Cl. D58—17.
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Fransreb, Henry W., and H. C. Hill, to American Can Co. Closure or similar article. 195,377, 6-4-63, Cl. D58—26.
Geisen, John R. Electric service box or the like. 195,338, 6-4-63, Cl. D26—13.
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Kessler, Ernest. Combination square. 195,358, 6-4-63, Cl. D52—6.
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Koenigsberg, Victor, to Colgate-Palmolive Co. Bottle or similar article. 195,369, 6-4-63, Cl. D58—6.
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Lonker, Arthur, to B. T. Babbitt, Inc. Jug. 195,367, 6-4-63, Cl. D58—5.
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Manderfield, Ellen B., to Oneida Ltd. Spoon or similar article. 195,361, 6-4-63, Cl. D54—12.
McFadyen, Richard J., to Aqua Meter Instrument Corp. Unit for a modular instrument panel for a boat or the like. 195,357, 6-4-63, Cl. D52—6.
Meader, Malcolm S. Combined tooth brush holder, drinking glass holder and sterilizing unit. 195,326, 6-4-63, Cl. D4—3.
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Manderfield, Ellen B. 195,361.
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Parkison, Donald E. Tray. 195,391, 6-4-63, Cl. D83—1.
Parkison, Donald E. Tray. 195,392, 6-4-63, Cl. D83—1.
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Reymann, Joseph A. Mobile bar. 195,341, 6–4–63, Cl. D33—19.
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Russell, James T. Playing card holder and dispenser. 195,342, 6–4–63, Cl. D34—13.
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Sorenson, Wesley T., to Sorenson Lighted Controls, Inc. Electric switch button. 195,339, 6–4–63, Cl. D26—13.
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TO WHOM

PATENTS WERE ISSUED ON THE 4TH DAY OF JUNE, 1963

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

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Adams, Ernest C., Jr., and J. A. Peterson to Miles Laboratories, Inc. Blood detecting composition. 3,092,464, 6–4–63, Cl. 23—253.
Adams, Ernest C., Jr., and R. R. Smeby, to Miles Laboratories, Inc. Diagnostic test device for blood sugar. 3,092,465, 6–4–63, Cl. 23—253.
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Andrews, Hugh H., to Scovill Mfg. Co. Pocket construction. 3,091,773, 6–4–63, Cl. 2—247.
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Jeger, Oskar, Arigoni, Wettstein, Anner, Heusler, Meystre, Wieland, and Kalvoda. 3,092,625.

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Gretler, Albert C., and Wilcox. 3,092,499.
Kell, Havard L. 3,092,500.
McBride, Joseph J., Jr. and Maia. 3,092,650.
Armstrong, Wilfred H., to Her Majesty the Queen in right of Canada, as represented by the Minister of National Defence. Tandem fairing. 3,092,067, 6–4–63, Cl. 114—235.
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Atomic Energy of Canada Ltd.: *See*—
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Cox, Bradley G. 3,092,575.
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Barnes, Paul T., to United States of America, Navy. Liquid propellant tankage. 3,091,923, 6–4–63, Cl. 60—35.6.
Barnhart, Carlton L. Automatic coin collector. 3,092,308, 6–4–63, Cl. 232—57.
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Bande, John, to Allis-Chalmers Mfg. Co. Pulse amplitude discriminator. 3,092,731, 6–4–63, Cl. 307—88.5.
Baughan, Herbert A. Dental saliva ejectors. 3,091,859, 6–4–63, Cl. 32—33.
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Beaudry, Walter A., E. P. Pollitt, and R. E. Smith, to F. W. Means & Co. Automatic towel flattening device. 3,092,-271, 6–4–63, Cl. 214—152.
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Beck, Herbert H., and A. J. Hall, to Armour & Co. Method of packaging food and the resulting package. 3,092,501, 6–4–63, Cl. 99—171.
Becker, Rudolf, to Gesellschaft fur Linde's Eismaschinen Aktiengesellschaft. Process and apparatus for refrigeration by work-producing expansion. 3,091,941, 6–4–63, Cl. 62—13.
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Beerli, George A., to Congoleum-Nairn Inc. Tape dispenser. 3,092,343, 6–4–63, Cl. 242—55.
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Tracey, John E., and Wheeler. 3,091,986.
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Ben-Ezra, Aaron, and E. S. Mackey, to General Aniline & Film Corp. Lower alkyl lactate coupler solvents. 3,092,495, 6–4–63, Cl. 96—100.
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Bennett, Harry B., and H. W. Vaughn; said Vaughn assor. of 20% to said Bennett. Manufacture of honeycomb cores. 3,092,711, 6–4–63, Cl. 219—61.
Bentley, John M., and J. H. Brown, to United States of America, Navy. Direct current digital to analog decoder. 3,092,824, 6–4–63, Cl. 340—347.
Bentley, Richard E., Jr., to Texas Paint Supply Co. Paint container device. 3,091,793, 6–4–63, Cl. 15—257.06.
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Ester, Wilhelm, and Sommer. 3,092,587.
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Bigge, Henry C. 3,091,826.
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Brownson, Ivan F. Hand grip. 3,092,068, 6-4-63, Cl. 115—6.1.

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Bruckmann, Maurice E. Reed cases. 3,092,243, 6-4-63, Cl. 206—13.

Brudney, Harry, to Dollac Corp. Tearing eye. 3,091,891, 6-4-63, Cl. 46—185.

Brudney, Harry, and R. S. Turshen, to Dollac Corp. Rolling and sleeping eye for dolls. 3,091,893, 6-4-63, Cl. 46—166.

Brunton, Philip E., and I. Morrison. Container for beverages. 3,092,275, 6-4-63, Cl. 215—1.

Bruson, Herman A., and W. I. Denton, to Olin Mathieson Chemical Corp. Isomerization of alkylene oxide. 3,092,-668, 6-4-63, Cl. 260—632.

Budd Co., The: *See*—
Gaenssle, Paul W. 3,092,212.
Herbert, Thomas M. 3,092,211.
Warahilek, Charles. 3,092,057.

Budwig, Gilbert G. Grommet. 3,091,795, 6-4-63, Cl. 16—2.

Bullock, Norman J., E. F. Brubaker, and C. K. Billings, to General Motors Corp. Free-piston pump for washing apparatus. 3,091,954, 6-4-63, Cl. 68—18.

Bunker, Henry L., Jr., E. F. Lewis, and W. J. Powers, Jr., to E. I. du Pont de Nemours and Co. Elastomeric anti-skid traction device. 3,092,163, 6-4-63, Cl. 152—221.

Burgy, Raymond A., to Toledo Scale Corp. System for controlling movements of elevator doors. 3,092,200, 6-4-63, Cl. 187—52.

Burke, Lawrence F. Automobile mechanic's creeper with adjustable headrest. 3,092,394, 6-4-63, Cl. 280—32.5.

Burns, Robert V., and R. T. Cleary, to Automatic Electric Laboratories, Inc. Electronic pulse correction circuit. 3,092,691, 6-4-63, Cl. 179—16.

Burns, Walter W.: *See*—
Brause, Jacob L., and Burns.

Burroughs Corp.: *See*—
Borutzke, Irvin W. 3,092,816.
Borutzke, Irvin W., and Eisenmann. 3,092,020.
Wolfe, Roger W. 3,092,752.

Burroughs Wellcome & Co. (U.S.A.) Inc.: *See*—
Coker, Geoffrey G., and Copp.

Busch, Gerhard, and W. Lenfer. Jarring machine for feeding and straightening stacks of paper. 3,092,382, 6-4-63, Cl. 271—89.

Buskirk, John E., and J. H. Childs, to General Motors Corp. Battery structure. 3,092,520, 6-4-63, Cl. 136—166.

Butler, James W. Method of making a neutron-absorbing calcium boride brick. 3,092,590, 6-4-63, Cl. 252—478.

Butler Mfg. Co.: *See*—
O'Dell, Richard A. 3,092,010.

Butler, William F., to Cutter Laboratories, Inc. Administration equipment. 3,092,106, 6-4-63, Cl. 128—214.

Byrd, Ray H. Highway picket and reflective marker. 3,091,-907, 6-4-63, Cl. 94—1.5.

Cable Electric Products, Inc.: *See*—
Abrams, Ralph. 3,092,695.

Cahoon, Nelson C., and M. P. Korver, to Union Carbide Corp. Anode film layer for galvanic cells. 3,092,518, 6-4-63, Cl. 136—146.

California Institute Research Foundation: *See*—
Johnston, Alan R. 3,091,972.

California Research Corp.: *See*—
Clark, Calvin M. 3,092,751.
Koslowski, Robert H., Mason, and Scott. 3,092,567.
Thompson, David P., and Earl. 3,091,987.

Campbell, Charles, and F. E. Barning, to Dynamic Process Co. Inc. Ink transfer impression-making ribbons. 3,092,236, 6-4-63, Cl. 197—172.

Canada, Her Majesty the Queen in right of, as represented by the Minister of National Defence: *See*—
Armstrong, Wilfred H. 3,092,067.

Cannon, John B., Jr. Reconnaissance system with a stabilized recording magazine. 3,092,687, 6-4-63, Cl. 178—6.7.

Cannon, Madison M., G. M. Dick, and S. M. Salomon, to Bird Machine Co. Screening apparatus. 3,092,578, 6-4-63, Cl. 210—304.

Canoga Electronics Corp.: *See*—
McCann, Joe G., Stegen, and Falstrom. 3,092,834.

Cantieri Riuniti Dell' Adriatico S.p.A.: *See*—
Costanzi, Nicolo. 3,092,061.

Cantrel, Kenneth E.: *See*—
Goodhue, Lyle D., Cantrel, and Louthan. 3,092,542.

Caral Packaging Machinery, Inc.: *See*—
Allison, Robert W. 3,091,995.

Carey, Philip, Mfg. Co., The: *See*—
Fasold, George A., and Leibrook. 3,091,898.

Carlisle Chemical Works, Inc.: *See*—
Nass, Leonard I., and Stamm. 3,092,598.

Carlson, Elwood L.: *See*—
Christensen, Valdemar J., Eglesen, and Carlson. 3,092,-460.

Carlson, Leonard A.: *See*—
Sullivan, Wilbur M., and Carlson. 3,092,601.

Carpenter, Dorothy J. M.: *See*—
Mayer, Oscar J. 3,092,292.

Carpenter, Joseph E.: *See*—
Lundberg, Lennart A., Schlegel, and Carpenter. 3,091,-926.

Carrier Corp.: *See*—
Birdsall, Bruce E. 3,092,178.

Carroll, Charles, to Duff-Norton Co. Hand-operated chain hoist. 3,092,369, 6-4-63, Cl. 254—170.

Carson, Frank J., to Libbey-Owens-Ford Glass Co. Glass bending mold. 3,092,481, 6-4-63, Cl. 65—288.

Carstens, Fred A., to A. O. Smith Corp. Starting joints for continuous wound vessel. 3,092,148, 6-4-63, Cl. 138—151.

Carter, Morris B., R. C. Stroup, J. J. Vadia, and K. B. McGhee, to Union Carbide Corp. Process for making carbon articles. 3,092,487, 6-4-63, Cl. 18—47.5.

Carter Products, Inc.: *See*—
Powell, Leo S. 3,092,656.

Cascade Pole Co.: *See*—
Ellerman, Charles E., and Monahan. 3,092,158.

Cash, Harvey, Jr., to No-Sag Spring Co. Spring cushion construction. 3,092,876, 6-4-63, Cl. 267—102.

Cassidy, William B., to Ling-Temco-Vought, Inc. Safety apparatus for oxygen system. 3,092,104, 6-4-63, Cl. 128—142.

Castellini, Nello R. Method and apparatus for the reduction of interference. 3,092,776, 6-4-63, Cl. 325—474.

Caterpillar Tractor Co.: *See*—
Johnson, Gordon W., Lichtenstein, Ramsel, Rohweder, and Winters. 3,091,976.
Wulkg, Eugene R. 3,091,874.

Cavagnero, Erman V.: *See*—
Vogt, Werner, and Cavagnero. 3,092,709.

Chain, John T.: *See*—
Banner, Robert G., Pierce, and Chain. 3,092,436.

Chambers, Lyal C. Wheeled conveyor. 3,092,200, 6-4-63, Cl. 180—9.22.

Chandler, Robert W.: *See*—
Guy, Kenneth T., and Chandler. 3,092,132.

Chang, Kern K. N., to Radio Corp. of America. Solid state traveling wave parametric amplifier. 3,092,782, 6-4-63, Cl. 330—5.

Chapman, Harold E. Containers or packages. 3,092,249, 6-4-63, Cl. 206—46.

Chase-Shawmut Co., The: *See*—
Hallas, Harry H. 3,092,715.

Cheal, James: *See*—
Augustine, Carroll F., McHenry, and Cheal. 3,092,798.

Chein, J., & Co.: *See*—
Wagner, Adelbert. 3,092,387.

Chemerda, John M.: *See*—
Tull, Roger J., and Chemerda. 3,092,642.

Chemical and Industrial Corp., The: *See*—
Smith, Benjamin G. 3,092,489.

Cherel, Guy, to Commissariat a l'Energie Atomique. Magnetic coupling through a plane wall. 3,092,763, 6-4-63, Cl. 317—201.

Cherry-Burrell Corp.: *See*—
Knappe, Herman E. 3,092,865.

Chesley Industries Inc.: *See*—
Chesley, Robert G. 3,092,047.

Chesley, Robert G., to Chesley Industries Inc. Shelf structure. 3,092,047, 6-4-63, Cl. 108—137.

Childs, James H.: *See*—
Buskirk, John E., and Childs. 3,092,520.

Chisholm, Roy D., to General Electric Co. Domestic oven with optimum heat distribution. 3,092,706, 6-4-63, Cl. 219—20.

Christensen Diamond Products Co.: *See*—
Mori, Takeshi, Peters, and Austin. 3,092,191.

Christensen, Valdemar J., G. C. Eglesen, and E. L. Carlson, to The Dow Chemical Co. Preparation of anhydrous magnesium chloride. 3,092,460, 6-4-63, Cl. 23—91.

Ciba Corp.: *See*—
De Stevens, George. 3,092,621.
Jeger, Oskar, Arigoni, Wettstein, Anner, Heusler, Meystre, Wieland, and Kalvoda. 3,092,625.
Wettstein, Albert, Anner, Kalvoda, and Meystre. 3,092,627.
Wettstein, Albert, Heusler, and Wieland. 3,092,626.

Ciba Ltd.: *See*—
Berlinger, Ernst. 3,092,541.
Gaumann, Ernst, and Voser. 3,092,550.

Cieri, Frank V., to The De Laval Separator Co. Stuffing horn. 3,091,799, 6-4-63, Cl. 17—41.

Cincinnati Mine Machinery Co., The: *See*—
Kreheler, Claude B. 3,092,374.

Cities Service Research and Development Co.: *See*—
Greenwald, Bertrand W. 3,092,564.

City Tank Corp.: *See*—
Brown, Robert E., and Bamber. 3,092,269.

Clark, Calvin M., to California Research Corp. Pulse analyzing. 3,092,751, 6-4-63, Cl. 315—8.5.

Clark, Henry B. Spring-closed swinging shock absorbing door. 3,091,818, 6-4-63, Cl. 20—16.

Clark, Howard T., to Arkla Industries, Inc. Fluid regulating valve. 3,092,133, 6-4-63, Cl. 137—220.

Clark, Joseph C., to True Temper Corp. Spin cast fishing reel. 3,092,351, 6-4-63, Cl. 242—84.2.

Clark, Philip B.: *See*—
Harling, Donald W., and Clark. 3,092,336.

Clark, Sheldon L., and D. J. Mangold, to Olin Mathieson Chemical Corp. Alkylated decaborane-acetylenic hydrocarbon reaction products and method for their preparation. 3,092,664, 6-4-63, Cl. 260—606.5.

Clay, Richard H., to H. H. Robertson Co. Building structures shielded against radio-frequency radiations and components thereof. 3,092,218, 6-4-63, Cl. 189—34.

Clayton, Richard W., and A. E. Jackson, to Radio Corp. of America. Braking mechanisms. 3,092,845, 6-4-63, Cl. 242—55.12.

Cleary, Robert T.: *See*—
Burns, Robert V., and Cleary. 3,092,691.

Cleary, Thomas R.: *See*—
Adams, George R., and Cleary. 3,092,726.

Cleaver, Charles S., to E. I. du Pont de Nemours and Co. Process for preparing nitronium hexafluorophosphate and nitryl fluoride. 3,092,459, 6-4-63, Cl. 23—203.

Clevite Corp.: *See*—
Poisson, Arthur J. 3,092,245.

Clinton, Raymond O., to Sterling Drug Inc. Process for the production of 2-lower alkyl-17β-acyloxy-1,4-androstadienes. 3,092,644, 6-4-63, Cl. 260—397.4.

Clock, Donald P., and G. A. Lacchi, to Radio Corp. of America. Decoder and coder circuit. 3,092,830, 6-4-63, Cl. 343—6.8.

Cochinal, Roland, to Commissariat a l'Energie Atomique. Apparatus for monitoring a physical magnitude at a multiplicity of distinct points and in particular for detecting burst slugs in the channels of a heterogeneous nuclear reactor. 3,092,819, 6-4-63, Cl. 340—213.

Cochran, Chudleigh E.: *See*—
Brown, Joseph R., and Cochran. 3,092,135.

Cohen, Elliott: *See*—
Song, John, and Cohen. 3,092,681.

Cohen, Irwin A., to Automatic Electric Laboratories, Inc. Electrical relays. 3,092,700, 6-4-63, Cl. 200—87.

Cohen, Jerrold, to Pacific Semiconductors, Inc. Method of bonding materials. 3,091,849, 6-4-63, Cl. 29—472.9.

Cohen, Martin J.: *See*—
Payne, Robert E., Cohen, and Gibson. 3,092,728.

Cohn, David, to Model Plastic Corp. Dolls' heads with rotating dolls' eyes. 3,091,894, 6-4-63, Cl. 46—169.

Cohn, Johana G. R., and A. J. Haley, Jr., to Engelhard Industries, Inc. Process for removing acetylene from gases. 3,092,444, 6-4-63, Cl. 23—2.

Cohn, Seymour B., to Sperry Rand Corp. Broadband transmit-receive device. 3,092,771, 6-4-63, Cl. 325—24.

Coker, Geoffrey G., and F. C. Copp, to Burroughs Wellcome & Co. (U.S.A.) Inc. Methods of treating oxyurid worms with quaternary ammonium compounds. 3,092,547, 6-4-63, Cl. 167—53.

Cole, Donald A., to Radio Corp. of America. Display device. 3,091,876, 6-4-63, Cl. 40—28.

Cole, Eldon B., and P. M. Niles, to Sinclair Research, Inc. Fuel composition. 3,092,475, 6-4-63, Cl. 44—72.

Coles, Ralph V., to Robertshaw-Fulton Controls Co. Operator with thermoelectric control. 3,091,919, 6-4-63, Cl. 60—23.

Collier, John R. Device for folding sheets of paper and the like. 3,092,379, 6-4-63, Cl. 270—61.

Collins, Maynard H., and W. M. Todd. Parking meter control mechanism. 3,091,918, 6-4-63, Cl. 58—142.

Combustion Engineering, Inc.: *See*—
Patterson, Robert C. 3,092,337.

Commercial Wire Products Co.: *See*—
Blood, Theodore M. 3,092,258.

Commissariat a l'Energie Atomique: *See*—
Cherel, Guy. 3,092,763.
Cochinal, Roland. 3,092,819.

Compagnie Francaise des Matieres Colorantes: *See*—
Mingasson, Georges R. H., and Ferrand. 3,092,615.

Comstock & Westcott, Inc.: *See*—
Rand, William M., Jr., Rice, Shaver, and Whitney. 3,092,466.

Conch International Methane Ltd.: *See*—
Dosker, Cornelius D. 3,091,617.

Conde, Lyall T., to Conde Milking Machine Co. Rotary valve for a milk releaser. 3,092,075, 6-4-63, Cl. 119—14.05.

Conde Milking Machine Co.: *See*—
Conde, Lyall T. 3,092,075.

Congoleum-Nairn Inc.: *See*—
Beeril, George A. 3,092,848.

Conner, Guy O. Die set bearing retainer. 3,092,425, 6-4-63, Cl. 308—6.

Consolidated Paper Corp. Ltd.: *See*—
Brandts, Theodorus G. 3,092,537.

Continental Can Co., Inc.: *See*—
Ripling, Edward J. 3,092,470.

Continental Oil Co.: *See*—
Shadan, Anna M. 3,092,506.

Control Data Corp.: *See*—
Cray, Seymour R. 3,092,729.

Conval Corp.: *See*—
Smith, Paul E., Jr., and Dudler. 3,092,742.

Cook Chemical Co.: *See*—
Ridenour, Stewart J., and Pickinpaugh. 3,092,330.

Cook, Ernest E.: *See*—
Sadler, Harry J., and Cook. 3,092,427.

Cook, Herbert A., Jr., to The Schlegel Mfg. Co. Beading for finishing structural edges. 3,091,821, 6-4-63, Cl. 20—74.

Cook, Ralph L., to Olin Mathieson Chemical Corp. Method of producing unitary nitrocellulose grains capable of fragmentation under primer blast to original granules. 3,092,-525, 6-4-63, Cl. 149—2.

Cook, Walter L., and R. B. McKelvey, to The Boeing Co. Positive locking fairlead for electrical cables. 3,092,360, 6-4-63, Cl. 248—56.

Cook, Walter L., to The Boeing Co. Fairlead for electrical cables. 3,092,361, 6-4-63, Cl. 248—56.

Cooper, Benjamin, to General Electric Co. Photoelectric tension sensing motor control circuit. 3,092,764, 6-4-63, Cl. 318—6.

Copolymer Rubber and Chemical Corp.: *See*—
Geuelna, Kjetil, and Sutherland. 3,092,603.

Copp, Frederick C.: *See*—
Coker, Geoffrey G., and Copp. 3,092,547.

Cornell-Dubilier Electric Corp.: *See*—
Weiss, Felix S. 3,091,835.

Corsan, George W., to Walter Grafton & Son, Ltd. Spools for business machines. 3,092,948, 6-4-63, Cl. 242—74.

Corsan, George W., to Walter Grafton & Son, Ltd. Spools for business machines. 3,092,949, 6-4-63, Cl. 242—74.

Corson, Alan S., C. Beck, and L. S. Guarino; said Corson and said Guarino assors. to United States of America, Navy. Angle of attack computer. 3,091,962, 6-4-63, Cl. 73—178.

Corydon, Jeff L., to Hush Bumper Service, Inc. Bowling ball bump absorbers. 3,092,885, 6-4-63, Cl. 273—47.

Costanzi, Nicolo, to Cantieri Riuniti Dell' Adriatico S.p.A. Ship form. 3,092,061, 6-4-63, Cl. 114—56.

Cougle, Harry T. Railing. 3,092,372, 6-4-63, Cl. 256—22.

Cox, Bradley G., to Baker Perkins Inc. Closure for pressurised vessels. 3,092,285, 6-4-63, Cl. 220—46.

Cox, Bradley G., to Baker Perkins Inc. Centrifugal machine stripper knife and controlling mechanism. 3,092,575, 6-4-63, Cl. 210—141.

Crabbe, Pierre: *See*—
Bowers, Albert, and Crabbe. 3,092,629.

Crafa, Arthur S., to American Home Products Corp. Display support. 3,091,875, 6-4-63, Cl. 40—11.

Craig, Robert P., and L. E. Weinert, to Crown Zellerbach Corp. Bag packer and weigher. 3,092,194, 6-4-63, Cl. 177—154.

Cranch, Edward J., E. T. Davis, and E. W. Voorhoeve, to Leeds and Northrup Co. Automatic control system of the current-summing type. 3,092,321, 6-4-63, Cl. 236—15.

Cranfill, John C. Double acting pump. 3,092,033, 6-4-63, Cl. 103—158.

Cray, Seymour R., to Control Data Corp. Bi-level amplifier and control device. 3,092,729, 6-4-63, Cl. 307—88.5.

Creamer, Vincent A., to United-Carr Fastener Corp. Method of assembling a threaded nut in non-rotatable engagement with a support. 3,091,842, 6-4-63, Cl. 29—432.

Creighton, John P., to Ford Motor Co. Ltd. Hydraulic pumps or motors. 3,092,036, 6-4-63, Cl. 103—162.

Cremin, John D., to Bell Telephone Laboratories, Inc. Microwave switching circuit. 3,292,789, 6-4-63, Cl. 333—1.1.

Crompton & Knowles Corp.: *See*—
Robb, Walter Y. 3,092,149.

Crossland, Edward J.: *See*—
Wilcox, Stanley W., Crossland, and McCaskill. 3,092,-311.

Crossley, Thomas J.: *See*—
Nelson, Earl W., and Crossley. 3,092,456.

Crouch, Eric A.: *See*—
Williams, David W., Jones, and Crouch. 3,092,565.

Crown Zellerbach Corp.: *See*—
Craig, Robert P., and Weinert. 3,092,194.

Crucible Steel Co. of America: *See*—
Payson, Peter, and Nehrenberg. 3,092,491.

Cummins, Clarence R., 40% to T. B. Dempsey. Cast cutter. 3,091,851, 6-4-63, Cl. 30—167.

Cutter Laboratories, Inc.: *See*—
Butler, William F. 3,092,106.

Cyr, Frank P.: *See*—
Heinle, Albert W. 3,092,222.

Czapar, Frank, Jr. Meat scraper. 3,091,791, 6-4-63, Cl. 15—245.

Da Costa, Harry: *See*—
Knowles, Carl H., and Da Costa. 3,092,522.

Dahlgren, Sven A. B., to Separator, Aktiebolaget. Heat exchange apparatus. 3,092,180, 6-4-63, Cl. 257—28.

Dakin, Vernon W., to General Motors Corp. Vacuum forming drum. 3,091,808, 6-4-63, Cl. 16—19.

D'Alelio, Gaetano F., to Dal Mon Research Co. Method of preparing a catalyst used in the polymerization of ethylene. 3,092,589, 6-4-63, Cl. 252—441.

Dal Mon Research Co.: *See*—
D'Alelio, Gaetano F. 3,092,589.

Dalton, Wayne D., and A. A. McGee, Jr., to General Electric Co. Control for noise squelch circuit. 3,092,772, 6-4-63, Cl. 325—319.

Da Monde, Homer H.: *See*—
Wolff, Hubert G., Rogers, and Da Monde. 3,092,803.

Dana Corp.: *See*—
Sink, William H. 3,091,949.

Daniel, Nathan I. Electro-acoustical delay line useful for producing reverberation in electrical musical instruments. 3,092,792, 6-4-63, Cl. 333—30.

Danielcsik, Ellen: *See*—
White, William V., Hamell, and Danielcsik. 3,092,498.

Daubman, Edward A., to Ametek, Inc. Centrifugal separators. 3,092,576, 6-4-63, Cl. 210—146.

Da Valle, Bruno. Pole gripping mechanism. 3,092,265, 6-4-63, Cl. 214—3.

David Industries: *See*—
Barnes, George W. 3,092,429.

Davidson, Charles R., Jr., to Pittsburgh Plate Glass Co. Apparatus for gripping and supporting glass sheets. 3,092,-413, 6-4-63, Cl. 294—86.

Davidson, Emil, to Guild Molders, Inc. Sealing device. 3,092,-281, 6-4-63, Cl. 215—40.

Davidson, Louis. Pallet for industry. 3,092,046, 6-4-63, Cl. 108—56.

Davis, Charles J., to Davis Mfg., Inc. Two speed transmission. 3,091,975, 6-4-63, Cl. 74—330.

Davis, Elwood T.: *See*—
Cranch, Edward J., Davis, and Voorhoeve. 3,092,321.

Davis, Felix A.: *See*—
Goodell, Murel G., Appelt, and Davis. 3,092,041.

Davis, Floyd. Ball throwing device. 3,092,093, 6-4-63, Cl. 124—4.

Davis Mfg., Inc.: *See*—
Davis, Charles J. 3,091,975.

Davis, Ralph A.: *See*—
Ruh, Robert P., Davis, and Allswede. 3,092,458.

Davis, Selby B.: *See*—
Gadekar, Shreekrishna M., Vaughan, and Davis. 3,092,-633.

Day, Frederick M. Thrust augmentation for fluid current propulsion motors. 3,092,184. 6-4-63, Cl. 170—135.28.

Deddo, Daniel G., to Kenron Awning and Window Corp. Awning structure. 3,092,171, 6-4-63, Cl. 160—40.

Deduck, Nicholas: *See*—
Growich, John A., Jr., and Deduck. 3,092,556.

Deely, Carroll L. Method of and apparatus for cutting, encasing and retrieving a core of earth formation from a well. 3,092,192. 6-4-63, Cl. 175—253.

Deere & Co.: *See*—
Hunter, George D., and Hill. 3,092,187.
Kirkpatrick, Kenneth L. 3,092,053.

Defibrator Aktiebolag: *See*—
Reinhall, Rolf B. 3,092,338.

De Koning, Arie A.: *See*—
Van Eldik Thieme, Herman C. A., and Keiser. 3,092,137.

De Kohing, Edwin W. Stacker apparatus. 3,092,266, 6-4-63, Cl. 214—6.

De Koning, Kornelis K. K.: *See*—
Van Eldik Thieme, Herman C. A., and Keiser. 3,092,137.

De Larber, Mathew. Putty removing tool. 3,091,852, 6-4-63, Cl. 30—172.

De Laval Separator Co., The: *See*—
Cieri, Frank V. 3,091,799.

Delman Co., The: *See*—
Webb, Edmond F. 3,091,932.

Demaison, Raymond J., to Quigley Co., Inc. Refractory insulating and sealing compound. 3,092,505, 6-4-63, Cl. 106—99.

Dempsey, Thomas B.: *See*—
Cummins, Clarence R. 3,091,851.

De Niet, Edmond, to North American Philips Co., Inc. Circuits for converting electric signals logarithmically for detectors and the like. 3,092,779, 6-4-63, Cl. 328—108.

Denman, Stephen A., to General Motors Corp. Intermittent pulse valve control system. 3,092,143, 6-4-63, Cl. 137—624.14.

Denton, William I.: *See*—
Bruson, Herman A., and Denton. 3,092,668.

Denton, William I., and J. D. Newkirk, to Olin Mathieson Chemical Corp. Glycerol from allyl alcohol. 3,092,669, 6-4-63, Cl. 260—636.

Deppeler, John H., Jr., and E. J. Antcsak, to Thermex Metallurgical, Inc. Mold welding. 3,091,825, 6-4-63, Cl. 22—116.

Desrosiers, George L., to Paintex Mfg. Co. Preload releasable clutch. 3,091,950, 6-4-63, Cl. 64—29.

De Stevens, George, to Ciba Corp. 2-amino-methyl androstano-derivatives. 3,092,621, 6-4-63, Cl. 260—239.5.

Dettman, Fred C. Bowling pin. 3,092,886, 6-4-63, Cl. 273—82.

Develop-Amatic Engineering: *See*—
Senger, Raymond J. 3,092,253.

De Viney, Terrence E.: *See*—
Manners, Frank A., and De Viney. 3,092,760.

De Vrijer, Frederik W., and J. J. P. Valeton, to North American Philips Co., Inc. Device for producing an output signal proportional to the quotient of the amplitudes of two input signals. 3,092,720, 6-4-63, Cl. 235—195.

Dewaa, Raymond: *See*—
Birmans, Josef, and Steinert. 3,092,150.

De Woody, Charles M., R. L. Pearce, W. Mueller, and E. A. Egisi, to Ace Glass Inc. Resistance coating for articles of glassware and the like. 3,092,704, 6-4-63, Cl. 219—19.

Dexter, L. B.: *See*—
Spence, Paulsen. 3,092,677.

Deykin, Ronald F., to Hordern Mason & Edwards Ltd. Powerpresses and other similar machine tools. 3,092,228, 6-4-63, Cl. 192—85.

De Zeeuw, John R.: *See*—
Lather, Herbert G., and De Zeeuw. 3,092,496.

Diamant, Henri B., to HRB-Singer, Inc. Magnetic reading/writing circuit and channel selector therefor. 3,092,817, 6-4-63, Cl. 340—174.1.

Diamantides, Nick D. Stamp handling implement. 3,092,410, 6-4-63, Cl. 294—2.

Diamond Alkali Co.: *See*—
Banner, Robert G., Pierce, and Chain. 3,092,436.

Dias-Compain, Jeronimo. Entrainment separator arrangements. 3,092,480, 6-4-63, Cl. 55—423.

Dick, George McK.: *See*—
Cannon, Madison M., Dick, and Salomon. 3,092,578.

Dickson, Edgar V., and T. E. Weber, to Hussmann Refrigerator Co. Food merchandiser. 3,091,942, 6-4-63, Cl. 62—89.

Dickson, Herbert F., Jr., and P. Haas, to Sylvania Electric Products Inc. Indirectly heated cathode. 3,092,748, 6-4-63, Cl. 313—270.

Diericha, Helmut: *See*—
Holsrichter, Hermann, König, and Diericha. 3,092,662.

Dietz, Murray W. Dental burr holder and steriliser. 3,092,-443, 6-4-63, Cl. 21—87.

Dinsmore, Joseph A., and R. I. Sedden, to Ampex Corp. Strip tensioning apparatus. 3,092,344, 6-4-63, Cl. 242—55.12.

Dobelaw, Gerhardt A., to Portable Electric Tools, Inc. Radial saw adjustment means. 3,092,154, 6-4-63, Cl. 143—6.

Dodsworth, James W., to Monroe Calculating Machine Co. Value transfer control for totaliser. 3,092,312, 6-4-63, Cl. 235—60.2.

Doelp, Louis C., Jr., to Air Products and Chemicals, Inc. Preparing alumina beta trihydrate. 3,092,454, 6-4-63, Cl. 23—143.

Dollac Corp.: *See*—
Brudney, Harry. 3,091,891.
Brudney, Harry, and Turshen. 3,091,893.

Dolsa, John. Internal combustion engines. 3,092,089, 6-4-63, Cl. 123—76.

Donahue, Frank M.: *See*—
Selle, Bernard G. 3,092,301.

Dorman, Isidore, to Ideal Toy Corp. Swimming pool alarm. 3,092,822, 6-4-63, Cl. 340—261.

Dosker, Cornelius D., to Conch International Methane Ltd. Insulation, method of construction, and elements. 3,091,-817, 6-4-63, Cl. 20—4.

Dossier, Michel. One-way clutches and in particular freewheels. 3,092,227, 6-4-63, Cl. 192—41.

Double, Plummer E., and J. H. Steward, to Multifastener Corp. Method of applying stress relieved fasteners. 3,091,-843, 6-4-63, Cl. 29—432.

Douglas, James: *See*—
Swick, Michael V., Ward, and Douglas. 3,092,532.

Doundoulakis, Helias, to C. A. Michalos. Electrical resistor. 3,092,800, 6-4-63, Cl. 338—143.

Dow Chemical Co., The: *See*—
Christensen, Valdemar J., Egieson, and Carlson. 3,092,-450.
Foerster, George S. 3,092,492.
Hahn, Harold G. 3,092,500.
Hahn, Harold G., Visger, and Raich. 3,092,598.
Hradel, Joseph R. and M. F. 3,092,025.
Nault, Joyce D., and Youngson. 3,092,544.
Ruh, Robert P., Davis, and Allswede. 3,092,456.
Sterling, George B., and Zimmerman. 3,092,605.
Wehr, Henry W., and Gusiak. 3,091,998.

Dowty Hydraulic Units Ltd.: *See*—
Thoma, Oswald, and Bowers. 3,091,930.

Drabert, Fritz. Orthopaedic seating device. 3,092,417, 6-4-63, Cl. 297—291.

Drake, Norman B. Grab hook. 3,092,412, 6-4-63, Cl. 294—66.

Dravo Corp.: *See*—
Koontz, Victor F., and Anthes. 3,092,473.

Dreyfus, Robert L.: *See*—
Howe, Milton A., Jr., and Dreyfus. 3,091,904.

Droeske, Gordon W. Tractor-trailer wheel steering assembly. 3,092,396, 6-4-63, Cl. 280—426.

Duble, Orville L. Bulk truck with flexible conveyor. 3,092,-241, 6-4-63, Cl. 198—213.

Dubsky, Bortivoj, and O. Straka, to Vyzkumny a zkusebni letecky ustav. Fourfold electromagnetic tensometer with adjustable prestressing. 3,092,795, 6-4-63, Cl. 336—30.

Dudler, Hans A.: *See*—
Smith, Paul E., Jr., and Dudler. 3,092,742.

Dudley, Homer T. Illuminated decoy and lure for fishing. 3,091,882, 6-4-63, Cl. 43—17.5.

Duensing, Maurice W. Muscular thermal support sheath. 3,092,110, 6-4-63, Cl. 128—293.

Duff-Norton Co.: *See*—
Carroll, Charles. 3,092,369.

Duff, Phillip, to United States of America, Navy. Explosive diaphragm valve. 3,092,286, 6-4-63, Cl. 220—47.

Duggins, William E., to General Aniline & Film Corp. Process of defoliating chlorophyllaceous plants. 3,092,485, 6-4-63, Cl. 71—2.7.

Dullabaun, Paul W., and R. E. Hanslip, to Mather Spring Co. Vehicle levelising mechanism. 3,092,397, 6-4-63, Cl. 280—124.

Duluth Filter Co.: *See*—
Sather, Olaf P. 3,092,577.

Dunlop Rubber Co. Ltd.: *See*—
Gould, Eric G., and Biggs. 3,091,800.

Dunn, Bernard J. Adjustable platform for diving board. 3,092,383, 6-4-63, Cl. 272—66.

Dunn, Robert F., and C. A. Baechtel, to Allegheny Ludlum Steel Corp. Process of soaking ingots. 3,092,679, 6-4-63, Cl. 263—52.

Du Pont de Nemours, E. I., and Co.: *See*—
Brasen, Wallace R. 3,092,655.
Brown, Morton. 3,092,637.
Bunker, Henry L., Jr., Lewis, and Powers. 3,092,163.
Cleaver, Charles S. 3,092,450.
Dusenbury, Charles E. 3,091,805.
Field, Frederick C., Jr. 3,091,913.
Hill, Broadus E., Jr., and Vanneman. 3,092,339.
Hobbs, Charles L., Jr. 3,092,647.
Jackson, Ivan U. 3,092,342.
Kennedy, John H. 3,092,448.
Loving, Frank A., Jr. 3,092,528.
Magat, Eugene E., and Tanner. 3,092,512.
Salzberg, Paul L. 3,092,464.
Schreyer, Ralph C. 3,092,654.
Vince, Sterling N. 3,092,451.

Duratile of Ohio, Inc.: *See*—
Fiekers, Edmund J., Klose, and Schramm. 3,091,822.

Dusenbury, Charles E., to E. I. du Pont de Nemours and Co. Apparatus and process for drawing yarn. 3,091,805, 6-4-63, Cl. 18—8.

Dykstra, Fred J., to Ethyl Corp. Lubricants. 3,092,586, 6-4-63, Cl. 252—49.6.

Dynamic Process Co., Inc.: *See*—
Campbell, Charles, and Barning. 3,092,236.

Earl, Austin W.: *See*—
Thompson, David P., and Earl. 3,091,937.

Eastman Kodak Co.: *See*—
Robeson, Charles D. 3,092,624.

Eaton Mfg. Co.: *See*—
Smith, Aubrey H. 3,092,756.

Eberhardt, George J., and F. R. Werner, to The National Cash Register Co. Totaliser selecting and control mechanisms for cash registers and accounting machines. 3,092,-313, 6-4-63, Cl. 235—60.3.

Ebner, Herman G., to Standard Oil Co. Fuel oil composition. 3,092,474, 6-4-63, Cl. 44—66.

Ebser, Willi. Cyclically operating machine having at least one element to be automatically positioned during each of the consecutive cycles of operation of the machine. 3,092,159. 6-4-63, Cl. 144—84.

Ecker, Howard W. Electromagnetic balance. 3,092,197, 6-4-63, Cl. 177—210.

Economy Forms Corp.: *See*—
McCracken, Lyde S. 3,092,363.

Edelman, Frank H., to Sperry Rand Corp. Magnetic devices and preparation thereof. 3,092,510, 6-4-63, Cl. 117—93.2.

Edelman, Frank H., to Sperry Rand Corp. Magnetic devices and preparation thereof. 3,092,511, 6-4-63, Cl. 117—107.2.

Eder, Virgil K., to General Motors Corp. Abradable protective coating for compressor casings. 3,092,306, 6-4-63, Cl. 230—133.

Edmie, James F., to Sun Oil Co. Process and apparatus for the reduction of iron ore. 3,092,490, 6-4-63, Cl. 75—26.

Edstan: *See*—
Sandstrom, Stanley B. 3,092,689.

Educational Institute for Learning and Research: *See*—
Fischman, Robert W., and Opperman. 3,091,868.

Edwards, Robert N., and L. C. Reese, Sr., to Policy-Matic Corp. of America. Vending machine for insurance contracts. 3,092,234, 6-4-63, Cl. 194—7.

Egisi, Eugene A.: *See*—
De Woody, Charles M., Pearce, Mueller, and Egisi. 3,092,704.

Egleson, Granville C.: *See*—
Christensen, Valdemar J., Egleson, and Carlson. 3,092,-450.

Ehlke, Edward C.: *See*—
Brown, Arthur E., and Ehlke. 3,092,167.

Eisenmann, John H.: *See*—
Boruntzke, Irvin W., and Eisenmann. 3,092,020.

Electricite de France Service National: *See*—
Vinet, Raymond. 3,092,434.

Ellerman, Charles E., and V. C. Monahan, to Cascade Pole Co. Pole incising mechanism. 3,092,158, 6-4-63, Cl. 144—2.

Ellis, William L. Automatic door. 3,092,170, 6-4-63, Cl. 160—26.

Emerson Electric Mfg. Co., The: *See*—
Bilbrey, Donald L. 3,092,431.

Engelhard Industries, Inc.: *See*—
Cohn, Johann G. E., and Haley. 3,092,444.
Hettinger, William P., Jr., Keith, and Lorenc. 3,092,676.
Langley, Robert C., and Kellam. 3,092,504.

Erdely, Ladislas, to Pechiney Cie de Produits Chimiques et Electrometallurgiques. Self-closing and self-opening hollow objects. 3,092,419, 6-4-63, Cl. 301—1.

Erdmann, Hans, to Waldes Kohinoor, Inc. Dispensing apparatus for spring retaining rings. 3,092,237, 6-4-63, Cl. 221—189.

Erdmann, John F., and C. R. Welter, to Union Carbide Corp. Ethylene polymerization process. 3,092,614, 6-4-63, Cl. 260—94.9.

Erickson, Edward B., to United States Rubber Co. Automatic carcass loader for tire presses. 3,091,801, 6-4-63, Cl. 18—2.

Erickson, Eugene E.: *See*—
Pike, Frederick P., and Erickson. 3,092,515.

Erast, Alvin O. Angle iron brick laying guide. 3,091,865, 6-4-63, Cl. 33—85.

Erayel, Herbert H., to Lignes Telegraphiques et Telephoniques. Plural signal frequency detector able to continuously distinguish whether frequency difference is positive or negative. 3,092,736, 6-4-63, Cl. 307—88.5.

Eschenbrenner, Gunther P.: *See*—
Slyngstad, Charles E., and Eschenbrenner. 3,092,468.

Esso Research and Engineering Co.: *See*—
Agins, Peter J. V. J., and Evans. 3,092,563.
Bray, William W., Jr., and Ponsek. 3,092,674.
Lampe, Frederick W. 3,092,561.
Makowski, Henry S. 3,092,612.
Reiter, Thomas A. 3,092,540.
Small, Augustus B. 3,092,675.

Ester, Wilhelm, and A. Sommer, to Bergwerksgesellschaft Hibernia A.G. Process for the production of highly concentrated solutions of peroxides of terpene hydrocarbons from dilute solutions of same. 3,092,557, 6-4-63, Cl. 202—64.

Ester, Wilhelm, and A. Sommer, to Bergwerksgesellschaft Hibernia Aktiengesellschaft. Process for the production of high percentage solutions of organic peroxides. 3,092,-557, 6-4-63, Cl. 252—428.

Ets Merlin & Gerin: *See*—
Latour, André. 3,092,099.

Ethyl Corp.: *See*—
Dykstra, Fred J. 3,092,586.
Orloff, Harold D. 3,092,585.

Evans, Eric B.: *See*—
Agins, Peter J. V. J., and Evans. 3,092,563.

Evans, Gene E. Signalling device. 3,091,881, 6-4-63, Cl. 43—17.

Evans Products Co.: *See*—
Tobin, Kenneth J. 3,092,042.

Evart, Garry V.: *See*—
Geosnak, Lev A., Evart, and Ribinsky. 3,092,088.

FMC Corp.: *See*—
Liao, Hsiang P., and Tuemmler. 3,092,638.
Lund, Martin A., and Alsous. 3,092,138.
Reich, Murray H., Nowlin, and Heiberger. 3,092,606.
Sheets, Charles E. 3,092,194.

Fabbrica Italiana Magneti Marelli S.p.A.: *See*—
Alfieri, Giuseppe. 3,092,422.

Falcon Alarm Co. Inc.: *See*—
Wright, Ehrick H. 3,092,070.

Fales, Douglas I., to General Motors Corp. Fluorescent lamp circuit. 3,092,754, 6-4-63, Cl. 315—97.

Falstrom, William: *See*—
McCann, Joe G., Stegen, and Falstrom. 3,092,834.

Farbenfabriken Bayer Aktiengesellschaft: *See*—
Holsrichter, Hermann, König, and Diericha. 3,092,662.
Nischk, Günther, Hoppe, Braun, and Paffrath. 3,092,-592.
Preiss, Werner, and Fromandi. 3,092,238.
Ruppert, Heinrich, Schnell, and Goerden. 3,092,606.
Schrader, Gerhard. 3,092,649.

Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning: *See*—
Siedel, Walter, Söder, and Scheurich. 3,092,635.

Farris, Ralph J., and J. M. Taylor, to Whipstock Inc. Directional drilling tool. 3,092,188, 6-4-63, Cl. 175—76.

Fasold, George A., and W. V. Leibrook to The Philip Carey Mfg. Co. Grooved roofing. 3,091,898. 6-4-63, Cl. 50—261.

Fawick Corp.: *See*—
Kneuss, Kenneth E. 3,092,231.

Feeler, James S. Pipe and flange aligner. 3,092,058, 6-4-63, Cl. 113—102.

Feid, Jack T.: *See*—
Slayter, Games, Bees, and Feid. 3,092,208.

Feldman, Charles L., A. C. Fields, and J. A. Bergin, to Joseph Kaye & Co., Inc. Thermocouple reference junction. 3,091,-940, 6-4-63, Cl. 62—3.

Feldt, Charles A., and G. T. Kekish, to Nalco Chemical Co. Weakly basic anion exchange resins. 3,092,617. 6-4-63, Cl. 260—2.1.

Ferrand, Marcelle H.: *See*—
Mingasson, Georges R. H., and Ferrand. 3,092,616.

Fey, Wilhelm: *See*—
Thiele, Berthold, Fey, and Hendel. 3,091,928.

Fiekers, Edmund J., A. A. Klose, and E. H. Schramm, to Duratile of Ohio, Inc. Connector for structural members. 3,091,822. 6-4-63, Cl. 20—94.

Field, Dwight L. Apparatus for indicating an abnormal condition in a vehicle wheel. 3,092,806, 6-4-63, Cl. 340—58.

Field, Frederick C., Jr., to E. I. du Pont de Nemours and Co. Variable denier composite yarn. 3,091,913, 6-4-63, Cl. 57—140.

Fields, Arnold C.: *See*—
Feldman, Charles L., Fields, and Bergin. 3,091,940.

Fields, Thomas L.: *See*—
Wilkinson, Raymond G., and Fields. 3,092,653.

Figley, Charles D. Grain drier. 3,092,472. 6-4-63, Cl. 34—26.

Fine, Samuel, and C. F. Hendee, to North American Philips Co., Inc. Proportional counter. 3,092,747, 6-4-63, Cl. 313—93.

Firestone, Richard F.: *See*—
Jones, Arthur L., Strecker, and Firestone. 3,092,588.

Fischman, Robert W., and J. Opperman, to Educational Institute for Learning and Research. Educational device. 3,091,868, 6-4-63, Cl. 35—21.

Fish, Richard H., ¼ to Evelyn Preston. Orchard spray mechanism. 3,092,327, 6-4-63, Cl. 239—77.

Fisher, Benjamin, to North American Aviation, Inc. Frequency control system for radio frequency discriminators. 3,092,780, 6-4-63, Cl. 329—139.

Fisher, Carl E., Jr., and C. H. Wilson. Pharmaceutical preparations and method and apparatus for making same. 3,092,553, 6-4-63, Cl. 167—82.

Fisher & Ludlow Ltd.: *See*—
Orwin, Olaf J. B. 3,092,038.

Flaig, Heinrich: *See*—
Schmidt, Karl, and Flaig. 3,092,539.

Fletcher, Peter S., to Anton Lorens. Leg-rest control linkage for multiple position chair. 3,092,416, 6-4-63, Cl. 297—89.

Flieg, Werner, and S. F. Plaisance, to Invac Corp. Data processing apparatus. 3,092,310, 6-4-63, Cl. 234—52.

Flynn, Edward L., to General Electric Co. Treating agent dispenser arrangement. 3,092,124, 6-4-63, Cl. 134—93.

Foerster, George S., to The Dow Chemical Co. Magnesium-base alloy. 3,092,492, 6-4-63, Cl. 75—168.

Fogt, Thomas H.: *See*—
Brucken, Byron L., Fogt, and Light. 3,091,956.

Forbro Design Inc.: *See*—
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Force, Gerald E Drafting instrument. 3,091,864, 6-4-63, Cl. 33—76.

Ford Motor Co. Ltd.: *See*—
Creighton, John P. 3,092,036.
Hair, Benjamin F. 3,092,390.
McDowell, Thomas E., and Whiteford. 3,092,368.

Ford, Ralph E., to Fords (Finsbury) Ltd. Crown caps. 3,092,280, 6-4-63, Cl. 215—40.

Fords (Finsbury) Ltd.: *See*—
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Forland, Albert J., to Chas. Pfizer & Co., Inc. Vitamin A ester. 3,092,657, 6-4-63, Cl. 260—488.

Forrester, Clyde: *See*—
Guise, Arthur B., and Forrester. 3,092,183.

Foster, George B., to Industrial Nucleonics Corp. Mass distribution analyzer. 3,092,724, 6-4-63, Cl. 250—83.3.

Foulke, Donald G., and E. C. Rinker, to Sel-Rex Corp. Gold plating. 6,092,559, 6-4-63, Cl. 204—43.

Fowler, Aubrey A., Jr., and H. O. McKee. Horizontal band saw. 3,092,155, 6-4-63, Cl. 143—19.

Frame, Thomas B.: *See*—
Baldwin, Glenn A., Frame, and Maletzke. 3,092,420.

Francis, Alfred W., to Socony Mobil Oil Co., Inc. Removal of aromatic hydrocarbons from jet fuel mixtures. 3,092,-570, 6-4-63, Cl. 208—323.

Francis, Alfred W., to Socony Mobil Oil Co., Inc. Solvent refining lubricating oils with a dual solvent system. 3,092,-571, 6-4-63, Cl. 208—324.

Francis, Gerald C.: *See*—
Patterson, Ned T., and Francis. 3,092,528.
Francisco, Edward E., Jr., to Hydropoise, Inc. Rotor suspension for flow meter. 3,091,964, 6-4-63, Cl. 73—231.
Franck, George E., to Imperial-Eastman Corp. Can tapping device. 3,092,291, 6-4-63, Cl. 222—83.
Frank, Bernard E., to General Motors Corp. Method of making multi-walled tubing. 3,091,848, 6-4-63, Cl. 29—471.7.
Frankel, Burton L., to United States of America, Navy. Sonic simulator. 3,092,684, 6-4-63, Cl. 35—10.4.
Fraser, George R. Sharpener. 3,092,081, 6-4-63, Cl. 120—95.
Fraser, Robert W., to United Carr Fastener Corp. Electrical switch assembly. 3,092,703, 6-4-63, Cl. 200—159.
Freeman, Frank G., to Joseph Lucas (Industries) Ltd. Fluid pumps or motors. 3,092,035, 6-4-63, Cl. 103—162.
French, Alfred W.) and E. E. Potts, to The French Oil Mill Machinery Co. Liquid expressing press. 3,092,017, 6-4-63, Cl. 100—93.
French Oil Mill Machinery Co., The: *See*—
French, Alfred W., and Potts. 3,092,017.
Frenk, Helmuth. Shutter for photographic apparatus. 3,092,002, 6-4-63, Cl. 95—58.
Friedman, Benjamin. Syringes and/or hypodermic needles, and cartridges therefor. 3,092,108, 6-4-63, Cl. 128—218.
Friedman, Lester, to Weston Chemical Corp. 2-hydroxyalkane phosphonate and polyphosphonate hydroxyalkyl esters. 3,092,651, 6-4-63. Cl. 260—461.
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Kulka, Kurt. 3,092,630.
Fromandi, Guido: *See*—
Preiss, Werner, and Fromandi. 3,092,238.
Fromson, Howard A. Method of dyeing anodized aluminum articles. 3,092,523, 6-4-63, Cl. 148—6.1.
Froot, Nathan D. Hypodermic injection device. 3,092,107, 6-4-63. Cl. 128—216.
Fruehauf Trailer Co.: *See*—
Tantlinger, Keith W., and Fujioka. 3,092,282.
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Fujioka, Richard T.: *See*—
Tantlinger, Keith W., and Fujioka. 3,092,282.
Furst, Stefan, to W. Reiners. Yarn-package winding machine. 3,092,340, 6-4-63 Cl. 242—35.5.
Gabb, John E., to Airmed Ltd. Respiratory masks. 3,092,105, 6-4-63, Cl. 128—146.
Gaddini, Louis D.: *See*—
Nett, James P., and Gaddini. 3,092,096.
Gadekar, Shreekrishna M., J. R. Vaughan, Jr., and S. B. Davis, to American Cyanamid Co. 2-acylated 2,3-dihydro-1H-pyrrolo[3,4-C]pyridines. 3,092,638, 6-4-63, Cl. 260—295.
Gaenzsle, Paul W., to The Budd Co. Railway disk brakes. 3,092,212, 6-4-63, Cl. 188—59.
Gaetani, Ermanno, to Asiende Colori Nazionali Affini Acne S.p.A., Diazo dyes. 3,092,616, 6-4-63, Cl. 260—186.
Gaeumann, Ernst, and W. Voser, to Ciba Ltd. Antibiotic danubomycin and process for its manufacture. 3,092,550, 6-4-63, Cl. 167—65.
Galetto, Battista. Spray nozzle. 3,092,333, 6-4-63, Cl. 239—491.
Galiano, Francis R.: *See*—
Mantell, Gerald J., Galiano, and Rankin. 3,092,640.
Garringtons Ltd.: *See*—
Macrae, Robert S. 3,091,996.
Garwick, William N. Alarm system. 3,092,820, 6-4-63, Cl. 340—227.
Gaumer, Lee S., Jr.: *See*—
Vander Arend, Peter C., and Gaumer. 3,092,461.
Gauslaa, Kjetil, and J. D. Sutherland, Jr., to Copolymer Rubber and Chemical Corp. Method of continuously coagulating rubber latices with fresh coagulant and the resultant product. 3,092,603, 6-4-63, Cl. 260—33.6.
Gay-Bell Corp., The: *See*—
Bell, Harry G., Gay, and Shaffer. 3,091,769.
Gay, Jacob D.: *See*—
Bell, Harry G., Gay, and Shaffer. 3,091,769.
Gee, William, Jr. Coffee brewer. 3,092,011, 6-4-63, Cl. 99—287.
Geiger, Russell C.: *See*—
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Ben-Ezra, Aaron, and Mackey. 3,092,495.
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Glickman, Samuel A., and Schultz. 3,092,630.
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General Dynamics Corp.: *See*—
Harvey, George W. 3,092,185.
Muehlner, Egon E. 3,092,521.
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Chisholm, Roy D. 3,092,706.
Cooper, Benjamin. 3,092,764.
Dalton, Wayne D., and McGee. 3,092,772.
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Guth, Lauren W. 3,092,122.
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Merritt, Philip E., and Steele. 3,092,809.
Milford, Richard E. 3,092,732.
Miller, William R. 3,092,769.
Millis, Walter T. 3,092,749.
Morris, William C. 3,092,758.
Peppiatt, Harry J. 3,092,774.
Simpson, James W., Jr., and Arnold. 3,092,071.
Sisler, Robert R. 3,092,230.
Wagner, James B., and Straney. 3,091,933.
Watters, Robert L. 3,092,784.
General Foods Corp.: *See*—
White, William V., Hamell, and Danielczik. 3,092,498.
General Mills, Inc.: *See*—
Pohl, Russell A. 3,092,859.
General Motors Corp.: *See*—
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Baldwin, Glenn A., Frame, and Maletzke. 3,092,420.
Berninger, Kenneth L. 3,092,090.
Black, Robert L. 3,091,980.
Boretti, Napoleon P. 3,092,713.
Brown, Arthur E., and Ehlke. 3,092,167.
Brucken, Byron L., Fogt, and Light. 3,091,956.
Bullock, Norman J., Brubaker, and Billings. 3,091,954.
Buskirk, John E., and Childs. 3,092,520.
Dakin, Vernon W. 3,091,808.
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Frank, Bernard E. 3,091,848.
Geyer, Howard M. 3,092,082.
Gute, Loren R. 3,091,792.
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Jaffe, Lawrence L., and Wetzel. 3,092,469.
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Rubinstein, Joseph. 3,092,161.
General Steel Industries, Inc.: *See*—
Lich, Richard L. 3,092,039.
Short, Oliver G., and Bienieckl. 3,092,042.
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Roters, Herbert C., Kropp, and Harasym. 3,092,762.
Gerard, George, and J. Brayman, to Barogenics, Inc. Hydrostatic press for an elongated object. 3,091,804, 6-4-63, Cl. 18—5.
Gerdeman, Dale B. Symmetrical coupling having interlocking lugs. 3,092,403, 6-4-63, Cl. 285—36.
Germen, Ustun, to Radio Corp. of America. Control apparatus. 3,092,254, 6-4-63, Cl. 211—1.5.
Gesellschaft fur Linde's Eismaschinen Aktiengesellschaft: *See*—
Becker, Rudolf. 3,091,941.
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Giannussi, George A., to International Business Machines Corp. Tape feed mechanism. 3,092,295, 6-4-63, Cl. 226—49.
Gibson, Henry C., Jr.: *See*—
Payne, Robert E., Cohen, and Gibson. 3,092,723.
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Smith, Frank W., Gilbert, and Sewell. 3,092,595.
Giovannucci, Julius L., to National Distillers and Chemical Corp. Heat treating articles wrapped in a metallic envelope. 3,092,524, 6-4-63, Cl. 148—13.
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Gitsen, Walter H., to Aluminum Co. of America. Production of low-soda alumina. 3,092,452, 6-4-63, Cl. 23—143.
Gitsen, Walter H., to Aluminum Co. of America. Production of low-soda alumina. 3,092,453, 6-4-63, Cl. 23—143.
Glickman, Samuel A., and H. S. Schultz, to General Aniline & Film Corp. Preparation of N-substituted-3-morpholones. 3,092,630, 6-4-63, Cl. 260—247.7.
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Martin, Harold F., Tidball, and Goddard. 3,092,823.
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Hanstock, Raymond F., Godwin, Lumb, and Williams. 3,091,959.
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Gold, Abraham and H., and H. Bogin, to Gold Bros., Inc. Initialed cigarette lighter and the like. 3,092,119, 6-4-63, Cl. 132—79.
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Gold, Abraham and H., and Bogin. 3,092,119.
Gold, Richard L., to Joseph Lucas (Industries) Ltd. Liquid fuel burning apparatus, a seal between a stationary cylindrical casing and a substantially cylindrical hollow member. 3,092,392, 6-4-63, Cl. 277—5.
Goldstein, Marvin C. Elastic thread ligature. 3,091,856, 6-4-63, Cl. 32—14.
Goodell, John D., B. Ivins, and J. C. Wistrand, to Minnesota Mining & Mfg. Co. Magnetic tape magazine. 3,092,346, 6-4-63, Cl. 242—55.13.
Goodell, Murel G., W. F. Appelt, and F. A. Davis, to Alwac International. Coach and suspension therefor. 3,092,041, 6-4-63, Cl. 105—153.
Goodhue, Lyle D., K. E. Cantrel, and R. P. Louthan, to Phillips Petroleum Co. Insect combatting agent. 3,092,542, 6-4-63, Cl. 167—22.
Goodman, David M. High power vacuum tubes. 3,092,755, 6-4-63, Cl. 315—158.

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Goorissen, Jan, to North American Philips Co., Inc. Method for the manufacture of rods of meltable material. 3,092,462, 6-4-63, Cl. 23—223.5.
Goosmak, Lev A., G. V. Evart, and D. Ribinsky. Carburetor type internal combustion engine with prechamber. 3,092,068, 6-4-63, Cl. 123—41.31.
Gordon, William J. J., C. S. Marden, and C. R. Sperry, to Linen Supply Assn. of America. Apparatus for continuous restaurant counter place mats. 3,092,045, 6-4-63, Cl. 108—50.
Goswick, George D. Poultry water fountain. 3,092,073, 6-4-63, Cl. 119—81.
Gould, Eric G., and J. Biggs, to Dunlop Rubber Co. Ltd. Sheet producing or sheet coating apparatus. 3,091,800, 6-4-63, Cl. 18—2.
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Speidel Louis, Jr., and Gow. 3,092,423.
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Corman, George W. 3,092,349.
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Greene, Leonard M., to Safe Flight Instrument Corp. Device for measuring lift of the swept back wing of an airplane. 3,092,353, 6-4-63, Cl. 244—1.
Greenwald, Bertrand W., to Cities Service Research and Development Co. Irradiation of wax. 3,092,564, 6-4-63, Cl. 204—162.
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Grimn, George O., and E. S. Hanshaw, to Trurun, Inc. Fabrication of wear resistant abrasive cutting blades. 3,092,094, 6-4-63, Cl. 125—15.
Grimmeiss, Hermann G., and H. Koelmans, to North American Philips Co., Inc. Blocking-layer photo-electric cell. 3,092,725, 6-4-63, Cl. 250—212.
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Guth, Lauren W., to General Electric Co. Dishwasher with time controlled vent. 3,092,122, 6-4-63, Cl. 134—58.
Gutmann, Hugo, O. Straub, and P. Zeller, to Hoffmann-La Roche Inc. 1-acyl-2-alkyl-hydrazine derivatives. 3,092,660, 6-4-63, Cl. 260—561.
Guy, Kenneth T., and R. W. Chandler, to Rotax Ltd. Compressed air or other gas control valves. 3,092,132, 6-4-63, Cl. 137—219.
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Gwynn, Bernard H., and R. W. Smyth, to Gulf Research & Development Co. Oxo process for the production of alcohols. 3,092,670, 6-4-63, Cl. 260—638.
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Dickson, Herbert F., Jr., and Haas. 3,092,748.
Hackert, Benjamin M., to Hollandsche Draad- en Kabelfabriek, N.V. Apparatus and methods for molding a foaming material. 3,091,811, 6-4-63, Cl. 18—39.
Hahn, Harold G., R. L. Vieger, and W. J. Raich, to The Dow Chemical Co. Thermal stabilization of latexes of haloethylene polymers with chlorine dioxide or chlorites. 3,092,568, 6-4-63, Cl. 260—29.6.
Hahn, Harold G., to The Dow Chemical Co. Composition of chloroethylenic polymer latex with a chlorate and osmium tetroxide. 3,092,599, 6-4-63, Cl. 260—29.6.
Hair, Benjamin F., to Ford Motor Co. Fifth wheel control device. 3,092,399, 6-4-63, Cl. 280—438.
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Hall, Richard H. Means responsive to sewing-machine presser-foot operation for work-control positioning of needle bar. 3,092,055, 6-4-63, Cl. 112—221.
Hall, Russell V. Power lawn mower. 3,091,906, 6-4-63, Cl. 56—25.4.
Hallas, Harry H., to The Chase-Shawmut Co. Method for manufacturing fuse links. 3,092,715, 6-4-63, Cl. 219—117.
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Halpern, Alfred, to Synergistics, Inc. Novel [nitric acid ester] derivatives of nicotinic acid. 3,092,634, 6-4-63, Cl. 260—295.5.
Ham, Donald M., to General Electric Co. Indicating demand meter. 3,092,318, 6-4-63, Cl. 235—104.
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White, William V., Hamell, and Danielczik. 3,092,498.
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Hammerand, Donald J. Spindle adapter. 3,092,391, 6-4-63, Cl. 274—10.
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Hammond, Wardlaw M., Jr., to Martin-Marietta Corp. Guided missile training and simulation device. 3,091,869, 6-4-63, Cl. 35—25.
Hampton, William C., to American Instrument Co., Inc. Thermal conductivity bridge circuit. 3,091,957, 6-4-63, Cl. 73—27.
Hanks, Hugh C., Jr., to Martin-Marietta Corp. Electronic waveguide switch. 3,092,788, 6-4-63, Cl. 333—1.1.
Hansen, Hans R. A., to The Louis Allis Co. Speed regulating system. 3,092,766, 6-4-63, Cl. 318—341.
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Griffin, George O., and Hanshaw. 3,092,094.
Hanslip, Richard E.: *See*—
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Hanson, Theodore L., and S. L. Black, to The Vendo Co. Fluid pumping mechanism. 3,092,029, 6-4-63, Cl. 103—11.
Hanstock, Raymond F., N. F. Godwin, R. F. Lumb, and M. A. Williams, to United Kingdom Atomic Energy Authority. Ultrasonic inspection apparatus. 3,091,959, 6-4-63, Cl. 73—67.8.
Haracz, Edward F. Tooth brush. 3,091,789, 6-4-63, Cl. 15—27.
Harasym, George W.: *See*—
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Harris, Donald A., to Hyster Co. Minimum close carton clamp. 3,092,274, 6-4-63, Cl. 214—620.
Harris, Jerome R., to Art Color Printing. Etching machine. 3,092,123, 6-4-63, Cl. 134—61.
Harrison, John W., and R. D. Lowry, to W. R. Grace & Co. Package. 3,092,246, 6-4-63, Cl. 206—45.33.
Harrison, John W., to W. R. Grace & Co. Method for producing a reinforced edge aperture in heat shrinkable material. 3,092,439, 6-4-63, Cl. 18—48.
Harrison, Lester E. Constant speed keeper for automobiles. 3,092,202, 6-4-63, Cl. 180—82.1.
Hart, Albert S. Disk cutter. 3,091,855, 6-4-63, Cl. 30—359.
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Morgan, William W., Mathers, and Hart. 3,092,446.
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Bröge, Kurt. 3,092,121.
Harvey, George W., to General Dynamics Corp. Magnetic forming method and apparatus therefor. 3,092,185, 6-4-63, Cl. 153—2.
Hasselhoff, Carl S., to The Mead Corp. Expandable bottom folded blank carton. 3,092,299, 6-4-63, Cl. 229—39.
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Hawkes, Fred, (N.V. Engineers) Ltd.: *See*—
Hawkes, Sidney. 3,091,787.
Hawkes, Sidney, to Fred Hawkes (N.V. Engineers) Ltd. Last removing machine. 3,091,787, 6-4-63, Cl. 12—15.1.
Hayasaka, Toshio, K. Masuzawa, R. Araki, and K. Tajima, to Nippon Telegraph and Telephone Public Corp. Electromagnetic receiver. 3,092,093, 6-4-63, Cl. 179—115.
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Hebras, Frederic J. M. Waistband. 3,091,772, 6-4-63, Cl. 2—221.
Heck, Jan M. Clamp for connecting two superimposed steel wire rope parts. 3,091,829, 6-4-63, Cl. 24—123.
Hedberg, Carl W. Double bag filter. 3,092,479, 6-4-63, Cl. 55—341.
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Heinle, Albert W., 25% to W. B. Jaspert and 25% to F. P. Cyr. Cruciform structural steel columns. 3,092,222, 6-4-63, Cl. 189—41.
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Heise, Herbert L., to Mobay Chemical Co. Polyurethane resin obtained from coal tar pitch reaction products and process for preparing same. 3,092,594, 6-4-63, Cl. 260—2.5.
Helfinstine, Robert F., to Minneapolis-Honeywell Regulator Co. Control apparatus. 3,092,356, 6-4-63, Cl. 244—77.
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Thiele, Berthold, Fey, and Hendel. 3,091,928.
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Janoff, Daniel L. 3,092,414.
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Heusler, Karl: *See*—
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Hirschmann, Ralph F., to Merck & Co., Inc. [3,2-c]pyrazolo-4,6-androstadienes. 3,092,623, 6-4-63, Cl. 260—239.5.
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Hohla, Johannes. Track support. 3,092,826, 6-4-63, Cl. 238—119.
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Horn, Roy H. Relatively collapsible aerosol foam compositions. 3,092,555 6-4-63, Cl. 167—88.
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Hosokawa, Zenmaro, to Nippon Reiso Kabushiki Kaisha. Revolving annular hen house. 3,092,075, 6-4-63, Cl. 119—15.
Hostetler, Ervin A. Overhead door. 3,092,173, 6-4-63, Cl. 160—191.
Hottenroth, Fred W., and R. C. Spooner, to Hupp Corp. Fuel burning hot air heater. 3,092,095, 6-4-63, Cl. 126—110.
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Howard, Paul J. Container for plants. 3,091,896, 6-4-63, Cl. 47—37.
Howard, Robert L., R. B. Thorness, and J. R. Winckler, to United States of America, Navy. Coding apparatus. 3,092,825, 6-4-63, Cl. 340—353.
Howe, Milton A., Jr., and R. L. Dreyfus, to W. R. Grace & Co. Poultry packaging apparatus. 3,091,904, 6-4-63, Cl. 53—390.
Howerton, Hugh K., to American Instrument Co., Inc. Spectro-phosphorescence measuring instrument. 3,092,722, 6-4-63, Cl. 250—77.
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Huber, Richard, and F. Kübler, to SKF Kugellagerfabriken Gesellschaft mit beschrankter Haftung. Textile drafting mechanism. 3,091,814, 6-4-63, Cl. 19—281.
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Hufford, Harold H., ½ to R. C. Shape. Interchangeable lure bodies and single support means therefor. 3,091,883, 6-4-63, Cl. 43—42.08.
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Tyler, Merle D., Hughes, and Bitzer. 3,092,240.
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Tyler, Merle D., Hughes, and Bitzer. 3,092,240.
Humphrey, Sidney B., and D. R. Smoak, to United States Rubber Co. Nitration of aromatic hydrocarbons. 3,092,671, 6-4-63, Cl. 260—645.
Hunter, George D., and D. A. Hill, to Deere & Co. Farm implement. 3,092,187, 6-4-63, Cl. 172—297.
Hupp Corp.: *See*—
Hottenroth, Fred W., and Spooner. 3,092,095.
Hurdlow, William R., B. B. Boecker, and R. E. Johnson, Jr., to United States of America, Air Force. Swipe sampler. 3,091,967, 6-4-63, Cl. 73—425.
Hurwitz, Max, to Maxam, Inc. Leather marking machine. 3,092,023, 6-4-63, Cl. 101—297.
Hush Bumper Service, Inc.: *See*—
Corydon, Jeff I. 3,092,385.
Hussmann Refrigerator Co.: *See*—
Dickson, Edgar V., and Weber. 3,091,942.
Huston, William D., and R. A. Beisheim, to Rochester Mfg. Co., Inc. Multi-angle gauge. 3,091,966, 6-4-63, Cl. 73—362.2.
Hycon Mfg. Co.: *See*—
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Hydropoise, Inc.: *See*—
Francisco, Edward E., Jr. 3,091,964.
Hypro Engineering, Inc.: *See*—
Sadler, Harry J., and Cook. 3,092,427.
Hyster Co.: *See*—
Harris, Donald A. 3,092,274.
Ideal Toy Corp.: *See*—
Dorman, Isidore. 3,092,822.
Stopek, Benjamin. 3,091,895.
Imperial-Eastman Corp.: *See*—
Franck, George B. 3,092,291.

Industrial Engineering & Equipment Co.: *See*—
Rouman, Wilford J., Jr., and Osterman. 3,092,705.
Industrial Nucleonics Corp.: *See*—
Foster, George B. 3,092,724.
Institut Dr. Ing. Reinhard Straumann A.G.: *See*—
Tannenberger, Helmuth. 3,091,917.
International Business Machines Corp.: *See*—
Anderson, Theodore E., and Harrington. 3,092,380.
Giannini, George A. 3,092,208.
Hinse, Charles G. 3,092,815.
Heegland, Albert B. 3,092,814.
Johnson, Reynold B. 3,092,689.
Martin, Harold F., Tidball, and Goddard. 3,092,823.
Pawletko, Joseph P. 3,092,816.
Saxenmeyer, George J. 3,092,811.
Smara, Edwin J. 3,092,746.
International MacGregor Organisation: *See*—
Kummerman, Henri. 3,092,065.
Invac Corp.: *See*—
Flieg, Werner, and Plaisance. 3,092,310.
Irmscher, Hans O., to National Tea Packing Co., Inc. Compressible infusion package. 3,092,242, 6-4-63, Cl. 206—.5.
Irving, Henry F., to Baker Perkins Inc. Centrifugal machines. 3,092,580, 6-4-63, Cl. 210—376.
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Beager, Walter C., and Ives. 3,092,309.
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JB Electronic Transformers, Inc.: *See*—
Sikorski, Frank J. 3,092,701.
Jackson, Arnel E.: *See*—
Clayton, Richard W., and Jackson. 3,092,345.
Jackson, Ivan U., to E. I. du Pont de Nemours and Co. Radially expansible holder for tubular packages. 3,092,342, 6-4-63, Cl. 242—46.2.
Jacobs, Ray T. Headgate apparatus. 3,091,934, 6-4-63, Cl. 61—29.
Jaffe, Lawrence L., and G. N. Wetsel, to General Motors Corp. Mixer. 3,092,469, 6-4-63, Cl. 23—285.
Jaffe, Myron I. Filter element. 3,092,581, 6-4-63, Cl. 210—510.
Jaggers, George A., to Mayfair Industries, Inc. Packaged article. 3,092,261, 6-4-63, Cl. 206—63.2.
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Smith, Thomas R. 3,092,400.
Janoff, Daniel L., to Heppenstall Co. Pile pulling tongs. 3,092,414. 6-4-63, Cl. 294—110.
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Jaspert, William B.: *See*—
Heinle, Albert W. 3,092,222.
Javorik, Laszlo J., to Zenith Radio Corp. Magnetic transcriber. 3,092,692, 6-4-63, Cl. 179—100.2.
Jaytanie, Joseph M., to Technical Appliance Corp. Multiband resonant V antenna. 3,092,835, 6-4-63, Cl. 343—802.
Jeger, Oskar, D. Arigoni, A. Wettstein, G. Anner, K. Heusler, C. Meystre, P. Wieland, and J. Kalvoda, to Ciba Corp. 20-hydroxy steroids. 3,092,626, 6-4-63, Cl. 260—239.55.
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Willie, Hans, Schuhmann, and Jellinek. 3,092,602.
Jennings, Frederic B.: *See*—
Schaefer, Hans F., Jr., and Jennings. 3,091,979.
Jensen, Warren R.: *See*—
Batchelor, Clyde S., and Jensen. 3,092,214.
Johns-Manville Fiber Glass Inc.: *See*—
Labino, Dominick. 3,092,531.
Johnsen, Henrik S., to United-Carr Fastener Corp. Driven fastener nut. 3,092,162, 6-4-63, Cl. 151—41.73.
Johnson, Erwin R., to Sta-Rite Products, Inc. Automatic release mechanism for a milking apparatus. 3,092,074, 6-4-63, Cl. 119—14.08.
Johnson, Gordon W., L. Lichtenstein, C. A. Ramsel, G. D. Rohweder, and F. H. Winters, to Caterpillar Tractor Co. Hydraulic controls for power transmission. 3,091,976, 6-4-63, Cl. 74—864.
Johnson, John A. Multi-stage parallel flow turbo-fan. 3,091,922, 6-4-63, Cl. 60—35.6.
Johnson, Reynold B., to International Business Machines Corp. Facsimile apparatus for enlarging images in color. 3,092,688, 6-4-63, Cl. 178—5.2.
Johnson, Ronald V., to Waldorf Paper Products Co. Container divider. 3,092,300, 6-4-63, Cl. 229—42.
Johnson, Rulon E., Jr.: *See*—
Hurdlow, William R., Boecker, and Johnson. 3,091,967.
Johnston, Alan R., to California Institute Research Foundation. Accelerometer. 3,091,972, 6-4-63, Cl. 73—517.
Jonard, Karl. Method of producing water-insoluble mineral salts. 3,092,554, 6-4-63, Cl. 167—86.
Jones, Arthur L., H. A. Strecker, and R. F. Firestone, to The Standard Oil Co. Method of producing a permanently active catalyst utilizing neutron irradiation. 3,092,588, 6-4-63, Cl. 252—432.
Jones, Morton E., and E. W. Mehal, to Texas Instruments Inc. Method of making degeneratively doped group III-V compound semiconductor material. 3,092,891, 6-4-63, Cl. 252—618.
Jones, Ronald M., to Belle Jardiniere. Measuring corset assembly for tailors' shops. 3,091,861, 6-4-63, Cl. 33—18.
Jones, Trevor E.: *See*—
Williams, David W., Jones, and Crouch. 3,092,565.
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Jonker, Frederick. 3,092,114.
Jonker, Frederick, to Jonker Business Machines, Inc. Selection method and apparatus for indexing documents and the like with extreme rapidity. 3,092,114, 6-4-63, Cl. 129—16.1.
Jönsson, Alfred. Method of heating ship walls and a device for carrying out the method. 3,092,066, 6-4-63, Cl. 114—221.
Kachergis, Henry J., to Scovill Mfg. Co. Micrometer. 3,091,866, 6-4-63, Cl. 33—167.
Kaiser, Carl B., to Xerox Corp. Protected xerographic plate. 3,092,498, 6-4-63, Cl. 96—1.
Kalfadelis, Charles D.: *See*—
Baldwin, Richard H., Spiller, and Kalfadelis. 3,092,658.
Kalleberg, Melvin O.: *See*—
Knutson, Andrew T., and Kalleberg. 3,092,250.
Kalvoda, Jaroslav: *See*—
Jeger, Oskar, Arigoni, Wettstein, Anner, Heusler, Meystre, Wieland, and Kalvoda. 3,092,625.
Wettstein, Albert, Anner, Kalvoda, and Meystre. 3,092,627.
Kamborian, Jacob S.: *See*—
Vornberger, Walter A. 3,091,783.
Vornberger, Walter A. 3,091,786.
Kammerer, Edwin G., to Storrac, Inc. Receptacle filling apparatus. 3,091,903. 6-4-63, Cl. 53—260.
Kämner-Morton G.m.b.H.: *See*—
Bartholomaus, Werner. 3,092,084.
Kanegafuchi Spinning Co., Ltd.: *See*—
Ozawa, Toshio, Yamashita, and Hayashi. 3,092,600.
Kanthal, Aktiebolaget: *See*—
Malm, Anders E. 3,092,681.
Kaye, Irving A.: *See*—
Rosen, Milton J., and Kaye. 3,092,618.
Kaye, Joseph & Co., Inc.: *See*—
Feldman, Charles L., Fields, and Bergin. 3,091,940.
Kaye, Theodore J., Jr., and R. H. Vogt, to The Rauland Corp. Four zone transistor having interal diode formed on base remote from transistor. 3,092,733, 6-4-63, Cl. 307—88.5.
Kearfott Co., Inc.: *See*—
Tivilis, Charles I. 3,092,424.
Keen John M. S.: *See*—
Brown, David M., Keen, and Urmston. 3,092,205.
Keil, Havard L., to Armour and Co. Double coating of food products to prevent moisture loss. 3,092,500, 6-4-63, Cl. 99—166.
Keith, Carl D.: *See*—
Hettinger, William P., Jr., Keith, and Lorenz. 3,092,676.
Keiser, Cornelis P.: *See*—
Van Eldik Thieme, Herman C. A., and Keiser. 3,092,137.
Kekish, George T.: *See*—
Feldt, Charles A., and Kekish. 3,092,617.
Kellam, David B.: *See*—
Langley, Robert C., and Kellam. 3,092,504.
Kellogg, M. W., Co.: *See*—
Atteridg, Paul T. 3,092,568.
Kellogg, M. W., Co., The: *See*—
Strumstad, Charles E., and Eschenbrenner. 3,092,468.
Kemp, Robert S. Coin controlled commodity vending apparatus. 3,092,235, 6-4-63, Cl. 194—10.
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Olson, Arthur R. 3,092,519.
Schaar, Charles H. 3,092,276.
Ken-Lab, Inc.: *See*—
Wood, William H. 3,092,049.
Kennedy, Harry M., to The Superior Equipment Co. Winch unit. 3,092,370. 6-4-63, Cl. 254—185.
Kennedy, John H., to E. I. du Pont de Nemours and Co. Process for separating niobium and tantalum. 3,092,448, 6-4-63, Cl. 23—15.
Kennerly, George W., D. S. Hoffenberg, and J. S. Noland, to American Cyanamid Co. Polymerization of acetylenic compound with alkali-metal borohydride and Ni or Co salt. 3,092,613. 6-4-63, Cl. 260—94.1.
Kenney, Robert W., to A. O. Smith Corp. Releasable balanced fluid coupling. 3,092,140. 6-4-63, Cl. 137—504.
Kenron Awning and Window Corp.: *See*—
Dedig, Daniel G. 3,092,171.
Kerr, Robert A., W. L. Richardson, and W. R. H. Springford, to Northern Electric Co., Ltd. Excessive extrusion pressure prevention apparatus. 3,091,806, 6-4-63, Cl. 18—13.
Kerrell, Richard C. Reusable coin wrapper. 3,092,304, 6-4-63, Cl. 229—87.2.
Kerschner, Rex R. Tool box. 3,092,428, 6-4-63, Cl. 312—218.
Kesling, Keith K., to General Motors Corp. Cabinet and process for making same. 3,091,946. 6-4-63, Cl. 62—465.
Kiashek, George. Scent sprays. 3,092,331, 6-4-63, Cl. 239—350.
Kiekhaefer Corp.: *See*—
Alexander, Charles F., Jr. 3,092,185.
Kiekhaefer, Elmer C. 3,091,977.
Kiekhaefer, Elmer C., to Kiekhaefer Corp. Outboard motor remote steering control. 3,091,977. 6-4-63, Cl. 74—501.
Kingsley, Lewis A. Take-up mechanism for use on a roll leaf hot stamping machine. 3,092,347, 6-4-63, Cl. 242—67.2.
Kinney, Cecile M. Portable device for hydrotherapy. 3,092,101, 6-4-63, Cl. 128—66.
Kinsey, Andrew H. Container cooling apparatus. 3,092,125, 6-4-63, Cl. 134—125.
Kiner, Gerd, to Agfa Aktiengesellschaft. Retarding device for photographic shutter. 3,092,003, 6-4-63, Cl. 95—63.
Kiriltsev, George M., and N. I. Lazarenko. Electro-spark (spark-erosion) apparatus for precision machining of metals. 3,092,710. 6-4-63, Cl. 219—69.
Kirkpatrick, Kenneth L., to Deere & Co. Power driven hoe. 3,092,053, 6-4-63, Cl. 111—11.
Kivett, Jerome S., to Regal Plastic Co. Bowling equipment carrier. 3,092,225, 6-4-63, Cl. 190—48.
Klass, Donald L., to The Pure Oil Co. Diarylethanes by reaction of aromatics with carbyl sulfate. 3,092,672, 6-4-63, Cl. 260—668.
Kleinman, Jacob L. Electric shavers having hingeable shearing section. 3,091,850, 6-4-63, Cl. 30—43.

Kleist, Robert A., to General Precision, Inc. Interrogator-responder signalling system. 3,092,829, 6-4-63, Cl. 343—6.5.

Klingner, Carl E., to Warning Lites, Inc. Collapsible barricade for streets and highways. 3,092,826, 6-4-63, Cl. 340—366.

Kline, Charles J. Automobile body dent repair device. 3,091,-983, 6-4-63, Cl. 81—15.

Klose, Albert A.: *See*—
Riekers, Edmund J., Klose, and Schramm.

Knappe, Herman E., to Cherry-Burrell Corp. Plug valve. 3,092,365, 6-4-63, Cl. 251—309.

Kneuss, Kenneth E., to Fawick Corp. Diaphragm and wear shoe assembly for clutch or brake. 3,092,281, 6-4-63, Cl. 192—107.

Knowles, Carl H., and H. Da Costa, to Motorola, Inc. Method and apparatus for use in the manufacture of transistors. 3,092,522, 6-4-63, Cl. 148—1.5.

Knox, William H.: *See*—
Medwedeff, Fred M., and Knox.

Knudsen, Vagn A., to Graybar Precast Ltd. Highway safety guard rail. 3,092,371, 6-4-63, Cl. 256—13.1.

Knutson, Andrew T., and M. O. Kalleberg, to Minnesota Mining and Mfg. Co. Pressure sensitive adhesive tape in which the adhesive is a mixture of synthetic rubber and acrylate. 3,092,250, 6-4-63, Cl. 206—59.

Kobee, Frank R. Pneumatic jack. 3,092,366, 6-4-63, Cl. 254—93.

Koch, Klaus: *See*—
Leinhos, Roland, and Koch.

Koeltjmans, Gerard D., to Socony Mobil Oil Co., Inc. Sequential seismic correction means. 3,092,805, 6-4-63, Cl. 340—15.5.

Koelmans, Hein: *See*—
Grimmeiss, Hermann G., and Koelmans.

Kosche, Horst: *See*—
Köhler, Rudolf, Grun, and Kosche.

Köhler, Rudolf, H.-H. Grun, and H. Kosche, to Henkel & Cie G.m.b.H. High molecular carbohydrate ether carboxylic acid esters. 3,092,619, 6-4-63, Cl. 260—231.

König, Theodor: *See*—
Holsrichter, Hermann, König, and Dierichs.

Koontz, Victor F., and J. A. Anthes, to Dravo Corp. Cooler for sinter and the like. 3,092,473, 6-4-63, Cl. 34—164.

Koppers Co., Inc.: *See*—
Wille, Hans, Schuhmann, and Jellinek.

Korver, Margaret P.: *See*—
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Koser, Arthur J. Rotary barbecue grill. 3,092,013, 6-4-63, Cl. 99—397.

Kostelitz, Oscar, and G. Wetroff, to Pechiney Compagnie de Produits Chimiques et Electrometallurgiques. Stabiliser for styrene-acrylonitrile copolymers. 6,092,609, 6-4-63, Cl. 260—45.9.

Köster, Roland, to Studiengesellschaft Kohle m.b.H. Improvements in the preparation of aluminum hydride containing materials. 3,092,648, 6-4-63, Cl. 260—448.

Kovach, John E., to Bergen Machine & Tool Co., Inc. Apparatus for curing molded building blocks. 3,091,838, 6-4-63, Cl. 25—143.

Koslowski, Robert H., H. F. Mason, and J. W. Scott, Jr., to California Research Corp. Low temperature hydrocracking process. 3,092,567, 6-4-63, Cl. 208—57.

Kosul, Theodore L. Protective device for radar receiving apparatus including crystal diode detector means. 3,092,781, 6-4-63, Cl. 329—162.

Kramer, Hyman. Web-to-tube fastenings. 3,092,176, 6-4-63, Cl. 160—404.

Kramer, Hyman. Web-to-tube fastenings. 3,092,177, 6-4-63, Cl. 160—404.

Krawiec, Walter. Restaurants. 3,091,815, 6-4-63, Cl. 20—1.

Krekeler, Claude B., to The Cincinnati Mine Machinery Co. Resilient engagement device. 3,092,374, 6-4-63, Cl. 262—33.

Krohn, Earl H., to Krohn-Hite Laboratories, Inc. Power amplifier. 3,092,783, 6-4-63, Cl. 330—98.

Krohn-Hite Laboratories, Inc.: *See*—
Krohn, Earl H.

Kropp, Willis A.: *See*—
Roters, Herbert C., Kropp, and Harasym.

Kruger, Rine, Jr., to General Motors Corp. Production of filled polyolefin molding compound and the molding of articles therefrom. 3,092,438, 6-4-63, Cl. 18—47.5.

Kübler, Friedrich: *See*—
Huber, Richard, and Kübler.

Kuhnle, Ernst, and J. Schwarz, to Bizerba-Werke Wilhelm Kraut KG. Scale. 3,092,199, 6-4-63, Cl. 177—255.

Kuhnle, Ernst, to Bizerba-Werke Wilhelm Kraut KG. Price indicating weighing apparatus. 3,092,814, 6-4-63, Cl. 235—61.

Kulka, Kurt, to Fritzsche Brothers, Inc. 2,2-dimethyl-1-(substituted phenyl)-1,3-dihydroxypropanes. 3,092,639, 6-4-63, Cl. 260—340.5.

Kummerman, Henri, to International MacGregor Organisation. Multi-section closing or lift-lock devices having retractable bearing members. 3,092,065, 6-4-63, Cl. 114—202.

Kupferberg, Kenneth: *See*—
Rosenfeld, Aaron, and Kupferberg.

Kusko, Alexander, to Basic Products Corp. Regulator. 3,092,-768, 6-4-63, Cl. 328—66.

Labbé, Francis A. M., to Molins Machine Co, Ltd. Winnowing apparatus for cigarette-making machines. 3,092,117, 6-4-63, Cl. 131—110.

Labino, Dominick, to Johns-Manville Fiber Glass Inc. Process of making essentially pure silica fiber bats. 3,092,531, 6-4-63, Cl. 156—24.

Lacher, Robert F., to The Black-Clawson Co. Centrifuge. 3,092,582, 6-4-63, Cl. 233—2.

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Laine, Edward A., to Allegheny Ludlum Steel Corp. Method of making flexible joints. 3,091,844, 6-4-63, Cl. 29—437.

Lakins, Franklin D., and G. B. Lanphere, to Lipe-Rollway Corp. Bar feed apparatus. 3,092,288, 6-4-63, Cl. 221—298.

Lamb, Charles P., to Merla Tool Corp. Gas lift valve. 3,092,-131, 6-4-63, Cl. 137—155.

Lambert, Jordan W., G. Spens, and H. E. Wilson. Vibrating screen clamp mechanism. 3,092,573, 6-4-63, Cl. 209—408.

Lamkin, James E., 17½ % to W. W. Lowrey, Jr., and 17½ % to W. M. Majors, Jr. Control for water softening apparatus. 3,092,736, 6-4-63, Cl. 307—116.

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Lane, George W., and J. G. Sawicki, to Packaging Frontiers, Inc. Tetrahedral container. 3,092,248, 6-4-63, Cl. 206—46.

Langley, Robert C., and D. B. Kellam, to Engelhard Industries, Inc. Thermoplastic precious metal decorating compositions. 3,092,504, 6-4-63, Cl. 106—1.

Lannen, Joseph P., to Micro-Poise Engineering and Sales Co. Automatic universal balance testing machine. 3,091,970, 6-4-63, Cl. 73—433.

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Lakins, Franklin D., and Lanphere.

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Vesper, Daniel M., and Larkin.

Lasar, William. Thickness gauge for meat saw. 3,092,157, 6-4-63, Cl. 142—174.

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Latour, André, to Ets Merlin & Gerin. Electrodynamic force-compensation pressure contacts for circuit breakers. 3,092,699, 6-4-63, Cl. 200—87.

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Kirilt'sev, George M., and Lazarenko.

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Lear, Siegler Inc: *See*—
Stoyke, Ludwig T.

Le Blond, R. K., Machine Tool Co., The: *See*—
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Ledex, Inc.: *See*—
Leland, Gerald H.

Leech, Robert E., and J. K. Rose, to Union Carbide Corp. Polyester resins. 3,092,597, 6-4-63, Cl. 260—29.2.

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Cranch, Edward J., Davis, and Voorhoeve.

Leesona Corp.: *See*—
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Stoddard, Nicholas J., and Seem.

Legge, Denis I., and M. Lipworth, to Anglo-Transvaal Consolidated Investment Co. Ltd. Treatment of uranium ores for recovery of the uranium content thereof. 3,092,447, 6-4-63, Cl. 23—14.5.

Leibrook, Walton V.: *See*—
Fasold, George A., and Leibrook.

Leinhos, Roland, and K. Koch, to C. Zeiss. Apparatus for the simultaneous observation of an incandescent spot and a relatively cool surrounding area. 3,092,727, 6-4-63, Cl. 250—226.

Leitz, Ernst, Gesellschaft mit beschrankter Haftung: *See*—
Schlapp, Werner.

Leland, Gerald H., to Ledex, Inc. Rotary stepping motor. 3,092,740, 6-4-63, Cl. 310—23.

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Busch, Gerhard, and Lenffer.

Leon, Edward, to Hooker Chemical Corp. Diels alder adducts of perchlorocoumalin. 3,092,641, 6-4-63, Cl. 260—343.2.

Leone, Otto J. Blast furnace control system. 3,092,680, 6-4-63, Cl. 266—30.

Leroux, René, ½ to Societe Anonyme des Anciens Chantiers Dubigeon. Construction of liquefied gas carriers. 3,092,-063, 6-4-63, Cl. 114—74.

Leslie, James D., to General Motors Corp. Door hinge and hold open. 3,091,796, 6-4-63, Cl. 16—142.

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Levine, Harold H., to Narmco Industries, Inc. Curable resin system, cured epoxy resin and process of forming the same. 3,092,604, 6-4-63, Cl. 260—37.

Lewis, Edward F.: *See*—
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Lewis, Richard B., to Thompson Ramo Wooldridge Inc. Light box. 3,092,004, 6-4-63, Cl. 95—73.

Lewis, Richard W.: *See*—
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Liao, Hsiang P., and W. B. Tuemmler, to FMC Corp. Synthesis of 2-pyrrolidone. 3,092,638, 6-4-63, Cl. 260—326.5.

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Lich, Richard L., to General Steel Industries, Inc. Suspended railway systems. 3,092,039, 6-4-63, Cl. 105—160.

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Johnson, Gordon W., Lichtenstein, Ramsel, Rohweder, and Winters.

Light, James W.: *See*—
Brucker, Byron L., Fogt, and Light.

Lignes Telegraphiques et Telephoniques: *See*—
Ernyei, Herbert H.

Limberger, Walter, to Lumoprint Zindler K.G. Photographic copying apparatus. 3,092 005, 6-4-63, Cl. 95—75.

Limberger, Walter, to Lumoprint Zindler K.G. Devices for making photographic copies. 3,092,006, 6-4-63, Cl. 95—77.5.

Limpel, Eugene J., to A. O. Smith Corp. Electric resistance heating units. 3,092,716, 6-4-63, Cl. 219—140.

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Gordon, William J. J., Marden, and Sperry.

Ling-Temco-Vought, Inc.: *See*—
Cassidy, William B.

Linsert, Friedrich: *See*—
Muller, Rudolf, Sim, and Linsert.

Lipe-Rollway Corp.: *See*—
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Lode, Tenny, to Rosemount Engineering Co. Dry circuit switching means. 3,092,780, 6-4-63, Cl. 307—137.

Lohman, Harry C., to The Trane Co. Ignition carry-over. 3,092,169, 6-4-63, Cl. 158—115.

Long, Leonard H., to National Research Development Corp. Production of alkylated boranes. 3,092,666, 6-4-63, Cl. 260—606.5.

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Hottinger, William P., Keith, and Lorenc.

Lorenz, Anton: *See*—
Fletcher, Peter S.
Schliephacke, Fridtjof F.

Losenhausenwerk Duesseldorfer Maschinenbau A.G.: *See*—
Thiele, Berthold, Fey, and Hendel.

Louthan, Rector P.: *See*—
Goodhue, Lyle D., Cantrel, and Louthan.

Lovejoy, Charles K., to Scripto, Inc. Retractable writing instrument. 3,092,080, 6-4-63, Cl. 120—42.03.

Loving, Frank A., Jr., to E. I. du Pont de Nemours and Co. Deflagrating composition. 3,092,528, 6-4-63, Cl. 149—41.

Lowrey, Wiley W., Jr.: *See*—
Lamkin, James E.

Lowry, Robert D.: *See*—
Harrison, John W., and Lowry.

Lucas, Homer C., and T. W. Abel. Mat. 3,091,779, 6-4-63, Cl. 4—185.

Lucas, Joseph, (Industries) Ltd.: *See*—
Freeman, Frank G.
Gold, Richard L.
Steele, Henry J.
Watkins, Sidney C.

Lucchi, Guelino A.: *See*—
Clock, Donald P., and Lucchi.

Luchsinger, Charles R., to Norcross, Inc. Display device. 3,091,877, 6-4-63, Cl. 40—124.1.

Lamb, Russell F.: *See*—
Hanstock, Raymond F., Godwin, Lumb, and Williams.

Lumoprint Zindler K.G.: *See*—
Limberger, Walter.
Limberger, Walter.

Lund, Martin A., and J. Alsens, to FMC Corp. Pivoted check valve. 3,092,138. 6-4-63, Cl. 137—514.

Lundberg, Lennart A., J. C. Schlegel, and J. E. Carpenter, to American Cyanamid Co. Resinous composition. 3,091,-936, 6-4-63, Cl. 61—36.

Luther, Herbert G., and J. R. De Zeeuw, to Chas. Pfizer & Co., Inc. Animal feeds. 3,092,496, 6-4-63, Cl. 99—2.

Lynds, Lahmer: *See*—
Stern, David R., Lynds, and Washburn.

Lynn, John W., to Union Carbide Corp. Homopolymer and copolymers of vinyl cyanoacetate. 3,092,611, 6-4-63, Cl. 260—78.4.

Lyon, George A., to Lyon Inc. Wheel cover. 3,092,421, 6-4-63, Cl. 301—37.

Lyon Inc.: *See*—
Lyon, George A.

Macchi, Arthur J. Pancake baking apparatus. 3,092,014, 6-4-63, Cl. 99—423.

MacDonald, Donald A.: *See*—
Leake, Bernard W. and MacDonald.

MacDonald, Raymore D., to Ulmac Equipment Co. Base spreader. 3,091,999, 6-4-63, Cl. 94—44.

Mackey, E Scudder: *See*—
Ben-Ezra, Aaron, and Mackey.

MacLean, James K. Variable pitch propeller mechanism. 3,092,186, 6-4-63, Cl. 170—160.45.

MacMillan, Charles W., to Bear Mfg. Co. Aligning device for assisting in centering an automobile steering wheel. 3,091,842. 6-4-63, Cl. 33—46.

Macrae, Robert S., ½ to Garringtons Ltd., and ½ to Gydelite Ltd. Markers for roads. 3,091,996, 6-4-63, Cl. 94—1.5.

MacWilliam, Wallace. Packed screw threaded gland type tube coupling for thin walled tubing. 3,092,404, 6-4-63, Cl. 285—334.4.

Madjar, Jose B.: *See*—
Bril, Kazimiers J., and Madjar.

Maeda, Hisao. Intermediate frequency transformer. 3,092,-796, 6-4-63, Cl. 336—135.

Magat, Eugene E., and D. Tanner, to E. I. du Pont de Nemours and Co. Graft copolymer of polymerizable amide and nitrogenous condensation polymer, and process for preparing same. 3,092,512, 6-4-63, Cl. 117—138.8.

Magic Chef, Inc.: *See*—
Moss, Harold J.

Mainil, Jean L. P., to Oletta, Societe Anonyme. Preparation of allopregnane-20-hydroxy-3 one and of allopregnane-3-20-dione. 3,092,643, 6-4-63, Cl. 260—397.3.

Maiz, Ago: *See*—
McBride, Joseph J., Jr., and Maiz.

Majors, William M., Jr.: *See*—
Lamkin, James E.

Makowski, Henry S., to Esso Research and Engineering Co. Copolymers preparation process. 3,092,612, 6-4-63, Cl. 260—83.2.

Maletzke, Arnold J.: *See*—
Baldwin, Glenn A., Frame, and Maletzke.

Malm, Anders E., to Aktiebolaget Kanthal. Electric resistance furnaces and the like. 3,092,681, 6-4-63, Cl. 13—22.

Manecke, Siegfried E.: *See*—
Hild, Henry F., and Manecke.

Mangold, Donald J.: *See*—
Clark, Sheldon L., and Mangold.

Mannerberg, Edward G., to H. J. Stolbach. Adjustable guided slicing knife. 3,091,854, 6-4-63, Cl. 30—283.

Manners, Frank A., and T. E. De Viney, to Square D Co. Switching circuit. 3,092,760, 6-4-63, Cl. 317—148.5.

Manshel, Jack C. Metal casting means. 3,091,824, 6-4-63, Cl. 22—85.

Mantell, Gerald J., F. R. Galiano, and D. Rankin, to Spencer Chemical Co. Processes for preparing bis(hydroxyneopentylidene). 3 092,640, 6-4-63, Cl. 260—340.7.

Marble Products Co. of Georgia: *See*—
Boggus, James D.

Marden, Carleton S.: *See*—
Gordon, William J. J., Marden, and Sperry.

Markus, Theodore: *See*—
Strobel, Charles J., and Markus.

Marschik, Eduard. Apparatus for carrying out automatic repeat change in embroidery machines. 3,092,054, 6-4-63, cl. 112—83.

Martin, Harold F., L. C. Tidball, and W. A. Goddard, to International Business Machines Corp. Decoding device. 3,092,823, 6-4-63, Cl. 340—347.

Martin, Leo T., to Abercrombie & Fitch Co. Carrying bag. 3,092,223, 6-4-63, Cl. 190—1.

Martin-Marietta Corp.: *See*—
Hammond, Wardlaw M., Jr.
Hanks, Hugh C., Jr.

Mason, Harold F.: *See*—
Koslowski, Robert H., Mason, and Scott.

Masusawa, Kenro: *See*—
Havasaka, Toshio, Masusawa, Araki, and Tajima.

Mather Spring Co.: *See*—
Dullabaum, Paul W., and Hanslip.

Mathers, Wilson G.: *See*—
Morgan, William W., Mathers, and Hart.

Matway, Leo. Plasma flame hyperthermal exothermic furnace with catalyst and combination thereof with an internal combustion engine. 3,091,920, 6-4-63, Cl. 60—30.

Maxam, Inc.: *See*—
Hurwitz, Max.

May, Gordon C., and C. G. Morley, to Rolls-Royce Ltd. Gas turbine engine fuel control with plural sleeve valves. 3,091,925. 6-4-63, Cl. 60—39.28.

Mayer, Oscar, & Co., Inc.: *See*—
Vedvik, Andrew H., and Borsuk.

Mayer, Oscar J., ½ to D. J. M. Carpenter. Instant coffee and tea dispensing machine. 3,092,292, 6-4-63, Cl. 222—185.

Mayfair Industries, Inc.: *See*—
Jaggers, George A.

Mayrath, Martin. Carriage for corn and hay elevators. 3,092,289, 6-4-63, Cl. 198—120.5.

McBride, Joseph J., Jr., and A. Maiz, to Armour and Co. Preparing esters of phosphinic acids. 3,092,650, 6-4-63, Cl. 260—461.

McCann Joe G., R. J. Steren, and W. Falstrom, to Canoga Electronics Corp. Split parabolic radar antenna utilizing means to discriminate against cross-polarised energy. 3,092,834. 6-4-63, Cl. 343—756.

McCaskill, Robert B.: *See*—
Wilcox, Stanley W., Crossland, and McCaskill.

McClure, Robert E., Jr., to United States Steel Corp. Mechanism for preventing loss of steam from a space heater. 3,092,324, 6-4-63, Cl. 237—9.

McCormick, Dale B., to General Motors Corp. Method and apparatus for making flexible belts. 3,091,837, 6-4-63, Cl. 29—148.8.

McCracken, Lyde S., to Economy Forms Corp. Adjustable aligner clamp for concrete forms. 3,092,863, 6-4-63, Cl. 248—316.

McCreary, Harold J., to Automatic Electric Laboratories, Inc. Full stroke energised rotary magnet. 3,092,787, 6-4-63, Cl. 307—112.

McDermott Martin A. Storage container. 3,092,302, 6-4-63, Cl. 229—52.

McDowell, Thomas E., and C. C. Whiteford; said McDowell assor. to Brandon Equipment Co., Inc., and said Whiteford assor. to Ford Motor Co. Winch mechanism for vehicle tie down. 3,092,868, 6-4-63, Cl. 254—164.

McGee, Archie A., Jr.: *See*—
Dalton, Wayne D., and McGee.

McGhee Kenneth B.: *See*—
Carter, Morris B., Stroup, Vadis, and McGhee.

McGill, Chester T. Automatic flow control means for liquid treating apparatus. 3,092,574, 6-4-63, Cl. 210—130.

McGillem, Clare D.: *See*—
Brink, Paul L., Graves, and McGillem.

McGraw-Edison Co.: *See*—
Goettl, John.
Harling, Donald W., and Clark.

McHenry, Vincent J.: *See*—
Augustine, Carroll F., McHenry, and Cheal.

McKee, Henry O.: *See*—
Fowler, Aubrey A., Jr., and McKee.

McKelvey, Harold E., to Pittsburgh Plate Glass Co. Molds for bending glass sheets. 3,092,482, 6-4-63, Cl. 65—291.
McKelvey, Richard B.: *See*—
Cook, Walter L., and McKelvey. 3,092,360.
McMackin, John J., and M. J. Paruolo, to Brockway Glass Co., Inc. Light collecting apparatus for photosensitive device. 3,092,728, 6-4-63, Cl. 250—239.
McMurray, Herman J., to said H. J. McMurray and N. B. McMurray. Ear tag pliers. 3,091,770, 6-4-63, Cl. 1—220.
McMurray, Neva B.: *See*—
McMurray, Herman J. 3,091,770.
McVittie, Harland E. Hollow tubular spirally wound covered metallic anchor. 3,091,990, 6-4-63, Cl. 85—2.6.
McWhirter, Wayne T. Pocket key case assembly. 3,092,244, 6-4-63, Cl. 206—38.
Mead Corp., The: *See*—
Hasselhoff, Carl S. 3,092,299.
Holcombe, Harold N. 3,092,294.
Means, F. W., Co.: *See*—
Beaudry, Walter A., Pollitt, and Smith. 3,092,268.
Beaudry, Walter A., Pollitt, and Smith. 3,092,271.
Medwedeff, Fred M., and W. H. Knox. X-ray film holder and aiming element. 3,092,721, 6-4-63, Cl. 250—70.
Meeker, David A.: *See*—
Allen, Charles M., Geiger, and Meeker. 3,092,134.
Mehal, Edward W.: *See*—
Jones, Morton E., and Mehal. 3,092,591.
Mercer, William R., to Sanders Associates, Inc. Automatic range tracking radar system. 3,092,831, 6-4-63, Cl. 343—7.3.
Merck & Co., Inc.: *See*—
Hirschmann, Ralph F. 3,092,622.
Hirschmann, Ralph F. 3,092,623.
Oberster, Arthur E., Beyler, and Sarett. 3,092,628.
Tull, Roger J., and Chemerda. 3,092,642.
Merla Tool Corp.: *See*—
Lamb, Charles P. 3,092,131.
Merritt, Philip E., and C. M. Steele, to General Electric Co. Spurious signal suppression in automatic symbol reader. 3,092,809, 6-4-63, Cl. 340—146.3.
Metachemical Processes Ltd.: *See*—
Hughes, Herbert D., and Lewis. 3,092,558.
Mettler's Fr., Sohne, Aktiengesellschaft: *See*—
Aschwanden, Paul. 3,092,341.
Meyerer, Paul: *See*—
Veith, Werner, and Meyerer. 3,092,745.
Meystre, Charles: *See*—
Jeger, Oskar, Arigoni, Wettstein, Anner, Heusler, Meystre, Wieland, and Kalvoda. 3,092,625.
Wettstein, Albert, Anner, Kalvoda, and Meystre. 3,092,627.
Michalos, Constantine A.: *See*—
Doundoulakis, Helias. 3,092,800.
Micro-Poise Engineering and Sales Co.: *See*—
Lannen, Joseph P. 3,091,970.
Milek, Robert C. Portable material handling apparatus. 3,092,264, 6-4-63, Cl. 214—2.
Miles Laboratories, Inc.: *See*—
Adams, Ernest C., Jr., and Peterson. 3,092,463.
Adams, Ernest C., Jr., and Peterson. 3,092,464.
Adams, Ernest C., Jr., and Smeby. 3,092,465.
Milford, Richard E., to General Electric Co. Maximum signal identifying circuit. 3,092,732, 6-4-63, Cl. 307—88.5.
Miller, Harry L., to Ways & Means, Inc. Conveyor arrangement. 3,092,237, 6-4-63, Cl. 198—19.
Miller, John W. Electrical lead connectors. 3,092,430, 6-4-63, Cl. 339—32.
Miller, William R., to General Electric Co. Magnetic amplifier. 3,092,769, 6-4-63, Cl. 323—89.
Millis, Walter T., to General Electric Co. Electron discharge device. 3,092,749, 6-4-63, Cl. 313—350.
Mills, Cyril R.: *See*—
Romanchuk, Steve, and Mills. 3,091,969.
Mine Safety Appliances Co.: *See*—
Bixby, Guy T. 3,091,771.
Miner, Robert G.: *See*—
Van Den Berge, Dick, and Miner. 3,091,944.
Mingasson, Georges R. H., and M. H. Ferrand, to Compagnie Francaise des Matieres Colorantes. Azo dyestuffs containing a quaternized pyrazolone radical. 3,092,815, 6-4-63, Cl. 260—163.
Minister of Aviation in Her Majesty's Government of the United Kingdom of Great Britain and Northern Ireland: *See*—
Prescott, Thomas W., and Scrimshaw. 3,092,357.
Minneapolis-Honeywell Regulator Co.: *See*—
Helfinstine, Robert F. 3,092,256.
Reach, Roy W., Jr. 3,092,807.
Minnesota Mining & Mfg. Co.: *See*—
Goodell, John D., Ivins, and Wistrand. 3,092,346.
Knutson, Andrew T., and Kalleberg. 3,092,250.
Minnesota and Ontario Paper Co.: *See*—
Barrett, William H., and Hart. 3,092,506.
Misicka, Arthur D. Saliva ejector control system. 3,091,858, 6-4-63, Cl. 32—33.
Missioux, Jean: *See*—
Nebout, Noel, and Missioux. 3,092,016.
Mitty, Jerald I.: *See*—
Mitty, Sol, N. H. and J. I. 3,092,395.
Mitty, Neil H.: *See*—
Mitty, Sol, N. H. and J. I. 3,092,395.
Mitty, Sol, N. H., and J. I. Corrugated shopping cart and parts. 3,092,395, 6-4-63, Cl. 280—36.
Mobay Chemical Co.: *See*—
Heiss, Herbert L. 3,092,594.
Nischk, Günther, Hoppe, Braun, and Paffrath. 3,092,592.
Model Plastic Corp.: *See*—
Cohn, David. 3,091,894.
Mohan, John M.: *See*—
Rauch, Paul E. 3,091,831.
Moline Machine Co. Ltd.: *See*—
Labbé, Francis A. M. 3,092,117.
Monahan, Victor C.: *See*—
Ellerman, Charles R., and Monahan. 3,092,158.
Monotype Corp. Ltd., The: *See*—
Williams, Joseph H. 3,092,000.
Monroe Calculating Machine Co.: *See*—
Dodsworth, James W. 3,092,312.
Monsanto Chemical Co.: *See*—
Herbig, James A., and Salyer. 3,092,607.
Moore, James M., and G. C. Ladman. Portable melting kettle. 3,092,098, 6-4-63, Cl. 126—343.5.
Moran Shoe Co.: *See*—
Rountree, Fred H. 3,092,257.
Moreau, Rene, Internal combustion engine silencers. 3,092,-206, 6-4-63, Cl. 181—68.
Moretti, Francesco, to Officine Meccaniche e Fonderie A. Bosco Societa per Azioni. Emptying system for rotary containers. 3,092,579, 6-4-63, Cl. 210—370.
Morgan, Dave J. Incinerator. 3,092,050, 6-4-63, Cl. 110—18.
Morgan, R. M., Co.: *See*—
Morgan, Robert M. 3,092,115.
Morgan, Robert M., to R. M. Morgan Co. Rasp type threshing cylinder and elastic concave elements. 3,092,116, 6-4-63, Cl. 130—27.
Morgan, William W., W. G. Mathers, and R. G. Hart, to Atomic Energy of Canada Ltd. Separation of plutonium from uranium. 3,092,446, 6-4-63, Cl. 23—14.5.
Mori, Takeshi, R. I. Peters, and B. L. Austin, to Christensen Diamond Products Co. Rubber sleeve core barrel apparatus. 3,092,191, 6-4-63, Cl. 175—226.
Morley, Charles G.: *See*—
May, Gordon C., and Morley. 3,091,925.
Morley, Frederick W. W., and W. H. Wilkinson, to Rolls-Royce Ltd. Labyrinth seals. 3,092,393, 6-4-63, Cl. 277—16.
Morris, William C., to General Electric Co. Polyphase electromagnetic protective relay. 3,092,758, 6-4-63, Cl. 317—27.
Morrison, Ian: *See*—
Brunton, Phillip E., and Morrison. 3,092,275.
Morse, Stanley H., to Prumore Sales, Inc. Refrigeration systems. 3,091,945, 6-4-63, Cl. 62—299.
Mosier, Jeanette E. J. Catamenial appliance. 3,092,109, 6-4-63, Cl. 128—289.
Moss, Harold J., to Magic Chef, Inc. Oven door hinge. 3,092,097, 6-4-63, Cl. 126—194.
Motorola, Inc.: *See*—
Knowles, Carl H., and De Costa. 3,092,522.
Tesch, Ernest A., Jr. 3,092,059.
Torrence, James A. 3,092,761.
Mower, Robert L. Eye patch. 3,092,103, 6-4-63, Cl. 128—132.
Muehlner, Egon E., to General Dynamics Corp. Leak meter for detecting fluid pressure leaks. 3,092,821, 6-4-63, Cl. 340—238.
Mueller, Walter: *See*—
De Woody, Charles M., Pearce, Mueller, and Egisi. 3,092,704.
Mullen, James A.: *See*—
Haus, Hermann A., and Mullen. 3,092,750.
Muller, Rudolf, W. Simm, and F. Linsert, to Agfa Aktiengesellschaft. Automatic weighing scale. 3,092,198, 6-4-63, Cl. 177—212.
Multifastener Corp.: *See*—
Double, Plummer E., and Steward. 3,091,843.
Munsey, Herbert H. Weapon sight. 3,091,868, 6-4-63, Cl. 33—47.
Murano, Joseph S. Instrument mouthpiece. 3,091,989, 6-4-63, Cl. 84—383.
Murphy, Clarence R., to Gulf Research & Development Co. Process for the recovery of methanol. 3,092,667, 6-4-63, Cl. 260—632.
Murphy, Roy E., Jr., to United States of America, Navy. Device for simulating the kinesthesia of submarine control. 3,092,683, 6-4-63, Cl. 35—10.2.
Murray, Victor E., ¼ to J. L. Baarlaer. Egg opener and holder. 3,092,400, 6-4-63, Cl. 294—1.
Murton, Crawford R. to Vesuvius Crucible Co. Stopper for a ladle or similar receptacle. 3,091,623, 6-4-63, Cl. 22—85.
Nalco Chemical Co.: *See*—
Feldt, Charles A., and Kekish. 3,092,617.
Narmco Industries Inc.: *See*—
Levine, Harold H. 3,092,604.
Nass, Leonard I., and W. A. Stamm, to Carlisle Chemical Works, Inc. Preparation of polyurethane foam. 3,092,-593, 6-4-63, Cl. 260—2.5.
National Cash Register Co., The: *See*—
Eberhardt, George J., and Werner. 3,092,313.
National Distillers and Chemical Corp.: *See*—
Giovannucci, Julius L. 3,092,524.
National Research Development Corp.: *See*—
Baker, Alan R. 3,092,799.
Long, Leonard H. 3,092,666.
Tucker, David G. 3,092,602.
National Tea Packing Co., Inc.: *See*—
Irmscher, Hans O. 3,092,242.
Nault, Joyce D., and C. R. Youngson, to The Dow Chemical Co. Organo phosphorous nematocide. 3,092,544, 6-4-63, Cl. 167—30.
Nebout, Noel, and J. Missioux, to Societes Aries, La Bougie B.G. & S.F.E.D.R. reunies. Wire tying machine. 3,092,-016, 6-4-63, Cl. 100—7.
Neff, Ted. Wire twisting and cutting tool 3,092,152, 6-4-63, Cl. 140—119.

Negus, Robert L., to Water Processing & Chemical Co., Ltd. Sterilization and purification apparatus. 3,092,566, 6-4-63, Cl. 204—240.
Nehrenberg, Alvin E.: *See*—
Payson, Peter, and Nehrenberg. 3,092,491.
Nelson, Earl W., and T. J. Crossley, to American Cyanamid Co. Iron chloride combustion. 3,092,456, 6-4-63, Cl. 23—200.
Nelson, Reuben F., to American Seal-Kap Corp. of Delaware. Railway truck brake beam bottom rod safety device. 3,092,-213, 6-4-63, Cl. 188—210.
Nesbit, Harold A., to Patent Resources, Inc. Crane boom safety apparatus. 3,092,261, 6-4-63, Cl. 212—59.
Nett, James P., and L. D. Gaddini. Furnace humidifier. 3,092,096, 6-4-63, Cl. 126—113.
Nevo-Hacohen, Jacob L. ¼ to R. H. Rines. Process for the manufacture of fertilisers and the like. 3,092,487, 6-4-63, Cl. 71—37.
Nevo-Hacohen, Jacob L., ¼ to R. H. Rines. Method for producing phosphate fertilisers. 3,092,486, 6-4-63, Cl. 71—39.
Newkirk, John D.: *See*—
Denton, William L., and Newkirk. 3,092,669.
Nicholson, Robert T., to G. D. Searle & Co. Esters of 17α-alkynyloester-5(10)-ene-3β,17β-diols. 3,092,645, 6-4-63, Cl. 260—397.5.
Nickels, Clifford C., to United Shoe Machinery Corp. Toe lasting machines. 3,091,784, 6-4-63, Cl. 12—8.2.
Niles, Phillip M.: *See*—
Cole, Eldon B., and Niles. 3,092,475.
Nippon Beiso Kabushiki Kaisha: *See*—
Hosokawa, Zenmaro. 3,092,075.
Nippon Telegraph and Telephone Public Corp.: *See*—
Hayasaka, Toshio, Masusawa, Araki, and Tajima. 3,092,-093.
Nischk, Günther, P. Hoppe, G. Braun, and H.-W. Paffrath, ½ to Farbenfabriken Bayer Aktiengesellschaft and ½ to Mobay Chemical Co. Preparation of cellular polyurethane plastics. 3,092,592, 6-4-63, Cl. 260—2.5.
Noland, James S.: *See*—
Kennerly, George W., Hoffenberg, and Noland. 3,092,-613.
Noll, George C., and P. E. Wesebaum, to The Thew Shovel Co. Back-hitch gantry. 3,092,260, 6-4-63, Cl. 212—59.
Nolte, Albert C.: *See*—
Romans, Isabella B. 3,092,552.
Norcross, Inc.: *See*—
Luchsinger, Charles R. 3,091,877.
Norddeutsche Affinerie: *See*—
Perkow, Werner. 3,092,483.
North American Aviation, Inc.: *See*—
Bressenoff, Stanley W. 3,092,805.
Fisher, Benjamin. 3,092,780.
North American Philips Co., Inc.: *See*—
Aschermann, Wilfried. 3,092,785.
De Niet, Edmond. 3,092,779.
De Vrijer, Frederik W., and Valeton. 3,092,720.
Fine, Samuel, and Hendee. 3,092,747.
Goorissen, Jan. 3,092,463.
Grimmeiss, Hermann G., and Koelmans. 3,092,725.
Putner, Walter. 3,092,775.
Rusche, Georg, and Grunwaldt. 3,092,777.
Northern Electric Co., Ltd.: *See*—
Benger, Walter C., and Ives. 3,092,309.
Kerr, Robert A., Richardson, and Springford. 3,091,806.
Norton Mfg. Corp.: *See*—
Wisbrod, William. 3,091,781.
No-Sag Spring Co.: *See*—
Cash, Harvey, Jr. 3,092,376.
Novello, John C. Bird perch. 3,092,076, 6-4-63, Cl. 119—26.
Nowlin, Gene: *See*—
Reich, Murray H., Nowlin, and Heiberger. 3,092,608.
Nutting, Donald W. Book holder. 3,091,886, 6-4-63, Cl. 45—85.
Oberster, Arthur E., R. E. Beyler, and L. H. Sarett, to Merck & Co., Inc. Aldosterone antagonists. 3,092,628, 6-4-63, Cl. 260—239.57.
O'Brian, Edward D.: *See*—
Bourns, Marian E., Boode, and O'Brian. 3,092,801.
O'Dell, Richard A., to Butler Mfg. Co. Storage structure with breathing means. 3,092,010, 6-4-63, Cl. 99—235.
Oetinger, Norman. Article of furniture having massaging action. 3,092,100, 6-4-63, Cl. 128—33.
Officine Meccaniche e Fonderie A. Bosco Societa per Azioni: *See*—
Moretti, Francesco. 3,092,579.
Ohnstad, Burl E., to American Pipe and Construction Co. Apparatus for forming welded helical seam tubing from metal strip. 3,092,055, 6-4-63, Cl. 113—35.
Oldham & Son Ltd.: *See*—
Booth, Frank, and Latham. 3,092,509.
Oletta, Societe Anonyme: *See*—
Maimil, Jean L. P. 3,092,643.
Olin Mathieson Chemical Corp.: *See*—
Bruson, Herman A., and Denton. 3,092,666.
Clark, Sheldon L., and Mangold. 3,092,664.
Cook, Ralph L. 3,092,525.
Denton, William L., and Newkirk. 3,092,669.
Heying, Theodore L. 3,092,550.
Williams, Charles O., and Turner. 3,092,026.
Olson, Arthur R., to The Kendall Co. Battery separator. 3,092,519, 6-4-63, Cl. 136—146.
Olson, Wallace P.: *See*—
Rodgers, Otis N., Olson, and Wheeler. 3,092,139.
Olympic Screw & Rivet Corp.: *See*—
Siebol, George. 3,091,962.
O'Neil, Brian D. Combined carrying bag and seat. 3,092,224, 6-4-63, Cl. 190—9.
Onyskin, Alexander. Slip clutch. 3,091,951, 6-4-63, Cl. 64—30.
Opperman, Joseph: *See*—
Fischman, Robert W., and Opperman. 3,091,868.
Orioff, Harold D., to Ethyl Corp. Lubricating oils. 3,092,-585, 6-4-63, Cl. 252—48.4.
Orwin, Olaf J. B., to Fisher & Ludlow Ltd. Conveyor systems. 3,092,038, 6-4-63, Cl. 104—172.
Osterman, Milton: *See*—
Roussan, Wilford J., Jr., and Osterman. 3,092,705.
Oswin, Harry G., to Leesona Corp. Non-porous hydrogen diffusion fuel cell electrodes. 3,092,517, 6-4-63, Cl. 136—86.
Otis Elevator Co.: *See*—
Powers, Chester H. 3,092,268.
Otto, Carl L. and L. B. Hair curlers. 3,092,118, 6-4-63, Cl. 132—40.
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Owens-Corning Fiberglas Corp.: *See*—
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Slayter, Games, Rees, and Feld. 3,092,203.
Owens-Illinois Glass Co.: *See*—
Rex, Raymond H., and Adams. 3,092,440.
Ozawa, Toshio, T. Yamashita, and S. Hayashi, to Kanegafuchi Spinning Co., Ltd. Modified polyvinyl acetate powders and compositions. 3,092,600, 6-4-63, Cl. 260—29.6.
Pacific Semiconductors, Inc.: *See*—
Cohen, Jerrold. 3,091,849.
Packaging Frontiers, Inc.: *See*—
Lane, George W., and Sawicki. 3,092,248.
Paffrath, Hans-Willi: *See*—
Nischk, Günther, Hoppe, Braun, and Paffrath. 3,092,592.
Paintex Mfg. Co.: *See*—
Desrosiers, George L. 3,091,950.
Papineau, Milton D. Phase analyser. 3,092,804, 6-4-63, Cl. 340—6.
Paris, René A., and R. Périères, to Pechiney. Process of making aluminum nitride. 3,092,455, 6-4-63, Cl. 23—192.
Parker, Joseph D., to Beloit Iron Works. Method and apparatus for feeding stock to paper making machine. 3,092,-538, 6-4-63, Cl. 162—216.
Parker, Joseph D., to Beloit Iron Works. Method and apparatus for distributing particle suspension. 3,092,540, 6-4-63, Cl. 162—343.
Parkersburg-Aetna Corp.: *See*—
Parsons, Robert L., and Bays. 3,092,221.
Parsons, C. A., & Co. Ltd.: *See*—
Horsley, William D. 3,092,741.
Parsons, Neil E., to Automatic Electric Laboratories, Inc. Microswitch relay. 3,092,702, 6-4-63, Cl. 200—104.
Parsons, Robert L., and G. H. Bays, to Parkersburg-Aetna Corp. Metal roof-supporting construction. 3,092,221, 6-4-63, Cl. 189—36.
Paruolo, Miller J.: *See*—
McMackin, John J., and Paruolo. 3,092,728.
Patch, Robert W. Toy truck. 3,091,888, 6-4-63, Cl. 46—17.
Patent Concern N.V.: *See*—
Van der Lely, Cornelis. 3,091,907.
Patent Resources, Inc.: *See*—
Nesbit, Harold A. 3,092,261.
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Braun, Ernst. 3,092,678.
Patterson, Ned T., and G. C. Francis. Spraying apparatus. 3,092,328, 6-4-63, Cl. 239—150.
Patterson, Robert C., to Combustion Engineering, Inc. Pulverizing system with indicator and control. 3,092,837, 6-4-63, Cl. 241—34.
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Spence, Paulsen, and Dexter. 3,092,677.
Pawl, Walter S. Universal timepiece. 3,091,915, 6-4-63, Cl. 58—44.
Pawletko, Joseph P., to International Business Machines Corp. Magnetic drum storage apparatus. 3,092,816, 6-4-63, Cl. 340—174.1.
Payne, Robert E., M. J. Cohen, and H. C. Gibson, Jr., to The Sharples Corp. Detection, metering and/or analysis of radioactive particles. 3,092,723, 6-4-63, Cl. 250—83.
Payson, Peter, and A. E. Nehrenberg, to Crucible Steel Co. of America. High strength alloy steel for atmospheric and elevated temperature service. 3,092,401, 6-4-63, Cl. 75—126.
Pearce, Roscol L.: *See*—
De Woody, Charles M., Pearce, Mueller, and Egisi. 3,092,704.
Pearce, Woodrow W. Distress signal. 3,092,827, 6-4-63, Cl. 340—366.
Pearlson, Raymond. Swimming pool cover. 3,091,777, 6-4-63, Cl. 4—172.
Pearson, Arthur J., to Owens-Corning Fiberglas Corp. Duct or conduit blank. 3,092,529, 6-4-63, Cl. 154—44.
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Pechiney, Cie de Produits Chimiques et Electrometallurgiques: *See*—
Erdely, Ladislas. 3,092,419.
Pechiney Compagnie de Produits Chimiques et Electrometallurgiques: *See*—
Kostelitz, Oscar, and Wetroff. 3,092,609.
Pedersen, Haakon O.: *See*—
Youngquist, Robertson, and Pedersen. 3,091,921.
Pedley, Eric L. and P., to Pedley-Knowles & Co. Apparatus for use in making rope nets. 3,091,884, 6-4-63, Cl. 28—1.
Pedley-Knowles & Co.: *See*—
Pedley, Eric L. and P. 3,091,884.
Pedley, Phillip: *See*—
Pedley, Eric L. and P. 3,091,884.
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Hardy, Peter S. 3,092,411.
Pembleton, James D., to Holley Carburetor Co. Bleed valve control mechanism. 3,092,128, 6-4-63, Cl. 137—81.
Pepplatt, Harry J., to General Electric Co. Low noise crystal diode mixer. 3,092,774, 6-4-63, Cl. 325—445.

Péras, Lucien, to Regie Nationale des Usines Renault. Epicyclic gearboxes for transmission mechanisms. 3,091,981, 6-4-63, Cl. 74—759.

Peras, Lucien, to Regie Nationale des Usines Renault. Auxiliary apparatus for automatic line welding, notably fuel tanks. 3,092,712, 6-4-63, Cl. 219—81.

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Péris, René A., and Périères. 3,092,455.

Perkow, Werner, ½ to Norddeutsche Affinerie and ½ to C. F. Spiess & Sohn. Herbicidal method employing 1-phenyl-2,3-dimethyl-4-chloro-pyrasolone and salts thereof. 3,092,483, 6-4-63, Cl. 71—2.5.

Persson, Per-Oskar. Air conditioning apparatus. 3,092,477, 6-4-63, Cl. 55—196.

Peters, Don L.: *See*—
Scott, John N., Jr., Alexander, and Peters. 3,091,808.

Peters, Ernest J., to United States of America, Atomic Energy Commission. Method of manufacture of metal encased core material. 3,091,847, 6-4-63, Cl. 29—471.5.

Peters, Robert I.: *See*—
Mori, Takeshi, Peters, and Austin. 3,092,191.

Peterson, Dana. Shower attachment. 3,092,334, 6-4-63, Cl. 239—516.

Peterson, James A.: *See*—
Adams, Ernest C., Jr., and Peterson. 3,092,468.
Adams, Ernest C., Jr., and Peterson. 3,092,464.

Petro-Electronics Corp.: *See*—
Tomberlin, Bill M. 3,092,514.

Petty, Charles O. Air sweetening. 3,092,569, 6-4-63, Cl. 208—204.

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Forland, Albert J. 3,092,657.
Luther, Herbert G., and De Zeeuw. 3,092,496.
Seto, Thomas A. 3,092,620.

Philco Corp.: *See*—
Brill, Richard H., and Biesel. 3,091,974.
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Blomko, George. 3,092,778.

Phillips, Alan H., to Sperry Rand Corp. Carrier phase modulated dual purpose communication system. 3,092,833, 6-4-63, Cl. 343—105.

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Goodhue, Lyle D., Cantrel, and Louthan. 3,092,542.
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Scott, John N., Jr., Alexander, and Peters. 3,091,808.
Vesper, Daniel M., and Larkin. 3,092,765.

Philipsen, Joseph, to Aerojet-General Corp. Ammonium perchlorate resin base propellants. 3,092,526, 6-4-63, Cl. 149—19.

Phlaum, Edward G., to A. O. Smith Corp. Cross lighter for a gas burner assembly. 3,092,168, 6-4-63, Cl. 158—115.

Pickinpaugh, Asa: *See*—
Ridemour, Stewart J., and Pickinpaugh. 3,092,330.

Piell, Reinhart. Load-cell mounting for mill-roll chock. 3,091,961, 6-4-63, Cl. 73—141.

Pierce, John H.: *See*—
Banner, Robert G., Pierce, and Chain. 3,092,486.

Pike, Frederick P., and E. E. Erickson, to Research Corp. Moving-bed liquid-solid contactor and operation thereof. 3,092,515, 6-4-63, Cl. 134—25.

Pillsbury, Albert F., Jr., to Ampex Corp. Tape cleaning apparatus. 3,091,794, 6-4-63, Cl. 15—308.

Pinton, John: *See*—
Savage, August N., and Pinton. 3,092,092.

Pittsburgh Plate Glass Co.: *See*—
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McKelvey, Harold E. 3,092,482.

Place, Robert E.: *See*—
Brown, Joe B., and Place. 3,092,262.

Plaisance, Stanley F.: *See*—
Flieg, Werner, and Plaisance. 3,092,310.

Planet Corp.: *See*—
Brown, Joe B., and Place. 3,092,262.

Plass, Raymond B., to Ray Oil Burner Co. Viscosity and flow control valve. 3,092,146, 6-4-63, Cl. 137—625.47.

Platzer, Peter J. Sectional grain sampling probe. 3,091,968, 6-4-63, Cl. 73—426.2.

Plegat, Alain B., to Societe Anonyme des Usines Chausson. Refrigerating unit, more particularly for air cooling. 3,091,943, 6-4-63, Cl. 62—196.

Plummer, Walter A. Heat protective sheathing. 3,092,530, 6-4-63, Cl. 154—44.

Plymouth Cordage Industries, Inc.: *See*—
Whitney, William E. 3,091,768.

Pohl, Robert G., to The Rauland Corp. Method of preparing semi-conductor junctions. 3,092,521, 6-4-63, Cl. 148—1.5.

Pohl, Russell A., to General Mills, Inc. Inflatable kites. 3,092 359, 6-4-63, Cl. 244—154.

Pohlman, Richard A., and D. F. Volkman, to Avco Corp. Crystal controlled multiple frequency generator. 3,092,-737, 6-4-63, Cl. 331—164.

Pohm, Arthur V.: *See*—
Rossing, Thomas D., Pohm, and Rubens. 3,092,812.

Poisson, Arthur J., to Clevite Corp. Package for miniature electrical components. 3,092,245, 6-4-63, Cl. 206—45.31.

Pojurowski, Leon. Method of pigmentation without grinding and paints resulting from this method. 3,092,507, 6-4-63, Cl. 106—293.

Polayes, Jack, to The Bar-Plate Mfg. Co. Notching tool of punch-out type. 3,091,853, 6-4-63, Cl. 30—229.

Policy-Matic Corp. of America: *See*—
Edwards, Robert N., and Reese. 3,092,234.

Pollitt, Erwin P.: *See*—
Beaudry, Walter A., Pollitt, and Smith. 3,092,263.
Beaudry, Walter A., Pollitt, and Smith. 3,092,271.

Pomes, Eliodoro. Rotary piston mechanism. 3,092,031, 6-4-63, Cl. 103—120.

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Bray, William W., Jr., and Ponsek. 3,092,674.

Pope, John R., to United Shoe Machinery Corp. Shoe machines. 3,091,785, 6-4-63, Cl. 12—12.

Portable Electric Tools, Inc.: *See*—
Dobslaw, Gerharut A. 3,092,154.

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Potschka, Joseph W. 3,092,818.

Potschka, Joseph W., to Potschka Enterprises Ltd. Vehicle load indicator. 3,092,818, 6-4-63, Cl. 340—198.

Potts, Edward E.: *See*—
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Potts, James H., Jr., and J. L. Baldwin, Jr., to United States of America, Navy. Parachute pack opener. 3,092,358, 6-4-63, Cl. 244—147.

Powell, Leo S., to Carter Products, Inc. Method of manufacturing N-substituted 2,2-disubstituted-1,3-propanediol dicarbamate. 3,092,656, 6-4-63, Cl. 260—482.

Powers, Chester H., to Otis Elevator Co. Industrial lift truck. 3,092,208, 6-4-63, Cl. 214—75.

Powers, Dwight W. Combustion control with combustion air and draft diversion air control system. 3,092,320, 6-4-63, Cl. 236—9.

Powers, Walter H., to Walker Mfg. Co. Silencer. 3,092,-204, 6-4-63, Cl. 181—36.

Powers, William J., Jr.: *See*—
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Preformed Line Products Co.: *See*—
Bonds, Albert. 3,091,988.

Preiss, Werner, and G. Fromandi, to Farbenfabriken Bayer Aktiengesellschaft. Tray for mixing mills. 3,092,238, 6-4-63, Cl. 198—107.

Prentice, Russell E., to Hycon Mfg. Co. Shutter drive mechanism. 3,091,973, 6-4-63, Cl. 74—2.

Prescott, Thomas W., and F. H. Scrimshaw, to Minister of Aviation in Her Majesty's Government of the United Kingdom of Great Britain and Northern Ireland. Automatic blind landing systems for aircraft. 3,092,357, 6-4-63, Cl. 244—77.

Preston, Evalyn: *See*—
Fish, Richard H. 3,092,327.

Price, Hollas K. Rocket-propelled vehicle with propulsion assistant. 3,092,027, 6-4-63, Cl. 102—49.

Prichard, John H.: *See*—
Brown, Frank, and Prichard. 3,091,935.

Profos, Paul, to Societe Anonyme Sulzer Freres. Feed-water control for forced-circulation boilers. 3,092,086, 6-4-63, Cl. 122—451.1.

Prosser, Dwight M., to Shiloh Tool & Die Mfg. Co. Window structure. 3,091,797, 6-4-63, Cl. 16—197.

Prumore Sales, Inc.: *See*—
Morse, Stanley H. 3,091,945.

Pullman Inc.: *See*—
Black, James J. 3,092,220.

Pure Oil Co., The: *See*—
Klaas, Donald L. 3,092,672.

Puretic, Mario J. Brailer apparatus for use with a fishing boat. 3,091,879, 6-4-63, Cl. 43—6.5.

Puretic, Mario J. Means for recovering fish from a net and transferring same onto a boat. 3,091,880, 6-4-63, Cl. 43—8.

Putzer, Walter, to North American Philips Co., Inc. Television receiver with ancillary apparatus for receiving further television transmissions in initially not present frequency bands. 3,092,775, 6-4-63, Cl. 325—461.

Quigley Co., Inc.: *See*—
Demaison, Raymond J. 3,092,505.

Radio Corp. of America: *See*—
Andrews, Dallas R. 3,092,296.
Chang, Kern K. N. 3,092,782.
Clayton, Richard W., and Jackson. 3,092,845.
Clock, Donald P., and Lucchi. 3,092,830.
Cole, Donald A. 3,091,876.
Germen, Ustun. 3,092,254.
Theriault, Gerald E. 3,092,734.
Walczak, Sylvester. 3,092,694.

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Hahn, Harold G., Visger, and Raich. 3,092,598.

Ramsel, Charles A.: *See*—
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Rand, William M., Jr., R. E. Rice, R. G. Shaver, and W. B. Whitney, to Comstock & Westcott, Inc. Carbon dioxide analyser cartridge assembly. 3,092,466, 6-4-63, Cl. 23—255.

Randrup, Ben F., Buckle. 3,091,827, 6-4-63, Cl. 24—68.

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Mantell, Gerald J., Galiano, and Rankin. 3,092,640.

Ransom, Robert B. Line pickup mechanism for a spinning reel. 3,092,352, 6-4-63, Cl. 242—84.21.

Rauch, Paul E., ¼ to J. M. Mohan. Conduit block making machine. 3,091,831, 6-4-63, Cl. 25—84.

Rauland Corp., The: *See*—
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Pohl, Robert G. 3,092,521.

Rawls Brothers Co., The: *See*—
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Rawls, Vaughn, to The Rawls Brothers Co. Multiple pneumatic tire retreading station. 3,091,802, 6-4-63, Cl. 15—2.

Ray Oil Burner Co.: *See*—
Plass, Raymond B. 3,092,146.

Raybestos-Manhattan, Inc.: *See*—
Batchelor, Clyde S., and Jensen. 3,092,214.

Rayback, William B., to Fred'K H. Levey Co., Inc. Register control mechanism for a web-fed printing press. 3,092,022, 6-4-63, Cl. 101—248.

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Fryklund, Robert A. 3,092,432.
Haus, Hermann A., and Mullen. 3,092,750.
Leake, Bernard W., and MacDonald. 3,092,790.

Reach, Roy W., Jr., to Minneapolis-Honeywell Regulator Co. Check number generator. 3,092,807, 6-4-63, Cl. 340—146.1.

Record, Frank A.: *See*—
Hubbell, Richard L., and Record. 3,092,791.

Rector, Joseph. Combined telephone amplifier and radio receiver. 3,092,688, 6-4-63, Cl. 179—1.

Reed, Frank G. Palletised vehicle deck. 3,092,044, 6-4-63, Cl. 105—369.

Reed, Stanley F., to American Scientific Corp. Media of exchange. 3,092,402, 6-4-63, Cl. 283—57.

Rees, Willis M.: *See*—
Slayter, Games, Rees, and Feld. 3,092,208.

Reese, James H., and P. J. Serlemitsos, to Hamilton Watch Co. Balance wheel for an electric watch. 3,091,914, 6-4-63, Cl. 58—28.

Reese, Lawrence C., Sr.: *See*—
Edwards, Robert N., and Reese. 3,092,234.

Refractory Products Co.: *See*—
Woodruff, Richard K. 3,092,247.

Regal Plastic Co.: *See*—
Kivett, Jerome S. 3,092,225.

Regie Nationale des Usines Renault: *See*—
Péras, Lucien. 3,091,981.
Péras, Lucien. 3,092,712.

Reich, Murray H., G. Nowlin, and C. A. Heiberger, to FMC Corp. Curing epoxidized polybutadiene with a dicarboxylic anhydride aromatic vinylidene monomer, and free radical polymerization initiator. 3,092,606, 6-4-63, Cl. 260—45.5

Reid, Donald V. Flying submarine. 3,092,040, 6-4-63, Cl. 114—16.

Reiners, Walter: *See*—
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Reinhall, Rolf B., to Defibrator Aktiebolag. Pulp refining apparatus. 3,092,338, 6-4-63, Cl. 241—84.

Reinhardt, Fritz, and A. Gräfingholt, to Hesser, Fr., Maschinenfabrik-Aktiengesellschaft, Firma. Method and device for fabricating bag packages. 3,091,902, 6-4-63, Cl. 53—28.

Reiter, Thomas A., to Esso Research and Engineering Co. Nuclear reactor loop for particulate radiation outside core. 3,092,560, 6-4-63, Cl. 204—154.

Rentschler, John W. Anti-theft means for fuel delivery truck. 3,092,286, 6-4-63, Cl. 272—30.

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Research Products Corp.: *See*—
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Rex, Raymond H., and E. L. Adams, to Owens-Illinois Glass Co. Injection molding method. 3,092,440, 6-4-63, Cl. 18—55.

Rhodes, Stanley J. Hydraulic pump mechanism. 3,092,037, 6-4-63, Cl. 103—174.

Ribinsky, Dmitrij: *See*—
Goossak, Lev A., Evart, and Ribinsky. 3,092,088.

Ricardo & Co., Engineers (1927) Ltd.: *See*—
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Kerr, Robert A., Richardson, and Springford. 3,091,806.

Richter, Sidney B., to Velsicol Chemical Corp. (O,O-dimethylphosphorodithio) allyl phthalate pesticidal compositions. 3,092,543, 6-4-63, Cl. 167—30.

Ricketts, James B. Jr., to General Motors Corp. Switching circuit for a ladder type digital to analog converter utilising an alternating reference voltage. 3,092,735, 6-4-63, Cl. 307—88.5.

Ridenour, Stewart J., and A. Pickinpaugh, to Cook Chemical Co. Hand pump for spraying liquids. 3,092,330, 6-4-63, Cl. 239—333.

Rightmire, Robert A., to The Standard Oil Co. Electrochemical reaction apparatus. 3,092,516, 6-4-63, Cl. 136—86.

Rines, Robert H.: *See*—
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Nevo-Hacohen, Jacob I. 3,092,486.

Rinker, Edwin C.: *See*—
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Ripling, Edward J., to Continental Can Co., Inc. Preparation of sheet stock having longitudinal external weakenings therein and product thereof. 3,092,470, 6-4-63, Cl. 29—187.

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Robb, Walter Y., to Crompton & Knowles Corp. Pile wires for looms. 3,092,149, 6-4-63, Cl. 139—46.

Roberts, Paul L. Rotary shower brush. 3,091,776, 6-4-63, Cl. 4—158.

Roberts, Perry M.: *See*—
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Robertshaw-Fulton Controls Co.: *See*—
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Robeson, Charles D., to Eastman Kodak Co. Sterol and piperazine complexes and process for the preparation thereof. 3,092,624, 6-4-63, Cl. 260—239.5.

Robins, Milton, to M. F. Steward. Method and apparatus for pressure testing aerosol containers. 3,091,958, 6-4-63, Cl. 73—45.2.

Robinson, Ralph O., Jr., to United States of America, Navy. Oscillator. 3,092,028, 6-4-63, Cl. 102—70.2.

Rochester Mfg. Co., Inc.: *See*—
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Röck, Heinrich, to Süddeutsche Kalkstickstoff-Werke A.G. Process for decreasing the oxide content of commercial calcium carbide. 3,092,460, 6-4-63, Cl. 23—208.

Rockwell, Edward A. Hydraulic system. 3,091,931, 6-4-63, Cl. 60—54.5.

Roden, William F.: *See*—
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Rodgers, Otis N., W. F. Olson, and W. R. Wheeler, Jr., to American Iron & Machine Works Co., Inc. Valve with means for controlling and indicating wear. 3,092,139, 6-4-63, Cl. 137—533.29.

Rogers, Jack: *See*—
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Rohr Corp.: *See*—
Herman, Hartley R., and Alsobrook. 3,091,845.

Rohweder, Gerald D.: *See*—
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Rolley, Emunds A., to Automatic Electric Laboratories, Inc. High speed data transmission system. 3,092,690, 6-4-63, Cl. 179—2.

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Brown, David M., Keen, and Urmston. 3,092,205.
May, Gordon C., and Morley. 3,091,925.
Morley, Frederick W. W., and Wilkinson. 3,092,393.

Romanchuk, Steve, and C. E. Mills, to Shemitt Gordon Mines Ltd. Powder metal sampling device. 3,091,969, 6-4-63, Cl. 73—425.2.

Romans, Isabella B., 15% to A. C. Nolte. Oligodynamic silver compositions and uses. 3,092,552, 6-4-63, Cl. 167—72.

Ronnerström, Sven-Erik. Brake for airplane-arresting devices. 3,092,210, 6-4-63, Cl. 188—1.

Root, Frank B., to United States of America, Agriculture. Compatible tung oil-unsaturated alkyd resin compositions and method for producing the same. 3,092,596, 6-4-63, Cl. 260—22.

Ropes, George F.: *See*—
Stromeyer, Charles F. 3,092,471.

Rose, Julian K.: *See*—
Leech, Robert E., and Rose. 3,092,597.

Roseman, Leo. Combined garment and covered stay, and method of making the latter. 3,092,113, 6-4-63, Cl. 128—567.

Rosemount Engineering Co.: *See*—
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Rosen, Milton J., and I. A. Kaye. Water-soluble non-ionic surface-active agents of mono and polysaccharides. 3,092,-618, 6-4-63, Cl. 260—209.

Rosenblatt, David H., and G. H. Broome. Preparation of dichloroacetamide from malonitrile. 3,092,661, 6-4-63, Cl. 260—561.

Rosenfeld, Aaron, and K. Kupferberg, to Forbro Design Inc. Circuit means for preventing spike or surges at the output of a power supply. 3,092,757, 6-4-63, Cl. 317—16.

Ross Operating Valve Co.: *See*—
Brinkel, Edwin P. 3,092,145.

Rossing, Thomas D., A. V. Pohm, and S. M. Rubens, to Sperry Rand Corp. Non-destructive sensing of thin film magnetic cores. 3,092,812, 6-4-63, Cl. 340—174.

Rotax Ltd.: *See*—
Guy, Kenneth T., and Chandler. 3,092,132.

Roters, Herbert C., W. A. Kropp, and G. W. Harasym, to General Time Corp. Rotary solenoid. 3,092,762, 6-4-63, Cl. 317—197.

Rountree, Fred H., to Moran Shoe Co. Counter display rack. 3,092,257, 6-4-63, Cl. 211—49.

Rousaan, Wilford J., Jr., and M. Osterman, to Industrial Engineering & Equipment Co. Bushing construction in air heating device. 3,092,705, 6-4-63, Cl. 219—19.

Roussel-UCLAF, S.A.: *See*—
Girard, André G. 3,092,549.

Rowell, William G. Method of and apparatus for temperature-stabilizing semi-conductor relays and the like. 3,092,-730, 6-4-63, Cl. 307—88.5.

Rubens, Sidney M.: *See*—
Rossing, Thomas D., Pohm, and Rubens. 3,092,812.

Rubin, James M. and R. W. Orthodontic device. 3,091,-857, 6-4-63, Cl. 32—14.

Rubin, Ronald W.: *See*—
Rubin, James M. and R. W. 3,091,857.

Rubinstein, Joseph, to General Slicing Machine Co., Inc. Swivelled cranks. 3,091,978, 6-4-63, Cl. 74—547.

Rubinstein, Joseph, to General Slicing Machine Co., Inc. Scrapers for slicing machines. 3,092,161, 6-4-63, Cl. 146—102.

Ruh, Robert P., R. A. Davis, and K. A. Allswede, to The Dow Chemical Co. Process for the production of sulfuryl fluoride. 3,092,458, 6-4-63, Cl. 23—203.

Ruhnke, Edward J., to Hill-Shaw Co. Brewing apparatus for coffee maker. 3,092,012, 6-4-63, Cl. 99—307.

Ruppert, Heinrich, H. Schnell, and L. Goerden, to Farbenfabriken Bayer Aktiengesellschaft. Flame-resistant unsaturated polyester-vinylidene monomer reaction product containing the dimethyl ester of 2-hydroxyisopropyl-phosphonic acid. 3,092,606, 6-4-63, Cl. 260—45.4.

Rusche, Georg, and G. Grunwaldt, to North American Philips Co., Inc. Circuit arrangement for use in phase-sensitive control amplifiers. 3,092,777, 6-4-63, Cl. 328—13.

Rush, Elton E., to Phillips Petroleum Co. Method and apparatus for crystal purification. 3,092,673, 6-4-63, Cl. 260—674.

Russell, George F. Impregnation by implosion. 3,092,536, 6-4-63, Cl. 162—50.

Ryan, Robert E., Jr., to United States of America, Army. Thread pitch gage. 3,091,867, 6-4-63, Cl. 33—199.

SKF Kugellagerfabriken Gesellschaft mit beschrankter Haftung: *See*—
Huber, Richard, and Kübler. 3,091,814.

Sadler, Harry J., and E. E. Cook, to Hypro Engineering, Inc. Expanded piston cup assembly. 3,092,427, 6–4–63, Cl. 308—51.

Safe Flight Instrument Corp.: *See*—
Greene, Leonard M. 3,092,353.

St. Regis Paper Co.: *See*—
Browning, Randolph M. 3,092,513.
Smith, Maurice D. 3,092,502.
Titchenal, Oliver R. 3,092,233.

Salomon, Salomon M.: *See*—
Cannon, Madison M., Dick, and Salomon. 3,092,578.

Salyer, Ival O.: *See*—
Herbig, James A., and Salyer. 3,092,607.

Salsberg, Paul L., to E. I. du Pont de Nemours and Co. Herbicidal method. 3,092,484, 6–4–63, Cl. 71—2.56.

Sampson, Howard J.: *See*—
Van Utt, Damon, and Sampson. 3,092,743.

Sanders Associates, Inc.: *See*—
Mercer, William R. 3,092,831.

Sandstrom, Stanley B., to Edstan. Automatic registrar. 3,092,689, 6–4–63, Cl. 179—2.

Sangster, Harold L. Magnetic-cohesion models of scientific and mathematical structures. 3,091,870, 6–4–63, Cl. 35—30.

Saperstein, Rose B., and W. K. Stiefel. Therapeutic method for the abrasion of the human skin. 3,092,111, 6–4–63, Cl. 128—355.

Sarafinas, Bruno A., to United-Carr Fastener Corp. Mounting foot member. 3,092,364, 6–4–63, Cl. 248—350.

Sarett, Lewis H.: *See*—
Oberster, Arthur E., Beyler, and Sarett. 3,092,628.

Sather, Olaf P., to Duluth Filter Co. Pressure liquid filtering device. 3,092,577, 6–4–63, Cl. 210—232.

Savage, August N., and J. Piston. Internal combustion engine. 3,092,092, 6–4–63, Cl. 123—197.

Savioli, Giulio V., to United States of America, Army. Auxiliary firearm trigger with integral safety. 3,091,878, 6–4–63, Cl. 42—69.

Savitsky, Daniel. Mechanical control for submerged hydrofoil systems. 3,092,062, 6–4–63, Cl. 114—66.5.

Sawicki, John G.: *See*—
Lane, George W., and Sawicki. 3,092,248.

Saxenmeyer, George J., to International Business Machines Corp. Data input device. 3,092,811, 6–4–63, Cl. 340—172.5.

Schaafsma, Willem, to United Aircraft Corp. Propellant mixing. 3,092,527, 6–4–63, Cl. 149—19.

Schaar, Charles H., to The Kendall Co. Baby nipple. 3,092,276, 6–4–63, Cl. 215—11.

Schaefer, Hans F., Jr., and F. B. Jennings, to United Shoe Machinery Corp. Power transmission. 3,091,979, 6–4–63, Cl. 74—640.

Schaefer, Werner: *See*—
Stis, Oskar, and Schaefer. 3,092,494.

Schenck, Carl, Maschinenfabrik G.m.b.H.: *See*—
Von Petery, Achim. 3,092,195.

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Siedel, Walter, Söder, and Scheurich. 3,092,635.

Schick, Günther, to H. Sickinger. Device for piling up sheets, booklets or the like. 3,092,381, 6–4–63, Cl. 271—87.

Schiffman, Julius, to The Bendix Corp. Closure signal system. 3,092,832, 6–4–63, Cl. 343—8.

Schilling, Edward A., to Syncro Corp. Generator and regulator. 3,092,767, 6–4–63, Cl. 322—90.

Schlapp, Werner, to Ernst Leitz Gesellschaft mit beschrankter Haftung. Adjustable objective camera. 3,092,001, 6–4–63, Cl. 95—45.

Schlegel, John C.: *See*—
Lundberg, Lennart A., Schlegel, and Carpenter. 3,091,936.

Schlegel Mfg. Co., The: *See*—
Cook, Herbert A., Jr. 3,091,821.

Schliephacke, Fridtjof F., to A. Lorenz. Underslung leg-rest control means for reclining chairs. 3,092,415, 6–4–63, Cl. 297—89.

Schlumberger Well Surveying Corp.: *See*—
Blagg, Leon. 3,092,152.

Schmidt, Karl, and H. Flaig, to J. M. Voith Maschinenfabrik G.m.b.H. Stock inlet for paper making machines and the like. 3,092,539, 6–4–63, Cl. 162—259.

Schmidt, Lothar M., to General Precision, Inc. High speed tape memory system. 3,092,810, 6–4–63, Cl. 340—172.5.

Schnabel, Harry, Jr. Method and structure for underpinning. 3,091,938, 6–4–63, Cl. 61—51.

Schnell, Hermann: *See*—
Ruppert, Heinrich, Schnell, and Goerden. 3,092,606.

Scholle Chemical Corp.: *See*—
Scholle, William R. 3,092,298.

Scholle, William R., to Scholle Chemical Corp. Container. 3,092,298, 6–4–63, Cl. 229—39.

Schrader, Gerhard, to Farbenfabriken Bayer Aktiengesellschaft. Thiophosphoric acid esters and process for their production. 3,092,649, 6–4–63, Cl. 260—461.

Schramm, Arthur G. Self-loading and dumping trailer. 3,092,273, 6–4–63, Cl. 214—504.

Schramm, Elmer H.: *See*—
Fiekers, Edmund J., Klose, and Schramm. 3,091,822.

Schreyer, Ralph C., to E. I. du Pont de Nemours and Co. Preparation of dicarboxylic acid nitriles. 3,092,654, 6–4–63, Cl. 260—465.8.

Schroeder, Lester A. Snow and ice removal tool. 3,091,790, 6–4–63, Cl. 15—105.

Schroeter, Louis C., and G. A. Boyack, to The Upjohn Co. Antifungal cycloheximide starch inclusion compositions. 3,092,546, 6–4–63, Cl. 167—42.

Schuhmann, Hans: *See*—
Wille, Hans, Schuhmann, and Jellinek. 3,092,602.

Schultes, A. C., & Sons, Inc.: *See*—
Schultes, James F. 3,092,189.

Schultes, James F., to A. C. Schultes & Sons, Inc. Core device. 3,092,189, 6–4–63, Cl. 175—77.

Schultz, Herman S.: *See*—
Glickman, Samuel A., and Schultz. 3,092,630.

Schur, Ernest M.: *See*—
Selle, Bernard G. 3,092,301.

Schwarz, Adolf, to General Motors Corp. By-pass valve thermostat. 3,092,322, 6–4–63, Cl. 236—34.5.

Schwarz, Josef: *See*—
Kuhnle, Ernst, and Schwarz. 3,092,199.

Schwarzer, Carl G., to Shell Oil Co. Polyepoxy ethers of polyhydric phenols and cured products obtained therefrom. 3,092,610, 6–4–63, Cl. 260—47.

Sciafani, Joseph M., to Aerotec Industries, Inc. Apparatus for flotation of articles on water. 3,091,782, 6–4–63, Cl. 9—316.

Scott, John N., Jr., D. L. Alexander, and D. L. Peters, to Phillips Petroleum Co. Blow molding apparatus. 3,091,808, 6–4–63, Cl. 18—5.

Scott, John W., Jr.: *See*—
Koslowski, Robert H., Mason, and Scott. 3,092,567.

Scott, Leslie E., to General Motors Corp. Selective antenna tuning system for a transistor portable automobile radio receiver. 3,092,773, 6–4–63, Cl. 325—370.

Scovill Mfg. Co.: *See*—
Andrews, Hugh H. 3,091,773.
Kachergis, Henry J. 3,091,866.

Scrimshaw, Frank H.: *See*—
Prescott, Thomas W., and Scrimshaw. 3,092,357.

Scripto, Inc.: *See*—
Lovejoy, Charles K. 3,092,080.

Seaboard Allied Milling Corp.: *See*—
Boyd, Halbert H. 3,092,007.

Searle, G. D., & Co.: *See*—
Nicholson, Robert T. 3,092,645.

Seddon, Richard I.: *See*—
Dinsmore, Joseph A., and Seddon. 3,092,844.

Seem, Warren A.: *See*—
Stoddard, Nicholas J., and Seem. 3,091,912.

Segerberg, Åke T. G., to Aktiebolaget Bofors. Gun turret. 3,091,994, 6–4–63, Cl. 89—36.

Seidl, Karl, Armaturen- und Metallwarenerzeugung: *See*—
Twaroch, Johannes. 3,092,329.

Seismograph Service Corp.: *See*—
Bright, Hugh H. 3,092,319.
Wilcox, Stanley W., Crossland, and McCaskill. 3,092,811.

Selby, Robert M. Folding boom. 3,092,367, 6–4–63, Cl. 254—139.1.

Selle, Bernard G., ½ (50%) to T. I. Sheridan, Jr., F. M. Donahue, W. F. Roden, and E. M. Schur. Carton. 3,092,301, 6–4–63, Cl. 229—51.

Sel-Rex Corp.: *See*—
Foulke, Donald G., and Rinker. 3,092,559.

Senger, Raymond J., to Develop-Amatic Engineering. Component checker. 3,092,258, 6–4–63, Cl. 209—81.

Separator, Aktiebolaget: *See*—
Dahlgren, Sven A. B. 3,092,180.
Zachariasson, Stig H. B. 3,092,584.

Serlemitsos, Peter J.: *See*—
Reese, James H., and Serlemitsos. 3,091,914.

Seto, Thomas A., to Chas. Pfizer & Co., Inc. Derivatives of penicillianic acid. 3,092,620, 6–4–63, Cl. 260—239.1.

Sewell, Edgar F.: *See*—
Smith, Frank W., Gilbert, and Sewell. 3,092,595.

Shadan, Anna M., to Continental Oil Co. Wax compositions. 3,092,506, 6–4–63, Cl. 106—270.

Shaffer, Keith G.: *See*—
Bell, Harry G., Gay, and Shaffer. 3,091,769.

Shape, Robert C.: *See*—
Hufford, Harold H. 3,091,883.

Shapona, George, and H. J. Brown, to Sharon Steel Corp. Basic open hearth roof construction. 3,092,051, 6–4–63, Cl. 110—99.

Sharon Steel Corp.: *See*—
Shapona, George, and Brown. 3,092,051.

Sharples Corp., The: *See*—
Payne, Robert E., Cohen, and Gibson. 3,092,723.

Shaver, Robert G.: *See*—
Rand, William M., Jr., Rice, Shaver, and Whitney. 3,092,466.

Shears, Stuart T., to United-Carr Fastener Corp. Combination brush and wiper. 3,091,788, 6–4–63, Cl. 15—4.

Sheets, Charles E., to FMC Corp. Adjustable spring-balanced scale. 3,092,196, 6–4–63, Cl. 177—170.

Shell Oil Co.: *See*—
Schwarzer, Carl G. 3,092,610.
Zwahlen, Kenneth D. 3,092,632.

Shemitt Gordon Mines Ltd.: *See*—
Romanchuk, Steve, and Mills. 3,091,969.

Shepherd, Thomas L., to Air Reduction Co., Inc. Space heating method and apparatus. 3,092,166, 6–4–63, Cl. 158—11.

Sheppard, Richard H. Piston for power steering system. 3,092,083, 6–4–63, Cl. 121—41.

Sheridan, Thomas I., Jr.: *See*—
Selle, Bernard G. 3,092,301.

Sherman, Wilbur E.: *See*—
Tama, Manuel, and Sherman. 3,092,082.

Shiloh Tool & Die Mfg. Co.: *See*—
Prosser, Dwight M. 3,091,797.

Shoemaker, Leslie E. Emergency long range communication system. 3,092,770, 6–4–63, Cl. 325—4.

Shoemaker, Milton J., to Research Products Corp. Treatment of air with odor reduction. 3,092,442, 6–4–63, Cl. 21—53.

Shook, John D. Magic clown toy bank. 3,091,887, 6–4–63, Cl. 46—4.

Short, Oliver G., and H. S. Bieniecki, to General Steel Industries, Inc. Railway car truck. 3,092,042, 6–4–63, Cl. 105—197.

Shular, David M. Means for and method of sewing button loops on garments. 3,091,774, 6–4–63, Cl. 2—266.

Shutt, Milo, to Union Industrial Co., Division of the Alliance Machine Co. Parking structures. 3,092,267, 6–4–63, Cl. 214—16.5.

Sickinger, Hans: *See*—
Schick, Günther. 3,092,381.

Siebel, George, to Olympic Screw & Rivet Corp. Method of setting lock bolts. 3,091,982, 6–4–63, Cl. 78—46.

Siedel, Walter, A. Söder, and W. Scheurich, to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning. Process for the preparation of crystallized compounds of pyrrolidine-methyl-tetracycline. 3,092,635, 6–4–63, Cl. 260—326.3.

Siemens and Halske Aktiengesellschaft: *See*—
Sommer, Friedrich. 3,092,759.
Veith, Werner, and Meyerer. 3,092,745.

Sikorski, Frank J., to JB Electronic Transformers, Inc. Miniature relay. 3,092,701, 6–4–63, Cl. 200—87.

Silverstolpe, Karl O. L. Method and means for producing aseptically packaged sterile plastic articles. 3,091,901, 6–4–63, Cl. 53—22.

Simjian, Luther G., to Universal Match Corp. Depository machine combined with image recording means. 3,092,433, 6–4–63, Cl. 346—22.

Simm, Walter: *See*—
Muller, Rudolf, Simm, and Linsert. 3,092,196.

Simpson, James W., Jr., and R. S. Arnold, to General Electric Co. Indicator. 3,092,071, 6–4–63, Cl. 116—129.

Sinclair Research, Inc.: *See*—
Cole, Eldon B., and Niles. 3,092,475.

Sink, William H., to Dana Corp. Clutch plate. 3,091,949, 6–4–63, Cl. 64—27.

Siomko, George, to Philco Corp. Improved sweep integrator system. 3,092,778, 6–4–63, Cl. 328—165.

Sisler, Robert R., to General Electric Co. Clutch control arrangement. 3,092,230, 6–4–63, Cl. 192—105.

Slamar, Frank, and A. Teplitz, to United States Steel Corp. Transfer mechanism. 3,092,270, 6–4–63, Cl. 214—89.

Slayter, Games, W. M. Ross, and J. T. Feld, to Owens-Corning Fiberglas Corp. Sound absorbing fibrous board with plastic film covering. 3,092,203, 6–4–63, Cl. 181—33.

Slyngstad, Charles E., and C. P. Eschenbrenner, to The M. W. Kellogg Co. Apparatus for handling powdered material. 3,092,468, 6–4–63, Cl. 23—284.

Small, Augustus B., to Esso Research and Engineering Co. Isoolefin-multiolefin copolymer oils. 3,092,575, 6–4–63, Cl. 260—683.15.

Smeby, Robert R.: *See*—
Adams, Ernest C., Jr., and Smeby. 3,092,465.

Smith, A. O., Corp.: *See*—
Carstens, Fred A. 3,092,148.
Henry, Scott L. 3,091,846.
Kenney, Robert W. 3,092,140.
Lauck, Francis W. 3,092,179.
Limpel, Eugene J. 3,092,716.
Phlaum, Edward G. 3,092,168.
Steen, William E. 3,092,129.

Smith, Aubrey H., to Eaton Mfg. Co. Synchronised control system. 3,092,756, 6–4–63, Cl. 317—6.

Smith, Audrey K. Portable car port. 3,092,126, 6–4–63, Cl. 135—5.

Smith, Benjamin G., to The Chemical and Industrial Corp. Process for production of fertilizer pellets and the like. 3,092,489, 6–4–63, Cl. 71—64.

Smith, Frank W., R. H. Gilbert, and E. F. Sewell, to American Brake Shoe Co. Method of forming bodies of friction material. 3,092,595, 6–4–63, Cl. 260—3.

Smith, Howard, Paper Mills, Ltd.: *See*—
Tomlinson, George H., II. 3,092,535.

Smith, Joseph W. Game disc. 3,092,389, 6–4–63, Cl. 273—128.

Smith, Maurice D., to St. Regis Paper Co. Bread package and wrapper. 3,092,502, 6–4–63, Cl. 99—172.

Smith, Paul E., Jr., and H. A. Dudler, to Conval Corp. Motor positioning device. 3,092,742, 6–4–63, Cl. 310—68.

Smith, Roy E.: *See*—
Beaudry, Walter A., Pollitt, and Smith. 3,092,268.
Beaudry, Walter A., Pollitt, and Smith. 3,092,271.

Smith, Thomas R., ½ to W. Jamieson. Loose-leaf binder. 3,092,400, 6–4–63, Cl. 281—19.

Smith, Tom R., to American Air Filter Co., Inc. Tube type dust collector arrangement. 3,092,478, 6–4–63, Cl. 55—262.

Smithson, Harry B. Machine for uncapping honeycombs in supers. 3,091,780, 6–4–63, Cl. 6—12.

Smoak, David R.: *See*—
Humphrey, Sidney B., and Smoak. 3,092,671.

Smoker, Isaac Z., and A. P. Reller, to Sperry Rand Corp. Feeder for stock animals. 3,092,077, 6–4–63, Cl. 119—52.

Smura, Edwin J., to International Business Machines Corp. Cathode ray tube for processing digital data. 3,092,746, 6–4–63, Cl. 313—95.

Smyth, Rex W.: *See*—
Gwynn, Bernard H., and Smyth. 3,092,670.

Societe d'Etudes Scientifiques et Industrielles de l'Ile-de-France: *See*—
Ancel, Gilbert. 3,092,551.

Societe d'Exploitation des Etablissements Baudou, Societe a responsabilite limitee dite: *See*—
Tronche, Roger. 3,091,871.

Societes Arlen, La Bourse B.G. & S.F.E.D.R. reunies: *See*—
Nebout, Noel, and Missioux. 3,092,016.

Socony Mobil Oil Co., Inc.: *See*—
Francis, Alfred W. 3,092,570.
Francis, Alfred W. 3,092,571.
Kooijmans, Gerard D. 3,092,805.

Soddy, Thomas C., to American Seal-Kap Corp. of Delaware. Door latching arrangements. 3,091,820, 6–4–63, Cl. 20—23.

Söder, Alfons: *See*—
Siedel, Walter, Söder, and Scheurich. 3,092,635.

Soltis, Mary. Clamp. 3,091,828, 6–4–63, Cl. 24—87.

Sommer, August: *See*—
Ester, Wilhelm, and Sommer. 3,092,557.
Ester, Wilhelm, and Sommer. 3,092,587.

Sommer, Friedrich, to Siemens and Halske Aktiengesellschaft. Wired circuit plate with electrical components. 3,092,759, 6–4–63, Cl. 317—101.

Song, John, and E. Cohen, to American Cyanamid Co. 7-chloro-2-lower alkyl-1,2,3,4-tetrahydro-4-oxoquinasolines. 3,092,631, 6–4–63, Cl. 260—251.

Speidel, Louis, Jr., and E. J. Gow, Jr., to United States of America, Army. Aggressive dual pin track. 3,092,423, 6–4–63, Cl. 305—11.

Spence, Paulsen, deceased, L. B. Dexter and O. C. Paulsen, co-executors. Desuperheater. 3,092,677, 6–4–63, Cl. 261—16.

Spencer Chemical Co.: *See*—
Mantell, Gerald J., Galiano, and Rankin. 3,092,640.

Spens, Gordon: *See*—
Lambert, Jordan W., Spens, and Wilson. 3,092,573.

Sperry, Charles R.: *See*—
Gordon, William J. J., Marden, and Sperry. 3,092,045.

Sperry Rand Corp.: *See*—
Adams, George R., and Cleary. 3,092,726.
Cohn, Seymour B. 3,092,771.
Edelman, Frank H. 3,092,510.
Edelman, Frank H. 3,092,511.
Phillips, Alan H. 3,092,833.
Rossing, Thomas D., Pohm, and Rubens. 3,092,812.
Smoker, Isaac Z., and Beller. 3,092,077.

Spiess, C. F., & Sohn: *See*—
Perkow, Werner. 3,092,483.

Spiller, Charles A., Jr.: *See*—
Baldwin, Richard H., Spiller, and Kalfadelis. 3,092,658.

Spooner, Richard C.: *See*—
Hottenroth, Fred W., and Spooner. 3,092,095.

Sprague, James W., to The Standard Oil Co, Method for preparing high surface area titania. 3,092,457, 6–4–63, Cl. 23—202.

Springfield Tool and Die Co., Inc.: *See*—
Stark, Ludwig. 3,092,141.

Springford, William R. H.: *See*—
Kerr, Robert A., Richardson, and Springford. 3,091,806.

Square D Co.: *See*—
Manners, Frank A., and De Viney. 3,092,760.

Stamm, Walter A.: *See*—
Nass, Leonard L., and Stamm. 3,092,593.

Standard Oil Co. (Indiana): *See*—
Baldwin, Richard H., Spiller, and Kalfadelis. 3,092,658.
Ebner, Herman G. 3,092,474.

Standard Oil Co. (Ohio), The: *See*—
Jones, Arthur L., Strecker, and Firestone. 3,092,588.
Rightmire, Robert A. 3,092,516.
Sprague, James W. 3,092,457.

Stanley, Lester N., to General Aniline & Film Corp. 2-hydroxy-2,4,5-trimethylbenzophenone. 3,092,663, 6–4–63, Cl. 260—591.

Sta-Rite Products, Inc.: *See*—
Johnson, Erwin R. 3,092,074.

Stark, Ludwig, to Springfield Tool and Die Co., Inc. Airflow control unit for aquariums. 3,092,141, 6–4–63, Cl. 137—608.

Statham Instruments, Inc.: *See*—
Stedman, Cecil K. 3,091,971.

Stauffer Chemical Co.: *See*—
Williamson, Thomas B. 3,092,545.

Stedman, Cecil K., to Statham Instruments, Inc. Damped vibrational systems. 3,091,971, 6–4–63, Cl. 73—515.

Steel Co. of Canada, Ltd., The: *See*—
Swick, Michael V., Ward, and Douglas. 3,092,532.
Ward, Frederick W. A. 3,092,534.

Steele, Carroll M.: *See*—
Merritt, Philip E., and Steele. 3,092,809.

Steele, Henry J., to Joseph Lucas (Industries) Ltd. Fabricating devices for fibres or filaments. 3,091,910, 6–4–63, Cl. 57—77.33.

Steen, William E., to A. O. Smith Corp. Liquid blending control. 3,092,129, 6–4–63, Cl. 137—100.

Stegen, Robert J.: *See*—
McCann, Joe G., Stegen, and Fahstrom. 3,092,834.

Steidinger, Donald J., to Uarco, Inc. Multi-ply fully-fastened continuous-form stationery. 3,092,401, 6–4–63, Cl. 282—11.5.

Steiger, Werner, to Hughes Aircraft Co. Magnetic deflection apparatus for cathode ray type tube. 3,092,753, 6–4–63, Cl. 315—27.

Steiner, Lajos. Automatic locking handle mechanisms for tools and the like. 3,091,984, 6–4–63, Cl. 81—329.

Steinert, Herbert: *See*—
Birmans, Josef, and Steinert. 3,092,150.

Sterling Drug Inc.: *See*—
Clinton, Raymond O. 3,092,644.

Sterling, George B., and R. L. Zimmerman, to The Dow Chemical Co. Copolymer of a monovinyl ether of a glycol and N-vinyl-2-oxazolidinone and rubber made by vulcanising same. 3,092,605, 6–4–63, Cl. 260—41.

Stern, David R., L. Lynds, and R. M. Washburn, to American Potash & Chemical Corp. Preparation of aryldihaloboranes and poly(dihaloborano) benzenes. 3,092,052, 6–4–63, Cl. 260—462.

Stevens, J. P., & Co., Inc.: *See*—
Taylor, Winfred P., and Tillman. 3,091,909.

Stevens, Stanford S. Means for preparing urinary drainage collection bottle. 3,092,270, 6–4–63, Cl. 215—36.

Steward, Jerry H.: *See*—
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Van der Winden, Johannes B. 3,092,373.
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Kammerer, Edwin G. 3,091,903.
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Vornberger, Walter A., to J. S. Kamborian. Apparatus for lasting pointed toe shoes. 3,091,784, 6-4-63, Cl. 12—12.4.

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ISSUED JUNE 4, 1968

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Classification of Designs

D 4— 3: 196,326	D26— 13: 196,328	D48— 4: 196,350	D54— 196,361	D68— 10: 196,372	D71— 196,383
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196,337	D47— 8: 196,349				

U.S. DEPARTMENT OF COMMERCE

OFFICIAL GAZETTE of the UNITED STATES PATENT OFFICE

June 4, 1963 Volume 791 Number 1

TRADEMARKS

NOTICES

Examination

Pursuant to the provisions of Rule 341(c), an examination for persons seeking registration before the United States Patent Office as patent attorneys or agents will be held Tuesday, August 6, 1963.

With the exception of former patent examiners for whom the examination is waived, all persons recognized for practice before the Patent Office in patent cases must, pursuant to the noted rule, pass the examination. Those passing the examination do not thereby qualify for recognition for practice before the Patent Office in trademark cases. Recognition for practice in trademark cases is governed by Rule 2.12 of the Trademark Rules of Practice, which does not require the passing of an examination.

The examination will be given under the supervision of the Civil Service Commission, and may be taken in any of the cities of the country in which the Civil Service Commission regularly conducts examinations. Applications to take the examination must be directed to the Commissioner of Patents and filed in the Patent Office not later than July 5, 1963.

Application blanks may be obtained from the Clerk of the Patent Office Committee on Enrollment, Room 3718, Department of Commerce Building, Washington 25, D.C.

EDWIN L. REYNOLDS,
Chairman, Committee on Enrollment.

Apr. 12, 1963.

CONDITION OF TRADEMARK APPLICATIONS AS OF APRIL 30, 1963

Total number of applications awaiting action [excluding renewals and Sec. 12 (c)]	16,696
Date of oldest new application	Sept. 14, 1962
Date of oldest amended application	Aug. 2, 1962

J. H. MERCHANT, Director, Trademark Examining Operation

TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION	Oldest Application: New	Oldest Application: Amended
(I) C. M. WENDT, Classes 8, 12, 13, 14, 15, 17, 19, 20, 21, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 39, 41, 42, 43, 44	9-14-62	8-9-62
(II) H. E. KASCHUB, Classes 1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 16, 18, 22, 37, 38, 40, 45, 46, 47, 48, 49, 50, 51, 52; Service Mark Classes 100, 101, 102, 103, 104, 105, 106, 107; Collective Membership Marks, Class 200; Certification Marks, Classes A and B	9-26-62	9-5-62
Renewals (All Classes)	3-29-63	4-24-63
Sec. 12 (c) Publications (All Classes)	3-26-63	

Applications filed during the month of April 1963—2,166

Registrations Issued 379—No. 750,334 to No. 750,712
Renewals Issued 60

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, is mailed under the direction of the Superintendent of Documents, Government Printing Office, Washington 25, D. C., to whom all subscriptions should be made payable and all communications addressed; subscription price, $10.00 per annum, foreign mailing $3.75 additional; single copies, 20 cents each.

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MARKS PUBLISHED FOR OPPOSITION

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105.

As provided by section 31 of said act, a fee of twenty-five dollars must accompany each notice of opposition.

Class 1—Raw or Partly Prepared Materials

SN 140,645. Colorado Flower Growers Association, Inc., Denver, Colo. Filed Mar. 26, 1962. COLLECTIVE MARK.

COLORADO CARNATIONS

The representation of a flower, shown in the drawing, is lined for red. Applicant hereby disclaims the word "Carnations" and the representation of a carnation, apart from the mark as shown.

For Cut Carnations.

First use Apr. 25, 1961; in 1936 as to "Colorado Carnations."

SN 140,873. Società Rhodiatoce S.p.A., Milan, Italy. Filed Mar. 27, 1962.

TERITAL

Owner of Italian Reg. No. 121,972, dated Mar. 16, 1955.

For Synthetic Fibers and Filaments for Weaving and Spinning.

SN 141,753. Rogers Corporation, Rogers, Conn. Filed Apr. 6, 1962.

PORON

Owner of Reg. No. 673,910.

For Microporous Plastic Material Used in the Manufacture of Various Products, Such as Insoles for Shoes, Thermal Insulation Material, Luggage Cases, Etc.

First use on or about Sept. 30, 1954.

SN 143,358. Henry Field Seed and Nursery Company, Shenandoah, Iowa. Filed Apr. 30, 1962.

FIELD

Owner of Reg. No. 604,596.

For Seeds and Nursery Stock, Including Flower and Vegetable Seeds, Shrubs, Trees, Plants, Vines, Bulbs, Roots, Tubers, Scions, and Corms.

First use Mar. 15, 1962, on plants.

SN 143,360. Henry Field Seed and Nursery Company, Shenandoah, Iowa. Filed Apr. 30, 1962.

POSY LANE

For Seeds and Nursery Stock, Including Vegetable and Flower Seeds, Shrubs, Trees, Plants, Vines, Roots, Tubers, Scions, and Corms.

First use Mar. 15, 1962, on plants and shrubs.

SN 143,838. International Minerals & Chemical Corporation, Skokie, Ill. Filed May 4, 1962.

BALANCED REVIVO

Owner of Reg. No. 584,273.

For Blend of Clays.

First use in or about 1926.

SN 154,118. Hamilton-Skotch Corporation, Hamilton, Ohio. Filed Sept. 28, 1962.

VAC-U-TRON

Owner of Reg. No. 734,739.

For Insulating Foam Material for Incorporation in Consumer Products.

First use Apr. 17, 1962; Apr. 21, 1961, in the form of "Vacutron."

SN 154,165. Sternco Industries, Inc., Allendale, N.J. Filed Sept. 28, 1962.

DELTA

For Aquarium Tank Accessories—Namely, Porous Stone for Air Distribution and Activated Carbon for Use With Filters.

First use Sept. 4, 1962.

SN 155,017. Safe-T Pacific Company, Redwood City, Calif. Filed Oct. 11, 1962.

FLO-PAK

For Loose Tubular Packing Material for Use in the Protective Packaging of Fragile Objects.

First use Nov. 11, 1960.

SN 155,020. Stony Creek Granite Corporation, Providence, R.I. Filed Oct. 11, 1962.

STONY CREEK

Owner of Reg. No. 199,130.

For Granite.

First use in 1885.

SN 155,151. Hartz Mountain Products Corp., New York, N.Y. Filed Oct. 15, 1962.

HARTZ MOUNTAIN

Owner of Reg. Nos. 561,555, 726,805, and others.

For Absorbent Cat Litter.

First use Sept. 20, 1962.

SN 155,232. Harry T. Campbell Sons' Corporation, Towson, Md. Filed Oct. 16, 1962.

FLO-RITE

Owner of Reg. No. 527,626.

For Water Quenched Slag.

First use Sept. 7, 1962.

SN 155,325. Olin Mathieson Chemical Corporation, New York, N.Y. Filed Oct. 17, 1962.

V

For Cellophane.

First use at least as early as Aug. 4, 1960.

SN 155,485. Plastic Stained Glass Corp., New York, N.Y. Filed Oct. 18, 1962.

STAINGLO

For Plastic Sheet Material Simulating the Appearance of Stained Glass.

First use Sept. 25, 1962.

Class 2—Receptacles

SN 139,402. Gates Corporation, Costa Mesa, Calif. Filed Mar. 8, 1962.

TRIAD

For Racks for Holding Stacks of Coins.

First use September 1959.

SN 139,909. Mary L. Washburn, Orlando, Fla. Filed Mar. 14, 1962.

Pocket Pitcher

The word "Pitcher" is disclaimed apart from the mark as shown.

For Pitchers for Table or Kitchenware Use.

First use Jan. 22, 1962.

SN 140,726. Kennel Caskets, Inc., Massapequa Park, N.Y. Filed Mar. 26, 1962.

KENNEL CASKETS

The name "Caskets" is disclaimed.

For Animal Caskets.

First use Nov. 21, 1961.

SN 141,027. Aluma Corporation, Columbus, Ind. Filed Mar. 29, 1962.

LUMA CRATE

Applicant disclaims any exclusive right in the word "Crate" apart from the mark as shown.

For Crates Primarily Intended for Shipping Fowl.

First use Feb. 6, 1962.

SN 147,575. Hamac-Hansella Maschinen GmbH, Dusseldorf, Germany. Filed June 25, 1962.

TUFFSEAL

Priority claimed under Sec. 44(d) on German application filed Apr. 7, 1962; Reg. No. 762,689, dated June 25, 1962.

For Plastic Bags and Plastic Nets in the Nature of Bags.

SN 149,165. F. N. Burt Company, Inc., Buffalo, N.Y. Filed July 17, 1962.

VERICON BY BURT

Owner of Reg. No. 676,522.

For Paperboard Cartons and Boxes.

First use Apr. 4, 1962.

SN 154,166. Sternco Industries, Inc., Allendale, N.J. Filed Sept. 28, 1962.

DELTA

For Aquarium Tanks and Fish Food Trays.

First use Sept. 4, 1962.

SN 154,511. Pulp Reproduction Company, Milwaukee, Wis. Filed Oct. 4, 1962.

COLD-WAY

For Portable Picnic Cooler.

First use on or about July 1, 1961.

Class 4—Abrasives and Polishing Materials

SN 140,618. Armour and Company, Chicago, Ill. Filed Mar. 26, 1962.

PUTT-N-POLISH

For Fibrous Abrasive Products Impregnated With Abrasive in the Form of Pads Useful in Cleaning and Polishing Golfing Equipment.

First use Mar. 9, 1962.

SN 147,713. Dura Commodities Corporation, New York, N.Y. Filed June 26, 1962.

RUBB-R-MAGIC

For Formula Consisting of a Polymer-Based Emulsion Polish Which Is To Be Used on All Kinds of Rubber Goods for the Purpose of Providing a High Gloss Coating.

First use on or before June 5, 1962.

SN 159,520. Pangborn Corporation, Hagerstown, Md. Filed Dec. 20, 1962.

PANGBORNITE

Owner of Reg. Nos. 557,258 and 559,572.

For Particulate Abrasive Materials for Use in Mechanical Abrading, Cleaning and Finishing Processes.

First use June 18, 1948.

SN 159,993. Walter G. Legge Company, Inc., New York, N.Y. Filed Dec. 31, 1962.

TUFF-E-NUF

For Floor Polish.

First use Dec. 11, 1962.

Class 5—Adhesives

SN 140,852. Miracle Adhesives Corporation, Bellmore, N.Y. Filed Mar. 27, 1962.



Owner of Reg. No. 576,809.
For Adhesives—Namely, Epoxy Resin Glue.
First use Dec. 21, 1951.

SN 143,832. International Minerals & Chemical Corporation, Skokie, Ill. Filed May 4, 1962.

REVIVO

Owner of Reg. No. 584,273.
For Foundry Core Paste.
First use in or about 1927.

SN 145,032. Brumley-Donaldson Company, Huntington Park, Calif. Filed May 21, 1962.

DON-KOTE

Owner of Reg. Nos. 648,750 and 746,104.
For Core and Mold Spray Binder.
First use December 1959.

Class 6—Chemicals and Chemical Compositions

SN 132,536. Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning, Frankfurt am Main, Germany. Filed Nov. 22, 1961.

SOLUPHOB

Owner of German Reg. No. 651,539, dated Jan. 16, 1954.
For Chemical Preparations for Use in the Textile Industry—Namely, Wetting, Emulsifying, Leveling Agents; Brightening and Impregnating Agents; and Water Repellents Used in Dry-Cleaning.

SN 187,645. Milwhite Mud Sales Company, Houston, Tex. Filed Feb. 9, 1962.

THERM-OIL

For Additive Agent Designed To Prepare Thermally Stable, Low-Filter Loss High Weight, Water-in-Oil Emulsion Drilling Fluids.
First use May 12, 1960.

SN 138,729. Merck & Co., Inc., Rahway, N.J. Filed Feb. 27, 1962.

HEXO-MER

For Chemical Substances for Use in the Manufacture of Plastic Materials.
First use Jan. 16, 1962.

SN 142,666. Universal Blue Print & Supply Co. Inc., Houston, Tex. Filed Apr. 19, 1962.

"AMMO-MIST"

For Preparation for Use as a Developing Agent With Reproduction Equipment.
First use Mar. 13, 1962.

SN 142,914. American Cyanamid Company, Wayne, N.J. Filed Apr. 24, 1962.

CYANACRYL

Owner of Reg. Nos. 587,090, 672,365, and others.
For Acrylic Elastomer for Use in the Manufacture of Gaskets, Seals, Etc.
First use Feb. 27, 1962.

SN 142,922. Bug-A-Boo Products Inc., Wichita, Kans. Filed Apr. 24, 1962.

BUG-A-BOO

For Insecticides, Air Fresheners, and Moth Killers.
First use Feb. 14, 1933.

SN 142,955. Le Fevre Chemical Company, Oklahoma City, Okla. Filed Apr. 24, 1962.

BULL'S EYE

For Urinal Deodorizing Blocks.
First use Mar. 16, 1962.

SN 143,079. Wyandotte Chemicals Corporation, Wyandotte, Mich. Filed Apr. 25, 1962.

DIVIDEND

For Liquid Sanitizer and Germicide, Especially for Sanitizing Milk Utensils and Equipment.
First use Oct. 4, 1961.

SN 143,168. Royal Bond, Inc., St. Louis, Mo. Filed Apr. 26, 1962.

LANO-CO

For Co-Injection Fluid for Use in Embalming.
First use Apr. 10, 1962.

SN 143,361. Henry Field Seed and Nursery Company, Shenandoah, Iowa. Filed Apr. 30, 1962.

POSY LANE

For Insecticides, Fungicides, Weed Killers, and Plant Parasite Chemical Controls and Poisons.
First use Mar. 15, 1962, on insecticides and chemical weed killers.

SN 143,454. Stiles-Kem Sales Corporation, Waukegan, Ill. Filed Apr. 30, 1962.

AQUADENE

For Water Conditioner Compositions—Namely, a Non-Toxic Water Soluble Complex Phosphate Concentrate Used To Prevent Scale, Iron and Silica Deposits in Water Heaters, Boilers, Cooling Towers, and Air Conditioners.
First use Jan. 31, 1962.

SN 144,458. Ciba Limited, Basel, Switzerland. Filed May 14, 1962.

TENORAN

Owner of Swiss Reg. No. 174,595, dated Mar. 3, 1959.
For Herbicides.

SN 144,459. Ciba Limited, Basel, Switzerland. Filed May 14, 1962.

LANACRON

Owner of Swiss Reg. No. 172,161, dated Sept. 16, 1958; and U.S. Reg. No. 138,516.
For Dyestuffs, Coloring Matters, Chemical Products for Use as Auxiliary Agents in the Textile Industry.

SN 144,559. Tesco Chemicals, Inc., Atlanta, Ga. Filed May 14, 1962.

KLEER-KLOR

For Preparation Used as a Bacteriside, Algaecide, Disinfectant and Sanitizer for Swimming Pools.
First use on or about Apr. 12, 1961.

SN 145,611. Ross & Rowe, Inc., Fort Lauderdale, Fla. Filed May 28, 1962.

USALEC

For Lecithin.
First use Feb. 21, 1947.

SN 145,962. S. B. Penick & Company, New York, N.Y. Filed June 1, 1962.

PRAMEX

For Insecticidal Concentrates Containing DDT and DDT "Antiresistant" Compounds.
First use May 22, 1962.

SN 146,058. International Minerals & Chemical Corporation, Skokie, Ill. Filed June 4, 1962.

M-601

For Bentonite Extender and Viscosity Builder.
First use May 23, 1962.

SN 149,668. Orkin Exterminating Company, Inc., Atlanta, Ga. Filed July 24, 1962.

FUME-STOP

For Deodorants, Used Exclusively by Professional Exterminators.
First use Jan. 17, 1962.

SN 149,875. Sandoz, Inc., New York, N.Y. Filed July 26, 1962.

LEUCOPHOR

Owner of Reg. No. 590,706.
For Optical Brightening Agent for Use in the Textile, Leather, and Paper Industries.
First use 1950.

SN 150,926. Crompton & Knowles Corporation, Worcester, Mass. Filed Aug. 10, 1962.

LANAFAST

For Dyes.
First use on or about Feb. 6, 1958.

SN 151,002. Caled Products Company, Inc., Brentwood, Md. Filed Aug. 13, 1962.

CAL-SIZE

For Sizing Ingredient for Use in Solvents for Wet and Dry Cleaning Fabrics.
First use July 9, 1938.

SN 154,167. Sternco Industries, Inc., Allendale, N.J. Filed Sept. 28, 1962.

DELTA

For Aquarium Tank Accessories—Namely, Turtle Bath Preparation for Preventing Fungus and Shell Deterioration, Preparation for Preventing Fungus Diseases and Other Fish Disorders, and Preparation for Removing Chlorine From Aquarium Water.
First use Sept. 4, 1962.

SN 154,226. Farbenfabriken Bayer Aktiengesellschaft, Leverkusen-Bayerwerk, Germany. Filed Oct. 1, 1962.

BAYLETON

Owner of German Reg. No. 753,927, dated Oct. 16, 1961.
For Animal and Plant Destroying Agents—i.e., Weed Destroying Agents, Vermin Destroying Agents, Insecticides and Fungicides.

SN 155,815. Marsh Supermarkets, Inc., Yorktown, Ind. Filed Oct. 24, 1962.

YORKTOWN

For Fabric Softener and Liquid Starch.
First use Aug. 1, 1961.

SN 156,793. Brandhurst Company Limited, London, England. Filed Nov. 7, 1962.

PROLUCO

Owner of British Reg. No. 828,385, dated Dec. 7, 1961.
For Self-Luminous Compounds Consisting of a Phosphor Activated by a Radio-Active Substance.

SN 156,794. Brandhurst Company Limited, London, England. Filed Nov. 7, 1962.

TRILUCO

Owner of British Reg. No. 828,386, dated Dec. 7, 1961.
For Self-Luminous Compounds Consisting of a Phosphor Activated by a Radio-Active Substance.

Class 7—Cordage

SN 139,787. St. Egydyer Eisen- und Stahl-Industrie-Gesellschaft, Vienna, Austria. Filed Mar. 13, 1962.



Owner of Austrian Reg. No. 10,063, dated June 5, 1885.
For Wire Ropes.

Class 9—Explosives, Firearms, Equipments, and Projectiles

SN 142,149. Western Auto Supply Company, Kansas City, Mo. Filed Apr. 12, 1962.

REVELATION

Owner of Reg. Nos. 575,184 and 705,133.
For Shotgun Shells, Cartridges and Rifle Slugs, and Gun Cases.
First use May 15, 1954, on cartridges.

SN 155,789. The Ensign-Bickford Company, Simsbury, Conn. Filed Oct. 24, 1962.

PRIMALINE

Owner of Reg. No. 845,773.
For Detonating Fuses.
First use May 17, 1962.

Class 10—Fertilizers

SN 142,049. Miracle Mink Products, Inc., Astoria, Oreg. Filed Apr. 11, 1962.

MIRACLE MINK

No claim is made to the word "Mink" apart from the mark.
For Fertilizer.
First use July 17, 1961.

SN 143,210. Ralph E. Carmack, d.b.a. Rexroyal Farms, Uhrichsville, Ohio. Filed Apr. 27, 1962.

UMPh! UNDILUTED MANURE PRODUCTS FROM Hens

The phrase "Undiluted manure products from hens," except for the distinctive use of the letter "h," is disclaimed apart from the mark as shown.
For Plant Food.
First use Mar. 19, 1962; Sept. 15, 1960, as to the term "Umph!"

SN 148,666. Stadler Fertilizer Company, Cleveland, Ohio. Filed July 9, 1962.



For Lawn Food.
First use Feb. 21, 1961.

Class 12—Construction Materials

SN 125,530. Plywall Products Company, Inc., Corona, Calif. Filed Aug. 7, 1961.

DIAMONDIZED

For Prefinished Paneling Having a Particular Distinctive Finish.
First use June 9, 1961.

SN 132,751. Season-All Industries, Inc., Indiana, Pa. Filed Nov. 24, 1961.

Electrocote

For Electrostatic Coating Applied to Aluminum Windows and Doors, Window Screens and Door Screens, Storm Windows and Storm Doors.
First use Oct. 2, 1961.

SN 136,460. General Minerals Corporation, Denver, Colo. Filed Jan. 24, 1962.

GEMSTONE

Applicant makes no claim to the word "Stone" apart from the mark as shown.
For Marble Products—Namely, Marble Slabs and Marble Blocks, and Marble Chips for Terrazzo Panels and Exposed Aggregate Panels for Interior and Exterior Walls.
First use Jan. 4, 1962.

SN 136,631. Comanche Steel Products, Inc., San Antonio, Tex. Filed Jan. 26, 1962.

COMANCHE

For Shaped Pieces of Common Metal for Constructional Purposes—Namely, Ornamental Iron Including Porch Columns, Corner Brackets, Friezes and Mail Box Stands; Shaped Beams and Columns; Chain Link Fabric; and Railings, Including Newel Posts and Fittings.
First use Nov. 28, 1951.

SN 139,354. Terra-Losa, Inc., Miami, Fla. Filed Mar. 7, 1962.

TERRA-LOSA

For Concrete Floor Tile, Steps, Sills, Wall Panels, and Building Blocks.
First use Dec. 18, 1961.

SN 139,682. Republic Foil, Inc., Danbury, Conn. Filed Mar. 12, 1962.

FOIL-TITE

For Laminates of Kraft Paper and Aluminum Foil.
First use about December 1954.

SN 140,803. Fred A. Wilson Company, Lathrup Village, Mich. Filed Mar. 26, 1962.

WILSONITE

For Asphalt Base Emulsions, Containing Clay and Wool Fibres, for Use in Resurfacing and Patching Concrete and Wood Floors, Outside Pavements, and Driveways.
First use July 1, 1949.

SN 140,853. Miracle Adhesives Corporation, Bellmore, N.Y. Filed Mar. 27, 1962.



For Caulking Compounds.
First use Dec. 21, 1951.

SN 156,019. Owens-Corning Fiberglas Corporation, Toledo, Ohio. Filed Oct. 26, 1962.

SONOFORM

For Film-Faced Acoustical Tile and Sound Absorbing Baffles in the Form of Boards of Bonded Fibers.
First use Jan. 6, 1961.

SN 158,533. H-Brace, Inc., Miami, Fla. Filed Dec. 5, 1962.

BRACE

For Truss Connectors and Allied Accessories.
First use at least as early as Oct. 1, 1962.

SN 158,623. Harbison-Walker Refractories Company, Pittsburgh, Pa. Filed Dec. 6, 1962.

EXKASE

For Metal Cased Refractory Shapes.
First use Mar. 16, 1960.

SN 158,627. Harbison-Walker Refractories Company, Pittsburgh, Pa. Filed Dec. 6, 1962.

H-W HARPATCH

Owner of Reg. Nos. 310,762, 707,973, and others.
For Unconsolidated Refractory Mixes.
First use May 3, 1962.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

SN 138,083. Chieftain Automotive Products Corp., New York, N.Y. Filed Feb. 16, 1962.

CHIEFTAIN

For Air Valves for Pneumatic Equipment, Particularly for Tubeless Rubber Tires.
First use July 1958.

SN 138,084. Chieftain Automotive Products Corp., New York, N.Y. Filed Feb. 16, 1962.

ZENIT

For Air Valves for Pneumatic Equipment, Particularly for Tubeless Rubber Tires.
First use March 1957.

SN 138,471. Crane Co., Chicago, Ill. Filed Feb. 23, 1962.

GEM

For Ball Valves.
First use Feb. 1, 1962.

SN 139,267. Benjamin Baxter, Fowler, Calif. Filed Mar. 7, 1962.

SPOT GATE

For Irrigation Control Valves.
First use Nov. 15, 1961.

SN 139,680. Nicholas M. Reaves, d.b.a. Neverleak Roof Flang and Metal Co., Memphis, Tenn. Filed Mar. 12, 1962.

Neverleak

For Roof Flashings.
First use 1936.

SN 140,384. Rheem Manufacturing Company, New York, N.Y. Filed Mar. 21, 1962.

PLUMBING FIXTURES fashioned by Rheem

No claim is made to the exclusive use of the words "Plumbing Fixtures." Owner of Reg. No. 679,478.
For Plumbing Fixtures—Namely, Bathtubs, Lavatories, Urinals, Sinks, Laundry Trays and Sink and Tray Combinations, Drinking Fountains, Water Cooler Tops, Eye Baths, Bidets, and Shower Bath Receptors.
First use Jan. 15, 1962.

SN 140,636. Central Screw Company, Chicago, Ill. Filed Mar. 26, 1962.

RAPIDRIL

For Screw Threaded Fasteners.
First use Feb. 12, 1962.

SN 142,462. Shepherd Casters, Inc., Benton Harbor, Mich. Filed Apr. 17, 1962.

STARLET

For Furniture Casters.
First use Apr. 5, 1962.

SN 148,612. FMC Corporation, Chicago, Ill. Filed July 9, 1962.

SWINGFUSER

For Conduits for Holding Diffusion Elements Used in the Aeration of Sewage.
First use on or about May 18, 1962.

SN 148,715. Du Page Manufacturing Company, Downers Grove, Ill. Filed July 10, 1962.

DuPAGE

For Hose Clamps.
First use June 28, 1962.

SN 148,836. Abko Corporation, Hempstead, N.Y. Filed July 10, 1962.

FOGMATIC

For Fog Bell.
First use Nov. 16, 1961.

SN 148,869. The Aircraft Fitting Company, Dania, Fla. Filed July 12, 1962.

"BITE-TIPE"

For Pipe and Tube Couplings and Fittings.
First use May 2, 1962.

SN 149,050. The Colonial Plastics Manufacturing Company, Cleveland, Ohio. Filed July 16, 1962.

RITE-FLO

For Pipe, Particularly Plastic Pipe for Irrigation, Hardware, Plumbing and Steam Fittings, Supplies.
First use on or about Mar. 29, 1962.

SN 149,053. Crane Co., Johnstown, Pa. Filed July 16, 1962.

NEUVOGUE

For Bathtubs.
First use June 15, 1936.

SN 149,127. Richards Industries, Inc., Cincinnati, Ohio. Filed July 16, 1962.

JORDAN

For Regulators and Control Valves.
First use in October 1961.

SN 149,317. Lady Neat Corporation, Miami, Fla., assignee of Frank V. Perez, Miami, Fla. Filed July 18, 1962.

LADY NEAT

For Toilet Bowl Attachments Functioning as Bidets.
First use June 1961.

SN 150,171. Harvey Hubbell, Incorporated, Bridgeport, Conn. Filed July 31, 1962.



Owner of Reg. Nos. 50,234, 723,015, and others.
For Cold Headed Fasteners—Namely, Screws, Machine Screws, Rivets and Special Fastening Devices.
First use February 1957.

SN 150,320. J. Willard Beasley, d.b.a. Middlesex Plumbing Service, Saluda, Va. Filed Aug. 2, 1962.

FLO-STOP

For Flush Valve.
First use Feb. 7, 1962.

SN 150,416. Homestead Valve Manufacturing Company, Coraopolis, Pa. Filed Aug. 3, 1962.

For Valves.
First use Oct. 17, 1960.

SN 150,417. Homestead Valve Manufacturing Company, Coraopolis, Pa. Filed Aug. 3, 1962.

BALLCENTRIC

For Valves.
First use May 21, 1962.

SN 154,168. Sterneo Industries, Inc., Alleudale, N.J. Filed Sept. 28, 1962.

DELTA

For Aquarium Tank Accessories—Namely, Air Line Valve Connectors.
First use Sept. 4, 1962.

Class 14—Metals and Metal Castings and Forgings

SN 130,212. High Temperature Materials, Inc., Brighton, Mass. Filed Oct. 18, 1961.



For Pyrolytic Graphite Alloys, Pyrolytic Metals, and Pyrolytic Carbides.
First use on or about Feb. 2, 1961.

SN 136,373. Howe Sound Company, New York, N.Y. Filed Jan. 22, 1962.

AIC

For Aluminum Investment Castings.
First use Dec. 15, 1961.

SN 139,787. St. Egydyer Eisen- und Stahl-Industrie-Gesellschaft, Vienna, Austria. Filed Mar. 13, 1962.



Owner of Austrian Reg. No. 10,063, dated June 5, 1885.
For Iron and Steel Wires, Cold-Drawn Steel Tubes, and Cold-Drawn Shapes and Steels.

SN 139,965. Precision Metalsmiths, Inc., Cleveland, Ohio. Filed Mar. 15, 1962.

SHELL 400

The word "Shell," in this instance, is disclaimed apart from the mark as shown. Owner of Reg. Nos. 704,503 and 721,795.
For Investment Castings Made to the Order and Specification of the Customer.
First use Mar. 1, 1962.

SN 154,193. Anaconda Aluminum Company, Louisville, Ky. Filed Oct. 1, 1962.

ANASEAL

For Laminate of Aluminum Foil and Paper.
First use June 26, 1962.

SN 154,867. C. Tennant, Sons & Co., of New York, New York, N.Y. Filed Oct. 9, 1962.

PINNACLE

For Non-Ferrous Metals.
First use Mar. 15, 1962.

SN 154,868. Tennessee Products & Chemical Corporation, Nashville, Tenn. Filed Oct. 9, 1962.

TENN-CHROME

Owner of Reg. Nos. 280,204, 735,196, and others.
For Bonded Metallurgical Products Consisting of Iron, Chromium, Silicon and Chromium Ore To Be Used for the Addition of Chromium as Alloying Agent in Metallurgical Operations.
First use Sept. 18, 1961.

Class 15—Oils and Greases

SN 135,376. Monroe Chemical Co., Inc., Hilton, N.Y. Filed Jan. 8, 1962.

PLASTAL

For Lubricating and Cooling Solution for Cutting Tools.
First use at least as early as July 10, 1947.

SN 144,439. Armstrong Chemical Products Company, Chicago, Ill. Filed May 14, 1962.



Applicant herein disclaims any trademark rights in the word "Products" separate and apart from the trademark as shown.
For Grinding, Cutting and Machining Oils, Stamping, Forming, Rolling, Drawing and Extruding Oils, and Honing and Grinding Oils.
First use Nov. 1, 1957.

SN 147,969. Texaco Inc., New York, N.Y. Filed June 28, 1962.

SPRAYTEX

Owner of Reg. No. 299,210.
For Mineral Oils for Agricultural Sprays.
First use June 5, 1962.

SN 154,524. Sun Oil Company, Philadelphia, Pa. Filed Oct. 4, 1962.

SUNAPLEX

For Grease.
First use Apr. 25, 1962.

SN 154,643. The Standard Oil Company, Cleveland, Ohio. Filed Oct. 5, 1962.

MIR-O-ROL

For Rolling Oil (of Petroleum Origin).
First use Sept. 14, 1962.

SN 154,861. The Standard Oil Company, Cleveland, Ohio. Filed Oct. 9, 1962.

OCTRON

For Oil (of Petroleum Origin) for Lubricating an Engine.
First use Dec. 26, 1961.

SN 154,862. The Standard Oil Company, Cleveland, Ohio. Filed Oct. 9, 1962.

CETRON

For Oil (of Petroleum Origin) for Lubricating an Engine.
First use Dec. 27, 1961.

SN 155,043. Beltraction Co., Chicago, Ill. Filed Oct. 12, 1962.

SPROCTOR

For Gear Lubricant.
First use Oct. 1, 1962.

SN 155,182. Phoenix Oil Company, Augusta, Ga. Filed Oct. 15, 1962.

UNITEST

For Lubricating Oils and Greases.
First use on or about Apr. 15, 1953.

SN 156,010. Muench-Kreuzer Candle Co., Inc., Syracuse, N.Y. Filed Oct. 26, 1962.

LAMPLIGHTER

For Candles.
First use at least as early as Aug. 1, 1962.

Class 16—Protective and Decorative Coatings

SN 134,088. Bee Chemical Company, Lansing, Ill. Filed Dec. 15, 1961.

BEE-KRETE

Owner of Reg. Nos. 596,559 and 721,804.
For Protective Rubber Resin for Use on Swimming Pools.
First use June 28, 1950.

SN 136,770. Iowa Paint Manufacturing Company, Inc., Des Moines, Iowa. Filed Jan. 29, 1962.

FUSIONTRED

For Paint Substance Normally Used for Stairs and Floors.
First use May 10, 1960.

SN 142,739. Rinshed-Mason Company, Detroit, Mich. Filed Apr. 20, 1962.

RINSHED-MASON

For Paints, Varnishes, Enamels, Lacquers, Primers, Undercoatings, Oil Paints, Wood-Finishing Coatings, Pyroxylin Glazing Putty for Use Particularly on Automobiles, Paint Products Pigmented With Aluminum, and Iridescent-Type Finishes.
First use on or about July 1, 1925.

SN 154,169. Sterneo Industries, Inc., Allendale, N.J. Filed Sept. 28, 1962.

DELTA

For Aquarium Tank Accessories—Namely, Decorative Lacquers for Application to Aquarium Tanks.
First use Sept. 4, 1962.

Class 17—Tobacco Products

SN 144,066. Garcia y Vega, Inc., New York, N.Y. Filed May 8, 1962.



Owner of Reg. No. 92,886.
For Cigars.
First use in or about October 1899.

Class 18—Medicines and Pharmaceutical Preparations

SN 142,064. Ultravite Laboratories Limited, Downsview, Ontario, Canada. Filed Apr. 11, 1962.

ULTRAVITES

Owner of Canadian Reg. No. 122,114, dated May 5, 1961.
For Vitamin and Mineral Supplement.

SN 146,764. Vitamineral Products Co., Peoria, Ill. Filed June 12, 1962.

KA-MIN

For Compound Containing Various Minerals To Be Mixed With Feed Rations of Animals for Purposes of Correcting and Preventing Feed Deficiencies.
First use Sept. 22, 1959.

SN 147,053. Testagar & Co., Inc., Detroit, Mich. Filed June 15, 1962.

SPEROTAB

For Pharmaceutical Preparation Having Antacid and Antispasmodic Properties.
First use May 8, 1953.

SN 150,132. Vitamix Pharmaceuticals, Incorporated, Philadelpia, Pa. Filed July 30, 1962.

COLDRIN

For Cough Suppressant and Decongestant.
First use on or about May 28, 1959.

SN 154,705. Eastern States Farmers' Exchange, Incorporated, West Springfield, Mass. Filed Oct. 8, 1962.

BRE-BITS

For Medicated Poultry Feed.
First use Sept. 15, 1962.

SN 156,996. Luly Pharmaceutical Company, St. Louis, Mo. Filed Nov. 9, 1962.

ARTICULONE

For Systemic and Topical Preparations for the Treatment and Alleviation of Pain in Rheumatism, Inflammatory Arthritis, and Neuro-Dermatitis.
First use Oct. 8, 1962.

SN 157,041. American Home Products Corporation, New York, N.Y. Filed Nov. 3, 1962.

MOTIVAN

Owner of Reg. No. 644,658.
For Central Nervous System Depressant.
First use Oct. 30, 1962.

SN 157,161. Smith, Miller & Patch, Inc., New York, N.Y. Filed Nov. 13, 1962.

VASOCIDIN

For Ophthalmic Solution.
First use Nov. 2, 1962.

SN 157,359. E. C. De Witt & Co. Inc., Chicago, Ill. Filed Nov. 16, 1962.

GUM-ZOR

For Lotion for the Relief of Denture Sores and Sore Gums.
First use Oct. 24, 1962.

SN 158,026. Dr. Salsbury's Laboratories, Charles City, Iowa. Filed Nov. 27, 1962.

NOVASTAT

For Veterinary Preparation for the Prevention and Control of Coccidiosis in Poultry.
First use Nov. 9, 1962.

SN 158,178. The Procter & Gamble Company, Cincinnati, Ohio. Filed Nov. 29, 1962.

STANAFLUOR PLUS

Owner of Reg. No. 623,250.
For Fluoride Preparation for the Treatment of Teeth.
First use July 1958.

SN 158,400. Texas Pharmacal Company, San Antonio, Tex. Filed Dec. 3, 1962.

Cetaphil

For Preparations for Use in the Treatment of Dermatosis and for Use as Skin and Scalp Emollients and Vehicles for Use in the Preparation of Medicaments.
First use Feb. 11, 1950.

SN 158,411. The Wander Company, Chicago, Ill. Filed Dec. 3, 1962.

AQUARUB

For Topical Analgetic.
First use Nov. 23, 1962.

SN 158,610. The Dietene Company, Minneapolis, Minn. Filed Dec. 6, 1962.

NIOSITOL

For Pharmaceutical Preparation Used To Regulate Blood Cholesterol Level.
First use Nov. 14, 1962.

SN 159,306. The Upjohn Company, Kalamazoo, Mich. Filed Dec. 17, 1962.

CARBATE

For Antiarthritic, Anti-Inflammatory Compound.
First use Apr. 27, 1962.

SN 159,611. Ralston Purina Company, St. Louis, Mo. Filed Dec. 21, 1962.

CATTLE-PLUS

Owner of Reg. No. 663,369.
For Vitamin Containing Feed Supplement.
First use Nov. 26, 1962.

SN 159,677. American Cyanamid Company, Wayne, N.J. Filed Dec. 26, 1962.

LEDERMIX

Owner of Reg. Nos. 280,833, 666,774, and others.
For Steroid-Antibiotic Preparation.
First use Dec. 7, 1962.

SN 160,020. Unimed, Inc., Morristown, N.J. Filed Dec. 31, 1962.

ONYCHO-PHYTEX

Owner of Reg. No. 636,385.
For Fungicidal Preparation.
First use Dec. 15, 1957.

SN 160,024. The Upjohn Company, Kalamazoo, Mich. Filed Dec. 31, 1962.

ZYMAFLOR

Owner of Reg. Nos. 420,751, 732,647, and others.
For Vitamin-Fluoride Preparation.
First use Nov. 7, 1962.

Class 19—Vehicles

SN 111,821. Lester J. Voss, Houston, Tex., assignee of Tee Bug, Inc., Houston, Tex. Filed Jan. 13, 1961.

TEE BUG

For Small Powered Open Vehicles for Transporting Persons on and Around Golf Courses.
First use in August 1960.

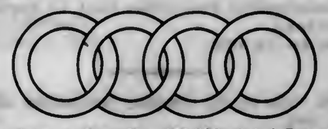
SN 123,251. ABG, Paris, France. Filed July 3, 1961.

VELOVAP

Owner of French Reg. No. 91,064, dated May 28, 1957; Natl. Inst. No. 91,064.

For Motorcycles, Motorized Cycles, Engine-Assisted Cycles and Bicycles With Auxiliary Engine, Light-Weight Three-Wheeled Delivery Vehicles, and Parts and Attachments Therefor—Namely, Body Frames, Gasoline Tanks.

SN 125,275. Auto Union G.m.b.H., Ingolstadt, Germany. Filed Aug. 3, 1961.



Owner of German Reg. No. 482,232, dated Jan. 22, 1936; and U.S. Reg. No. 650,810.

For Automobiles, Motor Trucks, Parts of Automotive Vehicles, Passenger Motor Cars, Small Motor Cars, Three-Wheel Motor Cars, Airplanes, Motorboats, Car Bodies, Car Frames, Automobile Brakes, Brake Drums, Wheel Hubs, Springs for Automobiles, Front Axles, Bumper Guards, Windshields, Rearview Mirrors for Automobiles, Wheel Caps.

SN 130,877. Boles-Aero, Inc., Burbank, Calif. Filed Oct. 30, 1961.



For House Trailers.
First use Oct. 3, 1960.

SN 134,945. Columbia Motor Sales Co., Cincinnati, Ohio. Filed Jan. 2, 1962.

ASK YOUR NEIGHBOR HE BOUGHT FROM US

For Automotive Vehicles—Namely, New and Used Passenger Automobiles.
First use Mar. 1, 1956.

SN 135,087. Montgomery Ward & Co., Incorporated, Chicago, Ill. Filed Jan. 2, 1962.

RIVERSIDE

Owner of Reg. Nos. 400,109 and 607,990.

For Trailers, Motorized Carts, Scooters, Motorized Bicycles and Automobile Parts and Accessories—to wit, Wheel Covers, Floor Mats, Seat Covers, Seat Belts, Roof Bars, Luggage Racks, Radiators, Radiator Caps, Coil Springs, Shock Absorbers, King Bolts, Idler Arms, Tie Rods, Tie Rod Ends, Steering Sectors, Steering Control Arms, Leaf Springs, Brake Drums, Brake Shoes, Master Cylinders, Wheel Cylinders, and Mirrors.

First use July 15, 1959; Dec. 31, 1912, on pneumatic tires and tubes.

SN 135,381. Outboard Marine Corporation, Waukegan, Ill. Filed Jan. 8, 1962.

HAULSTER

For Motorized, Light-Weight, Load Transporting, Wheeled Vehicles.
First use on or about Sept. 26, 1961.

SN 141,263. Damm-Rock, Inc., Kansas City, Mo. Filed Apr. 2, 1962.

MARKO
Micro Ground

The term "Micro Ground" is disclaimed apart from the mark as shown.

For Bonded Brake Shoes.
First use Aug. 16, 1961.

SN 141,691. American Plastics Corporation, Bainbridge, N.Y. Filed Apr. 6, 1962.



For Plastic Knobs for Vehicles.
First use on or about Jan. 23, 1962.

SN 143,341. Braincon Corporation, Marion, Mass. Filed Apr. 30, 1962.

V-FIN

For Instrument Carrying Vehicles Designed To Be Towed Under Water Behind a Powered Vehicle.
First use in November 1960.

SN 150,113. Standard Cycle Company, Inc., Chicago, Ill. Filed July 30, 1962.

Ranger

For Bicycles.
First use early in 1896.

SN 150,590. Nethercutt Industrial Corp., Sylmar, Calif. Filed Aug. 6, 1962.

Trailbreaker

For Motorized Two-Wheel, Cross-Country Passenger and Cargo Vehicle in the Nature of a Heavy Duty Motorcycle.
First use July 24, 1962.

SN 160,581. Allied Plastics, Inc., Gastonia, N.C. Filed Jan. 14, 1963.

FROSHIELD

For Windshield Covers.
First use Aug. 2, 1962.

SN 160,658. Pitman Manufacturing Company, Grandview, Mo. Filed Jan. 14, 1963.

pacemate

For Truck Bodies.
First use Dec. 20, 1962.

SN 160,750. Dowty Rotol, Inc., Arlington, Va. Filed Jan. 16, 1963.

DOWTY

For Undercarriage Equipment for Supporting Airplanes.
First use Aug. 21, 1957.

SN 161,177. Glastron Boat Company, Austin, Tex. Filed Jan. 22, 1963.

AQUA-LIFT

For Boats.
First use Mar. 15, 1962.

SN 161,267. Michigan Wheel Company, Grand Rapids, Mich. Filed Jan. 23, 1963.



For Marine Propellers.
First use in or about August 1962.

SN 161,353. Michigan Wheel Company, Grand Rapids, Mich. Filed Jan. 24, 1963.

SUPER-CUP X-100

For Marine Propellers.
First use in or about November 1960.

Class 21—Electrical Apparatus, Machines, and Supplies

SN 114,974. The Siegler Corporation, New York, N.Y. Filed Mar. 6, 1961.

DECASWITCH

For Multi-Position, Indexing Switches for Electrical and Electronic Circuits.
First use January 1960.

SN 122,712. Palo Alto Engineering Company, Palo Alto, Calif. Filed June 23, 1961.



Owner of Reg. No. 642,275.
For Electrical Transformers.
First use Jan. 5, 1961.

SN 132,006. Ace-Sycamore, Inc., Sycamore, Ill. Filed Nov. 15, 1961.

Ace

Owner of Reg. No. 636,414.

For Portable Electric Spot Welders, Electric Powered Hot or Cold Air Blowers for Industrial Use in Drying Out Motors, Electrical Wiring, Etc., Portable Electric Powered Tank Type Suction Cleaners and Blowers for Industrial Use, Portable Electric Powered Drum Type Conversion Unit for Industrial Use in Wet or Dry Vacuum Pick-Up, and Portable Electric Powered Vacuum Type Boiler Tube Cleaners, and Attachments and Parts for All of the Foregoing.

First use May 8, 1945, on portable electric blowers.

SN 137,729. Erie Resistor Corporation, Erie, Pa. Filed Feb. 12, 1962.



Owner of Reg. Nos. 541,627, 670,351, and others.

For Electronic Circuit Components—Namely, Capacitors, Resistors, Semiconductors, and Combinations Thereof, Assembled Circuits Each Consisting of a Plurality of Electronic Circuit Components and the Associated Support and Wiring, Components, Piezoelectric Ceramics and Transducers, Printed Wiring Boards, Thermoelectric Ceramics, High Temperature Electrical Ceramics.

First use Dec. 12, 1961.

SN 137,730. Etteo Wire & Cable Corp., Brooklyn, N.Y. Filed Feb. 12, 1962.

PJ

For Non-Metallic Sheathed Cable.
First use January 1961.

SN 138,160. Chem-Care Products, Inc., Glendale, Calif. Filed Feb. 19, 1962.

CHEM-CARE

For Electrically Actuated Machines for Polishing, Scrubbing, Shampooing, Steel Wooling, Sanding and Grinding Floors, Floor Surfaces, and Floor Coverings.
First use first part of 1958.

SN 138,764. Bradley Manufacturing Company, Chicago, Ill. Filed Feb. 28, 1962.

CAVALCADE

For Electric Table Lamps and Electric Floor Lamps.
First use Sept. 12, 1961.

SN 138,976. Nuvox Electronics Corp., New York, N.Y. Filed Mar. 2, 1962.

NUVOX

For Radios and Television Sets.
First use Feb. 9, 1962.

SN 139,832. Daystrom, Incorporated, Murray Hill, N.J. Filed Mar. 14, 1962.

SYNCHROPOT

For Transformer Controlled Electrical Potentiometer.
First use February 1962.

SN 139,940. Illinois Tool Works Inc., Chicago, Ill. Filed Mar. 15, 1962.

FILMATIC

For Small Electronic Components Comprising Modules, Capacitors, Resistors, Transistors, Diodes, and Precision Ceramic Parts for the Foregoing.
First use Mar. 2, 1962.

SN 140,473. Monarch Electronics International, Inc., North Hollywood, Calif. Filed Mar. 22, 1962.

MONACOR

For Radio Sets, Amplifiers, Tuners, Preamplifiers, Radio Accessories, Intercoms, Speakers, Electrical Tape, Microphones, Pickups, Telephone Amplifiers, Transceivers and the Like.
First use Dec. 4, 1961.

SN 142,722. Maus & Pfeiffer, Stuttgart-Botnang, Germany. Filed Apr. 20, 1962.

PROGRESS

Owner of German Reg. No. 652,409, dated Jan. 29, 1954; and U.S. Reg. No. 326,588.
For Electric Floor Conditioners and Floor Polishers, Vacuum Cleaners, Household and Kitchen Utensils—Namely, Electric Juice Extractors and Mixers.

SN 143,689. Teca Corporation, White Plains, N.Y. Filed May 2, 1962.

TECA

Owner of Reg. Nos. 530,554, 666,555, and others.
For Electrical Control Devices for Utility and Industrial Uses, Such as Electrically Operated, Controlled and Synchronized Recorders Including Magnetic Tape Recorders; Electrical Coaxial Probes for Sensing and/or Applying Electric Current Signals and Connecting Cables and Cable Assemblies for Utility and Industrial Uses; Electronic Wave Form Generators and Electrical Amplifiers.
First use on or about July 2, 1941.

SN 144,203. Thor Power Tool Company, Aurora, Ill. Filed May 9, 1962.

THERMOWELD

For Electric Motors Used in Electrically Actuated Portable Power Tools.
First use Apr. 12, 1962.

SN 144,206. Uniwave, Inc., Farmingdale, N.Y. Filed May 9, 1962.

UNIWAVE

For Wave Guides.
First use Apr. 27, 1957.

SN 144,388. The I-T-E Circuit Breaker Company, Philadelphia, Pa. Filed May 11, 1962.

ITE

Owner of Reg. Nos. 557,827, 724,521, and others.
For Air and Oil Circuit Breakers, Switchgear, Unit Substations, Power Transformers, Panelboards and Switchboards, Bus Duct Systems, Power Switching Equipment, Outdoor Substations, Distribution Equipment, Power Rectifier Equipment, Motor Control Centers, Safety Switches, Service Entrance Equipment, Porcelain Insulators, Fuses, Antenna Systems and RF Transmission Components.
First use in January 1959.

SN 144,471. Damon Engineering, Inc., Needham Heights, Mass. Filed May 14, 1962.

D
DAMON

For Crystal Filters, Crystal Discriminators, and Voltage Control Crystal Oscillators.
First use Jan. 8, 1962.

SN 144,586. H. K. Porter Company, Inc., Pittsburgh, Pa. Filed May 14, 1962.

DOT

For Hand Electric Drill.
First use Oct. 1, 1961.

SN 150,852. Codamite Corporation, Anaheim, Calif. Filed Aug. 9, 1962.

CALLMITE

For Electronic, Digital-Type Communication Receiving, Character Detecting and Decoding Equipment.
First use July 16, 1962.

SN 154,313. Vapor Corporation, Chicago, Ill. Filed Oct. 1, 1962.

VAPOR

The drawing is lined for red but no claim is made as to color.
For Electric Door Operators.
First use Jan. 2, 1962.

SN 154,560. Cecilware-Commodore Products Corporation, Long Island City, N.Y. Filed Oct. 5, 1962.

Golden Brew

For Automatic Coffee Urns.
First use on or about Oct. 15, 1959.

SN 155,046. Clements Mfg. Co., Chicago, Ill. Filed Oct. 12, 1962.

CADILLAC

Owner of Reg. Nos. 527,628 and 632,584.
For Floor Cleaning, Polishing, and Treating Machines.
First use Apr. 15, 1962.

SN 156,104. S. W. Farber, Inc., New York, N.Y. Filed Oct. 29, 1962.

OPEN HEARTH

For Electrical Broilers and Rotisseries.
First use at least as early as Mar. 22, 1962.

SN 159,519. The Okonite Company, Passaic, N.J. Filed Dec. 20, 1962.

POLYKENTHERM

Owner of Reg. No. 695,973.
For Magnet Wire.
First use Nov. 8, 1962.

SN 160,524. Allied Radio Corporation, Chicago, Ill. Filed Jan. 11, 1963.

STAR ROAMER

For Shortwave Receiver Sold in Kit Form.
First use Dec. 15, 1962.

SN 160,534. Electronic Engineering Company of California, Santa Ana, Calif. Filed Jan. 11, 1963.

EECOLITE

Owner of Reg. Nos. 622,217, 622,219, and others.
For Electric Lighting Devices.
First use Nov. 9, 1962.

SN 160,592. Anderson Electric Corporation, Leeds, Ala. Filed Jan. 14, 1963.

VERSA-GRIP

Owner of Reg. No. 610,983.
For Compression Connectors.
First use Dec. 6, 1962.

SN 160,946. Insul-8 Corp., San Carlos, Calif. Filed Jan. 18, 1963.

INSUL 8

Owner of Reg. Nos. 578,786, 711,151, and others.
For Trolley Conductor Systems and Components Thereof for Conducting Electric Current to Mobile Machines.
First use on or about Feb. 11, 1952.

SN 161,029. The Emerson Electric Manufacturing Company, St. Louis, Mo. Filed Jan. 21, 1963.

INSULIFE

For Electrical Insulation for Windings Forming Parts of Electrical Motors.
First use Dec. 1, 1962.

SN 161,066. King Radio Corporation, Inc., Olathe, Kans. Filed Jan. 21, 1963.

ASTROGUIDE

For Radios.
First use Jan. 12, 1963.

SN 161,749. Spirling Products Co., Inc., Hicksville, N.Y. Filed Jan. 30, 1963.

LECTRO-TENNA

For Radio and Television Antennas.
First use Oct. 11, 1962.

SN 165,535. St. Louis Music Supply Company, St. Louis, Mo. Filed Mar. 27, 1963.

Custom Kraft



For Amplifiers for Use in Association With Musical Instruments, Such as Steel Guitars.
First use on or about Sept. 1, 1938.

Class 22—Games, Toys, and Sporting Goods

SN 130,526. Valentine Dolls Inc., New York, N.Y. Filed Oct. 23, 1961.

HUG-A-BYE BABY

No claim of exclusive right is made to "Baby" for dolls.
For Dolls.
First use July 13, 1961.

SN 137,761. Hy Kauff, New York, N.Y. Filed Feb. 12, 1962.

SIMON SAYS

For Dolls.
First use Feb. 2, 1962.

SN 139,469. J. Chein & Company, Burlington, N.J. Filed Mar. 9, 1962.

BASKET BOWL

For Equipment Comprising a Plurality of Balls and a Goal Structure for Playing a Parlor-Type Basketball Game.
First use Mar. 5, 1962.

SN 139,606. Joe Dimatteo, d.b.a. Weightless Missile Co., Downey, Calif. Filed Mar. 12, 1962.

WEIGHTLESS MISSILE

The word "Weightless" is disclaimed apart from the mark as shown.
For Water Weight Fishing Line Caster (Which After It Lands in the Water Loses Its Weight).
First use Aug. 14, 1961.

SN 140,398. A. G. Spalding & Bros. Inc., Evanston, Ill. Filed Mar. 21, 1962.

TINKER ZOO

Owner of Reg. No. 96,175.
For Toy Construction Sets.
First use Feb. 8, 1962.

SN 141,300. Joseph P. Hennick, d.b.a. Joe Hennick Enterprises, Ashland, Oreg. Filed Apr. 2, 1962.



The drawing is lined for the colors red, blue, and brown, but these colors are not an essential feature of the mark.
For Toy Logs.
First use Feb. 13, 1962.

SN 142,148. Western Auto Supply Company, Kansas City, Mo. Filed Apr. 12, 1962.

REVELATION

Owner of Reg. Nos. 575,184 and 705,133.
For Fishing Equipment—Namely, Flies, Tackle Boxes, Hooks, Fishing Buckets and Sinkers; Baseball Gloves, Bats and Shoes; Inflated Goods—Namely, Footballs and Basketballs; Boxing Gloves and Striking Bags; Wading Pools; and Table Tennis Sets and Equipment—Namely, Balls and Paddles.
First use Jan. 15, 1938, on fishing equipment including flies.

SN 142,297. Eureka Specialty Printing Company, Scranton, Pa. Filed Apr. 16, 1962.

HUMPTY DUMPTY

For Prepackaged Toy Cut-Out and Assembly Kits Comprising Gummed Sheets and Articles for Easter Egg Games and Easter Egg Decorations, Printed Sheets for Constructing Toy Scenery, Toy Balloons, Dyes, and Paints for Easter Egg Decorations.
First use on or about Feb. 8, 1962.

SN 143,183. U.S. Teens, Inc., New York, N.Y. Filed Apr. 26, 1962.

U.S. TEENS

For Stuffed Animals and Similar Stuffed Toys.
First use Mar. 1, 1962.

SN 144,286. Marblehead Golf Corp., Sarasota, Fla. Filed May 10, 1962.

MARBLEHEAD

For Golf Putter.
First use April 1961.

SN 146,454. Thomas Black & Sons (Greenock) Limited, Port Glasgow, Scotland. Filed June 8, 1962.

PAL-O-MINE

Owner of British Reg. No. 765,702, dated May 18, 1957.
For Sleeping Bags for Outdoor or Campers' Use.

SN 146,455. Thomas Black & Sons (Greenock) Limited, Port Glasgow, Scotland. Filed June 8, 1962.



No claim of exclusive right is made to "Sleeping Bag" for the goods recited. Owner of British Reg. No. 581,714, dated Nov. 27, 1937.
For Sleeping Bags for Outdoor or Campers' Use.

SN 147,393. Paradise Manufacturing Company, Los Angeles, Calif. Filed June 21, 1962.



Applicant disclaims the doll and the dark background appearing in the drawing apart from the trademark as shown.
For Inflated Doll.
First use June 4, 1962.

SN 147,748. Jack E. O'Neill, d.b.a. Surf Shop, Santa Cruz, Calif. Filed June 26, 1962.



For Water Sports Equipment—Namely, Surfboards, Rubber Wet Suits, Diving Equipment.
First use in 1957.

SN 148,354. Milton Bradley Company, Springfield, Mass. Filed July 5, 1962.

SPORTS ARENA

For Equipment (or Apparatus) Sold as a Unit for Playing a Football or Automobile Racing Parlor Game.
First use May 1, 1962.

SN 148,355. Milton Bradley Company, Springfield, Mass. Filed July 5, 1962.

PRO BOWLING

No claim of exclusive right is made to "Bowling" for a bowling-type parlor game.
For Equipment (or Apparatus) Sold as a Unit for Playing a Bowling Type Parlor Game.
First use May 1, 1962.

SN 148,356. Milton Bradley Company, Springfield, Mass. Filed July 5, 1962.

BIG TOWN

For Equipment (or Apparatus) Sold as a Unit for Playing an Automobile-Type Parlor Game.
First use May 1, 1962.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

SN 99,187. Associated Engineering Limited, Leamington Spa, England. Filed June 17, 1960.

AE

Priority claimed under Sec. 44(d) on British Reg. No. B800,289, dated Jan. 13, 1960.
For Parts and Fittings of Internal Combustion Engines—Namely, Pistons, Gudgeon Pins, Cylinder Liners, Tappets, Valve Guides, Swirl Chambers, Rocker Arms, Cylinder Inserts, Circlips Being Spring Clips for Retaining Gudgeon Pins in Position of Use, Crankshafts, and Turbine Blades and Drill Bushes.

SN 117,066. Van Gorp Manufacturing, Inc., Pella, Iowa. Filed Apr. 3, 1961.

TRUE TURN

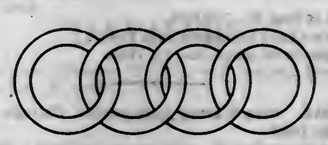
For Pulley for Use With Conveyor Belts and the Like.
First use Feb. 14, 1961.

SN 123,514. Willys Motors, Inc., Toledo, Ohio. Filed July 6, 1961.

TORNADO

For Automobile Engines.
First use June 8, 1961.

SN 125,275. Auto Union G.m.b.H., Ingolstadt, Germany. Filed Aug. 3, 1961.



Owner of German Reg. No. 482,232, dated Jan. 22, 1936; and U.S. Reg. No. 650,810.
For Automobile Engines, Couplings of Automobile Engines, Road Rollers, Universal Joints, Driveshafts, Driving Axles, Pistons, Carburetors, Dashpots for Automobiles and Automobile Jacks.

SN 126,222. Giant Industries, Pico Rivera, Calif. Filed Aug. 18, 1961.



For Concrete Pumping and Placing Machines and Accessories Therefor Including Finishing Guns and Machines, Plaster Guns, Reducers, Nozzles, Rotors, Plaster and Cement Pumps and Grouters.
First use Sept. 14, 1957, on finishing guns.

SN 130,257. Vibraslide, Inc., Binghamton, N.Y. Filed Oct. 18, 1961.



For Vibrating Tubs Used To Polish and Debur Metal, Plastics, and Other Materials in Large Quantities.
First use Apr. 6, 1961.

SN 139,787. St. Egydyer Eisen- und Stahl-Industrie-Gesellschaft, Vienna, Austria. Filed Mar. 13, 1962.



Owner of Austrian Reg. No. 10,063, dated June 5, 1885.
For Files and Rasps.

SN 140,740. Outboard Marine Corporation, Waukegan, Ill. Filed Mar. 26, 1962.

DURACUT

Owner of Reg. No. 739,960.
For Saw Chain and Saw Chain Teeth.
First use on or about Jan. 15, 1962.

SN 140,912. Borg-Warner Corporation, Chicago, Ill. Filed Mar. 28, 1962.

STAR ★ LITE

Owner of Reg. Nos. 221,218, 658,292, and others.
For Shovels and Spades.
First use on or prior to Jan. 1, 1957.

SN 141,150. Anderton Springs Limited, Bingley, England. Filed Mar. 30, 1962.



Applicant disclaims exclusive right to the use of a pictorial representation of a circlip and to the use of the word "Circlip" apart from the mark as shown. Owner of British Reg. No. 729,927, dated May 6, 1954.
For Circlips Being Retaining Clips of Common Metal.

SN 143,581. Torpedo Buromaschinen Werke A.G., Frankfurt am Main-Rodelheim, Germany. Filed May 1, 1962.

DYNACORD

Owner of German Reg. No. 753,764, dated Oct. 11, 1961.
For Typewriters, Tabulator Stops for Typewriters, Addressing Machines, Postage Franking Machines, and Oiling Needles.

SN 154,813. Vapor Corporation, Chicago, Ill. Filed Oct. 1, 1962.



The drawing is lined for red but no claim is made as to color.
For Pneumatic Door Operators and Door Treadles.
First use Jan. 2, 1962.

SN 160,373. Albert E. Harold Fair, Brookline, Mass. Filed Jan. 8, 1963.

UNIFORMER

For Papermaking Machine.
First use Dec. 5, 1962.

SN 160,392. Reltool Corporation, Milwaukee, Wis. Filed Jan. 8, 1963.



RELTOOL

For Cutting Tools—Namely, Drills, Saws, Milling Cutters, Routing Cutters, Die Sinking Cutters, Key Seat Cutters, Concave Cutters, Convex Cutters, T-Slot Cutters, Dovetail Cutters, Tool Bits, Cutoff Blades, Slitting Knives, Rotary Shears, Center Reamers, Countersinks, Specialty Cutters, and Custom Made Cutters; and Accessories—Namely, Lathe Centers, Lathe Mandrels, Drive Collars, End Mill Holders, and Stub Arbors.
First use June 29, 1942.

SN 160,593. Anderson Electric Corporation, Leeds, Ala. Filed Jan. 14, 1963.

VERSA-GRIP

Owner of Reg. No. 610,983.
For Compression Tool for Installation of Compression Connectors.
First use Dec. 6, 1962.

SN 161,039. Fraser's, Inc., New York, N.Y. Filed Jan. 21, 1963.

STUART

For Stainless Steel Flatware—Namely, Knives, Forks, and Spoons.
First use in or about May 1957.

SN 161,495. General Rubber Corporation, Tenafly, N.J. Filed Jan. 28, 1963.

FLEXICONE

For Funnels, Made of Rubber, Coupled to Parts of Machinery and Used for Conveying Materials Between Said Machinery Parts.
First use Feb. 1, 1962.

SN 161,660. Hydyn Company, Cleveland, Ohio. Filed Jan. 28, 1963.



For Hydraulic Equipment, Specifically, Hydraulic Accumulators and Surge Chambers.
First use June 20, 1962.

SN 165,400. Monarch Mufflers, Inc., Rochester, N.Y. Filed Mar. 26, 1963.

MONARCH

For Mufflers for Automotive Use.
First use Sept. 23, 1960.
Subj. to Intf. with SN 137,253 and SN 163,919.

Class 24 — Laundry Appliances and Machines

SN 136,407. Textile Mills Company, Chicago, Ill. Filed Jan. 28, 1962.

ALUMICOTE

For Ironing Board Covers and Ironing Board Cover and Pad Sets.
First use Nov. 1, 1961.

SN 141,801. Blackstone Corporation, Jamestown, N.Y. Filed Apr. 9, 1962.



For Clothes Driers, Automatic Washers, and Combined Washers and Wringers.
First use Dec. 29, 1961.

Class 25 — Locks and Safes

SN 146,845. The Tyden Corporation, Hastings, Mich. Filed June 13, 1962.

TYDEN

For Band Seals.
First use in or around 1897.

Class 26 — Measuring and Scientific Appliances

SN 112,890. Eastman Kodak Company, Rochester, N.Y. Filed Feb. 1, 1961.

ROYAL BLUE

For Sensitized Radiographic Film.
First use July 25, 1957.

SN 127,322. C. G. Conn, Ltd., Elkhart, Ind. Filed Sept. 6, 1961.

CONN

Owner of Reg. Nos. 121,045, 501,429, and 517,163.
For Stroboscopes and Instruments for Indicating the Loudness of Sound.
First use Mar. 16, 1938, on stroboscopes.

SN 135,207. Kollsman Instrument Corporation, Elmhurst, N.Y. Filed Jan. 4, 1962.

PISTOLASER

For Light Amplifying Device Utilizing the Principle of Producing Energy Directly From Excited Molecules or Atoms (Lasers).
First use Dec. 19, 1961.

SN 136,962. Daymarc Corporation, Waltham, Mass. Filed Jan. 31, 1962.

DAYMARC

For Electrical Element Holding and Testing Devices.
First use Dec. 21, 1961.

SN 138,062. Sterling Automotive Manufacturing Co., Elk Grove Village, Ill. Filed Feb. 15, 1962.

STERLING

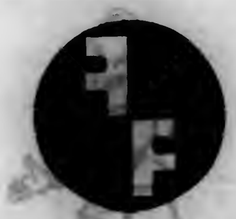
For Thermostats for Engine Cooling Systems.
First use Apr. 20, 1961.

SN 139,605. Diamond Power Specialty Corporation, Lancaster, Ohio. Filed Mar. 12, 1962.

DIAMOND POWER

Owner of Reg. Nos. 279,300, 284,934, and 684,410.
For Liquid Level Gauges and Telegauges Comprising Both Gauges per se, and Means for Transmitting to a Remote Location the Information as to Liquid Level as Determined by the Gauges per se, Such Means for Transmitting Said Intelligence Comprising Optical Systems Including Mirrors, Viewing Hoods and Ducts, and Electronic Systems, Said Electronic Systems Including Cable-Connected Television Apparatus for Transmitting the Liquid Level Indication to a Remote Location.
First use May 10, 1961.

SN 143,029. Impulsphysik Dr. Ing. Frank Früngel G.m.b.H., Hamburg-Rissen, Germany. Filed Apr. 25, 1962.



Owner of German Reg. No. 689,209, dated Apr. 4, 1956.
For Stroboscopes, Electronic Flashers, High Voltage Pulse Generators, Electronic Pulse Discharge Generators, Electric Impulse Discharge Generators, High Voltage Testers for Cable Testers and the Like, Electric Spark Pulse Generators, Electronic Calculators and Ultra-Sound Generators.

SN 143,581. Torpedo Buromaschinen Werke A.G., Frankfurt am Main-Rodelheim, Germany. Filed May 1, 1962.

DYNACORD

Owner of German Reg. No. 753,764, dated Oct. 11, 1961.
For Calculating Machines, Calculating Typewriters, Bookkeeping Machines, Tabulating Stops for Bookkeeping Machines, and Adding Machines.

SN 143,638. Kollsman Instrument Corporation, Elmhurst, N.Y. Filed May 2, 1962.

KIFIS

For Integrated Flight Instrument Systems Including Altitude Indicators, True Air Speed Indicators, Computers for Processing Correction Information Therefor and Static Pressure Determining Systems for Aircraft and Parts Therefor.
First use Apr. 1, 1959.

SN 143,690. TECA Corporation, White Plains, N.Y. Filed May 2, 1962.

TECA

Owner of Reg. Nos. 530,554, 666,555, and others.
For Electronic Generators for Testing Purposes; Cathode Ray Indicators; Electric Current Control Instruments for Measurement and Testing Purposes, Such as Regulated D.C. Continuous Current Generators, Regulated Uni-Directional Current Pulse Generators; Electrodes and Fittings and Accessories Therefor; Recording Devices, Including Magnetic Tape and Photographic Cathode Ray Recorders; and Apparatus Regulating Electric Currents for Testing Purposes.
First use July 2, 1941.

SN 145,655. Astrosonics, Inc., Syosset, N.Y. Filed May 29, 1962.

THE ASTROLAB

For Kit Including a Mechanical-Acoustical Gas-Driven, Self-Sustaining Oscillating Sound Generator and Accessories Therefor.
First use June 23, 1961.

SN 145,819. FMC Corporation, San Jose, Calif. Filed May 31, 1962.



For Automotive Servicing Equipment—Namely, Wheel Aligners and Balancers.
First use July 8, 1960.

SN 153,495. The Lionel Corporation, Hillside, N.J. Filed Sept. 19, 1962.

BIOCRAFT

For Educational and Scientific Equipment and Materials for Use by Beginners and Students in Conducting Scientific Experiments.
First use March 1959.

SN 154,170. Sterneo Industries, Inc., Allendale, N.J. Filed Sept. 28, 1962.

DELTA

For Thermometers for Aquarium Tanks.
First use Sept. 4, 1962.

SN 154,736. The Lionel Corporation, New York, N.Y. Filed Oct. 8, 1962.

LIONEL

Owner of Reg. Nos. 173,957, 313,353, and 735,256.
For Microscopes, Chemical Balances, Centrifuges, and Agitators for Testing Purposes.
First use September 1961.

SN 156,411. HollyCam Inc., d.b.a. Hollywood Camera Co., Hollywood, Calif. Filed Nov. 1, 1962.

ARRATAR

For Photographic Lenses.
First use Aug. 17, 1961.

SN 156,425. Minneapolis-Honeywell Regulator Company, Minneapolis, Minn. Filed Nov. 1, 1962.

CELION

For Ion Sensing Devices.
First use Sept. 21, 1962.

SN 156,561. Levi C. Chaplowsky, Bangor, Wis. Filed Nov. 5, 1962.

LAN-O-TURN

For Devices for Holding Photographic Transparencies.
First use Aug. 21, 1962.

SN 156,849. American Nuclear Corporation, Oak Ridge, Tenn. Filed Nov. 8, 1962.



For Nuclear Radiation, Detection and Measuring Apparatus.
First use Mar. 18, 1962.

SN 156,850. American Nuclear Corporation, Oak Ridge, Tenn. Filed Nov. 8, 1962.

RAY-D-TEC

For Apparatus for Detecting and Measuring Nuclear Radiation.
First use Mar. 18, 1962.

SN 156,890. The Leneta Company, Ho-Ho-Kus, N.J. Filed Nov. 8, 1962.

PENOPAC

For Paint Test Charts Designed for Testing Penetration Resistance and Opacity of Paints.
First use June 27, 1956.

SN 156,939. CRS Industries Inc., Philadelphia, Pa. Filed Nov. 9, 1962.

COSA/TRON

For Contamination Control Apparatus.
First use Nov. 6, 1962.

SN 157,201. The Eastern Company, Naugatuck, Conn. Filed Nov. 14, 1962.

KELVIN-WHITE

For Marine Compasses.
First use 1938.

SN 157,573. Sidney C. Smith, d.b.a. Smythe Engineering, Chandler, Ind. Filed Nov. 19, 1962.

"Axcelo"

For Electrical Instruments for Measuring Acceleration and Deceleration of Motor Driven Vehicles.
First use Oct. 10, 1962.

Class 27 — Horological Instruments

SN 126,129. Noble H. Stibolt, Matteson, Ill. Filed Aug. 16, 1961.

METRICTIME

For Time Pieces and Graduated Faces for Time Pieces.
First use Apr. 24, 1955.

SN 134,954. Ebauches S.A., Neuchatel, Switzerland. Filed Jan. 2, 1962.

dynotron

Priority is claimed under Sec. 44(d) on Swiss Reg. No. 188,719, dated Oct. 6, 1961.
For Electric and Electronic Timepieces and Parts Thereof.

SN 134,955. Ebauches S.A., Neuchatel, Switzerland. Filed Jan. 2, 1962.

dynotronic

Priority claimed under Sec. 44(d) on Swiss Reg. No. 188,720, dated Oct. 6, 1961.
For Electric and Electronic Timepieces and Parts Thereof.

SN 141,994. Sunbeam Corporation, Chicago, Ill. Filed Apr. 10, 1962.

CHIEF

For Clocks.
First use on or about July 1, 1961.

SN 143,789. Benrus Watch Company, Inc., New York, N.Y. Filed May 4, 1962.

ULTRADEEP

For Watches.
First use Feb. 28, 1962.

SN 154,199. Belforte Watch Company, Inc., New York, N.Y. Filed Oct. 1, 1962.

QALCO

For Watches.
First use Aug. 29, 1962.

SN 154,200. Belforte Watch Company, Inc., New York, N.Y. Filed Oct. 1, 1962.

QUALCO

For Watches.
First use Aug. 29, 1962.

SN 154,243. Gruen Industries, Inc., d.b.a. The Gruen Watch Company, New York, N.Y. Filed Oct. 1, 1962.

AMERICAN FASHION FIRST

Owner of Reg. No. 398,926.
For Watches.
First use Feb. 7, 1941.

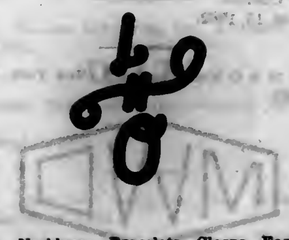
Class 28 — Jewelry and Precious-Metal Ware

SN 127,758. Florence Lustig Crossman, d.b.a. Florence Lustig, Bay Harbor Islands, Miami Beach, Fla. Filed Sept. 13, 1961.

LUSTIGEM

For Costly Synthetic Gems Set in Precious Metal and Sold in the Form of Finished Jewelry.
First use Mar. 20, 1961.

SN 133,399. L. Harris Ogden, Limited, Atlanta, Ga. Filed Dec. 5, 1961.



For Rings, Necklaces, Bracelets, Clasps, Earrings, Pins, and Charms, Made of Precious and Semi-Precious Metals and Jewels.
First use Oct. 16, 1961.

SN 139,767. Morton Marks, d.b.a. Division Sales, Chicago, Ill. Filed Mar. 13, 1962.

Every Day of The Week

For Jewelry—Namely, Cuff Links, Tie Holders, Rings, Earrings, Finger Rings, Pendants, Necklaces, Charm Bracelets, Bracelets, Charms, Jewelry Clips, Brooches, and Lockets.
First use Feb. 19, 1962.

SN 140,446. Harry Guise, Inc., New York, N.Y. Filed Mar. 22, 1962.



For Rings.
First use January 1952.

SN 141,262. Ray Curran & Co., Providence, R.I. Filed Apr. 2, 1962.

MR. EXECUTIVE

For Men's Jewelry—Namely, Tie Clasps, Cuff Links, Tie Bars, Collar Bars, and Dress Sets, and the Following Goods Made in Whole or in Part From Precious Metals: Key Chains, Key Tags, Money Clips, and Belt Buckles.
First use September 1959.

SN 143,918. Baldwin-Miller Company, Inc., Indianapolis, Ind. Filed May 7, 1962.

B-M CO

For Wedding Rings, Mountings, Diamond Rings, Stone Rings, Both Ladies' and Men's Styles, and Other Jewelry.
First use Feb. 15, 1912.

SN 144,049. Coronet Jewelry Manufacturing Co., New York, N.Y. Filed May 8, 1962.



Applicant disclaims "14K" apart from the mark as shown.
For Ladies' Charms.
First use Feb. 15, 1962.

SN 144,399. M & D Wakshlag Corp., New York, N.Y. Filed May 11, 1962.



For Watch Bracelets Without Movements.
First use Apr. 18, 1962.

SN 144,645. Rogers, Lunt & Bowlen Company, Greenfield, Mass. Filed May 15, 1962.



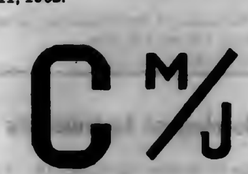
For Sterling Silver Hollowware and Novelty Items—Namely, Salt and Pepper Shakers, Infants' and Children's Cups, Brush and Comb Sets and Diaper Pins.
First use March 1961.

SN 145,609. Lawrence Reich, d.b.a. Reich Jewelry, Detroit, Mich. Filed May 28, 1962.



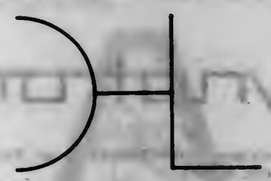
For Finger Rings and Other Jewelry for Personal Wear.
First use 1956.

SN 146,588. Cordova Inc., New York, N.Y., by change of name from Cordova Watch Corporation, New York, N.Y. Filed June 11, 1962.



For 14 Karat Gold Jewelry.
First use June 1, 1962.

SN 147,397. Stanley J. Prokop, Sr., d.b.a. Stanley Prokop, Jeweler, Alliance, Nebr. Filed June 21, 1962.



For Finger Rings, Brooches and Pins, Finger Ring Sizing Adapters, Belt Buckles Made of Precious Metals.
First use October 1954.

SN 150,950. Julius Katz, d.b.a. Julius Katz & Son, New York, N.Y. Filed Aug. 10, 1962.

KI

For Jewelry for Personal Wear.
First use May 30, 1962.

SN 152,828. Rodman & Yaruss Refining Co. Inc., New York, N.Y. Filed Sept. 10, 1962.



For Jewelry—Namely, Discs, Charms, Coin Frames, Tie Clasps, Buckles, Money Clips, Cufflinks, Crosses, Jewish Stars, Religious Jewelry, Letters, Numerals, and Bracelets, All of 14 Karat Gold.
First use June 1954.

SN 154,438. Morris Rosenbloom & Co., Inc., Rochester, N.Y. Filed Oct. 3, 1962.

ENDEARMENT

Owner of Reg. No. 425,986.
For Finger Rings and Costume Jewelry.
First use at least as early as Dec. 10, 1945, on finger rings.

Class 29—Brooms, Brushes, and Dusters

SN 150,087. Marwin Products, Jefferson, Tex. Filed July 30, 1962.



For Brooms and Mops.
First use on or about Nov. 26, 1954.

SN 154,771. Rubon, Incorporated, Independence, Mo. Filed Oct. 8, 1962.



Owner of Reg. No. 206,454.
For Dust Cloths, Duster, Dust Mops, Water Mops, Wax Spreaders, and Wax Polishing Brushes.
First use July 1956.

SN 156,643. National Silver Company, New York, N.Y. Filed Nov. 5, 1962.

CAVALIER

For Battery Operated Toothbrushes and Battery Operated Hair Brushes.
First use Oct. 26, 1962.

Class 30—Crockery, Earthenware, and Porcelain

SN 108,514. Societa Ceramica Italiana Societa per Azioni, Laveno, Varese, Italy. Filed Nov. 15, 1960.



Priority claimed under Sec. 44(d) on Italian application filed Sept. 30, 1960; Reg. No. 161,247, dated Feb. 19, 1963. The exclusive use of the words "Laveno Italy" as shown in the drawing of applicant's mark is disclaimed apart from the trademark as a whole.
For Ceramic Table Ware; Stoneware; Porcelain Knick-Knacks; Pottery, Household Ware, Cups and Dishes Made of Earthenware, Majolica, Ceramic Porcelain, and Vitreous China.

SN 144,076. Marion E. Lang, d.b.a. Peacock Enamels, Needham, Mass. Filed May 8, 1962.

PEACOCK

For Enameled Dishes for Decorative Purposes and for Serving Canapes and Confections.
First use June 1958.

SN 144,846. The Inerto Company, San Francisco, Calif. Filed May 17, 1962.

MACALOID

Owner of Reg. No. 571,002.
For Thickening Agent in the Form of Refined Clay for Ceramics.
First use about August 1952.

Class 31—Filters and Refrigerators

SN 143,493. A/S Atlas, Copenhagen, Denmark. Filed May 1, 1962.

CRYSTAL PRINCE

Owner of Danish Reg. No. 833/61, dated Oct. 7, 1961.
For Domestic Refrigerators, Display Refrigerator Cabinets, and Other Apparatus of Refrigeration.

SN 154,171. Sternco Industries, Inc., Allendale, N.J. Filed Sept. 28, 1962.

DELTA

For Aquarium Tank Accessories—Namely, Air and Water Filters.
First use Sept. 4, 1962.

SN 154,557. CHD Pool Equipment, Inc., South El Monte, Calif. Filed Oct. 5, 1962.

CHD

For Pool Filtering Equipment.
First use July 30, 1960.

Class 32 — Furniture and Upholstery

SN 103,124. The Englander Company, Inc., Chicago, Ill. Filed Aug. 22, 1960.

CHEMFOAM

For Mattresses and Box Springs.
First use Aug. 15, 1960.

SN 103,125. The Englander Company, Inc., Chicago, Ill. Filed Aug. 22, 1960.

KEMFOAM

For Mattresses and Box Springs.
First use Aug. 15, 1960.

SN 126,328. Forcite, Inc., College Point, N.Y. Filed Aug. 21, 1961.

Foam Rubber CITY

No claim is made to the words "Foam Rubber" apart from the mark as shown. Owner of Reg. No. 716,130.
For Furniture—Namely, Couches, Tables, Benches, Stools, Chairs, Sofas, Beds and Bed Headboards.
First use Aug. 5, 1960.

SN 133,553. Executive Furniture Guild of America, Grand Rapids, Mich. Filed Dec. 7, 1961. COLLECTIVE MARK.

EXECUTIVE FURNITURE GUILD OF AMERICA

For Office Furniture—Namely, Desks, Table Units, Cabinet Units, Shelf Units, Filing Units, Seating Units, and Mirrors.
First use Oct. 1, 1948.

SN 133,554. Executive Furniture Guild of America, Grand Rapids, Mich. Filed Dec. 7, 1961. COLLECTIVE MARK.

GUILD HOUSE

For Desks, Tables, Movable Cabinets, Shelf Units, Filing Units, Chairs, and Mirrors.
First use Oct. 16, 1961.

SN 138,826. Hatfield Industries, Inc., d.b.a. Warehouse Storage Systems Co., Hatfield, Pa. Filed Feb. 28, 1962.



Applicant makes no claim to the word "Rack" apart from the mark as shown. The drawing is lined for red but no claim is made to this color as a feature of the mark.
For Merchandise Storage Racks for Warehousing.
First use Dec. 12, 1961.

SN 141,941. Gameo Products, Inc., Big Spring, Tex. Filed Apr. 10, 1962.

MATH-MASTER

Owner of Reg. Nos. 693,200 and 695,813.
For Furniture—to wit, School Room Desks.
First use Dec. 29, 1960.

SN 155,060. Dandy Mattress Corporation, Brooklyn, N.Y. Filed Oct. 12, 1962.

A SILVER CROSS PRODUCT

For Mattresses, Box Springs, Crib Mattresses, and Studio Couches.
First use in June 1961.

SN 155,787. Disa Corporation, New York, N.Y. Filed Oct. 24, 1962.

GARDEN OF EDEN

For Awnings.
First use Oct. 9, 1962.

SN 157,414. Oscar M. Stanley Inc., New York, N.Y. Filed Nov. 16, 1962.

ALAMBRAX

For Articles of Furniture and More Specifically Interlocking Shelves.
First use as early as February 1962.

SN 158,151. Gleitsman's, Inc., Long Island City, N.Y. Filed Nov. 29, 1962.

RISE-O-MATIC

For Vanity Tables, Make-Up Tables, Valets, and Valet and Seat Combinations.
First use Nov. 21, 1962.

SN 158,246. The General Fireproofing Company, Youngstown, Ohio. Filed Nov. 30, 1962.

GF

Owner of Reg. Nos. 286,715, 287,258, and 503,051.
For Desks and Consoles.
First use Apr. 10, 1962; as early as Apr. 29, 1961, in another style.

SN 158,276. Sealy, Incorporated, Chicago, Ill. Filed Nov. 30, 1962.

POSTURE-POISE

For Mattresses and Box Springs.
First use Aug. 30, 1962.

SN 158,362. Mullins Manufacturing Corporation, Warren, Ohio. Filed Dec. 3, 1962.

EPIC

For Wood, Steel, and Plastic Cabinets of All Kinds—Namely, Kitchen, Under-Sink, Dishwasher, Wall, Base, Linen, Broom, and Corner; Revolving Shelves, Condiment Shelves, What-Not Shelves, Counter Tops, Vanitories, Storage Closets, and the Like.
First use on or about Oct. 8, 1962.

SN 158,363. Mullins Manufacturing Corporation, Warren, Ohio. Filed Dec. 3, 1962.

DIANA

For Wood, Steel, and Plastic Cabinets of All Kinds—Namely, Kitchen, Under-Sink, Dishwasher, Wall, Base, Linen, Broom, and Corner; Revolving Shelves, Condiment Shelves, What-Not Shelves, Standing Shelves, Counter Tops, Vanitories, Storage Closets, and the Like.
First use on or about Oct. 29, 1962.

SN 158,429. Charlton Company, Inc., Fitchburg, Mass. Filed Dec. 4, 1962.

REDONDO

For Living Room Chairs.
First use Nov. 14, 1962.

SN 158,555. Oak Hill Company, Fitchburg, Mass. Filed Dec. 5, 1962.

TWEEN

For Juvenile Furniture.
First use on or about Oct. 15, 1962.

SN 158,666. Thomasville Furniture Industries, Inc., Thomasville, N.C. Filed Dec. 6, 1962.



For Dressers, Chests, Buffets, Chinas, Servers, and Living Room Tables.
First use Aug. 31, 1962.

SN 159,493. Iron-A-Way, Inc., Peoria, Ill. Filed Dec. 20, 1962.

IRON-A-WAY

For Cabinet for Foldable Ironing Board and Iron.
First use Nov. 28, 1958.

SN 159,502. The Lane Company, Inc., Altavista, Va. Filed Dec. 20, 1962.

SWEETHEART CHEST

The word "Chest" is disclaimed apart from the other features of the mark.
For Cedar Chests.
First use March 1959.

SN 159,681. Bedding Manufacturers Associates, Inc., Philadelphia, Pa. Filed Dec. 26, 1962.

STARDUST

For Mattresses, Upholstered Chairs, Sofa Beds.
First use March 1960.

SN 159,761. Multipurpose Bed Co., Inc., Los Angeles, Calif. Filed Dec. 26, 1962.

V.I.C.

For Chairs.
First use July 10, 1962.

Class 33 — Glassware

SN 147,764. Skloexport, Podnik Zahranicniho Obchodu pro Vyvoz Skla, Prague, Czechoslovakia. Filed June 26, 1962.



No claim is made to the words "Bohemia" and "Glass" apart from the association shown in the drawing. Owner of Czechoslovakian Reg. No. 154,026, dated Oct. 5, 1959.
For Glass and Glassware—Namely, Raw Glass; Refined Glass; Sheet Glass; Plate Glass; Window Glass; Laminated Glass; Mirror Glass; Optical Glass; Table, Kitchen and Cooking Ware; Glassware for Household, Hotel and Hospital Use; Serving Dishes; Trays; Bottles; Drinking Glasses; Stemware; Bowls; Jars; Cruets; Jugs; Pitchers; Vials; Tumblers; Goblets; Mugs; Carafes; Flasks; Decanters; Beverage Mixers and Shakers; Glass Boxes and Other Glass Containers; Muddlers; Stirrers; Flower Pots and Plates; Vases; Patterned Architectural Glass; Ornamental Glassware; Glass Tubing and Filterings Therefor; Lamp Shades and Lamp Bowls; Glass Reflectors.

SN 149,902. Aktiebolaget Kosta Glasbruk, Kosta, Sweden. Filed July 27, 1962.

KOSTA

For Glassware—Namely, Vases, Ash Trays, Tumblers, Drinking Glasses, Ornaments, Decorative Articles, Bottles, Jars, Jugs, Pitchers, Candle Sticks, and Lamps.
First use 1742; in commerce 1956.

SN 149,903. Aktiebolaget Kosta Glasbruk, Kosta, Sweden. Filed July 27, 1962.



For Glassware—Namely, Vases, Ash Trays, Tumblers, Drinking Glasses, Ornaments, Decorative Articles, Bottles, Jars, Jugs, Pitchers, Candle Sticks, and Lamps.
First use 1956; in commerce 1956.

SN 165,604. Crichton K. Leong, d.b.a. C. K. Leong Co., Los Angeles, Calif. Filed Mar. 28, 1963.

LIFE OF THE PARTY

For Drinking Glasses.
First use Mar. 14, 1963.

Class 34 — Heating, Lighting, and Ventilating Apparatus

SN 118,956. Carrier Corporation, Syracuse, N.Y. Filed May 1, 1961.

Payne

Owner of Reg. Nos. 568,157 and 675,578.
For Water Heaters.
First use Aug. 12, 1960.

SN 132,023. Brighton Corporation, Cincinnati, Ohio. Filed Nov. 15, 1961.

"TRU-EDGE"

For Sheet Metal and Plate Head for Attachment to the Ends of Boilers, Tanks, and Other Hollow Bodies.
First use Oct. 15, 1959.

SN 143,947. Flint Barbecues, Inc., Woodside, N.Y. Filed May 7, 1962.



For Outdoor Barbecues and Parts Therefor.
First use Dec. 29, 1961.

SN 147,115. J. Ch. Herrmann, Nurnberg, Germany. Filed June 18, 1962.



The word "Candle" and the representation of the goods are disclaimed apart from the mark as shown. Owner of German Reg. No. 720,671, dated Dec. 23, 1958.
For Sanctuary Candles, Christmas Candles, Household Candles, Night Lights, Block Lights, and Wicks for Eternal Lights.

SN 147,648. Thermoflash Limited, London, England. Filed June 25, 1962.

THERMOFLASH

Owner of British Reg. No. B803,062, dated July 22, 1960.
For Installations for Distilling Water (Other Than Experimental Stills) and Domestic Water Boilers and Heaters Using Oil and Gas.

SN 154,172. Sternco Industries, Inc., Allendale, N.J. Filed Sept. 28, 1962.

DELTA

For Heaters for Aquarium Tanks.
First use Sept. 4, 1962.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

SN 99,187. Associated Engineering Limited, Leamington Spa, England. Filed June 17, 1960.

AE

Priority claimed under Sec. 44(d) on British Reg. No. B800,289, dated Jan. 13, 1960.
For Piston Rings.

SN 135,412. Western Auto Supply Company, Kansas City, Mo. Filed Jan. 8, 1962.

PREMIUM DAVIS SENTRY

"Premium" is disclaimed apart from the mark, as shown. Owner of Reg. Nos. 670,624; 710,262, and others.
For Automobile Tires.
First use Nov. 30, 1961.

SN 160,728. Tresco Industries, Inc., Tuckahoe, N.Y. Filed Jan. 15, 1963.

ACTIVATED TRACTION

For Tires and Tread Rubber.
First use Oct. 31, 1962.

SN 160,764. The Firestone Tire & Rubber Company, Akron, Ohio. Filed Jan. 16, 1963.

MOLI-CURE

For Tire and Tube Patches and Repair Materials.
First use Dec. 21, 1962.

SN 160,765. The Firestone Tire & Rubber Company, Akron, Ohio. Filed Jan. 16, 1963.

MULTI-CURE

For Rubber Tubes Used for the Curing of Tires.
First use Sept. 26, 1962.

SN 165,400. Monarch Mufflers, Inc., Rochester, N.Y. Filed Mar. 26, 1963.

MONARCH

For Brake Lining for Automotive Use.
First use July 9, 1962.
Subj. to Intf. with SN 137,253 and SN 163,919.

Class 36 — Musical Instruments and Supplies

SN 114,796. Sesac, Inc., New York, N.Y. Filed Mar. 2, 1961.



For Phonograph Records.
First use Jan. 31, 1957.

SN 121,322. Sanders Associates, Incorporated, Nashua, N.H. Filed June 2, 1961.

ZERO-START

For Magnetic Tape Recorders, Phonographs, Dictation Machines.
First use May 24, 1961.

SN 135,459. Verne Q. Powell Flutes, Inc., Boston, Mass. Filed Jan. 9, 1962.



For Flutes and Piccolos.
First use on or about Jan. 1, 1927.

SN 136,639. Dorsett Electronics, Inc., Norman, Okla. Filed Jan. 26, 1962.

NARRATOR

For Compact Tape Recorder and Playback Device.
First use Nov. 17, 1961.

SN 140,934. Electronic Futures Inc., New Haven, Conn. Filed Mar. 28, 1962.

AUDIO NOTEBOOK

The word "Audio" is hereby disclaimed as a part of the mark.
For Tape Recording and Reproducing Apparatus.
First use Dec. 27, 1961.

SN 146,752. H. H. Scott, Inc., Maynard, Mass. Filed June 12, 1962.

H.H. Scott

Owner of Reg. Nos. 730,718 and 730,719.
For Recording and Reproducing Amplifier Equipment and Parts Thereof Including Phonograph Record and Magnetic Tape Recording and Reproducing Equipment; Phonograph Disc Records; Loudspeakers and Cabinets Therefor; Turntable Apparatus Including Phonograph Record Players, Pickups and Arms.
First use in or about the fall of 1955.

SN 146,753. H. H. Scott, Inc., Maynard, Mass. Filed June 12, 1962.

Scott

Owner of Reg. Nos. 730,718 and 730,719.
For Recording and Reproducing Amplifier Equipment and Parts Thereof Including Phonograph Record and Magnetic Tape Recording and Reproducing Equipment; Phonograph Disc Records; Loudspeakers and Cabinets Therefor; Turntable Apparatus Including Phonograph Record Players, Pickups and Arms.
First use in or about early 1955.

SN 165,534. St. Louis Music Supply Company, St. Louis, Mo. Filed Mar. 27, 1963.

Custom Kraft



For Guitars, Ukuleles, Reeds, Mutes, Trumpets, Cornets, Clarinets, Flutes, French Horns, Drums, Bass-Violins, Violins, Violas, Cellos, Banjos, Trombones, Baritones, Alto Horns, Sousaphones, Tubas, Saxophones, Piccolos, and Harmonicas.
First use on or about Sept. 1, 1938.

Class 37 — Paper and Stationery

SN 131,051. Laurel Cards, Inc., Waukegan, Ill. Filed Oct. 31, 1961.

LAUREL

Owner of Reg. No. 532,519.
For Paper for Gift-Wrapping Purposes and the Like.
First use June 15, 1961.

SN 135,013. Walter Lantz Productions, Inc., Hollywood, Calif. Filed Jan. 2, 1962.

WOODY WOODPECKER

Owner of Reg. No. 558,834.
For Paperware—Namely, Napkins, Plates, and Cups.
First use December 1957.

SN 147,180. The Appleton Coated Paper Company, Appleton, Wis. Filed June 19, 1962.



For Off-the-Paper-Machine Surface Coated Papers, for Example, Letterpress and Offset Commercial Printing Coated Papers and Industrial Coated Papers.
First use May 1, 1962.

SN 147,575. Hamac-Hansella Maschinen GmbH, Dusseldorf, Germany. Filed June 25, 1962.

TUFFSEAL

Priority claimed under Sec. 44(d) on German application filed Apr. 7, 1962; Reg. No. 762,689, dated June 25, 1962.
For Packaging Materials—Namely, Paper, Cardboard, and Plastic Material in Sheet Form, Particularly Thermoplastic Sheet, for Wrapping Purposes.

SN 153,858. Binney & Smith Inc., New York, N.Y. Filed Sept. 25, 1962.

THE CRAYOLA MAKERS

Owner of Reg. Nos. 248,611, 650,515, and others.
For Kit Containing Crayons, a Book of Crayon Projects, and a Crayon Sharpener.
First use July 17, 1959.

Class 38 — Prints and Publications

SN 130,940. Official Films, Inc., New York, N.Y. Filed Sept. 27, 1961.

BIOGRAPHY

For Motion Picture Films.
First use Dec. 18, 1960.

SN 138,075. Bell & Gossett Company, Morton Grove, Ill. Filed Feb. 16, 1962.

HYDRO-GRAF

For Design Handbooks and Work Sheets of a Technical Nature Useful in the Design of Hot Water Heating Systems.
First use Feb. 8, 1962.

SN 138,884. The Board of Publication of the Methodist Church, Inc., d.b.a. Abingdon Press, Nashville, Tenn. Filed Feb. 21, 1962.

ABINGDON PRESS

For Books.
First use in or about 1923.

SN 139,900. Thompson Farms Company, Chicago, Ill. Filed Mar. 14, 1962.



For House Organ Published Periodically Pertaining to Packing and Sales of Meat and Meat Products.
First use June 15, 1952.

SN 140,376. Wm. Waddington, Jr., d.b.a. Naconic, Chicago, Ill., assignee of National Conservative League, Inc., Chicago, Ill. Filed Mar. 21, 1962.

THE CONSERVATIVE

For Monthly Magazine.
First use Jan. 26, 1962.

SN 140,611. Corporation for the National Association of Congregational Christian Churches of the United States, Milwaukee, Wis. Filed Feb. 21, 1962.



Owner of Reg. No. 682,220.
For Brochures Published at Frequent Intervals.
First use Sept. 1, 1961.

SN 154,203. Barnet Bookspan, d.b.a. Educrafts, Detroit, Mich. Filed Oct. 1, 1962.



For Trigonometry Pad.
First use June 29, 1962.

SN 154,432. Parke, Davis & Company, Detroit, Mich. Filed Oct. 3, 1962.

MEDICAMENTA VERA

Owner of Reg. No. 743,815.
For Publication for the Medical Profession.
First use on or before May 19, 1962.

SN 154,559. The Catholic Digest Publications, Inc., St. Paul, Minn. Filed Oct. 5, 1962.

THE CATHOLIC MARKET

For Magazine.
First use July 10, 1959.

SN 154,699. Dell Publishing Co., Inc., New York, N.Y. Filed Oct. 8, 1962.

DELTA

For Books.
First use Sept. 12, 1962.

Class 39 — Clothing

SN 111,851. Bettee Hosiery Mills, Inc., San Mateo, Calif. Filed Jan. 16, 1961.



Owner of Reg. Nos. 532,439 and 717,916.
For Women's Clothing—Namely, Hosiery and Panties.
First use in or about September 1956.

SN 112,010. Youthcraft Creations, Inc., New York, N.Y. Filed Jan. 17, 1961.

PANTEX

For Panty Girdles of Woven, Elastic, Synthetic Fibers.
First use Dec. 19, 1960.

SN 121,351. Bodner Neckwear Company, Philadelphia, Pa. Filed June 5, 1961.

ROYALIST

For Neckties and Men's Hosiery.
First use 1928.

SN 124,078. Genesco Inc., Nashville, Tenn., assignee of The Formfit Company, Chicago, Ill. Filed July 17, 1961.

AFTER FIVE

Owner of Reg. No. 714,780.
For Brassieres and Girdles Designed for Evening Wear by Mature Women.
First use July 7, 1961.

SN 124,159. American Biltrite Rubber Co., Inc., Chelsea, Mass. Filed July 18, 1961.

VINALON

For Shoe Soles of Molded Plastic Material.
First use May 22, 1961.

SN 127,901. Butler's Shoe Corporation, Atlanta, Ga. Filed Sept. 15, 1961.



For Boys' and Girls' Shoes.
First use Aug. 14, 1961.

SN 128,064. Maidenform, Inc., New York, N.Y. Filed Sept. 18, 1961.

KEY SIGNATURES

For Foundation Garments.
First use Aug. 22, 1961.

SN 136,615. Youthcraft Creations, Inc., New York, N.Y. Filed Jan. 25, 1962.

SHEER HEAVEN

For Girdles.
First use Dec. 20, 1961.

SN 137,158. D. S. Peterman & Company, York, Pa. Filed Feb. 2, 1962.

PETERMAN

For Boots and Shoes of All Styles and Types Made of Leather, Rubber, Fabric, Synthetic Resins or Combinations Thereof, for Men, Youths, Boys, Women, Misses, Children, and Infants.
First use on or about Jan. 15, 1942.

SN 140,953. I. B. Kleinert Rubber Company, New York, N.Y. Filed Mar. 28, 1962.

POMPADORE

For Bathing Caps.
First use Dec. 20, 1961.

SN 141,591. Exquisite Form Industries, Inc., New York, N.Y. Filed Apr. 5, 1962.

HI-LOW WITCHERY

For Brassieres.
First use January 1955.

SN 141,850. Lady Lynne Lingerie, Inc., New York, N.Y. Filed Apr. 9, 1962.

LADY LYNNE

The name "Lady Lynne" is the name of a fictitious person.
Owner of Reg. Nos. 618,687 and 625,914.
For Slips, Nightgowns, Brassieres, and Girdles for Women.
First use Jan. 3, 1956.

SN 141,909. Weinberg Corporation, Chicago, Ill. Filed Apr. 9, 1962.

PEERS OF THE REALM

For Men's and Boys' Suits, Outercoats, Jackets, and Slacks.
First use Mar. 9, 1962.

SN 142,214. Penobscot Shoe Company, Boston, Mass. Filed Apr. 13, 1962.



No claim is made to the abbreviation "Jrs." apart from the mark shown. Owner of Reg. Nos. 394,070, 430,589, and 437,707.
For Moccasins.
First use Apr. 2, 1951.

SN 142,315. Golf, Inc., Hialeah, Fla. Filed Apr. 16, 1962.

By Ernest



For The Carriage Trade

For Suits, Sportcoats, Slacks, and Belts for Men.
First use Nov. 29, 1961.

SN 149,012. Specialty Importers, Inc., Scarsdale, N.Y. Filed July 13, 1962.

SPEEDFIT

For Ski Boots.
First use June 1, 1956.

SN 149,394. Kayser-Roth Corporation, New York, N.Y. Filed July 19, 1962.

ULTRA-TWIST

For Ladies' Hosiery.
First use May 29, 1941.

SN 149,716. County Clothes, Inc., Levittown, N.Y. Filed July 25, 1962.

CRAMFORD

For Suits, Topcoats, Overcoats, Slacks, Sport Jackets, Shirts for Men, Women, and Boys.
First use May 28, 1962.

SN 154,294. Ruth Originals Corp., Hendersonville, N.C. Filed Oct. 1, 1962.

THINKING CAPS

Apart from the mark as shown on the drawing, and for the purpose of registration only, the word "Caps" is disclaimed.
For Hats.
First use on or about Jan. 15, 1962.

SN 154,808. Fredrick and Stanley Goldman, New York, N.Y., assignee of Eagle Clothes, Inc., New York, N.Y. Filed Oct. 9, 1962.

M'SIEUR SLACKS

The word "Slacks" is disclaimed apart from the mark as shown.
For Slacks for Men and Young Men.
First use Sept. 24, 1962.

SN 155,160. Lamet International, Incorporated, New York, N.Y. Filed Oct. 15, 1962.

STATUS



For Shoes.
First use June 27, 1962.

SN 155,176. Nierman's Tall Girl Shoes, Inc., Chicago, Ill. Filed Oct. 15, 1962.

CEE-DEE-ETTES

For Girls' and Women's Shoes.
First use on or about Sept. 1, 1962.

SN 155,367. Geo. W. Bollman & Co., Inc., Adamstown, Pa. Filed Oct. 18, 1962.

bolfelt

For Hats.
First use on or about July 15, 1962.

SN 155,553. Angelica Uniform Company, St. Louis, Mo. Filed Oct. 22, 1962.

FREOSTAT

For Garments for Clean-Room Usage, Being Resistant to Dust, Lint, and Like Atmospheric Impurities, Including Coveralls, Frocks, Smocks, Foot Coverings, Head Covers, Gloves, and Caps.
First use Oct. 8, 1962.

SN 155,573. Chipp Inc. of New York, New York, N.Y. Filed Oct. 22, 1962.

CHIPPWORTH

For Men's Clothing—Namely, Suits, Sport Coats, Slacks, Top Coats, and Overcoats.
First use Apr. 22, 1959.

SN 155,690. Chappell Allen & Co. Limited, Redfield, Bristol, England. Filed Oct. 23, 1962.

PERSUASION

Owner of British Reg. No. 828,990, dated Dec. 27, 1961.
For Brassieres, Corsets, Corselettes, Girdles (Corsets), and Suspender Belts.

SN 155,717. Hat Corporation of America, Norwalk, Conn. Filed Oct. 23, 1962.

CHARLES KNOX

The name "Charles Knox" is that of the deceased founder of the business of applicant's predecessor. Owner of Reg. Nos. 50,790 and 260,850.
For Men's Hats.
First use Oct. 12, 1962; 1840 as to "Knox."

SN 155,750. Shelburne Shirt Co. Inc., New York, N.Y. Filed Oct. 23, 1962.

ULTIMO

For Men's and Boys' Sport and Dress Shirts.
First use on or about July 1, 1959.

SN 155,968. Camp and McInnes, Inc., Reading, Pa. Filed Oct. 26, 1962.

SAILORS KNOT

For Men's Hosiery.
First use Oct. 10, 1962.

SN 156,005. Maidenform, Inc., New York, N.Y. Filed Oct. 26, 1962.

EXCERPT

For Foundation Garments.
First use Oct. 15, 1962.

SN 156,115. Gold Seal Rubber Company, Boston, Mass. Filed Oct. 29, 1962.

SAIL-TRED

For Women's Shoes.
First use Sept. 25, 1962.

SN 156,155. Palm Beach Company, Cincinnati, Ohio. Filed Oct. 29, 1962.

1290 COLLECTION

For Men's and Boys' Clothing Consisting of Coats, Trousers, Slacks, Topcoats, and Sportcoats.
First use Sept. 10, 1962.

SN 156,162. Perfect Bloomer Co., Brooklyn, N.Y. Filed Oct. 29, 1962.

LIK-A-DOL

For Children's Panties.
First use Oct. 1, 1951.

SN 156,231. The Joseph & Feiss Company, Cleveland, Ohio. Filed Oct. 30, 1962.

SUMMER SHARK

For Men's Tailored Clothing—Namely, Suits, Topcoats, Overcoats, Sportcoats, Jackets and Slacks.
First use Oct. 20, 1962.

SN 156,232. The Joseph & Feiss Company, Cleveland, Ohio. Filed Oct. 30, 1962.

SHARK FROST

For Men's Tailored Clothing—Namely, Suits, Topcoats, Overcoats, Sportcoats, Jackets and Slacks.
First use Oct. 20, 1962.

SN 156,734. Exquisite Form Industries, Inc., New York, N.Y. Filed Nov. 6, 1962.

FAVOR-FORM

For Brassieres.
First use Oct. 25, 1962.

SN 156,916. Van Raalte Company, Inc., New York, N.Y. Filed Nov. 8, 1962.

PLAIDEES

For Women's Underwear, Briefs, Petticoats, Pettitights, Brassieres, and Pajamas.
First use Nov. 1, 1962.

SN 156,991. Kayser-Roth Corporation, New York, N.Y. Filed Nov. 9, 1962.

SHEERLON

For Women's Hosiery.
First use Jan. 30, 1941.

Class 41—Canes, Parasols, and Umbrellas

SN 124,186. Giant Umbrella Company, Inc., New York, N.Y. Filed S.R. July 18, 1961; Am. P.R. Aug. 8, 1962.

HANDI-MATIC

For Umbrellas.
First use on or about Aug. 23, 1959.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 140,875. Società Rhodiatoce S.p.A., Milan, Italy. Filed Mar. 27, 1962.

TERITAL

Owner of Italian Reg. No. 121,972, dated Mar. 16, 1955.
For Fabrics (Obtained From Natural or Synthetic Fibers); Blankets, Coverlets; Furniture Scarves and Other Textile Articles—Namely, Table Napkins, Table Linen; Sheets, Pillow Cases, Bed Linen, Kitchen Linen, Towels, Curtains, Rubberized and Waterproof Fabrics, Filter Cloths, Felts Made of Wool, Hair, Cotton and Other Textile Fibers, Tapestry Fabrics, Laces, Ribbon in the Piece; Floor Coverings—Namely, Carpets and Carpet-Runners.

SN 144,693. Crompton Company, New York, N.Y. Filed May 16, 1962.

YANKEE CLIPPER

For Textile Fabrics in the Piece Composed of Cotton and Synthetic Fibers.
First use Apr. 2, 1962.

SN 145,376. Kroywen Coats, Inc., New York, N.Y. Filed May 24, 1962.

21 Jewel

For Textile Fabrics in the Piece of Wool, Worsted, Cashmere, Synthetic Fibres and Mixtures Thereof.
First use Feb. 6, 1962.

SN 157,047. Beaunit Corporation, New York, N.Y. Filed Nov. 13, 1962.

VEL-KNIT

For Nylon Brushed Knit Fabrics.
First use on or about Oct. 4, 1962.

SN 157,070. Chicopee Mills, Inc., New York, N.Y. Filed Nov. 13, 1962.

BLACK HAWK

For Poplin.
First use June 28, 1962.

SN 157,081. Dan River Mills, Incorporated, Danville, Va. Filed Nov. 13, 1962.

RIVERSTAR

For Textile Fabrics in the Piece of Cotton or Synthetic Fibers or Any Combinations Thereof.
First use Oct. 25, 1962.

Class 44—Dental, Medical, and Surgical Appliances

SN 140,625. Samuel Bonat & Bro., Inc., West Paterson, N.J. Filed Mar. 26, 1962.

ULTRA THIN

Owner of Reg. No. 618,805.
For End Wraps Used for Permanent Waving.
First use Sept. 23, 1954.

SN 143,294. Techni Electronics, Inc., Orange, N.J. Filed Apr. 27, 1962.

BALLERINA

For Hair Dryer.
First use Apr. 2, 1962.

SN 143,295. Techni Electronics, Inc., Orange, N.J. Filed Apr. 27, 1962.

CONTESSA

For Hair Dryer.
First use Apr. 2, 1962.

SN 143,688. TECA Corporation, White Plains, N.Y. Filed May 2, 1962.

TECA

Owner of Reg. Nos. 530,554, 666,555, and others.
For Electrical and Electronic Apparatus for Biological, Physiological and Medical Applications; for Medical Diagnosis; and for Therapeutic Treatment and Rehabilitation of the Human Body.
First use July 2, 1941.

SN 158,383. Roehr Products Company, Inc., De Land, Fla. Filed Dec. 3, 1962.

ROEHR

For Hypodermic Needles, Rubber Piercing Needles, and Stainless Steel Tubing.
First use in November 1952 on hypodermic needles.

SN 158,582. Unimed, Inc., Morristown, N.J. Filed Dec. 5, 1962.

VAGAERATOR

For Skeletal Tubular Device for Insertion Into and Retention Within the Vagina for Maintaining the Vaginal Lining in a Dilated Condition.
First use July 21, 1961.

SN 158,741. Shane Engineering Co., Los Angeles, Calif. Filed Dec. 7, 1962.

Curler-Queen

For Electrical Hair Curlers.
First use Sept. 19, 1962.

SN 158,881. Vita-Zahnfabrik H. Rauter o.H.G., Essen, Germany. Filed Dec. 10, 1962.

VITA LUMIN

Owner of German Reg. No. 513,945, dated July 8, 1939; and U.S. Reg. No. 259,601.
For Artificial Teeth.
First use Nov. 9, 1940; in commerce Mar. 15, 1941.

Class 45—Soft Drinks and Carbonated Waters

SN 141,948. Herschi N.V., Hoensbroek, Netherlands. Filed Apr. 10, 1962.

ORANJOLA

Owner of Dutch Reg. No. 111,025, dated Jan. 16, 1962.
For Lemonades.

SN 141,987. Seminole Flavor Company, Chattanooga, Tenn. Filed Apr. 10, 1962.

DOUBLE COLA

Owner of Reg. No. 572,477.
For Carbonated Cola-Type Soft Drinks and Syrups Used in the Preparation Thereof.
First use January 1958.

SN 155,970. Certified Grocers of Illinois, Inc., Chicago, Ill. Filed Oct. 26, 1962.

COUNTRY'S DELIGHT

For Soft Drinks.
First use July 3, 1961.

Class 46—Foods and Ingredients of Foods

SN 126,267. Kathy Godfrey McCann, d.b.a. American United Co., Hartford, Conn. Filed Aug. 21, 1961.

LIVE

For Vitamin and Mineral Fortified Food Beverage.
First use Aug. 14, 1961.

SN 132,705. Nodaway Valley Foods, Inc., Corning, Iowa. Filed Nov. 24, 1961.

NODAWAY Valley

For Canned Fruit Flavored Food Beverages and Canned Dairy Products—Namely, Non-Alcoholic Eggnog, Chocolate Milk Drink, Fluid Cream, Concentrated Milk, Evaporated Milk, Flavored Milk Food Beverages and Skim Milk Food Beverages.
First use Oct. 10, 1961.

SN 136,519. Warner-Lambert Pharmaceutical Company, Wilmington, Del., assignee of American Chicle Company, Long Island City, N.Y. Filed Jan. 25, 1962.

DOT

For Chewing Gum.
First use Dec. 13, 1961.

SN 136,520. Warner-Lambert Pharmaceutical Company, Wilmington, Del., assignee of American Chicle Company, Long Island City, N.Y. Filed Jan. 25, 1962.

POKA DOT

For Chewing Gum.
First use Dec. 13, 1961.

SN 136,597. Jack Sisler, Inc., Exeter, Calif. Filed Jan. 25, 1962.

Golden MAID

For Fresh Deciduous Fruits and Fresh Grapes.
First use at least as early as August 1954.

SN 137,483. Cal T. Albritton, Inc., Tallahassee, Fla. Filed Feb. 8, 1962.

SEMINOLE BEE

For Honey.
First use July 26, 1962.

SN 138,917. Continental Baking Company, Rye, N.Y. Filed Feb. 23, 1962.



For Prepared Frozen Food Products—Namely, Frozen Prepared Meats, Poultry, Potatoes, Vegetables, Rice and Macaroni and Cheese, Spaghetti and Meat, Chicken and Turkey Casseroles.
First use Dec. 14, 1961.

SN 139,837. The Duradean Co., Inc., Beverly Hills, Calif. Filed Mar. 14, 1962.

EVE'S CHOICE

For Fruit Butter.
First use Mar. 6, 1962.

SN 140,226. The Borden Company, New York, N.Y. Filed Mar. 20, 1962.

BORDEN'S

Owner of Reg. Nos. 55,233, 357,806, and others.
For Oleomargarine.
First use Jan. 8, 1962.

SN 140,310. Armour and Company, Chicago, Ill. Filed Mar. 21, 1962.

AMERICAN FARE

For Frozen Prepared Foods—Namely, Prepared Entrees Containing Either Meat, Poultry or Shellfish.
First use Aug. 4, 1961.

SN 141,283. Francisco Nunez Fernandez, Seville, Spain. Filed Apr. 2, 1962.

SOLEÁ

"Soleá" is a dialectal word of the Spanish word "soledad" which means in English "solitude" or "loneliness." Owner of Spanish Reg. No. 374,288, dated June 10, 1961.
For Edible Vegetable Oils and Fats.

SN 143,600. Corn Products Company, New York, N.Y. Filed May 2, 1962.

AROMAT

For Food Seasoning of a Spice Nature.
First use Dec. 15, 1961.

SN 147,530. Allied Old English, Inc., Newark, N.J. Filed June 25, 1962.

POLYNESIAN PUNCH

The word "Punch" is disclaimed apart from the mark as shown.
For Canned Fruit Beverage.
First use Mar. 12, 1962.

SN 147,877. H. S. Whiteside & Co. Limited, London, England. Filed June 27, 1962.

SUN-PAT

Owner of British Reg. No. 646,532, dated Apr. 3, 1946; and U.S. Reg. No. 614,012.
For Chewing Gum.

SN 150,494. Adam & Ann Amistadi (partnership), Dover, Ohio. Filed Aug. 6, 1962.



For Pickled Mushrooms.
First use July 2, 1962.

SN 150,527. Continental Baking Company, Rye, N.Y. Filed Aug. 6, 1962.

COCONUT TEASE

The word "Coconut" is disclaimed as a part of the mark as shown.
For Cookies.
First use May 10, 1962.

SN 150,572. Joe Lowe Corporation, New York, N.Y. Filed Aug. 6, 1962.

THIN-FLO

For Liquid Imitation Chocolate Coating for Use on Frozen Confections With or Without Sticks.
First use Jan. 4, 1937.

SN 150,842. The Great Atlantic & Pacific Tea Company, Inc., New York, N.Y. Filed Aug. 9, 1962.



The drawing is lined for the color red. Owner of Reg. Nos. 296,883, 531,242, and 580,052.
For Frozen French Fried Cod Fillets, Frozen French Fried Shrimp, Frozen Uncooked Shrimp, Frozen Precooked Fish Sticks, Frozen Oyster Stew, Frozen Cooked Deviled Crabs, Frozen Cooked Fish Cakes, Frozen Haddock Dinner Consisting of Haddock, French Fried Potatoes and Green Peas, Frozen Scallop Dinner Consisting of Sea Scallops, French Fried Potatoes and Green Peas.
First use June 1951 on frozen French fried cod fillets.

SN 154,174. Sternco Industries, Inc., Allendale, N.J. Filed Sept. 28, 1962.

DELTA

For Aquarium Foods for Fish and Turtles.
First use Sept. 4, 1962.

SN 155,740. Plus Poultry, Inc., Siloam Springs, Ark. Filed Oct. 23, 1962.

FULMEAL

For Dog and Cat Food.
First use Aug. 20, 1962.

SN 155,741. Plus Poultry, Inc., Siloam Springs, Ark. Filed Oct. 23, 1962.

PEPPY

For Dog and Cat Food.
First use Aug. 20, 1962.

SN 155,743. Pure Milk Association, Chicago, Ill. Filed Oct. 23, 1962.

VITA-PRO

For Modified Skim Milk Product Containing 2% Butter Fat With Vitamin D and Vitamin A Units Added.
First use December 1952.

SN 155,982. General Foods Corporation, White Plains, N.Y. Filed Oct. 26, 1962.

COUNT OFF

For Cereal Breakfast Foods.
First use Sept. 26, 1962.

SN 156,351. Park and Hagna (Incorporated), New York, N.Y. Filed Oct. 29, 1962.



Owner of Reg. Nos. 694,639, 700,262, and others.
For Pickled Cucumbers.
First use June 24, 1963.

SN 156,393. Fruit Cake Bakers of America, Inc., Chicago, Ill. Filed Nov. 1, 1962.

OAK BROOK FARM

For Fruit Cakes.
First use Sept. 4, 1962.

SN 156,394. Fruit Cake Bakers of America, Inc., Chicago, Ill. Filed Nov. 1, 1962.

HUNTINGTON FARMS

For Fruit Cakes.
First use Sept. 4, 1962.

SN 156,538. Geo. A. Hormel & Company, Austin, Minn. Filed Dec. 5, 1962.

SPAM

Owner of Reg. No. 529,294.
For Deviled Luncheon Meat Spread.
First use July 27, 1962.

Class 47 — Wines

SN 135,911. Remané Weinmarken G.m.b.H., Bingen (Rhine), Germany. Filed Jan. 16, 1962.

Remané

Owner of German Reg. No. 740,277, dated Sept. 15, 1960.
For Wines of French Manufacture.

SN 156,661. Regina Grape Products Co., Etiwanda, Calif. Filed Nov. 5, 1962.

Maitre d'

For Wines.
First use Jan. 22, 1959.

SN 157,810. Hans Jung, Alsheim (Rhineland), Germany. Filed Nov. 23, 1962.

RHEINBLICK

Owner of German Reg. No. 702,627, dated May 22, 1957.
For Rhine Wines.

Class 48 — Malt Beverages and Liquors

SN 142,523. Metropolis Brewery of N.J., Inc., d.b.a. Banner Brewing Co., Trenton, N.J. Filed Apr. 16, 1962.

EL TORO

The English translation of applicant's mark "El Toro" is "the bull."
For Malt Cereal Beverage.
First use in 1957.

SN 142,532. Metropolis Brewery of N.J., Inc., d.b.a. Old Dominion Beverage Co., Trenton, N.J. Filed Apr. 18, 1962.

OLD DOMINION

For Beer.
First use June 29, 1950.

SN 142,534. Metropolis Brewery of N.J., Inc., Trenton, N.J. Filed Apr. 18, 1962.

HORTON

For Beer.
First use May 15, 1933.

SN 143,059. The Spearman Brewing Company, d.b.a. Sewanee Brewing Co., Pensacola, Fla. Filed Apr. 25, 1962.

SPEARMAN

For Beer and Ale.
First use 1935.

SN 143,651. Metropolis Brewery of N.J., Inc., Trenton, N.J. Filed May 2, 1962.

EHRET'S EXTRA

For Malt Cereal Beverage.
First use 1876.

Class 49 — Distilled Alcoholic Liquors

SN 144,545. Joseph E. Seagram & Sons, Inc., New York, N.Y. Filed May 14, 1962.

LITTLE DEVIL

For Whiskey.
First use Dec. 18, 1961.

SN 155,844. Savermo Limited, London, England. Filed Oct. 24, 1962.

GLEN MIST

Owner of British Reg. No. 620,012, dated Aug. 28, 1942.
For Whisky Liqueurs.

SN 155,851. The Viking Distillery, Inc., Albany, Ga. Filed Oct. 24, 1962.

GEORGIA CRACKER

For Whiskey.
First use Oct. 1, 1962.

SN 155,853. The Viking Distillery, Inc., Albany, Ga. Filed Oct. 24, 1962.

GEORGIA PEACH

For Whiskey.
First use Oct. 1, 1962.

SN 155,854. The Viking Distillery, Inc., Albany, Ga. Filed Oct. 24, 1962.

GEORGIA BOY

For Whiskey.
First use Oct. 1, 1962.

SN 156,874. Glenmore Distilleries Company, d.b.a. Two Naturals Distilling Company, Owensboro, Ky. Filed Nov. 8, 1962.



For Bourbon Whiskey.
First use Jan. 17, 1934.

Class 50 — Merchandise Not Otherwise Classified

SN 132,881. Superior Plastics Inc., Chicago, Ill. Filed Nov. 27, 1961.

The World of Sensation

For Anatomical Models of Parts of the Human Body.
First use Nov. 3, 1961.

SN 138,863. Clyde Hood, d.b.a. Prairie Art Co., Decatur, Ill. Filed Mar. 1, 1962.

PRAIRIE ART

Applicant disclaims the word "Art" when used apart from the mark.
For Painting Kits Containing a Mounted Painting Surface, Premixed Paints and Instructions.
First use Feb. 8, 1962.

SN 139,241. Safe-T Pacific Company, Redwood City, Calif., by change of name from Safe-T Pacific Baking Company, Redwood City, Calif. Filed Mar. 6, 1962.

DEKA-STIX

For Tubular Devices, Similar to Drinking Straws in Construction and Appearance, Except for Length, and Used in Decorating or in Decorative Displays.
First use Jan. 31, 1962.

SN 154,076. Warner-Lambert Pharmaceutical Company, Morris Plains, N.J. Filed Sept. 27, 1962.

VUNATOMY

For Educational Anatomical Model.
First use Sept. 12, 1962.

SN 154,624. Polychrome Corporation, Yonkers, N.Y. Filed Oct. 5, 1962.

DIKOTE

For Offset Mats.
First use Mar. 26, 1962.

SN 154,701. Jasper Devore, Arkansas City, Kans. Filed Oct. 8, 1962.

SOWTEL

For Hog Farrowing Huts.
First use May 24, 1962.

Class 51 — Cosmetics and Toilet Preparations

SN 140,771. Edward M. Spitz, d.b.a. Glamour Puss Cat Products, Los Angeles, Calif. Filed Mar. 26, 1962.

DE-O-DEAR

For Animal Deodorizing Formulations.
First use Feb. 25, 1962.

SN 144,847. The Inerto Company, San Francisco, Calif. Filed May 17, 1962.

MACALOID

Owner of Reg. No. 571,002.
For Thickening or Suspending Agent in the Form of Refined Clay for Cosmetics.
First use about July 1952.

SN 154,685. Russell L. Bastress, d.b.a. The Clarion Dental Products Co., Clarion, Pa. Filed Oct. 8, 1962.

YAR

For False Denture Cleanser.
First use Aug. 30, 1962.

SN 154,754. Merle Norman Cosmetics, Inc., Los Angeles, Calif. Filed Oct. 8, 1962.

PRETTY PAT

For Compact Powder.
First use on or about Sept. 1, 1954.

SN 154,815. Robert Alan Franklyn, d.b.a. Robaire Alain, Los Angeles, Calif. Filed Oct. 9, 1962.

CANIBELLE

For Perfumes and Toilet Waters.
First use Sept. 1, 1962.

SN 154,816. Robert Alan Franklyn, d.b.a. Robaire Alain, Los Angeles, Calif. Filed Oct. 9, 1962.

CANIBAL

For Perfumes and Toilet Waters.
First use Sept. 1, 1962.

SN 155,058. Foods Plus, Inc., New York, N.Y. Filed Oct. 12, 1962.

fp

For Hand Lotion, Skin Cleanser, Skin Lotion, Deodorant, Hair Dressing, After Shave Lotion, Hair Spray, Bath Oil, Skin Cream, Cologne, Sun Tan Lotion.
First use Feb. 20, 1961.

SN 155,106. Sea Trading Associates, Inc., New York, N.Y. Filed Oct. 12, 1962.

ALTIGA

For Lipstick and Nail Polish.
First use Aug. 10, 1962.

SN 155,228. Associated Brands, Inc., Brooklyn, N.Y. Filed Oct. 16, 1962.

FIRST CHOICE

For Hair Waving Preparations.
First use October 1961.

SN 155,265. Lever Brothers Company, New York, N.Y. Filed Oct. 16, 1962.

BETWEEN

For Dentifrice in Tablet Form.
First use June 8, 1962.

SN 155,683. Bourjois, Inc., New York, N.Y. Filed Oct. 23, 1962.

Dialogue

For Cologne.
First use Sept. 10, 1962.

SN 156,278. Helene Curtis Industries, Inc., Chicago, Ill. Filed Oct. 31, 1962.

REGENCY

For Permanent Hair Waving Lotion.
First use on or about Sept. 17, 1962.

Class 52 — Detergents and Soaps

SN 138,548. The Scott & Fetzer Company, Cleveland, Ohio. Filed Feb. 23, 1962.

KIRBY

Owner of Reg. No. 623,790.
For Shampoo for Fabrics.
First use June 1, 1961.

SN 142,294. Estes Corporation, Oakland, Calif. Filed Apr. 16, 1962.

CYCLO

For Gum Cutting and Cleaning Preparation for Use in Carburetors, Automatic Chokes and Various Engine Parts and Components.
First use Jan. 28, 1962.

SN 143,209. The Cambridge Tile Manufacturing Company, Cincinnati, Ohio. Filed Apr. 27, 1962.

Camkleen

For Dilute Solution of Phosphoric Acid and a Non-Ionic Wetting Agent for Cleaning Grouted Ceramic Surfaces.
First use Apr. 9, 1962.

SN 156,487. E. R. Goodrich, d.b.a. Goodrich Maintenance Supply Company, Oklahoma City, Okla. Filed Nov. 2, 1962.

Goodrich 745

Owner of Reg. Nos. 434,121 and 636,658.
For Hand Cleaner.
First use July 1955; Jan. 15, 1954, as to "Goodrich."

SN 156,543. American Home Products Corporation, New York, N.Y. Filed Nov. 5, 1962.

AEROWAX

Owner of Reg. No. 358,637.
For Wax Remover and Floor Cleaner.
First use Oct. 1, 1962.

SERVICE MARKS

Class 100 — Miscellaneous

SN 144,535. Acton Laboratories, Inc., Acton, Mass. Filed May 15, 1962.

ACTON

For Environmental Testing of Components and Systems for Others, Including Fabrication of Special Test Fixtures, Repair and Calibration of Instruments, and Consultations on Customer Test Problems.
First use on or about Mar. 19, 1962.

SN 144,634. Munch Wagons Inc., Philadelphia, Pa. Filed May 15, 1962.

MUNCH WAGON

The drawing is lined for the colors orange and gray.
For Mobile Restaurant Service for Dispensing Specially Prepared Food and Beverages From Vehicular Food Counters.
First use Feb. 17, 1962.

SN 148,214. F. W. Moulthrop & Associates, Oakland, Calif. Filed July 2, 1962.



For Service of Manufacturer's Representative for Distributing, Selling and Promoting Various Electrical and Electronic Products and Components Manufactured by Others.
First use April 1961.

SN 154,539. Valle's Steak House, Portland, Maine. Filed Oct. 4, 1962.



Owner of Reg. No. 649,480.
For Service of Foods and Beverages in Restaurants.
First use on or about Nov. 15, 1955.

SN 155,846. Sheraton Corporation of America, Boston, Mass. Filed Oct. 24, 1962.



Applicant disclaims the words "Motor Inn" apart from the mark as shown. Owner of Reg. Nos. 552,070, 633,328, and 691,422.
For Hotel-Motel and Restaurant Services.
First use Feb. 26, 1962.

Class 101 — Advertising and Business

SN 141,522. Gas Appliance Manufacturers Association, New York, N.Y. Filed Apr. 4, 1962.



Owner of Reg. Nos. 550,067 and 594,888.
For Services to Its Members and to the Gas Appliance Industry, Namely: Association Services—Namely, the Collection and Dissemination of Statistical Marketing and Other Pertinent Information, Assistance in the Promotion of Gas Appliances and Equipment and the Use of Gas as a Fuel, Cooperation in the Development of Industry, National and Legislative Standards for the Safe Construction, Installation and Operation of Such Appliances and Equipment.
First use Dec. 21, 1961.

SN 144,808. Consultants & Designers, Inc., New York, N.Y. Filed May 17, 1962.



For Employment Services—Namely, Furnishing Temporary Help.
First use Apr. 1, 1962.

SN 148,746. Ernst J. Neugroschl, Cleveland, Ohio. Filed July 10, 1962.

SCIENTECH

For Scientific and Technical Language Translations and Technical Literature Searches.
First use on or about Sept. 1, 1960.

Class 102 — Insurance and Financial

SN 133,141. El Paso National Bank, El Paso, Tex. Filed Dec. 1, 1961.



The character shown in the drawing is a fanciful figure.
For Banking Services, Including Maintaining Checking and Savings Accounts; Selling Money Orders and Travelers' Cheques; Issuing Letters of Credit; Making Collections; Making Loans, Including Real Estate, Commercial, Life Insurance, Personal, Automobile, Commodity and Home Improvement Loans; Buying and Selling Stocks and Bonds; Rendering Trust Services; and Making Transfer of Funds Within the United States and to and From Foreign Countries.
First use Sept. 25, 1961.

SN 140,289. Quaker City Life Insurance Company, Philadelphia, Pa. Filed Mar. 20, 1962.



Quaker City Life Insurance Company

The bust displayed in the symbol is not a natural person, it is a modern stylization of the head of a Quaker.
For Underwriting Life and Hospitalization Insurance.
First use February 1959.

SN 144,589. Industrial Development Service, S.A., Geneva, Switzerland. Filed May 11, 1962.

EURADVICE

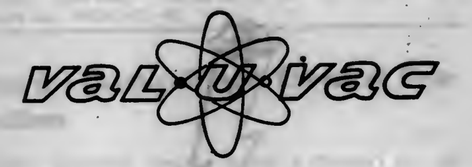
For Business and Financial Advisory Services Rendered to American Companies Who Wish To Initiate or Expand Activities in Europe, Including Assistance in Negotiations With Potential Distributors, Licensees or Partners, Arrangements for Financing and Supervision of Operations.
First use Jan. 20, 1961; in commerce Jan. 27, 1961.

SN 144,462. Continental Assurance Company, Chicago, Ill. Filed May 14, 1962.

VAL-U-VAC

For Statistical Analysis of Estate and Insurance Programming by Electronic Means.
First use Oct. 20, 1961.

SN 144,601. Continental Assurance Company, Chicago, Ill. Filed May 15, 1962.



For Statistical Analysis of Estate and Insurance Programming by Electronic Means.
First use Oct. 20, 1961.

SN 155,422. Lumbermens Mutual Casualty Company, Chicago, Ill. Filed Oct. 18, 1962.

KEMPER CARE

Owner of Reg. Nos. 527,583, 732,268, and others.
For Underwriting of Insurance and Fidelity and Surety Bonds.
First use Oct. 2, 1960; January 1920 as to "Kemper."

SN 156,143. National Old Line Insurance Company, Little Rock, Ark. Filed Oct. 29, 1962.



For Underwriting Life Insurance.
First use 1932.

SN 156,144. National Old Line Insurance Company, Little Rock, Ark. Filed Oct. 29, 1962.



For Underwriting Credit Life Insurance.
First use on or about Apr. 1, 1960.

Class 103 — Construction and Repair

SN 139,608. Electrical Contractors Association, Milwaukee, Wis. Filed Mar. 12, 1962. COLLECTIVE MARK.



For Electrical Contracting Services Rendered by Applicants' Members.
First use Feb. 2, 1962.

SN 147,726. Foster Equipment Corporation, Merrifield, Va. Filed June 26, 1962.



The drawing is lined for green but no claim is made to color.
For Rental of Heavy Construction Equipment.
First use Dec. 26, 1961.

Class 105 — Transportation and Storage

SN 149,652. International Customs Service, Inc., Los Angeles, Calif. Filed July 24, 1962.



For Freight Forwarding Agency Services.
First use May 1, 1959.



TRADEMARK REGISTRATIONS ISSUED

PRINCIPAL REGISTER

Class 1 — Raw or Partly Prepared Materials

750,334. 30-GRAND. Warren H. Cooper and Warren Mark Cooper. SN 134,616. Pub. 3-19-63. Filed 12-26-61.

750,335. GOLDEN BOY. Howard B. Peto, d.b.a. Peto Seed Co. SN 142,848. Pub. 3-19-63. Filed 4-23-62.

750,336. DE KALB COTTON ETC. AND DESIGN. De Kalb Agricultural Association, Inc. SN 143,942. Pub. 3-19-63. Filed 5-7-62.

750,337. PRAIRIE CHIPS. Sudden-Baker Co. SN 145,220. Pub. 3-19-63. Filed 5-22-62.

750,338. TRIDON. Trident Engineering Associates, Inc. SN 146,944. Pub. 3-19-63. Filed 6-14-62.

750,339. MASTERSEAL. Masterseal Sales Corporation. SN 147,601. Pub. 3-19-63. Filed 6-25-62.

750,340. SETAMOL. General Aniline & Film Corporation. SN 149,075. Pub. 3-19-63. Filed 7-16-62.

750,341. AGSEAL. Macmillan Ring-Free Oil Co., Inc. SN 151,768. Pub. 3-19-63. Filed 8-23-62.

750,342. CFC AND SHIELD DESIGN. Crest-Foam Corporation. SN 152,114. Pub. 3-19-63. Filed 8-29-62.

750,343. EXTREN. Universal Moulded Fiber Glass Corporation. SN 152,173. Pub. 3-19-63. Filed 8-29-62.

750,344. ISODRIL. Macco Corporation. SN 152,320. Pub. 3-19-63. Filed 8-31-62.

750,345. PICCOLLOID. Pennsylvania Industrial Chemical Corporation. SN 152,435. Pub. 3-19-63. Filed 9-4-62.

Class 2 — Receptacles

750,346. BEMISEAL. Bemis Bro. Bag Company. SN 146,607. Pub. 3-19-63. Filed 6-4-62.

750,347. CEKAVAC. Christenssons Maskiner & Patenter AB. SN 146,169. Pub. 3-19-63. Filed 6-5-62.

750,348. JOHNSON'S. Johnson & Johnson. SN 146,826. Pub. 3-19-63. Filed 6-12-62.

750,349. LINEX. Ipco Hospital Supply Corporation. SN 146,905. Pub. 3-19-63. Filed 6-14-62.

750,350. WIN-DOME. Kaiser Aluminum & Chemical Corporation. SN 147,589. Pub. 3-19-63. Filed 6-25-62.

750,351. STOR-N-FEED. Butler Manufacturing Company. SN 148,008. Pub. 3-19-63. Filed 6-29-62.

750,352. ROYMAC. Royalon, Inc. SN 148,233. Pub. 3-19-63. Filed 7-2-62.

Class 3 — Baggage, Animal Equipments, Portfolios, and Pocketbooks

750,353. AMERICAN TOURISTER AND DESIGN. American Luggage Works, Inc. SN 152,664. Pub. 3-19-63. Filed 9-7-62.

Class 4 — Abrasives and Polishing Materials

750,354. CONOCO AND DESIGN. Continental Oil Company. SN 145,527. Pub. 3-19-63. Filed 5-28-62.

750,355. PEAK. Magnolia Paper Co. SN 146,638. Pub. 3-19-63. Filed 6-11-62.

750,356. TREADWEAR. Purex Corporation, Ltd., assignee of Franklin Research Company. SN 154,412. Pub. 3-19-63. Filed 10-3-62.

Class 5 — Adhesives

750,357. BORG-WARNER. Borg-Warner Corporation. SN 130,329. Pub. 3-19-63. Filed 10-20-61.

750,358. GRIP-TITE. Lino Paste Company, Inc., d.b.a. Lino Paste Company. SN 139,413. Pub. 3-19-63. Filed 3-8-62.

750,359. USM AND DESIGN. United Shoe Machinery Corporation. SN 150,477. Pub. 3-19-63. Filed 8-3-62.

750,360. RE-PEEL. Wilhold Glues, Inc. SN 152,025. Pub. 3-19-63. Filed 8-27-62.

Class 6 — Chemicals and Chemical Compositions

750,361. DERNYE. Textile Aniline & Chemical Co. SN 133,335. Pub. 3-19-63. Filed 12-4-61.

750,362. ETHYNIER. Rayonier Incorporated. SN 134,900. Pub. 3-19-63. Filed 12-29-61.

750,363. DESIGN OF 3 CIRCLES LINKED TOGETHER. Sarafan Corporation. SN 145,128. Pub. 3-19-63. Filed 5-21-62.

750,364. ZEO. J. M. Huber Corporation. SN 146,050. Pub. 3-19-63. Filed 6-4-62.

750,365. DROPLET DESIGN. Morton Salt Company. SN 148,744. Pub. 3-19-63. Filed 7-10-62.

750,366. ASL AND DESIGN. Schering Corporation, assignee of American Scientific Laboratories, Inc. SN 148,872. Pub. 3-5-63. Filed 7-12-62.

750,367. SIMAX. Agricultural Specialties. SN 148,943. Pub. 3-19-63. Filed 7-13-62.

750,368. MERSECT. E. I. du Pont de Nemours and Company. SN 151,215. Pub. 3-19-63. Filed 8-15-62.

750,369. HEXAGON DESIGN. S. C. Johnson & Son, Inc. SN 151,333. Pub. 3-19-63. Filed 8-16-62.

750,370. VIKING. The Farm-Oyl Company. SN 151,811. Pub. 3-19-63. Filed 8-24-62.

Class 7 — Cordage

750,371. LAUREL. Laurel Cards, Inc. SN 131,052. Pub. 3-19-63. Filed 10-31-61.

Class 8 — Smokers' Articles, Not Including Tobacco Products

750,372. SHOPPER'S FAIR. Mangel Stores Corporation. SN 151,945. Pub. 3-19-63. Filed 8-27-62.

Class 10 — Fertilizers

750,373. LAWN CHEER. International Minerals & Chemical Corporation. SN 138,717. Pub. 3-19-63. Filed 2-27-62.

Class 12—Construction Materials

750,374. AUTOCRETE AND DESIGN. Spickelmier Industries, Inc. SN 125,985. Pub. 10-16-62. Filed 8-11-61.

750,375. MAGOLITE. Semicon of California, Inc. SN 130,834. Pub. 2-5-63. Filed 10-27-61.

750,376. SUNNY DRY. Wall Firma, Inc. SN 149,144. Pub. 3-19-63. Filed 7-16-62.

750,377. GABLEWOOD. Albert J. Hillesheim, d.b.a. Gablewood Spans. SN 151,676. Pub. 3-19-63. Filed 8-22-62.

750,378. HEARTHSIDE. United States Plywood Corporation. SN 152,169. Pub. 3-19-63. Filed 8-29-62.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

750,379. SKI-MAN DESIGN. T-Fal Corporation. SN 98,169. Pub. 3-19-63. Filed 5-31-60.

750,380. ECON-O-MITE. Worcester Valve Company, Inc. SN 145,152. Pub. 3-19-63. Filed 5-21-62.

750,381. CHICK GRIP. Gilbert Hyde Chick Company. SN 146,892. Pub. 3-19-63. Filed 6-14-62.

Class 14—Metals and Metal Castings and Forgings

750,382. TWIN-COTE. Stoody Company. SN 139,693. Pub. 3-19-63. Filed 3-12-62.

750,383. LUSTREWEAVE. Levolor Lorentzen, Inc. SN 144,859. Pub. 3-19-63. Filed 5-17-62.

750,384. ALCOA ALFLAKE. Aluminum Company of America. SN 145,019. Pub. 3-19-63. Filed 5-21-62.

750,385. DIECRAT. The Marshall Steel Company. SN 145,195. Pub. 3-19-63. Filed 5-22-62.

750,386. ENGALOY. Engelhard Industries, Inc. SN 145,253. Pub. 3-19-63. Filed 5-23-62.

Class 15—Oils and Greases

750,387. AFTOL. Petrolite Corporation. SN 145,848. Pub. 2-5-63. Filed 5-31-62.

750,388. FRICTON. Dura Commodities Corporation. SN 147,811. Pub. 3-19-63. Filed 6-27-62.

750,389. QUAKER STATE. Quaker State Oil Refining Corporation. SN 147,956. Pub. 3-19-63. Filed 6-28-62.

750,390. 3-IN-ONE AND DESIGN. American Home Products Corporation. SN 147,986. Pub. 3-19-63. Filed 6-29-62.

Class 16—Protective and Decorative Coatings

750,391. FORMULA 70. Sears, Roebuck and Co. SN 132,744. Pub. 3-19-63. Filed 11-24-61.

750,392. PAN-MAGIC. American Machine & Foundry Company. SN 133,859. Pub. 3-19-63. Filed 12-12-61.

750,393. OLEO-AQUA. Girard Paint Products, Inc. SN 142,312. Pub. 3-19-63. Filed 4-16-62.

750,394. SMOOTH-EEZ AND DESIGN. Trade Paper Co. Inc. SN 148,437. Pub. 3-19-63. Filed 7-5-62.

750,395. SOFT BRITE. Warlick Paint Company, Inc. SN 148,684. Pub. 3-19-63. Filed 7-9-62.

750,396. FROLIC. Warlick Paint Company, Inc. SN 148,685. Pub. 3-19-63. Filed 7-9-62.

750,397. DESIGN OF WOLF HEAD. Lobo Chemical Products Company. SN 149,190. Pub. 3-19-63. Filed 7-17-62.

750,398. X-CITE. Hanline Bros., Inc. SN 149,461. Pub. 3-19-63. Filed 7-20-62.

750,399. PLEXATHANE. Evr-Gard Coatings Corporation. SN 150,406. Pub. 3-19-63. Filed 8-3-62.

750,400. SIGNAL. Standard Oil Company of California, d.b.a. Signal Oil Company. SN 151,438. Pub. 3-19-63. Filed 8-17-62.

Class 17—Tobacco Products

750,401. MANIKIN. J. R. Freeman & Son, Limited. SN 150,688. Pub. 3-19-63. Filed 8-7-62.

Class 18—Medicines and Pharmaceutical Preparations

750,402. PERMA-MIX. Commercial Solvents Corporation. SN 127,389. Pub. 3-19-63. Filed 9-7-61.

750,403. SUBLORAL. American Home Products Corporation, d.b.a. Ives-Cameron Company. SN 132,287. Pub. 3-19-63. Filed 11-20-61.

750,404. ZYLINOL. C. H. Boehringer Sohn. SN 132,891. Pub. 6-26-62. Filed 11-28-61.

750,405. MED-TECH. Medical-Technical Gases, Incorporated. SN 137,148. Pub. 3-19-63. Filed 2-2-62.

750,406. PHOSFLO. Dawson Chemical Co. Inc. SN 139,046. Pub. 3-19-63. Filed 3-5-62.

750,407. TRIPLE-VITES. Ultravite Laboratories Limited. SN 142,382. Pub. 3-19-63. Filed 4-16-62.

750,408. SPIRAVIT. Societe des Usines Chimiques Rhone-Poulenc. SN 144,771. Pub. 3-19-63. Filed 5-16-62.

750,409. VAXOID. American Home Products Corporation. SN 145,020. Pub. 3-19-63. Filed 5-21-62.

750,410. OMNICOL. Delta Drug Corporation. SN 146,147. Pub. 3-19-63. Filed 6-1-62.

750,411. MEDINAL. Warner-Lambert Pharmaceutical Company. SN 146,849. Pub. 3-19-63. Filed 6-13-62.

750,412. STOCK SLICK. Pay Way Feed Mills, Inc. SN 147,614. Pub. 3-19-63. Filed 6-25-62.

750,413. SAFFOZYME. The Emenel Company. SN 148,018. Pub. 3-19-63. Filed 6-29-62.

750,414. PRAMET. Abbott Laboratories. SN 148,279. Pub. 3-19-63. Filed 7-3-62.

750,415. INJECT-R-MYCIN. Ralston Purina Company. SN 148,421. Pub. 3-19-63. Filed 7-5-62.

750,416. PROCTYN. Anabolic, Incorporated. SN 148,461. Pub. 3-19-63. Filed 7-6-62.

750,417. NEUREX. Anabolic, Incorporated. SN 148,462. Pub. 3-19-63. Filed 7-6-62.

750,418. JENOMYCIN. Jensen-Salsbery Laboratories, Inc. SN 148,558. Pub. 3-19-63. Filed 7-5-62.

750,419. SAFTI-STYP. Nu-Vita Products, Inc. SN 148,883. Pub. 3-19-63. Filed 7-11-62.

750,420. TROPEDYL. Riker Laboratories, Inc. SN 149,006. Pub. 3-19-63. Filed 7-13-62.

750,421. ARQUIN. Riker Laboratories, Inc. SN 149,409. Pub. 3-19-63. Filed 7-19-62.

750,422. SUPRES. Vitamix Pharmaceuticals, Incorporated. SN 149,687. Pub. 3-19-63. Filed 7-24-62.

750,423. INGALDRON. C. H. Boehringer Sohn. SN 149,914. Pub. 3-19-63. Filed 7-27-62.

750,424. MAXIDEX. Alcon Laboratories, Inc. SN 150,144. Pub. 3-19-63. Filed 7-31-62.

750,425. VITA-MANDETS. American Cyanamid Company. SN 150,492. Pub. 3-19-63. Filed 8-6-62.

750,426. HYCHOLIN. American Home Products Corporation. SN 151,867. Pub. 3-19-63. Filed 8-27-62.

750,427. CEREBRATONIN. The Purdue Frederick Company. SN 152,088. Pub. 3-19-63. Filed 8-28-62.

Class 19—Vehicles

750,428. BUZZ A BOUT. Jordan Bros. SN 129,948. Pub. 3-19-63. Filed 10-16-61.

750,429. ROVER. The Rover Company Limited. SN 146,220. Pub. 3-19-63. Filed 6-5-62.

750,430. PERE MARQUETTE AND DESIGN. Pere Marquette Fibreglas Boat Company. SN 153,018. Pub. 3-19-63. Filed 9-12-62.

750,431. TRANSDRIVE. Chris-Craft Corporation. SN 153,063. Pub. 3-19-63. Filed 9-13-62.

750,432. HOLIDAY. Seiberling Rubber Company. SN 153,518. Pub. 3-19-63. Filed 9-19-62.

750,433. REVELLA. McCain's Industries. SN 153,666. Pub. 3-19-63. Filed 9-21-62.

Class 21—Electrical Apparatus, Machines, and Supplies

750,434. SOLID CIRCUIT. Texas Instruments Incorporated. SN 95,329. Pub. 3-19-63. Filed 4-18-60.

750,435. "RESEARCH MAKES THE DIFFERENCE." Sony Corporation of America. SN 106,284. Pub. 3-19-63. Filed 10-12-60.

750,436. UNITRODE. Unitrode Transistor Products, Inc. SN 110,717. Pub. 3-19-63. Filed 12-22-60.

750,437. MPE. Midwest Pole & Equipment Corp. SN 126,531. Pub. 3-19-63. Filed 8-23-61.

750,438. CERADOT. CTS Corporation. SN 128,510. Pub. 3-19-63. Filed 9-25-61.

750,439. CHEM-I-LITE AND DESIGN. Semco Sales Company, Inc., by change of name from Semco Electrical Controls, Inc. SN 129,542. Pub. 3-19-63. Filed 10-9-61.

750,440. TELLITE. Tell Manufacturing Company, Incorporated. SN 137,030. Pub. 3-19-63. Filed 1-30-62.

750,441. SQUARE PULSE AND DESIGN. General Electric Company. SN 137,621. Pub. 3-19-63. Filed 2-9-62.

750,442. UNIMOLD. PLM Products, Inc. SN 138,043. Pub. 3-19-63. Filed 2-15-62.

750,443. AKG. Electronic Applications, Inc. SN 139,053. Pub. 3-19-63. Filed 3-5-62.

750,444. AKG AND DESIGN. Electronic Applications, Inc. SN 139,054. Pub. 3-19-63. Filed 3-5-62.

750,445. PB AND DESIGN. Pickard & Burns, Inc. SN 139,964. Pub. 3-19-63. Filed 3-15-62.

750,446. NOBLEQUEEN. National Merchandising Corporation. SN 140,251. Pub. 3-19-63. Filed 3-20-62.

750,447. FORM-L. Anaconda Wire and Cable Company. SN 146,561. Pub. 3-19-63. Filed 6-11-62.

750,448. ORBIT AND DESIGN. Orbit Industries, Inc. SN 152,060. Pub. 3-19-63. Filed 8-28-62.

750,449. FLEXI-CORE. Sylvania Electric Products, Inc. SN 152,102. Pub. 3-19-63. Filed 8-28-62.

750,450. RAVENSWOOD AND DESIGN. Ravenswood Corporation. SN 152,245. Pub. 3-19-63. Filed 8-30-62.

750,451. TRAVELER. Bright Star Industries. SN 152,756. Pub. 3-19-63. Filed 9-10-62.

750,452. FIRE FAN. Bright Star Industries. SN 152,757. Pub. 3-19-63. Filed 9-10-62.

750,453. ALL AMERICAN. General Indicator Corporation. SN 152,890. Pub. 3-19-63. Filed 9-11-62.

750,454. LAZALARM. Motorola, Inc. SN 153,502. Pub. 3-19-63. Filed 9-19-62.

750,455. POWER THRUST. General Battery and Ceramic Corp. SN 153,644. Pub. 3-19-63. Filed 9-21-62.

750,456. DELPOWER. General Motors Corporation. SN 153,645. Pub. 3-19-63. Filed 9-21-62.

750,457. STAR FIRE. Price Battery Corporation. SN 154,056. Pub. 3-19-63. Filed 9-27-62.

750,458. FRIDEN. Friden, Inc. SN 154,106. Pub. 3-19-63. Filed 9-28-62.

750,459. MULTIVERSAL. Killark Electric Mfg. Co. SN 154,496. Pub. 3-19-63. Filed 10-4-62.

750,460. INSTALERT. Electrosonics International, Inc. SN 154,579. Pub. 3-19-63. Filed 10-5-62.

750,461. VERSA-SEAL. Anderson Electric Corporation. SN 154,677. Pub. 3-19-63. Filed 10-8-62.

750,462. WIREMOLD. The Wiremold Company. SN 154,789. Pub. 3-19-63. Filed 10-8-62.

750,463. CLEAR-PASS. Dearborn Electronic Laboratories of Delaware, Inc. SN 155,137. Pub. 3-19-63. Filed 10-15-62.

750,464. ROLKODE. General Railway Signal Company. SN 155,249. Pub. 3-19-63. Filed 10-16-62.

Class 22—Games, Toys, and Sporting Goods

750,465. HOT SPOT. Edwin F. Wolff. SN 134,776. Pub. 3-19-63. Filed 12-27-61.

750,466. WINNWELL. Wellinger & Dunn Leather Goods Limited. SN 139,720. Pub. 3-19-63. Filed 3-12-62.

750,467. PIN HI. Wilson Sporting Goods Co. SN 146,536. Pub. 3-19-63. Filed 6-8-62.

750,468. E-Z OUT. Wilson Sporting Goods Co. SN 146,537. Pub. 3-19-63. Filed 6-8-62.

750,469. SALMONEER. Seneca Tackle Co., Inc. SN 146,671. Pub. 3-19-63. Filed 6-11-62.

750,470. "MISS DEBUTANTE." Uneeda Doll Co. Inc. SN 146,846. Pub. 3-19-63. Filed 6-13-62.

750,471. AER FLO. Wilson Sporting Goods Co. SN 146,851. Pub. 3-19-63. Filed 6-13-62.

750,472. STAFF PRO. Wilson Sporting Goods Co. SN 146,852. Pub. 3-19-63. Filed 6-13-62.

750,473. HEAD SPEED. Wilson Sporting Goods Co. SN 146,853. Pub. 3-19-63. Filed 6-13-62.

750,474. SPEED-FLO. Wilson Sporting Goods Co. SN 147,250. Pub. 3-19-63. Filed 6-19-62.

750,475. THE SOOPER DOOPER GOOFER GUN. Louis Marx & Co. Inc. SN 147,296. Pub. 3-19-63. Filed 6-20-62.

750,476. USM AND DESIGN. United Shoe Machinery Corporation. SN 150,472. Pub. 3-19-63. Filed 8-3-62.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

750,477. REPCO. Repco Limited. SN 79,290. Pub. 3-19-63. Filed 8-10-59.

750,478. DIAL-A-PART. American Thermoform Corporation. SN 122,252. Pub. 3-19-63. Filed 6-19-61.

750,479. LG. Lockwood Grader Corporation. SN 128,569. Pub. 5-29-62. Filed 9-25-61.

750,480. ROTOTWIN. Fluid Dynamics Corporation. SN 132,321. Pub. 3-19-63. Filed 11-20-61.

750,481. TOUCH 'N' GO. Warshawsky and Company, Inc. SN 133,725. Pub. 3-19-63. Filed 12-8-61.

750,482. BELEX. The J. B. Beaird Company, Inc. SN 136,188. Pub. 3-19-63. Filed 1-22-62.

750,483. WEIGH-VAC. Seco, Inc. SN 136,596. Pub. 3-19-63. Filed 1-25-62.

750,484. RIVERSIDE. Montgomery Ward & Co., Incorporated. SN 137,149. Pub. 3-19-63. Filed 2-2-62.

750,485. TELL/TALE. Pekor Iron Works. SN 137,157. Pub. 12-4-62. Filed 2-2-62.

750,486. TSUBAKI AND DESIGN. The Tsubakimoto Chain Mfg. Co., Ltd. SN 138,070. Pub. 3-19-63. Filed 1-15-62.

750,487. THE VALUE LINE. The Torrington Company. SN 141,474. Pub. 3–19–63. Filed 4–3–62.

750,488. AUTO-CRETE. Pratt & Whitney Company, Incorporated. SN 141,645. Pub. 10–16–62. Filed 4–5–62.

750,489. ALMAR. Midland Products Co. SN 143,256. Pub. 3–19–63. Filed 4–27–62.

750,490. PACKETEER. Integral Packaging Corporation, by merger from Machinery Development Corporation. SN 144,078. Pub. 1–15–63. Filed 5–3–62.

750,491. THORO-PAC. Integral Packaging Corporation, by merger from Machinery Development Corporation. SN 144,079. Pub. 1–15–63. Filed 5–3–62.

750,492. CENTENNIAL. Bissell Inc. SN 144,928. Pub. 3–19–63. Filed 5–18–62.

750,493. AMP-TAPEMATIC. AMP Incorporated. SN 145,428. Pub. 3–19–63. Filed 5–25–62.

750,494. HERCULEAN. Lawnmowers Incorporated. SN 147,125. Pub. 3–19–63. Filed 6–18–62.

750,495. DARI-LANDER. Automatic Packaging Equipment, Inc. SN 147,346. Pub. 3–19–63. Filed 6–21–62.

750,496. SELECT-A-SHELF. Container Development Corporation. SN 147,444. Pub. 3–19–63. Filed 6–22–62.

750,497. AEROSOLVAN. Lurgi Gesellschaft für Mineralöltechnik mbH. SN 147,745. Pub. 3–19–63. Filed 6–26–62.

750,498. AIR-FOAM. Sunbeam Corporation. SN 147,768. Pub. 3–19–63. Filed 6–26–62.

750,499. FOAMIZER. Oakite Products, Inc. SN 147,844. Pub. 3–19–63. Filed 6–27–62.

750,500. BAUMFOLDER. Bell & Howell Company. SN 147,992. Pub. 3–19–63. Filed 6–29–62.

750,501. WESTERN. Hay Equipment Distributors. SN 148,034. Pub. 3–19–63. Filed 6–29–62.

750,502. JET STREAMER. A. F. Klinzing Co., Inc. SN 148,046. Pub. 3–19–63. Filed 6–29–62.

750,503. UNI-PAC. Baldwin-Montrose Chemical Company, Incorporated. SN 148,128. Pub. 3–19–63. Filed 7–2–62.

750,504. INSTO. Firth Brown Tools Limited. SN 148,168. Pub. 3–19–63. Filed 7–2–62.

750,505. MID-WEST. Mid-West Abrasive Company. SN 148,641. Pub. 3–19–63. Filed 7–9–62.

750,506. PALLETVEYOR. Chainveyor Corp. SN 148,792. Pub. 3–19–63. Filed 7–11–62.

Class 26 — Measuring and Scientific Appliances

750,507. PAXAR. Chicago Aerial Industries, Inc. SN 112,950. Pub. 3–12–63. Filed 2–2–61.

750,508. IMAGE INSTRUMENTS AND DESIGN. Image Instruments, Inc. SN 122,199. Pub. 3–19–63. Filed 6–16–61.

750,509. UNIT GAMMA. General Aniline & Film Corporation. SN 122,613. Pub. 3–19–63. Filed 6–22–61.

750,510. MASK EAR. Ambco Electronics. SN 128,378. Pub. 3–19–63. Filed 9–22–61.

750,511. PRESSUREFLOW. Black Products Co. SN 133,626. Pub. 3–19–63. Filed 12–8–61.

750,512. MICRO-POWER LOGIC. Astronetic Research, Inc. SN 134,179. Pub. 3–19–63. Filed 12–18–61.

750,513. DT AND DESIGN. Data Technology Corporation. SN 137,604. Pub. 3–19–63. Filed 2–9–62.

750,514. "VO." Coen Company. SN 142,498. Pub. 3–19–63. Filed 4–18–62.

750,515. SPACE WRITER. Daystrom, Incorporated. SN 146,366. Pub. 3–19–63. Filed 6–7–62.

750,516. OMNICORDER. McGraw-Edison Company. SN 147,210. Pub. 3–19–63. Filed 6–19–62.

750,517. KOPIL. Goshi-Gaisha Kobayashi Seiki Seisakusho, d.b.a. Kobayashi Seiki Seisakusho, Ltd. SN 148,500. Pub. 3–19–63. Filed 7–6–62.

750,518. GTI AND DESIGN. Guidance Technology, Inc. SN 150,050. Pub. 3–19–63. Filed 7–30–62.

750,519. KONCEPT-O-GRAPH. Graflex, Inc. SN 150,168. Pub. 3–19–63. Filed 7–31–62.

750,520. REALVIEW. Realtone Electronics Corp. SN 150,184. Pub. 3–19–63. Filed 7–31–62.

750,521. B. Bourns, Inc. SN 150,226. Pub. 3–19–63. Filed 8–1–62.

750,522. E AND DESIGN. The Egan Machine Corp. SN 150,861. Pub. 3–19–63. Filed 8–8–62.

750,523. CYBERTRON. Raytheon Company. SN 150,892. Pub. 3–19–63. Filed 8–9–62.

750,524. WIC AND DESIGN OF WICK. Western Instrument Corporation. SN 151,184. Pub. 3–19–63. Filed 8–14–62.

750,525. REX-WAY. Rexall Drug and Chemical Company. SN 151,259. Pub. 3–19–63. Filed 8–15–62.

750,526. VO DESIGN. Vogue Optical Mfg. Co., Inc. SN 151,377. Pub. 3–19–63. Filed 8–16–62.

750,527. PLEASANT AND DESIGN. Buttafarri Corporation. SN 151,394. Pub. 3–19–63. Filed 8–17–62.

750,528. TEACHER'S PET. C. W. Adams. SN 151,456. Pub. 3–19–63. Filed 8–20–62.

750,529. EXECUSTAT. The Powers Regulator Company. SN 151,524. Pub. 3–19–63. Filed 8–20–62.

750,530. LATRONICS COLORATIO. Latronics Corporation. SN 151,597. Pub. 3–19–63. Filed 8–21–62.

750,531. AGFALINE. Agfa Aktiengesellschaft. SN 151,641. Pub. 3–19–63. Filed 8–22–62.

750,532. FACILOG. Harman-Kardon, Incorporated. SN 151,822. Pub. 3–19–63. Filed 8–24–62.

750,533. FACILOGIC. Harman-Kardon, Incorporated. SN 151,823. Pub. 3–19–63. Filed 8–24–62.

Class 27 — Horological Instruments

750,534. MT. VERNON. Mt. Vernon Watch Co. SN 151,154. Pub. 3–19–63. Filed 8–14–62.

750,535. DERBY VOX. Ebauches S.A. SN 152,124. Pub. 3–19–63. Filed 8–29–62.

Class 28 — Jewelry and Precious-Metal Ware

750,536. RR. Rona Ring Corporation. SN 144,420. Pub. 3–19–63. Filed 5–11–62.

750,537. S AND DESIGN. Sylvette Jewelry, Inc. SN 144,424. Pub. 3–19–63. Filed 5–11–62.

750,538. SEA GIFT. A. Micallef & Co., Inc. SN 148,900. Pub. 3–19–63. Filed 7–12–62.

750,539. AW. Abraham A. Warmbrand, d.b.a. A. Warmbrand Jewelers. SN 150,987. Pub. 3–19–63. Filed 8–10–62.

750,540. B & G. Louis J. Bernard, d.b.a. Bernard & Gruning. SN 150,996. Pub. 3–19–63. Filed 8–13–62.

750,541. RJ AND DESIGN. Rockson Jewelry Manufacturing Co. SN 151,263. Pub. 3–19–63. Filed 8–15–62.

750,542. GIGI. Goldstein-Gerson Co., Inc. SN 151,314. Pub. 3–19–63. Filed 8–16–62.

750,543. DELROY. Royal Bead Novelty Co., Inc. SN 151,693. Pub. 3–19–63. Filed 8–22–62.

750,544. P AND DESIGN. Palliser Jewelry Co., Inc. SN 151,774. Pub. 3–19–63. Filed 8–23–62.

750,545. BUTTERFLY DESIGN. Halpern Jewelers Incorporated. SN 151,906. Pub. 3–19–63. Filed 8–27–62.

750,546. M WITHIN TRIANGLE DESIGN. The Mangan Company. SN 151,937. Pub. 3–19–63. Filed 8–27–62.

750,547. COL DESIGN. Columbia Jewelry Contractors, Inc. SN 152,207. Pub. 3–19–63. Filed 8–30–62.

750,548. HOBBY BIRTHDAY. Jerome H. Pennock. SN 152,241. Pub. 3–19–63. Filed 8–30–62.

Class 30 — Crockery, Earthenware, and Porcelain

750,549. FANCIFUL DESIGN OF A FEMALE FIGURE. HMH Publishing Co., Inc. SN 146,815. Pub. 3–19–63. Filed 6–13–62.

750,550. FEMLIN. HMH Publishing Co., Inc. SN 146,816. Pub. 3–19–63. Filed 6–13–62.

750,551. DURA-STONE. American Commercial Incorporated. SN 149,906. Pub. 3–19–63. Filed 7–27–62.

Class 31 — Filters and Refrigerators

750,552. SWEDEN SLUSHMAKER. Sweden Freezer Manufacturing Company. SN 111,015. Pub. 3–19–63. Filed 12–29–60.

750,553. CO_2LD SHOT. General Dynamics Corporation. SN 130,063. Pub. 3–19–63. Filed 10–17–61.

750,554. 76. Union Oil Company of California. SN 153,437. Pub. 3–19–63. Filed 9–18–62.

Class 32 — Furniture and Upholstery

750,555. PRINCESS. The Lane Company, Inc. SN 129,661. Pub. 3–19–63. Filed 10–11–61.

750,556. NATIONAL FRAME. National Frame Company. SN 138,972. Pub. 3–19–63. Filed 3–2–62.

750,557. ARC-BARS. Kay Manufacturing Corp. SN 139,861. Pub. 3–19–63. Filed 3–14–62.

750,558. FLEX-O-MATIC. Hallmark Cards, Incorporated. SN 151,049. Pub. 3–19–63. Filed 8–13–62.

750,559. MT. Mirror-Tech Manufacturing Company, Inc. SN 151,070. Pub. 3–19–63. Filed 8–13–62.

750,560. SELF-SELL. U.S. Merchandise Mart, Inc. SN 151,447. Pub. 3–19–63. Filed 8–17–62.

Class 33 — Glassware

750,561. CLEOPATRA. Artistic Glass Decorators, Incorporated. SN 149,526. Pub. 3–19–63. Filed 7–23–62.

Class 34 — Heating, Lighting, and Ventilating Apparatus

750,562. SUN-MITE. Hupp Corporation. SN 143,535. Pub. 3–19–63. Filed 5–1–62.

750,563. RAPIDAIRE. Hupp Corporation. SN 144,498. Pub. 3–19–63. Filed 5–14–62.

750,564. TEC AND DESIGN. Thermal Engineering Corporation. SN 144,560. Pub. 3–19–63. Filed 5–14–62.

750,565. REDI VENT. Joseph Pantatello, d.b.a. PM Manufacturing Company. SN 144,875. Pub. 3–19–63. Filed 5–17–62.

750,566. VIONIZER. Automatic Radio Mfg. Co., Inc. SN 144,928. Pub. 3–19–63. Filed 5–18–62.

750,567. SHOPPER'S FAIR. Mangel Stores Corporation. SN 151,965. Pub. 3–19–63. Filed 8–27–62.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

750,568. ARMOR TREAD. Armor Tread Tire Corporation. SN 50,440. Pub. 3–19–63. Filed 4–28–58.

750,569. VICTORIA VULCOFUX. Anita Hubale-Kienzle, d.b.a. Fa. Albert Kienzle. SN 129,014. Pub. 3–19–63. Filed 10–2–61.

750,570. ARMOSEAL. The Arbee Corporation, d.b.a. Manheim Manufacturing and Belting Company. SN 147,939. Pub. 3–19–63. Filed 6–28–62.

750,571. WINTER KING. The B. F. Goodrich Company. SN 152,692. Pub. 3–19–63. Filed 9–7–62.

750,572. HB. The B. F. Goodrich Company. SN 152,694. Pub. 3–19–63. Filed 9–7–62.

750,573. TRU-CREST. Sears, Roebuck and Co. SN 153,689. Pub. 3–19–63. Filed 9–21–62.

Class 36 — Musical Instruments and Supplies

750,574. RHYTHM BAND INC. AND DESIGN. Rhythm Band, Inc. SN 137,089. Pub. 3–19–63. Filed 2–1–62.

750,575. SHOPPER'S FAIR. Mangel Stores Corporation. SN 151,967. Pub. 3–19–63. Filed 8–27–62.

750,576. COLISEUM AND DESIGN. Coliseum Record Company, Incorporated. SN 153,462. Pub. 3–19–63. Filed 9–19–62.

750,577. GOLDIE. Goldie Records Inc. SN 153,952. Pub. 3–19–63. Filed 9–26–62.

750,578. VIBRA-MAGIC. Thomas Organ Co. SN 154,452. Pub. 3–19–63. Filed 10–3–62.

750,579. STARRETT AND DESIGN. Starrett H. Self. SN 155,358. Pub. 3–19–63. Filed 10–17–62.

Class 37 — Paper and Stationery

750,580. SIRNAP. Fort Howard Paper Company. SN 107,670. Pub. 4–18–61. Filed 11–2–60.

750,581. TRANSFOIL. Roovers-Lotsch, Inc. SN 128,595. Pub. 3–19–63. Filed 9–25–61.

750,582. SWINGLINE XI ELECTRO-POINTER. Swingline Inc. SN 137,288. Pub. 3–19–63. Filed 2–5–62.

750,583. SILBOND. Carl Freudenberg. SN 140,937. Pub. 3–19–63. Filed 3–28–62.

750,584. ARBOND. Arnold Cellophane Corporation. SN 142,231. Pub. 3–19–63. Filed 4–30–62.

750,585. DEMI-COAT. The D. M. Bare Paper Company. SN 146,965. Pub. 3–19–63. Filed 6–15–62.

750,586. BAND-AD. Sklaris Agency, Inc. SN 147,406. Pub. 3–19–63. Filed 6–21–62.

750,587. NORKLOTH. The Northwest Paper Company. SN 148,647. Pub. 3–19–63. Filed 7–9–62.

750,588. E-Z AND DESIGN. Gulf States Paper Corporation. SN 148,810. Pub. 3–19–63. Filed 7–11–62.

750,589. DURAPREG. Standard Packaging Corporation. SN 149,014. Pub. 3–19–63. Filed 7–13–62.

Class 38 — Prints and Publications

750,590. HAIR BEAUTY. The Realistic Company. SN 131,397. Pub. 3–19–63. Filed 11–6–61.

750,591. NARDA'S APPLIANCE ADVERTISER. National Appliance and Radio-TV Dealers Association, Inc. SN 146,921. Pub. 3–19–63. Filed 6–14–62.

750,592. ADVENTURES IN TRAVEL. Theodore Handelman, d.b.a. Ted Handelman Publications. SN 147,467. Pub. 3–19–63. Filed 6–22–62.

750,593. POTOMAC ALMANAC AND DESIGN. The Potomac Almanac. SN 147,757. Pub. 3–19–63. Filed 6–26–62.

750,594. NATURE PRINTS. The Paramount Line, Inc. SN 148,222. Pub. 3–19–63. Filed 7–2–62.

Class 39—Clothing

750,595. GLENBALLY. Palm Beach Company. SN 121,660. Pub. 3–19–63. Filed 6–8–61.

750,596. CLEO. Cleo Import & Export, Inc. SN 136,205. Pub. 3–19–63. Filed 1–22–62.

750,597. CLIPPER MILL. The Londontown Manufacturing Company. SN 136,911. Pub. 3–19–63. Filed 1–30–62.

750,598. WORK-AWAY. Edmont Inc. SN 137,617. Pub. 3–19–63. Filed 2–9–62.

750,599. CHIFFONETTE. Dutchess Underwear Corporation. SN 138,595. Pub. 10–2–62. Filed 2–26–62.

750,600. MR. BOB. Ainsbrooke Corporation, by merger from Carmi-Ainsbrooke Corporation. SN 141,499. Pub. 3–19–63. Filed 4–4–62.

750,601. SCOTCH-MIX. Renart Sportswear Corporation. SN 143,761. Pub. 1–8–63. Filed 5–3–62.

750,602. PONY-AIRES AND DESIGN. Plymouth Shoe Company. SN 145,400. Pub. 3–19–63. Filed 5–24–62.

750,603. BANRUN. Hudson Hosiery Company. SN 146,193. Pub. 3–19–63. Filed 6–5–62.

750,604. PRO-MASTER. Battelstein's Inc. SN 147,072. Pub. 3–19–63. Filed 6–18–62.

750,605. CHAMBLY. Paul Sachs Originals Co. SN 149,593. Pub. 3–19–63. Filed 7–23–62.

750,606. STRETCH 'N GROW. Cambridge Mills, Inc. SN 149,817. Pub. 3–19–63. Filed 7–26–62.

750,607. MIRABELLA. Pierce Shoe Manufacturing Company, Inc. SN 149,960. Pub. 3–19–63. Filed 7–27–62.

Class 40—Fancy Goods, Furnishings, and Notions

750,608. KAREN LEE. S. S. Kresge Company. SN 141,626. Pub. 3–19–63. Filed 4–5–62.

750,609. SELECTA. Select Beauty Brands, Inc. SN 145,216. Pub. 3–19–63. Filed 5–22–62.

750,610. TRUPOINT. The Union Pin Company. SN 146,128. Pub. 3–19–63. Filed 6–4–62.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

750,611. SHILLCRAFT. A. & H. Shillman Co., Inc. SN 131,238. Pub. 12–25–62. Filed 11–2–61.

750,612. W AND DESIGN. S. G. Winer & Co. Inc. SN 136,938. Pub. 3–19–63. Filed 1–30–62.

750,613. EINIGER WHITE-MIST. Einiger Mills, Inc. SN 141,049. Pub. 1–8–63. Filed 3–29–62.

750,614. LOCK-LINED. Lock-Lined, Inc. SN 142,201. Pub. 3–19–63. Filed 4–13–62.

750,615. ETIQUETTE. Chicopee Mills, Inc., assignee of Chicopee Manufacturing Corporation. SN 146,789. Pub. 3–19–63. Filed 6–13–62.

750,616. TAYLOR-MAKER. The Taylor-Maker, Inc. SN 147,520. Pub. 3–19–63. Filed 6–22–62.

750,617. PEEM PUFF. The Springs Cotton Mills. SN 149,338. Pub. 3–19–63. Filed 7–18–62.

750,618. COMEBACK. The Springs Cotton Mills. SN 149,340. Pub. 3–19–63. Filed 7–18–62.

750,619. LINOPAQUE. David and Dash Inc. SN 149,451. Pub. 3–19–63. Filed 7–20–62.

750,620. WONDROUS. Charles Bloom, Inc. SN 149,530. Pub. 3–19–63. Filed 7–23–62.

750,621. CROWN LOOM. Fruit of the Loom, Inc. SN 149,555. Pub. 3–19–63. Filed 7–23–62.

750,622. FLORA LOOM. Fruit of the Loom, Inc. SN 149,556. Pub. 3–19–63. Filed 7–23–62.

750,623. EVER LOOM. Fruit of the Loom, Inc. SN 149,557. Pub. 3–19–63. Filed 7–23–62.

750,624. BEAUTILOOM. Fruit of the Loom, Inc. SN 149,558. Pub. 3–19–63. Filed 7–23–62.

750,625. LADY LOOM. Fruit of the Loom, Inc. SN 149,559. Pub. 3–19–63. Filed 7–23–62.

750,626. LOCH LOOM. Fruit of the Loom, Inc. SN 149,560. Pub. 3–19–63. Filed 7–23–62.

750,627. ARTLACE. B. & S. Plastic Art, Inc. SN 149,699. Pub. 3–19–63. Filed 7–25–62.

750,628. PEERTEX. Lewis International Co. SN 149,751. Pub. 3–19–63. Filed 7–25–62.

750,629. WONDRETTE. J. P. Stevens & Co., Inc. SN 149,885. Pub. 3–19–63. Filed 7–26–62.

750,630. WONDERFREE. J. P. Stevens & Co., Inc. SN 149,886. Pub. 3–19–63. Filed 7–26–62.

750,631. HARLETRIQUE. J. P. Stevens & Co., Inc. SN 149,887. Pub. 3–19–63. Filed 7–26–62.

750,632. FLOWERLING. J. P. Stevens & Co., Inc. SN 149,888. Pub. 3–19–63. Filed 7–26–62.

750,633. WATERGUARD. David and Dash Inc. SN 149,922. Pub. 3–19–63. Filed 7–27–62.

750,634. ULTRAWEVE. Jerlee Products Corporation. SN 150,873. Pub. 3–19–63. Filed 8–9–62.

750,635. EXCLUSIVELY YOURS. Linco International, Inc. SN 150,959. Pub. 3–19–63. Filed 8–10–62.

750,636. SHOPPER'S FAIR. Mangel Stores Corporation. SN 151,973. Pub. 3–19–63. Filed 8–27–62.

750,637. TRENDSETTER COLLECTION. Tower Fabrics Company, Inc. SN 157,739. Pub. 3–19–63. Filed 11–21–62.

Class 43—Thread and Yarn

750,638. GLOSPAN. Globe Manufacturing Co. SN 149,460. Pub. 3–19–63. Filed 7–20–62.

Class 44—Dental, Medical, and Surgical Appliances

750,639. PROFEXRAY. Profexray, Incorporated. SN 129,389. Pub. 3–19–63. Filed 10–6–61.

750,640. 1501. C. R. Bard, Inc. SN 136,425. Pub. 3–19–63. Filed 1–24–62.

Class 45—Soft Drinks and Carbonated Waters

750,641. MAVIS CLUB. Mavis Bottling Company. SN 114,497. Pub. 3–19–63. Filed 2–27–61.

750,642. SUNFILLED AND DESIGN. The Coca-Cola Company. SN 145,521. Pub. 3–19–63. Filed 5–28–62.

Class 46—Foods and Ingredients of Foods

750,643. BLUE ROBIN AND DESIGN. Pacific Gamble Robinson Co., d.b.a. Pacific Fruit & Produce Company. SN 21,190. Pub. 6–18–57. Filed 12–17–56.

750,644. DE ZAAN AND AA IN CIRCLE DESIGNS. N.V. Cacaofabriek "De Zaan." SN 128,196. Pub. 3–19–63. Filed 9–19–61.

750,645. DOCTOR'S CHOICE. Nutri-Laboratories, Inc. SN 132,574. Pub. 3–19–63. Filed 11–22–61.

750,646. CATTLE GUARD. Pay Way Feed Mills, Inc. SN 132,578. Pub. 5–29–62. Filed 11–22–61.

750,647. GEL-A-RAMA AND DESIGN. Glendale Foods Corporation. SN 132,915. Pub. 3–19–63. Filed 11–28–61.

750,648. MEADORS. Meadors, Inc., assignee of Meadors Manufacturing Company, Inc. SN 135,285. Pub. 3–19–63. Filed 1–5–62.

750,649. ACME PRINCESS AND DESIGN. Acme Markets, Inc., by change of name from American Stores Company. SN 138,363. Pub. 3–19–63. Filed 2–21–62.

750,650. ZIA AND DESIGN. Howard Gault, d.b.a. Howard Gault Company. SN 139,061. Pub. 3–19–63. Filed 3–5–62.

750,651. FANCY CRESTS. National Biscuit Company. SN 142,340. Pub. 3–19–63. Filed 4–16–62.

750,652. TAJ-MAHAL. The U & J Lesson Corp. SN 144,564. Pub. 3–19–63. Filed 5–14–62.

750,653. RHODIAROME. Societe des Usines Chimiques Rhone-Poulenc. SN 144,770. Pub. 3–19–63. Filed 5–16–62.

750,654. CRISPY CRITTERS. General Foods Corporation. SN 145,180. Pub. 3–19–63. Filed 5–22–62.

750,655. DIBORINE. N.V. Verenigde Textiel- en Oliefabrieken. SN 145,283. Pub. 3–19–63. Filed 5–23–62.

750,656. SUNFILLED AND DESIGN. The Coca-Cola Company. SN 145,522. Pub. 3–19–63. Filed 5–28–62.

750,657. W BRAND AND FISH DESIGN. Omstead Fisheries 1961 Limited. SN 145,723. Pub. 3–19–63. Filed 5–29–62.

750,658. ICE BOX PIE. C. Y. Stephens, d.b.a. High's Ice Cream Novelties. SN 145,867. Pub. 3–19–63. Filed 5–31–62.

750,659. TULIP BRAND. Uithoornsche Conservenfabriken "de Hoorn" N.V. SN 145,897. Pub. 1–29–63. Filed 5–31–62.

750,660. GOLDEN YEARS. Richard L. Pelsman. SN 145,961. Pub. 3–19–63. Filed 6–1–62.

750,661. CORBETT'S. Corbett Canning Company, Inc. SN 146,709. Pub. 3–19–63. Filed 6–12–62.

750,662. BUDGETWISE. Norbest Turkey Growers Association. SN 147,140. Pub. 3–19–63. Filed 6–18–62.

750,663. HANOVER MAID AND DESIGN. Hanover Bakers, Inc. SN 149,741. Pub. 1–1–63. Filed 7–25–62.

750,664. PICK-L-ETTO. W. O. Sommers, Inc. SN 150,192. Pub. 1–29–63. Filed 7–31–62.

750,665. KERNLAND. Kern County Land Company. SN 151,386. Pub. 3–19–63. Filed 8–16–62.

750,666. PHOENIX. Louisiana State Rice Milling Company, Inc. SN 151,602. Pub. 3–19–63. Filed 8–21–62.

750,667. ORTEGA AND DESIGN. Coastal Valley Canning Co. SN 151,724. Pub. 3–19–63. Filed 8–23–62.

750,668. A-A ON AN OVAL BACKGROUND. Coger, Tucker & Cheney, Inc. SN 151,725. Pub. 3–19–63. Filed 8–23–62.

750,669. MARVEL. The Great Atlantic & Pacific Tea Company, Inc. SN 152,096. Pub. 3–19–63. Filed 8–28–62.

750,670. GLOMAR. Fred Delner. SN 152,388. Pub. 3–19–63. Filed 9–4–62.

750,671. BLUE HORIZON. South Bay Farmers Cooperative Association, d.b.a. South Bay Farmers Coop. Assn. SN 152,451. Pub. 3–19–63. Filed 9–4–62.

750,672. WHITE SEAL. Service Mills Company, Inc. SN 152,532. Pub. 3–19–63. Filed 9–5–62.

750,673. ANN RASKAS. Ann Raskas. SN 152,629. Pub. 3–19–63. Filed 9–6–62.

750,674. CALIB. Food Industries Company. SN 152,687. Pub. 3–19–63. Filed 9–7–62.

750,675. BLUE NURSE AND DESIGN. Meyenberg-Old Fashion Products Company. SN 152,814. Pub. 3–19–63. Filed 9–10–62.

750,676. MINER BRAND ETC. AND DESIGN. Meyenberg-Old Fashion Products Company, d.b.a. Meyenberg Milk Products Co. SN 152,815. Pub. 3–19–63. Filed 9–10–62.

750,677. S AND DESIGN. Safeway Stores, Incorporated. SN 152,835. Pub. 3–19–63. Filed 9–10–62.

Class 49—Distilled Alcoholic Liquors

750,678. KENNESAW. The Viking Distillery, Inc. SN 152,478. Pub. 3–19–63. Filed 9–4–62.

750,679. MILL STREAM. The Viking Distillery, Inc. SN 152,479. Pub. 3–19–63. Filed 9–4–62.

Class 50—Merchandise Not Otherwise Classified

750,680. TENAFLOWERS. Henry Ten Hagen. SN 148,033. Pub. 3–19–63. Filed 6–29–62.

Class 51—Cosmetics and Toilet Preparations

750,681. MANNEQUIN. The Medco Company, Inc., d.b.a. Mannequin Beauty Aids. SN 138,410. Pub. 3–19–63. Filed 2–21–62.

750,682. MAN STAY. Turtle Wax, Inc. SN 140,500. Pub. 3–19–63. Filed 3–22–62.

750,683. SKETCH. Benard et Honnorat, Societe Anonyme. SN 141,243. Pub. 3–19–63. Filed 4–2–62.

750,684. EMLIN CARE. Empress Dilene Cosmetics, Inc. SN 142,698. Pub. 3–19–63. Filed 4–20–62.

750,685. RHODIAROME. Societe des Usines Chimiques Rhone-Poulenc. SN 144,769. Pub. 3–19–63. Filed 5–16–62.

750,686. CARMEL MYERS. Carmel Myers, Inc. SN 149,047. Pub. 3–19–63. Filed 7–16–62.

Class 52—Detergents and Soaps

750,687. SOLUSCOUR. Soluol Chemical Co. Inc. SN 130,960. Pub. 3–19–63. Filed 10–30–61.

750,688. PLAUDIT. Purex Corporation, Ltd. SN 138,115. Pub. 3–19–63. Filed 2–16–62.

750,689. ACT! Magnolia Paper Co. SN 146,737. Pub. 3–19–63. Filed 6–12–62.

750,690. CC CONCENTRATE. Magnolia Paper Co. SN 146,738. Pub. 3–19–63. Filed 6–12–62.

750,691. COUNTRY MIST. Colane, Inc. SN 152,044. Pub. 3–19–63. Filed 8–28–62.

Service Marks

Class 100—Miscellaneous

750,692. McDONALD'S HAMBURGERS. McDonald's Corporation, assignee of McDonald's Self-Service System. SN 119,308. Pub. 3–19–63. Filed 5–4–61.

750,693. SMITH BROS. FISH SHANTY. Smith Bros. of Port Washington Inc. SN 143,884. Pub. 3–19–63. Filed 5–4–62.

750,694. OBC AND DESIGN. Outboard Boating Club of America. SN 145,119. Pub. 3–19–63. Filed 5–21–62.

750,695. TASTEE-FREEZ. Harlee Manufacturing Co. SN 153,084. Pub. 3–19–63. Filed 9–13–62.

Class 101—Advertising and Business

750,696. GEAR AND WORLD DESIGN. Manpower, Inc. SN 145,099. Pub. 3–19–63. Filed 5–21–62.

Class 102 — Insurance and Financial

750,697. FOODY AND DESIGN. Foody & Co. Inc. SN 149,073. Pub. 3-19-63. Filed 7-16-62.

Class 103 — Construction and Repair

750,698. JASCO. Johnson Acoustical & Supply Co. SN 128,052. Pub. 3-19-63. Filed 9-18-61.

750,699. MICRO-METRIC. Rayco Mfg. Co. SN 134,155. Pub. 3-5-63. Filed 12-15-61.

750,700. NCR SERVICE AND DESIGN. The National Cash Register Company. SN 145,709. Pub. 3-19-63. Filed 5-29-62.

Class 104 — Communication

750,701. CALIFORNIA INTERSTATE TELEPHONE COMPANY AND DESIGN. California Interstate Telephone Company. SN 135,760. Pub. 3-19-63. Filed 12-11-61.

Class 105 — Transportation and Storage

750,702. AS YOU TRAVEL ASK US AND DESIGN. The American Oil Company. SN 128,140. Pub. 3-12-63. Filed 9-19-61.

750,703. AVIANCA AND DESIGN. Aerovias Nacionales de Colombia. SN 146,253. Pub. 3-19-63. Filed 6-4-62.

Class 106 — Material Treatment

750,704. NAL ETC. AND DESIGN. National Astro Laboratories, Inc. SN 142,540. Pub. 3-19-63. Filed 4-18-62.

Class 107 — Education and Entertainment

750,705. TINKERTOWN. Theodore S. Bowers, d.b.a. Tinkertown Company. SN 135,753. Pub. 3-19-63. Filed 1-15-62.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 2 — Receptacles

750,706. Simmons Company, New York, N.Y. SN 141,472. Filed P.R. 4-3-62; Am. S.R. 3-18-63.

FIRE-SAFE

For Wastebaskets.
First use Mar. 8, 1962.

Class 12 — Construction Materials

750,707. Advance Construction Corp., Somerville, Mass. SN 122,052. Filed P.R. 6-15-61; Am. S.R. 3-13-63.

COLORADO STONE

For Pre-Cast Decorative Facing and Siding Stones for Use on Buildings.
First use Aug. 7, 1957.

Class 14 — Metals and Metal Castings and Forgings

750,708. Service Engraving Works, Inc., Newark, N.J. SN 143,055. Filed 4-25-62.

SERVICE-TYPE

For Metal Printing Type Used for Printing, Stamping, and Embossing.
First use Jan. 10, 1941.

Class 21 — Electrical Apparatus, Machines, and Supplies

750,709. Interelectronics Corporation, New York, N.Y. SN 122,539. Filed P.R. 6-21-61; Am. S.R. 4-9-63.

THERM-CAPACITOR

For Electric Capacitors.
First use on or about June 15, 1960.

Class 28 — Jewelry and Precious-Metal Ware

750,710. Marden Jewelry Co., Inc., New York, N.Y. SN 143,634. Filed 7-9-62.

MARDEN

For Finger Rings, Earrings, Bracelets, Pins, Necklaces and Other Jewelry Items Worn as Ornaments.
First use 1944.

Class 36 — Musical Instruments and Supplies

750,711. Gospel Light Publications, Glendale, Calif. SN 150,233. Filed P.R. 8-2-62; Am. S.R. 4-8-63.



For Phonograph Records.
First use Mar. 16, 1962.

Class 50 — Merchandise Not Otherwise Classified

750,712. Berkshire Farms, Inc., Yonkers, N.Y. SN 129,910. Filed P.R. 10-16-61; Am. S.R. 1-23-63.

SAF-T-GARD

For Inflatable Signaling Luminous Reflector for Use on the Highway for Safely Changing Tires or Auto Repairing.
First use June 6, 1961.

TRADEMARK REGISTRATIONS RENEWED

23,291. ARMOUR'S. Cl. 46. 7-4-1896.
23,649. EXCELSIOR AND DESIGN. Cl. 23. 9-26-1898.
163,713. JEWEL. Cl. 38. 1-23-23.
163,908. BEAR. Cl. 29. 2-6-23.
164,467. LILAS DE RIGAUD. Cl. 51. 2-20-23.
165,006. PLUKO. Cl. 51. 2-27-23.
165,772. FESCO AND DESIGN. Cl. 16. 3-20-23.
166,171. LONG OIL AND DESIGN. Cl. 16. 3-27-23.
166,460. HUMBLE. Cl. 15. 4-3-23.
166,701. ACE CLUB. Cl. 39. 4-10-23.
167,068. AGRIPPA AND DESIGN. Cl. 37. 4-24-23.
167,234. WEIGHTOMETER. Cl. 26. 4-24-23.
167,690. DIAMOND BRAND. Cl. 1. 5-8-23.
167,907. CHESEBROUGH'S VASELINE AND DESIGN. Cl. 16. 5-8-23.
168,134. LISTERINE. Cl. 18. 5-15-23.
168,186. ESQUIRE. Cl. 39. 5-15-23.
168,409. FR. HOTZ. Cl. 26. 5-22-23.
168,890. MISS CLASSIFIED. Cl. 38. 5-29-23.
168,938. BRICO. Cl. 4. 5-29-23.
169,064. OZITE. Cl. 42. 6-5-23.
169,206. HY-LIFT. Cl. 19. 6-12-23.
169,332. HAIRINSUL. Cl. 12. 6-12-23.
169,375. RAJAH. Cl. 39. 6-12-23.
170,765. DOUBLE COVER. Cl. 16. 7-24-23.
171,121. PILOT. Cl. 22. 7-31-23.
171,463. NUT LUNCH AND DESIGN. Cl. 46. 8-7-23.
171,478. SUNRAY AND DESIGN. Cl. 34. 8-7-23.
171,592. GOLDEN SMOKE. Cl. 46. 8-7-23.
172,111. DESIGN INDIAN HEAD. Cl. 39. 8-21-23.
172,588. KROMEPATCH. Cl. 12. 9-11-23.
172,638. SPERRY BLOSSOMS. Cl. 46. 9-11-23.
173,495. WARMSTER. Cl. 39. 9-25-23.
399,711. LIMBERJACK. Cl. 39. 1-26-43.
400,093. SIMPLEAT. Cl. 40. 2-16-43.
400,257. PATEK, PHILIPPE & CIE. Cl. 27. 2-23-43.
400,372. KENTEX APRON AND DESIGN. Cl. 35. 3-2-43.
400,534. ISOTEMP. Cl. 26. 3-16-43.
400,876. H.M.P. Cl. 18. 4-6-43.
400,936. URSINA. Cl. 51. 4-13-43.
401,261. GAMAL. Cl. 4. 5-4-43.
401,326. FLAVORSEAL. Cl. 15. 5-11-43.
401,368. H.B.D. Cl. 18. 5-11-43.
401,548. PENALJO. Cl. 39. 5-25-43.
401,603. HYPOT. Cl. 26. 5-25-43.
401,604. VIBROGROUND. Cl. 26. 5-25-43.
401,605. VIBROTEST. Cl. 26. 5-25-43.
401,806. HYPOLOID. Cl. 6. 6-8-43.
401,870. DURATION. Cl. 51. 6-15-43.
401,912. AMBER BEAUTY. Cl. 46. 6-15-43.
402,507. SWANELLE. Cl. 39. 7-27-43.
402,569. RAGGY LOU AND DESIGN. Cl. 46. 8-3-43.
402,600. ISCO. Cl. 30. 8-3-43.
402,628. WARCOPEL. Cl. 6. 8-3-43.
403,135. UNITEX AND DESIGN. Cl. 39. 8-7-43.
403,154. CHAFE-O-TEX AND DESIGN. Cl. 39. 8-7-43.
403,223. LAMINAC. Cl. 1. 9-14-43.
403,245. URAC. Cl. 1. 9-14-43.
403,274. DAPTA. Cl. 18. 9-14-43.
403,518. BLUSHING AND DESIGN. Cl. 46. 9-28-43.
403,519. ON RUSH. Cl. 46. 9-28-43.

TRADEMARK REGISTRATIONS CANCELED

Section 8

251,658. CERTIFIED SILVERTONE ETC. AND DESIGN. Cl. 50. 3-24-31.
345,066. VERI-BEST AND DESIGN. Cl. 26. 4-13-37.
618,461. DEMA. Cl. 6. 1-3-56.
624,961. AUTOPONENTS FOR INDUSTRY. Cl. 26. 4-10-56.
625,963. AMERICAN SEAL-HOOD. Cl. 50. 4-24-56.
626,223. LO MEJOR DEL CATHOLIC DIGEST. Cl. 38. 5-1-56.
626,494. TOP-FIVE. Cl. 22. 5-8-56.
627,894. BULLDOGGING. Cl. 39. 5-29-56.
629,728. DUCKPINS AND DOLLARS. Cl. 101. 6-26-56.
630,142. HALGEU. Cl. 46. 7-3-56.
630,551. GRANELL. Cl. 42. 7-10-56.
630,724. PHILIPPANEL. Cl. 12. 7-17-56.
631,011. MAGIC AND DESIGN. Cl. 46. 7-17-56.

The following registrations issued Apr. 16, 1957

644,024. PETECTOR. Cl. 3.
644,028. V-COAT. Cl. 6.
644,029. UNISHADE. Cl. 6.
644,032. BIOLOAM. Cl. 10.
644,034. SHADOW-CREST. Cl. 12.
644,035. GAZ. Cl. 12.
644,037. CED-A-ROC. Cl. 12.
644,057. "FROSTINE." Cl. 16.
644,066. SOMNESIUM. Cl. 18.
644,067. PETROCEL. Cl. 18.
644,068. SEDALOTION. Cl. 18.
644,076. BAYCARON. Cl. 18.
644,079. POLYRUBIN. Cl. 18.
644,083. SKY CHIEF. Cl. 21.
644,084. CARROTTO. Cl. 21.
644,096. COMP-U-TRIM. Cl. 21.
644,101. TELE-AQUARIUM. Cl. 21.
644,105. HY-GLOW. Cl. 21.
644,106. SAFETY-NTD-LITE. Cl. 21.
644,107. NTD. Cl. 21.
644,108. LIFE TIME. Cl. 21.
644,114. TELE-GUIDE AND DESIGN. Cl. 21.
644,120. C & R. Cl. 21.
644,122. TUK-A-TENNA. Cl. 21.
644,126. BELDGRIP. Cl. 21.
644,131. EV. Cl. 22.
644,132. RIO. Cl. 22.
644,133. SCOOP. Cl. 22.
644,134. CORSAIR. Cl. 22.
644,135. TILTING TOMMY. Cl. 22.
644,137. THUNDERBOLT. Cl. 23.
644,142. BELL AND DESIGN. Cl. 23.
644,149. GOVERNOR. Cl. 23.
644,155. WALLRAMIT. Cl. 23.
644,157. THE ROANOKE-HOLLIDAY. Cl. 23.
644,159. TRAV-LIFT. Cl. 23.
644,163. SHERMAN MAJOR AND DESIGN. Cl. 23.
644,168. B-W MECHANICS ETC. AND DESIGN. Cl. 23.
644,169. B-W DETROIT GEAR ETC. AND DESIGN. Cl. 23.
644,172. V-I-P. Cl. 23.
644,174. EQUALOK. Cl. 23.
644,177. RAP-IT ETC. AND DESIGN. Cl. 23.
644,178. PIE-O-MATIC. Cl. 23.
644,183. TESTRITE. Cl. 26.
644,185. TRANSLIGHT. Cl. 26.
644,186. THEY SOFTEN THE SUN AND DESIGN. Cl. 26.
644,189. PEGASUS SYMBOL AND DESIGN. Cl. 26.
644,191. MICRO-MIDGET. Cl. 26.
644,194. OCEAN. Cl. 26.
644,195. OPLEN. Cl. 26.
644,198. KEL-RAY. Cl. 26.
644,204. WELLINGTON. Cl. 28.
644,213. RESTUP. Cl. 32.
644,215. SPACE MIZER. Cl. 32.
644,219. STEDTLER. Cl. 37.
644,222. TEMPO. Cl. 37.
644,227. EAST-DEX. Cl. 37.
644,228. THE GUARANTY SURVEY. Cl. 38.
644,229. THE GUARANTY NEWS. Cl. 38.
644,231. TOMORROW'S MARKETS. Cl. 38.
644,234. PENNY BONNETS WETHERN'S AND DESIGN. Cl. 39.

644,236. NAUTILUS. Cl. 39.
644,237. COLERAINE. Cl. 39.
644,243. TACH-ON. Cl. 40.
644,244. HARVY AND DESIGN. Cl. 41.
644,245. NI°. Cl. 42.
644,246. PALM CREST. Cl. 42.
644,247. ECONOMY. Cl. 42.
644,248. NOCHLOR. Cl. 42.
644,249. BERN-SHEEN. Cl. 42.
644,251. BERKBLEND. Cl. 42.
644,252. BERKRON. Cl. 42.
644,253. TWISTER-PAK. Cl. 43.
644,260. PINK ELEPHANT. Cl. 46.
644,266. NASH-A-RYE. Cl. 46.
644,269. BAKE-A-PAK. Cl. 46.
644,278. RB-JOYCE. Cl. 46.
644,279. YUKON CHARLIE'S. Cl. 46.
644,280. JONDRE'S. Cl. 46.
644,281. JONDRE'S AND DESIGN. Cl. 46.
644,290. BRIGHT CHRISTMAS. Cl. 51.
644,291. DANSES. Cl. 51.
644,292. COME ALIVE GRAY AND DESIGN. Cl. 51.
644,295. LONAY. Cl. 51.
644,296. SABUNIT. Cl. 51.
644,300. "TAM" BY CARRIE AND DESIGN. Cl. 51.
644,301. PLAYHOUSE. Cl. 51.
644,307. GEO SURVEYS AND DESIGN. Cl. 100.
644,308. OPERATION HOME IMPROVEMENT AND DESIGN. Cl. 100.
644,316. TEX-TONE. Cl. 103.
644,323. HERION. Cl. 13.
644,324. TWIN TRAILER. Cl. 19.
644,325. LINDQUIST AND DESIGN. Cl. 23.
644,326. CHROMADOT. Cl. 26.
644,331. PEEBLES' WHEYBLOC. Cl. 46.
644,332. SILVER STATE. Cl. 46.
644,334. SKIMIX. Cl. 46.
644,338. TRAVALIN'S. Cl. 51.
644,339. WHITE DAFFODILS. Cl. 51.

TRADEMARK REGISTRATIONS—NEW CERTIFICATES

New Certificates issued under sections 7(c), 7(f), 7(g) of the Trademark Act of 1946 for the unexpired term of the original registrations.

72,574. FAULTLESS. Cl. 39. E. Rosenfeld & Co. 2–2–09. New Cert. Sec. 7(c) to The Enro Shirt Company, Inc., Louisville, Ky.

150,650. WILSON BRO'S. Cl. 39. Wilson Brothers. 1–3–22. New Cert. Sec. 7(c) to The Enro Shirt Company, Inc., Louisville, Ky.

329,617. SKIPPER. Cl. 39. Wilson Brothers. 11–5–35. New Cert. Sec. 7(c) to The Enro Shirt Company, Inc., Louisville, Ky.

399,664. RINGSIDER AND DESIGN. Cl. 39. Wilson Brothers. 1–26–43. New Cert. 7(c) to The Enro Shirt Company, Inc., Louisville, Ky.

580,091. MAXIM'S. Cl. 100. Louis Vaudable. 9–15–53. New Cert. Sec. 7(c) to La Societe d'Investissement Commercial et Hotelier S.A., Zug, Switzerland.

589,317. MAXIM'S. Cl. 47. L. Vaudable. 5–4–54. New Cert. Sec. 7(c) to La Societe d'Investissement Commercial et Hotelier S.A., Zug, Switzerland.

REGISTRATIONS PUBLISHED UNDER SEC. 12(c)

The following marks registered under the act of 1905, or the act of 1881, are published under the provisions of section 12(c) of the Trademark Act of 1946. These registrations are not subject to opposition but are subject to cancellation under section 14 of the act of 1946.

Class 2—Receptacles

400,513. Mar. 16, 1943. The Preload Company, Boston, Mass. Pub. by The Preload Company, Inc., Westbury, N.Y.

PRELOAD

For Receptacles of Cement or Concrete—Namely, Tanks for Water, Oil or Gasoline, Aquariums, and Bird Baths.

Class 5—Adhesives

165,814. Mar. 20, 1923. Rhodia Chemical Company, New Brunswick, N.J. Pub. by E. I. du Pont de Nemours and Company, Wilmington, Del.

Cel-o-seal

For Protective Materials Used for Coating and Sealing Containers and the Like.

Class 6—Chemicals and Chemical Compositions

169,853. July 3, 1923. E. I. du Pont de Nemours and Company, Wilmington, Del. Pub. by registrant.

SEMESAN

For Fungicide, Seed Disinfectant.

Class 16—Protective and Decorative Coatings

166,059. Mar. 27, 1923. Oliver Reeder & Son, Incorporated, Baltimore, Md. Pub. by registrant.



For Marine Paints, Ready Mixed Paints, and Copper Paints for Submerged and Other Surfaces of Ships, Boats, and Other Structures.

166,060. Mar. 27, 1923. Oliver Reeder & Son, Incorporated, Baltimore, Md. Pub. by registrant.

BALTIMORE

For Copper Paint, Non-Fouling Paint, Anticorrosive Composition for Iron and Steel Vessels, Antifouling Composition for Iron and Steel Vessels; Prepared Paints, Ready-Mixed Deck Paint, Quick-Drying Black Paint, Ready-Mixed Marine White Paint, Ready Mixed Gloss White Paint, Red Lead Mixed Ready for Use, Red Lead and Zinc Mixed Ready for Use, Asbestos Smokestack Paint, Filler for Masts and Spars, Inside Varnish, Spar Varnish, Japan Drier, Gas-Engine and Machinery Paint, Paint Colors Ground in Oil, and Paint and Varnish Remover.

Class 18—Medicines and Pharmaceutical Preparations

22,443. Feb. 7, 1903. E. F. Houghton & Co., Philadelphia, Pa. Pub. by registrant.

COSMOLINE

For Unguents.

402,720. Aug. 10, 1943. Thomas Dain Allen, New York, N.Y. Pub. by Carter Products, Inc., New York, N.Y.

COLONAID

For Laxatives.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

166,854. Apr. 17, 1923. Sanderson Brothers & Newbould, Limited, Sheffield, England. Pub. by registrant.

PAX



For Hacksaw Pruning Blade.

400,202. Feb. 16, 1943. United Dairy Equipment Company, West Chester, Pa. Pub. by registrant.

MECHANICAL COW

No claim is made to the word "Mechanical" apart from the mark as shown.

For Machines for Emulsifying Butter Fats, Milk Solids, and Water.

Class 39—Clothing

164,058. Feb. 13, 1923. Aquascutum Limited, London, England. Pub. by registrant.

The Eiderscutum Coat

No claim is made to the exclusive use of the word "Coat" apart from the other features of the mark.

For Overcoats for Men and Children, and Coats for Women.

399,748. Jan. 26, 1943. Lily of France Corset Company, Inc., New York, N.Y. Pub. by Lily of France, Inc., New York, N.Y.

Lilees

For Brassieres.

402,496. July 27, 1943. Southland Manufacturing Co., Inc., Wilmington, N.C. Pub. by registrant.

FRANKLIN SQUARE

No claim is made to the word "Franklin" apart from the mark as shown.

For Men's and Boys' Outer Shirts, Pajamas, Underwear, and Shorts.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

168,791. May 29, 1923. The Bradford Dyers' Association, Limited, Bradford, England. Pub. by registrant.

BDA

For Piece Goods Composed of Silk, or of an Admixture of Silk and Cotton, or of an Admixture of Silk and Wool; Piece Goods Composed of Wool, or of an Admixture of Wool and Cotton, or an Admixture of Wool and Silk; Piece Goods Composed of an Admixture of Artificial Silk and Cotton, or an Admixture of Artificial Silk and Wool.

Class 44—Dental, Medical, and Surgical Appliances

166,521. Apr. 3, 1923. The L. D. Caulk Company, Milford, Del. Pub. by registrant.

TWENTIETH CENTURY

For Dental Alloy.

Class 45—Soft Drinks and Carbonated Waters

399,561. Jan. 19, 1943. The Mil-K-Botl Corporation of America, St. Louis, Mo. Pub. by Sun Drop Sales Corporation of America, St. Louis, Mo.

SUN DROP

For Non-Alcoholic, Maltless Beverages Sold as Soft Drinks, and Extracts and Concentrates for Making Such Beverages.

Class 46—Foods and Ingredients of Foods

69,352. June 9, 1908. The Blanton Manufacturing Company, St. Louis, Mo. Pub. by The Blanton Company, St. Louis, Mo.

CREAMO

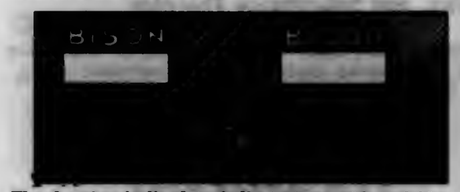
For Oleomargarine.

169,812. July 3, 1923. Phillip Smolinsky, d.b.a. Parkview Pharmacy, Kansas City, Mo. Pub. by Parkview Drugs, Inc., Kansas City, Mo.

FRUIT SALAD

For Ice Cream.

317,040. Sept. 11, 1934. Bison Canning Company, Inc., Angola, N.Y. Pub. by registrant.



The drawing is lined to indicate tan, gold, and blue, and is shaded for black.

For Canned Berries and Canned Vegetables.

356,912. May 17, 1938. American Breddo Corporation, New York, N.Y. Pub. by Breddo-Food Products Corporation, Inc., Kansas City, Kans.

Breddo



For Rye Flour.

439,105. June 1, 1948. American Breddo Corp., New York, N.Y. Pub. by Breddo-Food Products Corporation, Inc., Kansas City, Kans.

WHIPPOLENE

For Food Material in the Form of an Emulsifying Agent Added to Cream or Milk and Serving as a Whipping Agent.

Class 51—Cosmetics and Toilet Preparations

399,428. Jan. 5, 1943. House of Westmore, Inc., New York, N.Y. Pub. by registrant.

OVERGLO

For Foundation Face Cream.

INDEX OF REGISTRANTS

JUNE 4, 1968

(Registered; Renewed; Canceled; Amended, Disclaimed, Corrected, etc.; New Certificates; 12c Publications.)

AMBCO Electronics, Los Angeles, Calif. 750,510, pub. 3–19–68. Cl. 26.
AMP Inc., Harrisburg, Pa. 750,493, pub. 3–19–68. Cl. 23.
Abbott Laboratories, North Chicago, Ill. 750,414, pub. 3–19–68. Cl. 18.
Acme Markets, Inc., from American Stores Co., Philadelphia, Pa. 750,649, pub. 3–19–68. Cl. 46.
Adams, C. W., San Angelo, Tex. 750,528, pub. 3–19–68. Cl. 26.
Advance Construction Corp., Somerville, Mass. 750,707. Cl. 12.
Aerovias Nacionales de Colombia, Bogota, Colombia. 750,703, pub. 3–19–68. Cl. 105.
Agfa Aktiengesellschaft, Leverkusen-Bayerwerk, Germany. 750,531, pub. 3–19–68. Cl. 26.
Agricultural Specialties, Dallas, Tex. 750,367, pub. 3–19–68. Cl. 6.
Ainsbrooke Corp., from Carmi-Ainsbrooke Corp., New York, N.Y. 750,600, pub. 3–19–68. Cl. 39.
Aktiebolaget Galco, to Aktiebolaget Galco, Stockholm, Sweden. 167,085, ren. 6–4–63. Cl. 37.
Alcon Laboratories, Inc., Fort Worth, Tex. 750,424, pub. 3–19–68. Cl. 18.
Allen, Thomas D. by Carter Products, Inc., New York, N.Y. 402,720, 12(c) pub. 6–4–63. Cl. 18.
Altmann, Bernhard, Corp., The, New York, N.Y. 644,237, canc. Cl. 39.
Aluminum Co. of America, Pittsburgh, Pa. 750,384, pub. 3–19–68. Cl. 14.
American Breddo Corp., New York, N.Y., by Breddo-Food Products Corp., Inc., Kansas City, Kans. 356,912, 12(c) pub. 6–4–63. Cl. 46.
American Breddo Corp., New York, N.Y., by Breddo-Food Products Corp., Inc., Kansas City, Kans. 439,105, 12(c) pub. 6–4–63. Cl. 46.
American Commercial Inc., Los Angeles, Calif. 750,551, pub. 3–19–68. Cl. 30.
American Cyanamid Co., Wayne, N.J. 403,223, ren. 6–4–63. Cl. 1.
American Cyanamid Co., Wayne, N.J. 403,245, ren. 6–4–63. Cl. 1.
American Cyanamid Co., Wayne, N.J. 750,425, pub. 3–19–68. Cl. 18.
American Hair Felt Co., to Onite Corp., Chicago, Ill. 169,064, ren. 6–4–63. Cl. 42.
American Hair Felt Co., to Onite Corp., Chicago, Ill. 169,832, ren. 6–4–63. Cl. 12.
American Home Products Corp.: *See*—
S.M.A. Corp.
American Home Products Corp., New York, N.Y. 750,390, pub. 3–19–68. Cl. 15.
American Home Products Corp., New York, N.Y. 750,409, pub. 3–19–68. Cl. 18.
American Home Products Corp., New York, N.Y. 750,426, pub. 3–19–68. Cl. 18.
American Home Products Corp., d.b.a. Ives-Cameron Co., New York, N.Y. 750,403, pub. 3–19–68. Cl. 18.
American Luggage Works, Inc., Warren, R.I. 750,353, pub. 3–19–68. Cl. 3.
American Machine & Foundry Co., New York, N.Y. 750,392, pub. 3–19–68. Cl. 16.
American Oil Co., The, Chicago, Ill. 750,702, pub. 3–12–68. Cl. 105.
American Scientific Laboratories, Inc.: *See*—
Schering Corp.
American Stores Co.: *See*—
Acme Markets, Inc.
American Thermoform Corp., Culver City, Calif. 750,478, pub. 3–19–68. Cl. 23.
American Seal-Kap Corp. of Delaware, Long Island City, N.Y. 625,983, canc. Cl. 50.
Anabolic, Inc., Glendale, Calif. 750,416–17, pub. 6–19–68. Cl. 18.
Anaconda Wire and Cable Co., Hastings-On-Hudson, N.Y. 750,447, pub. 3–19–68. Cl. 21.
Anderson Electric Corp., Leeds, Ala. 750,461, pub. 3–19–68. Cl. 21.
Anvil Brand, Inc., d.b.a. Tractor Brand, High Point, N.C. 627,894, canc. Cl. 39.
Aquascutum Ltd., London, England. 164,058, 12(c) pub. 6–4–63. Cl. 39.
Arbee Corp., The, d.b.a. Manheim Mfg. and Belting Co., Manheim, Pa. 750,570, pub. 3–19–68. Cl. 35.
Armor Tread Tire Corp., Baltimore, Md. 750,568, pub. 3–19–68. Cl. 35.
Armour and Co.: *See*—
Armour & Co.
Armour & Co., to Armour and Co., Chicago, Ill. 23,291, ren. 6–4–63. Cl. 46.
Arnold Cellophane Corp., Miami, Fla. 750,584, pub. 3–19–68. Cl. 37.
Artistic Glass Decorators, Inc., Waterloo, Iowa. 750,561, pub. 3–19–68. Cl. 33.
Associated Research Inc., Chicago, Ill. 401,603–5, ren. 6–4–63. Cl. 26.
Astronetic Research, Inc., Nashua, N.H. 750,512, pub. 3–19–68. Cl. 26.
Automatic Packaging Equipment, Inc., Skokie, Ill. 750,495, pub. 3–19–68. Cl. 23.
Automatic Radio Mfg. Co., Inc., Boston, Mass. 750,566, pub. 3–19–68. Cl. 34.
Avon Products, Inc., New York, N.Y. 644,339, canc. Cl. 51.
B. & S. Plastic Art, Inc., Jersey City, N.J. 750,627, pub. 3–19–68. Cl. 42.
Baker, E. & L., Co., The, Cleveland, Ohio, to Otis Elevator Co., New York, N.Y. 169,206, ren. 6–4–63. Cl. 19.
Baldwin-Montrose Chemical Co., Inc., Philadelphia, Pa. 750,503, pub. 3–19–68. Cl. 23.
Baldwin-Rice Corp., Boston, Mass. 644,024, canc. Cl. 3.
Bancroft, Joseph, & Sons Co., Wilmington, Del. 644,248, canc. Cl. 42.
Bard, C. R., Inc., Murray Hill, N.J. 750,640, pub. 3–19–68. Cl. 44.
Bare, D. M., Paper Co., The, Roaring Spring, Pa. 750,585, pub. 3–19–68. Cl. 37.
Battelstein's Inc., Houston, Tex. 750,604, pub. 3–19–68. Cl. 39.
Beaird, J. B., Co., Inc., The, Shreveport, La. 750,482, pub. 3–19–68. Cl. 23.
Beck, A. S., Shoe Corp., New York, N.Y. 339,711, ren. 6–4–63. Cl. 39.
Belden Mfg. Co., Chicago, Ill. 644,126, canc. Cl. 21.
Bell & Howell Co., Chicago, Ill. 750,500, pub. 3–19–68. Cl. 23.
Bemis Bro. Bag Co., St. Louis, Mo. 750,346, pub. 3–19–68. Cl. 2.
Berkshire Farms, Inc., Yonkers, N.Y. 750,712. Cl. 50.
Berkshire Hathaway, Inc., Providence, R.I. 644,251–2, canc. Cl. 42.
Bernard et Honnorat, Societe Anonyme Grasse, Alpes-Maritimes, France. 750,683, pub. 3–19–68. Cl. 51.
Bernard & Grunning: *See*—
Bernard, Louis J.
Bernard, Louis J., d.b.a. Bernard & Grunning, New Orleans, La. 750,540, pub. 3–19–68. Cl. 23.
Bernside Mills, Inc., New York, N.Y. 644,249, canc. Cl. 42.
Bevin Wilcox Line Co., The, East Hampton, Conn. 171,121, ren. 6–4–63. Cl. 22.
Birkbeck Brothers, Inc., Willow Grove, Pa. 644,243, canc. Cl. 40.
Bison Canning Co. Inc., Angola, N.Y. 317,040, 12(c) pub. 6–4–63. Cl. 46.
Bissell Inc., Grand Rapids, Mich. 750,492, pub. 3–19–68. Cl. 23.
Bissell, Titus L., Charleston, S.C. 644,185, canc. Cl. 22.
Black Products Co., Chicago, Ill. 750,511, pub. 3–19–68. Cl. 26.
Blanton Co., The: *See*—
Blanton Mfg. Co., The.
Blanton Mfg. Co., The, by The Blanton Co., St. Louis, Mo. 69,352, 12(c) pub. 6–4–63. Cl. 46.
Bloom, Charles, Inc., New York, N.Y. 750,620, pub. 3–19–68. Cl. 42.
Boehringer, C. H., Sohn, Ingelheim (Rhine), Germany. 644,206, canc. Cl. 51.
Boehringer, C. H., Sohn, Ingelheim (Rhine), Germany. 750,404, pub. 6–26–62. Cl. 18.
Boehringer, C. H., Sohn, Ingelheim (Rhine), Germany. 750,423, pub. 3–19–68. Cl. 18.
Borg-Warner Corp., Chicago, Ill. 644,168–9, canc. Cl. 23.
Borg-Warner Corp., Chicago, Ill. 750,357, pub. 3–19–68. Cl. 5.
Bourns, Inc., Riverside, Calif. 750,521, pub. 3–19–68. Cl. 26.
Bowers, Theodore S., d.b.a. Tinkertown Co., Los Angeles, Calif. 750,705, pub. 3–19–68. Cl. 107.
Bradford Dyers' Association, Ltd., The, Bradford, England. 168,791, 12(c) pub. 6–4–63. Cl. 42.
Breddo-Food Products Corp., Inc.: *See*—
American Breddo Corp.
Bright Star Industries, Clifton, N.J. 750,451–2, pub. 3–19–68. Cl. 21.
Brillo Mfg. Co., Brooklyn, N.Y. 168,938, ren. 6–4–63. Cl. 4.
Burroughs Wellcome & Co. (U.S.A.) Inc., Tuckahoe, N.Y. 401,805, ren. 6–4–63. Cl. 6.
Butler Mfg. Co., Kansas City, Mo. 750,351, pub. 3–19–68. Cl. 2.
Buttafarri Corp., New York, N.Y. 750,527, pub. 3–19–68. Cl. 26.
CTS Corp., Elkhart, Ind. 750,488, pub. 3–19–68. Cl. 21.
California Interstate Telephone Co., Victorville, Calif. 750,701, pub. 3–19–68. Cl. 104.
Cambridge Mills, Inc., New York, N.Y. 750,606, pub. 3–19–68. Cl. 39.
Carmi-Ainsbrooke Corp.: *See*—
Ainsbrooke Corp.
Carr, Otis T., Baltimore, Md. 644,094, canc. Cl. 21.
Carrie & Sleminger Co., Flint, Mich. 644,300, canc. Cl. 51.
Carter Products, Inc.: *See*—
Allen, Thomas D.
Catholic Digest, Inc., The: *See*—
Catholic Digest International Inc., The.

Catholic Digest International Inc., The, New York, N.Y., to The Catholic Digest, Inc., St. Paul, Minn. 426,223, canc. Cl. 38.
Celotex Corp., The, Chicago, Ill. 644,034, canc. Cl. 12.
Certified Dry Mat Corp., New York, N.Y. 281,658, canc. Cl. 50.
Chainveyor Corp., Los Angeles, Calif. 750,506, pub. 3–19–63. Cl. 23.
Cherry-Burrell Corp., Chicago, Ill. 644,183, canc. Cl. 26.
Chesebrough Mfg. Co., to Chesebrough-Pond's Inc., New York, N.Y. 167,907, ren. 6–4–63. Cl. 18.
Chesebrough-Pond's Inc.: *See*—
Chesebrough Mfg. Co.
Chicago Aerial Industries, Inc., Barrington, Ill. 750,507, pub. 3–12–63. Cl. 26.
Chicopee Mfg. Corp.: *See*—
Chicopee Mills, Inc.
Chicopee Mills, Inc., from Chicopee Mfg. Corp., New Brunswick, N.J. 750,615, pub. 3–19–63. Cl. 42.
Chippewa Shoe Co.: *See*—
Chippewa Shoe Mfg. Co.
Chippewa Shoe Mfg. Co., to Chippewa Shoe Co., Chippewa Falls, Wis. 172,111, ren. 6–4–63. Cl. 39.
Chris-Craft Corp., Pompano Beach, Fla. 750,481, pub. 3–19–63. Cl. 19.
Christenssons Maskiner & Patenter AB, Stockholm, Sweden. 750,847, pub. 3–19–63. Cl. 2.
Clairol Inc., Stamford, Conn. 644,292, canc. Cl. 51.
Claster, Bert, Television Productions: *See*—
Claster, Bertram H.
Claster, Bertram H. d.b.a. Bert Claster Television Productions, Baltimore, Md. 629,728, canc. Cl. 101.
Cleo Import & Export, Inc., New York, N.Y. 750,596, pub. 3–19–63. Cl. 39.
Club Razor & Blade Mfg. Corp., Newark, N.J. 644,142, canc. Cl. 23.
Coastal Valley Canning Co., Oxnard, Calif. 750,667, pub. 3–19–63. Cl. 46.
Coca-Cola Co., The, Atlanta, Ga. 750,642, pub. 3–19–63. Cl. 46.
Coca-Cola Co., The, Atlanta, Ga. 750,656, pub. 3–19–63. Cl. 46.
Coen Co., San Francisco, Calif. 750,514, pub. 3–19–63. Cl. 26.
Corge, Tucker & Cheney, Inc., Corning, N.Y. 750,668, pub. 3–19–63. Cl. 46.
Colane, Inc., Chicago, Ill. 750,691, pub. 3–19–63. Cl. 52.
Coliseum Record Co., Inc., Hollywood, Calif. 750,576, pub. 3–19–63. Cl. 36.
Columbia Jewelry Contractors, Inc., New York, N.Y. 750,547, pub. 3–19–63. Cl. 28.
Commercial Solvents Corp., New York, N.Y. 750,402, pub. 3–19–63. Cl. 18.
Conchemco, Inc.: *See*—
Seidlits Varnish Co.
Conso Products, Inc.: *See*—
Consolidated Trimming Corp.
Consolidated Trimming Corp., to Conso Products, Inc., New York, N.Y. 400,098, ren. 6–4–63. Cl. 40.
Container Development Corp., Watertown, Wis. 750,496, pub. 3–19–63. Cl. 23.
Continental Oil Co., Ponca City, Okla. 750,354, pub. 3–19–63. Cl. 4.
Cooper, Warren H., and Warren Mark Cooper, Odessa, Tex. 750,334, pub. 3–19–63. Cl. 1.
Corbett Canning Co., Inc., Tabor City, N.C. 750,661, pub. 3–19–63. Cl. 46.
Creat-Foam Corp., Flushing, N.Y. 750,342, pub. 3–19–63. Cl. 1.
Data Technology Corp., Palo Alto, Calif. 750,513, pub. 3–19–63. Cl. 26.
Dawson Chemical Co. Inc., Houston, Tex. 750,406, pub. 3–19–63. Cl. 18.
David and Dash Inc., Miami, Fla. 750,619, pub. 3–19–63. Cl. 42.
David and Dash Inc., Miami, Fla. 750,633, pub. 3–19–63. Cl. 42.
Daystrom, Inc., Murray Hill, N.J. 750,515, pub. 3–19–63. Cl. 26.
Dearborn Electronic Laboratories of Delaware, Inc., Orlando, Fla. 750,463, pub. 3–19–63. Cl. 21.
Dahl, Norman F., Toronto, Canada, to Lehn & Fink Products Corp., Bloomfield, N.J. 401,870, ren. 6–4–63. Cl. 51.
De Kalb Agricultural Association, Inc., De Kalb, Ill. 750,536, pub. 3–19–63. Cl. 1.
Delta Drug Corp., Jacksonville, Fla. 750,410, pub. 3–19–63. Cl. 18.
Delzer, Fred, Bakersfield, Calif. 750,670, pub. 3–19–63. Cl. 46.
Dexter Folder Co., Pearl River, N.Y., to Miehle-Goss-Dexter, Inc., Chicago, Ill. 644,101, canc. Cl. 26.
Du Pont de Nemours, E. I., and Co.: *See*—
Rhodia Chemical Co.
Du Pont de Nemours, E. I., and Co., Wilmington, Del. 169,353, 12(c) pub. 6–4–63. Cl. 6.
Du Pont de Nemours, E. I., and Co., Wilmington, Del. 750,368, pub. 3–19–63. Cl. 6.
Dura Commodities Corp., New York, N.Y. 750,388, pub. 3–19–63. Cl. 15.
Dutchess Underwear Corp., New York, N.Y. 750,599, pub. 10–3–62. Cl. 39.
E.Z. Plastics Co., Lenni Mills, Pa. 644,120, canc. Cl. 21.
Eastern Precision Resistor Corp., Brooklyn, N.Y. 644,098, canc. Cl. 21.
Ebauches S.A., Neuchatel, Switzerland. 750,535, pub. 3–19–63. Cl. 27.
Edmont Inc., Coshocton, Ohio. 750,598, pub. 3–19–63. Cl. 39.
Egan Machine Corp., The, Terryville, Conn. 750,522, pub. 3–19–63. Cl. 26.
Einiger Mills, Inc., New York, N.Y. 750,613, pub. 1–8–63. Cl. 42.
Electronic Applications, Inc., Wilton, Conn. 750,443, pub. 3–19–63. Cl. 21.
Electronic Applications, Inc., Wilton, Conn. 750,444, pub. 3–19–63. Cl. 21.
Electrosinics International, Inc., Philadelphia, Pa. 750,460, pub. 3–19–63. Cl. 21.
Emenel Co., The, Loma Linda, Calif. 750,413, pub. 3–19–63. Cl. 18.
Empress Dilene Cosmetics, Inc., Racine, Wis. 750,684, pub. 3–19–63. Cl. 51.
Engelhard Industries, Inc., Newark, N.J. 750,386, pub. 3–19–63. Cl. 14.
Enro Shirt Co., Inc., The: *See*—
Rosenfeld, E., & Co.
Wilson Brothers.
Eska Co., Dubuque, Iowa. 644,131, canc. Cl. 22.
Evr-gard Coatings Corp., Los Angeles, Calif. 750,399, pub. 3–19–63. Cl. 16.
Excelsior Needle Co., to The Torrington Co., Torrington, Conn. 23,649, ren. 6–4–63. Cl. 23.
FMC Corp.: *See*—
Food Machinery Corp.
Fairchild Engine and Airplane Corp., Costa Mesa, Calif. 644,189, canc. Cl. 26.
Farbenfabriken Bayer Aktiengesellschaft Leverkusen-Bayerwerk, Germany. 644,076, canc. Cl. 18.
Farm-Oyl Co., The, St. Paul, Minn. 750,370, pub. 3–19–63. Cl. 6.
Fastening Devices, Inc., Brooklyn, N.Y. 644,177, canc. Cl. 23.
Ferbert-Schorndorfer Co., The, Cleveland, Ohio, to Martin Marietta Corp., Chicago, Ill. 165,772, ren. 6–4–63. Cl. 16.
Firestone Tire & Rubber Co., The, Akron, Ohio. 644,035, canc. Cl. 12.
Firth Brown Tools Ltd., Sheffield, England. 750,504, pub. 3–19–63. Cl. 23.
Fisher Scientific Co., Pittsburgh, Pa. 400,534, ren. 6–4–63. Cl. 26.
Fisher Scientific Co., Pittsburgh, Pa. 401,261, ren. 6–4–63. Cl. 4.
Flintkote Co., The, New York, N.Y. 644,037, canc. Cl. 12.
Fluid Dynamics Corp., Santa Clara, Calif. 750,480, pub. 3–19–63. Cl. 23.
Food Industries Co., Dallas, Tex. 750,674, pub. 3–19–63. Cl. 46.
Food Machinery Corp., to FMC Corp., San Jose, Calif. 401,826, ren. 6–4–63. Cl. 15.
Foody & Co., Inc., Hackensack, N.J. 750,697, pub. 3–19–63. Cl. 102.
Foremost Dairies, Inc.: *See*—
Western Condensing Co.
Fort Howard Paper Co., Green Bay, Wis. 750,580, pub. 4–18–61. Cl. 37.
Franklin Research Co.: *See*—
Purex Corp., Ltd.
Freeman, J. R., & Son, Ltd., London, England. 750,401, pub. 3–19–63. Cl. 17.
Freudenberg, Carl, Hoehnerweg, Germany. 750,583, pub. 3–19–63. Cl. 37.
Friden, Inc., San Leandro, Calif. 750,458, pub. 3–19–63. Cl. 21.
Fruit of the Loom, Inc., New York, N.Y. 750,621–6, pub. 3–19–63. Cl. 42.
Fulton Smoked Fish Co., Chicago, Ill. 171,592, ren. 6–4–63. Cl. 46.
Gablewood Spans: *See*—
Hillesheim, Albert J.
Gault, Howard, Co.: *See*—
Gault, Howard.
Gault, Howard, d.b.a. Howard Gault Co., Hereford, Tex. 750,650, pub. 3–19–63. Cl. 46.
Gebr. Krusius: *See*—
Krusius, Erwin.
Gemex Co., Union, N.J. 644,204, canc. Cl. 28.
Gem-Klein Photo Corp.: *See*—
Ocean Photo Supply Co., Inc.
General Aniline & Film Corp., New York, N.Y. 750,340, pub. 3–19–63. Cl. 1.
General Aniline & Film Corp., New York, N.Y. 750,509, pub. 3–19–63. Cl. 26.
General Battery and Ceramic Corp., Reading, Pa. 750,455, pub. 3–19–63. Cl. 21.
General Bronze Corp., Garden City, N.Y. 644,093, canc. Cl. 21.
General Dynamics Corp., Chicago, Ill. 750,553, pub. 3–19–63. Cl. 31.
General Electric Co., Schnectady, N.Y. 750,441, pub. 3–19–63. Cl. 21.
General Foods Corp., White Plains, N.Y. 750,654, pub. 3–19–63. Cl. 46.
General Indicator Corp., Burlingame, Calif. 750,453, pub. 3–19–63. Cl. 21.
General Mills, Inc.: *See*—
Sperry Flour Co.
General Motors Corp., Detroit, Mich. 750,456, pub. 3–19–63. Cl. 21.
General Railway Signal Co., Rochester, N.Y. 750,464, pub. 3–19–63. Cl. 21.
Gilbert Hyde Chick Co., Oakland, Calif. 750,881, pub. 3–19–63. Cl. 18.
Girard Paint Products, Inc., Philadelphia, Pa. 750,393, pub. 3–19–63. Cl. 16.
Glendale Foods Corp., Glendale, N.Y. 750,647, pub. 3–19–63. Cl. 46.
Globe Mfg. Co., Fall River, Mass. 750,638, pub. 3–19–63. Cl. 43.

Goldie Records Inc., New York, N.Y. 750,577, pub. 3–19–63. Cl. 36.
Goldstein-Gerson Co., Inc., New York, N.Y. 750,542, pub. 3–19–63. Cl. 28.
Goodall-Sanford, Inc., Sanford, Maine. 644,246, canc. Cl. 42.
Goodrich, B. F., Co., The, Akron, Ohio. 750,571–2, pub. 3–19–63. Cl. 35.
Goshi-Gaisha Kobayashi Seiki Seisakusho, d.b.a. Kobayashi Seiko Seisakusho, Ltd., Naka-Gun, Ibaragi-ken, Japan. 750,517, pub. 3–19–63. Cl. 26.
Gospel Light Publications, Glendale, Calif. 750,711. Cl. 36.
Goyo & Co., Ltd., Minato-ku, Tokyo, Japan. 644,195, canc. Cl. 26.
Grafex, Inc., Rochester, N.Y. 750,519, pub. 3–19–63. Cl. 26.
Great Atlantic & Pacific Tea Co., The, New York, N.Y. 750,669, pub. 3–19–63. Cl. 46.
Grubbs, Hal B., and Co., Long Beach, Calif. 630,142, canc. Cl. 46.
Guaranty Trust Co. of New York, New York, N.Y. 644,228–9, canc. Cl. 38.
Guidance Technology, Inc., Santa Monica, Calif. 750,518, pub. 3–19–63. Cl. 26.
Gulf States Paper Corp., Tuscaloosa, Ala. 750,583, pub. 3–19–63. Cl. 37.
H & C Engineering Corp., Sunnyvale, Calif. 644,174, canc. Cl. 23.
HMH Publishing Co., Inc., Chicago, Ill. 750,549–50, pub. 3–19–63. Cl. 30.
Hagen, Henry T., Warsaw, N.Y. 750,660, pub. 3–19–63. Cl. 50.
Hale, Alfred, Rubber Co., El Dorado, Ark. 169,375, ren. 6–4–63. Cl. 39.
Hallmark Cards, Inc., Kansas City, Mo. 750,558, pub. 3–19–63. Cl. 32.
Halpern Jewelers Inc., New York, N.Y. 750,545, pub. 3–19–63. Cl. 28.
Hamilton Shoe Co.: *See*—
Penaljo, Inc.
Handelman, Ted, Publications: *See*—
Handelman, Theodore.
Handelman, Theodore, d.b.a. Ted Handelman Publications, New York, N.Y. 750,592, pub. 3–19–63. Cl. 38.
Hanover Bakers, Inc., Hanover, Pa. 750,663, pub. 1–1–63. Cl. 46.
Hanline Bros., Inc., Baltimore, Md. 750,506, pub. 3–19–63. Cl. 16.
Harlee Mfg. Co., Chicago, Ill. 750,695, pub. 3–19–63. Cl. 100.
Harman-Kardon, Inc., Plainview, N.Y. 750,532, pub. 3–19–63. Cl. 26.
Harman-Kardon, Inc., Plainview, N.Y. 750,533, pub. 3–19–63. Cl. 26.
Harnischfeger Corp., Milwaukee, Wis. 644,159, canc. Cl. 23.
Harrington Mfg. Co., Inc., Lewiston, N.C. 644,167, canc. Cl. 23.
Harris-Seybold Co., Cleveland, Ohio. 644,093, canc. Cl. 6.
Hartmetallwerk, Wallram, und Hartmetallwerksgesellschaft Mestech, Voigtlander & Co., Essen, Germany. 644,155, canc. Cl. 23.
Hay Equipment Distributors, Tulare, Calif. 750,501, pub. 3–19–63. Cl. 23.
Henri Stern Watch Agency, Inc., The: *See*—
Patek, Philippe & Co. Inc.
Herion, Erich, Stuttgart, Germany. 644,333, canc. Cl. 13.
Hersey, Kenneth J., and Arthur J. Hersey, Minneapolis, Minn. 644,324, canc. Cl. 19.
Hettrick Mfg. Co., The, Toledo, Ohio. 644,247, canc. Cl. 42.
Hicks Pharmacal Co.: *See*—
Voight's Pepticine Co.
High's Ice Cream Novelties: *See*—
Stephens, C. Y.
Hillesheim, Albert J., d.b.a. Gablewood Spans, Clements, Minn. 750,377, pub. 3–19–63. Cl. 12.
Hills Laboratories: *See*—
Mills, Lyle W.
Hogue, F. H., Jr.: *See*—
Hogue, F. H., Co.
Hogue, F. H., Co., Yuma, Ariz., and Kent, Wash., to F. H. Hogue, Jr., Yuma, Ariz. 405,518–19, ren. 6–4–63. Cl. 46.
Hohner, M., Inc.: *See*—
Hohner, M.
Hohner, M., New York, N.Y., to M. Hohner, Inc., Hicksville, N.Y. 166,409, ren. 6–4–63. Cl. 36.
Holman, A. J., Co., Philadelphia, Pa. 163,718, ren. 6–4–63. Cl. 38.
Hoody Peanut Products Co.: *See*—
Townsend, Glenn.
Houghton, E. F., & Co., by E. F. Houghton & Co., Philadelphia, Pa. 22,445, 12(c) pub. 6–4–63. Cl. 16.
House of Westmore, Inc., New York, N.Y. 399,428, 12(c) pub. 6–4–63. Cl. 51.
Houston Chronicle Publishing Co., The, Houston, Tex. 166,690, ren. 6–4–63. Cl. 38.
Hubele-Kienzle, Anita, d.b.a. Fa. Albert Kienzle, Bietigheim, Wurttemberg, Germany. 750,509, pub. 3–19–63. Cl. 28.
Huber, J. M., Corp., Borger, Tex. 750,364, pub. 3–19–63. Cl. 4.
Hudson Hosiery Co., Charlotte, N.C. 750,603, pub. 3–19–63. Cl. 39.
Humble Oil & Refining Co., to Humble Oil & Refining Co., Houston, Tex. 166,490, ren. 6–4–63. Cl. 18.
Hupp Corp., Cleveland, Ohio. 750,542–3, pub. 3–19–63. Cl. 34.
Hy-G Products Co., Los Angeles, Calif. 644,105, canc. Cl. 21.
Image Instruments, Inc., Newton Lower Falls, Mass. 750,508, pub. 3–19–63. Cl. 26.
Indian Head Mills, Inc.: *See*—
Ullmann, Bernhard, Co., Inc.
Integral Packaging Corp., from Machinery Development Corp., Chicago Heights, Ill. 750,490–1, pub. 1–15–63. Cl. 22.
Interelectronics Corp., New York, N.Y. 750,709. Cl. 21.
International Minerals & Chemical Corp., New York, N.Y. 750,373, pub. 3–19–63. Cl. 10.
Ipco Hospital Supply Corp., New York, N.Y. 750,349, pub. 3–19–63. Cl. 2.
Ives-Cameron Co.: *See*—
American Home Products Corp.
JFD Mfg. Co., Inc., Brooklyn, N.Y. 644,122, canc. Cl. 21.
Jenisch, Paul, Creations: *See*—
Jenisch, Paul.
Jenisch, Paul, d.b.a. Paul Jenisch Creations, Mount Vernon, N.Y. 626,494, canc. Cl. 22.
Jensen-Salsbery Laboratories, Inc., Kansas City, Mo. 750,418, pub. 3–19–63. Cl. 18.
Jerico Products Corp., Brooklyn, N.Y. 750,634, pub. 3–19–63. Cl. 42.
Johnson Acoustical & Supply Co., Portland, Oreg. 750,698, pub. 3–19–63. Cl. 103.
Johnson & Johnson, New Brunswick, N.J. 750,348, pub. 3–19–63. Cl. 2.
Johnson, S. C., & Son, Inc., Racine, Wis. 750,369, pub. 3–19–63. Cl. 6.
Jondre Food Products Co., St. Petersburg, Fla. 644,280–1, canc. Cl. 46.
Jordan Bros., Austin, Minn. 750,428, pub. 3–19–63. Cl. 19.
Kaiser Aluminum & Chemical Corp., Oakland, Calif. 750,350, pub. 3–19–63. Cl. 2.
Kali Mfg. Co., Philadelphia, Pa. 644,029, canc. Cl. 6.
Kay Electric Co., Pine Brook, N.J. 644,326, canc. Cl. 26.
Kay Mfg. Corp., Brooklyn, N.Y. 750,557, pub. 3–19–63. Cl. 32.
Kayser-Roth Corp.: *See*—
Nichols & Lauber, Inc.
Kellogg, M. W., Co., The, New York, N.Y. 644,198, canc. Cl. 26.
Kelly, William, d.b.a. Products K Blackpool, Blackpool, England. 644,101, canc. Cl. 21.
Kennington, J. B., d.b.a. Textile Apron Co., to Textile Apron Co., Inc., East Point, Ga. 400,272, ren. 6–4–63. Cl. 35.
Kern County Land Co, San Francisco, Calif. 750,665, pub. 3–19–63. Cl. 46.
Kienzle, Fa. Albert: *See*—
Hubele-Kienzle, Anita.
Killark Electric Mfg. Co., St. Louis, Mo. 750,459, pub. 3–19–63. Cl. 21.
Klinsing, A. F., Co., Inc., Milwaukee, Wis. 750,502, pub. 3–19–63. Cl. 23.
Kobayashi Seiki Seisakusho, Ltd.: *See*—
Goshi-Gaisha Kobayashi Seiki Seisakusho.
Kresge, S. S., Co., Detroit, Mich. 750,606, pub. 3–19–63. Cl. 40.
Krusius, Erwin, d.b.a. Gebr. Krusius, Solingen, Germany. 644,149, canc. Cl. 23.
L. D. Caulk Co., The, Milford, Del. 166,521, 12(c) pub. 6–4–63. Cl. 44.
Lambert Pharmacal Co., St. Louis, Mo., to Warner-Lambert Pharmaceutical Co., Morris Plains, N.J. 166,134, ren. 6–4–63. Cl. 18.
Lane Co., Inc., The, Altavista, Va. 750,555, pub. 3–19–63. Cl. 32.
La Societe d'Investissement Commercial et Hotelier S.A.: *See*—
Vaudable, Louis.
Latronics Corp., Latrobe, Pa. 750,530, pub. 3–19–63. Cl. 26.
Laurel Cards, Inc., Waukegan, Ill. 750,371, pub. 3–19–63. Cl. 7.
Lavino, E. J., and Co., Philadelphia, Pa. 172,583, ren. 6–4–63. Cl. 12.
Lawnmowers Inc., Selma, Ala. 750,494, pub. 3–19–63. Cl. 23.
Lehn & Fink Products Corp.: *See*—
Dahl, Norman F.
Lehn & Fink Products Corp., Bloomfield, N.J. 644,201, canc. Cl. 51.
Lennon, U & J, Corp., The, Brooklyn, N.Y. 750,652, pub. 3–19–63. Cl. 46.
Levolor Lorentzen, Inc., Hoboken, N.J. 750,393, pub. 3–19–63. Cl. 14.
Levy, Harry, New York, N.Y. 644,244, canc. Cl. 41.
Lewis International Co., Newark, N.J. 750,628, pub. 3–19–63. Cl. 42.
Lily of France Corset Co., Inc., by Lily of France, Inc., New York, N.Y. 399,743, 12(c) pub. 6–4–63. Cl. 39.
Lily of France, Inc.: *See*—
Lily of France Corset Co., Inc.
Lindquist Pump Corp., Culver City, Calif. 644,325, canc. Cl. 23.
Lino Paste Co., Inc., Chicago, Ill. 750,358, pub. 3–19–63. Cl. 5.
Lobo Chemical Products Co., Bedford, Ohio. 750,397, pub. 3–19–63. Cl. 16.
Lockhart Mfg. Co., Pittsburgh, Pa. 345,008, canc. Cl. 29.
Lock-Lined, Inc., New York, N.Y. 750,614, pub. 3–19–63. Cl. 42.
Lockwood Grader Corp., Gering, Nebr. 750,479, pub. 3–29–62. Cl. 23.
Lonco International, Inc., St. Louis, Mo. 750,635, pub. 3–19–63. Cl. 43.
Londontown Mfg. Co., The, Baltimore, Md. 750,597, pub. 3–19–63. Cl. 39.
Louisiana State Rice Milling Co., Inc., Abbeville, La. 750,664, pub. 3–19–63. Cl. 46.
Lucky Stores, Inc.: *See*—
Marketa, Inc.
Lurgi Gesellschaft fur Mineraloltechnik mbH, Frankfurt (Main), Germany. 750,497, pub. 3–19–63. Cl. 23.
Lyle Wayne Mills: *See*—
Mills, Lyle W.

Macco Corp., Reno, Nev. 750,344, pub. 3–19–63. Cl. 1.
Machinery Development Corp.: *See*—
Integral Packaging Corp.
Macmillan Ring-Free Oil Co., Inc., New York, N.Y. 750,341, pub. 3–19–63. Cl. 1.
Magnolia Paper Co., Houston, Tex. 750,689–90, pub. 3–19–63. Cl. 52.
Magnolia Paper Co., Houston, Tex. 750,355, pub. 3–19–63. Cl. 4.
Mahogany Importing Co., Los Angeles, Calif. 630,724, canc. Cl. 12.
Makiola, Dr. Bernhard A., d.b.a. Bernhard A. Makiola, Institut fur Arzneimittelforschung, Vaduz, Liechtenstein. 644,079, canc. Cl. 18.
Makiola, Bernhard A., Institut fur Arzneimittelforschung: *See*—
Makiola, Dr. Bernhard A.
Mangan Co., The, Providence, R.I. 750,546, pub. 3–19–63. Cl. 28.
Mangel Stores Corp., New York, N.Y. 750,636, pub. 3–19–63. Cl. 42.
Mangel Stores Corp., New York, N.Y. 750,372, pub. 3–19–63. Cl. 8.
Mangel Stores Corp., New York, N.Y. 750,567, pub. 3–19–63. Cl. 24.
Mangel Stores Corp., New York, N.Y. 750,575, pub. 3–19–63. Cl. 36.
Manheim Mfg. and Belting Co.: *See*—
Arbee Corp., The.
Mannequin Beauty Aids: *See*—
Medco Co., Inc., The.
Manpower, Inc., Milwaukee, Wis. 750,696, pub. 3–19–63. Cl. 101.
Marden Jewelry Co., Inc., New York, N.Y. 750,710. Cl. 28.
Markets, Inc., Oakland, to Lucky Stores, Inc. San Leandro, Calif. 402,569, ren. 6–4–63. Cl. 46.
Marquette, Pere, Fibreglas Boat Co., Scottville, Mich. 750,490, pub. 3–19–63. Cl. 19.
Marshall Steil Co., The, La Grange, Ill. 750,285, pub. 3–19–63. Cl. 14.
Martin Marietta Corp.: *See*—
Ferbert-Schorndorfer Co., The.
Marx, Louis, & Co., Inc., New York, N.Y. 750,475, pub. 3–19–63. Cl. 22.
Masco Foods: *See*—
National Sales Council of Pennsylvania, Inc.
Masterseal Sales Corp., Ventura, Calif. 750,339, pub. 3–19–63. Cl. 1.
Mavis Bottling Co., Detroit, Mich. 750,641, pub. 3–19–63. Cl. 45.
McCain's Industries, Lima, Ohio. 750,483, pub. 3–19–63. Cl. 19.
McCampbell & Co., Inc., New York, N.Y. 630,551, canc. Cl. 42.
McDonald's Corp., Chicago, Ill., from McDonald's Self-Service System, Santa Barbara, Calif. 750,692, pub. 3–19–63. Cl. 100.
McDonald's Self-Service System: *See*—
McDonald's Corp.
McGraw-Edson Co., Elgin, Ill. 750,516, pub. 3–19–63. Cl. 24.
McKesson & Robbins, Inc.: *See*—
Walnut Growers Spray Mfg. Co.
Meadors, Inc., from Meadors Mfg. Co., Inc., Greenville, S.C. 750,648, pub. 3–19–63. Cl. 46.
Meadors Mfg. Co., Inc.: *See*—
Meadors, Inc.
Medco Co., Inc., The, d.b.a. Mannequin Beauty Aids, New Orleans, La. 750,681, pub. 3–19–63. Cl. 51.
Medical-Technical Gases, Inc., Medford, Mass. 750,405, pub. 3–19–63. Cl. 18.
Merit Mfg. Co., Central Falls, R.I. 644,186, canc. Cl. 26.
Merke, Alois, Inc., Philadelphia, Pa. 644,295, canc. Cl. 51.
Merrick Scale Mfg. Co., Passaic, N.J. 167,234, ren. 6–4–63. Cl. 26.
Meyenberg-Old Fashion Products Co., d.b.a. Meyenberg Milk Products Co., San Francisco, Calif. 750,676, pub. 3–19–63. Cl. 46.
Meyenberg-Old Fashion Products Co., San Francisco, Calif. 750,675, pub. 3–19–63. Cl. 46.
Micallef, A., & Co., Inc., Providence, R.I. 750,538, pub. 3–19–63. Cl. 28.
Midland Chemical Corp., Dayton, Ohio. 616,461, canc. Cl. 6.
Midland Products Co., Midland Park, N.J. 750,489, pub. 3–19–63. Cl. 23.
Mid-West Abrasive Co., Owosso, Mich. 750,505, pub. 3–19–63. Cl. 28.
Midwest Pole & Equipment Corp., Chicago, Ill. 750,437, pub. 3–19–63. Cl. 31.
Miehle-Goss-Dexter, Inc.: *See*—
Dexter Folder Co.
Mil-K-Botl Corp. of America, The, by Sun Drop Sales Corp. of America, St. Louis, Mo. 390,561, 12(c) pub. 6–4–63. Cl. 46.
Mills, Lyle W., d.b.a. Hills Laboratories, Silver Spring, Md., to Lyle W. Mills, d.b.a. Hills Laboratories, Herndon, Va. 401,368, ren. 6–4–63. Cl. 18.
Mirrow-Tech Mfg. Co., Inc., New Rochelle, N.Y. 750,559, pub. 3–19–63. Cl. 32.
Montgomery Ward & Co., Inc., Chicago, Ill. 750,494, pub. 3–19–63. Cl. 23.
Morton Salt Co., Chicago, Ill. 750,365, pub. 3–19–63. Cl. 6.
Motorola, Inc., Franklin Park, Ill. 750,454, pub. 3–19–63. Cl. 21.
Mt. Vernon Watch Co., New York, N.Y. 750,534, pub. 3–19–63. Cl. 27.
Myers, Carmel, Inc., New York, N.Y. 750,696, pub. 3–19–63. Cl. 51.
N.V. Cacaofabriek "De Zaan," Koog aan de Zaan, Netherlands. 750,644, pub. 3–19–63. Cl. 46.
N.V. Verenigde Textiel-en Oliefabrieken, Krommenie, Netherlands. 750,655, pub. 3–19–63. Cl. 46.
National Appliance and Radio-TV Dealers Association, Inc., Chicago, Ill. 750,591, pub. 3–19–63. Cl. 38.
National Astro Laboratories, Inc., Pasadena, Calif. 750,704, pub. 3–19–63. Cl. 106.
National Biscuit Co., New York, N.Y. 750,651, pub. 3–19–63. Cl. 46.
National Cash Register Co., The, Dayton, Ohio. 750,700, pub. 3–19–63. Cl. 103.
National Drug and Chemical Co. of Canada, Ltd., Montreal, Canada, to Ursina Co., New York, N.Y. 400,936, ren. 6–4–63. Cl. 51.
National Frame Co., Carnegie, Pa. 750,556, pub. 3–19–63. Cl. 32.
National Merchandising Corp., New York, N.Y. 750,446, pub. 3–19–63. Cl. 21.
National Sales Council of Pennsylvania, Inc., The, d.b.a. Masco Foods, Hazleton, Pa. 631,011, canc. Cl. 46.
Nickels & Lauber, Inc., Philadelphia, Pa., to Kayser-Roth Corp., New York, N.Y. 168,196, ren. 6–4–63. Cl. 39.
Norbest Turkey Growers Association, Salt Lake City, Utah. 750,662, pub. 3–19–63. Cl. 46.
Northeast Tool and Die Works, Inc., Kansas City, Mo. 644,-106–8, canc. Cl. 21.
Northwest Paper Co., The, Cloquet, Minn. 750,587, pub. 3–19–63. Cl. 37.
Nut Lunch Co.: *See*—
Townsend, Glenn.
Nutri-Laboratories, Inc., Washington, D.C. 750,645, pub. 3–19–63. Cl. 46.
Nu-Vita Products, Inc., Pittsburgh, Pa. 750,419, pub. 3–19–63. Cl. 18.
Oakite Products, Inc., New York, N.Y. 750,499, pub. 3–19–63. Cl. 23.
Ocean Photo Supply Co., Inc., New York, N.Y., to Gem-Klein Photo Corp., Manhattan, N.Y. 644,194, canc. Cl. 26.
O'Leary, Lydia, Inc., New York, N.Y. 644,213, canc. Cl. 32.
Olmstead Fisheries 1961 Ltd., Wheatley, Ontario, Canada. 750,657, pub. 3–19–63. Cl. 46.
Operation Home Improvement, Inc., New York, N.Y. 644,-308, canc. Cl. 100.
Orbit Industries, Inc., Vienna, Va. 750,448, pub. 3–19–63. Cl. 21.
Organ, Thomas, Co., Sepulveda, Calif. 750,578, pub. 3–19–63. Cl. 36.
Otis Elevator Co.: *See*—
Baker, E. & L., Co., The.
Ottenberg's Bakers, Inc., Washington, D.C. 644,266, canc. Cl. 46.
Outboard Boating Club of America, Chicago, Ill. 750,694, pub. 3–19–63. Cl. 100.
Owite Corp.: *See*—
American Hair Felt Co.
PLM Products, Inc., Cleveland, Ohio. 750,442, pub. 3–19–63. Cl. 21.
Pacific Fruit & Produce Co.: *See*—
Pacific Gamble Robinson Co.
Pacific Gamble Robinson Co., d.b.a. Pacific Fruit & Produce Co., Seattle, Wash. 750,642, pub. 6–18–57. Cl. 6.
Packard Motor Car Co., to Studebaker-Packard Corp., Detroit, Mich. 644,137, canc. Cl. 23.
Pallisar Jewelry Co., Inc., New York, N.Y. 750,544, pub. 3–19–63. Cl. 28.
Palm Beach Co., Portland, Maine. 750,595, pub. 3–19–63. Cl. 39.
Pantatello, Joseph, d.b.a. PM Mfg. Co., New York, N.Y. 750,-565, pub. 3–19–63. Cl. 34.
Paramount Line, Inc., The, Pawtucket, R.I. 750,594, pub. 3–19–63. Cl. 38.
Parker Brothers, Inc., Salem, Mass. 644,182–8, canc. Cl. 22.
Parkview Drugs, Inc.: *See*—
Smolinsky, Phillip.
Parkview Pharmacy: *See*—
Smolinsky, Phillip.
Patek, Philippe & Co. Inc., to The Henri Stern Watch Agency, Inc., New York, N.Y. 400,257, ren. 6–4–63. Cl. 27.
Pay Way Feed Mills, Inc., Kansas City, Mo. 750,412, pub. 3–19–63. Cl. 18.
Pay Way Feed Mills, Inc., Kansas City, Mo. 750,646, pub. 3–29–62. Cl. 46.
Pekor Iron Works, Columbus, Ga. 750,485, pub. 12–4–62. Cl. 23.
Pelsman, Richard L., New York, N.Y. 750,660, pub. 3–19–63. Cl. 46.
Penaljo, Inc., to Hamilton Shoe Co., St. Louis, Mo. 401,543, ren. 6–4–63. Cl. 39.
Pennock, Jerome H., Palm Beach, Fla. 750,548, pub. 3–19–63. Cl. 28.
Pennsylvania Industrial Chemical Corp., Clairton, Pa. 750,345, pub. 3–19–63. Cl. 1.
Peto, Howard B., d.b.a. Peto Seed Co., Saticoy, Calif. 750,335, pub. 3–19–63. Cl. 1.
Peto Seed Co.: *See*—
Peto, Howard B.
Petrolite Corp., St. Louis, Mo. 750,387, pub. 2–5–63. Cl. 15.
Phillips-Jones Corp., to Phillips-Van Heusen Corp., New York, N.Y. 166,701, ren. 6–4–63. Cl. 39.
Phillips-Van Heusen Corp.: *See*—
Phillips-Jones Corp.
Pickard & Burns, Inc., Waltham, Mass. 750,445, pub. 3–19–63. Cl. 21.
Pie-O-Matic Corp., The, North Haven, Conn. 644,178, canc. Cl. 23.

Pierce Shoe Mfg. Co., Inc., Waycross, Ga. 750,607, pub. 3–19–63. Cl. 39.
Piper, H., Co., The, Chicago, Ill. 644,269, canc. Cl. 46.
Pittsburgh Plate Glass Co., Pittsburgh, Pa. 170,765, ren. 6–4–63. Cl. 16.
Plough Chemical Co., d.b.a. Pluko Mfg. Co., to Plough, Inc., Memphis, Tenn. 165,006, ren. 6–4–63. Cl. 51.
Plough, Inc.: *See*—
Plough Chemical Co.
Pluko Mfg. Co.: *See*—
Plough Chemical Co.
Plymouth Shoe Co., Middleboro, Mass. 750,602, pub. 3–19–63. Cl. 39.
Pneu-Trol Devices, Inc., Chicago, Ill. 624,961, canc. Cl. 26.
Potomac Almanac, The, Potomac, Md. 750,593, pub. 3–19–63. Cl. 38.
Powers Regulator Co., The, Skokie, Ill. 750,529, pub. 3–19–63. Cl. 26.
Pratt & Whitney Co., Inc., West Hartford, Conn. 750,488, pub. 10–16–62. Cl. 23.
Preacher Drug Co.: *See*—
Preacher, Henry M.
Preacher, Henry M., d.b.a. Preacher Drug Co., Kinstree, S.C. 400,576, ren. 6–4–63. Cl. 18.
Preload Co., Inc., The: *See*—
Preload Co., The.
Preload Co., The, Boston, Mass., by The Preload Co. Inc., Westbury, N.Y. 400,518, 12(c) pub. 6–4–63. Cl. 2.
Price Battery Corp., Hamburg, Pa. 750,457, pub. 3–19–63. Cl. 21.
Products K Blackpool: *See*—
Kelly, William.
Profexray, Inc., Maywood, Ill. 750,639, pub. 3–19–63. Cl. 44.
Purdue Frederick Co., The, New York, N.Y. 750,427, pub. 3–19–63. Cl. 18.
Purex Corp., Wilmington, Calif. 750,636, pub. 3–19–63. Cl. 52.
Purex Corp., Ltd., Lakewood, Calif., from Franklin Research Co., Philadelphia, Pa. 750,256, pub. 3–19–63. Cl. 4.
Quaker State Oil Refining Corp., Oil City, Pa. 750,389, pub. 3–19–63. Cl. 15.
Ralston Purina Co., St. Louis, Mo. 750,415, pub. 3–19–63. Cl. 18.
Raskas, Ann, St. Louis, Mo. 750,673, pub. 3–19–63. Cl. 46.
Ravenswood Corp., Annapolis, Md. 750,450, pub. 3–19–63. Cl. 21.
Rayco Mfg. Co., Paramus, N.J. 750,699, pub. 3–5–63. Cl. 103.
Rayonier Inc., New York, N.Y. 750,362, pub. 3–19–63. Cl. 6.
Raytheon Co., Lexington, Mass. 750,522, pub. 3–19–63. Cl. 26.
Realistic Co., The, Cincinnati, Ohio. 750,590, pub. 3–19–63. Cl. 38.
Realtone Electronics Corp., New York, N.Y. 750,520, pub. 3–19–63. Cl. 26.
Reeder, Oliver, & Son, Inc., Baltimore, Md. 166,059–60, 12(c) pub. 6–4–63. Cl. 16.
Reid & Joyce Packing Co., Salinas, Calif. 644,275, canc. Cl. 46.
Reliance Chemicals Corp., Houston, Tex. 644,082, canc. Cl. 10.
Renart Sportswear Corp., New York, N.Y. 750,601, pub. 1–8–63. Cl. 39.
Repco Ltd., Victoria, Australia. 750,477, pub. 3–19–63. Cl. 23.
Rexall Drug and Chemical Co., Los Angeles, Calif. 750,525, pub. 3–19–63. Cl. 26.
Rhodia Chemical Co., New Brunswick, N.J., by E. I. du Pont de Nemours and Co., Wilmington, Del. 165,814, 12(c) pub. 6–4–63. Cl. 5.
Rhythm Band, Inc., Fort Worth, Tex. 750,574, pub. 3–19–63. Cl. 36.
Riamera, N.V.: *See*—
Rigaud, Henri.
Rigaud: *See*—
Rigaud, Henri.
Rigaud, Henri, d.b.a. Rigaud, Paris, France, and New York, N.Y., to Riamera, N.V., Curacao, Netherlands, West Indies. 164,467, ren. 6–4–63. Cl. 51.
Riker Laboratories, Inc., Northridge, Calif. 750,420–1, pub. 3–19–63. Cl. 18.
Rockson Jewelry Mfg. Co., New York, N.Y. 750,541, pub. 3–19–63. Cl. 28.
Roma Ring Corp., New York, N.Y. 750,536, pub. 3–19–63. Cl. 28.
Roovers-Lotsch, Inc., Old Fargo, Pa. 750,581, pub. 3–19–63. Cl. 37.
Rosenfeld, E., & Co., to The Enro Shirt Co., Inc., Louisville, Ky. 72,574, new cert. Cl. 39.
Roth Drug Co.: *See*—
Roth, Herbert J.
Roth, Herbert J., d.b.a. Roth Drug Co., Philadelphia, Pa. 644,067–8, canc. Cl. 18.
Rover Co. Ltd., The, Solihull, England. 750,429, pub. 3–19–63. Cl. 19.
Royal Bead Novelty Co., Inc., New York, N.Y. 750,543, pub. 3–19–63. Cl. 28.
Royal Crest Yarns, Inc., New York, N.Y. 644,253, canc. Cl. 42.
Royalon, Inc., Sebring, Ohio. 750,352, pub. 3–19–63. Cl. 2.
S.M.A. Corp., Chicago, Ill., to American Home Products Corp., New York, N.Y. 405,274, ren. 6–4–63. Cl. 18.
Sachs, Paul, Originals Co., St. Louis, Mo. 750,605, pub. 3–19–63. Cl. 39.
Safeway Stores, Inc., Oakland, Calif. 644,334, canc. Cl. 46.
Safeway Stores, Inc., Oakland, Calif. 750,677, pub. 3–19–63. Cl. 46.
Sanderson Brothers & Newbould, Ltd., Sheffield, England. 166,854, 12(c) pub. 6–4–63. Cl. 23.
Sarafan Corp., South San Francisco, Calif. 750,363, pub. 3–19–63. Cl. 6.
Schering Corp., Bloomfield, N.J., from American Scientific Laboratories, Inc., Madison, Wis. 750,366, pub. 3–5–63. Cl. 6.
Schertz, Walter, Neuilly-sur-Seine, France. 644,291, canc. Cl. 51.
Scott, Bruce, Co., Inc., Philadelphia, Pa. 644,215, canc. Cl. 32.
Sears, Roebuck and Co., Chicago, Ill. 750,391, pub. 3–19–63. Cl. 16.
Sears, Roebuck and Co., Chicago, Ill. 750,573, pub. 3–19–63. Cl. 35.
Seco, Inc., Goodlettsville, Tenn. 750,483, pub. 3–19–63. Cl. 23.
Seiberling Rubber Co., Barberton, Ohio. 750,432, pub. 3–19–63. Cl. 19.
Seidlits Varnish Co., to Conchemco, Inc., Kansas City, Mo. 166,171, ren. 6–4–63. Cl. 16.
Semco Electrical Controls, Inc.: *See*—
Semco Sales Co., Inc.
Semco Sales Co., Inc., from Semco Electrical Controls, Inc., Houston, Tex. 750,439, pub. 3–19–63. Cl. 21.
Semicon of California, Inc., Watsonville, Calif. 750,375, pub. 2–5–63. Cl. 12.
Seneca Tackle Co., Inc., New York, N.Y. 750,469, pub. 3–19–63. Cl. 22.
Select Beauty Brands, Inc., Little Neck, N.Y. 750,609, pub. 3–19–63. Cl. 40.
Self, Starrett H., Dayton, Ohio. 750,579, pub. 3–19–63. Cl. 36.
Service Engraving Works, Inc., Newark, N.J. 750,706. Cl. 14.
Service Mills Co., Inc., Bristol, Va. 750,672, pub. 3–19–63. Cl. 46.
Sherman Products, Inc., Royal Oak, Mich. 644,168, canc. Cl. 23.
Shillman, A. & H., Co., Inc., Baltimore, Md. 750,611, pub. 12–26–62. Cl. 42.
Shirtcraft Co., Inc., The, Hazleton, Pa. 644,245, canc. Cl. 42.
Simmons Co., New York, N.Y. 750,706. Cl. 2.
Sklaris Agency, Inc., Duluth, Minn. 750,586, pub. 3–19–63. Cl. 37.
Smith Bros. of Port Washington Inc., Port Washington, Wis. 750,693, pub. 3–19–63. Cl. 100.
Smith Victory Corp., Buffalo, N.Y. 644,290, canc. Cl. 51.
Smolinsky, Phillip, d.b.a. Parkview Pharmacy, by Parkview Drugs, Inc., Kansas City, Mo. 166,812, 12(c) pub. 6–4–63. Cl. 46.
Societe des Usines Chimiques Rhone-Poulenc, Paris, France. 750,685, pub. 3–19–63. Cl. 51.
Societe des Usines Chimiques Rhone-Poulenc, Paris, France. 750,683, pub. 3–19–63. Cl. 46.
Societe des Usines Chimiques Rhone-Poulenc, Paris, France. 750,406, pub. 3–19–63. Cl. 18.
Soluol Chemical Co., Inc., Natick, R.I. 750,687, pub. 3–19–63. Cl. 52.
Sommers, W. O., Inc., Chicago, Ill. 750,664, pub. 1–29–63. Cl. 46.
Sony Corp. of America, New York, N.Y. 750,435, pub. 3–19–63. Cl. 21.
South Bay Farmers Coop. Assn.: *See*—
South Bay Farmers Cooperative Association.
South Bay Farmers Cooperative Association, d.b.a. South Bay Farmers Coop. Assn., San Ysidro, Calif. 750,671, pub. 3–19–63. Cl. 46.
Southland Mfg. Co., Inc., Wilmington, N.C. 402,496, 12(c) pub. 6–4–63. Cl. 39.
Sperry Flour Co., San Francisco, Calif., to General Mills, Inc., Minneapolis, Minn. 172,038, ren. 6–4–63. Cl. 46.
Spickelmier Industries, Inc., Indianapolis, Ind. 750,374, pub. 10–16–62. Cl. 12.
Springs Cottons Mill, The, Lancaster, S.C. 750,617–18, pub. 3–19–63. Cl. 42.
Staedtler, J. S., Nurnberg, Germany. 644,219, canc. Cl. 37.
Standard Oil Co. of California, d.b.a. Signal Oil Co., Los Angeles, Calif. 750,400, pub. 3–19–63. Cl. 16.
Standard Packaging Corp., New York, N.Y. 750,589, pub. 3–19–63. Cl. 37.
Stein's Stores Inc., New York, N.Y. 644,236, canc. Cl. 39.
Stephens, C. Y., d.b.a. High's Ice Cream Novelties, Memphis, Tenn. 750,658, pub. 3–19–63. Cl. 46.
Stevens, J. P., & Co., Inc., New York, N.Y. 750,629–32, pub. 3–19–63. Cl. 42.
Stewart, Gerson, Corp., The, Cleveland, Ohio. 644,057, canc. Cl. 16.
Stoody Co., Whittier, Calif. 750,382, pub. 3–19–63. Cl. 14.
Strauss, Ignaz, Co., Inc., New York, N.Y. 402,600, ren. 6–4–63. Cl. 30.
Studebaker-Packard Corp.: *See*—
Packard Motor Car Co.
Suddeth-Baker Co., Long Beach, Calif. 750,337, pub. 3–19–63. Cl. 1.
Sunbeam Corp., Chicago, Ill. 750,498, pub. 3–19–63. Cl. 23.
Sun Chemical Corp.: *See*—
Warwick Chemical Co.
Sun Drop Sales Corp. of America: *See*—
Mil-K-Botl Corp. of America, The.
Sun-Maid Raisin Growers of California, Fresno, Calif. 401,912, ren. 6–4–63. Cl. 46.
Sunray Stove Co., The, Delaware, Ohio. 171,478, ren. 6–4–63. Cl. 34.
Surveys, Geo., Washington, D.C. 644,207, canc. Cl. 100.
Sweden Freezer Mfg. Co., Seattle, Wash. 750,552, pub. 3–19–63. Cl. 31.
Swingline Inc., Long Island City, N.Y. 750,582, pub. 3–19–63. Cl. 37.

Sylvania Electric Products, Inc., New York, N.Y. 750,449, pub. 3–19–63. Cl. 21.
Sylvette Jewelry, Inc., New York, N.Y. 750,537, pub. 3–19–63. Cl. 28.
T-Fal Corp., New York, N.Y. 750,379, pub. 3–19–63. Cl. 13. Cl. 42.
Telerad Mfg. Corp., New York, N.Y. 644,114, canc. Cl. 21.
Tell Mfg. Co., Inc., Orange, N.J. 750,440, pub. 3–19–63. Cl. 21.
Texas Instruments Inc., Dallas, Tex. 750,424, pub. 3–19–63. Cl. 21.
Textile Aniline & Chemical Co., Lawrence, Mass. 750,861, pub. 3–19–63. Cl. 6.
Textile Apron Co., Inc.: *See*—
Kennington, J. B.
Tex-Tone Corp., The, Torrington, Conn. 644,316, canc. Cl. 103.
Taylor-Maker, Inc., The, Dalton, Ga. 750,616, pub. 3–19–63.
Thermal Engineering Corp., Columbia, S.C. 750,564, pub. 3–19–63. Cl. 24.
Tinkertown Co.: *See*—
Bowers, Theodore S.
Tomorrow's Markets, Inc., New York, N.Y. 644,231, canc. Cl. 38.
Torrington Co., The: *See*—
Excelsior Needle Co.
Torrington Co., The, Torrington, Conn. 750,487, pub. 3–19–63. Cl. 23.
Tower Fabrics Co., Inc., New York, N.Y. 750,637, pub. 3–19–63. Cl. 42.
Townsend, Glenn, d.b.a. Nut Lunch Co., to Hoody Peanut Products Co., Portland, Oreg. 171,463, ren. 6–4–63. Cl. 46.
Tractor Brand: *See*—
Anvil Brand, Inc.
Trade Paper Co. Inc., New York, N.Y. 750,394, pub. 3–19–63. Cl. 16.
Travalin, Antonio, Reading, Pa. 644,838, canc. Cl. 51.
Trident Engineering Associates, Inc., Annapolis, Md. 750,388, pub. 3–19–63. Cl. 1.
Trimline Tackle Co., Inc., New York, N.Y. 644,184, canc. Cl. 22.
Tsubakimoto Chain Mfg. Co., Ltd., The, Osaka, Japan. 750,486, pub. 3–19–63. Cl. 23.
Turtle Wax, Inc., Chicago, Ill. 750,662, pub. 3–19–63. Cl. 51.
Twin Coach Co., Kent, Ohio. 644,172, canc. Cl. 22.
Uithoornsche Conservenfabriken "De Hoorn" N.V., Uithoorn, Netherlands. 750,659, pub. 1–29–63. Cl. 46.
Ulmann, Bernhard, Co., Inc., to Indian Head Mills, Inc., New York, N.Y. 168,908, ren. 6–4–63. Cl. 39.
Ultravite Laboratories Ltd., Downsview, Ontario, Canada. 750,407, pub. 3–19–63. Cl. 18.
Uneeda Doll Co. Inc., Brooklyn, N.Y. 750,470, pub. 3–19–63. Cl. 22.
Union Oil Co. of California, Los Angeles, Calif. 750,554, pub. 3–19–63. Cl. 31.
Union Pin Co., The, Winsted, Conn. 750,610, pub. 3–19–63. Cl. 40.
United Dairy Equipment Co., West Chester, Pa. 400,202, 12(c) pub. 6–4–63. Cl. 23.
United Shoe Machinery Corp., Boston, Mass. 750,476, pub. 3–19–63. Cl. 22.
United Shoe Machinery Corp., Boston, Mass. 750,359, pub. 3–19–63. Cl. 5.
U.S. Merchandise Mart, Inc., Washington, D.C. 750,560, pub. 3–19–63. Cl. 32.
United States Plywood Corp., New York, N.Y. 750,378, pub. 3–19–63. Cl. 12.
United States Rubber Co., New York, N.Y. 178,495, ren. 6–4–63. Cl. 39.
Unitex Garments, Inc.: *See*—
Unitex Mfg. Co., The.
Unitex Mfg. Co., The, Tiffin, Ohio, to Unitex Garments, Inc., Gloversville, N.Y. 403,135, ren. 6–4–63. Cl. 39.
Unitex Mfg. Co., The, Tiffin, Ohio, to Unitex Garments, Inc., Gloversville, N.Y. 403,154, ren. 6–4–63. Cl. 39.
Unitrode Transistor Products, Inc., Waltham, Mass. 750,436, pub. 3–19–63. Cl. 21.
Unitronics, Inc., Ferguson, Mo. 644,185, canc. Cl. 26.
Universal Moulded Fiber Glass Corp., Bristol, Va. 750,243, pub. 3–19–63. Cl. 1.
Urnina Co.: *See*—
National Drug and Chemical Co. of Canada, Ltd.
Vaudable, Louis, to La Societe d'Investissement Commercial et Hotelier S.A., Zug, Switzerland. 580,091, new cert. Cl. 100.
Vaudable, L., to La Societe d'Investissement Commercial et Hotelier S.A., Zug, Switzerland. 589,817, new cert. Cl. 47.
Vereinigte Papierwerke Schickedanz & Co., Nurnberg, Germany. 644,222, canc. Cl. 37.
Vernon, S. M., & M., Inc., New York, N.Y. 644,227, canc. Cl. 37.
Viking Distillery, Inc., The, Albany, Ga. 750,678–9, pub. 3–19–63. Cl. 46.
Vitamix Pharmaceuticals, Inc., Philadelphia, Pa. 750,422, pub. 3–19–63. Cl. 18.
Vogue Optical Mfg. Co., Inc., New York, N.Y. 750,526, pub. 3–19–63. Cl. 26.
Voigt's Pepticine Co., East Rutherford, N.J., to Hicks Pharmacal Co., Newark, N.J. 644,066, canc. Cl. 18.
Wall Firma, Inc., Monongahela, Pa. 750,376, pub. 3–19–63. Cl. 12.
Walnut Growers Spray Mfg. Co., Vernon, Calif., to McKesson & Robbins, Inc., New York, N.Y. 187,690, ren. 6–4–63. Cl. 1.
Warlick Paint Co., Inc., Statesville, N.C. 750,395, pub. 3–19–63. Cl. 16.
Warlick Paint Co., Inc., Statesville, N.C. 750,396, pub. 3–19–63. Cl. 16.
Warmbrand, Abraham A., d.b.a. Warmbrand Jewelers, New York, N.Y. 750,539, pub. 3–19–63. Cl. 28.
Warmbrand Jewelers: *See*—
Warmbrand, Abraham A.
Warner-Lambert Pharmaceutical Co.: *See*—
Lambert Pharmacal Co.
Warner-Lambert Pharmaceutical Co., Morris Plains, N.J. 750,411, pub. 3–19–63. Cl. 18.
Warshawsky and Co., Inc., Chicago, Ill. 750,481, pub. 3–19–63. Cl. 23.
Warwick Chemical Co., West Warwick, R.I., to Sun Chemical Corp., New York, N.Y. 402,628, ren. 6–4–63. Cl. 6.
Welsh's Bakery, Inc., Reno, Nev. 644,279, canc. Cl. 46.
Western Condensing Co., Petaluma, Calif., to Foremost Dairies, Inc., San Francisco, Calif. 644,331, canc. Cl. 46.
Western Instrument Corp., Worland, Wyo. 750,524, pub. 3–19–63. Cl. 26.
Wetherall Inc., Boston, Mass. 644,234, canc. Cl. 39.
White, Bob, Miami, Fla. 644,260, canc. Cl. 46.
White Swan Uniforms, Inc., New York, N.Y. 402,507, ren. 6–4–63. Cl. 39.
Wilhold Glass, Inc., Los Angeles, Calif. 750,360, pub. 3–19–63. Cl. 5.
Wellinger & Dunn Leather Goods Ltd., Toronto, Ontario, Canada. 750,466, pub. 3–19–63. Cl. 22.
Williams, Irving, Co., Dayton, Nev. 644,832, canc. Cl. 46.
Wilson Brothers, to The Enro Shirt Co., Inc., Louisville, Ky. 150,650, new cert. Cl. 39.
Wilson Brothers, to The Enro Shirt Co., Inc., Louisville, Ky. 329,617, new cert. Cl. 39.
Wilson Brothers, to The Enro Shirt Co., Inc., Louisville, Ky. 399,664, new cert. Cl. 39.
Wilson Sporting Goods Co., River Grove, Ill. 750,467–8, pub. 3–19–63. Cl. 22.
Wilson Sporting Goods Co., River Grove, Ill. 750,471–4, pub. 3–19–63. Cl. 22.
Winer, S. G., & Co. Inc., Worcester, Mass. 750,612, pub. 3–19–63. Cl. 42.
Wiremold Co., The, Hartford, Conn. 750,462, pub. 3–19–63. Cl. 21.
Wolff, Edwin F., Indianapolis, Ind. 750,465, pub. 3–19–63. Cl. 22.
Worcester Valve Co., Inc., Worcester, Mass. 750,380, pub. 3–19–63. Cl. 13.

U.S. GOVERNMENT PRINTING OFFICE: 0—1963

U.S. DEPARTMENT OF COMMERCE
OFFICIAL GAZETTE of the UNITED STATES PATENT OFFICE
June 11, 1963 Volume 791 Number 2

PATENTS
NOTICES

Board of Appeals Decisions Rendered in the Month of April 1963

Examiner affirmed	340
Examiner affirmed in part	60
Examiner reversed	73
Total	473

Disclaimer

2,936,047.—*George F. Quayle*, Philadelphia, Pa. LIFT TRUCK. Patent dated May 10, 1960. Disclaimer filed Apr. 23, 1963, by the assignee, *The Yale & Towne Manufacturing Company*.

Hereby enters this disclaimer to claims 1 and 2 of said patent.

Adjudicated Patents

(D.C.N.J.) Thias and White Patent No. 2,496,183 (336—142), for circuit component selecting unit. Claims 2, 5, 8 and 10 *Held* invalid. *Standard Kollsman Industries, Inc.* v. *Sarkes Tarsian Inc.*, 214 F. Supp. 463; 136 USPQ 582.

(D.C.N.J.) Thias Patent No. 2,620,378 (317—249), for fine turner for turret type tuners. Claim 3 *Held* invalid. *Id.*

(D.C. Ariz.) Stiegele Patent No. 2,689,450 (59—79), for expansible bracelet. Claims 1, 2, and 5 to 9 *Held* valid and infringed. *Stiegele* v. *Bentley & Schibelle Trading Co. et al.*, 314 F. Supp. 364; 137 USPQ 297.

(D.C. Mich.) Osten Patent No. 2,903,736 (16—197), for automatically-locking sash balance for removable sash windows, *Held* invalid and not infringed. *Malta Mfg. Co.* v. *Osten*, 215 F. Supp. 114; 137 USPQ 127.

(D.C.N.J.) Thias Patent No. 2,755,486 (325—457), for turner shield. Claim 1 *Held* invalid. *Standard Kollsman Industries, Inc.* v. *Sarkes Tarsian Inc.*, 214 F. Supp. 463; 126 USPQ 582.

(D.C. Ill.) Gross Patent No. 2,703,083 (128—156), for adhesive bandage. Claims 1, 2, 4, 5, 8, 9, 11 and 12 *Held* valid and infringed. *Johnson & Johnson* v. *Kendall*, 215 F. Supp. 124; — USPQ —.

(D.C. Del.) Watts Reissue Patent No. 23,688 (339—218), for electrical connector. Claims 1, 2 and 4 to 7 *Held* valid and not infringed. *AMP. Inc.* v. *Burndy Corp. et al.*, 215 F. Supp. 8; 136 USPQ 617.

Practice Under Rule 112

The following practice shall henceforth be followed by the Examining Corps in applying Rule 112, in the light of the notice entitled "New Examining Procedures" appearing at 781 O.G. 1, on August 7, 1962.

Any amendment after a second action upon the patentability of the invention as claimed shall be inspected immediately to determine whether such amendment is restricted to the rejection made, as required by Rule 112. If the amendment would require rejection on any new basis, as for example if it introduces any new limitation into any existing claim, or adds any claim including such a limitation, and the limitation is of such a nature that a further search would be required before it could be determined that such claim is or is not patentable, the amendment is to be treated as failing to comply with Rule 112.

In such a case applicant shall be notified promptly that the amendment has *not* been entered since it does not constitute a proper response under Rule 112. Such notification shall clearly point out the reason why the response is considered improper.

Where insufficient time remains in the original statutory period for response, and the amendment in question otherwise appears to be a bona fide attempt to advance the case to final action, and is substantially a complete response to the Examiner's action, as provided by Rule 135(c), applicant will be given a specified period (usually 20 days) in which to overcome the Examiner's objection.

Petition will lie from denial of entry of an amendment under the aforementioned condition and will be governed by all the requirements of Rule 181.

An applicant may ordinarily avoid nonentry of an amendment on this ground by including in his application at the time of filing, or after the first complete action, the most detailed claim that he would be willing to accept as well as the broadest claim to which he considers himself entitled.

Inasmuch as this practice presupposes an essentially complete first action, its application will ordinarily be deferred in any case where a new reference is cited in a subsequent action for any purpose other than to meet newly added limitations.

Pending further notice, to insure uniform and equitable application of the practice, every action holding a response improper under the circumstances indicated above must be submitted to, and approved by, the appropriate Group Supervisor.

EDWIN L. REYNOLDS,
May 21, 1963. *First Assistant Commissioner.*

Directory for Reorganized Patent Examining Operations

The movement of all Examining Groups incident to the reorganization of the Patent Examining Corps is now complete.

For your convenience, a yellow tear sheet, which provides a complete listing of room and telephone numbers of each Director and Supervisory Examiner as of May 15, 1963, is included as the last page of this issue of the OFFICIAL GAZETTE.

New Applications Received During April 1963

Patents	7,797
Designs	466
Plant Patents	9
Reissues	31
Total	8,303

Issue

Patents	992—No.	3,092,837	to No.	3,093,828, incl.
Designs	56—No.	195,394	to No.	195,449, incl.
Plant Patents	3—No.	2,262	to No.	2,264, incl.
Reissues	2—No.	25,393	to No.	25,394, incl.
Total	1,053			

PATENT EXAMINING CORPS

H. B. WHITMORE, Superintendent

PATENT EXAMINING OPERATIONS AND GROUPS	Oldest Application	
	New	Amended
CHEMICAL EXAMINING OPERATION—P. E. MANGAN, Director.		
GENERAL CHEMISTRY, GROUP 110—R. L. CAMPBELL, Supervisory Examiner	7-21-61	9-6-61
Inorganic and Organo-metal (formerly Div. 59)—M. A. Brindisi.		
Metallurgy (formerly Div. 3).		
Electrochemistry (formerly Div. 56)—J. R. Speck.		
GENERAL ORGANIC CHEMISTRY, GROUP 120—I. MARCUS, Supervisory Examiner	1-16-62	12-7-61
Heterocyclic (formerly Div. 6)—H. J. Lidoff.		
Specialized Organic Compounds (formerly Div. 26)—C. B. Parker.		
Medicines (formerly Div. 45).		
PETROLEUM CHEMISTRY, GROUP 130—J. S. BAILEY, Supervisory Examiner	11-3-61	10-16-61
Hydrocarbons (formerly Div. 31).		
Oxo- and Oxy-Derivatives.		
HIGH POLYMER CHEMISTRY, GROUP 140—M. STERMAN, Supervisory Examiner	5-17-61	7-20-61
High Polymer Preparation (formerly Div. 60).		
Mixed High Polymers and Natural Resins (formerly Div. 39).		
COMPOSITIONS AND MOLDING, GROUP 150—L. H. GASTON, Supervisory Examiner	11-9-61	11-8-61
Coating Compositions and Molding.		
Special Utility Compositions (formerly Div. 64)—J. Greenwald.		
COATING AND LAMINATING, GROUP 160—I. G. STONE, (J. REBOLD, Acting) Supervisory Examiner	11-15-61	11-20-61
Coating Methods and Apparatus (formerly Div. 28)—R. D. Nevius.		
Laminating and Stock Materials (formerly Div. 67).		
SPECIALIZED CHEMICAL ARTS AND INDUSTRIES, GROUP 170—W. B. KNIGHT, Supervisory Examiner	11-24-61	10-11-61
Specialized Chemical Arts (formerly Div. 63)—A. H. Winkelstein.		
Reactors and Miscellaneous Industrial Processes.		
CHEMICAL ENGINEERING, GROUP 180—G. D. MITCHELL, Supervisory Examiner	1-2-62	1-2-62
Gases, Liquids and Solids Separating (formerly Div. 23)—H. L. Martin.		
Distillation, Drying and Physical Processes.		
ELECTRICAL EXAMINING OPERATION—N. H. EVANS, Director.		
POWER, GROUP 210—M. L. LEVY, Supervisory Examiner	10-5-61	8-31-61
Generation and Utilization (formerly Div. 21)—O. L. Rader.		
General Applications (formerly Div. 49)—S. Bernstein.		
Conversion and Distribution (formerly Div. 71)—L. McCollum.		
Heating and Related Art (formerly Div. 76)—R. M. Wood.		
SECURITY, GROUP 220—S. BOYD, Supervisory Examiner	12-29-61	12-6-61
Chemical (formerly Div. 46).		
Electrical (formerly Div. 44)—C. L. Justus.		
Mechanical (formerly Div. 10).		
INFORMATION TRANSMISSION, GROUP 230—S. W. CAPELLI, Supervisory Examiner	11-6-61	12-6-61
Communications (formerly Div. 16)—R. H. Rose.		
Multiplexing Techniques (formerly Div. 77)—D. G. Redinbaugh.		
Facsimile and Related Art (formerly Div. 41)—R. Lake.		
INFORMATION STORAGE AND RETRIEVAL, GROUP 240—W. W. BURNS, Supervisory Examiner	9-29-61	9-29-61
Processing and Related Art (formerly Div. 66)—M. A. Morrison.		
Storage Devices and Related Art (formerly Div. 42)—I. Sragow.		
ELECTRONIC COMPONENT SYSTEMS AND DEVICES, GROUP 250—B. G. MILLER, Supervisory Examiner	10-30-61	9-1-61
Semi-Conductor and Space Discharge Systems and Devices (formerly Div. 51)—G. N. Westby.		
Electronic Component Circuits (formerly Div. 73)—A. Ganes.		
Wave Transmission Lines and Networks (formerly Div. 66)—H. K. Saalbach.		
RADIATION AND INSTRUMENTS, GROUP 260—F. M. STRADER, Supervisory Examiner	9-20-61	10-4-61
Optics (formerly Div. 75)—J. H. Pedersen.		
Radiant Energy (formerly Div. 54)—R. G. Nilson.		
Measuring (formerly Div. 74)—W. L. Carlson.		
ELEMENTS, GROUP 270—E. J. SAX, Supervisory Examiner	10-6-61	9-27-61
Conductors (formerly Div. 78)—J. P. Wildman.		
Switches (formerly Div. 37)—B. A. Gilheany.		
Miscellaneous (formerly Div. 72)—J. F. Burns.		

CONDITION OF PATENT APPLICATIONS AS OF APRIL 30, 1962

Total number of pending applications (excluding Designs)	196,995
Total number of Design applications pending	5,979
Total number of applications awaiting action (excluding Designs)	112,252
Total number of Design applications awaiting action	2,202
Date of oldest new application awaiting action	May 17, 1961
Date of oldest amended application awaiting action	July 20, 1961

EXPIRATION OF PATENTS

The patents within the range of numbers indicated below expire during June 1962, except those which may have been extended under the provisions of the Veterans Patent Extension Act (54 Stat. 316 as amended by 66 Stat. 321) and those which may have expired earlier due to shortened terms under the provisions of Public Law 600. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1962*

Patents ..... Numbers 2,991,293 to 3,029,623, inclusive

Plant Patents ..... Numbers 626 to 701 inclusive

PATENT EXAMINING OPERATIONS AND GROUPS (Continued)	Oldest Application	
	New	Amended
MECHANICAL ENGINEERING EXAMINING OPERATION—R. A. WAHL, Director.		
MATERIAL OR ARTICLE HANDLING AND DISPENSING, GROUP 310—A. BERLIN, Supervisory Examiner	3-5-62	1-15-62
Conveying and Loading (formerly Div. 4)—E. A. Faller.		
Handling.		
Dispensing (formerly Div. 35)—L. J. Dembo.		
METAL AND PLASTICS WORKING, GROUP 320—N. BERGER, Supervisory Examiner	4-18-62	4-24-62
Metal-Working.		
Plastics Working (formerly Div. 18)—M. V. Brindisi.		
MANUFACTURING AND ASSEMBLING MISCELLANEOUS ARTICLES, GROUP 330—A. HORTON, Supervisory Examiner	10-31-61	11-10-61
Combined Machines and Processes (formerly Div. 14)—W. A. Wiltz.		
Assembly and Special Article Making.		
MACHINE TOOLS, MECHANISMS, AND ELEMENTS, GROUP 340—F. BRONAUGH, Supervisory Examiner	1-15-62	12-11-61
Comminuting, Abrading and Drilling.		
Cutting.		
Machine Elements and Mechanisms (formerly Div. 12)—B. G. Durham.		
Clutches, Shafting and Workholders.		
HARDWARE, TOOLS AND JOINTS, GROUP 350—T. HICKEY, Supervisory Examiner	1-5-62	12-18-61
Hardware (formerly Div. 20)—J. D. Sears.		
Tools.		
Joints.		
FLUID HANDLING, GROUP 360—E. PAUL, Supervisory Examiner	2-26-62	2-12-62
Fluid Handling and Valves (formerly Div. 30)—I. Weil.		
Baths, Closets and Fluid Conduits (formerly Div. 11)—E. V. Benham.		
POWER PLANTS, MOTORS AND PUMPS, GROUP 370—C. GAREAU, Supervisory Examiner	1-22-62	1-30-62
Power Plants and Motors (formerly Div. 18)—A. Blum.		
Expansible Chamber Motors.		
Pumps (formerly Div. 9)—J. H. Branson.		
HEATING, COOLING AND VENTILATING, GROUP 380—P. PATRICK, Supervisory Examiner	1-2-62	12-6-61
Burners and Heat Exchange.		
Cooling and Ventilation (formerly Div. 30)—R. A. O'Leary.		
GENERAL ENGINEERING AND INDUSTRIAL ARTS EXAMINING OPERATION—J. A. MANIAN, Director.		
AGRICULTURE, GROUP 410—A. RUEGG, Supervisory Examiner	5-11-62	4-26-62
Animal (formerly Div. 8)—C. W. Robinson.		
Plant (formerly Div. 1)—A. G. Stone.		
CIVIL ENGINEERING, GROUP 420—B. BENDETT, Supervisory Examiner	1-8-62	12-8-61
Buildings.		
Construction and Structures.		
Earth Working, Drilling and Mining.		
PHYSICS, GROUP 430—R. L. EVANS, Supervisory Examiner	1-5-62	1-8-62
Photography, Sound and Lighting (formerly Div. 7)—E. G. Anderson.		
Indicators and Optics (formerly Div. 23)—L. Smilow.		
Measuring and Testing (formerly Div. 36)—J. P. Strizak.		
Geometric, Heat and Liquid Testing (formerly Div. 66)—I. Lisann.		
TEXTILES AND APPAREL, GROUP 440—R. C. MADER, Supervisory Examiner	2-21-62	2-14-62
Textiles.		
Apparel.		
TRANSPORTATION, GROUP 450—P. ARNOLD, Supervisory Examiner	1-11-62	1-9-62
Rail Vehicles and Brakes (formerly Div. 24)—L. Quackenbush.		
Land Vehicles.		
Aeronautics and Ships (formerly Div. 22)—M. Buchler.		
FURNITURE AND RECEPTACLES, GROUP 460—W. COLE, Supervisory Examiner	3-20-62	2-19-62
Furniture (formerly Div. 32)—C. A. Le Roy.		
Receptacles (formerly Div. 40)—E. J. Drummond.		
PRINTING, STATIONERY AND MATERIAL TREATMENT, GROUP 470—L. W. VARNER, Supervisory Examiner	12-19-61	11-24-61
Printing (formerly Div. 17)—R. A. Leighey.		
Stationery (formerly Div. 53)—G. A. Nines.		
Material Treatment.		
PERSONAL TREATMENT, ADORNMENT AND AMUSEMENT, GROUP 480—L. B. PRINCE, Supervisory Examiner	2-1-62	2-5-62
Personal Treatment.		
Adornment and Amusement (formerly Div. 62)—D. B. Lowe.		
DESIGNS—J. A. MANIAN, Supervisory Examiner	11-15-62	11-16-62
Industrial Arts (formerly Div. 31)—A. B. Hannah.		
Household, Personal and Fine Arts (formerly Div. 32)—E. Hunter.		

(CLASSIFICATION) GORECKI, G. A.—ARTS UNDERGOING RECLASSIFICATION AS LISTED UNDER CLASSIFICATION DIVISIONS.		
91. KENT, A. P. (acting)		
92. GAUSS, H.		
93. PURDY, W. F. (acting), Wire Working	6-1-62	5-11-62
94. BERLOWITZ, W.	7-11-62	7-23-62
95. ANGEL, C. D., (REZNEK, J., acting)	1-8-62	1-12-62

DECISIONS IN PATENT AND TRADEMARK CASES

U.S. Court of Customs and Patent Appeals

IN RE RUSSELL G. HEYL, JR.

No. 6913. Decided February 13, 1963

[50 CCPA —; 312 F.2d 839; 136 USPQ 476]

1. PATENTABILITY—PARTICULAR SUBJECT MATTER—"POWER SEAT TRACK HAVING HORIZONTAL AND VERTICAL MOVEMENT."

The decision of the Board of Appeals, refusing a certain claim in an application entitled "Power Seat Track Having Horizontal and Vertical Movement" as unpatentable over the prior art, is affirmed.

APPEAL from the Patent Office. Serial No. 430,267.

AFFIRMED.

Paul F. Seibold, Harness, Dickey & Pierce for appellant.

Clarence W. Moore (*S. Wm. Cochran* of counsel) for the Commissioner of Patents.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, SMITH, and ALMOND, Jr., *Associate Judges*

RICH, *J.*, delivered the opinion of the court.

This appeal is from the decision of the Patent Office Board of Appeals affirming the rejection of claim 12 of application Ser. No. 430,267, filed May 17, 1954, for "Power Seat Track Having Horizontal and Vertical Movement."

The single reference relied on is:

Garvey et al., 2,809,689, October 15, 1957.

Appellant's invention relates to the supporting structure for an automobile seat which can be moved both forward and backward and up and down by a motor-driven mechanism. The Garvey et al. patent shows such a mechanism. In both appellant's device and in the device of the reference the seat is supported at either side on track units, each unit having an element attached to the floor of the car and an element movable relative thereto supporting the seat. The fixed and movable elements of each unit are linked together by levers, links, springs, pivots, and the like and corresponding elements in the right and left hand units are functionally tied together by rotatable torsion bars which, on being rotated, cause the track elements to move relative to each other. Rotation of one bar moves the seat fore and aft rotation of the other moves it up and down. These movements are produced by a pair of motor-driven screw jacks, the motors being reversible. One is linked to the fore-and-aft torsion bar through a crank and the other is similarly linked to the bar producing vertical movement.

There is only one legally significant difference between the structure defined in the appealed claim and the disclosure of Garvey et al. In the reference, one end of the power means, or screw jack, is attached directly to the floor of the vehicle through its own bracket. Appellant, however, attaches the same end of his screw jack *to a bracket which is attached to the element of one of the seat-supporting units which is attached to the floor.*

While the complete structure necessarily includes two jacks to produce the two motions desired, it will be seen that claim 12 is broad and not limited thereto. It reads on either of the jacks employed and its support, to produce either the horizontal or vertical movement, and reads on a seat having only one of the two movements. Claim 12 is as follows (subdivision and reference letters supplied by us):

A unit seat supporting structure for an automobile
[*a*] which may be completely assembled and tested outside of the body thereof embodying
[*b*] a pair of spaced units, each unit comprising
[*i*] a floor engaging element and
[*ii*] a seat supporting element,
[*c*] means interconnecting said elements to permit the seat supporting elements of each unit to be moved relative to the floor engaging element thereof,
[*d*] drive means interconnecting said supporting elements for producing their simultaneous movement,
[*e*] attaching means on one of said floor engaging elements spaced from said drive means, and
[*f*] a power unit secured to said attaching means and connected to said drive means and supported solely thereby.

In further explanation of the claim, element [*d*] is a torsion bar; [*e*] is the bracket to which one end of a screw jack is attached, the other end being attached to the torsion bar through a crank arm; and [*f*] is the motor-driven screw jack, which, through the crank, rotates the torsion rod.

The claim seems obviously to have been drafted to distinguish in terms from Garvey et al., which it does in elements [*e*] and [*f*]. This mechanical difference, appellant urges, is of great importance and gives him the advantage recited in clause [*a*] of the claim, namely, that his seat supporting mechanism can be completely assembled and bench tested before its assembly in the vehicle, whereas Garvey's mechanism cannot be so tested because his screw jack, which has an end bracket secured *directly* to the floor of the car, is unsupported until assembly in the car.

This difference is what is relied on for patentability. It is the only difference which exists between the structure of claim 12 and the prior art. The law is that the claimed subject matter is not patentable if this difference "between the subject matter sought to be patented and the prior art" is "such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains." 35 U.S.C. 103.

Assuming that the Garvey et al. and similar structures had the disadvantage alleged, and that it appeared to be desirable to "unitize" the structure to produce an entirely self-contained mechanism which could be operated under its own power for testing outside of the vehicle, all that was necessary, and apparently all that appellant did, was to mount the free end of the screw jack on a bracket riveted to one of the floor engaging elements which was to be attached to the vehicle floor in any case. Even though this might have entailed shifting some of the other parts around slightly to attain the optimum position for the screw jack so mounted, and using parts of adequate strength, we are in complete agreement with the board that "such a modification of the reference apparatus would be quite obvious even to the routineer."

For no reason we can perceive, two and a half pages of the record are taken up with the reproduction of allowed claims which have no relevance to the issue before us.[1]

[1] The decision of the Board is affirmed.

AFFIRMED.

[1] In this regard see paragraph 8 of this court's Rule 26(3) (1958), which states in part (our emphasis):

> • • • If any claims of the applicant shall have been allowed, *and a consideration of the same shall be involved in the issues presented on appeal*, a like copy of said allowed claims shall immediately follow the rejected claims, under the heading Allowed Claims.

REISSUES

JUNE 11, 1963

Matter enclosed in heavy brackets [ ] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates additions made by reissue.

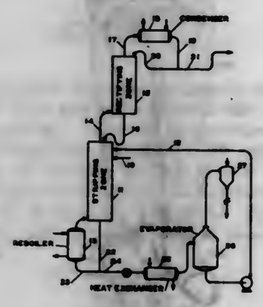
25,393

NITRIC ACID CONCENTRATION

Robert J. Bechtel, South River, N.J., assignor to Hercules Powder Company, Wilmington, Del., a corporation of Delaware

Original No. 2,716,631, dated Aug. 30, 1955, Ser. No. 254,768, Nov. 3, 1951. Application for reissue Feb. 13, 1956, Ser. No. 565,294

7 Claims. (Cl. 202—68)



8. The method of concentrating a weak aqueous nitric acid solution which comprises fractionally distilling said nitric acid solution in a stripping zone and a rectifying zone, the introduction of said nitric acid solution being made to said stripping zone; introducing a concentrated aqueous solution of an alkaline earth metal nitrate to said stripping zone not below the point of introduction thereto of said nitric acid solution; passing vapors of nitric acid and water from the top of said stripping zone to said rectifying zone; passing a liquid solution of nitric acid and water from the bottom of said rectifying zone to the top of said stripping zone; recovering substantially all of the nitric acid entering said stripping zone in a concentrated aqueous solution from the top of said rectifying zone; recovering an aqueous solution of magnesium nitrate more dilute than the magnesium nitrate solution introduced to the stripping zone and containing not less than 55% magnesium nitrate and not more than about 0.1% free nitric acid as a bottoms product from the bottom of the stripping zone, reconcentrating the bottoms product by vacuum evaporation to produce concentrated magnesium nitrate solution containing 60% to 80% magnesium nitrate, and recycling the concentrated magnesium nitrate solution to the stripping zone.

25,394

CORROSION-INHIBITED LIQUID FERTILIZER COMPOSITIONS

Carl Robert Martinson, Belleville, Ill., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Original No. 3,024,099, dated Mar. 6, 1962, Ser. No. 660,038, May 20, 1957. Application for reissue Sept. 26, 1962, Ser. No. 228,214

4 Claims. (Cl. 71—64)

1. A process for inhibiting the corrosion of aluminum by aqueous liquid fertilizer compositions having a pH between about 6 and about 8 and containing an inorganic orthophosphate salt selected from the group consisting of monoammonium orthophosphate, diammonium orthophosphate, monopotassium orthophosphate and dipotassium orthophosphate, said process comprising the incorporation therein of an effective corrosion inhibiting amount of a soluble fluosilicate compound selected from the group consisting of sodium fluosilicate, potassium fluosilicate and ammonium fluosilicate.

PLANT PATENTS

GRANTED JUNE 11, 1963

Illustrations for plant patents are usually in color and therefore it is not practicable to reproduce the drawing.

2,262

GLADIOLUS PLANT

Carl H. Fischer, St. Charles, Minn., assignor to Selected Glads, Inc., New Albany, Ind., a corporation of Tennessee

Filed June 25, 1962, Ser. No. 205,138

1 Claim. (Cl. Plt.—85)

The new and distinct variety of gladiolus plant, substantially as herein shown and described, characterized by its intense yellow blossom color, ease of propagation and robust health.

2,263

GLADIOLUS PLANT

Carl H. Fischer, St. Charles, Minn., assignor to Selected Glads, Inc., New Albany, Ind., a corporation of Tennessee

Filed June 26, 1962, Ser. No. 205,474

1 Claim. (Cl. Plt.—85)

The new and distinct variety of gladiolus plant, substantially as herein shown and described, characterized by its intense ruffling, purity of color, precision of form, and high order of beauty.

2,264

GLADIOLUS PLANT

Carl H. Fischer, St. Charles, Minn., assignor to Selected Glads, Inc., New Albany, Ind., a corporation of Tennessee

Filed June 28, 1962, Ser. No. 206,112

1 Claim. (Cl. Plt.—85)

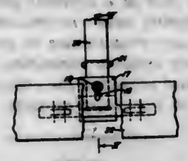
The new and distinct variety of gladiolus plant, substantially as herein shown and described, characterized by its brilliant coloring, broad flowerhead and excellent height.

PATENTS

GRANTED JUNE 11, 1963

GENERAL AND MECHANICAL

3,092,837
HELMET SHELL SUSPENSION WITH ADJUSTABLE HEIGHT SWEAT BAND
Harry W. Austin, Monroeville, Pa., assignor to Mine Safety Appliances Company, Pittsburgh, Pa., a corporation of Pennsylvania
Original application Nov. 26, 1958, Ser. No. 776,615, now Patent No. 3,020,551, dated Feb. 13, 1962. Divided and this application Aug. 31, 1961, Ser. No. 135,288
4 Claims. (Cl. 2—3)



1. A helmet shell suspension comprising a plurality of straps forming a head-receiving cradle member having its lower part formed for attachment to a helmet shell to support the shell, a headband member disposed inside the lower part of the cradle member, headband supporting means disposed between said members and connected to one of them and provided with slots extending up and down, and studs secured to the other member and extending through said slots to hold it tightly against the slotted means but permitting relative manual up and down movement of said other member and slotted means in frictional engagement to adjust the headband member bodily vertically in the cradle member.

3,092,838
GLARE SHIELD
Fred P. Vacha, 116 Clarke Road, Needham, Mass.
Filed Dec. 12, 1961, Ser. No. 161,763
10 Claims. (Cl. 2—12)



1. A glare shield of the type described, comprising a frame for support on the head of a wearer, a pair of transparent narrow glare reducing tabs supported on the frame for selective individual adjustment in a direction extending across the eyes of a wearer to match the spacing of the tabs to the pupillary distance of the wearer, and a pair of opaque aligning members respectively associated with said glare reducing tabs, each of said opaque members providing a vertical aligning index marker for registry with a vertical reference line during alignment of the glare reducing tabs.

3,092,839
CHILD'S SLEEPING GARMENT
William W. Cantrell, Winston-Salem, N.C., assignor to The P. H. Hanes Knitting Company, Winston-Salem, N.C., a company of North Carolina
Filed Oct. 4, 1960, Ser. No. 60,472
4 Claims. (Cl. 2—83)

1. In a child's sleeping garment having legs terminating in enclosed foot portions, the improvement comprising extended portions of the garment leg having bottom unsewn edges and forming upper front and upper heel members of the foot enclosure, a fabric sole having unsewn edges peripherally disposed adjacent to the unsewn edges of the said extended portions, a reinforcing strip covering both said edges on the outside and overlapping the extended portions and the sole by beginning at one



end thereof and extending around the periphery of the foot portion, at least one row of stitching joining the strip to the extended portions, and at least one other row of stitching joining the strip to the sole the reinforcing strip further being sewn across the said one end and extending upward therefrom along the garment leg for a short distance and being sewn against the leg by said rows of stitching along said distance.

3,092,840
SUPPLEMENTAL SEAL FOR GARMENT SEALING FLAP
William Bruce Roberts, Perryville, Md., assignor to the United States of America as represented by the Secretary of the Army
Filed May 26, 1961, Ser. No. 113,043
3 Claims. (Cl. 2—128)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. In a sealing flap for a garment closure formed of overlapped inner and outer garment edge portions secured together by at least one separable fastener, said flap comprising a separate body of impervious sheet material arranged in a Z-fold to provide inner and outer

bights respectively receiving therein said inner and outer garment edge portions, said flap and garment having substantially flush upper edge portions, and means readily detachably securing said flap to said garment; the improvement comprising an extension of said flap material extending upwardly of a portion of said upper edge portion thereof, said extension being adapted to be folded to an operative position overlying said flush upper edge portions of at least said garment portions, and means for readily detachably securing said extension in said operative position.

3,092,841
FUSED TAB
Edward C. Pfeffer, Jr., Troy, N.Y., assignor to Cluett, Peabody & Co., Inc., Troy, N.Y., a corporation of New York
Filed Oct. 25, 1960, Ser. No. 64,835
1 Claim. (Cl. 2—131)



A multi-ply collar for wearing apparel having thermoplastic collar stays and collar closure tabs comprised in part of thermoplastic material, characterized by a fused attachment through the interstices of the outside back ply of said collar of each tab to each of said thermoplastic collar stays respectively, said fused attachment being the sole means of maintaining said collar stays in proper position within said collar and also of securing said tabs to said collar.

3,092,842
TOILET DEVICE
Morton M. Rosenfeld, Mount Vernon, N.Y. (271 Madison Ave., New York, N.Y.)
Filed Oct. 6, 1961, Ser. No. 143,361
7 Claims. (Cl. 4—90)



1. A toilet device comprising a bowl, an outlet conduit in communication with said bowl, a cover movably mounted on said bowl, a plunger reciprocally mounted through said cover, said plunger having a flexible member on one end for engagement with the inner peripheral surface of said bowl.

3,092,843
PORTABLE STEAM CHEST
Raymond I. Wright, 25832 Springbrook, Farmington, Mich.
Filed Nov. 30, 1961, Ser. No. 156,048
2 Claims. (Cl. 4—164)



1. A collapsible, portable steam chest comprising a frame, said frame having base frame members rigidly connected in a horizontal plane, upright frame members rigidly connected in a vertical plane, a hinged connection between adjacent members in each plane, a pair of bipartite front frame members extending between the remote sides of said base frame members and said upright frame members, hinge structure for joining each part of said front frame members together in end-to-end relationship, said hinge structure including two friction parts, one friction part being carried by each front frame member, means for maintaining said frictional parts in frictional engagement, another frame member extending between said front frame members to hold the latter in spaced relationship, the extremities of each front frame member being hinged to said base frame member and said upright frame members, and a flexible covering tailored to the shape of the frame and enclosing said frame, said covering having a closable access opening.

3,092,844
SAFETY SCREEN FOR SWIMMING POOLS
Thomas H. Brunson, Sherman Oaks, Calif., assignor of one-tenth each to Joseph M. Dubiel and Jerry Giesler
Filed Jan. 3, 1961, Ser. No. 80,082
2 Claims. (Cl. 4—172)



1. A safety apparatus for a swimming pool having an elongate inclined bottom wall and upwardly extending peripheral walls and with one end of the pool being deeper than its other end, said safety apparatus comprising a screen adapted to conform to the configuration of the pool bottom, means for moving the screen to and between a submerged position adjacent the bottom wall and an elevated position proximate the top of said pool, said means comprising a vertically extending hydraulic cylinder positioned under and centrally of the pool, a piston in said cylinder, a shaft extending vertically from said piston to said screen, a pivot mount secured upon the upper end of the shaft, a pin for pivotally attaching the underside of said screen to said mount along a pivotal axis extending transversely of the screen whereby the screen is swingable on said pivotal axis to a position paralleling the slant of said bottom wall when the screen is in its lowered position and the screen is swingable on said pivotal axis to a position extending horizontally when the pool is in its elevated position, means on the screen engageable with said mount for preventing turning of the screen on said axis beyond said horizontal position with respect to said slant position and valve controlled fluid supply system connected to said cylinder for admitting fluid pressure to said cylinder thereby to drive the piston in the cylinder.

3,092,845
LAUNDRY TUB HOSE SYSTEM
Bernard E. Mustee, Cleveland, Ohio, assignor to E. L. Mustee & Sons, Inc.
Filed Apr. 28, 1961, Ser. No. 106,305
3 Claims. (Cl. 4—192)

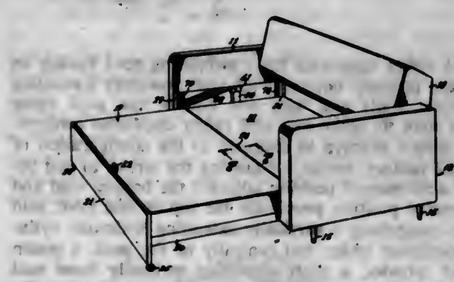
1. In a laundry tub assembly having a side wall structure and a hose the improvement which comprises:
(*a*) an apertured bracket structure secured to the side wall, structure in confronting relationship to define a coupling enclosure;
(*b*) said side wall structure having an aperture axially aligned with a bracket structure aperture;
(*c*) said hose projecting through the aperture of one structure into said enclosure;

(*d*) a coupling projecting through the aperture of the other of said structures and telescoped into the hose;
(*e*) said coupling projecting outwardly of the assembly for connection to a conduit;



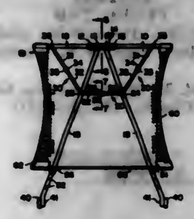
(*f*) clamp means in said enclosure to securing said hose to the coupling; and,
(*g*) said clamp means being constructed to limit both axial and rotational movement of the hose and coupling relative to the structures.

3,092,846
DUAL SOFA BED
Edward E. Biby, 5725 Avalon Blvd., Los Angeles, Calif.
Filed Feb. 23, 1961, Ser. No. 91,267
7 Claims. (Cl. 5—18)



7. An article of furniture comprising:
a pair of end members,
a stationary lower frame disposed between said end members,
a movable upper frame normally disposed in superimposed relationship above said lower frame,
an elongated straight track disposed within each of said end members, said tracks normally extending in a straight horizontal direction, said tracks being pivotally mounted to permit downward pivotal movement of the forward ends of said tracks to and from a downwardly inclined angular position,
a roller carried by each end of said upper frame, said rollers being mounted for horizontal rotational movement within said tracks,
said upper frame being mounted for movement forwardly and downwardly to a position directly adjacent to said lower frame in which the upper surfaces of said frames are disposed in substantially the same plane,
said rollers on said upper frame being adapted to move forwardly along said tracks, said rollers as they reach the forward ends of said tracks being adapted to pivot said forward ends of said tracks downwardly to a downwardly inclined angular position to guide said upper frame downwardly,
said upper frame adapted to be moved back to its normal position by first lifting said upper frame upwardly to pivot the forward ends of said tracks back to their normal straight horizontal positions and then moving said upper frame rearwardly, with said rollers moving rearwardly along said tracks.

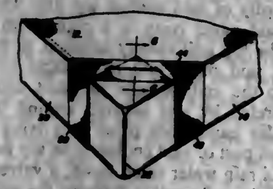
3,092,847
PLAYYARD, CRIB, AND COMBINED PLAYYARD AND CRIB
Charles T. De Puy, Rochester, N.Y., assignor, by mesne assignments, to Trimble Products Incorporated, Southern Pines, N.C., a corporation of Delaware
Filed Dec. 27, 1961, Ser. No. 162,370
6 Claims. (Cl. 5—99)



1. A folding playyard, crib, or the like device, comprising
(*a*) a rectangular shaped frame having two short and two long sides, said frame comprising
(*b*) two rigid, generally U-shaped frame members, disposed with the ends of one member adjacent the ends of the other member, the bight portions of said frame members forming the longer sides of said frame and the leg portions of both said U-shaped frame members forming parts of both shorter sides of said frame,
(*c*) two pairs of legs, one leg of each pair being pivotally interconnected adjacent its upper end with one leg portion of each of the two frame members, the two legs at each shorter side of the frame being pivotable toward and from one another,
(*d*) a brace connecting the two legs at each end of the frame to one another to hold the legs in extended unfolded position,
(*e*) a brace connecting one leg of one pair of legs to one of the frame members, and a brace connecting one leg of the other pair of legs to the other frame member, to hold the frame members in unfolded position,
(*f*) a bar rigid with each pair of legs and connecting said legs, the two said bars being parallel and extending in the direction of the longer sides of said frame,
(*g*) a single-piece floor pivotally mounted on one of said bars and positioned to rest on the other of said bars when the legs are pivoted apart, and
(*h*) a flexible skirt connected at its upper end to said frame around the perimeter thereof and at its lower end around said floor.

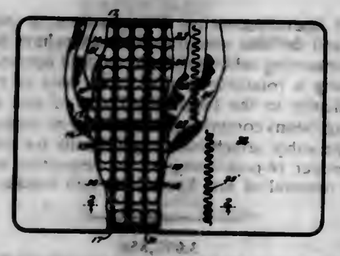
3,092,848
BED SHEET HOLDER
George B. Gronvold, P.O. Box 727, Vancouver, Wash.
Filed Sept. 8, 1960, Ser. No. 54,701
2 Claims. (Cl. 5—320)

1. In combination with a mattress having top, sides and bottom portions, a bed sheet of continuous material having an uninterrupted perimeter dimensionally restricted to the entire top portion of the mattress, fastener means removably engageable with the sheet adjacent the corner on the mattress but completely separable from the sheet for holding the sheet on and restricted to the top portion of the mattress in taut condition said fastener means comprising, an elastic band embracing each corner of the mattress under tension tending to displace each band off the corner of the mattress, gripping means mounted on each band for receiving a corner of the sheet with a gripping



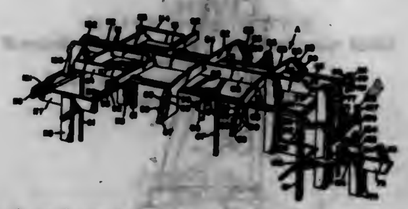
and tensioning force which increases in response to displacement of each elastic band, said gripping means comprising a slit in a top portion of each elastic band receiving a folded corner of the sheet.

3,092,849
MATTRESS CONSTRUCTION
Robert T. Clifton, 4828 Kathleen Ave., Castro Valley, Calif.
Filed Oct. 31, 1960, Ser. No. 66,024
2 Claims. (Cl. 5—351)



2. In a double bed mattress including a core with independent coil spring sections on opposite sides of the longitudinal center line thereof, the combination comprising a pair of elongated substantially planar resilient strengthening members extending transversely of the mattress adjacent the upper portion of said sections and respectively secured thereto at longitudinal positions which during occupancy by a couple respectively underlies the small of their backs.

3,092,850
BOAT CONSTRUCTION
Frederick W. Klopstock, Atherton, and Joseph Samson, Menlo Park, Calif., assignors to George B. Garrett, Redwood City, Calif.
Filed Aug. 10, 1959, Ser. No. 832,577
9 Claims. (Cl. 9—6)



1. A method of manufacturing a boat comprising providing a first jig having the general outline of the interior of the completed boat in inverted position and having slots for the reception of bow, transom, knee, at least one transverse rib, and at least one chine on each side extending longitudinally from said transom to said bow; placing said bow, transom, knee, transverse rib and chines in said slots on said jig; securing said knee to said transom, said knee to said rib, and said chine to said transom, rib and bow; providing pre-cut sides; fastening said sides to said chines and extending below said chines; said sides having outwardly sloping upper edge portions; providing pre-cut bottom layers, applying a plurality of said pre-cut bottom layers over said knee and extending from said transom to said bow and from the longitudinal centerline of said boat out to said chines; providing a second jig having the general outline of the gunwale of the boat, fitting together pieces of wood having the shape of one-half of said gunwale split on the longitudinal centerline of the boat, and having grooves disposed at an angle in one surface corresponding to the angle of the edges of the sides of the hull; fitting the two halves of said gunwale together on said second jig; inverting the gunwale and slipping the edges of the sides of the hull into the grooves in the gunwale; and securing said hull and gunwale together.

3,092,851
BOAT
Charles E. Sauer, Highland, Ill., assignor to Alton Box Board Company, Alton, Ill., a corporation of Delaware
Filed Oct. 11, 1961, Ser. No. 144,470
10 Claims. (Cl. 9—6)

1. A boat formed of flexible board-like sheet material foldable along predetermined curved fold lines, the boat having a downward bowed bottom panel of biconcave outline and inwardly bowed side panels of convex outline foldably connected to the sides of the bottom panel.

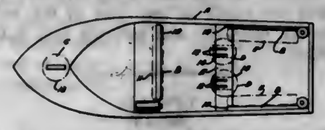
3,092,852
INHERENTLY STABILIZED DEEP SEA FLOATING OBSERVATION STATIONS
Robert F. Devereux, Del Mar, Calif.
(5636 Linda Rosa, La Jolla, Calif.)
Filed Feb. 15, 1957, Ser. No. 640,356
3 Claims. (Cl. 9—8)



1. An inherently stabilized deep sea floating observation station, comprising a cylindrical spar hull not less

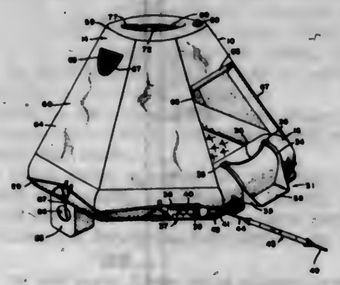
than six hundred feet in length, of substantially constant diameter with length-to-diameter ratio approximately 30:1, and having a natural period of oscillation for vertical motion of about 25 seconds; said hull being thereby inherently stabilized against vertical oscillation due to surface wave action; said hull partitioned above to form a living space for human occupants; and the space below being ballasted to maintain said hull, when introduced into the sea, in an upright position with the upper portion thereof projecting to a substantial extent above the level of the sea.

3,092,853
BUOYANCY UNITS
John R. Owen, 115 Howard Terrace, Leonia, N.J.
Filed Sept. 24, 1958, Ser. No. 763,126
1 Claim. (Cl. 9—8)



In a buoyancy unit of the type mounted permanently in a pleasure boat and having a base mounted on the interior of a boat, a compressed gas container mounted on the base, a connecting conduit and an inflatable envelope connected to the conduit; the combination therewith of a manually and automatically operated valve connected to and connecting the container and the conduit having a vertical axis, a cylindrical stepped housing with a lower larger gas conduit chamber and an upper smaller actuating chamber having a coil spring actuator and a water dissolvable link, a sealing closure at the bottom of said lower larger gas conduit chamber, an outlet to the conduit at the side of the gas conduit chamber and a pin for opening the closure extending vertically axially through said housing and through both ends of the housing, the lower end penetrating through the closure and the upper end projecting above the housing and carrying a manual actuator at its upper end, said spring biasing the pin upwardly away from the membrane and said link holding the pin down against the spring bias.

3,092,854
LIFE RAFT
Charles E. Manhart, 3133 SW. 25th Terrace, Miami, Fla.
Filed Sept. 10, 1959, Ser. No. 839,165
2 Claims. (Cl. 9—11)



1. A life raft having an inflatable endless tube forming a hull body, a diaphragmatic deck extending inwardly of the tube, a shelter structure carried by the hull body and including a number of upwardly extending inflatable converging stanchions, at least one of the stanchions being in communication at its lower end with the interior of the endless tube, and an endless tube top unit supported on the upper ends of the stanchions, said stanchions all being in communication with the interior of the endless tube top unit, means for inflating the hull body, the stanchions and the endless top unit, a panel unit extending horizontally inwardly of said endless top unit when the latter is inflated, said panel lying in a plane with respect to the endless tube top unit closely adjacent to the underside of the latter, said panel unit comprising an annular band secured to the endless tube top unit and a transparent sheet encircled by and secured around its periphery to said annular band, said panel unit lying entirely below the topmost part of said endless tube top unit and forming therewith a rain water catch basin, a valved tube attached at one end to and opening through the said annular band for use in withdrawing rain water from the catch basin by occupants of the raft.

3,092,855
PADDLES FOR CANOES AND THE LIKE
John K. Smith, 2210 Marion St., Columbia 2, S.C.
Filed Sept. 29, 1959, Ser. No. 843,260
4 Claims. (Cl. 9—24)



1. An operating means for attaching to paddles for canoes and the like, wherein said paddles have two blades and a connecting stem therebetween, said operating means comprising a rotatable handle whose axis of rotation is perpendicular to the longitudinal axis of said stem, said operating means comprising mounting post means adapted to be spaceably attachable longitudinally on said stem to allow proper re-positioning of the respective hand without the removal of said hand from said handle.

3,092,856
HYDRAULIC POWER ARRANGEMENT FOR MECHANICAL DAVITS
Robert H. Wallace and William R. Bromfield, Perth Amboy, N.J., assignors to Continental Copper & Steel Industries, Inc., Welin Davit & Boat Division, New York, N.Y., a corporation of Delaware
Filed July 15, 1959, Ser. No. 827,257
2 Claims. (Cl. 9—39)



1. A hydraulically powered mechanical boom davit having a deck support structure including inverted high and low inboard and outboard longitudinal U cross section beam members to give a horizontal base, a triangular beam structure having a horizontal transversely extending base member supported at its ends upon said beam members in horizontal position above the deck, a vertical inboard upwardly extending leg and a hypotenuse member extending obliquely outwardly and downwardly from the upper end of the vertical leg to the outer end of the transversely extending base member, a lower end hydraulic cylinder pivot mount on the upper end of the vertical inboard leg, a hydraulic cylinder having a piston pivotally mounted at its lower end on said pivot mount, spaced boom davit pivot mounts on each side of said horizontal base member and on the top sides of the ends of the outboard U-cross section beam member, obliquely upwardly and inwardly extending boom pivot and brace members extending from the davit pivot mounts to a boom carried by said brace members intermediate its sides and extending downwardly to midway between said spaced pivot mounts and pivoted thereon and upwardly to substantially beyond the upper end of said hydraulic cylinder, a piston driven connecting rod extending from the upper end of the hydraulic cylinder to the upper portion of the boom below the upper end thereof and means to limit the outboard movement of the boom.

3,092,857
WATER SLED
Fred L. Churchman, Box 81, Benicia, Calif.
Filed Apr. 23, 1962, Ser. No. 189,593
5 Claims. (Cl. 9—310)



2. A water sled comprising:
a planing body adapted to be supported on the water and provided with front and rear ends,
a steering rudder,
a vertically extending steering post extending downwardly through said body at the forward portion thereof and secured at its lower end to said rudder,
means rotatably mounting said post to said body for swingably mounting said rudder relative to said body,
a towrope connector,
means swingably securing said connector to said post below said body to permit towing said body by means of a tow rope at various angles as desired relative to the central longitudinal axis of said body.

3,092,858
WATER SPORT DEVICE
Bernard H. Wallach, 365 Knickerbocker Road, Englewood, N.J.
Filed Apr. 3, 1961, Ser. No. 100,108
1 Claim. (Cl. 9—348)



A water sport device comprising a streamlined aircraft type base adapted to be submerged and propelled through the water, legs extending upwardly and inwardly from the base, and a platform of smaller area than the area of the base supported on the top of the legs, said platform having a central depressed portion from end to end thereof adapted to support a person's body in a prone position while stroking a propelling means for propelling the device through the water.

3,092,859
TAP STOP DEVICE
John W. Lehde, Jr., and Nicholas Hertelendy, Chicago, Ill., assignors to Scully-Jones and Company, Chicago, Ill., a corporation of Illinois
Filed Feb. 5, 1960, Ser. No. 6,997
5 Claims. (Cl. 10—129)

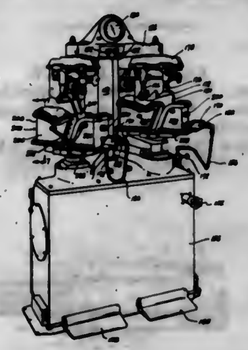


1. Apparatus for tapping a thread in a bore for an adjustably limited distance inwardly from a surface through which the bore opens, comprising a driving socket having a non-circular cross-section, a tap carried by said socket, a nut member having a threaded bore for working on said tap to adjust to a position thereon longitudinally spaced from the tap end a distance equal to said limited distance, a reduced portion on the nut member end adjacent said socket having an exterior surface corresponding to said socket cross section and defining a socket-opposed shoulder on the nut member, a counterbore in said reduced end portion defining a wall portion on the nut member, an annular groove in the inner surface of said wall portion, an aperture extending radially through the wall portion in spaced relation to said shoulder, a pin slidably disposed in said aperture of a length greater than the thickness of the wall portion, a split resilient ring disposed in said groove and engaged with said pin biasing the pin to a position with an outer end projecting exteriorly of the wall portion, a sleeve on said socket having the interior surface thereof corresponding to said socket cross-section and reduced portion exterior surface of the nut member and slidable longitudinally partially off the socket for abutting engagement of one end with said nut member shoulder, a plurality of openings in said sleeve each spaced from said one end thereof not more than the spacing of said pin aperture from said shoulder each adapted to receive said projecting pin end therein upon said abutting engagement of the sleeve and shoulder for locking the sleeve against longitudinal movement relative to the nut member, and camming surfaces on said pin end and said one sleeve end cooperable upon sliding movement of the sleeve into engagement with the shoulder to move the pin radially inwardly to allow movement of the sleeve end therepast.

3,092,860
SHOE MACHINE FOR SOLE AND HEEL BREAST FLAP LAYING
Edgar Haas, New York, N.Y., assignor to Herman Schwabe, Inc., Brooklyn, N.Y., a corporation of New York
Filed Feb. 16, 1959, Ser. No. 793,488
10 Claims. (Cl. 12—16.2)

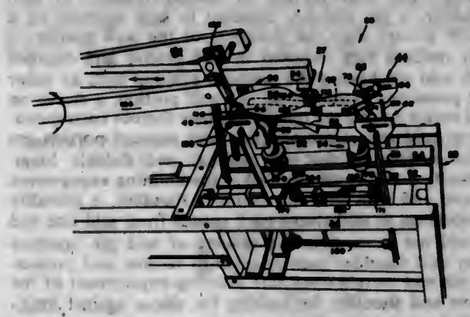
1. A shoe machine for simultaneously laying a sole and heel breast flap, said machine comprising a stationary base, a stationary head mounted over said base, an upright hydraulic cylinder in the base, a plunger in said cylinder,

a sole and heel breast pad carried by the plunger for movement toward the head, adjustably located stop posts on the head to arrest the upward movement of a lasted shoe resting on the pad, a heel back pad also carried by the plunger for movement toward the head but being horizontally movable toward or away from the first pad, a



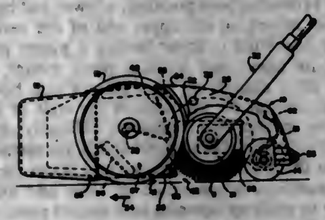
second hydraulic cylinder and plunger bodily carried by the first plunger and arranged to move the heel back pad horizontally, means including a flexible hose connected to the second cylinder to apply hydraulic pressure simultaneously to both cylinders, and means to adjust the rate of movement of one relative to the other.

3,092,861
METHOD FOR ASSEMBLING AN INSOLE WITH A LAST
John B. Reid, Brighton, and Robert A. Spence, South Lincoln, Mass., assignors to Bata Corporation, Cambridge, Mass., a corporation of Massachusetts
Filed Feb. 21, 1962, Ser. No. 174,839
19 Claims. (Cl. 12—142)



1. In the manufacture of footwear, a method of automatically assembling a contoured insole with a related last having an insole supporting bottom portion generally corresponding in contoured outline with at least a portion of the contoured insole comprising the steps of (1) initially positioning said insole and bottom portion of said last in generally corresponding superimposed relation and (2) aligning the positioned insole and last by applying at least three deflecting forces which mutually cooperate with each other at different points along the periphery of said insole and bottom portion of said last to displace any related overlapping peripheral portion to a position of final alignment where the corresponding contoured outlines of said insole and bottom portion of said last coincide in superposed aligned relation for subsequent combining into a detachably assembled unit.

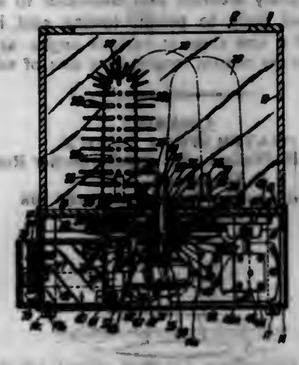
3,092,862
HAND CARPET SWEEPER CONSTRUCTION
William A. Sherbondy, 2517 Guilford Road, Cleveland Heights, Ohio
Filed Nov. 15, 1961, Ser. No. 152,392
7 Claims. (Cl. 15—41)



1. A carpet sweeper comprising a housing including a forward end, a top wall, a bottom wall having an opening therein, and spaced side walls, a trough-like dirt storage cartridge at said forward end of said housing communicating with said opening, said cartridge having one side removably clipped to the top wall of said housing and its opposite side removably clipped to the bottom wall of said housing, a rotatable sweeping brush journaled between the side walls of said housing and partially extending through said opening, said brush being disposed rearwardly of said cartridge, wheels for rollingly supporting said sweeper, means connecting said wheels to said housing, said connecting means including means for unidirectionally rotating said brush opposite to the direction of rotation of said wheels when said sweeper is moved forwardly, and a handle rotatably connected to said housing about an axis parallel to said brush and rearwardly of the center of gravity of said sweeper for permitting said housing to pivot when lifted by said handle so that dirt will fall from said housing into said cartridge

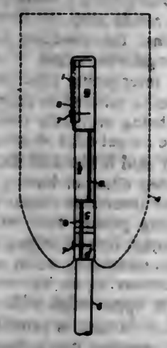
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3,092,863
WASHING APPARATUS FOR HOLLOW-WARE AND CROCKERY
Christopher Edmund Linnit, London, England, assignor to Cleanglaze Mechanical Washer Limited, London, England, a British company
Filed June 8, 1961, Ser. No. 115,783
Claims priority, application Great Britain June 8, 1960
4 Claims. (Cl. 15—76)



1. A washing apparatus comprising a container for washing liquid, a number of brushes grouped around a central brush in said container arranged to engage the inside and outside of the article to be washed, rotatable spindles carrying said brushes and extending through sealed bearings in the bottom wall of the container into a hollow base, gearing in said base drivingly connecting said spindles, a motor in said base, a shaft driven by said motor, and a resilient universal coupling and an overload release between said shaft and the spindle carrying the central brush, said overload release being incorporated in said universal coupling, the motor casing having secured to it a block formed with a vertically extending hole, a bearing in a fixed part of the apparatus, a vertically extending spindle having an eccentric at one end thereof rotatable in the bearing and which spindle is also rotatable in the hole in the said block whereby said shaft may be brought into alignment with said spindle carrying the central brush by rotational adjustment of said vertical extending spindle and eccentric.

3,092,864
LAMBSWOOL DUSTER
Thomas Stanislaus McCann, Reigate, Surrey, England
Filed Apr. 2, 1962, Ser. No. 184,276
Claims priority, application Great Britain Apr. 24, 1961
4 Claims. (Cl. 15—235)



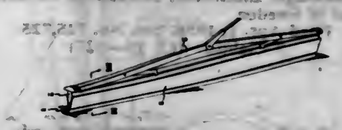
1. A duster in the form of a tube made of a plurality of separate pieces of wool-bearing skin, each skin having two edges thereof joined together to form an individual tube having a longitudinally extending seam, and a rod on which said individual tubes are mounted, said individual tubes being connected together in longitudinal succession with their respective seams staggered peripherally about the rod, said duster comprising a strip of said wool-bearing skin extending across one end of said rod and lengthwise over the longitudinal seam of the endmost individual tube.

3,092,865
WINDSHIELD WIPERS
Antoine Nassib Massoud, % B. Szempruch, 2236 93rd St., Flushing, N.Y.
Filed Dec. 20, 1962, Ser. No. 246,222
10 Claims. (Cl. 15—250.23)

1. A windshield wiper, comprising a rotatably oscillatable axle, a wiper arm secured to said axle and extending essentially radially therefrom, a first wiper blade pivotally supported by said arm at a fixed radial distance from said axle, a second wiper blade disposed adjacent said first wiper blade, a member carried by said arm for linear displacement therealong radially of said axle and pivotally supporting said second wiper blade, a hydraulic pressure system operatively connected with said member for applying positive forces thereto to effect the corresponding linear displacements thereof in opposite directions, and cam means having a predetermined working contour operatively connected with said hydraulic system for actuating the same so as to effect the required displacements of said member and said second wiper blade during each oscillating stroke of said axle.



3,092,866
RENEWABLE WIPER BLADE AND METHOD OF MAKING SAME
John H. Jennings and Charles S. Thompson, Jackson, Mich.; said Thompson assignor to said Jennings
Filed Aug. 22, 1960, Ser. No. 51,181
8 Claims. (Cl. 15—250.36)

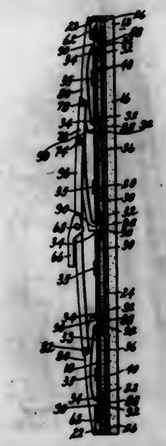


2. A wiping blade formed from sheet material, said sheet having first and second planar sides, a cut slit formed in said first side terminating short of said second side defining an unsevered portion in said sheet, said unsevered portion functioning as a hinge and connecting element upon folding the second sides of said sheet about said unsevered portion whereby the sheet corner edges formed by said slit and first side thereof define a pair of sharp wiping edges and bonding said second sides together adjacent said unsevered portion.

3,092,867
WINDSHIELD WIPER BLADE ASSEMBLIES
Eugene R. Ziegler, Spencerport, N.Y., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed May 12, 1960, Ser. No. 28,570
10 Claims. (Cl. 15—250.42)

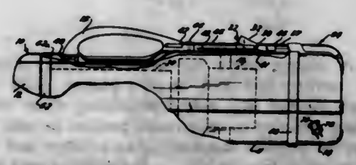
2. A windshield wiper blade assembly including, an elongate freely flexible elastomeric squeegee having a wiping lip along one edge and a retention portion along the opposite edge, a plurality of backing strips secured to the retention portion of said squeegee with the ends thereof being spaced apart, at least one of said backing strips being shorter in length than another of said backing strips, and a pressure applying superstructure comprising a primary pressure distributing member and a plurality of secondary pressure distributing members operatively connected to the primary pressure distributing member, at

least one of said secondary pressure distributing members comprising a differential secondary yoke having one end loosely connected to said shorter backing strip and the other end loosely connected to an adjacent backing strip



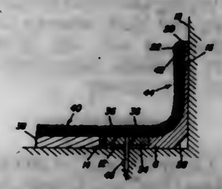
whereby substantially equal unit length pressures will be applied to said backing strips and pivotal movement of said differential secondary yoke will cause differential movement of the respective backing strips.

3,092,868
SUCTION CLEANER
Raymond Descarries, Montreal, Quebec, Canada, assignor to Aktiebolaget Electrolux, Stockholm, Sweden, a corporation of Sweden
Filed Apr. 1, 1958, Ser. No. 725,725
7 Claims. (Cl. 15—327)



1. In a suction cleaner, a casing, the top wall of the casing having adjoining horizontal sections at different levels and an inclined sloping top wall section therebetween, a handle for the casing having one end terminating at a first region which is at the higher level top wall section and at the immediate vicinity of the higher end of the inclined sloping wall section and the other end terminating at a second region which is at the lower level top wall section and removed from the lower end of the inclined sloping wall section, an elongated member fixed to the casing which is disposed over the top wall sections and the sloping wall section therebetween, the member being formed with a four-sided opening having a portion of its periphery horizontally disposed and forming a U at one level at the higher level top wall section and another portion of its periphery forming a side at a lower level at the sloping top wall section, a side formed by the closed end of the U and the side at the lower level being transverse to the length of the member and opposite one another, the one end of the handle projecting through and filling the opening and extending lengthwise of and beneath the member past the side of the opening formed by the closed end of the U the side at the lower level providing a support upon which the bottom of the one end of the handle rests, and means including the member for securing the one end of the handle to the top wall of the casing at the first region.

3,092,869
CARPET FASTENER WITH CONTOURING SURFACE
Homer C. Stump, 4428 Knoxville St., Lakewood, Calif.
Filed Oct. 3, 1961, Ser. No. 142,580
1 Claim. (Cl. 16—7)



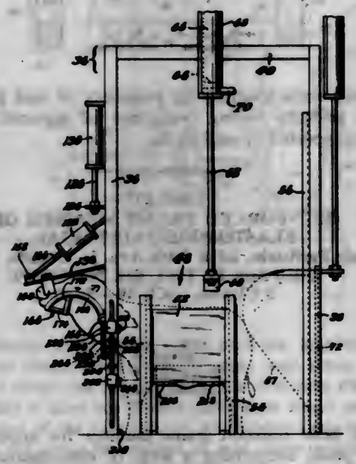
A carpet fastening device which enables the user thereof to dispense with the use of a customary baseboard and strip of molding comprising a unitary body having a horizontal portion to reside atop the floor and a vertical portion to rest against the coacting vertical surface of a wall, adjacent lengthwise edges of said members being connected by an intervening junctional web, the reverse side of the web being mitered to provide a clearance face, the obverse side being arcuately concave, the arcuity defining a decorative carpet-edge shaping and fastening cove, the top surface of said horizontal member being provided with an open-ended channel having undercut lengthwise marginal edges, an insertable carpet strip having upstanding carpet impaling prongs received and removably retained in said channel by said edges, said vertical member beginning with the terminal portion of said web decreasing gradually in thickness in an upward direction and terminating along its upper edge with an outstanding horizontal flange which in turn is provided with a depending lip, said vertical member being flexible and disposed at an obtuse angle with respect to said horizontal portion for its whole length in an unstressed condition, the flange and lip defining a relatively narrow downwardly opening channel for reception and anchorage of a marginal edge of the carpet.

3,092,870
HINGE
Austin R. Baer, Wake Forest, N.C.
(4557 Ponce de Leon Blvd., Coral Gables 46, Fla.)
Filed July 15, 1960, Ser. No. 43,188
8 Claims. (Cl. 16—128)



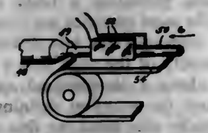
1. A hinge structure comprising two intermeshed geared hinge members and a clamp member maintaining said geared hinge members in mesh, each geared hinge member comprising a gear segment having an outwardly extending leg portion, each gear segment being formed with a pie-shaped cutout sector the apex of which coincides with the axis of rotation of said gear segment, said clamp member comprising a C-shaped element the inwardly turned ends of which contact the gear segment of each geared hinge member at the axis of rotation thereof.

3,092,871
APPARATUS FOR HOLDING CATTLE IN POSITION FOR HUMANE SLAUGHTERING
Milton Marshall, Oreland, Pa., Elwood E. Milbery, Collingswood, N.J., and Eugene W. Shultz, Philadelphia, Pa., assignors, by mesne assignments, to Humane Slaughtering Device Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Filed May 21, 1962, Ser. No. 196,379
8 Claims. (Cl. 17—1)



7. Apparatus for holding cattle and like animals to facilitate slaughtering thereof comprising means providing an enclosure for penning in an animal on all sides thereby to restrain the animal from movement fore and aft and to either side including means in a side of said enclosure operable to afford an opening through which the animal may be removed bodily from said enclosure after it is slaughtered, means extending horizontally from side to side of said enclosure and operable for engaging with the underbelly of the animal to force the animal, before it is slaughtered, to stand upright in said enclosure on all four feet with its head and neck extending out of said enclosure and to support the body of the animal, after it is slaughtered, to keep it from falling to the floor of the enclosure, and means operable for engaging the animal under the chin and raising and holding its head in a predetermined position to expose its neck for being cut.

3,092,872
METHOD OF PRODUCING ARTICLES SUCH AS SKINLESS FRANKFURTERS
Rex E. Moule, 11 Brentwood Drive, Holden, Mass.
Original application Nov. 21, 1956, Ser. No. 623,664, now Patent No. 2,933,758, dated Apr. 26, 1960. Divided and this application Nov. 24, 1959, Ser. No. 855,199
1 Claim. (Cl. 17—45)



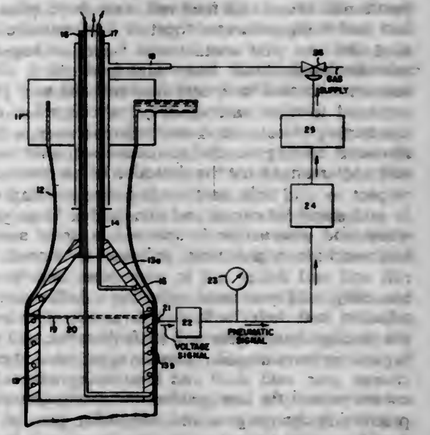
The method of making a solid product from a comminuted semi-fluid mesh of ingredients in the absence of any container or outer skin therefor comprising the steps of continuously molding the ingredients of the product and subjecting the molded food product to a high frequency electric current sufficient to cause the material to be heated to a setting temperature wherein the heating step and the molding step are separate.

3,092,873
SPINNERET
James A. Kay, Pearisburg, and Clarence E. Bishop, Narrows, Va., assignors to Celanese Corporation of America, New York, N.Y., a corporation of Delaware
Filed Oct. 17, 1958, Ser. No. 767,936
4 Claims. (Cl. 18—8)



1. A spinnerette having at least one jet opening with a periphery defined by a pair of substantially straight intersecting portions and a convex arcuate portion extending across the inside of the angle subtended by said straight portions.

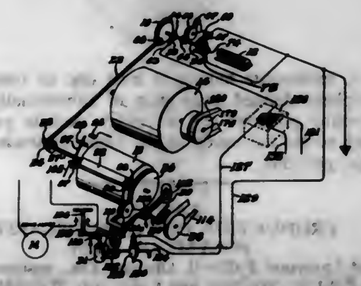
3,092,874
PRODUCTION OF THERMOPLASTIC POLYMERIC FILM
Ernest Lynwood Fallwell, Orange, Tex., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed July 17, 1961, Ser. No. 124,438
7 Claims. (Cl. 18—14)



4. In an apparatus comprising in combination means for extruding thermoplastic organic material in the form of a continuous tubing, said means including a die having an annular extrusion orifice, a mandrel of substantially circular cross-section positioned adjacent to said orifice and coaxial therewith, said mandrel comprising at least a first portion of gradually increasing diameter and a second portion of non-increasing diameter, means for advancing continuous tubing extruded from said orifice over and past said mandrel, valved means for supplying a gaseous medium within the tubing between said orifice and said mandrel at a pressure effective to increase the diameter of the tubing while in the formative state and to maintain said tubing just out of physical contact with said mandrel, and means for maintaining said mandrel at a predetermined reduced temperature to render said mandrel effective to cool tubing passing thereover; the improvement which comprises, in combination, tempera-

ture sensing signal-generating means located at a predetermined point closely adjacent the surface of said second portion of said mandrel, and operative to sense the temperature of said tubing passing over said mandrel at said point and to generate a signal directly proportionate to the temperature of the tubing at said point.

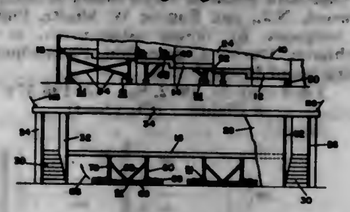
3,092,875
STOP MOTION MECHANISM
John W. McLean, Gastonia, N.C., assignor to Cocker Machine & Foundry Company, Gastonia, N.C., a corporation of North Carolina
Filed Nov. 3, 1959, Ser. No. 850,643
14 Claims. (Cl. 19—.23)



2. In a carding machine, a stop motion mechanism comprising a feed roll having an insulated shaft, a feed roll plate positioned beneath said feed roll, a contact stud positioned above said feed roll, said shaft, plate and contact stud being connected together in electrical circuit, said feed roll and said contact stud being arranged to close said electrical circuit when said feed roll is moved into contact with said stud, said feed roll and said plate being arranged to close said electrical circuit when a current-conducting object is in contact therebetween, a doffer roll, movable sensing means positioned adjacent said doffer roll and arranged for the detection of an obstruction with respect to said roll, said sensing means being connected in said electrical circuit and arranged to close said circuit when said obstruction is detected, a drive assembly for said machine, a gear train arranged to connect said feed roll and said doffer roll to each other and to said drive assembly, said gear train including a doffer gear disposed adjacent said doffer roll, said drive assembly including a production change gear and shaft therefor, said shaft having a drop lever disposed thereon adjacent said production change gear, said shaft and lever being adapted to vertical movement for engagement and disengagement of said production change gear and said doffer gear, an air cylinder disposed adjacent said drop lever, and means connected to said cylinder and to said electrical circuit for actuating said cylinder to drop said lever when said circuit is closed.

3,092,876
MOVABLE LIVE AUDIENCE AUDITORIUM
Sol Cornberg, 240 Central Park S., New York 19, N.Y.
Filed June 15, 1960, Ser. No. 36,427
7 Claims. (Cl. 20—1.12)

6. A movable live audience auditorium comprising first, second and third platforms, rows of chair means fixedly secured on said platforms, said chair means being spaced to form an aisle on said platforms, collapsible leg means on some of said platforms, the leg means on said third platform being longer than the leg means on said second platform, the leg means on said second platform being longer than the leg means on said first platform, means along edges of said platforms selectively releasably interlocking said edges of said platforms so as to prevent any relative movement between said platforms in a direction normal to the interlocking edges in a horizontal plane,



foldaway walls abutting the periphery of said platforms, and a grid-like ceiling comprised of separate abutting panels supported by said walls.

3,092,877
REINFORCED FRAME MEMBER OF ELASTOMERIC MATERIAL
Louis Perlstein, 2416 24th Ave. N., Seattle, Wash.
Filed Jan. 27, 1961, Ser. No. 85,391
3 Claims. (Cl. 20—56.4)

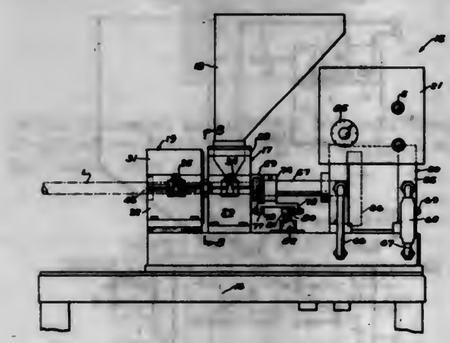


1. A bend resistant frame member for application to a flat panel comprising a strip of elastomeric material having a longitudinally extending panel-receiving groove therein; an inwardly extending flap forming one side of said panel-receiving groove, the outer edge of said flap being integrally connected with said strip and the inner side of said flap being spaced from an adjacent wall of said strip and the inner edge of said flap being spaced from the bottom of said panel-receiving groove; a longitudinally extending metal reinforcing member of L-shaped cross section embodied in and forming part of said strip, one flange of said reinforcing member being disposed under said flap and lying alongside of said panel-receiving groove and the other flange thereof resting on the bottom of said panel-receiving groove; a longitudinally extending spline-receiving groove in a side of said strip opposite to the side thereof with which said flap is connected; and a spline insertable in and removable from said spline-receiving groove.

3,092,878
METHOD AND APPARATUS FOR CONTINUOUSLY FORMING FOUNDRY MOLDS, CORES AND THE LIKE
Gerald A. Conger, Detroit, Mich., assignor to C & S Products Company, Inc., Detroit, Mich., a corporation of Michigan
Filed Aug. 24, 1960, Ser. No. 55,819
10 Claims. (Cl. 22—11)

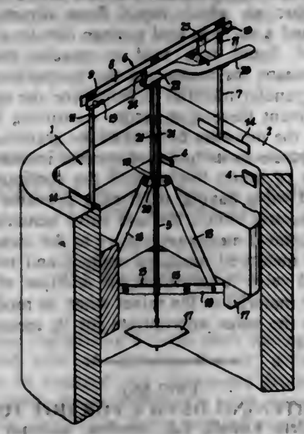
1. The method of forming foundry mold or core shapes which comprises, providing a body of coated foundry sand in which the sand particles are coated with a thermosetting binder, intermittently introducing a generally predetermined quantity of the sand into a die having a mandrel disposed along a longitudinal axis of the die and with the die and the mandrel defining a cross-sectional shape substantially the same as that of a shape to be formed therein, intermittently applying substantially rectilinear force to the sand in the die and thereby intermittently advancing the sand through the die, by means of said die confining the intermittently moving sand in directions transverse to its direction of movement and thereby causing the sand to pack in the die as a result of resistance to relative movement of the sand and die and

assume substantially the cross dimensions of said die, then, without otherwise treating the exterior surface of the packed sand, continuing to apply said force to intermittently advance the packed sand in said die through a zone at least about four times as long as said cross dimension of said die, subjecting the packed sand in said zone to heat, said heat being sufficient to cure said thermo-



setting binder to bond the sand particles together in a permanent shape, continuing to apply said force to advance the shape out of said die while confining the mandrel so that it does not project more than about one inch downstream of the heated zone, and without substantially changing the cross dimensions of said shape severing the shape to predetermined lengths after it has emerged from the die.

3,092,879
METAL CASTING MOULDS
Ferdinand Bauer, Tamworth, England, assignor to Foseco International Limited, Birmingham, England, a company of Great Britain
Filed Mar. 7, 1961, Ser. No. 94,076
Claims priority, application Great Britain Mar. 11, 1960
6 Claims. (Cl. 22—31)



1. A jig for supporting the sections of a sectional liner in a mould mouth prior to the wedging of the sections in the latter, such jig comprising: a central shaft member; a sleeve member mounted on said shaft member and dimensioned so that free relative longitudinal sliding movement between the two members can occur; a cross beam extending transversely of the shaft and sleeve members and fixedly secured intermediate its ends to one only of these members; legs at each of the cross beam extending to one side thereof parallel to the said shaft member and having a length less than that of the latter; a plurality of liner supports spaced outwardly from, and arranged at spaced positions around, the said shaft member to that side of the cross beam to which the said legs extend; and a linkage coupling each support to the said shaft member and to the said sleeve member and acting, on relative movement occurring between these two members by movement relatively to the said cross beam in a direction to that side of the cross beam to which the said legs extend to that one of said shaft and sleeve members not connected thereto, to move the supports from a liner supporting position in which said liner supports are widely spaced from the shaft member to a collapsed position in which the supports are retracted towards the shaft member.

3,092,880
DIE CASTING MACHINE PLUNGER TIP
Glen R. Morton, 7025 Sarpy St., Omaha, Nebr.
Filed Aug. 25, 1959, Ser. No. 836,004
1 Claim. (Cl. 22—68)



A plunger for a die casting machine having a shot cylinder in the bore of which the plunger is fitted and reciprocates to displace molten die casting metal from said shot cylinder, comprising

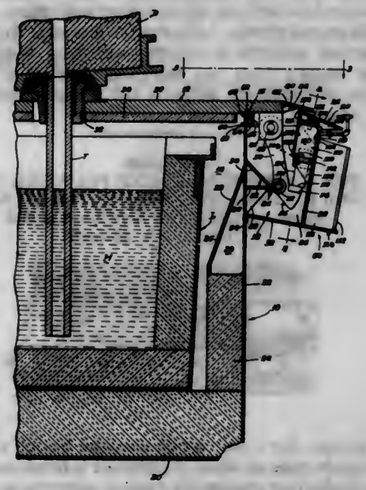
(A) a cylindrical metal body arranged coaxially in said shot cylinder with its periphery slidingly fitting said bore and having a coaxial concavity extending inwardly from one end thereof, said concavity having
  (*a*) a small internal diameter cylindrical inner end
  (*b*) a larger internal diameter outer end
  (*c*) and said cylindrical body also having a protrusion projecting radially inwardly from the outer end of said larger internal diameter cylindrical outer end of said concavity

(B) a ring of soft ductile sealing metal having
  (*a*) a bore equal in size to and forming a continuation of said smaller internal diameter inner end of said concavity,
  (*b*) a large external diameter cylindrical end closely fitting said bore of said shot cylinder,
  (*c*) a smaller external diameter end completely filling said large internal diameter outer end of said concavity, and
  (*d*) completely embedding said protrusion whereby said protrusion retains said ring of soft ductile sealing metal against axial withdrawal from said concavity,

(C) and a plug having
  (*a*) a cylindrical sleeve fitting within said bore of said ring of soft ductile sealing metal and also slidingly fitting said small internal diameter cylindrical inner end of said concavity,
  (*b*) and a head fixed to and closing the outer end of said sleeve and engaging the outer end face of said ring of soft ductile sealing metal,

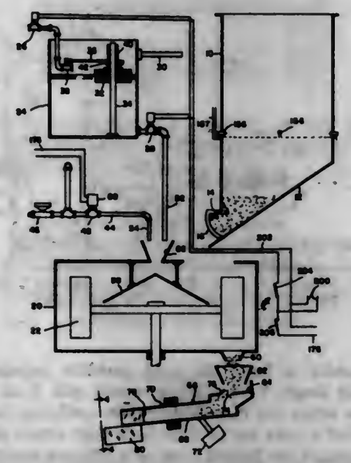
(D) whereby pressure of said molten die casting metal axially against the exterior of said head can displace said plug axially inwardly into said concavity and expand said ring of soft ductile sealing metal
  (*a*) both axially into engagement with said bore of said shot cylinder
  (*b*) and also axially into engagement with said larger internal diameter outer end of said concavity behind said protrusion.

3,092,881
CLAMPING ARRANGEMENT FOR PRESSURE CASTING APPARATUS
George R. Vorel, Sr., Downers Grove, Ill., assignor to Amsted Industries Incorporated, Chicago, Ill., a corporation of New Jersey
Filed July 25, 1960, Ser. No. 45,106
2 Claims. (Cl. 22—69)



1. In a pressure casting arrangement, the combination of: a pressure tank open at the top, a detachable cover for closing the open top of said tank, a plurality of downwardly depending clamping arms secured to said cover and spaced generally circumferentially thereabout, each of said clamping arms comprising an elongated body portion, a generally upwardly directed abutment surface formed on said body portion near the lower end thereof, roller means pivotally secured to said body portion near said lower end, a plurality of downwardly directed mounting brackets continuously secured to said cover, a pivot member pivotally securing each of said clamping arms near their respective upper ends to said mounting brackets, a plurality of laterally extending support assemblies secured to said tank in a manner radiating generally outwardly therefrom, a pressure responsive piston and cylinder assembly received and retained by each of said support assemblies, a source of pressure fluid connected to each of said pressure responsive piston and cylinder assemblies, said pressure responsive assemblies being received by said support assemblies in a manner enabling downward movement of said piston in a direction slightly inclined from the vertical and toward said tank whenever actuated by said source of pressure fluid, and a plurality of guide structures formed on said tank externally thereof and arranged so as to be generally in juxtaposition with said support assemblies, each of said guide structures comprising an inclined guide surface extending both downwardly and away from said tank, a vertically extending and downwardly directed abutment surface formed at the lowermost end of said guide surface, said guide surfaces and roller means being effective to continuously position said lower ends of said clamping arms as said cover is being lowered onto the tank in order to place said upwardly directed abutment surface in the normal path of travel of said piston, and said vertically extending abutment surfaces and said roller means being effective to limit lateral movement of said lower ends of said clamping arms when said piston is urged against said upwardly directed abutment surface upon actuation by said source of fluid pressure.

3,092,882
APPARATUS FOR MEASURING AND CONTROLLING MOISTURE CONTENT OF MATERIALS
Harry W. Dietert, Detroit, Mich., assignor to Harry W. Dietert Co., Detroit, Mich., a corporation of Michigan
Filed Feb. 25, 1952, Ser. No. 273,270
28 Claims. (Cl. 22—89)



28. Apparatus for producing moist granular material the moisture content of which is variable directly in accordance with its temperature, comprising a mixer in the form of a receptacle having a top opening therein for the admission of granular material and having rotary mixing means therein to work the granular material and to mix it thoroughly with liquid added to the granular material in the mixer, means for introducing into said receptacle through the top opening thereof batches of granular material of different moisture content and temperature, liquid supply means for said mixer comprising a passage through which liquid flows directly to said receptacle, and a valve in said passage directly controlling the flow of liquid into said receptacle, temperature measuring means for measuring the temperature of said batches of granular material to determine the appropriate moisture content thereof, moisture measuring means for determining the moisture content of the granular material in said receptacle as its moisture content increases due to the addition of liquid thereto and the continued mixing thereof, said valve having electrically operable actuating means, an electric circuit for said valve actuating means, and circuit control means responsive to the measurements of both the measured moisture content and temperature to close said valve to terminate the addition of liquid to the granular material in the mixer when its moisture content reaches the value appropriate for its measured temperature.

3,092,883
TIGHTENING DEVICE FOR HOT TOPS
Daniel Fredrik Edsell, Ed, Sweden, assignor to Sandvikens Jernverks Aktiebolag, Sandviken, Sweden, a corporation of Sweden
Filed May 21, 1962, Ser. No. 196,085
Claims priority, application Sweden May 25, 1961
13 Claims. (Cl. 22—147)

1. A hot top for casting molds comprising heat insulating slabs positioned adjacent to the inner surfaces of the wall of the mold adjacent the upper end thereof, said slabs having inwardly and downwardly sloping inner surfaces at least adjacent to the lower edges thereof, and a tightening member positioned horizontally between said slabs and resting with its edges in contact with said sloping surfaces thereby urging said slabs against the inner surfaces of the mold when the mold is empty, said member being floatable upon the molten metal and having



smaller dimensions than the inner horizontal dimensions of said hot top at all levels above that at which it engages said sloping inner surfaces.

3,092,884
SHEET METAL FASTENER
Edwin F. Elms, Roseville, Mich., assignor to Robert L. Brown, Ferndale, Mich.
Filed Apr. 23, 1959, Ser. No. 808,567
11 Claims. (Cl. 24—73)



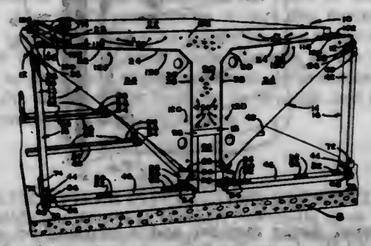
11. A sheet metal fastener comprising a head having a pair of integral tabs projecting therefrom, said tabs being generally trough-shaped comprising a generally flat back portion with a pair of generally flat legs diverging therefrom, said tabs being disposed adjacent one another in opposed relation to form a stud projecting from said head, said tabs contacting one another throughout a substantial portion of their length to resist radial inward collapse of the stud, the opposed longitudinal free edges of the trough-shaped tabs projecting substantially uniformly outwardly from the back portion of each tab so as to define the maximum diameter of the stud, said tabs having a generally smooth surface and the stud being slightly tapered at its free end.

3,092,885
SAFETY CLASP
Guarino D. Guanche, 953 Woodycrest Ave., Bronx, N.Y.
Filed Aug. 18, 1961, Ser. No. 132,480
9 Claims. (Cl. 24—230)



1. A clasp comprising a catch plate having a rim portion formed with an opening therein, a latch means adapted to be engaged and disengaged from said catch plate, said latch means including a latch plate adapted to underlie said catch plate in the engaged position, a spring latch, means pivotally connecting said spring latch to said latch plate, said spring latch being insertable into the opening of said rim with said latch plate underlying said catch plate, said spring latch and latch plate each having opposed finger press end portions, and spring means normally urging said latch plate and spring latch hinged thereto toward one another so as to embrace said catch plate therebetween in the engaged position, said finger press end portions of said spring latch and latch plate extending beyond said catch plate in said engaged position, and cooperating means on said catch plate and latch means for positively locking said latch means to said catch plate when engaged and whereby disengagement of said latch means and catch plate is effected by pressing said opposed finger press end portions together.

3,092,886
APPARATUS FOR MOLDING CONCRETE T-BEAMS
Edgar G. M. Dykeman, Riverside, and John N. Kelley, Arlington, Calif., assignors to FMC Corporation, a corporation of Delaware
Filed May 11, 1959, Ser. No. 824,446
6 Claims. (Cl. 25—121)

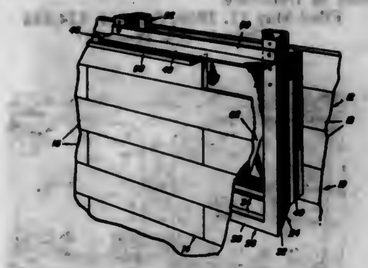


1. For use in molding apparatus for a concrete beam having a horizontal flat slab section and a vertical web section, an article of manufacture comprising a pivotally mounted molding member having a first forming surface for forming a side of said web section and a second forming surface extending laterally from said first forming surface for forming an adjacent underside of said slab section, means on said second forming surface to receive a forming member for the lateral side of said slab section, a rigid strut pivotally connected at one of its ends to said molding member beneath said slab forming surface, a link having a pivotal connection at one of its ends with the other end of said strut to form a movable toggle joint. support means, means securing the other end of said link to said support means so that said strut and said link are movable into and out of coaxial alignment, means pivotally mounting the molding member on said support means for movement of said first forming surface, means mounted on said support means in spaced relation to said other end of said link for limiting the movement of said toggle joint in one direction at a position whereby said strut and said link are out of coaxial alignment to cause the weight of concrete on said slab forming surface to lock said strut and link in place, and means for moving said toggle joint in a second direction to cause said molding member to pivot and be released from a concrete beam formed thereon.

3,092,887
BASEMENT WINDOW BUCK
Erwin Donald Switzer, 907 1st Ave. NW., Minot, N. Dak.
Filed July 24, 1961, Ser. No. 126,033
2 Claims. (Cl. 25—131)

1. In combination with a wall form including spaced opposed inner and outer panels having substantially horizontal upper edges, a window buck for forming a window opening in a cast concrete wall and for positioning a window assembly in said opening for securement therein upon a casting of the concrete in said form, said window buck comprising a one-piece upwardly opening U-shaped frame position between said inner and outer panels and including a pair of generally parallel legs interconnected by means of a bight portion at their lower ends, said legs and said bight portion being substantially U-shaped in cross section each including substantially parallel inner and outer flanges interconnected by

means of a web portion extending between the outer side edges of corresponding ones of said flanges, the opposite flanges of said legs and bight portion on each side of the medial plane of said frame being coplanar and defining substantially parallel opposite side faces of said frame, one of said side faces being orientated against one of said panels, means adjustably mounting said one side face on said one panel, said means consisting of a



horizontal flange member and a plurality of vertically aligned holes in the leg flanges in said one side face, said flange member being releasably secured to a selected pair of said holes, one in each leg flange, said flange member projecting laterally outwardly from said one side face and being supported on the upper edge of said one panel, and support means for releasably securing a window assembly to the second side face of said frame.

3,092,888

STABILIZATION OF THE DIMENSIONS OF FELT MATERIALS

Louis R. Mizell, Bethesda, Md., and Julian Berch, Washington, D.C., assignors to Western Felt Works, Chicago, Ill.

No Drawing. Filed Jan. 12, 1959, Ser. No. 786,038
8 Claims. (Cl. 26—18.5)

1. A method of stabilizing the thickness of felt material such that said material will not increase appreciably in thickness when wetted, exposed to a high humidity, or when cut into small pieces, which consists in wetting said material so that it contains more than 20% moisture by weight; over-compressing the said material while wet so as to reduce its thickness by an amount equal to from about 20% to about 85% of the thickness of the material in its wet and relaxed condition to a reduced thickness which is substantially less than the desired finished thickness of said material; heating said material to a temperature between 150 and 350 degrees F., said over-compression and said heating being performed simultaneously; and after a predetermined length of time releasing the compression and permitting said material to relax to its desired finished thickness.

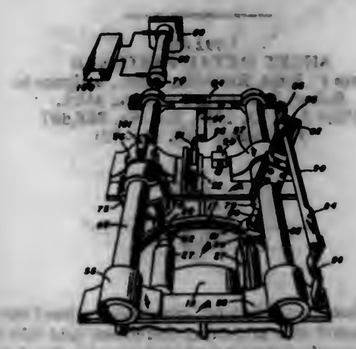
3,092,889

BOBBIN STRIPPER

Louie W. Hayes, Sr., Pensacola, Fla., assignor, by mesne assignments, to Monsanto Chemical Company, a corporation of Delaware

Filed Mar. 23, 1960, Ser. No. 17,162
7 Claims. (Cl. 28—19)

3. An apparatus for removing waste yarn from a bobbin, comprising a base, a pair of circular plates mounted on the base in spaced relationship, a shaft rotatably mounted on the circular plates and extending through the centers of said plates, a reel secured to the shaft between the circular plates and having therein a plurality of notches for receiving bobbins having waste yarn thereon, an indexing wheel secured to the shaft and having thereon a plurality of spaced projections, a lever pivotally mounted on the shaft adjacent to the indexing wheel, a pawl attached to the lever for engaging said spaced projections to move the indexing wheel and the reel, a hydraulic cylinder connected to the lever and the base for actuating said lever, a pair of rods slidably mounted above the circular plates, a bracket interconnecting the rods in such a manner that said rods are movable together, a fluid cylinder connected between the base and one of the rods for moving said rods, a blade secured to one of the rods for movement along a first predetermined path, said blade being adapted to make a rough cut through the waste yarn longitudinally along the bobbin, a spring-loaded shaft slidably mounted on the other rod for substantially vertical movement, a circular cutter carried by the lower



end of the shaft and having a flat lower surface for engaging the bobbin in such a manner that said cutter severs the yarn missed by the blade, a rail mounted above said other rod and having along the upper edge thereof a pair of synclinal surfaces intersected by a straight surface, a yoke secured to the upper end of said cutter carrying shaft, a roller attached to the yoke and adapted to roll along said upper edge of the rail, said synclinal surfaces and said straight surfaces being so positioned on the rail that the circular cutter is elevated from the bobbin at the ends thereof, and a pair of chutes attached to the base for feeding bobbins to the reel and receiving bobbins therefrom.

3,092,890

TEXTURED MULTILOBAL FILAMENT YARN

James E. Bromley and William H. Hills, Pensacola, Fla., assignors, by mesne assignments, to Monsanto Chemical Company, a corporation of Delaware

Filed Nov. 21, 1960, Ser. No. 70,807
13 Claims. (Cl. 28—81)

1. A textured filament yarn prepared from a synthetic thermoplastic polymer and having a multilobal cross section along the length of the filaments thereof characterized by having crimps assuming a curve of sines, the apices of said crimps of the individual filaments being located in a haphazard relation with respect to each other thereby to impart a fluffy appearance to the yarn, and further characterized by lobes of the filaments having been randomly bent along the lengths thereof from a normally substantially symmetrical arrangement to a non-symmetrical curvilinear arrangement, the angle formed by a line drawn between the tips of the bent lobes in the normally unbent position and the center of a circumscribable circle of said cross section intersecting a line drawn between the tips of the bent lobes in the bent position and the center of said circle being in the range of 0–45°.

3,092,891

PRODUCTION OF MONOFILAMENTS OBTAINED FROM HIGHLY VISCOUS ALPHA-OLEFIN POLYMERS

Enrico Beratti, Milan, Italy, assignor to Montecatini Societa Generale per l'Industria Mineraria e Chimica, Milan, Italy

Filed July 27, 1959, Ser. No. 829,519
Claims priority, application Italy Aug. 1, 1958
8 Claims. (Cl. 28—82)

1. A process for improving the properties of melt-extruded monofilaments containing polypropylene made up prevailingly of isotactic crystallizable macromolecules non-extractable with boiling n-heptane, which comprises the steps of (1) quenching the polypropylene-containing monofilament immediately after extrusion thereof, (2) subjecting the quenched monofilament to a first stretching stage at room temperature with a stretching ratio of from 3:1 to 5:1, (3) subjecting the stretched monofilament to a second stretching stage at about 100° C. with a stretching ratio of from 1.5 to 1.9, and (4) subjecting the twice stretched monofilament to a third stretching stage at room temperature with a stretching ratio of from 1.1:1 to 1.2:1.

3,092,892

COMPOSITE FILAMENT

James Francis Ryan, Jr., and Robert Lauren Tichenor, Waynesboro, Va., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed Apr. 10, 1961, Ser. No. 102,071
6 Claims. (Cl. 28—82)



1. Composite filaments comprising at least two dry spun linear fiber forming synthetic polymers arranged in eccentric relationship, characterized in that the filaments have 10 to 18 helical crimps per inch of extended length and an equilibrium crimp reversibility of 25 to 50%.

3,092,893

FABRICATION OF SEMICONDUCTOR DEVICES

Boyd Cornelison, Jay W. Thornhill, and Elmer A. Wolff, Jr., Dallas, Tex., assignors to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware

Filed Feb. 13, 1958, Ser. No. 715,040
4 Claims. (Cl. 29—25.3)



1. A method of making a semiconductor device assembly that comprises the steps of mounting a semiconductor device composed of at least two regions of opposite conductivity on an electrically conductive frame, with one region in contact with one part of said frame and a wire electrically connecting the other region with another part of said frame, mounting the frame on a support, and severing the frame to subdivide it into electrically isolated parts.

3,092,894

INDUSTRIAL PROCESS FOR PREPARING PLANAR BLANKS FOR THE MANUFACTURE OF HOLLOW TURBINE BLADES

Jean-Baptiste Paul Van, Saumois, France, assignor to Societe Nationale d'Etude et de Construction de Moteurs d'Aviation, Paris, France, a French company

No Drawing. Filed July 19, 1957, Ser. No. 672,870
Claims priority, application France July 31, 1956
5 Claims. (Cl. 29—531)

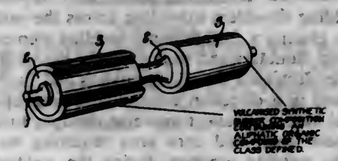
1. A process for obtaining uniform properties on a large area of a ductile metal sheet, the elastic limit of which can be increased by cold-drawing producing a permanent deformation, comprising at least one cycle of two successive operations, namely, the steps of tensioning said sheet while maintaining it very flat during the drawing operation, giving the tensile stress a value in the region of yield of the stress-strain diagram of the metal in order to produce a slight permanent deformation, and making the sheet strictly uniform in breadth and thickness by removing material therefrom.

3,092,895

TEXTILE FIBRE CONTACTING ELEMENTS

Mark Balkin and Denys G. Turner, Newcastle upon Tyne, England, assignors to George Angus & Company Limited, Newcastle upon Tyne, England

Filed Sept. 2, 1959, Ser. No. 839,043
2 Claims. (Cl. 29—132)



1. A textile fibre contacting element for use in the mechanical processing of textile fibres, said element being hollow and having an endless, seamless surface, said surface composed of an oil resistant synthetic rubber composition selected from the group consisting of butadiene-acrylonitrile copolymers and polychloroprene and containing as an ingredient at least one compound having a boiling point of not less than 180° C. and selected from the group consisting of the dihydroxy and trihydroxy alcohols containing up to 6 carbon atoms and the ammonia or amine condensation products of said alcohols, the quantity of said one compound being 2–50 parts by weight per 100 parts by weight of said synthetic rubber composition.

3,092,896

METHOD OF MAKING WAVEGUIDE

Harold E. Stinehelfer, Livingston, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Oct. 7, 1958, Ser. No. 765,838
2 Claims. (Cl. 29—155.5)



1. The method of making a corrugated waveguide having internal corrugations of rectangular cross section that comprises applying to a smooth surfaced mandrel a length of corrugated metal tubing having convexly curved internal corrugations, axially compressing the tubing until the surfaces of the internal corrugations are forced

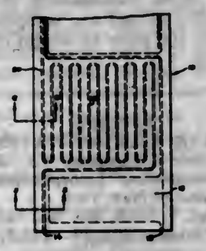
against the mandrel and become flattened in the axial direction to snugly fit the mandrel and then removing the mandrel.

3,092,897
STATOR CONFIGURATION FOR WELDING PURPOSES
Bengt E. Agner, 9100 Avers Ave., Evergreen Park, Ill.
Filed Mar. 13, 1959, Ser. No. 799,160
4 Claims. (Cl. 29—155.5)



1. In the method of producing a metal unit having a centrally disposed cylindrical core area by superimposing a plurality of substantially identical laminating plates and electrically welding them by means of passing a current through welding rods held under pressure against the peripheries of the assembled laminating plates, the improvement which comprises providing the peripheral edge of the assembled laminating plates with oppositely disposed welding shoulders extending across the said peripheral edge, placing a fusible metal welding element across the welding shoulders and then applying the welding pressure of the electrodes on said shoulders and fusible metal element and in a direction substantially tangential to the cylindrical core area and transverse the longitudinal axis of said core area, said core area requiring no support against the welding pressure during the welding operation.

3,092,898
METHOD FOR INFLATING HOLLOW PASSAGEWAY PANELS
Boyd D. Cave, Tlalnepantla, Mexico, Mexico, and Dietrich Reimann, Barranquilla, Colombia, assignors to Reynolds Metals Company, Richmond, Va., a corporation of Delaware
Filed Sept. 11, 1958, Ser. No. 760,318
4 Claims. (Cl. 29—157.3)



1. In a method of forming an inflated article from a generally flat metallic sheet having portions bonded together and serving as a boundary for inflatable unbonded passageway portions interiorly of said sheet, said unbonded portions having a non-uniform configuration with respect to the overall face of said sheet and forming a region of said sheet requiring a greater inflation-resisting pressure to be applied to the corresponding outer surfaces of said sheet than in other regions thereof, the steps comprising: providing a press having two platens with at least one platen movable to closed position by coaction with a cylinder and piston, the platens of said press being normally subjected to deflecting stresses in at least one central region of said platen surfaces corresponding to a region of said sheet requiring said greater inflation-resisting pressure; positioning said sheet between said platens; supplying a first pressure fluid to said cylinder and bringing said platens into inflation-resisting contact with the respective outer sides of said sheet; continuing the supply of said first pressure fluid until said platens are prestressed to a greater extent in said one central region thereof than in the remaining regions of said platen surfaces; thereafter supplying an inflating second pressure fluid interiorly of said passageway portions of said confined sheet, while maintaining the supply of said first fluid to said cylinder, said second pressure fluid being under a higher pressure than said first pressure fluid.

3,092,899
MULTILAYERED COMPOSITE METAL ARTICLE
Robert L. Dega, Utica, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
No Drawing. Filed Mar. 31, 1958, Ser. No. 724,790
3 Claims. (Cl. 29—182.3)

1. A multilayered composite article of manufacture comprising a steel base member having a layer of a silver alloy brazing material metallurgically bonded thereto, a thin impervious electrodeposited coating of copper metallurgically bonded to said silver alloy layer, and metallurgically bonded to said impervious copper layer, a briquetted sintered powdered metal mixture consisting essentially of a copper base powder and about 2% to 6% boron nitride by weight of the copper base powder, said briquetted mixture having a lesser concentration of boron nitride immediately adjacent said copper layer.

3,092,900
WORK-SUPPORTING AND GUIDING DEVICE
John E. Smith, 103 3rd St., and Patsy A. Scicchitano, 337 Main St., both of Bentleyville, Pa.
Filed June 1, 1960, Ser. No. 33,333
3 Claims. (Cl. 29—200)



2. An integral work-supporting and guiding device which comprises a nail having a head, a point and attached thereto a first leg portion at an angle from the side of said nail within the range of from about 30° to about 85°, a second leg portion adapted to position and assemble a large flat sheet-like structure and extending from said first leg portion at an angle of approximately 90° in the direction of the point of said nail, said first and second leg portion being approximately the same length.

3,092,901
PROCESS FOR ENCASING AN OBJECT
Thomas D. Sharples, Plymouth Meeting, Pa., assignor to The Sharples Corporation, a corporation of Delaware
Filed Jan. 7, 1958, Ser. No. 707,640
18 Claims. (Cl. 29—520)

1. A process for encasing the outer peripheral surface of an object which comprises placing said object in a tube having its inner periphery of a cross-sectional geometrical shape generally corresponding to the cross-sectional geometrical shape of said object, said tube being of a ductile substance, thereafter elongating said tube by longitudinal stretching through engagement of said tube on opposite sides of said object to decrease its diameter with consequent peripheral shrinkage to cause



said tube to grip the outer surface of said object, said longitudinal stretching being such as to cause said tube to neck on opposite sides of said object, and thereafter removing from said object undesired excess portions of said tube.

3,092,902
SEAL INSTALLATION TOOL
William J. Fowler, Chicago, Ill., assignor to Chicago Rawhide Manufacturing Company, Chicago, Ill., a corporation of Illinois
Filed Oct. 15, 1959, Ser. No. 846,576
1 Claim. (Cl. 29—275)



A tool for use in the installation of annular seals in the bores of housings, said tool comprising a flat cylindrical base plate, a handle projecting normally from the center of one face of said plate and having a striking surface at its outer end, a series of concentric circular indicia on the other face of said plate whereby to facilitate centered positioning of annular seals of various diameters on said other face of said plate, means defining three elongated radial slots extending through said plate, said slots being spaced equidistantly from one another, a radially adjustable elongated member slidable in each of said slots and having a co-linear jaw end portion projecting from said other face of said plate and a co-linear threaded opposite end portion projecting from said one face of said plate, the outermost surfaces of said jaw end portions of said radially adjustable members being alignable with said concentric circular indicia and adapted for abutting engagement with circumferentially spaced points on the inner diameter of an annular seal disposed flush against said other face of said plate in centered relationship thereon, and releasable nut means on said opposite end portions of said radially adjustable members for clamping same to said plate with said jaw end portions radially adjusted into engagement with a seal, whereby to releasably retain the seal on said other face of said base plate for axial insertion into the bore of a housing.

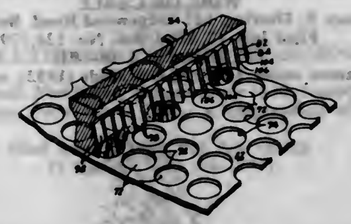
3,092,903
CARTON CUTTER
Ralph O. Bockhold, 7904 10th Ave., Inglewood, Calif.
Filed July 27, 1962, Ser. No. 212,787
12 Claims. (Cl. 30—2)

1. A carton cutter comprising:
a pair of plates adapted to receive a double-edged cutter blade therebetween, one of said plates being supported on the other for movement relative thereto and positionable into an extended position with one of its ends extending outwardly of the other of said plates and into a retracted position with said one plate aligned with the other;
means defining a cutout on said extendible portion of said one plate adjacent to its outwardly extendible end;
means removably supporting the double-edged blade between said plates and for movement with said one of said plates;



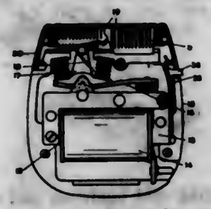
means indexing said blade on said one movable plate so that one of its edges is exposed by said cutout; and
roller means on said extendible end of said one plate and extending transversely therefrom and laterally outwardly beyond the blade edge of said one plate, said roller means being extendible below the wall of the carton so as to lift the wall into angular relationship to the exposed cutting edge of the blade for cutting the wall while said cutter is moved relatively to the carton.

3,092,904
MOVABLE CUTTER FOR A DRY SHAVER HAVING SAW TOOTH DESIGN CUTTING EDGE
John Bruecker, 1100 N. Verdugo Road, Glendale, Calif.
Filed May 9, 1960, Ser. No. 27,688
2 Claims. (Cl. 30—43)



1. A thin plate-like cutter adapted for use in connection with a shear plate having a series of circular perforations therein, said cutter having an end face designed for sliding contact with said shear plate and adapted to traverse said perforations, the leading side of said cutter being formed with a series of elongated parallel troughs and intervening crests which intersect said end face of the cutter and, in combination therewith, define a sharp leading cutting edge of zig-zag configuration, the sides of said troughs and crests being planar, the sides of each trough intersecting each other to define a sharp trough bottom and the sides of each crest intersecting each other to define a sharp crest edge whereby said leading cutting edge at the intersection of the troughs and crests with the end face of the cutter is of sharp saw-tooth design, the leading side of said cutter being undercut and inclined at an obtuse angle to the direction of motion of the cutter whereby said planar sides approach the inside surface of the shear plate at an obtuse angle, the leading side of said cutter being provided with an inclined ledge immediately below said troughs and crests, the combined width of two adjacent troughs being less than the diameter of the shear plate perforations and the combined width of three consecutive troughs being greater than the diameter of the shear plate perforations.

3,092,905
DRY SHAVER WITH FLEXIBLE SHEAR PLATE AND MEANS SUPPORTING THE SHEAR PLATE
Ian Gair Duncan, London, England, assignor to Ever-Ready Razor Products Limited
Filed Apr. 3, 1961, Ser. No. 100,091
2 Claims. (Cl. 30—43)



1. In a dry shaver comprising a casing, in combination; a flexible shear plate attached to said casing and held in arched condition thereon to have a concave inner surface and curved end edges; two spaced end members on said casing each positioned adjacent one of said curved end edges but spaced therefrom so that a gap is left between the shear plate and the said end member; two support members of resiliently flexible material; and means securing said members to said casing with each said member having supporting engagement with the inner concave surface of said shear plate adjacent one curved end edge thereof, and also engaging the end member adjacent said one edge, thereby bridging one of said gaps.

3,092,906
TOOL FOR STRIPPING INSULATION FROM WIRE OR CABLE
Lawrence E. Deering, 622 Ridgewood Road, Bel Air, Md.
Filed July 17, 1961, Ser. No. 124,739
14 Claims. (Cl. 30—91)
(Granted under Title 35, U.S. Code (1952), sec. 266)



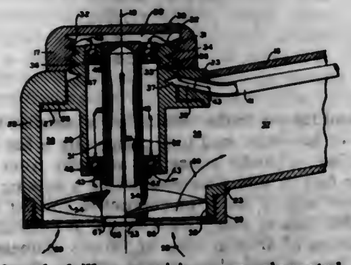
1. A tool having a body adapted to be provided with detachable cutting means for the successive operations of longitudinally slitting and for cross cutting the insulation from a length of insulation-covered wire or cable, said body having a cutter blade holding portion and a wire or cable receiving trough containing portion extending therefrom in diverging relationship thereto to provide a wedge-like crotch portion therebetween, said blade holding portion having a pocket formed therein opening toward the trough-containing portion to receive and removably support a cutting blade, means for holding the blade rigidly in position, and said trough containing portion having a longitudinally extending slot therethrough opposite and in alignment with the pocket opening, whereby when a cutter blade is disposed in said pocket a portion of a cutting edge thereof extends into said crotch portion while a corner of said cutting edge projects through the longitudinally extending slot in said trough containing portion and into the trough to provide, respectively, means for cross cutting the insulation and for slitting the same longitudinally.

3,092,907
INTRAORAL TRACTION APPARATUS
Harry A. Traiger, 3132 Henry Hudson Parkway E., New York 63, N.Y.
Filed Feb. 12, 1960, Ser. No. 8,439
19 Claims. (Cl. 32—14)



1. An intraoral total traction device comprising, in combination, a retention body having means of attachment to a series grouping of teeth, a posterior projectory carried upon at least one side of said retention body, and traction means carried by at least one of said retention body and posterior projectory respectively for exerting a corrective positioning pressure upon selective malpositioned teeth.

3,092,908
ASPIRATING DENTAL DRILL
Lloyd P. Flatland, 462 Gonzalez Drive, San Francisco, Calif.
Filed July 20, 1959, Ser. No. 828,175
8 Claims. (Cl. 32—27)



1. A dental drill comprising: an elongated hollow sheath adapted to be connected at one end with a vacuum hose, said sheath having at the other end a circular opening and adjacent said opening a hollow cylindrical portion defined by inwardly extending cylindrical interior walls; a hollow elongated knee having at one end right circular cylindrical walls adapted to fit snugly through said circular opening at said other end of said sheath and to engage in face to face relation with said cylindrical interior walls of said sheath; a collar slidably mounted on said knee and adapted to move selectively between a first position wherein an aperture in said knee is fully covered by said collar and a second position wherein said aperture isf ully exposed; a hollow drilling head mounted on the other end of said knee; means on said drilling head for directing the movement of air induced by a vacuum in said hose from the atmosphere outside said drilling head to a focation within said drilling head; and a drill-holding chuck rotatably mounted within said drilling head, said chuck including air-flow responsive means for rotating said chuck, said air-flow-responsive means being located within the path of air movement determined by said air-directing means.

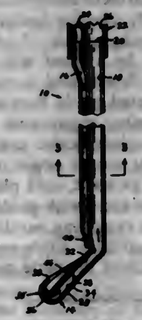
3,092,909
METHOD FOR RELEASABLY MOUNTING DENTAL MODELS IN PLASTER OF PARIS ON DENTAL ARTICULATORS
Roland M. Miller, P.O. 1737 S. Bend Drive, Rocky River, Ohio
Filed Feb. 14, 1961, Ser. No. 89,231
1 Claim. (Cl. 32—32)

The method of forming a plaster-of-Paris dental articulator mount on a hardened dental cast for releasable engagement therebetween, comprising the steps of grinding the base of the cast flat, grinding a plurality of half-round locating grooves in the base face, grinding opposed flat surfaces on each side of the cast, drilling a dimple in each side face proximate the base, said dimples being aligned with each other, mounting a C clamp, having adjustable



clamping points, on the cast base, cross-wise thereof between the dimples, with the clamp points releasably seated in the dimples, coating the base with a parting lubricant and then pouring a plaster-of-Paris mount over the cast base and clamp to embed the clamp in the plaster mount, leaving only its jaw points exposed.

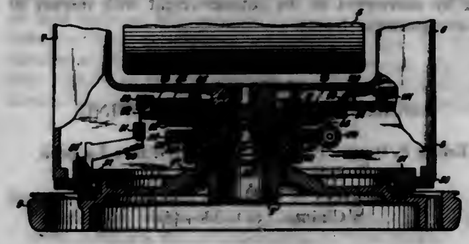
3,092,910
END INSTRUMENT FOR DENTAL EVACUATOR
Joe F. Warriner, 1903 Dorchester Drive, Oklahoma City 20, Okla.
Filed Mar. 2, 1961, Ser. No. 92,808
5 Claims. (Cl. 32—69)



1. An end instrument for a dental evacuator, comprising: a handle having fluid inlet and outlet passageways; an end member forming a continuation of said handle and arranged at an angle with respect to the axis of said handle, said end member having an upturned lip portion adjacent its forward end, said end member having an upper portion forming a support and defining a fluid receiving compartment communicating with the fluid outlet in said handle, said support having a substantially semi-circular free forward edge portion terminating in spaced relation with respect to said upturned lip portion; and an image reflecting member secured to the outer surface of said support.

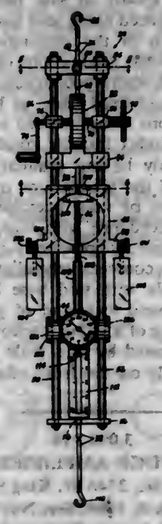
3,092,911
TARGET TRACKING INSTRUMENT
Rudolf Letzgesell, Berlin-Mariendorf, Germany, assignor to Continental Elektroindustrie A.G., Askania-Werke, Berlin-Mariendorf, Germany, a corporation of Germany
Filed Aug. 12, 1960, Ser. No. 49,216
Claims priority, application Germany Aug. 12, 1959
1 Claim. (Cl. 33—46)

In a target tracking instrument having a reference portion and a rotating portion to form a main assembly and a pair of circular plates, closely spaced and parallel and varying in coupling with relative rotation to produce an electrical signal indicative of relative rotational positions of the two portions of the main assembly, each plate being coupled one to each of the portions and concentric with the axis of rotation, the improved construction wherein the rotating portion of the main assembly is supported on the reference portion by an annular bearing and one of the plates is rotatably supported with respect to the second by an independent bearing, the second plate being mounted in fixed position on one of the portions of the main assembly, and a coupling affixing said one plate to the other portion of the main assembly for maintenance of rotational position correspondence therebetween, said coupling comprising a thin spring plate



parallel with the axis of rotation and a thin spring plate perpendicular to the axis of rotation and a clamp adjustably joining the adjacent ends of the plates to permit adjustment of the coupling to prevent stress on the holding means, the coupling being more yielding in other directions than in the direction of rotation about the axis, whereby the reliance of relative plate positioning upon maintenance of relative positioning of the portions of the main assembly in directions other than that of rotation is reduced without corresponding reduction of accuracy of plate orientation as regards rotational position.

3,092,912
TAPE EXTENSOMETER FOR MEASURING ROOF SAG
John J. Reed, Flat River, Mo., assignor to St. Joseph Lead Company, New York, N.Y., a corporation of New York
Filed Aug. 1, 1960, Ser. No. 46,426
11 Claims. (Cl. 33—147)



9. A tape extensometer for measuring roof sag comprising an extensometer frame having a pair of parallel

tracks and top and bottom plate members, a roof tape having means for connecting it at one end to the extensometer frame and means for connecting it to a roof at the other end, a floor tape having means at one end for connecting it to a floor and means at the other end for maintaining the extensometer under a constant tension comprising a counterweight, the last named means comprising a counterweight frame relatively movable upon said tracks, said counterweight frame supporting said counterweight, a counterweight pulley secured to said extensometer frame for supporting said floor tape, and means for indicating relative movement between the floor and roof by movement of the counterweight with respect to the extensometer frame.

3,092,913
MICROMETER SCREW MEASURING INSTRUMENT
Erling P. Bugge, P.O. Box 36183, Wilshire-La Brea Branch, Los Angeles, Calif.
Filed Jan. 8, 1960, Ser. No. 1,205
8 Claims. (Cl. 33—166)



1. In a micrometer screw measuring instrument having a barrel assembly, a spindle with a micrometer screw engagement with said barrel assembly, and a thimble assembly for actuating said spindle, the combination comprising: a fixed scale extending axially of said barrel assembly; a scale extending circumferentially of the front edge of said thimble assembly, said pair of scales having marked graduations for directly indicating a dimension actually measured with said instrument; an index band mounted on said barrel assembly for movement axially thereof and having a scale whose length equals the length of said fixed scale, said index-band scale including a base line extending axially of said barrel assembly and having graduations spaced along said base line whose pitch is equal to the pitch of the graduations of said fixed scale, the space between graduations of said index band having a value fractionally proportional to the pitch of the graduations of said fixed scale, at least some of said index-band graduations being marked in accordance with said value; and an index thimble rotatably mounted on said thimble assembly having graduations of the same pitch as the pitch of the graduations of said thimble assembly, at least some of said index-thimble graduations being marked in accordance with said value, said index thimble being rotatable independently of rotation of said thimble assembly to consecutively align the graduations of said index thimble with said base line, said graduations of said index band scale and of said index thimble giving a direct reading of a value fractionally proportional to a dimension indicated by said scale of said barrel assembly and said scale on the front edge of said thimble assembly.

3,092,914
GAUGE AMPLIFIER
Harold K. Buscher, Sr., 2346 W. King St., Kokomo, Ind.
Filed Sept. 8, 1960, Ser. No. 54,776
10 Claims. (Cl. 33—169)

7. A gauge amplifier comprising a casing having an opening therethrough, a pair of pins slidably received in said opening, said pins having the same cross section as



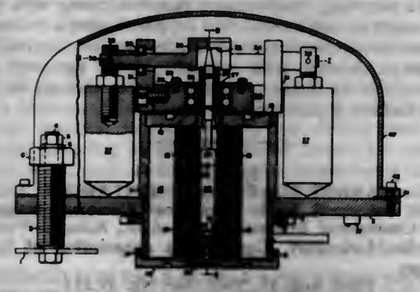
said opening and a lever within the opening between said pins.

3,092,915
DEVICE FOR ALIGNING AND SPACING THE INSIGNIA ON MILITARY UNIFORMS
Samuel J. Bell, Box 171, Lost Creek, Anaconda, Mont.
Filed Aug. 15, 1961, Ser. No. 131,576
3 Claims. (Cl. 33—180)



2. A template device for locating insignia in relation to a corner portion of a garment comprising a plate member formed with a generally circular insignia guide aperture, said plate member having a pair of edges meeting at a corner and adapted to be aligned with the edges of the garment adjacent said first-named corner portion, and a pair of oppositely directed guide flanges on each of said edges of the plate member engageable with the garment edges, whereby the template device may be reversely engaged with the garment corner edges on either the right or the left side of the garment, said plate member being inscribed on its opposite faces with guide lines intersecting said guide aperture and extending parallel to the direction of a diameter of said circular guide aperture and at the same angle to a side edge of the plate member.

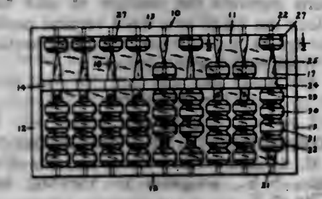
3,092,916
ATTITUDE DETECTOR
Wolfgang M. Kendziorek and Jack W. Clements, Monroeville, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Feb. 24, 1959, Ser. No. 795,157
6 Claims. (Cl. 33—215)



3. An attitude detector for a conveyance on which the detector is mounted, in combination, a mounting for the detector having a base, means for securing the mounting to the conveyance, when the conveyance is in a level position, so that the base is in a horizontal position, a pendulum yoke rotatably mounted in suitable anti-friction bearings on an axis normal to the base, a shaft rotatably

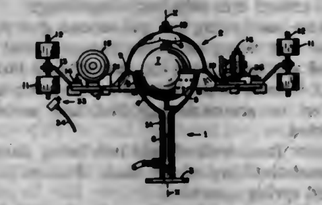
mounted in suitable anti-friction bearings disposed on the yoke, the axis of rotation being normal to the axis of rotation of the yoke, a pair of aligned pendulums secured to the shaft one being at each end of the shaft, whereby any movement of the conveyance from its level position will, through said pendulums, cause said yoke to rotate just sufficient to maintain the shaft axis horizontal and cause the shaft to rotate in proportion to the change of attitude of the conveyance, and electric means for indicating the amount of change in attitude of the conveyance as a function of the angle of departure of the conveyance from its level position.

3,092,917
ABACUS
Howard I. Podell, 1319 Stonybrook Ave., Mamaroneck, N.Y.
Filed June 15, 1961, Ser. No. 117,394
7 Claims. (Cl. 35—33)



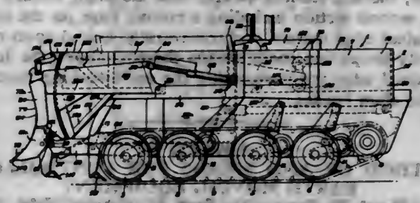
7. An educational device comprising a frame, at least one spindle mounted on said frame, a group of beads on said spindle, said beads being slidable individually and in groups along said spindle, and a row of numbers extending lengthwise of said spindle, said numbers being covered and uncovered individually by selective movement of beads along said spindle to display a single number corresponding to the number of beads moved along said spindle.

3,092,918
SATELLITE MOTION SIMULATOR
Walter Haeussermann and Adolf L. Herrmann, Huntsville, Ala., assignors to the United States of America as represented by the Secretary of the Army
Filed Apr. 29, 1960, Ser. No. 25,800
14 Claims. (Cl. 35—43)
(Granted under Title 35, U.S. Code (1952), sec. 266)



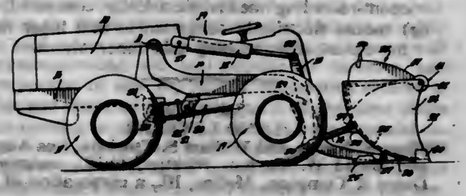
1. A space vehicle motion simulator comprising: a pedestal having a parti-spherical, concave, upper surface; means, extending thru said pedestal, for supplying pressurized gas to said surface; a missile-simulating device having a range of movement, which is substantially free, for allowing the device to respond to simulated attitude disturbing motions, said device comprising an element, disposed for movement relative to its pitch, yaw and roll axes, for the support of missile-controlling instruments, to be tested, and a ball-like bearing member fixed to a central portion of said element and having a lower, parti-spherical, convex surface that fits within said concave upper surface and floats on a bearing film of said pressurized gas; means carried by said element for imparting said attitude disturbing motions to said element; actuating means carried by said element for actuating said missile controlling instruments for response thereof to said attitude disturbing motions; masses supported by said element for balancing said element about the pitch, yaw and roll axes and for simulating a predetermined space vehicle moment of inertia; means for detachably and adjustably fastening each of said masses to said element, whereby said masses may be detached and replaced by other masses for variation of the simulated vehicle moment of inertia, and whereby said masses individually may be altered in position relative to the center of gravity of said missile simulating device, for balancing said missile simulating device on said gaseous film; the outer portions of said element and pedestal having sufficient clearance between them to allow a substantial amount of tilting motion of the element relative to the pedestal, said motion simulating changes of missile attitude when missile-controlling instruments are being tested on said element.

3,092,919
VEHICULAR FRAMEWORK
Ralph K. Reynolds, Des Plaines, and James R. Clarke, Palatine, Ill., assignors to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Jan. 3, 1961, Ser. No. 80,413
13 Claims. (Cl. 37—4)



1. A vehicle containing a scraper bowl having a forward scraping edge and having a movable scraper apron wall rearward of the scraper edge operable in bowl closing relation therewith and vertically swingable about a transverse axis on the vehicle for accommodating the entrance of a load within the bowl and moldboard means carried by the apron wall vertically swingable relative to the wall about an axis transverse to the longitudinal axis of the tractor in an operative position and in an inoperative position of unobstructing relation with respect to the scraping edge, said bowl including side members having forward portions carrying truss means at the forward end thereof and being in contact with the apron wall and the moldboard means in the lowered operative position of the apron.

3,092,920
TRACTOR LOADERS
Edward L. Benno, Skokie, Ill., assignor to The Frank G. Hough Co., a corporation of Illinois
Filed Nov. 23, 1960, Ser. No. 71,190
10 Claims. (Cl. 37—117.5)



7. In a front end type tractor loader having a boom pivotally connected to said tractor and extending forwardly thereof, means for raising and lowering said boom; a multi-function bucket construction comprising two sec-

tions for performing the earthworking functions of a digging bucket, a bulldozer, a self-loading scraper and a clam bucket; the first of said two sections comprising a pair of spaced-apart side walls interconnected by a curved bottom wall, flange means on said bottom wall pivotally connected to the forward end of said boom for carrying said first section on said tractor loader for pivotal movement about an axis disposed transversely of said tractor loader with an open side of said first section disposed forwardly, linkage means pivotally connected between said first section and said tractor for pivoting said first section relative to said boom, the second of said two sections being substantially rectangularly plate shaped with the width and height thereof respectively substantially equal to the inner width and height of said first section, means pivotally connecting the upper end of said second section to the upper end of said first section with said second section positioned relative to the first section so that said second section is pivotable through said first section and substantially forwardly thereof, means connected between said two sections for selectively pivoting said second section relative to said first section through the arc of said bottom wall and a substantial arc forwardly of said first section, the forward marginal edge of said bottom wall of said first section being provided with a cutting edge for cutting material in the earthworking functions of the digging bucket, the bulldozer, the self-loading scraper and the clam bucket, and said second section including a cutting edge on the lower marginal edge thereof and transversely spaced-apart rearwardly projecting tooth means thereon above the lower marginal edge for performing the earthworking function of the clam bucket.

3,092,921
METHOD OF AND MEANS FOR CONTROLLING EARTH MOVING EQUIPMENT
Frank W. Forst, 3316 Pratt St., Omaha, Nebr.
Filed Apr. 30, 1962, Ser. No. 190,986
6 Claims. (Cl. 37—129)



1. In a means for controlling earth moving equipment, comprising, in combination,

(*a*) a scoop type dirt carrying powered vehicle,

(*b*) a pushing powered vehicle adapted to engage and push the dirt carrying vehicle during the loading phase,

(*c*) at least two signal means on said pushing vehicle each of a different distinguishable character from the other,

(*d*) a timer means operatively connected to at least one of said signal means,

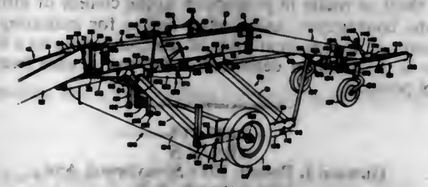
(*e*) means for count-recording each time said timer means is used;

(*f*) said two signal means, said timer means, and said count-recording means electrically connected; and

(*g*) means electrically connected to said timer means for electrically actuating said timer means.

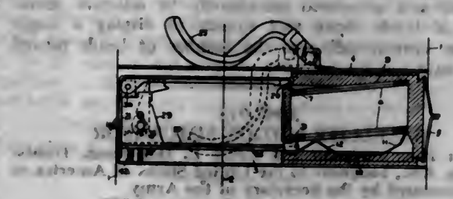
3,092,922
LAND LEVELER
William E. Knapp and William S. Trachiya, Los Angeles, and David W. Caytoa, Whittier, Calif., assignors to Deere & Company, Moline, Ill., a corporation of Delaware
Filed June 15, 1961, Ser. No. 117,469
11 Claims. (Cl. 37—189)

9. A land leveler comprising: generally fore-and-aft extending main frame means, a rear bogie section, means releasably connecting said bogie section with said main frame for generally vertical movement relative thereto, a blade connected with said main frame means for generally vertical movement relative thereto, means connecting said blade with said bogie section whereby generally



vertical movement of the bogie section relative to the frame means controls the position of said blade, and means to lock the blade in a fixed vertical position relative to said frame means when the bogie section is disconnected from said frame means.

3,092,923
REMOVABLE SLIDE BOX FOR PROJECTOR
Theodore F. Aronson, Glen Cove, and Floyd A. Lyon, Brookville, N.Y., assignors to Viewlex, Inc., Long Island City, N.Y.
Original application Jan. 31, 1958, Ser. No. 712,356, now Patent No. 2,953,967, dated Sept. 27, 1960. Divided and this application Feb. 18, 1960, Ser. No. 15,009
1 Claim. (Cl. 40—79)



A box type slide magazine adapted to hold a stack of slides and adapted to be removably inserted in a slide projector of the type having a pivotally mounted hook adapted to extend into said box comprising;

a magazine box having first and second slots in one side,

said first slot being near the forward wall and said second slot being near the rear of said box,

the rear interior wall of said box having a pedestal adapted to accommodate first and second spring members,

the interior front wall of said box being slanted to accommodate tilting of the stack of slides in said box by said spring members,

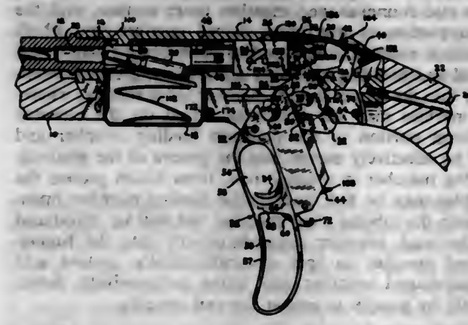
said first slot being adapted to receive said hook as said box is pushed into said projector, whereby said hook engages one of said slides and retracts it from said box as said box is pulled out of said projector,

said second slot being adapted to receive a slide from said projector as said box is pushed into said projector, and

means to tilt the stack of slides in said box comprising a first spring member mounted on said pedestal in the rear outer portion of said box and adapted to push the outer edges of said slides forward when said box is in its outermost position, and

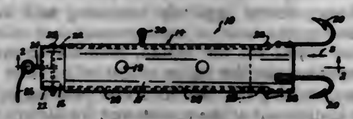
a second spring member mounted on said pedestal in the rear inner portion of said box and adapted to push the inner edges of said slides forward when said box is in its innermost position.

3,092,924
LEVER ACTION FIREARM
Louis W. Seecamp, 385 Orange St., New Haven, Conn.
Filed Nov. 22, 1961, Ser. No. 154,214
10 Claims. (Cl. 42—22)



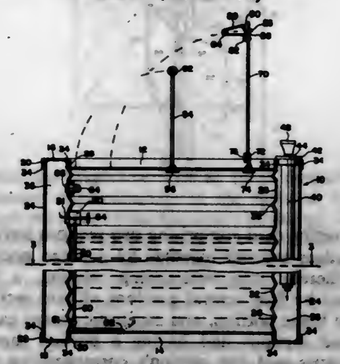
9. In a lever action firearms, the combination of a reciprocable bolt for inserting and extracting cartridges from the chamber of the firearm, a frame having a pair of spaced side plates, a manually operable finger lever pivotally connected to the frame, a bolt operating member pivotally connected to the finger lever and slidably coupled to the bolt, a slot disposed in one of the side plates, a laterally extending pin on the bolt operating member extending into the slot in the side wall, a hammer pivotally mounted on the finger lever, a cam slot formed in the other of said side plates, and a laterally extending pin on the hammer extending into said cam slot.

3,092,925
FISHERMAN'S GAFFS
John K. Ho, 856 Market St., and Johnny D. Ho, 14 Isis St., Apt. 1, both of San Francisco, Calif.
Filed Oct. 11, 1960, Ser. No. 62,993
1 Claim. (Cl. 43—5)



A device for gaffing fish caught on a hook of a fishing line, said device comprising in combination, an elongated and longitudinally extensible and contractable hollow cylindrical body including a tubular front section having closed front and rear ends and an open-ended rear section slidably telescoped on said front section and projecting rearwardly beyond the closed rear end of the latter, a plurality of circumferentially spaced and radially outwardly oriented gaff hooks secured to the projecting rear end portion of said open-ended rear section, said hooks extending longitudinally rearwardly beyond the rear end of the rear section, means provided externally on the intermediate portion of said rear section for removably attaching the device to a fishing line for sliding movement therealong, a transverse pin provided in the front end portion of said front section, an eye member provided on said transverse pin and projecting forwardly through an opening in the closed front end of the front section for attachment to a pull line for actuating said device and controlling its movement along the stated fishing line, a set of circumferentially spaced resilient fingers provided at and projecting longitudinally rearwardly from the rear end of said front section adjacent the inside surface of the rear section, said rear section being provided with circumferentially spaced and longitudinally extending rows of apertures, and outwardly directed detents provided at the rear ends of said fingers, said detents being selectively received in the apertures of the respective rows whereby to adjustably lock said front and rear sections against relative sliding, said front and rear sections of said body being provided with lateral water passages spaced apart longitudinally of the respective sections by a distance corresponding to the spacing of said apertures in said rows, whereby the water passages in the respective sections may remain in register when the extensible and contractable body is locked against sliding by said detents in any preadjusted position.

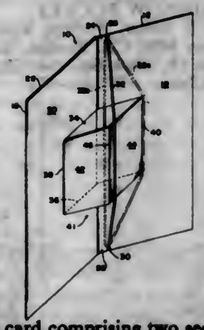
3,092,926
MINNOW BUCKET
Edward S. Baker, Wichita, Kans.
(% Andover Mfg. Co., Benton, Kans.)
Filed Sept. 12, 1960, Ser. No. 55,371
1 Claim. (Cl. 43—57)



An aerating minnow bucket comprising, in combination, a circular top and bottom, said top and said bottom being formed from identical pieces and having the center portion thereof recessed to provide like relatively narrow annular ledges at the outer extremity thereof in mirror image relation, an outer wall forming the sides of said bucket, said wall being cylindrical and positioned between said ledges of said top and said bottom to abut the outermost portion thereof, an inner cylindrical wall, said inner wall being positioned between the innermost portion of said ledges and being concentric with said outer wall, said inner wall having corrugations therearound, said inner and outer walls being bonded to said top and said bottom by a plastic adhesive to rigidly secure said walls thereto, said walls and said ledges forming an annular air retaining chamber, a pump secured within said annular chamber and projecting from said ledge on said top and in sealing relation therewith, an operator for said pump extending from said top, a plastic valve sealingly mounted in said inner wall and communicating with said annular chamber, said valve having the valve operator thereof projecting into the interior of said bucket, an air conduit, said conduit having one end thereof mounted in said valve, said conduit extending along the inside of said inner wall to said bottom, the other end of said conduit being positioned on the inside of said bottom of said bucket, a safety valve, said safety valve being mounted in said inner wall and communicating with said annular air chamber, said center portion of said top having an opening therein in the size and shape of a polygon, a lid of the same shape as said opening in said top and formed from material removed from said top, said lid being hingedly mounted on the edge of said opening for access into said bucket, said lid being located relative to said opening so that the corners of said lid engage said top adjacent said opening therein when said lid is closed, spring latch means on said lid engageable with said top to maintain said lid in the closed position, and a handle hingedly mounted on said

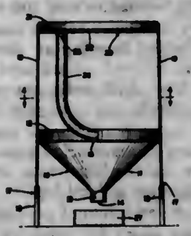
top, said device being constructed and adapted to provide a minnow bucket in which the water received therein can be adjustably aerated by pumping air into said cylindrical chamber and allowing it to escape therefrom through said valve and said conduit.

3,092,927
SOUND EMITTING DEVICE
Charles R. Lachsinger, Great Neck, N.Y., assignor to Norcross, Inc., New York, N.Y., a corporation of New York
Filed Jan. 23, 1961, Ser. No. 84,300
9 Claims. (Cl. 46—34)



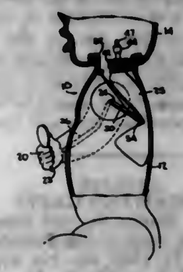
9. A greeting card comprising two sections having their adjacent edges secured together by a hinge portion and foldable thereon into overlapping relation, a foldable flap formed by free central portions of said sections adjacent said hinge portion, and an elastic means carried by one of said sections and having a portion thereof extending across said one section's corresponding foldable flap, said portion of said elastic means being substantially parallel to said hinge portion and adapted to be stretched by the outward movement of said flap in response to the folding of said sections.

3,092,928
TOY CONSTRUCTION
Homer E. Geiser, Cucamonga, Calif.; Willis Nonenschwander, administrator of said Homer E. Geiser, deceased, assignor to Hilda G. Geiser, Applecreek, Ohio
Filed Oct. 17, 1960, Ser. No. 63,065
1 Claim. (Cl. 46—43)



Toy construction for use with marbles and the like including a hollow generally funnel-shaped member having an inner surface defining a continuous conical plane, a generally horizontally extending platform feeding member supported spaced above the funnel-shaped member and having a single width groove formed between the outer periphery of the platform feeding member and an elevated platform portion in a central portion of said platform feeding member, an opening formed vertically through the platform feeding member within said groove, a generally cylindrical tubular track member operably connected with an upper end communicating with the feeding member opening and extending generally vertically downwardly from the feeding member and then arcuately into a generally horizontally extending lower end, the track member lower end extending into an upper portion of the funnel-shaped member generally circumferentially of said funnel-shaped member upper portion and opening onto said funnel-shaped member inner surface, and the upper portion of the funnel-shaped member into which the track member lower end extends being radially enlarged and blending smoothly arcuately and circumferentially into the funnel-shaped member inner surface; whereby, marbles may be selectively stored on the elevated platform portion of the platform feeding member and may be selectively moved into the groove of the platform feeding member in a single row, from which groove the marbles may be fed through the feeding member opening into the tubular track member and will be introduced by the track member circumferentially into the funnel-shaped member to spin circumferentially around said funnel-shaped member and move progressively downwardly by gravity to exit at the exit opening.

3,092,929
DOLLS
Robert K. Ostrander, 497 Prospect St., Maplewood, N.J.
Filed Jan. 9, 1961, Ser. No. 81,297
2 Claims. (Cl. 46—141)



1. A doll comprising a head having a mouth, a hollow torso, an arm, means captively mounting said arm for free rotation on the torso, a hand on said arm, said hand carrying an object for the mouth, manually overridable means operable over the entire extent of rotation of the arm for maintaining the arm in a first position in which the object is disposed at the mouth and for slowly returning the arm to said first position after manual movement thereof to a second position wherein the object is spaced from the mouth, said last mentioned means comprising an actuating lever and a hollow air-containing self-inflatable flexible-walled vessel having an egress check valve and a slow air intake leak opening, said lever being adapted to move with said arm and including an element located adjacent the vessel when the arm is in its first position and the vessel is fully inflated, said element being positioned to deform the vessel on movement of the arm towards its second position whereby such movement of the arm causes deflation of the vessel and whereby, on release of the arm, self-inflation of the vessel occurs slowly, thereby causing the element to actuate the lever to slowly move the arm back towards its first position, and resilient means for rapidly returning the arm to its first position after the first mentioned means has slowly returned the arm from its second position partially back to its first position.

3,092,930
DOLL TORSO WITH FLEXIBLY JOINED LIMBS
William Resnol, 277 Bronx River Road, Yonkers, N.Y.
Filed Mar. 15, 1962, Ser. No. 179,979
2 Claims. (Cl. 46—161)

1. In a doll, a hollow torso including a front, sides, a back, and a bottom, said torso having limb-receiving openings formed therein, each said limb-receiving opening comprising an elongated, narrow slot, a limb secured on said torso through each of said openings, each said limb comprising a hollow, molded body formed of resiliently pliable material adapted to retain its shape, each said limb having its end portion attachable to said torso of substantial circular cross-section, said end portion having inwardly extending indentions provided at substantially diametrically opposed points in its marginal edge portion,



forming projections between them, said projection flattened against opposed faces of an elongated stay and secured thereto in flattened position, said flattened edge portion of said limb being of lesser length than the length of the receiving slot therefor, and said stay being of greater length than said slot and projecting to each side of said flattened limb-edge portion, said flattened edge portion and said stay inserted through said slot into said torso with said projecting end portions of said stay engaging over the marginal edge portions of the ends of said slot.

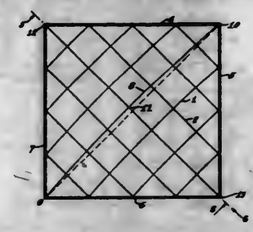
3,092,931
DOLL EYE
Harvey W. Samo, Bayonne, N.J., assignor to Margon Corporation, Newark, N.J., a corporation of New Jersey
Filed Nov. 15, 1960, Ser. No. 69,410
5 Claims. (Cl. 46—169)



1. A doll eye comprising an eye member made out of a single body of transparent material and provided with a pupil portion and an iris portion, the iris portion comprising (*a*) a grooved area of radially arranged serrations surrounding the area of the pupil portion and (*b*) a generally planar continuous peripheral area surrounding the grooved area, the radially arranged serrations of the grooved area forming iris lines and the peripheral area forming the iris rim, the inner periphery of the iris rim being star shaped to impart a star-like appearance to the iris lines, and the grooved area at its juncture with the peripheral rim area being depressed throughout its circumference below the peripheral rim area.

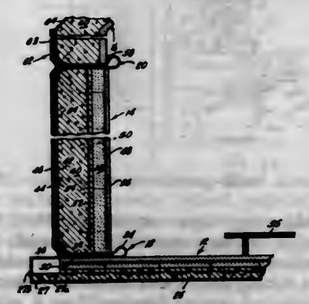
3,092,932
SKELETON FRAMEWORK FOR MODIFIED HYPERBOLIC PARABOLOID
Winfred E. Wilson, 2602 N. Figueroa, Los Angeles, Calif.
Filed July 6, 1959, Ser. No. 825,368
2 Claims. (Cl. 50—52)

1. A skeleton frame structure of hyperbolic paraboloid configuration including: four straight, rigid boundary members, two of which are stressed axially in compression and the other two are stressed in tension, said boundary members being joined at their ends to enclose an area which when projected onto a horizontal plane assumes approximately the shape of a parallelogram, two of said boundary members lying in one plane and the other two of said boundary members lying in a second plane which intersects the first plane along a diagonal of the area enclosed, and a lattice secured to all four of the boundary members, and formed of structural tension members and structural compression members lying within the confines of the boundary members; the actual lengths of each of said tension members and of said compression members being greater than its respective projected lengths between the boundary members, each of the tension members being arranged approximately parallel to said diagonal and being curved in one plane and positioned with the concave side facing upwardly, each of said compression members being approximately parallel to the second diagonal of the area enclosed and being curved in one plane and positioned with the convex side facing upwardly, each of the tension members and the compression members being so



located that the respective lines of force carried through them intersect approximately at the lines of force acting through the axes of the boundary members, and pivot means joining said tension members and said compression members at substantially all points of intersection within the confines of the four boundary members so that the lattice formed by said tension and compression members may be collapsed and later expanded into position between said boundary members, the tension and the compression members each being subject to equal direct stresses with no components normal to each other at points of intersection, whereby neither of these members tends to impose a stress on the other member at such points of intersection.

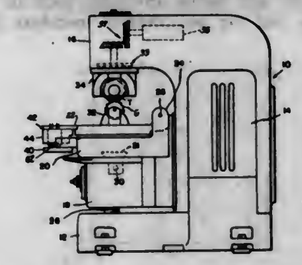
3,092,933
STORAGE STRUCTURE
John J. Closner and Rudolf Marodi, New York, N.Y., and Leroy Magers, Jr., Hillside, N.J., assignors to Preload Corporation, New York, N.Y., a corporation of Delaware
Filed July 7, 1961, Ser. No. 122,473
20 Claims. (Cl. 50—129)



1. A structure for storing liquefied gases maintained at low temperatures, said structure comprising a floor, a roof, a substantially cylindrical cementitious wall prestressed by a plurality of prestressing tendons and an impervious liquid tight and vapor tight barrier substantially coextensive with said wall interposed between the wall and the prestressing tendons whereby the barrier is

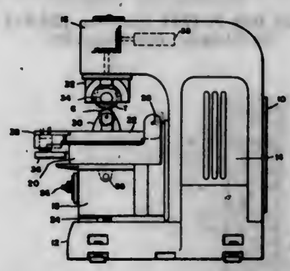
prestressed with the wall and is substantially in an initial state of compression at ambient temperatures.

3,092,934
METHOD AND APPARATUS FOR FINISHING GEARS
David W. Daniel, Detroit, Mich., assignor to National Broach & Machine Company, Detroit, Mich., a corporation of Michigan
Filed July 1, 1960, Ser. No. 40,447
16 Claims. (Cl. 51—105)



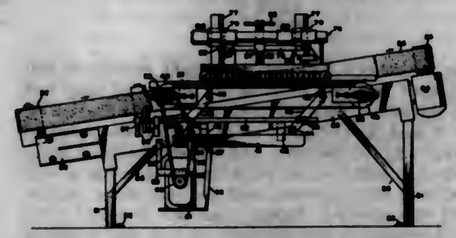
6. A gear finishing machine comprising a frame, a rotary work support, means mounting said work support on said frame, a rotary tool support, means mounting said tool support on said frame, means mounting one of said supports for movement toward and away from the other, means for driving one of said supports in rotation, non-positive means connected between said frame and said movable support to apply a substantially constant force urging said movable support toward the other, and adjustable friction means connected between said frame and said support to oppose movement of said movable support toward and away from said other support.

3,092,935
METHOD AND APPARATUS FOR FINISHING GEARS
David W. Daniel, Detroit, Mich., assignor to National Broach & Machine Company, Detroit, Mich., a corporation of Michigan
Filed Sept. 6, 1960, Ser. No. 54,211
18 Claims. (Cl. 51—105)



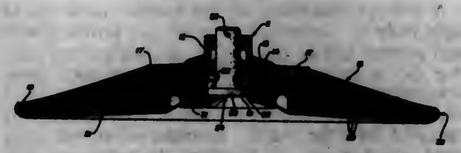
2. Gear finishing apparatus comprising a rotary support for a gear member, a rotary support for a gear-like honing member in position to provide for meshing of said members, means for driving one of said members in rotation at pitch line velocity of several hundred feet a minute, a movable structure on which one of said supports is mounted for movement generally toward and away from the other member, means for applying a force to said movable structure urging it in a direction to cause approach between said members, and means for restricting the rate of movement of said movable structure so as to provide for continuous substantially uniform pressure between said members during the slow movement of said movable structure occasioned by removal of stock from said gear member but to apply a substantially greater force opposing relatively rapid movement of said movable structure in a direction away from said other member.

3,092,936
MACHINE FOR SANDING EDGE SURFACES OF LUMBER
Julius Everett Marsh, Box 870, High Point, N.C.
Filed Sept. 28, 1960, Ser. No. 59,020
11 Claims. (Cl. 51—138)



1. A machine for sanding board lumber including a frame, a lumber feed assembly in the frame for moving a board, in a lineal path in the frame, and a sanding assembly in the frame comprising a movable sand belt, the belt being disposed at an angle for contact of the belt with a margin of one edge of the board, the sanding surface of the angularly disposed belt being sinuous, for constantly changing the locus of contact of the belt with the board edge, to effect gradual sanding of said edge from one side of the board to the other.

3,092,937
POLISHING AND ABRADING APPARATUS
Berne Tocci-Guilbert, 2323 Larkin St., San Francisco, Calif.
Filed Mar. 30, 1961, Ser. No. 99,481
5 Claims. (Cl. 51—197)



1. In a polishing and abrading apparatus for use with a motor-operated device having a rotating shaft, a hub-like coupling member adapted to be connected to the shaft for rotation therewith, a pad of relatively soft material secured to the hub-like coupling member, a sheet-like abrasive element covering the lower surface of the pad, means for securing the center of the abrasive element to the hub, and means for securing the outer margin of the abrasive element to the pad so that the portion of the element between the center of the pad and the outer margin of the pad is free for slight movement with respect to the pad so that foreign articles may freely pass from the abrasive element.

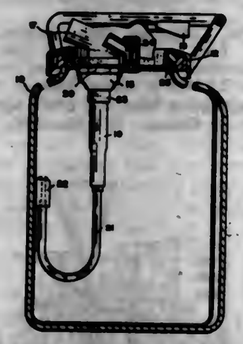
3,092,938
VALVE GRINDING DEVICE
Henry C. Fortin, 189½ North St., Bristol, Conn.
Filed Nov. 21, 1960, Ser. No. 70,837
2 Claims. (Cl. 51—241)

1. In a valve head grinding device, the combination of an adapter disk having a detachable non-rotatable connection to a vertical power driven shaft, said disk having a pair of drive studs projecting at right angles from both sides thereof for detachably engaging in the shallow apertures in the top of the valve head of an internal combustion engine, said disk also having a pin projecting therefrom, parallel to said drive studs for receiving the loop of a cotter pin secured to the end of said shaft above said disk, and a U-shaped lock washer frictionally fitted with-



in a groove in the end of said shaft below said disk to hold said disk upon said shaft, and a folded sheet of emery cloth held rigidly against the seat of said valve, whereby when said shaft is rotated, said valve head will be ground by said emery cloth.

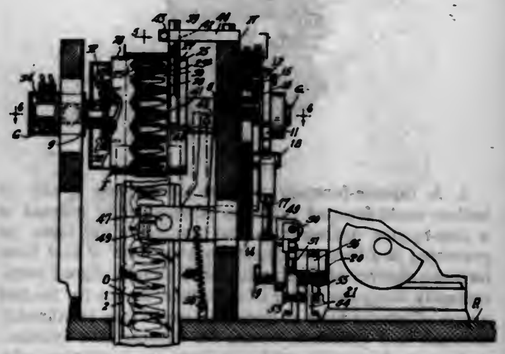
3,092,939
BULK BEVERAGE DISPENSER AND METHOD OF PREPARING SAME
Frank Welty, 4962 Lockwood Blvd., and Raymond D. Welty, 4307 Lake Road, both of Youngstown, Ohio
Filed Nov. 25, 1960, Ser. No. 71,719
4 Claims. (Cl. 53—27)



1. The method of preparing a beverage shipping and dispensing container of the kind in which a pressurizing expellant is integrally included in the container assembly and in which the container is provided with an enlarged opening; which consists of gathering a glob of heated polyethylene plastic on the lower open end of a blow pipe, inserting said end within said opening, applying air under pressure to said pipe to expand said glob into a closed inner container molded by the interior surfaces of the first mentioned container, removing said blow pipe, inserting and sealing a beverage dispensing tubular shank in the opening in said inner container caused by the withdrawal of the blow pipe, and closing off said opening except for the bore through said shank, the resultant assembly being such that a beverage may be charged into said inner container while a pressurizing expellant may be inserted in the space within the first mentioned container but outwardly of said inner container.

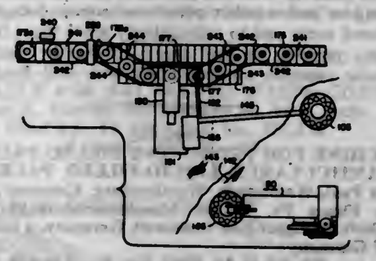
3,092,940
METHOD OF AND APPARATUS FOR MAKING A SUPPOSITORY PACKAGE
Edward J. David, Point Pleasant, N.J., assignor to Ivers-Lee Company, Newark, N.J., a corporation of New Jersey
Filed June 6, 1961, Ser. No. 115,148
12 Claims. (Cl. 53—29)

1. The method of making packages consisting of forming identical recesses in two strips of ductile material, bringing said strips into contact with each other with the recess of each strip facing the recess of the other strip and sealing the strips together in a zone extending in partially surrounding relation to said recesses between one end thereof and the corresponding edges of the strips while maintaining portions of said strips in non-adherent relation in zones between said recesses and said sealed



zones and extending to the other edges of said strips, thereby forming a package compartment, spreading apart the edges of said non-adherent portions of the strips, and successively inserting and removing a forming pin into and from each compartment between said spread-apart edges thereby forming a filling opening for the compartment between said non-adherent portions of the strips.

3,092,941
CAPPING APPARATUS AND PROCEDURE
Gerald W. Baker and David A. Pieper, Muncie, Ind., assignors to Ball Brothers Company, Incorporated, Muncie, Ind., a corporation of Indiana
Filed Apr. 12, 1960, Ser. No. 21,628
34 Claims. (Cl. 53—41)



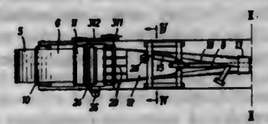
25. Procedure for protecting from contamination the interior surfaces of newly formed containers which comprises, providing flanged caps; successively delivering caps so formed to a delivery chute having an open lower end and stacking the caps in progression along such chute; retaining the lowermost cap located in such chute projecting from the open lower end of such chute; moving each of a series of open top containers in succession past the lower end of such chute; causing the neck finish of each such container, while the container is moving, to engage and withdraw a projecting cap from such chute; then temporarily arresting the movement of each such container, and then pressure crimping the flange of the cap carried by the then stationary container into holding engagement with the neck finish of such container.

3,092,942
APPARATUS FOR ENCAPSULATING
Sydney A. Chasman, 1350 Outlook Drive, Mountainside, N.J.
Filed Apr. 15, 1960, Ser. No. 22,520
28 Claims. (Cl. 53—182)



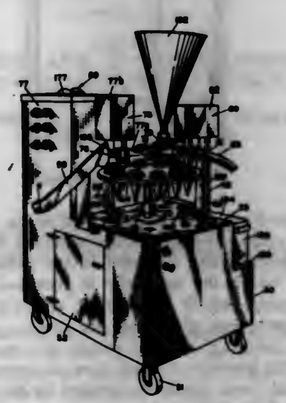
1. A capsule-forming machine comprising a pair of hollow multi-facetted cylinders adapted to be indexed in a step-by-step operation so that successive flat faces are presented in a face-to-face relationship, each of said faces having a number of apertures formed therein aligned longitudinally along the center of each face, means for feeding a pair of plastic films in opposed face-to-face relationship between said cylinders, means for causing said cylinders to be moved laterally until said faces are in abutting relationship, whereby defined opposed areas in each of said sheets are captured, plungers within each of said cylinders in alignment with each of the apertures in opposed faces and including opposed contact faces substantially coextensive with the opposed apertures, means for moving said contact faces of said plungers into mutually opposed pressing relationship with said sheets to express air which may be entrapped in the captured areas outlined by opposed apertures in said faces, means for retracting said plungers, means for introducing, under pressure, within each of the captured areas, a measured amount of fluid under pressure whereby the captured areas of said opposed sheets are inflated into opposed semi-globular areas entirely filled with said fluid, hollow die punches coaxial with said plungers and individual to each pair of opposed apertures, and means for forcing said die punches toward each other into abutting face-to-face relationship on opposite sides of said sheets, said last-mentioned means serving to seal together peripheral zones of each of said captured areas and to substantially sever them from contiguous portions of said sheets to thereby form sealed globular capsules entirely filled with said fluid.

3,092,943
MACHINE FOR PRODUCING FILLED PACKAGES, PARTICULARLY LIQUID-FILLED PACKAGES
Hans Paal, Waiblingen, Wurttemberg, Germany, assignor to Firma Fr. Hesser Maschinenfabrik-Aktiengesellschaft, Stuttgart-Bad Cannstatt, Germany, a corporation of Germany
Filed July 24, 1961, Ser. No. 126,020
Claims priority, application Germany July 25, 1960
25 Claims. (Cl. 53—183)



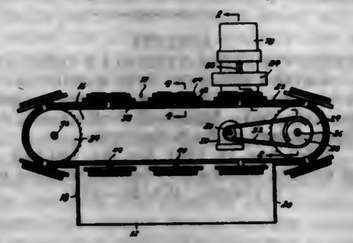
1. A machine for producing packages of the kind consisting of filled containers each comprising a sleeve-form body portion and top and bottom covers secured thereto in a fluid-tight manner, said machine including, in combination, a supply reel carrying packaging material in strip form, a device operable for continuously forming tubing with an overlap seam from said material fed from the supply reel, a mechanism which travels with said tubing for a predetermined distance and is operable for separating therefrom sleeve-form container body portions, a continuously rotating mandrel wheel, mandrels mounted on said wheel, movable grippers with which said mandrels are equipped, a device which functions to transfer the continuously separated container body portions to the mandrels, the aforesaid grippers functioning to draw the said body portions on to the mandrels, a feed device associated with the mandrel wheel for feeding thereto preformed container bottom covers, a mechanism comprising a continuously rotating series of devices associated with the mandrels and operable for welding said bottom covers to the container body portions, a filling means succeeding the mandrel wheel for filling the containers with contents, a mechanism following said filling means and operable for welding preformed top covers on to the filled but still open containers to close the same, and thus complete the packages, and a feed device associated with the said top cover welding mechanism for feeding thereto said top covers.

3,092,944
APPARATUS FOR FORMING AN EDIBLE ARTICLE AND A PACKAGED ARTICLE PRODUCED THEREBY
Robert T. Wise, Columbus, Ohio, assignor to Big Drum, Inc., a corporation of Ohio
Original application Sept. 3, 1957, Ser. No. 681,538, now Patent No. 2,934,872, dated May 3, 1960. Divided and this application Mar. 24, 1960, Ser. No. 17,323
9 Claims. (Cl. 53—276)



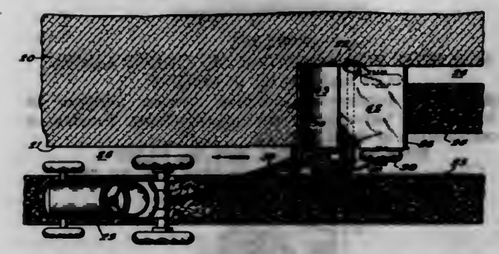
1. Apparatus for producing an article in a sealed protective package comprising a rotatable support having a series of angularly spaced pockets for receiving and supporting hollow package bodies each having an open mouth with the mouth upright, means for rotating said support intermittently so as to move said package to successive stations arranged angularly of said support, means at one of said successive stations for almost filling the package but allowing a sealing surface at the mouth edge of the package on its inner surface, said filling means comprising means for supplying a plastic material into the body and means for interrupting the filling operation and simultaneously forming a convex surface on the plastic material, and means at another of said stations for forming a cap with an upright flange and a central disc and inserting it in said package while simultaneously sealing it to said package sealing surface with the disc tangential to said convex surface.

3,092,945
BLISTER PACKAGING MACHINE
Morris Wizelman, Cheltenham, Pa., assignor to Globe Industries, Inc., Philadelphia, Pa., a corporation of Pennsylvania
Filed Oct. 10, 1961, Ser. No. 144,222
7 Claims. (Cl. 53—373)



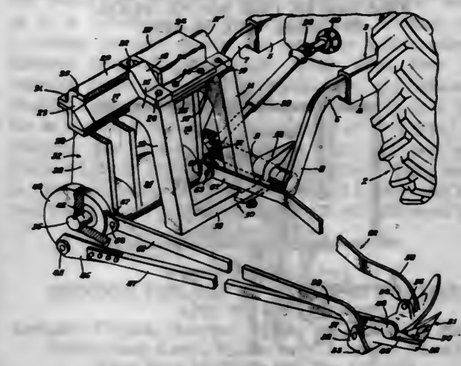
2. A blister packaging machine for heat-sealing a card to a synthetic resin blister having an article therein comprising a reciprocably mounted platen, means connected to said platen for heating the same, an endless chain means operatively disposed with respect to a pair of rotatably mounted sprocket means, mounting plates fixedly secured to said chain means at spaced points therealong, a die plate removably secured to each mounting plate, a motor means operatively connected to one of said sprocket means for intermittently rotating the same whereby each of said die plates are sequentially positioned opposite said platen for a predetermined period of time, means for moving said platen toward and away from said die plates opposite thereto, die means on each die plate for positioning said blister on said die plate, additional means on said die plate for positioning said card over said blister, and the securement of said mounting plates to said chain means enabling articles within a die on said die plates to be removed therefrom by gravity.

3,092,946
ROTARY CUTTER
Bernard C. Mathews, Box 202, Crystal Lake, Ill.
Filed Feb. 1, 1961, Ser. No. 86,471
10 Claims. (Cl. 56—24)



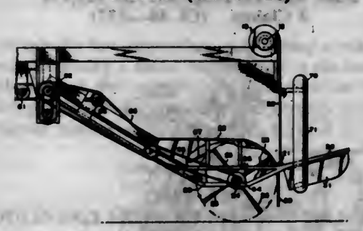
1. A mowing machine comprising a rotor including a plurality of cutting blades, a housing surrounding the upper front portion of said rotor and including a front wall providing a throat, the width of which is measured by the clearance between the blades of said rotor and said front wall, crop engaging means at the lower front end of said front wall for bending the plant elements of said crop forwardly, and being located at an elevation sufficiently high as to provide comparatively low frictional resistance to the movement of said plant elements as they are drawn into said housing by said blades and inverted, the width of said throat being in excess of two inches at the narrowest point to cause said inverted plants to pass through said throat as an attenuated mat, and a rearwardly extending duct connecting with said housing and having a tapering portion and a discharge portion for depositing the cut crop in a windrow behind the mowing machine.

3,092,947
YIELDABLE PENDULUM MOWER MOUNTING
Thomas J. Scarnato, Park Ridge, and Robert A. Johnson, Downers Grove, Ill., assignors to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Apr. 5, 1961, Ser. No. 102,912
14 Claims. (Cl. 56—25)



1. In a mower, the combination of an ambulatory support member, a coupling frame member extending laterally from the support, a pendulum structure member extending between the support member and frame member, means providing connections between the support member and structure member and between the frame member and structure member on vertically and laterally offset generally parallel axes, at least one of said connections including yieldable flexible material interposed between respective members resisting relative swinging movements therebetween, a mower connected to the frame member and having parts reciprocal transversely of said axes, and a driving train for reciprocating at least one of said parts and including crank means mounted on said pendulum member on an axis generally parallel to said axes and displaced laterally with respect to a vertical plane through the axis of the connection of said pendulum structure member with the support member, and pitman means connecting the crank means with at least one of said parts.

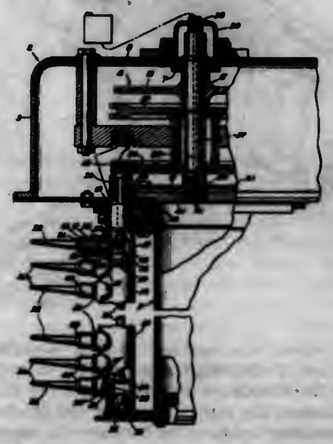
3,092,948
APPARATUS FOR SALVAGING WASTE COTTON
James E. Tieman, 547 S. Horne St., Mesa, Ariz.
Filed Apr. 19, 1961, Ser. No. 104,126
8 Claims. (Cl. 56—28)



1. Apparatus for salvaging waste cotton comprising a movable frame, a cotton picker assembly carried by the frame and including cotton picking means adapted for movement along and in contact with a furrow between a pair of harvested cotton rows, the assembly also including blower means mounted on the frame, parts of the blower means lying adjacent the ground in proximity to said harvested cotton rows for blowing the cotton from said pair of harvested rows into said furrow between said rows, and a flexible shield pendently carried by the frame in

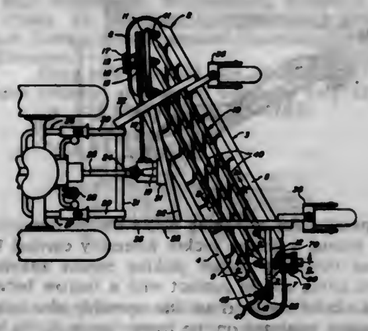
front of the cotton picking means to prevent cotton from being blown into the latter.

3,092,949
SEALED PICKER BAR AND SPINDLE ASSEMBLY
James E. Sadler, Memphis, Tenn., and Paul W. Hussey, Park Ridge, Ill., assignors to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed June 29, 1960, Ser. No. 39,632
10 Claims. (Cl. 56—44)



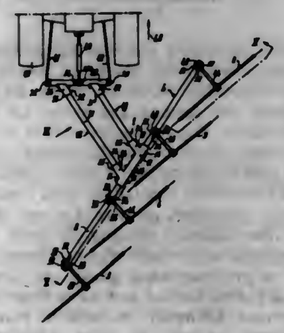
1. A cotton picker spindle mounting comprising a picker bar, a drive shaft rotatably mounted therein, a driving bevel gear connected thereto for rotation thereby, a holder mounted on the bar and extending angularly therefrom, bearing means in the holder, a cotton picker spindle having a shank journalled in said bearing means, a driven bevel gear connected to said shank, said driven gear and bearing means engaging along complementary surfaces, and sealing means carried by said spindle in sealing engagement with said holder and urging said spindle in a direction engaging said surfaces.

3,092,950
PARALLEL BARS SIDE DELIVERY RAKE WITH SELF ADJUSTING MOUNTING MEANS
Edward J. Johnston, La Grange Park, Ill., assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Apr. 12, 1961, Ser. No. 102,474
2 Claims. (Cl. 56—377)



1. In a side delivery rake of the parallel bar type, a support, a pair of rake end members, tine bars interconnecting the members, each member including a center portion, universal mounting means journalling one of the members through said center portion and mounted on said support, and a shaft journalling the other member through its center portion and rigidly fixed to the support, said universal mounting means operative to cause said end members to rotate in substantially parallel planes at all times.

3,092,951
IMPLEMENTS FOR LATERALLY DISPLACING CROP LYING ON THE GROUND
Cornelis van der Lely, Zug, Switzerland, assignor to C. van der Lely, N.V., Maasland, Netherlands, a limited-liability company of the Netherlands
Filed Apr. 19, 1961, Ser. No. 104,064
Claims priority, application Netherlands May 6, 1960
8 Claims. (Cl. 56—377)



1. An implement for displacing material lying on the ground, said implement having at least one frame beam provided with a plurality of spaced rake wheel supporting means fixed thereon, rake wheels mounted on said supporting means, said frame including a resilient strip, at least one of said rake wheel supporting means being supported by said resilient strip, whereby said rake wheels may move to accommodate ground irregularities by virtue of the resiliency of said resilient strip.

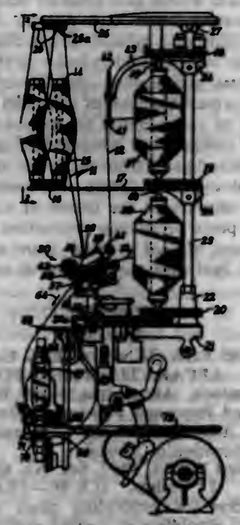
3,092,952
MACHINE FOR FORMING SECURING LOOPS ON SANITARY NAPKINS
Erik Ragnar Johansson, Molndal, Sweden, assignor to Molnlycke Vafveri Aktiebolag, Goteborg, Sweden, a corporation of Sweden
Filed Nov. 10, 1960, Ser. No. 68,387
Claims priority, application Sweden Nov. 24, 1959
3 Claims. (Cl. 57—34)



1. A machine for forming securing loops at the ends of sanitary napkins having a tubular covering which extends outside the absorption pad and forms at each end a tubular part bendable double, said machine comprising a stepwise movable feed track for said napkins such that

at least one of said tubular parts hangs downwardly at one side of said track, an assembly located at said side of and below said track being rotatable and reciprocable along its axis of rotation, said axis being substantially vertical and perpendicular relatively to said feed track, said assembly comprising a guide member mounted on the top thereof, a suction device having a suction opening, a catch device and a cutter arranged above said suction opening, means for raising said assembly into a raised position as said track moves a napkin above it, said suction device being adapted to catch said tubular part, means for lowering said assembly to a position where said tubular part is still within said suction opening, means for moving said catch device into engagement with said tubular part adjacent said suction opening, means for rotating said assembly to twist said tubular part, and means for operating said cutter to cut off said tubular part adjacent said suction device, bending means movable into engagement with said tubular part as said cutter cuts the end of said tubular part to bend it double around said guide member to form a loop, said assembly being rotated to twist said loop, and means for tying a knot in the loop, said knot tying means comprising a gripper device movable to grip said loop, a channel shaped tying arm movable between first and second positions in which the channel of said arm is respectively perpendicular and parallel to said track, said gripper device being operative when the tying arm is in its first position to wind the twisted portion of said loop around the tying arm to form an eye, whereafter said tying arm is moved to its second position parallel to said track, said gripper device together with the gripped portion of said loop being then moved through said channel of said arm and through said eye to form said knot, and means for tightening said knot.

3,092,953
METHOD AND APPARATUS FOR FORMING YARN
Emerson B. Blackstock, Kankakee, Ill., assignor to Bear Brand Hosiery Co., Kankakee, Ill., a corporation of Illinois
Filed Aug. 1, 1960, Ser. No. 46,641
17 Claims. (Cl. 57—36)



1. Apparatus for producing a core yarn comprising: a ring spinning frame having a roving creel, drawing rolls including front drawing rolls, a spindle and a ring and traveler; a support for a supply of continuous filament yarn; yarn guide means independent of said drawing rolls and disposed immediately adjacent said front drawing rolls for guiding the continuous filament yarn from said supply thereof to a position between the front drawing rolls in longitudinal alignment with the center line of the ribbon of staple fibers passing between said front drawing rolls; tensioning means for maintaining the continuous filament under a predetermined tension as it is introduced between said front drawing rolls; a bobbin on said spindle for receiving said continuous filament yarn and said staple fibers after they have emerged from said front drawing rolls; and means including said spindle for rotating said bobbin at a speed far in excess of the speed of rotation of said front rolls whereby said continuous filament yarn and said staple fibers are both maintained under relatively high tension as they pass from said front rolls to said bobbin and while said staple fibers are thus spun about said filament yarn.

3,092,954
SPINDLE FOR USE IN SPINNING FRAMES AND TWISTERS
Anthony Terpak, Assonet, Mass. (% Modern Plastics Engineering Corp., North Ave., Taunton, Mass.)
Filed June 15, 1961, Ser. No. 117,313
6 Claims. (Cl. 57—130)

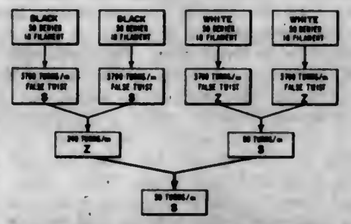


1. A spindle for supporting and roating a tubular yarn carrier, comprising a metal blade forming the longitudinal central core of the spindle, and a cylindrical barrel of light weight plastic material moulded directly to the blade, said barrel having a driving whorl formed at its lower end.

3,092,955
MOULINEE YARN AND METHOD OF MAKING THE SAME
Hendrikus J. Smit, Emmen, Netherlands, assignor to Algemene Kunstzijde Unie N.V., Arnhem, Netherlands, a corporation of the Netherlands
Filed June 21, 1962, Ser. No. 204,242
Claims priority, application Netherlands July 3, 1961
4 Claims. (Cl. 57—140)

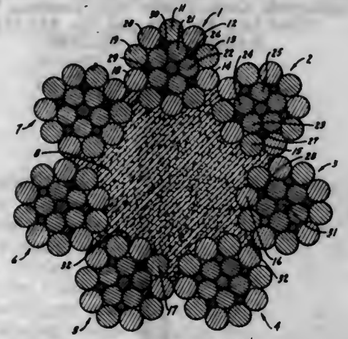
1. The method of making a moulinee yarn that comprises first imparting and setting a false twist to some yarns in the Z direction and to some yarns in the S direction, combining the yarns of like false twist into pairs, there-

after combining the pairs thus obtained by twisting them together an amount per unit length less than that of the



yarn of opposite twist and more than that of the yarn of the same twist.

3,092,956
7-STRAND WIRE ROPE
Archibald M. Naysmith, Kenosha, Wis., assignor to Macwhyte Company, Kenosha, Wis., a corporation of Wisconsin
Filed Sept. 8, 1960, Ser. No. 54,748
6 Claims. (Cl. 57—145)



1. An all purpose, substantially non-elastic, high strength wire rope having excellent flexibility and drum crushing characteristics,

said wire rope having a core extending the length of the rope and seven strands extending the length of the core,

said strands being laid around the core in snug frictional engagement therewith,

said wire rope having a constant external diameter along its length,

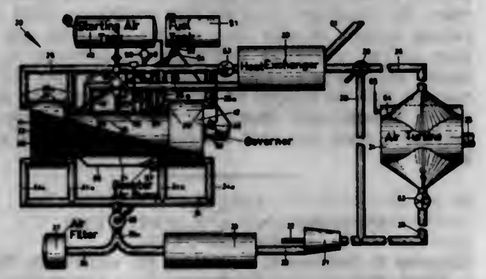
each strand being composed of a plurality of wires laid about a wire core.

3,092,957
METHOD OF PROVIDING CONTROLLED INTERFERENCE FIT OF A CHAIN PIN IN A PIN PLATE
Alfred F. Larkin, Jr., Grafton, Mass., assignor to Chain Belt Company, Milwaukee, Wis., a corporation of Wisconsin
Filed Sept. 17, 1959, Ser. No. 840,726
5 Claims. (Cl. 59—8)



1. The method of chain construction providing hardened fatigue-resistant areas defining spaced round holes of a pin plate and relatively elastic ridges at one side of the plate to bias or hold respective round pins toward or against the load bearing areas of the holes nearer the respective ends of the plate, which method comprises forming the holes to a given size less than that of the pin, heat treating the plate and thereafter enlarging the holes to a size at least equal to that of the pins by forcing a hardened ball or drift of a greater size than said given hole size through the holes and forming lips projecting from one side of the plate and extending around the end of each hole from which the ball or drift emerges, compressing the plate between flat dies and thereby forcing back into each hole that part of each lip which is nearer the center of the plate and opposite the load-bearing area of the respective hole to form an elastic ridge projecting into the hole, and pushing the pins into the holes and partially thereby pushing out said ridges which thereby serve to hold the pins against the respective load-bearing areas.

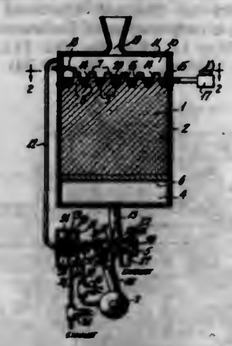
3,092,958
FREE PISTON ENGINE
Andrew William Duncan, 1434 Queen St. W., Caledon, Ontario, Canada
Filed Sept. 11, 1961, Ser. No. 137,207
14 Claims. (Cl. 60—14)



1. A free piston engine including a cylinder having a plurality of spaced apart exhaust ports therein and means for the admission thereto of air and fuel; a plurality of pistons operable within said cylinder and piston rods extending outwardly from said pistons, said pistons reciprocating within said cylinder compressing said fuel and air at opposite ends of said cylinder to the point of compression ignition and moving inwardly of said cylinder to compress a further quantity of said fuel and air mixture therebetween at substantially the center of said cylinder to a point of compression ignition; and said exhaust ports permitting burned gases from said ends of said cylinder to evacuate said cylinder during the compression of said fuel and air mixture in the center of said cylinder, and said exhaust ports permitting evacuation of burned gases from the center of said cylinder upon said pistons compressing said fuel and air mixture at said ends of said cylinder.

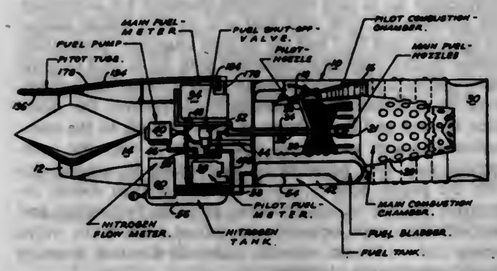
3,092,959
PROCESS FOR GENERATING GASES AND APPARATUS THEREFOR
Arch C. Scurlock, Alexandria, Keith E. Rumbel, Falls Church, and Raymond Friedman, Alexandria, Va., assignors to Atlantic Research Corporation, Alexandria, Va., a corporation of Virginia
Filed Nov. 6, 1957, Ser. No. 694,894
17 Claims. (Cl. 60—35.4)

1. A process for generating gases which comprises continuously extruding a continuous mass of plastic monopropellant composition which burns to produce gaseous combustion products, said composition having sufficient cohesive strength to retain a formed shape requiring finite stress to produce flow, having a minimum tensile strength of about 0.01 p.s.i., and being capable of continuous flow at ambient temperatures under a maximum shear stress at a wall of about 10 p.s.i., into a combustion chamber at a rate at least as high as the linear burning rate of the propellant material, through plurality of a shaping orifice, burning the leading faces of the ad-



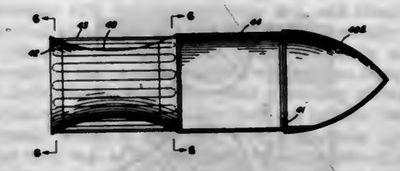
vancing shaped masses within said combustion chamber, said leading faces forming the burning surfaces of the extruding propellant and controlling the total burning surface area of the extruding propellant and, thereby, the mass rate of gas generation, by varying the cross-sectional area of the shaping orifices.

3,092,960
FUEL CONTROL SYSTEM FOR RAMJET ENGINE
William E. Worley and Richard B. Farrar, Mishawaka, Ind., assignors to The Bendix Corporation, a corporation of Delaware
Filed Apr. 10, 1958, Ser. No. 727,739
13 Claims. (Cl. 60—35.6)



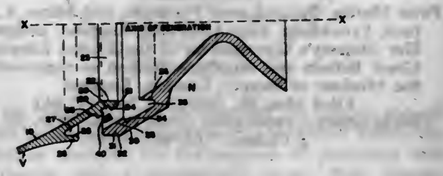
3. In a fuel feed system for a ramjet engine having a combustion chamber and independently operating thrust producing apparatus for launching said ramjet engine to a self-sustaining speed, the combination of a fuel tank; a conduit for delivering pressurized fuel from said tank to said combustion chamber; a pilot fuel meter responsive to ram air pressure operatively connected to said conduit for controlling the fuel flow therethrough as a function of mass air flow through said engine; a main fuel meter responsive to flight Mach number and ambient air pressure operatively connected to said conduit in parallel flow relationship with said pilot fuel meter for controlling fuel flow through said conduit in accordance with a predetermined flight Mach number vs. flight altitude relationship; and an air turbine driven fuel pump operatively connected to said conduit for pressurizing the fuel flowing therethrough.

3,092,961
ROCKET NOZZLES
Carzon Dobell, P.O. Box 643, Nassau, Bahamas
Filed Oct. 1, 1959, Ser. No. 843,805
20 Claims. (Cl. 60—35.6)



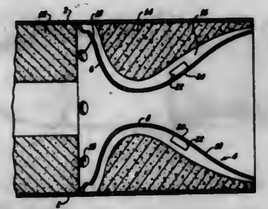
1. A reinforced rocket nozzle comprising a nozzle body having a constricted intermediate waist portion and flaring end portions; high tensile strength reinforcing linear elements extending longitudinally of said nozzle body and spaced from one another peripherally about said nozzle body and secured to respective flaring ends thereof; a spirally wound element wrapped under tension around said nozzle over said reinforcing linear elements, so that said linear elements are tensioned by the tensioning of said spirally wound element when wrapped thereon and causing said linear elements to be forced into contact with the constricted surface of the nozzle, said spirally wound element thus coacting with said linear elements to place the nozzle body under combined radial and longitudinal compression; and means for securing said spirally wound element in place.

3,092,962
CASINGS FOR ROCKET MOTORS
Memnon J. Wood, Huntsville, Ala., assignor to Thiokol Chemical Corporation, Bristol, Pa.
Filed Mar. 16, 1960, Ser. No. 15,408
9 Claims. (Cl. 60—35.6)



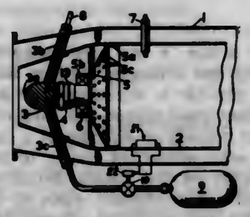
1. In a rocket motor, a two part casing having successive converging and diverging sections with a throat therebetween to provide a nozzle at one end through which the propellant gases escape, the parts of the casing being separable to provide an opening of a size sufficient for permitting a solid propellant charge to be placed in the casing forwardly of the nozzle throat, said nozzle converting pressure of propellant gases to thrust as it passes therethrough and producing stresses longitudinally of the casing which change from tension to compression along the converging section, and a peripheral joint on the converging section of the casing for connecting the separate casing parts, said joint being formed by the ends of the casing parts telescoped one in the other and so shaped as to form opposing shoulders normal to and in the plane of the converging section, a key between said shoulders to complete the joint, and said joint being located at a place along the inclined converging casing section nearest to the point of zero longitudinal load in the casing to provide the minimum opening required to insert solid propellant charge whereby reducing the longitudinal stress on the joint to a minimum.

3,092,963
VECTOR CONTROL SYSTEM
Herbert R. Lawrence, Atherton, Calif., assignor to United Aircraft Corporation, a corporation of Delaware
Filed Dec. 15, 1960, Ser. No. 75,956
4 Claims. (Cl. 60—35.54)



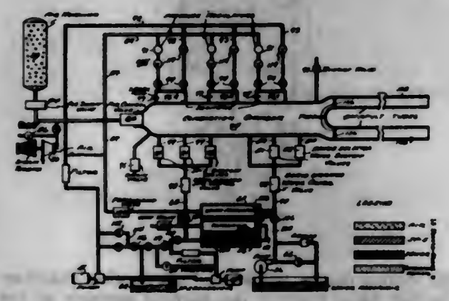
1. In a solid propellant rocket engine having a convergent-divergent discharge nozzle, said engine being provided with a main solid propellant which burns at a relatively high temperature and exhausts through said nozzle, the improvement comprising a second solid propellant in said rocket engine, said second solid propellant burning at a relatively low temperature and having clean gas characteristics by comparison with said first propellant, means communicating the exhaust gas from the second propellant to a first continuously open outlet from said second solid propellant to the convergent section of the nozzle whereby at least part of the gas from said second propellant is directed to flow along substantially the entire length of the inner surface of the nozzle and a second outlet on said nozzle in communication with said second propellant means for controlling the opening in said second outlet whereby at least part of said gas can be injected transversely in said nozzle whereby gas from said second solid propellant provides nozzle cooling and thrust vector control.

3,092,964
METHOD OF RELIGHTING IN COMBUSTION CHAMBERS
Peter Martin, Bentley, near Farnham, and James A. Bamford, Crookham, near Aldershot, England, assignors to Her Majesty's Government of the United Kingdom of Great Britain and Northern Ireland as represented by the Minister of Supply, London, England
Filed Mar. 30, 1955, Ser. No. 497,861
Claims priority, application Great Britain Mar. 30, 1954
2 Claims. (Cl. 60—39.09)



1. In a gas turbine or ram jet engine, a combustion chamber defining a combustion zone and having an air inlet and an outlet for combustion gases; a fuel injector comprising a body having a discharge nozzle in its end face arranged to inject fuel into said combustion chamber and a shroud enclosing said body and defining therewith an annular passage opening into said combustion chamber around said nozzle, means to admit air into said annular passage, means to introduce oxygen into said annular passage and means located in said combustion chamber responsive to a condition indicating flame extinction and operatively connected to said second mentioned means whereby the flow of oxygen may be automatically initiated and air and oxygen are mixed in said annular passage before being ejected around said nozzle.

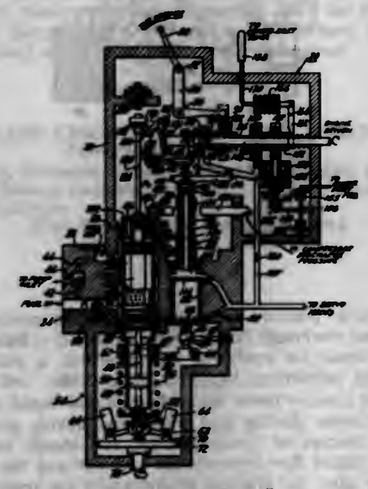
3,092,965
AUTOMATIC PRESSURE CONTROL FOR A GAS GENERATING CHAMBER
Bernard Pearlman, Morristown, and Alexander H. Bohr, Sparta, N.J., and Thomas W. Thompson, Nashua, N.H., assignors to Thiokol Chemical Corporation, Trenton, N.J., a corporation of Delaware
Filed May 11, 1959, Ser. No. 812,483
3 Claims. (Cl. 60—39.26)



1. A powerplant for generating high pressure and temperature gases comprising, in combination, an elongated combustion chamber, separate fluid accumulators for storing fuel and cooling water, a plurality of conduits connecting each of said accumulators with said combustion chamber to deliver fuel at separate axially spaced points and to deliver cooling water at different and separate axially spaced points, piston means for delivering fluid from said accumulators through said conduits, main and selector valve means controlling the flow from said accumulators through each of said conduits to said combustion chamber, means including a main valve for supplying compressed air to said combustion chamber for admixture and combustion with said fuel and to said piston means for igniting said fuel and air in said chamber, presettable control means operably connected with all of said selector valve means and operable upon activation of the powerplant to selectively and automatically control the operation thereof and the volume of flow of fluids to the combustion chamber at each of said points to vary the combustion rate and pressure of said gases in accordance with the preset control condition, and control means responsive to combustion chamber pressure fluctuation and connected to and operable to adjust said main valve means and said main valve to maintain constant pressure in said combustion chamber.

3,092,966
GOVERNOR FOR GAS TURBINE ENGINES INCLUDING INLET CONDITION BIAS DURING STEADY STATE OPERATION
Andrew A. Kuzmitz, South Bend, Ind., assignor to The Bendix Corporation, a corporation of Delaware
Continuation of application Ser. No. 413,318, Mar. 1, 1954. This application July 5, 1957, Ser. No. 670,347
3 Claims. (Cl. 60—39.28)

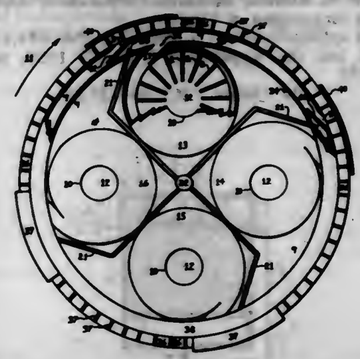
1. An engine speed governor comprising a flyweight device producing a force variable with instantaneous values of engine speed and a speed reference device including a throttle, a cam contoured for both axial and rotational movement movable in one of said directions by said throttle, and a governor spring producing a force opposing said flyweight force, a servo-mechanism interposed between said throttle and said governor spring including a hydraulically actuable servo motor member operably connected to said governor spring, a hydraulic pressure chamber formed on one side of said member, a servo valve for controlling the effective pressure in said chamber, said servo valve being controlled by said cam for varying the hydraulic pressure in said chamber, means responsive to an engine operating temperature for actuating said cam in the other of said directions and independently of said throttle to vary the force of said gover-



nor spring means for fixing the idle speed setting of said governor spring irrespective of the adjusted position of said throttle, means for adjusting the maximum selectable speed setting of said governor spring including a spring retainer for said governor spring, lever means for transferring the force from said throttle to said spring retainer, and means for adjusting said lever means such that the effective lever arm acting on said spring retainer is varied to effect a corresponding variation in the maximum speed setting of said governor spring and at idle speed there is no effective change in said lever arm.

3,092,967
SUPER-CHARGED FIRE JET TORQUE AND PROPULSION REACTION ENGINE
James N. Preston, 1633 W. Campbell, Phoenix, Ariz.
Filed Sept. 15, 1961, Ser. No. 138,362
3 Claims. (Cl. 60—39.35)

1. A reaction engine comprising; a combustion chamber contained within a combustion outer cylinder by means of a combustion ring disc which concentrically adjoins one end of said combustion outer cylinder and a center disc which concentrically adjoins the opposite end of said combustion outer cylinder; said combustion chamber contained on its axis-toward side by means of a concentric combustion inner cylinder which concentrically adjoins said combustion ring disc and said center disc; said combustion chamber provided with a number of combustion air intake ports located generally in the combustion inner cylinder; said combustion chamber provided with a number of combustion exhaust ports located generally in the combustion outer cylinder; each combustion exhaust port provided with a substantially larger cross-section area than that of each combustion air intake port; the combustion chamber provided with at least one fuel intake jet located generally in the combustion inner cylinder; an axle located concentric with the combustion outer cylinder and concentrically affixed to the center disc and which rotates on bearings within a stationary hub; a back-pressure disc affixed axially concentric to said stationary hub; a plurality of radial back-pressure vanes; each radial back-pressure vane being in connection with the back-pressure disc and extending in a general axial direction for a distance generally across the plane of the combustion chamber closely adjacent generally to the periphery of the combustion outer cylinder; each said back-pressure vane extending outward for a distance in a radial direction from an axially concentric perimeter which is provided with a diameter generally larger than that of the periphery of the combustion outer cylinder; a number of generally centrifugal-type axle-driven planetary air compressors connected to the center disc and located generally at a distance from the axis of the axle; the planetary axle of each said planetary air compressor being rotatable around its axis by means of a suitable torque transmission train, generally a gear train, which gears the planetary axle of each said planetary air compressor to the stationary hub and its assembly for the purpose of rotating each said planetary axle at a higher r.p.m. velocity than that of the axle thereby activating each planetary air compressor to compress expandable fluid, generally air, continuously through each combustion air intake port into the combustion chamber



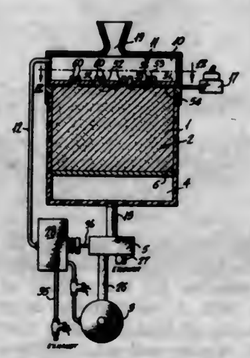
when the center disc and its assembly are rotated around the axis of the axle; thermal energy provided within the combustion chamber for the purpose of providing said fluid therein with a substantially larger fluid volume therein by means of fluid expansion thereby providing a fluid exhaust velocity and p.s.i. pressure to said larger fluid volume at each combustion exhaust port to a degree approaching the intake fluid velocity and p.s.i. pressure of compressed fluid within each combustion air intake port prior to entering said combustion chamber; any combustible fuel being forced generally by pump means through the fuel intake jet into said combustion chamber wherein said fuel is ignited by ignition means to compressed fluid, generally compressed air, thereby providing thermal energy and a larger fluid volume therein; the larger fluid volume consisting generally of ignited and expanding combustion gases and continuously exhausting from the combustion chamber through at least one combustion exhaust port generally directly into the plane and influence of the radial back-pressure vanes generally from the axis-toward side of said radial back-pressure vanes; a means located generally within the combustion chamber for the purpose of directing the exhausting larger fluid volume from said combustion chamber and each combustion exhaust port in a general axially transverse direction and generally directly into the plane and influence of the radial back-pressure vanes in a general

tangent general axially transverse direction generally from the axis-toward side of said radial back-pressure vanes; the continuous exhausting of the larger fluid volume from the combustion chamber at each combustion exhaust port providing a continuous reaction pressure which rotates each said combustion exhaust port, combustion chamber assembly, and planetary air compressors around the axis of the axle and activates the planetary axle of each said planetary air compressor by torque-transmission means thereby providing continuous compression of fluid into the combustion chamber thereby continuing the cycle providing continuous torque energy and propulsion thrust from thermal energy; said exhausting larger fluid volume thereupon impinging against a surface area of each radial back-pressure vane in the path of said exhausting larger fluid volume which provides a fluid back-pressure against said exhausting larger fluid volume and each combustion exhaust port of the combustion chamber thereby providing a substantial increase in the torque energy of the engine over the torque energy of a simple reaction engine.

3,092,968
PROCESS FOR GENERATING GASES AND APPARATUS THEREFOR

Arch C. Scurlock, Arlington, Keith E. Rumbel, Falls Church, and Raymond Friedman, Alexandria, Va., assignors to Atlantic Research Corporation, Alexandria, Va., a corporation of Virginia

Original application Nov. 6, 1957, Ser. No. 694,894. Divided and this application Dec. 17, 1959, Ser. No. 860,291
12 Claims. (Cl. 60—39.47)

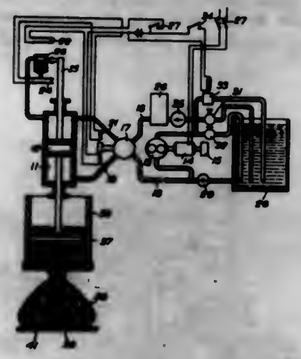


1. A gas generating apparatus comprising means forming a storage chamber, a plastic, shape-retentive monopropellant contained therein which is extrudible under pressure at ambient temperature, said monopropellant being an ignitible composition which is self-sufficient in its oxident requirements and which burns to produce hot combustion gases, means forming a combustion chamber, partition means having an orifice therethrough separating said storage chamber and said combustion chamber, means for progressively extruding a continuous mass of said monopropellant from said storage chamber through said orifice into said combustion chamber at a rate at least as high as the linear burning rate of the monopropellant, said mass being laterally shaped by said orifice, and a relatively narrow flow-divider bridging said orifice for progressively recessing the leading face of the laterally-shaped mass extruding through said orifice, and means for igniting said extruded, shaped mass in the combustion chamber.

3,092,969
OPERATION OF HYDRAULIC PRESSES

Donald Firth and James D. Hamilton, East Kilbride, Scotland, assignors to National Research Development Corporation, London, England, a British corporation

Filed Aug. 15, 1960, Ser. No. 49,681
1 Claim. (Cl. 60—52)

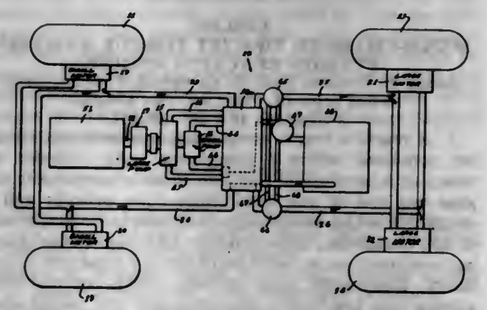


Hydraulic pressure apparatus for exerting pressure on a resilient workpiece comprising a hydraulic cylinder and piston, liquid for operating the apparatus, a pump for supplying pressurized liquid to the cylinder, said pump acting as a motor under return flow of said liquid, a main driving motor driving said pump and having provision for the storage of kinetic energy, and means for controlling liquid flow between the cylinder and the pump whereby after the pressure stroke, under the resilient recovery of a workpiece, the liquid is returned from the cylinder through the pump to cause it to act as a motor rotating in the same direction as the main driving motor on the pressure stroke and thereafter the return stroke is completed.

3,092,970
VARIABLE RATIO HYDRAULIC VEHICLE DRIVE

Achilles C. Sampietro, Birmingham, Mich., assignor to Thompson Ramo Wooldridge Inc., Cleveland, Ohio, a corporation of Ohio

Filed Nov. 16, 1960, Ser. No. 69,666
4 Claims. (Cl. 60—53)



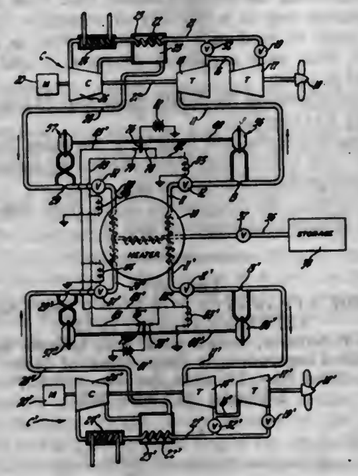
1. A hydraulic drive system for a vehicle comprising a first hydraulic pump having a predetermined fixed displacement, a second hydraulic pump having a predetermined fixed larger displacement, a first hydraulic motor for connection to a wheel of a vehicle having a predetermined first fixed displacement, a second hydraulic motor for connection to another wheel of the vehicle having a predetermined second larger fixed displacement,

conduit means connected between the pumps and the motors for delivering the outputs of the pumps to the motors, and valve means in said conduit means for selectively delivering the output of either one or both of said pumps to either one or both of said motors, said predetermined displacements chosen so that successive speed increase can be obtained in a predetermined pattern without requiring change in the pump speed by connecting in sequence the first pump to the first and second motors, then to the second motor, and then to first motor; then connecting the second pump to the first and second motors, then to the second motor, and then to the first motor; and then connecting both the first and second pumps to the first and second motors, then to the second motor, and then to the first motor.

3,092,971
FLUID CIRCUIT CONTROL FOR TURBINE POWERPLANT HEATERS

Paul M. Stivender, South Euclid, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Jan. 13, 1958, Ser. No. 708,605
14 Claims. (Cl. 60—59)



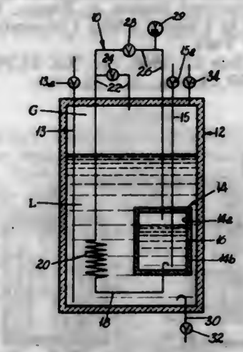
1. A closed circuit gas turbine power plant, comprising, in combination, a heater, two gaseous motive fluid circuits connected to the heater, each circuit including motive fluid circulating means, motive fluid cooling means, heater inlet and outlet lines, and valves in the said lines; and means responsive to a break in one of the circuits for closing both said valves in said circuit to isolate that circuit from the heater.

3,092,972
LIGHT WEIGHT LIQUID HELIUM CONTROL SYSTEM

Richard M. Poorman and George C. Haettinger, Indianapolis, Ind., assignors to Union Carbide Corporation, a corporation of New York

Filed Oct. 22, 1958, Ser. No. 768,960
10 Claims. (Cl. 62—52)

4. A method of reducing the weight of an airborne fluid control system comprising containing a body of liquefied helium within the control system and partially insulating such body from the effects of ambient heat by surrounding the liquefied helium body with a body of a second low-boiling liquefied gas; and utilizing the liquefied helium as a source of gas pressure for said control system by converting said liquefied helium to gaseous helium by heat exchange with the second liquefied gas body within

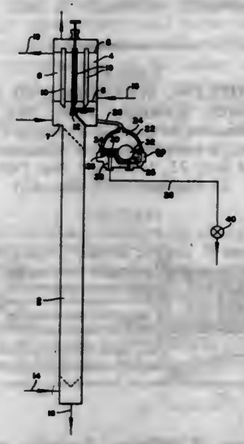


said control system at a temperature, pressure, and volume suitable for actuating said control system.

3,092,973
CRYOGENIC APPARATUS

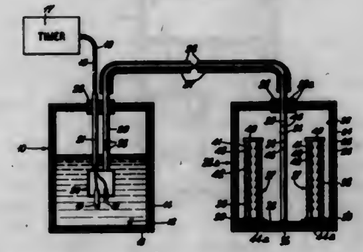
Robert W. Hughes, Greensburg, Pa., assignor to Joy Manufacturing Company, Pittsburgh, Pa., a corporation of Pennsylvania

Filed Dec. 5, 1960, Ser. No. 73,729
2 Claims. (Cl. 62—55)



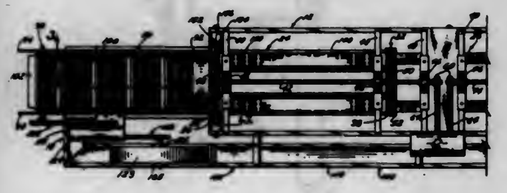
1. A cryogenic apparatus comprising, a cryogenic column being thermally operable to remove energy from a selected gaseous constituent and form a liquid product of such constituent, means in said column for accumulating such liquid product, said column being operable within a range of pressures and temperatures which continually causes a portion of such liquid product to return to such gaseous state, a chamber, conduit means connecting said chamber with said accumulating means, said chamber being located so that such liquid product gravitationally flows through said conduit to said chamber, said conduit being of sufficient cross sectional area to accommodate flow of such liquid product from said accumulating means to said chamber and to accommodate flow of such liquid product in a gaseous phase from said chamber to said accumulating means, and control means in said chamber responsive to the level of such liquid product for permitting flow of such liquid product from said chamber to a remote location.

3,092,974
METHOD AND APPARATUS FOR CONTROLLED FREEZING OF BIOLOGICALS
Wilfried Haumann and Dogan A. Esenc, Indianapolis, Ind., assignors to Union Carbide Corporation, a corporation of New York
Filed July 21, 1960, Ser. No. 44,397
20 Claims. (Cl. 62—62)



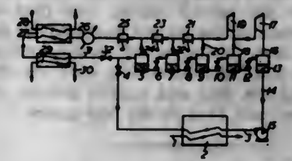
1. A method for cooling and freezing biological substance in a predetermined manner by heat exchange with a vaporized liquefied gas comprising the steps of providing said biological substance in a storage zone; providing a liquefied gas body having a boiling point below about —183° C. at atmospheric pressure; vaporizing a portion of said liquefied gas body independently of the temperatures of said biological substance and said storage zone at an adjustable rate; and uniformly distributing such vapor in said storage zone in heat exchange with said biological substance so as to uniformly cool and freeze said biological substance in said predetermined manner.

3,092,975
ARTICLE CHILLING METHOD AND APPARATUS
Ralph S. Zebarth, Hickman Mills, Mo., assignor, by mesne assignments, to Gordon Johnson Company, Kansas City, Mo., a corporation of Missouri
Filed July 21, 1958, Ser. No. 749,804
13 Claims. (Cl. 62—63)



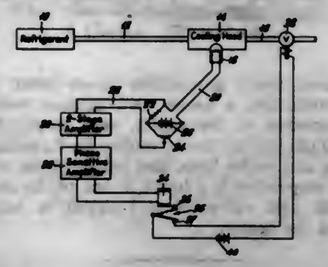
3. The process of reducing the body temperature of freshly killed birds which consists of maintaining a liquid bath at a depth amply sufficient to cause substantially full immersion of birds introduced thereinto; producing a high volume, unidirectional, generally horizontal, swiftly and continuously flowing current of the entire body of said liquid in the bath; maintaining the temperature of the liquid in the bath appreciably below said body temperature of the birds; releasing the birds into the bath for free movement therein and bodily advancement in a substantially horizontal direction and in sole response to the force of said current of liquid in the bath; maintaining the birds substantially surrounded with the liquid while the same are within the bath; constantly tumbling the birds in the bath as they are advanced, whereby to eliminate quiescence between the liquid and the surfaces of the birds and thereby enhance heat absorption; and removing the carcasses from the liquid when the body temperature thereof has been lowered to a predetermined level.

3,092,976
REFRIGERATION OF ONE FLUID BY HEAT EXCHANGE WITH ANOTHER
Hadi Hashemi-Tafreshi, London, England, assignor to Conch International Methane Limited, Nassau, The Bahamas, a Bahamian company
Filed June 1, 1961, Ser. No. 114,198
6 Claims. (Cl. 62—117)



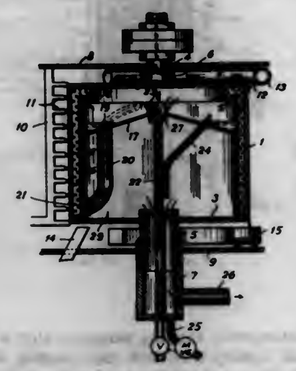
1. A method of cooling a first fluid with a second fluid which comprises:
(*a*) passing the second fluid as a liquid at a temperature lower than that of the first fluid in indirect heat exchange with the first fluid, the pressure of the second fluid being such that it remains as a liquid throughout such heat exchange step;
(*b*) expanding the warmed second fluid from the heat exchange step in a plurality of expansion chambers in series to produce a cold second fluid as a liquid and, from each expansion chamber, a cold second fluid as a gas;
(*c*) recompressing the liquid from step (*b*) and recycling it to step (*a*);
(*d*) recompressing and liquefying the gases from step (*b*), said liquefaction being effected by indirect heat exchange with a third fluid, and
(*e*) recycling the compressed liquid from step (*d*) to the expansion chambers of step (*b*).

3,092,977
CONTROL APPARATUS FOR LOW TEMPERATURE REFRIGERATION SYSTEM
Ransom P. Skinner, Indianapolis, Ind., assignor to Union Carbide Corporation, a corporation of New York
Filed Nov. 17, 1959, Ser. No. 853,537
2 Claims. (Cl. 62—202)



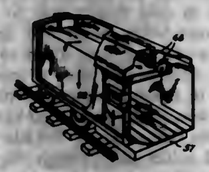
1. A refrigerating system for cooling an infra-red detection cell which comprises a cooling head for mounting adjacent to the detection cell, a first conduit for carrying liquid refrigerant directly to the cooling head, where it is vaporized and a second conduit for carrying vaporized refrigerant away from the cooling head, valve means in said second conduit for controlling the flow of refrigerant in the system, a temperature sensing device adjacent to the cooling head, circuit means associated with said sensing device for developing a signal proportional to the temperature of the sensing device, and means for utilizing such signal to operate the valve means, said temperature sensing device comprising a thermistor located in the second conduit between the cooling head and the valve means, and heating means for heating the thermistor when the valve means is closed.

3,092,978
EVAPORATOR COOLERS
Joergen Lorentzen, Naerum, Denmark
(A/S Atlas, Balderupgade 3, Copenhagen, Denmark)
Filed Dec. 2, 1960, Ser. No. 73,419
Claims priority, application Denmark Dec. 4, 1959
11 Claims. (Cl. 62—216)



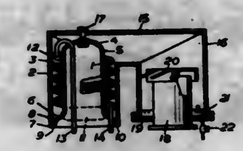
1. Evaporator cooler, comprising an outer substantially cylindrical cooling wall forming a drum and having a vertical axis, an inner wall at a distance from the innerside of said outer cooling wall so that said walls define between them a substantially narrow annular chamber, a bottom wall for said drum, a top wall for said drum, conduit means internally disposed of said drum for conducting a fluid evaporable cooling medium to the lower portion of said annular chamber, said inner wall having its upper edge situate at a distance from the innerside of the top wall so as to define an aperture communicating with the annular chamber and extending radially inwards, an intermediate wall forming a substantially closed central chamber with said top wall which communicates through said aperture with said annular chamber, conduit means extending from the bottom of said central chamber to the lower portion of the annular chamber and further conduit means for conducting cooling medium vapor away from said central chamber.

3,092,979
REFRIGERATOR CAR
John Lamont, St. Anne de Bellevue, Quebec, Canada, assignor to Canadian National Railway Company, Montreal, Quebec, Canada
Filed Oct. 27, 1960, Ser. No. 65,380
3 Claims. (Cl. 62—239)



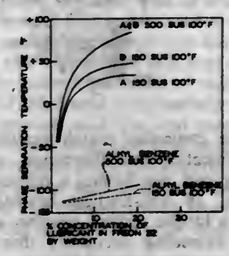
3. A rail car having a pair of opposite side doors; a ceiling, side walls and a platform defining a loading space and defining a plenum surrounding said loading space; a fan mounted in said plenum above said loading space; a duct extending to both sides of said car above said doors and communicating with the intake of said fan; each door having an opening at its top edge communicating with said duct and an opening at its bottom edge communicating with the portion of said plenum below said platform, said fan having its exhaust opening into said plenum portion above said ceiling; openable closure means in said duct on both sides of said fan, and a mechanical refrigeration unit mounted in said door.

3,092,980
COOLERS FOR COMPRESSORS
John Rutger Munck af Rosenschöld, Saltsjobaden, and Jan Graf, Enskede, Sweden, assignors to Atlas Copco Aktiebolag, Nacka, Sweden, a corporation of Sweden
Filed Mar. 18, 1959, Ser. No. 800,242
Claims priority, application Great Britain Mar. 18, 1958
1 Claim. (Cl. 62—452)



A cooler for compressors comprising in combination concentric inner and outer casings providing an annular pressure fluid tight space therebetween, a tube within said annular space for conducting cooling liquid, means in said inner casing forming an air-tight wall between said annular space and the interior of said inner casing adjacent one end of said casing preventing fluid flow axially from end to end of said inner casing, means at the opposite end of said inner casing forming an outwardly projecting flange upon which said outer casing may rest with its lower end and forming a wall confining the annular space at said opposite end of the inner casing, a cover for the upper end of the outer casing forming an air passage communicating with said annular space, and screw means for connecting said one end of the inner casing with said cover and for pressing said outer casing towards said flange.

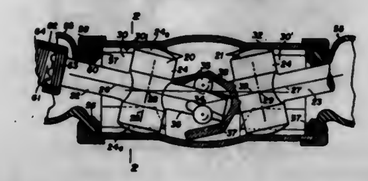
3,092,981
REFRIGERATION APPARATUS
Charles R. Begeman, Grosse Pointe Woods, Mich., and Victor A. Williamitis, Dayton, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Continuation of application Ser. No. 527,216, Aug. 9, 1955. This application July 15, 1960, Ser. No. 43,149
7 Claims. (Cl. 62—468)



1. A refrigerating apparatus of the sealed compressor type comprising a compressor, condenser and evaporator in refrigerant flow relationship, and a working fluid within said apparatus in contact with moving parts of said compressor which require lubrication, said working fluid consisting essentially of a refrigerant and a chemically inert, wax-free lubricant soluble in said refrigerant, said refrigerant being a fluoro halo substituted hydrocarbon selected from the class consisting of methane and

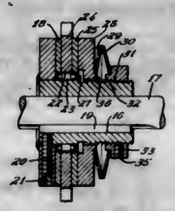
ethane and being in the liquid and gaseous phases within the operating temperatures of said refrigerating apparatus, said lubricant being present in an amount sufficient to lubricate the moving parts of said compressor and comprising an alkyl benzene in which the alkyl groups contain 1 to about 50 carbon atoms and having a viscosity of about 50 to 2,000 seconds Saybolt measured at 100° F.

3,092,982
UNIVERSAL JOINT
Ernest Wildhaber, Brighton, N.Y.
(124 Summit Drive, Rochester 20, N.Y.)
Filed Sept. 5, 1961, Ser. No. 136,413
10 Claims. (Cl. 64—21)



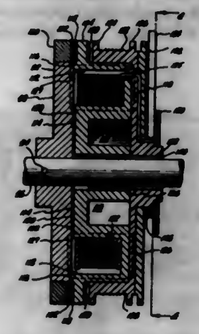
1. A double universal joint comprising two end parts and a connecting member, a torque-transmitting pivotal connection between each end part and said connecting member so that the axis of each end part intersects the axis of said connecting member, said two pivotal connections being spaced apart, and centering means constraining the axes of said two end parts to intersect between said pivotal connections, said centering means comprising an externally grooved projection coaxial and rigid with one end part, an internally grooved portion surrounding said projection and being coaxial and rigid with the other of said two end parts, the grooves of said projection extending at an angle to the adjacent grooves of said internally grooved portion, and balls engaging said grooves.

3,092,983
TORQUE CLUTCH
Mortimer J. Huber, 2141 N. Avon, St. Paul, Minn.
Filed Dec. 19, 1960, Ser. No. 76,609
6 Claims. (Cl. 64—30)



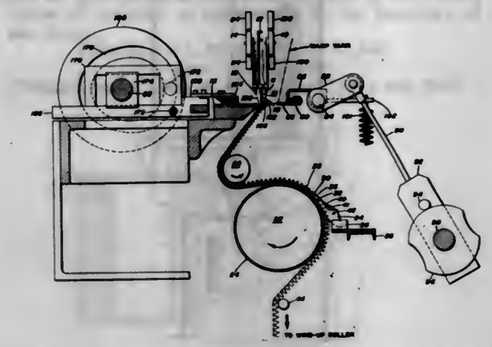
4. A torque controlled clutch including a disc having an axially projecting hub thereupon, a portion of said hub adjoining said disc having a substantially cylindrical outer surface, an anti-friction bearing mounted upon said surface, a torque control member supported by said bearing and extending outwardly therefrom, a pair of friction discs supported by said bearing on opposite sides of said torque controlled member, the end of said hub being threaded and being generally rectangular in cross section, a bearing plate supported by said hub and slidable axially thereupon, said bearing plate having a generally rectangular opening therethrough to engage the generally rectangular portion of said hub, a nut on the hub outwardly of said bearing plate, and a concavo-convex washer interposed between said nut and said bearing plate.

3,092,984
CONTINUOUSLY SLIPPING MAGNETIC CLUTCH
Theodore A. Kramer, Los Angeles, Minard A. Leavitt, Playa Del Rey, and Arthur Thom, Inglewood, Calif., assignors to Telautograph Corporation, Los Angeles, Calif., a corporation of Virginia
Filed May 26, 1961, Ser. No. 113,002
11 Claims. (Cl. 64—30)



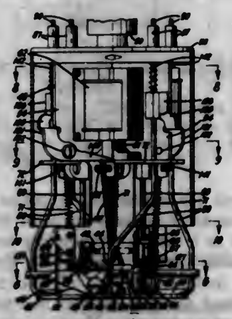
1. A continuously slipping magnetic clutch comprising: a drive disc fixedly mounted for rotation with a drive shaft, said drive disc having forward and rear faces and including an inner radial portion of magnetic material and an outer annular portion of non-magnetic material; a drum of magnetic material mounted for free rotation around said drive shaft adjacent to said drive disc, said drum having a forward and a rear surface, said forward surface including an annular slot dividing said forward surface into inner and outer planar surfaces, said outer planar surface projecting beyond the plane of said inner planar surface; a first facing of wear material impressed on said outer annular portion of said disc flush with the rear face of said drive disc; a second facing of wear material impressed on said outer planar surface of said drum, a one on said facings comprising a hard wear material and the other comprising a soft wear material, said first and second facings being positioned in continuous slipping friction contact to cause said drum to tend to rotate with said drive disc, the contacting wear materials maintaining an air gap between said inner planar surface of said drum and said rear face of said drive disc; a bobbin arrangement mounted within said annular slot for rotation with said drum; an electrical coil wound around said bobbin for generating a magnetic field through said drum and drive disc when said coil is energized by an electric current; a driven disc of non-magnetic material having forward and rear surfaces, said driven disc including an annular flange at a radial extremity of its forward surface and a collar having a longitudinal slot therein surrounding a hole which is centrally disposed in said driven disc to receive said drive shaft, said flange being positioned in pressure contact with an outer surface of said drum to cause said driven disc to rotate with said drum; a spacer disc mounted on said collar in pressure contact with the rear surface of said driven disc, said spacer disc having a slot extending radially from said collar; a flexible conductor extending around said collar and through the radial slot; means for connecting said conductor to said coil to energize said coil in response to current signals applied to said conductor; a circular spring clip having one end positioned in said longitudial slot and extending around said collar to secure a first turn of said conductor around said collar; and means positioned around the end of said collar to maintain said conductor in a spiral wrap around said collar when said drum is rotated.

3,092,985
FLAT BED WARP KNITTING MACHINE HAVING A PILE FORMING AND CUTTING ATTACHMENT
Russell R. Matthews, Cornwall, N.Y., assignor, by mesne assignments, to Mohasco Industries, Inc., Amsterdam, N.Y., a corporation of New York
Filed Mar. 7, 1960, Ser. No. 13,389
6 Claims. (Cl. 66—84)



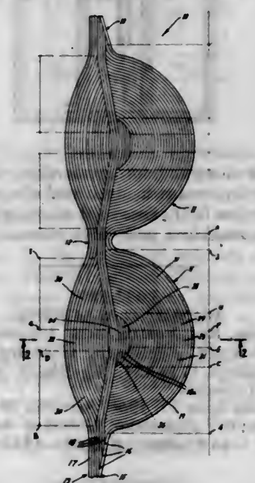
1. A loop pile cutting attachment for a flat bed warp knitting machine having a guide bar supporting a plurality of parallel pile loop guide wires extending from fixed positions adjacent the outer edge portion of the needle bed; a holder bar extending in spaced parallel relation below the guide bar; and a plurality of parallel, pile loop guiding and cutting members having their adjacent inner ends anchored to the holder bar and their adjacent outer end portions secured to the free ends of respective loop guide wires, the length of each pile loop guide wire being such that a plurality of courses of knitted pile fabric will be spaced thereover whereby the loop cutting lags behind the loop forming by a plurality of courses.

3,092,986
CLAMP AND CUTTER MECHANISM FOR KNITTING MACHINES
James D. Moyer, Wyomissing, Pa., assignor to Textile Machine Works, Wyomissing, Pa., a corporation of Pennsylvania
Filed Dec. 5, 1960, Ser. No. 73,653
15 Claims. (Cl. 66—140)



12. In a circular knitting machine having yarn feeding means, a rotatable cylinder, needles slidably mounted in said cylinder for forming yarns fed by said feeding means into knitted fabric, means for moving said yarn feeding means to move yarns fed thereby between knitting and non-knitting positions, means for severing said yarns when in said non-knitting position, means for clamping said yarns when in said non-knitting position, operating means for said yarn severing means, control means for said operating means, said control means being actuated by said yarns when in said non-knitting position, guard means having an active position to prevent said yarns from entering said clamping means and actuating said control means when said yarns are in said non-knitting position, means for moving said guard means to said active position, and pattern means for moving said guard means to inactive position.

3,092,987
ELEMENT OF APPAREL AND METHOD OF MAKING THE SAME
Alex Levine, 115 Cedar Ave., Hewlett, N.Y.
Filed Feb. 6, 1959, Ser. No. 791,704
4 Claims. (Cl. 66—176)

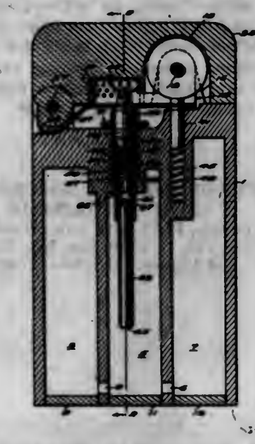


1. An integrally knit breast-receiving element of apparel comprising a longitudinally extending strip having continuous wales extending the full length thereof and areas on each side of said strip, the areas on one side comprising a first area in which the courses of said strip are progressively widened from adjacent one end of said strip toward a first point, a second area in which the courses of said strip are progressively narrowed from adjacent a second point toward the other end of said strip, and a third area between said first and second areas, the wales of said first area continuing through said third area, where the innermost of said wales from said first area is spaced from said strip, to become the wales of said second area, the courses of said third area progressively widening and then narrowing between said first and second points on the inside of said wales from said first area, the areas on the other side comprising connected fourth and fifth areas in which the courses of said strip are respectively progressively widened and then narrowed from adjacent said one end of said strip towards the other end thereof.

3,092,988
DISPOSABLE LIGHTER CONSTRUCTION
Frederick Charles Meyers, 916 Cole Drive, Brielle, N.J.
Filed Jan. 9, 1962, Ser. No. 165,184
9 Claims. (Cl. 67—7.1)

1. A lighter comprising a hollow body portion adapted to contain a flammable fuel, valve means mounted in said body portion for controlling the escape of said flammable fuel, a spark producing assembly for igniting said fuel, an elongated spring member including

wind shield means surrounding said valve means and having a portion adapted to bear upon said valve means to close said valve means, and cap means pivotally mounted on said body portion and having means thereon



engaging said elongated spring member, whereby movement of said cap means to open and closed positions on said body portion will cause said elongated spring member to release and close said valve means.

3,092,989
WASHING MACHINE

Anton Ludwig, Bad Voslau, near Vienna, Austria, and Gerold Fleissner, Egelsbach, Germany, assignors to Firma Fleissner G.m.b.H., Egelsbach, near Frankfurt am Main, Germany

Filed June 27, 1960, Ser. No. 39,182
Claims priority, application Germany June 26, 1959
16 Claims. (Cl. 68—158)



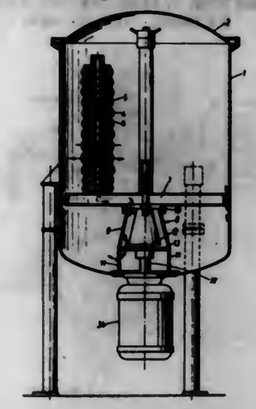
1. A device for wet treatment of materials having a specific gravity lighter than the washing medium employed comprising a receptacle for the washing medium, conveyor means at least partially immersible in said washing medium, said conveyor means having a plurality of compartmented elements each having a curved surface with perforation thereon, an inlet to said receptacle for materials being treated and an outlet for withdrawing materials which have been treated from said receptacle, means for moving said conveyor means from said inlet towards said outlet while simultaneously immersing said elements into said washing medium and thereafter withdrawing said elements from said washing medium to cause the material being treated to adhere due to suction to said conveyor means.

3,092,990
APPARATUS FOR TREATING TEXTILE PRODUCTS BY MEANS OF LIQUIDS

Pierre Schyns, Brussels, Belgium, assignor to Etablissements Callebaut-De Blicquy, societe anonyme, a company of Belgium

Filed Apr. 27, 1961, Ser. No. 106,121
Claims priority, application Belgium May 2, 1960
3 Claims. (Cl. 68—189)

1. Apparatus for treating textile products by means of liquids comprising in combination a closed liquid vessel, a receiver in said vessel, a plurality of perforated tubes for supporting the textile products mounted on said receiver and communicating therewith, an external liquid reservoir, a pump stator mounted in said vessel on the inlet of said receiver, a shaft in said stator, means for rotating said shaft, a pump rotor on said shaft for reversible liquid circulation in closed circuit through said re-

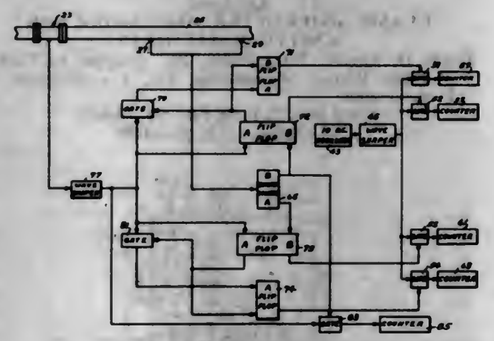


ceiver, said perforated tubes and said vessel, said rotor being provided with channels, hollow blades carried by said rotor, a socket provided around said shaft, a chamber limited by said shaft and said socket, the interior of said blades communicating with said chamber through said channels, and means for connecting said chamber to said external reservoir.

3,092,991
METER CALIBRATION

William Crawford Thompson, Jr., Decatur, Ga., assignor to Plantation Pipe Line Company, a corporation of Delaware

Filed Feb. 10, 1961, Ser. No. 88,520
8 Claims. (Cl. 73—3)



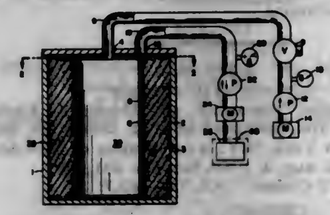
1. A system for calibrating a meter of the type for measuring the total amount of fluid flow by producing output pulses at a rate corresponding to the rate of fluid flow comprising means to indicate the start of a test interval and indicate the end of said test interval when a predetermined amount of fluid has passed through the meter to be calibrated after the start of said test interval, means to count the meter pulses produced by said meter to be tested occurring during said test interval, and means to measure the length of the interval between the start of said test interval and the next occurring meter pulse after the start of said test interval, the length of the interval between the first two meter pulses occurring after the start of said test interval, the length of the interval

occurring between the end of said test interval and the next occurring meter pulse after the end of said test interval, and the length of the interval between the first two meter pulses occurring after the end of said test interval.

3,092,992
APPARATUS AND METHOD FOR TESTING SOLID PROPELLANT FOR AGING

Ralph D. Doner, Huntsville, Ala., assignor to the United States of America as represented by the Secretary of the Army

Filed July 12, 1960, Ser. No. 42,448
7 Claims. (Cl. 73—19)
(Granted under Title 35, U.S. Code (1952), sec. 266)

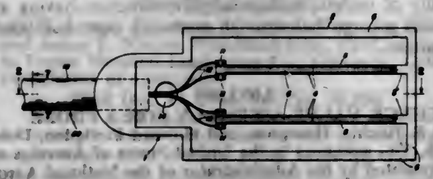


1. Apparatus for testing solid propellant having a central aperture therein comprising: means for enclosing said propellant; a hollow resilient means secured in said aperture, having an outer surface adapted to conform with the wall surface of said aperture; a porous coating secured to said resilient means in engagement with said propellant and separating said resilient means from said propellant; a first tube having one end passing thru said means for enclosing said propellant and flow-connected with the hollow of said resilient means; a second tube having one end passing thru said means for enclosing said resilient means and flow-connected adjacent said engagement of said coating and propellant; means flow-connected to the other end of said first-named tube, for controlling fluid pressure in the hollow of said resilient means; means flow-connected to the other end of said second-named tube, for controlling fluid pressure around the engagement of said resilient means, said coating and said propellant; a collection tank flow-connected to said last-named means for controlling fluid pressure, whereby a pressure differential can be created in said means for enclosing said propellant, by proper adjustment of said means for controlling fluid pressure, enabling gases created by aging of the propellant to be evolved into said collection tank.

3,092,993
STRAIN GAGES AND METHODS OF INSTALLING THE SAME

John D. Russell, Malibu, Calif., assignor to Microdot Inc., South Pasadena, Calif., a corporation of California

Filed Apr. 10, 1961, Ser. No. 101,949
9 Claims. (Cl. 73—88.5)

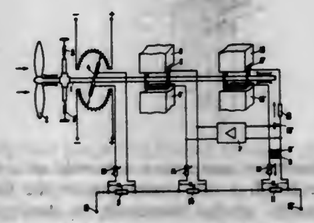


1. A wire strain gage comprising a flexible insulating receptacle; a strain responsive resistance filament mounted on the interior surface of said receptacle so as to be in contact with the test surface; a frictional and insulating coating applied to the surface of said filament; and means for producing a vacuum in said receptacle when the gage is applied to a test surface.

3,092,994
DEVICE FOR THE ELECTRIC MEASUREMENT OF ROTARY MOMENTS

Waldemar Möller, 10 Weinbergstrasse, Uberlingen (Bodensee), Germany

Filed July 13, 1959, Ser. No. 826,752
4 Claims. (Cl. 73—134)

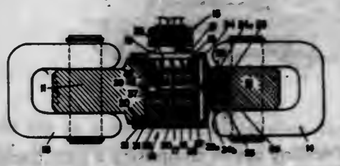


1. Electrical torque measuring apparatus which comprises force receiving means adapted to rotate about an axis under the influence of a measured force; fettering means adapted to limit the rotation of said force receiving means; means for producing a first electrical potential proportional to the degree of rotation of said force receiving means; inductive second electrical potential generating means driven by said force receiving means to generate a second potential proportional to the angular velocity of said force receiving means; voltage differentiating means adapted to receive said second potential and produce a third potential proportional to the derivative of said second potential with respect to time; and means for measuring said first, second, and third potentials as an indication of the torque exerted on said force receiving means.

3,092,995
FORCE MEASURING DEVICE

Irvin L. Glerum, Canoga Park, Calif., assignor to W. C. Dillon and Company, a corporation of California

Filed Oct. 28, 1960, Ser. No. 65,644
9 Claims. (Cl. 73—141)



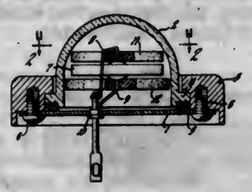
1. A measuring device comprising: a casing; first transformer means coupled within said casing; second transformer means coupled within said casing, said second transformer means being axially spaced from and in opposing relationship to said first transformer means; a common disc shaped armature member for said first and second transformer means axially interposed in spaced relationship between said first and second transformer means; a shaft axially extending through at least one of said transformer means, said shaft having coupled thereto said armature member, whereby axial movement imparted to said shaft will in turn effect movement of said armature member to cause an inverse variation in the magnetic flux of said first and second transformer means, and a corresponding change in the output voltages of said first and second transformer means.

3,092,996
SLING PSYCHROMETER
William J. Mayo, 6219 Loch Raven Road, Camp Springs, Md.
Filed Jan. 11, 1962, Ser. No. 165,542
10 Claims. (Cl. 73—338.6)



10. A psychrometer comprising a handle of a size to be held in one hand, a shaft extension on the forward end of the handle coaxial therewith, a sleeve device journaled upon the shaft extension and having an enlargement to be engaged by the fingers for turning, a crosshead secured to the sleeve device and extending equidistantly radially on opposite sides thereof and beyond opposite sides of the handle, sleeve elements pivotally secured to opposite ends of the crosshead, releasable detent means connected with the sleeve elements to secure them in a plurality of radially adjusted positions relative to the crosshead, radial socket members carried by the sleeve elements and adapted to extend parallel to the handle in coplanar relation thereto or transversely of the handle beyond opposite sides thereof, and wet and dry bulb thermometers detachably engageable with said socket members.

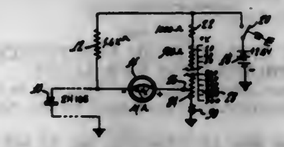
3,092,997
HEAT-SENSING DEVICE
George M. Gaskill, Kokomo, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Sept. 18, 1961, Ser. No. 138,903
7 Claims. (Cl. 73—355)



1. A heat sensing device comprising a light transparent housing, a heat sensitive element in said housing and a light shielding layer of an opaque material of low heat conductivity over said heat sensitive element to absorb and convert to heat light which would otherwise impinge on said element and to transmit such heat to said element slowly and at a relatively uniform rate.

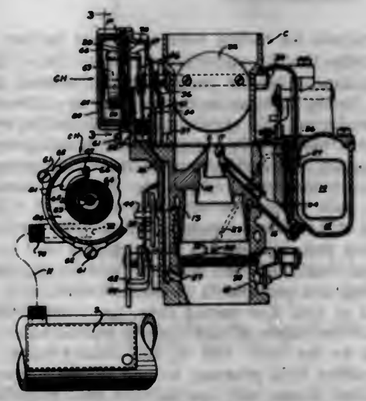
3,092,998
THERMOMETERS
Loy E. Barton, Princeton, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Aug. 8, 1960, Ser. No. 48,161
8 Claims. (Cl. 73—362)

7. A thermometer comprising a semiconductor diode, means for producing a flow of substantially constant current through said diode in a forward direction to thereby establish a voltage thereacross, said diode being responsive to temperature variations over a range of temperatures and having the characteristic of effecting variations in said voltage thereacross substantially linearly in response to temperature variations over said range while



said current therethrough remains substantially constant, and indicating means connected across said diode for indicating said voltage variations as a function of said temperature variations.

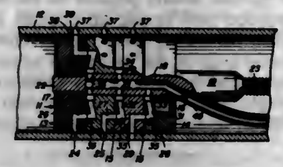
3,092,999
AUTOMATIC CHOKE
Olin J. Eickmann, Normandy, and Harold A. Carlson, Brentwood, Mo., assignors to ACF Industries, Incorporated, New York, N.Y., a corporation of New Jersey
Filed Aug. 4, 1959, Ser. No. 831,505
5 Claims. (Cl. 73—363.7)



3. An automatic valve control for a carburetor, said valve control comprising a closed housing, a thermostatic coil spring within a portion of said housing, means fixing one end of said spring aganist movement, an annular metal plate mounted in said housing and closing said housing portion, said metal plate positioned adjacent and coaxial to said thermostatic spring, said metal plate having appreciable mass and thickness and an inlet thereto for the passage of heated air into said metal plate structure, a plurality of outlets from said metal plate structure opening into said housing portion and spaced around the periphery of said metal plate structure adjacent to said coil spring for the passage of air from said wall structure into said housing portion, closed arcuate passages within said metal plate structure connecting said inlet to said plurality of outlets, said metal plate structure having an air outlet passage therethrough extending from said housing portion.

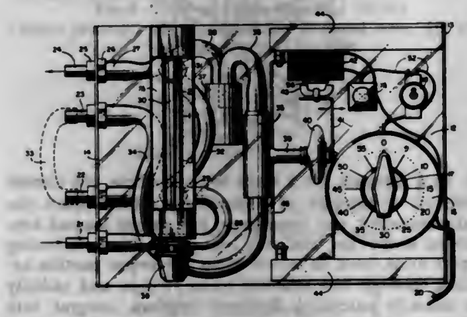
3,093,000
CHECK VALVE ASSEMBLY FOR A PROBE
Virgil S. Ritchie, Hampton, and Howard F. Ogden, Denbigh, Va., assignors to the United States of America as represented by the Administrator of the National Aeronautics and Space Administration
Filed May 27, 1960, Ser. No. 32,496
10 Claims. (Cl. 73—384)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. An atmospheric pressure sensor comprising a body having at least one row of inwardly extending peripheral orifices formed therein, there being a chamber formed in said body in communication with said orifices, means for simultaneously preventing outward flow and permitting



inward flow disposed in a majority of said orifices, and outlet means for connecting said chamber to a pressure measuring device.

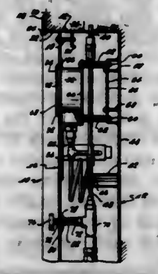
3,093,001
GAS SAMPLER
Dale D. Williams, 1702 Tucker Ave., McLean, Va.
Filed Feb. 1, 1960, Ser. No. 6,071
2 Claims. (Cl. 73—421.5)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A gas sampling apparatus comprising a gaseous flow rate indicator, a gaseous flow regulator, a pump assembly which includes a bellows having oppositely disposed movable walls defining an inner space, a valve housing containing an inlet valve and an outlet valve adapted to open and close alternately in accordance with the action of said bellows, a rigid conduit attached to one of said walls and connecting said inner space of said bellows to said housing at an intermediate point between said valves, a flexible arm supported at one end and having a U-shaped permanent magnet at its other end, a coil in spaced relationship to said magnet for vibrating said arm in response to alternating current, said arm being connected at a intermediate point between its ends to the other of said walls, means for actuating said coil in response to alternating current and gas conduits connecting said indicator, said regulator and said housing.

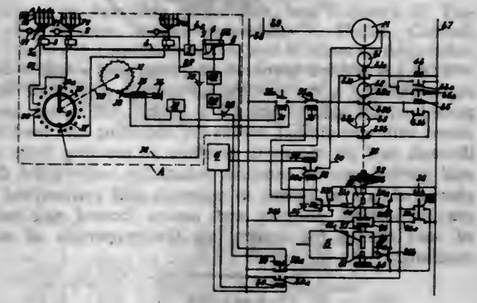
3,093,002
FLUSH MOUNTED, DUSTPROOF GAS SERVICE CABINET
Hugh H. Logan, Pasadena, George I. Doty, La Canada, and James F. Nelson, Woodland Hills, Calif., assignors to Logan Hospital Equipment Co., Glendale, Calif., a corporation of California
Filed Dec. 19, 1960, Ser. No. 76,958
4 Claims. (Cl. 73—431)

3. In an instrument enclosure, a rear housing having an open front side, a front panel overlying said open side of said housing, means releasably securing said panel to said housing, said panel having an opening, a gauge within said housing having a forward end removably projecting through said panel opening and a gauge face at said forward end, said panel having a locating surface aligned with said panel opening which encircles and engages said forward end of said gauge to laterally locate said gauge face in alignment with said panel opening, a forwardly acting, laterally deflectable spring support mounting said gauge on said housing and yieldably urging said gauge forwardly through said panel opening,



whereby said gauge has limited freedom of lateral movement in any direction to align itself with said panel opening, and cooperating means on said panel and gauge for limiting forward movement of the latter through said panel opening under the action of said spring support.

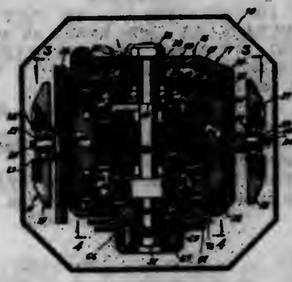
3,093,003
DISPLAY DEVICE FOR USE IN INSTALLATIONS FOR CYCLICALLY CHECKING, BY MEANS OF A LIMITED NUMBER OF APPARATUS THE VALUES OF A MAGNITUDE AT A MULTIPLICITY OF POINTS
Roland Cochinal, Paris, Jean Goupil, Fontenay-aux-Roses, and Jean Megy, Paris, France, assignors to Commissariat a l'Energie Atomique, Paris, France, a body corporate of France
Filed Jan. 26, 1959, Ser. No. 789,146
Claims priority, application France Jan. 27, 1958
19 Claims. (Cl. 73—432)



1. For use in a monitoring installation for cyclically checking the respective values of the magnitude of a physical factor in a multiplicity of fluid streams grouped in a plurality of groups, each group comprising at least one fluid stream, this installation including at least one measurement apparatus adapted to measure said physical factor, a plurality of conveying means each adapted to convey at least a portion of each of the fluid streams in one of said groups to said measurement apparatus, and cyclical switch means for operatively connecting said conveying means successively and repeatedly, at regular time intervals, to said measurement apparatus; a display device for indicating both the conveying means effectively operatively connected to said measurement apparatus and the conveying means which was operatively connected to said apparatus when the value of said magnitude has passed a predetermined limit for a particular group, said display device comprising, in combination, a first indicator element capable of displaying a plurality of different indications successively and repeatedly, each

of said indications identifying one of said groups respectively, driving means operatively connected with said switch means for shifting said first indicator element from one position indicative of one of said groups to the next position indicative of the next group in synchronism with the operation of said cyclical switch means, a second indicator element also capable of displaying a plurality of different indications successively and repeatedly, driving means operatively connected with said first indicator element for shifting said second mentioned indicator element from one position indicative of one group to the next position indicative of the next group in synchronism with the displacements of said first mentioned indicator element, and means under control of said measurement apparatus for stopping said second mentioned indicator element in response to the measurement by said apparatus of a value of said magnitude passing said predetermined limit for said particular group.

3,093,004
GAS ERECTED GYROSCOPE
Thomas O. Summers, Encino, Calif., assignor to Guidance Technology, Inc., Santa Monica, Calif., a corporation of California
Filed July 11, 1961, Ser. No. 123,173
16 Claims. (Cl. 74—5.43)



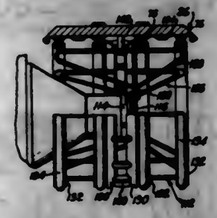
1. A gas erected gyrovertical comprising a sealed casing containing a gas erecting medium, a gyro rotor supported within said casing by a gimbal, jet means associated with said gimbal, means for impelling said medium through said jet means to produce an erecting force on said gimbal, gravity sensitive means for varying the discharge of said jet means to maintain said gyrovertical in gravity vertical position and means located externally of said casing for controlling the properties of said medium.

3,093,005
MEANS FOR JOINING FLEXIBLE BELTS
Val B. Dean, Englewood, Colo., assignor to The Union Supply Company, Denver, Colo., a corporation of Colorado
Filed Sept. 12, 1960, Ser. No. 55,485
11 Claims. (Cl. 74—232)



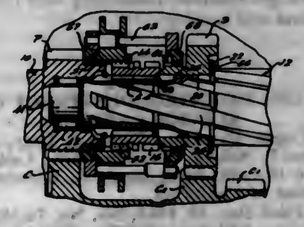
1. As an article of manufacture, a cleat device adapted to be mounted in groups and countersunk in aligned slots formed in the upper surface of abutting edge portions of a flexible belt and secured to said portions so as to form a smooth and substantially unobstructed conveying surface above said abutting edge portions comprising, a relatively long, rigid base portion having at least a pair of spaced bolt receiving openings, a plurality of teeth spaced around the periphery and depending from said base substantially normal to its bottom side, a rubber-like second portion fixedly secured to the top surface of said base portion and having an integral peripheral extension section depending therefrom in covering relation to a substantial area of the peripheral edges of said base portion, and there being openings through said second portion in registrable bolt-receiving relation with the said bolt-receiving openings of said base portion.

3,093,006
DRIVE AND GUIDE SPROCKET FOR TRACK LAYING VEHICLE
Roger L. Gamsunt, P.O. Box 55, Fawnskin, Calif.
Original application Aug. 25, 1958, Ser. No. 757,074, now Patent No. 3,017,942, dated Jan. 23, 1962. Divided and this application Apr. 28, 1961, Ser. No. 106,255
3 Claims. (Cl. 74—243)



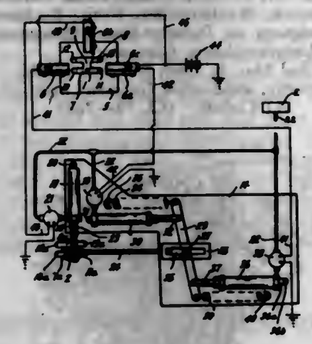
1. In a sprocket for a track laying vehicle, the combination of: a plurality of transversely spaced apart, coaxially arranged, and open rings; hub means located centrally of said rings; and ring mounting means including support arms, each of which has a transverse portion extending through and attached to said rings, and radially and laterally extending diagonal portions integral with said transverse portion and secured to opposite sides of said hub means, said support arms being circumferentially spaced apart to provide transverse passages therebetween, said hub means including transverse openings in communication with said passages whereby mud and the like may pass transversely through the sprocket.

3,093,007
COUNTERSHAFT GEARING NOISE ELIMINATOR
Frederick C. Aebernold, Detroit, Mich., assignor to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware
Filed Nov. 14, 1961, Ser. No. 152,302
13 Claims. (Cl. 74—325)



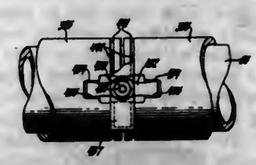
8. In a transmission, a rotatable input shaft with a drive pinion and clutch means thereon, a rotatable output shaft with an axially shiftable clutch gear drivingly connected thereto, a clutch sleeve axially shiftable and drivingly mounted on said clutch gear, and another gear mounted on the output shaft adjacent said clutch gear shiftable axially of and rotatable relative to said output shaft with said other gear having clutch means thereon, axial shift of said clutch sleeve being effective to selectively clutch said input shaft and said other gear to said output shaft, a unitary countershaft gear cluster rotatably supported adjacent said input and output shafts having a first gear meshingly engaged with said input shaft drive pinion and a second gear meshingly engaged with said output shaft mounted other gear, and means to frictionally engage said output shaft mounted other gear and prevent gear rattle noise, said friction means being arranged to be applied to said output shaft mounted gear as a result of axial shift of said output shaft gear due to axial shift of said clutch mechanism when torque load is transmitted thereby and comprising a friction means mounted on said output shaft and arranged to be brought into abutting engagement with a side face portion of said output shaft gear to limit axial shift thereof in one direction.

3,093,008
REMOTE CONTROL FOR AUXILIARY TRANSMISSIONS
John Lee Wight, Auckland, Auckland, New Zealand, assignor to Huntly Engineering & Welding Company Limited, Huntly, Auckland, New Zealand
Filed Aug. 15, 1960, Ser. No. 49,561
Claims priority, application New Zealand Aug. 18, 1959
9 Claims. (Cl. 74—335)



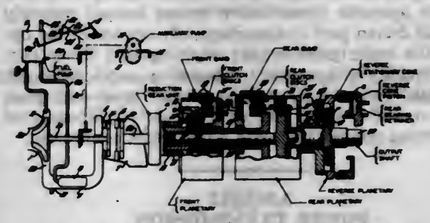
1. Remote control apparatus for effecting gear changing comprising a first vehicular power unit, transmission means having gearing means therein, said transmission means disposed in said first vehicular power unit, a gear changing member operably connected to said transmission means to effect changes in said gearing means, controller means mounted adjacent said gear changing member, cam means mounted on said gear changing member for engaging said controller means upon movement of said gear changing member, a second vehicular power unit connected to said first vehicular power unit, further transmission means having further gearing means therein, said further transmission means disposed in said second vehicular power unit, a further gear changing member connected to said further transmission means to effect changes in said further gearing means, further controller means mounted adjacent said further gear changing member, connecting means disposed between said first vehicular power unit and said second vehicular power unit for interconnecting said controller means on said first vehicular power unit and said further controller means on said second vehicular power unit, said further gear changing member on said second vehicular power unit being remotely moved in like manner as said gear changing member on said first vehicular power unit through both said controller means and connecting means, and additional means engaging said further gear changing member to move the same to and maintain the same in a neutral position when said gear changing member on said first vehicular power unit is moved to and disposed in a neutral position.

3,093,009
GAS TURBINE REGENERATOR DRIVE
John S. Collman, Detroit, James M. Ricketts, Oxford, and William A. Turunen, Birmingham, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Original application Sept. 10, 1958, Ser. No. 760,211. Divided and this application Sept. 29, 1960, Ser. No. 59,222
2 Claims. (Cl. 74—410)



2. The combination of a drive shaft, two sleeves on the shaft journalled thereon so as to allow limited rotation of the sleeves relative to the shaft, a pinion on each sleeve, and differential means drivingly coupling the drive shaft to the sleeves, each sleeve having an axially extending slot in one end thereof, the two slots being in adjacent ends of the sleeves, a diametral pivot extending from the shaft, a rocker arm journalled on the pivot extending into the slots and engaging the sleeves to transmit torque to the sleeves from the shaft, and a retainer mounted on the pivot over the rocker arm having inwardly directed flanges, the sleeves having grooves receiving the flanges to locate the sleeves axially of the shaft.

3,093,010
TRANSMISSION
William M. Spreitzer, Royal Oak, and Roderick G. Tipping, Inkster, Mich., and Mark E. Fisher, Carmel, Charles R. Copeland, Acton, and William O. Alexander, Plainfield, Ind., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Nov. 3, 1960, Ser. No. 67,069
23 Claims. (Cl. 74—472)

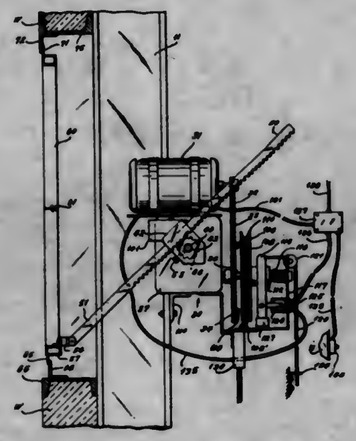


1. In a transmission for a gas turbine engine having a compressor with compressor outlet passage, a multiratio transmission, torque pressure signal means operatively connected to said gas turbine compressor outlet passage to provide a torque signal proportional to gas turbine pressure discharge, and shift control means operatively connected to said multiratio transmission and said torque pressure signal means to control the ratio of said multiratio unit and operatively controlled by said torque signal to selectively control said multiratio transmission.

18. In a power plant having a gas turbine engine including a compressor turbine driving a compressor and a power output turbine, a multiratio fluid operated transmission having input driven by said power turbine and an output, a fluid pressure supply system having an auxiliary pump driven by said compressor turbine of said gas tur-

bine engine and a transmission pump driven by said transmission output, and means connecting said auxiliary pump and transmission pump responsive to pressure delivered by said transmission pump to unload said auxiliary pump.

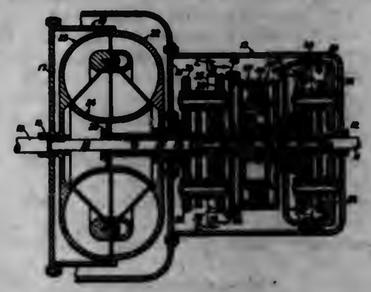
3,093,011
REGULATING MECHANISM FOR VENTILATORS
Albert F. Tuiro, St. Louis, Mo., assignor to Muschong Metal & Manufacturing Company, St. Louis, Mo., a corporation of Missouri
Filed Aug. 24, 1961, Ser. No. 133,689
4 Claims. (Cl. 74—625)



1. In a power operator for moving the regulators in a building ventilation system which includes a motor, an operating mechanism having a power input connection with said motor and a power output connection for moving said regulators and a controllable power supply connection with said motor, the improvement comprising, a manually operable transmission means including a driven part mounted on the driven power input connection of said operating mechanism, means to move said driven part into and out of positive driving connection with said driven input connection, a manually actuated part in said manually operable transmissions means located remotely from said driven part and mechanically connected for operating the same, guide means receiving said driven part of said manually operable transmission and located adjacent said driven part to engage and hold said parts against rotation when said driven part is disconnected from driving relation with said power input connection.

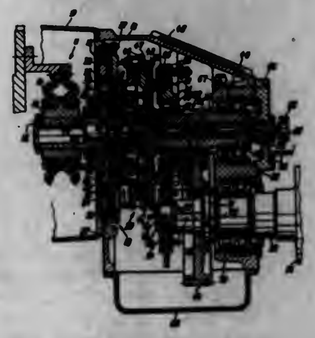
3,093,012
POWER TRANSMISSION
Charles I. Place, R.F.D. 4, McDonald Road, Colchester, Conn.
Filed Feb. 17, 1961, Ser. No. 90,019
16 Claims. (Cl. 74—677)

1. A transmission interconnecting driving and driven shafts comprising a fluid unit having driving, driven and reactor members, an operative connection between said driving shaft and said driving member, a differential gearing providing a first planet carrier drive connected to said driven shaft, a first and a second set of intermeshing planet gears carried by said first planet carrier, a second planet carrier drive connected to said fluid driven member, a first and a second set of intermeshing planet gears carried by said second planet carrier, a third set of planet gears attached to and rotatable with the first set of planet gears on said second carrier, a sun gear drivingly attached to said reactor member and meshing with the third set of planet gears on said second carrier, and a one-way brake operatively connected to said reactor member to prevent rotation of said reactor member in one direction, means



operatively interconnecting the said first set of planet gears on said first and second planet carriers, and a gear train operatively connecting the said second set of planet gears on said first and second planet carriers.

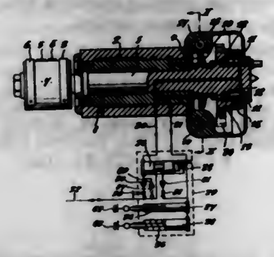
3,093,013
REVERSIBLE TRANSMISSION, PARTICULARLY FOR MARITIME PURPOSES
Hans-Joachim M. Förster, Stuttgart-Bad Cannstatt, and Karl Heinrich, Waldenweiler, Kreis, Backnang, Germany, assignors to Daimler-Benz Aktiengesellschaft, Stuttgart-Untertürkheim, Germany
Filed Mar. 8, 1960, Ser. No. 13,582
Claims priority, application Germany Mar. 11, 1959
11 Claims. (Cl. 74—788)



1. Reversible transmission comprising a sun gear element, an annular internal gear element, a planetary gear carrier element, said elements being mounted for independent rotation about a common axis, at least one pair of planetary gears meshing with each other and being rotatably mounted on said carrier element, one of said planetary gears meshing with said sun gear element and the other one of said planetary gears meshing with said annular internal gear element, a driving shaft fixed to said planetary gear carrier element, an optionally engageable friction brake co-ordinated to said annular internal gear for optionally arresting same, a driven shaft fixed to said sun gear element, and an optionally disengageable friction clutch for drivingly connecting said planetary gear carrier element to said driven shaft and including annular clutch members co-axially disposed with respect to said axis, a housing surrounding said elements, said brake and said clutch, said driving shaft extending into said housing on one side thereof, said brake including a plurality of annular brake members surrounding said annular internal gear element, means non-rotatably mounting said plurality of, annular brake members on said side

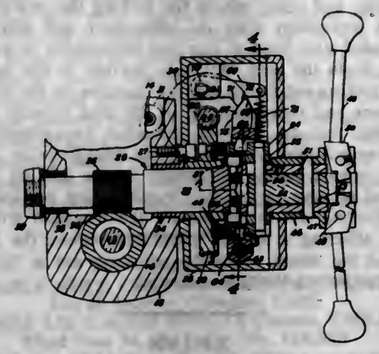
of said housing, said plurality of members, and said elements being disposed between said side of said housing and said clutch.

3,093,014
INDEXING DEVICE
Willi Graf, Zurich, Switzerland, assignor to Maag Gear Wheel & Machine Company Limited, Zurich, Switzerland
Filed Dec. 7, 1959, Ser. No. 857,645
Claims priority, application Switzerland Dec. 12, 1958
3 Claims. (Cl. 74—822)



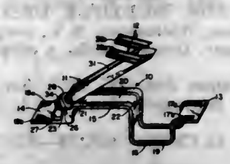
1. An indexing device for gear cutting machines and the like comprising an indexing spindle, an interchangeable indexing ring mounted fixedly upon said indexing spindle, a first hydraulic piston having an adjustable stroke, a gear rotatably mounted on said indexing spindle engaging said first piston, a hydraulically operated clutch disc upon said spindle moved axially against said gear to couple said spindle and gear and held there during the indexing stroke coupling said indexing ring to said gear, means for adjusting said stroke of said piston to provide a predetermined angle of rotation of said indexing ring, means for locking said indexing ring against rotation and a second hydraulic piston controlling said locking means independently of the position of said first piston.

3,093,015
MACHINE TOOL MOTION TRANSMITTING MECHANISM
Herbert R. Uhtenwoldt, Wilmington, Ohio, assignor to The Cincinnati Milling Machine Co., Cleveland, Ohio, a corporation of Ohio
Filed Apr. 22, 1960, Ser. No. 24,001
1 Claim. (Cl. 77—32.7)



In a machine tool having a source of power and a cutting tool, the combination of a housing, a shaft journaled in the housing operable when rotated to feed the tool into a workpiece, a drive gear operatively connected to the source of power and received on said shaft for rotation relative thereto, said drive gear having teeth on one face thereof, a driven gear received on the shaft, antifriction rollers connecting the driven gear to the shaft for rotation with the shaft and axial movement relative thereto, said driven gear having teeth on one face thereof facing the teeth on said drive gear, the teeth of said gears having engaging faces inclined relative to the axis of the shaft to produce an axial separating force between the gears when the gears are engaged and subjected to a relative torque therebetween, said separating force increasing as said torque increases, said driven gears shiftable axially on said shaft relative to the drive gear between an engaged and disengaged position, means to stop advance of the tool at a predetermined position and thereby stop rotation of the shaft when said driven gear is in the engaged position to produce a separating force between the teeth of the gears in excess of a predetermined separating force, a detent having a pair of oppositely sloping cam surfaces and having a spring connected thereto, means to adjust said spring to produce a predetermined biasing force normally to urge the detent into a holding position, a latching collar encircling the shaft and engaged with the driven gear, said collar pivotally connected at one side to the housing and having a pair of oppositely sloping cam surfaces on the opposite side adapted to engage the detent cam surfaces normally to hold the driven gear in one of said positions, said collar camming the detent out of its holding position against the bias of the spring for shifting of the driven gear from the engaged to the disengaged position when the separating force between the gears exceeds said predetermined separating force, a hub secured on said shaft, a plunger slidably received in said shaft, said plunger connected to the driven gear on the shaft, a handle pivotally connected to the hub and engaged with the plunger, said handle operable to rotate the hub to effect manual rotation of the shaft and movement of the tool when the driven gear is disengaged from the drive gear, said handle pivotal in one direction in the hub to shift the plunger and cam the detent out of its holding position to effect shifting of the driven gear from the disengaged to the engaged position, said handle pivoted in the opposite direction in the hub by the driven gear when the driven gear is shifted to the disengaged position in response to a separating force in excess of said predetermined separating force.

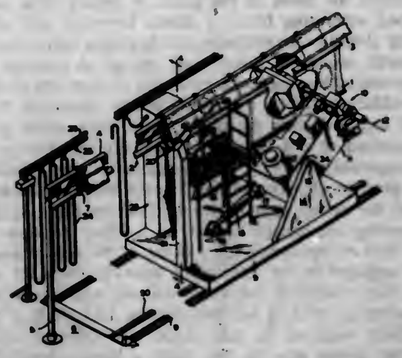
3,093,016
CHAIN SAW FILING GUIDE
Clifton F. Spence, Kamiah, Idaho; Hilda M. Spence, administratrix of said Clifton F. Spence, deceased
Filed Oct. 20, 1961, Ser. No. 146,550
4 Claims. (Cl. 76—36)



4. A chain saw filing guide of the nature aforesaid comprising, in combination, a body member having openings therein adapted to fit over and allow said member to rest upon the chain of a saw; an elongate guide arm rotatably and extensively carried by said body, releasably supported thereby in a position substantially parallel with said saw chain; means of adjustably moving said guide arm along its longer axes to predetermined positions; and paired file guides carried thereby on opposite sides thereof, shaped to receive a cylindrical file of commerce and support said file in a horizontal angular position relative to said saw chain, adapted to properly sharpen the saw teeth

thereof, said guide being rotatable 180 degrees about its longer axis to sharpen both right and left hand saw teeth, comprising a cross-piece carrying paired opposed axially coincident rollers at the ends thereof, having a surface shape adapted to receive said cylindrical file and appropriately support it when positioned on each of two paired rollers at opposite ends of said cross-piece.

3,093,017
SPAR RIVETING MACHINE
John J. White, Bethesda, Md., assignor to ACF Industries, Incorporated, New York, N.Y., a corporation of New Jersey
Filed Nov. 1, 1960, Ser. No. 66,643
8 Claims. (Cl. 78—49)



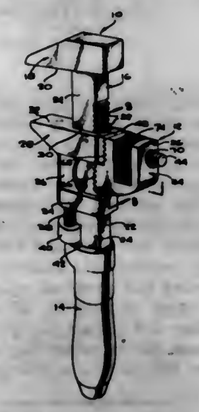
1. A machine for sequential application of a plurality of rivet fasteners to a work piece, including template pattern means locating in plan the positions at which fasteners are to be applied, means for supporting the work piece and said template pattern means in planes displaced from each other, a carriage member, a linear track guiding said carriage member along a path generally parallel the longest dimension of the work piece, a work head rotatably mounted on said carriage in a way permitting it to traverse the work piece, an index head rotatably mounted on said carriage in a way permitting it to similarly traverse said template pattern means by radial extension and rotation, means for translating said carriage member in a path retracting said index head to its initial radial extent, and means for rotating said work head into orientation coincident with that of said index head.

3,093,018
APPARATUS FOR MULTIPLE UPSET WELDING
Walter J. Rozmus, Whitesboro, N.Y., assignor to Kelsey-Hayes Company, Detroit, Mich., a corporation of Delaware
Original application Jan. 28, 1959, Ser. No. 789,669. Divided and this application July 1, 1960, Ser. No. 40,321
12 Claims. (Cl. 78—82)



1. Tooling for forming a pressure weld comprising, first and second opposed dies, each having a weld formation face and a spaced opposite end face, said dies being relatively movable in a common work performance travel path, first and second workpiece gripping members, said first workpiece gripping member being positioned adjacent the opposite end of said first die, and said second workpiece gripping member positioned adjacent the opposite end of said second die, said dies and said members each including surfaces adapted to grip a workpiece, guide means in operative connection with each of said dies and said members for guiding said dies and said members in work performance travel, said members and said dies being relatively movable between a first work performance station wherein the said members are spaced from said opposite ends of said dies, and a second work performance station wherein said first and second members each abut one of said opposite ends of said dies, and means to orient the gripping members into a selected one of said work performance stations.

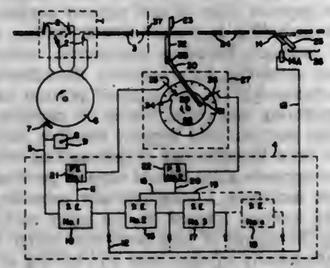
3,093,019
ADJUSTABLE JAW WRENCH
Emil Bolmet 204 Ontario St., Buffalo 7, N.Y.
Filed Dec. 11, 1961, Ser. No. 158,241
4 Claims. (Cl. 81—166)



1. In an adjustable jaw wrench, a body comprising in one rigid unit, a handle, a shank having a front side and a back side and a fixed jaw carried by and projecting from the front side of the shank, a movable jaw on the shank and having a back side portion lying across the back side of the shank, means threadably coupling the movable jaw with the shank for effecting sliding adjustment of the movable jaw on the shank relative to the fixed jaw, and other means for locking the movable jaw against movement after its adjustment and comprising a threaded stud fixed at one end immovably to and projecting from the said back side portion of the movable jaw, a locking nut freely slidably movable on the threaded stud over and independently of the stud threads and an adjusting nut on and in threaded engagement with the threaded stud and operatively engaging the locking nut to impart sliding movement to the locking nut on the stud relative to the said movable jaw portion when the adjusting nut is rotated on the threaded stud, and means effecting a locking coupling between the locking nut and the shank when the adjusting nut is turned in one direction on the threaded stud.

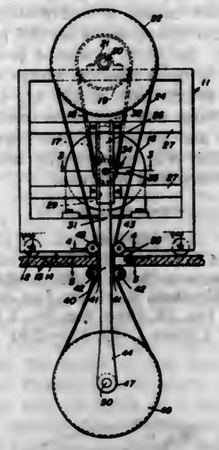
3,093,020
REJECT MEMORY SORTING APPARATUS
Robert Reddington Walsh, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Dec. 4, 1956, Ser. No. 626,257
5 Claims. (Cl. 83—106)

1. Apparatus comprising a film inspection device for detecting defects in a moving film and delivering a defect signal for each detected defect, a continuously operating film chopping means for severing said moving film transversely into sheets of a predetermined length, a first information storage group connected to receive said defect signal, means to deliver said defect signal to said first information storage group, shift pulse delivery means for effecting the transfer of all stored information concerning each predetermined length out of said first storage group simultaneously as each said inspected, predetermined length of film passes a preselected point, said first storage group characterized by being capable of receiving a defect signal and being unaffected by any additionally received defect signals until after the transfer of all the stored information out of said storage group is effected, a second information storage group connected to receive the output information signal of said first storage group, a defective sheet reject device connected to receive the output information signal of said second information storage group and to reject those sheets indicated by the information received as being defective, said second information storage group characterized by being made up of a series of shift-register information storage elements, one for each whole predetermined length of film present in the interval between the said preselected point and the said defective sheet reject device, and by being capable of shifting the stored information in stepwise fashion through the individual storage elements of said second information storage group in response to a signal, said shift pulse delivery means capable of effecting the transfer of stored information out of said second storage group and of simultaneously signaling the stepwise shift of stored information within said second information storage group, adjustable means to actuate said shift pulse delivery means each time the leading edge of each inspected sheet arrives at said reject device said shift pulse delivery means being actuated by said film chopping means and having adjustable computing means for varying the interval of delivery of said shift pulses.



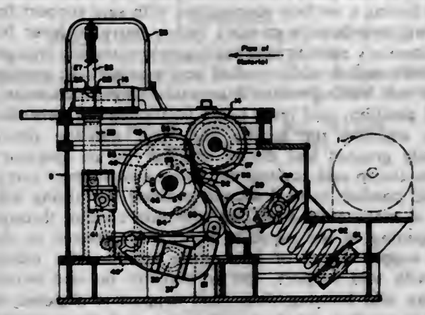
3,093,021
PORTABLE HOLE CUTTING WIRE-SAW MACHINE
Lee H. Barron, Glendale, Calif.
(4515 Alta Canyada Road, La Canada, Calif.)
Filed June 26, 1961, Ser. No. 119,500
4 Claims. (Cl. 83—201)

1. A portable wire saw machine comprising a frame which in operation is supported upon the upper surface of a self-supporting work sheet of material in which large holes are to be cut and which is freely movable over said surface wherever it may be required for effecting the cutting of said holes; a vertically disposed grooved upper saw pulley mounted in bearings on said frame; a lower pulley sub-assembly adapted to be positioned mainly below said sheet of material to be cut, said sub-assembly consisting of a supporting stem whose upper end is removably but rigidly attached to said frame and whose lower portion supports in operative position a lower saw pulley aligned with said upper saw pulley, and a pair of lower guide rollers extending from the edges of said supporting stem below said work sheet; a pair of upper guide rollers mounted on said frame above said work sheet and aligned respectively with said lower pair of guide rollers; means



for removably fastening said supporting stem to said frame; and a continuous wire saw operatively positioned over said upper pulley, said lower pulley and said two pairs of guide rollers when said lower sub-assembly is attached by said supporting stem to said frame; said guide rollers directing the runs of said wire saw adjacent the opposite edges of said supporting stem, and said wire saw being selected in size to cut a kerf wider than the thickness of said stem measured in the direction parallel to the axes of said rollers.

3,093,022
SHEAR MEANS HAVING INTERMITTENTLY OPERATED CAM MEANS TO HOLD SHEAR IN OPEN POSITION
Robert B. Metzner, Wheeling, W. Va., assignor to Wheeling Steel Corporation, Wheeling, W. Va., a corporation of Delaware
Filed Jan. 20, 1958, Ser. No. 709,848
8 Claims. (Cl. 83—320)



1. A shear having a knife movable between a cutting position and an open position, movable knife operating means connected to said knife, means resiliently urging the operating means in one direction to move the knife to

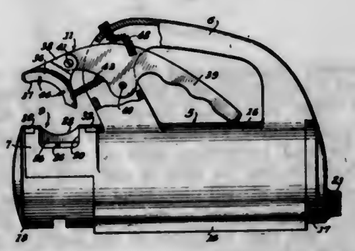
cutting position, main cam follower means on said operating means, main cam means placed for continuous contact with said follower, said cam means having a first position in which the knife is held in open position and a second position permitting controlled movement of the knife to cutting position, screen cam follower means on said operating means, selective screen cam means for contact with said screen cam follower means and so arranged to vary the frequency of oscillations of said screen cam follower, said screen cam means having a first position in which the knife is held in open position and the main cam follower means is intermittently held away from the main cam means and a second position permitting movement of the knife to closed position, whereby the knife is held in open position except when the main cam means and screen cam means are concurrently in said second positions, and cam drive means driving the main cam means and the screen cam means at different speeds whereby they will concurrently be in said second positions at predetermined intervals.

3,093,023

TOOL FOR CUTTING FLEXIBLE CONDUIT

Ande R. Vail, Sherman Oaks, Calif., assignor to William H. Myers and Elizabeth R. Myers, Los Angeles, Calif.

Filed Jan. 28, 1960, Ser. No. 5,181
7 Claims. (Cl. 83—370)



7. A tool for cutting flexible conduit comprising a housing having a handle, a motor-driven cutter carried within the housing, a support for a length of flexible conduit received in guides provided in an opening in said housing, means biasing said support into a first position in said opening away from said cutter, said support having an opening therein through which said cutter may pass into cutting engagement with said conduit as said support is moved in said guides to a second position, single manual means having a surface cooperating with said support for clamping said flexible conduit and a movable lever for simultaneously moving said surface into clamping engagement with said flexible conduit and moving said support against said biasing means from said first position to said second position, said lever being positioned adjacent said handle whereby the handle and lever may be simultaneously gripped and drawn together by an operator's hand to clamp said conduit and move said support carrying said conduit to said second position permitting said cutter to make cutting contact with said conduit through said opening in the support, a switch connected in the power supply circuit of said motor mounted for movement with said support, and an actuator on said switch engaging said housing when said support is disposed in said first position to open said switch and being moved free from engagement with said housing when said support is being moved to said second position to close said switch and thereby actuate said motor to operate said cutter.

3,093,024

CUTTER CONSTRUCTION FOR CUTTING CABLES, SOLID BARS AND THE LIKE

Phil S. Pell, Menlo Park, Calif.
(55 New Montgomery St., San Francisco 5, Calif.)

Filed Oct. 4, 1960, Ser. No. 60,352
2 Claims. (Cl. 83—568)



1. A cutter construction for a power operated metal cutting tool adapted for cutting solid bar stock or the like comprising a support member having a longitudinal axis including a support portion for orienting an elongated work piece to be cut normal to the longitudinal axis of said support member, a pair of co-planar cutter blades mounted in said support member for relative longitudinal movement on opposite sides of said support portion, said cutter blades including co-planar linear cutting edges, said support member including continuous, uni-planar keyway means extending longitudinally therethrough in intersecting relationship to said support portion and receiving and orienting said cutter blades on opposite sides of said support portion, said support member including a longitudinal bore therethrough in intersecting relationship to and on opposite sides of said support portion, said keyway means including a longitudinally extending, radially disposed keyway formed on the inner surface of and extending the length of said bore, said cutter blades extending diametrically of said bore and having an edge configuration conforming to that of the keyway and having a height equal to the combined depth of said keyway and the diameter of said bore portion, and a plurality of similar, circumferentially spaced keyways opening into and extending the length of said bore portion for receiving the edge configuration of said cutter blades therein for bevel cutting a work piece disposed in the support portion.

3,093,025

JACK FASTENER EMPLOYING A BOLT HAVING TWO-THREADED SECTIONS

Norman Wasserman, Bayside, N.Y., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed May 29, 1959, Ser. No. 816,963
7 Claims. (Cl. 85—1)



3. In combination, a supporting strip and a fastener for securing an object against said supporting strip which includes at least one tapped hole therein and an indexing ridge thereon, said fastener comprising a two-ended bolt having a head at one of the ends and two threaded sections of different diameters and pitch at the other end, the larger diameter section being threaded into a clamping bar including a tapped bushing therein, said bushing forming a friction clutch with said larger diameter section, whereby rotation of the bolt in one direction drives the smaller diameter section into the tapped hole until said clamping bar is seated on said supporting strip

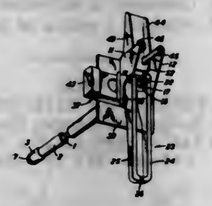
and extended away from said indexing ridge and rotation of the bolt in the other direction withdraws the smaller diameter section from said tapped hole and places the clamping bar in line with said ridge and elevated above said strip, and means for limiting the elevation of said clamping bar above the indexing ridge and rotation of the bolt in the direction of extraction, said limiting means further comprising a locking spacer clipped about the bolt between the head thereof and the clamping bar, said spacer having a width to limit the elevation of the clamping bar to a distance less than the height of the indexing ridge.

3,093,026

EXPANDABLE BOLT WITH AUXILIARY STRESSING MEANS

Joseph A. W. Mills, Charlton Kings, Cheltenham, and Dennis H. Cannon, St. Marks, Cheltenham, England, assignors to Dowty Mining Equipment Limited, Tewkesbury, England, a British company

Filed June 22, 1959, Ser. No. 821,812
Claims priority, application Great Britain June 23, 1958
3 Claims. (Cl. 85—2.4)



1. An expandable bolt suitable for insertion into and locking within a bore hole in a medium, the bolt including a shank and an enlarged head constituting an inner end on said shank, a sleeve surrounding the shank, an expandible head located between the inner end of the shank and the inner end of the sleeve for radial expansion by relative longitudinal movement in one direction between the shank and the sleeve to effect locking within a bore hole, locking means operatively connected to the shank and the sleeve to effect said relative longitudinal movement between the shank and the sleeve, and stressing means operable between the outer end of the bolt and a surface of said medium containing said hole after the expandable head has been locked in the bore hole by the locking means to apply a stress between the outer end of the bolt and the surface of the medium containing the bore hole by causing equal movement of the shank and the sleeve relative to the surface of the medium containing the bore hole.

3,093,027

PLASTIC DRIVE FASTENER HAVING A RADIALLY COLLAPSIBLE SHOULDER

George M. Rapata, Park Ridge, Ill., assignor to Illinois Tool Works Inc., a corporation of Delaware

Filed Jan. 7, 1960, Ser. No. 993
5 Claims. (Cl. 85—5)



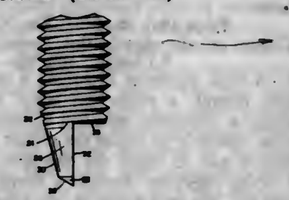
1. A one-piece plastic drive fastener comprising an axially elongated shank insertable into a complementary workpiece aperture having a predetermined circumference, and a radially enlarged portion at one end of the shank providing a first surface transverse to the axis of said shank for engaging one side of the margins of said workpiece surrounding said aperture, said shank including a portion of increased diameter relative to the diameter of the shank portion adjacent said first surface to provide shoulder means spaced from said first surface for engaging said workpiece and resisting withdrawal of the fastener from the workpiece when the shank has been inserted into the workpiece aperture, said shank including a tapering entering end portion extending from said shoulder means and terminating in a circumferentially continuous solid tip for facilitating application of the shank to the workpiece, said shank having laterally opening slot means therein extending from adjacent said solid tip toward said first surface to expose a circumferentially continuous uninterrupted shank portion from said slot means to said first surface, said slot means being defined by generally axially extending side surfaces positioned on opposite sides of the shank axis and a bottom wall closing said slot, said side surfaces diverging with respect to each other substantially from said bottom wall to intersections with a peripheral surface of the shank, said side surfaces joining said bottom wall closely adjacent to a plane containing the axis of said shank whereby said slot bottom provides an axially extending resilient hinge rib integrally joining axially extending margins of elements of the shank separated by said slot means and with the thickness of the shank material which forms the hinge rib between the bottom of the slot means and the opposed outer surface of the shank at said shoulder means and at least adjacent thereto in a direction both toward said first surface and said tip being of a minimum thickness relative to the cross-section of adjacent portions of the shank elements on opposite sides of said rib to concentrate flexing of the shoulder means along the rib as the adjacent shank elements are moved toward and away from one another, the intersections of said side surfaces with said peripheral surface converging in an axial direction from said shoulder means both toward said first surface and said tip until they join to define an opening which has a maximum width in the vicinity of said shoulder means, and which diminishes in width both toward said first surface and said tip, said slot having a maximum depth in the vicinity of said shoulder means substantially greater than one-half of the maximum shank diameter, said bottom inclining from said point of maximum depth toward said first surface and said tip and the opposite end surfaces of the slot means intersecting said peripheral surface, substantially all transverse peripheral surface portions of said shank which are insertable into said workpiece aperture having a circumference, exclusive of said slot surfaces, not in excess of the circumference of the workpiece aperture.

3,093,028

SELF-DRILLING AND SELF-TAPPING THREADED FASTENER

Richard G. Mathie, Canal Fulton, Ohio, assignor to Eaton Manufacturing Company, Cleveland, Ohio, a corporation of Ohio

Filed Feb. 5, 1959, Ser. No. 791,386
1 Claim. (Cl. 85—41)



An elongate self-drilling and self-tapping fastener device having

an externally threaded elongate shank portion terminating in a punch point which defines an end portion of the device,

said shank portion having a tapping portion and

a drilling portion formed integral with and disposed intermediate the tapping portion and the punch point of the device,

said drilling portion extending generally longitudinally from the tapping portion toward the punch point a distance substantially equal to the nominal diameter of the shank portion,

said tapping and drilling portions having a susbtantially frusto-conical configuration with the tapping portion being externally threaded and terminating in a flat surface disposed in a laterally extending plane which is normal to the longitudinal axis of the device, and

the drilling portion being defined by a substantially smooth laterally arcuate surface which extends generally longitudinally from the tapping portion toward the punch point with the radii of the drilling portion decreasing to dispose the arcuate surface at an angle of from 12° to 15° relative to the longitudinal axis of the device and a substantially planar surface disposed generally parallel to the longitudinal axis of the device in spaced relationship relative thereto a distance of from 1% to 4% of the nominal diameter of the shank portion,

said planar surface being disposed to the same side of the longitudinal axis of the device as the arcuate surface and extending generally laterally throughout the full extent of that part of the device which defines the drilling portion and intersecting the arcuate surface at laterally opposed locations therealong with one of such locations defining a cutting edge having an angle of less than 90° measured relative to the planar surface and a tangent of the arcuate surface at the cutting edge with the planar surface also intersecting the flat surface of the tapping portion with the laterally opposed extremities of the intersection therebetween being equidistant from the punch point,

said punch point having substantially a frusto-conical configuration defined by an extension of the planar surface of the drilling portion of the device and a substantially smooth laterally arcuate second surface which extends generally longitudinally away from the drilling portion with the radii of the punch point decreasing to dispose the second arcuate surface at an angle of from 55° to 60° relative to the longitudinal axis to the device, and

said punch point and said drilling portion having a juncture the size of which is within the range of 45% to 48% of the nominal diameter of the shank portion.

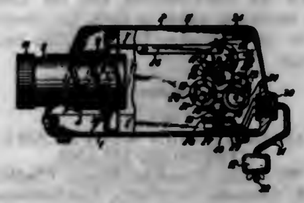
3,093,029

SLIDE PROJECTOR WITH REMOTELY CONTROLLED OBJECTIVE FOCUSING MEANS

Hans Werner Johannsen and Gerhard Bast, both of Braunschweig, Germany, assignors to Voigtländer A.G., Braunschweig, Germany, a corporation of Germany

Filed May 16, 1961, Ser. No. 110,451
Claims priority, application Germany May 25, 1960
9 Claims. (Cl. 88—24)

1. A slide projector including a manually settable objective mount; a projection lamp; a setting device, including a coupling member coupled to the objective mount, operable to adjust the mount longitudinally of the objective axis to focus the objective, the coupling member being operable through a limited range in opposed directions longitudinally of the objective axis; driving means for the setting device; electrically operated remotely controlled means selectively operable to couple the driving means and the setting device to operate the setting device in a selected direction within such range; a switch in circuit with said remotely controlled means; a switch operating element, movable in accordance with the position of said coupling member by said setting device, and operatively associated with said switch; said



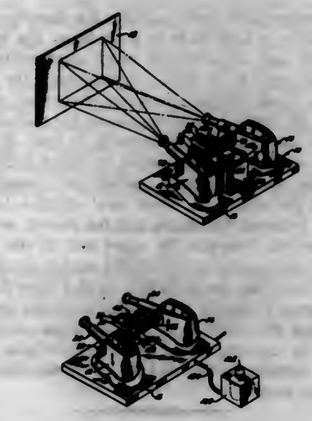
element effecting closure of said switch whenever said coupling member is at other than substantially the midpoint of such range, and effecting opening of said switch when said coupling member is at such midpoint; and means operable, responsive to activation of the projector, to connect said switch to a source of potential.

3,093,030

SLIDE PROJECTOR WITH DISSOLVE

Nestor Carrillo, Holland St., Langley Forest, McLean, Va.

Filed Feb. 9, 1959, Ser. No. 792,045
3 Claims. (Cl. 88—28)



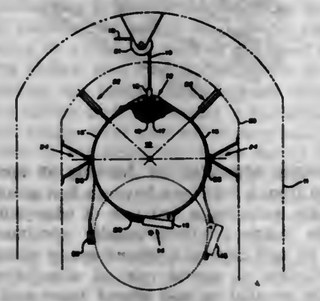
1. Projecting equipment comprising a pair of projectors arranged in close adjacent relation for projection on a common screen, each projector having an electric light source, a magazine positioned closely adjacent said projectors with the slides carried by the magazine in position for insertion in the projectors, slide feed means for sequentially moving each alternate slide from the magazine to one projector and each other slide to the other projector, said means to feed alternate slides to one projector and the other slides to the other projector being operable in sequence, a single operating handle mounted for two distinct movements, means operably connected to said single operating handle and operable by movements of said single operating handle according to one of said distinct movements for moving said slide feed means to feed slides to said projectors, control means for alternately making the light of the one projector bright while dimming the light of the other projector and alternately making the light of the other projector bright while dimming the light of said one projector, said control means being operably connected to said single operating handle for operation according to the other of said distinct movements of said single operating handle different from the movement to operate said means to feed slides for controlling the brightness of said lights and being operable so that when the slides in said projectors are stationary said lights are dimmed and brightened, and said slides are changed in the projector which has the darkened light whereby moving images on said screen may be completely avoided and complete darkness of the screen is avoided, the comfort level of the audience being kept substantially uniform without wide variations in light intensity.

3,093,031

UNIVERSAL STORE SUSPENSION APPARATUS

Carl A. Damm, Upper Black Eddy, Pa., assignor to the United States of America as represented by the Secretary of the Navy

Filed Dec. 29, 1959, Ser. No. 862,726
10 Claims. (Cl. 89—1.5)
(Granted under Title 35, U.S. Code (1952), sec. 266)



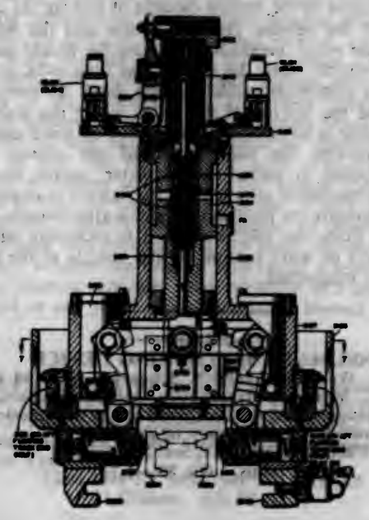
1. A universal suspension apparatus for hoisting, securing and releasing a horizontally disposed bomb of any size from any one of several types of aircraft having a bomb bay and a hoisting shackle for the bomb, comprising, in combination: a suspension lug having three load-carrying links for being mounted on the top of the bomb, two parallel truss-type spreaders connected to said links for maintaining said links parallel in one plane and in spaced relationship, adjacent ends of said spreaders extending beyond said links and being tapered for resiliently bearing against the surface of the bomb, one of said three load-carrying links being a center link adapted to be secured by the hoisting shackle of the aircraft, adjacent ends of said links extending beyond said spreaders and forming two parallel rows of three aligned holes, a suspension lug pin removably inserted through each row of said aligned holes in the ends of each of said links, adjusting means including a band pin secured to one of the suspension lug pins for compensating for various bomb sizes, four suspension bands having their ends turned back to form loops and arranged in two pairs for being circumferentially mounted around the periphery of the bomb, said loops at one end of one of said pairs of said four suspension bands disposed about said band pin and said loops at one end of the other of said pairs of said four suspension bands disposed about the other of said suspension lug pins, a release mechanism for being mounted at the bottom of the bomb, said release mechanism having a release shackle having a plurality of coaxial holes formed therein and a tunnel lug, said release shackle having a shackle pin inserted through said plurality of coaxial holes in said release shackle, said loops at the other end of said one of said pairs of said four suspension bands disposed about said shackle pin, said tunnel lug having a tunnel lug pin and a plurality of coaxial holes formed therein, said tunnel lug pin being inserted through said coaxial holes formed in said tunnel lug, said loops at the other end of said other of said pairs of said four suspension bands disposed about said tunnel lug pin, said release shackle and tunnel lug accordingly being connected to form substantially continuous bands around the bomb, said release shackle including means for quickly disconnecting and causing the separation of said release shackle and said tunnel lug for releasing the bomb, and said bands being pre-curved so that the ends thereof are resiliently biased inwardly toward the center of the bomb in such a manner that said release shackle and said tunnel lug tend to be retracted upwardly toward said suspension lug when the bomb is released from the aircraft.

3,093,032

FLOATING TRACKS

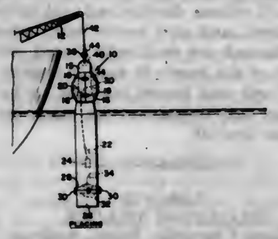
Richard C. Wilson, Champlin, Minn., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Original application Oct. 22, 1959, Ser. No. 848,163. Divided and this application Jan. 20, 1960, Ser. No. 3,700
4 Claims. (Cl. 89—1.7)



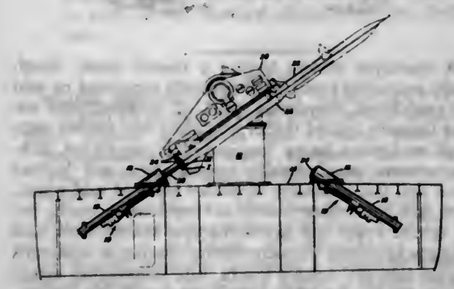
2. A conveyor system having a loader trunk, longitudinally extending laterally spaced rails supported by said trunk, said trunk supporting pairs of longitudinally extending laterally spaced tracks straddling said spaced rails, each of said pairs being longitudinally separated, converging means longitudinally spaced apart and located between said longitudinally separated pairs of said tracks, each of said converging means having floating tracks laterally spaced apart and straddling said spaced rails, said floating tracks having the same lateral spacing as said trunk supported laterally spaced tracks, said converging means having means for extending outwardly said floating tracks, said pair of floating tracks being laterally displaceable to align with longitudinally spaced elements of an object vertically spaced from said trunk, said converging means having means for lifting and aligning said floating tracks with said longitudinally separated pairs of said laterally spaced tracks.

3,093,033
DESCENDING-ASCENDING WATER-LAUNCHED ROCKET VEHICLE
John Emery Draim, Oxnard, Charles Edward Stalzer, Camarillo, and James Keihner, NAS, Point Mugu, Calif., assignors to the United States of America as represented by the Secretary of the Navy
Filed Nov. 30, 1960, Ser. No. 72,807
2 Claims. (Cl. 89—1.7)
(Granted under Title 35, U.S. Code (1952), sec. 266)



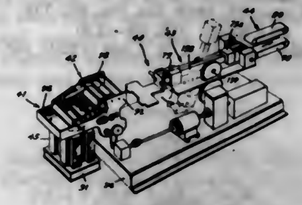
1. An apparatus comprising a vehicle launchable into air from a body of water which has surface wave motion that effects upward stability of the vehicle when the vehicle is water borne near said surface, float means attached to said vehicle capable of floating the combination of the vehicle and said float means in the water, weight means attached to the vehicle capable of sinking the combination of the vehicle, the float means and the weight means in the water, means for releasing the weight means from the vehicle when the vehicle has been sunk in the water to a minimum predetermined depth between the surface and the bottom of the water where the stability of the vehicle is substantially unaffected by wave motion thereby allowing the combination of the vehicle and buoyant means to ascend in the water, means for releasing the buoyancy means while the vehicle is ascending so as to minimize the load on the vehicle after launch, and, means for firing the vehicle while it is ascending whereby the effect of wave motion on the vehicle at the time of firing is minimized.

3,093,034
PNEUMATIC JETTISONING DEVICE
Palmer G. Wermager, John S. Scheurich, Sr., and Durwood E. Meinzer, Minneapolis, Minn., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Sept. 19, 1961, Ser. No. 139,581
3 Claims. (Cl. 89—1.7)



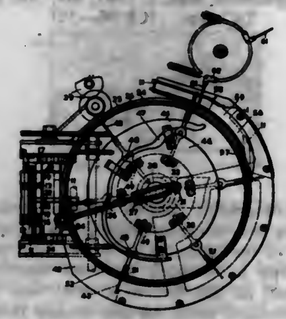
1. A dud jettisoning device for use with a missile launcher comprising a support; positioning means including a hollow positioner cylinder having a circumferential groove mounted in said support, means for moving said cylinder longitudinally, a plurality of spring biased, pneumatically actuated latch means mounted adjacent and spaced axially along said cylinder and valve means to effect selective actuation of any one of said latch means, said extensible dud ejecting means comprising a piston within said positioner cylinder, a bumper disc, a piston rod interconnecting said piston with said bumper disc and means for driving said piston, said piston rod and said positioner cylinder cooperating to form an annularly shaped space therebetween for compressing a fluid as said piston is moved by said driving means.

3,093,035
APPARATUS AND METHOD FOR PRODUCING A REINFORCED CONTAINER
Hermond G. Gentry, Atlanta, Ga., Edmund Radzins, Sheboygan Falls, Wis., and Charles J. Fortriede, Cold Springs, Ky., assignors to The Mead Corporation, Dayton, Ohio, a corporation of Ohio
Filed Aug. 14, 1961, Ser. No. 131,238
14 Claims. (Cl. 93—44.1)



1. Automatic apparatus for forming an erected multiply carton from a flat blank having a first group of edge-joined panels including a first row of edge-joined panels foldable to define circumferentially continuous inner side walls of said carton, a second group of edge-joined panels including a second row of edge-joined panels substantially parallel to and spaced from said first row of panels and foldable over and around said first row of panels to define circumferentially continuous outer side walls of said carton, a first bottom panel extending between and connected at opposite sides thereof to a side of one of the panels of each of said rows of panels, and a pair of additional bottom panels one adjacent each side of said first bottom panel and foldable to overlie the inner surface of said first bottom panel to reinforce the same, said apparatus comprising: at least one mandrel member of rectangular cross section corresponding in size and shape to the inner dimensions of said carton, means for swinging said mandrel member through an arc of 360°, means for arresting movement of said mandrel member at relatively widely spaced points in the swinging movement thereof, means for positioning a carton blank for coincident-margin engagement of a panel of said first row of panels by a side face of said mandrel member, means for wrapping the other panels of said first row of panels around the other faces of said mandrel member, means for temporarily holding said first row of panels in embracing contact with said mandrel member, means for folding said additional bottom panels over the free end of said mandrel member, trough-like means positioned beside and along the path of travel of said mandrel member as the latter moves between certain of said widely spaced points, said trough-like means being progressively constricted to fold and press said first bottom panel over and against said additional bottom panels and then fold and press medial panels of said second row of panels over and against said first row of panels, means for folding the end panels of said second row of panels against a medial panel of said first row of panels, and means for removing the thus formed carton from said mandrel member.

3,093,036
FEEDING AND OPENING OF COLLAPSED CARTONS
James Arthur Kay, Gainsborough, England, assignor to Rose Brothers (Gainsborough) Limited, Gainsborough, England, a British company
Filed Jan. 23, 1962, Ser. No. 168,064
Claims priority, application Great Britain Jan. 30, 1961
3 Claims. (Cl. 93—53)



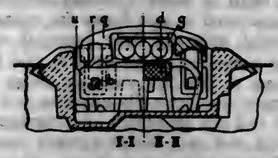
1. Carton-feeding apparatus comprising in combination a series of transfer blades for successively entering the leading carton of a stack or pack of collapsed cartons at a separating station and moving the carton to an intermediate station, the carton being opened from its collapsed form during such movement, a movable-refolding member into engagement with which each successive carton is pressed by the preceding carton during movement of that carton by its blade to the intermediate station to cause each successive carton to be re-collapsed in the opposite direction, a movable pressure member in engagement with the surface of the re-folding member to form a driving nip into which the re-collapsed carton is passed by pressure applied by the preceding carton, a guiding channel into which the carton is moved by the nip, and forwarding means for engaging the rear edges of the successive cartons to feed them along the channel towards a transfer station.

3,093,037
SECTION FORMING MECHANISM
Henry D. Ward, Jr., Timonium, Md., assignor to Koppers Company, Inc., a corporation of Delaware
Filed May 20, 1960, Ser. No. 30,678
8 Claims. (Cl. 93—58.2)



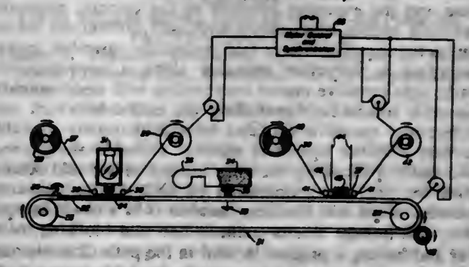
1. A machine for forming a blank into sections comprising means for defining a datum line, means for defining a first section adjacent one side of said datum line, means for defining a second section adjacent said first section, means for defining a third section adjacent the other side of said datum line, means for defining a fourth section adjacent said third section, and means interconnecting said section defining means for simultaneously repositioning a plurality of said section defining means to a selected extent relative to said datum line so that the ratio of the sum of the widths of said first and second sections to the sum of the widths of said third and fourth sections remains constant.

3,093,038
"LIGHT-DOME," SUSPENDED SPONGE-WASHED TRAFFIC LINE REFLECTOR
John Austin McRobbie and Agnes Forrest McRobbie, Llandrindod Wells, Wales
Filed Mar. 20, 1959, Ser. No. 800,898
1 Claim. (Cl. 94—1.5)



A road marker comprising, an open hollow casing having a bottom wall and four vertical side walls, said bottom wall having a pair of parallel grooves, an inverted U-shaped resilient member seated in said hollow casing and having legs seated within said grooves and spaced from the side walls of said casing to provide clearance, the top of said U-shaped member having projections on the upper and lower sides thereof, a rectangular transparent reflex reflector ring having a central transverse aperture, said ring being thickened on two opposite sides to form lenses, the lenses having reflective material affixed to the rear of lenses, said reflective material being covered by a waterproof material, said ring being seated on top of said U-shaped member with the top projection of the U-shaped member fitting within said central aperture, said U-shaped member and reflector ring being partially enclosed by a resilient cap having depending sides with a recessed portion exposing said lenses of the reflector ring, said open hollow casing having opposed pairs of studs projecting inwardly from the vertical side walls thereof, enlarged apertures in the sides of said cap for receiving with clearance the inwardly projecting studs, a cleaning sponge mounted on inside of the said sides with apertures, of said cap facing said lenses, whereby when said lenses are depressed they will engage said sponges, said cap being smaller than the distance between the sides of said casing whereby it may roll or depress vertically when subjected to a lateral load applied at any point on the perimeter thereof.

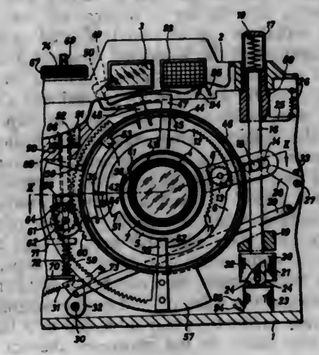
3,093,039
APPARATUS FOR TRANSFERRING POWDER IMAGES AND METHOD THEREFOR
John J. Rheinfrank, Columbus, Ohio, assignor, by mesne assignments, to Xerox Corporation, a corporation of New York
Filed May 12, 1958, Ser. No. 734,683
11 Claims. (Cl. 95—1.7)



1. A xerographic machine comprising in combination a frame, an endless belt comprising an inner electrically conducting layer and an outer photoconductive insulating layer, means operatively connected to said frame for moving said belt along a predetermined path sequentially through, first, an image station comprising means opera-

tively connected and positioned to said frame to form an electrostatic image on the outer layer of said belt; second, a development station comprising means operatively connected and positioned to said frame for dusting electrostatically charged, magnetically attractable powder particles on the electrostatic image on the outer layer of said belt; third, a transfer station comprising means operatively connected to said frame for contacting image support material with the outer layer of said belt, an electromagnet operatively connected to said frame at the point of contact of said belt and said image support material and means to electrically energize said electromagnet with high and low frequency electromagnetic currents while said belt and said image support material are in contact to effect transfer and fusion of said image body to said support material.

3,093,040
AUTOMATIC CAMERAS
Gerd Kiper, Unterhaching, near Munich, Germany, assignor to Agfa Aktiengesellschaft, Leverkusen-Bayerwerk, Germany
Filed Oct. 28, 1959, Ser. No. 849,216
Claims priority, application Germany Nov. 5, 1958
22 Claims. (Cl. 95—10)



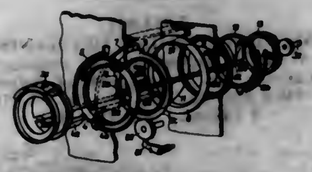
8. In a camera, in combination, an objective; a pair of setting rings turnably carried by said objective for respectively setting the exposure time and the exposure aperture, said setting rings respectively having rest positions where said exposure time and exposure aperture are at an extreme value; differential means cooperating with said setting rings for turning the latter to set the exposure time and the exposure aperture of the camera; manually operable means cooperating with said differential means for actuating the latter, said manually operable means including a projection movable along a predetermined path; light-sensitive means cooperating with said manually operable means for controlling the extent to which said differential means is actuated by said manually operable means; a shutter operating member movable along a second path; a blocking member located along said second path for preventing operation of said shutter operating member when said blocking member is in a blocking position; and linkage means connected to said blocking member and having a portion located in the path of movement of said projection of said manually operable means to be actuated by said projection of said manually operable means when the latter is operated to actuate said differential means for acting through said linkage on said blocking means to remove the latter from said blocking position thereof so as to free said shutter operating member for operation to actuate the shutter only after the differential means has been actuated to set said rings.

3,093,041
PHOTOGRAPHIC CAMERA WITH EXPOSURE METER PHOTOCELL ADJUSTABLE IN ACCORDANCE WITH OBJECTIVE FOCUSING
Heinz Melle, Braunschweig, Germany, assignor to Voigtlander A.G., Braunschweig, Germany, a corporation of Germany
Original application Oct. 16, 1956, Ser. No. 616,247, now Patent No. 3,007,381, dated Nov. 7, 1961. Divided and this application Sept. 1, 1961, Ser. No. 135,600
7 Claims. (Cl. 95—10)



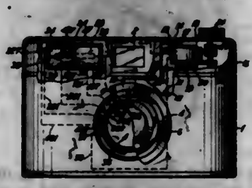
1. In a photographic camera having a casing, an objective having components relatively adjustable axially for focusing of the objective as to distance; an exposure meter including a photocell pivotally mounted in said casing adjacent an aperture in a front wall thereof for swinging movement about an axis spaced from and perpendicular to the axis of said objective; whereby said photocell may be adjusted to a position wherein the median of its included angle of incident light intersects the objective axis in the sharply focused object plane corresponding to the distance setting of said objective; and objective distance setting indicating means operatively associated with said photocell for such adjustment of the latter to the distance setting of said objective; the included angle of incident light on said photocell being only a minor fraction of the image angle of said objective.

3,093,042
PHOTOGRAPHIC CAMERA
Otto Weller, Aeslar, Kreis Wetzlar, Germany, assignor to Ernst Leitz Gesellschaft mit beschrankter Haftung, Wetzlar (Lahn), Germany
Filed Nov. 6, 1961, Ser. No. 150,266
Claims priority, application Germany Nov. 8, 1960
15 Claims. (Cl. 95—10)



1. A photographic camera having an adjustable diaphragm opening and exposure time, and comprising an exposure meter mounted therein, a rotatable adjusting means for independently adjusting the diaphragm opening and having an arm axially extending therefrom, a second adjusting means for independently adjusting the exposure time, including a ring having an arm axially extending therefrom, a first rotatable control ring having a radial pin thereon, a second rotatable control ring having a radial pin thereon, an adjustor ring for concurrently adjusting the diaphragm opening and exposure time according to a predetermined relationship, means actuated by said adjustor ring for positioning said first control ring in response to the illumination measured by said exposure meter, and means operatively connecting said first control ring and said second control ring so that said pin of said second control ring engages said axial arms and positions said arms against said pin of said first control ring when said adjustor ring is actuated.

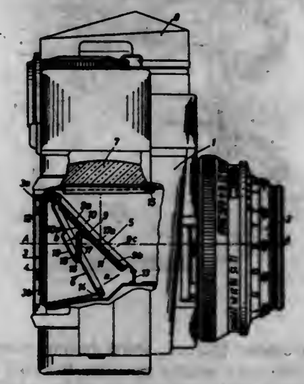
3,093,043
PHOTOGRAPHIC CAMERA WITH ELECTRICAL EXPOSURE METER
Gotthard Kinder, Braunschweig, Germany, assignor to Voigtlander A.G. Braunschweig, Germany, a corporation of Germany
Filed Nov. 24, 1961, Ser. No. 154,472
Claims priority, application Germany Dec. 3, 1960
8 Claims. (Cl. 95—10)



1. In a photographic camera of the type including an exposure meter incorporating an electrical measuring instrument having an indicator whose deflection is controlled by the setting of a first exposure factor to provide an indication for controlling the setting of a second exposure factor, and including a plurality of photo-sensitive elements operatively associated with the measuring instrument and exposed to incident light, with each element being adapted to control the current supplied by itself to the measuring instrument in accordance with the light incident on the element, and means for switching the photo-sensitive elements into and out of circuit connection with the measuring instrument in accordance with the setting of such first exposure factor; the improvement comprising, in combination, a first setting device movable relative to an adjacent fixed surface of the camera for setting said first exposure factor; a plurality of contacts mounted on said adjacent fixed surface in aligned spaced relation along the path of movement of said first setting device; a contact strip on said first setting device elongated in the direction of movement of the latter and aligned with said contacts, the length of said contact strip being sufficient to span all of said contacts, whereby to engage and interconnect a number of said contacts increasing with movement of said first setting device in one first exposure factor setting direction and decreasing with movement of said first setting device in the opposite first exposure factor setting direction; means connecting said instrument in series between one of said contacts and one terminal of each of said elements; and means connecting the other terminal of each element to a respective one of the other of said contacts; whereby the number of elements selectively connected to said instrument will be varied in accordance with the setting of said first setting device.

3,093,044
BUILT-IN EXPOSURE METERING ARRANGEMENT FOR A SINGLE LENS REFLEX CAMERA
Kurt Lederer, Munich, Germany, assignor to Agfa Aktiengesellschaft, Leverkusen-Bayerwerk, Germany, a corporation of Germany
Filed Mar. 20, 1962, Ser. No. 181,046
Claims priority, application Germany Mar. 25, 1961
11 Claims. (Cl. 95—10)

1. A built-in exposure metering arrangement for a single lens reflex camera having an optical axis extending through its objective lens and film aperture and a viewfinder with its optical axis intersecting said optical axis of said camera at the deflecting mirror which moves clear of the exposure area of the camera during an exposure, said arrangement comprising at least a portion of said mirror being semitransparent, a sealing plate movably mounted in said camera between said deflecting mirror and said film aperture, a phototransducing element, rotatable means mounting said sealing plate and said deflecting mirror together at one end thereof to form an angularly associated assembly, said viewfinder having a base which forms a limit of travel for said assembly when it is moved clear of said exposure area, a mirror stop in said camera maintaining said deflecting mirror in a position for reflecting images through said viewfinder, a sealing stop disposed in front of said film aperture for maintaining said sealing plate in its sealing position at a spaced angle from said mirror in said reflecting position, pivot means mounting said phototransducing element upon said assembly between said mirror and said sealing plate and disposed in line with said semitransparent portion of said deflecting mirror, mutually engaging means upon said phototransducing element and said mirror and sealing plate assembly for maintaining

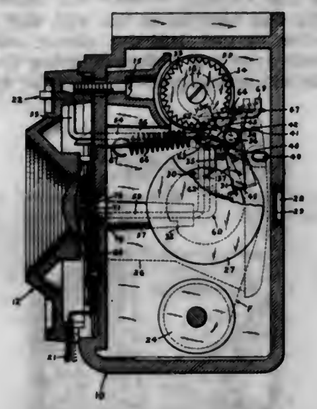


said phototransducing element disposed substantially perpendicularly to the rays of light passing through said semitransparent portion from an object and vertically shielded from light rays passing into said camera through said viewfinder by interposition of a totally reflecting portion of said mirror between said element and said rays passing through said viewfinder when said assembly is in said reflecting position, a retracted position of said assembly and said element against said base of said viewfinder when said film is being exposed, and said assembly including sealing surfaces for engaging each other and said base of said veiwfinder when said assembly and said element are moved toward each other and against said base of said viewfinder for preventing light from entering said camera through said viewfinder during an exposure.

3,093,045
FILM MEASURING AND DOUBLE-EXPOSURE PREVENTION DEVICE
Vinnie J. Rigolini, Brooklyn, N.Y., assignor to Whitehouse Products, Inc., Brooklyn, N.Y., a corporation of New York
Filed Dec. 19, 1961, Ser. No. 160,496
10 Claims. (Cl. 95—31)

1. In a roll film camera having a camera body, a shutter mechanism and a film winding mechanism, the combination comprising a shutter blade pivotally mounted in said camera and forming a part of said shutter mechanism, a film metering wheel rotatably mounted in said camera and arranged so that a peripheral surface of said film metering wheel engages and is rotated by the film upon operation of said film winding mechanism, said film metering wheel having a notch, a ratchet wheel connected to said film winding mechanism and arranged to rotate upon operation of the latter, first and second pawls pivotally mounted in said camera, first biasing means arranged to urge said first pawl into engagement with said notch, second biasing means arranged to urge said

second pawl into engagement with said ratchet wheel to lock said film winding mechanism against operation, means on said first pawl arranged to contact said second pawl to hold said second pawl out of engagement with said ratchet wheel except when said first pawl enters said notch, a slider movable between a first position in which said slider is out of contact with said shutter blade and a second position in which said slider is in locking engagement with said shutter blade to prevent exposure



making movement thereof, third basing means urging said slider into said second position thereof, a cam arranged to rotate with said ratchet wheel and to contact said slider, rotation of said cam moving said slider from said second position to said first position thereof, and means on said slider arranged to contact said second pawl and to pivot said second pawl out of engagement with said notch when said slider moves into said second position thereof.

3,093,046
PHOTOGRAPHIC CAMERA
Franz Wilhelm Reinhard Starp, Calmbach (Enz), Germany, assignor to Alfred Gauthier, G.m.b.H., Calmbach (Enz), Germany, a corporation of Germany
Filed May 19, 1960, Ser. No. 30,370
Claims priority, application Germany May 20, 1959
4 Claims. (Cl. 95—53)



1. In a photographic camera of the type having a camera shutter release device, and having mechanisms for effecting both automatic and non-automatic exposure settings, in combination, a locking means for preventing operation of said shutter release device; a manually operable selector member settable in an "automatic" position and a different, "non-automatic" position and adapted to occupy other positions as well; and means rendering inoperative said locking means for the shutter release device only when the selector member is in the "automatic" and "non-automatic" positions.

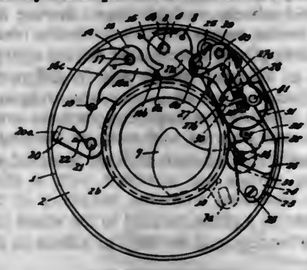
3,093,047
REMOTE CONTROLLED SOLENOID ACTUATED SHUTTER
John E. Neff, 545 Fairmont Ave., Mountain View, Calif.
Filed Jan. 9, 1961, Ser. No. 81,657
2 Claims. (Cl. 95—59)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A camera shutter device, comprising, in combination, a case having an opening therein and a rim around its inner edge extending vertically from its inner face and defining a shutter well, said shutter well having an indentation in the bottom thereof; a cover plate having an opening therein, the case and cover plate constructed to fit together in light-tight arrangement with the peripheries of the openings mating to form a light aperture; said case having an internally threaded adapter well concentric with the opening in the case depending from the outer surface of the case, said opening in the case being cut out of the bottom of said adapter well and having a diameter less than that of the adapter well whereby a thin section of said bottom remains; said cover plate having an adapter well concentric with the opening in it depending from its outer face, said opening in the cover plate being cut out of the bottom of said adapter well in the cover plate and having a diameter less than that of the cover plate adapter well, whereby a thin section of the bottom of the cover plate adapter well remains; an internally and externally threaded rim abutting said cover plate adapter well; a thin shutter mounted to reciprocate in said shutter well having a wide portion and a narrow neck section having a raised portion at its end; a shutter pin securely mounted in said neck section extending transversely thereof; a shutter lever arm having a hook at its end mounted in said raised portion in the plane of said shutter and at an acute angle to said neck section; said shutter pin being mounted in said indentation for rotation; a solenoid mounted on the outer surface of said case; a spring-biased solenoid actuated pin in said solenoid extending into said indentation; a solenoid lever arm secured at one end to said solenoid actuated pin and having a laterally extending slot near its other end, the hook of said shutter lever arm riding in said slot; whereby actuation of said solenoid serves to rotate said spring-biased solenoid actuated pin and correspondingly said shutter in one direction and in actuation of said solenoid permits return of said actuated pin and shutter to their original positions.

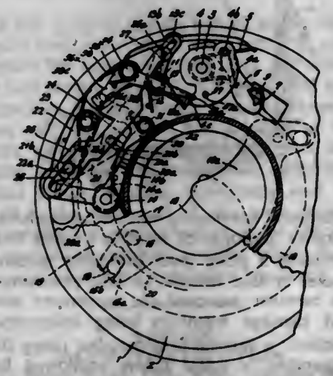
3,093,048
PHOTOGRAPHIC CAMERA ESCAPEMENT MECHANISM
Franz Wilhelm Reinhard Starp, Calmbach (Enz), Germany, assignor to Alfred Gauthier, G.m.b.H., a corporation of Germany
Filed Oct. 25, 1960, Ser. No. 64,844
Claims priority, application Germany Oct. 27, 1959
3 Claims. (Cl. 95—63).

1. An escapement mechanism in a photographic camera, comprising in combination, a powered device whose action is to be delayed; a movable actuating member arranged to be driven by said powered device; a driving member movable between starting and terminal positions; a pin-and-slot driving connection between the actuating member and said driving member whereby the latter is indirectly subjected to the driving force of the powered device; mounting means including a support for the actuating member, adjustably mounting the actuating member to enable the same and the support therefor to be adjustably positioned with respect to the driving member as determined by said pin-and-slot connection while said



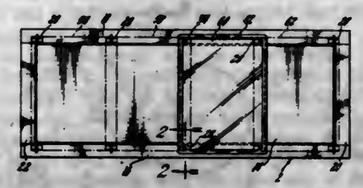
driving member remains in its starting position; a restoring spring tending to hold the driving member in starting position; and means including a speed setting member and cam operated thereby, for adjustably positioning said mounting means.

3,093,049
PHOTOGRAPHIC INTRA-LENS SHUTTER CONSTRUCTION
Franz W. R. Starp, Calmbach (Enz), Germany, assignor to Alfred Gauthier, G.m.b.H., Calmbach (Enz), Germany, a corporation of Germany
Filed Aug. 29, 1961, Ser. No. 134,658
Claims priority, application Germany Sept. 17, 1960
6 Claims. (Cl. 95—64)



1. In a photographic intra-lens shutter construction having a manually operable shutter release, in combination, shutter blades; a blade actuating mechanism including a powered cocking and driving member, for opening and closing the shutter blades; diaphragm segments; means including a diaphragm adjusting ring, for shifting the diaphragm segments; a diaphragm preselection device including an adjustable stop, cooperable with the diaphragm segment shifting means; an elongate setting and actuating bridge at one end pivotally connected to the diaphragm segment shifting means; a locking member pivotally connected to the other end of the bridge and adapted to retain the said powered driving member in cocked position; a spring-powered bridge-driving member for imparting lateral movement to the bridge; means responsive to operation of the shutter release, for releasing the bridge-driving member to effect lateral movement of the bridge whereby the latter first swings about the pivotal connection to the locking member to actuate the diaphragm segment shifting means for effecting adjustment of the diaphragm and thereafter swings about the pivotal connection to the diaphragm segment shifting means to effect actuation of the locking member so as to release the cocking and driving member for opening and closing of the shutter; and means responsive to termination movement of the cocking and driving member, for actuating the diaphragm segment shifting means to return the diaphragm segments to their closed positions.

3,093,050
DRAWING REPRODUCTION METHOD
Frank E. Smith, Birmingham, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Mar. 11, 1959, Ser. No. 798,702
2 Claims. (Cl. 95—73)

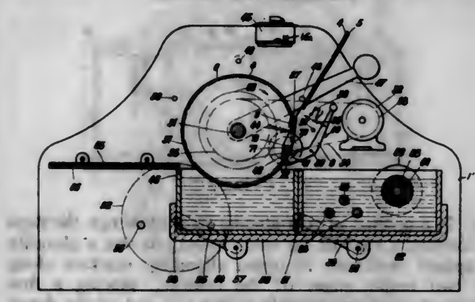


1. In a method of reproducing large drawings, the steps of forming a support for said drawing having a plurality of spaced resiliently mounted alignment markers along the two major edges of the drawing, placing a first sensitized plate transversely across one end of the drawing and covering the first four alignment markers, exposing said plate to obtain a negative of a first section of the drawing and the four alignment designs, removing the first plate and developing the same, placing a second sensitized plate transversely across the drawing but positioning it further toward the middle of the drawing by one transverse set of alignment markers, exposing said second sensitized plate and removing and developing the same, positioning as many more sensitive plates as are necessary to cover the remainder of the drawing moving one set of alignment markers along the transverse axis each time a new sensitized plate is applied until the whole drawing has been covered and sectional negatives having alignment markers have been made, substituting a sensitized sheet of dimensionally stable material of the same size as the original drawing for the same, placing the first negative made from the first sensitized plate over the first four alignment markers on one end of the sensitized sheet with the developed alignment designs on the negative in exact registration with those on the first four alignment markers, covering with opaque material the remainder of the sensitized sheet, exposing the first negative plate for the proper length of time, removing the first negative plate placing the second negative plate one set of alignment markers to one side of the location of the first and again aligning the developed designs on the corners of the second negative plate with the alignment markers on the supporting means, covering with opaque means the remainder of the sensitized sheet so that it will not be affected by light, exposing the second negative plate and proceeding in the same manner until all of the negative plates have been printed on the sensitized sheet and lastly removing the sensitized sheet and developing the same as a positive print.

3,093,051
APPARATUS FOR TREATING PRINTING FOILS
Wilhelm Ritzerfeld, 14 Schorlemer Allee, Berlin-Dahlem, Germany, and Gerhard Ritzerfeld, 21 Franzensbader Str., Berlin-Grunewald, Germany
Filed Apr. 13, 1959, Ser. No. 805,958
Claims priority, application Germany Aug. 14, 1958
7 Claims. (Cl. 95—89)

1. Apparatus for treating a printing foil having a treatable surface layer, the apparatus comprising, in combina-

tion, container means including a casing, a first container adapted to contain a first treating liquid and a second container adapted to contain a second treating liquid, said containers being supported on said casing adjacent each other and having adjacent wall means; rotary carrier drum means having a surface portion for supporting the printing foil for movement about a circular path; stationarily supported drive means for rotating said carrier drum means with the printing foil; a support supporting said carrier drum means for rotation; a pair of parallel arm means pivotally connected at the ends thereof to said support and to said casing and supporting said casing with said containers below said carrier drum means for move-



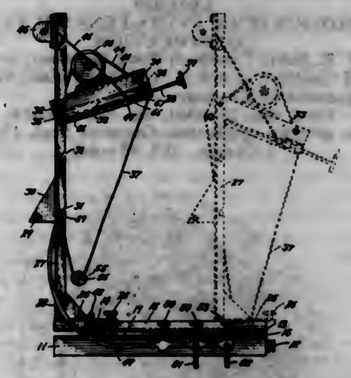
ment between a first position in which the lower part of said carrier drum means is located in said first container, an intermediate position in which said adjacent wall means are located below said carrier drum, and a second position in which the lower portion of said carrier drum means is located in said second container so that said surface portion and the printing foil are partly immersed in said liquids whereby the printing foil passes during rotation of said carrier drum means through said first and second liquids in said first and second positions, respectively, for successive treatment of the foil by the liquids; and a handle operatively connected to one of said arm means for turning the same to move said casing between said positions.

3,093,052
PHOTOGRAPHIC PROCESSING APPARATUS
Willard C. Berner, Linecroft, Seymour L. Hersh, Freehold, and Christopher Lucas, Long Branch, N.J., assignors to the United States of America as represented by the Secretary of the Army
Filed Dec. 3, 1959, Ser. No. 857,238
1 Claim. (Cl. 95—94)
(Granted under Title 35, U.S. Code (1952), sec. 266)



Apparatus for continuous processing of photosensitive strip materials comprising a plurality of rotatively mounted solution applying wheels having a solution absorbing soft fabric peripheral face, a solution containing tank for each wheel into which a portion of the wheel is submerged, a supply roll containing the strip to be processed, means to guide said strip into successive peripheral contact with a portion of the unsubmerged periphery of said wheels, squeegee means acting on the periphery of said solution applying wheels to prevent the passage of excessive solution from said tanks to the film strip, a driving system to drive said wheels consisting of at least one film strip feeding roll having means to advance the film through the apparatus at a given speed independently of the peripheral speed or direction of rotation of certain of said wheels, variable speed driving means for said wheels having means for independently reversing the rotation of some of said wheels, said driving system driving said wheels at different speeds and in different relative directions of rotation to reduce excessive drag on the film strip and to provide for applying variable amounts of solution per unit area to said strip at selected solution applying wheels and wherein at least some of said solution applying wheels are provided with a plurality of narrow slots extending from the periphery of the wheel radially inward in a plane parallel to the wheel axis acting to relieve the tendency of the strip to adhere to the wheel.

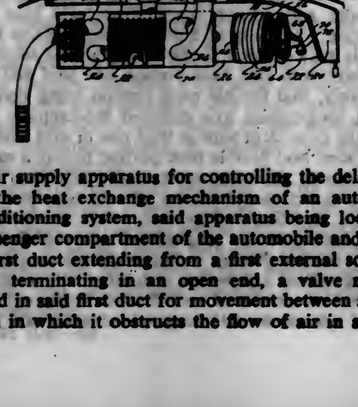
3,093,053
PHOTOPRINT DEVELOPING MACHINES
Perley T. Blood, 6811 Delta Drive, Box 216, El Paso, Tex.
Filed Apr. 28, 1961, Ser. No. 125,600
8 Claims. (Cl. 95—94)



1. A photoprint developing machine comprising: a horizontal plurality of elongated solution troughs arranged in parallel relation; a guide track extending transversely of the long axes of said troughs at each extremity thereof; a carriage member mounted for movement along each track, said carriage members being interconnected to move in unison; a vertical post member rising from each carriage member; a roller frame supported from and extending between said post members; print supporting rollers mounted in said roller frame axially parallel to and substantially equal in length to said troughs and adapted to support an endless photoprint band whereby said print can be moved over any desired trough by movement of said carriage members along said track members; and means allowing said roller frame to be moved downwardly to immerse said photoprint in the desired trough.

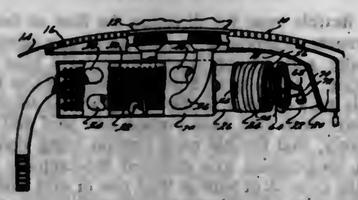
3,093,054
GENERATOR DEVICE FOR BOMBSHELTERS
Morton M. Rosenfeld, 271 Madison Ave., Mount Vernon, N.Y.
Filed Sept. 5, 1961, Ser. No. 135,900
1 Claim. (Cl. 98—1)

Apparatus comprising large and small rotatably mounted sprockets, a chain for mechanically interconnecting said sprockets, a set of pedals for driving said large sprocket, a first bifurcated support for said small sprocket, said first support having spaced parallel upright legs joined at their upper ends by a first cross piece, the lowermost ends of said legs having integral outwardly extending flanges thereon, said flanges being adapted to be bolted to the floor of a bomb shelter, a main drive shaft, said main drive shaft passing through both of said first support legs, said small sprocket being mounted on said main drive shaft between said legs, a seat supported by said first support above said first support cross piece, said seat being in a plane higher than said pedals, a second bifurcated support, said second support having spaced parallel upright legs joined at their upper ends by a cross piece, said second support upright legs having outwardly directed flanges at the bottom thereof for mounting said second support on the floor of a bomb shelter spaced



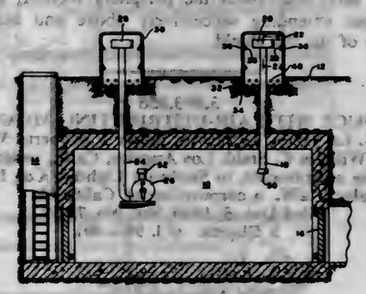
from said first support, handle bars mounted on said second support cross piece in the same plane as said seat, a third support for supporting said large sprocket between said first and second supports, a blower, said blower being mounted on a blower shaft, a bolted flange coupling connecting said blower shaft with one end of said main drive shaft, an electric generator, a generator drive shaft for rotating said generator to generate electricity, a second bolted flange coupling connecting said generator drive shaft to the other end of said main drive shaft, a battery connected to said generator to be charged thereby, and ventilation conduits for the bomb shelter connected to said blower for ventilating the bomb shelter.

3,093,055
DUCT CONSTRUCTION
Jackson L. Baker, Royal Oak, Mich., assignor to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware
Filed Mar. 20, 1961, Ser. No. 97,039
2 Claims. (Cl. 98—2)



1. Air supply apparatus for controlling the delivery of air to the heat exchange mechanism of an automobile air conditioning system, said apparatus being located in the passenger compartment of the automobile and including a first duct extending from a first external source of air and terminating in an open end, a valve movably mounted in said first duct for movement between a closed position in which it obstructs the flow of air in said first duct and an open position, a second duct of a flexible construction having one end in fluid flow communication with the above mentioned heat exchange mechanism, said apparatus including a stiff hollow member movably mounted adjacent the open end of said first duct and a tubular element formed of flexible material, said tubular element being carried by said stiff member for movement thereby, said stiff hollow member and the open end of said first duct having complementary contours adapted to effect a sealing engagement to define a continuous air passage when the hollow member and the open end of the first duct register with each other, and control linkage interconnecting said stiff member and said valve, movement of said stiff member being operable to flex said second duct and selectively move said second duct into sealing engagement with the open end of said first duct to receive air therefrom and into an open position relative to said first duct to accommodate the reception of air in said second duct from the passenger compartment of the automobile, said control linkage being operable to move said valve and said stiff member in unison so that said valve is in its open position whenever said second duct is in sealing engagement with the open end of said first duct to deliver air from the external source to said heat exchange mechanism and said valve closes when said second duct is moved to its open position relative to said first duct to admit air from the passenger compartment to said heat exchange mechanism.

3,093,056
VENTILATION SYSTEM
Morton M. Rosenfeld, Mount Vernon, N.Y. (271 Madison Ave., New York, N.Y.)
Filed Aug. 22, 1961, Ser. No. 133,133
3 Claims. (Cl. 98—33)

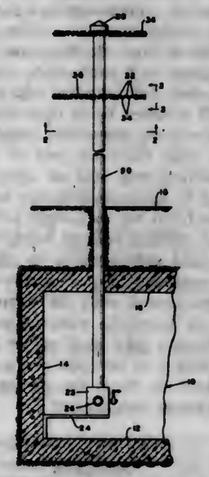


1. A ventilation system comprising an underground enclosure, means providing entry and exit to said enclosure, an intake pipe having a first end in communication with said enclosure and a second end above ground level, an exhaust pipe having a first end in communication with said enclosure and a second end above ground level, a hood supported on the second end of each pipe, and a tamperproof shield surrounding each hood and the portion of each pipe disposed above ground level, the shield comprising a tubular main body having a closed imperforate upper end spaced above said hood and extending to below the ground level to be secured therein, said tubular main body having air vents therein.

3,093,057
BOMBSHELTER VENTILATION MEANS
Morton M. Rosenfeld, 271 Madison Ave., Mount Vernon, N.Y.
Filed Sept. 19, 1961, Ser. No. 139,192
3 Claims. (Cl. 98—39)

1. Apparatus comprising an underground enclosure, a pipe having one end in said enclosure, the other end

of said pipe extending to a point above and substantially spaced from ground level, a hood on said other end of said pipe, and a tamperproof means secured to said pipe at a point intermediate said hood and ground level to prevent persons from climbing up said pipe to said hood, said tamper-proof means including a flat shield lying in a plane substantially perpendicular to the longitudinal



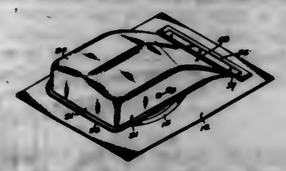
axis of said pipe, the inner peripheral diameter of said shield being fixedly secured to the outer peripheral diameter of said pipe, said flat shield having a minimum outer diameter of three feet, said flat shield additionally having serrations about the periphery thereof, alternate serrations extending successively above and below the surface of the flat shield.

3,093,058
DUCT WITH AIR-DISTRIBUTING MEANS
Paul G. La Vigne, La Habra, James A. Roberts, Whittier, and William C. Stahl, Los Angeles, Calif., assignors, by mesne assignments, to Sunbeam Lighting Co., Inc., Los Angeles, Calif., a corporation of California
Filed Dec. 5, 1960, Ser. No. 73,597
5 Claims. (Cl. 98—40)



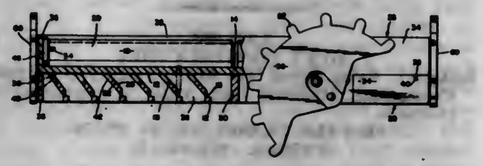
1. In a duct structure, a pair of spaced parallel longitudinal walls defining an air-discharging throat, a longitudinal inverted channel disposed beyond the ends of said walls, said channel comprising a transverse wall having openings through which air from the throat enters the channel, and channel side walls forming lower extensions to the mentioned parallel walls, a fixed vane disposed in said channel between and spaced from the side walls thereof to divide the channel into two side throats each defined between one of said side walls of the channel and an edge of the vane, removable support means depending from said transverse wall to support said fixed vane, and an angularly adjustable vane disposed in the channel between the fixed vane and the transverse wall of the channel, said angularly adjustable vane being rotatably mounted on said support means whereby the flow through the two side throats may be varied according to the angular adjustment of the adjustable vane.

3,093,059
ROOF VENTILATOR WITH REMOVABLE HOOD
Peter P. Metz, Seattle, Wash., assignor to Northwest Metal Products, Inc., Kent, Wash., a corporation of Washington
Filed Mar. 2, 1961, Ser. No. 92,857
7 Claims. (Cl. 98—42)



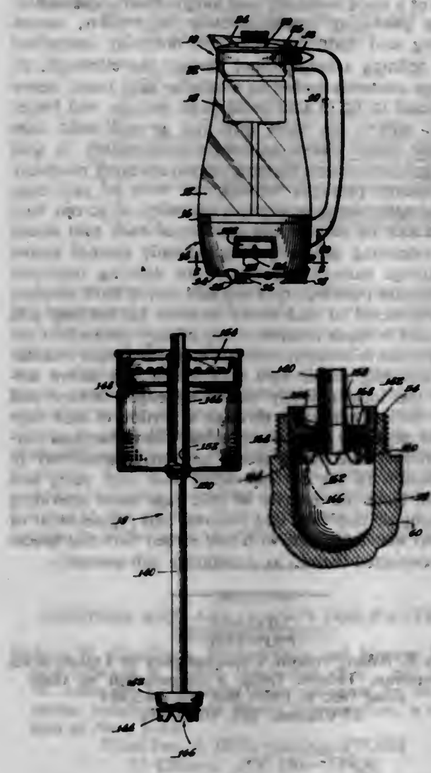
1. A roof ventilator comprising a base plate formed with a central vent aperture prolonged upwardly by a baffle-producing neck which is open at the top, a screen for said top opening, a hood for the ventilator, and means for removably attaching the hood to the neck so that the hood overlies the neck in a position spaced above said top opening and with its edges extending outwardly beyond the neck and terminating in downturned skirts which, along the front edge and each of the two sides, depend below the top limit of the neck while being spaced above the base plate and, along the back edge, extend into touching contact with the base plate, said attaching means including ears projecting laterally from the neck at opposite sides thereof and against which the side skirts bear, screw means which thread into said ears being provided for drawing said bearing portions of the side skirts against the ears.

3,093,060
FLEXIBLE VANE AND GRILLE ASSEMBLIES
Robert D. Emery, Wickliffe, Ohio, assignor to Eaton Manufacturing Company, Cleveland, Ohio, a corporation of Ohio
Filed Apr. 4, 1960, Ser. No. 19,565
7 Claims. (Cl. 98—110)



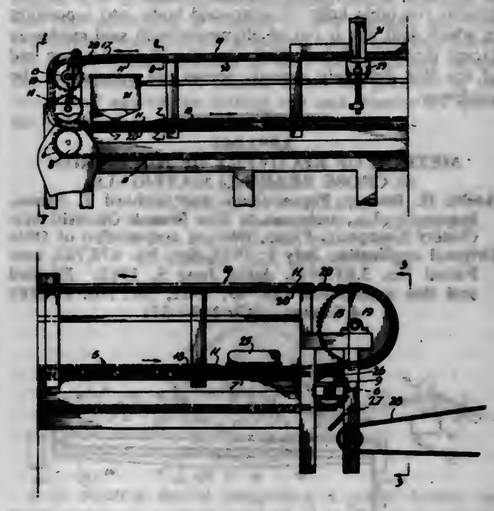
1. A flexible vane for directing the flow of fluid flowing thereover, comprising: a base portion; a substantially rectangular end portion spaced from said base portion and having a plurality of fluid directing surfaces thereon; a flexible neck portion formed integral and substantially coextensive with said base portion and said end portion respectively; said flexible neck portion being deformable about a longitudinal axis disposed substantially parallel to a plane coincident with at least one of said fluid directing surfaces; said flexible neck portion having a minimum cross-sectional thickness substantially less than a minimum cross-sectional thickness of said base portion and said fluid directing end portion when considered in a plane normal to said longitudinal axis; said fluid directing end portion having a linear dimension parallel to said longitudinal axis which is substantially greater than any linear dimension of said fluid directing end portion disposed normal to said longitudinal axis; said fluid directing end portion, in a non-flexed condition having at least one of said fluid directing surfaces disposed in a plane substantially parallel to said longitudinal axis and laterally off-set with respect to said base portion whereby positive movement of said fluid directing end portion varies the angular disposition of said end portion with respect to said base portion by the flexing of said neck portion with the fluid directing end portion remaining in a substantially undistorted shape.

3,093,061
COFFEE BREWER
Frank P. Rodwick, Palos Heights, and Nicholas T. Thome, Worth, Ill., assignors to The Silex Company, Hartford, Conn., a corporation of Connecticut
Filed May 27, 1959, Ser. No. 816,290
2 Claims. (Cl. 99—281)



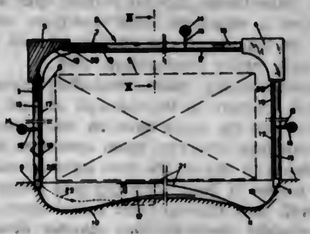
1. An electric percolator comprising:
(*a*) a transparent glass brewing vessel adapted to contain liquid and having an aperture in its lower end;
(*b*) heat transfer means secured to said vessel adjacent said aperture, including a thermally conductive member having walls defining a well which opens into said vessel, said heat transfer means further including electric resistance means in thermal communication with said member;
(*c*) thermally responsive electrical control means situated in thermal communication with the liquid in said vessel, said control means being electrically connected in series circuit with said resistance means to reduce the heat input to said member upon said vessel and its contents reaching a predetermined temperature;
(*d*) pump tube means including a pump tube having its lower end open to said well and including means at said lower end sealingly engaging the interior surface of the walls defining said well;
(*e*) basket means supported on said pump tube means spaced apart from said well, said basket means including a perforated sidewall portion adapted to receive and retain ground coffee and to pass liquid, said basket means further including a centrally disposed, imperforate, tubular portion open at both ends to define a standpipe, said standpipe telescopingly receiving the upper end portion of said pump tube in loosely fitting relationship; and
(*f*) liquid-bypassing means including means defining a radial aperture in the sidewall of said pump tube opening into the space between said pump tube and said standpipe whereby, upon operation of said control means to reduce the heat input to said member, weak surges of liquid entering said pump tube from said well pass through said radial aperture to flow in a visually inconspicuous manner down the outside of said pump tube.

3,093,062
MACHINES FOR MAKING CRUMPETS AND THE LIKE
Charles William Forrester, 198 Jasper Road, Bentleigh, near Melbourne, Victoria, Australia
Filed Mar. 21, 1961, Ser. No. 97,313
9 Claims. (Cl. 99—423)



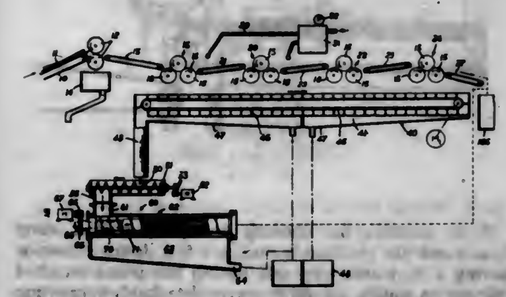
9. A machine for cooking crumpets, muffins, drop scones and like products including a first driven conveyor having a horizontal run and having hot plates attached thereto; an endless second conveyor detachably supporting mould ring plates and operating in synchrony with said first conveyor, said second conveyor having upper and lower horizontal runs, the lower run of said second conveyor being located adjacent to and above the run of said first conveyor; a cooking zone; means for release of the mould ring plates from said second conveyor onto the run of said first conveyor at the forward end of the cooking zone and means for picking up the mould ring plates from said first conveyor at the rearward end of the cooking zone.

3,093,063
GUIDEFRAMES IN MACHINES FOR FASTENING A STRAP OR WIRE AROUND A CONTAINER, BOX OR LIKE PACKAGE
Auke van der Wal, The Hague, Netherlands, assignor to N.V. Verenigde Metaalverpakking Maatschappij, The Hague, Netherlands, a company of the Netherlands
Filed Dec. 27, 1961, Ser. No. 162,466
Claims priority, application Netherlands Feb. 1, 1961
2 Claims. (Cl. 100—26)



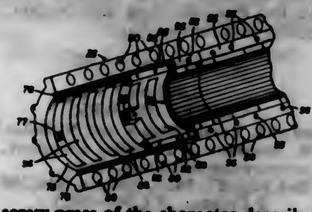
1. In a machine for fastening a strap or wire around a container, box or like package, the combination of a frame having a plurality of connected side elements and a guideway in said elements opening toward the inside of the frame with means for enclosing said strap in said guideway movable against spring pressure to a position for allowing the strap to leave the guideway and to be tensioned around the package to be tied, said means comprising a plurality of tubular bodies, each of which rotatably surrounds a side element of the frame, said bodies each having a longitudinal slot which is widened at its leading end, and a spring attached to each said tubular rotatable body biassing said body into a position in which said slot is out of alignment with said guideway except that one of the edges of said widened leading end of the slot obliquely extends across the opening of the guideway.

3,093,064
METHOD OF RECOVERY OF JUICE FROM SUCROSE BEARING MATERIALS
Andre H. Burner, Piqua, Ohio, and Richard T. Symes, Jeanerette, La., assignors to The French Oil Mill Machinery Company, Piqua, Ohio, a corporation of Ohio
Original application July 9, 1957, Ser. No. 670,742, now Patent No. 3,037,445, dated June 5, 1962. Divided and this application Oct. 19, 1961, Ser. No. 146,261
4 Claims. (Cl. 100—37)



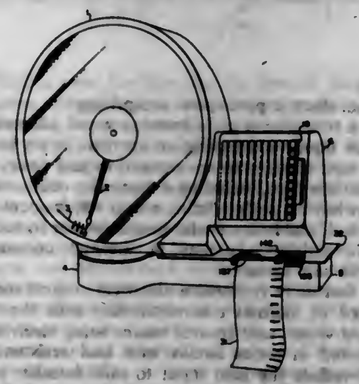
1. The improvement in the process of expressing juice from sugar cane in which the cane is crushed in roller mills to separate juice therefrom with accompanying formation of cush-cush which is entrained in the juice removed from the crushed sugar cane, comprising separating the cush-cush from the juice removed from the cane by the roller mills, and exerting a sustained mechanical pressure on the juice laden cush-cush to express juice therefrom and separating such expressed juice from the cush-cush fibers.

3,093,065
EXPRESSING PRESS
Alfred W. French, Piqua, Ohio, assignor to The French Oil Mill Machinery Company, Piqua, Ohio, a corporation of Ohio
Filed Nov. 25, 1957, Ser. No. 698,442
3 Claims. (Cl. 100—127)



1. In a screw press of the character described, the combination of a main vertically and longitudinally split drainage cage providing complementary cage parts, means supporting said main cage parts in normally assembled relation defining a longitudinal passage therethrough, an inner cage assembly including a tubular cage insert sleeve dimensioned to fit in said main cage passage and longitudinally split in the same direction as said main cage to provide insert sleeve sections corresponding to said main cage parts, means forming communicating relatively large drainage passages through the walls of said cage parts and said sleeve sections, a plurality of screen bars arranged side by side on the interior of each said sleeve section extending generally longitudinally thereof across said drainage passages, spacer means defining relatively small drainage openings between said screen bars, retainer means connected to said sleeve sections for holding said bars in said sections independently of any connection between said sleeve sections and said cage parts, said retainer means including center bars fastened to said sleeve sections at the longitudinally extending edges thereof and fastener devices extending through a portion of said cage parts and engaging the corresponding sleeve sections normally holding said insert sleeve sections respectively in fixed position in the corresponding said cage parts and releasable from the exterior of said cage parts providing for opening of said cage and removal and replacement of said insert sleeve sections with said screen bars and spacer means connected thereto as a complete sub-assembly.

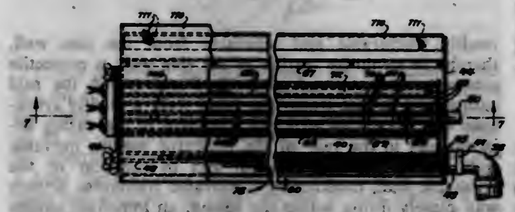
3,093,066
PRINTER
Clarence E. Adler, Toledo, Ohio, assignor to Toledo Scale Corporation, Toledo, Ohio, a corporation of Ohio
Filed Oct. 9, 1959, Ser. No. 845,401
15 Claims. (Cl. 101—92)



1. In a printer, in combination, means so defining a printing station that the station is hidden from view,

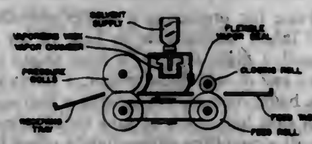
roller means for driving a record strip, movably mounted roller mounting means for rotatably mounting the roller means, the record strip being movable in steps through the printing station to be printed with successive lines of printed matter, drive means for operating the printer, and means operatable in synchronism with the drive means for so moving the roller mounting means that the record strip is ejected from the printing station a distance sufficient to make the last print visible exteriorly of the printer and is returned to the printing station to receive the next print.

3,093,067
HUMID AIR PRESS PLATE CONDITIONING APPARATUS FOR PRINTING PRESS
William C. Huebner, Mamaroneck, and Joseph Kunicki, Brooklyn, N.Y., assignors to Advanced Graphics, Inc., Brooklyn, N.Y.
Filed July 31, 1961, Ser. No. 128,257
11 Claims. (Cl. 101—147)



1. Apparatus for subjecting a printing press plate having hygroscopic areas and non-hygroscopic printing areas to humidified air and to air containing salt particles, said apparatus including a dispenser comprising a housing having a discharge opening in immediate proximity to said plate, means for supplying humidified air to said dispenser, including an air moving device including a conduit terminating in said dispenser, a coupling member connected with said conduit and extending into the interior of said dispenser, and a plurality of pipes connected with said coupling member extending in a direction substantially parallel to the printing plate, said pipes being of different lengths to discharge air to different parts of said dispenser.

3,093,068
METHOD AND APPARATUS FOR PATTERN REPRODUCTION
Robert W. Gundlach, Spencerport, and George R. Mott and Edward R. Sabel, Rochester, N.Y., and Howard W. Albrecht, Columbus, Ohio, assignors, by direct and mesne assignments, to Xerox Corporation, a corporation of New York
Filed Jan. 3, 1955, Ser. No. 479,454
15 Claims. (Cl. 101—149.4)



1. The method of forming a predetermined dye pattern on the master sheet of a spirit duplicating set comprising the steps of forming a tackifiable powder particle image of such predetermined pattern on the dye layer of the carbon sheet of a spirit duplicating set, superposing the master sheet of such set on the dye layer of said carbon sheet, passing the assembled set through a tackifying chamber whereby successive portions of said powder particle image are progressively tackified to a degree to adhere to the material of both said sheets, progressively pressing successive portions of the master and carbon sheets into intimate contact at a predetermined pressure in timed relation to the tackification of corresponding portions of the intervening powder particle image, maintaining said pressure for a time period to permit said tackified image to form a bond between the materials of said sheets, and separating said sheets, whereby an area of dye layer corresponding to the area of the predetermined pattern is separated from the carbon sheet and is affixed to the master sheet.

3,093,069
AUTOMATIC WEB TENSION CONTROL SYSTEM
Hans J. Luehrs, Westerly, R.I., assignor to The Cottrell Company, Westerly, R.I., a corporation of Delaware
Filed Sept. 16, 1960, Ser. No. 56,428
11 Claims. (Cl. 101—179)



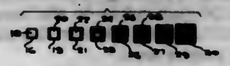
1. In a rotary web printing press or other web handling machinery, the combination which includes a web supply, means for taking a web therefrom under tension, web processing means, and web tension control mechanism, each said mechanism comprising a driven web forwarding roll, a deformable surfaced driving roll therefor operable against said driven roll, web engaging means movable by said web according to change in web tension, and connections between said web engaging means and each driven roll whereby such motion of said web engaging means due to changes in web tension alters the pressure of the driven roll against the driving roll and thereby its speed for maintaining web tension.

3,093,070
PRINTING APPARATUS
Millard B. Beaver, 2101 Lawndale, Fort Wayne, Ind.
Filed Jan. 30, 1962, Ser. No. 169,897
19 Claims. (Cl. 101—376)



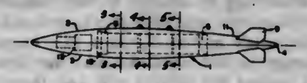
6. A printing device comprising a wheel having an outer peripheral surface, said wheel having three axially spaced circumferential grooves in said peripheral surface, a radial slot provided in said wheel extending radially inwardly from said peripheral surface, a pair of retaining members on the opposite sides of said radial slot, said retaining members extending toward each other, a rubber strip having two elongated parallel and spaced apart side legs which are connected together at the ends thereof by two opposite end legs respectively, said side legs being inserted into the two outer grooves in said peripheral surface with said end legs being received over said retaining members respectively, said side legs having a plurality of ridge portions which are elongated and circumferentially spaced apart on said wheel, said ridge portions extending radially outwardly from said peripheral surface, the ridge portions on said side legs being transversely opposite each other.

3,093,071
GRAVURE PRINTING SURFACE
Charles B. Taylor, Mount Vernon, Ohio, assignor to Continental Can Company, Inc., New York, N.Y., a corporation of New York
Filed Aug. 1, 1961, Ser. No. 128,574
8 Claims. (Cl. 101—401)



8. A screened gravure printing body including an upper surface having formed therein ink receiving cells positioned in accordance with the area to be printed and of ink capacity in accordance with the desired tone depth, said cells being arranged in a rectilinear pattern and said cells being in the form of continuous channels surrounding central portions of said upper surface with the widths of said channels varying in accordance with a desired tone depth, said channels increasing in width both inwardly and outwardly with respect to each cells center with an increase in tone depth less than full tone depth, and said channels transforming into single cavities devoid of said central portions in accordance with a desired full tone depth.

3,093,072
SPIN-INDUCED DISPERSAL BOMB
George L. Pigman, Pekin, Ill., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Jan. 30, 1957, Ser. No. 637,338
1 Claim. (Cl. 102—7.2)



Apparatus for providing a uniform ground pattern of scatter bomb hits from an aircraft launched cluster bomb which comprises in combination, a cluster bomb, three clusters of scatter bombs disposed therein, each of the first and third of which are comprised of an inner group of six scatter bombs disposed in an equilateral triangle with four additional scatter bombs disposed in adjacency to each of three sides of each triangular group, and the intermediate or central cluster comprises nineteen scatter bombs arranged in a hexagonal pattern, means for providing aerodynamically accelerated rotation of said cluster bomb after release from an aircraft, means for initiating dispersal of said clusters at a predetermined point along the trajectory thereof corresponding to a desired slant range from the ground, releasable retaining means individual to each of said clusters for maintaining the scatter bombs disposed in each of said clusters in geometric patterns of mutually differing orientations, and for instantaneously releasing all of the clusters at said dispersal point, and means including canted fins on each of said scatter bombs for providing accelerated rotation thereto, thereby to impart directional stability during flight along the individual trajectories of the scatter bombs, whereby the uniform pattern distributed at release of the scatter bombs is substantially maintained until all of the scatter bombs strike the target.

3,093,073
SHELL FOR GUNS
Harry A. Lockwood, Weston, Conn., and Roscoe L. Hockley, Baltimore, Md. (both % DriAire Inc., 26 Fitch St., East Norwalk, Conn.)
Filed Aug. 31, 1959, Ser. No. 836,998
3 Claims. (Cl. 102—42)

1. A shotgun cartridge comprising, in combination, a tubular molded one piece plastic casing having a cylindrical side wall and an integral substantially smooth and imperforate bulbous transverse front wall constituting a substantially smooth continuation of the front portions of, and joined to the front-most annular edge of, the casing side wall, an entire major portion of said bulbous front wall having appreciably less thickness than the thickness of the side wall of the casing, said front wall having an annular area of appreciable size and continuously of said lesser thickness immediately adjacent the said front-most annular edge of the side wall and the casing having an annular shoulder bordering said area and setting off the thin front wall from the thicker side wall whereby the front wall at said shoulder is relatively



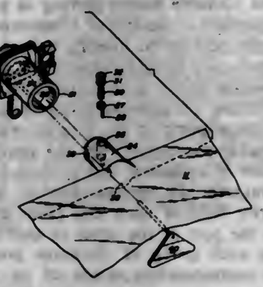
readily fracturable and separable from the side wall, thereby to minimize tearing of the side wall; a projectile means carried at the front end of and within the said casing next to said transverse front wall; a readily crushable wad of air-cell structure, disposed in the casing adjacent and to the rear of the projectile means; movable wall means disposed adjacent and to the rear of the crushable wad, constituting a movable transverse driving wall closely fitting within the casing; an impelling charge in the casing, disposed to the rear of the said movable wall means; breech closure means disposed at the rear of the casing for sealing said impelling charge and said casing; and primer means disposed in said breech closure means adjacent the said impelling charge.

3,093,074
MEANS FOR PROTECTING FLIGHT VEHICLES FROM INJURY ATTRIBUTABLE TO HEAT OF AIR FRICTION
Joseph de Forras, Chateau de Thuiset, Thonon, Haute-Savoie, France
Filed Jan. 8, 1960, Ser. No. 1,226
4 Claims. (Cl. 102—49)



1. In a device for protecting a rocket-propelled flight vehicle from injury attributable to heat of air friction, a rocket-propelled flight vehicle, a nose shield mounted to the forward end of said flight vehicle, a freely rotatable propeller-like baffle member comprising a hub and radial arms fixed in said hub, each of said radial arms having forward and aft straightline edges slightly offset from one another in the direction of rotation of said baffle member, said hub and arms comprising heat-resistant refractory material, a shaft extending rearwardly from said hub, lateral and thrust-resisting bearings supporting said shaft at the forward end of said flight vehicle in a manner to permit said shaft and said baffle member to freely rotate from the action of air on said arms as said flight vehicle moves through the atmosphere, whereby to create turbulence in the air passing through the plane of the arms and moving along the exterior surfaces of said flight vehicle.

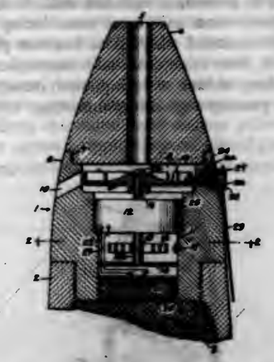
3,093,075
FIN LATCH ASSEMBLY
Edgar J. Garrett and Robert T. Langford, Dallas, and Robert F. Nicks, Mesquite, Tex., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed July 29, 1960, Ser. No. 46,322
2 Claims. (Cl. 102—50)



1. An improved mounting device for attaching a control fin to a missile and which will release said control fin when a key is inserted therein to allow said control fin to be detached from said missile comprising, a tubular control receptacle having open and closed ends and a hole therebetween mounted in said missile with said open end adjacent the outer surface of said missile, a pin affixed to the interior of said receptacle adjacent said closed end and transverse to the longitudinal axis of said receptacle, a compression spring retained within said receptacle between said pin and said closed end, a guide slot on the inner surface of said receptacle and extending from said open end to said hole, a shaft receivable in said receptacle mounted on said control fin and having a diametrically extending slot on the end thereof, a transverse bore in said shaft, a plunger having a tapered end movable in said shaft between locked and unlocked positions, and bias means retained within said bore for biasing said plunger outwardly into said locked position, said plunger being moved to said unlocked position by insertion of said key in said guide slot, said plunger and said diametrically extending slot positioned on said shaft to be registerable with said guide slot and said pin, respectively, as said shaft is inserted in said receptacle whereby said shaft will depress said spring and said pin will enter said diametrically extending slot assuring simultaneous rotation of said shaft and said receptacle.

3,093,076
SPRING-STARTED GENERATOR
Evert Blomgren, Kensington, Conn., assignor to the United States of America as represented by the Secretary of the Army
Filed Feb. 19, 1952, Ser. No. 272,336
2 Claims. (Cl. 102—70.2)

1. An electronic proximity fuse for explosive missiles comprising an ogive having an air duct therethrough along its longitudinal axis, a hollow body member affixed to the ogive and having a turbine chamber therein in communication with the duct, an electric generator provided with forwardly and rearwardly extending portions exteriorly of the generator, the forwardly extending portion supporting a turbine in said chamber, the rearwardly extending portion supported in said hollow body by a plate affixed therein, a tongue formed on said shaft intermediate said generator and said plate, a helical spring concentric with said shaft, the outer end of said spring affixed to the interior wall of said body, the inner end of said spring disposed adjacent said tongue and provided with a slot adapted to engage said tongue upon rotation of said turbine and thereby wind said spring, locking means in said body adapted to engage and lock said turbine against rotation after said spring has been wound,



said locking means disengaging said turbine upon firing of said missile to permit said spring to impart initial rotation to said turbo-generator and disengage said tongue.

3,093,077
HYPODERMIC PROJECTILE
Lucile B. Harris, 1487 Franklin St., Clearwater, Fla., and John A. Mease, Jr., Mease Hospital, Dunedin, Fla.
Filed Mar. 20, 1962, Ser. No. 181,095
1 Claim. (Cl. 102—92)

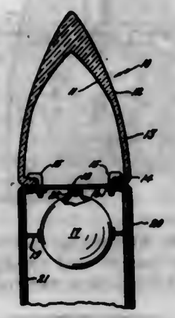


In a hypodermic projectile, a generally cylindrical hollow body, a flexible container positioned within the body and having a hypodermic charge under pressure, a cap closing one end of the body, means at the opposite end of the body for mounting the body to a weapon for projecting it, said cap including an inwardly directed extension mounting said container, a generally axial passage in the cap and extension opening into said container, a needle having a slanted outer end coming to a point for piercing a target mounted on said cap in alignment with said passage, said needle having a passage in communication with said cap passage, a hollow plunger slideable in said needle passage and extending outwardly from said needle, said plunger having an enlarged outside end which is adapted to fit against the slanted end of the needle when the needle and plunger contact a target, a plurality of radially extending holes in said plunger placing the interior of said plunger in communication with the space between the outer surface of the plunger and the inner surface of the needle to increase the flow of the hypodermic charge upon contact with a target, means, within the cap, blocking the passage in the cap, movement of said plunger in an inward direction upon contact with a target being effective to pierce the means blocking the passage in the cap and to release said hypodermic charge through the plunger.

3,093,078
NOSE CONES FOR MISSILES OR ROCKETS
Albert A. Ondrejka, Delta Ave., Rome, N.Y.
Filed Apr. 15, 1960, Ser. No. 22,653
6 Claims. (Cl. 102—92.5)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A nose cone for a missile or rocket which is of a shape which is efficient during flight through an atmos-

phere into outer space and also efficient for the re-entry condition, comprising a hollow nose cone of a generally pointed, streamline shape having an inner and outer surface contoured to provide a reduced wall thickness at the base of said nose cone, said nose cone being formed of a thermoplastic material adapted to become plastic upon re-entry of said nose cone into said atmosphere, a load-carrying member, means securing said member to said nose cone, a passageway interconnecting said member



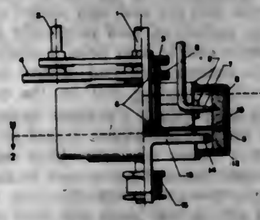
with said nose cone, a source of pressurized gas having an outlet, said source being mounted in said load carrying member, and a valve member at the outlet of said source adapted to connect said source with said passageway to the interior of said hollow nose cone when said nose cone reaches a plastic condition in order to pressurize the interior of said nose cone to change its shape such that the forces exerted by said pressurized gas source and the atmosphere cooperate to change the shape of said nose cone to a relatively blunt configuration.

3,093,079
VARIABLE VOLUME FUEL INJECTION DISTRIBUTOR PUMP
George C. Graham, 76 Crest Road, Ridgewood, N.J.
Filed Feb. 20, 1957, Ser. No. 641,314
13 Claims. (Cl. 103—2)



1. A variable volume pump comprising a housing, a pair of end plates in said housing defining a chamber between their opposing interior walls, a member rotatable upon a stationary axis within said chamber, the walls of said member being in intimate sliding contact with respective opposing interior walls of said end plates, two longitudinal pairs of cylinders in said member, each pair arrayed substantially 90° relative to the other, said cylinders being closed at their outer ends, each pair of cylinders being operative in conjunction with a respective one of said pair of end plates, a port for each of said cylinders, the ports of one longitudinal pair of cylinders being cut through one sliding wall of said member and the ports of the other pair of cylinders being cut through the opposite wall of said member, the port in one cylinder of each pair of cylinders being displaced radially a greater distance from the axis of said member than the port of the other cylinder of said pair, a piston in each of said cylinders, means connected to each of the pistons and movable into various positions eccentric to said axis for producing longitudinal motion of said pistons in said cylinders whereby during the suction stroke of a piston in one cylinder of a pair of cylinders the piston in the other cylinder of said pair is producing a pressure stroke, each of said alternate pressure and suction strokes occurring during substantially 180° of the rotation of said member, said movable means serving as an axis for said pistons independent of the axis of rotation of said member, an arcuate inlet port on the interior wall of each end plate and being traversed by a cylinder port during the time that its respective piston is performing its suction stroke, and a first group of separate circumferentially spaced, arcuate discharge ports on the interior wall of each end plate traversable successively by the port of one of its respective pair of cylinders, and a second group of separate, circumferentially spaced, arcuate discharge ports on the interior wall of each end plate traversable successively by the port of the other of said respective pair of cylinders, each group of discharge ports being positioned in a corresponding sector of its respective end plate where each piston is performing its pumping stroke in the cylinder whose port is traversing its corresponding group of discharge ports.

3,093,080
HYDRAULIC PUMPS
Carlos Sanchez Tarifa, Avda. de America 4, and Jacobo Valdés Pedrosa, Ayala 75, both of Madrid, Spain
Filed Mar. 15, 1961, Ser. No. 95,999
7 Claims. (Cl. 103—5)

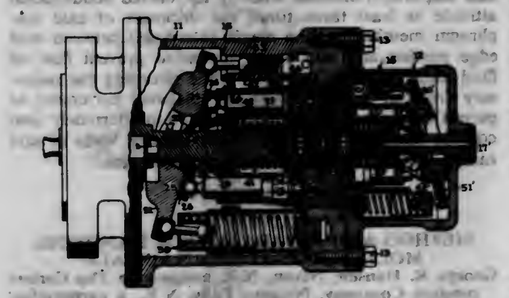


1. A hydraulic pump comprising an annular container forming a collection chamber of U-shaped cross-section rotatable on a shaft and adapted to retain a quantity of collected liquid at its outer periphery by centrifugal force, means for rotating said container at a high speed to impart a high tangential velocity to liquid injected therein, at least one liquid inlet pipe mounted rotatably with said shaft and extending radially into said container, said means rotating said inlet pipe in the same direction as that of the container, said inlet pipe terminating in an injection nozzle disposed substantially tangentially with respect to said outer periphery and facing in its direction of rotation, at least one fixed liquid outlet pipe extending radially into said container to a point near its outer periphery so as to scoop collected liquid therefrom, said container being rotated at a speed substantially higher than the speed of the inlet pipe, whereby high pumping pressures are created, and means for maintaining the quantity of liquid retained in the container between maximum and minimum limits.

3,093,081
PUMPING DEVICE
Tadeusz Budzich, Cleveland, Ohio, assignor to The New York Air Brake Company, a corporation of New Jersey
Filed Jan. 29, 1959, Ser. No. 789,995
10 Claims. (Cl. 103—11)

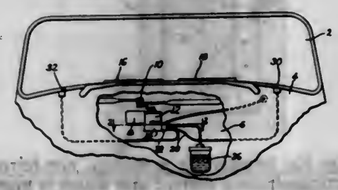
1. In combination, a plurality of variable displacement pumps connected to be driven by a common shaft, each

pump having an inlet port and a discharge port; common supply and delivery passages connected with the inlet and discharge ports, respectively; a displacement-controlling element for each pump, each element being shiftable between minimum and maximum displacement-establish-



ing positions; and control means responsive to the pressure in the delivery passage and connected with the displacement-controlling elements for varying the displacement of the pumps in sequence and in inverse relation to the pressure in the delivery passage when that pressure is above a predetermined value.

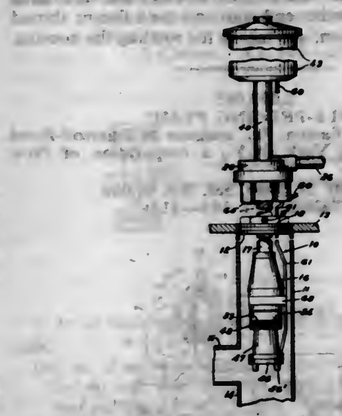
3,093,082
WINDSHIELD WASHER
Eugene R. Ziegler, Spencerport, N.Y., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Jan. 10, 1961, Ser. No. 81,770
4 Claims. (Cl. 103—23)



1. A windshield washer comprising a housing, a pump secured to said housing, a spring biased reciprocable rod slidably supported in said housing for operating said pump, a cam rotatably supported by a shaft in said housing, a cam follower on said rod in engagement with said cam such that when the cam rotates the rod is caused to reciprocate, a drive member rotatably supported by said shaft adjacent said cam and slidable on said shaft into and out of engagement with said cam, the opposed faces of said cam and said member forming a clutch such that when said faces are engaged the rotation of said member causes rotation of said cam, a spring disposed between said member and said cam and encircling said shaft for biasing said member out of engagement with said cam, and means to cause said drive member to slide into engagement with said cam against the action of said spring.

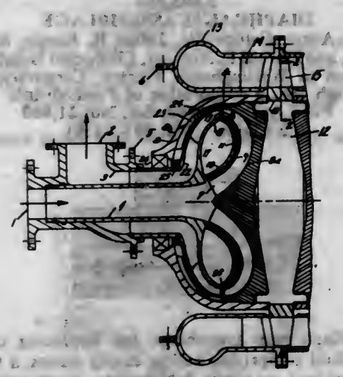
3,093,083
SWITCH AND PUMP CONTROL UNIT FOR SUMP, RISER AND THE LIKE
Axel L. Nielsen, 1316 E. Elza, Hazel Park, Mich.
Filed Nov. 9, 1959, Ser. No. 851,749
4 Claims. (Cl. 103—25)

1. In combination with an upright liquid accumulating casing having a lateral liquid intake conduit communicating with the upright casing at a predetermined point and having a level of liquid therein, a switch controlled pump unit, comprising a pump including a rotary impeller and a housing in which said impeller is mounted for rotation, said housing being provided with means to discharge liquid and having liquid intake means extending into said casing and communicating upwardly with said housing, said intake means having an intake opening a substantial distance beneath the housing, a motor operatively connected to said impeller to drive the latter, a switch device having a pressure responsive member controlling the same, and means providing an aperture for the upward application of liquid pressure on said pressure responsive member, said last named means and



member being mounted on said intake means beneath said opening of the latter, said aperture being downwardly exposed to and subject to the pressure of liquid beneath said intake opening, and means to mount said pump unit in a fixed vertical relation to said casing with said pump intake means in said casing and with said aperture and pressure responsive member above said lateral liquid intake conduit and the level of liquid therein, said switch device being operatively connected to said motor to operate the latter under the control of said pressure responsive member in response to varying liquid pressure beneath said member.

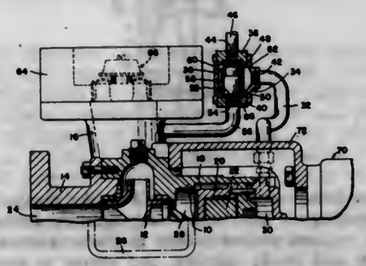
3,093,084
PUMP
George Derderian, 239 W. 8th St., Erie, Pa.
Filed Feb. 21, 1961, Ser. No. 90,717
7 Claims. (Cl. 103—87)



1. A pump comprising a rotatable housing having axially spaced end walls facing each other and a connecting peripheral wall, impeller blades fixed to one of the

end walls with inner ends adjacent the center of the housing and outer ends or discharge tips adjacent said peripheral wall of the housing, a stationary central inlet structure conducting fluid to the inner ends of the blades, a stationary diffuser section having a shroud adjacent the other of the end walls and angularly spaced diffuser vanes adjacent said central inlet structure and extending from adjacent said peripheral wall back toward the center of the housing, the outer tips of the diffuser vanes being presented to the discharge tips of the blades, a stationary outlet structure conducting fluid from the center of the diffuser section, other blades fixed on said other end wall for returning toward said peripheral wall fluid which may leak between said other end wall and the adjacent shroud of the diffuser section, and means for rotating the housing.

3,093,085
SELF-PRIMING PUMP
Henry M. Pollak, Easton, Pa., assignor to Ingersoll-Rand Company, New York, N.Y., a corporation of New Jersey
Filed July 28, 1960, Ser. No. 46,006
6 Claims. (Cl. 103—113)



1. A self-priming centrifugal pump comprising a housing for a rotor and a priming pump and having rotor inlet and discharge passages, a centrifugal rotor disposed in said housing, a priming pump disposed in said housing having an inlet connected to the rotor inlet and a discharge passage, and a valve connected to the priming pump discharge passage normally open to pass fluid from the priming pump to atmosphere, said valve having a pressure face connected to the rotor discharge passage to effect closing of said valve to atmosphere upon development of pressure in the rotor discharge passage and to connect the rotor discharge passage to the priming pump discharge passage.

3,093,086
DIAPHRAGM ASSEMBLAGE
Frank E. Altoz, Catonsville, Julian R. Eargle, Sr., Glen Burnie, and Harold E. Almony, Linthicum Heights, Md., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Apr. 12, 1960, Ser. No. 21,660
3 Claims. (Cl. 103—150)



1. A diaphragm assemblage for displacing or compressing fluid comprising hollow casing means, a thin circular semirigid normally-flat flexible diaphragm member having a central portion disposed within said hollow casing means and cooperable with aligned concave interior walls thereof to define a fluid pressure chamber on at least one side and having an outer edge portion loosely fit with respect to said casing means for radialwise movement of such edge portion to permit greater freedom for increased deflection of said diaphragm, there being an unobstructed center clearance between said walls and said diaphragm member when in its relaxed nondeflected attitude at least three times the thickness of said diaphragm member, sealing means interposed between said edge portion and said casing means to prevent flow of fluid under pressure therepast while affording the necessary freedom for the aforesaid radialwise movement to permit freedom for diaphragm deflection alternately into contact with the aforesaid concave interior walls of said casing without overstressing said diaphragm.

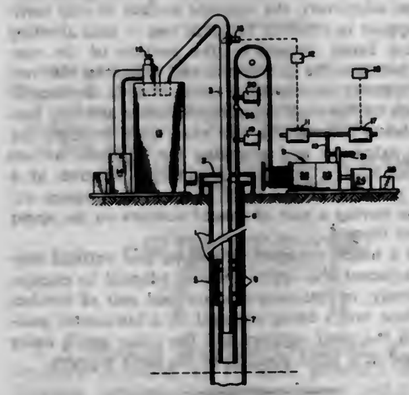
3,093,087
METHOD AND APPARATUS FOR HANDLING MOLTEN, NON-FERROUS METALS
George R. Hansen, Nixon, N.J., assignor to The Carborundum Company, Niagara Falls, N.Y., a corporation of Delaware
Filed Aug. 19, 1958, Ser. No. 755,947
1 Claim. (Cl. 103—153)



A pump for transferring a molten, non-ferrous metal without contamination thereof and which is highly resistant to thermal shock and corrosion by such metal which comprises a casing including an inlet and an outlet therefor, and impeller means within said casing, both said casing and said impeller means being formed of sludge-cast silicon nitride-bonded silicon carbide and having working faces for contact with a molten metal which are not wettable by said molten metal and which have a smooth, dense surface.

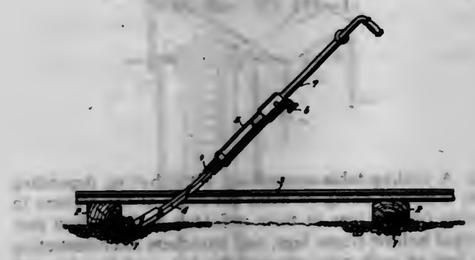
3,093,088
METHOD AND INSTALLATION FOR PUMPING LIQUID TO ANY DESIRED LEVEL
Douglas Arthur Ventress, 10 Winkley St., Berea, East London, Cape Province, Republic of South Africa
Filed Dec. 28, 1959, Ser. No. 862,257
Claims priority, application Republic of South Africa Jan. 20, 1959
12 Claims. (Cl. 103—232)

1. A method for pumping liquid to any desired level higher than the barometric head for the particular liquid above the level of liquid from which it is pumped, which comprises submerging the lower end of a tubular conduit of a length greater in vertical extent than said barometric head in the liquid to be pumped, applying suction to the upper end of said tubular conduit, withdrawing said lower end of the tubular conduit above the level of said liquid to be pumped as soon as a column of liquid has been drawn into the tubular conduit which has the desired length, but the vertical length of which is less than the maximum column length which could be supported in a barometric tube by the pressure prevailing in the gas space above the level of the liquid to be pumped, and



drawing said column of liquid after its isolation from the liquid to be pumped through the pipe up to the desired height.

3,093,089
TAMPING MACHINE FOR PACKING BALLAST UNDER RAILROAD TIES
Erich Fleing, Niedersprockhoevel, Westphalia, Germany, assignor to Frölich & Klüpfel, Wuppertal-Barmen, Germany, a corporation of Germany
Filed July 5, 1956, Ser. No. 595,926
3 Claims. (Cl. 104—14)



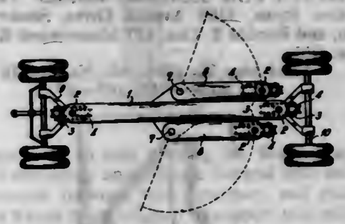
1. A power driven tamping tool for compacting ballast under railroad ties comprising at least two adjacent substantially parallel tamping heads mounted side-by-side for limited reciprocating motion in a forward and rearward direction, and means for alternately driving said heads in a forward direction, each said tamping head having its leading edge shaped so that upon forward motion thereof it tends to force material in a lateral direction toward the other tamping head.

3,093,090
SWITCHES FOR MONOBEAM TYPE RAILWAYS
Kurt Rosenbaum, Essen, Germany, assignor to Alweg-Forschung G.m.b.H., Cologne, Germany, a corporation of Germany
Filed July 29, 1958, Ser. No. 751,683
Claims priority, application Germany Aug. 3, 1957
5 Claims. (Cl. 104—130)



1. For use in a monobeam transportation system having a vehicle supporting beam with top and lateral running surfaces: a switch adapted to selectively connect angularly related track sections comprising, a plurality of switch beam sections pivotally connected to each other at adjacent ends, the body of one of said switch beam sections being elastically deformable and the remainder of said switch beam sections being rigid, and abutment means intermediate the ends of said elastically deformable switch beam section for bending said elastically deformable switch beam section smoothly along its longitudinal axis.

3,093,091
VEHICLE FOR MOVEMENT ON CURVED TRACKS
Hans Tax and Herbert Biedermann, Munich, Germany; said Biedermann assignor to said Tax
Filed June 14, 1961, Ser. No. 117,009
2 Claims. (Cl. 105—215)



1. In an undercarriage of a vehicle adapted to ride on rails,

(*a*) an elongated member diagonally extending from rail to rail, said member having two free ends and two portions,

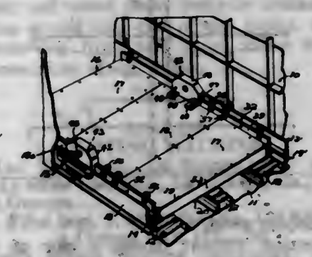
(*b*) pivot means on said member intermediate said ends, each of said portions extending between said pivot means and one of said ends,

(*c*) two arms, each arm having a free end and an end pivoted to said pivot means for movements in a normally horizontal plane, the pivot means being provided so as to allow each arm to be swung into a position closely alongside of either of said two portions,

(*d*) four supports for wheels, each of said supports being carried at one of the four free ends of said member and arms and being rotatable about a normally vertical axis, so that the two arm-carried wheel supports will swing along with said arms when said arm-swinging is carried out, and

(*e*) wheels carried by said supports for rolling engagement with rails.

3,093,092
CARGO PALLET
John O. Martin, South Lincoln, and Robert W. Rodier, Southboro, Mass., assignors to the United States of America as represented by the Secretary of the Army
Filed Apr. 18, 1962, Ser. No. 188,589
12 Claims. (Cl. 105—369)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. The combination with a vehicle, of a multi-rail restraint and guidance system including at least two fixed

rails in said vehicle; of a cargo pallet comprising at least two panels, side rails extending on opposite sides of said panels and securing the same together, said side rails slidably engaging the rails of the guidance system and having a flange portion projecting above the plane of said panels, a plurality of cargo tiedown means secured to said flange portion, restraint members have channel shaped base portions positioned on opposite sides of said pallet and astride said side rails, fastening means securing said restraint members to said side rails, and said restraint members cooperating with the fixed rails of said multi-rail restraint and guidance system to hold said pallet in said vehicle.

3,093,093

APPARATUS FOR SHAPING EDIBLE PRODUCTS

Genevieve Ryan, 3289 Avalon Drive, Shaker Heights, Ohio, and Ronald T. Cox, 157 Moorewood Road, Avon Lake, Ohio

Filed May 20, 1960, Ser. No. 30,510
3 Claims. (Cl. 107—19)



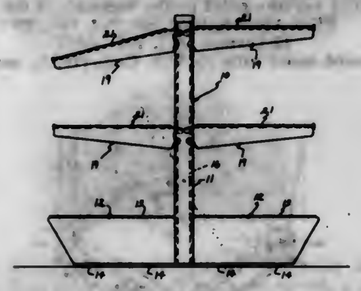
1. A form for shaping comestibles comprising a continuous band of light weight metal, said form having substantial depth, said band being provided with an outwardly extending flat peripheral flange and an inwardly extending opposite flat peripheral flange portion, said peripheral portions reinforcing a major vertically extending portion of the continuous band which constitutes the side walls of the form, said peripheral flanges extending substantially perpendicularly to said major vertically extending portion, the said walls being of a predetermined form to produce a desired external form sustaining shape to material disposed therein in fluent form after said fluent material has set within the form, said inwardly extending flange being positioned on the bottom of said form and said outwardly extending flange being positioned on the top of said form during pouring and processing of the fluent material.

3,093,094

ADJUSTABLE SHELF SUPPORT

Muammer A. Oztekin, % The Kent Corp., P.O. Box 3034, Birmingham 12, Ala.

Filed Jan. 17, 1962, Ser. No. 166,857
5 Claims. (Cl. 108—6)



1. In a display stand,

(*a*) a vertical support having a pair of vertically spaced slots therein,

(*b*) a shelf support having a rear edge with vertically spaced upper and lower extensions fitting in said openings, said rear edge having at least two abutting surfaces at different angles to each other adapted to engage, selectively, the adjacent surface of said vertical support in abutting relation, one of said abutting surfaces being formed by the portion of the rear edge between the extensions and engaging the vertical support in abutting relation at a horizontal position of the shelf support, the other abutting surface being formed by the rear edge beneath the lower extension and engaging the adjacent surface of said vertical support in abutting relation at a tilted position of the shelf support, said upper extension having a pair of spaced notches on the upper surface thereof,

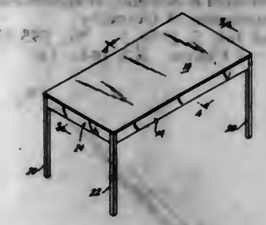
(*c*) and a notch engaging detent on said vertical support adjacent the upper opening adapted to engage, selectively, in retaining relation said pair of notches with one notch being engaged in a horizontal position of the shelf support and the other notch being engaged in a tilted position of the shelf support.

3,093,095

EXECUTIVE-TYPE FOLDING TABLE

Harold Howe, Rowayton, and Sherrick Lee Bauer, Whisconier Hill, Brookfield Center, Conn., assignors to Howe Folding Furniture, Inc., South Norwalk, Conn., a corporation of Connecticut

Filed Sept. 21, 1961, Ser. No. 139,744
12 Claims. (Cl. 108—131)



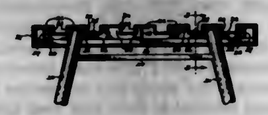
1. A folding table comprising a top having depending skirt members along its sides cut away at the corners to receive folding legs in their unfolded position, two pair of rigid hollow frame legs, and stretchers interconnecting the legs of each pair adjacent the top, and forming end skirts for the top when the legs are unfolded, cross members depending from the top and spaced inwardly from the ends of the top, hinge means for attaching the stretchers of each pair of legs to the cross members respectively for movement of the pairs of legs and stretchers between folded position, in which the legs and stretchers lie in a plane substantially parallel with the top, and an unfolded position, in which the legs and stretchers are substantially normal to the plane of the top and disposed under the top with the legs respectively in abutting relation to the ends of the skirt side members, and filling the space between the side and end skirt members, a slot in the wall portion of each leg which has an interface with the ends of the side skirt members, and slots in the said cross members disposed in alignment with the respective slots in the legs, locking rods, cam means engaging the locking rods adjacent their inner ends, the outer ends of the locking rods extending through the slots in the cross members respectively and substantially aligned with the slots in the legs for entry into the legs through the slots in the legs when the legs are unfolded, the outer ends of the locking rods comprising heads extending downwardly and having contact surface portions adapted to respectively engage and press against the inner surface of the portions of the legs having an interface with the ends of the side skirt members when the locking rods are moved into locking position, and means for controlling the cam means to move the locking rods inwardly and outwardly for locking and unlocking the legs respectively.

3,093,096

SIMULATED SLAT BENCH CONSTRUCTION

Warren R. Black, Bror W. Henrikson, and William R. Van Loo, Grand Rapids, Mich., assignors to American Seating Company, Grand Rapids, Mich., a corporation of New Jersey

Filed Aug. 11, 1960, Ser. No. 48,938
20 Claims. (Cl. 108—153)



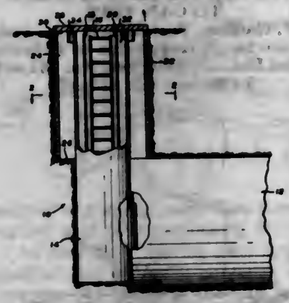
1. A simulated slat bench comprising: A supporting structure including an elevated, generally horizontally disposed, elongated supporting frame; and a generally horizontally disposed, elongated seat element mounted on said supporting frame at conventional seat height and formed with longitudinally extending, alternating ridges and channels therein, said ridges simulating the slats of a conventional slat bench.

3,093,097

BOMB SHELTER

Morton M. Rosenfeld, Mount Vernon, N.Y. (271 Madison Ave., New York, N.Y.)

Filed Oct. 19, 1961, Ser. No. 146,227
3 Claims. (Cl. 109—1)



1. Apparatus comprising an underground enclosure, wall means defining an escape passage from said enclosure to ground level, one end of said wall means being adjacent ground level, a second wall means surrounding said one end of said first mentioned wall means and defining an annular chamber therebetween, one end of said second wall means lying in substantially the same plane as said one end of said first mentioned wall means, a lid extending across said one end of said second wall means, and means mounting said lid for movement between an opened disposition and a closed disposition, in the closed disposition of said lid, said lid being in engagement with said one end of said second wall means.

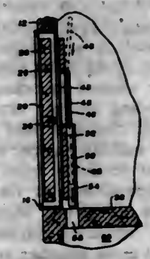
3,093,098

DOOR STRUCTURE FOR BOMB SHELTER

Morton M. Rosenfeld, Mount Vernon, N.Y. (271 Madison Ave., New York, N.Y.)

Filed Nov. 24, 1961, Ser. No. 154,544
5 Claims. (Cl. 109—1)

1. A shelter comprising an enclosure, ventilation means on a wall of said enclosure, said ventilation means including an innermost and outermost door in series with each other, a door frame, said innermost and outermost doors being mounted one behind the other in said door frame, the outermost door being mounted so that air may flow around the edge thereof adjacent the door frame, sealing means between the innermost door and the door frame, said innermost door having an opening therethrough, an



air filter mounted in said opening for filtering air as it enters said enclosure, and a flange integral with said door frame mounted between said innermost and outermost doors, said flange being adapted to support said outermost door in a manner whereby said outermost door would exert no pressure on said innermost door if a force was applied to said outermost door.

3,093,099

REFRACTORY ROOF CONSTRUCTION

Chester E. Grigsby, Penn Wynne, Philadelphia, Pa., assignor to General Refractories Company, Philadelphia, Pa., a corporation of Pennsylvania

Filed Feb. 13, 1961, Ser. No. 89,000
3 Claims. (Cl. 110—99)



1. In a refractory roof construction, a plurality of basic refractory bricks arranged side by side, having hot ends and cold ends, and having hanger connections near the cold ends, in combination with steel supporting structure above said bricks including a plurality of longitudinally extending steel beams in laterally spaced relation extending adjacent the bricks above the cold ends and a plurality of transversely extending steel corset plates extending between said longitudinally extending beams and connected thereto and extending generally vertically, said beams and corset plates being in contact with and terminating at the cold end of the bricks, and hanger means extending from said corset plates through the hanger connections of said bricks.

3,093,100

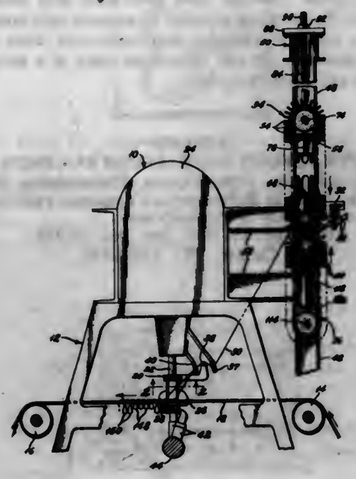
TUFTING MACHINE

Roscoe Lee Thompson, La Grange, Ga., assignor to Callaway Mills Company, La Grange, Ga., a corporation of Georgia

Filed Sept. 5, 1961, Ser. No. 135,828
6 Claims. (Cl. 112—79)

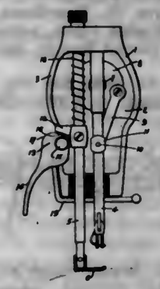
1. A wide tufting machine comprising: means for feeding fabric to be tufted; a plurality of spaced, par-

allel rows of needles extending laterally across the path of said fabric; a rigid framework including a pair of uprights at the sides of the machine and a horizontal cross member connected to the upper end portions of said uprights; a lower bar assembly including a rigid support connected at its ends to said uprights so as to permit vertical adjustment of its end portions, screw jacks means cooperating with the end portions of said support to facilitate vertical adjustment thereof, a drive shaft carried by said uprights and extending across said framework below said support, vertically aligned sets of sprocket wheels fixed to said drive shaft and to said support at intervals along their lengths, endless chains passing around the aligned sprocket wheels, and a set of bars each extending entirely across and being connected to all of said chains of said lower assembly; an upper bar assembly including upper and lower rigid horizontal beams spaced vertically from each other and being connected independently at their end portions to said uprights so as to permit vertical adjustments of their end portions, vertically adjustable hanger means suspended from said cross member and connected to said



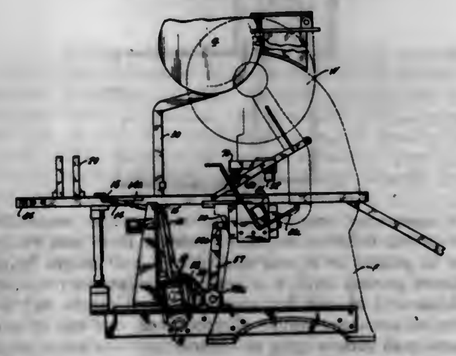
upper beam to facilitate vertical adjustment thereof, bearings fixed to said upper beam at intervals along its length, a drive shaft mounted in said bearings, vertically aligned sets of sprocket wheels fixed to the last-mentioned shaft and to said lower beam at intervals along their lengths, chains passing around the last-mentioned sets of sprocket wheels, and a set of pattern bars each extending entirely across and being connected to all of the chains of said upper assembly, at least some of the last-mentioned bars having spaced indentations in the projecting edges thereof; the bars of said upper assembly being disposed in intermeshing relation with the bars of said lower assembly in the zone between said assemblies; means for driving said shafts so that the chains of both assemblies move at the same speed; and a yarn guide device for guiding yarns for the needles of said plurality of needle rows, said device extending across said framework and being mounted on said uprights for back and forth movement in the direction of its length, said device having means for guiding each of the yarns into the zone where said bars intermesh along a line determined by the position of said device relative to said uprights.

3,093,101
AUXILIARY LIFTER ARM FOR PRESSER FOOT ON SEWING MACHINES
Anestis C. Foltis, New York, N.Y. (40—40 Hampton St., Jackson Heights, Long Island, N.Y.), and Martin Kraft, New York, N.Y., (2427 64th St., Brooklyn, N.Y.)
Filed July 11, 1960, Ser. No. 41,853
2 Claims. (Cl. 112—237)



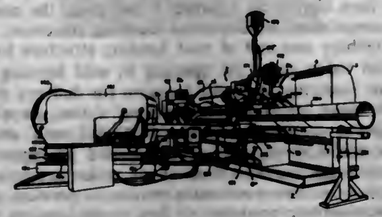
1. A head for a sewing machine having a pair of vertically movable rods mounted therein, one of said rods carrying a presser foot for engaging cloth to be sewed on the machine, and the other rod being adapted to bear a needle, an arm on said head for raising the rod having the presser foot, and a second arm mounted adjacent the first-named arm and connected thereto for lifting the presser foot, one of said arms being at one side of the said rods and the second-named arm extending behind said rods to the other side thereof.

3,093,102
APPARATUS FOR FASTENING SCREW NECKS TO CAN TOPS
Thomas P. Gardner, Port Arthur, Tex., assignor to Texaco Inc., a corporation of Delaware
Filed Dec. 23, 1958, Ser. No. 782,468
3 Claims. (Cl. 113—7)



1. In combination, in an apparatus for the automatic assembly of screw necks to can tops, means for positioning can tops in a feed line including longitudinally reciprocating members and means for separating individual can tops from a plurality thereof including separator and feed elements, said elements being supported by said reciprocating members whereby their movements cause individual can tops to feed along said feed line, reciprocating crank and lever means interconnected with said reciprocating members for actuation thereby, each of the separator elements having a knife edge in the direction of separating motion for separating individual can tops from said plurality thereof when said reciprocating members move in one longitudinal direction, the feed elements being mounted in spaced relationship to the separator elements for receiving separated individual can tops for movement into positions in said feed line when said reciprocating members return longitudinally to starting position, the knife edge of each of said separator elements ending adjacent the downstream edge of each of said feed elements whereby an individual can top is dropped into position for engagement by the latter for movement to feed positions, the improvement comprising a screw neck positioning structure for placing screw necks on can tops fed automatically along the feed line comprising means having oscillatory rotational and translational movement for removing a screw neck from a supply thereof and positioning the same on a can top including a pivoted lever arm having a plug for engagement with said screw neck and a pivot screw at the opposite end of said lever arm, means for imparting rotational movement to said pivoted lever arm including a grooved cam and a lever member controlled thereby and means for imparting translational movement to said pivoted feed arm after rotational movement thereof comprising pivoted lever members acting on said pivot screw and a compound cam actuating said pivoted lever members, said grooved cam and said compound cam being related in position for synchronization between the rotational and translational movements, said cams being actuated from a cam shaft providing automatic feed of spaced can tops.

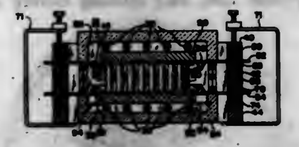
3,093,103
METHOD OF PRODUCING SPIRAL PIPE
Laurence J. Berkeley, Danville, Ill.; Florence B. Berkeley, executrix of said Laurence J. Berkeley, deceased
Filed Feb. 10, 1958, Ser. No. 714,098
4 Claims. (Cl. 113—35)



1. The method of forming metal tube from a helically wound elongated steel strip comprising the steps of imparting to a longitudinally moving steel strip diagonally of its longitudinal axis an initial curvature of a slightly greater radius than the radius of the tube to be formed; forming said curved strip helically into convolutions to form a tube while confining said strip to a radius of curvature which is slightly less than the initial radius of curvature imparted to said strip, which inherently changes the steel to its so-called plastic state, said tube being moved longitudinally of its axis by the forces of said moving strip; applying resistance to the longitudinal movement of said curved strip sufficient to cause abutment of the edges in the plastic state of said convolutions of the tube; and continuously welding together the abutting edges.

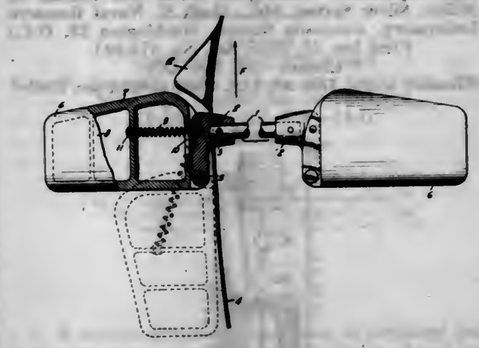
3,093,104
FURNACE
Stephen Bukata, 7813 Ardleigh St., Philadelphia, Pa.
Filed June 27, 1958, Ser. No. 745,129
3 Claims. (Cl. 113—99)

1. In a furnace comprising top and bottom sections, a pair of impervious envelope sheets mounted intermediate said top and bottom sections, each of said sheets cooperating with each of said sections to form top and bottom heating chambers, means in each of said heating chambers for uniformly heating the space between said sheets, the peripheral portions of said sheets projecting appreciably beyond the sides of said top and bottom sections, a rigid closure member intermediate said peripheral portions of said sheets, a conduit extending through said rigid closure member, said conduit communicating with the space between said sheets, seal means between



said closure member and each sheet, said rigid closure member having a coolant passage therethrough for receiving a coolant liquid adapted to cool said seal means, and means clamping said peripheral portions of said sheets against the said seal means thereby providing an airtight joint between said rigid closure member and said sheets.

3,093,105
CONTROL ARRANGEMENT FOR A SUBMARINE VESSEL
Dimitri Issaiewitch Rebikoff, Cannes, France, assignor to Loral Electronics Corporation, New York, N.Y., a corporation of New York
Filed Aug. 9, 1960, Ser. No. 48,461
Claims priority, application France Aug. 14, 1959
2 Claims. (Cl. 114—16)



1. A submarine vessel comprising a body member, a pair of shafts projecting laterally from opposite sides of said body member, a bracket mounted on the free end of each of said shafts and rotatable therewith and each of said brackets having a rearwardly directed arm provided with a free end, a pair of elevator fins having leading edges and trailing edges, said trailing edges having corners adjacent to said arm free ends, means pivotally connecting each of said fin trailing edge corners to an adjacent free end of a corresponding arm for rotation about an axis perpendicular to said fin between an extended laterally projecting position and a rearwardly directed retracted position, said shafts being forward of said fin trailing edges when said fins are in their extended positions, and spring means connected between each of said brackets and a corresponding of said fins to normally resiliently urge said fins to their extended positions.

3,093,106
FLUSH MOUNTED CLEAT
Robert L. Lippincott, 901 Thomas Ave., Riverton, N.J.
Filed May 9, 1962, Ser. No. 193,496
9 Claims. (Cl. 114—218)

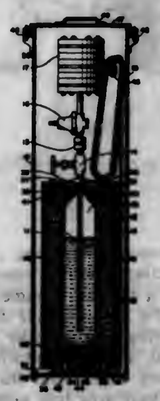
1. A cleat comprising a housing, a face plate from which said housing extends having an outer face, a cleat

body having an inner position with respect to said housing for storage and an outer position for use offset sidewise with respect to said inner position, said cleat body having an outer elongated portion and an inner elongated portion with a central connecting section therebetween, said inner portion of said cleat body having sidewise projecting cleat feet, said housing having aligned shelf



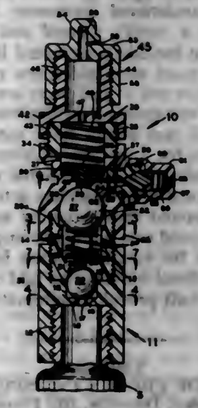
portions for the reception of said cleat feet in its outer position and slots for reception of said cleat feet at its inner position, said slots being offset sidewise from said shelf portions, and a member at said face plate and engageable with a portion of said cleat body for releasably locking said cleat body in its outer position with said cleat feet on said shelf portions.

3,093,107
EXPENDABLE AMMONIA NOISEMAKER
Joseph A. Grand, Washington, D.C., and Roman R. Miller, Silver Spring, Md. (both % Naval Research Laboratory, Anacostia Station, Washington 25, D.C.)
Filed Jan. 25, 1945, Ser. No. 574,603
9 Claims. (Cl. 116—27)
(Granted under Title 35, U.S. Code (1952), sec. 266)



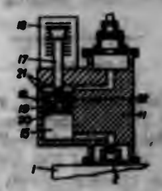
1. An expendable underwater sound generating device comprising a floating part and a submergible part, means suspending the submergible part from the floating part in a predetermined submerged position, said submergible part including a container, a body of liquid gas partially filling the container and leaving a liquid-free gas-filled space above the liquid in the submerged position, means operable upon submergence in a body of water to supply heat to the said body of liquid, a nozzle positioned to be submerged in the water when the device is floated for injecting gas into a surrounding body of water for generating compressional waves by collapse of the gas volume, means forming a gas conducting passage between said space and said nozzle, pressure responsive means for connecting said space with the nozzle upon attainment of a given pressure in said space, and an automatic pressure regulating valve connected in said conducting passage between the said pressure responsive means and the nozzle.

3,093,108
TIRE PRESSURE SIGNAL DEVICE
Ralph P. Wells, P.O. Box 50-274, Gratigny Station, and Joyce M. Lawrence, 4000 NW. 190th St., both of Opa-Locka, Fla.
Filed Nov. 14, 1961, Ser. No. 152,335
6 Claims. (Cl. 116—34)



1. In a tire pressure signal device for use with pneumatic tires having an inflation valve stem, the combination comprising, an elongated housing structure, means for attaching one end of said housing structure to a tire inflation valve stem, an opening in said housing structure for receiving air under pressure for delivery through said housing structure for inflating a tire, an air flow passageway between said opening and said attaching means, air flow control means in said passageway for preventing the outward flow of air under pressure from said tire when above a certain maximum pressure greater than atmospheric pressure, air flow control means in said passageway for automatically preventing the outflow of air under pressure from said tire when below a certain minimum pressure less than said maximum pressure, and a whistle cap attachable over said air receiving opening and operable to sound an audible whistle while air is flowing outwardly through said passageway.

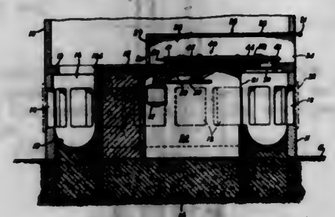
3,093,109
DEVICE FOR CHECKING THE OIL FEED FROM A PUMP TO A LUBRICATION POINT
August Bertold Pedersen, Saljeholtet 3, Blommenholm, Norway
Filed Jan. 9, 1958, Ser. No. 707,974
Claims priority, application Norway Jan. 9, 1957
2 Claims. (Cl. 116—117)



1. A device for indicating the feed from a source of lubricating liquid to a point of delivery, comprising a

cylinder provided with inlet and outlet openings adjacent its opposite axial ends, a plunger disposed for free axial movement within said cylinder, a plunger rod fixed to the plunger for movement therewith, said rod extending axially from the plunger and slidably disposed through one axial end of the cylinder with an end portion of the rod projecting externally of the cylinder to provide visible indication of its movement with the plunger, said plunger being formed with a passage opening therethrough, a valve carried by said plunger for axial movement in a direction to control said passage, resilient means yieldably urging said valve in an axial direction to close said passage whereby to cause movement of the plunger with the liquid within the cylinder, said externally extending portion of said rod providing means for manually moving said plunger independently of the fluid flow.

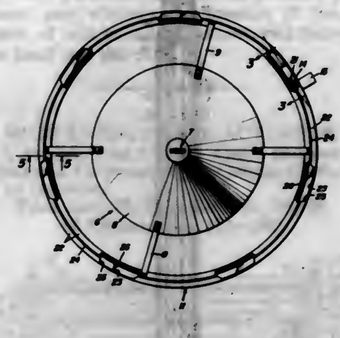
3,093,110
SILO UNLOADING APPARATUS
Ronald K. Evans, Birmingham, Mich., assignor to Sperry Rand Corporation, New Holland, Pa., a corporation of Delaware
Filed Nov. 12, 1959, Ser. No. 852,388
10 Claims. (Cl. 119—52)



1. Apparatus of the character described comprising a horizontally extending circular feed table surrounded in part at least by a feed trough, a ring gear connected to said table and extending around the periphery thereof, an endless conveyor having an inner sprocket mounted on said table at the center thereof for rotation on a fixed axis and an outer sprocket disposed beyond the periphery of said table, said sprockets being rotatable on parallel, vertical axes, the axis of rotation of said inner sprocket being fixed and of said outer sprocket movable, drive means rotating said inner sprocket and through said endless conveyor member said outer sprocket, means carried on said table supporting said outer sprocket for arcuate movement relative to the table, a pinion rotatable on a vertical axis, said pinion having teeth meshing with the teeth of said ring gear, a shaft to which said pinion is fastened, means connecting said shaft to said outer sprocket supporting means, a first means connected to said shaft and through which the shaft may be rotated in one direction only, a second means interconnected between said shaft and said supporting means locking said shaft against movement in a direction opposite to said one direction only, and means connected between said outer sprocket and said first means for intermittently rotating said pinion in said one direction.

3,093,111
POULTRY WATERING FOUNTAIN
Randall W. Garrison, R.R. 4, Fayetteville, Ark.
Filed Sept. 5, 1961, Ser. No. 135,979
7 Claims. (Cl. 119—72)

1. A poultry drinking fountain comprising an endless trough for the reception of water, a partition in the trough, said trough having a water inlet therein adjacent one side of the partition and further having a drain opening therein adjacent the other side of said partition, said trough including spaced pairs of inturned covering flanges overlying the trough for providing spaced poultry crossing areas and open drinking areas between said crossing



areas, the flanges comprising the pairs of flanges being spaced from each other for defining slots therebetween communicating with the drinking areas for the passage of a cleaning implement, and upstanding guards extending between the pairs of flanges for preventing the poultry from traversing the drinking areas.

3,093,112
WRITING INSTRUMENTS
John P. Sharcliff, 1408 Cypress St., Shelbyville, Tenn.
Filed Apr. 3, 1959, Ser. No. 803,920
10 Claims. (Cl. 120—14.1)



1. A writing instrument comprising an elongated body, a plurality of bores extending longitudinally of said body with each bore opening at an opposite end of said body, a plurality of slots extending longitudinally of said body each communicating with one of said bores, a plurality of leads each slidably mounted in one of said bores, a plurality of supple tapes each affixed to one of said leads and extending through one of said slots and said tapes each having a non-drying adhesive on one face detachably affixed to said body at any position along the length of said body retaining its attached lead in any given position in said body as desired and capable of moving said lead in either longitudinal direction when said tape is detached from said body.

3,093,113
BICHROMATIC FOUNTAIN PEN
Andres S. Reynoso, Valdivia, Chile
Filed Sept. 24, 1959, Ser. No. 842,034
5 Claims. (Cl. 120—42.16)

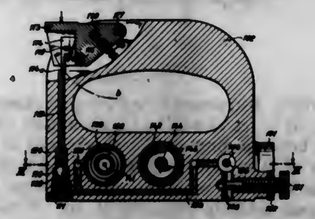
1. A bichromatic fountain pen for selectively writing with either one of two different colors, comprising a unitary double nib, having the shape of two ordinary nibs positioned back to back with a thin dividing wall therebeween, and provided on each side with a capillary groove or channel, the tip of said nib being in the form of a

small ball made of suitable hard metal and fed on each side by a separate fluid feeder, each feeder being con-



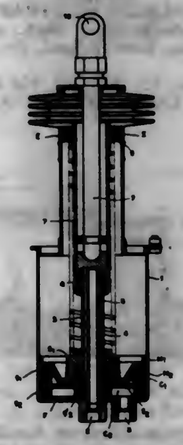
nected to a separate flexible sac for storing the writing fluid, and a casing encircling said nib, feeders and sacs.

3,093,114
PERCUSSION TOOL FOR TIGHTENING AND LOOSENING BOLTS AND NUTS
Albert Josef Heidler, Eltville (Rhine), Germany, assignor, by mesne assignments, to Chicago Pneumatic Tool Company, New York, N.Y., a corporation of New Jersey
Filed Sept. 24, 1958, Ser. No. 763,063
Claims priority, application Germany Sept. 24, 1957
13 Claims. (Cl. 121—33)



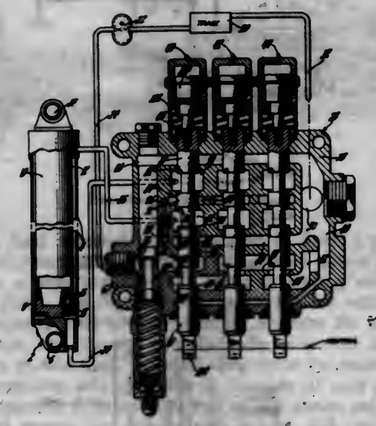
8. A power operated impact wrench tool comprising a rotatable output shaft adapted to drive a workpiece with a series of torsional impulses, a motor for driving said shaft with a series of rotational impacts, a source of power, an initiating element movable between a normal position and an operated position, manually controlled means for effecting movement of the initiating element from the normal to the operated position, means operable upon such movement for starting the operation of the tool, a time delay control means including a timing element movable forward from an idle position to an operating position, means for moving the timing element forward from its idle position upon operation of the initiating element, said control means including means for retarding the motion of the timing element whereby the latter moves gradually and progressively from normal toward operating position during the delivery of impacts, said motion retarding means controlling the motion of the timing element whereby the latter is arranged to attain a predetermined operating position after the lapse of a predetermined interval of time following the operation of the initiating element, means for terminating the delivery of torsional impacts to the shaft, said terminating means being operable automatically in response to the movement of the timing element to said predetermined operating position, and means for adjusting the distance between the idle position and the operating position of said timing element whereby to regulate the duration of the rotational impacts.

3,093,115
FLUID ACTUATED CONTROL MECHANISM FOR A BRAKE AND SIMILAR APPARATUS
Giuseppe Alfieri, Milan, Italy, assignor to Fabbrica Italiana Magneti Marelli S.p.A., Milan, Italy, a firm
Filed Jan. 20, 1960, Ser. No. 3,584
Claims priority, application Italy Jan. 31, 1959
4 Claims. (Cl. 121—38)



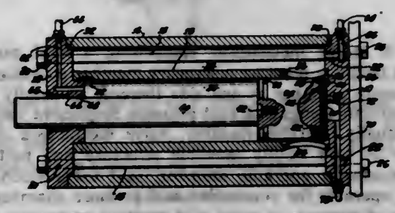
1. A dual action fluid pressure actuator for brakes and similar apparatus, comprising, in combination, a relatively elongated cylinder; a first annular piston slidable axially in said cylinder, and having a relatively large diameter rim, a relatively smaller diameter hub, and a generally radially extending web interconnecting said rim and said hub; a piston rod extending through one end of said cylinder and having an outer end formed for connection to the apparatus to be actuated; a first tubular rod connected at one end to the inner end of said piston rod and having its opposite end connected to the inner end of said hub of said first piston and communicating with the opening through the latter; the outer end of the hub of said first piston having a substantially centrally axially extending annular recess therein, and the major portion of the outer surface of the web of said first piston being substantially flush with the outer end of the hub thereof; a second annular piston slidable axially in said cylinder and disposed between said first piston and the opposite end of said cylinder said second piston having a relatively large diameter rim equal in diameter to the rim of said first cylinder, a relatively small diameter hub having a diameter smaller than that of the hub of said first piston, and a substantially uniplanar radial web interconnecting the rim and the hub thereof; said hub including an inner annular portion arranged to seat in the recess in the hub of said first piston, with clearance between the outer end of said annular portion and the base of the recess, and with clearance between the webs of said pistons, and having an axially outer annular projection extending outwardly from said web and arranged to engage the cylinder end wall to space the web of said second piston from said end wall; a second tubular rod, of smaller diameter than said first tubular rod, having a fixed end opening through said opposite end of said cylinder, said second tubular rod extending through said pistons and said first tubular rod and communicating, at its inner end, with the annular space between said first and second tubular rods; said second piston having fluidtight guiding engagement with said second tubular rod; means biasing both said pistons toward said opposite end of said cylinder, the axial clearance between the hubs and webs of said pistons forming a first pressure chamber between the facing surfaces of said pistons and communicating with said first tubular rod; a first pressure fluid inlet nipple connected to the outer end of said second tubular rod for application of fluid pressure to said first pressure chamber to move said first piston and said piston rod away from said opposite end wall of said cylinder; the axial clearance between the web of said second piston and the end wall of said cylinder, provided by engagement of said outer annular projection of said second cylinder with said end wall, forming a second pressure chamber between the outer face of said second piston and said opposite end wall; and a second pressure fluid inlet nipple in said opposite end wall communicating with said second pressure chamber for application of fluid pressure thereto to move both said pistons away from said opposite end wall.

3,093,116
HIGH-LOW SPEED HOIST VALVE
Alvin A. Rood, Willoughby, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Apr. 7, 1960, Ser. No. 20,743
13 Claims. (Cl. 121—38)



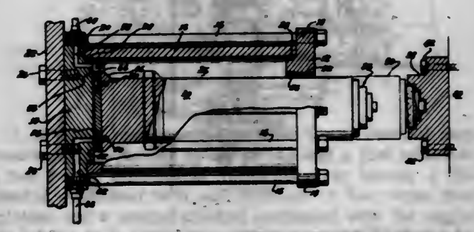
10. In combination, a fluid pressure operated jack comprising a cylinder, a piston reciprocably disposed within said cylinder and including a piston head and a piston rod rigidly secured thereto and extending out of said cylinder, a passageway in said piston head communicating the piston rod side of said cylinder to the piston head side thereof, one-way check valve means in said passageway permitting fluid flow from the piston rod side of said cylinder to the piston head side thereof when the pressure in the former exceeds that in the latter; a selector valve comprising a valve body, a fluid pressure inlet port in said body, an exhaust port in said body, a first pressure port in said body communicating with the piston head side of said cylinder, a second pressure port in said body communicating with the rod side of said cylinder, and a movable valve member in said body selectively controlling communication between said respective ports, said valve member having a first position communicating said first pressure port with said inlet port and preventing fluid flow through said second pressure port thereby causing the pressure in the rod side of said cylinder to exceed that in the piston head side thereof and fluid to flow through said passageway, and a second position communicating said first pressure port with said inlet port and said second pressure port with said exhaust port whereby the pressure of the fluid on the rod side of said cylinder is maintained below that in the piston head side thereof.

3,093,117
HIGH ENERGY RATE ACTUATOR
Bonlard I. Brown, West Covina, Calif., assignor to General Dynamics Corporation, San Diego, Calif., a corporation of Delaware
Filed June 27, 1960, Ser. No. 38,844
18 Claims. (Cl. 121—38)



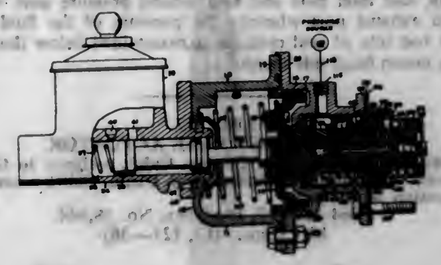
1. An actuator comprising means defining a wall having a pressure retaining portion, an actuator piston adapted for cooperation with the wall to provide a pressure seal therebetween about said portion of the wall, means for exerting a set force urging the piston toward the wall to effect said pressure seal, and means for applying pressure to the piston to overbalance the set force to eliminate said pressure seal and apply the pressure to an increased area of the piston, whereby the actuator piston is impelled from the wall to produce output thrust.

3,093,118
HIGH RATE ACTUATORS
Bonlard I. Brown, West Covina, Calif., assignor to General Dynamics Corporation (Convair Division), San Diego, Calif., a corporation of Delaware
Filed Feb. 24, 1961, Ser. No. 91,436
19 Claims. (Cl. 121—38)



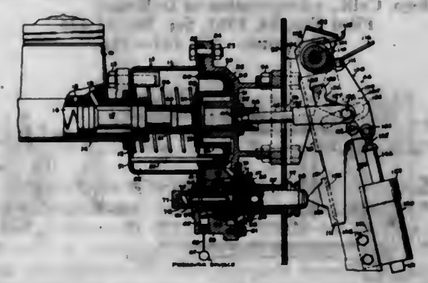
1. An actuator comprising means defining a wall, a thrust member having a head portion cooperable with the wall to provide a pressure seal therebetween about a portion of the wall, means establishing an actuating pressure fluid, said thrust member and head portion being disposed in the actuating pressure fluid, means for applying the actuating pressure fluid to the thrust member to exert a set force urging the thrust member toward the wall to effect said pressure seal between the head portion and the wall, and means for applying a triggering force to the thrust member to overbalance the set force to disengage the pressure seal and expose an area of said head portion to the actuating pressure fluid, whereby the thrust member is impelled from the wall to produce output thrust.

3,093,119
FLUID PRESSURE MOTOR
William Stelzer, Bloomfield Hills, Mich., assignor to Kelsey-Hayes Company, Romulus, Mich., a corporation of Delaware
Filed Oct. 30, 1961, Ser. No. 148,516
12 Claims. (Cl. 121—38)



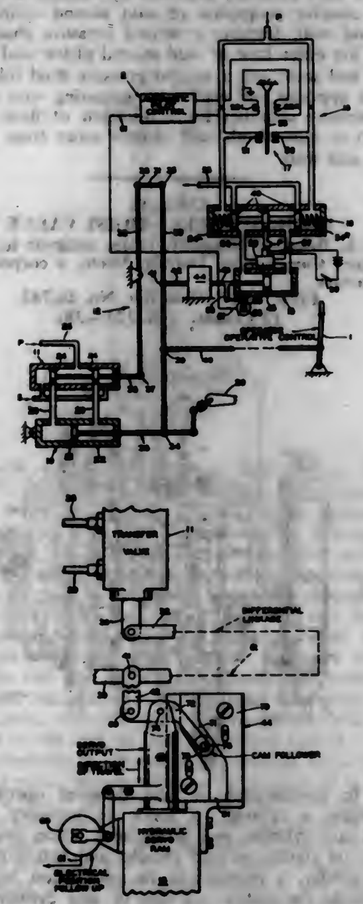
1. A motor mechanism comprising a fluid pressure motor having a pressure responsive member provided with a pressure chamber at one side thereof, an axially movable structure engaging said pressure responsive member, a manually operable member, valve mechanism carried partly by said axially movable structure and partly by said manually operable member, said valve mechanism being operable for connecting said pressure chamber to a source of pressure to move said pressure responsive member, and means for utilizing pressure delivered to said pressure chamber to normally prevent movement of said axially movable structure upon operation of said valve mechanism whereby, upon a failure of such pressure, said manually operable member will move said axially movable structure to manually operate said pressure responsive member.

3,093,120
FLUID PRESSURE MOTOR MECHANISM
David T. Ayers, Jr., Birmingham, Mich., assignor to Kelsey-Hayes Company, Romulus, Mich., a corporation of Delaware
Filed Dec. 26, 1961, Ser. No. 162,151
15 Claims. (Cl. 121—38)



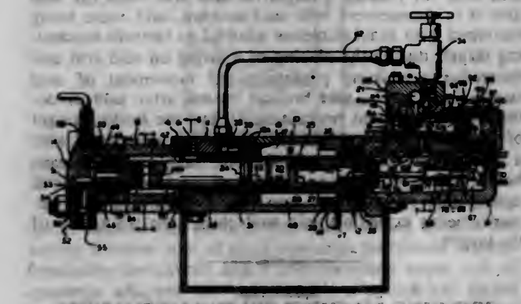
1. A fluid pressure motor mechanism comprising a motor having a casing and a pressure responsive unit forming therewith a pressure chamber, a normally stationary manually operable member movable to actuate said pressure responsive unit, a valve mechanism controlling communication between said pressure chamber and a pressure source and having an operating member, a lever mechanism normally engaging said operating member and having a normal position from which it is movable to move such member and operate said valve mechanism to connect said pressure chamber to said source, said lever mechanism normally having lost motion connection with said manually operable member within the limits of which lost motion said valve mechanism is operable without moving said manually operable member, and means automatically operative upon a failure of pressure in said source for moving said lever to a different normal position and taking up said lost motion connection and for establishing mechanical connection between said lever mechanism and said manually operable member for actuating the latter without moving said operating member.

3,093,121
MECHANICAL PHASE COMPENSATOR FOR CASCADE SERVO SYSTEM
Norman B. Murphy, Tenafly, N.J., assignor to The Bendix Corporation, Teterboro, N.J., a corporation of Delaware
Filed Sept. 15, 1961, Ser. No. 138,399
5 Claims. (Cl. 121—41)



1. In a hydraulic control system of a type including a first control system, a hydraulic power means designed for optimum control by said first control system, and a second control system having different operating characteristics from said first control system to alternatively control said hydraulic power means; the improvement comprising a motion changing means operatively connected between the output of the second control system and an input of the power means to correct for the different operating characteristics of said second control system whereby optimum control of the hydraulic power means may be effected by said second control system, said motion changing means including a housing operative means slidably mounted in the housing and controlled by the second system, a plate rigidly attached on the housing and having a cam surface and a channel, a cam follower roller mounted in the channel for traveling therein and making contact with the cam surface, a cam follower lever pivotally connected at a point to said cam follower roller, a rod longitudinally positioned by said operative means, said rod being slidably mounted with respect to the housing and pivotally connected to said cam follower lever at another point, and linkage operatively connected to the input of the hydraulic power means, said operative linkage being pivotally connected to said cam follower lever at still another point, so that longitudinal movement of the rod by said operative means angularly positions said cam follower lever relative to the channel to vary the position of the operative linkage in cooperative relation therewith to correct for the different operating characteristics of said second control system whereby optimum control of the hydraulic power means may be effected by said second control system.

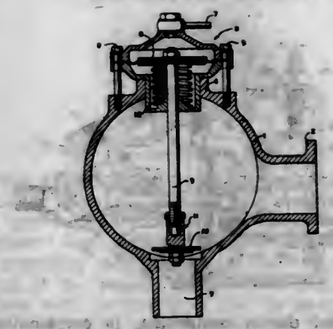
3,093,122
FLUID OPERATED PUMP
Norman H. Sachnik, Houston, Tex., assignor to Texstream Corporation
Filed Nov. 28, 1960, Ser. No. 72,161
13 Claims. (Cl. 121—158)



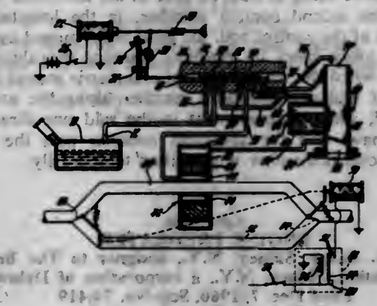
1. A fluid operated motor adapted to drive a pump, said motor comprising a piston rod having a power piston thereon, a high pressure fluid chamber having one end of the piston rod received therein, means for supplying high pressure fluid to said chamber whereby the end of the piston rod therein is continually subjected to the pressure of said fluid, a master slide valve for selectively interconnecting said chamber to the side of said power piston opposite from said one end of said piston rod, fluid operated means for driving said master slide valve, a pilot slide valve controlling said fluid operated means for selectively actuating said master slide valve, and means interconnecting said piston rod and pilot slide valve to actuate said pilot slide valve concurrently with the reciprocation of said piston rod.

3,093,123
INTERNAL COMBUSTION ENGINE ARRANGEMENT
Werner Weymann, Esslingen (Neckar), Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Untertürkheim, Germany
Filed Sept. 12, 1960, Ser. No. 55,305
Claims priority, application Germany Sept. 22, 1959
12 Claims. (Cl. 123—119)

1. A hot-start vent system for mixture-compressing internal combustion engines having intake conduit means leading to carburetor means, fuel pump means connected to said conduit means, and means for automatically controlling the effectiveness of said hot-start system in dependence on the pressure of said fuel pump means including discharge means for said intake conduit means controlled by said pressure in such a manner as to enable fuel and fuel vapor to be discharged from said intake conduit means upon stoppage of said engine.

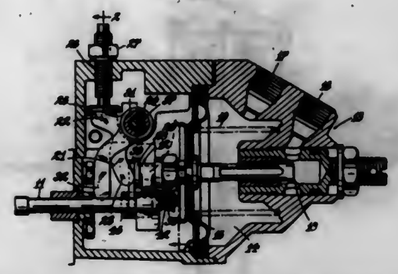


3,093,124
ENGINE FUEL VAPOR RECOVERY SYSTEM AND METHOD
Joseph T. Wentworth, Royal Oak, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Dec. 23, 1960, Ser. No. 78,087
20 Claims. (Cl. 123—136)



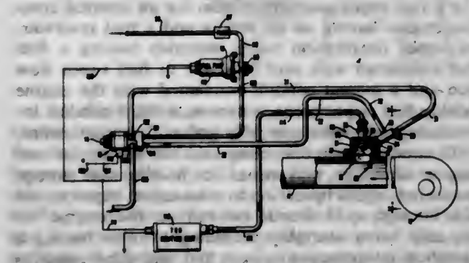
1. In a fuel vapor recovery system for an internal combustion engine having an air intake and a fuel reservoir, a fuel vapor distribution valve assembly having a first conduit connected with said reservoir in fuel vapor flow relation and a second conduit connected with the engine air intake, fuel vapor storage means, a third conduit interconnecting said valve assembly and said storage means, a fourth conduit interconnecting said storage means and the engine air intake, and means for heating said storage means during engine operation to release fuel vapor stored therein through said fourth conduit to the engine air intake, said valve assembly including a valve having a first position interconnecting said first and third conduits to direct fuel vapor from said reservoir to said storage means to store vapor therein when the engine is not operating and a second position interconnecting said first and second conduits to deliver fuel vapor from said reservoir to the engine air intake when the engine is operating.

3,093,125
FUEL INJECTION PUMPS
Geoffrey Robson North, London, England, assignor to Simms Motor Units Limited, London, England, a British company
Filed Oct. 20, 1960, Ser. No. 63,859
5 Claims. (Cl. 123—140)



1. A control device comprising, in combination, a control rod movable longitudinally in both directions, a first control member rotatable about an axis to move the control rod longitudinally, an abutment member carried by the control rod for movement therewith, a pawl movable with the said abutment member, means biassing the pawl towards a position adjacent the abutment member, a second control member normally in the path of the abutment member, whereby longitudinal movement in one direction of the control rod is limited by abutment of the abutment member against the said second control member, the said second control member being movable along the said axis to a position in which it is in the path of the pawl when the pawl is adjacent the abutment member, whereby longitudinal movement in the said one direction of the control rod is limited by abutment of the pawl against the second control member the pawl being at least as near as the abutment member to the second control member, in the longitudinal direction of the control rod, the pawl being moved against its bias away from its position adjacent the abutment member when the second control member is moved from abutment with the abutment member along the axis as aforesaid, whereby movement in the said one direction of the pawl and the abutment member past the said second control member is permitted temporarily.

3,093,126
ENGINE PREHEATER
David C. Baker, Sidney, N.Y., assignor to The Bendix Corporation, Sidney, N.Y., a corporation of Delaware
Filed Dec. 7, 1960, Ser. No. 74,419
9 Claims. (Cl. 123—142.5)



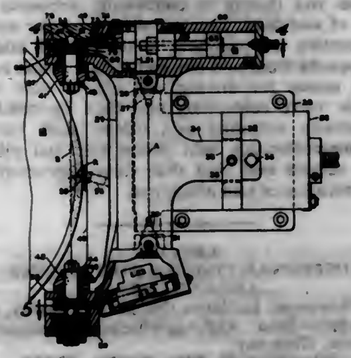
1. An engine intake air preheater unit comprising a combustion chamber-forming housing having an open inner delivery end and a closed outer end, the inner end of the housing being adapted for attachment to an air inlet conduit of an internal combustion engine at an opening in said conduit, a liquid fuel spray nozzle mounted on the wall of the housing for discharging fuel in comminuted form within the combustion chamber, the spray nozzle being inclined downwardly and forwardly in the direction of air flow to the engine so as to discharge its spray generally forwardly and through the opening in the conduit toward the axis of the conduit, and a spark discharge means disposed within the housing forwardly of the spray nozzle and in the path of fuel issuing from the nozzle.

3,093,127
TARGET-THROWING DEVICE
James Olan Starr, 510 W. California St., Urbana, Ill.
Filed Feb. 8, 1960, Ser. No. 7,288
7 Claims. (Cl. 124—3)



3. In throwing apparatus for generally disc-shaped targets equipped with recesses in the bottom walls thereof, a base, an arm pivotally mounted on said base, a latch-providing element on said base, a spring extending between said arm and element operative to urge said arm away from said element, motor means on said base for pivoting said arm against the urging of said spring and into engagement with said element, a chute supported on said base for placing a target on said arm when the said arm is in engagement with said element, said chute being equipped with bracket means adapted to restrain succeeding targets during the placing of a target on said arm and thereafter permitting predetermined movement of said succeeding targets, said bracket means after said predetermined movement restraining all but the leading target of said succeeding targets, said chute being equipped with a gate in the bottom wall thereof, said bracket means being positioned adjacent said gate and equipped with upstanding, spaced-apart stop elements, one of said elements being extensible into said chute into the recess of the target.

3,093,128
GRINDING MACHINE TRUING MECHANISM
William B. Seidel, Terrace Park, Ohio, assignor to The Cincinnati Milling Machine Co., Cincinnati, Ohio, a corporation of Ohio
Filed Oct. 20, 1960, Ser. No. 63,804
7 Claims. (Cl. 125—11)



1. In a grinding machine having a grinding wheel mounted on a spindle, mechanism to true convex arcuate sides intersecting at a peak on the periphery of the grinding wheel, said sides defining circular arcs having centers spaced a predetermined distance apart, the combination comprising a support mounted adjacent the grinding wheel, a bracket pivotally mounted on the support on an axis intersecting the grinding wheel, means to move the support for adjustably positioning said axis radially and laterally relative to the grinding wheel, a truing diamond having a cutting point mounted in the bracket with the point toward said axis and spaced therefrom, a fixed stroke reversible hydraulic motor connected to the grinding wheel spindle to shift the grinding wheel laterally said predetermined distance between a first position with the center of one of said arcs on said axis and a second position with the center of the other of said arcs on said axis, and a hydraulic motor connected to said bracket to swing the truing tool when the grinding wheel is in said first position and said second position, respectively.

3,093,129
HEATER
William J. Pickard, Jr., 204 Commonwealth Ave., Port Wentworth, Ga.
Filed Sept. 6, 1961, Ser. No. 136,238
1 Claim. (Cl. 126—65)



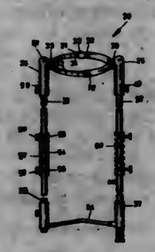
A portable heater comprising an outer vertical cylindrical shell having an open top and a closed bottom and having a lower row of draft openings positioned circumferentially thereabout and a corresponding upper row of openings adjacent the top thereof, a cylindrical screen positioned interiorly of said shell, said screen having an annular ring extending radially about its midpoint engaging said shell to space said screen from the inner wall of said shell, a grill extending transversely across said screen above said lower row of openings, elevated intersecting charcoal support members secured to the upper surface of said grill, a cover plate having a plurality of openings therein, a disc rotatably mounted on said plate, said disc having a plurality of openings therein correlated with said openings in said plate, handle means for rotating said disc relative to said plate, selectively to vary the effective size of the passages formed by said openings in said plate and disc, an annular depending flange on said plate extending exteriorly of said shell, said flange having a row of circumferentially positioned openings therein aligned and correlated with said upper row of openings, handle means for rotating said plate relative to said shell to selectively vary the effective size of the air passages formed by said top row of openings and said row of openings in said flange, stop means carried by said plate limiting rotative movement of said disc, and an inner annular flange depending from said plate between and spaced from the inner wall of said shell and the wall of said screen, said last-mentioned flange extending substantially below said upper row of openings in said shell and terminating above said annular ring, said annular flange being imperforate at least to a line substantially below said upper row of openings.

3,093,130
FOOT APPLIANCES
Lee James Cotton, 5323 S. State St., Chicago 9, Ill.
Filed Sept. 11, 1959, Ser. No. 839,529
1 Claim. (Cl. 128—80)



A foot appliance for treating a bunion on the great or little toe joints of a wearer's foot, comprising an elongated appliance body adapted to engage the bottom of the wearer's foot, thickened rib means on said appliance body extending longitudinally of the foot for engaging the ball of the wearer's foot, a thickened pad on said appliance body rearwardly of said rib means for engaging the longitudinal arch of the wearer's foot, said thickened pad comprising porous resilient material embedded in said appliance body with a portion of said material exposed to contact the wearer's foot, said porous material being adapted to receive a medicament of the type that is adapted to be distributed throughout the wearer's body by absorption, said appliance body having a plurality of apertures therethrough in or adjacent said rib means providing air passages communicating with the wearer's foot, and means carried by said appliance body for retaining the latter on the wearer's foot including a bunion protecting pad adapted to overlie and protect a bunion on the wearer's foot, said pad having a plurality of apertures therein for communicating air to the area of the bunion and being secured to one side of said appliance body.

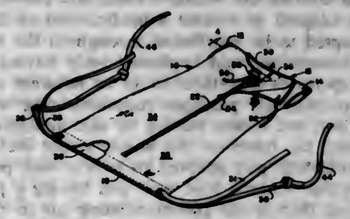
3,093,131
SURGICAL SPLINT
Kedar N. Kashyap, Montreal, Quebec, Canada (% Canadian Research & Development, 1434 Queen St. W., Toronto 3, Ontario, Canada)
Filed July 24, 1961, Ser. No. 126,067
1 Claim. (Cl. 128—85)



A surgical splint including an adjustable, band means having a plurality of perforations therethrough; clip means having a slot therethrough; the ends of said band means in overlapping relationship passing oppositely through said slot, having at least two of said perforations in axial alignment; a spring loaded pin mounted in said clip passing transversely through said slot and through said aligned perforations; cushioning means surrounding said band means; two oppositely located clips adjustably attached to said band means; ball members integral with said oppositely located clips; side bars including upper members having axial slots therein; each said slot slidably receiving and rotatably retaining one of said ball members; screw means extending through said upper mem-

bers transversely of said slots to retain said ball members therein; said side bars being substantially coplanar and coextensive; each of said side bars including hinged portions; a sleeve member slidable on each of said bars and screw means for the lockable retention of said sleeve member on said side bar over each of said hinged portions thereof; a transverse bar interconnecting the ends of said side bars remote from said band means; said transverse bar comprising an obtuse angled cross bar having a fixed sleeve at one end thereof located on one of said side bars and an adjustable sleeve at the opposite end thereof, slidable on the other of said side bars; said adjustable sleeve being provided with locking means; said other side bar having a plurality of spaced apart, circumferential grooves for the selective retention of said locking means; and lug means for the selective retention of said adjustable sleeve on said side bar carrying said fixed sleeve.

3,093,132
SAFETY CONTROL BAG FOR CHILDREN
Adeline M. Bailey, 13104 64th Ave. S., Seattle 88, Wash.
Filed July 24, 1961, Ser. No. 126,039
2 Claims. (Cl. 128—134)



1. A safety control bag for children, comprising: a generally rectangular bag having a closed bottom and reinforcing means secured across the bottom and between the back and front sides of said bag; said bag having an upper portion of reduced width; said upper portion of a size to substantially fit the child's torso and having arm openings provided with peripheral reinforcement; said upper portion closed across shoulder sections and having a reinforced contoured neck opening openable by a slide fastener; said slide fastener extending substantially the length of said bag on the back side of said bag; ties at the upper end of said fastener, at least one of which having increased width at the attached end to cover the slide member thereof when said fastener is closed to prevent an enclosed child from opening said slide fastener; tie-down tapes secured to each bottom corner of said bag and comprising two tapes at each corner spaced apart by said bag and said bottom reinforcement and means for extending the length of said tie-down tapes.

3,093,133
HYPODERMIC APPARATUS
Samuel James Everett, Thornton Heath, Surrey, England, assignor to S. & R. J. Everett & Company Limited
Filed July 1, 1959, Ser. No. 824,306
Claims priority, application Great Britain July 1, 1958
8 Claims. (Cl. 128—216)

1. Hypodermic injection equipment comprising a cylinder a piston slidable in said cylinder and extending through an end of said cylinder, resilient liquid-tight sealing means at the other end of said cylinder; liquid disposed within said cylinder, retaining means mounted at said other end of said cylinder, a combination flexible medicament holder and hypodermic needle secured by said retaining means adjacent the resilient sealing means wherein inward and outward movement of said piston with respect to said cylinder produces a corresponding movement of the resilient sealing-means and a corresponding expansion and contraction of the medicament holder.



3,093,134
NEEDLE WITH MOLDED HUB
Zbislaw M. Roehr, Deland, Fla., assignor, by mesne assignments, to Brunswick Corporation, a corporation of Delaware
Continuation of application Ser. No. 674,224, July 25, 1957. This application Jan. 19, 1959, Ser. No. 787,775
12 Claims. (Cl. 128—221)



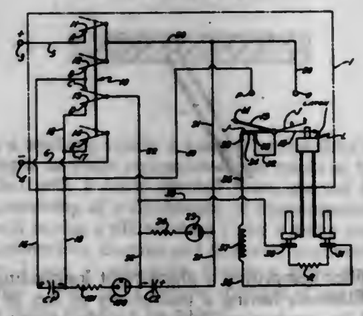
1. A needle of the class described comprising a cannula having a lumen and, at one end, a tapered penetrating point with an opening therein from the lumen and a light-pervious hub anchored thereto at a section of the cannula spaced axially from said penetrating point, said cannula having means localized on the periphery thereof at said section for indicating the angular orientation of the opening, said indicating means comprising a key integral with one of said hub and cannula and projecting into the other and discernable through the hub.

3,093,135
COOLED SURGICAL INSTRUMENT
Max L. Hirschhorn, 5601 13th Ave., Brooklyn 19, N.Y.
Filed Jan. 29, 1962, Ser. No. 169,266
8 Claims. (Cl. 128—303.1)



1. A surgical instrument comprising a heat conductive body having a knife edge in heat conductive relation with the body, a heat conductive rod heat conductively connected to said body, a plurality of Peltier cells each having a cold and a hot junction connected at their cold junction to the rod, means to connect the Peltier cells to a source of direct current electricity, heat radiating metal fins connected to the hot junctions of the Peltier cells, and a thermally and electrically insulative handle comprising the exterior portion of the instrument whereby the knife edge is cooled for surgical operations.

3,093,136
VENTRICULAR DEFIBRILLATOR
Paul L. R. Lohr, Baltimore, Md., assignor, by mesne assignments, to Mine Safety Appliances Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed May 25, 1960, Ser. No. 31,776
14 Claims. (Cl. 128—423)



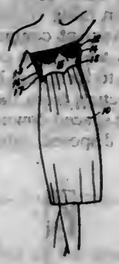
1. For use in a cardiac defibrillator having a plurality of condensers and a source of electrical energy for charging the condensers and a pair of electrodes adapted to be applied to the body of a patient, switch means for serially discharging the condensers through the electrodes and the patient's body, said switch means comprising: a movable electrical contact adapted to move from a cocked position to an uncocked position, a plurality of fixed electrical contacts disposed in the path of movement of the movable contact and adapted to be successively and momentarily engaged by the movable contact when moving from its cocked to its uncocked position, each of the fixed contacts when so engaged connecting through the movable contact a separate condenser across the electrodes, means for rapidly moving the movable contact from its cocked to its uncocked position, a releasable latch for holding the movable contact in its cocked position, and means for releasing the latch that are operative solely in response to a predetermined pressure of both electrodes against the body of the patient.

3,093,137
BRASSIERE
Martin Dugan, Irvington, N.J., assignor to Arthur Vale, doing business as La Trique Brassieres Co., New York, N.Y.
Filed Apr. 5, 1961, Ser. No. 100,936
3 Claims. (Cl. 128—443)



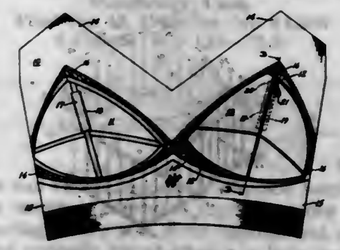
1. A brassiere comprising a pair of bust cups and a diaphragm portion within which said bust cups are laterally disposed; side panels to which said diaphragm portion at the outer vertical edges thereof is secured; a plurality of rear panels secured to said side panels along the vertical edges thereof; a substantially triangular panel secured to the top of each rear and side panel, said triangular panel being biasly disposed with respect to the horizontal plane of said garment; and shoulder straps secured at one end thereof to the top of said bust cups, and at the other end thereof to said triangular panel.

3,093,138
LADIES' SLIPS
Bernard Herman, East Meadow, N.Y., assignor to Stardust, Inc., New York, N.Y., a corporation of New York
Filed Nov. 23, 1960, Ser. No. 71,334
2 Claims. (Cl. 128—454)



1. A slip comprising a brassiere section, two limited diaphragm sections, and a limited waist section, all of said sections being of stretch fabric, said brassiere section being disposed at the upper front of the slip, each of said diaphragm sections being wholly disposed at the respective sides of the slip, and said waist section being laterally elongated and wholly disposed at the back waist portion of the slip and completely across said back waist portion, all of said sections being interconnected with the brassiere section, each limited diaphragm section, and said waist section being arranged in substantially circumferentially staggered relationship while their principal expanses are at substantially different vertical levels, whereby the upper portion of the slip has circumferentially arranged stretch portions around 360 degrees which are not aligned.

3,093,139
BRASSIERE
Henry M. Plehn, 730 Park Ave., New York, N.Y.
Filed Feb. 24, 1961, Ser. No. 91,379
3 Claims. (Cl. 128—465)



1. A breast-supporting and forming cup having an inside sheath extending from the upper part thereof substantially to the center thereof, and another cup adapted to nest within the former cup, and to be removably secured thereto, said other cup being formed of a reinforcing material and having a tongue disposed near the top of its convex side attached to the upper part thereof and extending freely therefrom substantially to the center thereof, with said tongue formed of a flexible plastic strip with corrugated edges adapted to frictionally engage the inside of said sheath.

3,093,140
SUSPENDED FILES
Raymond Arthur Eugene Guichard, 63 Rue de Rome, Paris, France
Filed Feb. 25, 1960, Ser. No. 10,993
Claims priority, application France Mar. 17, 1959
3 Claims. (Cl. 129—16.7)

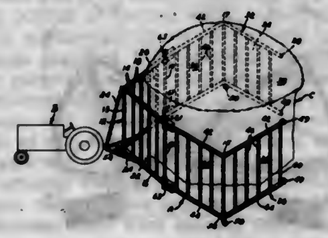
1. A suspended file comprising a sheet folded to form a pair of covers which are adapted to be suspended from

upper edges of the covers parallel to the fold, with the folded edge downward, to provide a receptacle between the covers of the folded sheet, a flat supporting bar fixed to the upper edge of one cover, and a hollow supporting bar having an inverted U-shaped cross section fixed to the upper edge of the other cover forming either a continuous or an accordion filing system or an individual filing system, the improvement comprising first and second spaced vertical flanges and a web connecting said flanges at their upper portions to form said hollow supporting bar, abutment means projecting from the inner portion of the first of said flanges and spaced downwardly from said web, said abutment means disposed substantially midway be-



tween the web and the bottom edge of said first flange, said abutment means extending substantially the entire length of said first flange, a fold formed at the upper portion of said other cover and disposed within said bar, and a wedging strip positioned within said fold and positioned substantially diagonally within the hollow bar with its lower edge bearing on said abutment means and with its upper edge bearing against the upper portion of said second flange with the upper portion of said other cover wedged between the upper edge of the wedging strip and said second flange whereby the flat bar of the file or an adjacent file may be disposed within the hollow supporting bar of the file.

3,093,141
MOBILE HAY STACK FORM
Vern H. Sherven, Charlson, N. Dak.
Filed Mar. 13, 1961, Ser. No. 95,244
6 Claims. (Cl. 130—20)



2. In a mobile hay stack form, a first hay enclosing section having vertical sides of equal length angularly disposed 120° with respect to each other, a second hay enclosing section identical to said first section hingedly carried by said first section about a vertical hinge axis in register with an end thereof, a third hay enclosing section identical to said first and second sections hingedly carried by said first section about a vertical hinge axis in register with the end opposite the end carrying said second section, means for securing the free ends of said second and third sections together in a hexagonally-shaped hay receiving enclosure, wheeled means carried by each of said sections at the vertex between the sides thereof, said wheeled means including means for raising or lowering at least one of the wheels mounted on said second and third sections, and means for locking said second and third sections in closely spaced parallel relation with each other whereby to define with said first section a nested structure of reduced width for transport.

3,093,142
CIGARETTE FILTER
Jack Swerdloff, Miami, Fla., Ezra B. Larson, Boulder, Colo., and Adriaan J. Troelsman, Narrows, Va., assignors to Celanese Corporation of America, New York, N.Y., a corporation of Delaware
Filed Aug. 12, 1959, Ser. No. 833,230
7 Claims. (Cl. 131—10)



1. A filter comprising a plurality of longitudinally extending filaments having a multiplicity of sets of crimps imparted by mechanical crimping, each of said sets of crimps comprising individual crimps which are angularly offset with respect to the general plane of other sets of crimps, wherein at least some of said filaments are of noncircular shape in cross section.

3,093,143
DEVICE FOR WRAPPING A CONNECTING BAND AROUND AXIALLY ALIGNED ROD-SHAPED ARTICLES
Willy Rudzinat, Hamburg-Lohbrügge, and Herbert Berlin, Hamburg, Germany, assignors to Hauni-Werke Körber & Co. K.G., Hamburg-Bergedorf, Germany
Filed Feb. 1, 1961, Ser. No. 86,421
Claims priority, application Germany Feb. 4, 1960
10 Claims. (Cl. 131—94)



1. In a device for wrapping a connecting band around axially aligned rod-shaped articles, a rotary drum to the circumference of which is supplied a group of axially aligned rod-shaped articles to which is attached one end of a connecting band in such a manner that said connecting band is placed against the circumference of said drum and extends in circumferential direction of the same and has a leading end to which said group of axially aligned rod-shaped articles is attached, means for causing said groups to adhere to the circumference of said drum, a counter roll member arranged in spaced relation from the circumference of said rotary drum and having a counter roll surface for engaging said group of axially aligned rod-shaped articles when said group is moved by said rotary drum past said counter roll member, means for pivotally supporting said counter roll member about an axis extending parallel to the axis of said rotary drum, and spring means for yieldably urging said counter roll member toward said drum and causing a rolling of said group of axially aligned rod-shaped articles along the circumference of said rotary drum during the rotation of the latter, whereby said connecting band is wrapped around said group of axially aligned rod-shaped articles.

3,093,144
TOBACCO SMOKE FILTER
Arend Jacob van Buuren, Weesperzijde 10, Amsterdam, Netherlands
Filed July 12, 1960, Ser. No. 42,307
3 Claims. (Cl. 131—208)



1. In a smoking article, a tobacco smoke filter comprising a paper cartridge permeable to the smoke at both ends and filled with a finely divided resin selected from the group consisting of a condensate of phenolmethylene sulfonic acid having a pH between 7 and 9 and a condensate of metaphenylene diamine and formaldehyde having a pH between 7 and 9, said resin having a grain size of not more than 1 mm. and a volume increase of less than sixty percent upon exposure to water.

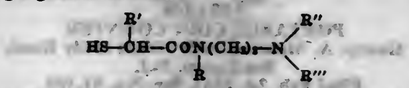
3,093,145
ASH TRAYS
Genzaburo Yamada, 82 1-chome, Taiseidori Higashinari-ku, Osaka City, Japan
Filed Feb. 13, 1961, Ser. No. 88,689
Claims priority, application Japan Dec. 2, 1960
1 Claim. (Cl. 131—235)



An ash tray, comprising a base having an upwardly convex central portion, a peripheral wall around the outer periphery of said base, a side wall around the central portion of said base and defining a cigarette end chamber within said side wall, a plurality of needles on said base and projecting upwardly from said base at least to a point just below the upper edge of said side wall, the needles in the central part of said upwardly convex central portion projecting above said side wall, a plate having the same outline as the cross section of said chamber and having a plurality of holes therein with a needle through each hole, said plate being slidable up and down on said needles, a handle on said plate projecting upwardly beyond the ends of said needles and above the level of the top of said side wall, said handle completely surrounding said needles and being adapted to support the lit end of a cigarette in downwardly and inwardly inclined radial relation when the mouthpiece end of the cigarette is placed on the upper edge of the peripheral wall of the ash tray, and a stop in the form of a flange around the top of said side wall against which the plate abuts to prevent it from being pulled off the needles, said side walls having vertical grooves therein and said plate having projections thereon projecting into said grooves for retaining the plate so that the apertures therein will remain in alignment with the needles and the plate will be maintained in perpendicular relation therewith whereby a cigarette or cigar can be extinguished by pressing the burning end down against the needles so that the needles penetrate the burning tobacco and the extinguished cigarette or cigar can be removed from the needles by lifting the handle to lift the plate along the needles.

3,093,146
PROCESS FOR PERMANENT SETTING OF LIVING HAIR BY SURFACE ACTIVE COMPOUNDS
Gregoire Kalopissis and Andre Viout, Paris, France, assignors to L'Oreal, a corporation of France
No Drawing. Filed Mar. 12, 1959, Ser. No. 798,805
Claims priority, application France Mar. 14, 1958
4 Claims. (Cl. 132—7)

1. An improved process for setting living hair without submitting the hair to a previous permanent waving which comprises, impregnating the hair with an aqueous solution of an addition salt of a member of the group consisting of the organic and inorganic acid salts of a compound having a general formula



wherein R′ is a member of the group consisting of a hydrogen atom and a lower alkyl radical having not more than 6 carbon atoms, R″ is a lower alkyl radical, and one of the substituents R and R‴ is selected from the group consisting of a hydrogen atom and a lower alkyl radical, the other being a water repelling fatty acid radical having from 8 to 24 carbon atoms, the organic and inorganic acids being harmless to the live hair and to the scalp, said addition salt having a reducing action analogous to that of mercaptans, so as to impart to the hair the desired plasticity and having moreover the characteristics of a cation-active detergent which cleans the hair and comprises a fatty chain susceptible to adhere to the cleaned hair, while giving to the latter a brightness and a suppleness which facilitates hair setting, rinsing the so impregnated hair, separating the hair into individual locks, setting the hair in the form desired and allowing the hair to dry so as to permit oxidation to impart to the hair in a set condition its natural elasticity.

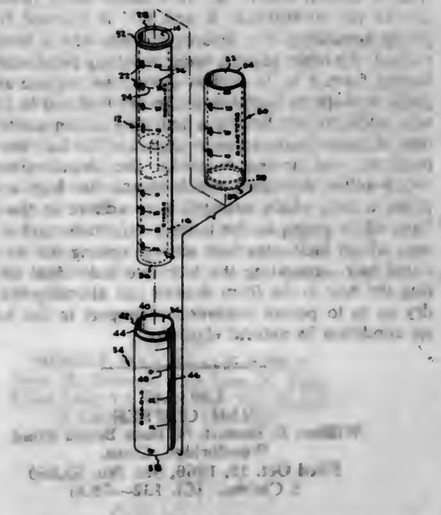
3,093,147
NAIL CLIPPER
William E. Bassett, N. Race Brook Road, Woodbridge, Conn.
Filed Oct. 19, 1960, Ser. No. 63,660
5 Claims. (Cl. 132—75.5)



1. In a nail clipper, oppositely disposed longitudinally extending members connected together at one end and having mating cutting jaws at the opposite end which are biased into normally spaced relation, a lever mounted on said longitudinally extending members for swinging movement toward said members and having means for forcing the jaw ends of said members together for effecting a cutting operation and said lever having an inoperative position in superposed relation with one of said longitudinally extending members, a file member, means pivotally connecting said file member on said one longitudinally extending member for movement from longitudinal superposed relation therewith to outwardly extended relation at one end of said one longitudinally extending member, said file member having openings spaced longitudinally thereof and disposed on opposite sides of the pivotal connection of said file member with said one longitudinally extending member, said one longitudinally extending member having an opening disposed in alignment with one of the openings in said file member when said file is in said longitudinal relation and said opening in said one longitudinally extending member being disposed in alignment with the other opening in the file member when the file member is in said extended relation, and said lever having an ex-

tension of a length and size and positioned so as to project into said one opening in said file member and into said opening in said longitudinally extending member when said openings are aligned with the file member disposed in said longitudinal superposed relation, and said extension being adapted to project into said other opening in said file member and into said opening in said longitudinally extending member when said openings are aligned with the file member disposed in said extended relation for retaining said file member in said relations respectively against sidewise movement about its pivotal connection.

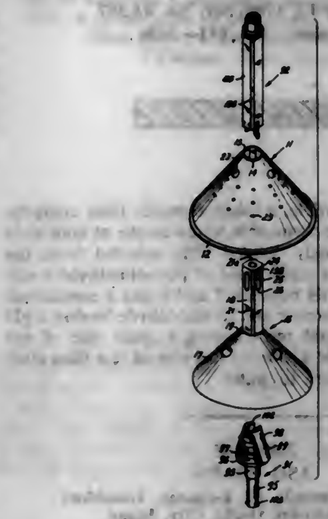
3,093,148
PORTABLE COIN COUNTER
George A. Mesthos, 1609 Mount Holly Road, Burlington, N.J.
Filed Feb. 24, 1961, Ser. No. 91,399
4 Claims. (Cl. 133—8)



1. A coin counter comprising an inner tubular cylinder, a partition wall intermediate the ends of and dividing said cylinder into first and second chambers having open ends, said chambers being of differing diameters and depths, a first outer tubular cylinder circumposed about said inner cylinder and connected to said inner cylinder for sliding movement relative thereto, said first outer cylinder having a single chamber opening to its ends and differing in diameter from said first and second chambers, and a second outer tubular cylinder having a single chamber differing in diameter from the other chambers and slidably engaged on said inner cylinder, said first and second outer cylinders being interengaged at adjacent ends thereof so as to define a chamber of pre-determined length in said second outer cylinder.

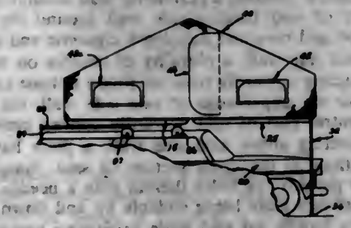
3,093,149
DISC WASHING MACHINE
Benjamin Jaffe, Delhi, N.Y., and Andrew Textor, Sussex, N.J., assignors to Dektowa Foods, Incorporated, Yonkers, N.Y., a corporation of New York
Filed May 2, 1961, Ser. No. 107,188
9 Claims. (Cl. 134—149)

1. Equipment for washing the frusto-conical discs of a centrifugal separator of the type in which the discs are mounted in nested relationship on the stem of a disc carrier, said equipment comprising a first rigid extension unit, means releasably to connect said extension unit to the free end of the stem to extend longitudinally thereof, whereby the discs on said stem may be spread over substantially the length of said extension unit to separate said discs, a tank, means to support said disc



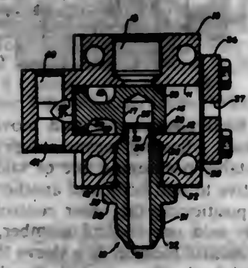
carrier and connected extension unit in said tank in substantially horizontal position, means to rotate said disc carrier and connected extension unit and means to force liquid between said spaced discs to clean the latter.

3,093,150
CAR TOP TENT
Stuart P. Schaftener, 661 Hazelbank Drive, and Lloyd W. Anderson, 9 W. 35th St., both of Holland, Mich.
Filed Sept. 16, 1960, Ser. No. 56,396
5 Claims. (Cl. 135—1)



1. A car top tent comprising: a trunk having a base adapted to be secured to a car top carrier, a single trunk cover coextensive with said base and hingedly secured to said base along one of its sides; a pair of posts pivotally secured to said cover opposite said hingedly connected side, said posts being of sufficient length for the average height person to reach when the cover is in a vertical pivotal position, one of said posts being pivotal in one direction to a position where its lower end is on one side of the vertical pivotal position of said cover and the other of said posts being pivotal in a direction where its lower end is on the other side of the vertical pivotal position of said cover whereby the weight of said cover can be transferred from one post to the other in pivoting the cover to and past the vertical position and whereby said posts can be operated as actuating means to lift and steady said cover upon opening thereof, said cover when open lying in the same plane as said base and together with said base forming the floor of a tent, collapsible tent top means stored within said trunk and secured thereto, and means for setting up said tent top means to form a car top tent structure.

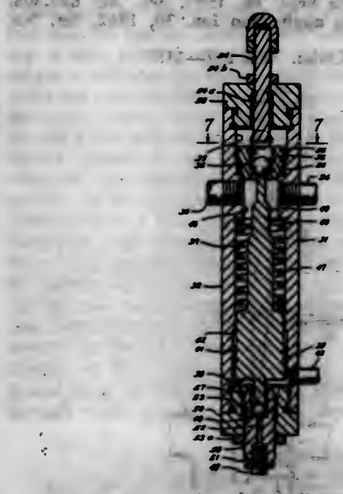
3,093,151
SHEAR VALVE AND FRANGIBLE FITTING
Samuel Merkowitz, San Diego, Calif., assignor to General Dynamics Corporation, San Diego, Calif., a corporation of Delaware
Filed Sept. 12, 1958, Ser. No. 760,722
11 Claims. (Cl. 137—68)



1. A valve and fitting, said valve comprising a housing, an elongated valve member movably positioned within a bore in said housing and having opposite ends and wall means intermediate said ends, said housing having inlet and outlet ports intersecting the valve bore, said valve member positioned within the valve bore to span across said intersecting inlet and outlet ports, a fitting mounted in said inlet port of said housing, and said fitting having a passageway therein, a frangible wall sealing said passageway, said frangible wall projecting into the valve bore of said housing, said valve member having a recess in said wall means receiving and completely encompassing said frangible wall of said fitting, said valve member having fluid passage means intermediate the ends thereof, actuating means adapted to impart motion to said valve member, and sealing means for sealing said actuating means from fluid within said valve housing whereby upon activation of said actuating means said frangible wall of said fitting is sheared off and said passage means registers with said inlet and outlet ports.

3,093,152
VALVE
Rufus B. Johnston, Dallas, Tex., assignor to Wilson Supply Company, Houston, Tex., a corporation of Texas
Original application Sept. 23, 1957, Ser. No. 685,583, now Patent No. 2,914,037, dated Nov. 24, 1959. Divided and this application Apr. 14, 1959, Ser. No. 806,303
7 Claims. (Cl. 137—87)

1. A valve, comprising a body having a passageway therethrough and a cylinder therein, an inlet to and outlet from the passageway, a first valve member seatable on a first valve seat intermediate the inlet and outlet to close the passageway, a port in the cylinder, a second valve member within the cylinder seatable on a second valve seat at the intersection of the port with said cylinder, a piston having an actuator at one end extending into the passageway and between said valve members and sealably slidable within the cylinder in one longitudinal direction to unseat the first valve member and permit unseating of the second valve member and in an opposite longitudinal direction to seat the second valve member and permit seating of the first valve member, and means for selectively holding the first valve member upon the first seat and adjusting the longitudinal distance between the second valve seat and the outer end of the actuator, whereby the valve members and piston may be brought



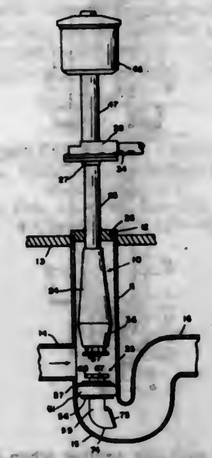
into engagement with one another when said valve members are seated.

3,093,153
QUICK RELEASE VALVE
Charles Horowitz, Chicago, Ill., assignor to Berg Airlectro Products Co., Chicago, Ill., a corporation of Illinois
Filed Sept. 14, 1961, Ser. No. 138,071
2 Claims. (Cl. 137—102)



1. A quick release valve assembly comprising a housing, a chamber in said housing, an inlet in said housing, an outlet in said housing, a second outlet in said housing intermediate said inlet and said first-named outlet, a shuttle valve member movable between said inlet and said first-named outlet in response to pressure within said chamber, said shuttle valve member comprising a metal disc having a diameter slightly less than the inner diameter of said chamber, a seal element having a central portion secured to said disc and having circular ridges extending in opposite axial directions about the center of said disc for sealing contact with said inlet in said first-named outlet, said seal element having a major annular portion lying on that side of said disc opposite from the side opposed to said inlet, said seal element annular portion having a diameter greater than the inner diameter of said chamber whereby a portion of said seal element annular portion is folded upon itself by contact with the inner wall of said chamber to form a peripheral lip portion, said seal element annular portion and said seal element lip portion having a thickness less than that of said disc, said seal element and disc being joined only adjacent the central areas thereof.

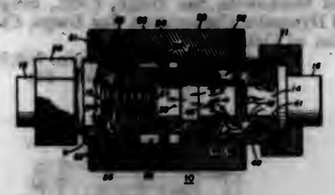
3,093,154
FLOODING CONTROL PUMP SYSTEM
Axel L. Nielsen, 1316 E. Elza, Hazel Park, Mich.
Original application Sept. 16, 1957, Ser. No. 684,308. Divided and this application Jan. 30, 1962, Ser. No. 169,843
1 Claim. (Cl. 137—115)



A flood control system comprising the combination of an upright tubular riser opening upwardly at a predetermined level, said riser having a drain conduit in lateral communication therewith and adapted to discharge thereto a predetermined distance beneath said level, and a disposal conduit in communication therewith a still greater distance beneath said level, a pump unit, and a plug unit separate from said pump unit having means to removably and adjustably position the same independently of the pump unit in said riser between said conduits and below said drain conduit in a vertical zone determined by the point of communication of said drain conduit with said riser, said plug unit having means to expansively engage the same with said riser to seal the latter against backflow externally of the plug unit from said disposal conduit to the riser, said plug unit having a passage therethrough provided with a valve automatically permitting normal flow of liquid from said riser and drain conduit through the passage to said disposal conduit, said valve automatically closing said passage to prevent backflow from said disposal conduit to said riser, said pump unit having means to secure the same to said riser with the intake side of said pump unit in the riser and in pumping communication with the interior of said riser above said plug unit.

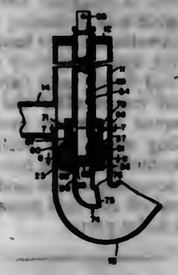
3,093,155
VARIABLE-RESTRICTION VALVE
Leslie J. Dawes, Van Nuys, Calif., assignor to The Bendix Corporation, North Hollywood, Calif., a corporation of Delaware
Filed June 20, 1960, Ser. No. 37,217
1 Claim. (Cl. 137—269)

A valve comprising:
a body defining a through passage including a stationary valve element;
a movable valve element reciprocable within said passage relative to said stationary valve element for variably blocking fluid flow through said passage;
actuating means longitudinally fixed relative to said movable valve element for movement therewith;
a first control member engageable with said actuating means to limit closing movement of said movable valve element toward said stationary valve element;
a second control member engageable with said actuating means to limit opening movement of said movable valve element away from said stationary valve element;
and adjusting means for independently adjusting the longitudinal positions of said first and second control members to independently adjust the closing and



opening limit positions of said movable valve element, which adjusting means comprises one means for adjustably positioning one of said control members relative to said body and another means for adjustably positioning the other control member with respect to said one control member, and in which said one control member is a sleeve threaded on said body, and said other control member is a sleeve threaded on said one control member.

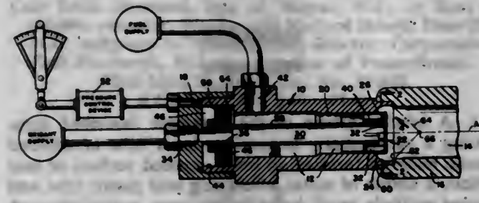
3,093,156
REMOVABLE FLOODING CONTROL PLUG
Axel L. Nielsen, 1316 E. Elza, Hazel Park, Mich.
Original application Sept. 16, 1957, Ser. No. 684,308. Divided and this application Nov. 16, 1959, Ser. No. 853,243
10 Claims. (Cl. 137—328)



1. A plug unit for flow control apparatus adapted to be removably positionable downwardly in a basement or like upright riser, said plug unit including a resilient annular sealing member which is expansible radially outwardly for sealing engagement with said riser, a tubular member of substantial axial length extending coaxially downwardly into said sealing member with its exterior is sealed relation to the latter, thus to provide a flow passage through the unit when the sealing member is engaged with the riser, an annular actuating member threadedly engaging said tubular member circumferentially thereof, an annular thrust member surrounding said tubular member and adapted to transmit axial thrust to said sealing member from said actuating member, said tubular and thrust members having radially outwardly extending portions thereon engaging and compressing said sealing member in the axial direction therebetween to expand the sealing member radially upon relative threading adjustment of the tubular and actuating members, said actuating member compressing said sealing member from above through the agency of said thrust member and being provided with a formation above the latter which is releasably engageable by a tool for the rotation of said actuating member

for said threading adjustment, said tubular member having a fixed element positioned cross-wise and internally thereof which is releasably engageable by a tool to move said unit downwardly and upwardly in the riser, as well as to restrain said tubular member upon relative rotation of the actuating member, said last named element affording means to support said plug unit for vertical adjustment in said riser, said tubular member having means to prevent reverse flow through said flow passage.

3,093,157
METERING AND MIXING APPARATUS
Adrien J. Aitken, Sunnyvale, and Eugene V. Rutkowski, China Lake, Calif., assignors to the United States of America as represented by the Secretary of the Navy
Filed Dec. 2, 1960, Ser. No. 73,462
4 Claims. (Cl. 137—605)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. Apparatus for metering end mixing a liquid fuel and a liquid oxidant, comprising; a body member having a cylindrical bore open at one end thereof forming a circular metering edge, a cylindrical piston valve member slideably disposed in said bore having a plurality of outwardly directed apertures angularly spaced about the piston axis and adapted to simultaneously pass across said edge to provide metering openings of continuously variable area, said apertures comprising a first and second set for delivering oxidant and fuel, respectively, the apertures of the sets being axially elongated and angularly alternating about the axis whereby the liquid oxidant and fuel may discharge radially outwardly in spaced streams with a stream of one liquid disposed between adjacent streams of the other liquid, and an annular wall member adjacent said end of the cylindrical bore and having an inner surface adjoining said metering edge and extending axially therefrom, forming an inwardly concave surface of revolution surrounding said axis and having a converging circular discharge portion, the construction and arrangement of said apertures and annular wall member being such that the streams of liquid discharging from the apertures impinge on the wall member and spread angularly in fan-like pattern, the liquids thence being directed inwardly along the surface of a cone having its apex on said axis.

3,093,158
DETENT MECHANISM FOR HYDRAULIC CONTROL VALVE
Francis H. Tennis, Milwaukee, Wis., assignor to Hydraulic Unit Specialties Company, Pewaukee, Wis., a corporation of Wisconsin
Filed Oct. 31, 1960, Ser. No. 66,167
7 Claims. (Cl. 137—622.5)

1. A detent device for releasably holding a tubular detent carrier in a defined position of axial motion along a bore in a body part in which the detent carrier is slidable, and wherein fluid entering the detent carrier at one end thereof at a predetermined pressure value effects release of the detent carrier for axial sliding motion in the bore, said detent device comprising: cam follower means carried by the detent carrier for axial movement therewith and for substantially radial movement relative thereto to and from a detent defining position in which the cam follower means projects partway out of the wall of the detent carrier through a hole therein to engage in a circumferential groove in the body part which opens to the bore; a cam member axially slidable in the detent carrier, said cam member having a coaxial bore therethrough and having a cam surface engageable with the cam follower means to maintain the latter in its detent defining position when the cam member is in one axial position relative to the detent carrier, spaced from said one end thereof, and by which the cam follower means is released for radially inward movement out of said detent defining position when the cam member is moved out of its said one axial position in the direction away from said one end of the detent carrier; a first yielding means in the detent carrier biasing the cam member axially toward its said one position; a fluid pressure responsive plunger slidable axially in the interior of the detent carrier, said plunger having a coaxial bore therethrough and having a motion transmitting connection with the cam member to move the same against its bias as a consequence of subjection of said plunger to fluid pressure; means in the detent carrier spaced from the other end thereof providing a valve seat through which pressure fluid must flow before the pressure of such fluid can be imposed upon the plunger; a valve element in the detent carrier movable axially toward and from engagement with the valve seat and adapted to be moved off of the seat by the pressure of fluid in said end of the carrier; a spring seat member having a stem portion extending axially through the bores in the cam member and the plunger, an inner end portion of the seat member providing an abutment which faces the valve element, and an outer end portion being accessible at the other end of the detent carrier; cooperating adjustment means on the detent carrier and on the outer end portion of the spring seat member to provide for axial adjustment of said abutment on the inner end portion of the spring seat member relative to the detent carrier; and a second yieldable biasing means reacting between the valve element and the abutment on the spring seat member, for biasing the valve element toward its seat with a force which depends upon the axial position of said abutment, so that the pressure at which fluid unseats the valve element and enters the interior of the detent carrier to produce plunger driven movement of the cam member out of its said one position is determined by the adjustment of the spring seat member.



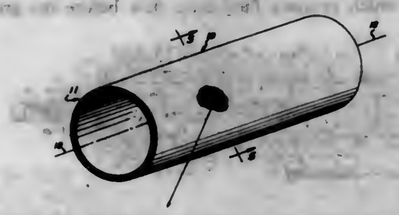
3,093,159
HYDRAULIC CONTROL VALVE
Joseph Kenneth Royle, Manchester, England, assignor to National Research Development Corporation, London, England, a British corporation
Filed July 20, 1959, Ser. No. 828,290
Claims priority, application Great Britain June 10, 1959
4 Claims. (Cl. 138—46)



1. A pressure control valve comprising a valve body, a valve member movable within said valve body, said

valve body having at least one inlet for fluid under a first high pressure and at least one exhaust outlet for fluid at a second lower pressure, a pressure take off outlet from said valve, and means for varying the pressure at said take off outlet between the first and second pressures, said means including a restricted path providing resistance for fluid flow between said inlet and exhaust outlet and means for shifting said valve member to vary the effective length of said restricted path between said inlet and said take off outlet thereby varying the proportion of the pressure at the inlet appearing at the take off outlet.

3,093,160
PLASTIC ARTICLES
Herbert D. Boggs, Tulsa, Okla., assignor, by mesne assignments, to H. D. Boggs Company, Ltd., Omaha, Nebr., a limited partnership
Continuation of abandoned application Ser. No. 459,092, Sept. 29, 1954. This application Dec. 4, 1959, Ser. No. 857,469
2 Claims. (Cl. 138—140)



1. A rigid reinforced pipe for sustaining high pressures comprising thermosetting resinous material selected from a class of polyester resins, epoxy resins and phenolic-epoxy resins and including a reinforcement element of a uniformly interwoven seamless sleeving formed of glass threads, said sleeving being entirely surrounded by a mass of said resinous material, the mesh opening in said sleeving being less than about .001 inch.

3,093,161
LINED NIPPLE ASSEMBLY FOR HOT WATER TANKS
Irvin D. Jacobson, Painesville, Ohio, assignor to Perfection Pipe Nipple Company, Madison, Ohio, a corporation of Ohio
Filed Feb. 13, 1962, Ser. No. 172,942
2 Claims. (Cl. 138—143)



1. A lined nipple assembly for a hot water tank having a top provided with an opening, said assembly comprising a metallic nipple secured to said top in alignment with said opening, a tubular member of plastic material extending through said nipple, said member having an external diameter substantially the same as the internal diameter of the nipple, means interlocking said nipple and said member with each other, said means comprising at least one corrugation on said nipple, said corrugation being tightly engaged with the contiguous area of the surface of said member to provide a substantially leak-proof seal between said corrugation and said contiguous area of said member and to maintain a minute annular space between remaining areas of said nipple and said member and serving to entrap water initially seeping into said minute annular space between said nipple and member, and a protective oxide layer within said minute annular space, said oxide layer being formed by an initial oxidation of said metallic nipple in the presence of said initial seepage of water, said interlocking means and said minute annular space entrapping said oxide layer and precluding the free circulation of water within said space and the resultant erosion of said protective oxide layer whereby further oxidation is prevented.

3,093,162
PLASTIC LINED PERFORATED METAL TUBE
Victor G. Rolling, Dayton, Ohio, assignor, by mesne assignments, to The Durkee Company, Inc., Dayton, Ohio, a corporation of New York
Filed June 29, 1959, Ser. No. 823,725
4 Claims. (Cl. 138—150)



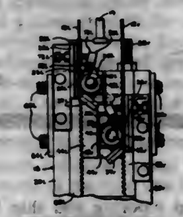
1. A tubular article of the character described comprising a substantially impervious inner tube of sintered plastic material forming an inner exposed surface of said article, a sheath of metal enveloping said plastic tube and having multiple small holes in the inner surface thereof, said sintered plastic material having a coefficient of thermal expansion greater than said sheath of metal, and the material of said plastic tube including integral portions projecting radially outwardly within said holes and cooperating therewith to secure said sheath and said tube against both axial and rotational movement relative to each other.

3,093,163
PATTERNED ROUGH-TEXTURED PILE FABRIC FLOOR COVERING
Robert J. Jackson, Hazardville, and Raymond J. Carrigan, Thompsonville, Conn., assignors to Bigelow-Sanford, Inc., a corporation of Delaware
Original application Mar. 16, 1959, Ser. No. 799,541, now Patent No. 3,069,485, dated Nov. 11, 1961. Divided and this application Oct. 20, 1959, Ser. No. 847,605
2 Claims. (Cl. 139—396)



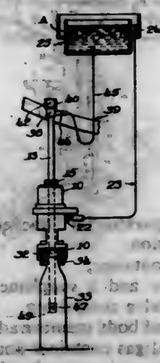
1. A patterned, rough-textured pile fabric floor covering comprising stuffer warp yarns, upper wefts lying above the stuffer warp yarns, lower wefts lying below the stuffer warp yarns, binder warp yarns woven above upper wefts and below lower wefts, and pile warp yarns woven below the upper wefts and extending upwardly between adjacent upper wefts to form weftwise rows of pile loops, alternate pile warp yarns differing from the intermediate pile warp yarns in color, the pile loops in each pile yarn varying in length along the length of the pile yarn in accordance with a pattern, the longer loops extending sidewise to hide adjoining lower loops, the loops in alternate rows being long in areas where the loops in intermediate rows are short and short in areas where the loops in intermediate rows are long, whereby the pile surface is provided with a color pattern, the pile loops further having a haphazard sequence of varying heights within a range of ⅛ inch warpwise and weftwise superposed on said patterned variation in length, giving a correspondingly rough texture appearance to the patterned pile surface.

3,093,164
LEAD-WIRE BENDING APPARATUS
Carl Lenz, deceased, late of Wayne, N.J., by Earl J. Aberle, executor, Wayne, and Richard Hazell, Denville, N.J., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Mar. 31, 1960, Ser. No. 19,032
6 Claims. (Cl. 140—71.5)



1. Apparatus for bending a supported lead wire of an electric lamp, said apparatus comprising:
(a) mounting means;
(b) a rotatable member on said mounting means;
(c) an anvil affixed to said rotatable member;
(d) a bending member rotatable on said rotatable member, the portion of said lead wire desired to be bent positioned between said anvil and said bending member;
(e) coupling means affixed to said anvil for first connecting and later disconnecting said bending member from said anvil;
(f) drive means operatively associated with said rotatable member for causing rotation of said anvil and said bending member connected thereto; and
(g) stop means affixed to said mounting means for limiting the rotation of said bending member and for causing said coupling means to disconnect said bending member from said anvil; the components comprising said apparatus coacting in the following fashion:
(1) rotation of said rotatable member by said drive means through a predetermined angle causing said bending member and said anvil to rotate and to bend through a predetermined angle the portion of said lead wire positioned therebetween;
(2) further rotation of said rotatable member by said drive means causing said coupling means to abut against said stop means and disconnect said bending member from said anvil; and
(3) said bending member upon being disconnected from said anvil operating to move from contact with said supported lead wire to permit said apparatus to move from engagement with said supported lead wire.

3,093,165
ROTARY FILLING MACHINE AND FILLING TUBES THEREFOR
Ivan H. Risser, Glenview, Ill., assignor to U.S. Bottlers Machinery Company, Chicago, Ill., a corporation of Illinois
Filed Aug. 20, 1957, Ser. No. 679,162
6 Claims. (Cl. 141—140)



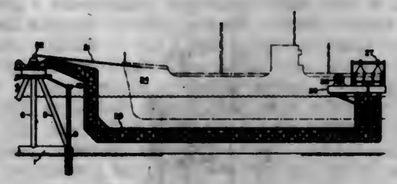
3. In a rotary filling machine for bottling liquids such as dry wines with a minimum of entrained air, a reservoir for receiving and supplying the liquid to be bottled in said machine, an inlet for the liquid, a conduit rising from said inlet and connected to the base of said reservoir for vertical flow upwardly into said reservoir, said conduit having stepped enlargements to decrease the velocity and turbulence of the liquid entering said reservoir, a collecting chamber in the base of but separated from the conduit for said reservoir, the liquid flowing by gravity from said collecting chamber for bottling, baffles provided in said reservoir for directing the entering liquid in a tortuous path to said collecting chamber whereby the liquid in said collecting chamber is in a quiescent state, a filling assembly comprising a filling head communicating with and withdrawing liquid from the bottom of said collecting chamber by gravity, a stationary cam track over which the head is moved and by which the head is lowered during filling of a bottle and elevated when the bottle has been filled, a filling tube unit including a filling tube depending from and carried by said head with its lower end movable vertically in said unit and into and out of a bottle to be filled, a centering bell housing slidably mounted in said unit and in which said filling tube is slidably mounted, a tube mounted in said centering bell and encompassing and spaced from the filling tube to provide an annular restricted passage therebetween, a flexible sealing collar carried on the lower end of said encompassing tube for sealing contact with the neck of the bottle, a filling tip on the lower end of said filling tube, said tip being provided with a sealing ring and one or more outlet ports above said ring, said tip being telescopically received in the encompassing tube with the lower end of the encompassing tube engaging the sealing ring to cover the ports and seal the annular restricted passage, a return hose communicating with said restricted annular space and of a smaller internal diameter than the internal diameter of the filling tube for the escape through said restricted passage and return hose of air and entrained liquid from the bottle during the initial part of the filling operation when a limited quantity of liquid enters the bottle through the uncovered outlet ports after which the tip is lowered to adjacent the bottom of the bottle and liquid issues through said ports beneath the collected liquid until the bottle is filled, said cam track and filling head lowering and raising said tip in a predetermined timed sequence.

3,093,166
CHARGING APPARATUS FOR LIQUEFIED GAS LIGHTERS
Taisho Ikutani, 589 Negata-cho 1-chome, Nakano-ku, Tokyo, Japan
Filed Sept. 7, 1961, Ser. No. 136,639
Claims priority, application Japan July 22, 1961
2 Claims. (Cl. 141—295)



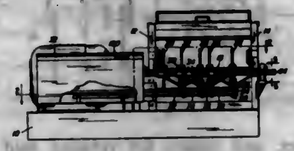
1. A charging apparatus for liquefied gas lighters, comprising in combination:
a first fuel gas container,
an injection valve and a supplementary filling valve, said injection valve comprising
an outer cylindrical body member adapted to be secured to said first fuel gas container and having two oppositely disposed openings in the side wall thereof, as well as an innermost inner face,
said outer cylindrical body member including an inwardly directed annular valve seat disposed outwardly of said openings,
an inner valve body axially movable in said outer cylindrical body member and including an inwardly facing shoulder portion near its outer end,
a first packing means received in and disposed on the outer face of said valve body and engaging said annular valve seat in the closed position of said injection valve,
a first coil spring disposed between said innermost inner face of said outer cylindrical body member and said shoulder portion of said valve body and urging the latter into its outermost valve seat engaging position,
said supplementary filling valve comprising a container body and a valve stem projecting from said container body and having a neck portion and an axial passage closed at its inner end and open at its outer end,
a skirt member having an inner base face and receiving the inner end of said valve stem, said skirt member being retained in the outer end of said container body,
a second packing means disposed at the outer end of said skirt member and received in said neck portion of said valve stem,
a second coil spring disposed between said inner base face of said skirt member and a shoulder of said valve stem to urge the latter into its outermost position,
the outer portion of said valve stem etxending into said outer cylindrical body member of said injection valve and the outer end of said valve stem engaging the outer face of said first packing means in its operative position with said injection valve,
said valve stem having a first radial passage disposed at the inner end of said axial passage thereof and a second radial passage disposed at the outer end of said axial passage thereof, both said radial passages communicating with said axial passage,
said second packing means sealing said first radial passage in the inoperative position of said valve stem,
said first radial passage feeding fuel, upon pressing said valve stem against said inner valve body to move the latter inwardly against the pressure of said first coil spring, through said axial passage of said valve stem and said second radial passage into said injection valve in the operative position of the latter, wherein said valve stem is pushed into said container body against the pressure of said second coil spring, and through one of said openings of said outer cylindrical body of said first injection valve into said fuel gas container,
the outer diameter of said valve stem being smaller than the inner diameter of said outer cylindrical body member to define an annular channel therebetween, and
said annular channel communicating with another of said openings of said outer cylindrical body in the operative position of said valve stem, thereby permitting bleeding of said injection valve during the filling operation.

3,093,167
OFFSHORE COMBINATION SHIP MOORING AND SHIP LOADING APPARATUS-BOW MOORING
George A. McCammon, Tripoli, Libya, assignor to Esso Research and Engineering Company, a corporation of Delaware
Filed May 5, 1961, Ser. No. 108,156
6 Claims. (Cl. 141—387)



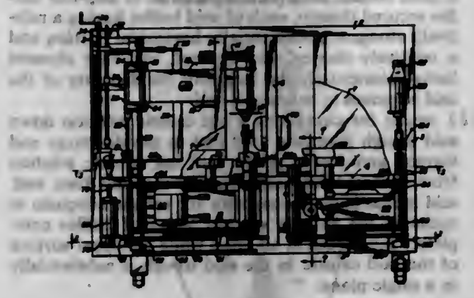
1. Improved ship mooring and ship loading structure which comprises in combination (1) a lower base donut ring adapted to be positioned on the ocean floor, (2) supporting legs affixed to said donut ring and extending upwardly and inwardly from said donut ring to a point above the surface of the water, (3) a top rigid platform supported above the water by said supporting legs, (4) fendering tubes extending upwardly from said donut ring and positioned about the periphery of said donut ring to a point above the surface of the water, (5) a fendering ring rigidly attached at the upper ends of said fendering tube, (6) a top ring positioned within and above said fendering ring and rigidly attached to said fendering ring by means of structural members, said top ring being positioned about said rigid top platform, (7) a turntable mechanism positioned on said rigid top platform and adapted to rotate with respect thereto, (8) an outwardly extending boom, the inboard end of which is rigidly attached to said turntable mechanism, said boom being characterized by an inboard section which is above the surface of the water and which extends to a point without said fendering ring, said boom being characterized by a middle section which extends downwardly to below the surface of the water, said boom being characterized by an outboard section one end of which is attached to the lower end of said middle section and which extends outwardly below the surface of the water to the loading manifold of a moored ship, (9) a loading platform affixed to the outboard end of said boom by means of upwardly extending structural members and positioned above the surface of the water adjacent the loading manifold of a moored ship, (10) mooring lines affixed to said turntable mechanism and adapted to rotate therewith, said mooring lines extending outwardly and adapted to moor a ship, (11) loading lines extending from shore facilities to within said lower base donut ring upwardly to said turntable mechanism and outwardly through said boom to said manifold of a moored ship whereby as tide, wind and current change the position of a moored ship, said boom will adjust in relation thereto.

3,093,168
POWER OPERATED DEVICE
Victor L. Colt and Charles B. Willock, Portland, Oreg., assignors to The Peters Company, Portland, Oreg., a partnership
Filed Feb. 16, 1960, Ser. No. 9,083
12 Claims. (Cl. 143—37)



3. In a device including a frame and having a plurality of load elements supported on said frame in a longitudinally extending series and shiftable to predetermined positions relative to each other and to a fixed element positioned at one end of said series, a plurality of cylinders fixedly mounted on said frame, a piston in each of said cylinders connected one to each of said load elements for shifting the same, control means for said cylinders responsive to predetermined signals to cause movement of any selected one of said pistons to shift the corresponding load element a predetermined distance longitudinally of said series, and means responsive to and operable upon shifting of any one of said load elements to cause the piston connected to the load element next adjacent thereto on the side away from said fixed element to be driven relative to its cylinder and to shift the load element connected to said last mentioned piston a distance equal to and in the direction of the movement of the said one load element.

3,093,169
FURNITURE FORMING MACHINES
Luther E. Nichols, Morristown, Tenn., assignor to Walters Mfg. Company, Morristown, Tenn., a corporation of Tennessee
Filed June 4, 1959, Ser. No. 818,143
5 Claims. (Cl. 144—3)



1. Apparatus for severing from a panel a set of strips of different widths and shaping each of the severed strips comprising panel-supporting means along which the panel may be moved, means for pressing the moving panel toward said panel-supporting means, a guide on said panel-supporting means in position to be contacted by one edge of the moving panel so as to fix the position of such edge, a cutter spaced away from said guide for severing the moving panel, means for automatically changing the distance between said guide and said cutter to vary the widths of successive strips severed from said panel, shaping means for shaping an edge portion of each such strip adjacent said guide, automatic means operating independently of the cutter-positioning means for changing the distance between said shaping means and said guide to vary the shaping action produced upon successive strips and both of said automatic means being responsive to a master control to produce a combination of varied operations.

3,093,170
PORTABLE LOG DEBARKING MACHINE
Julius A. Thayer, 233 E. Prospect Ave., Tomahawk, Wis.
Filed Mar. 4, 1960, Ser. No. 12,757
9 Claims. (Cl. 144—208)



1. A machine for removing bark from logs comprising:
A. an endless flexible cutter carrier;
B. three rotatable members about which said cutter carrier is trained;
C. a frame supporting said rotatable members with their axes parallel,
(1) said frame holding two of the rotatable members in spaced apart relation so that they cooperate in defining a substantially long stretch of the carrier, and
(2) holding the third rotatable member with its axis spaced from the plane of the axes of said two designated rotatable members and at the side of the plane remote from said long stretch of the carrier, so that said third rotatable member defines two shorter stretches of the carrier and provides for substantial inward displacement of the medial portion of said long stretch of the carrier;
D. yielding biasing means on the frame translatingly urging two of said rotatable members relatively away from one another so that they at all times tend to hold said long stretch of the carrier straight and tend to resist such displacement thereof;
E. and a plurality of cutting elements secured to the cutter carrier at spaced intervals along the length thereof, each of said cutting elements comprising:
(1) a pair of thin knife blades projecting perpendicularly from the outer face of the cutter carrier, parallel to one another and to the direction of cutter carrier motion, said knife blades having their inner surfaces opposite one another and having
a. cutting edges which extended in the direction of cutter carrier motion so that the length of the knife blades is substantially greater than their height and
b. having curved and sharpened leading ends which merge with their cutting edges, and
(2) a chisel blade having
a. a cutting edge transverse to the cutting edges of the knife blades and between the planes of their inner surfaces, to plow material from between parallel cuts made by them,
b. said chisel blade being fixed with respect to the knife blades near their trailing ends so that the knife blades control the depth to which the chisel blade cuts.

3,093,171
BOWLING PIN AND METHOD OF PRODUCING THE SAME
Arthur M. Bean and Maurice F. Cetta, Walton, N.Y., assignors to Bean Brothers Inc., Walton, N.Y., a corporation of New York
Filed Jan. 9, 1961, Ser. No. 81,615
3 Claims. (Cl. 144—310)



1. A method for producing a bowling pin comprising removing a plurality of generally prolate spheroidal segmental portions from the belly of at least one discarded bowling pin by passing a plurality of circumferentially spaced, substantially vertical cuts through said discarded bowling pin at distances from the longitudinal axis thereof greater than the minor radius of the neck portion of said discarded bowling pin; adhesively joining a plurality of rectangular wooden strips to one another as to form a laminated block having a square cross section and four rectangular faces, adhesively joining one of said generally prolate spheroidal segmental portions to each of said rectangular faces, and turning the joined block and portions down to substantially the size and shape of a standard bowling pin.

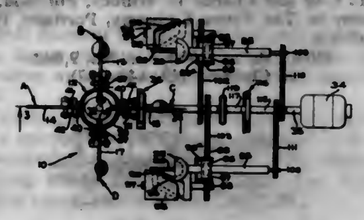
3,093,172
ANTI-SLIP HANDLE FOR MANUALLY OPERATED TOOLS
Edgar Reed 2nd, 24 Butternut Hill Road, Worcester, Mass.
Filed Nov. 29, 1961, Ser. No. 155,591
1 Claim. (Cl. 145—61)



A handle for a manually operated turning tool, said handle being shot-blasted to provide an exterior surface substantially covered by spaced outwardly extending curved edges of low height with respect to the diameter of the handle, each of the edges defining the intersection of crater-like indentations, such edges having an irregular pattern providing a roughened gripping surface highly resistive to relative movement between the hand and the handle as the tool is turned.

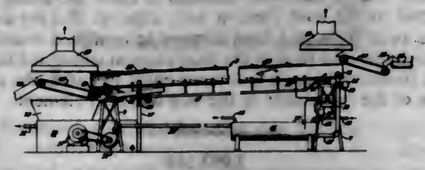
3,093,173
PEACH PITTER
James M. Halt, San Jose, Calif., assignor to FMC Corporation, a corporation of Delaware
Filed Feb. 9, 1959, Ser. No. 792,210
6 Claims. (Cl. 146—28)

1. A pitting machine comprising a turret mounted for rotation about a vertical axis, flat faced cutting and gripping means mounted on said turret and arranged when actuated to cut into a whole peach to make a vertical planar cut in the peach to bisect the flesh of the peach and grip the pit, means for actuating said cutting and gripping means, a pair of twister heads mounted in spaced relation adjacent said turret on the same side



of the turret, and means for rotating said turret for moving said cutting and gripping means in a direction normal to the flat faces thereof toward and away from said twisting heads for successively presenting opposite halves of a peach supported by said flat faced cutting and gripping means to different ones of said twister heads.

3,093,174
TOMATO PEELER
Raymond C. Warren, Woodland, Calif., assignor to Contadina Foods, Inc., a corporation of Illinois
Filed Apr. 26, 1961, Ser. No. 105,983
2 Claims. (Cl. 146—47)

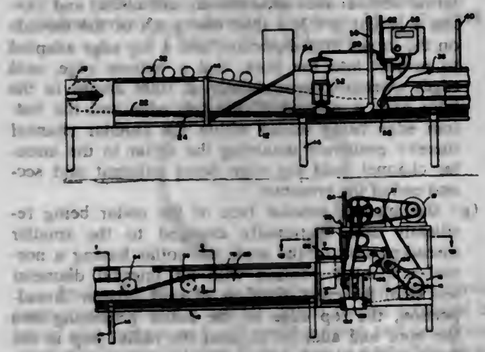


1. A machine for treating tomatoes and the like with a hot caustic solution comprising:
(a) an inclined trough having a relatively elevated feed end and a relatively lowered discharge end and having a fixed bottom incorporating a series of step-like baffles secured thereto, each of said baffles having a relatively elongated, substantially horizontal portion and a relatively shorter riser element, said riser element being substantially the length of the diameter of the said tomatoes to be treated; and
(b) means for circulating a hot caustic solution down said trough from the feed end to the discharge end thereof and for recycling said hot caustic solution from the said discharge end to the said feed end, said means having a capacity for caustic adequate to maintain the entirety of said series of baffles completely submerged at all times while the upper surface of the said caustic in the said trough is substantially in a single plane.

3,093,175
MACHINE FOR TREATING TOMATOES WITH LYE SOLUTION, WASHING AND TRIMMING SAME
Alfred A. Morici, San Jose, Calif., assignor to Hershel California Fruit Products Co. Inc., a corporation of California
Filed Apr. 1, 1960, Ser. No. 19,391
3 Claims. (Cl. 146—52)

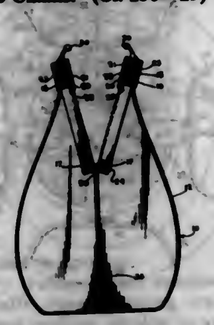
3. In a tomato processing machine, a stem and calyx removing section for use in conjunction with a tomato-holding cup of generally dish-shaped configuration, said cup being mounted on a continuously moving conveyor and having a slot in the bottom thereof extending in the

direction of the movement of the said conveyor, said calyx removing section comprising:
(a) a knife mounted for rotation about a horizontal axis perpendicular to the direction of movement of the said conveyor, said knife being positioned in the path of movement of the said cup immediately below the said cup so that when the said cup passes over the said knife, the said knife will enter the said



slot and contact the calyx end of the said tomato; and
(b) at least a single guide positioned immediately below the path of travel of the said cup, said guide being vertically movable relative to said tomato-holding cup and positioned to contact the bottom of a tomato protruding through the said opening in a cup, said guide being operatively associated with said knife to control the vertical position of the said knife whereby to limit penetration of the knife into the bottom of the said tomato.

3,093,176
HEAT SEALED HANDBAG FRAME
Nathaniel Kahn, 337 Snyder Ave., Brooklyn, N.Y.
Filed July 17, 1961, Ser. No. 124,599
6 Claims. (Cl. 150—29)



1. A handbag construction, comprising a flexible bag body made of flexible, thermoplastic sheet material, said body having free edges, a rigid core made of thermoplastic material, said core including two generally U-shaped core members hinged together at ends of their legs, said edges of the body being wound around the core members and integrally fused thereto, and a pair of generally U-shaped channels fitted over the U-shaped core members respectively, said core members being rectangular in cross section and said channels being correspondingly rectangular in cross section.

3,093,177
THREAD LOCK AND METHOD OF MAKING THE SAME
Joseph P. Villo, Glenside Gardens, Pa., assignor to Standard Pressed Steel Co., Jenkintown, Pa., a corporation of Pennsylvania
Filed Nov. 8, 1957, Ser. No. 696,014
2 Claims. (Cl. 151—7)



1. A self-locking threaded fastener element wherein the self-locking characteristic is derived from a nylon plastic composition having fused juncture with a surface of the thread, said plastic being confined to a local circumferential and axial area of the thread, and being bound to the thread solely by said fused juncture.

3,093,178
RETAINER FASTENER
Thomas R. Boyd, Rolling Hills Estates, Calif., assignor to Illinois Tool Works, Inc., Chicago, Ill., a corporation of Delaware
Filed Feb. 5, 1959, Ser. No. 791,346
3 Claims. (Cl. 151—41.73)



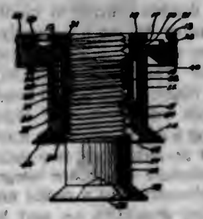
1. A one-piece self-retaining sheet metal nut fastener made from material of substantially uniform thickness which is adapted to be telescopically assembled within a complementary bore in a workpiece, said fastener formed from a double cruciform blank and including a planar head member having a centrally located aperture, a depending open ended tubular body member surrounding said aperture which is integral with said head and drawn from the blank forming said head, said body member provided with internal thread engaging means suitable for accepting a complementary screw threaded member to be passed therethrough, two pairs of opposed tabs arranged in quadrature which are integral with said head and emanating therefrom in a radial and co-planar fashion and providing shoulders on said head which determine the depth to which said fastener may be inserted into the complementary bore in a workpiece, two pairs of opposed elongated fingers arranged in quadrature which have a bendable junction integral with the peripheral margin of said head and positioned intermediate adjacent pairs of the aforementioned tabs, each said bendable junction being an equal radial distance from the body axis, one pair of fingers being of greater radial length in the blank than the other pair of fingers, said first pair of fingers being initially formed downwardly and inwardly from their bendable juncture with said head member and axially beyond said threaded body member thence being bent inwardly again under said threaded body member until said first pair of fingers are in close and opposed proximity to each other at which point each finger is reversely bent outwardly to provide terminal finger portions extending substantially along a plane normal to the axis of the fastener, said second pair of fingers being bent downwardly and inwardly from their

bendable juncture with said head member towards the free end of said body member and extended until they substantially abut the marginal edges of said first pair of fingers thence bent outwardly to provide terminal finger portions extending substantially along the same plane as the said first pair of fingers, all of said fingers terminating in a point with all points falling on an imaginary circle concentric with and of a greater diameter than said threaded body member, and each point of each of said fingers extended radially outward a radial distance substantially equal to the radial distance that the bendable juncture of each of said fingers extends from the axis of the fastener shank portion, said terminal finger portions of said first fingers having a greater radial length than said terminal finger portions of said second fingers, said fastener shank portion adapted to extend into said bore to a depth as determined by said tabs, said finger portions in the vicinity of the juncture of those portions in the common plane and their adjacent reversely bent portions being spaced apart a distance substantially smaller than the diameter of the threaded body member and the complementary screw member with which it cooperates to assure that as the complementary screw is inserted and moved axially through said fastener shank portion that said fingers are forced laterally into the material of the workpiece forming the wall of said bore with the points on the terminal portions of said two pairs of said fingers assuming an imbedded position in two different planes which are normal to the axis of the fastener and which occurs because of the different lengths of the terminal portions of each of said two pairs of said fingers being moved radially outwardly different radial measurements from their initial position in a common plane normal to the fastener axis.

3,093,179
STUD AND GROMMET HAVING RESILIENT MEANS WITHIN THE GROMMET TO HOLD THE STUD AND GROMMET IN ASSEMBLY

Victor F. Zahodiakin, River Road and Morris Turnpike, Summit, N.J.

Filed June 8, 1959, Ser. No. 818,720
5 Claims. (Cl. 151—69)

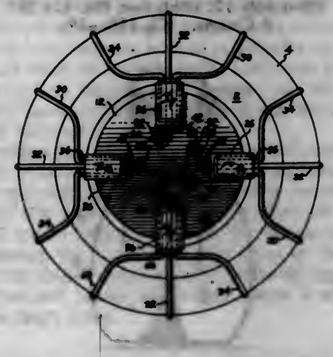


1. A stud and grommet assembly comprising,
(*a*) a grommet having laterally extending abutment means at one end and a generally central bore and an internal, annular channel communicating with the bore and positioned approximately midway between the ends of the bore, said channel having end surfaces substantially at right angles to the bore,
(*b*) means engageable with the grommet at a second end thereof, adapted to secure the grommet against disengagement from an aperture into which the grommet can be inserted,
(*c*) a threaded stud in the bore, said stud having a head at one end,
(*d*) a larger thread-portion of normal threads on the stud at the end opposite to said head,
(*e*) a smaller thread-portion on the stud immediately adjacent to the larger thread portion said smaller thread-portion having truncated threads to provide a reduced crest diameter relative to the threads of said larger thread-portion, thereby defining a radial step in the threads, the axial length of the larger thread-portion being no greater than the distance between the top of the annular channel and the top of the grommet,
(*f*) a resilient, split collar positively seated within the channel in the bore against movement in the direction of the axis of the bore, the collar having an internal annular face substantially cylindrical and having a height not less than one pitch of the threads on the larger thread-portion, and a top edge adapted to project into the bore, and a bottom edge, said edges extending substantially at right angles to the bore axis, a portion of the top edge and the bottom edge being seated within the annular channel thereby positively detaining the collar in the annular channel, said top edge being adjacent said second end of the grommet,
(*g*) the internal annular face of the collar being resiliently and frictionally engaged to the smaller thread-portion of the stud, the collar having a normal contacted position with an internal diameter less than the crest diameter of said smaller thread-portion, the top edge of the collar projecting into the bore and adapted to abut the radial step in the threads of the stud,
(*h*) the collar being non-expandable in response to pressure exerted by the radial step in the threads of the stud against its top edge generated by force exerted against the stud tending to withdraw the stud from the bore, the stud thereby being positively detained within the bore, and
(*i*) the annular channel in the bore being sufficiently deep to permit the collar to expand radially to pass the larger thread-portion of the stud therethrough.

3,093,180
TRACTION DEVICE FOR AUTOMOBILE WHEELS

Edmund L. Jones, Jr., 1615 Lark Lane, Villanova, Pa.

Filed Jan. 25, 1962, Ser. No. 168,716
4 Claims. (Cl. 152—216)



1. A traction device for automobile wheels, comprising spacer members having their inner ends interiorly threaded and their outer ends exteriorly threaded, the interiorly threaded ends of said spacer members being adapted to engage with the usual stud bolts carried by the hub of an automobile wheel, a mounting plate carried by the outer ends of said spacer members, nuts engageable with the exteriorly-threaded ends of said spacer members and with the mounting plate, for holding the mounting plate on said spacer members, outwardly opening mounting boxes carried near the periphery of said mounting plate, a plurality of base plates, a plurality of groups of ground engaging traction members having their inner portions converged toward each other and secured to its respective base plate, the several base plates being mounted respectively in said mounting boxes.

3,093,181
PNEUMATIC TIRE

Richard Beckadolph, Hannover, Germany, assignor to Continental Gummi-Werke Aktiengesellschaft, Hannover, Germany

Filed May 2, 1961, Ser. No. 107,095
Claims priority, application Germany May 17, 1960
5 Claims. (Cl. 152—361)

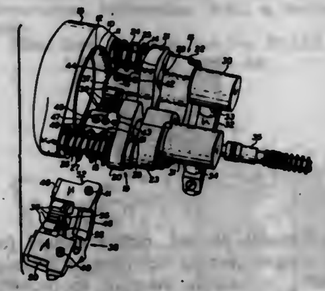


1. In combination in a pneumatic vehicle tire having a tread portion and a carcass: insert means arranged between said carcass and said tread portion and comprising substantially parallel first thread means extending in circumferential direction of said tire, said insert means also comprising second thread means extending transverse to and being looped around at least some of said first thread means in a direction transverse to said first thread means while also extending below and above at least some of said first thread means in a direction transverse to said tire.

3,093,182
SWAGING TOOL

Alton S. Vanderhoof, Caldwell, N.J., assignor to Resistoflex Corporation, Roseland, N.J., a corporation of New York

Filed June 20, 1960, Ser. No. 37,141
8 Claims. (Cl. 153—1)

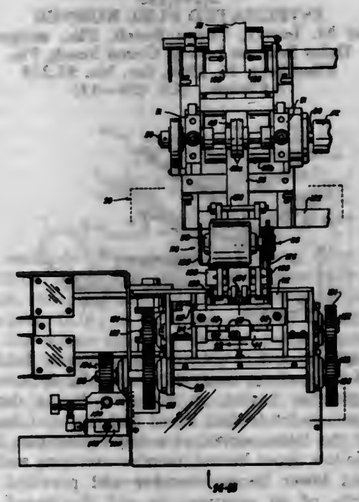


1. A swaging tool comprising:
(*a*) a generally U-shaped base member,
(*b*) an internally tapered sizing ring rigidly supported in fixed position parallel to and spaced from said base member with an unobstructed axial approach to the opening therein on both sides thereof,
(*c*) a generally U-shaped pressure plate disposed parallel to and in the space between said sizing ring and said base member and movable therebetween,
(*d*) means carried by said base member for selectably urging said pressure plate toward said sizing ring,
(*e*) a plurality of die fingers, and
(*f*) a cage for carrying said fingers in a uniform circular distribution for radial movement, said cage being ring-shaped and divided into two semicircular portions, one portion being secured to said pressure plate parallel thereto on the side facing said sizing ring and detachably carrying the other portion for joint movement into said sizing ring, said fingers being engaged by the sizing ring when the cage is moved therein to urge the fingers simultaneously radially inwardly,
the U-shaped base member, U-shaped pressure plate, and cage portion secured to said pressure plate all being oriented in the same direction to provide collectively an unobstructed U-shaped channel co-axial with said sizing ring and cooperating therewith to provide an axial passage completely through the tool for accommodating an article to be swaged.

3,093,183
ZEROING MECHANISM

Edwin C. Eldred, Wenham, and Trevor Temple, Newbury, Mass., assignors, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware

Filed Oct. 1, 1958, Ser. No. 764,724
20 Claims. (Cl. 153—2)



1. For a machine having a plurality of adjustable stops, means for moving each of said stops to an independent initial reference location which comprises: a common prime mover for all of said stops; a separate drive connection for each of said stops to enable it to be moved by said prime mover; separate and adjustable means connected between each of said stops and its respective drive connection; and, means independently responsive to each of said adjustable connecting means and capable of preventing each respective drive connection from moving its associated stop at a given location of said associated stop while said prime mover continues to move others of said plurality of stops.

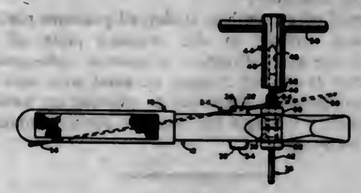
3,093,184
TOOL FOR FORMING HELICES OR EYES IN WIRES

Paul H. Moon, Fremont, Ohio, assignor, by mesne assignments, to Kelsey-Hayes Company, a corporation of Delaware

Filed Sept. 30, 1960, Ser. No. 59,707
2 Claims. (Cl. 153—67)

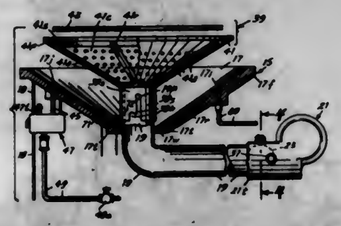
1. A tool for forming helices in wire, said tool comprising a pair of pivoted members pivotally connected one to another, said members forming handles and jaws for holding a wire, a cylindrical projection extending from the pivot point of said members in a line perpendicular

to a plane in which said members pivot, each of said jaws being aligned with said projection regardless of the position of said handles, a disc concentrically mounted on said projection adjacent said pivoted members, said disc



extending from said handle substantially at least as far as said jaws so that said jaws cannot interfere with a wire when wound around said projection, and means cooperating with said projection for wrapping therearound a wire held in said jaws.

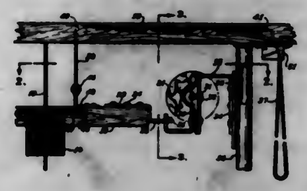
3,093,185
INTEGRATED FUEL BURNER
Walter M. Lowry, Cocoa Beach, Fla., assignor to Daisy Seaman Lowry, Cocoa Beach, Fla.
Filed Sept. 26, 1960, Ser. No. 58,228
3 Claims. (Cl. 158—11)



1. A quickly and easily convertible burner for gaseous or liquid fuels, comprising: a horizontally disposed lower burner member having an upwardly facing depression therein, means for feeding liquid fuel into said depression whereby the latter serves as a vaporizing pan for said fuel, a hollow upper burner member overlying and spaced from said lower burner member and provided with a multiplicity of jet apertures in and distributed over a major portion of the area of the wall defining its lower face, means for supplying air under pressure to said upper burner member to issue through said jet apertures to support combustion of vaporized fuel in the space between said members, valve means for introducing gaseous fuel into said means for supplying air so as to mix with the air to produce a combustible mixture for issuance from said jet apertures to produce downwardly directed flames, and at least one igniter means disposed between said members, said burner members being relatively vertically adjustably interconnected so as to increase or decrease the spacing therebetween and thereby the vertical dimension of the combustion chamber provided by said spacing for increased efficiency when converting to a gaseous or liquid fuel burning arrangement, respectively, of the apparatus.

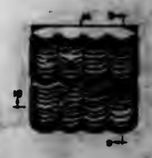
3,093,186
LIFTING AND LOWERING SYSTEM FOR VENETIAN BLINDS
Luis Lara Castanedo, Avenida Horacio 911, Mexico City, Mexico
Filed Feb. 12, 1962, Ser. No. 172,446
Claims priority, application Mexico Sept. 26, 1961
4 Claims. (Cl. 160—167)

1. In a Venetian blind including an upper channel adapted to be fixed to a wall surface adjacent a window and enclosing a plurality of cords to effect movements of the blind, an upper bar, a plurality of flexible ladder strips hung from said upper bar, louvers forming the blinds supported by said strips, a lower rail secured to the bottom of said strips, first cord means to lift and lower said lower rail, second cord means for tilting said louvers, and third cord means for lifting and lowering said upper rail, the improvements comprising rail tilting means fixed to one end of said upper rail, a single



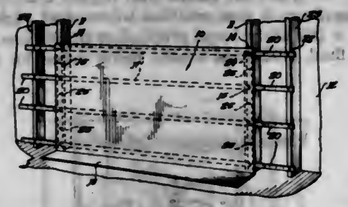
vertical guide member fixed at its upper end to said upper channel, a slide movably engaged in said guide member, a rotatable device journaled in said slide and turnable by said second cord means, and pivot means securing said rail tilting means to said slide, whereby upon operation of said third cord means to raise or lower said upper rail said rotatable device and upper rail are guided in a vertical plane and subsequent tilting of said louvers is unhampered because said rotating device is prevented from movements out of said plane.

3,093,187
CURTAINS
Julia Maras, Dubl, Miss.
Filed Mar. 10, 1959, Ser. No. 798,410
6 Claims. (Cl. 160—330)



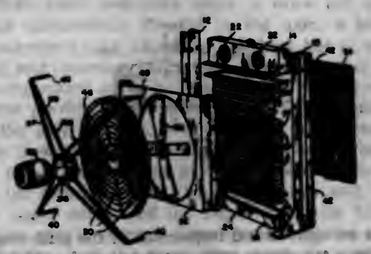
1. An adjustable pleated, ruffled curtain for use in covering a window opening regardless of the height thereof comprising, a backing sheet of appreciably greater length than the height of the opening and adapted to be folded intermediate its ends, a pleated sheet mounted on one surface and at one end of said backing sheet and secured to said backing sheet by lines of stitching extending the length of the backing sheet, a second pleated sheet mounted on the other surface and at the other end of said backing sheet and secured to said backing sheet by lines of stitching extending the length of said backing sheet, pleats in said pleated sheets extending transversely of said backing sheet, a ruffled strip extending around the periphery of one of said pleated sheets, a ruffled strip extending around the outer end and sides of the other pleated sheet, said backing sheet being adapted to be folded intermediate said pleated sheets to provide overlapping portions of said pleated sheets providing an illusion of continuous pleating while permitting adjustment of the length of the curtain for covering openings of differing length.

3,093,188
TEMPORARY CLOSURE FOR FREIGHT VEHICLE DOORWAY
Barton H. Ford, Omaha, Nebr., assignor of one-half to International Paper Company, New York, N.Y., a corporation of New York, and one-half to The Stanley Works, New Britain, Conn., a corporation of Connecticut
Filed July 25, 1960, Ser. No. 45,035
10 Claims. (Cl. 160—368)



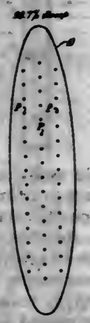
1. In combination with a car having vertical door posts and vertical studs spaced therefrom, a flexible door panel adapted to extend between said posts in overlapping relation therewith, vertically spaced, flexible, flat straps in said panel to support the same and having end portions overlapping said door posts, said strap ends being equipped with separate extension tie portions, said extension tie portions overlapping said studs, means connecting said extension tie portions and said strap end portions, and nails securing each strap to said posts and other nails anchoring said extension tie portions to said studs laterally of said posts, whereby said tie portions connect said studs to said posts, each of said studs being spaced from its associated door post a distance sufficient to dispose said tie portion at substantially right angles to said stud so as to stress said other nails principally in shear.

3,093,189
COOLING APPARATUS
Ernest H. Panthofer, Milwaukee, Wis., assignor to Perfex Corporation, Milwaukee, Wis., a corporation of Wisconsin
Filed Sept. 28, 1960, Ser. No. 59,113
1 Claim. (Cl. 165—69)



A heat transfer unit comprising:
a pair of rigid spaced support members;
a core, a top tank and a bottom tank connected together to provide a liquid radiator unit, said unit rigidly mounted on said support members between said members;
a fan unit including an electric motor and a fan blade driven thereby, said fan unit mounted adjacent said radiator unit to circulate air through said core;
a resilient mounting means for mounting said fan unit adjacent said radiator unit, said resilient mounting means including four radially extending arms and a fan support member fastened thereto, said fan support member adapted to receive and support said electric motor, said four radially extending arms having their outer ends fastened to said support members at the top and bottom portions thereof; and
a fan guard having a central aperture mounted between said fan blade and said electric motor, said fan guard fastened to said fan support member and said arms so that any vibration which is set up in said fan guard will be isolated from said liquid radiator unit.

3,093,190
METHOD OF IMPROVING PRODUCTION OF PETROLEUM FROM AN UNDERGROUND RESERVOIR
Donald L. Hoyt, Houston, Tex., assignor to Texaco Inc., New York, N.Y., a corporation of Delaware
Filed Apr. 11, 1960, Ser. No. 21,485
5 Claims. (Cl. 166—9)



1. A method of producing petroleum from a uniformly thick, nearly flat, underground petroleum-bearing formation, elongated and substantially elliptical in shape with the ratio (a/b) of the major axis (a) of said formation to the minor axis (b) thereof being greater than four, which comprises penetrating said formation with a plurality of production wells, and producing petroleum from said formation via said production wells, the number of said production wells disposed substantially in line along said major axis of said formation varying from 5 to 30.

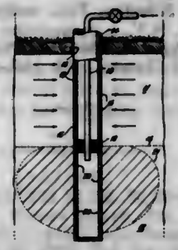
3,093,191
OIL RECOVERY METHOD
Eugene D. Glass, Tulsa, Okla., assignor to Pan American Petroleum Corporation, Tulsa, Okla., a corporation of Delaware
No Drawing. Filed Nov. 10, 1958, Ser. No. 772,692
5 Claims. (Cl. 166—11)

1. The method of recovering oil from an underground formation having an injection well and a production well comprising establishing a heat wave in said formation near said injection well, injecting at said injection well a quantity of an oxygen-free, oil-soluble fluid which dissolves in said oil between said heat wave and said production well, immediately thereafter injecting an oxygen-free aqueous driving fluid at said injection well whereby said heat wave is moved toward said production well vaporizing said oil-soluble fluid and producing a two-phase system which displaces said oil toward said producing well, and withdrawing oil from said production well.

3,093,192
OIL WELL TREATMENT TO OVERCOME WATER CONING
Joseph C. Allen, Billaire, Tex., assignor to Texaco Inc., a corporation of Delaware
Filed July 14, 1958, Ser. No. 748,215
10 Claims. (Cl. 166—21)

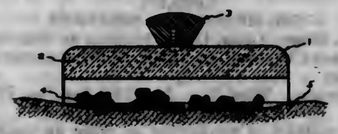
1. A method of treating a well to inhibit water-coning during the production of oil from an oil-producing for-

mation adjacent an underlying water-producing formation via a well bore extending through said oil-producing formation which comprises introducing a gas via said well bore into said water-producing formation in an amount sufficient to force water in said water-producing formation a substantial distance outwardly from said well bore adjacent said oil-producing formation, subsequently introducing via said well bore into that portion of said water-producing formation into which said gas has been introduced solvent liquid containing asphaltic material dissolved therein to effect vaporization of at least a portion of said solvent liquid and to effect precipitation of



at least a portion of said asphaltic material contained in said solvent liquid, subsequently introducing solvent liquid substantially free of asphaltic material dissolved therein via said well bore into the thus-treated portion of said water-producing formation to force the remaining first introduced solvent liquid outwardly further into said water-producing formation and to redissolve and reprecipitate the aforementioned precipitated asphaltic material thereby plugging a substantial portion of the thus-treated water-producing formation outward from said well bore and substantially reducing the water permeability thereof, and subsequently resuming production of oil via said well bore from said oil-producing formation.

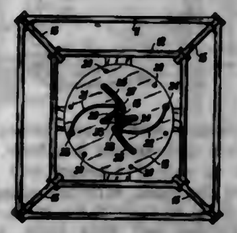
3,093,193
FIRE EXTINGUISHER
Spencer Craig Schantz, 116 Lakeside Drive, Glassboro, N.J.
Filed Oct. 16, 1961, Ser. No. 145,266
4 Claims. (Cl. 169—1)



1. A fire extinguisher of the smother type adapted to extinguish glowing embers over a bed of soft material, as of ashes in a conventional barbecue stand, comprising a closed shell having a broad top portion, and a thin annular skirt extending down from said top portion and having a thin bottom edge adapted to enter into the bed of soft material to form a seal, and a thick layer of heat resistant insulating material disposed within said shell adjacent said top portion and spaced away from said bottom edge by a distance to allow the bottom edge to enter the bed of soft material and allow ample space below the insulating material for the embers.

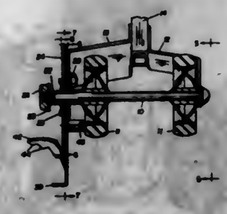
3,093,194
AEROMOTOR
Fausto Rusconi, 20 Via I° Maggio, Como, Italy
Filed May 4, 1960, Ser. No. 26,773
Claims priority, application Italy May 5, 1959
14 Claims. (Cl. 170—33)

6. In an apparatus for deriving energy from a moving fluid, in combination, resiliently supported frame means; a rotary driven shaft supported in substantially vertical position by said frame means and adapted to be connected to a device which is to be driven; rotary support means coaxial with and freely turnable with respect to said shaft, said rotary support means being positioned in said frame means; vane means comprising two substantially vertical vanes carried by said rotary support means for turning movement therewith about the common axis of said shaft and support means and connected to said support means for movement with respect thereto toward and away from a rest position where said vane means receives a relatively large proportion of the energy of a moving fluid, said vane means being urged by the fluid



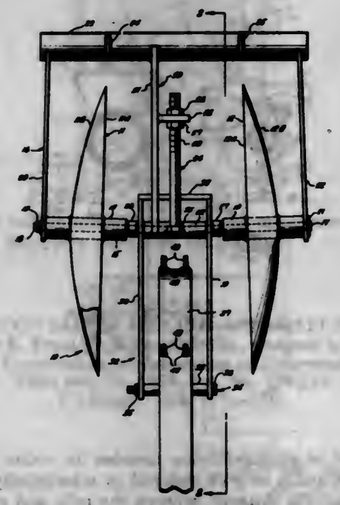
away from said rest position and receiving a lesser proportion of the force of the moving fluid as its distance from said rest position increases; and yieldable transmission means operatively connected to said vane means and shaft for yieldably resisting movement of said vane means so that said transmission means acts as a governor and for transmitting rotary movement of said vane means with said support means about said axis to said shaft for driving the latter, whereby said yieldable transmission means also absorbs shocks and provides a smooth power transmission between said rotary support means and vane means, on the one hand, and said driven shaft, on the other hand.

3,093,195
GARDEN EDGING TOOL
William John Roberts, 3600 SE. Crystal Springs Blvd., Portland, Oreg.
Filed Dec. 19, 1960, Ser. No. 76,536
3 Claims. (Cl. 172—16)



3. In an agricultural implement of the push truck type including a transverse axle, ground engaging wheel means fixed to said axle, axle mounting means rotatably journaling said axle, and an edger comprising a fixed clipper plate and a rotating clipper plate, said fixed clipper plate being secured to said mounting means radially with respect to said axle and having forwardly projecting fixed blade means, and said rotating clipper plate being secured to said axle, lying flush against said fixed clipper plate and having notches therein throughout its periphery defining a plurality of rotating blades which sheer past said fixed blade means when said axle rotates; the improvement of a plowshare beneath said rotating clipper plate and comprising an integral, vertically depending extension of said fixed clipper plate, said extension having a sharp forward edge beginning at a point forwardly of said rotating clipper plate and curving downwardly and rearwardly beneath said rotating clipper plate, and a moldboard fixed to said extension beneath said rotating clipper plate and extending outwardly therefrom away from said wheel means, said extension having an inwardly directed depth limiting flange lying rearwardly of said rotating clipper plate and said ground engaging wheel means.

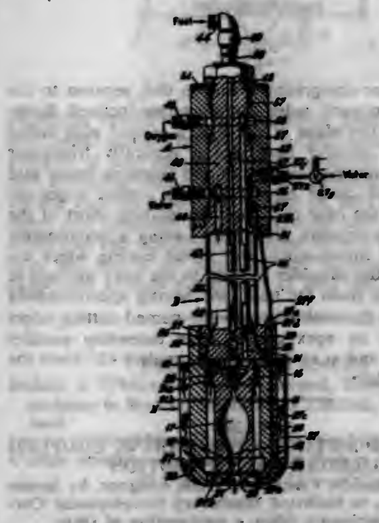
3,093,196
EARTH OPENING DEVICE
Richard K. Nakatani, 14601 Bushard, Santa Ana, Calif.
Filed May 2, 1960, Ser. No. 26,037
4 Claims. (Cl. 172—158)



1. A furrowing and earth marking apparatus for forming furrows in the top of an earth ridge to prepare a bed for plants comprising a horizontal axle extending transversely of the apparatus, a first and a second disk each having a curved face and a substantially flat face, said disks being rotatably mounted on the axle so as to be locally perpendicular thereto and so that the flat faces of the disks open onto each other, a draw bar spaced from and substantially parallel to the axle, a pair of parallel members each affixed to the draw bar at one of their ends and mounting the axle ends at their other ends, axle bowing means connected between the draw bar and the central portion of the axle and selectively operable to bow the axle rearwardly of the ends of the axle to toe-in the disks, and an earth marking wheel having peripheral projections thereon pivotally linked to the axle between the disks, whereby the disks engage and disengage the upper surface of the ridge to provide furrows for bedding plants without disturbing the profile of the prepared ridge, and the projections mark the earth between the furrows to indicate particular bedding locations for the plants.

3,093,197
METHOD AND APPARATUS FOR THERMALLY WORKING MINERALS AND MINERAL-LIKE MATERIALS
Donald C. Freeman, Jr., Durham, N.C., and Joseph A. Sawdye, North Tonawanda, N.Y., assignors to Union Carbide Corporation, a corporation of New York
Filed Dec. 9, 1958, Ser. No. 779,102
8 Claims. (Cl. 175—14)

1. A method of thermally working a mass of difficultly spallable rock which comprises introducing an oxidizing agent and fuel into an enclosed combustion zone in a burner; burning said mixture in such zone to form combustion gases; intermittently injecting a coolant into the combustion zone to cool the combustion gases; discharging the resulting alternately hot and cool combustion gases from said combustion zone first through a flow restriction zone and then through an expansion zone as high velocity jet flame; impinging the alternately hot and cool jet flame against said mass to separate material therefrom and rapidly intermittently quench the initially molten particles thereby substantially preventing the formation of difficultly workable melt zones; removing the separated material from said mass at least partially by said coolant; and advancing said burner along a selected path to separate and remove additional material from said mass along said path.



5. In apparatus for thermally working a mass of difficultly spallable rock, a blowpipe having means for impinging high velocity jet flame against said mass, means for injecting coolant into said jet flame, and control means associated with said last-named means for providing pulses of coolant to said jet flame.

3,093,198
ICE AUGER
Herman J. Webber, Kelliher, Minn.
Filed July 28, 1961, Ser. No. 127,521
8 Claims. (Cl. 175—18)



1. In an ice auger, a circular cutting disk rotatable about a central vertical axis, a first set of depending radially spaced circumferentially aligned cutting teeth on said disk, a second set of depending radially spaced circumferentially aligned cutting teeth on said disk in circumferentially spaced relation to said first set of cutting teeth, a central pilot point on said disk, a third set of depending circumferentially aligned cutting teeth radially spaced between said pilot point and said first and second set of teeth, at least one cutting tooth in said first set is circumferentially positioned between said first and second sets of teeth on the perimeter of said disk, said disk having

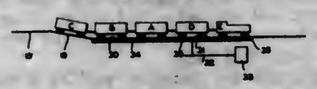
shoulder and slot means adjacent said sets of teeth for allowing the removal of material cut thereby, and means for rotating said disk.

3,093,199
ICE AUGER
Howard J. Premo, 3 Clary St., Massena, N.Y.
Filed Sept. 1, 1961, Ser. No. 135,553
1 Claim. (Cl. 175—18)



An ice auger comprising a hub, a disk secured to the hub having opposed radial cutting edges inclined downwardly below the plane of the disk, a central pilot cutter comprising a circular base and a generally triangular cutter plate, extending therefrom and mounted below said disk, said pilot cutter having inclined cutting edges extending from the base to a shoulder portion short of the apex of the triangular plate, and having approximately 60° clearance therebehind, and initial cutting edges extending from the shoulder portion to the apex inclined at a greater angle from the base, and having approximately 45° clearance therebehind, said last named cutting edges converging in an apex cutting edge extending parallel with the base, and at an angle approximately 45° from the plane of the plate.

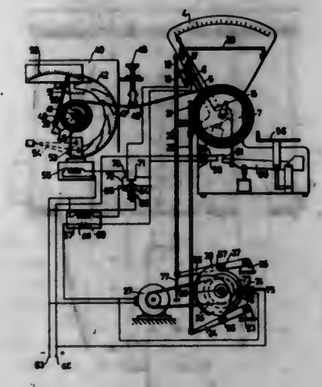
3,093,200
SYSTEM AND METHOD OF WEIGHING COUPLED RAILROAD CARS IN MOTION
Seymour H. Raskin, Cincinnati, Ohio, assignor, by mesne assignments, to Railroad Machinery Development Corporation, Cincinnati, Ohio, a corporation of Ohio
Filed Oct. 22, 1957, Ser. No. 691,747
5 Claims. (Cl. 177—1)



1. In the method of weighing coupled railroad cars while in motion in which the cars are passed over a weigh rail and weighed; the improvement which comprises passing the cars successively over a downwardly-inclined rail section a short distance prior to their passage onto the weigh rail to accelerate the rate of movement of each successive trailing car of a train of cars relative to the rate of movement of its coupled leading car an amount sufficient to free the couplers of forces in draft, thereafter, and before passing the cars onto the weigh rail, passing the cars along a substantially level rail section, applying a mechanical retarding force to the cars as they successively pass along said substantially level rail section to decelerate the rate of movement of each trailing car relative to the rate of movement of said leading car sufficient to cause the couplers to engage in draft before said trailing cars successively reach the weigh rail, and maintaining said cars coupled in draft until after said trailing car has passed over the weigh rail.

3,093,201
COMPUTING MEANS FOR WEIGHING SCALES
Karl Viking Forsberg, Enskede, Stockholm, Sweden, assignor to Antonsson Avery AB, Vastra Frolunda, Sweden, a corporation of Sweden
Filed Jan. 5, 1961, Ser. No. 80,768
Claims priority, application Sweden Jan. 9, 1960
8 Claims. (Cl. 177—25)

1. Price computing means for a weighing scale of the type wherein an indicator arm is supported for pivotal movement in response to the weight of the load on the scale, said price computing means comprising a movable sensing member adapted to sense the position of said indicator arm when a load has been placed on the scale and to rotate accordingly, an indicating mechanism including a rotatably supported indicating member, and an adjustable translating mechanism connecting said sensing member and said indicating member, said translating mechanism including a first rotatable roll releasably connected to said sensing member to rotate in dependence on the movement of said sensing member, a second rotatable roll spaced radially from said first roll and releasably

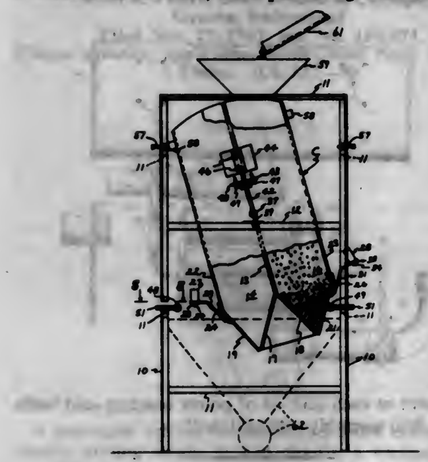


connected to said indicating member to rotate together therewith, and a strip of material of substantially greater length than the distance between the rolls and extending between the rolls and in wound relation thereon, said strip being adapted to transmit the rotation of the first roll to the second roll in such a way that the relation between the angular movements of the rolls will be equal to the inverse ratio of the radii of the material on the rolls, a desired price per unit of weight being adapted for being set by releasing the rolls and winding the strip on the rolls so as to obtain a required relation between the radii of the material on the rolls.

3,093,202
GRAVITY ACTUATED APPARATUS FOR WEIGHING GRANULAR MATERIAL AND THE LIKE
Hansel S. Sanderson, Decatur, Ala., assignor of fifty per cent to C. E. Anthony, Tupelo, Miss.
Filed Dec. 14, 1961, Ser. No. 159,312
3 Claims. (Cl. 177—96)

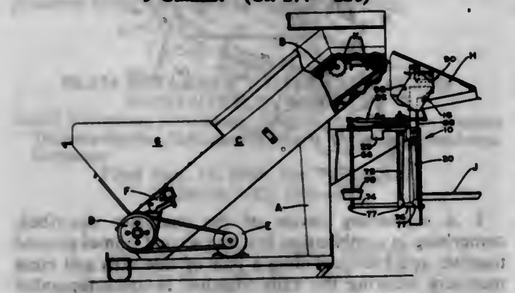
1. In weighing apparatus,
(*a*) a container divided into two side-by-side material receiving compartments,
(*b*) closures for each compartment at the lower ends thereof biased toward closed position with a force sufficient to close the compartments when empty of material,
(*c*) means mounting the container for bodily rocking motion about a horizontal axis whereby the bottom of each of said compartments in turn is located at a higher elevation than the other,
(*d*) means to supply material into the compartments, alternately and into the one which at any given time has its bottom raised above the other,
(*e*) and stationary members for positively holding closed the closure for the compartment being loaded, whereby upon loading the compartments with the

predetermined weight of material gravity causes the container to rock, thus permitting the material in



said loaded compartment to open the closure thereof and discharge therefrom by gravity.

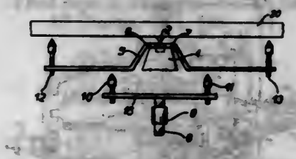
3,093,203
CONTAINER FILLING APPARATUS
Elmer F. Frost, Jr., Lakeland, Fla., assignor to FMC Corporation, a corporation of Delaware
Filed July 24, 1958, Ser. No. 750,732
9 Claims. (Cl. 177—120)



1. An apparatus for discharging measured amounts of material into a receptacle comprising a support, a conveyor mounted in said support having a discharge end, powered means for motivating said conveyor, a balance beam having a counterweight end portion and an opposite loading end portion, means on said support pivotally mounting said beam intermediate its end portions, means mounting said receptacle on the loading end portion of said beam under the discharge end of said conveyor, control means borne by said support and connected to said powered means, and actuating means on said beam engageable with said control means when said beam is in balance for interrupting motivation of said conveyor.

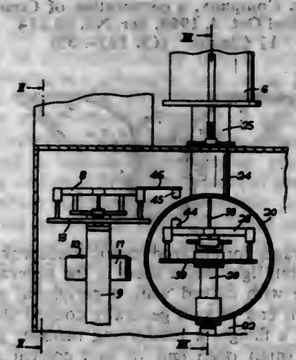
3,093,204
ARRESTMENT ARRANGEMENT FOR PRECISION BALANCE
Zdeněk Kadlec and Miloslav Leboda, Prague, Czechoslovakia, assignors to Meopta-Praha, narodni podnik, Prague, Czechoslovakia
Filed June 27, 1958, Ser. No. 745,146
Claims priority, application Czechoslovakia Sept. 25, 1957
4 Claims. (Cl. 177—157)

1. An arrestment arrangement for a precision balance and the like, comprising a support, a bearing fixedly mounted thereon, a balance beam movable in an upward direction from an operative to an arrested position, and vice versa, knife edge means on said balance beam engaging said bearing, when in said operative position, for pivoting support about an axis extending transversely to the elongation of said beam, an elongated arresting member having a center portion fixedly fastened to said support, two opposite free end portions, and at least a single



elastically flexible portion permitting simultaneous equidirectional arcuate movements to and from an arresting position of said free end portions about at least a single axis extending transversely to the elongation of said arresting member, abutment means on said free end portions, said abutment means supporting said balance beam when said end portions are moved to said arresting position, and means for actuating said arresting member to cause said arcuate movements of said free end portions.

3,093,205
PRECISION BALANCES
Robert J. Whitcroft, West Norwood, London, England, assignor to Stanton Instruments Limited, London, England
Filed May 23, 1961, Ser. No. 111,959
Claims priority, application Great Britain May 23, 1960
10 Claims. (Cl. 177—184)

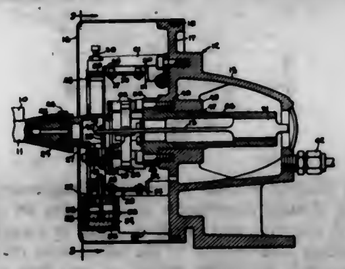


1. A precision balance comprising a normally completely enclosed chamber, an undamped first beam arranged within said chamber and indicating by its deflection a change in weight, a second beam external of said chamber, means for damping the movement of said second beam, and magnetic means having spaced opposed magnets coupling said two beams such that the damping of said second beam is transmitted to control the movement of said first beam.

3,093,206
APPARATUS FOR MEASURING FORCES
Reid A. Mahaffy, Montclair, and John R. Harder, Cedar Grove, N.J., assignors, by mesne assignments, to Bartelt Engineering Company, Inc., Rockford, Ill., a corporation of Delaware
Filed Mar. 24, 1959, Ser. No. 801,500
9 Claims. (Cl. 177—228)

1. A force measuring device comprising a rigid base, a cantilever spring supported at one end on said base, a rigid member disposed adjacent the free end of said spring and

in a plane extending transversely of the longitudinal axis of the spring, a plurality of flat resilient strips angularly spaced around said axis and connecting said member and said base, said strips being parallel to each other to support said member on said base for movement in only one direction transversely of said axis, rigid plates clamped to the central portions of said strips to permit the strips to



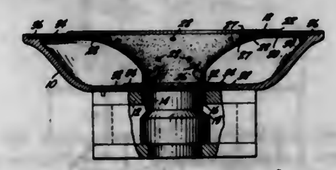
flex only between said plates and said base and between said plates and said member, a wire extending in said one direction and intersecting said axis, said wire being connected at one end to the free end of said spring and at the other end to said member, and means responsive to deflection of said spring and operable to produce a signal corresponding to the magnitude of such deflection.

3,093,207

METALLIC DIAPHRAGM FOR ELECTRODYNAMIC LOUDSPEAKERS

Rudolph T. Bozak, Stamford, Conn., assignor to R. T. Bozak Mfg. Company, a corporation of Connecticut

Filed Oct. 4, 1960, Ser. No. 60,414
11 Claims. (Cl. 181—32)



1. A diaphragm for electrodynamic loudspeakers which comprises a thin lightweight sheet in the general form of an open cone with curved wall, a peripheral portion at the large open end of said generally conical sheet being bent to form a flange, a reinforcing member positioned adjacent the small open end of said conical sheet and bridging the interior wall surfaces thereof, and compliant annuli attached to the exterior wall of said sheet adjacent the periphery and lower end portions thereof.

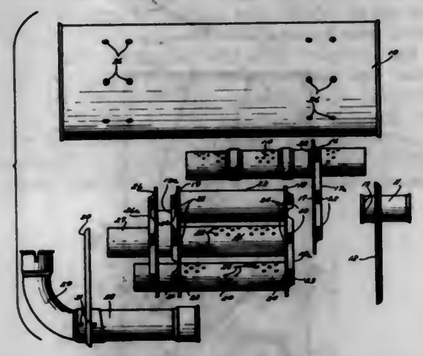
3,093,208

COMPOSITE COATED MUFFLER AND METHOD OF MAKING THE SAME

Eugene E. Howe, Glen Ellyn, Ill., assignor to Eagle-Picher Company, Cincinnati, Ohio, a corporation of Ohio

Filed Nov. 17, 1960, Ser. No. 69,950
9 Claims. (Cl. 181—33)

1. An exhaust muffler comprising, baffle means forming closed cavities having a through-tubular-multiple-path passage extending therethrough with small holes in said passage at intervals, thereby to break sound waves which follow different paths and meet again out of phase before leaving the muffler, a shell forming a housing to enclose said baffle means, each of said baffle means and said shell having a thin layer of glass fused to the surface thereof except for a plurality of spaced points on an external surface of said baffle means and a corresponding plurality of points on the external surface of said shell, and a



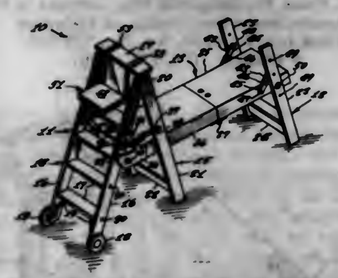
welded joint at each said set of points bonding said baffle means in firm assembly with said shell.

3,093,209

ALL PURPOSE PLATFORM LADDER

Louis Nagy, 46049 Frederick St., Northville, Mich.

Filed May 7, 1962, Ser. No. 192,778
4 Claims. (Cl. 182—118)



1. A supporting device of the character described, comprising in combination first and second frames pivoted together and each including a pair of side rails and cross members securing the rails together in spaced parallel relationship, a folding brace for holding the frames apart in an upright rigid triangular structure, a platform shorter than either frame and narrower than one of the frames, the platform including a pair of offset securing means at one end, means pivoting the offset securing means to the first frame so that the platform can be disposed parallel to said first frame and within the width of one of the frames and within the length of both frames, said platform being adapted to be swung into horizontal position when said structure is upright, a second platform shorter than either frame and pivoted at a line below the upper side of one end thereof to a corresponding line below the upper side of the first platform, the platforms including abutment means above their pivot lines so that both platforms when horizontal form a rigid support for vertical loads, a support wider than said second platform pivoted to the outside of the other end of the second platform and a folding brace forming a rigid triangular structure with said second platform and said support whereby the entire device includes a foldable horizontal support held by two rigid vertical supports secured together by a rigid triangular structure and the device can be folded into a series of contiguous parallel members in which the first platform is within the thickness of one of the frames and the second platform is within the thickness of the support.

3,093,210

SIGHTSEEING CAR

Fred A. Picard, Boîte Postale 8, Champel, Geneva, Switzerland

Filed Nov. 27, 1961, Ser. No. 155,071
Claims priority, application Switzerland Nov. 25, 1960
1 Claim. (Cl. 187—9)



A passenger vehicle for sightseeing tours, comprising a chassis, driving means in said chassis, a vertically movable platform for taking up passengers, means for lifting said platform from a lowered to a raised position, said platform being of U-shape having two lateral branches extending along the sides of the chassis with the platform in lowered position and connected by a rear portion at the rear of the chassis, an inner railing extending along the inner edge of the U-shaped platform, an outer railing extending along the outer edge of the platform, and doors provided in said railing, the lifting means for raising the platform being connected to said inner railing.

3,093,211

BEAM RETARDER WITH BRAKE BEAMS SUPPORTED BY STIRRUPS

Adolf Pollmann, Dinslaken, Germany, assignor to August Thyssen-Hütte Aktiengesellschaft, Duisburg-Hamborn, Germany

Filed Aug. 18, 1960, Ser. No. 50,547
7 Claims. (Cl. 188—62)



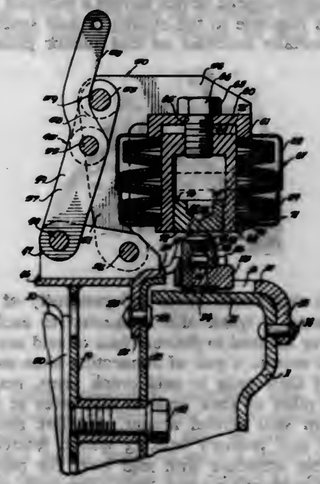
1. A brake beam retarder for engaging the wheel of a vehicle operable on a rail, the retarder comprising: a pair of brake beams each being positioned on opposite sides of the rail, a stirrup rigidly supporting one of said brake beams, means slidably supporting the other of said brake beams on said stirrup for movement transverse of said rail, means supporting said stirrup for movement transverse of said rail, a stop operatively positioned with respect to said rail with said stirrup abutting against said stop whereby said one brake beam is operatively positioned with respect to said rail to allow the free passage of said wheel past said one brake beam, means operatively coupled to said stirrup urging the same against said stop, and elastic means of a strength greater than the means urging the stirrup against the stop, said elastic means being in engagement with the other of the brake beams for supporting the latter in a displaced position relative to the rail such that when a wheel passes between the brake beams and the brake beams are spaced apart a distance less than the width of the wheel, the wheel contacts the other of the brake beams, to cause displacement of the stirrup against the action of the means urging the stirrup against the stop until said one brake beam contacts the wheel whereafter the elastic means will then be deformed to allow displacement of the other brake beam.

3,093,212

MOTOR VEHICLE LOCK DEVICE

Robert E. McAfee and Henry K. Arnold, Fort Wayne, Ind., assignors to International Harvester Company, Chicago, Ill., a corporation of New Jersey

Filed Sept. 6, 1960, Ser. No. 54,288
18 Claims. (Cl. 188—69)



1. In a motor vehicle having a circular member rotatable when the vehicle is in motion, said member having a plurality of circumferentially spaced teeth formed on its outer periphery; a releasable lock device for positively preventing rotation of said member including a pawl having one end pivotally connected to a relatively fixed support adapted to pivot between a normal unlocked position and a locked, tooth-engaging position, means for moving said pawl from said unlocked position to said locked position including a substantially L-shaped bellcrank having an end of one leg thereof pivotally connected to said relatively fixed support for movement between raised and lowered positions, a cylindrical member carried by said bellcrank having one end continually in abutting engagement with said pawl, said cylindrical member being pivotally movable in unison with said bellcrank and capable of relative sliding movement with respect thereto only along its longitudinal axis, said longitudinal axis of said cylindrical member being substantially perpendicular to the rotational axis of said circular member when said bellcrank is in said lowered position; and biasing means yieldably resisting sliding movement of said cylindrical member along its longitudinal axis in one direction.

3,093,213

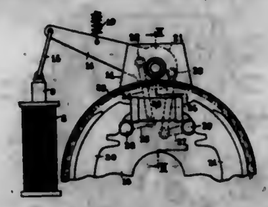
EMERGENCY CONTROL DEVICE FOR HYDRAULIC OR PNEUMATIC BRAKING SYSTEMS

Henri Limoges, 18 Rue des Droits de l'Homme (Allier), and Maurice Paul Limoges, 19 Rue de Paquis, Montlucon (Allier), both of Montlucon, France

Filed May 5, 1960, Ser. No. 27,190
1 Claim. (Cl. 188—106)

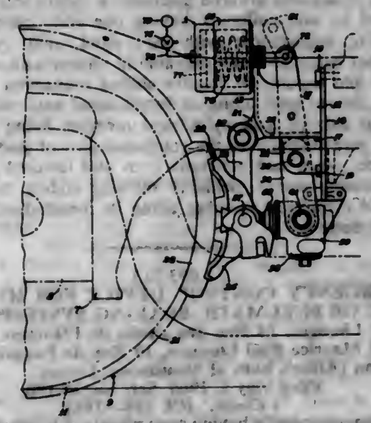
In an automobile having road wheels, a hydraulic braking system for said road wheels including a hydraulic pressure circuit, a fixed anchor plate at each of said wheels, a brake drum fixed to each of said road wheels, a pair of brake shoes pivotally mounted on each of said anchor plates, hydraulic means for moving said brake

shoes into engagement with said brake drum in response to increased pressure in said hydraulic circuit, and foot actuated control means for said hydraulic circuit, the improvement comprising, an emergency, automatic braking system for engaging said brake shoes with said drum in response to a failure in said hydraulic circuit, said emergency braking system comprising a pressure sensitive response member inserted within said hydraulic circuit including a switch closable in response to a drop of pressure in said hydraulic circuit below a predetermined limit value, an electric circuit including said switch, a battery, and an electromangetic device having a movable armature operable in response to the closing of said switch, a pair of cams pivotally mounted on said anchor plate and en-



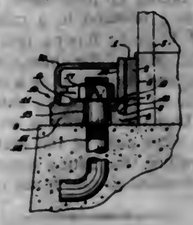
gaged with said brake shoes independently of said hydraulic means, a crank arm connected to each of said cams, a lever secured to the rear face of said anchor plate at a pivotal mount, a pair of connecting arms mounted at one end of their ends to said crank arms, respectively, and at the other of their ends to said lever at points removed from said pivotal mount, and link means independent of said primary braking system interconnecting said movable armature with said lever for moving said lever, said connecting arms, said cams and said brake shoes into contact with said drum when the pressure within said hydraulic circuit falls below a prescribed level and said switch is closed and said electromagnetic device is actuated.

3,093,214
SELF-CONTAINED BRAKE
Walter R. Polanin, Hammond, Ind., assignor to Amsted Industries Incorporated, Chicago, Ill., a corporation of New Jersey
Filed July 31, 1961, Ser. No. 128,125
12 Claims. (Cl. 188—153)



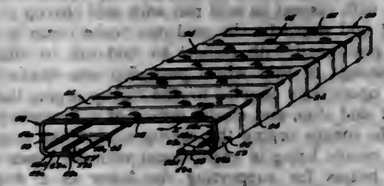
1. In a self-contained tread brake for a railway car having a truck frame supported on wheel and axle assemblies, a support bracket adapted to be mounted on a truck frame, a hanger pivotally connected to said bracket, a brake head-shoe assembly pivotally supported on said hanger to engage a wheel, a brake lever pivotally mounted intermediate its end on said bracket, a slack adjuster device comprising a housing pivotally mounted on the lower end of said brake lever, an adjustment screw pivotally connected to said brake head-shoe assembly, a rotatable ratchet member journaled in said housing and having teeth thereon, a reciprocable pawl mounted on said bracket and projecting into said housing to engage said teeth and rotate said ratchet member responsive to movement of said brake lever, means journaled in said housing operable responsive to rotation of said member to move said adjustment screw to increase the spacing between the brake lever and the brake head-shoe assembly to reduce slack, and a power cylinder unit mounted on said bracket and having a piston rod pivotally connected to the upper end of said brake lever.

3,093,215
ROTATABLE BASE ASSEMBLY
Peter Scribens, Calgary, Alberta, Canada, assignor to Barber Machinery Limited, Calgary, Alberta, Canada
Filed Nov. 22, 1961, Ser. No. 154,216
2 Claims. (Cl. 189—29)



1. A rotatable base assembly comprising a socket member having an annular wall and flange extending radially outwardly from one end of said wall, said flange having an annular peripheral rib thereon in opposed relation to said wall and an annular groove constituted by surfaces of said rib and wall, and a plurality of mounting brackets each comprising an anchor bolt receiving base plate having a base engageable surface, a surface in substantially perpendicular relation to said base engageable surface and engageable with said annular wall, an arcuate rib depending from said annular wall engageable surface and receivable in said groove, and an arcuate recess adjoining said rib and arranged to receive said peripheral rib.

3,093,216
PERFORATED NON-SKID PANEL
John C. Dunham, Aurora, Ill., assignor to Aurora Equipment Company, Aurora, Ill., a corporation of Illinois
Filed May 12, 1959, Ser. No. 812,607
8 Claims. (Cl. 189—34)



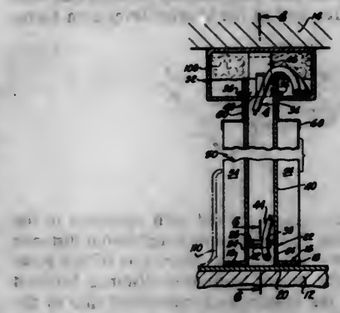
5. An anti-skid device comprising a one-piece sheet metal panel having a main panel portion with its opposite longitudinal margins turned under and providing attachment flanges underlying the main panel portion, the attachment flanges each having slots at its opposite ends for receipt of means for anchoring the panel and with the panel being channeled in cross-section, the panel having a series of transversely extending longitudinally spaced ribs extending above the panel along its top surface, said ribs extending transversely across opposite longitudinal margins as well as across the attachment flanges for reinforcing the attachment flanges, and frusto-conical bumps carried by the panel between the ribs with the frusto-conical bumps having inclined surfaces intersecting at an edge positioned above the main panel portion, the ribs and the perforated areas being cooperable together to resist slippage.

3,093,217
INSULATING UNIT FOR CURTAIN WALL
Donald J. Doede, Wausau, Wis., assignor to Marmet Corporation, Wausau, Wis., a corporation of Wisconsin
Filed July 13, 1960, Ser. No. 42,627
5 Claims. (Cl. 189—34)

1. A metal curtain wall on a building having an inner metal part forming part of the inside wall of the building, an outer metal part spaced from said inner part and forming part of the outer wall of the building, a window positioned between the walls in fixed relation relative thereto, an insulated panel spaced from said window and forming part of said outer wall, said inner and outer parts each having an element receiving area formed therein in facing relation to each other, a rigid plastic insulating element longitudinally positioned with one end within said inner element receiving area and the other end positioned within said outer element receiving area, all parts of the outside surface of said insulating element being spaced a predetermined distance from the edge surfaces of said element receiving areas so that an insulating space is formed therebetween, fastening means located in said space for attaching said insulating element to said surfaces of said receiving areas, the cross-sectional center line of said window passing through the inner element receiving area and the cross-sectional center line of said insulated panel passing through said outer element receiving area, said insulating element being positioned between and spaced from the adjacent ends of said window and insulating panel.

3,093,218
INTERNAL BUILDING PARTITION STRUCTURES
Donald H. Peterson, 14861 Copper St., San Fernando, Calif.
Filed Aug. 1, 1960, Ser. No. 46,436
2 Claims. (Cl. 189—34)

1. In a building having a floor and a ceiling, an internal building partition structure which includes: a metal floor track located upon said floor, said floor track including a hollow flange extending upwardly therefrom away from said floor along the entire length of said track, said flange having parallel side walls and top wall positioned at the uppermost extremities of said sidewalls of said floor track, and having a plurality of openings formed in said top wall so as to lead into the interior of said hollow flange; a hollow metal ceiling track, having a bottom slot formed therein, mounted on said ceiling so as to be located parallel to said bottom track directly above said flange; a plurality of hollow metal stud members, each of said members extending vertically into said slot and having a lower end engaging and fitting closely against said flange so as to be in communication with the interior of said flange through said opening in said top wall of said flange and with the interior of said ceiling track; means for connecting each of said stud members to said top wall of said flange; and a plurality of partition panels, each of said partition panels being located on said floor track



so as to extend upwardly therefrom and including a groove receiving said floor track and a continuous extension extending through said slot, in said ceiling track, each of said panels being of such a length so as to be capable of being assembled with respect to said floor and ceiling tracks by the extension thereon being inserted into locking side edges, other of said panels including side edges engaging and enclosing said stud members so as to be secured by said stud members against movement; clip means grounding at least some of said stud members to said ceiling track; and electrical conduit means extending within the interior of said ceiling track and into the interiors of said stud members grounded by said clip means.

3,093,219
PLURAL-SECTION AIRFOILS
Maurice L. Ramme, Seattle, Wash., assignor to Monte-Copter, Inc., Seattle, Wash., a corporation of Washington
Filed Apr. 6, 1961, Ser. No. 101,156
12 Claims. (Cl. 189—34)



12. A sectional airfoil comprising two airfoil sections having joint elements extending spanwise of the airfoil, interengageable to connect said sections by relative swinging of said sections to increase the downwardly facing obtuse angle formed between the adjacent lower surfaces of said sections, and including two resiliently self-interlocking elements one carried by one of said airfoil sections and the other carried by the other of said airfoil sections.

3,093,220
ELASTIC FASTENER
Henry J. Modrey, Eagle Drive, Stamford, Conn.
Filed Feb. 11, 1959, Ser. No. 792,497
13 Claims. (Cl. 189—36)

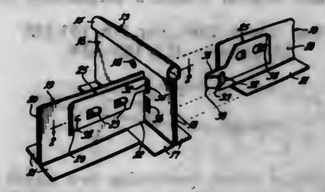
1. A fastener for releasably fastening together several plate members, each having an opening therethrough, said

fastener comprising an axially deformable elastic sleeve, a stud fitting the bore of said sleeve and having a length in excess of the length of the sleeve in its expanded state, one end of the stud being enlarged to prevent the passage of the stud through the sleeve bore and the other end of the stud terminating in an open hook, the open side of said hook facing downwardly and forming a bearing, and a two-armed lever insertable in said open hook pivotal about a pivot axis transverse of the axis of said stud, said lever including a pivot pin extending transverse of the longitudinal axis of said lever and defining transverse distances of unequal length between the pivot axis and the longitudinal sides of the lever and also defining two lever arms of unequal length, the longitudinal sides of said lever arms being plane and substantially parallel one with the other and the free end of the shorter lever arm form-



ing a cam surface concavely curved with reference to the pivot axis of the lever, the maximum longitudinal distance between said cam surface and the pivot axis of the lever being greater than the longer transverse distance between said pivot axis and the respective longitudinal side of the lever, said lever being pivotal through an angle of about 180 degrees between a first limit position in which the longitudinal lever side closer to the pivot axis is parallel and adjacent to the plate members to be fastened together and a second limit position in which the longitudinal lever side more distant from the pivot axis is parallel and adjacent to the plate members, said first limit position constituting the release position of the fastener and said second limit position the locking position, whereby the lever passes through a dead center position upon being pivoted from one limit position to the other.

3,093,221
CEILING CONSTRUCTION MEANS
Burl O. Purdy, Bensenville, Ill., assignor to W. J. Haertel & Co., Melrose Park, Ill., a corporation of Illinois
Filed Nov. 18, 1959, Ser. No. 853,733
12 Claims. (Cl. 189—36)



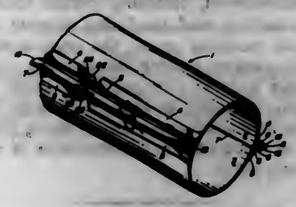
1. In ceiling construction means, a flanged longitudinal support member having a web normal to the flange, a flanged transverse support member having a web normal to its flange, the web of the transverse member projecting beyond its flange whereby the flange of the transverse support member may be disposed co-planar with the flange of the longitudinal member, with the web of the transverse member resting on the flange of the longitudinal member, a hole in the web of the longitudinal member adjacent the web of the transverse member, and an interlocking clip readily detachably carried by the transverse member having a spring nose entering the hole in the longitudinal member and providing a detachable interlocking connection therewith.

3,093,222
CAPTIVATED FASTENING MEANS
Glen R. Christoffersen, Cupertino, and Carmine G. Montanaro, Jr., San Jose, Calif., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Sept. 22, 1960, Ser. No. 57,857
8 Claims. (Cl. 189—36)



1. A device for coupling together a first member and a second member having aligned apertures which comprises a bolt element, a nut element threadable upon said bolt element, said nut element having a counterbore, first means on said second member confining said nut element to limited movement along its axis and confining it against material rotation about said axis, said first means including guide means cooperating with said nut element to maintain said nut element in aligned position throughout said limited movement of said nut element, second means acting between said nut element and said first means thereby biasing said nut element yieldingly toward said second member to one limit of its movement, confining means on said first member operable to secure said bolt element to said first member and to limit its relative axial movement while permitting rotational movement thereof whereby when said first and second members are in face-to-face relationship with said apertures aligned said bolt element will pass through said aligned apertures into said counterbore and cause axial displacement of said nut element away from said members against the bias of said second means and subsequent rotation of said bolt element will thread the latter through said nut element and draw said nut element on said bolt element in a direction to couple said first and second members together.

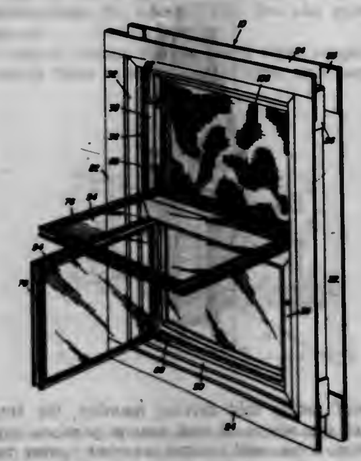
3,093,223
FLANGE SEAL
Charles F. Federico, Dorchester, Mass., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed July 6, 1961, Ser. No. 122,363
3 Claims. (Cl. 189—36)



1. A connector for securing two sections together in assembled relation, the improvement comprising an upper and lower section, flange means for fastening said sections together, said flange means formed by a pair of flanges that are integral with each of said sections, said flanges being located at opposite ends of each of said sections, said flanges each having a mating face and an outer face, said outer face having a straight portion and a tapered portion, sealing means carried by said flange means, wedging means spaced from said flange means and attached to each of said sections, clamping means received by said flange means and said wedging

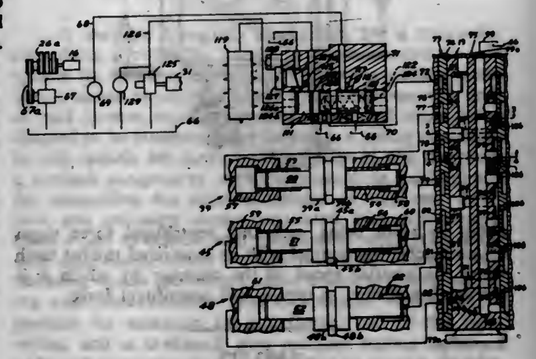
means, said clamping means comprising a rigid belt of substantially U-shaped configuration, said rigid belt being received in said spaces, said rigid belt having ears for receiving bolts therethrough, said bolts threadably received by a plurality of spaced bosses, said bosses being located intermediate said wedge means and fixedly secured to said sections, said rigid belt having tapered portions that conform to and mate with said tapered portion on said outer face of said flanges and said tapered portion of said wedge means thus exerting a double wedging action on said flanges when said bolts are tightened urging said rigid belt inwardly causing said flanges to closely inter-engage and form a seal therebetween, additional means for securing said clamping means to said sections whereby said sections are securely fastened together and said sealing means seals said flange means.

3,093,224
METAL WINDOW CONSTRUCTION
Benjamin S. Wilson, 19 Cook St., Akron, Ohio
Filed Feb. 18, 1960, Ser. No. 9,459
5 Claims. (Cl. 189—66)



1. In in window construction, a window frame having a pair of vertical trackways provided therein, an upper and lower sash slidably disposed in said trackways for vertical sliding movement past each other, each of said sashes having an enlarged insert forming the major portion of the sash and a peripheral frame for the insert, said insert including an enlarged panel of transparent material provided with a peripheral frame member, means hingedly and releasably securing the peripheral frame member of the transparent panel to one edge of the peripheral frame of the sash, lock means on the upper portion of the insert frame member for securing the edge of the peripheral frame member of the panel to the edge of the frame of the sash thereby retaining the insert in closed relation to the sash frame and permitting opening and removal thereof from the interior of the window, said window frame, sash frame and insert frame all being constructed of metal, and lock means interconnecting the overlapping edges of the sash frames for retaining them in closed position in relation to the window frame, each of said trackways including a vertical cylindrical bore rigid with the window frame with the outer surface of the bore being provided with a slot communicating the surface of the trackway which faces inwardly with the bore, each slidable sash having a longitudinal cylindrical projection thereon slidable in the bore, said projection being hollow and including means for expanding the projection for varying the frictional resistance to sliding movement of the projections within the trackways for retaining the sashes in adjusted position.

3,093,225
MACHINE TOOL PRESELECT SPEED CHANGE MECHANISM
Herbert R. Uhtenwoldt, Wilmington, Ohio, assignor to The Cincinnati Milling Machine Company, Cincinnati, Ohio, a corporation of Ohio
Filed July 5, 1960, Ser. No. 40,892
7 Claims. (Cl. 192—4)

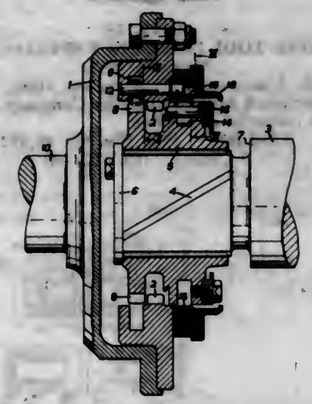


1. In a machine tool having a transmission with a driven shaft and a plurality of shiftable speed change gears to drive a spindle at selected operating speeds, the transmission having shifters operable when actuated to shift the transmission gears and change the speed of the spindle, the improvement comprising a pump operatively connected to said shaft to produce an output varying as the speed of said shaft varies, means operable in response to the output from said pump to render the shifters inoperable when said shaft is driven above a predetermined speed and to render said shifters operable when said shaft slows down to a speed below said predetermined speed, and means to condition the shifters while inoperable for subsequent actuation when operable.

3,093,226
ROTARY SYNCHRONOUS CLUTCHES
Arthur C. Basebe, Twickenham, and Herbert A. Clements, Weybridge, England, assignors to S.S.S. Gears Limited, Middlesex, England, a British company
Filed Oct. 31, 1960, Ser. No. 65,977
Claims priority, application Great Britain Nov. 7, 1959
7 Claims. (Cl. 192—67)

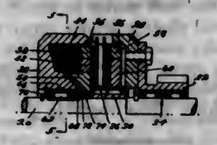
1. A synchonous self-shifting clutch comprising a first rotary clutch member provided with jaw clutch teeth, a secondary rotary clutch member, and an intermediate member provided with jaw clutch teeth and constrained for helical movement relative to the second clutch member to bring its clutch teeth into and out of engagement with the clutch teeth of said first clutch member, and means for initiating clutch engagement when said first clutch member tends to over-run said second clutch member in one direction of relative rotation, the said means comprising pawl and ratchet mechanism with the pawl carried by one of said first and intermediate members and adapted to ratchet over teeth on the other of said first and intermediate members, means urging said pawl into engagement with the teeth over which it ratchets and said pawl having a weight distribution about its pivot such that above a predetermined angular speed of the member by which it is carried centrifugal force renders it incapable of ratchetting, the said means for initiating clutch engagement also comprising at least one pawl car-

ried by said other of said first and intermediate members and ratchet teeth on the said one of said members, the weight distribution of said second mentioned pawl



about its pivot being such that centrifugal force urges it into ratchetting contact with its associated ratchet teeth when the angular speed of the member by which it is carried is sufficient to create said centrifugal force.

3,093,227
STATIONARY FIELD CLUTCH WITH SLANTED AIR GAP
Hermann Straub, Friedrichshafen, and Anselm Blum, Kehlen, Germany, assignors to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed May 6, 1959, Ser. No. 811,428
4 Claims. (Cl. 192—84)



1. In an electromagnetic clutch; a magnetic structure comprised of a movable portion and a stationary portion; a rotatable shaft means extending through said magnetic structure; said movable magnetic portion being positioned adjacent said stationary portion and being attracted to said stationary portion when magnetic flux flows from said stationary portion to said movable portion; a first bearing means for supporting said stationary magnetic portion with respect to said rotatable shaft and a second bearing means for maintaining said movable magnetic portion at a predetermined axial spacing with respect to said stationary magnetic portion; said first bearing means including a needle bearing contained within a bushing forming an axially directed outer race; said bushing having a radial extension; said radial extension forming an abutment for receiving said second bearing means.

3,093,228
AUTOMOTIVE PLATE SPRING FRICTION CLUTCH
Richard Binder, Schweinfurt (Main), Germany, assignor to Fichtel & Sachs A.G., Schweinfurt (Main), Germany, a corporation of Germany
Filed May 20, 1960, Ser. No. 30,487
Claims priority, application Germany May 26, 1959
2 Claims. (Cl. 192—99)

1. A clutch of the class described, comprising: a revoluble driving member, a revoluble driven member coaxial with said driving member, a pressure ring connected for rotation coaxially with said driving member, said pressure ring being axally displaceable with respect to said driving member, said driven member having a peripheral portion interposed between said driving member and said pressure ring, means defining friction surfaces for coupling said driven member both to said driving member and to said pressure ring upon the application of axially directed pressure to said pressure ring urging said pressure ring toward said driving member, a circular radially slotted plate spring member coaxial with said driving member and having tongue portions which extend inwardly from the peripheral portion thereof, said peripheral portion engaging said pressure ring, fulcrum means carried by said driving member and engaging said plate spring member substantially at the roots of said tongue portions, an axially displaceable circular control member coaxial with said driving member, said control member being centered and supported by the free ends of certain regularly arranged ones of said tongue portions, said control member having a circular fulcrum ridge formed on the

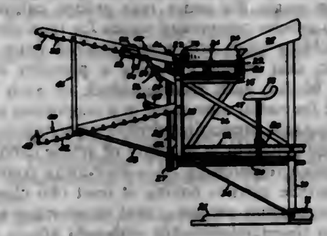


side thereof facing said driving member, the free end portions of the others of said tongue portions engaging said fulcrum ridge, said control member having radially extending slots formed therein wherein the free end portions of said ones of said tongue portions are received, said peripheral portion of said plate spring member normally applying pressure yieldingly urging said pressure ring toward said driving member for holding said clutch engaged, movement of said control member toward said driving member causing bending of said plate spring member pivotally with respect to said fulcrum means to withdraw said pressure normally applied to said pressure ring, a cylindrical cup carried by said control member centrally thereof, one end of said cup being turned back to form a lip, the other end being secured to said control member, and a helical compression spring surrounding said cup, one end of said compression spring bearing against said lip, the other end of said compression spring bearing against said others of said tongue portions where said fulcrum ridge is engaged thereby, whereby deformation of said compression spring during engagement and disengagement of said clutch is minimized.

3,093,229
BOX HANDLING APPARATUS
Earl L. Scheidenhelm, Mendota, Ill., assignor to Horace D. Hume, Mendota, Ill.
Filed Jan. 23, 1961, Ser. No. 84,177
1 Claim. (Cl. 193—36)

A box handling apparatus for bulk produce, comprising:

a support framework;
a sorting table mounted on said framework;
a first box supporting gravity conveyor mounted on said framework extending perpendicularly from a location adjacent one edge of said table at an acute upward angle with respect to the horizontal;
a second box supporting gravity conveyor mounted on said framework extending perpendicularly from a lower location adjacent said one edge of said table at an acute downward angle with respect to the horizontal, said first and second conveyors being vertically aligned with one another and said first conveyor having an open area directly adjacent said table through which a single box on said first conveyor may be transferred to said second conveyor;
movable stop means mounted on said first conveyor in the path of boxes thereon and adjacent to said open area adapted to selectively prevent movement of boxes to said open area;
movable box support means mounted on said framework directly below said open area adapted to transfer boxes from said first conveyor to said second conveyor, said movable box support means comprising a pair of outwardly extending support arms located intermediate the sides of said first and second conveyors;
and control means comprising a rigid supporting assembly fixed to said arms at their ends nearest the



framework, said assembly extending above said arms and being pivoted about a horizontal transverse axis on said framework adjacent said first conveyor;
a control arm mounted on said assembly adjacent one outer side of said first conveyor, said control arm including a first link fixed to said assembly, a second link pivoted thereto, and a stop on said first link adapted to limit pivotal movement of said second link in one direction of rotation about its pivot;
said movable stop means comprising a transverse shaft rotatably mounted between the sides of said first conveyor adjacent said open area;
radial abutments fixed to said transverse shaft intermediate the conveyor sides and extending from the shaft in a single radial direction;
and lever means fixed to said shaft adjacent said one outer side of said first conveyor, said lever means including a counterweight fixed thereon adapted to urge said radial abutments to an upwardly extending vertical position, said lever means having a portion positioned in the path of said control arm adapted to be abutted by the outer end of said second link to thereby raise said counterweight and pivot said shaft; said second link having a cam surface at the end thereof adapted to abut said lever means to thereby pivot said shaft and adapted to release said lever means after said radial abutments have been moved below the elevation of boxes on said first conveyor.

3,093,230
TYPEWRITER CARRIAGE TRAVERSING MECHANISM
Edward Victor Byers, 16 Barrack Lane, The Park, Nottingham, England
Filed Feb. 5, 1960, Ser. No. 7,013
2 Claims. (Cl. 197—85)



1. A carriage traversing mechanism for a typewriter comprising a rotatable spindle, a drum secured to said spindle for rotation therewith, two flexible tension members attached to said drum and wound thereon with ends of said tension members remote from said drum being adapted to be connected to a carriage, a spring connected to said spindle for turning said spindle in one direction, a toothed escapement wheel connected to said spindle for controlling the rotation thereof in said one direction, and releasing means associated with said escapement wheel to release said escapement wheel and allow said escapement wheel to turn one tooth thereof, said releasing means including a plate, means pivotally mounting said plate adjacent said escapement wheel and in position for actuation by a universal bail of the typewriter, and a U-shaped wire member having upturned ends and connected to said plate for movement thereby, one end of said wire member normally being engaged with a tooth of said escapement wheel to prevent rotation thereof and the other end normally being slightly spaced from said escapement wheel whereby when said plate and said wire member are rocked, said wire member ends alternatingly engage teeth of said escapement wheel with said escapement wheel advancing one tooth for each cycle of rocking of said plate and said wire member.

3,093,231
REVERSING MECHANISM AND RIBBON ATTACHMENT
Walter D. Landgraf, 4808 W. 96th Place, Oak Lawn, Ill.
Filed Apr. 23, 1962, Ser. No. 189,526
22 Claims. (Cl. 197—175)



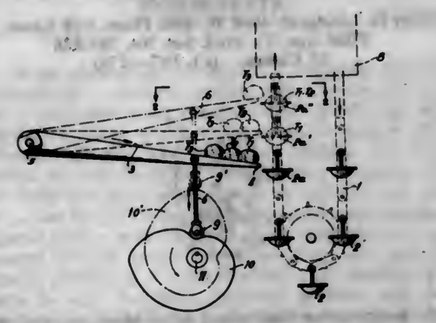
1. A typewriter ribbon and spool assembly, said spool including a hub having an exterior wall, said wall having a gap substantially co-extensive with the length of said hub and parallel to the axis of said hub within which extends a ribbon attaching anchor rod substantially co-extensive with the length of said hub and parallel with the axis of said hub, said rod having one free end and one end anchored to said hub, and a ribbon wound on said spool and including a slit adjacent to and spaced from the end of said ribbon, said slit running over the free end of said anchor rod, whereby a part of the width of said ribbon adjacent said slit lies over said anchor rod exteriorly of said wall and the remaining part of the width of said ribbon lies under said anchor rod interiorly of said wall.

3,093,232
SYSTEM FOR HANDLING FOAMED PLASTIC
Andrew T. Kornylak, Jersey City, N.J.
(400 Heaton St., Hamilton, Ohio)
Filed Oct. 9, 1961, Ser. No. 143,891
17 Claims. (Cl. 198—1)



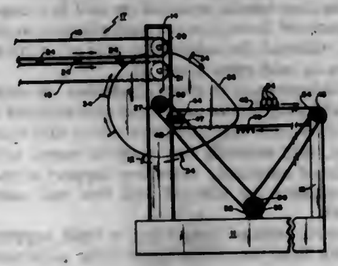
1. In a system for handling foamed plastic, a first endless belt type conveyor, a truss frame for supporting said first conveyor and means for adjustably supporting said truss frame, means for driving said first conveyor, a second endless belt conveyor adapted to receive material from said first conveyor, means for driving said conveyor, a pair of side fences supported on said truss frame and extending to a point in close proximity to the conveyor surface, at least one of said side fences being transversely adjustable relative to the first conveyor, means for supplying web material as a liner for said first conveyor and said side fences, means for holding said web material to the first conveyor, means for supplying foaming plastic in fluid form to the first conveyor, means adjacent the discharge end of the second conveyor to receive the web material therefrom.

3,093,233
DEVICE FOR FEEDING UNITS OF MATERIAL TO CONTINUOUSLY MOVING CARRIERS
Willy Klenk, Korntal, near Stuttgart, Germany, assignor, by mesne assignments, to Werner & Pfleiderer G.m.b.H., Zug, Switzerland, a firm of Switzerland
Filed Aug. 8, 1961, Ser. No. 130,111
Claims priority, application Germany Aug. 11, 1960
7 Claims. (Cl. 198—20)



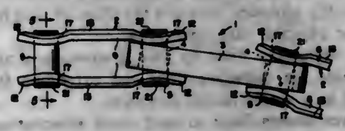
1. A device for successively feeding, one by one, substantially equally sized units of material to continuously moving carriers, said device comprising a continuously movable conveyor for transporting thereon said units of material spaced apart in lengthwise row arrangement, a plurality of carriers continuously movable, uniformly spaced apart, along a rectilinear path, each carrier being shaped to accommodate one of said units, said conveyor having a discharge end terminating adjacent the path of said carriers for transferring said units one by one from the conveyor to successive carriers, support means supporting said conveyor pivotally at the discharge end thereof through a distance about equal to the distance between each two adjacent carriers and substantially parallel to the path of travel thereof, and actuating means coacting with said conveyor for pivoting the discharge end thereof through said distance from an initial position to an end position at a rate of movement substantially equal to the rate of travel of the carriers along said path.

3,093,234
ARTICLE REARRANGING APPARATUS
Edmund G. Jansson, Jr., Colerain Township, Hamilton County, Ohio, assignor to The Procter & Gamble Company, Cincinnati, Ohio, a corporation of Ohio
Filed Sept. 27, 1961, Ser. No. 141,124
3 Claims. (Cl. 198—34)



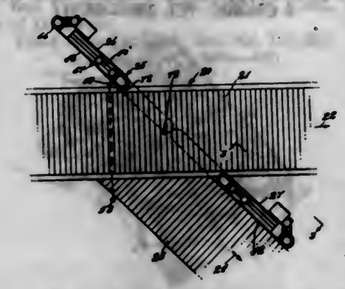
1. Apparatus for arranging equally spaced articles received in single file order into groups composed of at least two articles comprising means for receiving and positively holding each article as received from an infeed conveyor, said means including a plurality of pairs of receiver blocks, each receiver block of each pair being mounted for radial movement in a supporting arm, means for moving said supporting arms in timed relationship with said infeed conveyor, a plurality of article carriers mounted in spaced relationship on a take-away conveyor, each of said article carriers having at least two closely spaced article supporting recesses, said supporting arms being moved in timed relationship with said article carriers so that successive pairs of arms deliver articles in sequence to each recess of each article carrier whereby a plurality of groups of articles are formed.

3,093,235
CONVEYOR CHAIN
Philip J. Imse, Wauwatosa, Wis., assignor to Chain Belt Company, Milwaukee, Wis., a corporation of Wisconsin
Filed May 16, 1962, Ser. No. 195,145
4 Claims. (Cl. 198—129)



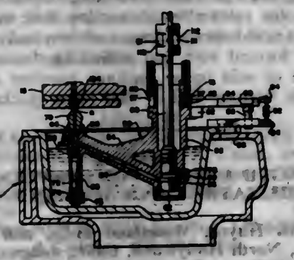
1. In a chain comprising alternate pin links and block links, parallel pins and spaced bars of stamped construction with a section at each end of each bar bowed inwardly respecting the center line of the chain, the center sections of the bars of the pin links being parallel and defining the width of the chain, each end of each pin link having a pin with ends extending through corresponding holes at the midpoints of the bowed sections of the bars, the said midpoints being spaced to hold the block link therebetween with only such clearance required to allow the block link to rock on either bowed section for the lateral flexing of the chain.

3,093,236
DEFLECTOR MECHANISM
John J. McLaughlin, Norwood, Pa., assignor to The Wilkie Company, Ellwood City, Pa., a corporation of Pennsylvania
Filed Dec. 21, 1959, Ser. No. 861,035
9 Claims. (Cl. 198—185)



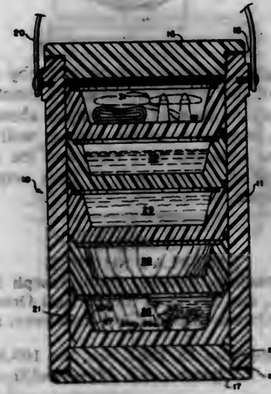
8. In a deflector mechanism for use with a conveyor, a pair of deflector halves on opposite sides of the conveyor and directed diagonally across the conveyor in prolongation of one another, each of the deflector halves having a forward position in which it extends partially across the conveyor and a retracted position in which it is clear of the conveyor, the two deflector halves in their extended positions cooperating to obstruct a path across the conveyor and in their retracted positions cooperating to extend clear of the conveyor, and means for moving the deflector halves between their retracted and extended positions.

3,093,237
PUMP MECHANISM AND CONTROL THEREFOR
Artur Roth, Philadelphia, Pa., assignor to Lanston Industries, Incorporated, Philadelphia, Pa., a corporation of Virginia
Filed Mar. 29, 1961, Ser. No. 99,217
20 Claims. (Cl. 199—52)



1. A pump mechanism comprising a pump body having a pump chamber and a discharge outlet communicating with said pump chamber; a pump plunger mounted for movement with respect to said pump body and said pump chamber to effect movement of liquid from said chamber outwardly through said discharge outlet; means mounting said pump body for movement between an operative position wherein said discharge outlet is disposed in substantially fluid-tight communication with a receptacle for receiving the liquid moved outwardly through said discharge opening and an inoperative position wherein said discharge outlet is disposed in spaced relation with respect to the receptacle; motion transmitting means operatively connected with said pump body and said pump plunger for effecting movement of said pump body from said inoperative position to said operative position, an initial movement of said pump plunger in a direction to move liquid outwardly of said discharge opening prior to the movement of said pump body into said operative position, and a subsequent movement of said pump plunger in a direction to move liquid outwardly of said discharge opening after the movement of said pump body into said operative position; and means for moving said motion transmitting means.

3,093,238
INSULATED CONTAINER FOR CARRYING OR STORING HEATED FOOD AND THE LIKE
Edward G. King III, 1004 Wedgewood Road, Baltimore 29, Md.
Filed Feb. 26, 1962, Ser. No. 175,663
3 Claims. (Cl. 206—4)



1. An insulated container comprising:
(*a*) a cylindrical jacket having a top cover and a bottom cover, at least one of which is detachably secured to the jacket;
(*b*) a plurality of open receptacles stacked one on top of another within said jacket and supported on said bottom cover and adapted to be slidably removed from said jacket as a unit;
(*c*) each of said receptacles having a closed bottom and an annular wall portion extending upwardly therefrom; and
(*d*) means interconnecting said receptacles together, whereby the bottom of one receptacle forms a cover for the receptacle directly beneath it;
(*e*) said means comprising an annular ledge formed in the wall of each receptacle to support the bottom of the receptacle which is directly above it;
(*f*) an annular protrusion formed in the wall of each receptacle above said ledge, the protrusion being directed radially inwardly of its respective receptacle; and
(*g*) said bottom of each receptacle having an external annular groove formed therein to cooperate with the annular protrusion of the receptacle which is directly beneath it.

3,093,239
PACKAGE
Robert K. Hart, P.O. Box 293, Short Hills, N.J.
Filed July 15, 1960, Ser. No. 43,222
2 Claims. (Cl. 206—42)

1. A package for holding pellets and the like in air tight and moisture proof condition and adapted to be fitted about the neck of a container, said package comprising a pan portion having a central opening defined by an inner side wall, a second side wall concentrically positioned relative to said first wall, a bottom wall joined

to said first and second walls and forming therewith a circular depository for said pellets, a lid sealed to said pan portion, said second side wall having an outward protrusion and said lid having a tab overlying and sealed to said protrusion, said protrusion being of greater lateral extent than the width of one pellet within said pan but less than twice the width of said pellet, said tab having an indicator marking thereon whereby said tab and the portion of the protrusion near the juncture with the side walls may be severed and hinged about the attachment of the protrusion to the bottom wall so that one pellet may be removed at a time and the tab and protrusion thereafter swung back to their original position before severance.

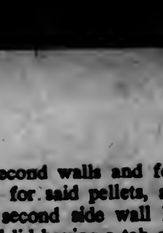


3,093,240

DISPLAY SHIPPER

Gary M. Donahue, Toledo, Ohio, Joseph Scher, Rockville, N.Y., and David B. Train, East Orange, N.J., assignors to Owens-Illinois Glass Company, a corporation of Ohio

Filed May 15, 1961, Ser. No. 109,946
3 Claims. (Cl. 206—45.19)



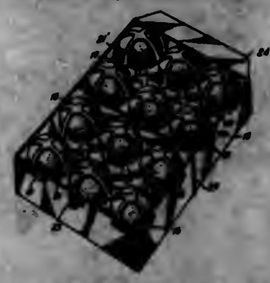
1. A display shipper for shipping and displaying an article, comprising, a display base having a base portion and an article retaining portion, said base portion comprising a bottom panel, four upstanding outer side walls foldably connected to said bottom panel, two pairs of end flaps foldably connected to the end edges of an opposed pair of said sidewalls, said end flaps folded normal to their respective outer side walls into parallel relation with their respective adjacent outer side walls, inner side walls foldably connected to the outer edges of said outer side walls, said inner side walls folded downwardly into parallel relation with their respective outer side walls, means for locking said inner side walls in said downward position, said article retaining portion comprising a load bearing panel, upstanding walls foldably connected to said load bearing panel and arranged to confine the lower end of said article, trapezoidal flaps foldably attached to the outer free edges of said upstanding walls, said trapezoidal flaps folded to slope downwardly and outwardly from said upstanding walls, the lower free edges of said trapezoidal flaps adapted to fit snugly within the perimeter formed by said inner side walls, a sleeve having one closed end and adapted to telescope over said base portion and enclose said article, and interior packing adapted to confine the upper end of said article within said sleeve.

3,093,241

PACKAGE, IN PARTICULAR FOR HOLLOW BODIES SENSITIVE TO PRESSURE SUCH AS CHRISTMAS TREE BALLS

Max Schmidt, Brunhamerstrasse 17, Ansbach, Bavaria, Germany

Filed Jan. 29, 1960, Ser. No. 5,553
Claims priority, application Germany June 27, 1959
2 Claims. (Cl. 206—45.31)



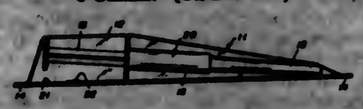
1. A display package for packaging pressure-sensitive bodies such as Christmas tree balls or the like comprising, in combination, an upper package member formed by an integral plastic frame comprising a plurality of adjacent nesting elements each formed by an endless rib located substantially in a plane and a pair of cross ribs extending transverse to each other from said endless rib upwardly from said plane and being joined to each other over the center portion of the space defined by said endless rib, the inner surfaces of said cross ribs being arranged along a concave surface so that an upper portion of each body may be nested in the respective nesting element while being visible from the outside, and a plurality of connecting ribs located in said plane and connecting adjacent nesting elements to each other; a lower box-shaped package member for housing the lower portions of the bodies, said lower package member having a bottom wall and side walls, said side walls being formed at upper portions thereof distant from some bottom wall with a plurality of spaced slots substantially parallel to said bottom wall, said frame of said upper package member having edge portions projecting respectively through said slots for releasably connecting said upper package member to said lower package member; and spacer means integrally formed with and projecting downwardly from the frame of said upper package member and abutting against the bottom wall of said lower package member.

3,093,242

PACKAGED ARTICLE FOR ETHYLENE OXIDE STERILIZATION AND SUBSEQUENT STORAGE

Willard M. Hayck, Woodland Hills, and Vincent A. Remito, North Hollywood, Calif., assignors to Aseptic Thermo Indicator Company, North Hollywood, Calif., a corporation of California

Filed July 10, 1961, Ser. No. 122,866
6 Claims. (Cl. 206—47)



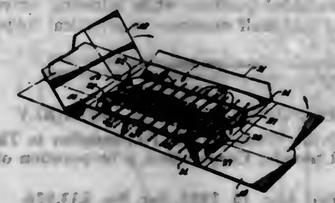
4. A package completely enclosing an article before, during, and after sterilization by exposure to ethylene oxide, comprising a sealed container made from a sheet material which is pervious to ethylene oxide but impervious to airborne bacteria, an ethylene oxide sterilization indicator which consists of dried ink insignia consisting essentially of a mixture of magnesium chloride with water of crystallization, an acid, an acid-alkali indicator dye, and a binder, said package also containing a solid moisture adsorbent containing adsorbed water while retaining its apparent dry condition whereby water vapor is provided within said sealed package.

3,093,243

PACKAGE FOR SMALL ELECTRICAL ARTICLES

Noel A. Petter, Glendale, Calif., assignor to Standard Paper Box Corporation, Los Angeles, Calif., a corporation of Delaware

Filed June 22, 1961, Ser. No. 118,886
6 Claims. (Cl. 206—65)



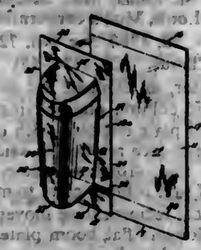
1. In a package of electrical articles each comprising a cylindrical body and a terminal lead extending axially from each end thereof, the combination of: a back panel, a pair of parallel score lines spaced from one another on said back panel and extending the full length of the panel, said score lines being spaced apart by a distance greater than the length of the cylindrical bodies, a pair of article-confining panels, each formed with an intermediate longitudinal score line, attached to said back panel outside the parallel score lines of the back panel and outside the score lines of the article-confining panels, the score lines of said article-confining panels being parallel to and in the vicinity of the corresponding score lines on said back panel, in such manner that the portions of the article-confining panels inwardly of the score lines in the latter are unattached to said back panel, and normally project inwardly toward one another, there being pairs of opposed and aligned notches formed in the edges of said unattached portions of said article-confining panels, a plurality of the said electrical articles adjacent said back panel, with the terminal leads thereof extended through the members of a pair of said aligned notches, and the cylindrical bodies thereof under said unattached portions of said article-confining panels, which are upwardly and angularly bent about the score lines thereof to an extent to accommodate said bodies.

3,093,244

STAND-UP BLISTER PACKAGES

Carl W. Middleton, Jr., Greenwich, Conn., and Earl F. Middleton, Pleasantville, N.Y., assignors to The Warner Brothers Company, Bridgeport, Conn., a corporation of Connecticut

Filed Nov. 2, 1961, Ser. No. 149,666
4 Claims. (Cl. 206—78)



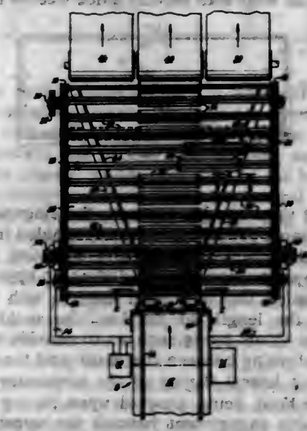
1. In a blister package including a planar base element, and a blister element having a planar portion laminated to said base element in hermetically sealed relation thereto, the improvement comprising: said blister element including a blister portion having a lower surface disposed in a plane perpendicular to that of said base element, there being an elongated beaded portion extending across said planar portion of said blister element in the area of said lower surface, said base element having a predisposition to bend in the elongated area disposed immediately below said bead.

3,093,245

SEGREGATION MECHANISM

Leslie E. Worcester and Robert L. Underwood, Sunnyvale, Calif., assignors, by mesne assignments, to Illumitronic Systems Corporation, a corporation of California

Filed May 6, 1960, Ser. No. 27,447
6 Claims. (Cl. 209—121)



1. A segregation device comprising:
(*a*) an endless conveyor;
(*b*) means for driving said conveyor in a single direction;
(*c*) a plurality of carriers slidably mounted on said conveyor for movement laterally thereof perpendicular to the direction of movement of said conveyor each of said carriers having a cam follower thereon;
(*d*) first cam means below and adjacent said conveyor, said cam means being so mounted that when in a first position the cam follower of a carrier passing thereby will be engaged and the carrier thereby diverted slightly from its path and when in a second position the cam follower of a carrier passing thereby the carrier will not be contacted by said cam and will not be diverted from its path;
(*e*) means for changing the position of said cam;
(*f*) second cam means positioned adjacent the said conveyor at a point along the path of travel thereof subsequent to said first cam means, said second cam means being so positioned that the cam follower of a diverted carrier passing thereby will be contacted and will be further diverted from its path as the conveyor moves and a non-diverted carrier will not be contacted and diverted;
(*g*) and a loading station for said conveyor intermediate the said first and said second cam means.

3,093,246

APPAREL CARRIER

Ralph A. Horton, 1621 NE. 56th St., Fort Lauderdale, Fla.

Filed June 5, 1962, Ser. No. 200,092
3 Claims. (Cl. 211—113)

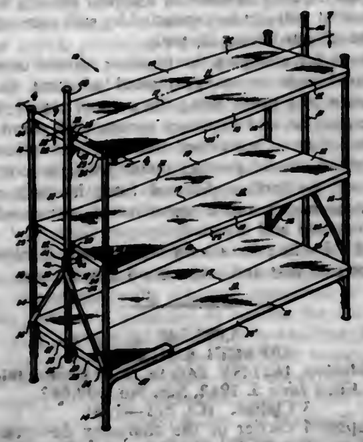
1. An apparel carrier of the character described that is adapted to clampingly support a plurality of slender flexible articles such as neckties and that comprises an open U-shape frame having an upper slightly flexible

cylindrical rail and a pair of integral right angularly disposed leg portions, an article clamping member that is slidably carried upon the leg portions to be shiftable in a vertical plane, a fixed lower rail of channel form and with the channel being upwardly opening, the channel being connected at its opposite extremities to the lower ends of the leg portions, a cushion pad that is pressed into the channel of the lower rail for its major length, the cushion pad seating upon the bottom of the lower rail and projecting above the lower rail and outwardly extending upon opposite sides, the cushion pad being formed of yieldable foam or sponge rubber, the clamping frame embodying a flat bar that is parallel with the upper and lower rails, the clamping bar being provided at its opposite ends with tubular guide sleeves for traverse



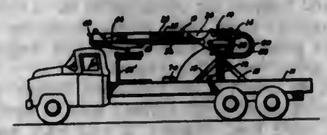
engagement upon the leg portions, the clamping bar and the sleeves being preferably integrally molded from plastic, a combined suspension hook and actuating means for the bar, the suspension hook including an upper loop and a shank portion that is molded integral with the bar intermediate the length of the bar, the molding of the bar and the shank being such as to provide a relatively thicker reinforcing between the shank and the bar whereby to permit lateral flexing of the suspension hook, the loop of the hook being grooved upon its top portion to have snapping engagement beneath the upper rail when the clamping bar has been moved downwardly to clamp the slender articles upon the lower rail, the hook being releasable from its snapping engagement with respect to the upper rail to permit the hook to be elevated and to move the bar upwardly for releasing the clamping engagement with the articles.

3,093,247
COLLAPSIBLE RACK
Theodore F. Erickson, Des Moines, Iowa, assignor to C. E. Erickson Co., Inc., Des Moines, Iowa, a corporation of Iowa
Filed Feb. 25, 1960, Ser. No. 10,965
3 Claims. (Cl. 211—149)



3. A collapsible rack comprising a shelf unit movable to folded and unfolded positions thereof, said shelf unit including a pair of shelf members which in the unfolded position of said unit are horizontally arranged in a side-by-side relation, pivotal connecting means for pivotally connecting together the adjacent sides of said shelf members, an upright support hinged at each outer corner of said shelf unit, and lift means connected with said pivotal means for moving said shelf members into a vertically arranged folded position, locking means pivotally connecting said lift means to said upright supports, and means on said lift means for coacting with said locking means for limiting the movement of said shelf units to a horizontal unfolded position while allowing unrestricted movement of said shelf members to a vertical folded position.

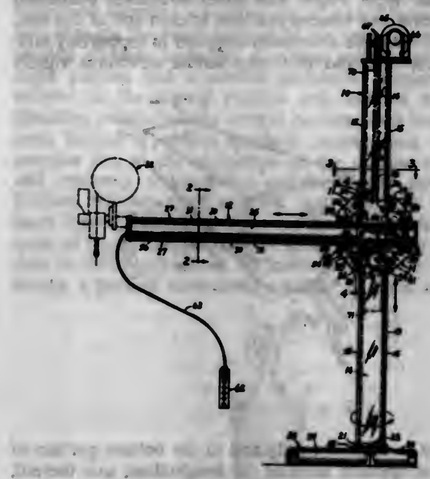
3,093,248
SELF POWERED BOOM ASSEMBLY
Charles Melville Winter, York, Pa., assignor to The Side-O-Matic Unloader Corporation, a corporation of Pennsylvania
Filed Aug. 14, 1959, Ser. No. 833,826
4 Claims. (Cl. 212—55)



1. A hoisting assembly comprising in combination, a mast connectable fixedly at the normally lower end thereof to a substantially horizontal supporting surface so as to extend substantially vertically upward therefrom in use for support thereby, a head having a socket receiving the upper portion of said mast and supported solely by said upper portion of said mast for rotation about the axis thereof, a boom extending substantially horizontally through the upper portion of said head and longitudinally movable relative to said head in opposite directions, flexible hoisting means operably supported by said boom and extending from one end thereof to raise and lower load means, self-energizing power generating means supported entirely by said head and not extending appreciably above the upper surface of said boom, and power transmitting means between said power generating means and said head and operable to rotate said head relative to the upper end of said mast and about the axis thereof.

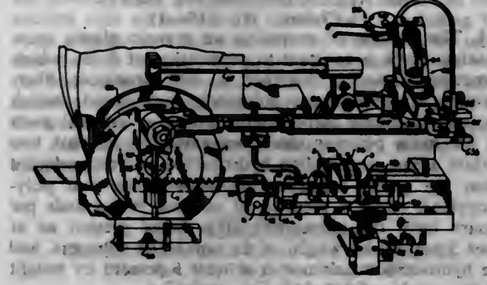
3,093,249
MANIPULATOR
Paul P. Wuesthoff, St. Louis, Mo., assignor to Pandjiris Weldment Co., St. Louis, Mo., a corporation of Missouri
Filed Nov. 28, 1960, Ser. No. 72,011
8 Claims. (Cl. 212—55)

1. In a manipulator, an elongate flat column plate disposed vertically, said column plate having opposed margins, a flat crosshead plate disposed with one side closely adjacent and in face-to-face relation to said column plate, means carried by said crosshead plate and engaging said side margins of said column plate to mount the crosshead plate for vertical reciprocating movement along said column plate, an elongate flat boom plate disposed horizontally, said boom plate being arranged closely adjacent and in face-to-face relation to the other side of said crosshead plate, the distances between the support planes of said flat plates being reduced to a minimum, said boom plate having opposed top and bottom margins, and means carried by said crosshead plate and engaging said top and bottom margins of said boom plate



to mount the boom plate for horizontal reciprocating movement relative to said crosshead plate.

3,093,250
DISTRIBUTORS NOTABLY FOR FEEDING MACHINE-TOOLS AND THE LIKE
Ernest Sosolic, Ornans, France, assignor to Societe Ornanaise de Constructions Mecaniques (S.O.C.), Ornans, France
Filed Sept. 24, 1959, Ser. No. 842,030
Claims priority, application France June 29, 1959
8 Claims. (Cl. 214—1)



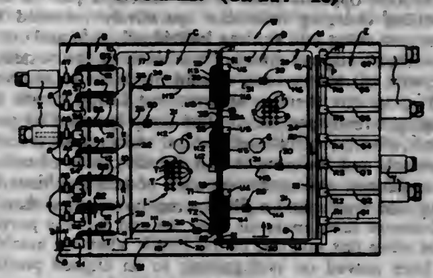
1. In a distributor for automatically feeding pieces to machine-tools comprising at least one gripping arm, two end abutments for limiting the oscillation of said arm, a fluid actuator, piston means in said actuator for reciprocating said arm, a braking device on the exhaust passage of said fluid actuator, slide-valve means in said braking device controlled by the piston means in said actuator and consisting of a distributing block, an inner bore in said block, a slide-valve member slidably mounted in said inner bore and responsive to the motion of said piston means, at least two inner passages opening in said inner bore constituting the inlet and outlet passages for the actuator exhaust fluid through said distributing block, a by-pass duct of a variable cross-sectional area smaller than the one of said two inner passages connecting directly said inlet passage with said outlet passage to allow a reduced flow of fluid between said passages when their openings into said inner bore are closed by said slide valve member, said reduced flow corresponding to a breaking period which occurs, during a predetermined time prior to the completion of every stroke of said actuator in either direction.

3,093,251
POWER OPERATED PIPE BIN
Emil A. Bender, Box 52, Bakersfield, Calif.
Filed Feb. 25, 1960, Ser. No. 11,026
1 Claim. (Cl. 214—2.5)



A storage device comprising a bin with vertical, structural, side and end elements defining a top opening, a pair of sheaves mounted on each side of the bin and lying closely below the top of said side element, said sheaves being axially aligned on opposite sides of the bin at positions substantially removed from the central region of the bin, means on each of the sides of said bin at one end thereof mounting a powered cylinder with a plunger aligned with the sides of said bin, hydraulic means powering said cylinder, a pair of cable segments attached one to each of said plungers and trained over the pair of sheaves on its respective side of the bin, an equalizer in said hydraulic means for maintaining said cable segments in alignmeint during movement thereof, guide means for said cable segments associated with each of said mounting means, said guide means being located, respectively, above and below the axis of said cylinder and on opposite sides of a vertical plane through the axis of said cylinder, and a pair of cross rails each freely suspended at its ends from the adjacent ends of the pair of cable segments depending from the axially aligned sheave pairs, said rails having a length permitting their movement vertically within the framework of said bin from a point closely adjacent the floor of the bin to a point close to the margin of the top opening.

3,093,252
AUTOMATIC WAREHOUSE
Robert F. Cahill, Los Altos, Calif., assignor to FMC Corporation, San Jose, Calif., a corporation of Delaware
Filed Jan. 17, 1962, Ser. No. 166,871
15 Claims. (Cl. 214—16)

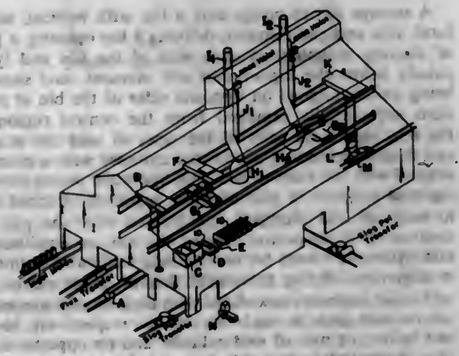


1. An article handling and storage system comprising a warehouse, a receiving station for said warehouse, a temporary storage conveyor for said receiving station, an article code marking station at said receiving station, an article stacker at said storage conveyor, said warehouse having a storage bay, a monorail encircling said storage bay and having a leg adjacent said receiving station and a leg opposite said receiving station, motor driven carriages on said monorail, a stacked article carrier depending from each carriage, a switch in said monorail at said storage conveyor, an article transfer and unloading conveyor in

the leg of said monorail opposite said receiving station, an overhead crane having a carriage mounted for serving said storage bay, a stacked article carrier depending from the carriage of said crane, an article unstacker at said transfer and unloading conveyor, a shipping station for said warehouse, and an article discharge conveyor for receiving unstacked articles and conveying them to said shipping station.

3,093,253
SCRAP CHARGING
Harry L. McFeaters, New Castle, and Ira W. Lakin, Volant, Pa., assignors to Pennsylvania Engineering Corporation, New Castle, Pa., a corporation of Pennsylvania

Filed Aug. 16, 1960, Ser. No. 49,996
17 Claims. (Cl. 214—18)

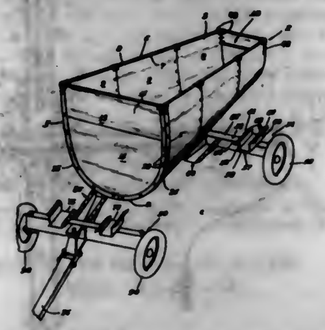


1. A scrap charging installation for feeding scrap material downwardly from an overhead-aligned position into an open mouth portion of furnace vessels which comprises, a lower level scrap collecting, weighing and storage area; a group of scrap-material-receiving boxes in said area, means for filling said scrap boxes with measured quantities of scrap material, each of said scrap boxes having an end delivery portion for scrap material carried thereby, means in said area for positioning filled scrap boxes ready for individual lifting movement, a group of longitudinally-spaced-apart open-mouth furnace vessels operatively positioned longitudinally to one side of said area, an overhead runway extending longitudinally above and beyond opposite sides of the vessels, a pair of self-propelling charging machines operatively mounted for movement along said runway individually into and out of an overhead aligned position with each of the vessels, a tilt cradle carried by each of said machines to receive a filled scrap box therein, an overhead lifting means for engaging a ready-positioned filled scrap box and supporting it in a horizontally-level position while raising it above the vessels and lowering it into the tilt cradle of one of said machines, and means on each of said machines for tilting said cradle and a filled scrap box carried thereby to discharge scrap material from the end delivery portion of the scrap box into one of the vessels when the machine has been moved on said runway to an aligned position thereabove.

3,093,254
FRAMELESS GRAIN WAGON
Peter Sammarco, Bellwood, Ill., assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey

Filed July 22, 1960, Ser. No. 44,595
5 Claims. (Cl. 214—83.32)

5. In a frameless wagon, a torsionally flexible U-section box having a bottom portion of single curvature and upstanding lateral portions of substantially uniform section extending substantially tangentially from opposite ends of the bottom and terminating in upper edges, means rigidifying said upper edges, end panel structures connected to the lateral and bottom portions at each end of the box, and wheel and axle assemblies disposed in supporting relation to the box and including saddle structures rigidly



connected to each assembly and to the bottom portion of the box at opposite sides of the longitudinal axis thereof, and a channel-shaped structure comprising an upwardly open auger trough extending from one end to the other of the box and depending below said bottom portion and disposed on substantially the neutral axis of the box about which the box is torsionally flexible.

3,093,255
METHOD OF PREPARING MIXTURES OF HYDROCARBON POLYMER RESINS AND LINEAR POLYAMIDE RESINS AND PRODUCT THEREOF
Robert B. Mesrobian, Hinsdale, and Clayton J. Ammondson, Tinley Park, Ill., assignors to Continental Can Company, Inc., New York, N.Y., a corporation of New York

Filed Aug. 28, 1958, Ser. No. 758,175
15 Claims. (Cl. 215—1)

1. The process of preparing an organic plastic composition which is resistant to permeation of fluids, which comprises kneading together a water-insoluble fiber-forming synthetic linear polymeric carbonamide which contains recurring carbonamide groups as integral parts of the main polymer chain separated by at least two carbon atoms, and molten hydrocarbon polymer selected from the group consisting of polyethylene and polypropylene, under a pressure of at least 500 pounds per square inch, the polycarbonamide being present as at least 5 percent by weight of the combined polymers, and the hydrocarbon polymer as at least 5 percent by weight of the combined polymers.

12. As an article of manufacture, a bottle made from the composition produced by the process of claim 1.

3,093,256
BABY FOOD FEEDER
Clifford R. Woodbury, Jr., 7747 N. Hermitage Ave., Chicago, Ill.

Filed Jan. 26, 1960, Ser. No. 4,677
5 Claims. (Cl. 215—11)

1. A baby food feeder of the character disclosed comprising a tubular body member having a uniformly cylindrical inner surface extending its full length with full diameter openings at both ends, the body member being adapted for containing a quantity of flowable food, a mouthpiece having an aperture therein detachably mounted on one end of the body member and forming an air seal therewith, the opposite end of the body member defining substantially the corresponding end of the device, and preformed piston means in the body member insert-

ible through said opposite end thereof and movable in leading direction in the body member toward food therein, said piston means including a pair of axially spaced transverse elements a leading one of which faces the food and engages the inner surface of the body member, said leading element including a central substantially planar main portion and a conical peripheral portion flexible relative to the central portion and inclined in trailing direction relative to the central portion, said leading element having a possible diameter greater than the body member due to the inclination of the peripheral portion and tendency to spreading toward planar position by friction between itself and the body member in movement thereof in trailing direction, thereby enabling movement of the piston means more easily in leading direction than in trailing direction, the trailing one of the elements having a portion substantially planar in form and a peripheral portion at least as far in trailing direction as the planar portion, the trailing element also at least closely approaching the inner surface of the body member in diameter and sufficiently spaced from the leading element as to be operative for maintaining the piston means in co-axial alignment with the body member in all positions along the body member, the piston means being contained in axial direction between the respective front and rear planar surfaces of the leading and trailing elements, the piston means further being free of mechanical connection with all other parts of the feeder including the body member and movable without restriction, by other than food in the body member and contact friction with the body member, throughout the full length of the body member and thus movable substantially completely to the end of the device opposite the mouthpiece, said opposite end of the body member being freely vented to atmosphere.



3,093,257
BAIL ARRANGEMENT
Charles Miller, 2413 Grove Ave., Berwyn, Ill.

Filed Jan. 10, 1961, Ser. No. 81,827
3 Claims. (Cl. 215—100)



1. The combination with a container for relatively heavy quantities of fluids, such as milk, said container being provided with a neck and annular lip projecting from said neck, of a bail arrangement comprising a neck ring of resilient plastic material loosely fitting about the neck of the container below said annular lip, said neck ring being dimensioned with an internal diameter larger than the neck of said container but substantially smaller than the outside diameter of said annular lip so that due to its said internal diameter and resilient nature the neck ring is adapted to be urged peripherally and progressively over and under the lip in the manner that an automobile tire bead is progressively pressed over a wheel rim, a pair of trunnions integrally connected to and extending outwardly from said neck ring, a bail rotatably mounted about said trunnions, said bail being reinforced at least in the hand engaging portion, and means including a button at the outer end of each trunnion preventing disengagement of said bail from said integrally connected trunnions, said means taking the form of bearing bores in the ends of the bail having diameters in the order of .0050 to .0010 inch smaller than the outer diameter of said buttons.

3,093,258
COVER LIFT
Oswald W. Turner, Rte. 2, Box 145, Antioch, Ill.

Filed June 9, 1960, Ser. No. 35,086
4 Claims. (Cl. 217—60)



1. In an assembly including an enclosure and a hinged cover therefor; the provision of a cover support adapted to retain the cover in open and closed positions with respect to the enclosure, and comprising a first arm pivotally connected at one end to the cover, a second arm pivotally connected at one end to the enclosure, the opposite ends of each arm being lapped relative to each other, a pivot stud pivotally interconnecting the lapped ends of the arms, one of said arms having cam means at the lapping end thereof and the other of said arms having a slot extending longitudinally thereof, a cam follower projection and means slidably mounting the same on the said other arm adjacent the said cam means and projecting through said slot for cooperation therewith, spring means connected to said cam follower projection and said pivot stud with the end connected to the cam follower projection being movable in unison with said cam follower projection in said slot and in the direction of sliding movement thereof as the lapped ends of the arms are moved during movement of the cover between open and closed positions, said spring means acting between the pivot stud and the cam follower projection to constantly bias the cam follower projection into cooperative engagement with the cam means for holding the cover in its various positions while permitting the cam follower to ride on said cam means upon the application of force to the cover in a direction to effect opening or closing thereof.

3,093,259
INSULATING CONTAINER
Willard L. Morrison, Lake Forest, Ill., assignor to Liquefreeze Company, Inc., New York, N.Y., a corporation of New York

Filed Mar. 3, 1960, Ser. No. 12,559
1 Claim. (Cl. 220—9)

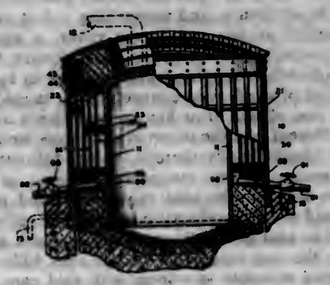
An insulated, knock down, shipping container comprising a plurality of panels of identical shape and dimension detachably joined one to another at adjacent edges to form the container, each panel comprising a stiff, porous, one-piece, self-supporting, foamed plastic core bounded on opposite sides by parallel symmetrical

inner and outer faces with the outer face being larger than the inner face, and bounded peripherally by perimetric faces inclined approximately at a forty-five degree angle to the parallel inner and outer faces, a flexible elastomeric gas tight envelope enclosing the panel in engagement with all of the faces but unattached thereto, means for drawing a vacuum in the envelope whereby atmospheric pressure forces the envelope to conform



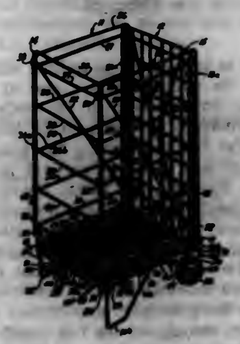
with the adjacent surfaces of the faces and to be drawn into intimate continuous contact with the panel throughout its entire exposed area, an elastomeric member peripherally enclosing the panel to cover the entire perimetric surfaces of the panel, removable means carried by the envelope, extending laterally from the outer face of the panel, on all four sides thereof, arranged for locking a pair of such panels in removable edge to edge contact assembly.

3,093,260
INSULATED REFRIGERATION TANK STRUCTURES
James G. Macormack, New York, N.Y., and Frank R. Hickory, Minneapolis, Minn., assignors to Aluminoal Corporation, a corporation of New York
Filed Apr. 8, 1960, Ser. No. 20,909
2 Claims. (Cl. 220—14)



1. An insulating tank structure for holding a liquefied gas at low temperatures having the combination of a tank having walls and a roof, for containing said gas, with a structure arranged thereabout for insulating said tank from the atmosphere comprising a first non-vapor sealed thin aluminum metal side wall supported on a first framework which spaces said side wall away from the tank wall by a preselected amount to form a first side airspace, expansion bolts anchoring said first framework to said tank walls in a floating manner, a first non-vapor sealed roof formed of a thin aluminum metal wall supported on a roof scaffold which spaces said first roof wall away from the tank roof by a preselected amount, to form a first roof airspace, expansion bolts anchoring said first roof wall to said tank roof in floating manner, said first side airspace and said first roof airspace being channelled for communication with each other, a second thin aluminum metal non-vapor sealed side wall and a second thin aluminum metal non-vapor sealed roof wall each supported on a side framework and roof scaffold which spaces the second side and roof walls away from the first side and roof walls by a preselected amount, to form second side and roof airspaces in communication with each other, a third thin aluminum metal side wall supported on a third framework which spaces the third side wall away from the second side wall by a preselected amount to form a third side airspace, a third thin aluminum metal roof wall supported on a third roof scaffold which spaces said third roof wall away from said second roof wall by a preselected amount, to form a third roof airspace, said third wall airspaces communicating with each other, vapor sealing means on the outer face of the third metal side wall and on the third metal roof wall, comprising a pressure sealed tape over all joints forming said walls and a pressure cap embracing said tape and forcing it into contact with the wall faces, a plurality of conduits extending through said side walls communicating with said first side and roof airspace and projecting into the atmosphere external of said structure and control valves on said conduits normally sealing said conduits from the atmosphere to permit venting of said first airspace by opening said valves.

3,093,261
COMBINED TRANSPORTATION AND DISPLAY CONTAINER
Joseph A. Salat, 18 Crabapple Road, Manhasset, N.Y.
Filed Nov. 24, 1961, Ser. No. 154,507
1 Claim. (Cl. 220—19)



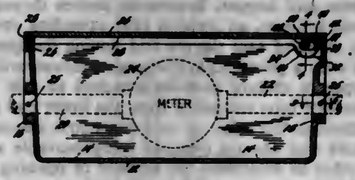
A combined transportation and display container comprising a bottom, two side walls, each of said side walls comprising a frame member having the shape of an inverted U, spaced horizontal rods connected to said frame member, and a diagonal rod connected to said horizontal rods; a rear wall; said bottom comprising an upper substantially rectangular frame inclined downwardly in the direction of said rear wall, a lower substantially U-shaped horizontal frame having a transverse portion extending substantially acroes the front of said container, said upper frame having a transverse portion extending beyond said rear wall, transverse rods carried by the two frames, one of said transverse rods interconnecting the two frames, a plurality of longitudinal rods carried by said upper frame, and a plurality of L-shaped rods having vertical portions connected with the two frames adjacent the front of the container and longitudinal portions connected with the transverse rods carried by the lower frame; means connecting the lower ends of said frame members to said upper frame, said rear wall comprising spaced vertical rods, spaced horizontal rods connected to said vertical rods and transverse rods connected to some of the last-mentioned rods; means connecting the vertical rods of the rear wall to said bottom, means connecting the horizontal rods of the rear wall to said side walls, and a removable front wall comprising a frame member and spaced horizontal rods connected with the last-mentioned frame member, at least some of the horizontal rods of said side walls having hook-shaped ends adapted to engage the horizontal rods of said front wall.

3,093,262
LUNCH BOX LATCH
Zebe A. Babcock, R.F.D. 3, Cass City, Mich.
Filed Feb. 28, 1961, Ser. No. 92,332
3 Claims. (Cl. 220—34)



1. A container having an open top box body, a cover hinged on said body, said body and said cover having front wall, said cover having longitudinally spaced upturned hooks on its front wall, said body having pivot brackets, on its front wall in vertical alignment with said hooks, an elongated U-shaped latch, said latch being longer than the distance between the outer sides of the brackets and the hooks and comprising a pivot leg extending between and journalled through said brackets, a bight portion on one end of said pivot leg, a resilient detent leg on said bight portion, said detent leg being tensioned away from said pivot leg, said pivot leg having a lateral detent arm thereon terminating in a detent hook, said detent leg being flexed toward said pivot leg and engaged in the cover hooks, with said detent hook engaged over the detent leg.

3,093,263
PROTECTIVE BOX FOR METERS
Bobbie C. Mabry, 3440 Evalon, Beaumont, Tex.
Filed July 25, 1961, Ser. No. 126,718
5 Claims. (Cl. 220—38)



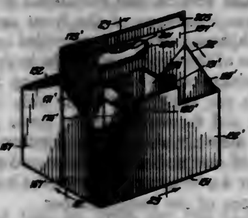
1. A protective receptacle, for meters and the like, comprising a generally rectangular box, with four sides, a bottom having drain openings, and a swingable cover, two of said sides having bosses with aligned openings, the top edge of said box having a rabbeted, inner corner on three sides, with a side wall tapering inwardly in the downward direction, and the inner face of the fourth side being planar, said rabbeted corners on two sides having counter recesses adjacent said planar face, each with a horizontal shelf extending from said planar face, and an upwardly extending, arcuate, forward shelf, terminating at the rabbeted portion, a covering having downwardly depending beads at its periphery, on three sides, tapered on the outer face to mate with the rabbeted corners of the box, and a generally similar bead on its fourth side, a pair of ears depending from said beads at opposite ends of said bead on the fourth side, said ears having arcuate, lower edges, complementary to said arcuate shelf in the box, said ears having elongate openings extending in a direction parallel to the plane of said cover, and a keeper rod secured in the side of said box, received in said elongate openings, and having a diameter less than the width thereof.

3,093,264
METALLIC ARTICLE LINED WITH A HALOGENATED OLEFIN POLYMER FILM
Leo J. Fitz Harris, Dayton, Ohio, assignor, by mesne assignments, to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware
Filed Apr. 4, 1955, Ser. No. 499,071
5 Claims. (Cl. 220—63)



1. A novel vessel which comprises an inner protective layer of a difficultly bondable thermoplastic halogenated olefin polymer film, an outer supporting layer of a settable material and interposed between said inner protective layer and said outer supporting layer a plurality of thermoplastic olefin polymer particles, said particles being fused to a surface of said protective layer and being embedded in a surface of said supporting layer prior to setting said settable material.

3,093,265
ARTICLE CARRIER
Edwin L. Arneson, Morris, Ill., assignor to Federal Paper Board Company, Inc., Bergen, N.J., a corporation of New York
Filed Feb. 25, 1960, Ser. No. 10,971
1 Claim. (Cl. 220—113)



An article carrier comprising in the completed and erected condition thereof, a bottom wall panel, a pair of upstanding side wall panels, a pair of end wall panels connected along upright corner forming hinge lines at each end of the carrier to corresponding ends of the side wall panels and extending in end wall forming relation between the same, an upright longitudinal partition structure connected at its opposite ends on upright hinge lines to the adjacent inner edges of the pairs of end wall panels, said longitudinal partition structure comprising pairs of longitudinal partition panels at each end thereof which are connected in oppositely disposed relation and integrally hinged to the adjacent inner edges of a pair of end wall panels, a cross partition panel member hinged to the inner vertical edge of each of said longitudinal partition panels and disposed in parallel transverse planes which are spaced equal distances from each other and from adjacent end wall panels, a second cross partition panel member cut from each of said longitudinal partition panels in an area spaced from the top and bottom edges thereof, said cross partition panel members having a width no less than half the width of said longitudinal partition panels and said second cross partition panel member being hinged about the inner edge of the adjoining cross partition panel member into face engaging relation with the latter, a cross strap member connected to each of said first named cross partition panel members and integrally hinged to a side wall panel, and said longitudinal partition structure including pairs of longitudinal partition and handle panels folded upon each other and trapped between said oppositely disposed longitudinal partition panels at each end

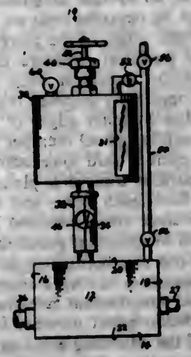
of the longitudinal partition structure with an inner marginal portion of one of the panels of each pair thereof overlapping and secured to an inner marginal portion of one of the panels of the other pair thereof.

3,093,266
SAFETY RAZOR BLADE DISPENSER
Leopold Karl Kuhnl, Stratford, Conn., assignor to Eversharp, Inc., New York, N.Y., a corporation of Delaware
Filed Oct. 14, 1959, Ser. No. 846,342
10 Claims. (Cl. 221—232)



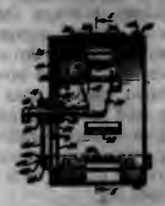
1. In a safety razor blade dispenser, a chamber in which a stack of new blades is adap ed to be positioned, said chamber including a hollow body member against the upper wall of which the uppermost blade in the stack is adapted to be positioned for forward sliding movement, a spring within the chamber adapted to press the stack of blades upwardly against the upper wall of the body member, a relatively thick separate metal throat member of right-angular configuration having a vertically disposed front end portion and a horizontally disposed portion extending rearwardly from the upper edge of said front end portion with said vertical and horizontal portions interfitting with cutaway portions of the front end of the body member, which throat member is provided immediately beneath the plane of the upper wall of the body member with a narrow precision-cut forwardly opening horizontal slot through which the uppermost blade only in the stack is adapted to be slid forwardly, and a cover plate mounted on said body member and having portions overlying the top and sides of said horizontally disposed portion of said throat member for retaining said throat member in said cutaway portions of the body member.

3,093,267
DUAL CHEMICAL DISPENSER
Charley Lowery, Rte. 8, Box 186, Oklahoma City, Okla.
Filed May 16, 1960, Ser. No. 29,394
7 Claims. (Cl. 222—159)



2. A chemical dispenser, comprising: a fluid mixing chamber having an inlet port in its side wall adjacent its lowermost surface for connection with a crude oil line, said mixing chamber having an outlet port in its wall opposite said inlet port in a plane spaced horizontally above the plane of the inlet port for connection with a crude oil line; a chemical reservoir disposed above said mixing chamber, said chemical reservoir having an opening in its lowermost wall forming a valve seat; a first tubular member extending between and connected with said mixing chamber and said chemical reservoir around the opening in the latter for fluid communication between the two, said first tubular member having a transparent window medially its ends; valve means connected to the top wall of the chemical reservoir, said valve means having an elongated downwardly tapered stem terminating medially the ends of said first member and adapted to open and close the opening in said chemical reservoir; a second tubular member extending between and connected with the upper walls of said mixing chamber and said chemical reservoir for communication between the two; and valve means interposed in said second tubular member for controlling communication therethrough.

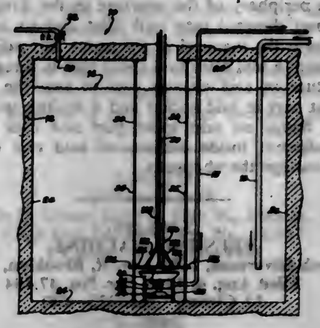
3,093,268
FERTILIZER DISTRIBUTOR
Alexander Smith, Box 1460, and Burton D. Beggs, Jr., 2429 Laurel Ave., both of Sanford, Fla.
Filed Mar. 13, 1959, Ser. No. 799,359
6 Claims. (Cl. 222—167)



1. A fertilizer distributor comprising a cylinder having an opening for the introduction of material to be discharged, means for rotating said cylinder about a horizontal axis, a hopper carried within said cylinder, a series of buckets around the inner periphery of said cylinder for elevating said material and permitting it to fall by gravity into said hopper, concentric sleeves through one end of said cylinder, an internal tube extending upwardly from the outer of said sleeves and having its upper end provided with a goose-neck discharging downwardly into said hopper, a closure member attached to said goose-neck, a second tube extending from the lower end of said hopper through the inner of said concentric sleeves, said hopper and said closure member being movable relative to each other to determine the amount of opening in the top of the hopper in which is received material falling from said buckets by gravity, and means for connecting said outer sleeve to a source of pressurized fluid.

3,093,269
DISPENSING MEANS HAVING LIQUID STORAGE TANK AND LIQUID REMOVAL MEANS
Elmer S. Measer, Tulsa, Okla., assignor to Conch International Methane Limited, Nassau, Bahamas, a corporation of the Bahamas
Filed Jan. 23, 1961, Ser. No. 84,422
12 Claims. (Cl. 222—333)

1. A dispensing means for removal of liquid from a deep well tank comprising the combination of a tank having top, bottom and side walls formed of a fluid and vapor impervious material, an outer shell which is open at the top and bottom formed with vertically disposed side walls having an outlet port therein, means fixing the outer shell within the tank adjacent the bottom side thereof, an inner shell shaped to correspond to the outer shell and defined by continuous vertically disposed side walls spaced inwardly a short distance from the vertically disposed side walls of the outer shell to define a continuous enclosed space therebetween and having an outlet port in the side wall of the inner shell, means above and below said ports sealing the space between the inner and outer shells to define a sealed space therebetween in communication with said ports, a pump means independent of said shells having an inlet and an outlet, a driving motor operatively connected to said pump means for operation thereof,



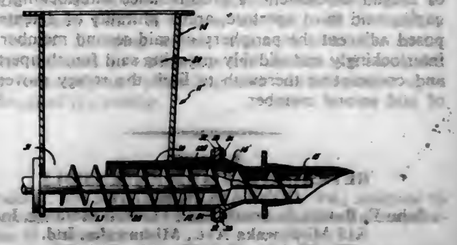
means mounting the pump means and motor on the inner shell with the inlet in communication with the interior of the tank and the outlet in communication with the outlet port of the inner shell, a delivery pipe communicating the outlet port of the outer shell with the exterior of the tank and means for raising and lowering the inner shell with the pump means and motor into and out of the outer shell.

3,093,270
AUTOMATIC LIVESTOCK FEEDER
Frank Sarmento, 7420 N. Central Ave., Winton, Calif., and Louis B. Almeida, 1312 N. Prairie Flower, Turlock, Calif.
Filed Jan. 4, 1961, Ser. No. 80,671
2 Claims. (Cl. 222—360)



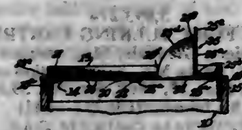
1. A mash and pellet feed metering valve for dispensing feed from a hopper, the combination comprising a cylinder permanently closed at its upper end and demountably closed at its lower end, said cylinder having an upper hole in the top thereof and a lower hole in the bottom spacially disposed in 180° opposed relation to said upper hole, said cylinder being rigidly sealed to said hopper, a hollow pipe extending axially through the cylinder and protruding through the upper and lower ends thereof, a shaft extending within said pipe to protrude therefrom at either end thereof, a handle affixed to the lower end of said shaft, unidirectional ratchet means connecting said pipe to said shaft at their upper ends, and a plurality of vanes radially affixed to said hollow pipe to divide the length of the volume of said cylinder into three equal axially-extending volumes, wherein two of said volumes are filled through said upper hole and the third of said volumes is simultaneously emptied through said lower hole.

3,093,271
MATERIAL-HANDLING DEVICE
Edwin J. Douglas, Whittier, Calif., assignor to H. L. Stoker Company, Claremont, Calif., a corporation of California
Filed Apr. 10, 1959, Ser. No. 805,397
4 Claims. (Cl. 222—413)



1. Apparatus for packing materials comprising a hopper for receiving and containing the material to be packed, a U-trough attached to the lower end of the hopper and having an opening at one end thereof, a screw conveyor disposed in the U-trough and extending out of said opening, an anti-flood sleeve disposed in the U-trough so as to enclose a portion of the length of the screw conveyor therewithin adjacent said opening, the sleeve having a length selected so that the length of the screw conveyor enclosed thereby is such, with respect to the flow characteristics of the material to be packed, as to increase the frictional resistance of the material to flow along the screw conveyor to a resistance which prevents flooding of the screw conveyor by the material during packing, and means for releasably attaching the anti-flood sleeve to the U-trough.

3,093,272
DISPENSING APPARATUS
Norman L. Esthus, Arlington Heights, Ill., assignor to Morton Salt Company, Chicago, Ill., a corporation of Illinois
Filed Aug. 30, 1960, Ser. No. 52,888
3 Claims. (Cl. 222—480)



1. A dispensing apparatus for use on an open-end container, said apparatus comprising a substantially disc-shaped first member mountable on such container in overlying relation with respect to the open end thereof, said first member being provided with an elongated arcuate first aperture having the center of curvature thereof coaxial with the transverse center axis of said first member, a second aperture angularly spaced from said first aperture, a third aperture disposed at said center axis, and a plurality of arcuate-shaped fourth apertures disposed adjacent the outer periphery of said first member and symmetrically arranged about said center axis, said first member having a flange element adjacent the periphery of said first member and projecting from one surface thereof for engagement with such container open end; and a substantially disc-shaped second member mounted in substantially superimposed relation on said first member for limited rotary movement with respect thereto, said second member being provided with a first opening disposed in continuous registered relation with said arcuate first aperture, and a plurality of small perforations arranged in a group which is angularly spaced

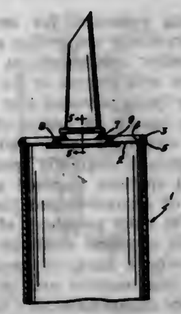
from said first opening, all of said perforations being in registered relation with said second aperture only when said second member is at one terminus of its limited rotary movement; said second member including a pouring spout hingedly mounted on a portion of said second member circumjacent said first opening, said spout overlying and closing off said first opening, when in one position of hinged adjustment, a protuberance interlockingly engaging said third aperture, and a plurality of detents disposed adjacent the periphery of said second member and interlockingly and slidably engaging said fourth apertures and cooperating therewith to limit the rotary movement of said second member.

3,093,273
RETRACTABLE AND EXTENSIBLE CONTAINER SPOUT
John E. Borah, % South Bend Modern Molding, Inc., 815 Mishawaka Ave., Mishawaka, Ind.
Filed July 3, 1959, Ser. No. 825,394
5 Claims. (Cl. 222—527)



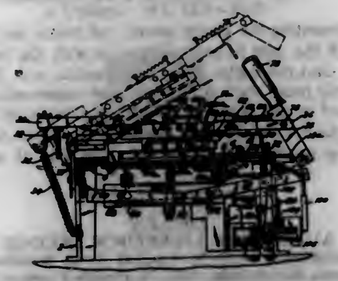
1. A collapsible spout for a container having an outlet portion, comprising an annular base of resilient material for engaging said outlet portion, a hollow conical section of resilient foldable material joined at its large end to said base, a neck of greater length than said conical section joined to the small end of said section and having an intermediate cylindrical portion of the same diameter as said small end, said cylindrical portion being adapted to fold upon itself with the folded portions in direct contact and having sufficient friction therebetween to hold the spout in its collapsed position, and an outer end portion connected to said cylindrical portion, said cylindrical portion being of the same diameter as the small end of said conical section and said outer end portion having the same internal diameter as said cylindrical portion and an external diameter of increasing uniform taper.

3,093,274
SPOUTS FOR CAULKING CARTRIDGES
Jerome J. Galbierz, Glendale, Mo., assignor to R.C. Can Company, St. Louis, Mo., a corporation of Missouri
Filed June 27, 1960, Ser. No. 39,000
8 Claims. (Cl. 222—541)



1. A combined spout and end closure for a disposable type of cartridge for a dispensing gun having an apertured closure part adapted to be secured to the open end of a cartridge body, a hollow spout part of rubber-like material assembled in the aperture of the closure part and means for securing the spout part in the aperture of the end closure part comprising a flange at the inner open end of said hollow spout part, an integral rib around said spout part spaced from said flange, a fillet formed in said spout part between said rib and said flange, a flange integral with and offset from said closure part to form a socket around the aperture in said closure part to receive said first flange and project between said first flange and said rib and an angular lip at the periphery of the aperture in the flange on said closure part directed into said fillet and so constructed as to deform the material in the spout part adjacent said fillet to form a seal after said spout part is forced through the aperture in said closure part to seat the flange on said spout part in said socket and a sealing strip secured over the flange on said spout part and over a portion of the adjacent inside surface of said end closure to prevent leakage therebetween.

3,093,275
PRESSING MACHINE
Jacob Silverman, 2101 Ave. R, Brooklyn, N.Y.
Filed Aug. 4, 1960, Ser. No. 47,484
12 Claims. (Cl. 223—38)



1. A pressing device for a sheet comprising a support having a pressing station, an element articulately operatively connected to said support for essentially vertical movement relative to said pressing station between first and second positions, a shaping form carried by said element and movable relative to said element in an essentially horizontal direction toward and away from said pressing station, and actuating means on said support operatively connected to said shaping form when said element is in its first position for moving said shaping form relative to said element, said actuating means being operatively disconnected from said shaping form when said element is in its second position.

3,093,276
CLOTHES HANGER
Trillis Volker and Velma Brink, both % Haas-Aquila, 16th at Douglas St., Omaha, Nebr.
Filed July 15, 1960, Ser. No. 43,209
1 Claim. (Cl. 223—93)



In combination: a clothes hanger having a hook and a garment shoulder supporting section suspended from said hook and having two upper surfaces generally extending downwardly and outwardly therefrom on each of two opposite sides thereof respectively, said supporting section having recesses in its upper surfaces respectively on each side of said hook, clamping means disposed in said recesses respectively, said clamping means having clip members which are elongated in the direction of the respective upper surface of said garment shoulder-supporting section, and said clamping means being adapted to grip portions of garments, the under surface of the outer end of each said clip members serving as a gripping surface for garment engagement, the upper surfaces of said clip members being substantially flush with the respective upper surfaces of said garment shoulder supporting section.

3,093,277
SEWING BOX
Marvin D. Mann, 4619 E. 25th St., Tucson, Ariz.
Filed Oct. 14, 1960, Ser. No. 62,577
1 Claim. (Cl. 223—106)



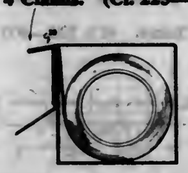
A container for spools of thread having spindle engaging bores comprising:
a box having end walls;
a square shaft rotatably mounted between said end walls;
spindles vertically mounted along the longitudinal axis of said shaft, the diameter of said spindles being substantially smaller than the bores in said spools; and
a shaped wall encompassing said shaft, said spindles cooperating with said shaped wall to prevent spools of thread from falling off said spindles when said shaft is rotated.

3,093,278
LABEL DISPENSER
Arthur L. Gottlly, Pensacola, Fla., assignor, by mesne assignments, to Monsanto Chemical Company, a corporation of Delaware
Filed Nov. 21, 1961, Ser. No. 153,812
4 Claims. (Cl. 225—42)



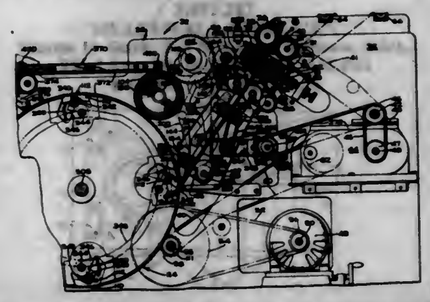
1. A label dispenser for use with a tubular bobbin provided with an annular flange, said label dispenser comprising an elongated body having an upper face and a convex bottom face for correspondingly engaging with the inner circumferential wall of the tubular bobbin, a longitudinal passage extending through said elongate body, said longitudinal passage having opposite arcuate ends each opening outwardly from said upper face of said elongated body and being adapted to receive a strip of labels at one of said arcuate ends and to discharge said strip of labels at the opposite arcuate end, said elongated body having an aperture opening into said longitudinal passage to permit finger contact of the strip of labels normally carried within said longitudinal passage for forwarding them slidingly toward said discharging arcuate end thereof, a cutting edge formed on said elongate body adjacent said opposite arcuate end of said longitudinal passage to permit severing of each label individually from the strip of labels by contact of the latter with said cutting edge, groove means formed at opposite sides of said elongate body for gripping the latter, said elongated body having a transverse slot formed at one end thereof at said convex bottom face thereof, said slot being of predetermined width to fit over the flange of the bobbin, and biased clamping means mounted within a cavity formed adjacent to said transverse slot in said elongated body for clamping by holding said label dispenser upon the flange of the bobbin.

3,093,279
CUTTER CARTON
Edward T. Bryant, Chesterfield County, Va., assignor to Reynolds Metals Company, Richmond, Va., a corporation of Delaware
Filed Nov. 21, 1960, Ser. No. 70,759
4 Claims. (Cl. 225—43)



1. In a carton having longitudinally extending panels and including a front panel and a longitudinally hinged cover panel, a front flap control panel longitudinally hinged to said cover panel for movement from a first position in a close parallel relationship with said front panel to a second position extending outwardly away from said front panel, a cutter panel having a longitudinal knife edge at one free side edge, connection means connecting the other side of said cutter panel to said control panel at the hinge between the front flap control panel and the cover panel to facilitate movement from a storage position within the carton to a cutting position in face-to-face engagement with the outside of said front panel, said connection means being of predetermined structural strength to enable said movement of said cutter panel by manipulation of said control panel between said first position and said second position.

3,093,280
BAG MAKING MACHINE
Frank E. Simpson, Castro Valley, and John D. Hoffman, San Lorenzo, Calif., assignors to FMC Corporation, a corporation of Delaware
Filed May 22, 1959, Ser. No. 815,159
10 Claims. (Cl. 225—96)



1. A machine for forming bags from a strip of bag stock comprising feeding means for advancing the strip of bag stock within the machine, means arranged to receive the advancing strip of bag stock from the feeding

means and to weaken the strip in transverse lines spaced apart to define bag lengths of the bag stock, a series of transversely spaced strip guiding means arranged for advancement of the strip from said weakening means, and a pull-apart mechanism mounted adjacent said guiding means in position to extend therebetween and into engagement with a part of the advancing strip, said pull-apart mechanism being operable to accelerate advancement of said part to detach the particular bag length of stock engaged thereby from the strip of bag stock.

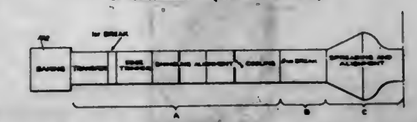
3,093,281

APPARATUS FOR HANDLING BAKERY ARTICLES

James H. Hahn, Glenview, and Russell J. Nadherny, Wilmette, Ill., assignors to Schulze and Burch Biscuit Co., Chicago, Ill., a corporation of Illinois

Original application Aug. 23, 1957, Ser. No. 679,991. Divided and this application Aug. 29, 1960, Ser. No. 52,637

9 Claims. (Cl. 225—97)



1. Apparatus of the character described adapted to transform an elongated sheet of baked dough having a plurality of longitudinal and lateral scores first into rows of shingled individual baked dough strips and then into files of individual panels by conveying said sheet and breaking said conveyed sheet along said lateral scores to form a plurality of laterally extending strips, which comprises in sequential combination along the line of travel of the baked dough being processed:

means for shingling said strips;

means for conveying said shingled strips;

means for engaging each of the conveyed shingled strips along the respective top edges thereof only; and

means for breaking the engaged shingled strips along said longitudinal scores thereof.

3,093,282

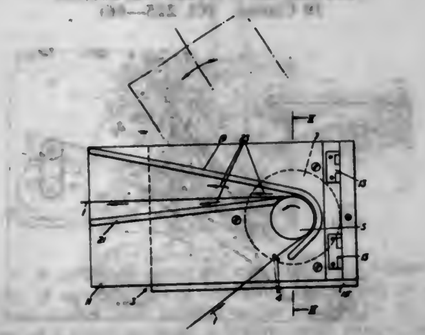
CONTROLLING OF TENSION IN RUNNING THREADS

Alan Hezzlewood, Usk, England, assignor to British Nylon Spinners Limited, Pontypool, England

Filed Oct. 31, 1960, Ser. No. 66,133

Claims priority, application Great Britain Nov. 12, 1959

6 Claims. (Cl. 226—7)



1. A process for reducing the tension of a running thread which comprises: contacting said running thread with an arcuate portion only of the periphery of a roller; rotating said roller at a peripheral speed greater than the maximum linear speed of the thread in contact therewith; and directing a steady flow of air tangential to said periphery at the point thereon at which the thread departs from said roller and in the direction of departure of said thread, the directing of said flow of air including the step of at least partially enclosing said portion of said roller to form a partial annular space containing said running thread whereby rotation of said roller creates said flow of air due to friction between air in said partial annular space and the surface of said roller.

3,093,283

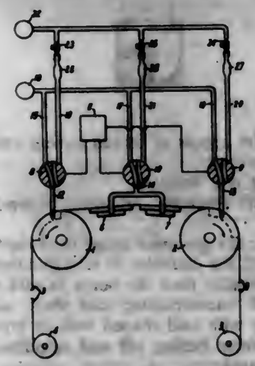
TAPE-FEEDING APPARATUS

Robert James Hodges, Newport, England, assignor to International Computers and Tabulators Limited, London, England, a British company

Filed June 20, 1961, Ser. No. 118,374

Claims priority, application Great Britain July 14, 1960

4 Claims. (Cl. 226—95)



1. Apparatus for controlling movement of a tape to and from a spool, comprising a tape-engaging member arranged to cause a tape to be adhered thereto by negative air pressure, a source of negative air pressure, a source of positive air pressure of predetermined high pressure value greater than atmospheric pressure, a double-acting valve connected respectively with said member, said source of negative air pressure and said source of positive air pressure by first, second, and third air lines and operable to connect said member alternately with each of said sources, operating means operatively connected with said valve to effect operation thereof to admit negative or positive air pressure to said member, and a constriction device connected in said third air line between said valve and the source of positive air pressure and arranged to restrict to a predetermined low pressure value the passage of positive air pressure to the part of the third air line between said device and valve and while the valve is closed to said source of positive air pressure to build up in said part a predetermined volume of air at said predetermined high pressure whereby when the valve is opened to the source of positive air pressure said built up predetermined volume of air is rapidly released to free the tape from said member and is immediately followed by air at said low pressure value to retain the tape free from said member but in close proximity therewith.

3,093,284

DIFFERENTIAL CAPSTAN ASSEMBLY

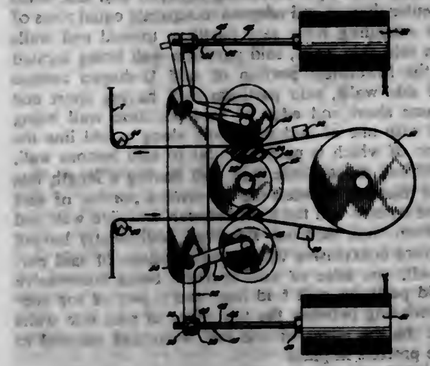
John T. Mullin, Beverly Hills, Calif., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

Filed May 11, 1959, Ser. No. 812,188

5 Claims. (Cl. 226—176)

1. In a tape transport mechanism, apparatus for developing and maintaining a predetermined longitudinal

tension in the tape passing through a defined zone of the tape path, the said apparatus comprising in combination: a rotatably mounted elastomer body of circular configuration; first means disposed in cooperative relation with the peripheral surface of the body for holding the tape in frictional engagement with the body as the tape enters the zone; second means mounted in spaced angular relation with respect to the first means and in cooperative relation with the peripheral surface of the body for holding the tape in frictional engagement against the body as the



tape leaves the zone; means coupled to the first means for pressing the first means toward the body with a first force to produce local deformation of the body and consequent elastomer flow and tape entrance velocity related to the first force; and means coupled to the second means for pressing the latter toward the body with a second force greater than the first force to produce local deformation of the body and consequent elastomer flow and tape exit velocity from the zone greater than the entry velocity of the tape, thereby developing and maintaining the predetermined tension.

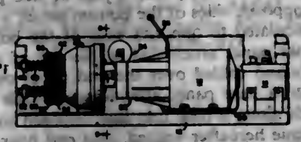
3,093,285

ELECTRODE FEEDING MECHANISM FOR WELDING APPARATUS

Robert R. Leaming, Rahway, and William W. Coffeen, Westfield, N.J., assignors, by mesne assignments, to M & T Chemicals Inc., New York, N.Y., a corporation of Delaware

Filed Apr. 28, 1959, Ser. No. 809,454

2 Claims. (Cl. 226—184)



1. An electrode feeding mechanism for welding apparatus comprising, in combination, a constant speed power drive means having a rotary output shaft, a variable speed power transmission having a rotary input shaft and a rotary output shaft, means connecting said output shaft of said constant speed power drive means in driving relation to said input shaft of said power transmission to drive said input shaft at constant speed, one-way friction clutch means mounted for rocking movement on said output shaft of said power transmission whereby rocking movement of said friction clutch means in one direction is effective to impart motion to said output shaft of said power transmission, while rocking movement of said friction clutch means in the opposite direction is ineffective to impart rotary motion to said output shaft of said power transmission, means connecting said input shaft of said power transmission to said friction clutch means whereby rotation of said input shaft imparts rocking movement to said friction clutch means, means for adjusting the degree of rocking movement of said friction clutch means for a given rotation of said input shaft to thereby vary the movement of said output shaft of said power transmission for a given rotation of said input shaft, and electrode feed rolls driven by said output shaft and engageable with the welding electrode to impart movement thereto.

3,093,286

MOLDED FOAMED PLASTIC EGG CARTON

William H. Brickner and John Rodish, Cincinnati, Ohio, assignors to The Mead Corporation, Dayton, Ohio, a corporation of Ohio

Filed Jan. 24, 1961, Ser. No. 84,581

4 Claims. (Cl. 229—2.5)



1. An egg carton comprising: a tray portion and a cover portion, said portions being molded of foamed plastic material and being joined along one edge of each portion by an integral web constituting a hinge, said portions having mating complemental egg pockets molded therein, said egg pockets being constrictingly tapered toward the bottoms thereof and having vertically disposed flutes substantially equally spaced to form gripping and shock absorbing supports for eggs held therein, said portions and pockets having diverging walls whereby when said cover portion is opened substantially 180° the carton can be nested relative to other cartons for mutual protection and for saving of space during shipping and storage, the edges of said tray and cover portions opposite said hinge having interlocking elements formed thereon for releasably holding said carton closed, said interlocking elements being rib means and mating channel means extending along said last-mentioned edges, said rib and channel means defining a narrow outwardly opening channel therebetween when said carton is closed, and adhesive sealing material deposited in said narrow channel whereby dehydrating circulation of air into and from said carton and penetration of foreign odors into said carton are prevented.

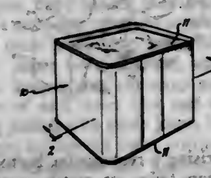
3,093,287

MULTI-WALL FIBER CAN

Martin H. Stark, 223 N. Porter, Saginaw, Mich.

Filed Aug. 30, 1961, Ser. No. 135,044

1 Claim. (Cl. 229—3.1)



A fluid-impervious can body comprising a plurality of peripheral fibrous plies laminated in face-to-face assembly and having self-abutting skived edges offset radially of

the body so that none of the edges are aligned with any other edge, the self-abutting skived edges being adhesively secured to one another, and an inner ply comprising a water-impervious liner secured to a fibrous backing sheet, the fibrous backing sheet being laminated to the inner one of the peripheral plies, the inner ply having an overlap joint in which one axial edge of the inner ply overlaps the other axial edge thereof, and the liner covering the entire inner surface of the backing shet, the exposed axial edge thereof and that portion of the backing sheet opposite the inner surface adjacent the exposed axial edge and overlapping the other edge of the inner ply, and means adhesively securing to one another the overlapped liner-covered edges of the inner ply to form a fluid-impervious liner-to-liner joint.

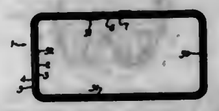
3,093,288

STAGGERED PLY TUBE BODY

Martin H. Stark, 223 N. Porter, Saginaw, Mich.

Original application May 22, 1956, Ser. No. 586,525. Divided and this application Jan. 20, 1960, Ser. No. 10,012

1 Claim. (Cl. 229—4.5)



A tube body for incorporation into a liquid-tight container, said body having its axial extremities open and comprising a plurality of individual plies of sheet material including a pair of fibrous plies and an inner non-fibrous liquid-impervious liner, said plies and said liner being adhesively secured to one another in face-to-face contact to define a laminated perimetric enclosure, the fibrous plies being offset in stepped relation relative to one another perimetrically of the body with the parallel, linear edges of each fibrous ply extending axially of the body being in edge abutment and the opposite overlapping extremities of the fibrous plies being adhered to one another, and the inner liner being also perimetrically offset relative to the fibrous plies and being of a perimetric extent such that its extremities overlap one another, the overlapping extremities of the liner forming rectangular areas which are adhesively secured to one another to form a continuous internal liner completely isolating said fibrous plies from contact with liquid contents of the final container.

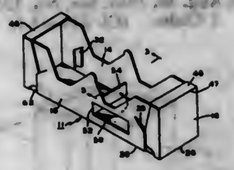
3,093,289

CARTON WITH INTEGRAL PARTITION MEMBER

Albert Reisman, Philadelphia, Pa., assignor to J. Reisman & Sons, Inc., Pennsauken, N.J., a corporation of Pennsylvania

Filed Apr. 27, 1961, Ser. No. 105,938

1 Claim. (Cl. 229—27)



A carton comprising a rectangular bottom wall having a length more than twice its width, square end walls integral with said bottom wall and at right angles thereto, side walls integral with the long side edges of said bottom wall and with one edge of each of said end walls, the center of said side walls having a height equal to the height of said end walls, two pairs of equal U-shaped cutouts in each of said side walls, each pair of said U-shaped cutouts extending downward from the top edge of its associated side wall on opposite sides of the center of said side wall, the lowermost portions of said U-shaped cutouts being in a plane parallel to said bottom wall, paper locks integral with said end walls interconnecting said side and end walls for maintaining said side and end walls upright with respect to said bottom wall, a partition wall having long side edges extending between said side walls at the center thereof and adapted to separate equal rows of pretzels extending from said partition to said end walls between said side walls, said partition wall being located below the lowermost portion of said U-shaped cutouts on said side walls, said partition wall having short end edges, one short end edge of said partition wall being integral with one of said side walls along a fold line the extension of which is perpendicular to said bottom wall, said fold line on said one side wall having a length less than the distance between the lowermost portion of said U-shaped cutouts and the joint between said side wall and said bottom wall, said one side wall additionally having an aperture coextensive with the dimensions of said partition wall, one edge of said aperture being coextensive with said partition wall fold line, and a pair of top supports extending between the top edges of said side walls adjacent the top edges of said end walls and adapted to hold the pretzels in place.

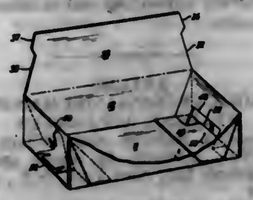
3,093,290

FOLDING BOXES OF THE TRAY TYPE

William H. Banks, Westport, Conn., and Richard C. Poole, New Rochelle, N.Y., assignors to Atlas General Industries, Inc., New York, N.Y., a corporation of Massachusetts

Filed July 26, 1962, Ser. No. 212,605

4 Claims. (Cl. 229—34)



1. A tray of foldable sheet material comprising, in combination, a bottom panel; a pair of side panels articulated to opposite sides of the bottom panel; a pair of end panels articulated to opposite ends of the bottom panel; an end liner panel articulated to the top of each of the end panels and folded over the end panel on the inside of the tray; a base panel articulated to each of the end liner panels along a base fold line disposed to either side of the tongue hereafter recited, said end liner panel having a tongue cut therefrom by an internal cut extending from said base fold line, said tongue lying substantially in the plane of said base panel, pointing toward the respective end panel, and causing the said end liner panel to assume a slanted position, leaving a hollow space of substantially triangular cross section between end panel, end liner panel, and bottom panel, into which space merchandise to be packaged in the tray may be inserted, and an inner side panel articulated to the top of each of the side panels, the inner side panels being of a length greater than the height of the side panels and being disposed at a slant to the side panels and to the bottom panel, said inner side panel having lateral lock tabs thereon for engaging the apertures formed in the said end liner panels by said internal cuts.

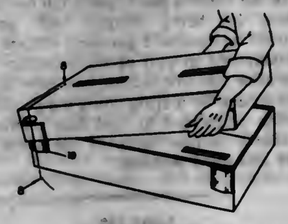
3,093,291

SELF-LOCKING TELESCOPING CONTAINER

William J. Brandle, Monroe, La., assignor to Olin Mathieson Chemical Corporation, a corporation of Virginia

Filed May 8, 1961, Ser. No. 108,424

1 Claim. (Cl. 229—35)



In a container of the type comprising a cover portion having a top panel with depending cover walls and a body portion having a bottom panel with upstanding body walls, said cover portion being operative to receive the body portion in telescopic fashion to close the container, the improvement comprising corner tabs formed on the mating walls of the telescoped body and the cover portions, respectively, operative to engage slots formed in contiguous walls of said body and cover portions respectively to retain the walls connected together in a position generally normal to the plane of the top panel in the cover portion and to the plane of the bottom panel in the body portion respectively, said tabs being so disposed spaced from said top and bottom panels on the cover walls and on the body walls respectively that when the body portion is received within the cover portion in telescopic fashion, the cover wall tabs interfere with the body wall tabs to lock the body and cover together, each of the tabs on the body walls being of sufficient length and being formed with a score line so as to cause said body wall tabs to break partially and bow outwardly opposite said score line in resilient fashion to insure tab interference and to strengthen the lock, and means on said cover walls in registry with the scored tabs for facilitating manual contact with said scored tabs whereby said scored tabs are bowed inwardly to unlock the body from the cover.

3,093,292

PACKAGES

Valter A. Ahlbor, Bromma, Sweden, assignor to Aranco Aktiebolag, Vallingby, Sweden, a joint-stock company of Sweden

Filed Mar. 7, 1961, Ser. No. 94,044

Claims priority, application Sweden Mar. 12, 1960

4 Claims. (Cl. 229—51)



1. A receptacle made from flexible material and having back and front and side walls, said back and front walls having at one end thereof integral projecting flaps which are folded inwardly, said side walls also having integral projecting flaps folded inwardly, the projecting flap on said rear wall being folded over the front and side wall flaps and having a substantially T-shaped extension connected thereto and extending beyond said rear wall flap, said extension having an end portion having flaps projecting in opposite directions laterally beyond the adjacent part of said extension, said end portion being folded back along a transverse line against the inner face of said adjacent part of said extension and secured by said laterally extending flaps only to the front wall of the receptacle to form a pocket which, after severance from said extension receives said adjacent portion of said extension.

3,093,293

CONTAINER OPENING PROVISION

Samuel A. Freese, Warson Woods, Mo., assignor to Container Corporation of America, Sefton Fibre Can Company Division, St. Louis, Mo., a corporation of Delaware

Filed Jan. 2, 1962, Ser. No. 163,757

5 Claims. (Cl. 229—51)



1. A container for packaging material comprising an inner wall layer spirally wound, an outer wall layer spirally wound upon said inner layer, said layers being adhesively united, tear means disposed between said layers and extending spirally about the container with said spirally wound outer wall layer, and means on the container for opening the same by tearing said outer wall layer away to expose said inner wall layer, said opening means including a tab formed in the outer wall layer including a length of said tear means and a fold in said outer wall layer spaced from the tab, said fold being formed by underlapping a portion of the outer wall layer opposite said tab to form a gap space in said outer wall layer to expose the end of said tap.

3,093,294

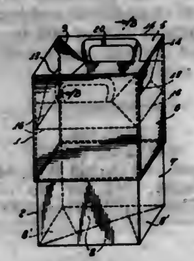
PAPER CONTAINER WITH INTEGRAL HANDLE MEANS

Yukio Kasunoki, 417 Nishi-Nakano, Toyama-shi, Japan

Filed Mar. 7, 1961, Ser. No. 93,916

Claims priority, application Japan Mar. 8, 1960

2 Claims. (Cl. 229—52)



1. A container, comprising an outer box having a top part formed with foldable flaps having cut away portions adapted to enclose said top part upon the folding of said flaps toward each other, and an inner box having a top part with foldable flaps having cut away portions corresponding to said cut away portions on the top part of said outer box, said inner and outer boxes being made of separate sheets of paper or cardboard, each being formed integral with its flaps having cut away portions, said flaps on the top part of said outer box and said flaps of said inner box being joined with paste joints between the edges of said flaps, flaps having cut away portions on the bottom of said inner box adapted to fold against the inside of said inner box when said inner and outer boxes are folded flat, and adapted to fold toward each other and enclose the bottom of said inner box when said inner and outer boxes are in a contents receiving state, said inner box being

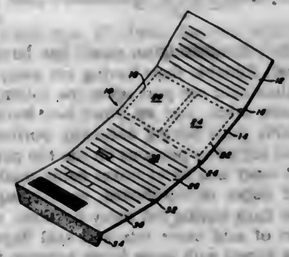
slideable within said outer box, whereby the flaps having cut away portions on the respective top parts of said inner and outer boxes will enclose the top sides when the inner box is being slid upward within said outer box, and said bottom flaps having cut away portions will be in a plane common to the plane of the bottom edge of said outer box.

3,093,295
DRAWSTRING BAG
Emanuel Kugler, 296 Hungry Harbor Road, Valley Stream, N.Y.
Filed May 18, 1962, Ser. No. 195,735
3 Claims. (Cl. 229—63)



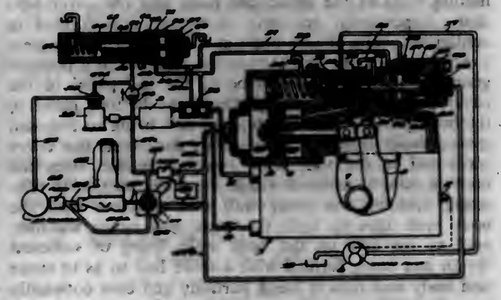
1. A drawstring bag of flexible material having in its initially manufactured condition: a closed top end, an open bottom end, and opposed side edges, and including oppositely disposed front and back face panels merging together in three lines of fold at said top end, said lines of fold being spaced from and alternating in direction of fold with respect to each other to provide an interiorly disposed gusseted construction which is entirely below said top end and which includes two oppositely disposed interior panels respectively adjacent said front and back face panels, each of said interior panels, at their respective ends and adjacent the middle fold of said three lines of fold, being attached to the respective of said side edges of the bag, and each said interior panel being further attached, substantially along its length between said side edges and in parallel spaced relation with respect to the respective of said first and third lines of fold, to the said respectively adjacent of said front and back face panels to provide a tubular hem of each of said front and back face panels adjacent said top end, and drawstring means disposed within said tubular hems.

3,093,296
MAILING PIECE
Albert J. Wood, 300 Orchid Way, Merion, Pa.
Filed Apr. 30, 1962, Ser. No. 191,091
1 Claim. (Cl. 229—92.8)



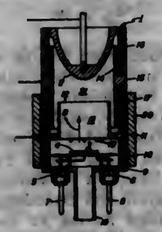
A mailing piece comprising first and second integral sections interconnected by a perforation line, said first section having perforations thereon defining a removable portion, a third section integral with said second section, a fold line between said second and third sections, said sections being the same size, said second and third sections having blanks on one surface thereof which are adapted to be filled in by a customer, an opposite surface of said second section containing the address of the customer and any code numbers associated therewith, an opposite surface of said third section having the address of the sender of the mailing piece, and a tab having a gummed surface, said tab being integral with and extending from said third section, said gummed surface being adapted to be juxtaposed to said opposite surface of said second section after said first section has been separated from said second section by tearing along the perforation line, a fourth section connected to said first section by a fold line, said fourth section being of the same size as said first, second and third sections.

3,093,297
HYDROSTATIC TRANSMISSION
Charles O. Weisenbach, Watertown, N.Y., assignor to The New York Air Brake Company, a corporation of New Jersey
Filed Sept. 25, 1961, Ser. No. 140,328
19 Claims. (Cl. 230—4)



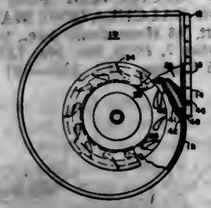
1. In combination, a hydrostatic transmission including a pump and a motor; an air compressor system including an air compressor connected in driven relation with the motor and a reservoir connected with the compressor for receiving and storing compressed air; first means connected with the hydrostatic transmission for maintaining motor speed at a constant predetermined value; and second means responsive to reservoir pressure for overriding the first means and reducing motor speed when reservoir pressure exceeds a predetermined value.

3,093,298
IONIC PUMP
James M. Lafferty, Schenectady, and Thomas A. Vanderslice, Scotia, N.Y., assignors to General Electric Company, a corporation of New York
Filed June 21, 1960, Ser. No. 37,780
16 Claims. (Cl. 230—69)



1. An ionic pump comprising: an evacuable envelope; a sputtering electrode member disposed within said envelope; an ion source within said envelope disposed opposite said sputtering electrode member, said ion source producing ions by the ionization of gas molecules within said envelope without substantial sputtering therefrom; means for withdrawing and accelerating ions from said ion source to said sputtering electrode member so that such ions impinge upon said sputtering electrode member with sufficient velocity to cause the ejection of metallic particles therefrom; a collector electrode member disposed in juxtaposition with both said sputtering electrode member and said ion source, said collector electrode member being so arranged and adapted to provide a surface for the collection of ions and deposition of metallic particles ejected from said sputtering electrode member; and means for applying appropriate operating potentials to said sputtering electrode member, said ion source, said ion withdrawing and accelerating means, and said collector electrode member respectively.

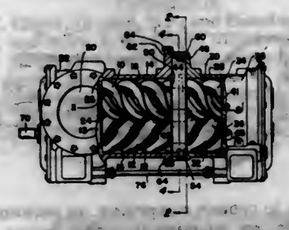
3,093,299
CENTRIFUGAL FAN
Paul E. Hammann, Kenneth J. Nelson, and Robert L. Wagner, all of La Crosse, Wis., assignors to The Trane Company, La Crosse, Wis., a corporation of Wisconsin
Filed May 15, 1961, Ser. No. 109,952
7 Claims. (Cl. 230—127)



1. In a centrifugal fan, a housing of scroll form having spaced substantially parallel sides and a scroll shaped wall, inlet throat means attached to and extending within said housing, an impeller of the centrifugal type having flow passages therein and having said flow passages terminating in a peripheral air discharge surface, means rotatably mounting said impeller in said housing for drawing air through the inlet throat into said impeller and discharging the same from the fan housing, a substantially rectangular discharge opening in said housing, said opening being spaced from and in a plane substantially parallel with a plane tangent to the periphery of said impeller, two sides of said discharge opening being substantially at the housing sides, a third side of said discharge opening being substantially at the scroll shaped wall, a fourth side of said discharge opening extending between and being substantially normal to said substantially parallel sides of said housing and being located a predetermined distance from said third side of said opening, and a sloping substantially conical shaped cut-off means located in said discharge opening adjacent said fourth side to reduce the recirculation of air around said inlet throat and to prevent recirculation of discharged air back through the lower portion of said discharge opening.

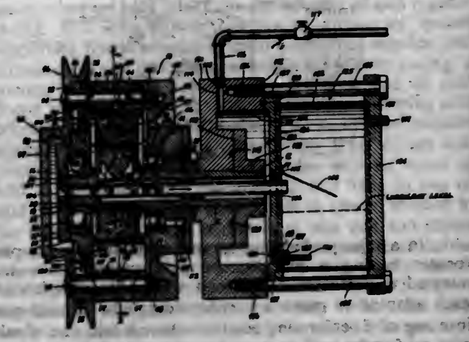
3,093,300
AXIAL FLOW COMPRESSOR
Grover D. Fraser, Palisted Post, N.Y., assignor to Ingersoll-Rand Company, New York, N.Y., a corporation of New Jersey
Filed Jan. 31, 1961, Ser. No. 86,164
2 Claims. (Cl. 230—158)

1. A plural stage axial flow gas handling machine comprising: a casing containing a pair of gas handling expansible-contractable positive displacement stages including first and second stages; each stage including a pair of inter-meshing screw-type rotors cooperating with each other to form an expansible-contractable positive displacement chamber therebetween and mounted in axially spaced relationship to the rotors of the other stage; a partition secured to the casing and located between the rotors of said first and second stages; said partition being hollow and including a pair of axially spaced walls, each of which is located adjacent one of said stages and engages the end faces of the rotors of that stage to co-



operate with the rotors in forming the expansible-contractable positive displacement chamber of that stage; one of said walls containing an outlet port from the first stage and the other wall containing an inlet port for the second stage with said ports being angularly displaced from each other relative to a plane passing through the axes of the rotors; and said partition being formed in at least two interfitting arcuate sections which can be separated for assembly and disassembly of the machine.

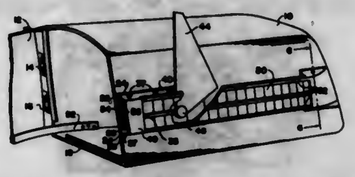
3,093,301
LUBRICATING SYSTEM FOR COMPRESSOR
Orville Mitchell, Dallas, Tex., assignor to John E. Mitchell Company, Dallas, Tex., a corporation of Missouri
Filed July 5, 1960, Ser. No. 40,734
4 Claims. (Cl. 230—206)



1. In a compressor having a stationary hollow shaft, a housing rotatable about the shaft, a plurality of compression chambers within the housing, means to deliver a compressible fluid to the chambers, a plurality of pistons within the chambers, means to cause the pistons to reciprocate as the housing rotates, a lubrication system comprising an oil reservoir, an oil passage leading from the oil reservoir to the interior of the shaft, an orifice through the shaft in communication with the lower side of the interior of the shaft and in the plane of rotation of the chambers, means for communicating the inner side of each chamber with the orifice as each chamber rotates past the orifice, a fluid outlet port adjacent the outer side of each chamber for receiving both lubricant and compressible fluid following compression, passage means communicating the fluid outlet ports with the oil reser-

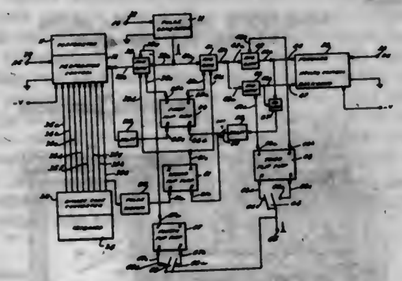
voir, and means for separating the oil from the compressed fluid delivered by the last-mentioned passage means to the reservoir.

3,093,302
MAIL BOX AND SIGNAL
John Mark Alley, 300 E. Sunnydell, Derby, Kans.
Filed Nov. 16, 1961, Ser. No. 152,878
7 Claims. (Cl. 232—35)



7. A means to contain comprising, an enclosure means having a door, an attention-attracting means movably mounted on said enclosure means, operating means for said enclosure means, said operating means including a plunger means to open said door, and a plunger means to selectively position said attention-attracting means independently of said plunger means to open said door.

3,093,303
TAPE PERFORATION AND MOVEMENT CONTROL SYSTEM
Gerhard Dirks, 12120 Edgecliff Place, Los Altos Hills, Calif.
Filed Jan. 18, 1962, Ser. No. 167,043
10 Claims. (Cl. 234—108)



1. In a tape perforating arrangement including a perforator having a plurality of pins spaced from and adapted to perforate a tape and a plurality of solenoids each adapted to move a corresponding one of said pins into one of a perforating position wherein said one of said pins perforates said tape and a non-perforating position wherein said one of said pins remains spaced from said tape, and moving means adapted to move a tape in operative relation to said perforator in predetermined increments in one of a forward and backward direction relative to said perforator, said moving means having forward and backward drive control coil means, in combination,

alternating current power supply means for providing alternating current power;

pulse generating means connected to said alternating current power supply means for deriving control pulses from said alternating current power at determined time instants of the cyclic period of said alternating current power;

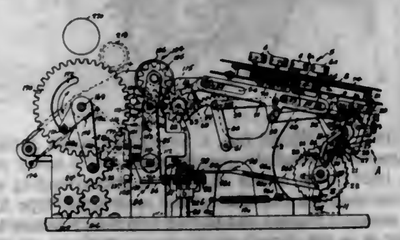
perforator control means interconnected between said pulse generating means and the solenoids of said perforator;

binary code keyboard means connected to said perforator control means for providing code combination signals to said perforator control means under control of a keyboard, said binary code keyboard means being adapted to prepare selected components of said perforator control means in accordance with said code combination signals;

moving control means interconnected between said pulse generating means and the forward and backward drive control means of said moving means; and

pulse gating means interconnected between said pulse generating means and each of said perforator control means and said moving control means for controlling the transmission of control pulses from said pulse generating means to a selected one of said perforator control means and said moving control means in a manner whereby the operation of each of the said perforator control means and the said moving control means is dependent upon the transmission of said control pulses thereto at determined time instants and the condition of conduction of said pulse gating means.

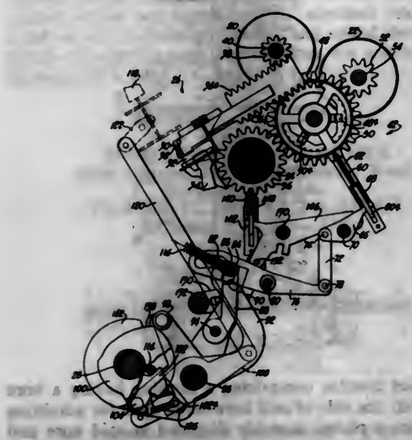
3,093,304
ELECTRICALLY POWERED KEYBOARD AND TRANSFER MECHANISM FOR TEN KEY ADDING OR CALCULATING MACHINE
Rupert M. Starrett, 94 Housatonic Ave., Stratford, Conn.
Filed May 7, 1958, Ser. No. 733,507
16 Claims. (Cl. 235—60)



1. A calculating machine comprising a series of numeral keys, a series of toothed transfer wheels movable from a normal inoperative position to a single operative position, means for setting up numerals in the successive transfer wheels in the operative position according to which key is operated, said means comprising a single operative unit including a forwardly and backwardly movable member, a toothed segment operated by said member, a motor for operating said unit, a toothed drive wheel capable of meshing with a transfer wheel in the operative position, a one-way ratchet drive from the segment to the drive wheel operable to turn said wheel only on reverse movement of the segment and movable member, and means operable by said unit on forward movements of the movable member to shift the transfer wheels successively to the operative position.

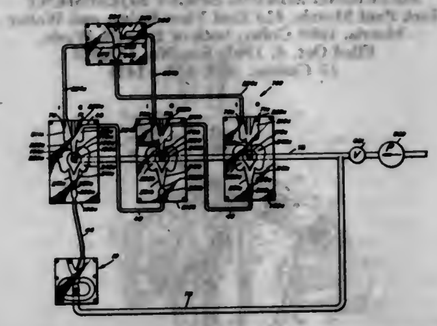
3,093,305
ACCOUNTING MACHINE
Gosta R. Englund, Stockholm, Sweden, assignor to Svenska Dataregister AB, Stockholm, Sweden, a corporation of Sweden
Filed Nov. 1, 1961, Ser. No. 149,446
Claims priority, application Sweden Nov. 4, 1960
14 Claims. (Cl. 235—60)

1. In an accounting machine including an accumulator, differential means movable to different data representing settings and operable to enter a data item in said accumulator, indicating means movable to different settings corresponding to the data representing settings of the differential means, coupling means connected to said indicating means and engaged by said differential means to transfer the setting of said differential means to said indicating means, said differential means being movable in opposite directions to a data representing setting and to a normal setting during an operation of said machine, said coupling means being engaged by said differential means only



during movement of said differential means in a setting direction, and means for selectively locking said indicating means and the connected coupling means in a previous setting during selected operations of said machine so that said differential means is set in a data representing setting by engagement with said coupling means to enter a data item in said accumulator that is identical to the data item entered in said previous setting.

3,093,306
FLUID-OPERATED TIMER
Raymond W. Warren, McLean, Va., assignor to the United States of America as represented by the Secretary of the Army
Filed June 5, 1961, Ser. No. 124,754
3 Claims. (Cl. 235—61)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A fluid-operated timer comprising, a source of pressurized fluid, oscillating means connected to said source for producing periodic fluid pulses, means limiting said fluid within said oscillating means to a plane of oscillation of said fluid, fluid-operated means for converting said pulses into a fluid flow pattern, the characteristics of said flow pattern being dependent upon the number of pulses received, means limiting said fluid flowing within said fluid-operated means to a single plane, means connected to said source and said fluid-operated means for resetting said fluid-operated means after a predetermined flow pattern is created by said fluid-operated means and means limiting said fluid flowing within said resetting means to a single plane.

3,093,307
METER REGISTERS AND DRIVE MECHANISMS THEREFOR
Robert Z. Hague, Oradell, N.J., and Henning Karlby, Pittsburgh, and Amos B. Newbury, Murrysville, Pa., assignors to Rockwell Manufacturing Company, Pittsburgh, Pa., a corporation of Pennsylvania
Original application Mar. 14, 1952, Ser. No. 276,652, now Patent No. 2,858,461, dated Oct. 28, 1958. Divided and this application Oct. 25, 1957, Ser. No. 694,473
9 Claims. (Cl. 235—94)

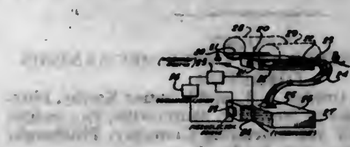


1. In a fluid meter having a meter housing, a register assembly adapted to be fixed to said meter housing and comprising a multi-component register casing delimiting a confined space, and a register sub-assembly structurally distinct from said register casing and mounted in said space solely on only one of the components of said register casing, said subassembly comprising a pair of spaced supporting frame members rigidly connected together and mounted on said one component of said register casing, a counter mechanism supported on at least one of said frame members, a speed reducing gear train driving said counter mechanism and including a series of fixed parallel shafts with meshing pairs of relatively large driven and relatively small drive gears journalled thereon, some of said shafts being solely mounted on and fixed to one of said frame members and terminating in spaced relation to the other of said frame members at one end and others of said shafts being mounted solely on and fixed to the other of said frame members and terminating in spaced relation to said one frame member, said frame members cooperating with each other to axially retain said relatively large driven and said relatively small drive gears on those shafts fixed to one of said frame members.

3,093,308
METHOD AND MEANS FOR CONTROLLABLY RELEASING HEAT FROM SUPER-COOLED LIQUIDS
Charles D. Snelling, Breinigsville, Pa.
Filed May 16, 1961, Ser. No. 110,511
15 Claims. (Cl. 236—1)

6. In a device for controlling the temperature of a temperature-sensitive object subject to the influence of fluctuating ambient temperature the combination including, a heat reservoir comprising a super-coolable chemical bath spacially related to and at a temperature greater than the object to be regulated, means insulating said object and said heat sink from each other and from

said ambient temperature under substantially adiabatic conditions, heat transfer means adapted to be coupled to said heat reservoir and said temperature-sensitive object, means for coupling said heat transfer means, temperature-sensing means associated with said object for actuating said coupling means in accordance with the temperature at which it is desired to control said object, and temperature-sensing means associated with said bath including means associated with said temperature-sensing means for promoting the solidification of said bath when said bath has reached a predetermined super-cool temperature.

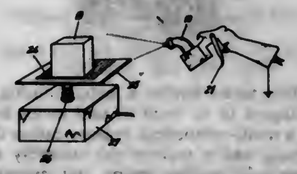


3,093,309

ELECTROSTATIC COATING APPARATUS OF SPRAY-GUN TYPE

Tamotsu Watanabe, 28 Yazukata-cho, Ohta-Ward, Tokyo, Japan

Filed July 18, 1960, Ser. No. 43,399
Claims priority, application Japan July 20, 1959
4 Claims. (Cl. 239—15)



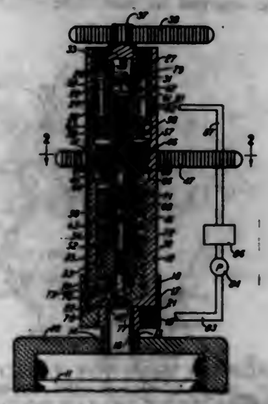
1. Electrostatic spray coating apparatus comprising, in combination, a nozzle support body having separate fluid coating material and air passages for respective connection to a source of coating material and a source of air under a preselected relatively low pressure of the order of seven p.s.i.; a plurality of atomizing nozzles on said body having their discharge axes lying in substantially the same plane and substantially parallel to each other for discharge of atomized coating material toward a common work surface; each of said nozzles having a relatively small diameter central orifice of the order of 0.5 mm. connected to said coating material passage and each having air discharge orifice means arranged around said central orifice and connected to said air passage, said air discharge orifice means directing compressed air inwardly toward the fluid coating material discharged from said central orifice to atomize the material solely by compressed air; the value of such low pressure, at nozzles, being of the order of seven p.s.i. and being coordinated with the relatively small discharge area of each of said relatively small diameter central orifices to effect thorough atomization of the coating material discharged therethrough; and means for establishing an electrostatic potential gradient between said nozzles and the work surface to move the thus compressed-air atomized coating material particles to the work surface to coat the latter; the atomized particle velocity, at a selected distance of the order of 30 cm. from the tips of said nozzles, being of the order of 0.5 mm./sec.; the sum of the discharge rates of five of said nozzles being of the order of the discharge rates of a single spray nozzle operating at a nozzle pressure of the order of 40 p.s.i. and with an atomized particle velocity, at a distance of the order of 30 cm. from its tip, of 15 mm./sec.

3,093,310

COMPRESSION PRESSURE FUEL INJECTOR

John C. Wagner, Orland Park, Ill., assignor to Jamaco Corporation, Kenosha, Wis., a corporation of Wisconsin

Filed Nov. 13, 1962, Ser. No. 237,164
5 Claims. (Cl. 239—87)



1. A fuel injector comprising a housing having a bore therein with one side of said bore being open for admitting gas therein, a piston movably disposed in said bore and having one end seating on the opening in said one side for controlling gas flow therethrough, the other end of said piston including a circular helix surface and defining a pressure chamber in said bore, said piston having a fuel passageway extending from said pressure chamber to said opening, check valve means in said passageway for controlling fuel flow therethrough, said housing having a fuel inlet port and a fuel outlet port both in fuel-flow communication with said pressure chamber, a jacket rotatably mounted in said bore and fluid tightly disposed on said helix surface and having a port in fuel-flow communication with said pressure chamber and in the path of movement of said helix surface for altering the flow of fuel with respect to said chamber according to the rotative position of said jacket, and positive engaging means for rotating said jacket.

3,093,311

METERING MIXING SPRAY EQUIPMENT

Jack Paul Morris, 416 East View Ridge, and Walter Morris, 1009 Colby, both of Everett, Wash.

Filed Oct. 4, 1961, Ser. No. 142,826
12 Claims. (Cl. 239—142)



1. A liquid metering, mixing and spraying mechanism comprising, a first liquid source having valve seat means in communication therewith; a cylindrical member having first and second ends, the first end thereof having a valve forming surface, and the second end terminating into a nozzle head; means normally biasing the first end of said cylindrical member into engagement with said valve seat means; a second liquid source; valve means for said second liquid source, said valve means being in a normally closed position and when open communicating said second liquid source with the interior of said cylindrical member; means for simultaneously moving said cylindrical member away from said valve seat means and opening said second liquid valve means, whereby the first and second liquids are simultaneously admitted into the interior of said cylindrical member and mixed therein; and means for ejecting such mixture from the nozzle head in the form of a spray.

3,093,312

IRRIGATION SYSTEM DEVICE

John Johnson, 4108 N. McDonald Road, Spokane 69, Wash.

Filed Oct. 17, 1962, Ser. No. 231,221
4 Claims. (Cl. 239—185)



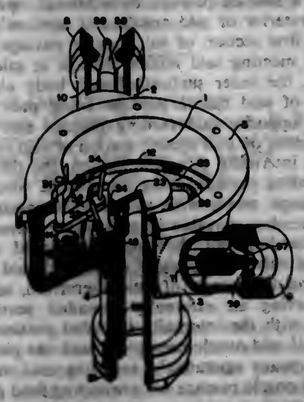
1. An irrigation system comprising a pair of widely spaced elongated parallel tracks, a spray boom suspended from said tracks and projecting to opposite sides thereof, and means at opposite ends of said tracks for moving said spray boom back and forth along said tracks, said spray boom being formed in sections and including two truss sections each having a hanger engaged with one of said tracks, and each section including a central spray pipe, terminal plates secured to said spray pipe, reinforcing rods extending between said terminal plates and spaced around said spray pipe, and fillers carried by said spray pipe and bracing said reinforcing rods intermediate said terminal plates.

3,093,313

TURBINE-DRIVEN IRRIGATION DEVICE

Paavo Viktor Ludvig Salminen, Topeliuksenkatu 29B, Helsinki, Finland

Filed Nov. 29, 1960, Ser. No. 72,412
6 Claims. (Cl. 239—236)



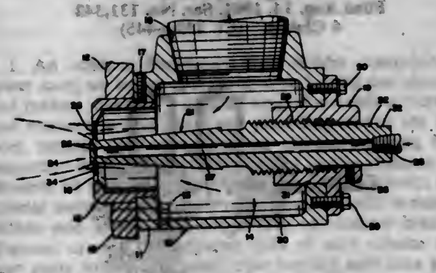
1. A rotary sprinkling device, comprising, in combination, a supporting means; a turbine means mounted on said supporting means and including an inlet means and a rotary whel means; a rotary body means having nozzle means and enveloping said turbine wheel means, said rotary body means being mounted on said supporting means for turning movement; first transmission means connecting said body means with said rotary wheel means so that said body means rotates when water passes through said inlet means and said rotary wheel means to said nozzle means and out of said rotary body means; nozzle control means including movable valve means in said nozzle means for controlling the flow of water through said nozzle means; and second transmission means connecting one of said rotary means with said nozzle control means for operating said valve means to vary the flow of water through said nozzle means; said valve means including a recess for downwardly deflecting the stream of water, said recess being operative when said nozzle means is at the center of one side of a substantially rectangular area sprinkled by said nozzle means.

3,093,314

LIQUID FUEL ATOMIZER

David Meyer, Canton, Ohio, assignor to E. W. Bliss Company, Canton, Ohio, a corporation of Delaware

Filed Nov. 16, 1960, Ser. No. 69,626
4 Claims. (Cl. 239—417)



1. In a liquid fuel atomizer device including a housing having an air inlet port and an orifice outlet port, each communicating wtih the interior of said housing, a body member movably mounted in said housing having a fuel inlet, a fuel discharge tip communicating with said fuel inlet and located at said orifice outlet, the improvement comprising: said fuel discharge tip having circumferentially spaced discharge channels in the surface of said body member sloping radially inwardly from in front of diffuser plate means and in communication with said fuel inlet, said diffuser plate means comprising a thin coin like disk formed about the outer peripheral surface of said body means and having circumferentially spaced circular openings therein corresponding to each of said discharge channels with the axes of said openings parallel to the axis of said fuel discharge tip and at an acute angle to the respective discharge channels whereby fuel is drawn from the interior of said discharge tip along each of said channels for atomization with an air stream under pressure passing through said spaced openings in said diffuser plate.

3,093,315

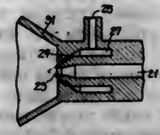
ATOMIZATION APPARATUS

Kenkichi Tachibi, 117 Sun-ya-cho, Meguro-ku, and Masami Sata, 17 2-chome, Kami-Nakazato, Kita-ku, both of Tokyo, Japan

Filed Mar. 22, 1960, Ser. No. 16,848
6 Claims. (Cl. 239—424)

1. An apparatus for atomization of a liquid comprising a nozzle having a gate for discharge of liquid and an orifice for discharge of gas arranged around said gate for jetting said gas so as to converge at a focus on the axis of said gate on the discharge side of said gate, said

gate having a protrusion with respect to said orifice, said focus being arranged in such a manner that the smallest limit of the ratio of the distance between the outlet of said gate and said focus to the diameter of said gate is between about 1.2 and about 1.4, the ratio of the equivalent diameter of said orifice to the diameter of said gate being in the range of from about 0.5 to about 1.5, and the ratio of the distance between said focus and said outlet of said orifice to said equivalent diameter of said orifice being in the range of from about 0.15 to about 0.50.



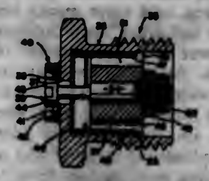
3,093,316
BEVERAGE DISPENSER NOZZLE
Robert M. Hedesman, 14 Fernwood Road, Kings Point, N.Y.
Filed Aug. 14, 1961, Ser. No. 131,342
4 Claims. (Cl. 239—445)



1. A beverage dispenser nozzle for a selective beverage vending machine, comprised of a conduit block having an upper cavity and a substantially larger lower cavity, said cavities being disposed in axial communicative relation, a delivery exit nozzle core having an axial passage therethrough, said nozzle core having a stem and a cylindrical core body depending therefrom, an O-ring annularly connected to said cylindrical core body, said core body having a lower end and a first annular shoulder adjacent said stem, said nozzle core being removably adapted within said upper and lower cavities, a plurality of circularly oriented downwardly disposed orifices within said cylindrical core body, a second annular shoulder integral with said cylindrical core body and spaced adjacent the lower end thereof, said plurality of orifices being normal to the plane of said second annular shoulder and in communicative relation therewith, a delivery exit nozzle having a passage therethrough, said delivery exit nozzle being supported by said cylindrical core body and sealingly connected to said O-ring, said exit nozzle passage and said delivery exit nozzle core passage being disposed in coaxial relation.

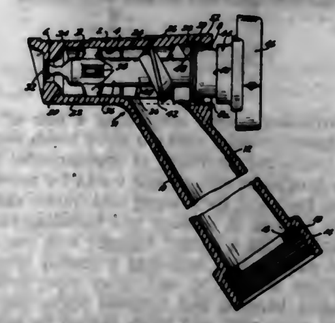
3,093,317
FUEL INJECTION NOZZLE
Harold C. Simmons, South Euclid, and Lawrence B. O'Sickey, University Heights, Ohio, assignors to Parker-Hannifin Corporation, Cleveland, Ohio, a corporation of Ohio
Filed Aug. 24, 1960, Ser. No. 51,613
7 Claims. (Cl. 239—453)

5. A fuel injection nozzle comprising a body having an inlet for fuel under pressure and a discharge orifice, a pintle valve movable in said body, spring means between



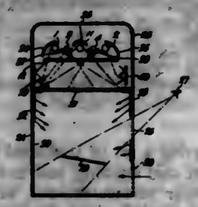
said body and valve; and spring damping means having a surface in frictional contact with said spring means.

3,093,318
ADJUSTABLE NOZZLE
Ho Chow, Yonkers, N.Y., assignor, by mesne assignments, to International Patent Research Corp., New York, N.Y., a corporation of New York
Filed Feb. 28, 1961, Ser. No. 92,303
3 Claims. (Cl. 239—456)



1. An adjustable nozzle comprising a one-piece body having first and second angularly related parts, said first part having a nozzle passage therethrough with first and second openings to the exterior of said nozzle at opposite ends thereof respectively, said first opening defining a fluid exit opening, said nozzle passage having first and second sections of relatively increasing internal size, said first section being located nearer to said first opening than said second section and being located between and spaced from said first and second openings, said second part having a feeding passage therethrough open at one end to the exterior of said nozzle and open at the other end to said first section of said nozzle passage, said feeding passage meeting said nozzle passage at said first section thereof, the inner surface of said body along said first section of said nozzle passage being provided, at least in part opposite said feeding passage and extending to and opening on said second section of said nozzle passage, with an internally threaded portion, the threads opposite said feeding passage being interrupted where said feeding passage meets with said nozzle passage, a unitary valve member movable in said nozzle passage, having a part extending out through said second opening, and having a valve tip movable relative to said first opening to control the escape of fluid therefrom, said valve element having an externally threaded portion engaging directly with the internally threaded portion in said first section of said nozzle passage of said one-piece body, and sealing means operatively engaging said valve member and said nozzle passage for preventing fluid escape at said second opening, said second opening being larger in internal diameter and said first opening being smaller in internal diameter than said first section of said nozzle passage, said second opening being no smaller in internal diameter than said second section of said nozzle passage and communicating therewith without constriction therebetween, whereby said nozzle passage may be formed in said one-piece body by operations all conducted from one end of said nozzle passage and said valve member may be inserted into and removed from said nozzle passage via said end thereof.

3,093,319
APPARATUS FOR PRODUCING ARTIFICIAL DAYLIGHT
Charles Henri Alfred Gaumain, 31 Rue des Annelets, Paris, France
Filed Oct. 21, 1960, Ser. No. 64,075
Claims priority, application France Nov. 26, 1959
1 Claim. (Cl. 240—1.1)



Apparatus for artificially producing light having predetermined, desired characteristics equivalent to those of a special type of light such as natural light and for viewing a subject to which said artificially produced light is applied, which apparatus includes: an enclosure having a light generating chamber portion, and a subject receiving chamber portion, there being means permitting placement of a subject to be viewed within said latter chamber portion and means permitting viewing of a subject within said latter chamber portion; light diffusing means within said enclosure between said chamber portions thereof; a plurality of electrically operable light sources within said light generating chamber portion, said sources including an incandescent, tungsten filament lamp, an incandescent, tantalum filament lamp, an ultraviolet lamp and luminescent lamps; reflector means adjacent the rear and one side of each of said luminescent lamps; slitted covers mounted in front of certain of said incandescent lamp; electrical circuit means coupled with each of said sources for energizing the latter; variable resistance means coupled in said circuit means for controlling the energization of at least certain of said sources; and switch means coupled in said circuit means for selectively operating different pluralities of said sources.

3,093,320
LAMP CONSTRUCTION
George A. Knapp, De Witt, N.Y., assignor to R. E. Dietz Company, Syracuse, N.Y., a corporation of New York
Filed Nov. 1, 1960, Ser. No. 66,677
4 Claims. (Cl. 240—8.2)



1. A lamp having two incandescent bulbs comprising a base member of conducting material, means integral with said base member forming the lower portions of a pair of spaced, coaxial lamp bulb sockets, a flat insulating plate, means forming the upper portions of said bulb sockets and engaging said insulating plate to hold it in upright position centered between the confronting ends of the bulb sockets, said plate being disposed at substantially right angles to the axes of said sockets, a spring contact strip narrower than said plate and being secured to said insulating plate, said strip having portions extending along the opposite sides of the plate for engagement with the base terminals of the lamp bulbs mounted in said sockets, said contact strip portions being sprung outwardly from said insulating plate when said bulb sockets are empty and being pushed inwardly into substantially parallel relation to the plate when bulbs are mounted in the sockets, and an electrical conductor connected to said contact strip to deliver current thereto.

3,093,321
OUTDOOR FLUORESCENT LIGHT HOLDER
Howard L. Christy, 4616 N. 12th St., Phoenix, Ariz.
Filed June 16, 1961, Ser. No. 117,706
2 Claims. (Cl. 240—25)

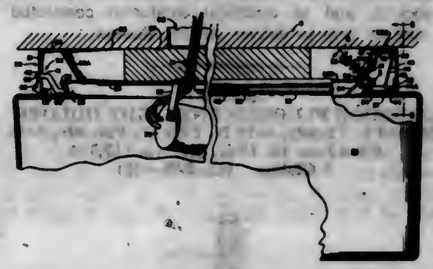


1. An outdoor fluorescent light holder comprising a lower case, an upper case, each case having top closures and bottom closures, a tubular support extending through and connecting said cases and providing means for support, tubular fluorescent lighting elements having their respective ends operatively supported in the adjacent end closures of said lower and upper cases respectively; said tubular support having two parts longitudinally separated within said lower case, a plurality of channel brackets disposed around the adjacent ends of said tubular support parts within said lower case holding said tube parts in spaced and axially aligned relation, radiating and supporting plates having flat central areas to receive and support ballast cases, centrally attached vertically to each of said channel brackets respectively, and having radiating baffle plates on each side of said central area extending angularly outward from said central areas, attached to said channel brackets, and ballast units attached to said supporting plates and operatively connected to said lighting units; the bottom closure of said lower case and the bottom closure of said upper case being perforated with a plurality of ventilating holes so that air will circulate through said bottom case upward through said tubular support and outward through the bottom closure of said top case.

3,093,322
LIGHTING FIXTURE
Allan O. Bontello, Jefferson, Wis., assignor to Thomas Industries Inc., Fort Atkinson, Wis., a corporation of Delaware
Filed June 20, 1960, Ser. No. 37,171
13 Claims. (Cl. 240—78)

10. A ceiling light fixture comprising a base having an entrance on its underside, a cover enclosing said entrance which includes a neck portion of smaller cross section than said entrance and extending therethrough into the interior of the base, said neck portion having a pair of peripherally-disposed, oppositely-located offsets projecting outwardly therefrom in fixed relation to each other and to said neck portion, one of said offsets constituting horizontal pintle means, a catch member mounted within and connected to said base including a relatively long shank depending from its connection with the base and having a relatively shorter lower end upturned and partially encircling said pintle means leaving a space there-

between and the shank which is of a greater width than the diameter of the pintle means, said pintle means being rotatably caught by said upturned end, said base having further means opposite said catch member forming a horizontal shoulder accessible from the inside of the base on which the other offset rests, said catch member being biased to resist sliding of the other offset from said shoulder, and said cover being bodily movable in a generally horizontal direction against said bias of the catch member to move



the other offset off the shoulder and permit the cover to swing down out of the entrance to said base with its pintle means caught in the upturned end of the catch member, the upturned end of the catch member being shorter than the shank of the catch member allowing the pintle means to be raised through said space between the upturned end and shank of the catch member by bodily raising the cover in a vertical direction and thereby complete separation of the cover from the base.

3,093,323
LIGHT DIFFUSORS
Edwin F. Guth, Jr., Ladue, Mo., assignor to The Edwin F. Guth Company, St. Louis, Mo., a corporation of Missouri
Filed Oct. 12, 1961, Ser. No. 144,674
4 Claims. (Cl. 240—78)



1. In a light-controlling panel having a lattice of elongate intersecting prisms of substantially transparent material formed of spaced longitudinal elements and spaced transverse elements defining a multiplicity of generally frusto-pyramidal openings through the panel, said prisms being substantially triangular in cross-section and having their apices at the upper surface of the panel disposed in the plane of the larger base of said frusto-pyramidal openings, wherein the angle included between the convergent surfaces of said prisms which define said apices being between thirty-four and forty-five degrees and the base of said prisms form the lower surface of the panel, the improvement comprising a plurality of regular grooves and ribs disposed parallel to the longitudinal elements and forming a continuous corrugated lower surface on said prisms.

3,093,324
VEHICLE LAMP
Harold L. Doberitz, Chicago, Ill., assignor to Berg Airlectro Products Company, Chicago, Ill., a corporation of Illinois
Filed Jan. 27, 1960, Ser. No. 4,986
2 Claims. (Cl. 240—8.2)

2. For use in a vehicle external light system, a combination light housing and junction box structure comprising a box-like housing having a bottom wall, a substantially continuous side wall, said side wall having a cover-receiving surface, a plurality of U-shaped openings in said side wall, said openings intersecting said cover-receiving surface, and a cover adapted to seat upon said cover-receiving surface, said cover being formed substantially of light-transmitting material, and yielding means movably secured to said housing and engaging said cover and urging said cover toward said cover-receiving surface, a U-shaped, axially apertured seal member seated in each of said side wall openings and having a relatively flat surface intersecting said cover-receiving surface in position to be compressed by said cover in response to said urging thereof by said yielding means, each of said



seal members having a set of U-shaped lips engaging said side wall adjacent said opening, said cover having pockets formed in the outer surface thereof, said yielding means comprising a plurality of spring clip members, said spring clip members being pivotally secured to said housing and having a first portion curved inwardly toward said housing and terminating in an end portion adapted to seat yieldingly in said pockets, abutment means secured to said housing and extending substantially along and adjacent said clip first portion in an upwardly, outwardly direction from said housing, said abutment means being positioned between said housing and said spring clip first portion to prevent inward movement of said spring clip first portion toward said housing beyond a predetermined point when said clip is in engagement with said cover.

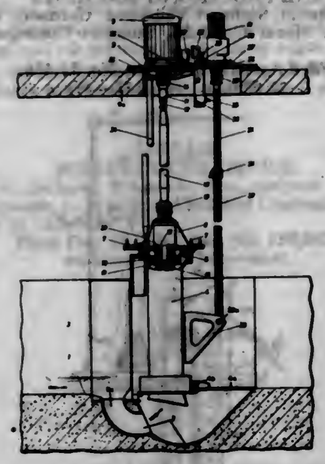
3,093,325
ROTARY APPARATUS FOR SCREENING, COMMINUTING AND WASHING
Harry J. Baumbl, 831 E. Furnace St., Norristown, Pa.
Filed Jan. 17, 1961, Ser. No. 83,365
4 Claims. (Cl. 241—43)



1. A portable device for the classification and washing of aggregate comprising a generally rectangular mobile frame; a motor mounted on one end of said frame; a hollow cylindrical drum rotatably mounted on said frame longitudinally spaced apart from said motor; a shaft journaled between vertically extending frame members on which said drum is mounted; a screw conveyor including integral hopper means mounted on said frame intermediate said motor and said drum, discharging into one end thereof; said motor including a shaft, said screw conveyor including a shaft on which its flights are mounted, these shafts and said drum mounting shaft being operatively connected and in axial alignment so that rotation of said motor rotates both said conveyor and said drum shafts; a water tight trough mounted on said frame surrounding

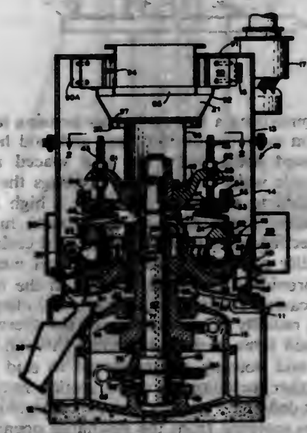
and enclosing the lower portion of said drum; said drum further including internal transverse generally circular dividers delineating a plurality of internal longitudinal zones and preventing passage of oversize aggregate therebetween, foraminous walls the mesh of which differs from zone to zone; a plurality of helicoids affixed to the exterior of said drum, one helicoid being associated with each zone; a plurality of bucket elevators affixed to the exterior of said drum, each elevator being associated with a given zone and being longitudinally positioned proximate the terminus of the helicoid for said zone; discharge means associated with each of said elevators; constant level means for circulating water through said trough; an internal elevator mounted on said drum at the end thereof remote from said screw conveyor; discharge means for tailings operatively associated with said internal elevator; rotation of said motor simultaneously causing said screw conveyor to feed material from its hopper into one end of said drum, tailings to be discharged by said internal elevator from the other end of said drum, material to pass through said foraminous walls into said trough at predetermined longitudinal locations dependent upon its size, each of said helicoids to urge solid material along said trough, within the boundaries of each of said zones, toward its elevator, and the discharge of solid material of a given size range by each of said external elevators; all of said solid materials being washed by water present in said trough.

3,093,326
WATER PURIFICATION AND WASTE DISPOSAL SYSTEMS
Karl Zavell, Hahnstätten, Germany, assignor to Passavant Werke, Nassau, Germany
Filed Jan. 27, 1960, Ser. No. 4,990
Claims priority, application Germany Jan. 31, 1959
5 Claims. (Cl. 241—46)



1. A water purification and waste disposal system comprising a first housing defining an intake and defining an outlet for water and solid matter fixedly secured to the bottom of a bed for a body of water, a second housing substantially in the shape of a cylinder vertically arranged above said first housing, said second housing accommodating therein a rotatable crushing machine in the lower portion thereof and defining an intake juxtaposed to said outlet of said first housing to receive the outflow derived from said first housing, a cantilever bracket projecting laterally from said second housing, a fixed horizontal pivot supporting said second housing adjacent the upper end thereof, a first electric motor arranged at a level above said second housing for operating said crushing machine therein, vertical shaft means arranged in coaxial relation to said second housing and including a pair of universal joints operatively relating said first motor and said crushing machine, a cone clutch arranged adjacent the upper end of said second housing interposed into said shaft means movable between an engaged position and a disengaged position thereof by pivoting said second housing about said pivot relative to said first motor and to said first housing, a second electric motor arranged at a level above said second housing and laterally spaced therefrom for tilting said second housing about said pivot, and a transmission means operatively relating said second motor and said cantilever bracket on said second housing, said transmission means comprising a telescoping tie mechanism operated by said second motor and having one end thereof pivotally secured to said cantilever bracket.

3,093,327
PULVERIZER
James L. Harvey and Alden Q. Beaty, Wadsworth, Ohio, assignors to The Babcock & Wilcox Company, New York, N.Y., a corporation of New Jersey
Filed May 29, 1962, Ser. No. 198,682
8 Claims. (Cl. 241—52)



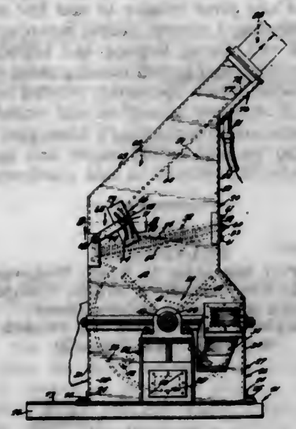
1. A pulverizer comprising a housing enclosing a pulverizing zone, said pulverizing zone including horizontally disposed upper and lower grinding rings, a horizontally disposed circumferential row of rolling grinding elements positioned between said upper and lower rings, means for rotating said upper grinding ring including an upright shaft having its upper end projected above said upper grinding ring and its lower end projected below said housing, a gear housing positioned below said housing to enclose the lower portion of said shaft, drive means for rotating said shaft, adjustably resilient means for connecting the upper portion of said shaft with said upper grinding ring to transmit the rotation of said shaft to said upper grinding ring and to exert a downward pressure on said upper ring including a yoke mounted on the upper end portion of said shaft, a horizontally disposed annular member radially spaced from and encircling said yoke, means for adjustably positioning said member relative to said upper grinding ring and means for resiliently connecting said member and upper grinding ring, means for discharging material to be pulverized into said pulverizing zone, and means for withdrawing pulverized material from said pulverizer.

3,093,328

TURBO MILL

Marx Law, Scottsdale, Ariz.
(P.O. Box 1382, Phoenix, Ariz.)

Filed Oct. 6, 1961, Ser. No. 143,397
1 Claim. (Cl. 241—55)



A mill comprising a base, a hollow housing including a lower section mounted on said base and said housing including spaced apart end walls and spaced apart side walls, said side walls having inlet openings therein, hoppers connected to said inlet openings; a high speed impeller including a generally circular casing mounted in the lower section of said housing and said casing including a plurality of arcuate overlapping wall members arranged to provide a discharge opening in the upper portion of the casing, said impeller further including a rotary hub having radially disposed arms affixed thereto, blades affixed to said arms, a shaft extending through the lower section of said housing and conneced to said hub; said housing further including an upper section having a hollow interior defining a chamber which communicates with and receives material from the discharge opening of the casing; an anvil supported in the housing above the impeller and said anvil including side members having a plurality of spaced parallel bars secured thereto, each of said bars having a tapering portion adjacent one end, one of the end walls of said housing having an opening therein for the withdrawal and insertion therethrough of the anvil; an inclined chute in the upper portion of said housing and said chute being defined by a top wall and a slanting wall member arranged in spaced parallel relation below said top wall, there being an opening defined in the lower portion of the wall member; an adjustable damper mechanism for controlling flow of material from said chamber through said last named opening into the chute, said damper mechanism comprising a pivotally mounted baffle, a pivot rod affixed to said baffle, a lever arranged externally of said housing and connected to said pivot rod, a pointer on the end of said lever, a calibrated base piece affixed to said housing and having an arcuate slot therein, an adjustable securing element extending through said slot and connected to said lever, an inclined wall section within said chute and having a plurality of spaced parallel slots therein, there being a compartment defined below said wall section for receiving material passing downwardly through said inclined wall slots.

3,093,329

BREAKER PLATE STRUCTURE

Thomas E. Bridgewater, Elmhurst, Ill. (% Adams Engineering Company, 2151 E. 83rd St., Chicago 17, Ill.)

Filed June 28, 1961, Ser. No. 120,219
10 Claims. (Cl. 241—275)



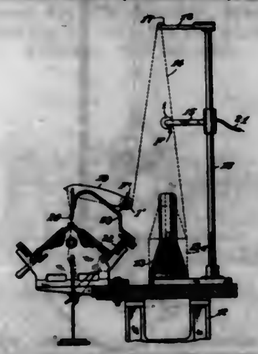
1. In a crushing apparatus of the type described having a central upright rotatable impeller structure, cylindrical housing means surrounding said impeller structure and brackets secured within said housing means around said impeller structure and presenting upwardly facing support edge means and upstanding abutment surface means, a breaker plate structure disposed around said housing means and radially outwardly of the impeller structure and including a support member disposed against said surface means and including hook means engaging over said edge means, said support member having an opening therein, a breaker plate member abutting said support member and including a rearwardly extending lug projecting into said opening and having an aperture therein, and wedge means extending into said aperture and cooperating with said support member for releasably holding said breaker plate member against said support member.

3,093,330

FEEDING MECHANISM FOR YARN WINDING AND PROCESSING MACHINES

Richard Schmidt, Stuttgart-Vaihingen, Germany, assignor to Franz Morat G.m.b.H., Stuttgart-Vaihingen, Germany

Filed Apr. 11, 1960, Ser. No. 21,480
12 Claims. (Cl. 242—45)



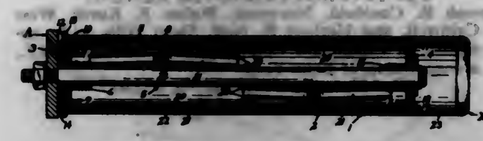
1. In a textile machine, a feeding mechanism for moving a pair of yarns in predetermined directions and at predetermined constant speeds against variable resistance which the yarns offer to such movements, said mechanism comprising a rotary engine including a pair of coaxial electric motors each of which comprises a rotor, said rotors having smooth peripheral surfaces of tempered hardness, each of said surfaces engaging one of the yarns along at least a portion thereof, and said motors being adapted to drive the respective rotors at such peripheral speeds and in such directions that the peripheral speeds of the rotors exceed said predetermined speeds and that said rotors feed the respective yarns by friction in said predetermined directions whereby slippage occurs between the yarns and the respective surfaces, the peripheral speeds of said surfaces and the friction between said surfaces and the respective yarns being correlated with the resistance which the yarns offer in such a way that the yarns moving in said predetermined directions advance at said predetermined speeds.

3,093,331

MOUNTING HEAD FOR PIRNS

Robert L. Carroll, Greenville, S.C., assignor to Acrometal Products, Inc., Minneapolis, Minn., a corporation of Minnesota

Filed Jan. 24, 1961, Ser. No. 84,717
1 Claim. (Cl. 242—46.6)



Mounting head for pirns comprising an elongated cylindrical metal body having a straight tubular wall structure from end to end thereof and of substantially uniform diameter throughout the length thereof, bearing carrying end plates mounted within the ends of said tubular wall structure and rigidly supporting bearings at opposite ends thereof, a plural series of circumferentially arranged slots extending longitudinally from points adjacent the end portions of said tubular wall structure, each series including widely spaced pairs of slots, the slots of each series being misaligned with respect to the slots of each other series, said pairs of slots of each series terminating at widely spaced circumferential points about the center of said tubular wall structure, whereby to provide relatively wide unslotted transversely curved wall portions extending uninterruptedly from end to end of said structure, and outwardly bowed relatively narrow wall portions defined by each pair of slots providing resilient rib portions disposed between said uninterrupted wall portions, and said rib portions having sharp edges adapted to bite into longitudinally staggered inner wall portions of a pirn slidably supported on said tubular wall structure.

3,093,332

BOBBIN CHUCK DEVICE

Robert C. Jackson, Pensacola, Fla., assignor, by mesne assignments, to Monsanto Chemical Company, a corporation of Delaware

Filed Dec. 18, 1961, Ser. No. 159,842
4 Claims. (Cl. 242—46.6)



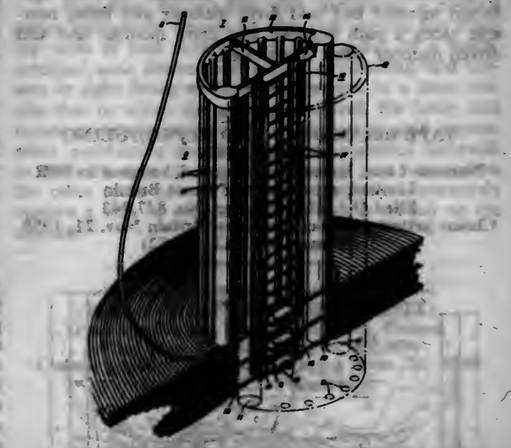
1. A bobbin chuck device, for rotatably carrying a tubular bobbin comprising, an elongated bobbin receiving member adapted to be rotatably driven, a plurality of annular grip rings mounted coaxially on said bobbin receiving member, each of said annular grip rings carrying circumferential brushes formed from a multiplicity of flexible strips of predetermined length extending outwardly therefrom and being arranged circumferentially in a common inclined sweep to respective radial planes, the outer free ends of said flexible strips normally being circumscribed by a circle having a diameter larger than the inside diameter of said bobbin, said flexible strips serving to grip said bobbin normally mounted coaxially about said flexible strips and being effective to permit said bobbin to shift position on said bobbin receiving member to control conditions of unbalance, limit means carried on said bobbin receiving member for limiting the degree of shifting of said bobbin thereon, and clamping means associated with said bobbin receiving member for clamping said plurality of annular grip rings thereon.

3,093,333

STOWAGE APPARATUS FOR CABLE INSTRUMENTALITY HOUSINGS

Walter M. Bishop, Mountainside, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed July 1, 1960, Ser. No. 40,272
7 Claims. (Cl. 242—54)



1. Stowage apparatus for holding cable housing structures in a tiered stack formation preparatory to their sequential launching during subsequent cable paying-out operations, said apparatus comprising instrumentalities so constructed and arranged as to define a launching path for said housings during cable paying-out operations, a plurality of self-retracting holding means each adapted to hold at least part of a housing, means for mounting each of said holding means for movement into two alternative positions, one of said positions being in said launching path and the other position being out of said launching path, and biasing means for moving each of said holding means to said position out of said launching path.

3,093,334

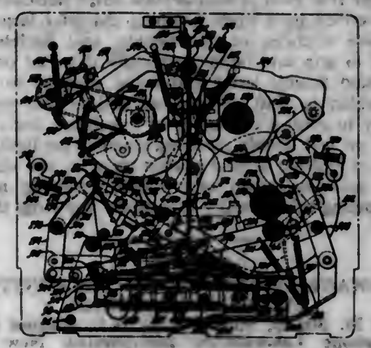
MAGNETIC RECORDING AND REPRODUCING APPARATUS

Dallas R. Andrews, Merchantville, N.J., assignor to Radio Corporation of America, a corporation of Delaware

Filed Apr. 27, 1959, Ser. No. 809,192
27 Claims. (Cl. 242—55.12)

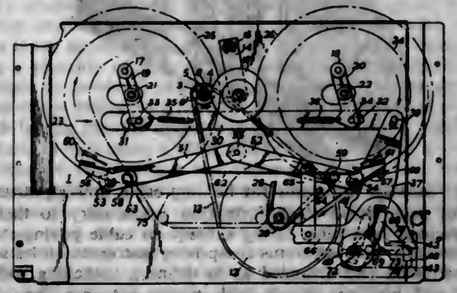
26. In a tape drive system, the combination comprising a rotatable drive member, a rotatable driven member spaced from said drive member, and a rotatable coupling member disposed between said driven member and

said drive member and in contact therewith in such relation that a line between the center of said driven member and the center of said coupling member and another line between the center of said coupling member and the center of said drive member define a snubbing angle of slightly less than 180°, said coupling member being



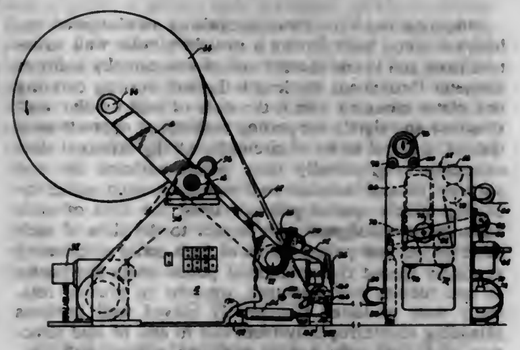
constituted at least in part of resilient, compressible material, said coupling member, when compressed, having a dimension smaller than the distance between said driven member and said drive member and being movable along a path between said drive member and said driven member when compressed..

3,093,335
TAPE RECORDING AND REPRODUCING APPARATUS
Norman Lane, Halesowen, England, assignor to BSR Limited, a company of Great Britain
Filed Oct. 22, 1959, Ser. No. 847,943
Claims priority, application Great Britain Nov. 21, 1958
7 Claims. (Cl. 242—55.12)



1. Sound recording and reproducing apparatus of the kind utilizing a magnetic tape movable in both directions between two rotatable spools, said apparatus comprising a driving motor including a driving spindle, a first friction pulley mounted on said driving spindle, a second and reversing friction pulley driven by said first friction pulley, two rotatable spool carriers mounted one at each side of the pulley assembly comprising said first friction pulley and said second and reversing friction pulley and rotatable together in the same direction both clockwise and counterclockwise, two movable bearing members each carrying one of said spool carriers for movement in their own planes of rotation towards and away from the said pulley assembly, a longitudinally movable hand-operated control bar having a pin-and-slot connection with each of said bearing members, spring means biasing said two bearing members and the said spool carriers carried thereby towards one another and towards the said pulley assembly between said spool carriers, the arrangement being such that the spool carriers are moved simultaneously and in the same direction by movements of the control bar between two terminal positions in which one of the said spool carriers is held by said spring biasing means in yielding driving pressure engagement with one of the pulleys of the said pulley assembly and the other spool carrier is held by the control bar in opposition to said spring biasing means away from driving engagement with the other pulley of said pulley assembly and an intermediate position in which both said spool carriers are held in opposition to said spring biasing means out of driving contact with either of the pulleys of said pulley assembly.

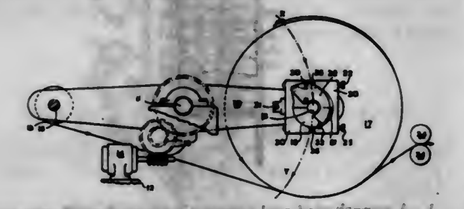
3,093,336
CONTINUOUS TURNOVER REWIND
Joseph R. Caulfield, Norwood, Walter E. Korth, West Caldwell, and Herbert E. Neff, Short Hills, N.J., assignors to Champlain Company, Inc., Roseland, N.J., a corporation of New York
Filed Nov. 17, 1959, Ser. No. 853,617
11 Claims. (Cl. 242—66)



10. A two-spindle turnover rewind for forming large rolls from a continuously supplied web, said rewind comprising a stand carrying a turnover shaft, a spaced pair of relatively long arms carried by the turnover shaft, roll core spindles at the ends of said arms, a motor to index the turnover shaft, a motor to rotate one roll core spindle, a motor to rotate the other roll core spindle, a knife disposed transversely of the web for cutting the web when completing one roll and starting another, a touch roller disposed transversely of the web, a movable support for both the knife and touch roller, an actuator to move said support transversely of the web toward the core spindle of a new roll to simultaneously cut the web between the old and new rolls and to press the new starting end of the web against the core of the new roll, a manually depressible push button control to cause operation of said actuator, delay means to cause a briefly maintained operation of said actuator corresponding to one or more rotations of the new roll, and means also responsive to operation of said manual control to automatically stop the completed roll.

3,093,337
APPARATUS FOR JOINING A FRESH WEB TO AN EXHAUSTING WEB CONTINUOUSLY FEEDING PROCESSING MACHINERY
Angus Murray Hailey, Edgbaston, Birmingham, England, assignor to James Hailey & Sons Limited, West Bromwich, England, a British company
Filed Oct. 8, 1962, Ser. No. 229,150
Claims priority, application Great Britain Jan. 2, 1959
3 Claims. (Cl. 242—58.2)

1. Apparatus for joining a fresh web to an exhausting web that is being continuously fed to processing machinery or the like comprising a support, a turret pivotally mounted on said support, an exhausting web roll mounting shaft and a fresh web roll mounting shaft each rotatably mounted on the turret, means guiding the exhausting web toward said machinery in peripheral frictional contact with said fresh web roll, means releasably locking said fresh web roll against rotation on said turret, drive means for rotating the turret about its pivot on the support in a selected direction for interchanging the positions of said roll shafts relative to said machinery, means made effective by initial rotation of said turret in said direction for releasing said locking means, said initial rotation of said



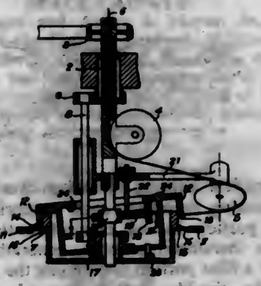
turret being accompanied by increased frictional contact between the exhausting web and said fresh web roll, and means operative automatically after said locking means is released and actuated by continued movement of the turret in said direction acting in combination with the increased frictional pressure between said exhausting web and the fresh roll for accelerating the rotation of the released fresh roll during less than one revolution of said fresh roll to a peripheral speed that is substantially equal to the speed of the exhausting web by virtue of the speed correction applied to the new roll by the exhausting web in peripheral frictional contact therewith during said acceleration.

3,093,338
REEL FOR COILING STRIP MATERIAL
George E. Trapp, Pittsburgh, Pa., assignor to United Engineering and Foundry Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Sept. 29, 1959, Ser. No. 843,242
7 Claims. (Cl. 242—72.1)



1. An expansible reel upon which strip materials of various gages are to be coiled comprising a stationary element, a segment operatively engaged with said element, means in engagement with said element and said segment operable in one direction to cause said segment to be placed into the reel expanded position, and means for securing the end of a strip material to be coiled upon said reel comprising a stationary gripper jaw secured to said element, a movable gripper jaw operatively engaged with said segment and caused to move toward said stationary gripper jaw on said movement of said segment in said one direction, a member extending between said element and said movable jaw operatively engageable with said movable jaw and effective to urge said movable gripper jaw toward said stationary jaw on the movement of said segment in said one direction, and resilient means interposed between said movable jaw and said segment for maintaining said movable jaw in engagement with said member.

3,093,339
ARRANGEMENTS FOR WINDING WIRE AT HIGH SPEED INTO CIRCULAR TURNS
Jean Goldsridge, 11 Boulevard Henri Barbusse, Houilles, France
Filed June 15, 1960, Ser. No. 36,411
7 Claims. (Cl. 242—82)



1. Apparatus for winding wire comprising a capstan means operatively associated with said capstan for winding turns of said wire around said capstan in a predetermined zone thereof and means surrounding said capstan in tight fitting uniform engagement in a zone outside that in which the wires are wound, the latter said means cyclically oscillating with respect to said capstan while maintaining the tight fitting engagement therewith to cyclically urge the last wound turn of said wire against the other turns of wire on said capstan to successively remove a turn of wire as another turn is wound on the capstan.

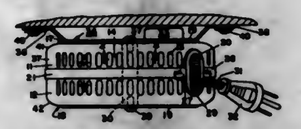
3,093,340
FIXED-DRUM TYPE FISHING REEL
Paul Mauborgne, Bernouville, Eure, France
Filed June 12, 1959, Ser. No. 820,030
Claims priority, application France June 26, 1958
8 Claims. (Cl. 242—84.21)



4. A fishing reel of the type adapted to be selectively conditioned for reeling in or for casting, said reel having a rotatable flier mounted on a rotatable shaft forming a first support to support said flier, a sleeve surrounding said rotatable shaft forming a second support for supporting a spool coaxially of said first support, a spool mounted on said second support, means including a gear lying in a plane parallel to said rotatable shaft to rotate said first support, an eccentric pin forming a crank mounted on said gear, a crosshead engaging said eccentric pin, means on said second support engaging said crosshead to cause relative reciprocation between said first and said second supports upon rotation of said flier by said gear when said reel is conditioned for reeling in, whereby said spool and flier are reciprocated with respect to each other, and manually operable means adapted to engage said second support independent of said gear and of said crosshead to positively move said second support to disengage said means on said second support from said crosshead to

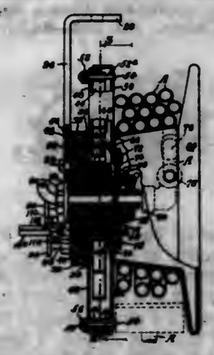
condition the reel for casting, and means biasing said second support toward its position engaging said crosshead to condition said reel to reeling in condition.

3,093,341
CORD REEL
Adolph Meiotti, Philadelphia, Pa., assignor to Vacuum Cleaner Corporation of America, Philadelphia, Pa., a corporation of Pennsylvania
Filed Aug. 10, 1962, Ser. No. 216,150
6 Claims. (Cl. 242—107)



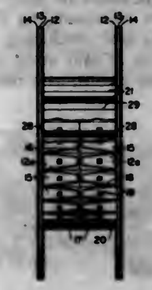
1. A cord-reel housing including two generally symmetrical housing members each comprising a general cylindrical portion having circumferentially distributed perforations therethrough and a generally disc-like end portion and a fillet portion intervening the cylindrical portion and the disc-like portion thereof, a twin-grooved juncture-band intervening the free edges of the cylindrical portions of said housing members, with said edges telescoped into the opposite grooves thereof, a co-axial reel-arbor between the disc-like portion of said housing members, and means securing said disc-like portions to the opposite ends of said arbor for maintaining the aforementioned cylindrical edges of said housing members in telescoped relation to said juncture-band.

3,093,342
INDUSTRIAL TYPE REEL AND BALANCER
Fred W. Krohn, Detroit, Mich., assignor to Walter Machine and Screw Company, Detroit, Mich., a corporation of Michigan
Filed May 18, 1960, Ser. No. 29,894
4 Claims. (Cl. 242—107.5)



1. An adjustable reel comprising a stationary supporting means including a stationary ring, a clock spring having inner and outer ends, an adjustable L-shaped ring adjustably mounted on said stationary ring, means connecting the inner end of said spring to said adjustable ring, a reel, means extending transversely to the plane of said adjustable ring for connecting said reel to the outer end of said spring, a stationary shaft for mounting said reel, a bearing member for supporting said reel on said stationary shaft, said bearing member being located radially inwardly of said adjustable ring and on one side of said reel.

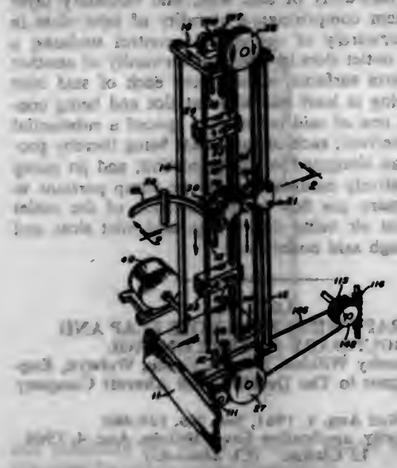
3,093,343
PAPERBOARD REEL
Charles D. Weisenbach and John J. Aust, Sandusky, Ohio, assignors to West Virginia Pulp & Paper Company, New York, N.Y., a corporation of Delaware
Filed Feb. 27, 1958, Ser. No. 717,929
2 Claims. (Cl. 242—118.8)



1. A paperboard reel comprising paperboard core structure and paperboard flange structure, said flange structure comprising a pair of spaced parallel coaxially aligned multi-ply end discs, said core structure comprising at least three core plies, the radially innermost of said three plies comprising two sets of a given number of tabs, the tabs of one set being integral with and folded laterally inwardly from the laterally innermost ply of one end disc, the tabs of the other set being integral with and folded laterally inwardly from the laterally innermost ply of the other end disc, the radially intermediate one of said three plies comprising a pair of short tubes each surrounding one of said sets of tabs, said short tubes being polygonal in cross section and having as many sides as said given number, the sides of each short tube lying against and being affixed to the tabs of its associated set of tabs in one-to-one relationship, the radially outermost of said three plies comprising a long tube surrounding both of said short tubes, said long tube being polygonal in cross section and having as many sides as said given number, the sides of said long tube lying against the sides of each short tube in a one-to-one relationship, at least one ply of each end disc extending radially inwardly of said radially innermost core ply.

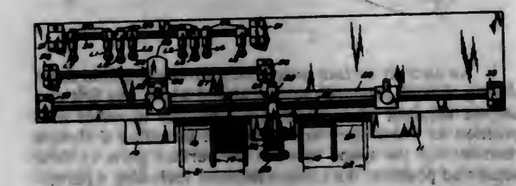
3,093,344
TRAVERSING DEVICE
Douglas J. Lamb, Gulf Breeze, Fla., assignor, by mesne assignments, to Monsanto Chemical Company, a corporation of Delaware
Filed Jan. 21, 1960, Ser. No. 3,884
6 Claims. (Cl. 242—158.4)

1. A device for winding yarn onto a rotating bobbin, comprising a frame, a belt movably mounted on the frame and having a pair of spans parallel to the axis of the bobbin, means on the frame for driving the belt in such a manner that one of said spans moves in one direction and the other span moves in the opposite direction, a traversing member mounted for reciprocation on the frame adjacent to the belt and having a guide for directing the yarn onto the bobbin, a gripper member movably mounted on the traversing member for cooperating with said traversing member to alternately grip one and then the other of said spans and thereby reciprocate the traversing member, a pair of fluid cylinders mounted on the traversing member and connected to the gripper member for actuating said gripper member, means on the traversing member for alternately controlling said cylinders, a pair of stop members mounted on the frame on opposite sides of the traversing member, said stop members having thereon spring-loaded elements, and means on the traversing member for engaging and deflecting said spring-loaded elements as the traversing member approaches



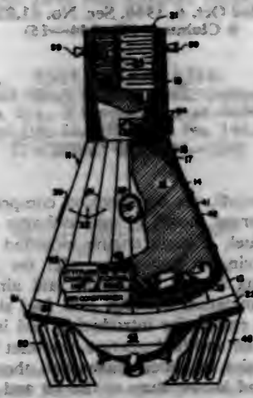
the ends of the traversing stroke, said spring-loaded elements being adapted to clear said engaging and deflecting means and strike and actuate the controlling means.

3,093,345
APPARATUS FOR DISTRIBUTING STRANDS
George Dragun, Clark, N.J., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed Jan. 9, 1961, Ser. No. 81,420
2 Claims. (Cl. 242—158.4)



1. An apparatus for distributing a strand in predetermined areas on rotatably driven takeup members of different lengths when disposed in said areas comprising:
a distributor arm for the strand,
a reciprocable element supporting the arm for movement relative to the takeup members in said areas,
means to support the element for reciprocal movement,
an actuator for limit switches mounted on the element and movable therewith,
limit switches mounted at predetermined fixed positions corresponding to the known different lengths of the takeup members and operable by the actuator,
actuable power control means responsive to the switches to reciprocably cause movement of the element,
selective means actuable at different intervals to render certain of the switches effective and others of the switches ineffective to actuate the power control means to cause the element to move the distributor arm between predetermined different limits in the areas of the takeup members of different lengths,
counter contacts,
means for closing the counter contacts when a measured amount of strand is distributed in an area on a takeup member,
transfer control circuits selectively closed by closing of the counter contacts to cause the element moving power control means to transfer the distributor arm to another area, and
actuable auxiliary power control means rendered effective by closing of the counter contacts to assist the power control means for the element to cause rapid transfer of the element and distributor arm from the area of one takeup member to the area of another takeup member.

3,093,346
SPACE CAPSULE
Maxime A. Faget and Andre J. Meyer, Jr., Newport News, Robert G. Chilton, Sanford, Willard S. Blanchard, Jr., and Alan B. Kehlet, Hampton, and Jerome B. Hammack and Caldwell C. Johnson, Jr., Newport News, Va., assignors to the United States of America as represented by the Administrator of National Aeronautics and Space Administration
Filed Oct. 16, 1959, Ser. No. 847,023
17 Claims. (Cl. 244—1)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A space satellite comprising an air tight compartment, a shell structure surrounding said compartment, heat shielding means for said compartment, jettisonable means positioned adjacent said heat shielding means for generating acceleration and deceleration thrusts toward said heat shielding means in a direction substantially on a line through the center of gravity of the satellite, and means for generating torque thrusts to effect a desired attitude of the satellite.

3,093,347
CONVERTIBLE VTOL AIRCRAFT
Harlan D. Fowler, Burlingame, Calif.
Filed Dec. 26, 1961, Ser. No. 161,892
9 Claims. (Cl. 244—12)



1. In an airplane arranged for vertical takeoff and landing and conventional flight operations, combination of a fuselage, at least one conventional major airfoil, mounted on said fuselage, a propeller rotatably mounted on said airfoil, means for driving said propeller, a stationary shroud circumferentially mounted around but

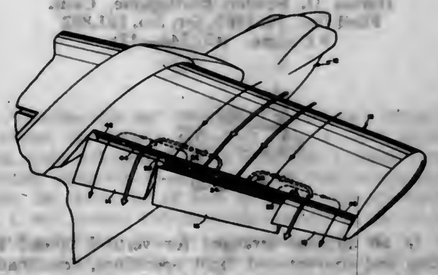
spaced from the tips of said propeller, a slotted flap mounted on said airfoil for retracted movement adjacent said airfoil and projected position below said airfoil, and a slipstream deflector mounted on said airfoil below the projected position of said slotted flap, said deflector having a retracted position and a downwardly disposed projected position, said shroud, flap and deflector cooperating when said flap and deflector are in projected positions to force a slipstream from said propeller generally horizontally over said airfoil and in a substantially downward direction, said fuselage, said airfoil and the axis of said propeller maintaining a substantially horizontal attitude during said operations, the leading edge of said airfoil being located rearwardly of the entire exit of said shroud and of said propeller.

3,093,348
HYPERSONIC AIRCRAFT
Helmut R. Schelp, Archibald P. Kelley, and Leslie W. Norman, Scottsdale, Ariz., assignors to The Garrett Corporation, Los Angeles, Calif., a corporation of California
Filed Oct. 6, 1960, Ser. No. 61,025
8 Claims. (Cl. 244—15)



1. In an aircraft, the combination comprising: an airframe; fuel storage means in said airframe for receiving and holding fuel; a main engine mounted on said airframe and having a converging inlet for receiving air and a diverging outlet; means on said airframe establishing communication between said fuel storage means and said main engine for introducing fuel into said inlet to produce an air and fuel mixture, the inlet being shaped to create a series of shock waves and thereby increase the pressure and temperature of the air and fuel mixture sufficiently to cause detonation thereof when the airframe is traveling at a velocity corresponding to a Mach number of substantially 6.5; and a rocket booster separably mounted on said airframe, said rocket booster serving to initiate motion of said airframe and accelerate the same to said velocity.

3,093,349
DUCT ARRANGEMENT FOR AIRCRAFT BOUNDARY LAYER CONTROL
Fred G. Wagner, San Diego, Calif., assignor to The Ryan Aeronautical Co., San Diego, Calif.
Filed July 29, 1960, Ser. No. 46,178
7 Claims. (Cl. 244—42)



1. A boundary layer control system for use in an aircraft wing having a wall extending between the upper and lower surfaces forwardly of the trailing edge thereof, and aerodynamic control surfaces hingedly mounted on said wing rearwardly of said wall, said boundary layer control system comprising: a plurality of inlet slots in said wall forwardly of one of said control surfaces; a plurality of outlet slots in said wall forwardly of another of said control surfaces; a duct from each of said inlet slots bypassing at least one adjacent slot and being connected with one of said outlet slots spaced a substantial distance therefrom; each of said ducts being thereby provided with an elongated jet pump portion; and jet pump means operatively mounted in said jet pump portions to provide primary gas flow in the direction of the outlet slots, ambient air being drawn into said inlet slots and ejected through said outlet slots.

3,093,350
AIRCRAFT WING WITH NOSE FLAP AND BOUNDARY LAYER CONTROL
Charles Timothy Wilkins, Hanmer Green, Welwyn, England, assignor to The De Havilland Aircraft Company Limited
Filed Aug. 1, 1961, Ser. No. 128,460
Claims priority, application Great Britain, Aug. 4, 1960
13 Claims. (Cl. 244—42)

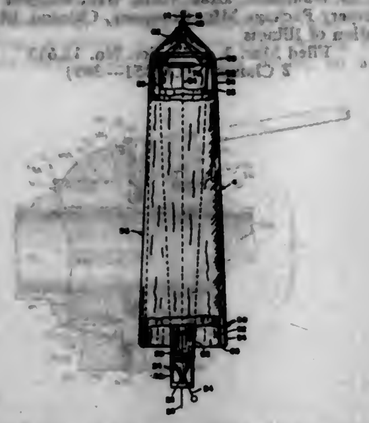


1. An aircraft surface over which enveloping fluid flows during aircraft forward movement and which has first and second adjacent parts which are relatively movable to a position in which they are separated, including a closure member for the space between the surface parts in their separated position, the closure member including a permeable element and being articulated to the first of said parts for movement relatively to both said parts between an extended position, in which the permeable element is exposed and lies between the surface parts in their separated position, and a retracted position, in which the permeable element is covered by the surface parts in their adjacent position, means operatively connected between the closure member and said second surface part to automatically move said closure member to its extended position when the two surface parts are moved to their separated position, and means to produce a pressure differential across the permeable element.

3,093,351
BALLOON AND METHOD OF LAUNCHING THE SAME
Edward P. Noy, Rudolph B. Thiemsen, and John R. Winchler, all of Minneapolis, Minn., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Dec. 15, 1961, Ser. No. 159,799
19 Claims. (Cl. 244—98)

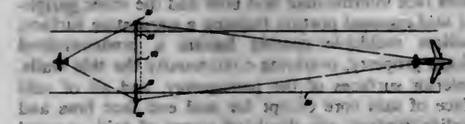
1. In a balloon to be vertically launched, a telescopically folded balloon envelope having a closed crown, means including a diaphragm sealing fluid-tight the interior of the folded end of the innermost wall of the envelope and

thereby dividing the envelope into tubular compartments, and means comprising a cord connected to the diaphragm



and extending out of the envelope bottom to be pulled to render the sealing means inoperative.

3,093,352
POWER ABSORBING SYSTEMS AND COMPONENTS FOR ARRESTING AIRCRAFT
Bo N. Hoffstrom, Santa Monica, Calif., assignor to Douglas Aircraft Company, Inc., Santa Monica, Calif.
Filed June 6, 1961, Ser. No. 122,307
13 Claims. (Cl. 244—110)



1. An aircraft retarding system having a flexible strand engageable by the aircraft, comprising reel structures upon which the opposite ends of said strand are normally coiled, a rotary variable capacity hydraulic drag device rotatable with said reel structure to control the rate at which the strand is fed from the reel structure when the strand is engaged by an aircraft, a throttle assembly in said drag device for regulating the capacity of said drag device; and control means driven by said strand and responsive to the deceleration of said aircraft to position said throttle assembly to thereby control the capacity of said drag device to decelerate said aircraft at a predetermined rate to thereby bring the aircraft to a stop at a predetermined roll-out distance.

3,093,353
AIRCRAFT OCCUPANT PROTECTING AND EJECTING SYSTEM
Frank T. Pitney, 152 W. Albanus St., Philadelphia, Pa., and Leonard L. Pitney, 38 Thornapple Lane, Levittown, Pa.
Filed Jan. 28, 1963, Ser. No. 254,512
3 Claims. (Cl. 244—122)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. In a system for maintaining the acceleration of an aircraft occupant's shoulders below a predetermined limit and for ejecting said occupant and his seat from said aircraft in case of an emergency, the combination therewith of

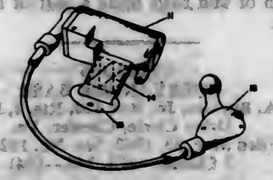
a shoulder harness attachment,

an internal reel mounted at the top and to the rear of said seat,

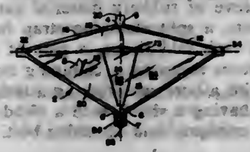
an inertial belt fixed at one end to said harness attachment and arranged at its other end to be rolled about said reel,

an injector belt having one of its ends fixed to the front of said seat and having its other end position adjacent said inertial belt, said ejector belt extending over the bottom of said seat and up the back thereof, and

means for successively attaching said other end of said ejector belt to said inertial belt and detaching said inertial belt from said shoulder harness.

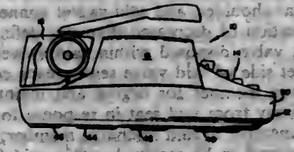


3,093,354
INFLATABLE KITE
Russell A. Pohl, Sioux Falls, S. Dak., assignor to General Mills, Inc., a corporation of Delaware
Filed Oct. 10, 1961, Ser. No. 144,182
11 Claims. (Cl. 244—154)



1. An inflatable kite formed from sheets of gas impervious material joined by an outer seam at the periphery of said sheets to form a gas containing chamber, said kite having a series of longitudinal central seams joining said sheets at predetermined points within said outer seam to divide said chamber into adjoining stress beams, said kite having a lateral seam joining said sheet at a predetermined point within said outer seam to terminate said longitudinal seams, said outer seam having means for introducing gas into said chambers to inflate said beams, said inflated beams exerting forces on adjoining beams to permanently distort said kite to form an airfoil having camber and dihedral.

3,093,355
MACHINE SUPPORT STRUCTURE
Aaron C. Zeamer, Groton, N.Y., assignor to Smith-Corona Marchant, Inc., Syracuse, N.Y., a corporation of New York
Filed Aug. 29, 1960, Ser. No. 52,570
7 Claims. (Cl. 248—24)



1. In combination with a movable carriage machine, a base structure comprising a base member having a substantially flat bottom face and friction means fixed to said

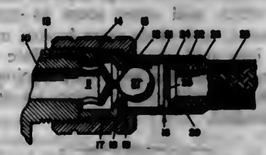
base member bottom face adapted to frictionally engage a support surface for such a machine to completely prevent material slippage of said machine relative to such surface, said means comprising a plurality of rows of thin support feet fixed to said base member bottom face and formed of thin elastomeric material, each of said feet in each of said rows being a part of a single elastomeric strip.

3,093,356
HOBBY HORSE BASE
Michael A. Buyalos, Jr., Box 420, Rte. 2, Forest Glenn Drive Circle, Chester, Va.
Filed Mar. 23, 1962, Ser. No. 182,072
2 Claims. (Cl. 248—194)



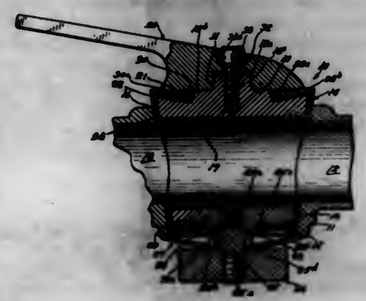
1. In combination with a tubular, hobby horse framework of the type having a base with two sets of divergent segments, a sleeve of rubbery material carried on each of said segments, a split clamping strap having arcuate sides engaging each said sleeve, a pair of terminal tabs with aligned bores receiving a clamping bolt, and a flat base section with a bore receiving an attaching bolt, and a suction cup having a shank with a blind bore holding a captive nut, engaging said attaching bolt.

3,093,357
PRESSURIZED FLUID COUPLING MEANS
Arthur Rodgers, Northbrook, and Charles E. Fallis, Park Ridge, Ill., assignors to Fire Guard Corporation, a corporation of Illinois
Filed Jan. 23, 1961, Ser. No. 84,240
3 Claims. (Cl. 251—149.4)



1. In the combination of a pressurized line adapted for coupling to a fluid discharge member: a nut member designed for connection to said discharge member; cooperative means on said discharge member and said nut member for establishing said connection; a swivel connector carried by said nut member, said swivel connector having a first portion thereof designed for rigid connection to said pressurized line, said first portion defining an inner annular shoulder, and said swivel connector having a second portion of decreased diameter defining a valve seat; a ball valve disposed within said swivel connector on the outlet side of said valve seat; means connected to said discharge member for urging and maintaining said ball valve away from said seat in response to connection of said nut member to said discharge member; an annular retainer designed to be received within said first portion against said shoulder; and a diametrically extending pin carried by said retainer limiting movement of said ball valve in the direction of said pressurized line.

3,093,358
PLUG VALVE CONSTRUCTION
Alden H. Wakeman, Lake Mills, Wis., assignor to The Creamery Package Mfg. Company, Chicago, Ill., a corporation of Illinois
Filed Mar. 3, 1960, Ser. No. 12,613
2 Claims. (Cl. 251—309)

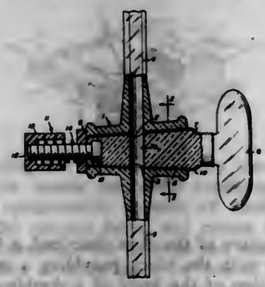


1. In a valve construction having a valve seat provided with a pair of relatively spaced ports; a valve plug rotatably mountable within such valve seat, said plug comprising a rotatable core having tapered side walls, a passageway formed in said core and having the opposite ends of said passageway terminating at spaced locations on said tapered side walls and being registrable with the ports of such valve seat when said core is in one position of rotatable adjustment, and an end face provided with an axially disposed boss and a recessed portion having the inner periphery thereof spaced from said boss; the segment of said end face intermediate said boss and the inner periphery of said recessed portion forming a supporting surface; a resilient moldable coating having a predetermined shrinkage property, overlying continuously the side walls, the interior surfaces of the passageway, and all of said end face of said core except for said end face boss and supporting surface; the depth of recess of said recessed portion relative to the plane of said supporting surface being greatest adjacent the inner periphery of said recessed portion, gradually diminishing toward the outer periphery, and being such as to provide a relieved exposed coating surface; and a removable end piece mounted on said end face and having a planar surface engaging said end face supporting surface and overlying the exposed surface of said end face coating; the outer periphery of said end piece planar surface compressively engaging the end face coating overlying said end face outer periphery; the thickness of said end face coating being greatest at said recessed portion inner periphery and being greater than the spacing between the outer periphery of said end piece planar surface and the outer periphery of said core end face whereby the compressibility of the portion of said end face coating adjacent said recessed portion inner periphery is such that such end face coating portion is impassable relative to said spacing, said end piece effecting progressively greater compression forces against said end face surface coating as the outer periphery of said core end face is approached.

3,093,359
STOPCOCK FOR LABORATORY GLASSWARE AND THE LIKE
Charles M. De Weedy, Vineland, N.J., assignor to Ace Glass Incorporated, Vineland, N.J., a corporation of New Jersey
Filed Aug. 31, 1959, Ser. No. 837,222
3 Claims. (Cl. 251—314)

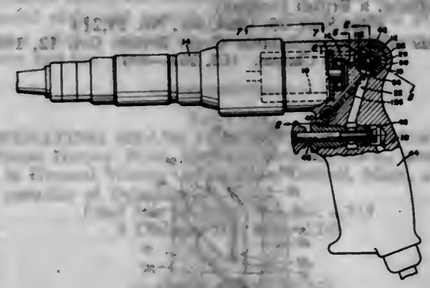
1. A stopcock for laboratory glassware and the like having a low coefficient of linear expansion, comprising

a smooth tapered glass valve barrel, a complementary, tapered glass valve plug and a relatively thin, film-like coating of chemically inert, self-lubricating thermoplastic material uniformly covering the tapered periphery of said glass plug, providing a plastic-to-glass sealing contact with said barrel, said coated plug having an average



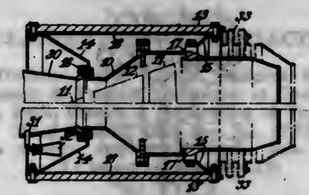
linear coefficient of expansion which, while greater than that of the glass alone, is considerably less than the linear coefficient of expansion of the material of said thermoplastic coating per se, whereby the self-lubricating qualities of said coating are made fully available without the danger of the "freezing" of the plug or permanent deformation thereof.

3,093,360
PILOT VALVE CONTROL REVERSE VALVE
John P. Krouse, Athens, Pa., assignor to Ingersoll-Rand Company, New York, N.Y., a corporation of New Jersey
Filed June 2, 1959, Ser. No. 817,669
6 Claims. (Cl. 253—2)



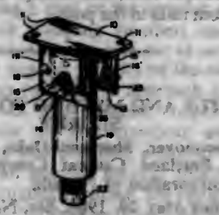
1. In combination with a tool having casing, a reversible rotary motor in said casing adapted to be driven by fluid with a pair of fluid openings therein, and spaced fluid supply and exhaust conduit means in said casing for said motor, a valve comprising a valve casing having a chamber in communication with said openings and said supply and exhaust conduit means, a valve member slidable in said chamber and operable to control flow through said motor openings to selectively control the direction of rotation of said motor, spring means in said chamber to bias the valve member into a first position to associate the supply conduit means with one of said openings and the other of said openings with the exhaust conduit means, said valve member having a pair of inter-connected surfaces in said chamber, and valve exhaust means adapted to lower the pressure forces acting on one of said surfaces to overcome the force of said spring means to move the valve member into a second position to reversely associate said openings with said supply and exhaust conduit means.

3,093,361
ENGINES
Stanley George Hooker and Francis Charles Ivor Marchant, Bristol, England, assignors to Bristol Siddeley Engines Limited, Bristol, England, a British company
Filed July 2, 1959, Ser. No. 824,515
Claims priority, application Great Britain July 7, 1958
6 Claims. (Cl. 253—39)



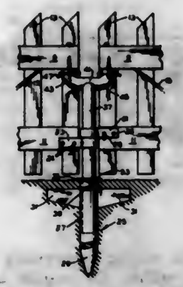
1. A gas turbine engine comprising an engine casing, a rotor mounted within the engine casing and having rotor blades mounted thereon, a tubular shield encircling the engine casing in radially spaced relation thereto at the location of the rotor blades, and an open work resilient mounting means for resiliently mounting said shield on the engine casing, said mounting means being open for passage of air axially between the casing and shield and including resilient portions bridging the space between the casing and shield connected adjacent opposite extremities to said casing and said shield, respectively.

3,093,362
JACK ASSEMBLY
Reuben W. Schaefer, Rte. 2, Kewaskum, Wis.
Filed Feb. 19, 1962, Ser. No. 173,936
4 Claims. (Cl. 254—86)



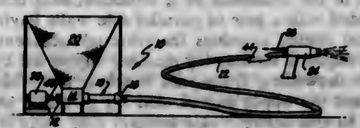
1. A jack, comprising: a bracket adapted to be secured to the underside of a structure, said bracket being provided with a pair of parallel side walls having aligned, vertical slotted openings therethrough adjacent their forward edges; a tubular leg member supported by and normally depending from said bracket, there being means adjacent the upper end of said leg pivotally securing the same to and between said bracket side walls in a manner whereby said leg can be swung forwardly and upwardly about said connection from its normal vertical position to a horizontal position; a shaft longitudinally adjustably carried in and projecting from the lower end of said leg, said shaft having a base on its lower end; a retaining bar vertically slidably carried by and between the slotted openings in said bracket side walls, said retaining bar being movable from a position at the bottom of said slotted openings wherein it prevents upward swinging movement of said pivotal leg member, to a position adjacent the top of said slotted openings wherein it will not interfere with the upward and forward swinging of said leg to a horizontal position; and means on said jack adapted to releasably maintain said leg member in a horizontal position.

3,093,363
DETACHABLE FENCE
Giles W. Bolton, San Jose, Calif., assignor, by mesne assignments, to Raymond J. Bailey
Filed Oct. 5, 1961, Ser. No. 143,174
2 Claims. (Cl. 256—26)



1. A fence structure comprising in combination:
(*a*) a fence element having an upper rail and a lower rail with means extending between the rails for holding the rails in spaced relationship;
(*b*) a post having a bifurcated upper end terminating in hollow members having upper surfaces adapted to support abutting top rails of said fence elements;
(*c*) eye rings extending downwardly from the ends of the top rails, said rings extending into the hollow members;
(*d*) locking pins extending through holes in the hollow members and passing through the eye rings, whereby the top rail is locked in place; and
(*e*) clamp means extending outwardly from each end of the bottom rails, said clamps detachably fastening the bottom rails to the post.

3,093,364
APPARATUS AND METHOD FOR CONVEYING SLURRY
Paul L. Schoonover, Sherman Oaks, Calif., assignor to Monolith Portland Cement Company, Los Angeles, Calif., a corporation of Nevada
Filed May 20, 1960, Ser. No. 30,671
5 Claims. (Cl. 259—146)



5. A method of conveying a slurry of solids within a liquid through an elongated flexible conduit so as to prevent said slurry from separating into fractions, which method comprises: forcing a slurry of solids within a liquid into one end of an elongated, flexible conduit which is capable of being bent while simultaneously agitating said slurry by turning an elongated, flexible member capable of being bent to a shape conforming to any position of said conduit within the interior of said conduit, by rotating an end of said member located within said end of said conduit, said member extending substantially the length of said conduit and fitting within the interior of said conduit.

3,093,365
CUTTING BIT HOLDERS
Claude B. Krekeler, Cincinnati, Ohio, assignor to The Cincinnati Mine Machinery Co., Cincinnati, Ohio, a corporation of Ohio
Filed Nov. 12, 1957, Ser. No. 695,771
6 Claims. (Cl. 262—33)



6. In a structure of the class described, a block, means in connection with the block providing a recess for accepting a portion of the body of a double ended cutter bit so as to maintain it in cutting position, said means having surfaces to engage said bit to sustain both the rearward and the downward strains of cutting, resilient means mounted on said block for engaging a forwardly directed face of said cutting bit to maintain said bit in contact with said surfaces, and to prevent removal of said bit from said recess, said resilient means being pivotally connected with said block, said resilient means being movable to disengage said forwardly directed face of said cutting bit and to clear the opening of said recess sufficiently to permit free withdrawal of said bit from said recess.

3,093,366
CUTTER BIT HOLDER
Sidney Ernest Proctor, High Wycombe, England, assignor to Austin Hoy and Company Limited, High Wycombe, England, a British company
Filed Sept. 29, 1960, Ser. No. 59,214
Claims priority, application Great Britain Oct. 12, 1959
4 Claims. (Cl. 262—33)



1. In a coal cutter pick and pick box assembly of the class in which said pick is provided with a shank for longitudinal reception and removal from the socket of a pick box, said pick box normally supporting the pick with its head projecting from the said socket, the combination with said assembly of releasable means for securing the pick in the pick box comprising a latch member slidably guided through said shank for movement into and from latching reception in a recess in the wall of the socket, a plunger spaced from said latch member and slidably guided in the head of the pick for movement parallel to the movement of the latch member, and means interconnecting said latch member and plunger for movement together, said pick head being formed with a bore therethrough transversely to said plunger, said plunger projecting partially across said bore in the latched condition of said latch member.

3,093,367
VIBRATION ATTENUATING COUPLING
Robert D. Hawkins, Greenlawn, and Hamilton Southworth, Jr., New York, N.Y., assignors to Sperry Rand Corporation, Great Neck, N.Y., a corporation of Delaware
Filed Mar. 16, 1961, Ser. No. 96,123
10 Claims. (Cl. 267—1)



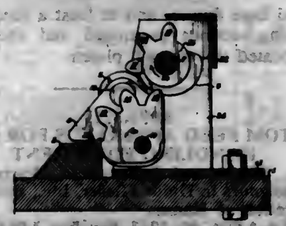
1. A coupling for spaced vibratory members subject to compressive, tensile and shear conditions of loading including a compressible isolator of resilient material having parallel spacing faces, and means for mounting the isolator compressively between the spaced members including a first coupling piece for one of the vibratory members having a flat face arranged in parallel relation to the spacing faces of the isolator, a second coupling piece for the other of the vibratory members having a flat face arranged in parallel relation to the spacing faces of the isolator, a first plate with opposite flat sides sandwiched between the first coupling piece and isolator with one of its sides against one of the faces of the isolator and the other of its sides against the flat face of the first coupling piece under zero load conditions, a second plate with opposite flat sides sandwiched between the second coupling piece and isolator with one of its sides against the other face of the isolator and the other of its sides against the flat face of the second coupling piece under zero load conditions, and means for decreasing the spacing between the respective parallel plates to compress the isolator under tensile and shear conditions of loading including first parallel spacing means providing a pliable connection between the first coupling piece and second plate and second parallel spacing means providing a pliable connection between the second coupling piece and first plate.

3,093,368
OPERATING MEANS FOR WINDOW REGULATOR
Wilson Harvey West, Madison Heights, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Jan. 25, 1960, Ser. No. 4,319
4 Claims. (Cl. 268—126)



1. In a vehicle body having a window mounted thereon for movement to open and closed positions and a window regualtor mechanism for so moving said window, operating means for said mechanism comprising, an operating member movably mounted on said body, clutch means selectively and alternately movable to clutched and first and second declutched positions to selectively and alternately connect said operating member to said window regulator mechanism to thereby operate said mechanism or disconnect said member from said mechanism and allow said member to be moved independently thereof, an operating handle mounted on said member for movement between operating and non-operating positions with respect thereto, means interconnecting said handle and said clutch means for automatically moving said clutch means between said clutched and one of said declutched positions upon movement of said handle between said operating and said non-operating positions, and means for moving said clutch means to the other of said declutched positions to disconnect said interconnecting means between said clutch means and said handle.

3,093,369
CLAMPING DEVICE FOR ELECTRIC CONNECTIONS
Daniel Ducieux, Lille, France, assignor to Pechiney, Compagnie de Produits Chimiques et Electrometallurgiques, Paris, France, a corporation of France
Filed June 22, 1960, Ser. No. 37,952
Claims priority, application France June 24, 1959
5 Claims. (Cl. 269—221)

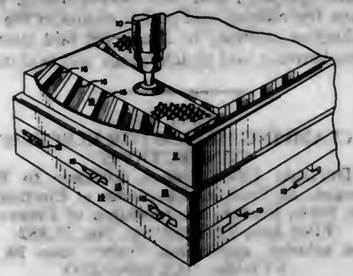


1. A device for clamping a fixed bar to a movable one so that in the unclamped position the space situated before the fixed bar is free for the approach of the movable bar from above, comprising, in combination: a housing attached to the fixed bar; a movable clamping member comprising a clamping face, an actuating member adjacent said clamping member, both said clamping member and said actuating member being mounted in the housing for rotation upon parallel shafts; first cooperating means on said members comprising toothed sectors which are in engagement during a part of the angular displacement of the actuating and clamping members and which are adapted to move said clamping face out of said housing in a rotary path at an angular velocity of the same order as that of the actuating member to approach said movable bar to said fixed bar, and separate cooperating means mounted respectively on said clamping and actuating members for moving said clamping member, after the approach motion, at an angular velocity relatively smaller than that of said actuating member, for applying pressure to the clamping face, to thereby clamp the bars together.

3,093,370
WORKHOLDER WITH MEANS FOR THERMAL COMPENSATION
Richard K. May, William O. Smeafrank, and Howard H. Powell, Fort Worth, Tex., assignors to General Dynamics Corporation, San Diego, Calif., a corporation of Delaware
Filed Nov. 20, 1957, Ser. No. 697,645
1 Claim. (Cl. 269—309)

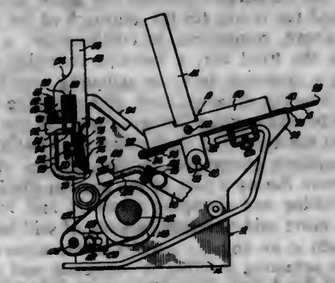
Apparatus for holding material being machined including a base fixture and a platen for fixedly holding said material during expansion and contraction of said platen, means for securing said platen to said base fixture, said securing means comprising a plurality of spaced T slots in the bottom surface of said platen extending in one direction, said spaced T slots including a centrally located slot, a plurality of inverted T slots in said base fixture extending at right angles to said slots in the bottom of said platen, said inverted T slots including a centrally located slot, and elements slidable within said slots and engageable therewith, each of said elements comprising two sections secured together, one of said sections engaging a platen slot and the other of said

sections engaging a base fixture slot at points of intersection of said slots, at least a pair of said elements with sections positioned and secured in said centrally located



slot on said base fixture, and at least a pair of said elements having sections positioned and secured in said centrally located slot on said platen.

3,093,371
BOTTOM FEED APPARATUS FOR SHEET HANDLING EQUIPMENT
Donald A. Glaser and Leonard C. Warren, Emporia, Kans., assignors to Didde-Glaser, Inc., Emporia, Kans., a corporation of Kansas
Filed Oct. 30, 1961, Ser. No. 148,590
7 Claims. (Cl. 271—29)



1. Feed apparatus for sheet handling equipment comprising structure provided with an inclined surface having a lower marginal edge and adapted for supporting a stack of sheets with portions of said sheets projecting outwardly therefrom; means having a lateral projection thereon spaced from said marginal edge and disposed with the projection beneath and in supporting relationship to the portion of the lowermost sheet of the stack for supporting the portions of the stack; suction means shiftably carried by said structure for engaging the lowermost of said sheets and for shifting the portion of the latter downwardly; means carried by said structure and movable into the space between said marginal edge and said projection for augmenting the supporting action of said projection after the portion of the lowermost sheet is shifted downwardly under the influence of said shifting means; and means adjacent said edge and engageable with the downwardly shifted portion of said lowermost sheet for advancing the latter away from said edge and said stack.

3,093,372
ROBOT AMUSEMENT RIDE
Salvatore Cirami, 75—36 Parsons Blvd., Flushing 67, N.Y.
Filed Oct. 21, 1958, Ser. No. 768,793
7 Claims. (Cl. 272—34)

1. A stepping robot adapted to the carriage of one or more passengers for their merriment and the entertainment of onlookers, comprising:

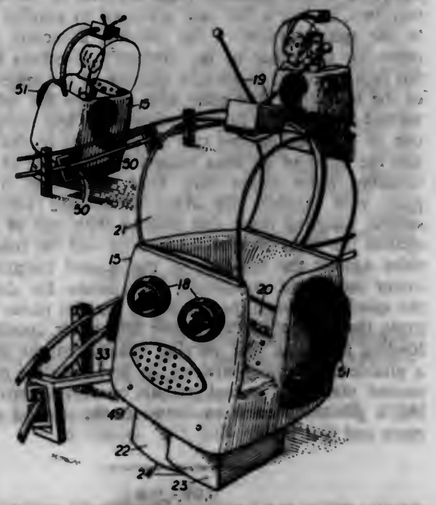
a torso in the form of an open top passenger compartment having a floor and provided with walls arranged upright and immediately encircling passengers in such manner as to confine and restrict their movement in said compartment, said walls proportioned reaching no higher than shoulder height of said passengers;

a head in the form of an enclosure attached on top of said compartment, constructed large enough to encompass the head and shoulders of said passengers and so constructed and arranged as to provide visibility for said passengers and ventilation of said compartment;

arms attached on said compartment;

a single pair of foot members, said foot members located depending and spaced apart from the underside of said floor a distance adequate to provide passing clearance between the top of said foot members and the underside of said floor;

means to alternately lift, advance, lower and return said foot members, said means located under said floor



and fixed to said compartment, and so constructed and arranged as to support the weight of said compartment on said foot members;

a motor connected to drive said means;

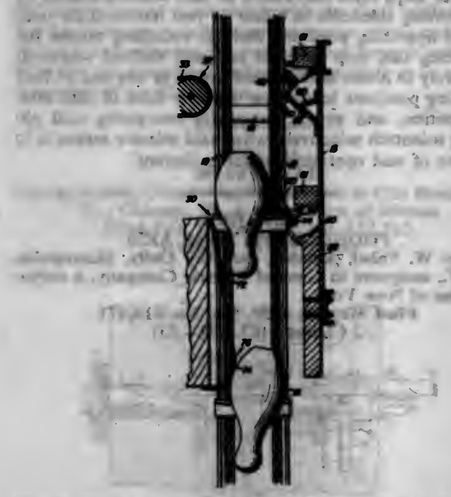
the combination so constructed and arranged as to provide a passenger carrying robot having a space inside its head contiguous with a space inside its torso suitable for occupancy by passengers, and so proportioned that said passengers can occupy the space at the conjunction of the head and torso with sufficient freedom to turn about in the act of waving and shouting to onlookers, although the robot is provided with a compact torso and is scaled such that they must occupy both the head and torso simultaneously;

the combination so constructed and arranged that the lifting, advancing, lowering and returning of said foot members by said means displaces the compartment for the merriment of its occupants and to create for the entertainment of onlookers the illusion of a walking robot.

3,093,373
SELECTOR AND EJECTOR FOR BOWLING BALLS AND PINS
Philip J. Reese, 1401 Boulevard, New Haven, Conn.
Filed Dec. 29, 1959, Ser. No. 862,597
15 Claims. (Cl. 273—43)

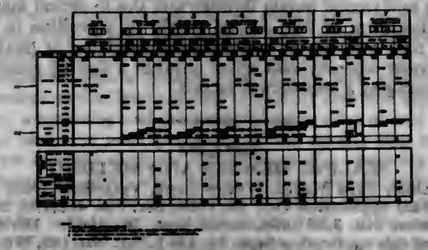
6. In the combination of a bowling ball and pin elevator, a support frame, vertically moving elevating means

mounted upon said frame, vertically spaced pairs of horizontally spaced supports on said elevating means, each pair of supports being positioned for supporting thereon and therebetween bowling balls or bowling pins, vertically spaced ball and pin discharge stations at which balls and pins are to be respectively ejected from said pairs of supports, a pair of ball and pin ejectors of identical con-



struction mounted each at one of said discharge stations but on the opposite side of the elevating means therefrom, means for operating each ejector when a pair of supports passes the ejector and the associated discharge station, means for displacing a pin upon said supports to a position where the ball ejector will be ineffective to eject the pin at the ball discharge station.

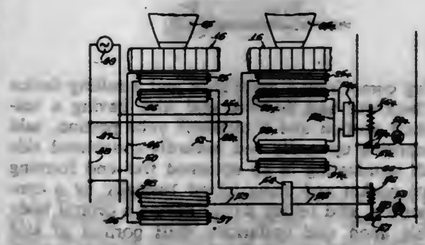
3,093,374
BOWLING SCOREKEEPING MACHINE
Jack L. Rothberg and Alton R. Melcher, Hayward, Calif., assignors to Scoremaster, Inc., a corporation of California
Filed Jan. 22, 1960, Ser. No. 4,048
9 Claims. (Cl. 273—43)



8. A bowling scorekeeping machine comprising, an accumulator having a units input, a 10 input, a 20 input, and a 30 input; a pinfall counter operable to indicate the frame-accumulator pinfall count for each ball rolled; a memory unit connected to store strike and spare information; and programming means connected to said accumulator, memory unit, and pinfall counter and having pre-set programming circuits for each of the following seven scoring situations viz.:

First—No mark;
Second—Strike following two strikes;
Third—First ball following two strikes;
Fourth—No mark following a strike;
Fifth—Spare following a strike;
Sixth—Strike following a spare; and
Seventh—First ball following a spare.

3,093,375
PIN DETECTION MEANS
Albert E. Shaw, Sampson Isenberg, and Robert J. Moon, Chicago, Ill., assignors, by mesne assignments, to Brunswick Corporation, Chicago, Ill., a corporation of Delaware
Filed Apr. 18, 1960, Ser. No. 23,092
9 Claims. (Cl. 273—52)



7. In combination with a bowling alley, apparatus for detecting the presence or absence of a standing bowling pin on the alley by distinguishing between a first condition represented by a standing pin and second condition represented by a fallen pin or by the absence of a pin, comprising, a first mutual inductance device positioned adjacent a pin spot on the alley, a second mutual inductance device, an alternating current source connected for energizing the primaries of both devices, said devices being balanced to provide equal and opposite outputs from the secondaries when one of said conditions exists and to provide unequal outputs from the secondaries when the other condition exists, and a circuit connecting the secondaries of the mutual inductances to provide no signal when the outputs from the secondaries are equal and a signal when the outputs from the secondaries are unequal.

3,093,376
PADDLE-BALL TOY
Morris Terry, Detroit, Mich., assignor of one-half to Lettie Terry, Detroit, Mich.
Filed Dec. 30, 1960, Ser. No. 79,633
2 Claims. (Cl. 273—97)



1. In a paddle-ball toy, the combination, comprising: a paddle; a first rebounding ball; a first elastic cord having one end attached to said first ball and the other end attached to one side of said paddle; a second rebounding ball; a second elastic cord having one end attached to said second ball and the other end attached to the other side of said paddle; the elastic cords being attached to the paddle at aligned positions on the opposite sides of said paddle; and, the lengths of said elastic cords being so made that said balls are disposed against the paddle when the paddle is held upright, whereby, when the pad-

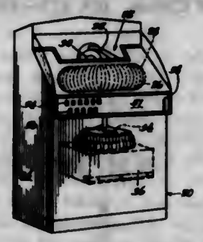
dle is moved sidewardly, backwardly and forwardly said balls will alternately hit against the paddle to produce a tapping action.

3,093,377
SKILL TOYS
William R. Irwin, 1034 Tiffany St., P.O. Box 155, New York 59, N.Y.
Original application Feb. 10, 1959, Ser. No. 792,386, now Patent No. 3,011,788, dated Dec. 5, 1961. Divided and this application Sept. 7, 1961, Ser. No. 136,463
5 Claims. (Cl. 273—109)



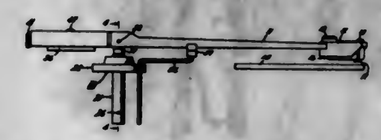
1. A toy comprising a game-stick and a rolling device useable therewith and thereon, said stick having a unifarious shaft portion and a bifarious yoke portion, said yoke comprising upwardly and inwardly convoluted side arms each terminating in an upturned free end forming an arcuate pocket and being joined basically by a connecting portion, said rolling device having a central body supportable upon said unifarious shaft portion of said game-stick and with outwardly disposed portions extending from each side of said central body, said rolling device being supportable by said outwardly extending portions upon the convolutions of said side arms and in the arcuate pockets formed by said free ends, each of said free ends being spaced from its adjacent convolution a distance sufficient to permit passage of a said outwardly extending portion of said rolling device therebetween whereby said rolling device may be moved along said convolutions of said yoke portion of said gamestick by a rolling movement, and said arcuate pockets having a radius of curvature sufficiently small to enable said rolling device to be retained in a substantially fixed position therein while permitting spinning thereof by the momentum of said rolling movement.

3,093,378
AUTOMATIC PHONOGRAPH RECORDING SELECTOR MEANS
Robert S. Tuttle, Eggertsville, and Charles A. Mellon, Clarence, N.Y., assignors to The Wurlitzer Company, Chicago, Ill., a corporation of Ohio
Filed June 27, 1960, Ser. No. 38,861
10 Claims. (Cl. 274—10)



1. In an automatic phonograph, record selecting means comprising, in combination, an annular array of selector pins, an annular series of pin setting solenoids, rotary selector means having a plurality of rotatably spaced operating positions corresponding respectively to a plurality of different annular series of said selector pins, said selector means including means coacting with said solenoids in each of said operating positions of said selector means to effect an operative pin setting relationship between said solenoids and a corresponding series of said pins, means for urging said selector means to a middle one of said operating positions thereof, two shifting solenoids connected to said selector means for moving the latter rotatably in opposite directions from said middle position, a pair of abutments coacting with said selector means to terminate movement thereof by said shifting solenoids in either of two extreme ones of said operating positions thereof, a pair of movable stops, a stop solenoid coacting with said movable stops to move the latter between inoperative positions and operative positions in which the movable stops limit movement of said selector means by said shifting solenoids to either of two intermediate ones of said operating positions thereof, switching means for energizing said stop solenoid and said shifting solenoids selectively to locate said selector means in any one of four operating positions located on opposite sides of said middle position, and switch means for energizing said pin setting solenoids selectively when said selector means is in any one of said operating positions thereof.

3,093,379
PHONOGRAPH TONE ARM
George W. Fabel, Auburn, and Roy Dally, Skaneateles, N.Y., assignors to General Electric Company, a corporation of New York
Filed May 11, 1959, Ser. No. 812,471
2 Claims. (Cl. 274—23)



1. In a phonograph tone arm comprising a hollow elongated member adapted to carry a pick-up cartridge at the forward end thereof, said cartridge having a stylus, and said tone arm further comprising support means for pivotally supporting said elongated member intermediate the ends thereof, stylus pressure adjustment means comprising first and second weights adjustable in a direction along the length of said tone arm within the portion of said elongated member which is at the rear of said support means, a threaded rod arranged for manual rotation to drive said first weight to a position to place said tone arm in a balanced condition when carrying said pick-up cartridge, an elongated slot in the wall of said elongated member at said portion thereof which is at the rear of said support means, said elongated slot extending in a direction along the length of said tone arm, and a tab extending from said second weight through said slot to permit manual adjustment of said second weight to a position to set said tone arm out of said balanced condition at least to an extent whereby said stylus acquires a desired pressure for engaging a phonograph record.

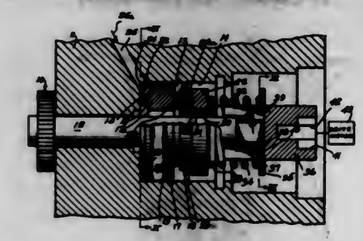
3,093,380
SEALING MEMBER AND METHOD
Elmer Fred Mackz, Willow Lane, Vermilion, Ohio
Original application Oct. 14, 1954, Ser. No. 462,195, now Patent No. 3,001,806, dated Sept. 26, 1961. Divided and this application Sept. 26, 1961, Ser. No. 140,791
9 Claims. (Cl. 277—1)



9. A method of sealing a quantity of gas under pressure in a chamber defined at least in part by a shaft and an annular housing circumferentially disposed about said shaft comprising the steps of positioning an annular foraminous

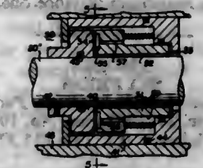
ring around the shaft and in an annular recess in the housing, allowing the ring to float both radially and axially relative to the housing and the shaft, generating a load-carrying and sealing film of gas in a gas film region between the ring from an exposed surface in the housing to the gas film region defined by the radially inner surface of the ring and the complemental outer surface on the shaft, supporting the ring on the film of gas to maintain the ring in spaced relationship with the shaft while allowing gas to escape axially from the region at one end of the housing, and allowing the ring to move toward and away from the complemental surface on the shaft so as to vary the extent of gas film region.

3,093,381
SHAFT SEAL
George Schulz, Naperville, Ill., assignor to Gits Bros. Mfg. Co., Chicago, Ill., a corporation of Illinois
Filed July 7, 1961, Ser. No. 122,515
1 Claim. (Cl. 277—3)



A rotary seal assembly for removable insertion into a chamber having a cylindrical wall and a radial end wall and for fitting over the end of a shaft projecting from the chamber, said seal comprising a mating ring having an annular radial sealing face and an inner annular surface spaced from the shaft for the insertion of a removal tool and having a radial support face parallel to said sealing face and positioned on the end of the seal opposite said sealing face for engaging the end wall of the chamber and determining the position of the mating ring, an annular outwardly facing groove on the mating ring, an annular resilient seal in said groove for sliding along the outer wall of the cylindrical chamber when the mating ring is inserted and for sealing against the outer wall of the chamber, a bevelled edge formed on the outer edge of the mating ring joining said support face, means defining a radially extending groove in said support face for communicating with a passage leading into said cylindrical chamber so that fluid can flow outwardly past said support face, a removing tool groove at the inner edge of said support face, the inner periphery of the mating ring being larger than the shaft for the insertion of a removing tool between the shaft and mating ring to engage said tool groove, a rotatable sealing ring having an annular radial face for sealingly engaging the sealing face of the mating ring, a carrier ring for supporting the sealing ring on the shaft, an inwardly facing annular groove on the carrier ring defined by a circumferential surface on the carrier ring, further defined by a radial surface on the carrier ring, and further defined by a radial surface on the rotatable sealing ring, an annular resilient seal within the groove in the carrier ring for resiliently engaging the shaft, a radially outwardly facing spring support surface on the carrier ring, a coil compression spring having one end locked over said spring support surface, a backing washer engaging the other end of said spring, a driving end for said shaft having flattened radial surfaces, a drive coupling having a radially extending groove with flat surfaces for engaging the drive surfaces of the shaft, and inwardly projecting tongues on said washer projecting into said coupling groove for driving the washer with the coupling in rotation, said washer locked axially to the coupling for providing a backing for the spring.

3,093,382
SEAL
Elmer Fred Mackz, Willow Lane, Vermilion, Ohio
Filed July 10, 1956, Ser. No. 597,039
6 Claims. (Cl. 277—27)



1. In combination, a housing defining at least a portion of a pressure chamber and having an aperture therein, a shaft projecting through said aperture and having a radially directed shoulder near said aperture, a sealing ring around the shaft and interposed between the housing and the shoulder, said ring extending from a first transverse end wall remote from said shoulder to a sealing face adjacent said shoulder, said ring including a cylindrically contoured portion extending from said first end wall to a second transverse end wall intermediate the ends of the ring, said ring including an outwardly directed flange adjacent said sealing face and of a diameter greater than said cylindriral portion, the housing including a cylindrical portion spaced from and concentric to the ring cylindrical portion, one of said cylindrical portions having an annular groove formed therein, an O-ring in the groove and in sliding engagement with said other cylindrical surface to seal said chamber and prevent the flow of fluid between the housing and the ring, a spring interposed between the housing and the ring and biasing the ring toward said shoulder, said shoulder having a sealing face complemental to the ring sealing face and defining a fluid film producing region therebetween, said ring having sealing fluid supply passages extending from the face through the ring and communicating with said chamber to conduct a quantity of the fluid being sealed from the chamber to the fluid film producing region, one of said transverse end walls being in said chamber and of an area less than the area of said ring sealing face to cause the pressure in the chamber to urge the ring toward the shoulder with a pressure less than the pressure of a generated film urging the ring away from the shoulder when the device is in use, and the radial extremity of said region remote from said chamber being in unobstructed communication with the atmosphere ambient to the housing whereby fluid may escape continuously from the region to the ambient atmosphere.

3,093,383
ROTARY SHAFT FACE SEAL
Wah B. Lew, Bremerton, Wash., assignor to the United States of America as represented by the Secretary of the Navy
Filed Apr. 24, 1961, Ser. No. 105,240
1 Claim. (Cl. 277—92)
(Granted under Title 35, U.S. Code (1952), sec. 266)

A rotary shaft seal comprising a seal holder rotatably carried by the shaft, said holder having a flat surface disposed substantially normal to said shaft and provided with a groove extending concentrically about the shaft, and at least two thin flat sealing strips contiguously wound together and seated in said groove with contiguously wound

portions thereof projecting outwardly of said holder surface, each of said strips having its end portions over-



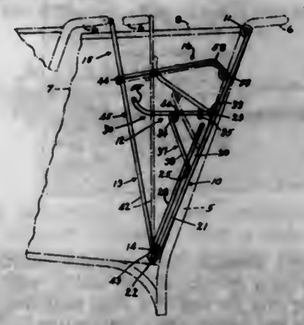
lapped for forming joints, and said joints being spaced circumferentially a maximum distance one from the other.

3,093,384
SKI PRESS
Wayne L. Daniel, 1925 Madison, Paducah, Ky.
Filed Apr. 20, 1961, Ser. No. 104,270
4 Claims. (Cl. 280—11.37)



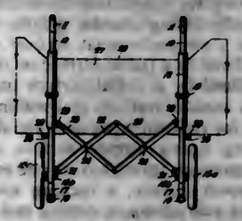
1. A ski press for providing a convenient means for storing and/or transporting a pair of skis with each ski supported in a manner whereby the camber and curvature of its toe will be preserved, said ski press comprising an elongated spine member including opposite longitudinal surfaces adapted to be abutted by the under surfaces of a pair of skis, clamp means carried by opposite end portions of said spine members adapted to clampingly engage corresponding end portions of a pair of skis to opposite ends of said spine, and abutment means slidably mounted on said spine intermediate its opposite ends for longitudinal movement therealong and projecting outwardly beyond said longitudinal surfaces adapted for engagement with the under-surfaces of a pair of skis clamped to said spine intermediate their opposite ends whereby said skis will be clamped to said spine in a bowed state thereby preserving the camber of the skis, and prevent warping or correcting slight warping, spreader means on one end of said spine member adapted to engage the undersurfaces of the curved toe portions of a pair of skis clamped to said spine member adjacent the tips thereof and to urge said tips away from each other whereby the desired curvature of said toe portions may be maintained, said spreader means including a pair of panel-like arm members, means pivotally securing corresponding ends of said arm members to one end of said spine member for movement about parallel axes with the arm members being movable between retracted positions disposed in side-by-side relation having their remote surfaces forming continuations of said opposite longitudinal surfaces and extended positions with said arm members diverging apart at their free ends and away from opposite sides of the longitudinal medial plane of said spine member disposed between said longitudinal surfaces to form positioning abutment surfaces for the undersurfaces of the forward toe portions of a pair of skis and to properly longitudinally position a pair of skis on said spine member when said arm members are in the extended positions, a pair of oppositely internally threaded axially alignable bushings pivotally secured to the free ends of said arm members for rotation about axes generally paralleling the first mentioned axes and extending at right angles to the longitudinal axes of said bushings, and a screw shaft having its opposite end portions oppositely threaded and threadedly engaged in said bushings.

3,093,385
MARKET BASKET CART WITH CHILD'S SUPPORT
Norris J. Thompson, Arcadia, Calif., assignor to National Carts, Inc., Azusa, Calif., a corporation of California
Filed Jan. 15, 1962, Ser. No. 166,078
11 Claims. (Cl. 280—33.99)



1. In a market basket cart having a frame supporting a basket that is provided with an end wall pivoted at its upper edge and swingable upwardly within the basket for nesting another, similarly mounted basket therein, the combination of an inner wall pivoted to the lower edge of said end wall, a child's seat pivotally supported between said walls but exclusively supported on one of said walls, said end wall having opening means for the legs of a child sitting on said seat, stop means on the seat-supporting wall preventing downward pivotal movement of the seat when it has substantially reached a horizontal position, and means limiting pivotal movement of said walls away from each other when they are a greater distance apart than the width of the seat between the walls.

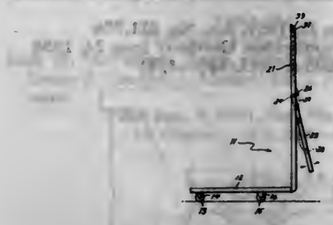
3,093,386
COLLAPSIBLE BOAT AND MOTOR MOVER
Morris A. Case, 3725 SW. 170th St., Seattle, Wash.
Filed Nov. 21, 1960, Ser. No. 70,626
8 Claims. (Cl. 280—42)



1. A moving device comprising a pair of leg members, a pair of wheels, one fixed rotatably to the lower end of

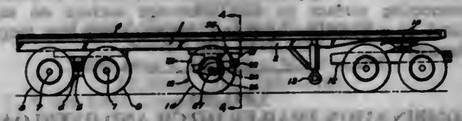
each of said leg members, a pair of sleeves, one slidably mounted on each of said leg members, transverse diagonal strut members connecting between the leg members and sleeves, one transverse diagonal strut member pivotally connected to each leg member adjacent the lower end thereof and to the sleeve on the opposite leg member, said strut members pivotally connected to one another centrally, an engaging arm fixed to each sleeve and extending forwardly and downwardly substantially parallel relative thereto, a support bar fixed to each leg member below the sleeve thereon and extending forwardly thereof and at a substantial angle thereto.

3,093,387
MATERIALS-HANDLING TRUCK
John E. O'Neill, Springfield, Pa., assignor to Nathan Schwartz & Sons, Inc., Philadelphia, Pa., a corporation of Pennsylvania
Filed Feb. 28, 1961, Ser. No. 92,298
4 Claims. (Cl. 280—47.12)



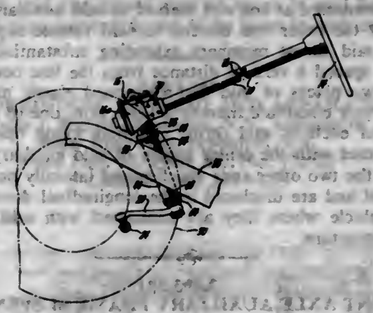
1. Materials-handling truck comprising a generally rectangular bed, an upstanding frame affixed to the bed along an edge thereof, bed-supporting wheels mounted on the bed and adapted to support it essentially parallel to the floor, with a pair of the wheels spaced apart along a line parallel to and spaced from that edge of the bed, the wheel diameter and the wheel spacing from that edge of the bed being such that a tangent to the lower portion of each wheel from the edge of the bed defines an angle with respect to the bed amounting to approximately one-sixth of a right angle, the truck being adapted to rest in tipped orientation on that pair of wheels and that edge of the bed, depending swing brace pivoted on the frame and adapted to swing out beyond the edge of the bed, and a stop adapted to limit the angle through which the brace is adapted to swing outward, the truck also being adapted to rest in further tipped orientation on that brace swung outward and that edge of the bed with the wheels clear of the floor.

3,093,388
LIFTABLE LOAD WHEEL ASSEMBLAGE
John W. Kulyk, Albion, Pa., assignor to Rogers Brothers Corporation, Albion, Pa., a corporation of Pennsylvania
Filed Dec. 4, 1961, Ser. No. 156,885
5 Claims. (Cl. 280—81)



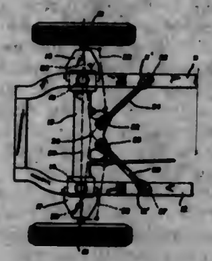
1. A trailer comprising a frame, rear supporting wheels on the frame, a front end support for the frame, rocking beam means extending longitudinally of the frame and pivotally connected to the frame for swinging upwardly and downwardly about a horizontal axis extending transversely of the frame, auxiliary wheels on the beam means, respectively, and spaced endwise of the frame from said axis and forwardly from the rear wheels and rearwardly from the front end support, inflatable air cushions interposed between the beam means and frame in spaced relation endwise of the frame from said horizontal axis and yieldably opposing upward swinging of the beams means when inflated by air under predetermined pressure, means operable to admit air under said pressure into the cushions for forcing the rocking beam means to swing downwardly to apply the auxiliary wheels to a pavement under sufficient yielding pressure to impose part of the weight of the frame, and any load thereon, on the auxiliary wheels, and to reduce the air pressure in the cushions to a predetermined amount, selectively, resilient means operatively interconnecting the beam means and frame and resiliently urging the beam means upwardly with sufficient force to lift the auxiliary wheels clear of the pavement when the said air pressure is reduced to said predetermined amount, and said resilient means having inadequate force to swing the beam means upwardly against the resistance of the cushions while said cushions are inflated by said air under said predetermined pressure.

3,093,389
STEERING GEAR ARRANGEMENT
Leslie Glenn Hogsten, Birmingham, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Mar. 1, 1961, Ser. No. 92,518
2 Claims. (Cl. 280—87)



1. The combination comprising, a vehicle body having an apertured frame side rail member and a fender having a portion disposed outwardly of said member in spaced relationship thereto and defining a steering gear housing recess, a steering gear housing located within said recess and including an elongated extension extending through said apertured side rail member, a pitman arm shaft depending from said steering gear housing and being rotatably supported within said extension, means sealing the lower end of said extension and cooperating therewith to provide a lubricant receiving chamber adapted to receive lubricant for said pitman arm shaft, a tubular member surrounding said extension and extending through and being secured to said side rail member, releasable means at the upper end of said tubular member and said extension for releasably securing said extension to said tubular member, releasable means at the lower end of said tubular member for releasably securing the lower end of said extension to said tubular member, and means releasably securing said housing to said fender portion, each of said releasable securing means being releasable to permit removal of said housing and said extension, including said chamber, as a unit with respect to said side rail member and said fender.

3,093,390
AUXILIARY FRAME FOR MOTOR VEHICLES
Josef Müller, Stuttgart-Riedenberg, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Untertürkheim, Germany
Filed Aug. 10, 1959, Ser. No. 832,679
Claims priority, application Germany Aug. 16, 1958
8 Claims. (Cl. 280—106.5)



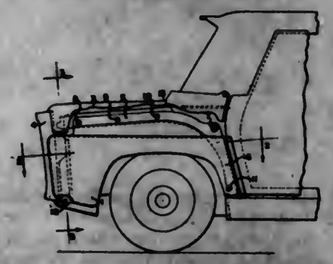
1. A front wheel suspension for a motor vehicle having a vehicle superstructure, comprising an auxiliary frame, independent wheel suspension means supported on said auxiliary frame, elastic means for elastically supporting said vehicle superstructure on said auxiliary frame in only one place on each side of the central longitudinal plane of the vehicle, and resilient stabilizing support means for stabilizingly securing said auxiliary frame at said vehicle superstructure including two thrust members forming essentially two sides of a triangle and each flexibly connected at one end thereof to said auxiliary frame and at the other end thereof to said vehicle superstructure, said thrust members extending substantially in a plane spaced a vertical distance from the line connecting said two places of said first-mentioned elastic means to effectively constitute thereby a lever arm, one of the two ends of each of said thrust members being operatively connected with the center region of said auxiliary frame while the two other ends are disposed laterally outwardly thereof and are displaced in the longitudinal direction of the vehicle where they are connected with said vehicle superstructure.

3,093,391
FRONT AXLE AUXILIARY FRAME SUSPENSION
Alfred Fr. Roßweiler, Esslingen-Hegensberg, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Untertürkheim, Germany
Filed July 18, 1961, Ser. No. 124,840
Claims priority, application Germany July 22, 1960
6 Claims. (Cl. 280—106.5)



1. An auxiliary frame suspension for a vehicle having a superstructure including a main frame and a plurality of wheels, comprising an auxiliary frame, independent wheel suspension means for suspending said wheels from said auxiliary frame, resilient support means for transmitting the vehicle weight from the superstructure to the auxiliary frame consisting of two relatively soft elastic bearing means secured between said main frame and said auxiliary frame and arranged on opposite sides of the vehicle central longitudinal plane, said bearing means being spaced from each other a relatively large distance in the transverse direction of the vehicle, and guide means operatively connecting said auxiliary frame to said vehicle superstructure to allow relative vertical movements of said auxiliary frame with respect to said vehicle superstructure while essentially preventing relative horizontal movements therebetween, said guide means comprising two leaf springs arranged on opposite sides of the central longitudinal plane of the vehicle and extending essentially in the vehicle longitudinal direction, elastic pivot means for securing one end of each of said leaf springs to said auxiliary frame so as to pivot about essentially transverse axes, and means for rigidly securing the other end of each of said leaf springs to said vehicle superstructure, said rigid securing means including means for adjusting the effective length of said leaf springs, said pivot means being spaced a relatively large distance in the vertical direction from said elastic bearing means, said first-mentioned distance being greater than said last-mentioned distance.

3,093,392
VEHICLE FENDER CONSTRUCTION
Béla Barényi, Stuttgart-Vaihingen, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Untertürkheim, Germany
Filed June 22, 1959, Ser. No. 821,776
Claims priority, application Germany June 24, 1958
2 Claims. (Cl. 280—152)



1. In a fender arrangement for a motor vehicle having at least one wheel, a superstructure including an outer body having a fender panel for said wheel, and frame means for supporting said body including at least one main support girder extending longitudinally and laterally of the vehicle substantially in the longitudinal plane of the vehicle containing said wheel, the improvement comprising means for supporting said fender panel including said girder, said longitudinal girder extending in approximately a quarter arc around the periphery of said wheel and being spaced therefrom, said longitudinal girder being provided with a vertical connecting surface extending substantially longitudinally and horizontally of the vehicle essentially over the wheel to be contained within the construction and a substantially vertical connecting surface extending upwardly with respect to the road surface from the region of the trailing edge of said wheel, said connecting surfaces being essentially parallel to the central longitudinal plane of the vehicle, said connecting surfaces serving for mounting of said fender panel, an abutment surface complementary to said connecting surfaces provided on said fender panel, and means for rigidly connecting said horizontally extending vertical connecting surface and said upwardly extending connecting surface to said abutment surface on said panel at a plurality of points spaced along the length thereof.

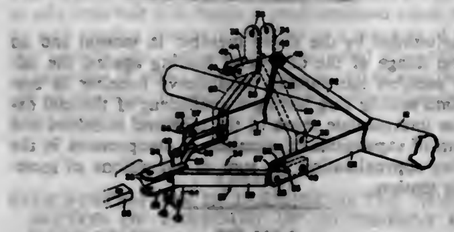
3,093,393
COMBINATION TRAILER HITCH AND OVERLOAD SUPPORTING DEVICE
Leon A. Madden, 4605 S. Melrose Drive, Oklahoma City, Okla.
Filed Oct. 11, 1961, Ser. No. 144,401
15 Claims. (Cl. 280—406)

1. A trailer load equalizing device for use with a tractor vehicle having a trailer drawbar connected to the frame thereof and a trailer having a tongue coupled to said drawbar by a trailer hitch, comprising lever means connected to said tongue for applying a downward force on the wheels of said trailer while applying a lifting force to the end of said tongue connected to said hitch; and a flexible tension member extending tautly over the rear



axle housing of said tractor vehicle in contact therewith, said tension member being connected at one of its ends to the frame of said tractor vehicle forward of said rear axle and connected at its other end to said lever means for applying a force to said lever means when a tensioning force is applied to said flexible tension member through said axle housing.

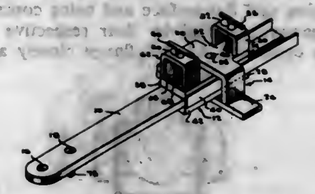
3,093,394
CONVERTIBLE HITCH
Jack W. McCollum, Boise, Idaho, assignor of one-half to Deere & Company, Moline, Ill., a corporation of Delaware
Filed Jan. 3, 1961, Ser. No. 80,180
10 Claims. (Cl. 280—415)



1. In an agricultural implement adapted to be connected optionally with a tractor having a drawbar for trailing implements or a tractor having upper and lower three-point hitch links, the improvement comprising a convertible hitch mechanism adapting the implement for attachment to either of said types of tractors, said hitch mechanism including generally horizontal frame means fixed to the implement and extending forwardly therefrom, means forming an A-frame pivoted to the forward portion of said generally horizontal frame means and swingable between a generally horizontal position, generally coplanar with said frame means, and a generally vertical position, means on the generally apical portion of said A-frame to receive the upper of said hitch links which extends forwardly when the A-frame is in its vertical position, means on the forward portion of said horizontal frame means to receive the lower of said hitch links, and means fixing said A-frame in either of its positions.

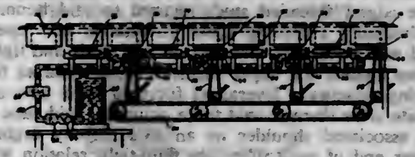
3,093,395
HITCH
Louie J. Boutwell, 2004 N. Moss St., North Little Rock, Ark.
Filed June 9, 1961, Ser. No. 116,198
3 Claims. (Cl. 280—475)

2. A tow hitch comprising:
(*a*) a slide housing having an upper plate, a lower plate, and side plates defining a through passage of rectangular cross section;
(*b*) a tow bar slidably mounted in said passage, and having a pair of bores near one end, in longitudinally spaced relation, and having stop means on opposite sides of said housing, for limiting sliding motion;
(*c*) a yoke adapted for fixed mounting on a vehicle, and having a base plate, a top plate and side walls, defining an aperture having a width in excess of that of said housing;
(*d*) a pair of trunnions carried by said housing, and journaled in said base plate, and said top plate, respectively;
(*e*) the upper plate of said housing having a bore in spaced relation to the trunnion axis;
(*f*) a bracket carried by said top plate;



(*g*) a spring pressed, manually operable lock pin, slidably mounted in said bracket and engageable in the bore in said housing when said tow bar is disposed in a medial position of swing within the limits of said yoke;
(*h*) said housing having a pair of axially aligned bores in its upper and lower plate, respectively, on the side opposite the trunnion axis from said first named lock pin; and
(*i*) a bracket carried by said upper plate, and carrying a spring pressed, manually operable, lock pin aligned with said last-named pair of bores in said housing and engageable with one of the bores in said tow bar.

3,093,396
BOOKBINDING METHOD AND APPARATUS
John J. Segreto, Brooklyn, N.Y., assignor to Betsy Ross Feld, Brooklyn, N.Y.
Filed Dec. 22, 1960, Ser. No. 77,722
5 Claims. (Cl. 281—21)



1. In a bookbinding system, the process of applying an adhesive to the signatures of a book and securing a cover thereto, said process comprising the steps of applying several successive layers of adhesive of generally uniform thickness to the signatures of the book and skin-drying each layer before the succeeding layer is applied, the final layer being dried to tacky condition to receive a cover, placing the backbone of such cover against the final layer of adhesive and applying heat and pressure to said backbone to fuse the several layers of adhesive while causing the first layer to penetrate the fibers of the individual signature pages.

3,093,397
FLANGE CONNECTOR
John R. Yancey, Houston, Tex., assignor, by mesne assignments, to FMC Corporation, San Jose, Calif., a corporation of Delaware
Filed Feb. 15, 1960, Ser. No. 8,865
3 Claims. (Cl. 285—137)

1. In a multiple tubing string well installation, a tubing head bonnet having an upper flat surface and a plurality of fluid passageways opening through said surface and

being substantially equally radially spaced from a predetermined center; sector-shaped flanges, each flange being of integral construction and having upper and lower surfaces, an outer arcuate edge, side edges converging from said outer edge to an inner apex, and an arcuate shoulder projecting downward from said outer edge, said flanges individually overlying said passageways and being assembled in circular formation with said lower surfaces spaced upwardly from said flat surface, with adjacent side edges of adjacent flanges confronting each other, with said apieces meeting at said center, and with said shoulders engaging said flat surface and being concentric with the passageways overlaid by their respective flanges; a valve tube connected to each flange closely adjacent to



its apex and in alignment with the passageway overlaid by its associated flange, said tubes extending upward from said bonnet and clustered closely about said center, each tube having a lower end communicating with its aligned passageway, each flange having openings on opposite sides of its associated tube and adjacent to its respective side edges; threaded studs secured to said bonnet and individually extending upward through said openings; and nuts releasably threaded on said studs and tightened down against the upper surfaces of said flanges for applying downward leveraging force to each tube on opposite sides thereof, said force acting on said tube about its associated shoulder as an axis thereby urging the lower end of each tube into fluid-tight relation with its respective passageway.

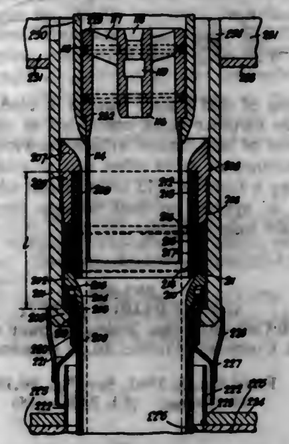
3,093,398

JOINTS BETWEEN TUBES OF DISSIMILAR MATERIALS

Sydney Fawcett, Hale Barnes, and William Rodwell, Culcheth, near Warrington, England, assignors to the United Kingdom Atomic Energy Authority, London, England

Filed June 24, 1958, Ser. No. 744,205
Claims priority, application Great Britain June 24, 1957
2 Claims. (Cl. 285—173)

1. A tube coupling between a first tube end member forming a fixed part of an apparatus and a second tube end member forming a removal part of said apparatus and inside said first tube end member, the tube end members having different coefficients of thermal expansion, an internal flange on said first tube end member, an external flange on the second tube end member and axially spaced from said internal flange, a sealing ring between said flanges, a clamping ring engaged with an internal thread on said first tube end member and having a radially inwardly extending face, and a nest of coaxial sleeve members alternately in compression and tension, the innermost thereof being in compression as exerted by the face of the clamping ring bearing thereon, and the outermost of said coaxial sleeve members being in contact with said external flange on the second tube end member, each sleeve member in tension having an internal flange at one end bearing against the adjacent mem-



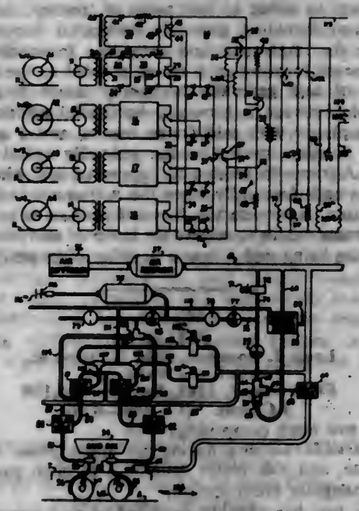
ber surrounded by the sleeve member in tension and an external flange at the other end bearing against the adjacent member surrounding said sleeve member in tension, said sealing ring having a coefficient of thermal expansion intermediate those of the tube end members and the sum of expansions of members in compression in the coupling approximating the sum of expansions of members in tension.

3,093,399

WHEEL SLIP SUPPRESSION SYSTEM

David I. Smith, Erie, Pa., assignor to General Electric Company, a corporation of New York

Filed Mar. 6, 1961, Ser. No. 93,714
12 Claims. (Cl. 291—2)



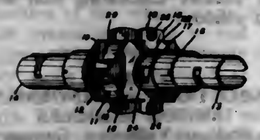
7. In a locomotive having powered axles with wheels thereon adapted to have rolling contact with rail, means for detecting slippage of the wheels on the rail, an air brake system including a brake cylinder arranged when pneumatically actuated to force braking elements into contact with the locomotive wheels, a compressed air source, conduit means for pneumatically connecting the air source to the brake cylinder including a pneumatically controlled relay valve having control means adapted to allow passage of air from the air source to the brake cylinder upon application of a pneumatic control signal to the control means: pneumatic conduit means including a magnet valve connecting the pressure source to said relay valve control means; means operable by said detecting means in response to detection of wheel slippage for energizing said magnet valve to cause application of a pneumatic control signal to said relay valve control means to brake the locomotive wheels to suppress the wheel slippage; an air reservoir connected to said pneumatic conduit means whereby the air pressure in said reservoir builds up as a function of the time said magnet valve is energized, an exhaust vent for allowing bleed-off of the pressure in said reservoir; a locomotive sanding system including a sand trap and conduit means connecting said sand trap to an air pressure source through a sanding relay valve having pneumatic control means for opening said sanding relay valve to allow sand to be blown from said sand trap between the locomotive wheels and rail, said sanding relay valve control means being pneumatically connected to said reservoir whereby said sanding relay valve is opened when the pressure in said reservoir reaches a predetermined valve and remains open until the pressure in said reservoir falls below a predetermined value whereby said sanding system is actuated as a function of wheel slip activity and continues to be actuated after cessation of detection of wheel slippage for a period of time dependent on the time duration of detected wheel slippage in a given interval of time.

3,093,400

STOP SYSTEM FOR DETERMINING THE NORMAL SECTOR OF FREEDOM OF MOVEMENT OF A DOOR KNOB

Murray E. Williams, Grand Rapids, Mich., assignor to Dexter Industries, Inc., Grand Rapids, Mich., a corporation of Michigan

Filed Aug. 8, 1960, Ser. No. 47,983
1 Claim. (Cl. 292—1)



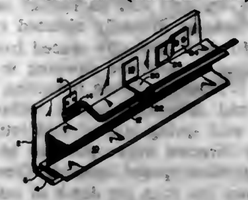
In a latch mechanism, a stop system for establishing the normal sector of freedom of knob rotation, comprising: a frame means including a knob-supporting member provided with a cylindrical bearing portion, a clearance cylindrical portion extending from said bearing portion coaxially therewith and of increased diameter over that of said bearing portion, and also having a flange portion containing an opening coaxial with said clearance portion and secured to said clearance portion and disposed in a plane perpendicularly to the axis of said clearance portion at the opposite end thereof from said bearing portion, said frame means also including a plate normally secured to said flange portion and having a central opening coaxial with said clearance portion, said plate having a lug extending axially therefrom and radially outwardly of said central opening to said clearance portion; a knob sleeve having a substantially annular cross section throughout its length, extending through and being rotatably mounted in said bearing portion and said openings, and having an abutment portion extending outward from the periphery of said sleeve within the space enclosed by said clearance portion and disposed to engage said lug on rotation of said knob sleeve to determine the normal sector of freedom thereof.

3,093,401

UNIT AIR FILTER LATCH

Willem J. Hagendoorn, Louisville, Ky., assignor to American Air Filter Company, Inc., Louisville, Ky., a corporation of Delaware

Filed Dec. 19, 1960, Ser. No. 76,683
5 Claims. (Cl. 292—207)



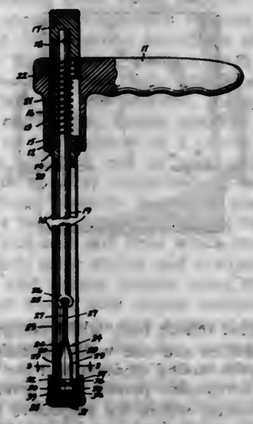
5. An improvement in latches for releasably retaining an air filter cell within a forwardly open auxiliary frame having a marginal sealing flange along its rear, comprising: a wire latching arm of generally U-shape having an elongate, straight bight portion extending along a major part of the length of a wall of said frame and having its ends pivotally secured to the inner face of said frame wall so that said bight portion moves through an arc between a cell-engaging-position and a cell-releasing-position; a clip of angular cross-section having one extremity slidably and rotatably secured to said bight portion; and detent means on the inner face of said wall and substantially centered relative to said bight portion for receiving said clip in interlocking relation when said bight portion is in said cell-engaging-position.

3,093,402

COMBINATION CANE AND RETRIEVER

Earl L. Sisson, Stratford, Conn., assignor to Clark Metal Products Incorporated, Fairfield, Conn., a corporation of Connecticut

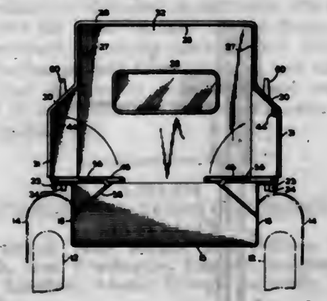
Filed Dec. 29, 1960, Ser. No. 79,257
3 Claims. (Cl. 294—19)



1. A combination cane and retriever, comprising a tubular shaft having an open lower end, a laterally extending handle having a vertically extending hub portion fixed upon the upper end of said shaft, said hub portion having a vertically extending pocket opening to its upper end and axially aligned with said shaft, a bearing bushing in the lower end of said pocket axially aligned

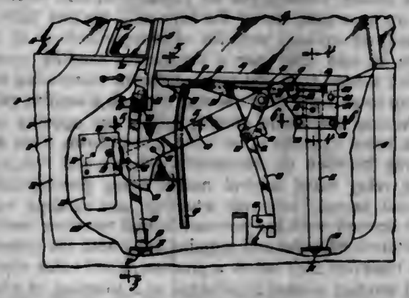
with said shaft, a rod disposed longitudinally in said shaft having its upper end portion slideable in said bearing bushing and extending into said pocket, a retriever means carried upon the lower end of said rod comprising a pair of laterally opposed spring legs having a closed position retracted within said shaft and an open position projected from said open lower end thereof, a push button disposed in said pocket and secured to said rod for imparting downward movement thereto to project said retriever means, a helical expansion spring interposed on said rod between said bearing and said push button for exerting upward pressure on said rod to retract said retriever means, and an annular inwardly directed rib upon the inner wall of said shaft upwardly spaced from said open lower end defining a restricted opening in which said retriever means is movable during retracting and projecting movement and defining a pocket within said shaft below said rib, said spring legs of said retriever means having inwardly directed finger portions at their lower ends, shoulder portions spaced upwardly from said finger portions a distance less than the depth of said pocket for engaging beneath said rib to limit the retraction of said retriever means under the pressure of said spring means to a position wherein said finger portions are disposed in said pocket entirely above said open lower end of said shaft, downwardly divergent inclined portions spaced upwardly from said shoulder means, and portions intermediate said shoulder portions and said inclined portions of a length substantially greater than the depth of said pocket disposed parallel to each other in said closed position and adapted to engage said rib within said restricted opening in the fully retracted position of said retriever means and in a partially retracted position, and said inclined portions being movable into laterally opposed relation to said rib within said restricted opening as said retriever means is moved to its fully projected position to allow said legs to move to open position.

3,093,403
CONVERTIBLE VEHICLE BODY
Thomas D. Smurall, 2976 Woodside Drive, Jackson, Miss.
Filed Apr. 28, 1959, Ser. No. 809,522
12 Claims. (Cl. 296—10)



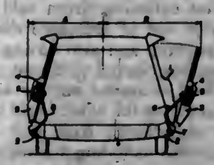
1. A convertible vehicle body which comprises a closed top, an open bottom and side walls extending from said top, said side walls having adjacent said top first portions whose outside dimensions permit upon inversion of said body, close insertion within the respective side walls of an open top truck bed, seating means pivotally attached to a body side wall, said seating means having support means for holding said seating means in a substantially horizontal position vertically spaced from said body top a sufficient distance to accommodate the body portion of seated human passengers between said seating means and said body top, said side wall being stationary on said body and serving as a back to said seating means, said seating means being pivotable towards said open bottom to a position forming extension of its respective said side wall when said body is in inverted position, means for holding said seating means in said extended position, and said seating means also being pivotable from the horizontal to a storage position towards said closed top and adjacent its respective said body side wall.

3,093,404
WINDOW REGULATOR MECHANISM
Delbert C. Probst, Detroit, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Feb. 24, 1961, Ser. No. 91,363
6 Claims. (Cl. 296—44)



1. A window regulator mechanism for a vehicle window movable in a multiplicity of planes between open and closed positions with respect to a vehicle body window opening comprising, in combination, means mounted on said body for movement in a fixed plane and operatively connected to said window for moving said window between said open and closed positions thereof, planar guiding means, means pivotally and slidably connecting said guiding means to said window, means resiliently mounting said guiding means on said body to permit said guiding means to shift out of its normal plane as required during movement of said window between said positions thereof, second guiding means mounted on said body, and means pivotally and slidably connecting said second guiding means to said window.

3,093,405
SLIDABLE DOOR ARRANGEMENT IN MOTOR VEHICLES
Béla Barényi, Stuttgart-Vaihingen, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Untertürkheim, Germany
Filed Mar. 12, 1959, Ser. No. 798,882
Claims priority, application Germany Mar. 15, 1958
6 Claims. (Cl. 296—46)



1. A sliding door arrangement, particularly for motor vehicles having a vehicle body provided with at least one door aperture and a fixed vehicle part positioned below said door aperture, a sliding door normally closing said door aperture, support means for supporting said door in an open position consisting essentially exclusively of a single support arm assembly having an upper end and a lower end, essentially longitudinal pivot means to pivotably secure said lower end of said support arm assembly to said fixed vehicle part to enable a first movement of said door from a closed position thereof in the transverse direction of the vehicle away from said door aperture, guide means connected to said upper end of said support arm assembly and pivotable therewith, and complementary guide means secured to the inside of said door and cooperating with said first-mentioned guide means to enable a second movement of said door essentially in the longitudinal direction of the vehicle, the above-enumerated support means being positioned within the interior of said vehicle body in the closed position of said door.

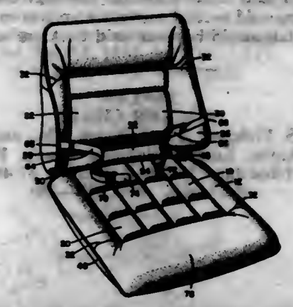
3,093,406
MOTOR VEHICLE DOOR CONSTRUCTION
Béla Barényi, Stuttgart-Vaihingen, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Untertürkheim, Germany
Filed May 11, 1959, Ser. No. 812,403
Claims priority, application Germany May 13, 1958
7 Claims. (Cl. 296—46)



1. A slidable door arrangement, especially for passenger motor vehicles having a vehicle body provided with at least one door aperture and a fixed vehicle part positioned below said door aperture, a sliding door normally closing said door aperture, support means for supporting said door in an open position consisting essentially exclusively of a single support arm assembly having an upper end and a lower end, said support arm assembly having means including link members interconnected to form a quadrilateral, essentially longitudinal pivot means to pivotably secure said lower end of said support arm assembly to said fixed vehicle part to enable first movement of said door from a closed position thereof in the transverse direction of the vehicle away from said door aperture, guide means connected to said upper end of said support arm assembly and pivotable therewith, and complementary guide means secured to the inside of said door and cooperating with said first-mentioned guide means to enable a second movement of said door essentially in the longitudinal direction of the vehicle, the above-enumerated support means being positioned within the interior of said vehicle body in the closed position of said door.

3,093,407
BODY CUSHION
Minor E. Wilson, Williamsburg, Ohio, assignor to Wilson Seat Company, Batavia, Ohio, a corporation of Ohio
Filed Aug. 11, 1961, Ser. No. 130,855
6 Claims. (Cl. 297—4)

1. A body cushion comprising in combination, a padded insert section having opposite sides and opposite ends, and a hinge portion traversing the insert section from side to side, a circumferential padded border section having opposite sides and opposite ends spaced apart to provide a well for reception of the insert section, and means securing the insert section within the well, with corresponding sides and ends of the sections in abutment with one another to form a composite structure, and wherein the opposite sides of the border section are constricted at locations adjacent to the hinge portion of the insert section, and the border section includes outwardly extended flexible wings adjacent to the constricted portions thereof



for embracing the sides of a wearer's body when the border section is strapped upon the body of the wearer.

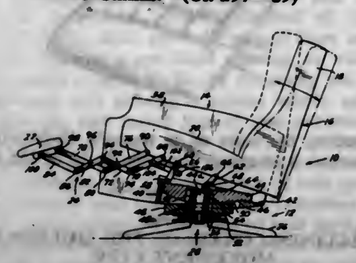
3,093,408
RECLINING CHAIR OF THE MULTIPLE MOVEMENT TYPE
Peter S. Fletcher, Delray Beach, Fla., assignor to Anton Lorenz, Ocean Ridge, Boynton Beach, Fla.
Filed Sept. 14, 1959, Ser. No. 839,666
9 Claims. (Cl. 297—85)



1. A reclining chair comprising a support, body-supporting means including a back-rest and seat adapted to be mounted on said support for reclining and inclining movements respectively, and mounting means operatively connected to said body-supporting means and to said support and mounting said body-supporting means for a first movement phase from an upright sitting position to an intermediate tilted sitting position with a substantially fixed angular relationship between said back-rest and seat and for a second movement phase from said intermediate tilted sitting position to a fully reclined position with an increase in the angular relationship between said back-rest and said seat, the mounting means including a carrier link, means pivotally mounting said carrier link on said support at a carrier pivotal mount adjacent the rearward end of said carrier link, seat-guiding means movably mounting said seat on said carrier link, means pivotally mounting said back-rest on said seat at a back-rest pivot, a control linkage including said carrier link and said links which remain stationary relative to each other during said first movement phase, the links of said control linkage being movable relative to each other during said second movement phase and operatively connected to said support, said carrier link being stationary during said first movement phase and together with said support serving as the stationary link of said mounting means during said first movement phase, back-rest guiding means including at least one link operatively connecting said back-rest to one of said other links of said control linkage and operative during said first movement phase to maintain said fixed angular relationship between said seat and back-rest, and means for blocking movement of said seat-guiding means relative to said carrier link at the end of said first movement phase such that said seat and carrier link are rigid rela-

tive to each other during said second movement phase and serve as one movable link of said control linkage, the links of said control linkage moving relative to each other during said second movement phase to increase the angular relationship between said backrest and said seat.

3,093,409
ROCKER CHAIR
Peter S. Fletcher, Delray Beach, Fla., assignor to Anton Lorenz, Boynton Beach, Fla.
Filed June 20, 1960, Ser. No. 37,402
5 Claims. (Cl. 297—89)



1. A rocking chair comprising a base, a body-supporting unit, a rocker member mounted on said base for rocking thereon, mounting means mounting said body-supporting unit on said rocker member for rearward movement thereon from a normal sitting position to a tilted sitting position, a leg-rest, a leg-rest control linkage operatively connected between said body-supporting unit and said rocker member to move said leg-rest from a retracted position to an elevated leg-supporting position in response to said rearward movement of said body-supporting unit on said rocker member to said tilted sitting position incident to rearward pressure against said back-rest by the chair occupant, said body-supporting unit and said rocker member when in said normal sitting position with said leg-rest in said retracted position having a first stable equilibrium position and being rockable on said base forwardly and rearwardly about said first stable equilibrium position under control of the chair occupant, the rearward movement of said body-supporting unit relative to said rocker member under control of said mounting means causing said rocker member to rock rearwardly to assume a second stable equilibrium position relative to said base, the combined effect of the rearward rocking of said rocker member to said second stable equilibrium position and the rearward movement of said body-supporting unit under control of said mounting means causing said body-supporting unit to assume said tilted sitting position, said leg-rest being moved to said elevated leg-supporting position in response to the rearward movement of said body-supporting unit into said tilted sitting position, said body-supporting unit and rocker member when in said tilted sitting position with said leg-rest in said elevated leg-supporting position being rockable on said base forwardly and rearwardly about said second stable equilibrium position of said rocker member on said base under control of the chair occupant.

3,093,410
CONVERTIBLE DIVAN ENSEMBLE
Forest Wilson, Oak Park, Ill., assignor to The Englander Company, Inc., Chicago, Ill., a corporation of Delaware
Filed July 29, 1959, Ser. No. 830,309
3 Claims. (Cl. 297—119)

1. A convertible divan comprising: a horizontal platform having flanges upstanding at opposite ends thereof and an end table portion disposed between such flanges adjacent one of them; legs depending from said platform adjacent to the corners thereof; a seat cushion member located on said platform between said end table portion and the flange non-adjacent thereto; a back support including a plurality of angularly formed braces secured at one and to the underside of said platform, said support further including a horizontal lip-defining member affixed to the other ends of said braces; and a plurality of back



cushion members arrangeable longitudinally adjacent to each other in vertically wedged relationship between said seat cushion member and said lip-defining member and alternatively arrangeable transversely on said platform over the end table portion theerof coplanarly with said seat cushion member to be laterally wedgeable between said seat cushion and the flanges upraised from said platform.

3,093,411
DETACHABLE TABLE TOP
John E. Mallett, 1609 SW. 8th St., Miami, Fla.
Filed May 11, 1962, Ser. No. 194,122
2 Claims. (Cl. 297—135)

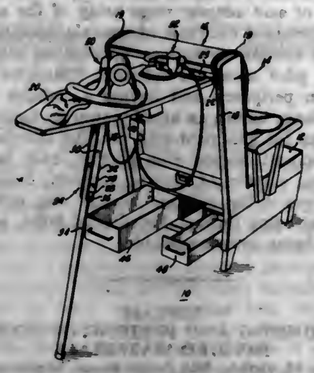


1. A table or tray for mounting upon a pair of spaced chairs comprising, a table top, downwardly-directed channel members secured on the underside of the table top adjacent to its opposite side edges, each of said channel members being shaped to fit over one of the arms on each of a pair of spaced apart chairs, the arms of the chairs being rearwardly inclined, the table top having notches in its rear corners, said notches fitting around upright portions of the chair backs, pivotally supported and slidable lock means on the table top whereby to embrace and retain the chair backs in the notches, slidable wedges disposed in the channels at their rear portions and between flanges of the channels to have progressive sliding contact with rear curved portions of the arms of the chairs and whereby to elevate the table top with respect to the arms for leveling the table top and supplemental wedge devices slidably fixed within the forward ends of the channels to engage the forward portions of the arms for an additional leveling of the table top, the said wedge devices being provided with bolts that extend through slots formed in one flange of each of the channels, the bolts at their outer ends being threaded for the reception of a wing nut and whereby the wedges may be locked in their wedging engagement with respect to the arms.

3,093,412
CONVERTIBLE CHAIR
Robert H. Gore, Fort Lauderdale, Fla., and John J. Barabas, New Rochelle, N.Y., assignors to Castro Convertible Corporation, New Hyde Park, N.Y., a corporation of New York
Filed Oct. 16, 1961, Ser. No. 145,327
3 Claims. (Cl. 297—217)

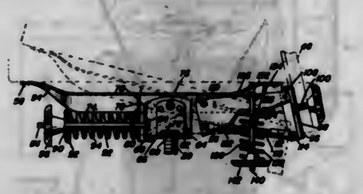
1. An improved convertible chair-ironing board unit comprising a chair frame having a seat and a back with a

hollow vertical space, a panel of upholstery covering the back of said chair, said panel being permanently attached to said chair along the top of said frame and being removably attached to said frame along the vertical rear sides thereof, fastener means along each vertical rear side to secure the edges of said panel to said chair, an ironing board pivoted along its upper or inner end to said frame closely beneath the top edge thereof, said board having a length substantially less than the height of said chair, said board when folded fitting within said vertical



space and being completely concealed by said panel, said board being swingable outward from said frame to a horizontal ironing position, a leg pivoted to the underside of said board near the outer end thereof, said leg having a knee joint near its center, stop means to limit the outward swinging of said leg relative to said board to slightly more than a right angle, means to lock the knee joint of said leg when it is unfolded, the length of said leg being subs antially greater than the length of said board, and latch means to hold said board folded within said space and said leg folded against said board.

3,093,413
CHAIR WITH DOUBLE PIVOT SPRING ASSEMBLY
Charles W. Chancellor, Jr., Box 15, Midland, Tex.
Filed Feb. 21, 1962, Ser. No. 174,729
13 Claims. (Cl. 297—284)



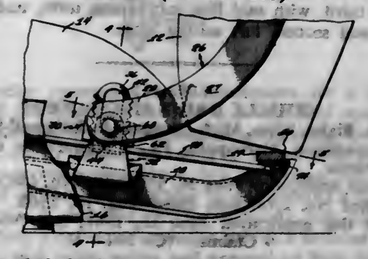
9. An auxiliary backrest for use in combination with a stationary seat backrest comprising a cushion adapted to be supported in recess means defined in the seat backrest, a supporting arm for said cushion, said supporting arm being free of the seat backrest, a supporting bracket, means supporting the supporting bracket for pivotal movement about substantially a transverse axis, spring means interconnecting the supporting bracket and the supporting means therefor for varying the resilient supporting characteristics of the supporting bracket, and means rigidly interconnecting the supporting bracket and the support arm.

3,093,414
FOLDING CHAIR
Charles Eames, Venice, Don Albinson, Culver City, and Peter J. Pearce, Los Angeles, Calif., assignors to Herman Miller, Inc., a corporation of Michigan
Filed Jan. 14, 1960, Ser. No. 2,519
5 Claims. (Cl. 297—323)



1. A folding chair having a seat frame and a back frame; an anchor frame adapted to be mounted on a vertical support; the rearward end of said seat frame being pivotally attached to said anchor frame; one end of said back frame being pivotally attached to said seat frame at a point spaced outwardly from said anchor frame; link means pivotally attaching said back frame to said anchor frame at a point susbtantially spaced from said seat frame; said link means holding said back frame substantially outwardly from said anchor frame when said chair is open; said link means permitting said chair to be folded from an open position to a closed position with both said seat and back frames adjacent and generally parallel to said anchor frame; stop means limiting opening swinging movement of said back and seat frames when said seat is generally horizontal.

3,093,415
RECLINING SEAT BACK
Richard M. Slivik, Detroit, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Aug. 1, 1961, Ser. No. 128,537
9 Claims. (Cl. 297—373)

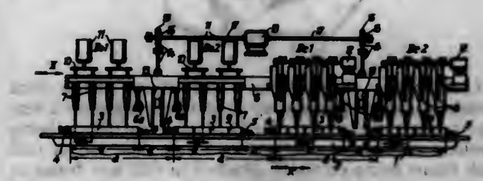


1. In a chair having a back portion pivoted to a seat portion and movable between a normal sitting position and an inclined position, a hinge member having an arm attached to said back portion and a pivot portion formed therewith, a base member secured to said seat portion, a slot formed in said base member for pivotally and slidably carrying said pivot portion of said hinge member, and a latching means operatively associated with said base member and said pivot portion for locking said back portion between said positions.

3,093,416
MACHINE AND METHOD OF MAKING BRUSHES
Herbert Schmidt, Hohenlockstedt, Schleswig-Holstein, Germany
Filed Nov. 28, 1958, Ser. No. 776,934
Claims priority, application Germany Nov. 30, 1957
19 Claims. (Cl. 300—21)

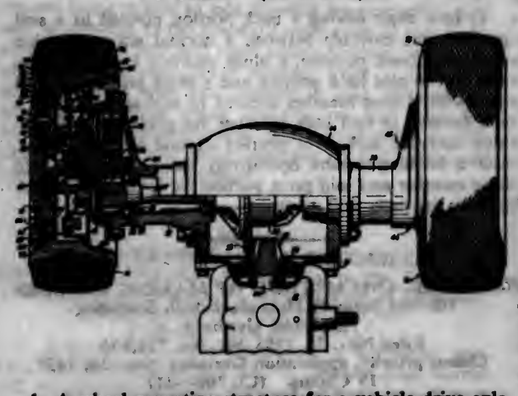
1. In combination with an intermittently operable conveyor adapted to advance in uniform steps with uniform

rest periods therebetween, said conveyor being adapted for carrying a plurality of brush heads having bores therein to be provided with tufts: a plurality of tools each of which is adapted to insert a tuft in a tuft-receiving bore of a brush head, arranged in spaced relationship to said conveyor and distributed along the conveyor, said tuft-inserting tools being so positioned that each is aligned with a predetermined bore of a different brush head at each rest position of the conveyor, and means for moving said tools and the brush head aligned therewith relatively to cause said tools to inert tufts in their respective bores simultaneously.



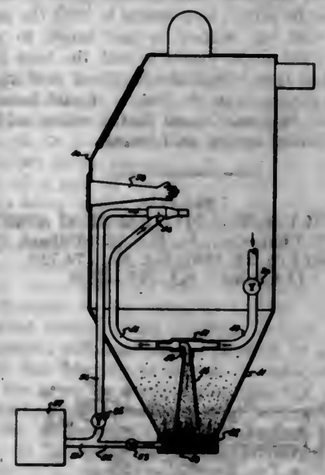
8. A method of providing a brush head with a line of bores and with tufts therein, which includes the steps of: creating a first group of holes by first simultaneously drilling bores into said brush head with a corresponding number of first drilling tools and with the axes of said bores spaced from each other a distance equal to twice the desired minimum distance of two adjacent holes in the finished brush head, subsequently creating a second group of holes by simultaneously drilling holes intermediate the first drilled holes and in alignment therewith and with a corresponding number of second drilling tools, thereupon inserting tufts first simultaneously into one of said groups of holes with a first set of tuft setting tools and thereafter simultaneously inserting tufts into the other group of holes with a second set of tuft setting tools, and moving the brush bodies in succession and by steps into operative alignment consecutively first, with said first drilling tools, second, with said second drilling tools, third, with said first tuft setting tools, and fourth, with said second tuft setting tools.

3,093,417
VEHICLE DRIVE MECHANISM
Leo A. Bixby, Niles, Mich., assignor to Rockwell-Standard Corporation, Coraopolis, Pa., a corporation of Pennsylvania
Original application June 30, 1954, Ser. No. 440,498, now Patent No. 2,949,040, dated Aug. 16, 1960. Divided and this application June 13, 1960, Ser. No. 35,543
9 Claims. (Cl. 301—1)



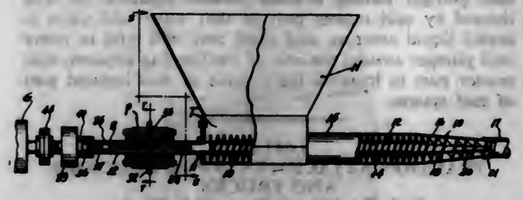
1. A wheel mounting structure for a vehicle drive axle assembly having housing means and a pair of spindles journaled on said housing means at opposite ends of said axle assembly, radial flanges on said spindles outside said housing means, adapter ring portions rigid with said spindle flanges, each said adapter ring portion projecting radially outwardly of and being disposed chiefly axially inwardly of its associated spindle flange and being provided with a series of fastener holes, each said adapter ring portion having a flat axially outwardly facing annular surface disposed radially outwardly of the associated spindle flange, and each said adapter ring portion having a chiefly cylindrical external periphery radially outwardly of said fastener holes, the cylindrical external peripheries of said adapter rings being of the same size, a wheel assembly at each side of the axle assembly having an internal cylindrical surface adapted to closely surround and pilot upon the adjacent cylindrical adapter ring portion periphery and having a radially inwardly extending flange having an axially inwardly facing flat annular surface for abutment with said flat annular surface of the associated adapter ring portion, each said wheel flange having a series of fastener receiving holes aligned with the holes in the adjacent adapter ring portion, and fasteners extending through the aligned holes, said wheel assemblies being interchangeable.

3,093,418
FLUIDISING AND FEEDING OF FINELY DIVIDED MATERIALS
Allan M. Doble, 206 Peath Road, Melbourne, Victoria, Australia
Filed Sept. 22, 1960, Ser. No. 57,792
2 Claims. (Cl. 302—17)



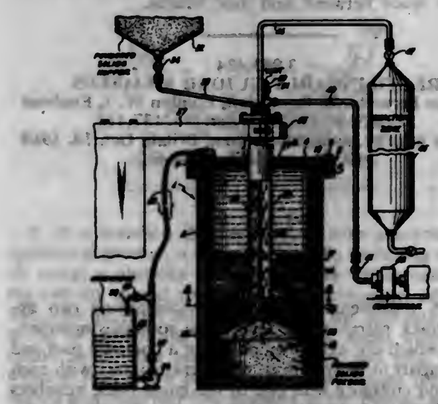
1. Apparatus for fluidizing and feeding finely divided materials comprising: a storage chamber having a porous bottom; a feed chamber mounted within said storage chamber, said feed chamber comprising a vertically extending duct open at its lower end and closed at its upper end, said duct having a frusto-conical form with a cross section that diminishes towards its upper end; the lower edge of said duct being spaced above the bottom of said storage chamber whereby the material may gravitate therebelow; a restricted air passage connecting the storage chamber above the material therein to an upper part of said feed chamber; and a discharge passage communicating with an upper portion of said feed chamber.

3,093,419
MORTAR SPREADING APPARATUS AND METHOD OF CONVEYING
William E. Bowers, 1712 Woodside Ave., Bay City, Mich.
Filed Mar. 2, 1960, Ser. No. 12,458
6 Claims. (Cl. 302—50)



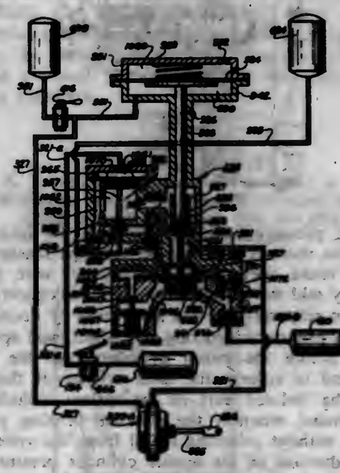
1. A conveying system for handling and conveying materials in a finely divided condition comprising a hopper having a horizontally disposed tubular extension terminating in an outwardly tapered outer end section, a driven screw conveyor including a hollow sleeve mounted in said hopper and extension, said tapered outer end section terminating in a reduced longitudinally disposed passage, a longitudinally disposed passage, a longitudinally disposed spring pressed shaft mounted in said sleeve with its outer end extending into said reduced passage and normally forming a valve closure for same, a piston attached to the shaft and slidable in said sleeve member, spring means bearing against the one end of said piston, means for admitting a selected pressure agent to said sleeve at a point intermediate said valve and piston, for discharge through said passage, said shaft being movable inwardly to open said valve and permit passage of the pressure agent when the force of the pressure agent exceeds the spring pressure on said piston.

3,093,420
APPARATUS FOR FEEDING FINELY DIVIDED SOLIDS
Harold D. Levene, Thomas G. Stephenson, and Ezequiel Montes, El Paso, Tex., assignors to Fossil Fuels, Inc., a corporation of Delaware
Filed Sept. 8, 1961, Ser. No. 136,955
14 Claims. (Cl. 302—53)



1. Apparatus for feeding finely divided solids from a low pressure zone to a high pressure zone, comprising: a vertical cylindrical feed vessel having a feed chamber, a piston mounted in said chamber for relative movement substantially throughout the length thereof, means for effecting a controlled movement of said chamber with respect to said piston to effect said relative movement of the piston through the chamber, valved inlet means for introducing said solids below said piston from said low pressure zone to provide a bed of said solids in said feed chamber, outlet means in said piston for receiving said solids from said feed chamber upon relative movement of said piston and chamber to decrease the volume of said chamber, valved conduit means connecting said outlet means to said high pressure zone for transferring solids thereto, and means for introducing gas through said piston into said feed chamber to aerate the solids from the top of said bed and facilitate their entry into said outlet means, whereby said solids and gas may be continuously discharged to said high pressure zone until said bed of solids is exhausted.

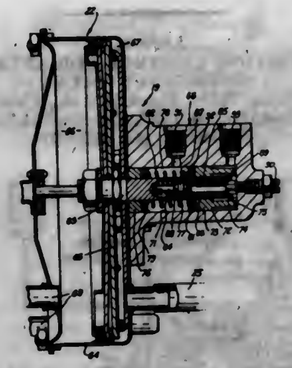
3,093,421
LIMITING CONTROL FOR RELAY EMERGENCY VALVE
Arthur B. Enga, 728½ Franklin Ave., Columbus, Ohio
Filed Dec. 10, 1957, Ser. No. 701,935
9 Claims. (Cl. 303—2)



1. A relay emergency valve mechanism for a brake system of the type that includes a service fluid reservoir and a brake motor, said mechanism comprising, in combination, casing means including a sealed chamber; a first passage for conducting a flow of pressurized fluid from said service fluid reservoir to said motor; a service valve means in said first passage including inlet and exhaust valves; a pressure responsive movable member connected to said valve means and exposed to fluid in said chamber whereby a decrease of pressure in said chamber closes the inlet valve of said service valve means and terminates the flow of fluid through said first passage; a second passage connected to said first passage for conducting fluid from said reservoir to said motor; an emergency valve means for normally obstructing the flow of fluid through said second passage and permitting flow in said first passage; means forming a second sealed chamber; a second pressure responsive movable member connected to said emergency valve means and exposed to pressurized fluid in said second sealed chamber whereby a change of pressure in said second sealed chamber opens said emergency valve means; means forming a third chamber; an actuating means including a rod extended through said casing means for overriding and closing said emergency valve means to terminate said emergency flow of fluid to said motor, said actuating means including a pressure responsive member exposed to the pressure in said third chamber; and a third valve means in said first passage, said third valve means being normally open and

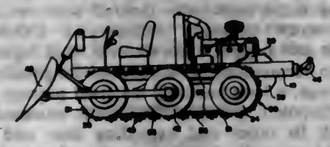
connected to said actuating means whereby operation of said second actuating means closes said third valve means.

3,093,422
VEHICLE BRAKE SYSTEM
Mervyn Brian Packer, Allen Frank Prestidge, John Rodway, and Frank Gordon Parnell, all of Leamington Spa, England, assignors to Automotive Products Company Limited, Leamington Spa, England
Filed Mar. 2, 1960, Ser. No. 12,295
Claims priority, application Great Britain Mar. 16, 1959
1 Claim. (Cl. 303—21)



A liquid pressure braking system of the hydrostatic type wherein there is provided between the master cylinder and a brake operating motor cylinder with a brake operated by said motor cylinder, apparatus operable by a deceleration responsive device as a result of deceleration exceeding a predetermined rate of a wheel, said apparatus acting to isolate the motor cylinder from the master cylinder and to enlarge the total volume of the liquid space in the isolated part of the system including the motor cylinder, whereby the effective braking pressure is reduced without releasing liquid from the system and without reduction of the master cylinder pressure, said apparatus including a hollow housing having a port therein in communication with said master cylinder and a port therein in communication with said motor cylinder, said ports being spaced from each other, a slidable plunger disposed in said housing of substantially smaller diameter than said housing forming an annular chamber around said plunger, axial bore means in said plunger, a sleeve disposed in said bore means forming a valve seat at one end, first port means in said plunger in communication with said annular chamber and said master cylinder port, said sleeve forming a passage communicating with said first port means and said motor cylinder port, a valve enclosed within the axial bore means of said plunger adjacent the master cylinder port adapted to seat on said sleeve valve seat to close off communication between said master cylinder and motor cylinder, resilient means mounting said valve within said bore means to provide relative movement thereof with respect to said plunger, said valve being normally open when said slidable plunger is disposed toward the end of the housing adjacent said motor cylinder port to permit communication between the master and motor ports through the annular chamber, plunger and axial bore means, and said valve being closed and seated on said valve seat when said slidable plunger is disposed toward the end of the housing adjacent said master cylinder port to cut off communication between said master and motor cylinder ports, an annular stop member limiting the travel of the plunger toward said motor cylinder port, an adjustable stop pin member maintaining said valve unseated when said plunger bears on its annular stop member, and an annular sleeve member surrounding said plunger and disposed in said housing toward the end thereof adjacent said motor port and forming sealing means therein, said annular sleeve member having recesses therein communicating with said axial bore means and said motor port, said plunger having a solid portion adjacent the end thereof by said master port so that when said valve is seated liquid entering said axial bore will tend to move said plunger toward the end of the housing adjacent said master port to increase the volume of said isolated part of said system.

3,093,423
TRACTION ATTACHMENTS FOR TRACTORS AND TRUCKS
Jack B. Adams, Eastsound, Wash. (Rte. 8, Box 446, Olympia, Wash.)
Filed Apr. 29, 1960, Ser. No. 25,672
6 Claims. (Cl. 305—56)



1. A belt traction tread attachment for wheeled vehicles having multi-axle drive with dual wheels thereon comprising:

(1) a continuous link chain capable of being disposed between said dual wheels, said chain consisting solely of straight closed oval metal ring links, adjacent links of said chain being interlinked to one another and positioned at right angles with respect to one another providing alternate links disposed in a common plane;

(2) transverse tread plates fixedly secured to links of said chain, said tread plates being dimensioned to extend from the tread surface of one of said dual wheels to the tread surface of the other of said dual wheels; and

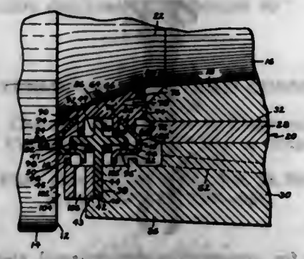
(3) semi-circular guide means fixedly secured to links of said chain and directed to extend inwardly into the space between said dual wheels.

3,093,424
RECTILINEARLY GUIDED MEMBERS
Charles Pernetta, 28 Bryanston, London W. 1, England
Filed Sept. 11, 1961, Ser. No. 137,413
Claims priority, application Great Britain Oct. 14, 1960
10 Claims. (Cl. 308—6)



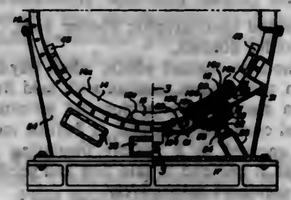
10. A rectilinear guiding means comprising two opposed track members, at least three rotatable members, two of which are axially mounted on a common part and spaced apart to be free from peripheral contact with each other and engaging with one of the guide track members while the third rotatable member is free mounted in peripheral engagement with the said two members and the opposing guide track member wherein the said two members are provided with V-shaped peripheries in engagement with a curved cross-sectional guide track member while the said third member is a spherical ball freely located to engage within the V-shaped periphery of the said two members and a V-shaped groove in said opposing guide track member.

3,093,425
SEAL FOR ROLLING MILL
Charles A. Rich, Jr., Worcester, Mass., assignor to Morgan Construction Company, Worcester, Mass., a corporation of Massachusetts
Filed Nov. 30, 1961, Ser. No. 155,941
7 Claims. (Cl. 308—36.1)



5. Sealing means for use on the roll neck of a roll for preventing the passage of water to the bearing area, said means comprising a neck seal positioned on the roll neck, a seal ring having an annular portion engaging the face of said roll and having its inner edge in watertight engagement with said neck seal, a cylindrical flange on said seal ring extending away from said annular portion, a flange of flexible material attached to a stationary part of the bearing and engaging the inner face of said cylindrical flange in sliding watertight relationship, a second seal ring of reverse but similar configuration to the said first seal ring, the inner edge of said second seal ring being in watertight engagement with said neck seal, and a second flange fixed with respect to said bearing in sliding and watertight engagement with the interior surface of cylindrical flange of said second seal ring.

3,093,426
TRUNNION BEARING
Arthur S. Cornford, Toronto, Ontario, Canada, assignor to Aerofall Mills Inc., Columbus, Ohio
Filed Dec. 16, 1959, Ser. No. 859,926
Claims priority, application Canada Apr. 28, 1959
13 Claims. (Cl. 308—73)



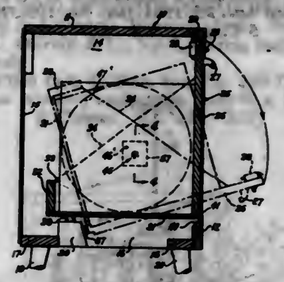
1. In a trunnion bearing for use with a substantially cylindrical journal, a trunnion housing including a spent oil sump; a plurality of bearing shoes within said housing radially spaced above said sump to support said journal; high pressure oil supply means for applying a film of oil to the bearing surfaces of said shoes whereby to create an oil film between said shoes and said journal when at rest; a low pressure oil supply means for applying oil at a relatively low pressure to the bearing surfaces of said shoes to create a hydrodynamic oil film between said journal and said bearing shoes when the journal is in motion in the bearing; means to select the high or low pressure oil supply; individually adjustable supporting means for supporting each bearing shoe in engagement with said journal, said supporting means including a universal mounting for said bearing shoe; and means for retracting an individual supporting means to permit the associated shoe to disengage from said journal.

3,093,427
BALL OR ROLLER BEARINGS
Francesco Vasta, Via del Gambero 8, Rome, Italy
Filed May 11, 1959, Ser. No. 812,240
6 Claims. (Cl. 308—184)



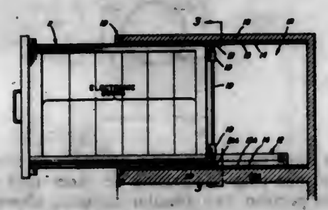
1. An anti-friction bearing having two race rings, at least one race ring comprising an inner ring portion, an outer ring portion, two annular damping elements located between the inner and outer ring portions of each race ring, said damping elements being of a material which is more elastic than the material of said inner and outer ring portions, and a flat metal supporting ring disposed between the damping elements extending between the damping elements for substantially the width of the damping elements.

3,093,428
STORAGE CABINET
Harold S. Lanier, Welcome, N.C., assignor to La-Chap, Inc., Welcome, N.C., a corporation of North Carolina
Filed Jan. 29, 1962, Ser. No. 169,971
1 Claim. (Cl. 312—255)



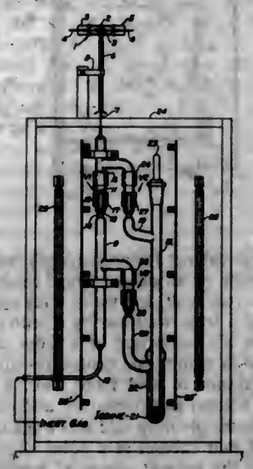
In a storage cabinet for phonograph records or the like, the combination of an outer storage cabinet comprised of a fixed top, a rear wall, end walls, a leg supporting bottom structure and a front wall having a central opening therein, a storage bin comprised of a front closure panel dimensioned to fit within said central opening and conforming in appearance to said front wall, a relatively short rear wall, a bottom and forwardly and upwardly inclined end walls, means pivoting said end walls of said bin to the end walls of said cabinet at a point slightly beneath and forwardly of the normal center of gravity of said bin to reduce the effort of opening the bin to minimum, said means pivoting said end walls of said bin to said end walls of said cabinet comprising a nylon bearing socket in a countersunk bore in each cabinet end wall, a pivot support nut in a bore extending through each end wall of said bin, a bolt threaded into said support nut and having its end extending into said bearing socket, a lock washer on said bolt between said pivot support nut and said bushing, the end of said bolt extending into said socket unthreaded, the opposite end headless and provided with a screwdriver slot, and said pivot bearing socket is provided with an external plate having inclined guide flanges thereon to facilitate the alignment of the unthreaded end of said bolt with said socket during assembly.

3,093,429
TORSION BAR SUPPORT FOR SLIDING RACK
Charles Curtis Christen, Santa Clara, and Michel J. Matovich, Jr., Sunnyvale, Calif., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Jan. 17, 1962, Ser. No. 166,971
6 Claims. (Cl. 312—331)



1. The combination of a cabinet having a rack slidably disposed therein, toothed means disposed within and fixed to said cabinet, a torsion bar rotatably mounted on said rack and having complementary means fixed thereto in engagement with and movable along said toothed means as the torsion bar is rotated according to the movement of the rack.

3,093,430
GAS AND VAPOR FILLING METHOD FOR ELECTRIC LAMPS OR SIMILAR DEVICES
Emmett H. Wiley, Willowick, Ohio, assignor to General Electric Company, a corporation of New York
Filed Apr. 25, 1961, Ser. No. 105,398
5 Claims. (Cl. 316—24)



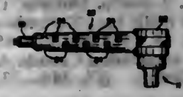
1. The method of expelling an undesired atmosphere from the envelope of an electric lamp or similar device and filling it with inert gas and active vapor which comprises removing the atmosphere from the envelope by flushing it out with a flow of inert gas, introducing an active vapor into the envelope and continuing the flushing with inert gas to establish a desired equilibrium density of the active vapor in the envelope, cooling at least a portion of the envelope sufficiently to condense the active vapor and to increase the density of the inert gas by admitting an additional quantity of inert gas into the envelope, and sealing the envelope with the inert gas and active vapor retained therein as the final gaseous filling.

3,093,431
ELECTRICAL CONNECTOR FOR USE IN AN EXPERIMENTAL CIRCUIT KIT
Richard R. Lewis, 23 Lawrence St., Cambridge, Mass.
Filed Oct. 11, 1961, Ser. No. 144,339
2 Claims. (Cl. 339—18)



2. A kit for constructing experimental electrical circuits, comprising a mounting board formed with a plurality of spaced openings, and a plurality of electrical connectors each including an insulating plug having a split resiliently-deformable portion for insertion into one of said openings to mount said connector on said board, each of said connectors further including a conductive helical coil spring secured at one end thereof on said plug, and an insulating cap secured to the other end of said spring, said insulating cap being formed with a cylindrical opening for insertion of a plug connector therethrough into contact with the interior of said spring.

3,093,432
MOLDED ELECTRICAL CORD CONNECTOR
William R. King, Denver, Colo., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Oct. 27, 1960, Ser. No. 65,485
2 Claims. (Cl. 339—59)



1. In a molded photographic shutter cord,
a first metallic contact,
a second metallic contact which, when physically positioned in cooperative relation with said first contact, forms an electrical connector end terminal,
an electrical cord having a pair of flexible metallic conductors encased in a flexible insulating jacket and connected at one end to said first and second metallic contact members respectively,
cord crimping strain relief means directly mounted on said flexible jacket and encircling and firmly compressing said flexible jacket in the vicinity of said one end of said metallic conductors,
a solid plug of resilient insulating material molded around said one end of said cord, said strain relief means, and said first and second contacts, to firmly surround said strain relief means and to mount and hold said first and second contacts in said cooperative relation to form a mechanically stable connector end terminal having pulling strain relief for pulling forces extending along said electrical cord,
and a tapered flexible sleeve of insulating material molded as an integral extension of said solid plug, said sleeve having an interior dimension matching the exterior dimension of said insulating jacket to thus firmly surround and grip said insulating jacket to provide pulling strain relief for pulling forces extending along said electrical cord, said sleeve being provided with a plurality of rectangular shaped open holes which extend completely through said sleeve, said holes being grouped in pairs of holes which are circumferentially oppositely disposed and have a hole length equal to approximately 90° of the circumference of said sleeve, with alternate pairs of said holes being axially displaced and being circumferentially displaced approximately 90°.

3,093,433
WIRE TERMINALS AND LEAD CONNECTOR DEVICES
Hans Ege, Chicago, Ill., assignor to Underwriters Safety Device Company, Chicago, Ill., a corporation of Illinois
Filed Dec. 27, 1960, Ser. No. 78,380
6 Claims. (Cl. 339—95)



1. A terminal for lead connection thereto, said terminal being formed from a single strip of electrical current conductive resilient material, said strip centrally thereof being reversely folded to define a lead connection portion of generally rectangular outline, said lead connection portion at one end thereof forming a disconnect terminal means, the other end of said lead connection portion including a right angled apertured lead insertion flange constituting one end of said single strip and a diagonally inwardly folded lead locking flange constituting the other end of said single strip, said locking flange being located inwardly of said lead insertion flange with the free end thereof being in close proximity to a side marginal base of a lead locking rib formed in said strip inwardly of said lead insertion flange, said locking rib being formed from an inwardly offset transverse portion of said strip and projecting into said lead connection portion for cooperative functioning with said locking flange in resiliently engaging a lead therebetween which lead is inserted into said lead connection portion through the aperture of said lead insertion flange.

3,093,434
MOLDED PLUG
Wallace R. Francis, New Haven, Conn., assignor to General Electric Company, a corporation of New York
Filed Jan. 4, 1960, Ser. No. 265
9 Claims. (Cl. 339—195)



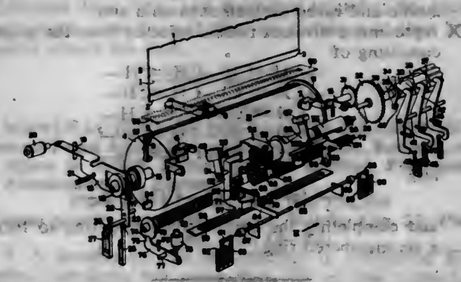
1. A molded wiring device comprising a plurality of spaced contacts, an electrical cord having a plurality of conductors mechanically and electrically connected to said contacts to form a plurality of spaced connections, a first body of molded insulating material surrounding said connections, and a second body of molded insulating material surrounding said first body and having a section interposed between said connections thereby to further insulate said connections and strengthen said device.

3,093,435
ELECTRICAL TERMINAL
Philmore E. Johnson, Bristol, Conn., assignor to The Superior Electric Company, Bristol, Conn., a corporation of Connecticut
Filed Mar. 14, 1961, Ser. No. 95,609
6 Claims. (Cl. 339—276)



4. A one-piece electrical terminal comprising a head, a body connected to the head, a stem secured to the body and being formed to provide at least a portion of a transverse aperture and a collar integrally secured to the stem, said collar being fracturable from its connection to the stem to be pressed onto said stem to form a press fit with the stem to clamp a wire inserted in the aperture to the terminal to provide for electrical connection between said wire and the terminal and additional means formed on said terminal for providing for another electrical connection to the terminal.

3,093,436
RECORDING MACHINE FOR A SHEET RECORD HAVING TWO OPPOSITE RECORDING FACES
Bruno Merli and Giorgio Jannuzzi, Ivrea, Italy, assignors to Ing. C. Olivetti & C., S.p.A., Ivrea, Italy, a corporation of Italy
Filed Oct. 4, 1960, Ser. No. 109,795
Claims priority, application Italy Oct. 7, 1959
6 Claims. (Cl. 346—125)



1. In a recording machine having a frame, the combination comprising a rotatable drum mounted in said frame and having an endless surface about which a flexible sheet record is adapted to be wrapped through substantially one complete revolution, said record having a strip adapted to be folded with respect to its leading edge, said surface having a longitudinal slot for firmly receiving said strip, said record having two opposite recording faces and being normally urged by its inherent resiliency to keep flat, wrapping means mounted on said frame and spring urged to contact said surface for folding said record along said leading edge and wrapping same about said surface during the rotation thereof, a recording head mounted on said frame for travelling parallel to the axis of said drum across an exposed face of said record, driving means for selectively rotating said drum in forward and return drive, and means mounted on said frame at either end of the travel of said head and controlled by said head upon completion of its travel in either direc-

tion for causing said driving means to reverse said drive, whereby when upon completion of said travel the trailing edge of said record has moved past said wrapping means the record by its resiliency unwraps from the drum and finally unfolds along said leading edge and in the further course of the rotation thereof is caused by said wrapping means to be folded in an opposite direction along said leading edge and to be wrapped again through one revolution to expose the other face to said recording head.

CHEMICAL

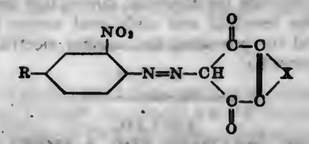
3,093,437

PROCESS FOR THE DYEING, PADDING AND PRINTING OF HYDROPHOBIC FIBERS WITH INDANDIONE DYESTUFFS

Ernest Merian, Bottmingen, and Otto Senn, Arlesheim, Basel-Land, Switzerland, assignors to Sandoz Ltd., Basel, Switzerland

No Drawing. Filed Feb. 16, 1960, Ser. No. 8,908
Claims priority, application Switzerland Apr. 25, 1958
12 Claims. (Cl. 8—21)

1. Process for dyeing hydrophobic textile materials selected from the group consisting of secondary cellulose acetate, cellulose triacetate, synthetic polyamide fibers, and polyethylene terephthalate fibers, which comprises applying onto the said textile materials an aqueous suspension of the finely divided dyestuff of the formula



wherein

R represents a member selected from the group consisting of hydrogen, chlorine, nitro, amino, lower alkyl, lower alkanoylamino, lower carbalkoxyamino, lower carbo-(alkoxy)-alkoxyamino, lower carbo-(alkoxy - alkoxy) - alkoxyamino, carbo - (phenoxy)-lower alkoxyamino, carboaryloxyamino wherein aryl is of the benzene series, carbo-(phenyl lower alkoxy)-amino and carbo-cycloalkoxyamino and

X represents a divalent radical selected from the group consisting of

—CH=CH—CH=CH—
—CH=CCl—CH=CH—
—CH=CCl—CCl=CH—
—CH=CBr—CH=CH—
—CH=CBr—CBr=CH—

and

—CH=C(NO_2)—CH=CH—

and completing the carbon-containing ring to form a six-membered ring.

3,093,438

ASSISTING DYEING OF SYNTHETIC FIBERS WITH DISPERSE DYES AND ARYL ETHER ESTERS

Kurt Hofer, Neue Welt, Munchenstein, Switzerland, assignor to Sandoz Ltd., Basel, Switzerland

No Drawing. Filed Oct. 17, 1960, Ser. No. 62,896
Claims priority, application Switzerland Oct. 19, 1959
4 Claims. (Cl. 8—92)

1. A method of dyeing or printing a member selected from the group consisting of polyester fibers, cellulose acetate fibers, polyamide fibers, polyvinyl chloride fibers, polyvinylidine chloride fibers and fibers of polyvinyl chloride-polyvinylidine chloride copolymer with a disperse dyestuff, which comprises effecting the dyeing or printing in the presence of, as auxiliary agent, a water-soluble ester of a compound of the formula

$$Ar—(OA)_n—OH$$

wherein Ar is an aromatic radical, A is an alkylene radical with 2 to 4 carbon atoms, and *n* is a whole number from 1 to 5 inclusive, with a member selected from the group consisting of an alkanoic acid, an alkoxy-alkanoic acid, and a phenoxyalkanoic acid.

3,093,439

PROCESS FOR PREPARING TANNED COLLAGENOUS MATERIAL WITH DIALDEHYDE STARCH

James W. Bothwell, New Brunswick, N.J., assignor to Johnson & Johnson, a corporation of New Jersey

No Drawing. Filed July 5, 1961, Ser. No. 121,822
5 Claims. (Cl. 8—94.11)

1. A process for preparing tanned collagenous material of mammalian origin useful for implanting in a mammal which comprises immersing collagenous material of mammalian origin which contains at least 80% by weight collagenous solids in an aqueous solution of periodate oxidized starch containing about 50 to about 100% dialdehyde starch calculated on an anhydrous basis having a concentration from about 0.5 to about 10% (weight/volume) and a pH within the range of about 7.5 to about 12 for sufficient time to bring the shrinkage temperature of the tanned collagen to from about 84° C. to about 90° C.; removing the tanned collagen from the tanning solution and washing the tanned collagen with distilled water until excess tanning agent is removed therefrom.

3,093,440

PROCESS FOR PREPARING COLLAGENOUS MATERIAL TANNED WITH POLYACROLEIN

James W. Bothwell, New Brunswick, N.J., assignor to Johnson & Johnson, a corporation of New Jersey

No Drawing. Filed July 5, 1961, Ser. No. 121,823
9 Claims. (Cl. 8—94.11)

2. Collagenous material of mammalian origin useful for implanting in a mammal, having its collagen fibrils present substantially in their naturally producing relationship and containing at least 80% collagenous solids and not over about 20% of other protein based on the weight of solids therein and tanned with polyacrolein having an average molecular weight within the range of from about 20,000 to about 500,000 so that it has increased resistance to breakdown by normal body processes.

3,093,441

SHRINKPROOFING WOOL WITH INTERPOLYMERS

Robert E. Whitfield and Lowell A. Miller, Walnut Creek, and William L. Wasley, Berkeley, Calif., assignors to the United States of America as represented by the Secretary of Agriculture

No Drawing. Filed May 10, 1961, Ser. No. 109,229
27 Claims. (Cl. 8—128)
(Granted under Title 35, U.S. Code (1952), sec. 266)

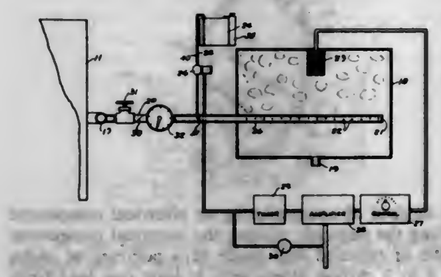
1. A process for shrinkproofing wool without significant impairment of its hand which comprises serially impregnating wool with two solutions, one solution containing a diamine in a first solvent, the other solution containing at least two members of the group consisting of diacid chlorides, bischloroformates, and diisocyanates in a second solvent, said first and second solvents being substantially immiscible with one another.

3,093,442

METHOD AND APPARATUS FOR CONTROLLING THE RELATIVE HUMIDITY OF DRY CLEANING SYSTEMS

Malcolm W. Brown and Jack W. Stead, Dearborn, Mich., assignors to Eaton Chemical and Dyestuff Company, Detroit, Mich., a corporation of Michigan

Filed Aug. 8, 1955, Ser. No. 526,981
4 Claims. (Cl. 8—142)



1. The method of controlling the relative humidity of a liquid dry cleaning solution in a dry cleaning system which comprises spraying dry cleaning solution continuously into an air tight chamber and thereby creating an atmoshpere of vapor from said solution in said chamber, continuously removing the dry cleaning solution from said air tight chamber, continuously measuring the relative humidity of the vapor in said chamber, and adding water to the dry cleaning solution as it is sprayed into said chamber when the relative humidity is below a predetermined amount.

3. In an apparatus for controlling the relative humidity of a liquid dry cleaning solution, the combination comprising a dry cleaning system through which said liquid solution is circulated, an air tight chamber, said chamber having an inlet through which a portion of said liquid solution is continuously introduced into said chamber and an outlet through which said liquid solution is removed from said chamber, a sensing device including a sensing element positioned in said chamber, spray means in said inlet of said chamber for creating an atmosphere of vapor from said liquid solution as it is introduced through said inlet into said chamber, and means actuated by the sensing device for adding water to the dry cleaning system at said inlet to said chamber.

3,093,443

PROCESS FOR PRODUCING A VULCANIZED RUBBER GASKET

Herbert H. Levinson, Northbrook, Ill., assignor to Felt Products Mfg. Co., Skokie, Ill., a corporation of Illinois

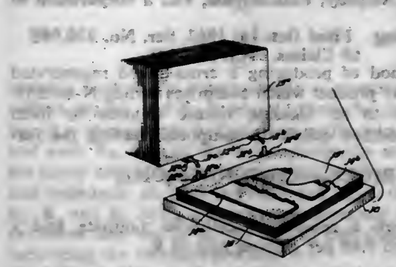
Filed Mar. 13, 1961, Ser. No. 95,406
8 Claims. (Cl. 18—47.5)

1. A process for the manufacture of a gasket configuration from uncured gasket stock, which stock when unrestrained is subject to distortion upon being subjected to curing conditions, which process comprises the steps of:

(*a*) cutting the desired gasket configuration from said stock;

(*b*) supporting the resulting gasket configuration in direct contact with a substantially-rigid surface having a substantial coefficient of friction with respect thereto, whereby the gasket configuration is frictionally restrained without substantial squashing thereof;

(*c*) subjecting the gasket configuration while so supported to curing conditions for a period sufficient to effect cure thereof, whereby the shape of the gasket



configuration is controlled without substantial distortion during curing thereof; and

(*d*) withdrawing the cured gasket configuration from said curing conditions.

3,093,444

PROCESS OF PREPARING A HELICALLY CRIMPED POLYPROPYLENE FILAMENT

Bruce Eugene Martin, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed July 10, 1961, Ser. No. 122,717
10 Claims. (Cl. 18—48)

1. Process of preparing a helically crimped polypropylene filament which process comprises drawing a polypropylene filament having gamma orientation and an orientation angle of 10° to 36°, said filament not having been pre-drawn at a draw ratio of greater than 1.86×, at a draw ratio of at least 1.4× but not above a total draw ratio, including any pre-drawing, of 2.6×, under conditions that said draw ratio is 60% to 100% of the maximum draw ratio, and thereafter releasing the drawing tension whereby said filament develops at least five helical crimps per inch.

3,093,445

MANUFACTURE OF POLYAMIDE FILAMENTS

Ronald Frank James Freeman, Abergavenny, England, assignor to British Nylon Spinners Limited, Pontypool, Monmouthshire, England

Filed July 17, 1961, Ser. No. 124,394
Claims priority, application Great Britain Aug. 23, 1960
6 Claims. (Cl. 18—54)

1. A process for the manufacture of polyamide filaments containing not more than 2% of low molecular weight material and suitable for textile purposes which comprises melting high molecular weight polycaprolactam chips which have been washed with water and incompletely dried and contain over ¼% by weight of water by heating said chips at a temperature from 250° C. to 295° C. under an inert gas at a pressure from 0.5 to 5 atmospheres, maintaining the polyamide in a molten condition for a period not exceeding in minutes the value of the following expression:

$$10^4 e^{(8.75-0.039T)}(P.E)^{-1}$$

wherein *e* is the base of the natural logarithms, T is the temperature in degrees centigrade, P is the pressure in atmospheres of the inert gas and E is the sum of the free amine and carboxyl end groups in the molten polycaprolactam expressed in gram equivalents per million grams, and extruding the molten polyamide in the form of filaments.

3,093,446

MODIFIED SPINNING SOLUTIONS, METHODS FOR PRODUCING FIBERS AND FILMS, AND FILMY PRODUCTS PRODUCED THEREFROM

Arthur L. Allewelt, West Chester, Pa., assignor to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware

No Drawing. Filed Oct. 16, 1962, Ser. No. 230,985
10 Claims. (Cl. 18—54)

3. A method of producing a cross-linked regenerated cellulose filmy product which comprises adding N-methylolacrylamide to an alkaline viscose solution to form therein a modified cellulosic compound having the formula

$$R(OCH_2—CH_2CONHCH_2OH)_x$$

wherein

R represents a residue of cellulose xanthate and x is 0.15 to 0.60 per glucose unit of R,

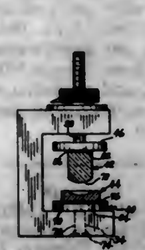
extruding the solution containing the modified cellulosic compound into a coagulating bath to form a filmy product, regenerating the residue R to a modified cellulosic compound of the formula above wherein R is a regenerated cellulose residue, stretching the regenerated product at least in a longitudinal direction, subsequently treating the filmy product with an acidic catalyst, and then drying and heating the filmy product at a temperature of at least 220° F. for a period of at least ½ minute.

3,093,447

METHOD OF CASTING OPTICAL ELEMENTS

Harry D. Crandon, Woodstock, Conn., assignor to American Optical Company, Southbridge, Mass., a voluntary association of Massachusetts

Filed Sept. 15, 1960, Ser. No. 56,136
5 Claims. (Cl. 18—59)



3. The method of casting a contact lens comprising providing a pair of mold halves each having a casting surface shaped in accordance with the ultimate shape desired of the opposite sides of said lens, attaching said mold halves with their respective casting surfaces facing each other on said supporting members in such manner as to permit one of said halves to be moved laterally in a single plane without becoming detached from said member, moving said mold halves and supporting members one toward the other to cause said casting surfaces thereof to become engaged with each other by an amount sufficient to cause said movable mold half to be automatically moved in said plane into coaxially aligned relation with the casting surfaces of the other mold half, moving said mold halves apart from each other a distance sufficient to provide a spacing between their respective casting surfaces substantially equal to the thickness desired of said lens, inserting an initially flowable resinous material between said casting surfaces and heating said inserted material to a predetermined temperature and for a controlled time period sufficient to substantially completely polymerize the same.

3,093,448

ENCAPSULATION OF ELECTRICAL COMPONENTS AND OTHER ARTICLES

Wylie C. Kirkpatrick, Wayland, William G. Baird, Jr., Winchester, and Thomas E. Ford, Arlington, Mass., assignors to W. R. Grace & Co., Cambridge, Mass., a corporation of Connecticut

Filed Nov. 25, 1959, Ser. No. 855,412
2 Claims. (Cl. 18—59)



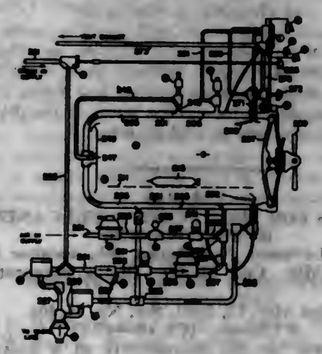
1. A method of encapsulating an electrical component comprising the steps of: placing the electrical component in a tube of oriented film made of a polymer of olefin having 2 to 3 carbon atoms with at least one lead from the component extending out of at least one of the ends of the tube, applying heat locally to the end of the tube having the lead extending therefrom to cause the end to shrink about the lead, then applying additional heat locally to the shrunk end to cause the same to melt and seal about the lead, and then applying heat along the length of the tube causing uni-directional shrinking of the tube about the component.

3,093,449

STERILIZING APPARATUS

Lester R. Kotarski and Henry G. Boucher, Rochester, N.Y., assignors to Wilmot Castle Company, Rochester, N.Y., a corporation of New York

Filed Nov. 14, 1958, Ser. No. 773,910
7 Claims. (Cl. 21—94)



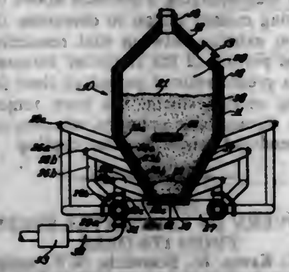
1. Sterilizer apparatus comprising, a closed sterilizing chamber, steam control means responsive to the chamber temperature for admitting steam to said chamber when the temperature therein is within a predetermined range, compressed air control means responsive to the chamber pressure for admiting compressed air to said chamber when the pressure therein is within a predetermined range and means responsive to the chamber temperature for preventing admission of compressed air into said chamber when the temperature is below a predetermined value.

3,093,450

GAS-SOLID CONTACT IN A NON-FLUIDIZED SYSTEM

Frank W. Leermon, Munster, Ind., and John P. Douglas, Calumet City, Ill., assignors to Inland Steel Company, Chicago, Ill., a corporation of Delaware

Filed June 1, 1960, Ser. No. 33,239
12 Claims. (Cl. 23—1)



1. In the contacting of a downwardly moving non-fluidized bed of solid particles with an upwardly flowing gas, the method of improving gas-solid contact which comprises confining the lower portion of the bed to a cone-shaped configuration, pulsating the inlet gas and introducing the pulsating gas in a plurality of streams spaced circumferentially around the cone-shaped lower portion of the bed and arranged in at least three annular groups at spaced elevations above the bottom of the bed, regulating the introduction of gas at the lowermost of said annular groups so that the on-pulse bed velocity is from about 90% to about 110% of the minimum fluidization velocity and so that the on-pulse inlet velocity of each stream is from about 10 to about 20 times the minimum fluidization velocity, and regulating the introduction of gas at the remainder of said annular groups so that above said lowermost group the on-pulse bed velocity is not more than about 60% of the minimum fluidization velocity and the on-pulse inlet velocity of each stream is from about 5 to about 10 times the minimum fluidization velocity, whereby at the beginning of each pulse a flattened gas bubble is formed in the bed adjacent said lowermost group which rises through the bed during the pulse, the height of said bed being correlated with the pulse frequency so that the bubble collapses at the termination of the pulse before reaching the top of the bed and the gas thereafter passes upwardly through the top of the bed.

3,093,451

PROCESS FOR PREPARING SILICON ISOCYANATES

Guenter Karl Weisse, Hamden, and Robert M. Thomas, Orange, Conn., assignors to Olin Mathieson Chemical Corporation, a corporation of Virginia

No Drawing. Filed Jan. 26, 1961, Ser. No. 84,971
15 Claims. (Cl. 23—14)

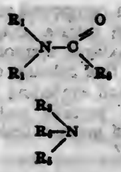
1. A process for the preparation of silicon isocyanates having the structural formula:

$$R_ySi(NCO)_z$$

wherein each R is independently selected from the group consisting of a monovalent hydrocarbon radical, a monovalent alkoxy radical, and a monovalent aryloxy radical; y is an integer from 0 to 3, inclusive; z is an integer from 1 to 4, inclusive; and the sum of y plus z equals 4, which comprises: reacting together in the liquid phase, at a temperature of between −85 and 150° C., isocyanic acid and a silicon halide having the structural formula:

$$R_ySiX_z$$

wherein X is halogen and R, y, and z are as defined above, in the presence of a nitrogen-containing compound selected from the group consisting of compounds having the following structural formulas and mixtures thereof:



wherein each R_1 is independently a monovalent hydrocarbon radical, and R_2 is selected from the group consisting of a monovalent hydrocarbon radical and hydrogen, and each R_3, R_4 and R_5 is independently selected from the group consisting of a monovalent hydrocarbon radical and hydrogen, at least one, but not more than two, of R_3, R_4 and R_5 being a monovalent aromatic radical, and not more than one of R_3, R_4 and R_5 being hydrogen, and recovering the resultant product.

3,093,452

PRECIPITATION OF ZIRCONIUM AND FLUORIDE IONS FROM SOLUTIONS

Billie J. Newby, Idaho Falls, Idaho, assignor to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Filed Sept. 25, 1961, Ser. No. 140,617
7 Claims. (Cl. 23—14.5)

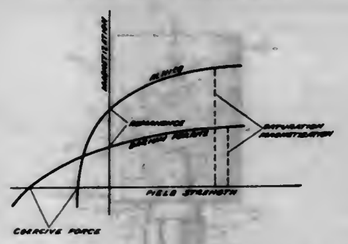
1. A process of removing zirconium and fluoride ions from an aqueous hydrofluoric acid solution of zirconium fluoride and hexavalent uranium in which the mole ratio of F^-:Zr is at least five, said process comprising adding an aqueous solution of sodium formate to said solution in a quantity to have at least two moles of sodium formate present for each mole of zirconium whereby the zirconium and fluoride ions are precipitated along with the sodium while uranium remains in solution, and separating the precipitate from the solution.

3,093,453

FERRITE MATERIAL CONTAINING FLUORINE

Ephraim Heinrich Frei, Michael Schieber, and Shmuel Shtrikman, Rehovot, Israel, assignors to The Weizmann Institute of Science, Rehovot, Israel

Filed Apr. 15, 1959, Ser. No. 806,655
3 Claims. (Cl. 23—50)



1. A barium ferrite, having the formula $BaO.6Fe_2O_3$, and having a hexagonal magneto plumbite crystal structure in which two out of nineteen oxygen atoms are replaced by fluorine.

3,093,454

PRODUCTION OF GRANULATED CALCIUM CYANAMIDE

Thomas Fischer, Trostberg, and Hans Knoblauch, Trostberg-Mogling, Germany, assignors to Suddeutsche Kalkstickstoff-Werke A.G., Trostberg, Germany

No Drawing. Filed Apr. 5, 1961, Ser. No. 102,793
Claims priority, application Germany Apr. 6, 1960
4 Claims. (Cl. 23—78)

1. A method of producing granulated calcium cyanamide comprising mixing calcium cyanamide with an

aqueous solution of a compound selected from the group consisting of calcium nitrate, magnesium nitrate, urea, urea nitrate, and mixtures thereof, in an amount sufficient to hydrate the free calcium oxide contained in the calcium cyanamide and exceeding such sufficient amount by not more than 1 percent, and granulating the thus obtained dry hydrated product under a pressure of about 300 to 1000 kg./cm.^{2}.

3,093,455

STABILIZATION OF SULFUR TRIOXIDE AND HIGH STRENGTH OLEUMS

James R. Jones, Tonawanda, and Russell F. Fogle, Jr., Niagara Falls, N.Y., assignors to Olin Mathieson Chemical Corporation, a corporation of Virginia

No Drawing. Filed Mar. 21, 1958, Ser. No. 722,829
21 Claims. (Cl. 23—167)

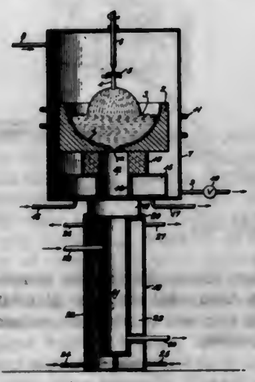
1. The method of stabilizing material selected from the group consisting of liquid sulfur trioxide and oleum of at least about 80% strength which comprises adding thereto in an amount at least effective to stabilize the sulfur trioxide and oleum but not more than 2% by weight of an oxygenated aromatic compound selected from the group consisting of aryl aldehydes, aryl ketones, aryl hydroxides, aryl carboxylic acids and their anhydrides and alkyl esters in which the alkyl group contains from 1 to 4 carbon atoms, aryl sulfonic acids and aryl phosphonic acids, wherein the aryl group of the said aldehydes, ketones, carboxylic acids, esters, anhydrides, sulfonic acids and phosphonic acids is selected from the group consisting of phenyl, alkylphenyl in which the alkyl group contains from 1 to 4 carbon atoms, alkoxyphenyl in which the alkyl group contains from 1 to 4 carbon atoms, hydroxyphenyl, oxyphenyl, naphthyl and fluorenyl.

3,093,456

METHOD FOR RECOVERY AND REUSE OF QUARTZ CONTAINERS

Walter R. Runyan, Dallas, John W. Ross, Richardson, and James L. Fischer, Dallas, Tex., assignors to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware

Filed Sept. 2, 1958, Ser. No. 758,379
2 Claims. (Cl. 23—301)



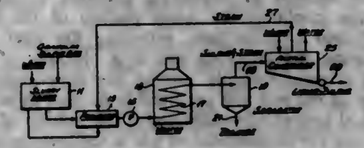
1. The method of preventing the destruction of a quartz container used in melting silicon in which some of said silicon normally adheres to the container after resolidification causing destruction of said container, said method comprising, melting a mass of silicon within a quartz container having an aperture therein at a point normally below the surface of said molten silicon, said aperture being of sufficiently small size to prevent discharge of molten silicon therethrough by gravitation, removing a portion of said mass of silicon from said container by lowering a seed crystal to contact the uppermost portion of said molten silicon and then pulling said seed crystal from said molten silicon at a predetermined speed and rotation with some of said molten silicon attaching to said seed crystal to produce a single crystal of silicon by removing a predetermined amount of said molten silicon from said quartz container and then applying a pressure above the surface of the remaining molten silicon to overcome the normal surface tension existing between said remaining molten silicon and the portion of the container surrounding said aperture for a predetermined period of time until all of said remaining molten silicon has been removed from said container through said aperture, whereby said quartz container is rendered reuseable after cooling.

3,093,457

RECOVERY OF ELEMENTAL SULFUR FROM ITS ORES

Lebbeus C. Kemp, Jr., Scarsdale, N.Y., assignor to Texaco Inc., a corporation of Delaware

Filed Dec. 30, 1954, Ser. No. 478,565
10 Claims. (Cl. 23—389)



1. A process for recovering elemental sulfur from ore containing same which comprises forming a flowable mixture of granular particles of said ore in a vaporizable liquid which is a non-solvent for sulfur; passing said mixture as a flowing stream into and through a confined heating zone; heating said mixture in said zone to a temperature sufficiently above the boiling temperatures of said liquid and of sulfur to vaporize said liquid and said sulfur, forming therein a flowing dispersion of said particles in vapor; disintegrating said granular particles of ore and liberating sulfur therefrom by passing said dispersion as a flowing stream through a succeeding zone of high velocity flow and subjecting the flowing stream therein to turbulence and a high velocity in excess of 25 feet per second; separating the sulfur vapor and the vapor of said vaporizable liquid from the disintegrated ore particles; and condensing and recovering the separated sulfur.

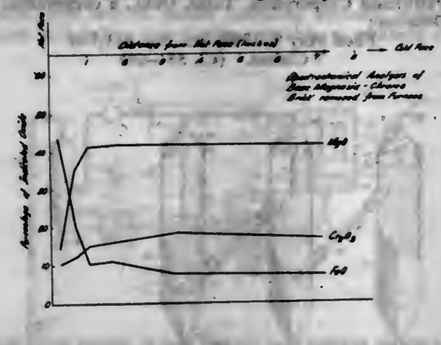
3,093,458

METHOD OF SPRAYING MULTIPLE COATINGS OF REFRACTORY COMPOSITIONS FOR HOT FURNACE REPAIR

Raymond J. Dennison, Bronx, N.Y., assignor to Quigley Company, Inc., a corporation of New York

Filed Jan. 17, 1961, Ser. No. 83,272
6 Claims. (Cl. 25—155.5)

1. A method of prolonging the life of an open hearth furnace lining, which consists in spraying onto the flame exposed surface of said lining while the furnace is in full operation at least two high temperature refractory material coatings in superimposed relation, the first coating being compatible with the furnace lining and capable of reacting with the iron oxide and slag deposited on said lining to form spinels of higher refractoriness than the refractory material of the first coating, and the second coating being composed in part of a refractory material such as is present in the first coating and in part of another more refractory material, said second coating being compatible with the first coating and also capable of reacting with the iron oxide and slag deposited on the first coating to form spinels of higher refractoriness than the refractory materials of the second coating, the more refractory part of the second coating having a greater capacity than the other part of said coating to absorb and react with the iron oxides and slag as they are continually



being deposited on said second coating during the normal furnace operation to form additional spinels of higher refractoriness than the refractory materials composing the second coating.

3,093,459

METHOD FOR MANUFACTURING HIGHLY POLISHABLE SHEETS OF ALUMINUM

Gustav Siebel, Wolfgang Müller, and Erich Trigner, Singen, Hohentwiel, Germany, assignors to Aluminium-Industrie-Aktien-Gesellschaft, Chippis, Switzerland, a joint-stock company of Switzerland

No Drawing. Filed July 30, 1959, Ser. No. 830,471
Claims priority, application Germany Aug. 2, 1958
2 Claims. (Cl. 29—197.5)

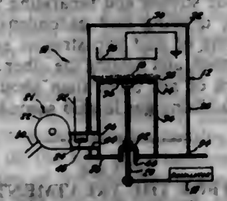
2. A highly polishable sheet composed only of aluminum alloys and having a yield strength of 28 to 32 kg./mm.^{2}, a tensile strength of 32 to 36 kg./mm.^{2}, an elongation of 20 to 15 percent and a Brinell hardness of 90 to 100 kg./mm.^{2}, which sheet comprises a base of an alloy consisting essentially of aluminum with 0.3 to 0.7 percent magnesium and 0.3 to 0.7 percent silicon, said aluminum being a commercial grade aluminum with a purity of 99.0 percent to 99.49 percent, plated on at least one face with a substantially thinner layer of an alloy consisting essentially of aluminum with 0.3 to 0.7 percent magnesium and 0.3 to 0.7 percent silicon, the last mentioned aluminum being of a purity of over 99.85 percent and the last mentioned alloy being fine grained.

3,093,460

MOISTURE TELLER

Harry W. Dietert, Kerrville, Tex., assignor to Harry W. Dietert Co., Detroit, Mich., a corporation of Michigan

Filed June 20, 1961, Ser. No. 118,399
1 Claim. (Cl. 34—1)



Drying apparatus for removing moisture from a specimen of granular material such as foundry sand, comprising an outer container including a bottom having an opening therein offset with respect to the center of the container which bottom is secured to and closes one end of the outer container, a top at the other end of the outer container for closing said other end, an air intake and an air exhaust opening extending transversely through opposite sides of said outer container adjacent the bottom of the outer container with the air intake opening substantially closer to the opening in the bottom of the container than the air exhaust opening, an inner container of insulating material having an open lower end positioned within the first container and resting on the bottom thereof, said inner container extending parallel to said outer container and having its center offset with respect to the center of said outer container and positioned substantially over the opening in the bottom of the first container, a perforated conducting member secured over the other end of the inner container for supporting a sample of granular material, a grounded electrode supported in the outer container in a location over the perforated member, a second electrode insulated from and extending through the opening in the bottom of said outer container to the perforated member for directing a field of high frequency electric energy between the perforated member and grounded electrode, means including an oscillator connected to the second electrode for producing and passing through said second electrode a high frequency electric signal, a blower including a conduit extending through the air intake opening in the outer container and emptying into the inner container for passing air through the air intake opening in the outer container into the inner container through the perforated member, around the electrodes and out of the exhaust opening in the outer container, and a heater positioned in said blower operable to heat the blower air to a temperature above the boiling point of moisture to be removed from a sample of granular material positioned on the perforated member for maintaining the electrodes at a temperature above the boiling point of the moisture to prevent condensation of moisture on the electrodes.

3,093,461

FOLDING DECORATION

John L. Woolven, 682 Centennial St., Winnipeg, Manitoba, Canada

Filed June 13, 1960, Ser. No. 35,555
8 Claims. (Cl. 41—11)



1. A folding decoration comprising in combination a principal decorative element and a plurality of groups of secondary decorative elements, each of said groups comprising a plurality of decorative elements hingedly secured together in adjacent relationship, each of said groups being in turn, hingedly secured by the edge of one of said elements in said group, to the edge of said principal decorative element, whereby when said decoration is suspended by said principal element with said principal element uppermost, said secondary elements fold downwardly by gravity to complete an erected, enclosed, symmetrical decoration, and when supported with said principal element lowermost, said secondary elements fold back upon one another and said principal element in an open, stored position, and means associated with said elements to limit the angular engagement of one element with the other.

3,093,462
PROCESS OF DECORATING A PAINTING
Gerald M. Rapaport, Chicago, Ill., assignor to American Toy and Furniture Co., Inc., Chicago, Ill., a corporation of Illinois
Filed July 25, 1960, Ser. No. 45,189
2 Claims. (Cl. 41—26)

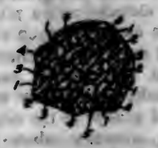


1. A process of making and decorating a painting comprising the steps of outlining a picture on a plaque with a water soluble adhesive, applying water to activate the adhesive, applying a colored granulated material to said activated adhesive, covering said granulated material with a sheet of paper and applying pressure thereto, removing said sheet and covering the remaining exposed areas of the plaque with colored paints.

3,093,463
SMOKELESS BRIQUETTES
Daniel Garrick Madley, Twyning, near Tewkesbury, England, assignor to Coal Industry (Patents) Limited, London, England, a company of Great Britain
No Drawing. Filed June 13, 1960, Ser. No. 35,438
4 Claims. (Cl. 44—10)

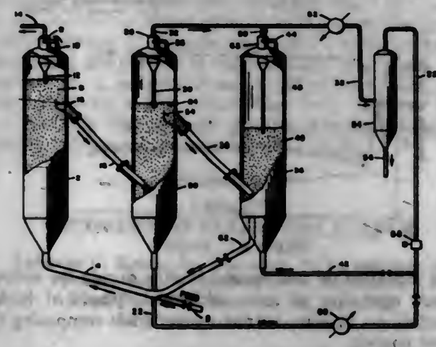
1. A method for the manufacture of smokeless briquettes without a binder which comprises the steps of heating, for a period of time not exceeding one hour, a comminuted non-coking coal while in the form of a fluidized bed to a temperature within the range 350–500° whereby the coal is converted into a char and a relatively minor part of the volatile content is driven off, subsequently removing said char from the fluidized bed and delivering said char to a briquetting press while still hot but in a condition in which the conversion to char has been substantially completed, the decrease between the temperature of the fluidized bed and the temperature of the char at the entry to the briquetting press being not more than 50° C.

3,093,464
MAGNETIC ABRASIVE WHEELS, METHOD OF MAKING THEM, AND MACHINE TOOLS FOR USING THEM
Loring Coes, Jr., Brookfield, Mass., assignor to Norton Company, Worcester, Mass., a corporation of Massachusetts
Filed Jan. 16, 1959, Ser. No. 787,216
4 Claims. (Cl. 51—295)



1. A porous vitrified grinding wheel having on the surfaces of the pores thereof magnetically susceptible material selected from the group consisting of magnetite Fe_3O_4, cobaltous cobaltic oxide Co_3O_4, cobalt ferrite $CoO \cdot Fe_2O_3$, nickel ferrite $NiO \cdot Fe_2O_3$, cobalt and nickel and mixtures thereof, and the wheel having a magnetic susceptibility of at least 10^{-6} c.g.s. units.

3,093,465
METHOD FOR TREATMENT OF GASES
James E. Latta, Tulsa, Okla., assignor to Pan American Petroleum Corporation, Tulsa, Okla., a corporation of Delaware
Filed May 8, 1959, Ser. No. 811,949
7 Claims. (Cl. 55—60)

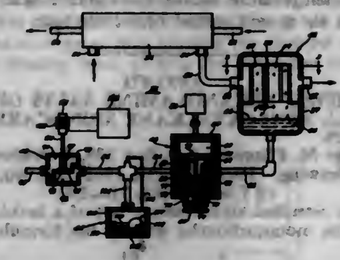


1. In a process for the removal of a gaseous component from a gasiform stream containing said component, the improvement which comprises injecting said stream into a first zone containing a bed of finely divided particles active to combine selectively with said component, said stream being injected at a linear velocity sufficient to fluidize said particles but insufficient to prevent a net downflow of said particles, injecting hot gas at a temperature of not more than about 700° F. into a second zone containing a fluidized bed of particles from said first zone, the level of the bed in said first zone being higher than the level of the bed in the second zone, continuously withdrawing said particles and adsorbed component from said first zone and transferring this mixture to the second zone by means of the pressure due to the difference in levels of the two beds, conducting the operation in the second zone so that the hot freshly regenerated particles therein tend to spill over into a third zone into which relatively cool gas consisting essentially of uncondensables present in said gasiform stream is injected at a rate such that there is a net downflow of said particles in said third zone, the fluidized bed in the third zone having a level lower than the bed level in the second zone, continuously transferring the resulting cooled regenerated particles from the third to the first zone via an additional charge of said gasiform stream, the pressure in all three zones being substantially the same, withdrawing a gaseous stream from said first zone free of said component and removing the entire quantity of this stream from the system, withdrawing and combining the gaseous streams from the second and third zones, cooling the resulting combined gaseous stream and separating the uncondensables therefrom, dividing said uncondensables into two streams, using one of said two streams as the fluidizing gas in the third zone, and heating the other of said streams to a temperature of not more than about 700° F. and using it as the fluidizing gas in said second zone.

3,093,466
APPARATUS FOR THE TREATMENT OF GASES
Harry E. Zankey, Pittsburgh, Pa., assignor to McGraw-Edison Company, Milwaukee, Wis., a corporation of Delaware
Filed July 15, 1959, Ser. No. 827,241
12 Claims. (Cl. 55—169)

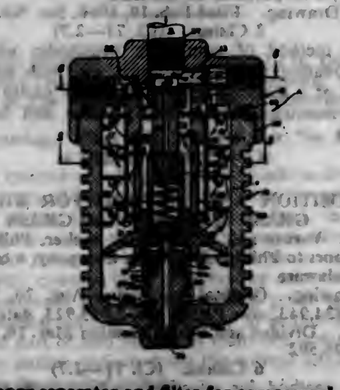
1. Means for removing moisture from a high pressure gas system including moisture separating means disposed in said system for removing moisture from the gas

therein and condensing the same, low pressure condensate discharge means, control means having an inlet connected to said system and an outlet connected to said discharge means, said control means including pressure reducing means and being periodically operable to connect said



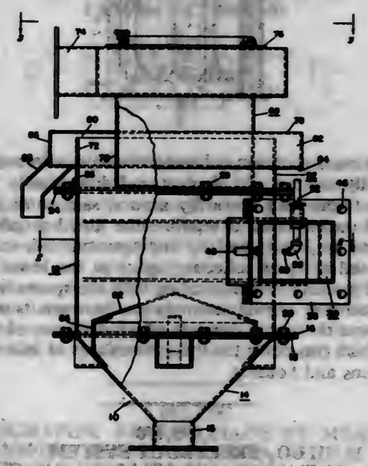
discharging means to said system, said control means also being operable in response to said high pressure gas to disconnect said discharge means from said system after all the condensate in said system has passed through said discharge means.

3,093,467
VAPOR SEPARATOR AND FILTER FOR COMPRESSED AIR
William L. McLaughlin, 10211 Darby Ave., Inglewood, Calif.
Filed Sept. 15, 1958, Ser. No. 760,890
5 Claims. (Cl. 55—218)



1. A vapor separator and filter for compressed air comprising a housing adapted to be mounted in upright position, and having an inlet for untreated highly pressurized air, said housing having also an outlet for treated air in the upper portion of the housing, and having a dump outlet in the bottom thereof, a first valve member mounted for limited movement for opening and closing the dump outlet, the upper end of said first valve member being shielded from the housing air pressure and being vented to atmosphere, a shoulder facing toward the dump outlet and acting on the first valve member, said shoulder being exposed to air pressure within the housing, a second valve member riding on the first valve member for movement therewith, the top of the second valve member being of smaller effective area than said shoulder, an enclosure over the second valve member, said enclosure communicating with pressurized air through a small passage, said enclosure being sealed from atmosphere with the valve members in dump outlet closing position and being vented to atmosphere with the valve members in dump outlet opening position, and spring means urging both valve members toward dump outlet closing position, whereby, when the air pressure acting on the exposed valve shoulder overcomes the combined air and spring pressure on the second valve member, both valve members are moved thereby to dump valve opening position to discharge through the dump outlet pressurized air from the housing together with any liquid collected in the bottom of the housing, thereby venting to atmosphere both the valve shoulder and the enclosure over the second valve member and allowing the spring means to again move both valves to their dump outlet closing condition.

3,093,468
GAS SCRUBBER
Harry Krochta, East Northport, N.Y., assignor to The Ducon Company, Inc., Mineola, N.Y., a corporation of New York
Filed Jan. 23, 1961, Ser. No. 85,175
18 Claims. (Cl. 55—238)

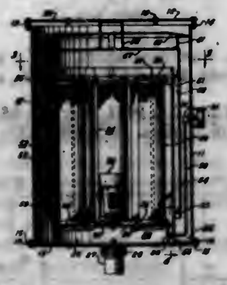


1. A gas scrubber for gas laden with suspended particulates including an upright shell, said shell comprising a basal sludge outlet, a top clean gas outlet, and a cylindrical section intermediate said basal sludge outlet and said top clean gas outlet, a dirty gas inlet entering said cylindrical section tangentially thereof, a slidable valve element disposed within said dirty gas inlet at a spaced distance from the tangential entrance of said dirty gas inlet, said slidable valve element defining an orifice having an appreciably reduced cross-sectional area compared to the cross-sectional area of the adjacent portions of said dirty gas inlet, and a wash liquid nozzle spaced from the side of the slide valve element which is remote from the tangential entrance of the dirty gas inlet into the cylindrical section, with the discharge opening of said nozzle being in a position to impinge upon the slidable valve element, whereby the liquid discharge from said nozzle impinges upon the slidable valve element.

3,093,469
OIL MIST SEPARATOR
William D. Woolston and John J. Fitzgerald, Dallas, Tex., assignors to Vector Engineering Contractors, Inc., Dallas, Tex., a corporation of Texas
Filed Aug. 18, 1960, Ser. No. 50,480
4 Claims. (Cl. 55—324)

1. A separator for removing liquid from a gaseous fluid including an upright housing having an outlet at its upper portion, a chamber in the lower portion of the housing and having an inlet for receiving a gaseous fluid, an upright tubular glomerating element having a closed upper end and its lower end communicating with the chamber,

the element having a side wall of fibrous material which is densely compacted to impede the passage of liquid therethrough and glomerate the liquid in droplets, a baffle assembly surrounding and separating said glomerating element from the outlet, the baffle assembled including a pair of upright concentric partitions spaced annularly from said housing and element, a transverse partition at the upper end of the outer partition closing the upper end of the baffle assembly, the inner partition extending above said element and terminating below the transverse partition, said outer partition terminating above the lower end



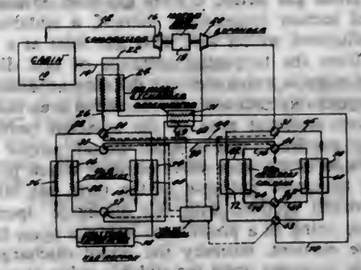
of said inner partition, whereby the fluid is forced to flow upwardly around said element and downwardly between the partitions and upwardly around said outer partition to said outlet so as to separate the liquid droplets from the fluid by gravity and by impingement with said partitions, and a liquid collecting space in the lower portion of said housing communicating with the spaces internally and externally of said assembly and between its partitions to receive the liquid droplets which drop out of the fluid and which run down the upright surfaces of said element, partitions and housing.

3,093,470

CO_2 FREEZEOUT SYSTEM

Gorken Melikian, Springfield, Mass., and George T. Peters, Hartford, Conn., assignors to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware

Filed June 28, 1960, Ser. No. 39,366
7 Claims. (Cl. 62—39)



1. In an environmental control system for a sealed compartment containing air subjected to contamination of carbon dioxide, means for separating carbon dioxide from said air by condensation of carbon dioxide to a solid form, said means comprising an air compressor, an expander driving said compressor, a primary heat exchanger to cool air after compression, first, second, third and fourth heat exchangers, means for defining a flow path for successively passing flow from said compartment to said primary heat exchanger to said first heat exchanger to said second heat exchanger to said third heat exchanger to said fourth heat exchanger back to said second heat exchanger and through the expander, said third and fourth heat exchangers adapted to separate carbon dioxide from the cooled air by further cooling and freezing of carbon dioxide, and means defining a return flow path for returning said carbon dioxide free air from said expander through said third heat exchanger and to said compartment whereby the carbon dioxide free air is utilized as the low temperature source for indirect heat exchange with the air in said second heat exchanger.

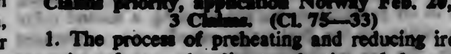
3,093,471

ESTERIFIED ALKANOLAMINE SALTS OF HERBICIDAL ARYLOXYALKANE MONOCARBOXYLIC ACIDS

George M. Pfaumer, P.O. Box 309, Norristown, Pa.

No Drawing. Filed Mar. 30, 1960, Ser. No. 18,504
9 Claims. (Cl. 71—2.6)

4. An esterified alkanolamine salt of a herbicidal aryloxyalkane monocarboxylic acid of the formula:



wherein Ar is an aryl radical, R_1 and R_2 are alkylene radicals, R_3 is an alkyl radical of 6 to 19 carbon atoms, and R_4 and R_5 are radicals selected from the group consisting of hydrogen, alkyl, alkanol and $—R_2OOCR_3$.

3,093,472

METHOD FOR COMBATING HARD GRASS AND NEMATODES

Bernhard Homeyer, Opladen, and Engelbert Kühle, Cologne-Stammheim, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Feb. 19, 1960, Ser. No. 9,679
2 Claims. (Cl. 71—2.7)

1. A method of combating nematodes which comprises treating nematode-infested soil with an effective amount of a member selected from the group consisting of unsymmetrical heptachloro-propane and hexachloropropene.

3,093,473

COMPOSITION AND METHOD FOR KILLING A GRASS, SUCH AS CRAB GRASS

Paul F. Warner and Bradford L. Archer, Phillips, Tex., assignors to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Original application Aug. 20, 1959, Ser. No. 834,943, now Patent No. 2,993,923, dated July 25, 1961. Divided and this application Mar. 14, 1961, Ser. No. 95,502
6 Claims. (Cl. 71—2.7)

1. A method for selectively killing crab grass which comprises applying to the same a quantity effective to kill the same of cuprous chloride addition product of ditertiarybutyl sulfide.

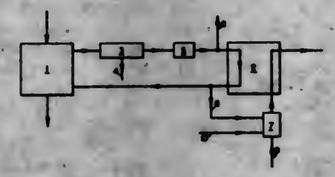
3,093,474

PROCESS OF REDUCING METAL OXIDES

Fredrik Christen Collin, Ljan, Oslo, Norway, assignor to Elektrokemisk A/S, Oslo, Norway, a corporation of Norway

Filed Feb. 16, 1960, Ser. No. 9,053
Claims priority, application Norway Feb. 20, 1959
3 Claims. (Cl. 75—33)

1. The process of preheating and reducing iron oxide ores in a furnace by direct reduction of the oxide with a solid carbonaceous reducing while recycling the reaction gases generated by and in equilibrium with the reduction reaction in order to control the atmosphere in the furnace and thereby minimize oxidation of carbon and reoxidation of reduced iron which comprises the steps of forming molded aggregates of the iron oxide ore in finely divided form together with a solid carbonaceous reducing agent, charging the aggregates to the furnace, heating the aggregates to a temperature of from about 800° C. to about 1100° C. to reduce the iron oxide by reaction with the carbonaceous reducing agent and simultaneously generate reaction gas in equilibrium with such reaction and consisting essentially of CO in major proportion and CO_2 in minor proportion, withdrawing the reaction gas from the furnace, dividing out a portion of the reaction gases and burning the divided out portion in a heating zone, passing the remainder of the reaction gas through the heating zone to indirectly heat the same without contacting the products of combustion, returning the heated reaction gas to the furnace substantially in the equilibrium proportions of CO and CO_2 that it was generated, and controlling the combustion of the divided out portion of reaction gas in the heating zone by burning additional fuel if necessary to indirectly heat the reaction gas that is to be recycled to that temperature required for heating the aggregates to the specified temperatures of reduction.



3,093,475

METHOD FOR PURIFYING METALLIC INDIUM

John Robert Dyer, Jr., Harts Hill, Whitesboro, N.Y., assignor to The Indium Corporation of America, Utica, N.Y.

No Drawing. Filed Aug. 23, 1960, Ser. No. 51,292
6 Claims. (Cl. 75—63)

1. The method of refining elemental indium containing small amounts of impurities selected from the group consisting of copper, iron, nickel, cadmium, lead, tin and silver and combinations thereof, which comprises intimately mixing said indium in molten form with a solution of alkali metal cyanide in a high boiling organic solvent at a temperature between the melting point of indium and the boiling point of said solvent to extract at least a substantial part of said impurities from said indium, separating the molten indium from the solvent solution and recovering the purified indium.

3,093,476

NICKEL-CHROMIUM ALLOYS

John H. Gittus, Studley, England, assignor to The International Nickel Company Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed May 23, 1960, Ser. No. 31,231
Claims priority, application Great Britain May 27, 1959
2 Claims. (Cl. 75—171)

1. An alloy having an advantageous combination of high temperature and room temperature characteristics specifically adapted to be employed at elevated temperatures in contact with sulfur-containing atmospheres under high stress which consists essentially of more than about 15% to about 22% chromium, up to about 15% cobalt, about 7% to about 9% tungsten, about 3.5% to about 4.5% aluminum, about 1.5% to about 4.5% titanium, about 0.01% to about 0.20% carbon, about 0.005% to about 0.15% boron, about 0.3% to about 0.7% zironium, up to about 0.5% silicon, up to about 0.5% manganese, up to about 0.5% iron, the balance of the alloy being essentially nickel, the respective contents of titanium (Ti), chromium (Cr) and cobalt (Co), expressed as percentages by weight, being so correlated that the relationship

$$-0.8\ TiCoCr+10.4\ TiCo+1.13\ TiCr$$
$$+1.75\ CoCr-19.2\ Co-11\ Cr+8.4\ Ti+123$$

is greater than zero and said respective contents of titanium, chromium and cobalt being so correlated that the relationship

$$-0.057\ TiCoCr+1.325\ TiCo+3.944\ TiCr$$
$$+0.228\ CoCr-5.32\ Co-15.762\ Cr-80.225\ Ti+319.25$$

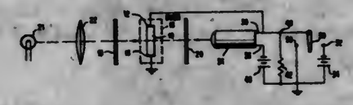
is less than zero.

3,093,477

ELECTRO-OPTICAL BISTABLE LIGHT SWITCH

Sol Triebwasser, Peekskill, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Dec. 31, 1959, Ser. No. 863,360
8 Claims. (Cl. 88—61)



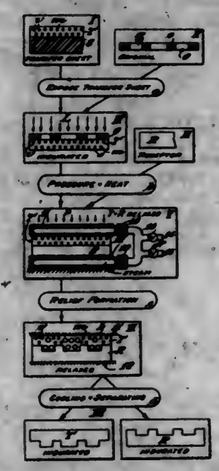
1. An electro-optical bistable device comprising a light source, a light switch including a light modulating element, light responsive means producing an output voltage, means for applying said voltage to said light modulating element, said light switch being interposed between said light source and said light responsive means, a voltage source, means for selectively coupling said voltage source across said element to operate said device in a first stable state and means for selectively reducing the voltage across said element to operate said device in a second stable state.

3,093,478

PHOTOGRAPHIC RELIEFS MADE BY MEANS OF TRANSFER INTERMEDIARIES WHICH PRODUCE GAS UPON IRRADIATION

Willard D. Peterson, Whittier, Calif., and Robert W. Fabian, Doylestown, Pa., assignors, by mesne assignments, to Thomas J. Moran's Sons, Inc., New Orleans, La., a corporation of Louisiana

Filed Dec. 1, 1961, Ser. No. 156,437
15 Claims. (Cl. 96—35)



1. A method of producing a relief image comprising dispersing a matrix material selected from the group consisting of gelatin and glue in water, dissolving in the

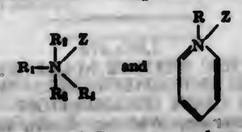
water of this dispersion a sensitizer capable of liberating gas upon exposure to radiation, applying the thus sensitized dispersion to a support, drying the sensitized dispersion to an induarted rigid photo-sensitive record medium, exposing said medium to light so as to form in the sheet a record of the image in terms of gas sources which are restrained from effectively expanding by the said rigid condition of said record medium, contacting the record medium with a thermoplastic receptor sheet comprising a thermoplastic cellulose ester which becomes softened under conditions of temperature and pressure substantially the same as but somewhat lower than does said record medium pressurably restraining said record medium and said receptor in contact between rigid platens, heating the resulting sandwich to soften the said record medium and said thermoplastic receptor sheet while expanding the gas within the exposed areas of the said record medium to develop a relief image in said record medium and impress a complementary relief image in said thermoplastic receptor sheet, and cooling the sandwich to indurate the respective layers, whereupon they can be separated, each carrying said images in terms of relief.

3,093,479
USE OF QUATERNARY AMMONIUM COMPOUNDS FOR STABILIZING PROCESSED PHOTOGRAPHIC ELEMENTS

Ismael A. Olivares and Delfin Galvez, Panama City, Panama, assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Dec. 12, 1958, Ser. No. 779,821
7 Claims. (Cl. 96—52)

7. A process in which a developed and fixed silver image in a photographic element is (1) treated in an aqueous solution containing at least 0.25 percent by weight of a surface active compound of the formula:



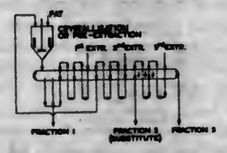
and

wherein R, R_1, R_2, and R_3 are members selected from the group consisting of alkyl, aryloxyalkyloxyalkyl, aryl, and arylalkyl radicals, said radicals represented by R having 6 to 20 carbon atoms and said radicals represented by R_1, R_2, and R_3 having 1 to 20 carbon atoms; and Z is a member selected from the group consisting of halogen atoms, sulfate radicals, and acetate radicals; and (2) is then dried.

3,093,480
PROCESS FOR THE PREPARATION OF COCOA BUTTER SUBSTITUTES

Johannes M. Arnold, Zaandijk, Netherlands, assignor to N.V. Twinconn, Koog-Zaandijk, North Holland, Netherlands, a corporation of the Netherlands

Filed May 9, 1960, Ser. No. 27,850
Claims priority, application Netherlands May 13, 1959
10 Claims. (Cl. 99—118)



1. A process for the preparation of a cocoa butter substitute, comprising the steps of, subjecting a fat in solid to semi-solid form suitable for extraction to at least one low-temperature extraction at a temperature between about −5 and about +10° C. with a total quantity of acetone of twice to twenty times as great as said fat to provide a first fat fraction as residue; and subjecting said residue to at least one subsequent extraction at a temperature between about 10 and about 35° C. with a total quantity of acetone of as great to fifteen times as great as the quantity of said fat, resulting in an extract containing said cocoa butter substitute.

3,093,481
PLASTIC GLYCERIDE FAT AND PROCESS FOR PREPARING IT

Eddy W. Eckey, Wyoming, and Richard O. Alderson, Warren County, Ohio, assignors, by direct and mesne assignments, to The Procter & Gamble Company, Cincinnati, Ohio, a corporation of Ohio

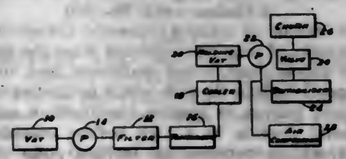
No Drawing. Filed Apr. 18, 1961, Ser. No. 103,701
13 Claims. (Cl. 99—118)

1. A plastic glyceride fat composition containing from about 0.01% to 0.5%, by weight, of substantially non-emulsifying and non-surface-active fatty acid ester of carbohydrate selected from the group consisting of oligosaccharides and dextrin, at least one-half of the hydroxyl groups of said carbohydrate being esterified with saturated fatty acid having from 14 to 22 carbon atoms, said carbohydrate having not more than one-half of its hydroxyl groups unesterified, and any additional fatty acid groups of said ester being selected from the group consisting of fatty acids having from 2 to 12 carbon atoms and unsaturated fatty acids having from 14 to 22 carbon atoms.

3,093,482
BUTTER MAKING METHOD

Charles F. Weimreich, Cedar Rapids, Iowa, assignor to Cherry-Burrell Corporation, Cedar Rapids, Iowa, a corporation of Delaware

Filed Aug. 24, 1959, Ser. No. 835,623
4 Claims. (Cl. 99—119)



1. A process for manufacturing butter comprising the steps of: pasteurizing cream; cooling said pasteurized cream; violently agitating said cream in the presence of gas sufficiently to cause rapid destabilization of said cream; and churning said destabilized cream to form butter.

3,093,483
PROCESS FOR PREPARING A FOOD PRODUCT HAVING A FIBROUS TEXTURE AND THE RESULTING PRODUCT

Norman H. Ishler, Valley Cottage, Robert V. MacAllister, West Nyack, Allan S. Szczesniak, Yonkers, and Eric Engel, Tarrytown, N.Y., assignors to General Foods Corporation, White Plains, N.Y., a corporation of Delaware

No Drawing. Filed Aug. 10, 1961, Ser. No. 130,697
34 Claims. (Cl. 99—131)

1. A process for preparing an edible food product having a fibrous texture which comprises forming a sol of a polymeric carbohydrate gel precursor capable of producing a continuous thermostable gel, forming said sol into oriented, gelled fibers, said gelation being caused by the use of an alkaline earth metal ion.

3,093,484
BROWN SUGAR FLAVOR CONCENTRATE AND METHOD OF MAKING THE SAME

Robert F. Kozlik, Minneapolis, Minn., assignor to General Mills, Inc., a corporation of Delaware

No Drawing. Filed Mar. 12, 1959, Ser. No. 798,804
8 Claims. (Cl. 99—141)

1. A method for intensifying brown sugar flavor which comprises heating a solution consisting essentially of brown sugar and water until said solution is capable of forming a hard candy, immediately cooling said candy before appreciable degradation of the sugar takes place, and obtaining thereby a hard candy having an intensified brown sugar flavor.

3,093,485
SALAD DRESSING

Anthony Partyka, Chicago, Ill., assignor to National Dairy Products Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Apr. 11, 1960, Ser. No. 21,088
4 Claims. (Cl. 99—144)

1. An emulsified salad dressing which is stable against freezing conditions, comprising, in combination, an edible oil which includes soft oil and winterizable components, a freeze resistant starch in an amount sufficient to substantially imbibe all of the moisture present in the salad dressing and retain the water under freezing conditions, and an emulsifying agent in an amount equivalent to egg yolk at a level in excess of 8 percent of the soft oil in the edible oil, said edible oil comprising more than about 5 percent of the salad dressing and less than about 65 percent of the salad dressing, said edible oil having an iodine value of between about 75 and about 115, and the winterizable components in such edible oil being in an amount such that the oil clouds when held in an ice bath for 5.5 hours.

3,093,486
SALAD DRESSING

Orest J. Krett, Des Plaines, and Salvatore L. Gennuso, Elk Grove Village, Ill., assignors to National Dairy Products Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Feb. 6, 1961, Ser. No. 87,124
3 Claims. (Cl. 99—144)

1. An emulsified salad dressing whcih is stable against freeze-thaw conditions, comprising, in combination, an edible oil, a modified freeze resistant starch in an amount sufficient to substantially imbibe all of the moisture present in the salad dressing and retain the water under freeze-thaw conditions, and an emulsifying agent in an amount sufficient to effect emulsification, said edible oil comprising more than about 5 percent of the salad dressing and less than about 35 percent of the salad dressing.

3,093,487
EGG PRODUCTS AND PROCESSES FOR PREPARING SAME

Eynon Jones, Portland, and Oliver H. Tracy, Oswego, Oreg., and Clarence B. Deffenbaugh, Omaha, Nebr., assignors of one-fourth to said Eynon Jones, one-fourth to said Oliver H. Tracy, one-fourth to Roberts Dairy Company, a corporation of Nebraska, one-eighth to Lewis R. Dunham, and one-eighth to Edward Johnson, both of Modesto, Calif.

No Drawing. Filed Feb. 27, 1961, Ser. No. 91,602
5 Claims. (Cl. 99—161)

1. The method of preparing a salmonella-free homogenized and pasteurized egg product without coagulating the same comprising adding to natural shelled eggs a mixture of oil and milk solids in such amount that the end product has the ratio of total solids to total water plus solids that is the same as the ratio of total solids of a natural egg to total solids and water in a natural egg, the oil being selected from the group comprising animal oil and vegetable oil, the total amount of the oil and milk solids being less than the weight of the natural shelled eggs, mixing the natural shelled egg and the added material, pre-heating the mixture to approximately 135° F. to make the natural fats in the natural shelled eggs free flowing, reducing the mixture to a state of fine dispersion, heating said dispersion to a pasteurization temperature of within the range of 150° F. to 170° F. by bringing the same into contact with the plates of a heat exchanger, and holding the dispersion at said temperature to destroy substantially all of the pathogenic bacteria contained in the egg product.

3,093,488
PREPARATION OF STABLE DEHYDRATED PRODUCTS

Robert P. Graham, El Cerrito, Lewis F. Ginnette, San Leandro, and Arthur I. Morgan, Jr., Berkeley, Calif., assignors to the United States of America as represented by the Secretary of Agriculture

No Drawing. Filed July 21, 1961, Ser. No. 125,879
13 Claims. (Cl. 99—199)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. The process which comprises gasifying a liquid material and forming it into a stable foam, dehydrating the foam to produce a porous dehydrated product, and subjecting this product to essentially surface-localized fusing to reduce the porosity of the surface.

3,093,489
PREVENTION OF OFF-FLAVORS IN RADIATION-STERILIZED BEEF

Frank J. Alexander, Mount Prospect, and Louis A. Harriman, Chicago, Ill., assignors to the United States of America as represented by the Secretary of the Army

No Drawing. Filed July 28, 1961, Ser. No. 127,750
7 Claims. (Cl. 99—217)

1. Process for preventing off-flavors in radiation-sterilized beef, comprising surrounding said beef with an aqueous solution of sodium chloride prior to exposure of said beef to radiation, said solution having a strength of at least about .85%, exposing said beef, while surrounded by said solution, to a dose of ionizing radiation not exceeding about 5 megarads and sufficient to sterilize said beef, and then discarding said solution prior to serving said beef; whereby radiation-induced off-flavors are eluted from said beef and discarded with said solution.

3,093,490
CERAMIC METALIZING MIXTURE AND METHOD OF COMPOUNDING IT

Robert John Mackey, San Carlos, Calif., assignor to Eitel-McCullough, Inc., San Carlos, Calif., a corporation of California

No Drawing. Filed Apr. 8, 1960, Ser. No. 20,800
6 Claims. (Cl. 106—1)

1. A ceramic metalizing paint consisting esssentially of a mixture of at least two members of the group consisting of molybdenum, molybdenum trioxide, manganese, manganese dioxide and manganese trioxide, said mixture containing both molybdenum and manganese with at least 50% of the total molybdenum in said mixture being in elemental metallic from, a vehicle, a resinous binder and a flocculating agent to maintain said mixture suspended, thereby obtaining a uniform paint.

3,093,491
METAL PROTECTIVE COATING COMPOSITION

Norman Bernard Larsen, Norristown, Pa., assignor to Corrosion Reaction Consultants, Inc., Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Filed May 5, 1960, Ser. No. 26,966
9 Claims. (Cl. 106—14)

1. A metal protective coating composition consisting essentially of a solvent, a resin which is the reaction

product of about 1 to 6 parts by weight of a sorbitan mono fatty acid ester per 1 part by weight of an ester of stearic acid and an alcohol having from 1 to 6 carbon atoms, and which contains intimately dispersed therewithin a compatible corrosion inhibitor.

3,093,492

METAL PROTECTIVE COATING COMPOSITION

Norman B. Larsen, Norristown, Pa., assignor to Corrosion Reaction Consultants Inc., Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Filed May 27, 1960, Ser. No. 32,486
13 Claims. (Cl. 106—14)

1. A metal protective coating composition consisting essentially of a solvent containing a resin which is the reactive product of about one to six parts by weight of a sorbitan mono fatty acid ester per one part by weight of an ester of stearic acid and an alcohol having from one to six carbon atoms and per one part by weight of a compound selected from the group consisting of benzoic acid and substituted derivatives of benzoic acid in which at least one substitution of one of the hydrogen atoms on the benzene nucleus of the benzoic acid with the group selected from the group consisting of NH_2, NO_2, F, Cl, Br, I, and the following organic radicals: methoxy, ethyl, ethoxy, benzyl, toluic, and phenyl is made, and which contains intimately dispersed therewithin a compatible corrosion inhibitor.

3,093,493

COATING MATERIAL FOR CORROSION PREVENTION

Helmut von Freyhold, Duesseldorf-Oberkassel, Germany, assignor to Philadelphia Quartz Company, Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Filed Nov. 23, 1960, Ser. No. 71,157
Claims priority, application Germany Nov. 26, 1959
8 Claims. (Cl. 106—14)

1. A corrosion-resistant coating composition, composed of finely-divided metallic zinc, alkali silicate and minor quantities of additives, said additives consisting essentially of alkali chromates and an organic compound containing at least two amino groups in its molecule selected from the group consisting of hexamethylenetetramine, phenylenediamine, benzidine, guanidine and melamine, each of said additives being present in an amount between about 0.1 to 2.0 percent by weight, based on the alkali silicate.

3,093,494

PREPARATION OF MOLDED ARTICLES

Robert C. Hedlund and Myron Kin, Midland, Mich., assignors to Dow Corning Corporation, Midland, Mich., a corporation of Michigan

No Drawing. Filed June 12, 1961, Ser. No. 116,299
4 Claims. (Cl. 106—38.2)

1. A method of preparing articles suitable for use as molds and cores in the forming of cast metal articles to close tolerances which comprises mixing an aqueous dispersion of a hydrolyzate of a silane of the formula $RSi(OR')_3$ where R is an alkyl radical of from 2 to 3 inclusive carbon atoms and R' is an alkyl radical of from 1 to 2 inclusive carbon atoms with a foundry aggregate in amount such that (1) the amount of water in the aggregate is sufficient to bond the aggregate into a non-crumbling and non-slumping article when the mixture is shaped by a ramming process and (2) the amount of silane employed is such that the residual silica after firing is at least .4 percent by weight based on the weight of the aggregate, thereafter forming the mixture into the desired shape by ram molding, drying the molded article to remove most of the water and thereafter heating the shaped article at a temperature not greater than 700° F. until the hydrolyzate is reduced to silica, whereby a unitary bonded article having a compressive strength of at least 400 p.s.i. is obtained.

3,093,495

MAGNESIA COMPOSITION AND METHOD OF MAKING SAME

Alexander W. von Mickwitz, 701 Main St., Latrobe, Pa.

No Drawing. Filed Mar. 27, 1959, Ser. No. 802,321
5 Claims. (Cl. 106—58)

4. A substantially impervious, high-density, refractory, fired ceramic shaped article having a minimum density of 2.85 g./cc., said article consisting essentially of at least about 99% by weight of magnesium oxide and, as a mineralizer, from about 0.05% to about 1% by weight of titanium dioxide based on the magnesium oxide.

3,093,496

HEAT RESISTING COATING COMPOSITION AND METHOD OF APPLYING IT TO THE BASIC REFRACTORY SURFACE OF A FURNACE

Raymond Jules Demaison, Bronx, N.Y., and Lewis J. Dreyling, Milltown, N.J., assignors to Quigley Company, Inc., a corporation of New York

No Drawing. Filed Feb. 12, 1959, Ser. No. 792,701
7 Claims. (Cl. 106—59)

1. A coating composition adapted to be sprayed onto the hot basic refractory material forming the inner surface of a high temperature furnace while the furnace is in operation consisting of an aqueous slurry of sprayable consistency, said slurry containing a binding agent, a suspension agent and finely powdered refractory material consisting essentially of chrome ore, uncombined magnesia and uncombined iron oxide, the chrome ore constituting the major portion of the refractory material, the amount of uncombined magnesia in the refractory material being at least 10 parts by weight over and above any magnesia that may be present in the chrome ore, and the amount of uncombined iron oxide present in the refractory material being such as to provide an excess of from 1 to 6 parts by weight over and above the amount required to form an iron-chrome spinel with the chrome oxide present in the chrome ore, whereby the uncombined iron oxide acts as a fluxing agent, under the high temperature of the furnace, for both the chrome ore and the uncombined magnesia present in said refractory material when sprayed on said surface, the major portion of the chrome ore of the refractory material being in the form of chromite, the particle size of the refractory material being such that 20% to 40% will remain on a 100 mesh screen, 40% to 55% will remain on a 200 mesh screen and 45% to 60% will pass through a 200 mesh screen.

3,093,497

SPRAYABLE BASIC REFRACTORY COMPOSITION FOR REPAIRING THE HOT BASIC REFRACTORY LININGS OF HIGH TEMPERATURE FURNACES, AND METHOD

Raymond J. Demaison, Bronx, N.Y., assignor to Quigley Company, Inc., a corporation of New York

No Drawing. Filed May 23, 1960, Ser. No. 30,778
11 Claims. (Cl. 106—59)

1. A sprayable coating composition for repairing hot basic refractory linings of high temperature furnaces while the furnaces are in operation consisting essentially of an aqueous slurry of sprayable consistency containing refractory material composed of chrome ore and free magnesia, the amount of magnesia being materially greater than the amount of chrome ore, and the amount of chrome ore being at least 10 parts by weight of the refractory material, the particle size of the chrome ore being such that all of the ore will pass through a 20 mesh screen, 25% to 40% will remain on a 100 mesh screen, 35% to 50% will remain on a 200 mesh screen, 40% to 60% will remain on a 325 mesh screen and 40% to 60% will pass through a 325 mesh screen, and the particle size of the magnesia being such that all of the magnesia will pass through a 12 mesh screen, 50% to 80% will remain on a 100 mesh screen, 70% to 90% will remain on a 200 mesh screen, 80% to 95% will remain on a 325 mesh screen and 5% to 20% will pass through a 325 mesh screen.

3,093,498

MOLDED ALUMINA ARTICLES AND PROCESS OF MAKING THEM

Osgood J. Whittemore, Jr., Princeton, Alan G. King, Shrewsbury, and John C. Logan, Leicester, Mass., assignors to Norton Company, Worcester, Mass., a corporation of Massachusetts

No Drawing. Continuation of application Ser. No. 767,020, Oct. 13, 1958. This application June 1, 1961, Ser. No. 113,997
10 Claims. (Cl. 106—62)

1. Process of producing hard wear resistant articles comprising providing comminuted alumina which is at least 98% alumina and consists of alumina and up to about 2.0% oxides which form solid solutions with alumina selected from the group consisting of the oxides of gallium, chromium, titanium, vanadium and mixtures thereof, at least 99.88%, molding said alumina, then pressing said alumina under a pressure of at least 500 pounds per square inch at a temperature between about 1400 and 1800° C. and for a time effective to form the alumina with a density between 3.95 and 4.05 grams per cubic centimeter and at least 80% as a crystalline matrix with average crystal size of from one-half micron to ten microns.

3,093,499

CEMENT PACK SET INHIBITOR

George W. Blackwood and Dunbar L. Shanklin, Winchester, Mass., assignors to W. R. Grace & Co., Cambridge, Mass., a corporation of Connecticut

No Drawing. Filed Feb. 2, 1961, Ser. No. 86,579
4 Claims. (Cl. 106—90)

1. A composition consisting essentially of Portland cement and 0.01 and 0.04 weight percent of tertiary butyl acetate intimately admixed therewith, said tertiary butyl acetate reducing the tendency of said cement to pack set during storage and transportation in bulk.

3,093,500

CREEP REDUCTION IN ASPHALTIC PAVING

George M. Jones, Salt Lake City, Utah, assignor to American Gilsonite Company, Salt Lake City, Utah, a corporation of Delaware

No Drawing. Filed June 22, 1959, Ser. No. 821,654
3 Claims. (Cl. 106—273)

1. A paving cement for use as a binder for mineral aggregates to form a hot laid pavement having high creep resistance, which consists essentially of from about 3% to about 7% by weight of gilsonite admixed with an asphalt having a penetration of about 60 to about 300.

3,093,501

METAL COATING ON NON-METAL BODY BY TUMBLING

Erik T. Clayton, Baltimore, Md., assignor to Penn Plate, Inc., Baltimore, Md., a corporation of Maryland

No Drawing. Filed Apr. 4, 1958, Ser. No. 726,354
Claims priority, application Great Britain Apr. 4, 1957
5 Claims. (Cl. 117—29)

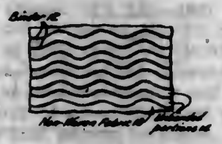
1. A process of coating non-metallic surfaces of articles with a plurality of layers of metal particles comprising the steps of placing articles having non-metallic clean surfaces in a container, adding a plurality of individual and completely dry fine particles of a plating metal, said particles being in a substantially spherical and non-laminar form, and in a malleable state and free from strain hardening and corrosion products, adding a charge of impact media and a charge of a solid abradable film forming substance capable of forming a film of the substance on the articles and metal particles but insufficient to prevent the formation of a good lattice contact between the metal plating particle and the non-metallic surface, agitating the container to cause abrasion by sliding of the substance on the articles and particles to form a weak film of the substance on the articles and metal particles to promote the subsequent coating of the metal particles on the articles, and further to cause the metal particles to be plastically deformed and weld and conform to the microscopic profile of the article and to weld the metal particles to each other on the surface to form a continuous solid metal coating having a plurality of interfitting layers of the metal particles, and sporadic inclusions throughout the continuous solid coating of said solid film forming substance, the operating temperature enabling distortion and flattening of the metal particles and being below the melting point of the metal particles and substance to maintain the completely dry condition, and the operation being conducted in a liquid free environment chemically inert to the surfaces of the articles, the metal particles and the substance.

3,093,502

NONWOVEN FABRICS AND METHODS OF MANUFACTURING THE SAME

Arthur H. Drelich, Plainfield, N.J., assignor, by mesne assignments, to Johnson & Johnson, New Brunswick, N.J., a corporation of New Jersey

Filed Dec. 30, 1959, Ser. No. 862,923
12 Claims. (Cl. 117—38)



1. A bonded nonwoven fabric having textile-like softness, drape, hand and superior wash-resistance comprising: a web of overlapping, intersecting cellulosic fibers and a formaldehyde cross-linked cellulosic binder, said binder being distributed throughout said web and forming bonds between said fibers, said fabric having a formaldehyde content of from about 0.1% to 0.8% based on the weight of the fabric and the cellulosic fibers of said fabric being substantially unbound by formaldehyde.

3,093,503

COATED MATERIALS HAVING AN UNDERCUT SUBSTRATE SURFACE AND METHOD OF PREPARING SAME

Tibor S. Laszlo, Melrose, Mass., assignor to Avco Corporation, Cincinnati, Ohio, a corporation of Delaware

Filed Dec. 29, 1959, Ser. No. 862,550
28 Claims. (Cl. 117—49)

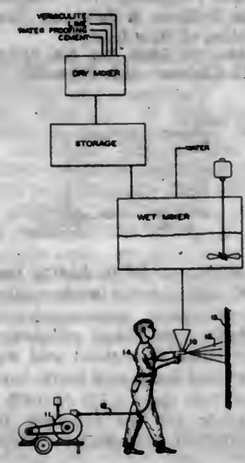


4. A method of coating a polycrystalline substrate comprising: forming the substrate dimensionally; subjecting the surface of the substrate to an etchant which will have a rate of reaction with respect to a crystal surface different from its rate of reaction with respect to a cut surface; maintaining said treatment for a predetermined time; and depositing a coating on the surface.

3,093,504
PROCESS FOR SIZING TEXTILES AND THE DISPOSITION OF SIZING WASTES THEREFROM
Harold E. Bode, 8735 N. Olcott, Niles, Ill.
(80 E. Jackson Blvd., Room 200, Chicago 4, Ill.)
No Drawing. Filed Apr. 28, 1960, Ser. No. 25,481
8 Claims. (Cl. 117—102)

1. A process for sizing, desizing, and desize disposition, comprising: sizing textile fibres with an alkali starch phosphate liquor at a size concentration of sufficient starch content to cause the addition of a substantial amount of the said starch phosphate dry substance to the textile fibre, weaving the said sized fibre into a cloth, desizing the fibre in the said cloth by means of a hot water wash, and precipitating the starch phosphate dissolved in the desize liquor by the addition of a cation-yielding substance that forms an insoluble precipitate with starch phosphate, said alkali starch phosphate containing from about 0.5 to about 2.0 percent of phosphorus as starch phosphate ester groups.

3,093,505
COATING MATERIALS
Kells A. Conway, 3238 Wood Valley Road NW., Atlanta, Ga.
Filed Mar. 21, 1960, Ser. No. 16,269
5 Claims. (Cl. 117—104)



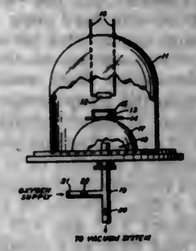
1. Process of coating an exterior surface of a structure comprising the steps of mixing together by weight from 27.0% to 41.0% white Portland cement, from 10.5% to 19.3% lime, from 5.9% to 10.2% expanded vermiculite, and from 42.3% to 49.1% water to produce a slurry, feeding the slurry in a stream, directing air onto said stream to deflect the stream of slurry and entrain the slurry in said air and directing the air and slurry onto said exterior surface.

3,093,506
HIGH MOLECULAR WEIGHT COPOLYMERS OF UNSATURATED ALDEHYDES AND THEIR PREPARATION AND USE
William T. Tsatsos, San Mateo, Calif., assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware
No Drawing. Filed Dec. 30, 1960, Ser. No. 79,483
19 Claims. (Cl. 117—155)

2. A solid water-insoluble high molecular weight copolymer of acrolein and an acidic material of the group consisting of ethylenically unsaturated carboxylic acids and ethylenically unsaturated polycarboxylic acid anhydrides, said copolymer containing from 55% to 99% by weight of polymerized acrolein and having an intrinsic viscosity above about 0.5 dl./g.

17. A process for treating paper to improve the wet strength thereof which comprises impregnating the paper with an aqueous solution of a sulfur dioxide adduct of the copolymer defined in claim 2.

3,093,507
PROCESS FOR COATING WITH SILICON DIOXIDE
James J. Lander, Watchung, and James Morrison, Fair Lawn, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Oct. 6, 1961, Ser. No. 143,377
5 Claims. (Cl. 117—201)



4. The method of coating the surface of a diffused junction silicon diode with a protective coating of silicon dioxide which comprises heating a silicon source having a purity of at least 99.9% to a temperature within the range of 625 to 1000° C. in the presence of oxygen maintained at a pressure within the range of 10^{-10} to 10^{-3} millimeters of mercury, the lower temperature corresponding with the lower pressure, thereby vaporizing silicon monoxide from the surface of said silicon source, and condensing said silicon monoxide on the surface of said diffused junction silicon diode which is maintained at a temperature approximately 50° C. below that of the source silicon, thereby resulting in a coating of silicon dioxide.

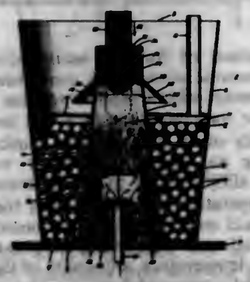
3,093,508
METHOD OF COATING GLASS
Erwin W. Wartenberg, Gaehkopf 20, Stuttgart, Germany
No Drawing. Filed June 2, 1960, Ser. No. 33,591
Claims priority, application France June 8, 1959
13 Claims. (Cl. 117—211)

1. A method of forming a firmly adhering surface coating on a glass body while simultaneously quenching the same, comprising the steps of forming a liquid bath having a predetermined boiling point and containing at least one coating substance adapted to firmly adhere to a glass body at quenching temperature thereof and at a coating temperature being higher than said predetermined boiling point and lower than said quenching temperature; maintaining said liquid bath at substantially the boiling point thereof; and immersing into said liquid bath containing said coating substance a glass body heated to at least said quenching temperature so as to quench said glass body and simultaneously to vaporize the liquid bath along the immersed surface of said heated glass body thereby forming along said surface a vaporized region consisting of vaporized liquid of said bath having said coating substance distributed therethrough and being heated to at least said coating temperature, thereby firmly adhering said substance to said glass body so as to form an even coating thereon.

3,093,509
PROCESS FOR MAKING COPPER FILMS
Samuel Wein, 98 Bigelow St., Quincy, Mass.
No Drawing. Filed Sept. 28, 1959, Ser. No. 842,572
1 Claim. (Cl. 117—213)

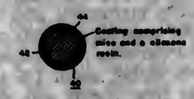
A process for applying a copper layer to a previously sensitized and super-sensitized surface comprising contacting the surface with an alkaline aqueous solution comprising copper gluconate and copper reducing agent.

3,093,510
COATING METHOD AND APPARATUS
Albert L. Olson and Robert L. Stout, Fort Wayne, Ind., assignors, by mesne assignments, to Polymer Processes, Inc., a corporation of Pennsylvania
Filed Mar. 24, 1958, Ser. No. 723,333
6 Claims. (Cl. 117—230)



1. The method of applying an insulating coating to the walls of the winding slots and the end faces of a preheated dynamoelectric machine stator core member having a bore extending therethrough, without applying an insulating coating to the exterior surface of said stator core member, comprising the steps of: positioning said core member with one face and said slots exposed to the upper end of a conduit member containing a powdered, resin containing, insulating coating material adapted to adhere to said preheated core member; fluidizing said material to form an agitated bed having an upper level maintained below said upper end of said conduit member by passing a stream of gas upwardly therethrough; and inserting a plug member having a diameter less than the bore diameter of said core member and less than the diameter of said conduit member into said conduit member through the bore of said core member while fluidizing said material thereby to displace said fluidized material upwardly into contact with said one face and the walls of said slots without moving said conduit member in an upward direction.

3,093,511
SOLID INORGANIC INSULATION FOR METALLIC CONDUCTORS AND ELECTRICAL MEMBERS INSULATED THEREWITH
Melvin P. Weisel, Pittsburgh, and Donald H. Hogle, Monroeville, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Feb. 17, 1960, Ser. No. 9,368
6 Claims. (Cl. 117—232)



3. A coated electrical conductor consisting essentially, in combination, of a metallic conductor and a coating composition applied thereto, said coating composition consisting essentially of mica flakes having a particle size of from about 0.5 micron to 25 microns, and a tolyl methyl phenyl siloxane resin having a ratio of total number of tolyl, methyl, and phenyl groups to silicon of from 1.3 to 1.6.

3,093,512
CURRENT GENERATOR CELL
John McCallum, Worthington, Ohio, Theodore B. Johnson, Stratford, Conn., and Walter E. Ditmars, Jr., and Leslie D. McGraw, Columbus, Ohio, assignors, by direct and mesne assignments, to Remington Arms Company, Inc., Bridgeport, Conn., a corporation of Delaware
No Drawing. Original application Jan. 3, 1958, Ser. No. 706,890, now Patent No. 2,979,553, dated Apr. 11, 1961. Divided and this application Nov. 14, 1960, Ser. No. 68,581
5 Claims. (Cl. 136—100)

1. A primary cell having an alkaline electrolyte and an anode that is an alloy consisting essentially of at least 50 atomic percent titanium, about 27 weight percent molybdenum, and about 10 weight percent niobium.

3,093,513
CURRENT GENERATOR CELL
John McCallum, Worthington, Ohio, Theodore B. Johnson, Stratford, Conn., and Walter E. Ditmars, Jr., and Leslie D. McGraw, Columbus, Ohio, assignors, by direct and mesne assignments, to Remington Arms Company, Inc., Bridgeport, Conn., a corporation of Delaware
No Drawing. Original application Jan. 3, 1958, Ser. No. 706,890, now Patent No. 2,979,553, dated Apr. 11, 1961. Divided and this application Nov. 14, 1960, Ser. No. 68,582
5 Claims. (Cl. 136—100)

5. A primary cell having an alkaline electrolyte and an anode that is an alloy consisting essentially of titanium with a voltage-improving and current-improving element present in an effective amount and selected from the group consisting of up to 60 weight percent aluminum, up to 40 weight percent beryllium, and up to 13 weight percent boron.

3,093,514
CURRENT GENERATOR CELL
John McCallum, Worthington, Ohio, Theodore B. Johnson, Stratford, Conn., and Walter E. Ditmars, Jr., and Leslie D. McGraw, Columbus, Ohio, assignors, by direct and mesne assignments, to Remington Arms Company, Inc., Bridgeport, Conn., a corporation of Delaware
No Drawing. Original application Jan. 3, 1958, Ser. No. 706,890, now Patent No. 2,979,553, dated Apr. 11, 1961. Divided and this application Nov. 14, 1960, Ser. No. 68,583
4 Claims. (Cl. 136—100)

1. A primary cell having an anode consisting essentially of at least 50 atomic percent titanium, about 34 weight percent molybdenum, and about 5 weight percent aluminum, a cathode, and an electrolyte comprising potassium hydroxide.

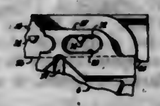
3,093,515
BATTERY CASE
Ralph H. Rector, Whittier, Calif., assignor to Stauffer Chemical Company, a corporation of Delaware
Filed May 31, 1960, Ser. No. 32,721
1 Claim. (Cl. 136—166)

In a wet cell storage battery having a generally rectangular case and a top planar surface with exposed terminals, the improvements comprising:

(*a*) integral flanges extending upwardly from either end of the said rectangular base, each of the said

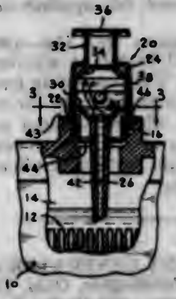
flanges having a pair of laterally spaced finger holes therein passing entirely through the said upwardly extending flanges;

(*b*) a one piece molded protective cover constructed solely of a material selected from the class consisting of stiff rubber, plastic and a resin-rubber mixture, said cover having outlets therefrom for electrical cables attached to the said terminals;



(*c*) and means for removably securing said cover over said top planar surface of the said rectangular base, said means consisting of four ears, two on either end thereof, molded as a part of the said cover and of the same material, said ears being so positioned on said cover that one of said ears is capable of registry with each of the said finger holes of said upwardly extending flanges when the cover is positioned over the said top planar surface of the said rectangular case.

3,093,516
HYDROMETER VENT CAP
Roy E. Hennen, Mequon, and Jerome T. Lawrie, Brookfield, Wis., assignors to Globe-Union Inc., Milwaukee, Wis., a corporation of Delaware
Filed Apr. 25, 1961, Ser. No. 105,376
6 Claims. (Cl. 136—177)



1. A vent cap for the vent opening of the cell of an electric storage battery having liquid electrolyte therein to be maintained at a normal level having

a portion sealingly engageable with said vent opening and adapted to hold said vent cap in place in said vent opening and prevent loss of electrolyte therebetween,

a vent with an opening below and above said portion to provide means for venting the cell and preventing abnormal accumulation of pressure therein,

a transparent reservoir above said portion adapted to temporarily receive electrolyte from the cell,

a tube with an upwardly opening conical portion connected to said reservoir and a lower end constituting an inlet to be positioned below the normal level for the electrolyte in the cell,

an imperforate plunger operable within said reservoir having a downwardly facing conical portion opening toward said tube and provided with manually engageable means extending exteriorly of said reservoir for raising and lowering said plunger to draw electrolyte from the cell into said reservoir and expel it from said reservoir back into the cell without removing the vent cap from its proper position in said vent opening, and

specific gravity indicating means within said transparent reservoir cooperable with liquid drawn into said reservoir to indicate whether the specific density is above or below normal.

3,093,517
INTERMETALLIC SEMICONDUCTOR BODY FORMATION
Vincent J. Lyons, Wappingers Falls, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed June 30, 1959, Ser. No. 823,973
3 Claims. (Cl. 148—1.5)



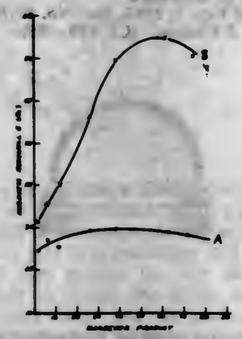
1. The method of forming semiconductor bodies in binary intermetallic compounds comprising the steps of placing in contact with a monocrystalline substrate of a semiconductor compound having a first melting temperature a quantity of an alloy of said semiconductor compound having an excess of a lesser volatile element therein, said alloy melting at a temperature lower than said first temperature and lower than the melting temperature of said compound in stoichiometric proportions heating said alloy to its melting temperature and introducing at that temperature, a quantity of the more volatile element of said compound from a gaseous medium causing thereby quantities of said compound in stoichiometric proportions to grow upon the substrate.

3,093,518
NICKEL ALLOY
Clarence G. Bieber, Roselle Park, N.J., assignor to The International Nickel Company, Inc., New York, N.Y., a corporation of Delaware
No Drawing. Filed Sept. 11, 1959, Ser. No. 839,296
5 Claims. (Cl. 148—31)

1. A hardened ferrous-base alloy containing about 24% to about 30% nickel, about 1.5% to about 9% of metal selected from the group consisting of aluminum and titanium and up to about 0.1% carbon exhibiting a hardness in excess of at least about 50 Rc, said hardness being induced in said alloy after solution treatment by first aging said alloy at a temperature above the martensitic transformation range and within the range of about 1100° F. to about 1400° F. for about 1 hour to about 24 hours, cooling said alloy to a temperature at least below about 90° F. to effect a transformation therein and thereafter again aging said alloy at a temperature of about 500° F. to about 1200° F. for about ¼ hour to about 24 hours.

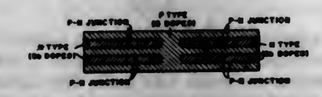
3,093,519
AGE-HARDENABLE, MARTENSITIC IRON-BASE ALLOYS
Raymond F. Decker, Fanwood, N.J., Alan J. Goldman, New Haven, Conn., and John T. Eash, Westfield, N.J., assignors to The International Nickel Company, Inc., New York, N.Y., a corporation of Delaware
Filed Jan. 3, 1961, Ser. No. 80,381
6 Claims. (Cl. 148—31)

2. An age-hardenable, martensitic iron-base alloy containing interrelated and coacting amounts of molybdenum and cobalt as essential elements and consisting essentially of about 10% to 23% nickel, about 1% to 10% molybdenum, about 2% to 20% cobalt with the amounts of molybdenum and cobalt being interrelated such that the hardener product determined as the product of the numerical values of the weight percentages of molybdenum and cobalt is from 10 to about 80, up to about 0.15% carbon, not more than 0.25% manganese, up to 5% chromium with the total nickel and chromium contents being less than 23%, up to about 0.1% boron, up to about 0.25% zirconium, up to about 0.1% calcium, up to 0.2% nitrogen, up to 6% copper, up to 7% tungsten, up to 6% vanadium, up to 3% columbium, up to 3% titanium, up to 3% aluminum, up to 1% beryllium and up to 0.2% silicon, the total amount of nitrogen, copper, tungsten, vanadium, columbium, titanium, aluminum, beryllium



and silicon not exceeding about 7% in the aggregate, and the balance essentially iron with the iron being present in an amount above 50%, said martensitic iron-base alloy having a martensitic structure in both the aged and non-aged condition and said alloy having, after aging in the martensitic condition to obtain yield strength levels over 200,000 p.s.i. and up to at least 300,000 p.s.i., an unusually high combination of toughness, resistance to stress-corrosion cracking, resistance to crack propagation in the notched condition and weldability at such high strength levels.

3,093,520
SEMICONDUCTOR DENDRITIC CRYSTALS
Harold F. John, Wilkinsburg, and John W. Faust, Jr., Forest Hills, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Mar. 11, 1960, Ser. No. 14,396
6 Claims. (Cl. 148—33)



1. A dendrite of semiconductor material which exhibits areas of different types of semiconductivity in a transverse cross-section of the dendrite, comprising an elongated body having two substantially parallel flat faces of {111} orientation extending in the lengthwise direction, the dendrite having two substantially symmetrical portions disposed about a {110} plane perpendicular to the {111} faces and extending midway of the edges along the lengthwise direction of the dendrite, each symmetrical portion comprising, (1) at least two legs extending substantially perpendicularly from said {110} plane, the two outermost legs forming the flat faces of the dendrite, (2) a central cross-bar connecting the legs at the said plane, the legs and the cross-bar being of one type of semiconductivity, and (3) at least one area between the legs extending laterally from the cross-bar to the outside edge being of the opposite type of semiconductivity.

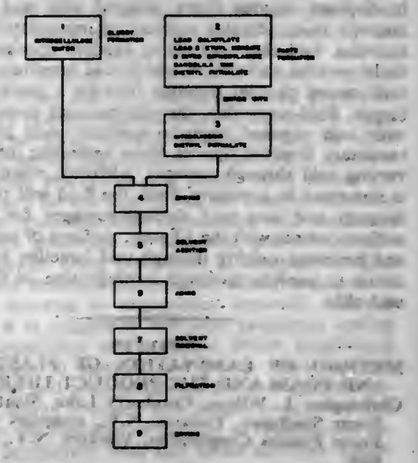
3,093,521
EXPLOSIVE COMPOSITION
Cyril J. Breza, Thorofare, N.J., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Oct. 26, 1960, Ser. No. 65,012
3 Claims. (Cl. 149—19)

1. A deformable self-supporting, low-velocity explosive composition consisting essentially of by weight 15 to 45% of a finely-divided cap-sensitive crystalline high explosive compound, selected from the group consisting of organic nitrates, organic nitramines and azides, 30 to 75% of red lead, and 10 to 25% of a binder consisting of 25 to 75% of an organic rubber material selected from the group consisting of natural and synthetic rubber, and 75 to 25% of a thermoplastic terpene hydrocarbon resin.

3,093,522
LIQUID FUELS FOR REACTION MOTORS
Leonard A. Stengel and Emory E. Toops, Jr., Terre Haute, Ind., assignors to Commercial Solvents Corporation, New York, N.Y., a corporation of Maryland
No Drawing. Filed Jan. 14, 1959, Ser. No. 786,677
1 Claim. (Cl. 149—46)

A liquid fuel consisting essentially of from about 50 to about 85% by weight methanol, about 5 to about 30% by weight of ammonium nitrate, and from about 5 to about 15% by weight of monomethylamine.

3,093,523
PROCESS FOR MAKING EXTRUDABLE PROPELLANT
Eli D. Besser, China Lake, Calif., assignor to the United States of America as represented by the Secretary of the Navy
Filed Oct. 24, 1955, Ser. No. 542,530
1 Claim. (Cl. 149—98)
(Granted under Title 35, U.S. Code (1952), sec. 266)



The process of compounding in extrudable form propellent compositions consisting essentially of about 44 to about 60 percent of nitrocellulose, about 28 to about 47 percent of nitroglycerin, about 2 to about 5 percent of a material from the class consisting of lead salicylate and lead 2-ethyl hexoate, about 2 percent of 2-nitrodiphenylamine, and about 3 to about 11 percent of diethyl phthalate; said process consisting essentially of making a water slurry of the nitrocellulose consisting of about 9 parts of water to about 1 part of nitrocellulose; making a paint paste by grinding together a small amount of the diethyl phthalate, the lead salicylate and the 2-nitrodiphenylamine; adding the remainder of the diethyl phthalate to the nitroglycerin to desensitize it; adding the desensitized

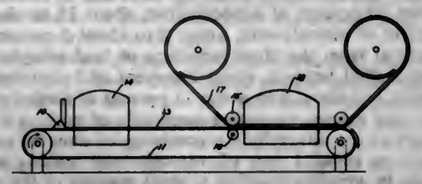
nitroglycerin to the paint paste to form a liquid mixture; adding the liquid mixture to the nitrocellulose slurry with continuous stirring to form a propellent mixture; adding methyl ethyl ketone-toluene solvent to the propellent mixture in an amount from about .5 to about 3.5 parts by weight of propellent mixture; aging the mixture formed by addition of solvent to propellent mixture; and distilling off said solvent.

3,093,524
WOOD CHIPS
Pierre Louis Victor Flamant, Chaponval, Auvers-sur-Oise, and Michel Jean-Marie Sinares, Versailles, France, assignors to Etablissements Linares Freres, Dordogne, France, a joint-stock company of France, and Societe de Developpement des Procedes Isogrand (Isodev), Paris, France, a limited-liability company of France
Filed Feb. 10, 1960, Ser. No. 7,887
Claims priority, application France Feb. 17, 1959
5 Claims. (Cl. 154—43)



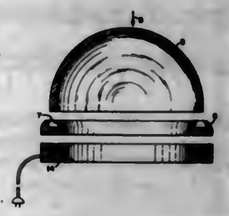
1. A natural wood chip for use in pulp manufacture or the like comprising a coherent, porous, fragile body of a substantially uniform thickness ranging upwardly from 5 mm. comprising a series of loosely-interconnected integral natural core lamellae lying in substantially parallel planes and extending in the direction of the natural grain of the chip and substantially in the direction of the thickness dimension of the chip, and a plurality of randomly disposed lignous fibers, integral with and extending laterally from adjacent surfaces of immediately adjacent lamellae, said chip comprising exposed opposite substantially parallel surfaces at which said lamellae terminate, said spaced parallel lamellae forming a plurality of enlarged, fluid-permeable, through-passages communicating with said exposed opposite surfaces, said plurality of randomly disposed lignous fibers extending into and traversing said through-passages, whereby, when said chip is immersed in a treating fluid, the fluid will readily pass through and into said through-passages for maximum surface contact with the adjacent surfaces of said lamellae and permeate quickly through said lamellae by capillary action to provide thorough impregnation of the fluid in said chip.

3,093,525
METHOD OF LAMINATION OF PLASTIC FILM AND FOAM AND THE PRODUCT THEREFROM
Christopher L. Wilson, Cranberry Lake, Sloatsburg, and Oscar Shuffman, Yonkers, N.Y., assignors to Hudson Foam Plastics Corporation, Yonkers, N.Y., a corporation
Filed July 25, 1955, Ser. No. 523,986
6 Claims. (Cl. 156—79)



1. The method of making a laminated article comprising bringing a preformed layer of polyester-diisocyanate foam into contact with an incompletely cured layer of plasticized polyvinyl chloride dispersion selected from the group consisting of plastisol and organosol, compressing the layers together and completing the cure of the polyvinyl choride layer.

3,093,526
METHOD OF PLASTIC EDGE ATTACHMENT
James O. Price and Franklin T. Smith, Phoenix, Ariz., assignors to Goodyear Aircraft Corporation, Akron, Ohio, a corporation of Delaware
Filed Feb. 7, 1961, Ser. No. 87,707
2 Claims. (Cl. 156—85)



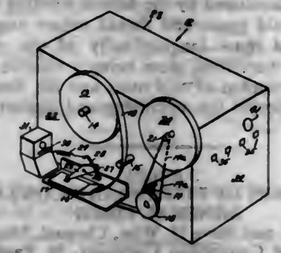
1. That method of securing a stretched plastic canopy in an endless frame which includes the steps of providing a laterally directed endless undercut groove in the frame of a width to slidably receive the edge of the canopy, slidably positioning the edge of the canopy in the groove, heating only the canopy edge to effect plastic recovery and thickening thereof, and simultaneously applying pressure to the canopy tending to slidably move the edge into the groove so that as the edge thickens it substantially fills the undercut groove.

3,093,527
METHOD FOR TREATING GLASS SHEETS
Robert W. Wheeler, Cheswick, Pa., assignor to Pittsburgh Plate Glass Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Nov. 23, 1960, Ser. No. 71,282
4 Claims. (Cl. 156—99)



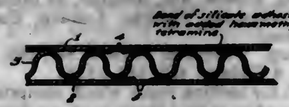
1. In the method of making a laminated curved assembly comprising two glass sheets bonded to a plastic interlayer and having for each of said glass sheets a central portion and end portions extending in the same direction from the central portion with a small radius of curvature between the central portion and the end portions which comprises bending together a smaller glass sheet and a larger glass sheet both cut to outline, placing thermoplastic material between the bent glass sheets and bonding at an elevated temperature the glass sheets to the thermoplastic material by the application of an elevated pressure, the improvement comprising seaming one face only of said smaller sheet at the tips of the end portions of the smaller glass sheet to provide seamed surface portions of said face at the tips of said smaller sheet and placing said smaller glass sheet against the larger glass sheet with said seamed surface portions facing said larger glass sheet prior to said bending.

3,093,528
LABEL APPLYING MEANS
Robert L. Reich, Forest Hills, N.Y., assignor to Kleen Stik Products Inc., Chicago, Ill., a corporation of Illinois
Filed July 28, 1960, Ser. No. 45,914
18 Claims. (Cl. 156—285)



16. A method of applying a pressure sensitive adhesive coated label to an article from a backing strip on which a plurality of said labels are removably supported, which comprises feeding said strip containing said labels along a given path and then guiding the tape away from said path at an angle to permit the labels to be removed from said backing strip and to project said labels away from said backing strip, each said label as removed from its said backing strip being held by vacuum against a grid surface with its pressure sensitive adhesive side away from said grid surface, and then directing air under pressure through said grid and against said label to drive it into contact with said article whereby to cause said label to adhere to said article.

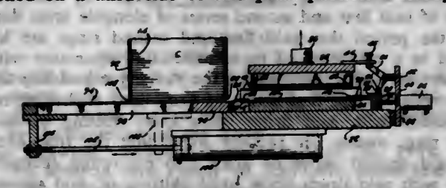
3,093,529
MANUFACTURE OF WATER RESISTANT LAMINATES AND SILICATE ADHESIVE THEREFOR
Helmut v. Freyhold, Duesseldorf-Oberkassel, Germany, assignor to Philadelphia Quartz Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Sept. 1, 1955, Ser. No. 531,898
Claims priority, application Germany Sept. 10, 1954
1 Claim. (Cl. 156—325)



A novel method of bonding together two plies of fibrous material which comprises applying an adhesive composition between said plies, said adhesive composition being capable of producing water-resistant bonds and comprising a sodium silicate solution having a ratio of Na_2O to SiO_2 within the range of from about 1:2 to 1:4, a viscosity ranging from about 50 to 400 centipoises and a gravity of from about 37° to 43° Baumé, aud containing dissolved therein from about 0.1 to 0.5 wt. percent of hexamethylene tetramine, then applying heat to decompose the hexamethylene tetramine into ammonia and formaldehyde, and thereby effecting a water-resistant bond between said two plies.

3,093,530
APPARATUS FOR THE MANUFACTURE OF BINDERS
Gerald Lippman, 3403 2nd St., Oceanside, N.Y.
Filed June 30, 1961, Ser. No. 122,385
12 Claims. (Cl. 156—383)

1. Apparatus for the automatic manufacture of binders formed of a board structure encased within a pair of plastic sheets to form a sandwich unit, comprising a press portion, a plastic sheet feed portion and a board structure feed portion; said sheet feed portion including means to feed a portion of said pair of plastic sheets in spaced relationship to said press portion; said board structure feed portion including means operatively associated with said first-mentioned means to feed a board structure to said press portion between said portion of said pair of plastic sheets; and said press portion including a die means, said die means including a peripheral sealing edge having a periphery complementary with the periphery of said board structure, and means to bring said peripheral sealing edge into operative engagement with one of said plastic sheets to seal said one plastic sheet to the other of the plastic sheets along the periphery of said board structure to form said sandwich unit, wherein said plastic sheet feed portion includes a pair of plastic sheet supply rolls positioned on one side of said press portion and a conveyor mechanism for drawing said plastic sheets past said press portion positioned on another side of said press portion, opposite to said one side, said conveyor mechanism including grippers which grip the edges of the plastic sheets and remove the completed sandwich unit from said press portion; said board structure feed includes a board structure magazine adapted to contain a plurality of board structures, said magazine being positioned on a third side of said press portion whereby to

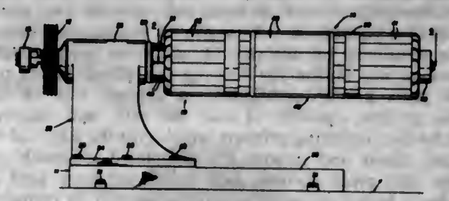


feed said board structures in a direction transverse to the direction of feed of said plastic sheets, said magazine having a pair of slots in the base thereof in registry with each other, a board pusher mechanism operatively associated with said magazine arranged to enter one of said slots for ejecting the lowermost board structure through said other slot for positioning at said press portion; and said press portion including a die base, a reciprocating die vertically movable relative to said die base, a peripheral sealing edge coupled to said die, a movable board structure positioning and plastic sheet separation device arranged on one side of said die base, a stationary plastic sheet separation unit cooperating with said separation device positioned on the other side of said die base, said device being positioned in the path of feed of said board structure to limit the extent of travel of said board structure by engagement therewith whereby to position it in alignment with said peripheral sealing edge, said separation unit and said device cooperating with each other to separate said plastic sheets as they are drawn past said press portion by said conveyor mechanism, lever means coupling said device to said die and responsive to the lowering of said die to remove said device out of engagement with said board structure whereby to permit said peripheral sealing edge to engage the top plastic sheet for sealing with the bottom plastic sheet along the peripheral edge of the board structure.

3,093,531
TIRE BUILDING MACHINE
Adolf H. Fröhlich, Hannover, Germany, and Edward J. Harris, Akron, Ohio, assignors to The Cleveland Trust Company, Cleveland, Ohio, as trustee
Filed Jan. 16, 1956, Ser. No. 559,243
7 Claims. (Cl. 156—400)

1. A tire building machine of the character described, comprising; a base member; an elongate support shaft secured to said base member; a building drum disposed

medianally of said support shaft; a first ring member received around said support shaft in axially shiftable relationship therewith; a second ring member received around said support shaft in axially shiftable relationship therewith at an axial distance from said first ring; a first series of elongated arms, each having one end thereof pivotally mounted with respect to said first ring, with said pivoted ends thereof being arranged in a circular course of variable dimension; a second series of elongated arms, each having one end thereof being pivotally mounted with respect to said second ring, with said free ends of said second series of arms being arranged in a circular course of variable dimension; a pair of guide rings disposed adjacent the opposed axial



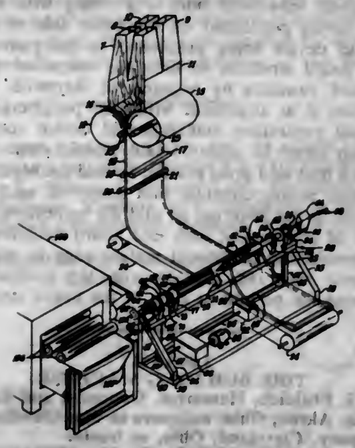
ends of said drum in substantially abutting relationship therewith and being respectively engaged by the free ends of said first and second series of elongate arms during the period that said first and second rings are located in a condition of maximum axial separation with respect to each other; means for radially expanding the free ends of said first series of arms into encircling relationship with said drum upon axial shifting of said first ring; means for radially expanding the free ends of said second series of arms into encircling relationship with said drum upon axial shifting of said second ring; and means for alternately reciprocating said first and second rings; said guide rings being fixed with respect to said support shaft.

3,093,532

APPARATUS FOR FORMING TUBULAR INSULATING BODIES OF FIBROUS STRUCTURE

Ward B. Miller, Waterville, and William H. Ewing, Newark, Ohio, assignors to Owens-Corning Fiberglas Corporation, Toledo, Ohio, a corporation of Delaware

Filed July 30, 1958, Ser. No. 751,938
8 Claims. (Cl. 156—430)



1. Apparatus for the production of tubular bodies from a continuous veil of fibers impregnated with an uncured binder including a cylindrical casing having a smooth interior surface, a lateral opening at one end of the casing for the entry of the veil into the casing, means delivering a continuous veil of fibers to the lateral opening, a mandrel axially positioned within the casing and around which the veil is helically wound, means for curing the binder in the portion of the veil contacting the casing and the mandrel, means rotating about the longitudinal axis of the casing adjacent the exit end thereof engaging the tubular mass developed by the helical winding of the veil and rotating said mass, and thread means engaging and advancing said mass longitudinally of the casing and discharging it therefrom, there being a relative difference in rotative movement of said mass and the thread means by which is effected the advancing and discharge of said mass.

3,093,533

PRODUCTION OF FIBERBOARD CONTAINING MINERAL FIBER

John M. Hella and Steve H. Wise, Cloquet, Minn., assignors to Wood Conversion Company, St. Paul, Minn., a corporation of Delaware

Filed Feb. 1, 1960, Ser. No. 5,809
3 Claims. (Cl. 162—145)

1. In the method of forming a fire-retardant mineral fiber board bonded by a binder consisting essentially of dried gelatinized starch by continuously dewatering an aqueous slurry containing said starch as raw starch grains, synthetic mineral fibers and a small quantity of asbestos fibers and thereby forming a wet fiber mat, the improvement in which said slurry contains solids consisting essentially of from 5 to 20 parts of said raw starch grains and from 77 to 100 parts of feltable fibers of which 77 to 90 parts are mineral fibers, in turn consisting of 75 to 88 parts of synthetic mineral fibers and from 2 to 15 parts of asbestos fibers for retaining at least 80% of said starch grains in dewatering, any remainder being substantially unhydrated cellulose fibers, gelatinizing the starch grains in situ in the wet mat by heating the wet mat throughout to at least the gelatinizing temperature for the starch, and drying the resulting wet mat containing said gelatinized starch as binder for the fibers.

3,093,534

PAPERMAKING PROCESS AND PRODUCT

James H. Filling, Mobile, Ala., assignor, by mesne assignments, to Courtaulds, Limited, London, England, a British company

No Drawing. Filed Jan. 7, 1960, Ser. No. 948
4 Claims. (Cl. 162—146)

1. A method for making paper which comprises forming an aqueous paper-making slurry having a fibrous component comprising between about 10% and about 75% by weight regenerated cellulose fiber and between about 90% and about 25% by weight natural cellulose fiber, said slurry also containing between about 0.01 and about 1% by weight of a polyacrylic acid having a molecular weight between about 200,000 and about 860,000, and forming said slurry into paper.

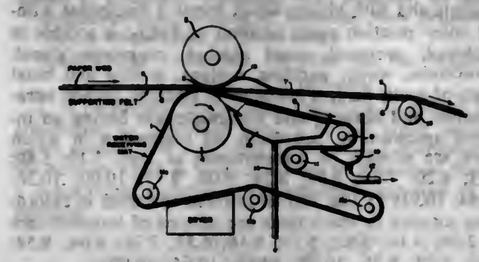
3,093,535

METHOD OF DEWATERING PULP WEBS

Otto L. J. Brauns, Stockholm, and Lars B. Jordansson, Karlstad, Sweden, assignors to Svenska Pappersbrukens Forskningsinstitut, Stockholm, Sweden

Filed July 14, 1958, Ser. No. 748,420
13 Claims. (Cl. 162—199)

1. A method of dewatering a wet or moist web of paper or a web of other absorbent material comprising passing the web through the nip of a pair of cooperating press rolls together with a water-receiving mat having cavities at the nip of the rolls to receive and hold water squeezed out of the web at the nip of the press rolls, entraining water pressed from the web in the cavities of the water-receiving mat after passage through the nip, moving the web and the mat carrying entrained water along divergent



paths away from the surface of said rolls, said mat being removed at an acute angle to the web.

3,093,536

STABILIZED HALOGENATED ENOL ESTER PESTICIDAL COMPOSITIONS

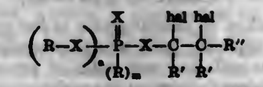
Erwin S. Loeffler, New Providence, N.J., assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Apr. 5, 1961, Ser. No. 100,801
7 Claims. (Cl. 167—22)

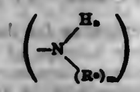
1. A stable solid pesticidal composition comprising in combination:

(*a*) a substantially toxicologically inert solid carrier material,

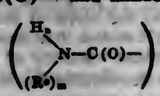
(*b*) a pesticide of the formula:



wherein hal represents halogen of the group consisting of chlorine and bromine, X represents a member of the group consisting of oxygen and sulfur, R represents a radical containing up to 10 carbon atoms which is a member of the group consisting of alkyl, cycloalkyl, aryl, alkaryl and aralkyl radicals and such radicals substituted by from one to a plurality of substituents from the group consisting of chlorine, bromine, nitro, ether (—O—R°) and amino



radicals wherein R° represents a hydrocarbon radical of the group represented by R, R′ represents a member of the group consisting of hydrogen, chlorine, bromine, and radicals represented by R, and R″ represents a member of the group consisting of chlorine, bromine, radicals represented by R, carboalkoxy radicals of up to 10 carbon atoms, alkoxyalkyleneoxycarbonyl radicals of up to 10 carbon atoms, ether radicals (—O—R), acyloxyalkoxycarbonyl radicals containing up to 10 carbon atoms wherein the acyl group is R—C(O)— and amido radicals



of up to 10 carbon atoms, and *n* is an integer from 0 to 2, with the proviso that $m+n=2$,

(*c*) a phenol,

the amount of said phenol being sufficient to stabilize said pesticide against decomposition.

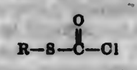
3,093,537

CHLOROTHIOLFORMATE PESTICIDE

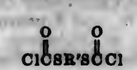
Harry Tilles, 703 Bahra Drive, El Cerrito, Calif.

No Drawing. Original application Sept. 6, 1960, Ser. No. 53,924. Divided and this application Nov. 16, 1961, Ser. No. 158,632
8 Claims. (Cl. 167—22)

1. A method of controlling nematodes and fungi comprising: applying thereto a small amount of a compound selected from the class consisting of compounds of the general formula



where R is selected from the class consisting of alkyl, cycloalkyl, lower alkenyl, aryl, alkaryl, aralkyl, haloalkyl, haloaralkyl, carboalkoxyalkyl and



wherein R′ is a polymethylene group.

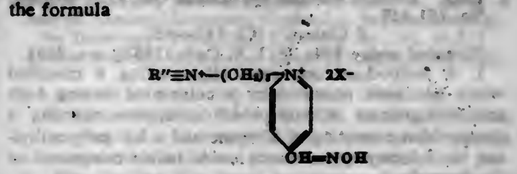
3,093,538

BIS QUATERNARY OXIMES

Brennie E. Hackley, Jr., and Edward J. Poziomek, Edgewood, and George M. Steinberg, Baltimore, Md., assignors to the United States of America as represented by the Secretary of the Army

No Drawing. Original application Apr. 28, 1959, Ser. No. 809,578, now Patent No. 3,077,476, dated Mar. 12, 1963. Divided and this application Oct. 11, 1961, Ser. No. 151,123
3 Claims. (Cl. 167—65)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A method of therapeutically treating a mammal which has been poisoned by a compound having high anticholinesterase activity which comprises injecting a composition consisting of atropine and an unsymmetrical bis quaternary 4-formyl pyridinium halide monoxime of the formula



wherein R″ is selected from the class consisting of three lower alkyl groups and the hydrocarbon portion of the pyridine ring.

3,093,539

BIS QUATERNARY OXIMES

Brennie E. Hackley, Jr., and Edward J. Poziomek, Edgewood, and George M. Steinberg, Baltimore, Md., assignors to the United States of America as represented by the Secretary of the Army

No Drawing. Original application Apr. 28, 1959, Ser. No. 809,578, now Patent No. 3,077,476, dated Mar. 12, 1963. Divided and this application Oct. 11, 1961, Ser. No. 151,124
2 Claims. (Cl. 167—65)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A method of therapeutically treating a mammal which has been poisoned by a compound having high anticholinesterase activity which comprises injecting a composition consisting of atropine and 1,1′-(2,5 dimethyl-p-phenylmethylene) bis-(4-formylpyridinium) halide dioxime.

3,093,540
BIS QUATERNARY OXIMES
Brennie E. Hackley, Jr., and Edward J. Poziomek, Edgewood, and George M. Steinberg, Baltimore, Md., assignors to the United States of America as represented by the Secretary of the Army
No Drawing. Original application Apr. 28, 1959, Ser. No. 809,578, now Patent No. 3,077,476, dated Mar. 12, 1963. Divided and this application Oct. 11, 1961, Ser. No. 151,125
1 Claim. (Cl. 167—65)
(Granted under Title 35, U.S. Code (1952), sec. 266)

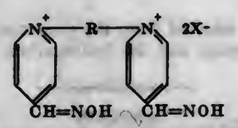
A method of therapeutically treating a mammal which has been poisoned by a compound having high anticholinesterase activity which comprises injecting into said mammal a composition containing atropine and 1,1'-trimethylene bis-(3-amidoxime pyridinium) halide.

3,093,541
BIS QUATERNARY OXIMES
Brennie E. Hackley, Jr., and Edward J. Poziomek, Edgewood, and George M. Steinberg, Baltimore, Md., assignors to the United States of America as represented by the Secretary of the Army
No Drawing. Original application Apr. 28, 1959, Ser. No. 809,578, now Patent No. 3,077,476, dated Mar. 12, 1963. Divided and this application Oct. 11, 1961, Ser. No. 151,126
1 Claim. (Cl. 167—65)
(Granted under Title 35, U.S. Code (1952), sec. 266)

A method of therapeutically treating a mammal which has been poisoned by a compound having high anticholinesterase activity which comprises injecting a composition comprising atropine and 1,1'-(2-butenylene) bis(4-formylpyridinium) halide dioxime.

3,093,542
BIS QUATERNARY OXIMES
Brennie E. Hackley, Jr., and Edward J. Poziomek, Edgewood, and George M. Steinberg, Baltimore, Md., assignors to the United States of America as represented by the Secretary of the Army
No Drawing. Original application Apr. 28, 1959, Ser. No. 809,578, now Patent No. 3,077,476, dated Mar. 12, 1963. Divided and this application Oct. 11, 1961, Ser. No. 151,127
6 Claims. (Cl. 167—65)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A method of therapeutically treating a mammal which has been poisoned by a compound having high anticholinesterase activity which comprises injecting a composition consisting of atropine and a 1,1' polymethylene bis(4-formyl pyridinium) oxide halide compound of the formula



wherein R is a polymethylene group containing from two to six carbon atoms and X^- is selected from the class consisting of chloride, bromide and iodide.

3,093,543
ANTIBIOTIC, FLAVENSOMYCIN, AND PROCESS FOR PREPARING IT
Renato Craveri and Giovanni Giolitti, Milan, Italy, assignors to Montecatini Società Generale per l'Industria Mineraria e Chimica, Milan, Italy
Filed Dec. 13, 1961, Ser. No. 159,049
Claims priority, application Italy Sept. 19, 1956
14 Claims. (Cl. 167—65)

1. The antibiotic Flavensomycin, the molecular weight of which is 351.43; having the empirical formula $C_{28}H_{53}N_3O_{16}$; which gives color reactions with Molisch, Fehling, and Ehrlich reagents; gives no color reactions with Seliwanoff, Tollens, Millon, Liebermann, Sakaguchi reagents and with biuret; which forms a precipitate without color reaction upon addition of $FeCl_3$; is soluble in methanol, propanol, amyl alcohol, propylene glycol, chloroform, water, pyridine, acetone, methyl and butyl esters of acetic acid; is insoluble in glycerol, carbon tetrachloride, and hexane, said Flavensomycin having an infrared spectrum in petroleum oil suspension in which there are minima or transmittance at 2.96; 3.10; 5.80; 5.93; 6.20; 7.76; 8.04; 8.54; 9.09; 9.75; 10.00; 10.36; 10.64; 10.91; 13.10μ, and an infrared spectrum in chloroform solution in which there are minima of transmittance at 3.00; 3.10; 5.82; 5.93; 6.16; 6.53; 7.76; 8.04; 8.54; 9.02; 9.09; 9.75; 10.02; 10.33; 10.64; 10.90μ.

8. The process of producing the antibiotic Flavensomycin, which comprises incubating and aerating while submerged in a liquid medium containing sources of assimilable carbon, nitrogen and mineral salts, a culture of *Streptomyces cavourensis*, NRRL 2740, and recovering Flavensomycin from the liquid medium by extraction with benzene.

3,093,544
METHOD OF RELIEVING PAIN EMPLOYING 1,3,5-TRIHYDROXY-BENZENE
Louis Lafon, 86 Ave. de la Republique, Paris, France
No Drawing. Filed Dec. 22, 1961, Ser. No. 161,397
Claims priority, application Great Britain Dec. 30, 1959
7 Claims. (Cl. 167—65)

1. The method of relieving pain in the management of hepatic and nephritic colic which comprises administering to patients suffering such colic an amount of phloroglucinol sufficient to combat the colic.

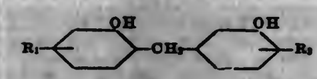
3,093,545
THERAPEUTIC IRON-DEXTRAN PREPARATIONS
Robert J. Westfall, Kankakee, and Sheldon H. Lewis, Park Forest, Ill., assignors, by mesne assignments, to Armour Pharmaceutical Company, a corporation of Delaware
No Drawing. Filed Aug. 29, 1960, Ser. No. 52,332
3 Claims. (Cl. 167—68)

1. An iron preparation for therapeutic purposes, comprising an aqueous solution of a complex of iron and dextran, which complex demonstrates an average intrinsic viscosity at a temperature of 25° C. of from 0.025 to 0.25, which complex demonstrates in aqueous solution at an iron concentration of 100 mg. per ml. at a temperature of 25° C. a kinematic viscosity of less than 45 centistokes, which complex is substantially free from dextran degradation products having molecular weights of less than 300, which complex demonstrates on intravenous administration to mice an LD_{50} of at least 1500 mg. Fe per kg., and which complex demonstrates, on intramuscular injection into the hind leg of a rabbit at a dose concentration of 20 mg. of iron per kg. of body weight, less than 20% residual iron at the injection site after seven days.

2. In a method of preparing an iron product for therapeutic purposes, the steps of forming an aqueous solution having a pH of less than about 2.3 of dextran having an average intrinsic viscosity of from 0.025 to 0.25 and at least one water-soluble ferric salt, and adjusting the resulting aqueous solution to a pH of from 3.5 to 5.0 over a period of at least one-half hour to obtain the iron-dextran complex, while maintaining said aqueous solution during the formation of the iron-dextran complex at a temperature of less than 70° C.

3,093,546
ABSORBENT PRODUCT
Ralph L. Atkinson, Westfield, N.J., assignor, by mesne assignments, to Johnson & Johnson, New Brunswick, N.J., a corporation of New Jersey
No Drawing. Filed Dec. 18, 1958, Ser. No. 781,204
5 Claims. (Cl. 167—84)

1. A catamenial dressing for absorbing menstrual fluid comprising an absorbent core, a fibrous liquid pervious cover around said core, said cover having distributed in the portion which is to be contacted by menstrual fluid as a deodorizing material a halogenated compound of the formula



wherein R_1 and R_2 are at least two chlorines, said deodorizing material being in solution in a polyhydric alcohol having humectant properties and being bound to said cover in admixture in a water dispersible resin binder selected from the class consisting of polyvinyl alcohol and polyvinyl acetate, said deodorizing material being removable from said cover by the passage of menstrual fluid therethrough.

3,093,547
PROCESS OF PREPARING PENICILLINS
Hans Margreiter, Radfeld, Tirol, and Richard Brunner and Ernst Brandl, Kundl, Tirol, Austria, assignors to Biochemie Gesellschaft mit beschraenkter Haftung, Kundl, Tirol, Austria, a corporation of Austria
No Drawing. Filed Nov. 23, 1960, Ser. No. 71,126
Claims priority, application Austria Nov. 24, 1959
18 Claims. (Cl. 195—36)

1. In a process of producing, by fermentation, penicillins of the formula

$$C_8H_{10}O_2NS—NH—CO—R_1—(X—R_2)_n$$

wherein

R_1 is a bivalent, unsubstituted, saturated aliphatic radical;
X is a member selected from the group consisting of oxygen, sulfur, and a direct linkage between R_1 and R_2;
R_2 is an organic radical selected from the group consisting of an unsubstituted aliphatic, cycloaliphatic, and aromatic radical and a substituted aliphatic, cycloaliphatic, and aromatic radical; and
n is one of the integers 1 and 2,

the step which comprises adding the halide of an acid of the formula

$$(R_2—X)_n—R_1—COOH$$

wherein R_1, X, R_2 and *n* represent the same members and integers as indicated above, to the fermentation mixture during cultivation of a penicillin-producing microorganism on a culture medium supporting the growth of such a microorganism.

3,093,548
FERMENTATION OF SUGAR TO ETHYL ALCOHOL IN THE PRESENCE OF PROTEOLYTIC ENZYMES
Ellis W. Coates and Julio Castro Conde, Guatemala City, Guatemala, assignors to Central Anejadora Guatemalteca, Guatemala City, Guatemala, a corporation of Guatemala
No Drawing. Filed Aug. 3, 1961, Ser. No. 128,983
10 Claims. (Cl. 195—37)

1. A process for the fermentation of sugar to ethyl alcohol which comprises hydrolysing protein present in the sugar, and fermenting the sugar with alcohol-producing yeast selected from the group consisting of *Saccharomyces ellipsoideus* yeast grown on pineapple, and capable of elaborating bromelin, and *Saccharomyces ellipsoideus* yeast grown on papaya, and capable of elaborating papain, and accustomed to alcohol in a concentration greater than 10% up to about 20% by volume.

3,093,549
PREPARATION OF METHOXYNOVOBIOCIN
Karl Folkers and H. Boyd Woodruff, Plainfield, N.J., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey
No Drawing. Filed Apr. 4, 1958, Ser. No. 726,320
4 Claims. (Cl. 195—80)

1. A process for the production of methoxynovobiocin which comprises growing a novobiocin producing strain of Streptomyces in a culture medium in the presence of 3-(3-methyl-2-butenyl)-4-methoxybenzoic acid to produce methoxynovobiocin.

3,093,550
PROCESS FOR THE MANUFACTURE OF FERRIMYCIN
Ernst Gaeumann, Zurich, Ernst Vischer, Basel, and Hans Bickel, Binningen, Switzerland, assignors to Ciba Corporation, a corporation of Delaware
Filed Mar. 15, 1961, Ser. No. 95,843
Claims priority, application Switzerland Mar. 18, 1960
25 Claims. (Cl. 195—80)

1. Process for the manufacture of the antibiotic ferrimycin, its components, salts and derivatives, wherein a member of the group consisting of the Streptomyces strain *S. lavendulae* A 21510 and mutations of this strain, is grown in a nutrient solution until the latter displays a substantial antibiotic action whereupon a member of the group consisting of the antibiotic ferrimycin, its components, derivatives and salts is isolated from the nutrient solution.

3,093,551
PRODUCTION OF NISIN
Ronald H. Hall, Yeovil, England, assignor to Aplin & Barrett Limited, Somerset, England, a British company
No Drawing. Filed Mar. 17, 1961, Ser. No. 96,371
Claims priority, application Great Britain Apr. 8, 1960
1 Claim. (Cl. 195—96)

A process of producing nisin which comprises:
(*a*) preparing a culture medium by treating milk with a proteolytic enzyme to digest a part of the protein contained therein and to cause precipitation of protein, heating the liquid containing the enzyme to inactivate the enzyme, and separating at least the protein precipitated during said enzyme treatment; and
(*b*) inoculating the culture medium comprising the liquid remaining after the heating and separation steps with a nisin-producing organism.

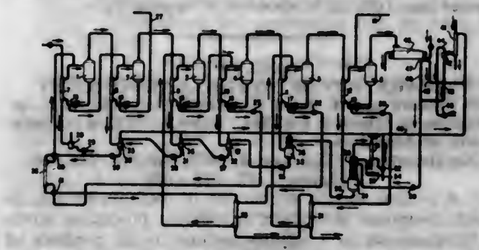
3,093,552
SYNTHESIS OF COBAMIDES
David Perlman, Princeton, N.J., assignor to Olin Mathieson Chemical Corporation, New York, N.Y., a corporation of Virginia
No Drawing. Filed Jan. 9, 1962, Ser. No. 165,250
1 Claim. (Cl. 195—114)

A process for preparing 5,6-dimethylbenzimidazolylcobamides, which comprises culturing the microorganism *Butyribacterium rettgeri* in a nutrient medium, said medium having included therein a source of assimilable carbon, nitrogen and cobalt under anaerobic conditions and recovering the 5,6-dimethylbenzimidazolylcobamide formed.

3,093,553
PROCESSES OF EVAPORATING ALCOHOLIC LIQUORS

Torsten Ramén, Drottninggatan 71 C, Stockholm, Sweden

Filed Nov. 13, 1959, Ser. No. 852,665
5 Claims. (Cl. 202—43)



1. Method of evaporating an alcohol containing liquid with simultaneous recovery of the alcohol contained therein which comprises introducing said liquid into the lowest temperature stage of a multistage evaporating system having stages progressively increasing in temperature from said lowest temperature stage, each stage being heated by heat exchange with vapors from the next higher temperature stage wherein the major portion of the vapors is condensed whereby said condensed vapors still include uncondensed gases, recovering the major portion of said contained alcohol in the form of vapor from said lowest temperature stage, leaving a liquid containing a minor proportion of alcohol, condensing said alcohol vapor to obtain an alcoholic condensate, further concentrating said alcoholic condensate in a distillation column by the direct heat of said uncondensed gases from the evaporation stage of the system operating at a higher temperature than said lowest temperature stage, and further evaporating the liquid from the lowest temperature evaporation stage containing a minor proportion of alcohol in the stage operating at the next highest temperature to recover residual alcohol contained therein.

3,093,554
PROCESS FOR THE ELECTROLYTIC DEPOSITION OF NIOBIUM OR TANTALUM

Fritz Kern, Binningen, Switzerland, assignor to Ciba Limited, Basel, Switzerland, a Swiss firm

No Drawing. Filed May 27, 1960, Ser. No. 32,152
Claims priority, application Switzerland June 12, 1959
3 Claims. (Cl. 204—10)

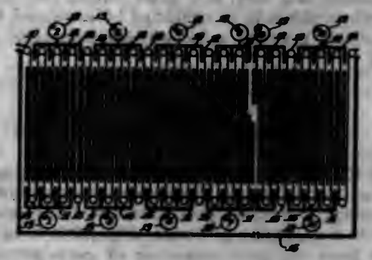
1. In the electrolytic production of tantalum from an alkali halide-tantalum halide melt containing fluoride, introducing into the melt vapor of tantalum pentachloride and maintaining in said melt a molar ratio of tantalum to fluorine greater than 1:7 and at most 1:3, whereby there is a stoichiometric excess of tantalum over that required to form the double fluoride of tantalum.

3,093,555
ELECTROLYTIC TINNING PROCESS

Leslie M. Bernick, Calumet City, Ill., and Vincent P. Pearson and William C. Sievert, Chesterton, Ind., assignors to Inland Steel Company, Chicago, Ill., a corporation of Delaware

Filed June 1, 1959, Ser. No. 817,256
6 Claims. (Cl. 204—28)

1. In a method of continuously differentially electrolytically tinning a metal strip in a tin plating bath to deposit a light-weight tin coating on one side having a weight of not substantially in excess of about 0.25 pound per base box while simultaneously depositing a substantially heavier weight tin coating on the other side which includes passing said strip continuously through a tin plating bath having two series of anodes disposed therein with each series of anodes being substantially equal in number and connected with source means of electric current with one of said series of anodes in the said bath being adapted to deposit tin on the lightweight side of the strip and the other series of anodes in the said bath being adapted to deposit tin on the heavy-weight side of the strip, the improvement comprising; maintaining only certain consecutive plating anodes of said one of said series at an anodic



current density sufficient to deposit tin on the light-weight side of said strip, said certain consecutive plating anodes being less than the total number of anodes of said one of said series, with the remaining anodes of said one of said series having at most only a minimum current to positively charge the anodes, and maintaining at least the initial consecutive plating anodes of said one of said series at an anodic current density in excess of 25 amperes per square foot, all of the tin coating on said light-weight side being deposited by said consecutive plating anodes.

3,093,556
ELECTRO-DEPOSITING STAINLESS STEEL COATINGS ON METAL SURFACES

Willibald Machu, Vienna, Austria, and Mohamed Fathi Mahmoud El Ghandour, Heliopolis, Egypt, assignors to Amchem S.A., Zug, Switzerland, a corporation of Switzerland

No Drawing. Filed June 13, 1961, Ser. No. 116,699
6 Claims. (Cl. 204—43)

1. The method of electro-depositing a stainless steel alloy coating consisting of chromium, nickel and iron on a metal surface, with chromium constituting from about 8.2% to about 27.1% of the deposit, nickel from about 3.6% to about 33% and iron the balance, the iron content being predominantly greater than either chromium or nickel and at least 58.5%; said method comprising using the metal to be coated as cathode in a plating bath consisting essentially of an aqueous solution of from 0.2 mol/liter to saturation of the sulfate salt of each of the metals in the alloy to be deposited and from 1 to 4 mols/liter of urea with the balance water; maintaining the temperature of the bath at from 30° C. to 80° C., the pH at from 1.5 to 3.5, and passing an electric current of from 0.645 to 2.148 amps./in.^{2} therethrough between an anode and the said cathode.

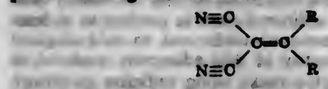
3,093,557
METHODS AND ELECTROLYTES FOR DEPOSITING NICKEL AND COBALT

Richard P. Cope, Jr., Wilkinsburg, and John R. Drobne, Munhall, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

No Drawing. Filed Aug. 25, 1961, Ser. No. 133,800
14 Claims. (Cl. 204—43)

1. An acidic solution for electrodepositing a metal selected from the group consisting of nickel, cobalt and nickel-cobalt alloys containing a soluble salt of said metal and a brightener compound selected from the group

consisting of dicyanoketene-ethyleneacetal and compounds having the formula:



wherein R is selected from the group consisting of OR_1, NH_2 and NHR_1, wherein R_1 is an aliphatic monovalent hydrocarbon radical with 1 to 3 carbon atoms, said brightener being present in a concentration range of from 0.00005 oz./gal. to 0.05 oz./gal. of solution.

3,093,558
PRODUCTION OF MAGNESIUM FROM SILICATES

Alex Labounsky, Oyster Bay, N.Y., assignor to University Laboratories, Inc., a corporation of New York

No Drawing. Filed Aug. 2, 1960, Ser. No. 46,881
7 Claims. (Cl. 204—70)

1. A process for producing magnesium from magnesium-bearing silicate ores which comprises forming a melt from a member of the group consisting of Na_3AlF_6, the halides of Li, Na, K, Cs, Ba, Sr, and Ca and mixtures thereof, said melt having a melting point below about 1000° C., adding to said melt a substantially dehydrated silicate of magnesium, passing direct current at a low current density through the resulting reaction mixture and recovering magnesium metal from said reaction mixture.

3,093,559
TREATMENT OF LATERITIC ORES

Merwin G. White, 3920 South 5200 West St., Salt Lake City 4, Utah, and John H. White, Jr., 106 N. Mall, Willow Lawn, Richmond, Va.

Filed June 20, 1958, Ser. No. 743,510
6 Claims. (Cl. 204—123)

1. A method for treating lateritic ores having the following composition of metals in approximate percentage by weight: iron, 25–35%; magnesium, 5–15%; nickel, 0.8–1.50%; cobalt, 0.10–0.15%; and chromium 2.00–3.50%; which comprises, as a first chemical treatment step, leaching the ore with a stoichiometric excess, based on the metal values, of a sulfuric acid solution containing between about 25 and 50% by weight sulfuric acid to produce an acid leached pulp and an acid leached solution containing substantially all the metal values iron, magnesium, nickel and cobalt; separating the acid leached pulp from the acid leached solution; drying the acid leached solution to produce an acid leached solution residue; roasting the acid leached solution residue at a temperature of between 975° and 1050° F. and recovering overhead volatilized sulphuric acid and evolved sulphur oxide; water-leaching the roasted residue; separating the insoluble ferric oxide from the water leached solution; and electrolyzing the water leached solution to separate the nickel and cobalt from said water leached solution.

3,093,560
METHOD OF PREPARING POLYFORMALDEHYDE MATERIAL HAVING IMPROVED CHARACTERISTICS

Robert Fourcade, Gosnay, France, assignor to Houilleres du Bassin du Nord & du Pas-de-Calais, Douai, Nord, France, a French public establishment of France

No Drawing. Filed July 22, 1959, Ser. No. 828,730
Claims priority, application France July 23, 1958
3 Claims. (Cl. 204—154)

1. A non-catalytic method of producing polyformaldehyde having molecular chains of long uniform length and which is stable at elevated temperatures, comprising exposing formaldehyde to a total dose of high energy, ionizing irradiation in the range between approximately 500 and 10,000 Roentgen units at a temperature in the range between approximately −60° C. and −190° C.

3,093,561
REINFORCEMENT OF RUBBER WITH IRRADIATED CARBON BLACK

Gerard Kraus, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

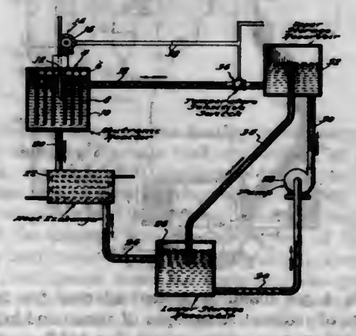
No Drawing. Filed Sept. 17, 1959, Ser. No. 840,520
7 Claims. (Cl. 204—154)

1. In the production of rubber articles containing carbon black as a reinforcing agent, the improvement comprising incorporating in the rubber carbon black which has been subjected prior to incorporation in the rubber to fast neutron radiation from a nuclear reactor for a total exposure of 10^{16} to 10^{18} *nvt* where *nv* is the number of neutrons per centimeter cross-section per second and *t* is the time in seconds.

3,093,562
FLOW SYSTEM FOR REACTOR

Walter H. Zinn, Hinsdale, Ill., assignor to the United States of America as represented by the United States Atomic Energy Commission

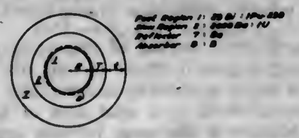
Filed Mar. 15, 1951, Ser. No. 215,773
3 Claims. (Cl. 204—193.2)



1. A neutronic reactor having a negative temperature coefficient comprising means for sustaining a nuclear fission chain reaction, a coolant system associated therewith including a coolant fluid, inlet and outlet conduits connected to said reactor, a pair of reservoirs connected to respective conduits, an overflow conduit connecting the reservoir in the inlet conduit to the reservoir in the outlet conduit, means for cooling the coolant flowing through the outlet conduit, a connecting conduit between said reservoirs, a pump in the connecting conduit, and means responsive to the temperature of the coolant in

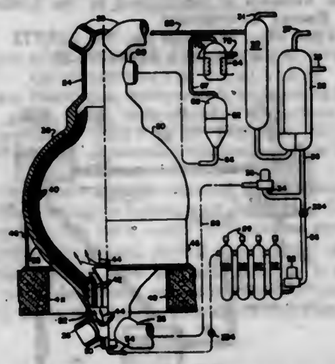
the inlet conduit for terminating said reaction when said temperature reaches a predetermined minimum value.

3,093,563
COMPOSITE NEUTRONIC REACTOR
John R. Menke, Scarsdale, N.Y., assignor to the United States of America as represented by the United States Atomic Energy Commission
Filed Apr. 30, 1953, Ser. No. 352,166
4 Claims. (Cl. 204—193.2)



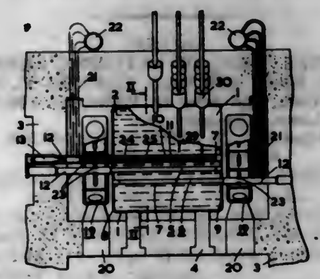
1. A nuclear reactor having a core comprising two active regions, a first inner active region having a low ratio of moderator to fuel such that the majority of fissions in the region are caused by neutrons having energies greater than thermal, a second outer active region having a high ratio of moderator to fuel such that the majority of fissions in the region are caused by thermal neutrons, the first and second regions in combination having a k effective not less than one and each region contributing a substantial amount to the k effective of the reactor core but each region separately having a k infinity greater than one but a k effective less than one, the core having neutron absorber control means in the second active region.

3,093,564
GAS HANDLING SYSTEMS FOR RADIOACTIVE GASES
Joel Weisman and Maurice Griffel, Pittsburgh, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Oct. 21, 1957, Ser. No. 691,263
6 Claims. (Cl. 204—193.2)



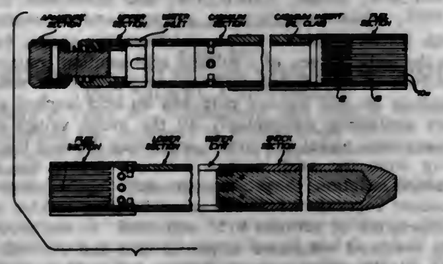
1. In a gas handling system adapted for use with a mixture of radioactive isotopes of xenon and krypton, the combination comprising means for holding up and for cooling said gases for a time sufficient to permit substantial radioactive decay of at least the shorter-lived isotopes in said mixture, a plurality of adsorption tanks, each of said tanks containing a quantity of adsorptive material capable of adsorbing substantially all of said xenon isotopes but only a portion of said krypton isotopes, radioactive gas disposal means, valved conduit means coupled to all of said tanks for conveying said isotopes from said holding and cooling means to a selected one of said tanks for adsorption therein, an additional adsorption tank containing a quantity of adsorptive material for adsorbing said isotopes, additional valved conduit means coupled to said first-mentioned tanks and to said additional tank for connecting said additional tank in tandem to at least one of said first-mentioned tanks and to said disposal means, the total quantity of said adsorptive material in the tandemly connected tanks being sufficient to adsorb substantially all of said xenon and said krypton isotopes, said first-mentioned valved conduit means and said additional valved conduit means being cooperative for selectively isolating each of said first-mentioned tanks for a time sufficient to permit substantial radioactive decay of the radioactive isotopes adsorbed therewithin, and means for regenerating each of said tanks, whereby each of said first-mentioned tanks can be cyclically operated for the purposes of adsorption, isolation for radioactive decay, and regeneration.

3,093,565
NUCLEAR REACTORS
Gwillym John Blockley, Culcheth, Warrington, and George Oliver Jackson, Lowton, England, assignors to the United Kingdom Atomic Energy Authority, London, England
Filed Oct. 3, 1958, Ser. No. 765,210
Claims priority, application Great Britain Oct. 4, 1957
3 Claims. (Cl. 204—193.2)



1. A liquid moderated gas cooled nuclear reactor employing re-entrant type cooling and having two groups of thimble ended core tubes entering a moderator containment tank, the tubes of one group entering the moderator containment tank in one direction and intermeshing with the tubes of the second group which enter the moderator containment tank in the opposite direction.

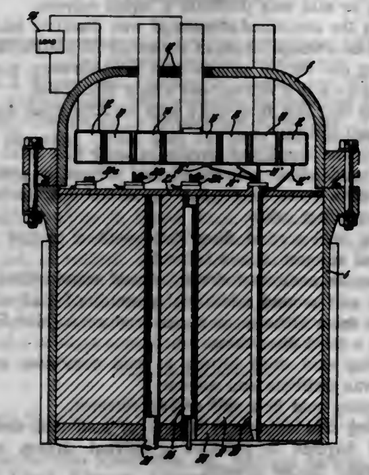
3,093,566
NUCLEAR REACTOR FUEL ELEMENT
Edwin L. Currier, Jr., Silver Spring, and John H. Nicklas, Riverdale, Md., assignors, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission
Filed Nov. 7, 1958, Ser. No. 772,575
5 Claims. (Cl. 204—193.2)



1. A nuclear reactor fuel element containing control rod having a neutron poison material and at least one fuel plate, said plate having a first section containing a first volume of fissionable material and a second slotted section containing a second volume of fissionable material, from about one-third to about three-quarters of said first volume per unit length of fuel plate, said second section being adjacent to the neutron poison material of said control rod.

4. In a nuclear reactor control rod comprised of a lengthwise section containing neutron poison material and a lengthwise section containing fissionable fuel material adjacent to but spaced from the poison section, the improvement wherein the fuel material is in plate form and each plate is slotted at the end adjacent the poison material so that the slotted end contains from about one-third to about three-quarters as much fissionable material per unit length as the unslotted part of the fuel plate.

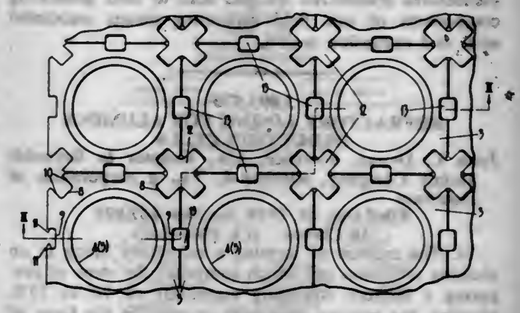
3,093,567
NUCLEAR DEVICE FOR GENERATING ELECTRIC POWER
Francis E. Jablonski, Birmingham, and Charles B. Leffert, Oak Park, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Mar. 30, 1959, Ser. No. 802,958
15 Claims. (Cl. 204—193.2)



1. A device for converting nuclear energy to electrical energy comprising a thermoelectric cell having a cathode containing a fissile material, the total fissile material within said device constituting a critical mass to sustain a chain nuclear fission reaction, a conductive anode in spaced relationship with and electrically insulated from said cathode, a gas between said anode and said cathode ionizable by fission fragments from said cathode, means for cooling said anode, and means for taking off the E.M.F. generated between said anode and said cathode.

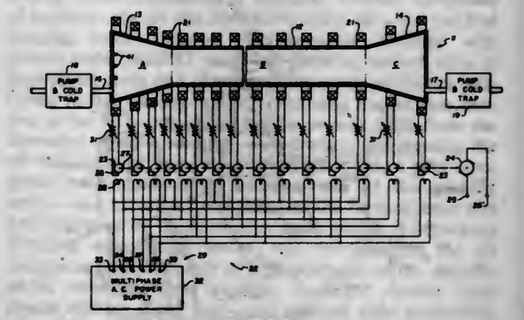
3,093,568
MODERATOR CORE STRUCTURES FOR NUCLEAR REACTORS
Harry Albert Cox, Welling, Kent, England, assignor to The General Electric Company Limited, London, England
Filed Sept. 15, 1960, Ser. No. 56,282
Claims priority, application Great Britain Sept. 25, 1959
12 Claims. (Cl. 204—193.2)

1. A main core structure for a nuclear reactor comprising an assembly of basically square section prismatic blocks of graphite arranged in lines substantially end to end, some at least of said lines of blocks having holes therethrough which align to form channels for the reception of fuel elements, and key and keyway restraint means at substantially all side faces and corners of the lines of blocks, interengaging faces of parts of said restraint means being arranged to position said lines of



blocks relative to each other, and the change-due-to-neutron-irradiation characteristics of parts of each restraint means being substantially similar, at least in the direction at right angles to the common positioning faces of said parts.

3,093,569
TRAVELING WAVE PYROTRON
Richard F. Post, Walnut Creek, Calif., assignor to the United States of America as represented by the United States Atomic Energy Commission
Filed July 31, 1961, Ser. No. 128,644
8 Claims. (Cl. 204—193.2)



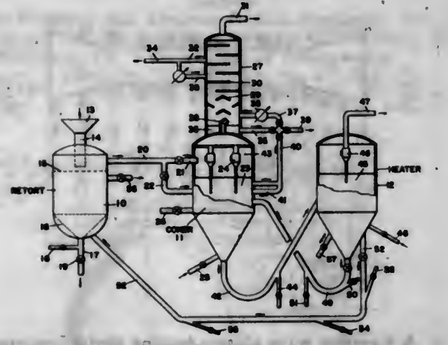
1. A traveling wave plasma heating device comprising an axially elongated vacuum tank establishing an evacuated space, magnetic field generating means carried by said vacuum tank to generate an axially symmetric traveling wave magnetic field progressing axially through said space with the alternate maxima and minima of the field defining a continuous series of moving axially symmetric magnetic containment zones for containing charged particles, said magnetic field progressively increasing in intensity along the axis of said space in the direction of wave motion within an injection region, said field gradually increasing in intensity in the direction of wave motion in a reaction region within said space axially adjoining said injection region, said field progressively decreasing in intensity in an expansion region axially adjoining said reaction region within said space in the direction of wave motion, and plasma generating means disposed within said injection region to inject plasma into said containment zones continuously moving therethrough whereby the plasma is trapped and compressed within each containment zone during passage through the injection region and then undergoes nuclear reactions with

an attendant production of energetic reaction products during passage through the reaction region with the reaction products thereafter expanding against the field and delivering energy thereto during passage of the containment zones through the expansion region which energy is thenceforth transferred by said field to field generating components of said field generating means associated with said expansion region.

3,093,570
REFRACTORY LINING FOR ALUMINA REDUCTION CELLS
John L. Dewey, Florence, Ala., assignor to Reynolds Metals Company, Richmond, Va., a corporation of Delaware
Filed Oct. 20, 1959, Ser. No. 847,594
16 Claims. (Cl. 204—243)

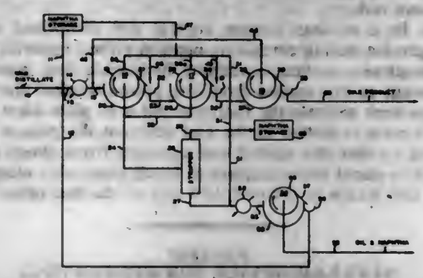
14. The method of forming a refractory lining in an alumina reduction cell which comprises the steps of preparing a mixture consisting essentially of 20 to 75% alumina, the balance essentially cryolite, in the form of powder, placing the mixture into a reduction cell and then putting the cell in operation to cause the mixture to sinter in a region extending from the molten zone inwardly of the refractory.

3,093,571
METHOD AND APPARATUS FOR TREATING SHALE
Leonard W. Fish and George F. Pappas, Westfield, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware
Filed Oct. 20, 1958, Ser. No. 768,456
19 Claims. (Cl. 208—11)



1. An improved method for treating oil-bearing solids, which comprises maintaining a retorting zone and a two-zone hydrocarbon conversion system, said system comprising a reaction zone and a burner zone, passing finely divided carbon-coated solid particles from said reaction zone to said burner zone for oxidation therein, recycling at least a portion of the particles thus heated from said burner zone to said reaction zone, introducing and passing larger sized oil-bearing solids down through said retorting zone, passing at least a portion of said heated finely divided particles from said burner zone upwardly through said retorting zone to contact said downflowing larger sized oil-bearing solids and to supply requisite retorting heat thereto and to form vaporous hydrocarbons, withdrawing spent oil-bearing solids from the bottom portion of said retorting zone and discarding them from the method, withdrawing the vaporous hydrocarbons from said retorting zone and passing them to said reaction zone for further reaction, withdrawing vaporous reaction products overhead from said reaction zone, and returning finely divided solid particles from said retorting zone to said two-zone hydrocarbon conversion system.

3,093,572
WAX FILTRATION PROCESS
Bruce C. Benedict, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Mar. 14, 1960, Ser. No. 14,633
1 Claim. (Cl. 208—33)



A method for the recovery of a high yield of high flexibility wax product from a crude oil wax distillate stream by continuous filtration in the presence of a liquid solvent in a series of vacuum filter stages, comprising the steps of:

adding to said wax distillate a liquid solvent;

chilling the combined stream of wax distillate and solvent to a temperature in the range of 25–35° F.;

filtering the chilled stream in a first filtration zone to produce a first filtrate and a first filter cake;

diluting said first filter cake with an additional amount of said solvent;

filtering the combined stream of said first filter cake and said added amount of said solvent in a second filtration zone to produce a second filtrate and a second filter cake;

diluting said second filter cake with a second additional amount of said solvent;

filtering the combined stream of said second filter cake and said second additional amount of said solvent in a third filtration zone to produce a third filtrate and a third filter cake;

recycling said third filtrate to said combined stream of wax distillate and solvent;

combining said first and second filtrates;

stripping said combined stream of said first and second filtrates to produce a solvent stream and a stripped filtrate stream;

diluting said stripped filtrate with said solvent;

chilling the combined stream of said stripped filtrate and said solvent to the temperature in the range of —10° F. to 0° F.;

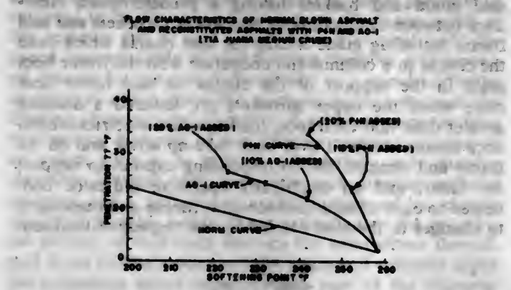
filtering the chilled stream of stripped filtrate and solvent in a fourth filtration zone to produce a fourth filter cake and a fourth filtrate, said fourth filtrate comprising dewaxed oil and solvent;

recycling said fourth filter cake as a soft wax recycle stream to said wax distillate prior to said first filtration zone; and

recovering from said third filter said high flexibility wax, said wax characterized by a melting point in the range of 120–135° F.

3,093,573
ASPHALTS OF IMPROVED RESISTANCE TO FLOW
Luke W. Corbett, Westfield, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware
Filed Dec. 15, 1959, Ser. No. 859,678
3 Claims. (Cl. 208—39)

1. A process for improving the flow properties of an asphalt which comprises segregating from a separate asphaltic fraction a hydrocarbon mixture consisting essentially of paraffins, naphthenes with paraffin side chains, single ring aromatics with paraffin side chains and single ring aromatics with attached naphthene rings and blending said mixture with said asphalt, said mixture having a

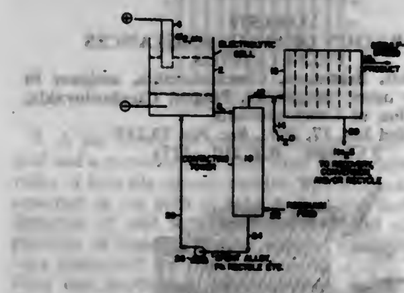


specific gravity at 60/60° F. of not less than about 0.86 and not greater than about 0.95, a Universal Viscosity at 210° F. of not less than about 50 and not greater than about 300, and an initial boiling point of greater than about 800° F.

3,093,574
ARSENIC REMOVAL FROM HYDROCARBONS AND CONVERSION THEREOF
Ralph J. Bertolacini, Chesterton, and George W. Powers, Jr., Crown Point, Ind., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana
No Drawing. Filed May 28, 1958, Ser. No. 738,304
7 Claims. (Cl. 208—91)

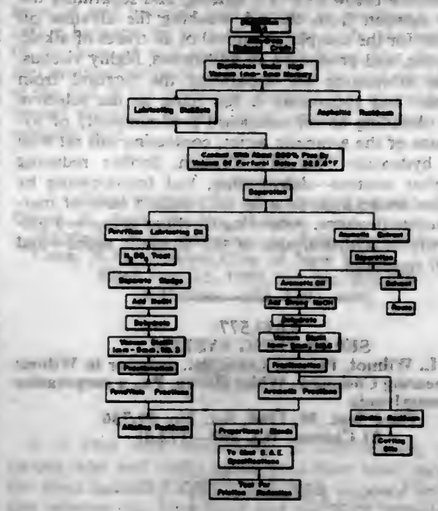
1. The method of converting an arsenic-containing hydrocarbon naphtha which comprises the step of contacting such naphtha in liquid phase with silica gel impregnated with at least about 20 percent by weight, based on silica gel, of sulfuric acid, under conditions to remove at least a substantial part of the arsenic from the naphtha, and thereafter subjecting at least a part of the resulting contacted naphtha to conversion conditions in the presence of a catalyst comprising a noble-metal.

3,093,575
TREATMENT OF PETROLEUM RESIDUA WITH SODIUM ALLOYS
Charles Newton Kimberlin, Jr., William Judson Mattox, and Clark Edward Adams, all of Baton Rouge, La., assignors to Esso Research and Engineering Company, a corporation of Delaware
Filed Nov. 25, 1959, Ser. No. 855,453
5 Claims. (Cl. 208—208)



1. The process of upgrading a petroleum residual stock which comprises contacting said stock in the liquid phase at a temperature of about 400° to 800° F. with an alloy comprising sodium and lead, said sodium content being at least 2% and less than 10% based on total weight of alloy.

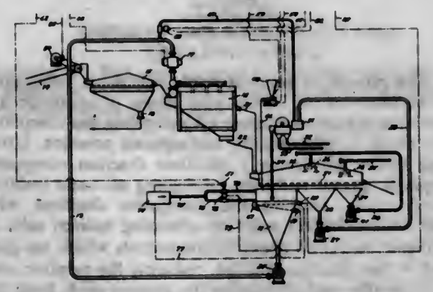
3,093,576
REFINING OF CRUDE PETROLEUM
Sumner E. Campbell, 2200 D St., Bakersfield, Calif.
Filed Oct. 26, 1959, Ser. No. 848,523
2 Claims. (Cl. 208—221)



1. The process of refining crude petroleum containing 20% or more of an homologous series of aromatic hydrocarbons, which comprises: (A) distilling the adequately dry crude at substantially atmospheric pressure, introducing steam, producing a distillate fraction composed of naphtha, gas oil and light lubricating oil—and residual reduced crude; treating the composite distillate with caustic soda (NaOH) solution—forming sodium salts of naphthenic acids and phenolic compounds which are contained in the alkaline solution, reducing the sulphur content of the oil—and recovering the organic acids from the separated alkaline solution; dehydrating, and treating the oil with furfural, separating the mixture into a part composed predominantly of hydrocarbons of the paraffin series—and an extract composed of the furfural used and hydrocarbons of the aromatic series which it separates; distilling, introducing steam, and fractionating the oil composed predominantly of hydrocarbons of the paraffin series, obtaining light naphtha, Stoddard solvent, high cetane number diesel fuel—and residual light lubricating oil, and treating the light lubricating oil with adsorbent; separating the furfural from the aromatic oil and recovering it for reuse as the selective solvent; treating the aromatic oil which has been freed of furfural, with sodium hydroxide (NaOH) solution, reducing the sulphur content, dehydrating, and distilling the alkaline oil, introducing steam, producing aromatic fractions, aromatic additive compositions—and an alkaline residuum; (B) distilling under high vacuum of 1 mm.–5 mm. of mercury absolute pressure, of the anhydrous reduced crude, producing lubricating distillate—and asphaltic residuum; contacting the anhydrous lubricating distillate with furfural at substantially atmospheric pressure and at elevated temperature, separating the mixture into a portion composed predominantly of hydrocarbons of the paraffin series, and an extract composed of the furfural and the aromatic hydrocarbons which it separates; treating the portion composed substantially of hydrocarbons of the paraffin series with concentrated sulphuric acid, and removing the formed acid sludge—neutralizing the acid oil with caustic soda (NaOH) solution, thereby further reducing the sulphur content—dehydrating, distilling and fractionating under high vacuum of 1 mm.–5 mm. of

mercury absolute pressure, and recovering fractions composed predominantly of hydrocarbons of the paraffin series—and an alkaline residuum; mixing the alkaline residuum with sufficient water, heating the mixture to a temperature below 212° F., settling, and separating the alkaline solution from the oil, washing the alkaline oil with water for the complete removal of all traces of alkali, dehydrating, and producing an anhydrous, highly viscous, paraffinic lubricating oil; separating the furfural from the extract and recovering it for reuse as the selective solvent, obtaining an oil composed predominantly of hydrocarbons of the aromatic series; contacting this oil with sodium hydroxide (NaOH) solution, further reducing the sulphur content—dehydrating, and fractionating by distillation under high vacuum of 1 mm.–5 mm. of mercury absolute pressure, producing fractions composed predominantly of hydrocarbons of the aromatic series—and an alkali residuum.

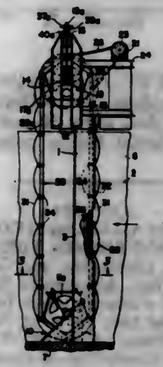
3,093,577
SEPARATING SYSTEM
George L. Wilmot, Pocono Lake, Pa., assignor to Wilmot Engineering Company, White Haven, Pa., a corporation of Pennsylvania
Filed Sept. 30, 1960, Ser. No. 59,736
21 Claims. (Cl. 209—172.5)



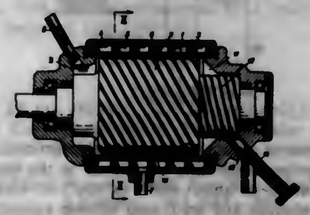
1. A process of separating coal from raw coal containing coal and waste, comprising feeding water and finely divided magnetite to a mixing zone to form a coal-separating slurry medium, feeding separating medium from said mixing zone into a coal-separating zone, feeding raw coal to said coal-separating zone and there separating the coal from the waste by causing the coal to float in the separating medium and the waste to sink therein, separating a fraction of the medium from the coal and waste by draining and returning it to said mixing zone, separating another fraction of the medium from the coal and waste by diluting it, recovering magnetite from said dilute fraction and returning the recovered magnetite to said mixing zone, continuously measuring the density of the medium being fed to said coal-separating zone, and controlling said density by adding and subtracting water and magnetite automatically in response to said measuring.

3,093,578
CHAIN ADJUSTMENT FOR TRAVELING WATER SCREENS
William F. Hofmeister, Muskego, Wis., assignor to Chain Belt Company, Milwaukee, Wis., a corporation of Wisconsin
Filed Mar. 23, 1960, Ser. No. 17,051
1 Claim. (Cl. 210—91)

In a traveling water screen having a frame, a series of baskets, upper and lower sprockets carried by said frame, a lower boot plate below said lower sprockets and fixed to said frame and cooperating therewith to close the channel in which the screen is installed, chains operating over said sprockets and carrying said baskets, each upper sprocket having and being supported by a take-up screw provided with a capstan supported by the frame and threaded on the screw to raise and lower the sprocket, said chain and baskets having a predetermined clearance between said boot plate and lower sprockets and said frame including guide means for said chains which hold the chains in a column and cooperate with the lower boot plate in the support of the chains on said lower boot plate when the upper sprockets are lowered a distance greater than said clearance, load-sensitive electrical-resistance means mounted over each take-up screw and on the frame and beneath the corresponding capstan to support the latter, and an electrically operative indicator connected to each of said load-sensitive means and responsive to changes in the load carried by the respective load-sensitive means within a given range, said indicator having means adjustable to selectively raise or lower said range so that the dead weight of the chains and baskets on the upper sprockets when the chains are hanging between the lower sprockets and said boot plate is within said range, each indicator in combination with the respective take-up screw and turnable capstan having means to indicate a reduced load when the chains have been lowered and are partially supported within said guide means by said boot plate, and having means to indicate the lifting of the chains from said boot plate to said lower sprockets as when the upper sprockets have been raised the amount of said clearance with no indicated change in load, whereby the upper sprockets are thereupon properly adjusted to provide a minimum positive tensioning of the chains between the sprockets.

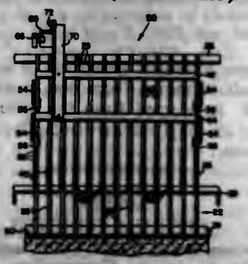


3,093,579
SEPARATION OF SOLID SUBSTANCES FROM LIQUIDS
Karol Schmidt, Bratislava, Czechoslovakia, assignor to Vyzkumny ustav energeticky, Prague, Czechoslovakia, a corporation of Czechoslovakia
Filed Jan. 17, 1961, Ser. No. 83,255
3 Claims. (Cl. 210—117)



2. A continuous rotary filtering device comprising in combination a relatively large diameter cylinder of filtering material defining a cylindrical filtering chamber; a casing surrounding said filtering material cylinder and defining therewith a drainage space; a liquid discharge outlet communicating with said drainage space; an inlet at one end of said chamber for ingress, under pressure, of material to be filtered; a concentrate discharge outlet at the opposite end of said chamber; a cylindrical body disposed concentrically of said filtering chamber and mounted therein for rotational movement at a speed excluding centrifugal action upon the material passing through the filtering chamber; the diameter of said body approaching the internal diameter of said filtering material cylinder to an extent such as to provide substantially only running clearance between said body and said filtering material cylinder; and a plurality of axially juxtaposed but closely adjoining parallel, helical flutes extending on the cylindrical surface of said body through the axial extent thereof, said flutes having a substantially equal and constant depth not exceeding about one twentieth part of the diameter of said body and a substantially equal and constant width not exceeding about one tenth part of said diameter, whereby material entering said inlet under pressure is moved by said flutes during rotation of said body in a plurality of separated narrow and shallow helical flows to said concentrate discharge outlet and is compressed between the surface of said flutes and the inner surface of said filtering material cylinder to force therethrough liquid from the material into said annular drainage space; means forming a relatively smaller diameter substantially cylindrical collecting chamber extending coaxially from the discharge end of said filtering chamber; said cylindrical body having a smaller diameter cylindrical extension disposed in said collecting diameter chamber and formed with a plurality of axially juxtaposed, parallel and relatively shallow helical grooves on its cylindrical surface and each extending through the axial extent thereof; said concentrate discharge outlet communicating with the axially outer end of said collecting cylindrical chamber.

3,093,580
BAR SCREEN
Norman R. Siewert, Rochester, N.Y., assignor to Kinetflow Corporation, Rochester, N.Y., a corporation of New York
Filed June 9, 1960, Ser. No. 34,991
8 Claims. (Cl. 210—159)



1. A bar screen for sewage conduits comprising a fixed grid and a movable grid, said fixed grid comprising a plurality of laterally spaced, parallel, upwardly-extending bars mounted in the path of sewage flow and inclined to the direction of said flow, said movable grid comprising a plurality of laterally spaced, parallel upwardly-extending bars connected together to move as a unit and spaced from one another in correspondence to the spacing of the bars of said fixed grid, said movable grid being disposed at the upstream side of said fixed grid and the bars of said movable grid being in contact with the corresponding bars of said fixed grid so that the bars of said movable grid overlie and ride on the bars of said fixed grid upon movement of said movable grid, means for alternately lifting said movable grid upwardly and letting it drop back again by gravity to its starting position, said means imparting a slight lateral wiping motion to said movable grid to cause the bars thereof to wipe across the bars of said stationary grid at least on the upward movement of said movable grid thereby to produce a shearing action between the bars of the two grids, the lower ends of the bars of said movable grid being free to vibrate, and means positioned to be engaged by said movable grid at the end of the downward drop of said movable grid to impart vibration to said lower ends of the bars of said movable grid.

3,093,581
HIGH PRESSURE SEALING ELEMENT
David B. Pall, Roslyn Heights, and Harry Cordes, Wantagh, N.Y., assignors to Pall Corporation, Glen Cove, N.Y., a corporation of New York
Filed Aug. 25, 1959, Ser. No. 835,910
6 Claims. (Cl. 210—444)



6. A filter unit comprising, in combination, a head having inlet and outlet passages, a filter bowl secured to the head including a filter unit, and, disposed in a fixed gap between the filter bowl and the head, a sealing element comprising, in combination, a stainless steel sheet surfaced with a coating not exceeding 0.010 inch in thickness of a material softer than the steel sheet, the coating serving as a sealing surface for the element in the gap, the element having a flattened base portion constituting a periphery thereof and from which extend two divergent flanges, each flange having a flat surface and extending from the base portion at an enclosed angle greater than 90°, and a core of resilient material enclosed at least partially by the base portion and the flanges.

3,093,582
GUARD FOR PIPE OUTLET
Henry J. Compton, Casco Township, Allegan County, Mich. (Rte. 2, South Haven, Mich.)
Filed Aug. 10, 1959, Ser. No. 832,785
2 Claims. (Cl. 210—463)



1. A guard structure for the lengthwise opening in a corrugated pipe of substantially circular cross-section, comprising:

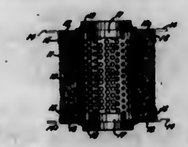
wall means defining the opening in the pipe, said wall means having a plurality of adjacent, similar and substantially annular recesses communicating with said opening;

a grill formed from substantially rigid rod means, said grill having at least three, elongated, spaced and substantially parallel rod elements substantially disposed within the same plane, and at least two arcuate elements disposed substantially within said plane, each pair of adjacent rod elements being rigidly secured at adjacent, corresponding ends thereof to the opposite ends of one of said arcuate elements, and said two arcuate elements being located at the opposite ends of said rod elements, the outer edges of

said two arcuate elements and one end of both of the two outermost rod elements being substantially tangent to the periphery of a circle disposed substantially within said plane and having substantially the same diameter as said annular recesses;

a pair of gripping arms rigidly secured to and extending away from the two outermost rod elements near the said one ends thereof in a direction substantially perpendicular to said plane, said arms being on the same side of said plane and having end portions extending into said recesses.

3,093,583
FILTERS AND PROCESSES FOR MANUFACTURING THE SAME
Hermann Stoll, Bietigheim, Germany, assignor to Firma Robert Bosch G.m.b.H., Stuttgart, Germany
Filed Oct. 14, 1958, Ser. No. 767,140
10 Claims. (Cl. 210—487)



1. A filter body comprising a tubular winding of thermoplastic crinkled filamentary material having windings provided with crinkles which engage each other at a plurality of places while at the same time defining small haphazard passages through the wall of the tubular filter body, said crinkles cohering at said places where they engage each other; and a pair of annular closure means respectively located at the ends of said tubular winding and closing the wall thereof at the ends of said wall so that the medium which is filtered must flow substantially radially through said passages of the wall of said body.

3,093,584
ZINC SALTS OF P_2S_5-OLEFIN-CHLORAL REACTION PRODUCTS AS EXTREME PRESSURE AGENTS
Richard L. Ferm, El Cerrito, Calif., assignor to California Research Corporation, San Francisco, Calif., a corporation of Delaware
No Drawing. Filed Aug. 8, 1960, Ser. No. 47,945
7 Claims. (Cl. 252—32.7)

1. A lubricating oil composition comprising a major proportion of an oil of lubricating viscosity selected from the group consisting of mineral oil and synthetic oil and mixtures thereof, and from 0.1% to 25%, by weight, of a zinc salt of a phosphosulfurized polyolefin-chloral reaction product, which product is obtained by reacting in equivalent molar amounts a phosphosulfurized polyolefin with chloral at temperatures in the range of 0° C. to 150° C., where said phosphosulfurized polyolefin is a product obtained by reacting phosphorus pentasulfide with a polyolefin at temperatures in the range of about 120° C. to about 290° C. wherein the phosphorus pentasulfide-polyolefin mol ratio is 1:2, and said polyolefin is selected from the group consisting of polypropylene and polybutylene having molecular weights from about 175 to about 500.

3,093,585
ESTER BASE LUBRICANT COMPOSITIONS
Hans Low and William W. Reynolds, East Alton, Ill., and Donald W. Schmulling, St. Louis, Mo., assignors to Shell Oil Company, New York, N.Y., a corporation of Delaware
No Drawing. Filed June 6, 1960, Ser. No. 33,952
10 Claims. (Cl. 252—37.2)

10. A synthetic ester base lubricant composition comprising a major proportion of an aliphatic ester of an aliphatic carboxylic acid and minor oxidation-inhibiting amounts each of a copper C_2–24 fatty acid salt complex of an amine of the group consisting of pyridylamines, aminotriazines and mixtures thereof and a free amine of the same group, the mol ratio of total amine to copper being between about 2 and about 75.

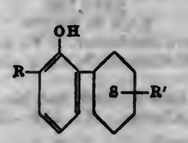
3,093,586
STABILIZATION OF LUBRICANTS
Henryk A. Cyba, Chicago, Ill., assignor to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware
No Drawing. Filed Aug. 11, 1960, Ser. No. 48,814
8 Claims. (Cl. 252—51.5)

1. A synergistic inhibitor composition consisting essentially of one part by weight of an antioxidant selected from the group consisting of N,N'-di-sec-alkyl-and N,N'-di-cyclohexyl-diaminodiphenyl methanes and from about 0.1 to about 4 parts by weight of the polymeric condensation product of an alkyl methacrylate and an alkylaminoalkyl acrylate.

5. A lubricating composition comprising a major proportion of dioctyl sebacate and from about 0.001% to about 5% by weight of the synergistic inhibitor composition of claim 1.

3,093,587
ORGANIC MATERIAL CONTAINING CYCLOHEXYL PHENOLS AS ANTIOXIDANTS
George G. Ecke, Penn Hills Township, Allegheny County, and Alfred J. Kolka, Pittsburgh, Pa., assignors to Ethyl Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed May 17, 1960, Ser. No. 29,560
15 Claims. (Cl. 252—52)

1. Organic material normally tending to undergo oxidative deterioration in the presence of air, oxygen or ozone, containing a small antioxidant quantity, up to 5 percent, of a compound having the formula



where S denotes hydrogen saturation, R is an organic hydrocarbon radical having from one to about 18 carbon atoms and R' is selected from the group consisting of hydrogen and an alkyl radical having from one to about 9 carbon atoms.

3,093,588
LITHIUM FERRITES
Daniel L. Brown, Los Angeles, Calif., assignor, by mesne assignments, to Ampex Corporation, Redwood City, Calif., a corporation of California
Filed Apr. 4, 1960, Ser. No. 19,843
3 Claims. (Cl. 252—62.5)

1. In a method of making square hysteresis loop lithium ferrite magnetic material wherein the magnetic material is sintered, the improvement comprising during sintering supporting said lithium ferrite material with other lithium ferrite material of substantially the same composition, and during sintering covering said lithium ferrite material with a cover of lithium ferrite material of the same composition, said cover being spaced from said material and together with said base during the sintering temperatures insures that the space between said material and said cover contains an excess of evaporated lithium.

3,093,589
MAGNETIC MATERIAL
Charles D. Downs, Newtown, Pa., and John Martin, Hamilton Square, N.J., assignors to Columbian Carbon Company, New York, N.Y., a corporation of Delaware
No Drawing. Filed May 11, 1961, Ser. No. 109,268
10 Claims. (Cl. 252—62.5)

1. Process for producing an improved barium ferrite especially adapted to use in the making permanent magnets which comprises calcining at a temperature of 1600°–1800° F. for from 10 to 30 minutes an intimate uniform mixture of finely divided barium carbonate and a finely divided ferric oxide having an acicular structure, in proportions within the range equivalent to one mol BaO to 5.9–6.4 mols Fe_2O_3 and a catalytic amount of a chloride catalyst, which is volatile at the calcining temperature equivalent to not less than about 0.1% nor more than about 1% of barium chloride on the weight of the solids, the particles of the ferric oxide used having an average length of 0.5–2.5 microns and an average diameter of 0.1–0.5 micron, the average ratio of length to diameter being within the range from about 2:1 to about 5:1.

3,093,590
TRICHLOROCYANURIC ACID BLEACH WITH SPRAY-DRIED BASE
Robert C. Ferris, Downey, Calif., assignor to Purex Corporation, Ltd., South Gate, Calif., a corporation of California
No Drawing. Filed Aug. 8, 1956, Ser. No. 602,938
5 Claims. (Cl. 252—99)

1. As a product, a uniform mixture of trichlorocyanuric acid which in itself gives off lachrymatory chloramine volatiles, and a silicate-soluble salt complex in hollow bead form acting to render the product unobjectionably lachrymatory, said salt complex resulting from the spray drying of an aqueous slurry containing a mixture of an alkali metal silicate of the group consisting of sodium silicate and potassium silicate, and a water soluble salt of the class consisting of alkali metal phosphates, sulfates, carbonates and chlorides.

3,093,591
COMPOSITIONS CONTAINING N-ALKYL-BETA-AMINO PROPIONATES AND GERMICIDAL QUATERNARY AMMONIUM COMPOUNDS
Royce G. Freese, Minneapolis, Minn., assignor to General Mills, Inc., a corporation of Delaware
No Drawing. Filed May 3, 1957, Ser. No. 656,773
3 Claims. (Cl. 252—106)

2. A sanitizer composition comprising an amphoteric anionic-form detergent of the formula

$$RN(CH_2CH_2COONa)_2$$

where R is an aliphatic hydrocarbon radical containing 8 to 22 carbon atoms, the cationic germicidal quaternary lauryl dimethyl benzyl ammonium chloride, and tetrapotassium pyrophosphate in which said amphoteric anionic-form detergent is present at least in equal parts by weight to the amount of lauryl dimethyl benzyl ammonium chloride.

3,093,592
GEL SPOT REMOVER
Peter J. Porcaro, Nutley, N.J., assignor to The Givaudan Corporation, New York, N.Y., a corporation of New Jersey
No Drawing. Filed Nov. 5, 1959, Ser. No. 851,024
3 Claims. (Cl. 252—163)

1. A cleaning composition in gel form for removing grease and oil stains from fabrics so as to leave said fabrics spotless, which comprises silicic acid of about 0.01 microns to about 10 microns particle size and a solvent mixture comprising (*a*) at least one member selected from the group consisting of benzene, toluene, xylenes, isopropyl benzene and chlorobenzene, (*b*) at least one member selected from the group consisting of hexane, octane, hexene-1, octene-1 and cyclohexyl chloride, and (*c*) at least one member selected from the group consisting of carbon tetrachloride, chloroform, ethylene dichloride, ethylene trichloride and 1-chloropentane, said silicic acid being present in an amount within the range from about 1% to about 20% by weight of the total amount of silicic acid and solvent mixture and the amounts of the aforementioned ingredients (*a*), (*b*) and (*c*) comprising said solvent mixture being within the range from about 1% to about 5% of (*a*), from about 5% to about 30% of (*b*) and from about 65% to about 95% of (*c*) by weight of the total solvent mixture.

3,093,593
METHOD FOR DISPOSING OF RADIOACTIVE WASTE AND RESULTANT PRODUCT
Frank C. Arrance, Wheatridge, Colo., assignor to Coors Porcelain Company, Golden, Colo., a corporation
Filed July 14, 1958, Ser. No. 748,139
16 Claims. (Cl. 252—301.1)

1. A method for disposing of radioactive waste which comprises the steps of mixing ceramic materials, adding water to the mixture, shaping the mixture into porous pieces which can be handled, pre-firing the pieces at temperature sufficient to destroy the ion-exchange capacity of the ceramic materials and to harden the pieces and prevent slaking on absorption of water while retaining maximum absorptive properties, saturating the pieces with radioactive waste material by absorption, drying the saturated pieces, and finally firing the saturated dried pieces at temperatures sufficient to produce complete vitrification and to convert the material to an insoluble state.

16. A new product of manufacture in the form of hardened pieces which can be handled, composed of ceramic material and radioactive waste material absorbed therein and chemically combined therewith in the form of insoluble silicates and minerals from which the components cannot be leached out by water, in which the weight of the radioactive solids is in excess of the weight of the ceramic material, characterized by complete vitrification and absence of water absorptiveness.

3,093,594
METHOD OF MAKING HALOPHOSPHATE PHOSPHORS
Horace Horatus Homer, Arlington, and Keith Huestis Butler, Marblehead, Mass., assignors, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware
Filed Dec. 10, 1958, Ser. No. 779,370
8 Claims. (Cl. 252—301.4)

1. The method of making a halophosphate phosphor, said method comprising preheating at a temperature between about 1000° F. and 1600° F. the mixture of materials necessary to make the phosphor, said preheating being at a temperature below that at which the materials react with each other then heating the resultant mixture of materials at a temperature between 1900° F. and 2150° F. and then cooling the phosphor, at a temperature below about 1000° F., the preheating, heating and cooling being in an atmosphere of gas inert with respect to the materials used.

3,093,595
CATIONIC ASPHALT-IN-WATER EMULSION
Dale F. Levy and Deane W. Gagle, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware
No Drawing. Filed Mar. 30, 1961, Ser. No. 99,382
3 Claims. (Cl. 252—311.5)

1. A cationic asphalt-in-water emulsion consisting essentially of: about 60 to 70 parts by weight of particulate

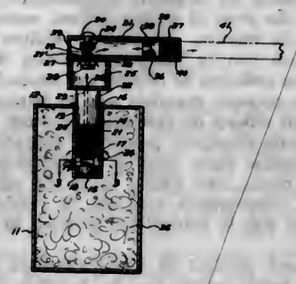
asphalt; about 30 to 40 parts by weight of water; about 0.1 to 0.3 part by weight of a metallic salt selected from the group consisting of the calcium, sodium, aluminum, magnesium, and lead salts of hydrochloric, nitric, and sulfuric acids; about 0.3 to 1.5 parts by weight of a water solubilized emulsifier consisting essentially of an acid addition product of a cation, surface-active agent; said acid addition product comprising a major part of said cation, surface-active agent which is a fatty acid amine having the general formula $RNH—(CH_2)_n—NH_2$, wherein R is a fatty acid radical selected from the group consisting of saturated and unsaturated aliphatic acids ranging from 12 to 20 carbon atoms in chain length, and *n* ranges from 1 to 3 and a minor part of sulfamic acid.

3,093,596

PRESSURIZED SMOKE DISPENSER

Malcolm R. Cone, 19345 Littlefield, Detroit, Mich.

Filed July 11, 1960, Ser. No. 42,074
3 Claims. (Cl. 252—359)



3. A smoke dispenser comprising a hermetically sealed container confining a pressurized gaseous propellant, a smoke producer, including an interiorly threaded chambered member projected down into and secured to said container, a smoke producing agent on the bottom of said chambered member, a sealed crushable capsule on said agent, there being a series of apertures formed through the wall of said chambered member for communication with said propellant, a capsule crusher threaded down into said chambered member, spaced from said capsule and on relative rotation of said container adapted to crush said capsule releasing its chemical for coaction with said agent, a valve chamber mounted on said capsule crusher, said crusher having a bore establishing communication between said valve chamber and the interior of said chambered member, and a dispenser outlet communicating with said valve chamber and including a spring-biased normally closed valve means.

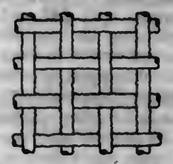
3,093,597

REGENERATION OF AMMONIA OXIDATION CATALYST

Oliver W. Hill, Bartlesville, Okla., and John C. Thomas, Golden, Colo., assignors to Phillips Petroleum Company, a corporation of Delaware

Filed June 20, 1960, Ser. No. 37,283
9 Claims. (Cl. 252—413)

8. A method for the regeneration of an ammonia oxidation catalyst gauze containing a metal of the platinum group to remove solid catalyst particles from the surface thereof which comprises subjecting the same to ultrasonic vibrations for a time sufficient to accomplish a desired regeneration thereof and then further regenerating said catalyst by subjecting the same to treatment with at least one acid selected from the group consisting of hydrofluoric, hydrochloric, sulfuric, nitric, phosphoric and formic acids for a time sufficient to accomplish the desired further regeneration which these acids can accomplish of the gauze initially treated.



3,093,598

ELECTRICALLY CONDUCTIVE GLASSES

Peter William McMillan and Brian Purdam Hodgson, Stafford, England, assignors to The English Electric Company Limited, London, England, a British company

No Drawing. Filed Jan. 3, 1961, Ser. No. 80,039
Claims priority, application Great Britain Sept. 13, 1957
18 Claims. (Cl. 252—521)

1. A process for producing a glass article which is electronically conductive which comprises maintaining glass having the molecular percentage composition, neglecting impurities: silicon, expressed as SiO_2, 35–56%; aluminum, expressed as Al_2O_3, 0–20%; manganese, expressed as MnO, 36–55%, the manganese being predominantly in its Mn^{+2} valence state, and said glass also having a softening point, measured as the dilatometric turnover temperature, in the range 660–720° C., at a temperature within the range 550° C. to 1,000° C. for a period of between thirty minutes and approximately four hours in an oxidizing atmosphere.

3,093,599

FLAMEPROOFED SYNTHETIC THERMOPLASTIC POLYMER CONTAINING AN ORGANIC POLYBROMINE COMPOUND AND METHOD OF MAKING SAME

Heinz Mueller-Tamm, Karl Buchholz, and Fritz Stastny, all of Ludwigshafen (Rhine), Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

No Drawing. Filed Aug. 16, 1960, Ser. No. 49,822
Claims priority, application Germany Aug. 22, 1959
16 Claims. (Cl. 260—2.5)

1. A flameproofed plastic composition comprising (A) a synthetic thermoplastic polymer selected from the group consisting of polystyrene, polymethylmethacrylate, polyethylene and copolymers of styrene and at least one member selected from the group consisting of acrylonitrile, vinylcarbazole and divinylbenzene, and (B) an organic polybromine compound selected from the group consisting of brominated butadiene and isoprene polymers of a polymerization degree of 2 to 2000, the amount of said bromine compound being such that the bromine content of the composition, based on said thermoplastic polymer, is at least 0.5% up to about 6% by weight.

6. An expandable flameproofed plastic composition comprising a granular expandable styrene polymer and an organic polybromine compound selected from the group consisting of brominated butadiene and isoprene polymers of a polymerization degree of 2 to 2000 in such an amount that the bromine content of the composition, based on the styrene polymer, is at least 0.5% up to about 6% by weight.

3,093,600

AMINOTRIAZINE-ALDEHYDE FOAM MODIFIED WITH A PRIMARY TRIOL

Frank R. Spencer, Stamford, Conn., and Alex J. Malashevitz, Cincinnati, Ohio, assignors to Formica Corporation, Cincinnati, Ohio, a corporation of Delaware

No Drawing. Filed Sept. 30, 1960, Ser. No. 59,484
12 Claims. (Cl. 260—2.5)

1. A heat resistant, cured cellular article of manufacture exhibiting improved resistance to cracking on drying which comprises a thermoset aminotriazine-aldehyde resin modified with an aliphatic primary triol, the aminotriazine component of said resin initially containing at least two amidogen groups each having at least one aldehyde-reactable hydrogen atom attached to the amidogen nitrogen atom, the mol ratio of said triol to said aminotriazine component being from about 0.2:1 to about 1:1, respectively.

3,093,601

COMPOSITION COMPRISING AGGREGATE, RUBBER AND A STEAM-CRACKED PETROLEUM RESIN

Albert M. Gessler, Cranford, and William J. Sparks, Westfield, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed June 30, 1960, Ser. No. 39,767
8 Claims. (Cl. 260—5)

1. A composition comprising aggregate whose particles are of 100 mesh and coarser bonded with from 2 to 8% by weight of bonding composition comprising (1) a thermoplastic synthetic petroleum resin polymerized from steam-cracked olefins and diolefins, having a softening point (Ring-and-Ball Method) between about 125° F. and about 230° F., an average molecular weight of about 1,000 to 1,500, a specific gravity (25/25° C.) of about 0.96 to about 0.98, and a carbon/hydrogen ratio of about 6.0–7.0, and (2) from 2 to 40% by wt. based on the wt. of resin of a rubber having a molecular weight of from 20,000 to 1,000,000, said composition having a Marshall stability measured at 140° F. of at least 1,500 pounds.

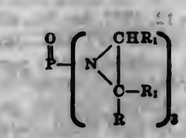
3,093,602

WATER-IN-OIL EMULSION TEXTILE DECORATING COMPOSITIONS

Arthur Booth, Little Falls, N.J., Roy A. Pizzarello, Mount Vernon, N.Y., and John E. De Graff, Waldwick, N.J., assignors to Interchemical Corporation, New York, N.Y., a corporation of Ohio

No Drawing. Filed Aug. 5, 1958, Ser. No. 753,186
8 Claims. (Cl. 260—17)

6. A textile printing composition consisting of an aqueous phase emulsified into a water-immiscible organic phase by means of a water-in-oil emulsifying agent of the group consisting of ethyl cellulose and fatty acid modified alkyd resin wherein the aqueous phase contains a substantially linear, high polymeric material containing reactive hydrogens selected from the group consisting of the reactive hydrogens in acrylic acid, methacrylic acid, acrylamide, and methacrylamide and wherein the water-immiscible organic phase comprises pigment, volatile water-immiscible organic solvent and a trifunctional monomeric cross-linking agent for the polymer containing reactive hydrogens, said cross-linking agent having the formula:



wherein R is a lower alkyl group and R_1 is a member of the group consisting of hydrogen and lower alkyl group.

3,093,603

LATEX PAINT PIGMENT AND PROCESS

Allan E. Gilchrist, Fairview Park, Ohio, assignor to The Glidden Company, Cleveland, Ohio, a corporation of Ohio

No Drawing. Filed Nov. 23, 1960, Ser. No. 71,147
10 Claims. (Cl. 260—17)

1. An improved paint pigment for blending with aqueous compounded film-forming latex and water to form an aqueous latex paint, said pigment consisting essentially of mineral pigmentary material and 0.1–5 weight percent of finely-divided, water soluble hydroxy ethyl cellulose, said hydroxy ethyl cellulose having level-out time between about 20 seconds and about 30 minutes and viscosity of 200–25,000 centipoises, the viscosity being measured at 20° C. in 2% aqueous solution.

3,093,604

COMPOSITION COMPRISING LIGNOCELLULOSIC EXTENDER AND OXIDIZED EXTRACTED LIGNIN AND ADHESIVE SOLUTION CONTAINING SAME

Joseph W. Ayers, Easton, Pa., assignor to Agrashell, Inc., Los Angeles, Calif., a corporation of Delaware

No Drawing. Filed June 30, 1960, Ser. No. 39,812
24 Claims. (Cl. 260—17.2)

5. Plywood-, and laminating-adhesive solutions which comprise a thermosetting aldehydic resin glue selected from the group consisting of phenolic-aldehyde resins and amino-aldehyde resins in aqueous alkaline colloidal solution containing therein a finely divided, ligno-cellulosic extender and a minor amount of an alkali-solubilized, extracted lignin in oxidized condition and containing at least 1 to 7 mols of added oxygen per mol of lignin.

3,093,605

LAMINATING GLUE SOLUTIONS AND EXTENDER COMPOSITIONS THEREFOR AND PROCESS FOR PREPARING SAME

Joseph W. Ayers, Easton, Pa., assignor to Agrashell, Inc., Los Angeles, Calif., a corporation of Delaware

No Drawing. Filed June 30, 1960, Ser. No. 39,813
15 Claims. (Cl. 260—17.2)

8. Plywood-, and laminating-adhesive solutions which comprise, a thermosetting aldehydic resin glue selected from the group consisting of phenolic-aldehyde resins and amino-aldehyde resins, in aqueous alkaline colloidal solution to which has been added, a vegetable shell flour extender and minor amounts in finely-divided form of an extracted lignin oxidized so as to contain about 1 to 7 mols of added oxygen per mol of lignin, and of a water-insoluble, non-fibrous, high-temperature, high-pressure hydrolyzation-degradation residue of a vegetable shell material degraded by an amount at least equal to that obtained by heating such material in finely divided form in an aqueous medium under about 100 pounds steam pressure for at least one hour.

3,093,606

EXTENDER COMPOSITIONS AND SYNTHETIC RESIN GLUE SOLUTIONS CONTAINING THE SAME

Joseph W. Ayers, Easton, Pa., assignor to Agrashell, Inc., Los Angeles, Calif., a corporation of Delaware

No Drawing. Filed June 30, 1960, Ser. No. 39,815
15 Claims. (Cl. 260—17.2)

6. Plywood-, and laminating-adhesive solutions comprising a thermosetting aldehydic resin glue selected from the group consisting of phenolic-aldehyde resins and aminoaldehyde resins in aqueous alkaline colloidal solution, a vegetable shell flour extender and minor amounts of an extracted lignin in oxidized condition and containing about 1 to 7 mols of added oxygen per mol of lignin, and of a lignocellulosic furfural by-product

residue remaining after the extraction of pentosans by acid hydrolysis from pentosan-containing material from plants of the family Graminales.

3,093,607

PLYWOOD ADHESIVE SOLUTIONS AND EXTENDER COMPOSITIONS THEREFOR

Joseph W. Ayers, Easton, Pa., assignor to Agrashell, Inc., Los Angeles, Calif., a corporation of Delaware

No Drawing. Filed June 30, 1960, Ser. No. 39,816
15 Claims. (Cl. 260—17.2)

5. Plywood- and laminating-adhesive solutions comprising a thermosetting aldehydic resin glue selected from the group consisting of phenolic-aldehyde resins and amino-aldehyde resins in aqueous alkaline colloidal solution, having dispersed therein an extender composition comprising a major proportion of a vegetable shell flour extender and minor proportions, each of at least 5% of the weight of said composition, of extracted lignin at least 10% of which is oxidized lignin containing about 1 to 7 mols of added oxygen per mol of lignin, and of a non-fibrous bark phloem flour.

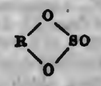
3,093,608

MOLDING COMPOSITION COMPRISING AMINOPLAST RESIN AND CYCLIC SULPHITE AND METHOD OF PREPARING SAME

Corwyn Philip Vale, Brierley Hill, and Sidney Gutter (now by change of name Sidney Goodman) and Walter Wilson, Birmingham, England, assignors to British Industrial Plastics Limited, London, England, a company of Great Britain

No Drawing. Filed Oct. 9, 1959, Ser. No. 845,317
Claims priority, Great Britain Oct. 17, 1958
11 Claims. (Cl. 260—17.3)

1. Hot press moulding compositions comprising at least one amine aldehyde resin and, at most, about 5% by weight, based on the dry weight of the total moulding composition, of a monomeric cyclic sulphite having the formula



wherein R is a bridging alkylene group of from 2 to 3 carbon atoms in the bridge.

7. Compositions according to claim 1 comprising also a cellulosic filler.

3,093,609

BINDER DISPERSION FOR BEATER SATURATION PROCESSES

David A. Feigley, Jr., and Leonard N. Ray, Jr., Lancaster, Pa., assignors to Armstrong Cork Company, Lancaster, Pa., a corporation of Pennsylvania

No Drawing. Filed Jan. 29, 1960, Ser. No. 5,349
10 Claims. (Cl. 260—23.7)

1. An aqueous dispersion of an organic binder in particulate form con aining an emulsifying agent selected from the group consisting of sulfonated anionic agents and nonionic agents, and containing in addition thereto about 2–20 parts by weight based on 100 parts by dry weight of said binder of a water-soluble salt of an aliphatic polycarboxylic acid containing at least 36 carbon atoms.

3,093,610

ASPHALTIC PRODUCTS

Robert G. Wurstner, East Cleveland, and Richard William Jahnke, Willoughby, Ohio, assignors to The Lubrizol Corporation, Wickliffe, Ohio, a corporation of Ohio

No Drawing. Filed Dec. 4, 1959, Ser. No. 857,251
8 Claims. (Cl. 260—28.5)

1. The process of reducing the penetration value of a petroleum residuum to produce an improved asphaltic material which comprises preparing a mixture of 100 parts of said petroleum residuum, from about 3.5 to about 7.5 parts of a lower olefin polymer having an average molecular weight above about 1,000 and from about 1.5 to about 3.0 parts of sulfur monochloride and heating said mixture to a temperature within the range of from about 25° C. to about 200° C.

3,093,611

DISPERSIONS OF C_2–C_3 POLYOLEFINS IN WATER-SOLUBLE DIALKYL AMIDE OF AN ALKANOIC ACID

John C. Thomas, Hockessin, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Dec. 27, 1960, Ser. No. 78,343
17 Claims. (Cl. 260—29.6)

1. A dispersion of a polymer of an olefin of 2–3 carbons in a water-soluble dialkylamide of an alkanoic acid wherein the N-alkyl groups each contain 1–3 carbons, and together contain at least 4 carbons, and the alkanoic acid contains 1–3 carbons.

10. The dispersion of claim 1 containing, additionally, water.

3,093,612

SOLUTIONS OF POLYOLEFINS AND AN ALKOXYALKYL ESTER OF AN ALIPHATIC MONOCARBOXYLIC ACID AND A PROCESS FOR SPINNING SAME

Paul R. Cox, Jr., and Pompello A. Ucci, Decatur, Ala., assignors, by mesne assignments, to Monsanto Chemical Company, a corporation of Delaware

No Drawing. Filed May 11, 1960, Ser. No. 28,206
19 Claims. (Cl. 260—31.4)

1. A new composition of matter comprising a solution of an olefin polymer containing from 2 to 10 carbon atoms in the monomeric chain and a solvent comprising an alkoxyalkyl ester of an aliphatic monocarboxylic acid having the general formula,

R—COOR'—O—R'

wherein R is an alkyl radical containing from 1 to 32 carbon atoms, and R' is an aliphatic saturated hydrocarbon chain containing from 1 to 8 carbon atoms.

2. The composition defined in claim 1 wherein the olefin polymer is polyethylene and the solvent is butoxyethyl laurate.

3. The composition defined in claim 1 wherein the olefin polymer is poly (4-methylpentene-1) and the solvent is butoxyethyl oleate.

4. The composition defined in claim 1 wherein the olefin polymer is polypropylene and the solvent is methoxyethyl stearate.

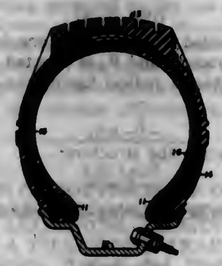
3,093,613

VULCANIZATION OF SYNTHETIC RUBBER WITH POLYHALOMETHYL PHENOL SUBSTANCES

James V. Fusco, Westfield, Samuel B. Robison, Roselle, and Alfred L. Miller, Cranford, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

Filed June 12, 1957, Ser. No. 665,246
12 Claims. (Cl. 260—38)

2. A composition comprising 100 parts by weight of an isobutylene-isoprene butyl rubber containing 0.5 to 5.0 wt. percent of combined isoprene and about 3 to 15 parts by weight of a divalent metal-containing compound selected from the group consisting of group II and IV metal oxides and salts and about 2 to 30 parts by weight of a polyhalomethyl hydrocarbon-substituted phenol resin in which the hydrocarbon substituent is a C_4 to C_{16} hydrocarbon in at least one of the meta and para positions and is selected from the group of alkyl, aryl and alkaryl



radicals, said resin containing about 1 to 16 wt. percent combined halogen.

3,093,614

CURED POLYMER COMPOSITIONS

James C. Mackenzie, Wellesley Hills, and Donald B. Smith, Danvers, Mass., assignors to Cabot Corporation, Boston, Mass., a corporation of Delaware

No Drawing. Filed Nov. 10, 1959, Ser. No. 851,954
9 Claims. (Cl. 260—41)

1. A process for strengthening a substantially saturated polymeric material chosen from the group consisting of the homopolymers of ethylene, propylene, and butene, copolymers thereof and mixtures thereof, to produce a material having exceptional flexibility and strength, which comprises compounding said material with an amount between about 0.1% and about 10% by weight of the polymer of a curing compound chosen from the group consisting of p-dinitrosobenzene, poly(p-dinitrosobenzene), m-dinitrobenzene and mixtures thereof, and an amount above about 0.1% by weight of said material of zinc salt, and curing the resulting compounds at a temperature above about 145° C.

3,093,615

METHOD FOR IMPROVING THE DYE-RECEPTIVITY OF ARTICLES FORMED OF LINEAR ISOTACTIC POLYPROPYLENE

Alberto Bonvicini and Renzo Pontal, Terni, Italy, assignors to Montecatini Societa Generale per l'Industria Mineraria e Chimica, Milan, Italy, a corporation of Italy

No Drawing. Filed Jan. 2, 1959, Ser. No. 784,437
Claims priority, application Italy Jan. 10, 1958
3 Claims. (Cl. 260—45.5)

1. A process for increasing the dye-receptivity of articles formed of linear, head-to-tail propylene homopolymerizate consisting prevailingly of isotactic polypropylene, which process comprises forming graft-copolymers by polymerizing an alkenyl pyridine selected from the group consisting of 2-isopropenylpyridine, 3-isopropenylpyridine, 4-isopropenylpyridine, and methylisopropenylpyridine, in the presence of the polypropylene, said polymerization being effected by heating said article with said alkenyl pyridine at a temperature from about 80° to 90° C.

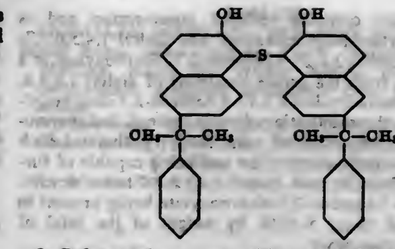
3,093,616

1,1'-THIOBIS(6-α,α-DIMETHYLBENZYL-2-NAPHTHOL)

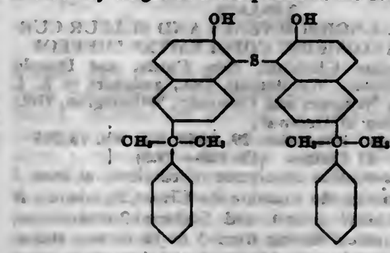
Christos Savides, New Brunswick, N.J., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Aug. 28, 1961, Ser. No. 134,144
2 Claims. (Cl. 260—45.95)

1. A compound of the formula:



2. Polypropylene compositions containing from 0.001 to 5.0% by weight of a compound of the formula:



3,093,617

CONTINUOUS BULK POLYMERIZATION PROCESS

Donald E. Hudgin, Summit, and Frank M. Berardinelli, South Orange, N.J., assignors to Celanese Corporation of America, New York, N.Y., a corporation of Delaware

Filed Oct. 24, 1957, Ser. No. 692,100
19 Claims. (Cl. 260—67)

1. A method of producing a tough, high molecular weight polymer which comprises dispersing molten trioxane into a form having an area exposed to a gaseous environment, said area being at least 0.8 square feet per pound, and contacting said trioxane with a catalyst which is effective for the homopolymerization of trioxane and which substantially fills said gaseous environment.

3,093,618

POLYAMIDES FROM BETA-AMINO CARBOXYLIC ACIDS

Roderich Graf, Hofheim, Taunus, Paul Schlack, Frankfurt am Main, and Gerhard Lohaus, Bad Soden, Taunus, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning, Frankfurt am Main, Germany, a corporation of Germany

No Drawing. Filed June 9, 1959, Ser. No. 819,007
Claims priority, application Germany June 14, 1958
26 Claims. (Cl. 260—78)

1. Linear, fiber-forming polyamides consisting essentially of polymerized β-mono-amino-monocarboxylic acids containing at least 4 and not more than 14 carbon atoms, said polyamides having two hydrogen atoms in the α-position to the carbonyl group, being unsubstituted at the nitrogen atom, and having a relative viscosity of 1.5 to 500, measured as a 1 percent solution in concentrated sulfuric acid at 20° C.

3,093,619

NEW ALLYLIC RESIN COMPOSITIONS

Bert S. Taylor, New York, N.Y., James L. Thomas, Baltimore, Md., and Charles A. Heiberger, Princeton, N.J., assignors to FMC Corporation, a corporation of Delaware

No Drawing. Filed Jan. 24, 1961, Ser. No. 84,502
12 Claims. (Cl. 260—78.5)

1. A polymerizable mixture comprising at least about 50% of a thermoplastic polymer of diallyl phthalate,

which polymer contains residual unsaturation and is capable of further polymerization, and diallyl 1,4,5,6,7,7-hexachlorobicyclo-(2.2.1)-5-heptene-2,3-dicarboxylate in a form selected from the group consisting of diallyl 1,4,5,6,7,7 - hexachlorobicyclo-(2.2.1)-5-heptene-2,3-dicarboxylate monomer, thermoplastic polymers thereof, and thermoplastic copolymers thereof with diallyl phthalate, each containing residual unsaturation and being capable of further polymerization, said diallyl 1,4,5,6,7,7-hexachlorobicyclo-(2.2.1)-5-heptene-2,3-dicarboxylate being present in an amount of about 5–50% by weight of the total of polymer plus monomer.

3,093,620

5-ALKENYL-2-NORBORNENES AND SULFUR-CURABLE ELASTOMERIC COPOLYMERS THEREOF

Edward Karcher Gladding, New Castle, and Donald Nellis Robinson, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Mar. 29, 1960, Ser. No. 18,265
11 Claims. (Cl. 260—79.5)

1. A sulfur-curable copolymer of ethylene, at least 1 alpha olefin having the structure $R—CH=CH_2$ wherein R is a C_1—C_8 alkyl radical, and 5-alkenyl-2-norbornene, said alkenyl radical having from 3 to 18 carbon atoms, the carbon to carbon double bond of said radical being internal, said copolymer having an iodine number between 5 and 60, and, said copolymer containing at least about 20% ethylene units by weight, at least 25% of said alpha olefin units by weight, and, at least about 0.03 gram-moles per 100 grams of said copolymer and not over about 20% by weight of said copolymer of said 5-alkenyl-2-norbornene.

3,093,621

SULFUR-CURABLE ELASTOMERIC COPOLYMERS OF ETHYLENE, α-OLEFINS, AND 5-METHYLENE-2-NORBORNENE

Edward K. Gladding, New Castle, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Mar. 29, 1960, Ser. No. 18,263
7 Claims. (Cl. 260—80.5)

2. A copolymer which is sulfur-curable to an elastomeric vulcanizate, said copolymer being of ethylene, at least 1 alpha olefin having the structure $R—CH=CH_2$ wherein R is a C_1—C_8 alkyl radical, and 5-methylene-2-norbornene, said copolymer having an iodine number between 5 and 60, and said copolymer containing at least about 20% ethylene units by weight and at least 25% of said alpha olefin units by weight, and, at least about 0.03 gram-moles per 100 grams of said copolymer and not over about 20% by weight of said copolymer of said 5-methylene-2-norbornene.

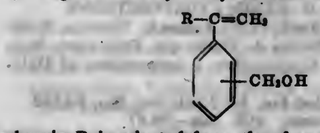
3,093,622

COPOLYMERS OF VINYLBENZYL ALCOHOL WITH VINYL COMPOUND

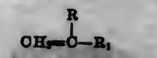
John G. Abramo and Earl C. Chapin, Springfield, Mass., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Mar. 25, 1960, Ser. No. 17,494
5 Claims. (Cl. 260—85.5)

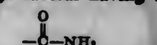
1. Synthetic copolymers having on the weight of said copolymer in polymerized form (*a*) from 2 to 80% by weight of a vinylbenzyl alcohol having the structure:



wherein R is selected from the class consisting of hydrogen and methyl radical, and (*b*) correspondingly, from 98 to 20% by weight of a vinyl component having the structure:



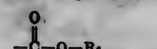
wherein R is selected from the class consisting of hydrogen and methyl radical and R_1 is selected from the class consisting of carbamyl radical having the structure:



nitrile radical having the structure:



and carboalkyl radicals having the structure:



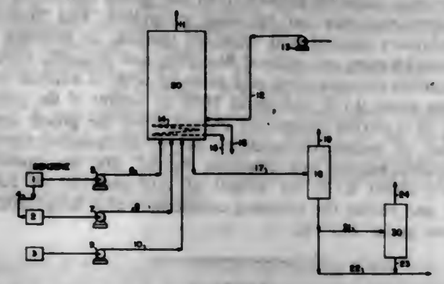
wherein R_2 is an alkyl radical of from 1 to 8 carbon atoms; the combined proportions of components (*a*) and (*b*) totaling 100% by weight of the synthetic copolymer.

3,093,623

PROCESS FOR THE MANUFACTURE OF IMPROVED POUR DEPRESSANTS FOR MIDDLE DISTILLATES

Stephan Ilnyckyj, Sarnia, Ontario, Canada, assignor to Esso Research and Engineering Company, a corporation of Delaware

Filed Jan. 5, 1960, Ser. No. 1,838
3 Claims. (Cl. 260—87.3)



1. Process for the manufacture of a pour depressant comprising a copolymer of ethylene and vinyl acetate which comprises introducing ethylene into a reaction zone containing a benzene solvent, thereafter raising the temperature of said reaction zone to a temperature in the range from 280° to 340° F. and to a pressure in the range from 700 to 2000 pounds per sq. in., thereafter adding to said reaction zone vinyl acetate and sufficient ethylene to maintain the pressure in said range, carrying out said reaction from a period of at a temperature in the range from 280° to 340° F. for 2 to 16 hours under conditions wherein the concentration of the vinyl acetate in the benzene solution varies from about 0.2 to 10.0%, whereby a polymer having a molecular weight in the range from about 1000 to 3000 is secured, wherein the concentration of the vinyl acetate in the product will vary from about 15 to 28% by weight.

3,093,624

COPOLYMERS OF OLEFINES CONTAINING AT LEAST THREE CARBON ATOMS

William F. Gresham, Wilmington, and Madison Hunt, Claymont, Del., assignors to E. I. du Pont de Nemours & Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Jan. 25, 1956, Ser. No. 561,337
7 Claims. (Cl. 260—88.2)

1. Copolymer elastomers of at least two terminally unsaturated straight chain monoolefins each containing

from 3 to 12 carbon atoms, the second olefin being present in an amount at least 5% of the total copolymer, said copolymer having an intrinsic viscosity of at least about 2, and being prepared by the use of a catalyst the essential constituent of which is a titanium compound in which the titanium has a valence of less than 4 and which catalyst is prepared by the reaction of a lithium aluminum alkyl with titanium tetrachloride in a hydrocarbon solvent and in the absence of water and oxygen.

3,093,625

PRODUCTION OF POLYMERS OF OLEFINICALLY UNSATURATED HYDROCARBONS WITH A CATALYST OF ALUMINUM, ALUMINUM TRICHLORIDE AND A TITANIUM TETRAHALIDE

Herbert Friederich, Worms, and Wolfgang Lehnerer, Ludwigshafen (Rhine), Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

No Drawing. Filed Oct. 2, 1956, Ser. No. 613,396
Claims priority, application Germany Oct. 28, 1955
1 Claim. (Cl. 260—88.2)

A polymerization process which comprises contacting a normally gaseous monoolefin with a three component catalyst initially consisting of metallic aluminum, a titanium tetrahalide and aluminum trichloride, wherein the aluminum trichloride is present in a minor molar ratio with respect to the molar total of the other two components and recovering a polymer product which is predominantly solid.

3,093,626

POLYMERIZATION PROCESS AND APPARATUS

Martin R. Cines, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Filed May 27, 1955, Ser. No. 511,694
5 Claims. (Cl. 260—94.9)

1. In a process wherein an aliphatic olefin having a maximum chain length of 8 carbon atoms and no branching nearer the double bond than the 4-position is converted to normally solid polymer by contacting in a first reaction zone with a particulate solid polymerization catalyst containing chromium oxide as an essential ingredient under temperature and pressure conditions sufficient to effect such conversion, and a portion of the original catalyst particles disintegrate during the conversion and form a catalyst mixture consisting of larger particles and catalyst fines, the improvement which comprises causing the coarser particles of catalyst to settle a resulting reaction mixture, and recovering a crude reaction product mixture containing a substantial amount of said fines in suspension, introducing said mixture to a second reaction zone, maintaining said mixture in turbulent flow under temperature and pressure conditions suitable for the formation of such solid polymer, adding an olefin of the class defined, converting said olefin to such polymer, by contacting said olefin with said fines under said temperature and pressure conditions, and recovering a resulting polymer.

3,093,627

POLYPEPTIDES AND PROCESS FOR THEIR MANUFACTURE

Robert Schwyzer, Rieben, and Heini Kappeler, Birsfelden, Switzerland, assignors to Ciba Corporation, a corporation of Delaware

No Drawing. Filed June 23, 1959, Ser. No. 822,187
Claims priority, application Switzerland July 3, 1958
2 Claims. (Cl. 260—112)

1. Hexapeptides of the formula L-glutamyl-L-histidyl-L-phenylalanyl-L-α-(lower aminoalkyl)-α-amino - acetyl-L-tryptophyl-glycine.

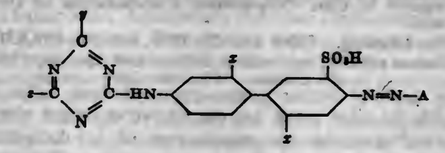
3,093,628

MONOAZO DIPHENYL TRIAZINE DYESTUFFS

Jakob Benz, Munchenstein, Basel, August Schweizer, Muttenz, Basel, and Walter Wehrli, Riehen, Basel, Switzerland, assignors to Sandoz Ltd., Basel, Switzerland

No Drawing. Filed Aug. 18, 1959, Ser. No. 834,392
Claims priority, application Switzerland Aug. 20, 1958
6 Claims. (Cl. 260—153)

1. A water-soluble monoazo dyestuff of the formula



wherein each *x* represents a member selected from the group consisting of low molecular alkyl, low molecular alkoxy, chlorine and bromine, *y* represents a member selected from the group consisting of chlorine and bromine, *z* represents a member selected from the group consisting of chlorine, bromine, amino, lower alkylamino, lower 'hydroxyalkylamino, lower alkoxyalkylamino, di-(hydroxyethyl)-amino, di-(lower hydroxyalkyl)-amino, carboxymethylamino, dicarboxy-ethylamino, sulfo-ethylamino, N-methyl-N-sulfoethyl-amino, phenylamino, methylphenyl - amino, lower alkoxyphenylamino, dimethylphenylamino, trimethylphenylamino, N-lower alkyl-N-phenylamino, N-lower hydroxyalkyl-N-phenylamino, carboxyphenylamino, sulfophenylamino, aminosulfonylphenylamino, methylsulfonyl-phenylamino, cyclohexylamino, benzylamino and disulfonaphthylamino, and A stands for the radical of a coupling component selected from the group consisting of 1-chlorophenyl-3-methyl-5 - pyrazolone, 1 - (methylchlorophenyl) - 3 - methyl-5-pyrazolone, 1-(aminosulfonyl-phenyl)-3-methyl-5-pyrazolone, 1-dichlorophenyl-3-methyl - 5 - pyrazolone-sulfonic acid, 1-(methyl-chloro-phenyl) - 3 - methyl-5-pyrazolone-sulfonic acid, 1-phenyl-3-methyl-5-pyrazolone-sulfonic acid, 1-hydroxy-naphthalene-mono-, -di- and -trisulfonic acids, 2-hydroxy-naphthalene-mono-, -di- and -trisulfonic acids, 2-amino-naphthalene-mono- and -disulfonic acids, 1-amino - 8 - hydroxy - naphthalene - mono- and -disulfonic acids, 2-amino-8-hydroxy-naphthalene-mono- and -disulfonic acids and 2-amino-5-hydroxy-naphthalene-monosulfonic acid.

3,093,629

WATER INSOLUBLE CYANOETHYLATED HYDROXYETHYL CELLULOSE OF HIGH NITROGEN CONTENT

Wesley O. Fugate, Old Greenwich, and Ellsworth C. McClenachan, Stamford, Conn., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Aug. 11, 1961, Ser. No. 130,768
4 Claims. (Cl. 260—231)

1. Water insoluble cyanoethylated hydroxyethyl cellulose having a degree of polymerization between 100 and 2500, a hydroxyethyl molar substitution of between about 0.25 and about 4.2 and a degree of cyanoethylation above about 2.0.

3,093,630

PROCESS FOR PURIFICATION OF CITRUS OIL

Fred W. Muncie, Lake Wales, Fla., assignor to Sunl-Citrus Products Company, Haines City, Fla., a corporation of Florida

No Drawing. Filed Oct. 16, 1959, Ser. No. 846,787
2 Claims. (Cl. 260—236.6)

1. A process for purification of citrus oil degraded by the air oxidation of the limonene therein, consisting of: introducing said degraded citrus oil into heated citrus

refuse solubles in aqueous solution, and thereafter, continuously steam distilling to recover the volatile portion of the said oil from the resulting mixture.

3,093,631

NEW CYCLIC DIAMINES AND PROCESS FOR THEIR MANUFACTURE

Cyril Grob and Oswald Schier, Basel, Switzerland, assignors to Ciba Corporation, a corporation of Delaware

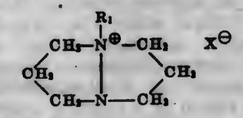
No Drawing. Filed Apr. 29, 1959, Ser. No. 809,631
Claims priority, application Switzerland Apr. 30, 1958
20 Claims. (Cl. 260—239)

8. 1-alkyl-1:2-trimethylene - pyrazolidinium halide in which the alkyl group has one to twelve carbon atoms.

10. Process for the manufacture of 1:5-diazacyclo-octane compounds which comprises treating 1:2-trimethylene-pyrazolidine with a quaternizing reagent of the formula:

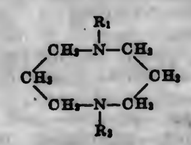
$$R_1—X$$

in which R_1 represents an organic radical selected from the group consisting of ω-hydroxyalkyl, ω-alkoxyalkyl, alkyl, ω-phenoxyalkyl, benzyl, diphenylmethyl, monohalogenoalkyl, ω-diethylaminoalkyl, the alkyl group in each instance having one to twelve carbon atoms and X stands for halogen, and reacitng a resulting quaternary ammonium compound of the formula:



with nascent hydrogen.

14. A member of the group consisting of compounds of the formula:



in which R_1 represents a member of the group consisting of ω-hydroxyalkyl, ω-alkoxyalkyl, ω-phenoxyalkyl, monohalogenoalkyl, ω-dimethylaminoalkyl, the alkyl group in each instance having one to twelve carbon atoms, and R_2 stands for a member of the group consisting of R_1, hydrogen, acetyl, alkyl having one to twelve carbon atoms, benzyl and diphenylmethyl, pharmaceutically acceptable acid addition salts thereof, 1-lower alkyl-quaternary ammonium halides thereof and N-oxides thereof.

16. 1-(γ-hydroxypropyl)-1:5-diazacyclo-octane.

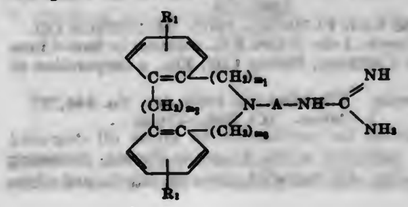
3,093,632

DIBENZPOLYMETHYLENIMINO-ALKYLENE-GUANIDINES

Robert Paul Mull, Florham Park, N.J., assignor to Ciba Corporation, a corporation of Delaware

No Drawing. Filed Feb. 2, 1961, Ser. No. 86,575
2 Claims. (Cl. 260—239)

1. A member selected from the group consisting of a compound of the formula:



in which R_1 is a member selected from the group consisting of hydrogen, lower alkyl, lower alkoxy and halogeno, each of the symbols m_1, m_2 and m_3 is one of the numbers selected from the group consisting of 0, 1 and 2, with the proviso that the total of $m_1+m_2+_3$ is one of the numbers selected from the group consisting of 2 and 3, A stands for lower alkylene having from two to three carbon atoms and separating the guanidino group from the imino-nitrogen by from two to three carbon atoms, and addition salts of such compound with therapeutically acceptable acids.

2. 2{5-(10,11-dihydro-dibenz[b,f]azepinyl)}-ethyl guanidine.

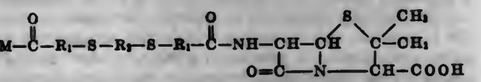
3,093,633

NOVEL PENICILLIN COMPOUNDS

Donald C. Hobbs, East Lyme, Conn., assignor to Chas. Pfizer & Co., Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed June 29, 1960, Ser. No. 39,456
13 Claims. (Cl. 260—239.1)

1. A compound selected from the group consisting of compounds represented by the formula:



and the pharmaceutically acceptable salts thereof wherein M is selected from the group consisting of hydroxy, alkoxy containing 1 to 4 carbon atoms, amido, carboxymethylimido, carboxyethylimido and carboxyethylideneimido; R_1 is selected from the group consisting of methylene and ethylidene; R_2 is selected from the group consisting of cycloalkylene containing 4 to 6 carbon atoms, phenylene, 2,5-thienylene, 2-carboxy-3,4-thienylene, methylene and substituted methylene wherein the substituent is selected from the group consisting of carboxy, and halogen; alkylene containing 2 to 4 carbon atoms which may be unsaturated and substitu ed derivatives thereof wherein the substituent is selected from the group consisting of hydroxy, carboxy, halogen and alkanoyloxy radical of a hydrocarbon carboxylic acid containing 1 to 4 carbon atoms.

3,093,634

PREPARATION OF α-NITROLACTAMS

Johannes H. Ottenheym, Sittard, and Johan P. H. von den Hoff, Geleen, Netherlands, assignors to Stamicarbon N.V., Heerlen, Netherlands

No Drawing. Filed Sept. 10, 1959, Ser. No. 839,080
Claims priority, application Netherlands Sept. 30, 1958
6 Claims. (Cl. 260—239.3)

1. A process for the preparation of α-nitrolactam which comprises hydrolyzing 3,nitro-azacyclo-alkanone-2-N-carbochloride containing up to 12 carbon atoms in the alkanone group with water at a temperature between 50° C. and 100° C.

3,093,635

PREPARATION OF NITRO DERIVATIVES FROM CYCLIC AMIDES

Berend J. Hoek, Beek, and Johan P. H. von den Hoff and Johannes W. M. Stoesman, Geleen, Netherlands, assignors to Stamicarbon N.V., Heerlen, Netherlands

No Drawing. Filed Nov. 14, 1960, Ser. No. 68,589
Claims priority, application Netherlands Nov. 23, 1959
9 Claims. (Cl. 260—239.3)

1. In a process for preparing ω-nitro ω-lactam by mixing 2-chloro-azacyclo-2,3-alkene 1-carbochloride containing up to 12 carbon atoms in the ring, with a nitrating acid and then hydrolyzing the resulting product with water, the improvement which comprises carrying out the hydrolysis in at least two stages using a pH of 0.5–2 and a temperature of 20–50° C. in the first stage, and a pH of 2–4 and a temperature of 50–100° C. in the second stage.

3,093,636

INTERMEDIATES IN THE CONVERSION OF 11α-HYDROXY-DIOSGENIN TO CORTISONE

Carl Djerassi, Otto Halpern, and Octavio Mancera, Mexico City, Mexico, assignors, by mesne assignments, to Syntex Corporation, a corporation of Panama

No Drawing. Filed Oct. 3, 1958, Ser. No. 765,056
Claims priority, application Mexico Oct. 4, 1957
22 Claims. (Cl. 260—239.55)

1. A process for the production of the lower fatty acid esters of 16α,17α-oxido-Δ^5-pregnen-3β-ol-11,20-dione comprising selectively acylating 11α-hydroxy-diosgenin in an inert solvent at low temperature to form the 3-lower fatty acid esters thereof, oxidizing the esters with an oxidizing agent to form the 3-lower fatty acid esters of 11-keto-diosgenin, oxidatively degrading the side chain of the last mentioned esters to form the corresponding 3-lower fatty acid esters of $\Delta^{5,16}$-pregnadien-3β-ol-11,20-dione, epoxidizing the last mentioned compound with a peroxidizing agent to form 16α,17α-oxido-Δ^5-pregnen-3β-ol-11,20-dione and esterifying this last mentioned compound with a lower fatty acid anhydride.

7. 5,6 - dibromo - 16α,17α-oxido-pregnan-3β-ol-11,20-dione acetate.

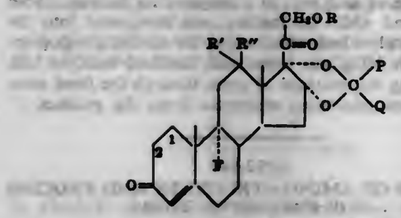
3,093,637

ACETALS AND KETALS OF 9-FLUORO-12-OXYGENATED-16,17,21-TRIHYDROXY STEROIDS OF THE PREGNANE SERIES AND INTERMEDIATES THEREFOR

Patrick A. Diassi, Westfield, N.J., assignor to Olin Mathieson Chemical Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed June 13, 1962, Ser. No. 202,087
13 Claims. (Cl. 260—239.55)

1. A compound selected from the group consisting of steroids of the general formula



and the 1,2-dehydro derivatives thereof, wherein R' is hydrogen, R'' is β-hydroxy and together R' and R'' is keto; R is selected from the group consisting of hydrogen and the acyl radical of a hydrocarbon carboxylic acid of less than ten carbon atoms; P is selected from the group consisting of hydrogen, lower alkyl, halo lower alkyl, carboxy lower alkyl, monocyclic cycloalkyl, monocyclic aryl, monocyclic aryl lower alkyl, monocyclic heterocyclic and monocyclic heterocyclic lower alkyl; Q is selected from the group consisting of lower alkyl, halo lower alkyl, carboxy lower alkyl, monocyclic cycloalkyl, monocyclic aryl, monocyclic aryl lower alkyl, monocyclic heterocyclic and monocyclic heterocyclic lower alkyl; and together with the carbon to which they are joined P and Q is selected from the group consisting of cycloalkyl and monocyclic heterocyclic.

3,093,638

CEPHALOSPORIN C

Edward Penley Abraham and Guy Geoffrey Frederick Newton, Oxford, England, assignors to National Research Development Corporation, London, England, a British body corporate

Filed Feb. 1, 1956, Ser. No. 562,891
Claims priority, application Great Britain Feb. 2, 1955
13 Claims. (Cl. 260—243)

1. A product of manufacture, the antibiotic substance, Cephalosporin C substantially free from Cephalosporin N; said Cephalosporin C containing carbon, hydrogen, oxygen, nitrogen and sulphur only and being a monoaminodicarboxylic acid effective against both gram positive and gram negative bacteria; soluble in water and almost insoluble in ethanol and ether; the sodium salt having an ultra-violet absorption maximum at 260 mμ and an infra-red spectrum showing bands at 2.94μ, 3.06μ, 5.61μ, 5.77μ, 6.05μ, 6.29μ, 6.57μ, 7.17μ and 7.36μ; stable in aqueous solution at a pH of 2.5; and having a specific rotation $[\alpha]_D^{20}$ of +103° in the form of its sodium salt.

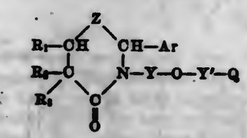
3,093,639

2,3-DISUBSTITUTED-4-METATHIAZANONES, -1-OXIDES AND -1,1-DIOXIDES

Alexander R. Surrey, Albany, N.Y., assignor to Sterling Drug Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed July 27, 1961, Ser. No. 127,148
15 Claims. (Cl. 260—243)

1. A compound of the formula



where Z is a member selected from the group consisting of S, SO and SO_2, Ar is a member of the group consisting of phenyl, naphthyl, biphenylyl, furyl, pyridyl, pyrimidyl, thiazolyl, oxazolyl, quinolyl, isoquinolyl and thienyl radicals and such radicals substituted by one to three substituents selected from the group consisting of lower-alkyl, lower-alkoxy, lower-alkylmercapto, lower-alkylsulfonyl, halo, trifluoromethyl, nitro, amino, lower-alkylamino, lower-carboxylic-acylamino, phenoxy, benzyloxy, hydroxy, phenylmercapto, benzyl and 4-chlorophenoxy, Y is alkylene having from two to six carbon atoms and having its connecting linkages on different carbon atoms, Y' is a member selected from the group consisting of a direct linkage and lower-alkylene, Q is a member selected from the group consisting of lower-alkyl and monocarbocyclic-aryl, and R_1, R_2 and R_3 each is selected from the group consisting of hydrogen and lower-alkyl.

6. 2-(3,4-dichlorophenyl)-3-(2-methoxyethyl)-4-metathiazanone.

3,093,640

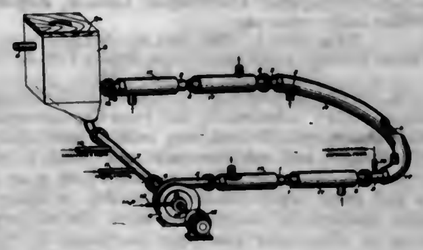
NITROLYSIS OF HEXAMINE

David C. Hull, Kingsport, Tenn., assignor, by mesne assignments, to the United States of America as represented by the Secretary of War

Filed July 16, 1943, Ser. No. 495,083
7 Claims. (Cl. 260—248)

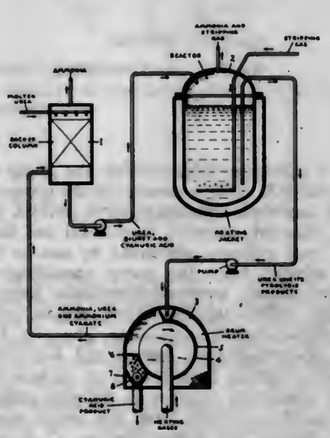
1. In the manufacture of cyclonite by the treatment of a hexamine compound, an ammonia donor and a nitrate ion donor under conditions effecting the elimination of elements of water with the production of solid cyclonite and a mother liquor, the improvement which comprises, maintaining a stream of said mother liquor containing suspended cyclonite continuously flowing in a confined flow path of restricted cross section; continuously circulating said flowing stream through a vapor separating zone

communicating with the atmosphere; continuously charging said donors to said flowing stream at selected points downstream from said vapor separating zone; and con-



tinuously withdrawing a portion of the mother liquor containing suspended cyclonite at a discharge point upstream from said charging points.

3,093,641
PRODUCTION OF CYANURIC ACID
Robert L. Formaini, Petersburg, Va., assignor to Allied Chemical Corporation, New York, N.Y., a corporation of New York
Filed Dec. 12, 1958, Ser. No. 779,966
5 Claims. (Cl. 260—248)



1. The process for the production of cyanuric acid which comprises first heating a body of molten urea at about 135° C. to 215° C. while dispersing a stripping gas for ammonia within said molten urea and passing the gas through and in intimate contact with the heated body, thereby removing ammonia evolved by decomposition of the urea, continuing said heating until at least about 50% of the urea has been decomposed, discontinuing said heating before unreacted urea in said heated body is decreased to substantially below 30% by weight of the heated body and the resulting product ceases to be mobile when heated to a temperature in the range 135° C. to about 215° C., thereafter spreading the resulting stripped product of the partial pyrolysis of the urea as a sheet no greater than about 0.5 inch in thickness on a hot surface at a temperature in the range 200° C. to 300° C. and maintaining it in contact with said surface at said temperature until the urea is substantially completely decomposed, thereby obtaining a product principally composed of cyanuric acid.

3,093,642
PREPARATION OF CYANURIC CHLORIDE
Herbert Zima, Darmstadt, Germany, assignor to Rohm & Haas G.m.b.H., Darmstadt, Germany
No Drawing. Filed Aug. 11, 1959, Ser. No. 832,913
Claims priority, application Germany Aug. 22, 1958
6 Claims. (Cl. 260—248)

1. The process of making cyanuric chloride by simultaneously contacting chlorine and cyanogen in the gas phase with an activated charcoal catalyst at a temperature from about 350° to about 750° C.

3,093,643
STABILIZED DINITROSOPENTAMETHYLENETETRAMINE COMPOSITIONS AND PROCESSES FOR THEIR PRODUCTION
Kurt Volwinkel, Leverkusen and Paul Stöcklin, Opladen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany
No Drawing. Filed Aug. 23, 1960, Ser. No. 51,283
Claims priority, application Germany Aug. 27, 1959
10 Claims. (Cl. 260—248)

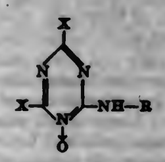
1. A composition consisting essentially of dinitrosopentamethylenetetramine containing, as a stabilizing agent therefor, a salt of a weak organic acid and a fatty acid ester of a hydroxyalkylamine the alkyl radical of which contains up to 12 carbon atoms, in an amount of at least 3 percent by weight of the composition.

3,093,644
PREPARATION OF MELAMINE
Johannes J. Steggerda, Geleen, Netherlands, assignor to Stamicarbon N.V.
Filed Aug. 17, 1962, Ser. No. 217,709
Claims priority, application Netherlands Apr. 2, 1959
9 Claims. (Cl. 260—249.7)

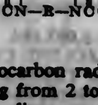
1. In a process for preparing melamine by heating a compound selected from the group consisting of urea and products obtainable by thermal decomposition of urea, at a temperature between about 220° and 450° C., in the presence of NH_3 gas and a catalyst of large internal surface area, the improvement which comprises providing a fluidized catalyst bed in which the catalyst is fluidized by said NH_3 gas, providing a fixed catalyst bed, maintaining both of said beds at a temperature between about 220° C. and 450° C., feeding said compound into the fluidized catalyst bed, withdrawing the resulting vapors together with NH_3 gas from said fluidized catalyst bed, then passing this mixture of gases through the fixed catalyst bed and recovering melamine from the product.

3,093,645
N-OXIDES OF AMINO-s-TRIAZINES AND PROCESS FOR PREPARING THEM
John T. Shaw, Middlesex, N.J., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine
No Drawing. Filed May 9, 1961, Ser. No. 108,722
9 Claims. (Cl. 260—249.9)

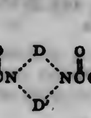
1. A compound of the formula:



wherein one X is a member selected from the group consisting of hydrogen, alkyl, oxyalkyl, haloalkyl, aryl, nitroaryl, haloaryl, hydroxyaryl, aralkyl, pyridyl, furyl, hydroxy, alkoxy, aryloxy, $(CH_2)_n$—A and



the other X is a member selected from the group consisting of hydrogen, aralkyl, alkyl, aryl and



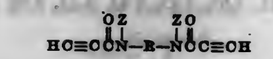
R, R_1 and R_2 are individually selected from the group consisting of hydrogen, alkyl, aralkyl, aryl, nitroaryl, haloaryl and hydroxyaryl; *n* is a positive integer less than nineteen; A is the radical:



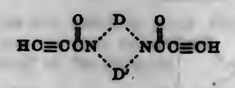
wherein R and X are as hereinbefore defined and both correspond identically with the R and X substituents on the other triazinyl nucleus; provided that aforementioned alkyl moieties contain no more than 18 carbons and aryl moieties are mononuclear carbocycles.

3,093,646
ACETYLENIC DIAMIDES
Lee A. Miller, Dayton, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed Dec. 22, 1960, Ser. No. 77,487
8 Claims. (Cl. 260—268)

1. A bispropiolamide selected from the class consisting of hydrocarbon bispropiolamides of the formula



in which R is a hydrocarbon radical, free of aliphatic unsaturation, containing from 2 to 12 carbon atoms and being attached through diverse carbon atoms thereof to the rest of the molecule of which it forms a part, and Z is selected from the class consisting of hydrogen and alkyl radicals of from 1 to 5 carbon atoms, and a cyclic bispropiolamide of the formula



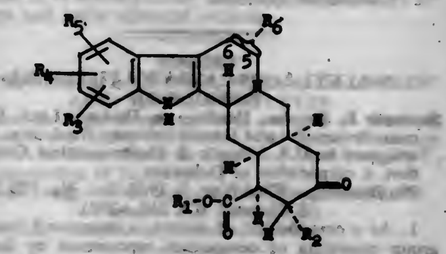
in which D and D′ are bivalent alkylene radicals having from 1 to 3 carbon atoms in the alkylene chain and a total of from 1 to 7 carbon atoms and D and D′ together with the nitrogen atoms to which they are attached complete a ring of from 5 to 6 members.

3,093,647
DINICOTINOYL N-ALLYL NORMORPHINE ESTER
Konrad Lothar Zirm, Steiermark, and Alfred Pongratz, Graz, Austria, assignors to Laumacher Heilmittel Gesellschaft m.b.H., Steiermark, Austria
No Drawing. Filed Feb. 26, 1960, Ser. No. 11,141
Claims priority, application Austria Oct. 12, 1959
1 Claim. (Cl. 260—285)

The dinicotinoyl N-allyl normorphine ester.

3,093,648
18β-DESOXY-18-OXO- AND 18-OXIMINO-RESERPATES
Michael Mullen Robison, Berkeley Heights, Harold Belding MacPhillamy, Madison, and Robert Armistead Lucas, Mendham, N.J., assignors to Ciba Corporation, a corporation of Delaware
No Drawing. Filed July 31, 1961, Ser. No. 127,853
12 Claims. (Cl. 260—287)

1. A member selected from the group consisting of a compound of the formula:



in which R_1 is a member selected from the group consisting of lower alkyl, phenyl-lower alkyl, lower alkoxy-lower alkyl, in which lower alkyl separates lower alkoxy from the carboxyl group by two to four carbon atoms, and N,N-di-lower alkyl-amino-lower alkyl, in which lower alkyl separates N,N-di-lower alkyl-amino from the carboxyl group by two to four carbon atoms, R_2 stands for a member selected from the group consisting of lower alkoxy and cyano, each of the groups R_3, R_4 and R_5 is a member selected from the group consisting of hydrogen, lower alkyl, lower alkoxy, phenyl-lower alkoxy, halogeno, lower alkyl-mercapto, and, whenever two of the groups R_3, R_4 and R_5 are attached to two adjacent positions and taken together, lower alkylenedioxy, and R_6 is a member selected from the group consisting of hydrogen and lower alkyl, an oxime of such compound, a semicarbazone of such compound and a lower alkylene glycol ketal of such compound, and a non-toxic acid addition salt thereof, an N-oxide thereof and a non-toxic acid addition salt of an N-oxide thereof.

3,093,649
FRACTIONAL CRYSTALLIZATION PROCESS
John D. Ratje and Harold W. Tompkins, Borger, Tex., assignors to Phillips Petroleum Company, a corporation of Delaware
Filed Apr. 3, 1957, Ser. No. 650,419
6 Claims. (Cl. 260—290)

1. In a process which comprises cooling a liquid multicomponent mixture to form a slurry of solids in mother liquor, passing said slurry of solids in mother liquor into a purification zone, separating mother liquor from said slurry within said purification zone, moving solids through said purification zone toward a melting zone, melting solids in said melting zone, displacing a portion of the resulting melt into said moving solids, and recovering a purified product from said melting zone, the improvement comprising measuring the dielectric properties of said slurry passing into said purification zone, and adjusting said cooling to regulate the solids content of the slurry being formed in response to said measurement.

3,093,650

ALTERNATIVE SYNTHESIS OF 2' - HYDROXY-5,9 - DIMETHYL - 2 - PHENETHYL - 6,7 - BENZOMORPHAN (PHENAZOCINE)

Edward M. Fry, Darnestown, and Everette L. May, Bethesda, Md., assignors to the United States of America as represented by the Secretary of Health, Education, and Welfare

Filed July 19, 1962, Ser. No. 211,144
8 Claims. (Cl. 260—290)
(Granted under Title 35, U.S. Code (1952), sec. 266)

3. A method of producing a 2-benzyl-1,2,5,6-tetrahydropyridine base which essentially comprises

(*a*) reducing a pyridinium halide with sodium borohydride to produce a 1,2,5,6-tetrahydropyridine base,

(*b*) reacting said tetrahydropyridine base with a benzyl halide to form an N-benzyl quaternary 1,2,5,6-tetrahydropyridine salt, and

(*c*) reacting said tetrahydropyridine salt with ethereal phenyllithium for a sufficient time to induce shift of the benzyl substituent to the 2-position of the 1,2,5,6-tetrahydropyridine.

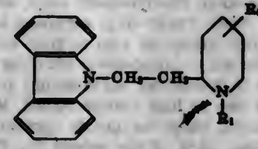
3,093,651

N-ALKYL-2-(2-[9-CARBAZOLYL-ETHYL])-PIPERIDINES

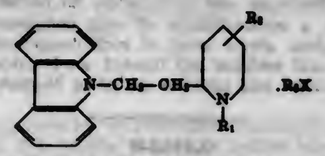
Seymour L. Shapiro, Hastings on Hudson, Louis Freedman, Bronxville, and Harold Soloway, Tuckahoe, N.Y., assignors to U.S. Vitamin & Pharmaceutical Corporation, a corporation of Delaware

No Drawing. Filed Nov. 7, 1958, Ser. No. 772,398
5 Claims. (Cl. 260—293)

1. As a composition of matter, a compound from the group consisting of compounds represented by the formula



wherein R_1 is lower alkyl of from one to about three carbon atoms, R_2 is selected from the group consisting of hydrogen and lower alkyl of from one to about three carbon atoms, and the nontoxic pharmacologically acceptable acid and quaternary ammonium salts thereof represented by the formula



wherein R_3 is selected from the group consisting of hydrogen and lower alkyl of from one to about three carbon atoms and X is a pharmacologically acceptable nontoxic anion.

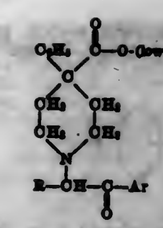
3,093,652

ALKYL 1-(2-ARYL-2-OXOALKYL)-4-PHENYLPIPERIDINE-4-CARBOXYLATES AND THEIR PREPARATION

Bill Ziporn, Walnut Creek, Calif., assignor to Sterling Drug Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Oct. 23, 1958, Ser. No. 769,059
6 Claims. (Cl. 260—293.2)

1. A composition of matter selected from the group consisting of lower-alkyl 1-[2-(monocarbocyclic-aryl)-2-oxo-(lower-alkyl)]-4-phenylpiperidine-4-carboxylates having the formula



where R represents a member selected from the group consisting of hydrogen, methyl and ethyl, C_6H_5 represents phenyl and Ar represents a monocarbocyclic-aryl radical selected from the group consisting of unsubstituted-phenyl and phenyl having from one to three substituents selected from the group consisting of nitro, amino, (lower-alkyl)-amino, (lower-alkanoyl)amino, lower-alkyl, lower-alkoxy, benzyloxy, lower-alkylmercapto, lower-alkylsulfonyl and halo; and acid-addition salts thereof.

4. The process of preparing ethyl 1-[1-(3,4-dihydroxyphenyl)-1-hydroxy - 2 - butyl]- 4 -phenylpiperidine-4-carboxylate which comprises catalytically hydrogenating ethyl 1-[1-(3,4 - dibenzyloxyphenyl) - 1 - oxo-2-butyl]-4-phenylpiperidine-4-carboxylate.

3,093,653

HETEROCYCLIC PRODUCTS FROM CYANOGEN AND CYANIDES AND PROCESS

Owen W. Webster, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Mar. 1, 1961, Ser. No. 92,462
21 Claims. (Cl. 260—299)

1. A compound of the formula $Y(C_7N_7)_n$ wherein Y is selected from the class consisting of hydrogen, metal, ammonium, tetraalkylammonium wherein each alkyl group contains up to 6 carbon atoms, and monovalent and divalent hydrocarbon of from 1–8 carbon atoms and *n* is the formal valence of Y, the radical C_7N_7 containing three



groups and being such that KC_7N_7 is a hydrolytically stable orange solid which melts at 325–332° C. and has an infrared spectrum which contains absorption bands at 4.47, 6.40, 6.81, 7.05, 7.25, 7.65, 8.25, 8.40, 10.00 and 13.50μ.

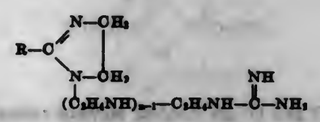
3,093,654

GUANIDINO-IMIDAZOLINE COMPOSITIONS AND METHODS FOR THEIR PREPARATION

Clyde S. Scanley, Stamford, and Frederick H. Siegele, Westport, Conn., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Nov. 30, 1960, Ser. No. 72,587
13 Claims. (Cl. 260—309.6)

1. A member selected from the group consisting of guanidino-imidazolines and mixtures of guanidino-imidazolines of the formula:



where *n* is an integer from 1 to 4, and R is hydrocarbon of 4 to 22 carbon atoms selected from the group consisting of alkyl, alkenyl and alkadienyl.

3,093,655

CARBOXYLIC ACID-POLYETHYLENE POLYAMINE REACTION MIXTURE

Elizabeth C. Dearborn, Boston, and Philip K. Isaacs, Brookline, Mass., assignors to W. R. Grace & Co., Cambridge, Mass., a corporation of Connecticut

No Drawing. Filed Dec. 28, 1960, Ser. No. 78,873
3 Claims. (Cl. 260—389.6)

1. A composition derived by reacting in a deoxygenated system 1 mole of oleic acid, 1 mole of sebacic acid and 2 moles of triethylene tetramine at a temperature of about 50° C. to 240° C. and a pressure of about 10 to 760 mm. Hg while continuously removing the water of reaction, and continuing the reaction until the flow of water of reaction substantially ceases.

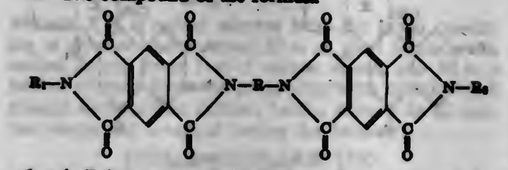
3,093,656

PYROMELLITDIIMIDES

John L. Draher, Berkeley, and Judson E. Goodrich, San Rafael, Calif., assignors to California Research Corporation, San Francisco, Calif., a corporation of Delaware

No Drawing. Filed Feb. 21, 1961, Ser. No. 90,616
4 Claims. (Cl. 260—326)

1. The compound of the formula



wherein R is a member selected from the group consisting of ethylene, propylene and phenylene, and R_1 and R_2 are members selected from the group consisting of hydrogen, benzene, alkylbenzene having from 6 to 20 carbon atoms, and alkyl having from 6 to 22 carbon atoms.

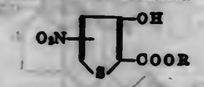
3,093,657

PROCESS OF PREPARING NITRO-3-HYDROXY-THIOPHENE-2-CARBOXYLIC ACID ESTERS

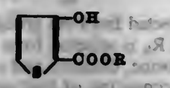
Manfred Schorr, Frankfurt am Main, and Hans Fiesselmann, Erlangen, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany, a corporation of Germany

No Drawing. Filed Jan. 12, 1961, Ser. No. 82,165
Claims priority, application Germany Jan. 14, 1960
9 Claims. (Cl. 260—332.2)

1. A process of preparing nitro-3-hydroxy-thiophene-2-carboxylic acid esters of the formula

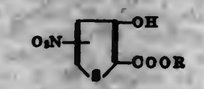


in which R is an alkyl of from 1 to 6 carbon atoms, which comprises reacting 3-hydroxy-thiophene-2-carboxylic acid esters dissolved in concentrated sulfuric acid and corresponding to the formula



in which R has the meaning given above, with molar quantities of concentrated nitric acid.

3. A compound of the formula



wherein R represents an alkyl of from 1 to 6 carbon atoms.

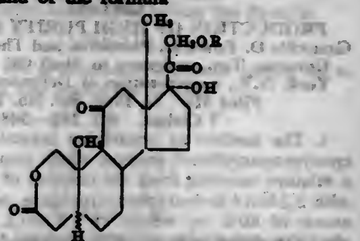
3,093,658

17α,21-DIHYDROXY-2-OXAPREGNANE-3,11,20-TRIONE, ESTERS THEREOF AND INTERMEDIATES THERETO

Raphael Pappo, Skokie, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

No Drawing. Filed Oct. 16, 1961, Ser. No. 145,448
3 Claims. (Cl. 260—343.2)

1. A compound of the formula



wherein R is selected from the group consisting of hydrogen and lower alkanoyl radicals.

3,093,659

ANTIFUNGAL AND INSECTICIDAL HALOKOJIC ACID METAL COMPLEXES

William E. Ball, Bayside, N.Y., and Jay S. Buckley, Groton, and Philip N. Gordon, Old Lyme, Conn., assignors to Chas. Pfizer & Co., Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed June 20, 1956, Ser. No. 592,474
4 Claims. (Cl. 260—345.9)

4. A zinc complex of bromokojic acid.

3,093,660

POLYMERIC PRODUCTS OF DECABORANE AND CYCLIC ETHERS AND THEIR PREPARATION

Victor D. Aftandilian, Wilmington, Del., and Walter H. Knoth, Jr., Mendenhall, Pa., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Jan. 15, 1959, Ser. No. 786,917
4 Claims. (Cl. 260—346.1)

1. Polymeric products obtained by reacting at a temperature of from —50° C. to 50° C. decaborane with a monooxacycloalkane of the formula

$$(CR_2)_nO$$

wherein R is a member selected from the class consisting of hydrogen, alkyl radicals of 1 to 6 carbon atoms, alkenyl radicals of up to and including 6 carbon atoms, phenyl, and cycloalkyl radicals of 3 to 6 carbon atoms, and *n* is a cardinal number of from 2 to 4, said polymeric products containing 0.1–10.0% boron.

3. Polymeric product obtained by reacting decaborane and tetrahydrofuran at a temperature of from —50° C. to 50° C., said product being characterized by being a solid at room temperature, stable in air at room temperature, soluble in ethers, and by being capable of reducing silver ion to silver.

3,093,661

PRODUCTION OF HIGH PURITY DIEPOXIDE

Robert W. Fourie, Houston, Kenneth B. Cofer, Pasadena, and Dwight M. Skeets, Houston, Tex., assignors to Shell Oil Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Mar. 14, 1960, Ser. No. 14,498
5 Claims. (Cl. 260—348)

1. The method of recovering crystalline 2,2-bis(2,3-epoxypropoxyphenyl)propane which comprises adding to a mixture resulting from the reaction of epichlorohydrin with 2,2-bis(4-hydroxyphenyl)propane, which contains in excess of 80% by weight of 2,2-bis(2,3-epoxypropoxyphenyl)propane, from 5 to 25% by weight of a liquid monoglycidyl ether of a hydrocarbon, having a viscosity in the range from 0.5 to 10 centipoises at 25° C., cooling

the resulting mixture to a temperature at which crystallization takes place, maintaining the solution at a crystallization temperature until a substantial amount of crystallization has taken place and recovering crystals of pure 2,2-bis(2,3-epoxypropoxyphenyl)propane from the resulting crystal slurry.

3,093,662

PRODUCTION OF HIGH PURITY DIEPOXIDE

Granville D. Edwards, Pasadena, and Thomas L. Keeler, Houston, Tex., assignors to Shell Oil Company, New York, N.Y., a corporation of Delaware

Filed Mar. 14, 1960, Ser. No. 14,583
7 Claims. (Cl. 260—348)

1. The method of recovering crystalline 2,2-bis(2,3-epoxypropoxyphenyl)propane which comprises dissolving a mixture resulting from the reaction of epichlorohydrin with 2,2-bis(4-hydroxyphenyl)propane, which contains in excess of 80% by weight of 2,2-bis(2,3-epoxypropoxyphenyl)propane together with undesired impurities, in a solvent selected from the group consisting of mixtures of methyl isobutyl ketone and methyl isobutyl carbinol, mixtures of methyl isobutyl ketone together with a paraffin hydrocarbon of six to eight carbon atoms and diisobutyl ketones, in which liquid 2,2-bis(2,3-epoxypropoxyphenyl) propane is completely soluble at 10° C. and higher temperatures and in which solid 2,2-bis(2,3-epoxypropoxyphenyl)propane is soluble to the extent of less than 40 parts per 100 parts by weight of solution at 15° C., cooling said solution to a temperature at which crystallization takes place, maintaining the solution at a crystallization temperature until a substantial amount of crystallization has taken place, discontinuing cooling at a temperature above that at which liquid 2,2-bis(2,3-epoxypropoxyphenyl)propane appears as a separate phase and removing crystalline 2,2-bis(2,3-epoxypropoxyphenyl) propane as a product from the crystal slurry.

3,093,663

DERIVATIVES OF 21-FLUORO-17α-METHYL-PREGNANES

Romano Deghenghi, Westmount, Quebec, Canada, assignor to American Home Products Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed June 26, 1961, Ser. No. 119,292
3 Claims. (Cl. 260—397.3)

1. A substance selected from the group consisting of 21-fluoro-17α-methylprogesterone and 1-dehydro-21-fluoro-17α-methylprogesterone.

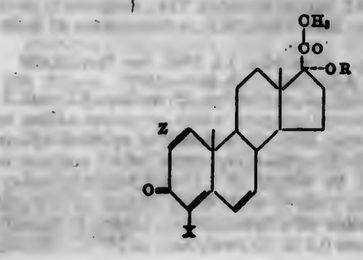
3,093,664

4-HALO-6-DEHYDRO AND 4-HALO-1,6-BIS DEHYDRO DERIVATIVES OF 17α-HYDROXY PROGESTERONE

John A. Edwards, Howard J. Ringold, and Fred A. Kincl, Mexico City, Mexico, assignors, by mesne assignments, to Syntex Corporation, a corporation of Panama

No Drawing. Filed Nov. 30, 1959, Ser. No. 19,438
Claims priority, application Mexico, Nov. 28, 1958
15 Claims. (Cl. 260—397.4)

1. A compound of the general formula:



wherein Z is a member of the group consisting of a single and a double carbon-to-carbon bond, X is a member of the group consisting of chlorine and bromine, and R is a member of the group consisting of hydrogen and the acyl radical of a hydrocarbon carboxylic acid having from 1 to 12 carbon atoms.

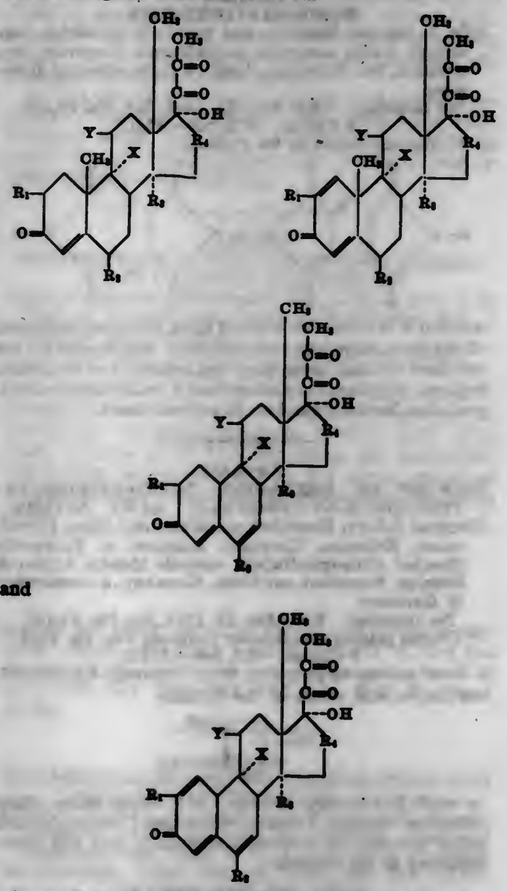
3,093,665

17β-PYRUVOYL-SUBSTITUTED PREGNENE DERIVATIVES

Eugene J. Agnello, Lyme, and Gerald D. Laubach, Niantic, Conn., assignors to Chas. Pfizer & Co., Inc., Brooklyn, N.Y., a corporation of Delaware

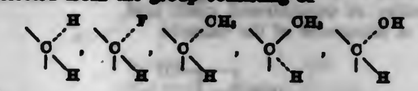
No Drawing. Filed Jan. 22, 1960, Ser. No. 4,000
3 Claims. (Cl. 260—397.45)

1. A compound selected from the group consisting of those having the structural formulas



and

wherein R_1 is selected from the group consisting of hydrogen and methyl; R_2 is selected from the group consisting of hydrogen, fluorine, chlorine and methyl; R_3 is selected from the group consisting of hydrogen and hydroxyl; R_4 is selected from the group consisting of



and



R_5 is selected from the group consisting of acyl containing only carbon, hydrogen and oxygen and derived from mono- and dicarboxylic acids containing up to ten carbon atoms, and the alkali metal and alkaline earth metal salts of those acyl moieties that are derived from the said dicarboxylic acids; X is selected from the group consisting of hydrogen, α-halogen, α-methoxy and α-ethoxy; and Y is selected from the group consisting of keto and β-hydroxyl; at least three of R_1, R_2, R_3 and the second substituent on the number 16 carbon atom always being hydrogen.

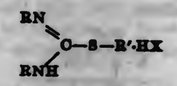
3,093,666

ISOTHIOURONIUM COMPOUNDS

Paul Du Brow, Chicago, Ill., assignor, by mesne assignments to Armour and Company, Chicago, Ill., a corporation of Delaware

No Drawing. Filed Apr. 1, 1957, Ser. No. 649,627
4 Claims. (Cl. 260—404.5)

1. An isothiouronium compound having the general formula



wherein X is a radical selected from the group consisting of chlorine and bromine, R' is an alkyl hydrocarbon radical having from 1 to 5 carbon atoms, and R is a radical selected from the group consisting of alkyl and alkenyl hydrocarbon radicals having from 8 to 22 carbon atoms and a radical having the formula

$$-[(CH_2)_x—N(CH_3)R'R'']^+X^-$$

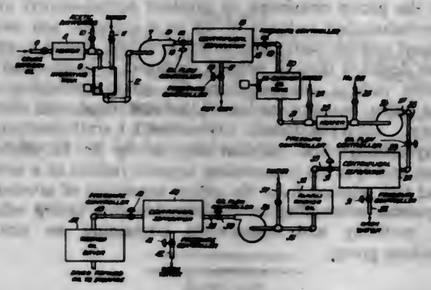
wherein R' and X are as hereinbefore defined, R'' is a radical selected from the group consisting of alkyl and alkenyl hydrocarbon radicals having from 8 to 22 carbon atoms, and n is an integer of from 2 to 10.

3,093,667

REFINING SOYBEAN OIL

Richard J. Fiala, Decatur, Ill., assignor to A. E. Staley Manufacturing Company, Decatur, Ill., a corporation of Delaware

Filed Apr. 27, 1961, Ser. No. 106,103
11 Claims. (Cl. 260—424)



4. In the processing of soybean oil wherein the crude oil is first water degummed with water containing a small amount of acetic anhydride as a degumming aid, next the wet gums are separated from the oil, and then the degummed oil is washed, the improvement in the washing operation which comprises, washing the degummed oil without any intervening treatment and in a non-attenuated condition in the presence of about 125% to 130% of the sodium hydroxide required to neutralize the free fatty acid content of the degummed oil.

3,093,668

CYCLOOCTATETRAENE GROUP VIB TETRACARBONYL COMPOUNDS AND PROCESS FOR PREPARING SAME

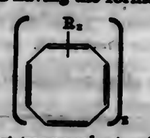
Kryn G. Ihrman, Farmington, Mich., and Thomas H. Coffield, Heidelberg, Germany, assignors to Ethyl Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed Mar. 23, 1960, Ser. No. 16,948
9 Claims. (Cl. 260—429)

1. Organometallic compounds having the formula

$$Q_zM(CO)_4$$

wherein Q is a cyclooctatetraene molecule having up to 20 carbon atoms, and having the formula



wherein R is an inert monovalent substituent group selected from the class consisting of halogen and univalent hydrocarbon radicals having up to 10 carbon atoms and selected from the class consisting of alkyl, alkenyl, cycloalkyl and cycloalkenyl radicals, x is an integer having a value of zero to eight, z is an integer having a value of one to two, and M is a group VIB metal.

3,093,669

REACTION PRODUCTS OF MOLYBDENUM PENTACHLORIDE AND DIALKYLPHOSPHITES

Edwin L. De Young, Milwaukee, Wis., assignor to Standard Oil Company, Chicago, Ill., a corporation of Indiana

No Drawing. Original application Dec. 19, 1960, Ser. No. 76,471. Divided and this application Sept. 7, 1961, Ser. No. 138,217
4 Claims. (Cl. 260—429)

1. The reaction product of about 1 mole of molybdenum pentachloride and about 3 moles of a phosphite having the formula $HOP(OR)_2$ wherein R is a C_{4-18} hydrocarbyl radical of the group consisting of alkyl and cycloalkyl radicals.

3,093,670

COORDINATION COMPOUNDS AND USE THEREOF

Herbert Giles Tanner, R.F.D. 3, Box 70, Frederick, Md.

No Drawing. Original application Aug. 7, 1957, Ser. No. 676,712, now Patent No. 2,980,583, dated Apr. 18, 1961. Divided and this application Feb. 28, 1961, Ser. No. 105,247
5 Claims. (Cl. 260—431)

1. Bis-butylaminemercuric halide of the group consisting of the chloride and the bromide thereof.

4. The method of forming a coordination reaction product of a strongly basic hydrocarbon monoamine and a mercuric salt selected from the group consisting of mercuric chloride and mercuric bromide comprising reacting an ethanolic solution of said amine with an ethanolic solution of said mercuric salt, said amine and mercuric salt being in a molar ratio of 2:1.

3,093,671

CYCLIC DIENE GROUP VI—B METAL CARBONYLS

Kryn G. Ihrman, Royal Oak, and Thomas H. Coffield, Farmington, Mich., assignors to Ethyl Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Nov. 14, 1960, Ser. No. 68,587
13 Claims. (Cl. 260—438)

1. Organometallic compounds having the formula

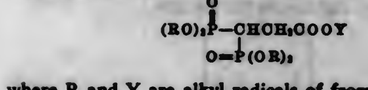
$$QM(CO)_4$$

wherein Q is a cyclic diene selected from the class consisting of bicycloheptadiene and cyclooctadiene compounds

and M is a group VIB transition metal atom having the electron configuration of the next higher inert gas.

3,093,672
DIPHOSPHONATE ALKYL ESTERS
Lee A. Miller, Dayton, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed Oct. 3, 1960, Ser. No. 59,841
2 Claims. (Cl. 260—461)

2. A diphosphonate of the formula



where R and Y are alkyl radicals of from 1 to 5 carbon atoms.

3,093,673
PROCESS FOR MAKING PHOSPHONATES
Leland K. Beach, Westfield, and James E. Shewmaker, Fanwood, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware
Filed June 8, 1961, Ser. No. 116,919
4 Claims. (Cl. 260—461)

1. A continuous process for making phosphonates which comprises heating crude dimethyl hydrogen phosphite, undistilled material consisting of about 60 to 85 wt. percent of dimethyl hydrogen phosphite, the balance being monomethyl phosphite and phosphorous acid, in a first reaction zone at about 180° to 240° C. until up to 95% of the phosphite has been pyrolyzed and thereafter passing the partially pyrolyzed phosphite to a second reaction zone and heating the partially pyrolyzed phosphite at a substantially higher temperature in the range of 250° to 350° C. in said second reaction zone until the pyrolysis is complete.

3,093,674
METHOD OF PREPARING DIALKOXYORGANOBORANES, DIARYLOXYORGANOBORANES AND DIHYDROXYORGANOBORANES
William H. Schechter, Bradfordwoods, Pa., assignor to Callery Chemical Company, Pittsburgh, Pa., a corporation of Pennsylvania
No Drawing. Filed Jan. 13, 1959, Ser. No. 786,446
17 Claims. (Cl. 260—462)

1. A method of preparing an organoborane selected from the group consisting of dialkoxyorganoboranes and diaryloxyorganoboranes comprising reacting a compound containing at least one unsaturated carbon to carbon linkage with a member selected from the group consisting of dialkoxyboranes and diaryloxyboranes and recovering the organoboranes thus produced.

3,093,675
PREPARATION OF ALKOXYBOROXINES AND ARYLOXYBOROXINES
James W. Shepherd, Mars, Pa., assignor to Callery Chemical Company, Pittsburgh, Pa., a corporation of Pennsylvania
No Drawing. Filed Feb. 1, 1960, Ser. No. 5,619
6 Claims. (Cl. 260—462)

1. A method of preparing an organoxyboroxine of the formula $B_3O_3(OR)(OR^1)(OR^2)$ in which OR, OR^1 and OR^2 are selected from the group consisting of alkoxy and aryloxy radicals, which comprises reacting an organoxyboroxine of the formula $B_3O_3(OCH_3)(OR)(OR^1)$, where OR and OR^1 are selected from the group consisting of alkoxy and aryloxy radicals, with a compound of the formula ROH, where R is selected from the group consisting of aryl radicals and alkyl radicals having at least 2 carbon atoms, in the presence of at least sufficient trimethylborate to form an azeotrope with the produced methanol, distilling methanol and trimethylborate from the reaction mixture, and recovering the organoxyboroxine formed.

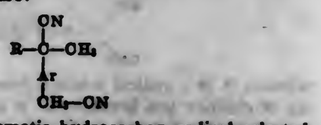
6. An organoxyboroxine of the formula

$$B_3O_3(OR)(OR^1)(OR^2)$$

in which OR is an alkoxy group, OR^1 is an aryloxy group and OR^2 is selected from the group consisting of alkoxy and aryloxy groups.

3,093,676
ALPHA-CYANOALKYL-AROMATIC-METHYL COMPOUNDS AND THEIR PRODUCTION
John G. Abramo and Earl C. Chapin, Springfield, Mass., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed May 18, 1959, Ser. No. 813,636
2 Claims. (Cl. 260—465)

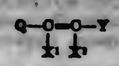
1. A class of alpha-cyanoalkyl-aromatic methyl cyanides having the structure:



wherein Ar is an aromatic hydrocarbon radical selected from the class consisting of naphthylene and anthrylene and R is selected from the class consisting of hydrogen and the methyl radical.

3,093,677
AROMATIC HALOCARBYL CHEMICAL PRODUCTS
Elmore L. Martin, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Aug. 28, 1959, Ser. No. 836,601
13 Claims. (Cl. 260—465)

1. A compound of the formula



wherein: X^1 and X^2 are selected individually from the group consisting of monovalent perhalocarbyl and oxoperhalocarbyl radicals of up to 12 carbons and, jointly, from the group consisting of divalent perhalocarbyl and oxoperhalocarbyl radicals of up to 6 carbons, any oxocarbonyl oxygen being carried by a carbon joined to one of the depicted doubly bonded carbons; Y is an electronegative radical selected from the group consisting of cyano, nitro, carboxy, carbamyl, halocarbonyl, and alkylsulfonyl, alkarylsulfonyl, arylsulfonyl, aralkylsulfonyl, alkoxycarbonyl and alkylcarbony of up to 12 carbon atoms; and Q is the monovalent organic radical of a compound QH selected from the group consisting of aromatic compounds containing an electron-donating group other than methoxy and compounds containing an active methylene group.

3,093,678
PRODUCTION OF 1-CARBETHOXY-2,6,6-TRIMETHYL-2-CYCLOHEXEN-4-ONE
Harry Rubinstein, Bethlehem, and Ransom T. Schenk, Bangor, Pa., assignors to Keystone Chemurgic Corporation, Bethlehem, Pa., a corporation of Pennsylvania
No Drawing. Filed Nov. 1, 1961, Ser. No. 149,195
3 Claims. (Cl. 260—468)

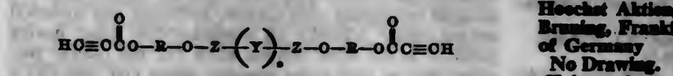
1. The process for the production of 1-carbethoxy-2,6,6-trimethyl-2-cyclohexen-4-one which comprises the condensation of ethyl acetoacetate with a ketone selected from the group consisting of acetone, diacetone alcohol and mesityl oxide, at a temperature within the range of about −20° C. to about +30° C. for a period of time within the range of about 5 hours to 7 days in the presence of a fluoride of boron selected from the group consisting of boron trifluoride and boron trifluoride etherate.

3,093,679
ESTERVINYLATION OF AROMATIC AMINES
Lee A. Miller, Dayton, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed July 31, 1961, Ser. No. 127,886
10 Claims. (Cl. 260—471)

1. A method which comprises reacting an amine selected from the class consisting of aromatic hydrocarbon and aromatic-paraffinic hydrocarbon primary and secondary mono- and diamines of from 6 to 18 carbon atoms with alkyl propiolate having from 1 to 6 carbon atoms in the alkyl in the presence of a catalyst selected from the group consisting of alkanoic acids having from 1 to 12 carbon atoms, salts of said acids with group I–II metals, and mixtures of said acids with acidic inorganic salts of said metals at a temperature of from 50° C. to refluxing, to form an N-carboalkoxyvinyl aromatic amine.

3,093,680
ESTERS
Lee A. Miller, Dayton, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed Mar. 17, 1961, Ser. No. 96,355
5 Claims. (Cl. 260—486)

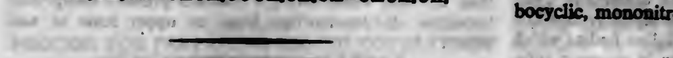
1. A compound of the formula



wherein R is an alkylene radical having from 2 to 4 carbon atoms in the alkylene chain and from 2 to 6 carbon atoms in the alkylene radical; Z is selected from the group consisting of a bivalent arene radical having from 6 to 8 carbon atoms, and halogen substituted bivalent arene radicals having from 6 to 8 carbon atoms; Y is a bivalent paraffin hydrocarbon radical having from 1 to 12 carbon atoms, and *n* is a whole number of from 0 to 1.

3,093,681
3-HEXEN-1-YL-3-HEXENOATE
Garry G. Eichmann, Fair Lawn, and Walter Kimel, Highland Park, N.J., assignors to Hoffmann-La Roche Inc., Nutley, N.J., a corporation of New Jersey
No Drawing. Filed Mar. 22, 1962, Ser. No. 181,819
1 Claim. (Cl. 260—486)

3-hexen-1-yl-3-hexenoate having the formula:



3,093,682
HYDROXYALKANAL SULFONATES
William J. Sullivan, Oakland, Calif., assignor to Shell Oil Company, a corporation of Delaware
No Drawing. Filed Jan. 30, 1959, Ser. No. 790,864
6 Claims. (Cl. 260—513)

1. The hydroxyalkanal sulfonate consisting of a carbon chain of from three to ten carbon atoms; a hydroxyl radical on one of the chain carbon atoms; a sulfonate radical —SO_3X attached to a chain carbon atom adjacent the hydroxyl-substituted carbon atom where X is selected from the group consisting of hydrogen and alkali metal atoms; and a formyl radical attached to a carbon atom of the chain.

3,093,683
PROCESS FOR THE TRANSFORMATION OF BENZENE POLYCARBOXYLIC ACIDS TO TEREPHTHALIC ACID
Bernhard Raecke, Duesseldorf, Bruno Blaser, Duesseldorf-Urdenbach, Hubert Schirp, Duesseldorf, Werner Stein, Duesseldorf-Holthausen and Hartwig Schutt, Hagen/Westphalia, Germany, assignors to Henkel & Cie. G.m.b.H., Duesseldorf-Holthausen, Germany, a corporation of Germany
No Drawing. Filed Jan. 2, 1957, Ser. No. 632,030
Claims priority, application Germany Jan. 12, 1956
9 Claims. (Cl. 260—515)

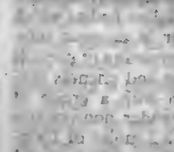
1. The process of producing terephthalic acid from benezene polycarboxylic acids, other than terephthalic acid, which comprises heating a mixture of an alkali metal salt of benzene polycarboxylic acid with from 3 to 6 carboxyl groups in the molecule and an alkali metal salt of a benzene carboxyl acid, other than terephthalic acid, with from 1 to 2 carboxyl groups in the molecule to a temperature between 300° C. and the decomposition temperature of said starting materials and reaction products in the substantially oxygen-free atmosphere of an inert gas until a substantial amount of an alkali metal salt of terephthalic acid has been formed, converting the alkali metal salt of terephthalic acid into terephthalic acid and separating said terephthalic acid from the reaction mass.

3,093,684
NOVEL N(2-HYDROXY-β-TRIHALOETHYL) DERIVATIVES OF TETRACYCLINES
Alfons Stöder, Bad-Soden, Taunus, and Walter Siedel, Frankfurt am Main, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany, a corporation of Germany
No Drawing. Filed Feb. 8, 1961, Ser. No. 87,738
Claims priority, application Germany Feb. 10, 1960
10 Claims. (Cl. 260—559)

1. Compounds selected from the group consisting of N-(2-hydroxy-β-trichloroethyl)-, N-(2-hydroxy-β-tribromoethyl)- and N-(2-hydroxy-β-trifluoroethyl)- derivatives of tetracycline, 7-chlorotetracycline, 5-hydroxy-tetracycline, 7-chloro-6-desmethyl-tetracycline, the 4-epi isomers of said compounds, the anhydro derivatives of said compounds, and the triethylamine, ammonium, piperidine and n-butylamino salts thereof.

3,093,685
CATALYTIC REDUCTION OF AROMATIC MONONITRO COMPOUNDS
Eugene V. Hort, Plainfield, N.J., Harlan B. Freyermuth, Easton, Pa., and David E. Graham, Westfield, N.J., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed Oct. 21, 1960, Ser. No. 63,968
11 Claims. (Cl. 260—580)

1. A method for reducing aromatic, monocyclic, carbocyclic, mononitro compounds of the formula:



wherein X is alkyl of 1 to about 18 carbon atoms and *n* has a value from 0 to 5, inclusive, to the corresponding amino compounds in the absence of added solvent which comprises reducing the said nitro compounds in the liquid phase with hydrogen in the presence of a noble metal catalyst having a surface area of at least about 150 square meters per gram at a temperature of from about 25° C. to about 125° C. and maintaining

the water of reaction as a well dispersed separate liquid phase in the reaction zone during the reduction.

3,093,686
PRODUCTION OF CYCLIC ALCOHOLS AND KETONES
Walter Simon, Hans Joachim Waldmann, and Rudolf Meias, Ludwigshafen (Rhine), and Ernst Plauth, Bad Durkheim, Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany
No Drawing. Filed June 4, 1957, Ser. No. 663,370
Claims priority, application Germany June 6, 1956
2 Claims. (Cl. 260—586)

1. In a continuous method of producting cyclic alcohols and ketones by the oxidation of saturated cyclic hydrocarbons having from 6–8 C-atoms with a gas containing oxygen in the presence of a metal-containing oxidation catalyst, the improvement which comprises subjecting the reaction products of the oxidation to a water wash, contacting said saturated cyclic hydrocarbon feedstock with this wash water whereby a quantity of from about 0.05 to about 1.5% of the acids contained in the wash water with reference to the feedstock is added to said feedstock, and thereafter oxidizing said treated feedstock after the wash water has again been separated from the saturated cyclic hydrocarbons.

3,093,687
ORGANOBORON COPOLYMERS
Sheldon L. Clark, Eggertsville, June T. Duke, Tonawanda, and Trescott B. Larchar and William K. Taft, Lewiston, N.Y., assignors to Olin Mathieson Chemical Corporation
No Drawing. Filed Sept. 4, 1959, Ser. No. 838,356
9 Claims. (Cl. 260—606.5)

7. An organoboron copolymer of a conjugated diolefin hydrocarbon with a compound of the class

$$RR'B_{10}H_8(CR''CR''')$$

wherein R and R' are each selected from the class consisting of hydrogen and an alkyl radical containing from one to five carbon atoms, wherein R'' and R''' are each selected from the class consisting of hydrogen, an alkyl radical and a monoalkenyl hydrocarbon radical, at least one of R'' and R''' being a monoalkenyl hydrocarbon radical, the total number of carbon atoms in R'' and R''' taken together not exceeding eight.

3,093,688
PROCESS FOR PREPARING PHENOL DIALCOHOLS
Stanley Kordzinski, Old Bridge, and Peter A. Yurcick, South River, N.J., assignors to Catalin Corporation of America, a corporation of Delaware
No Drawing. Filed Sept. 22, 1959, Ser. No. 841,464
5 Claims. (Cl. 260—609)

1. The process of preparing phenol dialcohols characterized by the presence of reactive methylol groups and substantial freedom from water and alkaline bodies which comprises the steps of mixing together in aqueous solution a phenol selected from the group consisting of phenols directly substituted at the para position and phenols substituted at at least one meta position with a group of sufficient size to sterically block and render non-reactive the adjacent para position, from 1 to 2.2 moles of formaldehyde per mole of phenol and from 0.015 to 1.1 moles of a volatile organic base per mole of phenol which base is non-reactive with the formaldehyde and has a vapor pressure of at least 100 mm. at 150° C. so that the base will be substantially completely volatilized at a temperature below the decomposition temperature of the prepared phenol dialcohols, and which base is selected from the group consisting of tertiary amines having up to about 15 carbon atoms and quaternary ammonium hydroxides which decompose in the subsequent dehydration steps to yield such amines, heating said mixture to a temperature of from 25° C. to 125° C. to initiate condensation between the phenol and the formaldehyde, maintaining said mixture at the temperature of condensation until a resinous phenol dialcohol is formed which is solid at ordinary temperatures, and then without neutralizing the said base heating the mixture to temperatures of up to 150° C. to dehydrate the mixture and volatilize the organic base, thereby producing a phenol dialcohol substantially free of water and alkaline bodies.

3,093,689
HYDROXY HALOGENATED ETHER PRODUCTION
Kenneth B. Cofer, Pasadena, and Robert W. Fourie, Houston, Tex., assignors to Shell Oil Company, New York, N.Y., a corporation of Delaware
No Drawing. Filed July 8, 1960, Ser. No. 41,475
6 Claims. (Cl. 260—613)

1. A process for producing an unsymmetrical halosubstituted hydroxy ether which comprises reacting at about 0° to about 100° C. an ethylenic alcohol having up to 18 carbon atoms per molecule and a member of the group consisting of phenol and a lower alkanol with an aqueous hypohalogenous acid solution using a mole ratio of said acid to ethylenic alcohol of about 0.5:1 to about 2:1 and a mole ratio of ethylenic alcohol to said group member of about 0.1:1 to about 1.5:1, the concentration of the ethylene alcohol in the hypohalogenous acid solution as calculated without said group member being initially at least 50% by weight, and said alcohols containing only carbon, hydrogen and hydroxyl oxygen atoms whereby an unsymmetrical ether having attached to the ether oxygen atom (*a*) the radical corresponding to said group member minus OH, and (*b*) a halo hydroxy radical derived from the ethylenic alcohol is produced.

3,093,690
METHOD FOR PREPARING BUTADIENE DICHLOROHYDRINS
Phillip H. Moss, Austin, Tex., assignor to Jefferson Chemical Company, Inc., Houston, Tex., a corporation of Delaware
Filed Sept. 30, 1959, Ser. No. 843,548
3 Claims. (Cl. 260—634)

1. A method for preparing butadiene dichlorohydrins which comprises continuously feeding chlorine and water into the lowermost zone of an elongated vertical reaction vessel to form a reaction mixture, maintaining said mixture at a temperature in the range of 0° to about 95° C., continuously feeding butadiene into said reaction mixture in a zone at least 2 feet up to about 8 feet above the zone of said chlorine feed, the mol ratio of said chlorine to said butadiene being in the range from about 1:1 to less than 2:1 and withdrawing a reaction product comprising butadiene dichlorohydrins from an upper zone of said vessel.

3,093,691
PREPARATION OF ALCOHOLS FROM ALUMINUM TRIALKYLS
Gifford G. McClaflin and Mark T. Atwood, Ponca City, Okla., assignors to Continental Oil Company, Ponca City, Okla., a corporation of Delaware
No Drawing. Filed Nov. 5, 1959, Ser. No. 851,623
2 Claims. (Cl. 260—638)

1. A process for the manufacture of a primary aliphatic alcohol which comprises reacting trioxane with a trialkylaluminum compound of the type $(R—CH_2)_3Al$ in which R is selected from the group consisting of primary saturated aliphatic hydrocarbon radicals having from 1 to 19 carbon atoms and hydrogen at a temperature of 30 to 100° C., to yield a reaction product, hydrolyzing of said reaction product and recovering from the hydrolysis product the corresponding alcohol of the type $R—CH_2—CH_2—OH$.

3,093,692
PREPARATION OF CYCLOHEXENE FLUORIDE-1
George N. Valkanas, Athens, Greece, and Heinrich Hopff, Zurich, Switzerland, assignors to Stauffer Chemical Company, a corporation of Delaware
No Drawing. Filed Dec. 29, 1960, Ser. No. 79,128
1 Claim. (Cl. 260—648)

The process for the preparation of cyclohexene fluoride-1 comprising reacting 1-fluoro 1-chloro cyclohexane with cobalt naphthionate by bringing said reactants into contact with one another and heating, withdrawing hydrogen chloride from said reaction mixture and recovering therefrom cyclohexene fluoride-1.

3,093,693
1,3-CYCLODODECADIENE AND METHOD OF PREPARATION
Robert H. Perry, Jr., Baytown, Tex., assignor, by mesne assignments, to Esso Research and Engineering Company, Elizabeth, N.J., a corporation of Delaware
No Drawing. Filed Feb. 16, 1961, Ser. No. 89,651
12 Claims. (Cl. 260—666)

1. A new composition of matter: 1,3-cyclododecadiene.

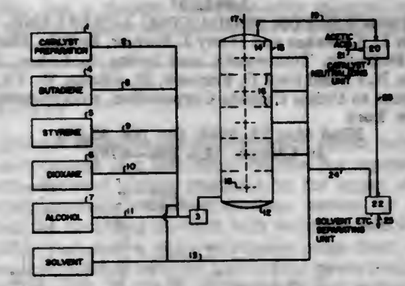
2. A method of producing 1,3-cyclododecadiene which comprises reacting in a first liquid phase cyclododecene and N-bromosuccinimide to obtain 3-bromocyclododecene, and contacting the 3-bromocyclododecene with a liquid dehydrobrominating agent to produce 1,3-cyclododecadiene.

3,093,694
METHOD FOR PREPARING ISOPROPENYL-SUBSTITUTED ARYL HYDROCARBONS
Frederick J. Soderquist, Essexville, James L. Amos, Midland, and Harold D. Boyce, Coleman, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed May 19, 1960, Ser. No. 30,069
9 Claims. (Cl. 260—669)

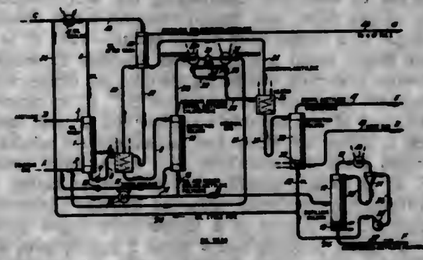
1. A process for preparing isopropenyl-substituted aryl compounds having from one to two isopropenyl substituents in the aryl nucleus, said process comprising passing a gaseous tertiary-butyl-substituted aryl compound having from one to two tertiary-butyl groups as the only nuclear substituents reactive in the process, through a reaction zone at a temperature of 500–800° C., thereby effecting substantial demethanation of the tertiary-butyl groups; condensing the effluent vapors and separating the isopropenyl aryl compound from the condensate.

3,093,695
PROCESS FOR PREPARING LIQUID COPOLYMERS OF BUTADIENE AND STYRENE
Clarence Martin Eldt, Jr., Plainfield, N.J., and John Dana Koontz, Baton Rouge, La., assignors to Esso Research and Engineering Company, a corporation of Delaware
Filed Oct. 3, 1960, Ser. No. 60,161
5 Claims. (Cl. 260—669)

1. A process for producing a crude liquid polymer oil containing catalyst in easily filterable form which comprises charging a mixture of 50 to 100 parts of a conjugated diolefin, 50 to 0 parts of a vinyl aromatic hydrocarbon, about 1 to 100 parts of an ether having 2 to 8 carbon atoms chosen from the group consisting of alkyl ethers and cyclic diethers having the oxygen atoms separated by at least two carbon atoms and about 1.0 to 2 parts by wt. of finely divided alkali metal catalyst, all based on monomers, to a first polymerization zone, maintaining a conversion of 10 to 30% in said first reaction zone at a temperature of 50 to 100° C., continuously passing the reactants after a residence time in said first reaction zone of 0.5 to 4 hr. to at least one additional reaction zone under similar temperature conditions and a residence time of 2 to 4 hrs. in each zone, and withdrawing polymer product containing catalyst in easily filterable form from the final reaction zone.



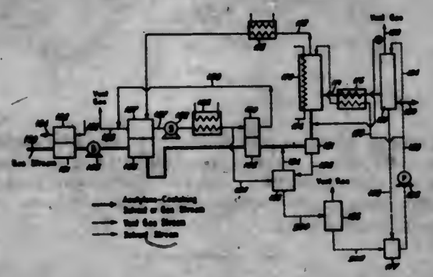
3,093,696
PROCESS FOR THE MANUFACTURE OF MONOVINYL ACETYLENE OF HIGH PURITY
Kurt Sennewald and Franz Pohl, Knapsack, near Cologne, Willi Meininger, Efferen, near Cologne, and Wilhelm Vogt, Knapsack, near Cologne, Germany, assignors to Knapsack-Griesheim Aktiengesellschaft, Knapsack, near Cologne, Germany, a corporation of Germany
Filed Dec. 2, 1958, Ser. No. 777,693
Claims priority, application Germany Dec. 11, 1957
7 Claims. (Cl. 260—678)



1. A process for isolating monovinyl acetylene of high purity from a moist, acetylene containing gas formed in the manufacture of an acetylene derivative selected from the group consisting of acrylonitrile and monovinyl acetylene from acetylene, said gas being cooled, deacidified and free of acrylonitrile, which comprises removing from the initial gas stream in a first stage monovinyl acetylene, divinyl acetylene, chloroprene, high boiling acetylene polymers and a minor portion of the acetylene by washing the gas stream with a hydrocarbon solvent as wash oil at a temperature in the range from about 0° to about 30° C., said hydrocarbon solvent possessing a boiling point in the range from about 170° to about 220° C., the major portion of the acetylene remaining in the initial gas stream, heating the wash oil to expel the dissolved minor portion of acetylene and the dissolved monovinyl acetylene, passing the expelled gas mixture of acetylene and monovinyl acetylene to a second stage, and washing with acetone for extracting monovinyl acetylene, the extraction being performed under a temperature being adjusted so that minor amounts of acetylene which are also dissolved in the acetone become permanently reduced in the liquid phase of the acetone, and expelling the monovinyl acetylene

from the acetone by heating, and washing the expelled monovinyl acetylene with water to obtain a pure final product.

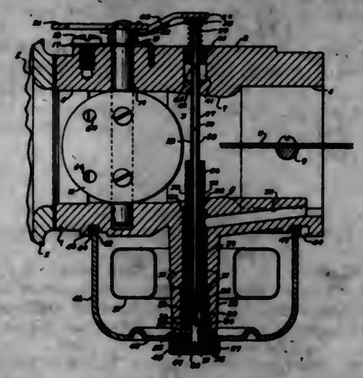
3,093,697
PROCESS FOR PRODUCING ACETYLENE
Martin L. Kasbohm and Harry J. Portner, Buffalo, Hartley C. Dellinger, Tonawanda, and Irving A. Cohen, Buffalo, N.Y., and Paul D. Fransson, St. Albans, W. Va., assignors to Union Carbide Corporation, a corporation of New York
Filed May 27, 1960, Ser. No. 32,251
19 Claims. (Cl. 260—679)



1. A process of producing acetylene from an in-gas containing a suitable hydrocarbon stock which comprises the steps of passing an in-gas containing hydrogen and said hydrocarbon stock in a molar ratio of between about 1 to 8 moles of hydrogen for each carbon atom of the hydrocarbon molecule through a heat transfer zone which has been heated to a suitable reaction temperature to form a heated reaction zone; reacting said in-gas in said heated reaction zone so as to convert at least part of said in-gas to acetylene; discharging the acetylene-containing off-gas from said heated reaction zone; cooling said off-gas to a temperature below about —120° F. at a pressure below about 3 atmospheres abeolute to remove condensable materials; contacting the cold gas stream with an adsorbent at a temperature below 32° F. to remove final amounts of condensable materials and at least some amounts of higher acetylenes and discharging the resultant gas stream from the adsorbent at a temperature below 32° F. so as to substantially prevent polymerization of the hydrocarbon impurities adsorbed therein; contacting the resultant gas stream at a temperature below about —120° F. and a pressure below about 2 atmospheres absolute with a solvent wherein said acetylene is selectively dissolved to separate said acetylene from said non-condensable materials; and recovering said acetylene from said solvent.

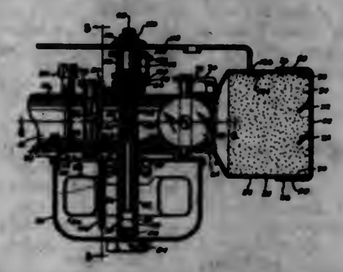
3,093,698
CARBURETOR
Wilmar W. Degenhardt, St. Louis, Mo., assignor to ACF Industries, Incorporated, New York, N.Y., a corporation of New Jersey
Filed Mar. 3, 1961, Ser. No. 93,177
1 Claim. (Cl. 261—41)

A carburetor for an internal combustion engine and comprising a bodly including a mixture conduit adapted to be horizontally disposed and having an inlet, an outlet and a venturi surface therebetween, a throttle valve in said outlet, a throttle shaft journaled in said body and secured to said throttle valve, a fuel bowl mounted on said carburetor body, means forming a tubular fuel passage extending from said body and terminating at one end in said bowl, a main fuel nozzle formed at the other end of said fuel passage means and projecting through said venturi surface into said mixture conduit, means forming in said one terminating end of said fuel passage a metering orifice, a movable metering tube extending through said mixture conduit and said nozzle and having a tapered end extending through said orifice to vary the flow area therethrough, an opening from said fuel bowl into said fuel passage means for the flow of fuel from said bowl upwardly through said nozzle, an idle fuel system including a fuel passage extending axially through said metering tube into a portion of said carburetor body above said mixture conduit, said metering tube having a port above said orifice connecting said axial fuel passage with said fuel passage means, said carburetor body portion having an idle fuel passage connected to said axial fuel passage and having an opening into said mixture conduit posterior



to said throttle valve, said metering tube having a second port connecting its axial fuel passage with said mixture conduit anterior to said throttle for bleeding air into said axial fuel passage, and mechanical means to actuate said throttle valve and metering tube simultaneously to variably proportion the fuel air mixture supplied to satisfy engine requirements at different speeds, said mechanical means comprising a spring biasing said metering tube in one direction, a control arm secured to said throtle shaft, and a cam on said control arm engaging the other end of said metering tube for moving said metering tube against said biasing spring.

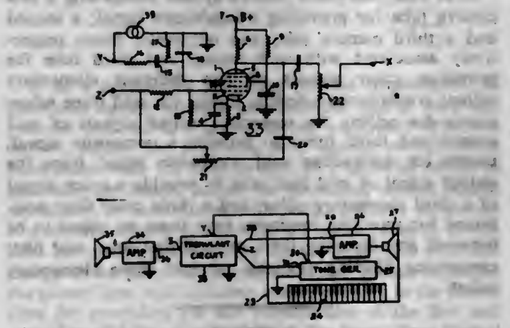
3,093,699
CARBURETOR
Roberts S. Demitz, University City, Mo., assignor to ACF Industries, Incorporated, New York, N.Y., a corporation of New Jersey
Filed Jan. 30, 1961, Ser. No. 85,665
5 Claims. (Cl. 261—65)



1. A carburetor for an internal combustion engine comprising a fuel reservoir, a substantially flat cover plate over the top of said fuel reservoir, a tube of uniform diameter forming a tubular mixture conduit, a portion of the outer surface of said tube being supported by the outer surface of said cover plate, a single bolt having one portion thereof extending from the bottom of said fuel reservoir through said cover plate and a second portion thereof extending through said tubular mixture conduit normal to the axis thereof, said bolt including means fixing said fuel reservoir said cover plate and said tube together, means formed in said outer cover plate surface to prevent relative movement between said cover plate and said tube about the axis of said bolt, said bolt having a fuel passage axially therethrough including a first port opening into said fuel reservoir and a second port opening into said mixture conduit, said second bolt portion having a substantially cylindrical surface forming restricted regions with the inner surface of said mixture conduit to provide a venturi effect for air passing through said conduit, and a throttle valve movably mounted within said mixture conduit adjacent to said restricted regions.

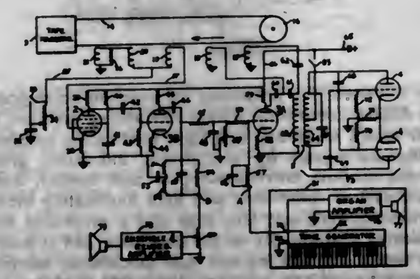
ELECTRICAL

3,093,700
ELECTRONIC TREMULANT SYSTEM
Thomas J. George, Los Angeles, Calif.
(11671 Victory Blvd., North Hollywood, Calif.)
Filed Sept. 21, 1959, Ser. No. 841,244
4 Claims. (Cl. 84—1.22)



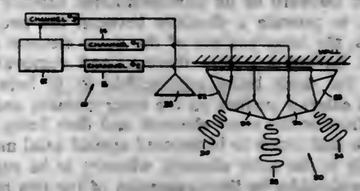
1. A tremulant circuit for musical instruments comprising an audio signal source, a vibrato oscillator signal source, a single stage variable gain amplifier having an output and first and second inputs for combining said audio signal and said vibrato oscillator signal to produce a discontinuous signal of opposite phase from said audio signal, means connecting said audio signal source to said first input, means connecting said vibrato oscillator source to said second input and a feed-forward path connecting said source of audio signals to the output of said variable gain amplifier without changing the phase of said audio signal, whereby said discontinuous signal and said audio signal are combined to produce a tremulant signal of desired characteristic.

3,093,701
ORGAN ENSEMBLE AND REVERBERATION SYSTEM
Thomas J. George, 11671 Victory Blvd., North Hollywood, Calif.
Filed July 17, 1959, Ser. No. 827,898
21 Claims. (Cl. 84—1.24)



11. In an electronic organ in which electrical signals are generated representing musical notes, means for creating artificial ensemble and reverberation effects including the combination of a first signal channel for reproducing directly electrical signals produced by the organ, a continuously movable recording medium, means for transporting the recording medium with velocities which continuously vary over a phase responsive range from a predetermined nominal velocity, a recording means positioned along the path of travel of the recording means and recording electrical signals derived from the organ with continuously varying phase changes, a plurality of pickup means positioned along the path of travel of the recording medium trailing the recording means, each of said pickup means generating an electrical signal representing the recorded signals on the recording means, said pickup means being spaced apart whereby the recorded signals passing adjacent thereto produce successively in each of the pickup means an electrical signal which is delayed with respect to the electrical signal applied to the recording means with variations in the velocity of transport of the recording medium producing additional and randomly varying phase changes in the electrical signals produced by each of the pickup means, the phase changes being random relative to each other, means coupled to the pickup means for combining selected relative amplitudes of the reproduced electrical signals to form a composite signal, means coupled to the signal combining means for applying the composite signal to the recording means whereby a reentrant loop is established within which the electrical signals circulate with both a delay and continuously variable phase shift being introduced with each passage of the electrical signals from the recording means to the recording medium and from the recording medium to each of the pickup means, a signal attenuator coupled to the reentrant loop for establishing the rate of attenuation of signals circulating within the loop, and a second signal channel coupled to the reentrant loop for reproducing the composite signal whereby artificial reverberation and ensemble effects are produced through a simultaneous reproduction of the composite signal and the electrical signal from the electronic organ.

3,093,702
MULTIPLE ZONE STEREOPHONIC EFFECT FOR ELECTRIC ORGANS
Alan C. Young, Des Plaines, Ill., assignor to Hammond Organ Company, Chicago, Ill., a corporation of Delaware
Filed Sept. 23, 1960, Ser. No. 57,973
1 Claim. (Cl. 84—1.24)



In an electric organ system having means for providing a bass signal together with a pair of phase displaced related signals of a mutually substantially identical audio

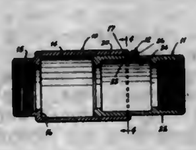
frequency range and of higher frequency range than said bass signal and characterized by having a high order of directionality as compared with said bass signal, said bass signal and said pair of higher frequency range signals together covering at least the major portion of audible frequency spectrum, the improvement comprising at least one speaker connected for reproducing said bass signal, four other mutually substantially identical speakers arranged in pairs with means connecting one of said pair of directional signals to both of the speakers of one of the speaker pairs, and means connecting the other of said pair of directional signals to both speakers of the other speaker pair, whereby the signals fed to one speaker pair are out of phase with the signals fed to the other speaker pair, said four other speakers being arranged so that one speaker in each of said pairs is between the two speakers of the other of said pairs, and with all of said four speakers being arranged in a substantially horizontal plane with the axial line of each of said four speakers intersecting the axial line of each of the other three of said four speakers, said axis intersections occurring behind the speakers.

3,093,703

EXPANSION FITTING FOR ELECTRICAL CONDUITS

Marshall G. Zavertnik, St. Louis, Mo., assignor to Killark Electric Manufacturing Company, St. Louis, Mo., a corporation of Missouri

Filed Nov. 7, 1960, Ser. No. 67,824
4 Claims. (Cl. 174—86)



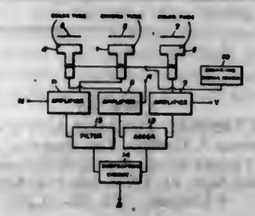
1. An expansion fitting comprising two elements, one telescoped within the other, and a spring clip for holding them in assembled relationship, each element being tubular and having connecting means at its outer end whereby it may be attached to a conduit or the like, the outer element having an interior bearing surface and the inner element having an exterior bearing surface complementary to the said interior surface, the interior surface on the outer element having a greater axial length than the outer surface of the inner element, whereby the said surfaces may remain in engagement during telescoping of the two elements with respect to each other, the two surfaces having a close fit and the surface on the outer element having a sufficient length to inhibit the formation of flame paths, from inside the elements to the outside thereof, the inner element being reduced in diameter outward of its aforementioned exterior bearing surface, to provide a shoulder between the two surface portions, the inner surface of the outer element adjacent its end having a recess therein; and removable stop means, the same being contractible to fit between the reduced exterior surface on the inner element and the inner surface on the outer element, and then being expandable into said recess to be secured against axial movement relatively to the outer element, whereby to be engageable with the shoulder to limit extension of the two telescopic elements, and the said retaining means having resilient and firm engagement with both elements to establish electrical contact from one element to the other.

3,093,704

COLOR TELEVISION CAMERA SYSTEMS

Henri Georges de France, Paris, France, assignor to Compagnie Francaise de Television, a corporation of France

Filed Oct. 22, 1958, Ser. No. 768,906
Claims priority, application France Nov. 5, 1957
5 Claims. (Cl. 178—5.4)



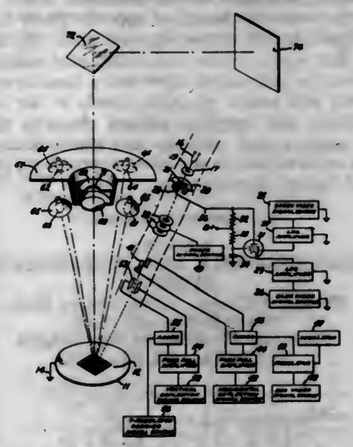
1. A color television camera system comprising a first camera tube for providing a luminance signal; a second and a third camera tube and chromatic filters respectively associated with said second and third tube for providing color signals of two different elementary colors; synchronous scanning means for said three tubes; means for adding the respective output signals of said second and third tubes to provide a composite signal; means for subtracting said composite signal from the output signal of said first tube to provide a color signal of a third elementary color; and a three color filter positioned for receiving luminous rays from an object to be televised and directing them on said first tube, said filter comprising filtering elements of said three elementary colors.

3,093,705

PROJECTING SYSTEM

William E. Glenn, Jr., Scotia, N.Y., assignor to General Electric Company, a corporation of New York

Filed Aug. 1, 1961, Ser. No. 128,944
11 Claims. (Cl. 178—5.4)



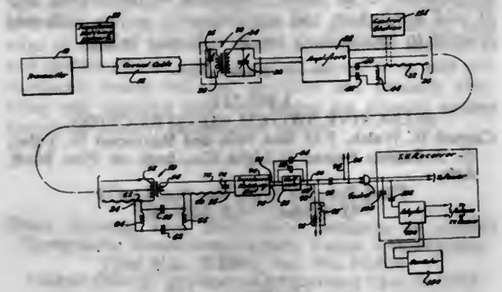
3. A system for projecting information corresponding to a display comprising a light modulating medium, electrical means subjecting said light modulating medium to intelligence signals for establishing diffraction gratings on said medium corresponding to said display, and an optical system comprising said light modulating medium, a projection lens and lens stop and a projection screen all located substantially on the same axis, and at least one light source illuminating said light modulating medium at an angle to said axis, said lens stop acting to obstruct zero order light from said light source.

3,093,706

TELEVISION SYSTEM

Walter J. Karplus, Los Angeles, Calif., assignor, by mesne assignments, to Electronic Measurement Systems, Inc., Newbury Park, Calif., a corporation of Delaware

Filed Feb. 25, 1958, Ser. No. 717,495
19 Claims. (Cl. 178—5.6)



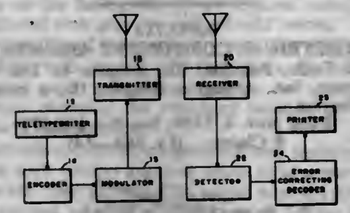
1. In a system for providing for the transmission of television signals between a transmitter and at least one receiver disposed in a house having a plurality of power outlets, means for providing first signals modulated in accordance with the light pattern of a pictorial image to represent the image, means for providing second signals modulated in accordance with audio patterns at successive instants of time to represent the audio patterns, power lines for receiving alternating signals to provide electrical energy at the power outlets in the house, means including the power lines and including means coupled to the power lines for providing for the transmission of the first and second modulating signals through the power lines toward the receiver along at least part of the path between the transmitter and the receiver, and means in the house for providing for the introduction of only the modulating signals to the receiver for the production of light images and sounds corresponding to the modulations in the first and second signals.

3,093,707

DATA TRANSMISSION SYSTEMS

Madison G. Nicholson, Jr., deceased, late of Snyder, N.Y., by Katherine C. Nicholson, executrix, Snyder, N.Y., and Robert A. Smith, Eggertsville, N.Y., assignors to Sylvania Electric Products Inc., a corporation of Delaware

Filed Sept. 24, 1959, Ser. No. 842,549
15 Claims. (Cl. 178—23)



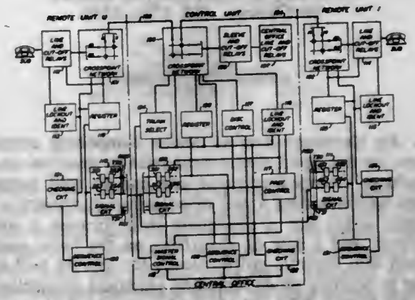
4. A teletypewriter communication system comprising: a teletypewriter adapted to represent alpha-numeric characters in a series of binary coded electric impulses; an encoder for said pulses; said encoder including a multistage shifting register having feedback and control connections adapted to produce a sequence of electric impulses including said series of pulses followed by further pulses representing sum-modulo-two addition of selected pulses within said series; a decoder for said sequence of electric pulses; said decoder including means for verifying individual pulses within said sequence by comparison with every other pulse of said sequence and means for converting groups of said verified pulses to teletypewriter printing impulses.

3,093,708

TELEPHONE LINE CONCENTRATOR SYSTEM

Myron E. Krom, Columbus, Ohio, assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Mar. 29, 1961, Ser. No. 99,078
18 Claims. (Cl. 179—18)



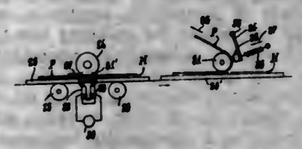
1. A universal telephone line concentrator system including a first and second plurality of lines, a telephone central office, first and second concentrator units remote from said office and from each other, a first group of trunks less in number than said first plurality of lines extending from said central office to said first remote concentrator unit, a second group of trunks less in number than said second plurality of lines extending from said central office to said second remote concentrator unit, switching means in said concentrator units for connecting said lines to said trunks under control of said central office, a control unit at said central office for coupling said trunks to said office, means in said control unit for governing said remote units on a space division basis including means effective upon the simultaneous occurrence of originating calls at both of said remote concentrator units for denying access to said control unit by a less preferred one of said remote units, and additional means in said control unit responsive to the simultaneous seizure of said control unit by both of said remote units for severing the connection to said less preferred unit.

3,093,709

APPARATUS FOR PRINTING MAGNETIC SOUND RECORD PROVIDED WITH A DEVICE FOR THE INSPECTION OF THE INTENSITY OF PRINTED MAGNETIC SOUND RECORD

Yasushi Hoshino, 462 1-chome, Tamagawa-Okusawa-cho, Setagaya-ku; Masaoru Namikawa, 664 Kugahara-cho, Ota-ku; and Shigeno Tochihara, 531 Matsunoki-Jyutaku, Matsunoki-cho, Suginami-ku, all of Tokyo, Japan

Filed Jan. 20, 1960, Ser. No. 3,615
Claims priority, application Japan Jan. 27, 1959
3 Claims. (Cl. 179—100.2)



1. Apparatus for printing a plurality of sheets from a master sheet having a recorded signal thereon in a determinable zone, said apparatus comprising: means for recording a reference signal of determinable intensity on

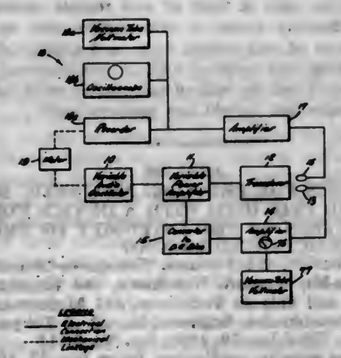
said master sheet in a zone external of the first said zone, means for printing said signals on said sheets from the master sheet and means for measuring said reference signal on said plurality of sheets to determine the intensity thereof.

3,093,710
PIEZOELECTRIC ELECTROMECHANICAL TRANSDUCER
Robert R. Ten Eyck, Metuchen, N.J., assignor to Gulton Industries, Inc., Metuchen, N.J., a corporation of New Jersey
Filed July 6, 1959, Ser. No. 825,361
16 Claims. (Cl. 179—110)



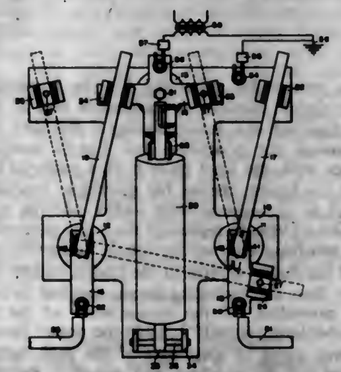
1. An electromechanical device comprising mounting means, an elongated electromechanically sensitive ceramic transducer clamped adjacent one end to said mounting means and including a pair of polarized piezoelectric thin ceramic strips and a conductor strip forming a unitary sandwich and a pair of electrodes on the outer surfaces of said thin ceramic strips, means for driving said transducer in bending mode including electrical connections to said conductor strip and electrodes, mechanical operating means connected to the free end of said transducer for operation thereby, and means on and adjacent to the free end of the transducer for damping the same to provide a substantially flat frequency response over the audible range.

3,093,711
TESTING MICROPHONES
Frank A. Comerci, Stamford, Conn., and Michel Copel, Huntington Station, and Eliseo V. Oliveros, Forest Hills, N.Y., assignors to the United States of America as represented by the Secretary of the Navy
Filed Jan. 25, 1961, Ser. No. 84,963
2 Claims. (Cl. 179—175.1)
(Granted under Title 35, U.S. Code (1952), sec. 266)



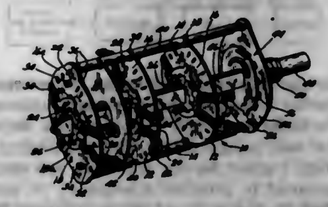
1. An apparatus for use in testing a close talking microphone comprising a source of swept audio frequency sinusoidal power of controllable amplitude, an element energizable by said source for radiating into the atmosphere swept-frequency substantially sinusoidal acoustic wave energy in a spatial sound distribution in the immediate vicinity thereof simulating that in the immediate vicinity of a human mouth when speaking, said radiating element including a substantially hemispherical dish-shaped member having a central opening through the wall thereof for passing said acoustic wave energy, acoustic sensing means having substantially linear response in the audio band for continuously monitoring the amplitude of the acoustic wave energy at a position contiguous with the opening in said hemispherical member and in the direct radiation field of said element, means coupled to said acoustic sensing means and to said source of power to maintain the amplitude of the acoustic wave energy at said position substantially constant over said frequency band, and means for supporting a close-talking microphone to be tested proximate to the convex side of said hemisphere and approximately in line with said opening to approximate use by a human being.

3,093,712
SELECTIVE SWITCH CONSTRUCTION
Carroll H. Walsh, P.O. Box 982, and Raymond W. Toler, % Arkansas Power & Light Co., both of Pine Bluff, Ark.
Filed Feb. 29, 1960, Ser. No. 11,672
12 Claims. (Cl. 200—6)



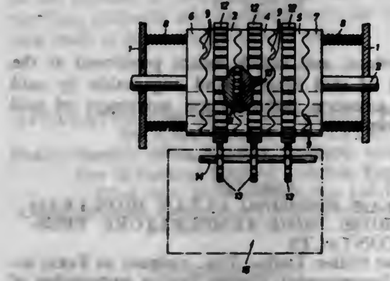
12. In a selective switch construction, spaced insulated first and second line terminals, a first load contact mounted in spaced insulated relationship with the first line terminal and a second load contact mounted in spaced insulated relationship with the second line terminal, a removably mounted first switch member and a removably and rotatably mounted second switch member hinged respectively at said first and second line terminals, said members being swingably movable respectively to connect said first line terminal to said first load contact and said second line terminal to said second load contact, and means responsive to sequential swingable and rotary movement of said second switch member for bridging said line terminals.

3,093,713
ELECTRICAL COMPONENT ASSEMBLY
Hugh S. Eadie, Palatine, Ill., assignor to The Grigsby Company, Inc., Arlington Heights, Ill., a corporation of Delaware
Filed Nov. 6, 1959, Ser. No. 851,372
9 Claims. (Cl. 200—14)



1. An electrical component assembly comprising a plurality of elongate apertured strut means disposed in generally parallel spaced relationship, a plurality of electrical components supported in said assembly in spaced relationship, each component including substantially flat web means of insulation material disposed between said strut means and an associated rotary portion mounted thereon; and means for rigidly supporting said web means transversely between said strut means comprising protuberance means extending outwardly from said web means adjacent said strut means, said strut means having apertures adapted to snugly receive the corresponding protuberance means, and struck-out portions along each edge of each of said strut means immediately adjacent to one surface of said web means but spaced from said protuberance means and said apertures and partially overlying and engaging said web means for support against movement relative to said strut means.

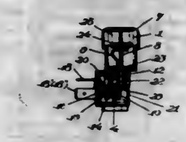
3,093,714
PERMUTATION SWITCH
Sture Nyberg, Zug, Switzerland, assignor to Anstalt Europaische Handelsgesellschaft, Vaduz, Liechtenstein
Filed Mar. 7, 1961, Ser. No. 94,006
Claims priority, application Switzerland Mar. 8, 1960
4 Claims. (Cl. 200—43)



4. A permutation switch comprising:
a supporting shaft,
at least three rotors rotatably mounted side by side and axially slidable on said shaft,
coacting wiping contacts on the sides of said rotors facing each other,
said facing sides of adjacent rotors being provided with intermeshing serrations,
resilient means acting on said rotors for yieldingly holding them in axially converged relation in which the serrations of adjacent rotors are in intermeshing engagement and in which at least one of said contacts, on one rotor, may engage at least one of said contacts on the facing side of an adjacent rotor,
a peripheral ring gear on each of said rotors,
and a plurality of independently rotatable pinions, each meshing with one of said ring gears, for selectively rotating said rotors one relative to another and thereby changing the switching position of at least some of said contacts,
said serrations defining cooperating cam surfaces which upon such relative rotation cause axial separation of adjacent relatively rotating rotors whereby to reduce the contact pressure of said coacting wiping contacts as their switching positions are changed.

3,093,715
WATERTIGHT DIMMER SWITCH
Yuichiro Kaneko, Aichi-ken, Japan, assignor to Kabushiki Kaisha Tokai Rika Denki Seisakusho, Aichi-ken, Japan
Filed May 29, 1961, Ser. No. 113,436
Claims priority, application Japan May 30, 1960
7 Claims. (Cl. 200—67)

1. A watertight dimmer switch comprising a casing having a cylindrical portion, a helical spring accommodated within said cylindrical portion, a cap covering said cylindrical portion and biased upwardly by said spring, means defining a switch operating chamber, means defining a switch contacting chamber and a switch operating chamber below said cylindrical portion, a partition having a bearing opening and separating said switch operating chamber and said switch contacting chamber, an operating rod rotatable in the partition bearing opening, a converting plate affixed to said operating rod for rotation



therewith and connected to said cap for rotation when said cap is moved against the biasing force of said spring, said converting plate being located in said switch operating chamber, an O-shaped packing ring surrounding said partition hole, said contact plate being mounted on said rod for rotation therewith, and a lid plate having stationary contacts and terminals attached to said housing with said contacts located in the path of movement of said contact plate.

3,093,716
SNAP ACTION SWITCH
Charles Horowitz, Chicago, Ill., assignor to Berg Airlectro Products Co., Chicago, Ill., a corporation of Illinois
Filed Jan. 23, 1961, Ser. No. 84,151
10 Claims. (Cl. 200—83)



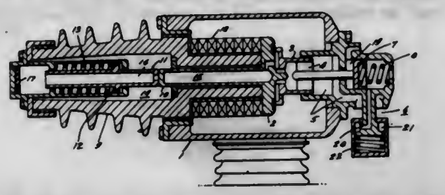
1. In a switch, a housing, a chamber in said housing, a pair of spaced terminals extending through a wall of said housing and having contact portions spacedly positioned within said chamber, a diaphragm dividing said chamber, a contact member in engagement with said diaphragm, yielding means in said chamber and positioned to hold said diaphrgam and contact member away from said terminal portions, passage means positioned to deliver fluid pressure against said diaphragm on the side thereof opposite from that opposed to said terminal portions, a circular seat formed in said chamber and positioned to receive a central portion of said diaphragm thereagainst in response to the action of said yielding means, said seat being surrounded by an annular segment of said chamber, said means for delivering fluid pressure to said diaphragm comprising a passage communicating with said annular chamber segment, a well formed within said circular seat, a passage formed in said circular seat and positioned to place said well in communication with said annular chamber segment and check valve means positioned to permit passage of pressure from said well to said annular chamber segment and to prevent passage of fluid pressure from said annular chamber segment to said well.

3,093,717

AIR BLAST CIRCUIT BREAKER HAVING A SERIES CONNECTED BREAKING GAP IN A BUSHING

Haakon Forwald, Ludvika, Sweden, assignor to Allmanna Svenska Elektriska Aktiebolaget, Vasteras, Sweden, a Swedish corporation

Filed Feb. 23, 1961, Ser. No. 91,209
Claims priority, application Sweden Feb. 25, 1960
2 Claims. (Cl. 200—145)



1. In an air blast circuit breaker, a conductive compressed air container connected to a source of compressed air, a first pair of contacts, a second pair of contacts and an insulating bushing; said insulating bushing entering said compressed air container and having one of said first pair of contacts secured to the end thereof within said compressed air container; the other contact of said first pair of contacts being connected to said compressed air container and having an outlet channel therethrough, means mounted on said other contact for closing said outlet channel from the container in the closed position of the first pair of contacts; a cavity within said insulating bushing; said second pair of contacts being contained within said cavity in said insulating bushing and being connected in series with said first pair of contacts, first means for connecting the cavity in the closed position of the first pair of contacts, with the open air to close said second pair of contacts, said first connecting means including a permanently open connecting channel between said cavity and said outlet channel, said connecting means in the open position of said first pair of contacts connecting said cavity with the container through said connecting channel to open said second pair of contacts, and second means responsive to the opening of said second pair of contacts to connect said cavity with the open air independently of said outlet channels.

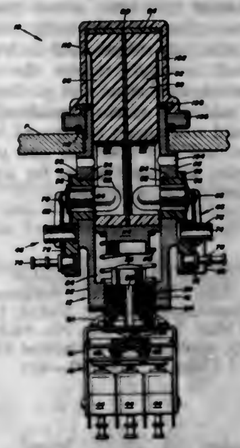
3,093,718

INDICATING PUSH BUTTON TYPE SIGNAL LIGHT ASSEMBLY

Arthur G. Blomquist and Willis F. Heine, Minneapolis, Minn., assignors to Northern Ordnance, Incorporated, Fridley, Minn., a corporation of Minnesota

Filed Sept. 21, 1960, Ser. No. 57,437
5 Claims. (Cl. 200—167)

1. An indicating push button switch device, comprising, a housing structure, a biased plunger positioned in said housing extending from one end thereof and terminating short of opposite end thereof, said plunger having a longitudinal opaque baffle plate to divide said plunger into a plurality of longitudinally extending sections, each section of said plunger having independent illumination transmitting characteristics throughout the length thereof for segregation of the illumination in the respective section of said plunger from adjacent sections of said plunger all the way from one end of said plunger to the opposite end thereof, each section of said plunger having at least one longitudinally extending slot provided in the peripheral surface thereof, an insulation receptacle assembly mounted on said housing adjacent each slot of each section of said plunger, each said receptacle assembly having a pair of spaced terminals and a lamp positioned in each slot of each section of said plunger for illumination of the respective section throughout its length independent of said other sections of said plunger, whereby a plurality of independent illuminated sections of the plunger are obtained for signalling a plurality of independent functions, and switch means positioned at the opposite end of said housing and engageable by said plunger for actuation thereof upon movement of said plunger theretowards.

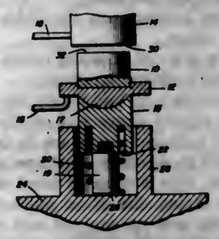


3,093,719

METHOD OF FORMING CLEAN IRON-LEAD TELLURIDE HIGH TEMPERATURE PRESSURE CONTACTS

Donald Piguet Miller, Dallas, Tex., assignor to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware

Filed Apr. 7, 1961, Ser. No. 101,565
7 Claims. (Cl. 219—9.5)



1. The method of cleaning and bonding the contacting faces of a metal contact electrode and an electrical conductor of thermoelectric material, which includes the steps of, positioning the contacting faces in closely spaced relation, cleaning the contacting face of the electrical conductor in a vacuum by heat radiating from the contact electrode to sublime a small amount of material from the contacting face of the electrical conductor, and pressing the contacting faces together while maintaining the vacuum to bond the faces together by heat provided by the contact electrode.

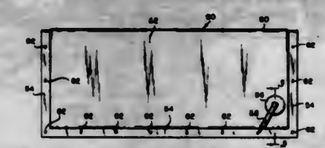
3,093,720

ELECTRICAL PAD HEATERS

Malcolm W. Patrick, Bedford, Ohio, assignor to Hupp Corporation, Cleveland, Ohio, a corporation of Virginia

Filed Aug. 22, 1961, Ser. No. 133,242
1 Claim. (Cl. 219—19)

A weatherproof electrical pad heater comprising a flat grid of resistance wire arranged in a series of side-by-side lengths connected by U-bends, a pair of plastic sheets adhesively secured together to enclose said grid, an outer rigid metal housing comprising a metal sheet having a central flat section surrounded by marginal flanges offset from the plane of said central section, said central flat section being slightly more than twice the width of said plastic sheets and slightly longer than said plastic sheets, said metal sheet being folded double in surrounding relation with said plastic sheets to form a rigid envelope, said flanges being disposed outwardly beyond the marginal edges of said plastic sheets and being sealingly secured together in waterproof relation, electrical leads extending through one of said plastic sheets and a portion of said flat section connecting said resistance wire to the exterior of said envelope, a tube rigid with said envelope enclosing said electrical leads and means sealing said leads at the entrance to said tube.

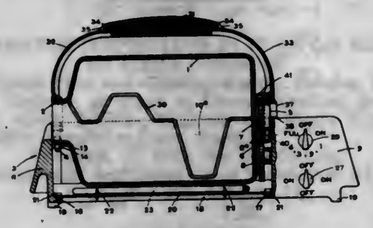


3,093,721

APPARATUS FOR HEATING LIQUID, POWDERED OR GRANULAR MATERIAL

Dennis Stanley Silver, London, England, assignor to Farrow & Jackson Limited, London, England

Filed Sept. 26, 1961, Ser. No. 140,711
Claims priority, application Great Britain May 11, 1961
8 Claims. (Cl. 219—19)



1. Apparatus for heating liquid, powdered and granular material including in combination, a transparent bottle open substantially coaxially at one end and closed at its opposite end, rotatable means providing a bed for supporting said bottle in a substantially horizontal position and for rotating said bottle about its axis, a projection on the closed end of the bottle carrying drive means engaged by said rotatable means, a base supporting said rotatable means, means, relatively to which said bottle rotates, for heating the contents of said bottle, and a stirring device inside said bottle for stirring the contents by virtue of the rotation of said bottle.

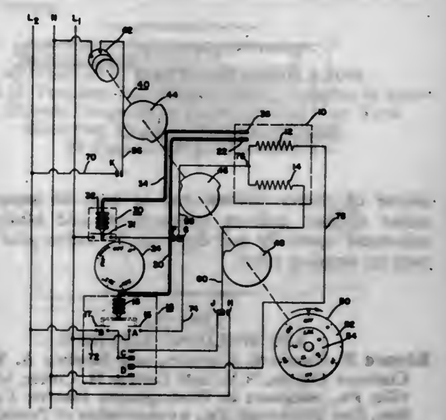
3,093,722

DOMESTIC HEATING APPLIANCE

George W. Schauer, Jr., Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Continuation of application Ser. No. 39,546, June 29, 1960. This application Feb. 23, 1962, Ser. No. 176,860
11 Claims. (Cl. 219—20)

11. In combination with an oven, a control for oven heating means in a low temperature roasting circuit comprising, first cycling switch means in series with said heating means, said first cycling switch means preset to cycle said heating means at a fixed predetermined temperature in said oven and calibrated to respond accurately to low temperatures in said oven, second cycling switch means in series with said heating means and in parallel with said first cycling switch means, said second cycling switch means calibrated to respond accurately to high temperatures in said oven, and timing means for selectively placing one of said switch means in control relationship with said heating means.

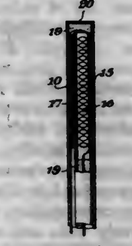


3,093,723

ELECTRICALLY HEATED SOLDERING IRONS

Robert Alfred Adamson, 35 Courtfield Rise, West Wickham, Kent, England

Filed Mar. 20, 1961, Ser. No. 96,744
Claims priority, application Great Britain Mar. 21, 1960
8 Claims. (Cl. 219—26)



1. An electrically heated soldering iron comprising a tubular metal body carried by a handle, a soldering tool at the end of said body, a helical heater element wire in said body and located within individual electrically insulating sleeving, the overall cross sectional area of the sleeving being less than the internal cross sectional area of the body tube so that a free space is provided between the sleeving and body, metal heat shunt packing within said body between the sleeving and body tube, said packing wedging the said sleeving within and directly into the contact with the body tube.

3,093,724

ELECTRIC HAIR SINGEING DEVICE

Grady L. Johnson, 619 W. Howard Ave., Decatur, Ga.

Filed Nov. 3, 1961, Ser. No. 149,948
2 Claims. (Cl. 219—29)

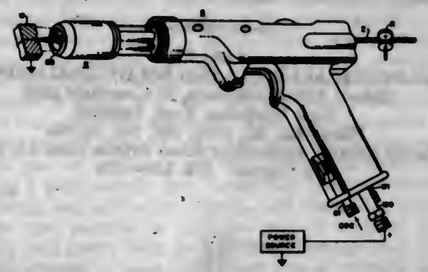
1. An electric hair singeing device comprising an elongated head provided with two sets of tapered comb teeth, said sets being spaced apart from each other by a longitudinal slot of said head, and a longitudinal wire blade located within said slot, the teeth of each set being of

gradually increasing thickness towards their root ends due to their taper, said head being of electric non-conducting fireproof material, said blade being of electric conducting material and adapted to be connected to a



source of electric current and to have its temperature raised to hair singeing temperature, said blade being adjustable upwardly and downwardly within said slot to vary its singeing effect.

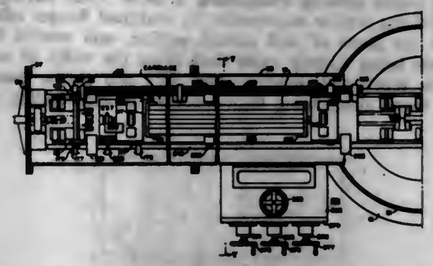
3,093,725
ARC WELDING METHOD
Edward R. Gamberg, Clarence, and Stephen A. Yaczko, Clarence Center, N.Y., and George H. Cotter, Monroeville, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed May 23, 1961, Ser. No. 112,069
1 Claim. (Cl. 219—74)



The method of arc welding work with a consumable electrode which comprises firing an arc between said electrode and said work, advancing said electrode into said arc to be progressively melted thereby, and shielding said arc in a shield predominately of carbon dioxide gas, the said method being characterized in that the electrode is of generally rectangular cross-section whereby the weld bead deposited is relatively wide and of moderate penetration.

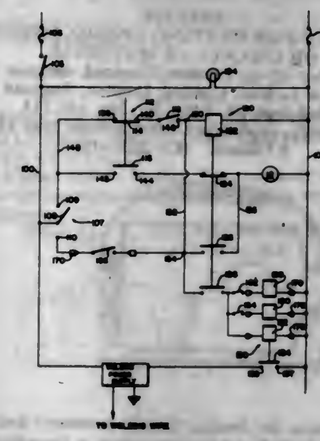
3,093,726
ELECTRON BEAM WELDING APPARATUS
George Burton, Jr., Pittsburgh, David Rosner, McKeesport, John G. Landkroin, Irwin, and Richard L. Machett, Pittsburgh, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Sept. 30, 1960, Ser. No. 59,723
11 Claims. (Cl. 219—117)

1. Electron beam welding apparatus for welding work over a substantial length in a predetermined direction comprising means for producing a concentrated electron beam having a focal point along its axis, work holding means for holding said work, said work holding means including work mounting means for mounting said work at at least two regions of said work spaced along said direction, and work positioning means adjacent said beam for positioning said work relative to said focal point and including first means for engaging said holding means to move said mounting means so that one of said regions moves along said axis, second means for engaging said holding means to move said mounting means so that said other of said regions moves along said axis, and third



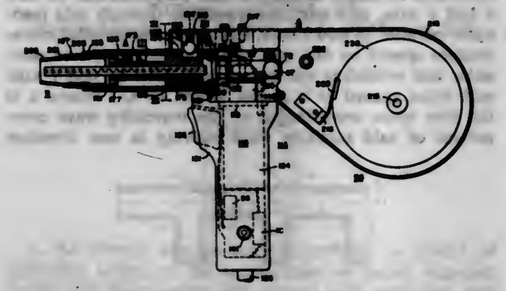
means for rotating said work about the line between said regions.

3,093,727
ELECTRIC WELDING APPARATUS AND CONTROL SYSTEM
Robert R. Leaming, Rahway, N.J., assignor to Metal & Thermit Corporation, Woodbridge Township, N.J., a corporation of New Jersey
Filed July 9, 1959, Ser. No. 826,022
6 Claims. (Cl. 219—130)



1. An electrical welding apparatus and system adapted to be used selectively for either automatic or semi-automatic welding operation, comprising electric motor means for feeding an elongated welding material to a workpiece; an electrical circuit for said motor means and an electrical circuit connecting said welding material to a source of electrical power; electrical control means selectively operable to a first condition for automatic welding operation in series with an "inch" switch, said "inch" switch being connected to electrical power only when said control means is in said first condition; said "inch" switch being movable to a first position in which it closes the electrical circuit of the motor means and opens the electrical circuit of the welding material to thereby permit "cold inching" of the welding material; said "inch" switch being movable to a second position in which it concurrently closes the electrical circuits of both said motor means and of said welding material; said electrical control means being selectively operable to a second condition for semi-automatic operation in which said control means is in circuit with a switch on a welding gun, whereby operation of the switch on the welding gun is effective to concurrently complete the electrical circuits of both said motor means and of said welding material.

3,093,728
ARC WELDING GUN
Floyd E. Adamson, Kenmore, N.Y., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Mar. 17, 1961, Ser. No. 96,526
11 Claims. (Cl. 219—130)



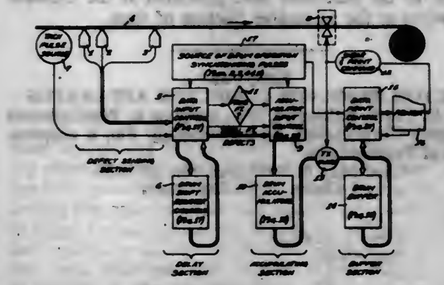
1. A gun for arc welding work in a shield of gas comprising a gun body from which a barrel extends, said barrel terminating in resilient fingers, and a gas nozzle readily removably and adjustably secured by said fingers, said nozzle extending internally into said barrel in a direction upstream with respect to said gas so as to expand outwardly with respect to said barrel when heated by said arc, said nozzle extending a substantial distance beyond the region on said barrel from which said fingers extend and hugging the contiguous internal surface of said barrel closely, so as to suppress the flow of air into said gas stream through the spaces between said fingers.

3,093,729
APPARATUS FOR ACTING IN TURN ON SHEETS IN A PILE THEREOF
Peter Ralph Price and Geoffrey Buckle, Debden, Loughton, England, assignors to George Edmond Brackenbury Abell, London, England, and Henry Loveridge Chaddor, Loughton, Essex, England
Filed Jan. 28, 1958, Ser. No. 711,641
Claims priority, application Great Britain Jan. 30, 1957
3 Claims. (Cl. 235—61.11)



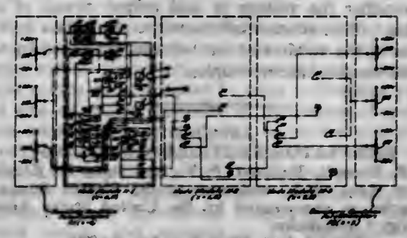
1. In apparatus for examining a stack of documents held together at one zone and free of each other at portions, the combination of mechanism operating in successive cycles to separate said portions of the documents successively in turn, and including counting mechanism for the documents and document-sensing means responsive, when operative, to a predetermined property of a document to provide a signal; said mechanism including suction-separator means, separation-increasing means, and a control for said document-sensing means; said suction-separator means having a rotatable part for location opposite the free portions of the documents of the stack and for actuation during each cycle of the mechanism to initiate separation of the documents; said separation-increasing means functioning to the extent of increasing separation of the portions by said separator means to enable sensing of the documents by the document-sensing means at a predetermined point in the cycle and being operable orbitally in a path which passes between the initial position of separation of the portions from the stack and the axis of said rotatable part, said path being also around and eccentric with respect to the said axis of said rotatable part; and said control rendering said document-sensing means operative at the predetermined point in the cycle at which the separated portion lies adjacent the document-sensing means.

3,093,730
AUTOMATIC DATA ACCUMULATOR
Charles H. Prepster, Jr., Phoenix, Ariz., assignor to General Electric Company, a corporation of New York
Filed Oct. 27, 1959, Ser. No. 849,002
10 Claims. (Cl. 235—151)



1. A system for accumulating inspection data as items are being conveyed along an inspection line comprising: means for conveying said items along said line; a plurality of inspecting means placed along said line for providing inspection data, a given inspecting means being displaced a predetermined number of linear units of measure from a point of reference at the end of said line; a plurality of accumulators, at least one for each inspecting means; a plurality of shift registers, each coupling a given inspecting means to an associated accumulator, a given shift register having a shift control means and a plurality of stages equal in number to the number of linear units of measure that its associated inspecting means is displaced from said point of reference; and a means for synchronizing the translation of inspection data through said shift registers with the conveyance of said items along said line, said synchronizing means including a shift pulse generator controlled by the means for conveying said items along said line to generate one shift pulse for each linear unit of measure that said given item is conveyed along said line and means for coupling shift pulses to the shift control means of each shift register.

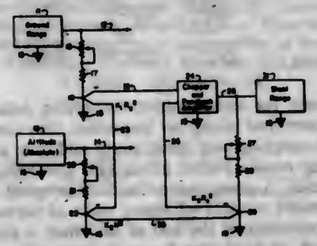
3,093,731
TRANSIENT FIELD SIMULATOR
Walter J. Karplus, 7450 Palo Vista Drive, Los Angeles 46, Calif.
Filed Sept. 10, 1959, Ser. No. 839,160
22 Claims. (Cl. 235—185)



1. A computer for solving transient field problems, including, a plurality of node modules for simulating the characteristics of points in the field, each of said node modules including a number of circuit nodes representing

the characteristics of a point in the field at successive time epochs, adjustable circuit means coupled to said circuit nodes of some of said node modules for introducing electrical signals representing boundary conditions, and adjustable means selectively interconnecting said circuit nodes in each of said node modules with one another and with the circuit nodes in the other of said modules and with the adjustable circuit means representing the boundary conditions in accordance with the requirements of particular field problems to obtain variations in the electrical signals at the circuit nodes at successive discrete intervals of time in representation of the solution of the particular field problems at the different field points at the successive instants of time.

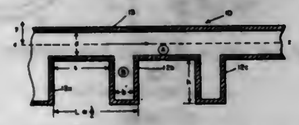
3,093,732
VECTOR RESOLVER COMPUTER APPARATUS
James O. Clark, Baltimore, Md., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed May 6, 1957, Ser. No. 657,388
1 Claim. (Cl. 235—189)



Computer apparatus comprising a pair of input analogue circuits which are adapted to have impressed thereon input analogue signals representing respective quadrature vector quantities, first and second thermocouples thermally disassociated from each other and energized, respectively, by said pair of input circuits for independently generating direct current voltages which are respective linear functions of the squares of the current in the respective input circuits, amplifier means having an input circuit and an output circuit, a third thermocouple operatively associated with the output circuit of said amplifier and thermally disassociated from said first and second thermocouples and responsive to the signal in the output circuit of said amplifier to generate a direct current feedback voltage proportional in amplitude to the square of the amplitude of the output of said amplifier, said first and second thermocouples being connected in a series circuit including the input circuit of said amplifier and said third thermocouple, said first and second thermocouples being poled so that their voltages add in opposition to the voltage generated by said third thermocouple, whereby for the null condition of said input circuit of said amplifier the voltage in said output circuit of said amplifier will be substantially equal to the square root of the sum of the squares of the voltages generated by said first and second thermocouples.

3,093,733
RESONATOR PARTICLE SEPARATOR
John P. Blewett, Bellport, N.Y., and John D. Kissling, River Edge, N.J., assignors to the United States of America as represented by the United States Atomic Energy Commission
Filed July 8, 1960, Ser. No. 41,706
3 Claims. (Cl. 250—41.9)

1. A TE mode wave guide standing wave resonator for removing an unwanted charged particle from a mixture of sub-atomic and nuclear particles of equal momentum and different masses and velocities having energies of 1 b.e.v. and above passing through said resonator by deflecting continuously the unwanted particle in the same direction transverse to its path through said resonator comprising, conductive walls forming a rectangular cross section along x and y mutually perpendicular axes and extending in length along a z axis perpendicular to said x and y axes, said particles travelling through said resonator parallel to said z axis, stubs with rectangular cross-sections spaced on one wall along the length of said resonator and extending out in length parallel to said y axis, said stubs spaced at a repeat length of $\lambda/2$ where λ is the free space wave length of the travelling wave component of said standing wave moving in one direction

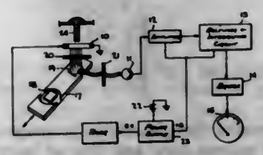


down the length of said resonator in the same direction as and at a velocity identical to the velocity of said unwanted particle along its path in said resonator, and the dimensions of said wave guide resonator being in accordance with the relation

$$\frac{4h}{\lambda}\sqrt{1-k^2}=1-\frac{\Delta f}{f_c}\frac{(2s/\lambda)(1-2s/\lambda)}{(2d/\lambda)\sqrt{(1-k^2)}}$$

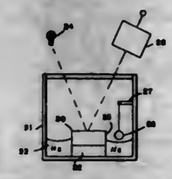
where h is the length of said stubs, k is the ratio f'_c/f_c, f'_c is the cut-off frequency of said stubs, f_c is the cut-off frequency of said wave guide, f is the frequency of said standing wave, Δf is $(f-f_c)$, s is the distance between stubs measured parallel to said z axis and d is the internal width of said wave guide measured along said y axis to establish said standing wave.

3,093,734
RADIATION DOSIMETER READER
Richard Just, Flushing, N.Y., assignor to Specialty Engineering & Electronics Company, Brooklyn, N.Y., a partnership composed of Herman Soudov, Theodore Soudov, Max Corriel, and H. Russell Cranmer
Filed Sept. 22, 1958, Ser. No. 762,466
8 Claims. (Cl. 250—71.5)



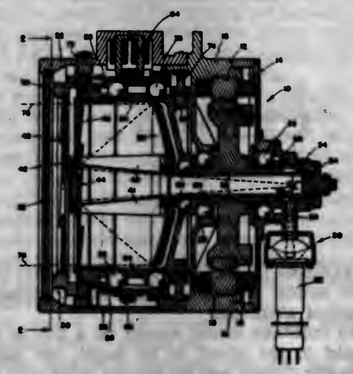
1. A portable radiation dosimeter reader for accurately computing and indicating the total amount of radiation to which a test detector has been subjected comprising means energized from a battery source periodically to generate ultraviolet light pulses at a relatively slow rate, a standard detector subjected to a predetermined level of radiation, a loading mechanism for selectively exposing said standard detector and said test detector to said ultraviolet pulses to cause the exposed detector to luminesce with an intensity proportional to the radiation accumulated therein, photomultiplier means responsive to the luminescence from the exposed detector to generate a pulsatory voltage proportional thereto, means to integrate said pulsatory voltage to provide a measuring voltage, means to indicate the measuring voltage, and means to calibrate said indication means in accordance with the level of said standard detector whereby accurate readings may be had for said test detector.

3,093,735
ENERGY STORAGE DEVICE
Charles H. Blakewood, Baton Rouge, La., Donald C. Reynolds, Springfield, Ohio, and Douglas M. Warschauer, Newton Center, Mass., assignors to the United States of America as represented by the Secretary of the Air Force
Filed Jan. 22, 1960, Ser. No. 4,581
7 Claims. (Cl. 250—83)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. An energy storage unit comprising: a crystal of cadmium sulfide at the temperature of liquid nitrogen, means for illuminating said crystal with radiation with a wave length shorter than 6900 angstroms, to thereby store energy therein, means for mechanically tapping said crystal along the C-axis of said crystal to thereby release said energy and means for sensing the release of said energy.

3,093,736
MULTIPLE PRISM OPTICAL SCANNER
Robert D. McLaughlin, South Norwalk, Robert M. Landsman, Norwalk, and Joseph L. Bordon, Westport, Conn., assignors to The Perkin-Elmer Corporation, Norwalk, Conn., a corporation of New York
Filed Dec. 21, 1959, Ser. No. 862,438
9 Claims. (Cl. 250—83.3)



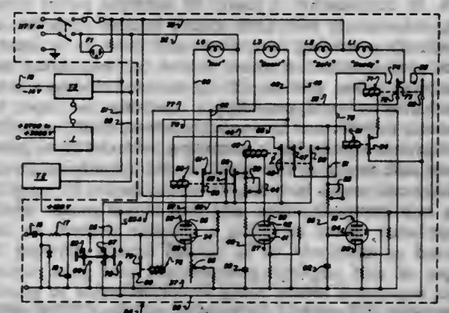
1. Radiant energy scanning apparatus which comprises a first substantially cylindrical hollow support member positioned to permit the passage of radiant energy therethrough and adapted to rotate about its axis of revolution; a second substantially cylindrical hollow support member coaxial with said first support member and adapted to rotate about said first support member; bearing means intermediate said first and second support members; first optical prism means supported by said first support member and positioned to pass radiation therethrough; second optical prism means supported by said second support member and positioned to pass radiation to said first prism means; radiation focusing means positioned to receive and focus radiation from said first and second prism means; radiation detector means positioned to receive the focused radiation; and driving means for rotating said first and second support members at different speeds.

3,093,737
NUCLEAR RADIATION DETECTOR HAVING ELECTROSTATICALLY CHARGEABLE ELEMENTS
Walter Shriner, 1133 S. 2nd St., Springfield, Ill.
Filed Oct. 21, 1960, Ser. No. 64,168
6 Claims. (Cl. 250—83.3)



1. A device for ionizing ray detection and measurement comprising a transparent electrically non-conducting plastic capsule defining an ion chamber, an insulating wall spaced from and surrounding said capsule, means sealing the space between said capsule and insulating wall to define a space barrier for outside electrostatic influence, and a plurality of elements loosely confined in said chamber, said elements and capsule being electrostatically chargeable in opposite polarities so as to cause the elements to be attracted by and adhere to the inside surface of said capsule, and the elements being responsive to gravitational forces upon neutralization of their electrostatic charge by induced ionizing radiation.

3,093,738
AUTOMATIC HAND COUNTER FOR ALPHA PARTICLE COUNTING
John R. Mann, Nashville, Tenn., and Arthur E. Wainwright, Golden, Colo., assignors to the United States of America as represented by the United States Atomic Energy Commission
Filed Jan. 18, 1961, Ser. No. 83,598
5 Claims. (Cl. 250—83.6)



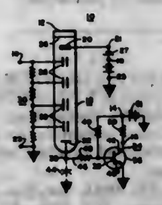
1. A radiation counter of the type disclosed comprising in an operatively associated combination a high voltage supply means operatively connected to probe means, said probe means being adapted to sense radioactive particles and give off pulses indicative to the degree of radiation, pulse amplifying means adapted to receive said pulse, a counter means including a charging circuit coupled to receive the amplified pulses, normally non-conducting thyratron means coupled to said charging circuit, bias adjusting means operatively associated with said thyratron means and adapted to be overcome by the charging circuit to provide conduction of the thyratron means, means for coupling the output of said thyratron means with signal means, and push button switch means in said counter means for de-energizing said thyratron

means and shorting said charging circuit when depressed and for energizing said thyratron means and removing said short when released.

3,093,739
METHOD FOR DETERMINING FLUID FLOW IN A CONDUIT
John P. Danforth, Mount Clemens, and Robert E. Black, Utica, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
No Drawing. Filed Mar. 10, 1958, Ser. No. 720,079
3 Claims. (Cl. 250—106)

1. A method for detecting the location of an opening in a fluid conduit comprising the steps of blocking the conduit downstream of the estimated location of the opening, placing in the fluid upstream of the estimated location of the opening a capsule having substantially the same density as the fluid and containing a radioactive material, detecting any change in the rate of movement of the capsule through the conduit by following said capsule with a radiation detector external of said conduit, and then remove the capsule from the conduit.

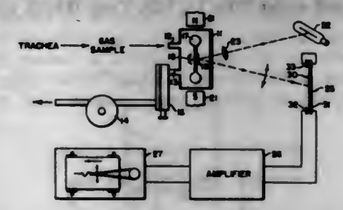
3,093,740
PULSE TRANSMITTER AND AMPLIFIER
Nyle E. Bush, Forest Hills, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Sept. 29, 1959, Ser. No. 843,250
6 Claims. (Cl. 250—207)



6. In combination, a source of electrical pulses occurring successively with each spaced in time from the immediately preceding and subsequent ones by at least a first predetermined amount, means for amplifying said electrical pulses, said amplifying means including a semiconductive element providing a relatively low input impedance therefor and having a given bandwidth capability, and circuit means for transmitting said electrical pulses from said source to the input of said amplifying means, said circuit means including inductive means for amplifying said electrical pulses, and said circuit means having impedance means including a resistive element so connected as effectively to be related serially between the input of said amplifying means and said pulse source, said impedance means being so correlated as to provide that when delivered to the input of said amplifying means said electrical pulses endure, respectively, over a period of time greater than a second predetermined amount for enabling said amplifying means to amplify said electrical pulses substantially within its bandwidth capability yet less than said first predetermined amount for enabling said electrical pulses to remain resolved.

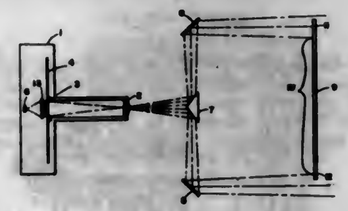
3,093,741
PHOTOVOLTAIC DEVICE FOR TRANSLATING SIGNALS
John Stirling Meyer, Birmingham, Mich. (% Grass Instrument Co., 101 Old Colony Ave., Quincy, Mass.)
Filed Sept. 2, 1960, Ser. No. 53,688
2 Claims. (Cl. 250—212)

1. Apparatus for generating electrical signals indicative of the position of a light beam, said apparatus comprising a photovoltaic medium in the form of an elongated strip having a light sensitive front surface and a back surface, said light sensitive surface being positioned to intercept the light beam at locations extending lengthwise of the front surface for a distance determined by the position of the beam, a pair of output terminals to supply said signals, a first of said output terminals consisting of a conductive layer in contact with substantially



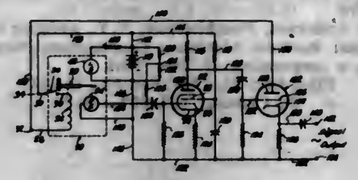
the entire back surface of said medium, and the second of said output terminals consisting of a conductive element in contact with a portion of said front surface adjacent one end of said medium, and an auxiliary terminal consisting of a conductive element in contact with a portion of said front surface adjacent the opposite end of said medium, said auxiliary terminal being electrically connected to said first output terminal.

3,093,742
EXTENDED RADIATION MICROMETER GAGE
James L. Murphy, Old Greenwich, Conn., assignor to Barnes Engineering Company, Stamford, Conn., a corporation of Delaware
Filed Mar. 17, 1961, Ser. No. 96,560
4 Claims. (Cl. 250—220)



1. An extended range, transverse dimensional gage operating on optical radiations comprising in combination and in optical alignment,
(a) two reflecting means spaced on a line in a plane parallel to the object to be gaged, the line being transverse thereof and the spacing being such that the reflecting means have centers approximating the edges of the object to be gaged and incline to reflect optical radiations from the object inwardly at an angle,
(b) unitary reflecting means receiving the radiations reflected from the first means and positioned centrally to combine the reflections onto a single beam,
(c) a scanning radiometric gage positioned in said combined beam and provided with a radiation detector capable of transforming radiation signals onto electrical signals,
(d) said radiometric gage being positioned to scan successive portions of the combined beam onto the detector and
(e) the inner limits of the first reflecting means being spaced a considerable distance from the center of the object to be gaged whereby the radiometric gage scans across a narrow beam at each edge of the object to be gaged.

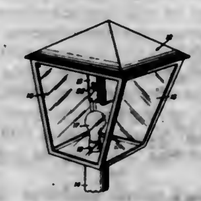
3,093,743
RESONANT REED FREQUENCY SENSITIVE CONTROL APPARATUS
Frank H. Inderwiesen, Prairie Village, Kans., assignor, by mesne assignments, to J-B-T Instruments, Inc., New Haven, Conn., a corporation
Filed Nov. 16, 1960, Ser. No. 69,670
6 Claims. (Cl. 250—232)



1. Control apparatus for effecting a switching action in response to the attainment by a source of electrical energy of a predetermined frequency, comprising in combination:
(a) first electrical circuit means to be controlled;
(b) radiation sensitive means characterized by the property that an electrically significant parameter thereof is subject to alteration responsive to imposition of radiation upon said radiation sensitive means;
(c) means electrically coupling said radiation sensitive means with said first electrical circuit means for control of said first electrical circuit means upon alteration of said electrically significant parameter of said radiation sensitive means;
(d) radiation source means;
(e) shiftable radiation transmitting means arranged relative to said radiation source means and said radiation sensitive means for imposing radiation from said radiation source means upon said radiation sensitive means and for varying the amount of radiation imposed by said radiation source means upon said radiation sensitive means responsive to shifting of said radiation transmitting means;
(f) a second electrical circuit means adapted for coupling with means for energizing the same, to exert control over said first electrical circuit means;
(g) operating means operably coupled with said shiftable radiation transmitting means for shifting the latter when said operating means is actuated, said operating means including an electrical circuit electrically coupled with said second electrical circuit means for actuation of said operating means responsive to the condition of energization of said second electrical circuit means;
(h) an output circuit connected to the said second electrical circuit means; and
(i) input terminals connected with the said electrical circuit of said operating means and adapted for connection to the source of electrical energy whose frequency is to effect the said switching action.

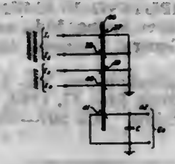
3,093,744
LIGHT SENSITIVE CONTROL DEVICE
Michael A. Tabet, 1336 Ballentine Blvd., Norfolk, Va.
Filed Oct. 11, 1960, Ser. No. 61,990
5 Claims. (Cl. 250—239)

1. A unit for controlling energization of a lamp bulb of a lighting fixture having a bulb socket connected to an electrical source comprising, an opaque substantially cup-shaped casing having an open end, a light sensitive element within said casing exposed to natural light through said open end, means for supporting said casing in position with the open end of the light sensitive element facing in a direction away from said bulb socket, means including a socket member and a plug member insertable in said bulb socket, said socket member having therein a central contact and a sleeve contact for engagement by terminals of a lamp bulb, an electrical connection through said plug member from one side of said source within said bulb socket to one of said contacts in said socket member, flexible conductors extending from said



means into said casing to energize the light sensitive element from said source, a relay responsive to operation of said light sensitive element, and flexible conductors extending from said means to said relay providing an interruptible circuit from the other side of said source within said bulb socket to the other of said contacts in the socket member.

3,093,745
MAGNETIC CORE FLIP-FLOP
Andrew H. Bobeck, Chatham, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Sept. 13, 1957, Ser. No. 683,761
8 Claims. (Cl. 307—88)

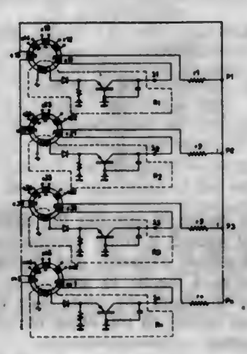


1. A magnetic core circuit comprising a core of magnetic material exhibiting a substantially rectangular hysteresis characteristic, driving means for alternately establishing magnetic fields of opposite polarity and preselected flux density in said core, energy storage means co-acting with said driving means to drive said core further toward saturation of the existing polarity, and setting means operative coincidentally with said driving means to increase the remanent flux density of said core in a predetermined polarity during a first particular cycle of operation.

3,093,746
MAGNETOSTATIC DEVICE
Pierre Burstow, Paris, and Claude Menin, Villeneuve-sur-Seine, France, assignors to Compagnie Industrielle des Telephones, Paris, France, a French corporation
Filed Oct. 6, 1958, Ser. No. 765,474
Claims priority, application France Oct. 28, 1957
1 Claim. (Cl. 307—88)

A magnetostatic selecting device including a plurality of magnetostatic relays, each magnetostatic relay comprising a saturable magnetic circuit, a main operating winding wound on the magnetic circuit with an output connected thereto, and additional windings wound on the magnetic circuit including a control winding, a feedback winding and a blocking winding, each relay being susceptible to assume active and inactive states of operation respectively supplying different current values in its output circuit, means for applying a control current to the control windings of each of the relays to modify

its state of operation, the feedback winding of each of the relays being connected in series in the output circuit of said relay, means connecting the output circuits of the relays to a common point, means connecting the blocking windings of said relays in series to said common point with said windings being so constructed and arranged that



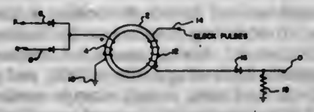
when all the relays are in the inactive state of operation a control current is applied to a control winding of one of the relays, said relay is placed in the active state of operation and its output circuit supplies a constant direct current in the blocking windings of the other relays to keep them inactive.

3,093,747

MAGNETIC SIGNAL STORAGE LOGIC COMPUTING ELEMENT

John D. Goodell, Silver Spring, Md., assignor, by mesne assignments, to General Precision, Inc., a corporation of Delaware

Continuation of application Ser. No. 451,484, Aug. 23, 1954. This application June 27, 1960, Ser. No. 38,958
6 Claims. (Cl. 307—88)



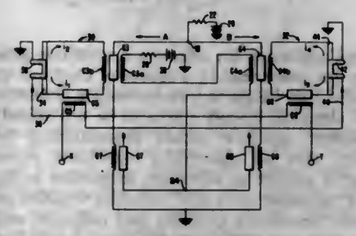
1. A magnetic logic system including: a magnetic core member saturable with fluxes of opposite polarities and having properties of bi-stable flux remanence, a first winding positioned on said core and magnetically coupled thereto, a first input circuit coupled across said first winding and including a plurality of input lines for receiving different input signals and connected to a terminal of said first winding and further including a plurality of isolating means interposed in respective ones of said lines, means coupled to an input signal source and to said first input circuit for introducing to said first winding on at least one of said input lines a signal of sufficient amplitude and duration to produce a flux of a first polarity in said magnetic core member, a second winding positioned on said magnetic core member and magnetically coupled thereto, a load circuit connected to said second winding, a second input circuit connected in series with said second winding and said load circuit and including an input line, and means coupled to a clock signal source and to said second input circuit for introducing on said last-named input line a clock signal for application to said second winding and having sufficient amplitude and duration to produce a saturating flux in said magnetic core of a second polarity opposite to said first polarity so as to produce an output signal across the load circuit, said output signal having a first value in the presence of flux of said first polarity in said core member and having a second value in the presence of flux of said second polarity in said core member.

3,093,748

SUPERCONDUCTIVE CIRCUITS CONTROLLED BY SUPERCONDUCTIVE PERSISTENT CURRENT LOOPS

John L. Anderson, Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Dec. 23, 1957, Ser. No. 704,627
32 Claims. (Cl. 307—88.5)



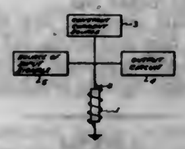
5. In a superconductor circuit, first and second superconductor gate conductors connected in parallel circuit relationship, first and second superconductor loops including, respectively, first and second control conductors for applying magnetic fields to said first and second gate conductors, respectively, first magnetic field applying means associated with a portion only of said first loop removed from said first control conductor for causing persistent currents to be established in said first loop, second magnetic field applying means associated with a portion only of said second loop removed from said second control conductor for causing persistent currents to be established in said second loop.

3,093,749

SUPERCONDUCTIVE BISTABLE CIRCUIT

Edward Dillingham, Los Angeles, Calif., assignor, by mesne assignments, to Thompson Ramo Wooldridge Inc., Cleveland, Ohio, a corporation of Ohio

Filed June 30, 1958, Ser. No. 745,515
10 Claims. (Cl. 307—88.5)



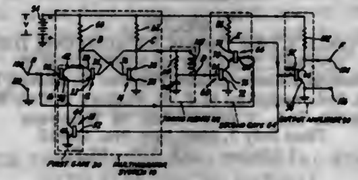
4. A bistable circuit including the combination of a switchable element which is capable of assuming a superconductive condition in one stable state and an electrically resistive condition in another stable state, a control coil connected directly across the switchable element, said control coil being magnetically coupled to said switchable element, means passing a current through the control coil to sustain the switchable element in an electrically resistive condition, and means for momentarily reducing the current flow through the control coil to switch the bistable circuit to a stable state in which the switchable element is in a superconductive condition.

3,093,750

BINARY COUNTER PRODUCING OUTPUT SIGNALS BY TRANSMISSION OF ALTERNATE INPUT SIGNALS THROUGH A PRE-CONDITIONED GATE, AND MULTIVIBRATOR SYSTEM FOR SAID COUNTER

Frederick N. Bruner, Meadowbrook, Pa., assignor, by mesne assignments, to Philco Corporation, Philadelphia, Pa., a corporation of Delaware

Filed June 30, 1958, Ser. No. 745,701
15 Claims. (Cl. 307—88.5)



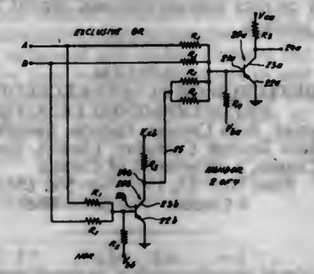
1. A binary counter comprising a bistable multivibrator having an output terminal and first gating means including first and second input terminals for controlling the conduction state of said multivibrator; second gating means having first and second input terminals and an output terminal; means for supplying an input pulse to said first input terminals of said first and second gating means; timing means coupling said output terminal of said multivibrator to said second input terminal of said second gating means; means directly connecting said output terminal of said second gating means to said second input terminal of said first gating means; and means coupled to said output terminal of said second gating means for deriving an output signal.

3,093,751

LOGICAL CIRCUITS

Robert G. Williamson, Norwalk, Conn., assignor to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware

Filed Aug. 14, 1959, Ser. No. 833,840
1 Claim. (Cl. 307—88.5)



An "exclusive or" circuit comprising:

(*a*) a single pair of input terminals;

(*b*) a pair of switching circuits each including biasing means, an input line, and an output line;

(*c*) a pair of resistance networks;

(*d*) a first one of the networks comprising first and second resistances connected in parallel between the input line of a first switching circuit and respective first and second input terminals;

(*e*) the first switching circuit being adapted and biased, and the first and second resistances being chosen, so that there is produced on the first switching circuit output line—

(I) a selected binary "one" signal level, when and only when a selected binary "zero" signal level is applied to both the first and second resistances,

(II) the said "zero" signal, when the said "one" signal is applied to one or more of the first and second resistances;

(*f*) a second one of the networks comprising third, fourth, and fifth resistances connected in parallel between the input line of a second switching circuit and the first input terminal, second input terminal, and first switching circuit output line respectively;

(*g*) the series resistance provided by the fifth resistance between the second switching circuit input line and the first switching circuit output line being half that provided by either the third or fourth resistance between the second switching circuit input line and either of the input terminals, whereby any signal applied to the fifth resistance is equivalent to two such signals applied to the third and fourth resistances respectively;

(*h*) the second switching circuit being adapted and biased, and the third, fourth, and fifth resistances being chosen, so that there is produced on the second switching circuit output line—

(I) the said "zero" signal, when the said "one" signal is applied to both the third and fourth resistances or to the fifth resistance,

(II) the said "one" signal, when and only when the said "zero" signal is applied to at least one of the third and fourth resistances and also to the fifth resistance;

(*i*) whereby a "zero" output from the second switching circuit indicates either—

(I) "one" inputs applied by both input terminals to the third and fourth resistances,

(II) or "zero" inputs applied by both input terminals to the first and second resistances, thereby causing a "one" input to be applied by the first switching circuit to the fifth resistance;

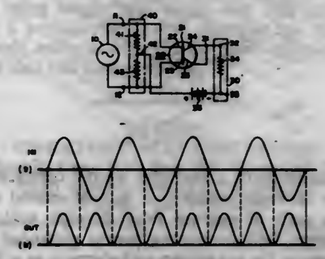
(*j*) and whereby a "one" output from the second switching circuit indicates a "zero" output applied by one of the input terminals to the third or fourth resistance, and a "one" input applied by the other of the input terminals to the first or second resistance, thereby causing a "zero" input to be applied by the first switching circuit to the fifth resistance.

3,093,752

FUNCTION GENERATOR AND FREQUENCY DOUBLER USING NON-LINEAR CHARACTERISTICS OF SEMICONDUCTIVE DEVICE

Bent Christensen, Monroeville, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

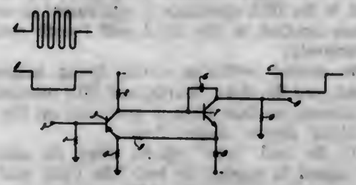
Filed Aug. 24, 1959, Ser. No. 835,488
13 Claims. (Cl. 307—88.5)



2. In a semiconductor apparatus, the combination comprising, a body of semiconductor material of a predetermined polarity conductivity type, means for applying an alternating current along an axis between the opposite ends of said body, a pair of electrodes connected to said body along another axis substantially perpendicular to said axis, said electrodes comprising a connection with said body and having opposite polarity to the conductivity

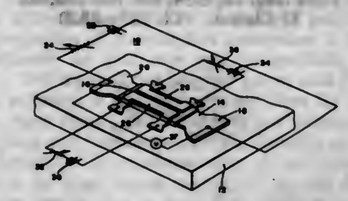
type of said body, an output circuit comprising a first and a second output terminal, and means for connecting said electrodes to said first output terminal.

3,093,753
PULSE CORRECTING AMPLIFIERS
Harri Kurt Ligotty, Chicago, Ill., assignor to International Telephone & Telegraph Corporation, New York, N.Y., a corporation of Maryland
Filed Sept. 21, 1959, Ser. No. 841,190
3 Claims. (Cl. 307—88.5)



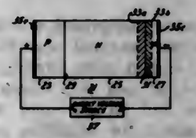
1. A pulse correcting amplifier circuit for use with logic circuitry comprising at least one input terminal and at least one output terminal, a pair of semi-conductor amplifying devices coupled between said input and output terminals, means responsive to the receipt of input signals at said input terminals for switching "on" one of said devices, said input signals having non-uniform characteristics, means responsive to said last named means for switching "on" the other of said devices to produce an output pulse, and means for feeding back said output signal to hold said other device in said "on" condition independently of the characteristics of said input signal, said feedback means consisting of a capacitor coupled directly to input and output electrodes of said other device and having a capacitance which maintains conductivity of the other of said devices for the duration of said input pulses despite the non-uniformity thereof.

3,093,754
SUPERCONDUCTOR AND GATE EMPLOYING SINGLE ELONGATED, SIMPLY CONNECTED THIN FILM AS GATE ELEMENT
Herman T. Mann, Palos Verdes, Calif., assignor to Space Technology Laboratories, Inc., Los Angeles, Calif., a corporation of Delaware
Filed June 3, 1960, Ser. No. 33,721
15 Claims. (Cl. 307—88.5)



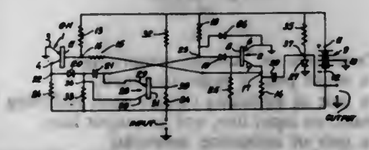
1. In combination, a thin film simply connected superconductive element including a pair of spaced terminals defining a path of current flow through said element, first magnetic field producing means mounted adjacent to said element for subjecting said element to a first magnetic field of sufficient magnitude to cause a change from the superconducting to the resistive state of a first portion of said element extending only part way across said current path but of insufficient magnitude to cause a change in state of regions of said element extending fully across said current path, second magnetic field producing means mounted adjacent to said element for subjecting said element to a second magnetic field of sufficient magnitude to cause a change from the superconducting to the resistive state of a second portion of said element adjoining said first portion and extending across said current path the remainder of the way not covered by said first portion, said second magnetic field being insufficient to cause a change in state of regions of said element extending fully across said current path, whereby only the concurrence of said first and second magnetic fields will cause a change in state of both of said portions and hence of regions of said element that extend fully across said current path.

3,093,755
SEMICONDUCTOR DIODE EXHIBITING DIFFERENTIAL NEGATIVE RESISTANCE
Rolf Reinhold Haberecht and Wallace D. Loftus, Indianapolis, Ind., assignors to P. R. Mallory & Co., Inc., Indianapolis, Ind., a corporation of Delaware
Filed July 7, 1960, Ser. No. 41,415
7 Claims. (Cl. 307—88.5)



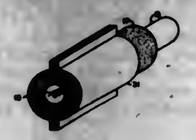
1. A semiconductor diode comprising: a unitary structure of three successive semiconductive zones being congruent in size and shape which form an emitter junction between the first outer zone and one side of the central zone and a collector junction between the second outer zone and the other side of the central zone, the width of said second outer zone being at most equal to the diffusion length therein of minority carriers from said central zone; and means for applying a voltage across said structure which forward-biases said emitter junction and reverse-biases said collector junction so as to establish thereat a potential barrier region which extends completely across said second outer zone when said voltage reaches a predetermined switching level, the potential across said barrier region then regeneratively collapsing due to a regenerative increase in the concentration of minority carriers injected into said central zone by said emitter junction.

3,093,756
DETECTOR OF PULSES EXCEEDING A PREDETERMINED LENGTH
John Rywak, Bells Corners, Ontario, Canada, assignor to Northern Electric Company, Limited, Montreal, Quebec, Canada, a corporation of Canada
Filed Nov. 24, 1961, Ser. No. 154,679
4 Claims. (Cl. 307—88.5)



1. A circuit for detecting pulses exceeding a predetermined length comprising in combination: a first and second semi-conductor device each having a base, emitter and collector electrode; a source of potential; a first resistor connected to a first terminal of the source, poled to apply a predetermined polarity thereto, and to the base electrode of the first device, a second resistor connected to the other terminal of the potential source and to the collector electrode of the second device, a third resistor connected between the first and second resistor, a fourth resistor connected to the first terminal of the potential source and to the anode of a first diode, means for connecting the cathode of the diode to the base electrode of the second device, a fifth resistor connected to the other terminal of the potential source and to the collector electrode of the first device, a capacitor and a second diode, in series relation, connected between the fourth resistor and the collector electrode of the first device, a third transistor having its emitter and collector electrodes connected across the capacitor, a sixth and seventh resistor in series relation, connected across the potential source, the junction thereof being connected to the base electrode of the third device, an eighth resistor connected between junction of the second diode and the capacitor and the other terminal of the potential source, means for grounding the emitter electrode of the first and second device.

3,093,757
DEVICE FOR CONVERTING THERMAL ENERGY INTO ELECTRICAL ENERGY
Ernest A. Lederer, Essex Fells, N.J., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Dec. 30, 1957, Ser. No. 706,040
5 Claims. (Cl. 310—4)



5. A vacuum device for converting thermal energy into electrical energy, said device comprising a conductive base member, a conductive collector member spaced from said base member and an interposed body of electron emissive semiconductive material in the space between said base member and said collector member, said device being made by the method comprising the steps of coating said conductive base member with a coating material of at least one member of the group consisting of barium carbonate, strontium carbonate, calcium carbonate, cerium oxide, zirconium oxide, titanium oxide, thorium oxide, barium titanate, barium beryllate and barium thoriate, placing said conductive collector member in intimate contact with the surface of said coating material and heating said conductive base member, subsequent to said placing step, so that substantially all of said coating material is an electron emissive semiconductive material of at least one member of the group consisting of barium oxide, strontium oxide, calcium oxide, cerium oxide, zirconium oxide, titanium oxide, thorium oxide, barium titanate, barium beryllate and barium thoriate.

3,093,758
PIEZOELECTRIC DEVICES UTILIZING CADMIUM SULFIDE
Andrew R. Hutson, Plainfield, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Apr. 13, 1960, Ser. No. 22,615
3 Claims. (Cl. 310—8)



1. A piezoelectric device comprising at least one element consisting essentially of a single crystal of cadmium sulfide of a maximum room temperature conductivity of 10^{-6} ohm^{-1} cm.$^{-1}$ and means for making electrode contact with the said element on two faces.

3,093,759
ACCELEROMETER
Anthony W. Oriacchio, Fords, N.J., assignor to Gulton Industries, Inc., Metuchen, N.J., a corporation of New Jersey
Filed Oct. 22, 1958, Ser. No. 768,975
12 Claims. (Cl. 310—8.4)



1. An accelerometer comprising a housing, a mass-loaded electromechanically sensitive body, means for making at least two electrical connections from said body to an external circuit, means for mounting said housing to the apparatus whose acceleration is under measurement affixed to said housing, at least a portion of said housing being formed of electrically conductive material, said electromechanically sensitive body being mounted within said housing and electrically insulated therefrom and means for electrically insulating said conductive portion of said housing from said mounting means.

3,093,760
COMPOSITE PIEZOELECTRIC ELEMENT
Michael Tarasevich, Glen Cove, N.Y., assignor to American Bosch Arma Corporation, a corporation of New York
Filed June 15, 1960, Ser. No. 36,375
5 Claims. (Cl. 310—9.1)

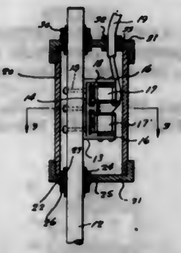


1. In a device of the character described, a metal foil, piezoelectric material bonded to each side of said foil, said foil being longer and wider than said piezoelectric material, a portion of the foil adjacent the end of said piezoelectric material between the side edges and within the end of said foil being removed.

3,093,761
VIBRATORY ELECTRIC MOTOR
Delbert E. Case, P.O. Box 127, Kenwood, Calif.
Filed Jan. 24, 1961, Ser. No. 84,654
1 Claim. (Cl. 310—28)

A device for protecting lawn and garden areas from vermin comprising a vertical rigid stake member driven into the ground, said stake member being of a material capable of transmitting longitudinal vibrations, a U-shaped bracket member having vertically spaced top and bottom arms and a vertical straight bight portion, means rigidly securing said bight portion to the upper portion of the stake member with the arms thereof extending horizontally, a first vibrator assembly operatively and rigidly secured to and depending from the top arm, a second vibrator assembly operatively and rigidly secured to and upstanding from said bottom arm, said vibrator

assemblies including vibratory armatures adapted to vibrate in phase with substantial amplitude and at an audible frequency when energized with alternating current, a source of alternating current, and means to con-



nect said vibrators to said source, whereby to energize said vibrators and to generate vibrations which are transmitted from said arms through said bight portion and stake member to the ground, serving to radiate corresponding vibrations outwardly from the stake member.

3,093,762
STEP MOTOR USING PRINTED CIRCUIT COMPONENTS
Jacques Henry-Baudot, Antony, France, assignor to Printed Motors Inc., New York, N.Y.
Filed Jan. 4, 1960, Ser. No. 186
Claims priority, application France Jan. 8, 1959
17 Claims. (Cl. 310—49)



1. An electrical multipolar axial airgap rotating machine operable in a step by step fashion from a change-over of the current supply connections to the terminals of the rotor winding of the machine, comprising the combination of a stator having an inductor structure establishing magnetic poles spaced about the axis of the machine, a rotor having a winding made of flat conductors intimately secured to the insulating faces of an annular carrier over which they are distributed in two sets of half-turns with face-to-face connections between the ends of these half-turns to form a closed-circuit winding, at least two pairs of brushes spaced about the axis of the machine, adjacent pairs of brushes being angularly displaced by one polar pitch, each pair of brushes being located in a plane midway between two adjacent magnetic poles, two rings of conductor segments mounted concentric with the machine axis, each segment extending substantially over one half of the polar pitch and the segments in one ring being displaced relative to the segments of the other ring by one-half pole pitch, said brushes of each pair bearing on said two rings respectively, a connection extending from each segment of said rings to an individual point on said winding, the connection points to two adjacent segments in each ring being spaced apart by one-half of the polar pitch, and the connection points for the segments in one ring being located midway between the connection points for the segments in the other ring, a pair of current supply terminals, and a two-position transfer switch for alternately connecting said current supply terminals through said segments and brushes to selected pairs of connection points on said winding to produce progressive step-by-step movement of said rotor.

3,093,763
PRINTED CIRCUIT MOTOR
Walter E. Sargeant, Clawson, John M. Farrell, Detroit, and Edward F. Weller, Jr., Birmingham, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Mar. 22, 1960, Ser. No. 16,729
3 Claims. (Cl. 310—154)



1. An electric motor comprising, first and second end frames formed of nonmagnetic material having cooperating threaded portions connecting the end frames to form a housing, a yoke member formed of magnetic material secured to an inner wall of one of said nonmagnetic end frames, a second yoke member formed of magnetic material secured to an inner wall of the other end frame and in opposed relationship to said first yoke member, and a permanent magnet secured to one of said yoke members, said permanent magnet being formed as a unitary annular piece of ferrite material having alternate sections magnetized as north and south poles, the end of said permanent magnet defining an annular wall which is substantially flat and which lies in a plane that is normal to the longitudinal axis of said end frames, a shaft journalled for rotation in said end frames, an armature assembly carried by said shaft including a printed circuit member having radially extending conductors, said armature assembly being positioned between the flat end wall of said permanent magnet and one of said yoke members, and brush holders extending through one of said yoke members and said permanent magnet and carrying brushes that engage said printed circuit member.

3,093,764
DYNAMOELECTRIC MACHINE
Kahl V. King and Robert E. Wilson, Dayton, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed July 8, 1960, Ser. No. 41,516
3 Claims. (Cl. 310—214)

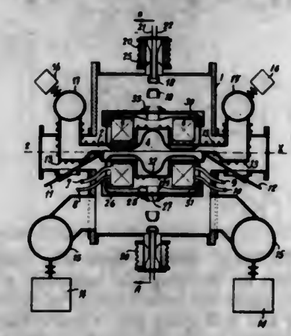
1. An improved stator assembly for a dynamoelectric machine comprising, a magnetic core having adjacent substantially radial and full metal poles separated from each other by a slot shared by windings placed therein and having radially inwardly located slot openings between edges of poles, and an extrusion of elastomeric rubber-like material having metal particles embedded therein, said extrusion including a deformable portion that is snugly wedged resiliently against edges directly between adjacent poles of said stator core for high magnetic flux

saturation to have only said metal particles complement a magnetic flux path between said edges of said poles



without danger of noise such as electrical harmonics hum as well as mechanical vibration and rattling due to any metal to metal contact.

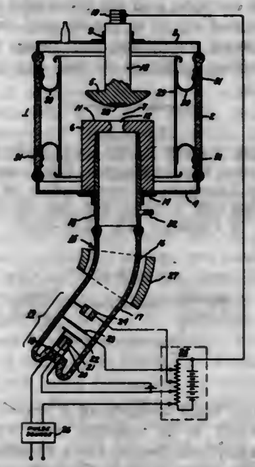
3,093,765
ION INJECTION DEVICE FOR THERMONUCLEAR PLASMA APPARATUS
Francois Prévot, Antony, France, assignor to Commissariat a l'Energie Atomique, Paris, France
Filed Mar. 22, 1960, Ser. No. 16,830
Claims priority, application France Apr. 20, 1959
12 Claims. (Cl. 313—63)



1. Ion injection device for thermonuclear plasma apparatus including an enclosure under vacuum, an annular source of ions, an annular accelerating electrode for said ions, production and confinement means for the plasma, means for dissociation of molecular ions centered on the axis of said source, said electrode being coaxial with said source and creating with said source an ion beam in sheet form, said means including annular electric coils creating a confinement magnetic field of axial symmetrical and coaxial with said ion source and said acceleration electrode, a ferromagnetic frame surrounding said confinement coils and an annular air gap in said frame for the passage of the ion beam.

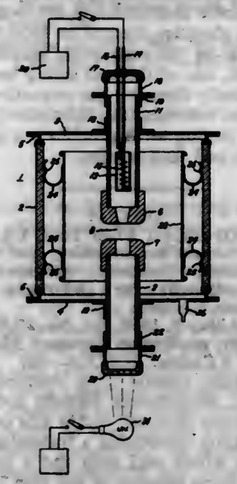
3,093,766
GAS GENERATING ELECTRIC DISCHARGE DEVICE
James D. Cobine, Rexford, N.Y., assignor to General Electric Company, a corporation of New York
Filed May 10, 1961, Ser. No. 109,090
5 Claims. (Cl. 313—174)

3. An electric discharge device adapted to change from a nonconducting condition to a conducting condition in response to a pulsed signal and comprising: an evacuable envelope evacuated to a hard vacuum; a first primary electrode and a second apertured primary electrode spaced apart from one another within said envelope to define a breakdown gap therebetween; said first primary electrode having a target area upon the face thereof substantially opposite the aperture in said second primary electrode which comprises a material having active gas-gettering properties and adapted to store, under conditions consistent with the maintenance of a hard vacuum within said envelope, a quantity of an ionizable gas; means for con-



necting voltage to said primary electrodes to cause an electric field to exist within said gap; a cathode gun positioned within said envelope and adapted to direct a stream of electrons through the aperture in said second primary electrode into said gap and upon the target area on said first primary electrode in response to a pulsed signal to said cathode gun to cause electrons to be directed into said gap to render the device conducting.

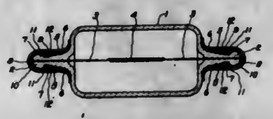
3,093,767
GAS GENERATING SWITCHING TUBE
James M. Lafferty, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
Filed May 10, 1961, Ser. No. 109,093
6 Claims. (Cl. 313—174)



1. An electric discharge device adapted to change from a non-conducting state to a conducting state with the ap-

plication of a pulsed signal thereto and comprising: an hermetically sealed envelope evacuated to a pressure of 10^{-6} mm. of mercury or less; a cathode electrode and an anode electrode located within said envelope and spaced apart from each other to define a breakdown gap therebetween; means located in close juxtaposition to said gap for storing, under conditions consistent with the maintenance of a hard vacuum, a quantity of an ionizable gas; means for evolving said gas from said storage means at a predetermined signal to render said breakdown gap at near-breakdown conditions; and means for delivering a pulse of ionizing radiation to said gap to render said gap conducting.

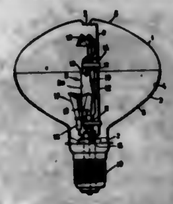
3,093,768
ELECTRIC LAMP BASE END STRUCTURE
Reginald J. Ayres, Shaker Heights, Ohio, assignor to General Electric Company, a corporation of New York
Filed Feb. 1, 1961, Ser. No. 86,391
4 Claims. (Cl. 313—318)



4. An electric lamp comprising a sealed tubular glass envelope provided at its opposite ends with protruding flat stem press portions disposed in a common plane, each of said flat stem press portions having shallow indentations in its opposite flat sides forming sharp lateral shoulders on the respective stem press portions facing inwardly of the envelope, lead-in wires sealed through respective ones of said stem press portions and extending into said envelope, a filament disposed within said envelope and connected at its opposite ends to said lead-in wires, said lead-in wires protruding endwise from said stem press portions and being bent around the outer ends thereof to extend alongside one of their flat sides and across the respective indentation therein, and hollow metal base shells mounted on and enclosing the respective stem press portions and having flat side portions corresponding to and disposed closely alongside the flat sides of the stem press portions, each of the flat side portions of said base shells being provided with an inward spring tongue portion pressed out therefrom and having its free end snap-caught within the respective indentation in the stem press behind the said lateral shoulder thereof to lock the base shell securely in place on the stem press against endwise removal therefrom, one of the said spring tongues of each base shell resiliently clamping the respective lead-in wire firmly against the bottom of the indentation in the respective stem press portion to thereby form a good electrical connection with said lead-in wire.

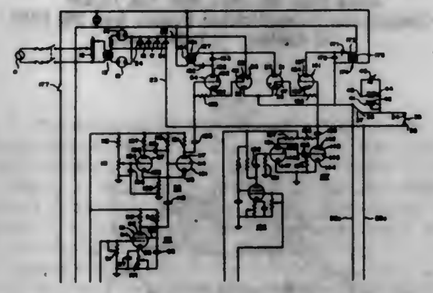
3,093,769
MIXED-LIGHT ELECTRIC LAMP
Bernard Kuhl, Berlin-Charlottenburg, and Horst Krause, Berlin-Zehlendorf, Germany, assignors to Patent-Treuhand-Gesellschaft fur elektrische Gluhlampen m.b.H., Munich, Germany
Filed May 9, 1960, Ser. No. 27,970
Claims priority, application Germany May 15, 1959
3 Claims. (Cl. 315—46)

1. A mixed-light electric lamp comprising an outer envelope, a first incandescent filament and a high-pressure discharge lamp mounted within said outer envelope, said discharge lamp comprising a transmissive bulb, two main electrodes within said bulb and a gaseous atmosphere having a filling pressure of less than 2 atmospheres, a second incandescent filament mounted within but out of the axis of said bulb and parallel to the arc path, said second incandescent filament proportioned for an electric current of 2 to 30% of the lamp current, and series resistors within said outer envelope connected to the end por-



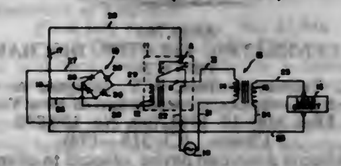
tions of said second incandescent filament in parallel to the arc path, said series resistors having negative temperature coefficients of the resistance.

3,093,770
HIGH ENERGY SPARK CONTROL
Richard H. Wesley, Fort Worth, and Thomas D. Winters, Irving, Tex., assignors to General Dynamics Corporation (Convair Division), San Diego, Calif., a corporation of Delaware
Filed Jan. 8, 1960, Ser. No. 1,245
16 Claims. (Cl. 315—241)



1. Spark discharge control apparatus comprising a capacitor, means for charging said capacitor, a spark gap, normally open electronic switch means in circuit between said capacitor and said spark gap, a spark discharge repetition rate control oscillator, spark discharge duration control means connected to said oscillator, and means to close said electronic switch means in response to said oscillator and said duration control means, thereby controlling the duration and repetition rate of discharge of said capacitor through said spark gap.

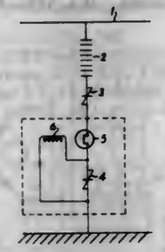
3,093,771
A.C. MODULATOR PROTECTIVE DEVICE
Robert J. Carl, Granada Hills, and Chester B. Parkinson, Jr., Santa Monica, Calif., assignors to the United States of America as represented by the Secretary of the Air Force
Filed Jan. 12, 1960, Ser. No. 2,085
1 Claim. (Cl. 317—14)



A protective device for an alternating current circuit comprising an A.C. source, a power transformer having a primary winding connected across said A.C. source and

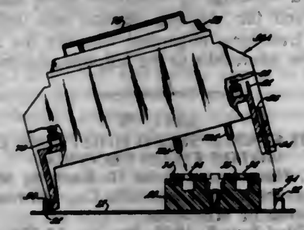
a secondary winding, a load in circuit with said secondary winding, a bridge-rectifier having input and output terminals, means for developing an A.C. voltage proportional to the current through said load, means for applying said voltage to the said input terminals of said bridge-rectifier, a relay having a coil and a first, second and third contacts, said second and third contacts normally being closed and adapted to be opened when the said coil is energized, said first contact being normally open and adapted to be closed to said third contact when said coil is energized, means for connecting said A.C. source to the said primary winding through said normally closed second and third contacts, means for connecting said A.C. source across said input of the rectifier through said normally open first and third contacts, and means for connecting said bridge-rectifier to said coil whereby on the occurrence of sufficient voltage at said output terminals the said coil is energized and the said A.C. source is removed from the said primary winding.

3,093,772
SURGE DIVERTERS
Alan David Miller, Wigan, England, assignor to Associated Electrical Industries (Manchester) Limited, a British company
Filed May 2, 1958, Ser. No. 732,529
Claims priority, application Great Britain May 9, 1957
2 Claims. (Cl. 317—75)



1. A surge diverter comprising for connection between an A.C. circuit and earth, a series arrangement of at least two switch contacts, at least one spark gap, and a non-linear resistance whose ohmic value decreases as the current traversing it increases, means providing a vacuum space in which said contacts are mounted, and means for effecting switch opening comprising an operating coil, said coil being connected parallel to a portion at least of said resistance.

3,093,773
PANELBOARD WITH CIRCUIT PROTECTIVE DEVICES
Thomas M. Cole, Harrison, N.Y., assignor to Federal Pacific Electric Company, a corporation of Delaware
Filed Mar. 23, 1959, Ser. No. 801,349
8 Claims. (Cl. 317—117)



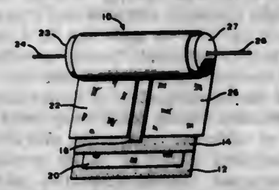
1. In combination, a panelboard bearing a pair of parallel bus bars and a plurality of elongated circuit protective devices disposed crosswise of said bus bars, each of said circuit protective devices including a body of molded insulation having longitudinally separated fastening elements at the bottom thereof, and each having a pair of plug-in terminals directed downwardly and spaced apart lengthwise and transversely of the circuit protective device, said plug-in terminals both being disposed off-center relative to the lengthwise spacing between said longitudinally separated fastening elements and a pair of solderless connectors for wire at each end of said protective device, said plug-in terminals having a solid electrical connection to one pair of said solderless wire connectors at one end of the circuit protective device and said body of molded insulation having break-away parts obstructing said one pair of solderless conductors, said circuit protective device including a pair of means providing circuit protection interposed between respective solderless wire connectors at the opposite ends of said device, said fastening element adjacent one of said pairs of solderless connectors including a spring locking detent and the other of said fastening elements being in the form of a separable hinge element integral with said body of molded insulation, said panelboard having two rows of confronting hooks parallel to said bus bars and disposed to cooperate respectively with said spring detent and with said separable hinge, said two rows of hooks being spaced apart along said bus bars in accordance with said fastening elements of said circuit protective devices, said hooks in both said rows being cooperable as mating hinge parts with the separable hinge elements of said circuit protective devices, said hooks also being of a form to lock to said spring detents, said bus bars being disposed off-center between said rows of hooks, said circuit protective devices being accordingly reversible end for end to assume either of two positions transverse of the bus bars and being retained by said fastening elements to said panel board in either disposition thereof, said bus bars having formations complementary to the plug-in terminals of said circuit protective devices and cooperable therewith when mounted on said panelboard in one of said dispositions, said plug-in terminals of said circuit protective devices being well clear of said bus bar formations in the reverse disposition of said circuit protective devices.

3,093,774
MICROWAVE FERRITE-ROTATOR DEGAUSSING SYSTEM
Charles L. Christianson, 8205 Loch Raven Blvd., and Joseph Lane Ware, 514 Epsom Road, both of Towson, Baltimore County, Md.
Filed June 22, 1959, Ser. No. 822,140
1 Claim. (Cl. 317—157.5)



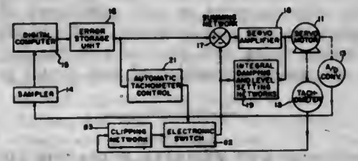
A microwave ferrite device comprising a ferrite element positioned to affect microwave energy, a field coil positioned to produce a magnetic field on said ferrite element, a choke coil connected in series with said field coil, a direct current source, a ground connection from said source to one of said coils, a double-pole double-throw switch, the contact closed by the first pole of said switch in the first position of said switch and the contact closed by the second pole of said switch in the second position of said switch being connected together and to the other of said series connected coils, means connecting the first pole of said switch to said current source, a capacitor connected between ground and the second pole of said switch, and means connecting said current source with the contact closed by the second pole of said switch in the first position of said switch.

3,093,775
SERIES WOUND CAPACITOR
Walter C. Lamphier, Williamstown, Mass., assignor to Sprague Electric Company, North Adams, Mass., a corporation of Massachusetts
Filed Jan. 22, 1959, Ser. No. 788,320
6 Claims. (Cl. 317—260)



1. A series-wound electrical capacitor section comprising an elongated common electrode convolutely wound in capacitive relation with a pair of elongated laterally spaced juxtaposed electrodes, layers of dielectric spacer material separating said common electrode from said pair of electrodes throughout the convolutely wound section, and a discrete dielectric ribbon in the space between the adjacent lateral edges of said pair of electrodes.

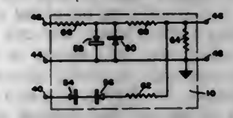
3,093,776
DIGITAL SERVO LOOP WITH AUTOMATIC TACHOMETER CONTROL TO PROVIDE VARIABLE DAMPING
Richard M. Bird, Glendale, and Roy Stanley, Jr, Los Angeles, Calif., assignors to General Precision, Inc., a corporation of Delaware
Filed Jan. 3, 1961, Ser. No. 80,141
9 Claims. (Cl. 318—28)



2. In a digital servo loop having a servo motor and tachometer feedback with a summing network and servo amplifier receiving error and feedback signals to control the servo motor, the improvement comprising an electronic switch receiving said tachometer feedback and applying a variable feedback signal to said summing network, and an automatic tachometer control circuit including rectifying and integrating networks and level detector for receiving said error signals and applying a control signal to said electronic switch for varying the amount of tachometer feedback in accordance with a time integral of successive error signals.

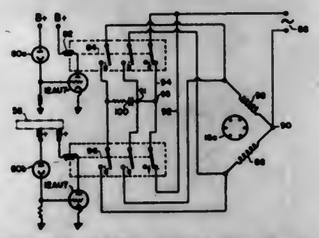
3,093,777
MULTI-SPEED SERVO SYSTEM CROSSOVER NETWORK
Nolan R. Kroninger, Sepulveda, Calif., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Feb. 28, 1961, Ser. No. 92,427
6 Claims. (Cl. 318—30)

1. In a multi-speed servo system signal transfer network for derivation, from low-speed and high-speed servo error signals applied to its input leads, of a control voltage for servo drive means, in combination: a low-speed section responsive to said low-speed servo error signal to provide a control voltage low-speed component; a high-speed section responsive to said high-speed servo error signal to provide a control voltage high-speed component; and circuit means including an output resistor associating said low-speed and high-speed sections to yield said servo drive means control voltage; wherein said low-speed section includes, in serial connection between said low-speed



error signal input lead and said output resistor, a pair of series-connected oppositely-poled Zener diodes, whereby to provide a control voltage low-speed component across said output resistor, and whereby to reduce said control voltage low-speed component effectively to zero value when the low-speed servo error signal is of magnitude less than a predetermined threshold value.

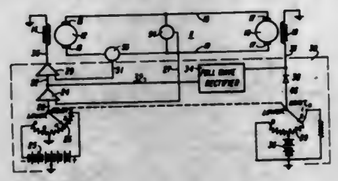
3,093,778
PHOTOCELL POSITION CONTROL SYSTEM
Abraham O. Tidwell, State College, Pa., assignor to Centre Circuits, Inc., State College, Pa., a corporation of Pennsylvania
Filed Mar. 17, 1961, Ser. No. 96,452
16 Claims. (Cl. 318—31)



6. Follow-up means for use in relatively positioning a table connected element and a fixed element with respect to one another, including reversible drive means comprising a pair of windings for causing relative longitudinal motion between said elements, an electrical amplifier device for operating said windings, one of said elements having plural lamps fixed at equally spaced apart points therealong for selectively emitting light and the other of said elements comprising an indexing element which with respect to each selected point of light has a satisfied position of transverse alignment therewith, means connected for operating said amplifier device comprising a pair of photocells mounted to said indexing element to face in opposite directions for unequally receiving said light and introducing unequal respective outputs to the amplifier device, and means connecting said reversible drive means and said amplifier device whereby the latter selectively operates said windings to relatively move said selected light point and the indexing element into their satisfied position of transverse alignment whereby the outputs of the respective photocells to the amplifier device equalize.

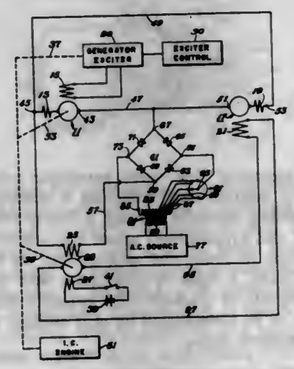
3,093,779
D.C. ADJUSTABLE SPEED HOIST DRIVE WITH MOTOR FIELD CONTROL
Hans R. A. Hansen and John H. Karlson, Milwaukee, Wis., assignors to The Louis Allis Co., Milwaukee, Wis., a corporation of Wisconsin
Filed June 8, 1960, Ser. No. 34,778
8 Claims. (Cl. 318—143)

6. A control system for a direct current armature coupled motor-generator set provided with separately excited field windings, comprising a source producing a first reference signal corresponding to a desired armature voltage, a first differential amplifier balancing said first reference signal with a signal corresponding to said armature voltage, said first amplifier being capable of a limited output, a second differential amplifier balancing the output signal of said first amplifier with a signal corresponding to the armature current, means for applying



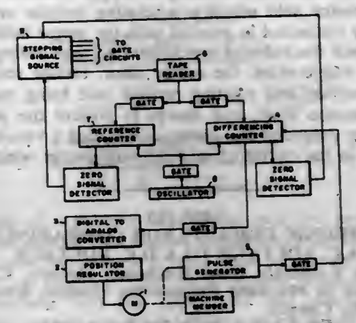
the output of said second differential amplifier to the generator field winding for exciting said generator field, means controlled in accordance with the output signal of said first amplifier for exciting said motor field winding, and means for maintaining excitation to said motor field winding and excitation to said generator field winding independent for first output signals below a predetermined level.

3,093,780
ELECTRIC MOTOR CONTROL SYSTEM
Robert G. LeTourneau, P.O. Box 2307, Longview, Tex.
Filed Mar. 17, 1961, Ser. No. 96,461
4 Claims. (Cl. 318—145)



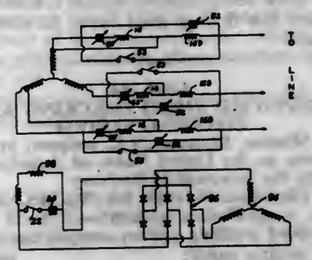
1. In a motor control system for an electrically powered self-propelled vehicle, a differential compound direct current generator having output terminals, a cumulative compound direct current traction motor having input terminals connected to said generator output terminals, an exciter having a shunt field and having output terminals connected to supply the shunt field of said traction motor, an internal combustion engine driving said generator and said exciter, a bridge rectifier connected in series with said exciter shunt field to said generator output terminals, a constant voltage alternating current source connected to said bridge rectifier in bucking relation to said generator output terminals, with the magnitude of said alternating current voltage being such as will reduce the said exciter shunt field to zero at light generator loads, whereby the strength of said motor shunt field will vary as a function of generator load.

3,093,781
DIGITAL CONTROL APPARATUS
Klaus Anke, Erlangen, Karl Ertel, Nurnberg, and Fritz Fröhr, Claus Kessler, Ingo Pritsching, and Gerhard Sinn, Erlangen, Germany, assignors to Siemens-Schuckertwerke Aktiengesellschaft, Erlangen, Germany, a corporation of Germany
Filed July 26, 1960, Ser. No. 45,396
Claims priority, application Germany July 30, 1959
6 Claims. (Cl. 318—162)



1. In position control apparatus for a machine member operative with a desired position signal source, the combination of a first signal counter device operative with said signal source for receiving said desired position signal, a second signal counter device operative with said signal source for receiving said desired position signal, a counting signal source operative with each of said first signal counter device and said second signal counter device for supplying counting signals to said first and second counter devices for counting down to zero at least one of said counter devices, zero signal sensing means operative with at least one of said counter devices for sensing a zero signal stored in said one counter device, means responsive to said zero signal sensing means for controlling the supply of said counting signals to the counting devices, and output means operative with said machine member and responsive to the signal stored in at least one of said counter devices for controlling the position of said machine member.

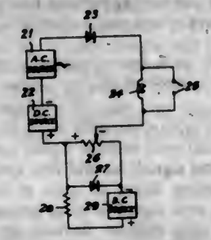
3,093,782
DYNAMO ELECTRIC MACHINE
Kenneth M. Sparrow, Lima, Ohio, assignor to Lima Electric Motor Co., Inc., Lima, Ohio, a corporation of New York
Filed June 13, 1960, Ser. No. 35,467
2 Claims. (Cl. 318—186)



1. In a synchronous motor having a power winding and rotating field winding, means to supply a voltage to said field winding comprising a rotating current transformer induction frequency converter exciter, said exciter having a tapped stationary primary winding, one of said

primary windings being connected across an A.C. voltage derived from the motor line voltage and representing only a small portion of said motor line voltage, and another of said exciter stationary windings being connected in series with said motor line circuit to provide an inherent approximate constant power factor of said motor by increasing or decreasing the power output of said current transformer exciter by an increase or decrease in the motor line current, a rotating rectifier connected to said exciter secondary winding to supply rectified voltage to said motor field winding, a rotating resistor unit permanently connected in parallel with the motor field winding to limit the induced motor field voltage during starting and acceleration, the motor rotor, exciter rotor, rotating rectifier, and rotating resistor unit being mounted on a common shaft, and means to control the rectified secondary output of the exciter comprising a variable impedance in the circuit of said primary exciter winding.

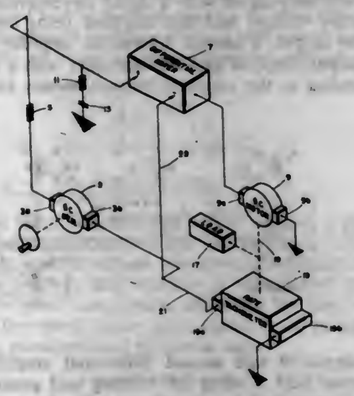
3,093,783
ELECTRONIC CIRCUITS FOR COMPARING AN A.C. VOLTAGE TO A D.C. VOLTAGE
Zygmunt Konstanty Hasz, Kitchener, Ontario, Canada, assignor to Marsland Engineering Limited, Kitchener, Ontario, Canada
Filed July 7, 1960, Ser. No. 41,313
28 Claims. (Cl. 318—327)



1. An electric circuit for comparing an A.C. voltage to a D.C. voltage, comprising a first closed loop, having in series an A.C. voltage source, a first D.C. voltage source, a passive circuit element, a comparison semiconductor diode disposed in the loop so as to oppose flow of D.C. current from the first D.C. source in the absence of any A.C. voltage, and a first end terminal and the tap of a potentiometer; a second closed loop having in series a compensating diode having a negative temperature characteristic, a resistor, and a second D.C. voltage source; the end terminals of the compensating diode being connected to the end terminals of the potentiometer, the compensating diode and the second D.C. voltage source being disposed so that the compensating diode does not oppose D.C. current flow through the second closed loop, and the compensating diode being disposed so that it does not oppose D.C. current flow through itself due to the first D.C. voltage source.

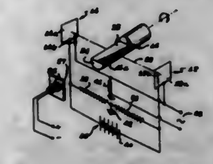
3,093,784
SIMPLIFIED AIDED TRACKING AND COASTING SYSTEM
Alfred I. Mintzer, Riverton, N.J., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Apr. 26, 1961, Ser. No. 105,828
2 Claims. (Cl. 318—327)

1. An aided tracking system comprising:
(*a*) an electric motor;
(*b*) a rate tachometer mechanically coupled to the output shaft of the motor;
(*c*) a variable source of potential;
(*d*) means for combining the output potential of the tachometer with the potential of the variable source;
(*e*) means for integrating the combined potential of the tachometer and the variable source;



(*f*) and means responsive to the difference between the integrated combined potential and output potential of the tachometer for energizing the motor.

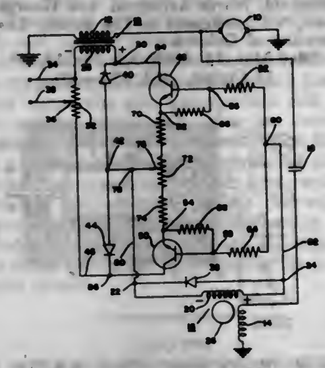
3,093,785
PHOTOELECTRIC SIGNAL GENERATOR
Albert K. Edgerton, 9763 Johanna Place, Sunland, Calif.
Filed Aug. 31, 1959, Ser. No. 837,248
10 Claims. (Cl. 321—34)



1. In an electrical sine wave generator comprising a rotary optical commutator including a semi-cylinder of light transmitting material having a flat ground face in the plane of and symmetrical about the axis of the semicylinder, means to rotate the commutator on the axis of said semicylinder, a light to illuminate said face, and a pair of photocells at diametrically opposite sides of said semicylinder to be illuminated by said surface alternately as the commutator turns.

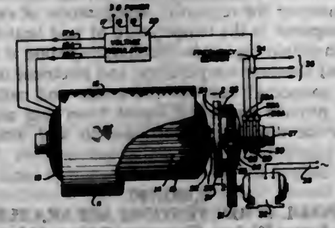
3,093,786
PHASE RESPONSIVE CONVERTER
Robert E. Nelson, Billy B. McCain, and Leo F. Walsh, Indianapolis, Ind., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed May 23, 1960, Ser. No. 30,949
13 Claims. (Cl. 321—47)

1. An electric circuit providing a reversible direct current output, comprising, a source of A.C. voltage, a load, means forming a first loop circuit including said source of voltage, said load and a pair of rectifiers having sides of common polarity connected to a common junction, first and second transistors each having emitter, base and collector electrodes, a resistive network connecting the emitter electrodes of said transistors, means connecting the junction of said rectifiers with said resistive network, means connecting the collector electrodes of said transistors with the side of said rectifiers opposite from said common junction, a source of A.C. signal voltage, means connecting one side of said source of A.C. signal voltage with said common junction, and means connecting the



opposite side of said source of A.C. signal voltage with the base electrodes of said transistors.

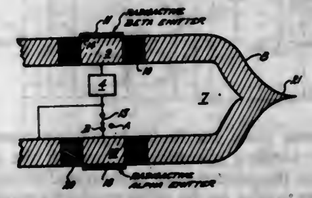
3,093,787
ELECTRICAL APPARATUS FOR PRODUCING A VARIABLE FREQUENCY
Ernest A. Taylor, Jr., Decatur, Ala., assignor, by mesne assignments, to Monsanto Chemical Company, a corporation of Delaware
Filed Dec. 4, 1959, Ser. No. 857,462
1 Claim. (Cl. 321—61)



An apparatus for producing an output potential of predetermined frequency and voltage, comprising a stationary permeable core having a plurality of slots, a distributed winding mounted in said slots to form sets of coils, a permeable shield attached to and enclosing said core, a radial commutator provided with conductive segments connected respectively to said coils, a brush holder journaled for rotation with respect to said core, a group of three brushes supported by said holder and disposed to slidably engage said conductive segments during rotation of said holder, means including slip rings and slip ring brushes mounted on said holders and electrically connected to said brushes for rendering available said output potential therefrom, a polyphase power supply, magnetic amplifier means connected between the power supply supply and the winding, and a voltage monitor connected between the slip brushes and the magnetic amplifier for adjusting the input voltage to the winding to thereby obtain a uniform output voltage at said brushes.

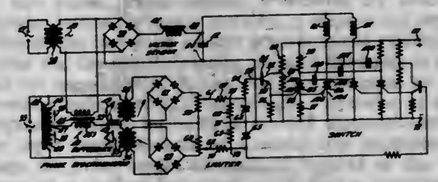
3,093,788
RADIOACTIVE POWER SUPPLY SYSTEM
Ernest G. Linder, Princeton, N.J., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Air Force
Filed Aug. 26, 1955, Ser. No. 530,863
3 Claims. (Cl. 322—2)

1. An electrical power supply apparatus consisting of first means having a relatively low electrical capacity, second means electrically insulated from said first means and having a relatively high electrical capacity, said first means being a small, electrically conductive body having a flat radiating surface for releasing charged particles of one polarity into the space adjacent thereto, said charged particles having a travel path perpendicular to said flat radiating surface and away from said second means, said charged particles escaping from said power supply apparatus, the release of said particles producing an electric



potential of a polarity opposite to said one polarity on said first means, said second means being an electrically conductive body which is large with respect to said first means, an electrical load, third means connecting said load beaween said first means and said second means, whereby current may flow between said first and said second means and through said load, and fourth means connected to said second means for controlling the static charge on said electric supply apparatus.

3,093,789
VOLTAGE REGULATOR FOR GENERATORS
Paul D. Brobaugh, Milwaukee, Wis., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Filed Dec. 26, 1961, Ser. No. 161,930
5 Claims. (Cl. 322—20)

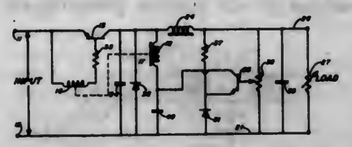


1. A voltage regulator for an alternating current generator having an output voltage that varies in phase direction as the polarity of the generator excitation varies, comprising,
means mechanically connected to a rotating element of the alternating current generator for producing a phase reference,
means connected to be responsive to said phase reference and to the generator output voltage to produce an electrical signal varying in magnitude with the magnitude of the generator output voltage and varying in polarity with the phase direction of the generator, and
means connected to receive said electrical signal to vary the excitation of the generator.

3,093,790
VOLTAGE REGULATOR
Robert J. Ehret, Los Altos, Calif., assignor to Ampex Corporation, Redwood City, Calif., a corporation of California
Filed Mar. 18, 1959, Ser. No. 800,261
1 Claim. (Cl. 323—22)

A regulator comprising a series regulating transistor serving to control the flow of current, an inductor adapted to receive said current, a load connected to said inductor, switching means adapted to form a closed circuit including

said inductor and said load, a reactor including a core, a primary and at least a secondary winding wound on said core, said secondary winding connected to control the conduction of said series transistor thereby controlling the current flowing through the same, a reference voltage source, said primary winding connected in circuit with the reference voltage source and also connected to re-



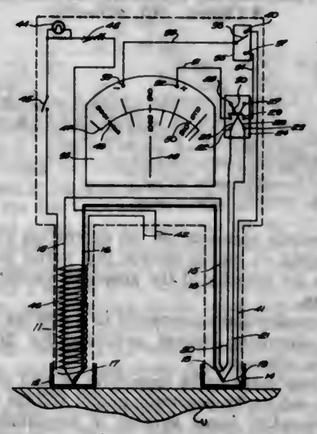
ceive current from the series regulating transistor, said secondary winding operating to turn off the series transistor when the reactor core is saturated in one direction and serving to turn on the series regulating transistor when the reactor core is saturated in an opposite direction, said switching means forming a closed circuit when the series regulating transistor is turned off and an open circuit when the series regulating transistor is turned on.

3,093,791

METHOD AND MEANS USING THERMOELECTRIC COMPARISON FOR IDENTIFYING CONDUCTIVE MATERIALS

Whitman A. Richards, Cambridge, Mass., assignor to Arklay S. Richards Co., Inc., Newton Highlands, Mass., a corporation of Massachusetts

Filed July 5, 1960, Ser. No. 40,778
7 Claims. (Cl. 324—32)



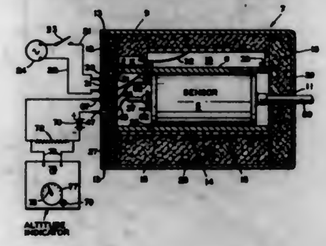
1. A metals classifier comprising a housing, a pair of legs supported from said housing and providing first and second points of contact with an unknown, a standard indicating circuit including dissimilar standard conductors extending through both said legs and having a plurality of thermocouple junctions, one said junction at one said contact point, means for uniform differential heating of said one thermocouple junction, means for indicating the potential induced in said circuit by said differential heating, an unknown reading circuit including said potential responsive means and means for connecting that to the other said contact and thereby completing a circuit through an unknown applied to both said points of contact, and means manipulable selectively to include one or another of said dissimilar conductors in said unknown reading circuit.

3,093,792

ION AIR DENSITY SENSOR FOR ATMOSPHERIC PRESSURE AND ALTITUDE MEASUREMENTS

Joseph Steenfeld, North Arlington, and George V. Zito, Northvale, N.J., assignors to The Bendix Corporation, a corporation of Delaware

Filed Mar. 16, 1960, Ser. No. 15,449
13 Claims. (Cl. 324—33)



1. In an air density sensor device of a type including spaced anode and cathode elements for providing a sampling zone therebetween, means for supplying air under prevailing atmospheric pressure to said sampling zone, and means to ionize the air in the sampling zone; the improvement comprising heating means to maintain the air in the sampling zone at a predetermined constant temperature, said heating means including a casing, a tubular heat conducting member for carrying said air density sensor device therein, heat insulation means surrounding the tubular member and supporting the tubular member within the casing, heater coils surrounding the tubular member, and thermostatic switch means carried by the tubular member for regulating energization of said heater coils in response to the temperature of said heating means so as to maintain the air in the sampling zone at said predetermined constant temperature, and electrical means operatively connected between the anode and cathode elements to provide an output signal from said air density sensor device directly proportional to said atmospheric pressure.

3,093,793

INSULATION TESTING APPARATUS

James Hicken, Chenango Bridge, N.Y.
(7 Elizabeth St., M.R. 97, Binghamton, N.Y.)

Filed June 20, 1961, Ser. No. 118,310
5 Claims. (Cl. 324—54)



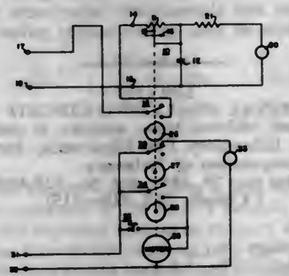
4. In an apparatus for testing the insulating property of deformable apparel used in the protection of persons against contact with high voltage conductors, a solid conducting shell having the general configuration of said apparel and adapted to hold said apparel therewithin, a flexible, expandable conducting lining adapted to be inserted in said apparel and having the volumetric configuration thereof when expanded, a frame, means for removably supporting said apparel within said frame, means for fixably supporting said lining within said frame, an inflatable member within said lining and means for inflating said member whereby upon inflation thereof said lining is expanded within said apparel and constraining said apparel to expand against the inner walls of said shell and into firm electrical contact therewith, a high voltage power supply, a circuit interconnecting one terminal of said supply with said shell and the other terminal with said lining and means for indicating the leakage current in said circuit.

3,093,794

AVERAGE-RESPONDING METER

Herbert B. Brooks, Menlo Park, and Kenneth E. Walker, Poway, Calif.; said Walker assignor to said Herbert B. Brooks

Filed Dec. 24, 1958, Ser. No. 782,954
3 Claims. (Cl. 324—111)



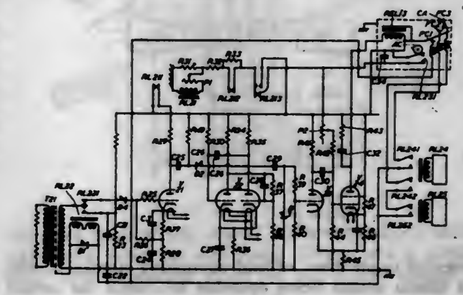
1. An average-responding meter comprising first and second input terminals for receiving an applied input signal, a variable resistor having first and second terminals and a slider, a first switch coupled to said first input terminal and the first terminal of said resistor for connecting said first input terminal to the first terminal of said resistor when actuated, a meter having first and second terminals, the second terminal of said resistor being coupled to the slider of said resistor and also to the first terminal of said meter, the second terminal of said meter being connected to said second input terminal, a capacitor having first and second terminals, the first terminal of said capacitor being connected to the slider of said resistor, the second terminal of said capacitor being connected to said second input terminal, a source of potential, an indicator having a terminal connected to said source of potential, a second switch coupled to said source of potential and to another terminal of said indicator for causing said indicator to indicate when said second switch is actuated, a motor having a terminal connected to said source of potential, a third switch coupled to another terminal of said motor and to said source of potential for causing said motor to rotate when said third switch is closed, said motor being mechanically coupled to said switches and the slider of said resistor for successively actuating said first switch when said third switch is closed, moving said slider to maintain the product of the resistance between the first terminal of said resistor and the slider of said resistor and the capacitance of said capacitor substantially equal to the time elapsed since the actuation of said first switch, actuating said second switch and opening said third switch before the slider of said resistor reaches the second terminal of said resistor.

3,093,795

AUDIENCE PREFERENCE ANALYSIS SYSTEM UTILIZING CONTINUOUSLY INTERROGATED RESPONDER STATIONS

Kenneth Jones, Rickmansworth, England, assignor of one-half to Attwood Statistics Limited, London, England, a British company

Filed June 29, 1959, Ser. No. 823,519
6 Claims. (Cl. 325—31)



1. A remote indication system comprising a central station, a plurality of responder stations remote from said central station, at least one communication path interconnecting said responder stations with said central station, said central station including interrogation pulse-generating means connected to apply repeated series of interrogation pulses to said communication path, and each of said responder stations including a responder comprising response pulse-generating means and stepping means responsive to interrogation pulses received over said path to step one step for each pulse received whereby to count said pulses, each said stepping means being responsive to the counting of a predetermined number of said pulses, which number is different for each responder station, to step a plurality of steps in the period between the last pulse of said predetermined number of pulses and the next succeeding pulse of the series to control the generation of at least one response pulse by said response pulse-generating means, the responder at each responder station including a limiting electronic amplifier input stage followed by a monostable multivibrator stage the pulse output of which is applied to the first stage of a further two-stage multivibrator functioning as a monostable stage in response to such pulse output and also functioning as an astable multivibrator in response to a D.C. input to the second stage thereof, pulse counting means settable to respond to a predetermined one of a series of pulses applied thereto by said further multivibrator to apply said D.C. input to said second stage, and means for coupling the response pulse to said communication path.

3,093,796

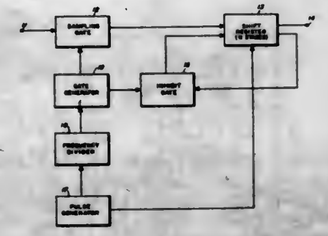
AUTOMATIC SIGNAL TIME COMPRESSOR WITH GATE MEANS FOR CONTROLLING RATE OF SHIFT REGISTER OUTPUT

Everett C. Westerfield, San Diego, Calif., assignor to the United States of America as represented by the Secretary of the Navy

Filed Oct. 28, 1959, Ser. No. 849,418
4 Claims. (Cl. 328—15)
(Granted under Title 35, U.S. Code (1952), sec. 266)

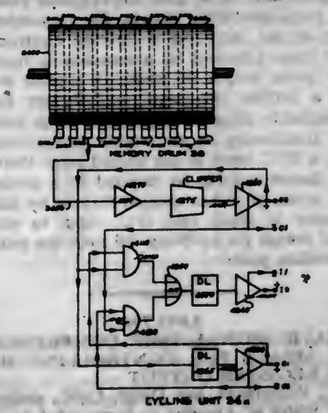
1. An automatic signal time compressor comprising; sampling means having inputs and at least one output adapted to sample a binary signal at a predetermined rate; circulating storage means consisting of an N-stage shift register and having inputs and outputs, one input on said storage means being connected to an output of said sampling means; inhibit means having inputs and at least one output; gate pulse generator means for producing gating

pulses at a predetermined rate and having at least one input and outputs, one of said outputs being operatively connected to an input of said sampling means and another of said outputs from said gate pulse generator means being operatively coupled to an input on said inhibit means; an output of said circulating storage means being operatively connected to an input on said inhibit means, the output of said inhibit means being operatively



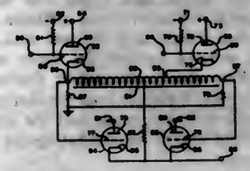
connected to an input of said circulating storage means; said inhibit means being operable to couple the output of said circulating storage means to said input of said circulating storage means in the absence of an input from said gate generator means; shift pulse producing means operatively connected to an input of said circulating storage means adapted to shift said circulating storage means at a rate which is a predetermined multiple, higher than one, of said predetermined gating pulse rate.

3,093,797
PULSE GENERATOR EMPLOYING LOGIC GATES AND DELAY MEANS
Samuel Lubkin, Bayside, N.Y., assignor, by mesne assignments, to Curtiss-Wright Corporation, Carlstadt, N.J., a corporation of Delaware
Original application July 27, 1953, Ser. No. 370,538, now Patent No. 2,934,262, dated Apr. 26, 1960. Divided and this application Mar. 8, 1960, Ser. No. 13,654
12 Claims. (Cl. 328—61)



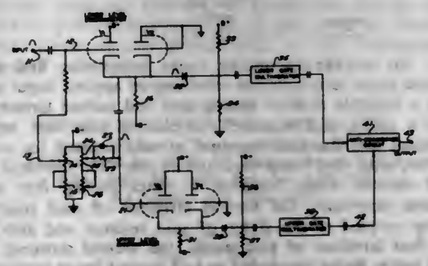
1. A narrow pulse generator comprising a source producing a first and second primary series of periodic pulses which are of opposite polarities and of like amplitudes and a first and second secondary series of periodic pulses which are delayed with respect to said primary series of periodic pulses and are of opposite polarities and of like amplitudes, and means responsive to said primary series of periodic pulses and to said delayed secondary series of periodic pulses for producing a first series of short duration pulses, and a second series of short duration pulses.

3,093,798
CODED DATA DECODER
Andrew B. Jacobsen, Somerville, Mass., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Original application Sept. 19, 1945, Ser. No. 617,365, now Patent No. 2,772,399, dated Nov. 27, 1956. Divided and this application Feb. 10, 1954, Ser. No. 410,744
8 Claims. (Cl. 328—67)



3. Apparatus for producing a train of time spaced output pulses from an input pulse comprising, in combination, a delay line, said delay line terminating at each end in its characteristic impedance, means for applying an input pulse simultaneously to two spaced points along said delay line, said points being asymmetrically spaced with respect to the transverse axis of electrical symmetry of said delay line and means for combining the pulses appearing across said characteristic impedances thereby to produce a train of time spaced output pulses.

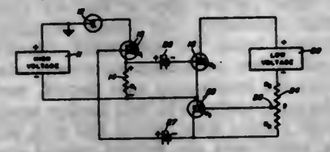
3,093,799
SIGNAL ANALYZING CIRCUIT
Earl N. Hansen, Melrose, Mass., assignor, by mesne assignments, to Laboratory For Electronics, Inc., Boston, Mass., a corporation of Delaware
Filed July 20, 1959, Ser. No. 828,403
3 Claims. (Cl. 328—115)



1. A pulse amplitude selector circuit comprising first and second discriminator stages, said first stage providing in response to a pulse at its input a pulse at its output only if said input pulse exceeds a first predetermined amplitude level, said output pulse from said first stage having an amplitude related to the difference between said input pulse amplitude and said predetermined amplitude level, said second stage having as its input the said output of said first stage, said second stage providing an output pulse only if said output pulse from said first stage exceeds a second predetermined amplitude level, an anti-coincidence output circuit coupled to said first and said second discriminator stage outputs and adapted to provide a circuit output only when said first discriminator stage output pulse does not coincide with a pulse from said second discriminator stage output, whereby an output pulse is provided in response only to output pulses from said first discriminator stage which have an amplitude less than said second predetermined amplitude level, wherein said first and second discriminator stages each comprise first and second electron tubes, each said first electron tube being operated as a cathode follower, each said second electron tube being connected as a triode

having its control grid connected directly to a respective reference potential junction, and each having its cathode coupled directly to the cathode of the respective discriminator first tube, a source of negative potential resistively coupled to said cathodes of said first and said second tubes in each of said stages, whereby a pulse at the input of each of said first tubes, which does not exceed the respective predetermined amplitude level is capacitively coupled to the respective output of each of said stages with a time constant determined by the conductance of the respective second electron tube, whereas a pulse at the input of each of said first tubes which exceeds the respective predetermined amplitude level renders the respective first tube conducting thereby substantially decreasing the conductance of the respective second electron tube.

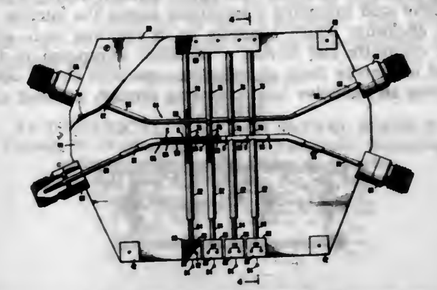
3,093,800
CURRENT REGULATOR WITH REINFORCED FEEDBACK
Walter J. Bonia, Lincoln, Mass., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed May 26, 1960, Ser. No. 32,052
1 Claim. (Cl. 328—267)



A current regulator comprising a load device, a regulator tube connected to the load, a cathode resistor connected to the regulator tube so as to carry all of the current flowing through the regulator tube and load, a source of high potential joining the load and the cathode resistor, first and second triodes connected in series, a first reference battery, means connecting said first reference battery between one end of the cathode resistor and the control grid of the first triode, means connecting the other end of the cathode resistor and the juncture of the first and second triodes, a source of low potential connected to the plate of the first triode, an adjustable resistance connected to the source of low potential and the cathode of the second triode, means connecting the grid of the second triode and the sliding arm of the adjustable resistance, a second reference battery, and means connecting the second reference battery between the grid of the regulator tube and the cathode of the second triode, whereby variations in the current flowing through the cathode resistor causes an opposing potential to be applied to both the regulator tube and second triode thereby regulating the current drawn by the load.

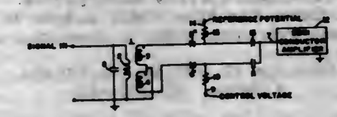
3,093,801
TRAVELING WAVE PARAMETRIC AMPLIFIERS
George F. Bland, New York, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 27, 1960, Ser. No. 78,585
16 Claims. (Cl. 330—4.6)

1. An amplifier comprising first and second transmission lines, means for applying a signal voltage having a first frequency to said first line, means for applying to said second line a pump voltage having a second frequency higher than said second frequency, a variable reactance inter-coupling said lines between a given point on each of said lines, first impedance means coupled to the given point of said first line having at the given point of said first line a substantially infinite impedance value for said signal voltage and a substantially zero impedance value for said pump voltage and second impedance means coupled to the given point of said second line having at



the given point of said second line a substantially infinite impedance value for said pump voltage and a substantially zero impedance value for said signal voltage.

3,093,802
CONTROLLABLE SIGNAL TRANSMISSION NETWORK
Woo F. Chow, Syracuse, N.Y., assignor to General Electric Company, a corporation of New York
Filed Feb. 25, 1959, Ser. No. 795,415
3 Claims. (Cl. 330—145)



1. A gain control circuit for selectively varying the dynamic range of a signal in electronic amplifying circuitry comprising signal transforming means having a primary winding and two secondary winding portions, means for applying an input signal to said primary winding, means for connecting said secondary winding portions whereby signals of opposite phase are produced between a common terminal of said secondary winding and, respectively, the first and the second end terminal of said secondary winding, a first junction diode and a first capacitor serially connected to the first end terminal, a second junction diode and a second capacitor serially connected to the second end terminal, means for connecting said first and second capacitor to a common input terminal of a load circuit, means for applying a fixed reference potential between said common terminal and the junction of said first junction diode and said first capacitor whereby said first junction diode is back-biased, means for applying a variable gain control voltage between said common terminal and the junction of said second junction diode and said second capacitor whereby said second junction diode is normally back-biased.

3,093,803
FILTER HAVING LUMPED RESONANCE ELEMENTS SPACED ALONG LENGTH OF SHIELDING ENCLOSURE, WITH ADJUSTABLE MAGNETIC COUPLING BETWEEN ELEMENTS
Heinz M. Schlicke, Fox Point, and Hans J. Rey and Hans E. Weidmann, Milwaukee, Wis., assignors to Allen-Bradley Company, Milwaukee, Wis., a corporation of Wisconsin
Filed Aug. 19, 1959, Ser. No. 834,806
16 Claims. (Cl. 333—73)

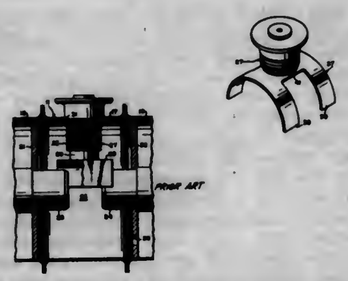
1. In a narrow band pass filter for radio frequencies the combination comprising: a tubular metallic enclosure

for confining magnetic fields therein; a pair of longitudinally spaced resonant circuit elements in said enclosure each adapted to have strong magnetic fields associated therewith at resonance, each circuit element having a conductive stud extending transversely across the interior of the enclosure which connects at its opposite ends with the enclosure and having a capacitor interposed in the stud to thereby form an inductive-capacitive circuit comprising an inductive loop extending through the stud and



circumferentially about the inner surface of the enclosure and a capacitance in series with the inductive loop whereby the field of each circuit element encircles an axis transverse of the enclosure such that rotation of a circuit element adjusts the coupling between elements; a circumferential division in the inner surface of the enclosure which longitudinally divides the resonant circuit elements one from another; and means for introducing radio frequency energy to said circuit elements and withdrawing energy therefrom.

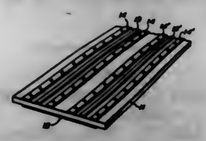
3,093,804
TUNABLE CAVITY RESONATOR
Albert D. Larue, Los Altos, Calif., assignor to Varian Associates, Palo Alto, Calif., a corporation of California
Filed Apr. 17, 1961, Ser. No. 103,604
9 Claims. (Cl. 333—83)



1. A cavity resonator comprising a cavity wall, re-entrant means on said wall for forming a gap region of concentrated electric field lines directed across said gap, and a tuner assembly for said resonator, said tuner assembly comprising two spaced paddle portions spaced apart in the direction of the electric field taken across said gap, and support means for said paddles and for applying motion to said paddles towards and away from said gap region, and said paddles being elongated in a direction transverse to the direction of electric field lines across said gap.

3,093,805
COAXIAL TRANSMISSION LINE
Nicholas Ozifchin, Clifton, and Abel L. Zitcer, Mountain Lakes, N.J., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Army
Filed July 26, 1957, Ser. No. 674,539
1 Claim. (Cl. 333—84)

A plurality of independently shielded coaxial transmission lines of the printed circuit type comprising a dielectric board having parallel planar surfaces, a plurality of rectangular line conductors affixed in spaced parallel relation to one wide surface of said dielectric board, a plurality of further rectangular conductors affixed to said one wide surface of said dielectric board on opposite narrow sides of said line conducters in such manner that each further conductor has a narrow side spaced from but in parallel relation to one of the two narrow sides of each of said line conductors, said further conductors providing electric shields for said line conductors to prevent spurious electric coupling therebetween, a wide rectangular ground conductor affixed to a wide dielectric board surface opposite to said one wide surface thereof,



said ground conductor having a width substantially equal to the combined widths of said line and further conductors including the spacing therebetween, said ground conductor having narrow edges lying in the same plane with the outer narrow sides of the two outermost of said further conductors, and means extending through said dielectric board for electrically connecting said ground and further conductors at corresponding spaced points along the longitudinal axes thereof, each of said line conductors together with said further conductors on the opposite narrow sides thereof and with said ground conductor constituting one printed coaxial transmission line.

3,093,806
PRESSURE TRANSDUCER
Robert P. Gutterman, 9500 Forest Road, Bethesda 14, Md.
Filed Oct. 24, 1961, Ser. No. 148,791
14 Claims. (Cl. 338—42)

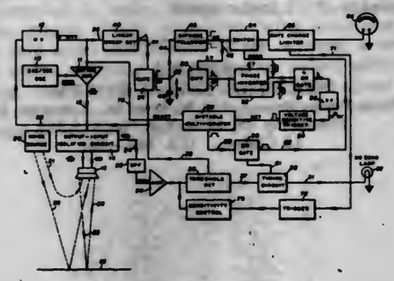


1. A transducer for measuring pressure changes which comprises: at least two plates, each having an electrical resistance characteristic invariable with pressure, means spacing and insulating said plates from each other solely at their periphery and forming a hermetically sealed solely gas-filled space between said plates, at least one of said plates being resiliently flexible in response to applied external pressure to place the same in direct electrical contact with the other of said plates, and further resiliently flexibly responsive to increased pressure thereon in excess of the pressure in said gas-filled space to increase the area of contact between said plates, the electrical resistance between said plates varying solely as the area of contact therebetween varies, and the ratio of the maximum planar dimension of the plates to the width dimension of the space between said plates is at least 10:1.

3,093,807
SONIC ALTIMETER
Lawrence S. Crane, Los Angeles, and Irvin M. Starr, San Fernando, Calif., assignors to The Bendix Corporation, a corporation of Delaware
Filed Apr. 11, 1960, Ser. No. 21,335
15 Claims. (Cl. 340—1)

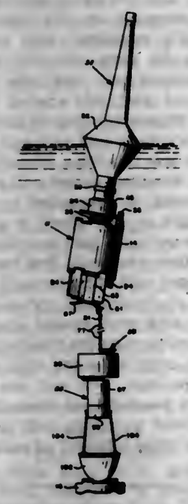
1. In a pulse-echo distance-measuring system: an oscillation generator; a transducer for radiating energy from

the oscillation generator toward a distant object; means for introducing energy from the oscillation generator into the transducer; means for detecting echoes reflected by a distant object; means for developing successive voltages of magnitude a function of the elapsed period of time



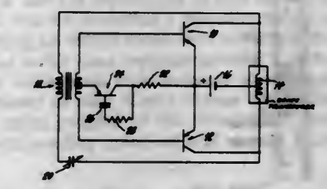
between the time of transmission and return of the echo; utilization means responsive to object distance as determined by the magnitude of the developed voltages; and means responsive to differences between successive developed voltages above a predetermined value for temporarily disabling the utilization means.

3,093,808
AIR-DROPPED MINIATURE SONOBUOY
George J. Tatnall, Southampton, and Albert F. Scarcelli and George A. Gimber, Hatboro, Pa., assignors to the United States of America as represented by the Secretary of the Navy
Filed Feb. 29, 1960, Ser. No. 11,939
9 Claims. (Cl. 340—2)
(Granted under Title 35, U.S. Code (1952), sec. 266)



6. An air-dropped miniature sonobuoy for acousto-electric transponding when immersed in water, comprising, in combination: a casing of a nose assembly, a transmitter mounted in a body separably connected to said casing, first squib-actuated means on said body operable to release said transmitter body from said casing, a weight seated in said casing, hanger means, a detecting means seated in said weight and connected thereto by said hanger means, means connecting said transmitter to said detecting means, an inflatable means attached to said transmitter body, an antenna attached in said inflatable means and connected to said transmitter, and second squib-actuated means on said body operable to inflate said inflatable means.

3,093,809
AUTOMATICALLY KEYED SIGNAL SOURCE
Francis W. Watlington, Coralita Pembroke, Bermuda, assignor to the United States of America
Filed July 8, 1960, Ser. No. 41,709
9 Claims. (Cl. 340—15)

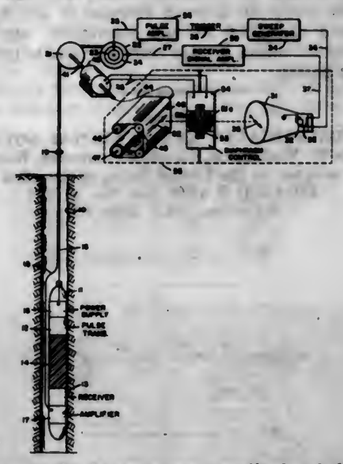


8. An automatically keyed, sonic-signal source comprising, in combination: a pair of transistors, each having at least an emitter, collector and base element, said emitters being connected together; a magnetostriction transducer connected between the collector elements of said transistors; connections for a source of supply voltage for said transistors, said connections being connected between said magnetostriction transducer and the emitters of said transistors; a transformer for providing sufficient positive feedback between the output and input of each transistor to cause said transistors to oscillate, the primary winding of said transformer being connected between the collector elements, and the secondary winding between the base elements, of said transistors; a capacitance connected in the feedback path of at least one transistor, said capacitance being of such value that the frequency of oscillation of said transistors corresponds to the resonant frequency of said magnetostriction transducer; a base-biasing resistance; and a relaxation oscillator connected in series with said base-biasing resistance between the emitters and the bases of said transistors for automatically cutting off oscillation of said transistors at a predetermined rate.

3,093,810
SEISMIC WELL LOGGING DATA DISPLAY
Robert L. Geyer and Neil R. Sparks, Tulsa, Okla., assignors to Pan American Petroleum Corporation, Tulsa, Okla., a corporation of Delaware
Filed Feb. 1, 1960, Ser. No. 5,882
12 Claims. (Cl. 340—18)

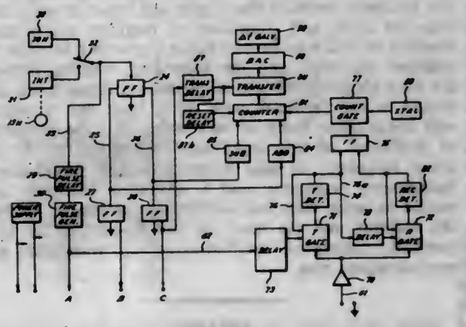
1. The method of recording seismic well logs while moving a seismic impulse transmitter and a receiver of seismic waves through a well at substantially constant speed while maintaining said transmitter and receiver a small fixed distance apart and repeatedly causing said transmitter to emit impulses and said receiver to detect the resultant seismic waves impinging thereon, which recording method comprises moving a record-receiving strip lengthwise in proportion to the speed of moving said transmitter and receiver through said well, initiating a mark at a base line parallel to the edge of said strip substantially synchronously with the emission of each impulse by said transmitter, extending said mark continuously and linearly with time across said strip in the direction of its width during the time interval while the seismic waves resulting

from said impulse are traveling to and are being received by said receiver, and varying the density of said mark in



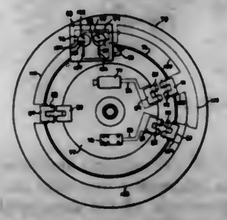
proportion to the instantaneous amplitude of the waves received by said receiver.

3,093,811
WELL LOGGING SYSTEMS
William P. Schneider, Houston, Tex., assignor to Schlumberger Well Surveying Corporation, Houston, Tex., a corporation of Texas
Filed Nov. 29, 1961, Ser. No. 155,675
7 Claims. (Cl. 340—18)



1. An acoustic logging system for use in a well bore comprising: a borehole instrument sized for passage through a well bore and having spaced upper and lower acoustic transmitter means and at least two acoustic receiver means therebetween, means coupled to said transmitter and receiver means for developing signals representing transmitter-to-receiver acoustic travel times for successive depth intervals between each of said transmitter means and each of said receiver means; means coupled to said signal developing means to provide counter pulse signals in response to said developed signals, counter means coupled to said counter pulse signal means for adding and subtracting at least two pulse signals from said counter pulse means representing at least two transmitter-to-receiver acoustic travel times for a given depth in a well bore to provide a net pulse count, transfer means coupled to said counter means and responsive to a transfer signal to read out a net pulse count in said counter means, means to key said counter means, said transfer means and said signal developing means in sequence to obtain an addition and subtraction of at least two pulse signals representing transmitter-to-receiver acoustic travel times for a given depth in a well bore and provide a transfer signal to said transfer means to transfer such net pulse count in said counter means to said transfer means, and means coupled to said transfer means to derive indications of the net pulse count in the counter at the time of occurrence of a transfer signal.

3,093,812
INDUCTION SIGNAL SYSTEM
Elmer Verlin Brown, 918 N. West St., Lebanon, Ind.
Filed May 25, 1959, Ser. No. 815,365
15 Claims. (Cl. 340—58)

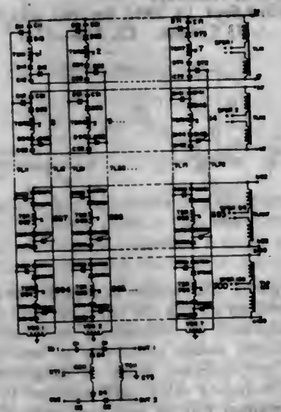


13. In combination with a vehicle having a dual wheel mounted to rotate about an axle and an inflatable tire on each rim of said wheel, a pressure-responsive, single-pole double-throw switch for each tire mounted on said wheel, each switch including a movable contactor biased away from one terminal and toward engagement with the other terminal of its switch but maintained in engagement with said one terminal by pressure values within its associated tire above a predetermined minimum, a first electrically-activated signal device carried on the vehicle, a second electrically-activated signal device carried on the vehicle, a first armature-wound coil stationarily mounted on said vehicle adjacent said axle and electrically associated with said first signal device to energize the same whenever a current pulse is induced in said first coil, a second armature-wound coil stationarily mounted on said vehicle adjacent said axle and electrically associated with said second signal device to energize the same whenever a current pulse is induced in said second coil, said coils being equidistant from said axle and angularly spaced from each other about said axle, a permanent magnet stationarily mounted at the same distance from said axle and angularly spaced from said coils, a first travelling, armature-wound coil, a second travelling, armature-wound coil and a third travelling, armature-wound coil mounted to travel with said wheel, upon rotation of said wheel, in a path closely adjacent said stationary coils, said travelling coils being so angularly spaced that, when said first travelling coil registers with said magnet, said second travelling coil will register with said first stationary coil and said third travelling coil will register with said second stationary coil, and conductor means connecting the windings of said first and second travelling coils in series with each other and, through separate resistors, with said one terminal of each of said switches in parallel, and connecting the windings of said first and third travelling coils in series with each other and with the other terminal of each of said switches in parallel.

3,093,813
ELECTRONIC SWITCH
Kurt Gerbig, Berlin-Treptow, Germany, assignor to VEB Fernmeldewerk Arnstadt, Arnstadt/Thuringia, Germany
Filed Dec. 17, 1959, Ser. No. 860,143
9 Claims. (Cl. 340—166)

1. An electronic switch free from movable contacts, particularly for telephone installations, comprising two

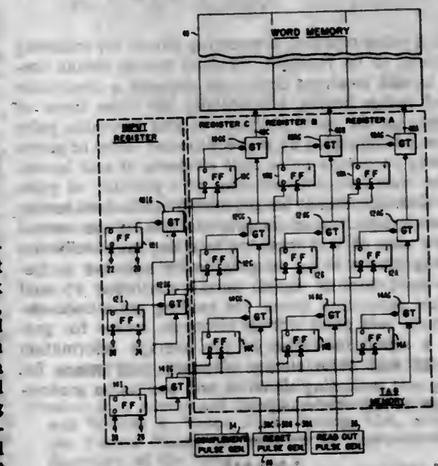
input terminals, two output terminals, and two additional terminals, two series components each comprising a direct current decoupling element series connected to first and second rectifier means respectively, each of said series components connecting an input terminal to an output terminal, a shunt component comprising third and fourth rectifier means and a first choke with a centertap constituting the first of said additional terminals, said choke being connected in series between said third and fourth rectifier means, shunt component being connected between said series components of the network, a second choke with a centertap constituting the second additional terminal, said second choke being connected across said output terminals, and control means connected to the centertap of said first choke.



3. An electronic co-ordinate switching circuit comprising a matrix of N input branches and M output branches wherein at each of the junctions of said matrix there is an electronic switch having two input terminals, two output terminals, and two additional terminals, said switch further including two series components each comprising a direct current decoupling element and a diode connected in series, between an input terminal and an output terminal, and a shunt component comprising two additional diodes and a choke with a centertap constituting the first of said additional terminals connected in series between said two additional diodes, said shunt component being connected in circuit between said series components of the network, said co-ordinate switch having a number of electronic switches in each input branch equal to the number of output branches, all of the input terminals of said switches assigned to the same input branch being connected in parallel with each other, choke coils, and all of the output terminals of said switches assigned to the same output branch being connected in parallel with one of said choke coils, each of said choke coils having a centertap constituting said second control terminal for the switches connected thereto, and control means connected to said first and second control terminals.

3,093,814
TAG MEMORY
Eric G. Wagner, New York, N.Y., and John McCarthy, Cambridge, Mass., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Apr. 29, 1959, Ser. No. 809,808
7 Claims. (Cl. 340—172.5)

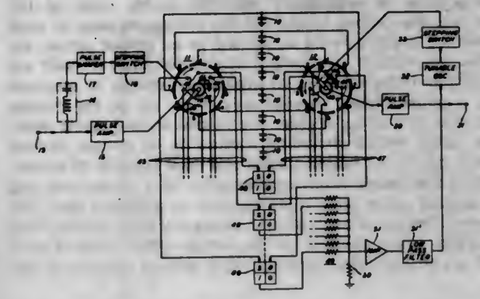
1. A memory circuit comprising; a plurality of tag registers each including a plurality of bistable storage devices; each of said storage devices being capable of assuming a first stable state representative of a binary one and a second stable state representative of a binary zero; each of said storage devices in said tag registers having a reset input, a complement input, and output means; a pulse applied to the reset input of any one of said storage devices in said tag registers being effective to set that device in said second stable state; a pulse applied to the complement input of any one of said storage devices in said tag registers being effective to complement that storage device by switching it from the one of said binary states it is in to the other of said binary states; the output means for each of said storage devices in said tag registers being responsive in accordance with the stable state of the device; the output means for the storage devices in each said tag register being connected in an output circuit for that tag register; the output circuit for each of said tag registers being effective to provide an output in response to a pulse applied thereto only when all of the storage devices in that tag register are in said second stable state; an input register including a plurality of storage devices each having an output means and each capable of assuming a first stable state representative of a binary one and a second stable state representative of a binary zero; the output means of each of said storage devices in said input register being coupled to the complement input of each of a corresponding group of said storage devices in said



tag registers with each said group including one storage device in each of said tag registers; the output means of each of said storage devices in said input register being responsive according to the state of the device whereby, when a pulse is applied to the output means of any one of these storage devices, the storage devices in the corresponding group in the tag registers are complemented only when that storage device in the input register to whose input means the pulse is applied is in said first stable state; means for entering a tag in said input register; and pulse generator means for said memory; said pulse generator means being effective when the tag entered in said input register is to be entered into a particular one of said tag registers to first apply a pulse to each of said output means for said storage devices in said input register, to then apply a pulse to the first input for each of said storage devices in the particular tag register into which the tag is to be entered, and to then again apply a pulse to each of said output means for said storage devices in said input register; said pulse generator means being effective when the tag entered in said input register is to be simultaneously compared with tags stored in each of said tag registers to first apply a pulse to each of said output means for said storage devices in said input register, to then simultaneously apply a pulse to each of the tag register output circuits; and to then again apply a

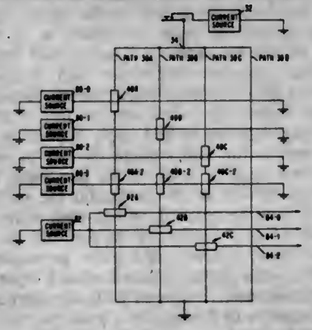
pulse to each of said output means for said storage devices in said input register.

3,093,815
PULSE REPEATING SYSTEM
Maurice Karnaugh, Warren Township, Somerset County, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed May 31, 1960, Ser. No. 32,793
10 Claims. (Cl. 340—173)



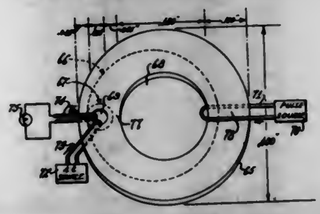
2. In a pulse repeater, a receiving circuit for incoming pulse trains to be repeated, flywheel timing means connected to said receiving circuit for deriving a continuous series of pulses having substantially the same times of occurrence as the pulse positions in said incoming pulse train, means controlled by said continuous series of pulses for writing successive pulse code elements of said incoming pulse train into different ones of a plurality of pulse storage elements, means for generating oscillations having a frequency equal to an integral multiple of the normal repetition rate of said input pulse train, said oscillation generating means being adapted to be adjusted in frequency by a control signal, means controlled by said oscillation generating means for reading pulse code elements from said pulse storage elements, means for generating a signal indicative of the average information content of said pulse storage elements, and means for applying said indicating signal to said oscillation generating means as said control signal.

3,093,816
SUPERCONDUCTOR PERSISTENT CURRENT CIRCUITS
Lloyd P. Hunter, Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed May 26, 1960, Ser. No. 31,940
24 Claims. (Cl. 340—173.1)



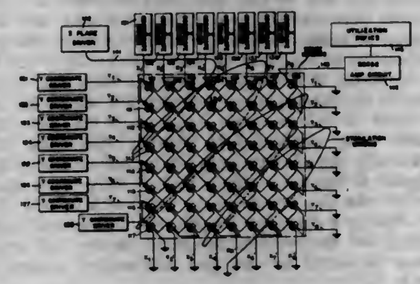
20. In a superconductor circuit; a plurality of superconductive paths connected in parallel circuit relationship to form a plurality of superconductive loops; means for causing said circuit to assume a persistent current condition in which persistent currents are stored in at least two of said plurality of superconductive loops and for thereafter introducing resistance into at least one of said paths in which persistent current is flowing to quench the persistent current flowing in that path and at the same time increase the persistent current flowing in at least one other of said paths in said circuit.

3,093,817
MAGNETIC SYSTEMS
Jan A. Rajchman, Princeton, and Arthur W. Lo, Elizabeth, N.J., assignors to Radio Corporation of America, a corporation of Delaware
Filed Sept. 13, 1954, Ser. No. 455,725
33 Claims. Cl. 340—174)



14. A magnetic information storage device comprising a magnetic medium having the characteristic of being substantially saturated at remanence, said medium having distinct portions, means selectively to saturate one said portion to two different states of magnetic saturation, and means including other said portions to reverse the sense of remanent flux of said one portion any desired number of times without affecting the information stored in said device.

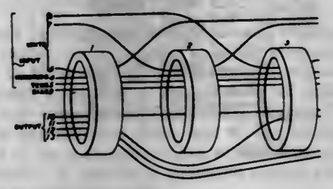
3,093,818
DOMAIN ROTATIONAL MEMORY SYSTEM
Lloyd P. Hunter, Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Oct. 8, 1956, Ser. No. 614,654
18 Claims. (Cl. 340—174)



1. An information storage device comprising a plurality of tubular elements, each of said elements including a plurality of rings of magnetic material on one surface thereof, each of said rings of magnetic material having a preferred axis of magnetization wherein magnetization in one and the other direction along said axis is representative of two binary states, means inductively coupled to each of said rings for modifying the excitation threshold of said magnetic material by generating a magnetic field having a component transverse to the preferred axis of magnetization and energization means inductively coupled to each of said rings for generating a magnetic field

along the preferred axis of magnetization, the magnitude of the field generated along the preferred axis of magnetization exceeding said modified threshold whereby switching of said ring from one to the other direction of said preferred axis of magnetization may be accomplished.

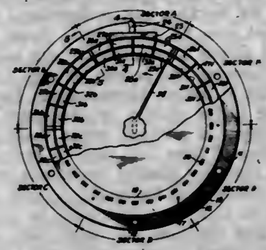
3,093,819
MAGNETIC TRANSLATORS
Arnold Charles Lynch, Potters Bar, Middlesex, England, assignor to Her Majesty's Postmaster General, St. Martin's-le-Grand, London, England
Filed Nov. 17, 1958, Ser. No. 774,467
Claims priority, application Great Britain Nov. 21, 1957
3 Claims. (Cl. 340—347)

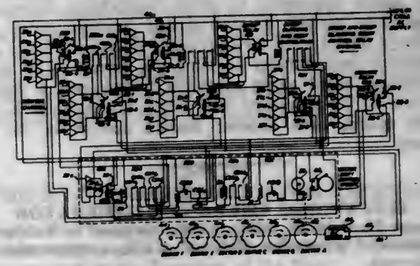


3. A magnetic translation device comprising a plurality of switchable magnetic cores, a bias wire threading all of said cores to provide on each core a single turn winding for magnetically saturating the core in one direction, the magnetic saturation of all the cores being in the same direction, a plurality of input wires arranged in groups of a predetermined number and threading selected cores and by-passing the remaining cores in such manner that each core is threaded by only one input wire of each group of input wires and every core is threaded by a different and unique combination of input wires, the said input wires threading the said selected cores in one and the same direction to provide on each core single turn windings each of which is adapted to produce a magnetic flux opposed to that produced by the bias wire, means for applying a first electric potential to the bias wire to continuously magnetically saturate the cores in the said first-mentioned one direction, means for applying a second electric potential simultaneously to a combination of input wires formed by one input wire selected from each group of input wires for magnetizing the cores in the direction opposite to said first mentioned one direction and effective to cause reversal of magnetism in the one core through which all the said selected input wires are threaded but ineffective to cause reversal of magnetism in a core having threaded therethrough one less than the said combination of input wires, a plurality of output wires threaded through said cores, each wire threaded through selected cores and by-passing other cores, each core being threaded by at least one output wire, and a plurality of output circuits less in number than the number of cores and connected to said output wires by the reversal of magnetism in said one core for giving a required translation of the number represented by the said combination of input wires.

3,093,820
AUTOMATIC RADAR MONITOR AND ALARM DEVICE
Robert C. Nelson, 516 Rathbun Ave., Staten Island 12, N.Y.
Filed July 1, 1960, Ser. No. 34,345
10 Claims. (Cl. 343—5)
(Granted under Title 35, U.S. Code (1952), sec. 266)

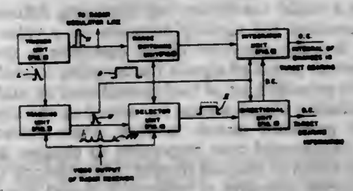
1. In a radio object locating system of the type having a cathode-ray display tube for manifesting detected targets, a device for automatically indicating the initial presence of a target manifestation on said tube comprising: a plurality of light-sensitive transducer elements responsive to target manifestations on said tube, means mounting said elements in a predetermined pattern on the face of said display tube to define distinct zonal areas of response to said target manifestations, indicating means having a plurality of selectively energizable registers corresponding respectively to each of said zonal areas, circuit means for





connecting said registers to said light-sensitive transducer elements, said circuit means including control means for correlating each of said zonal areas with a corresponding signal register for indicating as a discrete registration the specific zonal area encountered by a particular target manifestation.

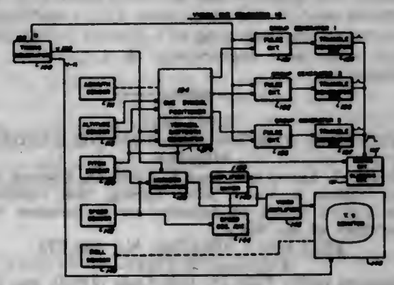
3,093,821
CONTROL SYSTEM FOR HOMING GUIDED MISSILE
Frederick C. Alpers and Fred S. Atchison, Corona, Calif., and Wilfrid A. Yates, Silver Spring, Md., assignors to the United States of America as represented by the Secretary of the Navy
Filed July 1, 1952, Ser. No. 296,772
8 Claims. (Cl. 343—7)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A control system, for a guided missile having means for sensing the presence of a target and producing signals in response thereto, comprising a trigger unit for cyclically producing a time base pulse and a tracking trigger in fixed time phase relationship, a range tracking unit operating cyclically in response to said tracking triggers to track by time discrimination a preselected signal from a group of time displaced signals obtained from said sensing means and representative of a plurality of targets at different ranges, said tracking unit accomplishing said tracking function by producing a range trigger

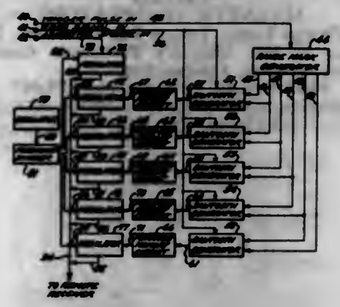
and a range pulse each being continually adjusted during each cycle of operation by the tracking unit into a respectively chosen fixed phase relationship with said preselected target signal through phase comparison means, a selector unit operating to time gate said group of signals by phase coincidence measuring means controlled by said range trigger to select that signal being tracked by the tracking unit, a directional unit for effecting a spatial scan by the sensing means, commutating the selected signals in accordance with said spatial scan, and for comparing the powers of thus commutated selected signals to derive selected target bearing information relative to the missile, an integrator unit for integrating changes in selected target bearing information over a period of time and thereby deriving an appropriate lead angle for placing the missile on substantially a collision course with the target, a range unit operating in response to each time base pulse to produce a pulse of chosen time duration and continually comparing the phase of the chosen duration pulse with said range pulse, and means responsive to phase coincidence between a latter time portion of said chosen duration pulse and an early time portion of said range pulse to activate said integrator unit, thereby enabling the missile to home on a selected target along a pursuit course over a desired portion of its trajectory and along substantially a collision course over another desired portion of its trajectory.

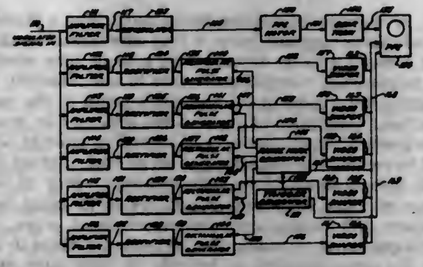
3,093,822
ELECTRONIC VISUAL CUE GENERATOR
George H. Balding, Niles, Calif., assignor to Kaiser Industries Corporation, Oakland, Calif., a corporation of Nevada
Filed Apr. 11, 1958, Ser. No. 728,019
97 Claims. (Cl. 343—11)



1. In a visual cue system for displaying different items of information for viewing purposes on a video display unit, a first cue generator circuit operative to generate a first discrete group of signals for coupling to said display device to provide a set of background cues on said display unit including signal means for adjusting the signal output the generator circuit to vary given characteristics of the background cues responsive to changes in a first data set which is coupled thereto, and a second cue generator circuit operative to generate a second group of signals for coupling to said display device to provide a second discrete cue set on said display device in superposed relation with said background display comprised of at least one path which has characteristics related to a second set of data, including means for adjusting the signal output of said second cue generator circuit to vary given characteristics of the superimposed cue set to indicate changes in the information represented thereby relative to said first cue set, whereby the information represented by said two independently adjustable sets of visual cues is simultaneously presented on a common display for comparison purposes.

3,093,823
RADAR RELAY SYSTEM
John C. Reed, Santa Barbara, Calif., assignor to the United States of America as represented by the Secretary of the Air Force
Filed Mar. 17, 1961, Ser. No. 96,615
4 Claims. (Cl. 343—11)
(Granted under Title 35, U.S. Code (1952), sec. 266)

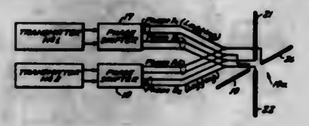




1. A system for relaying radar target signals and the azimuthal position thereof to remote receivers comprising means for generating a sawtooth waveform for each of said radar target signals, said sawtooth waveform being proportional in length to the range of the radar target signal representative thereof, means to convert each of said sawtooth waveforms to a direct current signal having an amplitude equal to the peak amplitude value of the sawtooth waveform representative thereof, means to generate an azimuthal signal representative of the orientation of the radar antenna receiving said radar target signals, means to modulate said azimuthal signal and said direct current signals at separate preselected audio frequencies, means to transmit said modulated signals to a remote receiver for reconverting said modulated signals to pulses representative of said radar target signals and to signals representative of said azimuthal positions, and means for displaying said reconverted signals on the screen of a plan position indicator.

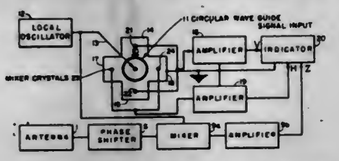
3,093,824
COMMUNICATION SYSTEM USING CIRCULAR POLARIZATION
Charles R. Ammerman, State College, Pa., assignor, by mesne assignments, to HRB-Singer, Inc., State College, Pa., a corporation of Delaware
Filed Feb. 17, 1959, Ser. No. 793,904
1 Claim. (Cl. 343—100)

In a circular polarization communications system, crossed dipole radiating antenna elements comprising a first pair of elements perpendicular to a second pair of elements, two transmitters operating on substantially the same carrier frequency, first phase-splitting means connecting the output of one of said transmitters to the respective pairs of said dipole elements to continuously produce a first circularly polarized radiation from said antenna for the output of said first transmitter, second phase-splitting means connecting the output of the other of said transmitters to the respective pairs of said dipole elements to continuously produce a second circularly polarized radiation from said antenna for the output of said second transmitter, said respective radiations being in opposite circularly polarized senses, and receiving



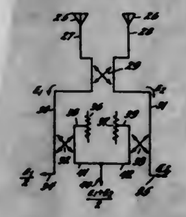
means, said receiving means including a crossed dipole antenna having perpendicular pairs of elements corresponding to those of said first-mentioned antenna, first circuit means connected to the elements of said second antenna and responsive to circularly polarized signals rotating in one electrical sense, and second circuit means connected to the elements of said second antenna means and responsive to circularly polarized signals rotating in the opposite electrical sense.

3,093,825
POLARIMETER
Philip J. Allen, 8000 Marion St., North Forestville, Md.
Filed Feb. 26, 1959, Ser. No. 795,876
3 Claims. (Cl. 343—100)
(Granted under Title 35, U.S. Code (1952), sec. 266)



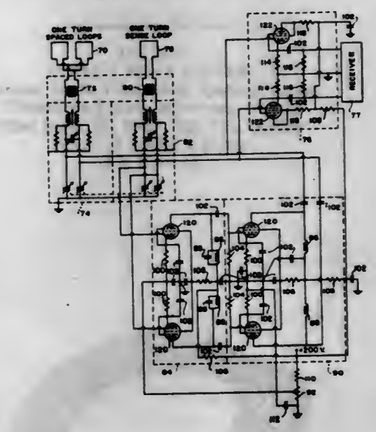
1. In combination, a trimode turnstile junction, a circular waveguide input to said junction, means for deriving a first signal in proportion to one orthogonal component of energy supplied to said junction from the circular waveguide, means for deriving a second signal in proportion to a second orthogonal component of energy supplied to said junction from the circular waveguide, means for amplifying the first and second signals, and means connected to said last named means for comparing the amplified first and second signals.

3,093,826
ANTENNA SYSTEM
Charles Fink, Silver Spring, Md., assignor, by mesne assignments, to Litton Systems, Inc., a corporation of Maryland
Filed Apr. 8, 1960, Ser. No. 20,957
11 Claims. (Cl. 343—100)



1. In an antenna system for simultaneously obtaining three spaced displaced lobe patterns during reception, a pair of antenna elements displaced apart at least one quarter wavelength, a first four terminal directional coupler having two lead-in and two lead-out terminals, each of said lead-in terminals being connected respectively to a different one of the two antennas, a second four terminal directional coupler having one of its lead-in terminals connected to one of said lead-out terminals of the first coupler, and having one of its lead-out terminals connected to a first output line and a second of its lead-out terminals connected to a common output line and its remaining lead balanced with respect to the common output line, and a third four terminal directional coupler having one of its lead-in terminals connected to the remaining lead-out terminal of the first direction coupler, and having a lead-out terminal connected to a second output line and the other lead-out terminal being connected to the common output line and the remaining lead-in terminal balanced with respect to the common output line, whereby each of said output lines receives a lobe pattern of substantially the same form as that of the other output line that is space displaced from the others, with the lobe pattern being received by the common output line being symmetrical about a line normal to the plane of the antennas and with the lobes received by the first and second of said lines being oppositely angularly displaced from said normal line.

3,093,827
THREE LOOP DIRECTION FINDER ANTENNA FOR SHIPBOARD USE
Douglas N. Travers, San Antonio, Tex., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Dec. 11, 1959, Ser. No. 859,080
7 Claims. (Cl. 343—114)



1. A three loop direction finder antenna system comprising a pair of coaxial spaced loop antennas having a cross-connected output, a sense loop antenna mounted at a right angle to said spaced loop antennas and having an output, a phase shift amplifier connected to said sense loop output and having a substantially capacitive load to provide a 90° phase shift, an isolating amplifier connected to said phase shift amplifier and having an output, tuning means connected between said spaced loop output and said isolating amplifier output for mixing said sense loop and spaced loop output and to provide a substantially resistive load to said isolating amplifier, a receiver for displaying the response of said antennas, and a cathode follower connected between said tuning means and said receiver.

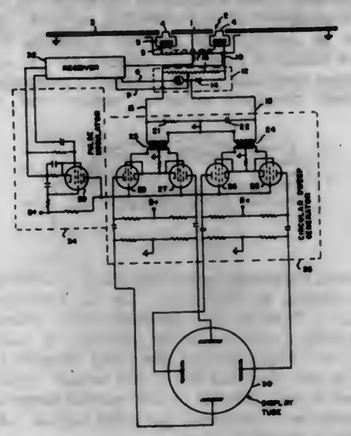
3,093,828

DIRECTION FINDING ANTENNA

Sherin L. Stutz, Lewisburg, Ohio, assignor to the United States of America as represented by the Secretary of the Air Force

Filed June 20, 1961, Ser. No. 118,476
2 Claims. (Cl. 343—118)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. An automatic direction finding antenna system for determining the angle of arrival of a radio frequency signal comprising: an antenna; means providing a ground plane for said antenna having a plurality of series connected interference elements equally and uniformly spaced from said antenna inserted in the current path of said ground plane; means for generating a sinusoidal signal wave; means for rectifying said sinusoidal wave thereby providing a pulsed signal wave; means for applying said pulsed signal wave to said elements in series thereby sequentially energizing said interference elements and causing a rotating asymmetric receiving antenna pattern which acts to modulate any radio frequency signal impressed on the antenna; means for demodulating said modulated radio freuency signal coupled to said antenna; a cathode ray tube having two pairs of deflection plates; means for generating a circular sweep on said cathode ray tube; means coupling the output of said sinusoidal signal generator to said circular sweep generator; and means coupled to said circular sweep generator for causing an increase in voltage output from said circular sweep generator during a period when said demodulating means



has an output whereby an increase in the circle traced on said cathode ray tube screen results during said increase in output voltage.

DESIGNS

JUNE 11, 1968

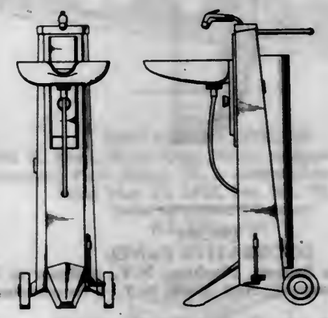
195,394
SIGN
Jack Levit, 437 Semple Ave., West Kildonan, Manitoba, Canada
Filed Nov. 24, 1961, Ser. No. 67,675
Term of patent 14 years
(Cl. D1—12)



195,395
SLIP
Richard Sidney Strauss, 5639 Netherland Ave., Riverdale, N.Y.
Filed Dec. 28, 1960, Ser. No. 63,376
Term of patent 3½ years
(Cl. D3—26)



195,396
HAIR WASHING UNIT OR SIMILAR ARTICLE
Charles M. Barkus, 41 E. Winnie Way, Arcadia, Calif.
Filed July 30, 1962, Ser. No. 71,112
Term of patent 14 years
(Cl. D4—2)



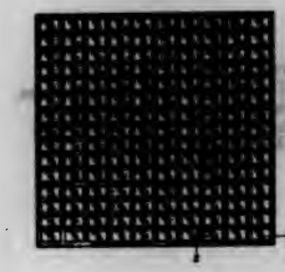
195,397
TOILET SEAT COVER
Patricia Toole Whitehorn, Golden Acres, Whitehorn Farms, Flowerree, Mont.
Filed Sept. 25, 1961, Ser. No. 66,828
Term of patent 7 years
(Cl. D4—5)



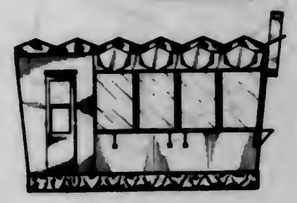
195,398
FILTER FOR VACUUM CLEANERS
Edmund C. Pratt, 10341 Ladera Sonda, Santa Ana, Calif.; Kenneth R. House, 15303 Dumart Ave., Norwalk, Calif.; Randolph J. Smith, 618 Elmwood St., Anaheim, Calif.; and Dennis G. Phillips, 6314 San Rolando Circle, Buena Park, Calif.
Filed Jan. 9, 1962, Ser. No. 68,242
Term of patent 14 years
(Cl. D9—2)



195,399
DECORATIVE PANEL
Morrison John Brouns, Flushing, N.Y., assignor to Otis Elevator Company, New York, N.Y., a corporation of New Jersey
Filed Aug. 31, 1960, Ser. No. 61,969
Term of patent 14 years
(Cl. D13—1)



195,400
MOBILE CATERING BUILDING
Werner E. Carlson, San Gabriel, Calif., assignor to Loma Linda Food Company, Arlington, Calif., a corporation of California
Filed Mar. 30, 1962, Ser. No. 69,508
Term of patent 14 years
(Cl. D13—1)



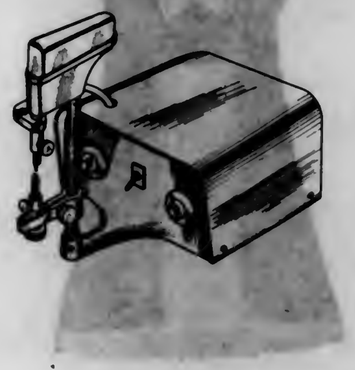
195,401
ARMCHAIR
Jerry Johnson, 3739 S. Rodeo Drive, Malibu, Calif.
Filed Oct. 2, 1962, Ser. No. 71,974
Term of patent 7 years
(Cl. D15—1)



195,402
RIGID AWNING
Bertrand N. Trombley, Bloomfield Hills, Mich., assignor to Republic Steel Corporation, Cleveland, Ohio, a corporation of New Jersey
Filed Dec. 27, 1961, Ser. No. 68,096
Term of patent 14 years
(Cl. D21—6)



195,403
WELDER
Raymond F. Stewart, 552 Bean Creek Road, Santa Cruz, Calif.
Filed Oct. 18, 1961, Ser. No. 67,143
Term of patent 14 years
(Cl. D26—1)



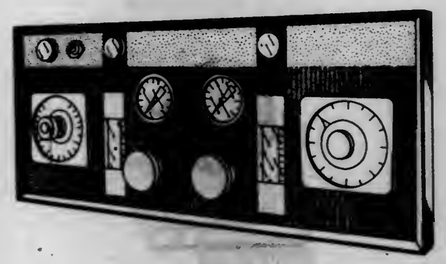
195,404
MAGNETIC TAPE UNIT OR SIMILAR ARTICLE
Gene S. Tepper, San Francisco, and John M. Wernli, Menlo Park, Calif., assignors to Datamec Corporation, Mountain View, Calif., a corporation of California
Filed Dec. 17, 1962, Ser. No. 72,878
Term of patent 14 years
(Cl. D26—5)



195,405
DATA PROCESSOR CONSOLE
Loring C. Bixler and Edward J. Sabella, Vestal, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 19, 1962, Ser. No. 72,901
Term of patent 14 years
(Cl. D26—5)



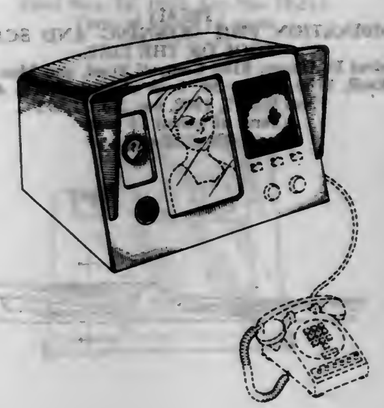
195,406
INSTRUMENT PANEL
Roy E. Romine, 11485 Southland Road, Cincinnati, Ohio
Filed Mar. 20, 1962, Ser. No. 69,368
Term of patent 14 years
(Cl. D26—13)



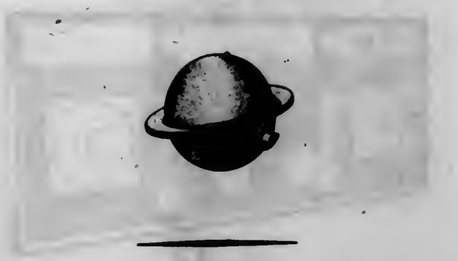
195,407
SWITCH ENCLOSURE
David E. Scott, Royal Oak, Mich., assignor to Square D Company, Park Ridge, Ill., a corporation of Michigan
Filed May 17, 1962, Ser. No. 70,180
Term of patent 14 years
(Cl. D26—13)



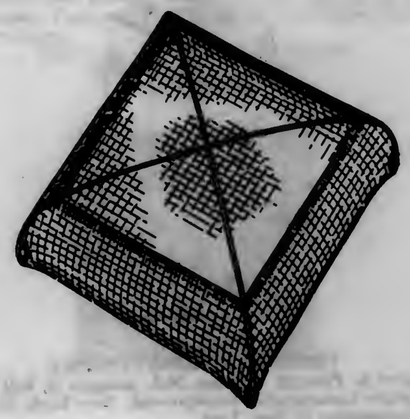
195,408
VIDEO TELEPHONE CONSOLE
Robert E. Prescott, Ramsey, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 18, 1961, Ser. No. 67,932
Term of patent 14 years
(Cl. D26—14)



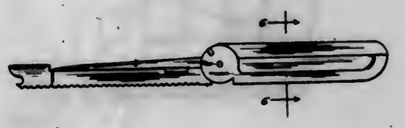
195,409
BIRD FEEDER
James R. Waite, 95 Northwoods Road, Manhasset, N.Y.
Filed Dec. 27, 1961, Ser. No. 68,091
Term of patent 14 years
(Cl. D31—2)



195,410
MINNOW SEINE
John E. Blatchford, 205 Benna St., and Charles E. McBride, 821 W. 9th St., both of East Liverpool, Ohio
Filed Sept. 18, 1961, Ser. No. 66,732
Term of patent 7 years
(Cl. D31—4)



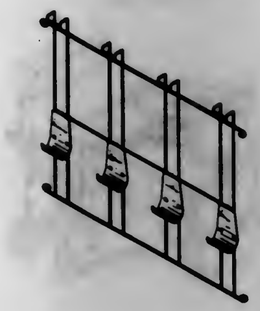
195,411
COMBINATION FISH SKINNING AND SCALING TOOL OR THE LIKE
Admiral D. Henry, 8108 Cantrell Road, and Max Henry Ezell, 1108 Battery St., both of Little Rock, Ark.
Filed Sept. 7, 1962, Ser. No. 71,592
Term of patent 14 years
(Cl. D31—4)



195,412
PHONOGRAPH RECORD RACK
David Vernik, 845 Tyson Ave., Philadelphia, Pa.
Filed Sept. 15, 1961, Ser. No. 66,728
Term of patent 14 years
(Cl. D33—3)



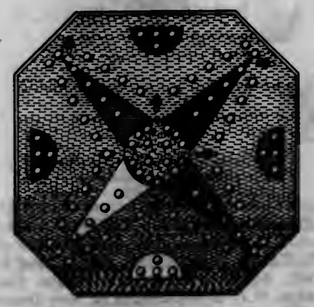
195,413
SHOE RACK
David C. Crawford, Cincinnati, Ohio, assignor to Ekco Products Company, Chicago, Ill., a corporation of Delaware
Filed Sept. 7, 1962, Ser. No. 71,601
Term of patent 14 years
(Cl. D33—3)



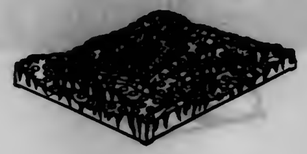
195,414
SUPPORT STAND FOR A TELEVISION RECEIVER
Richard E. Lee, Canaseviu, N.N.Y., assignor to General Electric Company, a corporation of New York
Filed Nov. 23, 1962, Ser. No. 72,591
Term of patent 7 years
(Cl. D33—3)



195,415
GAME BOARD
Delmer H. Coghlin, 1810 6th Ave., Lethbridge, Alberta, Canada
Filed Apr. 26, 1962, Ser. No. 69,859
Claims priority, application Canada Oct. 27, 1961
Term of patent 14 years
(Cl. D34—5)



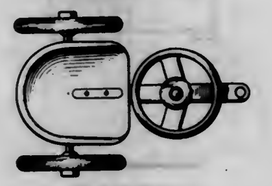
195,416
THREE-DIMENSIONAL GAME BOARD
Bill Markham, Los Angeles, Calif., assignor to Lakeside Industries, Inc., Minneapolis, Minn., a corporation of Delaware
Filed Sept. 18, 1962, Ser. No. 71,749
Term of patent 14 years
(Cl. D34—5)



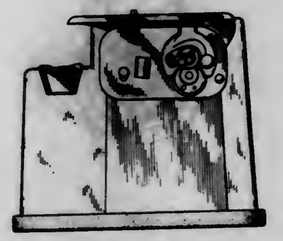
195,417
ANIMATED TOY MONKEY
Frank Stanton, 1 W. 72nd St., New York, N.Y.
Filed May 4, 1962, Ser. No. 69,984
Term of patent 14 years
(Cl. D34—15)



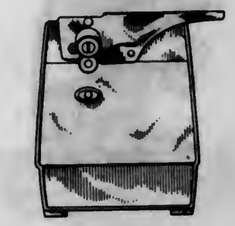
195,418
TOY TRAILER
Kathryne E. Busenlehner, 512 Columbiana Road, Birmingham, Ala.
Filed July 18, 1962, Ser. No. 70,983
Term of patent 14 years
(Cl. D34—15)



195,419
COMBINED ELECTRIC CAN OPENER AND KNIFE SHARPNER
Henry J. Talge, Kansas City, Mo., assignor to John C. Hockery, trustee, Kansas City, Kans.
Filed Nov. 16, 1962, Ser. No. 72,511
Term of patent 14 years
(Cl. D37—1)



195,420
COMBINED ELECTRIC CAN OPENER AND KNIFE SHARPENER
Henry J. Talge, Kansas City, Mo., and Downer P. Dykes, Lawrence, Kans., assignors to John C. Hockery, trustee, Kansas City, Kans.
Filed Nov. 16, 1962, Ser. No. 72,514
Term of patent 14 years
(Cl. D37—1)

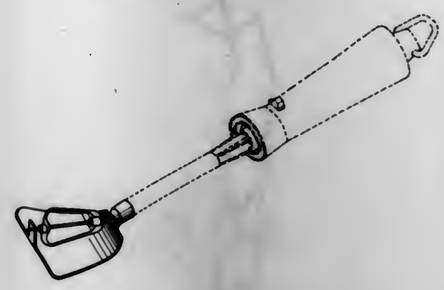




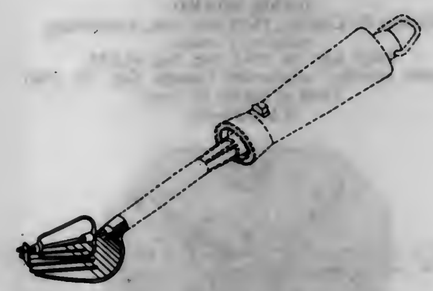
195,421
WRIST WATCH CASE
Jean Huguenin, Cologny, Geneva, Switzerland, assignor to Montres Rolex S.A., Geneva, Switzerland, a firm of Switzerland
Filed Apr. 14, 1961, Ser. No. 64,741
Term of patent 14 years
Claims priority, application Switzerland Oct. 14, 1960
(Cl. D42—8)



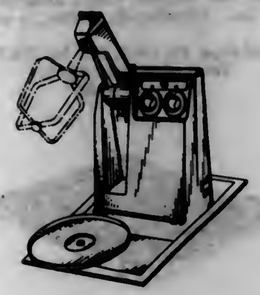
195,422
PORTABLE ELECTRIC FOOD MIXER
Frederick G. J. Grise, New Braintree, Mass., assignor, by mesne assignments, to Electric Spoon, Inc., West Brookfield, Mass., a corporation of Massachusetts
Filed Oct. 9, 1961, Ser. No. 67,018
Term of patent 14 years
(Cl. D44—1)



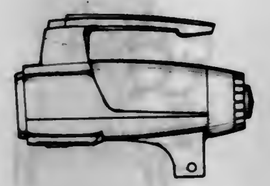
195,423
PORTABLE ELECTRIC FOOD MIXER
Lionel Grise, Jr., West Brookfield, Mass., assignor, by mesne assignments, to Electric Spoon, Inc., West Brookfield, Mass., a corporation of Massachusetts
Filed Oct. 9, 1961, Ser. No. 67,024
Term of patent 14 years
(Cl. D44—1)



195,424
DOMESTIC FOOD MIXING AND PREPARING BASE
Douglas N. Cabell, Birmingham, and Alfred J. Prizlow, Royal Oak, Mich., assignors to Renson Corporation, Woodbridge, N.J., a corporation of New Jersey
Filed Dec. 5, 1961, Ser. No. 67,834
Term of patent 14 years
(Cl. D44—1)



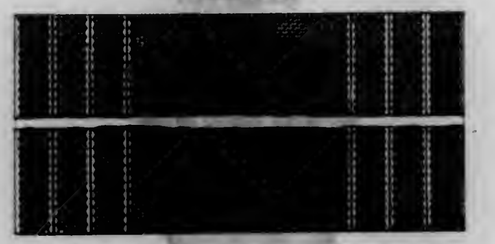
195,425
FOOD MIXER OR THE LIKE
John E. Reed, Glen Ellyn, Ill., assignor to Sunbeam Corporation, Chicago, Ill., a corporation of Illinois
Filed July 13, 1962, Ser. No. 70,926
Term of patent 14 years
(Cl. D44—1)



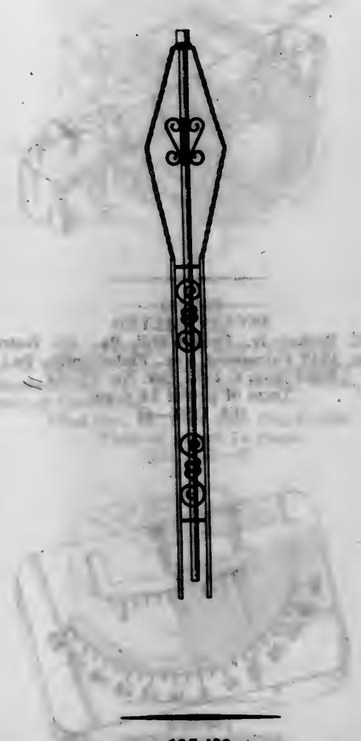
195,426
EGG SEPARATOR
Robert D. Parry, 1336 Custer Ave., Cincinnati, Ohio
Filed Nov. 26, 1962, Ser. No. 72,609
Term of patent 14 years
(Cl. D44—29)



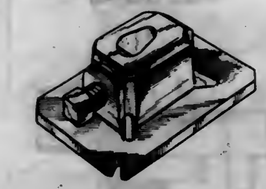
195,427
PANELING FOR LIGHTING FIXTURES
Richard S. Hawes III, Meadey Road, Creve Coeur, Mo., and Frederick L. Hawes, 16 Enfield Road, Olivette, Mo.
Filed Feb. 24, 1959, Ser. No. 54,703
Term of patent 14 years
(Cl. D48—16)



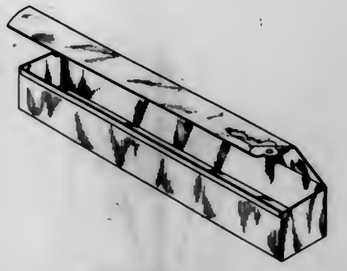
195,428
LAMPPOST
Jozsef Molnar, 158 Maple Ave., Holmes, Pa.
Filed Feb. 27, 1962, Ser. No. 69,006
Term of patent 14 years
(Cl. D48—31)



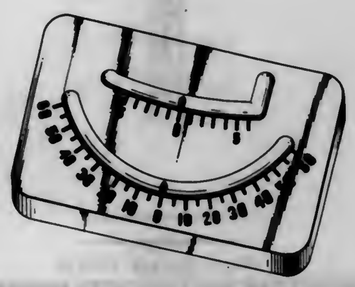
195,429
FORM CLAMP FOR CONCRETE FORM RODS
Theodore A. Kuz, Oak Lawn, Ill., assignor to Universal Form Clamp Co., Chicago, Ill., a corporation of Illinois
Filed Oct. 30, 1961, Ser. No. 67,302
Term of patent 14 years
(Cl. D51—1)



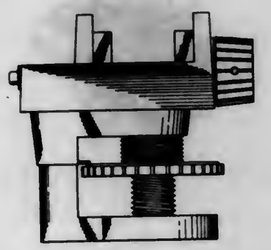
195,430
CARTON
Charles M. Mapes, Henrico County, Va., assignor to Reynolds Metals Company, Richmond, Va., a corporation of Delaware
Filed Apr. 3, 1961, Ser. No. 64,571
Term of patent 14 years
(Cl. D52—2)



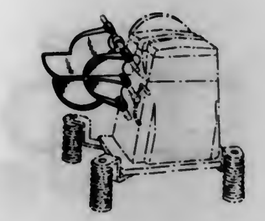
195,431
INCLINOMETER
Walter C. Rieker, Jr., Drexel Hill, Pa. (% Instrument Co., 1919 Fairmount Ave., Philadelphia, Pa.)
Filed Nov. 6, 1961, Ser. No. 67,382
Term of patent 14 years
(Cl. D52—6)



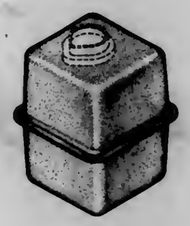
195,432
ADJUSTABLE WAVE GUIDE SUPPORT TEST STAND
Paul C. Ely, Jr., and Robert J. McCaw, Clearwater, Fla., assignors to Sperry Rand Corporation, Great Neck, N.Y., a corporation of Delaware
Filed Mar. 16, 1962, Ser. No. 69,298
Term of patent 14 years
(Cl. D52—6)



195,433
PAINT CAN SHAKER
George L. Lee, Jr., Pittstown, N.J., assignor to Red Devil Tools, Union, N.J., a corporation of New Jersey
Filed Dec. 11, 1961, Ser. No. 67,858
Term of patent 14 years
(Cl. D55—1)



195,434
MILK CARTON OR THE LIKE
Albert B. Mojonnier, Chicago, Ill., assignor to Albert Mojonnier Inc., Franklin Park, Ill., a corporation of Illinois
Filed Aug. 14, 1961, Ser. No. 66,344
Term of patent 14 years
(Cl. D58—17)



195,435
PACKAGING CUP FOR FOOD PRODUCTS OR THE LIKE
Howard H. Kulow, Berea, Ohio, assignor to Wilson Plastics, Inc., Sandusky, Ohio, a corporation of Ohio
Filed Mar. 26, 1962, Ser. No. 69,418
Term of patent 14 years
(Cl. D58—17)



195,436
COMBINED CLOSURE AND DISPENSER FOR A PRESSURE PACKED CAN OR SIMILAR ARTICLE
Phillip H. Segaria, Bridgeport, Conn., assignor to Valve Corporation of America, Bridgeport, Conn., a corporation of Connecticut
Filed Dec. 27, 1961, Ser. No. 68,682
Term of patent 14 years
(Cl. D58—26)



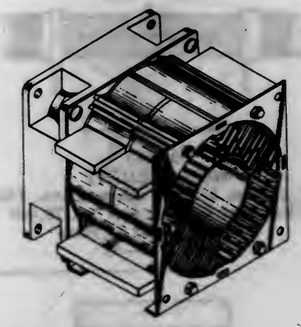
195,437
PHOTOGRAPHIC PRINTING APPARATUS
Joel W. Bravo, Binghamton, N.Y., assignor to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware
Filed Jan. 17, 1962, Ser. No. 68,347
Term of patent 14 years
(Cl. D61—1)



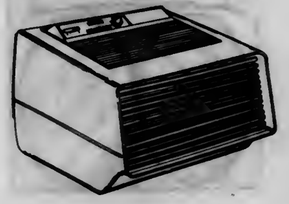
195,438
PLASMA SPRAYER
John J. Wing, Newbury, Mass., assignor to Avco Corporation, Cincinnati, Ohio, a corporation of Delaware
Filed Aug. 17, 1961, Ser. No. 66,391
Term of patent 14 years
(Cl. D62—3)



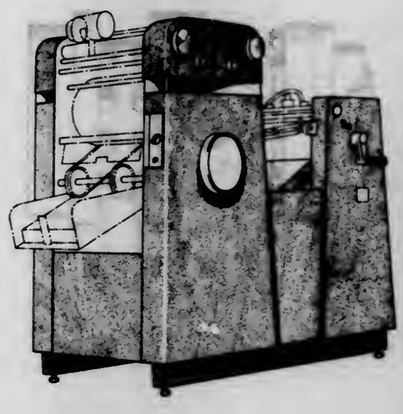
195,439
COOLING UNIT FOR SEMICONDUCTOR DEVICES OR THE LIKE
Thomas D. Coe, Winchester, Mass., assignor to Wakefield Engineering, Inc., Wakefield, Mass., a corporation of Massachusetts
Filed June 15, 1961, Ser. No. 65,602
Term of patent 14 years
(Cl. D62—4)



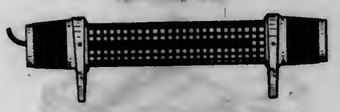
195,440
EVAPORATIVE AIR COOLER
Lester H. Bennett, Long Beach, Calif., assignor to G & B Manufacturing Co., Inc., Long Beach, Calif., a corporation of California
Filed Oct. 16, 1961, Ser. No. 67,184
Term of patent 14 years
(Cl. D62—4)



195,441
PRINTING PRESS
Robert H. Hose, Summit, N.J., assignor, by mesne assignments, to Fairchild Camera and Instrument Corporation, a corporation of Delaware
Filed Apr. 5, 1962, Ser. No. 69,594
Term of patent 14 years
(Cl. D64—11)



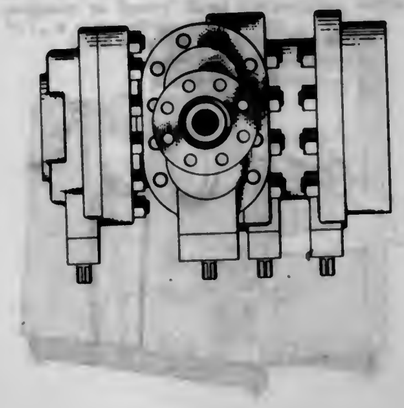
195,442
DEFROSTER FOR REFRIGERATORS
R. Stuart Davis, Jr., 32021 Weston Drive, Birmingham, Mich.
Filed Oct. 17, 1962, Ser. No. 72,162
Term of patent 14 years
(Cl. D67—2)



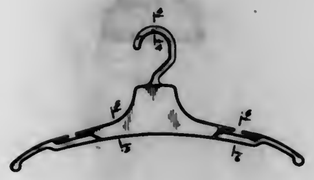
195,443
SIGNAL LIGHT
Jefferson C. Gibson, 217 E. Cullerton Ave., Chicago, Ill.
Filed June 6, 1962, Ser. No. 70,440
Term of patent 14 years
(Cl. D72—1)



195,444
COMPLETION VALVE
Marvin H. Grove, 340 Hillside Ave., Piedmont, Calif.
Filed Oct. 5, 1959, Ser. No. 57,796
Term of patent 14 years
(Cl. D78—1)



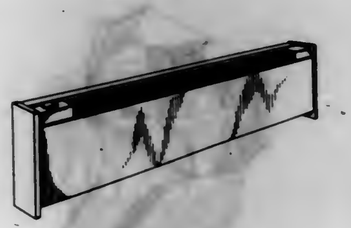
195,445
GARMENT HANGER
John G. Warmath, Brooklyn, N.Y., assignor to Yankee Plastics, Inc., New York, N.Y., a corporation of New York
Filed Oct. 29, 1962, Ser. No. 72,284
Term of patent 14 years
(Cl. D80—5)



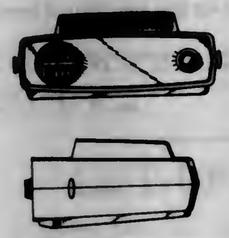
195,446
REFRIGERATED DISPLAY CASE FOR PREPARED FOODS OR THE LIKE
Eugene E. Goodrich, Park Ridge, and Joseph R. Mango, Midlothian, Ill., assignors to Bastian-Blessing Company, Chicago, Ill., a corporation of Illinois
Filed Aug. 25, 1960, Ser. No. 51,880
Term of patent 14 years
(Cl. D80—11)



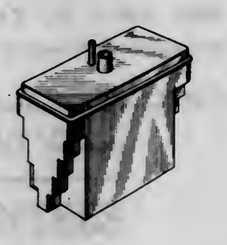
195,447
BASEBOARD HEATER CASING
Robert C. Ware, 1065 Kingston Drive, Olean, N.Y.
Filed Mar. 13, 1962, Ser. No. 69,248
Term of patent 14 years
(Cl. D61—10)



195,448
HAIR DRYER BLOWER
William J. Rakacy, Clifton, N.J., assignor to Ronson Corporation, Woodbridge, N.J., a corporation of New Jersey
Filed Nov. 30, 1962, Ser. No. 72,666
Term of patent 14 years
(Cl. D86—10)



195,449
AQUARIUM TANK FILTER
Victor E. Scafuro, 132 E. Allendale Ave., Allendale, N.J.
Filed Dec. 10, 1962, Ser. No. 72,785
Term of patent 14 years
(Cl. D91—1)





LIST OF REISSUE PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 11TH DAY OF JUNE, 1963

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

Bechtel, Robert J., to Hercules Powder Co. Nitric acid concentration. Re. 25,393, 6–11–63, Cl. 202—68.

Hercules Powder Co.: *See*—
Bechtel, Robert J. Re. 25,393.

Martinson, Carl R., to Monsanto Chemical Co. Corrosion-inhibited liquid fertilizer compositions. Re. 25,394, 6–11–63, Cl. 71—64.

Monsanto Chemical Co.: *See*—
Martinson, Carl R. Re. 25,394.

LIST OF PLANT PATENTEES

Fischer, Carl H., to Selected Glads, Inc. Gladiolus plant. 2,262, 6–11–63, Cl. Plants—85.

Fischer, Carl H., to Selected Glads, Inc. Gladiolus plant. 2,263, 6–11–63, Cl. Plants—85.

Fischer, Carl H., to Selected Glads, Inc. Gladiolus plant. 2,264, 6–11–63, Cl. Plants—85.

Selected Glads, Inc.: *See*—
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Fischer, Carl H. 2,263.
Fischer, Carl H. 2,264.

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Avco Corp.: *See*—
Wing, John J. 195,438.

Barkus, Charles M. Hair washing unit or similar article. 195,396 6–11–63, Cl. D4—2.

Bastion-Blessing Co.: *See*—
Goodrich, Eugene E., and Mango. 195,446.

Bell Telephone Laboratories, Inc.: *See*—
Prescott, Robert E. 195,408.

Bennett, Lester H., to G & B Mfg. Co., Inc. Evaporative air cooler. 195,440, 6–11–63, Cl. D62—4.

Bixler, Loring C., and E. J. Sabella, to International Business Machines Corp. Data processor console. 195,405, 6–11–63, Cl. D26—6.

Blatchford, John E., and C. E. McBride. Minnow seine. 195,410, 6–11–63, Cl. D31—4.

Bravo, Joel W., to General Aniline & Film Corp. Photographic printing apparatus. 195,437, 6–11–63, Cl. D61—1.

Brounn, Morrison J., to Otis Elevator Co. Decorative panel. 195,399 6–11–63, Cl. D13—1.

Busenlehner, Kathryne E. Toy trailer. 195,418, 6–11–63, Cl. D34—15.

Cabell, Douglas N., and A. J. Prizlow, to Ronson Corp. Domestic food mixing and preparing base. 195,424, 6–11–63 Cl. D44—1.

Carlson, Werner E., to Loma Linda Food Co. Mobile catering building. 195,400, 6–11–63, Cl. D13—1.

Coe, Thomas D., to Wakefield Engineering, Inc. Cooling unit for semiconductor devices or the like. 195,439, 6–11–63, Cl. D62—4.

Coghlin, Delmer H. Game board. 195,415, 6–11–63, Cl. D34—5.

Crawford, David C., to Ekco Products Co. Shoe rack. 195,413, 6–11–63, Cl. D33—3.

Datamec Corp.: *See*—
Tepper, Gene S., and Wernli. 195,404.

Davis, R. Stuart, Jr. Defroster for refrigerators. 195,442, 6–11–63, Cl. D67—2.

Dykes, Downer P.: *See*—
Talge, Henry J., and Dykes. 195,420.

Ekco Products Co.: *See*—
Crawford, David C. 195,413.

Electric Spoon, Inc.: *See*—
Grise, Frederick G. J. 195,422.
Grise, Lionel, Jr. 195,423.

Ely, Paul C., Jr., and R. J. McCow, to Sperry Rand Corp. Adjustable wave guide support test stand. 195,432, 6–11–63, Cl. D52—6.

Ezell, Max H.: *See*—
Henry, Admiral D., and Ezell. 195,411.

Fairchild Camera and Instrument Corp.: *See*—
Hose, Robert H. 195,441.

G & B Mfg. Co., Inc.: *See*—
Bennett, Lester H. 195,440.

General Aniline & Film Corp.: *See*—
Bravo, Joel W. 195,437.

General Electric Co.: *See*—
Lee, Richard E. 195,414.

Gibson, Jefferson C. Signal light. 195,443, 6–11–63, Cl. D72—1.

Goodrich, Eugene E., and J. R. Mango, to Bastion-Blessing Co. Refrigerated display case for prepared foods or the like. 195,446, 6–11–63, Cl. D80—11.

Grise, Frederick G. J., to Electric Spoon, Inc. Portable electric food mixer. 195,422, 6–11–63, Cl. D44—1.

Grise, Lionel, Jr., to Electric Spoon, Inc. Portable electric food mixer. 195,423, 6–11–63, Cl. D44—1.

Grove, Marvin H. Completion valve. 195,444, 6–11–63, Cl. D78—1.

Hawes, Frederick L.: *See*—
Hawes, Richard S., III, and F. L. Hawes. 195,427.

Hawes, Richard S., III, and F. L. Hawes. Paneling for lighting fixtures. 195,427, 6–11–63, Cl. D48—16.

Henry, Admiral D., and M. H. Ezell. Combination fish skinning and scaling tool or the like. 195,411, 6–11–63, Cl. D31—4.

Hockery, John C.: *See*—
Talge, Henry J. 195,419.
Talge, Henry J., and Dykes. 195,420.

Hose, Robert H., to Fairchild Camera and Instrument Corp. Printing press. 195,441, 6–11–63, Cl. D64—11.

Huguenin, Jean, to Montres Rolex S.A. Wrist watch case. 195 421, 6–11–63, Cl. D42—6.

International Business Machines Corp.: *See*—
Bixler, Loring C., and Sabella. 195,405.

Johnson, Jerry. Armchair. 195,401, 6–11–63, Cl. D15—1.

Kulow, Howard H., to Wilson Plastics, Inc. Packaging cup for food products or the like. 195,435, 6–11–63, Cl. D58—17.

Kus, Theodore A., to Universal Form Clamp Co. Form clamp for concrete form rods. 195,429, 6–11–63, Cl. D51—1.

Lakeside Industries, Inc.: *See*—
Markham, Bill. 195,416.

Lee, George L., Jr., to Red Devil Tools. Paint can shaker. 195,433, 6–11–63, Cl. D55—1.

Lee, Richard E., to General Electric Co. Support stand for a television receiver. 195,414, 6–11–63, Cl. D33—3.

Levit, Jack. Sign. 195,394, 6–11–63, Cl. D1—12.

Loma Linda Food Co.: *See*—
Carlson, Werner E. 195,400.

Mapes, Charles M., to Reynolds Metals Co. Carton. 195,430, 6–11–63, Cl. D52—2.

Markham, Bill, to Lakeside Industries, Inc. Three-dimensional game board. 195,416, 6–11–63, Cl. D34—6.

McBride, Charles E.: *See*—
Blatchford, John E., and McBride. 195,410.

McCaw, Robert J.: *See*—
Ely, Paul C., Jr., and McCaw. 195,432.

Mojonnier, Albert B., to Albert Mojonnier, Inc. Milk carton or the like. 195,434, 6–11–63, Cl. D58—17.

Mojonnier, Albert, Inc.: *See*—
Mojonnier, Albert B. 195,434.

Molnar, Jossef. Lamppost. 195,428, 6–11–63, Cl. D48—31.

Montres Rolex S.A.: *See*—
Huguenin, Jean. 195,421.

Otis Elevator Co.: *See*—
Brounn, Morrison J. 195,399.

Parry, Robert D. Egg separator. 195,426, 6–11–63, Cl. D44—29.

Phillips, Dennis G.: *See*—
Pratt, Edmund C., House, Smith, and Phillips. 195,398.

Pratt, Edmund C., K. R. House, R. J. Smith, and D. G. Phillips. Filter for vacuum cleaners. 195,398, 6–11–63, Cl. D9—2.

Prescott, Robert E., to Bell Telephone Laboratories, Inc. Video telephone console. 195,408, 6–11–63, Cl. D26—14.

Prizlow, Alfred J.: *See*—
Cabell, Douglas N., and Prizlow. 195,424.

Rakacy, William J., to Ronson Corp. Hair dryer blower. 195,448, 6–11–63, Cl. D86—10.

Red Devil Tools: *See*—
Lee, George L., Jr. 195,433.

Reed, John E., to Sunbeam Corp. Food mixer or the like. 195,425, 6–11–63, Cl. D44—1.

Republic Steel Corp.: *See*—
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Reynolds Metals Co.: *See*—
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Rieker, Walter C., Jr. Inclinometer. 195,431, 6–11–63, Cl. D52—6.
Romine, Roy E. Instrument panel. 195,406, 6–11–63, Cl. D26—13.
Ronson Corp.: *See*—
Cabell, Douglas N., and Prizlow. 195,424.
Rakacy William J. 195,448.
Sabella, Edward J.: *See*—
Bixler, Loring C., and Sabella. 195,405.
Sagarin, Philip H., to Valve Corp. of America. Combined closure and dispenser for a pressure packed can or similar article. 195,436, 6–11–63, Cl. D58—26.
Scafuro, Victor E. Aquarium tank filter. 195,449, 6–11–63, Cl. D91—1.
Scott, David E., to Square D Co. Switch enclosure. 195,407, 6–11–63, Cl. D26—13.
Smith, Randolph J.: *See*—
Pratt, Edmund C., House, Smith, and Phillips. 195,398.
Sperry Rand Corp.: *See*—
Ely, Paul C., Jr., and McCaw. 195,432.
Square D Co.: *See*—
Scott, David E. 195,407.
Stanton, Frank. Animated toy monkey. 195,417, 6–11–63, Cl. D34—15.
Stewart, Raymond F. Welder. 195,403, 6–11–63, Cl. D26—1.
Strauss, Richard S. Slip. 195,395, 6–11–63, Cl. D3—26.
Sunbeam Corp.: *See*—
Reed, John E. 195,425.
Talge, Henry J., to J. C. Hockery. Combined electric can opener and knife sharpener. 195,419, 6–11–63, Cl. D37—1.
Talge, Henry J., and D. P. Dykes, to J. C. Hockery. Combined electric can opener and knife sharpener. 195,420, 6–11–63, Cl. D37—1.
Tepper, Gene S., and J. M. Wernli, to Datamec Corp. Magnetic tape unit or similar article. 195,404, 6–11–63, Cl. D26—5.
Trombley, Bertrand N., to Republic Steel Corp. Rigid awning. 195 402, 6–11–63, Cl. D21—6.
Universal Form Clamp Co.: *See*—
Kus, Theodore A. 195,429.
Valve Corp. of America: *See*—
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Vernik, David. Phonograph record rack. 195,412, 6–11–63, Cl. D33—3.
Waite, James R. Bird feeder. 195,409, 6–11–63, Cl. D31—2.
Wakefield Engineering, Inc.: *See*—
Coe, Thomas D. 195,439.
Ware, Robert C. Baseboard heater casing. 195,447, 6–11–63, Cl. D81—10.
Warmath, John G., to Yankee Plastics, Inc. Garment hanger. 195,445, 6–11–63, Cl. D80—8.
Wernli, John M.: *See*—
Tepper, Gene S., and Wernli. 195,404.
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Wilson Plastics, Inc.: *See*—
Kulow, Howard H. 195,435.
Wing, John J., to Avco Corp. Plasma sprayer. 195,438, 6–11–63, Cl. D62—2.
Yankee Plastics, Inc.: *See*—
Warmath, John G. 195,445.

LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 11TH DAY OF JUNE, 1963

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

ACF Industries, Inc.: *See*—
Degenhardt, Wilmar W. 3,093,698.
Dumits, Roberts S. 3,093,690.
Hickmann, Olin J., and Carlson. 3,092,999.
White, John J. 3,093,017.
Abell, George E. B.: *See*—
Price, Peter R., and Buckle. 3,093,729.
Aberle, Earl J.: *See*—
Lenz, Carl, and Hasell. 3,093,164.
Abraham, Edward P., and G. G. F. Newton, to National Research Development Corp. Cephalosporin C. 3,093,638, 6–11–63, Cl. 260—243.
Abramo, John G., and E. C. Chapin, to Monsanto Chemical Co. Copolymers of vinylbensyl alcohol with vinyl compound. 3,093,622, 6–11–63, Cl. 260—85.5.
Abramo, John G., and E. C. Chapin, to Monsanto Chemical Co. Alpha-cyanoalkyl-aromatic-methyl compounds and their production. 3,093,676, 6–11–63, Cl. 260—465.
Ace Glass Inc.: *See*—
De Woody, Charles M. 3,093,359.
Acrometal Products, Inc.: *See*—
Carroll, Robert L. 3,093,331.
Adams, Clark E.: *See*—
Kimberlin, Charles N., Jr., Mattox, and Adams. 3,093,576.
Adams, Jack B. Traction attachments for tractors and trucks. 3,093,428, 6–11–63, Cl. 305—56.
Adamson, Floyd E., to Westinghouse Electric Corp. Arc welding gun. 3,093,726. 6–11–63, Cl. 219—130.
Adamson, Robert A. Electrically heated soldering irons. 3,093,723, 6–11–63, Cl. 219—26.
Adler, Clarence E., to Toledo Scale Corp. Printer. 3,093,066, 6–11–63, Cl. 101—92.
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Huebner, William C., and Kunicki. 3,093,067.
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Cornford, Arthur S. 3,093,426.
Af Rosenschold, John R. M., and J. Graf, to Atlas Copco Aktiebolag. Coolers for compressors. 3,092,980, 6–11–63, Cl. 62—452.
Aftandilian, Victor D., and W. H. Knoth, Jr., to E. I. du Pont de Nemours and Co. Polymeric products of decaborane and cyclic ethers and their preparation. 3,093,660, 6–11–63, Cl. 260—244.1.
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Lederer, Kurt. 3,093,044.
Agnello, Eugene J., and G. D. Laubach, to Chas. Pfizer & Co., Inc. 17β-pyruvoyl-substituted pregnene derivatives. 3,093,635, 6–11–63, Cl. 260—397.45.
Agner, Bengt E. Stator configuration for welding purposes. 3,092,697, 6–11–63, Cl. 29—155.5.
Agrashell, Inc.: *See*—
Ayers, Joseph W. 3,093,604.
Ayers, Joseph W. 3,093,605.
Ayers, Joseph W. 3,093,606.
Ayers, Joseph W. 3,093,607.
Ahlbor, Valter A., to Arenco Aktiebolag. Packages. 3,093,292, 6–11–63, Cl. 229—51.
Aitken, Adrien J., and R. V. Rutkowski, to United States of America, Navy. Metering and mixing apparatus. 3,093,157, 6–11–63, Cl. 137—606.
Albinson, Don: *See*—
Eames, Charles, Albinson, and Pearce. 3,093,414.
Albrecht, Howard W.: *See*—
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Alderson, Richard O.: *See*—
Eckey, Eddy W., and Alderson. 3,093,481.
Alexander Frank J., and L. A. Harriman, to United States of America, Army. Prevention of off-flavors in radiation-sterilized beef. 3,093,489, 6–11–63, Cl. 99—217.
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Allen, Philip J. Polarimeter. 3,093,526, 6–11–63, Cl. 343—100.
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American Bosch Arma Corp.: *See*—
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American Home Products Corp.: *See*—
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American Optical Co.: *See*—
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Polanin, Walter R. 3,093,214.
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Ayers, Joseph W., to Agrashell, Inc. Laminating glue solutions and extender compositions therefor and process for preparing same. 3,093,605, 6–11–63, Cl. 260—17.2.
Ayers, Joseph W., to Agrashell, Inc. Extender compositions and synthetic resin glue solutions containing the same. 3,093,606, 6–11–63, Cl. 260—17.2.
Ayers, Joseph W., to Agrashell, Inc. Plywood adhesive solutions and extender compositions therefor. 3,093,607, 6–11–63, Cl. 260—17.2.
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Krom, Myron E. 3,093,708.
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Benno, Edward L., to The Frank G. Hough Co. Tractor loaders. 3,092,920, 6–11–63, Cl. 37—117.5.
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Besser, Eli D., to United States of America, Navy. Process for making extrudable propellant. 3,093,523, 6–11–63, Cl. 149—98.

Biby, Edward E. Dual sofa bed. 3,092,846, 6–11–63, Cl. 5—18.
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Blood, Perley T. Photoprint developing machines. 3,093,053, 6–11–63, Cl. 95—94.
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Boggs, Herbert D., to H. D. Boggs Co. Ltd. Plastic articles and method of making same. 3,093,160, 6–11–63, Cl. 138—140.
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Borah, John E. Retractable and extensible container spout. 3,093 273, 6–11–63, Cl. 222—527.
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Bothwell, James W., to Johnson & Johnson. Process for preparing tanned collagenous material with dialdehyde starch. 3,093,439, 6–11–63, Cl. 8—94.11.
Bothwell, James W., to Johnson & Johnson. Process for preparing collagenous material tanned with polyacrolein. 3,093,440, 6–11–63, Cl. 8—94.11.
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Bozak, Rudolph T., to R. T. Bozak Mfg. Co. Metallic diaphragm for electrodynamic loudspeakers. 3,093,207, 6–11–63, Cl. 181—32.
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Bridgewater, Thomas E. Breaker plate structure. 3,093,328, 6–11–63, Cl. 241—275.
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Brown, Boniard I. to General Dynamics Corp. High energy rate actuator. 3,093,117, 6–11–63, Cl. 121—38.
Brown, Boniard I., to General Dynamics Corp. High rate actuators. 3,093,118, 6–11–63, Cl. 121—38.
Brown, Daniel L., to Ampex Corp. Lithium ferrites. 3,093,586, 6–11–63, Cl. 252—62.5.
Brown, Elmer V. Induction signal system. 3,093,812, 6–11–63, Cl. 240—58.
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Robinson, Michael M., MacPhillamy, and Lucas. 3,093,-648.
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Cirami, Salvatore. Robot amusement ride. 3,093,872, 6-11-63, Cl. 272—34.
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Ihrman, Krya G., and Cofield. 3,093,671.
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Compton, Henry J. Guard for pipe outlet. 3,093,582, 6-11-63, Cl. 210—463.
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Cope, Richard P., Jr., and J. R. Drobne, to Westinghouse Electric Corp. Methods and electrolytes for depositing nickel and cobalt. 3,093,557, 6-11-63, Cl. 204—43.
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Cox, Paul R., Jr., and P. A. Ucci, to Monsanto Chemical Co. Solutions of polyolefins and an alkoxyalkyl ester of an aliphatic monocarboxylic acid and a process for spinning same. 3,093,612, 6-11-63, Cl. 260—31.4.
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Crane, Lawrence S., and L. M. Starr, to The Bendix Corp. Sonic altimeter. 3,093,807, 6-11-63, Cl. 340—1.
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Bardayl, Bela. 3,093,392.
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Muller, Josef. 3,093,390.
Rothweiler, Alfred Fr. 3,093,391.
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Danforth, John P., and R. E. Black, to General Motors Corp. Method for determining fluid flow in a conduit. 3,093,739, 6-11-63, Cl. 250—106.
Daniel, David W., to National Broach & Machine Co. Method and apparatus for finishing gears. 3,092,934, 6-11-63, Cl. 51—105.
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David, Edward J., to Ivers-Lee Co. Method of and apparatus for making a suppository package. 3,092,940, 6-11-63, Cl. 53—29.
Dawes, Leslie J., to The Bendix Corp. Variable-restriction valve. 3,093,155, 6-11-63, Cl. 137—269.
Dean, Val B., to The Union Supply Co. Means for joining flexible belts. 3,093,005, 6-11-63, Cl. 74—232.
Dearborn, Elizabeth C., and P. K. Isaacs, to W. R. Grace & Co. Carboxylic acid-polyethylene polyamine reaction mixture. 3,093,855, 6-11-63, Cl. 260—309.6.
Decker, Raymond F., A. J. Goldman, and J. T. Nash, to The International Nickel Co., Inc. Age-hardenable, martensitic iron-base alloys. 3,093,519, 6-11-63, Cly. 148—31.
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Jones, Eynon, Tracy, and Deffenbaugh. 3,093,487.
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De France, Henri G., to Compagnie Francaise de Television. Color television camera systems. 3,093,704, 6-11-63, Cl. 178—5.4.
Dega, Robert L., to General Motors Corp. Multilayered composite metal article. 3,092,899, 6-11-63, Cl. 29—182.8.
Degenhardt, Wilmar W., to ACF Industries, Inc. Carburetor. 3,093,698, 6-11-63, Cl. 261—41.
Deghenghi, Romano, to American Home Products Corp. Derivatives of 21-fluoro-17a-methylpregnanes. 3,093,668, 6-11-63, Cl. 260—397.3.
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Demitz, Roberts S., to ACF Industries, Inc. Carburetor. 3,093,699, 6-11-63, Cl. 261—65.
De Puy, Charles T., to Trimble Products Inc. Playyard, crib, and combined playyard and crib. 3,092,847, 6-11-63, Cl. 5—99.
Derderian, George. Pump. 3,093,084, 6-11-63, Cl. 103—87.
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Devereux, Robert F. Inherently stabilized deep sea floating observation stations. 3,092,852, 6-11-63, Cl. 9—8.
Dewey, John L., to Reynolds Metals Co. Refractory lining for alumina reduction cells. 3,093,570, 6-11-63, Cl. 204—243.
De Woody, Charles M., to Ace Glass Inc. Stopcock for laboratory glassware and the like. 3,093,359, 6-11-63, Cl. 251—314.
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Dietert, Harry W., to Harry W. Dietert Co. Moisture teller. 3,093,460, 6-11-63, Cl. 34—1.
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Dillingham, Edward, to Thompson Ramo Wooldridge Inc. Superconductive bistable circuit. 3,093,749, 6-11-63, Cl. 307—88.5.
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Dirks, Gerhard. Tape perforation and movement control system. 3,093,303, 6-11-63, Cl. 234—108.
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McCallum, John, Johnson, Ditmars, and McGraw. 3,093,513.
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Djerassi, Carl, O. Halpern, and O. Mancera, to Syntex Corp. Intermediates in the conversion of 11α-hydroxydiosogenin to cortisone. 3,093,636, 6–11–63, Cl. 260—239.55.

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Doble, Allan M. Fluidising and feeding of finely divided materials. 3,093,418, 6–11–63, Cl. 302—17.

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Doede, Donald J., to Marmet Corp. Insulating unit for curtain wall. 3,093,217, 6–11–63, Cl. 189—34.

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Doner, Ralph D., to United States of America, Army. Apparatus and method for testing solid propellant for aging. 3,092,992, 6–11–63, Cl. 73—19.

Doty, George L.: *See*—
Logan, Hugh H., Doty, and Nelson. 3,093,002.

Douglas Aircraft Co., Inc.: *See*—
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Douglas, Edwin J., to H. L. Stoker Co. Material-handling device. 3,093,271, 6–11–63, Cl. 222—413.

Douglas, John P.: *See*—
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Dykeman, Edgar G. M., and J. N. Kelley, to FMC Corp. Apparatus for molding concrete T-beams. 3,092,886, 6–11–63, Cl. 25—121.

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Eckey, Eddy W., and E. O. Alderson, to The Procter & Gamble Co. Plastic glyceride fat and process for preparing it. 3,093,481, 6–11–63, Cl. 99—118.

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Federico, Charles F., to United States of America, Navy. Flange seal. 3,093,223, 6–11–63, Cl. 189—36.

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Jackson, Robert C., to Monsanto Chemical Co. Bobbin chuck device. 3,093,332, 6-11-63, Cl. 242—46.6.

Jackson, Robert J., and R. J. Carrigan, to Bigelow-Sanford, Inc. Patterned rough-textured pile fabric floor covering. 3,093,163, 6-11-63, Cl. 139—396.

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Jacobson, Irvin D., to Perfection Pipe Nipple Co. Lined nipple assembly for hot water tanks. 3,093,161, 6-11-63, Cl. 138—143.

Jaffe, Benjamin, and A. Textor, to Deltown Foods, Inc. Dise washing machine. 3,093,149, 6-11-63, Cl. 134—149.

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Jemnco Corp.: *See*—
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Jennings, John H., and C. S. Thompson; said Thompson assor. to Jennings. Renewable wiper blade and method of making same. 3,092,866, 6-11-63, Cl. 15—250.36.

Johannsen, Hans W., and G. Bast, to Voigtlander A.G. Slide projector with remotely controlled objective focusing means. 3,093,029, 6-11-63, Cl. 88—24.

Johansson, Erik R., to Molnlycke Vafveri Aktiebolag. Machine for forming securing loops on sanitary napkins. 3,092,952, 6-11-63, Cl. 57—34.

John, Harold E., and J. W. Faust, Jr., to Westinghouse Electric Corp. Semiconductor dendritic crystals. 3,093,520, 6-11-63, Cl. 148—33.

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Johnson, Grady L. Electric hair singeing device. 3,093,724, 6-11-63, Cl. 219—29.

Johnson, John. Irrigation system device. 3,093,812, 6-11-63, Cl. 239—185.

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Bothwell, James W. 3,093,439.
Bothwell, James W. 3,093,440.
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McCallum, John, Johnson, Ditmars, and McGraw. 3,093,513.
McCallum, John, Johnson, Ditmars, and McGraw. 3,093,514.

Johnston, Edward J., to International Harvester Co. Parallel bars side delivery rake with self adjusting mounting means. 3,092,950, 6-11-63, Cl. 56—377.

Johnston, Rufus B., to Wilson Supply Co. Valve. 3,093,152, 6-11-63, Cl. 137—87.

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Jones, Eynon, O. H. Tracy, and C. B. Deffenbaugh, ¼ to said E. Jones, ¼ to said O. H. Tracy, ¼ to Roberts Dairy Co., and ¼ to L. B. Dunham, and ⅛ to E. Johnson. Egg products and processes for preparing same. 3,093,487, 6-11-63, Cl. 99—161.

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Jones, Kenneth, ½ to Attwood Statistics Ltd. Audience preference analysis system utilising continuously interrogated responder stations. 3,093,795, 6-11-63, Cl. 325—31.

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Kahn, Nathaniel. Heat sealed handbag frame. 3,093,176, 6-11-63, Cl. 150—29.

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Kakatani, Richard K. Earth opening device. 3,093,196, 6-11-63, Cl. 172—158.

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Karplus, Walter J. Transient field simulator. 3,093,731, 6-11-63, Cl. 235—185.

Kasbohm, Martin L., H. J. Portner, H. C. Dellinger, I. A. Cohen, and P. D. Franson, to Union Carbide Corp. Process for producing acetylene. 3,093,607, 6-11-63, Cl. 260—679.

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Kern, Fritz, to Ciba Ltd. Process for the electrolytic deposition of niobium or tantalum. 3,093,534, 6-11-63, Cl. 204—64.

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King, William R., to Minneapolis-Honeywell Regulator Co. Molded electrical cord connector. 3,093,432, 6-11-63, Cl. 339—59.

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Kirkpatrick, Wylie C., W. G. Baird, Jr., and T. E. Ford, to W. R. Grace & Co. Encapsulation of electrical components and other articles. 3,093,448, 6-11-63, Cl. 18—59.

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Klenk, Willy, to Werner & Pfleiderer G.m.b.H. Device for feeding units of material to continuously moving carriers. 3,093,233, 6-11-63, Cl. 198—20.

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Knapp, William E., W. S. Tsuchiya, and D. W. Cayton, to Deere & Co. Land leveler. 3,092,922, 6-11-63, Cl. 37—180.

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Kordzinski, Stanley, and P. A. Yurcick, to Catalin Corp. of America. Process for preparing phenol dialcohols. 3,093,688, 6-11-63, Cl. 260—609.

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Kroninger, Nolan R., to United States of America, Navy. Multi-speed servo system crossover network. 3,093,777, 6-11-63, Cl. 318—30.

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Kugler, Emanuel. Drawstring bag. 3,093,295, 6-11-63, Cl. 229—63.

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Larsen, Norman B., to Corrosion Reaction Consultants, Inc. Metal protective coating composition. 3,093,491, 6–11–63, Cl. 106—14.
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Ludwig, Anton, and G. Fleissner, to Fleissner, G.m.b.H., Firma. Washing machine. 3,092,989, 6–11–63, Cl. 68—158.
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Luerssen, Frank W., and J. P. Douglas, to Inland Steel Co. Gas-solid contact in a non-fluidized system. 3,093,450, 6–11–63, Cl. 23—1.
Lynch, Arnold C., to Her Majesty's Postmaster General. Magnetic translators. 3,093,819, 6–11–63, Cl. 340—347.
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Lyons, Vincent J., to International Business Machines Corp. Intermetallic semiconductor body formation. 3,093,517, 6–11–63, Cl. 148—1.5.
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Leaming, Robert R., and Coffeen. 3,093,285.

Maag Gear Wheel & Machine Co. Ltd.: *See*—
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Mabry, Bobbie C. Protective box for meters. 3,093,263, 6–11–63, Cl. 220—38.
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Ishler, Norman H., MacAllister, Sacsenniak, and Engel. 3,093,483.
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MacKenzie, James C., and D. B. Smith, to Cabot Corp. Cured polymer compositions. 3,093,614, 6–11–63, Cl. 260—41.
Mackey, Robert J., to Eitel-McCullough, Inc. Ceramic metallizing mixture and method of compounding it. 3,093,-400, 6–11–63, Cl. 106—1.
Macks, Elmer F. Sealing member and method. 3,093,380, 6–11–63, Cl. 277—1.
Macks, Elmer F. Seal. 3,093,382, 6–11–63, Cl. 277—27.
Macormack, James G., and F. E. Hickory, to Aluminseal Corp. Insulated refrigeration tank structures. 3,093,260, 6–11–63 Cl. 220—14.
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Robison, Michael M., MacPhillamy, and Lucas. 3,093,-648.
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Naysmith, Archibald M. 3,092,956.
Madden, Lem A. Combination trailer hitch and overload supporting device. 3,093,393, 6–11–63, Cl. 280—406.
Madley, Daniel G., to Coal Industry (Patents) Ltd. Smokeless briquettes. 3,093,463, 6–11–63, Cl. 44—10.
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Closner, John J., Maroti, and Magers. 3,092,933.
Mahaffy, Reid A., and J. R. Harder, to Bartelt Engineering Co., Inc. Apparatus for measuring forces. 3,093,206, 6–11–63, Cl. 177—228.
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Haberecht, Rolf R., and Loftus. 3,093,755.
Mancera, Octavio: *See*—
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Manhart, Charles E. Life raft. 3,092,854, 6–11–63, Cl. 9—11.
Mann, Horace T., to Space Technology Laboratories, Inc. Superconductor and gate employing single elongated simply connected thin film as gate element. 3,093,754, 6–11–63, Cl. 307—88.5.
Mann, John R., and A. E. Wainwright, to United States of America, Atomic Energy Commission. Automatic hand counter for alpha particle counting. 3,093,738, 6–11–63, Cl. 250—83.6.
Mann, Marvin D. Sewing box. 3,093,277, 6–11–63, Cl. 223—106.
Maras, Julia. Curtains. 3,093,187, 6–11–63, Cl. 160—330.
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Hooker, Stanley G., and Marchant. 3,093,861.
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Closner, John J., Maroti, and Magers. 3,092,933.
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Marshall, Milton, E. E. Milburn, and E. W. Shultz, to Humane Slaughtering Device Corp. Apparatus for holding cattle in position for humane slaughtering. 3,092,871, 6–11–63, Cl. 17—1.
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Hass, Zygmunt K. 3,093,763.
Martin, Bruce E., to E. I. du Pont de Nemours and Co. Process of preparing a helically crimped polypropylene filament. 3,093,444, 6–11–63, Cl. 18—48.
Martin, Elmore L., to E. I. du Pont de Nemours and Co. Aromatic halocarbyl chemical products. 3,093,677, 6–11–63, Cl. 260—465.
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Martin, John O., and R. W. Rodler, to United States of America, Army. Cargo pallet. 3,093,092, 6–11–63, Cl. 105—369.
Martin, Peter, and J. A. Bamford, to Minister of Supply, Her Majesty's Government of the United Kingdom of Great Britain and Northern Ireland. Method of relighting in combustion chambers. 3,092,964, 6–11–63, Cl. 60—39.09.
Massoud, Antoine N. Windshield wipers. 3,092,865, 6–11–63, Cl. 15—250.23.
Mathews, Bernard C. Rotary cutter. 3,092,946, 6–11–63, Cl. 56—24.
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Frey, Edward M., and May. 3,093,650.
May, Richard K., W. O. Sunafrank, and H. H. Powell, to General Dynamics Corp. Workholder with means for thermal compensation. 3,093,370, 6–11–63, Cl. 269—309.
Mayo, William J. Sling psychrometer. 3,092,996, 6–11–63, Cl. 73—338.6.
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McCallum, John, T. B. Johnson, W. E. Ditmars, Jr., and L. D. McGraw, to Remington Arms Co., Inc. Current generator cell. 3,093,512, 6–11–63, Cl. 136—100.
McCallum, John, T. B. Johnson, W. E. Ditmars, Jr., and L. D. McGraw, to Remington Arms Co., Inc. Current generator cell. 3,093,513, 6–11–63, Cl. 136—100.
McCallum, John, T. B. Johnson, W. E. Ditmars, Jr., and L. D. McGraw, to Remington Arms Co., Inc. Current generator cell. 3,093,514, 6–11–63, Cl. 136—100.
McCammon, George A., to Esso Research and Engineering Co. Offshore combination ship mooring and ship loading apparatus-bow mooring. 3,093,167, 6–11–63, Cl. 141—387.
McCann, Thomas S. Lambswool duster. 3,092,864, 6–11–63, Cl. 15—235.
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McClaflin, Gifford G., and M. T. Atwood, to Continental Oil Co. Preparation of alcohols from aluminum trialkyls. 3,093,091, 6–11–63, Cl. 260—638.
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McCollum, Jack W., to Deere & Co. Convertible hitch. 3,093,394, 6–11–63, Cl. 280—415.
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McCallum, John, Johnson, Ditmars, and McGraw. 3,093,-513.
McCallum, John, Johnson, Ditmars, and McGraw. 3,093,-514.
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McLaughlin, William I. Vapor separator and filter for compressed air. 3,093,467, 6–11–63, Cl. 55—218.
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McRobbie, John A. and A. F. Light-dome, suspended sponge-washed traffic line reflector. 3,093,038, 6–11–63, Cl. 94—1.5.
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Gentry, Hermond G., Radsins, and Fortriede. 3,093,035.
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Wermager, Palmer G., Scheurich, and Meinzer. 3,093,034.
Melan, Rudolf: *See*—
Simon, Walter, Waldmann, Melan, and Plauth. 3,093,-686.
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Folkers, Karl, and Woodruff. 3,093,649.
Merian, Ernest, and O. Senn, to Sandos Ltd. Process for the dyeing, padding and printing of hydrophobic fibers with indandione dyestuffs. 3,093,437, 6–11–63, Cl. 8—21.
Merkowitz, Samuel, to General Dynamics Corp. Shear valve and frangible fitting. 3,093,151, 6–11–63, Cl. 137—68.
Meril, Bruno, and G. Jannuzzi, to Ing. C. Olivetti & C., S.p.A. Recording machine for a sheet record having two opposite recording faces. 3,093,436, 6–11–63, Cl. 346—125.
Mesrobian, Robert B. and C. J. Ammondson, to Continental Can Co., Inc. Method of preparing mixtures of hydrocarbon polymer resins and linear polyamide resins and product thereof. 3,093,255, 6–11–63, Cl. 215—1.

Messer, Elmer S., to Conch International Methane Ltd. Dispensing means having liquid storage tank and liquid removal means. 3,093,269, 6-11-63, Cl. 222—333.

Meathos, George A. Portable coin counter. 3,093,148, 6-11-63, Cl. 133—8.

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Metz, Peter P., to Northwest Metal Products, Inc. Roof ventilator with removable hood. 3,093,059, 6-11-63, Cl. 98—42.

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Meyers, Frederick C. Disposable lighter construction. 3,092,988, 6-11-63, Cl. 67—7.1.

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Middleton, Carl W., Jr., and E. F. Middleton, to The Warner Brothers Co. Stand-up blister packages. 3,093,244, 6-11-63, Cl. 206—78.

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Miller, Alfred L.: *See*—
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Miller, Charles. Bail arrangement. 3,093,257, 6-11-63, Cl. 215—100.

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Miller, Lee A., to Monsanto Chemical Co. Diphosphonate alkyl esters. 3,093,672, 6-11-63, Cl. 260—461.

Miller, Lee A., to Monsanto Chemical Co. Estervinylation of aromatic amines. 3,093,679, 6-11-63, Cl. 260—471.

Miller, Lee A., to Monsanto Chemical Co. Esters. 3,093,680, 6-11-63, Cl. 260—486.

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Miller, Roman R.: *See*—
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Miller, Ward B., and W. H. Ewing, to Owens-Corning Fiberglas Corp. Apparatus for forming tubular insulating bodies of fibrous structure. 3,093,532, 6-11-63, Cl. 156—430.

Mills, Joseph A. W., and D. H. Cannon, to Dowty Mining Equipment Ltd. Expandable bolt with auxiliary stressing means. 3,093,026, 6-11-63, Cl. 85—2.4.

Mine Safety Appliances Co.: *See*—
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Lohr, Paul L. R. 3,093,136.

Minister of Supply, Her Majesty's Government of the United Kingdom of Great Britain and Northern Ireland: *See*—
Martin, Peter, and Bamford. 3,092,964.

Minneapolis-Honeywell Regulator Co.: *See*—
King, William R. 3,093,432.

Minnesota Mining and Mfg. Co.: *See*—
Fitz Harris, Leo J. 3,093,264.
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Mintzer, Alfred L., to United States of America, Navy. Simplified aided tracking and coasting system. 3,093,784, 6-11-63, Cl. 318—327.

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Mitchell, Orville. 3,093,301.

Mitchell, Orville, to John E. Mitchell Co. Lubricating system for compressor. 3,093,301, 6-11-63, Cl. 230—206.

Misell, Louis R., and J. Berch, to Western Felt Works. Stabilization of the dimensions of felt materials. 3,092,888, 6-11-63, Cl. 26—18.5.

Modrey, Henry J. Elastic fastener. 3,093,220, 6-11-63, Cl. 189—36.

Mohasco Industries, Inc.: *See*—
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Monsanto Chemical Co.: *See*—
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Abramo, John G., and Chapin. 3,093,676.
Bromley, James E., and Hillis. 3,092,890.
Cox, Paul E., Jr., and Ucci. 3,093,612.
Gottlly, Arthur L. 3,093,278.
Hayes, Louie W., Sr. 3,092,889.
Jackson, Robert C. 3,093,332.
Lamb, Douglas J. 3,093,344.
Miller, Lee A. 3,093,646.
Miller, Lee A. 3,093,672.
Miller, Lee A. 3,093,679.
Miller, Lee A. 3,093,680.
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Montecatini Societa Generale per l'Industria Mineraria e Chimica: *See*—
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Shaw, Albert E., Isenberg, and Moon. 3,093,375.

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Morgan, Arthur I., Jr.: *See*—
Graham, Robert P., Ginnetto, and Morgan. 3,093,488.

Morgan Construction Co.: *See*—
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Morici, Alfred A., to Hershel California Fruit Products Co., Inc. Machine for treating tomatoes with lye solution, washing and trimming same. 3,093,175, 6-11-63, Cl. 146—52.

Morris, Jack P., and W. Morris. Metering mixing spray equipment. 3,093,311 6-11-63, Cl. 239—142.

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Morrison, James: *See*—
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Moss, Philip H., to Jefferson Chemical Co., Inc. Method for preparing butadiene dichlorohydrins. 3,093,690, 6-11-63, Cl. 260—634.

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Moyer, James D., to Textile Machine Works. Clamp and cutter mechanism for knitting machines. 3,092,986, 6-11-63, Cl. 66—140.

Mueller-Tamm, Heinz K. Buchholz, and F. Stastny, to Badische Anilin- & Soda-Fabrik Aktiengesellschaft. Flameproofed synthetic thermoplastic polymer containing an organic polybromine compound and method of making same. 3,093,599, 6-11-63, Cl. 260—2.5.

Mull, Robert P., to Ciba Corp. Dibenzpolymethyleniminoalkylene-guanidines. 3,093,632, 6-11-63, Cl. 260—239.

Müller, Josef, to Daimler-Benz Aktiengesellschaft. Auxiliary frame for motor vehicles. 3,093,350, 6-11-63, Cl. 280—106.5.

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Murphy, James L., to Barnes Engineering Co. Extended radiation micrometer gage. 3,093,742, 6-11-63, Cl. 250—220.

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Mustee, Bernard E. 3,092,845.

Myers, Elizabeth R.: *See*—
Vail, Ande R. 3,093,023.

Myers, William H.: *See*—
Vail, Ande R. 3,093,023.

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Nagy, Louis. All purpose platform ladder. 3,093,209, 6-11-63, Cl. 182—118.

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Daniel, David W. 3,092,935.

National Carts, Inc.: *See*—
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National Dairy Products Corp.: *See*—
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Logan, Hugh H., Doty, and Nelson. 3,093,002.

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Nelson, Robert C. Automatic radar monitor and alarm device. 3,093,320, 6-11-63, Cl. 343—5.

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Nielsen, Axel L. Flooding control pump system. 3,093,154, 6-11-63, Cl. 187—115.

Nielsen, Axel L. Removable flooding control plug. 3,093,156, 6-11-63, Cl. 137—328.

Nilsson, Erland, to Allmänna Svenska Elektriska Aktiebolaget. Lightning arresters. 3,093,643, 6-11-63, Cl. 317—61.

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McCallum, John, Johnson, Ditmars, and McGraw. 3,093,518.
McCallum, John, Johnson, Ditmars, and McGraw. 3,093,514.

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Russell, John D., to Microdot Inc. Strain gages and methods of installing the same. 3,092,993, 6–11–63, Cl. 73—88.5.

Russo, Philip J. Selector and ejector for bowling balls and pins. 3,093,373, 6–11–63, Cl. 272—43.

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Aitken, Adrien J., and Rutkowski. 3,093,157.

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Ryan, Genevieve, and R. T. Cox. Apparatus for shaping edible products. 3,093,093, 6–11–63, Cl. 107—10.

Ryan, James F., Jr., and E. L. Tichenor, to E. I. du Pont de Nemours and Co. Composite filament. 3,092,892, 6–11–63, Cl. 28—82.

Rywak, John, to Northern Electric Co. Ltd. Detector of pulses exceeding a predetermined length. 3,093,756, 6–11–63, Cl. 307—88.5.

S. S. S. Gears Ltd.: *See*—
Basebe, Arthur C., and Clements. 3,093,226.

Sabel, Edward R.: *See*—
Gundlach, Robert W., Mott, Sabel, and Albrecht. 3,093,068.

Sachnik, Norman H., to Texsteam Corp. Fluid operated pump. 3,093,122, 6–11–63, Cl. 121—158.

Sadler, James E., and P. W. Hussey, to International Harvester Co. Sealed picker bar and spindle assembly. 3,092,949, 6–11–63, Cl. 56—44.

St. Joseph Lead Co.: *See*—
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Salat, Joseph A. Combined transportation and display container. 3,093,261, 6–11–63, Cl. 220—19.

Salminen, Paavo V. L. Turbine-driven irrigation device. 3,093,313, 6–11–63, Cl. 239—236.

Sammarco, Peter, to International Harvester Co. Frameless grain wagon. 3,093,254, 6–11–63, Cl. 214—83.32.

Samo, Harvey W., to Margon Corp. Doll eye. 3,092,931, 6–11–63, Cl. 46—169.

Sampietro, Achilles C., to Thompson Ramo Wooldridge Inc. Variable ratio hydraulic vehicle drive. 3,092,970, 6–11–63, Cl. 60—53.

Samson, Joseph: *See*—
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Sanderson, Hansel S., 50% to C. E. Anthony. Gravity actuated apparatus for weighing granular material and the like. 3,093,202, 6–11–63, Cl. 177—96.

Sandox Ltd.: *See*—
Benz, Jakob, Schweizer, and Wehrli. 3,093,628.
Hofer, Kurt. 3,093,438.
Merian, Ernest, and Senn. 3,093,437.

Sandvikens Jerverks Aktiebolag: *See*—
Ednell, Daniel F. 3,092,883.

Sargeant, Walter E., J. M. Farrell, and E. F. Weller, Jr., to General Motors Corp. Printed circuit motor. 3,093,763, 6–11–63, Cl. 310—154.

Sarmento, Frank, and L. B. Almeida. Automatic livestock feeder. 3,093,270, 6–11–63, Cl. 222—360.

Sata, Masami: *See*—
Tachiki, Kenkichi, and Sata. 3,093,315.

Sauer, Charles E., to Alton Box Board Co. Boat. 3,092,851, 6–11–63, Cl. 9—6.

Savides, Christos, to American Cyanamid Co. 1,1'-thiobis-(6-s,c-dimethylbenzyl-2-naphthol). 3,093,616, 6–11–63, Cl. 260—45.95.

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Schaefer, Reuben W. Jack assembly. 3,093,362, 6–11–63, Cl. 254—86.

Schaftener, Stuart P., and L. W. Anderson. Car top tent. 3,093,150, 6–11–63, Cl. 135—1.

Schantz, Spencer C. Fire extinguisher. 3,093,193, 6–11–63, Cl. 169—1.

Schauer, George W., Jr., to General Motors Corp. Domestic heating appliance. 3,093,722, 6–11–63, Cl. 219—20.

Schechter, William H., to Callery Chemical Co. Method of preparing dialkoxyorganoboranes, diaryloxyorganoboranes and dihydroxyorganoboranes. 3,093,674, 6–11–63, Cl. 260—462.

Scheidenheim, Earl L., to H. D. Hume. Box handling apparatus. 3,093,229, 6–11–63, Cl. 193—36.

Scheip, Helmut R., A. P. Kelley, and L. W. Norman, to The Garrett Corp. Hypersonic aircraft. 3,093,348, 6–11–63, Cl. 244—15.

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Donahue, Gary M., Scher, and Train. 3,093,240.

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Wermager, Palmer G., Scheurich, and Meinzer. 3,093,034.

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Frei, Ephraim H., Schieber, and Shtrikman. 3,093,453.

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Graf, Roderich, Schlack, and Lohaus. 3,093,618.

Schlicke, Heins M., H. J. Rey, and H. E. Weidmann, to Allen-Bradley Co. Filter having lumped resonance elements spaced along length of shielding enclosure with adjustable magnetic coupling between elements. 3,093,803, 6–11–63, Cl. 333—73.

Schlumberger Well Surveying Corp.: *See*—
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Schmidt, Herbert. Machine and method of making brushes. 3,093,416, 6–11–63, Cl. 300—21.

Schmidt, Karol, to Vyzkumny ustav energeticky. Separation of solid substances from liquids. 3,093,579, 6–11–63, Cl. 210—117.

Schmidt, Max. Package, in particular for hollow bodies sensitive to pressure such as Christmas tree balls. 3,093,241, 6-11-63, Cl. 206—45.31.

Schmidt, Richard, to Frans Morat, G.m.b.H. Feeding mechanism for yarn winding and processing machines. 3,093,330, 6-11-63, Cl. 242—45.

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Low, Hans, Reynolds, and Schmulling. 3,093,585.

Schneider, William P., to Schlumberger Well Surveying Corp. Well logging systems. 3,093,811, 6-11-63, Cl. 340—18.

Schoonover, Paul L., to Monolith Portland Cement Co. Apparatus and method for conveying slurry. 3,093,364, 6-11-63, Cl. 259—146.

Schorr, Manfred, and H. Fiesselmann, to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning. Process of preparing nitro-3-hydroxythiophene-2-carboxylic acid esters. 3,093,657, 6-11-63, Cl. 260—332.2.

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Schwabe, Herman, Inc.: *See*—
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Schweizer, August: *See*—
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Schwyzer, Robert, and H. Kappeler, to Ciba Corp. Polypeptides and process for their manufacture. 3,093,627, 6-11-63, Cl. 260—112.

Schyns, Pierre, to Etablissements Callebaut-De Blicquy, societe anonyme. Apparatus for treating textile products by means of liquids. 3,092,990, 6-11-63, Cl. 68—189.

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Smith, John E., and Sciechitano. 3,092,900.

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Scurlock, Arch C., K. E. Rumbel, and R. Friedman, to Atlantic Research Corp. Process for generating gases and apparatus therefor. 3,092,959, 6-11-63, Cl. 60—35.4.

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Searle, G. D., & Co.: *See*—
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Seecamp, Louis W. Lever action firearm. 3,092,924, 6-11-63, Cl. 42—22.

Sefton Fibre Can Co. Division: *See*—
Freese, Samuel A. 3,093,293.

Segreto, John J., to B. R. Feld. Bookbinding method and apparatus. 3,093,396, 6-11-63, Cl. 281—21.

Seidel, William B., to The Cincinnati Milling Machine Co. Grinding machine truing mechanism. 3,093,128, 6-11-63, Cl. 125—11.

Senn, Otto: *See*—
Merian, Ernest, and Senn. 3,093,487.

Sennewald, Kurt, F. Pohl, W. Meininger, and W. Vogt, to Knapsack-Griesheim Aktiengesellschaft. Process for the manufacture of monovinyl acetylene of high purity. 3,093,696, 6-11-63, Cl. 260—678.

Shanklin, Dunbar L.: *See*—
Blackwood, George W., and Shanklin. 3,093,499.

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Sharples, Thomas D., to The Sharples Corp. Process for encasing an object. 3,092,901, 6-11-63, Cl. 29—520.

Shaw, Albert E., S. Isenberg, and R. J. Moon, to Brunswick Corp. Pin detection means. 3,093,375, 6-11-63, Cl. 273—52.

Shaw, John T., to American Cyanamid Co. N-oxides of amino-S-triazines and process for preparing them. 3,093,645, 6-11-63, Cl. 260—249.9.

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Cofer, Kenneth B., and Fourie. 3,093,689.
Edwards, Granville D., and Keelen. 3,093,662.
Fourie, Robert W., Cofer, and Sheets. 3,093,661.
Loeffler, Erwin S. 3,093,536.
Low, Hans, Reynolds, and Schmulling. 3,093,585.
Sullivan, William J. 3,093,682.
Tsatsos, William T. 3,093,506.

Shepherd, James W., to Callery Chemical Co. Preparation of alkoxyboroxines and arloxyboroxines. 3,093,675, 6-11-63, Cl. 260—462.

Sherbondy, William A. Hand carpet sweeper construction. 3,092,862, 6-11-63, Cl. 15—41.

Sherven, Vern H. Mobile hay stack form. 3,093,141, 6-11-63, Cl. 130—20.

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Beach, Leland K., and Shewmaker. 3,093,673.

Shriner, Walter. Nuclear radiation detector having electrostatically chargeable elements. 3,093,787, 6-11-63, Cl. 250—83.3.

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Siebel, Gustav, W Müller, and E. Trägner, to Aluminium-Industrie-Aktien-Gesellschaft. Method for manufacturing highly polishable sheets of aluminum. 3,093,459, 6-11-63, Cl. 29—197.5.

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Soder, Alfons, and Siedel. 3,093,684.

Siegele, Frederick H.: *See*—
Scanley, Clyde S., and Siegele. 3,093,654.

Siemens-Schuckertwerke Aktiengesellschaft: *See*—
Anke, Klaus, Ertel, Frohr, Kessler, Pritsching, and Sinn. 3,093,781.

Sievert, William C.: *See*—
Bernick, Leslie M., Pearson, and Sievert. 3,093,555.

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Silverman, Jacob. Pressing machine. 3,093,275, 6-11-63, Cl. 223—38.

Simmons, Harold C., and L. B. O'Sickey, to Parkes-Hannifin Corp. Fuel injection nozzle. 3,093,317, 6-11-63, Cl. 239—453.

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Simon, Walter, H. J. Waldmann, R. Melan, and E. Plauth, to Badische Anilin- & Soda-Fabrik Aktiengesellschaft. Production of cyclic alcohols and ketones. 3,093,686, 6-11-63, Cl. 260—586.

Simpson, Frank E., and J. D. Hoffman, to FMC Corp. Bag making machine. 3,093,280, 6-11-63, Cl. 225—96.

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Smit, Hendrikus J., to Algemene Kunstzude Unie N.V. Mouline yarn and method of making the same. 3,092,955, 6-11-63, Cl. 57—140.

Smith, Alexander, and B. D. Baggs, Jr. Fertilizer distributor. 3,093,266, 6-11-63 Cl. 222—167.

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Zeamer, Aaron C. 3,093,355.

Smith, David I., to General Electric Co. Wheel slip suppression system. 3,093,399, 6-11-63, Cl. 291—2.

Smith, Donald B.: *See*—
MacKenzie, James C., and Smith. 3,093,614.

Smith, Frank E., to General Motors Corp. Drawing reproduction method. 3,093,050, 6-11-63, Cl. 95—73.

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Smith, John E., and P. A. Sciechitano. Work-supporting and guiding device. 3,092,900, 6-11-63, Cl. 29—200.

Smith, John K. Paddles for canoes and the like. 3,092,853, 6-11-63, Cl. 9—24.

Smith, Robert A.: *See*—
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Societe Nationale d'Etude et de Construction de Moteurs d'Aviation: *See*—
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Societe Ornanaise de Constructions Mecaniques (S.O.C.): *See*—
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Soder, Alfons, and W. Siedel, to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning. Novel N-(2-hydroxy-B-trihaloethyl) derivatives of tetracyclines. 3,093,684, 6-11-63, Cl. 260—559.

Soderquist, Frederick J., J. L. Amos, and H. D. Boyce, to The Dow Chemical Co. Method for preparing isopropenyl-substituted aryl hydrocarbons. 3,093,694, 6-11-63, Cl. 260—669.

Soloway, Harold: *See*—
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Sosolic, Ernest, to Societe Ornanaise de Constructions Mecaniques (S.O.C.). Distributors notably for feeding machine-tools and the like. 3,093,250, 6-11-63, Cl. 214—1.

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Sparks, Neil R.: *See*—
Geyer, Robert L., and Sparks. 3,093,810.

Sparks, William J.: *See*—
Gessler, Albert M., and Sparks. 3,093,601.

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Spence, Clifton F., deceased; H. M. Spence, administratrix. Chain saw filing guide. 3,093,016, 6-11-63, Cl. 76—36.

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Spence, Clifton F. 3,093,016.

Spence, Robert A.: *See*—
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Hawkins, Robert D., and Southworth. 3,093,367.
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Stanley Works, The: *See*—
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Stardust, Inc.: *See*—
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Stark, Martin H. Staggered ply tube body. 3,093,288, 6-11-63, Cl. 229—4.5.

Starp, Frans W. R., to Alfred Gauthier, G.m.b.H. Photographic camera. 3,093,046, 6-11-63, Cl. 95—52.

Starp, Frans W. R., to Alfred Gauthier, G.m.b.H. Photographic intra-lens shutter construction. 3,093,049, 6-11-63, Cl. 95—64.

Starp, Frans W. R., to Alfred Gauthier, G.m.b.H. Photographic camera escapement mechanism. 3,093,048, 6-11-63, Cl. 95—63.

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Starr, James O. Target-throwing device. 3,093,127, 6-11-63, Cl. 124—8.

Starrett, Rupert M. Electrically powered keyboard and transfer mechanism for ten key adding or calculating machine. 3,093,804, 6-11-63, Cl. 235—60.

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Steenfeld, Joseph, and G. V. Zito, to The Bendix Corp. Ion air density sensor for atmospheric pressure and altitude measurements. 3,093,792, 6-11-63, Cl. 324—33.

Steggerda, Johannes J., to Stamicarbon, N.V. Preparation of melamine. 3,093,644, 6-11-63, Cl. 260—249.7.

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Hackley, Brennie E., Jr., Posiomek, and Steinberg. 3,093,539.
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Vohwinkel, Kurt, and Stocklin. 3,093,643.

Stoker, H. L., Co.: *See*—
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Stump, Homer C. Carpet fastener with contouring surface. 3,093,866, 6-11-63, Cl. 16—7.

Stutz, Iberia L., to United States of America, Air Force. Direction finding antenna. 3,093,828, 6-11-63, Cl. 343—118.

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Superior Electric Co., The: *See*—
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Switzer, Erwin D. Basement window buck. 3,092,887, 6-11-63, Cl. 25—131.

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Burner, Andre H., and Symes. 3,093,064.

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U.S. DEPARTMENT OF COMMERCE

OFFICIAL GAZETTE of the UNITED STATES PATENT OFFICE

June 11, 1963 Volume 791 Number 2

TRADEMARKS

NOTICES

Trademark Suits

Notices under 15 U.S.C. 1116; Trademark Act of July 5, 1946

Reg. No. 49,490 (COLT), Colt's Patent Fire Arms Manufacturing Company, Inc., Pistols; **Reg. No. 632,574** (FRONTIER), American Weapons Corporation, Revolvers, pistols, shotguns, rifles and parts thereof; **Reg. No. 636,745** (PEACEMAKER), same, Revolvers and parts thereof; **Reg. No. 651,917** (COBRA), Colt's Patent Fire Arms Manufacturing Company, Inc., Firearms—namely, automatic pistols and revolvers, filed June 14, 1961, D.C., S.D. Calif. (Los Angeles), Doc. 767–61–MC, *Colt's Patent Fire Arms Manufacturing Company, Inc.* v. *Haywood H. Hunter et al.* Consent judgment; injunction granted Jan. 21, 1963.

Reg. No. 57,908 (WHITE SEWING MACHINE CO.), White Sewing Machine Corporation, Sewing machines, attachments, covers, tables, and stands; **Reg. No. 66,220** (WHITE), same, Sewing machines; **Reg. No. 226,217** (DOMESTIC), same; **Reg. No. 669,284** (WHITE), same; **Reg. No. 669,285** (DOMESTIC), same, filed Oct. 31, 1962, D.C., W.D. Okla. (Oklahoma City), Doc. 9913, *White Sewing Machine Corp. et al.* v. *Gerald Baxter et al.* Injunction issued; defendant enjoined Jan. 21, 1963.

Reg. No. 66,220. (See Reg. No. 57,908.)

Reg. No. 235,709 (ANGELICA), Angelica Jacket Company, Men's and women's washable or cleanable apparel and uniforms—namely, coats, jackets, pants, dresses, skirts, blouses, waists, and aprons used for work or professional purposes by employees of hotels, etc.; **Reg. No. 578,857**, same, Angelica Uniform Company, Wearing apparel—namely, for women: dresses, blouses, skirts, etc.; for men: coats, pants, outer shirts, etc.; and for children: bed gowns, pajamas, and robes, filed Aug. 10, 1962, D.C., S.D. Calif. (Los Angeles), Doc. 62–1106–TC, *Angelica Uniform Co.* v. *Angelica Uniform Supply.* Consent judgment; trademarks held infringed; order restraining defendant Mar. 15, 1963.

Reg. No. 228,217. (See Reg. No. 57,908.)

Reg. No. 315,624 (DAKS), S. Simpson Limited, Trousers; **Reg. No. 539,343**, same, Men's and women's trousers and walking shorts, men's and women's jackets, men's suits, and women's skirts; **Reg. No. 649,373**, same, Topcoats and overcoats, filed Mar. 1, 1963, D.C. Md. (Baltimore), Doc. 14454, *S. Simpson Limited* v. *E. J. Korvette, Inc.*

Reg. No. 417,669 (WILBERT), Wilbert W. Haase Co., Burial vaults; **Reg. No. 502,992**, same; **Reg. No. 533,495**, same, filed Aug. 16, 1962, D.C., N.D. Okla. (Tulsa), Doc. 5455–Civil, *Wilbert W. Haase Co.* v. *Southwest Wilbert Vault Company et al.* Consent judgment against all defendants, except H. T. Robb; trademarks held valid and infringed; defendants enjoined Mar. 14, 1963; default judgment as to defendant H.T. Robb Apr. 1, 1963.

Reg. No. 418,601 (LOWERATOR), William J. Gibbs, d.b.a. Lowerator Manufacturing Co., Apparatus for holding articles or layers of articles capable of being stacked, such as machine

CONDITION OF TRADEMARK APPLICATIONS AS OF APRIL 30, 1963

Total number of applications awaiting action [excluding renewals and Sec. 12 (c)] 16,696
Date of oldest new application ..... Sept. 14, 1962
Date of oldest amended application ..... Aug. 2, 1962

J. H. MERCHANT, Director, Trademark Examining Operation

TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION	Oldest Application: New	Oldest Application: Amended
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or other commercial parts, trays, dishes, cups, plates, and for raising or lowering said articles a predetermined degree upon removal or addition respectively of one of said articles or layers of articles, said apparatus serving for the dispensing or receiving of the articles, held thereby, filed Jan. 30, 1963, D.C., S.D.N.Y., Doc. 63/305, *Aiddin Industries, Incorporated* v. *Gilbert Adams, et al.* Same, filed July 25, 1961, same, Doc. 61/2610, *American Machine & Foundry Company* v. *Levelator Corporation of America et al.* Stipulation and order of dismissal without prejudice Mar. 6, 1963.

Reg. No. 424,814 (FAIR LADY A STUTMAN ORIGINAL), Hyman H. Stutman, Ladies' and misses' dresses, filed Oct. 3, 1960, D.C., S.D.N.Y., Doc. 60/3802, *Stutman & Feldman Dress Co.* v. *Urbenoire, Inc.* Stipulation and order of discontinuance with prejudice Mar. 7, 1963.

Reg. No. 502,902. (See Reg. No. 417,669.)

Reg. No. 509,417 (VORNADO), The O. A. Sutton Corporation, Inc., Electric fans for domestic and commercial use; Reg. No. 504,899, same, Air conditioning units; Reg. No. 627,795, same, Thermostats, filed Nov. 20, 1961, D.C.N.J. (Newark), Doc. 965-61, *Vornado Auto Air Conditioning Corp.* v. *Vornado, Inc.* Stipulation and order of dismissal Nov. 21, 1961.

Reg. No. 529,668 (GARLAND), Garland Knitting Mills, Women's and girls' sweaters made principally of knitted material; Reg. No. 529,669 (GARLANDER), same; Reg. No. 669,169 (GARLANDER PETITE), same, Women's, girls', and children's sweaters made principally of knitted material, filed Mar. 6, 1963, D.C., S.D.N.Y., Doc. 63/625, *Garland Knitting Mills* v. *Garland Frocks, Inc. et ano.*

Reg. No. 534,685 (DURATITE), Webb Products Company, Putties—namely, wood dough, seam compound, surfacing putty, and metal surfacers and solvents for the same, filed Mar. 14, 1963, D.C., S.D.N.Y., Doc. 63/726, *Dap, Inc.* v. *Production Paints & Coatings, Inc.*

Reg. No. 540,179(c) (POLAROID), Polaroid Corporation, Light-polarizing organic plastic in sheet form for further manufacture; photographic cameras, shutters, exposure meters, etc.; Reg. No. 579,866, same, Intermittent photographic instruction manuals and publications, photographic prints and enlargements, filed Nov. 9, 1962, D.C., S.D.N.Y., Doc. 62/3711, *Polaroid Corporation* v. *Authenticolor, Inc. et al.* Consent judgment; defendants enjoined Mar. 14, 1963.

Reg. No. 540,179(b), (POLAROID), Polaroid Corporation, Light-polarizing organic plastic in sheet form for further manufacture; photographic cameras, shutters, exposure meters, etc.; Reg. No. 667,363, same, Camera cases, exposure meter cases, etc., filed Feb. 13, 1963, D.C., S.D.N.Y., Doc. 63/403, *Polaroid Corporation* v. *Ruke Co., Inc.* Consent judgment; defendants enjoined Mar. 14, 1963.

Reg. No. 559,343. (See Reg. No. 315,624.)

Reg. No. 572,235 (AMCREST AND DESIGN), The Associated Merchandising Corporation, Men's and boys' wearing apparel—namely, suits, coats, sweaters, shoes and slippers, filed Jan. 21, 1963, D.C., E.D. Mo. (St. Louis), Doc. 63-C-16(3), *Associated Merchandising Corporation* v. *Goodman Mercantile Company.* Stipulation and decree granting injunction Mar. 13, 1963.

Reg. No. 579,866. (See Reg. No. 540,179.)

Reg. No. 583,733 (BANK OF AMERICA), Bank of America National Trust and Savings Association, Commercial, savings, loan and trust department banking services, filed Oct. 13, 1961, D.C., N.D. Ill. (Chicago), Doc. 61c1731, *Bank of America National Trust & Savings Ass'n* v. *United Bank of America.* Consent judgment; trademark held valid; defendant enjoined Nov. 17, 1961.

Reg. No. 596,778 (CLEARASIL), Clearasil, Incorporated, Greaseless medication for external application to pimples and acne; Reg. No. 600,540, same, Medicated toilet and bath soap; Reg. No. 606,763 (CLEAR-AWAY), Revlon, Inc., Medicated cream for the treatment of acne, pimples, and blackheads, filed Dec. 7, 1960, D.C., S.D.N.Y., Doc. 60/4841, *Richardson-Merrell Inc.* v. *Revlon, Inc.* Stipulation and order of discontinuance Mar. 20, 1963.

Reg. No. 504,899. (See Reg. No. 509,417.)

Reg. No. 595,205 (WALESKOOL), Wales Manufacturing Company, Men's summer suits; Reg. No. 597,940 (WALES OF BOSTON), same, Water repellant and waterproof men's topcoats; Reg. No. 714,442 (WALES WEATHERPROOFS AND DESIGN), same, Men's raincoats, rain hats and rain jackets, filed Feb. 28, 1963, D.C., W.D.N.C. (Charlotte), Doc. 1748, *Wales Manufacturing Company* v. *Wales Manufacturing Co., Inc.*

Reg. No. 596,248 (IMPULSE ITEMS AND DESIGN), Frances Glencott, doing business as Impulse Items, Novelties and toys, filed Mar. 1, 1962, D.C., S.D.N.Y., Doc. 62/1000, *Impulse Items* v. *Impulse Items, Inc. et al.* Consent judgment; defendants Impulse Items, Inc. and Jack Bren enjoined; discontinued as to defendants Motel Rabinowitz and Ann Sclafani Mar. 14, 1963.

Reg. No. 597,940. (See Reg. No. 595,205.)

Reg. No. 597,363. (See Reg. No. 540,179.)

Reg. No. 600,169. (See Reg. No. 529,668.)

Reg. No. 600,540. (See Reg. No. 596,778.)

Reg. No. 602,574. (See Reg. No. 49,430.)

Reg. No. 606,745. (See Reg. No. 49,430.)

Reg. No. 627,795. (See Reg. No. 509,417.)

Reg. No. 627,439 (TELEDYNE), Taber Instrument Corporation, Instruments for measuring pressure, temperature and force, electrical transmitters for process control and research purposes and accelerometers, filed Feb. 5, 1963, D.C., S.D. Calif. (Los Angeles), Doc. 63/135-PH, *Taber Instrument Corporation* v. *Teledyne, Inc. et al.*

Reg. No. 649,572. (See Reg. No. 315,624.)

Reg. No. 651,917. (See Reg. No. 49,430.)

Reg. No. 659,294. (See Reg. No. 57,908.)

Reg. No. 659,295. (See Reg. No. 57,908.)

Reg. No. 679,186 (FRISBEE), Wham-O-Mfg. Co., Toy flying saucers for toss games, filed Mar. 12, 1963, D.C., E.D.N.Y. (Brooklyn), Doc. 63-C-252, *Wham-O-Mfg. Co., Inc.* v. *Premier Products Co. et al.*

Reg. No. 696,768. (See Reg. No. 502,778.)

Reg. No. 705,205 (ALASKINE), Staron, Inc., Silk and wool fabrics, filed Nov. 29, 1961, D.C., S.D.N.Y., Doc. 61/4207, *Staron, Inc.* v. *Federated Department Stores, Inc.* Stipulation and order of discontinuance Mar. 13, 1963.

Reg. No. 714,442. (See Reg. No. 595,205.)

Reg. No. 719,842 (HIO-DINE), Voldale, Inc., Solid compositions capable of mixing with water of yielding hypoidous acid and diatomic iodine for use in water purification, and particularly swimming pool water disinfection and sanitization, filed Mar. 11, 1963, D.C., N.D. Calif. (San Francisco), Doc. 41356, *Neese Chemical Company, Inc.* v. *Hydrodyne, Inc. et al.*

Reg. No. 721,716 (SAFEWAY), Safeway Stores, Inc., Retail grocery stores, filed Mar. 6, 1963, D.C., S.D. Ga. (Savannah), Doc. 1393, *Safeway Stores, Inc.* v. *Safe-Way Super.* Order dismissing complaint without prejudice Mar. 19, 1963.

MARKS PUBLISHED FOR OPPOSITION

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105. As provided by section 21 of said act, a fee of twenty-five dollars must accompany each notice of opposition.

Class 1—Raw or Partly Prepared Materials

SN 141,357. Pennington Grain & Seed, Inc., Madison, Ga. Filed Apr. 2, 1962.



The drawing is lined for the colors red, green, and yellow. No claim is made to the words "Research," "Integrity," "Leadership," and "Value" apart from the mark as shown.
Owner of Reg. No. 677,510.
For Grass Seed and Cotton Seed.
First use on or about Oct. 1, 1961, on grass seed.

SN 141,882. Rec-Stone Corporation, Montreal, Quebec, Canada. Filed Apr. 9, 1962.

REC-STONE

Priority claimed under Sec. 44(d) on Canadian application filed Oct. 14, 1961; Reg. No. 126,054, dated June 22, 1962.
For Artificial Stone Products Generally Utilizing Natural Stone, Marble, Granite, Quarts and Other Minerals and Materials of This Nature, in Their Natural, Crushed, Sawn, Chipped, Pulverized and Otherwise Manufactured Shapes, Which When Combined With Adhesives Such as Concrete, Cement, Resins, Plastics, Etc., and Processed by Pre-Casting, Pre-Stressing and/or Machine Pressing Into Various Shapes and Sizes Result in Products Which May Be Further Treated by Autoclaving, Grinding and Polishing.

SN 142,771. Kemwell (Chur) Ltd., Chur, Switzerland. Filed Apr. 17, 1962.

NOBEX

Owner of Swiss Reg. No. 180,273, dated Mar. 9, 1960; and U.S. Reg. No. 738,881.
For Exothermic Compositions in Powder or Molded Form for the Heat Treatment of Metals.

SN 143,306. Kemwell (Chur) Ltd., Chur, Switzerland. Filed Apr. 25, 1962.

KEMWELL

Owner of Swiss Reg. No. 180,274, dated Mar. 9, 1960; and U.S. Reg. No. 738,882.
For Exothermic Compositions in Powder or Molded Form for the Heat Treatment of Metals.

SN 148,807. Glaskyd Incorporated, Perrysburg, Ohio. Filed July 11, 1962.

TRAK-LESS

For Resinous Molding Compositions.
First use Mar. 20, 1961.

SN 149,093. Koppers Company, Inc., Pittsburgh, Pa. Filed July 16, 1962.

KOPOX

Owner of Reg. No. 708,560.
For Polyepoxy Resins.
First use Jan. 23, 1962.

SN 149,139. Ticonderoga Chemical Corp., Leominster, Mass. Filed July 16, 1962.

TICOR

For Polystyrene.
First use May 15, 1962.

SN 149,865. Mitsui & Co. Ltd., Minato-ku, Tokyo, Japan. Filed July 26, 1962.



The characters represent the Japanese term "Mitsui" which when translated into English, means "three wells."
For Raw Cotton.
First use Sept. 29, 1961; in commerce Sept. 29, 1961.

SN 151,058. Industrial Minerals of Canada Limited, Toronto, Ontario, Canada. Filed Aug. 13, 1962.

MINEX

For Ground Industrial Minerals—Namely, Nepheline Syenite.
First use Apr. 10, 1962; in commerce Apr. 12, 1962.

SN 152,117. E. I. du Pont de Nemours and Company, Wilmington, Del. Filed Aug. 29, 1962.

CORFAM

For Poromeric Material—i.e., Microporous and Permeable Coriaceous Sheet Material for Generalized Use in the Industrial Arts.
First use Aug. 15, 1962.

SN 152,120. E. I. du Pont de Nemours and Company, Wilmington, Del. Filed Aug. 29, 1962.

DORZAN

For Poromeric Material—i.e., Microporous and Permeable Coriaceous Sheet Material for Generalized Use in the Industrial Arts.
First use Aug. 15, 1962.

SN 155,779. Celanese Corporation of America, New York, N.Y. Filed Oct. 24, 1962.

PROCEL

Owner of Reg. No. 433,982.
For Plastic Film and Sheet.
First use on or before Sept. 28, 1946.

SN 155,998. Irving Tanning Company, Boston, Mass. Filed Oct. 26, 1962.

PORKY

For Leather.
First use Oct. 19, 1960.

SN 156,191. Albert Trostel & Sons Company, Milwaukee, Wis. Filed Oct. 29, 1962.

TIGERTAN

For Leather.
First use Mar. 30, 1962.

SN 156,372. Celanese Corporation of America, New York, N.Y. Filed Nov. 1, 1962.

PENDEX

For Plastic Film and Sheet.
First use on or before Oct. 29, 1962.

SN 156,373. Celanese Corporation of America, New York, N.Y. Filed Nov. 1, 1962.

GRONDEX

For Plastic Film and Sheet.
First use on or before Oct. 22, 1962.

SN 156,374. Celanese Corporation of America, New York, N.Y. Filed Nov. 1, 1962.

GRONDAR

For Plastic Film and Sheet.
First use on or before Oct. 30, 1962.

SN 156,375. Celanese Corporation of America, New York, N.Y. Filed Nov. 1, 1962.

PENDAR

For Plastic Film and Sheet.
First use on or before Oct. 23, 1962.

SN 156,436. Rezolin, Inc., Santa Monica, Calif. Filed Nov. 1, 1962.

PARAPLAST

For Hot Melt Water Soluble Compounds for Making Disposable Mandrels, Cores, and Molds.
First use July 28, 1958.

SN 156,535. Velsicol Chemical Corporation, Chicago, Ill. Filed Nov. 2, 1962.

GARD-N-GLASS

For Polyvinyl Sheeting for Home and Garden Use.
First use Oct. 20, 1962.

Class 2—Receptacles

SN 142,024. The Dow Chemical Company, Midland, Mich. Filed Apr. 11, 1963.

DOWPAC

Owner of Reg. Nos. 657,429, 710,521, and others.
For Plastic Containers and Closures.
First use Mar. 12, 1962.

SN 145,751. American Can Company, New York, N.Y. Filed May 31, 1962.



TUFFY

Owner of Reg. No. 739,867.
For Fibre Cartons.
First use on or about Aug. 17, 1961.

SN 147,810. Dundick Tool Works, Inc., Chicago, Ill. Filed June 27, 1962.

RAY-LUCENT

For Mortuary Trays Adapted for Transporting Human Bodies.
First use Apr. 9, 1962.

SN 149,745. Abraham H. Kantrow, Flushing, N.Y. Filed July 25, 1962.

KIDDY-PROOF

For Plastic Vials for Pharmaceutical Preparations.
First use July 2, 1962.

SN 149,919. Antone M. Christensen, d.b.a. Lortone, Seattle, Wash. Filed July 27, 1962.

UTILITRAY

For Portable Trays.
First use June 15, 1962.

SN 153,606. Thompson Industries, Inc., Phoenix, Ariz. Filed Sept. 20, 1962.



The mark comprises the letters "t" and "i."
For Plastic Drinking Cups.
First use Aug. 10, 1962.

SN 153,680. Rainbow Wood Products, Inc., New York, N.Y. Filed Sept. 21, 1962.

BUN HUT

For Basket for Rolls, Biscuits, and Bread.
First use Oct. 1, 1954.

SN 153,896. Rubbermaid Incorporated, Wooster, Ohio. Filed Sept. 25, 1962.

RUBBERMAID MEANS BETTER MADE

Owner of Reg. Nos. 528,621, 735,083, and others.
For Articles Made of Rubber Composition or Plastic Composition—Namely, Vegetable Bins, Waste Baskets, Buckets, Pails, Refuse Containers, Laundry Baskets, Juice Decanters, and Battery Box Cases.
First use Jan. 6, 1960.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

SN 156,485. General Sewing Corp., New York, N.Y. Filed Nov. 2, 1962.

FLEETWOOD

For Articles of Luggage—Namely, Suitcases, Valises, Dressing Cases, and Car Bags.
First use on or about Jan. 15, 1962.

SN 156,828. C. F. Rumpp & Sons Incorporated, Philadelphia, Pa. Filed Nov. 7, 1962.

CARDINAL

For Wallets and Billfolds.
First use Oct. 12, 1962.

SN 158,085. Markay Bags, Inc., New York, N.Y. Filed Nov. 28, 1962.



For Ladies' Handbags.
First use on or about Nov. 20, 1962.

Class 4—Abrasives and Polishing Materials

SN 129,033. F. A. Putnam Mfg. Co., Inc., Keene, N.H. Filed Oct. 2, 1961.

SUPER CEROXYLON

For Thread-Waxing Compound.
First use October 1947.

SN 152,530. SAIT—Societa Abravisi Industriali, S.p.A., Turin, Italy. Filed Sept. 5, 1962.

SAIT

For Grinding Wheels, Abrasive Discs, Abrasive Bands.
First use May 9, 1952; in commerce Nov. 14, 1958.

SN 156,513. Norton, Inc., Jersey City, N.J. Filed Nov. 2, 1962.

HEIRLOOM

For Silver Polish.
First use Oct. 18, 1962.

SN 157,936. Alphonso L. Shackelford, d.b.a. The Alchem Company, San Antonio, Tex. Filed Nov. 26, 1962.

ALCHEM

For Creamy Silver Polish.
First use Feb. 6, 1961.

SN 160,880. Oakite Products, Inc., New York, N.Y. Filed Jan. 17, 1963.

GLISTONE

For Floor Wax.
First use Dec. 5, 1962.

SN 160,998. Arol Chemical Products Company, Jersey City, N.J. Filed Jan. 21, 1963.

LORA

For Liquid Wax Used To Clean and Polish Floors.
First use Sept. 10, 1962.

SN 161,005. Chicago Wheel & Manufacturing Co., Chicago, Ill. Filed Jan. 21, 1963.



For Abrading Wheels.
First use on or about Sept. 17, 1962.

SN 161,080. Minnesota Mining and Manufacturing Company, St. Paul, Minn. Filed Jan. 21, 1963.

TYCRO

For Abrasive Wheels.
First use Nov. 9, 1962.

Class 5—Adhesives

SN 143,216. Dacar Chemical Products Company, Pittsburgh, Pa. Filed Apr. 27, 1962.

DAXCEL FOAMASTIK

Applicant makes no claim to exclusive rights in the term "Foamastik" apart from the mark as shown. Owner of Reg. No. 669,748.

For Adhesive Mastic for Cold Bonding Foam Plastics, Foam Polystyrene, Foam Polyurethane, Foam Glass, Cork and Other Materials for Perimeter Insulation, Room Insulation, Walk-In Coolers, Hardening Rooms and Freezers Where High Bond Strength and Resistance to Freezing Is Required.

First use Nov. 25, 1958.

SN 143,829. Arnav Shoe Corporation, Little Ferry, N.J., by change of name from Intercontinental Development Corporation. Filed May 4, 1962.

ARNAVBOND

For Synthetic Resin Bonding Agent.
First use Apr. 13, 1962.

SN 144,173. Minnesota Mining and Manufacturing Company, St. Paul, Minn. Filed May 9, 1962.

SCOTCH-MOUNT

Owner of Reg. Nos. 417,265, 724,110, and others.

For Double Coated Foam Adhesive Tape for General Household and Industrial Uses.

First use Apr. 17, 1962.

Class 6—Chemicals and Chemical Compositions

SN 116,380. Carus Chemical Company, La Salle, Ill. Filed Mar. 24, 1961.

CAROX

For Potassium Permanganate.
First use Mar. 15, 1961.

SN 122,932. International Salt Company, Clarks Summit, Pa. Filed June 27, 1961.

STERLING BRINE CRYSTALS

Applicant hereby disclaims "Brine Crystals" apart from the mark as shown. Owner of Reg. Nos. 539,172 and 679,450.

For Rock Salt, for Chemical and Industrial Use.

First use on or about Sept. 15, 1960.

SN 139,192. Baum's Castorine Co., Inc., Rome, N.Y. Filed Mar. 6, 1962.

REPEL-O-FILM

For Bird Repellant.
First use Nov. 8, 1961.

SN 143,455. Stiles-Kem Sales Corporation, Waukegan, Ill. Filed Apr. 30, 1962.

ALGAM

For Algaecide—Namely, a Concentrate Useful for Control of Algae and Slime.
First use Mar. 8, 1961.

SN 143,456. Stiles-Kem Sales Corporation, Waukegan, Ill. Filed Apr. 30, 1962.

ALKIL

For Algaecide—Namely, a Concentrate Useful for Control of Algae, Mildew, Fungus and Slime.
First use Jan. 31, 1962.

SN 144,706. FMC Corporation, New York, N.Y. Filed May 16, 1962.

DRIONE

For Insecticides.
First use Apr. 25, 1962.

SN 144,881. Adolf Radeck, Chemische Fabrik, Treuchtlingen, Bavaria, Germany. Filed May 17, 1962.

SENEGALIN

Owner of German Reg. No. 20,606, dated Nov. 23, 1896.

For Liquid and Powdered Vegetable Glue, Liquid and Powdered Rubber, Powdered Hydralined Starch, Liquid Starch, Pearl Starch, Starch Flour, Dextrin, Plant Gum, Sizing Paste, Glue, Glue Substance, Gelatin, and Finish Preparation—Namely, Textile Additives, Casting Additives and Auxiliary Agents for the Manufacture of Paper.

SN 144,882. Adolf Radeck, Chemische Fabrik, Treuchtlingen, Bavaria, Germany. Filed May 17, 1962.

IDEALIN

Owner of German Reg. No. 31,085, dated June 1, 1898.

For Adhesive Substances and Finishing Agents—Namely, Textile Additives, Casting Additives and Auxiliary Agents for the Manufacture of Paper.

SN 144,883. Adolf Radeck, Chemische Fabrik, Treuchtlingen, Bavaria, Germany. Filed May 17, 1962.

TRAGANTINE

Owner of German Reg. No. 16,801, dated May 28, 1896.

For Liquid and Dry Vegetable Glue, Starched Preparations, and Chemical Products for Industrial Purposes—Namely, Auxiliary Additives and Agents as Aids in the Textile, Casting and Paper Manufacturing Industries.

SN 147,145. Peansalt Chemicals Corporation, Philadelphia, Pa. Filed June 18, 1962.

HYDROTHOL

Owner of Reg. No. 722,734.
For Herbicide and Algaecide Composition.
First use Oct. 17, 1961.

SN 147,872. R. T. Vanderbilt Company, Inc., New York, N.Y. Filed June 27, 1962.

CADMATE

For Elastomer Accelerator.
First use Apr. 28, 1962.

SN 149,226. Tanabe Seiyaku Co. Ltd., Higashi-ku, Osaka, Japan. Filed July 17, 1962.

NARAMYCIN
ナラマイシン

The Japanese characters shown in the drawing are a phonetic equivalent of the term "Naramycin." Owner of Japanese Reg. No. 516,491, dated Mar. 19, 1958.

For Rodent Repellent and Antibiotic Preparations Used in Agriculture and Forestry.

SN 151,370. A. E. Staley Manufacturing Company, Decatur, Ill. Filed Aug. 16, 1962.

RUTEX

Owner of Reg. No. 711,687.

For Liquid Chemical Preparation To Retard the Moisture Loss and Preserve the Life of Roses, Shrubs, Trees, Annuals and Perennials.

First use July 26, 1963.

SN 152,145. Monsanto Chemical Company, St. Louis, Mo. Filed Aug. 29, 1962.

LAMBAST

For Pesticides.
First use Aug. 9, 1962.

SN 152,199. Billups Western Petroleum Company, Hammond, La. Filed Aug. 30, 1962.

BILLUPS

Owner of Reg. No. 681,070.
For Anti-Freeze and Hydraulic Brake Fluid.
First use as early as Jan. 1, 1954.

SN 152,543. The Wellcome Foundation, Ltd., London, England. Filed Sept. 5, 1962.

PREPUERIN

Owner of British Reg. No. 572,399, dated Oct. 20, 1956.
For Pregnancy Test Reagent.

SN 153,300. Loumac Chemical Company, Chattanooga, Tenn. Filed Sept. 17, 1962.

REPELIT

For Dog Repellent Pellet.
First use Sept. 5, 1962.

SN 153,628. Union Oil Company of California, Los Angeles, Calif. Filed Sept. 24, 1962.

UNIGAS

For Liquefied Petroleum Gas.
First use July 1, 1945.

SN 156,196. United States Borax & Chemical Corporation, Los Angeles, Calif. Filed Oct. 29, 1962.

U.S. BORAX

Owner of Reg. No. 845,251.
For Muriate of Potash.
First use Oct. 9, 1962.

SN 156,898. The Northwestern Chemical Company, West Chicago, Ill. Filed Nov. 8, 1962.

NORTHWESTERN N W E S

For Amyl Acetate, Amyl Butyrate, Ethyl Acetate, Ethyl Butyrate, Ethyl Caproate, Ethyl Propionate, Glycerol Monostearate, Chemicals and Chemical Compositions.

First use since Aug. 1, 1920.

SN 157,742. R. T. Vanderbilt Company, Inc., New York, N.Y. Filed Nov. 21, 1962.

FOMADE

Owner of Reg. No. 550,695.
For Stabilizer for Use in Vinyl Plastisols.
First use Aug. 14, 1962.

Class 7—Cordage

SN 157,378. International Minerals & Chemical Corporation, Skokie, Ill. Filed Nov. 16, 1962.

POT O'GOLD

Owner of Reg. No. 659,211.
For Baler and Binder Twine.
First use Oct. 24, 1962.

SN 158,074. The Hi-Flier Manufacturing Co., Decatur, Ill. Filed Nov. 28, 1962.

MEGALON

For Kite Cord or String.
First use Oct. 5, 1962.

Class 8—Smokers' Articles, Not Including Tobacco Products

SN 158,683. Buescher's Industries, Inc., Washington, Mo. Filed Dec. 7, 1962.

SUNDAY COB

For Corn Cob Pipes.
First use January 1953.

SN 160,495. HMH Publishing Co., Inc., Chicago, Ill. Filed Jan. 10, 1963.

PLAYBOY

Owner of Reg. No. 645,286.
For Cigarette Lighters.
First use December 1959.

Class 9—Explosives, Firearms, Equipments, and Projectiles

SN 121,682. Centennial Arms Corporation, Chicago, Ill. Filed June 8, 1961.

CENTENNIAL

For Firearms.
First use June 8, 1960.

SN 152,206. Colt's Patent Fire Arms Manufacturing Company, Inc., Hartford, Conn. Filed Aug. 30, 1962.

THE FRONTIER

Owner of Reg. Nos. 52,908, 738,097, and others.
For Revolvers.
First use Aug. 1, 1962; 1870 as to "Frontier."

SN 152,237. Olin Mathieson Chemical Corporation, East Alton, Ill. Filed Aug. 30, 1962.

W EZXS

Owner of Reg. Nos. 36,422, 723,447, and others.
For Rifle and Pistol Cartridges.
First use on or about Sept. 1, 1961.

SN 152,238. Olin Mathieson Chemical Corporation, East Alton, Ill. Filed Aug. 30, 1962.

W LEADER

Owner of Reg. Nos. 47,351, 723,447, and others.
For Rifle and Pistol Cartridges.
First use on or about Sept. 1, 1960.

SN 152,239. Olin Mathieson Chemical Corporation, East Alton, Ill. Filed Aug. 30, 1962.

W WINCHESTER

Owner of Reg. Nos. 142,353, 723,447, and others.
For Rifle and Pistol Cartridges.
First use on or about Sept. 1, 1960.

SN 153,204. Olin Mathieson Chemical Corporation, East Alton, Ill. Filed Sept. 14, 1962.

W SPATTERPRUF

Owner of Reg. Nos. 590,038, 705,413, 708,273, and others.
For Rifle and Pistol Cartridges.
First use on or about Sept. 1, 1961.

Class 10—Fertilizers

SN 147,469. Hortco, Inc., Westbury, N.Y. Filed June 21, 1962.

HORTCO

The drawing is lined to indicate the colors red and green.
For Fertilizer.
First use Mar. 18, 1959.

SN 148,667. Stadler Fertilizer Company, Cleveland, Ohio. Filed July 9, 1962.



For Lawn Food.
First use Apr. 5, 1962.

SN 150,109. Southern States Cooperative, Incorporated, Richmond, Va. Filed July 30, 1962.

BIG STRIKE

For Fertilizer for Use in Fish Ponds.
First use July 19, 1962.

SN 154,066. South Texas Soil Conditioner Service, Inc., Eagle Pass, Tex. Filed Sept. 27, 1962.

HUMI-CITE

For Soil Conditioner.
First use Oct. 15, 1959.

SN 154,115. Green & Reedy Fertilizer, Inc., Franklinton, La. Filed Sept. 28, 1962.

SIX-PLUS

For Fertilizer.
First use Aug. 7, 1962.

SN 154,183. Western States Chemical Corporation, Los Angeles, Calif. Filed Sept. 28, 1962.

GRO

For Fertilizers.
First use January 1956.
Subj. to intf. with SN 130,216.

Class 11—Inks and Inking Materials

SN 138,539. Radiant Color Company, Oakland, Calif. Filed Feb. 23, 1962.

KEMTAK

Owner of Reg. No. 744,089.
For Fluorescent and Conventional Inks Used in Silk Screen Printing.
First use Feb. 5, 1962.

SN 143,399. S. C. Johnson & Son, Inc., Racine, Wis. Filed Apr. 30, 1962.

PORELON

Owner of Reg. No. 690,891.
For Ink-Containing Porous Plastic Components for Marking Stamps and Marking Devices.
First use on or about Jan. 13, 1959.

Class 12—Construction Materials

SN 112,100. American Porcelain Enamel Company, Muskegon, Mich. Filed Jan. 19, 1961.



The word "Brilliants," is disclaimed apart from the mark as shown. Owner of Reg. No. 708,870.
For Concrete Aggregate Including Glass Particles Incorporated for Decorative Purposes.
First use Nov. 1, 1960.

SN 128,978. The Dow Chemical Company, Midland, Mich. Filed Oct. 2, 1961.

STYROFLOAT

Owner of Reg. Nos. 362,877, 698,819, and others.
For Buoyancy and Flotation Media of Expanded Synthetic Resins Useful in the Form of Boards, Planks, and Billets in Docks, Marinas and Other Floating Structures.
First use July 25, 1961.

SN 130,231. Nukem Products Corporation, Buffalo, N.Y. Filed Oct. 18, 1961.

NUKEM ELASTIK

For Components of Polymerizable and Cold-Setting Resinous Caulking and Sealing Material Comprising a Liquid and a Powdered Ingredient.
First use about Sept. 26, 1956.

SN 142,313. Globe Roofing Products Co. Inc., Whiting, Ind. Filed Apr. 16, 1962.

WIND-TAB

Owner of Reg. Nos. 415,729, 423,553, and 558,028.
For Asphalt Shingles.
First use Mar. 26, 1962.

SN 142,974. Security Renovating, Inc., Hicksville, N.Y. Filed Apr. 24, 1962.

DURA-NU

For Epoxy Mastic Coating for Re-Surfacing Exterior Side Walls.
First use Mar. 15, 1962.

SN 148,697. Wheeling Tile Company, Wheeling, W. Va. Filed May 4, 1962.

WHEELING TILE CO.

The word "Tile" and the abbreviation "Co." are disclaimed apart from the mark as shown.
For Ceramic Floor and Wall Tiles.
First use on or about Feb. 22, 1961.

SN 149,516. Alvin Products, Inc., Worcester, Mass. Filed July 23, 1962.

LAB

For Plastic Patching Fabric for Metal, Canvas, Wood, Plastic, Etc.
First use Apr. 10, 1950, on plastic patching fabric.

SN 153,342. Union Asbestos & Rubber Company, Chicago, Ill. Filed Sept. 17, 1962.

UNARCO

For Asbestos Pipe Covers, Rigid and Flexible Types; Asbestos Blanket or Sheet Insulation; Woven Asbestos Listing Tape for Insulation; and Asbestos Insulating Tape Comprising Woven Sheath and Filler With or Without Waterproofing.
First use Dec. 1, 1918.

SN 153,543. Austin Flooring Company, Chicago, Ill. Filed Sept. 20, 1962.

PERMA-THRUST

Owner of Reg. No. 627,610.
For Wood Flooring.
First use June 1, 1962.

SN 156,830. Johns-Manville Corporation, New York, N.Y. Filed Dec. 10, 1962.

SPIN-GLAS

For Thermal Insulating Felts and Blankets Comprising Glass Fibers.
First use Sept. 29, 1961.

SN 158,842. Modular Components Corporation, Chula Vista, Calif. Filed Dec. 10, 1962.

M-C

For Fully Factory Fabricated Structural Units and Modular Components for Homes and Buildings.
First use in or about May 1960.

SN 158,845. Modular Components Corporation, Chula Vista, Calif. Filed Dec. 10, 1962.

modubilt

For Fully Factory Fabricated Structural Units and Modular Components for Homes and Buildings.
First use on or about Apr. 16, 1962.

SN 158,918. Johns-Manville Corporation, New York, N.Y. Filed Dec. 11, 1962.

SOUNDIKE

For Fiberboard Panels Resistant to Sound Transmission for Use in Building Constructions.
First use Nov. 3, 1962.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

SN 146,105. Ronson Corporation, Woodbridge, N.J. Filed June 4, 1962.

RONSON

Owner of Reg. Nos. 261,178, 715,876, and others.
For Manually Operated Valves, Power Operated Valves, Actuating Cylinders and Components Thereof.
First use Oct. 1, 1955.

SN 152,963. Allied Metal Spinning Corp., New York, N.Y. Filed Sept. 12, 1962.

"CHEF'S PRIDE"

For Cooking Pots.
First use Aug. 24, 1962.

SN 153,813. Quisine, Inc., Torrington, Conn. Filed Sept. 24, 1962.

QUISINE

The drawing, in part, is lined for gold, although no claim is made to any particular coloring.
For Frying Pans, Griddles, Cooking Roasters, Saucepans, Dutch Ovens, and Cookie Sheets.
First use June 30, 1961.

SN 153,957. Hoover Ball and Bearing Company, Saline, Mich. Filed Sept. 26, 1962.

YORK

For Bathroom Fixtures or Accessories Including Soap Holders, Toothbrush and Tumbler Holders, Paper Holders, Hooks, Shelves, Towel Bars and the Like.
First use in 1953.

SN 153,958. Hoover Ball and Bearing Company, Saline, Mich. Filed Sept. 26, 1962.

NEWPORT

For Bathroom Fixtures or Accessories Including Soap Holders, Toothbrush and Tumbler Holders, Paper Holders, Hooks, Shelves, Towel Bars and the Like.
First use in 1946.

Class 14—Metals and Metal Castings and Forgings

SN 149,516. Alvin Products, Inc., Worcester, Mass. Filed July 23, 1962.

LAB

For Moldable Metal Patching Material, Moldable Plastic and Dispersed Powdered Metal Patching Material; and Thinner Therefor.
First use Apr. 13, 1948, on moldable metal patching material.

Class 15—Oils and Greases

SN 141,395. The Vigsol Oil Company Limited, London, England. Filed Mar. 8, 1963.

VITASUL

Owner of British Reg. No. 795,503, dated Sept. 16, 1959.
For Additive Compound for Introduction Into Liquid Fuel for Improving Engine Performance and Eliminating Exhaust Odor.

SN 150,288. Studebaker Corporation, South Bend, Ind. Filed Aug. 1, 1962.

TWIN TRACTION

Owner of Reg. No. 633,564.
For Lubricant for Automotive Differentials.
First use November 1957.

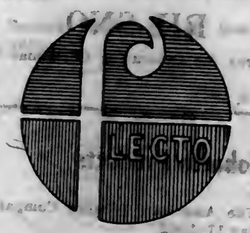
Class 16—Protective and Decorative Coatings

SN 114,495. Marshall L. Magee, d.b.a. Magee Chemical Company, Bensenville, Ill. Filed Feb. 27, 1961.

CATAPONIC DEVELOPMENT

Applicant claims the exclusive right to the use of the word "Development" as a part of its trademark, but not otherwise.
For Finishes for Floors, Such as Sealing Compounds in the Nature of a Paint.
First use on or about Feb. 15, 1961.

SN 134,110. The Flecto Company, Inc., Berkeley, Calif. Filed Dec. 15, 1961.



The drawing is lined for blue and red but no claim is made to color.
For Protective Coatings—Namely, Paints, Varnishes, and Enamels for Interior and Exterior Use.
First use Oct. 27, 1933.

SN 136,769. Iowa Paint Manufacturing Company, Inc., Des Moines, Iowa. Filed Jan. 29, 1962.

FUSIONKOTE

For Abrasion and Chemical Resistant Paint.
First use Mar. 7, 1957.

SN 139,047. De Soto Chemical Coatings, Inc., Chicago, Ill. Filed Mar. 5, 1962.

DESOGUARD

For Corrosion Resistant Coating Preparations.
First use on or about Jan. 26, 1962.

SN 139,656. Mr. Paint Shops, Inc., Rochester, N.Y. Filed Mar. 12, 1962.

mr. PAINT

The word "Paint" is disclaimed apart from the mark as shown. The drawing is lined for red but no claim is made to such color.
For Automotive Paint, Lacquer Thinner, Lacquer and Enamel Primer and Enamel Reducer.
First use at least as early as Jan. 20, 1961, on automotive paint.

SN 139,676. Pratt & Lambert-Inc., Buffalo, N.Y. Filed Mar. 12, 1962.

VARMOR

For Clear Finish Coating for Interior, Exterior, and Marine Use.
First use Aug. 26, 1960.

SN 154,951. The Charles, Inc., d.b.a. The Ril-Sno Products Co., Wichita Falls, Tex. Filed Oct. 11, 1962.

RIL-SNO

For Snow Spray for Decorating Christmas Trees and the Like.
First use Oct. 3, 1962.

Class 17—Tobacco Products

SN 144,305. The American Tobacco Company, New York, N.Y. Filed May 11, 1962.

CARLTON

Owner of Reg. No. 170,231.
For Cigarettes.
First use May 7, 1962.

SN 151,854. United Whelan Corporation, Brooklyn, N.Y. Filed Aug. 24, 1962.

SLENDORITA

For Cigars.
First use Jan. 17, 1934.

SN 159,503. Lane Limited, New York, N.Y. Filed Dec. 20, 1962.

CANADA HOUSE

For Smoking Tobacco.
First use October 1962.

SN 159,998. Philip Morris Incorporated, New York, N.Y. Filed Dec. 31, 1962.

CONCORD

For Cigarettes.
First use Dec. 21, 1962.

Class 18—Medicines and Pharmaceutical Preparations

SN 116,977. Collins Chemical Corp., North Miami, Fla. Filed Apr. 3, 1961.

S.U.R.

For Preparation for Stomach Ulcer Relief.
First use Nov. 11, 1953.

SN 125,836. Nutri-Bio Corporation, Beverly Hills, Calif. Filed Aug. 11, 1961.

BABY-BIO

For Dietary Food Supplement Consisting of Vitamins, Minerals and Concentrated Protein.
First use May 29, 1961.

SN 127,886. Commercial Solvents Corporation, New York, N.Y. Filed Sept. 7, 1961.

PERMA-COCKTAIL

For Vitamin Preparation Containing Antibiotics for Use in Livestock and Poultry Feeds Including Drinking Water.
First use June 15, 1960.

SN 130,519. Textron Inc., Providence, R.I. Filed Oct. 23, 1961.

FR-80

For Medicament as an Aid in the Prevention of Foot Rot Incorporated as an Ingredient in Livestock Feeds.
First use July 26, 1961.

SN 140,541. Drug Development Corporation, Brooklyn, N.Y. Filed Mar. 23, 1962.

CHOCOLATE SOLDIERS

Applicant disclaims the word "Chocolate" from the mark as shown.
For Chocolated Multiple Vitamins for Children.
First use Feb. 26, 1962.

SN 142,992. Theratron Corporation, St. Paul, Minn. Filed Apr. 23, 1962.

THERAFFIN

For Therapeutic Bathing Medium.
First use Jan. 12, 1962.

SN 145,884. R. W. MacDicken, d.b.a. Nephron Company, Tacoma, Wash. Filed May 24, 1962.

S2

For Epinephrine Hydrochloride for Asthma.
First use July 14, 1959.

SN 146,442. Add-A-Zyme, Inc., Wheaton, Minn. Filed June 8, 1962.

ADD-A-ZYME BRAND

Applicant disclaims the word "Brand."
For Cattle, Swine and Poultry Feeds.
First use May 2, 1961.

SN 152,070. Imperial Chemical Industries Limited, London, England. Filed Aug. 28, 1962.

ALDERLIN

For Pharmaceutical Preparations and Substances for the Treatment of Cardiovascular Conditions.
First use May 11, 1962; in commerce May 17, 1962.

SN 152,072. Imperial Chemical Industries Limited, London, England. Filed Aug. 28, 1962.

ATROMID

For Pharmaceutical Products and Preparations Affecting Cholesterol and Lipid Metabolism.
First use May 11, 1962; in commerce May 17, 1962.

SN 152,215. First Texas Pharmaceuticals, Inc. Dallas, Tex. Filed Aug. 30, 1962.

FEBRO-GESIC

Owner of Reg. No. 696,679.
For Analgesic and Antipyretic.
First use June 14, 1962.

SN 153,894. Will Ross, Inc., Milwaukee, Wis. Filed Sept. 25, 1962.

ALCO-WIPE

For Alcohol Impregnated Disinfectant Pads.
First use Aug. 7, 1962.

SN 154,413. Dr. Karl Thomae, G.m.b.H., Biberach an der Riss, Germany, assignee of Geigy Chemical Corporation, Ardsley, N.Y. Filed Oct. 8, 1962.

PRESANTIN

Owner of U.S. Reg. No. 674,865.
For Cardiac and Circulatory Preparation.
First use Apr. 24, 1962; in commerce Apr. 24, 1962.

SN 159,790. The Wander Company, Chicago, Ill. Filed Dec. 26, 1962.

MENTHO-FOAM

For Topical Analgesic.
First use Dec. 13, 1962.

SN 159,944. Baimm Pharmacal Corp., New York, N.Y. Filed Dec. 31, 1962.

HEXASIL CREAM

The word "Cream" is disclaimed apart from the mark as shown.
For Skin Ointment for the Treatment of Diaper Rash, Cracked and Dried Skin, Minor Burns, Insect Bites, Sunburn, Chafed and Itching Skin, Prickly Heat, and Detergent Rash.
First use Sept. 13, 1962.

SN 159,952. Buffington's Incorporated, Worcester, Mass. Filed Dec. 31, 1962.

CHOLICAPS

For Medicinal Preparation for the Correction of Faulty Fat Metabolism.
First use May 7, 1962.

SN 160,241. Winn-Michaels Pharmaceuticals, Inc., Evansville, Ind. Filed Jan. 4, 1963.

B-FIVE-C

For Chewable Multiple B Vitamins With Ascorbic Acid Tablet.
First use Nov. 21, 1962.

SN 160,312. Philadelphia Laboratories, Inc., Philadelphia, Pa. Filed Jan. 7, 1963.

PERELAX

For Suppository Laxatives.
First use Oct. 26, 1962.

Class 19—Vehicles

SN 136,532. Bonded Mobile Homes, New Albany, Ind. Filed Jan. 25, 1962.

For Mobile Homes.
First use Nov. 30, 1961.

SN 139,416. Manchester Yacht Sails, Inc., Dartmouth, Mass. Filed Mar. 8, 1962.

ZIP-R-LUFF

For Sails for Sailboats.
First use on or about Jan. 31, 1962.

SN 149,574. Klippan Gesellschaft mit beschrankter Haftung, Hamburg-Garstedt, Germany. Filed July 23, 1962.

KLIPPAN

The representation of the female person shown on the drawing is fanciful. Applicant disclaims the representation of the goods shown on the drawing apart from the mark as shown. Owner of German Reg. No. 752,189, dated Aug. 23, 1961.
For Safety Belts for Use in Motor Vehicles and Aircraft.

SN 152,917. Piasecki Aircraft Corporation, Philadelphia, Pa. Filed Sept. 11, 1962.

PIASECKI

Owner of Reg. Nos. 570,182 and 644,678.
For Aerial Vehicles.
First use May 29, 1957.

SN 153,715. Aluminum Truck Bodies, Inc., St. Louis, Mo. Filed Sept. 24, 1962.

ANDREWS

For Truck Bodies.
First use at least as early as 1938.

SN 159,862. Scotsman Manufacturing Co., Inc., Gardena, Calif. Filed Dec. 18, 1962.

PAPOOSE

For Travel Trailers for Automotive Vehicles.
First use Oct. 6, 1962.

SN 159,718. General Motors Corporation, Detroit, Mich. Filed Dec. 26, 1962.



For Brakes, Radiators, Defrosters, Air Conditioners, Heaters, Thermostats, Shock Absorbers, and Parts for Such Items for Automotive Vehicles.
First use June 1, 1961.

SN 159,897. Merriman Bros., Inc., Boston, Mass. Filed Dec. 28, 1962.

TRIDENT

Owner of Reg. No. 598,078.
For Surf and/or Planing Type Sailboats.
First use in January 1959.

SN 160,007. Riviera, Inc., Salt Lake City, Utah. Filed Dec. 31, 1962.

Esquire

For Detachable Hardtops for Convertible Automobiles.
First use Dec. 5, 1962.

SN 160,008. Riviera, Inc., Salt Lake City, Utah. Filed Dec. 31, 1962.

Riviera

For Detachable Hardtops for Convertible Automobiles.
First use July 15, 1962.

SN 160,027. Western Unit Corporation, City of Industry, Calif. Filed Dec. 31, 1962.

STABILAIRE

For Carriage-Mounted Spring Suspension Assemblies for Vehicles.
First use Sept. 9, 1960.

SN 160,088. Bo-Dar, Inc., Des Moines, Iowa. Filed Jan. 3, 1963.

LITE CLOUD

For Station Wagon Camper Comprising a Camping Unit Adapted for Detachable Mounting on Station Wagons and the Like.
First use Oct. 18, 1962.

SN 160,112. Goodyear Aircraft Corporation, Akron, Ohio. Filed Jan. 3, 1963.

VEE-BALLOON

For Lighter-Than-Air Craft.
First use Nov. 6, 1962.

SN 160,186. Jeffrey-Allan Industries, Incorporated, Chicago, Ill. Filed Jan. 4, 1963.

FLOMATIC

For Windshield Washer for Cars, Trucks, Tractors, Boats, and Aircraft.
First use Oct. 9, 1962.

SN 160,187. Jeffrey-Allan Industries, Incorporated, Chicago, Ill. Filed Jan. 4, 1963.

TOUCH-N-FLO

For Spray Control Device for Vehicle Windshield Washers.
First use Oct. 9, 1962.

SN 161,880. General Motors Corporation, Detroit, Mich. Filed Feb. 1, 1963.

STING RAY

For Automobiles.
First use Sept. 10, 1962.

Class 21 — Electrical Apparatus, Machines, and Supplies

SN 114,975. Lear Siegler, Inc., New York, N.Y., by change of name from The Siegler Corporation, New York, N.Y. Filed Mar. 6, 1961.

DECATROL

For Mechanical Turns Counter for Coupling to Shaft Devices To Present a Digital Read-Out of the Indexed Position and Parts Thereof.
First use January 1960.

SN 117,558. Texas Instruments Incorporated, Dallas, Tex. Filed Apr. 10, 1961.

TI

For Electrical Components—Namely, Carbon Film Resistors, Semi-Conductor Networks, Photocells, Diodes, Silicon Resistors, Rectifiers, and Capacitors.
First use July 1955.

SN 126,458. Kentron Hawaii, Limited, Honolulu, Hawaii. Filed Aug. 22, 1961.

TAPE-SLIDE

For Control Device To Be Selectively Operated for Synchronizing a Recording Apparatus, Such as a Sound Recorder, With a Controlled Apparatus, Such as a Visual Projector.
First use Mar. 28, 1961.

SN 145,673. Stanley S. Cramer, d.b.a. S.S.C. Laboratory, Okeechobee, Fla. Filed May 29, 1962.

SPECTRA VOX

For Apparatus in Which a Record Player Feeds Signals for Controlling Lamps of Different Colors for Producing Color Effects on a Background Screen With or Without Musical Accompaniment.
First use December 1961.

SN 146,125. Tohwa Electric Co., Ltd., Shinagawa-ku, Tokyo, Japan. Filed June 4, 1962.

TOHWALITE

Owner of Japanese Reg. No. 545,695, dated Dec. 15, 1959.
For Electric Generators, Electric Motors, Rotary Converters, Frequency Converters, Telegraph Equipments, Rectifiers, Telephones and Switchboards, Transformers, Electric Switches, Electric Current Limiters, Panel Control Switchboards, Rheostat, Electric Heaters, Electric Fans, Electric Bulbs, Vacuum Tubes, Dry Batteries and Cells, Storage Batteries, Incandescent Electric Lamps, Electric Torch Cases, Arc Lights, Cotton Braided Rubber Insulated Electric Wire, Electric Porcelain Insulators, Electric Carbon Products, Electric Insulating Plates, Electric Insulating Cloth, Electric Insulating Paper, Electric Insulating Rubber Products, Electric Insulating Compounds.

SN 146,632. Litecraft Manufacturing Corp., Passaic, N.J. Filed June 11, 1962.

UNIVERSAL HI-HAT

For Lighting Fixtures.
First use May 2, 1962.

SN 148,882. Federal Employees' Distributing Company, Los Angeles, Calif. Filed July 12, 1962.

TOSARI

For Transistor Radios and Radio and Flashlight Batteries.
First use May 16, 1961, on transistor radios.

SN 149,725. Electro-Optical Systems, Inc., Pasadena, Calif. Filed July 25, 1962.

HYTEK

For Micro-Electronic Circuits.
First use on or about Feb. 17, 1962.

SN 149,753. Magic Hostess Corporation, Kansas City, Mo. Filed July 25, 1962.



For Electric Motor Driven Fruit Juicers, Can Openers and Knife Sharpeners.
First use Mar. 19, 1962, on electric motor driven can openers and knife sharpeners.

SN 150,345. Ideal Industries, Inc., Sycamore, Ill. Filed Aug. 2, 1962.

Wire-Nut

Applicant disclaims the representation of the goods, apart from the mark as shown. Owner of Reg. Nos. 424,062, 706,282, and others.
For Connecting Members for Joining the Ends of Electric Wires or Conductors.
First use in 1946.

SN 150,423. Lithonia Lighting, Inc., Conyers, Ga. Filed Aug. 3, 1962.

LITHONIA

For Fluorescent Lighting Fixtures.
First use Aug. 1, 1948.

SN 151,323. The I-T-E Circuit Breaker Company, Philadelphia, Pa. Filed Aug. 16, 1962.

Bus-Duct

Owner of Reg. Nos. 648,557 and 712,068.
For Electrical Distribution Systems Comprising Electrical Busway, Including Tap-Offs, Feed-Ins and Other Attachments and Fittings Therefor.
First use June 1962.

SN 151,462. Ansa Fone Corp., Inglewood, Calif. Filed Aug. 20, 1962.

Ansafone

Applicant hereby disclaims the word "Phone" or its phonetic equivalent "Fone" apart from the mark as shown.
For Automatic Telephone Answering Device.
First use Aug. 10, 1960.

SN 151,806. Eastern Associates, Ltd., San Francisco, Calif. Filed Aug. 24, 1962.

Londale

For Radios.
First use in or about February 1960.

SN 152,200. Billups Western Petroleum Company, Hammond, La. Filed Aug. 30, 1962.

BILLUPS

Owner of Reg. No. 631,505.
For Vehicle Batteries.
First use at least as early as Jan. 1, 1954.

SN 159,539. Square D Company, Park Ridge, Ill. Filed Dec. 20, 1962.

I-LINE

For Electrical Bus Duct Comprising an Assemblage of Electrical Bus Bars.
First use Dec. 4, 1962.

SN 159,623. Telesystem Services Corporation, Glenside, Pa. Filed Dec. 21, 1962.

ISO-MATCH

For Electrical Transformers.
First use May 12, 1962.

SN 159,719. General Motors Corporation, Detroit, Mich. Filed Dec. 26, 1962.



For Storage Batteries, Electrical Generators and Motors, Radios, Electrical Starting, Lighting and Ignition Equipment for Automotive Vehicles, Electrical Wiring Systems for Automotive Vehicles, Aircraft and Household Appliances, and Parts for Such Items.
First use June 1, 1961.

SN 161,482. Dura Electric Lamp Co., Inc., Newark, N.J. Filed Jan. 28, 1963.

DURA

Owner of Reg. Nos. 516,264, 540,660, and 550,192.
For Fluorescent Lamps.
First use Jan. 15, 1963.

SN 161,871. Eagey Surplus Sales, Inc., d.b.a. Melward Industries, Chicago, Ill. Filed Feb. 1, 1963.

TRU-BREW

For Electric Coffeemakers.
First use Feb. 5, 1962.

SN 161,898. New Haven Wire & Cable, Inc., New Haven, Ind. Filed Feb. 1, 1963.

IMPAC

For Magnet Wire Packaged in a Cylindrical Shipping and Dispensing Container.
First use Aug. 21, 1961.

SN 161,981. Exchange Parts Company of Fort Worth, Fort Worth, Tex. Filed Feb. 4, 1963.

EPCO

Owner of Reg. Nos. 669,817, 685,056, and others.
For Starter Drives, Solenoids, Voltage Regulators, Starter Armatures, and Generator Armatures.
First use Jan. 1, 1949.

SN 162,355. Radio Shack Corporation, Boston, Mass. Filed Feb. 8, 1963.



For High Fidelity Equipment—Namely, Tuners, Amplifiers and Record Players, Radios, Tape Recorders, Loudspeaker and Sound Systems, Multiplex Adapters and Microphones.
First use about March 1961.

Class 22—Games, Toys, and Sporting Goods

SN 106,345. Pyro Plastics Corporation, Union, N.J. Filed Oct. 13, 1960.

DESIGN-A-PLANE

For Toy Airplane Construction Kit.
First use Dec. 1, 1959.

SN 111,550. Rapala, Minneapolis, Minn. Filed Jan. 9, 1961.

RAPALA

For Fishing Lures.
First use May 11, 1960.

SN 131,060. Scotts "Keepdrye" Dartboard Co. Ltd., Laindon, England. Filed Oct. 31, 1961.



For Dartboards.
First use Apr. 11, 1938; in commerce June 15, 1946.

SN 140,181. Rainbow Crafts, Inc., Cincinnati, Ohio. Filed Mar. 19, 1962.

FORGE PRESS

For Three-Dimensional Toy Molder.
First use Mar. 8, 1962.

SN 140,229. Bridge Corporation of America, Los Angeles, Calif. Filed Mar. 20, 1962.



For Supplies for Duplicate Bridge Tournaments—Namely, Combined Entrance Fee Forms and Score Cards; Data Cards; Marking Aids for Facilitating the Encoding of Data Cards; and Scoring Guides.
First use Feb. 20, 1962.

SN 140,274. Mag-Powr Games, Inc., Sausalito, Calif. Filed Mar. 20, 1962.

SPACESHIP

For Game Board for Table-Top Play With Magnetic Player Pieces and Control Wands.
First use Feb. 28, 1962.

SN 140,714. Monoloop Products, Inc., Detroit, Mich. Filed Mar. 26, 1962.



For Line Guides for Fishing Rods.
First use on or about Apr. 24, 1959.

SN 141,272. Dr. Med. Dent. Hugo Batt, Bern, Switzerland. Filed Apr. 2, 1962.



Owner of Swiss Reg. No. 184,663, dated Feb. 13, 1961.
For Equipment Sold as a Unit for Playing Outdoor and Indoor Games.

SN 143,252. Robert Charles McAllister, Lynnhaven, Va. Filed Apr. 27, 1962.

BAMBOOZLE BALL

No claim of exclusive right is made to "Ball" for the goods recited.
For Toy Consisting of a Ball Having a Hole Extending Therethrough Along One Axis and a Funicular Member Extending Through the Lumen of the Hole.
First use Apr. 3, 1962.
Subj. to Intf. with SN 147,351.

SN 143,543. Louis Marx & Co. Inc., New York, N.Y. Filed May 1, 1962.

TWISTOYS

For Toy Figures.
First use Apr. 4, 1962.
Subj. to Intf. with SN 148,022.

SN 146,292. Joytown Products, Inc., Brooklyn, N.Y. Filed June 6, 1962.

ORBIT TOP

The word "Top" is disclaimed apart from the mark as shown.
For Tops of the Return Type.
First use May 4, 1962.
Subj. to Intf. with SN 145,740.

SN 147,351. Milton Bradley Company, Springfield, Mass. Filed June 21, 1962.

BAMBOOZLE

For Equipment Sold as a Unit for Playing a Board Game.
First use in 1872.
Subj. to Intf. with SN 143,252.

SN 148,022. Gerardine Ogilby Evans, d.b.a. Gae's Originals, Briarcliff Manor, N.Y. Filed June 29, 1962.

TWIS-TOY

For Wire-Bodied Toys and Toy Figure.
First use in January 1962.
Subj. to Intf. with SN 143,543.

SN 148,367. Ralph K. Daugherty, San Jose, Calif. Filed July 5, 1962.

DAR-TAC-TOE

For Equipment Sold as a Unit for Playing a Dart Game.
First use June 1961.

SN 148,397. S. S. Kresge Company, Detroit, Mich. Filed July 5, 1962.

BABY K

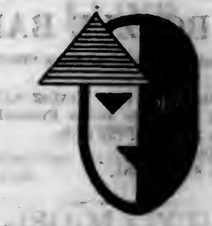
No claim is made to the word "Baby" apart from the mark as shown.
For Toy Dolls.
First use May 9, 1962.

SN 148,605. Lester M. Davis, d.b.a. Les Davis Fishing Tackle Co., Tacoma, Wash. Filed July 9, 1962.

DIAMOND RAY

For Fishing Tackle—Namely, Spoons.
First use June 28, 1962.

SN 148,874. Milton Bradley Company, Springfield, Mass. Filed July 12, 1962.



The drawing is lined for blue and red.
For Puzzles.
First use May 1, 1962.

SN 148,883. Federal Employees' Distributing Company, Los Angeles, Calif. Filed July 12, 1962.

TOSARI

For Bowling Balls, Tennis Rackets, Baseball Gloves and Mitts, Portable Swimming Pools, Air Pillows, Badminton Rackets, Golf Balls and Baseballs.
First use June 13, 1960, on tennis rackets.

SN 154,002. Weber Tackle Company, Stevens Point, Wis. Filed Sept. 26, 1962.



For Fishing Tackle and Accessories, and Parts Thereof—Namely, Flies, Lures, Poppers, Spoons, Spinners, Plugs, Floats, Hooks, Lines, Leaders, Reels and Landing Nets.
First use June 15, 1962; 1921 as to "Weber."

SN 154,022. The General Tire & Rubber Company, Akron, Ohio. Filed Sept. 27, 1962.

PENNSY PINKIE

For Hand Balls, Play Balls, Toy Balls, and Playground Balls.
First use prior to 1952.

SN 154,179. Transco Adult Games, Inc., New York, N.Y. Filed Sept. 28, 1962.



TAG

For Games and Equipment for Playing Games—Namely, Chess Sets, Chess Boards, Poker Chips, Racks and Chests for Containing or Dispensing Chips, Bingo Marker Dispensers, Bingo Markers, Bingo Cards, Card Games, Roulette Equipment and Bankers' Tables.
First use May 25, 1962.

SN 154,187. Writing Toys Corporation, St. Paul, Minn. Filed Sept. 28, 1962.

RITA

For Dolls.
First use Aug. 25, 1962.

SN 154,512. Pulp Reproduction Company, Milwaukee, Wis. Filed Oct. 4, 1962.

FLY-WAY

For Hunters' Decoys.
First use on or about Aug. 1, 1961.

SN 154,950. Cartex Corporation, Morrisville, Pa. Filed Oct. 11, 1962.

PAR PUTT

For Synthetic Putting Green.
First use July 1961.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

SN 137,620. General Dynamics Corporation, San Diego, Calif. Filed Feb. 9, 1962.

HIVOPAK

For Electro-Hydraulic Metal Forming Machines and Parts Thereof.
First use on or before June 30, 1961.

SN 146,415. Roberto Becurseil-Prat, Barcelona, Spain. Filed June 7, 1962.

FILASOL

Priority claimed under Sec. 44(d) on Spanish application filed Mar. 5, 1962; Reg. No. 397,949, dated June 19, 1962.
For Automatic Apparatus or Device for Joining Broken Threads in Continuous Spinning Machines.

SN 147,054. Universal Roll-A-Form Corporation, Royal Oak, Mich. Filed June 15, 1962.

URAFCO

For Forming Rolls and Tools Used Therewith, Both Used in Metal Rolling Mills.
First use on or about Apr. 1, 1961.

SN 149,611. Marion Lee Thompson, d.b.a. Mickey Thompson Enterprises, Long Beach, Calif. Filed July 23, 1962.



For Cams, Pistons, Rods, Rocker Arms, Tappets and Similar Automotive Parts, Equipment and Accessories.
First use July 9, 1961.

SN 149,721. The Diversey Corporation, Chicago, Ill. Filed July 25, 1962.

SHUR-LUBE

For Centralized Lubricating Feeding System for Conveyors and, Particularly, Chain Conveyors.
First use May 18, 1962.

SN 149,831. Fabrecka Products Company, Boston, Mass. Filed July 26, 1962.

FABCEL LEV-L

The word "Lev-L" is disclaimed apart from the mark as shown. Owner of Reg. No. 701,961.
For Adjustable Leveling Mounts for Machinery and Like Equipment.
First use June 20, 1962.

SN 151,783. Heritage House Products, Inc., Pittsburgh, Pa., assignee of Seaboard Seed Co., Inc., Pittsburgh, Pa. Filed Aug. 23, 1962.

HERITAGE HOUSE

For Lawn Spreaders.
First use June 20, 1962.

SN 151,785. Heritage House Products, Inc., Pittsburgh, Pa., assignee of Seaboard Seed Co., Inc., Pittsburgh, Pa. Filed Aug. 23, 1962.

HERITAGE HOUSE

For Lawn Spreaders.
First use June 20, 1962.

SN 152,049. Crown Controls Corporation, New Bremen, Ohio. Filed Aug. 28, 1962.



For Materials Handling Equipment—Namely, Portable Lift Trucks and Pallet Trucks.
First use on or about Apr. 25, 1962.

SN 152,818. Jee Lowe Corporation, New York, N.Y. Filed Aug. 31, 1962.

JO-LO

For Packaging Machines Capable of Feeding Flat Box Blanks, Opening Said Blanks and Sealing the Boxes When Filled and Machines for Feeding and Stacking Handle Sticks.
First use Mar. 6, 1962.

SN 152,464. The Henry G. Thompson & Son Company, New Haven, Conn. Filed Sept. 4, 1962.

Milband

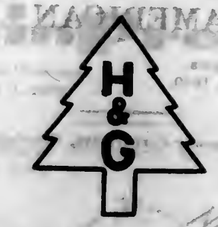
For Band Saw Machines.
First use in or about January 1925.

SN 152,562. Buehler Ltd., Evanston, Ill. Filed Sept. 6, 1962.

WHIRLIMET

For Device Used With a Metallurgical Polishing Machine for Holding and Rotating Metallurgical Specimens Across a Polishing Wheel.
First use Mar. 20, 1962.

SN 152,790. H & G Tool Company, Warren, Mich. Filed Sept. 10, 1962.



For Cutting Tool Blades.
First use Nov. 10, 1961.

SN 152,935. Tuthill Pump Company, Chicago, Ill. Filed Sept. 11, 1962.

FUTURA

For Pumps for Gasoline and Hazardous Liquids.
First use July 11, 1962.

SN 152,979. The Cincinnati Shaper Co., Cincinnati, Ohio. Filed Sept. 12, 1962.

RIGID-REFLEX

For Presses for Compacting Powdered Materials.
First use Sept. 7, 1962.

SN 153,207. Oneida Ltd., Oneida, N.Y. Filed Sept. 14, 1962.

FRONTIER

For Stainless Steel Flat Tableware.
First use Aug. 29, 1962.

SN 153,337. Thompson Industries, Inc., Phoenix, Ariz. Filed Sept. 17, 1962.



For Machinery for Molding Plastics.
First use Aug. 10, 1962.

SN 153,450. Bissell Inc., Grand Rapids, Mich. Filed Sept. 19, 1962.

CUSTOM

For Carpet Sweepers.
First use July 9, 1962.

SN 153,451. Bissell Inc., Grand Rapids, Mich. Filed Sept. 19, 1962.

400

For Carpet Sweepers.
First use July 11, 1962.

SN 153,452. Bissell Inc., Grand Rapids, Mich. Filed Sept. 19, 1962.

AMERICAN

For Carpet Sweepers.
First use Jan. 26, 1940.

SN 153,528. Towmotor Corporation, Cleveland, Ohio. Filed Sept. 19, 1962.

Lansing TOWMOTOR

Owner of Reg. Nos. 602,341, 652,695, and others.
For Lift Trucks and Parts Thereof.
First use June 7, 1962.

SN 153,990. Simon Attachment Co., New York, N.Y. Filed Sept. 26, 1962.

SIMCO

For Sewing Machine Accessories Such as Binders, Folders and Harnesses.
First use May 16, 1951.

SN 155,039. Addressograph-Multigraph Corporation, Cleveland, Ohio. Filed Oct. 12, 1962.

FREIGHTRITE

For Printing Machines.
First use May 11, 1960.

SN 156,873. The Tait Manufacturing Company, Dayton, Ohio. Filed Dec. 10, 1962.

NOMAD

For Water Pumps and Parts Therefor.
First use Mar. 22, 1961.

SN 158,910. H. D. Hudson Manufacturing Company, Minneapolis, Minn. Filed Dec. 11, 1962.

FASTGUN

For Applicators for Spraying Fertilizers, Pesticides, Insecticides and the Like.
First use Apr. 29, 1960.

SN 159,109. North American Manufacturing Company, Sioux City, Iowa. Filed Dec. 13, 1962.

NAMCO

For Fork Lift Vehicles.
First use about Oct. 22, 1962.

SN 159,893. Illinois Tool Works Inc., Chicago, Ill. Filed Dec. 28, 1962.

ITW

Owner of Reg. Nos. 650,060, 730,743, and others.
For Cutting Tools in Connection With Machine Tools, Tool Bits in Connection With Machine Tools, Milling Cutters, Planer Tools, and Friction Resisting Parts of Machinery Such as Bearing Surfaces in General.
First use on or about Dec. 26, 1961.

SN 161,848. Charles D. Briddell, Incorporated, d.b.a. Chas. D. Briddell, Inc., Crisfield, Md. Filed Feb. 1, 1963.

CARVALLOY

For Knife Blades.
First use Nov. 16, 1962.

SN 162,944. Great Lakes Stamp & Mfg. Co., Inc., Chicago, Ill. Filed Feb. 18, 1963.

Great Lakes

For Packaging Machinery Comprising Sealing Machines, Packaging Conveyors, Film Dispensing Machines, Bag Sealing Machines, Labeling Devices, and Food Slicers.
First use in 1940.

Class 26—Measuring and Scientific Appliances

SN 146,125. Tohwa Electric Co., Ltd., Shinagawa-ku, Tokyo, Japan. Filed June 4, 1962.

TOHWALITE

Owner of Japanese Reg. No. 545,695, dated Dec. 15, 1959.
For Electric Measurement Instruments.

SN 146,760. United-Greenfield Corporation, Chicago, Ill. Filed June 12, 1962.

ACCU-RAMIC

Owner of Reg. No. 649,281.
For Gage Blocks, Ring and Plug Gages, and Parts Therefor.
First use Mar. 27, 1962, on ring and plug gages.

SN 146,797. Devolite Corporation, New York, N.Y. Filed June 13, 1962.

DUROBROM

For Sensitized Photographic Papers.
First use June 6, 1962.

SN 148,759. Shandon Scientific Company Limited, London, England. Filed July 10, 1962.

PRECIBOR

Priority claimed under Sec. 44(d) on British Reg. No. 834,114, dated May 3, 1962.
For Chromatographic and Electrophoretic Apparatus and Parts and Fittings Therefor, Including Glass Tubes for Use in Column Chromatography.

SN 151,119. Bear Manufacturing Company, Rock Island, Ill. Filed Aug. 14, 1962.

BEARMATIC

Owner of Reg. Nos. 267,361, 734,523, and others.
For Wheel Balancers.
First use July 13, 1962.

SN 152,008. Shell Oil Company, New York, N.Y. Filed Aug. 27, 1962.

SHELL

For Measuring Device for Mercaption Odorant in Liquid Petroleum Gas.
First use June 1, 1962.

SN 152,590. Julian A. Lipman, d.b.a. Chemiquip Company, New York, N.Y. Filed Sept. 6, 1962.

CHEMIQUIP

For Porous Metallic Element Pressure Snubbers Used To Prevent Surging or Pulsating Gas or Liquid From Damaging Pressure-Sensitive Meters or Indicating Instruments, Metering Valves, and Bleed Controls Having a Porous Metallic Membrane and Used To Reduce the Flow of Liquids or Gases Therethrough.
First use September 1953.

SN 153,036. William R. Weaver, d.b.a. W. R. Weaver Co., El Paso, Tex. Filed Sept. 12, 1962.

WEAVER

For Firearm Telescope Sights, Mounts, Lens Caps, Reticules Therefor.
First use Nov. 15, 1962, on telescope sights.

SN 153,040. William R. Weaver, d.b.a. W. R. Weaver Co., El Paso, Tex. Filed Sept. 12, 1962.

WEAVER MOUNTS

For Firearm Telescope Sight Mounts.
First use June 27, 1958.

SN 153,698. The L. S. Starrett Company, Athol, Mass. Filed Sept. 21, 1962.

WEBBER

For Inspection Gages—Namely, Gage Blocks, Angle Gage Blocks, Height Gages, Meters, Optical Polygons, Linear Measuring Machines.
First use Feb. 28, 1938.

SN 157,837. Picker X-Ray Corporation, White Plains, N.Y. Filed Nov. 28, 1962.

TwinProber

For Radiation Detectors.
First use Apr. 1, 1962.

SN 157,894. Frontier Development, Inc., Des Moines, Iowa. Filed Nov. 26, 1962.

FRONTIER

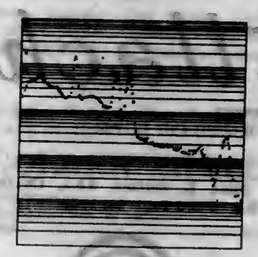
For Electrically Actuated Thermometers.
First use Sept. 2, 1959.

SN 158,076. Isis Incorporated, York, Pa. Filed Nov. 28, 1962.

STABILCORE

For Drafting Boards and Supports Therefor, and Drafting Tables.
First use on or about Oct. 2, 1962.

SN 158,169. Nuclear Data, Inc., Madison, Wis. Filed Nov. 29, 1962.



For Electronic Computers, Storage Counters and Accessories Therefor.
First use October 1960.

SN 158,204. Isis Incorporated, York, Pa. Filed Nov. 29, 1962.

NIKE

For Drafting Boards and Supports Therefor, and Drafting Tables.
First use on or about July 25, 1960.

Class 27—Horological Instruments

SN 152,403. Hawthorne Watch Co., Inc., Los Angeles, Calif. Filed Sept. 4, 1962.

HAWTHORNE

Owner of Reg. No. 582,359.
For Watches.
First use August 1950.

Class 28 — Jewelry and Precious-Metal Ware

SN 150,883. Monterey Jewelers Inc., New York, N.Y. Filed Aug. 9, 1962.



The applicant disclaims the expression "14 K" apart from the trademark as shown.
For Jewelry of Precious Metals for Personal Wear.
First use May 15, 1962.

SN 150,953. Phil S. Khalaf, d.b.a. De-Cor Jewelry Co., New York, N.Y. Filed Aug. 10, 1962.



The term "14 K" is disclaimed.
For Jewelry.
First use Jan. 30, 1951.

SN 153,258. Ray Curran & Co., Providence, R.I. Filed Sept. 17, 1962.

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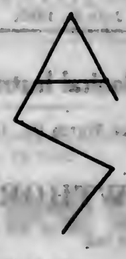
For Men's Jewelry.
First use on or about July 3, 1962.

SN 153,987. Allan L. Seltser, d.b.a. Chatham Creations, Providence, R.I. Filed Sept. 26, 1962.



For Jewelry.
First use on or about Jan. 15, 1961.

SN 153,988. Albert Sher, Boston, Mass. Filed Sept. 26, 1962.



For Platinum and Gold Jewelry.
First use June 11, 1962.

SN 154,316. J. R. Wood & Sons, Inc., New York, N.Y. Filed Oct. 1, 1962.

MIDNIGHT STAR

For Jewelry for Personal Wear.
First use April 1962.

SN 154,364. National Bellas Hess, Inc., North Kansas City, Mo. Filed Oct. 2, 1962.

TRESURA

For Jewelry.
First use July 30, 1962.

SN 154,383. The Strongite Co., New York, N.Y. Filed Oct. 2, 1962.

STRONGITE

For Manufactured Gems Used in Ornamental Jewelry.
First use during April 1961.

SN 154,605. Kiwanis International, Chicago, Ill. Filed Oct. 5, 1962.



Owner of Reg. Nos. 285,049, 672,949, and others.
For Jewelry, for Personal Wear Not Including Watches—Namely, Finger Rings, Fraternity Pins, Watch Chains, Bar Pins, Scarf Pins, Necktie Pins, Lapel Pins, Charm Keys, Bracelets, Plaques, and the Following Made in the Whole of, or in Part of, or Plated With Precious Metal: Necktie Clasps, Key Chains, Bill Clips, Belt Buckles, Identification Tags, and Cuff Links.
First use November 1955.

Class 29 — Brooms, Brushes, and Dusters

SN 149,755. Michael R. McDanal, d.b.a. Surprise Soapy Sponge, Denver, Colo. Filed July 25, 1962.

SURPRIZE

For Foam Plastic Sponges Provided With an Internal Pocket for Receiving a Cake of Soap.
First use on or about Mar. 16, 1962.

Class 30 — Crockery, Earthenware, and Porcelain

SN 152,460. Vita Craft Corporation, Kansas City, Mo. Filed Sept. 4, 1962.



For China Dinnerware.
First use Aug. 20, 1962.

Class 31 — Filters and Refrigerators

SN 151,329. Industrial Products Company, Inc., Timonium, Baltimore County, Md. Filed Aug. 16, 1962.

filterite

Owner of Reg. No. 607,894.
For Fluid Filters, Housings and Casings Therefor Including Oil Filters for Internal Combustion Engines.
First use July 1940.

SN 151,401. Drico Industrial Corporation, Passaic, N.J. Filed Aug. 17, 1962.

DRICO

For Fiberglass Air Filters.
First use Apr. 16, 1946.

SN 160,289. Haws Drinking Faucet Company, Berkeley, Calif. Filed Jan. 7, 1963.

HAWS

Owner of Reg. No. 592,928.
For Electric Water Coolers.
First use in or about January 1937.

Class 32 — Furniture and Upholstery

SN 158,491. Jean B. Zindell, Ann Arbor, Mich. Filed Dec. 4, 1962.



For Safety Nets for Babies' Cribs.
First use Apr. 1, 1962.

SN 159,727. Haydock Caster Company, Morton Grove, Ill. Filed Dec. 28, 1962.



For Casters, Wheels and Furniture Tips Commonly Known as Furniture Glides, or Devices for Applying to the Lower Ends of Furniture Legs To Prevent Gouging Floors or Supporting Surfaces.
First use on or about Oct. 12, 1962.

SN 159,920. Sealy, Incorporated, d.b.a. Sealy Mattress Company, Chicago, Ill. Filed Dec. 28, 1962.

DURA-GARD

For Mattresses and Box Springs.
First use Oct. 26, 1962.

Class 33 — Glassware

SN 151,756. Imperial Glass Corporation, Bellaire, Ohio. Filed Aug. 23, 1962.



Applicant disclaims any exclusive rights in the words "American Handcrafted" and the outline map design of the United States apart from the mark as shown on the drawing. Owner of Reg. Nos. 392,737 and 526,994.
For Table, Gift, and Art Glassware for Residential and Commercial Use.
First use June 4, 1962.

SN 161,582. Verrerie Cristallerie d'Arques, G. Durand & Cie, Arques, Pas-de-Calais, France. Filed Jan. 24, 1963.



For Glassware—Namely, Cut Glass, Drinking Glasses, Table Crystal of All Types, Glasses, Mugs, and Vases.
First use May 22, 1934; in commerce May 15, 1962.

SN 164,300. Anchor Hocking Glass Corporation, Lancaster, Ohio. Filed Mar. 11, 1963.

GOLDEN SHELL

For Glass Tableware.
First use on or about Feb. 9, 1963.

Class 34 — Heating, Lighting, and Ventilating Apparatus

SN 151,418. Arthur E. Mapes, d.b.a. E. Mapes Co., Norcatur, Kans. Filed Aug. 17, 1962.



For Industrial Grain Dryers.
First use Feb. 5, 1960.

SN 152,009. Shell Oil Company, New York, N.Y. Filed Aug. 27, 1962.

SHELL

For Oil Burner Head.
First use Aug. 7, 1962.

SN 152,936. Washington Stove Works, Everett, Wash. Filed Sept. 11, 1962.

ALASKA

Owner of Reg. Nos. 397,734, 544,206, and others.
For Cooking Stoves and Ranges of the Type Using Coal, Wood or Oil.
First use July 15, 1913.

SN 153,688. Sears, Roebuck and Co., Chicago, Ill. Filed Sept. 21, 1962.

PROGRAMMER

For Gas Cooking Stoves.
First use on or about Mar. 10, 1961.

SN 153,864. Joseph Christophill, Chicago, Ill. Filed Sept. 25, 1962.

PROTEC-U-LITE

For Discs Adapted To Convert Automobile Headlight Lenses Into Fog Lenses.
First use Aug. 16, 1962.

SN 155,101. Hobart Brothers Company, Troy, Ohio. Filed Mar. 14, 1963.

Micro-wire

For Electrode Feeding Equipment for Electric Arc Welders.
First use Sept. 28, 1960.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

SN 135,131. The Goodyear Tire & Rubber Company, Akron, Ohio. Filed Jan. 3, 1962.

TRACTION WEDGE

For Belts and Belting.
First use Dec. 7, 1961.

SN 152,201. Billups Western Petroleum Company, Hammond, La. Filed Aug. 30, 1962.

BILLUPS

Owner of Reg. No. 631,508.
For Tires.
First use at least as early as Jan. 1, 1954.

SN 153,343. Union Asbestos & Rubber Company, Chicago, Ill. Filed Sept. 17, 1962.

UNARCO

For Asbestos Packing, With Oil, Rubber or Combination Impregnation; Asbestos Sheet Gasket Material; Asbestos Gasket Tape for Locomotive Front End Plates; and Brake Lining, Woven or Molded Type.
First use Dec. 1, 1918.

SN 153,386. Croton Compound Corporation, New York, N.Y. Filed Sept. 18, 1962.

PLASBESTOS

For Packing Material, Used in Valves.
First use June 8, 1962.

SN 159,045. Cordovan Associates, Incorporated, Dayton, Ohio. Filed Dec. 13, 1962.

CORDOVAN

Owner of Reg. Nos. 431,993 and 730,712.
For Pneumatic Tires.
First use Mar. 3, 1945.

SN 159,646. The Gates Rubber Company, Denver, Colo. Filed Dec. 24, 1962.

STATION MASTER

For Air Hose.
First use Aug. 18, 1961.

SN 159,647. The Gates Rubber Company, Denver, Colo. Filed Dec. 24, 1962.

WAGON MASTER

For Petroleum Transfer or Delivery Hose.
First use Aug. 18, 1961.

SN 159,648. The Gates Rubber Company, Denver, Colo. Filed Dec. 24, 1962.

JET MASTER

For Petroleum Fueling Hose.
First use Aug. 18, 1961.

SN 159,649. The Gates Rubber Company, Denver, Colo. Filed Dec. 24, 1962.

PUMP MASTER

For Petroleum Pump Hose.
First use Aug. 18, 1961.

SN 159,888. The Gates Rubber Company, Denver, Colo. Filed Dec. 28, 1962.

Micro-V

For Power Transmission Belts.
First use Aug. 2, 1962.

SN 160,084. White Stores, Inc., Wichita Falls, Tex. Filed Jan. 2, 1963.

WHITE MAGIC 50

Owner of Reg. No. 623,991.
For Tires.
First use Dec. 13, 1962; 1952 as to "White."

SN 160,113. The Goodyear Tire & Rubber Company, Akron, Ohio. Filed Jan. 3, 1963.

DURATUBE

For Tire Curing Tubes.
First use Nov. 14, 1962.

SN 160,114. The Goodyear Tire & Rubber Company, Akron, Ohio. Filed Jan. 3, 1963.

MILEATHON

For Retread Rubber.
First use May 15, 1963.

SN 160,420. The Goodyear Tire & Rubber Company, Akron, Ohio. Filed Jan. 9, 1963.

RED STREAK

For Tires.
First use Sept. 13, 1962.

SN 160,805. Ronthor Reiss Corporation, New York, N.Y. Filed Jan. 16, 1963.

RONTHANE

For Urethane Rubber Tubing, Belting and Sleeving, Laboratory Stoppers and Gasket Material.
First use Dec. 27, 1962.

SN 161,477. Dayco Corporation, Dayton, Ohio. Filed Jan. 28, 1963.

POWER-WEDGE

For Transmission Belts.
First use Nov. 28, 1962.

SN 161,601. The Goodyear Tire & Rubber Company, Akron, Ohio. Filed Jan. 29, 1963.

SOF-T

For Tank Truck Hose.
First use Nov. 27, 1962.

SN 161,602. The Goodyear Tire & Rubber Company, Akron, Ohio. Filed Jan. 29, 1963.

NYROD

For Tank Truck Hose.
First use Oct. 15, 1962.

SN 161,606. The Goodyear Tire & Rubber Company, Akron, Ohio. Filed Jan. 29, 1963.

FLEXTRA

For Tank Truck Hose.
First use Oct. 8, 1962.

SN 161,924. United States Rubber Company, New York, N.Y. Filed Feb. 1, 1963.

SPORT SPECIAL

For Pneumatic Tires.
First use in August 1958.

SN 162,293. Sealcraft Corporation, Salt Lake City, Utah. Filed Feb. 7, 1963.

MOLYTHANE

For Machinery Packings Including Piston Cups, U-Cups, V-Packing, O-Rings, Flange Packing, Rod Wipers, Oil Seals, Gaskets, and Washers.
First use on or before Jan. 18, 1963.

SN 162,437. The Gates Rubber Company, Denver, Colo. Filed Feb. 11, 1963.

GREEN STRIPE

Owner of Reg. No. 685,565.
For Automotive Radiator Hose, Heater Hose, Brake Hose, and Automotive Power Transmission Belts.
First use Oct. 19, 1955.

SN 162,659. The Polymer Corporation, Reading, Pa. Filed Feb. 13, 1963.

NYLATUF

Owner of Reg. No. 617,475.
For Synthetic Resin Tubing.
First use Feb. 1, 1963.

Class 36 — Musical Instruments and Supplies

SN 146,858. Zenith Radio Corporation, Chicago, Ill. Filed June 13, 1962.

MICRO TOUCH

For Phonograph Tone Arms.
First use May 8, 1962.

SN 149,842. The Gramophone Company Limited, Hayes, Middlesex, England. Filed July 26, 1962.

STATESIDE

Priority claimed under Sec. 44(d) on British Reg. No. 833,660, dated Apr. 25, 1962.
For Sound Records in the Form of Discs, Tapes, and Cylinders.

SN 151,282. Worldwide Musical Instrument Co. Inc., New York, N.Y. Filed Aug. 15, 1962.

ERNST RIEDL

The name "Ernst Riedl" as used in connection with the trademark is not the name of any living person.
For Bassoons.
First use Oct. 26, 1954.

SN 164,228. Eminence Industries, Inc., New York, N.Y. Filed Mar. 8, 1963.

SONATA

For Organs, Electric and/or Air Operated.
First use Feb. 1, 1963.

SN 164,567. Sonola Accordion Company, Inc., Hoboken, N.J. Filed Mar. 13, 1963.

RIVOLI

For Accordions.
First use January 1947.

SN 164,611. Pamper Music, Inc., Goodlettsville, Tenn. Filed Mar. 13, 1963.

GAYLORD

For Grooved Phonograph Records.
First use Jan. 22, 1963.

SN 165,976. Levi H. Zerr, Jr., d.b.a. Lehoff Associates, Parkesburg, Pa. Filed Apr. 2, 1963.

Lehoff

For Phonograph Records.
First use Mar. 29, 1963.

Class 37 — Paper and Stationery

SN 116,387. Diagraph-Bradley Industries, Inc., Herrin, Ill. Filed Mar. 24, 1961.

ROL-IT-ON

Owner of Reg. No. 648,421.
For Stencil Applicator Kit, Comprising a Rubber Roller, Ink Pad and Ink and Components Therefor.
First use May 3, 1955.

SN 127,290. Visible File Corp., New York, N.Y. Filed Sept. 5, 1961.

FC
FINGER-TIP CONTROL

For Office and Record-Room Visible Filing Systems Comprising Assemblies of Cards Each of Which Has Slots for the Engagement of Index Cards Thereon.
First use July 7, 1961.

SN 128,848. The Polly Coat Book Cover Co., Baltimore, Md. Filed Sept. 28, 1961.

POLLY-COAT

For School Book Covers.
First use Jan. 4, 1961.

SN 138,226. The Parker Pen Company, Janesville, Wis. Filed Feb. 19, 1962.

THE WORLD'S MOST WANTED PENS

For Fountain Pens, Ballpoint Pens, Mechanical Pencils, and Desk Sets.
First use about July 1944.

SN 140,086. Bridge Corporation of America, Los Angeles, Calif. Filed Mar. 19, 1962.

DUPLIFACTOR

For Supplies for Duplicate Bridge Tournaments—Namely, Score Guides.
First use Feb. 20, 1962.

SN 143,847. John A. Manning Paper Co. Inc., Troy, N.Y. Filed May 4, 1962.

MANNITHERM

For Cellulosic Products, Particularly Thermally Upgraded Paper Resistant to High Temperatures and Oxidation.
First use Nov. 6, 1961.

SN 148,249. Uniscript, Inc., Wichita, Kans. Filed July 2, 1962.

Uniscript

For Business Accounting Forms.
First use June 21, 1962.

SN 151,700. United States Envelope Company, Springfield, Mass. Filed Aug. 22, 1962.

Linweave MILANO

Owner of Reg. No. 154,170.
For Envelopes and Writing Text and Cover Papers.
First use on or about Sept. 15, 1928.

SN 153,565. Harry and David, Medford, Oreg. Filed Sept. 20, 1962.

SOPHISTIGIFT

Owner of Reg. Nos. 739,873, 743,775, and 744,727.
For Paper Weights and Pen Holders.
First use Oct. 30, 1961.

SN 154,616. Minnesota and Ontario Paper Company, Minneapolis, Minn. Filed Oct. 5, 1962.

EXPLORER

For Printing Paper.
First use in May 1958.

SN 154,812. A. W. Faber-Castell Pencil Co. Inc., Newark, N.J. Filed Oct. 9, 1962.

BIPLEX

For Pencils, With or Without Rubber Erasers Attached Thereto.
First use June 12, 1928.

SN 154,862. Brown Products, Inc., Nashua, N.H. Filed Oct. 10, 1962.

DURA-FLUTE

For Molded Corrugated Paper.
First use June 12, 1962.

SN 155,040. Addressograph-Multigraph Corporation, Cleveland, Ohio. Filed Oct. 12, 1962.

FREIGHTRITE

For Freight Shipment Forms.
First use May 11, 1960.

SN 155,139. Duro Pen Company, Inc., New York, N.Y. Filed Oct. 15, 1962.

Kangaroo

For Combined Ball Pen and Memo Pad.
First use Mar. 15, 1962.

SN 155,206. Tension Envelope Corporation of Kansas City, Kansas City, Mo. Filed Oct. 15, 1962.

STEELKRAFT

For Envelopes.
First use July 17, 1961.

SN 155,259. Albert L. Jamison, d.b.a. A.J. Art & Design, Whittier, Calif. Filed Oct. 16, 1962.

TWIST-SNAP

For Looseleaf Book Binders.
First use Aug. 10, 1962.

SN 155,311. The Grand Union Company, East Paterson, N.J. Filed Oct. 16, 1962.

GRAND WAY

Owner of Reg. Nos. 638,790, 725,063, and others.
For Facial Tissues and Bathroom Tissues.
First use on or about Sept. 15, 1962, on facial tissues.

Class 38 — Prints and Publications

SN 128,913. John F. Murray Advertising Agency, Incorporated, New York, N.Y. Filed Sept. 29, 1961.

HELPFUL HINTS BY HARRIET

The words "Helpful Hints" are disclaimed apart from the mark as a whole.
For Newspaper Column.
First use May 31, 1961.

SN 133,444. Arthur Brown & Bro., Inc., New York, N.Y. Filed Dec. 6, 1961.

instant lettering

For Sheets of Dry Transfers.
First use on or about Nov. 15, 1960.

SN 133,983. The Parents' Magazine's Education Press, Inc., New York, N.Y. Filed Dec. 13, 1961.

THE NEW WONDER WORLD CULTURAL LIBRARY

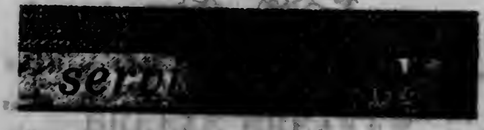
Applicant makes no claim to the words "Cultural Library" apart from the mark as shown.
For Series of Books.
First use Oct. 30, 1961.

SN 136,569. Leadership Resources, Inc., Washington, D.C. Filed Jan. 25, 1962.



For Brochures, Reprints of Articles, Monographs and Other Similar Educational and Training Materials.
First use Mar. 13, 1961.

SN 136,876. The Bureau of National Affairs, Inc., Washington, D.C. Filed Jan. 30, 1962.



The drawing is lined for gray and tan.
For Periodically Published News Reports.
First use Mar. 3, 1954.

SN 136,877. The Bureau of National Affairs, Inc., Washington, D.C. Filed Jan. 30, 1962.



The drawing is lined for the color blue.
For Periodically Published News Reports.
First use Sept. 28, 1955.

SN 138,163. Childrens Press, Inc., Chicago, Ill. Filed Feb. 19, 1962.

FRONTIERS OF AMERICA

For Books.
First use on or about Oct. 1, 1958.

SN 138,378. E. James Ball, d.b.a. Lifetronics Research, Rancho Santa Fe, Calif. Filed Feb. 21, 1962.

COUNTDOWN

For Printed Chart Containing a Chronology of Historical Events, Arranged on a Time Scale, and Commonly Called a Time Line.
First use Dec. 18, 1961.

SN 139,716. Youth Associates Company, Minneapolis, Minn. Filed Mar. 12, 1962.

Hi-Mine

Owner of Reg. Nos. 401,810 and 557,305.
For Magazine Produced Monthly.
First use September 1961.

SN 140,457. Interstate Vending Company, Chicago, Ill. Filed Mar. 22, 1962.

THE INTERSTATE I

For Periodically Appearing Company Newsletter.
First use December 1960.

SN 142,420. Fernand & Spertus Publishers, Inc., New York, N.Y. Filed Apr. 17, 1962.



The word "Books" is disclaimed apart from the mark as shown.
For Coloring Books, Children's Story Books, Children's Activity Books, Textbooks.
First use Feb. 1, 1962.

SN 142,928. Colpitts Tourist Company, Inc., Boston, Mass. Filed Apr. 24, 1962.

BIG AND LITTLE JOURNEYS

For Magazine.
First use in or about January 1930.

SN 144,161. Forest Press, Inc., Lake Placid Club, Essex County, N.Y. Filed May 9, 1962.

DEWEY DECIMAL CLASSIFICATION, ADDITIONS, NOTES AND DECISIONS

Applicant disclaims the term "Decimal Classification, Additions, Notes and Decisions" apart from the mark as shown.
For Periodical Publication—Namely, an Index Relating to a System of Classifying the Field of Human Knowledge.
First use Mar. d, 1960; Dec. 1, 1876, as to the portion "Dewey."

SN 144,162. Forest Press, Inc., Lake Placid Club, Essex County, N.Y. Filed May 9, 1962.

DEWEY DECIMAL CLASSIFICATION

The term "Decimal Classification" is disclaimed apart from the mark as shown.
For Periodical Publication—Namely, an Index Relating to a System of Classifying the Field of Human Knowledge.
First use Dec. 1, 1876.

SN 146,376. Alex D. Hawkes, d.b.a. The Tropical Gardener, Miami, Fla. Filed June 7, 1962.

THE TROPICAL GARDENER

For Magazine Columns Dealing With Horticultural and Botanical Subjects.
First use Oct. 12, 1960.

SN 146,876. Charles Beseler Company, East Orange, N.J. Filed June 14, 1962.

COLOR-STIK

For Backing Sheets Carrying Transferable Adhesive Coated Indicia Elements, and Adhesive Coated Transparent Polyester Film With Protective Cover Sheet for Advertising Layouts, Charts, Graphs, Maps; and Color Slides for Projection.
First use Apr. 10, 1961.

SN 149,462. Hayden Flour Mills, Tempe, Ariz. Filed July 20, 1962.

Sallie Hayden's

"Sallie Hayden's" is the name of a deceased person.
For Card File Box and Cards of Kitchen Recipes.
First use Dec. 20, 1961.

SN 150,660. Western Hotels, Inc., Seattle, Wash. Filed Aug. 6, 1962.

WESTERN GUEST

For Magazine Published From Time to Time.
First use June 15, 1962.

SN 154,321. International Rescue and First Aid Association, Inc., Alexandria, Va. Filed Sept. 12, 1962.

INTERNATIONAL RESCUER

For Bi-Monthly Periodical.
First use February 1957.

SN 155,119. Gale Broadcasting Co., Inc., Chicago, Ill. Filed Oct. 11, 1962.

PERSPECTIVE ON IDEAS AND THE ARTS

For Magazine.
First use Aug. 27, 1962.

SN 155,659. South Dakota Fertilizer Association, Sioux Falls, S. Dak. Filed Oct. 22, 1962.

FERTILE ACRES

For Publication Printed and Distributed by This Association to Its Members and Others Interested in the Farm Fertilizer Industry.
First use March 1962.

SN 155,872. Allstate Insurance Company, Skokie, Ill. Filed Oct. 25, 1962.

FULL CIRCLE

For Magazine Devoted to the Promotion of Insurance for Distribution Monthly to Agents of Applicant.
First use on or about Apr. 1, 1960.

SN 155,878. American Home Products Corporation, New York, N.Y. Filed Oct. 25, 1962.

CAROLYN CLARKE

The mark "Carolyn Clarke" is a fanciful name and not the name of any particular living person.
For Cook Books.
First use Oct. 16, 1962.

SN 155,883. The Associated Press, New York, N.Y. Filed Oct. 25, 1962.

AP WIREPHOTO

Owner of Reg. No. 397,144.
For News Photographs.
First use Jan. 1, 1935.

SN 156,096. Documentation, Incorporated, Bethesda, Md. Filed Oct. 29, 1962.

DOCUFORM

For Developed Film.
First use August 1962.

SN 156,262. Elite Stamp Service, Victoria, British Columbia, Canada. Filed Oct. 31, 1962.



For Postage Stamps for Collectors.
First use Apr. 12, 1961; in commerce Apr. 12, 1961.

SN 156,698. William A. Watson, Tampa, Fla. Filed Nov. 5, 1962.

WATSON'S WIZARD OF ODDS

For Football Score Predictions Sold in Sheet Form to Newspapers.
First use Sept. 19, 1962.

SN 156,712. Avdel, Inc., Burbank, Calif. Filed Nov. 6, 1962.

QUICK RELEASE

For House Organ.
First use Sept. 20, 1962.

SN 156,931. Ameryka-Echo, Incorporated, Chicago, Ill. Filed Nov. 9, 1962.

AMERYKA-ECHO

For Newspaper Issued From Time to Time.
First use in 1886.

SN 163,922. The Associated Press, New York, N.Y. Filed Mar. 5, 1963.

AP

Owner of Reg. Nos. 401,258 and 606,647.
For News Reports and News Dispatches.
First use Apr. 26, 1917.

Class 39—Clothing

SN 138,151. Brewster Shirt Corporation, New York, N.Y. Filed Feb. 19, 1962.

lady brewster

The name "Lady Brewster" is that of a fictitious person.
Owner of Reg. No. 511,269.
For Ladies' Shirts.
First use Sept. 2, 1961.

SN 146,188. P. H. Hanes Knitting Company, Winston-Salem, N.C. Filed June 5, 1962.

BREEZE BREAKER

For Underwear.
First use Mar. 27, 1962.

SN 149,177. Finger, Rabiner & Jontow Inc., New York, N.Y. Filed July 17, 1962.

Polo Trophy

For Misses' and Ladies' Coats.
First use June 14, 1962.

SN 149,958. Perfect Knit Togs, Inc., New York, N.Y., assignee of Perfect Knit & Woven Togs, New York, N.Y. Filed July 27, 1962.

JETZIP

Owner of Reg. No. 553,165.
For Diaper Sets, Creepers, and Infants' Suits.
First use Mar. 30, 1962.

SN 150,032. Edmont Inc., Coshocton, Ohio. Filed July 30, 1962.

GREEN THUMB

Owner of Reg. Nos. 412,528, 576,183, and others.
For Gloves, Mittens, and Aprons.
First use on or about May 3, 1943.

SN 150,328. Delightform Foundations, Inc., Easton, Pa. Filed Aug. 2, 1962.

at home

For Brassieres and Girdles.
First use Mar. 1, 1962.

SN 150,968. Plymouth Hosiery Mills, Inc., Thomasville, N.C. Filed Aug. 10, 1962.

RIB O'RAMA

For Socks.
First use July 19, 1962.

SN 151,025. Sam Diamond Knitting Mills, Inc., Chicago, Ill. Filed Aug. 13, 1962.

Dimonelli

"Dimonelli" is not the name of any living individual.
For Women's Suits, Sweaters, Skirts, Knit Suits, Blouses, Slacks.
First use Jan. 10, 1962.

SN 151,126. Colfax Industries, Clifton, N.J. Filed Aug. 14, 1962.

LEONARDO STRASSI

"Leonardo Strassi" is a fictitious name and does not identify a particular individual.
For Knitted Clothing—Namely, Sweaters and Shirts.
First use May 16, 1962.

SN 151,378. Wales Manufacturing Company, Boston, Mass. Filed Aug. 16, 1962.

CLOUD BURST

For Raincoats and Topcoats.
First use Aug. 8, 1962.

SN 151,380. Wales Manufacturing Company, Boston, Mass. Filed Aug. 16, 1962.

MIST-ER WALES

The name "Mist-er Wales" is fictitious and does not identify a particular individual. Owner of Reg. Nos. 597,940 and 714,442.
For Raincoats and Topcoats.
First use Aug. 8, 1962.

SN 152,771. Dorson-Fleisher, Inc., Manchester, N.H. Filed Sept. 10, 1962.

MAGIC QUARTER

For Women's Shoes.
First use Aug. 29, 1962.

SN 152,818. G. C. Murphy Company, McKeesport, Pa. Filed Sept. 10, 1962.

Murtag

Owner of Reg. Nos. 596,822 and 597,428.
For Men's and Boys' Shirts.
First use July 15, 1962.

SN 153,118. Rob Roy Company, Inc., New York, N.Y. Filed Sept. 13, 1962.

LOCKER LOOP

For Boys' Outer Shirts.
First use June 20, 1962.

SN 153,188. Melrose Hospital Uniform Co., Inc., Brooklyn, N.Y. Filed Sept. 14, 1962.

VEST-RAINT

For Restraining Jackets.
First use Aug. 17, 1962.

SN 153,358. Ben Wiener & Hoffman, Inc., New York, N.Y. Filed Sept. 17, 1962.

BRENDON HALL

For Young Men's and Boys' Suits, Sport Coats, and Top Coats.
First use Sept. 7, 1962.

SN 153,395. Fit-Rite Pants Company, Inc., New York, N.Y. Filed Sept. 18, 1962.

MANSLACK

The drawing is lined for red. Owner of Reg. No. 724,246.
For Juniors', Preps', Young Men's, and Men's Trousers and Slacks.
First use in March 1962.

SN 153,447. Barbara Gayle, Inc., New York, N.Y. Filed Sept. 19, 1962.

Haybrooke Classic

No claim is made to the word "Classic" apart from the mark as shown.
For Women's and Children's Dresses.
First use Aug. 29, 1962.

SN 153,556. D'Orsay Mills, Inc., Reading, Pa. Filed Sept. 20, 1962.

FEATHERIB

For Men's Hosiery.
First use Apr. 24, 1962.

SN 157,551. Lilly Pulitzer, Inc., Palm Beach, Fla. Filed Nov. 19, 1962.

THE LILLY

For Women's Dresses.
First use Aug. 23, 1962.

SN 157,552. Lilly Pulitzer, Inc., Palm Beach, Fla. Filed Nov. 19, 1962.

THE MINNIE BY LILLY

For Children's Dresses.
First use Aug. 23, 1962.

SN 157,553. Lilly Pulitzer, Inc., Palm Beach, Fla. Filed Nov. 19, 1962.

THE SNEAKY PETE BY LILLY

For Men's Night Shirts.
First use Aug. 23, 1962.

SN 157,591. Tru Balance Corsets, Inc., New York, N.Y. Filed Nov. 20, 1962.

SPAN "C"

For Ladies' Corsets, Girdles, Foundation Garments, Panty Corselettes, Bathing Suits, and Underwear.
First use May 26, 1962, on ladies' corsets, girdles, foundation garments and panty corselettes.

SN 157,626. Leon's Fashions, Inc., Waco, Tex. Filed Nov. 20, 1962.

GLAMAZONS

For Women's Shoes, Hats, Dresses, Coats, and Gloves.
First use Nov. 13, 1947.

SN 157,920. Salter & Michaelson, Pawtucket, R.I. Filed Nov. 26, 1962.

PETTI TARDS

Owner of Reg. No. 690,582.
For Underwear.
First use on or about Nov. 1, 1962.

SN 158,162. International Latex Corporation, Dover, Del. Filed Nov. 29, 1962.

SERENADE

Owner of Reg. No. 716,193.
For Foundation Garments.
First use July 30, 1960.

SN 158,261. Maidenform, Inc., New York, N.Y. Filed Nov. 30, 1962.

INTIMO

Owner of Reg. No. 612,653.
For Foundation Garments.
First use Oct. 28, 1936.

Class 40—Fancy Goods, Furnishings, and Notions

SN 144,891. Secor Manufacturing Co., Inc., New York, N.Y. Filed May 17, 1962.

SECOR-BAC

For Belt Backing, Which Is Not Precut but Is Sold in Roll Form, Used in the Manufacture of Belts for Wearing Apparel.
First use Apr. 20, 1962.

SN 162,302. Specialty Sales Company, Atlanta, Ga. Filed Feb. 7, 1963.

SPESCO

For Safety and Straight Pins, Needles, Zippers, Tapes, Elastics, Pacifiers, Shoe Laces, and Combs.
First use 1943.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 150,990. Antics Inc., New York, N.Y. Filed Aug. 13, 1962.

NYTRON A2

For Fabrics in the Piece for Making Men's, Women's, and Children's Outerwear, Such as Jackets.
First use Aug. 1, 1962.

SN 152,782. Fab-Lace, Inc., New York, N.Y. Filed Sept. 10, 1962.

HEATHERMIST

For Laminated Fabrics Used in Making Jackets, Coats and the Like.
First use Aug. 7, 1962.

SN 157,973. Cannon Mills Company, Kannapolis, N.C. Filed Nov. 27, 1962.

Regal Family

For Pillow Cases, Wash Cloths, Towels, Sheets, Bedspreads, and Blankets.
First use Oct. 15, 1962.

SN 158,034. Whiting Manufacturing Company, Inc., Cincinnati, Ohio. Filed Nov. 27, 1962.

PERMA-FLUFF

For Quilted Comforters.
First use June 1936.

Class 43 — Thread and Yarn

SN 157,791. Glen Raven Cotton Mills, Inc., Glen Raven, N.C. Filed Nov. 23, 1962.

BUCARONI

Owner of Reg. No. 627,052.
For Yarns.
First use Dec. 8, 1961.

SN 158,061. The Firestone Tire & Rubber Company, Akron, Ohio. Filed Nov. 28, 1962.

SPANDELLE

For Elastic Thread and Yarns.
First use Nov. 12, 1962.

Class 44 — Dental, Medical, and Surgical Appliances

SN 145,003. Techni Electronics, Inc., Orange, N.J. Filed May 18, 1962.

VENUS

For Electric Hair Dryer.
First use Jan. 10, 1962.

SN 150,164. Fairhope Fabrics, Inc., Fall River, Mass. Filed July 31, 1962.

FAIRLON

For Elastic Bandages and Elastic Stockings.
First use Jan. 7, 1957.

SN 150,250. Beverley C. Hollingshead, d.b.a. B. C. Hollingshead Company, Toronto, Ontario, Canada. Filed Aug. 1, 1962.

INTRA-VEL HOLDER

Priority claimed under Sec. 44(d) on Canadian application filed Feb. 3, 1962; Reg. No. 127,435, dated July 27, 1962. Applicant disclaims the right to the exclusive use of the word "Holder," apart from the mark as shown.
For Belts and Straps for Encircling Parts of the Human Body, and Tourniquets.

SN 155,952. Younger Bach Day, Inc., New York, N.Y. Filed Oct. 25, 1962.

BEAUTY WAND

For Rotary Electrical Abrading Machine for Home or Beauty Parlor Use.
First use March 1962.

SN 158,798. C. De Witt Lukens Co., St. Louis, Mo. Filed Dec. 10, 1962.

LU-TEX

For Synthetic Surgical Sutures.
First use Nov. 23, 1962.

SN 159,244. Jefferson Medical Instruments Company, Inc., Charlottesville, Va. Filed Dec. 17, 1962.

PULSENTRY

For Medical Instrument—Namely, a Heart-Rate Monitor.
First use Sept. 13, 1961.

SN 159,559. The L. D. Caulk Company, Milford, Del. Filed Dec. 21, 1962.

DORCATE

For Dental Zinc Silicate Cement.
First use August 1962.

SN 159,561. The L. D. Caulk Company, Milford, Del. Filed Dec. 21, 1962.

JELCONE

For Dental Silicone Base Impression Material.
First use September 1958.

SN 159,724. John F. Greer Company, Oakland, Calif. Filed Dec. 26, 1962.

COLOSTOCAP

For Surgical Appliances and Parts Used in Irrigation of the Colostomy.
First use in 1929.

SN 160,104. Susana A. Figueroa, New York, N.Y. Filed Jan. 3, 1963.

La Sue-e

For Sanitary Napkin Holder.
First use Nov. 28, 1962.

Class 45 — Soft Drinks and Carbonated Waters

SN 142,309. "Belfrut" Gesellschaft mit beschrankter Haftung, Wangen, Allgau, Germany, by change of name from Firma Belfrut Allgäu-Oberland-Getränke G.m.b.H., Wangen, Allgau, Germany. Filed Apr. 16, 1962.

BELFRUT

Owner of German Reg. No. 708,460, dated June 13, 1957.
For Fruit Syrups for Use in Making Soft Drinks.

SN 156,926. ABC Vending Corporation, d.b.a. ABC Vending Corp., Long Island City, N.Y. Filed Nov. 9, 1962.



Owner of Reg. Nos. 379,079 and 699,436, and others.
For Soft Drinks.
First use on or about Dec. 1, 1960.

Class 46 — Foods and Ingredients of Foods

SN 53,261. The Euclid Candy Company, Inc., Elizabeth, N.J. Filed June 10, 1958.

GOOD NEWS

Applicant claims use for the area comprising Alabama, Arkansas, Connecticut, Delaware, District of Columbia, Florida, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Nebraska, New Hampshire, New Jersey, New York, North Carolina, North Dakota, Ohio, Oklahoma, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Vermont, Virginia, West Virginia, Wisconsin.
For Candy.
First use in 1927.
Subj. to concurrent use proceeding with Reg. No. 656,902.

SN 76,073. Florida Products Company, Inc., Washington, D.C. Filed June 19, 1959.

WILLIAMS

For Chocolate Syrup; Crystal Syrup; Fruit Syrup; Concentrated Fruit Sundae Toppings; Concentrated Nut Sundae Toppings; Ready-to-Use Fruit Sundae Toppings; Ready-to-Use Nut Sundae Toppings; Milk Chocolate Hot Fudge; Butterscotch; Sno-Bal Syrups; Concentrated Flavors; Fruit-Flavored Drink Bases; Marshmallow Topping; Dry Chopped Walnuts; Maraschino Cherries; Concentrated Purees; Malted Milk Powder; Hot Chocolate Powder; Hot Chocolate Syrup; Canned Fruits; Canned Fruit and Vegetable Juices; Mayonnaise; Salad Dressing; French Dressing; Worcestershire Sauce; Cooking Oils (Peanut, Cottonseed, Soya); Canned Beef and Pork Barbecue; Canned Boned Chicken; Canned Boned Turkey; Canned Chili Con Carne; Canned Corned Beef Hash; Canned Chicken Chow Mein; Canned Beef Stew; Canned Tuna Fish; Canned Bonita; Canned Spaghetti Sauce With Meat; Canned Chop Suey Vegetables; Canned Chow Mein Noodles; Pickle Chips; Pickle Relish; Pickles; Olives; Catsup; Chili Sauce; Barbecue Sauce; Vinegar; Mustard; Table Salt; Spices; Soup Bases; Gravy Coloring and Seasoning; Smokey Barbecue Base; Canned Spaghetti With Meat; Canned Chicken Stew; Canned Vegetables; Canned Tomato Paste, Puree, and Sauce; Canned Onions; Canned White Potatoes; Canned Sweet Potatoes; Dry Beans; Elbow Macaroni; Spaghetti; Egg Noodles; Pancake and Waffle Syrup; Evaporated Milk; Corn Starch; Tea Bags; and Jell Dessert.
First use 1927.

SN 106,064. Franck Industria Nazionale dei Succedanei al Caffe S.p.A., Milan, Italy. Filed Oct. 10, 1960.



Priority claimed under Sec. 44(d) on Italian application filed May 25, 1960; Reg. No. 152,027, dated Nov. 17, 1960.
For Coffee, Tea, Cocoa, Rice, Tapioca, Sago, Substitutes of Coffee, Bread, Biscuits, Cakes, Pastry, Honey, Molasses Syrup, Salt, Mustard, Pepper, Vinegar.

SN 113,538. Libby, McNeill & Libby, Chicago, Ill. Filed Feb. 13, 1961.

TOMA-RICO

For Fresh Tomatoes.
First use Dec. 13, 1960.

SN 114,684. Christian & Snyder Bakery Service, Oakland, Calif. Filed Mar. 1, 1961.

CAPTAIN BLIGH'S GALLEY BREAD

No claim of exclusive right is made to the word "Bread" as the name of the goods herein. The name "Captain Bligh's" does not identify any particular living individual but instead refers to the legendary naval character.
For Bread and Bread Mix Preparations.
First use Feb. 21, 1961.

SN 118,042. Golden Valley Brands, Inc., Beverly Hills, Calif., assignee, by mesne assignments, of M. Elizabeth Bartlett and Charles Martin, co-executrix and co-executor for the estate of George Maurice Bartlett, deceased, d.b.a. G. M. Bartlett Kevo Company, Azusa, Calif. Filed Apr. 18, 1961.

KEVO-ETTS

For Concentrated Foods in Tablet Form Used as a Dietary Supplement.
First use Oct. 15, 1935.

SN 118,694. International Stock Food Corporation, Waverly, N.Y. Filed Apr. 26, 1961.

SILO GUARD



For Food-Grade Product of a Chemical Nature for Use as a Silage Preservative and in Controlling Fermentation of Silage.
First use Jan. 1, 1960.

SN 123,780. Takeda Chemical Industries, Ltd., Higashi-ku, Osaka, Japan. Filed July 11, 1961.

Takeda

Priority claimed under Sec. 44(d) on Japanese application filed May 6, 1961; Reg. No. 603,821, dated Jan. 21, 1963.
For Seasonings, Spices, Edible Oils, Fat and Milk Products.

SN 126,614. Seneca Grape Juice Corporation, Dundee, N.Y. Filed Aug. 24, 1961.

SENECA

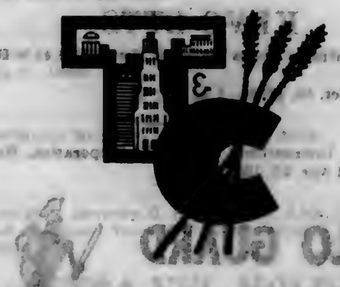
For Canned Apple Sauce, Prune Juice, Vegetables, Canned Frozen Cherries, Canned Raspberry Puree, Canned Food Beverage Comprising Grape Juice and Lesser Ingredients, Canned Grape Juice and Canned Apple Cider.
First use in the year 1949.

SN 127,205. Crowley's Milk Company, Inc., Binghamton, N.Y. Filed Sept. 5, 1961.



For Buttermilk, Sour Cream, and Cottage Cheese.
First use Mar. 1, 1961.

SN 130,893. Town and Country Food Company, Inc., Fort Wayne, Ind. Filed Oct. 20, 1961.



The drawing is lined for blue, red and yellow but no claim is made as to color.
For Frozen Foods—Namely, Berries, Vegetables, Meats, Poultry Pies, Meat Pies, Fish, and Dinners With Fish or Shellfish as the Main Ingredient; Dairy Butter; Instant Coffee; and Peanut Butter.
First use Dec. 6, 1960.

SN 132,214. Caribe Food Products, Inc., Albuquerque, N. Mex. Filed Nov. 16, 1961.

EL REY

The mark "El Rey" is the Spanish term for "the king."
For Ground Chile Peppers in Dry Powdered Form.
First use 1955.

SN 138,809. Phoenix Candy Co., Inc., Brooklyn, N.Y. Filed Feb. 28, 1962.

NOW & LATER

For Candy.
First use Jan. 19, 1962.

SN 139,429. Snack Products, Inc., d.b.a. House of Snacks Co., Downers Grove, Ill. Filed Mar. 8, 1962.

CRISPINS

Owner of Reg. No. 722,899.
For Cheese Flavored Puffed Corn and Artificial Bacon and Salami Flavored Puffed Corn.
First use on or about Jan. 9, 1962.

SN 143,345. Marjorie W. Chilstrom, d.b.a. Vital Food Company of California, Los Angeles, Calif. Filed Apr. 30, 1962.

SALA-TONE

For Dietary Dressings for Salads.
First use Jan. 1, 1933.

SN 143,346. Marjorie W. Chilstrom, d.b.a. Vital Food Company of California, Los Angeles, Calif. Filed Apr. 30, 1962.

SALA-DIET

For Dietary Dressings for Salads.
First use Jan. 1, 1954.

SN 143,734. Gotaas Export Corporation, New York, N.Y. Filed May 3, 1962.

AFRICAN QUEEN

For Frozen Shrimp and Rock Lobster Tails.
First use June 1956.

SN 145,512. Bargreen Coffee & Restaurant Equipment Co., Inc., d.b.a. Bargreen Coffee Co., Everett, Wash. Filed May 28, 1962.

BARGREEN'S

For Coffee.
First use in 1906.

SN 145,540. Frito-Lay, Inc., Dallas, Tex. Filed May 28, 1962.



For Corn Chips, Potato Chips, Puffed Cheese Corn, Pretzels, Fried Pork Skins, Canned Chicken Liver Dip, Dehydrated Dip Mixes Comprising the Following Flavors: Garlic-Olive, Chili Con Queso, Green Onion, Onion, Bleu Cheese; Cracker Sandwiches, Canned and Packaged. Nut Meats, Popped Popcorn, Canned Bean Dip, Canned Beans, Canned Beans and Franks, Lima Beans and Ham, Canned Rice, Canned Corned Beef Hash, Bottled Chili Powder, Canned Enchiladas, Canned Chili (With and Without Beans), Canned Tamales, Canned Barbecued Beef, Canned Spaghetti and Meat Balls, Canned Gravy and Beef, and Canned Beef Stew.
First use Apr. 18, 1962.

SN 146,939. Thompson's Dairy, Inc., Washington, D.C. Filed June 14, 1962.

THOMPSON HONOR DAIRY

Owner of Reg. No. 571,840.
For Fresh Milk, Fresh Cream, Sour Cream, Whipped Cream, Chocolate Milk Drink, Fortified Skim Milk, Buttermilk, Non-Alcoholic Eggnog, Fresh Eggs, Cottage Cheese, Dry Cheese, Butter, Yogurt, and Orange Juice, Lemonade, Orange Food Drink, and Grape Food Drink, Sold in Liquid Form in Cartons and Bottles.
First use in or about 1938.

SN 146,940. Thompson's Dairy, Inc., Washington, D.C. Filed June 14, 1962.



THOMPSON
HONOR DAIRY

Owner of Reg. No. 571,840.
For Fresh Milk, Fresh Cream, Sour Cream, Whipped Cream, Chocolate Milk Drink, Fortified Skim Milk, Buttermilk, Non-Alcoholic Eggnog, Fresh Eggs, Cottage Cheese, Dry Cheese, Butter, Yogurt, and Orange Juice, Lemonade, Orange Food Drink, and Grape Food Drink, Sold in Liquid Form in Cartons and Bottles.
First use May 9, 1962.

SN 146,941. Thompson's Dairy, Inc., Washington, D.C. Filed June 14, 1962.



Owner of Reg. No. 571,840.
For Fresh Milk, Fresh Cream, Sour Cream, Whipped Cream, Chocolate Milk Drink, Fortified Skim Milk, Buttermilk, Non-Alcoholic Eggnog, Fresh Eggs, Cottage Cheese, Dry Cheese, Butter, Yogurt, and Orange Juice, Lemonade, Orange Food Drink, and Grape Food Drink, Sold in Liquid Form in Cartons and Bottles.
First use May 9, 1962; Dec. 23, 1960, in a different form.

SN 147,136. Mr. & Mrs. Diet, Inc., Cincinnati, Ohio. Filed June 18, 1962.

MR. AND MRS. DIET

For Dairy Products, Specifically Fluid Milk.
First use May 22, 1962.

SN 147,400. Rod's Food Products, Inc., d.b.a. Rod's Food Products, Los Angeles, Calif. Filed June 21, 1962.

COFFEE DELIGHT

No claim is made to the word "Coffee" except in the association shown.
For Vegetable Fat Product for Creaming Coffee, Tea, Cereals, and Other Food Products.
First use June 4, 1962.

SN 148,307. Henri's Food Products Company, Inc., Milwaukee, Wis. Filed July 3, 1962.



Owner of Reg. Nos. 402,670, 566,666, 677,803, 712,593, and 719,730.
For Salad Dressing With Cheese.
First use June 18, 1962.

SN 148,430. Robt. R. & R. W. Smith Limited, London, England. Filed July 5, 1962.



Owner of British Reg. Nos. 542,066, 566,092, 701,311, 746,975, 792,249, and 811,065, dated June 7, 1933; Jan. 30, 1936; Sept. 18, 1953; Oct. 14, 1955; June 17, 1959; Sept. 22, 1960, respectively.
For Lard, Canned Meats, Canned Fish, Tea, Coffee, Cocoa and Chocolate.

SN 148,804. Ferry-Morse Seed Co., Mountain View, Calif. Filed July 11, 1962.

MORSE'S

Owner of Reg. Nos. 376,309 and 422,975.
For Deciduous Fruits.
First use on or about Aug. 9, 1939.

SN 149,363. Comet Rice Mills, Inc., Houston, Tex. Filed July 19, 1962.



Owner of Reg. Nos. 77,427, 709,806, and others.
For Rice.
First use Jan. 25, 1962.

SN 149,598. Reese Finer Foods, Inc., Chicago, Ill. Filed July 23, 1962.

CHEESE WHISPERS

No claim is made to the exclusive use of the word "Cheese" apart from the mark as a whole.
For Crackers.
First use on or about May 15, 1962.

SN 150,314. Aunt Jane's Foods, Incorporated, Dearborn, Mich. Filed Aug. 2, 1962.

Aunt Jane's

Owner of Reg. Nos. 236,761, 354,482, and 649,419.
For Pickles; Pickle Relishes; Pickled Onions and Peppers; Preserves; Jams; Jellies; Vinegar; Mustard; Catsup; Red Hot, Barbecue, and Chili Sauces; Dry Spices; Maraschino Cherries; Honey; Edible Olive Oil; Food Flavoring Extracts; and Canned Vegetables, Pork and Beans, Fruits, Apple Sauce, Fruit and Vegetable Juices, Potato Salad, and Sauerkraut.
First use during March 1962.

SN 150,623. "Sanopharm" Chem. Pharm. "Präparate Gesellschaft m.b.H., Vienna, Austria. Filed Aug. 6, 1962.

SOUPEEN WITH VITAMINS

No claim is made to the descriptive wording "with vitamins" apart from the association shown in the drawing. Priority claimed under Sec. 44(d) on Austrian application filed Mar. 22, 1962; Reg. No. 47,944, dated May 18, 1962.
For Dietetic Dehydrated Soups.

SN 150,909. Allied Mills, Inc., Chicago, Ill. Filed Aug. 10, 1962.



For Dog Food.
First use Dec. 30, 1960.

SN 151,297. Chicken Delight, Inc., Rock Island, Ill. Filed Aug. 16, 1962.

RIB DELIGHT

No claim of exclusive right is made to the word "Rib" as the name of the goods herein. Owner of Reg. Nos. 578,807, 578,808, and 600,096.
For Packaged Food Product Comprising Ready-to-Eat Ribs.
First use July 2, 1962.

SN 152,389. Ekset Kakao- and Schokoladefabrik Staengel & Ziller, Stuttgart-Unterturkheim, Germany. Filed Sept. 4, 1962.



The mark consists of the representation of an "Edelweiss Flower." Owner of German Reg. No. 633,734, dated Aug. 28, 1956.
For Cocoa, Cocoa Butter for Food Purposes, Cooking and Baking Chocolate, Candy, Pastries, and Baked Goods—Namely, Biscuits, Cookies, Gingerbread, Wafers, Tarts, and Small Pies.
First use Dec. 1, 1960; in commerce 1960.

SN 153,786. The B. Manischewitz Company, Newark, N.J. Filed Sept. 24, 1962.

VEGE-MATZO

For Matzos.
First use Sept. 11, 1962.

SN 153,808. Parke, Davis & Company, Detroit, Mich. Filed Sept. 24, 1962.

TONILLONE

For Food Flavoring Agent.
First use on or before Oct. 1, 1920.

SN 156,379. Community Shops Inc., d.b.a. Community Bakeries, Chicago, Ill. Filed Nov. 1, 1962.

VALLEY FORGE

For Fruit Cakes and Other Cakes.
First use Sept. 4, 1962.

SN 156,422. Meat Industry Suppliers, Inc., Northfield, Ill. Filed Nov. 1, 1962.

SORBAGRAN

For Food Preservative Composed of Salt, Sorbic Acid, and Tricalcium Phosphate.
First use on or about Feb. 15, 1962.

SN 156,554. Becharas Brothers Coffee Company, Detroit, Mich. Filed Nov. 5, 1962.

YORK

Owner of Reg. No. 571,494.
For Coffee.
First use May 28, 1962.

SN 156,687. Twin County Grocers, Inc., Linden, N.J. Filed Nov. 5, 1962.

TATER-ETTES

For Frozen Shredded Cooked Potatoes.
First use Oct. 25, 1962.

SN 156,772. Suburban Foods, Inc., Newark, N.J. Filed Nov. 6, 1962.

GOLDEN BOY

For Packaged Frozen Meats.
First use Aug. 1, 1962.

SN 156,916. Weis Markets, Inc., Sunbury, Pa. Filed Nov. 8, 1962.

GREEN STAR

For Margarine.
First use in 1934.

SN 157,112. Intercontinental Food Laboratories Co., Philadelphia, Pa. Filed Nov. 13, 1962.

I.D.A.

For Meat Tenderizers.
First use Jan. 2, 1961.

SN 157,279. E. J. Brach & Sons, Chicago, Ill. Filed Nov. 15, 1962.

SUNSET RIDGE

For Candy.
First use Feb. 11, 1937.

SN 157,464. The Chun King Corporation, Duluth, Minn. Filed Nov. 19, 1962.

HONG KONG

For Frozen Hamburgers.
First use Sept. 15, 1962.

SN 158,596. Besco Products Company, Inc., Zebulon, Ga. Filed Dec. 4, 1962.

DIXIE LIVING

For Canned Peaches and Ruthbagas.
First use Dec. 13, 1961.

SN 158,710. House of Herbs, Inc., Salisbury, Conn. Filed Dec. 7, 1962.

MAESTRO

For Vinegar.
First use Nov. 26, 1946.

Class 47—Wines

SN 127,028. Monsieur Henri Wines, Ltd., Brooklyn, N.Y. Filed Aug. 31, 1961.

RÉMY DUPONT

The name "Rémy Dupont" is a fictitious name.
For Wines.
First use in October 1957.

Class 49—Distilled Alcoholic Liquors

SN 153,925. Barton Distilling Company, Chicago, Ill. Filed Sept. 26, 1962.

MAD WORLD

For Whiskey.
First use July 6, 1962.

SN 157,153. Joseph E. Seagram & Sons, Inc., New York, N.Y. Filed Nov. 13, 1962.

MAGNA CARTA

For Whiskey.
First use Oct. 9, 1962.

Class 50—Merchandise Not Otherwise Classified

SN 133,962. Lakeside Plastics and Engraving Company, Minneapolis, Minn. Filed Dec. 18, 1961.

LAKESIDE

For Point of Purchase Advertising Signs and Plaques.
First use Sept. 15, 1945.

SN 140,868. Magellan Sounds Corporation, New York, N.Y. Filed Mar. 21, 1962.

FUN-DIAL

For Educational Kits Comprising Recordings, Audio-Visual Aids, Visual Aids, and Instructional Material.
First use Dec. 27, 1961.

SN 149,516. Alvin Products, Inc., Worcester, Mass. Filed July 23, 1962.

LAB

For Penetrating Oil and Rust Preventative.
First use June 13, 1961, on penetrating oil.

SN 152,760. Carry-Pack Corporation, Schiller Park, Ill. Filed Sept. 10, 1962.

PS

For Paper Tape Having Pressure Sensitive Coatings Thereon and Having Flexible Handle Members Associated Therewith and Severable Into Sections and Adapted for Use in Carrying and Sealing Packages.
First use Aug. 10, 1962.

SN 152,976. Cas-Craft, Inc., Knightstown, Ind. Filed Sept. 12, 1962.

CAS-COT

For Adjustable Bed for Cashets.
First use July 13, 1962.

SN 154,570. Dalton Supplies Limited, Nettlebed, Henly-on-Thames, England. Filed Oct. 5, 1962.

ROTOTAG

For Markers for Identifying Animals, Birds, and Fish.
First use Mar. 21, 1960; in commerce October 1961.

SN 155,239. Harry E. Davis, d.b.a. Cell-O-Core Co., Akron, Ohio. Filed Oct. 16, 1962.

CELL-O-SIPS

Owner of Reg. No. 711,983.
For Beverage Straw.
First use June 6, 1962.

SN 155,456. Visual Communications, Inc., New York, N.Y. Filed Oct. 18, 1962.

SOS

For Road Warning Signs Printed With Light Reflecting Ink.
First use on or about Sept. 25, 1962.

Class 51—Cosmetics and Toilet Preparations

SN 52,240. Robert Richemond, New York, N.Y. Filed May 23, 1958.

Frivole

The word "Frivole" can be liberally considered the equivalent of the English expression "carefree caper."
For Perfume.
First use in August 1957.

SN 98,167. Suzuki-Shinobu Sohonsha Company, Limited, Shizuoka-shi, Shizuoka-ken, Japan. Filed May 31, 1960.

POLA

For Face Powder; Grease Paint; Liquid Face Paint; Face, Hand and After Shaving Lotion; Vanishing Cream; Cold Cream; Cleansing Cream; Hand Cream; Shaving Cream; Cream To Prevent Sunburn; Tanning Cream; Lip Cream; Foundation Cream; Rouge; Lipstick; Pomade; Hair Oil; Hair Cream; Hair Fixer; Hair Tonic; Hair Setting Lotion; Hair Lacquer; Color Rinsing Lotion; Hair Dye; Liquid Perfume; Eau de Cologne; Perfume in Solid, Paste and Powder Form; Eyeshadow; Eyebrow Paint; Mascara; Nail Enamel; Depilatory; Talcum Powder; Baby Oil, Smelling Salts, and Bath Salts.
First use July 10, 1929; in commerce May 10, 1959.

SN 98,168. Suzuki-Shonobu Sohonsha Company, Limited, Shizuoka-shi, Shizuoka-ken, Japan. Filed May 31, 1960.



The mark consists of a stylized showing of the term "pola."
For Face Powder; Grease Paint; Liquid Face Paint; Face, Hand and After Shaving Lotion; Vanishing Cream; Cold Cream; Cleansing Cream; Hand Cream; Shaving Cream; Cream To Prevent Sunburn; Tanning Cream; Lip Cream; Foundation Cream; Rouge; Lipstick; Pomade; Hair Oil; Hair Cream; Hair Fixer; Hair Tonic; Hair Setting Lotion; Hair Lacquer; Color Rinsing Lotion; Hair Dye; Liquid Perfume; Eau de Cologne; Perfume in Solid, Paste and Powder Form; Eyeshadow; Eyebrow Paint; Mascara; Nail Enamel; Depilatory; Talcum Powder; Baby Oil, Smelling Salts, and Bath Salts.
First use Dec. 1, 1946; in commerce May 10, 1959.

SN 118,813. Rich's, Inc., Atlanta, Ga. Filed Apr. 27, 1961.

SANTA'S SECRET SHOP

For Toilet Water, Powder, Shaving Lotion, Hand Lotion, Gift Sets Comprising a Combination of Toilet Preparations Such as Perfume, Hand Lotion, Dusting Powder, Bubble Bath and Soap, Powder Puffs Containing Powder, Atomisers Containing a Toilet Preparation Such as a Hand or Body Lotion or Shave Lotion, Perfume Bottles Containing Cologne or Perfume.
First use Nov. 2, 1960.

SN 128,655. Chesebrough-Pond's Inc., New York, N.Y. Filed Sept. 26, 1961.

GROOM AND CLEAN

For Hair Grooming Preparation for Use by Men.
First use Aug. 30, 1961.

SN 129,214. Kristol Products, Inc., Brooklyn, N.Y. Filed Oct. 4, 1961.

KRISTOL

For Hair Preparations—Namely, Waving Lotions and Cremes, Neutralizers, Shampoos, Conditioners, and Dye Stain Removers.
First use Aug. 16, 1961.

SN 130,508. Marguerite St. Pierre, Inc., Watertown, Mass. Filed Oct. 23, 1961.

SWEET MYSTERY

For Cologne and Perfume.
First use Sept. 30, 1945.

SN 130,840. The Stephan Co., Fort Lauderdale, Fla. Filed Oct. 27, 1961.



The drawing is lined for red, however, no claim is made for the color per se.
For Hair Dressing.
First use Sept. 20, 1961.

SN 139,240. Walter Scott, Inc., Miami, Fla. Filed Mar. 7, 1962.



Owner of Reg. No. 697,569.
For Anti-Dandruff Hair Lotion With Oil and an Anti-Dandruff Hair Lotion Without Oil.
First use Mar. 2, 1962.

SN 141,942. Gee Sales Company, Inc., Chicago, Ill. Filed Apr. 10, 1962.

OXYMINT

For Denture Cleaner.
First use in January 1960.

SN 147,510. Societe L'Oreal, Paris, France. Filed June 22, 1962.

PRINTIL

Owner of French Reg. No. 480,987, dated June 11, 1959 (Seine); Natl. Inst. No. 127,394.
For All Perfumes, Deodorants and Cosmetics, Makeup Preparations, Dentifrices, Dyes, Coloring Agents, Rinses and Lotions for Hair and Beards, Products for Bleaching of Hair, Hair Lotions, Products for Waving and Setting of Hair.

SN 151,615. Lehn & Fink Products Corporation, Bloomfield, N.J. Filed Aug. 17, 1962.

MAGIC COLOR

Without disclaiming its common law rights and for the purpose of this registration only, applicant makes no claim to the notation "Color" apart from the mark as shown.
Owner of Reg. No. 599,182.
For Hair Coloring Preparation.
First use Mar. 2, 1959.

SN 155,280. Scandia Cosmetics Corp., New York, N.Y. Filed Oct. 16, 1962.

POLISHED LOOK

For Fluid Make-Up (Foundation Base), Facial Lotion, and Face Powder.
First use Sept. 19, 1962.

SN 156,894. The Meanen Company, Morristown, N.J. Filed Nov. 8, 1962.



Owner of Reg. Nos. 703,672 and 739,145.
For After Shave Lotion, Pre-Shave Lotion, After Shave Talc, Personal Deodorant and Cologne.
First use Sept. 3, 1962.

Class 52—Detergents and Soaps

SN 136,394. Platt and Smillie Chemicals, Inc., St. Louis, Mo. Filed Jan. 23, 1962.

SPARK

For Cleaning Material for Removing Soap and Alkali Film, Metal Salt Deposits, Rust and Lime Stains and Like Matter From Floor Surfaces, Tubs, Shower Rooms, Swimming Pools, Wash Bowls and the Like for Industrial and Household Use.
First use about Dec. 31, 1941.

SN 145,066. The Drackett Company, Cincinnati, Ohio. Filed May 21, 1962.

TANKAIRE

For Chemical Preparation for Cleaning Tank Cars, Tank Trucks, and the Like, Sold in Bulk.
First use May 14, 1962.

SN 152,922. Walter Scott, Inc., Miami, Fla. Filed Sept. 11, 1962.



"Walter Scotts'" is not the name of any particular living individual. Owner of Reg. No. 697,569.
For Hair Shampoo.
First use Oct. 19, 1961.

SN 154,871. Paul C. Vasel, d.b.a. Schmidt Sales Company, New York, N.Y. Filed May 25, 1962.

speed king

For Plastic Sponge Containing a Special Cleaning Agent Released Through Use of Water, Particularly Suitable for Car-Washing Purposes.
First use Sept. 20, 1961.

SN 156,625. Leewood Sales Company, d.b.a. Leewood Products Co., St. Joseph, Mo. Filed Nov. 5, 1962.

RAVON

For Window Cleaner and Detergents.
First use Oct. 1, 1962.

SN 157,042. American Home Products Corporation, New York, N.Y. Filed Nov. 13, 1962.

SQUIRTY

For Bath Soap.
First use Aug. 14, 1962.

SN 157,162. Southland Paint Co., Inc., Gainesville, Tex. Filed Nov. 13, 1962.

SO FAST

For Paint and Varnish Remover.
First use June 17, 1961.

SN 157,331. Roux Laboratories, Inc., New York, N.Y. Filed Nov. 15, 1962.

CLEAN TOUCH

For Skin Cleanser for Removing Hair Color Stains.
First use Oct. 19, 1962.

SERVICE MARKS

Class 100 — Miscellaneous

SN 126,377. Optics Technology, Inc., Belmont, Calif. Filed Aug. 21, 1961.

For Research and Development for Others in Science of Optics.
First use on or about Mar. 28, 1961.

SN 127,976. Desde 1830 Restaurant y Bar, S.A., Havana, Cuba. Filed Sept. 8, 1961.

LA ZARAGOZANA

Owner of Cuban Reg. No. 201,743, dated Jan. 6, 1961.
For Restaurant and Catering Services.

SN 136,326. Arizona State Guard and Detective Agency, Phoenix, Ariz. Filed Jan. 8, 1962.

CONTINENTAL SECURITY GUARDS

The term "Security Guards" and the depiction of the map of the United States are disclaimed apart from the mark as shown.
For Security Guard Services.
First use Dec. 1, 1960.

SN 140,242. Cosmic, Inc., Washington, D.C. Filed Mar. 20, 1962.

COSMIC

For Design and Development of a High Voltage Capacitive Ignition System for Internal Combustion Engines.
First use Feb. 1, 1962.

SN 143,645. Arthur D. Little, Inc., Cambridge, Mass. Filed May 2, 1962.

ADL

For Engineering, Technical and Advisory Services in the Fields of Scientific Research, Product Development, Corporate Planning, and Economic Development.
First use December 1954.

SN 144,879. Phillips Petroleum Company, Bartlesville, Okla. Filed May 17, 1962.

AVITROL

For Deterring Nuisance by Predatory Birds.
First use on or about Feb. 1, 1962.

SN 147,478. Luce Press Clipping Bureau, Topeka, Kans. Filed June 22, 1962.

LUCE PRESS CLIPPING

For Newspaper and Magazine Clipping Bureau Services.
First use Feb. 19, 1962.

SN 148,609. Dunkin' Donuts of America, Inc., Quincy, Mass. Filed July 9, 1962.



Owner of Reg. Nos. 692,491 and 715,860.
For Restaurant Services.
First use July 1954; May 15, 1950, as to the mark "Dunkin' Donuts."

Class 101 — Advertising and Business

SN 141,253. Cock-A-Doodle-Doo, Inc., Cedar Rapids, Iowa. Filed Apr. 2, 1962.

COCK-A-DOODLE-DOO

For Promoting the Establishment of, and Advice and Consultation in the Operation of, Restaurants.
First use April 1960.

SN 144,265. National Bellas Hess, Inc., North Kansas City, Mo. Filed May 10, 1962.

G★E★X

For Department Store Services.
First use on or about Sept. 5, 1959.

SN 146,427. The Suburban Homemaking & Maternity Agency, Inc., Hempstead, N.Y. Filed June 7, 1962.

HELPING HANDS IN YOUR HOME

For Employment Agency Services.
First use Apr. 16, 1962.

Class 102 — Insurance and Financial

SN 136,337. Bankers Title Guaranty Company, Sacramento, Calif. Filed Jan. 23, 1962.

BANKERS TITLE GUARANTY COMPANY

The words "Guaranty Company" are disclaimed apart from the mark as shown.
For Title Searching, Insurance, and Escrow Services.
First use Feb. 15, 1961.

SN 139,103. Interstate Securities Company, Kansas City, Mo. Filed Mar. 5, 1962.

financial house

For Making Mortgage Loans and Loans to Small Business, and Insurance Brokerage.
First use Oct. 2, 1961.

SN 143,955. Harris Trust and Savings Bank, Chicago, Ill. Filed May 7, 1962.

EPOCH

For Correspondent Banking Services.
First use Apr. 24, 1962.

SN 146,232. Tag-A-Bag Company, Washington, D.C. Filed June 5, 1962.

TAG-A-BAG

For Insuring Travel Luggage While Transported on Specified Common Carriers or Checked in Hotels, Motels, Stations and the Like, Including Providing Personalized Luggage Identification Tags Containing Evidence of the Insurance.
First use May 31, 1962.

SN 147,461. Fidelity Life Association, a Mutual Legal Reserve Company, Fulton, Ill. Filed June 22, 1962.

Fidelity Life Association

For Underwriting of Insurance.
First use Oct. 7, 1930.

SN 149,666. North Carolina Mutual Life Insurance Company, Durham, N.C. Filed July 24, 1962.



For Life Insurance.
First use June 15, 1962.

Class 103 — Construction and Repair

SN 136,105. Blue Haven Pools, North Hollywood, Calif. Filed Jan. 19, 1962.

BLUE HAVEN

For Designing, Engineering, and Construction of Swimming Pools.
First use 1955.

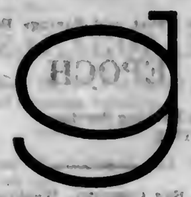
SN 154,021. General Motors Corporation, Detroit, Mich. Filed Sept. 27, 1962.

United Delco

Owner of Reg. Nos. 180,358, 554,295, and 592,402.
For Repair and Maintenance of Automotive Vehicles and Their Parts, Accessories, and Equipment.
First use June 1, 1961.

Class 104 — Communication

SN 152,575. Gilmore Broadcasting Corporation, Joplin, Mo. Filed Sept. 6, 1962.



For Television Broadcasting Services.
First use June 26, 1962.

SN 156,854. American Broadcasting-Paramount Theatres, Inc., New York, N.Y. Filed Nov. 1, 1962.

abc

Owner of Reg. No. 724,619.
For Broadcasting of Television Programs.
First use Sept. 23, 1962.

Class 105 — Transportation and Storage

SN 140,588. Richard Joyce Smith, William J. Kirk, and Harry W. Dorigan, trustees of The New York, New Haven and Hartford Railroad Company, New Haven, Conn. Filed S.R. Mar. 23, 1962; Am. P.R. Nov. 5, 1962.

MAYFLOWER TOURS

The applicants claim no exclusive rights in that portion of the mark containing the word "Tours."
For Independent Package Planned Railroad Passenger Travel Tours.
First use Feb. 1, 1938.

SN 140,589. Richard Joyce Smith, William J. Kirk, and Harry W. Dorigan, trustees of The New York, New Haven and Hartford Railroad Company, New Haven, Conn. Filed S.R. Mar. 23, 1962; Am. P.R. Nov. 5, 1962.

PILGRIM TOURS

The applicants claim no exclusive rights in that portion of the mark containing the word "Tours."
For Independent Package Planned Railroad Passenger Travel Tours.
First use Feb. 1, 1938.

SN 153,508. Parking Management, Inc., Washington, D.C. Filed Sept. 19, 1962.

PMI

The drawing is lined for red.
For Automobile Parking Facility Operating and Management Services.
First use Oct. 31, 1957.

Class 106 — Material Treatment

SN 128,999. Graniteville Company, Graniteville, S.C. Filed Oct. 2, 1961.

COBOND

Owner of Reg. No. 637,220.
For Sale and Advertising of Services Offered by the Applicant in Connection With the Use of Applicant's Process for Laminating Synthetic Plastic Foams and Films to Textile Fabrics for Others.
First use June 2, 1961.

SN 134,898. Permaflex, Inc., New York, N.Y. Filed Dec. 29, 1961.

PERMA-NEW

For Film Rejuvenation Service.
First use Jan. 22, 1958.

SN 143,868. Rapid Copy Service, Inc., Chicago, Ill. Filed May 4, 1962.

rcs

For Printing Service—Namely, Reproducing Prints and Material by Lithographic, Planographic, Photographic, and Photoprinting Processes.
First use 1947.

Class 107 — Education and Entertainment

SN 143,654. The Moody Bible Institute of Chicago, Chicago, Ill. Filed May 2, 1962.

THE FELLOWSHIP HOUR

For Title of a Radio Program (or Radio Programs) Relating to Religion.
First use Nov. 5, 1961.

COLLECTIVE MEMBERSHIP MARKS

Class 200

SN 106,727. Lambda Chi Alpha Fraternity Incorporated, Indianapolis, Ind. Filed Oct. 19, 1960.



For Identification of Members of the Organization Who Are No Longer Attending College and Who Have Served the Fraternity Above and Beyond the Call of Duty.
First use Aug. 16, 1933.

CERTIFICATION MARKS

Class A — Goods

SN 153,093. Sage Export, Belgrade, Yugoslavia. Filed Aug. 28, 1962.

DALMATIAN

The mark certifies regional origin of the goods. Owner of Reg. No. 648,222.
For Sage.
First use January 1924; in commerce January 1924.

TRADEMARK REGISTRATIONS ISSUED
PRINCIPAL REGISTER

Class 1—Raw or Partly Prepared Materials

750,713. MICROGEL. Shell Oil Company. SN 132,383. Pub. 3–26–63. Filed 11–20–61.

750,714. KLEHM'S ESTATE PEONIES AND DESIGN. Carl G. Klehm. SN 137,530. Pub. 3–26–63. Filed 2–8–62.

750,715. STEPAN AND DESIGN. Stepan Chemical Company. CONSOLIDATED CERTIFICATE. SN 139,894, pub. 3–19–63, filed 3–14–62, Cl. 1; SN 139,895, pub. 3–19–63, filed 3–14–62, Cl. 6; SN 139,896, pub. 3–19–63, filed 3–14–62, Cl. 52.

750,716. LLANO-LITE. Southwestern Talc Corporation. SN 149,220. Pub. 3–26–63. Filed 7–17–62.

750,717. GULF LITE. Gulf Oil Corporation. SN 149,845. Pub. 3–26–63. Filed 7–26–62.

750,718. GULF WITHIN AN ORANGE DISC. Gulf Oil Corporation. SN 149,846. Pub. 3–26–63. Filed 7–26–62.

Class 2—Receptacles

750,719. SIGNATUR. Aktiebolaget Husqvarna Borstfabrik. SN 106,778. Pub. 6–19–62. Filed 10–20–60.

750,720. SNO-CAP AND DESIGN. Murray Bag and Paper Corp. SN 123,671. Pub. 3–26–63. Filed 7–10–61.

750,721. PHARM-ASSIST. Merck & Co., Inc. SN 124,112. Pub. 3–26–63. Filed 7–17–61.

750,722. AD PANEL. The Mead Corporation. SN 132,850. Pub. 3–26–63. Filed 11–27–61.

750,723. SER-VAC. N.F.C. Engineering Company. SN 134,484. Pub. 3–26–63. Filed 12–21–61.

750,724. HANDI-BOY. Hartman-Leddon Company, Inc. SN 134,542. Pub. 3–26–63. Filed 12–22–61.

750,725. ACME PRINCESS AND DESIGN. Acme Markets, Inc., by change of name from American Stores Company. SN 138,356. Pub. 3–26–63. Filed 2–21–62.

750,726. AURORA. American Can Company. SN 147,341. Pub. 3–26–63. Filed 6–21–62.

750,727. ILLUSTRAYS. Robert M. McMath, d.b.a. Illustrade Company. SN 148,054. Pub. 3–26–63. Filed 6–29–62.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

750,728. THE POCKET DOCTOR. Harry Dixon & Sons, Inc. SN 151,113. Pub. 3–26–63. Filed 11–1–61.

750,729. TIARA. American Luggage Works, Inc. SN 151,868. Pub. 3–26–63. Filed 8–27–62.

750,730. EXECUTAB. Swank, Inc. SN 152,019. Pub. 3–26–63. Filed 8–27–62.

Class 4—Abrasives and Polishing Materials

750,731. IMAGE. Chemical Corporation of America. SN 153,938. Pub. 3–26–63. Filed 9–26–62.

Class 5—Adhesives

750,732. PRES-STIX AND DESIGN. American "Pres-Stix" Tape Co. SN 119,739. Pub. 3–26–63. Filed 5–11–61.

750,733. CHARBOND. Lauhoff Grain Company. SN 149,657. Pub. 3–26–63. Filed 7–24–62.

Class 6—Chemicals and Chemical Compositions

750,715. CONSOLIDATED CERTIFICATE. See Class 1.

750,734. EXTRAN. General Aniline & Film Corporation. SN 126,162. Pub. 3–26–63. Filed 8–17–61.

750,735. FLOWER-DRI. Plantabbs Corporation, assignee of W. R. Grace & Co. SN 129,364. Pub. 3–26–63. Filed 10–6–61.

750,736. REGENEVER. Hach Chemical Company. SN 129,599. Pub. 3–26–63. Filed 10–10–61.

750,737. SPRAY 'N' PULL. Myron Goldstein. SN 138,260. Pub. 3–26–63. Filed 12–4–61.

750,738. STAR DESIGN. The Procter & Gamble Company. SN 134,759. Pub. 3–26–63. Filed 12–27–61.

750,739. FOMREZ. Witco Chemical Company, Inc. SN 136,318. Pub. 3–26–63. Filed 1–22–62.

750,740. ISO-TPN. Sigma Chemical Company. SN 137,171. Pub. 3–26–63. Filed 2–2–62.

750,741. FRIADAK. The Dow Chemical Company. SN 139,396. Pub. 3–26–63. Filed 3–8–62.

750,742. ACIDLAN. Malmstrom Chemical Corporation. SN 143,747. Pub. 3–26–63. Filed 5–3–62.

750,743. REHEIS FINE CHEMICALS AND DESIGN. Reheis Company, Inc. SN 144,416. Pub. 3–26–63. Filed 5–11–62.

750,744. REHEIS. Reheis Company, Inc. SN 144,417. Pub. 3–26–63. Filed 5–11–62.

750,745. NEST NUGGETS. Chas. Pfizer & Co., Inc. SN 145,479. Pub. 3–26–63. Filed 5–25–62.

750,746. PARACHEK. Halliburton Company. SN 146,481. Pub. 3–26–63. Filed 6–6–62.

750,747. KOSTAT. H. Kohnstamm & Co., Inc. SN 152,140. Pub. 3–26–63. Filed 8–29–62.

750,748. FABRIZYME. Chas. Pfizer & Co., Inc. SN 152,914. Pub. 3–26–63. Filed 9–11–62.

Class 7—Cordage

750,749. GREENFIELD SUPREME. Le Lis (Naamloze Vennootschap). SN 148,897. Pub. 3–26–63. Filed 7–12–62.

750,750. WEAR-FLEX. The Wear-Flex Corporation. SN 151,627. Pub. 3–26–63. Filed 8–21–62.

750,751. COBRA. Indian Head Mills, Inc. SN 152,307. Pub. 3–26–63. Filed 8–31–62.

Class 9—Explosives, Firearms, Equipments, and Projectiles

750,752. STRIPLAP. Dorr-Oliver Incorporated. SN 124,345. Pub. 3–26–63. Filed 7–20–61.

750,753. KENT. New Jersey Fireworks Mfg. Co., Inc. SN 140,480. Pub. 3–26–63. Filed 3–22–62.

750,754. NUMITE. Hercules Powder Company, d.b.a. Hercules Powder Company, Incorporated. SN 141,179. Pub. 3–26–63. Filed 3–30–62.

Class 10—Fertilizers

750,755. N-SERVE. The Dow Chemical Company. SN 137,615. Pub. 3–26–63. Filed 2–9–62.

Class 12—Construction Materials

750,756. POLYIZED. Donald Cutler, d.b.a. Cutler Manufacturing Company. SN 106,279. Pub. 3–26–63. Filed 11–14–60.

750,757. ALL-FIX. Global Construction Devices, Inc., by change of name from Fast-Fix, Inc. SN 125,591. Pub. 3–26–63. Filed 8–8–61.

750,758. SAFE-GARD. General Pool Corporation. SN 134,217. Pub. 3–26–63. Filed 12–18–61.

750,759. CJN RAM. The Nock and Son Company. SN 134,897. Pub. 3–26–63. Filed 12–29–61.

750,760. STALWART AND DESIGN. Certain-Teed Products Corporation. SN 136,955. Pub. 3–26–63. Filed 1–31–62.

750,761. FLOAT-STUD. G & T Associates, Inc. SN 137,062. Pub. 3–26–63. Filed 2–1–62.

750,762. TEXTURWOOD. Gerald Simoneau, d.b.a. Simoneau Custom Cabinet Works. SN 138,434. Pub. 3–26–63. Filed 2–21–62.

750,763. MAGNE-SEAL. Precision Aluminum Products Company. SN 138,734. Pub. 3–26–63. Filed 2–27–62.

750,764. RELY-ON. DAP, Inc. SN 144,239. Pub. 3–26–63. Filed 5–10–62.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

750,765. SETKO. Set Screw & Mfg. Co. SN 122,029. Pub. 3–26–63. Filed 6–14–61.

750,766. SETKO AND DESIGN. Set Screw & Mfg. Co. SN 122,030. Pub. 3–26–63. Filed 6–14–61.

Class 14—Metals and Metal Castings and Forgings

750,767. PYRALLOY. High Temperature Materials, Inc. SN 127,775. Pub. 3–26–63. Filed 9–13–61.

750,768. GRIFFIN. Griffin Wheel Company. SN 130,209. Pub. 3–26–63. Filed 10–18–61.

750,769. KE-VAC. Kentucky Electronics Inc. SN 137,140. Pub. 3–26–63. Filed 2–2–62.

Class 15—Oils and Greases

750,770. W & B AND DESIGN. The White & Bagley Company. SN 137,828. Pub. 3–26–63. Filed 2–12–62.

750,771. CAPE COD COLONIAL AND DESIGN. Colonial Candle Co. of Cape Cod, Inc. SN 143,348. Pub. 3–26–63. Filed 4–30–62.

750,772. FUMINITE. Fused Mineral Company Limited. SN 145,071. Pub. 3–26–63. Filed 5–21–62.

Class 16—Protective and Decorative Coatings

750,773. ARTISTA. Stanley & Smith Inc. SN 161,133. Pub. 3–26–63. Filed 1–22–63.

Class 17—Tobacco Products

750,774. HOLLANDIA. Theodorus Niemeijer N.V., d.b.a. Theodorus Niemeijer. SN 148,748. Pub. 3–26–63. Filed 7–10–62.

Class 18—Medicines and Pharmaceutical Preparations

750,775. PHENIRATAN. Irwin, Neisler & Co. SN 140,018. Pub. 3–26–63. Filed 3–16–62.

750,776. THE B–4 FACTOR. Lew Burston Associates, Inc. SN 142,601. Pub. 3–26–63. Filed 4–19–62.

750,777. IOCORT. Greco Pharmacal, Inc. SN 144,376. Pub. 3–26–63. Filed 5–11–62.

750,778. BILE-TONE. Carter Products, Inc. SN 144,676. Pub. 3–26–63. Filed 5–16–62.

750,779. NAREMCO TSC AND DESIGN. National Remedy Products Company, Inc. SN 150,358. Pub. 3–26–63. Filed 8–2–62.

750,780. FOMASIL. Sterling Drug Inc. SN 151,848. Pub. 3–26–63. Filed 8–24–62.

750,781. RAHNOUS. Earl W. Rahn, d.b.a. E. W. Rahn. SN 152,091. Pub. 3–26–63. Filed 8–28–62.

750,782. ANICOT. The Purdue Frederick Company. SN 152,866. Pub. 3–26–63. Filed 8–28–62.

Class 19—Vehicles

750,783. REBEL. Raymond P. Greene, d.b.a. Ray Greene & Co. SN 129,207. Pub. 3–26–63. Filed 10–4–61.

750,784. T-MATE. Sears, Roebuck and Co. SN 129,413. Pub. 3–26–63. Filed 10–6–61.

750,785. VIKING T-BAR AND DESIGN. Bostrom Corporation. SN 131,007. Pub. 3–26–63. Filed 10–31–61.

Class 21—Electrical Apparatus, Machines, and Supplies

750,786. REPRESENTATION OF A PORTION OF A FITTING COLORED BLUE. The Thomas & Betts Co. SN 47,719. Pub. 3–26–63. Filed 3–14–58.

750,787. SE MONOGRAM. Siemens Electrogerate Aktiengesellschaft. CONSOLIDATED CERTIFICATE. SN 106,750, pub. 3–19–63, filed 10–19–60, Cl. 21; SN 135,616, pub. 11–20–62, filed 1–11–62, Cl. 24; SN 106,751, pub. 4–10–62, filed 10–19–60, Cl. 31; SN 106,752, pub. 4–10–62, filed 10–19–60, Cl. 34; SN 136,831, pub. 2–26–63, filed 1–29–62, Cl. 44.

750,788. MAGSWITCH. Minneapolis-Honeywell Regulator Company. SN 106,066. Pub. 3–26–63. Filed 11–8–60.

750,789. INTERNATIONAL AND GLOBE DESIGN. International Crystal Manufacturing Co., Inc. MULTIPLE CLASS CERTIFICATE (Classes 21 and 26). SN 109,595. Pub. 3–26–63. Filed 12–8–60.

750,790. VACUDYNE. Vacudyne Corporation. SN 116,604. Pub. 3–26–63. Filed 3–27–61.

750,791. KORTING. Korting Radio Werke Gesellschaft mit beschrankter Haftung. SN 125,056. Pub. 3–26–63. Filed 7–31–61.

750,792. SPATTERPROOF. Radiant Lamp Corporation of Delaware. SN 129,585. Pub. 3–26–63. Filed 10–9–61.

750,793. SEL AND DESIGN. Systems Engineering Laboratories, Incorporated. SN 130,968. Pub. 3–26–63. Filed 10–30–61.

750,794. POLYFUSION. J. S. & F. Folkard Limited. SN 132,088. Pub. 3–26–63. Filed 11–15–61.

750,795. LOVOLT. Daniel Woodhead Company. SN 140,804. Pub. 3-26-63. Filed 3-26-62.

750,796. S. Consolidated Systems Corporation. SN 142,795. Pub. 3-26-63. Filed 4-23-62.

750,797. NEYETCH. The J. M. Ney Company. SN 143,557. Pub. 3-26-63. Filed 5-1-62.

750,798. TE AND DESIGN. La Telemecanique Electrique, Societe Anonyme. SN 143,640. Pub. 3-26-63. Filed 5-2-62.

750,799. BIG MIKE. W. W. Renner & Associates, Inc. SN 150,617. Pub. 3-26-63. Filed 8-6-62.

Class 22 — Games, Toys, and Sporting Goods

750,800. REPRESENTATION OF A KANGAROO WITH LINES. Nissen Corporation, by change of name from Nissen Trampoline Company. SN 102,336. Pub. 3-26-63. Filed 8-9-60.

750,801. "TRAMPY" WITH KANGAROO DESIGN. Nissen Corporation, by change of name from Nissen Trampoline Company. SN 102,337. Pub. 3-26-63. Filed 8-9-60.

750,802. PUTTER POOL AND DESIGN. Tom Tarbox. SN 126,056. Pub. 3-26-63. Filed 8-15-61.

750,803. PUTT-A-SIZOR. Joseph Bell. SN 135,170. Pub. 3-26-63. Filed 1-4-62.

750,804. LOJO. Buckeye Manufacturing Company, Inc. SN 144,806. Pub. 3-26-63. Filed 5-17-62.

750,805. FLAG-HI. Wilson Sporting Goods Co. SN 146,239. Pub. 3-26-63. Filed 6-5-62.

750,806. WIL-WIN. Wilson Sporting Goods Co. SN 146,241. Pub. 3-26-63. Filed 6-5-62.

750,807. KNOCK-N-ROLL. American Toy & Furniture Co., Inc. SN 147,178. Pub. 3-26-63. Filed 6-19-62.

750,808. BISMARCK. The Avalon Hill Company. SN 147,536. Pub. 3-26-63. Filed 6-25-62.

750,809. OLE. Robert M. Olson, d.b.a. Ole Surfboards. SN 147,749. Pub. 3-26-63. Filed 6-26-62.

750,810. X-1200. Triangle Leather Goods Company. SN 147,870. Pub. 3-26-63. Filed 6-27-62.

750,811. SAMBROS. Sams Brothers Limited. SN 147,960. Pub. 3-26-63. Filed 6-28-62.

750,812. WRIST-LOK. Mary E. Crutchfield, d.b.a. Wrist-Lok Company. SN 148,013. Pub. 3-26-63. Filed 6-29-62.

750,813. RAMP MASTER. Cypress Gardens Skis, Inc. SN 148,014. Pub. 3-26-63. Filed 6-29-62.

Class 23 — Cutlery, Machinery, and Tools, and Parts Thereof

750,814. REPRESENTATION OF A NARROW GOLD BAND. Reed Roller Bit Company. SN 114,047. Pub. 3-26-63. Filed 2-20-61.

750,815. FILL-RITE. Tuthill Pump Company. SN 126,966. Pub. 3-26-63. Filed 8-30-61.

750,816. ROBBI AND DESIGN. Robinair Manufacturing Corporation. SN 128,216. Pub. 3-26-63. Filed 9-19-61.

750,817. PISTOL MATIC AND DESIGN. Southwest Grease & Oil Co., Inc., d.b.a. P. & J. Equipment Co. SN 130,962. Pub. 3-26-63. Filed 10-30-61.

750,818. POLYFUSION. J. S. & F. Folkard Limited. SN 132,039. Pub. 3-26-63. Filed 11-15-61.

750,819. SPEEDY STITCHER. Charles A. Stewart Trust, d.b.a. Stewart Manufacturing Company. SN 132,593. Pub. 3-26-63. Filed 11-22-61.

750,820. INTERTEK. International Technology Development Corp. SN 133,276. Pub. 3-26-63. Filed 12-4-61.

750,821. FINEFLOW. Stoffel Seals Corporation. SN 134,575. Pub. 3-26-63. Filed 12-22-61.

750,822. WINCH-MASTER. Western Gear Corporation, d.b.a. Western Gear. SN 135,929. Pub. 3-26-63. Filed 1-16-62.

750,823. WRAP KING AND DESIGN. Washington Packaging Corp. SN 136,267. Pub. 3-26-63. Filed 2-19-62.

750,824. HYDRO-SET. Proctor Hydro-Set Company. SN 136,511. Pub. 3-26-63. Filed 2-28-62.

750,825. VIBRA-FOOT. Rostek Manufacturing Company. SN 139,285. Pub. 3-26-63. Filed 3-7-62.

750,826. FLEXIPACKER. Brebner Machinery Company, Inc. SN 141,805. Pub. 3-26-63. Filed 4-9-62.

750,827. SNAP-CUT AND DESIGN. Seymour Smith & Son, Inc. SN 142,750. Pub. 3-26-63. Filed 4-20-62.

750,828. SPIDER. Gilson Brothers Company. SN 143,124. Pub. 3-26-63. Filed 4-26-62.

750,829. AUTOROLL. William Kariyn. SN 143,408. Pub. 3-26-63. Filed 4-30-62.

750,830. THE COVENTRY. Renold Chains Limited. SN 143,669. Pub. 3-26-63. Filed 5-2-62.

750,831. CMC. Daniel Lamar Christy, d.b.a. Christy Machine Company. SN 144,323. Pub. 3-26-63. Filed 5-11-62.

750,832. SPINFLOTE. Ernest Scragg & Sons Limited. SN 144,993. Pub. 3-26-63. Filed 5-18-62.

750,833. TURBOLIFT. Dresser Industries, Inc., d.b.a. Pacific Pumps, Inc. SN 153,632. Pub. 3-26-63. Filed 9-21-62.

Class 24 — Laundry Appliances and Machines

750,787. CONSOLIDATED CERTIFICATE. See Class 21.

Class 26 — Measuring and Scientific Appliances

750,834. CANONET. Canon Camera Kabushiki Kaisha. SN 109,942. Pub. 3-26-63. Filed 12-9-60.

750,835. VACUDYNE. Vacudyne Corporation. SN 116,605. Pub. 3-26-63. Filed 3-27-61.

750,836. WIT. Yarnall-Waring Company. SN 120,772. Pub. 3-26-63. Filed 5-24-61.

750,837. DIAL-A-CODE. Standard Instrument Corporation. SN 124,802. Pub. 3-26-63. Filed 7-19-61.

750,838. MINI-PUNCH. Varifab, Inc. SN 124,810. Pub. 3-26-63. Filed 7-19-61.

750,839. INTER. Intercontinental Marketing Corporation. SN 135,660. Pub. 3-26-63. Filed 1-12-62.

750,840. DESIGN REPRESENTATION OF SINE WAVE. General Precision, Inc., by merger from Royal Precision Corporation. SN 135,829. Pub. 3-26-63. Filed 1-15-62.

750,841. VERNI-TROL. Robert E. Platt II, d.b.a. Robert E. Platt Machine Products. SN 137,456. Pub. 3-26-63. Filed 2-7-62.

750,842. FISCHER AND DESIGN. Artur Fischer, d.b.a. Artur Fischer, Feinmechanik, Plastikwerk, Werkzeugbau. SN 137,734. Pub. 3-26-63. Filed 2-12-62.

750,843. PC AND DESIGN. Penn-Chem Corporation. SN 139,130. Pub. 3-26-63. Filed 3-5-62.

750,844. EASYCHECK. O. S. Walker Company, Inc. SN 139,907. Pub. 3-26-63. Filed 3-14-62.

750,845. CINEMAX. Uryu Seiki Company Limited. SN 140,405. Pub. 3-26-63. Filed 3-21-62.

750,846. CYCLELOCK. Minnesota Mining and Manufacturing Company. SN 141,869. Pub. 3-26-63. Filed 4-6-62.

750,847. ASTRODATA. Astrodata, Inc. SN 142,779. Pub. 3-26-63. Filed 4-23-62.

750,848. LITHOTANX. Oscar Fisher Company, Inc. SN 143,617. Pub. 3-26-63. Filed 5-2-62.

750,849. OPLEX-COLOR. Optique & Precision de Levallois. SN 145,474. Pub. 3-26-63. Filed 5-25-62.

Class 27 — Horological Instruments

750,800. KINGMATIC "S." Movado Watch Agency, Inc. SN 144,407. Pub. 3-26-63. Filed 5-11-62.

Class 28 — Jewelry and Precious-Metal Ware

750,851. 14-K AND DESIGN. Arnold D. Golber, d.b.a. Certified Metals Co. SN 144,249. Pub. 3-26-63. Filed 5-10-62.

750,852. HB. Hutzler Brothers Co. SN 144,616. Pub. 3-26-63. Filed 5-15-62.

Class 30 — Crockery, Earthenware, and Porcelain

750,853. DURA-FIRED. Stangl Pottery Company. SN 142,174. Pub. 3-26-63. Filed 4-26-62.

750,854. C CHODZIEZ AND DESIGN. Minex, Centrala Eksportowo-Importowa Wytworow Przemyslu Mineralnego. SN 147,388. Pub. 3-26-63. Filed 6-21-62.

Class 31 — Filters and Refrigerators

750,787. CONSOLIDATED CERTIFICATE. See Class 21.

Class 32 — Furniture and Upholstery

750,855. DATACASE. Steelcase, Inc. SN 132,390. Pub. 3-26-63. Filed 11-20-61.

750,856. CHAIR-PAL. Earl A. Clabaugh, d.b.a. Clabaugh Enterprises. SN 132,977. Pub. 3-26-63. Filed 11-29-61.

750,857. FLEX-TAB. Rose-Derry Company. SN 135,914. Pub. 3-26-63. Filed 1-16-62.

750,858. SENG. The Seng Company. SN 146,518. Pub. 3-26-63. Filed 6-8-62.

Class 33 — Glassware

750,859. FOUR SEASONS. Artistic Glass Decorators, Incorporated. SN 143,711. Pub. 3-26-63. Filed 5-3-62.

Class 34 — Heating, Lighting, and Ventilating Apparatus

750,787. CONSOLIDATED CERTIFICATE. See Class 21.

750,860. NATIONAL-U.S. Crane Co. SN 115,125. Pub. 3-26-63. Filed 3-8-61.

750,861. SUNBURST DESIGN. The Van Dorn Iron Works Company. SN 124,942. Pub. 3-26-63. Filed 7-18-61.

750,862. BENJ. FRANKLIN. Bennett-Ireland, Inc. SN 126,904. Pub. 3-26-63. Filed 8-30-61.

750,863. IGNIFLUID. Societe Anonyme Activit. SN 140,999. Pub. 3-26-63. Filed 3-26-62.

750,864. WIREMOLD. The Wiremold Company. SN 142,894. Pub. 3-26-63. Filed 4-16-62.

750,865. WIREMOLD. The Wiremold Company. SN 142,895. Pub. 3-26-63. Filed 4-16-62.

750,866. ADAMS SPEEDFLAME. The Adams Manufacturing Co. SN 142,911. Pub. 3-26-63. Filed 4-24-62.

750,867. ROOF-AIRE HARDY AND DESIGN. The Hardy Corporation, d.b.a. Hardy Mfg. Co. SN 143,337. Pub. 3-26-63. Filed 4-30-62.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

750,868. REDGO. The Arbee Corporation, d.b.a. Manheim Manufacturing and Belting Company. SN 126,035. Pub. 3-26-63. Filed 8-15-61.

750,869. VANDERBILT. The B. F. Goodrich Company, assignee of Vanderbilt Rubber Co., Inc. SN 129,434. Pub. 3-26-63. Filed 10-6-61.

750,870. DUROLOY. Rogers Corporation. SN 130,839. Pub. 3-26-63. Filed 10-27-61.

750,871. REEVAC-DIAPHRAGMS. Reeves Brothers, Inc. SN 145,851. Pub. 3-26-63. Filed 5-31-62.

750,872. TRACTION KING. The B. F. Goodrich Company. SN 146,374. Pub. 3-26-63. Filed 6-7-62.

Class 36 — Musical Instruments and Supplies

750,873. MUSI-PAK. Musi-Pak, Inc. SN 128,458. Pub. 3-26-63. Filed 9-22-61.

750,874. MUSICOR. Musicor Record Corporation. SN 132,857. Pub. 3-26-63. Filed 11-27-61.

750,875. TALKAPUMP. Schulmerich Carillons, Inc. SN 134,843. Pub. 3-26-63. Filed 12-28-61.

750,876. THE BERGO. The Bergo Co. SN 138,383. Pub. 3-26-63. Filed 2-21-62.

750,877. KING TEMPO. The H. N. White Company. SN 138,446. Pub. 3-26-63. Filed 2-21-62.

Class 37 — Paper and Stationery

750,878. "BIBLE LOVER'S." Warner Press, Inc., by change of name from Gospel Trumpet Company. SN 104,255. Pub. 3-26-63. Filed 9-12-60.

750,879. HANDYSETS. Baltimore Business Forms, Inc. SN 123,163. Pub. 3-26-63. Filed 6-30-61.

750,880. YOUR VERY OWN. E. Errett Smith Inc. SN 123,374. Pub. 3-26-63. Filed 7-3-61.

750,881. WRAP'NTIE. Papercraft Corporation. SN 124,221. Pub. 3-26-63. Filed 7-18-61.

750,882. VISTA BANDS. RAP Industries, Inc., by change of name from The Rap-In-Wax Company. SN 124,374. Pub. 3-26-63. Filed 7-20-61.

750,883. L WITHIN A CIRCLE. Venus Pen & Pencil Corporation. SN 125,389. Pub. 3-26-63. Filed 8-3-61.

750,884. OFS. Henri Malsert. SN 129,161. Pub. 3-26-63. Filed 10-2-61.

750,885. HARVEY. KVP Sutherland Paper Company. SN 141,188. Pub. 3-26-63. Filed 3-30-62.

750,886. CURVWAX. Potlatch Forests, Inc. SN 142,782. Pub. 3-26-63. Filed 4-20-62.

750,887. GUINEOKRAFT. St. Regis Paper Company. SN 145,215. Pub. 3-26-63. Filed 5-22-62.

750,888. HE AND DESIGN. Business Envelope Manufacturers, Inc. SN 145,763. Pub. 3-26-63. Filed 5-31-62.

750,889. SNOPAKE. The Battelle Development Corporation. SN 146,002. Pub. 3-26-63. Filed 6-4-62.

750,890. MOHAWK FAX. Mohawk Paper Mills, Inc. SN 147,012. Pub. 3-26-63. Filed 6-15-62.

750,891. MADRAS. The Crystal Tissue Company. SN 150,397. Pub. 3-26-63. Filed 8-3-62.

750,892. CLASS-DEX. DEV-COA Inc. SN 150,536. Pub. 3-26-63. Filed 8-6-62.

750,893. CARBO-MARK. Mason Marking Systems Corporation. SN 150,798. Pub. 3-26-63. Filed 8-8-62.

750,894. CARTOMARKER. Mason Marking Systems Corporation. SN 150,799. Pub. 3-26-63. Filed 8-8-62.

750,895. CLING-N. Mason Marking Systems Corporation. SN 150,800. Pub. 3-26-63. Filed 8-8-62.

750,896. FRAME-N. Mason Marking Systems Corporation. SN 150,802. Pub. 3-26-63. Filed 3-8-62.

750,897. M-PRESS-N. Mason Marking Systems Corporation. SN 150,803. Pub. 3-26-63. Filed 3-8-62.

750,898. RAPITYPE-N. Mason Marking Systems Corporation. SN 150,805. Pub. 3-26-63. Filed 3-8-62.

Class 38—Prints and Publications

750,899. ALTAR & HOME POCKET MISSAL. Altar & Home Pocket Missal, Inc., assignee of Dennis M. Heward. SN 115,068. Pub. 3-26-63. Filed 3-7-61.

750,900. FOOD ENGINEERING. Chilton Company. SN 115,220. Pub. 3-26-63. Filed 3-9-61.

750,901. BILLY BOUNCE. Billy Bounce Productions. SN 125,715. Pub. 3-26-63. Filed 8-10-61.

750,902. SONICARD AND DESIGN. American Kleer-Vu Plastics, Inc. SN 126,426. Pub. 3-26-63. Filed 8-22-61.

750,903. THE WEATHER BOY. Francis & Lusky Company. SN 127,764. Pub. 3-26-63. Filed 9-13-61.

750,904. HOT FAIR STORMY ETC. AND DESIGNS. Francis & Lusky Company. SN 127,765. Pub. 3-26-63. Filed 9-13-61.

750,905. MEDALLION. Allied Decals, Inc. SN 132,009. Pub. 3-26-63. Filed 11-15-61.

750,906. BREVARD COUNTY SENTINEL. Orlando Daily Newspapers, Inc. SN 133,894. Pub. 3-26-63. Filed 12-12-61.

750,907. THE DECIBEL ETC. AND DESIGN. The Chesapeake and Potomac Telephone Company. SN 143,512. Pub. 3-26-63. Filed 5-1-62.

750,908. RED OWL AND DESIGN. Red Owl Stores, Inc. SN 144,099. Pub. 3-26-63. Filed 5-8-62.

750,909. CHARTER BOOKS. The Bobbs-Merrill Company, Inc. SN 145,660. Pub. 3-26-63. Filed 5-29-62.

750,910. RANK & FILE. Rank and File Publications, Inc. SN 148,116. Pub. 3-26-63. Filed 6-26-62.

750,911. FUTURE. The United States Junior Chamber of Commerce. SN 148,251. Pub. 3-26-63. Filed 7-2-62.

750,912. FUN-TIME. Continental Advertising, Inc. SN 152,080. Pub. 3-26-63. Filed 9-7-62.

Class 39—Clothing

750,913. PERFECT BALANCE AND DESIGN. Manchester Hosiery Mills. SN 125,064. Pub. 3-26-63. Filed 7-31-61.

750,914. HANES AND DESIGN. P. H. Hanes Knitting Company. SN 132,668. Pub. 3-26-63. Filed 12-8-61.

750,915. REPRESENTATION OF AN UMBRELLA. Arnold D. Palmer. MULTIPLE CLASS CERTIFICATE (Classes 39 and 40). SN 135,293. Pub. 3-26-63. Filed 1-5-62.

750,916. REPELLEX. Driway Raincoats Limited. SN 139,932. Pub. 3-26-63. Filed 3-15-62.

750,917. GARRISON. Garrison Sportswear, Inc. SN 141,176. Pub. 3-26-63. Filed 3-30-62.

750,918. PERMA-FINISH. Edwards & Hill, Inc. SN 142,710. Pub. 3-26-63. Filed 4-20-62.

750,919. "J' ST." Young American Undergarment, Inc. SN 144,218. Pub. 3-26-63. Filed 5-9-62.

750,920. ANDREW GELLER EXQUISITE FOOTWEAR. Andrew Geller, Inc. SN 146,811. Pub. 3-26-63. Filed 6-13-62.

750,921. DESIGNS BY DI NINNI. Peerless Mills Corporation. SN 146,934. Pub. 3-26-63. Filed 6-14-62.

Class 40—Fancy Goods, Furnishings, and Notions

750,922. RINGPOINT. Fa. Barthels-Feldhoff. SN 138,637. Pub. 3-26-63. Filed 3-1-62.

750,923. NU-LO. Morton Zimmerman, d.b.a. Keystone Garter Company. SN 149,247. Pub. 3-26-63. Filed 7-18-62.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

750,924. CUSH-N-FOAM. Hudson Foam Plastics Corporation. SN 127,220. Pub. 3-26-63. Filed 9-18-61.

750,925. CREAZIONI SPECIALI STREAM. STREAM S.r.l. SN 130,584. Pub. 3-26-63. Filed 10-24-61.

750,926. FIGURE OF MAN UNROLLING RUG. Federal Carpet Co., Inc. SN 135,244. Pub. 3-26-63. Filed 1-8-62.

750,927. TRIOMPHE. E. De Grandmont, Inc. SN 135,774. Pub. 3-26-63. Filed 1-15-62.

750,928. LUXURY BLANKETS. Luxury Blankets, Inc. SN 139,874. Pub. 3-26-63. Filed 3-14-62.

750,929. CREAZIONI SPECIALI STREAM. STREAM S.r.l. SN 143,175. Pub. 3-26-63. Filed 4-26-62.

Class 44—Dental, Medical, and Surgical Appliances

750,787. CONSOLIDATED CERTIFICATE. See Class 21.

750,930. SKY-OX. Dye Oxygen Company. SN 136,965. Pub. 3-26-63. Filed 1-31-62.

750,931. ROTO-VAC. Clifford L. Hutson, d.b.a. Glenco Research Company. SN 144,499. Pub. 3-26-63. Filed 5-14-62.

750,932. STERI-STRIP. Minnesota Mining and Manufacturing Company. SN 153,794. Pub. 3-26-63. Filed 9-24-62.

Class 45—Soft Drinks and Carbonated Waters

750,933. RC ROYAL CROWN AND DESIGN. Royal Crown Cola Co., by change of name from Nehi Corporation. SN 29,294. Pub. 10-22-57. Filed 5-2-57.

750,934. ROYAL CROWN. Royal Crown Cola Co., by change of name from Nehi Corporation. SN 29,296. Pub. 10-29-57. Filed 5-2-57.

750,935. NACIP. Harry Kramer, d.b.a. National Citrus Products Ltd. SN 147,376. Pub. 3-26-63. Filed 6-21-62.

Class 46—Foods and Ingredients of Foods

750,936. FOSTER'S "OLD FASHION" FREEZE. Meyenberg-Old Fashion Products Company, d.b.a. Foster's Old Fashion Freeze. SN 115,507. Pub. 3-26-63. Filed 2-13-61.

750,937. HYGRADE'S AND DESIGN. Hygrade Food Products Corporation. SN 119,130. Pub. 3-26-63. Filed 5-2-61.

750,938. DESIGN OF GIRL KNEADING DOUGH. Brownberry Ovens, Inc. SN 119,660. Pub. 3-26-63. Filed 5-10-61.

750,939. CAROUSEL ETC. AND DESIGN. Weston Biscuit Company, Inc. SN 120,051. Pub. 3-26-63. Filed 5-15-61.

750,940. SPRINGTIME. Patterson Frozen Foods, Inc., d.b.a. Spring Sales Co. SN 121,236. Pub. 3-26-63. Filed 6-1-61.

750,941. MARY LEE TAYLOR. Pet Milk Company, d.b.a. Pet Dairy Products Co. SN 130,287. Pub. 3-26-63. Filed 10-18-61.

750,942. SUNNY SUE AND DESIGN. Old Monmouth Peanut Brittle Co., d.b.a. Sunny Sue Co. SN 131,060. Pub. 3-26-63. Filed 10-31-61.

750,943. YEASTFEAST. Mixin' Bowl Foods, Inc. SN 132,928. Pub. 3-26-63. Filed 11-28-61.

750,944. HONEY BIRD. Eastern Poultry Co., Inc. SN 133,234. Pub. 3-26-63. Filed 12-4-61.

750,945. BETTY BAKER. Betty Baker Frozen Foods Co., Inc. SN 133,624. Pub. 3-26-63. Filed 12-8-61.

750,946. TARANTELLA. The Continental Fruit Packing Co., Limited. SN 134,194. Pub. 3-26-63. Filed 12-18-61.

750,947. TARANTELLA AND DESIGN. The Continental Fruit Packing Co., Limited. SN 134,724. Pub. 3-26-63. Filed 12-27-61.

750,948. PASTRY CART AND DESIGN. Farm House Frozen Foods, Inc. SN 134,965. Pub. 3-26-63. Filed 1-2-62.

750,949. NEUROCA. Societe Philanthropique de la Ligniere. SN 135,837. Pub. 3-26-63. Filed 1-15-62.

750,950. PA AND DESIGN. Pan-Alaska Fisheries, Inc. SN 136,277. Pub. 3-26-63. Filed 1-22-62.

750,951. TROPIC FRESH. Sub-Tropic Fruit Co. Inc. SN 136,837. Pub. 3-26-63. Filed 1-29-62.

750,952. BON SECOUR. Bon Secour Fisheries, Inc. SN 137,319. Pub. 3-26-63. Filed 2-6-62.

750,953. ADMIRAL. Sea Minerals, Incorporated. SN 137,467. Pub. 3-26-63. Filed 2-7-62.

750,954. ADMIRAL TRACE ELEMENT SEA SALT AND DESIGN. Sea Minerals, Incorporated. SN 137,468. Pub. 3-26-63. Filed 2-7-62.

750,955. BEEF-IN-A-MUG. Langis Laboratories Limited. SN 137,532. Pub. 3-26-63. Filed 2-8-62.

750,956. HASKRAUT. Joseph V. Hasto. SN 137,627. Pub. 3-26-63. Filed 2-9-62.

750,957. LANCASTER BRAND. Acme Markets, Inc., by change of name from American Stores Company. SN 138,352. Pub. 3-26-63. Filed 2-21-62.

750,958. ACME FIESTA AND DESIGN. Acme Markets, Inc., by change of name from American Stores Company. SN 138,360. Pub. 3-26-63. Filed 2-21-62.

750,959. GLENSIDE PARK. Acme Markets, Inc., by change of name from American Stores Company. SN 138,361. Pub. 3-26-63. Filed 2-21-62.

750,960. ACME LOUELLA AND DESIGN. Acme Markets, Inc., by change of name from American Stores Company. SN 138,367. Pub. 3-26-63. Filed 2-21-62.

750,961. FIRESIDE BRAND. Acme Markets, Inc., by change of name from American Stores Company. SN 138,370. Pub. 3-26-63. Filed 2-21-62.

750,962. NESTLE'S TRIPLE DECKER. The Nestlé Company, Inc. SN 138,416. Pub. 3-26-63. Filed 2-21-62.

750,963. GRAND UNION. The Grand Union Company. SN 139,406. Pub. 3-26-63. Filed 3-8-62.

750,964. MRS. PIPPEN'S. Coast Counties Canning Co. SN 141,252. Pub. 3-26-63. Filed 4-2-62.

750,965. CHILLEROO. Marian Company. SN 143,149. Pub. 3-26-63. Filed 4-26-62.

750,966. THE HOME OF MR. MAC AND DESIGN. Marshall Farm, Incorporated. SN 145,385. Pub. 3-26-63. Filed 5-24-62.

750,967. KOO-KOO. Leaf Brands, Inc. SN 145,398. Pub. 3-26-63. Filed 7-5-62.

750,968. HI-HEALTH. Prospect Dairy, Inc. SN 145,842. Pub. 3-26-63. Filed 7-11-62.

750,969. MISS GOLDY AND DESIGN. Sanderson Farms, Inc. SN 149,677. Pub. 3-26-63. Filed 7-24-62.

750,970. MF MILANI AND DESIGN. Milani Foods, Inc. SN 150,091. Pub. 3-26-63. Filed 7-30-62.

750,971. SWEET LOVES. W. O. Sommers, Inc. SN 150,191. Pub. 3-26-63. Filed 7-31-62.

750,972. SEA RIPPLE. Frank J. Tarantino, d.b.a. F. J. Tarantino and as Tarantino's Canned Sea Foods. SN 150,197. Pub. 3-26-63. Filed 7-31-62.

750,973. WHEAT OATA. Ralston Purina Company. SN 151,527. Pub. 3-26-63. Filed 8-20-62.

750,974. COUNTRY OVEN. The Kroger Co. SN 152,707. Pub. 3-26-63. Filed 9-7-62.

750,975. ROBERTS. Roberts Food Corporation. SN 153,117. Pub. 3-26-63. Filed 9-13-62.

750,976. TELSTAR. A. Giuriani & Bro. SN 153,273. Pub. 3-26-63. Filed 9-17-62.

750,977. NASSAU. Pepperidge Farm, Incorporated. SN 153,318. Pub. 3-26-63. Filed 9-17-62.

750,978. HOLLAND HOUSE. J. J. Newberry Co. SN 153,588. Pub. 3-26-63. Filed 9-20-62.

750,979. COUNTRY CHEF. Mona Melvin Shelton, d.b.a. Country Chef Foods. SN 153,598. Pub. 3-26-63. Filed 9-20-62.

750,980. McCORMICK SCHILLING AND DESIGN. McCormick & Company, Incorporated. SN 153,885. Pub. 3-26-63. Filed 9-25-62.

Class 47—Wines

750,981. DESIGN OF A FISH PENDANT. Società per Azioni Fratelli Folonari. SN 126,487. Pub. 3-26-63. Filed 8-22-61.

750,982. LEJON. United Vintners, Inc., d.b.a. Shewan-Jones and Lejon Champagne Cellars. SN 148,545. Pub. 3-26-63. Filed 7-6-62.

Class 48—Malt Beverages and Liquors

750,983. CHURN DESIGN. Mackeson & Company Limited. SN 143,647. Pub. 3-26-63. Filed 5-2-62.

Class 49—Distilled Alcoholic Liquors

750,984. CANADIAN MIST. Barton Distilling Company. SN 136,719. Pub. 3-26-63. Filed 1-29-62.

750,985. LEADER. Jas. Barclay & Co. Limited. SN 144,589. Pub. 3-26-63. Filed 5-15-62.

750,986. DISTILLER'S GOLD. House of Wines Inc. SN 145,557. Pub. 3-26-64. Filed 5-28-62.

750,987. GOLD PENNANT. Brown-Forman Distillers Corporation. SN 147,792. Pub. 3-26-63. Filed 6-27-62.

750,988. WHITE RUSSIAN. Heublein, Inc. SN 149,464. Pub. 3-26-63. Filed 7-20-62.

Class 50—Merchandise Not Otherwise Classified

750,989. MUSTKIT. R. Sheldon Corporation. SN 109,111. Pub. 3-26-63. Filed 11-25-60.

750,990. THE GUILD OF ISRAELI CRAFTSMEN ISRAELI ART CRAFT AND DESIGN. Israeli Art-Craft Importing Co., Inc. SN 119,822. Pub. 3-26-63. Filed 5-9-61.

750,991. BIP. John L. Rie, Inc. SN 126,389. Pub. 3-26-63. Filed 8-21-61.

750,992. BRITE NITE. Kaiser Displays, Inc. SN 128,174. Pub. 3-26-63. Filed 9-19-61.

750,993. BOW-K. Bow-K-Corporation. SN 129,729. Pub. 3-26-63. Filed 10-12-61.

750,994. MAGNATROL AND DESIGN. P. Flanigan and Sons, Inc. SN 130,277. Pub. 3-26-63. Filed 10-19-61.

750,995. THIN MAN. The George F. Cram Company, Incorporated. SN 137,720. Pub. 3-26-63. Filed 2-12-62.

750,996. GENERAL CRAFTS ETC. AND DESIGN. General Crafts Corporation. SN 144,068. Pub. 3-26-63. Filed 5-8-62.

750,997. ROTO-VISION. Kimball Manufacturing Corporation. SN 148,208. Pub. 3-26-63. Filed 7-2-62.

750,998. USM AND DESIGN. United Shoe Machinery Corporation. SN 150,478. Pub. 3-26-63. Filed 8-8-62.

750,999. ALUMA-SIGNS. Hawkins-Hawkins Co. Inc. SN 150,943. Pub. 3-26-63. Filed 8-10-62.

751,000. GIANT DIRECT-O. The Hopp Press, Inc. SN 151,322. Pub. 3-26-63. Filed 8-16-62.

Class 51 — Cosmetics and Toilet Preparations

751,001. TINSOL. S.I.P.A.P.—S.p.A. Societa Italiana Prodotti Apparecchi Parrucchieri. SN 103,211. Pub. 3-26-63. Filed 8-22-60.

751,002. OZON COLOR-RICH. Associated Brands, Inc. SN 104,884. Pub. 3-26-63. Filed 9-21-60.

751,003. KREEM TONE. California Beauty and Barber Supply, Inc., d.b.a. Hollywood Beauty & Barber Supply. SN 114,831. Pub. 3-26-63. Filed 3-3-61.

751,004. MY DREAM AND DESIGN. Freddy, S.A.R.L., d.b.a. De Vernon. SN 132,283. Pub. 3-26-63. Filed 11-17-61.

751,005. FOUNDATION PLUS. Hazel Bishop Inc., assignee of Lanolin Plus, Inc. SN 134,994. Pub. 3-26-63. Filed 1-2-62.

751,006. EMPERADOR. Perramon y Argulloi, S.R.C. SN 135,151. Pub. 3-26-63. Filed 1-3-62.

751,007. PERENNIA. International Cosmetics, Inc. SN 135,799. Pub. 3-26-63. Filed 1-15-62.

751,008. CLING. Merle Norman Cosmetics, Inc. SN 142,542. Pub. 3-26-63. Filed 4-18-62.

751,009. SHAVOTION. Charles A. Crete, d.b.a. Pharmaceutical Associates. SN 149,370. Pub. 3-26-63. Filed 7-19-62.

751,010. YEARS AWAY. Chesebrough-Pond's Inc. SN 149,820. Pub. 3-26-63. Filed 7-26-62.

751,011. TRACERY. The Fuller Brush Company. SN 149,841. Pub. 3-26-63. Filed 7-26-62.

Class 52 — Detergents and Soaps

750,715. CONSOLIDATED CERTIFICATE. See Class 1.

751,012. SUPER-EDISONITE. S. M. Edison Chemical Company, Inc. SN 133,058. Pub. 3-26-63. Filed 11-30-61.

751,013. SIL AND DESIGN. Donnell W. Wright, d.b.a. Donnell W. Wright Mfg. Co. SN 134,860. Pub. 3-26-63. Filed 12-28-61.

751,014. POLYCHEM. U.S. Polychemical Corporation. SN 139,161. Pub. 3-26-63. Filed 3-5-62.

751,015. STIEFEL AND DESIGN. Stiefel Laboratories, Inc. SN 141,126. Pub. 3-26-63. Filed 3-29-62.

751,016. METED. Texas Pharmacal Company. SN 148,436. Pub. 3-26-63. Filed 7-5-62.

751,017. MIRADERM. Pharmacosmetics, Inc. SN 148,841. Pub. 3-26-63. Filed 7-11-62.

Service Marks

Class 100 — Miscellaneous

751,018. MEO PATACCA. Diana Olmsted, nee Vare. SN 121,113. Pub. 3-26-63. Filed 5-31-61.

751,019. TODAYS DISPLAYS AND DESIGN. Todays Displays, Inc. SN 135,067. Pub. 3-26-63. Filed 1-2-62.

751,020. NELSONS AND DESIGN. Nelsons Food Systems, Inc., assignee of Nelsons Food Service, Inc. SN 136,799. Pub. 3-26-63. Filed 1-29-62.

751,021. REACT. The Hallicrafters Co. SN 137,747. Pub. 3-26-63. Filed 2-12-62.

751,022. CANDLELIGHT INN. Candlelight Inns Corporation. SN 140,424. Pub. 3-26-63. Filed 3-22-62.

751,023. FROSTOP. Frostop Products, Inc. SN 145,934. Pub. 3-26-63. Filed 6-1-62.

751,024. MERCO STORES. Merco Stores, Inc. SN 147,132. Pub. 3-26-63. Filed 6-18-62.

751,025. BIDDLE ESTABLISHED 1879 AND DESIGN. Biddle Purchasing Company. SN 149,535. Pub. 3-26-63. Filed 7-24-62.

751,026. JUNIORS. Juniors Restaurant, Inc. SN 150,785. Pub. 3-26-63. Filed 8-8-62.

Class 101 — Advertising and Business

751,027. NCSS AND DESIGN. James R. Bremner, Jr., d.b.a. National Car Shoppers Service. SN 48,825. Pub. 3-26-63. Filed 4-1-58.

751,028. INSTANT NEWS. Dow Jones & Company, Inc. SN 115,452. Pub. 3-26-63. Filed 3-13-61.

751,029. BIRTHDAY CLUB AND DESIGN. Birthday Club, Inc. SN 123,599. Pub. 3-26-63. Filed 7-10-61.

751,030. NATIONAL COLLEGE QUEEN CONTEST. National College Queen Contest, Inc. SN 130,642. Pub. 3-26-63. Filed 10-25-61.

751,031. REPRESENTATION OF A HUMAN FEMALE IN SUNBURST DESIGN. The American Dairy Association. SN 133,121. Pub. 3-26-63. Filed 12-1-61.

751,032. OMC. Organization Manning Controls, Inc. SN 146,095. Pub. 3-26-63. Filed 6-4-62.

751,033. THOM McAN. Melville Shoe Corporation. SN 148,742. Pub. 3-26-63. Filed 7-10-62.

751,034. PLAIDLAND. E. F. MacDonald Stamp Company. SN 150,429. Pub. 3-26-63. Filed 8-3-62.

Class 102 — Insurance and Financial

751,035. HUMBLE-MATIC. Humble Oil & Refining Company. SN 111,101. Pub. 3-26-63. Filed 12-30-60.

751,036. COLLEGE ASSURANCE PLAN CAP AND DESIGN. CAP, Inc. SN 113,043. Pub. 3-26-63. Filed 12-29-60.

751,037. MAGIC CIRCLE. Jackson Furniture Company. SN 113,113. Pub. 3-26-63. Filed 2-6-61.

751,038. FLEX-RATE. Farmers Savings and Loan Association. SN 137,223. Pub. 3-26-63. Filed 2-5-62.

751,039. MINNESOTA TITLE. Title Insurance Company of Minnesota. SN 141,908. Pub. 3-26-63. Filed 4-9-62.

751,040. MINUTEMAN PROTECTION ETC. AND DESIGN. Archie Slawsby Agency, Inc., d.b.a. Slawsby Insurance. SN 146,935. Pub. 3-26-63. Filed 6-14-62.

751,041. REPRESENTATION OF A FANCIFUL MINUTEMAN ON ROLLER SKATES. Archie Slawsby Agency, Inc., d.b.a. Slawsby Insurance. SN 146,936. Pub. 3-26-63. Filed 6-14-62.

751,042. J.B.H. & CO. ETC. AND DESIGN. J. B. Hanauer & Co. SN 150,053. Pub. 3-26-63. Filed 7-30-62.

751,043. MODERN PROTECTION WITH THE HUMAN TOUCH! AND DESIGN. Federated Mutual Implement and Hardware Insurance Company. SN 151,744. Pub. 3-26-63. Filed 8-23-62.

751,044. YOU'RE IN GOOD HANDS WITH ALLSTATE INSURANCE AND DESIGN. Allstate Insurance Company. SN 152,734. Pub. 3-26-63. Filed 9-10-62.

Class 103 — Construction and Repair

751,045. UNITED ELECTRIC CO. AND DESIGN. United Electric Company. SN 106,161. Pub. 3-26-63. Filed 10-10-60.

751,046. COMAD. Comad, Inc. SN 121,706. Pub. 3-26-63. Filed 6-9-61.

751,047. PIXIE DESIGN. Associated Professional Launderers of America, Inc., assignee of Edward L. Stalvey, d.b.a. Associated Professional Laundries of Charlotte. SN 129,697. Pub. 3-26-63. Filed 10-11-61.

751,048. DIAMOND STEEL ETC. AND DESIGN. The Diamond Steel Construction Co. SN 134,865. Pub. 3-26-63. Filed 12-21-61.

751,049. COMMERCIAL PIPING ETC. AND DESIGN. Commercial Piping Company, Inc. SN 134,866. Pub. 3-26-63. Filed 12-21-61.

751,050. SMO AND DESIGN. Southern Massachusetts Oil Corporation. SN 146,324. Pub. 3-26-63. Filed 6-6-62.

Class 104 — Communication

751,051. TELE-CARD. The Western Union Telegraph Company. SN 133,111. Pub. 3-26-63. Filed 11-30-61.

751,052. BEE GEE AND DESIGN. Triangle Publications, Inc. SN 149,343. Pub. 3-26-63. Filed 7-18-62.

Class 105 — Transportation and Storage

751,053. NATIONWIDE AND REPRESENTATION OF MAP ON WHEELS. Nationwide Trailer Rental System, Inc. SN 83,816. Pub. 3-26-63. Filed 10-22-59.

751,054. NATIONWIDE. Nationwide Trailer Rental System, Inc. SN 83,817. Pub. 3-26-63. Filed 10-22-59.

751,055. CONTINENTAL AIRLINES AND DESIGN. Continental Air Lines, Inc. SN 120,500. Pub. 3-26-63. Filed 5-22-61.

751,056. TAG. Koninklijke Luchtvaart Maatschappij N.V., d.b.a. KLM Royal Dutch Airlines. SN 135,366. Pub. 3-26-63. Filed 1-8-62.

751,057. PACIFIC STAR LINE. Zim Israel Navigation Company Ltd. SN 148,691. Pub. 3-26-63. Filed 7-9-62.

Class 106 — Material Treatment

751,058. THERMO-CHEM. Chemical Resources Corporation, assignee of Thermo-Chem Corporation. SN 127,819. Pub. 3-26-63. Filed 9-18-61.

751,059. MCL. Manhattan Color Laboratory, Inc. SN 135,691. Pub. 3-26-63. Filed 1-12-62.

Class 107 — Education and Entertainment

751,060. THE WORLD AROUND US AND DESIGN. The World Around Us, Inc. SN 111,455. Pub. 3-26-63. Filed 1-5-61.

751,061. INSIDE POLITICS. Better Government Association. SN 129,898. Pub. 3-26-63. Filed 9-28-61.

751,062. TEXANS AND DESIGN. Dallas Texans Football Club, Inc. SN 142,930. Pub. 3-26-63. Filed 4-24-62.

751,063. BA AND DESIGN. Belmont Aviation Corporation. SN 143,094. Pub. 3-26-63. Filed 4-26-62.

Collective Membership Mark

Class 200

751,064. AMERICAN SCHOOL BAND DIRECTORS ASS'N AND DESIGN. American School Band Directors' Association. SN 102,004. Pub. 3-26-63. Filed 8-4-60.

Certification Marks

Class A — Goods

751,065. UNION MADE ETC. AND REPRESENTATION OF A SEWING MACHINE. Amalgamated Clothing Workers of America. SN 147,531. Pub. 3-26-63. Filed 6-25-62.

Class B — Services

751,066. MTS ETC. AND DESIGN. Motor Travel Services, Inc. SN 142,843. Pub. 3-26-63. Filed 4-23-62.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 6 — Chemicals and Chemical Compositions

751,067. Fels and Company, Philadelphia, Pa. SN 151,131. Filed P.R. 8-14-62; Am. S.R. 2-12-63.



The mark comprises the conformation of the bottle.
For Fabric Softener.
First use Jan. 29, 1962.

Class 12 — Construction Materials

751,068. Minnesota and Ontario Paper Company, Minneapolis, Minn. SN 141,238. Filed P.R. 4-2-62; Am. S.R. 3-13-63.

PAISLEY

For Decorative-Acoustical Tileboard.
First use Mar. 9, 1962.

Class 13 — Hardware and Plumbing and Steam-Fitting Supplies

751,069. Clair R. Killen, d.b.a. Unit Engineering Company, Gardena, Calif. SN 84,775. Filed P.R. 11-6-59; Am. S.R. 2-25-63.

CLIP STRIP

For Clip for Securing Papers, Drawings, Maps and the Like.
First use May 29, 1958.

Class 18 — Medicines and Pharmaceutical Preparations

751,070. U.S. Ethicals Inc., Long Island City, N.Y., by change of name from Ethica Standard Co., Inc., Long Island City, N.Y. SN 119,866. Filed P.R. 5-12-61; Am. S.R. 10-18-61.

U.S. Ethicals

For Vitamin Products and Pharmaceutical Preparations for Human Use.
First use May 8, 1961.

751,071. Tanabe Seiyaku Co. Ltd., Higashi-ku, Osaka, Japan. SN 150,898. Filed P.R. 8-9-62; Am. S.R. 4-3-63.

BESTON
ベストン

The Japanese characters shown in the drawing are a phonetic equivalent of the term "Beston." Owner of Japanese Reg. No. 391,410, dated Sept. 13, 1950.
For Vitamin Preparations for Use in Medicine and Pharmacy.

Class 21 — Electrical Apparatus, Machines, and Supplies

751,072. Barler, Inc., Goshen, Ind. SN 122,749. Filed P.R. 6-26-61; Am. S.R. 3-6-63.

BLINK-N-BEACON

For Warning Light Devices.
First use Apr. 25, 1961.

751,073. The Enlite Products Co., Inc., New York, N.Y. SN 151,896. Filed 8-27-62.



The drawing is lined for red and yellow.
For Electric Accessories for Bicycles—Namely, Electric Lights, Electric Horns, Electric Sirens, and Electric Generators.
First use on or prior to June 1, 1961.

Class 22 — Games, Toys, and Sporting Goods

751,074. De Luxe Reading Corporation, Newark, N.J. SN 119,684. Filed P.R. 5-10-61; Am. S.R. 3-28-63.

"DE LUXE DREAM KITCHEN"

No claim is made to the word "Kitchen" apart from the mark shown on the drawing.
For Toy Kitchens.
First use Feb. 20, 1961.

751,075. De Luxe Reading Corporation, Newark, N.J. SN 119,686. Filed P.R. 5-10-61; Am. S.R. 3-28-63.

"DE LUXE BEAUTY PARLOR"

No claim is made to the term "Beauty Parlor" apart from the mark shown on the drawing.
For Plastic Toy in the Form of Miniature Beauty Parlors.
First use Feb. 20, 1961.

Class 26 — Measuring and Scientific Appliances

751,076. Sunspecs, Bonanza, Oreg. SN 121,879. Filed P.R. 6-12-61; Am. S.R. 4-18-62.

SUNSPECS

For Glare Preventative and Protective Attachment for Lenses of Eye Glasses, Goggles, Binoculars and the Like.
First use Nov. 26, 1960.

751,077. Ault Magnetics, Inc., Minneapolis, Minn., assignee of Joseph C. Ault, d.b.a. Ault Magnetics, Minneapolis, Minn. SN 121,964. Filed P.R. 6-14-61; Am. S.R. 5-2-62.

AULT

For Electronic Devices—Namely, Electronic Regulated Power Supplies, Variable Time Constant Networks, and Components Thereof for Use in the Computer Industry.
First use Nov. 9, 1958.

751,078. Gaylord Products, Incorporated, Chicago, Ill. SN 132,629. Filed P.R. 11-27-61; Am. S.R. 3-21-63.

GAYLORD

For Motion Detectors.
First use June 9, 1961.

Class 32 — Furniture and Upholstery

751,079. The United States Bedding Company, St. Paul, Minn. SN 106,165. Filed P.R. 10-10-60; Am. S.R. 4-12-63.

QUILTOP

For Innerspring Mattresses.
First use August 1959.

Class 36 — Musical Instruments and Supplies

751,080. Gospel Light Publications, Glendale, Calif. SN 156,594. Filed P.R. 11-5-62; Am. S.R. 4-8-63.



For Phonograph Records.
First use Dec. 31, 1959.

751,081. Gospel Light Publications, Glendale, Calif. SN 156,595. Filed P.R. 11-5-62; Am. S.R. 4-8-63.

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For Phonograph Records.
First use Dec. 31, 1959.

Class 38 — Prints and Publications

751,082. Farnsworth Publishing Company, Inc., New York, N.Y. SN 131,028. Filed P.R. 10-31-61; Am. S.R. 4-9-63.

THE FARNSWORTH REPORT

For Monthly Pamphlet Directed to Life Insurance Companies.
First use Sept. 15, 1961.

751,083. Blake-Potter, Incorporated, Charleston, W. Va. SN 148,464. Filed P.R. 7-6-62; Am. S.R. 4-8-63.

WEST VIRGINIA NEWSDIGEST

For Independent Monthly Newsmagazine of West Virginia.
First use Oct. 1, 1961.

Class 39 — Clothing

751,084. Geist & Geist, Inc., New York, N.Y. SN 133,783. Filed P.R. 12-11-61; Am. S.R. 4-11-63.

FASHION IN MOTION

For Women's and Children's Sweaters, Coats, Dresses, Slacks, Shorts, and Bathing Suits.
First use Oct. 16, 1961.

Class 40 — Fancy Goods, Furnishings, and Notions

751,085. E. E. Weller Co., Providence, R.I. SN 131,737. Filed P.R. 11-9-61; Am. S.R. 11-30-62.

SNAG-PRUF

For Shoe Buckles of Non-Precious Metal.
First use Oct. 17, 1961.

Class 46 — Foods and Ingredients of Foods

751,086. M.J.B. Co., San Francisco, Calif. SN 136,259. Filed P.R. 1-22-62; Am. S.R. 1-2-63



For Tea.
First use Nov. 20, 1961.

Class 47 — Wines

751,087. The Westminster Corporation, Long Island City, N.Y. SN 144,210. Filed P.R. 5-9-62; Am. S.R. 4-9-63.

BRAZILIA

For Fruit Wine Specialty.
First use Mar. 28, 1962.

Class 51 — Cosmetics and Toilet Preparations

751,088. Cort Cosmetics, Inc., Stamford, Conn. SN 97,174. Filed P.R. 5–16–60; Am. S.R. 11–22–61.

SPRAY AND WAVE

For Hair Spray.
First use Aug. 15, 1958.

751,089. Shulton, Inc., Clifton, N.J. SN 128,603. Filed P.R. 9–25–61; Am. S.R. 4–2–63.

PRETTY PERM

For Home Permanent Hair Wave Preparation.
First use Aug. 11, 1961.

751,090. Hazel Bishop, Inc., New York, N.Y. SN 142,407. Filed P.R. 4–17–62; Am. S.R. 4–12–63.

SET TO STAY

For Hair Set Preparation.
First use Mar. 15, 1962.

751,091. Merle Norman Cosmetics, Inc., Los Angeles, Calif. SN 142,545. Filed P.R. 4–18–62; Am. S.R. 4–12–63.

AUTUMN HAZE

For Powder Base.
First use Mar. 23, 1962.

751,092. Nethercutt Laboratories, d.b.a. Cosgenic Labs., Los Angeles, Calif. SN 143,548. Filed P.R. 5–1–62; Am. S.R. 4–1–63.

HUMDINGER RED

For Lipstick.
First use Mar. 19, 1962.

751,093. Nethercutt Laboratories, d.b.a. Cosgenic Labs., Los Angeles, Calif. SN 143,550. Filed P.R. 5–1–62; Am. S.R. 4–5–63.

DOUBLE WHAMMY RED

For Lipstick.
First use Mar. 19, 1962.

751,094. Nethercutt Laboratories, d.b.a. Cosgenic Labs., Los Angeles, Calif. SN 143,551. Filed P.R. 5–1–62; Am. S.R. 4–1–63.

OBVIOUSLY PINK

For Lipstick.
First use Mar. 19, 1962.

751,095. Nethercutt Laboratories, d.b.a. Cosgenic Labs., Los Angeles, Calif. SN 143,553. Filed P.R. 5–1–62; Am. S.R. 4–1–63.

OSO RED

For Lipstick.
First use Mar. 19, 1962.

751,096. Hazel Bishop, Inc., d.b.a. Lanolin Plus, Newark, N.J. SN 150,322. Filed P.R. 8–2–62; Am. S.R. 4–4–63.



The trademark comprises the contour or configuration of a package for the goods.
For Lipstick and Nail Enamel.
First use Sept. 20, 1961.

Class 52 — Detergents and Soaps

751,097. H. M. Sinclair, Jr., trustee for the Sinclair Manufacturing Company, Toledo, Ohio. SN 131,922. Filed 11–13–61.



The mark consists of the configuration of the container for the goods.
For Liquid Detergent for General Household Use.
First use Sept. 26, 1960.

Service Mark

Class 105 — Transportation and Storage

751,098. S. Malatesta & Sons, Paterson, N.J. SN 146,061. Filed P.R. 6–4–62; Am. S.R. 4–11–63.

MAINE TO MIAMI

For Storage and Transportation of the Goods of Others by Motor Vehicle.
First use March 1947.

TRADEMARK REGISTRATIONS RENEWED

22,859. WALTHAM MASS. Cl. 27. 4–25–1893.
22,955. CRITERION COAL AND DESIGN. Cl. 1. 5–2–1893.
23,089. WHITE ROSE. Cl. 46. 5–23–1893.
23,126. WHITE ROSE. Cl. 46. 5–30–1893.
23,420. GARLOCK AND DESIGN. Cl. 35. 7–25–1893.
164,526. MAXFLI. Cl. 22. 2–20–23.
164,855. AMACCO. Cl. 10. 2–27–23.
165,987. SEBASTOPOL APPLE GROWERS UNION AND DESIGN. Cl. 46. 3–27–23.
166,091. OAK GLENN. Cl. 46. 3–27–23.
166,092. ASTRAL. Cl. 46. 3–27–23.
166,099. HAISS. Cl. 23. 3–27–23.
166,489. KUHN'S AND DESIGN. Cl. 16. 4–3–23.
166,691. NATION-WIDE J. C. PENNY CO. AND DESIGN. Cl. 39. 4–10–23.
166,782. WEXTEEL. Cl. 23. 4–17–23.

166,899. GOLDEN WEST. Cl. 46. 4–17–23.
167,737. BATHOL. Cl. 18. 5–8–23.
168,234. TRAVELETTE. Cl. 51. 5–15–23.
169,247. SANITEX. Cl. 42. 6–12–23.
169,274. FEDERAL. Cl. 35. 6–12–23.
169,275. FEDERAL AND DESIGN. Cl. 35. 6–12–23.
169,758. HUYLER'S. Cl. 46. 7–3–23.
170,590. THE HUMBER ETC. AND DESIGN. Cl. 19. 7–17–23.
171,076. PURITY CHEESE AND DESIGN. Cl. 46. 7–31–23.
171,495. CARBON-RAISER. Cl. 1. 8–7–23.
172,323. ANGELUS. Cl. 51. 9–25–23.
173,385. CROWNED LYON BRAND AND DESIGN. Cl. 46. 9–25–23.
173,869. DARNETTE. Cl. 39. 10–2–23.
399,480. MIDO MULTIFORT. Cl. 27. 1–12–43.
400,162. SEERTA-PLUS. Cl. 18. 2–16–43.
400,163. VITA-PLUS. Cl. 18. 2–16–43.
400,825. TUEC. Cl. 23. 4–6–43.
400,971. UNICON. Cl. 12. 4–13–43.
400,973. ESKIMO PIE. Cl. 46. 4–13–43.
400,981. DESIGN OF HEAD OF COW. Cl. 46. 4–13–43.
401,029. VYCOR. Cl. 35. 4–20–43.
401,172. KINGSWAY. Cl. 28. 4–27–43.
401,193. ROTAIR. Cl. 23. 4–27–43.
401,238. RAD. Cl. 52. 5–4–43.
401,264. ROTOGRATE STOKER. Cl. 34. 5–4–43.
401,415. SAPAMINE. Cl. 6. 5–18–43.
401,421. FIRESTONE. Cl. 37. 5–18–43.
401,431. LUXURY. Cl. 46. 5–18–43.
401,721. THOMPSON. Cl. 23. 6–1–43.
401,746. S. E. McCORMICK. Cl. 49. 6–8–43.
401,893. WECK. Cl. 23. 6–15–43.
402,130. FABERGE. Cl. 51. 6–29–43.
402,276. RX. Cl. 34. 7–13–43.
402,403. PLASKITE. Cl. 13. 7–20–43.
402,415. IRONTEX. Cl. 5. 7–20–43.
402,781. PHOBOTEX. Cl. 6. 8–10–43.
402,853. BONAT GLEEMOL AND DESIGN. Cl. 51. 8–17–43.
403,068. "SUGITUBE." Cl. 44. 8–31–43.
403,159. CRAWLABOUT. Cl. 39. 9–7–43.
403,244. MELURAC. Cl. 1. 9–14–43.
403,272. GALLIVANTING. Cl. 51. 9–14–43.
403,275. SOLITAIR AND DESIGN. Cl. 51. 9–14–43.
403,316. "KEEP FIT." Cl. 44. 9–14–43.
403,372. ARCHIE COMICS. Cl. 38. 9–21–43.
403,456. AIRLOX. Cl. 23. 9–28–43.
403,534. VELVET. Cl. 37. 9–28–43.

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275,303. POLO. Cl. 26. 9–23–30.
325,452. MERCARBOLIDE. Cl. 15. 6–26–35.
423,860. THIOZALKA. Cl. 6. 9–10–46.
441,113. PROHYDRATEIN. Cl. 6. 10–19–48.
636,446. PERRIN. Cl. 26. 10–30–56.
697,756. UDS ROYAL CUTTER AND DESIGN. Cl. 23. 5–17–60.
698,488. UDS. Cl. 19. 5–31–60.
703,511. UDS. Cl. 23. 8–30–60.
703,849. UDS. Cl. 21. 9–6–60.
707,077. UDS. Cl. 6. 11–15–60.
708,953. UDS. Cl. 16. 12–27–60.
711,496. UDS. Cl. 23. 2–21–61.
717,015. UDS. Cl. 1. 6–20–61.
717,470. UDS. Cl. 21. 6–27–61.
717,723. UDS. Cl. 12. 7–4–61.
735,751. CLUB DES BILLIONNAIRES. Cl. 46. 8–7–62.
735,752. CLUB DES MILLIONNAIRES. Cl. 46. 8–7–62.
737,140. LANVIN CASTILLO. Cl. 23. 9–4–62.
737,196. LANVIN CASTILLO. Cl. 39. 9–4–62.

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106,485. MAYKNIT AND DESIGN. Cl. 39. 2–8–16.
626,731. BAGSKET. Cl. 3. 5–15–56.
629,934. BABY "DOUGHTER." Cl. 26. 7–3–56.
635,025. TJAP TJENGKEH AND DESIGN. Cl. 8. 10–2–56.

The following registrations issued Apr. 23, 1957

644,342. SARANAC. Cl. 2.
644,346. MIRACLE BRUSH KEEPER. Cl. 6.
644,353. NEOCAST. Cl. 12.
644,354. TIMBERWELD AND DESIGN. Cl. 12.
644,355. TRIPLE-MATIC. Cl. 12.
644,356. SEE-ALL. Cl. 12.
644,357. TEKNOCORE. Cl. 12.
644,358. CORBRIK AND DESIGN. Cl. 12.
644,359. SOUTHWEST AND DESIGN. Cl. 12.
644,360. NECO AND DESIGN. Cl. 12.
644,365. PERMAGLAS. Cl. 12.
644,374. DYNALOK. Cl. 13.
644,380. FINGER FANTASY. Cl. 16.
644,381. FLAME X CONTROL. Cl. 16.
644,382. PLASTINETTE. Cl. 16.
644,383. LUSTER-VAR ETC. Cl. 16.
644,392. THE MARKSMAN. Cl. 17.
644,393. CC AND DESIGN. Cl. 18.
644,400. MOLOTAC. Cl. 18.
644,406. ROUNDUP. Cl. 19.
644,411. B-Z TOTE. Cl. 19.
644,413. LUCKY LITE. Cl. 21.
644,415. RELISTOR. Cl. 21.
644,421. PLUTO DOODLE. Cl. 22.
644,423. CHAMPION. Cl. 22.
644,424. STREAMLINER. Cl. 22.
644,425. POLKA DOT. Cl. 22.
644,428. CAPTAIN KIDD. Cl. 22.
644,430. ICE QUEEN. Cl. 22.
644,431. LIPPY. Cl. 22.
644,434. A-MOLE. Cl. 23.
644,453. DUO-MATIC. Cl. 26.
644,454. POLITEK. Cl. 26.
644,462. SUPER GRUEN POWER-PAK. Cl. 27.
644,463. POLYSET. Cl. 29.
644,464. SCROP. Cl. 29.
644,466. TUFTY AND DESIGN. Cl. 29.
644,467. EZ ICE. Cl. 31.
644,478. PEN VEND. Cl. 37.
644,486. CONTACT AND DESIGN. Cl. 38.
644,488. MC FORTY-FOUR. Cl. 39.
644,489. MC ONE-FIFTY. Cl. 39.
644,497. BAGHDAD. Cl. 39.
644,498. SLACK-TOP. Cl. 39.
644,499. NEE-EEK. Cl. 39.
644,500. CUDDLE BUNNY. Cl. 39.
644,501. SOFT CLOUD AND DESIGN. Cl. 39.
644,502. BRUNNY. Cl. 39.
644,506. BENNINGTWEED. Cl. 42.
644,507. NARCO. Cl. 45.
644,508. STA TRIM. Cl. 46.
644,519. PRIZE PAK. Cl. 46.
644,522. SAUCE MAGIC. Cl. 46.
644,537. KEPE NETE. Cl. 50.
644,539. SLEEV-A-DORE. Cl. 50.
644,540. MAM-SELLE. Cl. 51.
644,542. GRAY'S AND DESIGN. Cl. 51.
644,544. RIVA. Cl. 51.
644,549. STERIFOME. Cl. 52.
644,553. SLENDERELLA INTERNATIONAL AND DESIGN. Cl. 100.
644,555. RK AND DESIGN. Cl. 101.
644,559. GRAND LODGE OF THE THEATRICAL MUTUAL ASS'N AND DESIGN. Cl. 200.
644,570. QUALITYBILT ETC. AND DESIGN. Cl. 32.
644,572. CADILLAC ETC. AND DESIGN. Cl. 51.
644,573. WESTERN RED CEDAR LUMBER ASSOCIATION. Cl. B.

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393,058. GUARDIAN. Cl. 32. 1–27–42.
636,970. DELSA ETC. AND DESIGN. Cl. 46. 11–6–56.
717,877. GUARDIAN. Cl. 32. 7–4–61.
724,528. PERMACOTE. Cl. 38. 11–28–61.

TRADEMARK REGISTRATIONS AMENDED, DISCLAIMED, CORRECTED, ETC.

50,890. REPRESENTATION OF THREE RIFLES. Cl. 19. 4-3-06. The Birmingham Small Arms Company Limited, Birmingham, England. Corrected: In the certificate, lines 3 and 17, in the drawing, both occurrences, in the heading, signature and in the statement, column 1, line 3, "Co. Ld." should be deleted and *Company Limited* should be inserted.

50,890. REPRESENTATION OF THREE RIFLES. Cl. 19. 4-3-06. The Birmingham Small Arms Company Limited, Birmingham, England. Amended: In the certificate, line 9, in the drawing, in the heading and in the statement, column 2, line 4, "cycles," is deleted.

69,725. B.S.A. Cl. 19. 6-30-06. The Birmingham Small Arms Company Limited, Birmingham, England. Corrected: In the certificate, lines 3 and 17, in the drawing, both occurrences, in the declaration, in the heading, signature and in the statement, column 1, line 3, "Co." should be deleted and *Company* should be inserted.

69,725. B.S.A. Cl. 19. 6-30-06. The Birmingham Small Arms Company Limited, Birmingham, England. Amended: In the statement, column 1, line 10, "cycles," is deleted.

164,692. GRAFOIL. Cl. 15. 2-27-23. The Joseph Dixon Crucible Company, Jersey City, N.J. Corrected: In the certificate, lines 3 and 16, in the heading, signature and in the statement, column 1, line 1, before "Joseph" *The* should be inserted.

417,110. PLAIMAR AND DESIGN. Cl. 6. 10-16-45. Plaimar Limited, West Perth, Western Australia, Australia. Amended to appear:



643,229. PIONEER. Cl. 23. 3-26-57. Pioneer Gen-E-Motor Corporation, Chicago, Ill. Corrected: In the statement, column 1, line 1, "Illinois" should be deleted and *Delaware* should be inserted.

INDEX OF REGISTRANTS

JUNE 11, 1963

(Registered; Renewed; Canceled; Amended. Disclaimed, Corrected, etc.; New Certificates; 12c Publications.)

Acme Markets, Inc., from American Stores Co., Philadelphia, Pa. 750,725, pub. 3-26-63. Cl. 2.
Acme Markets, Inc., from American Stores Co., Philadelphia, Pa. 750,957-61, pub. 3-26-63. Cl. 46.
Adams Mfg. Co., The, Cleveland, Ohio. 750,866, pub. 3-26-63. Cl. 34.
Affiliated Products, Inc., Jersey City, N.J., to American Home Products Corp., New York, N.Y. 406,272, ren. 6-11-63. Cl. 51.
Agfa Ansco Corp., Binghamton, N.Y. 275,803, canc. Cl. 26.
Aktienbolaget Husqvarna Borstfabrik, Huskvarna, Sweden. 750,719, pub. 6-19-62. Cl. 2.
Alhadeff, E. & N.: *See*—
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Allied Decals, Inc., Cleveland, Ohio. 750,905, pub. 3-26-63. Cl. 38.
Allstate Insurance Co., Skokie, Ill. 751,044, pub. 3-26-63. Cl. 102.
Altar & Home Pocket Missal, Inc., from Dennis M. Heward, Hackensack, N.J. 750,899, pub. 3-26-63. Cl. 38.
Amalgamated Clothing Workers of America, New York, N.Y. 751,065, pub. 3-26-63. Cl. A.
American Agricultural Chemical Co., The, to The American Agricultural Chemical Co., New York, N.Y. 164,855, ren. 6-11-63. Cl. 10.
American Artists' Color Works, Inc., Hasleton, Pa. 644,860, canc. Cl. 16.
American Can Co., New York, N.Y. 750,726, pub. 3-26-63. Cl. 2.
American Cyanamid Co., Wayne, N.J. 403,244, ren. 6-11-63. Cl. 1.
American Dairy Association, The, Chicago, Ill. 751,031, pub. 3-26-63. Cl. 101.
American Home Products Corp.: *See*—
Affiliated Products, Inc.
Philippe, Louis, Inc.
American Hospital Supply Corp., Evanston, Ill. 644,542, canc. Cl. 51.
American Kleer-Vu Plastics, Inc., New York, N.Y. 750,902, pub. 3-26-63. Cl. 38.
American Lead Pencil Co., Hoboken, N.J., to Venus Pen & Pencil Corp., New York, N.Y. 403,534, ren. 6-11-63. Cl. 37.
American Luggage Works, Inc., Warren, R.I. 750,729, pub. 3-26-63. Cl. 3.
American-Marietta Co., Chicago, Ill. 644,434, canc. Cl. 23.
American "Pres-Stix" Tape Co., Port Huron, Mich. 750,732, pub. 6-26-63. Cl. 5.
American School Band Directors' Association, Mason City, Iowa. 751,064, pub. 3-26-63. Cl. 200.
American Stores Co.: *See*—
Acme Markets, Inc.
American Toy & Furniture Co., Inc., Chicago, Ill. 750,807, pub. 3-26-63. Cl. 22.
American Waltham Watch Co., Boston, and Waltham, Mass., New York, N.Y., to Waltham Watch Co., Chicago, Ill. 22,859, ren. 6-11-63. Cl. 27.
Arbee Corp., The, d.b.a. Manheim Mfg. and Belting Co., Manheim, Pa. 750,868, pub. 3-26-63. Cl. 35.
Archie Comic Publications, Inc.: *See*—
M.L.J. Magazines, Inc.
Arnold, Clifford R., d.b.a. Arnold Health Equipment Co., New York, N.Y. 644,422-4, canc. Cl. 22.
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Artistic Glass Decorators, Inc., Waterloo, Iowa. 750,859, pub. 3-26-63. Cl. 33.
Associated Brands, Inc., Brooklyn, N.Y. 751,002, pub. 3-26-63. Cl. 51.
Associated Professional Launderers of America, Inc., from Edward L. Stalvey, d.b.a. Associated Professional Laundries of Charlotte, Charlotte, N.C. 751,047, pub. 3-26-63. Cl. 100.
Associated Professional Laundries of Charlotte: *See*—
Associated Professional Launderers of America, Inc.
Astrodata, Inc., Anaheim, Calif. 750,847, pub. 3-26-63. Cl. 26.
Ault, Joseph C.: *See*—
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Ault Magnetics, Inc., from Joseph C. Ault, d.b.a. Ault Magnetics, Minneapolis, Minn. 751,077. Cl. 26.
Avalon Hill Co., The, Baltimore, Md. 750,806, pub. 3-26-63. Cl. 22.
Babcock Relays, Inc., Van Nuys, Calif. 644,415, canc. Cl. 21.
Baker, Betty, Frozen Foods Co., Inc., Los Angeles, Calif. 750,945, pub. 3-26-63. Cl. 46.
Baltimore Business Forms, Inc., Baltimore, Md. 750,879, pub. 3-26-63. Cl. 37.
Banning Canning Co., to George R. Barker, d.b.a. Banning Canning Co., Banning, Calif. 166,091, ren. 6-11-63. Cl. 46.
Banning Canning Co., to George R. Barker, d.b.a. Banning Canning Co., Banning, Calif. 166,092, ren. 6-11-63. Cl. 46.
Barclay, Jas., & Co. Ltd., Peoria, Ill. 750,965, pub. 3-26-63. Cl. 49.
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Barler, Inc., Goshen, Ind. 751,072. Cl. 21.
Barton Distilling Co., Chicago, Ill. 750,984, pub. 3-26-63. Cl. 49.
Battelle Development Corp., The, Columbus, Ohio. 750,889, pub. 3-26-63. Cl. 37.
Bell, Joseph, Napa, Calif. 750,803, pub. 3-26-63. Cl. 22.
Belmont Aviation Corp., Long Beach, Calif. 751,063, pub. 3-26-63. Cl. 107.
Bennett-Ireland, Inc., Norwich, N.Y. 750,862, pub. 3-26-63. Cl. 34.
Bergo Co., The, Minneapolis, Minn. 750,976, pub. 3-26-63. Cl. 36.
Berkey Photo Service, Inc., New York, N.Y. 724,523, canc. Cl. 38.
Better Government Association, Chicago, Ill. 751,061, pub. 3-26-63. Cl. 107.
Biddle Purchasing Co., New York, N.Y. 751,025, pub. 3-26-63. Cl. 100.
Billy Bounce Productions, Hempstead, N.Y. 750,901, pub. 3-26-63. Cl. 38.
Binney & Smith, Inc., New York, N.Y. 750,773, pub. 3-26-63. Cl. 16.
Birmingham Small Arms Co. Ltd., The, Birmingham, England. 50,890, cor. Cl. 19.
Birmingham Small Arms Co. Ltd., The, Birmingham, England. 50,890. Am. 7(d). Cl. 19.
Birmingham Small Arms Co. Ltd., The, Birmingham, England. 69,725. Am. 7(d). Cl. 19.
Birmingham Small Arms Co. Ltd., The, Birmingham, England. 69,725, cor. Cl. 19.
Birthday Club, Inc., St. Louis, Mo. 751,029, pub. 3-26-63. Cl. 101.
Bishop, Hasel, Inc., from Lanolin Plus, Inc., Newark, N.J. 751,005, pub. 3-26-63. Cl. 51.
Bishop, Hasel, Inc., New York, N.Y. 751,090. Cl. 51.
Bishop, Hasel, Inc., d.b.a. Lanolin Plus, Newark, N.J. 751,096. Cl. 51.
Blake-Potter, Inc., Charleston, W. Va. 751,063. Cl. 38.
Bobbs-Merrill Co., Inc., The, Indianapolis, Ind. 750,909, pub. 3-26-63. Cl. 38.
Bon Secour Fisheries, Inc., Bon Secour, Ala. 750,952, pub. 3-26-63. Cl. 46.
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Bostrom Corp., Milwaukee, Wis. 750,735, pub. 3-26-63. Cl. 19.
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Bow-K-Corp., Napa, Calif. 750,993, pub. 3-26-63. Cl. 50.
Bowman Dairy Co., Chicago, Ill. 644,506, canc. Cl. 46.
Brubaker Machinery Co., Inc., Green Bay, Wis. 750,826, pub. 3-26-63. Cl. 23.
Brenner, James R., Jr., d.b.a. National Car Shoppers Service, Chicago, Ill. 751,027, pub. 3-26-63. Cl. 101.
Bronson Products Co. of Chicago, Chicago, Ill. 644,540, canc. Cl. 51.
Brown, Bentley, Textiles, Inc.: *See*—
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Brownberry Ovens, Inc., Oconomowoc, Wis. 750,935, pub. 3-26-63. Cl. 46.
Brown-Forman Distillers Corp., Louisville, Ky. 750,967, pub. 3-26-63. Cl. 49.
Brush Keeper Co.: *See*—
Simone, Guy A.
Buckeye Mfg. Co., Inc., Newark, N.J. 750,804, pub. 3-26-63. Cl. 22.
Burston, Lew, Associates, Inc., New York, N.Y. 750,776, pub. 3-26-63. Cl. 18.
Business Envelope Mfgs., Inc., New York, N.Y. 750,888, pub. 3-26-63. Cl. 37.
Butcher Polish Co., The, Malden, Mass. 644,466, canc. Cl. 29.
Cadillac Cosmetics and Perfumes, Miami, Fla. 644,572, canc. Cl. 51.
California Beauty and Barber Supply, Inc., d.b.a. Hollywood Beauty, Van Nuys, Calif. 751,003, pub. 3-26-63. Cl. 51.
Campana Corp., Batavia, Ill., to Purex Corp., Ltd. d.b.a. Campana Corp., Lakewood, Calif. 403,275, ren. 6-11-63. Cl. 51.
Candlelight Inns Corp., Columbus, Ohio. 751,022, pub. 3-26-63. Cl. 100.
Canon Camera Kabushiki Kaisha, Ohta-ku, Tokyo, Japan. 750,834, pub. 3-26-63. Cl. 26.
CAP, Inc., Milwaukee, Wis. 751,036, pub. 3-26-63. Cl. 102.
Capuana per l'Industria Della Lignocellulosa S.p.A., Milan, Italy. 644,358, canc. Cl. 12.
Carter Products, Inc., New York, N.Y. 750,778, pub. 3-26-63. Cl. 18.

Certain-Teed Products Corp., Ardmore, Pa. 750,760, pub. 3-26-63. Cl. 12.
Certified Metals Co.: *See*—
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Chemical Corp. of America, Tallahassee, Fla. 750,731, pub. 3-26-63. Cl. 4.
Chemical Resources Corp., New York, N.Y., from Thermo-Chem Corp., Penndel, Pa. 751,058, pub. 3-26-63. Cl. 106.
Chesapeake and Potomac Telephone Co., The, Washington, D.C. 750,907, pub. 3-26-63. Cl. 38.
Chesebrough-Pond's Inc., New York, N.Y. 751,010, pub. 3-26-63. Cl. 51.
Chilton Co., Philadelphia, Pa. 750,900, pub. 3-26-63. Cl. 38.
Christy, Daniel L., d.b.a. Christy Machine Co., Fremont, Ohio. 750,831, pub. 3-26-63. Cl. 24.
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Colonial Brush Mfg. Co., Inc., Boston, Mass. 644,463, canc. Cl. 29.
Colonial Candle Co. of Cape Cod, Inc., Hyannis, Mass. 750,771, pub. 3-26-63. Cl. 15.
Comad, Inc., Moorestown, N.J. 751,046, pub. 3-26-63. Cl. 103.
Commercial Piping Co., Inc., Youngstown, Ohio. 751,049, pub. 3-26-63. Cl. 103.
Comptone Co., Ltd., New York, N.Y. 644,458, canc. Cl. 26.
Consolidated Systems Corp., Monrovia, Calif. 750,796, pub. 3-26-63. Cl. 21.
Continental Advertising, Inc., Denver, Colo. 750,912, pub. 3-26-63. Cl. 38.
Continental Air Lines, Inc., Denver, Colo. 751,055, pub. 3-26-63. Cl. 105.
Continental Car-Na-Var Corp., Brazil, Ind. 644,383, canc. Cl. 16.
Continental Fruit Packing Co., Ltd., The, London, England. 750,946-7, pub. 3-26-63. Cl. 46.
Corning Glass Works, Corning, N.Y. 401,029, ren. 6-11-63. Cl. 35.
Cort Cosmetics, Inc., Stamford, Conn. 751,088. Cl. 51.
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Nethercutt Laboratories.
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Cowap, Henry B., Evanston, Ill. 644,537, canc. Cl. 50.
Crum, George F., Co., Inc., The. 760,995, pub. 3-26-63. Cl. 50.
Crane Co., Chicago, Ill. 750,860, pub. 3-26-63. Cl. 34.
Crete, Charles A., d.b.a. Pharmaceutical Associates, San Francisco, Calif. 751,009, pub. 3-26-63. Cl. 51.
Crutchfield, Mary E., d.b.a. Wrist-Lok Co., Atlanta, Ga. 750,812, pub. 3-26-63. Cl. 22.
Crystal Tissue Co., The, Middletown, Ohio. 750,891, pub. 3-26-63. Cl. 37.
Cuddle Bunny Co., Inc., New York, N.Y. 644,500, canc. Cl. 39.
Cutler, Donald, d.b.a. Cutler Mfg. Co., Salem, Oreg. 750,756, pub. 3-26-63. Cl. 12.
Cutler Mfg. Co.: *See*—
Cutler, Donald.
Cypress Gardens Skis, Inc., Cypress Gardens, Fla. 750,813, pub. 3-26-63. Cl. 22.
DAP, Inc., Dayton, Ohio. 750,764, pub. 3-26-63. Cl. 12.
Dallas Texans Football Club, Inc., Dallas, Tex. 751,062, pub. 3-26-63. Cl. 107.
Davega Stores Corp., New York, N.Y. 644,430, canc. Cl. 22.
De Grandmont, E., Inc., New York, N.Y. 750,927, pub. 3-26-63. Cl. 42.
Del Gaizo S.p.A., Rome, Italy. 636,970, canc. Cl. 46.
De Luxe Reading Corp., Newark, N.J. 751,074-5. Cl. 22.
De Mert & Dougherty, Inc., Chicago, Ill. 644,549, canc. Cl. 52.
Detroit Stoker Co., Detroit, Mich., to United Industrial Corp., New York, N.Y. 401,264, ren. 6-11-63. Cl. 34.
Dev-Coa Inc., Floral Park, N.Y. 750,892, pub. 3-26-63. Cl. 37.
De Vernon: *See*—
Freddy, S.A.R.L.
Diamond, Lester A., Westwood, N.J. 644,358, canc. Cl. 12.
Diamond Match Co., The, New York, N.Y. 644,342, canc. Cl. 2.
Diamond Steel Construction Co., The, Youngstown, Ohio. 751,048, pub. 3-26-63. Cl. 103.
Dietzgen, Eugene, Co., Chicago, Ill. 644,454, canc. Cl. 26.
Dixon, Harry, & Sons, Inc., New York, N.Y. 750,726, pub. 3-26-63. Cl. 3.
Dixon, Joseph, Crucible Co., The, Jersey City, N.J. 164,692, corr. Cl. 15.
Dorr-Oliver Inc., Stamford, Conn. 750,752, pub. 3-26-63. Cl. 9.
Dow Chemical Co., The, Midland, Mich. 750,741, pub. 3-26-63. Cl. 6.
Dow Chemical Co., The, Midland, Mich. 750,755, pub. 3-26-63. Cl. 10.
Dow Jones & Co., Inc., New York, N.Y. 751,028, pub. 3-26-63. Cl. 101.
Dresser Industries, Inc., d.b.a. Pacific Pumps, Inc., Huntington Park, Calif. 750,833, pub. 3-26-63. Cl. 23.
Dritz-Traum Co., Inc., to David Traum Co., Inc., New York, N.Y. 402,415, ren. 6-11-63. Cl. 5.
Driway Raincoats Ltd., Leeds, England. 750,916, pub. 3-26-63. Cl. 39.
Dunlop Rubber Co. Ltd., The, London, England, to Dunlop Tire and Rubber Corp., Buffalo, N.Y. 164,526, ren. 6-11-63. Cl. 22.
Dunlop Tire and Rubber Corp.: *See*—
Dunlop Rubber Co. Ltd., The.
Dye Oxygen Co., Phoenix, Ariz. 750,930, pub. 3-26-63. Cl. 44.
Eastern Poultry Co., Inc., Stamford, Conn. 750,944, pub. 3-26-63. Cl. 46.
Ecusta Paper Corp., Pisgah Forest, N.C. 635,025, canc. Cl. 5.
Edison, S. M., Chemical Co., Inc., New York, N.Y. 751,012, pub. 3-26-63. Cl. 52.
Edwards & Hill, Inc., Chicago, Ill. 750,918, pub. 3-26-63. Cl. 39.
Emporium Industries, Inc., Emporium, Pa. 644,467, canc. Cl. 31.
Enlite Products Co., Inc., The, New York, N.Y. 751,073. Cl. 21.
Eskimo Pie Corp., Richmond, Va. 400,973, ren. 6-11-63. Cl. 46.
Essick Mfg. Co., Los Angeles, Calif. 750,835, pub. 3-26-63. Cl. 23.
Ethicon Standard Co., Inc.: *See*—
U.S. Ethicals Inc.
Faberge, Inc.: *See*—
Rubin, Samuel.
Farley & Loetscher Mfg. Co., Dubuque, Iowa. 644,570, canc. Cl. 32.
Farm House Frozen Foods, Inc., New York, N.Y. 750,948, pub. 3-26-63. Cl. 46.
Farmers Savings and Loan Association, Peoria, Ill. 751,088, pub. 3-26-63. Cl. 102.
Farnsworth Publishing Co., Inc., New York, N.Y. 751,082. Cl. 38.
Fast-Fix, Inc.: *See*—
Global Construction Devices.
Faultless Caster Corp., Evansville, Ind. 402,403, ren. 6-11-63. Cl. 13.
Federal Carpet Co., Inc., New York, N.Y. 750,926, pub. 3-26-63. Cl. 42.
Federal Rubber Co., The, to The Fisk Rubber Co., of Chicopee Falls, Mass., Cudahy, Wis., to Tidewater Oil Co., Los Angeles, Calif. 166,214-5, ren. 6-11-63. Cl. 35.
Federated Mutual Implement and Hardware Insurance Co., Owatonna, Minn. 751,043, pub. 3-26-63. Cl. 102.
Fels and Co., Philadelphia, Pa. 751,067. Cl. 6.
Firestone Tire & Rubber Co., The, Akron, Ohio. 401,421, ren. 6-11-63. Cl. 37.
Fischer, Artur, d.b.a. Artur Fischer, Feinmechanik, Plastikwer, Werkzeugbau, Tumlingen (Kr. Freudenstadt), Germany. 750,842, pub. 3-26-63. Cl. 26.
Fischer, Artur, Feinmechanik, Plastikwer, Werkzeugbau: *See*—
Fischer, Artur.
Fisher, Oscar, Co., Inc., Newburgh, N.Y. 750,848, pub. 3-26-63. Cl. 26.
Fisk Rubber Co. of Chicopee Falls, Mass., The: *See*—
Federal Rubber Co., The.
Fitz-Gerald & Littrov: *See*—
Miller-Cummings Co., Inc.
Flame Control Co., Los Angeles, Calif. 644,381, canc. Cl. 16.
Flanigan, P., and Sons, Inc., Baltimore, Md. 750,994, pub. 3-26-63. Cl. 50.
Flaska, Robert, Melrose Park, Ill. 644,425, canc. Cl. 22.
Flexonics Corp.: *See*—
Meridan Corp.
Folkard, J. S. & F., Ltd., London, England. 750,794, pub. 3-26-63. Cl. 21.
Folkard, J. S. & F., Ltd., London, England. 750,818, pub. 3-26-63. Cl. 23.
Ford Motor Co., Dearborn, Mich. 644,406, canc. Cl. 19.
Foster's Old Fashion Freeze: *See*—
Meyenberg-Old Fashion Products Co.
Francis & Lusky Co., Nashville, Tenn. 750,903-4, pub. 3-26-63. Cl. 36.
Freddy, S.A.R.L., d.b.a. De Vernon, Paris, France. 751,004, pub. 3-26-63. Cl. 51.
Friele, Anton, trustee in Bankruptcy of A/S Bergen Preserving Co., Bergen, Norway. 755,751-2, canc. Cl. 46.
Frostop Products, Inc., Humboldt, Tenn. 751,023, pub. 3-26-63. Cl. 100.
Fuller Brush Co., The, East Hartford, Conn. 751,011, pub. 3-26-63. Cl. 51.
Fused Mineral Co. Ltd., Burslem, Stoke-on-Trent, England. 750,772, pub. 3-26-63. Cl. 15.
G & T Associates, Inc., San Francisco, Calif. 750,761, pub. 3-26-63. Cl. 12.
Ganco: *See*—
Gantman, Benjamin.
Gantman, Benjamin, d.b.a. Ganco, St. Paul, Minn. 644,499, canc. Cl. 39.
Garlock Inc.: *See*—
Garlock Packing Co.
Garlock Packing Co., to Garlock Inc., Palmyra, N.Y. 23,420, ren. 6-11-63. Cl. 35.
Garrison Sportswear, Inc., New York, N.Y. 750,917, pub. 3-26-63. Cl. 39.
Gaylord Products, Inc., Chicago, Ill. 751,078. Cl. 26.
Geist & Geist, Inc., New York, N.Y. 751,084. Cl. 39.
Geller, Andrew, Inc., Brooklyn, N.Y. 750,920, canc. Cl. 39.
General Aniline & Film Corp., New York, N.Y. 750,784, pub. 3-26-63. Cl. 6.
General Crafts Corp., Baltimore, Md. 750,995, pub. 3-26-63. Cl. 50.
General Pool Corp., Summit, Ill. 750,758, pub. 3-26-63. Cl. 12.
General Precision, Inc., Glendale, from Royal Precision Corp., Burbank, Calif. 750,840, pub. 3-26-63. Cl. 26.

General Properties Co., Inc., to Midland-Ross Corp., Toledo, Ohio. 402,276, ren. 6-11-63. Cl. 34.
Gilson Bros. Co., Plymouth, Wis. 750,628, pub. 3-26-63. Cl. 23.
Giuriani, A., & Bro., San Francisco, Calif. 750,976, pub. 3-26-63. Cl. 46.
Glenco Research Co.: *See*—
Hutson, Clifford L.
Global Construction Devices, from Fast-Fix, Inc., Fort Lee, N.J. 750,757, pub. 3-26-63. Cl. 12.
Golber, Arnold D., d.b.a. Certified Metals Co., Newark, N.J. 750,851, pub. 6-26-63. Cl. 26.
Goldstein, Myron, New York, N.Y. 750,737, pub. 3-26-63. Cl. 6.
Goodrich, B. F., Co., The, Akron, Ohio, from Vanderbilt Rubber Co., Inc., New York, N.Y. 750,869, pub. 3-26-63. Cl. 35.
Goodrich, B. F., Co., The, Akron, Ohio. 750,872, pub. 3-26-63. Cl. 35.
Gospel Light Publications, Glendale, Calif. 751,080-1. Cl. 36.
Gospel Trumpet Co.: *See*—
Warner Press, Inc.
Grace, W. R., & Co.: *See*—
Plantabbs Corp.
Grand Union Co., The, East Paterson, N.J. 750,963, pub. 3-26-63. Cl. 46.
Great Lakes Carbon Corp., New York, N.Y. 644,539, canc. Cl. 50.
Greco Pharmacal, Inc., Bayside, N.Y. 750,777, pub. 3-26-63. Cl. 18.
Greene, Ray, & Co.: *See*—
Greene, Raymond P.
Greene, Raymond P., d.b.a. Ray Greene & Co., Toledo, Ohio. 750,783, pub. 3-26-63. Cl. 19.
Griffin Wheel Co., Chicago, Ill. 750,768, pub. 3-26-63. Cl. 14.
Gruen Industries, Inc., New York, N.Y. 644,462, canc. Cl. 27.
Guardian Corp., Quincy, Mass. 717,877, canc. Cl. 32.
Guignon, Emile S., Jr.: *See*—
Unicon Co.
Gulf Oil Corp., Pittsburgh, Pa. 750,717-18, pub. 3-26-63. Cl. 1.
Hach Chemical Co., Ames, Iowa. 750,736, pub. 3-26-63. Cl. 6.
Haiss, George, Mfg. Co. Inc., New York, N.Y., to Pettibone Mulliken Corp., Chicago, Ill. 166,699, ren. 6-11-63. Cl. 23.
Halliburton Co., Duncan, Okla. 750,746, pub. 3-26-63. Cl. 6.
Hallicrafters Co., The, Chicago, Ill. 751,021, pub. 3-26-63. Cl. 100.
Hanauer, J. B., & Co., Beverly Hills, Calif. 751,042, pub. 3-26-63. Cl. 102.
Hancock Corp., Philadelphia, Pa. 644,464, canc. Cl. 29.
Hanes, P. H., Knitting Co., Winston-Salem, N.C. 750,914, pub. 3-26-63. Cl. 39.
Hardy Corp., The, d.b.a. Hardy Mfg. Co., Birmingham, Ala. 750,887, pub. 3-26-63. Cl. 34.
Hardy Mfg. Co.: *See*—
Hardy Corp., The.
Hartman-Leddon Co., Inc., Philadelphia, Pa. 750,724, pub. 3-26-63. Cl. 2.
Hasto, Joseph V., Forest Hills, N.Y. 750,956, pub. 3-26-63. Cl. 46.
Hawkins-Hawkins Co., Inc., Berkeley, Calif. 750,999, pub. 3-26-63. Cl. 50.
Hercules Powder Co., d.b.a. Hercules Powder Co., Inc., Wilmington, Del. 750,754, pub. 3-26-63. Cl. 9.
Hercules Powder Co., Inc.: *See*—
Hercules Powder Co.
Heublein, Inc., Hartford, Conn. 750,963, pub. 3-26-63. Cl. 49.
High Temperature Materials, Inc., Brighton, Mass. 750,767, pub. 3-26-63. Cl. 14.
Hodgman Rubber Co.: *See*—
Strauss, Archer, Rubber Co.
Hollywood Beauty: *See*—
California Beauty and Barber Supply, Inc.
Hopp Press, Inc., The, New York, N.Y. 751,000, pub. 3-26-63. Cl. 50.
House of Wines Inc., Washington, D.C. 750,936, pub. 3-26-63. Cl. 49.
Howard, Dennis M.: *See*—
Altar & Home Pocket Missal, Inc.
Hudnut, Richard, New York, N.Y. 168,234, ren. 6-11-63. Cl. 51.
Hudson Foam Plastics Corp., Edgewater, N.J. 750,924, pub. 3-26-63. Cl. 42.
Humber Ltd., Coventry, England. 170,590, ren. 6-11-63. Cl. 19.
Humble Oil & Refining Co., Houston, Tex. 751,035, pub. 3-26-63. Cl. 102.
Hutson, Clifford L., d.b.a. Glenco Research Co., Glendale, Calif. 750,931, pub. 3-26-63. Cl. 44.
Hutzler Brothers Co., Baltimore, Md. 750,852, pub. 3-26-63. Cl. 26.
Huyler's, New York, N.Y., to Howard Johnson Co., Wollaston, Mass. 166,758, ren. 6-11-63. Cl. 46.
Hygrade Food Products Corp., Detroit, Mich. 750,937, pub. 3-26-63. Cl. 46.
Illustrade Co.: *See*—
McMath, Robert M.
Indian Head Mills, Inc., New York, N.Y. 750,751, pub. 3-26-63. Cl. 7.
Intercontinental Marketing Corp., Long Island City, N.Y. 750,889, pub. 3-26-63. Cl. 26.
International Cosmetics, Inc., Los Angeles, Calif. 751,007, pub. 3-26-63. Cl. 51.
International Crystal Mfg. Co., Inc., Oklahoma City, Okla. 750,789, pub. 3-26-63. Classes 21 and 28.
International Technology Development Corp., New York, N.Y. 750,820, pub. 3-26-63. Cl. 23.
Irwin, Neisler & Co., Decatur, Ill. 750,775, pub. 3-26-63. Cl. 18.
Israeli Art-Craft Importing Co., Inc., Philadelphia, Pa. 750,-990, pub. 3-26-63. Cl. 50.
Jackson Furniture Co., Oakland, Calif. 751,087, pub. 3-26-63. Cl. 102.
Johnson, Howard, Co.: *See*—
Huyler's.
Juniors Restaurant, Inc., Miami Beach, Fla. 751,026, pub. 3-26-63. Cl. 100.
KLM Royal Dutch Airlines: *See*—
Koninklijke Luchtvaart Maatschappij N.V.
KVP Sutherland Paper Co., Kalamazoo, Mich. 750,885, pub. 3-26-63. Cl. 37.
Kaiser Displays, Inc., Detroit, Mich. 750,992, pub. 3-26-63. Cl. 50.
Kariyn, William, Lynn, Mass. 750,839, pub. 3-26-63. Cl. 23.
Kelly, Russell, Office Service, Inc., Detroit, Mich. 644,555, canc. Cl. 101.
Kentucky Electronics Inc., Owensboro, Ky. 750,769, pub. 3-26-63. Cl. 14.
Keystone Alloys Co., Derry, Pa. 644,356, canc. Cl. 12.
Keystone Garter Co.: *See*—
Zimmerman, Morton.
Killen, Clair R., d.b.a. Unit Engineering Co., Gardena, Calif. 751,060. Cl. 13.
Kimball Mfg. Corp., San Rafael, Calif. 750,997, pub. 3-26-63. Cl. 50.
Klehm, Carl G., Arlington Heights, Ill. 750,714, pub. 3-26-63. Cl. 1.
Knapstein, T. L., Appleton, Wis., to Purity Cheese Co., Mayville, Wis. 171,076, ren. 6-11-63. Cl. 46.
Kohnstamm, H., & Co., Inc., New York, N.Y. 750,747, pub. 3-26-63. Cl. 6.
Koninklijke Luchtvaart Maatschappij N.V., d.b.a. KLM Royal Dutch Airlines, New York, N.Y. 751,066, pub. 3-26-63. Cl. 105.
Korting Radio Werke Gesellschaft mit beschraenkter Haftung, Grassau, Chiemgau, Germany. 750,791, pub. 3-26-63. Cl. 21.
Kramer, Harry, d.b.a. National Citrus Products Ltd., Los Angeles, Calif. 750,935, pub. 3-26-63. Cl. 45.
Kroger Co., The, Cincinnati, Ohio. 750,974, pub. 3-26-63. Cl. 46.
Kuhn, Harry J., d.b.a. Kuhn Paint and Varnish Works, to Kuhn Paint Co., Houston, Tex. 166,489, ren. 6-11-63. Cl. 16.
Kuhn Paint Co.: *See*—
Kuhn, Harry J.
Kuhn Paint and Varnish Works: *See*—
Kuhn, Harry J.
Langis Laboratories Ltd., Vancouver, British Columbia, Canada. 750,955, pub. 3-26-63. Cl. 46.
Lanolin Plus: *See*—
Bishop, Hazel, Inc.
Lanolin Plus, Inc.: *See*—
Bishop, Hazel, Inc.
La Telemecanique Electrique, Societe Anonyme, Nanterre, France. 750,798, pub. 3-26-63. Cl. 21.
Lauhoff Grain Co., Danville, Ill. 750,723, pub. 3-26-63. Cl. 5.
Leaf Brands, Inc., Chicago, Ill. 750,967, pub. 3-26-63. Cl. 46.
Leggett, Francis H., & Co.: *See*—
Seeman Brothers.
Le Lis (Naamloze Vennootschap), Hamme, Belgium. 750,749, pub. 3-26-63. Cl. 7.
Luxury Blankets, Inc., St. Marys, Ohio. 750,928, pub. 3-26-63. Cl. 42.
Luxury Mint Corp.: *See*—
Luxury Mint & Gum Co.
Luxury Mint & Gum Co., to Luxury Mint Corp., Chicago, Ill. 401,431, ren. 6-11-63. Cl. 46.
M.J.B. Co., San Francisco, Calif. 751,086. Cl. 46.
M.L.J. Magazines, Inc., New York, N.Y., and St. Louis, Mo., to Archie Comic Publications, Inc., New York, N.Y. 403,272, ren. 6-11-63. Cl. 38.
MacDonald, E. F., Stamp Co., Dayton, Ohio. 751,084, pub. 3-26-63. Cl. 101.
Mackeson & Co. Ltd., London, England. 750,983, pub. 3-26-63. Cl. 48.
Malatesta, S., & Sons, Paterson, N.J. 751,098. Cl. 105.
Malsert, Henri, Lyon, Rhone, France. 750,884, pub. 3-26-63. Cl. 37.
Malstrom Chemical Corp., Newark, N.J. 750,742, pub. 3-26-63. Cl. 6.
Manchester Hosiery Mills, Manchester, N.H. 750,918, pub. 3-26-63. Cl. 39.
Manhattan Color Laboratory, Inc., New York, N.Y. 751,059, pub. 3-26-63. Cl. 106.
Manheim Mfg. and Belting Co.: *See*—
Arbee Corp., The.
Manning, Joseph P., Co., Boston, Mass. 644,392, canc. Cl. 17.
Marlan Co., Chicago, Ill. 750,965, pub. 3-26-63. Cl. 46.
Marshall Farm, Inc., Fitchburg, Mass. 750,966, pub. 3-26-63. Cl. 46.
Martin, Lewis W., Manheim, Lancaster, Pa. 626,731, canc. Cl. 3.
Martin, T. C., Co.: *See*—
Martin, Thomas C.
Martin, Thomas C., d.b.a. T. C. Martin Co., Boston, Mass. 644,431, canc. Cl. 22.
Marx, Louis, & Co., Inc., New York, N.Y. 644,428, canc. Cl. 22.
Mason Marking Systems Corp., Norfolk, Va. 750,882-3, pub. 3-26-63. Cl. 37.
May Co., The, Cleveland, Ohio. 108,485, canc. Cl. 39.
McCormick & Co., Inc., Baltimore, Md. 750,980, pub. 3-26-63. Cl. 46.

McCormick Distilling Co.: *See*—
Old Weston Distilling Co.
McMath, Robert M., d.b.a. Illustrade Co., New York, N.Y. 750,727, pub. 3–26–63. Cl. 2.
Mead Corp., The, Dayton, Ohio. 750,722, pub. 3–26–63. Cl. 2.
Melville Shoe Corp., New York, N.Y. 751,038, pub. 3–26–63. Cl. 101.
Mendolia Art Associates: *See*—
Mendolia, Arthur.
Mendolia, Arthur, d.b.a. Art Mendolia Associates, Santa Paula, Calif. 644,544, canc. Cl. 51.
Merck & Co., Inc., Rahway, N.J. 750,721, pub. 3–26–63. Cl. 2.
Merco Stores, Inc., Jamaica, N.Y. 751,024, pub. 3–26–63. Cl. 100.
Meridan Corp., Inkster, Mich., to Flexonics Corp., Maywood, Ill. 644,374, canc. Cl. 13.
Merrick Costa, Ltd., New York, N.Y. 644,501, canc. Cl. 39.
Meyenberg-Old Fashion Products Co., d.b.a. Foster's Old Fashion Freeze, San Francisco, Calif. 750,936, pub. 3–26–63. Cl. 46.
Micro-Lite Co. Inc., New York, N.Y. 644,413, canc. Cl. 21.
Mid City Uniform Cap Co., Chicago, Ill. 644,488–9, canc. Cl. 39.
Midland-Ross Corp.: *See*—
General Properties Co., Inc.
Mifflin, McCambridge Co., The: *See*—
Smith, Kline & French Co.
Milani Foods, Inc., Los Angeles, Calif. 750,970, pub. 3–26–63. Cl. 46.
Miller-Cummings Co., Inc., New York, N.Y., to Fitz-Gerald & Litrov, El Centro, Calif. 173,385, ren. 6–11–63. Cl. 46.
Minex, Centrala Eksportowo-Importowa Wytworow Przemyslu Mineralnego, Warsaw, Poland. 750,854, pub. 3–26–63. Cl. 30.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn. 750,788, pub. 3–26–63. Cl. 21.
Minnesota Mining and Mfg. Co., St. Paul, Minn. 750,846, pub. 3–26–63. Cl. 26.
Minnesota Mining and Mfg. Co., St. Paul, Minn. 750,932, pub. 3–26–63. Cl. 44.
Minnesota and Ontario Paper Co., Minneapolis, Minn. 751,968. Cl. 12.
Mixin' Bowl Foods, Inc., Phoenixville, Pa. 750,943, pub. 3–26–63. Cl. 46.
Mohawk Paper Mills, Inc., Cohoes, N.Y. 750,890, pub. 3–26–63. Cl. 37.
Motor Travel Services, Inc., Minneapolis, Minn. 751,066, pub. 3–26–63. Cl. B.
Movado Watch Agency, Inc., New York, N.Y. 750,850, pub. 3–26–63. Cl. 27.
Murray Bag and Paper Corp., Vernon, Calif. 750,720, pub. 3–26–63. Cl. 2.
Musicor Record Corp., New York, N.Y. 750,874, pub. 3–26–63. Cl. 36.
Must-Pak, Inc., Valley Stream, N.Y. 750,873, pub. 3–26–63. Cl. 36.
N.F.C. Engineering Co., Anoka, Minn. 750,723, pub. 3–26–63. Cl. 2.
Narco, Inc., Chattanooga, Tenn. 644,507, canc. Cl. 45.
National Automotive Wholesalers Association, Atlanta, Ga. 697,756, canc. Cl. 23.
National Automotive Wholesalers Association, Atlanta, Ga. 698,488, canc. Cl. 19.
National Automotive Wholesalers Association, Atlanta, Ga. 703,511, canc. Cl. 23.
National Automotive Wholesalers Association, Atlanta, Ga. 705,849, canc. Cl. 21.
National Automotive Wholesalers Association, Atlanta, Ga. 707,077, canc. Cl. 6.
National Automotive Wholesalers Association, Atlanta, Ga. 708,953, canc. Cl. 16.
National Automotive Wholesalers Association, Atlanta, Ga. 711,496, canc. Cl. 23.
National Automotive Wholesalers Association, Atlanta, Ga. 717,015, canc. Cl. 1.
National Automotive Wholesalers Association, Atlanta, Ga. 717,470, canc. Cl. 21.
National Automotive Wholesalers Association, Atlanta, Ga. 717,723, canc. Cl. 13.
National Car Shoppers Service: *See*—
Bremner, James R., Jr.
National Citrus Products Ltd.: *See*—
Kramer, Harry.
National College Queen Contest, Inc., New York, N.Y. 751,030, pub. 3–26–63. Cl. 101.
National Remedy Products Co., Inc., Springfield, Mo. 750,779, pub. 3–26–63. Cl. 18.
National Publishing Co., Fort Lee, N.J. 644,486, canc. Cl. 38.
Nationwide Trailer Rental System, Inc., Wichita, Kans. 751,063–4, pub. 3–26–63. Cl. 105.
Nazira Alhadate Freijie, d.b.a. E. & N. Alhadate, Socorro, N. Mex. 644,393, canc. Cl. 18.
Neall Pressed Products Co., San Leandro, Calif. 644,360, canc. Cl. 12.
Nehi Corp.: *See*—
Royal Crown Cola Co.
Nelsons Food Service, Inc.: *See*—
Nelsons Food Systems, Inc.
Nelsons Food Systems, Inc., Dayton, Ohio, from Nelsons Food Service, Inc., Detroit, Mich. 751,020, pub. 3–26–63. Cl. 100.
Nestle Co., Inc., The, White Plains, N.Y. 750,862, pub. 3–26–63. Cl. 46.
Nethercutt Laboratories, Los Angeles, Calif. 751,092–5. Cl. 51.
New Jersey Fireworks Mfg. Co., Inc., Vineland, N.J. 750,753, pub. 3–26–63. Cl. 9.
Newberry, J. J., Co., New York, N.Y. 750,978, pub. 3–26–63. Cl. 46.
New J. M., Co., The, Bloomfield, Conn. 750,797, pub. 3–26–63. Cl. 21.
Niemetjer, Theodorus: *See*—
Niemetjer, Theodorus, N.V.
Niemetjer, Theodorus, N.V., d.b.a. Theodorus Niemetjer, Bronlagen, Netherlands. 750,774, pub. 3–26–63. Cl. 17.
Nissen Corp., from Nissen Trampoline Co., Cedar Rapids, Iowa. 750,900–01, pub. 3–26–63. Cl. 22.
Nissen Trampoline Co.: *See*—
Nissen Corp.
Nock and Son Co., The, Cleveland, Ohio. 750,789, pub. 3–26–63. Cl. 12.
Norman, Merle, Cosmetics, Inc., Los Angeles, Calif. 751,008, pub. 3–26–63. Cl. 51.
Norman, Merle, Cosmetics, Inc., Los Angeles, Calif. 751,091. Cl. 51.
Ohio Truss Co., The, to Surgical Appliance Industries, Inc., Cincinnati, Ohio. 403,316, ren. 6–11–63. Cl. 44.
Old Bennington Weavers, Inc., Bennington, Vt. 644,506, canc. Cl. 42.
Old Monmouth Peanut Brittle Co., d.b.a. Sunny Sue Co., Freehold, N.J. 750,942, pub. 3–26–63. Cl. 46.
Old Weston Distilling Co., to McCormick Distilling Co., Weston, Mo. 401,746, ren. 6–11–63. Cl. 49.
Ole Surfboards: *See*—
Olson, Robert M.
Olin Mathieson Chemical Corp., New York, N.Y. 644,400, canc. Cl. 18.
Olmsted, nee Vare, Diana, Rome, Italy. 751,018, pub. 3–26–63. Cl. 100.
Olson, Robert M., d.b.a. Ole Surfboards, Seal Beach, Calif. 750,809, pub. 3–26–63. Cl. 22.
Optique & Precision de Levallois, Levallois-Perret, Seine, France. 750,849, pub. 3–26–63. Cl. 26.
Organization Manning Controls, Inc., New York, N.Y. 751,032, pub. 3–26–63. Cl. 101.
Orlando Daily Newspapers, Inc., Orlando, Fla. 750,906, pub. 3–26–63. Cl. 38.
P. & T. Equipment Co.: *See*—
Southwest Grease & Oil Co., Inc.
Pacific Pumps, Inc.: *See*—
Dresser Industries, Inc.
Palmer, Arnold D., Cleveland, Ohio. 750,915, pub. 3–26–63. Classes 39 and 40.
Pan-Alaska Fisheries, Inc., Seattle, Wash. 750,950, pub. 3–26–63. Cl. 46.
Papercraft Corp., Pittsburgh, Pa. 750,881, pub. 3–26–63. Cl. 37.
Patterson Frozen Foods, Inc., d.b.a. Spring Sales Co., Patterson, Calif. 750,940, pub. 3–26–63. Cl. 46.
Peerless Mills Corp., New York, N.Y. 750,921, pub. 3–26–63. Cl. 39.
Penn-Chem Corp., Lancaster, Pa. 750,843, pub. 3–26–63. Cl. 26.
Penney, J. C. Co., to J. C. Penney Co., New York, N.Y. 166,691, ren. 6–11–63. Cl. 99.
Penney, J. C., Co., New York, N.Y. 406,159, ren. 6–11–63. Cl. 39.
Pen-Vend Corp., Clayton, Mo. 644,478, canc. Cl. 37.
Pepperidge Farm, Inc., Norwalk, Conn. 750,977, pub. 3–26–63. Cl. 46.
Perramon y Argullol, S.R.C., Barcelona, Spain. 751,006, pub. 3–26–63. Cl. 51.
Perrin, J. B., & Co., Inc., Culver City, Calif. 636,446, canc. Cl. 26.
Pet Dairy Products Co.: *See*—
Pet Milk Co.
Pet Milk Co., d.b.a. Pet Dairy Products Co., St. Louis, Mo. 750,941, pub. 3–26–63. Cl. 46.
Pettibone Mulliken Corp.: *See*—
Haisa, George, Mfg. Co. Inc.
Pfizer, Chas., & Co. Inc., Brooklyn, N.Y. 750,745, pub. 3–26–63. Cl. 6.
Pfizer, Chas., & Co., Inc., New York, N.Y. 750,748, pub. 3–26–63. Cl. 6.
Ph. Barthels-Feldhoff, Wuppertal-Barmen, Germany. 750,922, pub. 3–26–63. Cl. 40.
Pharmaceutical Associates: *See*—
Crete, Charles A.
Pharmacosmetics, Inc., Great Neck, N.Y. 751,017, pub. 3–26–63. Cl. 52.
Philippe, Louis, Inc., to American Home Products Corp., New York, N.Y. 178,323, ren. 6–11–63. Cl. 51.
Pioneer Gen-E-Motor Corp., Chicago, Ill. 643,229, cor. Cl. 23.
Plaimar Ltd., Western Australia, Australia. 417,110. Am. 7(d). Cl. 6.
Plantabbs Corp., Baltimore, Md., from W. R. Grace & Co., New York, N.Y. 750,735, pub. 3–26–63. Cl. 6.
Plastinette Products Corp., Austin, Tex. 644,382, canc. Cl. 16.
Platt II, Robert E., d.b.a. Robert E. Platt Machine Products, Feasterville, Pa. 750,841, pub. 3–26–63. Cl. 26.
Platt, Robert E., Machine Products: *See*—
Platt II, Robert E.
Potlatch Forests, Inc., Pomona, Calif. 750,886, pub. 3–26–63. Cl. 37.
Precision Aluminum Products Co., Philadelphia, Pa. 750,763, pub. 3–26–63. Cl. 12.
Procter & Gamble Co., The, Cincinnati, Ohio. 750,738, pub. 3–26–63. Cl. 6.
Proctor Hydro-Set Co., Montgomeryville, Pa. 750,824, pub. 3–26–63. Cl. 26.
Production Devices Inc., Whitehall, N.Y. 403,456, ren. 6–11–63. Cl. 23.
Prospect Dairy, Inc., Stamford, N.Y. 750,948, pub. 3–26–63. Cl. 46.
Purdue Frederick Co., The, New York, N.Y. 750,782, pub. 3–26–63. Cl. 18.
Purex Corp., Ltd.: *See*—
Campana Corp.

Purity Cheese Co.: *See*—
Knapstein, T. L.
Radiant Lamp Corp. of Delaware, Newark, N.J. 750,782, pub. 3–26–63. Cl. 21.
Rahn, E. W.: *See*—
Rahn, Earl W.
Rahn, Earl W., d.b.a. E. W. Rahn, Cleveland, Ohio. 750,781, pub. 3–26–63. Cl. 18.
Ralston Purina Co., St. Louis, Mo. 750,973, pub. 3–26–63. Cl. 46.
Rank and File Publications, Inc., Portland, Oreg. 750,910, pub. 3–26–63. Cl. 38.
Rap Industries, Inc., from The Rap-In-Wax Co., Minneapolis, Minn. 750,882, pub. 3–26–63. Cl. 37.
Rap-In-Wax Co., The: *See*—
Rap Industries, Inc.
Red Owl Stores, Inc., Hopkins, Minn. 750,908, pub. 3–26–63. Cl. 38.
Reed Roller Bit Co., Houston, Tex. 750,814, pub. 3–26–63. Cl. 23.
Reeves Brothers, Inc., New York, N.Y. 750,871, pub. 3–26–63. Cl. 35.
Rebeis Co., Inc., Berkeley Heights, N.J. 750,743–4, pub. 3–26–63. Cl. 6.
Renner, W. W., & Associates, Inc., New York, N.Y. 750,799, pub. 3–26–63. Cl. 21.
Renold Chains Ltd., Wythenshawe, Manchester, England. 750,830, pub. 3–26–63. Cl. 23.
Richardson-Merrell Inc.: *See*—
Vitamins Plus Inc.
Rie, John L., Inc., Yonkers, N.Y. 750,991, pub. 3–26–63. Cl. 50.
Roberts Food Corp., Brooklyn, N.Y. 750,975, pub. 3–26–63. Cl. 46.
Robinair Mfg. Corp., Montpelier, Ohio. 750,816, pub. 3–26–63. Cl. 23.
Rogers Corp., Rogers, Conn. 750,870, pub. 3–26–63. Cl. 35.
Rose-Derry Co., Newton, Mass. 750,857, pub. 3–26–63. Cl. 32.
Roth Appliance Distributors, Inc., Milwaukee, Wis., to Swift & Co., Chicago, Ill. 401,238, ren. 6–11–63. Cl. 52.
Royal Precision Corp.: *See*—
General Precision, Inc.
Royal Crown Cola Co., from Nehi Corp., Columbus, Ga. 750,933, pub. 10–22–57. Cl. 45.
Royal Crown Cola Co., from Nehi Corp., Columbus, Ga. 750,934, pub. 10–29–57. Cl. 45.
Rubin, Samuel, to Faberge, Inc., New York, N.Y. 402,130, ren. 6–11–63. Cl. 51.
S.I.P.A.P., S.p.A., Societa Italiana Prodotti Apparecchi Parrucchieri, Genoa, Italy. 751,001, pub. 3–26–63. Cl. 51.
STEAM S.r.l., Milan, Italy. 750,925, pub. 3–26–63. Cl. 42.
STEAM S.r.l., Milan, Italy. 750,929, pub. 3–26–63. Cl. 42.
Safeway Stores, Inc., Oakland, Calif. 644,519, canc. Cl. 46.
St. Regis Paper Co., New York, N.Y. 750,887, pub. 3–26–63. Cl. 37.
Sams Brothers Ltd., Hoddesdon, England. 750,811, pub. 3–26–63. Cl. 22.
Sanderson Farms, Inc., Laurel, Miss. 750,969, pub. 3–26–63. Cl. 46.
Sardi's Restaurant Corp., New York, N.Y. 644,522, canc. Cl. 46.
Schaeren, Mido G., & Co., S.A.: *See*—
Societe Anonyme Mido.
Schulmerich Carillons, Inc., Sellersville, Pa. 750,875, pub. 3–26–63. Cl. 36.
Scragg, Ernest, & Sons Ltd., Macclesfield, England. 750,832, pub. 3–26–63. Cl. 23.
Sea Minerals, Inc., Freeport, Tex. 750,953–4, pub. 3–26–63. Cl. 46.
Sears, Roebuck and Co., Chicago, Ill. 750,784, pub. 3–26–63. Cl. 10.
Sebastopol Apple Growers Union, to Sebastopol Cooperative Cannery, Sebastopol, Calif. 165,987, ren. 6–11–63. Cl. 46.
Sebastopol Cooperative Cannery: *See*—
Sebastopol Apple Growers Union.
Seeman Brothers, New York, N.Y., to Francis H. Leggett & Co., Carlstadt, N.J. 23,089, ren. 6–11–63. Cl. 46.
Seaman Brothers, New York, N.Y., to Francis H. Leggett & Co., Carlstadt, N.J. 23,126, ren. 6–11–63. Cl. 46.
Seng Co., The, Chicago, Ill. 750,858, pub. 3–26–63. Cl. 32.
Set Screw & Mfg. Co., Bartlett, Ill. 750,765–6, pub. 3–26–63. Cl. 13.
Sheldon, R., Corp., White Plains, N.Y. 750,989, pub. 3–26–63. Cl. 50.
Shell Oil Co., New York, N.Y. 750,713, pub. 3–26–63. Cl. 1.
Shelton, Mona M., d.b.a. Country Chef Foods, Ladue, Mo. 750,979, pub. 3–26–63. Cl. 46.
Shewan-Jones and Lejon Champagne Cellars: *See*—
United Vintners, Inc.
Shulton, Inc., Clifton, N.J. 751,089. Cl. 51.
Siemens Electrogerate Aktiengesellschaft, Munich, Germany. 750,787. Pub. 3–19–63, Cl. 21; pub. 11–20–62, Cl. 24; pub. 4–10–62, Cl. 31; pub. 2–26–63. Cl. 34, 44. (Consolidated certificate. Classes 21, 24, 31, 34, and 44.)
Sigma Chemical Co., St. Louis, Mo. 750,740, pub. 3–26–63. Cl. 6.
Silber Knitwear Corp., New York, N.Y. 644,502, canc. Cl. 39.
Simone, Guy A., d.b.a. Brush Keeper Co., Los Angeles, Calif. 644,346, canc. Cl. 6.
Simoneau Custom Cabinet Works: *See*—
Simoneau, Gerald.
Simoneau, Gerald, d.b.a. Simoneau Custom Cabinet Works, Cheshire, Conn. 750,762, pub. 3–26–63. Cl. 12.
Sinclair, H. M., Jr., trustee for The Sinclair Mfg. Co., Toledo, Ohio. 751,097. Cl. 52.
Slawsby, Archie, Agency, Inc., d.b.a. Slawsby Insurance, Nashua, N.H. 751,040–41, pub. 3–26–63. Cl. 102.
Slawsby Insurance: *See*—
Slawsby, Archie, Agency, Inc.
Slenderella Systems, Inc., Stamford, Conn. 644,553, canc. Cl. 100.
Smith, A. O., Corp., Milwaukee, Wis. 644,365, canc. Cl. 12.
Smith, E. Errett, Inc., New York, N.Y. 750,880, pub. 3–26–63. Cl. 37.
Smith, Kline & French Co., Philadelphia, Pa., to The Mifflin, McCambridge Co., Riverdale, Md. 167,757, ren. 6–11–63. Cl. 18.
Smith, Seymour, & Son, Inc., Watertown, Conn. 750,827, pub. 3–26–63. Cl. 23.
Spring Sales Co.: *See*—
Patterson Frozen Foods, Inc.
Societa per Azioni Fratelli Folonari, Brescia, Italy. 750,961, pub. 3–26–63. Cl. 47.
Societe Anonyme Activit, Paris, France. 750,863, pub. 3–26–63. Cl. 34.
Societe Anonyme Jeanne Lanvin, Paris, France. 737,140, canc. Cl. 26.
Societe Anonyme Jeanne Lanvin, Paris, France. 737,196, canc. Cl. 39.
Societe Anonyme Mido, Biel, Switzerland, to Mido G. Schaeren & Co., S.A., Bienne, Switzerland. 399,480, ren. 6–11–63. Cl. 27.
Societe Philanthropique de la Ligniere, Gland, Vaud, Switzerland. 750,949, pub. 3–26–63. Cl. 46.
Society of Chemical Industry in Basel, to Ciba Ltd., Basel, Switzerland. 401,615, ren. 6–11–63. Cl. 6.
Society of Chemical Industry in Basel, to Ciba Ltd., Basel, Switzerland. 402,781, ren. 6–11–63. Cl. 6.
Sommers, W. O., Inc., Chicago, Ill. 750,971, pub. 3–26–63. Cl. 46.
South Bend Tackle Co., Inc., South Bend, Ind. 644,411, canc. Cl. 19.
South Tamworth Industries, Inc., South Tamworth, N.H. 393,058, canc. Cl. 32.
Southern Massachusetts Oil Corp., Taunton, Mass. 751,050, pub. 3–26–63. Cl. 103.
Southwest Grease & Oil Co., Inc., d.b.a. P. & T. Equipment Co., Wichita, Kans. 750,817, pub. 3–26–63. Cl. 23.
Southwest Lumber Mills, Inc, Phoenix, Ariz. 644,359, canc. Cl. 12.
Southwestern Talc Corp., Llano, Tex. 750,716, pub. 3–26–63. Cl. 1.
Stalvey, Edward L.: *See*—
Associated Professional Lauderers of America, Inc.
Standard Instrument Corp., New York, N.Y. 750,837, pub. 3–26–63. Cl. 26.
Standard Pool Cleaner Co., Canton, Ohio. 400,825, ren. 6–11–63. Cl. 23.
Stangl Pottery Co., Trenton, N.J. 750,853, pub. 3–26–63. Cl. 30.
Steel Door Corp., Birmingham, Mich. 644,356, canc. Cl. 12.
Steelcase, Inc., Grand Rapids, Mich. 750,855, pub. 3–26–63. Cl. 32.
Stepan Chemical Co., Northfield, Ill. 750,615, pub. 3–19–63. Classes 1, 6, and 52.
Sterling Drug Inc., New York, N.Y. 750,780, pub. 3–26–63. Cl. 18.
Stewart, Charles A., d.b.a. Stewart Mfg. Co., Worcester, Mass. 750,819, pub. 3–26–63. Cl. 23.
Stewart Mfg. Co.: *See*—
Stewart, Charles A.
Stiefel Laboratories, Inc., Oak Hill, N.Y. 751,015, pub. 3–26–63. Cl. 52.
Stoffel Seals Corp., Tuckahoe, N.Y. 750,821, pub. 3–26–63. Cl. 23.
Strauss, Archer, Rubber Co., to Hodgman Rubber Co., Framingham, Mass. 169,247, ren. 6–11–63. Cl. 42.
Sub-Tropic Fruit Co. Inc., Goulds, Fla. 750,951, pub. 3–26–63. Cl. 46.
Suckling Ltd., Birmingham, England. 401,172, ren. 6–11–63. Cl. 28.
Sunny Sue Co.: *See*—
Old Monmouth Peanut Brittle Co.
Sunspecs, Bonanza, Oreg. 751,076. Cl. 26.
Superior Flake Graphite Co., to Superior Graphite Co., Chicago, Ill. 171,495, ren. 6–11–63. Cl. 1.
Superior Graphite Co.: *See*—
Superior Flake Graphite Co.
Surgical Appliance Industries, Inc.: *See*—
Ohio Truss Co., The.
Surgitube Products Corp., Bronx, N.Y. 403,086, ren. 6–11–63. Cl. 44.
Swank, Inc., Attleboro, Mass. 750,730, pub. 3–26–63. Cl. 3.
Swedlin, J., Inc., New York, N.Y. 644,421, canc. Cl. 22.
Swieco, Inc., Fort Worth, Tex. 629,934, canc. Cl. 26.
Swift and Co., Chicago, Ill. 166,899, ren. 6–11–63. Cl. 46.
Swift & Co.: *See*—
Roth Appliance Distributors, Inc.
Systems Engineering Laboratories, Inc., Fort Lauderdale, Fla. 750,793, pub. 3–26–63. Cl. 21.
Texas Pharmacal Co., San Antonio, Tex. 751,016, pub. 3–26–63. Cl. 52.
Theatrical Mutual Associations of United States and Canada, Brooklyn, N.Y. 644,559, canc. Cl. 200.
Thermo-Chem Corp.: *See*—
Chemical Resources Corp.
Thomas & Betts Co., The, Elizabeth, N.J. 750,786, pub. 3–26–63. Cl. 21.
Thompson Products, Inc., to Thompson Ramo Wooldridge Inc., Cleveland, Ohio. 401,721, ren. 6–11–63. Cl. 23.
Thompson Ramo Wooldridge Inc.: *See*—
Thompson Products, Inc.
Tidewater Oil Co.: *See*—
Federal Rubber Co., The.
Timberweld Mfg. Co., Broadview, Mont. 644,354, canc. Cl. 12.

Title Insurance Co. of Minnesota, Minneapolis, Minn. 751,069, pub. 3–26–63. Cl. 102.
Todays Displays, Inc., Long Island City, N.Y. 751,019, pub. 3–26–63. Cl. 100.
Tanabe Seiyaku Co. Ltd., Osaka, Japan. 751,071. Cl. 18.
Tarantino, F. J., World Trade Center: *See*—
Tarantino, Frank J.
Tarantino, Frank J., d.b.a. F. J. Tarantino World Trade Center and as Tarantino's Canned Sea Foods, San Francisco, Calif. 750,972, pub. 3–26–63. Cl. 46.
Tarantino's Canned Sea Foods: *See*—
Tarantino, Frank J.
Tarbox, Tom, Phoenix, Ariz. 750,802, pub. 3–26–63. Cl. 22.
Traum, David, & Co., Inc.: *See*—
Drits-Traum Co., Inc.
Triangle Leather Goods Co., Chicago, Ill. 750,810, pub. 3–26–63. Cl. 22.
Triangle Publications, Inc., Philadelphia, Pa. 751,052, pub. 3–26–63. Cl. 104.
Tuthill Pump Co., Chicago, Ill. 750,815, pub. 3–26–63. Cl. 23.
Unicon Co., to E. S. Guignon, Jr., Kansas City, Mo. 400,971, ren. 6–11–63. Cl. 12.
Unit Engineering Co.: *See*—
Killen, Clair R.
United Electric Co., Oklahoma City, Okla. 751,045, pub. 3–26–63. Cl. 108.
United Hosiery Mills Corp., Chattanooga, Tenn., to Buster Brown Textiles, Inc., Wilmington, Del. 178,869, ren. 6–11–63. Cl. 39.
United Industrial Corp.: *See*—
Detroit Stoker Co.
United Shoe Machinery Corp., Boston, Mass. 750,998, pub. 3–26–63. Cl. 50.
United Vintners, Inc., d.b.a. Shewan-Jones and Lejon Champagne Cellars, San Francisco, Calif. 750,982, pub. 3–26–63. Cl. 47.
United States Bedding Co., The, St. Paul, Minn. 751,079. Cl. 32.
U.S. Ethicals Inc., from Ethica Standard Co., Inc., Long Island City, N.Y. 751,070. Cl. 18.
United States Junior Chamber of Commerce, The, Tulsa, Okla. 750,911, pub. 3–26–63. Cl. 38.
U.S. Polychemical Corp., Spring Valley, N.Y. 751,014, pub. 3–26–63. Cl. 52.
United States Wallboard Machinery Co., Dover, Del. 644,357, canc. Cl. 12.
Upjohn Co., The, Kalamazoo, Mich. 325,452, canc. Cl. 18.
Upjohn Co., The, Kalamazoo, Mich. 423,860, canc. Cl. 6.
Upjohn Co., The, Kalamazoo, Mich. 441,113, canc. Cl. 6.
Urya Seiki Co. Ltd., Itabashi-ku, Tokyo, Japan. 750,845, pub. 3–26–63. Cl. 26.
Vacudyne Corp., Chicago, Ill. 750,790, pub. 3–26–63. Cl. 21.
Vacudyne Corp., Chicago, Ill. 750,835, pub. 3–26–63. Cl. 26.
Vanderbilt Rubber Co., Inc.: *See*—
Goodrich, B. F., Co., The.
Van Dorn Iron Works Co., The, Cleveland, Ohio. 750,861, pub. 3–26–63. Cl. 34.
Varifab, Inc., Hill Falls, N.Y. 750,838, pub. 3–26–63. Cl. 26.
Venus Pen & Pencil Corp.: *See*—
American Lead Pencil Co.
Venus Pen & Pencil Corp., New York, N.Y. 750,883, pub. 3–26–63. Cl. 37.
Vitamins Plus Inc., to Richardson-Merrell Inc., New York, N.Y. 400,162–3, ren. 6–11–63. Cl. 18.
Walker, O. S., Co., Inc., Worcester, Mass. 750,844, pub. 3–26–63. Cl. 26.
Waltham Watch Co.: *See*—
American Waltham Watch Co.
Warner Press, Inc., from Gospel Trumpet Co., Anderson, Ind. 750,878, pub. 3–26–63. Cl. 37.
Washington Packaging Corp., Seattle, Wash. 750,828, pub. 3–26–63. Cl. 23.
Wear-Flex Corp., The, Milwaukee, Wis. 750,750, pub. 3–26–63. Cl. 7.
Week, Edward, & Co., Inc.: *See*—
Week, Edward, & Son, Inc.
Week, Edward, & Co., Inc., Brooklyn, to Edward Week & Co., Inc., Long Island City, N.Y. 401,896, ren. 6–11–63. Cl. 23.
Week, Edward, & Son, Inc., New York, to Edward Week & Co., Long Island City, N.Y. 166,782, ren. 6–11–63. Cl. 23.
Weller, E. R., Co., Providence, R.I. 751,065. Cl. 40.
Western Gear: *See*—
Western Gear Corp.
Western Gear Corp., d.b.a. Western Gear, Lynwood, Calif. 750,822, pub. 3–26–63. Cl. 23.
Western Red Cedar Association, Seattle, Wash. 644,573, canc. Cl. 8.
Western Union Telegraph Co., The, New York, N.Y. 751,051, pub. 3–26–63. Cl. 104.
Westinghouse Air Brake Co., Wilmerding, Pa. 401,198, ren. 6–11–63. Cl. 23.
Westminster Corp., The, Long Island City, N.Y. 751,087. Cl. 47.
Westmoreland Coal Co., Philadelphia, Pa. 22,955, ren. 6–11–63. Cl. 1.
Weston Biscuit Co., Inc., Passaic, N.J. 750,939, pub. 3–26–63. Cl. 46.
White & Bagley Co., The, Worcester, Mass. 750,770, pub. 3–26–63. Cl. 15.
White, H. N., Co., The, Cleveland, Ohio. 750,877, pub. 3–26–63. Cl. 36.
Wilson Sporting Goods Co., River Grove, Ill. 750,805–6, pub. 3–26–63. Cl. 22.
Wiremold Co., The, West Hartford, Conn. 750,864–5, pub. 3–26–63. Cl. 24.
Witco Chemical Co., Inc., New York, N.Y. 750,739, pub. 3–26–63. Cl. 6.
Woodhead, Daniel, Co., Chicago, Ill. 750,795, pub. 3–26–63. Cl. 21.
World Around Us, Inc., The, Miami, Fla. 751,060, pub. 3–26–63. Cl. 107.
Wright, Donnell W. d.b.a. Donnell W. Wright Mfg. Co., Highland, Calif. 751,018, pub. 3–26–63. Cl. 52.
Wright, Donnell W., Mfg. Co.: *See*—
Wright, Donnell W.
Wrist-Lok Co.: *See*—
Crutchfield, Mary E.
Yarnall-Waring Co., Philadelphia, Pa. 750,836, pub. 3–26–63. Cl. 26.
Young America Undergarment, Inc., New York, N.Y. 750,919, pub. 3–26–63. Cl. 39.
Zim Israel Navigation Co. Ltd., Haifa, Israel. 751,057, pub. 3–26–63. Cl. 105.
Zimmerman, Morton, d.b.a. Keystone Garter Co., New York, N.Y. 750,923, pub. 3–26–63. Cl. 40.

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PATENTS

NOTICES

Board of Appeals Decisions Rendered in the Month of May 1963

Examiner affirmed	351
Examiner affirmed in part	52
Examiner reversed	103
Total	506

Dedication

2,660,355.—*Chester S. Allen*, Warren, Pa. METHOD OF APPLYING SEALING SPOUTS FOR LIGHTER FLUID CANS. Patent dated Nov. 24, 1953. Dedication filed Apr. 30, 1963, by the assignee, *Owens-Illinois Glass Company*.

Hereby dedicates to the public the entire terminal portion of the term of said patent.

Disclaimers

2,789,919.—*John W. Eastes*, Ridley Park, Pa., and *Theodore F. Cooke*, Martinsville, N.J. HYDROPHOBIC, ORGANOPHILIC PIGMENTS AND PROCESS OF PRODUCING THE SAME. Patent dated Apr. 23, 1957. Disclaimer filed Apr. 8, 1963, by the inventors and the assignee, *American Cyanamid Company*.

Hereby enter this disclaimer to claim 1 of said patent.

2,871,873.—*Malcolm M. McQueen*, Hollywood, Calif. LIQUID LEVEL CONTROL VALVE WITH PRE-CHECK SYSTEM. Patent dated Feb. 3, 1959. Disclaimer filed Apr. 19, 1963, by the assignee, *Telecomputing Corporation*.

Hereby enters this disclaimer to claims 10, 11, 12, 13, 14 and 16 of said patent.

2,876,173.—*Bernard H. Nicolaisen*, Kenmore, N.Y. SEPARATION OF UNSYMMETRICAL DIMETHYLHYDROZINE FROM AQUEOUS SOLUTION CONTAINING NOT MORE THAN 20 PERCENT OF THE FORMER CAUSTIC SODA. Patent dated Mar. 3, 1959. Disclaimer filed Apr. 15, 1963, by the assignee, *Olin Mathieson Chemical Corporation*.

Hereby enters this disclaimer to claims 1, 2 and 4 of said patent.

2,903,787.—*Joseph B. Brennan*, Cleveland, Ohio. METHOD OF PRODUCING STRIP MATERIALS. Patent dated Sept. 15, 1959. Disclaimer filed Apr. 5, 1963, by the assignee, *Armour Research Foundation of Illinois Institute of Technology*.

Hereby enters this disclaimer to claims 1 and 9 of said patent.

Practice Under Rule 112

The following practice shall henceforth be followed by the Examining Corps in applying Rule 112, in the light of the notice entitled "New Examining Procedures" appearing at 781 O.G. 1, on August 7, 1962.

Any amendment after a second action upon the patentability of the invention as claimed shall be inspected immediately to determine whether such amendment is restricted to the rejection made, as required by Rule 112. If the amendment would require rejection on any new basis, as for example if it introduces any new limitation into any existing claim, or adds any claim including such a limitation, and the limitation is of such a nature that a further search would be required before it could be determined that such claim is or is not patentable, the amendment is to be treated as failing to comply with Rule 112.

In such a case applicant shall be notified promptly that the amendment has *not* been entered since it does not constitute a proper response under Rule 112. Such notification shall clearly point out the reason why the response is considered improper.

Where insufficient time remains in the original statutory period for response, and the amendment in question otherwise appears to be a bona fide attempt to advance the case to final action, and is substantially a complete response to the Examiner's action, as provided by Rule 135(c), applicant will be given a specified period (usually 20 days) in which to overcome the Examiner's objection.

Petition will lie from denial of entry of an amendment under the aforementioned condition and will be governed by all the requirements of Rule 181.

An applicant may ordinarily avoid nonentry of an amendment on this ground by including in his application at the time of filing, or after the first complete action, the most detailed claim that he would be willing to accept as well as the broadest claim to which he considers himself entitled.

Inasmuch as this practice presupposes an essentially complete first action, its application will ordinarily be deferred in any case where a new reference is cited in a subsequent action for any purpose other than to meet newly added limitations.

Pending further notice, to insure uniform and equitable application of the practice, every action holding a response improper under the circumstances indicated above must be submitted to, and approved by, the appropriate Group Supervisor.

EDWIN L. REYNOLDS,
First Assistant Commissioner.

May 21, 1963.

New Applications Received During April 1963

Patents	7,797
Designs	466
Plant Patents	9
Reissues	31
Total	8,303

Issue

Patents	872	No. 3,093,829 to No. 3,094,700, incl.
Designs	45	No. 195,450 to No. 195,494, incl.
Reissues	10	No. 25,395 to No. 25,404, incl.
Total	927	

Directory for Reorganized Patent Examining Operations

The movement of all Examining Groups incident to the reorganization of the Patent Examining Corps is now complete.

For your convenience, a yellow tear sheet, which provides a complete listing of room and telephone numbers of each Director and Supervisory Examiner as of May 15, 1963, is included as the last page of this issue of the OFFICIAL GAZETTE.

Patents Available for Licensing or Sale

In accordance with the provisions of 14 F.R. § 1245.200 et seq., and 42 U.S.C. 2457(g), the National Aeronautics and Space Administration is prepared to grant royalty-free licenses, of the types specified, under the following patents.

Applications for licenses should be addressed to the Administrator, National Aeronautics and Space Administration, Washington 25, D.C.

Patents available for exclusive licensing:

2,898,889.	8-11-59.	Mechanically-Limited Electrically Operated Hydraulic Valve System for Aircraft Controls.
2,903,307.	9- 8-59.	Two Component Bearing.
2,926,123.	2-23-60.	Temperature Reducing Coating for Metals Subject to Flame Exposure.
2,934,391.	4-26-60.	Apparatus for Making a Metal Slurry Product.
2,940,259.	6-14-60.	Rocket Propellant Injector.
2,944,316.	7-12-60.	Process of Casting Heavy Slips.
2,945,667.	7-19-60.	Flexible Seal for Valves.
2,956,772.	10-18-60.	Liquid-Spray Cooling Method.
2,971,837.	2-14-61.	High Temperature Nickel-Base Alloy.
2,971,838.	2-14-61.	High Temperature Nickel-Base Alloy.
2,974,925.	3-14-61.	External Liquid-Spray Cooling of Turbine Blades.
2,984,735.	5-16-61.	Runway Light.
D. 187,350.	3- 1-60.	Aircraft.
D. 187,351.	3- 1-60.	Aircraft.
D. 187,352.	3- 1-60.	Aircraft.
D. 187,353.	3- 1-60.	Aircraft.

Patents available for nonexclusive, revocable licensing:

2,991,671.	7-11-61.	Wire Grid Forming Apparatus.
2,991,961.	7-11-61.	Jet Aircraft Configuration.
2,996,212.	8-15-61.	Self Supporting Space Vehicle.
2,997,274.	8-22-61.	Turbo-Machine Blade Vibration Damper.
3,001,363.	9-26-61.	Spherical Solid-Propellant Rocket Motor.
3,001,395.	9-26-61.	Air Frame Drag Balance.
3,001,739.	9-26-61.	Aerial Capsule Emergency Separation Device.
3,004,735.	10-17-61.	Particle Detection Apparatus.
3,005,061.	10-17-61.	High Intensity Heat and Light Unit.
3,005,339.	10-24-61.	Wind Tunnel Airstream Oscillating Apparatus.
3,006,229.	11-14-61.	Process for Applying a Protective Coating for Salt Bath Brazing.
3,010,372.	11-28-61.	Folding Apparatus.
3,011,760.	12- 5-61.	Transpiration Cooled Turbine Blade Manufactured From Wires.
3,012,400.	12-12-61.	Nozzle.
3,012,407.	12-12-61.	Insulating Structure.
3,016,693.	1-16-62.	Electro-Thermal Rocket.
3,016,963.	1-16-62.	Hydrofoil.
3,022,672.	2-27-62.	Differential Pressure Cell.
3,024,659.	3-13-62.	Magnetically Centered Liquid Column Float.
3,028,122.	4- 3-62.	Landing Arrangement for Aerial Vehicles.
3,028,126.	4- 3-62.	Three Axis Controller.
3,028,128.	4- 3-62.	Reentry Vehicle Leading Edge.
3,028,077.	6- 5-62.	Infrared Scanner.
3,028,175.	6-12-62.	Survival Couch.
3,041,587.	6-26-62.	Angular Measurement System.
3,041,924.	7- 3-62.	Motion Picture Camera for Optical Pyrometry.
3,045,424.	7-24-62.	Method for Continuous Variation of Propellant Flow and Thrust in Propulsive Devices.
3,049,876.	8-21-62.	Annular Rocket Motor and Nozzle Configuration.
3,053,484.	9-11-62.	Variable Sweep Wing Configuration.
3,057,597.	10- 9-62.	Modification and Improvements to Cooled Blades.
3,060,320.	10-16-62.	Apparatus for Coupling a Plurality of Ungrounded Circuits to a Grounded Circuit.
3,063,291.	11-13-62.	High Vacuum Condenser Tank for Ion Rocket Engines.
3,063,658.	12-18-62.	Venting Vapor Apparatus.
3,069,123.	12-18-62.	Instrument Support With Precise Lateral Adjustment.
3,070,330.	12-25-62.	Attitude and Propellant Flow Control System and Method.
3,070,349.	12-25-62.	Multistage Multiple-Reentry Turbine.
3,070,407.	12-25-62.	Air Bearing.
3,076,065.	1-29-63.	High-Speed Low-Level Electrical Stepping Switch.
3,077,599.	2-12-63.	Collapsible Loop Antenna for Space Vehicle.
3,079,113.	2-26-63.	Vehicle Parachute and Equipment Jettison System.
3,080,711.	3-12-63.	Pentshape Exhaust Nozzle for Supersonic Engine.
3,083,611.	4- 2-63.	Multi-Lobar Scan Horizon Sensor.
3,084,421.	4- 9-63.	Reinforced Metallic Composites.
3,085,165.	4- 9-63.	Ultra-Long Monostable Multivibrator Employing Bistable Semiconductor Switch To Allow Charging or Timing Circuit.
3,087,692.	4-30-63.	Variable-Span Aircraft.
3,088,441.	5- 7-63.	Valve Actuator.
D. 193,454.	8-21-62.	Aircraft.

PATENT EXAMINING CORPS

H. B. WHITMORE, Superintendent

PATENT EXAMINING OPERATIONS AND GROUPS	Oldest Application: New	Oldest Application: Amended
CHEMICAL EXAMINING OPERATION—P. E. MANGAN, Director.		
GENERAL CHEMISTRY, GROUP 110—R. L. CAMPBELL, Supervisory Examiner	7-21-61	9-6-61
Inorganic and Organo-metal (formerly Div. 69)—M. A. Brindisi.		
Metallurgy (formerly Div. 3).		
Electrochemistry (formerly Div. 56)—J. R. Speck.		
GENERAL ORGANIC CHEMISTRY, GROUP 120—I. MARCUS, Supervisory Examiner	1-16-62	12-7-61
Heterocyclic (formerly Div. 6)—H. J. Lidoff.		
Specialized Organic Compounds (formerly Div. 26)—C. B. Parker.		
Medicines (formerly Div. 45).		
PETROLEUM CHEMISTRY, GROUP 130—J. S. BAILEY, Supervisory Examiner	11-3-61	10-16-61
Hydrocarbons (formerly Div. 31).		
Oxo- and Oxy-Derivatives.		
HIGH POLYMER CHEMISTRY, GROUP 140—M. STERMAN, Supervisory Examiner	5-17-61	7-20-61
High Polymer Preparation (formerly Div. 60).		
Mixed High Polymers and Natural Resins (formerly Div. 30).		
COMPOSITIONS AND MOLDING, GROUP 150—L. H. GASTON, Supervisory Examiner	11-3-61	11-8-61
Coating Compositions and Molding.		
Special Utility Compositions (formerly Div. 64)—J. Greenwald.		
COATING AND LAMINATING, GROUP 160—L. G. STONE, (J. REBOLD, Acting) Supervisory Examiner	11-15-61	11-20-61
Coating Methods and Apparatus (formerly Div. 28)—R. D. Nevius.		
Laminating and Stock Materials (formerly Div. 67).		
SPECIALIZED CHEMICAL ARTS AND INDUSTRIES, GROUP 170—W. B. KNIGHT, Supervisory Examiner	11-24-61	10-11-61
Specialized Chemical Arts (formerly Div. 63)—A. H. Winkelstein.		
Reactors and Miscellaneous Industrial Processes.		
CHEMICAL ENGINEERING, GROUP 180—G. D. MITCHELL, Supervisory Examiner	1-2-62	1-2-62
Gases, Liquids and Solids Separating (formerly Div. 23)—H. L. Martin.		
Distillation, Drying and Physical Processes.		
ELECTRICAL EXAMINING OPERATION—N. H. EVANS, Director.		
POWER, GROUP 210—M. L. LEVY, Supervisory Examiner	10-5-61	8-31-61
Generation and Utilization (formerly Div. 20)—O. L. Rader.		
General Applications (formerly Div. 45)—S. Bernstein.		
Conversion and Distribution (formerly Div. 71)—L. McCollum.		
Heating and Related Art (formerly Div. 76)—R. M. Wood.		
SECURITY, GROUP 220—S. BOYD, Supervisory Examiner	12-22-61	12-6-61
Chemical (formerly Div. 46).		
Electrical (formerly Div. 44)—C. L. Justus.		
Mechanical (formerly Div. 10).		
INFORMATION TRANSMISSION, GROUP 230—S. W. CAPELLI, Supervisory Examiner	11-6-61	12-6-61
Communications (formerly Div. 10)— R. H. Ross.		
Multiplexing Techniques (formerly Div. 77)—D. G. Redinbaugh.		
Facsimile and Related Art (formerly Div. 41)— R. Lake.		
INFORMATION STORAGE AND RETRIEVAL, GROUP 240—W. W. BURNS, Supervisory Examiner	9-28-61	9-29-61
Processing and Related Art (formerly Div. 60)—M. A. Morrison.		
Storage Devices and Related Art (formerly Div. 42)—I. Sragow.		
ELECTRONIC COMPONENT SYSTEMS AND DEVICES, GROUP 250—B. G. MILLER, Supervisory Examiner	10-30-61	9-1-61
Semi-Conductor and Space Discharge Systems and Devices (formerly Div. 51)—G. N. Westby.		
Electronic Component Circuits (formerly Div. 72)—A. Gauss.		
Wave Transmission Lines and Networks (formerly Div. 66)—H. K. Saalbach.		
RADIATION AND INSTRUMENTS, GROUP 260—F. M. STRADER, Supervisory Examiner	9-20-61	10-4-61
Optics (formerly Div. 73)—J. H. Pedersen.		
Radiant Energy (formerly Div. 54)—R. G. Nilson.		
Measuring (formerly Div. 74)—W. L. Carlson.		
ELEMENTS, GROUP 270—E. J. SAX, Supervisory Examiner	10-5-61	9-27-61
Conductors (formerly Div. 75)—J. P. Wildman.		
Switches (formerly Div. 37)—B. A. Gilheany.		
Miscellaneous (formerly Div. 75)—J. F. Burns.		

CONDITION OF PATENT APPLICATIONS AS OF APRIL 30, 1963

Total number of pending applications (excluding Designs)	196, 995
Total number of Design applications pending	5, 979
Total number of applications awaiting action (excluding Designs)	112, 252
Total number of Design applications awaiting action	2, 202
Date of oldest new application awaiting action	May 17, 1961
Date of oldest amended application awaiting action	July 20, 1961

EXPIRATION OF PATENTS

The patents within the range of numbers indicated below expire during June 1963, except those which may have been extended under the provisions of the Veterans Patent Extension Act (54 Stat. 218 as amended by 65 Stat. 321) and those which may have expired earlier due to shortened terms under the provisions of Public Law 600. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1963*

Patents ..... Numbers 2,401,262 to 2,468,985, inclusive

Plant Patents ..... Numbers 695 to 701 inclusive

PATENT EXAMINING OPERATIONS AND GROUPS (Continued)	Oldest Application	
	New	Amended
MECHANICAL ENGINEERING EXAMINING OPERATION—R. A. WAHL, Director.		
MATERIAL OR ARTICLE HANDLING AND DISPENSING, GROUP 310—A. BERLIN, Supervisory Examiner	3-5-62	1-15-62
Conveying and Loading (formerly Div. 4)—E. A. Faller.		
Handling.		
Dispensing (formerly Div. 35)—L. J. Dembo.		
METAL AND PLASTICS WORKING, GROUP 320—N. BERGER, Supervisory Examiner	4-18-62	4-24-62
Metal-Working.		
Plastics Working (formerly Div. 15)—M. V. Brindisi.		
MANUFACTURING AND ASSEMBLING MISCELLANEOUS ARTICLES, GROUP 330—A. HORTON, Supervisory Examiner	10-31-61	11-10-61
Combined Machines and Processes (formerly Div. 14)—W. A. Wiltz.		
Assembly and Special Article Making.		
MACHINE TOOLS, MECHANISMS, AND ELEMENTS, GROUP 340—F. BRONAUGH, Supervisory Examiner	1-15-62	12-11-61
Comminuting, Abrading and Drilling.		
Cutting.		
Machine Elements and Mechanisms (formerly Div. 12)—B. G. Durham.		
Clutches, Shafting and Workholders.		
HARDWARE, TOOLS AND JOINTS, GROUP 350—T. HICKEY, Supervisory Examiner	1-5-62	12-18-61
Hardware (formerly Div. 20)—J. D. Sears.		
Tools.		
Joints.		
FLUID HANDLING, GROUP 360—E. PAUL, Supervisory Examiner	2-26-62	2-12-62
Fluid Handling and Valves (formerly Div. 30)—I. Weil.		
Baths, Closets and Fluid Conduits (formerly Div. 11)—E. V. Benham.		
POWER PLANTS, MOTORS AND PUMPS, GROUP 370—C. GARBAU, Supervisory Examiner	1-22-62	1-30-62
Power Plants and Motors (formerly Div. 18)—A. Blum.		
Expansible Chamber Motors.		
Pumps (formerly Div. 9)—J. H. Branson.		
HEATING, COOLING AND VENTILATING, GROUP 380—P. PATRICK, Supervisory Examiner	1-2-62	12-8-61
Burners and Heat Exchange.		
Cooling and Ventilation (formerly Div. 30)—R. A. O'Leary.		
GENERAL ENGINEERING AND INDUSTRIAL ARTS EXAMINING OPERATION—J. A. MANIAN, Director.		
AGRICULTURE, GROUP 410—A. RUEGG, Supervisory Examiner	5-11-62	4-26-62
Animal (formerly Div. 5)—C. W. Robinson.		
Plant (formerly Div. 1)—A. G. Stone.		
CIVIL ENGINEERING, GROUP 420—B. BENDETT, Supervisory Examiner	1-8-62	12-8-61
Buildings.		
Construction and Structures.		
Earth Working, Drilling and Mining.		
PHYSICS, GROUP 430—R. L. EVANS, Supervisory Examiner	1-5-62	1-8-62
Photography, Sound and Lighting (formerly Div. 7)—E. G. Anderson.		
Indicators and Optics (formerly Div. 23)—L. Smilow.		
Measuring and Testing (formerly Div. 26)—J. P. Strizak.		
Geometric, Heat and Liquid Testing (formerly Div. 66)—L Lisann.		
TEXTILES AND APPAREL, GROUP 440—R. C. MADER, Supervisory Examiner	2-21-62	2-14-62
Textiles.		
Apparel.		
TRANSPORTATION, GROUP 450—P. ARNOLD, Supervisory Examiner	1-11-62	1-9-62
Rail Vehicles and Brakes (formerly Div. 34)—L. Quackenbush.		
Land Vehicles.		
Aeronautics and Ships (formerly Div. 22)—M. Buchler.		
FURNITURE AND RECEPTACLES, GROUP 460—W. COLE, Supervisory Examiner	3-20-62	2-19-62
Furniture (formerly Div. 52)—C. A. Le Roy.		
Receptacles (formerly Div. 40)—E. J. Drummond.		
PRINTING, STATIONERY AND MATERIAL TREATMENT, GROUP 470—L. W. VARNER, Supervisory Examiner	12-19-61	11-24-61
Printing (formerly Div. 17)—R. A. Leighey.		
Stationery (formerly Div. 53)—G. A. Ninas.		
Material Treatment.		
PERSONAL TREATMENT, ADORNMENT AND AMUSEMENT, GROUP 480—L. R. PRINCE, Supervisory Examiner	2-1-62	2-5-62
Personal Treatment.		
Adornment and Amusement (formerly Div. 62)—D. B. Lowe.		
DESIGNS—J. A. MANIAN, Supervisory Examiner	11-15-62	11-16-62
Industrial Arts (formerly Div. 31)—A. B. Hannah.		
Household, Personal and Fine Arts (formerly Div. 32)—E. Hunter.		

(CLASSIFICATION) GORECKI, G. A.—ARTS UNDERGOING RECLASSIFICATION AS LISTED UNDER CLASSIFICATION DIVISIONS.		
91. KENT, A. P. (acting)		
92. GAUSS, H.		
93. PURDY, W. F. (acting), Wire Working	6-1-62	5-11-62
94. BERLOWITZ, W.	7-11-62	7-23-62
95. ANGEL, C. D., (REZNEK, J., acting)	1-8-62	1-12-62

DECISIONS IN PATENT AND TRADEMARK CASES

U.S. Court of Customs and Patent Appeals

IN RE CARL LOUIS OTTO, LANELLE BURNHAM OTTO AND JEAN BRITON

No. 6901. Decided February 13, 1963

[50 CCPA —; 312 F.2d 937; 136 USPQ 458]

1. PATENTABILITY—DEVICE—IRRELEVANCY OF METHOD OF USING OR MATERIAL WORKED ON.

"• • • the claims are directed to a particular device and a method of making that device, not to a method of curling hair wherein this particular device is used. It seems appellants are endeavoring to predicate patentability upon a certain procedure for curling hair using this device and involving a number of steps in the process. This process is irrelevant as is the recitation involving the hair being wound around the core insofar as the determination of whether these particular claims should be allowed or rejected. *In re Lampert et al.*, 44 CCPA 958, 245 F.2d 253, 114 USPQ 163; *In re Rishot et al.*, 39 CCPA 1004, 197 F.2d 342, 94 USPQ 71; *In re Mulholland*, 29 CCPA 1222, 129 F.2d 860, 54 USPQ 388; *In re Young*, 22 CCPA 1060, 75 F.2d 996, 25 USPQ 69. • • • the *Lampert* case pertains to the impropriety of relying on a method concept to distinguish a structural claim over the prior art and *Rishot* and the others indicate that inclusion of the material or article worked upon by a structure being claimed does not impart patentability to the claims."

2. SAME—PARTICULAR SUBJECT MATTER—"HAIR CURLERS FOR PERMANENT WAVING AND MANUFACTURE THEREOF."

The refusal of certain claims in an application entitled "Hair Curlers For Permanent Waving and Manufacture Thereof," as unpatentable over the prior art, is affirmed.

APPEAL from the Patent Office. Serial No. 512,520.

AFFIRMED.

Clarence M. Fisher, Pennie, Edmonds, Morton, Barrows and Taylor (*John T. Roberts* of counsel) for appellants.

Clarence W. Moore (*Joseph F. Nakamura* of counsel) for the Commissioner of Patents.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, SMITH, and ALMOND, JR., *Associate Judges*

MARTIN, *J.*, delivered the opinion of the court.

This is an appeal from the decision of the Patent Office Board of Appeals affirming the Primary Examiner's rejection of claims 1–4 of appellants' application Ser. No. 512,520, filed June 1, 1955 for Hair Curlers for Permanent Waving and Manufacture Thereof.

Claims 1 and 4, illustrative of the appealed claims, read:

1. As a new article of manufacture, a core member for hair curlers comprising a body of elastically resilient foam material, the hair being wound directly on said body and said body carrying a hair waving lotion in non-liquid form distributed in the pores of the material.

4. The method of making a core member of the character described for hair curlers which comprises providing a body of elastically resilient foam material, saturating the body with a hair waving lotion consisting of a water-soluble solution of saponified material and thereafter permitting the saturated body to dry, whereby to produce a body the pores of which are substantially impregnated with a waving solution in non-liquid form adapted to be activated by subsequent wetting of the body.

The references relied on by the Examiner and the Board are:

Picard, 1,219,147, March 13, 1917.
Banigan et al., 2,295,823, September 15, 1942.
Ramsey, 2,418,664, April 8, 1947.
Moses, 2,720,206, October 11, 1955.
Connolly, 2,761,166, September 4, 1956.
Lyons, 2,763,885, September 25, 1956.
L'Oreal (France), 966,988, March 15, 1950.

Appellants' application relates to a core member for hair curlers. The body of the core member is made up of an elastically resilient foam material, e.g. a resinous polyurethane. It can be of any suitable shape, although the drawing shows it as cylindrical. A hair waving lotion, which may be a water-soluble mixture of thioglycolic acid and ammonia, in non-liquid form, is contained in the pores of the foam material. The lotion may be deposited by first saturating the core member with the lotion in solution form and thereafter permitting it to dry.

In use, the core member may have the tresses of hair wound on it while the core and hair are both dry. After the dry hair is wound on the dry core and fixed in place by appropriate retaining means, depending on the specific construction of the curler, the curler with the hair wound on it is then thoroughly wetted and manipulated by squeezing or twisting of the core member to force the lotion from the pores of the core member outwardly to saturate the hair wound on the curler.

The Moses patent discloses a hair curler provided with an absorbent pad member in the form of a cylinder of natural sponge, viscose sponge or the like for holding a permanent wave solution to be squeezed out into the hair wound on the curler.

Each of the Connolly and Lyons patents relates to a core member of absorbent material provided with a dry dentifrice which is activated for use by contact with a liquid. Picard discloses a similar member impregnated with a dentifrice or antiseptic while Banigan et al. relates to sponges impregnated with numerous materials.

The Ramsey patent and the French patent to L'Oreal each discloses a cream for use in the permanent waving of hair. The cream comprises a base which may include an emulsifiable water-soluble mixture of thioglycolic acid and ammonia.

The Examiner indicated that in the light of the teachings of Lyons, Picard, Conolly and Banigan et al. he did not see "that invention would be involved in providing the pores of a core, as shown in Moses, with a non-liquid lotion, to be activated by liquid at the time of use." The Examiner further rejected the claims as unpatentable over any of Picard, Lyons and Banigan et al. in view of either Ramsey or L'Oreal taking the position that "it would not require invention to substitute the dry hair-waving compositions of either secondary reference for the dentifrice of each primary reference."

The Board in affirming the rejection of the appealed claims stated:

> * * * We agree that the art used makes it obvious to incorporate in a sponge a material that has an unspecified degree of dryness (including the substantial degree of some of the art) that causes the material to be retained in the sponge and thus makes obvious doing this with hair waving material.

Appellants urge that the Moses core is not the article of manufacture which appellants claim. They contend that the Moses core is merely a wick inside of a perforated metal hair curler which when compressed will release liquid through the pores of the metal curler. Appellants also urge that the patents of Picard, Connolly and Lyons, which show a water-soluble dentifrice impregnated in a sponge body useful as a toothbrush and the Banigan et al. patent which mentions that artificial sponges may be impregnated with numerous materials "would not be reasonably expected to teach modifying the Moses curler." Appellants further contend that the cream lotion of Ramsey and L'Oreal will not work in their invention.

[1] First of all it should be remembered that the claims are directed to a particular device and a method of making that device, not to a method of curling hair wherein this particular device is used. It seems appellants are endeavoring to predicate patentability upon a certain procedure for curling hair using this device and involving a number of steps in the process. This process is irrelevant as is the recitation involving the hair being wound around the core insofar as the determination of whether these particular claims should be allowed or rejected. *In re Lampert et al.*, 44 CCPA 958, 245 F.2d 253, 114 USPQ 163; *In re Rishoi et al.*, 39 CCPA 1004, 197 F.2d 342, 94 USPQ 71; *In re Mulholland*, 29 CCPA 1222, 129 F.2d 860, 54 USPQ 388; *In re Young*, 22 CCPA 1060, 75 F.2d 996, 25 USPQ 69. It will be seen that the *Lampert* case pertains to the impropriety of relying on a method concept to distinguish a structural claim over the prior art and *Rishoi* and the others indicate that inclusion of the material or article worked upon by a structure being claimed does not impart patentability to the claims.

The particular device claimed is an elastically resilient "core member for hair curlers * * * carrying a hair waving lotion in non-liquid form distributed in the pores of the material." It should be noted at this point that no attaching means is recited in the claims.

Moses teaches a pad member which "is first charged with a curling liquid" to be inserted in a mandrel to be used for hair curling purposes. Picard, Banigan et al., Connolly and Lyons all teach impregnating sponge-like material with various substances for various purposes such as brushing teeth and polishing metalware. Connolly and Lyons teach impregnating a sponge-like material with *dry* substances to be activated by contact with a liquid. In view of these teachings we believe it would be within the skill of the art to apply those disclosures of Connolly and Lyons to Moses' pad. Since appellants' structure claims pertain only to a core or pad member and recite no means for attaching it to the hair, it is apparent that the invention does not distinguish over Moses' pad [1] in view of Connolly and Lyons insofar as the concept of impregnating the pores of a sponge-like pad with a dry substance, which pad is to be used in connection with hair curlers.

Appellants have never questioned that a hair curling composition, such as the water-soluble saponified thioglycolin-ammonia mentioned in their application, can be provided in dry form. Therefore no issue arises with reference to that matter. However it should be noted that even though the creams of L'Oreal and Ramsey may contain ingredients of appellants' hair curling preparation, being in cream form, it would not be practicable to endeavor to impregnate a hair curling pad with them.

Although the structure claims do not decite any means by which the core member could be attached to the hair and thus the *manner* of its intended use is of no significance, it might be well to note that the Moses pad impregnated with a dry hair curling substance would be operable with a non-liquid solution. Thus the core could be used by dipping the mandrel containing the pad into water which would activate the hair curling substance in the pad and then the mandrel could be attached to the hair and the liquid would be squeezed from the pad through the perforations in the mandrel into the hair by

[1] There seems to be no contention on the part of appellants that patentability resides in the substitution of known foamed plastic in lieu of Moses' sponge material and we see none.

means of the plunger activity associated with the locking device. There is no significance in the fact that the Moses pad would be moistened differently than appellants' since, as stated, methods are not involved here. For these reasons we affirm the rejection of claims 1, 2 and 3.

Coming to claim 4, the only aspect of the recited method which requires additional consideration reads:

* * *, saturating the body with a hair waving lotion * * * and thereafter permitting the saturated body to dry, * * * adapted to be activated by subsequent wetting of the body.

It does not appear to us that it would be beyond the skill of an ordinary workman in this art who desires to impregnate a foam-like material with a liquid soluble substance to prepare that substance in liquid form then saturate the material with it. Upon the material and the substance becoming dry, the substance obviously would remain in the pores of the material until it is reactivated by being wetted. We feel certain that this procedure takes place every day in the homes in this country where a housewife saturates a sponge with soapy water then permits the sponge to dry and, unless she has rinsed the sponge thoroughly, when she wets the sponge again the water squeezed therefrom will be soapy. For these reasons we affirm the rejection of claim 4.

[2] In view of the foregoing we affirm the decision of the Board.

AFFIRMED.

In the United States Patent Office
Commissioner's Decision

IN RE REISSUE APPLICATION PAPERS EXECUTED BY ASSIGNEE

Decided March 21, 1963. On Reconsideration April 17, 1963.

1. REISSUE—BROADENED CLAIMS—REISSUE APPLICATION EXECUTED BY ASSIGNEE—35 U.S.C. 251.

"In accordance with Title 35, Section 251 of the United States Code, a reissue application may be executed by the assignee only 'if the application does not seek to enlarge the scope of the claims of the original patent.' It follows that if either of new claims 9 and 10 which are included in the papers under consideration is broader than any claim of the patent, the proposed application seeks to enlarge the scope of the patent claims and cannot properly be executed by the assignee. Since it is a prerequisite of the filing by the assignee that the application does not seek to enlarge the scope of the patent claims, the determination of that question must be made before the application can be given a filing date and if it is found that the application seeks such enlargement, it cannot be accepted."

2. SAME—SAME.

Held that "* * * a claim of a reissue application is broader than a corresponding patent claim if it omits any limitation included by such patent claim or in other words, if it would be infringed by any conceivable structure which does not infringe the patent claim * * *."

ON PETITION.

DENIED.

REYNOLDS, *First Assistant Commissioner.*

This is a petition from the refusal of the Application Branch to accord a filing date to the above identified papers which purport to constitute a reissue application, on the ground that they were filed by the assignee and seek to enlarge the scope of the claims of the original patent. [1] In accordance with Title 35, Section 251 of the United States Code, a reissue application may be executed by the assignee only "if the application does not seek to enlarge the scope of the

claims of the original patent." It follows that if either of new claims 9 and 10 which are included in the papers under consideration is broader than any claim of the patent, the proposed application seeks to enlarge the scope of the patent claims and cannot properly be executed by the assignee. Since it is a prerequisite of the filing by the assignee that the application does not seek to enlarge the scope of the patent claims, the determination of that question must be made before the application can be given a filing date and if it is found that the application seeks such enlargement, it cannot be accepted.

[2] For the purpose here involved a claim of a reissue application is broader than a corresponding patent claim if it omits any limitation included by such patent claim or in other words, if it would be infringed by any conceivable structure which does not infringe the patent claim, *In re Bostwick*, 26 CCPA 1117, 102 F.2d 886; *Fox Typewriter Co.* v. *Corona Typewriter Co.*, 282 Fed. 502; *Schenk et al.* v. *United Aircraft Corporation*, 51 USPQ 519. A consideration of the original patent claims shows that each of them includes at least one limitation which is not present in new claim 9. Thus, each of claims 1, 2, 5, 6, 7 and 8 is limited to an apparatus including a secondary resistance network, while claim 9 is not so limited. Claim 3 of the patent includes in lines 5 and 6 a means "responsive to operation of said control means," which is a limitation not present in claim 9. Patent claim 4 depends upon claim 3 and is therefore similarly limited.

From the foregoing, it appears that the Examiner correctly held that the application papers here involved seek to enlarge the scope of the claims of the original patent and that the refusal of the Application Branch to accord such papers a filing date was therefore proper.

The petition is denied.

Petition for Reconsideration

This is a petition for reconsideration of the decision rendered March 21, 1963 denying a petition for acceptance of the above-identified papers as a reissue application. The present petition requests answers to several specific questions, but in view of the number of petitions filed it is not practicable to respond in detail to each specific inquiry by a petitioner as to the basis of a decision.

This case involves an interpretation of a portion of the 1952 Patent Act, for which no exact precedent is known. It has been necessary to interpret the statute involved and the reasons for arriving at the interpretation given in the decision of March 21, 1963 are set forth as fully as possible therein. The arguments now advanced by the petitioner have all been fully considered but they are not found to justify any modification or amplification of that decision beyond what is contained herein.

The petition is denied.

U.S. Court of Customs and Patent Appeals

IN RE DOUGLAS A. MORETON

No. 6929. Decided February 13, 1963

[50 CCPA —; 312 F.2d 594; 136 USPQ 479]

1. APPLICATION—BENEFIT OF DATE OF EARLIER APPLICATION—35 U.S.C. 120.

"Our decision as to whether the Board was correct in finding that the claimed

invention was not entitled to the benefit of the filing date of appellant's application Serial No. 28,521 requires a careful analysis of that earlier application as a whole to see what invention is disclosed therein. 35 U.S.C. 120 states that 'An application for patent for an *invention* disclosed * * * in an application previously filed in the United States by the same inventor shall have the same effect, *as to such invention*, as though filed on the date of the prior application, * * *.' If appellant's invention as claimed in the appealed claims is not disclosed in Serial No. 28,521, he is obviously not entitled to the filing date of that application for the appealed claims."

2. SAME—SAME—SAME.

"* * *, viewed in the light of the disclosure in Serial No. 28,521, we are convinced that that application discloses an invention directed to a three-component hydraulic fluid and lubricant but *not* an invention directed to a two-component hydraulic fluid and lubricant, i.e. one consisting 'of a mixture of a particular phosphorus compound and a particular chlorinated hydrocarbon.' On that basis we find that appellant is not entitled to the benefit of the filing date of Serial No. 28,521 for the appealed claims."

3. SAME—SAME—SAME—OVERCOMING REFERENCE.

"For another reason appellant asserts that the disclosure in Serial No. 28,521 is sufficient to support his appealed claims and overcome the patent to Gamrath et al. He contends that since the parent case is a constructive reduction to practice of everything disclosed therein, the test is whether the disclosure of the parent case is sufficient to antedate so much of the claimed disclosure as the patent shows 'much in the same manner as an affidavit under Rule 131,' citing *In re Stempel, Jr.*, 44 CCPA 820, 241 F.2d 755, 113 USPQ 77. We do not believe that to be the test. The decision in *In re Stempel, Jr.* is limited to affidavits under Rule 131 and no such affidavit is involved here. Instead, the instant situation is governed by 35 U.S.C. 120 which entitles the appellant to rely on the date of an earlier filed application for his claimed invention only if that invention is disclosed in that earlier filed application. In the present case we have found that the invention disclosed in the earlier application, Serial No. 28,521, is a composition containing at least three essential ingredients while the claimed invention is directed to a composition consisting essentially of two ingredients."

4. PATENTABILITY—PARTICULAR SUBJECT MATTER—"FIRE-RESISTANT HYDRAULIC FLUID AND LUBRICANT."

The decision of the Board of Appeals, refusing certain claims in an application entitled "Fire-Resistant Hydraulic Fluid and Lubricant" as unpatentable over the prior art, is affirmed.

APPEAL from the Patent Office. Serial No. 668,700.

AFFIRMED.

Joseph A. De Grandi (*Francis C. Browne*, *William E. Schuyler, Jr.*, *Andrew B. Beveridge*, and *Gerald H. Peterson* of counsel) for appellant.

Clarence W. Moore (*Jack E. Armore* of counsel) for the Commissioner of Patents.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, SMITH, and ALMOND, JR., *Associate Judges*

MARTIN, *J.*, delivered the opinion of the court.

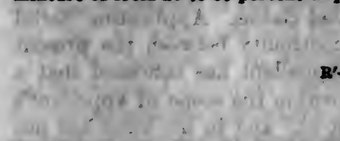
This is an appeal from a decision of the Patent Office Board of Appeals affirming the Examiner's rejection of claims 1–6 of appellant's application Serial No. 668,700, filed June 28, 1957, for Fire-Resistant Hydraulic Fluid and Lubricant. Ten claims have been allowed by the Examiner. Appellant states in application Serial No. 668,700 that said application is a continuation-in-part of his earlier applications, Serial No. 221,739, filed April 18, 1951 (abandoned July 2, 1957), and Serial No. 28,521, filed May 21, 1948 (forfeited October 22, 1952).

The following appealed claims are representative:

2. The fire-resistant hydraulic fluid and lubricant consisting essentially of from 20 to 80 perecnt of tricreayl phosphate and from 80 to 20 percent of chlorinated biphenyl having a combined chlorine content of from 40 to 55 percent.

4. The fire-resistant hydraulic fluid and lubricant consisting essentially of 50 percent of tricreayl phosphate and 50 percent of chlorinated biphenyl having a combined chlorine content of 48 percent.

6. The fire-resistant hydraulic fluid and lubricant consisting essentially of a mixture of from 20 to 80 percent of phosphate ester represented by the formula:



in which R and R' are radicals selected from the group consisting of phenyl, cresyl and xylyl and R'' is a radical selected from the group consisting of phenyl, cresyl, xylyl and an alkyl radical having from 4 to 12 carbon atoms and from 80 to 20 percent chlorinated biphenyl having a combined chlorine content of from 40 to 55 percent.

Claims 1 and 5 are identical to claim 6 except that the phosphate ester is defined in claim 1 as "triaryl phosphate in which the aryl radicals have from 6 to 8 carbon atoms and a total of 19 to 24 carbon atoms" and in claim 5 as "alkyl diaryl phosphate in which the aryl radicals have from 6 to 8 carbon atoms and the alkyl radical from 4 to 12 carbon atoms." Claim 3 is identical to claim 2 except for reciting cresyl diphenyl phosphate rather than tricresyl phosphate.

The allowed claims are drawn to compositions which contain a polymeric alkyl methacrylate in addition to the phosphate ester and chlorinated bipenyl recited in the appealed claims.

Appellant's application describes a new composition of matter useful particularly as an extremely fire-resistant and explosion-resistant hydraulic fluid and lubricant. One embodiment of the application, to which the appealed claims are directed, discloses a fire-resistant hydraulic fluid and lubricant consisting essentially of a mixture of a particular phosphate ester and a chlorinated biphenyl which has a combined chlorine content of from 40 to 55 percent.

The references relied on by the Examiner and the Board are:

Caprio, 2,245,649, June 17, 1941.
Gamrath, 2,504,121, April 18, 1950.
Watson, 2,636,861, April 28, 1953.
Gamrath et al., 2,707,176, April 26, 1955.

The Gamrath et al. patent describes hydraulic fluids and discloses a fluid composition containing 50 percent by weight of tricresyl phosphate and 50 percent by weight of a chlorinated biphenyl containing 48 percent of combined chlorine.

The Watson, Caprio and Gamrath patents disclose various phosphate esters useful as components in lubricating and hydraulic fluids.

Claims 1, 2, 4 and 6 stand rejected as being fully met by Gamrath et al.

Claim 3 stands rejected as being unpatentable over Gamrath et al. in view of Watson while claim 5 stands rejected as being unpatentable over Gamrath et al. in view of either Gamrath or Caprio. It is the Examiner's position that it "lacks invention" to substitute the cresyl diphenyl phosphate and alkyl diaryl phosphate esters of the secondary references for the tricresyl phosphate in the fluid compositions of Gamrath et al. since the prior art, e.g. the Watson and Caprio patents, shows that various phosphate esters are equivalent in the hydraulic fluid and lubricant art.

Appellant contends that he is entitled to the filing date of his application Serial No. 28,521, filed May 21, 1948, for his appealed claims and thus he antedates the filing dates of the Gamrath et al. patent

and of the Watson patent. The applications from which the Gamrath et al. and Watson patents resulted were filed in the Patent Office on January 15, 1951 and June 9, 1950, respectively. Appellant also contends his application Serial No. 221,739, filed April 18, 1951, discloses the subject matter of his appealed claims. Application Serial No. 221,739 is necessary to provide continuity between the present application and Serial No. 28,521. Appellant has conceded that a "two-component composition coming within the scope of appellant's claims 1–6 is disclosed by Gamrath et al." and in his brief has not challenged the merits of the Examiner's rejections of the appealed claims on the cited art but contends that he antedates Gamrath et al. and Watson.

The Board held that appellant was not entitled to the benefit of the filing dates of either of the earlier filed applications for the claimed subject matter. It stated:

> * * * Nowhere in application, Serial No. 28,521 have we been able to find any disclosure, contemplation, or suggestion of a two-component composition such as claimed in the instant case and disclosed in the Gamrath et al. patent upon which the appealed claims are rejected. * * *
>
> Claims drawn to the two-component composition were finally rejected in Serial No. 221,739 as based on insufficient disclosure [1] and the appeal thereon was withdrawn. The Examiner has held, therefore, that issue of support for the two-component composition in Serial No. 221,739 was finally determined or is *res adjudicata* and, therefore, appellant is not entitled to the filing date thereof in the instant application for this subject matter. * * * The Examiner has concluded that since appellant is not entitled to the filing dates of either of the parent applications in regard to the two-component phosphate ester-chlorinated biphenyl composition, the patents to Gamrath et al. and Watson are statutory bars.
>
> We are in full agreement with these holdings of the Examiner * * *.

The case involves the question whether appellant is entitled to the benefit of the filing dates of his two parent applications for the appealed claims. If we find that appellant is not entitled to the filing date of Serial No. 28,521, the issue as to whether he is entitled to the filing date of Serial No. 221,739 becomes moot because of the effective dates of the cited prior art.

Appellant urges that the disclosure in Serial No. 28,521 is sufficient to support the appealed claims. It is contended that what is disclosed in that application is a hydraulic fluid and lubricant having a high degree of non-flammability and "which to Appellant and also to anyone having ordinary skill in the art *consisting of* a mixture of a particular phosphorus compound and a particular chlorinated hydrocarbon." [Emphasis ours.] Appellant contends that in Serial No. 28,521 he went a step further and defined a particular ingredient, i.e. a suitable polymeric alkyl methacrylate, which he found to be excellent for improving the viscosity index of his two-component mixture, i.e. his phosphorus compound-chlorinated hydrocarbon mixture. He urges that the only purpose for the polymeric alkyl methacrylate is as a viscosity index improver to increase the viscosity index of the resulting composition to the desired level for the intended use. To support that contention appellant points to that part of Serial No. 28,521 which reads:

> For the purposes of this invention, it has been discovered that the proportion of poly alkyl methacrylate [polymeric alkyl methacrylate] used may be that which is sufficient to increase the viscosity index of the resulting composition to the desired level for its intended use. Usually from 0.2 to 10 percent by volume of the poly alkyl methacrylate (exclusive of any solvent) will be found satisfactory, and preferably a proportion within the range from 1 to 5 percent.

[1] Those claims were rejected as based on insufficient disclosure since there was no specific embodiment of a composition solely of chlorinated biphenyl and tricresyl phosphate which is a suitable hydraulic fluid and lubricant.

It is argued that if one having ordinary skill in the art were satisfied with the properties of the two-component composition "for a particular use," he would not add the polymeric alkyl methacrylate.

[1] Our decision as to whether the Board was correct in finding that the claimed invention was not entitled to the benefit of the filing date of appellant's application Serial No. 28,521 requires a careful analysis of that earlier application as a whole to see what invention is disclosed therein. 35 U.S.C. 120 states that "An application for patent for an *invention* disclosed * * * in an application previously filed in the United States by the same inventor shall have the same effect, *as to such invention*, as though filed on the date of the prior application, * * *." [Emphasis ours.] If appellant's invention as claimed in the appealed claims is not disclosed in Serial No. 28,521, he is obviously not entitled to the filing date of that application for the appealed claims.

Turning to the introductory portion of Serial No. 28,521, it reads:

> This invention relates to a new composition of matter useful as a functional fluid, such as a hydraulic fluid and lubricant, especially such a fluid having a high degree of non-flammability.
>
> Certain functional fluids for hydraulic systems are required to meet many stringent specification requirements relating to such properties as viscosity at low and high temperatures, rate of change or viscosity with temperature, pour point, volatility, density, stability, ability to lubricate, etc., and in addition are required to have a high degree of non-flammability. The compositions of *my invention* have properties making them surprisingly suitable for such functional fluids.
>
> Compositions of *my invention* are made by compounding *at least three essential ingredients;* namely, a suitable ester of an acid of phosphorus, a suitable halogenated hydrocarbon, and a suitable polymeric alkyl methacrylate. * * * [Emphasis ours.]

Another portion of Serial No. 28,521 reads:

> * * * The triaryl phosphate, tricresyl phosphate, was found to be incompatible with the polymeric octyl methacrylate in the absence of the halogenated hydrocarbons, * * * and *it is a significant feature of my invention* that such chlorinated hydrocarbons render the polymerized octyl-methacrylate soluble in such a triaryl phosphate as tricresyl phosphate. The non-flammability of the resulting compositions was surprisingly high, especially in view of the fact that such other properties as *viscosity at low and high temperatures, rate of change of viscosity with temperature*, pour point, volatility, density, stability, ability to lubricate, etc. *were such as to render these compositions useful as hydraulic functional fluids having a high degree of non-flammability.* [Emphasis ours.]

All the specific examples as well as the original claims in Serial No. 28,521 are drawn to compositions containing at least a suitable phosphorus compound, a suitable halogenated hydrocarbon *and* a suitable polymeric alkyl methacrylate. Moreover, we are unable to find a teaching in Serial No. 28,521 that a hydraulic fluid and lubricant could be had in the absence of the third essential ingredient, i.e. the suitable polymeric alkyl methacrylate.

Although appellant has pointed to language in Serial No. 28,521 as indicating that the only purpose for the polymeric alkyl methacrylate is as a viscosity index improver, we find nothing in that language which discloses that a lubricant and hydraulic fluid according to the invention of that application can be produced without the polymeric alkyl methacrylate. The application has characterized the polymeric alkyl methacrylate as an essential ingredient of the lubricant

and hydraulic fluid. Furthermore, in elaborating on the polymeric alkyl methacrylate appellant in that earlier application states:

* * * * * * * *

The poly octyl methacrylates suitable *for the purposes of this invention are* * * *.

* * * * * * * *

For purposes of this invention, it has been discovered that the proportion of poly alkyl methacrylate used * * *. [Emphasis ours.]

[2] Therefore, viewed in the light of the disclosure in Serial No. 28,521, we are convinced that that application discloses an invention directed to a three-component hydraulic fluid and lubricant but *not* an invention directed to a two-component hydraulic fluid and lubricant, i.e. one consisting "of a mixture of a particular phosphorus compound and a particular chlorinated hydrocarbon." On that basis we find that appellant is not entitled to the benefit of the filing date of Serial No. 28,521 for the appealed claims.

[3] For another reason appellant asserts that the disclosure in Serial No. 28,521 is sufficient to support his appealed claims and overcome the patent to Gamrath et al. He contends that since the parent case is a constructive reduction to practice of everything disclosed therein, the test is whether the disclosure of the parent case is sufficient to antedate so much of the claimed disclosure as the patent shows "much in the same manner as an affidavit under Rule 131," citing *In re Stempel, Jr.*, 44 CCPA 820, 241 F.2d 755, 113 USPQ 77. We do not believe that to be the test. The decision in *In re Stempel, Jr.* is limited to affidavit under Rule 131 and no such affidavit is involved here. Instead, the instant situation is governed by 35 U.S.C. 120 which entitles the appellant to rely on the date of an earlier filed application for his claimed invention only if that invention is disclosed in that earlier filed application. In the present case we have found that the invention disclosed in the earlier application, Serial No. 28,521, is a composition containing at least three essntial ingredients while the claimed invention is directed to a composition consisting essentially of two ingredients.

Since we have found that the appealed claims are not entitled to the benefit of the filing date of Serial No. 28,521, as stated previously it is unnecessary to consider the question of whether appellant is entitled to the benefit of his other application, Serial No. 221,739, which does not antedate the effective dates of the references. [4] It follows then that since the claims clearly do not define patentably over those references, the decision of the Board is affirmed.

AFFIRMED.

PATENT SUITS

Notices under 35 U.S.C. 290; Patent Act of 1952

2,342,076, H. M. Herbener, Combined bust supporter and filler; **2,563,241**, same, Artificial bust; **2,725,574**, S. J. Block et al., Brassiere pad, filed Mar. 19, 1963, D.C., S.D. Calif. (Los Angeles), Doc. 63/312–S, *Forms Incorporated* v. *Sears, Roebuck & Co.*

2,566,897, W. Strauss, Leather buttons, filed Mar. 13, 1963, D.C., S.D.N.Y., Doc. 63/707, *Strauss Import Corporation* v. *Streamline Button, Inc. et al.* Same, filed same, Doc. 63/708, *Strauss Import Corporation* v. *B. Blumenthal & Co., Inc.* Same, filed same, Doc. 63/709, *Strauss Import Corporation* v. *Bailey Green & Elger et al.* Same, filed same, Doc. 63/710, *Strauss Import Corporation* v. *Lidz Brothers, Inc. et al.*

2,563,241. (See 2,342,076.)

2,642,679, F. J. Zamboni, Ice rink resurfacing machine, filed Mar. 6, 1963, D.C., S.D. Calif. (Los Angeles), Doc. 63/260–WB, *Frank J. Zamboni, etc.* v. *M. B. Vandenberg, etc.*

2,647,804, Baker and Conrad, Well packer and bridge plug for well bores, filed Aug. 4, 1953, D.C., N.D. Tex. (Fort Worth), Doc. 4/63/26, *Baker Oil Tools, Inc.* v. *Go Perforator Supply, Inc.*

2,672,885, B. W. Colman, Popcorn package, filed Feb. 4, 1963, D.C., M.D. Tenn. (Nashville), Doc. 3403, *The Taylor-Reed Corporation* v. *Blevins Popcorn Co., Inc. et al.*

2,677,894, H. P. Collier, Jr., Method of making spectacle frames, filed Mar. 13, 1963, D.C., S.D.N.Y., Doc. 63/706, *Titmus Optical Co., Inc.* v. *Jason Optics Co., Inc.*

2,712,304, B. J. Blumberg, Hygroscopic air escape valve, filed Sept. 15, 1961, D.C., S.D.N.Y., Doc. 61/3279, *Benjamin J. Blumberg et al.* v. *Border Plumbing & Heating Supply Company, Inc. et al.* Order dismissing action for lack of prosecution (notice Mar. 7, 1963).

2,712,982, G. Frenger, Heating and ventilation system, filed Nov. 18, 1959, D.C., S.D.N.Y., Doc. 153/70, *Burgess-Manning Co. et al.* v. *Waldvogel Brothers, Inc.* Stipulation and order of dismissal Mar. 6, 1963. Same, filed Mar. 10, 1958, D.C., N.D. Ill. (Chicago), Doc. 58c414, *Burgess-Manning Company et al.* v. *Airlite, Incorporated et al.* Order substituting Frenger International Corporation as plaintiff for Gunnar Frenger, Lief Mathiesen, Carl Martin Mathiesen and Dag Siggerud Mar. 1, 1963. Order holding claims 2, 11 and 12 of patent valid and infringed and dismissing counterclaims Mar. 1, 1963.

2,725,574. (See 2,342,076.)

2,802,495, T. W. Nicholson, Swiveled-scraper-plate-rotary-ring log barkers; **2,802,496**, same, Barking scraper blades and mountings therefor; **2,802,802**, C. W. Mullis, Sr., Rotary debarker having pivotable bark-removing tools biased by fluid under pressure in an annular tank, filed Apr. 14, 1962, C.C.A., 4th Cir., Doc. 8639, *Thomas W. Nicholson* v. *Carl W. Mullis Engineering & Mfg. Co., Inc.* Cause remanded to District Court for dismissal of complaint and counterclaim Mar. 6, 1963.

2,802,496. (See 2,802,495.)

2,827,141, M. Kessler, Framed panel construction, filed Mar. 8, 1963, D.C., N.D. Ohio (Cleveland), Doc. C–63/154, *Milton Kessler* v. *Imperial Plastics Co., Inc. et al.*

2,876,536, C. T. Dawson, Case for tool; **2,903,791**, H. S. Walker, same; **2,903,792**, same; Des. 183,333, same, Combined key case and pocket knife, filed May 22, 1961, D.C., S.D.N.Y., Doc. 61/1822, *The W. E. Bassett Company* v. *Eugene Bauer et al.* Consent judgment; patents held valid and infringed; defendants enjoined Mar. 8, 1963.

2,903,791. (See 2,876,536.)

2,903,792. (See 2,876,536.)

2,905,945, L. Winter, Collar construction for shirts, filed Dec. 6, 1962, D.C., S.D.N.Y., Doc. 62/3994, *Mebs, Inc. et al.* v. *Campus Sweater and Sportswear Co.* Order transferring action to D.C., N.D. Ohio (Cleveland), Mar. 7, 1963. Same, filed Nov. 20, 1961, D.C., S.D.N.Y., Doc. 61/4226, *Snap-Tab Corporation* v. *Wilk Shirt Corporation.* Order dismissing cause for lack of prosecution Mar. 13, 1963.

2,906,266. (See 2,802,495.)

2,909,371, G. Alcover, Gymnastic device, filed Mar. 5, 1963, D.C., S.D.N.Y., Doc. 63/616, *Pisos Internacional Ltd. et al.* v. *R. H. Macy & Co., Inc. et al.*

2,919,528, J. S. Adkins, Gyroscope, filed Mar. 1, 1963, D.C., S.D. Calif. (Los Angeles), Doc. 63/241–Y, *Lear Siegler, Inc.* v. *John S. Adkins.*

2,927,104, J. T. Stephan, Polymeric alkylene-oxide defoamer material for alkaline aqueous adhesive solutions and the like, filed Mar. 7, 1963, D.C., W.D. Wash. (Seattle), Doc. 5817, *Van Waters & Rogers, Inc. et al.* v. *Westport Chemical Company et al.*

2,941,795, A. W. Kammerer, Expansible rotary drill bit, filed Mar. 5, 1963, D.C., S.D. Calif. (Los Angeles), Doc. 63/253–WM, *Rotary Oil Tool Company* v. *A-Z International Tool Company.*

2,948,212, Jay and Rankins, Scale attachment for balers, filed Oct. 23, 1962, D.C., N.D. Calif. (San Francisco), Doc. 41064, *George Jay et al.* v. *Oliver Corporation.* Consent judgment; patent held infringed Mar. 11, 1963.

2,954,994, R. T. Beers, Socket retainer for rotary power tools; **2,990,189**, same, Socket connecting means for a rotary impact tool; **3,073,192**, same, Splined socket member for wrenches, filed Mar. 5, 1963, D.C., S.D. Tex. (Houston), Doc. 63–H–138, *Chicago Pneumatic Tool Company* v. *Reed Roller Bit Company.*

2,971,674, L. E. Canno, Method of making plastic bags, filed Nov. 3, 1961, D.C., S.D.N.Y., Doc. 61/3941, *Equitable Paper Bag Co., Inc.* v. *Flexicraft-Wrapture, Inc. et al.* Order of discontinuance Mar. 13, 1963.

2,990,189. (See 2,954,994.)

3,069,872, Henderson and Brown, Metering oil and gas separators, filed Mar. 7, 1963, D.C., S.D. Tex. (Houston), Doc. 63–H–145, *Houston Corporation* v. *National Tank Company.*

3,057,195, Bently and Price, Force measuring system; **3,074,279**, H. D. Morris, Position detecting transducer, filed Mar. 8, 1963, D.C., N.D. Calif. (San Francisco), Doc. 41353, *System-Donner Corporation* v. *Palomar Scientific Corporation et al.*

3,073,192. (See 2,954,994.)

3,074,279. (See 3,057,195.)

3,078,365, Atkins and Holmgreen, Jr., Continuous combustion signal lamp, filed Mar. 4, 1963, D.C., W.D. Tex. (San Antonio), Doc. 3252, *Warning Lites Company, Inc.* v. *S. H. Leggitt Company et al.*

Re. 23,839, A. B. Mojonnier, Dispensing mechanism with time controlled flow, filed Feb. 28, 1963, D.C. Mass. (Boston), Doc. 63/164–W, *The Kartridg Pak Co.* v. *Ward C. Cramer Associates, Inc. et al.*

Re. 23,849 (of 2,437,015), W. Baltz, Suspended horse, filed Mar. 29, 1962, D.C., N.D. Ill. (Chicago), Doc. 62c720, *William Baltz et al.* v. *Goldblatt Bros., Inc. et al.* Patent held valid and infringed; defendant Moulded Products, Inc. enjoined Feb. 28, 1963.

Re. 24,017 (of 2,588,264), J. A. Hendricks, Method of coating and drawing metal and compositions therefor, filed May 17, 1957, D.C., N.D. Ill. (Chicago), Doc. 57c892, *Devoe Corporation* v. *Houdaille Industries, Inc.* Decree holding claim 4 of patent invalid; complaint dismissed with prejudice June 29, 1962. Same, filed Nov. 13, 1956, same, Doc. 56c1912, *Devoe Corporation et al.* v. *General Motors Corporation et al.* Decree as above.

Des. 177,926, N. C. Powers, Hostess tray or similar article, filed Mar. 11, 1963, D.C., N.D. Ga. (Atlanta), Doc. 8231, *Tisch Hotels, Inc.* v. *Atlanta Americana Motor Hotel Corporation.*

Des. 183,333. (See 2,876,536.)

Des. 183,491, R. F. Green, Ceiling tile or the like, filed Mar. 9, 1961, D.C. Del. (Wilmington), Doc. 2306, *Armstrong Cork Company* v. *National Gypsum Company.* Complaint and counterclaim dismissed without prejudice Mar. 11, 1963.

Des. 189,902, S. Frankel, Combined radio and penholder, filed Sept. 1, 1961, D.C., S.D.N.Y., Doc. 61/3135, *Continental Merchandise Co., Inc.* v. *Astra Trading Corporation et al.* Consent judgment; patent held valid Mar. 8, 1963.

Des. 192,836, G. Meyer, Thermally insulated box, filed Feb. 26, 1963, D.C., S.D. Fla. (Miami), Doc. 63/116–DD, *Life-Like Products, Inc.* v. *Silby-Delcourt Chemical Industries, Inc.*

Des. 192,755, M. Hollinger, Surface skimmer for swimming pools or the like, filed Mar. 6, 1963, D.C.N.J. (Newark), Doc. 190/63, *Deeco, Inc.* v. *Duralite Company, Inc.* Same, filed Mar. 28, 1963, D.C., E.D.N.Y. (Brooklyn), Doc. 63–C–318. *Lemart Industries, Inc.* v. *Ampro Pool Filters, Inc.*

REISSUES

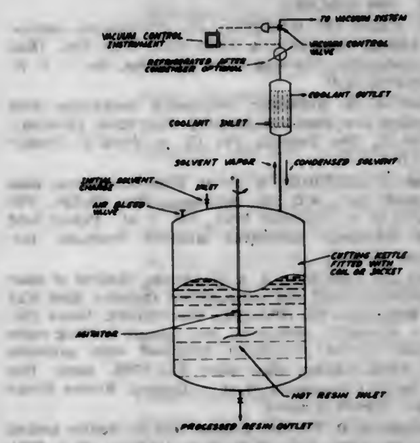
JUNE 18, 1963

Matter enclosed in heavy brackets [ ] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates additions made by reissue.

25,395
PROCESS FOR BLENDING A HOT POLYESTER RESIN AND POLYMERIZABLE SOLVENT

William C. Mallison, Topsfield, Mass., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine

Original No. 3,036,030, dated May 22, 1962, Ser. No. 827,939, July 17, 1959. Application for reissue Sept. 13, 1962, Ser. No. 224,280
12 Claims. (Cl. 260—45.4)



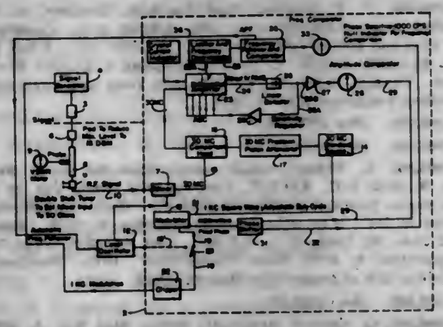
1. A process for blending a hot resin and a polymerizable solvent comprising introducing a hot polyester resin, at a temperature between about 180° C. and 210° C. and prepared by reacting an aliphatic diol with an alpha, beta-ethylenically unsaturated dicarboxylic acid, into a normally-liquid polymerizable monomer containing a polymerization inhibitor while maintaining the system under a vacuum evaporating the monomer to absorb the sensible heat from the hot resin and condensing the gaseous monomer in a condenser and returning the liquid monomer thus condensed to the blending vessel wherein said monomer in the mixing kettle initially has a temperature varying between about 25° C. and 100° C. and the vacuum on said kettle during the polyester resin addition is varied inversely with said monomer temperature between about 1 mm. and 120 mms. [below atmospheric pressure.]

25,396
VOLTAGE RATIO METER FOR HIGH-FREQUENCY CALIBRATION SYSTEMS

Bruno O. Weinschel, Bethesda, Md., assignor to Weinschel Engineering Co., Inc., Kensington, Md., a corporation of Delaware

Original No. 3,034,045, dated May 8, 1962, Ser. No. 64,766, Oct. 25, 1960. Application for reissue Sept. 20, 1962, Ser. No. 225,964
8 Claims. (Cl. 324—58)

1. An insertion loss test system comprising a high-frequency signal generator supplying an output at a frequency from *the order of* 1,000 to *the order of* 4,000 megacycles for supplying a high-frequency device whose insertion loss is to be tested; a standard source of intermediate frequency at a certain amplitude, said source being subject to spontaneous changes in frequency during a test; a local oscillator; a mixer for beating the output of said generator in the range up to 4,000 megacycles through said high-frequency device with the output of said local oscillator to provide a heterodyne frequency output equal to said intermediate frequency; an intermediate-frequency amplifier; means including an audio-frequency squarewave modulating device for supplying the output of said mixer and of said standard source in counterphase to said intermediate frequency amplifier at said [A-F] *audio-frequency* so that each of said outputs is alternately supplied in interlaced fashion; amplitude limiter means for limiting the output of the [I.F.] *intermediate-frequency* amplifier to a constant level; means supplied by said *intermediate frequency* [I.F.] amplifier for converting said interlaced outputs to interlaced D.-C. outputs whose respective D.-C. levels are representative of



the respective frequencies of said mixer output and of said standard source output; means for converting said interlaced D.-C. outputs to [a sine-wave output at said audio frequency whose amplitude is indicative of the difference of said respective frequencies; means for converting said sine-wave output to] an uninterrupted D.-C. voltage indicative of the difference in sense and magnitude between said two respective frequencies; voltage-controlled frequency control means for varying the frequency of said local oscillator output; and means for applying said D.-C. voltage to said last means to equalize the frequency of said mixer output to the same frequency as the standard source regardless of said spontaneous changes, and means for comparing said certain amplitude of the standard source output with the output amplitude of the intermediate frequency amplifier as a measure of attenuation of the system being tested.

25,397
WHEEL COVER

George Albert Lyon, Detroit, Mich., assignor to Lyon Incorporated, Detroit, Mich., a corporation of Delaware

Original No. 2,970,009, dated Jan. 31, 1961, Ser. No. 686,991, Sept. 30, 1957. Application for reissue Oct. 30, 1961, Ser. No. 149,157.
17 Claims. (Cl. 301—37)

10. In a tire sidewall simulating ring assembly, a rubber-like resiliently flexible ring member, and a retaining circular substantially rigid member of sheet metal having retaining fingers thereon providing with the mem-

ber a structure of generally hook form and with a marginal rib portion of said sidewall simulating ring member interengaged in the hook structure with portions of the



fingers overlying the marginal rib portion interlockingly against pull-out from the hook structure whereby to secure the members together to be handled as a unit.

25,398
INFLATABLE LIFE PRESERVER

Harold J. Moran, Trenton, N.J., assignor to Switlik Parachute Company, Inc., Trenton, N.J.

Original No. 2,886,835, dated May 19, 1959, Ser. No. 656,139, Apr. 30, 1957. Application for reissue May 16, 1961, Ser. No. 119,010
18 Claims. (Cl. 9—340)



17. A life preserver comprising an inflatable unit having a plurality of separate superimposed gas cells, each of said cells being composed of a thin, flexible, impervious material and shaped to form a central opening so as to surround the body of the wearer and provide an inner periphery adjacent to and an outer periphery remote from the body of the wearer, means for inflating the individual cells and maintaining the cells inflated independently of each other, and webs connected to and extending between the edges of the adjacent cells at the inner and outer peripheries thereof to connect the plurality of superimposed cells into a single unit and control the expansion of the cells away from each other.

25,399
DRAPERY ROD FIXTURE

Joseph V. Graber and Ferdinand F. Salzmann, Madison, Wis., assignors to Graber Manufacturing Company, Inc., Middleton, Wis., a corporation of Wisconsin

Original No. 3,049,176, dated Aug. 14, 1962, Ser. No. 17,517, Mar. 25, 1960. Application for reissue Dec. 12, 1962, Ser. No. 244,229
17 Claims. (Cl. 160—346)

15. A rod bracket for supporting a drapery traverse rod, said rod bracket including a pulley case adjacent one end thereof and means supporting a drapery rod adjacent the other end, said pulley case having a front plate and an end plate on one end of the front plate and extending rearwardly thereof, an end bracket overlying the outer face of said end plate and having opposed retainer elements attached to its top and bottom edges and extending toward each other in spaced relation to



the inner face of the end bracket to form a socket for slidably receiving the end plate, a latch leaf on said rod bracket extending in spaced relation to the inner face of said end plate, said latch leaf having at least one notch therein, and a finger on one of said retainer elements extending into said notch to releasably latch the rod bracket onto the end bracket.

25,400
ADSORBENT BRIQUETS FOR COMBINED ODOR AND MOISTURE REMOVAL

Ernest G. Doying, Fostoria, Ohio, assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Original No. 2,933,455, dated Apr. 19, 1960, Ser. No. 480,287, Jan. 6, 1955. Application for reissue Jan. 17, 1962, Ser. No. 167,479
2 Claims. (Cl. 252—428)

1. An odor and moisture adsorbent composition consisting of a shaped mixture of fragmentary activated carbon particles and a desiccant selected from the group consisting of activated alumina, zeolite and silica gel bonded with a water-dispersible and water-insoluble polymerized binder selected from the group consisting of polyvinyl acetate, polyvinyl chloride, polystyrene, and styrene-butadiene copolymers, said binder being present in an amount ranging between 5 percent and 30 percent by weight of said composition. [, and a vehicle for said binder, said vehicle being selected from the group consisting of water, ethyl alcohol, benzene, and acetone.]

25,401
SYSTEM FOR ANCHORING AND TRANSPORTING A SEISMIC VIBRATOR

Frank Clynch, Ponca City, Okla., assignor to Continental Oil Company, Ponca City, Okla., a corporation of Delaware

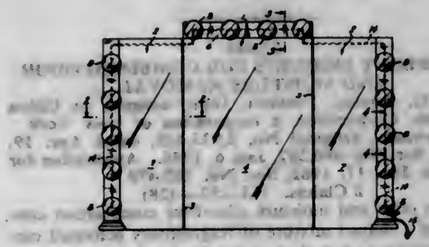
Original No. 3,024,861, dated Mar. 13, 1962, Ser. No. 718,574, Mar. 3, 1958. Application for reissue May 14, 1962, Ser. No. 202,338
20 Claims. (Cl. 181—.5)



11. In combination with a vibrator and a truck; a base plate rigidly secured to the vibrator and extending outwardly from opposite sides of the vibrator, a pair of columns slidingly secured to the truck in positions to

extend substantially vertically on opposite sides of the vibrator, a jack connected to the truck and the columns for raising and lowering the columns relative to the truck and for raising and lowering one end of the truck with respect to said columns, a collapsible linkage secured to the lower end of each column and the base plate on the respective side of the vibrator to lift the vibrator upon upward movement of the columns, and spring means secured to the lower end of each column and the base plate on the respective side of the vibrator for resiliently transmitting the weight of the truck onto the base plate when one end of the truck is raised with respect to the columns, said spring means having a compliance such that the resonant frequency of the system is substantially different from the frequency of vibration of the vibrator.

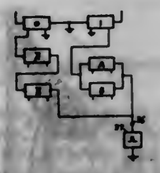
25,402
MAKE-UP MIRROR
Michael Myerberg, New York, N.Y.
Original No. 3,059,103, dated Oct. 16, 1962, Ser. No. 129,784, Aug. 7, 1961. Application for reissue Nov. 20, 1962, Ser. No. 243,695
1 Claim. (Cl. 240—4.1)



A make-up mirror comprising a central mirror panel, side mirror panels hingedly joined thereto, a row of electric light bulbs along substantially the entire outer edge of each side panel and along substantially the entire top edge of the central panel, and being positioned in spaced relation to the panes of the mirror panels and in front thereof for illuminating the face of a user by reflection from the said mirror panels as well as by direct lighting and being also positioned to permit bringing the face as close as desired and including even actual contact with said bulbs, the said bulbs being comparatively low wattage and large surface incandescent bulbs and having a smooth exterior light diffusing coating, whereby a substantially shadowless illumination for the face of the user is provided without danger of burning if the face is brought into contact with one of said bulbs, the said bulbs being substantially 15 watt bulbs, substantially 2¼ inches in diameter with a ratio of surface area to wattage of about one square inch to [three watts] *each watt* and being spaced apart in the said rows by a distance substantially equal to the bulb diameter.

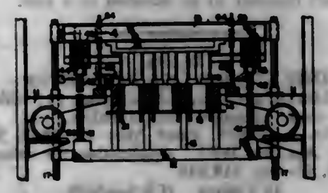
25,403
CRYOTRON LOGIC CIRCUIT
Richard K. Richards, Ames, Iowa
Original No. 2,969,469, dated Jan. 24, 1961, Ser. No. 669,539, July 2, 1957. Application for reissue Jan. 21, 1963, Ser. No. 253,529
31 Claims. (Cl. 307—88.5)

26. A logic circuit comprising a plurality of pairs of cryotrons, means for selectively causing the input winding of one and only one cryotron of each pair to be actuated, a transfer current source connected to a first terminal and a second terminal, a first current path from said first terminal to said second terminal where said first current path includes the series connection of the contacts of one cryotron of each of said pairs, a second current path from said first terminal to said second terminal where said second



path includes the parallel connection of the contacts of the other cryotron of each of said pairs, and a load connected in series with one of said paths.

25,404
CONTROL SYSTEM FOR A CONCRETE BLOCK FORMING MACHINE
Harry A. Wellnitz, Columbus, Ohio
Original No. 2,985,935, dated May 30, 1961, Ser. No. 722,256, Mar. 18, 1958. Application for reissue May 9, 1962, Ser. No. 193,907
12 Claims. (Cl. 25—41)

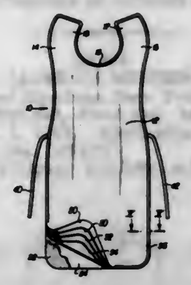


9. In a block forming machine of the type including a mold box having an open top through which it may be charged with moldable material and an open bottom, a pallet-supporting frame carrying a pallet to close said mold box bottom during the block forming operation and to receive the formed block thereon, a pressure stripper head frame mounted on said machine and carrying a pressure stripper head in cooperative relationship with the open top of the mold box and movable vertically relative thereinto through the open top to compact the block forming material in the mold box; spacing means on the respective pallet-supporting and pressure stripper head frames normally operable to afford relative vertical movement therebetween during the block compacting operation but capable of fixedly spacing said frames against vertical movement thereof toward each other upon completion of the block compacting operation, said spacing means including stop portions spaced vertically from each other during the block compacting operation but movable vertically toward each other during such operation by vertical movement of the pressure stripper head frame and head carried thereby relative to the pallet-supporting frame and the pallet carried thereby to provide a variable space therebetween whereby height of the formed block is not affected by variations in pallet thickness, and variable means operable to take-up the space between said stop portions to prevent further relative movement toward each other and to thereby fixedly space said pallet-supporting frame and said pressure stripper head frame against relative movement toward each other to prevent crushing of the formed block between the pallet and the pressure stripper head during the stripping action and to provide unitary movement thereof and the mold box relatively vertically so as to strip the formed block from the mold; and cooperating block height sensing means operatively connected to said variable space filling means to actuate said space filling means upon completion of the block compacting operation and thereby determine the extent of movement of the pressure stripper head into the mold box, said sensing means comprising a sensing member carried by the pressure stripper head frame and a cooperating sensing member carried by the mold box in relatively spaced relationship for movement toward each other by the relative movement of the pressure stripper head frame and mold box during the block compacting operation so as to contact each other upon completion of the operation, said sensing member carried by the pressure stripper head frame being mounted for vertical movement relative to the pressure stripper head frame so as to permit the necessary relative movement of the pressure stripper head frame and the mold box during the stripping operation.

PATENTS

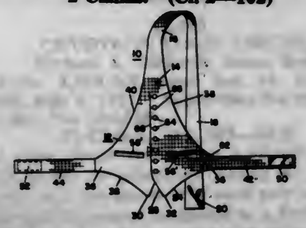
GRANTED JUNE 18, 1968

3,093,829
PROTECTIVE APRON CONSTRUCTION
De Witt C. Maine, Downey, Calif.
(1200 S. Central Ave., Los Angeles 21, Calif.)
Filed Mar. 2, 1962, Ser. No. 176,936
5 Claims. (Cl. 2—2)



1. A multi-layer pliant apron comprising:
(*a*) a generally rectangular body panel adapted to cover the front of a wearer's body from the neck downwardly to below the waist;
(*b*) a pair of laterally spaced shoulder and back wings formed integrally with the upper portion of the body panel and extending generally upwardly therefrom, the body panel and wings including a supporting layer of flexible sheet material, protective means including an outer layer of flexible sheet material overlying said supporting layer and joined thereto along marginal edge portions of the two layers, and a layer of porous foam material underlying the wing and upper body panel portions of the supporting layer and being bonded thereto, the porous material layer being of substantially greater thickness than the supporting layer and having a highly frictional inner exposed surface adapted to frictionally cling to a wearer's body or clothing across the shoulders and adjacent portions of the upper chest and back and thereby to support the weight of the apron; and
(*c*) tie means attached to the body panel approximately at the waist level thereof including flexible stripe attached to opposite sides of the body panel and adapted to be knotted behind the wearer's back.

3,093,830
REVERSIBLE COMBINATION TIE-VEST ARTICLE
David V. Wills, 4828 Brown St., Philadelphia 39, Pa.
Filed Apr. 18, 1961, Ser. No. 103,809
2 Claims. (Cl. 2—102)



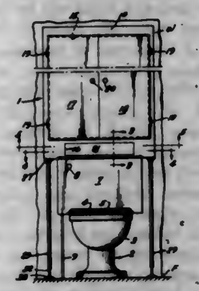
1. A combination tie-vest article comprising a unitary vest panel which narrows to a single band in the direction towards its top portion and extends to provide a neck tie band with one free end, said panel having its greatest width at its bottom portion and provides the only neck tie band of said article, and first and second waist bands respectively extending from opposite sides of the bottom portion of said vest panel.

3,093,831
ARTIFICIAL GLAND
Gerhard Paul Wilhelm Jordan, San Francisco, Calif.
(% Downtown Medical Center, 450 Clarkson Ave., Brooklyn 3, N.Y.)
Filed Oct. 22, 1959, Ser. No. 847,994
7 Claims. (Cl. 3—1)



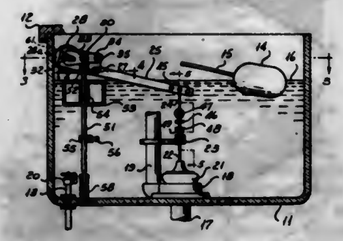
6. An implantable gland comprising living hormone-producing tissue completely enclosed in a container, at least a portion of the walls of said container being formed of a semipermeable membrane, said semipermeable membrane having pores with a maximum size of about 5 millimicrons and being made from a material selected from the group consisting of cellulose, cellulose hydrate, and cellulose esters.

3,093,832
CABINET
Glenn E. Wise, 2415 39th Place NW., Washington, D.C.
Filed Dec. 8, 1960, Ser. No. 74,497
7 Claims. (Cl. 4—1)



1. In combination: a floor portion; a toilet including a bowl portion and a flush tank having a hollow interior; means supporting said toilet; a unitary portable cabinet structure supported by said floor portion and adapted for engagement with but structurally detached from and, thus, movable as a unit relative to said toilet, said cabinet including wall-forming means, entry means supported by said wall-forming means for movement relative to said wall-forming means, and means, engaging said floor portion and said wall-forming means supporting said wall-forming means, said wall-forming means and said entry means normally cooperating with portions of said tank to prevent direct entry of a hand into said interior, said entry means being movable, however, as aforesaid, to allow direct entry of a hand into said interior when such entry is desired.

3,093,833
TWO-WAY FLUSH VALVE MECHANISM
Romeo Morton Nardone, 19 Ox Bow Lane, Summit, N.J.
Filed July 25, 1961, Ser. No. 126,685
2 Claims. (Cl. 4—67)



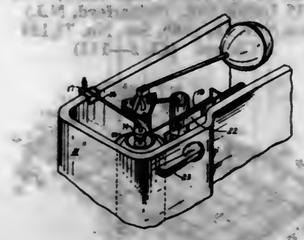
1. In a toilet tank, a water supply pipe, an inlet valve, a float controlling the flow of water from said pipe through said valve, an outlet pipe, a ball valve normally closing said outlet pipe, mechanism including a lever pivotally mounted in said tank, a link connecting one arm of said lever to said ball valve, a handle oscillatably mounted in said tank, means connecting said handle to said lever for lifting said ball valve and permitting escape of water in said tank through said outlet pipe, and another float and means other than said lever connecting said float directly to the last-named means to return the ball valve to its seat when a selected fraction of the water in said tank has been discharged through said outlet pipe.

3,093,834
CONVERTIBLE STRUCTURE
Wallace D. Watkins, P.O. Box 285, Portland, Tex.
Filed Oct. 2, 1961, Ser. No. 142,046
4 Claims. (Cl. 4—172)



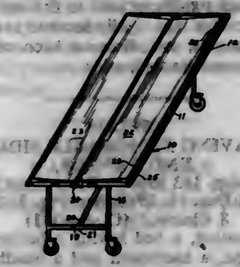
1. A structure convertible from a garage to a swimming pool comprising, an enclosure having a floor, spaced side walls, a back wall and an open front, the floor being water tight and the side and back walls being water tight from the floor to a predetermined height, a water inlet through one of the walls, a water outlet in the floor, a trackway at the top of the walls extending the length of the enclosure and beyond, a roof mounted on the trackway and movable therealong to a position overlying the enclosure and to a position removed from the enclosure, a door mounted at the open front of the enclosure movable to and from position across the open front, and removable means for bridging the side walls adjacent the open front in sealing relation with the side walls and floor to complete a water-tight enclosure, said side and back walls are divided into upper and lower sections hingedly connected, with means to hold the upper sections erect in vertical alignment with and in continuation of the lower sections to complete the walls from the floor to the trackway, and means to support the upper sections of at least some of the walls in horizontal position to form platforms along the upper edges of the lower wall sections to which they are hinged.

3,093,835
ROOM SPRAY DEODORIZER
Martin Kaplan, Skokie, Ill., assignor of one-third to Leo S. Singer, Lincolnwood, Ill., and one-third to Bernard R. Lewis, Chicago, Ill.
Filed June 9, 1961, Ser. No. 116,020
1 Claim. (Cl. 4—228)



In combination with a toilet tank provided with a cover and having a ball lift assembly, an aerosol type can containing a spray deodorant and having a manually operable discharge valve, means for mounting said can within said tank, means operatively engageable with the discharge valve of said can and with the ball lift assembly for actuating said discharge valve whereby to discharge a quantity of the contents of the can with each operation of said ball lift assembly, a conduit connected to the discharge valve to conduct discharged spray, a bracket carried on the upper edge of the tank wall and having means for securing the free end of said conduit exteriorly of said tank wall whereby spray is discharged exteriorly of said tank, the conduit passing between the cover and the upper edge of said tank wall.

3,093,836
BATH CART
Robert C. Christensen, Erie, George P. Bement, Harborcreek Township, Erie County, and Arthur O. Brueckman, Fairview, Pa., assignors to GAR Hospital Equipment, Inc., Erie, Pa., a corporation of Pennsylvania
Filed May 2, 1960, Ser. No. 25,958
1 Claim. (Cl. 5—60)



A bed comprising a frame, said frame comprising side members and end members integrally connected together to define a generally rectangular enclosure, a support means for said frame, a top, said top being made of an integral unitary plate like member having two generally flat planar support portions for supporting pads, said support portions being integrally connected together by a portion defining an intermediate trough and inclined toward each other, said intermediate trough having vertical side walls and a bottom therebetween formed by said plate like member, the material of said top around the outer edges thereof being bent downwardly, then outwardly, then upwardly and defining an outer trough around said top communicating with said intermediate trough, said material of said top around said outer trough being bent outwardly and then downwardly, forming a downwardly

facing channel around the entire periphery of said top, said downwardly facing channel receiving said frame.

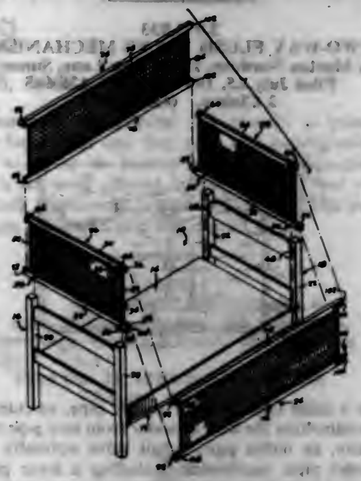
3,093,837
COLLAPSIBLE COT
James H. Clayton, Glen Rock, N.J. (175 Union Ave., Rutherford, N.J.)
Filed Nov. 16, 1960, Ser. No. 73,159
3 Claims. (Cl. 5—111)



1. A collapsible cot comprising pairs of rigid side segments pivotally secured together at their inner ends and defining foldable side members wherein each side segment may be foldably disposed parallel to the side segment to which it is pivotally secured, pairs of rigid end segments pivotally secured to the outer ends of the side segments, the inner ends of the end segments being detachably secured together whereby each end segment may be foldably disposed parallel to the side segment to which it is pivotally secured, the end segments and side segments collectively defining a rigid, rectangular frame when unfolded and a compact group of adjacent, mutually parallel, interconnected segments when folded; a plurality of longitudinal and transverse, flexible strips attached respectively across the end segments and the side segments to provide a flexible supporting surface across the rectangular frame when unfolded and to provide attachment strips securing together respective elements of pivotally connected side segments with end segments pivotally connected thereto when folded thereby preventing detachment of the said elements; means for rigidly and detachably securing adjacent inner ends of the end segments together, end legs rigidly secured to the outer ends of the side segments, center legs rigidly secured to the inner ends of the side segments, and discs on each of the end and center legs intermediate their ends.

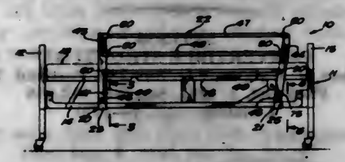
3,093,838
BED HAVING REMOVABLE SIDE AND END PANELS
Willis R. Beasley, 133 McGee Drive, Fort Worth, Tex.
Filed Dec. 16, 1960, Ser. No. 76,309
8 Claims. (Cl. 5—331)

1. In combination, a bed having a horizontal mattress supporting frame, a footboard and a headboard fixed to and rising above related ends of said frame, said footboard and said headboard having vertical end posts, a footboard panel engaged with the inner side of the footboard, first means removably and supportably securing the footboard panel to the posts of the footboard, a headboard panel engaged with the inner side of said headboard, second means removably and supportably securing the headboard panel to the posts of the headboard, said footboard and headboard panels being spaced above the mattress frame, side panels extending between the footboard and headboard panels at related ends thereof and spaced above and extending along related sides of the mattress supporting frame, third means removably and supportably securing the side panels at related ends to the footboard panel, and fourth means removably and supportably securing the other ends of the side panels to the headboard panel, said panels comprising upper and lower horizontal bars, said first securing means comprising first socket means on the inner sides of the footboard and headboard posts, and



first screw means on the bars of the footboard and headboard panels engaged in said first socket means.

3,093,839
GUARD ACCESSORY FOR BEDS
Anthony J. Higgins, 390 Wallis St., Pasadena, Calif.
Filed Feb. 12, 1962, Ser. No. 172,399
12 Claims. (Cl. 5—331)

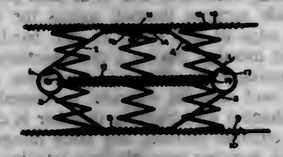


1. A side guard accessory adapted to be detachably mounted along the side of a bed to prevent an occupant falling from the bed when the accessory is in the extended guarding position thereof, said guard accessory comprising a pair of clamp assemblies securable to the side frame of a bed near the opposite ends thereof, a collapsing guard assembly having generally parallel rigid end members pivotally interconnected by a plurality of generally parallel rigid members, means pivotally connecting the lower ends of said end members to a respective one of said clamp assemblies, said guard assembly being shiftable in the plane of said end and said connecting members between an upright extended position and a compactly folded collapsed position close to the side frame of a bed on which said accessory is mounted, counterbalance means effective to urge said guard assembly away from said collapsed and toward the said upright extended position thereof, and means for rigidly and positively locking said guard assembly selectively in different positions including said extended and said collapsed positions.

3,093,840
BORDER STABILIZERS
Joseph Martin, Lawrence, N.Y., assignor to Eclipse Sleep Products, Inc., Brooklyn, N.Y., a corporation of New York
Filed July 20, 1961, Ser. No. 125,520
3 Claims. (Cl. 5—351)

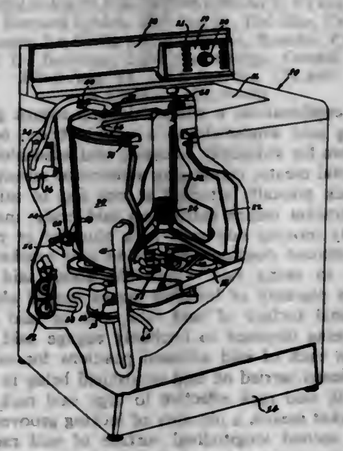
1. A border stabilizer for a mattress or the like having an upper and a lower border wire, said stabilizer

being composed of an elastic material and having upper and lower substantially longitudinally extending abutments, helical connecting springs connecting said abutments to said upper and lower border wires, said stabilizer having outwardly protruding extensions intermediate and about midway between said border wires, said abutments, extensions, and loops disposed in a substantially common



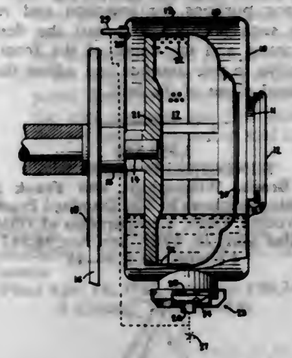
vertical plane, inwardly protruding loops extending from the middle of each extension, said loops extending from opposite sides of the plane of said stabilizer, and one free end of said elastic material is twisted around said elastic material adjacent its other free end inclining in one direction, and the other free end of said elastic material is twisted around said elastic material adjacent said one free end inclining in the other direction.

3,093,841
METHOD OF DETERMINING THE LIQUID LEVEL IN A CLOTHES WASHING MACHINE
Clifton A. Cobb and James T. Williams, St. Joseph, Mich., assignors to Whirlpool Corporation, St. Joseph, Mich., a corporation of Delaware
Original application Aug. 22, 1960, Ser. No. 51,226, now Patent No. 3,065,618, dated Nov. 27, 1962. Divided and this application Jan. 18, 1962, Ser. No. 167,109
3 Claims. (Cl. 8—158)



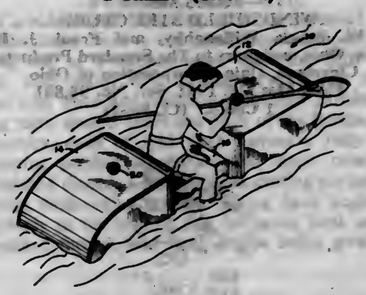
1. The method of filling a clothes washing machine having a liquid-receiving, movably-mounted container and an oscillatable agitator therein with an optimum quantity of washing fluid for varying clothes loads inserted in said container, comprising: adding a minimal quantity of washing fluid to said container, initiating oscillation of said agitator to commence the process of washing the clothes load inserted in said container, sensing the declining torque transmitted from said agitator to said container as washing fluid is added to said container, and terminating the addition of washing fluid to said container when the torque transmitted to said container declines to a predetermined value.

3,093,842
LAUNDRY METHOD
Benjamin Alvin Bunn, East Moline, Ill., assignor to Ametek, Inc., a corporation of Delaware
Filed Nov. 8, 1957, Ser. No. 695,260
2 Claims. (Cl. 8—159)



1. A method of washing textile materials and of then extracting liquid therefrom in a washer extractor including a housing and a receiver rotatable in said housing on a substantially horizontal axis, comprising the steps of loading the materials in the receiver, introducing washing liquid into the housing, rotating the receiver at washing speed through the washing liquid in the housing, dumping the washing liquid from the housing, then increasing the speed of rotation of the receiver to a predetermined speed which is higher than the washing speed and at which the materials are urged toward the wall of the receiver by centrifugal force without preventing slight movement of the materials away from said wall, introducing liquid into the housing while the receiver is being rotated at said predetermined speed, maintaining the speed of rotation of said receiver at said predetermined speed after the level of liquid in the housing is such that the receiver moves through the mass of liquid, so that the materials redistribute themselves evenly on said wall, dumping the liquid from the receiver after the materials have been evenly distributed, and then increasing the speed of rotation of the receiver to a speed substantially higher than said predetermined speed to extract the liquid from said materials.

3,093,843
WATER BUG BOAT
Ronald Oman, 293 4th Ave., St. James, N.Y.
Filed Aug. 22, 1960, Ser. No. 51,091
1 Claim. (Cl. 9—1)



A unitary boat hull comprising front and rear portions with a saddle portion of reduced height and width therebetween for a person to be supported by the hull,

said front and rear portions each having a compartment therein, a keel depending from the bottom of said hull extending along the central longitudinal plane thereof from a point spaced rearwardly of the front end of said hull to a point adjacent the rear end thereof, and a pair of filler caps each mounted on the top of one of said front and rear portions for insertion and removal of ballast from such portions to adjust the depth of the hull in the water and the depth of the front and rear portions relative to one another and adjust the angle of the longitudinal plane of the hull.

3,093,844
WINDSHIELD ASSEMBLY
Henry W. Brock, Willoughby, and Frank J. Hattan, Parma, Ohio, assignors to The Standard Products Company, Cleveland, Ohio, a corporation of Ohio
Filed Mar. 28, 1961, Ser. No. 98,817
1 Claim. (Cl. 9—1)



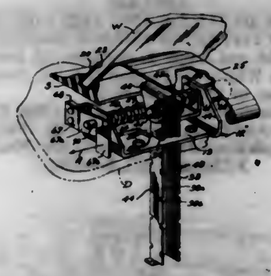
In combination, a marine vehicle having a deck, a windshield assembly for attachment in an upright windshielding position and extending laterally across said deck, comprising a transparent windshield having a non-linear peripheral edge and including a bottom longitudinal edge portion conforming to the lateral contour of said deck, a substantially C-shaped seal strip formed of a rubbery material placed over said peripheral edge of said windshield and extending over the opposite windshield edges closely adjacent thereto, said seal strip being bonded to said windshield, a narrow rigid frame mounted over said seal strip being similar in cross sectional configuration and having lip means on its opposed longitudinal edges thereof in engagement with said seal strip effective to anchor said frame to the latter, a second seal strip having a central portion of U-shaped cross sectional configuration being clamped over said frame along said bottom longitudinal edge of said windshield, said second seal strip having a surface in sealing relation with said deck, and wedge means insertable into said second seal strip adjacent its central portion effective to urge the latter into clamping engagement with said frame.

3,093,845
WINDSHIELD STRUCTURE
Henry W. Brock, Willoughby, and Frank J. Hattan, Parma, Ohio, assignors to The Standard Products Company, Cleveland, Ohio, a corporation of Ohio
Filed Mar. 28, 1961, Ser. No. 98,841
1 Claim. (Cl. 9—1)



In combination, a windshield having a peripheral edge which includes a middle section and sections on opposite sides thereof longitudinally deviating from said middle section, a seal strip mounted over said peripheral edge, a rigid channel having a longitudinal configuration conforming to the contour of said peripheral edge and clamped over said seal strip being effective to secure said strip on said edge, means for detachably connecting a cover to said peripheral edge comprising a rigid bar-like member shaped to longitudinally conform to the middle section of said windshield and to at least portions of the deviating side sections thereof, means for securely fastening one edge of said cover to said bar-like member, said bar-like member having a cross sectional configuration conforming to the transverse contour of the outer surface of said channel whereby in assembled relation with said channel said bar-like member is clamped over said outer channel surface, and latch means carried on said bar-like member movable into latching engagement with said channel effective to retain said bar-like member on said channel.

3,093,846
WINDSHIELD OPERATING MECHANISM
James S. Reid, Hudson, Ohio, assignor to The Standard Products Company, Cleveland, Ohio, a corporation of Ohio
Filed Mar. 28, 1961, Ser. No. 98,961
2 Claims. (Cl. 9—1)



1. In combination, a windshield and means pivotally mounting said windshield to a vehicle body, operating mechanism for swingably adjusting said windshield about said pivotal means, comprising adjustment means including a rack pivotally attached at one end to said windshield, bracket means carried on said body, means for selectively moving said rack to a plurality of predetermined adjusted positions relative to said bracket means effective to swing said windshield about said pivotal means, a plurality of latching means spaced along one longitudinal surface of said rack, one of said latching means being disposed to latchably engage said bracket means in each of said adjusted positions for said rack, spring means carried on said windshield being in engagement with said rack effective to urge said rack toward said bracket means, a plurality of locking grooves spaced along a second longitudinal surface of said rack, lock means comprising a lock bolt slidably mounted in said bracket means, a lock element carried on said bolt, said lock bolt being slidably actuatable to carry said lock element into locking engagement with one of said locking grooves in each of said adjusted positions for said rack, and spring means urging said lock element into said locking relation with each said locking groove.

3,093,847
REINFORCED FIBER GLASS STRUCTURE
William V. Strecker, 10 Larkspur Drive, West Islip, N.Y.
Filed Sept. 7, 1961, Ser. No. 136,562
1 Claim. (Cl. 9—6)

A fiber glass hull comprising a conventionally constructed keel, stem, and transom, a plurality of frame members

connected to said keel, said frame members being spaced along said keel, a plurality of continuous elongated flexible hollow plastic extruded planks connected to said frames, said hollow planks having interlocking connections along their entire length, said hollow planking members being sealed at their ends to provide flotation for said hull, said planks having a cross section having a socket portion at one side and a projecting portion at the other



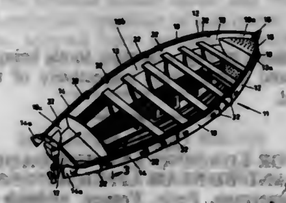
side, said projecting portion being adapted to snap into said socket portion of an adjoining member and to be held therein with a positive mechanical force developed by physical interference, said sealed hollow planks having a density of less than one, and means to seal and reinforce the surface grooves formed by said connections comprising a filling of fiber glass roving and plastic cement, said plastic plank construction having negligible water absorption.

3,093,848
SELF-REELING SUB-SURFACE FLOAT
George Bernard Schick, 626 2nd St., Del Mar, Calif.; John D. Isaacs, La Orilla and El Puente, Rancho, Calif.; and Cecil D. Jennings, 2220 Cambridge, Cardiff, Calif.
Filed Aug. 18, 1961, Ser. No. 132,469
8 Claims. (Cl. 9—8)



1. Apparatus for suspending an instrument at a substantially constant depth in water, comprising in combination:
(A) a surface floating element;
(B) a buoyant body;
(C) means for attaching the buoyant body, while submerged, to said surface floating element and for maintaining the buoyant body submerged at a substantially constant depth including:
(1) an anchor;
(2) a mooring line having one end connected with the anchor;
(3) said buoyant body including a primary reel and a mooring reel, said reels having a common axis, the diameter of the primary reel being greater than the diameter of the mooring reel;
(4) a surface line having one end thereof fastened to the surface floating element,
(*a*) the surface line being coiled in one direction about the primary reel and the end opposite the first mentioned end thereof being fastened to said primary reel,
(*b*) the mooring line being coiled in the opposite direction about the mooring reel and the end opposite the first mentioned end thereof being fastened to said mooring reel.

3,093,849
BOAT SAFETY ATTACHMENT
Michael Iwanitzu, % Canadian Research and Development Foundation, 1434 Queen St. W., Toronto, Ontario, Canada
Filed Apr. 18, 1962, Ser. No. 189,245
3 Claims. (Cl. 9—14)



1. A safety device for boats including a plurality of flotation units of substantially tubular configuration; each of said flotation units having tunnel-like holes formed therethrough; hand grips comprising bars centrally located within said tunnels; each of said tunnels being of sufficient size to permit the passage therein of a hand and to permit said hand to firmly clench said bar; said flotation units being in longitudinal alignment adjacent the gunwales of said boat; releasable clip means retaining said flotation units on said boat; the rear end of the rearmost of said flotation units being of fin configuration; and deflector plate means extending outwardly and rearwardly from the centre stem of the bows of said boat externally of the forward ends of the foremost of said flotation units.

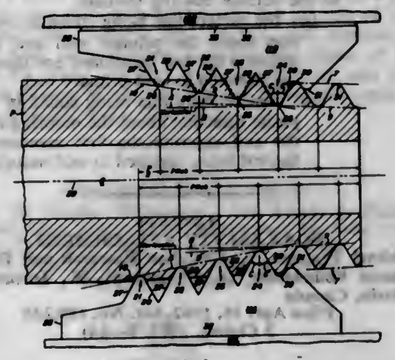
3,093,850
THREAD CHASERS HAVING THE LAST TOOTH FREE OF FLANK CONTACT REARWARDLY OF THE THREAD CREST CUT THEREBY
John W. Kelso, Dravosburg, Pa., assignor to United States Steel Corporation, a corporation of New Jersey
Filed Oct. 30, 1959, Ser. No. 849,858
3 Claims. (Cl. 10—111)

1. Carbide chaser dies adapted to be mounted in a retractable chaser head to cut a fully formed tapered thread running out at a steeper taper than the fully formed thread, said chaser dies having forward and rearward ends at least three and not more than four carbide thread cutting teeth spaced apart one pitch of the finished thread cut thereby, each of said teeth having a fully formed root-cutting portion tangent to the vanish cone of the said finished thread, a leading flank-cutting portion and a following flank-cuting portion having flank angles equal respectively to the leading and following flank angles of the finished thread, said flank angles being greater than

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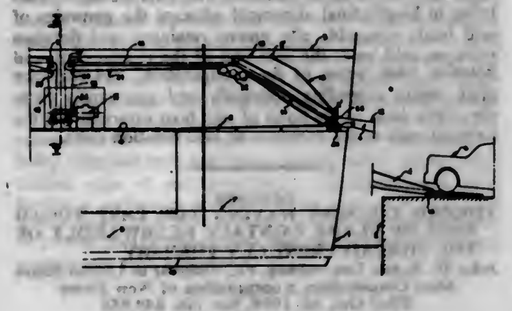
the rearmost tooth only having a crest-cutting portion disposed rearwardly of its following flank-cutting portion, said

chaser being substantially free of flank contact rearwardly of the thread crest cut thereby, said crest-cutting and root-



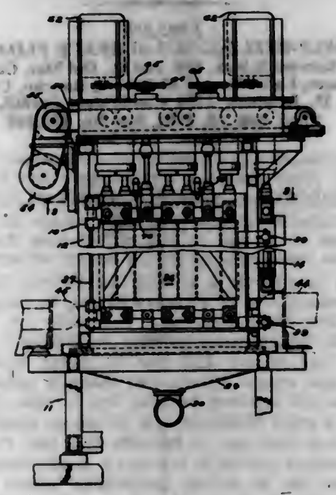
cutting portions of said rearmost tooth being tangent to the major and minor cones respectively of the said finished thread.

3,093,851
DEVICE FOR LOADING AND UNLOADING SHIPS, AND SIMILAR APPLICATIONS
Henri Kunnememan, Paris, France, assignor to International MacGregor Organization (I.M.G.O.), a body corporate of the Principauté of Monaco
Filed May 23, 1960, Ser. No. 30,939
Claims priority, application France May 25, 1959
7 Claims. (Cl. 14—71)



1. In an enclosed space including a bottom floor and an opening provided in a side wall limiting said space, a device for loading and unloading said floor and operating between substantially the level of said floor and a lower level outside thereof, comprising a sliding platform means movable between operative and inoperative positions and forming an inclinable ramp to interconect both of said levels in its operative position, control means within said space and arranged laterally of said platform means for selectively retracting said platform means to its inoperative position through said opening inside said space and extending it outside thereof in its operative position, a pair of opposed trackways located in registering relationship as mirror images inside said space to support and guide said platform means laterally along both of its operative sides and constituted each by a substantially straight horizontal portion located overhead near the top level of said opening to support said platform means in its retracted position inside said space and by a downward inclined portion adjacent and following endwise said horizontal portion and sloping towards said opening to end in the vicinity of said opening and of said floor to guidingly support said platform means during its tilting and outward projecting motion, each of said trackways being made throughout of a lower guideway consisting of two superposed spaced bearing flanges running parallel to each other to form a channel-like track therebetween and of an upper guideway made of a single bearing flange the horizontal portion of which is substantially longer towards said opening than that of said lower guideways and the slope of the inclined portion of said upper guideways being greater than that of said lower guideways, and at least two pairs of roller means provided laterally on said platform means one pair at the rear end portion of said platform means for constrainedly rolling in said lower guideways and the other pair secured intermediate the rear and front ends of said platform means and substantially offset towards the top face thereof with respect to the first-named pair for temporary unilateral engagement with said upper guideways during part of the motion of said platform means.

3,093,852
VERTICAL WASHER FOR FLAT GLASS
Joseph G. Madge, Dearborn, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Dec. 18, 1961, Ser. No. 159,929
6 Claims. (Cl. 15—77)



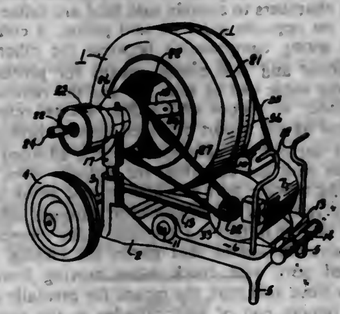
1. A vertical washer for glass, said washer having an enclosed, horizontally elongated housing, pairs of vertically extending opposed feed rolls within the housing, the nip of each pair of rolls lying along a common vertical plane extending longitudinally of the housing, a vertically extending rotary brush positioned on each side of said vertical plane between certain of the pairs of feed rolls, a door mounted on the housing opposite the feed rolls and rotary brushes for outward opening movement, the feed rolls and brushes on the side of the plane adjacent the door being mounted on the door, and means for driving the feed rolls on the side of the plane remote from the door and for driving the brushes.

3,093,853
POWER SWEEPER BROOM CHAMBER
Simon Tansay, Los Angeles, Calif., assignor to Wayne Manufacturing Company, Pomona, Calif., a corporation of California
Filed Jan. 22, 1962, Ser. No. 167,726
17 Claims. (Cl. 15—83)



1. In a power sweeper including a broom rotatable in a chamber about an axis extending generally horizontally and transversely relative to the direction of sweeper travel, the chamber having a lower inlet, and an outlet through which swept articles discharge to a hopper, the improvement which comprises an extension carried by the chamber and maintained in underlying particle retaining proximity to the downward travel path of the broom periphery at one side of said inlet under the broom for keeping articles in the path of broom rotation, the lower portion of said extension being flexible and accommodating sudden deflection of said portion away from the broom in response to contact with and travel over obstructions during sweeper travel.

3,093,854
MACHINE FOR AUTOMATICALLY FEEDING A PLUMBER'S SNAKE
Abraham Silverman, % General Wire Spring Co., S. 9th and Sarah Sts., Pittsburgh, Pa.
Filed June 13, 1960, Ser. No. 35,622
1 Claim. (Cl. 15—104.3)



A power fed sewer auger consisting of a rotary storage drum for containing a coiled sewer auger snake to be power rotated and power fed along the rotary axis of said drum to the pipe to be cleaned, a helix on the exterior of said snake forming continuous helical grooves, a motor connected to rotate said drum in opposite directions to power rotate said snake, a hollow clutch rotatably mounted coaxially of said drum to feed said snake to and from said drum, said clutch having a rotary tubular body with a bore to pass said snake, transverse slide means supported by said body for radial movement into and out of the bore of said body, means carried by said body to bias the movement of said slide means outwardly, tooth means on the inner end of said slide means to mate with the helical grooves formed on the exterior of said snake when said slide means is moved inwardly, drive means from said motor to rotate said clutch at a different speed from that of the speed of rotation of said drum, a cylindrical bell having large and small bores and mounted to slide back and forth between limits on said tubular body, said large and small bores alternately covering the outer ends of said slide means to limit their biased radial outward movement in said body, said small bore in said bell moving said slide means inwardly to engage said tooth means with the helical grooves on said snake to power feed the same, said large bore in said bell permitting said biased tooth means to completely disengage from said snake, said bell being manually slidable on said body to selectively engage said slide means in said large bore and in said small bore to merely power rotate said snake without feeding movement and to power rotate while power feeding said snake in accordance to the direction of the rotation of said motor and without interrupting the continuous operation of said motor, and means to retain the selected bore position of said manually shifted bell while the rotation of said clutch subsists.

3,093,855
SURGICAL HAND BRUSH
Stanford Shepley Stevens, Pawtucket, R.I., assignor to Zylon Products Co., Inc., Pawtucket, R.I., a corporation of Rhode Island
Filed June 8, 1962, Ser. No. 201,162
3 Claims. (Cl. 15—160)



3. A surgical hand brush comprising a hollow rectangular body consisting of a relatively thin bottom wall and integral end and side walls, the upper portions of the end and side walls defining a hollow parallel walled rectangular configuration provided with an outwardly projecting bead, the hollow parallel walled rectangular configuration being tapered downwardly and inwardly below said outwardly projecting bead to said bottom wall, a plurality of hollow circular projections integrally provided in said bottom wall, a plurality of ribs connecting said plurality of hollow circular projections, one hollow circular projection with each of the adjacent hollow circular projections, a plurality of bristle tufts, and means fastening one of said plurality of bristle tufts in each of said plurality of hollow circular projections.

3,093,856
WINDSCREEN WIPERS
Phillip Geoffrey Kent Smithers, London, England, assignor to Trico Products Corporation, Buffalo, N.Y., a corporation of New York
Filed July 1, 1960, Ser. No. 40,292
3 Claims. (Cl. 15—250.42)

1. A wiper blade consisting of a rubber and a backing strip made in two pieces, one extending outwards from the inner end of the rubber, and the other extending inwards from the outer end of the rubber, the two pieces overlapping near the center of the length of rubber, a

pressure distributing harness, means on said harness for engaging the backing strip at its ends and at two inter-



mediate points, said backing strip pieces overlapping from one of said intermediate points to the other.

3,093,857
AEROSOL CONTAINER CONTROL MECHANISM FITTED WITH APPLICATOR
Arthur Hersh, 60 Lehigh Ave., New Market, N.J.
Filed Aug. 21, 1961, Ser. No. 132,982
2 Claims. (Cl. 15—552)



1. In combination with an aerosol container having a top fixedly attached thereto, a control valve seat fixedly attached to the top of the container located within the container near the top thereof, and a control valve seated in the valve seat for sealing the interior of the container, a control cap holder removably attached to the top of the container, a reciprocally controllable cap removably attached to the cap holder, and an applicator fixedly attached to the top of the control cap, the applicator projecting beyond the control cap in a diretcion opposite the top of the container, the control cap having means integral therewith adapted to guide the material discharged from the interior of the container toward the applicator, said control cap being rotatably supported by the cap holder, the applicator having a substantially cylindrical attaching section integral therewith, the control cap being formed in two sections, the first section fixedly supporting the applicator, the second section being co-axial with the first section of the control cap and fixedly attached thereto, the first section of the control cap having a hollow, substantially cylindrical boss integral therewith, the boss being adapted to receive and fixedly support the cylindrical attaching section of the applicator, the portion of the second section of the control cap directed toward the top of the container having a plurality of radially positioned circular segmental extensions integral therewith, the control cap holder having mating cavities therein to receive the extensions of the second section of the control cap in the valve opening position of the control cap, the circular segmental sections of the control cap being adapted to retain the control cap in an inoperative position out of engagement with the valve when the control cap is rotated out of the valve control position, the first section of the control cap having a tubular control section integral therewith and extending through the second section thereof, the tubular control cap having a tubular control section integral therewith and extending through the second section thereof, the tubular control section being adapted to move the valve out of engagement with the valve seat to open the valve and allow the material in the container to be discharged through the control cap, the first section of the control cap having a tubular outlet section integral therewith and co-axial with the control section, the outlet section of the control cap being adapted to guide the material discharged from the container to the interior of the applicator, said material passing through the porous material of the applicator to the outer surface thereof.

3,093,858
HYDRAULIC DOOR CLOSER AND HOLD-OPEN DEVICE
Russell F. Trask, 394 Ridge Ave., Crystal Lake, Ill.
Filed July 28, 1960, Ser. No. 45,912
13 Claims. (Cl. 16—54)



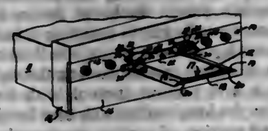
1. In a device of the character described, a cylinder containing an incompressible fluid, a piston reciprocable in said cylinder having a rod extending from one end of said cylinder through a guide opening provided therein, whereby chambers to contain said fluid are defined in said cylinder on opposite sides of said piston, a coiled compression spring compressible between the other end of said cylinder and said piston, means for pivotally connecting the outer end of said rod and the remote end of said cylinder to a door and a door frame, respectively, said piston having a port provided therein through which relatively unrestricted communication is afforded through the piston with the chambers on opposite sides thereof, there being another port provided in said piston affording relatively restricted communication through said piston between said chambers on opposite sides thereof, and a check valve housed in said piston for closing the first mentioned port, said check valve moving toward said spring to close said port, the means for pivotally connecting the remote end of said cylinder to the door frame comprising a bracket having a cylinder pivot on one portion thereof and having means provided on another portion thereof spaced from the cylinder pivot and adapted to be attached to a door hinge, whereby to pivotally connect the cylinder with the door frame on which the hinge is mounted with the pivot spaced radially outwardly from the hinge and hinged edge of the door, the bracket having an opening provided therein to receive the hinge pintle and having a lug projecting therefrom for engagement behind the fixed butt of the door hinge in radially spaced relationship to the pintle to prevent pivotal movement of said bracket with respect to said pintle in one direction.

3,093,859
HOLDER FOR FISH WHILE CLEANING SAME
George B. Cooper, Augusta, Ga.
(Rte. 3, Jefferson, Ga.)
Filed Dec. 14, 1960, Ser. No. 75,816
6 Claims. (Cl. 17—3)



1. A fish dressing implement comprising a clamp and an elongated extension frame slidably mounted upon said clamp, and having a retaining means, said clamp and retainer being operable to grip opposite ends of a fish to be dressed, said clamp comprising a pair of relatively movable jaws, pivot means connecting said jaws for pivotal movement towards and from each other, resilient means engaging said jaws and yieldingly biasing them towards a gripping position, said retainer including means for embracing and holding the head of a fish when the tail thereof is gripped by said jaws, means on said clamp slidingly and guidingly engaging and retaining said frame for rectilinear sliding movement whereby to adjust said retainer relative to said jaws for securely holding the opposite ends of fish of different sizes to be cleaned, prongs carried solely by one of said jaws and having points disposed between said jaws and projecting toward the other jaw for piercing and securing to said clamp a portion of a fish disposed between said jaws.

3,093,860
ADJUSTABLE EXTRUDING DIE
Jack E. Ellerson, Alameda, Calif., assignor to Oliver Tire & Rubber Company, Oakland, Calif., a corporation of California
Filed Mar. 16, 1961, Ser. No. 96,324
5 Claims. (Cl. 18—12)

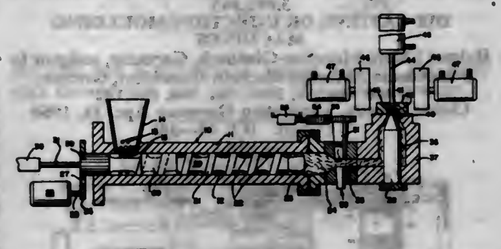


1. An adjustable die for use on an extruding apparatus, said die comprising: a die plate having a cutout portion forming an opening therethrough; an adjustable center gate member on said die plate adjacent said opening; means for moving said center gate member across said cutout portion to vary the size of said exit opening; and side plate means pivotally attached to said die plate and to said center gate member and movable in response to movement of said center gate member for varying the slope of opposite sides of said opening.

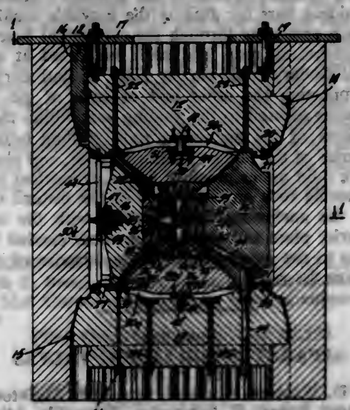
3,093,861
METHOD OF AND APPARATUS FOR MAKING PLASTIC ARTICLES
Raymond H. Rex, Toledo, Ohio, assignor to Owens-Illinois Glass Company, a corporation of Ohio
Filed May 12, 1961, Ser. No. 109,762
6 Claims. (Cl. 18—12)

1. In an apparatus for intermittently issuing plasticized material through an extrusion orifice, a plasticized screw freely axially displaceable, means for continuously rotating the screw to supply plasticized material from the outlet end thereof to the orifice, valve means controlling communication between the screw and the orifice, means constantly urging the screw in one axial direction in opposition to the pressure of the plasticized material issuing therefrom and urging the screw in the reverse axial direction, a supply hopper for supplying material to be plasticized to said screw, and shielding means carried by the screw and displaceable therewith to be interposed between the hopper and the screw upon displacement of the screw in said reverse direction.

4. In a method of intermittently operating a plasticizer of the screw type, the steps of rotating the screw to normally supply plasticized material at a predetermined pressure to a dispensing orifice, constantly urging the screw toward the orifice against the pressure developed by screw rotation, interrupting communication between the screw and the orifice, continuing to rotate the screw to develop pressures in the material supplied thereby in excess of said predetermined pressure, displacing the screw axially from the orifice and restricting the amount of material supplied to the screw in accordance with the degree of displacement of the screw.



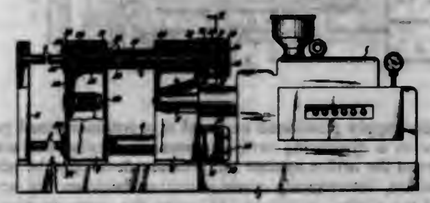
3,093,862
COMPACT HYDROSTATIC PRESSURE APPARATUS
George Gerard, Yonkers, and Jacob Braymen, Staten Island, N.Y., assignors to Baregenics, Inc., a corporation of New York
Filed May 24, 1961, Ser. No. 112,265
19 Claims. (Cl. 18—16.5)



1. Apparatus for subjecting an object to extreme pressures comprising a housing forming a fluid-tight enclosure, means for supplying fluid under high pressure into the enclosure, cage means having a central cavity to receive the object and a plurality of tapered openings formed therein leading from the exterior of the cage means to the central cavity, each opening being arranged to receive and independently support an anvil member for limited motion toward and away from the central cavity, a corresponding plurality of pressure-multiplying anvil mem-

bers each mounted in one of the tapered openings and having a large area surface exposed to the pressure of a fluid in the enclosure and a small area surface directed toward the central cavity to transmit increased pressure to an object therein, and means forming a pressure-tight seal at the outer end of each opening in the cage means to prevent fluid from passing into the interior of the cage means.

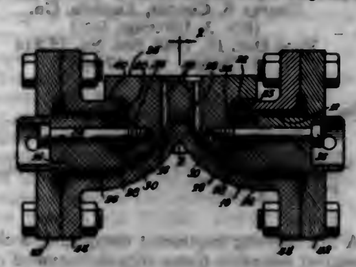
3,093,863
DIE-CASTING OR INJECTION-MOULDING MACHINES
Helmut Ehlert, Monchen-Gladbach, Germany, assignor to Schloemann Aktiengesellschaft, Duesseldorf, Germany
Filed Apr. 11, 1961, Ser. No. 102,152
Claims priority, application Germany Apr. 28, 1960
7 Claims. (Cl. 18—30)



1. A die-casting machine for the production of molded bodies, particularly from thermo-plastic synthetic substances, comprising: a stationary mold-carrier plate, adapted to carry one mold member, a movable mold-carrier plate, also adapted to carry one mold member, cylindrically bored anchoring rods each secured by one end to the movable mold-carrier plate and each extending into the stationary mold-carrier plate, means for locking the anchoring rods to the stationary mold-carrier plate, so as to hold the mold members in the closed position, pressure pads provided between the said locking means and the stationary mold-carrier plate and adapted to press the two mold members against one another when the anchoring rods are locked to the stationary mold-carrier plate, guiding bars for guiding the movable mold-carrier plate, each extending through the cylindrical bore of one of the anchoring rods, and each supported at one end by the stationary mold-carrier plate, a stationary crosspiece supporting the other end of each of the guiding bars, pistons secured to the guiding bars within the cylindrical bores of the anchoring rods, stuffing boxes closing the ends of the hollow anchoring rods, and means for admitting fluid under pressure to the cylindrical bores of the anchoring rods on either side of the pistons so as to displace the anchoring rods, together with the movable mold-carrier plate and the mold member carried thereby relatively to the guide bars, for the purpose of opening and closing the mold.

3,093,864
APPARATUS FOR LINING VALVES WITH PLASTIC
William D. Waldron, Midland, Donald L. McIntosh, Bay City, and Robert E. Schroeder, Essexville, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Filed Mar. 7, 1960, Ser. No. 13,272
3 Claims. (Cl. 18—36)

1. A mandrel assembly for lining the body of a diaphragm valve having a pair of diametrically arranged passageways disposed on opposite sides of a shallow weir and an opening located in a plane normal to the vertical plane of the weir, which mandrel assembly comprises a weir mandrel adapted for positioning in said opening in spaced relation thereto, a pair of ears adapted for positioning in said passageways in spaced relation thereto and in interconnected relation with the weir mandrel, and a contour insert supported upon each ear and being formed to



provide a curved shoulder in a region of transition between the weir mandrel and each ear.

3,093,865
INJECTION MOLDING OF PLASTIC MATERIALS
Donald L. Peters and John N. Scott, Jr., Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware
Filed May 16, 1960, Ser. No. 29,411
1 Claim. (Cl. 18—42)



In injection molding apparatus comprising a heating means, an unheated mold containing a cavity and molten plastic discharge means for discharging molten plastic from said heating means to said mold, the combination therewith of a runner formed in said mold comprising a tubular passageway extending substantially completely from said molten plastic discharge means to said cavity, having a diameter sufficient to maintain a wall of solidified plastic of about 3/32 to about 5/16 inch in thickness surrounding a stream of molten plastic flowing through said runner and having a first portion thereof with its longitudinal axis normal to the longitudinal axis of a hereinafter named gate, a second portion of greater cross-sectional area than said first portion turned at a 90-degree angle to meet the gate, and a gate means between said runner and said cavity, the walls of said gate opening into said cavity at a diverging angle of at least 14 degrees.

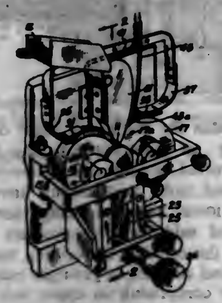
3,093,866
APPARATUS FOR PRODUCING RUBBER GLOVES
Attilio Angiolucci, Milan, Italy, assignor to Pirelli S.p.A., Milan, Italy
Filed July 24, 1961, Ser. No. 126,077
Claims priority, application Italy Aug. 6, 1960
4 Claims. (Cl. 18—42)



1. A mold for the formation of a rubber glove wherein the portions adapted to form the fingers of the said glove, are curved longitudinally downwardly in the direction outwardly of the palm in conformity with the relaxed

position of the hand with the thumb being in opposition to the other fingers, said mold comprising a male part and a female part subdivided into two sections, the contact faces of each section being defined by two longitudinal plane surfaces which are inclined with respect to each other, one surface carrying the complementary impressions for the glove and for four fingers and the other surface carrying complementary impressions for the thumb, the angle between said surfaces being equal to that formed by the plane of the palm with the plane defined by the forefinger and the thumb.

3,093,867
PROCESS AND APPARATUS FOR DYEING SLIVER
Norman H. Chandler, Granby, Quebec, Canada, assignor to Thor Mills Limited, Granby, Quebec, Canada
Filed Jan. 12, 1961, Ser. No. 82,297
8 Claims. (Cl. 19—66)

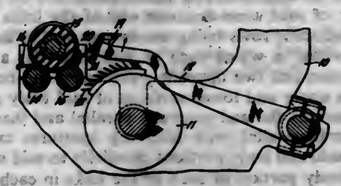


1. A continuous method of dyeing a running length of unwoven fiber, comprising, passing the running length into the nip between the converging surfaces of press rolls moving at a constant linear speed, confining the material leaving the nip under resilient pressure thereby crimping it and causing it to wipe the diverging compressing surfaces of the press rolls subsequent to the nip, continuously applying liquid dye to the converging surfaces prior to their point of contact with the running length in an amount absorbable by the running length, the speed of the rolls, the amount of resilient pressure and the speed of feed of the dye being coordinated and constant whereby there is continuous complete removal of dye from the roll surfaces and absorption by the running length.

5. An apparatus for applying dye to strands of textile material, comprising, a pair of smooth-surfaced crimp rolls arranged to rotate on parallel axes whereby their peripheral surfaces form therebetween a nip through which the strand is passed, a crimp box related to the rolls at the delivery side of the nip in such a manner as to receive the strand from the rolls and to subject it to crimping pressure, a pad held to ride on the surface of each roll to disperse the dye across the width of the roll at a position prior to the nip, a condenser for the strand arranged in advance of the nip to deliver the material to the nip, and means for supplying metered amounts of dye in liquid form to the pads.

3,093,868
SWORD FOR COMBING MACHINE
John H. Nydam, North Uxbridge, Mass., assignor to Whitin Machine Works, Whitinsville, Mass., a corporation of Massachusetts
Filed May 18, 1960, Ser. No. 29,994
2 Claims. (Cl. 19—231)

1. A sword for use in fiber-combing machines having detaching rolls, said sword having a fiber-engaging face roughened sufficiently to hold the fibers of an advancing fleece adjacent thereto as they advance into said detach-



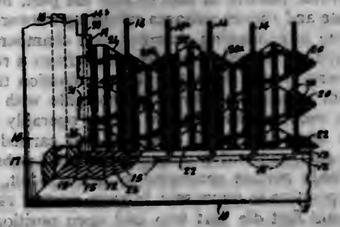
ing rolls and a plurality of needles adjacent the lower edge thereof with said sword in its operative position.

3,093,869
REVOLVING LIVING ROOM
Belvin C. Ramsey, R.D. 1, New Albany, Ohio
Filed May 1, 1962, Ser. No. 191,545
2 Claims. (Cl. 20—1)



1. In a building structure having an upper story rotatably mounted on a lower story, means for rotatably supporting and driving said upper story on a vertical axis comprising a large annular anti-friction bearing including a pair of opposing annular races one of which is secured to the floor of the upper story for rotation therewith about said vertical axis and the other being stationarily secured to the ceiling of the lower story, a plurality of ball bearings disposed between opposing faces of said races, a hollow ring gear concentric with said vertical axis secured to said floor and terminating in gear teeth disposed intermediate said vertical axis and said bearing races, motor means mounted on said ceiling intermediate the ring gear and said bearing races, a worm gear on opposite sides of said ring gear in driving engagement therewith, chain and sprocket means connecting said motor to said worm gears and an annular weather seal between said stories concentric with said axis adjacent the bearing.

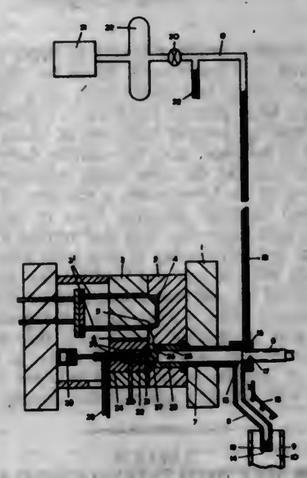
3,093,870
FLOOR MAT WITH INTERLOCKING LINKS
Kenneth E. Brock, Toledo, Ohio, assignor to The American Mat Corporation, Toledo, Ohio, a corporation of Ohio
Filed Oct. 26, 1960, Ser. No. 65,199
5 Claims. (Cl. 20—78.3)



1. A flexible floor mat of the type comprising a plurality of evenly spaced, parallel assembly wires extending

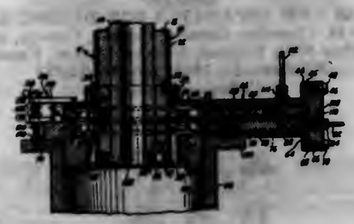
transversely across said mat and a plurality of parallel, transversely extending rows of links assembled on said wires, the links in each row being assembled on an adjacent pair of said wires and one end of the links in each pair of adjacent rows being assembled on the same one of said wires, in which each of said links has a central body portion and two oppositely extending end body portions, the upper and lower surfaces of said body portions being generally flat and generally parallel and there being two spaced, parallel, wire receiving apertures extending through said end body portions parallelly to said surfaces, the end body portion of each of the links in each of said rows of links being on the same wire with, in contact with and between the end body portions of two of said links in an adjacent row of links, each of the end body portions of said link having at least one protrusion extending outwardly therefrom in a direction parallel to said wires and a re-entrant recess adjacent and complementary to said protrusion, the protrusions on the links of each of said rows of links interlocking with the recesses in the contacted links of both of the adjacent rows of said links.

3,093,871
DIE CASTING AND MOULDING MACHINE
Harold Robert Henry Adams, London, England, assignor to The British Oxygen Company Limited, a British Company
Filed July 14, 1961, Ser. No. 124,055
Claims priority, application Great Britain July 15, 1960
2 Claims. (Cl. 22—68)



1. In a diecasting machine including first and second die parts defining a die cavity therebetween, said first die part movable relative to said second die part, means defining gate and runner passages extending outwardly from said cavity to a charging chamber, said chamber adapted for receiving a supply of molten metal from a receptacle for delivery to said die cavity, in combination therewith, a vacuum conduit selectively connectable with said die cavity, a vacuum control valve means operably movable between open and closed positions and carried by said first die part, said valve means including a substantially hollow body portion connected to said conduit, actuator means operative to move said vacuum control valve relative to said first die part into said open position and to protrude a portion of said valve body outwardly of said first die part toward said second die part, a bushing insert in said second die part forming a continuation of said charging chamber, said bushing insert co-acting with said protruding valve portion to define between them a restricted control orifice between the die cavity and the charging chamber operative to modify the effect of vacuum in the charging chamber.

3,093,872
METHOD OF AND APPARATUS FOR FORMING AN INGOT OF MOLTEN REACTIVE MATERIAL
George A. Pagonis, San Jose, Calif., assignor to Light Metals Research Laboratory, Inc., San Jose, Calif.
Filed Sept. 30, 1959, Ser. No. 843,533
13 Claims. (Cl. 22—79)



1. An apparatus for casting an ingot of molten material, comprising: an ingot mold having an open top; a downwardly-directed conduit for delivering said molten material into said mold, said conduit having a discharge opening at its lower end and being receivable through the open top of said mold to position said discharge opening within the mold; a connecting member connecting said mold and conduit in gas-tight relation, said connecting member comprising an upper valve housing having a bore slidably receiving said conduit; sealing means providing a gas-tight sliding fit between said bore and the outer periphery of said conduit; a lower valve housing having a gas-tight but separable connection with said upper valve housing and having a bore registering with the bore of the upper valve housing and also adapted to receive said conduit, said lower valve housing being fixed to said mold; a pair of slide valve members, one slide valve member being carried by each valve housing and each valve member being movable between open and closed positions opening and closing the bore of its respective housing; means for moving said valve members between said open and closed positions; said ingot mold and valve housings being movable axially with respect to said conduit to position said discharge opening at selected distances from the bottom of the mold during a mold-filling operation and within the upper valve housing above said valve members at the end of a mold-filling operation, said valve housings being separable together with their respective valve members, the upper valve housing being adapted to remain with said conduit with its valve closing said discharge opening and the lower valve housing being adapted to remain with the mold with its valve closing said open top.

3,093,873
MOLDING METHOD AND APPARATUS
Charles R. McFall and Vernon M. Eads, Johnson City, Tenn., assignors to Johnson City Foundry and Machine Works, Inc., Johnson City, Tenn., a corporation of Tennessee
Filed Jan. 31, 1961, Ser. No. 86,159
5 Claims. (Cl. 22—131)

4. An apparatus for making a hollow article comprising a mold including a drag and a cope cooperatively forming an article-defining cavity, a mold core within said cavity defining the hollow of said article, said mold being movable to rotate said core between generally horizontal and upright positions, a chaplet fixing one end of said core with respect to said cope and drag while said core is

generally horizontal, flange means at the other end of said core engageable with said cope and drag to fix said core against displacement with respect to said cope and drag when they are assembled and said core is upright, a first passage connecting said cavity and the exterior of



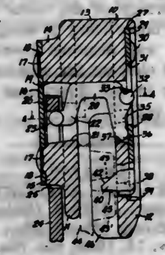
said mold and large enough to pass said chaplet therethrough, and means attached to said chaplet and extending through said first passage to permit said chaplet to be withdrawn therethrough, and a second passage connecting said cavity and the exterior of said mold through which liquid mold material may be introduced into said mold.

3,093,874
FASTENER
George M. Rapata, Park Ridge, Ill., assignor to Illinois Tool Works Inc., Chicago, Ill., a corporation of Delaware
Filed Dec. 19, 1960, Ser. No. 76,653
4 Claims. (Cl. 24—73)



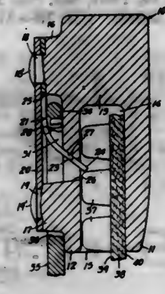
1. A one-piece plastic fastener for use in an apertured panel having a head and an integral shank, said shank including a substantially rigid first leg extending downwardly away from said head, at least one second leg resiliently connected to said first leg at its extremity opposite the head and extending upwardly towards said head in diverging relation to said first leg, said first leg being substantially uniform in section throughout its length, said second leg having substantially the same width as said first leg through its length, a first section of said second leg extending from the attachment to said first leg to a point intermediate the length of said second leg and decreasing in radial thickness as it diverges from said first leg, a second section of said second leg progressively increasing in radial thickness from its juncture with said first section to its free end, the juncture of said two sections being the thinnest radial measurement of said second leg and forming a concavity facing said first leg, said juncture constituting a flexible resilient hinge line which is weaker than the resilient connection between the two legs, the transverse measurement between the outer extremities of said two legs measured on a plane perpendicular to the axis of the fastener and passing through said resilient hinge line of said second leg normally being substantially greater than the diameter of the aperture in the complementary panel with which the fastener is to be associated, whereby telescopic insertion of the shank in a complementary panel aperture causes the second leg to flex inwardly toward the first leg until the resilient hinge line of said second leg passes the vicinity of the undersurface of the panel whereupon the second section is automatically deflected inwardly to form a shoulder to underlie the workpiece and the first section of said second leg springs outwardly under the panel due to the relative resilient strengths of the junctures between the two sections of said second leg and the first section of said second leg with the said first leg respectively.

3,093,875
LOCK SLIDER FOR ONE-SIDED SEPARABLE FASTENER STRINGERS
Louis H. Morin, Bronx, N.Y. (125 Beechwood Ave., New Rochelle, N.Y.)
Filed Aug. 9, 1961, Ser. No. 130,367
8 Claims. (Cl. 24—205.14)



1. A slider of the character described comprising a body having spaced walls joined at one end in a connecting web, one wall having flanged sides defining the channel of the slider body, a spring arm arranged upon one of said walls and including scoop engaging means at the free end of said arm extending through an aperture in said wall into the narrow end of the channel of the slider body, a pivoted spring arm actuating element movably mounted in the slider body at the forward portion of said web and pivoted adjacent to said spring, a pull movably supported in the other wall of the slider body and operatively engaging said element in flexing the spring arm away from the first named wall in movement of said scoop engaging means out of the channel of the slider body for free movement of the slider along a pair of stringers, said element having an offset pull engaging end, and said element including an offset lever having a rounded end operatively engaging said spring arm.

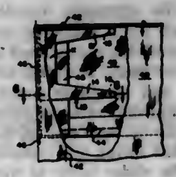
3,093,876
SLIDER FOR ONE-SIDED SEPARABLE FASTENERS
Louis H. Morin, Bronx, N.Y. (125 Beechwood Ave., New Rochelle, N.Y.)
Filed Nov. 24, 1961, Ser. No. 154,478
6 Claims. (Cl. 24—205.14)



1. A slider for separable fasteners comprising a channelled slider body having inner and outer walls joined at one wide end of the slider in a connecting web, the outer wall having spaced projecting lugs, a yoke arranged upon and bridging said lugs, means on the outer ends of said lugs retaining said yoke against displacement from the lugs, the outer wall of the slider body having an aperture

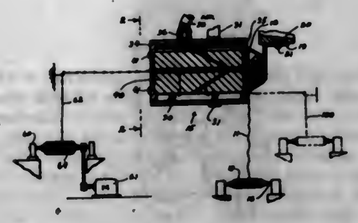
adjacent one of said lugs, a lock element fixed to the other of said lugs between said yoke and the end of said other lug and having an end portion operating in said aperture, said end portion of the element having a projecting locking tongue normally extending into the channel of the slider body to operatively engage scoops of a fastener stringer movable through the channelled slider body, a pull having a pivot end arranged between said element and the surface of the outer wall of the slider body, and means comprising a longitudinally slidable shoe on said outer wall disposed between the pivot end of the pull and said element for moving the element into inoperative position in one directional movement of the slider body by said pull.

3,093,877
DRAPERY SUPPORT
Lewis S. Roberts, 2010 S. Hibiscus Drive, North Miami, Fla.
Filed Nov. 15, 1960, Ser. No. 69,480
2 Claims. (Cl. 24—255)



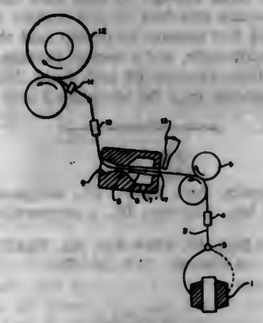
1. A drapery supporting device comprising a one piece plastic H-shaped member, said member having a central cross member connecting opposed leg portions, said device folded midway of the cross member to form a substantially U-shaped clip-like member having a pair of congruent laterally-extending central portions, each of said lateral central portions having a pair of permanently secured fingers extending at substantially right angles at either end therefrom, a transverse portion at the fold line joining each of said lateral portions at the top thereof and there being perforations at the fold line.

3,093,878
AIR JET FOR PRODUCING BULKED STUB YARN
Arnold Fieldman, Brooklyn, N.Y., assignor to Carl Nuisl, Boston, Mass.
Filed Oct. 16, 1961, Ser. No. 145,197
3 Claims. (Cl. 28—1)



1. An apparatus for providing slubs in a yarn comprising:
(*a*) means to free said yarn to a turbulence chamber under a relatively light tension,
(*b*) a nozzle directing a fluid into said turbulence chamber against said yarn,
(*c*) means to withdraw said yarn from said turbulence chamber through said nozzle in a direction opposite to said fluid,
(*d*) and take-up means for said yarn advancing at a rate substantially less than the rate of said means to feed.

3,093,879
TREATMENT OF MULTIFILAMENT BULK YARNS
Makoto Yamamoto, Kurashiki City, Okayama, Japan, assignor to Kurashiki Rayon Co., Ltd., Okayama Prefecture, Japan, a corporation of Japan
Filed Oct. 11, 1960, Ser. No. 62,009
Claims priority, application Japan Oct. 14, 1959
5 Claims. (Cl. 28—72)



2. In the bulking of yarn wherein yarn is introduced into a bulking zone for confined contact with gases under pressure and the bulked yarn and the gases are withdrawn through a nozzle, the process of cleaning the surfaces of said zone and of said nozzle which comprises intermittently introducing a liquid into said bulking zone in a form adapted to be atomized by said gases and brought into contact with said surfaces of said zone and of said nozzle by the action of said gases, said liquid being introduced by dropping it upon the yarn at its point of entry into said zone.

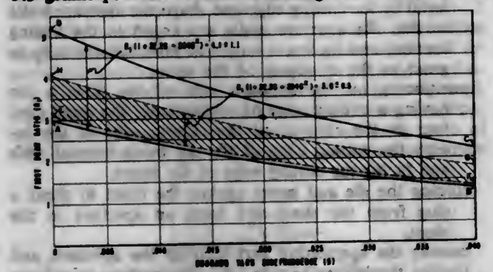
3,093,880
PAPERMAKERS FELTS AND METHOD OF MAKING THEM
William J. McLaughlin, Rensselaer, N.Y., assignor to Huyck Corporation, New York, N.Y., a corporation of New York
No Drawing. Filed Feb. 29, 1960, Ser. No. 11,415
9 Claims. (Cl. 28—72.2)

1. The method of making a papermakers felt comprising a woven base fabric with a nap of non-woven fibrous material firmly secured to at least one side thereof, which consists of weaving a base fabric from yarns at least some of which contain sufficient fullable fiber material to render the woven fabric capable of substantial fulling, needling a continuous batt of non-woven fibrous material to at least one side of said fullable woven base fabric, and fulling said fullable base fabric with said fibrous material needled thereto to form a fulled napped papermakers felt.

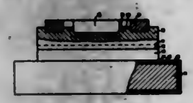
3,093,881
ORIENTED NYLON FILAMENTS
Joseph Zimmerman, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Original application Mar. 12, 1959, Ser. No. 799,054. Divided and this application Feb. 26, 1963, Ser. No. 260,981
15 Claims. (Cl. 28—82)

1. A polyamide strand having a tenacity of at least

5.5 grams per denier and a birefringence average standard deviation of less than $5/2(T-3)\times10^{-4}$ where T is the tenacity of the strand in grams per denier.



3,093,882
METHOD FOR PRODUCING A SILICON SEMICONDUCTOR DEVICE
Reimer Emeis, Ebermannstadt, Upper Franconia, Germany, assignor to Siemens-Schuckertwerke Aktiengesellschaft, Berlin, Germany, a corporation of Germany
Filed Sept. 28, 1959, Ser. No. 842,775
Claims priority, application Germany Sept. 30, 1958
5 Claims. (Cl. 29—25.3)



4. A method of making a silicon electric semi-conductor device having a molybdenum carrier plate, comprising heating a silicon body in face-to-face contact with a gold foil containing doping substance, to dissolve a portion of the silicon body and form a gold-silicon melt, and then cooling to form a gold-silicon alloy on the silicon body and to segregate recrystallized silicon out of the melt and to deposit the recrystallized silicon upon the undissolved part of the silicon body, the recrystallized silicon containing said doping substance, the doping substance being chosen to confer the opposite conductance type of said silicon, thus producing a gold-silicon alloy electrode on the silicon body and a p-n junction between the silicon body and the said electrode, joining the molybdenum carrier plate to said gold-silicon alloy electrode by separately joining gold to the carrier plate to provide a gilded surface thereon, and thereafter joining said gilded surface to the fold-silicon alloy electrode by heating them in face-to-face contact to a temperature of 400° to 450° C., to temporarily melt the gold-silicon alloy and to alloy-bond the gold surface of the carrier plate to the body, the gold coating of the carrier plate having a thickness not more than one-thirtieth that of the gold foil used for alloying to the silicon body, the gilded surface of the molybdenum plate being formed by electrode-depositing the gold directly upon the molybdenum plate, and burning said gold into the surface of the molybdenum.

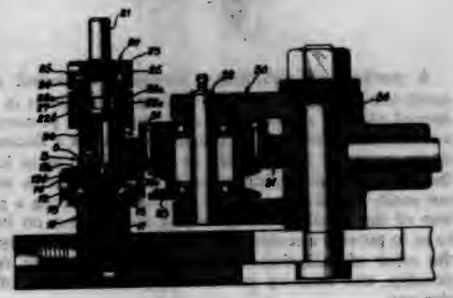
3,093,883
MANUFACTURE OF SOLID ELECTROLYTIC CAPACITORS
Horace E. Haring, deceased, late of Summit, N.J., by Eugene M. Haring, executor, Summit, N.J., and Raymond L. Taylor, Berkeley Heights, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Original application Apr. 2, 1953, Ser. No. 346,416. Divided and this application Feb. 9, 1962, Ser. No. 172,352
10 Claims. (Cl. 29—25.42)

1. The process of producing a capacitor body comprising, providing a tantalum oxide coated porous tantalum pellet with a manganese salt disposed within its crevices, converting said salt to manganese dioxide by firing at a temperature of about 300° C., electrolytically



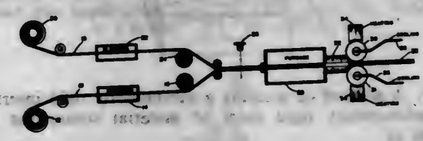
reforming the oxide coating of said tantalum pellet, disposing additional manganese salt in said crevices and firing at about 300° C.

3,093,884
APPARATUS FOR BURNISHING TELESCOPED BEARINGS
Lewis R. Heim, Fairfield, Conn., assignor, by mesne assignments, to Universal Bearing Corporation, Fairfield, Conn., a corporation of Delaware
Filed June 16, 1959, Ser. No. 820,635
6 Claims. (Cl. 29—90)



1. Apparatus for burnishing antifriction bearings having telescoped outer and inner ring-like members with rolling elements between them, comprising a base, an axially moving force member mounted on the base and having as a part thereof means for abutting one of the members of the bearing and applying a selected axial force to it, means connected to the base to prevent the other bearing member from moving axially with the bearing member to which force is applied, a pivoting member mounted on the base, a roller rotatably mounted on the pivoting member and capable of abutting the outer member of the bearing in a line of contact and of applying radial rolling force to the outer member, and driving means mounted on the base for rotating one of the bearing members.

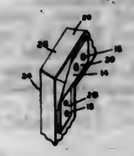
3,093,885
METHOD FOR MAKING A BIMETALLIC STRIP FOR BEARINGS
Wilbert H. Morrison and Donald W. Williams, Euclid, Ohio, assignors to Clevite Corporation, Cleveland, Ohio, a corporation of Ohio
Filed Dec. 28, 1959, Ser. No. 862,399
10 Claims. (Cl. 29—149.5)



1. The method of making a bimetallic bearing which comprises: selecting a layer of aluminum alloy comprising at least 5% low melting point constituents and selecting a steel backing layer; cleaning and brushing the bonding interface of said layers; preheating at least said layer of aluminum alloy to a temperature within the range of 700°

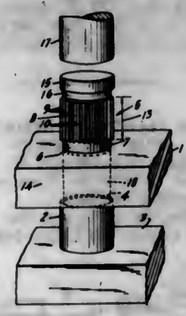
to 800° F.; substantially immediately thereafter and without affecting any appreciable temperature drop; passing said layers together through pressure rolls having a temperature between 200° to 350° F. to combine said layers face to face with each other and to reduce the thickness of each layer to effect a strong metallurgical bond therebetween; cutting said layers into sections; and deforming said sections into suitable bearing shapes.

3,093,886
METAL TAPE
Joseph A. Petnel, 598 3rd Ave., Troy, N.Y.
Filed Feb. 14, 1957, Ser. No. 640,294
1 Claim. (Cl. 29—155)



A method of reinforcing angularly connected elements comprising the steps of holding the elements in the desired angular relationship, attaching a first portion of a section of a thin strip of aluminum metal of a thickness in the range of from .00023 to .249 inch so as to have the physical characteristic of being manually pliable without easily rupturing to one of said elements along a portion of the length thereof, folding said section on itself so as to provide a second portion of said section overlying the other of said elements in the desired angular relationship, and securing said second portion to said other element.

3,093,887
SECURING INSERTS IN SHEET MATERIAL
Harry Thomas Prestige, Edmonton, Douglas Grey Eade, Nazeing, Anthony Peter Hale, Hoddesdon, Brian Morton Lee, Enfield, Ralph Tweed Lovelock, St. Albans, William Frederick Patrick Smith, Cheshunt, and Victor Teacher, Enfield, England, assignors to Belling & Lee Ltd., Enfield, Middlesex, England
Filed July 7, 1959, Ser. No. 825,512
Claims priority, application Great Britain July 11, 1958
4 Claims. (Cl. 29—155.55)



1. A method of securing a substantially rigid insert in a substantially rigid sheet of material comprising the steps of

positioning on one side of the sheet an insert having a shank formed with (*a*) a leading face, (*b*) a cutting edge along the periphery of the leading face, (*c*) a connecting part behind the leading face and (*d*) a knurled keying section behind the connecting part having cross-sectional dimensions sufficiently greater than those of the leading face and the connecting part to enlarge an aperture cut in the sheet of material by the cutting edge and shape the aperture walls so that the aperture walls are keyed to the keying section, and having a length at least substantially as great as the thickness of the sheet,

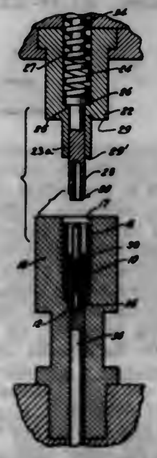
positioning on the opposite side of the sheet a die having a cutting edge of substantially the same contour as the contour of the cutting edge of the insert, the cutting edge of the die being coaxial with and facing the cutting edge of the insert,

forcing the die and insert against the sheet to shear a slug from the sheet and form an aperture in the sheet,

passing the connecting part through the aperture, and

forcing the keying section into the aperture to enlarge the aperture and shape the walls thereof so that they are keyed to the insert.

3,093,888
METHOD OF FABRICATING SMALL MOTOR ARMATURES
William C. Hingsley, Belleville, N.J.
Filed Nov. 18, 1958, Ser. No. 774,738
9 Claims. (Cl. 29—155.53)

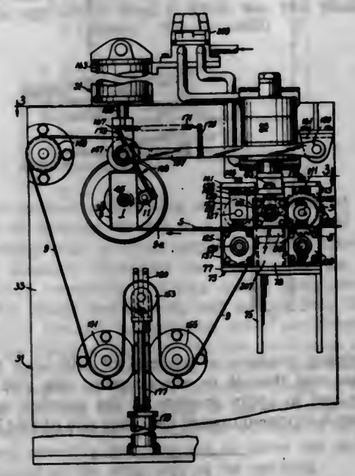


7. The method of forming a squirrel cage on a laminated rotor assembly by compressing the metal of an aluminum sleeve into and around slots in the laminations of the assembly, which consists in disposing the aluminum sleeve concentrically around the lamination rotor assembly, heating the sleeve and the assembly until the sleeve becomes plastic in state but retains its original dimensional form, and then pressing the sleeve to fill the slots hydraulically in the laminations, and then removing excess metal to expose the slots and the metal therein as separate bars.

3,093,889
ELECTRICAL CORE LOOP FABRICATION
Clarence G. Dusake, Webster Groves, Mo., assignor to Moloney Electric Company, St. Louis, Mo., a corporation of Delaware
Filed Feb. 28, 1957, Ser. No. 643,029
26 Claims. (Cl. 29—155.57)

1. The method of making a magnetic core loop comprising the steps of feeding a continuous strip of magnetic material toward a rotating core form, cutting the strip into individual strip segments, momentarily varying the relative speed of each cut-off segment and the strip after each cut to effect lapping of the leading end of the strip and each segment as the latter is cut off, and winding said segments one after another on said form.

26. The method of making a magnetic core loop adapted to be annealed and then disassembled and reassembled around a winding leg of a preformed conductive winding, said method comprising continuously feeding a continuous strip of magnetic material toward a rotating core form, sensing the completion of each cycle of rotation of the core form through a predetermined angle



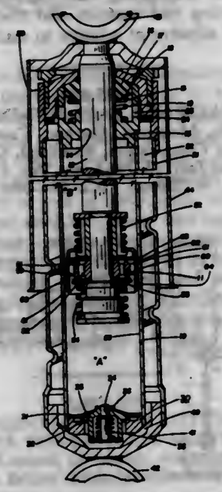
of rotation thereof, cutting the strip substantially simultaneously with each sensing step thereby to form a succession of disconnected strip segments of progressively greater length, maintaining the leading end portion of each segment in engagement with the trailing end portion of the preceding segment, and spirally coiling the segments one after another on the form to produce a magnetic core loop with flux-transmitting joints between the leading and trailing ends of successive segments.

3,093,890
METHOD FOR IMPACT-FORMING SLIPPER-TYPE PISTONS
Cleone Arthur Sparks, 1979 E. Colorado Blvd., Pasadena, Calif.
Filed Mar. 4, 1958, Ser. No. 719,006
2 Claims. (Cl. 29—156.5)



1. The method of making a forged slipper-type piston blank provided with a head, a skirt of predetermined non-uniform length and integral wrist pin bosses by a single impact extrusion operation of a male punch against a slug of metal in a die, comprising: applying impact forces to a slug of metal in a single impact extrusion operation by impacting a male punch against a slug of metal in a die to form a piston blank having a head, a skirt and integral wrist pin bosses and concurrently promoting flow of metal into areas of said blank between said wrist pin bosses to form thick skirt portions, restricting flow of metal into areas of said blank immediately adjacent said wrist pin bosses to form thin skirt portions adjacent each said wrist pin boss and preventing flow of metal into end face portions of said blank in the skirt adjacent the wrist pin bosses to form said skirt of predetermined non-uniform length and to form end face portions of said skirt of predetermined length and configuration adjacent said bosses.

3,093,891
METHOD OF PRODUCING A SHOCK ABSORBER WITH SLEEVED PISTON
Wayne A. Karlgaard, Englewood, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Original application July 27, 1959, Ser. No. 829,595. Divided and this application Sept. 21, 1960, Ser. No. 57,518
7 Claims. (Cl. 29—156.5)



1. In a method of manufacturing a piston having a layer of nylon on the cylindrical periphery thereof, the steps of, saturating the layer of nylon with moisture to complete saturation or equilibrium condition to establish thereby maximum expansion of the nylon, and while the nylon is maintained saturated with moisture machining off the periphery of the nylon layer to establish thereby a finish diameter on the periphery of the moisture saturated nylon layer under the so established moisture saturated maximum expansion condition of the nylon.

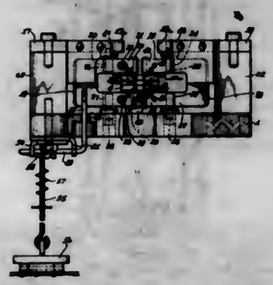
3,093,892
METHOD OF MAKING AN ADJUSTABLE ORIFICE
Wendell E. Resick, Columbus, Ohio, assignor to American Brake Shoe Company, New York, N.Y., a corporation of Delaware
Original application Aug. 27, 1957, Ser. No. 680,596, now Patent No. 2,936,152, dated May 10, 1960. Divided and this application Sept. 29, 1958, Ser. No. 763,858
4 Claims. (Cl. 29—157.1)



1. The method of making an adjustable orifice forming means for use in a fluid flow control device, said

method including the steps of forming a cylindrical sleeve; forming two circumferential grooves in the exterior of said sleeve; forming a passage from one of said grooves to the interior of said sleeve; milling a rectangular slot having its major axis extending transversely of the longitudinal axis of said sleeve to form an opening between the other of said grooves and the interior of said sleeve and to provide sharp edges where said slot joins the interior of said sleeve; forming a solid shaft having a close movable fit with the interior of said sleeve; forming a circumferentially extending groove in the exterior of said shaft, milling a notch in one side of said shaft, said notch having an axial dimension greater than said groove and joining the latter, said notch also providing sharp edges on the exterior of said shaft for cooperating with the sharp edges of said slot to form an adjustable orifice and for conducting fluid between said slot and passage, inserting said shaft in said sleeve and retaining said shaft for adjustment relative to said sleeve.

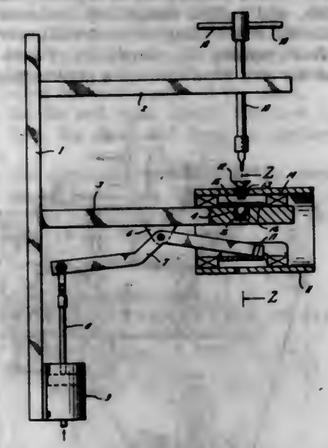
3,093,893
SLIDE FASTENER TAPE JOINING DEVICE
Guido Perrella, Montreal, Quebec, Canada, assignor to Clix Fastener Corporation, Montreal, Quebec, Canada
Filed July 17, 1961, Ser. No. 124,561
4 Claims. (Cl. 29—200)



1. A slide fastener tape joining device comprising a base, upper and lower tape guide members fixed to said base and forming therebetween a pair of horizontally disposed converging tape receiving channels, a pair of fastener element engaging ribs on each of said guide members, each said pair of ribs having a converging section leading from the convergence of said channels and a parallel section, one rib of each said pair of ribs being in vertically aligned spaced relation to one rib of the other of said pair of ribs and fastener element positioning means comprising a pair of members swingably mounted about a vertical axis on said base, a pair of fingers in spaced vertical alignment carried by each said member, stop means defining one position of said swingable members, a spring yieldably holding said members in said one position, each said finger having a fastener element engaging end portion disposed between a pair of said ribs in said one position, one of said members having, in said one position, its said fingers in closer relation to said channel convergence than said fingers of the other of said members.

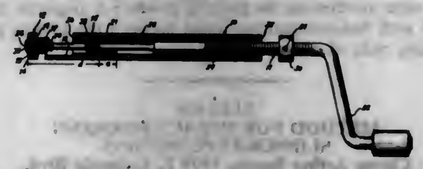
3,093,894
POLE SHOE ASSEMBLING AND SECURING MACHINE
Edwin A. Jurecka, 2110 Chenevert, Houston, Tex.
Filed May 19, 1961, Ser. No. 111,380
4 Claims. (Cl. 29—205)

1. In a pole shoe assembling and securing machine, a vertical support, a laterally extended member mounted on said support having screw driving means mounted therein, another laterally extended member on said support having a pole shoe screw port finder mounted therein, said pole shoe screw port finder being in alignment with said screw driving means, a lever pivotally mounted on and substantially parallel with one of said extended members, a housing in which pole shoes are to be mounted, means



for applying pressure to one end of said lever to cause the other end thereof to move against one side of said housing and to apply pressure to the member on which said lever is mounted toward the other side of said housing.

3,093,895
WIRE COIL INSTALLING TOOL
Theodore B. Eddy, Brookfield, Conn., assignor to Heli-Coil Corporation, Danbury, Conn., a corporation of Delaware
Filed Oct. 16, 1961, Ser. No. 145,391
11 Claims. (Cl. 29—240.5)



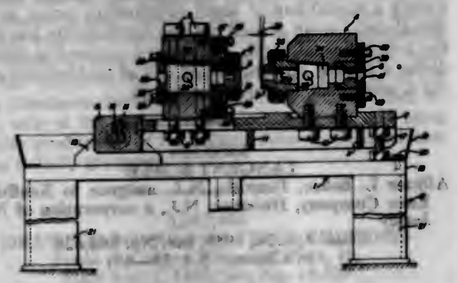
1. A prewinder tool for the installation of a wire coil insert having outer and inner screw thread forming portions and a diametrical tang at one of its ends, comprising a substantially tubular body including an inner screw-thread provided foot portion and an interiorly threaded nut-forming portion, said body being provided with a recess in its wall between said foot portion and said nut portion so as to form a laterally open chamber for receiving therein an insert charged into it, the thread of said foot portion complementing the outer screw-thread forming portion of said insert when contracted for installation in a work piece, both said threads of said foot portion and of said nut-forming portion being of the same pitch, a mandrel rotatable and axially shiftable in said tubular body and having an end portion provided with an exterior screw thread and with a slot for gripping said tang, a forward portion of said mandrel thread being of a form so as to complement the inner screw thread forming portion of said insert when contracted, and a rearward portion of said mandrel thread being of a form so as to complement the form of said nut forming portion, said nut forming portion and said rearward mandrel thread portion being of such extensions that they engage each other when the mandrel is withdrawn rearwardly from said chamber, and when the mandrel projects a predetermined distance forwardly of said foot portion, and means at the other end of the mandrel to apply a torque thereto.

3,093,896
METHOD OF MANIPULATING ARTICLES
Robert L. Self, Burlington, N.C., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Original application Sept. 3, 1957, Ser. No. 681,576, now Patent No. 2,996,796, dated Aug. 22, 1961. Divided and this application Sept. 6, 1960, Ser. No. 56,623
6 Claims. (Cl. 29—450)



1. The method of inserting a tubular resilient grommet into an opening formed in a workpiece, said grommet provided with an outer peripheral flange having an effective diameter exceeding the opening in the workpiece, which comprises engaging a first peripheral portion of the flange and tucking said portion into the hollow interior thereof, compressing other peripheral portions of the flange adjacent to the first portion to capture said first portion in its tucked position and cause the effective diameter of the thus deformed flange to be substantially less than the opening in the workpiece, inserting the deformed flange through the opening in the workpiece, and releasing the grommet to allow the deformed flange to seat on the other side of the opening.

3,093,897
METALLURGY
Joseph R. Lemyre, Ordeon L. Bartenslaw, and John A. Ketchum, all of Newark, Ohio, assignors to Kaiser Aluminum & Chemical Corporation, Oakland, Calif., a corporation of Delaware
Filed Mar. 13, 1959, Ser. No. 799,315
4 Claims. (Cl. 29—547)



2. A method of producing aluminum wire from aluminum wire stock comprising the steps of
reducing the diameter of said stock a small amount by passing said wire stock through an entry die,
passing said stock through a shaving die having a diameter less than the diameter of said entry die,
further reducing the diameter of said shaved wire stock by passing said shaved wire stock through an exit die having a diameter less than the diameter of said shaving die,
said entry die and said exit die being axially aligned with said having die thereby maintaining said wire stock in alignment during said shaving step whereby said shaving is uniform around the circumference of said wire stock,
subjecting the shaved wire stock to a plurality of cold drawing operations,
annealing said wire at a temperature of less than 570° F. prior to each drawing operation,
passing the wire through a cleaning die upon completion of the drawing operations and,
degreasing said wire.

3,093,898
NAIL CLIPPERS
Kenneth G. Smith, R.R. 1, Farmington, Mo.
Filed June 8, 1961, Ser. No. 126,754
2 Claims. (Cl. 30—28)



1. Nail clippers for creating a substantially central outwardly opening indentation in a nail to be clipped for relieving pressure of lateral growth components of the nail, comprising first and second jaws adapted for movement toward and away from each other, said jaws having cooperating, complementary, opposed cutting edge portions provided at one of their ends, said jaws being formed of resilient steel and biased into separated parted relationship at their cutting edge ends, the cutting edges of each of said jaws comprising a pair of lateral portions extending transversely of said jaws and an intermediate portion extending endwise thereof, said intermediate portion of said cutting edges comprising a pair of straight sides in converging relationship.

3,093,899
IMPROVEMENTS TO THE CUTTING HEADS OF DRY SHAVING APPARATUSES
Bodo Fütterer, Langen, Germany, assignor, by mesne assignments, to Braun Aktiengesellschaft, Frankfurt am Main, Germany
Filed Aug. 12, 1960, Ser. No. 49,372
Claims priority, application Germany Aug. 19, 1959
2 Claims. (Cl. 30—43)

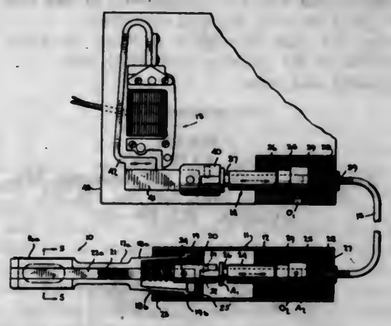


1. In a dry shaver cutting head, comprising an outer flexible perforated cutter plate and an inner reciprocable cutting part arranged to severe beard hairs protruding inwards through the perforations in the outer cutter plate, the improvement that the perforations in the outer plate are hexagonal and have main diagonals alined with the direction of movement of the inner cutting part.

3,093,900
HYDRAULIC SHAVING IMPLEMENT
Elmer B. Myers, Pompton Lakes, N.J., assignor to Fuller-Myers, Spokane, Wash., a partnership
Filed Sept. 14, 1959, Ser. No. 839,707
2 Claims. (Cl. 30—45)

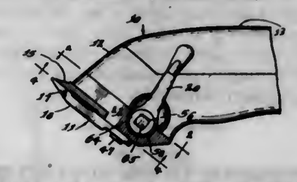
1. In a hair-cutting implement, a shaving head assembly comprising a pair of complementary metallic elements so shaped as to define a pair of matched stator segments in parallel relation, a pair of shank segments extending from said stator segments and connected to pair of conical segments terminating in a pair of annular flange segments, a blade interposed between said stator segments slidable longitudinally and provided with a stem, said

stem being received within channels formed in said stator segments and said shank segments and extending within



said conical segments, said blade and said stator segments having substantially the same transverse dimensions to prevent blade exposure.

3,093,901
ADJUSTABLE CLIPPER HEAD
Warren P. Wahl, Sterling, Ill., assignor to Wahl Clipper Corporation, Sterling, Ill., a corporation of Illinois
Filed May 10, 1962, Ser. No. 193,739
7 Claims. (Cl. 30—201)



1. In a hair clipper having a case, an adjustable clipper head comprising:

a transversely yieldable plastic part secured to the forward end of said case, said part having side portions and front and rear portions defining a generally rectangular central opening;

an inwardly directed guide flange on each side portion having front and rear shoulders defining stops;

a transverse metal plate within said plastic part, the ends of said plate engaging said side portions and guided thereby for longitudinal movement, said ends having reduced portions engaging upper surfaces of said guide flanges, said plate having a transverse recess therein;

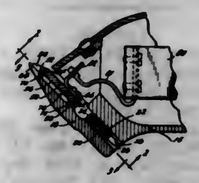
a comb blade secured to said metal plate and engaging lower surfaces of said side portions;

a transverse rotatable member journalled at least in part in said plastic part and having an elongated key extending into said transverse recess of said metal plate, whereby rotation of said member moves said plate longitudinally of said plastic part between said stops, said comb blade moving with said plate; and

resilient means on said rotatable member exerting inward pressure on said side portions whereby a frictional and wear-compensating relation is established between said metal plate and said side portions.

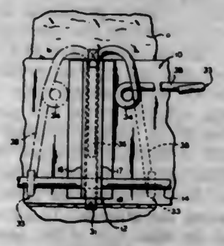
3,093,902
HAIR CLIPPER SHEAR BLADE ASSEMBLY
Mathew Andis, Racine, Wis., assignor to Andis Clipper Co., Racine, Wis., a corporation of Wisconsin
Filed Apr. 30, 1962, Ser. No. 191,045
9 Claims. (Cl. 30—223)

1. In a blade set for a hair clipper the combination of relatively fixed and movable blades having complementary teeth and complementary bearing surfaces extending transversely of the blades along the bases of the teeth,



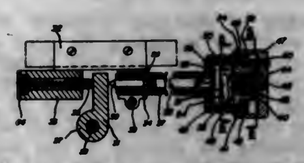
at least one such blade being provided with shallow grooves intersecting its said bearing surface.

3,093,903
PIN AND SPRING FOR LIGHT WIRE BRACKET
Harold D. Kesling, R.R. 2, La Porte, Ind.
Filed Mar. 30, 1961, Ser. No. 99,562
4 Claims. (Cl. 32—14)



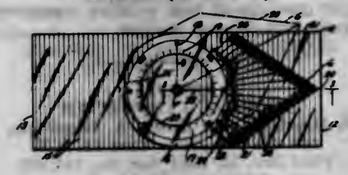
2. A lock pin for use with an orthodontic bracket having an elongated tubular opening of substantially uniform cross section to secure an arch wire to said bracket, said pin comprising a head having a buccal-lingual depth substantially equal to the buccal-lingual depth of said opening, a first reduced section adjacent to the head having a buccal-lingual depth such as to define with said lingual side of said bracket a buccal-lingual space slightly greater than the buccal-lingual depth of said arch wire, and a second reduced section adjacent to the first reduced section having a buccal-lingual depth substantially equal to the mesial-distal depth of said pin and substantially less than the buccal-lingual depth of said first reduced section to define a tubular opening at one end of said bracket having a substantial buccal-lingual depth.

3,093,904
TANGENT SCREW
Allistef L. Baker, Denville, N.J., assignor to Keuffel & Esser Company, Hoboken, N.J., a corporation of New Jersey
Filed Apr. 24, 1959, Ser. No. 808,626
14 Claims. (Cl. 33—69)



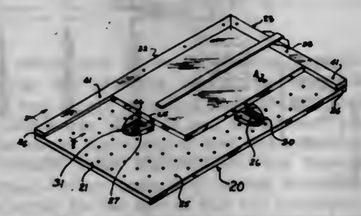
5. A screw providing fine and coarse adjustment against a spring-urged member comprising a shaft having a bore therethrough, a rod slidable in the bore of said shaft, said shaft being threaded at one end on its exterior for reception in a threaded aperture for axial movement upon rotation of the shaft, a housing at the other end of said shaft, fulcrum means provided in said housing, lever means in said housing cooperating with said fulcrum means, said lever means having a portion in alignment with said bore for engagement with the rod adapted to be received in the bore of said shaft, and means to move said lever means independently of the rotation of said shaft whereby a rod in said bore may be moved by rotation of said shaft or may be moved independently thereof by operation of said lever means.

3,093,905
DIRECTION FINDER
George J. Zaher, 537 3rd Ave., Brooklyn, N.Y.
Filed May 6, 1959, Ser. No. 811,392
3 Claims. (Cl. 33—75)



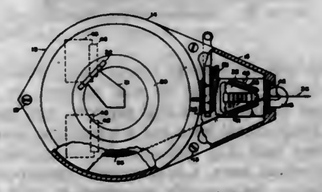
3. A navigational instrument for determining course directions in respect to a navigational chart, comprising an elongated double rectangular base having a plurality of closely spaced parallel graduations to permit the instrument to be placed upon and correctly lined up on a navigational chart, an intermediate rotatable compass dial mounted between the double plate to give the correct heading and a superimposed movable course arrow having a semi-circular base to be directed to the next point on the course and to give the proper course heading in respect to said dial, said rectangular base consisting of top and bottom elongated plastic rectangular members joined at their edges and said compass dial being rotatably mounted between said members and held in adjusted position by friction between said members, an eyelet acting as a pivot center and holding said rectangular members, said compass dial and said semi-circular base closely together to cause frictional retention of the compass dial and a window above the periphery of the dial and below the semi-circular base of the arrow on the top member to permit adjustment of said compass dial, and said arrow having oblique sides to form a point away from the eyelet and said spaced graduations extending parallel to each other the full length of the rectangular base transverse to the long dimension thereof but omitted for a short space on each side of the eyelet and the edges of the dial being radially graduated and the oblique sides of the arrow also being radially graduated.

3,093,906
DRAWING BOARD FOR STEEL RULE DIES
Frank J. Colnara, Elmwood Park, Ill.
Filed Apr. 1, 1960, Ser. No. 19,329
4 Claims. (Cl. 33—75)



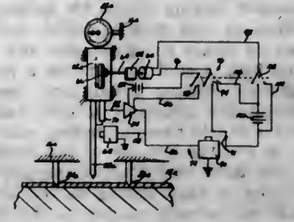
1. A drawing board for steel rule dies comprising two straight edges disposed at right angles to each other and adjustably mounted on a perforated base adapted to accommodate a four-sided workpiece so that two sides of said workpiece are in contact with said straight edges, securing means respectively manually operable to mount the straight edges to said perforated base in adjustable position with respect to said perforated base, said base having a plurality of equally spaced apertures, pressure responsive locking means for holding a workpiece in position on said drawing board, said pressure responsive locking means being movable and adjustably secured to said base, a stud pin forming a part of said pressure responsive locking means and operable for manually movably and adjustably securing said pressure responsive means to said base and having portions thereof adapted to be received into one of said equally spaced apertures in said base, said pressure responsive locking means comprising a body having curved end regions and a flat side in opposed relation to the curved end regions, said body having a recessed channel having a plurality of through apertures disposed therein and adaptable to accommodate said stud pin, a pair of studs disposed in spaced relationship and with portions thereof projecting from the flat side of said body and axially movable in relation to said body responsive to manual pressure, separate spring means disposed within said body and in engagement with a respective stud to provide a resilient force urging said studs axially outwardly of said body so that end portions thereof are in engagement with a side of said workpiece to exert resilient pressure thereon to maintain an opposed side of said workpiece in contact with an adjacent straight edge, and each of said studs having means respectively cooperating with portions of said body to limit the axial outward movement of said studs with respect to said body.

3,093,907
COMBINATION LINE REEL AND LINE ANCHORING DEVICE
Le Roy D. Searles, P.O. Box 409, La Grande, Oreg.
Filed Oct. 17, 1960, Ser. No. 63,126
2 Claims. (Cl. 33—85)



1. A composite tool comprised of a first unit and second unit for anchoring a guide line to building walls under construction, said first unit comprising a reel housing, a freely rotatable reel disposed within the housing, frictional line-locking means disposed within the housing, a guide line coiled about the reel and payable from the housing through said locking means, means carried by the housing for engagement with one end of a wall, said second unit provided with means for engagement with an opposite end of the wall and fixedly secured to the free end of said line, said frictional locking means comprising cooperating wedge members, one movable toward and away from the other with said line coiled about said movable member, whereby tension on the line in one direction will wedgingly engage said wedge members to lock the line between them and whereby movement of said movable wedge member in an opposite direction will free the line to be reeled into or payed out from said reel housing, and whereby tension on the guide line between said locking means and said second unit will maintain both of said units in firm engagement with their respective wall ends.

3,093,908
VISCOUS FILM THICKNESS MEASURING GAGE
Jacob Rabinow, Takoma Park, Md., assignor to Rabinow Engineering Co., Inc., Rockville, Md.
Filed Sept. 20, 1960, Ser. No. 57,362
14 Claims. (Cl. 33—172)



1. A gage for measuring the thickness of viscous film on a surface, said gage comprising a frame having coplanar contact points to penetrate the film and engage the surface, a reed, means connected to said frame for moving said reed toward the film, means for oscillating said reed at right angles to the movement, and means responsive to the damping effect of the viscous film when the reed is damped by initially contacting the film to stop said reed oscillating means and also stop said reed moving means so that the distance between the part of the reed touching the film and the plane of said points is the measure of film thickness.

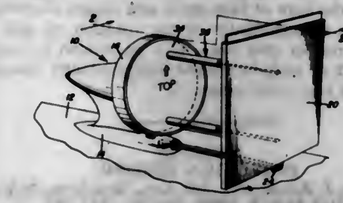
3,093,909
PRECISION BORE GAUGE
Andrew Eisele, 459 Belton Ave., Garden City, Mich.
Filed June 9, 1960, Ser. No. 34,906
7 Claims. (Cl. 33—178)



1. A precision bore gauge comprising a hollow support, a dial indicator mounted on said support, an elongated hollow stem connected to said support, said stem having therein a longitudinal bore and a transverse bore disposed remote from said dial indicator in communication with said longitudinal bore, a transversely reciprocable measuring member reciprocably mounted in said transverse bore and having a feeler portion thereon adapted to contact the wall of a workpiece bore to be measured, said measuring member in spaced relationship with one of its ends having a peripheral contact edge inclined relatively to the axis of said measuring member, and motion-transmitting mechanism including an elongated motion-transmitting member reciprocably mounted in said longitudinal bore and having a contact portion inclined obliquely to the axis of said motion-transmitting member and engageable with said contact edge.

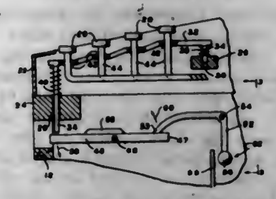
3,093,910
MIRROR ADJUSTING DEVICE
Robert W. Snider, R.R. 2, Bethel, Ohio
Filed May 2, 1960, Ser. No. 26,203
7 Claims. (Cl. 33—180)

1. A mirror positioning apparatus for a mirror frame adjustably mounted on a mirror frame support comprising, recording means, removable mounting means carrying said recording means for positioning it relative to the mirror frame support, marking means insertable into the mirror frame and comprising a plurality of spaced, parallel markers yieldably engageable with said recording means at spaced points and operative thereby to define a plane predetermined by an adjusted position of the mirror



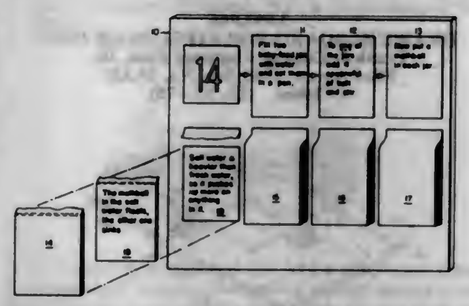
frame on its support, said recording means thereby recording the position of said marking means when the mirror frame is in adjusted position.

3,093,911
MUSICAL TYPEWRITER
Harry R. Hagelstein and Emma A. Hagelstein, both of 100 5th Ave., New York 11, N.Y.
Filed Dec. 22, 1961, Ser. No. 161,492
2 Claims. (Cl. 35—5)



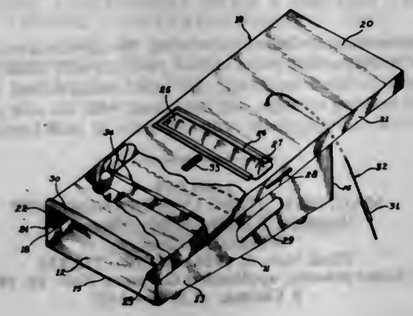
1. Apparatus comprising a musical typewriter having a keyboard and paper accommodating means, said keyboard having a plurality of keys arranged for ten finger typing, said keys being formed into eight distinct groups corresponding to the four typing fingers on each hand of the operator of the apparatus, eight tuned sound generating elements arranged in a sequence according to a diatonic musical scale, a hammer for each sound generating element, each of said groups of keys being operatively associated with a separate hammer whereby a single musical note is generated by the striking of a key within its associated finger group by the correct finger of the user.

3,093,912
TEACHING DEVICE
John H. Beauvais, 20 Healey St., Cambridge, Mass.
Filed June 1, 1961, Ser. No. 114,117
1 Claim. (Cl. 35—8)



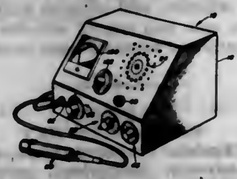
A science teaching device comprising a stiff rectangular base member having two horizontal rows of areas individually set off therein and separated by open space, the areas of the upper row presenting to view progressive procedural instructions comprising the steps for performing a scientific experiment and arrows between the instruction areas indicating the sequence in which the steps should be followed out, and the lower row of areas comprising unit groups each including a blank cover hinged at one edge to the base member, a hinged intermediate sheet enclosed beneath and initially concealed by the cover and displaying a statement of results observed from following the said instructions, and an area on the base member concealed by the cover and intermediate sheet presenting an explanatory statement of the observed results.

3,093,913
TEACHING DEVICE
John R. Wyllie, 17 Oliver St., Chatham, N.J., and Henry J. Manzella, 238 Shepard Ave., East Orange, N.J.
Filed July 19, 1961, Ser. No. 125,158
6 Claims. (Cl. 35—9)



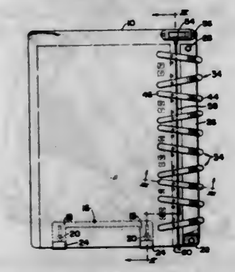
1. A teaching device comprising,
a base open at both ends,
a generally flat top on the base having an opening intermediate its ends, a pair of generally parallel sides on the base depending from the top,
a tray slidably mounted within the base beneath the top in between the sides, and means in the side walls adapted to receive means for sliding the tray from one end of the base to the other.

3,093,914
METRO-AUDIOMETER
Malcolm E. Bernstein, 822 Milford Mill Road, Baltimore 8, Md.
Filed Mar. 2, 1960, Ser. No. 12,478
1 Claim. (Cl. 35—35)



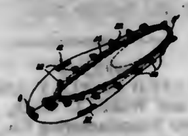
An educational device for training a speaker in voice inflection and intensity, comprising in combination, a sound beat circuit including a loudspeaker for producing metronome-type clicks in said loudspeaker and an audiometer circuit containing at least two transistors arranged for cascade audio amplification, said transistors being grounded-emitter connected, means including an input transformer for the first of said two transistors, a microphone, means for connecting said microphone to the input of said input transformer, means including a potentiometer for coupling the output of said input transformer to the first of said two transistors, so that the amplification of audio signals applied to said microphone and subsequently to said input transformer can be controlled, means including an interstage transformer for coupling the output of the first of said two transistors to the input of the second of said two transistors, an output transformer connected to the output of the second of said two transistors, an integrating transistor connected to the output of said output transformer, said output transformer and integrating transistor being utilized to rectify the output signal from the said second transistor, a visual indicating device including a D.C. microammeter connected to the output of the integrating transistor for indicating by the output signal thereof the excursions of speech inflections and the amplitude of the voice of the speaker into said microphone as well the clicks produced by the sound beat circuit so that deflections of said microammeter caused by said sound beat circuit will combine with the cadence of the voice of the speaker to cause greater deflections of said microammeter when proper cadence is used.

3,093,915
MECHANICAL GRADING DEVICE
Ralph F. De Simone, 13420 Keating St., Rockville, Md.
Filed Aug. 7, 1961, Ser. No. 129,703
9 Claims. (Cl. 35—48)



1. An examination grading device comprising a support adapted to hold a plurality of examination papers which are to be graded, retaining means including a plurality of posts fixed to said support in spaced relation, a bar member resiliently carried by said support adjacent one edge thereof, indicating means mounted on said bar member including a plurality of indicating elements, one for each two of said posts, said indicating elements each being retained on a selected one of its two corresponding posts and each having a portion adapted to overlie the examination papers.

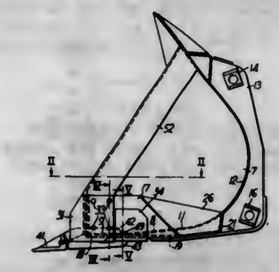
3,093,916
STRETCHABLE FOOTWEAR
Preston E. Hilestand and Eugene V. Mills, Princeton, Wis., assignors to Handcraft Company, Inc., Princeton, Wis., a corporation of Wisconsin
Filed June 20, 1955, Ser. No. 516,576
1 Claim. (Cl. 36—9)



As a new article of footwear a strecthable slipper to be worn in lieu of a shoe, comprising: a pair of substantially flat elongated panels of longitudinally and transversely stretchable fabric having outwardly curved extremities and being of uniform width between said extremities and disposed in confronting relation, means

joining said panels together along at least one of their longitudinal edges, the opposite longitudinal edges being free to define a foot opening, and stretchable seams of substantially similar configuration and length extending transversely of said panels and interconnecting the same adjacent their extremities from the ends of the joined edges to the ends of the free edges, said fabric being sufficiently stretchable to enable said article of footwear to fit a range of foot sizes, with either of said extremities conforming to the toe end of a foot, a plurality of ornamental elements secured to said panels adjacent said free edges at positions spaced therealong and around the foot opening, said ornamental elements being secured to said panels by a substantially inelastic continuous threads concealed within the body of the stretchable fabric, the length of said thread between said portions being greater than the distance between said positions when said article is relaxed so that said foot opening can be stretched in placing said article on a foot without breaking said inelastic thread.

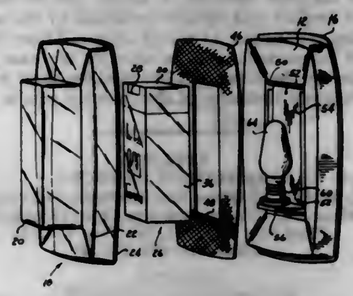
3,093,917
BUCKET STRUCTURE
Robert J. Schroeder, Deerfield, Ill., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Filed Dec. 6, 1961, Ser. No. 157,359
8 Claims. (Cl. 37—141)



1. An excavating bucket comprising: a pair of spaced upstanding side walls; a longitudinally extending bottom wall rigidly secured at its laterally opposite ends to the bottom ends of said side walls, said bottom wall having a front flat section and an upward sloping section extending rearwardly from said front flat section; a wrap-around plate having a forward portion in underlying contact with the flat section of said bottom wall and including upstanding end portions secured to the laterally outer sides of said side walls, said wrap-around plate presenting a rearward extending portion substantially coplanar with said forward portion and spaced vertically below said upward sloping section of said bottom wall; a wrap-around cutting blade connected to the front of the bottom and sides of said bucket; a backup plate rigidly secured to the underside of said wrap-around plate at the rear of and parallel to said blade, and a plurality of laterally spaced reinforcing teeth having upper and lower legs secured to said bucket in bridging relation to the space between said blade and backup plate.

3,093,918
ILLUMINATED DISPLAY ASSEMBLY
Merrill Krakauer and Walter L. Koch, Livingston, N.J., assignors to Rowe Manufacturing Co., Inc., Whippany, N.J., a corporation of New York
Filed Aug. 7, 1959, Ser. No. 832,232
3 Claims. (Cl. 40—126)

1. A merchandising machine display assembly for simulating the appearance of a boxlike package carrying indicia on a face and sides including in combination a base, a transparent housing conforming to the shape of said boxlike package carried by said base, said housing having an outwardly directed face and inwardly extending sides approximating the dimensions of the corresponding parts of said package, said housing being formed with an open back, a blank of translucent material cut to provide panels corresponding to the face and sides of said package, said



panels carrying indicia simulating the indicia carried by the corresponding parts of said package, said blank being folded to form an insert, said insert being nested within said housing through said open back with the side panels thereof in engagement with the sides of said housing.

3,093,919
MAGNETIC DISPLAY ARRANGEMENT
Hermann J. Holtz, Holsteinstrasse 54, Wiesbaden, Germany
Filed Nov. 6, 1958, Ser. No. 772,234
Claims priority, application Germany Nov. 18, 1957
8 Claims. (Cl. 40—142)



8. A display device comprising, in combination, a thin permanently magnetic base having a smooth, continuous mounting surface and formed from finely divided permanently magnetic particles dispersed throughout and imbedded within a non-magnetic binder, said base being magnetized to have a uniform magnetic power field and adapted to hold thin ferro-magnetic foil; a display layer coextensive with said mounting surface and means for securing said layer onto said mounting surface; a symbol; and a thin ferro-magnetic layer having a coating of pressure sensitive adhesive, said adhesive securing said ferro-magnetic layer onto said symbol whereby said symbol is magnetically attracted to said display layer by said power field.

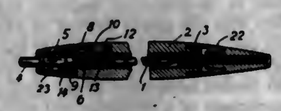
3,093,920
REINFORCED KEY
Irving Alfred Epstein, Fitchburg, Mass., and Adolphe J. Girardy, Lausanne, Switzerland, assignors to Independent Lock Company, Fitchburg, Mass., a corporation of Massachusetts
Filed Apr. 20, 1962, Ser. No. 189,086
4 Claims. (Cl. 40—330)



1. An ornamental key comprising a shank portion and a bow portion, said bow portion being formed to define

a recessed area on one face thereof, the other face of said bow portion including a raised reinforcing portion substantially in registry with the recess of said one face and extending outwardly beyond said other face to provide on said bow portion an area having substantial resistance to deformation under torsional stress, independent insert means positioned within said recess and having outer marginal edge portions conforming substantially to the outline of said recess and an adhesive layer interposed between said recess and said insert means and bonding said means to said key, all portions of said insert means lying within said recess and beneath the plane of said one face, whereby said recessed area will be substantially unaffected by torsional stresses applied to said bow to minimize relative movement of said insert with respect to said recess.

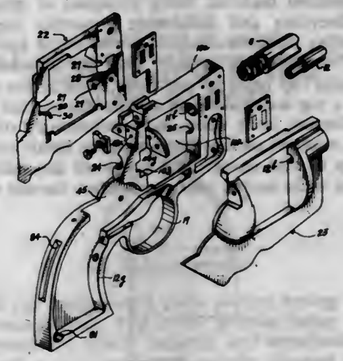
3,093,921
WRITING INSTRUMENT WITH A HOLDER CONTAINING A SHIFTABLE WRITING UNIT
Poul Asger Schacht Petersen, Copenhagen, Denmark, assignor to Chr. Olsen Akts., Copenhagen, Denmark
Filed Dec. 15, 1959, Ser. No. 859,628
1 Claim. (Cl. 40—334)



A writing instrument comprising a holder, a writing unit movably supported in said holder, switching means coupled to said writing unit for moving the same between operative and inoperative position, said switching means including a movable push-button and an extension rigidly connected to said push-button and in engagement with said writing unit, an indicia element in said holder, said holder including an element constituted in part by a transparent portion and associated with said indicia element to permit viewing thereof, and means operatively associated with the switching means and said elements for moving the elements relative to one another in accordance with movement of the switching means for exposing different portions of the indicia element through the transparent portions, the last said means including a transverse pin supported on said extension and engageable with one of the elements for moving the same with respect to the other of the elements.

3,093,922
REVOLVER CYLINDER AND MOUNTING THEREFOR
Jessie T. Ivy, 523 Henderson St., Seattle, Wash.
Filed Apr. 24, 1961, Ser. No. 105,228
6 Claims. (Cl. 42—62)

1. A revolver comprising a main frame formed with an opening therethrough and having laterally opening seats formed in the opposite end wall surfaces of said opening, a chambered cartridge cylinder removably mounted by said main frame in said opening; said cylinder having coaxial supporting trunnions at its opposite ends, rotatably contained in said seats for its functional support, a side plate applied to said frame, provided with an opening through which the cylinder is applicable to and removable from the main frame opening, and a pair of leaf springs fixed at their outer ends to said side plate and formed at their inner ends with shoulders designed to normally holdingly engage said supporting trunnions of



the cartridge cylinder to yieldingly retain the cylinder against displacement from the frame opening.

3,093,923
FISHING LURE
Haskell Lee Jackson, 101 W. Patrick St., Marion, Ill.
Filed Oct. 4, 1961, Ser. No. 142,849
1 Claim. (Cl. 43—42.11)

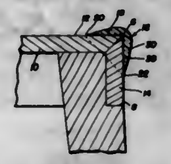


A surface-type fishing lure comprising, in combination, an imitation bug embodying a single fishhook and hackle cooperatively associated with and carried by said hook, a spinner supporting and carrier bracket embodying a first horizontal arm, a second arm vertical to said first arm and complemental thereto and having a lower end attached to a forward end portion of the first-named arm, said arms being integrally connected to each other and the portion thereof at the junctional connection of the arms being provided with a loop constituting a line-attaching eye, a third arm coplanar with the first and second-named arms and having a forward end joined to the upper end of the second arm by way of a bent portion, the latter constituting a shoulder, said third arm constituting a shaft and being of a length approximately the same as the length of the first-named arm, a single spinner having centralized aligned lateral lugs rotatably mounted on said shaft, and a linking plate, said plate constituting a spoon and being of dished concavo-convex form, the rearward end of said first arm being rigidly connected to the forward end of said plate, and the forward end of the shank of the aforementioned hook being connected to a central rearward end of said plate, said plate being located rearwardly of the rear end portion of said spinner.

3,093,924
CORNER CAP FOR FURNITURE
Joseph B. Pompa, West Los Angeles, Calif. (151 S. Westchester Drive, Anaheim, Calif.)
Filed Dec. 18, 1961, Ser. No. 160,133
4 Claims. (Cl. 45—68.4)

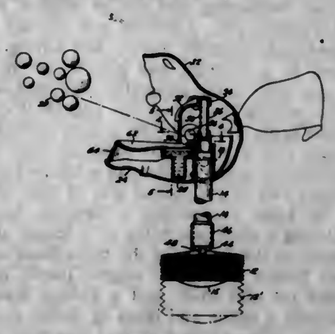
1. For use on a sharp corner on a piece of furniture such as, for example, an end table, coffee table, metal cabinets and the like; an accident forestalling and prevent-

ing cap which is applicable to and designed and adapted to safely cover the dangerous components of a corner of said table, said cap being made from moldable compressibility resilient material, being possessed of prerequisite shock absorbing and cushioning properties capable of safeguarding children, adults too, who might accidentally or otherwise forcibly collide with the aforementioned corner, said cap being of one-piece construction and embodying a top wall having an interior flat surface adapted to superimpose itself upon and conformingly overlie an intended minimal surface portion of the furniture's top in proximity to said corner, and a pair of depending complemental walls having contiguous edges thereof adjoined



to each other and additional contiguous edges adjoined with coinciding marginal edges of said top wall, also having flat uninterrupted attaching and retaining surfaces designed and adapted to conformably contact the furniture surfaces to the left and right of the usual sharp vertical edge portion of said corner, the entire attachable portions of the flat surfaces having flatwise contact with the cooperating furniture surfaces and being coated with pressure-responsive adhesive media, said cap being limited in its makeup to three walls which are complemental to each other and substantially identical in construction and are generally triangulate in plan and are each provided with a convex exterior rounded surface.

3,093,925
BUBBLE MAKING TOY
Norman A. Greene, New Rochelle, N.Y. (101 W. 55th St., New York 19, N.Y.)
Filed Feb. 6, 1961, Ser. No. 87,203
8 Claims. (Cl. 46—8)



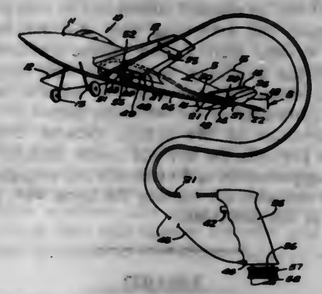
1. A bubble making toy comprising a bellows, a tubular stick having its lower end secured to the upper end of the bellows, a simulated head having pivoted upper and lower jaws, said head being secured to the upper end of the tubular stick, a slide disposed slidably in the upper end of the stick within the head and in communication with the bellows through the stick for upward movement when the bellows is squeezed, means serving to open the jaws when the stick is pushed downward and the bellows is squeezed by said downward movement of the stick, a well for bubble solution secured inside the head, a dip ring carried by the slide for movement into or out of the well, a constricted air discharge hole in the upper end of the stick inside the head and normally closed by the slide but opened for air discharge when the slide moves upward, at which time the dip ring is raised out of the well to a position in front of the air discharge hole thereby emitting a stream of bubbles through the space between the open jaws.

3,093,926
TOY TOP
Arnold E. Wright, 5140 Wellington Ave., Chicago, Ill.
Filed Mar. 27, 1959, Ser. No. 802,431
1 Claim. (Cl. 46—60)



A toy top adapted for conversion between a diabolo and a pointed spinning top; and comprising a pair of conical bodies each having an elongated threaded bore extending axially from the apex thereof and terminating short of the opposite end thereof with said bores being oppositely threaded, and an elongated stud oppositely threaded at opposite ends thereof for cooperative threaded engagement with the respective threaded bores of said conical bodies to facilitate the securing together of the conical bodies with the apices thereof in adjacency forming a diabolo and resisting separation of the bodies while spinning; and said stud being threadedly releasable from said bores to permit separation of the conical bodies and threaded attachment of a cooperatively threaded spinning point in the threaded bore at the apex of one of the said conical bodies.

3,093,927
POWER DRIVEN MINIATURE AIRCRAFT
Gene W. Smith, 5008 La Canada Blvd., La Canada, Calif.
Filed Nov. 23, 1959, Ser. No. 854,849
19 Claims. (Cl. 46—77)



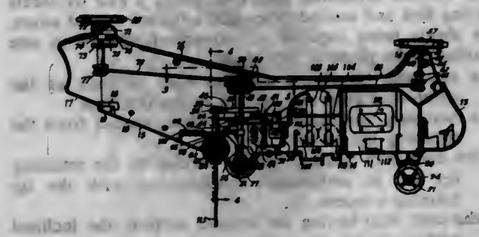
13. A jet powered toy aircraft adapted to be flown in air-sustained flight and maneuvered from control means held in the hand of a ground-stationed operator, said aircraft comprising an airframe, jet engine means mounted on said airframe having an orifice opening and effective to propel the same in air-sustained flight by the reaction of a pressurized stream of fluid discharging from said jet engine means into the surrounding air, control means for said aircraft comprising a pair of flexible parallel lines extending from said airframe to a handgrip member adapted to be carried entirely in and manipulated by one hand of the operator, one of said lines being a flexible lightweight tube transmitting pressurized fluid to said jet engine means and both of said flexible lines being operatively connected to flight direction control means on said airframe and effective by the relative longitudinal displacement of said flexible lines to vary the flight path of said aircraft by the manipulative movement of said hand-held control member.

3,093,928
MULTIVOICE UNIT
Robert K. Ostrander, 497 Prospect St., Maplewood, N.J.
Filed Feb. 16, 1961, Ser. No. 89,770
13 Claims. (Cl. 46—117)



1. A doll having a bellows with an outlet opening, and a multivoice unit connected to said opening, said unit being fixed to the doll and occupying a predetermined orientation with respect to the vertical when the torso of the doll is erect, said unit having a plurality of air passages therethrough, a different reed of a different pitch secured in each different air passage, and a tilting valve which is supported to vary its position when the torso is tilted with respect to the vertical, said valve in differently tilted random positions corresponding to differently tilted random positions of the torso obstructing different ones of the passages so as to prevent operation of the reeds secured in the obstructed passages.

3,093,929
TOY HELICOPTERS
Saul Robbins, 35 Mountain Way, West Orange, N.J., and Isaac Heller, 2080 Arrowwood Drive, Scotch Plains, N.J.
Filed Jan. 16, 1961, Ser. No. 83,117
3 Claims. (Cl. 46—243)



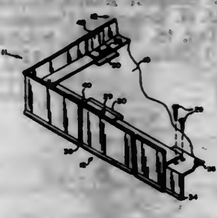
3. A toy helicopter comprising a hollow body having a mechanism frame therein, a propeller journaled on said body, a drive shaft journaled in said frame on a vertical axis, a motor mounted on said frame, reduction gearing between said drive shaft and said motor, driving connections between the upper end of said drive shaft and said propeller, an axle having a pair of wheels thereon journaled in said body on a horizontal axis, a pinion on the lower end of said drive shaft, and a gear coaxially mounted on said axle to rotate therewith, said gear meshing with said pinion so as to be driven thereby upon operation of said motor and thereby drive said wheels, a winch including a drum journaled on said body, a gear fixed at each end of said drum, a winch operating shaft, a lever pivoted on said body on which said winch operating shaft is journaled, a driving connection between said winch operating shaft and said drive shaft, a pinion on said winch operating shaft to mesh selectively with said gears on said drum, and means for actuating said lever to move said last-mentioned pinion into mesh with one or the other of said gears on the drum while maintaining the driving connection between said drive shaft and said winch operating shaft.

3,093,930
COVER FOR PLANTS
Henry J. Witkowski, 3934 Davenport Ave., Erie, Pa.
Filed Mar. 6, 1961, Ser. No. 93,600
1 Claim. (Cl. 47—29)



A hot cap comprising a cover portion having generally frusto-conical sides, said cover portion being made of thin transparent plastic material and terminating at its upper end in a crown, an outwardly directed rim integrally fixed to and extending outwardly from the large end of said cover portion, corrugations formed in said cover portion and extending from said rim to said crown, a hood in the same general shape as said crown and rotatably supported on said crown and overlying a part of said cover portion, a member extending through said crown and said hood and disposed to allow said crown to rotate about an axis substantially coincident with the central vertical axis of said cover portion, said hood having corrugations therein overlying the upper ends of said corrugations in said cover portion, and holes in said crown adapted to register with holes in said hood, said hood being adapted to flex sufficiently to allow the corrugations thereof to override the upper portions of said corrugations in said cover portion whereby said hood can rotate to bring the holes therein out of register with said holes in said crown.

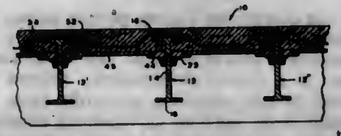
3,093,931
GRAVEL STOP AND BUILDING ASSEMBLY EMPLOYING THE SAME
James C. Waring, Richmond, Va., assignor to Reynolds Metals Company, Richmond, Va., a corporation of Delaware
Filed Feb. 2, 1960, Ser. No. 6,299
10 Claims. (Cl. 50—66)



1. A gravel stop structure for a substantially flat roof comprising in combination an elongated member having a generally T-shaped transverse cross section defined by a cross member and a stem joined to said cross member intermediate the ends of said cross member, said cross member having inner and outer surfaces and forming upper and lower arms, said stem having a generally horizontal length sufficient to engage securely with the top of the roofing material along the edge of the roof, a bottom joint member of generally L-shaped transverse cross section adapted to have intimate contact throughout its length with both the under surface of said stem and the inner surface of the elongated member along the lower arm thereof, said bottom joint member being disposed at the end of said elongated member and bridging an expansion

space between said elongated member and an adjoining gravel stop structure, a top joint member of generally L-shaped transverse cross section adapted to contact both the upper surface of said stem and the inner surface of the elongated member along the upper arm thereof, said top joint member being disposed above said bottom joint member, and means for aligning said elongated member with an adjoining gravel stop structure.

3,093,932
FLOOR CONSTRUCTION AND METHOD OF PROVIDING SAME
Sidney Dreier, New York, and Samuel Lubash, Bayside, N.Y. (both % Dreier Structural Steel Co., 32—50 Vernon Blvd., Long Island City 6, N.Y.)
Filed Apr. 22, 1960, Ser. No. 24,148
4 Claims. (Cl. 50—83)



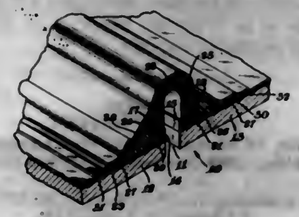
1. A floor construction comprising a plurality of support members, support brackets disposed on opposite sides of a web portion of each support member at spaced points along the length of each support member below the top of each support member, means removably securing the support brackets to the web portion of each support member, a form support on each support bracket, anchor clip means removably securing each form support to its respective support bracket, forms extending between adjacent support members having their ends supported by opposed form supports, a slab of poured concrete disposed over said forms and enveloping the portion of each support member above said form supports, said form supports being disposed in a horizontal parallel relationship, the distance between the ends of each form being less than the distance between opposed brackets, the width of said form supports and support brackets being taken in the direction between parallel support members, and each form support being wider than its respective support bracket.

3,093,933
ELECTRICAL DUCTS AND FITTINGS
Thomas J. Slingluff, Baden, Pa., assignor to H. H. Robertson Company
Filed Oct. 15, 1959, Ser. No. 846,659
1 Claim. (Cl. 50—127)



The combination of an electrical outlet fitting and an electrical duct, said duct having flat exposed and unexposed horizontal walls and connecting side walls,
said exposed wall having at least one circular wire passageway opening,
a plurality of outwardly raised dimples annularly disposed about the said opening and projecting above said exposed wall, each of said dimples having at its center a screw-receiving opening, said fitting comprising:
a base plate having a flat base annularly disposed about said wire passageway opening and an outwardly flared central tube, said flat base having first countersunk fastening-screw-apertures corresponding to said outwardly raised dimples, said flat base having second countersunk leveling-screw-apertures,
conical headed leveling screws each having a threaded shaft extending outwardly through said second countersunk apertures,
a leveling plate having a central sleeve surrounding said central tube,
a radial flange extending outwardly from said sleeve adjacent to said base plate and having threaded openings threadedly engaged with the shafts of said leveling screws and having tool access openings spaced outwardly from said first countersunk apertures,
said sleeve having an annular recess remote from said base and a circular floor cap peripherally engaged with the said sleeve within the said annular recess.

3,093,934
EXPANSION JOINT
Richard R. Underhill, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Filed May 13, 1960, Ser. No. 29,094
7 Claims. (Cl. 50—172)



1. A roof expansion joint comprising a pair of sheets having first and second faces and adjacent spaced edges, the sheets being capable of movement relative to one another in the plane of each sheet,
a retaining lip at the adjacent edge of each of the sheets and generally normal to the first face
a cant strip secured to said first face, spaced from the retaining lip,
the cant strip being generally parallel to the retaining lip and in cooperative combination with the lip forming a recess,
the cant strip having an inclined surface, the inclined surface terminating adjacent the first face and remote from the retaining lip, and also terminating at the recess face,
a generally U-shaped flexible foam plastic member having the terminal portion of one of the legs positioned in a recess of one of said sheets and the other leg in the other recess of the other sheet,
and a flexible sealing strip passing over the U-shaped member and secured to each sheet and cant strip.

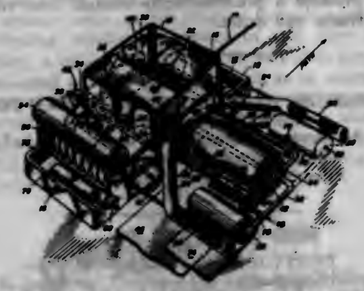
3,093,935
ROOF FORMING STRUCTURE
Harold S. Dunn, 163 Fleet Way, Fort Lauderdale, Fla.
Filed Nov. 27, 1959, Ser. No. 855,770
1 Claim. (Cl. 50—198)

In a roof construction, in combination, a truss member comprising an inclined chord member having a downwardly opening channel for receiving ends of truss struts therein and including an upper I-beam cross-section having laterally opening, opposed roof panel-receiving channels sealingly embracing the edges of roof panels disposed therein, and a plurality of rectangular roof panels being frictionally embraced at one edge in said roof panel-receiving channels, said roof panels comprising a lower sheet of expanded polystyrene-like material bonded to an upper thin sheet of fiberglass-like material, said lower sheet including at the edges normal to said one edge reversely stepped portions therealong and in sealed engagement with complementary stepped portions of immediately adjacent roof panels, said upper sheets including a lower marginal portion projecting beyond the stepped portion at one of said normal edges and terminating at



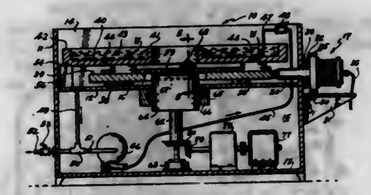
an upper marginal portion disposed inwardly and parallel to said other normal edge, adjacent upper sheets being sealingly secured at their lower marginal portion on said lower sheets of the next adjacent panel and disposed in said roof panel-receiving channels on said inclined chord below said engaged complementary stepped portions of said lower sheets, said upper I-beam cross-section comprising an upper flange including downwardly and laterally opening grooves bordering longitudinal edges thereof, and a pair of plastic sealing elements sealingly engaged in said grooves and on the upper surfaces of said upper thin sheets and spanning the joint between adjacent panels.

3,093,936
ROOFING APPARATUS
Carroll C. Figge, Batavia, Ill. (315 W. Madison St., Chicago, Ill.)
Filed Feb. 12, 1957, Ser. No. 639,772
6 Claims. (Cl. 50—538)



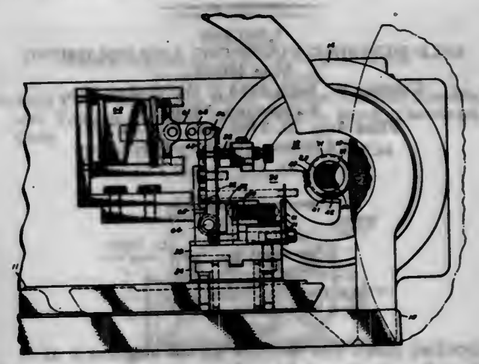
1. In a roofing apparatus, a wheeled carrier movable back and forth in spaced parallel paths for laying from one side lapped plies of roofing material without reversing the carrier, means supporting a roll of roofing material from said one side and projecting laterally outwardly therefrom with the axis of said roll substantially perpendicular to said one side, swingable means supporting a roll of sealing material from said one side and projecting outwardly beyond the first named supporting means with the axis of the second named roll parallel to the axis of said first named roll, said latter supporting means positioning the roll of sealing material with its innermost terminal edge inwardly of the outermost terminal edge of the roofing material and the outermost terminal edge of the sealing material outwardly of said outermost terminal edge of the roofing material for providing an overlap of said two materials when unrolled and said swingable supporting means movable about an axis to shift the roll of sealing material to either of two opposite sides of the first named roll thereby having the second named roll trail the first named roll while maintaining the parallel relationship of the axes of the rolls as the carrier moves in said paths.

3,093,937
ULTRASONIC LAPPING MACHINES
Lewis Balamuth, New York, and Arthur Kuris, Bronx, N.Y., assignors to Cavitron Ultrasonics Inc., Long Island City, N.Y., a corporation of New York
Filed Nov. 30, 1962, Ser. No. 241,330
19 Claims. (Cl. 51—67)



1. A lapping machine comprising
(A) a circular ring having an annular lapping surface,
(B) vibration generating means coupled to said ring to effect radial vibration of the latter at a high frequency,
(C) means for pressing the workpieces to be lapped against said lapping surface, and
(D) means for supplying an abrasive slurry in between said lapping surface and the surfaces of the workpiece pressed thereagainst so that said high frequency vibrations cause the abrasive to smoothly finish said surfaces of the workpieces.

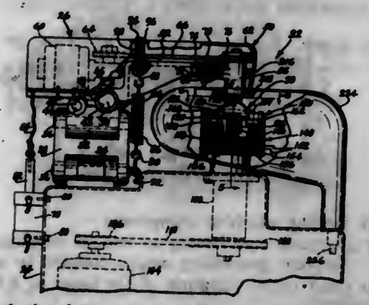
3,093,938
ALTERNATE SUPPORTING MEANS FOR ANNULAR WORKPIECES
Harold E. Balsiger, Waynesboro, Pa., assignor to Landis Tool Company, Waynesboro, Pa.
Filed Apr. 17, 1959, Ser. No. 807,056
3 Claims. (Cl. 51—103)



1. In a grinding machine for grinding cylindrical workpieces having more than one peripheral surface, a grinding wheel, a work drive spindle, a face plate on said work drive spindle, means for holding a workpiece against said face plate, work supporting means comprising a work supporting member having angularly spaced work engaging shoes for engaging one peripheral surface of the workpiece, a second work supporting member having angularly spaced work engaging shoes for engaging another peripheral surface of said workpiece, and means for moving said second work supporting member to move said workpiece against said grinding wheel and out of engagement with said first work supporting member and means

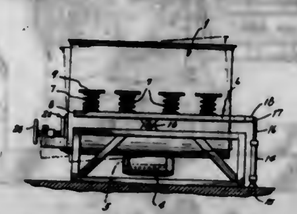
to stop said second work supporting member when said workpiece is ground to the desired size.

3,093,939
SURFACING APPARATUS
Ernest T. Dalton, Southbridge, Mass., assignor to American Optical Company, Southbridge, Mass., an association of Massachusetts
Filed July 3, 1961, Ser. No. 121,786
16 Claims. (Cl. 51—124)



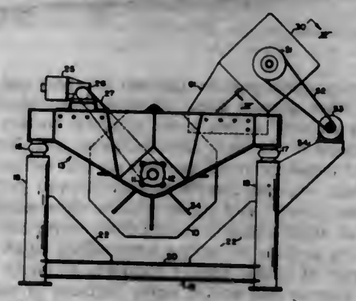
1. A device for use in forming a compound curvature on a surface of a work member comprising a tool member having a working surface thereon of the shape desired to be formed on said surface of said work member, a rotatable base plate, supporting means on said base plate adapted to receive and support a first of said members fixedly for rotation therewith, a resilient coupler encircling said supporting means and first member, said coupler having one of its ends fixed to said base plate for rotation in unison therewith and holding means on the opposite end of said coupler for receiving and supporting the second of said members in adjacent relation with the first of said members and with given meridians of the respective surfaces of said members retained substantially parallel to each other at all times during rotation of said base plate and coupler carried thereby.

3,093,940
SELF-DUMPING FINISHING AND POLISHING MACHINE
Gunther W. Balz, 2014 S. Westnedge Ave., Kalamazoo, Mich.
Filed Aug. 10, 1960, Ser. No. 48,737
4 Claims. (Cl. 51—163)



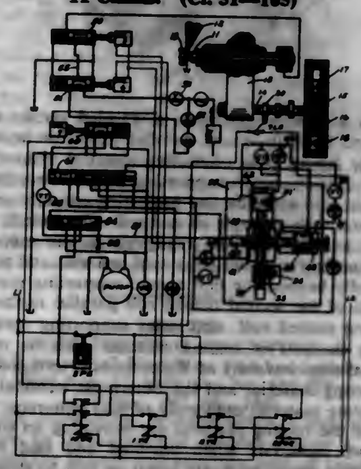
1. In a finishing and polishing machine the combination of a hopper adapted to receive finishing or polishing material and the pieces to be finished or polished having a rounded semi-cylindrical bottom and a vibratory motor having its axis parallel to the axis of said semi-cylindrical bottom and carrying an eccentric weight adapted to impart rotary vibrations to said hopper and its contents mounted directly on said hopper, said hopper having at one end thereof adjacent the bottom a discharge opening for the contents of said hopper and a cover for sealing said opening, a tiltable frame, and means on said tiltable frame supporting said hopper and motor as a unit for free movement in space, and means supporting said tiltable frame for tilting on an axis generally perpendicular to the axis of said hopper and means for tilting said tiltable frame whereby said hopper may be simultaneously tilted and vibrated to empty said hopper when said discharge opening is open.

3,093,941
VIBRATORY MILL DRIVE
Robert M. Carrier, Jr., and John M. Morris, Louisville, and Albert Muenchoot, near Louisville, Ky., assignors, by mesne assignments, to Chain Belt Company, Milwaukee, Wis., a corporation of Wisconsin
Filed July 2, 1959, Ser. No. 824,574
3 Claims. (Cl. 51—164)



1. A vibrating tumbling barrel assembly comprising, in combination, a resiliently mounted frame, a symmetrically shaped drum journaled on the frame for rotation about an axis, means for rotating the drum, an exciter mass, resilient means mounting said exciter mass on the frame for the transmission of vibratory force along a line directed transversely through the axis of rotation of the drum, and means for vibrating said exciter mass along a path having a major axis along said line to produce a predominantly straight line vibration of said frame and drum.

3,093,942
PRESSURE WORK HOLDING DEVICE FOR GRINDING MACHINES
Glenn M. Snyder, Waynesboro, Pa., assignor to Landis Tool Company, Waynesboro, Pa.
Filed Mar. 15, 1962, Ser. No. 179,902
11 Claims. (Cl. 51—165)



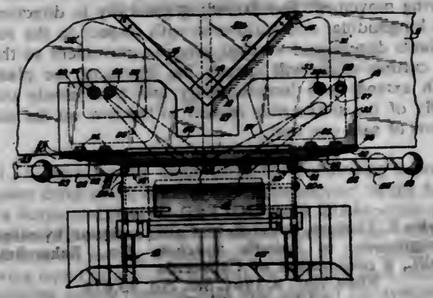
1. In a grinding machine having a grinding wheel and a rotatable face plate, means comprising a clamping member for holding ring-like workpieces against said face plate, means for supplying fluid under pressure to hold said clamping member against said workpieces including high and low pressure fluid conduits, and means for alternately connecting said clamping member to said high and low pressure fluid conduits.

3,093,943
ENCIRCLING TOOL
Charles E. Kaziunis, Rutherford, N.J., assignor to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland
Filed Jan. 27, 1961, Ser. No. 85,325
16 Claims. (Cl. 53—198)



1. A tool for encircling objects with a flexible material comprising a body, means for mounting thermoplastic flexible material within said body, a first jaw mounted on said body, a first arcuate track mounted on said body, a movable second arcuate track disposed adjacent to said first track to coact with and be guided through an arcuate path by said first track, a second jaw mounted on said second arcuate track, means coupled to said second track for producing relative movement of said jaws toward each other, a cold shoe mounted on said first jaw, a hot shoe mounted on said second jaw so as to engage said thermoplastic flexible material between said hot and cold shoes when said jaws are moved toward each other, and heating means coupled to said hot shoe to heat said hot shoe thus fusing said thermoplastic material in a closed loop about said encircled objects.

3,093,944
ARTICLE PLATFORM SUPPORT
Bengt A. Arvidson, Chicago, Ill., assignor to Miller Wrapping & Sealing Machine Co., a corporation of Illinois
Filed Nov. 15, 1960, Ser. No. 69,424
4 Claims. (Cl. 53—206)



1. A platform for supporting articles to be wrapped, comprising: a frame; a main plate affixed to said frame and lying in a horizontal plane; a pair of second plates operatively associated with said first plate and movable relative thereto; an elongate rod longitudinally movable on said frame; and a pair of links, each of said pair of links connecting one of said second plates to said rod, whereby the pair of second plates are moved relative to the first plate to vary the size of the platform in response to movement of the rod.

3,093,945
WRAPPING EQUIPMENT
Bengt A. Arvidson, Chicago, Ill., assignor to Miller Wrapping & Sealing Machine Co., a corporation of Illinois
Filed Dec. 16, 1960, Ser. No. 76,170
3 Claims. (Cl. 53—206)



1. Wrapping equipment comprising, in combination, an initial wrap table, wherein an article may be manually partially wrapped including an article platform with a back stop for locating the leading edge of an article and an adjustable stop to locate an article laterally of the platform, wrapping machine means to advance successive articles through spaced in-line stations for completing the wrapping thereof including, a supporting frame work, a pair of spaced apart frames extending through said in-line stations and movably mounted on said frame work, means operable to move the frames equal distances toward and away from each other and relative to the article advancing means, and a connection from the adjustable stop of the wrap table to one of the pair of frames of the wrapping machine causing said stop and said one frame to move equal distances for adjusting both the wrap table and the machine to handle different length articles with a single adjustment.

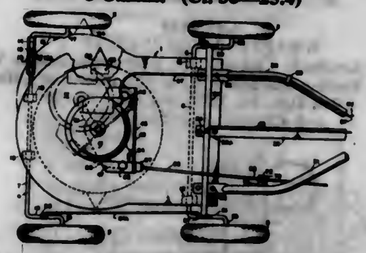
3,093,946
LOAD RESPONSIVE CONTROL FOR POWER SYSTEMS
Arnold Pitt, 5 Hillgarden Road, Weston, Ontario, Canada, and Tadeusz Budzich, 3344 Colwyn Road, Cleveland, Ohio
Filed Oct. 8, 1959, Ser. No. 845,234
12 Claims. (Cl. 56—20)



1. In a machine having a driven tool which performs work on material fed to it, a feed mechanism for advancing the material and the tool relative to each other and thus feeding material to the tool, and a prime mover for the tool and for the driven feed mechanism; a first power transmission and control system comprising a transmission having a constant speed output and interposed in a drive to the tool to drive the tool at a constant speed irrespective of the speed of operation of the associated prime mover a second power transmission system interposed between the prime mover and the feed mechanism to drive the feed mechanism, a load-sensing device to measure solely the load on the tool and produce a control signal, said control signal being operative upon a device to control the rate at which the

driven feed mechanism feeds material to the tool to maintain a substantially constant load on the tool.

3,093,947
HORIZONTALLY ADJUSTABLE ROTATING DISK TYPE MOWER
Louis F. Whitman, 2818 SE. Laurel, Milwaukie, Oreg.
Filed Aug. 14, 1961, Ser. No. 131,406
3 Claims. (Cl. 56—25.4)



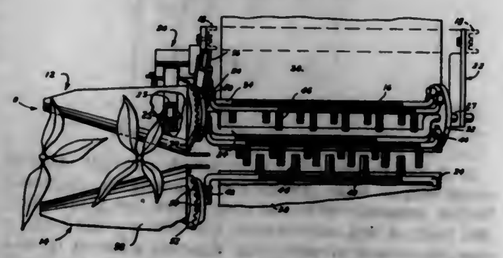
1. A power lawn mower comprising a horizontally disposed base supported upon ground engaging wheels, an inclined handle extending upwardly and rearwardly from the base, said base having a first and a second arcuate slot therein, a prime mover having a vertically disposed shaft extending through said second slot, means swingably mounting said prime mover upon the base to permit movement of said shaft lengthwise of said second slot, means interconnected said prime mover mounting means and said handle for lockably securing said prime mover in various positions relative to said second slot, a cutter secured to said prime mover shaft below said base, means for elevating one of said ground engaging wheels to permit orbit of rotation of the cutter directly below said wheel when said prime mover shaft reaches the end of said second slot whereby said elevated wheel will serve as a guard between the cutter and a rigid structure adjacent the path of movement of the mower.

3,093,948
ROTATING DISK MOWER WITH VERTICALLY ADJUSTABLE ROTATING BLADE
George R. Root, Baxter Springs, Kans., assignor to Root Manufacturing Company, Inc., Baxter Springs, Kans., a corporation of Kansas
Filed Sept. 11, 1961, Ser. No. 137,097
1 Claim. (Cl. 56—25.4)



A grass cutting mower comprising, a wheel supported platform, a framework including a pair of spaced legs mounted on said platform, a housing mounted on said platform between said legs, bearing means in said housing, a vertical shaft extending through the platform and through said bearing means and slidable vertically therein, a driving member rotatably supported by said bearing means and rotatably fixed with respect to said shaft and permitting vertical sliding of said shaft therethrough, means for rotating said driving member for rotating said shaft, a cutter blade fixed to the lower end of said shaft, a lever having one end pivotally attached to one of said legs for pivoting in a vertical plane, yoke means spaced above the upper end of said shaft, bearing means operatively connected between said yoke means and said shaft whereby said shaft is rotatable with respect to said yoke means and said shaft is vertically suspended by said yoke means, means spaced above said yoke means for pivotally attaching said lever to said yoke means between the ends of said lever whereby movement of said lever vertically will move said shaft vertically to change the cutting height of said blade, and means on the other of said legs for adjustably engaging the other end of said lever to maintain said shaft in adjusted vertical position, said means for pivotally attaching said lever to said yoke means comprises a link having an upper end and a lower end, said link upper end being pivotally connected to said lever and said link lower end being pivotally connected to said yoke means whereby said lever may be pivoted without jamming.

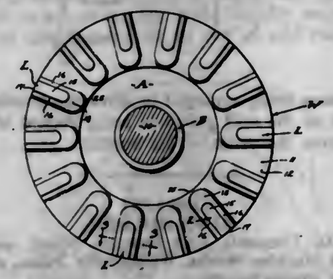
3,093,949
TOBACCO HARVESTER
William E. Splinter, Raleigh, N.C., assignor to Research Corporation, a corporation of New York
Filed June 9, 1961, Ser. No. 116,096
8 Claims. (Cl. 56—27.5)



1. Apparatus for priming tobacco plants having stalks and leaves extending outwardly therefrom arranged to be mounted on a vehicle frame movable along a row of such plants comprising a pair of defoliating units, means operatively associated with said defoliating units adapted to mount the same on the vehicle frame in longitudinally inclined spaced transverse relation to permit passage of the tobacco plants therebetween during the movement of the vehicle frame along the row of plants, at least one of said units including a plurality of members having cutting blade means thereon and means mounting said members for movement in an endless path which includes inward movement toward the stalks to bring said cutting blade means into cutting position in vertically spaced relation to the leaves adjacent the stalks, vertical movement to sever the leaves engaged thereby adjacent the stalks and outward movement to retract the cutting blade means from adjacent the stalks, said cutting blade means having sharp cutting edges facing in the direction of said vertical severing movement and extending generally in directions both longitudinal and transverse with respect to the row of plants during said vertical severing movement so that said cutting edges will engage the leaves of the plants which extend both longitudinally and transversely outwardly of the stalks with respect to the row on the side thereof of said one unit.

3,093,950
LUG FOR DOFFER WHEEL
Maurice E. Lindsay, Bakersfield, Calif., assignor, by mesne assignments, to Spindle Specialty Co., Bakersfield, Calif., a corporation of California
Filed Mar. 6, 1961, Ser. No. 93,674
4 Claims. (Cl. 56—41)

1. A doffer wheel for removing cotton fibers from the picking spindle of a cotton picking machine and including, a disc carried by a central hub and having an annular marginal portion in a plane normal to the axis of rotation, an annular body of rubber-like material bonded to the disc to overlie the said marginal portion, and radially disposed lugs formed on said body to project axially there-



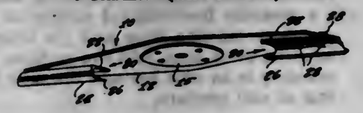
from and with a top spaced from said body and each with sides and a slanted nose at the radially inward end thereof, said nose extending axially and radially inward between the top and body, and said nose having a filleted corner where it adjoins and fairs into said body.

3,093,951
MULTIPLE KNIFE ASSEMBLY FOR FORAGE CHOPPERS
Arthur G. Barows, Downers Grove, and Ronald F. Zitko, Cicero, Ill., assignors to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Dec. 7, 1959, Ser. No. 857,697
18 Claims. (Cl. 56—294)



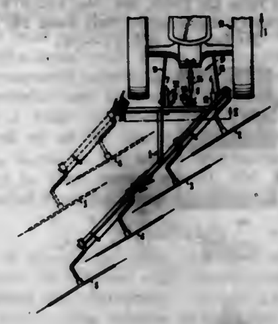
1. In a flail knife mower, a rotatable carrier, flail mounting means on the carrier, a flail assembly comprising a plurality of individual elements each pivotally mounted upon said mounting means and collectively presenting a plurality of radially stepped circumferentially directed cutting edges disposed in common radial planes.

3,093,952
LAWN MOWER BLADE
Stanley W. Bonser, % Bonser Engineering, Gilbert, Pa.
Filed May 29, 1961, Ser. No. 113,218
4 Claims. (Cl. 56—295)



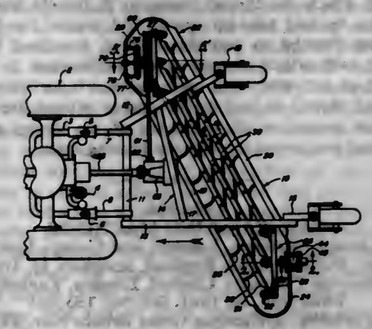
1. A lawn mower blade assembly comprising a power mower drive shaft, a flat main blade support in the form of a horizontal plate tapered outwardly in oppositely longitudinal directions from the center thereof, the width of said support having a maximum value at the center and having equal minimum values at the extreme ends thereof, mounting means integral with said support for symmetrical secured engagement upon said shaft, and a plurality of cutter elements secured in spaced apart relationship upon the lower surface of said plate, and projecting downwardly therefrom, said elements having cutting edges displaced downward from said plate.

3,093,953
DEVICE FOR THE LATERAL DISPLACEMENT OF MATERIAL LYING ON THE GROUND
Cornelis van der Lely, Zug, Switzerland, assignor to Patent Concern N.V., Willemstad, Curacao, Netherlands Antilles, a limited-liability company of the Netherlands
Filed Nov. 27, 1959, Ser. No. 855,594
Claims priority, application Netherlands Dec. 3, 1958
15 Claims. (Cl. 56—377)



1. A device adapted for being connected to a traction vehicle for the lateral displacement of material lying on the ground, said device comprising a frame, a plurality of rake members on said frame, and at least two laterally spaced fastening means on said frame and connecting the same to said vehicle, at least one of said fastening means including resilient means connected to and permitting the frame to deviate resiliently relatively to the said vehicle in a substantially horizontal plane.

3,093,954
PARALLEL BAR SIDE DELIVERY RAKE WITH TINE BAR ADJUSTING MEANS
Edward J. Johnston, La Grange Park, Ill., assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Apr. 11, 1961, Ser. No. 102,238
8 Claims. (Cl. 56—377)



1. A side delivery rake comprising a pair of rotatable end members, means including at least one universal coupling means mounting said end members for rotation on parallel axes of rotation laterally and axially displaced from one another, a plurality of rake bar members having connections at opposite ends with respective end

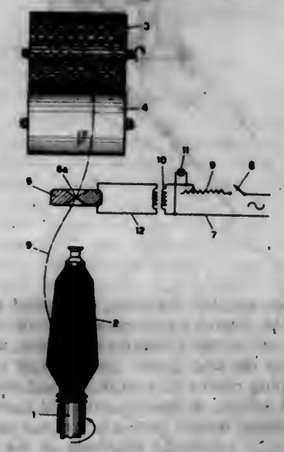
members effective to hold the bar members against rotation about their axes while moving bodily with the end members about the axes of the end members, said means adjustable about a substantially horizontal axis to position said end members to rotate on axes disposed at various angular relation to the horizontal.

3,093,955

DEVICE FOR THE TWISTING AND HEAT SETTING OF THREADS OR YARNS OF SYNTHETIC MATERIAL, CONSTITUTED PREFERABLY OF NUMEROUS ELEMENTARY FILAMENTS OR FIBERS

Vittorino Cadorio, Milan, Italy, assignor to Bemberg S.p.A., Milan, Italy, a company of Italy

Filed June 25, 1959, Ser. No. 822,878
Claims priority, application Italy June 28, 1958
2 Claims. (Cl. 57—34)



1. Apparatus for twisting a thread of thermoplastic material, comprising a rotary uptwister on which the thread is helically wound, a rotary take-up spool spaced from said uptwister and rotatable about an axis inclined to the axis of said uptwister, means for rotating said take-up spool to wind thread continuously from said uptwister onto said take-up spool while maintaining slack between said uptwister and said take-up spool, a single ring-shaped disc disposed between said uptwister and said take-up spool and having a single orifice therethrough through which the thread passes as it travels from said uptwister to said take-up spool, and means for heating said disc thereby to provide a short, localized heating zone at said orifice of only a few millimeters in length to heat at any one time only the short portion of the length of thread in said orifice and to progressively heat and twist successive short lengths of the thread only as the thread progresses through the heating zone.

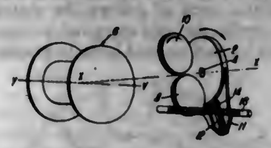
3,093,956

CABLE MAKING MACHINES

Ernest Joseph Williams, London, and George Henry Anthony, Welling, Kent, England, assignors to Trafalgar Engineering Company Limited, London, England

Filed Nov. 20, 1961, Ser. No. 153,583
Claims priority, application Great Britain Nov. 22, 1960
9 Claims. (Cl. 57—58.65)

1. A cable making machine comprising a bobbin cradle, a cage arranged to be rotated and to carry the strands of the cable around the bobbin cradle, a traversing device for laying cable onto the drum of a bobbin mounted in the bobbin cradle after the cable has passed through the said cage, a pulley forming part of the said traversing device, drive means to rock said pulley in a plane substantially parallel to the bobbin drum, and second drive means linked to the pulley drive, said second



drive means being arranged to drive the bobbin to take up cable as the said pulley is being rocked to traverse cable across the drum of the bobbin.

3,093,957

RING HOLDER

Merritt D. Tetreault, East Douglas, Mass., assignor to Whitin Machine Works, Whitinsville, Mass., a corporation of Massachusetts

Filed June 8, 1960, Ser. No. 34,740
2 Claims. (Cl. 57—122)



2. Means for holding a ring in a ring rail having two oppositely-facing outer surfaces and means defining a ring-holder-receiving aperture, said aperture-defining means forming junctures with said surfaces, comprising

an integral annular member formed about an axis and of a resilient nonmetallic material and having

(*a*) a split formed therein,

(*b*) a groove in its inner periphery for tightly engaging a flange on a ring to be held in said ring rail,

(*c*) a rail seat on its outer periphery for tightly engaging one of said two surfaces of said ring rail,

(*d*) a relief groove in its outer periphery adjacent to said rail seat, lying within said aperture in said ring rail, and spaced apart from said aperture-defining means,

(*e*) a generally frusto-conical surface on its outer periphery adjacent to said relief groove on the side thereof opposite said rail seat, said frusto-conical surface (i) tapering away from said axis and from said one of said two surfaces of said ring rail for tightly engaging said ring rail at the juncture of the second of said two surfaces of said ring rail with said aperture-defining means and (ii) terminating beyond said second surface of said ring rail in a rib having a greater diameter than that of said aperture, and

(*f*) a generally frusto-conical surface on its outer periphery tapering from said rib towards said axis and away from said two surfaces and terminating in an edge having a diameter less than that of said aperture.

3,093,958

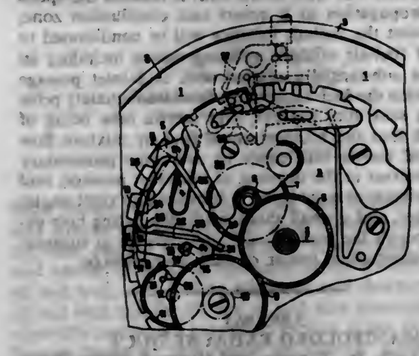
WATCH WITH JUMP OPERATED INDICATOR

Friedrich Meyer, Grenchen, Canton of Solothurn, Switzerland, assignor to Ebauches S.A., Neuchatel, Switzerland

Filed Apr. 3, 1961, Ser. No. 100,123
Claims priority, application Switzerland Apr. 11, 1960
5 Claims. (Cl. 58—58)

1. A watch including a rotatable indicator member adapted to be jump operated, an indicator member

driving wheel, a driving pin carried by the driving wheel, an impulse member for jump rotation of the indicator member responsive to rotation of the driving wheel, the impulse member having a triangularly shaped opening therein provided a plurality of bearing surfaces, a carrying pin alternatively adapted to engage the bearing surfaces, and spring means urging the impulse member into position so that it is carried by one of said bearing sur-



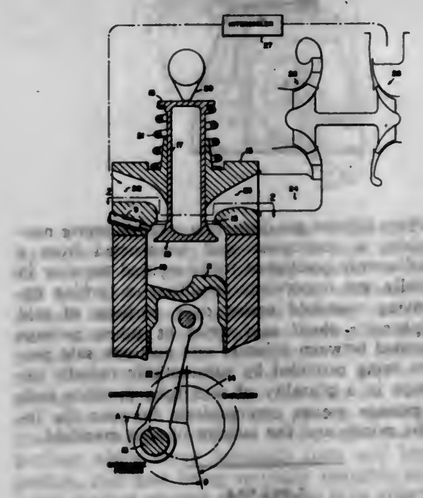
faces, a portion of the periphery of the impulse member forming a cam surface adapted to be contacted by the driving pin of the driving wheel to shift the position of the impulse member so that it is carried from one to another of the plurality of bearing surfaces and the impulse member is normally operatively spaced from the indicator member but is moved into operative contact therewith solely during the period of jump operation of the impulse member for jump movement thereof.

3,093,959

COMPOUND POWER PLANT

Rudolph Birmann, Highland Farm, Newtown, Pa.

Filed May 16, 1960, Ser. No. 29,314
9 Claims. (Cl. 60—13)



1. In combination, a two-stroke cycle engine comprising at least one cylinder and piston therein, an exhaust valve in the cylinder head, means for operating said valve, means providing a pair of exhaust gas passages controlled by said valve, said valve and means being arranged so that as the valve opens under the action of said operating means to provide exhaust from said cylinder one of said passages is opened before the other, turbocompressor means, said turbocompressor means having a pair of separate driving gas chambers communicating individually with said respective exhaust gas passages, and means for providing air from said turbocompressor to said engine.

3,093,960

METHOD OF PRODUCING THRUST BY REACTING A METAL AZIDE WITH A BORON AND HYDROGEN CONTAINING COMPOUND

George N. Tyson, Jr., Claremont, Calif., assignor to Olin Mathieson Chemical Corporation, a corporation of Virginia

Filed Apr. 20, 1959, Ser. No. 807,713
12 Claims. (Cl. 60—35.4)

1. A method for producing large volumes of hot gases which comprises reacting in a reaction zone at a temperature of at least about 2000° F. a mixture consisting essentially of a metal azide with a boron and hydrogen containing compound selected from the class consisting of boron hydrides and hydrocarbon substituted boron hydrides in a ratio approximately stoichiometric for the reaction of all of the nitrogen in the metal azide with all of the boron in the boron and hydrogen containing compound to form boron nitride, BN, the metal azide being selected from the group consisting of

$$M[H_x(N_3)_y]_z$$

wherein M is selected from the class consisting of an alkali metal, an alkaline earth metal, magnesium, beryllium, gallium and aluminum, x is 0 to 2, y is 1 to 3, and $x+y=1$ to $3=z$, the valence of the metal M;

$$M[BA_a(N_3)_b]_c$$

wherein M has the previous significance, a is 0 to 3, b is 1 to 4, $a+b=4$, and c is 1 to 3, the valence of the metal M;

$$M[AlH_a(N_3)_b]_c$$

wherein M, a, b, c and $a+b$ have the previous significance, and

$$M[GaH_a(N_3)_b]_c$$

wherein M, a, b, c and $a+b$ have the previous significance.

3,093,961

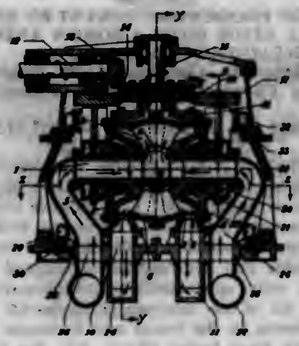
SHIP PROPELLING UNIT

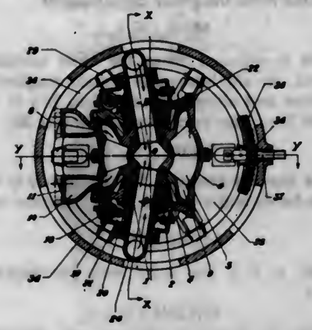
Pietro Pisa, 76 Lungotevere Flaminio, Rome, Italy

Filed July 7, 1960, Ser. No. 41,318
Claims priority, application Italy Feb. 9, 1960
6 Claims. (Cl. 60—35.5)

1. A ship propelling unit, comprising a casing having a spherical part and adapted to be mounted on a ship, two impellers in the spherical part of said casing each being in the form of a conical disc, two shafts, at least one of which is hollow, rotatably mounted in said casing and on which said conical discs are rigidly mounted, said shafts having the axes of rotation thereof horizontal and intersecting at an obtuse angle to each other at the center of said casing and with the vertices of said conical discs coincident with the point of intersection of said axes of rotation, a central sphere pivoted on and carried by the ends of said shafts with the center thereof coincident with the center of said casing and into which the hollow shaft opens, said central sphere having an opening therein extending along the upper semicircumference thereof and giving access to the space within said casing in the radial direction, said conical discs each having a plurality of blades thereon cooperating with the blades on the other conical disc to form, together with the outer surface of said central sphere and the inner surface of the spherical part of said casing, a plurality of chambers having a continuously changing volume during a revolution of the impellers, said casing having an opening in both sides thereof extending along the lower semicircumference of the spherical part of said casing for allowing the water dis-

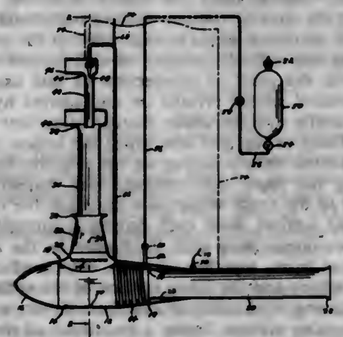
charge, the water stream being always radial in said chambers and having a continuous increase in its centrifugal force, power transmission means connected to said shafts for rotating said impellers at the same speed and in the same direction, an intake connected to said





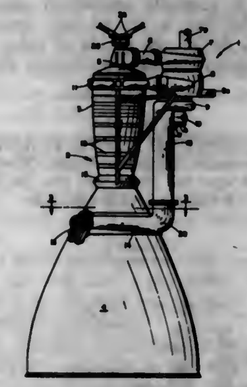
hollow shaft, and a discharge duct on said casing, said casing having an aperture therein opening into said duct, said discharge duct being directed away from said casing from the side thereof opposite the side at which said conical discs are most divergent.

3,093,962
VALVELESS JET ENGINE WITH INERTIA TUBE
Eugene M. Glaharef, 513 N. Dianthus, Manhattan Beach, Calif.
Filed Mar. 11, 1957, Ser. No. 645,229
8 Claims. (Cl. 60—35.6)



1. A jet propulsion system including a casing having internal wall means defining a combustion zone and inlet and exhaust passages, means for initially igniting fuel in said combustion zone, means for injecting a gaseous fuel-air mixture into said inlet passage at a velocity greater than the speed of flame propagation for said fuel-air mixture, the cross-sectional area of said inlet passage enlarging toward said combustion zone whereby the pressure of said fuel-air mixture will increase and the velocity of said fuel-air mixture will slow down until it reaches the speed of flame propagation as it enters said combustion zone, at which point the fuel-air mixture will be conditioned to ignite, said fuel-air mixture injecting means including an inertia tube substantially aligned with said inlet passage through which the fuel-air mixture flows immediately prior to entering said inlet passage, said inertia tube being of such length that the momentum of fuel-air mixture flow through said inertia tube tends to overcome momentary pressure reverses at the opening of said inlet passage, said inlet and exhaust passage being at substantially right angles to each other, and a small shock wave dissipating hole extending through the wall of said inlet passage at substantially the longitudinal center of said inlet passage.

3,093,963
MANIFOLDED EXHAUST DUCT
Shelby L. York, Jr., Tarzana, and Hiram S. Sibley, Newport Beach, Calif., assignors to North American Aviation, Inc.
Filed July 17, 1959, Ser. No. 827,746
7 Claims. (Cl. 60—35.6)



1. A turbine exhaust gas dispersing reaction motor nozzle comprising a continuous wall constructed from a series of adjacently positioned tubes secured together in a substantially gas impervious condition, a turbine exhaust receiving manifold sealed over portions of said tubes peripherally about said series of tubes, passage means provided between adjacent said portions, said passage means being provided by substantially radially extending loops in a plurality of said tube portions such that said passage means communicate between the interior of the nozzle and the interior of said manifold.

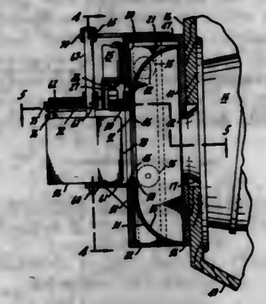
3,093,964
TWO-STAGE ROCKET
George F. Hamasaun, Glastonbury, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed Dec. 14, 1960, Ser. No. 75,849
7 Claims. (Cl. 60—35.6)

7. A multi-unit propulsion device comprising concentric coaxially disposed inner and outer rocket units, said inner unit having a power section of substantially constant cross section and an exhaust nozzle receiving fluids from said power section, said nozzle having an outer wall, a plug in said nozzle defining a convergent passage, said plug tapering in a downstream direction from its maximum dimension and protruding aft of the downstream end of said wall, said outer unit comprising an annular chamber and having an inner diameter substantially equal to the outer diameter of said inner unit, an annular ex-



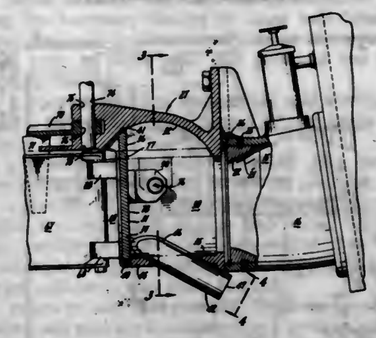
haust nozzle receiving fluid from said annular chamber, said annular nozzle having an outer casing having a trailing edge portion converging in a downstream direction, said casing terminating upstream of the downstream end of said wall, said trailing edge and said downstream end of said wall and the aft end of said plug presenting a substantially continuous expansion surface to the fluid stream flowing thereover and means for slidably mounting said inner unit with respect to said outer unit.

3,093,965
DIRECTION CONTROL
Richard L. Cochran and William N. Engel, Indianapolis, Ind., assignors to The Buehler Corporation, Indianapolis, Ind., a corporation of Indiana
Filed Aug. 21, 1961, Ser. No. 132,644
2 Claims. (Cl. 60—35.54)



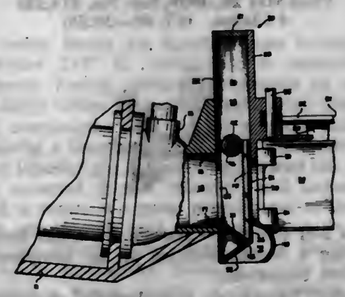
1. A direction control system for water craft comprising means for moving water in a jet from an aperture in the rear of said craft, a housing secured to the rear of said craft and covering the aperture, said housing having an open bottom and a rearward opening located in alignment with said conduit, a gate having an intermediate portion which extends vertically and is located in the rear of the housing, said intermediate portion having a passage therethrough of approximately the same size as said aperture and opening, said passage opening into the interior of the gate, said gate having upper and lower end portions which curve forwardly from said intermediate portion, said gate being vertically movable between an upper position wherein said passage is in alignment with said opening and aperture and said gate is completely within said housing and a lower position wherein said housing blocks passage of water through said passage and the rear plate guides the water of said jet downwardly and forwardly of the craft, and deflector means mounted on said craft and operable to deflect horizontally water issuing from the rearward opening of said housing.

3,093,966
GATE ASSEMBLY
Theodore M. Englehart and Richard L. Cochran, Indianapolis, Ind., assignors to The Buehler Corporation, Indianapolis, Ind., a corporation of Indiana
Filed Dec. 4, 1961, Ser. No. 156,819
7 Claims. (Cl. 60—35.54)



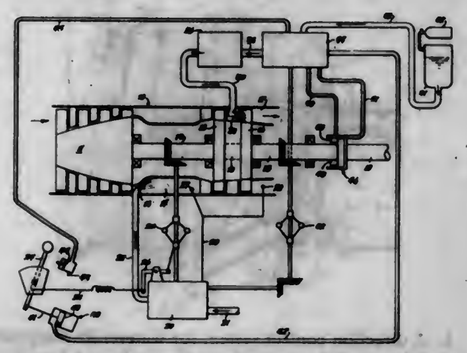
1. A direction control system for watercraft comprising a straight conduit mounted on the craft and having an exit opening externally of the craft, said conduit having a necked-down portion adjacent said exit, means for pumping water through said conduit to be formed into a jet by said necked-down portion and to then exhaust in a jet from said exit, a gate pivotally mounted within said conduit between the necked-down portion and the exit, said conduit having a recess in the inside wall thereof between the necked-down portion and the exit, said gate being pivotal to a position closing off said conduit exit and to a position wherein said gate is received in said recess out of the path of said water flowing through said conduit.

3,093,967
DIRECTION CONTROL DEVICE
Howard P. Lerwick, Indianapolis, Ind., assignor to The Buehler Corporation, Indianapolis, Ind., a corporation of Indiana
Filed Dec. 4, 1961, Ser. No. 156,820
6 Claims. (Cl. 60—35.54)



1. A direction control system for watercraft comprising means for moving water in a jet from said craft, said craft having a container mounted thereon with an entrance for said jet, said container including a wall having a pair of exits therethrough, one of said exits being positioned in registry with said jet, the other of said exits being positioned out of registry with said jet, a deflector fixed with relation to said craft and positioned and arranged to deflect flow from said other exit in a direction opposite to the direction of said jet, a plate mounted within said container for movement across the surface of said wall to selectively cover said exits.

3,093,968
METHOD AND APPARATUS FOR AUGMENTING THE DRIVE OF A GAS TURBINE
Irving B. Osofsky, Cheektowaga, N.Y., assignor to Cornell Aeronautical Laboratory, Inc., Buffalo, N.Y., a corporation of New York
Filed May 5, 1960, Ser. No. 27,182
8 Claims. (Cl. 60—39.21)



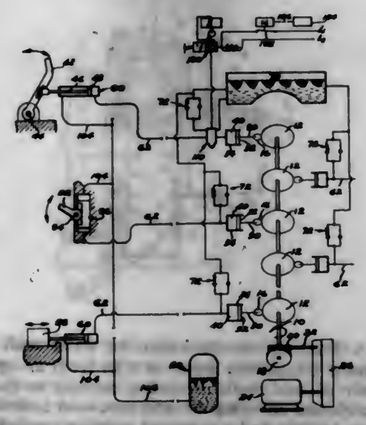
8. In a gas turbine including a gas generator and a bladed free power turbine wheel fast to an output shaft and normally driven by a main drive fluid flowed over the blades of said wheel, the combination therewith of means for augmenting the drive of said wheel, comprising valve means connected to a source of auxiliary drive fluid independent of that for said main fluid and controlling the flow of said auxiliary fluid, means for jetting such auxiliary flow into direct impingement against said blades within the same area limits thereof normally engaged by said main drive fluid to drive said wheel as an impulse turbine, and valve control means operatively associated with said valve means to regulate said auxiliary flow.

3,093,969
FUEL CONTROL TEMPERATURE UNIT
Heinz F. Moellmann, Stratford, Conn., assignor to Avco Corporation, Lycoming Division, Stratford, Conn., a corporation of Delaware
Filed May 20, 1959, Ser. No. 814,520
4 Claims. (Cl. 60—39.28)



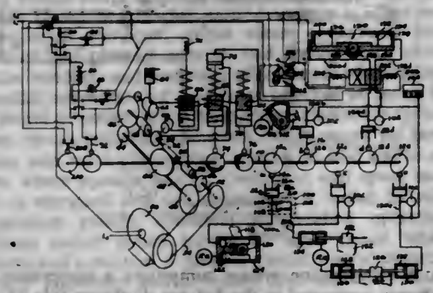
1. In a fuel control mechanism for a gas turbine engine having a turbine rotating an air compressor, the combination comprising:
a rockshaft having two interconnected sections;
a fuel metering valve;
means operable by rotation of one section of said rockshaft to control the opening of said fuel metering valve;
means adjacent the other rockshaft section for rotative positioning of said rockshaft as a function of speed of rotation of said compressor comprising a movable member responsive by axial movement to variation in rotative speed of said air compressor;
a lever positioned to be actuated by said axial movement of said movable member;
and connections from said lever to rotate said other rockshaft section;
means to vary the actuating effect of the movement of said movable member on said lever as a function of change in air temperature;
said last named means comprising a rotatable cam carried on said movable member;
a cam surface on said cam for varying the relative movement between said movable member and said lever on rotative positioning of said cam;
a motor bellows responsive to variations in air temperature;
a remotely positioned air temperature sensor positioned in the region of said air compressor;
a capillary tube connection from said temperature sensor to said motor bellows for actuating said motor bellows;
a multiplier bar actuated by said motor bellows;
said motor bellows and said multiplier bar being positioned adjacent said rotatable cam;
a compensating bellows adjacent said motor bellows;
a pivot connection for said multiplier bar;
a link having one end resiliently supported and movable with respect to said pivot connection;
contacting sockets for said motor bellows and said compensating bellows on said multiplier bar on opposite sides of said pivot connection;
and a direct connecting member from said multiplier bar to said cam to rotatively position said cam with variation in air temperature.

3,093,970
SEQUENCE INTERRUPTING VALVE
Walter H. Van Deberg, Ferndale, Mich., assignor to The Thompson Company, Ferndale, Mich., a co-partnership
Filed Aug. 23, 1960, Ser. No. 51,331
4 Claims. (Cl. 60—54.5)



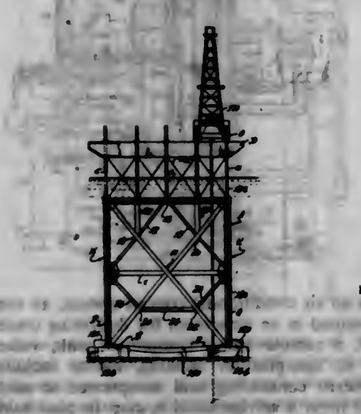
1. In a motion transfer system the combination of an expansible chamber type transmitter, an expansible chamber type receiver, a liquid column connected between the transmitter and the receiver, a liquid reservoir, relief and replenishing valves connected between the reservoir and the liquid column to discharge and re-deliver liquid to the column, and a two position valve operatively connected in the system and convertible to be associated with the liquid column in either of two different ways, in both of which one valve position allows unobstructed movement of the liquid column and in one way of association the other valve position prevents all movement of the liquid column and diverts liquid from a contracting transmitter chamber through the relief valve to the liquid reservoir and in the other way of association the other valve position allows unobstructed flow between the liquid column and the liquid reservoir by-passing the relief and replenishing valves.

3,093,971
MEANS FOR VARYING WORK CYCLES
Walter H. Van Deberg, Ferndale, Mich., assignor to Earl A. Thompson Manufacturing Company, a corporation of Michigan
Filed Mar. 29, 1961, Ser. No. 99,157
5 Claims. (Cl. 60—97)



5. A mechanico-hydraulic motion transfer arrangement for shifting a load device to and fro on a machine comprising in combination a plurality of load devices to be shifted, a plurality of shiftable piston type fluid motors connected to shift the load devices, a plurality of cams rotated in unison by common camshaft means, a plurality of expansible chamber type pulse transmitters one connected to be operated by each cam, a plurality of liquid columns each connected at one end with a transmitter, means connecting all but one of the liquid columns at their other ends with all but one of the fluid motors to shift them through cam determined cycles every rotation of the camshaft means, and means connecting the one liquid column at its other end with the one fluid motor only during given rotations of the camshaft means whereby the load device shifted by the one fluid motor operates less frequently than the other load devices on the machine.

3,093,972
PORTABLE MARINE PLATFORM
Montague R. Ward, Jr., 5500 Oleta St., Long Beach 15, Calif.
Filed Feb. 1, 1962, Ser. No. 173,086
4 Claims. (Cl. 61—46.5)



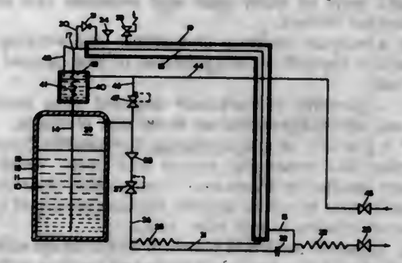
1. A structure for providing a working area over a body of water, comprising:
(*a*) a framework having a plurality of spaced downwardly extending bores formed in the upper extremity thereof;
(*b*) a plurality of hollow pontoons affixed to the lower portion of said framework, which pontoons have sufficient buoyancy to float said framework at a desired location in said body of water;
(*c*) means to admit water into said pontoons for lessening the buoyancy thereof to cause said framework and pontoons to concurrently move downwardly in said body of water until said pontoons rest on the bottom thereof;
(*d*) a buoyant platform that defines said working area and is capable of being floated to said desired location;
(*e*) a plurality of vertically disposed piles vertically and adjustably supported from said platform;
(*f*) a plurality of pins projecting downwardly from said piles that removably engage said bores, which pins are smaller in transverse cross section than that of said bores to permit angular positioning of said framework relative to said piles; and
(*g*) means to raise said platform upwardly on said piles when said pins are in said bores to a position sufficiently high above the surface of said body of water as to not be buffeted by waves formed thereon.

3,093,973
SYSTEM FOR METERING LIQUEFIED GAS
David A. Williams, Wheaton, Ill., assignor to Chemetron Corporation, Chicago, Ill., a corporation of Delaware
Filed June 29, 1959, Ser. No. 823,633
6 Claims. (Cl. 62—49)



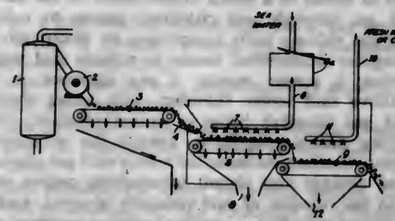
2. A meter device for liquefied gases having boiling points below 233° K. comprising, in combination: a sealed meter having rotating components all of which rotate wholly within the walls of said meter whereby the rotating components need not be pressure sealed, said meter having a chamber disposed in a line connected to a source of liquefied gas and an outlet; at least one rotatable element mounted in said chamber, said element being arranged to rotate at a speed proportional to the flow of liquefied gas through said chamber; means to indicate liquefied gas volume units comprising an electrically actuated register mechanism; means to actuate said register mechanism; a power source; a gas chamber in said meter above said meter chamber, said meter chamber and said gas chamber being in communication; circuit interrupting means adapted to control the actuation of said register mechanism mounted within said gas chamber; means to operate said circuit interrupting means in response to the rotation of said rotatable element, said operating means including a rotating member mounted within said gas chamber in proximity to said circuit interrupting means; a circuit operatively inter-connecting said actuating means, said circuit interrupting means and said power source; and means connecting said meter to said register, said connecting means consisting solely of a stationary flexible cable carrying at least one electrical conductor forming part of said circuit.

3,093,974
APPARATUS FOR STORING AND DISPENSING LIQUEFIED GASES
Charles Edward Tempier, London, John Edward Hardy, Pyrford Wood, and David Michael Leinchbury, Worcester Park, England, assignors to The British Oxygen Company Limited, a British company
Filed Aug. 22, 1961, Ser. No. 133,263
Claims priority, application Great Britain Aug. 23, 1960
5 Claims. (Cl. 62—51)



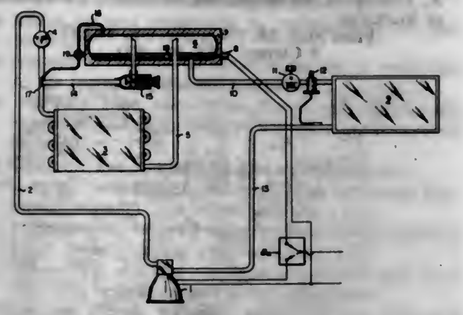
1. Apparatus for storing and dispensing a liquefied gas having a boiling point substantially below atmospheric temperature at normal atmospheric pressure comprising a thermally insulated container for the liquefied gas, a liquid withdrawal pipe opening at a point near to the bottom of said container and extending through the top thereof, a pressure raising coil located below the level of the bottom of said container, a liquid feed line connecting said liquid withdrawal pipe with one end of said pressure raising coil, a vapour feed line connecting the other end of said pressure raising coil with the vapour space of said container through an automatic valve arranged to open when the pressure in said container falls below a predetermined value, a jacket surrounding the part of the liquid feed line above the level of the bottom of said container and having a connection to said liquid withdrawal pipe through valve means arranged to maintain a pressure drop between said liquid feed line and said jacket, a liquid service connection to said jacket, and a filling line connected to the vapour space of said container through an automatic valve arranged to open when the pressure in said container exceeds said predetermined value and to the liquid space of said container through a lightly thermally insulated liquid storage vessel.

3,093,975
PROCESSES FOR SWEETENING SALTWATER BY FREEZING
Alexander Zarchin, 26 Syrkin St., Tel Aviv, Israel
Filed Feb. 17, 1960, Ser. No. 9,288
5 Claims. (Cl. 62—58)



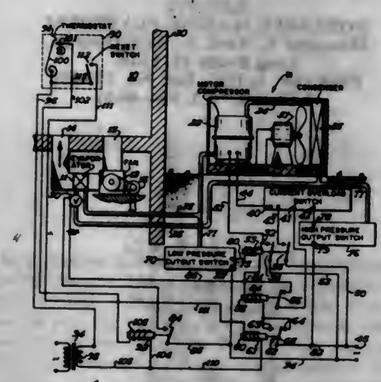
4. The process of sweetening sea water which comprises the steps of partially freezing said sea water to obtain a mixture of ice crystals and concentrated brine, draining said mixture, and rinsing the remaining ice crystals with sea water at about —1° C. while said crystals are supported on a draining surface.

3,093,976
REFRIGERATION SYSTEM INCLUDING RECEIVER
Carl O. Walcutt, 1890 W. Granville Road, Worthington, Ohio
Filed Apr. 20, 1962, Ser. No. 189,059
5 Claims. (Cl. 62—196)



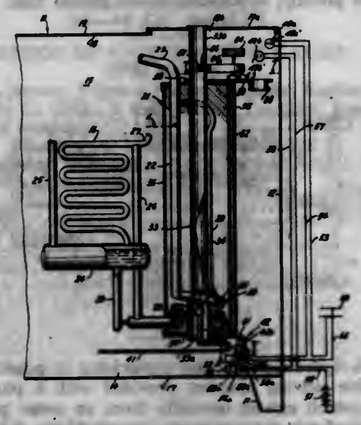
1. A refrigeration system comprising a compressor, a condenser connected to the hot gas discharge side of the compressor, a liquid receiver connected to the condenser, said liquid receiver being located at a level higher than the condenser so as to fill the condenser with liquid therefrom by gravity when the compressor is not running, an evaporator connected by a line to the inlet side of the compressor, a by-pass line connected between the hot gas discharge side of the compressor and the receiver having a normally open control valve to permit hot gas to by-pass the condenser, said by-pass line having an equalizer tube connected thereto for by-passing said control valve.

3,093,977
CONTROL APPARATUS FOR REFRIGERATION SYSTEM
Waldemar W. Liebrecht, Emerson, N.J., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Sept. 13, 1961, Ser. No. 137,810
4 Claims. (62—208)



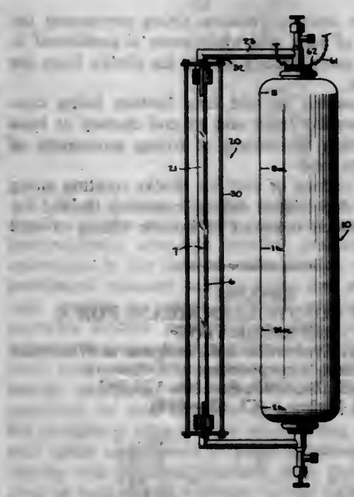
1. In an air conditioning control system, an evaporator coil mounted in an air stream for delivering cooled air to a space, a remote motor compressor unit, valve means having an energization winding, means including said valve means connecting said compressor to said evaporator to form a refrigeration system to cool said evaporator when said valve is energized, a low pressure responsive switch means connected to said refrigeration system to be responsive to suction pressure of the compressor, switch means providing an open circuit when said suction pressure is reduced to said predetermined low value, a source of power, a current overload switch means for providing an open circuit when an excessive current flows through a current responsive circuit, a control relay having an energization winding and being adapted to connect said motor compressor to said source of power through said responsive circuit, a first relay having an energization winding and a normally closed switch, a remotely controlled reset relay having a normally closed switch and a normally open switch, said relay insuring a closed circuit when said reset relay is either energized or de-energized, circuit means connecting said switch of said pressure control, said control relay energization winding, said first relay energization winding and a parallel connection of said reset switches in series to said source of power, space temperature responsive switch means, means including said space switch means for connecting said valve energization winding to said source of power where upon a call for cooling in said space said valve is energized and said evaporator is cooled by said refrigeration system, abnormal refrigeration operating condition switch means having an open circuit when an abnormal condition is present, circuit means connecting said condition switch means and said first relay switch in a series connection in parallel with said first relay energization winding and said parallel connection of said reset switches, said reset relay switches having a wide operating gap such that said closed switch opens before said open switch closes upon energization or de-energization of said reset relay, said reset relay providing for normal operation of said control system upon an abnormal condition occurring to open said abnormal condition switch means after said first relay has become energized and said abnormal condition has disappeared to close said abnormal condition switch means.

3,093,978
ABSORPTION REFRIGERATION APPARATUS
Gunnar Axel Grubb, Bromma, Sweden, assignor to Aktiebolaget Electrolux, Stockholm, Sweden, a corporation of Sweden
Filed Aug. 29, 1961, Ser. No. 134,760
Claims priority, application Sweden Sept. 22, 1960
6 Claims. (Cl. 62—236)



1. In absorption refrigeration apparatus, an upright shell having an upstanding side wall and a top and bottom and insulation therein, a vapor-expulsion unit embedded in the insulation, said vapor-expulsion unit having at least one part in which vapor is expelled from solution by heating, an upright heating tube which extends through said insulation between the top and bottom of said shell, the top and bottom of said shell having openings communicating with the upper and lower ends of said heating tube, means heat conductively connecting the exterior surfaces of said tube and said part along a zone which extends lengthwise of said tube, said heating tube being hollow, an electrical heating element, means for removably positioning said heating element in said tube through its upper open end to locate said heating element vertically at said zone for operating the apparatus electrically, means including a fluid fuel burner positioned at the lower end of said heating tube for operating the apparatus with a combustible fuel mixture, the part of said heating tube at said zone having its inner surface in the path of flow of combustion gases produced during operation of the burner, and control means for rendering said electrical heating element operable to heat said heating tube and for rendering said fluid fuel burner operable to heat said heating tube, said electrical heating element being removed from said heating tube at its upper end when said fluid fuel burner is rendered operable to heat said heating tube, said control means including structure for blocking said heating tube to prevent the insertion of said electrical heating element therein responsive to rendering said fluid fuel burner operable to heat said heating tube.

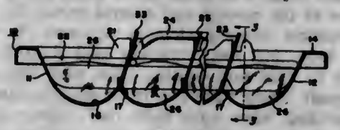
3,093,979
APPARATUS FOR STORING AND DISPENSING REFRIGERANT GAS
Henry Ehrens, 99 Park Ave., and Sidney Weiner, 479 Lafayette St., both of Cresskill, N.J.
Filed Jan. 19, 1961, Ser. No. 83,676
7 Claims. (Cl. 62—292)



1. A kit for storing and dispensing refrigerant gas and the like, comprising a container and a support for said container, said container having an axis and axially opposed ends which have respective hollow attachment nipples, said nipples having pierceable seals, said container being filled with said refrigerant gas in liquid phase under pressures, said support comprising a hollow sight glass, transverse opposing tubes connected to the opposite ends of said sight glass in communication therewith, and respective valve assemblies on the free ends of said tubes, said valve assemblies respectively including means for releasably mounting said valve assemblies on said nipples and for piercing said seals to establish communication between both ends of said sight glass and both ends of said container, said valve assemblies respectively having outlets and valve means for said outlets, said outlets com-

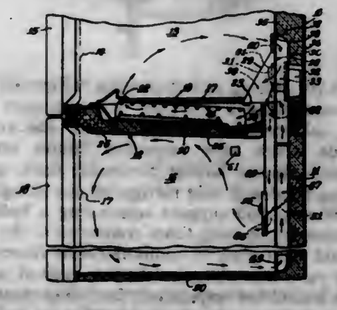
municating between said valve means and the atmosphere to permit discharge of said refrigerant from said container and to permit venting of air from said sight glass prior to said discharge to insure said communication whereby the levels of liquid refrigerant in said container and in said sight glass correspond.

3,093,980
FREEZING DEVICE
Arthur J. Frei, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Nov. 27, 1961, Ser. No. 154,953
6 Claims. (Cl. 62—367)



5. A freezing device comprising in combination:
(*a*) a tray adapted to contain water to be frozen and a grid within said tray,
(*b*) the bottom of said tray having spaced apart depressions therein providing raised ridges terminating a predetermined distance below a top bounding rim thereon,
(*c*) said grid including a plurality of walls tiltable with respect to one another and located in juxtaposed relationship to the apex of said ridges in the bottom of said tray for dividing the interior thereof into compartments in which the water is frozen into ice blocks,
(*d*) means for causing relative tilting movement between walls of said grid while same is positioned in said tray to mechanically loosen ice blocks from the tray and grid,
(*e*) said depressions in said tray bottom being continuously rounded from end to end thereof at least in the direction therealong of tilting movement of said grid walls, and
(*f*) the lower surface of said ice blocks rotating along the rounded depressions during loosening thereof for minimizing force required to initiate tilting of said grid walls.

3,093,981
GAS FLOW CONTROLLER MEANS FOR A REFRIGERATOR
James P. O'Grady, Evansville, Ind., assignor to Whirlpool Corporation, a corporation of Delaware
Filed July 24, 1961, Ser. No. 125,997
9 Claims. (Cl. 62—408)



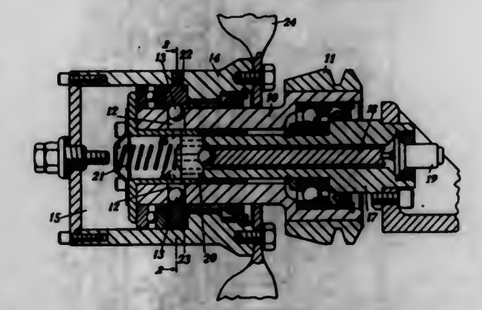
1. Refrigeration apparatus comprising: means defining a first chamber; means defining a second chamber; means defining an air passage; means for refrigerating air in said passage; means defining a third chamber; air moving means in said third chamber; means sequentially interconnecting said first chamber, third chamber and air passage to form a continuous air path to supply refrigerated air to said first chamber; first duct means for conducting air from said third chamber to said second chamber; second duct means for conducting air from said second chamber back to said third chamber; and means in each of said duct means for controlling the rate of air flow therethrough.

3,093,982
DETACHABLE COUPLING FOR DRIVEN ACCESSORY IN KITCHEN APPLIANCES
Rudolf Staeger, Alsterdorferstrasse 155, Hamburg, Germany
Filed Apr. 4, 1961, Ser. No. 102,692
Claims priority, application Germany May 19, 1960
6 Claims. (Cl. 64—11)



1. Power transfer apparatus comprising: a drive shaft, said drive shaft including a socket disposed at one end, said socket including a chamber with an inner wall and a floor, at least one elongated projection extending from said inner wall; and a driven shaft, said driven shaft including helical means at one end for fitting into said socket and engaging said elongated projection, a rigid shaft member at the other end of said driven shaft and an axially elastic means connecting said rigid shaft member to said helical means.

3,093,983
HYDRAULIC COUPLINGS
George Alan Montgomerie, Leamington, England, assignor to Serck Radiators Limited, Birmingham, England
Filed Mar. 12, 1962, Ser. No. 178,878
Claims priority, application Great Britain Mar. 15, 1961
3 Claims. (Cl. 64—26)



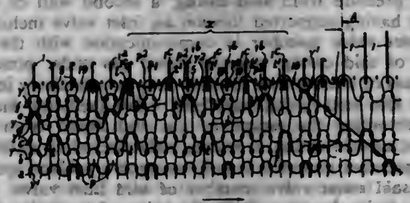
1. A hydraulic coupling comprising in combination a rotatable driving member provided with a plurality of bores which extend inwardly from an outer peripheral surface of said driving member towards the axis thereof, a rotatable driven member which is mounted coaxially with said driving member, an annular member united with said driven member, and provided with an internal cam surface which is situated around, and adjacent to, the outer ends of said bores, a plurality of driving elements which are mounted respectively within, and movable along, said bores, and which are in constant sealing engagement respectively with the peripheries of said bores, a plurality of ports which communicate respectively with the inner ends of said bores, and through which hydraulic fluid is admissible to, and dischargeable from, said bores, and valve means for closing said ports to prevent discharge of hydraulic fluid from said bores when it is desired to transmit movement from said driving member to said driven member, said bores being arranged so that when said driving member is rotated said driving elements are urged by centrifugal forces to extreme positions in which they project from the outer ends of said bores into engagement with said cam surface, and are held in said extreme positions by the hydraulic fluid in said bores when said ports are closed by said valve means to prevent discharge of hydraulic fluid from said bores, so that said driving member is drivingly coupled to said driven member by the engagement of said driving elements with said cam surface.

3,093,984
COUPLING MECHANISM
Dallas R. Andrews, Merchantville, and John B. Kelly, Haddonfield, N.J., assignors to Radio Corporation of America, a corporation of Delaware
Filed Dec. 1, 1960, Ser. No. 72,948
4 Claims. (Cl. 64—29)



1. A clutch mechanism which comprises a wheel having a cylindrical flange around the outer periphery thereof, a facing of flowable material lining the inner surface of said flange, a shaft, said wheel being disposed to rotate freely about said shaft, a member mounted for rotation with said shaft and being disposed within the confines of said cylindrical flange, said member having a passage therein extending in a direction radially of said wheel, a ball disposed in said passage at the end of said member which faces said flange, and a spring also disposed in said passage for biasing said ball into contact with said facing to indent said facing thereby causing the material thereof continuously to flow.

3,093,985
METHOD OF KNITTING FINE GAUGE STOCKINGS
Albert M. Brown, Wigston Fields, Leicester, England, assignor to G. Stibbe & Co. Limited, Leicester, England, a British company
Filed July 1, 1959, Ser. No. 824,308
Claims priority, application Great Britain July 1, 1958
4 Claims. (Cl. 66—42)



4. A method of knitting a stocking on a circular seamless hose knitting machine adapted to knit with rotary motion with knitting on at least two feeds as well as with reciprocatory motion with knitting on only one of said feeds and comprising a circular series of independent latch needles; a set of sinkers co-operating with said needles; a main feed; an auxiliary feed having thereat a guide for feeding to the needles an auxiliary yarn; jacks arranged beneath the needles and alternate ones of which are furnished with bottom butts, and a 1 x 1 welt selector incorporating a jack-raising cam for action upon said bottom butts; the said method including the steps of taking into the hooks of all of a group of successive needles, having thereon loops from the preceding course, the free and loose end portion of the auxiliary yarn resulting from the termination of knitting with one of said motions during a change to knitting with the other of said motions, causing the said needles, in co-operation with sinkers at the auxiliary feed, to distort the said free and loose end portion of the auxiliary yarn into an undulatory form by drawing it into measured loops extending lengthwise of the needles, then bringing into commission the 1 x 1 welt selector to effect a 1 x 1 selection of the needles of the specified group whereby alternate needles of the said group are selected to clear with the result that the undulatory free end portion of the auxiliary yarn is disposed under the latches of said alternate needles, the intervening needles only of the group retaining the said portion of yarn in their hooks, and, at a normal succeeding course, locking the undulatory portion of yarn into the fabric by knitting it together with loops already held by relevant ones of the said group of needles.

3,093,986
NEEDLE CONTROL DEVICE FOR CIRCULAR KNITTING MACHINES
Marvin B. Baker, Box 111-L, Midland, N.C.
Filed Oct. 28, 1960, Ser. No. 65,663
9 Claims. (Cl. 66—90)



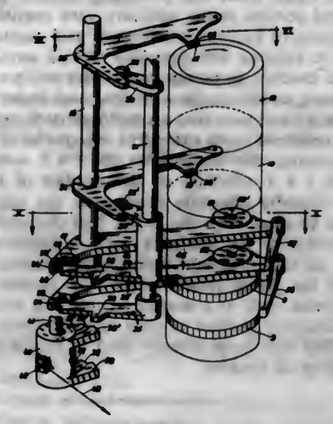
1. In a circular knitting machine having a rotatable needle cylinder with needle receiving needle slots therein, independently operable needles positioned for vertical movement in the slots of said cylinder, stitch cam means positioned adjacent said cylinder and adapted to lower said needles to stitch forming position, and radially movable sinkers positioned at the upper end of said cylinder and cooperating with said needles to successively form knit stitch loops, the combination therewith of a needle engaging wheel positioned adjacent the outer periphery of said cylinder and below said sinkers, and the peripheral edge of said wheel being positioned above said stitch cam means to press a few of the needles inwardly into firm engagement with the bottoms of the slots in said needle cylinder as the needles are lowered by said stitch cam means.

3,093,987
CONTROL DEVICE FOR THE PATTERN DRUM OF A KNITTING MACHINE
Pavel Zahrádka and Miloslav Loesrt, Trebic, Czechoslovakia, assignors to Sdruzení podniku textilního Strojirenství, Liberec, Czechoslovakia
Filed Dec. 8, 1960, Ser. No. 74,518
Claims priority, application Czechoslovakia Dec. 12, 1959
9 Claims. (Cl. 66—154)

1. In a knitting machine including a needle cylinder, a pattern drum having two coaxial, independently rotatable parts, and means for rotating said needle cylinder and for indexing said drum, the improvement in the means for indexing said drum which comprises

(*a*) two coaxial cam means connected to said needle cylinder for joint rotation;

(*b*) two motion transmitting means interposed between respective ones of said drum parts and corresponding ones of said cam means for independently actuating indexing movement of said drum parts responsive to the rotation of the corresponding cam means; and



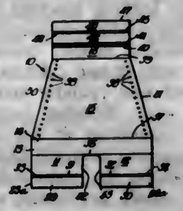
(*c*) control means for controlling the response of each of said drum parts to the rotation of the corresponding cam means.

3,093,988

METHOD FOR KNITTING PANTY PANELS FOR BODY MOLDING GARMENTS

George E. Rutledge, Chicago, Ill., assignor to Munsingwear, Inc., Minneapolis, Minn., a corporation of Delaware

Original application July 24, 1958, Ser. No. 750,609, now Patent No. 3,026,697, dated Mar. 27, 1962. Divided and this application Oct. 13, 1961, Ser. No. 144,993
6 Claims. (Cl. 66—177)



1. A method of knitting from yarn a panty panel which comprises: simultaneously knitting a tubular welt along the lower portion of each leg portion of the panel, from each tubular welt continuing the knitting to complete each leg portion simultaneously, continuing the knitting from said leg portions to form commonly therewith the lower body portion of the panel, continuing the knitting and narrowing the panel throughout its intermediate body portion, and continuing the knitting for the upper body portion of the panel.

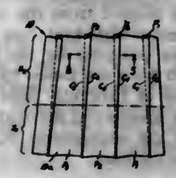
3,093,989

PLEATED KNIT FABRIC

August F. Breitinger, Westport, Conn., assignor to Jared Knitting Mills, Inc., New York, N.Y., a corporation of New York

Filed Dec. 28, 1961, Ser. No. 162,646
5 Claims. (Cl. 66—200)

1. A knit fabric having a plurality of longitudinally extending pleats of decreasing width separated by a plurality of longitudinally extending folds comprising multiple swaths each including plural courses, each of said swaths including spaced first groups of wales of double-faced rib stitching providing a set of pleat segments, spaced second groups of wales of double-faced rib stitching providing a set of fold segments, at least one wale of jersey stitching intermediate and joining successive pleat and fold segments of said first and second groups and providing cusp segments, alternate ones of said wales of jersey stitching being formed on opposite faces of said swath such that there is a natural tendency for said set of fold segments to lie beneath said pleat segments, there being a greater separation between adjacent and alternately formed cusp segments in successive swaths such that said pleat segments are of decreasing widths and said fold segments are of increasing widths, the stepwise decrease in the width of pleat segments in successive swaths forming longitudinally extending tapered pleats.

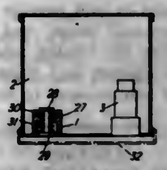


3,093,990

SMOKERS' OR THE LIKE LIGHTERS

John A. Goddard, Ashtead, England, assignor, by mesne assignments, to Ronson Corporation, Woodbridge, N.J., a corporation of New Jersey

Filed Mar. 5, 1957, Ser. No. 644,051
Claims priority, application Great Britain Mar. 6, 1956
7 Claims. (Cl. 67—7.1)



2. A gas lighter comprising a casing constructed to hold gas in liquid form under pressure in excess of atmospheric pressure, a first wall of said casing having supported thereon a burner valve, said burner valve including means for selectively controlling the flow of gas under pressure from said casing, a second wall of said casing having supported thereon an inlet valve including an outer valve member in communication with the interior of said casing whereby liquid gas under pressure in excess of atmospheric pressure may be selectively introduced into said casing, said inlet valve including means for preventing the escape of gas and liquid from the interior of said casing, a venting valve including an outer valve member mounted in said casing at a position spaced from said outer valve member of said inlet valve, said venting valve having a hollow portion of its outer valve member extending within said casing a predetermined distance to limit the level of liquid gas in said casing, and said hollow portion of said venting valve being in communication with the interior of said casing and the atmosphere whereby the interior of said casing may be selectively vented to atmosphere during the charging thereof with liquid gas under pressure in excess of atmospheric pressure.

3,093,991

APPARATUS FOR THE LIQUID TREATMENT OF SKEINS OF YARN

Friedrich Scharfenberger, Lindenberg, near Lambrecht, Germany, assignor to Obermaier & Cie., Neustadt an der Weinstrasse, Germany, a German company

Filed June 13, 1961, Ser. No. 128,283
Claims priority, application Germany June 14, 1960
8 Claims. (Cl. 68—188)



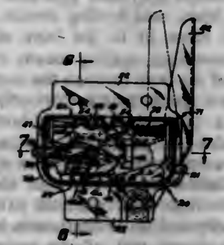
1. Apparatus for the liquid treatment of skeins of yarn and the like comprising a closed upright vat having a top, a bottom and cylindrical side wall, a closed hollow cylindrical insert conforming to and being concentrically removably mounted within said vat, to provide an intervening annular space therebetween and said vat, said insert having a perforated top wall and imperforate bottom and said walls, supporting means within said insert for suspending therein skeins of yarn to be treated in densely packed hanging position, and inlet and outlet means mounted in the bottom walls of said insert and said vat for maintaining a forced continuous flow of treating liquid in either direction through said insert and said annular space serving as an inflow or return flow passage, respectively.

3,093,992

LATCH MECHANISM

Lester E. France, Columbia Station, Ohio, assignor to The Standard Products Company, Cleveland, Ohio, a corporation of Ohio

Filed Dec. 5, 1960, Ser. No. 73,772
15 Claims. (Cl. 70—146)



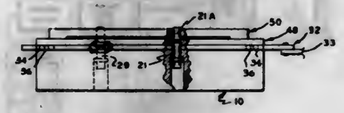
1. Latch mechanism for two relatively movable structures, said latch mechanism comprising a keeper for attachment to one structure, a casing for attachment to the other of said structures, said casing having a passageway into and out of which the keeper is adapted to move upon relative movement of said structures, a latch member, means for rollably mounting said latch member adjacent said passageway, said latch member being actuatable by the keeper as the latter enters into said passageway and rolled thereby through said casing in a latching direction and into retaining engagement with said keeper, detent means for releasably detaining said latch member in its keeper retaining relation, and means for actuating said detent means, with consequent rolling movement of said latch member to thereby release the keeper and permit relative movement of said structures.

3,093,993

IDENTIFYING DEVICE

John G. Lord, Swarthmore, Pa., assignor to Sloop Research & Development Corporation, Ridley Park, Pa.

Filed July 3, 1961, Ser. No. 121,480
5 Claims. (Cl. 70—352)



1. An identifying device comprising:

a block having a first set of apertures formed therein and arranged in a predetermined pattern,

each of said apertures having a wide portion and a narrow portion,

a pin movable in each of said apertures and including a first portion movable in the wide portion of the corresponding aperture and a second portion movable in the narrow portion of the corresponding aperture,

biasing means urging each of said pins outwardly of said block,

a flange carried by each of said pins and movable in said wide portion only to limit the movement of each of said pins to the length of the wide portion of its aperture,

the lengths of said pins being such that the second portions thereof extend at all times through the narrow portions of said apertures,

each of said pins having an intermediate portion of reduced cross-section as compared with the cross-section of its first and second portions,

a lock plate (32) mounted for sliding movement relative to said first set of apertures in said block and having a plurality of keyhole openings therein corresponding in number and pattern to said first set of apertures,

the small portions of said keyhole openings being wide enough to receive the intermediate reduced cross-section portions of said pins but too small to receive the first and second portions of said pins,

the lengths of the second portions of said pins being different to vary the distance between the ends of said pins and the reduced cross-sections thereof,

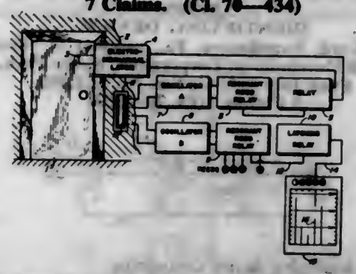
a card-holder movable towards, and away from, said lock plate,

a card detachably carried by said card-holder and having a number of check openings therein arranged to correspond to a randomly selected number of pins less than the total number of pins of said block,

the portions of said card between said check openings being solid whereby the second portions of some of the pins being biased towards said lock plate will pass through the large portions of the keyhole openings therein and whereby the second portions of the remaining pins will come in contact with the solid portions of said card,

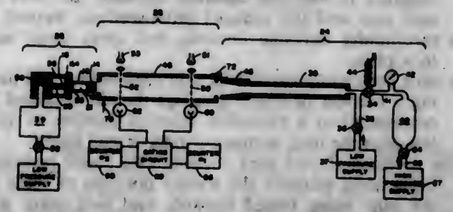
the arrangement of said check openings and the intermediate solid portions of said card relative to the randomly selected pins being such that the pins whose reduced cross-section portions register with the small portions of their respective keyhole openings will project through the check openings in said card and whereby the pins whose reduced cross-section portions do not register with the small portions of their respective keyhole openings will be depressed by the solid portions of the card to bring their reduced cross-section portions into alignment with the small portions of their respective keyholes to permit movement of said lock plate relative to said block.

3,093,994
RECORDING SECURE LOCKING SYSTEM
Joseph D. Richard, 3569 Loquat Ave., Miami 33, Fla.
Filed Mar. 3, 1961, Ser. No. 93,093
7 Claims. (Cl. 70—434)



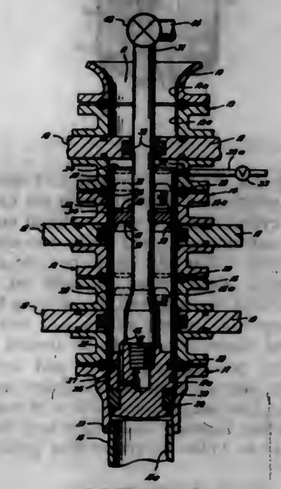
2. In a locking system of the type wherein a door or the like is secured by a latching mechanism releasable by means of an electronic control circuit which is actuated by the temporary connection of a key assembly having at least one electronic component of a specific value, apparatus for recording the use of the said key assembly which comprises: a graphic recorder having at least two recording conditions for maintaining a continuous time record; means for causing the said graphic recorder to assume the first of the said two recording conditions upon the temporary connection of the said key assembly to the said control circuit from outside the said secured door; and means for causing the said graphic recorder to assume the second of the said two recording conditions upon the temporary connection of the said key assembly to the said control circuit from inside the said secured door, a continuous record being thereby maintained of the periods of time the holder of the said key assembly spends inside the said secured door.

3,093,995
APPARATUS FOR MEASURING THE COEFFICIENT OF RESTITUTION OF A RESILIENT BODY
William E. Gordon, Winchester, Mass., assignor, by mesne assignments, to United States Golf Association, New York, N.Y.
Filed July 22, 1960, Ser. No. 44,783
4 Claims. (Cl. 73—13)



1. Apparatus for measuring the coefficient of restitution of a golf ball, comprising target means having a mass of approximately four to five times the weight of said golf ball, propelling means for propelling said golf ball against said target means, and means for measuring the time of travel of said golf ball toward and away from said target means through a predetermined travel distance, said target means being mounted to move in a direction in line with the line of travel of said golf ball, and having a plane impact surface facing said propelling means and perpendicular to said line of travel, an air chamber within said target means and in restricted communication with the ambient atmosphere, means associated with said chamber for decreasing its volume upon motion of said impact surface in a direction away from said propelling means, and cutoff means for blocking said restricted communication after a predetermined extent of said motion, said target means being free-moving during time of impact of said golf ball, and moving against air pressure after said golf ball has rebounded from said impact surface.

3,093,996
DRILLING PRESSURE CONTROL ASSEMBLY TESTER
Marvin R. Jones, Houston, Tex., assignor to Cameron Iron Works, Inc., Houston, Tex., a corporation of Texas
Filed Mar. 22, 1960, Ser. No. 16,857
17 Claims. (Cl. 73—46)

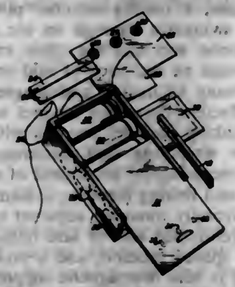


17. A device for testing a drilling pressure control assembly including a blowout preventer connected to a surface casing through a casing head or the like, the control assembly having means for charging test gas under pressure into the bore thereof and sealing means carried by the blowout preventer operable to seal about an object in the bore, said testing device comprising a body sized for a loose fit in the bore of the drilling pressure control assembly; sealing means carried by the body for sealing off the bore through the control assembly and providing a test space therein exteriorly of the body; a bore in said body, one end of the body bore being closed and the other end being connected with said test space and open to passage of fluid therebetween when the tester is in operable position in the bore of the control assembly; a pressure responsive member extending across the bore of the body and movable therein between a first position near the closed end of the body bore and a second position further removed therefrom and near the open end thereof, and means for supplying operating fluid under pressure to said member for moving it from said first to said second position and increasing the pressure of the gas confined in said test space.

3,093,997
OIL VISCOSITY TESTER
Ralph R. Uhrmacher, Fort Worth, Tex., assignor to Texas Refinery Corporation, Fort Worth, Tex., a corporation of Texas
Filed Nov. 20, 1958, Ser. No. 775,196
1 Claim. (Cl. 73—54)

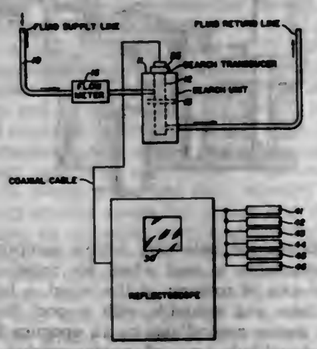
A viscometer for comparing the viscosity of an oil with oil of known standard viscosity comprising a flat plate of substantial thickness having plurality of aligned open

cone-like chambers therein, the bases of the cone-like chambers being at the surface of the plate and the central axes of the cone-like chambers being aligned at an acute



angle to the plane of the plate, said plurality of cone-like chambers being of equal volume and the acute angles between the central axes of each chamber and the plane of the plate being equal.

3,093,998
METHOD FOR TESTING FLUIDS FOR PARTICLE CONTAMINATION
Charles P. Albertson, Woodbury, and Warren E. Strittmatter, Plainview, N.Y., assignors to Grumman Aircraft Engineering Corporation, Bethpage, N.Y., a corporation of New York
Continuation of abandoned application Ser. No. 742,276, June 16, 1958. This application Nov. 6, 1959, Ser. No. 851,318
4 Claims. (Cl. 73—61)



2. A method of determining the number and sizes of contaminant particles in a fluid, which comprises the steps of: causing said fluid to flow past a testing position; measuring the rate of fluid flow past said testing position; subjecting said position and its fluid to the action of ultrasonic pules at a rate of repetition selected relative to the rate of flow such that any one particle in the testing position will be subjected to a predetermined number of pulses as that particle passes through the testing position; and indicating the number and magnitude of the reflections of said pulses returned from the fluid in testing position.

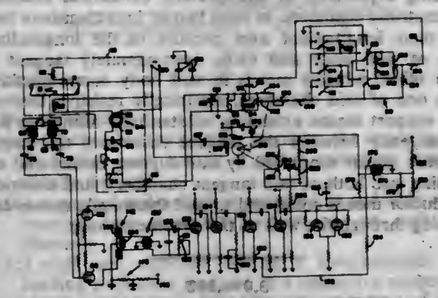
3,093,999
MAGNETOELASTIC FORCE MEASURING DEVICE
Orvar Dahle and Lars Berggren, both of Vasteras, Sweden, assignors to Allmanna Svenska Elektriska Aktiebolaget, Vasteras, Sweden, a Swedish corporation
Filed Sept. 19, 1960, Ser. No. 56,961
Claims priority, application Sweden Sept. 23, 1959
4 Claims. (Cl. 73—141)

1. A force measuring device of the magneto-elastic type comprising at least one measuring body of magnetostrictive material, subject to the mechanical force to be measured, said force acting upon two parallel and opposite sides of said measuring body, said measuring body comprising a middle portion and two outer portions extending parallel to each other from one of said sides to the other, said middle portion having holes therein penetrating said body, at least two coils engaged in said holes, the part of said middle portion including said holes and said coils being a measuring zone, one of said coils being con-



nected to an electric current source and serving as an excitation coil and the other coil being connected to an electric measuring device and serving as a measuring coil, the winding planes of said coils being disposed perpendicular to each other and at substantially 45° to the direction of said parallel and opposite sides, said middle portion being provided with apertures penetrating said body in the area between said measuring zone and said opposite parallel sides.

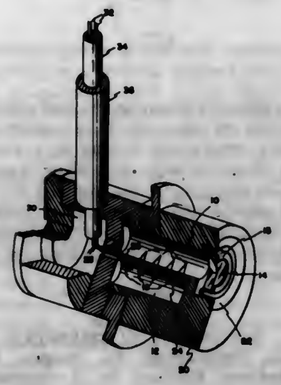
3,094,000
MAGNETIC FLOWMETER
Sholom Kaz, Philadelphia, Pa., assignor to Fischer & Porter Company, Hatboro, Pa., a corporation of Pennsylvania
Filed Oct. 21, 1958, Ser. No. 768,595
4 Claims. (Cl. 73—194)



1. A flowmeter comprising a conduit for flowing liquid, electromagnetic means providing a magnetic field transverse to said conduit, means supplying alternating current to said electromagnetic means, electrodes exposed to liquid flowing through said conduit and located on a line extending transversely through said field to pick up signals generated by flow of liquid through said field, a pair of similar transformers, each having a secondary winding with one end of each winding connected to a respective one of said electrodes, means connecting the other ends of the secondary windings to an amplifier having a push-pull input symmetric with respect to its connections to the secondary windings, a transformer having its primary connected to carry the alternating current supplied to said electromagnetic means, a phase correcting network receiving an input from the secondary of the last mentioned transformer and connected to the primary windings of the first mentioned transformers to provide signals in their secondaries bucking the signals from

said electrodes, and means controlled by said amplifier to effect adjustment of said network to null the signals received by the amplifier, said network including means providing to the primary windings of the first mentioned transformers adjustable signals in quadrature with the signals provided from said electrodes due to liquid flow.

3,094,001
RADIATION PYROMETER
Eugene L. Woodcock, Stratford, and Gordon W. Daeker, Georgetown, Conn., and Marcel J. E. Golay, Rumson, N.J., assignors to The Perkin-Elmer Corporation, Norwalk, Conn., a corporation of New York
Filed Feb. 16, 1960, Ser. No. 9,103
10 Claims. (Cl. 73—355)



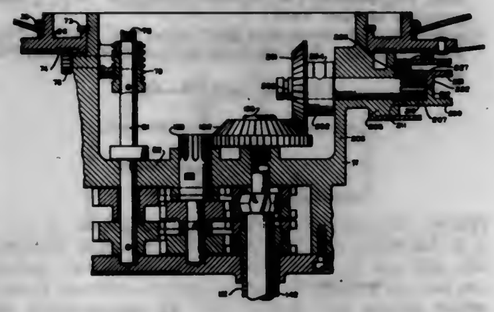
4. A radiation pyrometer comprising a substantially cylindrical body of heat conducting material, said body defining a plurality of substantially cylindrical enclosed symmetrical chambers, at least two of said chambers having their longitudinal axes parallel to the longitudinal axis of said body and being approximately tangent to each other; window means in said body communicating with one of said chambers; electrically resistive thermopile support means extending substantially along the line of tangency between the tangent chambers; thermopile element means supported by said support means and extending into both of said tangent chambers; and electrical conductor means connected to said thermopile means and passing through the wall of the pyrometer body.

3,094,002
MAGNETIC LINKING MECHANISM FOR MEASURING INSTRUMENTS
Alfred J. Ryan and Frederick J. Rink, Denver, Colo.; said Rink assignor to said Ryan
Filed June 29, 1959, Ser. No. 823,665
9 Claims. (Cl. 73—432)



1. In a measuring instrument or the like having indicating means thereon for measuring a movement of a detector member, the improvement which comprises a paramagnetic arm mounted on the detector member in position to swing through an arc in response to movement of the detector member, a linking member pivotally mounted with one end swingable through an arc in proximity to said paramagnetic arm and the other end concurrently swingable through an arc, each of said ends of said linking member being bifurcated and magnetizable thereby forming an effective horseshoe magnet at each end, the end of said linking member in proximity to said paramagnetic arm straddling said paramagnetic arm and spaced therefrom whereby movement of said arm causes movement of said linking member, a diamagnetic indicating support pivotally mounted adjacent to and straddled by the other bifurcated end of said linking member and maintained in spaced relation, and a small paramagnetic body mounted in said diamagnetic support in position to complete a magnetic linkage between the two members whereby movement of said linking member moves said indicating support.

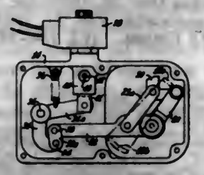
3,094,003
WHEEL BALANCER
George T. Hemmeter, 10791 Magdalena, Los Altos, Calif.
Filed Dec. 5, 1957, Ser. No. 700,778
12 Claims. (Cl. 73—458)



7. A deivce for balancing wheels comprising a base fixedly attachable to said wheel for rotation therewith about the axis of rotation of the wheel, a hub mounted on said base and rotatable with respect thereto about said axis, means controllable by an operator for effecting rotation of said hub, a pair of counter-weights, means individually journalling said weights for rotation with respect to said hub about said axis in axially-spaced planes of rotation, a continuous gear fixed to each of said counter-weights to rotate therewith about said axis, gear means rotatable with respect to said hub and interacting with said continuous gears for causing simultaneous but opposite rotation of said counter-weights in either direction and means manipulatable by an operator for rotating said gear means with respect to said hub while said wheel is spinning.

3,094,004
VALVE CONTROL MECHANISM
William F. Berck, Hayward, Calif., assignor to Ralph N. Brodie Company, San Leandro, Calif., a corporation of California
Filed Aug. 11, 1961, Ser. No. 130,958
12 Claims. (Cl. 74—2)

1. An actuating and control mechanism comprising: a parallelogram linkage having a pivotally mounted first linkage member and including second and third parallel members pivotally connected to said first member and to a fourth member, said second member having a catch engagement provided thereon; means for releasably retaining said third member in a first position; means for pivotally biasing said first linkage; and means engageable with said catch engagement when said third linkage occupies said



first position for pivotally moving said first linkage member against said biasing means, said last named means being inoperative for moving said first linkage member when said third linkage member is moved from said first position.

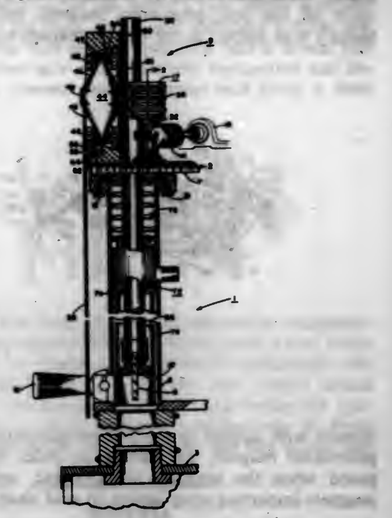
3,094,005
SPEED JACK
Antone L. Premler, Humboldt, S. Dak.
Filed Dec. 9, 1960, Ser. No. 74,918
1 Claim. (Cl. 74—15.2)



A speed jack comprising a stationary framework, vertically positioned supports attached to said stationary framework, a shaft journalled at the upper ends of said vertically positioned supports, a further movable framework journalled on said shaft, a further drive shaft journalled at the end of said movable framework, means for driving said further drive shaft from said shaft, including sprockets attached to both of said shafts, a sprocket chain engaging said sprockets, said further framework being adapted to be swung about said shaft whereby said further shaft will provide means for driving said shaft, said shaft including an extending portion at one end thereof, and including a squared portion at the other end thereof, said further shaft including a further squared portion at one end thereof, and a spline shaft portion at the other end thereof, said shaft being adapted to be drivingly engaged with the driving portions of an elevator, and said further shaft being adapted to be attached to the rear drive shaft of a tractor, and further being adapted to be attached to the driven unloading portions of a wagon.

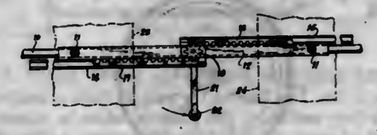
3,094,006
PULL AND ROTATION MECHANISM FOR CRYSTAL GROWING APPARATUS
Noble E. Hamilton, Belmont, Mass., assignor to Clevite Corporation, Cleveland, Ohio, a corporation of Ohio
Filed June 15, 1960, Ser. No. 36,233
5 Claims. (Cl. 74—22)

1. A pull and rotation mechanism for crystal growing apparatus comprising, in combination; driving means; shaft means rotatably driven by said driving means; annular frictional coupling means formed of elastic material surrounding portions of said shaft means; pull rod means mounted for rotation and longitudinal displacement; mounting means maintaining said pull rod means in frictional engagement with said frictional coupling means; roller means rotatably mounted and in driving engagement with said pull rod means; gimbal means rotatably constructed and arranged to carry said roller means for angular variation of the longitudinal axis of the roller in respect to said axis of the pull rod means so that upon changing the angular relation of the axes a force com-



ponent is exerted on the pull rod means to longitudinally displace and rotate said pull rod means.

3,094,007
EQUALIZER SLIDE MEANS
Gilbert W. Lahrs, Kankakee, Ill., assignor to Sears, Roebuck and Co., Chicago, Ill., a corporation of New York
Filed Nov. 17, 1961, Ser. No. 153,170
1 Claim. (Cl. 74—91)



In combination,
(*a*) an elongated stationary member, the opposite vertical sides each having a rabbet extending longitudinally thereof,
(*b*) a pair of rail members arranged in slideable abutment to said stationary member one on each side thereof,
(*c*) each rail member having a longitudinally extending projection received in a respective rabbet,
(*d*) a gear rack secured to the upper surface of each rail member with the teeth of said racks disposed horizontally and in confronting relation to each other,
(*e*) a vertical shaft rotatably supported in said stationary member,
(*f*) a pinion fixed on said shaft and engaging at opposite sides with the gear racks on the respective rail members,
(*g*) and a crank arm connected to said shaft for rotating said pinion to cause the rail members to move simultaneously in opposite directions.

3,094,008
SNAP ACTING MECHANISM
Le Bron Hardie, 3115 Aurora Ave., El Paso, Tex.
Filed Nov. 1, 1960, Ser. No. 66,596
12 Claims. (Cl. 74—97)

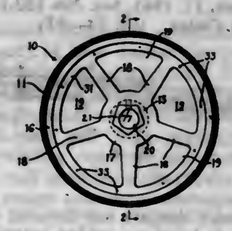
1. In snap acting mechanism, a rotatable shaft, an arm mounted on the shaft, a first permanent magnet

mounted on said arm and turning with said shaft, and a second permanent magnet adjoining the path of movement of the first permanent magnet, rotationally stationary with respect to the first permanent magnet and sta-



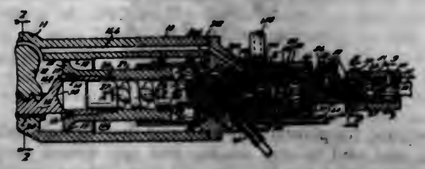
tionary with respect to the path of movement of the first permanent magnet, and having its poles oppositely disposed when the magnets are adjacent, said permanent magnets imparting snap action to said shaft.

3,094,009
PULLEY CONSTRUCTION
William H. Wentling, Dayton, Ohio, assignor to The Lau Blower Company, Dayton, Ohio, a corporation of Ohio
Filed Mar. 10, 1960, Ser. No. 14,069
1 Claim. (Cl. 74—230.4)



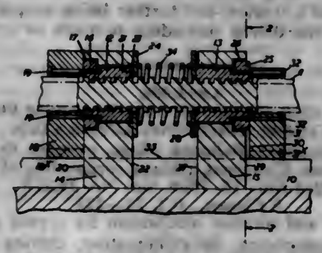
A pulley wheel of the character described comprising, a pair of disks, an annular hub member between said disks having a central bore for receiving a mounting shaft, each said disk including a central portion and a continuous peripheral rim portion connected by spoke portions, said hub having a radial set screw hole therein and including at each end thereof a concentric polygonal boss having the same number of sides as said spokes of one of said disks, each said polygonal boss having one side disposed perpendicularly to the axis of said set screw hole, said bore having a groove extending axially therethrough and including the radially inner end of said set screw hole, said central portion of each said disk being provided with a polygonal aperture complementary to and receiving the adjacent said boss, each said disk having an inner annular portion surrounding said aperture in radial compression with respect to the associated said boss, said polygonal aperture being located with its corners in radial alignment with said spokes, said spokes of each said disk being inclined inwardly of said wheel with respect to the central portion of said disk to position the rim of said disk in juxtaposition with the rim of the other said disk, means securing said juxtaposed rims together, and said rims including oppositely flared peripheral portions cooperating to form a belt-receiving groove.

3,094,010
POWER STEERING GEAR
Walter E. Folkerts, Hazel Park, Mich., assignor to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware
Original application Dec. 29, 1959, Ser. No. 862,566. Divided and this application Feb. 11, 1960, Ser. No. 8,037
11 Claims. (Cl. 74—388)



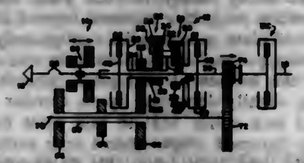
1. In a power steering gear for an automotive vehicle, a housing, a sector gear pivotally mounted in said housing for rocking motion and having means operably connectible with the dirigible wheels of said vehicle to steer the same upon rocking of said gear, a gear rack shiftable transversely of the pivot axis of said sector gear and meshed therewith to effect said rocking, said rack terminating at one end in a tubular extension having an axis parallel to the directions of shifting of said rack and having a radial shoulder thereon confronting said rack, a piston having a tubular extension sleeved over the first extension, the first extension abutting a radial shoulder on the second extension and confronting said rack, screw threaded means secured to said second extension and engaging the radial shoulder of said first extension to urge the latter snugly against the shoulder of said second extension, said first and second extensions projecting from said piston in axially opposite directions, a worm shaft rotatable coaxially within said second extension, a worm follower carried by said second extension and engaging said worm to turn the same upon axial shifting of said piston, and an annularly disposed guide carried by said housing and sleeved over an end of said second extension remote from said piston to guide axial shifting of said second extension.

3,094,011
MOTION TRANSMISSION MECHANISM OF THE SCREW AND NUT TYPE
John Ramsey Bradley, Harlow, England, assignor to The British Oxygen Company Limited, a British company
Filed June 15, 1960, Ser. No. 36,224
Claims priority, application Great Britain June 26, 1959
2 Claims. (Cl. 74—441)



1. In a motion transmission mechanism of the screw and nut class, the combination with said screw of first and second separate nuts engaging said screw at locations axially spaced thereon, a movable body, first and second nut housings secured to said body at spaced locations corresponding to the spacing of said nuts, non-circular portions on said nuts located in correspondingly shaped recesses in said nut housings for restraining said nuts only against rotation but with said nut housings otherwise freely locating the respective nuts on said screw, an attachment member, means rigidly securing said attachment member to said first nut for engagement of said attachment member with the outermost end of said first nut housing, and a compression spring of effective strength in excess of the normal operating loads of the mechanism acting between the innermost end of said first nut housing and the innermost end of the second nut, said second nut having sufficient free axial clearance with the second nut housing for the taking up of backlash between the screw threads of the nuts and the screw by said spring.

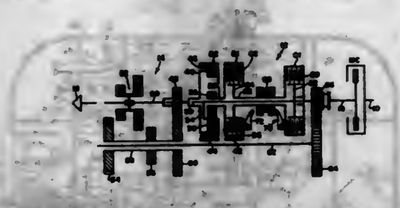
3,094,012
HIGH-LOW REVERSE DRIVE
Henry A. Ferguson, Waterloo, Iowa, assignor to Deere & Company, Moline, Ill., a corporation of Delaware
Filed June 2, 1961, Ser. No. 124,255
12 Claims. (Cl. 74—740)



1. High-low-reverse drive mechanism, comprising: a hollow fore-and-aft output shaft having a rear sun gear fixed thereto; a planet carrier ahead of the output shaft and having a hollow carrier shaft fixed thereto and extending coaxially loosely through said output shaft to a rear part behind the rear sun gear; a hollow driven shaft coaxial with and journaled relative to said carrier and carrier shaft and having a front sun gear fixed thereto ahead of said carrier; interconnected planet gears journaled on the carrier and including front and rear planet gears meshing respectively with the front and rear sun gears; an input shaft extending coaxially loosely through the driven, carrier and output shafts and having a front part ahead of the front sun gear and a rear part behind the rear sun gear; a front clutch ahead of the front sun gear and selectively engageable and disengageable between the front sun gear and input shaft front part; a rear clutch behind the rear sun gear and selectively engageable and disengageable between the rear parts of the input and carrier shafts; a sun brake selectively engageable with and disengageable from the front sun gear; a carrier brake selectively engageable with and disengageable from the carrier; and control means connected to and for selectively operating the clutches and brakes in combinations including both clutches engaged and both brakes disengaged, from clutch and carrier brake engaged and the others disengaged, and sun brake and rear clutch engaged and the others disengaged.

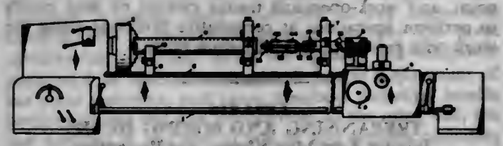
3,094,013
DUAL-RANGE FORWARD DRIVE WITH RANGE REVERSE
Henry A. Ferguson, Waterloo, Iowa, assignor to Deere & Company, Moline, Ill., a corporation of Delaware
Filed June 2, 1961, Ser. No. 124,256
7 Claims. (Cl. 74—740)

1. High-low-reverse drive mechansim, comprising: a hollow fore-and-aft drive shaft having front and rear ends; a carrier shaft extending coaxially loosely through the drive shaft and having front and rear ends respectively ahead of and behind the front and rear ends of said drive shaft; a coaxial front clutch selectively engageable and disengageable between said front ends of the shafts; epicyclic gearing at the rear ends of said shafts, including a carrier fixed to the rear end of the carrier shaft and journaling a planet pinion, a sun gear coaxial with the shafts and meshing with the pinion, and a coaxial ring gear meshing with the pinion; an output member connected to one of the gears; a rear clutch coaxially spaced behind the front clutch and including a drive part fixed to the rear end of the drive shaft and a driven part fixed to the other gear and selectively engageable and disengageable to connect and disconnect said parts; a front



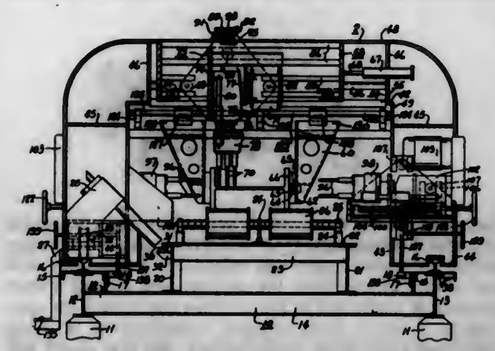
brake behind the front clutch and selectively engageable with and disengageable from the driven part; a rear brake behind the front brake and selectively engageable with and disengageable from the carrier; and control means operatively connected to the clutches and brakes for controlling same in three engaged combinations of front clutch and front brake, both clutches, and rear clutch and rear brake.

3,094,014
ROTATING GUIDE BORING BAR
Albert F. Bartolat, Star Rte., Bend, Oreg.
Filed Apr. 25, 1961, Ser. No. 105,396
2 Claims. (Cl. 77—3)



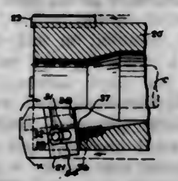
1. A boring device including a stationary boring bar comprising a shaft having a forward end and a rearward end, means at said rearward end mounting said shaft coaxially with a rotationally driven work piece to be bored, a cutter head carried by the forward end of said shaft, a sleeve rotatably mounted on said shaft rearwardly of said cutter head, a circumferential series of guide members mounted on said sleeve coextensive in length therewith and comprising forwardly and rearwardly extending flexible arm portions, elongated flexible guide pads secured to the forward and rearward ends of said arm portions for frictional engagement with the bored diameter of the work piece and in slidable lineal frictional contact therewith as the boring operation progresses, a plurality of radially disposed cutter tools carried by the cutter head, rotatable means carried by the cutter head for radially extending said cutter tools relative to the cutter head preparatory to starting the boring operation and for retracting said cutter tools relative to the bored diameter of the work piece at the end of the boring operation, said rotatable means comprising a hollow threadedly rotatable shaft extending into the cutter head provided at its outer end with a micrometric head and at its inner end with cam means, resilient means carried by said cutter head engaged with said cutter tools and at all times maintaining the inner ends of said cutter tools in intimate contact with said cam means whereby rotation of said hollow shaft and cam means in one direction will extend the cutter tools relative to the cutter head and rotation in an opposite direction will retract said cutter tools, and locking means extending through said hollow shaft and into said boring bar for locking said hollow shaft and cam means against rotation in either direction.

3,094,015
STRUCTURAL STEEL DRILL
Edwin L. Mead, Pittsburgh, Pa., assignor to Mulfab Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Aug. 11, 1960, Ser. No. 48,926
12 Claims. (Cl. 77—21)



1. A machine tool comprising a table having a longitudinally extending conveyor thereon to support and carry the work, a gantry supported for movement along said table, a work vise carried by said gantry for engaging the work to move it along said conveyor and hold the gantry relative to the work while operations are performed thereon, a datum point on said table, lock means to engage and hold the work with reference to said datum point, and work-operating means carried by said gantry to perform operations at consecutive positions along the work with reference to said datum point.

3,094,016
TREPANNING AND BORING HEAD
Werner Kurt Max Kleine, Am Roggenber, Bremen-Mahndorf, Germany
Filed Nov. 20, 1959, Ser. No. 854,492
16 Claims. (Cl. 77—69)



1. In an apparatus for forming holes wherein a hollow head having a longitudinally extending passage is brought into contact with a workpiece and relative rotation is produced between the workpiece and head about the axis of the head to form the hole, the improvement wherein said head has an axially extending opening therein having generally radial parallel side faces, said opening extending radially inwardly to the passage and radially outwardly to the periphery of said head, one side face of said opening having a generally axially extending key slot formed therein, said key slot being generally rectangular in cross section and being inclined to the axis of said head, a cutter body having generally parallel sides and a cutter on one end thereof, said cutter body being positioned in said opening, a guide key of rectangular cross section on one side of said cutter body intermediate the side edges thereof and interengaging said key slot on said head, and means for clamping said cutter body against said one side face of said opening in adjusted position relative to said key slot.

3,094,017
LOCK BOLT SEALING COLLAR AND METHOD OF INSTALLING THE SAME
Louis Champoux, Seattle, Wash., and George Siebol, Downey, Calif., assignors to Boeing Airplane Company, Seattle, Wash., a corporation of Delaware
Filed May 11, 1959, Ser. No. 812,463
3 Claims. (Cl. 78—46)



1. A lock bolt joint comprising a plate having an aperture therethrough, a lock bolt having a shank extending through and fitting snugly in such plate aperture and having a portion projecting outward beyond the adjacent surface of said plate, a lock collar contiguously encircling said projecting portion of said lock bolt, and an annular portion of the surface of said plate beneath said lock collar being slightly depressed by an annular rib on the end of said lock collar next to said plate having been swaged into flattened shape against such surface portion of said plate, said lock collar, by its engagement with such projecting portion of said lock bolt, maintaining under sustained compressive stress the slightly depressed surface portion of said plate beneath said lock collar and the portion of the lock collar end engaged therewith, which compressive stress is concentrated in an annulation of a width radially of said lock collar less than the maximum radial thickness of said lock collar and is located nearer the inner periphery than the outer periphery of said lock collar, the compressive stress in the slightly depressed surface portion of said plate in such annulation being greater than in the remainder of the surface portion of said plate beneath said lock collar.

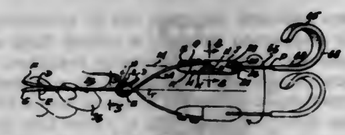
3,094,018
APPLICATOR TOOL FOR PIPE PROTECTORS
Charles H. Collett, P.O. Box 411, Menlo Park, Calif.
Filed June 27, 1960, Ser. No. 39,068
3 Claims. (Cl. 81—5.1)



1. A tool for tensioning about well drill pipe a flexible split protector collar, comprising a pincers having two relatively long handles and a pair of relatively short jaws operable in response to relative spreading displacement

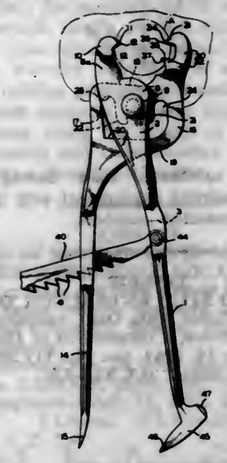
of the handles to effect grip tightening of a split protector collar about well drill pipe, each handle being integral with one jaw to form a pincers lever, said pincers including pivots mounting said levers to rotate about spaced apart parallel axes and support means carrying said pivots, means including a pair of elongated arms and a toggle joint actuable in response to relative spreading of said arms for spreading said pincers handles thereby to operate said jaws, and arm pivots interconnecting said arms with said handles, said toggle joint pivotally interconnecting arm extensions movable between said handles, said arms and handles having an operating position in which the handles have been pivoted relatively away from each other, the arms have been pivoted relatively away from each other and through wide angles, said toggle joint has been displaced relatively away from said jaws and slightly over-center through a line intersecting the centers of said arm pivots, and said jaws have been closed toward one another for collar tensioning but remain spaced apart, all in response to said pivoting of the arms, said arm extensions being in substantial longitudinal alignment in said operating position, and interengaged shoulders on an arm and handle blocking further spreading of said arms in said operating position.

3,094,019
COMBINATION INSULATION STRIPPER AND WIRE SPLICER
Marion W. Bradley, 14206 E. Coolbank Drive, La Mirada, Calif.
Filed Apr. 10, 1961, Ser. No. 101,724
4 Claims. (Cl. 81—9.5)



1. A device for use in first stripping insulation from two parallel adjacent electrical conductors and then twisting the stripped portions of said conductors one upon the other to effect an electrical conducting junction therebetween, comprising: an elongate rigid member having a straight rearward portion, an intermediate portion that extends downwardly and forwardly from said rearward portion, a forward upwardly extending arcuate portion, the upper part of which arcuate portion projects rearwardly, and a cutting groove formed in said arcuate portion that extends downwardly from the upper extremity thereof substantially along the longitudinal axis of said member to divide said arcuate portion into two laterally spaced downwardly convergent side walls, said side walls being beveled to form opposing cutting edges, with the upper ends of said side walls being laterally spaced a distance greater than the diameter of the insulation on one of said conductors, and a slot of substantially constant width in said arcuate portion extending downwardly from and coextensive with said convergent side walls, the width of which slot is slightly greater than the diameter of one of said conductors with the depth of said slot being at least twice the diameter of said insulation on one of said conductors; a handle; and means for rotatably supporting said rearward portion of said rigid member forwardly of said handle to permit said elongate member, handle and means to be moved longitudinally relative to said conductors when said conductors are engaged by said slot to concurrently strip desired lengths of said insulation therefrom and thereafter effect said electrical conducting junction by rotating said handle eccentrically relative to said lengths of said stripped conductors to twist said stripped lengths one upon another.

3,094,020
BOLT HOLDING TOOL
Coy J. Wise, Rte. 2, Box 159C, Vale, Oreg.
Filed June 13, 1961, Ser. No. 116,758
1 Claim. (Cl. 81—13)



A bolt holding tool comprising a pair of cross members hingedly connected together, a pivot member forming the hinge for the cross members, said pivot member being carried by one of the cross members and the other cross member being formed with a plurality of aligned longitudinally extending slots, said slots having open ends merging into a transverse opening, whereby the pivot member can be moved along the opening and selectively positioned in said slots to permit lateral adjustment of the cross members, said cross members including handle portions at one end and jaw portions at the other end, the jaw portions at one end of one of said handles including an outer enlarged laterally projecting head and an inner sharp transversely extending straight gripping edge portion, said straight gripping edge depending substantially below the enlarged portion and terminating at its lower end in an inwardly curved tapered pointed terminal, the jaw portion of the other cross member being provided with an outer laterally enlarged projecting head portion and a pair of parallel spaced straight transversely extending inner sharpened gripping edges, said spaced gripping edges extending below the enlarged head portion and terminating in inwardly projecting arcuate sharpened ends, said last-named gripping edges being so positioned that the single straight gripping portion of one head member will be directed intermediate said spaced gripping portions of the other head member and all of the gripping edges of the jaw portions being parallel to provide a three-point contact for a bolt head.

3,094,021
IMPACT WRENCH STRUCTURE FOR TIGHTENING OR LOOSENING ROD JOINTS
Merrill A. Young, Gates Mills, Ohio, assignor to Curtiss-Wright Corporation, a corporation of Delaware
Filed Oct. 26, 1960, Ser. No. 65,074
6 Claims. (Cl. 81—52.3)

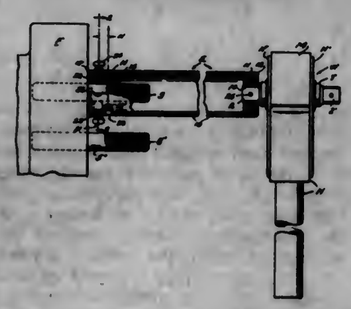
1. In impact wrenching apparatus for application to thread-connected elongated members in a series of string, a manually operated impact wrench unit having a rotary tool head and cooperating mechanism capable of imparting a succession of torsional impacts to the tool head on its rotational axis, a rigid output or extension member connected to turn with the tool head and extending laterally of said rotational axis and having jaw

faces remotely of said axis for wrenching engagement with one of two thread-connected members, and a rigid



anvil member of substantial mass having jaw faces adapted for twist-resisting engagement with the other of such two thread-connected members.

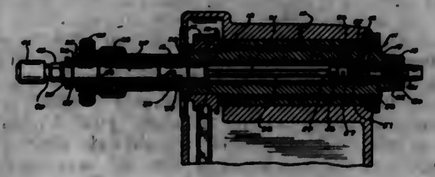
3,094,022
THREADED STUD EXTRACTOR TOOL
Merrill A. Young, Gates Mills, Ohio, assignor to Curtiss-Wright Corporation, a corporation of Delaware
Filed May 19, 1961, Ser. No. 111,286
4 Claims. (Cl. 81—53)



1. For operation by a torque transmitting output member of an impact wrench mechanism on a screw threaded stud to be extracted from threaded position in a support and having a free end portion projecting from the support, a substantially torsionally rigid unitary metal extractor body operatingly connected to receive impact torque from said output member and having an annular wall portion around and radially close to the projecting portion of the stud and disposed in close proximity to the support, and at least two rows of approximately equiangularly spaced and radially extending set screws in snug threaded engagement with complementary openings through the annular wall portion and having inner cup-pointed ends tightly seated in indenting relationship to respective peripheral surface portions of the stud, said rows being spaced apart axially of the annular wall portion of the body a distance in the magnitude of the pitch diameters of the screws, the set screws in one row being approximately equiangularly spaced from the screws in an adjacent row about the central axis of the annular wall portion.

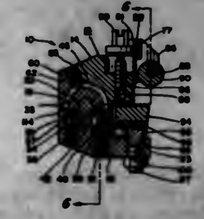
3,094,023
SPINDLE MOUNTED COOLANT CARRIER
Frank R. Lamunga, 3407 Polk St. NE., Minneapolis, Minn.
Filed Jan. 24, 1961, Ser. No. 84,672
4 Claims. (Cl. 82—34)

1. A coolant carrying device mounted inside of a tubular rotatable spindle shaft having means for holding a hollow work piece at a first end thereof, said device including an elongated inner tube positioned with a first end thereof in sealing relationship with said work piece and open to an opening through said work piece, a plurality of sleeves slidably mounted over said inner tube and being slidable into said spindle shaft, an annular elastic ring mounted between adjacent sleeves, means for moving said sleeves longitudinally toward each other to compress said annular rings to cause said rings to expand to sealingly engage an inner surface of said rotatable shaft, said inner tube extending outwardly from a second end of said spindle shaft, a cap rotatably mounted over



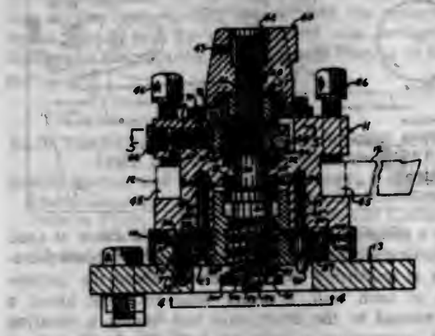
the outwardly extending end of said inner tube, rotatable sealing means mounted between said cap and said inner tube, and a conduit open from a source of coolant, connected to said cap and open to the interior of said inner tube, said conduit, said cap and said inner tube providing a passageway for said coolant from said source to said work piece.

3,094,024
SHAVE TOOL
John P. Synk, Parma Heights, Ohio, and John S. Cherny, Lynwood, Calif., assignors to Sentico, Inc., a corporation of Ohio
Filed July 18, 1960, Ser. No. 43,689
5 Claims. (Cl. 82—35)



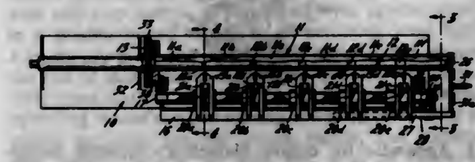
4. A shaving tool including in combination a body having first and second end portions, wall means defining an opening extending laterally through said body intermediate said first and second end portions, a bushing positioned in said opening in said body whereby said body may be rotated thereabout in first and second directions, wall means on said bushing intermediate the end portions thereof defining a groove, means for fixedly securing said bushing to an adapter, a first opening through said body into said laterally extending opening in said body, wall means defining a first abutment on said bushing, a first spring positioned in said first opening and engaging said first abutment, a first holding means for maintaining said first spring in said opening and in engagement with said abutment to yieldingly bias said body only in said first rotational direction relative to said bushing, a second opening through said body into said laterally extending opening in said body, wall means defining a second abutment on said bushing, a member in said second opening and having an end portion adapted to engage said second abutment to limit rotative movement of said body in said first direction, a third opening extending through said body into said laterally extending opening in said body, a member in said third opening and having an end portion residing in said groove on said bushing to prevent axial shifting of the bushing and body relative to each other, a roll block guide secured to said first end portion of said body, a roll block assembly mounted by said roll block guide for adjusted movement thereon, means for adjustably positioning said roll block assembly on said roll block guide, a work engaging roller mounted by said roll block assembly, a cutter support secured to said second end portion of said body, a cutter on said cutter support, and means for removably securing said cutter on said cutter support.

3,094,025
MACHINE TOOL TURRET
Robert E. Diener, Shaker Heights, Ohio, assignor to The Warner & Swasey Company, Cleveland, Ohio, a corporation of Ohio
Filed Mar. 11, 1960, Ser. No. 14,380
7 Claims. (Cl. 82—36)



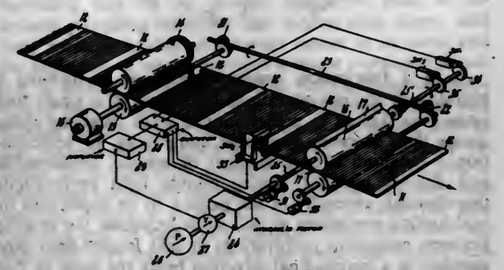
1. A toolholder of the character described comprising a base, a shaft having a threaded connection with said base for combined rotational and axial movement with respect thereto, a turret mounted on said shaft and rotatable relative to said base into a plurality of positions, means connecting said turret to said shaft for axial movement of said turret with said shaft, a ratchet wheel surrounding said shaft, lost motion means connecting said ratchet wheel to said shaft for permitting limited rotation of said shaft with respect to said ratchet wheel in both directions of rotation, pawl means on said turret and adapted to be engaged by said ratchet wheel for movement of said turret upon rotation of said ratchet wheel in one direction, whereby rotation of said shaft in said one direction beyond said limited rotation will effect rotation of said ratchet wheel and said turret, and rotation of said shaft in the opposite direction beyond said limited rotation will effect rotation of said ratchet wheel with respect to said turret.

3,094,026
CUTTER SPACING DEVICE
Ralph Kennicott Pottle, Georgetown, Conn., assignor to American Can Company, New York, N.Y., a corporation of New Jersey
Filed June 10, 1960, Ser. No. 35,288
8 Claims. (Cl. 82—46)



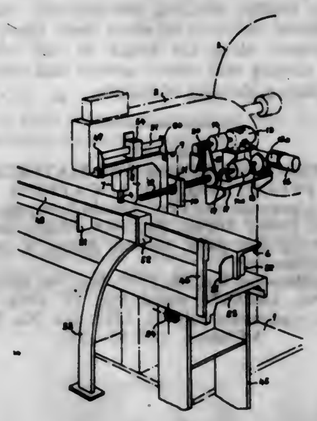
1. A machine for cutting cylindrical articles into a plurality of lengths, comprising holding means for retaining a said article in a predetermined position, a plurality of axially spaced cutters mounted alongside said held article for movement axially of said article and also toward and from the axis of said article, said holding means including an axially stationary stop and an axially movable stop for abutting the opposite ends of said article, means connected with said movable stop and also with said cutters for moving each of said cutters axially with said movable stop a distance substantially proportional to the axial distance of the cutter from said stationary stop, whereby movement of said movable stop into article holding position automatically moves said cutters different distances to space them apart predetermined distances along the length of said article, and means for moving said cutters toward said axis to sever the article into a plurality of lengths.

3,094,027
METHOD OF SEVERING WEB MATERIAL AT PREDETERMINED LOCATIONS
Raymond Alexander and Fred Arnold Schupan, Framingham, and James Abbott, Sherborn, Mass., assignors to The Kendall Company, Boston, Mass., a corporation of Massachusetts
Original application Jan. 28, 1957, Ser. No. 636,800, now Patent No. 3,029,675, dated Apr. 17, 1962. Divided and this application July 13, 1961, Ser. No. 130,449
3 Claims. (Cl. 83—37)



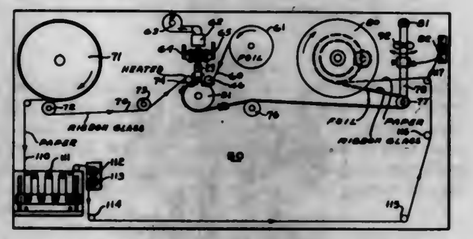
1. A method for severing strip material at locations spaced longitudinally of the strip at intervals defined by longitudinally spaced indicia on the strip comprising continuously feeding the strip longitudinally past spaced first and second stations, spacing the stations a distance equal to normal spacing between indicia on the strip, sensing the arrival at said first station of a said location, repetitively moving a cutter into and out of engagement with said strip at said second station, driving the strip feed and the cutter at a speed to cut the strip once at each location, producing a first velocity signal proportional to the speed of said strip, producing a second velocity signal proportional to the rate of said cutting operations, the velocity signals being equal when the strip feed and the cutter speeds are synchronized, producing a first location signal upon sensing of the arrival of a said location at said first station, producing a second location signal upon arrival of said cutter at the position in its travel corresponding to the position of the strip when said location is at said first station such that said location signals will be simultaneously generated when said locations are normally spaced, interrupting one only of said velocity signals upon occurrence only of a corresponding one of said location signals, and terminating such interruption upon occurrence of the other location signal, combining said velocity signals into an error signal, the error signal being directly proportional to the time integral of the difference between said velocity signals, and varying the relative speed of said cutter and strip in accordance with variations in said error signal to tend normally to keep the motion of said cutter in synchronism with the motion of said strip while moving said cutter to cut said strip only upon arrival at said second station of a said location.

3,094,028
FABRICATION SYSTEM
Carlo Ansenda, Roberto Desalles d'Epinoix, Renzo Castellini, and Giordano Orsolato, all of Milan, Italy, assignors to Compagnia Italiana Forme Acciaio, Milan, Italy, a corporation of Italy
Filed Nov. 10, 1958, Ser. No. 772,738
11 Claims. (Cl. 83—71)



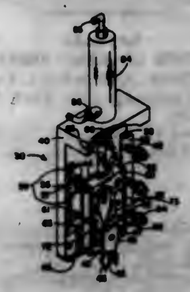
1. In a fabrication system capable of performing a plurality of tooling operations by means of a single tool upon a workpiece at predetermined work locations along gauge lines thereon, apparatus comprising, in combination, a longitudinal tape member of opaque, intextensible and flexible material having minute light perforations therethrough generally in the pattern to be duplicated by said tooling operations at said work locations, the spacing between respective perforations in said longitudinal tape member in a longitudinal direction being the same as that between respective work locations in such direction, a longitudinal scanning head member to control the movement and stopping of said workpiece relative to said tool in a longitudinal direction in accordance with said perforations on said longitudinal tape member, means for mounting one of said longitudinal members so as to remain longitudinally fixed relative to said workpiece and the other of said longitudinal members so as to remain longitudinally fixed relative to said tool, a transverse tape member of opaque, inextensible and flexible material having a minute light perforation therethrough for each work location gauge line, the spacing between respective perforations in said transverse tape member in a transverse direction being the same as that between the work location gauge lines in such transverse direction, said tape members normally having a different number of said perforations respectively, a transverse scanning head member to control the movement and stopping of said tool relative to said work piece in a transverse direction at the respective actual work locations when respective perforations on said transverse tape member are in operative complementary relation to corresponding perforations on said longitudinal tape member, said scanning head member having operatively interconnected circuits, said circuits in said longitudinal scanning head member being respectively responsive to perforations on said longitudinal tape member to ready corresponding circuits in said transverse scanning head member for activation by complementary perforations in said transverse tape member, means for mounting one of said transverse members so as to remain transversely fixed relative to said tool and the other of said transverse members so as to remain transversely fixed relative to said workpiece, and means for moving said workpiece relative to said tool successively after each tooling operation at each work location until all said tooling operations are completed.

3,094,029
SHEAR WITH ROTATING LATERALLY FLEXIBLE BLADES
Charles F. Seck, Corning, N.Y., assignor to Corning Glass Works, Corning, N.Y., a corporation of New York
Original application Nov. 1, 1956, Ser. No. 619,893. Divided and this application Feb. 2, 1961, Ser. No. 120,805
4 Claims. (Cl. 83—341)



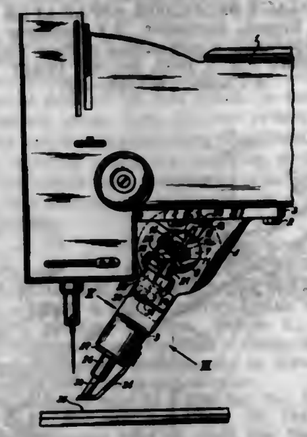
1. In a shearing device, a drum rotatable about its axial center having a cylindrical wall with transverse slots therethrough at uniformly spaced intervals about the circumference of such wall, a cutter head rotatable about a center normal to the drum axis and having a shearing element comprising a pair of laterally flexible shear blades whose paths of travel are through the slots of said drum and each of which is in slidable engagement with a different one of two oppositely disposed slot bordering surfaces of said drum while passing through a slot thereof, means for rotating said cutter head about its axis, and a mechanical linkage between said head and drum by means of which said drum is rotated by rotation of such head, said shear blades having the necessary lateral resiliency to enable the continued rotation of said head and drum while such blades are passing through a drum slot.

3,094,030
APPARATUS FOR CUTTING FILAMENTARY MATERIALS
Joseph S. Cerra, Burlington, Mass., assignor to Sylvania Electric Products, a corporation of Delaware
Filed Mar. 31, 1960, Ser. No. 18,995
6 Claims. (Cl. 83—555)



1. Apparatus for cutting filamentary material including two cutting members having mating cutting portions, a support for said cutting members, said members being pivotally mounted on said support, spring means mounted on said support tending to bias said cutting portions together, a cam element movably mounted on said support for separating said cutting portions in opposition to said spring means upon movement of the cam element in one direction with respect to said support and for permitting said spring means to close said cutting portions upon movement of the cam element in the opposite direction with respect to said support, reciprocating means for moving said cam element in the one direction with respect to said support and for advancing said support in the one direction, and also for moving said cam element in the opposite direction with respect to said support and for moving said support in the opposite direction, and support restraining means adapted to prevent advancement of the support in the one direction by the reciprocating means until the reciprocating means has moved the cam element a predetermined distance in the one direction with respect to the support, and also adapted to prevent movement of the support in the opposite direction by the reciprocating means until the reciprocating means has moved the cam element said predetermined distance in the opposite direction with respect to the support.

3,094,031
ELECTROMAGNETIC CUTTING KNIFE AND THE LIKE ACTUATING MECHANISM
Rudolf Reeber and Emerich Schenkengel, Kaiserslautern, Pfalz, Germany, assignors to G.M. Pfaff AG, Kaiserslautern, Pfalz, Germany, a corporation of Germany
Filed Apr. 6, 1959, Ser. No. 804,270
Claims priority, application Germany Apr. 10, 1958
12 Claims. (Cl. 83—571)



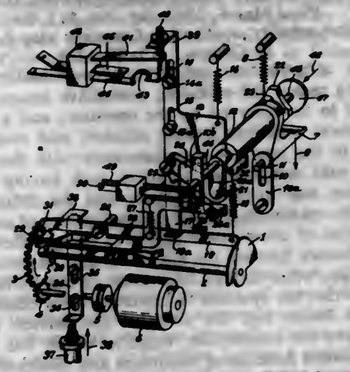
1. Electro-mechanical actuating mechanism for an impact-operated device comprising an electromagnet having an armature operable to and fro within a predetermined working stroke upon energization and de-energization, respectively, of said electromagnet, a double lever pivotally mounted upon said armature and having a first and a second arm, stop means upon said armature and means to resiliently urge said first arm into engagement with said stop means, to block said lever against rotation in a predetermined direction, an actuating lever having a stationary pivot and arranged to have an end engaging the end of said second arm of said double lever immediately upon starting of a working stroke by said armature, operating means connecting said actuating lever with said device including resilient return means, and stationary stop means therefor for said first arm, to rotate said double lever in a direction opposite to said predetermined direction, to thereby disengage said actuating lever from said second arm, said stationary stop means arranged in relation to the operating path of said armature to effect disengagement of said actuating lever from said second arm upon imparting a quick-acting force upon said device by said actuating lever through said operating means, to operate said device from its inoperative to its operative position, said resilient return means adapted to substantially instantly retract said device to its inoperative position substantially independently of the return of said armature upon disengagement of said actuating lever from said second arm.

3,094,032
MUSICAL INSTRUMENT OF THE BASSOON TYPE
Roy Jackson Linton, Elkhart, Ind., assignor to Linton Manufacturing Company, Inc., Elkhart, Ind.
Filed Apr. 4, 1960, Ser. No. 19,885
8 Claims. (Cl. 84—380)



1. A musical instrument of the bassoon type comprising a unitary body end member of molded thermo plastic material and having two passages therein, each terminating at its outer end in a cylindrical socket of a diameter exceeding that of the passage, the inner ends of the sockets providing shoulder like tuning slide stops, said body member having an external rabbet at its outer end the inner end of which provides a thrust sustaining shoulder, a unitary U-shaped tubular tuning slide of metal having parallel arms telescopingly adjustable within said passage sockets, the fit of the arms of the tuning slide in said sockets being such that the slide is frictionally retained in its manually adjusted positions therein, and a removable combined tuning slide housing and body end member having a retaining frictional fit with the said rabbeted end of said body member when in seated engagement with the shoulder at the inner end thereof and constitutes an end thrust sustaining member for the instrument, said housing and body end member being dimensioned so that said slide does not contact therewith in any adjusted position of the slide.

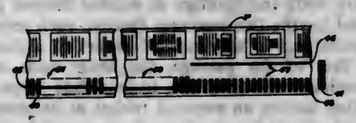
3,094,033
CAMERA FOR PRODUCING MOTION PICTURES AND INDIVIDUAL PICTURES
Heinz Thiele and Roland Hochstein, Kiel-Wik, Germany, assignors to Zeiss Ikon Aktiengesellschaft, Stuttgart, Germany
Filed Jan. 16, 1961, Ser. No. 82,779
10 Claims. (Cl. 88—17)



1. In a camera for producing motion pictures and individual pictures, a manually operable shutter release

key, a rotatably mounted shutter disc, a mechanical control device therefor, means for rotating said shutter disc including an electric motor and a slip clutch between said electric motor and said shuter disc, a circuit for said motor including a normally open switch and a normally closed switch, a releasable arresting means for the shutter disc, means operatively connecting said shutter release key to said normally open switch control means for said mechanical control device operative by said manually operable key to first close said normally open switch and energize said electric motor and then operate said control device to release said shutter disc, and a second arresting means for said shutter disc associated with said normally closed switch to interrupt the motor circuit after said shutter disc has been rotated a single revolution.

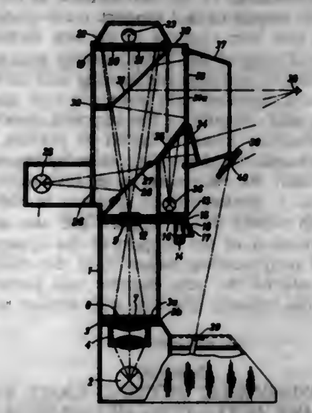
3,094,034
FILM STRIP FOR INDEXING SYSTEM
John H. Eagle and John E. Morse, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed Mar. 16, 1956, Ser. No. 571,983
1 Claim. (Cl. 88—24)



A film strip having a series of images recorded thereon and bearing an indexing code comprising a series of marks arranged between successive images on said film strip in juxtaposition with said images for denoting successive longitudinal sections of said film strip, each mark in said series of marks being repeated throughout the one of said sections which that mark uniquely identifies and representing an identifying unit therefor having at least two characters, each mark including at least two separate and distinct elements each indicating by its transverse position on said film strip a different one of said characters, and each element having a predetermined shape which is discernable and distinguishable when the mark of which it is a part is stationary and when moved rapidly through a given area of view, whereby each mark presents a visibly distinct pattern.

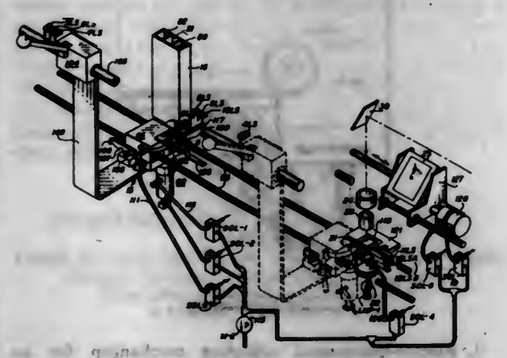
3,094,035
PROJECTION PRINTER PROVIDED WITH COMPARISON NEGATIVES
Wilhelm Baasner, Munich, Germany, assignor to Agfa Aktiengesellschaft, Leverkusen-Bayerwerk, Germany
Filed May 6, 1959, Ser. No. 811,406
Claims priority, application Germany May 7, 1958
10 Claims. (Cl. 88—24)

1. In a projection printer, in combination, image-receiving means for receiving a negative image which is adapted to be observed by the operator; and a series of comparison negatives located adjacent said means to be visible to the operator simultaneously with the negative image, said comparison negatives each having areas of maximum and minimum density and the difference between the maximum and minimum densities of any one of said series of comparison negatives being different from the difference between the maximum and minimum densities of any other one of said series of comparison negatives, so that the operator by simultaneously observing the negative image and the series of comparison negatives can select the comparison negative which has a difference between its areas of maximum and minimum density closest to the difference between the areas of maximum and minimum density of the negative image; and adjusting means for adjusting the amount of light used to expose a print, said adjusting means being actuated by the operator according to the selected comparison negative



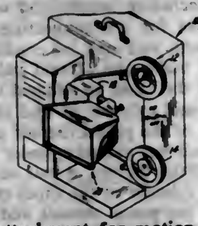
to adjust said amount of light in accordance with the difference between the areas of maximum and minimum density of the negative image.

3,094,036
IMAGE SELECTOR APPARATUS
Robert W. Benson, Rochester, N.Y., assignor to Xerox Corporation, a corporation of New York
Filed Apr. 4, 1960, Ser. No. 19,847
6 Claims. (Cl. 88—24)



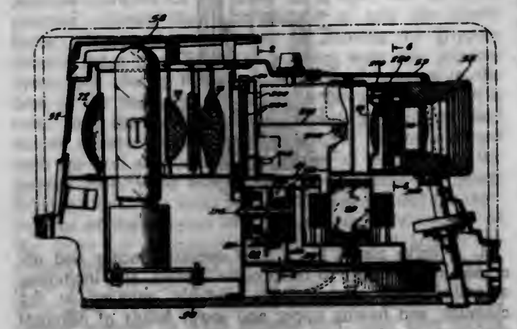
1. Apparatus to selectively position an image of a multiple image document containing a plurality of images arranged divided into at least two parallel rows at a viewing station of an optical system having a fixed optical axis, said apparatus including in combination document support means to support a multiple image document with one image thereof at the viewing station of the optical system, means motively operated to move the support means in a plane past the viewing station whereby the images of the document are successively positioned at the viewing station, said last recited means including an electric motor, a first drive member driven by said motor and adapted to advance said support means in a longitudinal direction, and a second drive member driven by said motor and adapted to advance said support means in a lateral direction, whereby each of said drive members are coupled in image shifting relation to each other, and uni-setting selector means operatively connected to said support moving means to selectively effect positioning of a select image of the document supported on said support means to be positioned.

3,094,037
VIEWER ATTACHMENT FOR MOTION PICTURE PROJECTORS
Marvin Kapllow, Croton-on-Hudson, N.Y., assignor, by direct and mesne assignments, to Kanar Products, Inc., Irvington on Hudson, N.Y., a corporation of New York
Filed Dec. 9, 1960, Ser. No. 81,662
5 Claims. (Cl. 88—24)



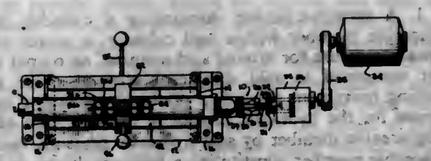
1. A viewer attachment for motion picture film projectors comprising a viewer housing, a relatively wide screen on which film images are to be viewed supported by said housing, a lens system on said housing for transmitting an image from the motion picture film to be viewed, said lens system being adapted to be inserted into the lens mounting of a motion picture projector after the projector lens has been removed and, thusly, be positioned adjacent the film plane of the motion picture film to be viewed, said lens system being a wide angle, short focal lens system, a mirror in said housing for reflecting the image transmitted by the lens system and projecting it on said screen, the optical path of said lens system being substantially parallel to the plane of said screen, said mirror being disposed at approximately 45° to the optical path of the lens system to thereby reflect the transmitted image from the lens system on to said screen, and said housing including an adjustable laterally extending standard means for engaging surfaces of the projector on which said attachment is to be placed for disposing and maintaining said screen in a substantially vertical position.

3,094,038
DUAL PURPOSE SHUTTER ARRANGEMENT FOR A SLIDE PROJECTOR
Theodore S. Briskin, Chicago, Robert L. Moore, La Grange Highlands, and Rudolph A. Rom, Stickney, Ill., assignors, by mesne assignments, to Revere Camera Company, a corporation of Delaware
Original application Mar. 21, 1955, Ser. No. 495,474, now Patent No. 2,968,993, dated Jan. 24, 1961. Divided and this application May 13, 1960, Ser. No. 29,058
2 Claims. (Cl. 88—28)



1. A slide projector comprising a housing, a lens unit slidably mounted in said housing, a shutter device, an operating shaft for said shutter device, mechanism disposed within said housing for operating said projector in successive cycles of operation, said mechanism including a cam assembly, said cam assembly including a shutter cam and a cycling cam, and means for rotating said cam assembly, means providing a mechanical connection between said shutter cam and said operating shaft whereby said shutter device will be operated once during each cycle of operation, means controlled by said cycling cam for terminating the cycle of operation while said shutter is in open position, said shutter device being mounted within said lens unit so that it forms a part thereof and is movable therewith in said housing, said shutter device including a sleeve having a noncircular opening for slidably receiving said operating shaft, said operating shaft having a noncircular cross section which is received within said sleeve so that a driving connection may be provided between said operating shaft and said shutter device without impairing the slidable movement of said lens unit, and additional means movable into engagement with said mechanical connection providing means for operating said shutter from its open position into a partially closed position.

3,094,039
KEY BITTING MACHINE
Roy C. Spain, Salem, Va., assignor to The Yale and Towne Manufacturing Company, Stamford, Conn., a corporation of Connecticut
Filed Mar. 18, 1960, Ser. No. 15,989
11 Claims. (Cl. 90—13.05)



1. In a machine of the class described for bitting keys for a rotary tumbler lock, said keys being bitted by forming bitting surfaces at different depths in longitudinal edges of the keys with the surfaces extending across said edges, a bitting cutter, a support for holding a key so that a longitudinal edge of the key is against said cutter whereby to form a bitting surface on the key, and means mounting said key support to rotate on a relatively short radius so that the cutter when cutting the bitting surface to different depths in the key will form the surface in different angular positions relatively to the key.

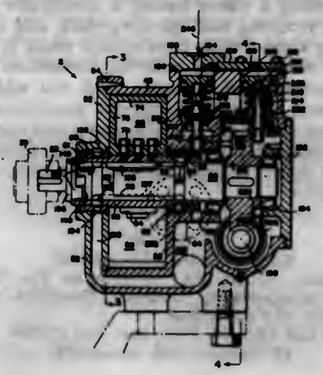
3,094,040
PLASTIC WATER METER
James H. Judge, Mathew H. Hetzel, and Archie E. Weingard, all of Abington Township, Montgomery County, Pa., assignors to American Meter Company, Incorporated, Philadelphia, Pa., a corporation of Delaware
Filed Nov. 29, 1957, Ser. No. 699,731
6 Claims. (Cl. 91—78)



1. A water meter measuring chamber part, said part being a single piece, injection molded, of one of the inert non-toxic thermoplastics of low water absorption, the part having a bottom wall with an upwardly facing spherical seat on its upper side and further having a radial rib on the lower side of the bottom wall with a one piece radial metal diaphragm having its lower portion cast into said rib during the injection molding operation and its upper

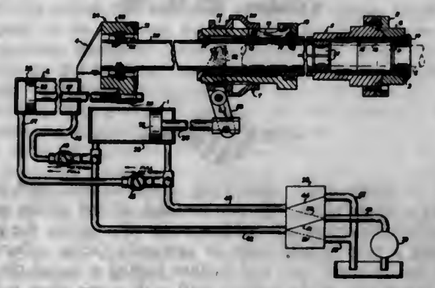
portion with an under cut inner edge surface in direct continuation of the spherical seat.

3,094,041
SERVOMECHANISM
Vincent S. Wagner, Lower Makefield Township, Bucks County, Pa., assignor to De Laval Steam Turbine Company, Trenton, N.J., a corporation of New Jersey
Filed Oct. 7, 1960, Ser. No. 61,128
8 Claims. (Cl. 91—375)



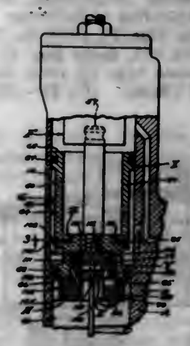
1. A servomechanism comprising a cylinder, a displaceable member within said cylinder, a source of hydraulic pressure for driving said member, an output member connected to said displaceable member for transmitting movement thereof, a pilot valve member having means for the hydraulic control of the operation of said displaceable member by said hydraulic pressure, said displaceable member constituting a follower driven in direct relation to the movement of said valve member, intermeshing lugs on said output member and valve member, the lugs on said output member normally being disengaged from and following the lugs on said valve member, means for operating said valve member, means normally preventing movement of said valve member to an extent that the lugs on the valve member engage and drive the lugs on the output member, and means operable to render inoperative the last-mentioned means, whereby the said output member may be driven directly by said valve member.

3,094,042
FLUID SYSTEMS
Robert E. Diener, Shaker Heights, Ohio, assignor to The Warner & Swasey Company, Cleveland, Ohio, a corporation of Ohio
Filed Mar. 14, 1960, Ser. No. 14,973
4 Claims. (Cl. 91—414)



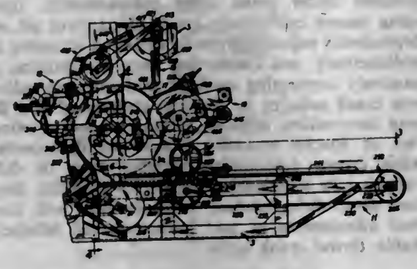
1. A pressure fluid supply and control system for a pair of double acting pressure fluid motors each having a cylinder and a piston movable therein and with the pistons of the motors being adapted to be operatively connected respectively to different movable elements of a mechanism and one of which elements is to have delayed actuation relative to the actuation of the other of said elements; said system comprising a pair of conduits connected to the cylinder of one of said motors on opposite sides of the piston thereof, pressure fluid supply and exhaust means including supply and outlet conduits, a main control valve for interconnecting said supply and outlet conduits with said pair of conduits to selectively and alternatively make one of said pair of conduits an inlet conduit and the other an exhaust conduit to supply pressure fluid to said cylinder of said one motor on one or the other side of the piston thereof and exhaust pressure fluid from said last named cylinder on the the opposite side of the piston thereof, a pair of branch conduits connected to the cylinder of the other of said motors on opposite sides of the piston thereof and each being connected respectively to a different one of said pair of conduits; and valves in said branch conduits and exclusively of the type providing for free pressure fluid flow therethrough from the pair of conduits to said cylinder of the other of said motors and a restricted pressure fluid flow therethrough from said last named cylinder to said pair of conduits whereby the pistons of said motors will be simultaneously subjected to pressure fluid from the supply conduit of the pressure fluid supply and exhaust means while the exhaust of pressure fluid from the cylinder of the other of said motors is restricted relative to the exhaust of the pressure fluid from the cylinder of said one motor thus causing delayed actuation of the other of said motors relative to said one motor.

3,094,043
SELF RETURNING DRIVE PISTON AND VALVE THEREFOR
Richard E. Powers, Monterey Park, and Charles W. Weis, Arcadia, Calif., assignors to Powers Wire Products Company, Inc., Monterey Park, Calif., a corporation of California
Original application Feb. 10, 1958, Ser. No. 714,412, now Patent No. 2,959,155, dated Nov. 8, 1960. Divided and this application Sept. 28, 1959, Ser. No. 842,906
3 Claims. (Cl. 91—416)



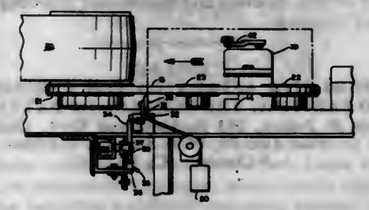
1. A drive piston for a fluid operated motor and operable in a cylinder to reciprocate therein, and including, a cylindrically shaped body slidably engaged in the cylinder, and having upper and lower heads of different diameters operating in separate bores, a valve seat between the piston heads and at the exterior of the piston, a port in communication with one end of the piston and opening at the seat, and a valve element of electric material encircling the piston and engaged with the seat.

3,094,044
APPARATUS FOR MANUFACTURING BAGS
Russell J. Williams, Clayton, and Milton J. Heimos, Lemay, Mo., assignors to Bemis Bro. Bag Company, St. Louis, Mo., a corporation of Missouri
Filed May 29, 1961, Ser. No. 113,346
28 Claims. (Cl. 93—22)



1. Apparatus for operating on gusseted bag tubes to form a bottom at one end of each tube, with the bottom being of the type comprising inwardly directed end flaps and side flaps one overlapping the other, said apparatus comprising a rotary drum, means for continuously driving the drum, means for feeding gusseted bag tubes one after another endwise toward the drum, at least one bottom-opening mechanism carried by the drum for operating on the leading end of each bag tube fed endwise thereto to open up a bottom at said leading end of each tube, said bottom-opening mechanism comprising two gripper units spaced apart laterally on the drum for operating on opposite sides of a bag tube, each gripper unit comprising a first gripper for gripping the radially inner fold of the gusset of the bag tube at the respective side of the tube, and a second gripper for gripping the radially outer fold of the gusset at the respective side of the tube, said first grippers being adapted to grip the radially inner folds of the gussets at opposite sides of the tube and hold them stationary relative to the drum, said second grippers being adapted to grip the radially outer folds of the gussets at opposite sides of the drum and being pivotally mounted on the drum for swinging movement relative thereto from a first angular position wherein they are positioned to grip the outer gusset folds at points outward of the first grippers to a second angular position trailing the first grippers for opening up a bottom at said leading end of the tube with the opened-up bottom comprising inwardly directed end flaps and leading and trailing flaps, said first and second grippers being mounted for lateral inward and outward movement relative to the drum between a retracted position outward of the sides of a tube and an inner position wherein they are adapted to grip the gusset folds, gripper actuating means for moving the grippers inward from their retracted position with the grippers open, then closing the grippers in timed relation to the feed of the bag tubes for gripping the gusset folds of a tube, and then swinging the second grippers to said second angular position, and means for biasing outward both the first and second grippers of at least one of the gripper units while the grippers are gripping the gusset folds to stretch the walls of the tube laterally and for biasing one of the grippers of each unit circumferentially of the drum for stretching the end flaps, said gripper actuating means including cam means fixed relative to the drum and cam follower means rotary with the drum for controlling inward and outward movement of the first and second grippers of each gripper unit, said cam means being formed to act via said cam follower means to move the first and second grippers of each gripper unit inward to the inner position for gripping the gusset folds of a tube and to release both the first and second grippers of said one gripper unit after the grippers have gripped the gusset folds of a tube for outward bias by said biasing means of both said first and second grippers of said one gripper unit while gripping the gusset folds of a tube to stretch the walls of the tube laterally.

3,094,045
CARTON ERECTING MACHINE
Robert B. Horn, Winchester, Ind., assignor to Ball Brothers Company, Inc., Muncie, Ind., a corporation of Indiana
Filed Dec. 26, 1961, Ser. No. 162,030
2 Claims. (Cl. 93—36)

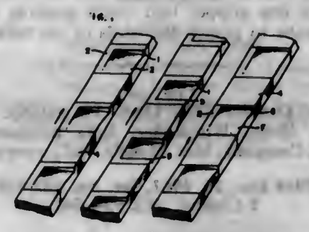


1. In a carton erecting machine, a pair of drive belts having spaced, parallel, live sides, with at least the surfaces of said live sides which are toward the opposite belt lying in parallel planes, means for driving said belts in a common direction, a pivotable squaring member having a carton-engaging surface lying in a plane perpendicular to the direction of movement of said belts and which is also perpendicular to the planes of said surfaces of said live sides, the length of said squaring member being substantially equal to the distance between the planes of said surfaces, the plane of said carton-engaging surface intersecting the live sides of said belts at intermediate portions thereof, said belts adapted to frictionally engage side walls of a carton to be erected and said squaring member being adapted to engage an end wall of the carton to restrict movement of the end wall of the carton while said belts urge said side walls toward said squaring member to position said end wall perpendicularly to both of said side walls, means supporting said squaring member for movement into and out of the path of a carton advanced by said belts, means for yieldingly holding said squaring member in the path of a carton, stop means normally preventing said squaring member from moving out of the path of a carton, switch means closed by engagement of an entering carton, delay means actuated by the closing of said switch means, and moving means actuated by said delay means to move said stop means away from said squaring member whereby an engaging carton moves said squaring member out of its path of advancement, and additional belt means beyond said engaging belts for engaging side walls of the carton and for moving it beyond said belts while holding the carton in the squared relationship.

3,094,046
ROADWAY MARKING
Robert Zipelius, Bremen, Germany, assignor to Henry Kellner, trading as Deutsche Cement-Industrie H. Kellner & Co.
Filed Jan. 22, 1959, Ser. No. 788,328
Claims priority, application Germany Jan. 28, 1958
4 Claims. (Cl. 94—1.5)

1. In combination a roadway and a marking system comprising spaced indentations along at least one side edge of said roadway, said indentations having substantially vertical substantially wedge shaped reflecting surfaces facing the line of traffic, the lower surfaces of said indentations sloping downwardly and outwardly of the

surface of said roadway and downwardly toward said reflecting surfaces, whereby surface drainage flows out-



wardly of said roadway and against said reflecting surfaces for self cleaning.

3,094,047
METHOD AND APPARATUS FOR PERFORATING AND PAINTING THE SURFACE OF PAVEMENTS
Charles B. Patton, 103 Beckleywood Blvd., Dallas, Tex.
Filed Oct. 21, 1958, Ser. No. 768,794
3 Claims. (Cl. 94—45)



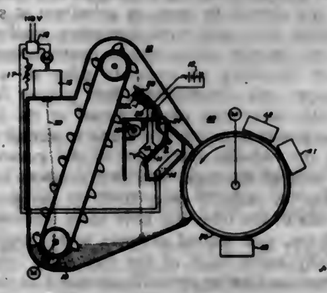
1. A stripe forming machine comprising in combination: a frame, means for propelling said frame along a relatively hard highway surface, an impacting drum assembly mounted on said frame, a multiplicity of reciprocating impact punch units extending radially from said drum assembly, means for slidably mounting said punch units upon said drum assembly for movement within predetermined limits, means mounted within said drum assembly for reciprocating the punch units in the lower area of said drum assembly which are in contact with the hardened surface whereby said surface is continuously impacted with sufficient force to form a string of individual indented perforations in said surface as said frame is propelled thereacross, air cleaning means on said frame rearward of said impacting drum assembly for cleaning the individual indented perforations formed in the surface by said impacting drum assembly, paint applying means on said frame rearward of said cleaning means for filling said perforations with paint to form a permanently visible stripe on said surface which is composed at least in part of slugs of paint inlaid below the normal wearing surface of the highway.

3,094,048
PAVEMENT SURFACE FINISHING APPARATUS
Michael I. Hudis, Waukesha, and George Mikulowicz, Milwaukee, Wis., assignors to Chain Belt Company, Milwaukee, Wis., a corporation of Wisconsin
Filed Apr. 13, 1959, Ser. No. 806,003
14 Claims. (Cl. 94—45)



1. In a pavement slab finishing machine, a frame adapted to straddle a slab of pavement being laid, a flexible crown determining element carried by said frame in position to extend transversely of the slab being laid, a series of actuating cranks each having an infinitely adjustable throw crank arm pivotally mounted on said frame in operative relationship with said flexible crown determining element, said cranks being arranged in spaced relationship therealong, a crank pin movably mounted on each of said crank arms for radial adjustment therealong, screw and nut adjusting means operatively arranged to effect incremental movement of each movable crank pin along its respective crank arm to provide infinitely variable adjustment of the throw of each of said adjustable throw crank arms independently, interconnecting means operatively arranged to pivot all of said independently adjusted pivotally mounted actuating cranks simultaneously, and connecting force transmitting means operatively connecting each of said infinitely adjustable throw crank arms to an adjacent element of said flexible crown determining member, whereby upon pivoting said series of spaced actuating cranks simultaneously said flexible crown determining member may be deflected throughout its length in a manner to establish therein a crown determining contour in accordance with the individual adjustments of said interconnected infinitely adjustable throw crank arms.

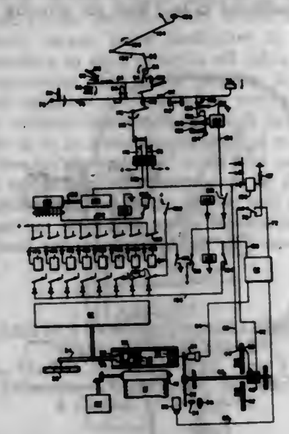
3,094,049
XEROGRAPHIC DEVELOPER MEASURING APPARATUS
Christopher Snelling, Brockport, N.Y., assignor to Xerox Corporation, a corporation of New York
Filed Feb. 3, 1961, Ser. No. 86,960
10 Claims. (Cl. 95—1.7)



1. A method of measuring concentration of electroscopic powder in a mixture with a carrier medium including connecting a bias potential between isolated conductive layers formed in a predetermined pattern on an insulating support, moving a quantity of mixture on said pattern to electrostatically deposit powder thereon from the mixture, and comparing the pattern of powder deposition to a deposition pattern of known powder concentration.

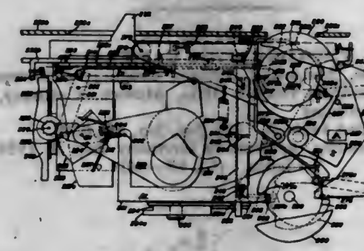
3,094,050
PHOTOTYPE COMPOSING METHOD
Rene A. Higonnet, Cambridge, and Louis M. Moyroud, West Medford, Mass. (both % Graphic Arts Research Foundation, Inc., 58 Charles St., Cambridge, Mass.)
Filed Aug. 31, 1959, Ser. No. 837,043
4 Claims. (Cl. 95—4.5)

1. The method of type composition which includes the steps of photographing on a first sensitized sheet variable-width, variable-spaced characters and space indicia in unjustified lines in direct response to operation of a keyboard, transferring said first sheet to a first support, supporting a second sensitized sheet parallel to said first sheet, moving an erect image forming optical system continuously between and parallel to said sheets and to a line of characters on said first sheet while permitting only a progressively moving portion of the line image to be formed on the second sheet, whereby said line is progressively projected on to said second sheet, and intermittently relatively moving said sheets parallel to the direction of said line at the instants when said indicia



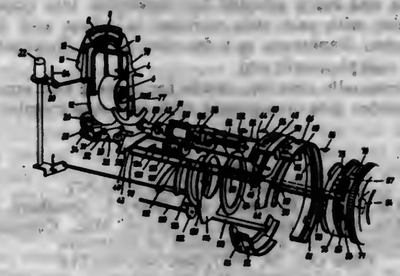
are in position for projection to effect incremental changes in the spaces between said characters on said second sheet.

3,094,051
PHOTOGRAPHIC EXPOSURE CONTROL SYSTEM
Miller R. Hutchison, Jr., and Guilford Edwin Kindig, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed Dec. 28, 1961, Ser. No. 162,861
25 Claims. (Cl. 95—10)



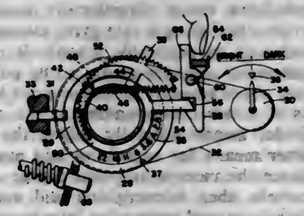
1. In a camera, an exposure control system comprising, in combination: an exposure meter including a member automatically displaceable throughout a range of positions as a function of field brightness; a first exposure regulating device comprising an adjustable lens diaphragm; a first movable control member coupled to said diaphragm; a second exposure regulating device comprising an adjustable shutter speed setting member; a second movable control member coupled to said setting member; an adjustable film sensitivity compensating member; a third movable control member coupled to said compensating member; a fourth movable control member; sensing means movable with said fourth control member and disposed in sensing relation with said displaceable member; first and second differential mechanisms, each intercoupling a respective pair of said control members; means intercoupling said first and second differential mechanisms; and manually operable means for moving said fourth control member to move said sensing means into sensing engagement with said displaceable member, thereby moving at least one of said first and second control members for adjusting at least one of said regulating devices as a function of field brightness.

3,094,052
PHOTOGRAPHIC CAMERA
Franz Singer, Munich, Germany, assignor to Compur-Werk G.m.b.H. & Co., Munich, Germany, a firm of Germany
Filed May 15, 1962, Ser. No. 194,757
Claims priority, application Germany May 19, 1961
12 Claims. (Cl. 95—10)



1. A photographic camera comprising a focusing member, a shutter speed setting member, a flash factor setting member, an adjustable diaphragm, photoelectric exposure mechanism including a shiftable mounting member and a galvanometer coil mounted on said mounting member and rotatable with respect thereto and a pointer operatively connected to said coil to be moved thereby, means for clamping said pointer temporarily in a fixed position to serve as an abutment stop for a feeler, means including a feeler engaging the clamped pointer for determining an adjusted position of said diaphragm, transmission means for moving said mounting member thereby to cause bodily movement of said galvanometer coil with said mounting member, and means for making said transmission means responsive, at will, either to said shutter speed setting member, or to said focusing member and said flash factor setting member jointly.

3,094,053
EXPOSURE COMPENSATING DEVICE FOR PHOTOGRAPHIC CAMERAS
Ernst Lieser, Stuttgart-Vaihingen, Germany, assignor to Eastman Kodak Company, Rochester, N.Y.
Filed Oct. 17, 1962, Ser. No. 231,118
Claims priority, application Germany Oct. 21, 1961
2 Claims. (Cl. 95—10)



1. In a camera having a taking lens axis and adapted to mount, on said axis, any of a plurality of taking lenses having different maximum exposure apertures, each of said taking lenses having associated therewith a respective adjustable diaphragm normally in a maximum-aperture adjustment, said camera having an exposure control system including an electrical measuring instrument and a photocell illuminatable by scene light through the taking lens that is mounted on the camera, said measuring instrument having an indicator positionable as a function of the illumination of said photocell, the combination comprising:

(*a*) means carrying an index mark;

(*b*) means for moving said measuring instrument to

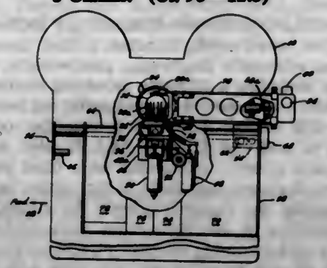
position said indicator in a predetermined relation with said index mark;

(*c*) a stop member coupled to said instrument for movement therewith;

(*d*) a sensing member coupled to the diaphragm associated with said mounted lens, said sensing member having an initial position spaced from said stop member and being adapted for movement into engagement with said stop member to adjust said last-named diaphragm as a function of the illumination of said photocell; and

(*e*) manually operable means for moving said sensing member into engagement with said stop member.

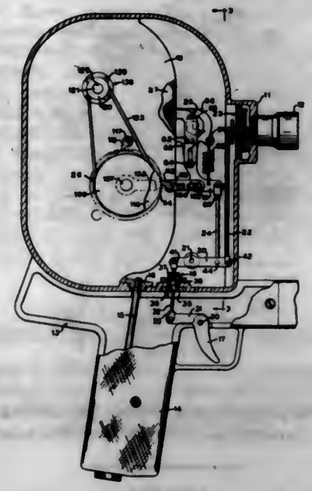
3,094,054
CAMERA STABILIZED MOUNT
Donald E. Moors, Pasadena, and Harry L. Sandberg, Alhambra, Calif., assignors to Hycon Mfg. Company, Pasadena, Calif., a corporation of Delaware
Filed Oct. 29, 1957, Ser. No. 693,114
5 Claims. (Cl. 95—12.5)



1. A stabilization system for controlling cameras, comprising: a three axis, flexure supported gimbal for mounting a camera on a pivot point; torquer solenoids connected directly and gearlessly to said gimbal to apply instantaneous torque respectively about the three axes of said gimbal, each of said torquer solenoids having a linear tractive force and displacement characteristic over its working stroke; rate gyros for sensing camera motion respectively about the three axes of said gimbal and responsively generating rate signals; autobalance means energizable for balancing the camera; servo amplifier means for amplifying said rate signals and energizing said torquer solenoids to normally oppose the camera motion, said servo amplifier means additionally energizing said autobalance means directionally according to phase of the rate signal from a rate gyro; means energizable for introducing an adjustable magnitude command signal into said servo amplifier means to be nullified by a generated rate signal whereby the camera can be moved about an axis at a rate corresponding to the command signal magnitude; means normally caging the camera; and programmer means for energizing said autobalance means to balance the camera and said caging means to uncage the camera, then de-energizing said autobalance means and energizing said means for introducing an adjustable magnitude command signal into said servo amplifier means and operating the camera for an exposure, and finally de-energizing said means for introducing an adjustable magnitude command signal and said caging means to cage the camera.

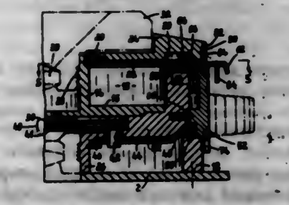
3,094,055
CAMERA
Norman E. Elsas, 3025 E. Pine Valley Road NW., Atlanta, Ga.
Filed Dec. 16, 1958, Ser. No. 780,793
6 Claims. (Cl. 95—31)

1. In a camera having a casing with a shutter mechanism and film take-up mechanism, a bracket secured to said casing, said bracket defining a D-shaped slot, a film actuator, a cam follower on said actuator adapted to ride in said D-shaped slot so as to guide the motion of said actuator, a lever pivoted to said casing, selectively operable means connected to said lever for pivoting said lever,



means responsive to movement of said lever for actuating said shutter mechanism, means also responsive to movement of said lever for moving said film actuator, and means responsive to a predetermined movement of said film actuator for operating said film take-up mechanism.

3,094,056
PHOTOGRAPHIC CAMERA
Kurt Gebele, Munich, Germany, assignor to Compur-Werk Friedrich Deckel OHG, Munich, Germany, a firm of Germany
Filed June 30, 1959, Ser. No. 824,052
Claims priority, application Germany July 9, 1958
2 Claims. (Cl. 95—64)



1. A photographic shutter and diaphragm assembly comprising a rotationally stationary member, a shutter speed control member rotatable relative to said stationary member through an internally timed exposure range controlling internally timed exposures between the limits of the fastest internally timed exposure and the slowest internally timed exposure and having a bulb exposure position beyond the slowest internally timed limit of said range, and a diaphragm aperture control member also rotatable relative to said stationary member through a range between the limits of maximum aperture and minimum aperture, characterized by the fact that rotation of said speed control member to control a faster exposure is in the same direction as rotation of said aperture control member to decrease the size of the diaphragm aperture,

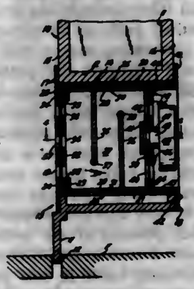
and by the fact there is releasable coupling means for coupling said speed control member and said aperture control member to each other for conjoint rotation in the same direction, in only a single position of relative orientation of said control members with respect to each other, said coupling means being ineffective to couple said control members to each other in all other positions of relative orientation, said single position in which said two control members are coupled to each other being a position of relative orientation in which said speed control member is in an intermediate position at a substantial distance from the slowest limit of its said range and said diaphragm aperture control member is at the maximum aperture limit of its said range, so that said speed control member can not be moved to the slowest limit of its internally timed range except when said coupling means is released.

3,094,057
APPARATUS FOR PHOTOGRAPHICALLY PRINTING ON FILM
John A. Maurer, 116 W. 29th St., New York, N.Y.
Filed May 19, 1960, Ser. No. 30,314
6 Claims. (Cl. 95—75)



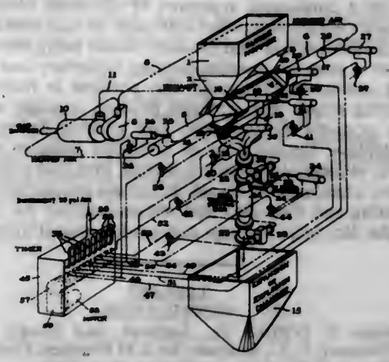
1. An apparatus for photographically printing on a strip of sensitized film successive uniformly spaced, longitudinally alternating picture areas and audible message areas, said apparatus comprising a pair of contact printing means each including a shutter means, first film transport means for transporting a first strip of film sequentially past both said printing means, said first film strip being the strip to be printed upon, second film transport means for transporting a second strip of film bearing longitudinally spaced apart picture areas past one of said printing means in superimposition with the first film strip while both film strips pass said one printing means, third film transport means for transporting a third film strip bearing longitudinally spaced audible message areas past the other one of said printing means in superimposition with the first film strip while both said first and said third film strip pass said other printing means, said printing means being spaced apart by a distance corresponding to the longitudinal spacing of said areas on the second and the third film strip, each of said picture areas being associated with one of said message areas, printing control means actuating sequentially both said shutter means for simultaneously printing a picture area and an audible message area respectively upon the first film strip while all three film strips are stationary, and said film transport means for moving all three film strips through predetermined respective distances upon completion of the printing of both areas to place said film strips in respective positions in which a succeeding picture area and the associated audible message area on the second and the third film strip respectively are in superimposition with a succeeding portion of the first film strip for repeating the aforesaid printing cycle, and common drive means drivingly coupled with said transport means for driving the same continuously to effect continuous transport of all three films, and a pressure means associated with each of said contact printing means, each of said pressure means being movable between a pressure position holding stationary and in pressure contact superimposed film portions in front of said printing means and a release position releasing said held film portions for transport, said printing control means controlling the positions of both said pressure means to effect sequential movement thereof into said pressure position when and while said shutter means are actuated for printing and then into said release position for transport of the film strips through said predetermined distances.

3,094,058
VENTILATOR
Edward F. O'Brien, Jr., Armonk, and Joseph Gerbasi, Freeport, N.Y., assignors to A-O Products Corporation, Bronx, N.Y., a corporation of New York
Filed Aug. 28, 1961, Ser. No. 136,144
3 Claims. (Cl. 98—97)



1. A ventilator arranged to be positioned in substantially planar relationship with the rail of a door, window or the like, with a slot formed therethrough, to be mounted within substantially the thickness of the rail, comprising a front cover plate having a pair of parallel guide plate means spaced apart substantially the height of the slot on one face thereof arranged to project into said slot of said rail, a tubular baffle member having upper and lower walls having engagement with said guide plate means and slidable within the limits of the ends of said slot between said guide plate means, said baffle having forward and rearward walls, a rear cover plate member coupled to said guide plate means, said front cover plate and rear cover plate having aligned ventilating holes and said forward and rearward walls of said baffle having aligned ventilating holes separated by lands, the holes of said baffle and said cover plates being aligned in one alidable position of said tubular baffle member, the lands of said baffle obscuring said ventilating holes in said front and rear cover plates in another position of said baffle member, end closure members for the opposite ends of said front cover plate, said guide plate means and end closure members each having outstanding ribs arranged to be co-planar and forming, with the front cover plate, a screen retaining slot along the edges of said plate and end members.

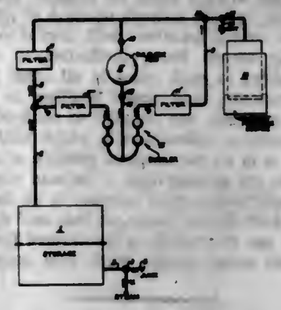
3,094,059
VERTICAL GUN-PUFFING APPARATUS
James V. Graham, Gordon A. Goodrich, and Roger B. Miller, Battle Creek, Mich., assignors to General Foods Corporation, White Plains, N.Y., a corporation of Delaware
Continuation of abandoned application Ser. No. 710,230, Jan 21, 1958. This application Oct. 27, 1959, Ser. No. 849,119
9 Claims. (Cl. 99—238)



1. Cereal puffing apparatus comprising preheating means, a pressurizing chamber means beneath said preheating means, said two means being arranged to provide a substantially vertical path of movement for the cereal charge from said preheating means into the top and out of the bottom of said chamber, said pressurizing chamber having a substantially uniformly cross-sectioned passage throughout its entire length, valve means controlling the passage of the charge from said preheating means into said chamber including an inlet valve closing the top of said chamber, discharge valve means abutting the bottom of said chamber and having a passage therethrough which is in communication with and has substantial cross-section area relative to that portion of the pressurized chamber immediately adjacent thereto, said discharge valve means comprising an obturating valve in said passage and movable between an obturating position and an open position in which said passage is unrestricted, whereby a cereal charge will be discharged from said chamber with a non-throttling action, power-operated actuating means for each of said valve means, and timed power-control means for said actuating means for operating said first valve means to pass the charge by gravity into said chamber and close said inlet valve, and then operating said discharge valve means to cause the charge to escape from the bottom of said chamber.

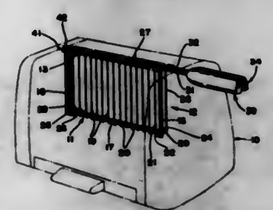
3,094,060
APPARATUS FOR STORING FERMENTABLE LIQUIDS
Yves Menoret, Montreuil sous Bois, and Roger Gautheret, Paris, France, assignors to Societe en nom collectif Pernod & Ricard, Paris, France
Filed July 6, 1960, Ser. No. 41,185
3 Claims. (Cl. 99—269)

1. Apparatus for the sterile storage of fermentable liquids comprising storage means for storing said liquid, and means coupling said storage means to a source of gas at a substantially constant pressure to exert said pressure on the liquid, said gas being inert with respect to said liquid and preventing fermentation thereof, the latter said means including measuring means for measuring the pressure of said gas to detect fermentation and a feed line between said source and said storage means connected in parallel with the measuring means, the measuring means including a bubbling device for purifying the gas, and means for selectively controlling communica-



tion of the source of gas with the feed line and the measuring means.

3,094,061
BROILER GRID
David F. Cole, 513 Beechwood Drive, Mansfield, Ohio
Filed Aug. 26, 1960, Ser. No. 52,225
2 Claims. (Cl. 99—402)



1. A broiler grid comprising a pair of generally rectangular grid sections for holding a food product therebetween, hinge means interconnecting said sections along corresponding bottom portions of the same, closure wires, said closure wires forming the upper edges of the grid sections and extending parallel to the thus connected bottom portions of the same, said closure wires projecting beyond the bodies of the sections at corresponding sides of the same and in the same general direction relative to the latter, the two closure wires being formed so that the projecting portions thereof diverge outwardly when the wires are brought into juxtaposition, and handle extensions secured to the projecting ends of the closure wires at angles thereto such that the handle extensions converge from the projecting portions of the closure wires when brought together, initial closure of the sections one upon the other thereby resulting in limited contact of the outer ends of the handle extensions and of the remote ends of the closure wires, with hand pressure applied to the handle extensions to bring the same fully together resiliently forcing the adjacent corner portions of the grid sections into contact.

3,094,062
WATERMELON CUTTER-PRESS
Jan Boeke, 70 Monument St., Concord, Mass., and Joe N. Welch, 129 Plimpton St., Walpole, Mass.
Filed Sept. 21, 1961, Ser. No. 139,646
1 Claim. (Cl. 100—94)

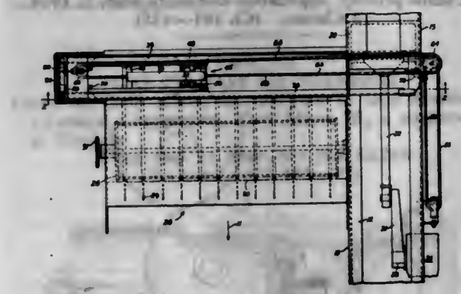
A watermelon processing device comprising, in combination, a U-shaped channel cutter wherein the mouth of the channel is convex lengthwise of said cutter, said cutter being provided with V-shaped cutting serrations following the U form of the cutter, a handle at one end of the said cutter, a juice plate at the other end of said cutter, said plate having openings therein to pass juice

and trap seeds, a first hinge on the bight portion of said U-shaped cutter, said juice plate being mounted on said hinge on one of the edges of said plate and transversely of said cutter, and a squeezer arm formed to move within and essentially fill said U-shaped cutter, said squeezer arm being adapted for nesting relation in said cutter during the operation of said squeezer and to lie along the outside top of said cutter when out of operation, a second hinge on said squeezer arm, said juicer plate being mounted on said second hinge on the opposite edge of



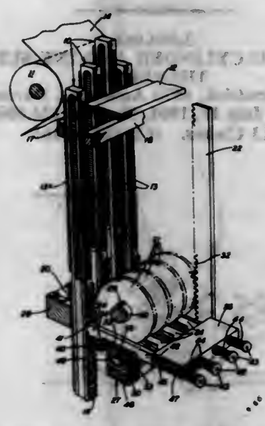
said juicer plate with respect to said first hinge, whereby said squeezer arm may be pivoted in and out of said U-shaped cutter, with said juice plate adapted to swing down and partially block the opening formed between said bight portion and said squeezer arm when said squeezer arm is in its nested, operative position within the U-shaped cutter, said juice plate, further, being adapted to swing up and over, through said hinges, to lie along the top of said U-shaped cutter bight, when said squeezer arm is in its inoperative position, along the top of U-shaped cutter.

3,094,063
BALER FEED MECHANISM
John H. Shepley, Lancaster, Pa., assignor to Sperry Rand Corporation, New Holland, Pa., a corporation of Delaware
Filed June 29, 1961, Ser. No. 120,695
2 Claims. (Cl. 100—142)



1. In a hay baler, the combination of a bale case having an infeed opening in a side wall thereof, a plunger reciprocable in said bale case, a hay receiving platform extending laterally from said side wall and communicating with said opening, a track mounted above said platform and extending transverse to the direction of reciprocation of said plunger, said track having an end adjacent said bale case opening and an end remote therefrom, a feeder carriage mounted on said track and reciprocable thereover between an extended position adjacent said bale case and a retracted position adjacent said track remote end, a chain extending alongside said track, means linking said chain to said carriage, means connecting said chain to said plunger whereby when the plunger is reciprocated the chain is oscillated and said carriage is moved toward and away from said bale chamber in timed relation to the reciprocations of said plunger, said connecting means including an element adapted to break responsive to a feeding overload condition on movement of said carriage toward said bale case to stop the feeding and including means to move the carriage toward said retracted position on the next retracting stroke after breakage of said element, said carriage being free to overrun said retracted position after breakage of said element, and rubber block means fixedly mounted adjacent said track remote end in the path of said carriage to be engaged thereby when the carriage overruns, said rubber block means being spaced from the carriage when the carriage is in said retracted position and the hysteresis of the rubber block means being such that when the carriage overruns and engages the rubber block means, energy is absorbed and spring-back of the carriage is reduced.

3,094,064
POSITIONING MECHANISM IN SELECTIVE TYPE PRINTING MACHINES
Paul L. Pecchenino, San Jose, Calif., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Jan. 4, 1960, Ser. No. 214
8 Claims. (Cl. 101—93)

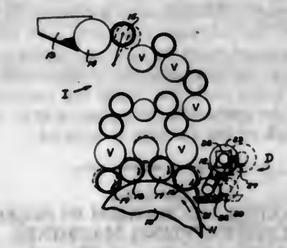


1. A printer comprising an elongated type carrier movable lengthwise and transversely during a positioning operation thereof, an intermittently moving drive means laterally adjacent to, and acting longitudinally of, the type carrier in a plurality of successive, spaced increments of known magnitude for each positioning operation of the type carrier, means urging the type carrier transversely into operative engagement with the drive means, and controlled means acting oppositely to said urging means in intervals between selected increments of movement of the drive means for moving the positional member out of operative engagement with the drive means.

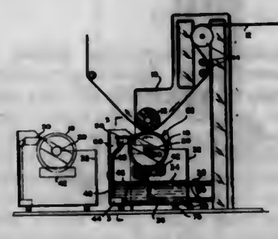
3,094,065
DAMPENING MECHANISM FOR LITHOGRAPHIC PRINTING PRESS
Webster C. Roberts, South Euclid, Ohio, assignor to Harris-Intertype Corporation, Cleveland, Ohio, a corporation of Delaware
Filed Apr. 6, 1959, Ser. No. 804,197
12 Claims. (Cl. 101—148)

11. In a lithographic printing press including a plate cylinder having a printing surface thereon, an ink supply, roller means for continuously transferring ink from the supply to said printing surface comprising a plurality of ink transfer rollers, a dampening roller supported in pressure relationship with one of said ink transfer rollers and having an uninterrupted surface adapted to run in contact with said one of said ink transfer rollers, means for driving the dampening roller to run said uninterrupted surface at a speed different from the surface speed of said one of said ink transfer rollers contacted thereby.

and means for supplying ink repellent fluid to said uninterrupted surface of the dampening roller, said uninterrupted surface being a surface which is receptive to the ink repellent fluid supplied thereto and at the same time relatively nonreceptive to ink.



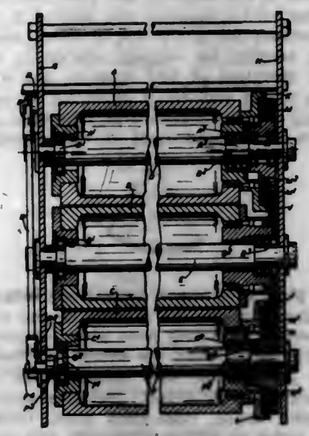
3,094,066
PRINTING CYLINDER AND INK SUPPLY THEREFOR
Robert E. Kendrick, 4575 Annapolis, Dayton, Ohio
Filed July 17, 1961, Ser. No. 124,600
13 Claims. (Cl. 101—216)



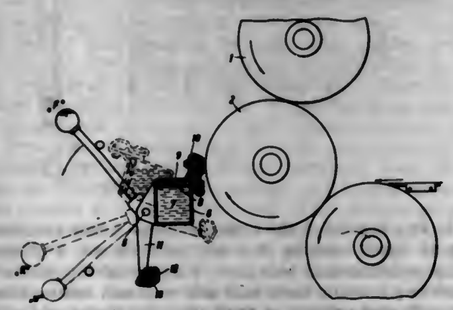
1. In a printing press; a press frame, a printing cylinder rotatably mounted in the press frame and detachable from the press frame, a sump for printing fluids in the frame beneath the cylinder, means in the sump including a pump for conveying printing fluids to the cylinder, said cylinder having shaft means by which it is supported in the press frame, and said sump having side walls extending upwardly to the region of said shaft means, said cylinder and sump being removable from the press frame substantially as a unit and said side walls being adapted for receiving the shaft means on the cylinder for supporting the cylinder when it is removed from the press frame, said sump having rollers moveably supporting the sump for movement in a direction at right angles to the axis of rotation of said cylinder.

3,094,067
CYLINDERS FOR PRINTING MACHINES
Joseph Henry Williams, Reigate, Surrey, England, assignor to The Monotype Corporation Limited, London, England, a British company
Filed Feb. 19, 1962, Ser. No. 174,050
Claims priority, application Great Britain Feb. 22, 1961
4 Claims. (Cl. 101—218)

1. A driving and adjusting mechanism comprising: a first shaft, a roller eccentrically mounted on said first shaft and adapted to rotate about an axis offset from the axis of said first shaft, an internal gear fixed to said roller and adapted to rotate therewith, an intermediate gear means rotatably mounted on said first shaft including a gear meshing with said internal gear, a second shaft having an axis spaced from and substantially parallel to the axis of said first shaft, a gear mounted on said second shaft in mesh with said intermediate gear means, and means for rotating said gear on said second shaft the depth of mesh between said gears remaining constant as the distance between the roller axis and the axis for the second shaft changes.



3,094,068
ARRANGEMENT FOR CLEANING PRINTING INK, DIRT OR THE LIKE FROM CYLINDRICAL SURFACES IN A PRINTING PRESS
Erich Gericke, 14 Flemmingstrasse, Berlin-Steglitz, Germany
Filed Feb. 27, 1961, Ser. No. 91,861
Claims priority, application Germany Mar. 3, 1960
2 Claims. (Cl. 101—425)

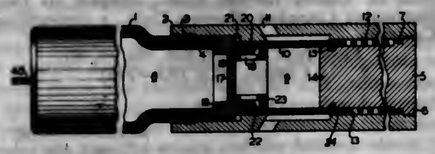


1. A device for cleaning printing ink, dirt or the like from a cylinder of printing presses comprising a shaft adjacent said cylinder extending parallel to the axis of said cylinder, a pivotally mounted tank on said shaft for a cleaning liquid, said tank being pivotal between an applying position and a rest position, a pivotally mounted wiper on said shaft angularly spaced from said tank and movable therewith and, in addition, pivotal from said rest position to contact said cylinder for wiping, and a wick mounted on said tank for drawing cleaning liquid from said tank, said wick having a portion extending outside of said tank serving as means to contact said cylinder for applying cleaning liquid to said cylinder and a portion extending inside of said tank along the top thereof when said tank is pivoted to applying position and said wiper is spaced from said cylinder so that when pivoted to applying position the wick is removed from the liquid in said tank and when pivoted away from said cylinder said wick dips into said liquid in said tank to receive a limited quantity of liquid to be applied to a cylinder surface.

3,094,069
METHOD OF BLASTING AND AMMONIUM NITRATE EXPLOSIVE COMPOSITION
Joseph R. Hradel, Mount Pleasant, and Carl Kenneth Bjork, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed Jan. 5, 1959, Ser. No. 784,894
5 Claims. (Cl. 102—23)

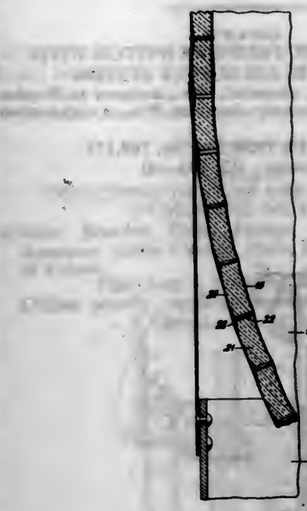
1. The improved method of blasting which comprises preparing an admixture comprising of from about 60 to 95 percent by weight of solid particulate ammonium nitrate having a particle size of from about 8 to 100 mesh, from 2.5 to 35 percent of a solid particulate light metal selected from the group consisting of magnesium, magnesium-base alloys, aluminum, aluminum-base alloys and magnesium-aluminum binary alloys, said particulate light metal having a particle size of from about 28 to 100 mesh, not more than 1 percent of the said metal particles passing a 325 mesh sieve, and from about 3 to 10 percent of a petrolic liquid selected from the group consisting of crude oil and liquid crude oil fractions, slurrying said admixture with an excess of said petrolic liquid, pumping said slurry into a borehole in an earth formation, settling said admixture whereby a detonable composition is formed in the bottom of said borehole and detonating the said admixture with a detonator having initiating power at least as great as a 1 ounce charge of cyclotrimethylenetrinitramine.

3,094,070
GAS RELEASE MECHANISMS
Lionel E. Goff, Alton, Ill., assignor to Olin Mathieson Chemical Corporation, East Alton, Ill., a corporation of Virginia
Filed Aug. 31, 1960, Ser. No. 53,218
1 Claim. (Cl. 102—25)



A valve device for explosively liberating a charge of compressed gas comprising a substantially cylindrical housing having a main chamber and an adjoining second chamber operative to contain gas under pressure, a lateral port in said housing, a slidable two-piece sleeve valve assembly in said housing said valve assembly including a main valve and a seal ring normally in abutting relation, said main valve including a head portion concentrically positioned in said seal ring, said head portion having lateral ports adapted to communicate with the lateral port in said housing upon separation of said main valve and said sealing ring, a passageway in said main valve to equalize pressure in said main and second chambers during charging, means cooperating with said housing and the valve assembly normally biasing and releasably holding the assembly in a position which closes the said housing port, said valve assembly having faces of differential area effective to cause said assembly to move as a unit in a first direction in response to fluid pressure impressed upon said faces, means cooperating with said housing and with said seal ring of said vaive assembly operative to stop motion of said seal ring to break the unity of the assembly and thereby increase the effective differential area of said main valve, said main valve of the valve assembly being operative by virtue of its inertia and increased effective area to continue to move in said first direction effective to open said port.

3,094,071
VACUUM INSULATED STORAGE TANKS FOR MISSILE USE
John Heller Beckman, Indianapolis, Ind., assignor to Union Carbide Corporation, a corporation of New York
Filed June 30, 1959, Ser. No. 824,022
9 Claims. (Cl. 102—49)



1. A cryogenic liquid storage container for missile use comprising: an inner vessel, an outer shell surrounding and outwardly spaced from said inner vessel defining an evacuable insulating space therebetween; a plurality of low thermally conductive brace members positioned a substantially uniform lateral distance apart in said insulating space; said inner vessel and outer shell having a wall thickness sufficiently thin such that neither is capable of withstanding by itself the entire pressure differential between said inner vessel and the ambient atmosphere; and said brace members, said inner vessel and said outer shell being cooperatively constructed and arranged to maintain said brace members in a state of compression, to elastically compress said inner vessel such that the inner vessel walls elastically buckle between said brace members, and to elastically stretch said outer shell.

3,094,072
AIRCRAFT, MISSILES, MISSILE WEAPONS SYSTEMS, AND SPACE SHIPS
Arthur R. Parilla, 34 Crestview Road, Mountain Lakes, N.J.
Filed Dec. 9, 1957, Ser. No. 701,571
27 Claims. (Cl. 102—50)

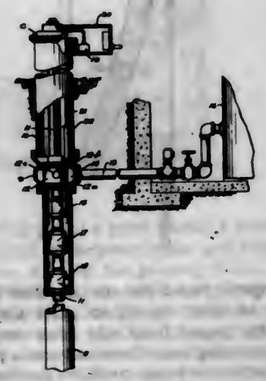
11. A jet nozzle for a reaction combustion engine, including, in combination: means providing a chamber for propellant gases; an axially disposed nozzle plug for directing the flow of propellant gases through the aft end of the engine; a cowl surrounding the plug and concen-

tric therewith, the cowl being spaced from the plug to define a throat transverse to the plug axis, through which the propellant gases flow aft between the cowl and the plug; means for directing propellant gas pressures against



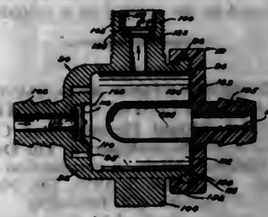
the cowl in both forward and aft directions to reduce the force required to move the cowl axially against gas pressures; and, means for moving the cowl axially against the resultant gas pressures acting thereon.

3,094,073
PUMP CONTROL PRESSURE SWITCH WITH AUTOMATIC AIR SUPPLY SYSTEM
Vaughan L. Andrew, Superior, Wis., assignor to Duplex Manufacturing Company, Superior, Wis., a corporation of Wisconsin
Filed Sept. 10, 1958, Ser. No. 760,151
4 Claims. (Cl. 103—6)



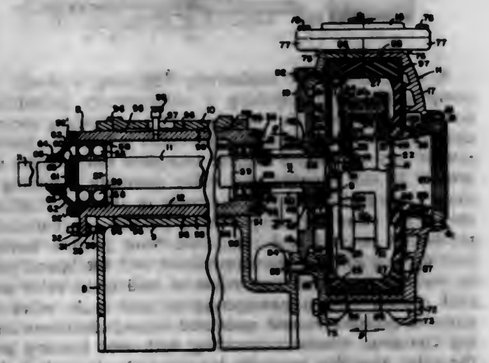
1. A pump control switch for use with pressurized water systems including a well casing, a pressure tank, a remotely disposed well pipe communicating with said pressure tank and having a portion disposed below the frost level of the ground, and pumping mechanism disposed in the well casing for supplying water to said tank under pressure, an electric pressure-responsive pump control switch located in close association to said well casing in a readily accessible location and having control connection with the pumping mechanism for actuating the same in response to variations in the pressure within the well system, a hollow conduit mounted in fixed selected relation to a portion of the well system and having said control switch mounted thereon, the lower end of said conduit communicating with the portion of the well pipe disposed below the frost level to permit transmission of the pressure in said system to said switch, and means defining an air reservoir chamber at the lower end of said conduit to assure a sufficient air supply to prevent water from reaching said switch due to compression of the air in said reservoir by the pressure in said well system.

3,094,074
BLADDER FUEL PUMP
Charles H. Tuckey, Cass City, Mich., assignor to Walbro Corporation, Cass City, Mich., a corporation of Michigan
Filed Dec. 27, 1960, Ser. No. 78,428
5 Claims. (Cl. 103—44)



1. In a small fuel pump adapted to be mounted in and supported by a fuel line of an internal combustion engine for remote operation and which comprises, a small elongate hollow shell open at one end, a unidirectional inlet means and outlet means in said shell spaced from the open end thereof, a cap for the open end of said shell, said cap including resilient means, having a snap-over relation thereto, and a pumping element in said shell comprising a thin walled, digital-shaped pouch of flaccid material projecting into said shell spaced from the walls thereof, the margins of said pouch being supported and confined around the edges of the open end of said shell between the shell and the cap, said pouch being otherwise unsupported in said shell, said cap having an opening to receive remote pulsations from the crank case of an engine, that improvement which comprises a radially extending surface on said cap to lie directly adjacent a similar radial surface at the end of said shell, wherein the peripheral portions of said pumping element are confined between said radial surfaces, and circumferentially spaced minute projections around one of said surfaces for projecting into engagement with the peripheral portions of said pumping element to lock it between said surfaces.

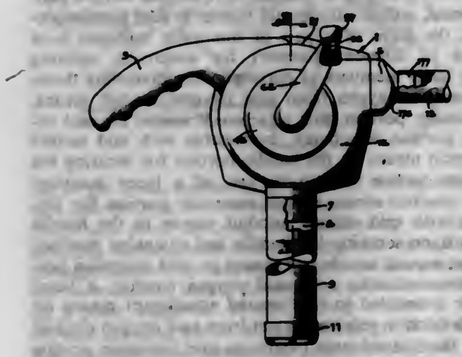
3,094,075
CENTRIFUGAL PUMPS
Leland H. Logue, Denver, Colo., assignor to Denver Equipment Company, Denver, Colo., a corporation of Colorado
Filed June 8, 1960, Ser. No. 34,787
8 Claims. (Cl. 103—103)



1. In a pump having a base, a housing mounted on said base and having an axial inlet, a tangential outlet and an opening opposite said inlet, a rotatable shaft extending through said opening in said housing opposite

said inlet, an impeller mounted on the end of said shaft within said housing and adapted to pump liquid from said inlet to said outlet and having means for driving fluid away from said shaft opening when said shaft is rotating, the improvement which comprises a blind plate forming the peripheral face of said opening and having a sealing surface thereon; sealing means operative to engage said sealing surface to prevent leakage of fluid within said housing through said shaft opening when said shaft and said impeller are motionless, but which is disengaged from said sealing surface during rotation of said shaft; means for causing said sealing means to engage said housing when said shaft is motionless and to be disengaged from said housing upon rotation of said shaft; and means for longitudinally adjusting said shaft, said impeller, said blind plate and said sealing means to adjust the clearance between said impeller and said inlet.

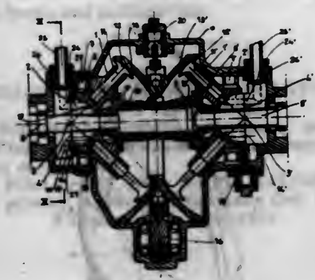
3,094,076
PUMP ASSEMBLY
Robert W. Hyde, Cincinnati, Ohio, assignor to Superior Tool and Grinding Co., House Springs, Mo., a corporation of Missouri
Filed Aug. 9, 1961, Ser. No. 130,357
11 Claims. (Cl. 103—150)



1. A pump comprising, a housing having inlet and outlet means therein, impeller means mounted within said housing, shaft means journalled within said housing, a reverse endless cam groove in said shaft means, a follower sleeve mounted on said shaft means and connected to said impeller means, a follower pin depending from said follower sleeve and engaged with said cam groove whereby upon rotation of said shaft said impeller is caused to reciprocate within said housing, and an impervious sleeve between the impeller means and the follower sleeve, the ends of said impervious sleeve being sealed to opposing walls of said housing, whereby a medium being pumped is prevented from contacting the follower sleeve and pin.

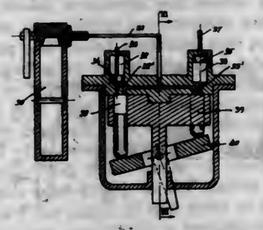
3,094,077
HYDRAULIC GENERATORS AND MOTORS
Jean Cadiou, Paris, France, assignor to Societe Anonyme Andre Citroen, Paris, France, a corporation of France
Filed July 5, 1961, Ser. No. 121,867
Claims priority, application France Sept. 3, 1960
5 Claims. (Cl. 103—161)

1. A hydrodynamic machine operating as a generator or a receiver of hydraulic pressure comprising a casing, two coaxial spaced shafts mounted in said casing, a barrel fixed to each shaft, inclined spaced cylinders provided in each barrel, the projected axes of the cylinders of each barrel intersecting, a central element having two spherical surfaces located between said barrels, pistons in each of said cylinders cooperating with said surfaces, means for eccentrically adjusting said central element with relation to the common axis of said shafts, floating distributors for feeding said cylinders, said distributors and said barrels having cooperating spherical contact surfaces, the



center of said spherical surfaces coinciding with the projected focus of the axes of said cylinders, said distributors comprising means for equalizing the pressure with respect to an axial thrust and a lateral thrust.

3,094,078
SWITCHING DEVICES FOR HYDRAULIC PUMPS AND MOTORS
Antoine Brueder, Paris, France, assignor to Societe Anonyme Andre Citroen, Paris, France, a corporation of France
Filed Aug. 4, 1960, Ser. No. 46,740
Claims priority, application France Aug. 21, 1959
6 Claims. (Cl. 103—162)

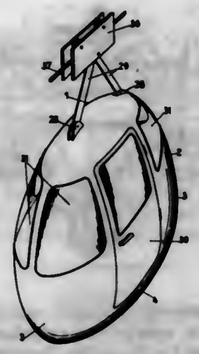


1. In a hydraulic machine operating as a generator or a receiver of the type comprising a rotating barrel fixed on a shaft, spaced cylinders provided in said barrel, a piston in each cylinder, and a distributor having high and low pressure manifolds cooperating with the cylinders, and connecting surfaces between said high and low pressure manifolds, the combination with a resonator and a duct connecting said resonator with said connecting surfaces to permit a gradual connection of the pressure with said cylinders, and means for regulating the frequency at which the resonator is resonant.

3,094,079
MOUNTAIN CABLE-WAY CABINS
Gerhart Grell, 7 Fischerstrasse, Innsbruck, Austria
Filed Feb. 24, 1961, Ser. No. 91,500
Claims priority, application Austria Feb. 27, 1960
7 Claims. (Cl. 105—150)

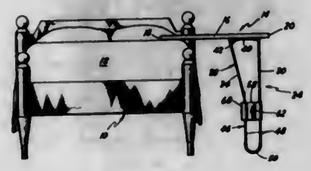
1. A cable-way cabin comprising a housing of two sections with a line of overlap in a first plane along the direction of travel of said cabin, each of said sections being symmetric with itself about a second plane perpendicular to said first plane and asymmetric with each other about said first plane so that one of said sections may frame the other, means for pivotably connecting said sections

substantially at points along the line of intersection of said first and second planes to enable pivotal movement of said one section to a position where said one section



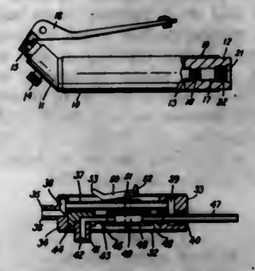
frames the other section to allow entry into and egress from the cabin and means fixed to the top of said sections in the region of the intersection of said planes for engaging a cable to suspend the cabin therefrom.

3,094,080
COLLAPSIBLE DESK FOR BEDS
William R. Shannon, St. Paul, Minn.
(23 SE. 6th Ave., Faribault, Minn.)
Filed Mar. 13, 1961, Ser. No. 95,160
1 Claim. (Cl. 108—129)



A collapsible desk of the character described comprising a panel member providing a generally flat writing surface, said member having one free edge for resting on a bed, a pair of telescoping leg units each including a first element hingedly connected to the underside of said panel member adjacent the opposite edge thereof and pivotal into one downwardly projecting position, each first element having a pair of generally parallel spaced portions, each leg unit further including a second element having a pair of generally parallel portions spaced substantially the same distance apart as the parallel portions of said first element, said legs being adapted to have substantially point contact with the floor subjacent said opposite edge of said panel member for pivotal movement, and respective means for clamping the adjacent parallel portions of the first and second elements of each leg unit together to adjust the height of said opposite edge to substantially that of said one edge, said respective clamping means including a first plate extending between the parallel portions of each first element, a second plate overlying the parallel portions of each second element, and a threaded element and nut for urging each of said first and second plates toward each other to clamp the corresponding parallel portions of said leg units together and thereby adjust the height of said opposite edge.

3,094,081
TORCH BODY ASSEMBLY FOR OXYGEN LANCING EQUIPMENT
Edward Thomas Casey, London, England, assignor to The British Oxygen Company Limited, a British company
Filed May 5, 1961, Ser. No. 108,078
Claims priority, application Great Britain May 12, 1960
1 Claim. (Cl. 110—22)

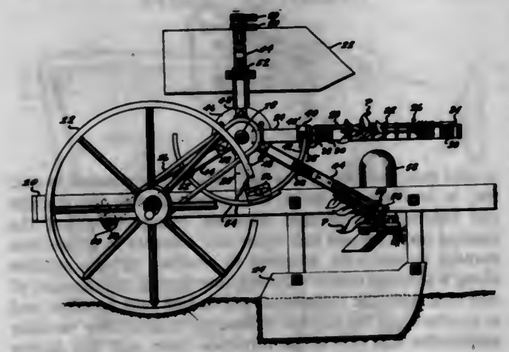


In a torch body assembly for oxygen lancing equipment, the combination of a handle portion, first attachment means on said handle portion for connection of an oxygen supply line thereto, oxygen conduit means in said handle portion, a manual flow control valve in said oxygen conduit means, second attachment means in said handle portion in the form of a pair of internally threaded bore portions of different diameter for selectively securing tubular lance members of corresponding diameters therein to receive oxygen from said oxygen conduit means, an extension portion, first attachment means on said extension portion detachably connectable with said second attachment means on the handle portion for securing the extension portion thereto in lieu of a lance member, oxygen conduit means in said extension portion for registering with said oxygen conduit means in the handle portion upon securing the handle and extension portions together, second attachment means on said extension portion communicating with said oxygen conduit, a lance member connected to said second attachment means on said extension to receive oxygen from said oxygen conduit means, third attachment means on said extension portion for connection of a powder supply thereto, powder conduit means in said extension portion and extending into the tubular lance for the supply of powder to the bore of the lance secured to said second attachment means, valve means operative to control the flow of powder through said powder conduit means, a lance-gripping chuck mechanism, first attachment means on said chuck mechanism selectively connectable with said second attachment means of said handle portion in lieu of a lance member or said extension portion and selectively connectable with said second attachment means of said extension portion in lieu of said lance member.

3,094,082
PLANT TRAY AND SETTING MEANS FOR PLANT SETTING MACHINES
Robert W. Wilson, Charlotte, N.C., assignor to R. H. Bouligny, Inc., a corporation of North Carolina
Filed Feb. 27, 1961, Ser. No. 91,745
1 Claim. (Cl. 111—2)

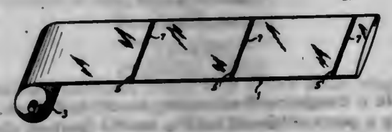
In a plant setting machine of the type incorporating setting means comprising at least one setting arm structure extending from a support on said machine for cyclic operating travel and carrying plant grasping means at the extending end thereof, cam means disposed on said machine for cyclically operating said setting arm structure to grasp a plant at a pickup station on said machine and transfer said plant downwardly from said pickup station for release at a setting position, and means carried by said machine for supporting a plant at said pick-

up station for grasping by said grasping means on said setting arm structure; said plant supporting means comprising a plant carrying and positioning structure forming a plurality of spaced supports for the entire length of a plant to be set, said plant carrying and positioning structure being pivotally mounted on said machine and extending laterally at said pickup station across the cyclic operating path of said setting arm structure and having the pivot mounting thereof yieldably biased to maintain said setting arm structure normally at said extending position while allowing displacement of said structure from said path about said pivotal mounting in substantially parallel and laterally spaced relation with respect to the stalk of a plant positioned thereon, abutment means connected to said plant carrying and positioning structure and extending laterally inward from said pivotal mount-



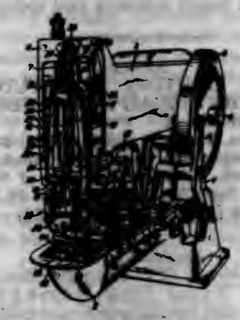
ing in the cyclic operating path of said setting arm structure intermediate the extending length thereof and spaced from said plant carrying and positioning structure for effecting displacement thereof from said operating path through contact by said setting arm structure intermediate the extending length thereof with said abutment means as a plant supported at said pickup station is grasped by said grasping means at the extending end of said setting arm structure through the action of said cam means, and said grasping means at the extending end of said setting arm structure comprising a plurality of spaced fingers carried to reach transversely therefrom in the direction of travel for grasping a plant at a plurality of points lengthwise thereof between and straddling at least one of the spaced supports formed by said plant carrying and positioning structure.

3,094,083
METHOD OF MAKING BAGS
Arnold N. Weeks, Ladue, Mo., assignor to Bemis Bro. Bag Company, St. Louis, Mo., a corporation of Missouri
Filed Feb. 13, 1961, Ser. No. 88,963
5 Claims. (Cl. 112—10)



1. The method of manufacturing paper bags with plastic liners comprising providing a length of heat-sealable plastic tubing with transverse heat seals spaced at intervals along the length of the tubing, forming a paper web into a tube around the plastic tubing, segmenting the resultant composite tubing into individual bag lengths on transverse lines spaced from but adjacent to the transverse heat seals and located at intervals along the length of said composite tubing, whereby each bag length comprises a plastic liner within a paper tube with a transverse heat seal across the plastic liner spaced from and adjacent one end of the bag length, and stitching each bag length across the width thereof along a line between said one end of the bag length and said heat seal.

3,094,084
FOLDING MECHANISM FOR LABEL SEWING MACHINES
Kristen Hedegaard, Gentofte, Denmark, assignor to G. M. Pfaff AG, Kaiserslautern, Pfalz, Germany, a corporation of Germany
Filed Oct. 17, 1961, Ser. No. 145,565
Claims priority, application Germany Oct. 18, 1960
8 Claims. (Cl. 112—104)



1. Folding mechanism for a label sewing machine of the type comprising stitch forming means including a needle, drive means to operate said needle, a work presser plate, a presser plate lifting bar operable between lowered work engaging and raised positions, said plate having an outline conforming to the outline of a label or the like to be sewn to a base of sewing material, to hold said label against said base in the lowered position of said plate with the edges of said label projecting beyond the edges of said plate, means being in motion transmitting connection with said drive means to operate said plate through a path conforming to the outline of said label, whereby to sew the edges of said label to said base, said folding mechanism comprising a retractable folding template resiliently engaging the undersurface of said presser plate and means to operate said template between an operative position of engagement with said plate in the raised position and a retracted lateral position of disengagement from said plate in the lowered position, a support affixed to said presser plate lifting bar and provided with a pair of first projections, a vertical guide rod having one end supported by said support and having its opposite end slidably mounted upon said machine, a label folding clamp comprising an operating member transverse to and slidably mounted upon said rod, a pair of clamping arms having a pair of sliding surfaces, each said arms having an end pivotally connected to an end of said member and said arms being provided, at their opposite ends, with inwardly directed folding claws, first resilient means to urge said arms and claws towards one another, to cause said sliding surfaces to resiliently engage said projections, second resilient means to urge said clamp to retracted position upon said support with said member engaging a stop upon said support, said sliding surfaces being provided with wedge-shaped recesses, second projections upon said arms spaced from said recesses, a locking member resiliently slidably mounted upon said support and having a pair of second sliding surfaces engaging said second projections, whereby, with said presser plate and adjoining folding template in the raised position, opera-

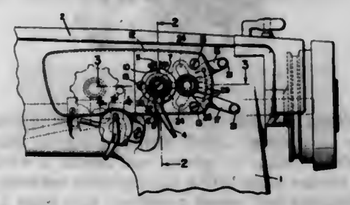
tion of said member in a direction away from said support against the action of said second resilient means first causes said arms to spread outwardly by camming of said first projections with said first sliding surfaces and then to be operated in a direction towards one another upon said first projections engaging said recesses such as to engage and reversely bend the projecting edges of a label placed between said presser plate and template about the edges of said template by said claws and to lock said clamp by interengagement of said locking member and said second projections, and whereby, furthermore, with said presser plate and supporting plate being lowered by said lifting bar, said claws upon engaging said sewing base are released from said template by camming of said first projections with said recesses such as to effect release of said claws from said template and to return said clamp to retracted position by the action of said second resilient means releasing said locking member.

3,094,085

MEANS FOR LIMITING AMPLITUDE ADJUSTMENT OF THE ZIGZAG MECHANISM FOR SEWING MACHINES

Walter D. Szabo, Summit, and Jacob M. Benzing, Elizabeth, N.J., assignors to The Singer Manufacturing Company, Elizabeth, N.J., a corporation of New Jersey

Filed Sept. 26, 1960, Ser. No. 58,345
4 Claims. (Cl. 112—158)



1. In a zigzag sewing machine having a frame and a zigzag amplitude adjustment mechanism including a control shaft to effect adjustment of the zigzag amplitude upon turning thereof, a manually actuated knob secured to said control shaft for unitary turning, means for limiting turning of said control shaft to a maximum and minimum zigzag amplitude setting comprising a pair of levers, means for mounting both of said levers on said frame for pivotal movement about a common axis and in planes normal to the axis of said control shaft, said levers having free ends accessible for manually effecting pivotal movement thereof, means carried by said knob and disposed between and adapted to engage said levers upon turning said knob thereby to limit adjustment of said control shaft, said levers having overlapping arcuate edge portions concentric with the pivot axis of said levers, and threaded means carried by said frame adjacent to said arcuate edge portions at a point where said edge portions overlap and having a head overlying said overlapping edge portions for simultaneously clamping both of said levers against pivotal movement when said threaded means is turned down.

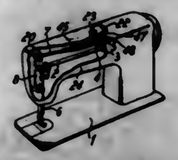
3,094,086

CONTROL MECHANISM FOR ZIG-ZAG SEWING MACHINES

Günther Meier, Weingarten, Baden, Germany, assignor to Gritzner-Kayser Aktiengesellschaft, Karlsruhe-Durlach, Germany, a German company

Filed Jan. 4, 1961, Ser. No. 80,596
Claims priority, application Germany Jan. 5, 1960
3 Claims. (Cl. 112—158)

1. In a zig-zag sewing machine including a needle bar carrying a needle and mounted both for reciprocation and oscillation transversey to the feed direction, and drive means operably connected to said bar, to reciprocate said needle; control mechanism for selectively producing straight stitches and zig-zag stitches of gradually variable amplitude comprising a three-dimensional control member with means to rotate the same by said drive means, said member being composed of a circular cylindrical portion concentric with its axis of rotation and an eccentric conical portion adjoining said cylindrical portion, said eccentric portion including three angular partial surfaces being inclined towards said axis and merging into each other, one of said surfaces having a circular arc-shaped cross-section concentric to said axis and the surfaces adjoining said first surface having eccentric cross-sections symmetrical to the center line of said arc-shaped cross-section, a spring-urged follower link disposed transversely



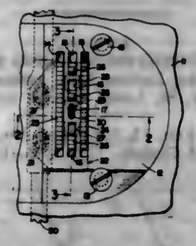
to said axis and having one end operably connected to said bar, to oscillate the same, and arranged with its opposite end bearing against said member, means to adjust the bearing point of said link upon said member in a direction parallel to said axis, whereby to produce straight stitches along a predetermined stitching line during engagement of said link with the cylindrical portion of said member and to produce zig-zag stitches extending to gradually variable amplitudes and in a single direction from said line during engagement of said link with the eccentric portion of said member, the incline of said first surface towards said axis coinciding with the tangent to a point of a circle located at the transition between the cylindrical and conical portions of said member with said circle having the connecting point of said link upon said bar as its center and having a radius equal to the length of said link.

3,094,087

FEED DOG AND THROAT PLATE FOR COMPOUND FEED SEWING MACHINES

Charles L. Thorne, Garwood, N.J., assignor to The Singer Manufacturing Company, Elizabeth, N.J., a corporation of New Jersey

Filed Nov. 23, 1960, Ser. No. 71,352
4 Claims. (Cl. 112—206)



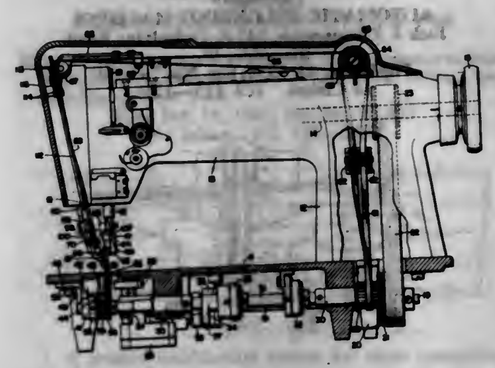
1. In a compound feed sewing machine, a throat plate having a portion formed with a needle aperture elongate in the direction of feed substantially the length of the longest stitch adapted to be produced by said sewing machine and with parallel feed dog slots elongate in the direction of feed and disposed one at each side of said needle aperture, a feed dog, upstanding work engaging ribs formed on said feed dog and operable upwardly through said feed dog slots in the throat plate, a web portion of said feed dog extending between said work engaging ribs and disposed beneath that portion of said throat plate formed with said needle aperture, said feed dog web being formed with a lint clearing aperture extending substantially the entire width of said web between said work engaging ribs, and said feed dog web being provided with a needle accommodating aperture formed as a narrow slot extending from said lint clearing aperture and disposed beneath said needle aperture in said throat plate.

3,094,088

WORK FEEDING MECHANISM FOR SEWING MACHINES

Raymond J. Di Camillo, Bridgeport, Conn., assignor to The Singer Manufacturing Company, Elizabeth, N.J., a corporation of New Jersey

Filed Oct. 28, 1960, Ser. No. 65,791
6 Claims. (Cl. 112—211)



1. In a sewing machine having a casing including a work supporting bed, and a bracket arm overhanging said bed, a presser device carried by said bracket arm and biased toward said bed, a feed drive shaft journaled in said bed, means driven by said sewing machine for imparting rotary motion to said feed drive shaft in one direction of rotation, a feed wheel supporting frame journaled freely on said feed drive shaft, a feed wheel journaled on said frame on an axis substantially parallel to that of said feed drive shaft, a sprocket fixed for rotation with said feed wheel, an idler supporting arm carried by said feed wheel supporting frame, an idler sprocket journaled on said idler supporting arm on an axis substantially parallel to that of said feed drive shaft, means for securing said idler supporting arm relatively to said feed wheel supporting frame in selected angular position about the axis of said feed drive shaft, means for securing said feed wheel supporting frame relatively to said sewing machine bed in selected angular position about the axis of said feed drive shaft to position said feed wheel in opposition to said presser device, a drive sprocket fast on said feed drive shaft, and a timing belt entrained about said sprockets for imparting rotation to said feed wheel upon rotation of said feed drive shaft.

3,094,089

PRESSER FOOT

Abraham Shuman, Union Mill 1, Fall River, Mass.

Filed Nov. 3, 1960, Ser. No. 66,995
1 Claim. (Cl. 112—235)

A presser foot for a sewing machine having a feed dog with surface teeth for feeding material to a needle, comprising a vertical shank for attaching the presser foot to a sewing machine, a rectangular housing extending forwardly from the bottom of said shank, said housing having integral side walls, a top wall and a front wall, a pair of spaced parallel feet extending integrally forwardly from the front bottom of said housing, a rear wall on said housing, a transverse shaft mounted in said side walls in said housing, and a roller rotatably mounted on said shaft, said roller having a plurality of longitudinal teeth slanted rearwardly, said teeth extending from the bottom of said housing, said roller teeth being of the same size and spacing as the teeth on the sewing machine feed dog, said roller being positioned over the feed



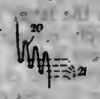
dog of the sewing machine, said teeth meshing with the feed dog to pinch and positively feed the material through the sewing machine on rearward movement of the feed dog, said rear wall being pivotally mounted adjacent its upper edge in said housing and having a forwardly extending flange at its lower edge extending into close proximity to said roller.

3,094,090

METHOD OF PRODUCING A PLEATED ARTICLE

Gisela Antonia Maria Wyndham, 185 Goldhurst Terrace, London, England

Original application Oct. 22, 1957, Ser. No. 691,745, now Patent No. 2,948,241, dated Aug. 9, 1960, Divided and this application Apr. 21, 1960, Ser. No. 23,812
Claims priority, application Great Britain Oct. 24, 1956
1 Claim. (Cl. 112—262)



A method of producing from a flat strip of material lying in a starting plane a multipleat strip having consecutive reversely bent folds arranged in stepped relationship comprising the steps of corrugating said flat strip across the width thereof, moving said corrugated strip longitudinally and gradually decreasing the width and increasing the depth of said corrugations so as to transform said flat strip into a multipleat strip having substantially flat superimposed consecutive folds lying in substantially parallel planes with the edges of adjacent folds being substantially aligned, fanning out said corrugations along consecutive paths each having substantially equal angular increments from the path of the immediately adjacent corrugation so that the consecutive folds are stepped and each of the folds has a portion superimposed upon each of the others at an angle to the starting plane of said strip, and row stitching through all of said stepped folds of said multipleat strip adjacent to the reversely bent extremity of each fold to fasten together a consecutively increasing number of said folds.

3,094,091

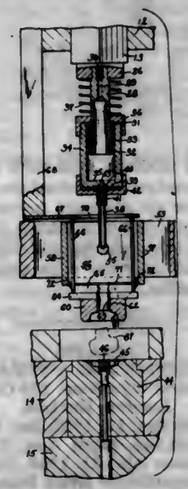
APPARATUS FOR MAKING BULGED ARTICLES

Donald Peccerill, 37 Susquehanna Ave., West Haven, Conn.

Filed Dec. 22, 1959, Ser. No. 861,303
2 Claims. (Cl. 113—44)

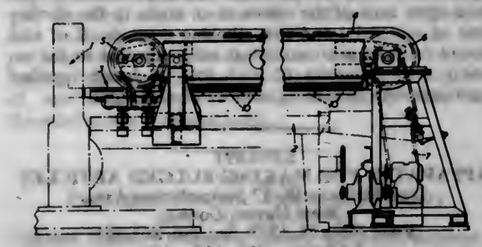
1. A press mechanism for bulging the walls of a cup-shaped workpiece comprising a frame, a ram slidably mounted thereon, a fluid-containing cylinder slidably embracing the ram and carried thereby in fluid-tight relation with the ram, said ram projecting from one end of the cylinder, a pressure-fluid container of flexible material

carried by and depending from the other end of the cylinder and having its open upper end secured in fluid-tight relation to the cylinder and in communication with the interior thereof and closed at its lower end, means to retain the cylinder on the ram, a pair of relatively movable cooperating die members having die cavities which, when the members are in closed position, together form a die chamber of the shape of the finished article mounted in line with said ram, means for moving said ram relatively to the die members to introduce the container



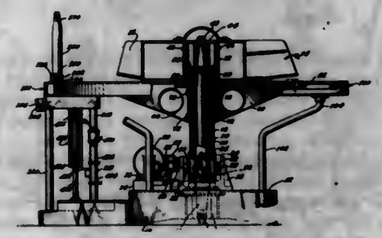
into the workpiece when the latter is positioned between the die members and apply pressure to the fluid in the container, and independent means for effecting relative movement of the die members to closed position in timed relation to the application of pressure in the container so that sufficient pressure is applied to the interior walls of the workpiece prior to closing of the dies to prevent collapse of the workpiece when the dies are closed and whereby continued movement of the ram expands the wall of the workpiece laterally into contact with the wall of the die chamber.

3,094,092
CAN BODY-MAKING APPARATUS
Arthur Leslie Stuchbery, Enfield, and Frederick Daniel Brookes, Hayes, England, assignors to The Metal Box Company Limited, London, England, a company of Great Britain
Filed Dec. 29, 1959, Ser. No. 862,705
Claims priority, application Great Britain Jan. 21, 1959
15 Claims. (Cl. 113—115)



1. Can body-making apparatus comprising a body-forming station, a side-seam soldering and subsequent operation stations, transfer means for indiscriminately moving tubular bodies from the forming station towards the soldering and subsequent operation stations, and conveyor means to receive bodies from the transfer means and to move them through the soldering and subsequent operation stations, said indiscriminate movement being a non-synchronous movement of the bodies both by the transfer means and from the transfer means to the conveyor means, said conveyor means including an endless conveyor movable in one direction, and a plurality of elongated body-carriers connected to the conveyor in close proximity slightly short of touching relation and for movement therewith with certain body-carriers being arranged to indiscriminately grip the outer sides of a body with relation to alignment with said body-carriers to locate it for axial movement during pre-heating, soldering and subsequent operations on the side-seam thereof and to effect release of the body following the soldering and subsequent operations on the side-seam.

3,094,093
AUTOMATIC SOLDERING MACHINE
Jack J. Zimmerman, 143 S. Delaplaine Road, Riverside, Ill.
Filed Sept. 23, 1958, Ser. No. 762,871
10 Claims. (Cl. 113—126)



1. An automatic soldering machine for printed circuit panel assemblies, and the like, including: a container for molten solder having an open top, solder applicator means having a pan-like configuration with a rimmed upper surface and positioned within said container, a molten solder reservoir having an upper rim defining an open top and positioned within said container with its upper rim in substantially uniplanar relationship with the rimmed upper surface of said applicator, conduit means extending between said reservoir and said solder applicator means for establishing a fluid connection between said reservoir and the rimmed upper surface of said applicator, elevator means for supporting said applicator means and said reservoir within said container and for moving the same between a lower position in which the top of said reservoir and the upper rimmed surface of said applicator are below the normal level of molten solder in the container and an upper position in which the rimmed upper surface of said applicator extends into the plane of said open top of said container, and a solder displacement unit mounted above said container and including a displacement element in vertical alignment with said reservoir and adapted to extend down into the open top of said reservoir and displace solder in said reservoir when said reservoir is in its upper position and thereby displace solder upwardly in the rimmed upper surface of said solder applicator means into a solder contact position.

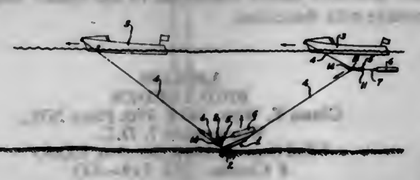
8. A fluid displacing unit including: a cylinder having a closed upper end and movable between a lower position and an upper position, a piston slidably mounted in said cylinder and movable therewith as said cylinder is moved upwardly, inlet valve means mounted on said cylinder to provide a restricted air path to the interior of said cylinder so as to permit said piston to move downwardly in said cylinder at a relatively slow speed after said cylinder has been moved to its upper position, a fluid displacing plunger mounted on the lower end of said piston to be moved downwardly thereby as said piston moves downwardly in said cylinder, stationary bracket means extending across the path of said cylinder over said closed upper end thereof, an elongated rod coupled to said piston and extending upwardly therefrom through the closed upper end of said cylinder and through said bracket means in slidable relationship with said closed end and with said bracket means, stop means mounted on the upper end of said rod to engage said bracket means and limit the downward movement of said fluid displacing plunger when said cylinder is in its upper position and for holding said piston stationary when said cylinder moves to its lower position, and outlet valve means mounted on said cylinder for providing an exhaust path from the interior of said cylinder as said cylinder moves to its lower position to permit such motion of the cylinder to proceed at a relatively rapid rate.

3,094,094
PASSIVE STABILIZATION SYSTEM FOR LONG PERIOD SHIPS
Kenneth Clay Ripley, Washington, D.C., assignor to John J. McMullen Associates, Inc., New York, N.Y., a corporation of New York
Filed Jan. 16, 1961, Ser. No. 83,092
5 Claims. (Cl. 114—125)



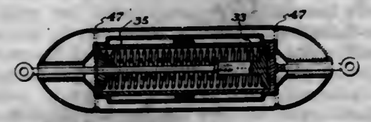
1. A passive stabilization system for ships comprising wing tanks symmetrically disposed on opposite sides of the ship, a mixing chamber therebetween astride the centerline plane of the ship, and an elongated nozzle open at its top and interconnecting each wing tank with the mixing chamber, said nozzles having flared mouths but being otherwise of uniform cross section throughout their length.

3,094,095
METHOD AND APPARATUS FOR RAISING ANCHORS
Walter R. Litchfield, 817 Bay Ave., Ocean City, N.J., and Robert R. Litchfield, 158 Bala Drive, Somers Point, N.J.
Filed June 5, 1961, Ser. No. 115,026
6 Claims. (Cl. 114—206)



3. An anchor raising device comprising a ring member adapted to be secured to an anchor line at a point intermediate the ends thereof for sliding movement along said line, said ring member having a central opening and means for providing access to said opening from a direction transverse to the axis of said opening to permit attachment and detachment of said ring on said anchor line at said point, a submersible enclosed buoyant member, and non-elastic connecting means secured at one end to said ring member and at the other end to said buoyant member at a centrally disposed point on the forward end thereof, said connecting means including a swivel connection to permit free spinning rotation of said buoyant member with respect to said ring member.

3,094,096
AQUATIC TOW ROPE WITH SHOCK ABSORBER
Nilo K. Florence, Tulsa, Okla.
(1449 SW. 65th St., Oklahoma City, Okla.)
Filed Dec. 5, 1960, Ser. No. 73,606
2 Claims. (Cl. 114—235)

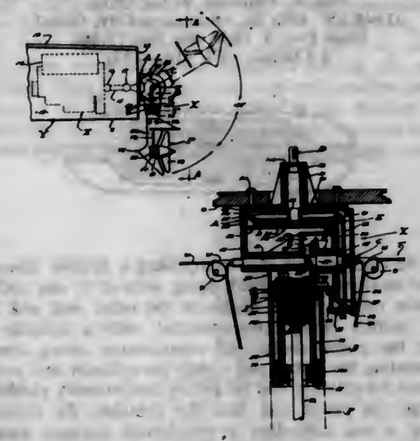


1. An aquatic tow rope comprising a flexible filament in two sections, one section being secured to one end of a piston rod having a piston at the other end and the other section being interconnected with a cylinder in which the piston slides, coil compression spring means surrounding the piston rod within the cylinder and acting between the cylinder and the piston continuously yieldably to urge the piston rod into the cylinder, the cylinder having a rod extending a substantial distance axially therefrom in alignment with but in the opposite direction from the piston rod, said other section of flexible filament being secured to said cylinder rod, said piston rod in its farthest position within the cylinder extending a substantial distance outside the cylinder, and a float encasing and mounted on the cylinder, the float extending a substantial distance beyond each end of the cylinder and having a rounded exterior end at each end thereof, the float closely encompassing both said rods for a substantial distance beyond each end of the cylinder but being spaced from at least the piston rod thereby to permit free movement of the piston rod within the float, said sections of the flexible filament being secured to said rods endwise beyond the float, the float being in two separable sections, each section defining a portion of each of a pair of passageways through which said rods extend, the cylinder having a cylindrical external contour including a circular end edge at each end of the cylinder, the float sections each having a pair of semicircular recesses therein spaced apart the length of the cylinder so that the float sections are supported on the cylinder by contact of the cylinder end edges in the semicircular float section recesses, the float sections being spaced outwardly of the cylinder between the semicircular recesses.

3,094,097
INBOARD-OUTBOARD BOAT PROPULSION UNIT
Floyd P. Elsey, Hawthorne, Calif.
(2301 Marshallfield Lane, Redondo Beach, Calif.)
Filed Mar. 18, 1958, Ser. No. 722,267
8 Claims. (Cl. 115—41)

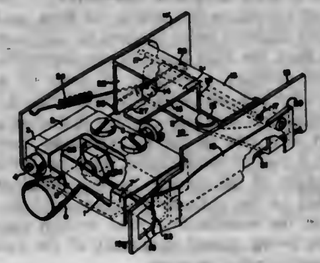
1. A boat propulsion unit of the character described and including, a frame adapted to be attached to the boat and having a housing with a central body with a chamber therein and with a laterally disposed support with a chamber therein open to the first mentioned chamber, said support having an inwardly faced wall with an opening therethrough, a drive shaft carried by the frame on a longitudinally disposed axis, an arm shiftable relative to the frame to support a propeller assembly and having a housing with an extension engaged through the said opening in the wall of the support, said housing having a chamber therein in open communication with the first mentioned chambers, a driven shaft carried by the arm to operate said propeller assembly, means pivotally joining the arm to the frame on a substantially horizontal transverse axis, an intermediate shaft on an axis coincidental with the axis of said means, the axis of the driven shaft being normal to the axis of the intermediate shaft to swing in a plane substantially coincidental with the axis

of the drive shaft, and a gear drive having a pair of gears operated by the drive shaft and within the chamber in the



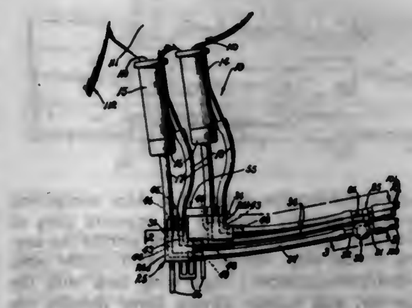
frame housing to drive a pair of gears within the chamber in the arm housing and operating the driven shaft.

3,094,098
VIBRATING REED REMOTE CONTROL TRANSMITTER
Albert P. Weiner, North Syracuse, N.Y., assignor to General Electric Company, a corporation of New York
Filed Sept. 11, 1961, Ser. No. 137,252
7 Claims. (Cl. 116—137)



1. A vibrating reed transmitter for generating an ultrasonic carrier wave having a sonic amplitude modulation component, comprising: a chassis for the transmitter having a base and a folded over side portion thereof; said side portion having an outer surface; said side portion including a ramp segment extending away from the base portion and having an aperture located in said ramp segment; a resilient reed; mounting means secured to said base portion for supporting and tightly clamping said reed at one end of its length and leaving an unclamped portion of the length of said reed free to oscillate when said reed is mechanically excited; said mounting means positioned on said base portion for providing extension of a segment of said unclamped portion of the length of said reed through said aperture; said mounting means and reed comprised of materials proportioned and dimensioned for establishing a natural frequency of mechanical oscillation for said reed within a range of relatively low sonic frequencies when said reed is excited into mechanical oscillations; an unyielding impactor positioned in the vicinity of the unclamped portion of the length of said reed for being struck by said reed when said reed is mechanically excited; said impactor positioned at a point along the unclamped portion of the length of said reed for causing said reed to oscillate at a desired ultrasonic overtone frequency of said natural frequency of oscillation when said impactor is struck by said reed; and excitation means for deflecting said reed at the unclamped end thereof in response to a manual operative force applied thereto, said excitation means comprising a trigger arm positioned at said outer surface of said side portion and adapted, when actuated, to make contact with and override said segment of said reed extending through said aperture, a trigger lever pivotally mounted on said base portion and coupled to said trigger arm, spring bias means coupled to said trigger lever for biasing said trigger lever in an unactuated position, a pivotally mounted rocker having a trigger cam segment, said cam segment arranged for causing rotation of said trigger lever when said rocker is pivotally rotated, and lever means for coupling an operative force applied thereto to said rocker for causing pivotal rotation of said rocker.

3,094,099
FLOATING CLAW FOR MILKING MACHINES
Antonio M. Bertao, Visalia, Calif., assignor, by mesne assignments, of fifty percent to Harold W. Jarvis, Tulare, Calif.
Filed Apr. 12, 1961, Ser. No. 102,507
10 Claims. (Cl. 119—14.54)



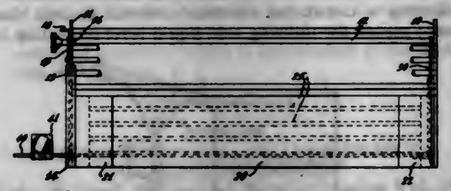
1. In a machine for milking an animal having an udder providing downwardly extended teats, which machine includes cups adapted to be fitted individually on the teats of the animal; a carrier including blocks individually mounted on the carrier for independent, elevational free floating rectilinear movement, fluid conducting means individually interconnecting the blocks and the cups and individually supporting the blocks on their respective cups whereby weight on the teats is substantially equalized, and manifold means connected to the blocks adapted to receive milk therefrom.

3,094,100
BIRD FEEDER
Glenn E. Wise, 2415 39th Place NW., Washington 7, D.C.
Filed Sept. 1, 1960, Ser. No. 53,493
8 Claims. (Cl. 119—51)



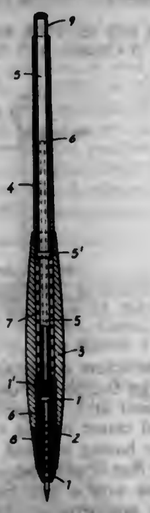
1. A feeder comprising: means forming a frame, and means providing feed for animal consumption attached to means supported for rotation on said frame, said feed providing means comprising edible material attached to a flexible backing by means of an adhesive.

3,094,101
APPARATUS FOR RESTRAINING ANIMALS
Ann L. Porter, Cherry Valley Road, Princeton, N.J.
Filed Apr. 2, 1962, Ser. No. 184,051
8 Claims. (Cl. 119—103)



1. An apparatus for restraining an animal, including an elongated cage, a vertically adjustable and longitudinally slidable floor slidably mounted in said cage, an end plate mounted at one end of said floor and transversely thereto and serving as a wall between said floor and the top and sides of said cage, an elongated tail holder at the other end of said slidable floor from said end plate, a tail clamp slidably mounted on said tail holder, and a door slidably mounted on said cage and adapted to engage said floor for caging an animal within said cage with the tail of said animal extending along and clamped on said tail holder.

3,094,102
LEAD HOLDER OR THE LIKE
Josef Maria Schwarzlingl, Stein, near Nuremberg, Germany, assignor to A. W. Faber-Castell, Stein, near Nuremberg, Germany
Filed July 30, 1959, Ser. No. 830,517
Claims priority, application Germany Jan. 31, 1959
1 Claim. (Cl. 120—22)



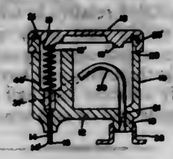
In a mechanical lead holder or the like having a lead clamping mechanism, the combination which comprises: a tubular front section and a tubular rear section together forming a casing, a plunger guided in the longitudinal opening of said casing and having a relatively short portion projecting out of the rear section of the casing so that the major portion of said plunger is within the confines of and thereby protected by the rear section of said casing, a collet guided within the front section of said casing and connected to said plunger for gripping and releasing a lead piece or the like, spring means within said front section, said spring means surrounding said plunger with one end thereof abutting against said casing and the other end thereof abutting against said plunger, the front end of said front section being conical and a front portion of said collet being pressed against the forward edge of said front end by said spring means, the front section of said casing having a double-conical outer surface convering from a point near the longitudinal center thereof toward both ends so that the largest diameter of the front section of said casing is at its longitudinal center, said rear section of said casing having a length substantially equal to the length of said front section of said casing and having a smaller diameter than the narrowest portion of the front section of said casing, said rear section of said casing being slightly tapered rearwardly, and said lead holder having its center of gravity within said tubular front section of said casing.

3,094,103
BALL-POINT PEN INSERT
Albert Trefzer, Tennenbronn-Bruck, Black Forest, Germany, assignor to Gebr. Schneider G.m.b.H., Tennenbronn, Black Forest, Germany, a corporation of Germany
Filed June 1, 1960, Ser. No. 33,295
5 Claims. (Cl. 120—42.4)



2. A ball-point pen insert for use with ink having a viscosity decreasing upon an increase in temperature, comprising, in combination, a socket consisting of metal; and a ball positioned in and partly surrounded by said socket with relatively small clearance so as to be retained thereby, said ball being made of a material having a coefficient of thermal expansion several times as high as that of said metal of said socket, whereby said clearance between said ball and socket will decrease upon an increase in temperature and vice versa so as to compensate for corresponding changes in said viscosity of said ink.

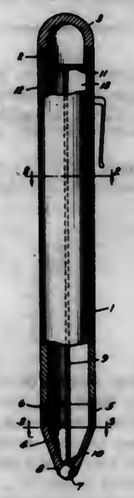
3,094,104
RECORDER PEN
Sherman Gauley, Irondequoit, N.Y., assignor to Bausch & Lomb Incorporated, Rochester, N.Y., a corporation of New York
Filed May 31, 1962, Ser. No. 198,929
4 Claims. (Cl. 120—42.06)



1. A recorder pen comprising means consisting essentially of non-wettable plastic material defining a generally box shaped reservoir for holding a supply of ink, a hollow needle extending through a base portion of said reservoir defining means, and a generally U-shaped vent tube disposed within the reservoir, an adapter formed integrally with the base of said reservoir defining

means to thereby constitute a second base portion, a first end of said U-shaped vent tube extending through the second base portion and associated with said adapter for having a supply of ink injected through said adapter and said vent tube for filling the reservoir, a second end of said vent tube disposed within said reservoir relatively close to an inner portion of said hollow needle, an integral pin coil spring unit, the spring portion of said unit biasing the pin portion through said hollow needle in a direction away from said reservoir whereby movement of said pin within said tube improves the flow of ink to the point of the pen.

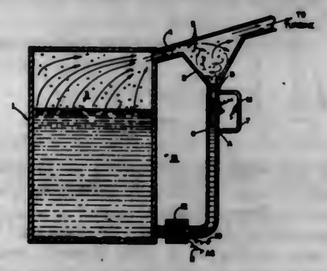
3,094,105
PEN
Lloyd T. Jenkins, P.O. Box 297, Cary, N.C.
Original application Jan. 7, 1957, Ser. No. 632,898, now Patent No. 2,977,320, dated Mar. 28, 1961. Divided and this application Jan. 19, 1961, Ser. No. 83,685
2 Claims. (Cl. 120—42.16)



1. A writing device adapted to contain a plurality of separated fluids which are mixed upon discharge therefrom comprising: an elongated hollow body portion having opposite ends; removable closure means sealing one end of said body portion; a ball-mounting aperture formed in the opposite end of said body portion; a ball mounted in said aperture and rotatable therein; and means disposed within said body portion providing at least two reservoirs, each reservoir being adapted to contain a different fluid and to maintain its fluid separated from the fluid in any other reservoir as long as said ball remains stationary but adapted to discharge and mix its fluid with the fluid from at least one other reservoir on said ball when said ball is rotated relative to said body portion, said means disposed within said body portion including a separator having one end engaging said closure means in sealing relationship therewith and having an opposite end terminating closely adjacent said ball and a seal disposed between said opposite end of said separator and said ball.

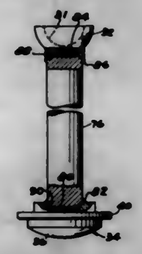
3,094,106
LIQUID METAL LEVEL GAUGE
Julius Hyman, Jr., Los Angeles, Calif., assignor to North American Aviation, Inc.
Filed Apr. 12, 1960, Ser. No. 21,824
7 Claims. (Cl. 122—451)

3. In combination with an enclosed system for processing liquid metal having a boiler, a quantity of such liquid metal therein, and a tube, forming a closed loop, means for determining externally the quantity of said liquid metal in said boiler, comprising a signal electrode disposed on said tube above the highest level of liquid metal anticipated therein; a reference member disposed in parallel with a portion of said tube and having an upper junction therewith above the highest level of liquid material anticipated therein and a lower junction therewith below the lower level anticipated therein; a reference electrode disposed on said reference member; means for inducing a circulating electrical current in said closed loop; means for utilizing said liquid level indicating tube



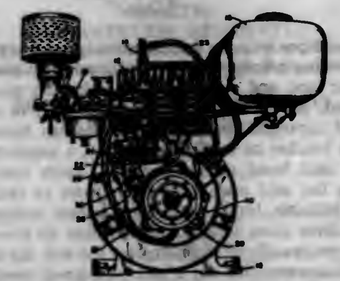
and said reference member as arms of a Wheatstone bridge circuit, with said lowest junction between said tube and said reference member acting as a first set of opposite disposed bridge junction points, and with said electrode and said reference electrode acting as a second set of opposite bridge junction points therein; said bridge circuit being adapted to compare the resistance of the reference member with that of said tube portion as shunted by varying quantities of said liquid metal therein, and adapted to furnish potential indicative of any variation in liquid height to servo means for level indicating and restoring purposes.

3,094,107
PUSH ROD STRUCTURE
Stanley Gondek, Birmingham, Mich., assignor to Bundy Tubing Company, Detroit, Mich., a corporation of Michigan
Filed July 15, 1960, Ser. No. 43,219
5 Claims. (Cl. 123—90)



1. Push rod structure comprising,
a rod having an end portion defining a seat having portions disposed at a non-perpendicular angle to the longitudinal extent of said rod,
and end piece having one end portion with a diameter larger than that of said rod, said one end portion having a recess with a first inner surface portion disposed at a non-perpendicular angle to the longitudinal extent of said rod,
a weld connection connecting said seat portions directly to said first inner surface portion,
said recess having a second inner surface portion contiguous to the first and being disposed immediately adjacent the very end of said rod,
the exterior surfaces of said one end portion of said end piece extending generally axially of said rod beyond said very end thereof,
said end piece having an intermediate portion extending across said very end of said rod, one side of which comprises said second inner surface portion of said recess,
said end piece having another end portion with an exposed rounded surface forming a bearing surface adapted for engagement with a part of a mechanism with which said push rod is adapted to be used,
said rounded surface terminating at a shoulder displaced from said very end of said rod and having a radius of curvature which is independent of the diameter of said rod.

3,094,108
AUTOMATIC SPARK ADVANCE DEVICE FOR IGNITION SYSTEM
Charles B. Small, Willoughby, Herman Lansing Vail, Jr., Shaker Heights, and George H. Hufferd, Lyndhurst, Ohio, assignors to Clevite Corporation, a corporation of Ohio
Filed July 3, 1961, Ser. No. 121,664
17 Claims. (Cl. 123—148)



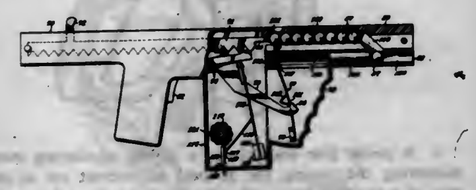
1. An ignition and automatic spark timing system for an internal combustion engine having a moving component, comprising, in combination: a piezoelectric element; pressure applying means connected with said piezoelectric element and adapted to apply periodically a force in timed relation with the position of said moving component to said element to generate an electric potential; switch means responsive to a condition of said engine and operably associated with said element to release the potential in timed relation with the position of said moving component; and automatic means controlling said switch means to effect a variable, timed, release of said potential with respect to said moving component.

3,094,109
REVERSAL INHIBITING ENGINE STARTER WITH CENTRIFUGAL BRAKE
William L. Ellinger, Jr., Hamden, Conn., assignor to The A. C. Gilbert Company, New Haven, Conn., a corporation of Maryland
Filed Feb. 23, 1961, Ser. No. 91,032
12 Claims. (Cl. 123—179)



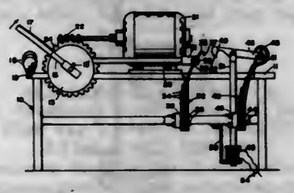
2. The combination with the driven rotor and stationary body of an internal combustion engine of, connections for elastically coupling said rotor to said engine body comprising at least in part, engine starting resilient means permanently attached to said rotor to travel in unison therewith, and self latching brake means including a keeper in fixed relation to said engine body and a catch cooperative with said keeper mounted to revolve with said rotor and shiftable relatively thereto in a direction automatically to couple and uncouple said rotor and engine body responsively respectively to changes in centrifugal force at different angular speeds of rotation of said rotor relative to said engine body.

3,094,110
VIBRATOR TOY GUN
John W. Ryan, Bel-Air, Calif., assignor to Mattel, Inc.
Original application Mar. 18, 1958, Ser. No. 722,239, now Patent No. 3,057,114, dated Oct. 9, 1962. Divided and this application Jan. 16, 1961, Ser. No. 83,075
8 Claims. (Cl. 124—2)



8. A toy gun comprising rack means, power means associated with the rack means for imparting linear motion thereto, rocker means operatively associated with the rack means for translating linear motion of said rack means into oscillatory motion of said rocker means, sound means associated with said rocker means for converting the oscillatory motion of the rocker means into sound while being driven by said power means, actuator means associated with said rocker means, plunger means associated with said actuator means, and means whereby said plunger means is extended and retracted in a barrel part of the gun by said actuator means when said rocker means is oscillated, said sound means including hammer means connected to the rocker means, means for imparting oscillatory motion to the hammer means, anvil means mounted adjacent said hammer means to be struck by the hammer means as it oscillates, and explosive cap feeding means associated with the rocker means for feeding caps onto the anvil means.

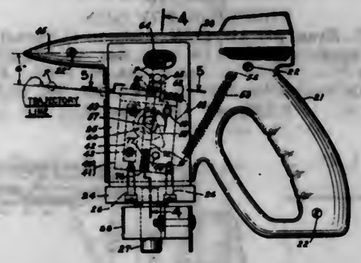
3,094,111
BALL THROWING MACHINES
Amadio G. Brigati, 68 Ave. A, Lodi, N.J., and Joseph Fiducia, 115 Mountain View Drive, Clifton, N.J.
Filed Sept. 28, 1961, Ser. No. 141,334
7 Claims. (Cl. 124—7)



1. In a throwing device, two fixedly mounted springs having respectively separated substantially free ends for reaction movement in a substantially common direction; a crank carrying a throwing arm for rotation; a reciprocatory connecting rod having one end connected to the crank and extending in said direction and having the other end connected to one of said free ends; a hooking

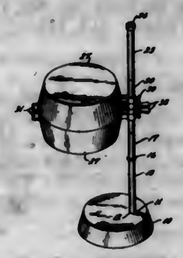
latch pivotally mounted on one of said free ends for selective pivotal movement to latching position for selectively hooking onto the free end of the other spring and movement to non-latching position; bias means for holding the latch in one of said positions, and a reciprocatory member linked onto the latch for moving the latch against the bias means to the other position.

3,094,112
PELLET GUN
Arvid O. Dahlstrom, 1653 Carmen Ave., Chicago, Ill.
Filed Dec. 16, 1959, Ser. No. 860,027
10 Claims. (Cl. 124—29)



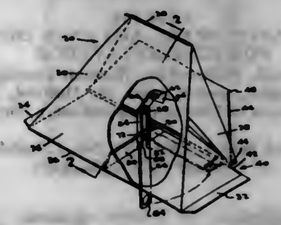
1. A pellet gun comprising a casing, mounting means mounting the casing for pivotal movement on at least one of a vertical axis and a horizontal axis, a frame carried by the casing having a pellet support, the pellet support being a trough having straight sides inclined upwardly in the direction of pellet projection, a hammer pivotally mounted on the frame and having an impact surface and movable to and from impact position on the pellet support to hit a pellet; the impact surface having an angle slightly greater than 90° with respect to the forward end of the trough, the impact surface providing the sole means for the direction of flight of the pellet, a backstop carried by the frame to retain the pellet in impact position on the supporting means; operating means connected with the hammer including a spring connected with the hammer and propelling the same to impact position and rotary cam means engaging the hammer to propel the same away from impact position and release the hammer; and feed means to feed one pellet at a time to the pellet support.

3,094,113
OUTDOOR COOKING UNIT
Lawrence H. Avila, 1408 Donaghey Bldg., Little Rock, Ark.
Filed June 5, 1961, Ser. No. 114,969
3 Claims. (Cl. 126—30)



1. An outdoor cooking unit comprising a supporting post of multiple connected segments and a plurality of utensils, certain of said utensils having wall structure defining open top pans and being of a size and shape to be disposed with their open tops in contiguous relation to provide a housing for the other utensils, bracket means on said certain utensils for connection to one of the segments of said supporting post for holding said utensils in housing forming relation, the segments of the post other than that connected to the bracket means being of a length less than the internal diameter of said certain utensils and capable of being readily contained therein, whereby the remainder of the utensils and the remainder of the segments of the post will be contained within the housing when the unit is not in use.

3,094,114
DAMPER CONTROL
Darcy L. Cage, 4325 Artesia Ave., Fullerton, Calif.
Filed Jan. 30, 1962, Ser. No. 169,871
8 Claims. (Cl. 126—288)



1. A damper unit for fireplaces comprising a pyramidal hood forming a fireplace throat with an open base and an open rear face, and a damper plate swingably mounted on said hood, on an axis near the lower end of said rear face and arranged to control the passage through said throat, a bracket on said damper plate, a support bar carried by said hood medially of the width thereof, and spanning the said open base from front to rear of said unit, a foldable lever comprising a first component of channel-form cross section, pivoted near its lower end to said bar rearwardly of the midpoint thereof, the side walls of said component having a pair of aligned openings, one of said walls having an L-form notch with one section opening outwardly of the wall edge, and a longitudinally disposed section communicating with one of said openings, the portion of said one of said walls adjacent said notch extending within the channel opening to provide a first spring finger detent, the lower edge of the other of said walls having a longitudinally disposed notch in its lower end edge, the portion of said other of said walls adjacent said latter notch extending within the channel opening to provide a second spring finger detent, a second component, of flat stock, wider than said first component, and having notches in its side edges near one end, defining a pair of oppositely disposed ears receivable in said aligned openings, for pivot action, said latter notches being of a length sufficient to clear the ends of the side walls of said first component, for alignment therewith when swung, said second component having an opening in the region of its notches, for clearing the pivot of said first component, and having an opening near its outer end for engagement by a grappling tool, and a coupling link pivoted at one end to the upper end of said first component and at its other end to said bracket on said damper plate.

3,094,115
TOOTH MOBILITY INDICATOR
Herbert S. Pelin, Veyrier, Switzerland
Filed June 8, 1960, Ser. No. 34,826
7 Claims. (Cl. 128—2.1)

1. A tooth mobility measuring instrument for measuring the firmness of the support of a tooth by its matrix, the jawbone and related periodontal tissue, comprising a small probe having a piezo-electric transducer portion suited for application to a tooth, for ready insertion into the oral cavity and suited to be placed in operating contact with an individual tooth, an electric circuit connected to said transducer, indicating means connected in said circuit, and an exciter means for applying a mechanical vibration of preselected characteristics to the bony structure of a patient's head whereby said signal is transmitted through the support matrix of a tooth under examination and through said transducer portion of said probe



which transforms the resultant vibration received through at least part of the tooth being tested into a corresponding electrical signal in said electric circuit which is supplied to said indicating means for the quantitative indication of changes in said input signal attributable at least in part to the condition of the support matrix of the tooth under examination.

3,094,116
THERAPEUTIC APPARATUS
Charles H. Logan, 4828 Tilden Ave., Van Nuys, Calif., and John H. Poor, 8963 Oak Park Ave., Northridge, Calif.
Filed Nov. 27, 1961, Ser. No. 155,011
16 Claims. (Cl. 128—24)



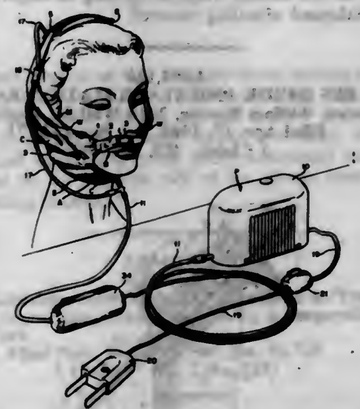
1. Therapeutic apparatus, comprising: a base structure having a cradle portion adapted to receive and support a body extremity thereon for treatment; a plurality of elongate inflatable cuffs each having a portion attached to said cradle; means for wrapping free portions of said cuffs around said body extremity; and means for cyclically inflating and deflating said cuffs while applied to the body extremity.

3,094,117
STRETCHER DEVICE FOR PRODUCING ARTIFICIAL RESPIRATION
Gerhard Otto Hintz, R.R. 1, Drinkwater Road, Alberni, British Columbia, Canada
Filed Dec. 22, 1959, Ser. No. 861,305
5 Claims. (Cl. 128—28)



1. A stretcher for use in artificial respiration comprising a support upon which a patient may be laid in prone position, said support consisting of a pair of laterally spaced frame members interconnected by means of a pair of spaced apart transversely extending flexible elements adapted to support said patient; a pair of support pads pivotally connected to said support for movement in a vertical plane between said flexible elements, one of said pads being mounted on a rigid backing member and positioned so as to underlie the pelvis of said patient and the other of said pads being mounted on a flexible backing member and positioned so as to underlie the abdomen of said patient; means for locking said support pads in a preselected position; means interconnecting said pads whereby movement of one of the pads simultaneously produces a corresponding and opposite movement of the other pad; and means operable to raise and lower said pads in alternation thereby to apply pressure alternately to said abdomen and said pelvis to cause alternate expirations and inspirations by the patient.

3,094,118
FACIAL MASSAGE MASK
Henry Geneste de Besse and William Weiss, Buffalo, N.Y., assignors to Rotary Hospital Equipment Corporation, Buffalo, N.Y.
Filed Aug. 10, 1962, Ser. No. 216,237
4 Claims. (Cl. 128—39)

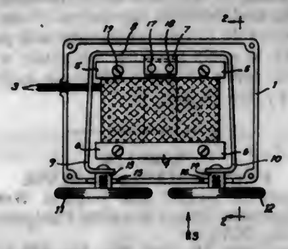


1. A device for toning and reinvigorating facial muscles and tissues comprising, in combination: a facial massage mask composed of connected plies of flexible material and having wings to fit snugly upon the malar regions of the face and a strap which connects the wings and fits snugly upon the area between the chin and the neck, the connections between the plies consisting of seams provided in the wings and the strap and delimiting cells in communicating relation throughout the mask and which are subject to distention and collapse, a bridge piece composed of flexible plastic material and having its ends connected to the wings, the bridge piece being positioned to extend below the nose and above the upper lip and being an element for centering the mask in snugly fitted relation upon the face, tapes connected to the wings and encircling the head as additional elements to hold the mask snugly upon the face, and flexible tubular means connected to the mask for delivering and venting air under pressure which flows into and from the cells.

3,094,119
MASSAGING APPARATUS
Michael K. Avedissian, R.D. 1, Box 351, Mohnton, Pa.
Filed Aug. 1, 1960, Ser. No. 46,719
3 Claims. (Cl. 128—41)

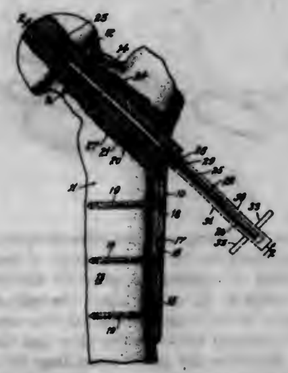
1. A massaging device of the character described comprising electromagnetic impulse generating means which includes a plurality of magnetic attraction areas on each of two sides thereof reciprocable means including at least one identical pair of armatures each of which is mounted so as to be movable in a certain work performing direction only, a massage element joined with each of said armatures so that each massage element is moved in said certain work performing direction only,

and means for maintaining said armatures in such spaced positional relationship with the electromagnetic impulse generating means that the magnetic impulses generated by the latter will cause the armatures to move toward



and away from each other to their maximum vibrating extent in said certain work performing direction only and in a balanced vibrating manner.

3,094,120
PIN GUIDE AND STABILIZATION BAR
Howard William Blosser, 2418 Wall St., Joplin, Mo.
Filed Apr. 17, 1961, Ser. No. 103,573
1 Claim. (Cl. 128—92)



A pin guide and stabilization bar for femoral neck, intertrochanteric and sub-trochanteric fractures comprising a plate having apertures therein, a barrel arranged angularly with respect to the upper portion of said plate and formed integral therewith, there being a pair of spaced parallel longitudinally extending openings in said barrel, said pair of openings being arranged in a plane transversely of the longitudinal axis of said plate, pins extending through the openings in said barrel, and each of said pins comprising and end portion having threads thereon, each pin further including a smooth portion, and an enlargement providing a shoulder on the outer end of said pin, there being a slot in said shoulder for engagement by a tool, said barrel projecting outwardly from said plate and being adapted to be inserted into a bore provided in a bone so as to reinforce said pins when inserted through said openings in said barrel into said bone.

3,094,121
AMPOULE APPLICATOR
Walter K. Blumenstein, Fairview Park, and Anthony David, Cleveland, Ohio, assignors to The Otto Konigslow Mfg. Company, a corporation of Ohio
Filed Aug. 7, 1961, Ser. No. 129,763
8 Claims. (Cl. 128—218)

7. An ampoule indicator including a body structure, an ampoule injection plunger movably supported by said body structure for movement in ampoule injecting and retracting directions, means for supporting an ampoule in position to be engaged and discharged by said injection plunger, a spring supported by said body structure and effective to move said injection plunger in ampoule injecting direction, handle means supported on said body structure, means for connecting said handle means and said injection plunger whereby when said handle means is



moved in one direction said injection plunger will be moved in retracting direction into retracted position, means for releasably locking said injection plunger in said retracted position, means operable by said handle means and adapted to activate said spring when said handle means is moved in the opposite direction and said plunger member is locked in said retracted position, and means for releasing said plunger member from said locked position.

3,094,122
FLEXIBLE CANNULA AND INTRAVENOUS NEEDLE COMBINED
Theophile E. Gauthier, 1210 4th St. NW., Rochester, Minn., and David J. Mann, 787 Woodhill Road, Mansfield, Ohio
Filed Jan. 18, 1961, Ser. No. 83,475
8 Claims. (Cl. 128—221)



1. An intravenous needle assembly comprising a hollow hypodermic needle having a shank with a smooth, unbroken and unobstructed exterior surface together with a pointed end, a flexible and non-toxic cannula tightly embracing and removably mounted upon said shank and adapted to be inserted into tissues with said needle and to remain in inserted position in said tissues upon withdrawal of said needle, said cannula having a forward end terminating in a feather edged lip disposed closely adjacent to and disposed rearwardly of said pointed end.

3,094,123
SURGICAL CUTTING NEEDLE
Leonard D. Kurtz, Woodmere, N.Y.
(9620 222nd St., Queens Village 29, N.Y.)
Filed Nov. 20, 1958, Ser. No. 775,214
3 Claims. (Cl. 128—339)



1. A surgical instrument comprising a member having at least one cutting edge, said cutting edge formed by intersecting planar surfaces, said surfaces converging to-

wards an end portion, the angle of convergence comprising an angle of slope and being less than 25°, the end portion being arc shaped and having a width within the range of .0001 to .010 inch.

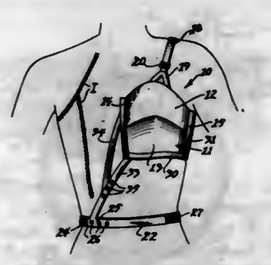
3,094,124
ARTERIAL CATHETER
William C. Birtwell, North Scituate, R.I., assignor to Davol Rubber Company, Providence, R.I., a corporation of Rhode Island
Filed June 30, 1960, Ser. No. 40,064
1 Claim. (Cl. 128—348)



In a surgical catheter, an elongated hollow body having a tapered portion formed on one end thereof, said hollow body being formed with a uniform inside diameter that extends a portion of the length thereof, the tapered portion of said body to the distal end thereof having an inside diameter of gradually decreasing diameter, a plurality of reference indicia marked on the outer surface of said tapered portion in spaced relation, said spaced reference indicia designating reference points that relate to the inside diameter of said tapered portion, said tapered portion being severable at any of said reference indicia, so that the inside diameter of the distal end of said body as severed is formed in a predetermined dimension, and a cannula formed of a metallic material and including a relatively thin-walled shank that terminates at one end thereof in an inclined edge, an enlarged head member joined to the other end of said shank and having an outer tapered surface that is secured to and inserted into the severed distal end of said tapered portion of said hollow body, the inside diameter of said cannula generally corresponding to the inside diameter of said tapered portion at the severed end thereof.

3,094,125
MASTECTOMY BRASSIERE
Martha M. Lewis, Oak Ridge, Tenn., assignor of fifty percent to Erretto Clements, Nashville, Tenn.
Filed Apr. 28, 1961, Ser. No. 106,273
7 Claims. (Cl. 128—483)

1. A brassiere for a single breast remaining after a mastectomy operation comprising, a breast pocket having a top portion, a bottom portion, an inner side portion and an outer side portion, a waist band normally spaced below said bottom portion for encircling the waist of a person, a shoulder strap attached to the top portion of said pocket and being adapted to pass over the shoulder corresponding to the remaining breast and diagonally across the back of the person, means for attaching said shoulder strap to said waist band on the opposite side of the person from said corresponding shoulder, a breast band connecting the outer portion of said pocket and an



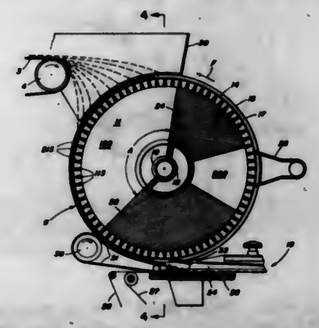
intermediate portion of said shoulder strap passing across the back of the person, and a supporting strap depending from the inner side portion of said pocket and being adapted to extend diagonally across the front of the person, said supporting strap being connected to said waist band on the opposite side of the person from said corresponding shoulder.

3,094,126
GIRDLE
Arthur Goldstein, New York, N.Y., assignor to Tru Balance Corsets, Inc., New York, N.Y., a corporation of New York
Filed Nov. 14, 1960, Ser. No. 68,720
6 Claims. (Cl. 128—529)



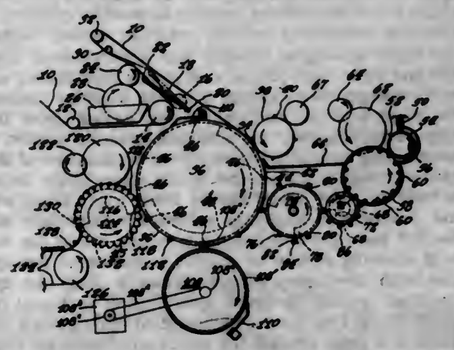
1. An elastic fabric undergarment extending from at least the waistline portion, over the abdomen portion, to below the thigh covering portions to provide waistline and abdomen enveloping sections and thigh sections comprising thigh enveloping sleeves, said undergarment having left and right front panels, said panels each having outer vertical edges which extend from the waistline section to the thigh sections, said panels also having upper inner edges extending over the abdomen covering portion and overlapping each other to provide a double-layered abdomen enveloping section and having upper edges forming a waistline, said panels having lower inner edges which are downwardly angularly extended substantially along the left and right crotch lines from one side of the abdomen covering section to provide a portion of the opposite thigh enveloping section elastically along the opposite thigh section, the lower inner edge of each said front panel being free from attachment to the opposite front panel at a point beneath the crotch enveloping portion of the garment, a rear panel joined to said outer edges from the waistline section to the thigh sections, said thigh enveloping portions being extended to join with said rear panel to form tubular thigh enveloping sleeves.

3,094,127
CIGARETTE MAKING MACHINE
Goffredo Gamberini, Bologna, Italy, assignor, by mesne assignments, to American Machine & Foundry Co., New York, N.Y., a corporation of New Jersey
Filed Apr. 7, 1960, Ser. No. 20,614
Claims priority, application Italy Apr. 18, 1959
8 Claims. (Cl. 131—21)



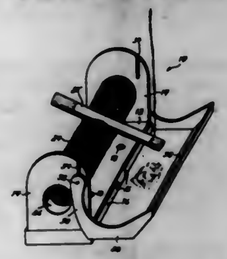
2. A cigarette making machine comprising a source of supply of tobacco, a first conveyor for conveying tobacco from said source, a cigarette rod former, a suction wheel positioned to receive tobacco showered from said conveyor, a second conveyor for bringing a rope of tobacco formed on said wheel to said rod former, said wheel comprising a fixed disk and a rotary disk coaxial therewith defining a chamber therebetween, a source of suction communicating with said chamber, a crown of radially narrowing partition members peripherally enclosing said disks, lateral retaining rings secured to said rotary disk and defining the sides of a peripheral groove in said wheel, a curved and perforated plate on said crown intermediate said retaining rings and secured to said rotary disk, said plate constituting the bottom of said groove, fixed sectors in said chamber secured to said fixed disk for closing a portion of said groove to said source of suction and thereby release tobacco held in rope form in said groove onto said second conveyor and means for rotating said wheel.

3,094,128
MOUTHPIECE CIGARETTE MAKING MACHINE
George Dearsley, Raleigh, N.C., assignor to American Machine & Foundry Company, a corporation of New Jersey
Filed Oct. 27, 1958, Ser. No. 769,822
14 Claims. (Cl. 131—94)



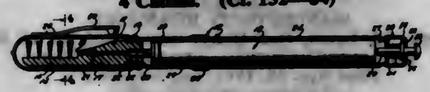
6. In a cigarette making machine comprising a suction drum having transverse suction grooves arranged at spaced intervals around the periphery thereof, feeding means underneath said suction drum for continuously and uninterruptedly feeding spaced cigarette rods axially of said suction drum, deflecting blades extending radially outwardly from the periphery of the suction drum for deflecting laterally in pairs the longitudinally moving spaced lengths of cigarette rods fed axially of the suction drum by said feeding means, said suction grooves being positioned along the forward surface of said deflecting blades to decelerate the axial movement of said cut lengths of cigarette rod by means of friction resulting from the suction pressure, means for feeding a filter between each pair of cigarette rod lengths on said suction drum, and an inclined rotatable aligning device positioned at the end of said suction drum for aligning the cut lengths of cigarette rod and filters axially as they rotate around said suction drum.

3,094,129
COIN HOLDING AND ASH TRAY DEVICE
David V. Wills, 4828 Brown St., Philadelphia, Pa.
Filed June 10, 1960, Ser. No. 35,319
5 Claims. (Cl. 131—238)



4. A combination coin holder and cigarette supporting ash tray comprising a base member adapted for being positioned upon a supporting body, said base having bracket members extending from said base at opposite ends thereof, said brackets having means for supporting a helical member therebetween in spaced parallel relation to said base and said brackets having means for supporting a tray thereon, a helical member and a tray supported by said bracket members, said tray comprising a flat planar portion adapted to rest upon said supporting surface beside and parallel to said base and also comprising arms at opposite ends thereof pivotally and removably attaching said tray to said brackets whereby said tray may be pivoted and placed in a horizontal position beside said helical member in order to receive ashes which may fall from a cigarette placed between adjacent portions of the helical member, may be removed from the brackets and base in order to empty and clean the same, or may be pivoted on said bracket adjacent to the helical member or the side thereof opposite from that wherein said tray was horizontally disposed, to a position where it serves as a stop limiting the extent to which coins may be placed in said helical member.

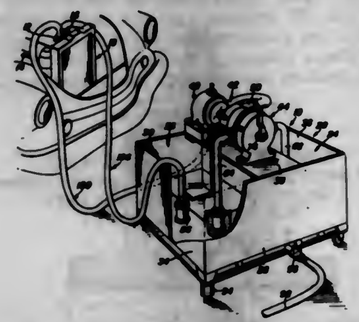
3,094,130
TOOTHBRUSH
William Wiener, 1160 Ocean Ave., Brooklyn, N.Y.
Filed Mar. 30, 1959, Ser. No. 803,048
4 Claims. (Cl. 132—84)



1. An improved fountain toothbrush comprising a head having a group of substantially vertical upstanding bristles, said group of bristles having a rearwardly directed recess formed therein, the bristles at the forward

base of said recess being upwardly forwardly inclined, a nozzle having a forwardly facing opening substantially horizontally directed at said inclined bristles and extending rearwardly from said head, a cartridge containing a liquid dentifrice under gaseous pressure, a normally closed valve carried by said cartridge and affording communication with the interior thereof and having a discharge opening, and means separably coupling said nozzle to said valve discharge opening.

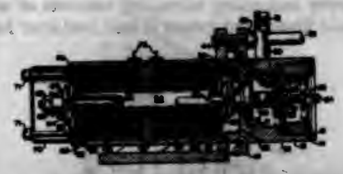
3,094,131
VEHICLE COOLING SYSTEM CLEANING APPARATUS
Henry L. Williams, 401 W. Commerce St., Eastland, Tex.
Filed Apr. 11, 1961, Ser. No. 102,255
1 Claim. (Cl. 134—98)



A vehicle cooling system cleaning apparatus comprising an open top tank reservoir compartmented into separate cleaning and flushing fluid reservoirs by a vertically extending partition wall completely segregating said reservoirs from each other, a pump having an inlet and an outlet, two branch conduits each having one end thereof in communication with the cleaning and flushing fluid reservoirs, a control valve, the other end of said two branch conduits being in communication with said control valve, said control valve having a movable valve member with an inlet selectively registrable with said branch conduits, and an outlet in constant registry with said pump inlet, a free flow outlet line having one end communicated with said pump outlet and the other end thereof adapted for securement to a cooling fluid inlet or outlet neck of an internal combustion engine normally connected to an outlet or inlet neck of radiator by means of a radiator hose, and a gravity flow return line having means on one end adapted for securement to the radiator neck normally connected to the engine cooling fluid neck with which said outlet line is connected, said free end of said return line being manually selectively positionable in communication with either the cleaning fluid reservoir or the flushing fluid reservoir through the open tops thereof.

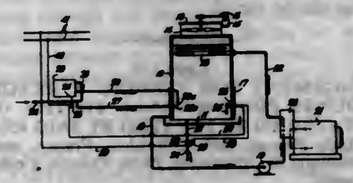
3,094,132
ELECTROMAGNETIC FLUID PRESSURE MODULATING VALVE
Robert C. Byloff, Los Angeles, Calif., assignor to The Garrett Corporation, Los Angeles, Calif., a corporation of California
Filed Dec. 24, 1959, Ser. No. 861,841
16 Claims. (Cl. 137—85)

1. An electromagnetic valve for providing a pressurized fluid signal varying in accordance with variation in the electrical signal used to energize the valve comprising: means defining a fluid flow path, a valve element in said path, a fluid flow control orifice in said path, means feeding fluid pressure to the upstream side of said valve element and orifice, a pressure signal take-off intermediate said valve element and orifice, a movable wall disposed adjacent said valve element and subjected on one side to fluid pressure existing on the inlet side of said valve element, said movable wall being connected to said valve element, a solenoid core connected to said valve element to control the position thereof, a pair of energizing coils about said core, means for con-



tinuously feeding unidirectional currents to said coils in directions to produce opposite magnetomotive forces therein, and means responsive to change in a condition being sensed to vary the relative values of the currents in said coils to produce a predominating magnetomotive force whose direction and amplitude are determined by the value of the condition being sensed.

3,094,133
CHEMICAL FEED AND BLOWDOWN SYSTEM
Earl E. Treanor, Leawood, Kans.
(% Treanor Corp., 4012 Truman Road, Kansas City, Mo.)
Filed July 22, 1959, Ser. No. 828,841
3 Claims. (Cl. 137—101.11)

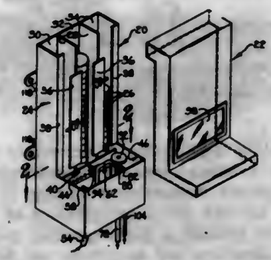


3. In a cooling water apparatus, a cooling tower having a sump from which water is passed to the work to be cooled, a source of water, a first input flowline from said source of water to said sump, a first valve on said first input flowline, a by-pass line from said first flowline after said first valve and before said sump, a throttling valve in said by-pass line operative to control the flow therethrough relative to the flow through said first input flowline past the said first valve, means for regulating the pH of the water in said by-pass flowline, second input line means for passing said pH controlled water to said sump, an output flowline from said sump, a second valve and a second throttling valve on said output flowline, means connected to said first and second valves for opening and closing them as the water level in said sump varies whereby to replenish said sump with raw water and simultaneously withdraw mineral concentrated water therefrom, the flow capacity of the output line proportioned by means of the throttling valve thereon relative to the flow capacity of the first and second input lines so as to withdraw such regulated quantities of water therefrom as to tend to control within limited ranges the insoluble constituents in the water and the sump.

3,094,134
DISPERSING DEVICE
Grover C. Currie, Charlotte, N.C., assignor to Fulbright Laboratories, Inc., Charlotte, N.C., a corporation of North Carolina
Filed Mar. 2, 1961, Ser. No. 92,948
15 Claims. (Cl. 137—132)

1. A device for dispersing soluble material in liquid comprising a container having an inlet, said liquid being

continuously introduced into said container through said inlet while said device is in operation, means positioned within said container above the bottom thereof for supporting the lower end of an upright column of said material, said introduction of said liquid into said container raising the liquid level therein above said supporting means and the lower end of the column of said material and thereby immersing increasing amounts of said material in said liquid, and means in said container for rapidly



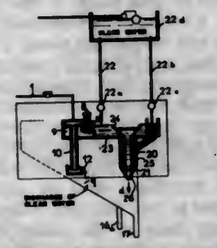
discharging said liquid from said container and thereby lowering said liquid lever below said supporting means when said liquid level reaches a predetermined height in said container, said discharging means including a siphon mounted for adjustment relative to said container to vary said predetermined height at which said rapid discharge commences, whereby the extent to which said liquid immerses said column of said material prior to said rapid discharge can be varied.

3,094,135

ARRANGEMENT FOR FEEDING A REAGENT IN AMOUNTS PROPORTIONAL TO THE OUTPUT OF WATER TO BE TREATED BY SAID REAGENT

Yves Marie Ponsar, Bois-Colombes, France, assignor to Hydraulique & Urbanisme, Paris, France, a corporation of France

Filed Mar. 9, 1960, Ser. No. 13,873
Claims priority, application France Mar. 10, 1959
2 Claims. (Cl. 137—240)



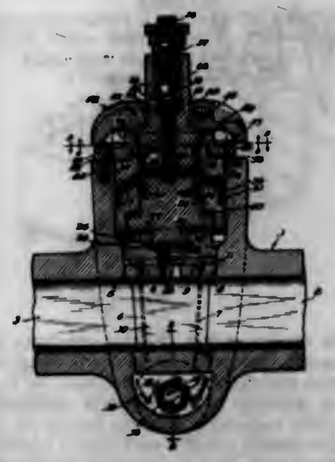
1. An apparatus for distributing a mixture of a liquid and of a suspension therein with a controlled amount of the suspension in the liquid, comprising a first tank, first feeding means for feeding liquid having a constant proportion of suspension therein to said first tank, means for maintaining the liquid surface in the first tank to a first predetermined level, an intermediate tank, a first liquid passageway connecting lower portions of said first tank and of said intermediate tank, a second tank, second feeding means for feeding clear liquid to said second tank, an overflow pipe in said second tank having an upper overflow portion located at a second predetermined level higher than said first predetermined level, a second liquid passageway connecting upper portions of said intermediate tank and of said pipe, said second liquid passageway being at a level lower than said first predetermined level, a sleeve member spacedly surrounding said overflow pipe, third feeding means for feeding clear liquid to said sleeve member, a constant flow outlet orifice formed at a lower end portion of said sleeve member, said overflow pipe having a lower end outlet located above said orifice and having a larger section than said orifice, and control means for varying the liquid surfaces in said second tank thereby adjusting the amount of the suspension in the liquid discharge through said constant flow orifice.

3,094,136

LUBRICATED PLUG VALVE

Kurt B. Bredtschneider, Chicago, Edmond P. De Craene, Westchester, George E. Hansen, Elmwood Park, and Frank D. Cotterman, La Grange, Ill., assignors to Crane Co., Chicago, Ill., a corporation of Illinois

Filed Dec. 2, 1959, Ser. No. 856,817
2 Claims. (Cl. 137—246.11)



1. A lubricated plug valve for use on high pressure fluid lines;

(*a*) the combination of a valve casing;

(*b*) a ported valve plug rotatably mounted in said casing provided with lubrication means;

(*c*) actuating means for rotating said plug;

(*d*) an axially adjustable resiliently mounted operating stem separate from and engageable with said plug to effect said rotation of the plug;

(*e*) the said stem having an upper end portion projecting outwardly from the said casing;

(*f*) resilient means interposed between said stem and plug to support said stem;

(*g*) the said resilient means being mounted between said stem and plug at the location at which said engagement of the stem with the plug is provided;

(*h*) an annular threadedly adjustable retaining bushing mounted in a threaded recess of the said casing whereby the axial position of the said stem is set in relation to said plug;

(*i*) the said bushing enclosing a longitudinal portion of said operating stem within said casing and restraining said stem against substantial axial movement while adjusting the compression load on said resilient means to permit predetermined axial movement of said plug in a direction toward said stem;

(*j*) annular sealing recess means disposed between a peripheral portion of said operating stem and an inner annular surface of said adjustable bushing;

(*k*) packing in said annular recess means;

(*l*) means in an end portion of said stem for injecting the said packing into said annular recess means to urge said packing into sealing engagement with said stem and bushing to prevent leakage of line fluid therepast;

(*m*) the said injection means for supplying the said packing to the said annular recess means being radially extending and located in said stem whereby to avoid the exertion of a substantial axial force on said valve plug;

(*n*) a second annular sealing recess means within said casing disposed between said casing threaded recess and the threaded portion of said bushing within said casing recess communicating with said first named annular sealing recess means;

(*o*) the said packing injection means including a second radially extending means, the latter means being in said bushing and connecting said first and second annular recess means;

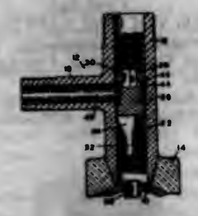
(*p*) means within the casing cooperating with the said packing means and supplementing the said annular recess sealing means for lubricating said valve plug to move the latter member limitedly axially in a direction toward said stem and said resilient means.

3,094,137

SELF-PUNCHING T FITTINGS

Donald J. Burke, 4530 S. Jamestown, Tulsa, Okla.

Filed Jan. 9, 1961, Ser. No. 81,347
2 Claims. (Cl. 137—318)



1. A self-punching T fitting of the type described adaptable for affixing to a pipe whereby fluid communication may be provided with said pipe, comprising, in combination: a tubular body member adaptable for affixing, as by welding, at one end thereof to the exterior surface of said pipe whereby said body member extends substantially radially therefrom, said tubular body member having threads formed substantially the full length of the internal surface thereof; a tubular T member engaging and integrally formed with said body member intermediate the ends thereof whereby the interior of said tubular T member communicates with the interior of said body member; and a cylindrical punching member having threads formed thereon adaptable to screwably engage said internal threads of said body member, said punch member having a reduced concentric cylindrical end portion, said reduced end portion terminating in a punching face, said punching face defined by at least three and not more than six flat face areas, each of said flat face areas formed at an angle with respect to a plane drawn perpendicular to the axis of said punching member, said flat face areas intersecting each other to form a point coinciding with the axis of said cylindrical punch member, and said punch member having means at the end opposite said punching face adaptable to receive a tool whereby said punch member may be rotated in one direction to engage said punching face with said pipe to displace a portion of the metal of said pipe to form a hole therein and whereby said punching member may be subsequently rotated in the opposite direction to displace said punching member within said body member away from said hole to provide fluid communication between said pipe and said tubular T member.

3,094,138

FLOAT VALVE MOUNTING

Verner E. Sprouse, Columbus, Ind., assignor to Veraco Corporation, Columbus, Ind., a corporation of Indiana

Filed Sept. 13, 1961, Ser. No. 137,801
4 Claims. (Cl. 137—448)



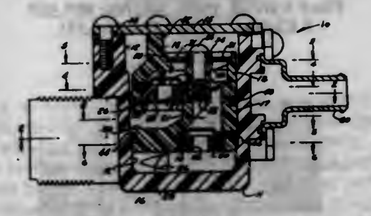
1. The combination of a wall having an opening therethrough; a valve body portion; a threaded stem extending from said portion; a bracket fixed to said wall; a cupped portion of said bracket extending in spaced relation from said wall and having an opening on one side of the bracket between said wall and said cupped portion; said cupped bracket portion having a body receiving opening; a washer within said cupped portion; said body portion entering said receiving opening and said stem passing through said washer and said wall opening to extend beyond said wall; a washer on said stem on the side of said wall removed from said bracket; a nut carried on said stem drawing said body portion against said washer in said cupped bracket portion against said wall on the bracket side of the wall, and said opposite side wall washer against the wall, sealing off the body opening; abutments around the periphery of the opening through said bracket; and said body portion lying within said bracket opening having an abutment interengaging between said bracket abutments maintaining the body portion against rotation relative to said wall.

3,094,139

MIXING VALVE EMPLOYING A FLOW CONTROL-CHECK VALVE INSERT

James Clarence Budde and Thomas Edmund Noakes, Detroit, Mich., assignors to American Radiator & Standard Sanitary Corporation, New York, N.Y., a corporation of Delaware

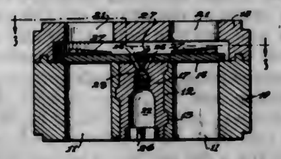
Filed Oct. 3, 1957, Ser. No. 687,989
2 Claims. (Cl. 137—454.6)



1. A mixing valve comprising a valve housing formed with a cylindrical recess therein; a cylindrical insert member seated within said recess but having its innermost end face spaced from the recess bottom wall so as to form an inlet chamber; a cylindrical pocket formed in said innermost face; a resilient flow control element carried in said pocket; a second cylindrical pocket formed in the outermost end face of the insert member; a resilient flow control element carried in said second pocket; a passage extending from the first pocket to the outermost end face of the insert member whereby to convey fluid from the first flow control element; a second passage extending from the cylindrical face of the insert member to the second pocket whereby to feed the second flow control element with fluid; means defining separate inlets for the valve in fluid communication with said inlet chamber and second passage, respectively; a second

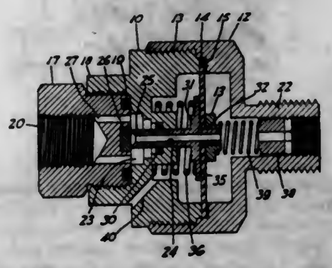
insert member carried on the aforementioned outermost end face of the first insert member; an orifice extending through said second insert member into communication with the first passage; a second orifice extending through said second insert member into communication with the second flow control element; a flexible disk carried on the downstream face of said second insert member and overlying the aforementioned orifices, whereby to act as a check valve for each of the fluid streams issuing from the flow control elements; and means defining an outlet for the mixing valve in fluid communication with the downstream face of the flexible disk.

3,094,140
AUTOMATIC VALVE FOR COMPRESSORS
Charles R. Miller, R.R. 2, Box 299, Crown Point, Ind.
Filed Sept. 20, 1960, Ser. No. 57,169
2 Claims. (Cl. 137—499)



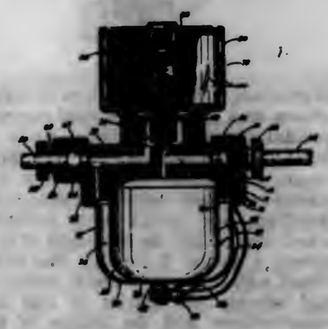
2. A compressor valve comprising a valve seat having a main fluid passage and a threaded bore, a valve plate displaceable from a seating position to an unseating position with respect to said valve seat, and means for displacing said valve plate from the seating position into the unseating position in response to a differential fluid pressure, said means including a threaded shaft connected to said valve plate and received in said threaded bore and further including an auxiliary passage for fluid flow through said threaded shaft and said valve plate, said auxiliary passage provided with a vane which imparts a torque to said threaded shaft and said valve plate in response to fluid passing through said auxiliary passage.

3,094,141
PRESSURE REGULATING VALVE
Galle E. Maieuknecht, 364 Reach Road, Williamsville, N.Y.
Filed Apr. 20, 1959, Ser. No. 807,587
3 Claims. (Cl. 137—505.25)



1. In a pressure regulating valve, causing means forming a generally cylindrical chamber, a diaphragm extending across said chamber to divide the same into coaxial chamber portions comprising a vented chamber portion and an outlet pressure chamber portion, said casing means having an inlet pressure chamber portion at the vented chamber portion side of said diaphragm but spaced axially therefrom away from said diaphragm, said casing means having an axial inlet passage at the inlet pressure chamber side thereof in open fluid communication with said inlet pressure chamber, said casing means including an axial bearing formation separating said inlet pressure chamber portion and said vented chamber portion, a tubular member axially slidable in said bearing formation and fixed at one end to said diaphragm, the opposite end of said tubular member being disposed in said inlet pressure chamber portion and comprising an axially movable valve, a radial face in said inlet pressure chamber portion cooperating with said tubular member to form a valve between said inlet pressure chamber portion and said outlet pressure chamber portion by way of the interior of said tubular member wherein the effective valve diameter is substantially the same as the diameter of said valve in said bearing formation whereby pressure in said inlet pressure chamber imposes substantially no bias on said tubular valve member in an axial direction, a main compression coil spring in said vented chamber portion and acting against said diaphragm, a more yieldable compression coil spring of less force than said main spring in said outlet pressure chamber portion and having an end thereof acting against said diaphragm to partially counteract the bias of said main compression coil spring, and an axially adjustable annular spring seat within said outlet pressure chamber portion bearing against the other end of said more yieldable coil spring to vary the counteracting effect thereof with respect to said main compression coil spring and thus adjust the outlet pressure constant of said valve, said adjustable annular spring seat having an axial bore comprising an outlet pressure passage.

3,094,142
LIMITED VOLUME SAFETY VALVE
Gordon J. Fairbanks, Indianapolis, Ind., assignor to Stewart-Warner Corporation, Chicago, Ill., a corporation of Virginia
Filed July 20, 1960, Ser. No. 44,113
4 Claims. (Cl. 137—564.5)



4. A fuel safety device comprising a generally cup-shaped housing member having internal walls defining a closed space, a molded flexible bag positioned within said housing and normally occupying a position adjacent said internal walls and spaced slightly therefrom when balanced stagnation fuel pressures are exerted on opposite sides thereof to divide said closed space into a first chamber of relatively small volume and a second chamber of relatively large volume, means forming an inlet, means forming a flow connection between said inlet and said second chamber for delivering fuel under stagnation pressure thereto, means forming a separate connection open transversely to the flow connection for communicating the static pressure of the fuel therein to the first chamber, said connections tending to compensate during flow conditions for stagnation pressure drop in the flow connection between the inlet and said second chamber, means forming an outlet from said second chamber, and valve means in said flow connection downstream of the separate connection.

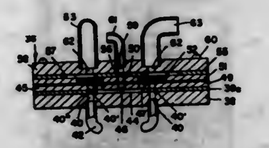
3,094,143
COMBINATION EXPANSION TANK VALVE
T Arnold Beach, 59 Bemis Road, Weston, Mass.
Filed June 23, 1960, Ser. No. 38,249
1 Claim. (Cl. 137—588)



A combination expansion tank valve comprising a body member including an upstanding portion having an upper externally threaded end, said upstanding portion having an inner vertically disposed passageway therein, a shoulder on said body member below said threaded end, said body member including a fluid inlet and a fluid outlet, a tapered seat in said body member, a rotary tapered valve member resiliently held into engagement with said seat by means of a coil spring engaging the lower end of said valve member, said tapered valve member having a closed lower end and an open top, and the interior of the tapered valve member being hollow and the interior of the tapered valve member communicating with the passageway in said upstanding portion, said tapered valve member also including a side wall portion having a slot therein, an externally threaded skirt depending from said body member, said skirt having a hollow interior which defines a cylindrical bore that communicates with the lower end of the valve seat, a sleeve threadedly engaging said skirt and said sleeve including an upper shouldered portion, a sealing element mounted in the upper portion of the sleeve, there being a port in the intermediate portion of said sleeve, a hollow vertically disposed tube extending through said sleeve, and said tube also extending through the tapered valve member and through the passageway in the upstanding portion of the body member, said tube being fixedly secured to said tapered valve member, there being an aperture in said tube mounted for movement into and out of registry with the ports in said sleeve, a plug closing a lower end of said tube, a handle connected to the bottom portion of the tube, a fitting on the upper end of the tube, a support member in said fitting provided with a vertically disposed passageway and an upper arcuate seat, and a spring pressed ball valve mounted for movement into and out of opened and closed relation with respect to said arcuate seat.

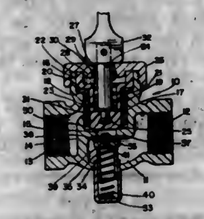
3,094,144
VACUUM ACTUATED BLOCKING VALVE FOR VACUUM CONTROLLED MECHANISM
Le Roy V. Oxley, 210 S. Church St., and Clarence M. Blythe, Rte. 5, Box 457, both of Hendersonville, N.C.
Filed Jan. 13, 1960, Ser. No. 2,237
4 Claims. (Cl. 137—609)

1. A vacuum operated valve comprising a body having a first, second, third and fourth plates arranged in superposed relation, the first plate having two ports therethrough in closely spaced relation, the second plate having a relatively large opening therethrough toward which said ports are directed, the third plate having an opening therethrough of smaller size than the second plate opening and communicating with the second plate opening, the fourth plate having a fluid port therethrough communicating with the opening in the third plate, said first and second plates having parallel opposing faces, a diaphragm secured between said opposing faces and covering the opening in the second plate, and a soft resilient body filling the opening in the second plate and having a top



surface coplanar with the said surface of the second plate and engaging and supporting the diaphragm over the opening in the second plate and said diaphragm and the top of the resilient body being joined whereby the application of reduced pressure to the opening in the third plate by way of the port in the fourth plate will effect the contraction of said resilient body to draw the diaphragm away from said pair of ports for the establishment of communication between the ports, and means securing said plates and diaphragm compactly together.

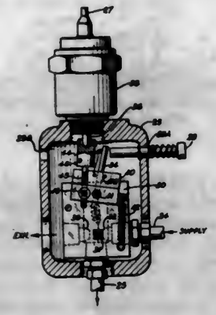
3,094,145
SELF-CLOSING STOP VALVE
John A. Chernak, Euclid, and Elroy J. Giese, Cleveland, Ohio, assignors to Tomlinson Industries, Inc., Cleveland, Ohio, a corporation of Ohio
Filed June 16, 1959, Ser. No. 820,726
6 Claims. (Cl. 137—614.2)



1. In a valve, a body having a passageway therethrough, an inlet adjacent one end of said passageway, an outlet adjacent the other end of said passageway, a partition in said passageway between said inlet and outlet, said partition having an opening therethrough, first and second seats respectively on the inlet and outlet sides of said partition and surrounding said opening, an elongated resilient primary sealing element disposed in said passageway on the inlet side of said partition, one end of said primary sealing element being fixed with respect to said body, means to move the opposite end of said primary sealing element into and out of sealing engagement with said first seat, the passageway being so constructed and arranged that the path of flow from said inlet to said opening in the partition is directed at said sealing element at an abrupt angle to the axis of elongation of said sealing element, rigid elongated protective shield means in said passageway between said primary sealing element and said inlet constructed and arranged to shield said primary sealing element from impinging flow by diverting said flow to a direction axially of said sealing element and toward said opening in the partition, an auxiliary sealing element disposed in said passageway on the outlet side of

said partition, and means to move said auxiliary sealing element into and out of sealing engagement with said second seat.

3,094,146
FLUID PRESSURE CONTROL SYSTEM
Clarence O. Glasgow, Tulsa, Okla., assignor to National Tank Company, Tulsa, Okla., a corporation of Nevada
Filed Dec. 28, 1959, Ser. No. 862,246
4 Claims. (Cl. 135—596.14)



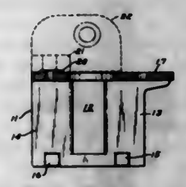
1. A control system including:
a transducer responsive to a variable condition and positioning a plunger element along a substantially straight line path;
a lever arranged in the path of the plunger element of the transducer and engaged by the plunger element and pivoted in the first of two directions;
a spring attached to the lever to pivot the lever in the second of the two directions;
a pin removably mounted on the lever as the actuating element of the lever;
a valve having two positions, each of which position establishes a fluid pressure output from a separate source of fluid pressure, and an actuated member positioned in the path of the actuating pin of the lever so the valve will be given the first of its two positions by the lever pin;
and a push rod mounted for manual actuation to contact the actuated member of the valve to give the valve the second of its two positions.

3,094,147
BENDABLE TUBING
Michael Nemer, Clyde, Ohio, assignor to The International Metal Hose Company, Bellevue, Ohio, a corporation of Ohio
Filed Mar. 22, 1961, Ser. No. 97,506
3 Claims. (Cl. 138—122)



1. A cylindrical tube comprising a helically wound strip of formable material, said strip having marginal portions turned back into overlying relation to opposite faces of said strip and extending along the longitudinal sides thereof with the free edge of each of said marginal portions received in interfolding engagement with and within the turned back marginal portion of the convolution of the strip contiguous thereto, a shoulder extending longitudinally of said strip adjacent to each of its marginal portions and respectively cooperatively engaging the turned back and interfolded marginal portions of the convolutions thereof contiguous thereto to secure the interlockingly engaged marginal portions against relative movement by bearing engagement between said shoulders and said turned back marginal portions.

3,094,148
PICKER-STICK CHECK BRACKET
Sylvio J. Maurice, 579 Hunt St., Central Falls, R.I.
Filed Nov. 9, 1960, Ser. No. 68,298
3 Claims. (Cl. 139—165)



1. A bracket adapted to be attached to a supporting element affixed to a fly shuttle loom wherein a picker-stick and check strap therefor are employed, comprising a flange portion for securing said bracket to said supporting element and including an apertured rib portion engageable with said supporting element, means on said flange for supporting a spindle and a recess intermediate the rib and supporting means for receiving a part of said supporting element, the bracket further including spaced parallel strap engaging faces defining a downwardly depending portion and integral projections mounted on said strap engaging faces for supporting the check strap.

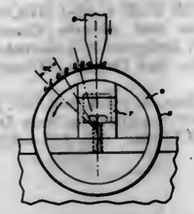
3,094,149
PAPER MAKERS FELT
Vincent C. Kelly, Piqua, Ohio, assignor to The Orr Felt & Blanket Company, Piqua, Ohio, a corporation of Ohio
Filed Nov. 14, 1960, Ser. No. 68,997
2 Claims. (Cl. 139—383)



1. A paper makers felt comprising a base fabric consisting of interwoven warp and fill threads, said base fabric comprising slivers of fibrous material interwoven with the fabric parallel with the fill threads and uniformly distributed in the fabric, said warp and fill threads and slivers of fibrous material being tightly interlocked, said fill threads being woven over two warp threads and then under two warp threads, and said slivers consisting of two groups, the members of which alternate with each other, the members of one group being disposed mostly in one face of the fabric and the members of the other group being disposed mostly in the other face of the fabric, said slivers being woven into the base fabric in pairs with a fill thread being disposed on the opposite sides of each pair of slivers.

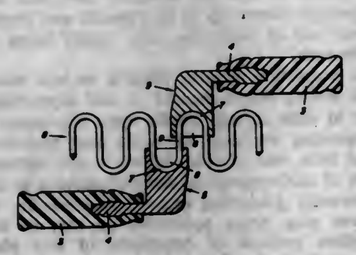
3,094,150
MANUFACTURE OF GRIDS FOR ELECTRONIC TUBES
Pierre Patriarche, Courbevoie, France, assignor to Compagnie Industrielle Francaise des Tubes Electroniques, Courbevoie, France
Filed June 18, 1959, Ser. No. 821,168
Claims priority, application France July 29, 1958
4 Claims. (Cl. 140—71.5)

1. In a method of making alignable grids for beam power tubes and the like the steps comprising drawing a wire from a supply spool, winding the wire onto a cylinder of good thermal conductivity and capacity in heat transferring contact therewith and in a helix having a desired pitch, placing in contact with the exterior of the wire helix a metallic supporting frame having a window area across which portions of the wire helix extend, welding the frame to the wires in contact therewith, and



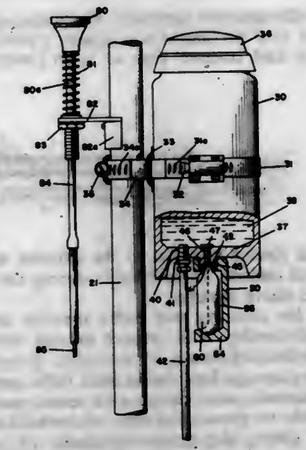
simultaneously maintaining the temperatures of said wires constant whereby heat elongation of said wire during welding is minimized by heat transfer to said cylinder, removing from the cylinder the frame together with the portions of said wire secured thereto, and deforming the frame to place the wire segments secured thereto in tension.

3,094,151
SPRING BENDING TOOL
Lonnie R. Dugger, 2112 Lantana Way, Bakersfield, Calif.
Filed Aug. 8, 1961, Ser. No. 130,184
1 Claim. (Cl. 140—106)



Means for bending a serpentine spring in any direction comprising, in combination, a pair of duplicate hand tools including elongated handles of generally circular transverse section, shanks anchored centrally in one end portion of the handles and projecting longitudinally therefrom, and substantially flat, elongated heads integral with the outer end portions of the shanks and projecting thereform at right angles thereto, said heads including flat free ends having extending thereinto laterally elongated, narrow sockets including coextensive side and end walls and further including arcuate inner walls for seatingly receiving adjacent bight portions of a spring to be bent and including opposed, parallel straight wall portions tangential to said arcuate inner walls, said sockets thereby being of a depth, width and length to receive and snugly embrace said adjacent bight portions and the immediately adjacent straight portions of the spring for preventing circumferential movement and rotation of the heads on said adjacent bight portions of said spring and retaining the handles in spaced parallelism with said spring whereby the straight portion of said spring connecting said adjacent bight portions may be axially twisted and angularly bent in any direction.

3,094,152
LIQUID DISPENSING DEVICE FOR FLOOR MACHINES
James P. Kenny, Havertown, and James J. Grant, Lansdowne, Pa., assignors to Power Spray Company, Inc., a corporation of Pennsylvania
Filed Jan. 26, 1962, Ser. No. 169,009
2 Claims. (Cl. 141—19)



1. A liquid dispensing device for attachment to a portable floor machine having a working head supported on a floor and a handle projecting upwardly therefrom for manual movement of the floor machine, said dispensing device comprising a container for storing a liquid composition therein, a removable top closure for said container for refilling said container with liquid composition, an outlet opening in the bottom wall of said container for passage therefrom of liquid stored in said container, a liquid supply tube connected to said outlet opening, a gas inlet port in the bottom of said container, a capsule containing liquefied gas, said capsule being provided with a frangible seal, a removable holder for retaining said capsule, said holder being open at one side thereof for the insertion and removal of the capsule, said holder being provided with coupling means for connecting the capsule to the gas inlet port of the container, puncture means positioned in said gas inlet port for puncturing said frangible seal upon connecting said capsule to said inlet port, a nozzle carried on the working head of the floor machine for projecting a stream of liquid forwardly of the working head of the floor machine, said liquid supply tube being connected to said nozzle, valve means communicating with said nozzle for controlling the flow of liquid to said nozzle, and manual valve control means carried on said handle for opening and closing said valve means.

3,094,153
BIASED DELIVERY GATE FOR FILLING MACHINE
Robert L. Hegman, Robert W. Hess, and Clinton L. Weber, Cincinnati, Ohio, assignors to The Safegard Corporation, Cincinnati, Ohio, a corporation of Ohio
Filed Apr. 4, 1961, Ser. No. 100,696
1 Claim. (Cl. 141—67)

In a filling machine for filling containers with substantially air-buoyant material comprising the combination of means for supplying gas under pressure and containing the material in suspension, a stationary transfer pipe having an intake end in communication with said supply means and an outlet end, a hollow, perforated cylindrical stationary screen member mounted in concentric rela-

tionship to and of larger diameter than said pipe and extending beyond said outlet end, a hollow tubular sleeve member concentrically disposed on said pipe and mounted for reciprocal movement relative to and in said screen, and means for projecting said sleeve member to eject material which collects on said screen and retracting said sleeve member to permit said material to be blown onto said screen, the improvement which comprises the following:

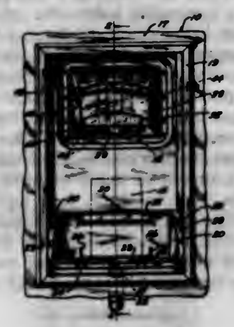
a flat baffle member normally positioned at the outer end of said perforated screen and transverse to the axis of said transfer pipe so as to present the passage of ejected material to the exterior and so that material collects on said baffle during the retraction of said sleeve member,



a hinge for securing said baffle member in a swinging relationship with respect to said outer end of said perforated screen,

and spring means for biasing said baffle member into said normal relationship, said spring means being yieldable to permit delivery of material to the exterior during the projecting stroke of said sleeve member when pressure is generated by the compacting of material against the baffle, overcoming the bias of the spring means.

3,094,154
BEVERAGE DISPENSERS
Paul J. Daniels, Niles, Mich., assignor to Meterflo Dispensers, Inc., Chicago, Ill., a corporation of Illinois
Filed Sept. 16, 1960, Ser. No. 56,405
7 Claims. (Cl. 141—88)



1. In a beverage dispenser cabinet having a rear wall, a top, and a front wall with a door therein, and having a disposable beverage delivery tube with a dispensing end, a cup station and spout unit comprising: a housing mounted in the cabinet door, said housing having an open front communicating with the exterior and having a back wall with an opening through its upper portion communicating with the cabinet interior; cup-supporting means in the lower portion of said housing; a spout cover removably mounted in and projecting forwardly through said housing back wall opening, said cover having a bottom dispensing opening and having an open back; a tube-holding bracket removably supported by and depending from said cabinet top in a position to project into said spout cover when the cabinet door is closed; and means on said bracket adapted to removably support the dispensing end of said disposable beverage delivery tube in a position adjacent said dispensing opening for discharge directly through said dispensing opening of the spout cover when the door is closed.

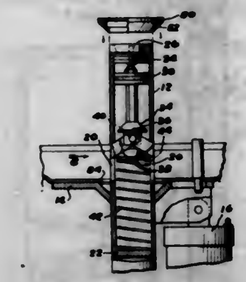
3,094,155
MICROSYRINGE FOR GAS-CHROMATOGRAPHY
Marco Taramasso and Alberto Guerra, San Donato Milanese, Italy, assignors to Laboratori Riuniti Studi e Ricerche S.p.A., San Donato Milanese, Italy, a company of Italy
Filed Dec. 8, 1960, Ser. No. 74,661
Claims priority, application Italy Dec. 16, 1959
4 Claims. (Cl. 141—329)



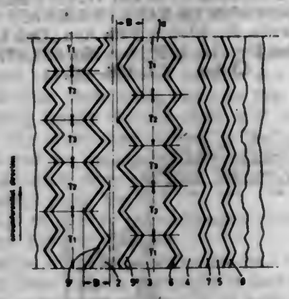
1. A microsyringe for gas chromatography comprising
(*a*) a tube,
(*b*) a hollow plunger reciprocable in said tube and projecting outwardly from one end of said tube,
(*c*) a self-sealing resilient plug secured to the inner end of said plunger to close the same whereby said plunger may hold a liquid,
(*d*) a piston secured to said plunger intermediate the ends of said plunger,
(*e*) means closing the other end of said tube,
(*f*) a hollow needle removably secured in said means to project at one end inwardly into said tube and to project outwardly at its opposite end beyond said other end of said tube, said needle being open at both ends,
(*g*) a supporting member slidable on said tube,
(*h*) a sealing sleeve secured to said supporting member to slide on said needle upon movement of said supporting member forwardly and backwardly on said tube, said sealing sleeve, in the forward position of said supporting member, serving to close the outwardly projecting end of said needle, said resilient plug being positioned so that in an intermediate position of movement of said plunger it closes the inwardly projecting end of said needle and so that, in the innermost position of movement of said plunger, said needle extends through said plug into said hollow plunger to permit liquid to flow from said plunger into said needle.

3,094,156
PNEUMATIC WHEEL LOCK FOR TIRE CHANGING APPARATUS
Hershel T. Breazeale, Dearborn, Fred May, Allen Park, and George May, Dearborn, Mich., assignors, by mesne assignments, to FMC Corporation, San Jose, Calif., a corporation of Delaware
Filed July 21, 1960, Ser. No. 44,341
8 Claims. (Cl. 144—288)

1. In a wheel holding device for a tire changing and repair apparatus of the type having a supporting column, a wheel supporting flange on said column, and a hollow post adjacent said flange with a fluid-actuated piston and rod therein movable to and from a locking position, that improvement which comprises one or more slots formed in said post, one or more dogs pivotally mounted on said piston rod slidable axially and radially in said slots from a retracted to an engagement position, and resilient means to retract said fluid actuated piston from a locking position causing said dogs to be cammed with an end of said slot to a retracted position, and to move said dogs outwardly through said slots when said piston is shifted to said locking position by fluid pressure.



3,094,157
VEHICLE TIRE
Friedel Klöhn, Hannover, Germany, assignor to Continental Gummi-Werke Aktiengesellschaft, Hannover, Germany
Filed July 28, 1961, Ser. No. 127,579
Claims priority, application Germany Aug. 1, 1960
5 Claims. (Cl. 152—209)



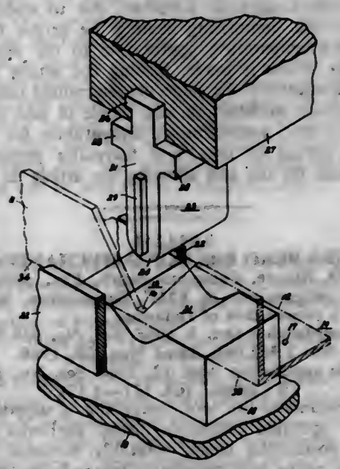
1. A vehicle tire which comprises a tread strip having a plurality of sharp-edged zigzag-shaped grooves extending in circumferential direction of said tread strip and being arranged in spaced relationship to each other so as to confine therewith sharp-edged zigzag-shaped circumferential ribs, at least some of said ribs respectively varying in width measured in a direction perpendicular to the direction of travel of said tire, and at least some adjacent ones of said grooves being sub-divided into successive series of different pitch sections following each other in at least one series in a definite order and in successive series changing this order along one and the same groove by skipping one pitch section only at a time, the different pitch sections of each series being substantially identical to each other, the zigzag-shaped grooves on one side of that plane of symmetry of the tire which is transverse to the axis of rotation thereof being identical to but the image of the zigzag-shaped grooves on the other side of said plane of symmetry, and on each side of said plane of symmetry each varying pitch section of one groove being offset with regard to the respective adjacent varying pitch section of the respective adjacent groove in longitudinal direction thereof by approximately one-half of the respective pitch section.

3,094,158
MECHANISM FOR FORMING PRONGS OR BARBS IN SHEET METAL STRIPS
James S. Reid, Hudson, Ohio, assignor to The Standard Products Company, Cleveland, Ohio, a corporation of Ohio
Filed June 27, 1960, Ser. No. 38,920
6 Claims. (Cl. 153—2)



1. In forming apparatus for forming barbs in deformable strip material, a die block having a pair of parallel rows of punch receiving grooves in parallel sides thereof and retractable support means disposed between said rows of grooves and normally projecting upwardly above said die block and supporting said strip material.

3,094,159
FORMING PUNCH
Thomas E. Walsh, Bayonne, N.J., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed June 25, 1962, Ser. No. 204,864
4 Claims. (Cl. 153—21)



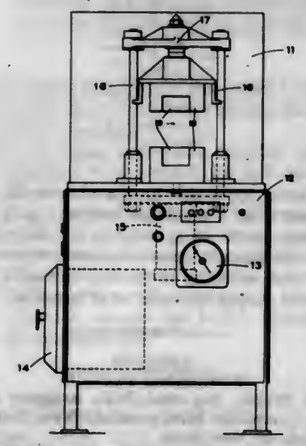
1. A forming device comprising:
a punch having a substantially U-shaped end portion,
a mating female die member to receive the U-shaped portion of the punch,
actuable means for driving the punch into cooperation with the die, and

a protruding member situated on one side of the punch a predetermined distance above the end portion thereof for preventing overforming of the work material when the punch is actuated.

3,094,160
PROCESS FOR STRAIGHTENING METALLIC ARTICLES

Eric Walton, Halton, Leeds, Michael Hilton Joseph Lord, Leeds, and Peter Austin, Churwell, Leeds, England, assignors to Daniel Doncaster & Sons Limited, Sheffield, England

Filed Jan. 22, 1960, Ser. No. 4,044
17 Claims. (Cl. 153—32)



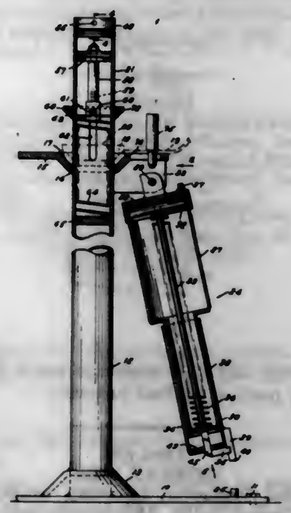
1. A process for straightening a metallic article which has been brought to its finished desired shape and has subsequently undergone distortion due to undesired internal stresses, comprising heating the article to a predetermined temperature appropriate to the material of which the article is made, placing the article in a die kept at substantially the same predetermined temperature as said object, maintaining said article in said die under pressure at said predetermined temperature for a predetermined period of time, and thereafter removing the article from the die and allowing the article to cool.

3,094,161
TIRE BEAD BREAKING MECHANISM

Donald D. Moore, Pompano Beach, Fla., assignor, by mesne assignments, to FMC Corporation, San Jose, Calif., a corporation of Delaware

Original application Oct. 3, 1955, Ser. No. 538,211, now Patent No. 2,962,065, dated Nov. 29, 1960. Divided and this application Aug. 12, 1960, Ser. No. 49,281
5 Claims. (Cl. 157—1.17)

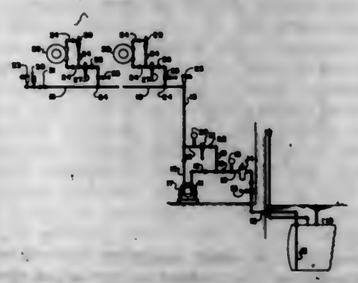
1. A pneumatic tire tool comprising, a support, pneumatically operated extensible means anchored on said support, positioning means rotatably mounted on said extensible means, said positioning means having a portion adapted to seat on a wheel rim when aligned circumferentially therewith, bead breaker means on said extensible means, said bead breaker means being rotationally fixed relatively to said positioning means, said bead breaker means being disposed generally adjacent said positioning means and being arranged to engage a tire wall adjacent the tire bead in a generally circumferential direction when said positioning means is seated on a wheel rim, said bead breaker means being movable generally axially of the wheel and relatively to the positioning means responsively to operation of said extensible means, whereby to break a tire bead away from a wheel rim.



3,094,162
FUEL OIL PIPING SYSTEM WITH PRESSURE RESPONSIVE SAFETY DEVICE

Evan H. Davies, Jr., 9742 S. 54th Ave., Oak Lawn, Ill.

Filed Dec. 16, 1959, Ser. No. 859,977
1 Claim. (Cl. 158—42.1)

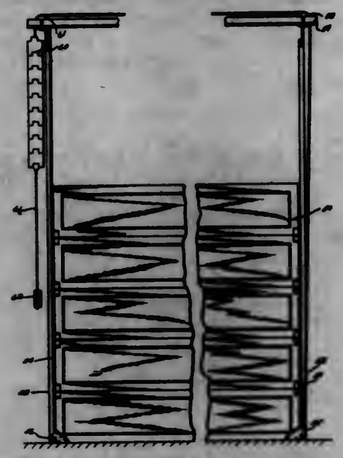


In a closed pressurized furnace fuel oil piping system having a fuel storage tank containing liquid fuel oil, a motor driven fuel oil pump, a main conduit having its near end leading from the storage tank, a plurality of spaced furnaces, a plurality of spaced branch oil circuits leading to and from the main conduit and each leading to a furnace, the other and remote end of said main conduit ending in a terminal beyond the last branch oil circuit without a return fuel line therefrom to the storage tank thereby providing a closed system, an electrically operated pressure switch located in the remote end of the main conduit, an electrically operated timer relay connected to the motor of the oil pump and adapted to start the operation of the motor to pump oil through the conduit to thereby apply normal pressure of the oil on said pressure switch and cause it to close the electrical circuit, and maintain the pumping operation, said pressure switch adapted upon lessening of pressure of the oil thereon to open the electrical circuit and stop operation of the lift pump and flow of oil through the system.

3,094,163
COUNTERWEIGHTED UPWARD ACTING DOOR

Joseph S. Herber, Grosse Pointe Woods, Mich., assignor to Crawford Door Company, Detroit, Mich., a corporation of Michigan

Filed Oct. 3, 1961, Ser. No. 142,594
1 Claim. (Cl. 160—190)



An overhead door assembly with guide tracks for the door having a vertical portion leading upwardly and a connecting horizontal portion with the horizontal portion supporting an increasing portion of the weight of the door as it moves onto the horizontal portion comprising:

a series of flexibly interconnected counterbalancing weights with a first end being connected to the door, an anchor,

a lightweight flexible cable means connecting the second end of said series of weights and said anchor, said flexible cable being sized so that the counterbalancing weight on the door will be unchanged while the entire door moves in the vertical guide tracks and the counterbalancing weight will change proportionally when the door begins to move in the horizontal guide tracks,

said series of flexibly interconnected counterbalancing weights being formed by

a series of links pivotally attached to each other to form a chain, the height of each door panel is a multiple of the length of each link and the chain is so connected that a proper counterbalancing weight proportion between the door portion remaining in the vertical guide tracks and the effective chain counterbalancing weight is maintained,

weight mounting means on each link,

weights selectively mounted on the chain link mounting means, and

said weights being readily mounted and removed so that a weight may be mounted and removed without disturbing an adjacent link

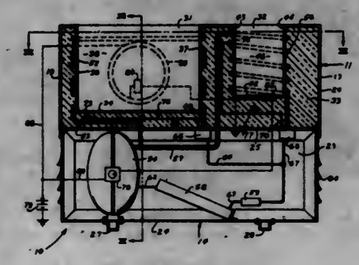
whereby a multipanel door having panels of different weights may be accommodated with proportional counterweights for each door panel.

3,094,164
REFRIGERATED CHEST

Burton R. Sherman and Porter J. Sherman, both of R.R. 4, South Haven Township, Van Buren County, Mich.

Filed July 1, 1960, Ser. No. 40,203
2 Claims. (Cl. 165—30)

1. A structure for controlling the temperature of perishable foods, comprising: a structure having wall means defining first and second, upwardly opening receptacles in side-by-side arrangement and a compartment beneath said receptacles, the wall means defining said compartment having perforations through which air can flow into and out of said compartment; closure means on said structure for covering the openings in said receptacles; insulation means surrounding the external surfaces of said receptacles and further insulation means disposed within said closure means; two sets of evaporator coils adjacent portions of the outer surfaces of said receptacles, the number of coils per unit of surface being greater with the second receptacle than with the first receptacle; a motor-driven compressor for supplying coolant under pressure; a condenser, said compressor and said condenser being disposed within said compartment; output conduit means connecting said condenser in series with said compressor, a pair of pressure sensitive, expansion valves and conduits connecting each of said valves between said condenser and one of said sets of coils, whereby the flow of coolant from said source



to said sets of coils is independently controlled; a pair of return conduit means respectively connecting said coils to said compressor, one coil and one valve being in parallel with the other coil and the other valve between said condenser and said compressor; a pair of temperature-sensitive means in contact with and responsive to temperature changes in each of said return conduit means and operatively connected to said expansion valves for applying control pressure thereto; a first temperature-sensitive device adjacent said second receptacle and operatively connected to said compressor for controlling the operation thereof; an electrical heating element adjacent said first receptacle; a source of electrical energy and a second temperature-sensitive device adjacent said first receptacle and operatively connected to said heating element for connecting same to said electrical source, whereby the temperature within said first receptacle can be held between selected limits and the temperature within said second receptacle can be held below a selected limit.

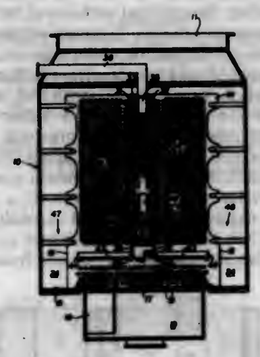
3,094,165
DEAERATING SYSTEM FOR CONDENSERS

Le Roy A. Droescher, Bala-Cynwyd, Pa., assignor to C. H. Wheeler Manufacturing Company, Philadelphia, Pa., a corporation of Pennsylvania

Filed Jan. 7, 1960, Ser. No. 1,078
5 Claims. (Cl. 165—39)

1. In a condenser for condensing the exhaust steam of a heat engine, a condenser shell having an inlet for the admission of exhaust steam to a steam space within said shell and an outlet for condensate, condensing tubes in said steam space, a deaerating section in said shell, said deaerating section comprising a plurality of tubes disposed below said condensing tubes, said tubes of said section having dead ends with drainage and venting openings adjacent their dead ends, said dead ends terminating within said shell, means for supplying steam to the tubes of said section, differential pressure regulating means responsive to the vacuum in said steam space and to the pressure of steam supplied to the tubes of said deaerating section

for controlling the pressure of steam in the tubes of said deaerating section, said differential pressure regulating means operable to maintain a substantially constant pressure difference between the pressure in said steam space



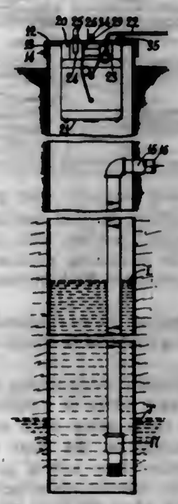
and the pressure of steam in said tubes of said deaerating section, means for inducing steam to flow from said steam space and across the outsides of the tubes of said deaerating section, and means for evacuating air released from the condensate falling through said deaerating section.

3,094,166
POWER TOOL
Ira J. McCullough, Los Angeles, Calif. (% McCullough Tool Co., 5820 S. Alameda St., Vernon, Calif.)
Filed July 25, 1960, Ser. No. 45,124
4 Claims. (Cl. 166—63)



1. In a power device for a well tool, the combination of: a cylinder member, a tubular member having a central cavity and serving as a piston slidably mounted in sealing relation with said cylinder member, a gas generating charge in said cavity, an igniter assembly fixed to said tubular member for igniting said charge, a piston rod connected to said tubular member, said cylinder member having an element thereon provided with a central opening forming a sliding seal with said piston rod, said members cooperating to form an expansion chamber between said piston and said element, said tubular member having an internal enlargement at the lower end of said cavity and having ports therein connecting said internal enlargement with said expansion chamber, whereby gas generated by said charge in said cavity passes through said enlargement and said ports into said expansion chamber to cause relative movement of said piston rod into said cylinder member.

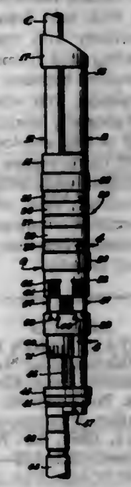
3,094,167
APPARATUS FOR RAISING AND QUICKLY RESTORING THE LEVEL OF WATER IN WELLS
Wilbur H. Hise, Jr., Hamburg, N.Y.
Filed May 10, 1961, Ser. No. 109,220
5 Claims. (Cl. 166—97)



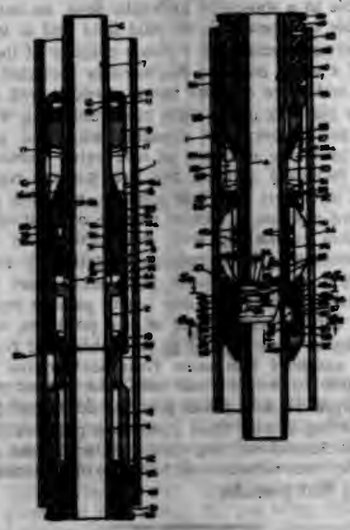
1. Apparatus for raising, quickly restoring and maintaining water in a water well at a normal level above the level of the contiguous water table, comprising cap means for closing and sealing the open upper end of a well casing, motor driven vacuum pump means for evacuating and reducing the pressure of air in a casing below atmospheric pressure, whereby atmospheric pressure acting on the water table causes water entering a well casing to rise above the level of the water table, and switch means responsive to reduced pressure in a casing and operably connected to the motor of the pump means for operating it to maintain the reduced pressure in a casing within predetermined limits.

3,094,168
RETRIEVABLE PARALLEL STRING WELL PACKER
William D. Myers, Downey, Calif., assignor to Baker Oil Tools, Inc., Los Angeles, Calif., a corporation of California
Filed Aug. 3, 1959, Ser. No. 831,137
21 Claims. (Cl. 166—118)

1. In a well tool adapted to be disposed in a well bore: generally parallel tubular body members; an expander on said body members; slip means engageable with and movable with respect to said expander to be expanded laterally outwardly upon relative movement between said expander and slip means in one direction; and co-engageable, releasable and reengageable latch means on said slip means and one of said body members for preventing such relative movement, said latch means being releasable to permit such relative movement.

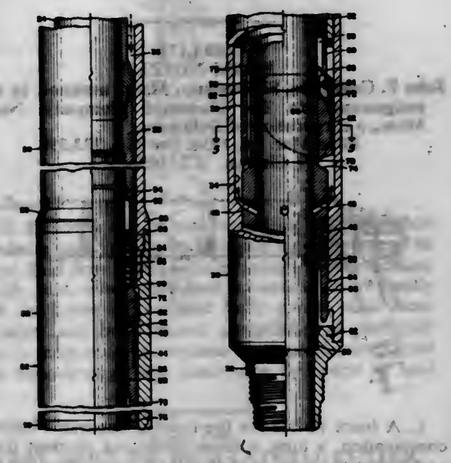


3,094,169
RETRIEVABLE PACKER
Martin B. Conrad, P.O. Box 1026, Downey, Calif.
Filed Aug. 8, 1958, Ser. No. 754,002
31 Claims. (Cl. 166—134)



1. In a well tool adapted to be run into a well bore on a running-in string, and comprising: a mandrel connectible to the running-in string, friction means engageable with the well bore wall and shiftably mounted on said mandrel, means for releasably latching said friction means to said mandrel, and expansible means operatively connected to said friction means and actuatable into engagement with the well bore wall upon relative longitudinal movement between said mandrel and said friction means, control means operatively connected with said friction means and said latching means for releasing said latching means upon rotation of said mandrel relative to said friction means, said latching means including a segmental dog engageable with said mandrel, said mandrel and said dog having coengageable elements for preventing longitudinal movement of said mandrel relative to said friction means when said elements are engaged, said mandrel having means for effecting disengagement of said mandrel and dog elements upon rotation of said mandrel relative to said dog, said control means having means for holding said dog against movement with said mandrel upon rotation of said mandrel, including a member swivelly connected to said friction means, and means for effecting a drive connection between said friction means and said dog holding means.

3,094,170
SUBSURFACE WELL TUBING SAFETY VALVE
Henry A. Bourne, Jr., Ponca City, Okla., assignor to Continental Oil Company, Ponca City, Okla., a corporation of Delaware
Filed May 31, 1960, Ser. No. 32,994
10 Claims. (Cl. 166—224)



1. A safety shutoff for fluid conducting tubing which comprises:

a control tubing positioned within the fluid conducting tubing and having a first end thereof terminating within the fluid conducting tubing, said control tubing having an outer diameter less than the inner diameter of the fluid conducting tubing to form an annular passage between the control and fluid conducting tubings;

a source of control fluid connected to a first end of the fluid conducting tubing for directing control fluid through said annular passage toward said first end of the control tubing;

a fluid-responsive valve assembly secured to said first end of the control tubing, said valve assembly including:

a housing having an opening therein, said housing being secured to the control tubing adjacent the second end of said fluid conducting tubing,

packing between the housing and the adjacent fluid conducting tubing for directing fluids into and through the housing and control tubing toward the second end of the control tubing,

a closure pivotally mounted on the housing and movable in a given path through said opening in the housing into and out of the central portion of the valve assembly,

means in operative engagement with a portion of the closure for biasing the closure toward the

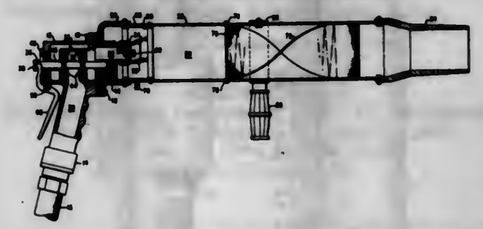
central portion of the valve assembly to prevent the flow of fluid therethrough,

reciprocal means movable within a portion of the housing toward and away from the path of said closure, said reciprocal means being in operative engagement with the closure and having a pressure receiving surface thereon in communication with the annular passage,

means for directing said control fluid from the annular passage against the pressure receiving surface for moving the reciprocal means toward the path of the closure to move said closure away from the interior of said valve assembly to permit passage of fluid therethrough, and

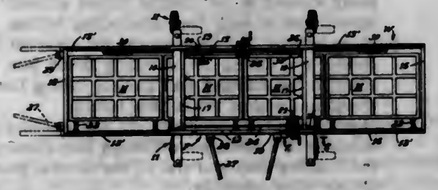
means carried by the housing for biasing the reciprocal means away from the path of the closure to permit movement of the closure into the interior of the valve assembly, said biasing means exerting a force insufficient to overcome the force exerted by the control fluid on the pressure receiving surface during normal operation of the valve.

3,094,171
FOAM NOZZLE
John P. Gagliardo, Shrewsbury, Mass., assignor, by mesne assignments, to The Gamewell Company, Newton, Mass., a corporation of Delaware
Filed Mar. 24, 1958, Ser. No. 723,398
7 Claims. (Cl. 169—15)



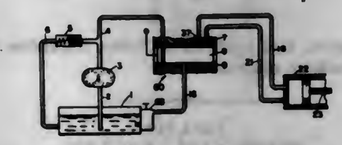
1. A foam nozzle for fire-fighting apparatus having, in combination, a tube, a foam producing element fixed to and within the tube, said element having edges lying generally in helixes coaxial with the tube, means to project a spray consisting of a mixture of water and foam liquid against said element, said element consisting of a screen having a number of transverse wire elements each lying approximately in a diameter of the tube, said wire elements being progressively longitudinally displaced along and angularly displaced about the axis of the tube, said element combining the water and foam liquid with air to form foam, and a shaper tube to discharge all of the material passing through said element in a stream.

3,094,172
CULTIVATOR FRAME
Albert K. Ose and John Ose, Wood Lake, Minn.
Filed May 2, 1960, Ser. No. 26,182
6 Claims. (Cl. 172—456)



1. In cultivator structure, a supporting chassis adapted for travel over the ground, elongate tool carrying frame means having a series of harrow sections suspended therefrom by flexible link means interconnecting the leading ends of said sections with said frame for free swinging movement of said sections with respect to said frame, means pivotally mounting said frame on said chassis for swinging movement thereof between raised transport and lowered cultivating position, first winch and cable means cooperatively and operationally interconnecting said frame and said chassis for the raising and lowering of said frame, and second winch and cable means cooperatively interconnected with the trailing ends of said harrow sections and adapted to independently raise and lower said trailing ends of said harrow sections simultaneously to selectively vary the angular relationship between said sections and the ground being cultivated thereby.

3,094,173
HYDRAULIC INSTALLATION FOR TRACTORS
Werner Hausmann, Uthleben, near Nordhausen, and Manfred Klose, Nordhausen, Harz, Germany, assignors to VEB Schlepperwerk Nordhausen, Nordhausen, Harz, Germany, a corporation of Germany
Filed Apr. 11, 1960, Ser. No. 21,392
15 Claims. (Cl. 172—491)

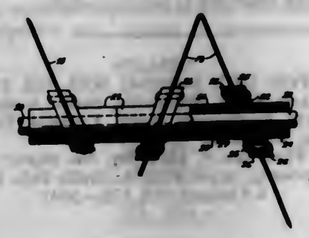


1. A distributor for the control of a hydraulically operable power unit, comprising a housing with an inlet port connectable to a source of hydraulic fluid, an outlet port connectable to a reservoir for said fluid and at least one further port connectable to a piston cylinder of the power unit, and a valve member displaceably mounted in said housing; said valve member being provided with a channel and a plurality of passages communicating with said channel and respectively alignable with said ports in different operating positions of said valve member; said passages including at least one first passage registering with said inlet port in a first position, a second position and a third position, a second passage of relatively wide cross-section registering with said outlet port in said second position, a third passage of relatively restricted cross-section registering with said outlet port in said third position, and at least one fourth passage registering with said further port in each of said positions, said passages being so dimensioned as to enable fluid from said cylinder, admitted into same from said source in said first position by way of said inlet and further ports, to be discharged via said outlet port in said second position while creating in said third position a pressure differential in said channel exerting upon a piston in said cylinder a hydraulic force substantially less than that exerted thereon in said first position.

3,094,174
SOIL AGITATOR
John H. Miller, La Grange, Mo. (6411 N. 52nd Place, Scottsdale, Ariz.), and Millard O. Helms, Ewing, Mo. (Palmyra, Mo.)
Filed Aug. 31, 1959, Ser. No. 836,956
8 Claims. (Cl. 172—531)

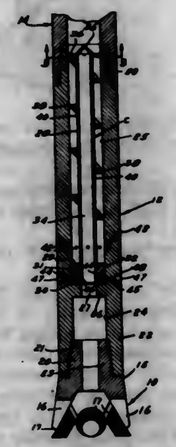
1. In a soil agitator for preparing plowed soil for planting, the combination comprising a horizontal shaft adapted to extend at right angles to the direction of agitator movement, a plurality of hub assemblies journaled upon said shaft for free independent rotation thereon, and a flat disk carried by each of said hub assemblies

for rotation about said shaft, said disks each being mounted upon said hubs at an angle oblique to the axis



of said shaft and to the axis of rotation of said disks, whereby, all of said disks are mounted for independent relative rotation upon said shaft.

3,094,175
WELL DRILLING APPARATUS AND METHOD
John Gordon Jackson, Denver, Colo., assignor to Well Completions, Inc., Denver, Colo., a corporation of Colorado
Filed Sept. 15, 1959, Ser. No. 840,165
13 Claims. (Cl. 175—69)



13. In the method of drilling oil and gas wells: drilling a bore hole with a drill string having a bit at the lower end; introducing an air and liquid drilling fluid under pressure into the drill string; centrifugally separating the air and liquid at a location above but adjacent to the drilling bit and discharging the liquid outwardly into the annulus about the drill string, the gas being collected in a central region; and passing the air downwardly and about the cutter elements of the bit, said air with entrained cuttings passing upwardly into the liquid discharged into said annulus.

3,094,176
PERCUSSION DRILL
Evin L. Cook, Dallas, Tex., assignor to Socony Mobil Oil Company, Inc., a corporation of New York
Filed July 31, 1959, Ser. No. 830,778
13 Claims. (Cl. 175—92)

1. In a fluid-actuated percussion drilling device the combination which comprises an outer tube, an inner tube concentrically positioned within and spaced apart from said outer tube, said inner tube being open at the upper end thereof into said outer tube, a valve at the lower end of said inner tube, spring means on said valve for holding said valve open until fluid flow through said inner tube exceeds a predetermined rate, and body means slidably secured within said outer tube for supporting said inner tube and valve, said body means being provided with at least one fluid flow passage therethrough in communica-



tion with the lower end of said inner tube to permit fluid to flow from said inner tube into said outer tube and at least one fluid flow passage therethrough in communication with said outer tube and extending downwardly through the lower end of said body means, said inner tube, valve, and body means comprising an assembly adapted to reciprocate in response to interruptions effected in fluid flow through said inner tube by action of said valve.

3,094,177
ROTARY DRILL BIT WITH LATERAL CUTTER
Edward B. Williams, Jr., Greenville, Tex., assignor of one-third to Edward B. Williams III, one-third to Joseph W. Williams, and one-third to David B. Williams, all of Greenville, Tex.
Filed Apr. 21, 1961, Ser. No. 104,633
3 Claims. (Cl. 175—334)



1. A drill bit for drilling bore holes in earth formations, said drill bit including

a rotary body member having a drill stem connection coaxial with said body member and said body member having radially outwardly and downwardly directed legs spaced radially of a drilling fluid discharge port in said body and with said legs having outwardly and downwardly sloping inner faces,

spindles projecting from said inner faces,

frusto-conical cutters rotatably carried on the spindles with base faces thereof in contact with said inner faces of the legs and having teeth along conical por-

tions thereof and provided with cutting edges rolling in circular paths concentric with the axis of rotation of the drill stem connection and to be washed by the drilling fluid discharged from said port and moving outwardly between said legs for cutting a pilot hole when the drill bit is in use,

means within the zone of the discharge port for providing on said body member an upwardly and inwardly sloping slot with a portion thereof substantially at the level of the discharge port,

a gauge cutter for establishing gauge of the bore hole and having a disk shaped body rotatable in said slot and having teeth extending from the disk shaped body and provided with cutting edges extending in corresponding parallel relation with the cutting edges of the teeth of the frusto-conical cutters and in direct contact with outwardly moving drilling fluid under flow between said legs whereby the gauge cutter is directly washed by the drilling fluid discharged from said port, and

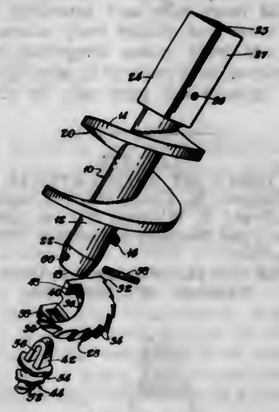
a pin carried by said body member and extending across said slot for providing a spindle to support said gauge cutter with the cutting edges of the teeth rolling circumferentially of the pilot hole for cutting an annular shoulder substantially parallel with the bottom of the pilot hole.

3,094,178

GROUND DIGGING AUGER

Albert G. Newbold, Summit, Pa., assignor to Trainer Associates Inc., New Castle, Del., a corporation of Delaware

Filed Oct. 6, 1961, Ser. No. 143,378
11 Claims. (Cl. 175—388)



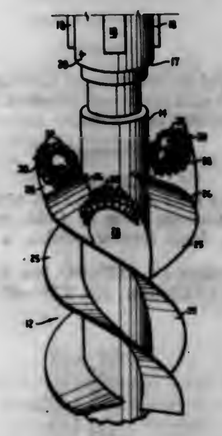
1. A ground digging auger comprising an axial shaft, a spiral web extending upwardly about said shaft and commencing a predetermined distance above the bottom end of said shaft, a spiral blade mounted upon the lower end of said axial shaft and extending about the bottom of said shaft up to join said spiral web, said spiral blade having a series of cutting edges about its periphery, the bottom of the periphery of said spiral blade being disposed substantially close to said axial shaft and the upper portion of said spiral blade joining said spiral web to provide a substantially continuous spiral from said blade to said web, an axial keyseat within said axial shaft, a penetrating point having a key projection upon its upper end which engages within said keyseat, the bottom of said spiral blade having a central boss which is disposed under said lower end of said axial shaft, said boss having an opening corresponding to said key projection, and said key projection being inserted through said aperture in said boss into said axial keyseat and a securing means connecting said key projection to said axial shaft for maintaining said spiral blade and said penetrating point secured to the lower end of said axial shaft.

3,094,179

DEVICE FOR DRY BORING SOIL OR THE LIKE

Raydon Ayers Lines, Woodville, South Australia, Australia (41 Boomerang Road, Croydon Park, South Australia, Australia)

Filed Feb. 9, 1961, Ser. No. 88,041
Claims priority, application Australia Feb. 11, 1960
6 Claims. (Cl. 175—394)



1. A device for dry boring soil comprising:

a central shaft adapted for rotation about a longitudinal axis,

a plurality of circumferentially spaced spindles around the central shaft and inclined inwardly towards the axis,

toothed cutters supported for free rotation on said spindles,

and a plurality of blades each having a leading end and extending rearwardly in helical fashion along said shaft, said blades having an inner edge fixed to said shaft end and a free outer edge, each said blade having a width which is several times greater than the thickness thereof, the outer edge of the blades defining a diameter several times greater than the diameter of the shaft whereby said blades constitute dry soil feed means,

said toothed cutters including leading teeth disposed forwardly of the leading ends of the blades, each of the cutters being disposed between a pair of adjacent blades and spaced from one of said blades whereby the leading teeth spill soil broken up thereby into the space between the adjacent pair of blades upon rotation of said cutters.

3,094,180

ROCK DRILLING BIT

William J. Haith, 205 Market St., Beatrice, Nebr.

Filed May 23, 1960, Ser. No. 31,075
1 Claim. (Cl. 175—401)

A rock drilling bit adapted to be carried by a drill stem, said bit comprising a shank portion surrounding said stem and having a first set of cutting teeth formed at one end thereof; and a tubular sleeve carried by said stem adjacent the opposite end of said shank portion, said stem extending through the sleeve, said sleeve having a second set of cutting teeth formed thereon extending in a direction opposite to that of said first set of teeth, said sleeve having an inturned, annular flange formed thereon, said flange having one face thereof in abutting engagement with said opposite end of the shank portion and the opposite face thereof in engagement with a



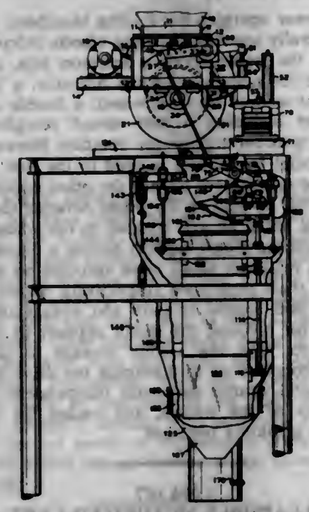
shoulder on the drill stem whereby to prevent rotation of said sleeve relative to said stem, said second set of teeth being substantially triangular in configuration, lying in substantially the same plane as said first set of teeth, the base edges thereof being adjacent said sleeve and the apex portions thereof being in overlying engagement with said drill stem at a point spaced from said flange.

3,094,181

AUTOMATIC BAGGING MACHINE

John Knox Kershaw, Montgomery, Ala., assignor to Jackson Manufacturing Company, Inc., Montgomery, Ala., a corporation of Alabama

Filed Nov. 12, 1957, Ser. No. 695,893
13 Claims. (Cl. 177—1)



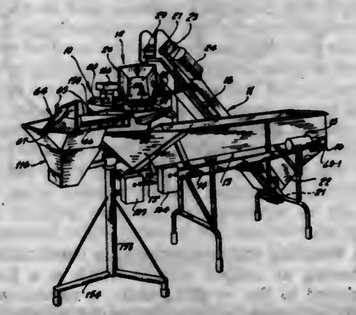
1. An automatic bagging machine comprising a hopper, a feed roller below said hopper for feeding material therefrom, a feed gate positioned adjacent the periphery of said feed roller and moveable toward and away from said periphery to control the amount of material passing between said roller and said gate, a hydraulic cylinder, a piston within said cylinder, a gate arm connected between said feed gate and said piston, control means for controlling the rate of flow of fluid to said cylinder to variably determine the rate of piston displacement to thereby determine the rate of movement of said gate toward and away from said roller, a solenoid for moving said gate toward and away from said roller, a time delay switch controlling said solenoid, motor means for driving said feed roller, a source of electrical current for actuating said motor means and said solenoid, a weighing hopper for receiving said material from said roller, weight responsive means supporting said weighing hopper, and means controlled by said weight responsive means for controlling the actuation of said solenoid.

3,094,182

MATERIAL FEEDING AND WEIGHING APPARATUS

Donald W. Garnett, Grand Ledge, and Gustav A. Olofsson, Lansing, Mich., assignors to The Olofsson Corporation, Lansing, Mich., a corporation of Michigan

Filed June 29, 1959, Ser. No. 823,385
28 Claims. (Cl. 177—1)



10. A method of weighing discrete material, comprising continuously moving a series of weighing receptacles past a common discharge point at which they are supplied with material, substantially continuously feeding the material to said discharge point, causing the charge of material received by each receptacle to exceed a predetermined desired weight, vibrating said receptacles during the travel thereof to occasion a feed-off of excess material thereof, weighing the receptacles and their content during said travel, and controlling the extent of said feed-off of excess material variably in response to the weight as determined by so weighing, and variably controlling the feed of the material to said discharge point in response to said determination.

3,094,183

FLUID PRESSURE OPERATED WEIGHING SCALES

Jiri Hovorka, Morris Plains, N.J., assignor to International Rotary Machine Corporation, Miami Beach, Fla., a corporation of Florida

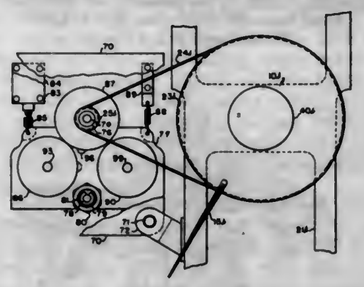
Filed Dec. 8, 1961, Ser. No. 157,919
9 Claims. (Cl. 177—208)



1. A weighing scale comprising a shallow housing base, a diaphragm assembly mounted upon the base and recessed bodily below the top of said base and including a liquid filled displacement chamber and a closed liquid filled compensating chamber, an indicator tube connected with and communicating with the displacement chamber and having an indicating scale visible thereon and extending substantially horizontally and circumferentially of the base and visible at one side of the base, a shallow tray structure mounted upon the diaphragm assembly to transmit the weight of material to be weighed directly to the displacement chamber, and mechanical means accessible at the bottom of said diaphragm assembly and

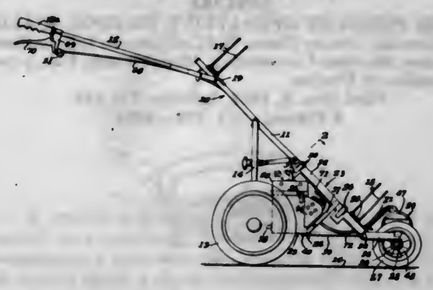
bodily carried thereby to finely adjust and calibrate the volume of the displacement chamber.

3,094,184
VARIABLE SYSTEM DAMPING
Robert J. Maring, Toledo, Ohio, assignor to Toledo Scale Corporation, Toledo, Ohio, a corporation of Ohio
Filed Apr. 14, 1959, Ser. No. 806,394
12 Claims. (Cl. 177—211)



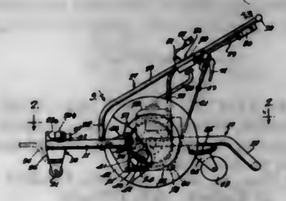
1. A weighing scale comprising, in combination, a network having an output voltage which is a function of load applied to the weighing scale, a continuously automatically adjustable voltage source that supplies a second voltage in opposition to the output voltage of the network, servo means for adjusting the voltage source in a balancing direction in response to differences between the voltages, load indicating mechanism for indicating the output voltage of the voltage source in terms of weight, a drive which connects the servo means to the adjustable voltage source and to the load indicating mechanism, and means for changing the speed ratio of the drive in response to arrival of condition at near balance of the opposing voltages.

3,094,185
POWERED-WHEEL ATTACHMENT FOR GOLF BAG CARRIER
Charles Racoosin, 1199 E St., San Bernardino, Calif.
Filed Apr. 3, 1961, Ser. No. 100,156
3 Claims. (Cl. 180—11)



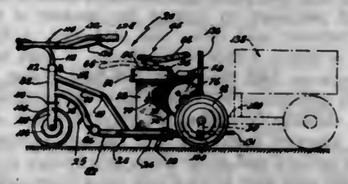
1. An attachment for a golf bag carrier that has an elongated body terminating at its upper end in a manipulating handle and supported by a pair of free-turning wheels on a foldable carriage connected to an intermediate portion of the body, said attachment being adapted to convert said carrier from a manually movable vehicle to a powered vehicle, said attachment comprising an elongated bracket generally coextensive with the end of the body that extends downwardly from the wheel-mounting foldable carriage, a pair of longitudinally spaced catches provided on said elongated bracket for separable engagement around the carrier body, a forward extension on the lower end of the bracket below the lower end of the body, a single wheel carried by said extension in aligned relationship with the body and bracket, a geared motor to drive the latter wheel and having an output shaft constituting the axle of said wheel, bearings on the bracket extension to mount said axle, a power pack unit disposed rearwardly of the mentioned bracket and separably electrically connected to the geared motor to provide electrical power therefor, a support on the bracket for the lower forward portion of the power pack unit, and releasable catch means on the bracket engaged with the upper end of said unit to retain the unit in position on said support.

3,094,186
FOLDING BLEACHER AND OPERATOR THEREFOR
Richard J. Lappin and Isadore T. Wurz, Muskegon, Mich., assignors to Brunswick Corporation, a corporation of Delaware
Filed Mar. 28, 1958, Ser. No. 724,628
2 Claims. (Cl. 180—19)



1. In a power operator for folding bleachers, a frame, a pair of laterally spaced propelling wheels independently rotatable on the frame about a common axis, a handle on the frame for manipulating the operator, a relatively large sprocket secured on each wheel, a double chain on each sprocket including a first strand completely encircling the sprocket tightly for rotation therewith and a second parallel free strand secured to the first adjacent thereto on the side thereof toward the other double chain, a motor support pivoted on the frame between the wheels for movement about an axis parallel to the wheel axis, a drive motor on the motor support having a double ended drive shaft, a relatively small drive sprocket on each end of the drive shaft positioned respectively within the peripheries of said second strands and engageable therewith, means for pivoting the motor support to mesh the drive sprockets with the second strands to drive the wheels synchronously or to disengage the drive sprockets from the second strands to permit independent differential movement of the wheels, and means for coupling the frame to a folding bleacher.

3,094,187
COLLAPSIBLE MOTORIZED CART
Arnold J. Horowitz, 6436 N. Greenview Ave., Chicago, Ill.
Filed Apr. 14, 1961, Ser. No. 103,149
3 Claims. (Cl. 180—27)



1. In a motorized golf cart of the character described, having a pair of driven rear wheels and a front wheel, a chassis comprising, a first tubular metal frame having a substantially rectangular, open configuration and front and rear ends arranged substantially horizontally, a second tubular metal frame comprised of a pair of elongated members each having a bend intermediate the ends thereof, said members being spaced one above the other in a plane perpendicular to the plane of the first frame and each having one end thereof rigidly secured to the front end of the first frame at a juncture co-planar with said first frame with said second frame in alignment with the longitudinal center line of the first frame and extending forwardly and upwardly relative to said front end, said second frame having means secured to the respective other ends of said members for mounting said front wheel and a steering mechanism therefor, said first frame having extensions adjacent the rear end thereof for mounting said rear wheels with their axes of rotations parallel with and spaced above the plane of the first frame.

3,094,188
SOUND ABSORBERS
Dominic D'Eustachio, Pittsburgh, Pa., assignor to Pittsburgh Corning Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Dec. 13, 1962, Ser. No. 244,419
9 Claims. (Cl. 181—33)



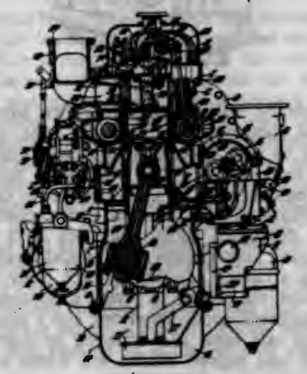
1. A sound absorber, comprising a body of porous material having a front face exposed to the sound to be absorbed and a back face, said body including a first group of recesses entering the same from said front face and extending into the intermediate portion of said material, and including a second group of recesses entering the same from said back face, at least some of the adjacent recesses from opposite faces being in overlapping relationship with each other and being separated from one another throughout their full extents within said absorber body by portions of the body material, and covering means in contact with said back face for closing said second group of recesses, to prevent the transmission of sound energy thereto except through the body of material.

3,094,189
AIR MIXING AND SOUND ATTENUATING CHAMBER
Frank J. Dean, Jr., Kansas City, Mo., assignor to Tempmaster Corporation, a corporation of Missouri
Filed Apr. 21, 1961, Ser. No. 104,640
7 Claims. (Cl. 181—36)



6. In a mixing and sound attenuation chamber for air conditioning systems of the type having two sources of conditioned air, the combination of a casing having a pair of spaced inlets near one end for connection with the respective sources and also having a discharge outlet near the other end, a stationery plate member disposed within the casing and substantially closing the casing between said inlets and outlet, said stationery plate member provided with a plurality of apertures therein arranged in two rows parallel with one another and substantially side by side, a flow directing baffle interposed between said plate member and said inlets and coextensive with said plate member, one edge of said baffle member adjoining said plate member between said rows and the other edge extending so as to separate said inlets and place them individually in communication with the separate rows of said apertures, a movable valving member covering one face of said stationery member and supported for sliding reciprocation with respect thereto lengthwise of said rows between opposed limiting positions, said movable valving member having openings similar to the apertures in the stationery plate member, but so arranged that when the movable valving member is in one limiting position certain openings of said movable valving member register with the apertures of one row in said stationery plate member while the apertures of the other row in said stationery plate member remain uncovered and when in the other limiting position, the apertures of the other row are covered while those of the one row are open.

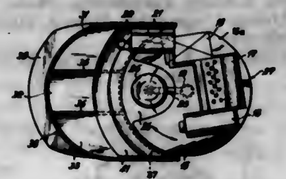
3,094,190
INTERNAL COMBUSTION ENGINE
George W. Conover and Kenneth L. Huising, Plymouth, and Joseph Koehler, Farmington, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed June 8, 1960, Ser. No. 34,728
7 Claims. (Cl. 184—6)



1. In an internal combustion engine, a frame member defining a plurality of inline cylinders and having two parallel shaft mounting galleries extending therethrough in symmetrical flanking relation to a plane common to and including the axes of the several cylinders, a plurality of bearing supporting bosses spaced longitudinally of said galleries between the several cylinders and adjacent each end of the frame member, said bosses having aligned grooves extending longitudinally thereof and opening inwardly of their bearing supporting surfaces, said longitudinal grooves being disposed symmetrically with respect to said common plane, a camshaft member alternatively mountable in one of said galleries and having cam lobes thereon intermediate barrel-type journal portions spaced radially of the bosses of said one gallery, a balance shaft member alternatively mountable in the other of said galleries and having journal portions spaced radially of the end bosses of said other gallery, interchangeable bearing sleeves rotatably mounting said shaft

journal portions within their respective supporting bosses, lubricant supply means including passages in said frame member connecting said supply means to ports opening on the bearing supporting surfaces of the bosses adjacent at least one end of each gallery in angularly spaced relation to the longitudinal groove thereof, said bearing sleeves being reversible end for end and each having a first radial port therein mateable with the supply port of the end adjacent bosses and a second radial port mateable with the longitudinal grooves of the mounting bosses within the camshaft mounting gallery, said second radial ports being closed by the bearing supporting surfaces of the end bosses of the balance shaft mounting gallery, said camshaft having a central oil distribution gallery extending longitudinally therethrough, and each of said camshaft journal portions having a radial port intersecting said central gallery and a circumferential groove therein mating with the radial ports of the adjacent sleeve bearing whereby lubricant is continuously metered and squirted onto the adjacent cam lobes through orifices defined between the several longitudinally extending grooves and the mating bearing sleeves.

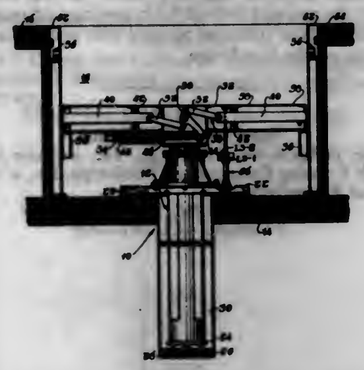
3,094,191
CASHIER'S TABLE FOR SELF-SERVICE STORES
Werner Potrafke, Hufeisenstr. 6, Hattingen (Ruhr), Germany
Filed Feb. 12, 1962, Ser. No. 172,638
Claims priority, application Germany Feb. 14, 1961
13 Claims. (Cl. 186—1)



1. A cashier's station for self-service stores, which comprises in combination: a rotatable table, a cash register carried by said table, said table including a deposit section for receiving the goods which have been selected and are to be deposited by a customer onto said deposit section, a plurality of withdrawal compartments for receiving the purchased goods after they have been registered by said cash register, said withdrawal compartments being arranged adjacent to each other and being accessible from the outside to permit a customer to withdraw his purchased goods therefrom, and a seat rotatably connected to said table and arranged so that said cash register and said deposit section are within reach of a person on said seat, said seat being rotatable selectively into a plurality of positions which respectively correspond to said withdrawal compartments and in which the respective withdrawal compartment is within reach of a person on said seat, whereby a person on said seat can in the respective position of said table reach both the deposit section and the respective withdrawal compartment.

3,094,192
PLATFORM OPERATING SYSTEM
John B. McAlpine, Scarborough, Ontario, Canada, assignor to Symington Wayne Corporation, Salisbury, Md., a corporation of Maryland
Filed Oct. 21, 1960, Ser. No. 64,076
16 Claims. (Cl. 187—28)

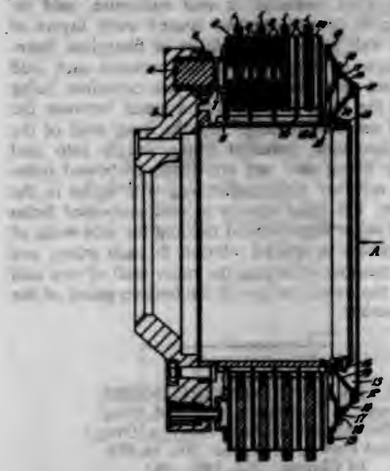
1. A vertically-movable platform arrangement comprising a hydraulic piston and cylinder assembly, a platform mounted upon said piston, said piston and cylinder assembly having a stroke sufficient to raise said platform through a series of levels including a loading level, a locking bar assembly connected to said platform including locking bars which are extendable to project laterally from said platform, an actuating device connected to said locking bar assembly for extending said bars laterally from said platform and for retracting them, supporting surface means disposed at the side of said platform adjacent said loading level for engagement by said locking bars when they are extended, hydraulic pressure bleeding means connected to said piston and cylinder assembly for lowering said platform at a slow speed, control means for actuating said pressure bleeding means when said locking bars are extended above said supporting surface means and said platform is substantially



aligned with said loading level to lower said platform upon said supporting surface means whereby any forces imposed by a load moving across said platform are resisted by said supporting surface means and said hydraulic piston and cylinder assembly is relieved of any loads and pressures, said control means being arranged for actuating said pressure-bleeding means when said platform is disposed within a predetermined distance above said loading level, and said control means being also arranged for inactivating said pressure bleeding means when said platform is more than said predetermined distance above said loading level to permit said platform to raise and maintain a load above said predetermined distance.

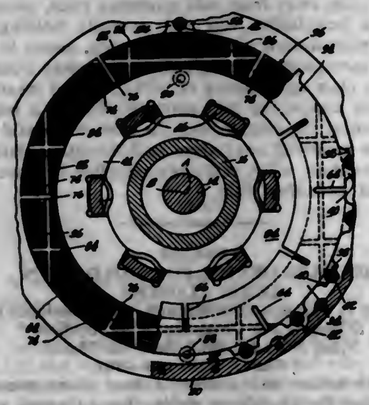
3,094,193
DISC BRAKES
Frederick Sidney Dowell, Coventry, England, assignor to Dunlop Rubber Company Limited, London County, England, a British company
Filed June 25, 1957, Ser. No. 667,756
Claims priority, application Great Britain June 26, 1956
12 Claims. (Cl. 188—72)

1. A disc brake comprising a rotatable disc slidable axially on a rotatable member to be braked, a non-rotatable friction member adjacent to one radial side of said rotatable disc, means for applying braking pressure to said friction member, a non-rotatable rigid annular pressure transmitting element opposed to the other radial side of said disc, an annular carrier plate between said pressure transmitting element and said rotatable disc and having a plane surface facing and parallel to the radial side of said disc, a friction pad secured to the face of said carrier plate opposed to said disc, and an annular thrust receiving member to be secured at its inner periphery to a fixed part of said brake and at its outer periphery engaging said annular pressure transmitting element on a circle coinciding substantially with a circle of pressure developed by engagement of said friction member and said friction pad with said rotating disc, the portion of said thrust receiving member at said outer periphery being substantially rigid and the portion between the outer and inner peripheries of said thrust receiving member being sufficiently flexible to yield between these peripheries under the thrust of the brake applying force to



permit the outer peripheral portion of said thrust receiving member and said annular pressure transmitting element supported thereby to adjust to parallelism with the opposed face of said disc under force received from said disc upon the application of said brakes.

3,094,194
FRICTION DEVICE
Osborn A. Kershner, St. Joseph, Mich., assignor, by mesne assignments, to Lambert Brake Corporation, St. Joseph, Mich., a corporation of Michigan
Filed Jan. 23, 1961, Ser. No. 84,131
3 Claims. (Cl. 188—72)



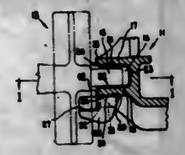
1. A friction device of the type described comprising housing means through which a cooling fluid may be circulated, a friction disc pack including a plurality of axially aligned and shiftable rotor and stator friction discs supported within said housing means and stacked in alternate relationship as rotor and stator groups of discs, and means for urging said friction discs together for energizing the friction device, said housing means defining a space around said friction discs and a space within said friction discs adapted to be filled with cooling fluid, and said friction discs including means providing a plurality of fluid passageway means facilitating easy flow of cooling fluid from one of said spaces into said friction disc pack and then restricting the flow of cooling fluid and spreading the fluid throughout the pack and then directing the fluid to the other of said spaces, said means providing said fluid passageway means including a plurality of radially spaced annular lands on one group of said discs defining annular grooves therebetween, said lands being substantially concentric with respect to each other and eccentric with respect to said discs, a plurality of circumferentially spaced chordally disposed groove means in the discs of said one group completely intersecting their radially outermost lands and approaching but not completely intersecting their radially innermost lands, and a plurality of generally radially disposed circumferentially spaced slots through the discs of said one group and extending from their outer peripheries toward and terminating short of their innermost lands.

3,094,195
TORQUE LIMITING SPRAG MECHANISM
Johan Lund, Detroit, Mich., assignor to Formsprag Company, Warren, Mich., a corporation of Michigan
Filed June 17, 1960, Ser. No. 36,961
23 Claims. (Cl. 188—82.2)



1. A torque transmitting and limiting mechanism, comprising a pair of coaxial, axially telescoped race members, one of which is rotatively fixed and the other of which has at least limited rotatability about the axis of said members, and means operatively connected to the last named member to so rotate the same only under torque applied thereto not exceeding a predetermined value, said last named means comprising a first power member having a rotatively fixed drive connection to said rotative race member, a second power member having means including a flexible torsion element drivingly connecting the same to said first power member, said first and second power members being rotatable as a unit up to a predetermined value of torque stressing of said torsion element, and means engaging between said race members to lock said power members against rotation under a torque stress on said element in excess of said predetermined value.

3,094,196
SAFETY SUPPORT FOR BRAKE BEAMS
Theodore J. Sweger, Riverdale, Ill., assignor to Illinois Railway Equipment Co., Chicago, Ill., a corporation of Illinois
Filed July 25, 1962, Ser. No. 204,996
8 Claims. (Cl. 188—210)



1. In a railway car truck comprising:
(*a*) a pair of side frames,

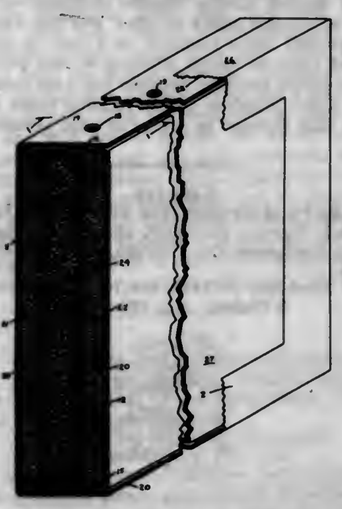
(*b*) railway wheel axles journaled in said side frames,
(*c*) each side frame having a generally lengthwise extending slot opposite a corresponding slot in the other side frame, and
(*d*) a brake beam slidably mounted at its ends in opposite slots and carrying adjacent each end a brake head and shoe assembly for braking engagement with an adjacent wheel,
(*e*) said side frames being normally spaced apart a predetermined distance and likely to spread apart and increase the distance therebetween whereupon one of the ends of said brake beam disengages its slot,
(*f*) the improvement which comprises:
(*g*) ledge means carried by and extending laterally from each side frame toward the other side frame in spaced relation below each brake beam receiving slot for receiving and supporting the respective end of said brake beam on disengagement from its slot, said ledge means being in the form of an integral extension of a wear plate overlying the lower side of each brake beam receiving slot.

3,094,197
BUILDING CONSTRUCTION ELEMENT
Warren R. Attwood, 4118 S. Wayne Road, Wayne, Mich.
Filed Apr. 30, 1958, Ser. No. 731,997
5 Claims. (Cl. 189—34)



1. A metallic structural element comprising a load transmitting member having at least one flat portion, a plurality of spaced knockouts disposed in the plane of said flat portion, said knockouts pressing against the adjacent metal of said member at all times and producing stress in the metal intermediate said knockouts.

3,094,198
STRUCTURAL PANEL
Norman J. Haskins, Melrose Park, Ill., assignor to The Erie Enameling Company, Erie, Pa., a corporation of Pennsylvania
Filed Jan. 7, 1960, Ser. No. 1,102
1 Claim. (Cl. 189—34)



A panel for use in building construction and refrigerators comprising two side members in the form of flat metallic plate like members having their edges and ends turned up to form two containers open at one side, one said container being received in the other with its open side towards the other said container providing an enclosure, an insulation material in said enclosure, said insulation material comprising two spaced outer layers of mineral type wall board with a layer of fiberglass therebetween, a layer of bright metal foil between each said wall board and said fiberglass, said one container being smaller than the other and leaving a space between the outer wall of one said member and the inner wall of the other, said insulation material fitting snugly into said one container filling said one container, embossed holes in the outer member walls registering with holes in the inner member, flat head screws in said embossed holes engaging said inner member and holding the side walls of said two members in spaced relation to each other, and a vinyl tape member overlying the outer wall of one said member and the outer surface of the bottom panel of the other said member.

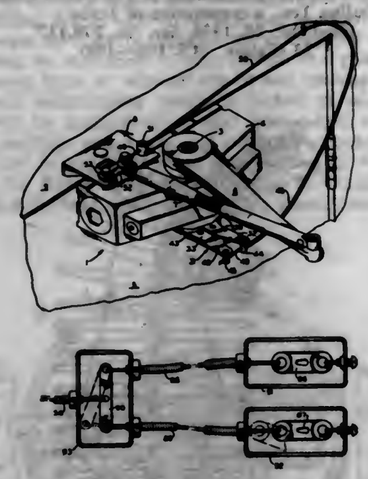
3,094,199
HEAT LATCH FOR FIRE DOORS
George R. Wallmann, Portland, Oreg.
(99 Berwick Road, Lake Oswego, Oreg.)
Filed Feb. 3, 1961, Ser. No. 86,958
14 Claims. (Cl. 189—46)



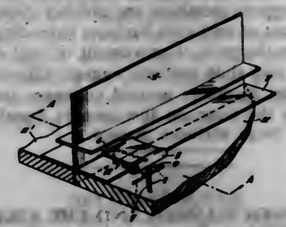
1. A heat latch safety release for fire doors comprising a mounting plate adapted to be mounted on a vertical surface of a door, a pressure plate movably mounted on said mounting plate for movement toward and away from said mounting plate, resilient means biased between said pressure plate and said mounting plate for urging said pressure plate away from said mounting plate, means including a heat-fusible link for normally holding said pressure plate toward said mounting plate, means to limit outward movement of said pressure plate away from said mounting plate upon fusing of said link, and means for operativley connecting said pressure plate to a latching mechanism of the door to lock the door when said pressure plate is moved away from said mounting plate and unlock the door when said pressure plate is moved toward said mounting plate.

3,094,200
RELEASE DEVICE FOR HOLD OPEN DOOR CLOSERS
Ernest L. Schlage, Hillsborough, Calif., assignor to Schlage Lock Company, a corporation
Filed Nov. 21, 1960, Ser. No. 70,635
1 Claim. (Cl. 189—50)

In combination with a door, a door closer connected to said door for applying a closing force thereto, a hold open device connected to said door closer for holding said door open against the application of said force, a release mechanism connected to said device for disabling the same and thereby permitting said closer to apply said force when said mechanism is released, a flexible cable connected at one end to said release mechanism and at its other end to a floating bar at a point intermediate the ends of the latter, a pair of additional flexible cables respectively connected at one of their corresponding ends to said bar at points on opposite sides of said first mentioned flexible cable and connected at their opposite corresponding ends to fusible links whereby the tension in said first mentioned cable is relaxed and said release mechanism is released upon fusion of one or the other of said links.

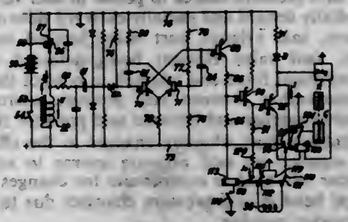


3,094,201
CEILINGS AND THE LIKE
Frederick Williams, 23 Collins Ave., Norton, Stockton-on-Tees, England
Filed July 14, 1959, Ser. No. 826,964
Claims priority, application Great Britain July 14, 1958
2 Claims. (Cl. 189—88)



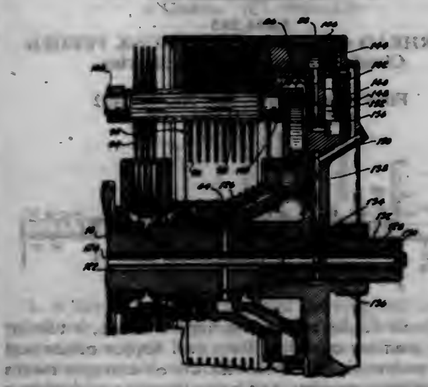
1. A device for supporting, upon a rail having at least one flange and a web perpendicular to said flange, a board as herein defined, and locating said board with an edge thereof beneath said flange, said board having at least one slot therein at an angle to its said edge, said support comprising in combination a spring clip having two limbs joined to each other so that the clip has a substantially U-shaped cross-section resiliently engageable about said flange, a slot in one limb of said clip at an angle to the outermost edge of the limb, and a board-retaining element having a flange adapted to be gripped between and parallel to said rail-flange and said slotted limb of the spring clip, a web member integral with said flange adapted to project substantially at right angles to said flange through said slot in said slotted limb and also through said slot in said board which bears by one plane surface against said slotted limb, and at least one end portion of said web member adapted for bending into engagement parallel with the other plane surface of said board.

3,094,202
ELECTROMAGNETIC CLUTCH ARRANGEMENT
Jörg Issler, Stuttgart, Germany, assignor to Robert Bosch G.m.b.H., Stuttgart, Germany
Filed Sept. 29, 1960, Ser. No. 59,409
Claims priority, application Germany Sept. 30, 1959
10 Claims. (Cl. 192—3.5)



1. In an electromagnetic slip clutch arrangement for operatively connecting a driving and a driven member, in combination, at least two clutching members respectively attached to said driving and driven members; electro-magnetic means cooperating with said clutching members for causing frictional transmission of force between said clutching members with a slippage the extent of which depends upon the variable average value of energization of said electromagnetic means; electric pulse generator means for creating electric pulse sequences at variable frequencies and for applying said pulse sequences to said electromagnetic means for thereby energizing the latter with an average value of energization depending upon the prevailing frequency of said pulse sequences; and means for varying the pulse frequency of said electric pulse sequences created by said pulse genrator means, whereby the extent of slippage, if any, between said clutching members is variable by varying the frequency of the electric pulse sequences applied to the electromagnetic means.

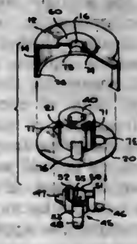
3,094,203
CLUTCH AND PRESSURE MODULATOR VALVE
Zbigniew J. Jania, Detroit, and Arnold E. Anderson, Livonia, Mich., assignors to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Apr. 14, 1960, Ser. No. 22,284
9 Claims. (Cl. 192—85)



1. In a friction disc power transmission mechanism having a rotary disc carrier member, a multiple disc assembly carried by said carrier member, said carrier member defining an annular cylinder at a radially outward location relative to the axis of rotation thereof, an annular piston disposed in said cylinder, said piston and cylinder defining a fluid pressure chamber, a fluid pressure source,

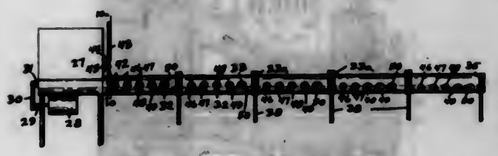
passage structure extending from said pressure source and communicating with said pressure chamber, a valve chamber disposed in and partly defining said passage structure, an exhaust port communicating with said valve chamber, and a valve element movably disposed in said valve chamber, said passage structure including portions extending from said pressure source to points in said valve chamber on radially inward and radially outward sides of said valve element, said exhaust port being located between said points, said valve element being actuated in response to centrifugal force and adapted to control the degree of communication between said pressure source and said pressure chamber and between said pressure chamber and said exhaust port whereby changes in the effective pressure supplied by said pressure source to said pressure chamber will tend to compensate for changes in the centrifugal head in said pressure chamber due to rotation of said carrier member.

3,094,204
UNIVERSAL SPOOLS
Walter D. Landgraf, 4808 W. 96th Place, Oak Lawn, Ill.
Filed Nov. 3, 1961, Ser. No. 150,073
10 Claims. (Cl. 197—151)



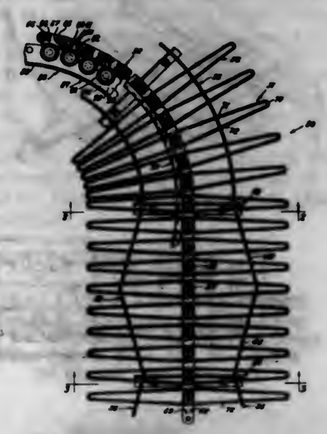
1. An adapter for ribbon spools carried by rotatable driving elements comprising a cylinder having an axially extending wall, means on said cylinder for securing said cylinder to the driving elements, a plurality of radially extending arms secured to said wall and adapted to fit into slots on a flange of said spools, and a rib secured to each of said arms and to said wall.

3,094,205
OVERHEAD CONVEYOR AND BUNK FEEDER
Claude Siebring and Owen Siebring, George, Iowa
Filed Sept. 8, 1958, Ser. No. 759,492
4 Claims. (Cl. 198—64)



1. A bunk feeder comprising hopper means, a tubular carrying member extending from said hopper means and being in communication therewith, driven conveyor means in said tubular member and extending into said hopper means, said tubular member being formed to provide at least one series of side openings therein, including a first circular opening adjacent said hopper means, the successive openings being spaced apart longitudinally in said tubular member and each successive opening being formed to extend somewhat longer along the axis of the tube than the previous opening whereby the last opening in said series is the most oblong of said openings.

3,094,206
CONVEYOR SYSTEMS
Harold H. Stewart and Herman S. Johns, Dallas, Tex., assignors to Stewart Engineering & Equipment Company, Inc., Dallas, Tex., a corporation of Texas
Filed Oct. 28, 1958, Ser. No. 770,117
23 Claims. (Cl. 198—189)

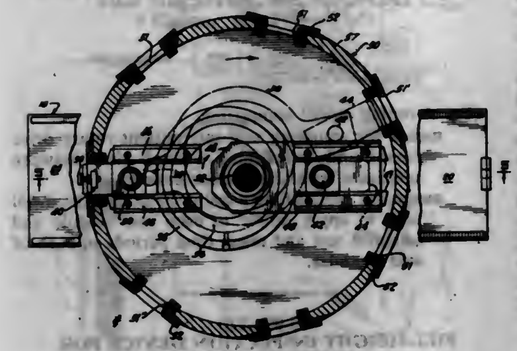


1. A conveyor system comprising: a conveyor having a draw member, said draw member having a plurality of sections pivotally connected together for movement with respect to each other about vertical axes; a plurality of support members connected to said sections and extending laterally outwardly therefrom in opposite directions; and support means for said conveyor, said conveyor being slidable on said support means, said support means comprising means disposed on opposite sides of said draw member providing upwardly facing slide surfaces upon which said support members are slidably disposed, some portions at least of said slide surfaces extending angularly with repect to the path of movement of said draw member whereby said slide surfaces engage different portions of said support members as said conveyor moves in its path whereby the wear on the support members is distributed over large surfaces thereof.

3,094,207
POWER WASHER AND THE LIKE
Robert G. Millhiser, Detroit, and Peter Kosar, Garden City, Mich., assignors to Ajem Laboratories, Inc., Livonia, Mich.
Filed May 24, 1961, Ser. No. 112,338
17 Claims. (Cl. 198—209)

1. A power washer apparatus for the surface treatment of fabricated parts wherein liquid is impinged upon the fabricated parts at successive stations and the parts are indexed from station to station and are held in said stations for predetermined periods, an indexing mechanism for driving a carriage step-by-step and accurately positioning it at a succession of stations during successive operations, which comprises a driven member connected to said carriage and having on opposite sides thereof spaced openings, a fixed frame on which said driven member is mounted for movement with said carriage, a locking bolt adapted to fit into the openings on one side of said driven member, a driving bolt adapted to fit the openings on the other side of said driven member, means on said frame slidably confining said locking bolt to a fixed path toward and away from an adjacent one of said openings when brought to the adjacent position,

eccentric drive means rotatably mounted on said frame, reciprocating means movably mounted on said frame and driven by said eccentric drive means, said reciprocating means being constrained for reciprocating movement paralleling that of said driven member and having thereon means for slidably engaging the driving bolt and constraining its movement relative thereto to a path toward and away from an adjacent one of said openings, whereby said reciprocating means is locked to said driven member by engagement of said driving bolt in one of said openings and drives said member a predetermined step and is withdrawn from said opening to disconnect from the driven member for return to its engaging position for the next selected opening, a motor connected in



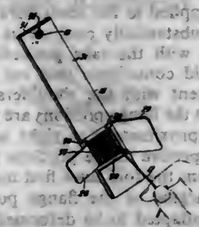
driving relation to said eccentric drive means and said reciprocating-means also being connected to said locking bolt to push it into its opening when the driving bolt is withdrawn and to retract it from its opening before driving said driven member, and electrical timing switch means responsive to said locking bolt means when the locking bolt is inserted into its opening for temporarily stopping the movement of said eccentric drive means, thereby temporarily holding said parts at said stations, said eccentric drive means and said reciprocating means providing smooth acceleration of said driven member following restarting of said eccentric drive means and providing smooth deceleration of said driven member prior to stopping of said eccentric drive means.

3,094,208
RECORD FOLDER
Richard E. Evans, % American Evatype Corp., 750 Central Ave., Deerfield, Ill.
Filed Sept. 25, 1961, Ser. No. 140,353
2 Claims. (Cl. 206—62)



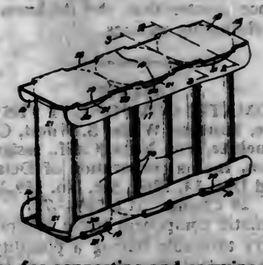
1. A record folder comprising separate top and bottom cover sheets registering along a straight edge of each, a record sheet overlying the bottom cover sheet and having a straight edge spaced inward from said straight edge of the bottom cover sheet, and a strip of flexible tape having one edge portion overlying and adhesively secured to the face of the record sheet adjacent to said straight edge thereof, an intermediate portion overlying and adhesively secured to the inner face of the bottom cover sheet between the straight edge thereof and the straight edge of the record sheet and its other edge portion folded back and adhesively secured to the inner face of the top cover sheet adjacent to the straight edge thereof.

3,094,209
DENTAL FLOSS PACKAGE
Frederick W. Krupp, Princeton, N.J., assignor to Gudebrod Brothers Silk Co., Inc., Pottstown, Pa., a corporation of Pennsylvania
Filed June 8, 1962, Ser. No. 201,105
3 Claims. (Cl. 206—63.5)



1. A dental floss package comprising an elongated, sheet-like card, means defining a plurality of openings in said card, at least two of said openings being laterally spaced and at least one opening spaced lengthwise from said laterally spaced openings, a bundle of strands threaded through said openings to provide first segments of the strands disposed on one side of the card and second segments of the strands disposed on the opposite side of the card and laterally spaced from said first segments, an envelope completely enclosing said card and said strand bundle, means securing said card in a predetermined fixed position in said envelope, said envelope including confronting overlying panels forming one side thereof, and means defining an access opening at an end of the envelope opposite the end thereof to which the card is fixed, said access opening exposing only the segments of strands on one side of said card at a portion spaced from their free ends.

3,094,210
CHANNEL-SHAPED CARRIER FOR CANS HAVING EXTERNAL BEADS AND FOR OTHER CONTAINERS HAVING SHOULDERS PROXIMATE THEIR ENDS
Joseph A. Van Den Berg, Green Bay, Wis., assignor to Green Bay Packaging Inc., a corporation of Wisconsin
Filed Feb. 23, 1960, Ser. No. 10,277
6 Claims. (Cl. 206—65)



1. A device for connecting and carrying containers disposed side by side in a row and provided with shoulders spaced from their ends, said device comprising a panel portion engageable with the ends of the several containers, and flange portions having free margins remote from said panel portion, said flange portions being laterally engageable with the sides of the several containers and foldably connected with the panel portion upon fold lines which are generally parallel and spaced by a distance less than the width of the ends of the containers, the said device having generally C-shaped slits interrupting the fold lines in pairs and opposed to each other across the locations at which the panel portion will rest upon the tops of the

containers, each of said slits separating from the flange portions aforesaid tabs in the plane of the panel portion and projecting oppositely therefrom, each of said slits further defining on its respective flange portion a cut edge which is substantially rectilinear and offset from the respective fold line by a distance substantially equalling the spacing between the shoulder and the end of a container with which the device is to be used, whereby, when said device is applied to the containers of such a row, the panel will be substantially continuous across the ends of the containers, with the tabs projecting laterally across the sides of said containers, said cut edges having confining engagement with the shoulders of the respective containers when the flange portions are folded downwardly to positions approximately at right angles to the panel portion, the respective flange portions being stiff and free of fold lines from the fold lines first mentioned outwardly to the free margins of the flange portions, said flange portions being adapted to be deformed curvilinearly outwardly around side portions of the respective containers and be stiffened by such curvilinear deformation and held in supporting relation to said shoulders.

3,094,211

SHIPPING SUPPORT FOR TEXTILE PACKAGES

David J. Bender, Toledo, Ohio, assignor to Johns-Manville Corporation, New York, N.Y., a coropration of New York

Filed Oct. 5, 1960, Ser. No. 60,633
13 Claims. (Cl. 206—65)



4. A platform for releasably positioning a plurality of recessed articles comprising: a top member having a plurality of apertures arranged in a repetitious pattern; a bottom member in spaced and parallel relation with and affixed to said top member; mounting posts seated on said bottom member and extending through the apertures of said top member, said mounting post being adapted to receive the recessed portions of said articles; and reinforcing sections intermediate of and spacing said top and bottom members, said top and bottom members being spaced apart a distance greater than the thickness of material forming said reinforcing sections.

3,094,212

AUTOMATIC COMPONENT TESTER

Clifford Moore, Tujunga, Walter S. Wuest, Glendale, and Elmer R. Zuehlke, Van Nuys, Calif., assignors to General Precision, Inc., a corporation of Delaware

Filed Dec. 14, 1961, Ser. No. 159,256
20 Claims. (Cl. 209—75)

1. An automatic component tester comprising;

(A) A rotary turntable having a plurality of component holders adapted to stop at each of a plurality of stations,

means for intermittent rotary drive of said turntable,

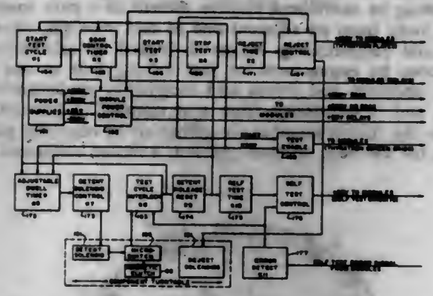
means for ejecting components from said holders;

(B) A plurality of test modules each connected to certain of said stations and adapted to electrically test a component in said holder and provide an output when the component does not meet certain test requirements,

means connected to said output for actuating said ejection means when an unsatisfactory component has been tested;

(C) Means at one of said stations for ejecting a satisfactory component which has passed each of the previous tests in said test modules,

means at another one of said stations for resetting said ejection mechanism;



(D) A timing circuit comprising,

means for actuating said intermittent rotary drive means and establishing a dwell time between successive turntable motion periods,

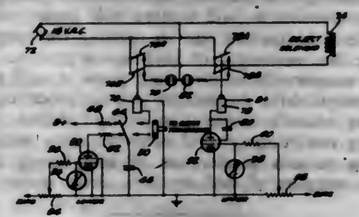
means for establishing a test cycle during the dwell time to apply power to each test module and establish test and reject time periods in each of said modules.

3,094,213

FILL-HEIGHT INSPECTION DEVICE FOR FLUID IN BOTTLES

James H. Wyman, San Pedro, Los Angeles, Calif., assignor to Industrial Automation Corp., Pasadena, Calif., a corporation of California

Filed June 30, 1960, Ser. No. 40,002
3 Claims. (Cl. 209—111.5)



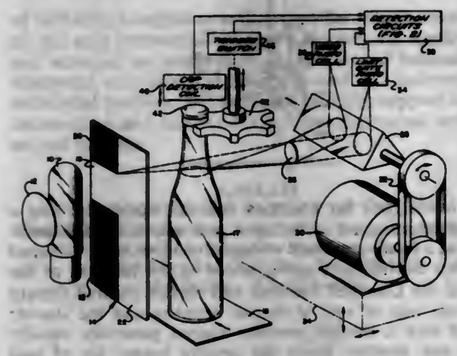
2. A system for determining whether a bottle passing through an inspection zone has been properly filled with a liquid comprising means, at one side of said inspection zone, for illuminating the predetermined region of a bottle to be inspected, a first and second photocell means positioned at a side of said inspection zone opposite to said one side, said first photocell means being positioned to receive only refracted light from the liquid in a bottle at a level which is just below a predetermined minimum acceptable liquid level in said bottle, said second photocell means being positioned to receive only refracted light from the liquid in a bottle at a level which just exceeds a predetermined maximum acceptable liquid level in said bottle, inoperative bottle-rejecting means, means responsive to illumination of said second photocell means when a bottle is in said inspection zone for operating said bottle-rejecting means, and means responsive to a failure to illuminate said first photocell means when a bottle is in said inspection zone for activating said bottle-rejecting means, a capacitor, means for charging up said capacitor, a means responsive to said photocell being illuminated for discharging said capacitor, a single-pole double-throw switch means having a standby position for connecting to said capacitor said means for charging up said capacitor and said means responsive to said photocell being illuminated for discharging said capacitor and having an operated position for connecting said capacitor to said bottle-rejecting means, and means for operating said switch means to its operated position as a bottle leaves said inspection zone whereby said bottle-rejecting means is operated if said capacitor has not been discharged.

3,094,214

AUTOMATIC CONTAINER FILL-HEIGHT INSPECTION MACHINE

James H. Wyman, San Pedro, and Robert G. Husome, Manhattan Beach, Calif., assignors to Industrial Automation Corp., El Segundo, Calif., a corporation of California

Filed May 5, 1961, Ser. No. 108,002
8 Claims. (Cl. 209—111.5)



7. Apparatus for inspecting a container for the presence of a cap and for fill height comprising an inspection zone having at one side thereof illumination means for said container, fill-height detection means on the other side thereof, and cap-detection means above said inspection zone, said illumination means comprising an opal glass, and masking means for rendering predetermined portions of said opal glass opaque to provide a remaining translucent region representative of an acceptable range of fill heights, said cap-detection means including an oscillator having a frequency-determining coil therein, said coil being positioned in said inspection zone to be proximal to the cap on a container whereby said oscillator is prevented from oscillating in the presence of said cap, and means for generating a first rejection signal from the output of said oscillator responsive to oscillations therefrom, said fill-height detection means including lens means, a rotatably supported multisided mirror, means for rotating said multisided mirror, a first and second photocell, means for positioning said lens means, multisided mirror, and first and second photocells relative to one another for deflecting an image of said illuminated region upon said first photocell and an image of the region of said container within which an acceptable fill height should occur upon said second photocell, means for deriving a first signal from the output of said first photocell representative of the interval required for scanning said illuminated region, means for deriving a second signal from said second photocell indicative of the occurrence of an interface at the top of the contents of said container, means for providing an enabling signal while said container is within said inspection zone, means to which said first and second signals are applied for generating a second reject signal when only one of said first and second signals is applied thereto, means for combining said first and second reject signals to provide a resultant signal, a normally inoperative means for rejecting a container, and means responsive to the simultaneous application of said enabling signal and said resultant signal for rendering said reject apparatus operative.

3,094,215

HOLDER

Charles B. Sipe, 903 Electric Bldg., Indianapolis, Ind.

Filed Sept. 21, 1960, Ser. No. 57,468
4 Claims. (Cl. 211—13)



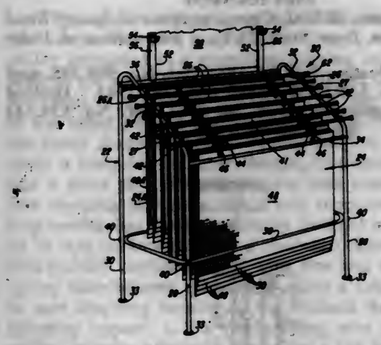
1. A holder comprising a length of wire formed into a plurality of connected loops each including a pair of straight converging portions joined by a bight, each of said loops extending in the same direction with the bight at the distal end thereof, said bight being of sufficiently sharp curvature to retain the handle of a pan cover, said loops being arranged in spaced parallel planes and joined to adjacent loops by diagonally extending portions of said length of wire, said last mentioned portions joining one straight portion of each loop to the diagonally located straight portion of an adjacent loop, and means for mounting said holder.

3,094,216

DISPLAY RACK FOR FLOOR COVERING MATERIALS

Marshall H. Gordon, 634 Winston Drive, Melrose Park, Ill.

Filed Apr. 26, 1961, Ser. No. 105,632
3 Claims. (Cl. 211—45)



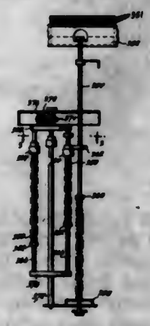
1. A display rack for groups of samples of floor covering materials and the like comprising, an upright frame of generally rectangular cross-section open at the upper end thereof, said frame having means at said upper end for removably supporting a plurality of elongated rods spaced apart one relative to other transversely across said open end with each rod having a group of said samples suspended therefrom through said open end into the interior of the frame and said rods disposed in a common plane angled downwardly from the rear toward the front of the frame, and hook means spaced above the said common plane at the rear of the frame for supporting a single rod with the group of samples thereof engaged upon the rods supported across said open end, said rods having opposite end portions protruding outwardly of the opposite sides of the frame.

3,094,217
RACK FOR PAPER BAGS OR THE LIKE
Stanley W. Peterson, Racine, Wis., assignor of one-fourth to Andrew J. Cottone, Racine, Wis., and one-fourth to Alex F. Skover, La Crosse, Wis.
Filed May 12, 1961, Ser. No. 116,226
3 Claims. (Cl. 211—49)



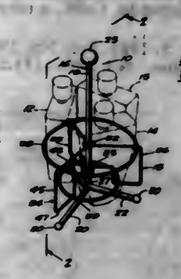
1. A rack for paper, comprising an upper member of a U-shape including two legs and an intermediate portion, a lower member spaced below said upper member and disposed parallel to said intermediate portion thereof, said members including means for mounting same on an upright support with said upper member in a horizontal plane, the free ends of said legs and said lower member being disposed on a common upright plane and with said intermediate portion of said upper member being spaced from said support and with said lower member being adjacent said support, and interconnecting J-shaped members disposed inwardly from said legs and extending between said intermediate portion and said lower member at an angle oblique to said plane to present a progressively lesser space from said support in the entire extent of said J-shaped members from said upper member to said lower member for securely holding different thicknesses of said paper along the length of said J-shaped members.

3,094,218
SELECTIVE PLATFORM TENSIONING MECHANISM
Guillermo Perez, Bristol, Conn., assignor to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Original application July 23, 1956, Ser. No. 599,385, now Patent No. 3,003,633, dated Oct. 10, 1961. Divided and this application Aug. 28, 1961, Ser. No. 134,341
8 Claims. (Cl. 211—51)



1. In apparatus of the character described having a platform member for receiving and supporting articles delivered thereto and adapted to yield under the weight of articles supported thereon, means for selectively changing the tension on said platform member comprising, a first tensioning means for providing a predetermined amount of resistance to the yield of said platform member, a plurality of second rotatably mounted tensioning means each of said plurality being connectable individually to resist the yield of said platform member and manually adjustable means for selectively coupling one of said plurality of second tensioning means to said platform member for resisting the yield of the platform member in combination with said first tensioning means.

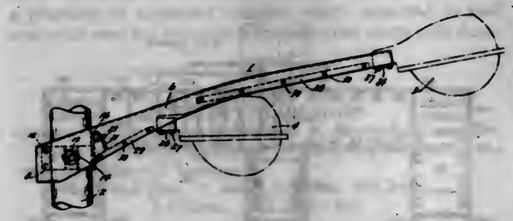
3,094,219
PORTABLE WIRE RACK FOR BOTTLES
Paul S. Klein, Los Angeles, Calif., assignor to "42" Products Ltd., Inc., Santa Monica, Calif., a corporation of California
Filed Jan. 29, 1962, Ser. No. 169,410
1 Claim. (Cl. 211—77)



A bottle rack for toiletries and the like comprising a two-piece standard including a generally L-shaped member and a relatively small V-shaped member, said V-shaped member having its V-notch seated in the junction of the legs of the L-shaped member and rigidly secured thereto with the legs of said V-shaped member and the shorter leg of said L-shaped member spaced generally equally from one another about the upright longer leg of said L-shaped member and similarly inclined thereto to provide said stand with a three-legged support base for said bottle rack, a multiple compartment bottle holder rotatably supported about the upright longer leg of said L-shaped member, said bottle holder comprising a plurality of generally U-shaped wire members having their legs lying in vertical planes disposed radially about the exterior of the upright leg of said standard, a pair of rings journaled on said upright leg and secured one to the upper legs of each of said U-shaped members and the other to the lower legs of these members, a bottle support ring concentric with said upright leg and secured to the mid-portions of the lower legs of said U-shaped members, a larger diameter ring secured to the upper legs of said U-shaped members adjacent their outer remote ends, thrust bearing means on the lower end of said upright leg engageable with the lower one of said pair of rings to support said bottle holder rotatably on said upright leg, and a knob secured to the upper end of said upright leg by which said bottle rack can be grasped and lifted as a unit.

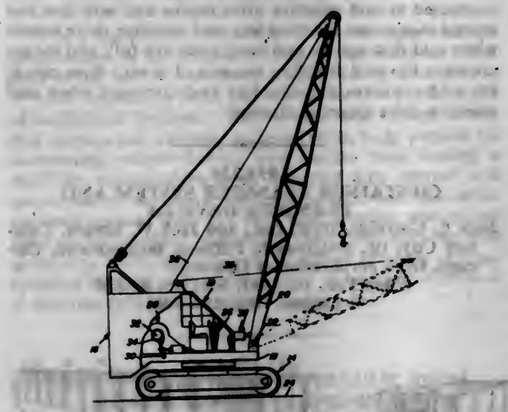
3,094,220
MAST ARM
Donald W. Harling, Milwaukee, Wis., assignor to McGraw-Edison Company, Milwaukee, Wis., a corporation of Delaware
Filed Nov. 2, 1960, Ser. No. 66,873
2 Claims. (Cl. 211—111)

1. A support assembly for mounting a pair of luminaires in tandem relation from a vertically extending pole, the combination of, an upsweep substantially channel-shaped arm, said arm being opened at one end for receiving said pole, bracket means adapted for embracingly engaging said pole, said one end of said arm being releasably connected to said bracket means at the opposite sides of said pole to define a pivotal axis substantially normal to the longitudinal axis of said arm, said bracket means having a vertically extending support member releasably engaging said arm along its longitudinal axis to secure said arm in a fixed angular position relative to said pole, a first mounting member fixedly connected adjacent the other end of said arm and disposed at an angle to the horizontal and constructed and arranged to receive and mount a first luminaire along the longitudinal axis



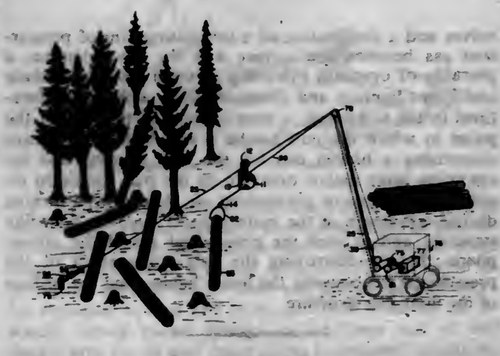
of said arm, a second mounting member fixedly connected to said arm intermediate the ends thereof and constructed and arranged to receive and mount a second luminaire in alignment with said first luminaire and in a substantially horizontal position, and electrical circuitry support means mounted on said arm between said bracket means and said second member.

3,094,221
BOOM LIMIT SAFETY DEVICE
Charles W. Galuska, San Jose, Calif., assignor of fifty per cent to Lois Edwards, San Jose, Calif.
Filed May 31, 1962, Ser. No. 199,152
4 Claims. (Cl. 212—39)



1. In combination with a support having one end of a beam pivotally secured thereto, a winding drum journalled from said support and having a tension member wound thereabout and operatively connected to said beam for effecting swinging movement of said beam in response to rotation of said drum, clutch means operatively connected to said drum and including means adapted for driving connection with a prime mover and including a movable actuator for rendering said clutch means inoperative to transmit power from said prime mover to rotate said drum, a spring loaded ram including a closed cylinder having a piston snugly and slidably disposed therein with one end of a piston rod secured thereto whose other end projects outwardly of one closed end of said cylinder and is provided with an abutment, an extensible motor including a closed cylinder member having a piston snugly and slidably disposed therein with one end of a piston rod secured thereto whose other end projects outwardly of one closed end of said cylinder member, means operatively connecting said other end of the last mentioned piston rod to said actuator, fluid conduit means communicating the other closed ends of said cylinder and cylinder member, hydraulic fluid disposed in said fluid conduit and said other ends of said cylinder and cylinder member, and means mounting said ram on said support with said piston rod disposed in the plane of movement of said beam and said abutment disposed for engagement with a portion of said beam spaced laterally of its axis of rotation defining a limit position of swinging movement of said beam toward said ram whereby as said abutment is engaged by said beam to move the piston of said ram, the piston of said fluid motor will be moved and thereby effect movement of said actuator to declutch said winding drum.

3,094,222
TONG RETURN BLOCK
Jess L. McAllister, 1220 Michigan Ave., Orofino, Idaho
Filed Apr. 19, 1962, Ser. No. 188,772
4 Claims. (Cl. 212—87)



1. In a highline logging system of the nature aforesaid, the combination of a tong block having an upper whiz line pulley journaled in a protective housing carrying a pivot plate at the lower portion thereof, a lower live line pulley journaled in a protective housing carrying a pivot plate in the upper portion thereof and a tong-ring housing in the lower forward portion thereof adapted to releasably carry a tong-ring member therein, releasable on impact, and a pivot pin pivotably joining said members; a whiz line carrying said tong block and supporting thereon a stop mechanism having a slidable forward member adapted to stop said tong block, a rearward clamping member non-slidably carried by said whiz line and a compression spring therebetween adapted to cause a tong-ring carried in said tong-ring housing to be released therefrom upon stopping impact; a live line passing over said live line pulley carrying aforesaid tong-ring; a log tong releasably carried by said tong-ring; and means of supporting and moving said cables.

3,094,223
LOAD CARRYING APPARATUS
Paul L. Smith, Santa Monica, Calif., assignor to Douglas Aircraft Company, Inc., Santa Monica, Calif.
Filed July 19, 1961, Ser. No. 125,237
5 Claims. (Cl. 214—1)

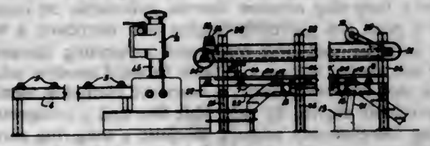
1. Cargo handling apparatus comprising: a main support having a trusswork reinforcement, said trusswork being perforated for the passage of air; a diagonally extending pull handle at one side of the support; a lower lamina of a sheet-like, flexible material affixed to said support; an intermediate lamina of resiliently compressible material interposed between said main support and lower

lamina; a floor-like structure having a generally planar surface across which the main support is pulled with the lower lamina in face-to-face contact with said surface, said intermediate lamina being adapted to locally expand and be compressed upon flexure of the lower lamina when the latter contacts local irregularities in said surface; a plurality of outlets spaced generally uniformly in the surface of said floor-like structure; a source of pressurized gas communicating with said outlets; valve means normally closing said outlets; and operating means for opening said valves, said operating means protruding above the surface of the floor-like structure and being depressible by said lower lamina whereby to effect opening of the



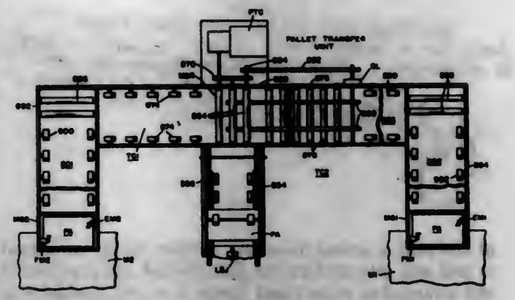
valves and a distribution of a lubricating film of pressurized gas between the surface and the lower lamina; a plurality of openings extending through the intermediate and lower laminas and communicating with the perforations in the trusswork; a vent opening at the side of the pallet to which the pull handle is attached; valve means comprising a hinged cap for the vent opening and cooperating lever means operable by the pull handle to restrict the passage of pressurized air through the opening during movement of the main support over the floor-like structure and to vent the pressurized gas to the atmosphere, thereby destroying the lubricating effect of the pressurized gas between the lower lamina and the surface of the floor-like structure.

3,094,224
STOCK FEEDING DEVICE FOR STRUCTURAL STEEL SAW
Edwin L. Mead, Pittsburgh, Pa., assignor to Mulfab Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Feb. 10, 1960, Ser. No. 7,828
4 Claims. (Cl. 214—1.1)



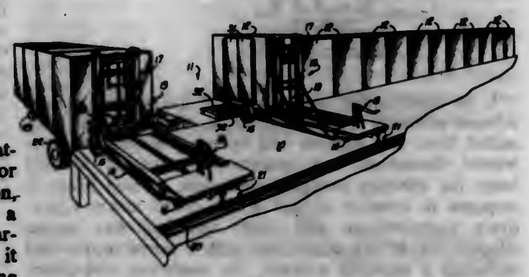
1. A stock positioning machine comprising an operating station, a stock conveyor to support the stock for movement longitudinally through said operating station, a track extending longitudinally with said conveyor, a carriage movable along said track, a clamp on said carriage to engage the stock on said conveyor and secure it relative to said carriage, positive drive means engaging said carriage to move it and the end of the stock in either direction along said stock conveyor to a predetermined position relative to said operating station, the stock and the carriage being independently supported by said conveyor and said track respectively, a vise at said conveyor adjacent said operating station to hold the work piece for operation, said clamp including an arm, a slide movable vertically on said arm, and a stock gripping member carried by said slide to compensate for variations in said stock while being drawn across said conveyor by said carriage.

3,094,225
BLOCK HANDLING APPARATUS
Joseph Repasky and George Repasky, Greensburg, Pa., assignors to Greensburg Concrete Block Co., Greensburg, Pa., a corporation of Pennsylvania
Filed June 17, 1959, Ser. No. 820,966
5 Claims. (Cl. 214—16)



1. A system for selective transfer of pallets including a main pallet conveyor, drive means connected to said conveyor when enabled for driving said conveyor, a transfer magazine connected to said conveyor for receiving pallets from said conveyor, a first storage magazine, a second storage magazine, means connecting each of said storage magazines to said transfer magazine, selective drive means connected to said transfer magazine when enabled for transferring pallets selectively from said transfer magazine to said first or said second storage magazine, means connected to said selective drive means and said first and second magazines for disabling said selective drive means when said first and second magazines are full, and means connected to said disabling means and to said drive means for said conveyor for disabling said conveyor when said selective drive means is disabled.

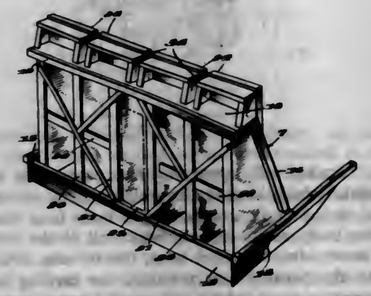
3,094,226
CONTAINER TRANSFER SYSTEM AND TRANSFER DEVICES
Jack E. Gutridge, Dyer, Ind., and Jack W. Borger, Calumet City, Ill., assignors to Pullman Incorporated, Chicago, Ill., a corporation of Delaware
Filed Feb. 16, 1961, Ser. No. 89,859
3 Claims. (Cl. 214—38)



1. A container transfer system comprising multiple container supporting and transporting means, a container loading and unloading dock arranged to accommodate container supporting and transporting means along a side thereof, at least one wheel-supported container transfer means freely movable on said dock to load and unload containers on and from said container supporting and transporting means from a single side thereof over the edge of said dock, said container transfer means including container engaging means which is operative at one edge

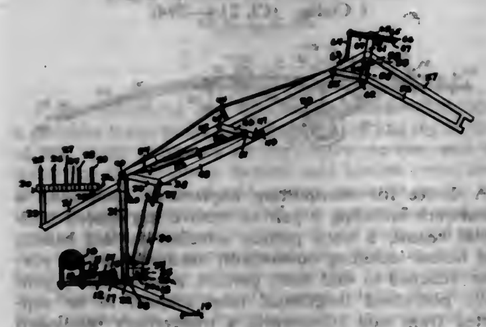
of said transfer means to lift containers to and from said container supporting and transporting means, tie-down means releasably interconnecting another edge of said container transfer means which is opposite said one edge with said dock to stabilize said container transfer means during off-center loading and unloading operation thereof, an overhead conveyor unit extending along said dock, and a plurality of container transfer means attached to said conveyor unit for simultaneous operation along said dock.

3,094,227
COMPACTION BODIES
George R. Dempster and William A. Herpich, Knoxville, Tenn.; said Herpich assignor to Dempster Brothers, Inc., a corporation of Tennessee
Filed Dec. 31, 1958, Ser. No. 784,241
2 Claims. (Cl. 214—82)



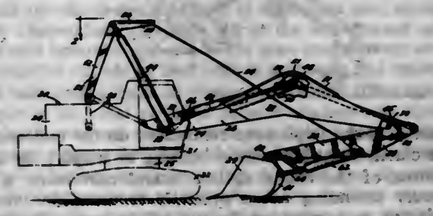
1. In a compaction body of the character described, the combination of an elongated body portion adapted to receive refuse therein, said body portion having spaced rows of teeth depending from the top thereof, a packer head of substantial thickness front to rear and having a rear face portion and movably mounted in the body portion for compacting refuse therein, said packer head having a shelf-like structural member mounted atop thereof and spaced below the top of the body portion, box assemblies mounted on said shelf-like structural member and spaced apart in longitudinal alignment, the spaces between said assemblies being alinged with said rows of teeth, said assemblies having upright rear faces in upward extension of said rear face portion of said packer head.

3,094,228
FOLDING AND SWINGING HYDRAULIC BOOM
Harold B. Peterson, Larchwood, Iowa
Filed Apr. 1, 1960, Ser. No. 19,334
5 Claims. (Cl. 214—133)



1. A folding and swinging boom comprising a boom structure including an extended bar, and a further extended bar parallel to said extended bar, hydraulic means for extending said extended bar with respect to said further extended bar including a link pivoted to a fixed pivot on said further extended bar, and pivoted to said extended bar, a further link pivoted to a fixed point on said further extended bar and pivoted to said extended bar, hydraulic means attached to said further extended bar and to said further link for moving said further link and said extended bar outwardly with respect to said further extended bar, a further boom structure pivoted to the outer end of said further extended bar.

3,094,229
HYDRAULIC BACK HOE
Kenneth V. Johnson, Milwaukee, and Edgar G. Burkhardt, Brown Deer, Wis., assignors to Koehring Company, Milwaukee, Wis., a corporation of Wisconsin
Filed Sept. 16, 1960, Ser. No. 56,457
2 Claims. (Cl. 214—138)

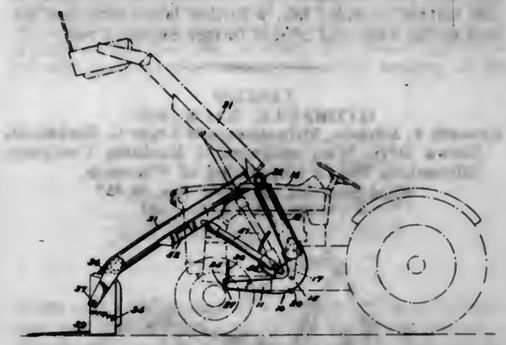


1. A back hoe attachment for use with a base machine comprising, in combination, a boom adapted to be pivotally supported at its inner end on said base for up and down swinging movement, a bucket arm pivotally supported intermediate its ends on the outer end portion of said boom for swinging toward and from said base machine, an inwardly facing bucket pivoted to the lower end of said bucket arm for up and down tilting movement, means for actuating said bucket arm including a hydraulic ram adapted to be pivotally supported at its inner end on said base at a point above and outwardly of the boom support connection and a rigid link pivotally connected at its respective ends to the outer end of said ram and the upper end portion of said arm, means including a guideway on said boom for restraining said pivotal connection on the outer end of said ram to a predetermined path of movement about the line of centers of said boom support and arm support pivots, means for hoisting and positioning said boom and arm including an upwardly extending hydraulic hoist ram pivotally mounted on said base, a pivotally mounted hoist frame extending upwardly above said base and engaged by said hoist ram for forward and backward swing and a tension member interconnecting the upper end of said frame and a point on said arm intermediate said arm support pivot and said bucket, and means for varying the angle of said bucket with respect to said arm.

3,094,230
TRACTOR MOUNTED LOADER
Raymond W. Wilson, Washington, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Nov. 6, 1959, Ser. No. 851,282
5 Claims. (Cl. 214—140)

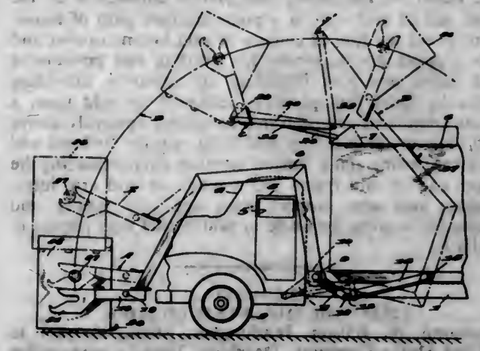
1. A tractor of the unitary type including an engine, clutch and transmission housing, and center housing of the rear axle, said elements connecting and supporting the front and rear axles of the tractor, the forward end of the clutch and transmission housing being provided with implement mounting connections at the sides and underside thereof, a rigid, integral, L-shaped loader frame mounted on one side of the tractor beside the engine, said

frame having a forwardly extending lower leg inclined inwardly towards the engine and the forward end of the lower leg being supported from the forward end of the engine, and the other leg of the frame projecting upwardly adjacent the rear end of the engine and being supported from the implement connection at one side of the clutch and transmission housing, and a third support extending from the frame adjacent to the intersection of the legs



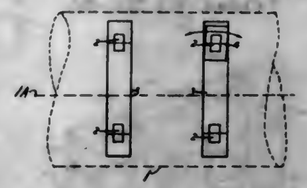
thereof to the implement connection on the underside of the clutch and transmission housing to support the lower portion of the frame against lateral movement, a forwardly extending boom pivotally mounted for vertical swinging movement on the top of the vertically extending leg of the frame, and a hydraulic cylinder extending between the frame and an intermediate portion of the boom, the frame and cylinder being the sole support for the boom.

3,094,231
FRONT END LOADERS
George R. Dempster and William A. Herpich, Knoxville, Tenn.; said Herpich assignor to Dempster Brothers, Inc., Knoxville, Tenn., a corporation of Tennessee
Original application May 28, 1957, Ser. No. 662,252, now Patent No. 2,900,096, dated Aug. 18, 1959. Divided and this application May 21, 1959, Ser. No. 814,890
11 Claims. (Cl. 214—302)



1. In a front end loader of the character described, the combination with a motor vehicle chassis including a chassis frame, a cab and a refuse body on the chassis frame, of loading mechanism on the vehicle comprising a pair of lifting arms extending over the top of the cab and downwardly at the front thereof, means pivotally mounting the rear end portions of the lifting arms on the vehicle for upward swinging movement, power means connected with the lifting arms for causing upward lifting movement thereof, pick-up arms supported by the front end portions of the lifting arms and having means thereon for detachable engagement with a container to lift the container to an elevated position over the body and for dumping the contents thereof into the body, and means detachably connecting the pick-up arms with the lifting arms for removal and separation therefrom.

3,094,232
TURNING ROLL APPARATUS
Allan H. B. Swan, Newcastle-upon-Tyne, England, assignor to The British Oxygen Company Limited, a company of Great Britain
Filed Nov. 16, 1959, Ser. No. 853,242
Claims priority, application Great Britain Nov. 24, 1958
3 Claims. (Cl. 214—340)



1. Turning roll apparatus for supporting a rotating cylindrical body during the welding of a circumferential seam on the body, comprising at least four turning rolls for the body, mountings on which all of the turning rolls can rotate about parallel axes, the turning rolls then being in the parallel axis position, the turning rolls being arranged in pairs which are spaced apart longitudinally of the parallel axes, and the two turning rolls in each pair being spaced apart transversely of the parallel axes so that the cylindrical body can be supported on the turning rolls with the longitudinal axis of the body parallel to and above the parallel axes, the mountings for at least two of the turning rolls being adapted to maintain the axes of said two turning rolls only in the parallel axis position during rotation of the body, and adjustment means for mounting one of the turning rolls adapted to incline the axis of rotation of said one turning roll in both senses away from the parallel axis position through a small angle of the order of 5° whereby any tendency of a body rotating on the turning rolls to move in either axial direction may be reduced by the counterscrewing effect produced on the body by said one turning roll.

3,094,233
DEVICE FOR TRANSPORTING ROTARY HOES
Herman M. Kowalke, Jr., Rte. 1, Le Mars, Iowa, and Donald P. MacKay, Rte. 1, Ransom, Iowa
Filed July 15, 1960, Ser. No. 43,073
1 Claim. (Cl. 214—394)



A device for transporting implements comprising a framework including a pair of transversely spaced horizontal beams, a hitch portion attached to said beams, said beams including downwardly inclined forward portions attached to said hitch portion, a substantially centrally positioned lengthened tube adapted to be supported from said framework, a transversely positioned winch attached to said framework, cables attached to said winch, rings attached to the outer ends of said cables adapted to receive said tube whereby said tube can be

longitudinally adjusted with respect to said rings, means for attaching an implement load to said tube including looped elements attached to said implement load for receiving said tube, rotation of said winch adapted to raise said implement load.

3,094,234
CONTAINER
Otto Warburg and Günther Krippahl, Berlin-Dahlem, Germany; said Krippahl assignor to said Warburg
Filed July 7, 1960, Ser. No. 41,388
8 Claims. (Cl. 215—6)



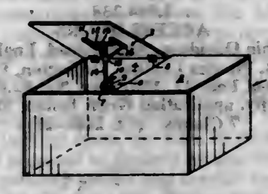
1. A container comprising, in combination, an outer vessel; an inner vessel located within and secured to said outer vessel and spaced above the bottom wall of said outer vessel, said inner vessel being relatively shallow, having a depth which is a relatively small fraction of the depth of said outer vessel, and having a width which is greater than its depth, said inner vessel having a horizontal top wall formed with an opening which is exposed in the outer vessel and is substantially smaller in width than the maximum width of the inner vessel; and an inverted V-shaped supply chamber integrally formed with said outer vessel and communicating with the interior of at least one of said vessels, said supply chamber having a downwardly and outwardly inclined outer leg provided with a close bottom wall to define a storage space for material, said material flowing to the interior of said one vessel when the container is tilted in a direction to elevate said outer leg.

3,094,235
COASTERS—VACUUM CUP
Alfred O. Luning, 5615 Kennedy St., Riverdale, Md.
Filed Oct. 14, 1957, Ser. No. 689,829
13 Claims. (Cl. 215—100.5)



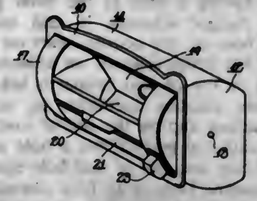
1. An attachable and detachable coaster comprising a platelike body, projections upon the top and the bottom of said body outwardly of the central portion and inwardly of the periphery thereof, said bottom projections forming the support of said coaster, material on the top of said body surrounding said top projections and extending to the peripheral portions of said body, said material having height approximately the same as said top projections, said top projections having height exceeding said bottom projections, and disposed relative thereto further outward on said body wherein a plurality of said coasters stacked one on top of another engage one another that said bottom projections of one coaster interlock within said top projections of an adjacent coaster providing therein means to align and to nest said coasters in said stacking, wherein adjacent coasters are held thereby against sliding one off of another, said stacking occurring further that the lowermost bearing surface of said bottom projections are held in spaced relationship between adjacent coasters providing therein means in said stacking to effectively separate adjacent coasters at their supporting surfaces; said projections upon the bottom of said coaster having a boss at the outer peripheral side of the base thereof wherein, in said stacking of said coaster, said boss on one coaster bears on the upper surface of said top projections of an adjacent coaster that said material on top of said coaster is held in spaced relation between coasters accessible to air outside said coasters; a suction cup on the top of said body situated inwardly of said top projections, a hole axially oriented through said cup, one end of said hole open from underneath said coaster body, said hole containing a suction release valve, said valve having a seat within the inside portion of said suction cup, said valve comprising a pin through said hole, said pin at one end enlarged and adapted therein to seal said hole at said valve seat, spring means cooperating with said pin at the end thereof opposite said enlarged end and at the area immediately surrounding the outside of said hole at said open end underneath said coaster body to produce a resilient force upon said pin in the axial direction thereof wherein said force urges said enlarged end of said pin tightly against said valve seat closing thereby said hole from passage of air, said valve further being accessibly disposed and operable from the underside of said coaster body, resilient means to stabilize the attachment of said coaster to a tumbler wherein in said attachment said means compensates for inherent resilient springback of said suction cup occasioned by said attachment.

3,094,236
LATCH MECHANISM
Howard D. Aldredge and Robert L. Aldredge, Dayton, Ohio, assignors to Container Service Company, Inc., Dayton, Ohio, a corporation of Ohio
Filed July 27, 1960, Ser. No. 45,746
7 Claims. (Cl. 217—60)



4. In a receptacle having a lid hinged to normally close an opening therein, mounting means on said lid, means pivoted to said mounting means to provide it with a degree of lateral movement thereon, means connecting between said lid and pivoted means causing said pivoted means to be normally biased to engage an inner surface of the receptacle, at an acute angle thereto, below and intermediately of the hinged portion of said lid to produce an upward thrust on said lid, latch means on the inner surface of said receptacle in the path of said biased means on lifting of said lid including a horizontal cam surface and a relatively inclined cam surface angled to laterally intersect the path of movement of said biased means on opening of said lid, said horizontal cam surface providing a surface portion adapted to cooperate with said biased means to latch said lid in an open position and said inclined cam surface being operable on lifting the lid from its open position and release thereof to engage and deflect said biased means laterally of its normal orientation to provide for closing of said lid.

3,094,237
FIXABLE ASH TRAY
Ryuji Tsuboaka, Kanagawa-Ward, Yokohama, Japan, assignor to Yuichi Sano, Osaka, Japan
Filed Dec. 28, 1961, Ser. No. 162,815
3 Claims. (Cl. 220—18)



1. A fixable ash tray comprising a laterally long hollow fixable casing which will be embedded into a wall surface at a suitable place where people smoke in an automobile, railroad train, airplane, ship, and building, etc., having a semicircular receptacle member supported by lateral pivots within said casing, said receptacle member having an inlet opening, a receiving dish pivoted in said receptacle member which can receive ashes from the inside of said inlet opening; a push button arranged on a flank of said receptacle member, and means for causing the casing to be in an opened state by moving said receive dish forwardly through pushing of said button, means for closing the bottom of said inlet opening by pivotal movement of said receive dish when the pressure on said push button has ceased, a locking pawl and slide head formed on the tip of a locking lever connected with a shaft for moving the receive dish to close and open said inlet opening of said receptacle member and a locking seat is mounted on the inner bottom face of the fixable casing and is formed with a surface having a cut-out providing a slide edge and a stop edge, and characterized in that when the receptacle member moves said inlet opening within the fixable casing, so as to conceal it therein, said slide head slidably contacts the surface of said locking seat.

3,094,238
ACCESS DOORS
Alastair Ritchie Davidson, Sanderstead, England, assignor to A. B. Plastics Limited, Orpington, England
Filed Feb. 27, 1961, Ser. No. 92,053
Claims priority, application Great Britain Mar. 11, 1960
7 Claims. (Cl. 220—25)



1. An access door comprising, in combination, first and second elongated plates of generally similar form with margins for overlapping the entire periphery of each side of a corresponding elongated aperture, the first plate being for one side of the aperture and the second plate being for the other side of the aperture, at least one of the plates being capable, without distortion or complete separation of the plates, of being passed edgewise through the aperture, a screwthreaded member mounted rigidly in the first plate and projecting therefrom through a bore in the second plate, retaining means associated with the screw threaded member and holding the latter captive in the bore, a complementary screwthreaded member upon the first-mentioned screwthreaded member enabling the plates to be drawn together for closing the aperture, the said margin of the first plate being of form corresponding to the margin of the aperture so as to be in sealing relaship therewith, and a peripheral seal on the said margin of the second plate.

3,094,239
PRESSURE DEVICE
William Edwin Baker, Needham, Mass., assignor to Standard-Thomson Corporation, Waltham, Mass., a corporation of Delaware
Filed Nov. 18, 1960, Ser. No. 70,236
14 Claims. (Cl. 220—44)



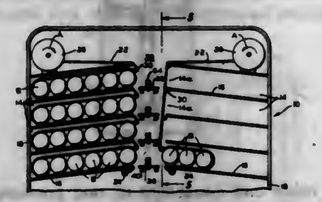
1. In combination with a container, pressure change indicator means, the container having a rigid wall portion provided with an opening therethrough, a flexible wall member within the container and having a peripheral edge encompassing the opening and sealingly attached to the rigid wall portion, an indicator element disposed adjacent the opening, means severably attaching the indicator element to a portion of the flexible wall member so that upon movement of the portion of the flexible wall member away from the opening the attachment between the indicator element and said portion of the wall member is severed.

3,094,240
MOLDED NESTABLE CONTAINER HAVING INDICIA PROTECTION MEANS
Herbert Jourdan Wanderer, Elmhurst, Ill., assignor to Illinois Tool Works Inc., Chicago, Ill., a corporation of Delaware
Filed Mar. 22, 1962, Ser. No. 181,595
6 Claims. (Cl. 220—97)



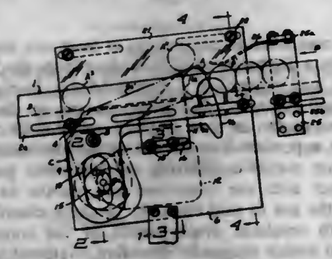
1. A nestable container having a bottom wall and side walls extending upwardly and outwardly therefrom to define an open mouth, said side wall having a first portion of major extent which is characterized as being substantially smooth and diverges upwardly and outwardly from the axis of the container at a constant predetermined angle, said first portion of said side wall being bounded by second and third portions, said second portion being intermediate the bottom wall and said first portion and radially outwardly offset from the plane of the outer surface of said first portion, said third portion being intermediate said first portion and said open mouth, said third portion being further characterized as having portions thereof offset from the predetermined angle of said first portion to define stacking means for cooperation with a like configured container nested therewithin, said stacking means affording a predetermined spacing in the vertical dimension of like containers when in nested relation, the amount of radial outwardly offset of the outer surface of said second portion of said side walls preventing rubbing contact of the outer surface of said first side wall portion with the inner side wall surfaces of a like container upon telescoping movement of like containers and permitting the stacking relationship between adjacent containers to be determined by said stacking means in said third side wall portion whereby freshly printed indicia means on the surface of said first portion will be protected during nesting and denesting of like containers.

3,094,241
VENDING MACHINE
Robert B. Lashley, 2863 Westgate Ave., San Jose 25, Calif.
Filed Aug. 11, 1959, Ser. No. 833,057
3 Claims. (Cl. 221—110)



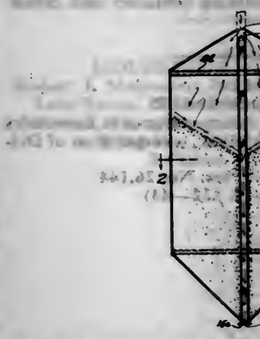
1. A vending machine which comprises a plurality of superposed, fixed shelves forming a plurality of compartments therebetween for storage of bottles or the like and having lateral exits, said shelves being disposed to support, substantially, the entire weight of the bottles and to resist, by gravitational force, bottle movement through said lateral exits, a belt arranged for folded insertion into said compartments to encompass the bottles therewithin, said belt being fixed at one end, a winding reel for said belt at its remote end, means for rotating said reel to wind in said belt and urge said bottles off the end of said shelves and out of said compartments, and means movably supported in engagement with said belt at the exit end of each compartment and arranged to urge said belt into exit-blocking position.

3,094,242
ESCAPEMENT ASSEMBLY FOR WORKPIECES
John G. Kay, Detroit, and Alfred L. Osinski, Warren, Mich., assignors to F. Jos. Lamb Company, Detroit, Mich., a corporation of Michigan
Filed Apr. 4, 1960, Ser. No. 19,788
6 Claims. (Cl. 221—241)



1. In combination, a gravity chute having a pair of side walls and a bearing strip spaced between the side walls and having its upper edge spaced below the upper edges of the side walls for supporting work pieces gravitating down the chute, an escapement for said work pieces and a plate having means thereon for securing it in vertical position against the outer face of one of the side walls of the chute, said escapement including a lifter arm pivotally supported on said plate in spaced relation to the inner side of said plate such that the arm is adapted to pivot about a horizontal axis upwardly between the bearing strip and one of said side walls, the pivotal support for said arm being located on the plate below the side walls of the chute, a stop, means mounting said stop on the inner face of said plate in spaced parallel relation thereto so as to project up between the bearing strip and one side wall of the chute and thereby halt work pieces travelling down the chute, said arm at its free end extending past the stop whereby work pieces travelling down the chute are arrested when they abut the stop and in the arrested position overlie the free end of the lifter arm and motor means mounted on said plate for oscillating the arm from a position wherein its free end is below the upper edge of the bearing strip to a position wherein its free end is above the upper end of said stop.

3,094,243
DISPENSING BIN AND METHOD FOR LOADING AND UNLOADING SAME
Edward P. Haugen, 1015 Marquette St., La Salle, Ill.
Continuation of application Ser. No. 705,034, Dec. 24, 1957. This application June 13, 1960, Ser. No. 35,841
2 Claims. (Cl. 222—1)



2. A method of loading and unloading a mixture of granular material from a storage bin through a discharge opening in the bottom of said bin in a manner to prevent segregation of said mixture into different sized particles comprising the placing of a conduit in a vertical position with its bottom end in communication with said discharge opening, providing aperture means in the side walls of said conduit throughout the length thereof, so as to afford continuous communication between the bin space surrounding the conduit and said discharge opening, via said aperture means and the interior of the conduit, providing an inlet opening at the upper center of said bin, and providing baffle means, in close proximity to said inlet opening, for causing material entering the bin to be directed toward, and impinge upon, the sides of said bin whereby said material is caused to descend by gravity downwardly and radially inwardly toward said conduit aperture means, whereby the granules of said granular material enter the conduit by gravity only from the upper layer of the material in said bin and are discharged by gravity through said discharge opening, no matter at what level said upper layer may be disposed.

3,094,244
DISPENSING RECEPTACLES
Patricia P. White, 1015 Woodrow Ave., Norfolk, Va.
Filed Apr. 28, 1960, Ser. No. 25,368
3 Claims. (Cl. 222—23)

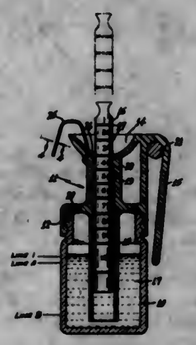
1. A dispensing receptacle for granular and like flowable materials comprising, in combination, a carton-type receptacle having a permanently closed top wall provided with a small-area contents-dispensing opening disposed immediately adjacent one end edge of said top wall and a measuring attachment hingedly connected to said receptacle along said end edge, said measuring attachment comprising a combined dispensing-opening cover and a dispensed-contents receiving and containing

unit, said unit extending the full width of said receptacle and adapted in its closed position to telescope over and hood the closed top and upper end portion of said receptacle and in a first open position to receive material dispensing from said receptacle through said opening and in a second open position to discharge the so-received



material, said unit having indicia representative of the quantity of the material received therein from the receptacle, said receptacle and measuring attachment being formed complete from a single blank of sheet material folded to form a receptacle proper and the aforesaid combination cover and measuring container unit constituting said attachment.

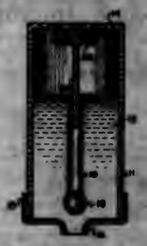
3,094,245
LIQUID DISPENSER
Keichi Mizuno, White Bear, Minn., assignor to Economics Laboratory, Inc., St. Paul, Minn., a corporation of Delaware
Filed May 2, 1960, Ser. No. 26,144
8 Claims. (Cl. 222—43)



1. Apparatus for dispensing a volume of liquid in response to a rise in ambient temperature, comprising a supply container adapted to be partially filled with a liquid to be dispensed and the space above said liquid filled with air, said container having an open reservoir at the top, a tubular dispensing element extending from the bottom of said reservoir downwardly in sealed engagement with the container and terminating within said container beneath the surface of the liquid, a volume-flow adjustment rod mounted within and spaced from said tubular element to define therewith a constricted passage therebetween for dispensing said liquid, and means for retaining said rod at different longitudinal positions relative to said tubular element to vary the length of said passage within said tubular dispensing element.

3,094,246
BALLOON ALTITUDE CONTROL DEVICE
Charles P. Fazio, Hull, David G. Greenlie, Weston, Robert M. Nelson, Arlington, and Beverly A. Nickerson, Concord, Mass., assignors to W. R. Grace & Co., Cambridge, Mass., a corporation of Connecticut
Filed Jan. 3, 1961, Ser. No. 80,230
4 Claims. (Cl. 222—52)

1. A ballast release device for attachment to a balloon comprising, in combination: a container adapted to hold fluid ballast; openable and closeable ballast discharge means in the lower portion of said container; a pressure responsive element which contracts with increases in atmospheric pressure and expands with decreases in atmospheric pressure; and a uni-directionally collapsing shaft having one end connected to said ballast discharge means



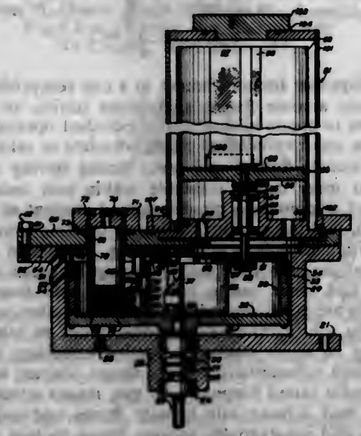
and the other end connected to said pressure responsive element, said shaft being operative to open said discharge means when said pressure responsive element contracts and to close said discharge means when said pressure responsive element expands to give intermittent opening and closing of said discharge means as the balloon descends and ascends.

3,094,247
ELECTRIC-SELECTION MULTI-RESERVOIR LIQUID DISPENSER
Vito V. Marchi, Redwood City, Calif., assignor to American Radiator & Standard Sanitary Corporation, New York, N.Y., a corporation of Delaware
Filed Oct. 10, 1960, Ser. No. 61,721
10 Claims. (Cl. 222—54)

1. A combination comprising at least one closed liquid reservoir; a discharge conduit leading from the liquid contents of said reservoir; a contained gas in contact with said liquid contacts; and pump means to displace said contained gas to in turn displace said liquid contents to dispense a portion thereof out of the discharge conduit; said pump means comprising an expansible gas chamber in contact with the contained gas; means to thermally expand the gas in said chamber to cause chamber expansion with resultant displacement of the contained gas; electrical switch means in operative relationship with said chamber for actuation responsive to chamber expansion; and valve means associated with said closed liquid reservoir; said valve means being controlled by the electrical switch means to selectively vent the contained gas to permit metering the amount of liquid contents dispensed.

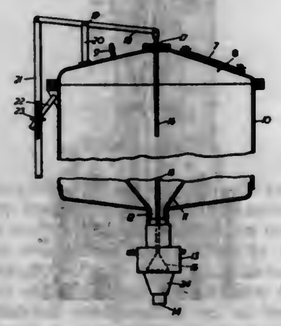
3,094,248
XEROGRAPHIC DEVELOPING APPARATUS
Charles L. Huber, Byron, N.Y., assignor to Xerox Corporation, a corporation of New York
Filed Apr. 4, 1960, Ser. No. 19,845
5 Claims. (Cl. 222—193)

1. A powder cloud generator including an enclosure, a powder carrier means, including a support and a shaft, rotatably journaled in the bottom portion of said enclosure with said support positioned for rotation in a horizontal plane and with said shaft extending from said enclosure for connection to a suitable drive means; metering means connected to said enclosure and positioned therein in closely spaced relation above said support to meter a quantity of a powder over said support as it is rotated beneath said metering means, an output means connected to said enclosure with one end of said output means positioned in closely spaced relation above said support, the opposite end of said output means being connectable to a discharge conduit, an inlet duct in said enclosure adapted to be connected to a source of compressed aeriform fluid,



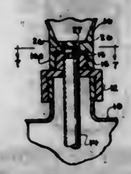
a powder inlet duct in said enclosure positioned above said support, a powder dispenser connected to said enclosure and positioned over said powder inlet duct, said powder dispenser including a reservoir means for powder material, a dispensing means positioned in said reservoir, said powder carrier means being operatively connected to said dispensing means to effect operation of said dispensing means to feed powder through said powder inlet duct onto said powder carrier means between said output means and said metering means in the direction of rotation of said support when said powder carrier means is rotated.

3,094,249
POWDER DISPENSING APPARATUS
Dennis Ian Pullen, Hove, Sussex, England, assignor to The British Oxygen Company Limited, a British company
Filed Apr. 12, 1960, Ser. No. 28,508
Claims priority, application Great Britain Apr. 14, 1959
3 Claims. (Cl. 222—193)



1. In apparatus for dispensing powdered materials from a hopper in a stream of carrier gas, the combination of a powder hopper, a mixing chamber defined by a top wall, side walls, and a downwardly convergent bottom wall with a central outlet opening, said top wall having a central opening therein in communication with the bottom opening of the hopper and also having an internal annular manifold chamber therein, a bell valve in said mixing chamber, said bell valve having an upwardly-presented and upwardly-convergent surface, means slidably mounting said bell valve for adjustment of said valve relative to the opening in the top wall of the mixing chamber for controlling the rate of powder flow through said opening, and conduit means for supplying carrier gas to the manifold chamber within the top wall of the mixing chamber, said top wall having a ring of downwardly-inclined jet orifices therein directed at said bell valve, which operate to inject carrier gas from the manifold chamber to sweep downwardly over the upwardly-presented surface of the bell valve, and at least one additional jet orifice which operates to inject carrier gas through said bell valve.

3,094,250
LIQUID-DISPENSING APPARATUS
Robert J. Molyneaux, Chicago, and David E. Goldich, Lake Forest, Ill., assignors to The Permalux Company, Aurora, Ill., a corporation of Illinois
Filed Nov. 17, 1960, Ser. No. 70,025
2 Claims. (Cl. 222—207)

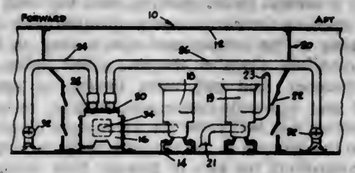


1. Dispensing apparatus for liquids comprising in combination a manually deformable air-tight container adapted to store liquid and having liquid exit means in one portion thereof, a dispensing cap mounted on the container over said exit means, said cap having a hollow interior portion adapted to receive liquid and marked to indicate at least one level therein representing a predetermined quantity of liquid contents, said cap being formed to define a restricted air-tight liquid passage between said interior portion and the exit means of said container, whereby manual compressive pressure on said container will force liquid from said container into the lower part of said cap interior, and a valve located in said restricted liquid passage, said valve unseating when liquid is forced through said passage due to compressive pressure on said container but seating when pressure on said container is relieved, said valve being provided with a small opening operative when the valve is seated to permit very slow back-flow from said cap interior into said container.

3,094,251
FUEL SUPPLY SYSTEM
Carl A. Weise, Pacific Palisades, Calif., assignor to Douglas Aircraft Company, Inc., Santa Monica, Calif.
Filed May 27, 1960, Ser. No. 32,214
3 Claims. (Cl. 222—255)

1. In an aircraft fuel supply system, a fuel tank, a reservoir box located near the low point of the tank, said box having flapper type valves allowing gravity flow of fuel into the box but restraining gravity flow from the box, a pump mounted in the box, a selector valve mounted in the box and having dual inlets and an outlet, said outlet being connected to the suction side of the pump, dual fuel pickup pipes attached to the inlets of the selector valve and extending respectively to the fore and aft parts of the tank, said selector valve having shuttle valve means

to alternatively select whichever pickup pipe is submerged in the fuel when the tank is tilted, a second pump



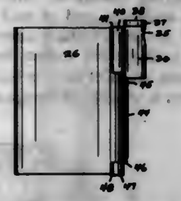
connected for pumping fuel out of the box, and check valves on the pickup legs for preventing drainage of the box when the system is inoperative.

3,094,252
CONTAINER FOR THIXOTROPIC PRODUCTS
Robert V. Burt, Cincinnati, Ohio, assignor to The Procter & Gamble Company, Cincinnati, Ohio, a corporation of Ohio
Filed Feb. 8, 1960, Ser. No. 7,334
3 Claims. (Cl. 222—410)



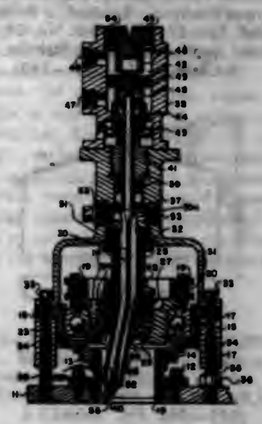
2. An hermetic container for a thixotropic product comprising a container body having a substantially cylindrical cross section, an inset bottom wall seamed to said body at one end, said bottom wall having a threaded downwardly projecting central opening, a conical top wall terminating in an upwardly extending and unrestricted threaded spout, said top wall being seamed to said body at the other end, said downwardly projecting threaded opening in said bottom wall and said threaded spout each being engaged by lower and upper closure caps, respectively, to effect an hermetic seal within the container, means for scraping the inner wall surfaces of said container, said means including a plurality of scraper blades contiguous to the inner wall surface of the container body and extending for substantially the entire length thereof, each of said scraper blades being connected at its upper end to an extension member, each of said extension members conforming substantially with the inner surface of the conical top and threaded spout and lying contiguous thereto, upper and lower spiders interconnected with said scraper blades and said extension members for holding the blades and extension members in proper assembled relationship, said lower spider having a downwardly extending annular portion mounted within the said downwardly projecting central opening of said bottom member, a central shaft member extending downwardly from said lower spider member, said shaft member terminating outside said central opening in said bottom member, a knob attached to said shaft member, said annular portion, shaft and knob being enclosed within the container when the lower closure cap is attached to the threaded opening in the said bottom wall, and a void formed in the thixotropic product behind the trailing edge of said extension members when the container is inverted and the scraper blades rotated, said void serving as an air vent to permit the thixotropic product to flow through the said unrestricted threaded spout in the top wall when the container is inverted and the thixotropic product is agitated and made flowable.

3,094,253
MEASURING DISPENSER ATTACHABLE TO RECEPTACLES
Nels J. Hvistendahl, 1324 S. Mulberry, Sioux City, Iowa
Filed Oct. 31, 1960, Ser. No. 66,244
1 Claim. (Cl. 222—452)



A dispenser for attachment to a can comprising a substantially arcuate flange, said flange having an opening adapted to communicate with a punched opening in said can, an outer cylindrical casing attached to said substantially arcuate flange, said outer casing having an opening, an inner casing rotatable within said outer casing adapted to contain a pre-determined amount of material therein, said inner casing having an opening communicating with said outer casing opening, all of said openings being aligned whereby said flange opening can be closed when said outer casing opening and said inner casing opening are positioned adjacently to each other, means for securing said substantially arcuate flange to said can including an upper bent-over portion extending integrally from said substantially arcuate flange adapted to receive an annular raised flange of said can, means attachable between said substantially arcuate flange and said can to secure said substantially arcuate flange to said can, said means including a helically wound spring positioned generally parallel to the axis of said can, one end of said spring being attached to said outer casing, a lower lug having a further bent-over portion adapted to engage a lower peripheral flange of said can, the other end of said spring being attached to said lug.

3,094,254
NUTATING NOZZLE
James J. Cullen, Framingham, and Richard P. Stokes, Malden, Mass., and Robin Mackay, Mercer Island, Wash., assignors to W. R. Grace & Co., Cambridge, Mass., a corporation of Connecticut
Filed Feb. 29, 1960, Ser. No. 11,599
5 Claims. (Cl. 222—504)



5. A nozzle for container closure compound applying machines comprising a base, a first radial bearing having

an outer race attached to said base, an inner race, means associated with the inner race to rotate said race, a second radial bearing having inner and outer races supported by the said means and having its axis angularly disposed to the vertical axis of the first named bearing, a nozzle tip fitted through the inner race of the said second bearing, a valve needle cooperating with said tip and forming a needle valve, flexible conduit means to conduct compound to said tip and means to operate the valve.

3,094,255
DISPENSING CAPS FOR CONTAINERS
Clayton M. Hunter, 2430 Williams St., Augusta, Ga.
Filed Feb. 3, 1958, Ser. No. 712,857
10 Claims. (Cl. 222—507)



1. A container, a housing on said container comprising inner and outer relatively rotatable members, said inner member consisting of a base plate fixed to a wall of said container and an outwardly extending inner cylindrical wall; and the outer member comprising a cap plate and a depending cylindrical wall fitting rotatably about the first said wall, a perpendicular tubular post eccentrically positioned on said base plate and having a bore communicating at the inner end thereof with the interior of said container, an upper end portion of said post having a port extending radially outwardly with relation to said housing, a discharge spout pivotally mounted on the end of said post and having a bore registering with said port when said spout is projected, alignable spout receiving openings in said cylindrical walls; and means for projecting and retracting said spout upon relative rotation of said housing members.

3,094,256
DISPENSING CAP FOR SQUEEZE-TYPE CONTAINERS
Thomas B. Easch, 1112 S. Jonstone, Bartlesville, Okla.
Filed Sept. 6, 1960, Ser. No. 54,119
5 Claims. (Cl. 222—536)



1. A dispensing cap for a squeeze type container comprising a cap body having a segmental cylindrical cavity in an upper portion thereof, means in its bottom portion for attaching to an outlet in said container, a conduit extending upwardly centrally therethru positioned for registry with said outlet; a spout in said cavity having a segmental cylindrical configuration on its lower side for frictional engagement in said cavity to form a rotatable seal therewith, said spout being pivoted in said cavity at the axis of the cylinders of both said cap and said spout;

3,094,257
LOAD-CARRYING ATTACHMENTS FOR BICYCLES AND SIMILAR VEHICLES
Lucian Wade Hampton, 317 SE. 24th Ave., Portland, Oreg.
Filed Sept. 1, 1961, Ser. No. 135,641
1 Claim. (Cl. 224—42)



An attachment suspending two loaded carrying bags from a bicycle one disposed on each side of the front wheel thereof,

said bicycle having handle bars, a front wheel, a steering fork and fender for the wheel,

each of said bags having a strap handle,

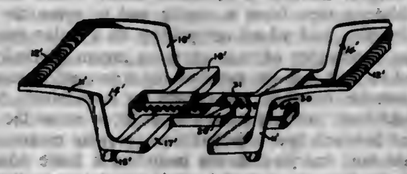
said attachment comprising in combination a pair of forwardly extending upwardly opening spaced apart integrated hook members attached to said handle bars, one hook member being on each side of the front wheel and in inwardly off-center hooked engagement with said bag handles,

a guard comprising a unitary frame attached at its forward end to said fork near the bottom end thereof extending rearwardly therefrom and embracing said fender,

and the spacing between said hook members being greater than the width of said guard,

whereby the bottom portions of said bags so suspended from said hook members will gravitationally bear against said guard on both sides thereof.

3,094,258
ADJUSTABLE DISH HOLDERS
John J. Punke, 2635 E. Genesee St., Syracuse, N.Y.
Filed Dec. 8, 1961, Ser. No. 158,174
7 Claims. (Cl. 224—45)



1. An adjustable dish holder consisting of two members of like construction, each member comprising a han-

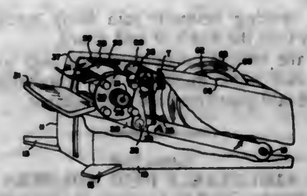
dle, a pair of side arms extending inwardly of the handle and each including a depending portion, base portions adjacent the lower end of each side arm, a central longitudinally disposed rack bar supported from said base portions, teeth on said rack bar, and a pawl adjacent the inner end of and projecting sideways from said rack bar, the pawl of one rack bar being adapted to fit between the teeth of the other rack bar, whereby said two members may be interlocked at various positions of longitudinal adjustment.

3,094,259
CUP CARRIER
Philip A. Diehl, 90 W. Main St., Norwalk, Ohio
Filed Dec. 16, 1960, Ser. No. 76,282
3 Claims. (Cl. 224—48)



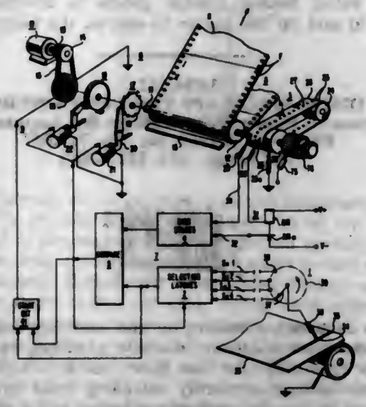
1. An article holding device comprising a sheet-like body provided with four article receiving apertures approximately equally spaced from and angularly about the center thereof, two bail-like handles connected to said sheet-like body such that there is a handle connection substantially at each of two diametrically opposite sides of each of said article receiving apertures.

3,094,260
ADHESIVE TAPE DISPENSER
Arthur A. Anderson, Falcon Heights, Minn., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware
Filed Oct. 7, 1959, Ser. No. 844,951
6 Claims. (Cl. 225—104)



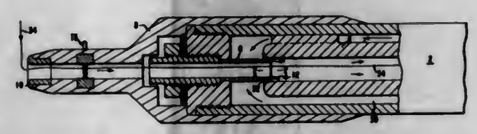
1. In a device for severing a strip of adhesive tape into lengths thereof, a rotatable cutter wheel adapted to withdraw tape from a supply and to sever the tape into lengths, said wheel comprising an annular member having a plurality of tape carrying means pivotally attached to said annular member for transporting tape on said annular member, and means for successively pivoting said tape carrying means in order to sever the tape carried between two adjacent tape carrying means, each of said tape carrying means including a knife edge on which the tape is severed by said pivotal movement of one of said adjacent tape carrying means while the other of said two adjacent tape carrying means is not pivoted.

3,094,261
TAPE CARRIAGE CONTROL
Thomas W. Thompson, Endwell, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Jan. 9, 1961, Ser. No. 81,387
16 Claims. (Cl. 226—9)



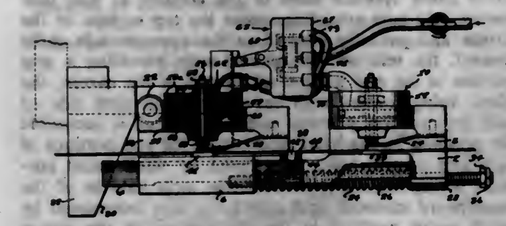
1. In apparatus for controlling a record feeding mechanism as it feeds a record form before a recording device, said form having a plurality of recording positions thereon:
selector means presettable to indicate a particular recording position count;
an endless looped member related to said mechanism so as to be driven thereby synchronously with said form, said member having a single channel of serially arranged indicia thereon with each indicium representing a recording position;
indicator means for sensing said indicia and for indicating a count of said recording positions;
and coincident means for comparing the count of said indicator means with the count of said selector means and for issuing a control signal when equal counts exist.

3,094,262
IMPROVED YARN HANDLING SUCKER GUN
William Cropper Ashby and William Wallar Bunting, Jr., Wilmington, Del., Robert Meagher, Wallingford, Pa., and Thomas Larson Nelson, Newark, and Kenneth Gilbert Swayne, Hockessin, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Nov. 25, 1960, Ser. No. 71,662
8 Claims. (Cl. 226—97)



1. A yarn-handling device comprising an air inlet tube, an air outlet tube having an outer exit end and an inner end, a passageway between said inlet and said outlet tubes, the outer exit end of said outlet tube provided with an elongated section of substantially constant cross-sectional area, an auxiliary air and yarn inlet tube having an outer end and an inner end, one of said air outlet and auxiliary air and yarn inlet tubes mounted for movement relative to the other, said inner end of said air and yarn inlet tube mounted to form in cooperation with the inner end of said outlet tube, a variable annular orifice, said orifice forming, in one condition of its variation and in cooperation with said elongated section, a converging-diverging nozzle, said device further comprising a conduit connecting said air inlet tube to a source of high pressure air, the pressure of the air in the inlet tube during operation of the device, the contour of said nozzle, and the elongated section each cooperating to produce supersonic air flow in said nozzle and maintain extremely high air flow velocities substantially throughout the elongated section of said outlet tube, and manually actuatable pneumatic means to rapidly and selectively vary the longitudinal relative positions of said outlet tube and said auxiliary inlet tube in order to vary the annular orifice, the improved device further comprising a baffle means cooperating with said orifice for creating a zone of great agitation in the air flowing through said nozzle and said outlet tube.

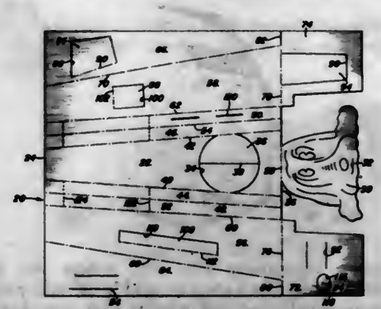
3,094,263
CONSTANT CONTROL MATERIAL FEEDING MECHANISM
Marvin Wills and Julius Allie, Colorado Springs, Colo.; said Allie assignor to said Wills
Filed May 9, 1961, Ser. No. 108,806
8 Claims. (Cl. 226—150)



4. Material feeding mechanism for the feeding of indefinite lengths of stock to a machine having relatively movable reciprocating work forming members, comprising in combination; a body member; a carriage slidably mounted on the said body member; course forming means attached to said body member over which the stock is directed; a pair of stock gripping means, one of said stock gripping means being secured to said carriage, the other of said stock gripping means being secured to said body member, said stock gripping means comprising, a pair of relatively movable clamping members, piston means reciprocally movable along an axis normal to the stock and adapted to engage one of the relatively movable clamping members, and a cylinder housing said piston means; means directing fluid pressure to the said piston means for actuating the same; actuator arm means interconnecting said fluid directing means and the said movable member of the machine; and first and second force means for reciprocally moving said carriage to provide advancement of stock, said first and second force means being directed to and applied on the said carriage.

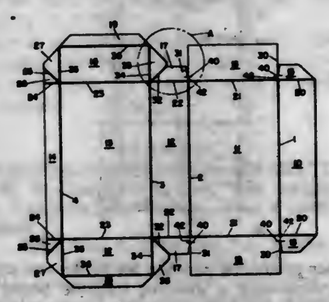
3,094,264
TRAY FOR FOOD AND DRINK
John Petrone, 198 Columbia St., Huntington Station, N.Y.
Filed Feb. 1, 1961, Ser. No. 86,372
8 Claims. (Cl. 229—16)

1. A portable tray for supporting an article of food and a beverage disposed in a container, said tray including an elongated relatively narrow supporting panel, said supporting panel having an opening therethrough adjacent one end thereof for receiving a beverage container, the remainder of the supporting panel adapted to receive an article of food, relatively narrow vertical wall panels connected to each edge of said supporting panel and forming abutments for preventing lateral movement of the article of food, said beverage container forming an abutment for preventing longitudinal movement of the article of food toward said one end, relatively narrow horizontal top panels connected to the vertical wall panels and extending outwardly therefrom, depending side wall panels connected to the outer edge of the horizontal top panels and extending vertically downwardly therefrom with the bottom edges terminating below the plane of the supporting panel, inwardly extending bottom panels connected



to the lower edges of the side wall panels, said bottom panel including means interconnecting the bottom panels for retaining them in assembled position, inwardly extending end panels connected to one end edge of each side wall panel, means interlockingly connecting the end panels thereby retaining the tray in assembled relation, one of said side wall panels being provided with a thumb receiving opening, the other of said side wall panels including an elongated opening for receiving a plurality of fingers from the same hand whereby the tray may be conveniently supported in one hand.

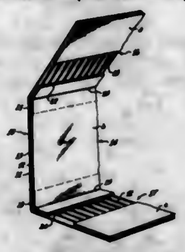
3,094,265
CORNER SEALED LEAKPROOF CARTON
Howard N. Hovland, Appleton, Wis., assignor to American Can Company, New York, N.Y., a corporation of New Jersey
Filed Dec. 30, 1958, Ser. No. 783,900
6 Claims. (Cl. 229—37)



1. A leakproof carton corner construction, the carton including a pair of main walls connected together along adjacent edges and an end closure flap hingedly connected to the end edge of each of said walls and folded in overlapping relation to overlie the end of the carton substantially normally with respect to the walls, the leakproof construction being provided by an integral web of carton material lying in a plane parallel to and immediately inwardly of the adjacent flaps at the corner of the carton and perpendicular to the walls and comprising a layer of carton material separated from the inner surface of said

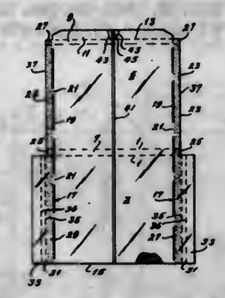
flaps at said corner and integrally connected to said flaps of the carton immediately adjacent the hinge connection of the flaps to the walls.

3,094,266
REINFORCED SHIPPING CONTAINERS
Deering M. Hoff, Lafayette, Calif., assignor to Weyerhaeuser Company, Tacoma, Wash., a corporation of Washington
Filed July 18, 1960, Ser. No. 43,538
5 Claims. (Cl. 229—37)



1. A carton comprising side wall panels and flap panels joined to said side panels by fold lines, said panels having a corrugated core, one side of said core having separate liners on said side wall panels and on said flap panels, one of said separate liners extending across said fold line and being of double thickness at said fold line, said two thicknesses being joined by a fold line at the outer end of said liner, the other of said separate liners being spaced from said one separate liner a distance substantially equal to the width of said double thickness portion of said one liner, and said corrugated core being exposed only between the said separate liners.

3,094,267
END CUSHIONED PAPERBOARD CONTAINER
Arwed Charles Boitel, Evanston, Ill., assignor to Alton Box Board Company, Chicago, Ill., a corporation of Delaware
Filed Sept. 28, 1960, Ser. No. 59,041
4 Claims. (Cl. 229—40)



1. A corner-protecting package for books and articles of like shape comprising a sheet of foldable board having top, bottom and side panels foldably connected to form an article-encompassing sleeve of length greater than the article, the bottom panel and at least one side panel having foldably connected marginal portions at both ends folded back within the sleeve, the infolded bottom-panel margins only having foldably-connected end-wall sections folded at right angles to the bottom panel, and the end-wall sections having retainer sections folded flat against the interior of the top panel, and the end-wall section having cut side edges extending along the interior surfaces of the side panels inwardly of the inner edge of said inwardly folded side panel margins.

3,094,268
CARRYING HANDLE CONSTRUCTION FOR CARTONS
Elmer G. Swanson, Salinas, and William C. Hyland, Monterey, Calif., assignors to St. Regis Paper Company, New York, N.Y., a corporation of New York
Filed June 26, 1962, Ser. No. 205,242
1 Claim. (Cl. 229—52)



A carton formed of a corrugated paperboard carton blank which includes opposite side wall areas and top and bottom surface areas, reinforcing tape means forming a part of the carton blank and adhered in place at a location inwardly of the corrugated medium thereof and extending entirely around the carton, the corrugations of the paperboard material extending transversely of said tape means, and handle means comprising a strip integrally formed of the material of the blank and defined by cuts extending in spaced relationship to and respectively along opposite sides of the position of said tape means, said cuts extending across the top surface of the carton and partially down into the opposite side walls thereof, the mid portion of said strip providing a grip portion at the mid portion of the top of the carton, the blank being formed with cut-out areas at each side of said grip portion whereby said grip portion is accessible for grasping by the hand, said cuts at the end portions of said grip portion being interrupted by small uncut portions acting normally to retain the strip flatwise of the paperboard material, said cuts being also interrupted by small uncut portions at the top corners of the carton normally to retain such corners closed but said uncut portions being separable by reason of lifting of the carton by the grip portion, whereupon the handle strip extends in an upwardly bulging form and the end portions of the strip tend to embrace the contents of the carton and said reinforcing tape as embodied with said strip then acting to embrace and apply lifting force to such contents.

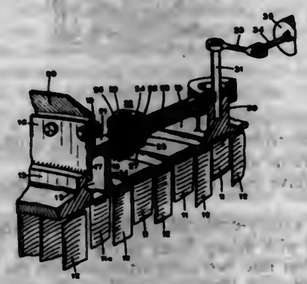
3,094,269
CONTAINER WITH A BUTT SEAM
William S. Schneider, Glendale, Calif., assignor, by direct and mesne assignments, to Packaging Frontiers Inc., a corporation of Delaware
Filed May 1, 1959, Ser. No. 810,304
5 Claims. (Cl. 229—86)



1. A filled package comprising a tube formed from a web of flexible packaging material and being heat-sealable on the inside, the longitudinal edges of the web being contiguous and secured together by a sealing strip on the inside of the tube, said strip being heat-sealable on both its faces and lapping and heat-sealed to the longitudinal margins of the web thereby providing a longitudinal tube seam, each end of the tube being closed by a transverse inside-face-to-inside-face heat seal, one of said transverse seals comprising an end portion of the tube flattened in such a plane that the portion of the web included therein is folded on a fold line at one end of said one transverse seal and the longitudinal edges of said portion of the web

are located at the corner of the package at the other end of said one transverse seal with the end portion of said strip at said corner folded on a fold line at said other end of said one transverse seal, a tearing member secured to said strip on the inside thereof extending longitudinally of the strip substantially in register with said contiguous longitudinal edges of the web, the interengaging faces of said folded end portion of said strip being heat-sealed together about the tearing member with said tearing member terminating at the ends of said strip within said transverse seals, and a line of weakness at said corner extending inward from the respective end of the tube across said one transverse seal and across the respective end portion of said strip to provide a tear-off corner portion of said one transverse seal and said strip for freeing the respective end of the tearing member whereby the tearing member along with the tear-off corner portion heat-sealed thereabout may be gripped and pulled to tear the strip between the contiguous edges of the web.

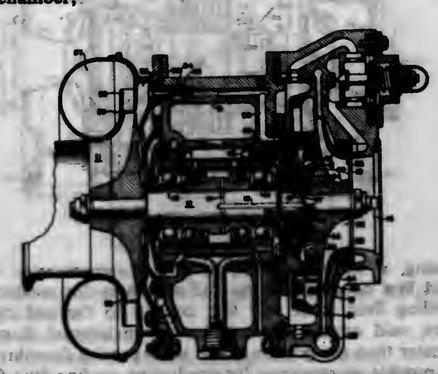
3,094,270
ANNULAR VALVE DEVICE
Nelson Hector Kent, Derby, Richard Derby Beale, Quarndon, and Robert Vaughan Blackhurst, Ripley, England, assignors to Rolls-Royce Limited, Derby, England, a company of Great Britain
Filed July 27, 1959, Ser. No. 829,692
Claims priority, application Great Britain Aug. 5, 1958
4 Claims. (Cl. 230—114)



1. An annular valve device comprising in combination an apertured casing circular in cross-section, a pair of parallel, outwardly directed, radial flanges on said casing, said apertures in said casing being between said casing flanges, a plurality of parallel, substantially axially extending levers spaced from each other around said casing, means mounting said levers for rotation about axes extending substantially radially of said casing, an annular valve member moveable over said casing and having three parallel, inwardly directed, radial flanges two of which are adapted in the closed position of the valve to seal against the respective casing flanges and the third of which is adapted in the open position of the valve to seal against one of the casing flanges, and joints so interconnecting said levers remote from said pivots and said valve member that pivotal movement of the levers produces axial and circumferential movement of the valve member with respect to the casing.

3,094,271
SEAL FOR REFRIGERANT COMPRESSOR
Harold A. Greenwald, Los Angeles, Calif., assignor to The Garrett Corporation, Los Angeles, Calif., a corporation of California
Filed July 12, 1962, Ser. No. 209,361
8 Claims. (Cl. 230—116)

1. In a turbine driven centrifugal compressor:
a housing;
a shaft rotatably mounted in said housing;
an impeller chamber adjoining said housing;
a compressor impeller mounted on said shaft for rotation in said impeller chamber;
a driving turbine operatively connected to said shaft;
a plate member mounted on said shaft and having an annular valve seat disposed contiguous said impeller;
first sealing means for preventing leakage of fluids between said housing and said impeller chamber including piston means surrounding said shaft and having an annular valve closure member adapted to be moved into and out of engagement with said valve seat;
means defining a cylindrical chamber, said piston means being disposed for movement in said cylindrical chamber;

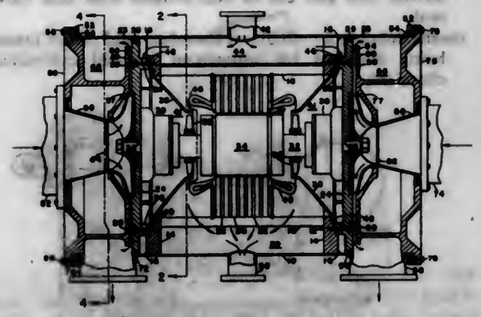


resilient means engaging said piston means for biasing said valve closure member into engagement with said valve seat when the compressor is idle;
means for conducting fluid under pressure from the inlet of said driving turbine to one side of said cylindrical chamber to actuate said piston means in opposition to the resilient means to move said valve closure member out of engagement with said valve seat when motive fluid is admitted to the driving turbine;
means for retarding the flow of fluid from said cylindrical chamber when said driving turbine is shut down to prevent engagement of the valve closure member with the valve seat while the compressor is coasting to a stop;
and second sealing means in series with said first sealing means and including a sealing ring having a surface contacting said plate member of said first sealing means.

3,094,272
MOTOR-COMPRESSOR APPARATUS
Arthur W. McClure, La Crosse, Wis., assignor to The Trane Company, La Crosse, Wis., a corporation of Wisconsin
Filed Dec. 9, 1960, Ser. No. 74,856
2 Claims. (Cl. 230—117)

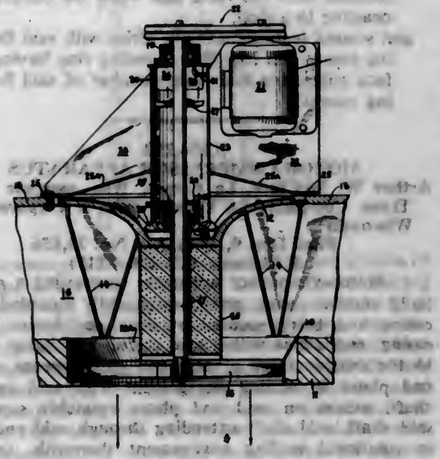
1. Motor-compressor apparatus comprising a substantially annular casing, end rings spacedly mounted in said casing and being secured at their peripheries to said casing, end plates within said casing and being secured to the outside faces of said end rings, means on said end plates in sealing engagement with said casing, a shaft, means on said end plates rotatably supporting said shaft, said shaft extending through said end plates in rotational sealing engagement therewith, impellers mounted on the ends of said shaft, compressor housings mounted in the ends of said casing in cooperative relationship with said impellers, annular shrouds extending inwardly from said end rings toward said shaft, said annular shrouds, said end rings, and said casing forming

a motor chamber, said annular shrouds and said end plates forming end chambers at each end of the motor chamber, a motor rotor mounted on said shaft in the motor chamber, a motor stator in the motor chamber, means mounting said motor stator on said end rings, a first conduit adapted to be connected to a source of cooling fluid under pressure, said first conduit being in fluid communication with the interior of said casing between said end rings for conducting cooling fluid to said



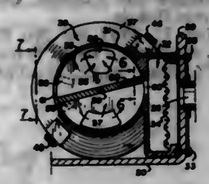
casing, a second conduit in fluid communication with said first conduit and the end chambers for conducting cooling fluid from said first conduit to the end chambers, said annular shrouds having an internal diameter greater than the portion of the shaft passing therethrough to provide passageways for conducting cooling fluid from the end chambers to the motor chamber, and a third conduit in fluid communication with the motor chamber of said casing for conducting cooling fluid from said casing.

3,094,273
FAN ASSEMBLY
Richard L. Hull, Davenport, Iowa, and Alonzo M. Harp, Moline, Ill., assignors to Amotek, Inc., a corporation of Delaware
Filed June 25, 1959, Ser. No. 822,951
7 Claims. (Cl. 230—211)



3. Apparatus comprising in combination, an enclosure within which gases are adapted to be heated to a high temperature, said enclosure including a wall having an outlet therein for the escape of hot gases from said enclosure; a fan assembly including first fan means located within said outlet for moving said gases in said enclosure; a drive shaft for said first fan means having a first portion extending transversely across said enclosure, and a second portion extending outwardly from said enclosure; tubular means having openings near both ends thereof and surrounding said second portion of said shaft; bearings supported by said tubular means for said shaft, at least one of said bearings being located within said tubular means adjacent said enclosure; insulating means extending transversely across said enclosure and completely surrounding and isolating from said enclosure, said first portion of said drive shaft as well as said one of said bearings; centrifugal fan means for circulating cool gases through said tubular means and over the bearing therein; and means outside of said enclosure for rotating said shaft.

3,094,274
ARTIFICIAL RESPIRATOR APPARATUS
Harris A. Thompson, 2625 Pennsylvania, Boulder, Colo.
Filed Apr. 29, 1960, Ser. No. 25,673
10 Claims. (Cl. 230—224)



1. A respiratory pumping unit having a conduit extending therefrom for connection with artificial respiratory apparatus and comprising:

(1) a valve case having a generally cylindrical chamber,

(2) an axially-centered shaft-mounted vane arms provided with sweep faces in the chamber dividing the chamber into two compartments with the shaft thereof extending through a wall of the case,

(3) a motor-driven oscillating means connecting with the shaft and being adapted to oscillate the shaft and vane connected thereto through a selected sweep-arc of movement of less than approximately 90 degrees and at a frequency corresponding with a person's selected breathing frequency.

(4) a continuous-flow air pump having a suction intake branch extending to one compartment of the valve chamber and the pressure discharge branch extending to the other compartment of the valve chamber.

(5) a supply port in the valve communicating from the valve to the atmosphere and being positioned at the side of the valve and within the sweep-arc of one arm of the vane,

(6) an operating port in the valve substantially diametrically opposite to the supply port and being within the sweep of the other arm of the vane and communicating from the valve to the respiratory conduit, and,

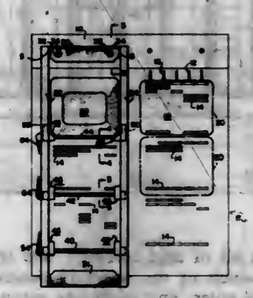
(7) wherein the openings of the said ports at the valve interior are substantially wider than the sweep faces of the vane arms, whereby to open the ports to both compartments of the valve chamber when the arms are moving across the ports and thereby permit a continuous air flow in the pump when the air flow in the conduit ceases as when reversing in direction, and thereby eliminate pressure and inertial effects in changing the direction of air flow in the conduit.

3,094,275
COLLECTION MEANS FOR A COIN BOX
Abraham Pinson, New Rochelle, and Bernard Steudt, Elmont, N.Y.; said Steudt assignor to said Pinson
Filed Dec. 21, 1960, Ser. No. 77,396
3 Claims. (Cl. 232—16)



1. An improved collection means for a coin box comprising in combination a housing, slotted means for introducing coins into a chamber within the housing, an inclined tube secured within said housing and provided with an aperture beneath said chamber and communicating with the lower portion of said chamber, one end of said tube communicating with an aperture in said housing, a second tube rotatably disposed within the aforesaid tube, said second tube being provided with an aperture congruous to the aperture of said first mentioned tube, said second tube being rotatable to a closed position wherein said apertures are disposed in diametrically opposite alignment, means insertable within said second tube, said insertable means being engageable with cam means within said second tube and rotatable therewith to align said congruous apertures in diametrically contiguous positions, said insertable means also being provided with at least one aperture congruous with the aforesaid congruous apertures in said tubes, the aperture of said insertable means being rotatable into adjacent alignment with the diametrically contiguous apertures of the tubes, whereby coins accumulated within the chamber will fall through said apertures into the said insertable means, said cam means including a pair of radially offset plates supported by a plug received within said second tube, said insertable means comprising an outer conduit provided with a circular plate secured to the end of said outer conduit, said circular plate being formed with a plurality of bores engageable with a plurality of springably supported locating pins projecting from said plug, said circular plate also being provided with a plurality of apertures wherein said radially offset plates are receivable, said outer conduit being slidably engaged with a concentric inner conduit provided with a circular collar, said circular collar being formed with a pair of diametrically opposed keyways which slidably receive two cam followers disposed transversely of said collar and springably supported in a pair of diametrically opposed channels formed on the inner periphery of the outer conduit, said cam followers being engageable with said radially offset plates when said bores are engaged with said locating pins and said offset plates are received within the apertures of said circular plate, whereby said cam followers are displaced from said diametrically opposed channels to permit rotation of said inner conduit with respect to said outer conduit to align a pair of congruous apertures formed in said inner and outer conduits, said inner and outer conduits also being rotatable to align said pair of congruous apertures with the said diametrically contiguous apertures of the tubes.

3,094,276
MEANS FOR MOUNTING PHOTOGRAPHING DEVICE ON A VOTING MACHINE, OR THE LIKE
Thomas C. Wilson, Havertown, Pa., assignor to Shoup Toll Collecting Devices, Inc., Ridley Park, Calif.
Filed Aug. 2, 1960, Ser. No. 52,309
3 Claims. (Cl. 235—50)



1. The combination with a voting machine of the type which includes

vote recording counters

and a camera for photographing said counters,

said counters covering an area larger than the field of the camera,

of a supporting device for mounting said camera in registration with various predetermined portions of said area,

said device including a pair of spaced, vertical rails providing a track,

means for movably and detachably suspending said rails from said voting machine in registration with said counters,

said rails having channels formed therein,

means carried by said camera for engaging said channels slidably to mount said camera on said rails,

shafts journaled for rotation in said rails and disposed substantially normal to said rails,

a pair of stops carried by each of said shafts, one near each of said rails, and

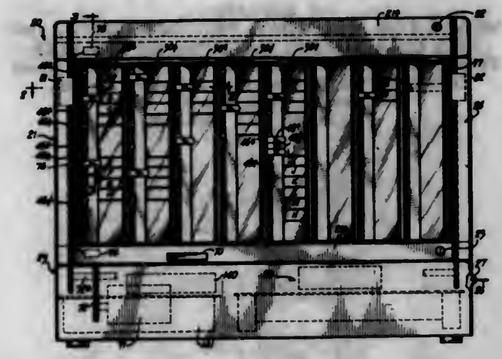
means for rotating said shafts to move said stops into a first position in which said stops arrest the movement of said camera relative to said rails, and to a second position in which said stops are out of the path of movement of said camera,

said stops being so disposed along said rails that the lens of a camera supported by any pair of said stops will be in focal registration with a predetermined portion of said area.

3,094,277
VOTING MACHINE
Stanley W. Wilcox, Tulsa, Okla., assignor to Seismograph Service Corporation, Tulsa, Okla., a corporation of Delaware
Filed Dec. 9, 1960, Ser. No. 74,888
42 Claims. (Cl. 235—50)

1. In a voting machine of the type utilizing a ballot for recording the voter's selections, the combination of means defining a plurality of side by side columns each divided into a number of selecting positions, means on each column dividing the selecting positions of that column into different office groups, at least some of said columns containing a plurality of office groups, the select-

ing positions being arranged in rows extending normal to the columns, manually operable selectors in each column whereby the voter makes his selection at the selecting positions of each office group, means for simultane-



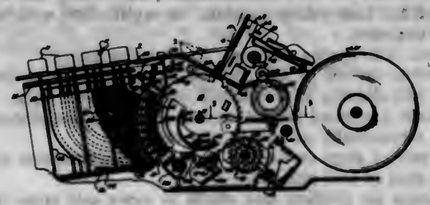
ously scanning all of said columns, one row at a time, to determine which of the selecting positions has been selected by the voter, and recording means including a plurality of recording devices for recording upon said ballot the selecting positions selected by the voter.

3,094,278

DETENT TYPE ACTUATOR FOR CALCULATING MACHINE

Bryan F. Kuhne, Monrovia, Calif., assignor to Clary Corporation, San Gabriel, Calif., a corporation of California

Filed Sept. 25, 1961, Ser. No. 140,544
4 Claims. (Cl. 235—60)



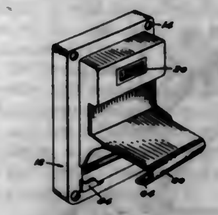
1. In a calculating machine having a shaft and selectively settable stop members, differential actuators comprising a plurality of gear elements rotatably mounted on said shaft, said gear elements having stop shoulders engageable with set ones of said stop members whereby to differentially arrest said gear elements in different positions about the axis of said shaft, each of said gear elements having an opening therein and a flexible tail portion extending into said opening; a bail extending through said openings of said gear elements, means supporting said bail for movement about said axis, each of said gear elements and a respective one of said tail portions being formed of a single piece of plastic material, said tail portion having a detenting shoulder thereon normally engaging said bail whereby to transmit rotation between said bail and said gear element, said tail portion being adapted to yield radially of said gear element upon said arrestment of said gear element whereby said bail can move beyond said detenting shoulder, and said tail portion extending along the path of travel of said bail whereby to yieldably and radially engage said bail in different arrested positions of said gear element.

3,094,279

BOTTLE COUNTER

Sherman L. Gordon, 1029 N. Altadena, Royal Oak, Mich., and Frank L. Elmkie, 605 E. Woodruff, Hazel Park, Mich.

Filed Feb. 9, 1960, Ser. No. 7,694
2 Claims. (Cl. 235—91)



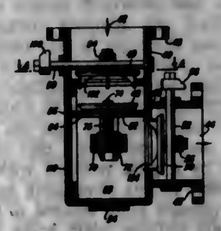
1. A counter for bottle openings comprising a housing to be mounted on a wall having a front face, a cylindrical counter within said housing having a visible counter dial at the face of said housing, a lever pivoted within said housing having an actuating portion projecting to the front face of said housing and an actuated portion in a position to influence said counter, means to operate said actuating portion of said lever comprising a hook plate mounted on the front face of said housing having a hook portion for catching the edge of a bottle cap and a thrust plate portion extending downwardly from said hook portion to overlie and enclose said actuating portion of said lever, means to mount said hook plate on the face of said housing and to retain said thrust plate to permit rearward thrust of said plate portion toward said housing due to the resilience of said plate, and means on said housing to shield said plate portion against the introduction of any motion blocking element from the face of said housing.

3,094,280

HEATING METHOD AND APPARATUS

Julius F. Meisner, 544 King St., Port Chester, N.Y.

Filed July 2, 1959, Ser. No. 824,578
2 Claims. (Cl. 236—93)



1. A water flow controlling unit comprising a metal casing, having a water inlet connection and a water outlet connection, arranged at right angles to each other; a removable plug in the casing opposite the inlet connection; disc valves integral with the casing for shutting off the space between the inlet and outlet connections, an access door in said casing leading to said shut off space; a valve in the shut off space of said casing having a perforated disc valve head and a stem mounted within said casing in alignment with said inlet opening, the perforations in said head having sharp edges, a valve seat carried by said casing against which said valve head closes, a safety spring surrounding said valve stem for normally closing said valve head against said valve seat; a valve part mounted beneath said valve head, said part having cross arms with openings in the cross arms aligned with the perforations in said valve head and a temperature responsive bellows, supported by said valve part, connected to said valve

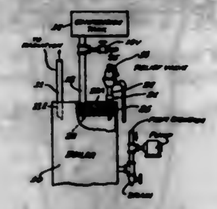
stem for moving said valve stem against said safety spring and thereby separating said valve head from said valve seat and valve part.

3,094,281

BOILER TOP MOUNTING ARRANGEMENT FOR PRESSURE RELIEF VALVES

Carl O. Myers, 1155 N. High St., Columbus, Ohio

Filed May 5, 1961, Ser. No. 108,082
3 Claims. (Cl. 237—63)



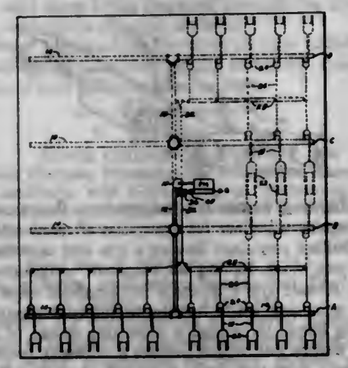
1. In a closed hot water heating system, in combination, a boiler, said boiler being able to collect bubble laden water to define a water level adjacent but spaced beneath the top of the boiler, pipe means exiting from the top of said boiler and adapted to supply hot water to circulate through said system, said pipe means having an inlet in the boiler and extending below the water level therein, a compression tank providing an air cushion for thermal expansion of system water, pipe means exiting from the boiler at a location above said reference level for transferring air bubbles collecting in the top of the boiler to the air cushion in said compression tank, a pressure relief valve having a bottom inlet opening communicating with an internal seal face thereof, said seal face being arranged to control fluid discharge from said system through said valve, and dip tube mounting structure disposed in sealed relation in a separate opening in the top of said boiler and having its upper end connected directly into the opening in said valve and having its lower end projecting into said boiler to a point beneath the said water level therein to subject the said seal face to existing system pressure while excluding air of said system from contact and hence possible leakage through said seal face.

3,094,282

IRRIGATION SYSTEM

Rufus J. Purtell, Brownfield, Tex., assignor to Robert B. Knight, J. B. Knight, and Jean Knight Jones, doing business as J. B. Knight Company, Brownfield, Tex.

Filed Mar. 14, 1961, Ser. No. 95,645
19 Claims. (Cl. 239—213)



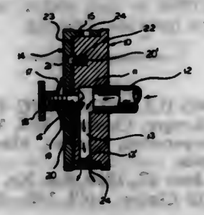
1. An irrigation unit comprising: prime mover; a pump connected in power transmission relationship to the prime mover; a header connected in fluid conducting relationship to the pump; a plurality of parallel pliable pipes connected to and extending from the header; a vehicle for each pliable pipe; a sprinkler attached on each vehicle; each sprinkler connected along its pliable pipe; said pliable pipes being means for conveying water under pressure to each sprinkler; said pliable pipes being means for moving each of said vehicles and attached sprinklers, a traveling pulley on each pliable pipe, a cable on each traveling pulley, and means interconnecting the prime mover and cables for drawing the cables in thus moving the vehicles; so that the one prime mover supplies both power for the water to the sprinkler and power to move the sprinkler.

3,094,283

LUBRICATING DEVICE

Alex V. Balister, 4934 W. Eccert Place, Milwaukee, Wis.

Filed July 25, 1962, Ser. No. 212,348
5 Claims. (Cl. 239—393)



1. A lubricating device comprising: a body having a cylindrical periphery, said body having a centrally disposed aperture shaped to be associated with a lubricating supply line, said body having a tubular port in communication with said centrally disposed aperture, said tubular port leading to the outer periphery of said cylindrical body, and having an opening thereon, and a cap having a radial flange that is rotatively mounted on said cylindrical periphery of said body, said flange having different shaped perforations at selectable points, said perforations being alignable with said opening of said tubular port, and means for selectively aligning each of said different shaped perforations with said opening of said tubular port, whereby a stream of lubricant of a selectable shape may be created.

3,094,284

FLASH UNIT AND MAGAZINE THEREFOR

Karl Hehl, Lossburg, Wurttemberg, Germany, assignor to ARBURG-Feingerastefabrik oHG, Hehl & Söhne, Lossburg, Wurttemberg, Germany

Filed Oct. 10, 1960, Ser. No. 61,728
Claims priority, application Germany Aug. 23, 1960
7 Claims. (Cl. 240—1.3)



1. A flash unit comprising, in combination:
(*a*) a housing having a bulb receiving portion and a

flash bulb socket communicating with said receiving portion;

(*b*) a flash bulb magazine adapted to contain, and normally to retain within it, a series of consecutive flash bulbs and constituting a self-contained unit which is connectable to said receiving portion of said housing with the series of flash bulbs one above the other, said magazine having a slotted attaching portion adapted to be spread apart when the magazine is connected to said receiving portion of said housing so that said bulbs may then leave said magazine and be fed into said receiving portion of said housing solely under the influence of gravity;

(*c*) said housing and said magazine being provided with means for spreading said slotted attaching portion of said magazine, thereby widening the bottom end of said slot when said magazine is attached to said housing; and

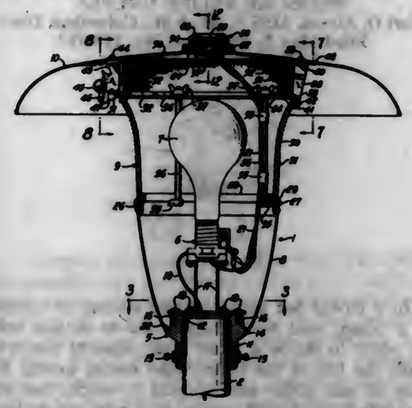
(*d*) a transport means on said housing for receiving flash bulbs from said receiving portion, for feeding them from there to said socket, and for thereafter ejecting them from said housing.

3,094,285
CEILING ILLUMINATING SYSTEM
Michael Henry Kruger, Chestnut Hill, Mass., assignor to Smithcraft Corporation, Chelsea, Mass., a corporation of Massachusetts
Filed June 27, 1960, Ser. No. 39,058
18 Claims. (Cl. 240—9)



1. An illuminating, sound-absorbent ceiling comprising a multiplicity of elongated grid members adapted to be suspended horizontally from overhead structure, each grid member being provided with an elongated upper surface, acoustical sheet means having a light reflective lower surface disposed over and supported at least in part by said grid member upper surfaces, at least some of said grid members being spaced apart from and parallel with adjacent grid members forming a plurality of grid member pairs, a plurality of elongated light tube means, means supporting each light tube means between a said pair of grid members and parallel therewith below said lower surface of said acoustical sheet means, each grid member disposed along the side of a light tube means having a generally continuous surface parallel with the corresponding light tube means and extending downwardly to a lower horizontal edge below said light tube means, a plurality of light-shielding means, one disposed below, along the length of each light tube means, each light-shielding means being substantially narrower than the space between the grid members of the corresponding pair but wider than the corresponding light tube means, having each longitudinal upper edge spaced aside from the corresponding side of said light tube means, each light tube means, its light-shielding means, and the corresponding pair of grid members being relatively positioned so that a line of sight through each light-shielding means longitudinal upper edge and the lower inner edge of the corresponding grid member intersects the horizontal at an angle no less than that of a line of sight between that shielding means edge and the upper limb of the corresponding light tube means.

3,094,286
POST TOP MOUNTED LIGHTING UNIT
Donald W. Harling, Milwaukee, Wis., assignor to McGraw-Edison Company, Milwaukee, Wis., a corporation of Delaware
Filed Sept. 25, 1959, Ser. No. 842,275
11 Claims. (Cl. 240—25)



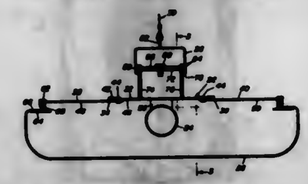
10. A post top lighting unit including, post top engaging adaptor means, a tubular base portion attached to said post top adaptor means and having an open top and bottom, said base portion including a first refractor ring on its upper end, a tubular refractor having a lower end engaging said first refractor ring and extending generally upward therefrom, a second refractor ring engaging the upper edge of said refractor, an inverted dished reflector having a diameter greater than the diameter of said refractor, releasable attachment means for mounting said reflector on said second refractor ring, a plurality of spaced apart rod-like members coupled to said base portion and extending upwardly through the interior of said refractor to releasably engage said second refractor ring to clamp the refractor in place and to prevent upward movement of said reflector.

3,094,287
FLUORESCENT TUBE FIXTURE AND HARDWARE
Robert W. Lester, Mount Vernon, N.Y., assignor to Transolite Corporation, New York, N.Y., a corporation of New York
Filed Dec. 18, 1959, Ser. No. 860,571
2 Claims. (Cl. 240—51.11)



1. A lighting fixture for hairpin-type fluorescent tubes which require a ballast for operation thereof which comprise a ballast container having a top and side walls, each of said side walls having an external, longitudinally extending, female track at each longitudinal edge thereof, each of said side walls having an internal longitudinally extending flange to engage a mounting flange of a ballast for said fixture and which defines a wireway between said flanges and said top wall, a socket mounting flange on each of said side walls, each of said socket mounting flanges comprising a lip slidably engaging said tracks on the side wall and an outwardly extending wall portion having an aperture therethrough, a socket mounted in each of said flanges and aligned with said aperture, a second socket mounting flange on each side wall, and a socket mounted thereon in axial alignment with the sockets on the first flange but oppositely faced, a socket cover housing comprising a U-shaped housing having a lip on the end of each leg thereof, said lip adapted to frictionally engage said tracks in said side wall.

3,094,288
LAMP
Paul D. Dall, La Mesa, Calif., assignor to Crownco of San Diego, San Diego, Calif., a corporation of California
Filed Nov. 14, 1960, Ser. No. 68,885
1 Claim. (Cl. 240—51.11)



A lighting fixture comprising in combination:

(A) means forming an elongated frame;

(B) an elongated translucent cover extending longitudinally of said frame, the major portion of said cover being planar in shape;

(C) an elongated lamp carried by the frame longitudinally thereof and disposed mid-way of the sides of the frame and cover;

(D) and means for effecting substantially constant illumination value throughout the entire planar surface of the translucent cover comprising:

(1) An elongated central section extending longitudinally of and substantially throughout the length of the frame and cover, said section having a light reflecting surface confronting the elongated lamp, said light reflecting surface being planar and extending throughout the length and width of the section; and

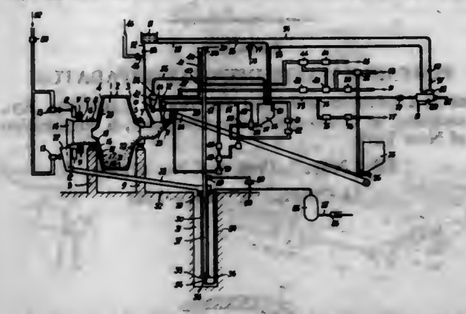
(2) Two elongated sections, one on one side and the other on the opposite side of the central section and coextensive therewith, said latter two sections having planar light reflecting surfaces lying in substantially the same plane as the light reflecting surface of the central section, the light reflecting surfaces of the latter two sections being inherently of greater light reflecting value, said lamp being disposed between the cover and said light reflecting surfaces;

(E) means for attaching the three sections to the frame.

(F) and means for attaching said elongated, translucent cover to said two elongated sections.

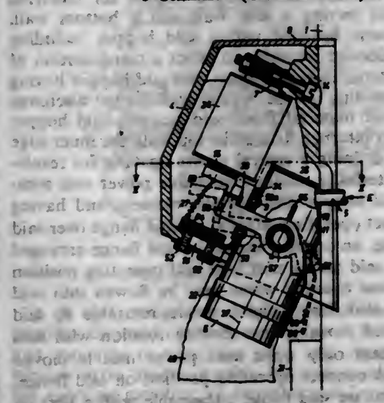
3,094,289
ROCK GRINDING SYSTEM
Per Anders Herman Henningsson Fahlström, Henry Lennart Lundberg, and Göran Ingvar Holmberg, all of Boliden, Sweden, assignors to Bolidens Gruvaktiebolag, Skellefteåmnn, Sweden, a joint stock company limited of Sweden
Filed Jan. 7, 1960, Ser. No. 1,134
Claims priority, application Sweden Oct. 29, 1959
5 Claims. (Cl. 241—34)

1. A device for comminuting a material consisting of solid pieces of preferably crystalline structure, for instance ore, to a water suspension of finely ground material having a substantially predetermined density, comprising a rotatable grinding drum provided with feeding devices for material to be ground and devices for discharging a pulp comprising finely and partly finely ground material and also with a driving device, in which grinding drum the grinding material without the presence of foreign grinding bodies is caused to act as grinding bodies and crush and grind itself, a pipe with a control valve for adjustably adding water to the grinding drum, devices for separation of the pulp comprising finely or partly finely ground material from coarse pieces of the material subjected to grinding, devices for conveying the pulp comprising finely and partly finely ground material discharged from the grinding drum, a flow meter for measuring the rate of flow of the pulp, a density meter, means



conveying said pulp through said flow meter and said density meter, means controlled by said flow meter and density meter to separate the finely ground material from the partly ground material to a predetermined ratio of separation independent of variations of the incoming quantity of solids and return the pulp comprising partly finely ground material to the grinding drum for furnishing a closed grinding circuit, and a regulating member which is adapted to be actuated by said density meter for governing the control valve to increase the addition of water to the grinding drum when measuring a pulp density above a predetermined value and for reducing the addition of water to the grinding drum when measuring a pulp density below said predetermined valve.

3,094,290
MILL FOR COFFEE, SPICES, NUTS AND THE LIKE
Walter Engi, Zurich, Switzerland, assignor to Adolf Ditting
Filed Jan. 5, 1962, Ser. No. 164,512
Claims priority, application Switzerland Jan. 10, 1961
6 Claims. (Cl. 241—100)



5. A spout construction for coffee mills and the like, said spout construction comprising support means adapted

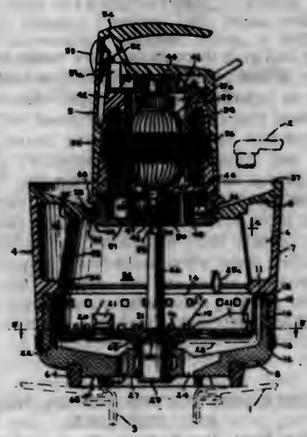
for rigid connection to the housing of a mill, an inclined discharge tube carried by the support means, said discharge tube being adapted for having its upper end positioned in closely spaced relation to the mill to receive ground material therefrom, means for movably holding said tube on said support means to permit said tube to vibrate, an electromagnet fixed to said support means, said electromagnet being influenced by alternating current, a rocker member with a first lever arm and a second lever arm, said rocker member being pivotably mounted on said tube, the end of said first lever arm cooperating with said electromagnet and the end of said second lever arm cooperating with a clamping device for a bag.

3,094,291

PORTABLE WASTE DISPOSAL APPARATUS

Joubert Lindstrom and Fred W. Moore, Louisville, Ky., assignors to General Electric Company, a corporation of New York

Filed Nov. 7, 1960, Ser. No. 67,630
14 Claims. (Cl. 241—258)



3. Portable waste disposal apparatus for use in a kitchen sink and the like comprising a hopper for receiving waste material having a side wall and a bottom wall, shredding means fastened within said hopper including an impeller element rotatable to effect a comminution of the waste material in said hopper, and said hopper having a discharge opening in said bottom wall for the discharge of comminuted material from said hopper, said hopper also having an inturned flange-like top wall, the inner edge of the flange defining a central access opening for receiving waste material, a readily removable power unit separate from said hopper and impeller element and having a quick-connect operating position on said flange over said access opening, an opening means in said flange arranged so that when said power unit is in said operating position over said access opening water may be flowed into said hopper from said flange, clutch means rotatable by said power unit and movable into driving relation with said impeller element only when said power unit is moved into said quick-connect operating position on said flange, and stop means on said flange engageable with a part on said power unit to prevent its rotation with respect to said hopper when it rotates said impeller element.

3,094,292

METHOD AND APPARATUS FOR TRAVERSE OF STRAND MATERIAL

Friedrich Hebberling, Mountain View, Calif., assignor to Owens-Corning Fiberglas Corporation, a corporation of Delaware

Filed Apr. 25, 1960, Ser. No. 24,459
10 Claims. (Cl. 242—43)



1. A method of effecting traverse in the winding of filamentary material including simultaneously advancing a plurality of filaments, gathering the filaments into a strand, engaging the strand by an oscillator, actuating the oscillator at a frequency to excite the strand to establish a series of standing transversal waves in the strand, engaging the excited strand with a movable surface at a region of a wave in the strand of less than the maximum amplitude of the wave, collecting the excited strand upon the surface during its oscillation, and adjusting the oscillator in a direction lengthwise of the strand to vary its region of engagement with the strand.

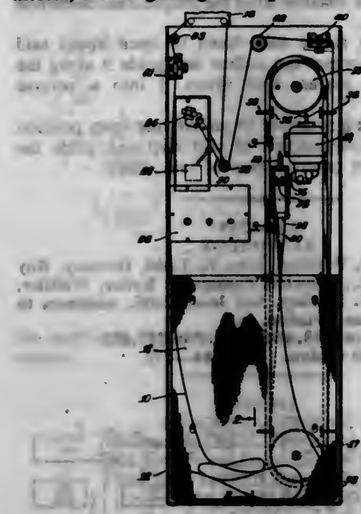
3,094,293

TAPE FEEDING AND STORAGE DEVICE

Curtis J. Schultz, Elmhurst, Ill., assignor to Motorola, Inc., Chicago, Ill., a corporation of Illinois

Filed Jan. 8, 1960, Ser. No. 1,197
6 Claims. (Cl. 242—55.01)

5. Apparatus for storing flexible tape and feeding the same to an automatic program device including in combination, a mounting structure, first and second spools mounted on said structure and having axes positioned vertically one above the other, with said axes spaced from each other by a distance substantially greater than the diameter of said spools, a continuous elongated flexible tape wound around said spools in a plurality of loops and extending from the outside loop and from the inside loop intermediate said spools, feeding means including an electric motor and tape moving means driven thereby for moving said tape, said tape moving means engaging the tape extending from the inside loop and drawing said tape from said inside loop to cause rotation of said spools to wind tape passed through the program device on the outside loop, said loops moving from outside positions to inside positions as said spools rotate with said loops remaining of substantially the same length and having slack therein as they move from outside to inside positions, a receptacle positioned below said feeding means for storing tape removed from said spools, said tape drawn from said inside loop by said feeding means dropping into said receptacle and accumulating in stacked relation therein, means guiding the tape from said receptacle to the automatic program device and from the program device to said spools, and switch means coupled to said tape for controlling said feeding means.



3,094,294

REEL STARTER FOR WINDING OF WEBS

Karl Kleesl, Wurttemberg, Germany, assignor to Escher Wyss G.m.b.H., Wurttemberg, Germany, a corporation of Germany

Filed May 26, 1961, Ser. No. 112,804
Claims priority, application Germany June 4, 1960
4 Claims. (Cl. 242—65)



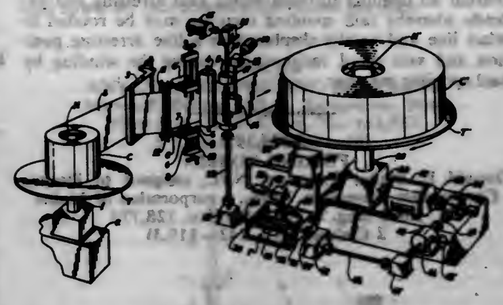
1. An apparatus for winding webs comprising a frame for supporting a driving drum, a driving drum mounted for rotation about a horizontal axis in said frame; a friction disc having a diameter smaller than half the diameter of the driving drum mounted for rotation in a stationary position laterally of the driving drum about an axis parallel with the drum axis at a height such that a small section of its periphery projects above the upper edge of the driving drum; driving means for said friction disc connected with said driving drum so as to cause said friction disc to rotate with a peripheral velocity which is equal to the peripheral velocity of the driving drum; a winding roll in operative position disposed in surface contact with the driving drum so as to be driven thereby; and means including members mounted on the frame for initially supporting said winding roll in a readiness position out of contact with said driving drum and for passing said winding roll from said readiness position past said projecting section of the friction disc to said operative position so that the winding roll is set in rotation by the friction disc at the same peripheral velocity as the driving drum before it reaches its operative position.

3,094,295

APPARATUS FOR OPEN COILING OF STRIP MATERIAL

Frederick W. A. Ward, Hamilton, Ontario, Canada, assignor to The Steel Company of Canada, Limited, Hamilton, Ontario, Canada, a corporation of Canada

Filed May 12, 1961, Ser. No. 109,729
17 Claims. (Cl. 242—67.2)



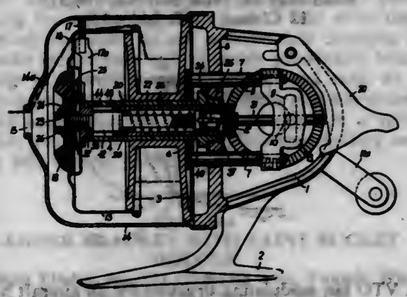
1. In combination in apparatus for forming an open coil of strip metal, a vertical axis turntable on which an open coil is adapted to be formed; variable speed turntable drive means for rotating said turntable on its vertical axis; means for feeding strip toward said turntable at a substantially constant lineal velocity; means for progressively reducing the speed of said turntable drive means at a diminishing rate which diminishes more rapidly than would be required to produce a tight coil whereby a space is formed between adjacent laps of the coil; and means for adjustably varying said rate at which the speed of said turntable drive means is reduced whereby the desired lap spacing of the open coil may be obtained for strip metal of different thicknesses.

3,094,296

FISHING REEL WITH RECIPROCABLE SPOOL

Karl Nurmse, Svangsta, Sweden, assignor to Aktiebolaget Urfabrikus, Svangsta, Sweden, a corporation of Sweden

Filed Oct. 19, 1959, Ser. No. 847,310
Claims priority, application Sweden Oct. 24, 1958
6 Claims. (Cl. 242—84.21)



1. A reel comprising a spool for a line, a spooling member disposed coaxially with respect to the line spool and rotatable to wind line onto said spool, a crank, a tubular drive shaft rotatable by said crank for rotating the spooling member, an arresting rod for displacing the spooling member axially to a line-arresting position, resilient means biasing said rod to non-arresting position, a thumb piece engaging said rod for displacing said rod

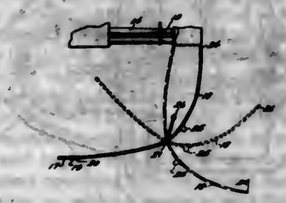
against the action of said resilient means, said rod comprising an individual part, said spooling member being mounted on said individual part, said individual part and said tubular drive shaft having complementary mating surfaces, said surfaces engaging one another to rotatably drivingly connect said tubular drive shaft and said individual part and permitting relative axial movement therebetween and said spool being mounted for axial movement in combination with means connected to said spool to reciprocate it axially, said means including a yoke, an eccentric abutment on said crank mounted to engage and reciprocate said yoke, and said yoke having formed therein an opening through which said arresting rod extends whereby said spooling member may be rotated to wind line and axially displaced to a line arresting position and said spool reciprocated during the winding by said spooling member.

3,094,297
FILLING BOBBIN
Donald L. Blake, Campton, N.H., assignor to Draper Corporation, Hopedale, Mass., a corporation of Maine
Filed Aug. 2, 1961, Ser. No. 128,774
2 Claims. (Cl. 242—118.3)



1. A bobbin for automatic bobbin changing looms, said bobbin including a butt and a barrel portion extending therefrom, said butt having a plurality of circumferential grooves, said grooves having received therein circular metallic rings which completely encircle the circumference of said butt and which have two ends in overlapping relationship, said ends of each of said rings being slabbed in a plane perpendicular to the axis of the bobbin to provide two reduced end portions of substantially uniform cross section in face-to-face contact with each other, the outermost circumference of each ring being substantially continuous and uninterrupted.

3,094,298
VTO FAN MODULATING STRUCTURE
Paul J. Hess and Donald R. Seyler, Cincinnati, Ohio, assignors to General Electric Company, a corporation of New York
Filed May 28, 1962, Ser. No. 198,315
12 Claims. (Cl. 244—23)



1. VTO fan modulating structure for an aircraft having a vertically mounted fan in a duct therein for movement of air vertically therethrough to provide lift, said structure comprising;

a pair of doors symmetrically disposed about the fuselage longitudinal centerline,

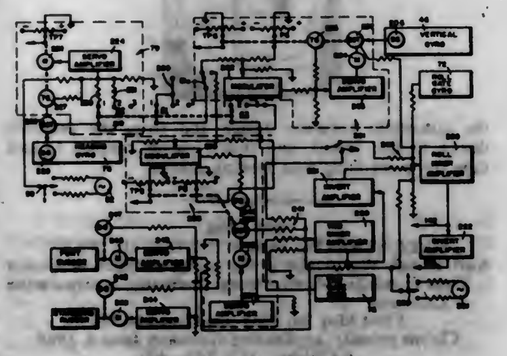
said doors being shaped to fair into said aircraft and be a part thereof in closed position,

each of said doors having a longitudinal pivot disposed substantially at the center of pressure of the door and vertically below the outer periphery of the fan substantially the distance from the longitudinal centerline to the pivot,

and means to rotate said doors to open about said pivots to intercept fan airflow and guide it along the door inner surface and divert it into a reverse direction,

said doors being rotatable to an extreme open position to form a continuation of said duct and guide the air along the outer surface of said doors.

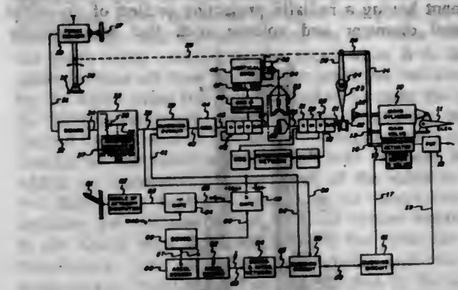
3,094,299
AUTOPILOT
Robert W. Boad, Whittier, John H. Ladd, Downey, Roy L. Roberts, Jr., Fullerton, George R. Keller, Whittier, and Harold G. Markey, San Jose, Calif., assignors to North American Aviation, Inc.
Filed Aug. 28, 1958, Ser. No. 757,852
20 Claims. (Cl. 244—77)



1. In combination with an aircraft having control surfaces, stabilizing means on said aircraft for generating stabilizing rate signals, flight instrument deviation means for generating a plurality of parameter signals each indicative of the deviation of a measured flight parameter from a selected value thereof, means for generating a manual control signal indicative of a desired aircraft attitude, means for selecting one of said parameter and control signals, mixing means for algebraically combining said selected signal with said stabilizing signals, actuator means responsive to said combining means for operating said surfaces, and means operable during the selection of one of said parameter signals for providing a momentary connection of said manual control signal to said mixing means whereby a temporary overriding of said one selected parameter signal may be achieved.

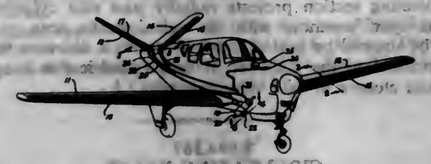
3,094,300
FLIGHT PATH CONTROL SYSTEM
Stephen S. Ostler, Phoenix, Ariz., assignor to Sperry Rand Corporation, Great Neck, N.Y., a corporation of Delaware
Filed June 23, 1960, Ser. No. 36,387
14 Claims. (Cl. 244—77)

12. In an artificial feel system for controlling an aircraft about an axis, a servomotor having a differential control link with a first input operable to move the craft about its axis and a second input operable to damp the system, a manual control member, means providing the first input to the link including a force sensor at the member providing a command signal depending on the manual force exerted on the member, an accelerometer providing a signal depending on the angular acceleration of the craft about its axis, and means connected to said link to provide the second input to said servomotor responsive to



the combined signals of the force sensor and the accelerometer.

3,094,301
HEAT PLACEMENT
Robert S. Taylor, Evansville, Ind.
(2906 Cedarview Drive, Austin 4, Tex.)
Filed Aug. 1, 1957, Ser. No. 675,671
1 Claim. (Cl. 244—134)



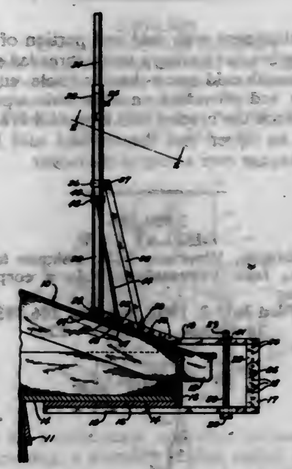
In an aircraft having external surface requiring freedom from snow and ice, a skin sheet forming such surface, a second sheet having a pattern of contiguous lineal channels and hermetically bonded to said skin sheet to form therewith a pattern of ducts, a vessel so connected to said pattern of ducts as to form therewith an hermetically sealed system, all parts of which are in open and unrestricted intercommunication and contain a halogenated hydrocarbon fluid, said system being so arranged that fluid in liquid phase drains from any and all parts thereof to said vessel, and a heater constructed and arranged to apply heat to said vessel whereby hot vapor is supplied to said pattern of ducts to maintain said skin sheet uniformly at a temperature above ambient, the pattern of ducts and connections of said vessel thereto being so arranged that free flow of vapor to the pattern is not impeded by drainage of liquid to the vessel.

3,094,302
WIRE SCREEN SEALING SYSTEM
Arthur L. Stauffer, Hanover, Pa., assignor to Continental Copper & Steel Industries, Inc. (Hanover Wire Cloth Division), New York, N.Y., a corporation of Delaware
Filed Oct. 28, 1959, Ser. No. 849,205
5 Claims. (Cl. 245—10)



1. A wire screen comprising a plurality of spaced warp wires and a plurality of spaced sinuous weft wires interlocked with said plurality of warp wires, said plurality of warp wires including at least one central warp wire and two side warp wires, one of said side warp wires being adjacent to, and spaced on either side of, said central warp wire, said plurality of weft wires having upwardly and downwardly bowed portions extending over and under said central and side warp wires, each of said upwardly and downwardly bowed portions having a crest, a strip of thermoplastic material encasing said central and side warp wires and said upwardly and downwardly bowed portions of said plurality of weft wires, said strip of thermoplastic material being substantially rectangular in cross-section and having a top and a bottom face, said top and bottom faces being coincident with said crests of said upwardly and downwardly bowed portions.

3,094,303
ANTENNA SUPPORTING BRACKETS
Myron P. Belger, R.R. 2, Kewaskum, Wis.
Filed Nov. 8, 1961, Ser. No. 151,953
5 Claims. (Cl. 248—40)

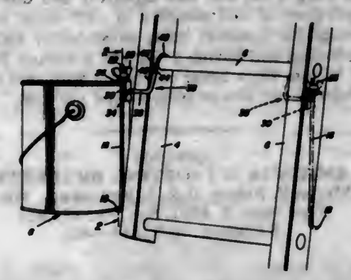


1. In combination with a sloping roof having an overhanging eave at its lower end, an antenna-supporting bracket comprising: a lower horizontal clamping leg underlying said eave and extending outwardly therebeyond; an upper clamping leg spaced above said lower leg, said upper clamping leg having an outwardly extending portion and having an upwardly angled inner portion engaging the sloping upper surface of said eave; means operatively connected to and between said clamping legs outwardly of said eave and releasably pressurably holding said legs in clamping engagement on said eave; an angularly-adjustable antenna mast-holding member mounted on said upper clamping leg and arranged in a vertical position; and means maintaining said mast-holding member in said vertical position.

3,094,304
LADDER BRACKET WITH PAINT BUCKET HOLDER
Robert Linder, Jr., 321 Glendale Ave., Tomah, Wis.
Filed Mar. 29, 1961, Ser. No. 99,152
3 Claims. (Cl. 248—211)

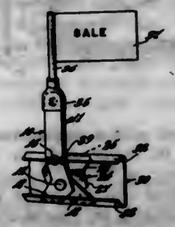
1. A paint bucket hanger for use on and in association with a ladder having vertical spaced parallel rails with horizontal rungs fixed therebetween comprising: an elongated J-shaped bolt having a shank with a nut-equipped upper end and a hook at the lower end, said hook being adapted to releasably engage over a bead on a paint bucket, an inverted J-shaped cleat removably and adjust-

ably mounted on the nut-equipped upper end portion of said shank, said cleat having a hook which is designed and adapted to engage releasably over a bead on an upper portion of the paint bucket, also having a depending arm portion spaced outwardly from and being parallel to an adjacent upper outwardly disposed end portion of said shank, said arm portion having a screw-threaded hole



therein in alignment with said end portion of the shank, and a ladder bracket having a screw-threaded end screwed into and through said screw-threaded hole, engaging said end portion and providing an adjustable separable connection between the bracket and arm, said bracket having a hook at an upper end thereof and said hook being adapted to engage over a rung of the ladder.

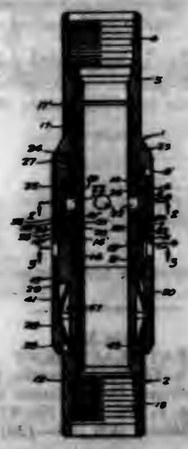
3,094,305
DISPLAY CLIP
Charles Lohrman, Riverton, N.J., assignor to Precision Parts Co., Inc., Pennsauken, N.J., a corporation of New Jersey
Filed July 2, 1962, Ser. No. 206,885
10 Claims. (Cl. 248—225)



1. A display clip for a shelf channel, said clip comprising a pair of arms pivotally connected together for swinging movement between overlying and diverging positions, an insertion lip carried by one of said arms, and a transverse foot on each arm and movable therewith, said feet being configured for movement between extended and retracted positions with respect to said lip upon arm movement between said overlying and diverging positions, whereby said lip and feet are removably engageable in respective sides of a shelf channel.

3,094,306
TELESCOPIC VALVE
Martin B. Conrad, P.O. Box 1026, Downey, Calif.
Filed Nov. 17, 1958, Ser. No. 774,483
13 Claims. (Cl. 251—282)

1. In an unloader valve assembly including a pair of telescopically interconnected tubular bodies, valve means for selectively confining the flow of fluid from one tubular body into the other tubular body when closed and for permitting flow between the interior of one tubular member and the exterior of the other tubular member when open upon telescopic movements of the tubular bodies in opposite directions, said valve means including a cylindrical seat on one tubular body, a resilient sealing element carried by the other tubular body, said sealing element having a radially projecting section of an initial relaxed diameter and volume such that said radially



projecting section projects radially past said cylindrical seat upon assembly with the valve means open so as to be sheared by said cylindrical seat to a diameter complemental to the diameter of said cylindrical seat upon initial closure of said valve means.

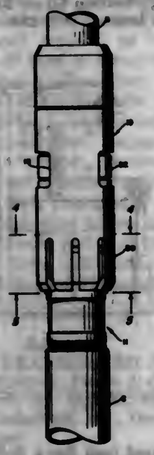
3,094,307
CIRCULATING VALVE
Thomas R. Alley, 341 Erin St., Houston, Tex.
Filed Jan. 15, 1960, Ser. No. 2,711
6 Claims. (Cl. 251—297)



1. In a sleeve valve arrangement wherein a sleeve valve having an unrestricted passage longitudinally thereof from end to end, and which valve is carried by a ported conduit and movable relative to the conduit to open and close the ports for flow through the ports of the conduit and through said unrestricted passage in said sleeve valve, and wherein seal means are carried by the conduit on each side of the ports to seal off between the conduit and sleeve valve when the sleeve valve is positioned to close

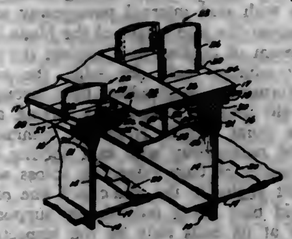
off flow through the ports, the seal means on one side of the ports being covered by the valve when it is in position to close off flow through the ports and also when the sleeve valve is moved to open the ports for flow therethrough, and the seal means on the other side of the ports being covered by the valve when it is in position to close off flow through the ports but not covered by the valve when the valve is moved to open the ports for flow therethrough, the invention comprising, means carried by the conduit and movable longitudinally of the conduit as the valve is moved to cover the seal means which are uncovered by movement of the valve to protect them from fluid flow, means in the sleeve valve to equalize the pressure across the seal means uncovered as the sleeve valve is moved to open the ports for flow therethrough, and means normally urging said seal covering means longitudinally of the conduit in the direction in which the sleeve valve is moved to open the ports so that when the sleeve valve is moved longitudinally to open the ports, said seal covering means abuts and follows the sleeve valve to cover the seal means as they are uncovered by the sleeve valve.

3,094,308
TELESCOPIC VALVE APPARATUS
Martin B. Conrad, Downey, Calif., assignor to Baker Oil Tools, Inc., Los Angeles, Calif., a corporation of California
Original application Apr. 21, 1958, Ser. No. 729,972, now Patent No. 2,984,451, dated May 16, 1961. Divided and this application Mar. 28, 1960, Ser. No. 17,899
4 Claims. (Cl. 251—297)



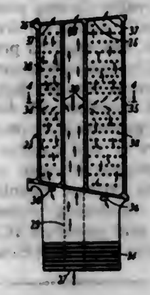
1. In valve apparatus to be disposed in a tubular string located in a well bore: an outer member; an inner member telescoped within said outer member; means on the end portions of each of said members for connecting said members to adjacent tubular sections of the tubular string; coengageable means on said members to close the valve apparatus when said members are in one telescoped position with respect to each other, said means being disengaged to open the valve apparatus when said members are in another telescoped position with respect to each other; releasable latch means for selectively securing said members in said positions, including longitudinally spaced circumferentially continuous cam surfaces on said inner member, said outer member having a circumferentially continuous portion and a plurality of circumferentially spaced laterally expandible and contractible legs secured to said cylindrical portion, said legs having inwardly extending portions adapted to selectively engage said cam surfaces, the exteriors of said continuous portion and legs lying in a cylindrical outer surface of said outer member, said inwardly extending portions also being engageable with the exterior of said inner member between said cam surfaces during shifting of said members between valve opening and valve closing positions, said portions being shiftable laterally outwardly from engagement with said cam surfaces in response to a predetermined longitudinal force imposed by the tubular string upon said members while the apparatus is in the well bore; coengageable stop means on said members for limiting the extent of relative telescoping movement between said members to locate said members in said another telescoped position with the valve apparatus in open condition; and coengageable stop means on said members for limiting the extent of relative telescoping movement between said members to locate said members in said one telescoped position with the valve apparatus closed.

3,094,309
ENGINE ROTOR DESIGN
Thomas Nell Hull, Jr., Marblehead, and Clarence Edgar Le Bell, Peabody, Mass., assignors to General Electric Company, a corporation of New York
Filed Dec. 16, 1959, Ser. No. 859,974
1 Claim. (Cl. 253—39)



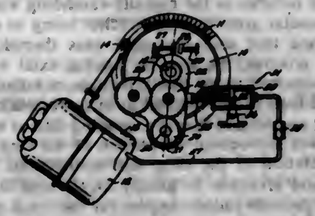
A rotor for a multi-stage axial-flow turbomachine, said rotor comprising: a plurality of thin walled disks, axially projecting flange means on each of said disks near the center thereof, said flange means on adjacent ones of said disks abutting in interengaging relation, a clamping bolt positioned through the center of said disks, means for tensioning said bolt so as to cause compression of said rotor, said flange means absorbing said compression load and locating said disks in the radial direction, an enlarged rim portion containing a plurality of circumferentially-spaced axially-extending slots; a plurality of blades mounted in said slots; a plurality of spacer rings positioned between said disks adjacent the rims thereof, said rings and disks being joined by oppositely-disposed bayonet-type connections, each connection comprising an inwardly opening annular groove in undercut portions of each disk, a plurality of circumferentially-spaced lugs carried on axially-extending portions of each spacer ring, a series of notches in the radially-extending walls of each of said annular grooves, said notches being so spaced and dimensioned that said lugs will pass therethrough and into said grooves, the grooves having axial widths such that the lugs will move freely therein on rotation of said rings, said lugs being retained in said grooves by the base of at least one of said blades extending into at least one of said grooves subsequent to rotation of the ring to prevent further rotation of the ring, said connections being constructed and arranged to axially locate said disks in said rotor and provide radial support for the rings at predetermined multiple points so that only relatively small radial loads will be impressed on said disks by said spacer rings during rotor operation.

3,094,310
BLADES FOR FLUID FLOW MACHINES
Thomas Bowmer, Wollaton, England, assignor to Rolls-Royce Limited, Derby, England, a British company
Filed Nov. 14, 1960, Ser. No. 68,729
Claims priority, application Great Britain Dec. 9, 1959
3 Claims. (Cl. 253—39.15)



1. A blade adapted for use in a fluid flow machine, said blade having root and tip ends, leading and trailing edges and fluid directing faces, said blade also having opposed interior walls defining an internal passageway extending longitudinally of and adjacent one of said edges, said blade having a cooling fluid supply duct adapted to be supplied with cooling fluid and in communication with said internal passageway solely immediately adjacent the mid-height of the blade for directing a single stream of cooling fluid against the wall of said passageway adjacent said one edge, the cooling fluid thereafter forming a longitudinal flow through said passageway, said internal passageway having at least one outlet at a point remote from the communication of said internal passageway with said cooling fluid supply duct, a plurality of bars extending across said passageway at right angles to the mid-chord line of the blade, each of said bars being individually supported in said passageway at its ends only by the respective opposed interior walls of the passageway, said bars being arranged in a plurality of chordwise extending rows spaced progressively downstream of one another relative to the longitudinal flow of the cooling fluid through said passageway, the bars of each of said rows being staggered with respect to the bars of the immediately preceding row so as to produce substantial turbulence in the longitudinal flow of cooling fluid as it flows through said passageway, and said rows of bars adjacent the mid-height of the blade being more closely spaced than the rows of bars positioned elsewhere in said passageway.

3,094,311
TURBINE ACCELERATION CONTROL SYSTEM
David Noah Goldstein, Marblehead, Mass., assignor to General Electric Company, a corporation of New York
Filed Oct. 30, 1961, Ser. No. 148,517
5 Claims. (Cl. 253—59)



1. In a fluid turbine having an axial flow turbine wheel, a supply of motive fluid under pressure, and means for directing a stream of said motive fluid against said wheel; means for controlling the acceleration rate of said wheel comprising:

(*a*) movable mounting means supporting said turbine wheel and adopted to move the wheel into and out of the motive fluid stream to vary the amount of torque generated on the wheel by the motive fluid stream,

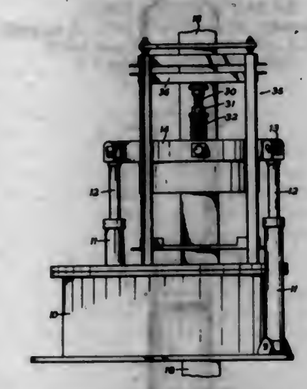
(*b*) means connecting said wheel to a load through gearing means mounted in said movable mounting means,

(*c*) means transmitting the forces imposed on said wheel and said connecting means by the motive fluid stream and the load to said mounting means such that the net effect of said forces on said mounting means is proportional to the actual net torque on the wheel and in a direction to move said wheel out of the motive fluid stream,

(*d*) and means responsive to the pressure of said motive fluid supply imposing a reference force proportional to a desired net torque on the wheel on said mounting means in a direction to move said wheel into the motive fluid stream,

(*e*) whereby said mounting means is moved to an equilibrium position in which the actual net torque on the wheel is equal to the desired net torque specified by the pressure of said motive fluid supply.

3,094,312
POWER ASSISTED FEED FOR A KELLY BAR
Reginald John Woolgar, Hayes, England, assignor to Economics Foundations Limited, Hayes, England, a British company
Filed Feb. 29, 1960, Ser. No. 11,546
Claims priority, application Great Britain June 17, 1959
2 Claims. (Cl. 254—29)



1. A power-assisted feed for a kelly bar comprising a frame structure, at least one fluid-pressure ram mounted on said frame structure and including a movable member, said ram being adapted to exert a downward thrust, thrust bearing means carried by the movable member of said fluid-pressure ram, a rotatable member rotatably supported by said thrust bearing means and having an axial opening adapted for the passage therethrough of a vertical kelly bar, at least two toggle members symmetrically disposed about the central opening and having mutually remote edges loosely supported in the rotatable member and mutually proximate edges formed to cooperate in gripping the kelly bar when the toggle members are downwardly inclined and downward thrust is applied to the rams, resilient means, toggle engagement means carried in vertically movable manner on said rotatable member and upwardly biased by said resilient means, and having a first abutment surface arranged to engage said toggle members to lift the proximate edges of said toggle members into contact with said kelly bar when said ram is displaced from the top of its stroke, and a second abutment surface arranged to engage said toggle members, and a stop member mounted on said frame structure where it can be engaged by said toggle engagement means when said ram is substantially at the top of its stroke to depress said toggle engagement means against the action of said resilient means to cause said second abutment surface to engage and depress said toggle members.

3,094,313
RELEASABLE LOAD-SUSPENSION DEVICE
Urbain Filipozzi, Rue Alfred Labbe, Valleroy, Meurthe-et-Moselle, France
Filed July 6, 1961, Ser. No. 122,318
Claims priority, application France July 12, 1960
7 Claims. (Cl. 254—196)



1. A releasable load-suspension device comprising a frame, a pulley journalled in said frame and having a rope trainable thereover for attachment of a load, a hook pivoted to the frame above the pulley and engageable with an overhead support, so arranged that the weight of said load will tend to rotate the hook about its pivot to a disengaging position clear of said support, latching means pivoted to the frame for rotation in a plane normal to the plane of hook rotation and means normally urging said latching means into engagement with a surface of said hook to prevent rotation thereof to said disengaging position, and a camming element positionable on said rope for camming engagement with said latching means whereby a pull applied to one side of the rope to draw the camming element past said latching means will cam the latter away from said hook surface to release the hook for rotation to said disengaging position.

3,094,314
SANDWICH TYPE TRANSDUCER AND COUPLING
Thomas J. Kearney, Detroit, Frank J. Opelski, Dearborn, and George O'Neal, Jr., Detroit, Mich., assignors to Detrex Chemical Industries, Inc., Detroit, Mich., a corporation of Michigan
Filed Aug. 2, 1960, Ser. No. 47,038
13 Claims. (Cl. 259—72)



1. In combination: a tank adapted to contain an ultrasonically agitated cleaning liquid; a plurality of studs secured to and projecting from the outer surface of the bottom of said tank, each stud being provided with adjustable fastening means at its outer end; a plurality of axially bored sandwich-type-transducer assemblies each supported by one of said studs through said axial bore and comprising in outward order an aluminum block, a cylindrical piezoelectric crystal having silvered opposing faces and a steel block; means insulating said stud from said assembly and conductive adhesive means securing said aluminum and steel blocks to the opposing faces of said piezoelectric crystal and connecting said aluminum block to the outer surface of the bottom of said tank.

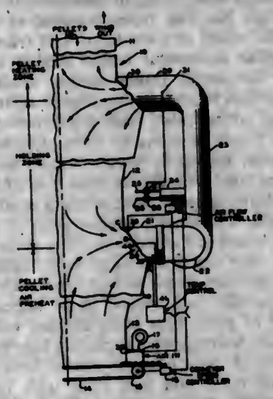
3,094,315
MACHINE FOR DISINTEGRATING ICE AND PACKED SNOW ON ROADWAYS
Mark Yetter, Box 38, Meeteetse, Wyo.
Filed Nov. 20, 1961, Ser. No. 153,292
1 Claim. (Cl. 262—19)



A machine for disintegrating hard packed snow and/or ice on roadways comprising in combination a transversely elongated rigid box-like frame adapted to span a major portion of the width of a roadway, said frame including a top rectangular horizontal frame section and a bottom rectangular horizontal frame section spaced below the top frame section in underlying aligned relationship therewith, vertical corner posts rigidly interconnecting the top and bottom frame sections to form therewith said rigid box-like frame, forwardly longitudinally projecting draft tongue means rigid with the forward side of the top frame section for drawing said frame along a roadway behind a towing vehicle, transversely spaced pairs of vertical guide bars on said frame at the front and rear sides thereof, each pair having their top and bottom ends rigidly secured to said top and bottom frame sections and each pair of guide bars being parallel and spaced apart laterally and each forward pair of guide bars being aligned with a rear pair thereof on said frame, spring centering lugs on the forward and rear sides of the top frame section between each pair of said guide bars, said lugs rigid with the top frame section, vertically slidable blocks disposed between each pair of guide bars and having flanges engaging forwardly and rearwardly of the guide bars to guide said blocks vertically along said bars, compressible coil springs extending vertically between each opposed pair of said lugs and blocks and between each pair of said guide bars and resiliently urging the blocks downwardly toward the bottom frame section, the bottom frame section underlying said blocks forming a stop to positively arrest downward movement of the blocks, a plurality of generally horizontal rectangular rigid sub-frames disposed within said frame near and above the elevation of the lower frame section and corresponding in number to the pairs of guide bars on the forward and rear sides of said frame and together spanning the major portion of the transverse width of said frame, forward and rear aligned longitudinal trunnions rigid with the forward and rear sides of each sub-frame at the transverse center thereof, said blocks having through bores rotatably receiving and supporting said trunnions, whereby each sub-frame is rockable relative to said frame upon its trunnions, substantially horizontal transverse axles on the sub-frames near the longitudinal centers thereof and having their ends rigidly secured to the longitudinal sides of the sub-frames and spanning the latter transversely for their full widths, stacks of heavy closely spaced disintegrator discs journaled for free rotation upon each axle and including symmetrically tapered peripheral portions for engagement with snow

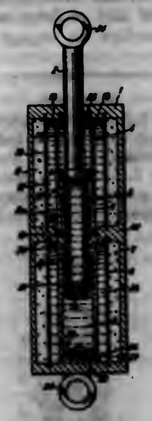
or ice to cut and break up the same, said discs being circular and of uniform diameter and having their tops terminating near and below said top frame section and their bottoms projecting below the bottom frame section, each stack of discs substantially filling the lateral space between sides of each sub-frame so that the several adjacent stacks of discs span continuously the major portion of said frame and roadway transversely, said discs freely rollable along the roadway when said frame is drawn forwardly and said sub-frames and discs adapted to conform automatically to the crown shape of the roadway, a rubber tired retractable transport wheel for each side of said frame outboard thereof, an arm carrying each wheel and pivoted to one side of the bottom frame section, a pivoted suspension link on each arm, and pin suspension means on said frame selectively engageable with said links to maintain said wheels extended below said frame and discs or retracted thereabove.

3,094,316
SHAFT FURNACE
John J. Turin, Toledo, Ohio, assignor to Midland-Ross Corporation, Toledo, Ohio, a corporation of Ohio
Filed July 7, 1960, Ser. No. 41,361
6 Claims. (Cl. 263—29)



6. Control means in combination with a shaft furnace comprising means constituting a vertically extending heat treating chamber having a lower compressible fluid inlet end and an upper compressible fluid discharge end, and through which pellet-like material flows downwardly, said chamber having an upper continuous portion of substantially constant cross-sectional area from its fluid discharge end and extending throughout a substantial adjacent portion of its vertical extent, having an intermediate continuous portion immediately adjacent said upper portion and having at least substantially as great a cross-sectional area as said upper continuous chamber portion, and having a lower portion extending to its fluid inlet end, and means effective to cause a compressible fluid to flow upwardly through the lower portion of the chamber countercurrent to, and in heat exchange relationship relative to the pellet-like material, said control means comprising, in combination, means for withdrawing a stream of the compressible fluid from the lower end of said intermediate portion of said chamber, means for returning a second stream of a compressible fluid to the lower end of said upper portion of said chamber, and means effective to control the weight per unit of time flowing in each of the first and second streams at least substantially as high as the weight per unit of time of compressible fluid flowing upwardly through the chamber below the region of withdrawal of the first stream.

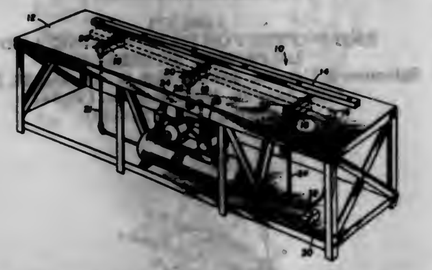
3,094,317
HYDRO-PNEUMATIC SPRING ELEMENT
Ludwig Arthammer, Schweinfurt (Main), Germany, assignor to Fichtel & Sachs A.G., Schweinfurt (Main), Germany, a corporation of Germany
Filed Jan. 22, 1962, Ser. No. 167,744
Claims priority, application Germany Jan. 21, 1961
13 Claims. (Cl. 267—64)



1. In a hydro-pneumatic spring element adapted for connecting sprung and unsprung masses, in combination,
(*a*) a main cylinder means defining a main cylinder space;
(*b*) resilient means for maintaining a liquid in said main cylinder space under positive pressure;
(*c*) a plunger member sealingly engaging said main cylinder means for substantially closing said space, said plunger member being movable from a normal position relative to said cylinder means inwardly and outwardly of said cylinder space;
(*d*) auxiliary cylinder means defining an auxiliary cylinder space;
(*e*) liquid storage means defining a liquid storage space normally communicating with said auxiliary cylinder space for passage of a liquid between said auxiliary cylinder space and said storage space;
(*f*) auxiliary piston means adapted to seal said auxiliary cylinder space from said storage space when engaging said auxiliary cylinder means, said piston means being connected to said plunger member for engagement with said auxiliary cylinder means and movement inward of said auxiliary cylinder space for exerting pressure on a liquid therein when said plunger member moves from said normal position thereof inwardly of said main cylinder space, and for movement outward of said auxiliary cylinder space when said plunger member moves outwardly of said main cylinder space toward said normal position thereof, said plunger member and auxiliary piston means constituting a unitary piston member;
(*g*) first valve means responsive to the pressure exerted on a liquid in said auxiliary cylinder space by said auxiliary piston means for connecting said auxiliary cylinder space to said main cylinder space;
(*h*) second valve means responsive to movement of said plunger member outward of said main cylinder space from said normal position thereof for connecting said main cylinder space with said storage space;
(*i*) third valve means responsive to said outward movement of said auxiliary piston means for connecting said auxiliary cylinder space to said liquid storage space; and

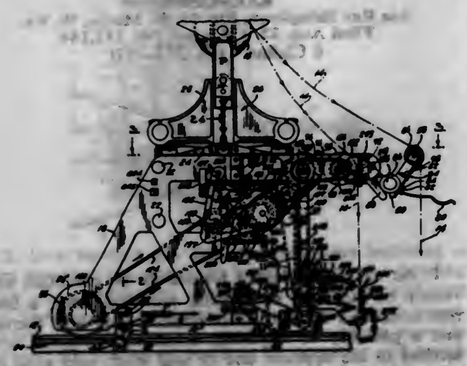
(*j*) fastening means for respectively fastening said main cylinder means and said plunger member to said sprung and unsprung masses.

3,094,318
TABLE FENCE CLAMP
Donald V. Frydenberg, Arlington, Tex., assignor, by mesne assignments, to Turn-A-Bore Equipment Co., Fort Worth, Tex., a corporation of Texas
Filed Apr. 27, 1960, Ser. No. 25,056
6 Claims. (Cl. 269—139)



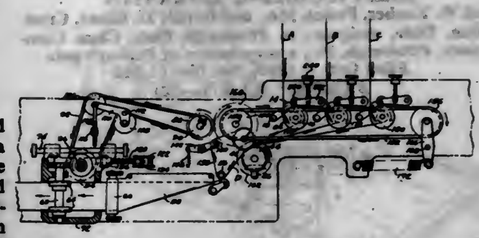
1. In combination, a work table, a fence stationed upon said work table, a clamping device for holding a workpiece securely against said fence, said work table having at least one slot directed towards said fence, said clamping device comprising a member mounted for sliding reciprocable movement beneath said slot for motion toward and away from said fence, a clamp dog mounted on said member for pivotal movement into and through said slot between a retracted position leaving said table surface clear and an extended position projecting above said table; means for moving said member in a clamping stroke toward said fence, and means comprising an abutment positioned beneath said table and extending at least the length of said clamping stroke for engagement by said clamp dog for automatically pivoting said clamp dog into its extended position during an initial part of such motion of said member, and for holding said clamp dog in its extended position throughout the remainder of the clamping stroke of said member.

3,094,319
TURNTABLE CUTTING MACHINES
Walter Deichmann, deceased, late of Mineola, N.Y., by Elizabeth C. Deichmann, administratrix, Mineola, N.Y., assignor to Cutting Room Appliances Corp., New York, N.Y., a corporation of New York
Filed Nov. 26, 1958, Ser. No. 776,645
14 Claims. (Cl. 270—31)



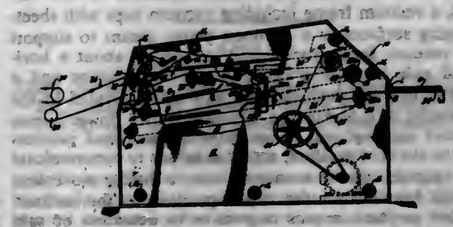
1. In a spreading machine, a carriage for movement over a table, the carriage comprising a pair of end frames,

3,094,320
MULTIPLE WEB COLLATING AND FOLDING APPARATUS
William F. Huck, 31 Greenway Terrace, Forest Hills, N.Y.
Filed Dec. 20, 1957, Ser. No. 704,202
16 Claims. (Cl. 270—52)



1. In a device for handling a plurality of separate webs that are to be combined in superposed fashion to form a unitary web group, the combination comprising means for imparting movement to said separate webs, a separate tension control means for each of said separate webs, each of said separate tension control means including a variable speed drive powered from a common source, means for combining said webs in superposed fashion to form a unitary web group, means for imparting movement to said unitary web group, means for folding said unitary web group as it is being moved, and tension control means for said unitary web group, said last mentioned tension control means including a variable speed drive that is varied upon changes in tension of the unitary web group.

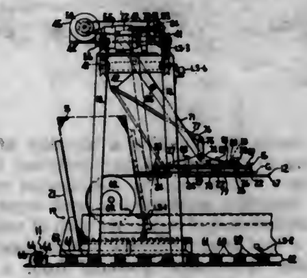
3,094,321
FOLDING APPARATUS
Eduard F. Kamberg, Des Plaines, Ill., assignor to Chicago Dryer Company, Chicago, Ill., a corporation of Illinois
Filed Jan. 31, 1961, Ser. No. 86,118
11 Claims. (Cl. 270—68)



3. In a folding apparatus the combination comprising first substantially horizontal conveyor means for conveying foldable articles, second substantially horizontal conveyor means; said first conveyor means being in substantial part superimposed over said second conveyor means;

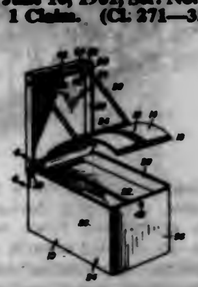
third substantially horizontal conveyor means, said first and second conveyor means being in substantial part superimposed over said third conveyor means; successive conveyors in said apparatus running in opposite directions; each of the lower conveyors running at a greater speed than the conveyor above, the initial portion of each of the lower conveyors being so located relative to the immediately overlying conveyor that the leading end of a conveyed foldable article may drop from the overlying conveyor onto the underlying conveyor whereby said conveyors may successively convey a foldable article moving thereover, and folding means for folding an engaged foldable article while carried by a conveyor associated with each of said upper two conveyors in such manner that said foldable articles are carried by each of said upper two conveyors into engagement therewith.

3,094,322
SHEET HANDLING APPARATUS
Fred W. Kocher, Festus, Mo., and Orville H. Rinne, Crestline, Ohio, assignors to Pittsburgh Plate Glass Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Oct. 7, 1960, Ser. No. 61,266
5 Claims. (Cl. 271—12)



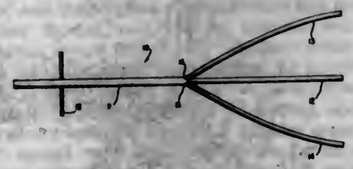
1. An apparatus for removing glass sheets from a stack which comprises a first conveyor to move a glass sheet in a horizontal path, actuated first power means to operate said first conveyor, a pallet having a side inclined rearwardly to support the stack in front of the side in an inclined position, a second conveyor to support the pallet at a horizontal plane lower than and to move said pallet in a horizontal path parallel to the horizontal path provided to a sheet by said first conveyor, actuated second power means for said second conveyor, a supporting structure, a carriage, means on said supporting structure mounting the carriage for horizontal movement above said first and second conveyors and normal to the path of movement of said pallet, actuated third power means to provide the horizontal movement of said carriage, a vacuum frame including vacuum cups with sheet-engaging surfaces in a common plane, means to support said vacuum frame for pivotal movement about a horizontal axis between a raised horizontal position and a lowered inclined position, said axis being parallel to the movement of said carriage, actuated fourth power means to move said vacuum frame between the raised position and the lowered position, actuated means to communicate said vacuum cups to a vacuum source during movement of said frame from the raised position to the inclined lowered position, means responsive to actuation of said first power means for actuation of said fourth power means to raise said vacuum frame and for actuation of said third power means to move said carriage and said raised vacuum frame from a position above said second conveyor to a position above said first conveyor, means responsive to movement of said carriage to a position above said first conveyor to release vacuum in said cups, to actuate said third power means to move said carriage and said vacuum frame to a position over said second conveyor and to actuate said fourth power means to lower said vacuum frame to an inclined position, and means responsive to a leading surface of a stack of glass sheets on said pallet to actuate said second power means to move the stack for placement of the next sheet at a position to be engaged by said vacuum cups after each time a sheet of the stack is removed.

3,094,323
END PAPERS FOR HAIR-WAVING AND DISPENSER THEREFOR
Salvatore J. Catania, 2531 S. 90th St., Omaha 24, Nebr.
Filed June 16, 1961, Ser. No. 117,542
1 Claim. (Cl. 271—33)



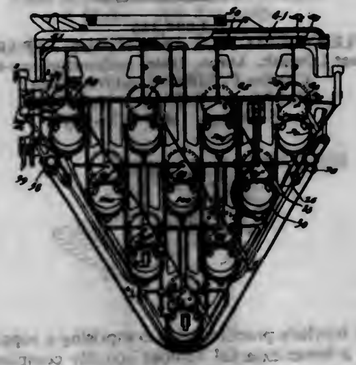
A dispenser for papers comprising a receptacle having an open top for receiving a stack of papers, a closure lid pivoted at one end thereof to the top of said receptacle, spring means biasing said closure lid from a closed to a substantially vertical open position, a generally rectangular arm including upper, lower and side bars, the upper bar being pivotally secured to the free end portion of the closure lid, spring means for normally biasing said arm downwardly and rearwardly toward that portion of the receptacle to which the closure is pivoted for engagement of the lower bar with the uppermost paper of the stack, a stop member on said arm for limiting the normal movement of the arm to an acute angular relation to the closure lid, means on said lower bar for picking up only the uppermost paper and lifting it along with the lid when the lid moves toward a substantially vertical position, thereby supporting the paper in position for removal from the arm, and releasable latch means for retaining the closure lid in closed position on the receptacle.

3,094,324
EXERCISER
Asa Ray Shingleton, Rte. 39, St. Marys, W. Va.
Filed Aug. 22, 1961, Ser. No. 133,144
6 Claims. (Cl. 272—57)



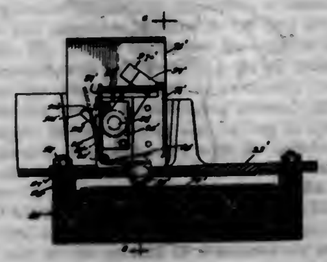
1. An exerciser adapted for use in the execution of a variety of exercises, comprising a central shaft, a foot-rest connected to said shaft adjacent one end thereof, and a plurality of angularly extending elongated arms secured to the opposite end of said shaft, said arms extending from said shaft forwardly of their juncture therewith.

3,094,325
PIN DETECTING AND INDICATING APPARATUS
Robert Torresen and Anthony J. Gretzky, both of Muskegon, Mich., assignors, by mesne assignments, to Brunswick Corporation, Chicago, Ill., a corporation of Delaware
Filed Aug. 23, 1961, Ser. No. 133,476
15 Claims. (Cl. 273—42)



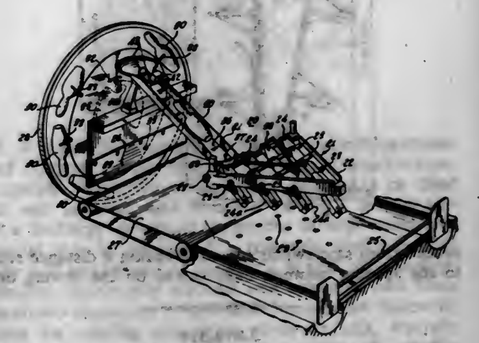
9. In a bowling pin detecting apparatus, a deck structure movable toward and away from a bowling alley including a lower deck and an upper deck movable relative to the lower deck, switch means on the upper deck operable to indicate the presence of a standing pin on the alley, switch operating means on the upper deck engageable with the head of a standing pin on the alley and operable thereby on movement of the deck structure toward the alley for operating said switch means, means on the upper deck for resetting the operating means, and means on said lower deck engaging and operating said resetting means on movement of the upper deck relative to the lower deck.

3,094,326
PIN DETECTING AND INDICATING APPARATUS
Robert Torresen, Muskegon, and Milton E. Brown, Grand Haven, Mich., assignors, by mesne assignments, to Brunswick Corporation, Chicago, Ill., a corporation of Delaware
Filed Aug. 23, 1961, Ser. No. 133,479
23 Claims. (Cl. 273—42)



2. In a bowling pin detecting apparatus including a part mounted for movement longitudinally of a bowling alley, the combination comprising: means on said part for detecting a pin standing on the alley; a switch operable between normal and set positions; an actuator movable between normal and set positions for operating said switch correspondingly; means responsive to the first said means detecting a standing pin for operating said switch actuator from normal to set position; an inertia member separate from said switch actuator movably mounted on said part for releasably latching said switch actuator in set position; and means releasably positioning said inertia member when said switch actuator is in set position for releasing said switch actuator for movement to normal position in response to acceleration of said part longitudinally of said alley.

3,094,327
SPARE PRACTICE PLAY FOR AN AUTOMATIC PINSPOTTER
Sang Y. Whang, 12 Hinsdale St., Brooklyn, N.Y., and Burton V. Seldner, 9 Pinetree Lane, Great River, N.Y.
Filed May 6, 1960, Ser. No. 27,328
26 Claims. (Cl. 273—43)

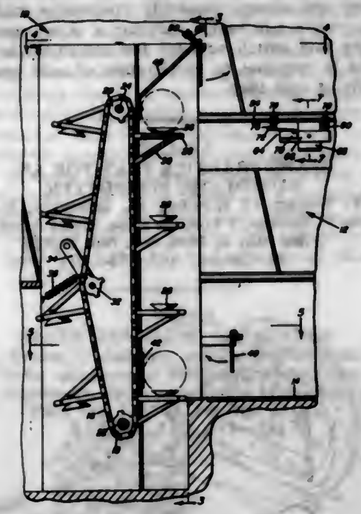


1. In an automatic pinspotter for spotting a given set of one or more tenpins on a bowling alley floor, table means operable over said alley floor and having a predetermined number of spotting cups for receiving said tenpins and spotting same on said floor, each cup being adapted to receive an individual tenpin and to spot same on said floor, a guide track carried by said table and being operatively associated with said cups, distributor means for traveling along said track and adapted to stop adjacent each cup for releasing an individual tenpin thereto, means for feeding said tenpins one at a time to said distributor, circuit means for selectively and momentarily actuating and then de-actuating said tenpin feeding means to release a predetermined number of tenpins of 1 to 9 in quantity as a given set to said distributor, and means operatively associating said track and distributor and causing said distributor to stop at selected ones of said cups for depositing a tenpin therein, said distributor otherwise by-passing all other table cups, whereby a set of pins of said predetermined number and of selected spot position are set on said floor.

3,094,328
BOWLING BALL LIFT
Hugh Neville, Jr., and Franklin W. Longson, Tiverton, R.I., assignors to Anawan Plastics & Machine Corp., Fall River, Mass., a corporation of Massachusetts
Filed May 13, 1960, Ser. No. 29,009
5 Claims. (Cl. 273—49)

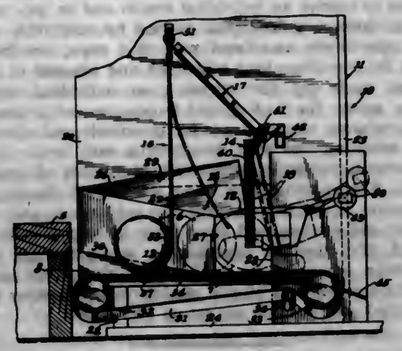
5. In combination with a powered ball conveyor continuously delivering bowling balls to a ball storing unit, control mechanism for discontinuing delivery of balls by the conveyor in response to a loaded condition of the storing unit comprising, a switch device secured to one end of a frame pivotally mounted on said storing unit, a switch actuating button connected to said switch device and extending upwardly for engagement by a ball on the storing unit and spaced from said conveyor a distance sub-

stantially equal to a ball diameter, and a switch conditioning button connected to another end of said frame and



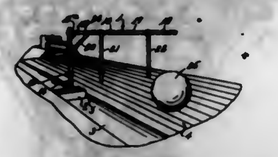
spaced from said switch actuating button a distance equal to the spacing between balls stored on the storing unit.

3,094,329
CONTROL AND GUIDE FOR BOWLING BALL
Robert H. Black, 434 S. Kenmore, No. 305, Los Angeles 5, Calif.
Filed Feb. 27, 1961, Ser. No. 91,786
9 Claims. (Cl. 273—49)



7. Control and guide means for bowling balls comprising, in combination, a pit floor mounted to move in a rearward direction and disposed on a transverse slope, a backstop across the path of movement of a bowling ball with its lower edge spaced above the floor a distance less than the diameter of a bowling ball and greater than the height of a fallen pin being transported rearwardly by the floor to allow such a pin to pass freely beneath the backstop, a gravity switch carried by the backstop, a hinge mounting the backstop for rearward pivotal deflection on said hinge when struck by a bowling ball to cause actuation of the switch, and a transverse flexible pendent curtain forwardly spaced from the backstop and having a free lower edge spaced from the pit floor a distance less than the diameter of a ball and rearwardly deflected by a ball to slow the impetus of the latter before striking the backstop so that the ball is rearwardly moved by the pit floor toward the backstop after said ball has moved past the deflected lower edge of the curtain, said backstop and curtain defining between them a path for the ball that is wider than the diameter of the ball so that the latter is free to roll down the slope of the floor for egress from the pit.

3,094,330
BOWLER'S PRACTICE AND GUIDE APPARATUS
Gilbert I. Smith, Akron, Ohio, assignor of one-half to Charles F. Mitchell, Akron, Ohio
Filed Mar. 3, 1961, Ser. No. 93,174
5 Claims. (Cl. 273—54)



4. A bowler's practice guide comprising a support base having a lower external contour roughly complementary to at least portions of the transverse contour of a gutter of a bowling alley for secure positioning therein, a support arm engage in said base and positioned thereby, said support arm including an articulated vertically extending section at said base and an articulated horizontal section for extending transversely of a bowling alley, a brace engaging said vertical and horizontal sections and extending therebetween to reenforce said horizontal section, a guide strap, and means carried by said guide strap to secure it removably to said support arm and suspended therefrom at a fixed position thereon for guide and indicator action relative to a bowling ball rolling along the bowling alley and passing said guide strap.

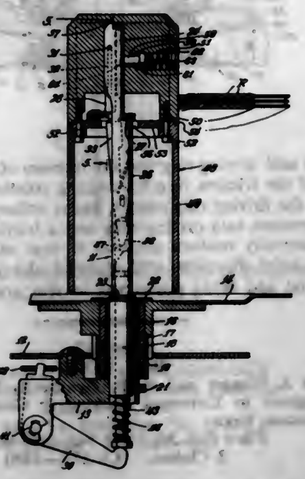
3,094,331
TOY
Norman A. Greene, New Rochelle, N.Y. (101 W. 55th St., New York 19, N.Y.)
Filed Feb. 6, 1961, Ser. No. 87,232
8 Claims. (Cl. 273—101)



1. A toy comprising an outer member, a slide passing through said outer member, arms pivoted on said outer member, means within the outer member so operatively connecting the inner ends of the arms to the slide that movement of the slide moves the arms toward or away from one another, and an object adapted to be received by the end of either arm, the arrangement being such that by proper manipulation of the slide and outer

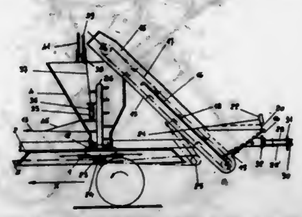
member the object may be tossed back and forth from one arm to the other.

3,094,332
PHONOGRAPH SPINDLE ADAPTER
James E. Vistain, Jr., Chicago, Ill., assignor to Admiral Corporation, Chicago, Ill., a corporation of Delaware
Filed July 11, 1952, Ser. No. 298,225
1 Claim. (Cl. 274—10)



The combination with a record player spindle small enough diametrically to extend through the center hole of a small center hole record and having a shoulder upwardly thereof above which is a pilot portion in offset relation to the portion below the shoulder and having an ejector within the spindle for movement outward thereof at the shoulder to release a record therefrom, one of the spindle portions being formed with a retention seat thereon, of an adapter comprising upper and lower barrel members rigidly coupled in coaxial relation to each other to provide a composite casing of uniform diameter and sufficiently smaller diametrically than the center hole of a large center hole record to pass freely therethrough, a first socket within one of the members formed to receive the spindle in a predetermined position with respect to the adapter when said adapter is slid down over said spindle into operative association therewith, a second socket normal to and communicating with the first socket at a point beside the spindle seat when the adapter is operatively associated with said spindle, a spring pressed latch member in the second socket to releasably retain the adapter on the spindle by its being pressed against the seat, the upper barrel member also having an aperture at one side thereof communicating with the interior of said member and being adjacent the spindle shoulder when the adapter is operatively associated with the spindle, upper and lower record supports mounted within one of the members, a linkage operated by the ejector when it is moved out of the spindle to communicate motion to the supports and for moving them concurrently in opposite directions and for support of the records above the bottom record by the upper support by its extension therebetween before said lower support is retracted to release the bottom record for passage to a turntable at the bottom of the adapter, and means coupled between said linkage and said lower support whereby said lower support is normally extended outward beyond the periphery of said adapter to support a stack of large center hole records threaded over said adapter, and said upper support is normally held with said adapter.

3,094,333
MACHINE FOR THE UNIFORM DISTRIBUTION OF MANURE AND THE LIKE SUBSTANCES OVER GROUND
Martin Rausch, Industriestrasse 6, Marburg an der Lahn, Germany
Filed Nov. 23, 1959, Ser. No. 854,754
Claims priority, application Germany Nov. 22, 1958
10 Claims. (Cl. 275—8)

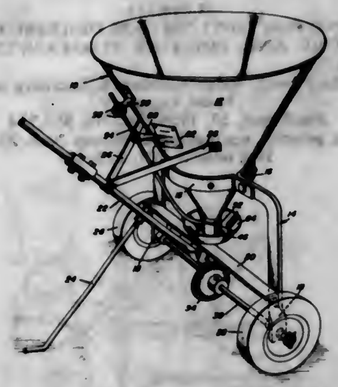


1. A hopper arrangement for feeding and mixing granulated material or the like, comprising, in combination, an upright funnel-shaped container adapted to be filled with said material, said container having a central axis and a discharge opening at the bottom through which said material is to be discharged; a rotatable shaft extending along said axis; a pair of resiliently flexible wall sections extending transversely through said container and being operatively connected to said shaft for rotation therewith; means for rotating said shaft about its axis, whereby during such rotation said wall sections will resiliently flex when said container is filled and resiliently straighten out again as the material is discharged from said container; a stationary plate located beneath and closely spaced from said discharge opening and coaxial therewith, said plate being formed with an annular cavity directed toward said discharge opening so as to form an annular shoulder adjacent the periphery of said plate; and a star-shaped member located between said plate and said discharge opening and coaxially fixed to said shaft for rotation therewith, said star-shaped member abutting against said shoulder and extending with peripheral portions thereof in radial direction beyond said shoulder.

3,094,334
MATERIAL SPREADER
Carlesle A. Middleton, 38 Dungarvin Road, Baltimore 28, Md.; Thomas B. Middleton, 4940 Rodman St. NW., Washington, D.C.; and Howard P. Johnson, 1901 Fairbank Road, Baltimore 9, Md.
Filed Mar. 23, 1961, Ser. No. 97,807
8 Claims. (Cl. 275—9)

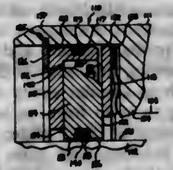
1. A spreader for centrifugally spreading material, comprising, a structure including a centered mount having a horizontally mounted shaft spaced therefrom, with spaced wheels positioned on said horizontally mounted shaft, an inverted conical shaped hopper for material to be spread positioned in said mount, means including a vertical shaft extending upwardly through and into said hopper, means on said vertical shaft and positioned in said hopper for breaking up said material in said hopper for smooth flow therefrom, means for mechanically coupling said shafts together, a distributor having a truncated cone impeller with a plain flat distributing area and upwardly and outwardly extending sloping sides with vanes thereon, said distributor being positioned axially below said hopper for receiving material from said hopper first on said distributing area and then broadcasting said received material from said distributing area upwardly and

outwardly by said upwardly and outwardly extending sloping sides of said truncated cone impeller for centrifugally dispensing said received material, and means



for powering said horizontally arranged shaft so as to cause said material to move from said hopper to said impeller distributor to be dispensed centrifugally therefrom.

3,094,335
RISING RING SEAL
Robert H. Shenk, Erie, Pa., assignor to Zurn Industries, Inc., Erie, Pa., a corporation of Pennsylvania
Filed Oct. 8, 1959, Ser. No. 845,192
11 Claims. (Cl. 277—5)



1. In combination, a hub and sleeve type gear coupling comprising an externally toothed hub and an internally toothed sleeve, the flange on said sleeve extending outwardly and overlying said hub, a flat washer inside said flange and having a diameter slightly smaller than the internal diameter of said flange, a retainer being L-shaped in cross section having an outer peripheral surface, an O-shaped sealing washer engaging said outer surface of said retainer, a groove in the internal surface of said flange receiving said O-shaped washer, snap rings disposed in a groove in said flange and engaging the outer surface of said retainer, holding said retainer against outward movement, and a resilient washer having an internal groove with the internal surface of said resilient washer on each side of said groove engaging the outer peripheral surface of said hub, said resilient washer being frusto-conical in shape and of lesser outer diameter adjacent said teeth than at the edge remote from said teeth, and the outer surface of said washer engaging the lateral surface of said retainer.

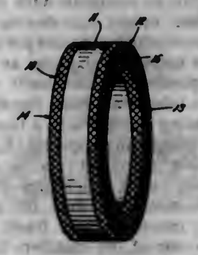
3,094,336
MECHANICAL SEALING DEVICES
Thomas A. Geary, Kenosha, Wis., assignor to Ladish Co., Cudahy, Wis., a corporation of Wisconsin
Filed Aug. 31, 1960, Ser. No. 53,287
5 Claims. (Cl. 277—92)

1. A sealing device for use around a rotary shaft which extends rotatably through a bearing opening in a wall comprising a unitary friction ring of hard wear resistant material adapted to surround said shaft and having a face adapted to frictionally engage said wall and having recesses, a driving ring adapted to surround said shaft, means projecting from said driving ring providing for detachable connection of said ring to the shaft, means be-



tween said driving ring and the recesses of the hard material of the friction ring for causing rotation of the latter when the driving ring rotates, and a unitary sealing member between said driving ring and a friction ring formed of inherently resilient material to urge said friction ring in an axial direction, said material also being a sealing material and being positioned to seal around the shaft.

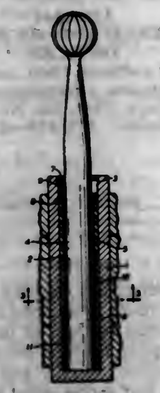
3,094,337
SEAL RING
Aaron J. Pippert and E. B. Heathcott, Houston, Tex., assignors to Universal Packing & Gasket Company, Houston, Tex.
Filed Oct. 31, 1960, Ser. No. 66,206
2 Claims. (Cl. 277—188)



1. A composite seal ring comprising a tubular body having an annular mass of a relatively soft thermoplastic sealing material intermediate its ends and opposed anti-extrusion elements at each of its ends, each of said end anti-extrusion elements including a pair of concentric radially spaced apart rings molded to said sealing material and defining the inner and outer corners, respectively, of said tubular body, each of said rings being of a fabric reinforced thermosetting material, the weave of said fabric being positioned on a bias with respect to the circumferential extent of the ring so that forces tending to produce expansion and contraction of the rings are directed across all the individual threads of the weave.

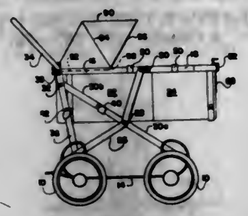
3,094,338
CHUCK
Richard W. Page, 307 Quaker Road, Chappaqua, N.Y.
Filed Dec. 23, 1960, Ser. No. 78,158
16 Claims. (Cl. 279—23)

1. A resilient chucking device comprising a drive shaft having a cylindrical axial bore open at one end for receiving a tool shank, a resilient sleeve insertable therein, an expansible split metal sleeve insertable, in turn, in the said resilient sleeve in position for receiving the shank of



a rotary tool and being expanded thereby to compress the resilient sleeve against the bore wall.

3,094,339
CONVERTIBLE BABY CARRIAGE
Harriet Hurvitz, 25 Westbourne Parkway, Hartford, Conn.
Filed May 14, 1962, Ser. No. 194,411
3 Claims. (Cl. 280—31)



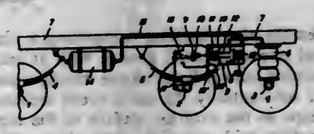
1. A convertible baby carriage comprising in combination, a carriage frame structure which includes a generally rectangular normally horizontal support comprising front and rear U-shaped frame pieces connected at their ends, a bed including a second generally rectangular horizontal support comprising front and rear U-shaped members detachably connected at their ends and each supporting fabric side walls and an end wall which cooperate to support a fabric bottom wall and thereby to define a unit, the fabric walls of one unit being detachably connected to their counterparts on the other unit when such units are connected and the bottom wall portions having flap extensions provided with leg openings but which are connected in overlapped relationship to cover said openings, hanger means interconnecting the two generally rectangular supports with the second support detachably held within the first support so that it can be lifted out of the carriage frame, said bed also including extensible legs respectively connected at their ends to the front and rear U-shaped members to provide independent support for the bed, the front unit being detachable to provide an infant's seat and the extending flap of the bottom wall thereof being connectible with the detached ends of its U-shaped member to provide a front closure for such seat, the rear unit being supportable independently in the carriage frame and the extending flap of the bottom wall thereof being connectible to the ends of its U-shaped member to provide a front closure for a stroller thus formed, and the front U-shaped frame piece of the carriage being pivotally movable downwardly to provide a foot rest for the stroller.

3,094,340
SLIVER COILER
Olan Richardson, Hampton, and Charles W. Walter, Griffin, Ga., assignors to Southern States Inc., a corporation of Georgia
Filed Apr. 22, 1959, Ser. No. 808,213
1 Claim. (Cl. 280—35)



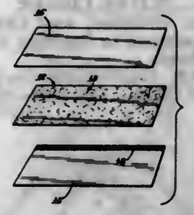
A can dolly comprising a frame formed of yieldable spring construction having a plurality of sides arranged in a common plane, one of said sides being discontinuous with adjacent parts normally spaced apart in opposed relation by a distance greater than the distance between said parts when forced toward each other against the inherent bias of said frame to accommodate contraction of said frame within said plane from its normal size and configuration against the inherent bias thereof, said frame being arranged to exert a substantial outward force in said plane when contracted due to its inherent bias, and a plurality of casters affixed to said frame on said plane.

3,094,341
PNEUMATIC SUSPENSION DEVICE
Giuseppe Alfieri, Milan, Italy, assignor to Fabbrica Italiana Magneti Marelli S.p.A., a corporation of Italy
Filed July 22, 1960, Ser. No. 44,710
Claims priority, application Italy Aug. 3, 1959
8 Claims. (Cl. 280—124)



1. A pneumatic suspension device for vehicles having at least one principal axle, said axle having a fixed spring rate, a chassis supported by said principal axle, an auxiliary axle having a bellows mounted between and in contact with said auxiliary axle and said chassis, a compressed air distributor secured to said chassis, a chamber in said distributor, a connection from a source of compressed air to said chamber, a connection from said bellows to said chamber, a valve and seat in said chamber between said connections, means for seating said valve, a slidable push rod in said chamber, means for biasing said push rod toward said valve and seat, control linkage mounted on said principal axle and operatively connected to said biasing means for moving said push rod to unseat said valve when said chassis is lowered relative to said principal axle, a vent in said chamber adapted to communicate with said bellows when said valve is seated and said push rod is retracted by pressure of air from said bellows.

3,094,342
CARBON SHEET AND ASSEMBLY
Joseph A. Weber, Prospect Heights, Ill. (% Weber Addressing Machine Co., Inc., 215 E. Prospect Ave., Mount Prospect, Ill.)
Filed Oct. 2, 1961, Ser. No. 142,343
4 Claims. (Cl. 282—22)



1. A carbon sheet suitable when placed between an original impression-receiving sheet and a copy-receiving sheet, of transferring a carbon impression to said copy-receiving sheet corresponding to an impression made on said impression-receiving sheet, comprising a porous fibrous base impregnated on one side thereof to retain its porosity with a viscous aromatic hydrocarbon oil vehicle containing finely divided carbon, said fibrous base having contact areas on both sides thereof which are an impregnation through said porous fibrous sheet of pressure sensitive adhesive.

3,094,343
PIPE COUPLING
John L. Wood, Charleston Heights, S.C., assignor to West Virginia Pulp and Paper Company, New York, N.Y., a corporation of Delaware
Filed Mar. 13, 1959, Ser. No. 799,299
9 Claims. (Cl. 285—113)



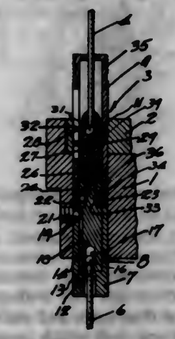
1. A flexible pipe coupling comprising a nipple having an external circumferential groove with at least one wall thereof sloping outwardly, a sleeve having a smooth inner surface of substantially the same cross sectional complemental shape as the exterior surface of the nipple, means for connecting said nipple to said sleeve whereby said sleeve encircles the nipple and is freely movable in axial relationship thereto, and a sealing ring positioned within and projecting radially out of the groove, the sealing ring having an outside radial dimension no greater than the inside radial dimension of the sleeve where the sleeve encircles the groove and otherwise so constructed that the sealing ring is mechanically uncompressed between any of the surfaces of the groove and the sleeve and able to move freely within the confines of the groove when no pressure differential exists between the interior and exterior of the coupling and is able to be positioned into a sealing relationship between the sloping wall of the groove and the interior surface of the sleeve solely by fluid forces created by a pressure differential between the interior and exterior of the coupling; said sealing ring being constructed of a material which is conformable to the smooth interior surface of the sleeve and to the surface of the sloping wall, expandable, and resistant to substantial deformation when acted on by fluid forces created by a pressure differential existing between the interior and exterior of the coupling.

3,094,344
IMPACT WRENCH AND SOCKET COUPLER DEVICES
John J. Varga, Lyndhurst, Ohio, assignor to Curtiss-Wright Corporation, a corporation of Delaware
Filed Apr. 6, 1961, Ser. No. 101,260
2 Claims. (Cl. 287—52.08)



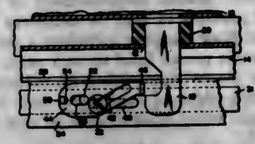
1. For quickly detachably securing a wrench socket to a drive member at round cross holes in non-circular mating torque-transmitting portions of the socket and member, a threadless spring fastener having a stem comprising a generally circular, spirally and openly convoluted piece of light gage leaf spring metal normally of greater average diameter than the hole in the drive member, and a head having an axial bore sufficiently tightly receiving an end portion of the stem so that the convolutions thereof are maintained in tight mutual face-to-face contact within the bore of the head to the extent of being rendered radially rigid or solid.

3,094,345
SEPARABLE LINE COUPLING
John A. Gaylord, San Rafael, Calif., assignor to H. Koch & Sons, Corte Madera, Calif., a corporation of California
Filed Feb. 8, 1962, Ser. No. 171,980
4 Claims. (Cl. 287—76)



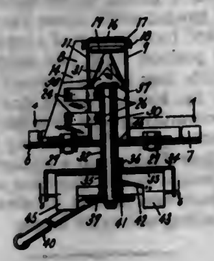
1. A separable line coupling device for manipulating lines extended through separable members, comprising
(a) a first hollow coupling casing adapted to be secured in one of said separable members,
(b) a second hollow coupling casing secured in the other separable member,
(c) a reciprocating plunger in each of said hollow casings,
(d) coacting means between each plunger and the adjacent casing to limit the stroke of reciprocation of the respective plungers and the respective casings,
(e) a line connected to each of said plungers,
(f) releasable clamping elements on the plunger in said second casing held in clamping relation to the plunger of the first casing when said separable members are coupled, said clamping elements being releasable when pulled at a predetermined distance by the plunger of the first casing when said members are separated.

3,094,346
CASKET CLOSURE DEVICE
Harold W. Baker, Jr., Bryn Mawr, Pa., assignor to Connersville Casket Company, Inc., Connersville, Ind., a corporation of Indiana
Filed Feb. 17, 1961, Ser. No. 89,952
6 Claims. (Cl. 292—5)



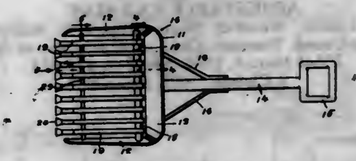
1. A closure device for a casket having a body and a lid hinged to the body comprising a pull down member adapted to depend from the casket lid, a pull down lever adapted to cooperate with the pull down member, means for mounting said lever in said body for pivotal movement and for longitudinal movement towards and away from the pull down member, means for restricting the pivotal movement of the lever during longitudnial movement towards the pull down member, a cam track on said lever, means movable longitudinally engaging said cam track to move the lever longitudinally towards the pull down member and free of the means restricting its pivotal movement and into a position in which a portion of the pull down lever overlies a portion of the pull down member and then pivotally downwardly to pull the pull down member downwardly.

3,094,347
LATCH STRUCTURE
Vivian G. May, Kalamazoo, Mich., assignor to Checker Motors Corporation, Kalamazoo, Mich.
Filed Oct. 16, 1961, Ser. No. 145,068
14 Claims. (Cl. 292—228)



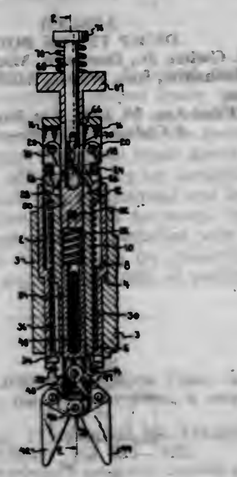
14. In an automotive vehicle having a body member and a swingable closure member mounted to close against the body member, a latch structure comprising,
a latch pin axially fixedly and rotatably mounted on one of said members to project into the other of said members in the closed position of the closure,
a head on said pin having a keeper engaging shoulder on one side projecting beyond the side of the pin,
said head and shoulder being cut away along a side of the pin angularly displaced from the shoulder,
a support secured to the other of said members with a first wall positioned in spaced side-by-side relation to said pin in the closed position of the members,
a second wall on said support arranged at an angle to said first wall,
openings formed in said walls,
a leaf spring having one end abutted against said first wall with an off-set projecting through the opening in said one wall into the path of said head as the closure closes on said body member to engage behind said shoulder in the closed position of the closure,
the other end of said spring being curved springably from said first end and having a hooked engagement with the edge of the opening in said second wall,
and an operating arm secured to said pin and projecting therefrom to rotate the pin.

3,094,348
SCOOP SHOVEL
Anthony Preziosi, 215 Wallace St., Freeport, N.Y.
Filed July 14, 1960, Ser. No. 42,916
4 Claims. (Cl. 294—55.5)



1. A scoop shovel comprising a body member having a pair of spaced parallel flat side portions each arranged in an upwardly and outwardly sloping direction and a flat back portion arranged in an upwardly and rearwardly sloping direction, said back portion connecting the adjacent ends of said side portions together, a handle having one end secured to said body member back portion, a plurality of spaced parallel tines arranged in a horizontal plane between said body member side portions adjacent the lower ends of the latter, each of said tines having an inverted U-shaped cross sectional configuration, means connecting the end portions of said tines adjacent said body member back portion to the adjacent parts of said body member side portions, and other means loosely connecting the end portions of said tines remote from said body member back portion to the adjacent parts of said body member side portions.

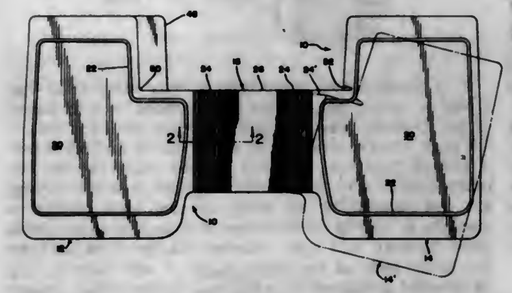
3,094,349
HANDLING DEVICE
Glendon H. Schwalm, Harrisburg, Pa., assignor to AMP Incorporated, Harrisburg, Pa.
Filed Apr. 3, 1961, Ser. No. 102,314
9 Claims. (Cl. 294—115)



1. A holding device comprising, a sleeve, closable holding means on one end of said sleeve, shaft means slidably mounted in said sleeve, means acting between said holding means and said shaft means to close said

holding means upon movement of said shaft means from a retracted position, relative to said sleeve, to an extended position, resilient means acting between said sleeve and said shaft means normally to bias said shaft means to said retracted position, latch means effective between said shaft means and said sleeve to latch said sleeve in said extended position, and latch release means in said shaft means to disengage said latch means and permit opening of said holding means under the influence of said resilient means.

3,094,350
ADJUSTABLE CAR MAT
Leo P. Cusick, Wooster, Ohio, assignor to Rubbermaid Incorporated, Wooster, Ohio, a corporation of Ohio
Filed Mar. 1, 1962, Ser. No. 176,573
2 Claims. (Cl. 296—1)



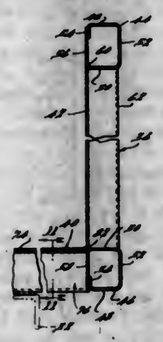
2. A flexible mat for the front floors of cars having central humps of various dimensions, comprising

a central section for resting on top of said humps,

floor panel sections on both sides of said central panel having outer peripheries adapted to substantially conform to the outer margin of the car floor,

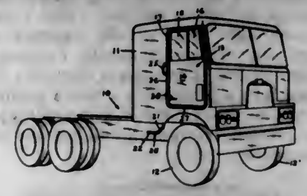
and laterally expansible accordion-like sections connecting said floor panel sections to said central panel, each said accordion-like section having a plurality of corrugations for conforming to various hump dimensions while maintaining the outer configurations of said side panels in place.

3,094,351
DUMP TRUCK BODY
Joseph M. Gwinn, Jr., Dearborn, Mich., assignor to Gar Wood Industries, Inc., Wayne, Mich., a corporation of Michigan
Filed Apr. 30, 1956, Ser. No. 581,693
4 Claims. (Cl. 296—28)



1. A vehicle dump body comprising a floor member and a pair of spaced substantially parallel side members secured to the opposite sides of said floor member, each of said side members including a substantially flat vertically extending panel, a pair of rails secured to the longitudinal edge portions of each of said panels, each of said rails including spaced top and bottom wall portions integrally joined by an outer wall portion, said rails being secured to said panels to form box sections closed in transverse cross section, a plurality of vertically extending tie members spaced longitudinally of said rails, the opposite end portions of said tie members being fixed to said rails, said floor member including a floor plate and a plurality of cross pieces fixed to said plate with the ends of said cross pieces terminating in vertical planes containing the side edges of said plate, said floor plate and said cross pieces being fixed to each of said side members.

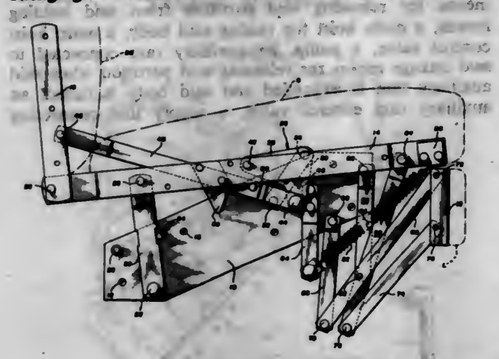
3,094,352
VEHICLE CAB DOOR LATCH HANDLE AND MECHANISM
Walter M. May, Allentown, Pa., assignor to Mack Trucks, Inc., Plainfield, N.J., a corporation of New York
Filed Aug. 14, 1961, Ser. No. 131,381
3 Claims. (Cl. 296—44)



1. The combination on a truck having a hinged door for the cab thereof, said door being mounted several feet above the ground, comprising, a stationary grab handle affixed to the outside of the cab adjacent the unhinged vertical margin of said door and high up from the bottom thereof to enable a person to lift himself into said cab with said grab handle, catch means carried by said door at said margin and forming part of a latch for locking said door in closed position when said catch means is unretracted, a movable door handle disposed on the outside of said door near the bottom thereof and adjacent to said margin in downwardly spaced relation from said catch means to prevent a person from lifting himself into said cab with said door handle, and a linkage connecting said movable door handle and catch means and responsive to movement of such door handle to release said door for opening by retracting said catch means.

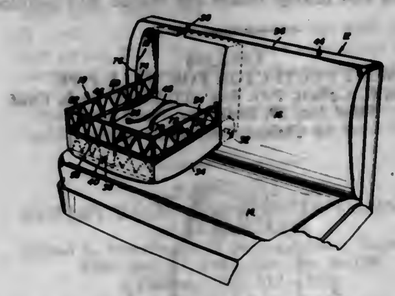
3,094,353
RECLINING CHAIR FIXTURE
Ned W. Miselle, High Point, N.C., assignor to General Steel Products, Inc., High Point, N.C., a corporation of North Carolina
Filed July 26, 1960, Ser. No. 45,356
14 Claims. (Cl. 297—85)

1. A reclining chair fixture comprising a base member having a first fixed pivot adjacent its rearward end and a second fixed pivot spaced forwardly from said first fixed pivot, a seat member having a first seat pivot spaced forwardly from its rearward end and a second seat pivot spaced forwardly from said first seat pivot, a back member pivoted at its lower end upon a back pivot on said seat member at a location spaced rearwardly from said first seat pivot, rear support link means pivotally connected to both of said first pivots independently of said back member, front support link means pivotally connected to both of said second pivots, said front and said rear support link means extending upwardly from said fixed pivots to support said seat member for swinging movement between a substantially horizontal normal position and a downwardly and rearwardly inclined position displaced rearwardly from said normal position, stop means on said base member engagable with said rear support link means to define a rearward limit to swinging movement of said rear support link means about



its fixed pivot, and a control link pivoted at spaced locations to said back member and to said front support link means at a location spaced from said second pivots for swinging said seat member about said first seat pivot when said stop means is engaged with said rear support link means and said back member is pivoted relative to said seat member about said back pivot.

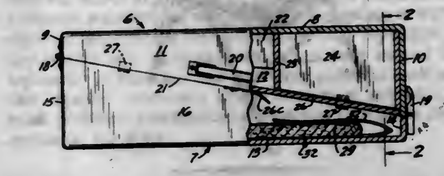
3,094,354
CAR SEAT ASSEMBLY
Roland J. Bernier, Newton, N.H.
(Rte. 2, Box 223B, Plaistow, N.H.)
Filed Apr. 16, 1962, Ser. No. 187,893
5 Claims. (Cl. 297—112)



1. In combination, a vehicle seat including a bottom and a back, said back having a recess therein, and an auxiliary seat including a vertically swingable cushioned panel pivotally mounted on the back and engaged in the recess when in an inoperative position and resting on the bottom in an operative position, a foldable front fence hingedly mounted for vertical swinging movement on the free end portion of the panel and including a slidable extension on one end, a plate slidable on the panel and providing a lateral extension therefor, and means connecting the fence extension to the plate for operation in unison therewith.

3,094,355
COMBINATION INFANT'S SUPPLY CARRIER AND SEAT
Eugene M. Pedro, 4210 McKnight Road, White Bear Lake, Minn.
Filed July 10, 1961, Ser. No. 122,928
7 Claims. (Cl. 297—129)

1. A combination infant's supply carrier and seat comprising, a pair of complementary seat and supply trays each having a unitary, rigid, oblong back wall and four side wall members disposed substantially at right angles to said back wall, said side wall members for each tray including a narrow end wall member, a relatively wide end wall member and a pair of unitary, rigid elongated wall members of substantially greater length than the length of either of said end wall members connecting the narrow end wall member to the relatively wide end wall member of each tray, each of such elongated wall members being substantially equal in length to said oblong



back walls, the several wall members of one of said trays fitting in edge-to-edge contact with the complementary wall members of the other tray when the case is closed, means for detachably securing said trays in case closing relative positions, means dividing said supply tray into a plurality of compartments for infant's supplies, said seat tray, when detached from said supply tray being adapted to support an infant in sitting position on the relatively wide end wall member thereof with the oblong back wall as a back rest.

3,094,356
CHILD'S CAR SEAT
Mary Burke, 507 W. 13th St., Sterling, Ill.
Filed June 5, 1962, Ser. No. 200,093
14 Claims. (Cl. 297—254)



1. A seat of the character described comprising a fixed support, a generally L-shaped frame member pivoted with respect to said support by means of the upright leg of the L for lateral oscillation of the horizontal leg, a generally rectangular horizontal frame above said horizontal leg fixed to said upright leg for oscillation laterally with the horizontal leg, a horizontal seat bottom supported for oscillation with said horizontal leg, an upright seat back supported for oscillation with said horizontal frame, and detent means for releasably holding the seat in either one of a plurality of positions of lateral adjustment.

3,094,357
CHAIR
Jesse Shwayder, Jefferson County, Colo., assignor to Shwayder Bros., Inc., Denver, Colo., a corporation of Colorado
Filed Aug. 17, 1959, Ser. No. 834,004
1 Claim. (Cl. 297—452)

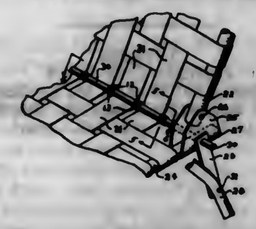
A chair seat comprising a generally smooth non-stretchable sheet; and a rigid frame formed integrally with said sheet including flanges extending downwardly from said sheet, said sheet being of sufficient area to provide a normally convex upper surface and having sufficient resiliency

that said surface will become concave when the weight of a normal user is placed thereon, but will spring back



to said convex position when the weight of the normal user is removed.

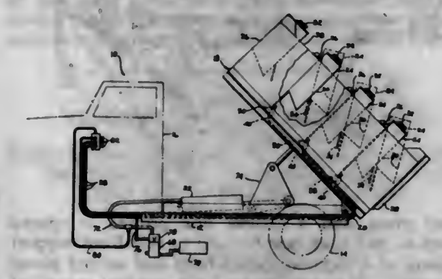
3,094,358
SEPARATOR MEANS FOR WEBBING
William F. Hartman, Cheltenham, Pa., assignor to The Bunting Company, Inc., Philadelphia, Pa., a corporation of Pennsylvania
Filed Mar. 31, 1959, Ser. No. 803,113
5 Claims. (Cl. 297—454)



1. In webbed sitting furniture having back and seat frames coupled to one another proximate the lower back frame and rear seat frame ends respectively, the combination comprising, a horizontal rod extending transversely to and coupled to the said back and seat frames proximate their coupled ends, a plurality of horizontally spaced parallel webbing straps each extending longitudinally of and secured to said back and seat frames and passing under and behind said rod between the points of securement to said frames, and a webbing strap separator including a backing strip disposed behind said webbing straps in parallel relationship to said rod and spaced from the latter by spacer means equal to substantially the intervening strap thickness so that the webbing straps may shift longitudinally without binding to the said rod, said backing strip being quick detachably secured to said rod by clip means formed integrally with said backing strip and projecting therefrom between said webbing straps into clipping engagement with said rod, said clip means also separating adjacent webbing straps from one another.

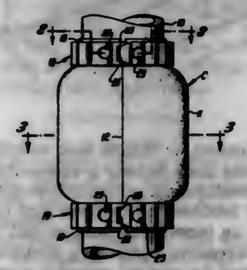
3,094,359
HYDRAULIC SYSTEM FOR DUMP TRUCKS
Fred Bizzantz and Arthur H. Ruth, Galion, Ohio, assignors to Hercules Galion Products Inc., a corporation of Delaware
Filed Jan. 7, 1960, Ser. No. 1,123
2 Claims. (Cl. 298—8)

1. A dump truck having a partitioned dump truck body and a hydraulic system therefor, said truck and system comprising a partition in said dump truck body pivoted thereto for free swinging movement with respect thereto, means for releasably holding said partition in a predetermined position laterally of said body, linkage means for releasing said partition from said holding means, a main hoist for raising said body, a main hoist control valve, a pump, an auxiliary ram connected to said linkage means for releasing said partition when said auxiliary ram is expanded and said body is raised, an auxiliary ram control valve, a supply line connecting



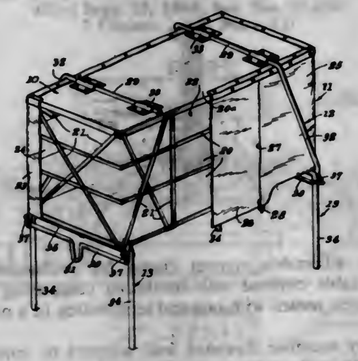
said pump through said main hoist control valve to said main hoist, a first connecting line connecting said auxiliary ram control valve and said auxiliary ram, a second connecting line connecting said auxiliary ram control valve and said supply line, whereby hydraulic fluid under pressure will be supplied from a cylinder of said main hoist through said supply line and said auxiliary ram control valve to said auxiliary ram when said body is raised and said auxiliary ram control valve is opened to operate said linkage means and release said partition.

3,094,360
SPLIT PROTECTOR FOR WELL PIPE
Charles H. Collett, P.O. Box 411, Menlo Park, Calif.
Filed Jan. 27, 1961, Ser. No. 85,229
13 Claims. (Cl. 308—4)



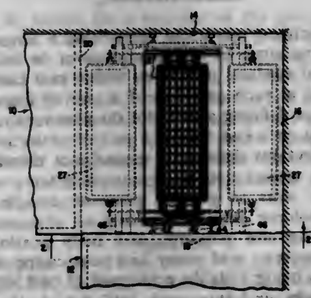
1. A well pipe protector, comprising generally endwise split tubular elastomeric body means adapted to be placed about the pipe, metallic gripping means carried within said body means to extend generally lengthwise thereof for engagement against the pipe, said gripping means being locally exposed at opposite ends of said body means, said body means being bonded to said gripping means and said local exposure of the gripping means being everywhere within endwise projection of a cylinder defined by the outer periphery of said body means, and other means at opposite ends of said body means for locally applying force acting to hold said gripping means in tight engagement with the pipe.

3,094,361
CONVERTIBLE CAMPER'S CUPBOARD
David Poyer, 6129 Vineland, North Hollywood, Calif.
Filed Mar. 27, 1961, Ser. No. 98,413
3 Claims. (Cl. 312—6)



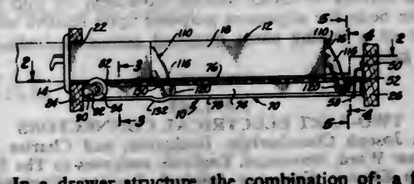
1. A convertible camper's cupboard comprising
(*a*) a plurality of shelves with flexible members extending between and connecting the shelves,
(*b*) a pair of similar bails hingedly connected to one outer shelf inwardly spaced from the opposite ends of said outer shelf and adapted to be swung to a position extended from said outer shelf to constitute a pair of hangers for said plurality of shelves while the portions of the flexible members between the shelves suspend the respective shelves in spaced relation one beneath the other,
(*c*) foldable legs mounted on the opposite outer shelf and movable between a position folded flat against the latter shelf and an extended position to support said latter shelf, and
(*d*) means locking the bails to the legs after said bails are swung from their positions as hangers over and around the opposite ends of the plurality of shelves, thereby constituting the bails braces supporting the upper shelf from the legs while said flexible members hold the several shelves separated one from the other.

3,094,362
ROTARY RACKS FOR KITCHEN CABINETS AND THE LIKE
Hilton B. Murray, 66 N. Murray Place, York, Pa.
Filed Jan. 31, 1961, Ser. No. 86,196
3 Claims. (Cl. 312—267)



2. In combination, a first and a second kitchen cabinet each resting on a common floor surface and having their tops lying in a common horizontal plane providing portions of a counter surface, said cabinets having ends meeting at right angles to each other and having front walls meeting in a common vertex thereby providing immediately beyond said ends of the cabinets a corner space bounded solely by said cabinet ends and the room walls behind the cabinets, a rotary storage rack positioned in said corner space comprising a rotor revolvable about a horizontal axis and a plurality of storage containers removably suspended circumferentially equidistantly on said rotor, a counter top covering said corner space and being substantially coplanar with the tops of the cabinets so as to cooperate therewith in providing other portions of said counter surface and having substantially centrally over said storage rack an opening slightly wider and longer than the width and length of each of said containers, and a closure mounted on said opening and being movable to uncover the opening for withdrawal and replacement of any one of said containers which has been moved to the top center of the rotor and providing access to each of any two adjacent containers which have been moved to topmost positions symmetrically disposed relative to the top center of the rotor.

3,094,363
DRAWER SLIDE
Viles K. Fremstad, Whittier, and Howard B. Gorton, West Covina, Calif., assignors to Ajax Hardware Manufacturing Corp., City of Industry, Calif., a corporation of California
Filed Jan. 16, 1961, Ser. No. 82,758
5 Claims. (Cl. 312—343)

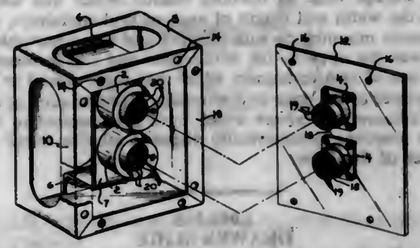


1. In a drawer structure, the combination of: a front mounting panel having a drawer receiving opening therein; a rear mounting panel spaced from said front mounting panel; a drawer guide mounted at each side of said front mounting panel adjacent said drawer opening; a front mounting bracket secured to the bottom of said opening intermediate the sides thereof; a rear mounting bracket secured to said back panel, said rear mounting bracket having a mounting plate and a mounting arm upon said mounting plate incorporating a track receiving opening, said mounting arm being sprung outwardly with respect to said plate; a roller track having its rear extremity engaged in said opening and wedgingly locked therein by the spring action of said arm and having its forward extremity secured to said front mounting bracket; a drawer disposed in said drawer receiving opening having side edges and a rear wall, said side edges being engaged by said guides; a roller bracket mounted on the rear wall of said drawer; and a roller upon the lower extremity of said roller bracket engageable with said track.

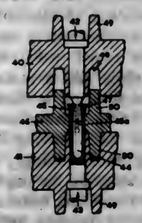
3,094,364
CONNECTOR MOUNTING
Thomas R. Lingg, Camp Hill, Pa., assignor to AMP Incorporated, Harrisburg, Pa.
Filed July 8, 1960, Ser. No. 41,560
4 Claims. (Cl. 339—64)

4. Electrical connecting means comprising a panel, a connector body extending through an opening in said panel which is oversized relative to said connector body, one end of said connector body being on one side of said panel and the other end of said body being on the opposite side of said panel, a guide member in coaxial surrounding relationship with, and mounted on, said connector body on said one side of said panel and normally

extending beyond said one end, a cylindrical housing on said one side of said panel in surrounding relationship to said connector body and in surrounding and overlapping relationship with portions of said guide member, opposed abutting shoulders on said housing and said guide, the end of said housing adjacent said panel being inwardly offset to define a second shoulder in said housing, a coil spring acting between said second shoulder and said guide, the inwardly offset portion of said housing being received within said oversized opening in said panel, and means on said other end of said connector body to prevent passage thereof through said opening, said abutting shoulders of said guide member and said housing permitting limited movement of said guide thereby to effect limited movement of said connector body for alignment purposes upon relative movement of a mating panel mounted connector body into said guide.

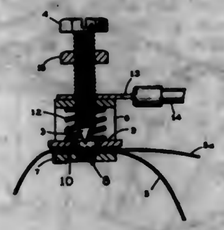


3,094,365
TWO-PART ELECTRICAL CONNECTORS
John Joseph Chamberlain, Benington, and Charles Andrew Ward, Stevenage, England, assignors to The English Electric Company Limited, London, England, a British company
Filed Sept. 26, 1960, Ser. No. 58,411
6 Claims. (Cl. 339—75)



1. A two-part electrical connector comprising on one part thereof at least one contact pin of predetermined cross-section having a tip portion of predetermined shape, a root, and a tapered portion between said tip portion and said root to form a neck, the cross-sectional area of said tapered portion being less than the cross-sectional area of said tip portion, said connector comprising on the other part thereof a resilient sleeve having an open end cooperating with and receiving said tip portion within said sleeve at said open end, said sleeve gradually increasing in thickness and being flared outwardly toward said open end, said connector further including a clamping member positioned about said sleeve and relatively movable along said sleeve to deform the thickened portion of said sleeve inwardly from a pivot point on said sleeve into said neck, said thickened portion of said sleeve contacting said neck, thereby to lock said pin and sleeve positively against disengagement.

3,094,366
ELECTRIC TEST CLAMP
James R. Harnett, Jr., 6845 SW. 17th St., Miami, Fla.
Filed Mar. 13, 1962, Ser. No. 179,439
4 Claims. (Cl. 339—97)



2. An adjustable contact clamp for multi-conductor electric cable covered with insulation comprising a terminal screw means with one end terminating in a piercing point,

a body member threaded and adapted to adjustably retain said screw means for axial movement therethrough when driven,

a band having one end thereof secured in said member and the opposite free end portion adapted to overlap said one end in said member when said band is wrapped around the periphery of said cable,

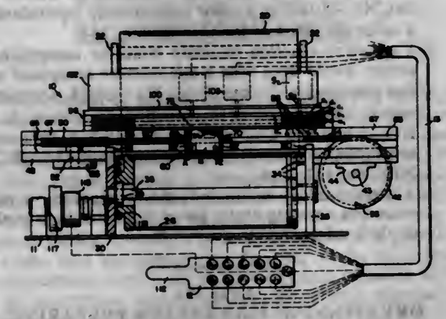
a spring means in said member retained and positioned to urge said end portion into frictional engagement with said member for temporarily holding said band when pre-tensioned around the periphery of said cable and whereby said point will pierce said end portion of said band and said insulation for engagement with at least one of said conductors in said cable when said screw means is driven a predetermined distance through said end portion and said member.

3,094,367
DUPLEX RECEPTACLE AND METHOD OF MANUFACTURING
Jacob Schmier, Allentown, Pa., assignor to Rodale Mfg. Co., Inc. (also known as Rodale Manufacturing Co., Inc. and Rodale Manufacturing Company, Inc.), Emmaus, Pa., a corporation of Pennsylvania
Filed June 29, 1960, Ser. No. 39,630
9 Claims. (Cl. 339—122)



1. An electrical receptacle comprising a cover, a casing, a holding strap to secure said cover to said casing and electrical contacts positioned within said casing, said cover having at each end thereof a pair of fingers, each pair of fingers defining a first slot therebetween, said casing having at each end thereof a pair of projections, each pair of projections defining a second slot therebetween, each of said second slots being complementary with one of said first slots to provide pairs of complementary slots, said holding strap comprising an elongated body portion having end portions, said body portion being positioned between said cover and said casing and said end portions being slidably positioned to rest upon said pairs of fingers, and ears, each having fastening means, extending from said holding strap, said ears each being positioned within one of said pairs of complementary first and second slots so that said fastening means cooperate with said pairs of projections to secure said casing to said cover, whereby said end portions of said strap bear against said fingers.

3,094,368
FLAW RECORDER
Henry E. Peck, Fairport, N.Y., assignor to Tricot Equipment Company, Incorporated, Fairport, N.Y., a corporation of New York
Filed Sept. 15, 1960, Ser. No. 56,295
7 Claims. (Cl. 346—33)



1. Apparatus for making a record of flaws in an elongate piece of material while the material is traveling past an inspection point, comprising a keyboard, a plurality of manually-operable separately-movable buttons mounted on said keyboard, each of said buttons representing, respectively, a separate type of flaw and adapted to be actuated when the corresponding flaw in the material passes the inspection point, a frame, a bed mounted in said frame for supporting a record form, a carriage slidably mounted on said frame in operative relation to said bed, a plurality of aligned marking members movably mounted in said carriage and spaced from one another in a direction perpendicular to the direction of movement of said carriage, spring means constantly urging said marking members away from said bed, means connected to said carriage to move said carriage in one direction substantially parallel to the surface of said bed at a rate of speed proportional to the rate of speed of travel of the piece of material, a plurality of bail bars movably mounted on said frame above said carriage, each of said bail bars having an elongated portion spaced above a respective marking member and extending a distance at least equal to the maximum travel of said carriage, spring means constantly urging said bail bars in one direction away from said marking members, a plurality of electromagnetic means mounted in engagement with said bail bars and each operative when energized to engage a respective bail bar to cause the elongate portion thereof to engage a marking member to cause said marking member to mark the form positioned on said bed, and electrical circuit means connecting each of said manually-operable buttons to one of said electromagnetic means for energizing a respective electromagnetic means when a corresponding button is actuated, thereby causing a record to be made on said form in a position corresponding to the location of the flaw along the longitudinal length of the material.

CHEMICAL

3,094,369
PROCESS FOR PRINTING OF TEXTILE MATERIAL
Hugo Bartl and Erich Feese, Frankfurt am Main, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany, a company of Germany
No Drawing. Filed June 28, 1960, Ser. No. 39,215
Claims priority, application Germany July 4, 1959
7 Claims. (Cl. 8—65)

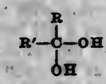
1. In a process for producing white and colored resists on pads made on cellulosic fabrics with leucosulfuric acid esters of vat dyestuffs and salts of nitrous acid, the improvement which comprises treating said fabric with a resisting agent consisting essentially of an addition product of (A) an alkali metal sulfoxylate, (B) a compound of the formula



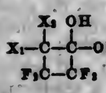
wherein R_1 stands for a member of the group consisting of hydrogen, lower alkyl and phenyl, R_2 stands for a member of the group consisting of hydrogen, lower alkyl, phenyl and furyl, and R_1 and R_2 together represent an alkylene group forming a cycloalkyl group with the carbonyl carbon atom, and (C) a compound of the group consisting of hydrazine, phenyl amino compounds and phenyl imino compounds, the molar amounts of components A and B being at least about equal to the molar amount of component C.

3,094,370
METHOD OF TREATING LEATHER WITH POLYFLUOROPOLYHALO GEM-DIOLS
William D. Nicoll, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Dec. 13, 1961, Ser. No. 159,160
12 Claims. (Cl. 8—94.21)

1. The method of treating leather which comprises contacting the same with a gem-diol of one of the formulas



and



wherein R and R′ are selected from the group consisting of fluoroperhalomethyl, difluoromethyl and perfluoroalkyl, ω-chloroperfluoralkyl and ω-hydroperfluoralkyl of 2–6 carbons and X_1 and X_2 are selected from the group consisting of fluorine and chlorine.

3,094,371
TEXTILE TREATMENT WITH AMINOPLAST AND POLYACRYLAMIDES AND THE TEXTILE SO TREATED
William Julius Van Loo, Jr., Middlesex, and Theodore F. Cooke, Martinsville, N.J., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine
No Drawing. Filed June 13, 1957, Ser. No. 665,606
6 Claims. (Cl. 8—116.2)

1. A process for treating textile materials containing groups reactive with the group $-CH_2OH$ to impart durable stiffness thereto which comprises treating said material with an aqueous solution consisting essentially of (1) a substantially water-soluble, heat-curable, at least difunctional aminoplast, (2) a water-soluble thermoplastic polyamide selected from the group consisting of polyacrylamide, polymethacrylamide and mixtures thereof, and (3) an acid acting curing catalyst for said aminoplast, said (1) and (2) being present in aqueous solution in weight ratios of from 3 to 10% of the former and 1 to 10% of the latter, wherein at least 1% of the polyamide is applied to the material based on its dry weight and

thereafter subjecting said material to elevated temperatures to cure (1) in intimate association with (2).

3,094,372

PROCESS OF WET CREASEPROOFING CELLULOSE FABRICS WITH SPECIFIC ALDEHYDE SOLUTIONS CONTAINING SPECIFIC METAL SALTS AND PRODUCTS PRODUCED THEREBY

Gilbert S. Hibbert, Disley, William S. Miller, Ashton-on-Mersey, and Arthur Schofield, Middleton, England, assignors to The Calico Printers' Association Limited, Manchester, England

No Drawing. Filed Oct. 28, 1959, Ser. No. 849,156
Claims priority, application Great Britain Oct. 30, 1958
6 Claims. (Cl. 8—116.4)

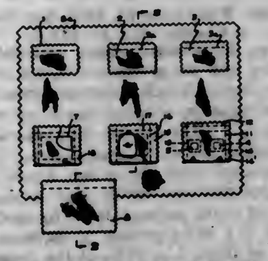
1. A process for the treatment of fabrics formed of cellulose fibers to impart to the fabric the ability to recover from creases imposed on the fabric in the wet state sufficient to substantially reduce the need for ironing after laundering which comprises impregnating said fabric with at least about 40 parts by weight per 100 parts of the dry weight of the fabric of an aqueous solution of a water-soluble aldehyde selected from the group consisting of formaldehyde, glyoxal, hydroxy adipaldehyde, and pyruvic aldehyde, an acid having an ionization constant of at least 0.01 selected from the group consisting of sulfuric, phosphoric, trichloracetic and hydrochloric acids and a water-soluble metal salt selected from the group consisting of calcium chloride, magnesium chloride, sodium chloride, sodium bisulfate, sodium nitrate, sodium trichloracetate, monosodium phosphate, potassium chloride and lithium chloride, said solution containing between about 50 to 300 g./l. of said aldehyde, between about 10 to 300 g./l. of said acid and an amount between 50 and 400 g./l. of said salt, the concentration of said acid in conjunction with said salt being such as to impart to the solution a pH between about —0.2 and —0.8, and a swelling of the cellulose fibers of the fabric at least about as great as the swelling in pure water, said concentrations being in g./l. of solution, and causing a reaction to occur between the aldehyde and the cellulose fibers of said fabric while holding the fabric in an extended condition completely free of any creases in the wet state swollen with said solution by so maintaining the swollen fabric at a temperature between about 0° and 100° C. for a time corresponding at the temperature used to between about 24 to 48 hours at 20° C., said time being an inverse function of the temperature until a wet crease-proofing effect is obtained, then completely freeing the fabric of all said solution and drying the solution-free fabric.

3,094,373

TESTER FOR LAUNDRY PROCESS AND LAUNDRY PROCESS EMPLOYING THE SAME

Louis F. Luechauer, P.O. Box 54, Sugarhouse Station, Salt Lake City, Utah

Filed Dec. 4, 1961, Ser. No. 156,753
17 Claims. (Cl. 8—137)



1. A laundry tester for determining the intensity of a sudsing operation in a laundry process comprising:

(*a*) a cotton textile enclosed in a water-permeable and dye-impermeable plastic envelope, said textile being dyed with a dye classified by the Color Index No. 16,605 to a color substantially equivalent to a color classified as ISCC–NBS No. 248;

(*b*) an alkali-reaction intensity indicator comprising a wool textile dyed with a dye classified by Colour Index No. 45,100 to a color substantially equivalent to a color classified as ISCC–NBS No. 254;

(*c*) an alkali-reaction intensity indicator comprising a cotton textile dyed with a dye mixture composed of a dye classified as Colour Index No. 30,925, containing minor amounts of dyes classified as Colour Index No. 11,020 and Colour Index No. 19,555, to a color substantially equivalent to a color classified as ISCC–NBS No. 151; and

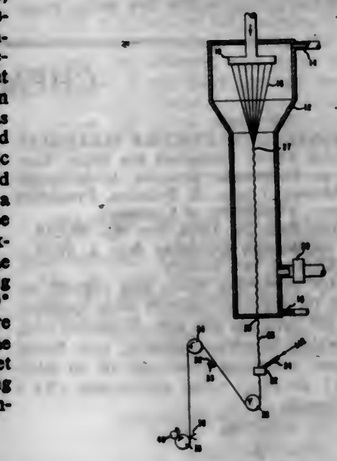
(*d*) a mechanical action indicator comprising a piece of cotton sheeting and a piece of poplin both pinked at their edges.

3,094,374

DRY SPINNING PROCESS FOR PREPARING COALESCED SPANDEX FILAMENTS

Perry M. Smith, New Shrewsbury, N.J., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed July 11, 1961, Ser. No. 123,248
3 Claims. (Cl. 18—54)



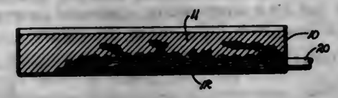
1. A process for preparing a coalesced multifilament which comprises extruding a solvent-containing solution of a spandex polymer through a spinneret having a plurality of orifices therein into a spinning cell to form a plurality of separate filaments, forwarding said filaments in an unsupported fashion through said cell while simultaneously introducing into said cell a gaseous evaporative medium, withdrawing said filaments from said cell through an outlet remote from said orifices and thence through a vortex of circulating gaseous fluid wherein said fluid exerts a torque on said filaments imparting a false twist thereto, said false twist extending back along the line of said filaments into said cell to a point at which the filaments are in a sufficient plasticized state to adhere to each other thereby forming a false-twisted coalesced multifilament, passing said twisted multifilaments from said vortex into contact with forwarding means under sufficient tension to counteract said torque imparted by said vortex thereby removing said false twist.

3,094,375

METHOD OF PRODUCING ARTISTIC CASTINGS

Edward J. Halford, 536 E. Olive, Fresno, Calif.

Filed Nov. 13, 1961, Ser. No. 151,637
7 Claims. (Cl. 18—58)



1. A method of casting an article comprising the steps of melting a wax substance in a container of predetermined dimensions; introducing into the container a cooling liquid immiscible in relation to the melted wax, the cooling liquid having a temperature of vaporization greater than the melting point of the wax whereby the wax is cooled below its melting point thereby forming a pattern having a configuration provided with a plurality of concavities and convexities; draining off the immiscible liquid; casting about said pattern a plastic material while in an amorphous state; hardening the plastic material to form a cast article; and elevating the temperature of the agglomerate article formed by the hardened plastic material and the pattern to a point greater than the melting temperature of the pattern thereby to remove the wax substance from the cast article.

3,094,376

METHOD OF CONSTRUCTION OF LOW FRICTION ELEMENTS

Paul P. Thomas, Detroit, Mich., assignor to American Metal Products Company, Detroit, Mich., a corporation of Michigan

Filed Oct. 3, 1958, Ser. No. 765,213
6 Claims. (Cl. 18—59)



1. The method of constructing a low friction element, which includes the steps of, applying one or more coatings of like low friction material in solution form directly to an element of curved surface configuration, driving the liquid from the solution, positioning a housing about said element and molding a hardenable backing material within said housing so as to completely fill the space therein, said molded material engaging said coating material and housing in a manner to prevent rotation therebetween when producing relative movement between said element and the low friction coating.

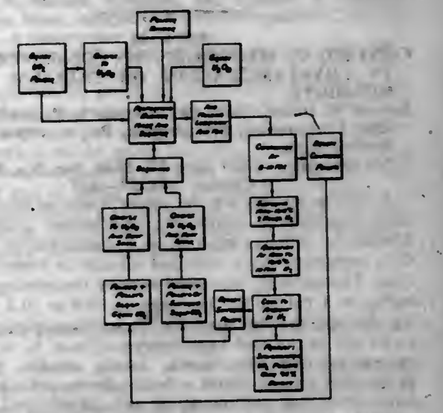
3,094,377

METHOD FOR PRODUCING HIGH DENSITY URANIUM OXIDE

Kasimir Langrod, Sherman Oaks, Calif., assignor, by mesne assignments, to Sylvania Electric Products Inc., a corporation of Delaware

Filed Mar. 29, 1960, Ser. No. 18,292
6 Claims. (Cl. 23—14.5)

1. The method for producing densified stoichiometric uranium dioxide comprising compacting non stoichiometric uranium dioxide at 5 to 10 t.s.i., sintering the compacted uranium dioxide in a nitrogen atmosphere for approximately 2 hours at a temperature in the range of 1300° to 1315° C., and subjecting said sintered uranium



dioxide to a forced hydrogen atmosphere for 10 minutes while still at said elevated sintering temperature.

3,094,378

PROCESS FOR LEACHING OF ALUMINA FROM ALUMINOUS MATERIAL

Neil H. Wolf, 1909 Thirba St., Metairie, La.

No Drawing. Filed Sept. 13, 1961, Ser. No. 138,238
7 Claims. (Cl. 23—52)

1. In a process for leaching alumina from finely divided aluminous material by digestion with aqueous sodium hydroxide solution, the concentration of said sodium hydroxide varying from about 40 grams to about 400 grams NaOH per liter at digestion temperatures of about 225° F. to about 450° F. that improvement consisting of adding an alkali metal boron compound soluble in said aqueous sodium hydroxide digestion solution, said alkali metal boron compound being a member of the class consisting of alkali metal metaborate, alkali metal tetraborate and alkali metal perborate, the amount of said alkali metal boron compound varying from about 10 grams per liter to about 400 grams per liter of digestion solution and said digestion is carried out for a period of about ½ hour to about 1 hour whereby the extraction of alumina from said aluminous material is increased over the amount which would be extracted in the absence of said alkali metal boron compound and the time for extracting alumina from the aluminous material is shortened under the stated temperature conditions of said digestion.

3,094,379

PROCESS FOR PREPARING PRUSSIAN BLUE, AND ANALOGOUS PIGMENTS, FROM HYDROCYANIC ACID, FERROUS SULPHATE AND BASES

Livio Cambi, Milan, Italy, assignor to Montecatini Società Generale per l'Industria Mineraria e Chimica, Milan, Italy

No Drawing. Filed June 1, 1960, Ser. No. 33,091
Claims priority, application Italy June 4, 1959
8 Claims. (Cl. 23—77)

1. A process of making leuco ferrous-ferrocyanide suitable for oxidation to blue pigment, comprising reacting the substances hydrocyanic acid, ammonia, and ferrous sulphate in aqueous medium, at a pH of from 3.5 to 5.5 maintained until the reaction of said substances is substantially completed, the reaction being carried out in non-oxidizing atmosphere, the molar ratio of the reactants being substantially as follows:

$$HCN:NH_3:FeSO_4=3:2.25:1$$

to maintain said pH, the process being carried out by add-

ing the ammonia to an aqueous solution of hydrocyanic acid saturated with ferrous sulphate.

3,094,380

CONTROL OF HYDROGEN ION CONCENTRATION IN CRYSTALLIZATION OF CALCIUM HYPOCHLORITE

Everett A. Bruce, Paoli, Pa., assignor to Pennsalt Chemicals Corporation, Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Filed June 27, 1960, Ser. No. 38,755
9 Claims. (Cl. 23—86)

1. In the process for the manufacture of neutral calcium hypochlorite comprising chlorinating calcium hydroxide in aqueous medium at a concentration to produce approximately a saturated solution in respect to calcium hypochlorite, the improvement comprising chlorinating to a pH within the range of 10.0 to 10.6, clarifying the said calcium hypochlorite solution, adding alkali metal salt to the said hypochlorite solution to crystallize neutral calcium hypochlorite, adding alkaline material to the said crystallization to maintain the pH within the range of 10.0 to 10.6 during the crystallization and thereafter separating the neutral calcium hypochlorite crystals from the mother liquor.

3,094,381

PRODUCTION OF AMMONIUM FLUORIDE FROM GASEOUS COMPOUNDS OF SILICON AND FLUORINE

Albert H. Cooper, Ridgewood, N.J., assignor to United Technical Industries, Inc., Murray, Utah, a corporation of Delaware

No Drawing. Filed Mar. 21, 1958, Ser. No. 722,847
6 Claims. (Cl. 23—88)

1. A process for the production of fluorine-containing compounds which comprises adding an aqueous fluosilicic acid-containing solution to sufficient aqueous ammonia to maintain a pH above 7 in the resulting reaction mixture, and separating the resulting silica which precipitates from the resulting ammonium fluoride solution.

3,094,382

PREPARATION OF SODIUM TRIPOLYPHOSPHATE

Bernard Bigot, Grand-Quevilly, France, assignor to Compagnie de Saint-Gobain, Paris, France

No Drawing. Filed Dec. 2, 1958, Ser. No. 777,595
Claims priority, application France Dec. 4, 1957
1 Claim. (Cl. 23—107)

In a method of transforming a calcined mixture of sodium tripolyphosphate, containing a substantial quantity of form I, to form II containing not substantially more than 4% form I, the step of adding to the said mixture of form I and form II a catalytic amount of a compound from the group consisting of water, HNO_3, and the nitrates of ammonia, potassium, sodium, and lead, in a proportion equivalent in effect to about .5% to 5% NH_4NO_3, heating the resulting mixture from several minutes to several hours at temperatures varying between about 500 and 200° C. respectively, cooling the resulting reaction mass, and recovering the said polyphosphate.

3,094,383

METHOD FOR MAKING SYNTHETIC ZEOLITIC MATERIAL

Frank J. Dzierzanowski, Bound Brook, and Walter L. Haden, Jr., Metuchen, N.J., assignors to Minerals & Chemicals Philipp Corporation, Menlo Park, N.J., a corporation of Maryland

No Drawing. Filed Dec. 16, 1960, Ser. No. 76,145
12 Claims. (Cl. 23—112)

1. A method for making a synthetic zeolite directly in the form of coherent polycrystalline aggregates which comprises forming reaction masses consisting of an apparently homogeneous mixture of sodium aluminate, at least one siliceous material selected from the group consisting of hydrous silica, finely divided amorphous silica and the finely divided silica residue of a silicate mineral originally having a continuous network, and water, said mixture having a composition, expressed in terms of mol oxide ratios, which falls within the range:

SiO_2/Al_2O_3	2 ± 0.05
Na_2O/SiO_2	$0.5\begin{cases}+0.05\\-0.025\end{cases}$
H_2O/Na_2O	5 to 25

aging said masses while maintaining them out of contact with an external aqueous liquid phase while preventing said masses from dehydrating for a time sufficient to crystallize the masses into the desired crystalline zeolite in the same form as said reaction masses.

3,094,384

METHOD OF CONTROLLING PROPERTIES OF POROUS METAL OXIDES

Ralph J. Bertolacini, Chesterton, and Harry M. Brennan, Hammond, Ind., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana

No Drawing. Filed Sept. 29, 1958, Ser. No. 763,805
3 Claims. (Cl. 23—141)

2. A method of preparing alumina of decreased pore size and surface area, which method comprises subjecting an alumina hydrogel to pressures in excess of about 50,000 p.s.i. for a period in the range of about 0.1 to 100 hours, depressuring, and thereafter drying and calcining.

3. A method of preparing silica of decreased pore diameter, which method comprises subjecting a silica hydrosol to pressures in excess of about 50,000 p.s.i. for a period in the range of about 0.1 to 100 hours, depressuring and thereafter drying and calcining.

3,094,385

METHOD FOR THE PREPARATION OF ALUMINA FIBERS

Philip H. Brisbin, Schenectady, and William J. Heffernan, Delmar, N.Y., assignors to General Electric Company, a corporation of New York

No Drawing. Filed Oct. 13, 1960, Ser. No. 62,335
5 Claims. (Cl. 23—142)

1. A process for alumina fiber preperation comprising (1) the introduction of a gaseous mixture of a volatile aluminum compound, carbon dioxide and hydrogen into a reaction chamber heated to at least 1100° C. at the inlet zone for the introduction of the gaseous mixture, (2) thereafter reacting the gaseous mixture during passing through the reaction chamber to form alumina at a reduced pressure of not more than 100 mm. of mercury vacuum and while simultaneously maintaining a temperature gradient in the reaction chamber along the direction of the gas flow up to a temperature of approximately 1500° C. at the exit end of the reaction chamber, and (3) finally depositing the alumina reaction product of (2) at the exit end of the reaction chamber in the form of single crystal fibers of hexagonal structure.

3,094,386

PROCESS FOR THE MANUFACTURE OF TITANIUM DIOXIDE

Raymond James Wigginton, Luton, England, assignor to Laporte Titanium Limited, Luton, England, a British company

No Drawing. Filed Dec. 3, 1957, Ser. No. 700,271
Claims priority, application Great Britain Dec. 4, 1956
12 Claims. (Cl. 23—202)

1. A process for the manufacture of titanium dioxide from a titanium-bearing ore containing iron as the main impurity, by heating the ore with a reducing agent to reduce iron compounds in the ore to metallic iron without producing a liquid slag, the percentage of metallic iron present immediately after the reduction being at least 80% based on the total quantity of iron present calculated as Fe, removing metallic iron from the reduced ore, sulphating to bring the titanium into soluble form, dissolving the soluble titanium in an aqueous medium and precipitating titanium dioxide from the solution by hydrolysis, wherein there is added, after the reduction and before the sulphation, a quantity of a titanium-bearing ore, which contains from 20 to 60% of titanium calculated as TiO_2 on the weight of the ore and has iron as the main impurity, to provide, in the material to be sulphated, a TiO_2:Fe ratio lying within the range from 2:1 to 6:1 and a percentage of iron present in the form of iron compounds of at least 30% calculated as Fe and based on the total iron present.

3,094,387

PROCESS FOR PREPARING BORON PHOSPHIDE

Forrest V. Williams, Dayton, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Oct. 21, 1957, Ser. No. 691,158
3 Claims. (Cl. 23—204)

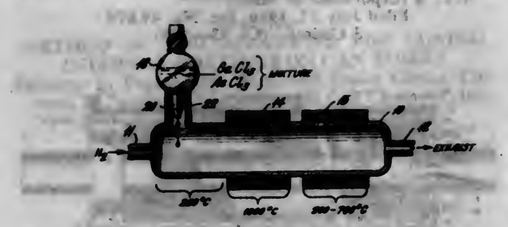
1. Process for the preparation of crystalline boron phosphide which comprises contacting solid boron with the vapor of phosphorus at a temperature between about 800° C. and 1500° C.

3,094,388

METHOD OF PRODUCING GALLIUM OR ALUMINUM ARSENIDES AND PHOSPHIDES

Rowland E. Johnson and Edward W. Mehal, Dallas, Tex., assignors to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware

Filed Dec. 11, 1959, Ser. No. 859,060
4 Claims. (Cl. 23—204)



1. A method of producing the compound semiconductor gallium arsenide which comprises passing a vapor phase mixture of hydrogen and halides of gallium and arsenic into a high temperature zone maintained at a temperature in the range of from about 900° C. to about 1100° C. to cause the hydrogen to react with the halides producing a reactant stream comprising the halide of gallium as a lower order halide and arsenic in the elemental state, passing the reactant stream produced into contact with a relatively cool surface maintained at a temperature of from about 200° C. to about 900° C. to ensure that the lower order halide of gallium disproportionates releasing part of the gallium in the elemental state and forming the higher order halide of the remaining part of the gallium whereby the elemental gallium combines with the elemental arsenic and condenses on the cool surface as the compound semiconductor gallium arsenide.

3,094,389

PRODUCTION OF SILICON TETRACHLORIDE

Robert N. Secord, Wenham, and Charles B. Woodall, Canton, Mass., assignors to Cabot Corporation, Boston, Mass., a corporation of Delaware

No Drawing. Filed Dec. 15, 1959, Ser. No. 859,568
9 Claims. (Cl. 23—205)

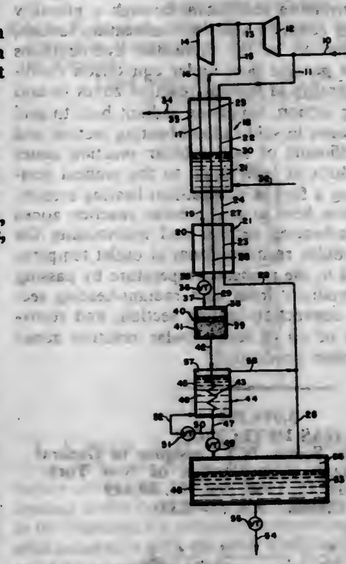
1. A process for producing silicon tetrachloride at high yields which comprises reacting finely-divided silica sand entrained in a gaseous medium, said gaseous medium being one chosen from the group consisting of chlorine, carbon monoxide, phosgene, air, oxygen, inert gases, and mixtures of any of same, with a reactant chosen from the group consisting of a gaseous mixture of carbon monoxide and chlorine, and phosgene, in a flame at temperatures between about 2200° F. and about 2800° F.

3,094,390

PRODUCTION AND STORAGE OF CONVERTED HYDROGEN

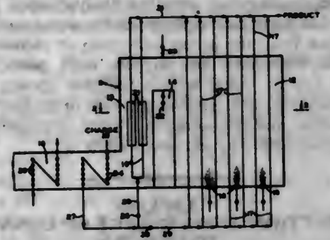
Peter C. Vander Arend, Allentown, Pa., assignor, by mesne assignments, to Air Products and Chemicals, Inc., Trexlertown, Pa., a corporation of Delaware

Filed July 9, 1958, Ser. No. 747,546
7 Claims. (Cl. 23—210)



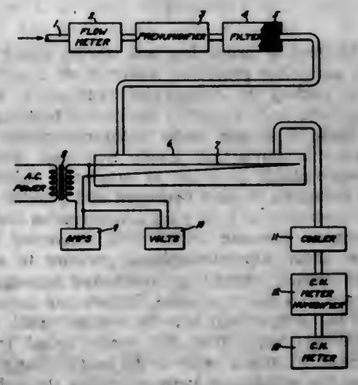
1. Method of producing and storing liquid hydrogen which comprises providing a stream of compressed hydrogen, cooling the compressed hydrogen in a heat exchange zone and expanding the cooled hydrogen to provide liquid hydrogen under superatmospheric pressure, catalytically converting liquid hydrogen while under superatmospheric pressure to accelerate conversion of ortho hydrogen to para hydrogen and provide converted liquid hydrogen of high para concentration under superatmospheric pressure, transferring converted liquid hydrogen under superatmospheric pressure to adjacent a storage vessel, expanding transferred converted liquid hydrogen to a lower pressure, introducing expanded converted liquid hydrogen into the storage vessel, withdrawing hydrogen vapor from the storage vessel, transferring withdrawn hydrogen vapor to the heat exchange zone and passing the withdrawn hydrogen vapor through the heat exchange zone in heat interchange with compressed hydrogen and then compressing the hydrogen vapor to form a portion of the stream of compressed hydrogen.

3,094,391
HYDROCARBON CONVERSION
Charles K. Mader, Cold Springs, N.Y., assignor to The M. W. Kellogg Company, Jersey City, N.J., a corporation of Delaware
Filed Apr. 22, 1960, Ser. No. 24,064
14 Claims. (Cl. 23—212)



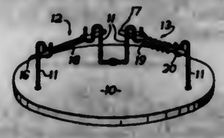
1. A method of conducting a high temperature endothermic hydrocarbon conversion reaction in a tubular furnace having a radiant-heating section and a convection-heating section which comprises passing one portion of the preheated hydrocarbon to be converted in parallel flow under conversion conditions through a plurality of tubular reaction zones in said radiant-heating section, passing another portion of the preheated hydrocarbons to be converted in parallel flow under conversion conditions through a plurality of tubular reaction zones in said convection-heating section, supplying radiant heat to said tubular reaction zones in said radiant-heating section and maintaining the effluents of said tubular reaction zones at outlet temperatures at least equal to the preheat temperature by burning a fuel in said radiant-heating section, supplying convection heat to said tubular reaction zones in said convection-heating section and maintaining the effluents of said tubular reaction zones at outlet temperatures at least equal to the preheat temperature by passing hot combustion products from said radiant-heating section through said convection-heating section, and recovering the effluents of all of said tubular reaction zones containing conversion products.

3,094,392
GAS DETECTION
George F. Skala, Scotia, N.Y., assignor to General Electric Company, a corporation of New York
Filed Nov. 15, 1960, Ser. No. 69,419
4 Claims. (Cl. 23—232)



1. The method of detecting the presence of a sulfur-halide gas or vapor in a gas stream which comprises prehumidifying the gas stream to remove ambient airborne particles, disassociating the sulfur-halide gas or vapor by pyrolysis in an oxidizing atmosphere to form gaseous sulfur oxidation products, hydrolyzing the sulfur oxidation products to form condensation nuclei and measuring the concentration of the nuclei.

3,094,393
APPARATUS FOR DETECTING INFLAMMABLE GASES
Joshua Sieger, Greystones, Western Ave., Branksome Park, Bournemouth, England
Filed Oct. 17, 1960, Ser. No. 63,060
Claims priority, application Great Britain Oct. 23, 1959
6 Claims. (Cl. 23—254)



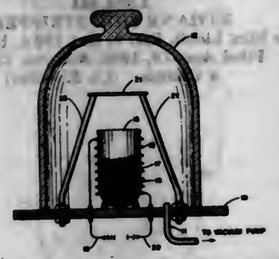
1. In apparatus for detecting the presence of inflammable gases of the type including a Wheatstone bridge, at least two arms of said bridge including a detector element and a balancing element respectively, said elements being disposed close together, and hence exposed to similar ambient conditions, and having substantially the same temperature coefficient of resistance, said detector element including a helically wound wire having spaced turns and being constituted to be much more active catalytically than said balancing element, the improvement which comprises a detector element having the spaces between turns between about one-half and twice the diameter of the wire.

3,094,394
CATALYTIC MUFFLER
William B. Innes and Walter Mordach, Stamford, Conn., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine
Filed July 22, 1960, Ser. No. 44,674
3 Claims. (Cl. 23—288)



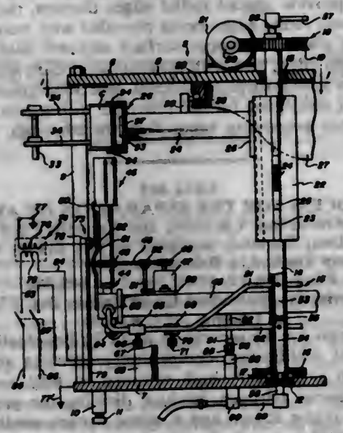
1. A catalytic muffler for oxidizing hydrocarbon combustion exhaust gases comprising a cylindrical housing having an inlet end and an outlet end, a longitudinally extending cylindrical tube centrally positioned within said housing between said inlet end and said outlet end and extending from said inlet end, that portion of said tube within said housing being perforated, a capping element for said tube adjacent said outlet end, a longitudinally extending perforated cylindrical sleeve within said housing and surrounding said tube, said sleeve having a cross-section greater than that of said tube but less than that of said housing, catalyst particles for oxidizing said hydrocarbon combustion exhaust gases disposed within the zone defined by said tube and said sleeve, a plate like retaining member transversely situated between said tube and said sleeve adjacent to said outlet end of said housing, the area between the outer surface of said sleeve and the inner surface of said housing defining a zone for catalytically oxidized exhaust gases to be carried to the outlet end of said housing, a moveable disk positioned within said housing and adjacent to the inlet end of said housing said disk being slideably fitted for longitudinal movement over said tube, the inner surface of said disk disposed to be in contact with catalyst particles in said catalyst zone and yieldable means contacting said slideably mounted disk whereby a force is created by said means against said catalyst particles so as to maintain said zone free of voids.

3,094,395
METHOD FOR EVAPORATING SUBLIMING MATERIALS
Morris E. Richardson, Rochester, N.Y., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware
Filed Jan. 12, 1959, Ser. No. 786,395
6 Claims. (Cl. 23—294)



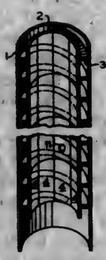
1. A method for evaporating particulate subliming material for the purpose of coating a surface comprising, placing a quantity of particulate subliming material in a container, placing on said subliming material a contiguous pervious layer of inert particulate material having higher decomposition, melting, and evaporating temperatures than the temperature of evaporation of said subliming material, and heating the container and its contents to a temperature sufficient to evaporate said subliming material through said contiguous pervious layer.

3,094,396
METHOD OF AND APPARATUS FOR CURING INTERNAL COATINGS ON CAN BODIES
Sylvester L. Flugge, Oak Park, and Ernest Glaser, Chicago, Ill., assignors to Continental Can Company, Inc., New York, N.Y., a corporation of New York
Filed July 7, 1959, Ser. No. 825,577
20 Claims. (Cl. 34—13)



3. An apparatus for flame curing the coated interior surface of a can body, said apparatus comprising a turret, drive means connected to said turret for rotating said turret, said turret including a plurality of burner supports, a generally vertically disposed burner assembly carried by each of said burner supports, each burner assembly including a union having a first portion fixedly secured to a respective one of said burner supports for movement therewith and a second portion connected to said first portion for movement therewith and for rotation relative thereto, a fuel line connected to said union, a burner supported by said union for rotation with fuel being supplied to said burner through said union, and means connected to said burner for rotating said burner, a plurality of can body supports connected to said turret for rotation therewith, there being one can body support for each of said burner supports, a can body holder carried by each of said can body supports for supporting a can body in vertical alignment with a respective one of said burner assemblies, and means connected to said can body supports for vertically reciprocating said can body holders toward and away from said burner assemblies as said turret rotates to telescope can bodies to be cured over said burner assemblies.

3,094,397
ROTARY DRYER
Edwin B. Lopker, Joliet, Ill., assignor to Olin Mathieson Chemical Corporation, East Alton, Ill., a corporation of Virginia
Filed Sept. 28, 1960, Ser. No. 59,037
5 Claims. (Cl. 34—128)

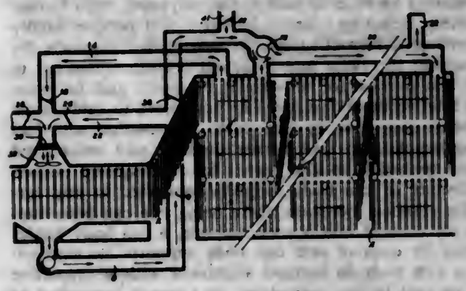


5. A rotary dryer having a substantially cylindrical outer shell and means for internal recirculation, said means comprising a segmented helical flighting internally secured to the outer shell, and plate-like members secured to the flighting, the members cooperating to form an inner shell concentric with the outer shell, said shells being separated by an annular space.

3,094,398
APPARATUS FOR DRYING MACARONI PRODUCTS
Rene Samson, Montreal, Quebec, Canada, assignor to Gebruder Bahler, Uzwil, Switzerland, a firm of Switzerland
Original application Oct. 24, 1956, Ser. No. 618,074. Divided and this application Nov. 2, 1960, Ser. No. 71,375
6 Claims. (Cl. 34—212)

1. In a dryer apparatus for alimentary paste products, comprising a preliminary dryer unit and a finishing dryer, an air duct connecting the entrance part of said finishing dryer with the said preliminary dryer unit, a long duct disposed externally of and connecting the preliminary dryer unit and the end part of said finishing dryer, a third duct closely connected between said air duct and said long duct for the purpose of selectively establishing a closed circuit for said preliminary dryer unit, the moisture laden drying air being cooled by thermal losses

in said long duct, heating means for the air used in said preliminary dryer unit, and blower means for displacing

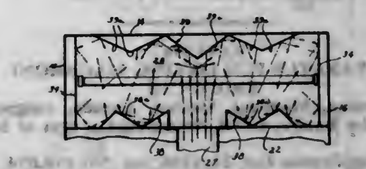


the drying air through said ducts, said preliminary dryer and said finishing dryer.

3,094,399
BRIQUETTING OF COALS
Kenneth Ernest Barton Macqueen, Maghull, England, assignor, by mesne assignments, to American Cyanamid Company, New York, N.Y., a corporation of Maine
No Drawing. Filed Mar. 2, 1960, Ser. No. 12,253
Claims priority, application Great Britain Mar. 10, 1959
9 Claims. (Cl. 44—23)

1. A process for manufacturing coal compactions from bituminous coal comprising the steps of heat oxidizing finely divided bituminous coal having a swelling number of at least B.S. 5 by reacting said coal with oxygen while in the fluidized state at a temperature within the plastic range of the coal and for a time of less than one minute but sufficient to reduce the swelling number to a value above B.S. 1, admixing the heat oxidized coal with about 5–15% by weight of an aromatic composition selected from the group consisting of crude tar having a substantial tar acid content and distillation fractions of the crude tar, aging the mixture for about five to ten minutes until the swelling number of the mass has been reduced to at least B.S. 2½, admixing the coal/tar mixture and up to about 10% of a carbonaceous binder and forming the resultant mixture into compactions of the desired size and shape.

3,094,400
ELECTRIC AIR PURIFIER
James B. Blanton, Arlington Heights, Ill.
Filed July 24, 1961, Ser. No. 126,085
10 Claims. (Cl. 55—102)



1. In an air purifying apparatus, an elongated substantially rectangular housing, a partition dividing said housing into a lower chamber and an upper compartment, a vertical partition dividing the upper compartment into an elongated radiation chamber and an elongated accumulation chamber, an air ingress opening communicating directly with the interior of said lower chamber and an air egress opening in the accumulation chamber, a filter covering said ingress opening for preliminary removal of air-borne impurities from air passing into said lower chamber, a blower unit in said lower chamber having its air outlet duct opening into the central region of the radiation chamber, the ends of said radiation chamber being in flow communication with the respective ends of the accumulation chamber, a germicidal ultra-violet radiating unit in said radiation chamber and extending longitudinally substantially the entire length of said radiation chamber, baffles in said radiation chamber to divert air entering same through said duct toward the ends of said radiation chamber, said baffles being effective to turbulate the air in said radiation chamber and to cause it to flow around the germicidal unit a multitude of times to maximize the radiation effect of the unit and effectively destroy undesirable organisms in the air, said accumulation chamber functioning to mix the ionized air flowing thereinto and cause charged particles therein to agglomerate, and a filter covering said egress opening.

3,094,401
ETHANE SIDE STRIPPER
Swante Max Lidell, Rte. 1, Box 198A, Houston, Tex.
Filed Apr. 19, 1960, Ser. No. 23,238
4 Claims. (Cl. 55—206)

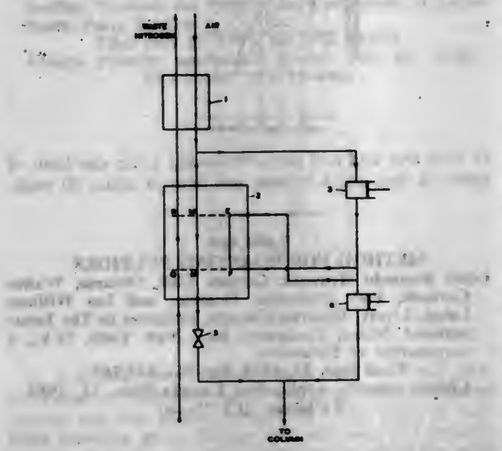


1. Apparatus for separation of vapors from liquids which comprises in combination: wall means defining a closed column, conduit means permitting flow of heat exchange fluid concentrically through said column; means permitting introduction of a vapor liquid mixture into said column; means permitting removal of separated mixture components from said column; conduit means permitting removal of separated vapor components from said column; and a plurality of spaced fractionating tray means each having inner and outer circumferential edges substantially contiguous with said conduit means and said wall means respectively said tray means being in heat conductive contact with said conduit means; each of said fractionating tray means comprising a centrally apertured disk, said disk being radially split and helically twisted so as to provide spaced radial edges thereon, the lowermost of said radial edges being provided with weir means extending above the upper surface adjacent said lowermost radial edge; and with downcomer means extending below the lower surface adjacent said lowermost radial edge; said disk being further provided with a plurality of perforations permitting vapor flow therethrough.

3,094,402
PROCESS FOR THE SEPARATION OF AIR
Michael Armstrong, Chertsey, and Kenneth Cecil Smith, Carshalton, England, assignors to The British Oxygen Company Limited, a British company
Filed Oct. 17, 1961, Ser. No. 145,569
Claims priority, application Great Britain Oct. 17, 1960
6 Claims. (Cl. 62—9)

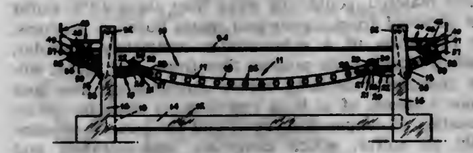
1. Process for the separation of air by liquefaction and subsequent rectification comprising precooling air compressed to a relatively high pressure by heat exchange with a gaseous nitrogen product, dividing the precooled air into a major stream and a minor stream, cooling said minor stream in a main heat exchanger by heat exchange with the gaseous nitrogen product passing to the pre-

cooling step, expanding the cooled minor stream to the rectification pressure, expanding said major stream to an intermediate pressure in an expansion machine with the performance of external work, warming a minor part of the expanded major stream by passing it through an intermediate section of the main heat exchanger counter-



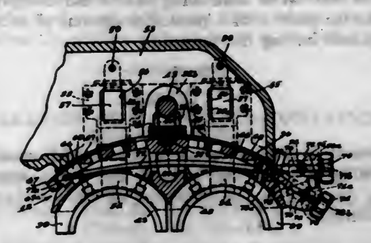
current to compressed air passing through said heat exchanger, combining the warmed part with the remainder of said major air stream, further expanding the re-united major air stream to the rectification pressure in an expansion machine with the performance of external work, and subjecting said expanded major and minor streams to rectification in a rectification zone.

3,094,403
GLASS SHEET BENDING MOLD
Joseph E. Jendrisak, Northville, Mich., assignor to Libbey-Owens-Ford Glass Company, Toledo, Ohio, a corporation of Ohio
Continuation of application Ser. No. 231,575, June 14, 1951. This application Apr. 19, 1956, Ser. No. 579,272
17 Claims. (Cl. 65—288)



13. A bending mold for bending flat glass sheets, comprising a plurality of shaping rail sections arranged in end to end relationship and including spaced movable flat glass sheet supporting end rail sections having their upper surfaces contoured to the desired configuration to which the glass sheet is to be bent, said flat sheet supporting rail sections comprising converging rail portions, and means mounting said movable rail sections in a first position wherein said rail portions support the undersurface of a flat glass sheet to be bent when mounted thereon and for movement to a second position wherein said movable rail sections form substantially continuations of a rail section inwardly thereof.

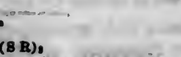
3,094,404
MOLD ASSEMBLY WITH CONTROLLED COOLING
Albert G. Lauck, Toledo, Ohio, assignor to Owens-Illinois Glass Company, a corporation of Ohio
Original application Mar. 24, 1958, Ser. No. 723,224, now Patent No. 3,021,644, dated Feb. 20, 1962. Divided and this application Dec. 12, 1958, Ser. No. 780,802
6 Claims. (Cl. 65—319)



1. A mold mounting device for use with a double-cavity parison forming mold, each cavity of said mold including a pair of mold sections movable to and from closed position, comprising a pair of hollow mold arms pivotally mounted for movement to and from a mold closed position and adapted to conduct coolant supplied therein, means to continuously supply coolant in each said hollow mold arm, a mold adapter on each arm, each said adapter mounting two mold sections, neck cooling passages in each said adapter individual to the neck end portion of each said mold section thereon for applying coolant to that portion thereof, said passages having an operative connection to receive coolant from its adjacent hollow mold arm, body cooling passages in each said adapter individual to the body portion of each said mold section thereon for applying coolant to that portion thereof and communicating with its adjacent hollow mold arm, bottom cooling passages in the adapter individual to the bottom end portion of each said mold section thereon for applying coolant to that portion thereof and communicating with its adjacent hollow mold arm, and separate means in the adapter, each operable independently and cooperating with said passages for individually regulating the volumetric application of coolant to the neck portion, body portion, and bottom portion of said mold sections on each said adapter.

3,094,405
DEFOLIANT METHODS USING THIO ESTERS OF CHLOROMETHYL PHOSPHONOUS AND CHLOROMETHYL PHOSPHONIC ACIDS
Arthur Dock Fon Toy, Park Forest, and Edward N. Walsh, Chicago Heights, Ill., and Joseph R. Frell, Jr., San Jose, Calif., assignors to Stauffer Chemical Company, New York, N.Y., a corporation of Delaware
No Drawing. Filed Feb. 8, 1961, Ser. No. 87,767
10 Claims. (Cl. 71—2.3)

1. A method of defoliating plants which comprises applying thereto a defoliating quantity of a compound having the formula



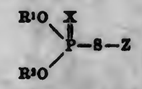
wherein R is a member of the class consisting of alkyl radicals having up to 12 carbon atoms and monocyclic aryl radicals, X is a member of the class consisting of oxygen and sulfur and *n* is a number selected from the class consisting of 1 and 0.

3,094,406
OXIME AND HYDROXAMIC ACID DERIVATIVES OF PHOSPHOROTHIOIC ACIDS

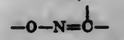
Glenn R. Price, South Chicago Heights, and Edward N. Walsh, Chicago Heights, Ill., and James T. Hallett, Saratoga, Calif., assignors to Stauffer Chemical Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Oct. 2, 1961, Ser. No. 141,971
17 Claims. (Cl. 71—2.3)

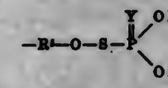
6. A method of controlling pests which comprises contacting the pests with a pesticidal amount of at least one compound having the formula:



wherein R^1 and R^2 are alkyl, X is selected from the group consisting of sulfur and oxygen, and Z is a member selected from the group consisting of oximino radicals of the formula



in which the oxygen is linked to the thio sulfur in the phosphoro ester portion of the molecule and the two available bonds of the carbon are substituted with members selected from the group consisting of hydrogen, alkyl, aryl, alkaryl, aralkyl, alkoxyalkyl, alkoxyaryl, cycloalkyl and phosphoro ester radicals of the formula:



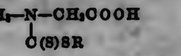
in which R^3 and R^4 are alkyl radicals, Y is selected from the group consisting of oxygen and sulfur, and R^5 is selected from the group consisting of lower alkylene, phenylene, and naphthalene and oxamino radicals of the formula —O—NH—C(O)— in which the oxygen having the available bond is linked to the thio sulfur in the phosphoro ester portion of the molecule and the available bond of the carbon is substituted with a member selected from the group consisting of hydrogen, alkyl, aryl, alkaryl, aralkyl, alkoxyalkyl and alkoxyaryl.

3,094,407
CONTROL OF UNDESIRED VEGETATION WITH ESTERS OF N-METHYL-N-CARBOXYMETHYLDITHIOCARBAMIC ACID

Ching C. Tung, Kirkwood, Mo., and John J. D'Amico, Charleston, W. Va., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed May 19, 1961, Ser. No. 111,180
12 Claims. (Cl. 71—2.7)

1. The method of destroying undesired vegetation which comprises applying to foliage thereof a toxic concentration of a compound of the structure



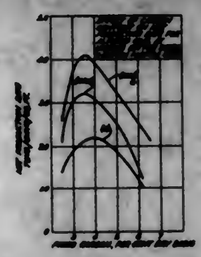
where R is selected from the group consisting of lower alkyl, lower alkenyl and lower haloalkenyl, the halogen being selected from a group consisting of chlorine and bromine.

3,094,408
METHOD OF SINTERING IRON ORE

James R. Guseman, Perryopolis, and Thomas L. Myron, Brentwood, Pa., assignors to United States Steel Corporation, a corporation of New Jersey

Filed Mar. 10, 1959, Ser. No. 798,377
2 Claims. (Cl. 75—5)

1. An iron oxide sinter mix consisting of iron oxide fines and solid carbonaceous fuel particles proportioned to supply a fixed carbon content on a dry basis of about 3 to 4.5% by weight, said iron oxide fines being minus

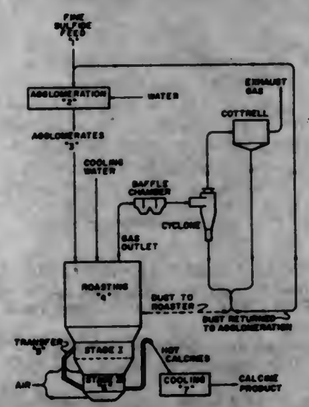


¼ inch and said fuel particles having a top size limit of about ⅛ inch and a bottom size limit of about 20 mesh.

3,094,409
METHOD FOR ROASTING SULFIDES

Louis Secondo Renzoni, Copper Cliff, Ontario, Walter Curlook, Port Colborne, Ontario, and Ian William Laing, Lively, Ontario, Canada, assignors to The International Nickel Company, Inc., New York, N.Y., a corporation of Delaware

Filed Sept. 23, 1959, Ser. No. 841,767
Claims priority, application Canada Mar. 31, 1959
8 Claims. (Cl. 75—9)

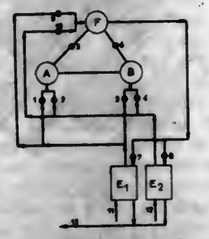


1. A process for the treatment of finely divided nickel sulfide material, containing more than about 15% sulfur and obtained from mattes and matte flotation products, for formation of a substantially completely granular, roasted, nickel oxide product therefrom, said nickel sulfide material containing minor amounts of iron and minor amounts of at least one element from the group consisting of copper and cobalt and the balance substantially all sulfur, which comprises agglomerating said sulfide material with water to form granules with a particle size of between about 65 mesh and about 0.5 inch, feeding said granules to a fluid bed reaction zone in which said sulfide material is oxidized at a temperature at least about 20° F. above the softening point of the sulfide material and below the melting point of the resulting oxide product in an oxygen-containing gas supplied to said reaction zone at a fluidizing rate sufficiently high to elutriate fines from the bed while maintaining the coarser material in a fluidized condition to insure rapid and substantially complete oxidation to less than about 2% sulfur and to produce a coarse, substantially completely granular, oxide product with a particle size not larger than that of the sulfide granules fed to said reaction zone, separating fine calcine dust from the reaction exhaust gases and returning said separated dust to the agglomerating step.

3,094,410
PROCESS FOR REDUCING IRON ORES

Claude Clement, Bagneux, François Eschard, Croissy-sur-Seine, and Michel Viguier, Paris, France, assignors to Institut Français du Petrole des Carburants et Lubrifiants, Paris, France

Filed July 27, 1960, Ser. No. 45,610
Claims priority, application France July 31, 1959
13 Claims. (Cl. 75—40)

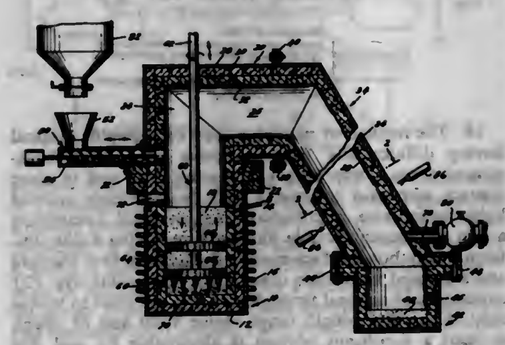


1. A process for reducing iron ores in the liquid state by means of reducing gases, said iron ores containing oxygen and iron atoms, comprising a first stage of bubbling reducing gases through said iron ores in a smelted state in at least one reducing step during which the ratio of the number of oxygen atoms to the number of iron atoms in the combined form in the iron ores is gradually reduced down to a value comprised between 0.7 and 1.2 and a second stage of bubbling oxygen and reducing gases the major part of which consists of methane, through the liquid iron ores obtained at the end of the first stage, in at least one reducing step, the molar ratio of oxygen to methane being at most 1.0, thereby converting said ores to liquid iron, and withdrawing the resulting liquid iron, at least one reducing step of an iron ore of a certain oxidation degree being carried out by means of the partially oxidized reducing gases having already reduced an iron ore of a lower oxidation degree in another concomitant reducing step.

3,094,411
METHOD AND APPARATUS FOR THE EXTRACTION OF ZINC FROM ITS ORES AND OXIDES

Bernard H. Trillhosen, 14—26 Chandler Drive, Fair Lawn, N.J.

Filed Apr. 8, 1959, Ser. No. 804,893
6 Claims. (Cl. 75—26)



1. A method for producing copper-based zinc alloys comprising the steps of (1) forming an intimate mixture of zinc oxide material and at least sufficient carbon to reduce the zinc oxide to zinc, (2) heating said mixture by submerging the mixture below the surface of a previously prepared body consisting essentially of molten copper, and (3) then indirectly heating said molten body at a temperature between 1900° and 2200° F. for at least 10 minutes to permit the carbon to reduce the zinc oxide to zinc and for the zinc to form with the copper a brass alloy containing up to 16% zinc, said reduction reaction and the formation of said brass alloy taking place entirely below the surface of said body of molten copper.

3,094,412
PREPARATION OF MAGNESIUM-CONTAINING SILICON ALLOYS

Franz Kaess, Erwin Vogel, and Richard Bauer, Trostberg, Germany, assignors to Süddeutsche Kalkstickstoff-Werke A.G., Trostberg, Germany

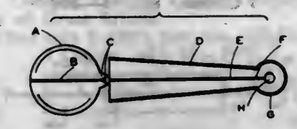
No Drawing. Filed Jan. 24, 1957, Ser. No. 635,973
5 Claims. (Cl. 75—135)

1. A method of preparing ternary magnesium-containing silicon alloys, comprising adding to a molten silicon alloy containing at least about 60 percent by weight of silicon, the balance being essentially at least one metal selected from the group consisting of calcium, iron, chromium, and manganese, magnesia in an amount of about 5 to 100 percent by weight, calculated on the alloy, heating said mixture above the melting point of said alloy at a temperature of 1000 to 1400° C., whereby part of said magnesia reacts with part of said silicon to form silica and magnesium, which magnesium is bound by unreacted silicon in the reaction mass to form magnesium silicide, whereas said silica forms with other part of said magnesia a silicate slag, and separating said slag from the obtained ternary magnesium-containing silicon alloy.

3,094,413
MAGNESIUM BASE ALLOYS

Philip Andrew Fisher and Edward Frederick Emley, Manchester, England, assignors to Magnesium Elektron Limited, Manchester, England

Filed Sept. 14, 1960, Ser. No. 55,892
7 Claims. (Cl. 75—135)



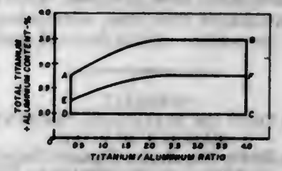
1. A magnesium base alloy containing from 0.1 to 0.7 percent by weight zirconium and at least one of the following zirconium-precipitating elements, viz:

Aluminium	Over 0.1 and up to 10%.
Tin	Over 0.1 and up to 10%.
Silicon	Over 0.1 and up to 5%.
Nickel	Over 0.1 and up to 2%.
Cobalt	Over 0.1 and up to 2%.
Antimony	Over 0.1 and up to 2%.
Iron	Over 0.01 and up to 0.1%.
Beryllium	Over 0.005 and up to 0.03%.
Manganese	Over 0.5 and up to 2%.

characterized by a matrix of magnesium alloy containing a dispersion of insoluble intermetallic compounds consisting of zirconium with one or more zirconium precipitating elements, the matrix being substantially free from oxide, the quantity of suspended zirconium being at least 0.2 percent while the dissolved zirconium is less than 0.05 percent.

2. An alloy as claimed in claim 1 containing at least 0.25 percent aluminium.

3,094,414
NICKEL-CHROMIUM ALLOY
Arthur W. Franklin, Birmingham, Ronald A. Smith, West Hagley, and Edward G. Richards, Birmingham, England, assignors to The International Nickel Company, Inc., New York, N.Y., a corporation of Delaware
Filed Mar. 14, 1961, Ser. No. 95,740
Claims priority, application Great Britain Mar. 15, 1960
9 Claims. (Cl. 75—171)



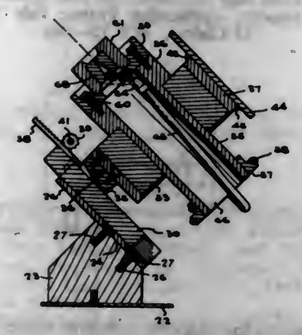
1. An alloy consisting essentially by weight of about 15% to about 25% chromium, up to about 45% iron, about 0.04% to about 0.15% carbon, about 0.7% to 2.5% titanium, about 0.7% to 1.5% aluminum, an element selected from the group consisting of tungsten and molybdenum in an amount equivalent in atomic concentration in the alloy to about 3% to 6% molybdenum, 0.001% to 0.009% boron, 0.01% to 0.1% zirconium, up to about 0.5% silicon, up to about 0.5% manganese, up to about 1% cobalt with the balance being substantially nickel, in an amount not less than about 35%, the sum of said titanium percentage and said aluminum percentage being 2% to 3.5% and the ratio of said titanium percentage to said aluminum percentage being 0.5 to 4 and the said sum being correlated with said ratio so that when the values of said sum and ratio are platted, the resultant point lies within the area ABCDA set forth in FIGURE 1 of the accompanying drawing.

3,094,415
COMPOSITE BEARINGS AND METHOD OF MAKING SAME
Victor Gallatin and James C. Gould, Ann Arbor, Mich., assignors to Federal-Mogul-Bower Bearings, Inc., Detroit, Mich., a corporation of Michigan
Filed Dec. 2, 1960, Ser. No. 73,421
7 Claims. (Cl. 75—208)



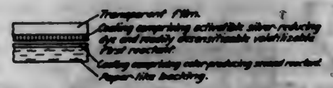
1. The method of making a composite material suitable for the manufacture of bearings and the like comprising the steps of providing a hard metal backing strip, uniformly blending a mixture of a prealloyed aluminum tin powder containing from about 7% to about 30% tin, an elemental tin powder, and an aluminum powder forming therewith a blended metallic powder containing from about 18% to about 30% tin; said tin powder present in an amount of less than about 15% of said metallic powder, the aluminum constituent in said prealloyed powder and in said aluminum powder comprising aluminum and alloys thereof consisting primarily of aluminum, superposing a relatively uniform layer of said metallic powder on said backing strip, preheating said layer and said backing strip in a reducing atmosphere at a temperature ranging from about 700° F. to about 1100° F., densifying the preheated said layer on said backing strip by passing said strip and said layer thereon through a pair of rolls, the one of said pair of rolls in contact with said layer rotating at a peripheral speed less than the linear speed of said layer causing concurrent compacting and extrusion of said layer and tenaciously bonding said layer to said backing strip, and thereafter rapidly cooling said composite material in a non-oxidizing atmosphere.

3,094,416
WIRE DIE VIEWER
Paul L. Damaska, Proctor Star Rte., Williamsport, Pa.
Filed May 23, 1960, Ser. No. 31,142
3 Claims. (Cl. 88—14)



1. A device for inspecting wire drawing dies comprising a housing having an inclined wall, a view opening being formed in said inclined wall, a base member mounted upon the bottom wall of the housing, said base member having a face inclined upwardly in the direction of the view opening, a channel member fixed to said inclined face, and slidably supporting an adjustable plate, a cylinder positioned on said plate and said cylinder being provided with an interior bearing member, an elongated sleeve rotatably supported in said bearing member, a die chuck on one end of the sleeve for support of the die and positioned in line with said view opening, illuminating means within the sleeve for directing rays of light upon said die, motor means operatively connected to said sleeve for rotating said sleeve and die, means for advancing and retracting said adjustable plate toward and away from said view opening and a magnifying lens mounted in said view opening.

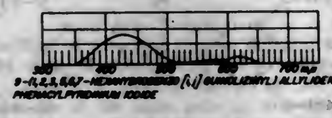
3,094,417
HEAT SENSITIVE COPY SHEET, PROCESS OF MAKING AND USING
Wesley R. Workman, St. Paul, Minn., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware
Filed Jan. 3, 1961, Ser. No. 80,184
25 Claims. (Cl. 96—28)



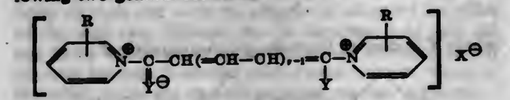
18. The method of making a copy of a graphic original having differentially light-absorptive image and background areas, comprising (1) placing over and in close contact with said original a light-desensitizable colored light-transmissive intermediate film material comprising a thin transparent flexible film backing having a thin uniform firmly bonded face-coating including a first reactant and a colored activatible organic photoreducible dye, (2) exposing said original through said film material to visible light in the wavelength range above 4200 and of which at least a significant portion is absorbable by said dye and for a time and at an intensity sufficient to cause total desensitization of said first reactant at areas corresponding to the least absorptive areas of said original and

significantly less than total desensitization at areas corresponding to the most absorptive areas of said original, (3) placing the thus exposed film material in face-to-face close contact with a receptor sheet comprising a thin paper-like backing sheet having a firmly bonded face-coating comprising a second reactant inter-reactive with said first reactant to produce a visibly distinct colored reaction product when said reactants are briefly heated together at a conversion temperature within the range of about 90° C. to about 150° C., (4) heating to said conversion temperature to produce on said receptor sheet a visible reproduction of image areas of said original, and (5) separating said receptor sheet and said intermediate film; said first reactant being further characterized as being readily desensitizable against said inter-reaction by exposure, in solution in an inert solvent at a concentration just sufficient to permit distinctly visible reaction with said second reactant component in said solvent, to radiation in the near-ultraviolet wavelength range of approximately 3000 to 4200 angstroms as obtained from a BH-6 high pressure mercury arc lamp at a distance of 6 inches and for a time of 45 minutes; and said dye being characterized by its ability to cause reduction of silver ion in a dilute solution of silver nitrate, triethanolammonium nitrate, and said dye on exposure of said solution for thirty minutes to visible light of wavelength higher than 4200 angstroms and absorbable by said dye and at about 60,000 foot-candles intensity as obtained from a high intensity incandescent tungsten filament lamp.

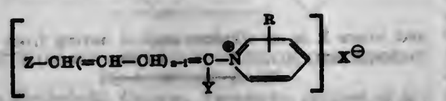
3,094,418
SILVER HALIDE EMULSIONS CONTAINING CATIONIC OXONOL AND BENZYLIDENE DYES
Donald W. Heseltine and Lewis L. Lincoln, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed Mar. 10, 1960, Ser. No. 14,139
8 Claims. (Cl. 96—84)



1. A photographic element comprising a support having thereon at least one sensitive silver halide emulsion layer, at least one layer of said photographic element containing a dye selected from those represented by the following two general formulas:



and



wherein R is a group selected from the class consisting of a hydrogen atom, a bromine atom, a methyl group and a phenyl group, provided when R is selected from the class consisting of a methyl group and a bromine atom, said R group is substituted on the carbon meta to the nitrogen atom of the pyridine ring; Y is a member selected from the group consisting of a cyano group, benzoyl groups, and benzothiazolyl groups; r is a positive integer of from 1 to 3; n is a positive integer of from 1 to 2; Z is a group selected from the class consisting of aminoaryl groups, and a 1,2,3,5,6,7-hexahydrobenzo[i,j]quinolizinyl group; and X is an acid anion.

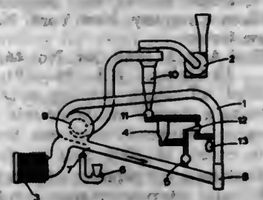
3,094,419
LIQUID FOOD TREATING PROCESS
Leon Singer, St. Paul, and Wallace D. Armstrong, Minneapolis, Minn., assignors to The Regents of the University of Minnesota, Minneapolis, Minn., a corporation of Minnesota
No Drawing. Filed Dec. 21, 1959, Ser. No. 860,725
11 Claims. (Cl. 99—60)

1. A method for the reduction of the concentration of cationic radioactive strontium isotopes in liquid foodstuffs which comprises intimately contacting the liquid with a solid finely divided relatively insoluble calcium containing chemically modified naturally occuring mineral bone material possessing cationic exchange properties and then separating the liquid from the solid.

3,094,420
NOVEL TABLE SPREAD PACKAGE AND PROCESS OF PREPARING SAME
Edmund L. Josefowicz, Bayonne, and Daniel Melnick, Teaneck, N.J., assignors to Corn Products Company, New York, N.Y., a corporation of Delaware
Filed Nov. 21, 1960, Ser. No. 70,609
3 Claims. (Cl. 99—179)

1. A table spread selected from the group consisting of margarine and butters in the form of a print, heat sealed in a foil laminated paper wrapper, wherein the inner paper layer faces said table spread and is in intimate contact with substantially the entire surface of the print and wherein a portion of the inner paper layer overlaps a portion of the outer foil thereof, and a sealant coating at least between the said portions, said coating being an edible food grade heat-sealable material selected from the group consisting of waxes, hydrogenated fats, polyethylene having about 300–500 ethylene units per molecule, vinyl chloride acetate and mixtures of these substances, said material having a melting point in the range of 115°–180° F., and said portions being heat sealed and bonded together by said coating whereby the wrapper is sealed about the print.

3,094,421
DRYING GLUTEN AND DOUGH-LIKE MATERIALS
Edward J. Parker, Slough, England, assignor to Starch Products Limited, Langley County, England, a body corporate of Great Britain
Filed July 7, 1961, Ser. No. 133,753
3 Claims. (Cl. 99—199)



1. A method of drying tacky dough and forming it into dried particles without the necessity of pretreatment comprising the steps of shredding the dough into a passage, forcing a stream of hot dry air and previously semi-dried particles of the dough through the passage to break up the shreds of dough and impregnate the shreds with the semi-dry particles, evaporating a substantial portion of the moisture from the shredded dough and semi-dried particle mixture while conducting it through said passage, exhausting the mixture into a disintegrator to further break up said mixture, conducting the hot air and broken up mixture from the disintegrator to a separator, separating the lighter dried particles of the mixture from the semi-dried heavier particles of the mixture in the separator, conducting the lighter dried particles of the mixture

to an exhaust conduit, returning the heavier semi-dried particles of the mixture from the separator to the inlet of said passage where they are mixed with said stream of hot air before it reaches the point where the dough is shredded into said passage.

3,094,422
CORE ELEMENTS
Jean Reinhold, Paris, France, assignor to Fonderie de Precision, Nanterre, Seine, France
No Drawing. Filed Dec. 19, 1960, Ser. No. 76,448
Claims priority, application France Dec. 21, 1959
3 Claims. (Cl. 106—38.3)

1. A core element for the casting of hollow parts consisting of at least one alkaline metasilicate and at least one alkaline disilicate and consisting substantially of 20–70% by weight of anhydrous alkaline metasilicate and 80–30% by weight of anhydrous alkaline disilicate.

3,094,423
NEUTRAL COLORED GLASS COMPOSITION
Earl K. Davis, Ogden, N.Y., assignor to Bausch & Lomb Incorporated, Rochester, N.Y., a corporation of New York
No Drawing. Filed Sept. 30, 1960, Ser. No. 59,486
1 Claim. (Cl. 106—52)

A gray colored ophthalmic glass consisting essentially of the following ingredients, parts by weight, batch basis:

	Weight percent
Silica	67.03
Alumina	0.50
Potash	9.45
Soda	8.95
Zinc oxide	10.88
Ferric oxide	2.63
Nickel oxide	0.185
Cobaltous oxide	.0075
Charcoal	.088
Arsenous oxide	0.50
Antimony oxide	0.75

said glass being of a neutral gray color and having a transmittance at 2 mm. thickness of about 31%.

3,094,424
SINTERED REFRACTORY MATERIAL
Temple W. Ratcliffe, Beaver, Pa., assignor to The Babcock & Wilcox Company, New York, N.Y., a corporation of New Jersey
Filed Aug. 2, 1960, Ser. No. 46,919
10 Claims. (Cl. 106—59)

1. A sintered refractory pouring nozzle for molten metal comprising a chrome-magnesite mix combined with a bonding agent and water, said mix being molded at a pressure in excess of 1000 p.s.i. to form a pouring nozzle and fired to a temperature of not less than 2700 to 2750° F., said chrome-magnesite mix analytically containing 3.6 to 7.5% FeO; 4.0 to 7.0% Al_2O_3; 9.3 to 15.0% Cr_2O_3; 50 to 70% MgO with the sum of FeO, Al_2O_3, Cr_2O_3 and MgO being at least 70%, and including no more than 11.0% CaO, 8.6% Fe_2O_3 and 8.7% SiO_2.

3,094,425
CEMENT GRINDING AID AND PACK SET INHIBITOR
Alfred B. Adams, Melrose, Emery Farkas, Cambridge, and Francis J. Mardulier and Dunbar L. Shanklin, Winchester, Mass., assignors to W. R. Grace & Co., Cambridge, Mass., a corporation of Connecticut
No Drawing. Filed Feb. 2, 1961, Ser. No. 86,578
7 Claims. (Cl. 106—90)

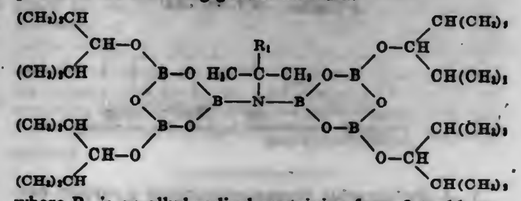
1. As a Portland cement additive, 1 to 20 parts of a lignin sulphonate admixed with 1 part by weight of calcium acetate.

3,094,426
BUILDING MATERIAL AND MANUFACTURE THEREOF
Robert Del Mar, 329 Amherst NE., Albuquerque, N. Mex.
No Drawing. Filed Jan. 25, 1960, Ser. No. 4,204
6 Claims. (Cl. 106—109)

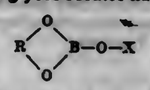
3. A process for producing gypsum-like products from uncalcined, relatively impure calcium sulfate material which comprises reducing a major portion of such material to about 300 mesh, treating the resultant finely divided material with a solution which is from ⅛ to ⅔ by weight of the material, said solution being dilute hydrofluosilicic acid and a minor amount of dissolved mineral wool, said solution containing from 1–5% by volume of free acid, stirring the resultant mixture until evolution of gas therefrom ceases, and then placing the resultant mixture into molds for hardening into desired shapes.

3,094,427
ASPHALTIC CEMENT
Philip C. Doyle, Rocky River, Edwin O. Hook, Chagrin Falls, and Harley F. Hardman, Lyndhurst, Ohio, assignors to The Standard Oil Company, Cleveland, Ohio, a corporation of Ohio
No Drawing. Filed Dec. 30, 1960, Ser. No. 79,510
5 Claims. (Cl. 106—273)

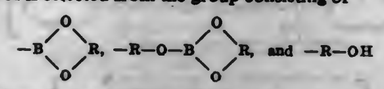
1. An asphalt cement for paving, having a penetration of from 50 to 200 at 77° F., and exhibiting improved resistance to the loss of ductility due to the high temperature mixing with aggregate to form a paving mix, said asphalt containing at least 0.001% by weight of a boron-containing compound selected from the group consisting of (I) tri-(tetrahydrofurfuryl) borate, (II) di-[4-(oleoyloxyethyl)-4-azaheptanediol-2,6] diborate, (III) a compound of the following general formula:



where R_1 is an alkyl radical containing from 9 to 11 carbon atoms, and (IV) glycol borates having the formula:



where X is selected from the group consisting of



and where R is an alkylene radical having from 4 to 8 carbon atoms.

3,094,428
COMPOSITION OF METAL OXIDES AND CARBON BLACK
Paul M. Hamilton, Dayton, Ohio, and George B. Kistiakowsky, South Lincoln, Mass., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed June 7, 1957, Ser. No. 664,184
5 Claims. (Cl. 106—307)

1. A process for the production of an intimate admixture of carbon black with an oxide selected from the group consisting of the oxides of boron, silicon, aluminum, titanium, zirconium, zinc, lead, tin, iron, cobalt, nickel, manganese, chromium, vanadium, molybdenum, niobium and tantalum, which comprises oxidizing a compound selected from the group consisting of the chlorides, bromides, iodides, nitrates, acetates, oxalates and tartrates of the said metal in vapor form in an oxygen-containing reducing flame, the said flame being supplied with an unsaturated hydrocarbon having from 2 to 8 carbon atoms, the proportion of the carbon black being from 10% to 50% by weight.

3,094,429
METHOD OF ELECTROSTATIC RECORDING WITH DIFFERENT INKS
Richard S. Howell, King of Prussia, Pa., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed July 31, 1959, Ser. No. 830,772
9 Claims. (Cl. 117—17.5)

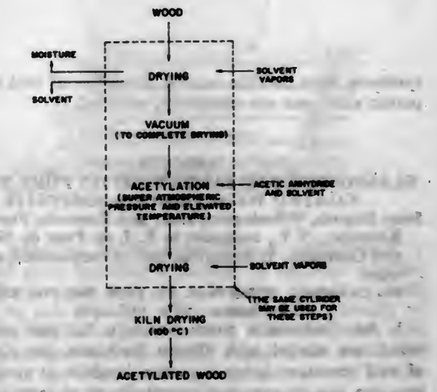


2. A method of recording by two different inks comprising the steps of: establishing on a charge-retentive medium a pattern of electric charges in two different charge densities of the same polarity, corresponding to the areas to be recorded by the said two different inks; developing the said charge pattern by exposing to its attractive forces a first uncharged conductive ink consisting of particles of such size as to be adherently attracted by the greater of the two said different charge densities and a second uncharged conductive ink consisting of particles of such size as to be adherently attracted by either of the said two different charge densities, said first ink size being of the order of ninety to one hundred twenty microns average diameter, said second ink size being of the order of twenty to sixty microns average diameter.

3,094,430
METHOD OF APPLYING MIRROR COATING TO ACRYLIC BASE
Albion Skwierinski, Caracas, Venezuela, assignor of five percent to John E. Marshall, Jr., Caracas, Venezuela; said Marshall attorney in fact for said Skwierinski, assignor of twenty-five percent to Edwin A. Meyer, twenty-five percent to Dr. Mariano Avelodo, and forty-five percent to Jose Mendez Rincon, Caracas, Venezuela
No Drawing. Filed Dec. 11, 1961, Ser. No. 158,540
6 Claims. (Cl. 117—35)

1. A method for applying a mirror coating to an acrylic article comprising treating the article with tannic acid, rinsing the article with water and thereafter applying a mirror coating thereto by precipitation from a silvering solution.

3,094,431
PROCESS OF ACETYLATING WOOD
Irving S. Goldstein, Pittsburgh, Pa., and Jeremiah W. Weaver, Greensboro, N.C., assignors to Koppers Company, Inc., a corporation of Delaware
Filed Mar. 22, 1961, Ser. No. 97,537
5 Claims. (Cl. 117—59)

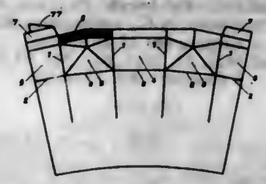


1. A process for improving the dimensional stability and decay resistance of wood by acetylation, which comprises: subjecting wood to vapors of a nonswelling for wood, substantially water immiscible, acetic anhydride miscible solvent selected from the group consisting of aromatic and chlorinated lower-aliphatic hydrocarbons, said solvent having a boiling point of at least 80° C. whereby a portion of the solvent vapor is condensed on a portion of the wood to flash-off the moisture as vapor, draining the condensed solvent from the wood, subjecting the wood to a vacuum whereby the remaining portion of the solvent and moisture is removed from the wood, subjecting the wood to a mixture of acetic anhydride and the aforesaid nonswelling for wood solvent containing sufficient anhydride based on the density of the wood at a pressure of about 150 p.s.i.g. and 100–130° C. for about 8–16 hours, whereby a weight gain to the wood from acetylation of at least 18 percent is obtained, removing the acetic anhydride from the wood by again subjecting said wood to nonswelling for wood solvent vapors which condense on the wood, removing the latter condensed vapors from the wood, and thereafter drying the wood until the wood reaches a constant weight.

3,094,432
METHOD OF TREATING ADHESIVE COATED BLANKS TO NULLIFY THE ADHESIVE EFFECT IN SELECTED AREAS
Gunther Meyer-Jagenberg, Dusseldorf-Grafenberg, Germany, assignor to Jagenberg-Werke Akt.-Ges., Dusseldorf, Germany
Filed Mar. 14, 1960, Ser. No. 14,972
Claims priority, application Germany Mar. 18, 1959
4 Claims. (Cl. 117—63)

1. A method of treating workpieces of paper, cardboard or the like material that have been completely surface-coated on one face thereof with a thermoplastic synthetic resin selected from the group consisting of polyethylene and polyvinylidene chloride capable of providing an adhesive effect under the action of heat and pressure, said method comprising subjecting a limited surface area of the coated face of said workpiece to a local treatment with a liquid penetrant selected from the group consisting of tetrahydrofuran, acetone and sulfuric acid to

react with the thermoplastic synthetic resin and cause such a change in the condition of said thermoplastic



synthetic resin that the sealing properties of said thermoplastic substance are completely nullified.

3,094,433

ELASTOMERIC FOAM HAVING ITS PORE WALLS COATED WITH FIBROUS BOEHMITE

John Bugosh, Wilmington, Del., and Emmette Farr Izard, Kenmore, N.Y., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Nov. 27, 1959, Ser. No. 855,513
2 Claims. (Cl. 117—98)

1. An elastomeric foam structure the pore walls of which are coated with fibrous boehmite, the elastomer of said structure being a material which at room temperature can be stretched repeatedly to at least twice its original length and upon release of the stress will return with force to its approximate original length, and being selected from the group consisting of natural rubber and synthetic rubbers of the group consisting of (1) rubber-like diene hydrocarbon homopolymers, (2) copolymers of said homopolymers with polymerizable vinyl and vinylidene compounds, and (3) copolymers which are rubber-like haloprene polymers of haloprenes with compounds of the group consisting of diene hydrocarbons and other polymerizable vinyl and vinylidene compounds.

3,094,434

MANUFACTURE OF POLYMERIC MATERIALS

John Frederick Chapman, John Henry Cundall, and John Alexander Partridge, all of Manchester, England, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

No Drawing. Filed Aug. 12, 1959, Ser. No. 833,134
Claims priority, application Great Britain Aug. 15, 1958
12 Claims. (Cl. 117—106)

1. A process for the manufacture of foamed polyurethane materials in a single stage which consists essentially of simultaneously contacting as the sole reacting materials water, an organic polyisocyanate and a hydroxyl-containing polyether containing at least two hydroxyl groups and at least one tertiary amino group and having a molecular weight of less than 1000, said polyether being the reaction product of a compound selected from the group consisting of ammonia and aliphatic, araliphatic and cycloaliphatic primary and secondary amines having at least 2 available active hydrogen atoms attached to nitrogen in each molecule with 2 to 40 moles per available active hydrogen of a 1:2 alkylene oxide selected from the group consisting of ethylene oxide and propylene oxide.

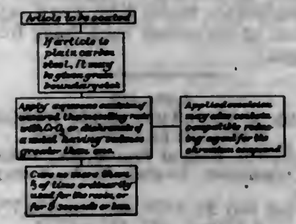
3,094,435

COATING WITH THERMOSETTING RESIN

Ludwig K. Schuster, Philadelphia, and Alfonso L. Baldi, Drexel Hill, Pa., assignors to Pennsalt Chemicals Corporation, Philadelphia, Pa., a corporation of Pennsylvania

Filed Feb. 9, 1961, Ser. No. 88,018
10 Claims. (Cl. 117—132)

1. In the process of coating an article with a film of thermosetting resin that has a definite curing time requirement, the improvement by which the resin is applied as an aqueous emulsion in which it is mixed with a chromium compound selected from the class consisting of chromic acid and water-soluble dichromates of metals



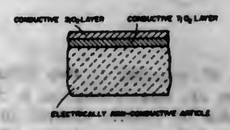
having a valence greater than one, the mixture having a resin-to-chromium compound ratio of from about 5:1 to 1:5 by weight, and the curing is terminated in not more than about five seconds.

3,094,436

TRANSPARENT, CONDUCTIVE, REFLECTION-REDUCING COATINGS ON NON-CONDUCTIVE OBJECTS AND METHOD

Hubert Schröder, Wiesbaden, Germany, assignor to Jenaer Glaswerk Schott & Gen., Mainz, Germany, a corporation of Germany

Filed Aug. 26, 1960, Ser. No. 52,042
Claims priority, application Germany Sept. 1, 1956
6 Claims. (Cl. 117—215)



5. The method of producing a non-conductive object having a conductive non-metallic, transparent, reflection-reducing coating on a surface thereof, which comprises forming such a coating on said object by applying to said surface a solution of an organic compound selected from the group consisting of titanic and silicic acid esters and mixtures thereof in its partially hydrolyzed form, and heating the film thereby formed on said surface to convert said partially-hydrolyzed organic compound into its corresponding oxide, whereby an electrically conductive coating is formed on said object.

3,094,437

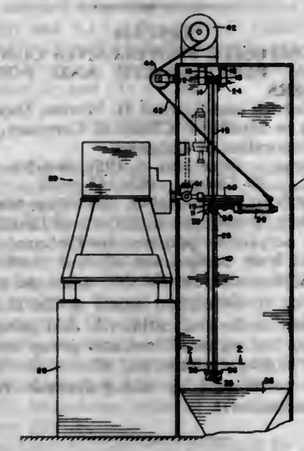
STRIPPING CATHODES OF ELECTRODEPOSITS

Charles Louis Scheer, Havertown, Pa., assignor to Foote Mineral Company, Philadelphia, Pa., a corporation of Pennsylvania

Filed Jan. 5, 1961, Ser. No. 80,958
8 Claims. (Cl. 134—16)

1. The method of stripping a brittle electrolytic deposit from a flexible cathode sheet which comprises substantially completely restraining one end of said cathode sheet from movement, and imparting a traveling flexure wave to said sheet by vigorously vibrating the opposite end through a substantially straight-line path of travel which

at all points is substantially normal to the plane of the undistorted sheet, whereby the brittle electrolytic deposit is



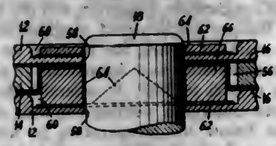
rapidly and substantially completely separated from the entire area of the cathode sheet.

3,094,438

MULTI-PLATE GALVANIC CELL

John L. S. Daley, Bay Village, Ralph M. Foecking, North Olmsted, and William J. Nagle, Rocky River, Ohio, assignors to Union Carbide Corporation, a corporation of New York

Filed Feb. 25, 1960, Ser. No. 10,978
2 Claims. (Cl. 136—6)



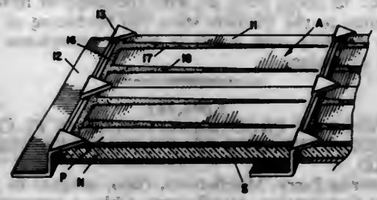
1. In a multi-plate galvanic cell comprising an open container, a plurality of positively charged plates and negatively charged plates disposed in said container, and an electrolyte in contact with said plates, said plates being arranged alternately in a stack with separators therebetween and being insulated from said container by a layer of semi-rigid insulating material, each of said plates having two circular apertures therein, one of said apertures in each of said plates having a smaller diameter than said other apertures, said plates being so oriented in said stack that said smaller apertures of said positive plates are at one end of said stack and said smaller apertures of said negative plates are at the other end of said stack; the improvement which comprises circular terminal posts having a smooth surface passing through said apertures, metallic contact washers having radial slots therein provided over said smaller apertures, and a plastic spacer washer disposed between said contact washers and said separators, said terminal posts having a diameter slightly larger than the inside diameter of said spacer washers so that when said terminal posts are passed through all of said washers in said plates, the tabs formed by said radial slots of said contact washers distort and deflect towards and against said spacer washers thereby providing good electrical contact by a tight radial seal between said posts and said slotted contact washers in said plates.

3,094,439

SOLAR CELL SYSTEM

Alfred E. Mann and Michael B. Dubey, North Hollywood, Martin Wolf, Altadena, Eugene L. Ralph, San Gabriel, Robert L. Oliver, Inglewood, and Saul Shuster, Northridge, Calif., assignors to Spectrolab, a Division of Textron Electronics, Inc., a corporation of Delaware

Filed July 24, 1961, Ser. No. 126,247
6 Claims. (Cl. 136—89)



1. A solar cell system comprising, in combination: a solar cell array including a plurality of coplanar adjacent rows of solar cells, each row including a plurality of cells in side by side coplanar relationship; and a plurality of elongated flexible strips separating said rows, each strip running beneath and electrically engaging the under end portions of the side by side cells in one row and including an upturned flange extending between said row and the next adjacent row, said upturned flange including tab elements bent at right angles to overlie and electrically engage upper end portions of the side by side cells in said next adjacent row whereby the cells in each row are connected in parallel and the paralleled cells of each row are connected through said strips in series with the cells in the next adjacent row and whereby flexibility in the connections is provided by said strips so that a relatively non-rigid array results.

3,094,440

STEELS HAVING ZINC ADDITIVES FOR IMPROVED MACHINABILITY

Elliot S. Nachtman, Oak Park, Ill., assignor to La Salle Steel Company, Hammond, Ind., a corporation of Delaware

No Drawing. Filed Aug. 5, 1960, Ser. No. 47,606
7 Claims. (Cl. 148—4)

1. The metallurgical process for improving the machinability of steel comprising the steps of advancing the steel through a die to effect reduction in cross-sectional area wherein the steel advanced through the die is a free machining steel to which a compound of zinc has been incorporated as an additive in an amount up to its saturation solubility in the steel when in the solid state but not in excess of 0.6 percent by weight of the steel, and in which the compound of zinc is selected from the group consisting of the sulfides, sulfates, sulfites, tellurides and selenides of zinc.

3,094,441

CHROMIC PHOSPHATE BONDING COATS FOR METAL

Leo P. Curtin, Cranbury, N.J.; Leo Vincent Curtin, executor of said Leo P. Curtin, deceased

No Drawing. Filed Sept. 3, 1958, Ser. No. 758,666
2 Claims. (Cl. 148—6.16)

1. Process for producing an adherent, chromic phosphate bonding coat on a metal base selected from the class consisting of aluminum and ferrous metal which comprises, (1) wetting the metal surface with a solution containing a chromic acid compound selected from the class consisting of free chromic acid and ammonium bichromate, the solution also containing a reducing agent for said chromic acid compound, said reducing agent be-

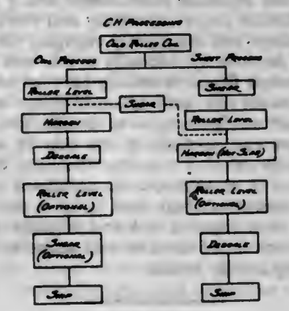
ing present in amount sufficient to reduce substantially completely the hexavalent chromium present, the solution also containing a phosphoric acid compound selected from the class consisting of free phosphoric acid and ammonium dihydrogen phosphate, the phosphoric acid compound being present in amount of about 0.51 mole to 2.90 moles for each mole of chromic acid compound, as CrO_3, and (2) heating the metal carrying the film of chromic acid compound to a temperature of from about 100° C. to about 400° C. with reduction of hexavalent chromium to the trivalent state and formation of an adherent bonding coat which is chiefly phosphates of trivalent chromium.

3,094,442

METHODS OF PRODUCING EXTREME FLATNESS IN HEAT TREATED STAINLESS STEEL AND THE LIKE

D Cameron Perry, Middletown, Ohio, assignor to Armco Steel Corporation, Middletown, Ohio, a corporation of Ohio

Filed Apr. 13, 1959, Ser. No. 805,898
11 Claims. (Cl. 148—12)



1. The method of producing extreme flatness and hardness in chromium-nickel alloy stainless steel which has been initially hardened by a phase transformation, which comprises subjecting said initially hardened steel to a final heat treatment at a temperature of from 850°–1150° F. for a period of at least about four minutes and, immediately prior to said final heat treatment, subjecting said initially hardened steel to a roller leveling operation of sufficient magnitude to produce plastic deformation of said steel, said steel having a final flatness on the order of ±.005 inch under two pounds per square inch vacuum.

3,094,443

AMMONIUM NITRATE EXPLOSIVE COMPOSITION

Joseph R. Hradel, Mount Pleasant, and Carl Kenneth Bjork, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Jan. 5, 1959, Ser. No. 784,895
8 Claims. (Cl. 149—1)

1. An explosive composition comprising from 20 to 95 percent by weight of ammonium nitrate, from 1 to 65 percent by weight of a solid light metal in particulate form, said particulate metal having a particle size of from about 20 to 140 mesh, not more than 1 percent of the said metal particles passing a 200 mesh sieve, from 2 to 50 percent by weight of ammonia and not more than 6 percent by weight of water, at least a portion of said ammonium nitrate being present as an ammoniacal solution of ammonium nitrate and the remainder of the ammonium nitrate being present in solid particulate form in a particle size ranging from about 8 to 100 mesh, and said solid light metal being selected from the group consisting of magnesium, magnesium-base alloys, aluminum, aluminum-base alloys, and mixtures thereof.

3,094,444

SOLID COMPOSITE PROPELLANTS CONTAINING LITHIUM PERCHLORATE AND POLYAMIDE POLYMERS

Ross M. Hedrick and Edward H. Mottus, Dayton, Ohio, assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Mar. 6, 1958, Ser. No. 719,502
20 Claims. (Cl. 149—19)

1. A composition of matter consisting essentially of a substantially homogeneous mixture of lithium perchlorate and a polyamide prepared by the condensation of polymerization of compounds selected from the group consisting of diamines, dicarboxylic acids and amino acids containing up to 14 carbon atoms in the chain linking the functional amine and carboxylic acid groups and the carbon chain linking said functional group contains only carbon and hydrogen atoms, and wherein the weight ratio of lithium perchlorate to said polyamide varies from about 2:1 to about 4:1.

3,094,445

METHOD OF GENERATING HEAT AND LIGHT

Robert S. Busk, Midland, Donald L. Leman, Freeland, and Martin A. Molnar, Sanford, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Sept. 25, 1959, Ser. No. 845,589
6 Claims. (Cl. 149—37)

2. In the heat and light generating combustion of a magnesium metal, the improvement which consists in employing as the combustible material a rigid solid consisting essentially of an intimate admixture consisting of 0.5 to 20 percent by weight of a particulated substance selected from the group consisting of oxides, carbonates and basic carbonates of magnesium, cadmium and the alkaline earth metals, the balance particulated magnesium metal, said combustible material having the form of an extrude prepared by die expressing said admixture at a temperature in the range of 300 to 850° F. whereby the magnesium metal particles undergo a welding together during die expression, but below the temperature at which the substance forms a fluid, thereby to aviod dripping molten metal during combustion.

3,094,446

SILICONE RUBBER COMPOSITIONS

Duane F. Bardick and Keith E. Polmanteer, Midland, Mich., assignors to Dow Corning Corporation, Midland, Mich., a corporation of Michigan

Filed Nov. 7, 1960, Ser. No. 67,656
5 Claims. (Cl. 154—2.7)



1. A vulcanizable siloxane rubber composition consisting essentially of (1) a diorganopolysiloxane in which the organic radicals are selected from the group consisting of methyl, phenyl, vinyl and 3,3,3-trifluoropropyl radicals, at least 50 percent of said radicals being methyl, (2) from 5 to 15 parts based on 100 parts of the diorganosiloxane of dicyclopentadienedioxide, and (3) a vulcanizing agent.

4. A transparent laminate comprising alternate layers of glass and a transparent vulcanized silicone rubber in which the edges of said laminate are sealed with a vulcanized silicone rubber composition consisting essentially of (1) a diorganopolysiloxane in which the organic groups are selected from the group consisting of methyl, phenyl, vinyl and 3,3,3-trifluoropropyl radicals, at least 50 percent of said radicals being methyl, (2) from 5 to 15 parts per 100 parts diorganopolysiloxane of dicyclopentadienedioxide, and (3) a filler.

3,094,447

METHOD OF MAKING AN INSULATED ROOF

Merle D. Chamberlain, Pittsburgh, Pa., assignor to Koppers Company, Inc., a corporation of Delaware

Filed Nov. 14, 1960, Ser. No. 68,788
3 Claims. (Cl. 156—71)

1. A method of making a built-up roof which comprises adhering a sheet of felt to a sheet of foam polystyrene by applying thereto a bituminous cement at a low temperature of 150–180° F. as an adhesive to provide a laminate, securing said laminate to the deck of a roof with the felt as the upper layer, and thereafter applying alternate upper layers of bituminous material and felt with the bituminous material at a higher temperature of about 400° F.

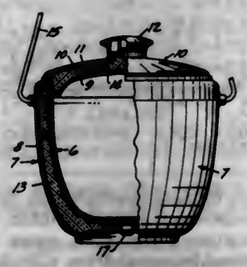
3. An insulated built-up roof produced by applying to one of the sheets of felt and of foam polystyrene a bitumen cement at a low temperature of 150–180° F. as an adhesive, pressing said sheets together to form a laminate, applying said laminate to the deck of a roof so that the felt is the upper layer, and thereafter alternately applying upper layers of bituminous material and felt thereto with the bituminous material at a higher temperature of about 400° F. so as to form said insulated built-up roof.

3,094,448

METHOD OF MAKING INSULATED PLASTIC CONTAINERS

Nelson F. Cornelius, 2939 66th Ave. N., Anoka, Minn.

Filed Mar. 9, 1959, Ser. No. 798,228
4 Claims. (Cl. 156—78)



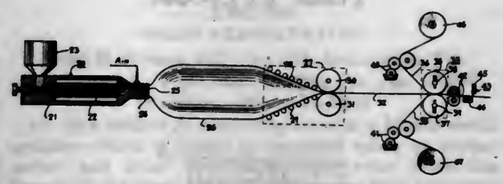
4. The steps in the process of making insulated receptacles which consist in preforming similarly shaped inner and outer shells with said inner shell being dimensionally somewhat smaller than said outer shell to leave an insulating chamber therebetween when the same are concentrically assembled, preforming an insulation reinforcing insert constructed of heat-expansible insulating material and shaped and dimensioned to very loosely fit between said shells, concentrically assembling said shells and said insert, joining edge portions of said inner and outer shells with sealing effect between the joined edge portion areas, and baking the shells so assembled at a temperature below that at which said shells will melt and above the temperature for producing expansion of said insulating material for producing expansion of said material in said insulating chamber.

3,094,449

METHOD OF FORMING A CONTAINER FROM A FLEXIBLE LAMINATE OF FOAMED POLYSTYRENE

James B. Sisson, Carthage, N.Y., assignor to St. Regis Paper Company, New York, N.Y., a corporation of New York

Original application Apr. 30, 1956, Ser. No. 581,430, now Patent No. 2,917,217, dated Dec. 15, 1959. Divided and this application Aug. 10, 1959, Ser. No. 837,564
11 Claims. (Cl. 156—184)



1. The method for forming a flexible laminate of foamed polystyrene sheet material adhered to a sheet of organic material, which comprises: extruding foamable polystyrene through a peripherally slotted nozzle to form a seamless tube therefrom while directing a preselected quantity of gas under pressure through an orifice located centrally of said nozzle and interiorly of said seamless tube while the latter is being formed, thus forming an expanded, stretched and inflated tube of foamed, flexible polystyrene sheet of at least several thousandths of an inch in thickness having on its opposite surfaces a continuous integral skin, said polystyrene sheet containing throughout between said skin surfaces a multitude of closed cells; continuously applying pressure to opposite outer sides of said tube to collapse and flatten same at a squeeze zone to bring into engagement opposite interior surfaces of said tube to form two adjacent polystyrene sheets joined along their sides; continuously bonding at least one ply of said sheet of organic material to one of the surfaces of the flattened tube and cutting said tube along opposite edges thereby to make separable said adjacent polystyrene sheets.

3,094,450

METHOD OF MAKING A CYLINDRICAL FILTER ELEMENT FOR CIGARETTE TIPS

Glenn Davidson, P.O. Box 510, Aurora, Ill.

Original application Jan. 26, 1955, Ser. No. 484,128, now Patent No. 2,900,989, dated Aug. 25, 1959. Divided and this application June 5, 1959, Ser. No. 818,407
6 Claims. (Cl. 156—209)



1. In a method of making cylindrical filter elements for cigarette tips, the steps of forming a sheet of wadding, impressing said sheet along a plurality of parallel lines spaced from each other a distance equal to twice the width of the desired filter element, sufficient pressure being applied in impressing said sheet to form closely compacted sections respectively at the occurrences of said lines, severing the sheet on lines at right angles to said compacted sections to form ribbons of a width approximately equal to the desired circumference of said filter

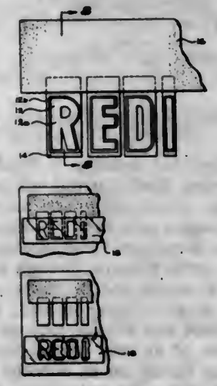
element, rolling a ribbon thus produced about a line lengthwise thereof to form a cylindrical body, and severing said cylindrical body transversely mid-way between the compacted sections of the same.

3,094,451

LETTERING TRANSFER DEVICE AND METHOD OF USING SAME

Robert J. Wagner, 1311 Gaviota Ave., Long Beach 13, Calif.

Filed Feb. 2, 1960, Ser. No. 6,138
1 Claim. (Cl. 156—249)



A method of mounting a plurality of insignia in a desired sequence and with desired spacing on a surface, which method comprises:

(*a*) forming a plurality of said insignia from a thin water-insoluble film;

(*b*) mounting each of said insignia on a water-permeable backing sheet that is coated with a water-soluble gum;

(*c*) moistening a transverse edge portion of each of said backing sheets and adhering the same in said desired sequence and desired spacing to an elongate spacing strip;

(*d*) laying said backing sheets and spacing strip on a flat supporting surface with said insignia facing upwardly;

(*e*) wetting said backing sheets and insignia to the extent that said gum coating is partially dissolved and a layer thereof is adhering to one surface of each of said insignia;

(*f*) contacting said wet insignia with a strip of a non-wettable polymerized resin to which said insignia adhere more strongly than to said partially dissolved gum coating;

(*g*) slidably moving said non-wettable strip transversely away from said backing strip with said insignia adhering thereto in said desired sequence and spacing;

(*h*) placing said insignia while mounted on said non-wettable strip in contact with said surface;

(*i*) applying water to said surface which seeps by capillary action between said insignia and said non-wettable strip to free said insignia therefrom; and

(*j*) transversely moving said non-wettable strip away from said surface to separate said insignia from said non-wettable strip, with said insignia remaining on said surface in said sequence and with said spacing due to said partially dissolved layer of gum adhering said insignia thereto.

3,094,452

METHOD OF MAKING INTERLOCKED WELDED CONNECTIONS BETWEEN SHAPED THERMOPLASTIC ARTICLES

Johannes von Riegen and Hans Bener, Neu-Ulm (Danube), Germany, assignors to Saad-West-Chemie G.m.b.H., Neu-Ulm (Danube), Germany, a corporation of Germany

Filed July 23, 1956, Ser. No. 599,390
Claims priority, application Germany July 23, 1955
4 Claims. (Cl. 156—275)



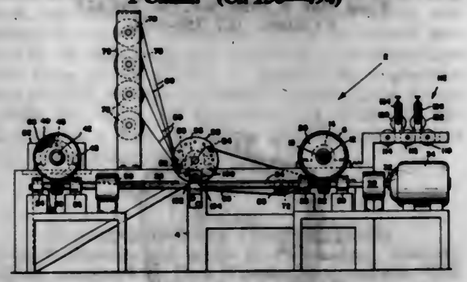
1. A process of welding together two interlocking shaped articles of thermoplastic synthetic resin, comprising the steps of forming a welding sleeve comprising essentially a heating conductor having spaced windings and a thin layer of a thermoplastic synthetic resin connecting the heating conductor windings, molding the welding sleeve to one of said shaped articles, interlocking the other one of said shaped articles with said one shaped article so that the welding sleeve lies between the shaped articles, and electrically heating the heating conductor until thermoplastic resin of the welding sleeve and of the other shaped article adjacent thereto melts and welds the interlocking articles together.

3,094,453

METHOD AND APPARATUS FOR MAKING LAMINATED SHEETS

Wayne R. Scherer, 1100 E. Miramar Ave., Claremont, Calif.

Filed June 22, 1960, Ser. No. 37,904
1 Claim. (Cl. 156—494)



Apparatus for forming relatively long lengths of laminated sheets comprising a laminating drum, means to control the temperature of said drum, means to rotate said drum, a reel spaced from said drum, a flexible band coiled on said reel and having its free end secured to said drum, means to heat said band prior to its being wound on said drum, means to place said band under tension, means to supply a plurality of resin impregnated sheets to the nip of the band on the laminating drum for winding on the drum between wraps of the band.

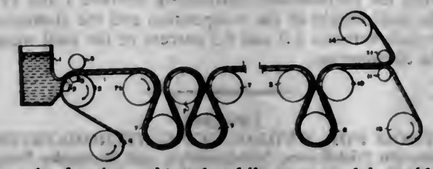
3,094,454

PAPER MAKING WITH SYNTHETIC FIBERS

Charles B. Moore, Scituate, Mass., assignor to W. R. Grace & Co., Cambridge, Mass., a corporation of Connecticut

Filed Jan. 3, 1961, Ser. No. 80,431
4 Claims. (Cl. 162—157)

1. A paper-making process comprising flowing an aqueous paper-making stock of a surfactant and hydrophobic polyolefin coated cellulose fibers from the head box of a paper-making machine having a moving, endless filter screen onto a relatively smooth surfaced felt supported by said screen, drawing the water thereof through said felt and screen forming thereby a web of said fibers on said felt, drying and fusing the polyolefin content of said



fibers by heating said web while supported by said felt and prior to any appreciable mechanical compaction thereof to a temperature in the range of 250° F. to 350° F., cooling the web, and stripping said web now in coherent form from said felt.

3,094,455

NOVEL CHLORINATED ETHYL SULFONES

James Forrest Allen, Pennington, and Harold K. Latourette, Hopewell Township, N.J., assignors to FMC Corporation, a corporation of Delaware

No Drawing. Filed June 20, 1961, Ser. No. 118,248
8 Claims. (Cl. 167—22)

7. A fungicidal composition comprising ⅛ to ¼ of a pound of 2-hydroxyethyl 2-chloroethyl sulfone as the active ingredient and 100 gallons of water.

8. A fungicidal composition comprising ⅛ to ¼ of a pound of 2-acetoxyethyl 2-chloroethyl sulfone as the active ingredient and 100 gallons of water.

3,094,456

CONCENTRATED INSECTICIDAL COMPOSITIONS

Frank Shumway Black, Westwood Manor, Wilmington, Del., assignor to FMC Corporation, a corporation of Delaware

Filed Jan. 17, 1961, Ser. No. 83,291
9 Claims. (Cl. 167—30)

1. A single phase insecticidal solution which will not crystallize at temperatures as low as 20° F. containing at least about 53% by weight of active ingredients consisting essentially of a mixture of aldrin and heptachlor in the ratio of 3 to 1 parts by weight of heptachlor to 1 to 3 parts by weight of aldrin in not more than about 47% by weight of a liquid solvent from the group consisting of xylene, methylene chloride, methylated naphthalene and mixtures of at least two of said solvents.

3,094,457

TOXIC O,O-DIMETHYL AND O,O-DIETHYL S-PENTACHLOROPHENYL PHOSPHOROTHIOATE

Gail H. Birum, St. Louis, Mo., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Original application Jan. 8, 1957, Ser. No. 632,966. Divided and this application Nov. 16, 1961, Ser. No. 152,939
12 Claims. (Cl. 167—30)

4. The method of destroying mites which comprises exposing said mites to a toxic amount of a compound taken from the class consisting of O,O-dimethyl S-pentachlorophenyl phosphorothioate and O,O-diethyl S-pentachlorophenyl phosphorothioate.

3,094,458

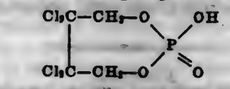
2,2,3,3-TETRACHLORO-1,4-BUTANEDIOL CYCLIC ACID PHOSPHATE

Max E. Childix and Robert W. Wynn, Easton, Pa., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Jan. 5, 1961, Ser. No. 80,740
5 Claims. (Cl. 167—33)

1. A process for the preparation of 2,2,3,3-tetrachloro-1,4-butanediol cyclic acid phosphate, which comprises heating 2,2,3,3-tetrachloro-1,4-butanediol with a substantially equimolecular amount of phosphorus oxychloride in an inert organic high boiling solvent while removing evolved HCl, cooling and adding water to the resulting mixture, and again heating while removing evolved HCl.

4. As a new composition of matter, 2,2,3,3-tetrachloro-1,4-butanediol cyclic acid phosphate having the formula



3,094,459

WOOD PRESERVATIVE

James H. Pickrell, P.O. Box 628, Jacksonville, Fla.

No Drawing. Filed Mar. 1, 1960, Ser. No. 11,949
11 Claims. (Cl. 167—38.5)

11. In a method of preserving wood in a ferrous metal container which is subject to corrosive attack by copper sulfate and alkali metal dichromate wood preserving chemicals, the novel method of preserving such wood notwithstanding the presence of such corrosive chemicals, which method comprises adding citric acid to said chemicals in an amount to reduce the pH, then adding ammonia in an amount to raise the pH to about 4.0 to about 4.8, and then immersing said wood in the resulting solution while maintaining said solution in said ferrous metal container.

3,094,460

DECOYININE

Clarence De Boer, Alma Dietz, Le Roy E. Johnson, and Thomas E. Eble, Kalamazoo, and Herman Hoeksema, Kalamazoo Township, Kalamazoo County, Mich., assignors to The Upjohn Company, Kalamazoo, Mich., a corporation of Delaware

Filed Jan. 20, 1959, Ser. No. 787,976
18 Claims. (Cl. 167—65)

1. A composition of matter, decoyinine, which in its essentially pure crystalline form is characterized by a melting point of 183–186° C.; a titration equivalent of 283; a molecular weight determination of 215–216; an elemental analysis as follows: C=47.11%, H=5.03%, N=25.03%, O=23.01%; the absence of an aldo-ketose group; an optical rotation $[\alpha]_D^{25}=+18.6$ in dimethyl formamide; exhibiting characteristic absorption in the infrared spectrum as shown in FIGURE 1, and in the ultraviolet spectrum shown in FIGURE 2, of the drawings; said composition of matter being further characterized in that on acid hydrolysis it yields adenine.

3,094,461

ANTIMICROBIAL AGENT M-259 AND METHOD OF PREPARATION

Joseph Frank Prokop, Mundelein, Ill., assignor to Abbott Laboratories, North Chicago, Ill., a corporation of Illinois

Filed July 10, 1961, Ser. No. 122,791
7 Claims. (Cl. 167—65)

7. An antimicrobial substance designated as antimicrobial agent M–259 which in its free base form has the following properties: substantially insoluble in water, somewhat soluble in acetone, saturated hydrocarbons, benzene, ethyl acetate, butanol, ethanol and methanol but readily soluble in dimethylformamide, chloroform, dimethylsulfoxide and acidified absolute ethanol; an ultraviolet absorption spectrum in ethanol exhibiting maxima at 235 and 335 millimicrons; an infrared absorption spectrum when run in a Nujol mull as shown in the drawing; has X-ray diffraction lines expressed in angstroms at 10.2, 6.5, 5.7, 5.15, 4.72, 4.50, 4.20, 3.88, 3.70, 3.37, 3.25,

3.04, 2.95, 2.85, 2.63, 2.56, 2.47, 2.23, 2.12, 1.97, 1.90 and 1.78; an elemental analysis of 63.00% carbon, 6.43% hydrogen, 18.42% oxygen and 11.95% nitrogen; a molecular weight as determined by the sedimentation velocity-diffusion method of 795±60; a specific rotation in ethanol solution of $\alpha_D^{29}=+0.90$; a melting point of 155°–157° C. with decomposition, is non-dialyzable and gives negative results in the acrolein, ninhydrin, phosphate and biuret tests.

3,094,462

THERAPEUTIC REACTION COMPLEX FOR MUSCLE RELAXATION

Joseph F. Gardocki, Doylestown, John W. Poole, Norristown, and George I. Poos, Ambler, Pa., assignors to McNeil Laboratories, Incorporated, a corporation of Pennsylvania

Filed Sept. 18, 1961, Ser. No. 138,647
14 Claims. (Cl. 167—65)

13. A method for producing muscle relaxation which comprises administering to a living animal a reaction complex of 5-chlorobenzoxazolinone and 2-amino-5R, 6R'-benzoxazole wherein one of R and R' is halogen and the other is a member of the group consisting of hydrogen, hydroxy and lower alkoxy, and 5-halo-6R-benzoxazolinone wherein R is a member of the group consisting of hydroxy and lower alkoxy.

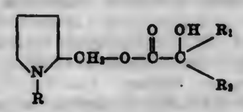
3,094,463

COMPOSITION CONSISTING OF 2-PYRROLIDYL-METHYL-N-LOWER ALKYL AND 3-PIPERIDYL-N-LOWER ALKYL PHENYLGLYCOLATES AS ANTI-SPASMODICS AND CENTRAL STIMULANT, AND PROCESS OF PREPARATION

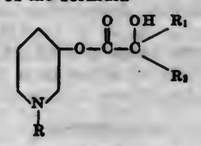
John H. Biel, Milwaukee, Wis., assignor to Lakeside Laboratories, Inc., Milwaukee, Wis., a corporation of Delaware

No Drawing. Filed Mar. 27, 1962, Ser. No. 182,969
10 Claims. (Cl. 167—65)

1. A composition comprising a compound of the formula



and a compound of the formula



and each compound being present in an amount of at least 25% by weight of the total weight of the two compounds present, wherein R is a member of the group consisting of lower alkyl and phenyl-lower alkyl groups, and R_1 and R_2 are members of the group consisting of phenyl, 2-thienyl, cyclohexyl and cyclopentyl groups but R_1 and R_2 are not both phenyl at the same time.

3,094,464

ASPIRIN-ANTACID POLYSILOXANE TABLET

Maurice Joullie, Saint-Germain-en-Laye, Michel Laurre, Chatillon-sous-Bagneux, Gabriel Maillard, Puteaux, and Pierre Muller, Paris, France, assignors to Recherches et Propagande Scientifiques, Paris, France, a French body corporate

No Drawing. Filed Mar. 30, 1961, Ser. No. 99,346
Claims priority, application Great Britain Apr. 1, 1960
3 Claims. (Cl. 167—82)

1. A pharmaceutical preparation for oral ingestion in the form of a compressed tablet containing aspirin in the form of particles individually coated with a coating which is at least partially enteric, in association with dimethyl polysiloxane having a viscosity of about 500 centistokes at 25° C., as a homogeneous dispersion in aluminium hydroxide, the polysiloxane constituting between 1 and 10% of the total weight of the composition and the aluminium hydroxide between 8.0 and 8.5 percent of the total weight of the composition.

3,094,465

METHOD FOR HYDROLYZING STEROID-ESTERS

Masamoto Nishikawa, Nishinomiya, and Shunsaku Noguchi, Minoo, Osaka, Japan, assignors to Takeda Pharmaceutical Industries, Ltd., Osaka, Japan

No Drawing. Filed Oct. 20, 1960, Ser. No. 63,719
Claims priority, application Japan Oct. 24, 1959
15 Claims. (Cl. 195—51)

1. A method for hydrolyzing a steroid ester, the steroidal carbon skeleton of which is that of pregnane and which has at the 16-position an acyloxy group selected from the group consisting of alkylcarbonyloxy groups having a straight chain of one to about ten carbon atoms and of alkylcarbonyloxy groups having a chain of less than five carbon atoms and being substituted by a member selected from the group consisting of hydroxyl, amino, lower alkylamino, lower dialkylamino, halogen and carboxy, which comprises bringing the said steroid ester into contact with an enzyme selected from the group consisting of diastase, Takadiastase and Protamilase in an aqueous medium, whereby the acyloxy group at the 16-position is selectively hydrolyzed to OH even in the presence of acyloxy groups in other positions of the starting steroid ester.

3,094,466

PREPARATION FOR TYPING OF STAPHYLOCOCCI AND PROCESS THEREFOR

Benjamin S. Schwartz, Livingston, N.J., assignor to Warner-Lambert Pharmaceutical Company, Morris Plains, N.J., a corporation of Delaware

No Drawing. Filed July 15, 1959, Ser. No. 827,140
4 Claims. (Cl. 195—103.5)

1. A preparation useful in the rapid routine typing of Staphylococci consisting of an unglazed dried porcelain bead the surface of which is uniformly coated and impregnated with a controlled and calibrated quantity of viable and removable bacteriophage organisms effective against a strain of Staphylococci.

3,094,467

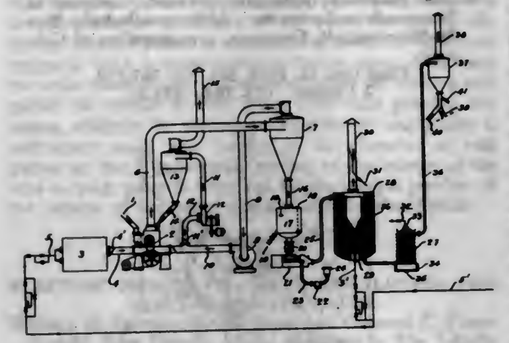
CARBONIZATION OF COAL

William J. Kruppa, Somerville, N.J., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine

Filed July 30, 1954, Ser. No. 446,832
11 Claims. (Cl. 202—22)

1. A process of producing a metallurgical grade coke from swelling coals which comprises subjecting such coal to flash oxidation with a gas containing free oxygen, in particulated and fluidized form, at a temperature within the plastic range of the coal for a controlled brief period of time; shock cooling the oxidized particulated coal to a temperature at which oxidation of the coal is inhibited; admixing the oxidized coal with a fluent binder to produce a plastic, formable mass of uniform consistency; forming the plastic mass into units of selected size and shape; carbonizing the formed units by contacting such units with a flowing stream of non-reactive gas characterized by a low partial pressure of the components of the coal which are volatile at such carbonization temperature; controlling the rate of heat input from such non-reactive gas to said formed units substantially at

the rate of between 2.5° C. to 5° C. per minute up to substantially 500° C. and thereafter controlling such heat



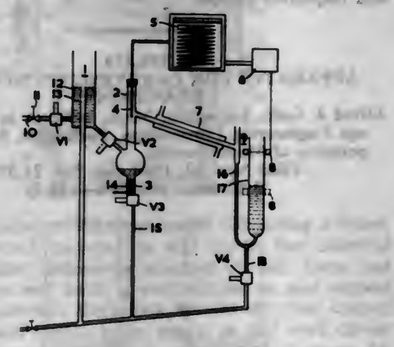
input at the rate of from substantially 0.75° C. to 1.25° C. per minute up to the final finishing temperature.

3,094,468

APPARATUS FOR USE IN THE CONTROL OF DISTILLATION

William Henry Topham, Isle of Grain, England, assignor to The British Petroleum Company Limited, London, England, a joint-stock corporation of Great Britain

Filed Feb. 9, 1961, Ser. No. 88,104
Claims priority, application Great Britain Feb. 11, 1960
5 Claims. (Cl. 202—160)



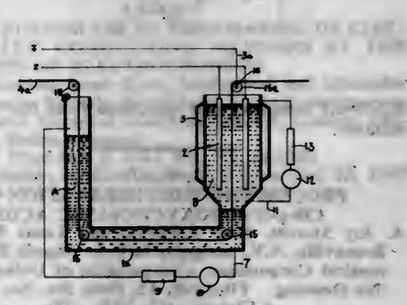
1. Apparatus, suitable for use in the control and monitoring of a continuous distillation process, comprising, in combination: a sample introduction system including a cell having an inlet and an outlet, said cell also having a weir discharge within said cell whereby a constant level of fluid may be maintained within said cell; a first valve connected to said inlet of said cell for controlling the admission of fluid into said cell, and a second valve connected to said outlet of said cell for controlling the discharge of fluid from said cell; a distillation still having a still head; said still communicating with said cell through said second valve, whereby fluid contents within said cell pass into said still when said second valve is opened; a heater contiguous to said still for heating said still; said still having electrical sensing means for sensing the overhead temperature in said still and adapted to produce a first signal in response to overhead temperatures; said electrical sensing means including a thermocouple set in said still head and a temperature recorder electrically coupled with said thermocouple to receive said first signal; said still also having a drainage limb and a third valve therein; a condenser connected to the said still head; a distillate receiver connected to said condenser, said receiver having liquid level detector means responsive to the volume of distillate collected in said receiver for producing a second signal as a function of the level of distillate in said receiver; said receiver also having a drainage limb and a fourth valve therein; relay means electrically coupled to said level detector means and responsive to said second signal, said relay means including a first switching means electrically coupled to said heater for deenergizing same upon receipt of said second signal from said level detector means, and a second switching means electrically coupled to said thermocouple and also responsive to said second signal to switch off said thermocouple.

3,094,469

PROCESS FOR CLEANING METAL OBJECTS

Wennemar Strauss and Hans Wedell, Dusseldorf-Holthausen, Germany, assignors to Dehydag Deutsche Hydrierwerke G.m.b.H., Dusseldorf, Germany, a corporation of Germany

Filed July 6, 1959, Ser. No. 825,327
Claims priority, application Germany July 12, 1958
12 Claims. (Cl. 204—141)



1. A process for cleansing metal surfaces by the use of chlorohydrocarbon solvents and aqueous cleansing agent solutions, in a cleaning bath comprising a lower layer of said chlorohydrocarbon solvent and an upper layer of said aqueous cleansing agent solution, the steps comprising treating said metal surfaces first in said chlorohydrocarbon solvent layer and subsequently in said aqueous cleansing agent solution and thereafter rinsing said metal surfaces.

2. The process of claim 1 wherein the cleaning in the aqueous layer is carried out under the action of an electric current.

3,094,470

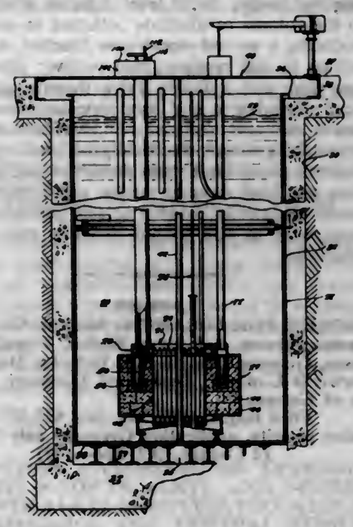
NUCLEAR REACTOR AND IRRADIATING SYSTEM

Richard S. Stone, Del Mar, and George P. Kraker, La Jolla, San Diego, Calif., assignors to General Dynamics Corporation, New York, N.Y., a corporation of Delaware

Filed Nov. 12, 1959, Ser. No. 852,505
6 Claims. (Cl. 204—154.2)

1. A method of irradiating a plurality of specimens in an isotope-producing neutronic reactor, comprising loading the specimens on a supporting member in spaced-apart relation peripherally of the core of the reactor, continuously moving the supporting member completely around the core at a selected, uniform speed to expose

each specimen substantially equally to all sides of the core during each revolution about the core, providing indicator means for indicating the positions of the specimens as the specimens are rotated about the core, and



selectively removing said specimens from the supporting member.

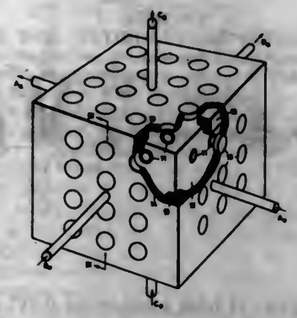
3,094,471
PROCESS FOR THE PREPARATION OF CIS-p-HYDROXYCINNAMIC ACID
A. Jay Merritt, New Rochelle, and Louis Freedman, Bronxville, N.Y., assignors to U.S. Vitamin & Pharmaceutical Corporation, a corporation of Delaware
No Drawing. Filed July 15, 1960, Ser. No. 42,968
4 Claims. (Cl. 204—158)

1. A process for the preparation of cis-p-hydroxycinnamic acid by photoisomerization of trans-p-hydroxycinnamic acid, which comprises subjecting to irradiation in a substantially nonoxidizing atmosphere with light of a wave length within the range of at least 2850 A. and up to at least 3600 A. an aqueous solution having a concentration of from about 0.1 to about 0.5 molar and a pH within the range from about 6.8 to about 9 of a salt of trans-p-hydroxycinnamic acid and a metal, said metal being inert to light of the stated wave length, until trans-acid is photoisomerized to cis-acid, adding an acid in an amount to effect precipitation of nonisomerized trans-acid, and recovering cis-acid from the resulting solution.

3,094,472
IRRADIATION OF HYDROCARBON OILS
Bertrand W. Greenwald, Haddonfield, and Allan K. Lazarus, Franklin Township, Somerset County, N.J., assignors to Cities Service Research and Development Company, New York, N.Y., a corporation of New Jersey
No Drawing. Filed Feb. 17, 1960, Ser. No. 9,202
1 Claim. (Cl. 204—162)

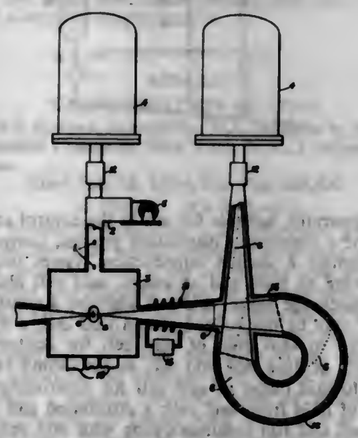
The process for treating hydrocarbon fuel oil containing between about 0.001 and about 1.0 weight percent imidazole for the improvement of the stability thereof which comprises subjecting said fuel oil to between about 10^7 and about 10^9 roentgens of gamma radiation.

3,094,473
FUEL-ROD STRUCTURE FOR HETEROGENEOUS NUCLEAR REACTORS
Walter Humbach, Erlangen, Germany, assignor to Siemens-Schuckertwerke Aktiengesellschaft, Berlin-Siemensstadt, Germany, a corporation of Germany
Filed Oct. 16, 1958, Ser. No. 767,732
2 Claims. (Cl. 204—193.2)



1. A fuel-rod lattice structure for heterogeneous nuclear retactors, comprising three component groups of lattice assemblies of fuel rods, each group having parallel fuel rods extending continuously across said lattice structure in a multiplicity of mutually spaced and parallel planes with a multiplicity of mutually spaced fuel rods in each plane, the planes of each group being perpendicular to those of each of the two other groups, and inlet and outlet conduit means providing three series-connected flow paths of coolant in direct contact with said fuel rods, each flow path being parallel to the fuel rods of a different one of said respective groups.

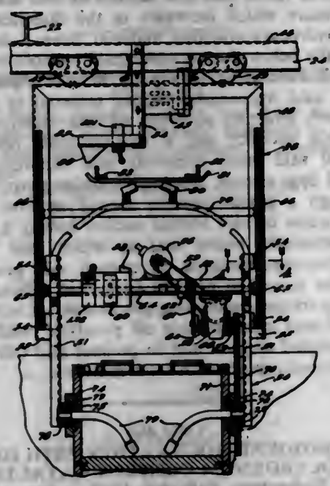
3,094,474
APPARATUS FOR CARRYING ON NUCLEAR REACTIONS
Alfred J. Gale, Lexington, Mass., assignor to High Voltage Engineering Corporation, Burlington, Mass., a corporation of Massachusetts
Filed Nov. 22, 1960, Ser. No. 71,379
2 Claims. (Cl. 204—193.2)



1. Apparatus for carrying on nuclear reactions comprising in combination at least one ion accelerator adapted to produce a beam of high-energy ions; an ion deflector adapted to deflect said ion beam periodically, whereby said ion beam is divided into linear segments each of

which is at an angle to the direction of travel of the ions therein; a magnet adapted to subject said segments to the deflecting action of a magnetic field so distributed in space that the ions in each segment converge both laterally and longitudinally so as to form an ion pulse; means for subjecting said ion pulses to the pinching action of an intense magnetic field; a pellet-forming device adapted to form exoergic material into pellets; and means for causing said pellets to collide in free space with said pinched ion pulses, wherein the transverse diameter of said pulses is sufficiently small with respect to the diameter of said pellets so that a substantial portion of the energy of the ions in each pulse is absorbed by the central portion of the volume of the pellet which is struck by said pulse.

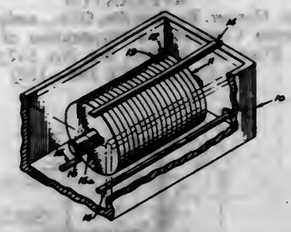
3,094,475
ELECTRIC POWER TRANSFER MECHANISM FOR CONVEYOR APPARATUS
William H. Jackson, Birmingham, and Clement C. Plentkowski, East Detroit, Mich., assignors to The Udylite Corporation, Detroit, Mich., a corporation of Delaware
Filed June 15, 1959, Ser. No. 820,329
8 Claims. (Cl. 204—202)



1. In a conveyor the combination comprising a frame, a support track mounted on said frame, first electrical contact means stationarily mounted on said frame and spaced from said track, a work carrier on said support track and movable therealong, second electrical contact means on said carrier, motor means on said work carrier electrically connected to said second contact means for raising and lowering workpieces supported on said carrier, said work carrier being movable along said track between positions in which said first and said second contacts are electrically connected and electrically disconnected, means electrically connected to said first contact means and operable to supply power thereto when said second contact is electrically connected to said first contact means and to remove power from said first contact when said second contact is electrically disconnected therefrom.

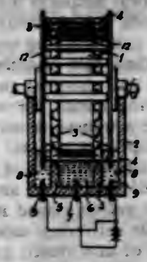
3,094,476
APPARATUS FOR FORMING METAL FIBERS
Howard T. Francis, Park Forest, Ill., assignor to Armour Research Foundation of Illinois Institute of Technology, Chicago, Ill., a not-for-profit corporation of Illinois
Filed July 13, 1960, Ser. No. 42,642
1 Claim. (Cl. 204—216)

In combination, apparatus for the manufacture of thin metal fibers comprising: container means; a solution containing an electrodepositable material in said container, conductive means suspended within said container but insulated therefrom; a series of discs having conductive and non-conductive sections uniformly spaced from each other about the periphery of said discs; a series of non-conductive discs interspersed alternately between said last mentioned discs whereby all the discs are in axial



alignment and substantially completely immersed in said solution; means for rotating said discs in unison; means for applying a voltage across said discs and the conductive means; means for removing the electrodepositable material from said conductive sections; means for regulating the rate of rotation of said rotating means; and means for regulating the magnitude of voltage applied across said discs and the conductive means.

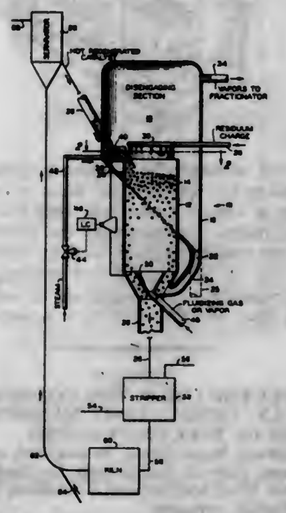
3,094,477
APPARATUS FOR USE IN THE COATING OF ELECTRICALLY CONDUCTING MEMBERS BY THE PROCESS OF ELECTROPHORESIS
Thomas Jackson, South Bents, Sunderland, and Alexander McPherson, Fulwell, Sunderland, England, assignors to Associated Electrical Industries Limited, London, England, a British company
Filed Oct. 9, 1961, Ser. No. 143,708
Claims priority, application Great Britain Oct. 13, 1960
6 Claims. (Cl. 204—300)



1. Apparatus for use in the process of coating at least one selected portion of at least one electrically conducting member with at least one finely divided material from a liquid suspension thereof by electrophoresis; which comprises a cylindrical support, a plurality of rows of raised, electrically insulated projections spaced peripherally on said support for supporting the conducting members to be coated, said rows of projections being in spaced parallel relation normal to the longitudinal axis of the support with the spacing therebetween defining the portion of the members to be coated, an electrically insulated trough positioned below said support for a distance such that a lower segmental portion of the support extends into the trough, a plurality of vertically disposed ribs positioned in said trough and coacting with said rows of projections to define a plurality of compartments in said trough with alternate compartments thereof being adapted to contain suspensions of coating material and the remaining compartments thereof being adapted to contain an electrically conducting liquid which serves to

enable electrical contact to be made with said conducting members and assist in confining said suspensions of coating material to their respective compartments, and an electrode extending into each compartment.

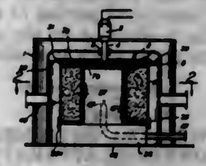
3,094,478
CATALYTIC CONVERSION PROCESS AND APPARATUS
Kenneth A. Harper, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Oct. 3, 1955, Ser. No. 537,928
10 Claims. (Cl. 208—155)



1. Apparatus for contacting fluids and solids comprising an upright fluidizing chamber having an open upper end and solids withdrawal means in the lower end; means for introducing fluidizing gas upwardly in the lower section of said chamber; a disengaging vessel of larger horizontal cross section than said chamber surrounding at least the upper end of said chamber and extending above same, said vessel having means for withdrawing solids from its lower section; a transverse solids receiving plate extending from the top edge of said chamber along a limited portion of the circumference of said edge laterally to the adjacent wall of said vessel and terminating adjacent said edge so as not to extend into said chamber; inlet conduit means for delivering solids onto said plate from a source outside of said vessel; gas injection means directed inwardly from the wall of said vessel along the upper surface of said plate directly below said inlet conduit means for moving solids across said plate into the top of said vessel; fluid outlet means from an upper section of said vessel; and means for introducing and distributing a fluid feed to the upper end of said chamber for contacting solids therein.

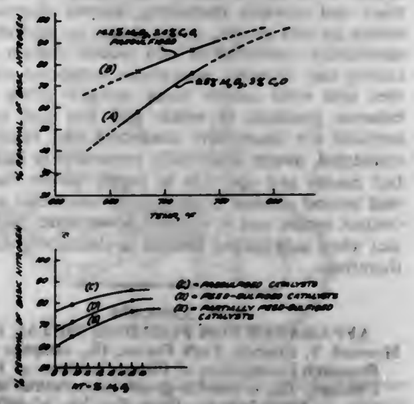
6. A process for producing cracked products from a heavy hydrocarbon feed which comprises maintaining a hot agitated bed of heat-exchange pellets in the range of about 4 to 10 mesh size in a restricted cracking zone at cracking temperature by injecting an agitating gas upwardly into the lower section of said bed; withdrawing pellets from the lower section of said bed and introducing fresh pellets onto the top layer of said bed by delivering same to a collecting zone above the top of said bed laterally outside thereof, and forcing said pellets laterally into the area above said bed with a laterally and inwardly directed stream of gas; introducing said feed in liquid form onto said top layer so that at least a portion thereof in liquid form passes downwardly in said bed with said pellets and so as to crack said feed and produce lighter hydrocarbons and coke on said pellets; and collecting said lighter hydrocarbons above said bed as product.

3,094,479
CONVERSION PROCESS AND APPARATUS
Maxwell Patrick Sweeney, Philadelphia, Pa. (2341/2 S. Bonsalo Brae St., Los Angeles 57, Calif.)
Filed Feb. 7, 1958, Ser. No. 713,863
4 Claims. (Cl. 208—176)



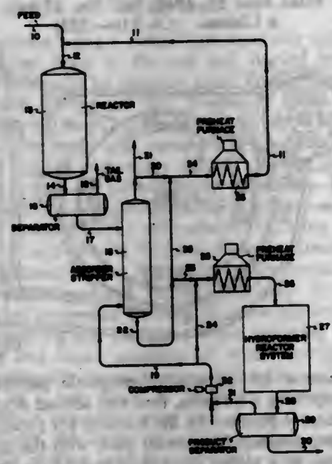
1. A method for pyrolytic conversion which comprises passing fluid-form hydrocarbonaceous material to be converted radially through a first section of a rotating annular fibrous mass, said first section of said mass having a temperature which increases in the direction of flow of said hydrocarbonaceous material from a degree not substantially below that at which said hydrocarbonaceous material is introduced to a point at least equal to that at which said hydrocarbonaceous material is pyrolysed and thereby effecting pyrolysis of said material to give a vaporous product and a non-vaporous residue and cooling of said mass, removing said vaporous product from said first section, passing vaporous pyrolysis product through a second section of said annular mass, at least a portion of said second section having a temperature substantially below that at which said vaporous product becomes unstable, to quench said product, removing the quenched product from said second section, passing an oxygen-containing gas in contact with a third section of said mass to burn off pyrolysis residue previously deposited thereon and to preheat said third section for subsequent contact with fresh material.

3,094,480
HYDRODENITROGENATION WITH HIGH MOLYBDENUM CONTENT CATALYST
Ryden L. Richardson, Fullerton, Calif., assignor to Union Oil Company of California, Los Angeles, Calif., a corporation of California
Filed Oct. 31, 1960, Ser. No. 65,987
3 Claims. (Cl. 208—254)



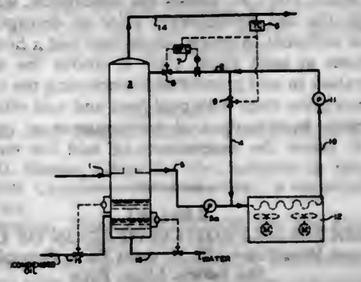
1. A process for hydrorefining a mineral oil feedstock containing organic nitrogen compounds to effect at least about 85% denitrogenation thereof, which comprises contacting said feedstock plus added hydrogen with a hydrorefining catalyst at an initial hydrorefining temperature between about 600° and 725° F., a space velocity between about 0.5 and 3.0 and a pressure between about 400 and 2,000 p.s.i.g., periodically raising the temperature of said contacting in order to maintain a substantially constant degree of denitrogenation, continuing said contacting at incrementally rising temperatures until a terminal temperature between about 775°–850° F. is reached, whereby a run length of at least about 60 days is obtained in which at least about 85% denitrogenation is maintained throughout, said catalyst comprising between about 0.7% and 4% by weight of cobalt and between about 8.3% and 10% by weight of molybdenum intimately distributed and supported upon a carrier which is essentially activated alumina, said catalyst having been prepared by alternate impregnation with separate aqueous solutions of ammonium molybdate and a soluble cobalt salt, and having been pre-sulfided prior to use in said hydrorefining process by contact with a reactive sulfiding agent under non-coking conditions, the Co/Mo atomic ratio in said catalyst being between about 0.2 and 0.6.

3,094,481
HYDROFINING PROCESS WITH TEMPERATURE CONTROL
Roger M. Butler, Sarnia, Ontario, and John A. Bichard, Point Edward, Ontario, Canada, assignors to Esso Research and Engineering Company, a corporation of Delaware
Filed Sept. 9, 1960, Ser. No. 54,867
5 Claims. (Cl. 208—255)



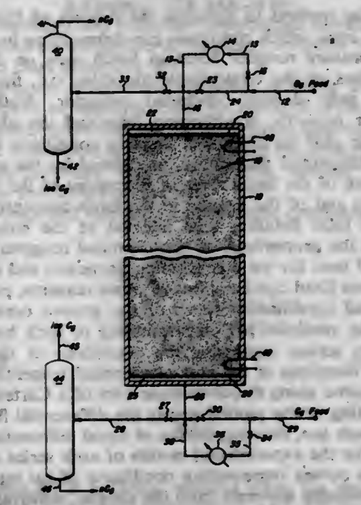
1. A method for catalytically hydrogenating naphtha feedstocks which tend to form deposits upon heat transfer surfaces when heated to temperatures above about 300° F. which comprises hydrogenating the feed at elevated temperature and pressure to improve the stability of the naphtha, separating the hydrogenated liquid product from the accompanying gases, preheating a portion of the hydrogenated liquid product to a temperature of about 900–1000° F., mixing the preheated hydrogenated product with naphtha feed at a temperature substantially below 300° F. in sufficient amount that the resultant mixture may be charged directly to the hydrogenating step without further heating.

3,094,482
DEPHLEGMATOR OPERATION AND APPARATUS
Henry B. Vineyard, Midkiff, Tex., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Nov. 7, 1960, Ser. No. 67,835
7 Claims. (Cl. 208—308)



1. A method of dephlegmating vapors in a dephlegmation zone which comprises feeding vapors into said zone, collecting in and removing from within said zone a liquid moving downwardly in said zone in direct contact with vapors therein, cycling said liquid into and through a cooling zone and then directly into the upper portion of said dephlegmation zone for intimate direct contact with said vapors in said zone responsive to the temperature of the vapors leaving said zone in an amount sufficient to maintain the temperature of said vapors at a predetermined valve, by-passing at least a portion of the liquid effluent from said cooling zone directly back to the inlet of and through said cooling zone, and controlling the amount of by-passed liquid responsive to the temperature of vapors at the top of said dephlegmation zone.

3,094,483
HYDROCARBON SEPARATION PROCESS
Robert J. Hengstebeck, Valparaiso, Ind., assignor to Standard Oil Company, Chicago, Ill., a corporation of Indiana
Filed July 12, 1960, Ser. No. 42,311
13 Claims. (Cl. 208—310)



1. In a process for separating hydrocarbons by differences in adsorption characteristics wherein a hydrocarbon feed containing hydrocarbons of differing adsorbabilities is passed through a bed of molecular sieve adsorbent and the more readily adsorbable hydrocarbon is adsorbed on said adsorbent and wherein the adsorbed hydrocarbon is

desorbed by displacement with another readily adsorbable hydrocarbon, said other readily adsorbable hydrocarbon boiling in a range differing from the boiling range of said feed, the combination with said process of the improvement which comprises passing a hot hydrocarbon fluid at least about 100° F. above the adsorption temperature through the bed immediately prior to desorption in an amount sufficient to create across said bed a hot temperature front at least about 100° F. above the adsorption temperature in said process and conducting the adsorption and desorption steps with cold feed and said other readily adsorbable hydrocarbon at temperatures at least about 100° F. below the temperature of said hot temperature front.

3,094,484

PROCESS OF FROTH FLOTATION OF ORES

Alfonso Rizo-Patrón R., A. de la Torre Gonzales 147, San Isidro, Lima, Peru

Filed Aug. 22, 1958, Ser. No. 756,680
15 Claims. (Cl. 209—166)



1. The method to optimize the process of froth flotation of ores, which comprises pre-determining by a series of laboratory rougher flotation batch tests on the ores, the values of the controllable variables viz., fineness of grind, pulp density, chemical collector, frother and modifier reagents, conditioning time and the pH resulting from said variables that produce conditions of maximum differential floatability, as defined by the algebraic difference of the mean rates of recoveries of the valuable minerals and of the gangue in the froth concentrate during the total flotation time interval of the batch tests; varying the proportions of two chemical reagents in each series of tests for various grinding finenesses and for each of various fixed combinations of other reagents, pulp densities and conditioning times of the ground ores; measuring the resultant pH corresponding to each batch test of every series; expressing the conditions of the batch tests as functions of the pair of chemical reagents varied, as measured along the coordinate axes of a Cartesian system; noting at the plotted points the differential floatability of each test, drawing curves of equal differential floatability for the experimental results of each series of tests, the zero curves representing conditions of no separation of the valuable minerals from the gangue, positives curves representing conditions of concentration of the valuable minerals in the froth, and negative curves representing conditions of concentration of the gangue in the froth; taking from said equal-differential floatability curves the best relative proportion indicated by the respective coordinates of the pair of chemical reagents which produces the greatest absolute value, positive or negative, for the differential floatability in each series of tests, defining thus the conditions corresponding to the maximum differential floatability of all the series of tests, for the treatment of any ore in terms of the controllable variables of the process, and their resultant pH.

3,094,485

FLOTATION PROCEDURES

Antoine M. Gaudin, Newtonville, Mass., Henry Rush Spedden, Chappaqua, N.Y., and John H. Sullivan, Bishop, Calif., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Jan. 2, 1959, Ser. No. 784,427
6 Claims. (Cl. 209—166)

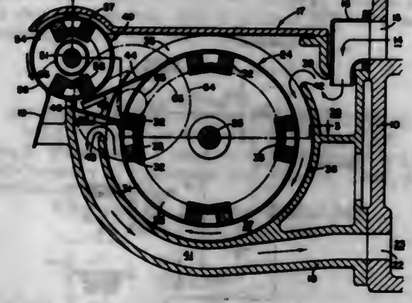
1. In a flotation process wherein calcium tungstate is separated from a mixture of said mineral with a gangue containing at least one mineral of the group consisting of calcite and fluorite by the addition to an aqueous slurry of said mixture of an organic flotation reagent whereby the major portion of said calcium tungstate is floated to the surface of said slurry and removed therefrom, and the major portion of said gangue remains in said slurry, the improvement which comprises adding to said slurry at least a substantial portion of at least one water-soluble permanganate selected from the group consisting of sodium permanganate and potassium permanganate, whereby the propensity of said gangue to float with said calcium tungstate is substantially decreased.

3,094,486

MAGNETIC SEPARATOR

Philip H. Goeltz, Rochester, N.Y., assignor to The Gleason Works, Rochester, N.Y., a corporation of New York

Filed June 22, 1960, Ser. No. 37,969
6 Claims. (Cl. 210—222)



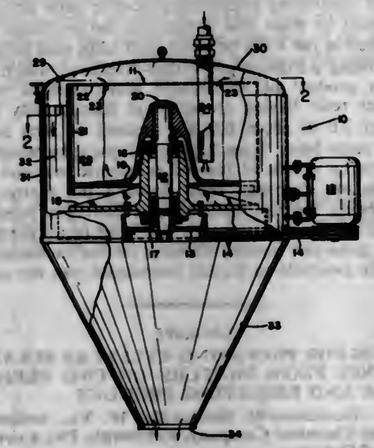
1. Apparatus for separating magnetic particles from liquid, comprising a housing, first and second magnet-containing drums supported by the housing for rotation about spaced approximately horizontal axes, with the axis of the second drum at a higher level than that of the first drum, the magnets in each drum being peripherally disposed, drive means for rotating said drums, the housing having an arcuate apron extending in substantial concentricity with said first drum around the lower portion thereof and together therewith defining a passageway for liquid in which particles may be drawn magnetically to said first drum, said apron having at one end thereof a lip, over which the liquid may spill, for establishing the liquid level in said passageway, transfer means having a downwardly inclined surface departing approximately tangentially from an upper portion of the first drum, in the direction of rotation of the drum, for mechanically removing adhering particles and residual liquid, the second drum being above said liquid level established by said lip, said downwardly inclined surface extending in a plane beneath the second drum in such spaced relation thereto that the removed liquid may flow down said inclined surface past the second drum, without contact therewith, while particles on said inclined surface are magnetically drawn across an air gap to said second drum, and means for removing the particles from the second drum.

3,094,487

PROCESS OF CENTRIFUGAL SEPARATION

Fred C. Van Arsdell, Medina, Ohio, assignor to The Quaker Oats Company, Chicago, Ill., a corporation of New Jersey

Filed Oct. 6, 1959, Ser. No. 844,799
2 Claims. (Cl. 233—28)



1. A process using a centrifugal separator with a rotating container open at the top and having imperforate base and side walls to separate solid, non-edible materials from masses of ground fish containing edible particles, comprising the steps of, rotating the container to distribute a portion of said ground fish introduced into the container radially outwardly against the side wall of the container, retaining said radially outwardly distributed portion as a centrifugally formed cylindrical mass having a wall of predetermined thickness, introducing additional portions of said ground fish into said container and then radially outwardly into the centrifugally formed mass to displace edible particles radially inwardly of said mass and to expel controlled portions of edible particles through the open top of said container while retaining non-edible materials and lesser amounts of edible particles within said centrifugally formed mass, impinging said expelled particles at a low angle of incidence against a curved cover surface extending over and above the open top of the container, the angle of incidence being measured between said surface and the approach trajectory path of said expelled particles, the impinging at said low angle of incidence preventing said expelled particles from being bruised and from acquiring undesired oxygen, and collecting said particles in an area beneath the cover surface and below the base of said container.

3,094,488

RADIATION RESISTANT MINERAL OILS

Alan Beerbower and John L. Murray, Westfield, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed Nov. 23, 1959, Ser. No. 854,567
7 Claims. (Cl. 252—51.5)

1. A gamma radiation resistant composition comprising a major proportion of mineral oil, about 75 parts per million to 0.5 wt. percent of an oil-soluble liquid scintillation phosphor capable of absorbing gamma radiation and converting said gamma radiation into ultraviolet light, when said oil is subjected to gamma irradiation, and about 75 parts per million to 0.5 wt. percent of an ultraviolet light absorber capable of absorbing said ultraviolet light emitted by said phosphor and converting said absorbed ultraviolet light into low energy photons substantially harmless to said composition.

3,094,489

METHOD AND COMPOSITION FOR BRIGHTENING ALUMINUM

Marion D. Barnes, Glendale, Mo., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Aug. 31, 1959, Ser. No. 836,942
9 Claims. (Cl. 252—79.2)

1. A liquid concentrated phosphoric acid useful, when intermixed with from about 0.5 to about 50 weight percent, based on the weight of said concentrated phosphoric acid, of nitric acid, for inhibiting the normal tendency of the resulting composition to evolve nitric oxide fumes when the ionic ratio of NH_4^+/NO_3^- in said resulting composition is at least about 0.8, and when it is utilized for brightening surfaces of metallic aluminum and aluminum alloys; said concentrated phosphoric acid containing less than about 25 weight percent of water, and said acid having intermixed therewith a material selected from the group consisting of ammonia, ammonium hydroxide and ammonium salts in an amount sufficient to produce an ammonium ion concentration between about 0.25 and about 4 weight percent.

3,094,490

INHIBITOR COMPOSITION AND METHOD OF INHIBITING ACID ATTACK ON METAL IN THE ACIDIZING OF WELLS

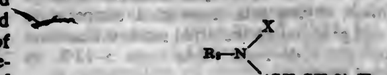
George S. Gardner, Elkins Park, Frank E. Manson, Lansdale, and Edgar S. Haynam, Jr., Doylestown, Pa., assignors to Amchem Products, Inc., Ambler, Pa., a corporation of Delaware

No Drawing. Filed Dec. 27, 1960, Ser. No. 78,316
2 Claims. (Cl. 252—149)

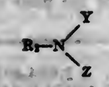
1. A concentrated inhibitor composition consisting essentially of an admixture of organic corrosion inhibitor from the class consisting of

(*a*) organic condensation product resulting from the reaction of aldehyde from the class of aldol, acetaldehyde, butyraldehyde, heptaldehyde, furfuraldehyde and benzaldehyde with amine from the class of alpha-naphthylamine, diphenylguanidine, aniline, o-toluidine and diethylamine, and

(*b*) compound selected from the class consisting of:

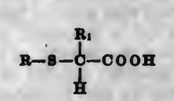


and



where R_2 is a radical selected from the group consisting of abietyl, hydroabietyl and dehydroabietyl; X is from the group consisting of hydrogen and the radical $(CH_2CH_2O)_nH$; Y is CH_2A; Z is from the group consisting of hydrogen and the radical CH_2A; in which radicals A represent alpha ketonyl groups, *m* is an interger of from 9 to 38; and *n* is an integer

of from 2 to 10, together with mercapto acid compound represented by the formula:



where R is a radical selected from the group consisting of phenyl, benzyl, naphthyl and naphthyl methyl and the halo and alkyl substitution products thereof; and R_1 is selected from the group consisting of hydrogen and lower alkyl; the said mercapto acid compound being present in a weight/weight ratio of from 0.05 to 0.5 part for each part of organic corrosion inhibitor compound.

3,094,491

WAX-FREE PAINT REMOVER

George K. Greminger, Jr., Richard W. Swinehart, and Miles A. Weaver, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Nov. 15, 1957, Ser. No. 696,626
3 Claims. (Cl. 252—171)

1. A paint, lacquer, and varnish remover composition consisting essentially of (*a*) from 1 to 10 percent by weight of a water-soluble alkyl hydroxyalkyl cellulose in which said hydroxyalkyl group contains from 2 to 4 carbon atoms and is present in said alkyl hydroxyalkyl cellulose in an amount of from 7 to 12 percent and in which said alkyl group contains from 1 to 3 carbon atoms and is present in said alkyl hydroxyalkyl celluose in an amount of from 28 to 32 percent; (*b*) from 85 to 98 percent of a solvent consisting essentially of methylene chloride; and (*c*) from 1 to 5 percent of an evaporation retardant selected from the class consisting of mannitan stearate and sorbitan stearate.

3,094,492

GRANULAR POROUS MASS FOR STORAGE OF ACETYLENE AND METHOD OF MANUFACTURING SAME

Samuel Aaron Miller, London, Geoffrey Colin Mash, Croydon, and John Arthur Tebboth, Morden, England, assignors to The British Oxygen Company Limited, a British Company

No Drawing. Filed Mar. 14, 1960, Ser. No. 14,571
Claims priority, application Great Britain Apr. 13, 1959
6 Claims. (Cl. 252—430)

1. The method of manufacturing a granular porous mass for filling pressure vessels for the storage of acetylene dissolved under pressure in a solvent, which comprises the steps of mixing kieselguhr with an aqueous dispersion of a melamine-formaldehyde resin to form a homogeneous mass, drying said mass at a temperature below 200° C. and granulating the dried mass, the amount of melamine-formaldehyde resin being from 5–15% by weight of the dried mass.

3. A porous mass for filling pressure vessels for the storage of acetylene dissolved under pressure in a solvent, comprising granules formed of kieselguhr bonded with 5–15% by weight of the mass of a melamine-formaldehyde resin.

3,094,493

STABILIZING NOBLE METAL CATALYST

William G. Nixon, Westchester, Ill., assignor to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

No Drawing. Filed Dec. 10, 1959, Ser. No. 858,561
4 Claims. (Cl. 252—466)

1. In a process for manufacturing a platinum-alumina catalytic composite, wherein the platinum has a crystal size less than about 50 Angstroms, the improvement which comprises contacting said composite at a temperature within the range of about 300° C. to about 700° C. with sufficient gaseous ammonia to increase the crystal size of said platinum to a level in excess of about 80 Angstroms.

3,094,494

IMPROVED ION EXCHANGE CELLULAR PRODUCTS

Robert P. Hopkins, Ardsley, Pa., and William C. Scudder, Haddonfield, N.J., assignors to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware

No Drawing. Filed Jan. 26, 1959, Ser. No. 788,780
10 Claims. (Cl. 260—2.1)

1. As an article of manufacture, a matrix of polymeric material containing intercommunicating cells distributed throughout its mass and particulate ion exchange resins distributed in the walls between such cells, said polymeric matrix being a foamed poly(ether-urethane) which is the reaction product of an organic polyisocyanate with a polyether resin having an hydroxyl functionality in the range of 2.0 to about 6.0, the amount of such ion exchange resin being from 0.5 to 160 parts by weight per 100 parts by weight of foamed polymeric material other than the ion exchange resin forming the matrix, said article being flexible, resilient, and having a density of not over 20 pounds per cubic foot and being permeable to both gases and liquids, whereby the ion exchange resin is readily available to liquids introduced into the matrix.

3,094,495

PROCESS FOR PREPARING CELLULAR POLYURETHANES FROM MIXTURE OF TWO PREPOLYMERS AND RESULTING PRODUCT

Paul G. Gemeinhardt, Sistersville, W. Va., assignor to Mobay Chemical Company, Pittsburgh, Pa., a corporation of Delaware

No Drawing. Filed Sept. 15, 1958, Ser. No. 760,832
6 Claims. (Cl. 260—2.5)

1. In a process for the preparation of a cellular polyurethane plastic by a process which comprises reacting an excess of an organic polyisocyanate with a polyhydric polyalkylene ether under substantially anhydrous conditions in a first step to prepare an isocyanato terminated prepolymer and subsequently reacting said prepolymer with water and additional organic polyisocyanate to generate carbon dioxide and prepare a cellular polyurethane plastic, the improvement which comprises reacting a mixture of at least two separate, distinct prepolymers (*a*) and (*b*) with water and additional organic polyisocyanate to prepare a cellular polyurethane plastic, wherein

prepolymer (*a*) is the reaction product of an excess of an organic polyisocyanate with a polyalkylene ether glycol having a molecular weight of at least about 500 under substantially anhydrous conditions at a temperature within the range of from about 30° C. to about 150° C. to prepare a prepolymer containing allophanate groups,

prepolymer (*b*) is the reaction product of an organic polyisocyanate with a mixture of a polyalkylene ether glycol having a molecular weight of at least about 500 and a polyhydric polyalkylene ether containing more than two hydroxyl groups and having a molecular weight of at least about 1000 under substantially anhydrous conditions at a temperature within the range of about 30° C. to about 150° C. to prepare a prepolymer containing allophanate groups,

the relative amounts of (*a*) and (*b*) being within the range of about 50 to about 95 percent by weight of one to about 50 to about 5 percent by weight of the other.

3,094,496

PROCESS OF MIXING DIENE RUBBERS WITH NITROSOARYLAMINOMETHYLIMIDES IN THE PRESENCE OF REINFORCING FILLERS

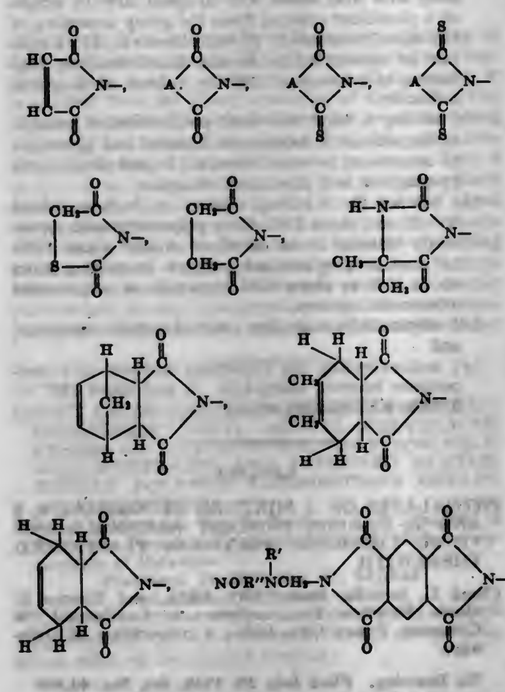
Lloyd A. Walker, St. Albans, W. Va., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Sept. 14, 1960, Ser. No. 55,848
7 Claims. (Cl. 260—5)

1. A process which comprises mixing a rubber selected from the group consisting of natural rubber, synthetic rubbery homopolymers of aliphatic conjugated diolefin hydrocarbons, synthetic rubbery copolymers containing at least 50% of an aliphatic conjugated diolefin hydrocarbon copolymerized with correspondingly not more than 50% of a copolymerizable monoethylenically unsaturated compound, and mixtures of such rubbers, with a relatively large amount of rubber reinforcing pigment and adding to the rubber in the presence of the pigment 0.05–5.0% of the rubber of a nitrosoarylaminomethylimide characterized by the structure



where R is an organic amino substituent, in which nitrogen is linked to the methylene group in the brackets, selected from the group consisting of



where A represents a radical selected from the group consisting of ortho-phenylene and substituted ortho-phenylene wherein the substituents are selected from the group consisting of halogen, lower alkyl, lower alkoxy and nitro, R′ is selected from the group consisting of hydrogen, lower alkyl, nitroso, cyanoethyl, lower alkyl carboxyethyl and carboxyethyl groups, R″ is selected from the group consisting of phenyl and substituted phenyl wherein the substituents are selected from the group consisting of halogen, lower alkyl, lower alkoxy and nitro, any vulcanizing agents, if present, being present in amounts insufficient to cause vulcanization, heating the mixture within the range of about 250° F. to 370° F. for a time sufficient to promote rubber-filler interaction and masticating the mixture.

3,094,497

CONDENSATION CATALYSTS

James Franklin Hyde, Midland, Mich., assignor to Dow Corning Corporation, Midland, Mich., a corporation of Michigan

No Drawing. Filed July 28, 1960, Ser. No. 45,811
7 Claims. (Cl. 260—18)

1. The method which comprises contacting (A) an organosilicon compound containing as functional groups both silicon-bonded hydroxyl radicals and silicon-bonded —OR′ radicals, each R′ radical being a monovalent radical selected from the group consisting of hydrocarbon radicals and hydrocarbon radicals containing functions selected from the group consisting of ether linkages, aromatic halogen atoms, nitrile groups, hydroxyl groups and aliphatic fluorine atoms, the last being separated from any silicon atom by at least three atoms, there being less than eleven total carbon atoms and ethereal oxygen atoms in each R′, the remaining silicon valences in said organosilicon compound being satisfied by radicals selected from the group consisting of silicon-bonded oxygen atoms, hydrocarbon radicals and hydrocarbon radicals containing functions selected from the group consisting of ether linkages, aromatic halogen atoms, nitrile groups, hydroxyl groups and aliphatic fluorine atoms, the last being separated from any silicon atom by at least three atoms, with (B) a composition compatible with (A) and selected from the group consisting of (1) a salt of a phosphoric acid, the only active hydrogen atoms in said acid being attached to the phosphorus through an oxygen atom, and a basic amino compound, any active hydrogen in said amino compound being attached to nitrogen and any remaining nitrogen valences being satisfied by carbon atoms, the total number of carbon atoms in (1) being at least 18, and (2) a salt of a carboxylic acid, the only active hydrogen in said carboxylic acid being a part of carboxyl groups attached only to carbon atoms, and a basic amino compound, any active hydrogen in said amino compound being attached to nitrogen and any remaining nitrogen valences being satisfied by carbon atoms, the total number of carbon atoms in (2) being at least 6, whereby the silicon-bonded hydroxyl radicals in (A) condense with the silicon-bonded —OR′ radicals in (A) to form siloxane linkages producing HOR′ as a by-product.

3,094,498

RESINOUS COMPOSITIONS

Paul H. Landolt, Danville, Ill., assignor to General Electric Company, a corporation of New York

No Drawing. Filed Dec. 7, 1959, Ser. No. 857,502
1 Claim. (Cl. 260—28)

A composition of matter comprising (A) the reaction product of (1) a complex epoxy resin consisting of at least two epoxide groups and comprising the polyether derivative of a ploy hydric compound selected from the class consisting of polyhydric alcohols having adjacent hydroxyl groups and phenols having at least two phenolic hydroxyl groups and (2) an aromatic diamine curing agent having at least one hydrogen atom attached to the nitrogen atoms, (B) from 3 to 10 percent by weight of substantially unreacted chlorendic anhydride, (C) from 1 to 10 percent by weight of antimony trioxide, (D) an inert filler comprising up to 65 percent by weight of the composition and (E) bituminous compounds comprising up to 10 percent of the composition, said chlorendic anhydride being immobilized in the cured composition.

3,094,499

PROCESS FOR PREPARING STABLE AQUEOUS PIGMENT DISPERSIONS

Hans U. Gassmann and Hans R. Zbinden, Basel, Switzerland, assignors to Ciba Limited, Basel, Switzerland

No Drawing. Filed July 6, 1960, Ser. No. 41,016
Claims priority, application Switzerland July 7, 1959
6 Claims. (Cl. 260—29.4)

1. Process for the manufacture of stable aqueous pigment dispersions, which comprises mixing an aqueous pigment filter cake of an organic alkali-resistant pigment with a non-ionic dispersant which is soluble in an acid to weakly alkaline medium but insoluble in concentrated aqueous alkalis, adding to the mixture containing the said dispersant in aqueous solution an amount of alkali metal hydroxide sufficient to cause the dispersant to separate from the aqueous alkaline solution and to form a separate phase, working the pigment into the dispersant phase, removing the bulk of the resulting pigment-free aqueous alkaline solution, and converting the non-ionic dispersant by neutralizing the residual alkali and by adding water into an aqueous solution which contains the pigment in a finely dispersed state, the said non-ionic dispersant being a reaction product of 5 to 150 mols of ethylene oxide with one mol of a water-insoluble organic compound, of the formula R—X—H, wherein R represents a hydrocarbon radical having from 8 to 24 carbon atoms and X is selected from the group consisting of —COO—, —CO—NH—, —O—, —S— and —NH—, and the ratio of pigment to said non-ionic dispersant being 1:0.5 to 1:2.

3,094,500

VINYL ESTER POLYMER EMULSIONS CONTAINING POLYVINYL ALCOHOL

Stedman C. Herman, Springfield, Mass., assignor to Shawinigan Resins Corporation, Springfield, Mass., a corporation of Massachusetts

No Drawing. Filed Aug. 31, 1959, Ser. No. 836,930
4 Claims. (Cl. 260—29.6)

1. A stable aqueous vinyl ester polymer emulsion comprising 50% up to about 60% by weight of the emulsion of discrete vinyl ester polymer particles having an average size range of 1–1.5 microns diameter, said emulsion—

(A) having a viscosity below 1,000 centipoises at 25° C.

(B) forming films which on air drying are remoistenable and possess high gloss and clarity

(C) being produced by polymerization of an aqueous dispersion of

(*a*) a vinyl ester of an organic acid

(*b*) at least 10% to about 12% by weight of the emulsion of a polyvinyl alcohol having a viscosity of 1.3 to 3 centipoises for a 4% aqueous solution at 20° C. which was prepared by the hydrolysis of 70 to 90% of the ester groups of a polyvinyl ester

(*c*) a minor amount of a dispersant taken from the group consisting of water-soluble, anionic, cationic and non-ionic organic surfactants.

3,094,501

WATER LOSS CONTROL OF AQUEOUS CEMENT SLURRIES BY ADDITION OF QUATERNARY AMMONIUM POLYMERS OR SULFONIUM POLYMERS

Winton W. Wahl, Tulsa, Okla., and Charles D. Dever, Saginaw, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed May 9, 1960, Ser. No. 27,473
11 Claims. (Cl. 260—29.6)

1. An aqueous hydraulic cement slurry containing by weight per 100 parts of an hydraulic cement, between 0.25 and 1.8 parts of a polymer selected from the class consisting of poly (ar-vinylbenzyl) alkyl- and hydroxyalkyl-substituted quaternary ammonium bases and salts and poly (ar-vinylbenzyl) sulfonium alkyl- and hydroxyalkyl-substituted bases and salts wherein each alkyl and hydroxyalkyl substituent contains not more than 4 carbon atoms, the total number of carbon atoms in the alkyl and hydroxyalkyl subetituted groups is not greater than 8, and no more than 1 hydroxyalkyl group is present in each recurring unit of polymer, and sufficient water to make a pumpable slurry.

3,094,502

PROCESS FOR PREPARING FILAMENTS FROM ACRYLONITRILE POLYMER-CONTAINING COMPOSITIONS

John Farago, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Dec. 2, 1959, Ser. No. 856,668
5 Claims. (Cl. 260—30.8)

1. In a process for preparing a filamentary article, the steps of

(*a*) intimately admixing from about 40% to about 80% by weight of a monomeric material consisting of at least 80% acrylonitrile and up to 20% of a copolymerizable monoethylenically unsaturated monomer with from about 60% to about 20% by weight of a plasticizer selected from the group consisting of (1) dimethylsulfoxide, (2) succinonitrile, (3) a mixture of dimethylsulfoxide and dimethylsulfone containing at least about 50% by volume of dimethylsulfoxide,

(*b*) adding a vinyl monomer polymerization catalyst to the mixture of monomeric material and plasticizer in an amount between about 0.1% and about 1.0% by weight of said monomeric material,

(*c*) heating the resulting mixture to between about 50° C. and about 130° C. to polymerize said monomeric material to an extent of at least about 60% to provide a plasticized mixture containing from about 40% to about 80% by weight of polymerized monomeric mixture,

(*d*) substantially removing residual volatile monomer, and

(*e*) melt-extruding the plasticized material at a temperature between about 120° C. and about 180° C. to form a filamentary article.

3,094,503

PHTHALATES OF A MIXTURE OF NORMAL 6, 8 AND 10 CARBON PRIMARY ALCOHOLS AND VINYL CHLORIDE POLYMERS PLASTICIZED THEREWITH

Claud L. Jacocks, Ponca City, Okla., and George E. Hinds, Houston, Tex., assignors to Continental Oil Company, Ponca City, Okla., a corporation of Delaware

No Drawing. Filed July 25, 1960, Ser. No. 44,899
4 Claims. (Cl. 260—31.8)

4. A resinous composition of matter comprising from about 50 to 67 weight percent of a vinyl polymer selected from the group consisting of polyvinyl chloride and polyvinyl acetate and correspondingly from about 50 to 33 weight percent of dialkyl phthalates obtained by esterifying phthalic anhydride with a mixture of straight chain alcohols having alkyl esterifying groups in the relative proportions by weight respectively of 20 percent n-hexyl, 35 percent n-octyl and 45 percent n-decyl.

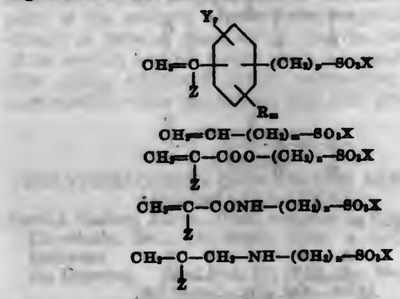
3,094,504

GRAFT COPOLYMERS OF CERTAIN MONOMERIC SULFONIC ACID COMPOUNDS ON N-VINYL-3-MORPHOLINONE POLYMER SUBSTRATES AND IMPROVED ACRYLONITRILE POLYMER COMPOSITIONS OBTAINABLE THEREWITH

Stanley A. Murdock, Rancho Cordova, Calif., and Teddy G. Traylor, Cambridge, Mass., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

Filed Sept. 11, 1959, Ser. No. 839,501
18 Claims. (Cl. 260—45.5)

1. Graft copolymer of between about 10 and about 80 weight percent of (*a*) an alkenyl group-containing organic sulfonic acid compound selected from the group consisting of those represented by the formulae:



(I)

(II)

(III)

(IV)

(V)

all wherein X is selected from the group consisting of hydrogen, saturated aliphatic hydrocarbon radicals containing from 1 to 4 carbon atoms and alkali metals; Y is selected from the group consisting of hydrogen, chlorine and bromine; R is selected from the group consisting of methyl and ethyl; Z is selected from the group consisting of hydrogen and methyl, *m* is an integer from 0 to 2; *n* is an integer from 1 to 2; *p* is an integer from 0 to 1, and *r* is an integer from 1 to 4; and (*b*) about 90 to about 20 weight percent of a polymerized monoethylenically unsaturated monomeric material containing at least about 10 weight percent of polymerized N-vinyl-3-morpholinone and up to 90 weight percent of another polymerized N-vinyl heterocyclic compound which compound is copolymerizable with N-vinyl-3-morpholinone.

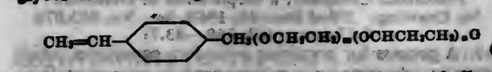
3,094,505

GRAFT COPOLYMERS COMPRISED OF CERTAIN MONOMERIC VINYL BENZYL POLYGLYCOL ETHERS ON N-VINYL-3-MORPHOLINONE POLYMER SUBSTRATES AND IMPROVED ACRYLONITRILE POLYMER COMPOSITIONS OBTAINABLE THEREWITH

Stanley A. Murdock, Rancho Cordova, Calif., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

Filed Sept. 28, 1959, Ser. No. 842,948
19 Claims. (Cl. 260—45.5)

1. Graft copolymer of between about 20 and about 80 weight percent of (*a*) a monomeric vinyl benzyl polyglycol ether of the general formula:



(I)

wherein G is selected from the group consisting of alkoxy radicals containing from 1 to about 8 carbon atoms; alkyl sulfide radicals containing from 1 to about 8 carbon atoms and halogens of atomic number 17 to 53; *m* has an average value from about 2 to about 40; *n* has an average value of from 0 to about 20 with the limitation that the value of *n* is always less than that of *m* and the sum total of *m* plus *n* is from about 2 to about 40; and (*b*) from about 80 to about 20 weight percent of a polymerized monoethylenically unsaturated monomeric material containing at least about 10 weight percent of polymerized N-vinyl-3-morpholinone and up to 90 weight percent of another polymerized N-vinyl heterocyclic compound which compound is copolymerizable with N-vinyl-3-morpholinone.

3,094,506

NOVEL COMPOUNDS AND POLYMERIC HALOGEN-CONTAINING RESINS INCORPORATING SAME

Alan E. Weinberg, Verona, and Richard J. Bellet, Mountain Lakes, N.J., assignors to Hooker Chemical Corporation, Niagara Falls, N.Y., a corporation of New York

No Drawing. Filed July 27, 1959, Ser. No. 829,503
8 Claims. (Cl. 260—45.8)

4. A composition of matter comprising (1) a polyester resin which comprises the esterification product of a polyhydric alcohol and a member selected from the group consisting of tetrachlorophthalic anhydride and the Diels-Alder reaction product of hexahalocyclopentadiene and maleic anhydride, wherein the halogen is selected from the group consisting of chlorine, fluorine, bromine, and mixtures thereof, and (2) a compound selected from the group consisting of a 2-hydroxy-4(2,3-epoxypropoxy) benzophenone and a 2-hydroxy-4'(2,3-epoxypropoxy)benzophenone.

3,094,507

PROCESS FOR PREPARING POLYSILOXANE COMPOSITIONS

Milton Yusem, 5335 S. Harper Ave., Chicago 15, Ill.

No Drawing. Filed Jan. 14, 1960, Ser. No. 2,348
4 Claims. (Cl. 260—46.5)

1. In a relatively fast method for preparing benzene-soluble polysiloxane compositions, the steps of adding dimethyl dichlorosilane to water to form a fluid hydrolysate having a viscosity within the range of about 5 to 30 centistokes and containing both low molecular weight linear and cyclic siloxanes, adding to the entire hydrolysate strong sulfuric acid of a concentration no greater than 72 percent and vigorously agitating the reactants to form an intermediate fluid of increased viscosity composed of both linear and cyclic siloxanes and having an increased proportion of cyclic siloxanes, interrupting the condensation of said linear siloxanes and removing the strong acid and water of condensation from said intermediate fluid when said fluid has reached a viscous but still pourable liquid state so that upon subsequent equilibration no more than one molecule of water is split out for each molecule of the equilibrated fluid, and intimately contacting the intermediate fluid at a reaction temperature within the range of 100 to 250° C. with a catalyst to form an equilibrated silicone composition composed of linear siloxane molecules of predetermined average length, said catalyst being selected from the group consisting of



and ROM, where R is an alkyl radical of less than 6 carbon atoms, *x* has a value of 0.5 to 2.5, and M is an alkali-metal selected from the group consisting of sodium and potassium.

3,094,508

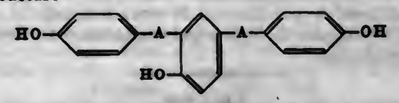
BRANCHED POLYCARBONATE AND PROCESS FOR PREPARING SAME

Richard Butterworth, Manor Township, Lancaster County, and John A. Parker, Lancaster Township, Lancaster County, Pa., assignors to Armstrong Cork Company, Lancaster, Pa., a corporation of Pennsylvania

No Drawing. Filed Apr. 16, 1959, Ser. No. 806,788
7 Claims. (Cl. 260—47)

1. A method of preparing a branched polycarbonate comprising forming in water a solution of water-soluble salts selected from the group consisting of alkali metal salts, ammonium salts, and organic amine salts, of a mixture of bis-phenols containing 90–99.5% by weight of bis-(4-hydroxyl phenyl) alkane and 0.5–10% by weight

of a 2,4-bis-(4-hydroxylphenyl alkylidene) phenol having the structure



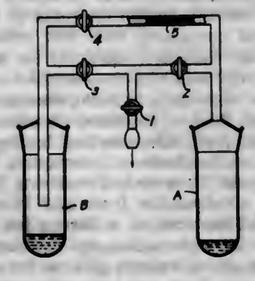
wherein said alkane and alkylidene groups contain 1–7 carbon atoms, establishing in the form of an emulsion a reaction mixture containing said solution and an inert organic solvent immiscible with water but capable of dissolving the final polycarbonate, said emulsion being formed by agitation and by adding up to about 5% by weight of said reaction mixture of an emulsifying agent, said reaction mixture containing 5–95% by weight of said organic solvent, maintaining said reaction mixture at a temperature sufficiently low to avoid gelation in the range of 28°–34° C., and passing phosgene on a mole-for-mole basis with said mixture of bis-phenols into said reaction mixture maintained at said temperature to form the branched polycarbonate soluble in said organic solvent.

3,094,509

METHOD OF PREPARING ACETALDEHYDE POLYMERS

Junji Furukawa, Sakyo-ku, Kyoto City, Takeo Saegusa, Kita-ku, Kyoto City, and Hiroyasu Fujii, Fukiai-ku, Kobe City, Japan, assignors to Zaidan Hojin Nihon Kagaku Seni Kenkyusho, Sakyo-ku, Kyoto City, Japan

Filed Dec. 8, 1959, Ser. No. 858,224
Claims priority, application Japan, Jan. 6, 1959
6 Claims. (Cl. 260—67)



1. Method of producing acetaldehyde polymer having high degree of polymerization, which comprises condensing acetaldehyde vapor on a catalyst consisting of alumina at a temperature between the freezing point of acetaldehyde and its boiling point, and keeping the condensate in contact with the catalyst.

3,094,510

NON-CRYSTALLIZING POLYESTER, AND POLYURETHANE MADE THEREFROM

John A. Parker, Lancaster Township, Lancaster County, and John Vermel, Manor Township, Lancaster County, Pa., assignors to Armstrong Cork Company, Lancaster, Pa., a corporation of Pennsylvania

No Drawing. Filed July 27, 1960, Ser. No. 45,543
4 Claims. (Cl. 260—75)

1. A non-crystallizing polyester suitable for forming a relatively temperature-insensitive polyurethane comprising the reaction product of adipic acid and sufficient of a mixture of 1,4-butanediol and 2,2-dimethyl-1,3-propylene glycol to react with all the acid groups in the adipic acid, said mixture containing 40–60% by weight 1,4-butanediol, said polyester having an acid number in the range of 1.5–2.5 and a hydroxyl number in the range of 50–70.

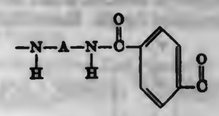
3,094,511

WHOLLY AROMATIC POLYAMIDES

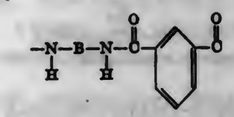
Harold Wayne Hill, Jr., Stephanie Louise Kwolek, and Wilfred Sweeny, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Nov. 17, 1958, Ser. No. 774,156
5 Claims. (Cl. 260—78)

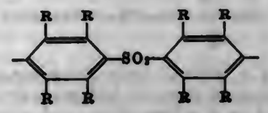
1. A linear, fiber-forming, synthetic polycarbonamide wherein recurring carbonamide linkages are an integral part of the polymer chain from the class consisting of a homopolymer and a copolymer, the said homopolymer and copolymer consisting essentially of recurring units of the class consisting of



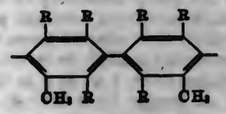
and



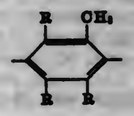
wherein —A— is



and —B— is a member of the class consisting of —A—



and



wherein —R is a member of the class consisting of hydrogen and lower alkyl, the total number of carbon atoms in substituent groups attached to any aromatic nucleus being no more than 9, and copolymeric units constituting no more than about 10% of the recurring polycarbonamide units, the said polycarbonamide having a melting point of at least about 350° C. and an inherent viscosity of at least about 0.6 in concentrated sulfuric acid at 30° C. at a concentration of 0.5% by weight.

3,094,512

PROCESS FOR THE PREPARATION OF LOW VINYL LOW TRANS CONTENT RANDOM COPOLYMER

James N. Short, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed Dec. 31, 1959, Ser. No. 863,076
4 Claims. (Cl. 260—83.7)

1. A process for preparing a random copolymer which comprises charging to a polymerization zone containing a catalyst of the formula $R(Li)_x$ where x is an integer from 1 to 4, R is a hydrocarbon radical selected from the group consisting of aliphatic, cycloaliphatic, and aromatic radicals and a hydrocarbon diluent, a conjugated diene of 4 to 5 carbon atoms and simultaneously a vinyl-substituted aromatic hydrocarbon in which said vinyl group is attached to a nuclear carbon atom, said monomers being charged at a rate less than the normal polymerization rate of the system under the conditions employed.

3,094,513

SOLID-PHASE POLYMERIZATION PROCESS OF METHACRYLATE MONOMERS, CATALYZED BY ALUMINUM TRIETHYL

Edward L. Kropa, Columbus, Ohio, assignor, by mesne assignments, to W. R. Grace & Co., New York, N.Y., a corporation of Connecticut

No Drawing. Filed July 14, 1960, Ser. No. 42,752
4 Claims. (Cl. 260—89.5)

1. The process of polymerizing methyl methacrylate to form acetone-insoluble polymethyl methacrylate having a softening point in the range 135–160° C. which comprises forming in an inert atmosphere a polymerization mixture consisting essentially of methyl methacrylate monomer and a catalytic amount of an aluminum trialkyl wherein the alkyl groups contain 1 to 8 carbon atoms at a temperature between 0° C. and the freezing point of the mixture, adjusting the temperature of the mixture to between minus 45° C. and the freezing point of the mixture whereat a solid phase is formed and thereafter adding additional methyl methacrylate monomer incrementally while maintaining said solid phase present.

3,094,514

POLYMERIZATION PROCESS FOR ALIPHATIC, CONJUGATED DIENES

Harold Tucker, Akron, Ohio, assignor to Goodrich-Gulf Chemicals, Inc., Cleveland, Ohio, a corporation of Delaware

No Drawing. Filed Feb. 13, 1958, Ser. No. 714,966
10 Claims. (Cl. 260—94.3)

1. The method which comprises polymerizing an aliphatic conjugated diene hydrocarbon in a hydrocarbon diluent medium, in the substantial absence of oxygen, at a temperature between —25 and 50° C. and in the presence of a catalyst dissolved in said hydrocarbon medium and including at least 0.001 gram millimole of cobalt per liter of said diluent, said catalyst being prepared by combining (1) a substantially anhydrous divalent cobalt salt (2) a mono-alkyl aluminum dihalide and (3) a dialkyl aluminum monohalide, the molar ratio of said mono-alkyl aluminum halide to said dialkyl aluminum halide being in the range of 1:10 to 10:1, and separating a solid polymer of said diene hydrocarbon containing not more than about 5% gel from the resulting polymerization mixture.

3,094,515

LIGNIN DISPERSING AGENTS AND A METHOD OF MAKING THE SAME

Karl F. Keirstead, Sillery, Quebec, and Jacques Giguere and Guy Fortin, Ste. Foy, Quebec, Canada, assignors to Lignocol Chemicals Limited, Quebec, Quebec, Canada

No Drawing. Filed Nov. 6, 1961, Ser. No. 150,165
6 Claims. (Cl. 260—124)

1. A process of producing a partly desulphonated lignin sulphonate dispersing agent which comprises forming a liquor consisting essentially of a lignosulphonate, sodium hydroxide, and at least one of a group consisting of zinc, zinc oxide, and zinc salts, then heating the said liquor at a temperature of approximately 156° C. to 178° C. to hydrolyse said lignosulphonate, and drying the resulting solution.

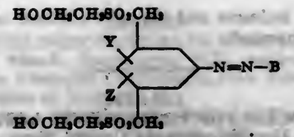
3,094,516

AZO DYESTUFFS CONTAINING A BENZENE RING SUBSTITUTED BY TWO HYDROXYETHYLSULFONYLMETHYL GROUPS

David I. Randall, New Vernon, N.J., Saul R. Buc and Harlan B. Freyermuth, Easton, Pa., and Raymond L. Mayhew, Phillipsburg, N.J., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Dec. 30, 1959, Ser. No. 862,802
6 Claims. (Cl. 260—163)

1. An azo dyestuff of the formula



wherein Y and Z are selected from the group consisting of H, lower alkyl and lower alkoxy; and B is the residue of an azo coupling component containing a sufficient number of sulfonic acid groups to water-solubilize the dyestuff.

3,094,517

PROCESS FOR TREATING A POLYSACCHARIDE OF SEAWEEDS OF THE GIGARTINACEAE AND SOLIERIACEAE FAMILIES

Norman F. Stanley, Rockland, Maine, assignor to Marine Colloids, Inc., a corporation of Delaware

Filed Dec. 29, 1958, Ser. No. 783,173
12 Claims. (Cl. 260—209)

1. A process for the treatment of a polysaccharide of seaweeds of the Gigartinaceae and Solieriaceae families containing ester sulfate groups within the range of about 5% to about 13% sulfur, which comprises heating the polysaccharide at a temperature of from about 80° C. to about 150° C. in an aqueous medium containing calcium hydroxide in an amount that is over 10% of the weight of the polysaccharide.

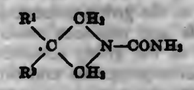
3,094,518

NOVEL CARBAMYL-AZETIDINE COMPOUNDS

Emilio Testa, Vacallo, Ticino, Switzerland, and Luigi Fontanella and Giulio Maffii, Milan, Italy, assignors to Lepetit S.p.A., Milan, Italy

No Drawing. Filed Dec. 18, 1959, Ser. No. 860,312
Claims priority, application Great Britain Dec. 23, 1958
6 Claims. (Cl. 260—239)

1. A compound of the formula



wherein R^1 is a member of the class consisting of hydrogen, lower alkyl, cyclohexyl, and benzyl, while R^2 is a member of the class consisting of lower alkyl and phenyl, R^2 being only phenyl when R^1 is hydrogen.

2. 1-carbamyl-3-phenyl-3-ethylazetidine.

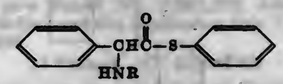
3,094,519

PROCESS FOR THE PREPARATION OF DERIVATIVES OF 6-AMINO-PENICILLANIC ACID

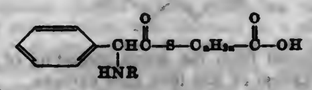
Joyce R. Lattinger, Syracuse, Joseph Lein, Fayetteville, and Alexander Gourevitch, Syracuse, N.Y., assignors to Bristol-Myers Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Jan. 16, 1961, Ser. No. 82,694
4 Claims. (Cl. 260—239.1)

1. A process for the preparation of α-alkylaminobenzylpenicillin comprising contacting 6-aminopenicillanic acid in an aqueous acidic reaction medium with a member selected from the group consisting of the compounds having the formula



and



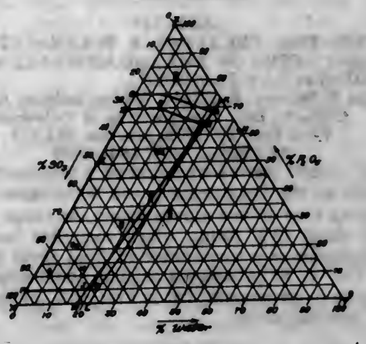
wherein R is a member selected from the group consisting of hydrogen and lower alkyl and n is an integer from

one to six inclusive and the acid addition salts of each of said compounds.

3,094,520
PROCESS FOR PRODUCING LACTAMS

Thomas R. Hopkins, Johnson County, Kans., assignor to Spencer Chemical Company, Kansas City, Mo., a corporation of Missouri

Filed May 28, 1959, Ser. No. 816,542
6 Claims. (Cl. 260—239.3)



1. A process of producing a lactam by the rearrangement of an alicyclic oxime which comprises contacting said oxime with a catalyst composition in the liquid phase at an elevated temperature which rearranges the oxime to a lactam and separating the lactam so produced from the reaction mixture, said catalyst composition being formed by admixing

(*a*) a member of the group consisting of sulfuric acid, sulfur trioxide and mixtures thereof, with

(*b*) a member of the group consisting of phosphoric acid, phosphorus pentoxide and mixtures thereof,

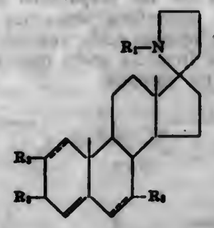
in such proportions to provide a catalyst composition having a P_2O_5—SO_3—H_2O analysis lying within the area bounded by the line passing through points ACDEFJGHA on the accompanying ternary diagram.

3,094,521
ALKANOYLTHIO AND PYRAZOLO ANDROSTANE DERIVATIVES

Arthur A. Patchett, Metuchen, Glen E. Arth, Cranford, and Frances G. Hoffman, Newark, N.J., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Filed July 25, 1961, Ser. No. 126,508
13 Claims. (Cl. 260—239.5)

1. A compound of the formula—



in which

R_1 is selected from the group consisting of hydrogen and alkanoyl of less than nine carbons,

R_2 is selected from the group consisting of hydrogen and lower alkanoylthio,

R_3 is selected from the group consisting of β-hydroxyl, keto and, together with R_4, pyrazolo in which one of the nitrogen carries a substituent selected from the group consisting of hydrogen, alkyl, cyclohexyl, phenyl, halophenyl, tolyl, alkoxyphenyl, nitrophenyl, naphthyl, pyridyl, oxidopyridyl, pyrimidyl, benzyl and phenylethyl,

R_4 is selected from the group consisting of hydrogen and, together with R_3, pyrazolo of the above description, and

the dotted line between carbons 1 and 2 and 6 and 7 indicates that the bonds joining these carbons is selected from the group consisting of single and double bonds, only one of said bonds being a double bond,

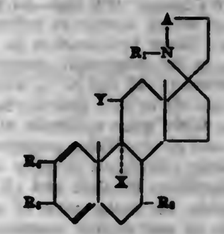
in which at least one of R_3 and R_4 is other than hydrogen.

3,094,522
ALKANOYLTHIO AND PYRAZOLO ANDROSTANE DERIVATIVES

Arthur A. Patchett, Metuchen, and Glen E. Arth, Cranford, N.J., and Harvey Schwam, Woodside, N.Y., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Filed July 25, 1961, Ser. No. 126,509
24 Claims. (Cl. 260—239.5)

1. A compound of the formula—



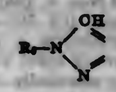
in which

R_1 is selected from the group consisting of hydrogen, methyl, and carboxylic acyl,

A is selected from the group consisting of carbonyl and methylene,

R_2 is selected from the group consisting of hydrogen and lower alkanoylthio,

R_3 is selected from the group consisting of α-hydroxyl, keto, and, together with R_4, a group—



in which

R_5 is selected from the group consisting of lower alkyl, hydroxyalkyl, cycloalkyl, phenyl, tolyl, alkoxyphenyl, nitrophenyl, naphthyl pyridyl, N-oxidopyridyl, pyrimidyl, benzyl and phenethyl,

R_4 is selected from the group consisting of hydrogen and, together with R_5, a pyrazolo group as defined above,

X is selected fro mthe group consisting of hydrogen, halogen and, together with Y, 9 (11) double bonds and epoxy groups,

Y is selected from the group consisting of keto oxygen, β-hydroxyl and, together with X, 9 (11) double bonds and epoxy groups, and the dotted lines in the 1, 2, and 3 and 5, 6 positions show that each of these bonds is selected from the group consisting of single and double bonds.

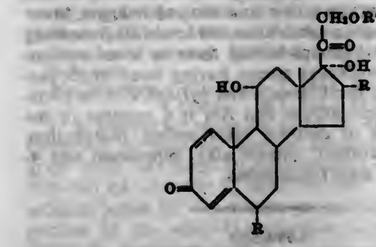
3,094,523
6α,16α-DIALKYL STEROID INTERMEDIATES AND PROCESSES

Meyer Sletzinger and Donald F. Reinhold, North Plainfield, N.J., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Filed Sept. 12, 1958, Ser. No. 760,562
29 Claims. (Cl. 260—239.55)

17. 6α,16α - di lower alkyl - 17α,20,20,21 - bismethylenedioxy-4-pregnen-3-one.

29. A compound of the following formula:



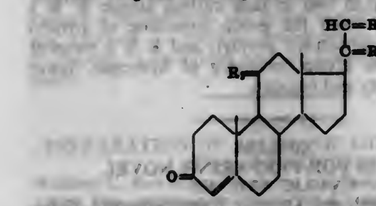
wherein R is lower alkyl, R' is selected from the group consisting of hydrogen and lower alkanoyl and the dotted line between carbon 1 and 2 indicates that a double bond may be present in this position.

3,094,524
NOVEL Δ⁴-PREGNENE-3-ONES AND PREPARATION THEREOF

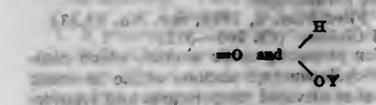
Daniel Bertin, Montrouge, Hubert Fritel, Paris, and Lucien Nedelec, Clichy-sous-Bois, France, assignors, by mesne assignments, to Roussel-UCLAF, S.A., Paris, France, a corporation of France

No Drawing. Filed July 20, 1961, Ser. No. 125,361
Claims priority, application France Aug. 10, 1960
24 Claims. (Cl. 260—239.55)

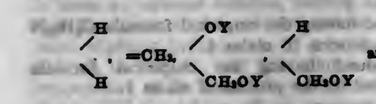
1. A compound having the formula



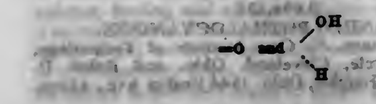
wherein R is selected from the group consisting of



R_1 is selected from the group consisting of



R_2 is selected from the group consisting of



and Y is selected from the group consisting of hydrogen and an acyl radical of a mineral acid and an acyl radical of an organic carboxylic acid having less than 6 carbon atoms.

3,094,525
DICHLOROCYANURATE COMPLEX

Ronald W. Marek, Tonawanda, N.Y., assignor to Olin Mathieson Chemical Corporation, New Haven, Conn., a corporation of Virginia

No Drawing. Filed June 26, 1961, Ser. No. 119,311
1 Claim. (Cl. 260—242)

The compound of the formula

$$CaHg(C_3N_3O_3Cl_2)_4 \cdot 6H_2O$$

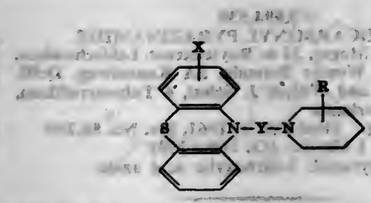
wherein the radical $(C_3N_3O_3Cl_2)_4^-$ is the dichlorocyanurate radical.

3,094,526
10-[(3- AND 4-HYDROXY-1-PIPERIDYL) LOWER-ALKYL] PHENOTHIAZINES

Bernard L. Zenitz, Colonie, and Lewis P. Alben, North Greenbush, N.Y., assignors to Sterling Drug Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Aug. 23, 1957, Ser. No. 680,020
9 Claims. (Cl. 260—243)

1. A member selected from the group consisting of (A) compounds of the formula



wherein X is a member of the group consisting of hydrogen, halogen, lower-alkyl, and lower-alkoxy; Y is lower-alkylene in which at least two carbon atoms separate the nitrogen atoms; R is a member of the group consisting of hydroxy in other than the 2-position of the piperidine ring, saturated hydrocarbon carboxylic acyloxy in other than the 2-position of the piperidine ring and containing from one to eight carbon atoms, and monocarbocyclic aroyloxy in other than the 2-position of the piperidine ring and containing from seven to eight carbon atoms; (B) pharmacologically acceptable acid-addition salts thereof; and (C) pharmacologically acceptable lower-alkyl, lower-alkenyl, and monocarbocyclic aryl-lower-alkyl quaternary ammonium salts thereof.

3,094,527
PROCESS FOR THE EXTRACTION OF CEPHALOSPORIN FROM AN IMPURE SOLUTION THEREOF

Howard Walter Florey, Edward Penley Abraham, Guy Geoffrey Frederick Newton, and Henry Stowar Burton, % Sir William Dunn School of Pathology, University of Oxford, Oxford, England, and Brendan Kevin Kelly, Clifford William Hale, and George Arthur Miller, % Antibiotics Research Station, 4 Elton Road, Clevedon, England

No Drawing. Original application Dec. 7, 1953, Ser. No. 396,742, now Patent No. 2,883,328, dated Apr. 21, 1959. Divided and this application July 11, 1958, Ser. No. 751,588.
14 Claims. (Cl. 260—243)

1. A process for the extraction of Cephalosporin N from a solution thereof which comprises adsorptively contacting said solution with charcoal at a pH above 4 but below 7, eluting adsorbed Cephalosporin N from the charcoal with a selective eluant therefor, contacting said Cephalosporin N in aqueous solution with an anion exchange resin and eluting Cephalosporin N from said resin with a dilute acid.

3,094,528
DERIVATIVE OF 4-PHENYL-CARBETHOXY-PIPERIDINE AND SALTS THEREOF
Martin A. Davis, Montreal, Quebec, Canada, assignor to American Home Products Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed June 26, 1961, Ser. No. 119,336
4 Claims. (Cl. 260—243)

1. A compound selected from the group which consists of [2-(4-carbethoxy-4-phenylpiperidino)ethoxy]ethyl phenothiazine-10-carboxylate, and its hydrochloride and methanesulfonic acid addition salts.

3,094,529
CAFFEINO-(8)-ALKYLENEDIAMINES
Josef Kloss, Berlin-Zehlendorf, Germany, assignor to Delmar Chemicals Limited, Lachine, Quebec, Canada, a corporation of Canada
No Drawing. Filed Sept. 11, 1959, Ser. No. 839,293
8 Claims. (Cl. 260—247.2)

1. 1-N-morpholine-2-(caffeino-(8))-aminoethylene.

3,094,530
5-AZIDOCARBONYL PYRAZINAMIDE
Humphrey I. X. Mager, 34 de Ruyterstraat, Leidschendam, Netherlands; Wouter Berends, 5A Kanaalweg, Delft, Netherlands; and Willem J. Schut, 6 Tulpencroftlaan, Heiloo, Netherlands
No Drawing. Filed Feb. 1, 1961, Ser. No. 86,294
1 Claim. (Cl. 260—250)

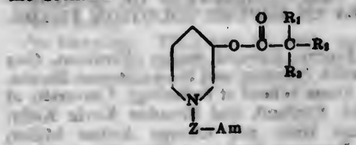
2-carbamoylpyrazine 5-carboxylic acid azide.

3,094,531
CAFFEINO-8-ALKANOLAMINES
Josef Kloss, Berlin-Zehlendorf, Germany, assignor to Delmar Chemicals Limited, Lachine, Quebec, Canada, a corporation of Canada
No Drawing. Filed Apr. 30, 1959, Ser. No. 809,919
5 Claims. (Cl. 260—256)

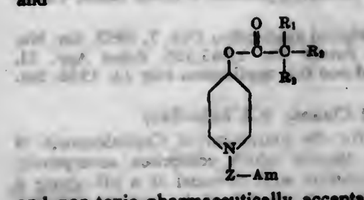
1. N-gamma-[caffeino-(8)]-aminopropanol-(1).

3,094,532
N-(AMINOALKYL)-PIPERIDYL ESTERS
Frederick F. Blicke, Ann Arbor, Mich., and John H. Biel, Milwaukee, Wis.; said Blicke assignor to Regents of the University of Michigan, Ann Arbor, Mich., a corporation of Michigan; said Biel assignor to Lakeside Laboratories, Inc., Milwaukee, Wis., a corporation of Delaware
No Drawing. Filed Sept. 9, 1960, Ser. No. 54,863
7 Claims. (Cl. 260—268)

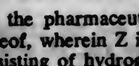
7. A member of the group consisting of compounds of the formula



and



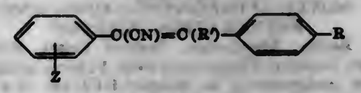
and non-toxic pharmaceutically acceptable acid addition salts thereof and quaternary ammonium salts thereof of the group consisting of those formed with lower alkyl halides, di-lower alkyl sulfates, phenyl-lower alkyl halides and methyl paratoluenesulfonate, wherein R_1 is a member of the group consisting of hydrogen, hydroxy, amino, lower alkoxy, halogen and acyloxy groups of the formula



wherein R_4 is a lower alkyl, R_2 is a member of the group consisting of thienyl, phenyl and phenyl groups containing at least one substituent of the group consisting of halogen, lower alkyl, lower alkoxy, amino, nitro and lower alkylenedioxy groups, R_3 is a member of the group consisting of phenyl and phenyl groups containing at least one substituent of the group consisting of halogen, lower alkyl, lower alkoxy, amino, nitro and lower alkylenedioxy groups, cycloalkyl groups having three to seven carbons in the ring, cycloalkenyl groups having three to six carbons in the ring, furyl, thienyl and pyridyl, Z is an alkylene of two to ten carbons and Am is a member of the group consisting of di-lower alkyl amino, morpholino, pyrrolidino, piperidino, 4-lower alkyl piperazino and 4-(hydroxy lower alkyl)-piperazino.

3,094,533
3-PYRIDYL-ACRYLONITRILES
George M. K. Hughes, Gales Ferry, Conn., assignor to Chas. Pfizer & Co., Inc., New York, N.Y., a corporation of Delaware
No Drawing. Filed Oct. 13, 1961, Ser. No. 144,845
16 Claims. (Cl. 260—294.9)

1. A compound selected from the group consisting of 3-(pyridyl)acrylonitriles represented by the formula:



and the pharmaceutically acceptable acid addition salts thereof, wherein Z is a member selected from the group consisting of hydrogen, lower alkyl, lower alkoxy, lower alkylmercapto, halogen, trifluoromethyl, nitro and alkanoyl having from two to four carbon atoms; R' is a member selected from the group consisting of pyridyl and lower alkyl-substituted pyridyl; and R is a member selected from the group consisting of hydrogen, lower alkyl, lower alkoxy and halogen.

3,094,534
PROCESS FOR PREPARING NOVEL CYCLIC AMINES
Rudolf Griot, Basel, and Theodor Wagner-Jauregg, Zofingen, Switzerland, assignors to Siegfried Aktiengesellschaft, Zofingen, Switzerland
No Drawing. Filed Mar. 6, 1961, Ser. No. 93,333
14 Claims. (Cl. 260—313)

1. A process for preparing cyclic amines, which comprises treating Δ^2-cyclopentenyl acetone oxime in acetic acid with zinc dust at elevated temperatures and recovering and separating the amines thus produced from the reaction mixture.

9. A compound having the empirical formula $C_6H_{12}N$ produced by the process of claim 1.

10. A compound having the empirical formula $C_6H_{13}NO$ produced by the process of claim 1.

3,094,535
GERMANIUM PHTHALOCYANINES
Malcolm E. Kenney, % Case Institute of Technology, University Circle, Cleveland, Ohio, and Ralph D. Joyner, Maple Heights, Ohio (544 Roslyn Ave., Akron, Ohio)
Filed Jan. 3, 1961, Ser. No. 80,226
6 Claims. (Cl. 260—314.5)

3. Dihydroxy germanium phthalocyanine.
5. Bis-(p-phenylphenoxy) germanium phthalocyanine.

3,094,536
SILICON PHTHALOCYANINES
Malcolm E. Kenney, % Case Institute of Technology, University Circle, Cleveland 6, Ohio, and Ralph D. Joyner, Maple Heights, Ohio (544 Roslyn Ave., Akron 20, Ohio)
Filed Jan. 3, 1961, Ser. No. 80,227
6 Claims. (Cl. 260—314.5)

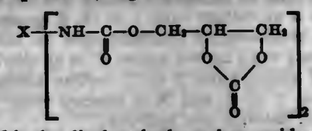
1. Dihalogen silicon phthalocyanine.
6. Bis-triphenylsiloxy silicon phthalocyanine.

3,094,537
RESOLUTION OF ACETYL-DL-TRYPTOPHAN
Halbert C. White, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed May 1, 1961, Ser. No. 106,474
4 Claims. (Cl. 260—319)

1. A process for resolving acetyl-DL-tryptophan which comprises forming an aqueous solution containing one gram mole of acetyl-DL-tryptophan·L-lysine in about 200–600 ml. of water at about 50–100° C., cooling said solution below 50° C., thereby precipitating a major proportion of the acetyl-D-tryptophan·L-lysine, and separating the precipitated salt.

3,094,538
CARBONATOPROPYL DICARBAMATES
John C. Smith, Lake Jackson, Tex., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed May 21, 1958, Ser. No. 736,710
3 Claims. (Cl. 260—340.2)

1. A compound having the formula



wherein X is the divalent hydrocarbon residue of a diisocyanate selected from the group consisting of phenylene, α,α'-xylylene, 2,4-tolylene, halophenylene, ethylene, hexamethylene, 1,2-octylene and 1,12-octadecylene diisocyanates.

3,094,539
PREPARATION OF ALIPHATIC DICARBOXYLIC ACID ANHYDRIDES
William G. Bowman, Pasadena, and Ralph O. Kerr, Houston, Tex., assignors to Petro-Tex Chemical Corporation, Houston, Tex., a corporation of Delaware
No Drawing. Filed Jan. 9, 1961, Ser. No. 81,263
4 Claims. (Cl. 260—346.8)

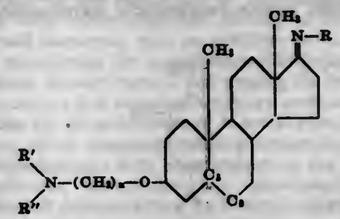
1. A process for the preparation of high purity maleic anhydride which comprises oxidizing ethylenically unsaturated aliphatic hydrocarbons of from 4 to 6 carbon atoms in a vapor state to form a crude vapor containing maleic anhydride, dissolving said crude vapor in water to form an aqueous solution, feeding said aqueous solution to a first column which contains a refluxing saturated aliphatic hydrocarbon of a boiling point of about 130° C. to 152° C., said first column having an internal temperature at the top of the column of no greater than about 135° C., taking off an aqueous solution of acid overhead and taking off impurities as bottoms from the column, feeding said aqueous solution of maleic acid to a second column which contains a refluxing organic liquid which forms an azeotrope with water, and which boils at a temperature lower than maleic anhydride, whereby the maleic acid is dehydrated to maleic anhydride and the water of solution and water of hydration are thereby distilled off overhead as an azeotropic mixture and the maleic anhydride is taken off as bottoms.

3,094,540
NOVEL 6-CHLORO-17α-ETHYNYL-ANDROSTADIENES AND PROCESSES
Ralph F. Hirschmann, Scotch Plains, N.J., assignor to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey
No Drawing. Filed Feb. 13, 1961, Ser. No. 88,659
6 Claims. (Cl. 260—397.4)

1. 6-chloro-17α-ethynyl-17β-hydroxy-2-hydroxymethylene-19-nor-4,6-androstadiene-3-one.

3,094,541
3-SUBSTITUTED ETHERS OF THE ANDROSTANE SERIES
Edward W. Cantrall, Pearl River, N.Y., Ruddy Littell, Rivervale, N.J., and Seymour Bernstein, New City, and Samuel Gordon, Pearl River, N.Y., assignors to American Cyanamid Company, Stamford, Conn., a corporation of Maine
No Drawing. Filed Nov. 6, 1962, Ser. No. 235,833
9 Claims. (Cl. 260—397.5)

1. A steroid of the formula:



wherein R is selected from the group consisting of lower alkyl and omega-hydroxy lower alkyl radicals, R' and R'' are lower alkyl radicals, $>C_5—C_6—$ is selected from the group consisting of $>CH=CH—$ and $>CH—CH_2—$ radicals and n is an integer from 2 to 4.

3,094,542
21-SUBSTITUTED-3,17α-DIHYDROXY-11,20-DI-/KETOALLOPREGNANES AND PROCESS OF PREPARING THEM
Earl M. Chamberlin, Westfield, N.J., assignor to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey
No Drawing. Filed Apr. 17, 1961, Ser. No. 103,262
14 Claims. (Cl. 260—397.45)

1. The process which comprises reacting 3(β),17α-dihydroxy-11,20-diketo-allopregnane with bromine in a halogenated hydrocarbon solvent at a temperature of approximately 45–50° C. to form 3(β),17α-dihydroxy-11,20-diketo-21-bromo-allopregnane, reacting this compound with an alkali metal acetate to produce 3(β),17α-dihydroxy-11,20-diketo-21-acetoxy-allopregnane, and reacting said 3(β),17α-dihydroxy-11,20-diketo-21-acetoxy-allopregnane with N-bromo-acetamide to produce 3,11,20-triketo-17α-hydroxy-21-acetoxy-allopregnane.

3,094,543
PREPARATION OF 9(11)-ANHYDRO STEROIDS FROM 11-HYDROXY STEROIDS
George G. Hazen, Northumberland, Pa., and Dale W. Rosenburg, Elkton, Va., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey
No Drawing. Filed July 3, 1961, Ser. No. 121,298
17 Claims. (Cl. 260—397.45)

1. The process which comprises reacting a mixture of an 11β-hydroxy-steroid of the pregnane series and an organic base with an organic acid halide reactant selected from the group consisting of benzene sulfonyl halides, benzoyl halides, and lower alkane sulfonyl halides, in the presence of anhydrous sulfur dioxide to form the corresponding $\Delta^{9(11)}$-steroid.

3,094,544

MOLYBDENUM BENZOPHENONE COMPOUNDS

Melvin L. Larson, Royal Oak, Mich., assignor to American Metal Climax, Inc., New York, N.Y., a corporation of New York

No Drawing. Filed June 11, 1962, Ser. No. 201,254
4 Claims. (Cl. 260—429)

1. Molybdenum oxytrichloride benzophenone.

3,094,545

CYCLIC ARSENIC AND PHOSPHORUS COMPOUNDS AND METHODS OF PREPARING SAME

Richard P. Welcher, Old Greenwich, Gerald A. Johnson, Stamford, and Vernon P. Wystrach, Noroton Heights, Conn., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed June 27, 1960, Ser. No. 38,697
33 Claims. (Cl. 260—440)

26. A novel cyclic compound selected from the group consisting of 4-amino-1,2,5,6-tetrahydro-1-substituted phosphorin-3-carbonitrile and 4-amino-1,2,5,6-tetrahydro-1-substituted arsenin-3-carbonitrile corresponding to the formula



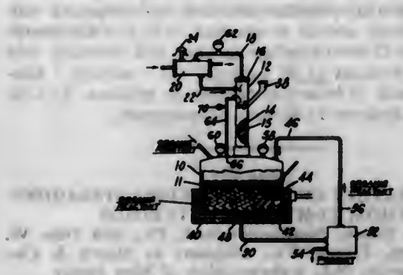
wherein Z is a member selected from the group consisting of phosphorus and arsenic and R is a member selected from the group consisting of alkyl C_1–C_{20}, substituted and unsubstituted; phenyl, substituted and unsubstituted; said substituents on the alkyl moiety being selected from the group consisting of hydroxy, lower alkoxy, amino, phenyl, pyridyl, furyl and thienyl; and said substituents on the phenyl moiety being selected from the group consisting of lower alkyl and halogen.

3,094,546

PROCESSES FOR PREPARING ORGANO-METALLIC COMPOUNDS

Russell Smith Towers, Adrian, Mich., assignor to Stauffer Chemical Company, Adrian, Mich.

Filed July 14, 1960, Ser. No. 42,865
12 Claims. (Cl. 260—448)



1. A process for producing metal alkyl and metal alkoxide compounds by a self-regulated procedure, comprising the steps of: forming a packing of solid phase metals selected from the group consisting of metals of groups IA, IIA and IIIA and having a particle size providing liquid and vapor phase passage through said packing, locating a quantity of vaporizable liquid phase material at the base of said packing selected from the group consisting of alcohol and alkyl halide in separated relation from said packing and having a boiling point below the melting point of said packing, heating said liquid phase material to its vaporization temperature and forming a continuous vapor phase flow from continuous fractional vaporization of said liquid phase material, conducting one portion of vapor phase material flow through said packing to effect at least partial reaction with said packing, conducting another portion of said vapor phase flow as a bypass flow to enter said packing at a location above the point of entry of said first-mentioned vapor phase flow into said packing, and condensing and refluxing unreacted vapor phase portions of said flows through the packing to remove the reaction product from within said packing in accompaniment with the reflux as a countercurrent flow to said first vapor phase flow.

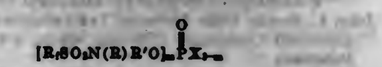
3,094,547

PERFLUOROALKYLSULFONAMIDOALKYL ESTERS OF PHOSPHORUS ACIDS

Richard F. Heine, White Bear Lake, Minn., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

No Drawing. Filed Feb. 6, 1961, Ser. No. 87,060
9 Claims. (Cl. 260—461)

1. A fluorinated compound having the formula



wherein R_f is a perfluorinated radical selected from the group consisting of aliphatic C_nF_{2n+1} and cyclo-aliphatic C_nF_{2n-1}, n is an integer from 1 to 18, R is selected from the group consisting of hydrogen and an alkyl radical having from 1 to 12 carbon atoms, R' is an alkylene bridging radical having from 2 to 12 carbon atoms, m is an integer from 1 to 2, and X is selected from the group consisting of chlorine and hydroxyl.

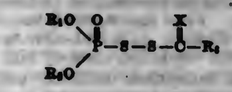
3,094,548

PHOSPHORO CARBAMOYL DISULFIDES

Glenn R. Price, South Chicago Heights, and Edward N. Walsh, Chicago Heights, Ill., and James T. Hallett, Saratoga, Calif., assignors to Stauffer Chemical Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Apr. 10, 1961, Ser. No. 101,675
3 Claims. (Cl. 260—461)

3. A compound having the formula:



wherein R_1 and R_2 are alkyl radicals; R_3 is a member selected from the group consisting of phenoxy and alkoxyalkoxy; and X is a member selected from the group consisting of oxygen and sulfur.

3,094,549

PROCESS FOR PREPARING HYDROXYALKYL PHOSPHATES

Arthur E. Gurgiolo and Robert A. Newton, Lake Jackson, Tex., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed July 27, 1961, Ser. No. 127,139
12 Claims. (Cl. 260—461)

1. In the process of producing phosphate esters by the condensation of phosphoric acid with an alkylene oxide, the improvement of conducting said condensation in an inert organic solvent.

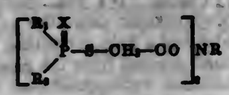
3,094,550

THIO- AND DITHIO-PHOSPHORUS ACID ALKYL ESTERS AND PROCESS FOR THE PRODUCTION THEREOF

Hans-Helmut Schlör, Wuppertal-Barmen, and Gerhard Schrader, Wuppertal-Cronenberg, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Apr. 3, 1962, Ser. No. 184,675
Claims priority, application Germany Apr. 13, 1961
18 Claims. (Cl. 260—461)

1. A compound of the formula



wherein R_1 and R_2 stand for members selected from the group consisting of lower alkyl having up to 4 carbon atoms and lower alkoxy having up to 4 carbon atoms; R stands for a member selected from the group consisting of hydrogen and a lower alkyl radical having up to 4 carbon atoms and X stands for a member selected from the group consisting of oxygen and sulfur.

3,094,551

PROCESS FOR PREPARING CYANO-ESTERS

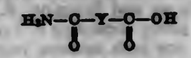
Carol K. Sauers, Highland Park, and Robert J. Cotter, New Brunswick, N.J., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Sept. 4, 1959, Ser. No. 838,041
10 Claims. (Cl. 260—465)

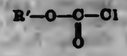
1. A process for the preparation of a cyano ester which has the formula:

NC—Y—COOR'

wherein Y and R' are as subsequently defined, which comprises, admixing at a temperature of about —70° C. to about 150° C., a monoamide of a dibasic carboxylic acid containing as the sole reactive groups under the conditions of the reaction one amide group and one carboxylic acid group and having the formula:



wherein Y is a hydrocarbon chain containing a maximum of 14 carbon atoms and the —$CONH_2$ and —COOH groups are attached to vicinal carbon atoms in said hydrocarbon chain, with an organic chloroformate having the formula:



wherein R' is a monovalent hydrocarbon radical containing a maximum of 10 carbon atoms, in contact with a tertiary amine, whereby said monoamide and said chloroformate react to form said cyano ester.

3,094,552

PRODUCTION OF UNSATURATED ALIPHATIC NITRILES

Barrie Wood, Epsom, England, assignor to The Distillers Company Limited, Edinburgh, Scotland, a British company

No Drawing. Filed Oct. 11, 1960, Ser. No. 61,817
Claims priority, application Great Britain Oct. 28, 1959
12 Claims. (Cl. 260—465.9)

1. The process for the production of an unsaturated aliphatic nitrile selected from the group consisting of acrylonitrile and methacrylonitrile which comprises reacting in the vapour phase an aldehyde selected from the group consisting of acrolein for production of acrylonitrile and methacrolein for production of methacrylonitrile with oxygen and ammonia at a temperature of about 300–550° C., over an oxidation catalyst selected from the group consisting of (1) a mixture of the oxides of antimony and oxides of tin, and (2) a compound of antimony, tin and oxygen.

3,094,553

PROCESS FOR THE PRODUCTION OF α-AMINO-β-HYDROXY-CARBOXYLIC ACIDS

Heinrich Hellmann and Helmut Piechota, both of Tübingen, and Hans Henecka and Helmut Thomler, both of Wuppertal-Elberfeld, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed June 16, 1960, Ser. No. 36,687
8 Claims. (Cl. 260—471)

1. Process for the production of α-amino-β-hydroxy-carboxylic acids, which comprises reacting an acylamino-malonic acid monoester with an aldehyde in an alkaline medium, hydrolyzing the α-acylamino-β-hydroxy-carboxylic acid ester thereby formed, and treating the hydrolized product to form a free α-amino-β-hydroxy-carboxylic acid.

7. Process for the production of N-acetyl-phenyl-serine-ethyl ester, which comprises reacting acetamino-malonic acid monomethylester with benzaldehyde in the presence of triethylamine, hydrolyzing the corresponding ester thereby formed, and recovering the N-acetyl-phenyl-serine-ethyl ester from the hydrolyzed product.

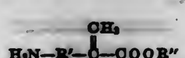
3,094,554

AMINO ACRYLATE ESTERS

Jack Dickstein, Huntingdon Valley, Pa., and Michael Bodnar, Dover, and Rose-Marie Hoegerle, Linden, N.J., assignors to The Borden Company, New York, N.Y., a corporation of New Jersey

No Drawing. Filed Feb. 20, 1961, Ser. No. 90,178
6 Claims. (Cl. 260—482)

6. The ester of the formula



in which R' is a bivalent hydrocarbon group having 1–3 carbon atoms, and R'' is a C_1—C_6 alkyl.

3,094,555

PURIFICATION OF SODIUM ISETHIONATE

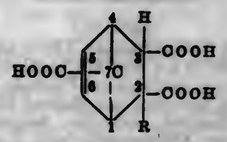
Vincent Lamberti, Hackensack, and Robert A. Haas, Fort Lee, N.J., assignors to Lever Brothers Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Aug. 3, 1959, Ser. No. 831,026
12 Claims. (Cl. 260—513)

1. A process for removing odor causing impurities from sodium isethionate which has been prepared by the reaction of ethylene oxide and sodium bisulfite, said process comprising removing whatever sulfite and bisulfite impurities are present, and treating the sodium isethionate with an oxidizing agent selected from the group consisting of sodium hypochlorite, sodium chlorite, calcium hypochlorite, potassium persulfate and potassium monopersulfate, each of said oxidizing agents, when selected, being present in the following minimum percentages by weight of sodium isethionate: sodium hypochlorite—0.12%, sodium chlorite—0.05%, calcium hypochlorite—0.12%, potassium persulfate—0.42%, and potassium monopersulfate—0.5%, said oxidizing agent being present in a maximum amount of about 1%.

3,094,556
CARBOXYLATED BICYCLOHEPTENE COMPOUNDS
Herbert K. Wiese, Cranford, and Fred W. Banes, Westfield, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware
No Drawing. Filed Dec. 30, 1957, Ser. No. 705,734
3 Claims. (Cl. 260—514)

1. Bicyclo-(2,2,1)-heptene polycarboxylic acid consisting of carbon, hydrogen and oxygen having the general formula



wherein the HOOC— radical is a substituent on the cyclopentene ring formed by carbon atoms numbered 1, 4, 5, 6 and 7, R is a member of the group consisting of hydrogen and $—(CH_2)_nCOOH$ where n is an integer from 0 to 2, and the remaining valences of the ring carbon atoms are satisfied by members of the group consisting of hydrogen and $C_1—C_4$ alkyl radicals.

3,094,557
PROCESS FOR THE PRODUCTION OF CIS OR TRANS - 1,2,3,4 - TETRAHYDRONAPHTHALENE DICARBOXYLIC ACID-(1,4)
Rudolf Gabler, Zollikerberg, Zurich, and Theodor Lyssy, Zurich, Switzerland, assignors to W. R. Grace & Co., Cambridge, Mass., a corporation of Connecticut
No Drawing. Filed May 18, 1960, Ser. No. 29,824
4 Claims. (Cl. 260—515)

1. A process for preparing stereoisomers of the alkali salts of 1,2,3,4-tetrahydronaphthalene dicarboxylic acid-(1,4) which comprises hydrogenating an aqueous solution of an alkali salt of a member selected from the group consisting of trans-1,4-dihydronaphthalene dicarboxylic acid-(1,4) and 1,2-dihydronaphthalene dicarboxylic acid-(1,4) in the presence of a hydrogenation catalyst at a pH between 7 and 10 and a temperature not substantially in excess of 150° C.

3,094,558
PROCESS FOR MAKING M-HYDROXY-BENZOATES
Edwin J. Strojny, Midland, and Dale E. Keeler, Sanford, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed Mar. 2, 1961, Ser. No. 92,752
8 Claims. (Cl. 260—521)

1. A process for making sodium m-hydroxybenzoate which comprises reacting one mole of m-sulfobenzoic acid with at least about 4.5 moles of sodium hydroxide in the continuous presence of about 0.1 to about 40 moles of water per mole of sodium hydroxide and at a temperature of about 220-400° C.

3,094,559
METHOD FOR THE PREPARATION OF DIPHENYL-PHOSPHINOUS CHLORIDE
Robert S. Cooper, Park Forest, Ill., assignor to Stauffer Chemical Company, New York, N.Y., a corporation of Delaware
Filed May 5, 1960, Ser. No. 26,987
4 Claims. (Cl. 260—543)

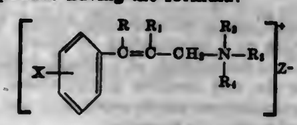
1. A method for the preparation of diphenylphosphinous chloride which comprises heating phenylphosphonous dichloride vapors at substantially atmospheric pressure at a pyrolizing temperature of at least about 400° C. to about 700° C. under anhydrous, non-oxidizing conditions, separating diphenylphosphinous chloride and phosphorus trichloride from the pyrolysis reaction products and returning unreacted phenylphosphonous dichloride to the process for further pyrolysis.

3,094,560
N-HALOCYCLOALKENIC DERIVATIVES OF ARYLAMINES
John P. Luvisi, Park Ridge, and James J. Louvar, Riverside, Ill., assignors to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware
No Drawing. Filed Mar. 9, 1959, Ser. No. 797,890
12 Claims. (Cl. 260—566)

1. An N-halocycloalkenic derivative of an arylamine prepared by condensing a halo substituted conjugated unsaturated compound selected from the group consisting of halogenated butadienes, cyclopentadienes and cyclohexadienes with an alkenyl alkyl ketone having from 2 to 4 carbon atoms in the alkenyl group and from 1 to 7 carbon atoms in the alkyl group at a temperature in the range of from about 25° to about 150° C., and reacting the resultant halocycloalkenyl alkyl ketone with an arylamine containing up to 9 carbon atoms per molecule in the presence of a metal of the platinum group of group VIII of the periodic table at a temperature in the range of from about 75° to about 150° C.

3,094,561
HALOCINNAMYL QUATERNARY AMMONIUM COMPOUNDS
John A. Faust and Melville Sahyun, Santa Barbara, Calif.; said Faust assignor to said Sahyun, doing business as Sahyun Laboratories, Santa Barbara, Calif.
No Drawing. Filed June 4, 1959, Ser. No. 818,018
4 Claims. (Cl. 260—567.6)

1. Compounds having the formula:



wherein X represents an atom selected from the group consisting of chlorine and bromine; R and R_1 are each selected from the group consisting of hydrogen and lower-alkyl; R_2 and R_3 are each selected from the group consisting of hydrogen, lower alkyl, lower alkenyl and lower alkanol; R_4 is lower-alkyl; and Z is a non-toxic anion.

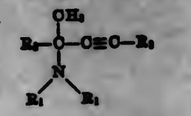
3,094,562
PROCESS FOR THE PREPARATION OF AMINE-BORANE COMPLEXES
Eugene C. Ashby, Baton Rouge, La., assignor to Ethyl Corporation, New York, N.Y., a corporation of Virginia
No Drawing. Filed Apr. 6, 1959, Ser. No. 804,077
7 Claims. (Cl. 260—583)

1. A process for the production of amine-borane complexes which comprises reacting together a mixture of activated aluminum metal, hydrogen and a tertiary amine complex of a boron halide, the tertiary amine of the complex being a hydrocarbon amine selected from the group consisting of alkyl, cycloalkyl, aryl, and heterocyclic tertiary amines which are liquid under the reaction conditions and contain up to and including about 18 carbon atoms in the hydrocarbon portions; said reaction being conducted at a temperature above about 100° C. but below the decomposition temperature of the desired amine-borane product; and said reaction being effected in an organic solvent which is liquid under the reaction conditions and is selected from the group consisting of (1) hydrocarbons which are inert to the reaction system, (2) hydrocarbon ethers which are inert to the reaction system, and (3) hydrocarbon tertiary amines selected from the class consisting of alkyl, cycloalkyl, aryl, and heterocyclic amines containing up to and including about 18 carbon atoms in the hydrocarbon portions.

3,094,563
AMINES AND UNSATURATED KETONES FROM TERTIARY ACETYLENIC AMINES
Carl W. Kruse and Roger F. Kleinschmidt, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware
No Drawing. Filed Sept. 6, 1960, Ser. No. 53,919
14 Claims. (Cl. 260—583)

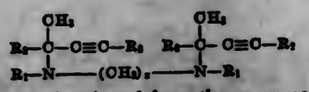
1. A process comprising contacting with an aqueous solution of a mineral acid of the group consisting of sulfuric, hydrochloric, and phosphoric, an acetylenic amine having a formula of the group consisting of

(I)



and

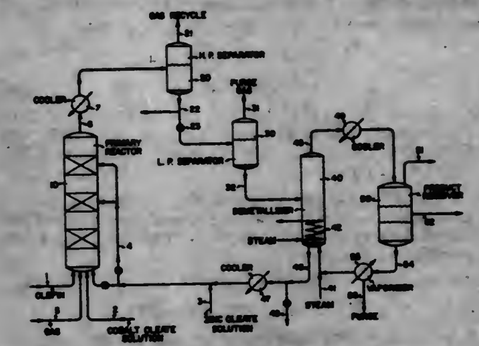
(II)



wherein each R_1 is selected from the group consisting of alkyl radicals containing from 1 to 6 carbon atoms and cycloalkyl radicals containing from 5 to 6 carbon atoms; wherein the two R_1's on a single nitrogen atom can together with the nitrogen form a saturated heterocyclic ring containing from 5 to 6 ring atoms, said ring atoms other than nitrogen being selected from the group consisting of carbon and oxygen, with at least three of said ring atoms being carbon; wherein x is an integer in the range of 2 to 8, wherein R_3 is selected from the group consisting of alkyl, aralkyl, alkylaralkyl, cycloalkyl, alkylcycloalkyl, polycycloalkyl, alkylpolycycloalkyl radicals containing from 1 to 10 carbon atoms, and $—CH_2—O—R_3$, wherein R_3 is a 1–10 carbon alkyl, at a temperature in the range of 0 to 200° C., an acid concentration in the range of 1 to 90 percent by weight, and with at least 1 mole of water per mole of acetylenic amine so as to hydrolyze said amine and form at least one ketone and an amine.

3,094,564
REMOVAL OF METAL RESIDUES FROM CARBONYLATION PRODUCTS
Joseph Kern Mertzweiller and Leroy Virgil Robbins, Jr., Baton Rouge, La., and Peter Joseph Berkeley, Jr., Tulsa, Okla., assignors to Esso Research and Engineering Company, a corporation of Delaware
Filed Jan. 25, 1960, Ser. No. 4,296
4 Claims. (Cl. 260—604)

1. In a carbonylation process wherein a monoolefin containing n carbon atoms, n being an integer ranging from 2 to 5, is contacted with carbon monoxide and hydrogen in the presence of a water-insoluble, oil-soluble cobalt carbonylation catalyst under conditions to produce an aldehyde containing $n+1$ carbon atoms and the aldehyde is contacted with a water-insoluble, oil-soluble dimerization-dehydration catalyst in a synthesis zone under conditions to produce a crude dimer aldehyde containing $2n+2$ carbon atoms and containing catalyst residues dissolved therein, the improvement which comprises steam distilling in a distillation zone the catalyst-containing crude dimer aldehyde at a temperature between about 212° and 275° F. under conditions such that substantially no liquid water phase is maintained in said steam distillation zone, removing from said distillation zone as a distillate a mixture of steam and substantially catalyst-free oxygenated product having not more than $2n+2$ carbon atoms per molecule, separating an organic phase comprising an aldehyde having $2n+2$ carbon atoms from



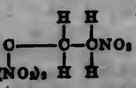
the said distillate and withdrawing from said distillation zone a catalyst-containing bottoms fraction.

3,094,565
PRODUCTION OF UNSATURATED ALIPHATIC ALDEHYDES
James Robert Bethell and David James Hadley, Epsom Downs, and Barrie Wood, Epsom, England, assignors to The Distillers Company Limited, Edinburgh, Scotland, a British company
No Drawing. Filed Feb. 3, 1960, Ser. No. 6,365
Claims priority, application Great Britain Apr. 18, 1959
7 Claims. (Cl. 260—604)

1. The process for the production of a substance selected from the group consisting of acrolein and methacrolein which comprises reacting in the vapor phase a mixture whose only reactants are molecular oxygen and a substance selected from the group consisting of propylene and isobutene in the presence of an oxidation catalyst selected from the group consisting of (1) antimony oxide and (2) antimony oxide with another polyvalent metal oxide selected from the group consisting of the oxides of molybdenum, tungsten, tin, tellurium, copper, titanium and cobalt, at a temperature of at least about 300° C.

3,094,566
TETRANITRO ORGANIC COMPOUNDS AND PREPARATION OF SAME
Marvin H. Gold, Covina, and Herman Plant, Los Angeles, Calif., assignors, by mesne assignments, to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio
No Drawing. Filed Dec. 20, 1949, Ser. No. 134,128
6 Claims. (Cl. 260—644)

1. A method of forming a composition of matter having the formula



which comprises admixing mononitroethylene dissolved in methanol, adding to this solution nitroform while maintaining the temperature not higher than about 0° C., permitting the temperature to rise to room temperature, refluxing the mixture and isolating the product.

3,094,567
CHLORINATION OF PROPYNES
Charles M. Eaker, St. Albans, and George A. Seal, Nitro, W. Va., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed Feb. 25, 1960, Ser. No. 10,874
4 Claims. (Cl. 260—654)

1. The process which comprises introducing from about .54 to .95 mole proportion of gaseous elemental Cl_2 into

one mole proportion of a member of the group consisting of propargyl chloride and propargyl bromide in liquid phase at 5–55° C. and isolating trihalogenated olefinic unsaturated product as the predominant product.

3,094,568

PROCESS FOR ALKYLATING AROMATICS IN THE PRESENCE OF A HEAVY METAL HALIDE, AN ORGANIC HALIDE AND AN ORGANO ALUMINUM HALIDE

Russell G. Hay, Gibsonia, and Stanley M. Hasen, Indiana Township, Allegheny County, Pa., assignors to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware

No Drawing. Filed Dec. 1, 1959, Ser. No. 856,346
11 Claims. (Cl. 260—671)

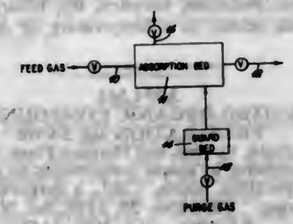
1. A process for alkylating an alkylatable aromatic which comprises reacting said alkylatable aromatic with an olefin in the presence of a catalyst system containing a heavy metal halide selected from the group consisting of the halides of titanium, zirconium, hafnium, molybdenum, antimony and tin, an organic halide defined by the formula R_3CX wherein R is selected from the group consisting of an alkyl radical and an aromatic radical and X is a halogen and an organo aluminum halide, the molar ratios of said compounds in said catalyst system being, respectively, about one to about 30 mol percent, about 15 to about 97 mol percent and about two to about 60 mol percent.

3,094,569

ADSORPTIVE SEPARATION PROCESS

Tudor L. Thomas, Snyder, N.Y., assignor to Union Carbide Corporation, a corporation of New York

Filed Oct. 28, 1958, Ser. No. 768,092
9 Claims. (Cl. 260—677)



1. A method for separating hydrocarbon gas mixtures comprising the steps of contacting a hydrocarbon gas mixture with a first zeolitic molecular sieve material being a member selected from the group consisting of analcite, gmelinite, chabazite and zeolite A, and adsorbing a first component therein; discharging first component-depleted hydrocarbon gas from the first molecular sieve; thereafter providing a purge gas containing at least one component which would deleteriously effect the adsorptive characteristics of the first molecular sieve, and zeolite X molecular sieve material having a larger pore size than that possessed by said first molecular sieve; contacting said purge gas with the zeolite X and adsorbing the deleterious component therein; contacting the deleterious component-depleted purge gas with the first component-containing first molecular sieve thereby desorbing said first component; discharging the first component-containing purge gas from the first molecular sieve.

3,094,570

C_{10}–C_{20} α-OLEFIN TREATMENT WITH H_2SO_4 FOR REMOVAL OF FREE RADICAL INHIBITORS

Jacob D. Kemp, El Cerrito, Calif., assignor to California Research Corporation, San Francisco, Calif., a corporation of Delaware

No Drawing. Filed May 18, 1960, Ser. No. 29,905
3 Claims. (Cl. 260—677)

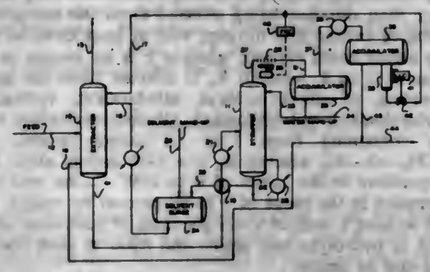
1. A process for treating α-olefins derived from cracking of petroleum hydrocarbons and having from 10 to 20 carbon atoms and inhibitors to free radical reactions to render them adaptable for a free radical reaction which comprises: contacting said olefins with about 0.05 to about 5.0 volume percent of at least 70 percent by weight H_2SO_4 for a period of time of less than about five minutes, separating the olefin phase from the acid sludge, and distilling said olefin phase to obtain an essentially inhibitor-free overhead, said percentages and said time being selected to minimize isomerization while recovering an overhead olefin product essentially free of said inhibitors to said free radical reaction.

3,094,571

SOLVENT EXTRACTION PROCESS

Lawrence V. Wilson, Jr., and Jack R. Williams, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

Filed Nov. 28, 1958, Ser. No. 776,849
10 Claims. (Cl. 260—681.5)



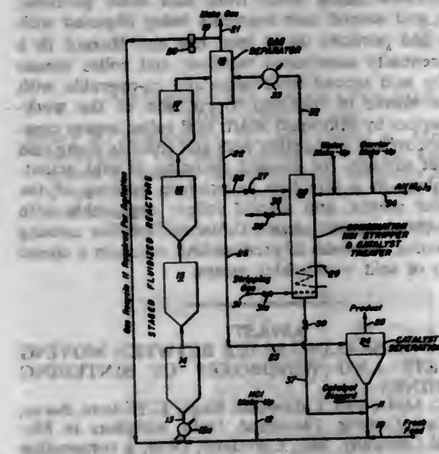
8. A combination solvent extraction-rich solvent stripping process for separating isoprene from a stream containing the same and isopentane comprising contacting said stream with a solvent mixture comprising water and the monomethyl ether of diethylene glycol in an extraction zone forming thereby a raffinate comprising isopentane and an extract comprising said solvent mixture and isoprene, introducing said extract into a stripping zone whereby there is produced an overhead stream comprising isoprene and a portion of the water and a bottom stream comprising the monomethyl ether of diethylene glycol and the remainder of the water, cooling said overhead in a first condensation zone to condense a portion of the water therein but not said isoprene, returning said condensed water to said stripping zone as reflux, cooling the remainder of said overhead stream in a second condensation zone to condense said isoprene and the remainder of the water therein, separating said condensed isoprene from said water and recovering said condensed isoprene as a product of the process, returning water separated from said isoprene to said extraction zone, and condensing in said first condensation zone all but the amount of water returned to said extraction zone by varying the amount of cooling in said first condensation zone responsive to the changes in demand for water by said extraction zone.

3,094,572

ALUMINUM CHLORIDE CATALYST ACTIVATION

John A. Ridgway, Jr., Texas City, Tex., assignor, by mesne assignments, to Standard Oil Company, Chicago, Ill., a corporation of Indiana

Filed Aug. 12, 1959, Ser. No. 833,349
12 Claims. (Cl. 260—683.7)



8. The method of isomerizing normal hexane and methylpentanes to form neohexane which method comprises contacting a mixture of said normal hexane and methylpentanes in the presence of about two to ten volume percent of naphthenes by contacting under isomerization conditions in the presence of hydrogen chloride with an aluminum chloride-adsorbent catalyst activated by an aluminum alkyl having an isobutyl radical and effecting the contacting by flowing a catalyst slurry upwardly in a plurality of contacting zones wherein the liquid component of a catalyst slurry flows upwardly at a more rapid rate than the catalyst component.

9. A catalyst for isomerizing light normal paraffinic hydrocarbons to obtain more highly branched structure which catalyst consists essentially of aluminum chloride and adsorbent, said catalyst having been prepared by treating an adsorbent in the presence of readily available hydroxyl radicals with a liquid hydrocarbon solution of an aluminum alkyl having more than one carbon atom per alkyl radical at a temperature in the range of about 150 to 200° F. and subsequently contacting the treated adsorbent with hydrogen chloride.

3,094,573

PREPARATION OF METHYL PENTENES

Lewis W. Hall, Jr., Wilmington, Del., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

No Drawing. Filed Apr. 13, 1961, Ser. No. 102,631
15 Claims. (Cl. 260—683.15)

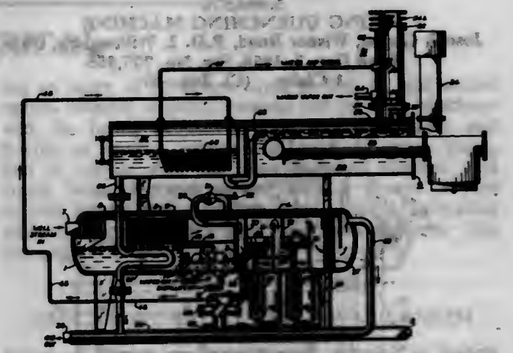
1. Method of preparing methyl pentenes which comprises contacting propylene at a temperature in the range of 100 to 250° C. with a catalyst system prepared by admixing an alkali metal, selected from the group consisting of sodium, potassium, rubidium and cesium, distended on an inert support with an organo metallic compound having the formula R_2M wherein R is selected from the group consisting of alkyl groups having 1–10 carbon atoms, phenyl and benzyl, and M is a metal selected from the group consisting of mercury, zinc and cadmium, the molar ratio of organo metallic compound to alkali metal being in the range of 5:1 to 1:5.

3,094,574

GAS DEHYDRATOR

Clarence O. Glasgow, Tulsa, and Charles T. Patterson, Sand Springs, Okla., assignors to National Tank Company, Tulsa, Okla., a corporation of Nevada

Filed Oct. 20, 1958, Ser. No. 768,267
6 Claims. (Cl. 261—23)



1. A bubble cap for a liquid-gas contacting structure for the absorber vessel of a liquid desiccant dehydrator system for natural gas comprising;

an elongated housing having,

(*a*) the general cross-sectional shape of an inverted U,

(*b*) one of the two legs extending vertically in the form of a solid plate,

(*c*) and the second of the two legs flared outwardly from a point intermediate its height at a predetermined angle and evenly perforated to distribute gas from within the housing over the entire horizontal area in liquid desiccant between the housing and an adjacent housing and overlying the flared portion of the leg determined by the rate of gas flow from within the housing;

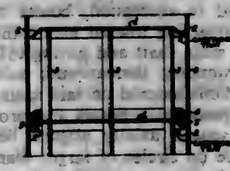
and a riser mounted within the housing to conduct gas from beneath the common mounting of both the housing and riser into the top of the housing.

3,094,575

DISTILLATION APPARATUS

Oscar Albert Petersen, Westwood, N.J., assignor to Scientific Design Company, Inc., a corporation of Delaware

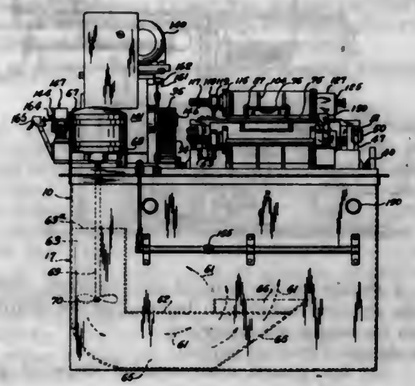
Filed Mar. 10, 1961, Ser. No. 95,422
1 Claim. (Cl. 261—114)



A cartridge tray distillation apparatus which comprises: a distillation column having smooth inner walls; a plurality of distillation trays, one above the other, within said column having a downwardly and outwardly inclined outer edge adjacent to the inner column wall; spacing means integrally affixed to the underside of said trays abutting directly on the upper side of the next lower tray, thereby maintaining a fixed distance between trays; a compressible gasket resting between the inclined outer tray edge and the inner column wall; and a bar ring integrally affixed to said spacing means directly above the

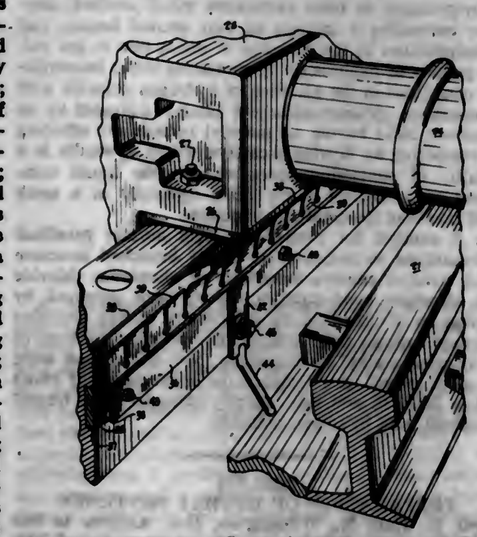
inclined surface of the next lower tray and spaced from the upper side of the next lower tray, whereby said ring due to the weight of the tray above compresses said gasket between the outer edge of the next lower tray and the inner column wall.

3,094,576
SPRING QUENCHING MACHINE
Joseph Gogan, Wisner Road, R.D. 2, Willoughby, Ohio
Filed Dec. 3, 1958, Ser. No. 777,955
1 Claim. (Cl. 266—6)



A quenching machine comprising; a support means including a tank having side walls and adapted to contain quenching liquid; bearing brackets attached to said side walls and supporting substantially horizontally aligned bearings; a main shaft rotatable in said bearings; polygonal-shaped end members spaced apart axially of said main shaft and mounted thereon for rotation therewith and having substantially straight peripheral portions at the locations of the sides of the polygonal shape; an annular series of workholder devices mounted on said end members at the locations of said straight portions and adapted to receive and hold workpieces to be quenched; said workholder devices each comprising a fixed workholder member secured against an axially opposed pair of said straight portions, and a co-operating movable workholder member slidably supported by said pair of straight portions and having opening and closing movement relative to said fixed workholder member; unidirectionally rotatable drive means connected with said main shaft to rotate the same for moving said workholder devices with the workpieces therein through said quenching liquid in succession; bosses on said bearing brackets and projecting toward each other in a coaxial relation to said main shaft and having cylindrical peripheral surfaces extending therearound; said end members having hub portions secured on said main shaft at points immediately adjacent said bosses and provided with circumferentially spaced axially aligned bearing openings whose centers lie on circles of larger diameter than said bosses; an annular group of rockshafts disposed around said main shaft in a parallel relation thereto and rockable in said bearing openings; said rockshafts having end portions projecting from said end members on the remote sides of the latter; actuating members of bell crank shape secured on said end portions of the rockshafts and having angularly disposed first and second lever arms; means connecting said first lever arms with said movable workholder members for imparting the opening and closing movement thereto; stationary cam means supported by said bearing brackets comprising a pair of workholder-opening first cam segments extending part way around said bosses on the upper side thereof, and a pair of workholder-closing second cam segments extending part way around said bosses on the lower side thereof; said first cam segments having first thrust surfaces facing toward and spaced from portions of said peripheral surfaces, and said second cam segments being seated against other portions of said peripheral surfaces and having second thrust surfaces facing away from said other portions; said first and second cam segments being disposed with adjacent end portions on at least one end thereof in a circumferentially contiguous relation; and roller means carried by said second lever arms and co-operable with said cam means in response to rotation of the workholder devices by said main shaft; said roller means comprising first rollers engageable with and rollable along said first thrust surfaces for causing swinging of said actuating members in a direction to produce opening of the workholder means, and second rollers engageable with and rollable along said second thrust surfaces for causing said actuating members to produce and maintain a closed condition of said workholder means.

3,094,577
MEANS FOR SEALING SPACE BETWEEN MOVING PALLETS AND WINDBOXES OF SINTERING MACHINES
Robert C. McDowell, Lakewood, Roger L. Hulette, Berea, and Carl Ludwig, Cleveland, Ohio, assignors to McDowell Company, Inc., Cleveland, Ohio, a corporation of Ohio
Filed Sept. 22, 1959, Ser. No. 841,542
4 Claims. (Cl. 266—21)

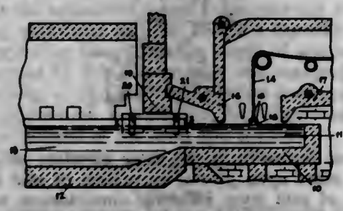


1. A sealing means for a sintering machine having a frame, a horizontal track on said frame, pallets adapted to be moved along said track in contacting succession, wheels for supporting the pallets on said track, and a windbox secured to said frame, the upper side edges of said windbox being spaced below adjacent portions of the pallet bottoms whereby the weight of the pallets rests on said wheels, said sealing means comprising a sealing strip for sealing the space between the adjacent portions of the pallet bottoms and upper side edges of the windbox, said sealing strip being formed of tetrafluoroethylene resin, said resin being characterized by high abrasion and heat resistance and by a low coefficient of friction and

homogeneity, clamping plates for holding said strip in a substantially vertical plane so that it extends above and along the upper side edge of said windbox, said strip and clamping plates extending in a direction parallel to said track, a cam plate secured to one of said clamping plates, a cam lever operatively mounted on said frame, said cam lever being adapted to be turned into contact with said cam plate to releasably clamp the clamping plates and strip to said frame, and seal contacting surfaces on portions of the pallet bottoms for contacting the strip in an air-tight manner when the pallets are moved over the windbox.

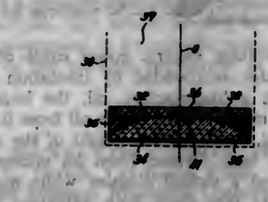
ELECTRICAL

3,094,578
METHOD AND APPARATUS FOR TREATING GLASS
Henry R. Meriwether, Jr., and Curtis A. Mewbourne, Shreveport, La., and Richard E. Warren, Toledo, and Alfred E. Badger, Maumee, Ohio, assignors to Libbey-Owens-Ford Glass Company, Toledo, Ohio, a corporation of Ohio
Filed Nov. 18, 1959, Ser. No. 853,977
8 Claims. (Cl. 13—6)



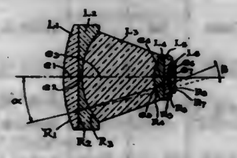
1. In apparatus for drawing a sheet from a mass of molten glass including a draw pot and a cooling chamber through which a stream of molten glass flows to said draw pot, electric heating means within the cooling chamber and positioned along opposite side walls at the exit end of said cooling chamber for internally heating the edge portions of the stream of molten glass in said cooling chamber and before said molten glass reaches said draw pot.

3,094,579
ALBADA TYPE VIEWFINDER WITH IMAGE FRAME IN COMPOSITE REAR LENS ASSEMBLY
Friedrich Papke, Braunschweig, Germany, assignor to Voigtlander A.G., Braunschweig, Germany, a corporation of Germany
Filed Jan. 28, 1960, Ser. No. 5,145
Claims priority, application Germany July 3, 1959
4 Claims. (Cl. 88—1.5)



1. An Albada type viewfinder comprising, in combination, a front, object-facing lens having a concave inner surface carrying a partially light-permeable mirror; a rear lens assembly axially spaced by an air gap from said front lens and mounting an image limiting frame in substantially the focal plane of said mirror for imaging by the latter at substantially infinity, said assembly including a first plano-parallel optical element toward said front lens, a second optical element having an annular convex surface and a central plane surface in contact with the central portion of the facing plane surface of said first optical element and a dispersion lens of transparent, adherent and initially plastic material, having an index of refraction equal to that of said second optical element, disposed between and forming interfaces with the facing surfaces of said optical elements, and having an annular curved and concave surface facing and in contact with said second optical element; said frame being disposed on said annular convex surface of said second optical element; and a casing embracing and axially spacing said front lens and said rear lens assembly.

3,094,580
AFOCAL OPTICAL SYSTEM FOCAL LENGTH CHANGER
Raymond Rosier, Asnieres, France, assignor to Societe d'Optique et de Mecanique de Haute Precision, Paris, France, a French company
Filed Aug. 3, 1960, Ser. No. 47,165
Claims priority, application France Aug. 6, 1959
1 Claim. (Cl. 88—57)



In an afocal optical lens system, a focal length changer having six lens elements including a lens unit formed by five of said lens elements having two concentric spherical surfaces, one front and one rear, the sixth lens element being separated from said lens unit by an air space and comprising one front spherical surface concentric to the surfaces of said lens unit and a plane rear surface, said lens unit including two thin terminal lens elements in contact over adjacent parallel plane surfaces, the lens system being substantially in accordance with the following table:

Radii of curvature	Thicknesses or distances	n_d	ν
$R_1=+70$			
$R_2=\infty$	$c_1=7$	1.8	46.5
$R_3=+33$	$c_2=2$	1.63025	36.2
$R_4=+20$	$c_3=34.964$	1.63025	60.2
$R_5=\infty$	$c_4=4$	1.63025	36.2
$R_6=+15.49$	$c_5=2$	1.8	45.5
$R_7=14.95$	$c_6=0.54$		
$R_8=\infty$	$c_7=3$	1.50050	60.7

wherein R is the radius of a spherical surface of a lens element, e indicates the thickness of an element of the system and the thickness of an air space measured along the axis of the system, n_d is the index of refraction of a lens element and ν is the dispersive power of the glass of the lenses, all the dimensions being measured in like linear units.

3,094,581
ZOOM PROJECTION LENS
Frank G. Back, 55 Sea Cliff Ave., Glen Cove, N.Y.
Filed Dec. 29, 1960, Ser. No. 79,349
2 Claims. (Cl. 88—57)



1. A varifocal projection lens system comprising a fixed outer barrel, a compensator mount slidably received within the fixed barrel, a variator mount carried at the front of the compensator mount, a variator lens in the variator mount, a compensator lens carried by the compensator mount spaced from the variator, an erector lens within the compensator mount between the variator and compensator rigidly secured through the compensator mount to the outer barrel, a relay on the projector end of the outer barrel, and means to move the variator axially with respect to the compensator to focus the lens system and thereafter slide the variator and compensator along the optical axis of the system to vary the focal length of the system in which the lenses have the following optical characteristics:

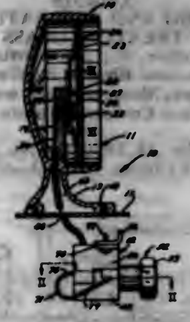
[EFL=25.40 mm to 15.10 mm. BFL=10.90 mm.]

Lens	Glass	Nd	V	Radii in mm.	Thickness (t) and Separation (d) in mm.
Variator 16..	CF-2	1.625	51.1	R_1=+22.93 R_2=+36.84	t_1=1.915 Variable d_1=20.854 to 6.364
Erector 18...	DF-3	1.621	36.2	R_3=−21.75 R_4=−675.40	t_2=1.37 Variable d_2=5.530 to 20.330
Compensator 17.	DBC-7	1.620	60.0	R_5=+79.93 R_6=−41.23	t_3=4.32 Variable d_3=16.185 to 1.985
Relay 23....	DBC-7	1.620	60.0	R_7=+17.22 R_8=−48.35	t_4=3.000 d_4=3.000
Relay 24....	EDF-3	1.720	29.2	R_9=−16.75 R_{10}=+56.70	t_5=2.000 d_5=3.000
Relay 25....	DBC-7	1.620	60.0	R_{11}=+18.17 R_{12}=−25.68	t_6=3.000

wherein Nd is the refractive index for D line, V is Abbe's dispersion number, CF is crown flint, DF is dense flint, DBC is dense barium crown, EDF is extra dense flint, EFL is equivalent focal length, BFL is back focal length, and the clear diameter of the erector is 9.2 mm. for constant brightness.

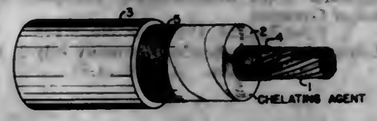
3,094,582
REMOTE CONTROL FOR REARVIEW MIRRORS AND THE LIKE
Edwin B. Jacobson, Grand Rapids, Mich., assignor to Jervis Corporation, Grandville, Mich., a corporation of Michigan
Filed Sept. 28, 1959, Ser. No. 842,916
4 Claims. (Cl. 88—93)

1. Mechanism for supporting and adjusting a rearview mirror, comprising in combination: a reflective member; a support structure provided with a pivot point pivotally supporting said reflective member for movement about first and second axes; said axes being substantially perpendicular to each other and passing through the pivot point between said support structure and said reflective member; a control base spaced remotely from said support structure; a lever pivotally and rotatably supported upon said control base; a pair of cables connected at one end of each thereof to said reflective member at points on opposite sides of one of said axes and said points being on the same side of the other of said axes, and the other ends of said cables engaging said lever for simultaneous



movement therewith in the same direction with respect to each other upon pivotal movement of said lever and rotation of said lever effecting simultaneous movement of said cables in the opposite direction with respect to each other; whereby a combination of rotational and pivotal movement of said lever will effect universal movement of said reflective member about said first and second axes through said pivot and a resilient means connected between said control base and said lever applying a fixed tension to said cables.

3,094,583
HIGH VOLTAGE ELECTRIC POWER CABLES
Edward D. Eich, Tarrytown, N.Y., and George Feick III, Needham, Mass., assignors, by direct and mesne assignments, to Anaconda Wire and Cable Company, a corporation of Delaware
Filed Mar. 24, 1959, Ser. No. 801,446
3 Claims. (Cl. 174—25)



1. In a high voltage electric power cable comprising a copper conductor surrounded by insulation which is impregnated with a hydrocarbon oil, the improvement which comprises incorporating in the oil from 0.01 to 0.1 percent by weight, based on the weight of the oil, of an oil-soluble Schiff base formed from an aromatic o-hydroxyaldehyde and a vicinal diamine while maintaining the oil completely free from both oxidation inhibitors and peroxide decomposers, thereby minimizing an increase in the power factor of the oil during operation of the cable.

3,094,584
ADJUSTABLE SUPPORT FOR ELECTRIC FIXTURES
Milton Liberman, 65 Sewane Road, East Rockaway, N.Y., and Rubin Liberman, 306 E. 79th St., New York, N.Y.
Filed May 31, 1960, Ser. No. 37,547
3 Claims. (Cl. 174—59)

1. An adjustable electrical fixture support and wire way comprising an elongated generally U-shaped channel having a bottom wall and side walls, removable end closures on said channel, each of said closures being of generally U-shaped configuration and secured to the side walls of said channel, an elongated cover member having side edges extending beyond said side walls, an adjustable mount having means engaging the side edges of said cover and means



carried by the adjustable mount for supporting an electrical fixture, said cover member having a depressed central portion extending throughout the length of said cover and means carried by said bottom wall and engaging cooperating openings in said depressed portion for fastening the cover in position on said channel, said depressed portion effecting alignment of the cover and channel.

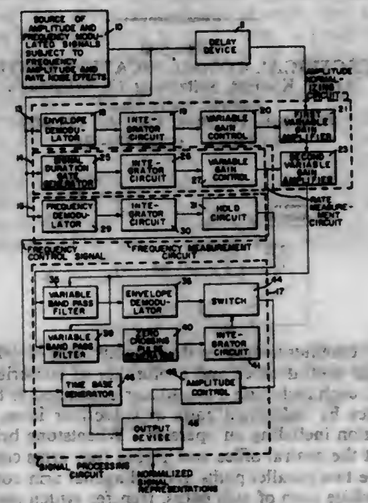
3,094,585
FLUOROCARBON RESIN MIXTURES AND METAL TO PLASTIC BONDING
Merritt A. Rudner, Camden, N.J., assignor, by mesne assignments, to Garlock Inc., Palmyra, N.Y., a corporation of New York
Filed Apr. 16, 1951, Ser. No. 221,197
11 Claims. (Cl. 174—77)



1. An article of manufacture comprising a plastic component of a thermoplastic polymer of trifluorochloroethylene and a metallic component comprising finely divided metal particles, said article ranging in composition from a major proportion of the metallic component at a surface to none of the metallic component at the opposite surface.

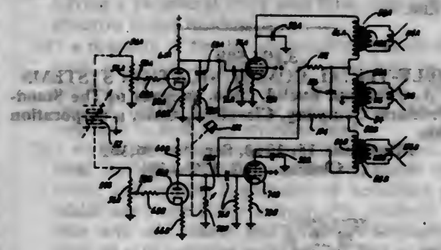
3,094,586
SIGNAL CONVERSION CIRCUITS
William C. Dersch, Los Gatos, Calif., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Feb. 12, 1960, Ser. No. 8,339
7 Claims. (Cl. 179—1)

1. Apparatus for converting amplitude modulation characteristics present in a time varying electrical signal which represents a manifestation of intelligence to normalized amplitude modulation characteristics, including the combination of means for averaging the electrical signals, delay means responsive to the electrical signals and providing a delayed version of the electrical signals, first adjustable gain amplifier means coupled to receive the delayed version of the electrical signals and controlled in response to the averaged signals, means responsive to the electrical signals for measuring the duration of the electrical signals, and second adjustable gain amplifier means responsive to the signals from the first adjustable



gain amplifier means and controlled by the duration measurement means.

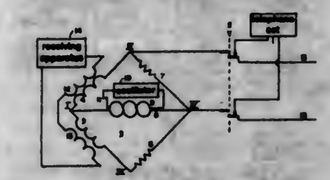
3,094,587
IMPROVED DUAL CHANNEL AMPLIFIER SYSTEM
Harrison E. Dow, Wycombe, Pa., assignor, by mesne assignments, to Philco Corporation, Philadelphia, Pa., a corporation of Delaware
Filed July 5, 1960, Ser. No. 40,815
15 Claims. (Cl. 179—1)



6. An audio amplifier system comprising first and second amplifier channels, each of said amplifier channels including at least one amplifier stage, means for supplying a signal from a first source to the input of said first amplifier channel, means for supplying a signal from a second source to the input of said second amplifier channel, a common low frequency output transducer, means coupling the output of said first and second amplifier channels to said common transducer for low frequency signals, low-pass signal coupling means having one input terminal connected to a point in said first amplifier channel separated from the input of said first amplifier channel by at least one amplifier stage and a second terminal connected to a point in said second amplifier channel separated from the input of said second amplifier channel by at least one amplifier stage and output terminals connected, respectively, to the input of said first amplifier channel and the input of said second amplifier channel, said low-pass signal coupling means being constructed and arranged to cross-couple low-frequency signals only from each channel

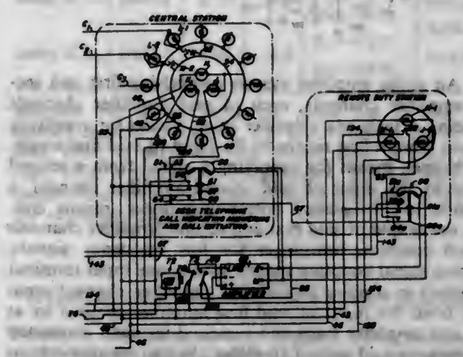
to the input of the other channel thereby to tend to equalize the amplitude of the low frequency signals present in said two amplifier channels.

3,094,588
ELECTRICAL COMMUNICATION SYSTEM
Alfred Kleinst, Spitzliweg 12, Erlenbach-Zurich, Switzerland
Filed July 14, 1958, Ser. No. 748,483
4 Claims. (Cl. 179—2)



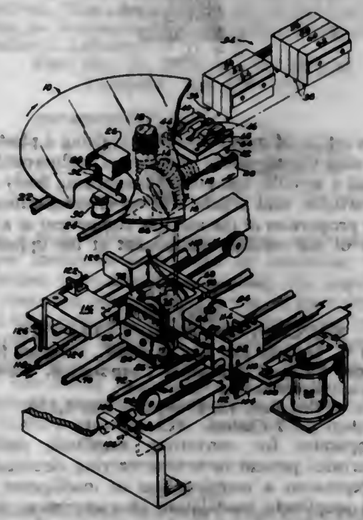
1. A communication system comprising a telephone exchange central office and a plurality of subscribers apparatus, each including a transducer connected to the central office by individual pairs of subscriber lines, a control station including an operator's Wheatstone bridge located at the central office and having four arms connected to define two parallel paths and a diagonal arm connected intermediate each of said paths, transfer switch means for connecting said bridge to one of said pairs of subscriber lines said control station including a first signal means including means for generating a control frequency signal and means for inducing said control signal in the diagonal arm of said bridge and an operator's receiving apparatus inductively coupled to two of said four arms of said bridge, said subscribers apparatus further including Wheatstone bridge means and relay means for connecting said subscribers bridge means in parallel with the subscribers lines in response to said control frequency signal, said subscribers' Wheatstone bridge means including means for sending a signal to said central office when said subscribers bridge means is connected to said subscriber line.

3,094,589
AUDIBLE-VISUAL COMMUNICATION SYSTEMS
Harold A. Corrigan, Euclid, Ohio, assignor to The Standard Products Company, Cleveland, Ohio, a corporation of Ohio
Filed June 15, 1960, Ser. No. 36,363
11 Claims. (Cl. 179—40)



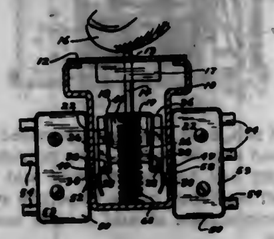
9. An audible-visual intercommunication system for communication between a central station and each of a plurality of remote stations comprising audible and visual communication means at the central station and at each of the remote stations, a source of electrical energy for energizing said communication means, conductors interconnecting the communication means at the remote stations and said central station and said energy source and including a pair of conductors connected to said energy source and to all of said communication means, a multi-contact switch, a plurality of stationary contacts on said switch, a third conductor individual to the communication means at each remote station and separately connected from the latter to one of said stationary contacts, a movable contact on said switch connecting with the communication means at said central station, means actuatable by a patient at each of said remote stations causing a potential from said energy source to be impressed upon the corresponding third conductor of the calling station and connected stationary contact of said switch, means for carrying said movable contact into sequential engagement with said stationary contacts to seek said potential on the third conductor of said calling remote station to thereby connect the communication means at said calling remote station through said third conductor to the communication means at said central station, means in circuit with said movable contact and responsive to said potential to retain said movable contact connecting with said calling remote station through said corresponding third conductor, and means responsive to the attendant at said central station terminating communication with said calling remote station to actuate said carrying means to thus re-actuate said movable contact and carry the same into sequential engagement with said stationary contacts so as to seek the potential on still another third conductor connecting with a second stationary contact and corresponding to a second calling remote station.

3,094,590
REMOTELY CONTROLLED SOUND TRANSLATION APPARATUS
Andre C. Dervieux, West Hartford, Conn., assignor to The Gray Manufacturing Company, a corporation of Connecticut
Filed Dec. 5, 1958, Ser. No. 778,452
6 Claims. (Cl. 179—100.4)



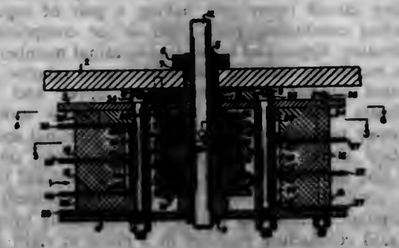
1. In recorder-reproducer apparatus of the type having a carriage, driving means for moving the carriage at recording speed in one direction, high-speed carriage stepping backspace means, high-speed carriage stepping forward space means, "correction" registering means, and a control circuit normally connected to said "correction" registering means for the operation of the latter when said control circuit is energized by the user during recording operations; the combination of switching circuit means operated automatically by the carriage whenever the latter is backspaced from its last recording position, for disabling the "correction" registering means and connecting said control circuit to the forward space means.

3,094,591
SWITCH ACTUATING APPARATUS
Robert A. Hill, Wayzata, Minn., assignor to American Monarch Corporation, Minneapolis, Minn., a corporation of Minnesota
Filed Oct. 30, 1961, Ser. No. 148,572
10 Claims. (Cl. 200—5)



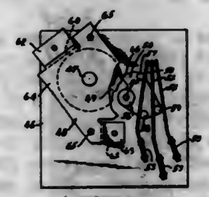
1. Apparatus for actuating a plurality of electrical switches, each of said switches including a switch button, said apparatus comprising in combination means to support said switches in longitudinally spaced apart pairs, the switches of each such pair being positioned in opposed relationship and the switch buttons of each pair being positioned in opposed face to face relationship, movable means slidably mounted between said switches for movement on an axis perpendicular to the plane of said switch buttons, resilient actuator means mounted on said movable means, the resiliency of said actuator means yieldably biasing portions of said actuator means toward said switches and means for limiting the movement of said portions toward said switches, said movable means and actuator means being on said axis movable between a first position wherein the actuator means is out of contact with said switch buttons to a second position wherein the actuator means contacts the switch buttons and the resiliency of said actuator means forces said switch buttons to a depressed position.

3,094,592
ROTARY SWITCH CONTROL UNIT
John Fisher, Cleveland, Ohio, assignor to The Warner & Swasey Company, Cleveland, Ohio, a corporation of Ohio
Filed Sept. 15, 1959, Ser. No. 840,158
4 Claims. (Cl. 200—6)



4. In a rotary control unit, a shaft rotatable about a first axis, a plurality of cams mounted on said shaft for rotation therewith and spaced therealong, a plurality of movable actuating members associated with said cams and moved upon rotation of said cams, an index cam mounted on said shaft for rotation therewith, index cam detent means biased into engagement with said index cam, a pair of stop plates encircling said shaft and movable about said shaft relative to each other, a projection extending from the periphery of each of said stop plates, said relative movement of said stop plates causing said projections to move relative to each other and spacing said projections annularly about said shaft, means for securing said stop plates in position on said shaft with said projections in predetermined positions so that said stop plates rotate with said shaft, and fixed stop means in the path of rotary movement of said projections to limit rotation of said shaft through less than a complete revolution determined by the annular spacing of said projections.

3,094,593
INTERVAL TIMER
Joe Bowman, Greentown, Ind., assignor to Kingston Products Corporation, Kokomo, Ind., a corporation of Indiana
Filed June 8, 1960, Ser. No. 34,706
7 Claims. (Cl. 200—38)



1. A sequential timer comprising in combination:
(*a*) a base;
(*b*) a synchronous electric motor assembly secured to said base and including a rotatably driven output shaft;
(*c*) a cam rotatably driven by said output shaft and having a peripheral track with three angularly spaced effective radial heights;
(*d*) a plurality of flexible electrically conductive blades each supported at one end by said base in flatwise spaced relation to each other, said blades comprising part of two switches, and one of said blades being common to both said switches; and
(*e*) an actuator member pivotally supported on said base, having a follower portion engageable with said track, and having a plurality of actuating portions which are respectively individually drivingly engageable with said blades, and which are so disposed that both of said switches, only one of said switches, and neither of said switches are respectively open as said follower portion engages said three effective heights of said cam.

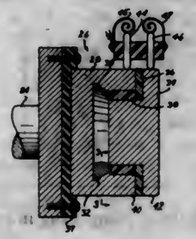
3,094,594
SNAP ACTING MECHANISM
James P. Watson, Inglewood, Calif.
(59 Waterway Road, Waterway Village, Jupiter, Fla.)
Filed Mar. 10, 1958, Ser. No. 720,303
10 Claims. (Cl. 200—67)



1. Snap-acting switching mechanism comprising: frame means having opposed spaced pivot means, a leaf spring

compressed and bowed by the said pivot means thereby to arch said leaf spring into one or the other of two positions, said leaf spring continuing integrally past one of said pivot means, the continued portion of said leaf spring being stiffened by over-lying said continued portion with a sheet of material folded through substantially 180 degrees into position against the continued portion, so that the continued portion is appreciably more rigid than the major portion of the part of said leaf spring spanning said pivot means, said folded sheet of material forming radiused bearing surfaces engaging said one pivot means, and movable operating means for engaging the stiffened portion of said leaf spring and for pivoting the same about said last mentioned pivot means, thereby to effect snapping of the leaf spring from one arched position to the other.

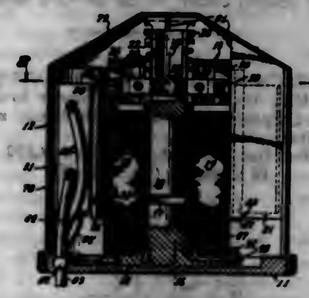
3,094,595
ZERO SPEED SWITCH
Otto Hermann, Cincinnati, Ohio, assignor to The R. K. Le Blond Machine Tool Company, Cincinnati, Ohio, a corporation of Ohio
Filed Oct. 20, 1960, Ser. No. 63,740
3 Claims. (Cl. 200—80)



1. An electric switch of the zero speed type comprising: a substantially cylindrical body of electrical insulating material adapted for rotation on its axis, a generally cylindrical cavity extending into said body from one side thereof concentric with said axis, means closing the cavity at the said one side of the body comprising a cover member of electrical insulating material attached to said body, uniformly circumferentially spaced contact elements extending axially into the cavity at the periphery thereof, a body of mercury in the cavity forming a pool therein when the switch is not rotating of smaller circumferential extent than the distance between adjacent ones of said contact elements and forming an annular layer about the periphery of said cavity when the switch is rotating on said axis, said layer electrically interconnecting said elements, first and second electrically conductive ring members concentric with said axis caried by said body and insulated from each other, alternate of said contact elements being connected with different ones of said ring members, said contact elements being printed in said cavity, and means carried by the switch entirely outside said cavity for connecting the switch to the end of a rotary member.

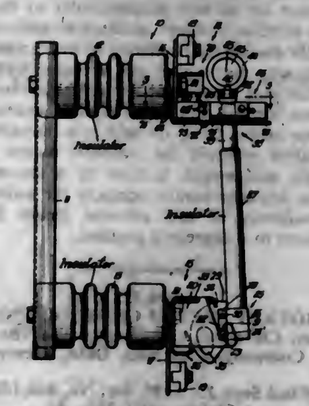
3,094,596
MULTIPLE-RELAY-ACTUATING-MECHANISM
James P. Watson, Miami Shores, Fla.
(59 Waterway Road, Waterway Village, Jupiter, Fla.)
Filed Jan. 8, 1960, Ser. No. 1,327
7 Claims. (Cl. 200—104)

1. Multiple switch relay comprising a solenoid coil means, paramagnetic plunger means reciprocably mounted within said coil means, frame means fixedly secured with respect to said coil means, annular actuating means disposed coaxially with respect to said coil means, means for linking said annular actuating means to said plunger means to be reciprocated by reciprocation of said plunger means substantially along said axis and in a direction opposite to the movement of said plunger means, a plurality of switch means disposed circumferentially circumjacent said annular means, each switch means having an operating shaft extending generally radially inward with



respect to said axis, each shaft being provided with torque arm means, said annular means being provided with cam means engaging and cooperating with said torque arm means to effect oscillation of the respective switch means shaft upon reciprocation of said annular means by said plunger means.

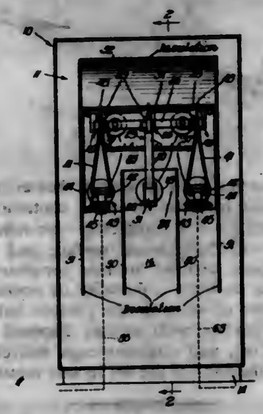
3,094,597
FUSE CONSTRUCTION FOR OPERATION BY AN AUXILIARY CIRCUIT INTERRUPTER
Henry J. Barta, Brookfield, Ill., assignor to S & C Electric Company, Chicago, Ill., a corporation of Delaware
Filed June 30, 1960, Ser. No. 39,886
7 Claims. (Cl. 200—114)



1. A circuit disconnecting device for operation by an auxiliary circuit interrupter having a pair of separable contacting conducting parts, said device comprising, in combination, upper and lower line terminal members and means mounting them in insulated spaced relation, rigid elongated conducting means having upper and lower electrically interconnected terminals, means mounting said lower terminal on said lower line terminal member to rotate about a pivot axis, contact means on said upper line terminal member, said upper terminal including a conducting member in contact engagement with said contact means and a pull ring extending upwardly from said conducting member in a plane at right angles to said piovt axis to be engaged by one of said separable contacting parts of said auxiliary circuit interrupter, and a hook member having a shank secured to said upper line terminal member and a hook portion adjacent and

turned away from said pull ring for receiving the other separable contacting conducting part of said auxiliary circuit interrupter.

3,094,598
CIRCUIT SWITCHING AND PROTECTING MEANS
Sigurd I. Lindell, Chicago, Ill., assignor to S & C Electric Company, Chicago, Ill., a corporation of Delaware
Filed Aug. 30, 1960, Ser. No. 52,895
21 Claims. (Cl. 200—114)



15. Circuit switching and protecting means comprising, in combination, a vertical metallic support plate, insulator means mounted along the upper end of said support plate, a horizontal bus bar carried by said insulator means, a switch contact assembly and a fuse contact assembly mounted on said bus bar, a pair of insulators mounted along the lower end of said support plate, a line terminal assembly on each of said insulators aligned respectively with a contact assembly on said bus bar, a switch blade pivotally mounted on the line terminal assembly in alignment with said switch contact assembly for movement into and out of contact engagement therewith, and a fuse pivotally mounted on the other line terminal assembly for movement into and out of contact engagement with said fuse contact assembly.

3,094,599
SUBMERGED PUMP PROTECTOR
Justin E. Wilder, Goshen, Ind., assignor to Penn Controls, Inc., Goshen, Ind., a corporation
Filed Feb. 19, 1960, Ser. No. 9,776
4 Claims. (Cl. 200—122)



1. A thermally responsive operator comprising first and second bimetal strips disposed in stacked relation with each other a thrust member extending centrally from the outer face of the said second element, a third and fourth bimetal strip disposed in stacked relation with each other, said thrust member centrally engaging the outer face of said third strip, an electric heater interposed between said third and fourth strips, a thrust pin extending centrally from the outer face of said fourth strip, said first and second bimetal strips having their high expansion sides facing each other, said third and fourth bimetal strips having their low expansion sides facing each other, and means confining the free ends of said strips against sideward movement, whereby upon energization of said heater said third and fourth bimetal strips assume a bowed configuration and thereby move said thrust pin rectilinearly, said first and second bimetal strips serving to maintain the work output available at said thrust pin substantially independent of ambient temperature change.

3,094,600
ELECTRIC FUSE HAVING IMPROVED CAP LINK CONNECTION
Frederick J. Kozacka, Amesbury, Mass., assignor to The Chase-Shawmut Company, Newburyport, Mass.
Filed Dec. 1, 1960, Ser. No. 72,945
4 Claims. (Cl. 200—132)

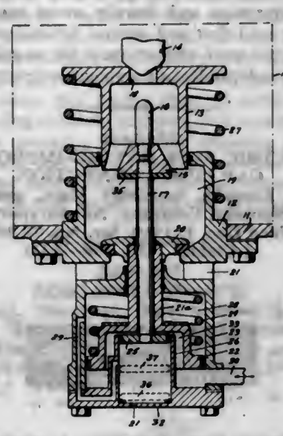


1. An electric fuse comprising a tubular casing of relatively resilient insulating material forming a pair of rims at the axially outer ends thereof; an elongated fusible element formed by a length of perforated resilient sheet metal inserted into said casing, said ribbon having points engaging angularly displaced points of said pair of rims and having axially outer ends bent around said points of said pair of rims to the outer surface of said casing; a pair of metal caps having substantially flat circular inner end surfaces and substantially cylindrical inner lateral surfaces mounted under pressure upon said casing and closing said axially outer ends of said casing and pressing said ends of said ribbon into said outer surface of said casing to form a pair of lateral cavities therein; solidified pools of soft solder substantially coextensive with said flat inner surfaces of said pair of caps establishing solder joints between said surfaces and said ribbon at said points thereof engaging said pair of rims; and said solidified pools of soft solder having projections extending in a direction longitudinally of said casing establishing solder joints between said inner lateral surface of said pair of caps and said ends of said ribbon situated in said pair of lateral cavities, said projections being formed by solidified solder drawn by capillary action into said pair of lateral cavities.

3,094,601
OPERATING DEVICE FOR THE MOVABLE CONTACT OF THE MAIN BREAKING GAP IN AN AIR BLAST CIRCUIT BREAKER
Haakon Forwald, Ludvika, Sweden, assignor to Allmänna Svenska Elektriska Aktiebolaget, Vasteras, Sweden, a Swedish corporation
Filed Sept. 28, 1961, Ser. No. 141,431
Claims priority, application Sweden Oct. 15, 1960
3 Claims. (Cl. 200—148)

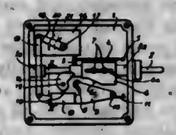
1. An operating mechanism for the movable contact of an air blast circuit breaker; said movable contact being movable into and out of engagement with respect to a relatively stationary contact; said movable and stationary contacts being contained within a high pressure air container; said high pressure air container having a blast valve therein for connecting the interior of said container to external atmosphere and causing an air blast past said movable and stationary contacts; said operating mechanism including a piston rod having one end connected to said movable contact; said piston rod extending through said blast valve; the other end of said

piston rod being connected to a first piston; said blast valve being connected to a second piston; said first and second pistons having adjacently positioned surfaces defining a first enclosed volume; the opposite surface of



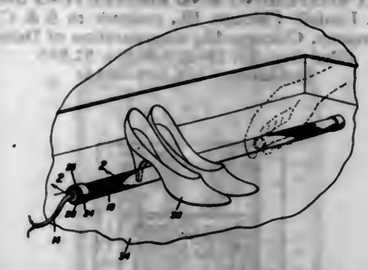
said second piston enclosing a second volume whereby application of high pressure gas to said first volume causes operation of said movable contact; and a pressure equalizing channel communicating between said first and second volumes.

3,094,602
PUSH-ROD SWITCHES
Marc Frachon, La Pierre Souveraine 11, Saint-Genis Laval, France
Filed June 30, 1961, Ser. No. 121,243
Claims priority, application France July 13, 1960
9 Claims. (Cl. 200—153)



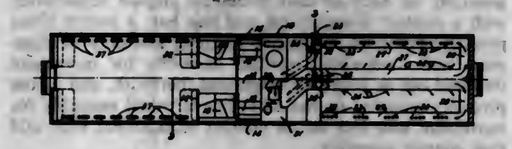
1. A push-rod switch comprising a main support; a pusher rod slidably supported by said main support; a microswitch unit pivotally carried by said main support, said micro-switch unit embodying an actuating push-button and inner snap-acting contacts actuated by said push-button; a normally stationary but adjustable regulating abutment carried by said main support to cooperate with said push-button; spring means to urge said micro-switch unit towards said adjustable abutment to cause said push-button to be depressed by same with respect to said unit; cam and follower means between said pusher rod and said micro-switch unit to move said unit away from said adjustable abutment to release said push-button from the action of said adjustable abutment; a retarding mechanism also carried by said main support, said mechanism having an inlet shaft freely rotatable in a first direction and which can only rotate at a predetermined slow speed in the second direction; and means to connect said micro-switch unit with said inlet shaft to cause said inlet shaft to rotate in said first direction when said micro-switch is moved away from said adjustable abutment against said spring means and to rotate in said second direction when said micro-switch unit is returned towards said adjustable abutment by said spring means.

3,094,603
ELECTRIC HEATER WITH PROTECTIVE NET
Allen M. Foote, % Dampp-Chaser, Inc., P.O. Box 1641, Hendersonville, N.C.
Filed June 16, 1961, Ser. No. 117,603
4 Claims. (Cl. 219—19)



4. In combination with an electric heater including an elongated tubular member having a continuous external surface, a protective net completely surrounding and in fitted contact with the external surface and including a plurality of spiral crossed strands peripherally spaced from each other to form a plurality of openings for enabling circulation of air over the surface but preventing contact of the surface with articles disposed against the surface of the net, and retaining caps encircling the net and anchoring the ends of the net to said tubular member.

3,094,604
VEHICLE ELECTRIC HEATING SYSTEM
William Van Der Sluys, Homewood, Ill., and John L. Swarner, Valparaiso, Ind., assignors to Pullman Incorporated, Chicago, Ill., a corporation of Delaware
Filed Aug. 12, 1960, Ser. No. 49,257
8 Claims. (Cl. 219—20)

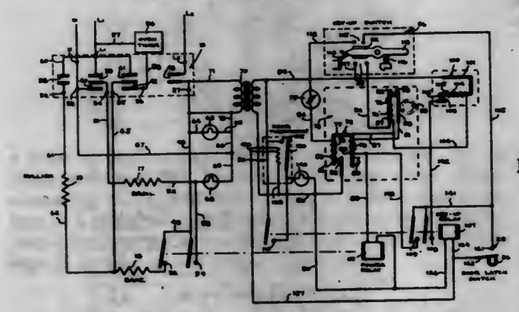


1. An electric heating system for an enclosure having means for admitting fresh air therein, said system comprising a motor-operated fresh air intake damper, two separate heating elements within said enclosure, a power source supplying a predetermined maximum amount of power to said system, an interlocking control circuit connecting said power source with said damper motor and each said heating element through either a delta or a Y connection, said control circuit regulating said damper and said delta and Y connections to adjust the amount of fresh air admitted to said system and to form respectively either a delta-Y or a Y-delta pair of connections for said heating elements in accordance with temperature demand in said enclosure whereby said system consumes a constant power load substantially equal to said maximum power supply at all times during operation to heat said enclosure.

3,094,605
OVEN TEMPERATURE CONTROL SYSTEM
Stanley B. Welch, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Filed Feb. 28, 1962, Ser. No. 176,300
3 Claims. (Cl. 219—20)

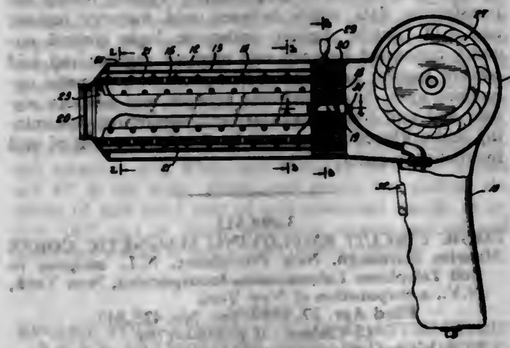
1. An electric oven comprising an oven cavity, electric heating elements in heat transmitting relation to the oven cavity and adapted for connection to a source of voltage,

selector means for arranging the heating elements in various circuits of different wattages, and a relatively low voltage thermostatic control circuit adapted to be supplied from said source of voltage for controlling the energization of the heating elements, said control circuit comprising a variable resistance temperature senser for sensing the temperature of the oven air, a pulsing voltage regulator in series with the senser so that the senser varies the effective output voltage of the voltage regulator in accordance with the sensed temperature within the oven cavity, a first responder relay receiving the effective output voltage of the voltage regulator, and an output relay controlled by the first responder relay for controlling the



energization of the heating element; the invention comprising a second responder relay for high temperature control, and a set-up relay means controlled by a set-up switch means for energizing the second responder relay while the first responder relay cycles when the oven temperature is above its maximum setting so as to protect itself against overheating, the first responder relay controlling said heating elements for normal cooking operations up to a maximum of about 600° F., while the alternate use of the second responder relay shifts the control point of the control circuit to control said heating elements to attain a heat cleaning temperature between about 750° F. and 950° F.

3,094,606
ELECTRIC PAINT REMOVING DEVICE
Edwin W. Ferris, 46 Lexington Ave., Greenwich, Conn.
Filed Oct. 29, 1958, Ser. No. 770,328
2 Claims. (Cl. 219—39)



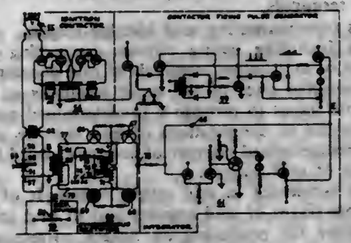
1. A paint softening device comprising:
(*a*) a casing having an air inlet and an air outlet;
(*b*) a tube having air inlet openings at one end thereof and an air outlet opening at its opposite end;
(*c*) a second tube concentrically surrounding said first-named tube in spaced relation thereto and having air inlet openings at one end thereof and an air outlet opening at its opposite end;
said inlet openings of said tubes communicating with said air outlet of the casing;
(*d*) a high temperature electric heating element disposed within said first-named tube;
(*e*) a fan in said casing for forcing air through its said outlet;
the aggregate area of the air inlet openings of said first-named tube being substantially less than the aggregate area of the air inlet openings of said second-named tube, such that a larger volume of air may be forced by said fan through said second-named tube than through said first-named tube; and
(*f*) means disposed intermediate said air outlet of the casing and the inlet openings of said tubes for controlling the flow of air through said tubes.

3,094,607
FLUX LOADING OF STAINLESS STEEL WELDING STUDS
Robert D. Flynn, Elyria, and Robert C. Singleton, Oberlin, Ohio, assignors to Gregory Industries, Inc., Toledo, Ohio, a corporation of Michigan
Filed June 21, 1960, Ser. No. 37,665
14 Claims. (Cl. 219—99)



1. The process of end welding a stud member to a construction member wherein one of the members is stainless steel and the other is steel comprising the steps of,
(*a*) positioning one end of the stud member adjacent an area of the construction member wherein a weld is to be formed;
(*b*) providing a flux in the weld area with the flux including finely divided stainless steel powder and an oxygen scavenging material;
(*c*) melting a portion of the one end of the stud member and a portion of the construction member in said area by establishing an electric arc between the members; and,
(*d*) forcing the portions together while melted and allowing the melted portions to cool to complete the weld.

3,094,608
SERVO SYSTEM SIGNAL GENERATION
George R. Archer, Salfordville, Pa., assignor, by mesne assignments, to Robotron Corporation, a corporation of Michigan
Filed Jan. 21, 1960, Ser. No. 3,779
6 Claims. (Cl. 219—110)



5. The servo system signal generation method primarily for use in the control of alternating current resistance heating operations of the type in which a succession of variable duration current pulses of alternating signs are conducted

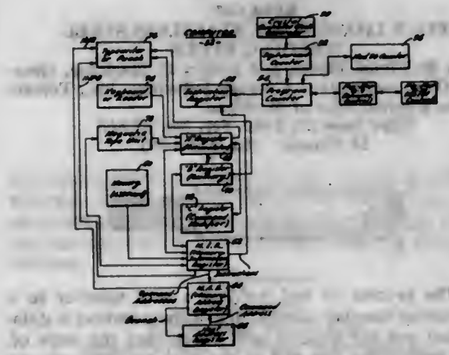
through a workpiece position, which method comprises the steps of generating a first signal proportional to the voltage developed across the resistance of the workpiece position by the current pulses, generating a second signal comprising alternate rectified and unrectified half cycles of the first signal by synchronously rectifying the first signal, and generating a third signal by integrating the second signal with respect to time whereby the third signal is indicative of the resistive voltage component and substantially independent of the inductive voltage component of the first signal.

3,094,609

CONTROL SYSTEM FOR A DIGITAL COMPUTER

Eric Weiss, La Jolla, Calif., assignor, by mesne assignments, to Daystrom, Incorporated, Murray Hill, N.J., a corporation of Texas

Filed Mar. 16, 1959, Ser. No. 799,489
4 Claims. (Cl. 235—157)



4. In a computer, the combination of memory means for storing signals corresponding respectively to a plurality of computer words and to a plurality of computer commands,

each of said commands having an instruction portion and an address portion,

each of said words having a predetermined number of bits of binary information,

an *n*-binary bit instruction register having 2^n possible states coupled to said memory means for receiving and storing the signals from said memory means corresponding to selected ones of the instruction portions of said commands,

decoding means connected to said instruction register including an output terminal corresponding to each of the 2^n possible states of said *n*-binary bit instruction register,

a counter having a plurality of bistable stages, each of said bistable stages having input terminals and output terminals,

means interconnecting said bistable stages,

means including gating circuits connecting different ones of said output terminals of said decoding means to selected ones of the input terminals of said bistable stages to provide a predetermined non-binary sequence of congurations of said bistable stages for a predetermined number of computer word times for each of said outputs,

means connected to said output terminals of said bistable stages of said counter and to said instruction register for producing an output corresponding to the combined states of said counter and of said instruction register for executing specified functions in said computer for each of said configurations as dictated by said instruction portion of said command,

and additional bistable means connected to said counter for establishing a predetermined configuration in said counter,

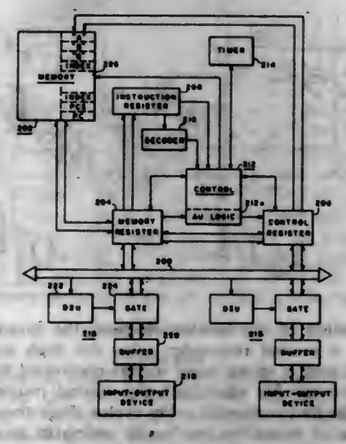
and means connected to said counter and to said register for transferring a new command from said memory means to said instruction register.

3,094,610

ELECTRONIC COMPUTERS

Watts S. Humphrey, Jr., Cochituate, John Terzian, Woburn, and Franz M. Bosch, North Billerica, Mass., assignors to Sylvania Electric Products Inc., a corporation of Delaware

Filed June 2, 1959, Ser. No. 817,531
4 Claims. (Cl. 235—157)



1. In a data processing system which includes a memory unit having a plurality of random access data word storage addresses, a memory register in parallel data word transfer connection with the individual addresses of said memory, a control register in parallel data word transfer connection with said memory register, and an instruction register, a control system which comprises: means for causing program counting data to be transferred from a given one of said memory addresses to said memory register; circuit means connected between said control register and said memory and arranged to connect selected individual addresses of said memory to said memory register in data transfer relationship as indicated by the data content of said control register; means for transferring data words between said memory register and said control register arithmetic logic control circuitry connected between said memory register and said control register and arranged to perform arithmetic operations upon data transferred between said memory register and said control register; and, means for determining said arithmetic operations by the data content of said instruction register.

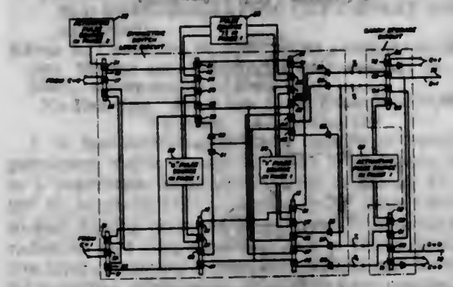
3,094,611

LOGIC CIRCUIT EMPLOYING MAGNETIC CORES

Maurice Karnaugh, New Providence, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Apr. 27, 1954, Ser. No. 425,847
12 Claims. (Cl. 235—175)

1. A binary adder comprising pairs of logic magnetic cores, each of said cores having input, activating, and output windings thereon, means connecting said activating windings in series, means for applying an activating pulse to said activating windings, means for applying input pulses to said input windings to set one of each of said pairs of logic cores, means connecting said output windings to said series connected activating windings so that said activating pulse flows through an output winding on one of each pair of logic cores in succession dependent on the input pulses applied to said input windings, a pair of carry storage magnetic cores each having input, activating, and output windings thereon, means for applying



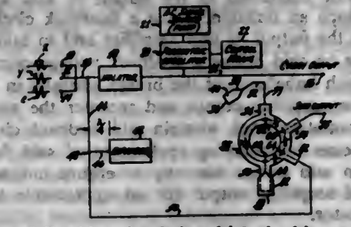
a pulse to said storage core activating windings out of phase with said first mentioned activating pulse, means connecting said storage input windings to the output windings of a given one of said pairs of logic cores, and means connecting said storage output windings to the input windings of another of said pairs of logic cores.

3,094,612

MICROWAVE ADDER CIRCUIT

Fred Sterzer, Monmouth Junction, N.J., assignor to Radio Corporation of America, a corporation of Delaware

Filed Mar. 24, 1959, Ser. No. 801,531
6 Claims. (Cl. 235—176)



1. In a full adder circuit in which the binary digits are represented, respectively, by two opposite phases of a radio-frequency signal, terminal means for receiving a plurality of radio-frequency binary signals, means for combining the received said binary signals, means for applying a first part of the combined signals to a first output terminal, means for simultaneously applying a second part of said combined signals unconditionally to a second output terminal 180° out of phase with respect to the signal at said first output terminal, means for applying a third part of said combined signals to said second output terminal only when said plurality of binary signals are all in the same phase, and means for shifting the phase of said third part of said combined signals to arrive 180° out of phase with said second part of said combined signals at said second output terminal.

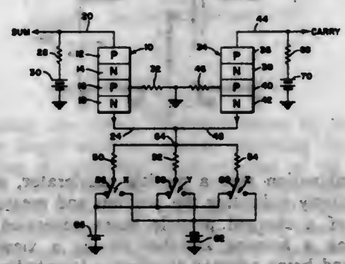
3,094,613

BINARY FULL ADDER UTILIZING ASYMMETRIC P-N-P-N TRANSISTORS OPERATED AT DIFFERENT SATURATION CURRENT LEVELS

Solomon L. Miller, Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Dec. 17, 1959, Ser. No. 860,223
12 Claims. (Cl. 235—176)

10. A full adder circuit comprising a first semiconductor transistor structure having an emitter, a collector, and a base which exhibits a current multiplication factor alpha greater than 1, a second semi-conductor transistor structure having an emitter, a collector, and a base which exhibits a current multiplication factor alpha greater than 1, said first transistor having an alpha slightly greater than the alpha of said second transistor first and second output impedance means respectively coupling the collectors of said first and second transistor structures to a voltage biasing source, with the relative magnitudes of said first and second output impedance means being such



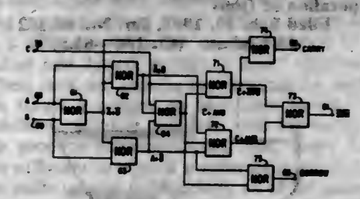
that the value of the collector saturation current of said second transistor structure is approximately twice the value of the collector saturation current of said first transistor structure, first and second base impedance means respectively coupling the bases of said first and second transistor structures to a common return path, threee input impedance means of equal magnitude connected to a common terminal which are adapted to receive input signals, and means coupling the emitters of said first and second transistor structures to said common terminal.

3,094,614

FULL ADDER AND SUBTRACTOR USING NOR LOGIC

William W. Boyle, La Grangeville, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Original application Dec. 19, 1960, Ser. No. 76,641. Divided and this application Dec. 14, 1961, Ser. No. 164,640
4 Claims. (Cl. 235—176)

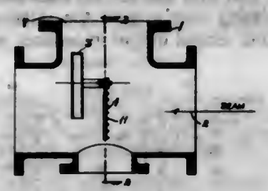


1. An adder circuit capable of accepting a first, a second and a third binary signal comprising: a first, a second, a third, a fourth, a fifth, a sixth and a sum NOR circuit; and, circuit means connecting said first and second binary signals to said first NOR circuit, said first binary signal to said second NOR circuit, said second binary signal to said third NOR circuit, the output of said first NOR circuit to said second and third NOR circuits, the output of said second and third NOR circuits to said fourth NOR circuit, said third binary signal to said fourth and fifth NOR circuits, the output of said second and third NOR circuits to said sixth NOR circuit, the output of said fourth NOR circuit to said fifth and sixth NOR circuits, and the outputs of said fifth and sixth NOR circuits to said sum NOR circuit, whereby the output of said sum NOR circuit represents the sum function of said three binary signals.

3,094,615
CHARGED PARTICLE BEAM-VIEWING ARRANGEMENT

Peter H. Rose, Bedford, Mass., assignor to High Voltage Engineering Corporation, Burlington, Mass., a corporation of Massachusetts

Filed Aug. 24, 1959, Ser. No. 835,528
1 Claim. (Cl. 250—49.5)

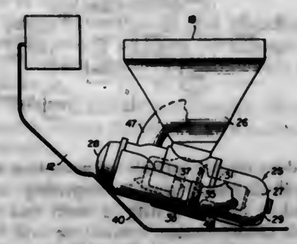


In combination with a particle accelerator, apparatus for selectively indicating the position and measuring the current of a charged particle beam generated thereby comprising a housing member having a viewing port therein and being adapted to effect a longitudinal extension to the output end of said particle accelerator, a Faraday cage disposed within said housing member, said Faraday cage being electrically connected to current indicating means, a beam position indicator disposed within said housing member, said beam position indicator consisting of a quartz plate and having a grounded wire mesh on the beam intercepting surface thereof, a rotatable shaft disposed transversely through said housing member, said Faraday cage and said beam position indicator being mounted on said shaft in mutually fixed relationship, and means for rotating said shaft, said Faraday cage and said beam position indicator being mutually spaced so that rotation of said shaft effects successive interception of the charged particle beam by said Faraday cage, said beam position indicator, and neither.

3,094,616
X-RAY TABLE WITH TILTED TUBE

Anthony Palermo, Jr., South Euclid, and Edward B. Graves, Cleveland, Ohio, assignors to Picker X-Ray Corporation Waite Mfg. Div. Inc., Cleveland, Ohio, a corporation of Ohio

Filed Feb. 10, 1961, Ser. No. 88,352
18 Claims. (Cl. 250—61.5)

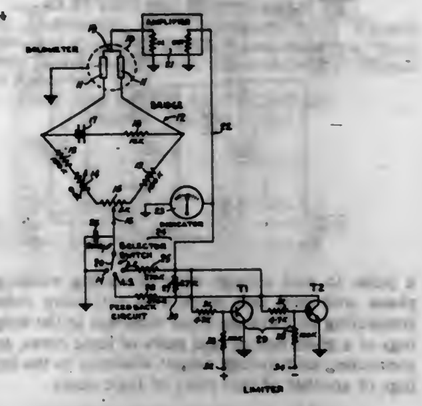


1. In an X-ray table having a body with a support surface and a column mounted in the body for relative longitudinal and transverse movement in a path paralleling the surface, the combination of, an X-ray tube housing mounted on the column and disposed within the body said housing having a longitudinal axis disposed at an acute angle with said support surface and the path of such longitudinal and transverse movement, and an X-ray tube within the housing oriented to emit a beam symmetrically about an imaginary line normal to such path and the surface.

3,094,617
INFRA-RED DETECTING SYSTEMS

John Humphries, William C. Brown, and Allen G. McIntosh, Ottawa, Ontario, Canada, assignors to National Research Council, Ottawa, Ontario, Canada, a body corporate of Canada

Filed June 26, 1961, Ser. No. 119,675
4 Claims. (Cl. 250—83.3)

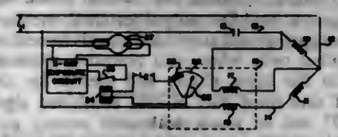


3. An infra-red detecting system comprising a bridge, an infra-red detector connected in said bridge as a part thereof whereby a change in the level of infra-red radiation received by said detector will modify the balance of the bridge, an amplifier, the input of said amplifier being connected to said bridge to detect an imbalance thereof, an indicator connected to the output of said amplifier indicate such an imbalance, and a feedback circuit connected to the output of said amplifier and to said bridge to impose on said bridge a feedback voltage compensating for such imbalance of the bridge whereby in turn to reduce the amplifier output and recenter the system at the new radiation level, wherein said feedback circuit includes means for delaying application of said feedback voltage to said bridge whereby to ensure indication of the initial amplifier output for an appreciable time by said indicator.

3,094,618
X-RAY TUBE PROTECTION MECHANISM

William R. McLaughlin, Willoughby, Ohio, assignor to Picker X-Ray Corporation, Waite Manufacturing Division, Inc., Cleveland, Ohio, a corporation of Ohio

Filed May 23, 1961, Ser. No. 111,976
11 Claims. (Cl. 250—93)



1. A mechanism for protecting the anode of a rotating anode type X-ray tube by detecting rotational speed of the anode comprising, first and second parallel connected field windings connected to an A.C. source for inducing the rotation of the anode, a capacitor in series with the first winding to maintain the two windings in an out-of-phase relationship, wattage responsive means connected to the windings and responsive to wattage induced by the voltage of one winding and the amperage of the other winding, an X-ray exposure circuit, and switch means connected to the X-ray exposure circuit and controlled by the wattage responsive means for closing the X-ray exposure circuit when the wattage is above a predetermined minimum level indicating a predetermined anode rotational speed.

3,094,619
ULTRA-VIOLET RADIATION-DESENSITIZABLE THERMOGRAPHIC COPY-SHEET AND METHOD

Edwin A. Grant, Jr., St. Paul, Minn., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

No Drawing. Filed Jan. 3, 1961, Ser. No. 79,990
7 Claims. (Cl. 250—65)

1. A heat-sensitive copy-sheet capable of undergoing permanent visible change on being momentarily heated to a conversion temperature within the range of about 90° C. to about 150° C. and of being made insensitive to such heating on moderate exposure to near-ultraviolet radiation, said copy-sheet including a visibly heat-sensitive layer containing, in physically distinct and chemically inter-reactive relationship, chemically inter-reactant components consisting essentially of (1) a normally solid organic acid salt of a noble metal and, as an organic reducing agent for the noble metal ion. (2) an alpha-naphthol having attached directly to the hydroxy-substituted aromatic ring a preponderance of electron donor groups selected from the class consisting of alkyl, aryl, alkoxy, aryloxy, hydroxy and amino groups.

4. Method of copying comprising: placing in surface contact and in position for irradiation a graphic original having differentially infra-red-ab orptive image and background areas and a heat-sensitive copy-sheet having a visibly heat-sensitive layer containing, in physically distinct and chemically inter-reactive relationship, chemically inter-reactive components consisting essentially of a normally solid silver salt of an organic acid and an alpha-naphthol having directly attached to the hydroxy-substituted aromatic ring a preponderance of electron donor groups selected from the class consisting of alkyl, aryl, alkoxy, aryloxy, hydroxy and amino groups; momentarily irradiating said graphic original with intense radiation rich in infra-red for promoting visible reaction in said layer at selectively heated image-defining areas; and then irradiating said layer with radiation in the near-ultraviolet wavelength range for rendering the background areas visibly insensitive to subsequent heating.

3,094,620
COPY-SHEET AND METHOD

John L. Reitter, St. Paul, Minn., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

No Drawing. Filed Jan. 3, 1961, Ser. No. 79,991
5 Claims. (Cl. 250—65)

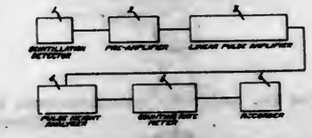
5. A radiation-desensitizable intermediate sheet product suitable for use in the reproduction of a graphic original by a process involving heating said sheet product, while in face-to-face contact with a separate receptor sheet consisting essentially of a paper-like backing and a surface layer of nickel stearate, at areas corresponding to image-forming areas of said original; the said intermediate sheet product consisting essentially of a paper-like backing and a surface layer of N,N'-bis-furfuryl dithiooxamide.

3,094,621
IDENTIFYING PLANT AND ANIMAL DEFICIENCIES BY RADIOACTIVE MEANS

Warner W. Schultz, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York

Filed Apr. 24, 1959, Ser. No. 808,661
3 Claims. (Cl. 250—83.3)

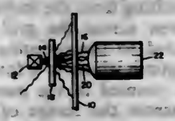
1. In a method for determining plant element characteristics without destroying the plant, the steps comprising radioactivating a plant to produce radioactive isotopes of the constituent elements, determining radiation characteristics of all the isotopes present by employing a pulse height analyzer means, administering a nutrient solution including at least one of a normal constituent plant element in a non-radioactive form to the plant under controlled conditions, removing the plant from the nutrient solution, radioactivating the plant in vivo and determining radiation characteristics of all isotopes present including any newly formed isotopes by employing the pulse height analyzer means, repeating the step of determining the radiation characteristics of all isotopes present at several specified spaced time intervals to determine the half lives of all isotopes present thereby positively identifying all isotopes present, and comparing the several determinations of the radiation characteristics of all isotopes present to determine the manner in which the plant absorbs and distributes the normal constituent plant element in said solution.



3,094,622
DENSITY MEASURING APPARATUS PROVIDING A SUBSTANTIALLY PURE BEAM OF RADIATION FROM COMPOSITE SOURCES

Neil E. Handel, Columbus, Ohio, assignor to Industrial Nucleonics Corporation, a corporation of Ohio

Filed June 30, 1959, Ser. No. 824,107
1 Claim. (Cl. 250—83.3)



Apparatus for measuring a property of material utilizing bremsstrahlung of a desired energy effective for the range of the property being mesured, said apparatus comprising a radioactive source emitting beta rays capable of producing bremsstrahlung of the desired energy and also emitting a substantial number of gamma rays of energy greater than said desired energy, a target disposed in the path of beta rays and gamma rays emitted by said source in which target a portion of beta rays emitted by said source undergo radiative collisions with the nuclei of said target to produce bremsstrahlung, said target having a thickness sufficient to absorb a substantial portion of said beta rays while passing substantially all of the gamma rays of energy greater than said desired energy, utilization means responsive to bremsstrahlung disposed in the path of bremsstrahlung produced in said target by said beta rays and out of the path of gamma radiation from said source transmitted through said target, said utilization means including a detector sensitive to bremsstrahlung for producing a signal indicative of said property, and means for shielding said detector from radiations coming directly from said source.

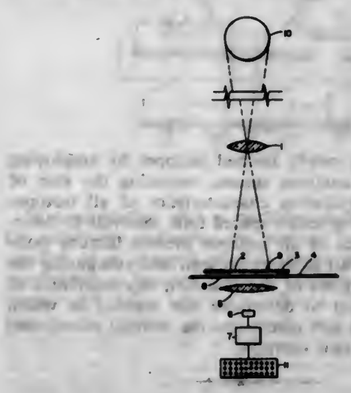
3,094,623
RADIATION OPERATED DIMENSIONAL GAGE

Morris Weiss, Stamford, Conn., assignor to Barnes Engineering Company, Stamford, Conn., a corporation of Delaware

Filed June 16, 1961, Ser. No. 117,727
6 Claims. (Cl. 250—83.3)

1. In a radiation dimension gage comprising in combination and in optical alignment a mask provided with

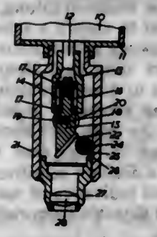
a window, means for imaging the object to be gaged onto the plane of the window, a radiation detector, means for imaging the window thereon, a moving reticle adjacent the mask and being provided with symmetrical radiation transparent openings to cause a small transparent area to move across the window, the spacing of the openings being greater than the width of the image of the object to be gaged, the improvement which comprises,



(*a*) a fine grid of radiation transmitting and opaque bars in the beam adjacent the reticle, the bars being of a width so that a symmetrical transparent opening approximates in width a small odd number of grid bars, and

(*b*) reset electronic counting means connected to the output of the radiation detector whereby the radiation pulses resulting from the movement of the small transparent area across the grid are counted and means connected to the counting means output to produce a response which is a function of the number of pulses counted in the passage of the transparent area across the image of the object to be gaged.

3,094,624
SCANNING MECHANISM FOR PHOTO-ELECTRIC LINE-FOLLOWING DEVICES
Robert Joseph Wills, Harlow, England, assignor to The British Oxygen Company Limited, a British company
Filed June 30, 1961, Ser. No. 121,006
Claims priority, application Great Britain July 1, 1960
2 Claims. (Cl. 250—202)



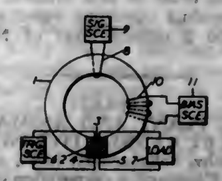
2. In a mechanism for scanning a line by means of a photo-electric cell, the combination of a shaft, a motor driving said shaft in rotation, and having a motor casing, a tubular cylindrical casing part secured to said motor casing and enclosing said shaft, a carrier member within said tubular casing part, an inclined mirror mounted on said carrier member, an eccentric mechanism drivably connecting said shaft with said carrier member, a transverse bar diametrically disposed in said tubular casing part, means securing said transverse bar to said carrier member, a resilient bushing secured to each end of said transverse bar and means mounting said resilient bushings in the side walls of said tubular casing part, said transverse bar and resilient bushings operating to restrain the carrier member against rotation so that a scanning motion of the carrier member supporting the inclined mirror is derived from the rotation of said shaft, a photo-electric cell, and means supporting said photo-electric cell on the inner wall of the tubular casing part to receive reflected line image from said inclined mirror.

3,094,625
PHOTOELECTRIC APPARATUS FOR MEASURING THE SIZE OF PARTICLES
Roy W. Hendrick, Jr., Santa Barbara, Calif., assignor to Cornell Aeronautical Laboratory, Inc., Buffalo, N.Y., a corporation of New York
Filed Nov. 6, 1959, Ser. No. 851,374
4 Claims. (Cl. 250—218)



1. In apparatus for measuring the size of particles suspended in a fluid, the combination comprising illuminator means arranged to project a beam of light into the path of moving particle laden fluid, including a light source from which light passes through a condenser, thence through a field aperture, thence through a convergence stop and thence through a projector, and detector means arranged to collect light scattered by a particle illuminated by said beam, including a collector, a convergence stop, a field aperture, a condenser and a photomultiplier, said detector means having a relatively large angle of acceptance in a plane perpendicular to the direction of motion of said fluid and a relatively small angle of acceptance in a plane parallel to said direction, whereby an illuminated field dimensionally smaller in said direction than perpendicularly thereto is provided.

3,094,626
PULSE CODING AND DECODING ARRANGEMENTS
Arthur Edward Brewster, London, England, assignor to International Standard Electric Corporation, New York, N.Y.
Filed Dec. 7, 1959, Ser. No. 857,829
Claims priority, application Great Britain Dec. 15, 1958
8 Claims. (Cl. 307—88)



1. A magnetic trigger device comprising: a first magnetic circuit having two opposed pole-pieces, and being composed of a magnetic material of low retentivity and low hysteresis loss; a plurality of closed magnetic circuits serially arranged in a line between said pole-pieces, said closed magnetic circuits being of saturable magnetic material of higher retentivity than the first-mentioned magnetic material; a magnetizing winding linking said first magnetic circuit but not linking any of the closed magnetic circuits; and a winding linking all of said closed magnetic circuits without effectively linking said first magnetic circuit.

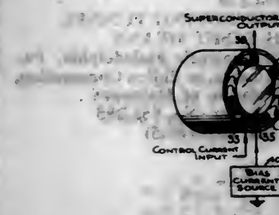
3,094,627
REDUCTION OF DISTORTION IN PULSE-TRANSMISSION CIRCUITS
Johannes Theodorus Antonius van Lottum, Eindhoven, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed May 5, 1958, Ser. No. 733,114
Claims priority, application Belgium May 24, 1957
7 Claims. (Cl. 307—88.5)



1. A pulse transmission circuit having an output terminal and a parasitic capacitance between said output terminal and a point of constant potential, said circuit including means for eliminating adverse effects of said parasitic capacitance comprising a compensating transistor having emitter, base and collector electrodes, said emitter electrode being connected to said output terminal, said collector electrode being directly connected to a point of constant potential, a source of signal pulses connected to said circuit, said pulses having a polarity driving said emitter electrode in the forward direction, bias means for applying a forward bias voltage to said base electrode thus rendering said transistor normally conducting due to said bias and substantially short-circuiting said circuit, and control means for applying a reverse bias signal to said base electrode, said control means operating to apply said reverse bias signal to be effective for the duration of the leading edge of each signal pulse to block the normally conducting emitter collector path of said transistor and to unblock said path prior to the occurrence of the trailing edge of each signal pulse whereby the distortion of the leading edge of the transmitted pulses caused by the parasitic capacity is at least partly compensated by the diffusion back to the emitter of free charge-carriers stored in the transistor base zone, and the lengthening of the pulses caused by the parasitic capacitance is restricted.

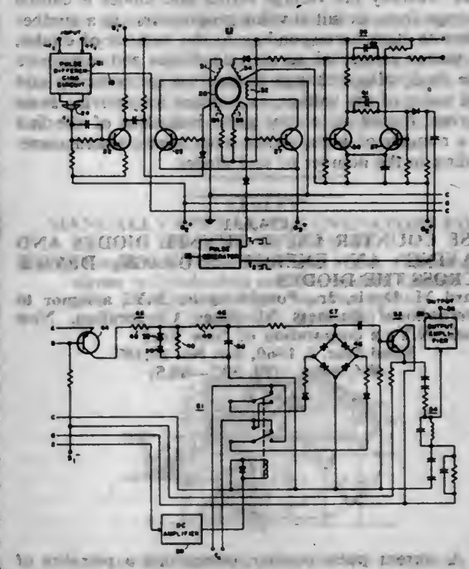
3,094,628
CRYOGENIC SWITCHING DEVICES UTILIZING MEISSNER EFFECT TO CONTROL SUPERCONDUCTIVITY
Richard Jiu, San Pedro, Calif., assignor, by mesne assignments, to Thompson Ramo Wooldridge Inc., Cleveland, Ohio, a corporation of Ohio
Filed Oct. 1, 1958, Ser. No. 764,589
39 Claims. (Cl. 307—88.5)

1. An electrical switching device including the combination of a superconductive shell enclosing a plurality of volumetrically exclusive elements comprising a superconductor disposed within the shell, said superconductor being constructed of a superconductive material which is capable of being switched between a superconductive condition and an electrically resistive condition in response to a magnetic field, and means for generating a magnetic field within the shell to switch the superconductor



between a superconductive condition and an electrically resistive condition.

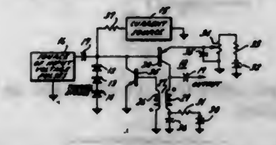
3,094,629
PULSE RATE TO AMPLITUDE CONVERTER
Edward D. Ostroff, South Sudbury, Alfred G. Marcotte, Chelmsford, and Herbert E. Miller, West Acton, Mass., assignors to Laboratory for Electronics, Inc., Boston, Mass., a corporation of Delaware
Filed Oct. 30, 1958, Ser. No. 770,832
8 Claims. (Cl. 307—88.5)



1. In a rate-to-amplitude converter, a constant area pulse generator comprising a synchronizer, means for applying an input signal having an input pulse rate to said synchronizer, said synchronizer being adapted to be set by said input pulses, means for periodically applying first timing pulses to said synchronizer, said synchronizer in its set state being adapted to be reset by said timing pulses to provide output pulses, a flip flop circuit, means coupling said output pulses to said flip-flop circuit to cause said flip-flop circuit to be set by said output pulses, means for periodically applying second timing pulses to said flip-flop circuit, each of said second timing pulses occurring a predetermined time period after the corresponding first timing pulse, said flip-flop circuit being adapted to be reset by said second timing pulses to provide constant width output pulses, means for amplitude limiting said last recited pulses to provide a constant area pulse signal, an averaging circuit, and means for applying said last recited signal to said averaging circuit to

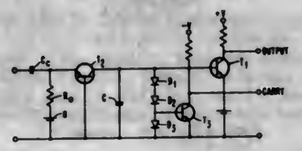
provide a direct current signal varying as a function of the input rate.

3,094,630
PULSE COUNTER EMPLOYING TUNNEL DIODES WITH RESET MEANS
Adolph K. Rapp and Philip Spiegel, Philadelphia, Pa., assignors, by mesne assignments, to Philco Corporation, Philadelphia, Pa., a corporation of Delaware
Filed Nov. 25, 1959, Ser. No. 855,295
8 Claims. (Cl. 307—88.5)



1. A pulse counter comprising a plurality of tunnel diodes connected in series which have a voltage-current characteristic consisting of a number of undulations corresponding to the number of diodes, means for passing current through said diodes such that the current level intersects all of the negative resistance portions of said undulations, input means to enable application of successive input voltage pulses across the series-connected diodes, whereby the voltage across said diodes is caused to change from an initial value progressively in a number of discrete steps corresponding to the number of diodes, reset means connected across said diodes and responsive to the final voltage change thereacross for restoring said initial value of the voltage, and means for deriving from said reset means an output pulse indicative of the fact that a number of input pulses have been counted corresponding to the number of said diodes.

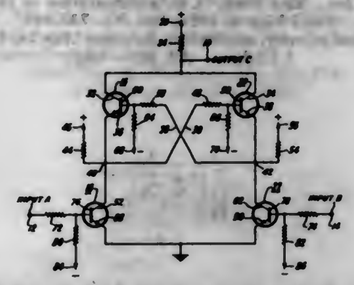
3,094,631
PULSE COUNTER USING TUNNEL DIODES AND HAVING AN ENERGY STORAGE DEVICE ACROSS THE DIODES
Edward M. Davis, Jr., Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Mar. 1, 1960, Ser. No. 12,187
8 Claims. (Cl. 307—88.5)



1. A current pulse counter, comprising a plurality of tunnel diodes connected in series, the number of diodes corresponding to the order of counting, means for applying current pulses to said diodes capable of switching each of said diodes seriatim from a first stable state to a second stable state, and an energy storage device connected across said tunnel diodes, whereby as the diodes are switched energy is stored in said storage device, the magnitude of the energy being representative of the number of pulses applied to said diodes.

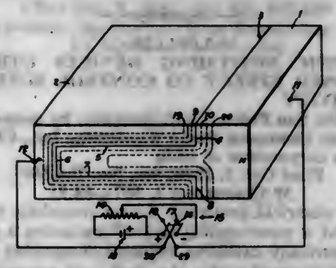
3,094,632
EXCLUSIVE-OR TRANSISTOR LOGIC CIRCUIT
Andrew Wartella, Cheektowaga, N.Y., assignor to Sylvania Electric Products Inc., a corporation of Delaware
Filed May 24, 1960, Ser. No. 31,452
1 Claim. (Cl. 307—88.5)

For the performance of logic functions, an electronic circuit providing a signal response at an output terminal when a signal is applied to either a first or a second input terminal and no such signal response when no signal is applied to either input terminal or simultaneous signals are applied to both of said terminals, said circuit comprising: first and second input terminals and an output terminal; first, second, third and fourth transistors each having collector, base and emitter electrodes; a first current source connected in common to said output terminal and the collector electrodes of said first and third transistors; a point of reference potential connected to the emitter electrodes of said second and fourth transistors; means connecting the emitter of said first transistor to the collector of said second transistor; means connecting the emitter of said third transistor to the collector of said fourth transistor; means connecting said first input ter-



minal to the base electrode of said second transistor; means connecting said second input terminal to the base electrode of said fourth transistor; first and second positive potential terminals; first and second negative potential terminals; a first series of impedance elements connected in a voltage divider arrangement between said first positive and said first negative terminals; a second series of impedance elements connected in voltage divider arrangement between said second positive and said second negative terminals; means connecting at least one of the impedance elements of said first series in series circuit between the base of said first transistor and the collector of said fourth transistor; and, means connecting at least one of the impedance elements of said second series in series circuit between the base of said third transistor and the collector of said second transistor.

3,094,633
SEMICONDUCTOR MULTIPLANAR RECTIFYING JUNCTION DIODE
Wynford L. Harries, Princeton, N.J., assignor to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland
Filed Sept. 29, 1960, Ser. No. 59,266
10 Claims. (Cl. 307—88.5)



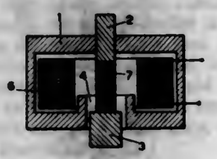
1. A semiconductor diode comprising a first zone of semiconductive material of one conductivity type having a low resistivity in the order of 10 ohm centimeters, a second zone of semiconductive material of opposite conductivity type having a high resistivity in the order of 500 to 1000 ohm centimeters, said second zone being disposed within said first zone, a multiplanar rectifying junction disposed between and contiguous to said first and second zones, a first ohmic contact connected to said first zone, and a second ohmic contact connected to said second zone.

3,094,634
RADIOACTIVE BATTERIES
Paul Rappaport, Princeton, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed June 30, 1953, Ser. No. 365,207
2 Claims. (Cl. 310—3)



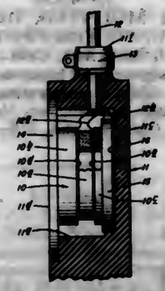
1. A primary source of electrical energy comprising, a pair of semiconductive devices, each with a junction and regions of different conductivity on opposite sides of the junction, said devices being arranged with regions of the same conductivity adjacent each other, a cold source of high energy nuclear emissions positioned between said adjacent regions, and connection means coupled to said devices for deriving a load current.

3,094,635
LINEAR MOTION GENERATOR TRANSDUCER SIGNAL
Waclaw Wysocki, Milan, Italy, assignor to Costruzioni Meccaniche Riva S.p.A., Milan, Italy, a company of Italy
Filed Nov. 24, 1958, Ser. No. 781,178
Claims priority, application Italy Dec. 21, 1957
3 Claims. (Cl. 310—12)



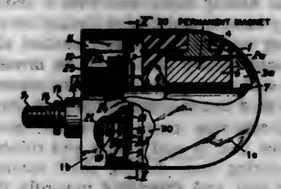
1. An electromechanical transducer comprising a generally cylindrical housing of magnetic material having end walls, an electrical output coil within said housing, each one of said end walls having a central opening, one of said openings being larger than the other one thereof, an armature of magnetic material extending centrally through said housing and having a relatively narrow portion closely fitted and slidable in the smaller one of said openings, said armature having a relatively wide end portion loosely fitted in the larger one of said openings and approximately equal in length to the length of said larger opening as taken in the direction of the length of the housing, the space in said larger opening between the end wall thereof and said armature defining a gap in the magnetic flux path through said housing and said armature, said larger opening and said wide end portion of said armature being shaped so that relative motion of said armature along a predetermined coordinate direction varies the reluctance of said gap, and means for producing a substantially constant magnetomotive force in said flux path, whereby relative motion of said armature in said predetermined direction produces an output electrical signal in said coil due to a change in flux in said flux path brought about by a change in the reluctance of said gap.

3,094,636
UNDERWATER TRANSDUCER
Browalee B. Gauld, Tucson, Ariz., assignor to The Bendix Corporation, a corporation of Delaware
Filed June 15, 1956, Ser. No. 591,602
7 Claims. (Cl. 310—26)



7. An electromechanical transducer system comprising electromechanical transducer means sandwiched between two pieces of solid materials which have relatively dissimilar densities and constituting with said pieces a mechanical vibrator, said system being dimensioned to vibrate as a half-wave vibrator in the direction of a line through said pieces and said transducer means.

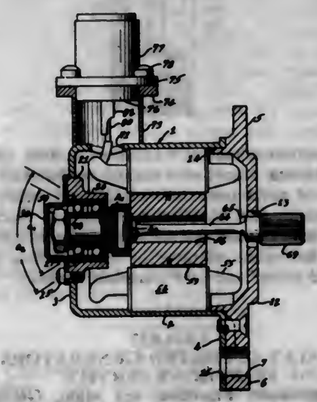
3,094,637
MANUALLY OPERATED GENERATORS FOR TELEPHONE SERVICE
Georg Bergsträsser, Frankfurt am Main, Germany, assignor to Telefonbau und Normalzeit GmbH
Filed Jan. 18, 1960, Ser. No. 2,934
7 Claims. (Cl. 310—69)



1. A manually operated generator for telephone service comprising a substantially hood-shaped casing consisting of one single piece of magnetic sheet material and having a substantially semi-cylindrical bottom portion and a substantially rectangular open-end portion; a pair of pole pieces having pole shoes and arranged inside said housing in substantially coaxial relation to said semi-cylindrical bottom portion thereof; a pair of auxiliary pole pieces having pole shoes and arranged inside said housing and angularly displaced 90 degrees relative to said pair of pole pieces; each of said pair of pole pieces supporting a cylindrical coil having a slightly smaller diameter than the diameter of said semi-cylindrical bottom portion; each of said pair of auxiliary pole pieces being coilless and adapted to control the magnetic reluctance of magnetic circuit of the generator; a casting cast into said housing for maintaining said pair of pole pieces and said pair of auxiliary pole pieces in position; an armature including a permanent magnet arranged in the space bounded by said pole shoes of said pair pole pieces and by said pole shoes of said pair of auxiliary pole pieces; a

shaft for supporting said armature; bearing means for one end of said shaft supported by said semi-cylindrical bottom portion of said housing; a pair of rectangular parallel spaced plates integrated to form a structural unit inserted into said housing and closing said open end portion thereof; bearing means on said structural unit for other end of said shaft; and a gear train adapted to drive said shaft arranged in the space between said pair of plates and supported by said pair of plates.

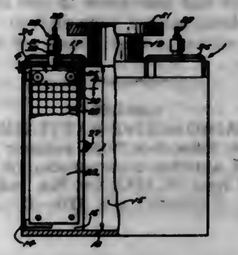
3,094,638
EXTERNALLY MOUNTED, DIRECT DRIVEN ROTARY UNITS FOR PRIME MOVERS
Harold H. Humpal, Santa Ana, Calif., and Hiroo Kitaoka, Euclid, Ohio, assignors to Thompson Ramo Wooldridge Inc., Cleveland, Ohio, a corporation of Ohio
Filed June 1, 1960, Ser. No. 33,252
10 Claims. (Cl. 310—75)



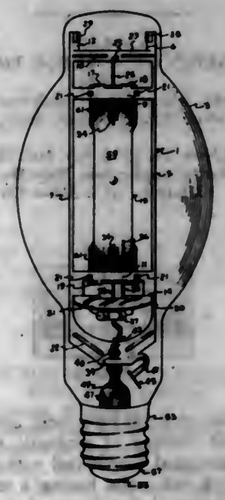
7. A rotary unit to be mounted on, and directly driven by, a prime mover comprising an axially extending casing having an axially inner end with a central opening and mounting means, said casing having an axially outer end, a bearing unit of the rolling contact element type mounted in said axially outer end, an inwardly extending rotor in said casing and rotatably mounted in said bearing unit, said bearing unit having an inner seal and outer grease retaining means to retain grease packed therein, a rotor unit in said casing and rotatably mounted in said bearing unit, driving shaft means connected to said rotor unit and extending inwardly through said casing inner end opening to be driven by said prime mover, said opening providing an open and unsealed access for the lubricating oil of said prime mover into said casing, said rotor unit being of larger diameter than said driving shaft means and extending close to said inner end opening to act as an oil slinger to fling entering engine lubricating oil radially outward and prevent its reaching said grease packed bearing unit, said bearing unit at said axially outer end being the only bearing or locating support for said rotor unit.

3,094,639
GLOW DISCHARGE METHOD AND APPARATUS
Robert L. Jepsen, Los Altos, Calif., assignor to Varian Associates, Palo Alto, Calif., a corporation of California
Filed Oct. 6, 1960, Ser. No. 60,819
5 Claims. (Cl. 313—7)

1. A glow discharge apparatus including an anode member subdivided into a plurality of lesser hollow open-ended cellular compartments, cathode members disposed opposite the open ends of said cellular compartments, and means for producing and directing a magnetic field coaxially of said lesser cellular compartments for enhancing the glow discharge current, said cathode members being spaced from one another by a value between 1.15" and 1.35" and the cathode-anode spaces being within the range of 0.2" to 0.35".



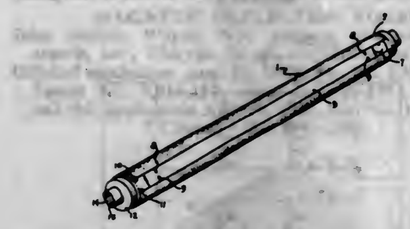
3,094,640
HARNESS FOR SUPPORTING HIGH PRESSURE ARC DISCHARGE TUBE WITHIN OUTER ENVELOPE, AND LAMP FORMED THEREBY
Daniel S. Gustin, Londonderry, N.H., assignor to Sylvania Electric Products Inc., a corporation of Delaware
Filed Dec. 19, 1960, Ser. No. 76,799
12 Claims. (Cl. 313—25)



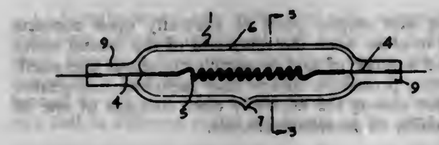
1. A unitary harness for holding an arc tube comprising a single sheet metal frame stamped and shaped into a pair of elongated struts spaced from each other, a pair of supporting cross arms positioned transversely between said struts, means for attaching said arc tube to said supporting cross arms and means to position said harness in a bulbous envelope.

3,094,641
FLUORESCENT LAMP
Warren C. Guengle, Danvers, and John G. Ray, Topsfield, Mass., assignors to Sylvania Electric Products Inc., a corporation of Delaware
Filed Apr. 27, 1960, Ser. No. 25,095
7 Claims. (Cl. 313—109)

1. A fluorescent lamp comprising a glass envelope; mercury vapor and means to produce an electric discharge in said envelope; a phosphor coating on the inner surface of said envelope; said envelope comprising a soda-lime glass containing above about 5% alkali and exhibiting essentially no devitrification and having sufficient quantities of antimony trioxide incorporated therein to inhibit the diffusion of alkali ions to the surface whereby the mercury-alkali amalgam formation on the surface is reduced.

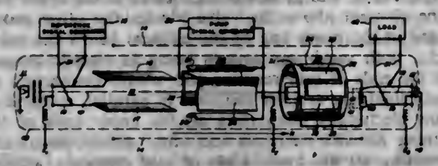


3,094,642
COATED LAMP
Leo E. Duval, Marblehead, Mass., assignor to Sylvania Electric Products Inc., a corporation of Delaware
Filed June 17, 1960, Ser. No. 36,801
4 Claims. (Cl. 313—223)



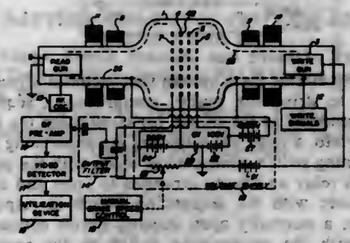
3. An incandescent lamp having an envelope prepared of a glass selected from the group consisting of quartz and one having greater than about 96% fused silica, said envelope being sealed from the atmosphere at its ends, lead-in conductors sealed in each of said ends, a tungsten filament positioned in said envelope and connected at its respective ends to the lead-in conductors, a filling of an inert gas and a quantity of iodine in said envelope, said iodine being in quantities less than that which results in appreciable adsorption of light, but sufficient to effect a regeneration getter action, and an evanescent barrier layer of an organic compound consisting of carbon, hydrogen and oxygen on said glass, whereby devitrification of the glass is inhibited.

3,094,643
FREQUENCY MULTIPLIER AND WAVE SIGNAL GENERATOR
Glen Wade, Menlo Park, Calif., assignor to Zenith Radio Corporation, a corporation of Delaware
Filed Oct. 1, 1959, Ser. No. 843,663
2 Claims. (Cl. 315—3)



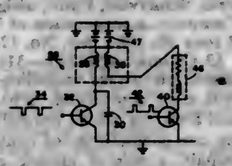
1. A frequency multiplier and wave signal generator comprising: means for projecting an electron stream along a given path; means for creating in said path a field for establishing electron resonance in said stream; means for deflection modulating said stream in accordance with a modulating signal of a predetermined frequency to establish therein orbital electron motion having a rotational component of said predetermined frequency; an electron-motion expander positioned along said path for expanding the radius of the orbital motion of the electrons of said stream, said expander including a multi-filar arrangement of interleaved helical conductors coaxial with said path and a source of unidirectional excitation potential connected across adjacent ones of said conductors for simulating within said expander a symmetrical, non-homogeneous pumping field which appears to be rotating in synchronism with the electrons of said stream; a multi-polar structure positioned coaxially of said path beyond said expander and including at least two pairs of poles arranged symmetrically about said path in electrostatic coupling relation to said stream; and means for deriving from said multi-polar structure an output signal of *N* times said predetermined frequency, where N is the number of pairs of poles included in said multi-polar structure.

3,094,644
ELECTRICAL STORAGE DEVICES
John A. Buckbee, Wellesley, and Albert J. Cloutier, Natick, Mass., assignors to Raytheon Company, Lexington, Mass., a corporation of Delaware
Filed Oct. 28, 1959, Ser. No. 849,287
17 Claims. (Cl. 315—12)



14. A storage device for storing electrical signals comprising an electron storage electrode for storing said signals, an electron collector electrode, means for producing writing and reading electron beams, means for causing said beams to scan said electrodes, means for energizing said electrodes at potentials positive with respect to said means for producing said reading beam, and means for producing a voltage differential between said electrodes to thereby erase signals stored on said storage electrode.

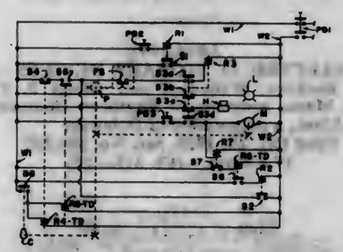
3,094,645
DEFLECTING CIRCUIT
John Di Paolo, Cedar Grove, N.J., assignor, by mesne assignments, to Fairchild Camera and Instrument Corporation, Syosset, Long Island, N.Y., a corporation of Delaware
Filed Nov. 24, 1959, Ser. No. 855,193
7 Claims. (Cl. 315—27)



1. A voltage deflection waveform generator for producing a deflection waveform having a scansion interval and a retrace interval for application to a deflection system comprising: means producing a pedestal waveform; means energizing said pedestal waveform producing means

for a duration equal to one scansion interval; means deenergizing said pedestal waveform producing means for a duration equal to said retrace interval; means producing a sinusoidal waveform; means energizing said sinusoidal waveform producing means for a duration equal to one scansion interval; means deenergizing said sinusoidal waveform producing means for a duration equal to one retrace interval; and means combining said waveforms, said combining means comprising a deflection coil.

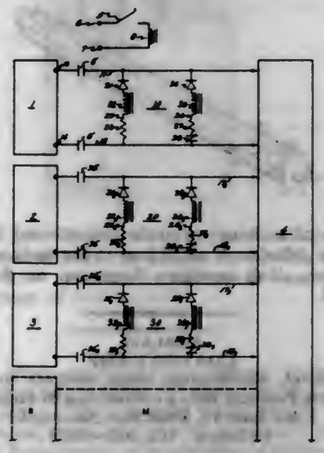
3,094,646
SAFETY CIRCUIT
Alton P. Swett, Painted Post, N.Y., assignor to Ingersoll-Rand Company, New York, N.Y., a corporation of New Jersey
Filed Apr. 20, 1959, Ser. No. 807,425
9 Claims. (Cl. 317—13)



1. Safety circuit for a system that includes a pump and a motor to drive the pump, comprising a sequencing switch connected to the motor for controlling the flow of power thereto, a relay for actuating the sequencing switch, a maintaining switch connected in series with the sequencing switch relay and being arranged to open and close simultaneously with the sequencing switch in response to said relay, a normally open starting circuit connected in parallel with the maintaining switch to the sequencing switch relay and having a manually operable switch for closing the starting circuit to energize the sequencing switch relay for starting the motor, a temporary running circuit connected to and closed by the maintaining switch when the motor is started and having a time delay relay switch means responsive to power flow to the motor for opening said temporary running circuit after a predetermined time interval after the motor is started, and an operating circuit connected in parallel with the temporary running circuit to the maintaining switch and having a sensing switch associated with the pump that opens and closes at a frequency relative to the speed of the pump and a time delay relay switch means responsive to the sensing switch that opens when the pump fails to run at a required speed to deenergize the sequencing switch relay to stop the pump.

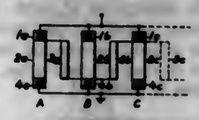
3,094,647
CIRCUIT PROTECTION MEANS
Kenneth S. Ferris, Sunnyvale, Calif., assignor to General Electric Company, a corporation of New York
Filed June 30, 1961, Ser. No. 121,167
13 Claims. (Cl. 317—31)

1. Circuit protection means including a plurality of protective circuits each comprising, a pair of input terminals, a first and a second pair of normally open contacts each pair having one contact thereof connected to one of said input terminals, a pair of electric conductors each connected to the other contact of one of said pairs of normally open contacts, respectively, a first series circuit connected between said conductors including a zener diode and a relay coil, said zener diodes having a zener voltage equal to a predetermined maximum voltage, a second series circuit connected between said conductors including a zener diode, a relay coil, and a pair of normally closed contacts, said zener diode of said second series circuit having a zener voltage equal to a predetermined minimum voltage, said normally closed contacts adapted to open when said relay coil of said first series circuit is energized,



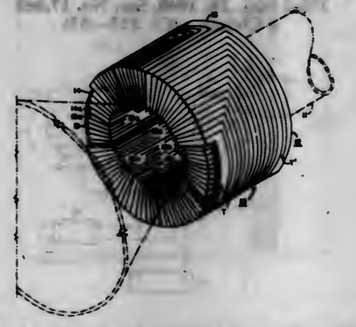
said first and second pairs of normally open contacts adapted to close when the relay coil of the second series circuit of another of said protective circuits is energized, said circuit protection means also including energizable means for closing the normally open contacts of one of said plurality of protective circuits.

3,094,648
LIGHTNING ARRESTERS
Erland Nilsson, Ludvika, Sweden, assignor to Allmänna Svenska Elektriska Aktiebolaget, Vasteras, Sweden, a corporation of Sweden
Filed Feb. 9, 1960, Ser. No. 7,613
Claims priority, application Sweden Feb. 11, 1959
3 Claims. (Cl. 317—61)



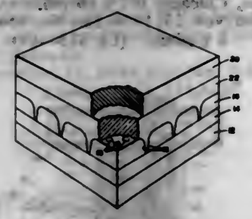
1. Lightning arrester having at least two lightning arrester elements each comprising valve blocks and spark gaps, each of said lightning arrester elements being arranged as a pile with said valve blocks arranged as a resistive pile in the middle of said element and with all of said spark gaps divided into two substantially equal groups, one of said groups being located at the upper end of the element above the valve blocks, the other group located in the lower end of the element below the valve blocks, both spark gap groups being in electric contact with the ends of said resistive pile, means connecting all of said lightning arrester elements in parallel, comprising means electrically connecting all the upper ends of the lightning arrester elements and other means electrically connecting all the lower ends of said elements, a cross impedance element connecting a point on one of the lightning arrester elements to a point on another lightning arrester element, said points in the state of rest of the lightning arrester having practically the same electrical potential, said cross impedance element being substantially resistive and being connected between the upper end of said resistive pile in one lightning arrester element and the lower end of the resistive pile in another lightning arrester element.

3,094,649
MAGNETIC DEFLECTION YOKES
John Marley, Wayne, N.J., assignor to Hazeltine Research, Inc., Chicago, Ill., a corporation of Illinois
Original application Aug. 23, 1955, Ser. No. 530,029, now Patent No. 3,015,152, dated Jan. 2, 1962. Divided and this application Apr. 20, 1961, Ser. No. 104,359
7 Claims. (Cl. 317—200)



1. A cathode-ray tube deflection yoke comprising: a yoke core including individual core walls and a dielectric sheet, bearing a continuous loop-type conductor pattern encircling a wall of the yoke core so that the two coils formed by the two sides of the loop-type conductor pattern fall in different radial quadrants of the core.

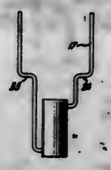
3,094,650
METHOD OF MAKING MULTIPLE LAYER CONDENSERS BY VAPOR DEPOSITION AND PRODUCT THEREOF
Richard P. Riegert, Goleta, Calif., assignor to Servomechanisms, Inc., Hawthorne, Calif., a corporation of New York
Filed Apr. 22, 1960, Ser. No. 23,955
2 Claims. (Cl. 317—258)



2. A condenser formed by vapor deposition including a film of silicon oxide sandwiched by first and second electro-conductive films; said film of silicon oxide defining a plurality of pinholes, and a lamina of silicon disposed between said film of silicon oxide and one of said metallic films and penetrating said defined pinholes.

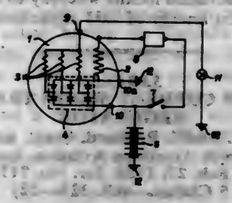
3,094,651
ROLLED CAPACITOR STRUCTURE
William L. Lehner, Snyder, and Milan L. Lincoln, Batavia, N.Y., assignors, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware
Filed Dec. 16, 1958, Ser. No. 780,826
3 Claims. (Cl. 317—260)

1. A tubular capacitor comprising a roll of laminae comprising at least two layers of dielectric material substantially coextensive in width with one of the side edges of each layer in substantially the same plane, a first conductive layer of less width than the width of dielectric material and having an edge in the plane of one of the side edges of the dielectric material, a second conductive layer underlying a layer of dielectrical material, of substantially the same width as the first conductive layer and having an edge in the plane of the opposite edges



of the dielectric material; and wire conductors, one at each side edge of the dielectric material, each wire conductor passing through openings in both layers of dielectric material and one only of the conductive layers, said conductors being larger in area than the initial area of the openings in the layers and being in press fit relationship to the associated openings and in frictional contact with said dielectric material and conductive layer.

3,094,652
BATTERY-CHARGING CIRCUITS ON MOTOR VEHICLES
Bruno Zoppi, Ercole Premoli, and Fioraldo Tamburini, all of Turin, Italy, assignors to FIAT Societa per Azioni, Turin, Italy
Filed Jan. 31, 1962, Ser. No. 170,139
Claims priority, application Italy Mar. 18, 1961
3 Claims. (Cl. 320—48)

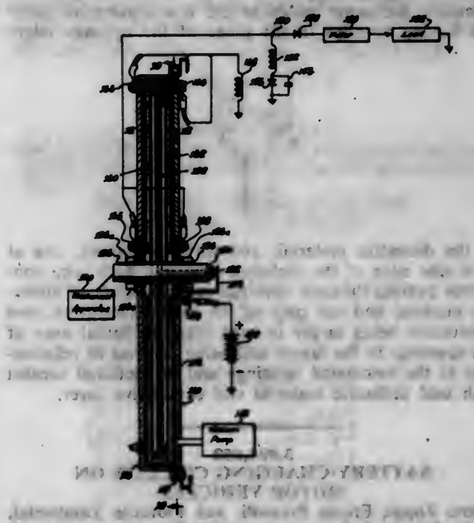


1. In a motor vehicle, a battery-charging circuit comprising a storage battery, a poly-phase alternating current generator including an exciting winding and a star-connected secondary winding providing the phase outputs for the alternating current, a full-wave poly-phase rectifier having its three inputs connected to the respective phase outputs and having its two output taps connected to opposite terminals of the battery, a voltage regulator operatively associated with the exciting winding and the battery thereby to automatically control the battery-charging conditions from the generator, and a voltage-responsive warning circuit branched between the star-centre of the secondary winding and a terminal of the battery.

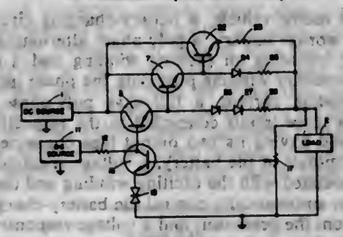
3,094,653
ELECTROSTATIC GENERATOR
Dan B. Le May and Charles F. Drexel, Palos Verdes Estates, Calif., assignors to Tylan Corporation, Torrance, Calif., a corporation of California
Filed May 22, 1961, Ser. No. 111,614
19 Claims. (Cl. 322—2)

6. An electrostatic energy conversion system for use between a mechanical means for carrying mechanical energy and an electrical means for carrying electrical energy comprising: a variable capacitance means; means for mechanically coupling said variable capacitance means to said mechanical means whereby said variable

capacitance means undergoes a cyclic capacitive variation upon said mechanical means carry-energy; switch means for electrically coupling said variable capacitance means to said electrical means, whereby the voltage on said capacitance means is varied in relation to the capacitance thereof; a plurality of field-shaping electrodes positioned adjacent said variable capacitance means, whereby to effect the variations of capacitance of said variable capacitance means; and a reactance circuit means coupled to said capacitance means whereby to alter the phase angle of electrical energy of said capacitance means.

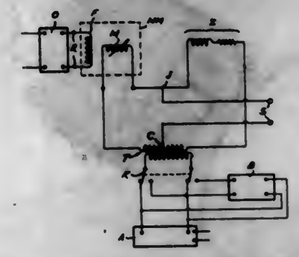


3,094,654
BALANCED CURRENT SERIES TRANSISTOR REGULATOR
Conrad H. Roelli, Portland, Oreg., assignor to North American Aviation, Inc.
Filed Feb. 27, 1958, Ser. No. 717,982
5 Claims. (Cl. 323—22)



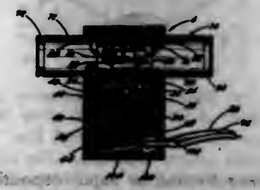
1. In combination, a first transistor having collector, emitter, and base electrodes, means for supplying current from a source through the collector-emitter path of said first transistor to a load, means for impressing upon the emitter with respect to the base of said first transistor a potential having variations corresponding to load voltage changes, a second transistor having collector, base, and emitter electrodes, the collector-emitter path of said second transistor connected in parallel with the collector-emitter path of said first transistor, means for equalizing the current flowing through said transistors, said equalizing means comprising unidirectional conducting means series connected in the collector-emitter circuit of said first transistors, the voltage characteristic of said unidirectional conducting means being identical to that of the base-emitter circuit of said second transistor, and means responsive to said unidirectional conducting means for impressing on the base of said second transistor a current proportional to the voltage drop across said unidirectional conducting means.

3,094,655
NARROW BAND FILTER CIRCUIT
Donald S. Smith, Cumberland, Ontario, Canada, assignor to National Research Council, Ottawa, Ontario, Canada, a body corporate of Canada
Filed Mar. 28, 1960, Ser. No. 17,868
6 Claims. (Cl. 323—53)



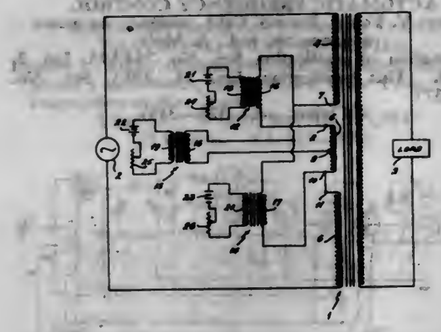
1. A narrow band filter circuit for discriminating between a received signal of predetermined frequency and surrounding noise, said circuit comprising a dynamometer type meter movement having a fixed coil and a movable coil arranged with their field directions normally intersecting in quadrature, a balanced bridge one arm of which includes a first one of said coils, means connected to the second of said coils for applying a reference voltage thereto of said predetermined frequency, means for applying said signal and noise across a first diagonal of the bridge, and means for detecting the output voltage across the other diagonal of the bridge.

3,094,656
ELECTRIC TACHOMETER SENDER
Marshall Miles, Skokie, Ill., assignor to Stewart-Warner Corporation, Chicago, Ill., a corporation of Virginia
Filed Nov. 23, 1959, Ser. No. 854,713
4 Claims. (Cl. 323—60)



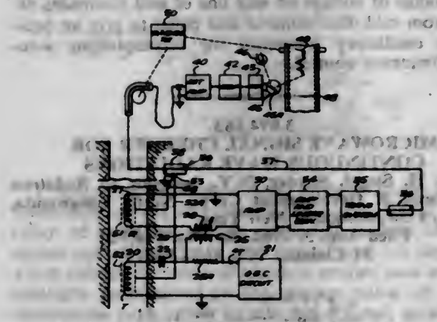
1. A transformer comprising a unitary shell structure of high dielectric material including a thin membrane and hollow portions closed by the membrane and extending therefrom in opposite directions, a first core received in one of the hollow portions and engaging one side of the membrane, a substantially identical second core received in the other hollow portion and engaging the other side of the membrane, an annular recess in each core facing the membrane, first and second coils received in the recesses of the first and second cores, and a high dielectric sealing compound filling the space in the shell structure not occupied by the cores and coils, the membrane and adjacent cores forming a low reluctance magnetic path for flux produced by current in one of the coils, the membrane, the hollow portions and the sealing compound forming a high resistance leakage path withstanding high potential differences existing between the coils.

3,094,657
VOLTAGE REGULATOR
Otis T. Farry, University City, Mo., assignor to Wagner Electric Corporation, St. Louis, Mo., a corporation of Delaware
Filed July 28, 1960, Ser. No. 45,937
10 Claims. (Cl. 323—61)



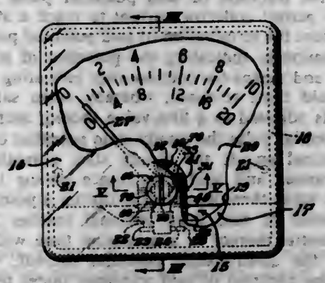
4. In a supply system having a power output circuit for connection with a load and a power input circuit for supplying power to the power output circuit, the combination therewith of voltage control means for controlling the voltage supplied to the power output circuit, said control means comprising a first circuit including a first reactor and a transformer winding connected in series with one another in one of said power circuits, a second circuit including a second reactor connected in parallel circuit relation with said first reactor and a portion of said winding, a third circuit including a third reactor connected in parallel circuit relation with said first circuit, and means for varying the reactance of said reactors.

3,094,658
LOGGING SYSTEM USING ELECTROSTATICALLY SHIELDED COILS
Frank R. Bravenec and Richard H. Huddleston, Jr., Houston, Tex., assignors to Halliburton Company, a corporation of Delaware
Filed Mar. 17, 1959, Ser. No. 799,982
7 Claims. (Cl. 324—6)



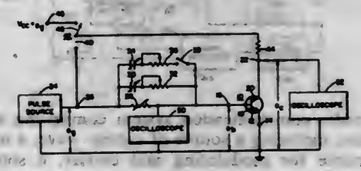
2. In an induction well logging system wherein a transmitter coil induces an eddy current in formations and said eddy current induces a voltage in a receiver coil, a logging line for transmitting a signal derived from said receiver coil, said logging line having a grounded outer sheath, a separate electrostatic shield surrounding each of said transmitter and receiver coils, each of shields being connected by a separate wire to a common ground point on said sheath.

3,094,659
PERMANENT MAGNET ROTOR TYPE ELECTRIC METER WITH MAGNETIC ZERO SET
William E. Pfeffer, Perkasie, Pa., assignor to Electro-Mechanical Instrument Co., Perkasie, Pa.
Filed Nov. 4, 1960, Ser. No. 67,248
2 Claims. (Cl. 324—146)



1. In an electrical measuring instrument, a casing having a hollow cup-like integrally formed rear component of dielectric plastic having a rearwardly extending undercut slot in the bottom of its hollow, and a transparent cover component: a preassembled insert comprising a U-shaped bracket of which the crossbar is slidable longitudinally into the undercut slot in the rear component of the casing, a hollow block of dielectric material secured to the bracket crosswise in the interval between the upstanding legs of the latter, a horizontally arranged vertical axis coil wound about said block, an arbor with a pointer thereon, for coordination with graduations on a dial within the casing, said arbor having its opposite ends rotatively supported in the upstanding legs of the U-shaped bracket at right angles to the coil axis, a permanently magnetized disk affixed to the arbor and extending into the hollow of said block, and a headed screw of which the shank is passed through the rear component of the casing and threadedly engages into the dielectric block to secure the unit in place.

3,094,660
TEST CIRCUIT FOR DETERMINING DYNAMIC TRANSISTOR CHARACTERISTICS
Frank J. Potter, Penfield, N.Y., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware
Filed Nov. 1, 1961, Ser. No. 149,249
6 Claims. (Cl. 324—158)



1. A test circuit for measuring at least one dynamic characteristic of a transistor comprising first, second, third, and fourth terminals, means for connecting the emitter electrode of a transistor under test to said first terminal, means for connecting the base electrode of a transistor under test to said second terminal, means for connecting the collector electrode of a transistor under test to said third terminal, a calibrated adjustable first resistance connecting said fourth terminal to said second terminal, a

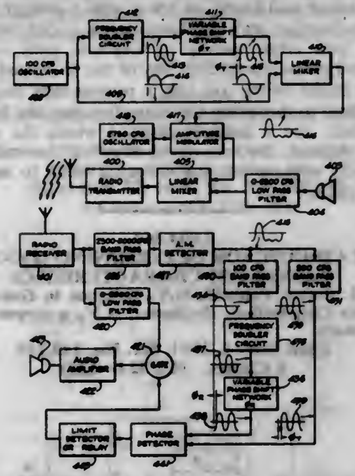
calibrated adjustable capacitance means, means for shunting said first resistance with said capacitance means, a second resistance of predetermined value connecting said fourth terminal to said third terminal, means for applying a reference potential to said first terminal, a pulse source coupled between said first and fourth terminals for intermittently applying a potential pulse to said fourth terminal, said potential pulse having a given magnitude and a polarity to forward bias said base electrode of said transistor under test with respect to the emitter electrode thereof, the duration of said potential pulse being sufficient to permit collector current to reach a steady state value before the termination of said potential pulse, means for continuously indicating the potential of said second terminal and means for continuously indicating the potential of said third terminal, whereby when said first resistance is adjusted to a first value thereof such that during a potential pulse the steady state potential of said second terminal equals the steady state potential of said third terminal and said capacitance means is adjusted to a first value thereof such that during a potential pulse the potential of said third terminal reaches the steady state potential thereof in a minimum time without overshooting the steady state potential thereof, the unsaturated time constant of said transistor under test is equal to the product of the predetermined value of said second resistance and said first value of said capacitance means.

3,094,661

RADIO TELEPHONE SYSTEM

Robert F. Herrman and Richard H. Moehlmann, Rochester, N.Y., assignors to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware

Filed Oct. 20, 1958, Ser. No. 768,411
7 Claims. (Cl. 325—55)



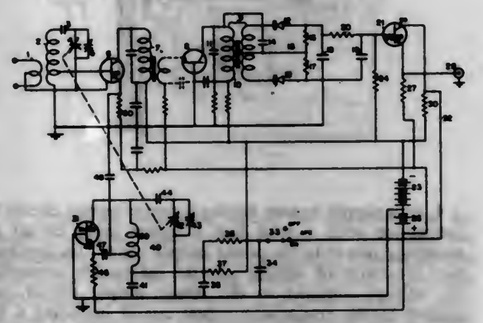
1. A radio communication system comprising a radio transmitter, including a source of carrier wave, a message signal source for modulating said carrier, a source of coded calling signals for simultaneously modulating said carrier, said coded signals including a first and a second undulating wave, means for shifting the phase of one of said undulatory waves with respect to the other, a plurality of receivers adapted to receive and demodulate the signals on said carrier, each of said receivers including means for separating the message signal from said coded signals, and means for separating the first from the second wave of the coded signals, a message reproducing device, a squelch circuit for normally disabling said reproducing device, a phase detector responsive to the waves of said coded signal for producing a distinctive output voltage when said first and second waves have a predetermined phase relationship, means for shifting the phase of said first wave a predetermined amount with respect to said second wave, the output of said phase detector being connected to said squelch circuit for enabling said reproducing device when a predetermined code signal is received.

3,094,662

AUTOMATIC FREQUENCY CONTROL

George V. Young, Encino, Calif., assignor, by mesne assignments, to C. A. Motz

Continuation of application Ser. No. 784,693, Jan. 2, 1959. This application Jan. 31, 1963, Ser. No. 255,377
4 Claims. (Cl. 325—319)



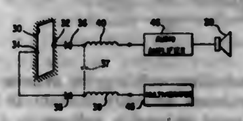
3. A radio frequency receiver automatic frequency control comprising a discriminator to provide an electrical output proportional to the intermediate frequency impressed upon said discriminator and to provide modulation frequency variations, a filter connected to said discriminator to remove modulation frequency variations at the output of said filter, an oscillator transistor having an emitter, base and collector electrodes, an oscillatory circuit having only a parallel type resonant circuit, said resonant circuit connected to said collector electrode and to a radio frequency ground, one of said electrodes connected direct to ground, and the output of said filter conductively connected exclusively to one of said electrodes and through said resonant circuit; the frequency of said oscillatory circuit changed by a change of voltage on said one of said electrodes derived from said discriminator and poled to give an equilibrium oscillatory frequency for accomplishing automatic frequency control.

3,094,663

MICROWAVE SIGNAL CHECKER FOR CONTINUOUS WAVE RADIATIONS

Vernon H. Siegel, Snyder, N.Y., assignor to Radatron Research & Development Corp., North Tonawanda, N.Y., a corporation of New York

Filed Aug. 3, 1962, Ser. No. 214,724
31 Claims. (Cl. 325—364)



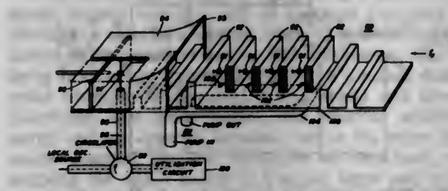
1. Apparatus for indicating the presence of electrical energy comprising an antenna, a detector including a series diode and shunt capacitance connected to receive electrical energy from said antenna, a modulator diode coupled in series with said detector diode across the opposite sides of said antenna with the electrical energy applied to said detector diode from said antenna passing through said modulator diode, means for rendering said modulator diode alternatively conductive and non-conductive, an amplifier coupled across said capacitance, and indicating means coupled to the output of said amplifier.

3,094,664

SOLID STATE DIODE SURFACE WAVE TRAVELING WAVE AMPLIFIER

Lynden U. Kibler, Middletown, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Nov. 9, 1961, Ser. No. 151,304
15 Claims. (Cl. 325—373)



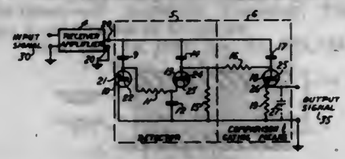
1. A traveling wave high frequency amplifier comprising a length of surface-wave transmission line having a plurality of alternate metallic and dielectric regions longitudinally distributed along said line, and means for producing an equivalent negative resistance and inductive reactants between adjacent metallic regions at the outer surface of said line comprising a negative resistance element disposed within successive dielectric regions and electrically connected to the metallic regions adjacent to each of said dielectric regions.

3,094,665

MEANS FOR THE DETECTION OF SIGNALS IN THE PRESENCE OF NOISE

Alan J. Wildman, Santa Barbara, Calif., assignor to Raytheon Company, Lexington, Mass., a corporation of Delaware

Filed Apr. 27, 1959, Ser. No. 809,311
8 Claims. (Cl. 325—475)



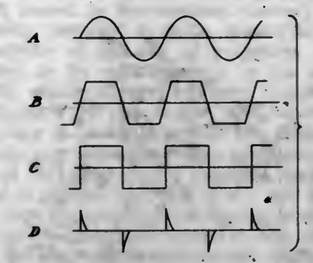
1. Means for detecting a signal in the presence of noise comprising means for receiving an input signal; a plurality of rectifying means connected to said receiving means and responsive to said input signal for producing a first voltage the value of which is greater than and substantially proportional to the average value of the instantaneous peak values of said input signal; means connected to said receiving means and to said first voltage producing means and responsive to said first voltage and to said input signal for comparing said first voltage with said instantaneous values of said input voltage and for producing an output voltage at those instants in time when said instantaneous values of said input voltage exceed said first voltage.

3,094,666

QUADRATURE AXIS-CROSSING COUNTER

Roger S. Smith, North Andover, Mass., assignor to Laboratory for Electronics, Inc., Boston, Mass., a corporation of Delaware

Filed May 1, 1961, Ser. No. 106,901
4 Claims. (Cl. 328—108)



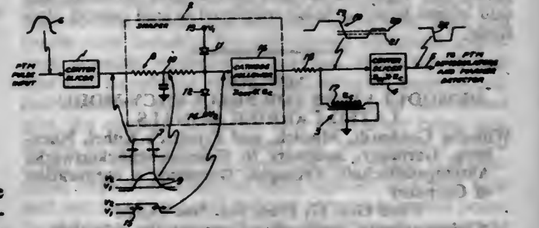
1. An axis-crossing counter comprising: means for deriving from an input signal an identical signal shifted in phase relative to the input signal, means applying the input signal to a first signal channel, means applying the phase shifted signal to a second signal channel, means in the second channel for obtaining gating signals from the phase shifted signal, means in the first channel for deriving pulses at the axis crossings of the input signal, means applying pulses representing positive slope axis crossings of the input signal to a first gate, means applying pulses representing negative slope axis crossings of the input signal to a second gate, the first and second gates being enabled by the gating signals from the second channel to pass the applied pulses to the inputs of a pulse differencing device.

3,094,667

NOISE REDUCING CIRCUIT EMPLOYING THE INFORMATION ON BOTH LEADING AND TRAILING EDGES OF RECEIVED PULSES

Warren G. Brown, Cedar Grove, N.J., assignor to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland

Filed Oct. 29, 1958, Ser. No. 770,551
20 Claims. (Cl. 328—162)



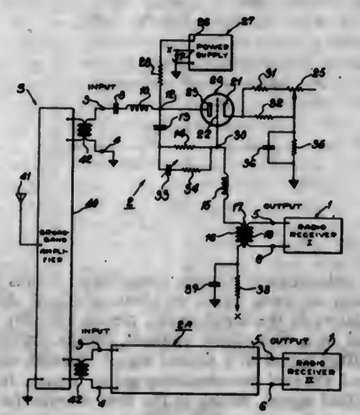
10. A circuit to reduce noise in a pulse communication system comprising a source of pulses having the time position of their leading and trailing edges shifted in time in accordance with the noise in said system, a pulse reshaper coupled to said source, a storage device coupled to the output of said reshaper, and a slicer coupled to said storage device to produce pulses at the output thereof having the time position of the leading edge correspond in time to the algebraically combined time position of the leading and trailing edges of the pulses of said source.

3,094,668

ISOLATOR SYSTEM PROVIDING LOW ATTENUATION FOR INPUT SIGNALS AND EXTREMELY HIGH ATTENUATION FOR SIGNALS ATTEMPTING TO PASS IN THE REVERSE DIRECTION

Carl G. Southeimer, South Norwalk, Conn., assignor to Trak Electronics Company, Inc., a corporation of Connecticut

Filed Feb. 20, 1959, Ser. No. 794,640
12 Claims. (Cl. 328—209)



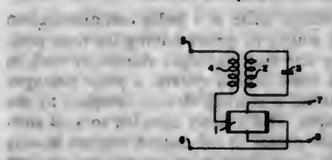
10. An isolator system for supplying desired electrical signals from a common source to a plurality of independent devices controlled by the signals from said source and in operation wherein said devices are effectively isolated from one another by strongly attenuating undesired signals originating in any one of said devices and attempting to progress back toward said common source, said system comprising a common source, a plurality of isolator circuits having their input terminals coupled to said common source, and a plurality of said controlled devices each coupled to the output terminals of a respective one of said isolator circuits comprising an electronic amplifier stage having a controlled electrode, a control electrode, and a common electrode; variable resistance means; a source of electrical power; circuit means connecting said source in serial relationship with said common electrode, said controlled electrode, and said variable resistance means; the input terminal being connected to said controlled electrode; second resistance means connected between said input circuit and said control terminal; and said output terminal being connected to said control electrode.

3,094,669

DEMODULATORS FOR FREQUENCY-MODULATED CARRIER SIGNALS

Wilhelm Gebhardt, Munich, and Friedrich Kuhrt, Nurnberg, Germany, assignors to Siemens-Schuckertwerke Aktiengesellschaft, Erlangen, Germany, a corporation of Germany

Filed Oct. 17, 1960, Ser. No. 63,205
Claims priority, application Germany Oct. 17, 1959
8 Claims. (Cl. 329—119)



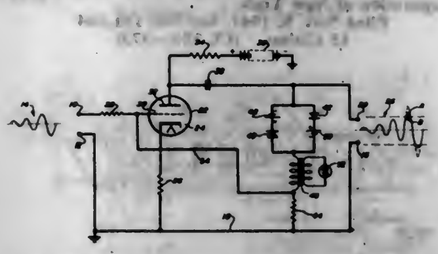
1. A demodulator for frequency-modulated carrier signals, comprising a tank circuit in resonance with the carrier frequency and having an inductance coil, a signal input circuit coupled with said tank circuit for exciting it to oscillate, a Hall-effect member disposed in the magnetic field of said inductance coil and connected to said input circuit to be traversed by current due to the modulated carrier signal, said member having an output circuit to provide demodulated output under joint control by said current and said field.

3,094,670

INVERSE CLIPPING CIRCUIT

Joseph B. Batcheler, Jr., Libertyville, Ill., assignor to Central Electronics, Incorporated, a corporation of Illinois

Filed Oct. 9, 1959, Ser. No. 845,346
6 Claims. (Cl. 330—2)



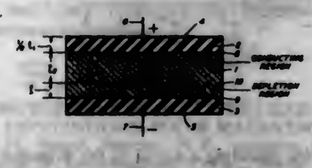
1. A self-indicating symmetrical peak clipper for communication equipment, comprising an amplifier having input and output terminals, means definining an output level sensing circuit connected across said output terminals and including, in series, the parallel combination of a pair of individually back-biased reversely-poled peak-sensing diode elements, one winding of an indicator transformer, and a dropping resistor; means for applying the voltage developed across said resistor to said input terminals to control said amplifier inversely with respect to output levels exceeding the threshold of said elements; and a clipping operation indicator coupled to another winding of said transformer.

3,094,671

FIELD EFFECT PARAMETRIC AMPLIFIER

Charles G. B. Garrett, Morristown, and William G. Pfann, Far Hills, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed June 12, 1959, Ser. No. 819,923
8 Claims. (Cl. 330—4.9)



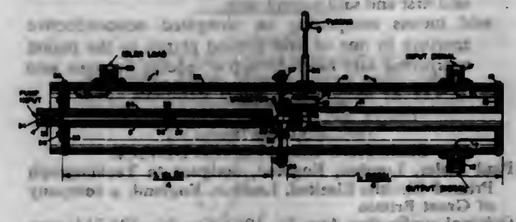
1. A parametric amplifier comprising at least one unit comprising in succession a first region of a dielectric material and a second region of a semiconductor material, said semiconductor material having a carrier mobility of at least 100 centimeters squared per volt-second, said two regions being in intimate contact, together with means for impressing a pumping field and a signal field across at least one said unit in a direction such as to encompass the said two regions and means for supporting an idler frequency, the pumping field being such as to vary the capacitance of the said device at a frequency such as to result in parametric amplification of the said signal field.

3,094,672

DOUBLE TANK DIODE PARAMETRIC AMPLIFIER

Dwight C. Lewis, Goshen, Ind., and Oliver L. Steigerwalt, Akron, Ohio, assignors to Goodyear Aircraft Corporation, Akron, Ohio, a corporation of Delaware

Filed Sept. 29, 1960, Ser. No. 59,211
2 Claims. (Cl. 330—4.9)



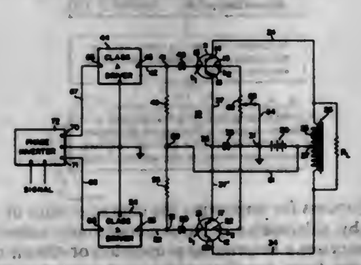
1. A parametric amplifier comprising a pair of closed metal cavities arranged end to end and separated by a conductive shield having an opening therethrough, one cavity being resonant to an idler frequency, the other being resonant to a signal frequency, a junction diode located through the opening of said shield and insulated therefrom, said diode having one terminal within one cavity and an opposite terminal within the other cavity, means coupling the idler cavity to an idler load, means coupling the signal cavity to a signal input and a signal output, conductive means extending coaxially of said signal cavity for supporting said diode and connecting one terminal thereof to the high impedance point of the signal cavity, tubular conductive means extending coaxially of said idler cavity and spaced from said shield and grounded on said idler cavity at its high impedance point, means for applying a reverse bias to and for pumping said diode at a frequency equal to the sum of the idler and signal frequencies, and a coaxial line extending through said tubular conductive means and insulated therefrom connecting the biasing and pumping means with the the diode, said coaxial line having its inner conductor connected conductively to the opposite terminal of said diode and its shield grounded on said idler cavity at the high impedance point thereof, and means to couple the idler energy out of the idler tank and dissipate it to a receiving load means.

3,094,673

PUSH-PULL SEMICONDUCTOR AMPLIFIER APPARATUS

Joseph T. Maupin, Deephaven, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Filed Dec. 10, 1959, Ser. No. 858,733
3 Claims. (Cl. 330—15)



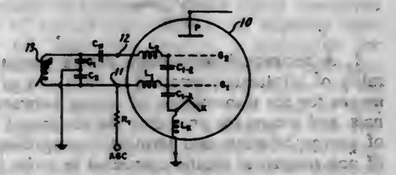
1. In transistor audio amplifier apparatus of the push-pull class B type which includes a pair of push-pull connected power transistors, each of said transistors having an emitter-base diode junction, in which the turn off waveform characteristic of the transistors does not match the turn on waveform due to a phase lag between the alternating signal being applied to the transistor input at the base and emitter electrodes and the amplified signal appearing at the collector circuit, which lag becomes significant at high audio frequencies so that the leading edge of the reverse polarity signal on the emitter junction during the off half-cycle of each transistor introduces unwanted distortion into the amplified signal, the improvement comprising: a pair of diodes, each diode having a rapid recovery time with respect to the transistor recovery time, said diodes being connected in series, respectively, with the base electrodes of said pair of transistors, said diodes being poled in the same direction as the emitter-base diode, the diode allowing forwerd current to flow in the transistor but due to the rapid recovery of the diode tending to prevent a reverse bias from appearing between the base and emitter electrodes upon reversal in polarity of the signal, and a relatively high resistance connected in parallel with each of said pair of diodes to provide a high resistance shunt around the diode and thereby allow a sufficient reverse current to flow to the emitter junction that the turn off characteristic of one transistor is matched to the turn on characteristic of the other so that said unwanted distortion is eliminated.

3,094,674

METHOD AND APPARATUS FOR NEUTRALIZING MILLER EFFECT

David E. Sparks, Chicago, Ill., assignor to Admiral Corporation, Chicago, Ill., a corporation of Delaware

Filed Jan. 26, 1960, Ser. No. 4,773
7 Claims. (Cl. 330—76)



1. In combination; a high frequency vacuum tube including a cathode, a control grid, and a screen grid; means for maintaining the potential of said screen grid at substantially the potential of said cathode comprising; a bridge connected input circuit including one arm consisting in part of the internal lead impedance of said screen grid; another arm of said bridge including the interaal lead impedance of said control grid and the internal impedance between said control grid and said screen grid; third and fourth arms including first and second additional impedance elements respectively, mounted exteriorly of said tube and completing said bridge connected input circuit, one corner of said bridge being selected on said screen grid, the opposed corner to said one corner being connected to said cathode; means for impressing a signal across the remaining two corners of said bridge; said additional impedance elements being selected such that both said one corner and said opposed corner are at null points for at least a selected frequency, whereby said screen grid is maintained at a potential substantially equal to that of said cathode.

3,094,675

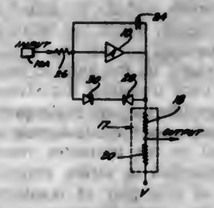
DEGENERATIVE FEEDBACK AMPLIFIER UTILIZING ZENER DIODE

Louis A. Ule, Alhambra, Calif., assignor to Gillfillan Bros., Inc., Los Angeles, Calif., a corporation of California

Filed May 21, 1956, Ser. No. 587,191
3 Claims. (Cl. 330—110)

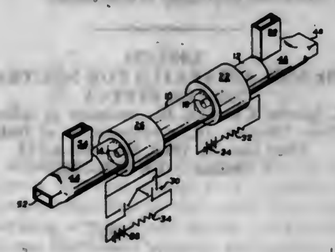
1. A signal translation device comprising: an amplifier

having a direct-coupled feedback path and a pair of Zener



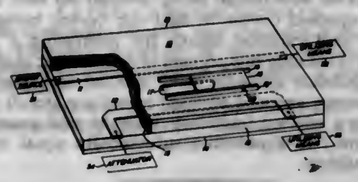
diodes poled in opposite directions connected serially with each other in said feedback path.

3,094,676
RECIPROCAL MICROWAVE SWITCHING DEVICE USING NON-RECIPROCAL COMPONENTS
Colin Bowness, Watertown, Mass., assignor to Raytheon Company, Lexington, Mass., a corporation of Delaware
Filed Dec. 21, 1959, Ser. No. 861,132
7 Claims. (Cl. 333—7)



1. A reciprocal microwave device comprising a plurality of terminals connected to each end of said device, means for the transmission of energy between said terminals, and means for providing the reciprocal transmission of energy between said terminals comprising a plurality of non-reciprocal means connected in series between said terminals, at least one of said non-reciprocal means imparting a reversible substantially 45-degree polarity rotation to the transmission of energy in either of two oppositely selected senses.

3,094,677
STRIP LINE WAVE GUIDE COUPLER
Eugene J. Theriot, Greensboro, N.C., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 19, 1960, Ser. No. 76,643
5 Claims. (Cl. 333—10)



1. In combination, a first electromagnetic wave energy transmission path comprising a first flat conductive strip dielectrically spaced between a pair of parallel conductive ground planes,

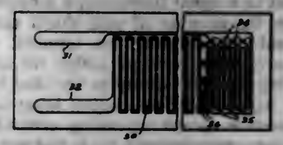
a second electromagnetic wave energy transmission path comprising a second flat conductive strip dielectrically spaced between said pair of ground planes, said dielectric spacing between said pair of parallel planes and said first and said second strips being continuous,

said first and said second strips positioned in the same plane in transverse coupling proximity with a finite dielectric spacing between the adjacent edges of said strips,

and means for increasing the energy coupling between said first and said second strip,

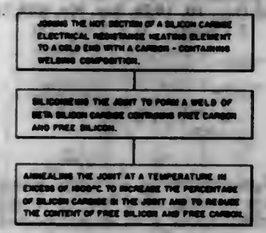
said means comprising an elongated nonconductive aperture in one of said ground planes in the region overlaying said finite dielectric spacing between said strips.

3,094,678
ELECTRIC RESISTANCE DEVICE
Paul Eisler, London, England, assignor to Technograph Printed Circuits Limited, London, England, a company of Great Britain
Original application Aug. 26, 1953, Ser. No. 376,711, now Patent No. 2,885,524, dated May 5, 1959. Divided and this application Dec. 19, 1958, Ser. No. 17,720
Claims priority, application Great Britain Aug. 28, 1952
8 Claims. (Cl. 338—2)



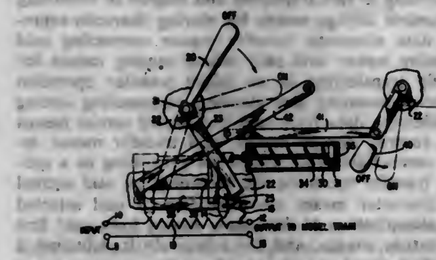
1. A gauge for supervising a variation of a physical magnitude, said gauge comprising an insulation base deformable by a variation of the physical magnitude to be supervised, and a resistance pattern including a continuous narrow metal strip adhered to said base, said metal strip being formed of a bimetal foil, one layer of said foil defining the resistance pattern and the other layer occupying a selected fractional portion of the surface area of said one layer, the thickness of said bimetal foil being such that the same participates in a deformation of said base.

3,094,679
SILICON CARBIDE RESISTANCE BODY AND METHOD OF MAKING THE SAME
John A. O'Connor, Williamsville, N.Y., and Stanley J. Matys, Wellandport, Ontario, Canada, assignors to The Carborundum Company, Niagara Falls, N.Y., a corporation of Delaware
Filed Jan. 13, 1960, Ser. No. 2,216
12 Claims. (Cl. 338—330)



1. A process for improving the characteristics of a body formed by siliconizing a carbon-containing mass, which body comprises a substantial proportion of silicon carbide in the beta form together with substantial quantities of free silicon and free carbon, free silicon constituting at least 30% by weight of said body and free carbon constituting at least 10% by weight of said body, which comprises maintaining said body, following siliconization thereof and in the absence of substantial free silicon external to said body, at a temperature in excess of about 1800° C. but not in excess of 2300° C. for a sufficient period of time to reduce significantly the content of free silicon and free carbon while increasing the silicon carbide content, under time-temperature conditions such that the silicon carbide content of the body remains primarily in the beta form, and then slowly cooling said body.

3,094,680
ELECTRIC CONTROL DEVICE
Francis E. Blake, Montgomery County, Md. (6113 Ramsgate Road, Washington 16, D.C.)
Filed Feb. 6, 1961, Ser. No. 87,253
1 Claim. (Cl. 338—98)



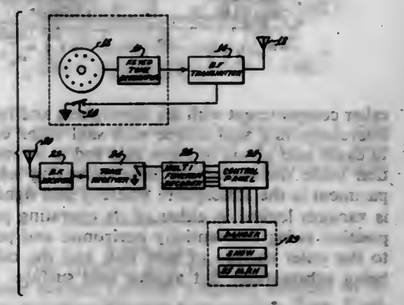
A control device for an electric motor comprising, a variable electric power element having a slider movable back and forth between power off and power on positions, a first control member movable in a first direction from an off position to engage with said slider to move the slider from power off position towards power on position and disengageable from the slider when moved in the other direction towards its off position, a second control member movable in a first direction from an off position to an on position to engage with said slider to move the slider from power on towards power off position and disengageable from the slider when moved towards its off position, and a spring loaded dashpot means engaging said slider to move said slider slowly back from power on position to power off position, the engagement of said dashpot with said slider being disengageable when said second control member is moved from its off position to its on position engaging and moving the slider member towards the power off position.

3,094,681
NON-LINEAR RECORDING AMPLIFIER
Hans Kletz and Hans Georg Schloen, Bremen, Germany, assignors to Atlas-Werke Aktiengesellschaft, Bremen, Germany, a firm
Filed May 25, 1954, Ser. No. 432,222
21 Claims. (Cl. 340—3)



10. In an echo ranging system, a display system comprising, transducing means responsive to echo signals for providing corresponding electrical signals of proportionate amplitude, a first channel responsive to all of said electrical signals whose amplitude is greater than a first predetermined minimum value for providing an output recording signal which does not exceed a predetermined first maximum amplitude, and a second channel responsive to all of said electrical signals whose amplitude is greater than a second predetermined minimum value higher than said first minimum value for increasing the amplitude of said recording signal beyond said first maximum amplitude.

3,094,682
CONTROL SYSTEM
Amnon Brosh, Philadelphia, Pa., and Douglas N. Lapp, Woodbury, N.J., assignors, by mesne assignments, to Radiation Service Company, a corporation of Florida
Filed Apr. 15, 1957, Ser. No. 652,912
1 Claim. (Cl. 340—22)

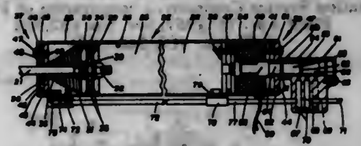


In a traffic directing system including a plurality of highway signs for indicating driving conditions, speed limits and weather conditions comprising a low frequency generator, dialing means associated with said low frequency generator to produce a coded signal therefrom for selection of one of said plurality of highway signs and to vary the indications thereon, a transmitter for transmitting radio signals, means for modulating said radio signals with said coded signal, a receiving station for receiving said radio signals associated with each of said plurality of highway signs, means including a low frequency receiver in each receiving station for abstracting said coded signal from said radio signals, a multi-function decoder adapted to be responsive to one type of coded signal and being non-responsive to other types of coded signals, said multi-function decoder including a stepping relay for converting said coded signals into control functions when said multi-function decoder is responsive to said coded signal, means for applying said abstracted coded signal from said low frequency receiver to said multi-function decoder, a control circuit including a plurality of relay devices to receive said control functions when said multi-function decoder is responsive to said coded signal, and a plurality of triangular signs having various indications for indicating driving conditions, speed limits and weather conditions adapted to be actuated by said control circuit, the indications of said plurality of signs being variable in accordance with the control functions applied to said control circuit.

3,094,683
SEMAPHORE ARM VEHICLE SIGNAL
Edwin P. Watkins, Springfield, Ohio, assignor to Ringwald Products, Inc., Springfield, Ohio, a corporation of Ohio
Filed Mar. 14, 1960, Ser. No. 14,576
12 Claims. (Cl. 340—136)

1. In combination, a vertically disposed wall having inner and outer surfaces, a cylinder having an elongated chamber, a movable piston disposed in said chamber and dividing said chamber into two compartments, a rod carried by said piston, a signal means including a horizontally swingable arm pivotally attached at one end to the outer surface of said wall, an arcuate push bar having an arcuate extent of the order of ninety degrees rigidly fixed

at one end to said arm adjacent the pivotally attached end of the latter and extending substantially horizontally through an aperture in said wall, said push bar being pivotally connected at its other end to the free end of said rod, said signal means being movable between two operating positions, a vacuum source, and means for selectively interconnecting said source with one of said compartments to cause said piston to move said rod to its extended position while simultaneously interconnecting the



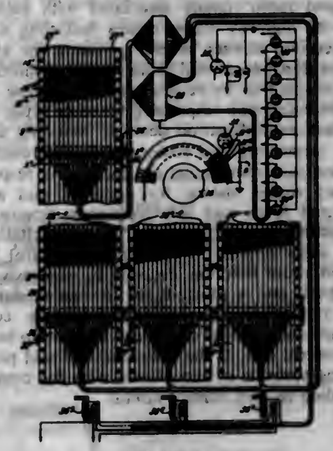
other compartment with the atmosphere and for selectively interconnecting said source with said other compartment to cause said piston to move said rod to its retracted position while simultaneously interconnecting said one compartment to the atmosphere whereby said signalling means is vacuum locked in either of its operating positions one position being substantially horizontal and perpendicular to the outer surface of said wall and the other position being substantially flat against said surface.

3,094,684

SORTING OF SIGNALS RECORDED ON A MAGNETIZABLE SIGNAL CARRIER

Gerhard Dirks, 44 Morfelder Landstrasse, Frankfurt am Main, Germany

Continuation of application Ser. No. 498,044, Mar. 30, 1955. This application Nov. 2, 1960, Ser. No. 66,884
Claims priority, application Germany Oct. 1, 1948
6 Claims. (Cl. 340—172.5)



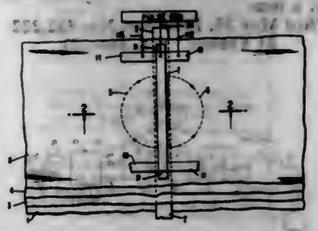
3. Apparatus for sorting information data recorded by spot magnetization of a magnetizable record carrier in the form of distinct data units each containing a plurality of character-representing data elements differentiated by their relative positions within the area occupied by the respective unit, each character-representing data element of a distinct data unit representing a different denominational order of said distinct data unit, comprising, in combination, first magnetizable record carrier means carrying a sequence of said data units erasably recorded thereon in areas of respectively corresponding unit length; first sensing means for sensing said data elements from said recorded data units, and for recording such data elements on said first record carrier means in replacement of previously recorded data elements; a plurality of second magnetizable record carrier means capable of having data erasably recorded thereon, said second record carrier means being respectively assigned to different sorting classifications; second sensing means for sensing recorded data elements from said second record carrier means and for recording such data elements on said second record carrier means in replacement of previously recorded data elements; first and second transportation means for respectively independently moving said first and second record carrier means relatively to said first and second sensing means, respectively, in steps corresponding to said respective unit lengths of recording areas; control storage means for storing character-representing data elements; transfer means connecting said first sensing means with said second sensing means for selectively transferring in an initial transfer operation character-representing data elements representing sorting of classification data from said first record carrier means to said control storage means, said transfer means including controllable gate means for permitting in a subsequent transfer operation the recording on said second record character means corresponding to said selected sorting classification of data units sensed from said first record carrier means, and for selectively transferring a first control signal stored in said control storage means from said control storage means to said second transportation means for controlling the operation of the latter; and selective control means for controlling the gate means of said transfer means by applying thereto a second control signal at a selected instant when any desired one of said character-representing data elements of any of the different denominational orders of said distinct data unit selected to serve as a classification data is sensed by said first sensing means from said first record carrier means, said selective control means including means for advancing said selective control means in synchronism with the sensing of consecutive ones of said character-representing data elements from said first record carrier, and setting means for causing said selective control means to produce said second control signal at said selected instant.

3,094,685

NON-DESTRUCTIVE READOUT SYSTEM

James W. Crowe, Hyde Park, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Sept. 30, 1957, Ser. No. 686,924
7 Claims. (Cl. 340—173.1)



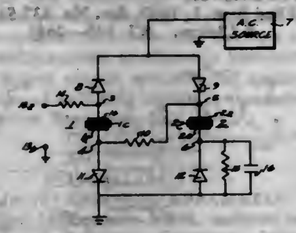
6. Means for non-destructively interrogating the binary state of a superconductive memory cell having a predetermined heat relaxation time and wherein the presence of a persistent current in said cell represents the storage of a first binary state and the absence of a persistent current represents the storage of its second binary state, comprising means for applying a magnetic field to said superconductive cell of sufficient magnitude to drive the latter to its resistive state when it is in its second binary state but of insufficient magnitude to drive said superconductive cell to its resistive state when it is in its first binary state, means for terminating said applied field at a time that is less than said heat relaxation time.

3,094,686

GATING CIRCUITS UTILIZING FERROELECTRIC CAPACITORS

Thomas R. Hoffman, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York

Filed Oct. 2, 1961, Ser. No. 142,085
6 Claims. (Cl. 340—173.2)



2. A gating circuit comprising first and second ferroelectric capacitors each having first and second remanent states, a source of alternating voltage having first alternate half cycles of a first polarity and second alternate half cycles of a second polarity, a first rectifier connecting said source to said first ferroelectric capacitor, said first rectifier being poled such that said first alternate half cycles switch said first ferroelectric capacitor into its first remanent state, a second rectifier connecting said source to said second ferroelectric capacitor, said second rectifier being poled such that said second alternate half cycles switch said second ferroelectric capacitor into its first remanent state, input means for switching said first ferroelectric capacitor to its second remanent state, means connecting said first and second ferroelectric capacitors whereby said second ferroelectric capacitor is switched from its first to its second remanent state in response to said first ferroelectric capacitor being switched from its second to its first remanent state, and means for providing an output signal from said second ferroelectric capacitor in response to said second ferroelectric capacitor being switched from its second to its first remanent state.

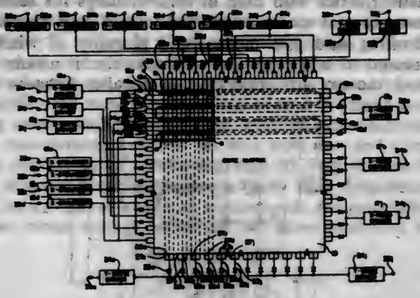
3,094,687

COMPOUND CASCADE TRANSISTOR MEMORY CIRCUIT DRIVER

Robert F. Archer, Clayton, Ohio, assignor to The National Cash Register Company, Dayton, Ohio, a corporation of Maryland

Filed Feb. 8, 1960, Ser. No. 7,318
5 Claims. (Cl. 340—174)

1. In a magnetic matrix system including a plurality of magnetic elements arranged in rows and columns, the combination comprising: a first plurality of coordinate selection coils each inductively coupled to all of the elements of a different column; a second plurality of coordinate selection coils each inductively coupled to all of the elements of a different row; sensing means inductively coupled to all of said elements; a first and a second transistor device each having an emitter electrode, a collector electrode, and a base electrode; means serially connecting the emitter electrode of said first transistor device with at least one of said coordinate selection coils; means connecting the collector electrode of each of said transistor devices to a common source of unidirectional operating current and to a source of reference potential through a diode device; means connecting the emitter electrode of said second transistor device with the base electrode of said first transistor device such that said first transistor device is caused to be conductive each time said second transistor device is rendered conductive;



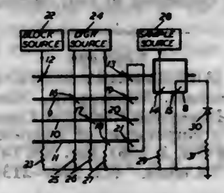
means to bias each of said transistor devices to a nonconducting state; and means connected to the base electrode of said second transistor device to selectively render said second transistor device conductive.

3,094,688

DECODING EQUIPMENT

Donald Robert Barber, London, England, assignor to International Standard Electric Corporation, New York, N.Y.

Filed Feb. 11, 1960, Ser. No. 8,056
Claims priority, application Great Britain Feb. 23, 1959
5 Claims. (Cl. 340—174)



1. An electric pulse decoder comprising a core of square-loop ferromagnetic material having two parallel holes passing therethrough, means for passing a current through a first winding threading the first hole in such manner as substantially to saturate all the magnetic material of the core, a source of a group of digit pulses representing an electrical sample, means for applying a current representing said group of digit pulses to a second winding threading said first hole to reverse the saturation flux of a ring of the material immediately surrounding said first hole, the width of said ring being substantially proportional to the magnitude of said sample and less than the shortest distance between the peripheries of said holes, means for applying a sampling signal to a first winding threading the second hole and means for deriving from a second winding threading said second hole an output pulse whose amplitude is substantially proportional to said magnitude.

3,094,689

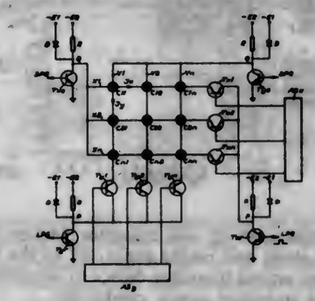
MAGNETIC CORE MEMORY CIRCUIT

Sven Erik Wahlström, Enskede, Sweden, assignor to Aktiebolaget Atvidaberga Industrier, Atvidaberg, Sweden, a joint-stock company of Sweden

Filed June 20, 1960, Ser. No. 37,318
Claims priority, application Sweden July 10, 1959
2 Claims. (Cl. 340—174)

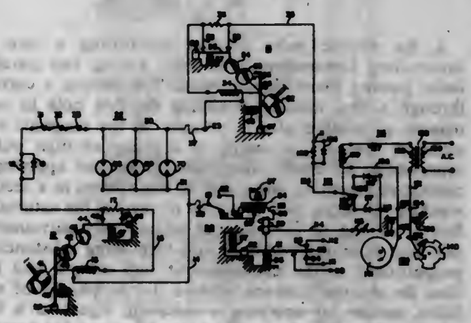
1. A magnetic core memory circuit comprising a plurality of groups of magnetic cores forming a matrix, each

core of which has a rectangular hysteresis loop, each group of cores in said array is connected to at least one common winding, normally closed gate circuit means connected in series with each of said windings for selecting a core, control means connected to said gate means for controlling said gate means, said plurality of windings connected to said cores and said gate circuit means connected thereto are connected in parallel between two



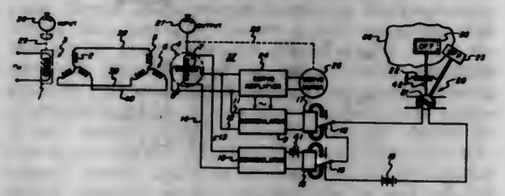
constant current sources each of which is normally short-circuited to a common potential by means of transistor switching means, one transistor means of which is cut off when setting the cores into one magnetic state while another transistor means is cut off when setting the cores into a reverse state, a constant current flowing from one current source to the other through a winding of a core selected by said control means, and non-selected windings being connected to said common potential.

3,094,690
SUPERVISORY SYSTEM
Russell L. Voorhees, Minneapolis, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Oct. 2, 1961, Ser. No. 142,221
7 Claims. (Cl. 340—213)



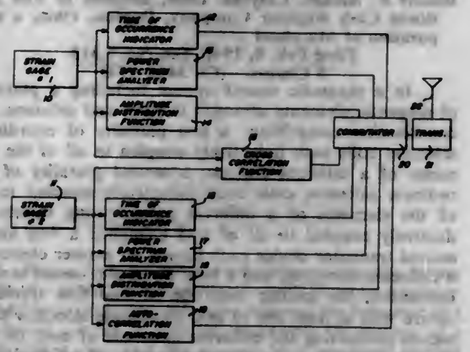
1. Circuit supervising apparatus comprising: a supervisory station having therein source voltage means, current reversing means, alarm actuating means, first impedance means and means for alternately shunting said first impedance means; a line to be supervised having therein second impedance means and means for alternately shunting said second impedance means; means connecting said line, said alarm actuating means, said current reversing means, said first impedance means and said second impedance means in series and across said source means; said impedance shunting means for said first impedance means and said impedance shunting means for said second impedance means being adapted to complementarily shunt their respective impedance means in a manner whereby the total impedance of the current loop remains substantially constant; and said alarm actuating means being sensitive to a deviation from a normal level of current flow and being adapted to actuate alarm means in the presence of an abnormal level of current flow.

3,094,691
FAILURE DETECTION MEANS FOR DATA TRANSMISSION SYSTEMS
Donal R. Treffeisen, Huntington Station, N.Y., assignor to Sperry Rand Corporation, Great Neck, N.Y., a corporation of Delaware
Filed Sept. 1, 1959, Ser. No. 837,514
8 Claims. (Cl. 340—268)



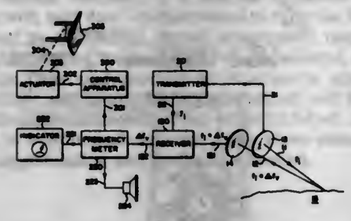
1. In a synchro data transmission system wherein the angular position of the primary synchro receiver coil is remotely synchronized with the angular position of a synchro transmitter member, means for detecting failures in said system, said means comprising an auxiliary synchro receiver coil coupled to said primary receiver coil in a fixed angular relationship, means for immersing said primary and said auxiliary coils in substantially the same alternating magnetic field whereby a predetermined maximum voltage is induced in said auxiliary coil by said alternating magnetic field only when synchronization has been achieved between said primary receiver coil and said transmitter member, a source of reference voltage having an amplitude substantially equal to that of said predetermined voltage, and means including said source for sensing decreases in the amplitude of the voltage induced in said auxiliary coil from the amplitude of said reference voltage.

3,094,692
STATISTICAL TELEMETERING
Arthur S. Westneat, Jr., Rocky Hill, and Enoch J. Durbin, Princeton, N.J., assignors, by mesne assignments, to Electro-Mechanical Research, Inc., Sarasota, Fla., a corporation of Connecticut
Filed Oct. 1, 1958, Ser. No. 764,566
17 Claims. (Cl. 340—345)



6. A system of telemetering comprising a transducer providing random data signals having a frequency spectrum extending over a relatively wide band with, a frequency scanning power spectrum analyzer having an input and an output terminal, and further having a scanning range extending entirely over and for every frequency of said relatively wide band width, said spectrum analyzer being arranged to provide relatively narrow band output signals at said output terminal in response to said wide band width spectrum of said data signals, said narrow band output signals containing substantially all the spectral informational content of said spectrum, means connecting said transducer to said input terminal, a multiple contact commutator, means connecting one contact of said commutator to said output terminal, and a radio link coupled to said commutator for transmitting to a remote location on a time division basis signals derivable from said commutator, said radio link having a relatively narrow band width capable of efficiently transmitting said narrow band output signals, whereby the spectral informational content of said data signals is transmitted over a relatively narrow band radio link.

3,094,693
VELOCITY SENSING APPARATUS
Daniel G. Taylor, Minneapolis, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Dec. 30, 1959, Ser. No. 862,932
2 Claims. (Cl. 343—7)



1. In combination: an earth-moving apparatus having tractive means to move said apparatus and having a movable earth working instrumentality to engage and to work the earth over which the apparatus moves; means for sensing the velocity of said apparatus with respect to the earth over which it moves having transmitter means and receiver means mounted upon said earth moving apparatus, said transmitter means including means directed downwardly toward the earth toward which said apparatus is moving and providing a signal of predetermined frequency which is directed toward the earth toward which said apparatus is moving, said receiver means including means directed downwardly toward the earth toward which said apparatus is moving to receive a reflected signal of varying frequency which is reflected from the earth toward which said apparatus is moving, and having further means connected to said receiver means and responsive to the difference between said signal of predetermined frequency and said reflected signal of varying frequency to provide a further signal proportional to the velocity of said earth moving apparatus; and means controlled by said further means to control the position of said earth working instrumentality.

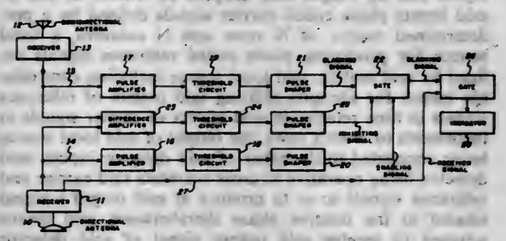
3,094,694
STROBE PAINTING DISPLAY SYSTEM FOR RADAR INDICATOR
John B. Beach, East Amherst, N.Y., assignor to Cornell Aeronautical Laboratory, Inc., Buffalo, N.Y., a corporation of New York
Filed Mar. 12, 1959, Ser. No. 799,052
10 Claims. (Cl. 343—11)

10. In radar apparatus, the combination comprising a PPI cathode ray tube, means for deflecting the electron beam of said tube, and means for time-sharing said beam between radar sweep presentation and stroke presentation and arranged to begin strobe presentation during dead time between radar sweep presentation and recurring at a substantially constant frequency, said time-sharing means including timing means operatively arranged to generate sequentially N pulses, N strobe generating means severally activated by said pulses and switching means arranged to connect the outputs of said stroke generating means to said beam deflection means, at least one of said N strobe generating means being arranged to generate an electronic strobe representing a vector on said indicator and comprising multivibrator means actuated by one of said N pulses and arranged to produce a delay time determined by the magnitude of a voltage input, means for generating a linear sweep voltage following the delay produced by



said multivibrator means, comparator trigger means to which said sweep voltage is fed and to which is also fed strobe vector amplitude voltage, said comparator trigger means generating a blanking pulse supplied to said indicator when said vector magnitude voltage equals that of the sweep voltage, and resolver means to which the sweep voltage is fed and to which is also fed strobe vector direction information and to which is also fed strobe vector position coordinate information, the delay of strobe sweep producing a dot at one end of the strobe vector displayed on said indicator and representing position and the output of said resolver means representing the direction of the strobe vector and the length of the strobe vector representing its magnitude and being controlled by the magnitude of said vector amplitude voltage.

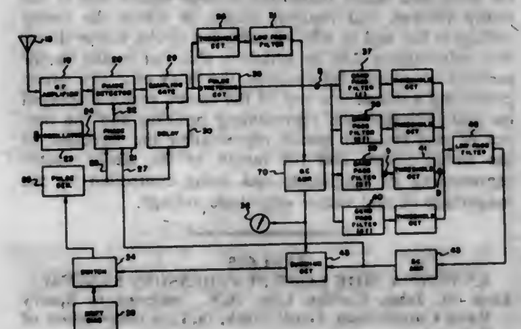
3,094,695
ANTENNA SIDE LOBE SUPPRESSION SYSTEM
Dale M. Jahn, Garden City, N.Y., assignor to Sperry Rand Corporation, Great Neck, N.Y., a corporation of Delaware
Filed Mar. 23, 1960, Ser. No. 16,983
5 Claims. (Cl. 343—100)



1. In a directional antenna system means for suppressing side-lobe signals comprising a directional receiving antenna having a directional pattern including a main beam and a side lobe, an omnidirectional receiving antenna, receiving means for deriving a signal in response to electromagnetic waves received by said directional antenna, receiving means for deriving a signal in response to electromagnetic waves received by said omnidirectional antenna, the signal gain of said omnidirectional antenna and receiver combination being substantially equal to the side lobe signal gain of said directional antenna and receiver combination, an indicator means for providing an indication of signals coupled thereto, separate means for coupling received signals from said directional antenna to said indicator means, normally closed switching means for coupling said received directional antenna signals to said indicator means, means for controlling

said switching means, means for producing blanking signals in response to signals received from said omnidirectional antenna, means for producing enabling signals in response to signals received from said directional antenna, means for producing an inhibiting signal whenever the magnitude of signals from said directional antenna exceeds by a predetermined amount the magnitude of signals simultaneously received from said omnidirectional antenna, means for coupling said blanking, enabling and inhibiting signals to said controlling means, said controlling means operating in response to said three last-named signals coupled thereto to block the passage of received signals from said directional antenna to said indicator means when only blanking and enabling signals occur simultaneously and operating to permit the coupling of said received signals from said directional antenna to said indicator means when an inhibiting signal occurs.

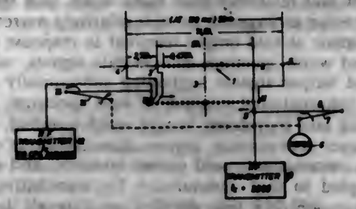
3,094,696
PHASE CODER ALIGNMENT SYSTEM
Solomon Zadoff, Flushing, N.Y., assignor to Sperry Rand Corporation, a corporation of Delaware
Filed Apr. 24, 1957, Ser. No. 654,969
16 Claims. (Cl. 343—103)



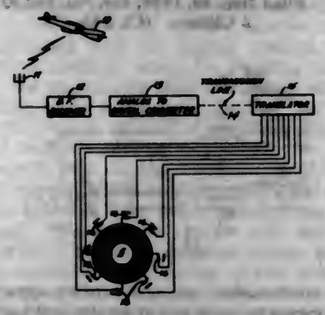
15. In combination, signal detecting means having two inputs and an output and adapted to receive at one of said inputs phase coded carrier signals defined by a predetermined matrix of N rows and N columns, a local source for producing phase coded reference signals defined by said matrix, said local source including controllable means for abruptly shifting said matrix of reference signals in time relative to said matrix of carrier signals in increments of matrix rows, the output of said local source being connected to the other of said detector inputs, said detector being operative to cross-correlate said carrier and reference signals so as to produce at said output a signal related to the relative phase therebetween, and means adapted to receive said output signal of said detector means for sensing the presence of harmonically related frequency components thereof.

3,094,697
FREQUENCY MODULATED APPROACH BEACON
Ernst Kramar and Fritz Steiner, both of Pforzheim, Germany, assignors to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware
Filed Apr. 18, 1961, Ser. No. 103,085
Claims priority, application Germany Apr. 27, 1960
8 Claims. (Cl. 343—106)

1. A Doppler VOR beacon having a frequency deviation directional pattern to produce an aircraft landing path comprising a plurality of antennas disposed in a linear array, a first transmitter having an output of a first frequency, a second transmitter having an output of a second frequency, switching means coupling the output of said first and second transmitter successively and cyclically to each said antenna, said output of said first transmitter being amplitude modulated at the switching frequency, whereby said switching means simulate an antenna motion to produce said frequency deviation directional pattern.



3,094,698
AIR TRAFFIC DISPLAY SYSTEM
Andre Sunnen, Montclair, N.J., assignor to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware
Filed Dec. 29, 1960, Ser. No. 79,354
5 Claims. (Cl. 343—112)

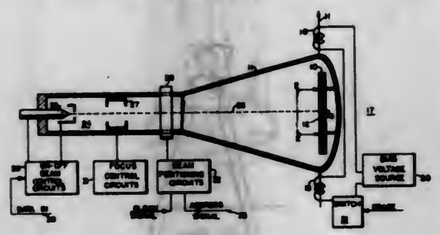


2. In an air traffic control arrangement having a plurality of receiving systems arranged at predetermined points responsive to radiant energy transmitted from a craft indicative of the azimuth of said craft, the combination comprising means at each point for receiving said radiant energy, means coupled to said receiver for converting said received energy into a code having a plurality of code elements, an indicator system coupled to said converting means, said indicator system comprising a plurality of concentrically arranged cylinders, there being one cylinder per code element, each of said cylinders having a predetermined code pattern of opaque and transparent elements, said pattern being designed to provide a different registration of transparent elements for each angular position of said craft, a source of radiant energy positioned within said cylinders, means for selectively and angularly displacing said cylinders respectively in accordance with the corresponding code elements to a registration position of said transparent elements whereby energy from said source will be transmitted therethrough in a direction corresponding to the angular position of said craft.

3,094,699
SYSTEM FOR MAGNETICALLY RECORDING DATA
Edward J. Supernowicz, Santa Clara County, Calif., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Mar. 3, 1959, Ser. No. 796,893
6 Claims. (Cl. 346—74)

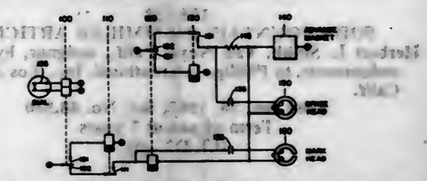
5. A storage unit for binary data representations comprising a plurality of spaced storage elements each of

which includes a film of magnetic material, said material having a preferred direction of magnetization which is stable below the Curie point of the material and a transverse unpreferred direction which is stable in a first temperature range and unstable in a second temperature range, said second range being between said first range and said Curie point, a bias means associated with said elements and adapted when energized to provide an external magnetic field having an axis parallel to said unpreferred direction to magnetize said material in said unpreferred direction, means for subjecting selected ones of said storage elements to a thermal condition in accordance with said data representation to raise the temperature thereof to within said second temperature range to cause the direction of magnetization of the selected elements to change from said unpreferred direction to said preferred direction, and means for testing each of said elements individually to distinguish those elements which are magnetized in unpreferred direction from those elements which are magnetized in said preferred direction.

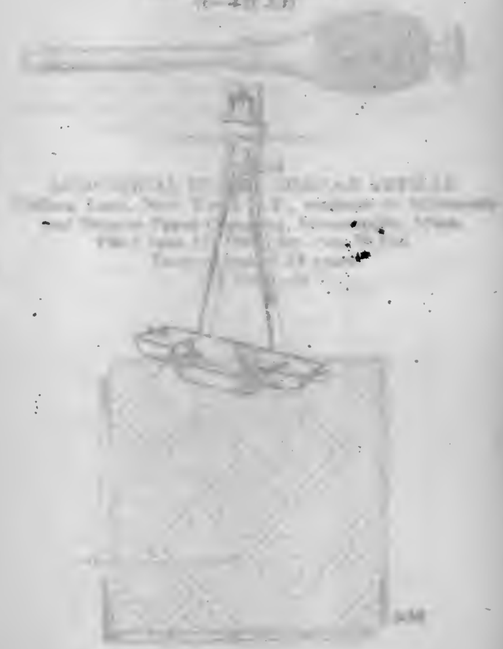




3,094,700
RECORDING CONTROL CIRCUIT
William H. Berch, Penfield, and Ben A. Harris, Rochester, N.Y., assignors to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware
Filed Nov. 23, 1959, Ser. No. 854,667
2 Claims. (Cl. 346—74)



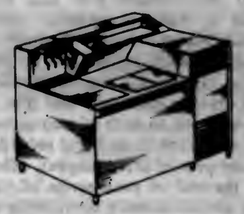
1. In a system for recording digital information on a magnetic medium comprising first and second channels, a drive magnet adapted to advance the magnetic medium in discrete increments, a source of electrical signals representing digital information, first and second recording heads adapted to make a magnetic recording on said medium in said first and second channels, respectively, in response to said electrical signals, circuit means responsive to each of said signals for simultaneously completing a circuit to said drive magnet and said first recording head, means also responsive to each of said signals for terminating the flow of current in said first recording head during the operate time of said drive magnet, other circuit means responsive to the end of each series of signals representing a digit for simultaneously completing a circuit to said drive magnet and said second recording head, and means also responsive to the end of each series of signals representing a digit for terminating the flow of current in said second recording head prior to the operation of said drive magnet whereby said recordings are made while the magnetic medium is stationary.



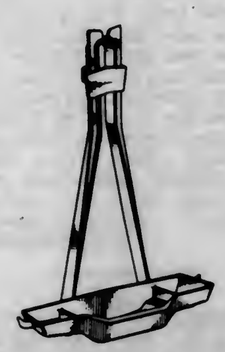
DESIGNS

JUNE 18, 1963

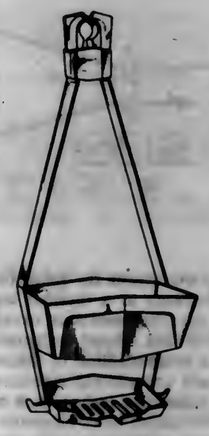
195,450
SODA FOUNTAIN OR SIMILAR ARTICLE
Herbert L. Smith, Van Nuys, Calif., assignor, by mesne assignments, to Phillips International, Inc., Los Angeles, Calif.
Filed Jan. 30, 1962, Ser. No. 68,580
Term of patent 7 years
(Cl. D2—3)



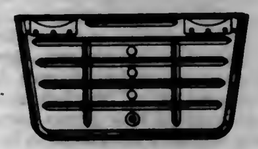
195,451
HANGING RECEPTACLE FOR BATH ARTICLES
Josef J. Bernay, 1138 S. Point View, Los Angeles, Calif.
Filed May 10, 1961, Ser. No. 65,106
Term of patent 14 years
(Cl. D4—3)



195,452
HANGING RECEPTACLE FOR BATH ARTICLES
Josef J. Bernay, 1138 S. Point View, Los Angeles, Calif.
Filed May 10, 1961, Ser. No. 65,107
Term of patent 14 years
(Cl. D4—3)



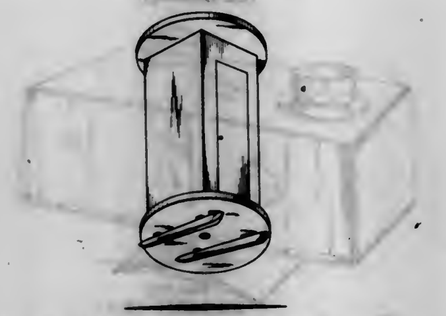
195,453
SITZ BATH
Charles F. Reavis, 1455 Norton St., Oroville, Calif.
Filed Jan. 30, 1961, Ser. No. 63,762
Term of patent 14 years
(Cl. D4—4)



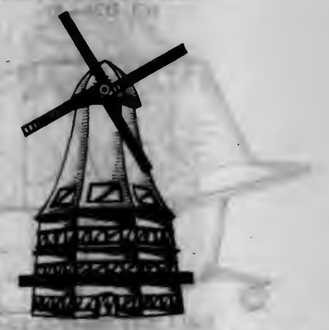
195,454
SLIPPER SOCK
Robert S. Servin, Jenkintown, Pa., assignor to Robert Hosiery Mills, Inc., Trappe, Pa., a corporation of Pennsylvania
Filed May 29, 1962, Ser. No. 70,346
Term of patent 14 years
(Cl. D7—7)



195,455
PORTABLE CABIN
John H. Ryan, 17 Fernaleroy Blvd., Toronto, Ontario, Canada
Filed Mar. 12, 1962, Ser. No. 69,231
Term of patent 14 years
(Cl. D13—1)



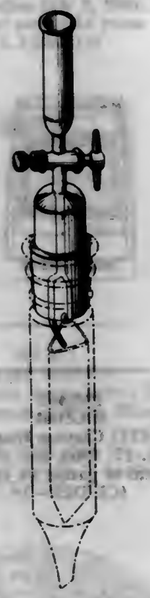
195,456
BUILDING
August C. Schoenfeld, 45555 Michigan Ave., Belleville, Mich.
Filed May 14, 1962, Ser. No. 70,109
Term of patent 14 years
(Cl. D13—1)



195,457
THERAPEUTIC CHAIR
Willard S. Ingram, 8428 Sagamore Road, Leawood, Kans., and Samuel P. Wallis, Jr., 1735 Tulane St., Shreveport, La.
Filed Jan. 2, 1962, Ser. No. 68,134
Term of patent 14 years
(Cl. D15—3)



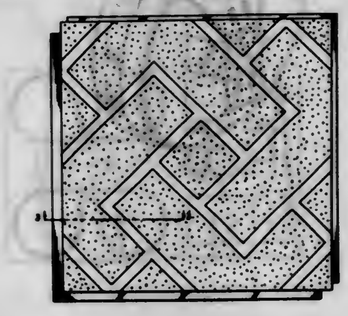
195,458
BURETTE UNIT FOR THE ELUTION OF CHEMICAL SUBSTANCES FROM PAPER
Joseph Kopp, 70—13 35th Road, Jackson Heights, N.Y.
Filed Mar. 26, 1962, Ser. No. 69,498
Term of patent 14 years
(Cl. D16—1)



195,459
FIRE EXTINGUISHER OR SIMILAR ARTICLE
Oscar Doster, 49 Brixham Terrace, Toronto, Ontario, Canada
Filed July 2, 1962, Ser. No. 70,772
Term of patent 14 years
(Cl. D16—2)



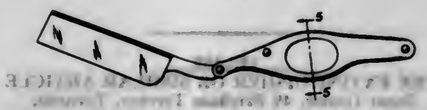
195,460
ACOUSTICAL TILE OR SIMILAR ARTICLE
Wallace Lanz, New York, N.Y., assignor to Minnesota and Ontario Paper Company, Minneapolis, Minn.
Filed June 12, 1962, Ser. No. 70,516
Term of patent 14 years
(Cl. D18—2)



195,461
SHAVER
Raymond T. Cassidy, 45 Federal St., Stratford Town, Conn.
Filed Feb. 5, 1962, Ser. No. 68,666
Term of patent 14 years
(Cl. D22—3)



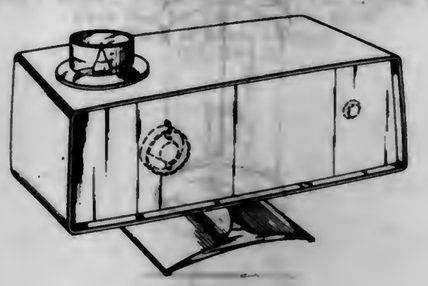
195,462
RAZOR
Sam M. Bassel, 8221 Clayton Road, St. Louis, Mo.
Filed Oct. 12, 1962, Ser. No. 72,084
Term of patent 14 years
(Cl. D22—3)



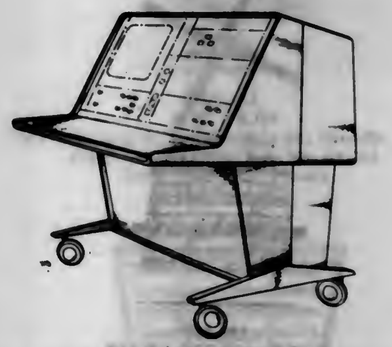
195,463
PORTABLE ELECTRICAL OUTLET CORD REEL
Bernard J. Tamaria, Whitemarsh, Pa.
(W. Valley Green Road and Hunt Lane, Flourtown, Pa.)
Filed July 7, 1960, Ser. No. 61,263
Term of patent 14 years
(Cl. D26—1)



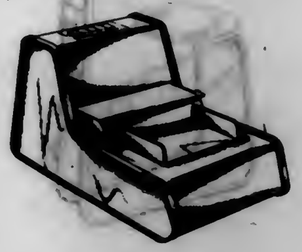
195,464
ION GENERATOR
Thomas H. Foster, Jr., Williamstown Township, Chester County, and Harper Landell, Ambler, Pa., assignors, by mesne assignments, to Philco Corporation, Philadelphia, Pa., a corporation of Delaware
Filed July 26, 1961, Ser. No. 66,076
Term of patent 7 years
(Cl. D26—1)



195,465
MOBILE INSTRUMENT CONSOLE
James R. Belknap, Syracuse, N.Y., assignor to Beckman Instruments Inc., a corporation of California
Filed June 13, 1962, Ser. No. 70,526
Term of patent 14 years
(Cl. D26—5)



195,466
TEST SCORING MACHINE
Edwin S. Elste, 2240 Washington Ave., Silver Spring, Md.; John F. Kellogg, 8301 Meadowlark Lane, Bethesda, Md.; and John D. O'Neale, 510 S. Walter Reed Drive, Bethesda, Md.
Filed Oct. 19, 1962, Ser. No. 72,198
Term of patent 14 years
(Cl. D26—5)



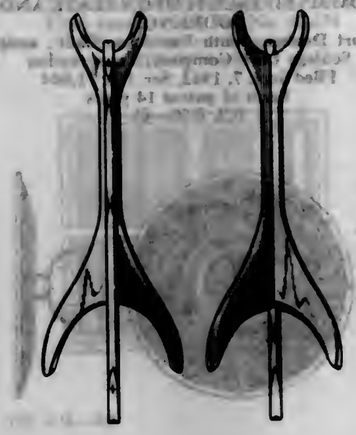
195,467
ELECTRICAL SWITCH OR SIMILAR ARTICLE
Montague Richard Duval, Rehoboth, Mass., assignor to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware
Filed Sept. 28, 1961, Ser. No. 66,893
Term of patent 14 years
(Cl. D26—13)



195,468
KEY HOLDER
Agnes V. Rust, 3318 1st St. S., Jacksonville Beach, Fla.
Filed Oct. 25, 1962, Ser. No. 72,260
Term of patent 14 years
(Cl. D29—23)



195,469
COAT STAND OR THE LIKE
Charles H. Dunaway, 16924 Ave. B, Channelview, Tex.
Filed Aug. 23, 1962, Ser. No. 71,430
Term of patent 14 years
(Cl. D33—8)



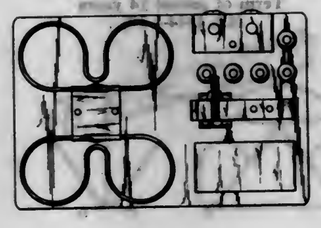
195,470
FILE DRAWER FACE PANEL
Florence S. Knoll, New York, N.Y., assignor to Knoll Associates, Inc., New York, N.Y., a corporation of New York
Original design application Feb. 18, 1960, Ser. No. 59,437, now Patent No. D. 191,273, dated Sept. 5, 1961. Divided and this application July 3, 1961, Ser. No. 65,796
Term of patent 14 years
(Cl. D33—19)



195,471
GAME BOARD
Phillip Everly, 888 Forest Acres Drive, Nashville, Tenn., and Thomas L. Garrett, 14938 Moorpark, Sherman Oaks, Calif.
Filed May 12, 1961, Ser. No. 65,148
Term of patent 14 years
(Cl. D34—5)



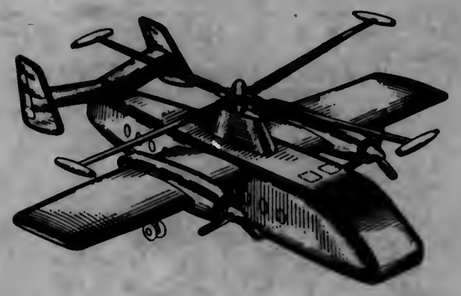
195,472
TRAY ATTACHMENT FOR A GOLF CART
Mildred G. Zimmers, Chicago, Ill., assignor to Parway Mfg. Co., Inc., Chicago, Ill., a corporation of Illinois
Filed Jan. 2, 1963, Ser. No. 73,027
Term of patent 14 years
(Cl. D34—5)



195,473
RIDING VEHICLE FRAME
Samuel P. Hundley, 1512 W. Springfield Ave., Champaign, Ill.
Filed Apr. 28, 1961, Ser. No. 64,938
Term of patent 14 years
(Cl. D34—15)



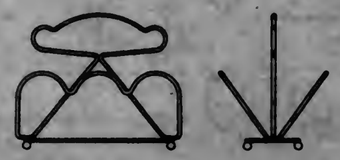
195,474
TOY HELICOPTER
Allan J. Alvaney, Arlington Heights, Ill., assignor to Sears, Roebuck and Co., Chicago, Ill., a corporation of New York
Filed June 22, 1962, Ser. No. 70,715
Term of patent 3½ years
(Cl. D34—15)



195,475
PIE TRAY OR THE LIKE
James B. Swett, Barrington, R.I., assignor to Rexall Drug and Chemical Company, Los Angeles, Calif., a corporation of Delaware
Filed Mar. 7, 1962, Ser. No. 69,123
Term of patent 14 years
(Cl. D44—10)



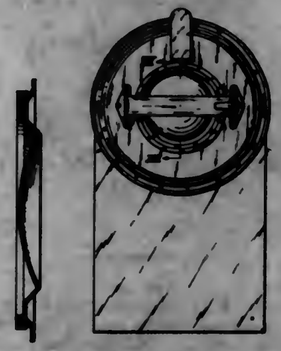
195,476
BEVERAGE CADDY
Kurt E. Christoffersen, Gales Ferry, Conn., assignor to Artistic Wire Products Co. of Conn., Incorporated, Norwich, Conn., a corporation of Connecticut
Filed Mar. 27, 1962, Ser. No. 69,451
Term of patent 14 years
(Cl. D44—10)



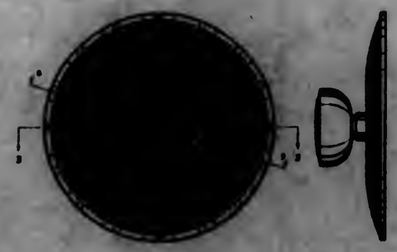
195,477
COFFEE PERCOLATOR
Ross E. Cornwell, Chicago, Ill., assignor to Sunbeam Corporation, Chicago, Ill., a corporation of Illinois
Filed Jan. 16, 1963, Ser. No. 73,194
Term of patent 14 years
(Cl. D44—26)



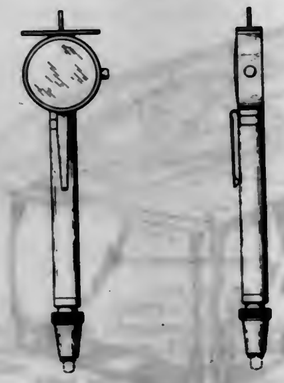
195,478
DRY CLEANING MACHINE
Adolph B. Habich, Bowling Green, Ky., assignor to Detrex Chemical Industries, Inc., Detroit, Mich., a corporation of Michigan
Filed Oct. 19, 1961, Ser. No. 67,232
Term of patent 14 years
(Cl. D49—1)



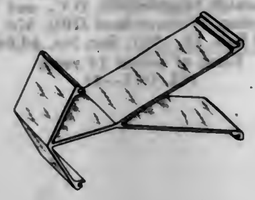
195,479
COMBINED ESCUTCHEON PLATE AND DOORKNOB
Roy Stuart Dunker, South Pasadena, Calif., assignor to Schlage Lock Company, a corporation
Filed Sept. 7, 1962, Ser. No. 71,604
Term of patent 14 years
(Cl. D50—6)



195,480
COMBINED TIRE TREAD DEPTH GAUGE AND MARKER
Thomas A. Tegen, 720 Coolidge St., Westfield, N.J.
Filed Nov. 3, 1961, Ser. No. 67,370
Term of patent 14 years
(Cl. D52—6)



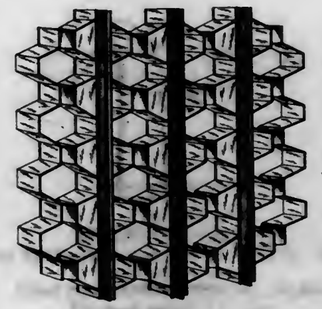
195,481
SPACING UNIT FOR A GRILLE
Edward C. Hallock, 86 Woodland Ave., Summit, N.J.
Filed Apr. 29, 1960, Ser. No. 60,383
Term of patent 14 years
(Cl. D54—2)



195,482
GRILLE
Edward C. Hallock, 86 Woodland Ave., Summit, N.J.
Filed June 8, 1960, Ser. No. 60,876
Term of patent 14 years
(Cl. D54—2)



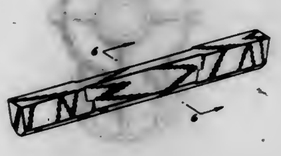
195,483
GRILLE
Edward C. Hallock, 86 Woodland Ave., Summit, N.J.
Filed Apr. 25, 1962, Ser. No. 69,850
Term of patent 14 years
(Cl. D54—2)



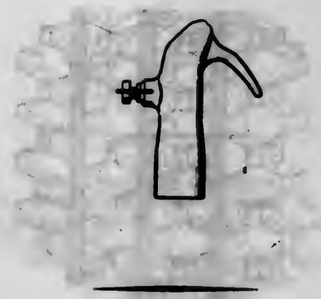
195,484
TRELLIS
Max S. Klein, Detroit, Mich., assignor to Max Klein, Inc., Ferndale, Mich., a corporation of Michigan
Filed Aug. 28, 1962, Ser. No. 71,472
Term of patent 14 years
(Cl. D54—2)



195,485
CUTTING TOOL
Raymond E. Novkov, 1730 17th St., Cuyahoga Falls, Ohio
Filed Apr. 14, 1961, Ser. No. 64,732
Term of patent 14 years
(Cl. D54—13)



195,486
AIR NOZZLE
Theodore Penkoff, 1 John St., Massapequa, N.Y.
Filed Feb. 28, 1962, Ser. No. 69,826
Term of patent 14 years
(Cl. D62—2)



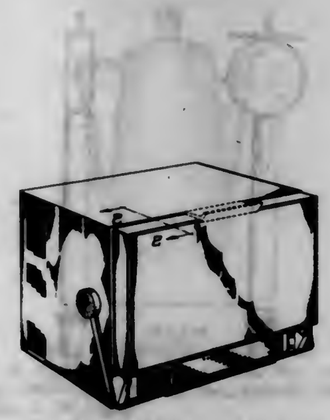
195,487
COOLING TOWER
John L. Goldsmith, Houston, Tex., assignor to Hudson Engineering Corporation, Houston, Tex., a corporation of Texas
Filed Nov. 7, 1961, Ser. No. 67,407
Term of patent 14 years
(Cl. D62—4)



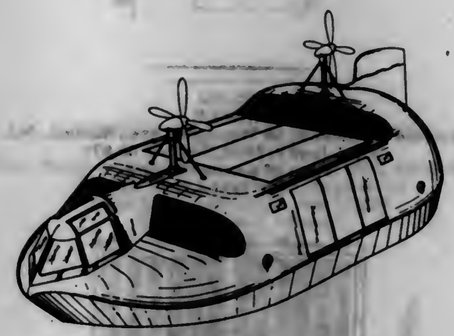
195,488
TRANSMISSION HOUSING FOR CENTRIFUGAL PUMPS
Harry J. Sadler, Minneapolis, Minn., assignor to Hypro Engineering, Inc., Minneapolis, Minn., a corporation of Minnesota
Filed Oct. 29, 1962, Ser. No. 72,290
Term of patent 14 years
(Cl. D65—1)



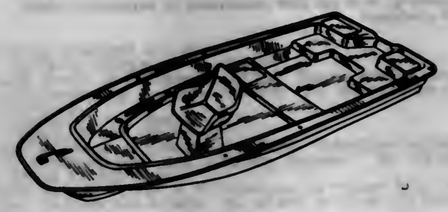
195,489
PORTABLE BEVERAGE COOLER
Benton Dales, Covert, and Kenneth W. Duesenberg, St. Joseph, Mich., assignors to Whirlpool Corporation, a corporation of Delaware
Filed Mar. 5, 1962, Ser. No. 69,066
Term of patent 14 years
(Cl. D67—4)



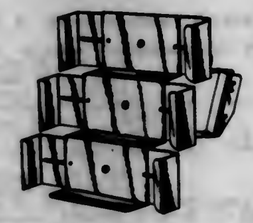
195,490
AMPHIBIOUS GROUND EFFECT MACHINE
Gabriel D. Boehler, Washington, D.C., and William F. Foshag, Westmorland Hills, Md.
Filed Feb. 24, 1961, Ser. No. 64,040
Term of patent 14 years
(Cl. D71—1)



195,491
BOAT
David D. Beach, % McCulloch Corp., 2700 Winter St. NE., Minneapolis, Minn., and Kurt B. Boehm, 4761 W. Toughy Ave., Chicago, Ill.
Filed Dec. 26, 1961, Ser. No. 68,072
Term of patent 14 years
(Cl. D71—1)



195,492
DISPLAY RACK
Leonard J. Beune, Cleveland, Ohio, assignor to American Greetings Corporation, Cleveland, Ohio, a corporation of Ohio
Filed July 23, 1962, Ser. No. 71,012
Term of patent 14 years
(Cl. D60—9)



195,493
CHARCOAL FIRE EXTINGUISHER
Jerome P. Homola, 2215 Earl Lane, South St. Paul, Minn.
Filed Dec. 7, 1962, Ser. No. 72,771
Term of patent 14 years
(Cl. D81—10)



195,494
FIREPLACE GRATE
James Hollis Buchanan Albert, 1601 W. 41st St., Baltimore, Md.
Filed Apr. 19, 1961, Ser. No. 64,822
Term of patent 14 years
(Cl. D81—18)





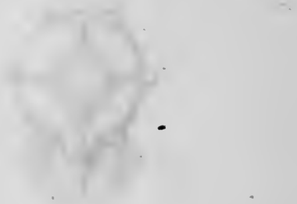












LIST OF REISSUE PATENTEES

TO WHOM

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NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

American Cyanamid Co.: *See*—
Mallison, William C. Re. 25,395.

Clynch, Frank, to Continental Oil Co. System for anchoring and transporting a seismic vibrator. Re. 25,401, 6–18–63, Cl. 181—.5.

Continental Oil Co.: *See*—
Clynch, Frank. Re. 25,401.

Doying Ernest G., to Union Carbide Corp. Adsorbent briquets for combined odor and moisture removal. Re. 25,400, 6–18–63, Cl. 252—426.

Graber, Joseph V., and F. F. Salzmann, to Graber Mfg. Co., Inc. Drapery rod fixture. Re. 25,399, 6–18–63, Cl. 160—346.

Graber Mfg. Co., Inc.: *See*—
Graber, Joseph V., and Salzmann. Re. 25,399.

Lyon, George A., to Lyon Inc. Wheel cover. Re. 25,397, 6–18–63, Cl. 301—37.

Lyon Inc.: *See*—
Lyon, George A. Re. 25,397.

Mallison, William C., to American Cyanamid Co. Process for blending a hot polyester resin and polymerizable solvent Re. 25,395, 6–18–63, Cl. 260—45.4.

Moran, Harold J., to Switlik Parachute Co., Inc. Inflatable life preserver. Re. 25,398, 6–18–63, Cl. 9—340.

Myerberg, Michael. Make-up mirror. Re. 25,402, 6–18–63, Cl. 240—4.1.

Richards, Richard K. Cryotron logic circuit. Re. 25,403, 6–18–63, Cl. 307—88.5.

Salzmann, Ferdinand F.: *See*—
Graber, Joseph V., and Salzmann. Re. 25,399.

Switlik Parachute Co., Inc.: *See*—
Moran, Harold J. Re. 25,398.

Union Carbide Corp.: *See*—
Doying, Ernest G. Re. 25,400.

Weinschel, Bruno O., to Weinschel Engineering Co., Inc. Voltage ratio meter for high-frequency calibration system. Re. 25,396, 6–18–63, Cl. 324—58.

Weinschel Engineering Co., Inc.: *See*—
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Wellnitz, Harry A. Control system for a concrete block forming machine. Re. 25,404, 6–18–63, Cl. 25—41.

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Bassel, Sam M. Razor. 195,482, 6–18–63, Cl. D22—3.

Beach, David D., and K. B. Boehm. Boat. 195,491, 6–18–63, Cl. D71—1.

Beckman Instruments Inc.: *See*—
Belknap, James R. 195,485.

Belknap, James R., to Beckman Instruments Inc. Mobile instrument console. 195,485, 6–18–63, Cl. D26—5.

Benne, Leonard J., to American Greetings Corp. Display rack. 195,492, 6–18–63 Cl. D60—9.

Bernay, Josef J. Hanging receptacle for bath articles. 195,481, 6–18–63, Cl. D4—3.

Bernay, Josef J. Hanging receptacle for bath articles. 195,482, 6–18–63, Cl. D4—3.

Boehler, Gabriel D., and W. F. Foshag. Amphibious ground effect machine. 195,490, 6–18–63, Cl. D71—1.

Cassidy, Raymond T. Shaver. 195,481, 6–18–63, Cl. D22—3.

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Cornwell, Ross E., to Sunbeam Corp. Coffee percolator. 195,477, 6–18–63, Cl. D44—26.

Dales, Benton, and K. W. Duesenberg, to Whirlpool Corp. Portable beverage cooler. 195,489, 6–18–63, Cl. D67—4.

Denker, Roy S., to Schlage Lock Co. Combined escutcheon plate and doorknob. 195,479, 6–18–63, Cl. D50—6.

Detrex Chemical Industries, Inc.: *See*—
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Doster, Oscar. Fire extinguisher or similar article. 195,459, 6–18–63, Cl. D16—2.

Dunaway, Charles H. Coat stand or the like. 195,469, 6–18–63, Cl. D32—8.

Duval, Montague R., to Texas Instruments Inc. Electrical switch or similar article. 195,467, 6–18–63, Cl. D26—13.

Elste, Edwin S., J. F. Kellogg, and J. D. O'Neale. Test scoring machine. 195,466, 6–18–63, Cl. D26—5.

Everly, Phillip, and T. L. Garrett. Game board. 195,471, 6–18–63, Cl. D34—5.

Foster, Thomas H., Jr., and H. Landell, to Philco Corp. Ion generator. 195,464, 6–18–63, Cl. D26—1.

Habich, Adolph B., to Detrex Chemical Industries, Inc. Dry cleaning machine. 195,478, 6–18–63, Cl. D49—1.

Hallock, Edward C. Spacing unit for a grille. 195,481, 6–18–63, Cl. D54—2.

Hallock, Edward C. Grille. 195,482, 6–18–63, Cl. D54—2.

Hallock, Edward C. Grille. 195,483, 6–18–63, Cl. D54—2.

Homola, Jerome F. Charcoal fire extinguisher. 195,493, 6–18–63, Cl. D61—10.

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Hundley, Samuel P. Riding vehicle frame. 195,473, 6–18–63, Cl. D34—15.

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Knoll, Florence S., to Knoll Associates, Inc. File drawer face panel. 195,470, 6–18–63, Cl. D32—19.

Kopp, Joseph. Burette unit for the elution of chemical substances from paper. 195,458, 6–18–63, Cl. D16—1.

Lanz, Wallace, to Minnesota and Ontario Paper Co. Acoustical tile or similar article. 195,460, 6–18–63, Cl. D18—2.

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Novkov, Raymond E. Cutting tool. 195,485, 6–18–63, Cl. D54—13.

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Zimmers, Mildred G. 195,472.

Penkoff, Theodore. Air nozzle. 195,486, 6–18–63, Cl. D62—2.

Philco Corp.: *See*—
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Reavis, Charles F. Sits bath. 195,453, 6–18–63, Cl. D4—4.

Rexall Drug and Chemical Co.: *See*—
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Robert Hosiery Mills, Inc.: *See*—
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Rust, Agnes V. Key holder. 195,468, 6–18–63, Cl. D29—23.

Ryan, John H. Portable cabin. 195,455, 6–18–63, Cl. D13—1.

Sadler, Harry J., to Hypro Engineering, Inc. Transmission housing for centrifugal pumps. 195,488, 6–18–63, Cl. D65—1.

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Schoenfeld, August C. Building. 195,456, 6–18–63, Cl. D13—1.

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Smith, Herbert L., to Phillips International, Inc. Soda fountain or similar article. 195,450, 6–18–63, Cl. D2—6.

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Tamarin, Bernard J. Portable electrical outlet cord reel. 195,463, 6–18–63, Cl. D26—1.

Tegen, Thomas A. Combined tire tread depth gauge and marker. 195,460, 6–18–63, Cl. D62—6.

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TO WHOM

PATENTS WERE ISSUED ON THE 18TH DAY OF JUNE, 1963

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Adams, Harold R. H., to The British Oxygen Co. Ltd. Die casting and moulding machine. 3,093,871, 6-18-63, Cl. 22—68.

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Vistain, James E., Jr. 3,094,332.

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Agfa Aktiengesellschaft: *See*—
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Ajax Hardware Mfg. Corp.: *See*—
Fremstad, Vilas K., and Gorton. 3,094,363.

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Aldredge, Howard D. and R. L., to Container Service Co., Inc. Latch mechanism. 3,094,236, 6-18-63, Cl. 217—60.

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Alexander, Raymond, F. A. Schupan, and J. Abbott, to The Kendall Co. Method of severing web material at predetermined locations. 3,094,027, 6-18-63, Cl. 83—37.

Alfieri, Giuseppe, to Fabbrica Italiana Magneti Marelli S.p.A. Pneumatic suspension device. 3,094,341, 6-18-63, Cl. 280—124.

Allen, James F., and H. K. Latourette, to FMC Corp. Novel chlorinated ethyl sulfones. 3,094,455, 6-18-63, Cl. 167—22.

Alley, Thomas R. Circulating valve. 3,094,307, 6-18-63, Cl. 251—297.

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Wills, Marvin, and Allis. 3,094,263.

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Amchem Products, Inc.: *See*—
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American Brake Shoe Co.: *See*—
Renick, Wendell E. 3,093,892.

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American Meter Co., Inc.: *See*—
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American Monarch Corp.: *See*—
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American Optical Co.: *See*—
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American Radiator & Standard Sanitary Corp.: *See*—
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Anaconda Wire and Cable Co.: *See*—
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Anderson, Arnold E.: *See*—
Janis, Zbigniew J., and Anderson. 3,094,203.

Anderson, Arthur A., to Minnesota Mining and Mfg. Co. Adhesive tape dispenser. 3,094,260, 6-18-63, Cl. 225—104.

Andis Clipper Co.: *See*—
Andis, Mathew. 3,093,902.

Andis, Mathew, to Andis Clipper Co. Hair clipper shear blade assembly. 3,093,902, 6-18-63, Cl. 30—225.

Angioletti, Attilio, to Pirelli S.p.A. Apparatus for producing rubber gloves. 3,093,866, 6-18-63, Cl. 18—42.

Andrew, Vaughan L., to Duplex Mfg. Co. Pump control pressure switch with automatic air supply system. 3,094,073, 6-18-63, Cl. 103—6.

Andrews, Dallas B., and J. B. Kelly, to Radio Corp. of America. Coupling mechanism. 3,093,964, 6-18-63, Cl. 64—29.

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Patchett, Arthur A., Arth, and Schwam. 3,094,522.

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Ashby, Eugene C., to Ethyl Corp. Process for the preparation of amine-borane complexes. 3,094,562, 6-18-63, Cl. 260—583.

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Barta, Henry J., to S & C Electric Co. Fuse construction for operation by an auxiliary circuit interrupter. 3,094,597, 6-18-63, Cl. 200—114.

Bartl, Hugo, and R. Fesca, to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning. Process for printing of textile material. 3,094,360, 6-18-63, Cl. 8—65.

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Beach, T. Arnold. Combination expansion tank valve. 3,094,143, 6-18-63, Cl. 137—586.

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Beasley, Willis E. Bed having removable side and end panels. 3,093,838, 6-18-63, Cl. 5—331.

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Beckman, John H., to Union Carbide Corp. Vacuum insulated storage tanks for missile use. 3,094,071, 6-18-63, Cl. 102—49.

Beerbower, Alan, and J. L. Murray, to Esso Research and Engineering Co. Radiation resistant mineral oils. 3,094,468, 6-18-63, Cl. 252—51.5.

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Bensing, Jacob M.: *See*—
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Berch, William H., and B. A. Harris, to General Dynamics Corp. Recording control circuit. 3,094,700, 6-18-63, Cl. 346—74.

Berck, William F., to Ralph N. Brodie Co. Valve control mechanism. 3,094,004, 6-18-63, Cl. 74—2.

Berends, Wouter: *See*—
Mager, Humphrey I. X., Berends, and Schut. 3,094,530.

Berggren, Lars: *See*—
Dahle, Orvar, and Berggren. 3,093,999.

Bergstrasser, Georg, to Telefonbau und Normalzeit G.m.b.H. Manually operated generators for telephone service. 3,094,637, 6-18-63, Cl. 310—69.

Berkeley, Peter ., Jr.: *See*—
Martsweiller, Joseph K., Robbins, and Berkeley. 3,094,564.

Bernier, Roland J. Car seat assembly. 3,094,354, 6-18-63, Cl. 297—112.

Bernstein, Malcolm E. Metro-audiometer. 3,093,914, 6-18-63, Cl. 35—35.

Bernstein, Seymour: *See*—
Cantrall, Edward W., Littell, Bernstein, and Gordon. 3,094,541.

Bertao, Antonio M., 50% to H. W. Jarvis. Floating claw for milking machines. 3,094,099, 6-18-63, Cl. 119—14.54.

Bertin, Daniel H., Fritel, and L. Nedelec, to Roussel-UCLAF, S.A. Novel Δ^5-pregnene-3-ones and preparation thereof. 3,094,524, 6-18-63, Cl. 260—239.55.

Bertolacini, Ralph J., and H. M. Brennan, to Standard Oil Co. Method of controlling properties of porous metal oxides. 3,094,384, 6-18-63, Cl. 23—141.

Bethell, James R., D. J. Hadley, and B. Wood, to The Distillers Co. Ltd. Production of unsaturated aliphatic aldehydes. 3,094,565, 6-18-63, Cl. 260—604.

Bichard, John A.: *See*—
Butler, Roger M., and Bichard. 3,094,461.

Biel, John H.: *See*—
Blicke, Frederick F., and Biel. 3,094,532.

Biel, John H., to Lakeside Laboratories, Inc. Composition consisting of 2-pyrrolidyl-methyl-N-lower alkyl and 2-piperidyl-N-lower alkyl phenyl-glycolates as antispasmodics and central stimulant, and process of preparation. 3,094,463, 6-18-63, Cl. 167—65.

Bigot, Bernard, to Compagnie de Saint-Gobain. Preparation of sodium tripolyphosphate. 3,094,582, 6-18-63, Cl. 23—107.

Birmann, Rudolph. Compound power plant. 3,093,959, 6-18-63, Cl. 60—13.

Birtwell, William C., to Davol Rubber Co. Arterial catheter. 3,094,124, 6-18-63, Cl. 128—348.

Birum, Gail H., to Monsanto Chemical Co. Toxic, O,O-dimethyl-and O,O-diethyl S-pentachlorophenyl phosphoro thioate. 3,094,457, 6-18-63, Cl. 167—30.

Bisgaard, Fred, and A. H. Ruth, to Hercules Gallon Products Inc. Hydraulic system for dump trucks. 3,094,259, 6-18-63, Cl. 298—8.

Bjork, Carl K.: *See*—
Hradel, Joseph R., and Bjork. 3,094,069.
Hradel, Joseph R., and Bjork. 3,094,443.

Black, Frank S., to FMC Corp. Concentrated insecticidal compositions. 3,094,456, 6-18-63, Cl. 167—30.

Black, Robert H. Control and guide for bowling ball. 3,094,329, 6-18-63, Cl. 273—49.

Blackhurst, Robert V.: *See*—
Kent, Nelson H., Beale, and Blackhurst. 3,094,270.

Blake, Donald L., to Draper Corp. Filling bobbin. 3,094,297, 6-18-63, Cl. 242—118.8.

Blake, Francis E. Electric control device. 3,094,680, 6-18-63, Cl. 338—98.

Blanton, James B. Electric air purifier. 3,094,400, 6-18-63, Cl. 55—102.

Blicke, Frederick F., and J. H. Biel; said Blicke assor. to Regents of the University of Michigan, and said Biel assor. to Lakeside Laboratories, Inc. N-(aminoalkyl)-piperidyl esters. 3,094,532, 6-18-63, Cl. 260—268.

Blosser, Howard W. Pin guide and stabilization bar. 3,094,120, 6-18-63, Cl. 128—92.

Blumenstein, Walter K., and A. David, to The Otto Konigslow Mfg. Co. Ampoule applicator. 3,094,121, 6-18-63, Cl. 128—218.

Blythe, Clarence M.: *See*—
Ozley, Leroy V., and Blythe. 3,094,144.

Bodnar, Michael: *See*—
Dickstein, Jack, Bodnar, and Hoegerle. 3,094,554.

Boeing Airplane Co.: *See*—
Champoux, Louis, and Siebel. 3,094,017.

Boeke, Jan, and J. N. Welch, Watermelon cutter-press. 3,094,062. 6-18-63, Cl. 100—94.

Boitel, Arwed C., to Alton Box Board Co. End cushioned paperboard container. 3,094,267, 6-18-63, Cl. 229—40.

Boliden Gruvaktiebolag: *See*—
Fahlstrom, Per A. H. H., Lundberg, and Helmberg. 3,094,269.

Bond, Robert W., J. H. Ladd, R. L. Roberts, G. R. Keller, and H. G. Markey, to North American Aviation, Inc. Autopilot. 3,094,200, 6-18-63, Cl. 244—77.

Bonser, Stanley W. Lawn mower blade. 3,093,952, 6-18-63, Cl. 56—295.

Borden Co., The: *See*—
Dickstein, Jack, Bodnar, and Hoegerle. 3,094,554.

Borger, Jack W.: *See*—
Gutridge, Jack E., and Borger. 3,094,226.

Borogenics, Inc.: *See*—
Gerard, George, and Brayman. 3,093,842.

Bosch, Franz M.: *See*—
Humphrey, Watts S., Jr., Ternian, and Bosch. 3,094,610.

Bosch, Robert, G.m.b.H.: *See*—
Issler, Jorg. 3,094,202.

Bouligny, R. H., Inc.: *See*—
Wilson, Robert W. 3,094,062.

Bourne, Henry A., Jr., to Continental Oil Co. Subsurface well tubing safety valve. 3,094,170, 6-18-63, Cl. 166—224.

Bowman, Joe, to Kingston Products Corp. Interval timer. 3,094,595, 6-18-63, Cl. 200—38.

Bowman, William G., and R. O. Kerr, to Petro-Tex Chemical Corp. Preparation of aliphatic dicarboxylic acid anhydrides. 3,094,539, 6–18–63, Cl. 260—346.8.

Bowmer, Thomas, to Rolls-Royce Ltd. Blades for fluid flow machines. 3,094,310, 6–18–63, Cl. 253—39.15.

Bowness, Colin, to Raytheon Co. Reciprocal microwave switching device using non-reciprocal components. 3,094,-676, 6–18–63, Cl. 333—7.

Boyle, William W., to International Business Machines Corp. Full adder and subtractor using NOR logic. 3,094,614, 6–18–63, Cl. 235—176.

Bradley, John E., to The British Oxygen Co. Ltd. Motion transmission mechanism of the screw and nut type. 3,094,011, 6–18–63, Cl. 74—441.

Bradley, Marion W. Combination insulation stripper and wire splicer. 3,094,019, 6–18–63, Cl. 81—9.5.

Braun Aktiengesellschaft: *See*—
Fütterer, Bodo. 3,093,899.

Bravenec, Frank R., and R. H. Huddleston, Jr., to Halliburton Co. Logging system using electrostatically shielded coil. 3,094,658, 6–18–63, Cl. 324—6.

Brayman, Jacob: *See*—
Gerard, George, and Brayman. 3,093,862.

Breazeale, Hershel T., and F. and G. May, to FMC Corp. Pneumatic wheel lock for tire changing apparatus. 3,094,-156, 6–18–63, Cl. 144—288.

Bredtschneider, Kurt B., E. P. De Craene, G. E. Hansen, and F. D. Cotterman, to Crane Co. Lubricated plug valve. 3,094,136, 6–18–63, Cl. 137—246.11.

Breitinger, August F., to Jared Knitting Mills, Inc. Pleated knit fabric. 3,093,989, 6–18–63, Cl. 66—200.

Brennan, Harry M.: *See*—
Bertolacini, Ralph J. and Brennan. 3,094,384.

Brewster, Arthur E., to International Standard Electric Corp. Pulse coding and decoding arrangements. 3,094,626, 6–18–63, Cl. 307—88.

Brigati, Amadio G., and J. Fiducia. Ball throwing machines. 3,094,111, 6–18–63, Cl. 124—7.

Brisbin, Philip H., and W. J. Heffernan, to General Electric Co. Method for the preparation of alumina fibers. 3,094,-385, 6–18–63, Cl. 23—142.

Briskin, Theodore S., R. L. Moore, and R. A. Rom, to Revere Camera Co. Dual purpose shutter arrangement for a slide projector. 3,094,038, 6–18–63, Cl. 88—28.

Bristol-Myers Co.: *See*—
Luttinger, Joyce R., Lein, and Gourevitch. 3,094,519.

British Oxygen Co. Ltd., The: *See*—
Adams, Harold R. H. 3,093,871.
Armstrong, Michael, and Smith. 3,094,402.
Bradley, John R. 3,094,011.
Casey, Edward T. 3,094,081.
Miller, Samuel, Mash, and Tebboth. 3,094,492.
Pullen, Dennis I. 3,094,249.
Swan, Allan H. B. 3,094,252.
Templer, Charles E., Hardy, and Lainchbury. 3,093,974.
Wills, Robert J. 3,094,624.

British Petroleum Co. Ltd., The: *See*—
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Brock, Henry W., and F. J. Hattan, to The Standard Products Co. Windshield assembly. 3,093,844, 6–18–63, Cl. 9—1.

Brock, Henry W., and F. J. Hattan, to The Standard Products Co. Windshield structure. 3,093,845, 6–18–63, Cl. 9—1.

Brock, Kenneth E., to American Mat Corp. Floor mat with interlocking links. 3,093,870, 6–18–63, Cl. 20—78.3.

Brodie, Ralph N., Co.: *See*—
Berck, William F. 3,094,004.

Brookes, Frederick D.: *See*—
Stuchbery, Arthur L., and Brookes. 3,094,092.

Brosh, Amnon, and D. N. Lapp, to Radiation Service Co. Control system. 3,094,682, 6–18–63, Cl. 340—22.

Brown, Albert M., to G. Stibbe & Co. Ltd. Method of knitting fine gauge stockings. 3,093,985, 6–18–63, Cl. 66—42.

Brown, Milton E.: *See*—
Torresen, Robert, and Brown. 3,094,326.

Brown, Warren G., to International Telephone and Telegraph Corp. Noise reducing circuit employing the information on both leading and trailing edges of received pulses. 3,094,-667, 6–18–63, Cl. 328—162.

Brown, William C.: *See*—
Humphries, John, Brown, and McIntosh. 3,094,617.

Bruce, Everett A., to Pennsalt Chemicals Corp. Control of hydrogen ion concentration in crystallization of calcium hypochlorite. 3,094,380, 6–18–63, Cl. 23—86.

Brueckman, Arthur O.: *See*—
Christensen, Robert C., Bement, and Brueckman. 3,093,-836.

Brueder, Antoine, to Societe Anonyme Andre Citroen, Switching devices for hydraulic pumps and motors. 3,094,078, 6–18–63, Cl. 103—162.

Brunswick Corp.: *See*—
Lappin, Richard J., and Wurn. 3,094,186.
Torresen, Robert, and Brown. 3,094,326.
Torresen, Robert, and Gretzky. 3,094,325.

Buc, Saul R.: *See*—
Randall, David I., Buc, Freyermuth, and Mayhew. 3,094,516.

Buckbee, John A., and A. J. Cloutier, to Raytheon Co. Electrical storage devices. 3,094,644, 6–18–63, Cl. 315—12.

Budde, James C., and T. E. Noakes, to American Radiator & Standard Sanitary Corp. Mixing valve employing a flow control-check valve insert. 3,094,139, 6–18–63, Cl. 137—454.6.

Budsich, Tadeusz: *See*—
Pitt, Arnold, and Budsich. 3,093,946.

Buehler Corp., The: *See*—
Cochran, Richard L., and Engel. 3,093,965.
Englehart, Theodore M., and Cochran. 3,093,966.
Lerwick, Howard P. 3,093,967.

Bugosh, John, and E. F. Izard, to E. I. du Pont de Nemours and Co. Elastomeric foam having its pore walls coated with fibrous boehmite. 3,094,433, 6–18–63, Cl. 117—98.

Bundy Tubing Co.: *See*—
Gondek, Stanley. 3,094,107.

Bunting Co., Inc., The: *See*—
Hartman, William F. 3,094,358.

Bunting, William W., Jr.: *See*—
Ashby, William C.; Bunting, Meagher, Nelson, and Swayne. 3,094,262.

Burdick, Duane F., and K. E. Polmanteer, to Dow Corning Corp. Silicone rubber compositions. 3,094,446, 6–18–63, Cl. 154—2.7.

Burke, Donald J. Self-punching T fittings. 3,094,137, 6–18–63, Cl. 137—318.

Burke, Mary. Child's car seat. 3,094,356, 6–18–63, Cl. 297—254.

Burkhardt, Edgar G.: *See*—
Johnson, Kenneth V., and Burkhardt. 3,094,229.

Burroughs Corp.: *See*—
Howell, Richard S. 3,094,429.

Burt, Robert V., to The Procter & Gamble Co. Container for thixotropic products. 3,094,252, 6–18–63, Cl. 222—410.

Burtenshaw, Ordeen L.: *See*—
Lemyre, Joseph R., Burtenshaw, and Ketchum. 3,093,-897.

Burton, Henry S.: *See*—
Florey, Howard W., Abraham, Newton, Burton, Kelly, Hale, and Miller. 3,094,527.

Busk, Robert S., D. L. Leman, and M. A. Molnar, to The Dow Chemical Co. Method of generating heat and light. 3,094,-445, 6–18–63, Cl. 149—37.

Buss, Benjamin A., to Ametek, Inc. Laundry method. 3,093,-842, 6–18–63, Cl. 8—159.

Butler, Roger M., and J. A. Bichard, to Esso Research and Engineering Co. Hydrofining process with temperature control. 3,094,481, 6–18–63, Cl. 208—255.

Butterworth, Richard, and J. A. Parker, to Armstrong Cork Co. Branched polycarbonate and process for preparing same. 3,094,508, 6–18–63, Cl. 260—47.

Byloff, Robert C., to The Garrett Corp. Electromagnetic fluid pressure modulating valve. 3,094,132, 6–18–63, Cl. 137—85.

Cabot Corp.: *See*—
Secord, Robert N., and Wendell. 3,094,389.

Cadario, Vittorino, to Bemberg S.p.A. Device for the twisting and heat setting of threads or yarns of synthetic material, constituted preferably of numerous elementary filaments or fibers. 3,093,955, 6–18–63, Cl. 57—34.

Cadiou, Jean, to Andre Citroen Societe Anonyme. Hydraulic generators and motors. 3,094,077, 6–18–63, Cl. 103—161.

Cage, Darcy L. Damper control. 3,094,114, 6–18–63, Cl. 126—288.

Calico Printers' Association Ltd., The: *See*—
Hibbert, Gilbert S., Miller, and Schofield. 3,094,372.

California Research Corp.: *See*—
Kemp, Jacob D. 3,094,570.

Cambi, Livio, to Montecatini Societa General per l'Industria Mineraria e Chimica. Process for preparing prussian blue, and analogous pigments, from hydrocyanic acid, ferrous sulphate and bases. 3,094,379, 6–18–63, Cl. 23—77.

Cameron Iron Works, Inc.: *See*—
Jones, Marvin R. 3,093,996.

Cantrall, Edward W., R. Littell, S. Bernstein, and S. Gordon, to American Cyanamid Co. 3-substituted ethers of the androstane series. 3,094,541, 6–18–63, Cl. 260—397.5.

Carborundum Co., The: *See*—
O'Connor, John A., and Matya. 3,094,679.

Carrier, Robert M., Jr., J. M. Morris, and A. Musschoot, to Chain Belt Co. Vibratory mill drive. 3,093,941, 6–18–63, Cl. 51—164.

Casey, Edward T., to The British Oxygen Co. Ltd. Torch body assembly for oxygen lancing equipment. 3,094,081, 6–18–63, Cl. 110—22.

Castellini, Renzo: *See*—
Ausenda, Carlo, D'Epinoix, Castellini, and Orsolato. 3,094,028.

Catania, Salvatore J. End papers for hair-waving and dispenser therefor. 3,094,328, 6–18–63, Cl. 271—33.

Cavitron Ultrasonics Inc.: *See*—
Balamuth, Lewis, and Kuris. 3,093,937.

Central Electronics, Inc.: *See*—
Batchelor, Joseph B., Jr. 3,094,670.

Cerra, Joseph S., to Sylvania Electric Products. Apparatus for cutting filamentary materials. 3,094,030, 6–18–63, Cl. 83—555.

Chain Belt Co.: *See*—
Carrier, Robert M., Jr., Morris, and Musschoot. 3,093,-941.
Hudis, Michael I., and Mihulowicz. 3,094,048.

Chamberlain, John J., and C. A. Ward, to The English Electric Co. Ltd. Two-part electrical connectors. 3,094,365, 6–18–63, Cl. 339—75.

Chamberlain, Merle D., to Koppers Co., Inc. Method of making an insulated roof. 3,094,447, 6–18–63, Cl. 156—71.

Chamberlin, Earl M., to Merck & Co., Inc. 21-substituted-3, 17a-dihydroxy-11,20-diketo allopregnanes and process of preparing them. 3,094,542, 6–18–63, Cl. 260—397.45.

Champoux, Louis, and G. Siebol, to Boeing Airplane Co. Lock bolt sealing collar and method of installing the same. 3,094,017, 6–18–63, Cl. 78—46.

Chandler, Norman H., to Thor Mills Ltd. Process and apparatus for dyeing sliver. 3,093,867, 6–18–63, Cl. 19—66.

Chapman, John F., J. H. Cundall, and J. A. Partridge, to Imperial Chemical Industries Ltd. Manufacture of polymeric materials. 3,094,434, 6–18–63, Cl. 117—106.

Chase-Shawmut Co., The: *See*—
Kosacks, Frederick J. 3,094,600.

Checker Motors Corp.: *See*—
May, Vivian G. 3,094,347.

Chemetron Corp.: *See*—
Williams, David A. 3,093,973.

Chernak, John A., and E. J. Giese, to Tomlinson Industries, Inc. Self-closing stop valve. 3,094,145, 6–18–63, Cl. 137—614.2.

Chicago Dryer Co.: *See*—
Kamberg, Eduard F. 3,094,321.

Chiddix, Max E., and R. W. Wynn, to General Aniline & Film Corp. 2,2,3,3-tetrachloro-1,4-butanediol cyclic acid phosphate. 3,094,458, 6–18–63, Cl. 167—33.

Christensen, Robert C., G. P. Bement, and A. O. Brueckman, to Gar Hospital Equipment, Inc. Bath cart. 3,093,836, 6–18–63, Cl. 5—60.

Chrysler Corp.: *See*—
Folkerts, Walter E. 3,094,010.

Ciba Ltd.: *See*—
Gassman, Hans U., and Zbinden. 3,094,499.

Cities Service Research and Development Co.: *See*—
Greenwald, Bertrand W., and Lazarus. 3,094,472.

Citroen, Andre, Societe Anonyme: *See*—
Brueder, Antoine. 3,094,078.
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Clary Corp.: *See*—
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Clayton, James H. Collapsible cot. 3,093,837, 6–18–63, Cl. 5—111.

Clement, Claude, F. Eschard, and M. Viguier, to Institut Français du Petrole des Carburonts et Lubrifiants. Process for reducing iron ores. 3,094,410, 6–18–63, Cl. 75—40.

Clements, Errette: *See*—
Lewis, Martha M. 3,094,125.

Clevite Corp.: *See*—
Hamilton, Noble E. 3,094,006.
Morrison, Wilbert H., and Williams. 3,093,885.
Small, Charles B., Vail, and Hufferd. 3,094,108.

Clix Fastener Corp.: *See*—
Perrella, Guido. 3,093,893.

Cloutier, Albert J.: *See*—
Buckbee, John A., and Cloutier. 3,094,644.

Cobb, Clifton A., and J. T. Williams, to Whirlpool Corp. Method of determining the liquid level in a clothes washing machine. 3,093,841, 6–18–63, Cl. 8—158.

Cochran, Richard L.: *See*—
Englehart, Theodore M., and Cochran. 3,093,966.

Cochran, Richard L., and W. N. Engel, to The Buehler Corp. Direction control. 3,093,965, 6–18–63, Cl. 60—35.54.

Cohara, Frank J. Drawing board for steel rule dies. 3,093,-906, 6–18–63, Cl. 33—75.

Cole, David F. Broiler grid. 3,094,061, 6–18–63, Cl. 99—402.

Collett, Charles H. Applicator tool for pipe protectors. 3,094,018, 6–18–63, Cl. 81—5.1.

Collett, Charles H. Split protector for well pipe. 3,094,360, 6–18–63, Cl. 308—4.

Compagnia Italiana Formse Acciaio: *See*—
Ausenda, Carlo, D'Epinoix, Castellini, and Orsolato. 3,094,028.

Compagnie Industrielle Francaise des Tubes Electroniques: *See*—
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Compur-Werk Friedrich Deckel oHG.: *See*—
Gebele, Kurt. 3,094,056.

Compur-Werk G.m.b.H. & Co.: *See*—
Binger, Frans. 3,094,052.

Connersville Casket Co., Inc.: *See*—
Baker, Harold W., Jr. 3,094,846.

Conover, George W., K. L. Huising, and J. Koehler, to General Motors Corp. Internal combustion engine. 3,094,190, 6–18–63, Cl. 184—6.

Conrad, Martin B. Retrievable packer. 3,094,169, 6–18–63, Cl. 166—134.

Conrad, Martin B. Telescopic valve. 3,094,306, 6–18–63, Cl. 251—262.

Conrad, Martin B., to Baker Oil Tools, Inc. Telescopic valve apparatus. 3,094,308, 6–18–63, Cl. 251—297.

Container Service Co., Inc.: *See*—
Aldredge, Howard D. and R. L. 3,094,236.

Continental Can Co., Inc.: *See*—
Flugge, Sylvester L., and Glaser. 3,094,306.

Continental Cooper & Steel Industries, Inc.: *See*—
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Continental Gummi-Werke Aktiengesellschaft: *See*—
Klohn, Friedel. 3,094,157.

Continental Oil Co.: *See*—
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Jacocks, Claud L., and Hinds. 3,094,503.

Cook, Evin L., to Socony Mobil Oil Co., Inc. Percussion drill. 3,094,176, 6–18–63, Cl. 175—92.

Cooke, Theodore F.: *See*—
Van Loo, William J., Jr., and Cooke. 3,094,371.

Cooper, Albert H., to United Technical Industries, Inc. Production of ammonium fluoride from gaseous compounds of silicon and fluorine. 3,094,881, 6–18–63, Cl. 23—88.

Cooper, George B. Holder for fish while cleaning same. 3,093,859, 6–18–63, Cl. 17—8.

Cooper, Robert S., to Stauffer Chemical Co. Method for the preparation of diphenylphosphinous chloride. 3,094,559, 6–18–63, Cl. 260—543.

Corn Products Co.: *See*—
Josefowicz, Edmund L., and Melnick. 3,094,420.

Cornelius, Nelson F. Method of making insulated plastic containers. 3,094,448, 6–18–63, Cl. 156—78.

Cornell Aeronautical Laboratory, Inc.: *See*—
Beach, John B. 3,094,694.
Hendrick, Roy W., Jr. 3,094,625.
Osofsky, Irving B. 3,093,966.

Corning Glass Works: *See*—
Seck, Charles F. 3,094,029.

Corrigan, Harold A., to The Standard Products Co. Audible-visual communication systems. 3,094,589, 6–18–63, Cl. 179—40.

Costruzioni Meccaniche Riva S.p.A.: *See*—
Wysocki, Waclaw. 3,094,685.

Cotter, Robert J.: *See*—
Sauers, Carol K., and Cotter. 3,094,551.

Cotterman, Frank D.: *See*—
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Cottons, Andrew: *See*—
Peterson, Stanley W. 3,094,217.

Crane Co.: *See*—
Bredtschneider, Kurt B., De Craene, Hansen, and Cotterman. 3,094,136.

Crawford Door Co.: *See*—
Herber, Joseph S. 3,094,165.

Crowe, James W., to International Business Machines Corp. Non-destructive readout system. 3,094,685, 6–18–63, Cl. 340—173.1.

Crownco of San Diego: *See*—
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Cullen, James J., R. P. Stokes, and R. Mackay, to W. R. Grace & Co. Nutating nozzle. 3,094,254, 6–18–63, Cl. 222—504.

Cundall, John H.: *See*—
Chapman, John F., Cundall, and Partridge. 3,094,434.

Curlook, Walter: *See*—
Renzoni, Louis S., Curlook, and Laing. 3,094,409.

Currie, Grover C., to Fulbright Laboratories, Inc. Dispersing device. 3,094,134, 6–18–63, Cl. 137—182.

Curtin, Leo P., deceased; L. V. Curtin, executor. Chromic phosphate bonding coats for metals. 3,094,441, 6–18–63, Cl. 148—6.16.

Curtin, Leo V.: *See*—
Curtin, Leo P. 3,094,441.

Curtiss-Wright Corp.: *See*—
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Young, Merrill A. 3,094,021.
Young, Merrill A. 3,094,022.

Cusick, Leo F., to Rubbermaid Inc. Adjustable car mat. 3,094,350, 6–18–63, Cl. 296—1.

Cutting Room Appliances Corp.: *See*—
Deichmann, Walter. 3,094,319.

Czorny, John S.: *See*—
Synk, John P., and Czorny. 3,094,024.

Dahle, Orvar, and L. Berggren, to Allmanna Svenska Elektriska Aktiebolaget. Magnetoelastic force measuring device. 3,093,999, 6–18–63, Cl. 73—141.

Dahlstrom, Arvid O. Pellet gun. 3,094,112, 6–18–63, Cl. 124—29.

Dail, Paul D., to Crownco of San Diego. Lamp. 3,094,288, 6–18–63, Cl. 240—51.11.

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Dalton, Ernest T., to American Optical Co. Surfacing apparatus. 3,093,939, 6–18–63, Cl. 51—124.

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Davidson, Alastair R., to A. B. Plastics Ltd. Access doors. 3,094,238, 6–18–63, Cl. 220—25.

Davidson, Glenn. Method of making a cylindrical filter element for cigarette tips. 3,094,450, 6–18–63, Cl. 156—209.

Davies, Evan H., Jr. Fuel oil piping system with pressure responsive safety device. 3,094,162, 6–18–63, Cl. 158—42.1.

Davis, Earl K., to Bausch & Lomb Inc. Neutral colored glass composition. 3,094,423, 6–18–63, Cl. 106—52.

Davis, Edward M., Jr., to International Business Machines Corp. Pulse counter using tunnel diodes and having an energy storage device across the diodes. 3,094,631, 6–18–63, Cl. 307—88.5.

Davis, Martin A., to American Home Products Corp. Derivative of 4-phenyl-carbethoxypiperidine, and salts thereof. 3,094,528, 6–18–63, Cl. 260—243.

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Dean, Frank J., Jr., to Tempmaster Corp. Air mixing and sound attenuating chamber. 3,094,189, 6–18–63, Cl. 181—36.

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De Besme Henry G., and W. Weiss, to Rotary Hospital Equipment Corp. Facial massage mask. 3,094,118, 6–18–63, Cl. 128—39.

De Boer, Clarence, A. Dietz, L. R. E. Johnson, T. E. Eble, and H. Hoeksema, to The Upjohn Co. Decoyinine. 3,094,-460 6–18–63, Cl. 167—65.

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Del Mar, Robert. Building material and manufacture thereof. 3,094,426, 6-18-63, Cl. 106—109.

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Dempster, George R., and Herpich. 3,094,231.

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D'Eustachio, Dominic, to Pittsburgh Corning Corp. Sound absorbers. 3,094,188, 6-18-63, Cl. 181—33.

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Di Camillo, Raymond J., to The Singer Mfg. Co. Work feeding mechanism for sewing machines. 3,094,068, 6-18-63, Cl. 112—211.

Dickstein, Jack, M. Bodnar, and R.-M. Hoegerle, to The Borden Co. Amino acrylate esters. 3,094,554, 6-18-63, Cl. 260—482.

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Dirks, Gerhard. Sorting of signals recorded on a magnetizable signal carrier. 3,094,684, 6-18-63, Cl. 340—172.5.

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Hradel, Joseph R., and Bjork. 3,094,443.
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Waldron, William D., McIntosh, and Schroeder. 3,093,864.
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Duenke, Clarence G., to Moloney Electric Co. Electrical core loop fabrication. 3,093,889, 6-18-63, Cl. 29—155.57.

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Eade, Douglas G.: *See*—
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Eaker, Charles M., and G. A. Saul, to Monsanto Chemical Co. Chlorination of propynes. 3,094,567, 6-18-63, Cl. 260—654.

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Eddy, Theodore B., to Heil-Coil Corp. Wire coil installing tool. 3,093,895, 6-18-63, Cl. 29—240.5.

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Ehlert, Helmut, to Schloemann Aktiengesellschaft. Die-casting or injection-moulding machines. 3,093,863, 6-18-63, Cl. 18—30.

Ehrens, Henry, and S. Weiner. Apparatus for storing and dispensing refrigerant gas. 3,093,979, 6-18-63, Cl. 62—292.

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Eilersen, Jack E., to Oliver Tire & Rubber Co. Adjustable extruding die. 3,093,860, 6-18-63, Cl. 18—12.

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Gebele, Kurt, to Compur-Werk Friedrich Deckel eHG. Photographic camera. 3,094,066, 6-18-63, Cl. 95—64.

Gebhardt, Wilhelm, and F. Kuhrt, to Siemens-Schuckertwerke Aktiengesellschaft. Demodulators for frequency-modulated carrier signals. 3,094,669, 6-18-63, Cl. 329—119.

Gemeinhardt, Paul G., to Mobay Chemical Co. Process for preparing cellular polyurethanes from mixture of two prepolymers and resulting product. 3,094,495, 6-18-63, Cl. 260—2.5.

General Aniline & Film Corp.: *See*—
Chiddix, Max E., and Wynn. 3,094,458.
Randall, David I., Buc, Freyermuth, and Mayhew. 3,094,516.

General Dynamics Corp.: *See*—
Berch, William H., and Harris. 3,094,700.
Herman, Robert F., and Moehlmann. 3,094,661.
Potter, Frank J. 3,094,560.
Richardson, Morris E. 3,094,395.
Stone, Richard S., and Kraker. 3,094,470.

General Electric Co.: *See*—
Brisbin, Philip H., and Heffernan. 3,094,385.
Ferrin, Kenneth S. 3,094,647.
Goldstein, David N. 3,094,311.
Hess, Paul J., and Seyler. 3,094,298.
Hoffman, Thomas R. 3,094,686.
Hull, Thomas N., Jr., and Le Bell. 3,094,309.
Landolt, Paul H. 3,094,498.
Lindstrom, Joubert, and Moore. 3,094,291.
Schultz, Warner W. 3,094,621.
Skala, George F. 3,094,392.
Weiner, Albert P. 3,094,098.
Welch, Stanley B. 3,094,605.

General Foods Corp.: *See*—
Graham, James V., Goodrich, and Miller. 3,094,059.

General Motors Corp.: *See*—
Conover, George W., Hulsing, and Koehler. 3,094,190.
Frei, Arthur J. 3,093,980.
Karigaard, Wayne A. 3,093,891.

General Precision, Inc.: *See*—
Moore, Clifford, Wuest, and Zuehlke. 3,094,212.

General Steel Products, Inc.: *See*—
Mizelle, Ned W. 3,094,353.

Gerard, George, and J. Brayman, to Borogenics, Inc. Compact hydrostatic pressure apparatus. 3,093,882, 6-18-63, Cl. 18—16.5.

Gerbasi, Joseph: *See*—
O'Brien, Edward F., Jr., and Gerbasi. 3,094,058.

Gericke, Erich. Arrangement for cleaning printing ink, dirt, or the like from cylindrical surfaces in a printing press. 3,094,068, 6-18-63, Cl. 101—425.

Giese, Elroy J.: *See*—
Chernak, John A., and Giese. 3,094,145.

Giguere, Jacques: *See*—
Keirstead, Karl F., Giguere, and Fortin. 3,094,515.

Gilbert, A. C., Co., The: *See*—
Effinger, William L., Jr. 3,094,109.

Ginsilian Bros., Inc.: *See*—
Ule, Louis A. 3,094,675.

Girardy, Adolphe J.: *See*—
Epstein, Irving A., and Girardy. 3,093,920.

Glaser, Ernest: *See*—
Flugge, Sylvester L., and Glaser. 3,094,306.

Glasgow, Clarence O., to National Tank Co. Fluid pressure control system. 3,094,146, 6-18-63, Cl. 137—596.14.

Glasgow, Clarence O., and C. T. Patterson, to National Tank Co. Gas dehydrator. 3,094,574, 6-18-63, Cl. 261—23.

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Gluhareff, Eugene M. Valveless jet engine with inertia tube. 3,093,962, 6-18-63, Cl. 60—35.6.

Goddard, John A., to Ronson Corp. Smokers' or the like lighters. 3,093,990, 6-18-63, Cl. 67—7.1.

Goelts, Philip H., to The Gleason Works. Magnetic separator. 3,094,486, 6-18-63, Cl. 210—222.

Goff, Lionel E., to Olin Mathieson Chemical Corp. Gas release mechanisms. 3,094,070, 6-18-63, Cl. 102—25.

Gogan, Joseph. Spring quenching machine. 3,094,576, 6-18-63, Cl. 266—6.

Golay, Marcel J.: *See*—
Woodcock, Eugene L., Dueker, and Golay. 3,094,001.

Gold, Marvin H., and H. Plaut, to Aerojet-General Corp. Tetranitro organic compounds and preparation of same. 3,094,566, 6-18-63, Cl. 260—644.

Goldich, David E.: *See*—
Molyneaux, Robert J., and Goldich. 3,094,250.

Goldstein, Arthur, to Tru Balance Corsets, Inc. Girdle. 3,094,126, 6-18-63, Cl. 128—529.

Goldstein, David N., to General Electric Co. Turbine acceleration control system. 3,094,311, 6-18-63, Cl. 253—59.

Goldstein, Irving S., and J. W. Weaver, to Koppers Co., Inc. Process of acetylating wood. 3,094,431, 6-18-63, Cl. 117—59.

Gondek, Stanley, to Bundy Tubing Co. Push rod structure. 3,094,107, 6-18-63, Cl. 123—90.

Goodrich, Gordon A.: *See*—
Graham, James V., Goodrich, and Miller. 3,094,059.

Goodrich-Gulf Chemicals, Inc.: *See*—
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Goodyear Aircraft Corp.: *See*—
Lewis, Dwight C., and Steigerwalt. 3,094,672.

Gordon, Marshall H. Display rack for floor covering materials. 3,094,216, 6-18-63, Cl. 211—45.

Gordon, Samuel: *See*—
Cantrall, Edward W., Littell, Bernstein, and Gordon. 3,094,541.

Gordon, Sherman L., and F. L. Eluskie. Bottle counter. 3,094,279, 6-18-63, Cl. 235—91.

Gordon, William E., to United States Golf Association. Apparatus for measuring the coefficient of restitution of a resilient body. 3,093,995, 6-18-63, Cl. 73—13.

Gorton, Howard B.: *See*—
Fremstad, Viles K., and Gorton. 3,094,363.

Gould, James C.: *See*—
Gallatin, Victor, and Gould. 3,094,415.

Gourevitch, Alexander: *See*—
Luttinger, Joyce R., Lein, and Gourevitch. 3,094,519.

Grace, W. R., & Co.: *See*—
Adams, Alfred B., Farkas, Mardulier, and Shanklin. 3,094,425.
Cullen, James J., Stokes, and Mackay. 3,094,254.
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Gabler, Rudolf, and Lyssy. 3,094,557.
Kropa, Edward L. 3,094,513.
Moore, Charles B. 3,094,454.

Graham, James V., G. A. Goodrich, and R. B. Miller, to General Foods Corp. Vertical gun-puffing apparatus. 3,094,059, 6-18-63, Cl. 99—235.

Grant, Edwin A., Jr., to Minnesota Mining and Mfg. Co. Ultra-violet-radiation-desensitizable thermographic copy-sheet and method. 3,094,619, 6-18-63, Cl. 250—65.

Grant, James J.: *See*—
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Greene, Norman A. Bubble making toy. 3,093,925, 6-18-63, Cl. 46—8.

Greene, Norman A. Toy. 3,094,331, 6-18-63, Cl. 273—101.

Greenlie, David G.: *See*—
Fasio, Charles P., Greenlie, Nelson, and Nickerson. 3,094,246.

Greensburg Concrete Block Co.: *See*—
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Greenwald, Bertrand W., and A. K. Lazarus, to Cities Service Research and Development Co. Irradiation of hydrocarbon oils. 3,094,472, 6-18-63, Cl. 204—162.

Greenwald, Harold A., to The Garrett Corp. Seal for refrigerant compressor. 3,094,271, 6-18-63, Cl. 230—116.

Gregory Industries, Inc.: *See*—
Flynn, Robert D., and Singleton. 3,094,607.

Greil, Gerhart. Mountain cable-way cabins. 3,094,079, 6-18-63, Cl. 105—150.

Greminger, George K., Jr., R. W. Swinehart, and M. A. Weaver, to The Dow Chemical Co. Wax-free paint remover. 3,094,491, 6-18-63, Cl. 252—171.

Gretzky, Anthony J.: *See*—
Torresen, Robert, and Gretzky. 3,094,325.

Griot, Rudolf, and T. Wagner-Jauregg, to Siegfried Aktiengesellschaft. Process for preparing novel cyclic amines. 3,094,534, 6-18-63, Cl. 260—313.

Gritzner-Kayser Aktiengesellschaft: *See*—
Meier, Günther. 3,094,086.

Grubb, Gunnar A., to Electrolux, Aktiebolaget. Absorption refrigeration apparatus. 3,093,978, 6-18-63, Cl. 62—236.

Grumman Aircraft Engineering Corp.: *See*—
Albertson, Charles P., and Strittmatter. 3,093,998.

Gudebrod Brothers Silk Co., Inc.: *See*—
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Taramasso, Marco, and Guerra. 3,094,155.

Gulf Research & Development Co.: *See*—
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Gungle, Warren C., and J. G. Ray, to Sylvania Electric Products Inc. Fluorescent lamp. 3,094,641, 6-18-63, Cl. 131—109.

Gurgiolo, Arthur E., and R. A. Newton, to The Dow Chemical Co. Process for preparing hydroxyalkyl phosphates. 3,094,549, 6-18-63, Cl. 260—461.

Guseman, James R., and T. L. Myron, to United States Steel Corp. Method of sintering iron ore. 3,094,408, 6-18-63, Cl. 75—5.

Gustin, Daniel S., to Sylvania Electric Products Inc. Harness for supporting high pressure arc discharge tube within outer envelope, and lamp formed thereby. 3,094,640, 6-18-63, Cl. 313—25.

Gutridge, Jack E., and J. W. Borger, to Pullman Inc. Container transfer system and transfer devices. 3,094,226, 6-18-63, Cl. 214—38.

Gwinn, Joseph M., Jr., to Gar Wood Industries, Inc. Dump truck body. 3,094,351 6-18-63, Cl. 296—28.

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Lamberti, Vincent, and Haass. 3,094,555.

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Hadley, David J.: *See*—
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Hagelstein, Harry E. and E. A. 3,093,911.

Hagelstein, Harry E. and E. A. Musical typewriter. 3,093,911, 6-18-63, Cl. 35—5.

Haith, William J. Rock drilling bit. 3,094,180, 6-18-63, Cl. 175—401.

Hale, Anthony P.: *See*—
Prestige, Harry T., Eade, Hale, Lee, Lovelock, Smith, and Teacher. 3,093,887.

Hale, Clifford W.: *See*—
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Halford, Edward J. Method of producing artistic castings. 3,094,375, 6-18-63, Cl. 18—58.

Hall, Lewis W., Jr., to Sun Oil Co. Preparation of methyl pentenes. 3,094,573, 6-18-63, Cl. 260—683.15.

Hallett, James T.: *See*—
Price, Glenn R., Walsh, and Hallett. 3,094,406.
Price, Glenn R., Walsh, and Hallett. 3,094,548.

Halliburton Co.: *See*—
Bravenec, Frank R., and Huddleston. 3,094,658.

Hamilton, Noble E., to Clevite Corp. Pull and rotation mechanism for crystal growing apparatus. 3,094,006, 6-18-63, Cl. 74—22.

Hamilton, Paul M., and G. B. Kistiakowsky, to Monsanto Chemical Co. Composition of metal oxides and carbon black. 3,094,428, 6-18-63, Cl. 106—307.

Hampton, Lucian W. Load-carrying attachments for bicycles and similar vehicles. 3,094,257, 6-18-63, Cl. 224—42.

Handcraft Co., Inc.: *See*—
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Handel, Neil E., to Industrial Nucleonics Corp. Density measuring apparatus providing a substantially pure beam of radiation from composite sources. 3,094,622, 6-18-63, Cl. 250—83.3.

Hansen, George E.: *See*—
Bredtschneider, Kurt B., De Craene, Hansen, and Cotterman. 3,094,136.

Hardie, Le Broa. Snap acting mechanism. 3,094,008, 6-18-63, Cl. 74—97.

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Doyle, Philip C., Hook, and Hardman. 3,094,427.

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Templer, Charles E., Hardy, and Lainchbury. 3,093,974.

Haring, Eugene M.: *See*—
Haring, Horace E., and Taylor. 3,093,883.

Haring, Horace E., deceased (by E. M. Haring, executor), and R. L. Taylor, to Bell Telephone Laboratories, Inc. Manufacture of solid electrolytic capacitors. 3,093,883, 6-18-63, Cl. 29—25.42.

Harling, Donald W., to McGraw-Edison Co. Mast arm. 3,094,220, 6-18-63, Cl. 211—111.

Harling, Donald W., to McGraw-Edison Co. Post top mounted lighting unit. 3,094,296, 6-18-63, Cl. 240—25.

Harmon, James R., Jr. Electric test clamp. 3,094,366, 6-18-63, Cl. 339—97.

Harp, Alonzo M.: *See*—
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Harper, Kenneth A., to Phillips Petroleum Co. Catalytic conversion process and apparatus. 3,094,478, 6-18-63, Cl. 208—155.

Harries, Wynford L., to International Telephone and Telegraph Corp. Semiconductor multiplanar rectifying junction diode. 3,094,633, 6-18-63, Cl. 307—88.5.

Harris, Ben A.: *See*—
Berch, William H., and Harris. 3,094,700.

Harris-Intertype Corp.: *See*—
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Hartman, William F., to The Bunting Co., Inc. Separator means for webbing. 3,094,358, 6-18-63, Cl. 297—454.

Haskins, Norman J., to The Erie Enameling Co. Structural panel. 3,094,196, 6-18-63, Cl. 189—34.

Hattan, Frank J.: *See*—
Brock, Henry W., and Hattan. 3,093,844.
Brock, Henry W., and Hattan. 3,093,845.

Haugen, Edward P. Dispensing bin and method for loading and unloading same. 3,094,243, 6-18-63, Cl. 222—1.

Hausmann, George F., to United Aircraft Corp. Two-stage rocket. 3,093,964, 6-18-63, Cl. 60—35.6.

Hausmann, Werner, and M. Klose, to VEB Schlepperwerk Nordhausen. Hydraulic installation for tractors. 3,094,173, 6-18-63, Cl. 172—491.

Hay, Russell G., and S. M. Hazen, to Gulf Research & Development Co. Process for alkylating aromatics in the presence of a heavy metal halide, an organic halide and an organic aluminum halide. 3,094,568, 6-18-63, Cl. 260—671.

Hayman, Edgar S., Jr.: *See*—
Gardner, George S., Manson, and Hayman. 3,094,490.

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Hazen, George G., and D. W. Rosenburg, to Merck & Co., Inc. Preparation of 9(11)-anhydro steroids from 11-hydroxy steroids. 3,094,543, 6-18-63, Cl. 260—397.45.

Hazen, Stanley M.: *See*—
Hay, Russell G., and Hazen. 3,094,568.

Heathcott, E. B.: *See*—
Pippert, Aaron J., and Heathcott. 3,094,337.

Hebberling, Friedrich, to Owens-Corning Fiberglas Corp. Method and apparatus for traverse of strand material. 3,094,292, 6-18-63, Cl. 242—43.

Hedegaard, Kristen, to G. M. Pfaff, AG. Folding mechanism for label sewing machines. 3,094,084, 6-18-63, Cl. 112—104.

Hedrick, Ross M., and E. H. Mottus, to Monsanto Chemical Co. Solid composite propellants containing lithium perchlorate and polyamide polymers. 3,094,444, 6-18-63, Cl. 149—19.

Heffernan, William J.: *See*—
Brisbin, Philip H., and Heffernan. 3,094,385.

Hegman, Robert L., E. W. Hess, and C. L. Weber, to The Safegard Corp. Biased delivery gate for filling machine. 3,094,153, 6-18-63, Cl. 141—67.

Hehl, Karl, to Arburg-Feingerastefabrik oHG, Hehl & Sohne. Flash unit and magazine therefor. 3,094,284, 6-18-63, Cl. 240—1.3.

Heim, Lewis R., to Universal Bearing Corp. Apparatus for furnishing telescoped bearings. 3,093,884, 6-18-63, Cl. 29—90.

Heimos, Milton J.: *See*—
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Heine, Richard F., to Minnesota Mining and Mfg. Co. Perfluoroalkylsulfonamidoalkyl esters of phosphorus acids. 3,094,547, 6-18-63, Cl. 260—461.

Heil-Coil Corp.: *See*—
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Heller, Isaac: *See*—
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Hellmann, Heinrich, H. Plechota, H. Henecka, and H. Timmler, to Farbenfabriken Bayer Aktiengesellschaft. Process for the production of L-amino-B-hydroxycarboxylic acids. 3,094,553, 6-18-63, Cl. 260—471.

Helms, Millard O.: *See*—
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Hemmeter, George T. Wheel balancer. 3,094,003, 6-18-63, Cl. 73—458.

Hendrick, Roy W., Jr., to Cornell Aeronautical Laboratory, Inc. Photoelectric apparatus for measuring the size of particles. 3,094,625, 6-18-63, Cl. 250—218.

Henecka, Hans: *See*—
Hellmann, Heinrich, Plechota, Henecka, and Timmler. 3,094,553.

Hengstebeck, Robert J., to Standard Oil Co. Hydrocarbon separation process. 3,094,483, 6-18-63, Cl. 208—310.

Herber, Joseph S., to Crawford Door Co. Counterweighted upward acting door. 3,094,163, 6-18-63, Cl. 160—190.

Hercules Gallon Products Inc.: *See*—
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Herman, Robert F., and R. H. Moehlmann, to General Dynamics Corp. Radio telephone system. 3,094,661, 6-18-63, Cl. 325—55.

Herman, Stedman C., to Shawinigan Resins Corp. Vinyl ester polymer emulsions containing polyvinyl alcohol. 3,094,500, 6-18-63, Cl. 260—29.6.

Herrmann, Otto, to The R. K. LeBlond Machine Tool Co. Zero speed switch. 3,094,595, 6-18-63, Cl. 200—80.

Herpich, William A.: *See*—
Dempster, George R., and Herpich. 3,094,227.
Dempster, George R., and Herpich. 3,094,231.

Hersh, Arthur. Aerosol container control mechanism fitted with applicator. 3,093,857, 6-18-63, Cl. 15—552.

Heseltine, Donald W., and L. L. Lincoln, to Eastman Kodak Co. Silver halide emulsions containing cationic oxonol and benzylidene dyes. 3,094,418, 6-18-63, Cl. 96—84.

Hess, Paul J., and D. R. Seyler, to General Electric Co. VTO fan modulating structure. 3,094,298, 6-18-63, Cl. 244—23.

Hess, Robert W.: *See*—
Hegman, Robert L., Hess, and Weber. 3,094,153.

Hetzel, Mathew H.: *See*—
Judge, James H., Hetzel, and Weingard. 3,094,040.

Hibbert, Gilbert S., W. S. Miller, and A. Schofield, to The Calico Printers' Association Ltd. Process of wet crease-proofing cellulose fabrics with specific aldehyde solutions containing specific metal salts and products produced thereby. 3,094,372, 6-18-63, Cl. 8—116.4.

Hiestand, Preston E., and E. V. Mills, to Handcraft Co., Inc. Stretchable footwear. 3,093,916, 6-18-63, Cl. 36—9.

Higgins, Anthony J. Guard accessory for beds. 3,093,839, 6-18-63, Cl. 5—331.

High Voltage Engineering Corp.: *See*—
Gale, Alfred J. 3,094,474.
Rose, Peter H. 3,094,615.

Higonnet, Rene A., and L. M. Moyroud. Phototype composing method. 3,094,050, 6-18-63, Cl. 95—4.5.

Hill, Harold W., Jr., S. L. Kwolek, and W. Sweeny, to E. I. du Pont de Nemours and Co. Wholly aromatic polyamides. 3,094,511, 6-18-63, Cl. 260—78.

Hill, Robert A., to American Monarch Corp. Switch actuating apparatus. 3,094,591, 6-18-63, Cl. 200—5.

Hinds, George E.: *See*—
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Hine, Wilbur H. Jr. Apparatus for raising and quickly restoring the level of water in wells. 3,094,167, 6-18-63, Cl. 166—97.

Hintz, Gerhard O. Stretcher device for producing artificial respiration. 3,094,117, 6-18-63, Cl. 128—28.

Hirschmann, Ralph F., to Merck & Co., Inc. Novel 6-chloro-17a-ethynyl-androstadienes and processes. 3,094,540, 6-18-63, Cl. 260—397.4.

Hochstein, Roland: *See*—
Thiele, Heins, and Hochstein. 3,094,083.

Hoegerle, Rose-Marie: *See*—
Dickstein, Jack, Bodnar, and Hoegerle. 3,094,554.

Hoeksema, Herman: *See*—
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Hoff, Deering M., to Weyerhaeuser Co. Reinforced shipping containers. 3,094,266, 6-18-63, Cl. 229—37.

Hoffman, Frances G.: *See*—
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Hoffman, Thomas R., to General Electric Co. Gating circuits utilizing ferroelectric capacitors. 3,094,686, 6-18-63, Cl. 340—173.2.

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Holtz, Hermann J. Magnetic display arrangement. 3,093,919, 6-18-63, Cl. 40—142.

Hook, Edwin O.: *See*—
Doyle, Philip C., Hook, and Hardman. 3,094,427.

Hooker Chemical Corp.: *See*—
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Hopkins, Robert P., and W. C. Scudder, to Rohm & Haas Co. Improved ion exchange cellular products. 3,094,494, 6-18-63, Cl. 260—2.1.

Hopkins, Thomas R., to Spencer Chemical Co. Process for producing lactams. 3,094,520, 6-18-63, Cl. 260—239.3.

Horn, Robert B., to Ball Brothers Co., Inc. Carton erecting machine. 3,094,045, 6-18-63, Cl. 93—36.

Horowitz, Arnold J. Collapsible motorized cart. 3,094,187, 6-18-63, Cl. 180—27.

Hovland, Howard N., to American Can Co. Corner sealed leakproof carton. 3,094,265, 6-18-63, Cl. 229—37.

Hovorka, Jiri, to International Rotary Machine Corp. Fluid pressure operated weighing scales. 3,094,183, 6-18-63, Cl. 177—208.

Howell, Richard S., to Burroughs Corp. Method of electrostatic recording with different inks. 3,094,429, 6-18-63, Cl. 117—17.5.

Hradel, Joseph R., and C. K. Bjork, to The Dow Chemical Co. Method of blasting and ammonium nitrate explosive composition. 3,094,069, 6-18-63, Cl. 102—23.

Hradel, Joseph R., and C. K. Bjork, to The Dow Chemical Co. Ammonium nitrate explosive composition. 3,094,443, 6-18-63, Cl. 149—1.

Huber, Charles L., to Xerox Corp. Xerographic developing apparatus. 3,094,246, 6-18-63, Cl. 222—193.

Huck, William F. Multiple web collating and folding apparatus. 3,094,320, 6-18-63, Cl. 270—52.

Huddleston, Richard H., Jr.: *See*—
Bravenec, Frank H., and Huddleston. 3,094,668.

Hudis, Michael I., and G. Mihulowicz, to Chain Belt Co. Pavement surface finishing apparatus. 3,094,046, 6-18-63, Cl. 94—45.

Hufferd, George H.: *See*—
Small, Charles B., Vail, and Hufferd. 3,094,106.

Hughes, George M. K., to Chas. Pfizer & Co., Inc. 6-pyridylacrylonitriles. 3,094,533, 6-18-63, Cl. 260—294.9.

Huguley, William C. Method of fabricating small motor armatures. 3,093,888, 6-18-63, Cl. 29—155.58.

Hulette, Roger L.: *See*—
McDowell, Robert C., Hulette, and Ludwig. 3,094,577.

Hull, Richard L., and A. M. Harp, to Ametek, Inc. Fan assembly. 3,094,278, 6-18-63, Cl. 230—211.

Hull, Thomas N., Jr., and C. E. Le Bell, to General Electric Co. Engine rotor design. 3,094,309, 6-18-63, Cl. 253—39.

Hulsing, Kenneth L.: *See*—
Conover, George W., Hulsing, and Koehler. 3,094,190.

Humbach, Walter, to Siemens-Schuckertwerke Aktiengesellschaft. Fusi-rod structure for heterogeneous nuclear reactors. 3,094,473, 6-18-63, Cl. 204—193.2.

Humpal, Harold H., and H. Kitaoka, to Thompson Ramo Wooldridge Inc. Externally mounted, direct driven rotary units for prime movers. 3,094,636, 6-18-63, Cl. 310—70.

Humphrey, Watts S., Jr., J. Tersian, and F. M. Bosch, to Sylvania Electric Products Inc. Electronic computers. 3,094,610, 6-18-63, Cl. 235—157.

Humphries, John, W. C. Brown, and A. G. McIntosh, to National Research Council. Infra-red detecting systems. 3,094,617, 6-18-63, Cl. 250—83.3.

Hunter, Clayton M. Dispensing caps for container. 3,094,265, 6-18-63, Cl. 222—507.

Hurvits, Harriet. Convertible baby carriage. 3,094,389, 6-18-63, Cl. 280—31.

Husome, Robert G.: *See*—
Wyman, James H., and Husome. 3,094,214.

Hutchison, Miller R., Jr., and G. E. Kindig, to Eastman Kodak Co. Photographic exposure control system. 6,094,051, 6-18-63, Cl. 95—10.

Huyck Corp.: *See*—
McLaughlin, William J. 3,093,880.

Hvistendahl, Nels J. Measuring dispenser attachable to receptacles. 3,094,258, 6-18-63, Cl. 222—452.

Hycon Mfg. Co.: *See*—
Moore, Donald E., and Sandberg. 3,094,054.

Hyde, James F., to Dow Corning Corp. Condensation catalysts. 3,094,497, 6-18-63, Cl. 260—18.

Hyde, Robert W., to Superior Tool and Grinding Co. Pump assembly. 3,094,076, 6-18-63, Cl. 103—150.

Hydraulique & Urbanisme: *See*—
Ponser, Yves M. 3,094,185.

Hyland, William C.: *See*—
Swanson, Elmer G., and Hyland. 3,094,268.

Hyman, Julius, Jr., to North American Aviation, Inc. Liquid metal level gauge. 3,094,106, 6-18-63, Cl. 122—451.

Illinois Railway Equipment Co.: *See*—
Sweger, Theodore J. 3,094,196.

Illinois Tool Works Inc.: *See*—
Wanderer, Herbert J. 3,094,240.

Imperial Chemical Industries Ltd.: *See*—
Chapman, John F., Cundall, and Partridge. 3,094,434.

Independent Lock Co.: *See*—
Epstein, Irving A., and Girardy. 3,093,920.

Industrial Automation Corp.: *See*—
Wyman, James H. 3,094,213.
Wyman, James H., and Husome. 3,094,214.

Industrial Nucleonics Corp.: *See*—
Handel, Neil E. 3,094,622.

Ingersoll-Rand Co.: *See*—
Swett, Alton P. 3,094,646.

Innes, William B., and W. Mordach, to American Cyanamid Co. Catalytic muffler. 3,094,394, 6-18-63, Cl. 23—288.

Institut Français du Petrole des Carburonts et Lubrifiants: *See*—
Clement, Claude, Eschard, and Viguier. 3,094,410.

International Business Machines Corp.: *See*—
Boyle, William W. 3,094,614.
Crowe, James W. 3,094,655.
Davis, Edward M., Jr. 3,094,631.
Dersch, William C. 3,094,586.
Miller, Solomon L. 3,094,612.
Pecchenino, Paul L. 3,094,064.
Supernowicz, Edward J. 3,094,600.
Thompson, Thomas W. 3,094,261.

International Harvester Co.: *See*—
Barows, Arthur G., and Zitko. 3,093,951.
Johnston, Edward J. 3,093,954.

International MacGregor Organisation (I.M.G.O.): *See*—
Kummerman, Henri. 3,093,851.

International Metal Hose Co., The: *See*—
Nemer, Michael. 3,094,147.

International Nickel Co., Inc., The: *See*—
Franklin, Arthur W., Smith, and Richards. 3,094,414.
Renzoni, Louis S., Curlook, and Laing. 3,094,409.

International Rotary Machine Corp.: *See*—
Hovorka, Jiri. 3,094,183.

International Standard Electric Corp.: *See*—
Barber, Donald R. 3,094,668.
Brewster, Arthur E. 3,094,626.
Kramar, Ernst, and Steiner. 3,094,697.
Sunnen, Andre. 3,094,698.

International Telephone and Telegraph Corp.: *See*—
Brown, Warren G. 3,094,067.
Harries, Wynford L. 3,094,633.
Kasimir, Charles E. 3,093,943.

Isaacs, John D.: *See*—
Schick, George B., Isaacs, and Jennings. 3,093,848.

Isaler, Jorg, to Mobert Bosch, G.m.b.H. Electromagnetic clutch arrangement. 3,094,202, 6-18-63, Cl. 192—3.6.

Ivy, Jessie T. Revolver cylinder and mounting therefor. 3,093,922, 6-18-63, Cl. 42—62.

Iwanitsa, Michael. Boat safety attachment. 3,093,849, 6-18-63, Cl. 9—14.

Izard, Emmette F.: *See*—
Bugosh, John, and Izard. 3,094,423.

Jackson, Haskell L. Fishing lure. 3,093,923, 6-18-63, Cl. 43—42.11.

Jackson, John G., to Well Completions, Inc. Well drilling apparatus and method. 3,094,175, 6-18-63, Cl. 175—69.

Jackson Mfg. Co. Inc.: *See*—
Kershaw, John K. 3,094,181.

Jackson, Thomas, and A. McPherson, to Associated Electrical Industries Ltd. Apparatus for use in the coating of electrically conducting members by the process of electrophoresis. 3,094,477, 6-18-63, Cl. 204—300.

Jackson, William H., and C. C. Pioatkowski, to The Udylite Corp. Electric power transfer mechanism for conveyor apparatus. 3,094,475, 6-18-63, Cl. 204—202.

Jacobson, Edwin B., to Jervis Corp. Remote control for rearview mirrors and the like. 3,094,582, 6-18-63, Cl. 88—93.

Jacocks, Claud L., and G. E. Hinds, to Continental Oil Co. Phthalates of mixture of normal 6, 8 and 10 carbon primary alcohols and vinyl chloride polymers plasticised therewith. 3,094,503, 6-18-63, Cl. 260—31.8.

Jagenberg-Werke Akt.-Ges.: *See*—
Meyer-Jagenberg, Gunther. 3,094,432.

Jahn, Dale M., to Sperry Rand Corp. Antenna side lobe suppression system. 3,094,695, 6-18-63, Cl. 343—100.

Janis, Zbigniew J., and A. E. Anderson, to Ford Motor Co. Clutch and pressure modulator valve. 3,094,203, 6-18-63, Cl. 192—85.

Jared Knitting Mills, Inc.: *See*—
Breitinger, August F. 3,093,989.

Jarvis, Harold W.: *See*—
Bertao, Antonio M. 3,094,009.

Jendrisak, Joseph R., to Libbey-Owens-Ford Glass Co. Glass sheet bending mold. 3,094,403, 6-18-63, Cl. 65—288.

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Jenaer Glaswerk Schott & Gen.: *See*—
Schröder, Hubert. 3,094,436.

Jennings, Cecil D.: *See*—
Schick, George B., Isaacs, and Jennings. 3,093,848.

Jepsen, Robert L., to Varian Associates. Glow discharge method and apparatus. 3,094,639, 6-18-63, Cl. 313—7.

Jervis Corp.: *See*—
Jacobson, Edwin B. 3,094,582.

Jiu, Richard, to Thompson Ramo Wooldridge Inc. Cryogenic switching devices utilising Meissner effect to control superconductivity. 3,094,628, 6-18-63, Cl. 307—88.5.

Johns, Herman S.: *See*—
Stewart, Harold H., and Johns. 3,094,206.

Johns-Manville Corp.: *See*—
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McFall, Charles R., and Eads. 3,093,873.

Johnson, Gerald A.: *See*—
Welcher, Richard P., Johnson, and Wystrach. 3,094,545.

Johnson, Howard P.: *See*—
Middleton, Carlesle A. and T. B., and Johnson. 3,094,394.

Johnson, Kenneth V., and H. G. Burkhardt, to Kochring Co. Hydraulic back hoe. 3,094,229, 6-18-63, Cl. 214—138.

Johnson Le Roy E.: *See*—
De Boer, Clarence, Dietz, Johnson, Bible, and Hoekema. 3,094,460.

Johnson, Rowland E., and H. W. Mahal, to Texas Instruments Inc. Method of producing gallium or aluminum arsenides and phosphides. 3,094,388, 6-18-63, Cl. 23—204.

Johnston, Edward J., to International Harvester Co. Parallel bar side delivery rake with time bar adjusting means. 3,093,954, 6-18-63, Cl. 56—377.

Jones, Jean K.: *See*—
Partell, Rufus J. 3,094,282.

Jones, Marvin E., to Cameron Iron Works Inc. Drilling pressure control assembly tester. 3,093,906, 6-18-63, Cl. 73—46.

Jordan, Gerhard P. W. Artificial gland. 3,093,851, 6-18-63, Cl. 3—1.

Josefowicz, Edmund L., and D. Melnick, to Corn Products Co. Novel table spread package and process of preparing same. 3,094,420, 6-18-63, Cl. 99—179.

Jouillie, Maurice, M. Laurre, G. Maillard, and P. Muller, to Recherches et Propagande Scientifiques. Aspirin-antacid polysiloxane tablet. 3,094,464, 6-18-63, Cl. 167—82.

Joyner, Ralph D.: *See*—
Keaney, Malcolm E., and Joyner. 3,094,535.
Keaney, Malcolm E., and Joyner. 3,094,536.

Judge, James H., M. H. Hetsel, and A. H. Weisgard, to American Meter Co., Inc. Plastic water meter. 3,094,040, 6-18-63, Cl. 91—76.

Jurecka, Edwin A. Pole shoe assembling and securing machine. 3,093,894, 6-18-63, Cl. 29—205.

Kaess, Franz, E. Vogel, and R. Bauer, to Suddeutsche Kalkstickstoff-Werke A.G. Preparation of magnesium-containing silicon alloys. 3,094,412, 6-18-63, Cl. 75—135.

Kaiser Aluminum & Chemical Corp.: *See*—
Lemayre, Joseph R., Burtenshaw, and Ketchum. 3,093,897.

Kamar Products, Inc.: *See*—
Kapilow, Marvin. 3,094,037.

Kamberg, Eduard F., to Chicago Dryer Co. Folding apparatus. 3,094,321, 6-18-63, Cl. 270—68.

Kapilow, Marvin, to Kamar Products Inc. Viewer attachment for motion picture projectors. 3,094,037, 6-18-63, Cl. 88—24.

Kaplan, Martin, ½ to L. S. Singer and ½ to B. R. Lewis. Room spray deodorizer. 3,094,685, 6-18-63, Cl. 4—228.

Karlgaard, Wayne A., to General Motors Corp. Method of producing a shock absorber with sleeved piston. 3,093,891, 6-18-63, Cl. 29—156.5.

Karnaugh, Maurice, to Bell Telephone Laboratories, Inc. Logic circuit employing magnetic cores. 3,094,611, 6-18-63, Cl. 235—175.

Kasm, Sholom, to Fischer & Porter Co. Magnetic flowmeter. 3,094,000, 6-18-63, Cl. 73—194.

Kay, John G., and A. L. Osinski, to F. Jos. Lamb Co. Escapement assembly for workpiece. 3,094,242, 6-18-63, Cl. 221—241.

Kasimir, Charles E., to International Telephone and Telegraph Corp. Encircling tool. 3,093,943, 6-18-63, Cl. 85—198.

Kearney, Thomas J., F. J. Opolski, and G. O'Neal, Jr., to Detrex Chemical Industries, Inc. Sandwich type transducer and coupling. 3,094,314, 6-18-63, Cl. 259—72.

Keeler, Dale E.: *See*—
Strojny, Edwin J., and Keeler. 3,094,558.

Kelly, Vincent C., to The Orr Felt & Blanket Co. Paper makers felt. 3,094,149, 6-18-63, Cl. 139—383.

Kelmstead, Karl F., J. Giguere, G. Fortin, to Lignosol Chemicals Ltd. Lignin dispersing agents and a method of making the same. 3,094,515, 6-18-63, Cl. 260—124.

Keller, George R.: *See*—
Bond, Robert W., Ladd, Roberts, Keller, and Markey. 3,094,299.

Kellner, Henry: *See*—
Zipelius, Robert. 3,094,046.

Kellogg, M. W., Co., The: *See*—
Mader, Charles K. 3,094,391.

Kelly, Brendan K.: *See*—
Florey, Howard W. Abraham, Newton, Burton, Kelly, Hole, and Miller. 3,094,527.

Kelly, John B.: *See*—
Andrews, Dallas R., and Kelly. 3,093,984.

Kelso, John W., to United States Steel Corp. Thread chasers having the last tooth free of flank contact rearwardly of the thread crest cut thereby. 3,093,850, 6-18-63, Cl. 10—111.

Kemp, Jacob D., to California Research Corp. Cis-Cis-olefin treatment with H_2SO_4 for removal of free radical inhibitors. 3,094,570, 6-18-63, Cl. 260—677.

Kendall Co., The: *See*—
Alexander, Raymond, Schupan, and Abbott. 3,094,027.

Kendrick, Robert E. Printing cylinder and ink supply therefor. 3,094,066, 6-18-63, Cl. 101—216.

Keaney, Malcolm E. and E. D. Joyner. Germanium phthalocyanines. 3,094,535, 6-18-63, Cl. 260—314.5.

Keaney, Malcolm E., and E. D. Joyner. Silicon phthalocyanines. 3,094,536, 6-18-63, Cl. 260—314.5.

Kenny, James P., and J. J. Grant, to Power Spray Co., Inc. Liquid dispensing device for floor machines. 3,094,152, 6-18-63, Cl. 141—19.

Kent, Nelson H., R. D. Beale, and R. V. Blackhurst, to Rolls-Royce Ltd. Annular valve device. 3,094,270, 6-18-63, Cl. 230—114.

Kerr, Ralph O.: *See*—
Bowman, William G., and Kerr. 3,094,539.

Kershaw, John K., to Jackson Mfg. Co. Inc. Automatic bagging machine. 3,094,181, 6-18-63, Cl. 177—1.

Kershner, Osborn A., to Lambert Brake Corp. Friction device. 3,094,194, 6-18-63, Cl. 188—72.

Keuling, Harold D. Pin and spring for light wire bracket. 3,093,908, 6-18-63, Cl. 32—14.

Ketchum, John A.: *See*—
Lemayre, Joseph R., Burtenshaw, and Ketchum. 3,093,897.

Keuffel & Esser Co.: *See*—
Baker, Allister L. 3,093,904.

Kibler, Lynden U., to Bell Telephone Laboratories, Inc. Solid state diode surface wave traveling wave amplifier. 3,094,664, 6-18-63, Cl. 325—373.

Kienast Alfred. Electrical communication system. 3,094,588, 6-18-63, Cl. 179—6.

Kiesel, Karl, to Escher Wyss G.m.b.H. Reel starter for winding of webs. 3,094,294, 6-18-63, Cl. 242—65.

Kietz, Hans, and H. G. Schleon, to Atlas-Werke Aktiengesellschaft. Non-linear recording amplifier. 3,094,681, 6-18-63 Cl. 240—3.

Kindig, Guilford R.: *See*—
Hutchison, Miller R., Jr., and Kindig. 3,094,051.

Kingston Products Corp.: *See*—
Bowman, Joe. 3,094,208.

Kistiakowsky, George B.: *See*—
Hamilton, Paul M., and Kistiakowsky. 3,094,426.

Kitaoka, Hiroo: *See*—
Humpal, Harold H., and Kitaoka. 3,094,636.

Klein, Paul S., to "42" Products Ltd., Inc. Portable wire rack for bottles. 3,094,219, 6-18-63, Cl. 211—77.

Kleine, Werner K. M. Trepanning and boring head. 3,094,016, 6-18-63, Cl. 77—60.

Kleinschmidt, Roger F.: *See*—
Kruse, Carl W., and Kleinschmidt. 3,094,563.

Klohn, Friedel, to Continental Gummi-Werke Aktiengesellschaft. Vehicle tire. 3,094,157, 6-18-63, Cl. 152—209.

Klosa, Josef, to Delmar Chemicals Ltd. Caffeino-(8)-alkylenediamines. 3,094,529, 6-18-63, Cl. 260—247.2.

Klosa, Josef, to Delmar Chemicals Ltd. Caffeino-8-alkanolamines. 3,094,531, 6-18-63, Cl. 260—256.

Klose, Manfred: *See*—
Hausmann, Werner, and Klose. 3,094,173.

Knight, J. B.: *See*—
Partell, Rufus J. 3,094,282.

Knight, J. B., Co.: *See*—
Partell, Rufus J. 3,094,282.

Knight, Robert B.: *See*—
Partell, Rufus J. 3,094,282.

Koch, H. & Sons: *See*—
Gaylord, John A. 3,094,345.

Koch, Walter L.: *See*—
Krakauer, Merrill, and Koch. 3,093,918.

Kocher, Fred W., and O. H. Kinne, to Pittsburgh Plate Glass Co. Sheet handling apparatus. 3,094,322, 6-18-63, Cl. 271—12.

Koehler, Joseph: *See*—
Conover, George W., Hulsing, and Koehler. 3,094,190.

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Konigslow, Otto, Mfg. Co., The: *See*—
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Koppers Co., Inc.: *See*—
Chamberlain, Merle D. 3,094,447.
Goldstein, Irving S., and Weaver. 3,094,431.

Kosar, Peter: *See*—
Millhiser, Robert G., and Kosar. 3,094,207.

Kowalke, Herman M., Jr., and D. P. MacKay. Device for transporting rotary hoes. 3,094,283, 6-18-63, Cl. 214—394.

Kosacka, Frederick J., to The Chase-Shawmut Co. Electric fuse having improved cap link connection. 3,094,600, 6-18-63, Cl. 200—132.

Krakauer, Merrill, and W. L. Koch, to Rowe Mfg. Co. Inc. Illuminated display assembly. 3,093,918, 6-18-63, Cl. 40—126.

Kraker, George P.: *See*—
Stone, Richard B., and Kraker. 3,094,470.

Kramar, Ernst, and F. Steiner, to International Standard Electric Corp. Frequency modulated approach beacon. 3,094,697, 6-18-63, Cl. 343—106.

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Warburg, Otto, and Krippahl. 3,094,234.

Kropa, Edward L., to W. R. Grace & Co. Solid-phase polymerization process of methacrylate monomers, catalysed by aluminum triethyl. 3,094,513, 6-18-63, Cl. 260—89.5.

Kruger, Michael H., to Smithcraft Corp. Ceiling illuminating system. 3,094,285, 6-18-63, Cl. 240—9.

Krupp, Frederick W., to Gudebrod Brothers Silk Co., Inc. Dental floss package. 3,094,209, 6-18-63, Cl. 206—63.5.

Kruppa, William J., to American Cyanamid Co. Carbonization of coal. 3,094,467, 6-18-63, Cl. 202—22.

Kruse, Carl W., and R. F. Kleinschmidt, to Phillips Petroleum Co. Aminoes and unsaturated ketones from tertiary acetylenic amines. 3,094,563, 6-18-63, Cl. 260—583.

Kuhne, Bryan F., to Clary Corp. Detent type actuator for calculating machine. 3,094,278, 6-18-63, Cl. 235—60.

Kuhrt, Friedrich: *See*—
Gebhardt, Wilhelm, and Kuhrt. 3,094,669.

Kummerman, Henri, to International MacGregor Organisation (I.M.G.O.). Device for loading and unloading ships, and similar applications. 3,093,851, 6-18-63, Cl. 14—71.

Kurashiki Rayon Co., Ltd.: *See*—
Yamamoto, Makoto. 3,093,879.

Kuris, Arthur: *See*—
Balamuth, Lewis, and Kuris. 3,093,987.

Kurtz, Leonard D. Surgical cutting needle. 3,094,123, 6-18-63, Cl. 128—339.

Kwolek, Stephanie L.: *See*—
Hill, Harold W., Jr., Kwolek, and Sweeny. 3,094,511.

Laboratori Riuniti Studi e Ricerche S.p.A.: *See*—
Taramasso, Marco, and Guerra. 3,094,165.

Laboratory for Electronics, Inc.: *See*—
Ostroff, Edward D., Marcotte, and Miller. 3,094,629.
Smith, Roger S. 3,094,686.

Ladd, John H.: *See*—
Bond, Robert W., Ladd, Roberts, Keller, and Markey. 3,094,299.

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Geary, Thomas A. 3,094,336.

Lainchbury, David M.: *See*—
Templer, Charles H., Hardy, and Lainchbury. 3,093,974.

Laing, Ian W.: *See*—
Renzoni, Louis S., Curlock, and Laing. 3,094,409.

Lakeside Laboratories, Inc.: *See*—
Blicke, Frederick F., and Biel. 3,094,532.
Biel, John H. 3,094,468.

Lamb, F. Jos., Co.: *See*—
Kay, John G., and Osinski. 3,094,242.

Lambert Brake Corp.: *See*—
Kershner, Osborn A. 3,094,194.

Lamberti, Vincent, and R. A. Haase, to Lever Brothers Co. Purification of sodium isethionate. 3,094,555, 6-18-63, Cl. 260—513.

Lamuraga, Frank R. Spindle mounted coolant carrier. 3,094,023, 6-18-63, Cl. 82—34.

Landgraf, Walter D. Universal spools. 3,094,204, 6-18-63, Cl. 197—151.

Landis Tool Co.: *See*—
Balsiger, Harold H. 3,093,938.
Snyder, Glenn M. 3,093,942.

Landolt, Paul H., to General Electric Co. Resinous compositions. 3,094,493, 6-18-63, Cl. 260—28.

Langrod, Kasimir, to Sylvania Electric Products Inc. Method for producing high density uranium oxide. 3,094,377, 6-18-63, Cl. 23—14.5.

Laporte Titanium Ltd.: *See*—
Wigginton, Raymond J. 3,094,386.

Lapp, Douglas N.: *See*—
Brosh, Amnon, and Lapp. 3,094,682.

Lappin, Richard J., and I. T. Wurn, to Brunswick Corp. Folding bleacher and operator therefor. 3,094,186, 6-18-63, Cl. 180—19.

Larson, Melvin L., to American Metal Climax, Inc. Molybdenum benzophenone compounds. 3,094,544, 6-18-63, Cl. 260—429.

La Salle Steel Co.: *See*—
Nachtman, Elliot S. 3,094,440.

Lashley, Robert B. Vending machine. 3,094,241, 6-18-63, Cl. 221—110.

Latourette, Harold K.: *See*—
Allen, James F., and Latourette. 3,094,455.

Lauck, Albert G., to Owens-Illinois Glass Co. Mold assembly with controlled cooling. 3,094,404, 6-18-63, Cl. 65—319.

Laurre, Michel: *See*—
Joullie, Maurice, Laurre, Maillard, and Muller. 3,094,404.

Lazarus, Allan K.: *See*—
Greenwald, Bertrand W., and Lazarus. 3,094,472.

Le Bell, Clarence E.: *See*—
Hull, Thomas N., Jr., and Le Bell. 3,094,309.

Le Blond, R. K., Machine Tool Co., The: *See*—
Hermann, Otto. 3,094,595.

Lee, Brian M.: *See*—
Prestige, Harry T., Eade, Hale, Lee, Lovelock, Smith, and Teacher. 3,093,887.

Lehner William L., and M. L. Lincoln, to Sylvania Electric Products Inc. Rolled capacitor structure. 3,094,651, 6-18-63, Cl. 317—260.

Lein, Joseph: *See*—
Luttinger, Joyce R., Lein, and Gourevitch. 3,094,519.

Leman, Donald L.: *See*—
Busk, Robert S., Leman, and Molnar. 3,094,445.

Le May, Dan B., and C. F. Drexel, to Tylan Corp. Electrostatic generator. 3,094,653, 6-18-63, Cl. 322—2.

Lemyre, Joseph R., O. L. Burtenshaw, and J. A. Ketchum, to Kaiser Aluminum & Chemical Corp. Metallurgy. 3,093,697, 6-18-63, Cl. 29—547.

Lepetit S.p.A.: *See*—
Testa, Emilio, Fontanella, and Maffii. 3,094,518.

Lerwick, Howard P., to The Buehler Corp. Direction control device. 3,093,967, 6-18-63, Cl. 60—35.54.

Lester, Robert W., to Transolite Corp. Fluorescent tube fixture and hardware. 3,094,287, 6-18-63, Cl. 240—51.11.

Lever Bros. Co.: *See*—
Lamberti, Vincent, and Haass. 3,094,555.

Lewis, Bernard R.: *See*—
Kaplin, Martin. 3,093,835.

Lewis, Dwight C., and O. I. Steigerwalt, to Goodyear Aircraft Corp. Double tank diode parametric amplifier. 3,094,672, 6-18-63, Cl. 330—4.9.

Lewis, Martha M., 50% to E. Clements. Mastectomy brassiere. 3,094,125, 6-18-63, Cl. 128—483.

Libbey-Owens-Ford Glass Co.: *See*—
Jendrisak, Joseph E. 3,094,403.
Meriwether, Henry R., Jr., Mewbourne, Warren, and Badger. 3,094,578.

Liberman, Milton and R. Adjustable support for electric fixtures. 3,094,584, 6-18-63, Cl. 174—59.

Liberman, Rubin: *See*—
Liberman, Milton and R. 3,094,584.

Lidell, Swante M. Ethane side stripper. 3,094,401, 6-18-63, Cl. 55—206.

Liebrecht, Waldemar W., to Minneapolis-Honeywell Regulator Co. Control apparatus for refrigeration system. 3,093,977, 6-18-63, Cl. 62—208.

Lieser, Ernst, to Eastman Kodak Co. Exposure compensating device for photographic cameras. 3,094,053, 6-18-63, Cl. 95—10.

Light Metals Research Laboratory, Inc.: *See*—
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Lignosol Chemicals Ltd.: *See*—
Keirstead, Karl F., Giguere, and Fortin. 3,094,515.

Lincoln, Lewis L.: *See*—
Heseltine, Donald W., and Lincoln. 3,094,418.

Lincoln, Milan L.: *See*—
Lehner, William L., and Lincoln. 3,094,651.

Lindell, Sigurd I., to S & C Electric Co. Circuit switching and protecting means. 3,094,598, 6-18-63, Cl. 200—114.

Linder, Robert, Jr. Ladder bracket with paint bucket holder. 3,094,304, 6-18-63, Cl. 248—211.

Lindsay, Maurice E., to Spindle Specialty Co. Lug for doffer wheel. 3,093,950, 6-18-63, Cl. 56—41.

Lindstrom, Joubert, and F. W. Moore, to General Electric Co. Portable waste disposal apparatus. 3,094,291, 6-18-63, Cl. 241—258.

Lines, Raydon A. Device for dry boring soil or the like. 3,094,179, 6-18-63, Cl. 175—394.

Lingg, Thomas R., to AMP Inc. Connector mounting. 3,094,364, 6-18-63, Cl. 339—64.

Linton Mfg. Co., Inc.: *See*—
Linton, Roy J. 3,094,032.

Linton, Roy J., to Linton Mfg. Co., Inc. Musical instrument of the bassoon type. 3,094,032, 6-18-63, Cl. 84—380.

Litchfield, Robert R.: *See*—
Litchfield, Walter R. and R. R. 3,094,095.

Litchfield, Walter R. and R. R. Method and apparatus for raising anchors. 3,094,095, 6-18-63, Cl. 114—206.

Littell, Ruddy: *See*—
Cantrall, Edward W., Littell, Bernstein, and Gordon. 3,094,541.

Logan, Charles H., and J. H. Poor. Therapeutic apparatus. 3,094,116, 6-18-63, Cl. 128—24.

Logue, Leland H., to Denver Equipment Co. Centrifugal pumps. 3,094,075, 6-18-63, Cl. 103—103.

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Luvisi, John P., and J. J. Louvar, to Universal Oil Products Co. N-halocycloalkenic derivatives of arylamines. 3,094,560, 6-18-63, Cl. 260—566.

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McLaughlin, William R., to Picker X-ray Corp., Waite Mfg. Division, Inc. X-ray tube protection mechanism. 3,094,618, 6-18-63, Cl. 250—93.

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Patchett, Arthur A., Arth, and Schwam. 3,094,522.
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Morin, Louis H. Slider for one-sided separable fasteners. 3,093,876, 6-18-63, Cl. 24—205.14.

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Gutridge, Jack E., and Borger. 3,094,226.
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Rom, Rudolph A.: *See*—
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Bertin, Daniel, Fritel, and Nedelec. 3,094,524.

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Schlage, Ernest L. 3,094,200.

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Schofield, Arthur: *See*—
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Schroeder, Robert J., to Allis-Chalmers Mfg. Co. Bucket structure. 3,093,917, 6-18-63, Cl. 37—141.

Schultz, Curtis J., to Motorola, Inc. Tape feeding and storage device. 3,094,298, 6-18-63, Cl. 242—55.01.

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Schupan, Fred A.: *See*—
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Schuster, Ludwig K., and A. L. Baldi, to Pennsalt Chemicals Corp. Coating with thermosetting resin. 3,094,435, 6-18-63, Cl. 117—132.

Schut, Willem J.: *See*—
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Schwalm, Glendon H., to AMP Inc. Handling device. 3,094,-249, 6-18-63, Cl. 294—115.

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Peterson, Oscar A. 3,094,575.

Scott, John N., Jr.: *See*—
Peters, Donald L., and Scott. 3,093,865.

Scudder, William C.: *See*—
Hopkins, Robert P., and Scudder. 3,094,494.

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Servomechanisms, Inc.: *See*—
Riegert, Richard P. 3,094,650.

Seyler, Donald R.: *See*—
Hess, Paul J., and Seyler. 3,094,298.

Shanklin, Dunbar L.: *See*—
Adams, Alfred B., Farkas, Mardulier, and Shanklin. 3,094,425.

Shannon, William R. Collapsible desk for beds. 3,094,080, 6-18-63, Cl. 108—129.

Shawinigan Resins Corp.: *See*—
Herman, Stedman C. 3,094,500.

Shenk, Robert H., to Zurn Industries, Inc. Rising ring seal. 3,094,335, 6-18-63, Cl. 277—5.

Shepley, John H., to Sperry Rand Corp. Baler feed mechanism. 3,094,063, 6-18-63, Cl. 100—142.

Sherman, Burton R. and P. J. Refrigerated chest. 3,094,-164, 6-18-63, Cl. 165—30.

Sherman, Porter J.: *See*—
Sherman, Burton R. and P. J. 3,094,164.

Shingleton, Asa R. Exerciser. 3,094,324, 6-18-63, Cl. 272—57.

Short, James N., to Phillips Petroleum Co. Process for the preparation of low vinyl low trans-content random copolymer. 3,094,512, 6-18-63, Cl. 260—83.7.

Shoup Research & Development Corp.: *See*—
Lord, John G. 3,093,993.

Shoup Tail Collecting Devices, Inc.: *See*—
Willson, Thomas C. 3,094,276.

Shuman, Abraham. Presser foot. 3,094,089, 6-18-63, Cl. 112—235.

Shuster, Saul: *See*—
Mann, Alfred E., Dubey, Wolf, Ralph, Oliver, and Shuster. 3,094,439.

Shwayder Bros., Inc.: *See*—
Shwayder, Jesse. 3,094,357.

Shwayder, Jesse, to Shwayder Bros., Inc. Chair. 3,094,357, 6-18-63, Cl. 297—452.

Sibley, Hiram S.: *See*—
York, Shelby L., Jr., and Sibley. 3,093,963.

Siebel, George: *See*—
Champoux, Louis, and Siebel. 3,094,017.

Siebring, Claude and O. Overhead conveyor and bunk feeder. 3,094,205, 6-18-63, Cl. 198—64.

Siebring, Owen: *See*—
Siebring, Claude and O. 3,094,205.

Siegel, Vernon H., to Radatron Research & Development Corp. Microwave signal checker for continuous wave radiations. 3,094,663, 6-18-63, Cl. 325—364.

Sieger, Joshua. Apparatus for detecting inflammable gases. 3,094,393, 6-18-63, Cl. 23—254.

Siegfried Aktiengesellschaft: *See*—
Griot, Rudolf, and Wagner-Jauregg. 3,094,534.

Siemens-Schuckertwerke Aktiengesellschaft: *See*—
Emeis, Reimer. 3,093,882.
Gebhardt, Wilhelm, and Kuhrt. 3,094,669.
Humbach, Walter. 3,094,473.

Silverman, Abraham. Machine for automatically feeding a plumber's snake. 3,093,854, 6-18-63, Cl. 15—104.2.

Singer, Franz, to Cempur-Werk G.m.b.H. & Co. Photographic camera. 3,094,052, 6-18-63, Cl. 95—10.

Singer, Leon, and W. D. Armstrong, to The Regents of the University of Minnesota. Liquid food treating process. 3,094,419, 6-18-63, Cl. 99—60.

Singer, Leo S.: *See*—
Kaplan, Martin. 3,093,835.

Singer Mfg. Co., The: *See*—
Di Camillo, Raymond J. 3,094,098.
Scuba, Walter D., and Benning. 3,094,085.
Thorne, Charles L. 3,094,067.

Singleton, Robert C.: *See*—
Flynn, Robert D. and Singleton. 3,094,607.

Sipe, Charles B. Holder. 3,094,315, 6-18-63, Cl. 211—13.

Sisson, James B., to St. Regis Paper Co. Method of forming a container from a flexible laminate of foamed polystyrene. 3,094,449, 6-18-63, Cl. 156—184.

Skala, George F., to General Electric Co. Gas detection. 3,094,392, 6-18-63, Cl. 23—232.

Skover, Alex F.: *See*—
Peterson, Stanley W. 3,094,217.

Skwierinski, Albion; 5% to J. B. Marshall, Jr., said Marshall attorney in fact for said Skwierinski, assor. of 25% to B. A. Myer, 25% to Dr. M. Aveledo, and 45% to J. M. Rincon. Method of applying mirror coating to acrylic base. 3,094,430, 6-18-63, Cl. 117—35.

Sletzinger, Meyer, and D. F. Reinhold, to Merck & Co., Inc. 6α,16α-dialkyl steroid intermediates and processes. 3,094,-523, 6-18-63, Cl. 260—239.55.

Slingluff, Thomas J., to H. H. Robertson Co. Electrical ducts and fittings. 3,093,933, 6-18-63, Cl. 50—127.

Small, Charles B., H. L. Vail, Jr., and G. H. Huffard, to Clevite Corp. Automatic spark advance device for ignition system. 3,094,106, 6-18-63, Cl. 123—148.

Smitco, Inc.: *See*—
Syak, John P., and Czerny. 3,094,024.

Smith, Donald B., to National Research Council. Narrow band filter circuit. 3,094,655, 6-18-63, Cl. 323—88.

Smith, Gene W. Power driven miniature aircraft. 3,093,-927, 6-18-63, Cl. 46—77.

Smith, Gilbert L., ½ to C. F. Mitchell. Bowler's practice and guide apparatus. 3,094,330, 6-18-63, Cl. 273—54.

Smith, John C., to The Dow Chemical Co. Carbonatreprogyl dicarbamates. 3,094,536, 6-18-63, Cl. 260—340.3.

Smith, Kenneth C.: *See*—
Armstrong, Michael, and Smith. 3,094,402.

Smith, Kenneth G. Nail clippers. 3,093,898, 6-18-63, Cl. 30—28.

Smith, Paul L., to Douglas Aircraft Co., Inc. Load carrying apparatus. 3,094,224, 6-18-63, Cl. 214—1.

Smith Perry M., to E. I. du Pont de Nemours and Co. Dry spinning process for preparing coalesced spandex filaments. 3,094,374, 6-18-63, Cl. 18—54.

Smith, Roger S., to Laboratory For Electronics, Inc. Quadrature axis-crossing counter. 3,094,666, 6-18-63, Cl. 328—108.

Smith Ronald A.: *See*—
Franklin, Arthur W., Smith, and Richards. 3,094,414.

Smith, William F. P.: *See*—
Prestige, Harry T., Eade, Hale, Lee, Lovelock, Smith and Teacher. 3093,887.

Smithcraft Corp.: *See*—
Kruger, Michael H. 3,094,285.

Smithers, Phillip G., to Trico Products Corp. Windscreen wipers. 3,093,856, 6-18-63, Cl. 15—250.42.

Snelling, Christopher, to Xerox Corp. Xerographic developer measuring apparatus. 3,094,049, 6-18-63, Cl. 95—1.7.

Snider, Robert W. Mirror adjusting device. 3,093,910, 6-18-63, Cl. 33—180.

Snyder, Glenn M., to Landis Tool Co. Pressure work holding device for grinding machines. 3,093,942, 6-18-63, Cl. 51—165.

Societe d'Optique et de Mecanique de Haute Precision: *See*—
Rosier, Raymond. 3,094,580.

Societe en nom collectif Pernod & Ricard: *See*—
Menoret, Yves, and Gautheret. 3,094,060.

Socony Mobil Oil Co., Inc.: *See*—
Cook, Evin L. 3,094,176.

Sontheimer, Carl G., to Trak Electronics Co., Inc. Isolator system providing low attenuation for input signals and extremely high attenuation for signals attempting to pass in the reverse direction. 3,094,668, 6-18-63, Cl. 328—209.

Southern States Inc.: *See*—
Richardson, Olan, and Walter. 3,094,340.

Spain, Roy C., to The Yale and Towne Mfg. Co. Key bitting machine. 3,094,039, 6-18-63, Cl. 90—13.05.

Sparks, Cleone A. Method for impact-forming slipper-type pistons. 3,093,890, 6-18-63, Cl. 29—156.5.

Sparks, David E., to Admiral Corp. Method and apparatus for neutralizing Miller effect. 3,094,674, 6-18-63, Cl. 330—76.

Spectrolab, a Division of Textron Electronics, Inc.: *See*—
Mann, Alfred E., Dubey, Wolf, Ralph, Oliver, and Shuster. 3,094,439.

Spedden, Henry R.: *See*—
Gaudin, Antoine M., Spedden, and Sullivan. 3,094,485.

Spencer Chemical Co.: *See*—
Hopkins, Thomas R. 3,094,520.

Sperry Rand Corp.: *See*—
Jahn, Dale M. 3,094,695.
Osder, Stephen S. 3,094,300.
Perez, Guillermo. 3,094,218.
Shepley, John H. 3,094,063.
Treffeisen, Donal R. 3,094,691.
Zadoff, Solomon. 3,094,696.

Spiegel, Philip: *See*—
Rapp, Adolph K., and Spiegel. 3,094,630.

Spindle Specialty Co.: *See*—
Lindsay, Maurice E. 3,093,950.

Splinter, William E., to Research Corp. Tobacco harvester. 3,093,949, 6-18-63, Cl. 56—27.5.

Sprouse, Verner E., to Vernco Corp. Float valve mounting. 3,094,138, 6-18-63, Cl. 137—448.

Staeger, Rudolf. Detachable coupling for driven accessory in kitchen appliances. 3,093,982, 6-18-63, Cl. 64—11.

Standard Oil Co. (Indiana): *See*—
Bertolacini, Ralph J., and Brennan. 3,094,384.
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Ridgway, John A., Jr. 3,094,572.

Standard Oil Co. (Ohio), The: *See*—
Doyle, Philip C., Hook, and Hardman. 3,094,427.

Standard Products Co., The: *See*—
Brock, Henry W., and Hattan. 3,093,844.
Brock, Henry W., and Hattan. 3,093,845.
Corrigan, Harold A. 3,094,550.
France, Lester R. 3,093,962.
Reid, James S. 3,093,848.
Reid, James S. 3,094,158.

Standard-Thomson Corp.: *See*—
Baker, William R. 3,094,239.

Stanley, Norman F., to Marine Colloids, Inc. Process for treating a polysaccharide of seaweeds of the gigartinaceae and solieriaceae families. 3,094,517, 6-18-63, Cl. 260—209.

Starch Products Ltd.: *See*—
Parker, Edward J. 3,094,421.

Stauffer, Arthur L., to Continental Copper & Steel Industries, Inc. (Hanover Wire Cloth Division). Wire screen sealing system. 3,094,302, 6-18-63, Cl. 245—10.

Stauffer Chemical Co.: *See*—
Cooper, Robert S. 3,094,550.
Price, Glenn E., Walsh, and Hallett. 3,094,406.
Price, Glenn E., Walsh, and Hallett. 3,094,548.
Towers, Russell S. 3,094,546.
Toy, Arthur D. F., Walsh, and Froli. 3,094,405.

Steel Co. of Canada, Ltd., The: *See*—
Ward, Frederick W. A. 3,094,395.

Steigerwalt, Oliver L.: *See*—
Lewis, Dwight C., and Steigerwalt. 3,094,672.

Steiner, Fritz: *See*—
Kramar, Ernst, and Steiner. 3,094,697.

Sterling Drug Inc.: *See*—
Zenitz, Bernard L., and Albro. 3,094,526.

Sterner, Fred, to Radio Corp. of America. Microwave adder circuit. 3,094,612, 6-18-63, Cl. 235—176.

Stevens, Stanford S., to Zylon Products Co., Inc. Surgical hand brush. 3,093,855, 6-18-63, Cl. 15—160.
Stewart Engineering & Equipment Co., Inc.: *See*—
Stewart, Harold H., and Johns. 3,094,206.
Stewart, Harold H., and H. S. Johns, to Stewart Engineering & Equipment Co., Inc. Conveyor systems. 3,094,206, 6-18-63, Cl. 198—189.
Stewart-Warner Corp.: *See*—
Fairbanks, Gordon J. 3,094,142.
Miles, Marshall. 3,094,656.
Stibbe, G., & Co. Ltd.: *See*—
Brown, Albert M. 3,093,985.
Stokes, Richard P.: *See*—
Cullen, James J., Stokes, and Mackay. 3,094,254.
Stone, Richard S., and G. P. Kraker, to General Dynamics Corp. Nuclear reactor and irradiating system. 3,094,470, 6-18-63, Cl. 204—154.2.
Stoudt, Bernard: *See*—
Pinson, Abraham, and Stoudt. 3,094,275.
Strauss, Weunemar, and H. Wedell, to Dehydag, Deutsche Hydrierwerke G.m.b.H. Process for cleaning metal objects. 3,094,469, 6-18-63, Cl. 204—141.
Strecker, William V. Reinforced fiber glass structure. 3,093,-847, 6-18-63, Cl. 9—6.
Strittmatter, Warren E.: *See*—
Albertson, Charles P., and Strittmatter. 3,093,996.
Strojny, Edwin J., and D. B. Keeler, to The Dow Chemical Co. Process for making M-hydroxybenzoates. 3,094,558, 6-18-63, Cl. 260—521.
Stuchbery, Arthur L., and F. D. Brookes, to The Metal Box Co. Ltd. Can body-making apparatus. 3,094,092, 6-18-63, Cl. 113—115.
Suddeutsche Kalkstickstoff-Werke A.G.: *See*—
Kaess, Franz, Vogel, and Bauer. 3,094,412.
Sued-West-Chemie G.m.b.H.: *See*—
Von Riegen, Johannes, and Bauer. 3,094,452.
Sullivan, John H.: *See*—
Gaudin, Antoine M., Spedden, and Sullivan. 3,094,485.
Sun Oil Co.: *See*—
Hall, Lewis W., Jr. 3,094,573.
Sunnen, Andre, to International Standard Electric Corp. Air traffic display system. 3,094,096, 6-18-63, Cl. 343—112.
Superior Tool and Grinding Co.: *See*—
Hyde, Robert W. 3,094,076.
Supernowicz, Edward J., to International Business Machines Corp. System for magnetically recording data. 3,094,099, 6-18-63, Cl. 346—74.
Swan, Allan H. B., to The British Oxygen Co. Ltd. Turning roll apparatus. 3,094,232, 6-18-63, Cl. 214—340.
Swanson, Elmer G., and W. C. Hyland, to St. Regis Paper Co. Carrying handle construction for cartons. 3,094,268, 6-18-63, Cl. 220—52.
Swarner, John L.: *See*—
Van Der Sluys, William, and Swarner. 3,094,604.
Swayne, Kenneth G.: *See*—
Ashby, William C., Bunting, Meagher, Nelson, and Swayne. 3,094,262.
Sweeney, Maxwell P. Conversion process and apparatus. 3,094,479, 6-18-63, Cl. 208—178.
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Hill, Harold W., Jr., Kwolek, and Sweeny. 3,094,511.
Sweger, Theodore J., to Illinois Railway Equipment Co. Safety support for brake beams. 3,094,196, 6-18-63, Cl. 188—210.
Swett, Alton P., to Ingersoll-Rand Co. Safety circuit. 3,094,-646, 6-18-63, Cl. 317—13.
Swinehart, Richard W.: *See*—
Gremlinger, George K., Jr., Swinehart, and Weaver. 3,094,491.
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Cerra, Joseph S. 3,094,030.
Duval, Lee R. 3,094,642.
Gungle, Warren C., and Ray. 3,094,641.
Gustin, Daniel S. 3,094,640.
Humphrey, Watts S., Jr., Tersian, and Bosch. 3,094,610.
Lehner, William L., and Lincoln. 3,094,651.
Langrod, Kazimir. 3,094,577.
Wartella, Andrew. 3,094,632.
Symington Wayne Corp.: *See*—
McAlpine, John B. 3,094,192.
Synk, John F., and J. S. Czorny, to Smitco, Inc. Shave tool. 3,094,024, 6-18-63, Cl. 82—35.
Szuba, Walter D., and J. M. Benning, to The Singer Mfg. Co. Means for limiting amplitude adjustment of the zigzag mechanism for sewing machines. 3,094,085, 6-18-63, Cl. 112—158.
Taboda Pharmaceutical Industries, Ltd.: *See*—
Nishikawa, Masamoto, and Noguchi. 3,094,465.
Tamburini, Fioraldo: *See*—
Zoppi, Bruno, Premoli, and Tamburini. 3,094,652.
Tamny, Simon, to Wayne Mfg. Co. Power sweeper broom chamber. 3,093,853, 6-18-63, Cl. 15—83.
Taramasso, Marco, and A. Guerra, to Laboratori Riuniti Studi e Ricerche S.p.A. Microsyringe for gas-chromatography. 3,094,155, 6-18-63, Cl. 141—329.
Taylor, Daniel G., to Minneapolis-Honeywell Regulator Co. Velocity sensing apparatus. 3,094,093, 6-18-63, Cl. 343—7.
Taylor, Raymond L.: *See*—
Haring, Horace E., and Taylor. 3,093,863.
Taylor, Robert S. Heat placement. 3,094,301, 6-18-63, Cl. 244—124.
Teacher, Victor: *See*—
Prestige, Harry T., Eade, Hale, Lee, Lovelock, Smith, and Teacher. 3,093,887.
Tebboth, John A.: *See*—
Miller, Samuel A., Mash, and Tebboth. 3,094,402.
Technograph Printed Circuits Ltd.: *See*—
Eisler, Paul. 3,094,078.
Telefonbau und Normalzeit G.m.b.H.: *See*—
Bergstrasser, Georg. 3,094,637.
Tempter, Charles E., J. E. Hardy, and D. M. Lafachbury, to The British Oxygen Co. Ltd. Apparatus for storing and dispensing liquefied gases. 3,093,974, 6-18-63, Cl. 62—51.
Temperamaster Corp.: *See*—
Dean, Frank J., Jr. 3,094,189.
Tersian, John: *See*—
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Testa, Emilio, L. Fontanella, and G. Maffii, to Lepetit S.p.A. Novel carbamyl-diethidine compounds. 3,094,518, 6-18-63, Cl. 260—239.
Tetreault, Merritt D., to Whitin Machine Works. Ring holder. 3,093,857, 6-18-63, Cl. 57—122.
Texas Instruments Inc.: *See*—
Johnson, Rowland E., and Mehal. 3,094,388.
Texas Refinery Corp.: *See*—
Uhrmacher, Ralph R. 3,093,907.
Theriot, Eugene J., to Bell Telephone Laboratories, Inc. Strip line wave guide coupler. 3,094,677, 6-18-63, Cl. 333—10.
Thiele, Heinz, and R. Hochstein, to Zeiss Ikon Aktiengesellschaft. Camera for producing motion pictures and individual pictures. 3,094,033, 6-18-63, Cl. 88—17.
Thomas, Paul P., to American Metal Products Co. Method of construction of low friction elements. 3,094,376, 6-18-63, Cl. 18—59.
Thomas, TuCor L., to Union Carbide Corp. Adsorptive separation process. 3,094,569, 6-18-63, Cl. 260—677.
Thompson Co., The: *See*—
Van Deberg, Walter H. 3,093,970.
Thompson, Earl A., Mfg. Co.: *See*—
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Thompson, Harris A. Artificial respirator apparatus. 3,094,-274, 6-18-63, Cl. 220—224.
Thompson Ramo Wooldridge Inc.: *See*—
Humpal, Harold H., and Kitaoka. 3,094,638.
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Thompson, Thomas W., to International Business Machines Corp. Tape carriage control. 3,094,261, 6-18-63, Cl. 226—9.
Thor Mills Ltd.: *See*—
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Maring, Robert J. 3,094,184.
Tomlinson Industries, Inc.: *See*—
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Topham, William H., to The British Petroleum Co. Ltd. Apparatus for use in the control of distillation. 3,094,468, 6-18-63, Cl. 202—160.
Torresen, Robert, and A. J. Gretsky, to Brunswick Corp. Pin detecting and indicating apparatus. 3,094,325, 6-18-63, Cl. 273—43.
Torresen, Robert, and M. R. Brown, to Brunswick Corp. Pin detecting and indicating apparatus. 3,094,326, 6-18-63, Cl. 273—43.
Towers, Russell S., to Stauffer Chemical Co. Processes for preparing organo-metallic compounds. 3,094,546, 6-18-63, Cl. 260—445.
Toy, Arthur D. F., E. N. Walsh, and J. R. Frell, Jr., to Stauffer Chemical Co. Defoliant methods using thio esters of chloromethyl phosphonous and chloromethyl phosphonic acids. 3,094,405, 6-18-63, Cl. 71—2.2.
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Trainer Associates Inc.: *See*—
Newbold, Albert G. 3,094,178.
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Trane Co., The: *See*—
McClure, Arthur W. 3,094,272.
Transolite Corp.: *See*—
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Trask, Russell F. Hydraulic door closer and hold-open device. 3,093,866, 6-18-63, Cl. 16—54.
Traylor, Teddy G.: *See*—
Murdock, Stanley A., and Traylor. 3,094,504.
Treaner, Earl R. Chemical feed and blowdown system. 3,094,133, 6-18-63, Cl. 137—101.11.
Trefsteen, Donal E., to Sperry Rand Corp. Failure detection means for data transmission systems. 3,094,091, 6-18-63, Cl. 340—366.
Trefzer, Albert, to Gebr. Schneider, G.m.b.H. Ball-point pen insert. 3,094,108, 6-18-63, Cl. 120—42.6.
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Smithers, Phillip G. K. 3,093,854.
Tricot Equipment Co., Inc.: *See*—
Peat, Henry R. 3,094,568.
Trifleman, Bernard H. Method and apparatus for the extraction of zinc from its ores and oxides. 3,094,411, 6-18-63, Cl. 75—96.
Tru Balance Corsets, Inc.: *See*—
Goldstein, Arthur. 3,094,126.
Tsuboaka, Ryuji, to Y. Sano. Fixable ash tray. 3,094,237, 6-18-63, Cl. 220—18.
Tucker, Harold, to Geodrich-Gulf Chemicals, Inc. Polymerization process for aliphatic, conjugated dienes. 3,094,-514, 6-18-63, Cl. 260—94.8.
Tuohey, Charles H., to Walbro Corp. Bladder fuel pump. 3,094,074, 6-18-63, Cl. 103—44.

Tung, Ching C., and J. J. D'Amico, to Monsanto Chemical Co. Control of undesired vegetation with esters of N-methyl-N-carboxymethyldithiocarbamic acid. 3,094,407, 6-18-63, Cl. 71—2.7.
Turin, John J., to Midland-Ross Corp. Shaft furnace. 3,094,-316, 6-18-63, Cl. 263—20.
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Frydenberg, Donald V. 3,094,318.
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Tyson, George N., Jr., to Olin Mathieson Chemical Corp. Method of producing thrust by reacting a metal aside with a boron and hydrogen containing compound. 3,093,960, 6-18-63, Cl. 60—35.4.
Udylite Corp., The: *See*—
Jackson, William H., and Piontkowski. 3,094,475.
Uhrmacher, Ralph R., to Texas Refinery Corp. Oil viscosity tester. 3,093,997, 6-18-63, Cl. 73—54.
Ule, Louis A., to Gilfillan Bros., Inc. Degenerative feedback amplifier utilizing Zener diode. 3,094,675, 6-18-63, Cl. 330—110.
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Union Carbide Corp.: *See*—
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Daley, John L. S., Foecking, and Nagle. 3,094,488.
Gaudin, Antoine M., Spedden, and Sullivan. 3,094,485.
Sauers, Carol K., and Cotter. 3,094,551.
Thomas, Tudor L. 3,094,569.
Union Oil Co. of California: *See*—
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United Aircraft Corp.: *See*—
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United States Golf Association: *See*—
Gordon, William E. 3,093,905.
United States Steel Corp.: *See*—
Gusseman, James E., and Myron. 3,094,408.
Kelso, John W. 3,093,850.
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United Technical Industries, Inc.: *See*—
Cooper, Albert H. 3,094,331.
Universal Bearing Corp.: *See*—
Heim, Lewis R. 3,093,884.
Universal Oil Products Co.: *See*—
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Luvisi, John P., and Lowvar. 3,094,560.
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Hausmann, Werner, and Klose. 3,094,173.
Van Arsdell, Fred C. to The Quaker Oats Co. Process of centrifugal separation. 3,094,467, 6-18-63, Cl. 233—28.
Van Deberg, Walter H., to The Thompson Co. Sequence interrupting valve. 3,093,970, 6-18-63, Cl. 60—54.5.
Van Deberg, Walter H., to Earl A. Thompson Mfg. Co. Means for varying work cycles. 3,093,971, 6-18-63, Cl. 60—97.
Van Dam Berg, Joseph A., to Green Bay Packaging Inc. Channel-shaped carrier for cans having external beads and for other containers having shoulders proximate their ends. 3,094,210, 6-18-63, Cl. 206—65.
Vander Arend, Peter C., to Air Products and Chemicals, Inc. Production and storage of converted hydrogen. 3,094,390, 6-18-63, Cl. 23—210.
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June 18, 1963 Volume 791 Number 3

TRADEMARKS
NOTICES

Trademark Suits

Notices under 15 U.S.C. 1116; Trademark Act of July 5, 1946

Reg. No. 27,102 (ZENITH AND DESIGN), Marshall-Wells Hardware Co., Hardware, machines and miscellaneous goods; **Reg. No. 171,067**, same, Marshall-Wells Company, Laundry washing machines and wringers; **Reg. No. 282,329**, same, Refrigerators; **Reg. No. 534,713**, same, Electric domestic vacuum cleaners; **Reg. No. 590,940**, same, Laundry washing machines and dryers; **Reg. No. 666,654**, same, Electrically operated dish washers and garbage disposers, sink type, filed Jan. 10, 1958, D.C., N.D. Ill. (Chicago), Doc. 58c51, *Zenith Radio Corporation* v. *Marshall-Wells Company*. Consent decree; defendant enjoined Nov. 30, 1962.

Reg. No. 46,832 (GRAND UNION), Grand Union Tea Co., Teas, filed Dec. 6, 1962, D.C.N.J. (Newark), Doc. 1005/62, *The Grand Union Company* v. *Grand Union Oil Company*. Consent judgment; injunction granted; counterclaim dismissed Mar. 28, 1963.

CONDITION OF TRADEMARK APPLICATIONS AS OF APRIL 30, 1963

Total number of applications awaiting action [excluding renewals and Sec. 12 (c)]	16,696
Date of oldest new application	Sept. 14, 1962
Date of oldest amended application	Aug. 2, 1962

J. H. MERCHANT, Director, Trademark Examining Operation

TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION	Oldest Application: New	Oldest Application: Amended
(I) C. M. WENDT, Classes 8, 12, 13, 14, 15, 17, 19, 20, 21, 22, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 39, 41, 42, 43, 44	9-14-62	8-2-62
(II) H. E. KASCHUB, Classes 1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 16, 18, 22, 27, 37, 38, 40, 45, 46, 47, 48, 49, 50, 51, 52; Service Mark Classes 100, 101, 102, 103, 104, 105, 106, 107; Collective Membership Marks, Class 200; Certification Marks, Classes A and B	9-28-62	9-6-62
Renewals (All Classes)	3-29-63	4-24-63
Sec. 12 (c) Publications (All Classes)	3-29-63	

Applications filed during the month of April 1963—2,166

Registrations Issued	373—No. 751,099 to No. 751,471
Renewals Issued	60

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MARKS PUBLISHED FOR OPPOSITION

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105.

As provided by section 31 of said act, a fee of twenty-five dollars must accompany each notice of opposition.

Class 1—Raw or Partly Prepared Materials

SN 126,544. United States Pumice Supply Co., Los Angeles, Calif. Filed Aug. 23, 1961.

Grill-master

Owner of Reg. No. 401,054.
For Natural Lava Foam Radiants Used in Gas-Fired Broilers.
First use June 1, 1960.

SN 138,601. Freeman Chemical Corporation, Port Washington, Wis. Filed Feb. 26, 1962.

NYPOL

Owner of Reg. Nos. 559,358, 577,900, and 706,615.
For Resinous Copolymer.
First use Feb. 5, 1962.

SN 143,366. The General Tire & Rubber Company, Akron, Ohio. Filed Apr. 30, 1962.

TOLEX AEROJET

Owner of Reg. Nos. 418,498, 537,014, and 630,224.
For Vinyl Fabrics Used as a Leather Substitute.
First use Apr. 17, 1962.

SN 146,058. Monarch Leather Corp., New York, N.Y. Filed June 29, 1962.

PIXSUEDE

For Suede-Finished Split Leather With Simulated Pig Grain.
First use June 19, 1962.

SN 155,673. E. B. & A. C. Whiting Company, Burlington, Vt. Filed Oct. 22, 1962.

PROSTRAP

Owner of Reg. No. 703,717.
For Extruded Plastic Strips.
First use Oct. 11, 1962.

SN 158,039. Algemene Kunstzijde Unie N.V., Arnhem, Netherlands. Filed Feb. 6, 1963.

NOVIVLAS

Owner of Dutch Reg. No. 143,040, dated Jan. 28, 1963.
For Flax Fibres; Shives (Woody Particles of the Flax Stalk).

Class 2—Receptacles

SN 106,938. Calmore-Devorn, Inc., Cleveland, Ohio. Filed Nov. 23, 1960.

the Glaspak

For Plastic Boxes for Shipping and Displaying Merchandise at Trade Show Exhibits.
First use Mar. 10, 1960.

SN 123,871. Glenn M. Chambers, d.b.a. Glenn M. C. Co., Longview, Wash. Filed July 13, 1961.



The representation of the goods is disclaimed apart from the mark as shown. The drawing is lined for red.
For Container Attachment for Soft Drink Bottles for Containing and Dispensing Ice Cream and Crushed Ices and for Dispensing Contents of Bottle Through the Latter.
First use Feb. 17, 1960.

SN 129,172. Neil B. Rudy, Toledo, Ohio. Filed Oct. 3, 1961.

RUDICAN

For Horticultural Planters Which Are Designed To Be Placed Around, In or Over Flower Pots or the Like.
First use Sept. 9, 1961.

SN 134,780. American Can Company, New York, N.Y. Filed Dec. 28, 1961.

FLEXI-SPOUT

For Pouring Feature Incorporated in the Walls and Top of a Fiber Carton.
First use April 1961.

SN 142,406. Bird & Son, Inc., East Walpole, Mass. Filed Apr. 17, 1962.

GRO-RITE

Owner of Reg. No. 656,648.
For Plant Containers, for Example, Flower or Plant Pots, Plant or Seedling Trays, Plant Bands, Vases or the Like of Plastic and Other Materials.
First use Aug. 1955.

SN 143,571. Reynolds Metals Company, Richmond, Va. Filed May 1, 1962.

R

For Cans Having Aluminum Ends, Together with Pouches, Cartons, and Container Packaging Materials Containing Aluminum Foil.
First use in 1947.

SN 147,639. Standard Corrugated Case Corp., Ridgefield, N.J. Filed June 25, 1962.

SHUR-GRIP

For Paper, Cardboard and Corrugated Containers.
First use Mar. 8, 1962.

SN 148,575. Bird & Son, Inc., East Walpole, Mass. Filed July 9, 1962.

BAR-MOR

For Fiberboard and Corrugated Fiberboard Boxes and Shipping Containers.
First use June 18, 1962.

SN 154,669. American Concrete Receptacle Company, d.b.a. American Vault Company, Detroit, Mich. Filed Oct. 8, 1962.

VAULKET

For Combination Vaults and Caskets Used for Burial.
First use on or about Jan. 3, 1960.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

SN 153,493. Stuart M. Lerner, Inc., Melville, N.Y. Filed Sept. 19, 1962.

"THE RUNABOUT"

For All Purpose Traveling and Utility Cases.
First use Sept. 7, 1962.

SN 157,756. Angler's Company Limited, Flushing, N.Y. Filed Nov. 23, 1962.

STUFFLE-BAG

For Plastic Carrying Case.
First use Feb. 21, 1961.

Class 4—Abrasives and Polishing Materials

SN 122,275. Coated Abrasives, Inc., Detroit, Mich. Filed June 19, 1961.

SHUR-STIK

For Abrasive Articles—Namely, Abrasive Grain-Coated Paper and the Like for Use in Grinding.
First use Feb. 13, 1961.

SN 123,278. Coated Abrasives, Inc., Detroit, Mich. Filed July 3, 1961.

Cg

For Abrasives and Polishing Materials and Abrasive Articles—Namley, Abrasive Coated Paper and Cloth for Grinding and Finishing Operations.
First use Feb. 13, 1961.

SN 128,241. Armour and Company, Chicago, Ill. Filed Sept. 20, 1961.

SUPER-RUBWET

Owner of Reg. No. 528,067.
For Coated Abrasives Having a Flexible Backing.
First use Sept. 7, 1961.

SN 129,053. Southern Products Company, Inc., Chattanooga, Tenn. Filed Oct. 2, 1961.

SO-PRO

For Polishing Waxes and Abrasives for Removing Waxes and Finishing.
First use Oct. 19, 1955.

SN 149,821. Collins Polish Corp., Brooklyn, N.Y. Filed July 26, 1962.

LUSTRE-LAC

For Combination Cleaning and Polishing Preparations for Automobiles, Furniture, Floors, Leather, and Windows.
First use May 15, 1931.

SN 156,270. Chemical Products Company, Inc., Aberdeen, Md. Filed Oct. 31, 1962.

MIKAL

For Combination Polish and Cleaner for Furniture, Metal, Porcelain, Tile, Marble and Glass.
First use Oct. 1, 1962.

SN 157,049. A. J. Bergren Company, Chicago, Ill. Filed Nov. 18, 1962.



For Leather Dressing and Polish.
First use Oct. 29, 1962.

SN 157,545. The Pep Boys, Manny, Moe & Jack, d.b.a. Varsity Products Company, Philadelphia, Pa. Filed Nov. 19, 1962.

VARSITY AWARD

Owner of Reg. Nos. 364,367 and 698,766.
For Car Polishing Cream.
First use Oct. 22, 1962.

SN 161,723. The National Metal Abrasive Company, Cleveland, Ohio. Filed Jan. 30, 1963.

PERMA-T

For Blend of Chilled and Annealed Iron Abrasives (Shot and Grit Sizes).
First use Dec. 1, 1962.

SN 161,724. The National Metal Abrasive Company, Cleveland, Ohio. Filed Jan. 30, 1963.

PERMANNEAL

For Annealed Iron Abrasive (Shot or Grit Size) Used for Blast Cleaning.
First use Dec. 1, 1962.

SN 161,725. The National Metal Abrasive Company, Cleveland, Ohio. Filed Jan. 30, 1963.

PERMA-IRON

For Chilled Iron Abrasive (Shot or Grit Size) for Ballast or Cleaning Application.
First use Dec. 1, 1962.

SN 161,806. National Abrasive Sales Co., Los Angeles, Calif. Filed Jan. 31, 1963.

NADIAM

For Grinding Wheels.
First use Nov. 25, 1960.

Class 5—Adhesives

SN 136,930. G. E. Smith, Inc., Pittsburgh, Pa. Filed Jan. 30, 1962.

GESCO

For Core Oils.
First use September 1961.

SN 141,391. Top Tile Stores, Inc., Latham, N.Y. Filed Apr. 2, 1962.

TOP TILE

Applicant specifically disclaims the use of the word "Tile" as its trademark.
For Cove Base Cement, Waterproof Rubber Adhesive, White Vinyl Adhesive, Plastic and Metal Wall Tile Adhesive, Ceramic Tile Adhesive, Tile Board Adhesive, Ceiling Tile Cement, Linoleum Paste, Formica Contact Cement, Vinyl Asbestos Tile Adhesive, and Asphalt Tile Adhesive.
First use Mar. 1, 1958.

SN 150,866. Scheidemandel-Motard-Werke Aktiengesellschaft, Berlin-Spandau, Germany. Filed Aug. 2, 1962.

AGSOLAN

Owner of German Reg. No. 447,592, dated July 15, 1935; and U.S. Reg. Nos. 628,074 and 632,483.
For Glues and Adhesives for Use as Wallpaper Size.

Class 6—Chemicals and Chemical Compositions

SN 119,434. Speed-O-Print Business Machines Corporation, Chicago, Ill., by change of name from Speed-O-Print Corporation, Chicago, Ill. Filed May 5, 1961.

REDI-PAK

For Cartridge Containing Developer Fluid for Use in Photocopy Machines.
First use July 15, 1960.

SN 146,810. New England Nuclear Corp., Boston, Mass. Filed June 6, 1962.



For Radioactive Chemicals.
First use Apr. 12, 1963.

SN 146,538. George H. von Fuchs, Belmont Mass. Filed June 8, 1962.

CASYL

For Alkylated Succinic Acids and Solutions Thereof for Industrial Use.
First use May 26, 1960.

SN 147,005. Kantex Corporation, Houston, Tex. Filed June 15, 1962.



For Sodium Salt of Sulfonated Complex Organic Acids Derived From Redwood or Other Bark Used in Drilling Wells.
First use Mar. 2, 1962.

SN 147,309. Powers Chemco, Inc., Glen Cove, N.Y. Filed June 20, 1962.

ENERGIZER

For Photographic Developers.
First use at least as early as May 9, 1962.

SN 148,283. Allied Research Products Incorporated, Baltimore, Md. Filed July 3, 1962.



Owner of Reg. No. 724,663.
For Chemicals Employed in Metal Coating, Brightening, and Electroplating Baths—Namely, Chromic Acid, Nickel Salts, Chrome Addition Agents, Zinc Purifiers, Nickel Activators, Acid Replacements, Buffs, and Maintenance Materials; Wetting Agents; Fume and Mist Suppressors; Rinsing Agents; Deoxidizers; Dyes; and Protective Coatings Applied to Metals by Means of Chemical Coating and Electroplating Baths.
First use Feb. 1, 1958.

SN 150,317. Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany. Filed Aug. 2, 1962.

LAROMIN

For Curing Agents for Epoxy Resins.
First use Nov. 5, 1963; in commerce Aug. 1, 1958.

SN 150,977. Stamford Rubber Supply Company, Stamford, Conn. Filed Aug. 10, 1962.

AMBEREX

For Plasticisers and Extenders—Namely, Vulcanized Vegetable Oils for Plasticising, Extending or Filling Rubber.
First use on or about July 1, 1929.

SN 153,002. Kayco, Inc., Elmwood Park, Ill. Filed Sept. 12, 1962.

POSEY-ROMA

For Scented Coating for Imparting Aromas to Various Articles Such as Artificial Flowers and the Like.
First use July 25, 1961.

SN 153,717. Amway Sales Corporation, Ada, Mich. Filed Sept. 24, 1962.

CEDAR SOL

For Mothproofing Compound.
First use on or about July 9, 1962.

SN 154,532. Thermidaire Corporation of America, Syracuse, N.Y. Filed Oct. 4, 1962.



For Special Alkaline Blend To Raise the pH of Boiler Water.
First use Sept. 1, 1962.

SN 155,521. Power Chemical Company, San Antonio, Tex. Filed Oct. 19, 1962.

POWER

For Insecticides and Rodenticides.
First use Jan. 25, 1962.

SN 155,602. Ferro Corporation, Cleveland, Ohio. Filed Oct. 22, 1962.

UNICURE

Owner of Reg. Nos. 584,184, 723,332, and others.
For Catalysts for the Polymerization of Thermosetting Resins.
First use on or about Mar. 24, 1960.

SN 156,042. Wisconsin Alumni Research Foundation, Madison, Wis. Filed Oct. 26, 1962.

PROLIN

For Rodenticide.
First use Oct. 11, 1962.

SN 156,271. Chemical Products Company, Inc., Aberdeen, Md. Filed Oct. 31, 1962.

MIKAL

For Insecticides.
First use Oct. 1, 1962.

Class 7—Cordage

SN 142,854. Puritan Cordage Mills, Louisville, Ky. Filed Apr. 16, 1962.

WATERLUBE

For Rope.
First use Sept. 12, 1961.

SN 142,855. Puritan Cordage Mills, Louisville, Ky. Filed Apr. 16, 1962.

DOWNLINE

For Rope.
First use Jan. 4, 1962.

Class 8—Smokers' Articles, Not Including Tobacco Products

SN 146,271. Clipper Craft Inc., Stony Brook, N.Y. Filed June 6, 1962.



Applicant hereby disclaims the words "Stony Brook, New York" in the mark as shown in the drawing.
For Hand Colored Ceramic Ashtrays, Table Lighters and Smoker Sets.
First use June 15, 1961.

Class 9—Explosives, Firearms, Equipments, and Projectiles

SN 114,522. Palmer Chemical & Equipment Company, Inc., Atlanta, Ga. Filed Feb. 27, 1961.

CAP-TURE

Owner of Reg. No. 688,538.

For Projectiles Which May Be Filled by the User Thereof With Various Types of Liquid Materials, and Guns for Propelling the Same; Said Projectiles and Guns Optionally Utilizable To Inject Drugs Into Animals.

First use Feb. 2, 1961.

SN 140,928. Colt's Patent Fire Arms Manufacturing Company, Incorporated, Hartford, Conn. Filed Mar. 28, 1962.

FRONTIER SCOUT

For 22 Caliber Pistols and Revolvers.

First use Nov. 20, 1957; 1876 as to "Frontier."

Class 10—Fertilizers

SN 125,195. Brockville Chemicals Limited, Maitland, Ontario, Canada. Filed Aug. 2, 1961.

BULL'S EYE

Priority claimed under Sec. 44(d) on Canadian application filed Feb. 9, 1961; Reg. No. 125,194, dated Jan. 26, 1962.

For Fertilizer Grade Ammonium Nitrate, Fertiliser Materials—Namely, Liquid and Solid Nitrogen Materials for Fertiliser Use, Anhydrous Ammonia for Fertiliser Applications, and Nitrogen Solutions for Fertiliser Applications.

SN 152,329. Plantation Organic Products, Inc., Houston, Tex. Filed Aug. 31, 1962.

GREEN GATE

For Fertiliser.

First use Apr. 18, 1962.

SN 154,204. Clayton B. Briggs, d.b.a. Organic Soil Aids, Fort Wayne, Ind. Filed Oct. 1, 1962.

COM-PEAT

For Organic Soil Aids.

First use Aug. 18, 1962.

Class 11—Inks and Inking Materials

SN 151,147. Mason Marking Systems Corporation, Norfolk, Va. Filed Aug. 14, 1962.

MAKING YOUR MARK IN THE WORLD

For Ink.

First use on or about May 29, 1962.

Class 12—Construction Materials

SN 141,391. Top Tile Stores, Inc., Latham, N.Y. Filed Apr. 2, 1962.

TOP TILE

Applicant specifically disclaims the use of the word "Tile" as its trademark.

For Ceramic Tile, Tile Board, Ceiling Tile, and Wood Tile.

First use Mar. 1, 1958.

SN 146,827. Tasmanian Board Mills Limited, Launceston, Tasmania, Australia. Filed June 6, 1962.



The word "Product" and the configuration of Australia are disclaimed apart from the mark as shown. The drawing is lined for red and yellow.

For Lumber and Lumber Products Such as Milled Lumber and Flooring.

First use December 1960; in commerce December 1960.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

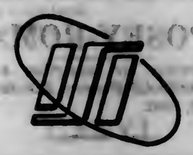
SN 139,251. The J. R. Clarkson Company, Palo Alto, Calif. Filed Mar. 6, 1962.



For Valves.

First use November 1961.

SN 140,697. I.S.I. Manufacturing, Inc., Warren, Mich. Filed Mar. 26, 1962.



For Manual Toggle Action Fiber Clamps, Manual Toggle Action Industrial Clamps, Air Hydraulic Powered Toggle Clamps, Air Hydraulic Power Roller Clamps, Air Hydraulic Power Wedge Clamps, Manual Plunger Clamps, Hoist Rings, Fixture Leveling Jacks, Clamp Action Spring Clip Retainers, Power Roller Automation Gripping Jaws, Power Roller Automation Vacuum Pickup, Universal Linear Shuttle Units, Overhead Press Room Automation Arms, "Rel-Dol" 15-Ton Moving Casters, Industrial Drop Away Units, and Pneumatic Circuitry Control Panels.

First use May 31, 1958.

SN 149,692. The Yale & Towne Manufacturing Company, New York, N.Y. Filed July 24, 1962.

TRI-STYLE

For Door Closers.

First use July 6, 1962.

SN 152,827. Raburn Products, Inc., Chicago, Ill. Filed Sept. 10, 1962.

MUL-TI MOLD

For Gelatine and Ice Cream Molds.

First use July 27, 1962.

Class 14—Metals and Metal Castings and Forgings

SN 135,448. McConway & Torley Corporation, Pittsburgh, Pa. Filed Jan. 9, 1962.

McConaloy

For Ferrous Metal Alloy Made Into Castings.

First use Mar. 22, 1961.

SN 155,591. Dominion Foundries and Steel, Limited, Hamilton, Ontario, Canada. Filed Oct. 22, 1962.



Owner of Canadian Reg. No. 128,067, dated Sept. 21, 1962.

For Steel Castings and Flat Rolled Products—Namely, Tin Plate, Tin Mill Black Plate, Galvanized Sheets, Hot and Cold Rolled Sheets and Strips, Blue Plate, Vitreous Enameling and Electrical (Silicon) Sheets.

Class 15—Oils and Greases

SN 95,312. Petrolite Corporation, St. Louis, Mo. Filed Apr. 18, 1960.

ULTRAFLEX

For Waxes Including Microcrystalline Waxes.

First use Oct. 18, 1954.

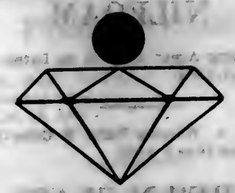
SN 119,430. Reilly-Whiteman-Walton Co., Conshohocken, Pa. Filed May 8, 1961.

RESULTS THRU RESEARCH

For Industrial Process Oils Used as Fatliquors in the Tanning Industry; Cutting, Grinding, Rolling and Drawing Lubricants for the Metal Working Industry; and Fiber Lubricants for the Spinning Industry.

First use Apr. 4, 1946.

SN 121,516. Vitramon, Incorporated, Monroe, Conn. Filed June 6, 1961.



For High Temperature Industrial Graphite Lubricants and Lubricants Containing Colloidal Graphite in Oil, Particularly Adapted for Use in the Baking Industry for Lubricating Oven Chains and the Like.

First use July 31, 1959.

SN 121,886. Whiting Brothers Oil Company, d.b.a. Whiting Brothers and Whiting Bros., Holbrook, Ariz. Filed June 12, 1961.

WHITING BROS.

Applicant claims use for the area comprising the States of Utah, Nevada, California, Arizona, New Mexico, Texas, Oklahoma, Idaho, Colorado, Washington, Oregon, Montana, Wyoming, Kansas, Nebraska, North Dakota, South Dakota, Alaska, and Hawaii.

For Motor Oil, Diesel Fuel, Gasoline, Kerosene.

First use at least as early as the year 1920.

Subj. to concurrent use proceeding with Reg. No. 629,832.

SN 138,285. Chemical Testing Corporation, Long Island City, N.Y. Filed Feb. 20, 1962.

VAN GUARD

For Anti-Corrosion Fuel Oil Additive.

First use Oct. 15, 1961.

Class 16—Protective and Decorative Coatings

SN 129,053. Southern Products Company, Inc., Chattanooga, Tenn. Filed Oct. 2, 1961.

SO-PRO

For Paints and Varnishes.

First use Oct. 19, 1955.

SN 129,334. Bell Intercontinental Corporation, Mishawaka, Ind. Filed Oct. 6, 1961.

BLAST-SEEL

For Organic Coatings for Preventing Metal Corrosion.

First use Sept. 7, 1961.

SN 142,852. Pittsburgh Plate Glass Company, Pittsburgh, Pa. Filed Apr. 23, 1962.

Pitt-Glaze

For Clear Finishes, Curing Agents, and Fillers.

First use Feb. 13, 1962.

SN 145,469. Naftone, Inc., New York, N.Y. Filed May 25, 1962.

NILFOAM

For Anti-Foaming Agent for Use in Latex Paints.
First use May 11, 1961.

SN 146,245. C. A. Woolsey Paint & Color Co. Inc., New York, N.Y. Filed June 5, 1962.

RES-N-GLAS

For Waterproof Resin Coating for Use on Cloth, Wood, and Metal.
First use May 1960.

SN 151,613. Pittsburgh Plate Glass Company, Pittsburgh, Pa. Filed Aug. 21, 1962.

MIR-O-CRON

For Coatings for Mirror Backing.
First use Jan. 5, 1961.

SN 152,150. O'Sullivan Paint Co., Inc., San Francisco, Calif. Filed Aug. 29, 1962.

O'SULLIVAN

For Paints, Lacquers, Primers, Coatings, and Paint Additives Such as Mildew-Resistant Wine Tank Coatings, and Interior and Exterior House, Industrial and Marine Paints, Lacquers and Primers for Metal, Wood and the Like, Such as Winery Equipment.
First use June 1957 on paints and coatings.

Class 18 — Medicines and Pharmaceutical Preparations

SN 135,657. Armour Pharmaceutical Company, Chicago, Ill. Filed Jan. 12, 1962.

QUIMORAL

For Proteolytic Enzyme Preparations for Oral Administration.
First use Dec. 6, 1960.

SN 139,168. The Warren-Teed Products Company, Columbus, Ohio. Filed Mar. 5, 1962.

BAR-DON

For Antispasmodic and Sedative.
First use July 31, 1950.

SN 140,560. R. Q. Howe, d.b.a. R.Q. Products Co., Temple City, Calif. Filed Mar. 23, 1962.

R-Q

For Liquid Treatment for Athlete's Foot, Ringworm, Impetigo and Other Skin Fungus.
First use July 6, 1934.

SN 140,906. The Baker Castor Oil Company, Bayonne, N.J. Filed Mar. 28, 1962.

Baker

For Medicinal Castol Oil, Undecylenic Acid, and Zinc Unicylenate.
First use March 1952.

SN 148,859. Bullock-Walker Manufacturing Co., Grand Rapids, Mich. Filed July 5, 1962.

H-U-S-K

For Inhibitory Antiseptic Surgical Dressing.
First use in 1923.

SN 149,552. Farbenfabriken Bayer Aktiengesellschaft, Leverkusen-Bayerwerk, Germany. Filed July 23, 1962.

LUJET

Priority claimed under Sec. 44(d) on German application filed Mar. 20, 1962; Reg. No. 760,995, dated May 3, 1962.
For Veterinary Product Effective Against Blowfly Strike.

SN 150,217. Atlas Chemical Industries, Inc., Wilmington, Del. Filed Aug. 1, 1962.

NEOTINIC

Owner of Reg. No. 637,079.
For Vitamin and Iron Preparation.
First use Feb. 1, 1956.

SN 150,748. Biosante Chemical Specialties, Inc., New York, N.Y. Filed Aug. 8, 1962.

Owner of Reg. Nos. 393,881 and 718,785.
For Medicinal Preparations Indicated in and for the Mitigation, Relief and Treatment of the Discomforts Resulting from Acidosis, Heartburn, Hyperacidity, and Overacidity of the Stomach and Digestive Tract.
First use October 1932.

SN 151,848. McNeil Laboratories, Incorporated, Fort Washington, Pa. Filed Aug. 16, 1962.

ACIQUEL

Owner of Reg. No. 729,093.
For Antacid Preparation.
First use May 18, 1962.

SN 151,622. Takeda Chemical Industries, Ltd., Higashi-ku, Osaka, Japan. Filed Aug. 21, 1962.

TOYOMYCIN
トヨマイシン

The Japanese characters appearing in the drawing correspond to the word "Toyomycin." Owner of Japanese Reg. No. 548,741, dated Mar. 2, 1960.
For Neoplasm Palliative Antibiotics.

SN 152,577. Gyneco Products Incorporated, Roslyn, Pa. Filed Sept. 6, 1962.

LARISAL

For Douche Powder.
First use Aug. 24, 1962.

SN 152,967. Sumter S. Arnim, d.b.a. D. Brownlee & Company, Bellaire, Tex. Filed Sept. 12, 1962.

XPOSE

The initial letter "X" in the drawing is lined for orange.
For Dye-Containing Dental Wafers for Disclosing Microbial Deposits on Teeth.
First use Mar. 15, 1962.

SN 152,998. Invenex Pharmaceuticals, San Francisco, Calif. Filed Sept. 12, 1962.

BE-CO

For Vitamin B Complex.
First use in 1962.

SN 153,283. Home Makers Savings Corporation, Pittsburgh, Pa. Filed Sept. 17, 1962.

MR. enzyme

No claim is made to the exclusive use of the word "Enzyme" apart from the mark as shown.
For Pharmaceutical Preparations for Relief and Prevention of Heartburn, Indigestion, Acidity, Gas or Upset Stomach Discomfort.
First use Aug. 12, 1962.

SN 153,328. Sauter Laboratories, Inc., Nutley, N.J. Filed Sept. 17, 1962.

DYNA-JETS

For Vitamin Supplement.
First use Sept. 5, 1962.

SN 154,016. Dalin Pharmaceuticals, Inc., Bayside, N.Y. Filed Sept. 27, 1962.

PHENAGESIC

For Preparation for Treating the Common Cold, Respiratory Infection, Nasal Congestion Associated With Sinusitis, Pollen Allergies and Headache.
First use Apr. 18, 1962.
Subj. to Intf. with SN 161,619.

SN 154,063. Shady Rest Nursing Home, Minneola, Fla. Filed Sept. 27, 1962.

DECUBAN

For Ointment Useful in the Treatment of Skin Ulcers, and Particularly Bed Sores.
First use Sept. 25, 1962.

SN 154,217. Eastern States Farmers' Exchange, Incorporated, West Springfield, Mass. Filed Oct. 1, 1962.

GRO-BITS

Owner of Reg. No. 745,071.
For Medicated Poultry Feed Containing Vitamins and Minerals.
First use Mar. 7, 1962.

SN 154,402. Crookes-Barnes Laboratories, Inc., Wayne, N.J. Filed Oct. 8, 1962.

RHOCAINE

For Sterile Ophthalmic Solution.
First use Aug. 28, 1962.

SN 155,385. Delta Drug Corporation, Jacksonville, Fla. Filed Oct. 18, 1962.

OMPYRONE

For Analgesic-Antipyretic Preparation for Relief of Pain and Severe Headaches, Neuralgia, Rheumatism, Malignancy, Biliary and Renal Colic, and Whenever a Reduction of Fever Is Desirable.
First use June 8, 1961.

SN 155,386. Delta Drug Corporation, Jacksonville, Fla. Filed Oct. 18, 1962.

OMNIOTO

For Antibiotic Preparation for Treatment of Infection of the Ear.
First use Mar. 2, 1962.

SN 155,387. Delta Drug Corporation, Jacksonville, Fla. Filed Oct. 18, 1962.

OMNICILLIN

For Antibiotic Preparation for Treatment of Infection of Human Beings.
First use Mar. 8, 1962.

SN 157,019. Société Anonyme: Laboratoires Asepta, Monaco. Filed Nov. 9, 1962.

AKILÉINE

Owner of Monacan Reg. No. 67.57.114, dated June 19, 1957.
For Products for the Care and Hygiene of Feet.

SN 160,667. Sandoz, Inc., Hanover, N.J. Filed Jan. 14, 1963.

BRINALDIX

For Pharmaceutical Preparation To Be Used as a Diuretic.
First use Jan. 4, 1963.

SN 160,701. Endo Laboratories, Inc., Richmond Hill, N.Y. Filed Jan. 15, 1963.

PERCOGESIC

Owner of Reg. Nos. 507,963 and 632,126.
For Medicinal Preparation Used as an Analgesic.
First use Dec. 20, 1962.

SN 160,806. Smith Kline & French Laboratories, Philadelphia, Pa. Filed Jan. 16, 1963.

DYAZIDE

For Diuretic.
First use Jan. 7, 1963.

SN 160,908. The Upjohn Company, Kalamazoo, Mich. Filed Jan. 17, 1963.

NEO-PREDEF

Owner of Reg. Nos. 662,148 and 676,235.
For Veterinary Antibiotic and Steroid Preparation.
First use Jan. 11, 1963.

SN 161,271. Norden Laboratories, Inc., Lincoln, Nebr. Filed Jan. 23, 1963.

CARMILAX

For Rumen Stimulant-Mild Laxative-Carminative-Antacid, Used in Veterinary Medicine.
First use November 1948.

SN 161,481. Drugs for Veterinary Medicine, Inc., Yonkers, N.Y. Filed Jan. 28, 1963.

CERUVET

For Veterinary Preparation for the Removal of Earwax.
First use Jan. 21, 1963.

SN 161,619. Kremers-Urban Company, Milwaukee, Wis. Filed Jan. 29, 1963.

PENTAGESIC

For Analgesic-Relaxant in Tablet Form Recommended for Use Whenever Pain or Muscle Spasm Demands Relief.
First use May 8, 1962.
Subj. to Intf. with SN 154,016.

SN 161,954. Chicago Pharmacal Company, Chicago, Ill. Filed Feb. 4, 1963.

URIVET

For Medicinal Preparation for the Treatment of Urinary Infections of Animals.
First use Jan. 10, 1963.

SN 162,064. American Cyanamid Company, Wayne, N.J. Filed Feb. 5, 1963.

AYNINE

For Antibacterial Agent.
First use Jan. 22, 1963.

SN 162,231. Bristol-Myers Company, New York, N.Y. Filed Feb. 7, 1963.

CALENDAR

For Premenstrual-Menstrual Medicinal Preparations.
First use Dec. 3, 1962.

SN 162,263. Geigy Chemical Corporation, Ardsley, N.Y. Filed Feb. 7, 1963.

REGUBRAN

For Antidepressant Preparation.
First use Jan. 29, 1963.

Class 19—Vehicles

SN 112,653. Toro Manufacturing Corporation, Minneapolis, Minn. Filed Jan. 27, 1961.

TORO

Owner of Reg. No. 529,845.
For Automotive Vehicles—Namely, Turf Tractors, Golf Cars, Utility Cars, and Motorized Golf Carts.
First use on or about Jan. 1, 1920.

SN 112,655. Toro Manufacturing Corporation, Minneapolis, Minn. Filed Jan. 27, 1961.

TORO

Owner of Reg. Nos. 529,845 and 623,377.
For Automotive Vehicles—Namely, Turf Tractors, Golf Cars, Utility Cars, and Motorized Golf Carts.
First use on or about Nov. 1, 1960.

SN 112,656. Toro Manufacturing Corporation, Minneapolis, Minn. Filed Jan. 27, 1961.



Owner of Reg. No. 623,377.
For Automotive Vehicles—Namely, Turf Tractors, Golf Cars, Utility Cars, and Motorized Golf Carts.
First use on or about Nov. 1, 1960.

SN 117,160. Cemco, Inc., Fort Worth, Tex. Filed Mar. 2, 1961.

cemco

For Automotive Horse Trailers and Parts Therefor.
First use Sept. 1, 1958.

SN 136,028. Anti-Friction Hull Corporation, Laurel, Md. Filed Jan. 16, 1962.

HYDROKEEL

For Power Driven Marine Craft and Amphibious Vehicles.
First use about June 1960.

SN 137,095. Sterling Precision Corporation, New York, N.Y. Filed Feb. 1, 1962.

TURBO CHIEF

Applicant disclaims the word "Turbo" apart from the mark as shown.
For Fire Fighting Vehicles.
First use about July 1960.

SN 137,115. Evelyn C. Caswell, d.b.a. Eve Caswell Enterprises, Orlando, Fla. Filed Feb. 2, 1962.

Cuddle-Carry

For Manual Carrier Device or Holder for Infants.
First use June 1961.

SN 137,254. Maskinbasset A/S, Hillevag, Norway. Filed Feb. 5, 1962.

Southwind

For Perambulators.
First use Feb. 14, 1920; in commerce May 2, 1957.

SN 137,533. Lawrence A. Loeb and Allan L. Loeb (joint owners), d.b.a. Laralo Marine Co., New Haven, Conn. Filed Feb. 8, 1962.

FENDA-DOX

For Inflatable and Collapsible Resilient Protectors for Boats, Including Boat Fenders and the Like.
First use Jan. 31, 1962.

SN 137,681. Brown Engine Products, Inc., Danbury, Conn., assignee of Blitz Kart, Incorporated, Huntington Station, N.Y. Filed Feb. 14, 1962.

BLITZ KART

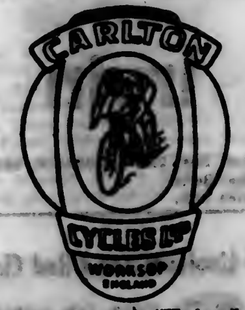
Applicant disclaims the word "Kart" apart from the mark as shown.
For Motorized and Unmotorized Land Vehicles—Namely, Cars.
First use Apr. 15, 1959.

SN 138,204. Helipod, Inc., Oceanside, Calif. Filed Feb. 19, 1962.

HELIPOD

For Aircraft and Parts Thereof.
First use Jan. 27, 1962.

SN 138,771. Carlton Cycles, Ltd., Worksop, Nottingham, England. Filed Feb. 28, 1962.



Applicant disclaims the words "Worksop" and "England" as being geographically descriptive. Applicant also disclaims the term "Cycles Ltd." and the representation of the goods apart from the mark as shown.
For Motor Bicycles, Motorised Cycles, Mopeds, Scooters, Bicycles, and Tricycles and Parts Thereof.
First use in 1946; in commerce in 1946.

SN 145,616. Schottel-Werft Josef Becker K.G., Oberspay (Rhine), Germany. Filed May 28, 1962.

SCHOTTEL

Owner of German Reg. No. 613,316, dated Oct. 29, 1951.
For Inland Watercraft.

SN 146,397. Lonergan Corporation, Elkhart, Ind. Filed June 7, 1962.

SPACEMAKER

For House Trailers.
First use May 1960.

SN 147,168. Wonstop Automotive Warehouse Co., Denver, Colo. Filed June 18, 1962.

ALPARTS

For Automotive Brake Shoes, Brake Bands, Shock Absorbers, Brake Cylinders, and Brake Cylinder Pistons.
First use Jan. 20, 1961.

SN 152,847. Stanray Corporation, Chicago, Ill. Filed Aug. 31, 1962.

LINE-RITE

For Land Vehicle Wall Lining.
First use Dec. 5, 1959.

SN 153,006. McDonnell Aircraft Corporation, St. Louis, Mo. Filed Sept. 12, 1962.



FIRST FREE MAN IN SPACE

The representation of the goods is disclaimed apart from the mark as shown.
For Aircraft, Spacecraft, Space Vehicles, Missiles and Components Thereof.
First use Aug. 31, 1962.

SN 154,823. Irving Air Chute Company, Inc., Lexington, Ky. Filed Oct. 9, 1962.

Irvin

Owner of Reg. Nos. 226,094, 569,636, and others.
For Safety Seat Belts.
First use March 1926.

Class 20—Linoleum and Oiled Cloth

SN 141,391. Top Tile Stores, Inc., Latham, N.Y. Filed Apr. 2, 1962.

TOP TILE

Applicant specifically disclaims the use of the word "Tile" as its trademark.
For Linoleum Tile, Vinyl Tile, Rubber Tile, Plastic Tile, Asphalt Tile, and Vinyl Asbestos Tile.
First use Mar. 1, 1958.

Class 21—Electrical Apparatus, Machines, and Supplies

SN 114,973. Lear Siegler, Inc., New York, N.Y., by change of name from The Siegler Corporation, New York, N.Y. Filed Mar. 6, 1961.

DECATRAN

For High Precision Transformer-Switch Assemblies Such as Ratio Boxes Useful in Digital to Analog Conversion Systems.
First use January 1960.

SN 115,068. Lear Siegler, Inc., New York, N.Y., by change of name from The Siegler Corporation, New York, N.Y. Filed Mar. 7, 1961.

DECALOG

For Digital Logic Units Comprising Assemblies of Diodes, Resistors, and Transistors, Such as "And" Gates, "Or" Gates, "Memory" Gates, and "Not" Gates.
First use in January 1960.

SN 121,997. Hankscraft Company, Reedsburg, Wis. Filed June 14, 1961.

HANKSCRAFT CO.

For Electrically Operated Humidifiers, Vaporizers, Sterilizers, Milk and Food Warmers, and Bottle Warmers.
First use during November 1957.

SN 123,810. The Electric Auto-Lite Company, Toledo, Ohio. Filed July 12, 1961.

A·G·pak
ACTIVATE and GO

The applicant without relinquishing any common law right disclaims the use of the words "Activate and Go" separate or apart from the mark as shown.
For Dry Charged Electric Storage Battery With Separately Contained Electrolyte Boxed as a Unitary Package.
First use June 8, 1961.

SN 133,427. E. H. Titchener & Company, Binghamton, N.Y. Filed Dec. 5, 1961.

Wire-Way

For Racks, Trays, Shelves, Shelving, and Supports Used in Electrical Apparatus All Composed in Whole or in Part of Wire.
First use July 26, 1961.

SN 137,217. ERA Dynamics Corporation, Cedar Grove, N.J. Filed Feb. 5, 1962.

NAUTACOM

For Transistorised Marine Sound Amplifying and Communication Systems.
First use Jan. 11, 1962.

SN 139,672. Plastic Wire & Cable Corporation, Jewett City, Conn. Filed Mar. 12, 1962.

PLAST-A-FLEX

For Electrical Wires and Cables.
First use Mar. 6, 1962.

SN 139,891. SEG Electronics Co., Inc., Brooklyn, N.Y. Filed Mar. 14, 1962.

SEG

For Electrical Communication Apparatus and Network Components Thereof, Including Line Equalisers, Filters, Antennas, Amplifiers, Receivers, and Transmitters.
First use during December 1954.

SN 140,099. Consolidated Sewing Machine Corp., New York, N.Y. Filed Mar. 19, 1962.

MODERNAGE

Owner of Reg. No. 691,632.
For Radio Receivers.
First use Oct. 11, 1961.

SN 140,345. Electrical Fittings Corporation, Farmingdale, N.Y. Filed Mar. 21, 1962.

SWING TOP

Owner of Reg. No. 639,144.
For Electrical Wiring Supplies and Accessories Therefor—Namely, Entrance Caps.
First use in or about March 1955.

SN 140,711. Microdot Inc., South Pasadena, Calif. Filed Mar. 26, 1962.

MICROCRIMP

For Electrical Connectors.
First use May 17, 1960.

SN 141,068. Marvel Lamp Company, Inc., Hoboken, N.J. Filed Mar. 29, 1962.

MARVEL

For Electric Light Bulbs.
First use 1932.

SN 141,386. Tennessee Stove Works, Inc., Chattanooga, Tenn. Filed Apr. 2, 1962.

TOWN HOUSE

Owner of Reg. No. 725,988.
For Electric Ranges.
First use Jan. 12, 1961.

SN 141,412. Behlman-Invar Electronics Corp., Santa Monica, Calif. Filed Apr. 3, 1962.

The drawing is lined for gold or orange.
For Electrical Power Supplies, Such as Alternating Current to Alternating Current Converters, Alternating Current to Direct Current Converters, and Direct Current to Alternating Current Inverters.
First use in November 1961.

SN 141,923. Aerovox Corporation, New Bedford, Mass. Filed Apr. 10, 1962.

AEROCUP

Owner of Reg. No. 534,756.
For Power and Transmitting Capacitors.
First use Feb. 21, 1962.

SN 141,982. Prescolite Manufacturing Corporation, Berkeley, Calif. Filed Apr. 10, 1962.

LUMESCENT

For Electric Lighting Fixtures.
First use Feb. 19, 1962.

SN 143,274. Rubel & Company Decorative Accessories, Inc., New York, N.Y. Filed Apr. 27, 1962.

Elec-tray

For Electric Food Warmers.
First use Feb. 5, 1962.

SN 143,604. Daystrom, Incorporated, Houston, Tex. Filed May 2, 1962.

HEATHKIT

Owner of Reg. Nos. 520,346, 723,532, and others.
For Radio Transmitters, Radio Receivers, Radio Telephones, Tuners, Amplifiers, Preamplifiers and Loud Speaker Systems, Tape Recorders, Record Playing Equipment, Combination of Such Items and Parts Thereof; Intercommunication Systems; Public Address Equipment; Electrical Power Converters; Electronic Garage Door Openers.
First use on or about Apr. 8, 1958, on amplifiers, tape recorders, record playing equipment, and radio receivers in kit form.

SN 144,345. Raphael J. Costanzo, d.b.a. Costanzo Electronics, Bridgeport, Conn. Filed May 11, 1962.

Cook Ray

For Electric Stoves.
First use Mar. 21, 1961.

SN 144,387. I-T-E Circuit Breaker Company, Philadelphia, Pa. Filed May 11, 1962.

Owner of Reg. Nos. 518,983, 650,836, and others.
For Circuit Breakers, Safety Switches, Load Centers, Panelboards, Switchboards, Motor Control Centers, Bus Duct Systems.
First use January 1960.

SN 144,593. Big-T-Inc., Eau Claire, Wis. Filed May 15, 1962.

POKER
beer

For Electric Type Beer Poker Machines.
First use Sept. 17, 1959.

SN 144,695. Dayton Aircraft Products, Inc., Fort Lauderdale, Fla. Filed May 16, 1962.

DAYTON AIRCRAFT MINIATURISED MINIFIT ANTENNA SYSTEMS ANTENNA FITTINGS

Applicant disclaims exclusive appropriation of the words "Miniaturised, Antenna Systems, Antenna Fittings" as shown on the drawing.
For Antenna Hardware.
First use May 4, 1962.

SN 145,425. Yardney Electric Corporation, New York, N.Y. Filed May 24, 1962.

YARDNEY SEACEL

For Electric Batteries.
First use Feb. 14, 1962.

SN 145,509. Atlas Tool & Manufacturing Co., St. Louis, Mo. Filed May 28, 1962.

ATLAS AIRE

For Portable Electric Heaters.
First use June 12, 1961.

SN 146,761. Vitalic Battery Company, Inc., Dallas, Tex. Filed June 12, 1962.

PILOT

For Lead Acid Storage Batteries of the Automotive Type.
First use June 13, 1955.

SN 146,983. Daystrom, Incorporated, Murray Hill, N.J. Filed June 15, 1962.

DAYSTROM

Owner of Reg. No. 721,840.
For Electric Recording and Reproducing Apparatus for Recording and Reproducing Magnetic Sound Records; Light Sensitive Cells; Radio Transmitters, Radio Receivers, Radio Telephones, Tuners, Amplifiers, Preamplifiers and Loudspeaker Systems, Tape Recorders, Record Playing Equipment and Apparatus, and Combinations of Such Items and Parts Thereof; Intercommunication Systems; Public Address Equipment; Electrical Power Converters; and Electronic Garage Door Openers.
First use at least as early as Oct. 31, 1961.

SN 147,193. Elox Corporation of Michigan, Troy, Mich. Filed June 19, 1962.

ELO-POLISH

For Surface Polishing Control Unit for Use as an Accessory With Electrical Discharge Machines.
First use on or about Feb. 19, 1962.

SN 147,649. Thiokol Chemical Corporation, Bristol, Pa. Filed June 25, 1962.

TRACE

For Electrical Systems for Detecting and Communicating Information Regarding Operation of Electrical Power Transmission Lines, and Parts and Supplies for Such Systems.
First use October 1961.

SN 147,759. Rockwell Manufacturing Company, Pittsburgh, Pa. Filed June 26, 1962.

ROCKWELL

Owner of Reg. Nos. 553,232, 685,401, and others.
For Electric Motors, Recording Apparatus, Instruments, Signal Generators, Signal Transmitters and Parts Thereof and Attachments and Accessories Therefor.
First use Dec. 13, 1945.

SN 148,267. Dog Supply House, Bainbridge, Ohio. Filed July 2, 1962.

DYNALITE

For Flashlight.
First use Jan. 10, 1961.

SN 148,392. Janus Products, Incorporated, Westbury, N.Y. Filed July 5, 1962.

WATER TALKIE

For Electronic Underwater Communication Equipment, Comprising Equipment for Transmitting and Receiving an Ultrasonic Energy Beam.
First use June 22, 1962.

SN 148,555. Olson Electronics Incorporated, Akron, Ohio. Filed June 12, 1962.

Olson

For Speaker Selectors, Pre-Amplifiers, Amplifiers, Condensers, Binding Post Kits, Electronic Kits, Lug Terminals, Phono Plugs and Jacks, Contact Plugs and Sockets, Transistor Sockets, Plug Adaptors, Switches, Audio Cable, Speaker Cable, Speakers, Tube Shield Kits, Batteries, Flash Bulbs, Travel Flat Irons, Fuse Holders, Neon Panel Lamps, Knobs, Loopsticks, Microphones, Mike Cartridges, Telephone Pick-Ups, Motors, Stereo Cartridges, Radio Headphones, Earphones, Beacon Flasher Bulbs, Lantern Bulbs, Resistors, Electrical Connectors, Test Lead Kits, Radios, Radio Intercoms, Intercom Systems, Radio Tuners, Rectifiers, Audio Head Demagnetizers, Power Megaphones, Speaker Switches, Telegraph Keys, Fluorescent Starters, Transformers, Voltage Regulators, Tape Erasers, Signal Injectors, Electrical Tape, Solderless Test Lead Kits, TV Tuners, Stereo L-Pads, Audio Mixers, Stereo Remote Controls, Jumper Cables, Hi-Fi Jumper Cables, Magnet Wires, Bus Wire, Coaxial Wire, Ground Wire, Speaker Wire, Mike Wire, Mike Cable Wire, Insulators, Mike Connectors, Vacuum Brushes, Immersion Heaters, Chassis Sockets, and Bottle Lights.
First use Feb. 1, 1959.

SN 148,921. Surprenant Manufacturing Company, Clinton, Mass. Filed July 12, 1962.

SURCO-RAD

Owner of Reg. No. 418,362.
For Electrical Wire Insulation.
First use June 4, 1962.

SN 151,688. National Silver Company, New York, N.Y. Filed Aug. 22, 1962.

JAGUAR

For Radios, Walkie-Talkies.
First use Feb. 21, 1962.

SN 151,761. Regina Kohler, d.b.a. Fa. Julius Karl Gorler, Berlin-Reinickendorf, Germany. Filed Aug. 23, 1962.

GÖRLER

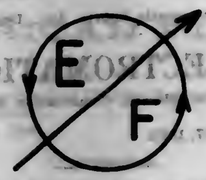
Owner of German Reg. No. 755,930, dated Dec. 4, 1961.
For Physical and Electro-Technical Apparatus, Especially All Kinds of Transformers, Reaction Coils, Parts for Radio and Television Apparatus, Current Supply Apparatus, Converters, Signal-, Measuring- and Control Devices, Parts of Synthetic Materials for Physical, Electro-Technical and Measuring Apparatus.

SN 152,386. John C. Dolph Company, Monmouth Junction, N.J. Filed Sept. 4, 1962.

DOLPH'S

Applicant disclaims the words "Electric Lacquer" apart from the mark as shown. Owner of Reg. Nos. 81,510 and 140,267.
For Electric Insulating Varnishes Such as Electric Insulating Lacquers.
First use on or about Mar. 1, 1921.

SN 152,794. Cesare Giulio Invernizzi, Geneva, Switzerland. Filed Sept. 10, 1962.



Owner of Swiss Reg. No. 145,785, dated Feb. 14, 1963.
For Lightning Rods.

SN 152,807. S. Wm. Lipson, Columbus, Ohio. Filed Sept. 10, 1962.

DUSTPOSALL

For Electric Powered Dust Mop Cleaning Appliance, Which Creates a Suction To Remove Dust or Lint From a Mop Placed Over the Intake Slots of the Unit.
First use July 10, 1962.

SN 154,117. Hafag Sales Inc., Chicago, Ill. Filed Sept. 28, 1962.



For Infra-Red Heating Units.
First use Feb. 1, 1961.

SN 154,813. Fairchild Camera and Instrument Corporation, Syosset, N.Y. Filed Oct. 9, 1962.

FAIRCO

For Electronic Tubes and Parts Therefor.
First use June 11, 1962.

SN 155,241. Dare-Test Corporation, North Bergen, N.J. Filed Oct. 16, 1962.

STORM KING

For Electric Light Fixtures.
First use Sept. 18, 1962.

SN 155,414. Hamilton Watch Company, Lancaster, Pa. Filed Oct. 18, 1962.

HAMILTON

Owner of Reg. Nos. 208,667, 718,547, and others.
For Inductive Devices—Namely, Transformers, Chokes, and R.F. Coils.
First use May 16, 1961.

SN 155,452. Usines Belges Vynckier Frères, en Flamand: Belgische Werkhuizen Vynckier Gebroeders, Ghent, Belgium. Filed Oct. 18, 1962.

LUMIBLOC

Priority claimed under Sec. 44(d) on Belgian Reg. No. 4,464, dated Aug. 13, 1962.
For Electrically Illuminated Mimic Diagram Panels.

SN 156,579. Display-O-Matic International, Inc., Denver, Colo. Filed Nov. 5, 1962.

DISPLAY-O-MATIC

For Sheet for Electrically Actuated Apparatus for Displaying Advertising Medium.
First use on or about July 1, 1962.

SN 157,010. Robertshaw-Fulton Controls Company, Richmond, Va. Filed Nov. 9, 1962.

MULTILOK

For Electronic Communication Modem and Control Modem.
First use Nov. 1, 1962.

SN 157,063. Chas. L. Dick Company, Kent, Wash. Filed Nov. 13, 1962.

PEOPLE HEATERS

Applicant disclaims the word "Heaters" apart from the mark as shown.
For Infra-Red Heaters.
First use Oct. 8, 1962.

Class 22 — Games, Toys, and Sporting Goods

SN 113,264. Julian Chapman, d.b.a. G-Mastic Co., Milwaukee, Wis. Filed Feb. 8, 1961.

G'MASTIC

Julian Chapman

For Weightlifting and Athletic Bodybuilding Equipment.
First use Aug. 21, 1950.

SN 116,868. Brunswick-MacGregor Inc., Cincinnati, Ohio, by change of name from MacGregor Sport Products Inc., Cincinnati, Ohio. Filed Mar. 10, 1961.



For Playing Equipment and Accessories for Use in Playing Baseball, Softball, Football, Basketball and Golf; Football and Baseball Shoes, Protective Pads and Helmets, and Football Pants.
First use June 1960.

SN 120,793. Crylor, Paris, France. Filed May 25, 1961.

Crylor

Priority claimed under Sec. 44(d) on French Reg. No. 498,283, dated Jan. 13, 1961 (Paris); Natl. Inst. No. 136,947. Owner of U.S. Reg. Nos. 609,640, 639,864, and others.
For Sporting and Hunting Goods, Specifically Tennis Nets, Nets for Games, and Table Tennis, Fishing Nets, Fishing Lines, Diving Masks, Tents, Sleeping Bags, Game Pouches and Bags, and Stuffed Toys.

SN 141,724. Hit Archery Co., Archbold, Ohio. Filed Apr. 6, 1962.

BLACK ACE

For Archery Bows.
First use November 1960.

SN 143,475. J. C. Walk & Company, St. Louis, Mo. Filed Apr. 30, 1962.

THE INVESTMENT CLUB

For Equipment Comprising Simulated Stock Certificates, Stock Exchange Quotation Boards, Purchase Records, and Similar Equipment for Playing an Educational Stock Market Game.
First use Apr. 23, 1962.

SN 143,611. Dearay Products Co., Cleveland, Ohio. Filed May 4, 1962.

KIDPROOF

For Toy Building Bricks and Blocks and Blocks in the Form of Geometrical Patterns for Playing Coordination Games.
First use on or about Aug. 1, 1961.

SN 144,723. Harrison Industries, Inc., Newark, N.J. Filed May 16, 1962.

Vivif

"Vivif" means in French, "lively" and is a derivation of the word "Vif."
For Fishing Bait or Lure.
First use Mar. 19, 1961.

SN 146,909. Lectromatic Sports, Inc., Denver, Colo. Filed June 14, 1962.

LECTROMATIC

For Motorized or Electric Combination Spinning Rod and Reel.
First use Mar. 17, 1962.

SN 147,712. Donald F. Duncan, Incorporated, Evanston, Ill. Filed June 26, 1962.

DUNCAN SEATTLITE

Owner of Reg. Nos. 618,961, 622,084, and 727,694.
For Tops of the Bandalore Return Type.
First use June 6, 1962.

SN 149,218. Samuel R. Slaymaker II, Gap, Pa. Filed July 17, 1962.

Slaymaker's "STREAMERETTE"

For Fishing Flies.
First use on or about May 3, 1962.

SN 149,547. Faye O. Dooda, d.b.a. Faye's Fashions for Dolls, Wichita, Kans. Filed July 23, 1962.

FAYE'S FASHIONS

No claim of exclusive right is made to "Fashions" for doll clothing and accessories.
For Doll Clothing and Accessories.
First use July 10, 1962.

SN 149,955. Orville M. Ontiveau, d.b.a. Deka Plastics, South Gate, Calif. Filed July 27, 1962.

MOON PLASM

For Plastic, Rubber-Like Toy Novelty Item for Use as a Modeling or Molding Material and Amusement Device by Children.
First use Sept. 26, 1961.

SN 150,368. Winifred Schroeder, d.b.a. Eyeball Co., Cincinnati, Ohio. Filed Aug. 2, 1962.



The drawing is lined for blue, but color is not claimed as a feature of the mark.
For Golf Balls.
First use July 6, 1961.

SN 150,512. Milton Bradley Company, Springfield, Mass. Filed Aug. 6, 1962.

FACT FINDER

For Teaching Aid Sold as a Unit and Including a Playing Surface, Movable Playing Pieces and Fact Cards.
First use Mar. 1, 1962.

SN 151,814. The A. C. Gilbert Company, New Haven, Conn. Filed Aug. 24, 1962.

AMERICAN FLYER

Owner of Reg. No. 238,802.
For Internal Combustion Engines Particularly for Installation in Model Aircraft.
First use Apr. 6, 1962.

SN 157,711. Alfred Malcolm Layson, Waukegan, Ill. Filed Nov. 21, 1962.

Tru Fish DECOYS

No claim of exclusive right is made to "Decoys" for artificial fishing decoys and lures.
For Fishing Equipment—Namely, Artificial Fishing Decoys and Lures.
First use Feb. 20, 1962.

SN 162,300. Specialty Sales Company, Atlanta, Ga. Filed Feb. 7, 1963.

SPESCO

For Fishing Equipment—Namely, Line, Floats, Sinkers, Rods, Reels and Miscellaneous Tackle; Sports Equipment—Namely, Golf Balls, Baseball Gloves, and Badminton and Croquet Sets; and Toys—Namely, Mechanical, Friction and Battery Operated Toys, Spinning and Return Tops, Jacks, Jump Ropes, and Dolls.
First use in 1943.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

SN 103,941. McEvoy Company, Houston, Tex. Filed Sept. 6, 1960.

CONTROLLED CF FRICTION

The drawing is lined for the color blue, however, no claim is made to the color as an integral portion of the mark.
For Oil Well Equipment—Namely, Casing Hangers.
First use February 1954.

SN 103,942. McEvoy Company, Houston, Tex. Filed Sept. 6, 1960.

CONTROLLED FRICTION

For Oil Well Equipment—Namely, Casing Hangers.
First use February 1954.

SN 115,459. Entoleter, Inc., Hamden, Conn. Filed Mar. 13, 1961.



While the drawing is shown as being lined for red, no particular color is claimed as a particular feature of the mark.
For Centrifugal Machines.
First use at least as early as Jan. 18, 1961.

SN 116,620. The Bailey Company, Inc., Amesbury, Mass. Filed Mar. 28, 1961.

AUTO-PILE DRIVER

For Machines for Inserting Into Grooved Objects Elongated Flexible Shapes Including Strips, Tapes, Ropes, Threads and Tubes.
First use in or about February 1960.

SN 119,091. The Frank Wilson Corporation, Memphis, Tenn., assignee of Wimco Manufacturing Company, Chicago, Ill. Filed May 1, 1961.

Wimco WMCo PRODUCTS

For Metal Tubing Forming Devices.
First use Nov. 1, 1955.

SN 119,707. E. E. Lohn Company, Inc., d.b.a. Eelco Mfg. and Supply Co., Inglewood, Calif. Filed May 10, 1961.



For Automotive Accessory Equipment—Namely, Parts of Engines, Exhaust Systems, and Blowers.
First use on or about Jan. 11, 1961.

SN 124,531. Economy Engineering Company, Chicago, Ill. Filed July 24, 1961.

SHOPLIFTER

Owner of Reg. No. 710,211.
For Manually or Power Operated Lift Truck With Elevating Platform or Load Forks.
First use Feb. 12, 1940.

SN 125,380. Giant Industries, Pico Rivera, Calif. Filed Aug. 4, 1961.

GIANT

For Pumping and Placing Machines for Applying Premixed Cementitious Fluids to Walls, Ceilings and the Like, and Accessories Therefor Including Finishing Guns and Machines, Plaster Guns, Reducers, Nozzles, Rotors, Plaster and Cement Pumps and Grouters.
First use Sept. 14, 1957, on finishing guns.

SN 131,795. The Bin-Dicator Company, Detroit, Mich. Filed Nov. 13, 1961.

BHO

For Discharge Outlets for Handling Granular or Lump Materials From Bins, Hoppers and Other Containers, and Combined Discharge Outlets and Bins, Hoppers and Other Containers for Handling Granular or Lump Materials.
First use June 27, 1961.

SN 131,796. The Bin-Dicator Company, Detroit, Mich. Filed Nov. 13, 1961.

BIN-DICATOR

Owner of Reg. No. 337,669.
For Discharge Outlets for Handling Granular or Lump Materials From Bins, Hoppers and Other Containers, and Combined Discharge Outlets and Bins, Hoppers and Other Containers for Handling Granular or Lump Materials.
First use June 27, 1961.

SN 132,945. Sheridan Iron Works, Inc., Sheridan, Wyo. Filed Nov. 28, 1961.



The drawing is lined for the color red. Applicant hereby disclaims exclusive use of the term "Trestle Support" apart from the mark as shown.
For Supports for Scaffolding and the Like.
First use Aug. 14, 1961.

SN 134,501. Utility Engineering & Manufacturing Co. Inc., Fort Wayne, Ind. Filed Dec. 21, 1961.

UTEMCO

For Construction Equipment—Namely, Winches, Hitches, Post-Hole Booms, Lawn Mowers, Scrapers and the Like.
First use Sept. 14, 1961.

SN 136,468. Layne & Bowler Pump Company, Los Angeles, Calif. Filed Jan. 24, 1962.



Owner of Reg. No. 329,374.
For Pumps.
First use Apr. 8, 1955.

SN 136,516. Hans Lenze, d.b.a. Maschinenfabrik Hans Lenze, Bosingfeld, Lippe, Germany. Filed Jan. 24, 1962.

SIMPLA

Owner of German Reg. No. 753,944, dated Oct. 16, 1961; and U.S. Reg. No. 685,850.
For Bevel Gear and Spur Gear Transmissions, Worm and Wheel Transmissions, Continuously Variable Transmissions, Shaft Couplings, Gear Drives, Chain or Belt Drives.

SN 136,875. The Bullard Company, Bridgeport, Conn. Filed Jan. 30, 1962.

IVG

For Variable Speed Transmissions.
First use Dec. 29, 1961.

SN 137,156. The Parker Pen Company, Janesville, Wis. Filed Feb. 2, 1962.

CLIPIT

For Hand Tool for Cutting Clippings From Newspapers, Magazines, and the Like.
First use Aug. 1, 1961.

SN 137,169. Applied Power Industries, Inc., West Allis, Wis. Filed Feb. 5, 1962.

HI-HOIST

For Mechanically Actuated Lifting Devices.
First use on or about Nov. 21, 1957.

SN 138,225. Oneida Ltd., Oneida, N.Y. Filed Feb. 19, 1962.

1881 ROGERS STAINLESS

Applicant disclaims the word "Stainless" apart from the mark as shown. Owner of Reg. No. 97,079.
For Stainless Steel Flat Tableware.
First use Sept. 20, 1961.

SN 138,564. Chemetron Corporation, Chicago, Ill. Filed Feb. 26, 1962.

MAGNETIC MONITOR

For Valve Control Mechanisms for Filling Machines.
First use Jan. 19, 1961.

SN 138,868. Jacobsen Manufacturing Co., Racine, Wis. Filed Mar. 1, 1962.

WORTHINGTON

For Grass Cutting Equipment—Namely, Mowers, and Tractors for Towing Same, and Accessories and Parts Thereof.
First use at least as early as 1920.

SN 139,635. Harry S. Jakobsen, d.b.a. The Form-All Mfg. Co., Long Valley, N.J. Filed Mar. 12, 1962.

FORM-ALL

For Radii and Angle Dressers, Optical Comparators, Cutting Tools, and Tool Parts.
First use Sept. 30, 1956.

SN 139,944. Machine Accessories, Inc., Minneapolis, Minn. Filed Mar. 15, 1962.

GEAR-PAK

Applicant disclaims the exclusive use to the notation "Gear" in the mark.
For Gear Reducers.
First use Feb. 8, 1962.

SN 140,196. Sunbeam Corporation, Chicago, Ill. Filed Mar. 19, 1962.

ECONO-FLOW

For Liquid Dispensing Apparatus.
First use Sept. 23, 1960.

SN 140,864. Prince Macaroni Manufacturing Company, Lowell, Mass. Filed Mar. 27, 1962.

STIR 'N SERVE

For Spaghetti Forks.
First use Dec. 12, 1956.

SN 140,913. Borg-Warner Corporation, Chicago, Ill. Filed Mar. 28, 1962.

INGERSOLL

Owner of Reg. Nos. 655,468, 722,209, and others.
For Shovels and Spades.
First use prior to Jan. 1, 1936.

SN 141,815. Kurt Manufacturing Company, Minneapolis, Minn. Filed Apr. 2, 1962.

ANGLOCK

For Machine Tool Accessories—Namely, Machine Tool Vises.
First use on or about Jan. 16, 1957.

SN 142,548. Pacific Pumping Company, Oakland, Calif. Filed Apr. 16, 1962.

PACO

For Pumps for Every Service—Namely, Deep and Shallow Well Jet Pumps, Centrifugal Pumps, Turbine Type Pumps, Sump Pumps, Submersible Pumps, Non-Clog Pumps, Self-Priming Pumps, Ditch Pumps, Proportioning Pumps, and Refrigerant Pumps, and Parts Therefor.
First use Mar. 1, 1962; Dec. 20, 1947, as to the mark "Paco" on turbine-type pumps.

SN 142,622. The Diversey Corporation, Chicago, Ill. Filed Apr. 19, 1962.

MIXOMATIC

For Spray Cleaning Unit.
First use on or about Feb. 20, 1962.

SN 142,919. Bemis Bro. Bag Co., Minneapolis, Minn. Filed Apr. 24, 1962.

POWR GRIP

For Bag Holders for Bag Filling Devices.
First use in or about March 1957.

SN 143,320. Aero-Motive Manufacturing Company, Kalamazoo, Mich. Filed Apr. 30, 1962.

FLOW-ROTATOR

For Hose Reels, Such as Automatic Take-Up Hose Reels.
First use Aug. 13, 1962.

SN 144,813. Dashew Business Machines, Inc., Los Angeles, Calif. Filed May 17, 1962.

DATAWRITER

For Data Transferring Devices—Namely, Imprinters.
First use February 1955.

SN 146,782. Automatic Devices Company, Allentown, Pa. Filed June 14, 1962.

SWITCHER-I

For Spring-Actuated Switching Devices for Mounting on Cyclorama Curtain Tracks To Change Stage Settings.
First use September 1960.

SN 146,927. Preway Inc., Wisconsin Rapids, Wis. Filed June 14, 1962.

PREWAY

Owner of Reg. Nos. 431,604, 666,304, and others.
For Dishwashers.
First use Apr. 27, 1962.

SN 149,071. Gene B. Fetrow, d.b.a. Pizza-Quik-Rol, Ontario, Calif. Filed July 16, 1962.

PIZZA-QUIK-ROL

For Hand Tools for Rolling and Spreading Pasty Dough-Like Materials.
First use June 15, 1962.

SN 149,610. Marion Lee Thompson, d.b.a. Mickey Thompson Enterprises, Long Beach, Calif. Filed July 23, 1962.



For Cams, Pistons, Rods, Rocker Arms, Tappets and Similar Automotive Parts, Equipment and Accessories.
First use Dec. 7, 1961.

SN 153,724. Blackwelder Manufacturing Company, Rio Vista, Calif. Filed Sept. 24, 1962.



For Sugar Beet Harvesters, Tomato Harvesters, Row Crop Plant Thinning Implements, Fruit Sampling Devices, Gopher Poison Applicators, Portable Orchard Towers, Portable Pumps, Grain Auger Units, Nut Harvesters, Fruit Harvesters, Green Crop Harvesters, Crop Planting Implements, and Fork Lift Units.
First use Mar. 2, 1959.

SN 154,342. Farbenfabriken Bayer Aktiengesellschaft, Leverkusen-Bayerwerk, Germany. Filed Oct. 2, 1962.

URETHEN

Owner of German Reg. No. 756,828, dated Jan. 10, 1962.
For Pressure Rollers, Shaft Couplings and Gears Made From Synthetic Plastics.

SN 154,469. Ralph B. Carter Company, Hackensack, N.J. Filed Oct. 4, 1962.

SCAVENGER

For Self-Priming Centrifugal Pumps.
First use Aug. 16, 1962.

SN 154,960. Dana Corporation, Toledo, Ohio. Filed Oct. 11, 1962.

DANCO

For Power Transmission Mechanisms—Namely, Clutches, Clutch Plates, and Parts Thereof.
First use Aug. 16, 1962.

SN 155,226. Charles C. Andrews, d.b.a. Andrews Machine Company, Decatur, Ill. Filed Oct. 16, 1962.

ANDREWS

For Portable Conveyors for Moving Bulk Materials.
First use July 9, 1954.

SN 155,433. Nelco Corporation, New York, N.Y. Filed Oct. 18, 1962.

NELCO

For Sewing Machines and Parts Therefor.
First use Oct. 1, 1962.

SN 155,507. Halmar, Inc., Minneapolis, Minn. Filed Oct. 19, 1962.

SLICETTE

For Steak Knives.
First use in or about April 1958.

SN 155,949. Torit Manufacturing Company, St. Paul, Minn. Filed Oct. 25, 1962.

TORIT

Owner of Reg. Nos. 604,188 and 728,360.
For Dust-Free Cabinets (Used in Manufacturing To Prevent Dust From Collecting in the Area the Product Is Being Produced), Dust Collectors and Dust Separators of an Industrial Nature for Use in Manufacturing Processes.
First use in September 1962; Apr. 5, 1955, in a different display.

SN 163,831. Cutler-Hammer, Inc., Milwaukee, Wis. Filed Feb. 25, 1963.

CH CONTROL

No claim is made to the word "Control" apart from the mark as shown. Owner of Reg. No. 705,517 and others.
For Conveyors, Stackers, Counters, Joggers, and Collators for Newspapers, Magazines and the Like; Apparatus and Systems for Conveying, Sorting, Counting, Classifying, and Storing Articles and Materials; Machine Controls and Linear Actuators; Apparatus and Systems for Inspecting Paper, Machined Parts and the Like; and Accessories for and Parts of the Foregoing Apparatus.
First use Oct. 5, 1960, on newspaper conveyors.

Class 24—Laundry Appliances and Machines

SN 113,590. Wichita Precision Tool Company, Inc., Wichita, Kans. Filed Feb. 13, 1961.

FASHIONER

For Garment Finishing Equipment Utilizing Steam and Air Passed Through the Garment for Conditioning the Material.
First use Mar. 17, 1958.

SN 155,760. Tingue, Brown & Co., New York, N.Y. Filed Oct. 23, 1962.

POLYKNIT

For Laundry Nets.
First use Sept. 7, 1962.

Class 26—Measuring and Scientific Appliances

SN 8,273. Seiko Denki Kogyo Kabushiki-Kaisha (The Seiko Electric Instrument Industry Co., Ltd.), Toshima-ku, Tokyo, Japan. Filed May 14, 1956.

SEKONIC PROFESSIONAL

Applicant disclaims the word "Professional" apart from the mark as shown.
For Photo-Electric Exposure Meters.
First use Apr. 5, 1955; in commerce Nov. 15, 1955.

SN 112,911. New York Institute of Technology, Inc., New York, N.Y. Filed Feb. 1, 1961.

EDUMATOR
AUTOMATION IN EDUCATION

The descriptive slogan "Automation in Education" is disclaimed.
For Automated Teaching Systems.
First use Feb. 2, 1957.

SN 115,847. Rockwell Manufacturing Company, Pittsburgh, Pa. Filed Mar. 16, 1961.

SEALED REGISTER

For Fluid Meters.
First use in June 1957.

SN 119,829. Ametek, Inc., Sellersville, Pa., by change of name from American Machine and Metals, Inc., Sellersville, Pa. Filed May 12, 1961.

SELECTO-SCALE

For Pressure Responsive Indicating Gauge for Showing Pressure, Temperature or the Like.
First use Jan. 4, 1961.

SN 125,409. A. C. Nielsen Company, Chicago, Ill. Filed Aug. 4, 1961.

Aptimeter

For Apparatus for Indicating or Recording Information Pertinent to Marketing Research.
First use in May 1961.

SN 130,922. Lindberg Engineering Company, Chicago, Ill. Filed Oct. 30, 1961.

ROBOTROL

For Punch Card Control Apparatus for Furnaces.
First use Oct. 18, 1961.

SN 136,120. Datex Corporation, Monrovia, Calif. Filed Jan. 19, 1962.

U-SCAN

For Encoders.
First use in November 1961.

SN 136,725. Berlant Automonitor Corporation, New York, N.Y. Filed Jan. 29, 1962.

BERLANT STENOLAB

For Stenographic and Typing Teaching Laboratory Equipment, Products, and Supplies.
First use on or about July 12, 1961.

SN 137,841. Clark-Karns Electronics, Inc., Grand Rapids, Mich. Filed Feb. 13, 1962.

MICRO SCHOOL

For Audio Instruction Equipment.
First use Nov. 15, 1961.

SN 138,949. Dorsett Electronics, Inc., Norman, Okla. Filed Mar. 2, 1962.

DORSETT

For Electrically Operated Teaching Aids, Telemetry Equipment, Computers, and Distance Measuring Equipment.
First use Mar. 1, 1961.

SN 141,944. Graybar Electric Company, Inc., New York, N.Y. Filed Apr. 10, 1962.

LITE-CHEK

For Footcandle Meter.
First use Jan. 8, 1962.

SN 142,716. Keuffel & Esser Company, Hoboken, N.J. Filed Apr. 20, 1962.

OPTICS AND METROLOGY

No claim is made to the words "Optics" and "Metrology," apart from the mark as shown, but applicant waives none of its rights therein.
For Optical and Electro-Optical Systems and Instruments; Systems and Instruments for Manufacturing, Inspection, and Quality Control Comprising a Complete Line of Alignment Instruments and Accessories; Theodolites; and Special Theodolites; Antenna Contour Checking Systems and Instruments; Contour Probing Systems and Instruments; Space and Missiles Guidance and Control Systems and Instruments; Collimation Test Instruments; Deviators; Borescopes; Electronic Auto-Collimators; Visual Auto-Collimators; Telescopes; Alignment Telescopes; Optical Squares; Transits; Leveling Instruments; Electronic Leveling Systems and Instruments; Gravity Reference Instruments; Striding Levels; Gratings; Targets and Special Scales; and Accessories.
First use April 1961.

SN 143,606. Daystrom, Incorporated, Houston, Tex. Filed May 2, 1962.

HEATHKIT

Owner of Reg. Nos. 520,346, 723,532, and others.

For Marine Equipment—Namely, Depth Sounders and Direction Finders; Photo Enlarger Timers; and Testing Equipment and Tool Kits for Testing and Repairing Electronic Equipment.

First use September 1956 on photo enlarger timers.

SN 145,177. Emery Industries, Inc., Cincinnati, Ohio. Filed May 22, 1962.

synergisto

For Devices for Metering Preselected Amounts of Liquids and for Injecting Said Amounts Into Associated Items of Dry Cleaning Apparatus.

First use Apr. 23, 1962.

SN 145,241. Ch. Dillemann & Polyclair, S.A., d.b.a. Polyclair, Paris, France. Filed May 23, 1962.

ARCOR

For Photo-Duplication Apparatus and Accessories Therefor.

First use in 1960; in commerce in May 1960.

SN 145,654. The Ansac Corporation, Cleveland, Ohio. Filed May 29, 1962.

For Automotive Test Equipment—Namely, Electronic and Electrical Indicating Devices for Measuring Performance and/or Condition by Meter Readings.

First use May 10, 1962.

SN 146,076. Leeds and Northrup Company, Philadelphia, Pa. Filed June 4, 1962.

D-E-B

For Systems for Controlling the Production of Electric Power in Which Boiler Inputs Are Adjusted in Accordance With Electric Power Requirements.

First use Apr. 14, 1962.

SN 146,293. Leeds and Northrup Company, Philadelphia, Pa. Filed June 6, 1962.

AZAR

For Electrical Measuring Instruments of the Indicating and/or Recording Type, the Electrical Ranges of Which Can Be Varied at Will by the User for Measuring Any Physical Quantity or Transducer Output That Can Be Measured in Terms of D.C. Voltage.

First use Aug. 1, 1961.

SN 146,746. Paragon Electric Co., Inc., Two Rivers, Wis. Filed June 12, 1962.

DE-FROST-IT

Owner of Reg. Nos. 562,761 and 569,781.

For Time Synchronous Electric Motor Operated Time Control Switch Which Causes an Electric Refrigerator To Defrost by Controlling the Current Thereto.

First use at least as early as Sept. 1, 1948.

SN 146,984. Daystrom, Incorporated, Murray Hill, N.J. Filed June 15, 1962.

DAYSTROM

Owner of Reg. No. 721,840.

For Testing Equipment and Tool Kits for Testing and Repairing Electronic Equipment, Indicating, Recording and Controlling Instruments of the Potentiometric and Wheatstone Bridge Types for Physical Quantities and Conditions Such as Temperature, Pressure, Potential and the Like, Which Are Variable With Time; Electric Test Apparatus—Namely, Oscilloscopes, Electric Signal Generators, Electric Signal Tracers, Electric Wave Generators, Electric Sweep Generators, Electric Timers, Electric Condenser Checkers, and Vacuum Tube Voltmeters; Apparatus for Converting Electrical Values Into Digital Information; Electrical Measuring Instruments Such as Voltmeters and Ammeters; Photographic Exposure Meters; Instruments for Measuring and Recording Light Intensities; Electrical Instruments and Apparatus for Measuring the Moisture Content of Materials; Devices Having Moisture Absorption Properties and Useful in the Determination of Humidity and Humidity Indicators Comprising Electrical Apparatus Incorporating Such Devices; Electrical Apparatus for Testing Electron Tubes, Bimetallic Thermometers, Light-Measuring Instruments, Photographic Analysers, Electronic Amplifiers and Controllers, Standard Cells, Electrical Circuit Analysers, Tachometers and Tachometer Generators and Resistor Units; Electrical Apparatus for Testing Radio and Television Equipment; Marine Equipment—Namely, Depth Sounders and Direction Finders; Photo Enlarger Timers.

First use Oct. 31, 1961.

SN 147,419. H. Wilson Corporation, Chicago, Ill. Filed June 21, 1962.

RP

For Audio-Visual Projection Units, Including Projection Tables, Screens and Screen Housings, Projector Adapters, Cord Reels and Lenses.

First use May 10, 1960.

SN 147,420. H. Wilson Corporation, Chicago, Ill. Filed June 21, 1962.

MOVIE-MOVER RP

Applicant disclaims the words "Movie-Mover" apart from the mark as shown, for purposes of registration only and not in derogation of its common law rights.

For Audio-Visual Projection Units, Including Projection Tables, Screens and Screen Housings, Projector Adapters, Cord Reels and Lenses.

First use May 10, 1960.

SN 147,760. Rockwell Manufacturing Company, Pittsburgh, Pa. Filed June 26, 1962.

ROCKWELL

Owner of Reg. Nos. 568,232, 635,401, and others.

For Devices for Measuring, Testing, Analysing, Calculating or Recording, and Parts Thereof and Attachments and Accessories Therefor; Said Devices Including Fluid Meters, Taximeters, Parking Meters, Etc.

First use Dec. 18, 1945.

SN 147,761. Rockwell Manufacturing Company, Pittsburgh, Pa. Filed June 26, 1962.

TEMCORECTOR

Owner of Reg. No. 300,090.

For Instruments for Attachment to Gas Meters To Accomplish Temperature and Pressure Corrections.

First use in April 1962.

SN 147,966. Syl Szajerski, d.b.a. Syma Electronics, Cicero, Ill. Filed June 28, 1962.

AFARP

For Electronic Bridges.

First use June 11, 1962.

SN 152,104. The Technology Instrument Corporation of California, Newbury Park, Calif. Filed Aug. 28, 1962.

Varifunction

For Unitised Assembly of Electro-Mechanical Servo System Components Variously Including Brakes, Switches, Spring Return Mechanisms, Potentiometers, Clutches, Servo Motors, Gear Heads and Synchros, for Use in Servo Applications.

First use Aug. 2, 1962.

SN 155,483. Charles Besseler Company, East Orange, N.J. Filed Oct. 19, 1962.

ROLL/LOCK

For Stands for Projecting Machines.

First use Aug. 20, 1962.

SN 156,420. H. S. Martin & Son, Evanston, Ill. Filed Nov. 1, 1962.

Thermajacket

For Distillation Kettle Mantles, Tensimeter Vacuum Control Mantles, and Distillation Column Heating Mantles.

First use on or about Apr. 30, 1962.

SN 156,771. Sperry Rand Corporation, New York, N.Y. Filed Nov. 6, 1962.

TRAN-SWITCH

For Testing Devices, Especially for Testing Pulse Dynamic Characteristics of Semiconductors Such as Transistors.

First use Sept. 7, 1962.

SN 156,960. Dynamics Research Corporation, Stoneham, Mass. Filed Nov. 9, 1962.

OPTISYN

For Electro-Optical Encoders for Shaft-Angle Indication and Electronic Equipment for Use Therewith.

First use in or about May 1958.

SN 157,482. Erdco Engineering Corporation, Addison, Ill. Filed Nov. 19, 1962.

TOX-EX

For Combustible and Toxic Gas Indicators and Alarms.

First use Aug. 16, 1962.

SN 157,780. Eastman Kodak Company, Rochester, N.Y. Filed Nov. 28, 1962.

PRECEPTOR

For Film Readers.

First use Oct. 30, 1962.

SN 157,822. The Magnavox Company, Fort Wayne, Ind. Filed Nov. 28, 1962.

MAGNA-MILER

For Tire Pressure Sensing Device.

First use Nov. 1, 1962.

SN 157,838. Picker X-Ray Corporation, White Plains, N.Y. Filed Nov. 28, 1962.

Omniprobe

For Radiation Detectors.

First use Apr. 1, 1962.

SN 157,864. Michael R. Trerotola, d.b.a. A & F Photo Equipment Company, Los Angeles, Calif. Filed Nov. 23, 1962.

PORTRAMATIC

For Photographic Cameras.

First use August 1957.

SN 157,865. Michael R. Trerotola, d.b.a. A & F Photo Equipment Company, Los Angeles, Calif. Filed Nov. 23, 1962.

AUTOMAG

For Magazines for Photographic Cameras.

First use August 1957.

SN 157,895. General Motors Corporation, Detroit, Mich. Filed Nov. 26, 1962.

SAGA

For Electronic Gradient Analysers.

First use Oct. 8, 1962.

SN 158,077. Otto A. Kaminsky, d.b.a. Modek Company, Cleveland, Ohio. Filed Nov. 28, 1962.

MODEK

For Calculators.

First use Oct. 3, 1962.

SN 158,336. Giannini Controls Corporation, Duarte, Calif. Filed Dec. 3, 1962.

THERMADUCER

For Temperature Responsive Element.
First use Mar. 7, 1962.

SN 158,361. Moore Associates, San Carlos, Calif. Filed Dec. 3, 1962.

TELEPLEX

For Electronic Time Division Multiplex Systems and Components for Remote Control, Monitoring and Data Transmission.
First use Nov. 3, 1961.

SN 158,551. Monsanto Chemical Company, St. Louis, Mo. Filed Dec. 5, 1962.

DAVA

For Device for Measuring Velocity Ratios of Moving Bodies.
First use Nov. 8, 1962.

SN 158,581. U.S. Industries, Inc., New York, N.Y. Filed Dec. 5, 1962.

READY/REVIEW

For Portable Mechanical Teaching Devices.
First use Nov. 20, 1962.

SN 158,584. Universal Drafting Machine Corporation, Cleveland, Ohio. Filed Dec. 5, 1962.

ORTHOMAT

For Drafting Machines.
First use Apr. 27, 1962.

SN 158,642. Motorola, Inc., Franklin Park, Ill. Filed Dec. 6, 1962.

TELEMEMORY

For Electronically Operated Equipment for Central Monitoring and Control of Remotely Located Water, Gas, Oil, Electric and Corresponding Distribution Facilities, and Other Types of Remotely Located Industrial Processing Facilities.
First use Oct. 30, 1961.

SN 163,330. Cutler-Hammer, Inc., Milwaukee, Wis. Filed Feb. 25, 1963.



No claim is made to the word "Control" apart from the mark as shown. Owner of Reg. No. 705,517 and others.
For Thermostatically Controlled Electric Switches; Gas Calorimeters and Meters; Apparatus for Controlling, Indicating and Recording the Measuring and Mixing of Combustible Gases; Instruments for Determining the Heating Value of Combustible Gases; Electronic Testing Instruments and Equipment; Gaging Apparatus; Surface Finish Measuring Equipment; Level Indicators; Quality Control Data Processing Equipment; Process Programming Apparatus and Systems; Scales; Automatic Weighing and Proportioning Systems; Batching Systems, and Allied Equipment—Namely, Vibratory Feeders, Rotary Feeders and Bag Holders; and Accessories for and Parts of the Foregoing.
First use Sept. 20, 1960, on thermostatically controlled electric switches.

Class 27 — Horological Instruments

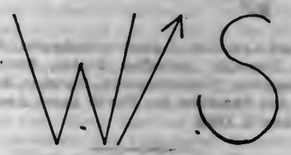
SN 154,804. Croton Watch Co. Inc., New York, N.Y. Filed Oct. 9, 1962.

RELIANCE

For Watches.
First use on or about Sept. 15, 1962.

Class 28 — Jewelry and Precious-Metal Ware

SN 137,304. Wax & Skolnik, Inc., New York, N.Y. Filed Feb. 5, 1963.



For Precious Rings and Jewelry.
First use in 1931.

SN 143,993. Oneida Ltd., Oneida, N.Y. Filed May 7, 1962.

MORNING ROSE

Applicant disclaims the word "Rose" apart from the mark as shown.
For Silver-Plated Flat Tableware.
First use Mar. 29, 1962.

SN 144,170. Gus Kroesen, Inc., Oakland, Calif. Filed May 9, 1962.

GK

For Articles of Jewelry.
First use July 1956.

SN 144,198. Spritzer & Fuhrmann-New York, Inc., New York, N.Y. Filed May 9, 1962.



For Jewelry and Precious Metal Ware—Namely, Pins, Rings, Earrings, and Dresser Sets.
First use Apr. 2, 1962.

SN 147,848. PS Creations, New York, N.Y. Filed June 27, 1962.



For Pendants, Cuff Links, Tie Tacks, Earrings, Pins, and Clips.
First use May 3, 1960.

SN 148,156. Leonore Doskow, Inc., Montrose, N.Y. Filed July 2, 1962.

LEONORE DOSKOW

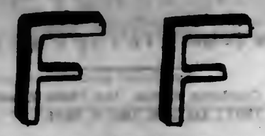
For Men's and Women's Jewelry, Especially Rings, Pins, Earrings, Brooches, Pendants, Necklaces, Bracelets, Cuff Links, and Tie Pins.
First use Oct. 16, 1935.

SN 148,714. E. Dragsted A/S, Copenhagen, Denmark. Filed July 10, 1962.

ED

For Gold and Silverware, Including Sets of Knife, Fork and Spoon, and Holloware of Silver, Sterling Silver or Silverplate, Jewelry of Silver, and Glass Bottles and Glass Vases With Silver Ornaments, Silverplated Copper and Brassware.
First use Jan. 1, 1923; in commerce Jan. 1, 1925.

SN 149,830. F & F Charms, Inc., New York, N.Y. Filed July 26, 1962.



For 14 Kt. Gold Charms, Pins, Earrings.
First use Apr. 16, 1962.
Subj. to Intf. with SN 155,147.

SN 150,138. Philip Wolman & Co., Los Angeles, Calif. Filed July 30, 1962.



The mark comprises the letter "W" in the form of a three-pointed crown with large dots capping the uppermost points thereof.
For Men's and Women's Gold and Gold Filled Jewelry, Sterling Silver Jewelry and Costume Jewelry.
First use in September 1957.

SN 154,031. The International Silver Company, Meriden, Conn. Filed Sept. 27, 1962.

PINNACLE

For Silverplated Flatware—Namely, Knives, Forks and Spoons.
First use June 26, 1962.

SN 154,101. Exotic Jewelry Mfg., Fort Lee, N.J. Filed Sept. 28, 1962.

HYPNOTIC

For Jewelry, Pendants and Earrings.
First use Sept. 15, 1962.

SN 154,352. Herzog & Adams, New York, N.Y. Filed Oct. 2, 1962.



For Jewelry: Rings, Earrings, Brooches, Bracelets, Cufflinks, Necklaces, Pendants, and Other Jewelry.
First use Sept. 4, 1962.

SN 154,443. Hans Sinsheimer, Hartsdale, N.Y. Filed Oct. 3, 1962.



For Finger Rings, Necklaces, Bracelets, Earrings, Cufflinks, Brooches, Pins, Tie-Clasps and Stickpins.
First use Sept. 26, 1962.

SN 154,486. Esco Jewelers, New York, N.Y. Filed Oct. 4, 1962.



For Earrings.
First use May 9, 1962.

SN 154,626. Rondette, Ltd., New York, N.Y. Filed Oct. 5, 1962.



For Jewelry and Precious Metalware—Namely, Finger Rings, Watch Chains, Bracelets, Earrings, Decorative Pins and Brooches, Not Including Watches.
First use Aug. 18, 1962.

SN 154,709. Forstner, Inc., Irvington, N.J. Filed Oct. 8, 1962.



For Jewelry.
First use on or about June 16, 1962.

SN 154,621. B. B. Greenberg Co., Providence, R.I. Filed Oct. 9, 1962.

FAIRYLAND

For Boys' and Girls' Jewelry.
First use Aug. 8, 1962.

SN 154,920. Original Designs Inc., New York, N.Y. Filed Oct. 10, 1962.

ODI

For Men's and Laddies' Rings and Other Jewelry.
First use June 1, 1962.

SN 155,051. Ray Curran & Company, Providence, R.I. Filed Oct. 12, 1962.

MR. X

For Men's Jewelry.
First use on or about July 1, 1962.

SN 155,147. Fred Froeschle, Philadelphia, Pa. Filed Oct. 15, 1962.



For Jewelry for Personal Wear or Adornment.
First use since Oct. 15, 1939.
Subj. to Intf. with SN 149,830.

SN 155,316. Jaffee-Rivkin Corporation, New York, N.Y. Filed Oct. 17, 1962.

GOLD RIBBON

Jewelry for Personal Wear or Adornment, Not Including Watches.
First use June 29, 1962.

SN 155,420. Thomas B. Kilbourne, d.b.a. Kilbourne & Donohue, Westfield, N.J. Filed Oct. 18, 1962.

K & D

For Jewelry.
First use Sept. 1, 1962.

Class 29—Brooms, Brushes, and Dusters

SN 130,381. Dunhill International, Inc., New York, N.Y., by merger from The Pyramid Rubber Company, Ravenna, Ohio. Filed Oct. 20, 1961.

evenflo

Owner of Reg. Nos. 322,650, 716,212, and others.
For Bottle and Nipple Brushes.
First use Jan. 20, 1934.

SN 151,688. National Silver Company, New York, N.Y. Filed Aug. 22, 1962.

JAGUAR

For Battery-Operated Toothbrushes and Battery-Operated Hair Brushes.
First use Feb. 21, 1962.

Class 30—Crockery, Earthenware, and Porcelain

SN 114,750. Castleton China, Inc., New Castle, Pa. Filed Mar. 2, 1961.

SOPHISTICATE

For China Dinnerware.
First use Dec. 23, 1958.

SN 114,751. Castleton China, Inc., New Castle, Pa. Filed S.R. Mar. 2, 1961; Am. P.R. Dec. 6, 1961.

GOLDEN CLASSIC

For China Dinnerware.
First use Jan. 7, 1958.

SN 114,752. Castleton China, Inc., New Castle, Pa. Filed S.R. Mar. 2, 1961; Am. P.R. Dec. 6, 1961.

CLASSIC SCROLL

For China Dinnerware.
First use Jan. 7, 1958.

SN 138,147. Eugene A. Garand, New York, N.Y. Filed Dec. 1, 1961.

FAR CORNERS

For Crockery, Earthenware, and Porcelain Products Designed for Household, Office, and Hotel Usage and General Decorative Purposes—Namely, Candlestick Holders, Dishes, Cups, Plates, Vases, Bowls, Ornaments, Barware, and Tableware.
First use Oct. 2, 1961.

SN 156,388. Patrick O'Neill, d.b.a. Dynasty Limited, Los Angeles, Calif. Filed Nov. 1, 1962.



For China and Chinaware—to-wit, Dinnerware Consisting of Sets of Dishes Such as Cups, Saucers, Plates, Platters, and the Like.
First use Sept. 10, 1962.

Class 31—Filters and Refrigerators

SN 140,409. Walker Manufacturing Company, Racine, Wis. Filed Mar. 21, 1962.



For Air, Oil, and Fuel Filters.
First use on or about Aug. 1, 1948.

SN 155,340. Quality Mfg. Co. Inc., Chilton, Wis. Filed Oct. 17, 1962.



For Automatic Ice Making Machines.
First use Mar. 10, 1961.

Class 32—Furniture and Upholstery

SN 120,791. Crylor, Paris, France. Filed May 25, 1961.

Crylor

Priority claimed under Sec. 44(d) on French Reg. No. 493,283, dated Jan. 13, 1961 (Paris); Natl. Inst. No. 136,947. Owner of U.S. Reg. Nos. 699,640, 699,864, and others.
For Furniture and Upholstery, Specifically Upholstered Furniture, Mattresses, Chair Pads and Cushions, Canvas Used in Furniture and Upholstery.

SN 146,653. Pacific Factors Ltd., Vancouver, British Columbia, Canada. Filed June 11, 1962.

EATOTER

Priority claimed under Sec. 44(d) on Canadian application filed Dec. 28, 1961; Reg. No. 127,154, dated July 6, 1962.
For Baby Feeding Chairs, Strollers, High Chairs; and Nursery Furniture—Namely, Play Pens and Cribs.

SN 149,479. Math-U-Matic, Inc., Oklahoma City, Okla. Filed July 20, 1962.

MATH-U-MATIC

For Students' Classroom Desks.
First use Mar. 13, 1962.

SN 154,673. American Feather Products, Inc., Chicago, Ill. Filed Oct. 8, 1962.

BUKMANIZED

For Filling Consisting of Feathers Incorporated Into Finished Pillows.
First use in October 1953.

SN 155,345. John S. Reynolds, d.b.a. Springfield Mattress Company, Springfield, Mo. Filed Oct. 17, 1962.

Sun Queen

For Mattresses and Bedding.
First use Oct. 8, 1962.

SN 155,346. John S. Reynolds, d.b.a. Springfield Mattress Company, Springfield, Mo. Filed Oct. 17, 1962.

Sun King

For Mattresses and Bedding.
First use Oct. 8, 1962.

SN 157,204. Excel Wood Products Co., Inc., Lakewood, N.J. Filed Nov. 14, 1962.

VERSADOR

For Kitchen Cabinets.
First use Oct. 1, 1962.

SN 160,285. Gleitsman's, Inc., Long Island City, N.Y. Filed Jan. 7, 1963.

VAL-O-TABLE

For Combination Clothes Rack and Shelf.
First use Dec. 7, 1962.

Class 33—Glassware

SN 133,132. R. F. Brodegaard & Co. Inc., New York, N.Y. Filed Dec. 1, 1961.

RFB

For Glassware, Designed for Household, Office, and Hotel Usage and General Decorative Purposes—Namely, Candlestick Holders, Dishes, Glasses, Vases, Stemware, Barware, Tableware, Plates, Cups, Bowls and Ornaments.
First use Oct. 2, 1961.

SN 134,881. Eugene A. Garand, New York, N.Y. Filed Dec. 29, 1961.

FAR CORNERS

For Glassware, Designed for Household, Office, and Hotel Usage and General Decorative Purposes—Namely, Candlestick Holders, Dishes, Glasses, Vases, Stemware, Barware, Tableware, Plates, Cups, Bowls and Ornaments.
First use Oct. 2, 1961.

SN 143,620. The Frostie Company, Camden, N.J. Filed May 2, 1962.

Frostie

Owner of Reg. Nos. 639,770, 678,582, and others.
For Glass Bottles.
First use during November 1944; Aug. 25, 1944, as to "Frostie."

SN 144,456. Carlow Company, Los Angeles, Calif. Filed May 14, 1962.

Décorline

For Decorative Colored Glass Panels for Doors.
First use Apr. 10, 1962.

SN 156,791. Anchor Hocking Glass Corporation, Lancaster, Ohio. Filed Nov. 7, 1962.

ANCHOR HOCKING

Owner of Reg. Nos. 419,329, 682,562, and others.
For Glassware—Namely, Dinnerware, Ovenware, Drinkware, Jars, Serving Plates, Trays, Mixing Bowls, Fancy Bowls, Miscellaneous Bowls, Vases, Ash Trays, Refrigerator Jars and Covers, Percolator Tops, and the Like, All Made of Glass.
First use on or about Nov. 1, 1961.

Class 34 — Heating, Lighting, and Ventilating Apparatus

SN 128,538. Dura-Vent Corporation, Redwood City, Calif. Filed Sept. 25, 1961.

DURA-VENT SPACE-SAVER

Owner of Reg. No. 633,188.
For Portable Metal Fireplace.
First use Sept. 14, 1961.

SN 137,008. Riello Condisionatori S.p.A., Bevilacqua, Verona, Italy. Filed Jan. 31, 1962.

Priority claimed under Sec. 44(d) on Italian application filed Nov. 8, 1961; Reg. No. 158,428 dated Mar. 9, 1962. The drawing appears to be lined for color; no claim to color is made.
For Air Conditioners, Heat Pumps, Fans, Hot Air Generators, Electric Stoves.

SN 140,135. Kemwell (Chur) Ltd., Chur, Switzerland. Filed Mar. 19, 1962.

KEMWELL

Owner of Swiss Reg. No. 186,596, dated June 14, 1961; and U.S. Reg. No. 738,82.
For Kits for Post-Weld Heat-Treatment of Tubes and Pipes, Comprising Heat-Insulating, Refractory and Exothermic Compositions.

SN 142,772. Kemwell (Chur) Ltd., Chur, Switzerland. Filed Apr. 17, 1962.

NOBEX

Owner of Swiss Reg. No. 180,273, dated Mar. 9, 1960; and U.S. Reg. No. 738,881.
For Kits for Post Weld Heat Treatment of Tubes and Pipes.

SN 143,807. Kemwell (Chur) Ltd., Chur, Switzerland. Filed Apr. 25, 1962.

KEMWELL

Owner of Swiss Reg. No. 180,274, dated Mar. 9, 1960; and U.S. Reg. No. 736,882.
For Kits for Post Weld Heat Treatment of Tubes and Pipes.

SN 143,536. Infra-Red Systems, Inc., Riverdale, N.J. Filed May 1, 1962.

irs

For Modular Infrared Ovens and Panels for Heating, Curing, Drying, or Baking Applications.
First use Dec. 20, 1961.

SN 147,599. Lindberg Engineering Company, Chicago, Ill. Filed June 25, 1962.

Li

For Industrial Furnaces.
First use Feb. 7, 1955.

SN 152,214. Eutectic Welding Alloys Corporation, Flushing, N.Y. Filed Aug. 30, 1962.

EUTALLOY

For Welding Torches for Spray-Depositing Metal and Ceramic Coatings—Namely, Gas Welding Torches, Parts and Accessories Thereof, for Depositing Such Coatings From Metal and Ceramic Powders.
First use July 23, 1962.

SN 152,895. The Frymaster Corporation, Shreveport, La. Filed Sept. 4, 1962.

STEAM-MASTER

For Comercial Steam Pressure Cookers for Cooking Vegetables, Meats and Similar Foods as Used in Commercial Cooking Establishments.
First use Aug. 8, 1962.

SN 154,672. American Electrical Heater Company, Detroit, Mich. Filed Oct. 8, 1962.

GLO-MELT

For Resistance Soldering Equipment.
First use Mar. 1, 1950.

SN 160,528. York-Shipley, Inc., York, Pa. Filed Jan. 10, 1963.

FLEXAIRE

For Hot Air Furnaces.
First use Feb. 19, 1962.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

SN 126,034. The Arbee Corporation, d.b.a. Manheim Manufacturing and Belting Company, by change of name from Manheim Manufacturing and Belting Company, Manheim, Pa. Filed Aug. 15, 1961.

MANHEIM

For Conveying, Elevating, and Power Transmission Belting.
First use May 16, 1911.

SN 126,817. Tractor Supply Co., Chicago, Ill. Filed Aug. 28, 1961.

TRAVELLER

For Pneumatic Tires.
First use Aug. 17, 1961.

SN 137,606. Dayco Corporation, Dayton, Ohio. Filed Feb. 9, 1962.

ELECTROFLEX

For Fluid Conveying Hose.
First use Apr. 20, 1960.

SN 137,673. United States Rubber Company, New York, N.Y. Filed Feb. 9, 1962.

ROYAL MASTER

For Rotary Hose.
First use July 24, 1961.

SN 137,997. Dayco Corporation, Dayton, Ohio. Filed Feb. 15, 1962.

FARM-FLEX

For Fluid Conveying Hose.
First use June 19, 1961.

SN 143,245. Lechler Dichtungswerke OHG, Stuttgart, Germany. Filed Apr. 27, 1962.

FERROLASTIC

Owner of German Reg. No. 415,621, dated Mar. 10, 1930.
For Gaskets, Sealing Rings and Packings for Machine Parts.

Class 36 — Musical Instruments and Supplies

SN 56,565. Miller International Co., Media, Pa. Filed Aug. 4, 1958.

Applicant disclaims the words "Stereo-Fidelity" alone and apart from the mark as shown.
For Phonograph Records.
First use on or about Apr. 14, 1958.

SN 107,678. A. R. Hüttl, Baiersdorf, Middle Franconia, Germany. Filed Nov. 2, 1960.

HÜTTL BAND INSTRUMENTS
BAIERSDORF/MFR.

Priority is claimed under Sec. 44(d) on German application filed June 30, 1960; Reg. No. 740,988, dated Oct. 7, 1960. AR Hüttl is the signature of one of the partners of applicant. The words "Band Instruments" and "Baiersdorf/Mfr." are disclaimed apart from the mark as shown. The representation of the goods is disclaimed apart from the mark as shown.
For Trumpets, Cornets, Trombones, Bugles, Altos, Baritones, Bass, Tubas, Bass Trumpets, Bass Trombones, French Horns, Saxophones, Clarinets, and Carrying Cases for the Above Instruments.

SN 136,285. Precision Instrument Company, San Carlos, Calif. Filed Jan. 22, 1962.

PI

Owner of Reg. No. 704,317.
For Magnetic Tape Recording Apparatus and Computer Instrumentation Used Therewith.
First use on or about Nov. 11, 1958.

SN 139,412. Johs. Link Kommanditgesellschaft, Aue, Westphalia, Germany. Filed Mar. 8, 1962.



Owner of German Reg. No. 740,702, dated Sept. 29, 1960.
For Percussion Musical Instruments—Namely, Drums, Tamboarines, Bass Drums, Cymbals, Children's Drums, Xylophones, Metallophones, Glockenspiels; and Parts Therefor—Namely, Skins for Drums.

SN 139,612. Fan Record Company, Anaheim, Calif. Filed Mar. 12, 1962.

FAN

For Phonograph Records.
First use Apr. 16, 1961.

SN 140,312. Astra Trading Corporation, New York, N.Y. Filed Mar. 16, 1962.

STELLAR

For Electronic Record Players, Phonographs and Tape Recorders.
First use July 20, 1961.

SN 145,898. National Silver Company, New York, N.Y. Filed May 24, 1962.

JAGUAR

For Tape Recorders.
First use Feb. 21, 1962.

SN 145,420. Marcel Teppas, Lyon, France. Filed May 24, 1962.

TEPPAZ

Owner of French Reg. No. 82,208, dated May 17, 1960 (Lyon); Natl. Inst. No. 148,781.
For Phonographs, Phonograph Records, Record Players, Tape Recorders of the Magnetic Tape Type, the Magnetic Wire Type, and of the Photosensitive Film Type, and Other Sound Recorders and Reproducers, and Electrophones in Which Rotation of the Record and Reproduction of the Sound Are Effected Electrically.

SN 147,067. Webcor, Inc., Chicago, Ill. Filed June 15, 1962.

SQUIRE

For Tape Recorders.
First use May 25, 1962.

SN 156,692. V-M Corporation, Benton Harbor, Mich. Filed Nov. 5, 1962.

SPACESAVER

For Phonograph Record Changers.
First use Oct. 10, 1962.

Class 37—Paper and Stationery

SN 91,338. Butler Paper Corporations, Chicago, Ill. Filed Feb. 23, 1960.

MANUSCRIPT

For Writing Paper—Namely, Bond, Mimeograph, and Duplicator Papers.
First use 1902.

SN 130,789. Crylor, Paris, France. Filed May 26, 1961.

Crylor

Priority claimed under Sec. 44(d) on French Reg. No. 493,283, dated Jan. 13, 1961 (Paris); Natl. Inst. No. 136,947. Owner of U.S. Reg. Nos. 609,640, 639,864, and others.
For Paper and Articles Made of Paper, Specifically Writing Papers, Die-Cut Flat Cartons, Printing Papers, Paper Mounts for Photographers, Book Covers, Artists' Papers, and Wall Papers.

SN 132,701. Nail Tone, Inc., Miami, Fla. Filed Nov. 24, 1961.

ROBERT'S fresh-n-up

For Paper Facial Blotters.
First use Aug. 23, 1961.

SN 138,128. Speedry Chemical Products, Inc., Glendale, N.Y. Filed Feb. 16, 1962.

DRY-BRUSH

For Multi-Color Ink Coloring Sets Consisting Essentially of a Combination of Ink Bottles With an Ink Applicator or Pen.
First use on or about Nov. 1, 1958.

SN 144,561. Tobey Fine Papers, Inc., St. Louis, Mo. Filed May 14, 1962.

STIPPLETONE

For Printing Paper.
First use Oct. 11, 1949.

SN 145,671. Cosmos Tablet Company, Inc., Birmingham, Ala. Filed May 29, 1962.

COSMOS

For School Supplies—Namely, Looseleaf Fillers, Filler Tablets, Typewriter Paper, Typewriter Tablets, Wire-Bound Composition Books, Primary Composition Books, Primary Spelling Tablets, Writing Tablets, Manila Drawing Paper, Art Papers, Brief Covers, Construction Paper, Posterboard, Chart Paper, Looseleaf Binders, Duplicator Paper and Mimeograph Paper.
First use May 4, 1962.

SN 147,334. Sam M. Yates, d.b.a. Kar-Pac Products Company, Washington, D.C. Filed June 20, 1962.

KAR-PAC

For Facial Tissue.
First use Aug. 9, 1960.

SN 147,640. Standard Corrugated Case Corp., Ridgefield, N.J. Filed June 25, 1962.

SHUR-GRIP

For Paper and Containerboard Suitable for Manufacture Into Corrugated Boxes and Corrugated Products.
First use Mar. 8, 1962.

SN 147,861. Straubel Paper Company, Green Bay, Wis. Filed June 27, 1962.

TOTE TOWELS

Applicant makes no claim of exclusive rights to the word "Towels" apart from the mark as shown.
For Disposable Paper Towels.
First use June 7, 1962.

SN 150,420. Jersey Tab Card Corporation, Union, N.J. Filed Aug. 8, 1962.

PERMA HAZE

For Printed Tabulating and Record Cards.
First use May 15, 1962.

SN 151,148. Mason Marking Systems Corporation, Norfolk, Va. Filed Aug. 14, 1962.

MAKING YOUR MARK IN THE WORLD

For Stencils.
First use on or about May 29, 1962.

SN 151,239. Lindy Pen Co., Inc., Culver City, Calif. Filed Aug. 15, 1962.

DEAUVILLE

For Ball Point Pens.
First use Apr. 7, 1960.

SN 151,806. Commonwealth Pencil Company, Inc., Shelbyville, Tenn. Filed Aug. 24, 1962.

COMMONWEALTH

Owner of Reg. No. 712,151.
For Ball Point Pens, Ball Point Pencils, and Ink Refills for Same.
First use Aug. 15, 1953.

SN 152,682. Crown Zellerbach Corporation, San Francisco, Calif. Filed Sept. 7, 1962.

MASTER COTE

Applicant disclaims "Cote" apart from the mark as shown.
For Bread Packaging Labels With Special Coating.
First use Aug. 7, 1962.

SN 153,303 Milton Paper Company, Inc., New York, N.Y. Filed Sept. 17, 1962.

MERCURY BOND

No registration rights are claimed for the word "Bond" apart from the complete mark "Mercury Bond."
For Rag Content Letter-Head Paper.
First use at least prior to Jan. 1, 1940.

Class 38—Prints and Publications

SN 142,978. Schofield Manufacturing Company, Euclid, Ohio. Filed Apr. 24, 1962.

"Instal-O-Guide"

For Pictorial Charts Listing Positions of Automobile Body Repair Panels.
First use on or about Mar. 10, 1948.

SN 156,777. The Trustees of the University of Pennsylvania, Philadelphia, Pa. Filed Nov. 6, 1962.

THE DAILY PENNSYLVANIAN

For Newspaper.
First use on or about Sept. 14, 1934.

SN 157,001. Newspaper Enterprise Association, Inc., Cleveland, Ohio. Filed Nov. 9, 1962.

POLLY'S POINTERS

For Newspaper Column.
First use Aug. 15, 1962.

SN 157,086. Walter Louis Ditzen, Phoenix, Ariz. Filed Nov. 13, 1962.

FAN FARE

For Comic Strip.
First use September 1947.

SN 157,720. Norcross, Inc., New York, N.Y. Filed Nov. 21, 1962.

CHILDREN'S CORNER

For Greeting Cards and Greeting Card Folders.
First use Oct. 30, 1962.

SN 157,721. Norcross, Inc., New York, N.Y. Filed Nov. 21, 1962.

YARN COUPLE

For Greeting Cards and Greeting Card Folders.
First use Oct. 30, 1962.

SN 157,750. Catechetical Guild Educational Society, St. Paul, Minn. Filed Nov. 6, 1962.

Aim Higher

For Monthly Magazine for Children.
First use Aug. 29, 1962.

SN 158,065. General Features Corporation, New York, N.Y. Filed Nov. 28, 1962.

Reader's Courtroom

For Syndicated Newspaper Column.
First use Aug. 2, 1948.

SN 158,070. Harvey Famous Cartoons, New York, N.Y. Filed Nov. 28, 1962.

THE GHOSTLY TRIO

Owner of Reg. No. 722,258.
For Comic Strip.
First use Feb. 15, 1959; July 15, 1955, in a different form.

SN 158,071. Harvey Famous Cartoons, New York, N.Y. Filed Nov. 28, 1962.

Herman and Katnip

For Comic Strip.
First use May 15, 1952.

SN 158,072. Harvey Famous Cartoons, New York, N.Y. Filed Nov. 28, 1962.

NIGHTMARE
THE GALLOPING GHOST

For Comic Strip.
First use Oct. 1, 1962; July 15, 1955, in a different form.

SN 158,114. United Thoroughbred Trainers of America, Inc., Birmingham, Mich. Filed Nov. 28, 1962.

THE BACKSTRETCH

For Magazine.
First use Mar. 1, 1962.

SN 158,155. Harvey Famous Cartoons, New York, N.Y. Filed Nov. 29, 1962.

Casper's Ghostland
and all his friends

Applicant disclaims the exclusive right to the words "And All His Friends," except as appear in the mark. Owner of Reg. No. 722,258.
For Comic Periodical and a Comic Strip.
First use Sept. 15, 1958.

SN 158,253. Jednosc Publishing House, Inc., Philadelphia, Pa. Filed Nov. 30, 1962.

JEDNOSC

The English translation of the Polish word "Jednosc" is "unity."
For Newspaper.
First use 1918.

Class 39 — Clothing

SN 96,703. J.D. Sportswear Inc., New York, N.Y. Filed May 9, 1960.

PUNCH AND JUDY

For Children's Clothing—Namely, Crawlers, Shirts and Slacks.
First use Apr. 27, 1960.

SN 136,809. Patty Petite, Inc., New York, N.Y. Filed Jan. 29, 1962.

make mine
McKETTRICK

For Women's Dresses, Suits, Coats, Skirts, Blouses, Slacks, and Beach Attire—Namely, Bathing Suits, Beach Robes, and Beach Coats.
First use in 1938.

SN 136,844. Thomson Company, Thomson, Ga. Filed Jan. 29, 1962.

MR. THOMSON

For Women's Slacks and Walking Shorts.
First use June 18, 1959.

SN 137,012. Smith Brothers Manufacturing Co., Carthage, Mo. Filed Jan. 31, 1962.

SKI CLUB

For Men's and Boys' Jackets and Coats.
First use Mar. 13, 1959.

SN 139,756. Johnny Appleseed's, Inc., North Beverly, Mass. Filed Mar. 13, 1962.

JOHNNY APPLESEED'S

Applicant's mark is the nickname of a historical character—namely, John Chapman.
For Women's and Girls' Dresses, Skirts, Blouses, Shorts, Slacks, Coats, Smocks, Bathing Suits, Hats, Shoes, Gloves, and Hosiery; and Men's and Boys' Trousers, Coats, Jackets, Overalls, Shirts, Shorts, Bathing Suits, Slacks, Jerseys, Sweaters, Neckties, Shoes, and Hosiery.
First use July 1946.

SN 141,827. Empire Shield Company, Inc., New York, N.Y. Filed Apr. 9, 1962.

Sweet-n-Dri

Owner of Reg. No. 648,991.
For Infants' Stretch Tights.
First use September 1961.

SN 141,828. Empire Shield Company, Inc., New York, N.Y. Filed Apr. 9, 1962.

Empire

Owner of Reg. Nos. 169,890, 422,753, and 500,621.
For Infants' Stretch Tights.
First use September 1961.

SN 143,503. The Asher Company, Inc., Fitchburg, Mass. Filed May 1, 1962.

MIRA-CREASE

For Men's Slacks.
First use Mar. 29, 1961.
Subj. to Intf. with Reg. No. 733,473.

SN 143,520. Farah Manufacturing Company, Inc., El Paso, Tex. Filed May 1, 1962.

FARAH

Owner of Reg. Nos. 558,581, 727,539, and others.
For Slacks, Walk Shorts, Beach Pants and Jeans for Men and Boys.
First use in October 1960; Mar. 24, 1948, as to the mark "Farah."

SN 144,732. Izod, Ltd., New York, N.Y. Filed May 16, 1962.
The drawing is lined for color.



For Men's and Boys' Sport Shirts.
First use Dec. 13, 1961.

SN 144,733. Izod, Ltd., New York, N.Y. Filed May 16, 1962.
The drawing is lined for color.



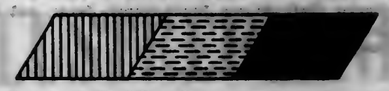
For Men's and Boys' Sport Shirts.
First use Dec. 11, 1961.

SN 144,734. Izod, Ltd., New York, N.Y. Filed May 16, 1962.



The drawing is lined for color.
For Men's and Boys' Sport Shirts.
First use Dec. 11, 1961.

SN 144,735. Izod, Ltd., New York, N.Y. Filed May 16, 1962.



The drawing is lined for color.
For Men's and Boys' Sport Shirts.
First use Dec. 11, 1961.

SN 144,736. Izod, Ltd., New York, N.Y. Filed May 16, 1962.



The mark consists of a tricolor parallelogram of the type shown in the drawing, embroidered on the bosom of the shirt; the drawing is lined for dark brown and light brown.
For Men's and Boys' Sport Shirts.
First use Dec. 13, 1961.

SN 144,737. Izod, Ltd., New York, N.Y. Filed May 16, 1962.



The mark consists of a tricolor parallelogram of the type shown in the drawing, embroidered on the bosom of the shirt; the drawing is lined for silver, light blue, and dark blue.
For Men's and Boys' Sport Shirts.
First use Dec. 11, 1961.

SN 144,738. Izod, Ltd., New York, N.Y. Filed May 16, 1962.



The mark consists of a tricolor parallelogram of the type shown in the drawing, embroidered on the bosom of the shirt; the drawing is lined for silver and red.
For Men's and Boys' Sport Shirts.
First use Dec. 11, 1961.

SN 145,648. The Alligator Company, St. Louis, Mo. Filed May 29, 1962.

YOUR ALLIGATOR GOES WITH YOU EVERYWHERE

Owner of Reg. Nos. 75,365, 720,062, and others.
For Raincoats, Water Repellent Coats, Topcoats, Coats With Zip-In Warmers, and Suburban Coats for Men, Women, and Children; Inner Linings for Men's, Women's, and Children's Coats; Sportswear for Men—Namely, Jackets, Golf, Fishing, and Sport Shirts, Parkas, Water Repellent Pants, Waterproof Protectors for Trousers, and Hats.
First use Apr. 26, 1962, on water repellent coats and topcoats.

SN 146,724. House of Juniorsville, Inc., New Bedford, Mass. Filed June 12, 1962.

HOUSE OF

juniorsville

For Women's Dresses.
First use January 1962.

SN 146,805. Farah Manufacturing Company, Inc., El Paso, Tex. Filed June 18, 1962.

LITTLE FARAHS

Owner of Reg. Nos. 558,581, 730,185, and others.
For Slacks, Walk Shorts, Beach Pants, Jeans, and Boxer Shorts for Boys.
First use Oct. 9, 1957.

SN 147,567. David Crystal, Inc., New York, N.Y. Filed June 25, 1962.

MISS CRYSTAL

Owner of Reg. Nos. 404,730, 535,038, and 658,088.
For Dresses.
First use May 30, 1962.

SN 148,554. Zayre Corp., Natick, Mass. Filed July 6, 1962.

VAL Mark

For Dungarees, Overalls, Coveralls, Aprons, Gloves, Jackets, Shirts, Handkerchiefs, Underwear, Pajamas, and Pants.
First use about August 1961.

SN 148,966. Exquisite Form Industries, Inc., New York, N.Y. Filed July 13, 1962.

FABRICADABRA

For Brassieres.
First use Feb. 22, 1962.

SN 152,311. Jones Knitting Corporation, New York, N.Y. Filed Aug. 31, 1962.

PETER PAN

For Children's Nightgowns, Sleeping-Garments, and Pajamas Made With and Without Feet.
First use Oct. 1, 1918.

SN 152,537. Surprise Brassiere Co. Inc., New York, N.Y. Filed Sept. 5, 1962.

J'maka

For Girdles and Panty Girdles.
First use Aug. 16, 1962.

SN 152,803. Harburt, Inc., Hollywood, Fla. Filed Sept. 11, 1962.

HARBURT

For Women's Sportswear—Namely, Shorts, Slacks, Skirts, Shirts, Blouses, Jackets, Culottes, Sweaters, Bowling Skirts, Bowling Slacks, Golf Shorts and Golf Shirts.
First use in 1953 on shorts and slacks.

SN 154,095. Burlington Industries, Inc., New York, N.Y. Filed Sept. 28, 1962.

END/RUN

For Women's Hosiery.
First use July 21, 1962.

SN 155,461. Wembley, Inc., New Orleans, La. Filed Oct. 18, 1962.

WEMBLEY IMPERIALS

Owner of Reg. Nos. 349,654, 729,779, and others.
For Neckties, Bow Ties, Ascots, Cummerbunds, Cummervests, Necktie and Handkerchief Sets, Cummerbund and Dress Bow Sets, Dress Bows, Handkerchief and Boutonniere Sets, Mufflers, Dress Bow and Handkerchief Sets, Necktie and Socks Sets.
First use Feb. 1, 1962.

SN 155,821. Merit Clothing Company, Inc., Mayfield, Ky. Filed Oct. 24, 1962.

WOOLGORA

Owner of Reg. No. 391,190.
For Men's Overcoats.
First use at least as early as 1933.

SN 157,089. Ethicon, Inc., Bridgewater Township, N.J. Filed Nov. 13, 1962.

MICRO-TOUCH

For Disposable Gloves.
First use Oct. 26, 1962.

SN 157,090. Ethicon, Inc., Bridgewater Township, N.J. Filed Nov. 13, 1962.

BEAUTY GARD

For Disposable Gloves.
First use Oct. 26, 1962.

SN 157,091. Ethicon, Inc., Bridgewater Township, N.J. Filed Nov. 13, 1962.

TEKSKIN

For Disposable Gloves.
First use Oct. 26, 1962.

SN 157,332. The Russell Hosiery Mills, Inc., Star, N.C. Filed Nov. 15, 1962.

HIDE-A-SOCKS

For Hosiery.
First use Sept. 3, 1962.

SN 157,406. A. H. Schreiber Co. Incorporated, New York, N.Y. Filed Nov. 16, 1962.

pfc*

For Ladies', Children's, and Infants' Underwear.
First use Oct. 1, 1962.

Class 40—Fancy Goods, Furnishings, and Notions

SN 145,529. Crosthill Industries, Inc., Yonkers, N.Y. Filed May 28, 1962.

PRISK-PEARL

Owner of Reg. No. 734,220.
For Buttons.
First use May 1, 1962; in or about March 1958 as to "Crosthill" and seal design.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 140,948. Huyck Corporation, New York, N.Y. Filed Mar. 28, 1962.

FORMEX DRI-FAB

Owner of Reg. No. 708,446.
For Industrial Fabrics Made of Synthetic Material.
First use Jan. 30, 1961.

SN 142,077. Deltox, Incorporated, Oshkosh, Wis. Filed Apr. 12, 1962.

FABRICRAFT

For Woven Wall Covering.
First use Feb. 12, 1962.

SN 140,058. The Dow Chemical Company, Midland, Mich. Filed July 16, 1962.

ZEFKROME

Owner of Reg. Nos. 704,080 and 740,426.
For Textile Fabrics Made of Synthetic Fibers.
First use Jan. 4, 1962.

SN 157,309. Lockport Felt Company, Inc., Newfane, N.Y. Filed Nov. 15, 1962.

Needled

The drawing is lined to show the color red, but color is not a feature of the mark. The words "Needled Felt" are disclaimed apart from the mark as shown. Owner of Reg. Nos. 717,635, 717,636, and 717,637.
For Papermakers' Felt.
First use Oct. 9, 1962.

SN 157,415. J. P. Stevens & Co., Inc., New York, N.Y. Filed Nov. 16, 1962.

LUSTREBLEND

For Textile Fabrics of Synthetic Fibers To Be Used for Lingerie.
First use Sept. 17, 1962.

Class 43—Thread and Yarn

SN 157,237. Northern Yarn Mills, Newark, N.J. Filed Nov. 14, 1962.

NORTHERN BANTRISE

For Textured and/or Crimped Synthetic Yarns.
First use in or about September 1961.

Class 44—Dental, Medical, and Surgical Appliances

SN 130,381. Dunhill International, Inc., New York, N.Y., by merger from The Pyramid Rubber Company, Ravenna, Ohio. Filed Oct. 20, 1961.

evenflo

Owner of Reg. Nos. 322,650, 716,212, and others.
For Feeding Equipment for Infants Comprising: Food Preparation Apparatus Consisting of Graduated Formula Pitchers, Dispensing Spoons, Entry-Facilitating Funnels, Sterilisers, Warmers for Bottles That Hold Liquids, and Thermometers; Food Serving Apparatus Consisting of Nursing Units and Components Thereof, i.e., Bottles, Nipples, Nipple-Securing Caps, and Seal Discs, Serving Dishes, Training Cups, Serving Pitchers, Spoons, and Sterilisers.
First use Jan. 20, 1934.

SN 140,822. Audium, Electro-Acoustische Industrie N.V., Amsterdam, Netherlands. Filed Mar. 21, 1962.

AUDIUM

Owner of Dutch Reg. No. 98,549, dated July 15, 1950.
For Electroacoustic Equipment—Namely, Hearing Aids and Components Thereof.

SN 142,556. The Kendall Company, Boston, Mass., assignee of Dean A. Rosecrans, d.b.a. Western Hospital Distributors, Los Angeles, Calif. Filed Apr. 18, 1962.

AUTO-FLATE

For Catheters.
First use Mar. 27, 1962.

SN 143,760. Precision Medical Instrument, Inc., Passaic, N.J. Filed May 3, 1962.

PERMARK

For Clinical Thermometers.
First use Apr. 10, 1962.

SN 144,200. Techni Electronics, Inc., d.b.a. Gym-Trim Rowers, Orange, N.J. Filed May 9, 1962.

GYM-TRIM

For Exercising and Vibrating Machines and Belt Massagers.
First use May 3, 1961.

SN 156,576. Diamon-Deb, Inc., Burbank, Calif. Filed Nov. 5, 1962.

DIAMON DEB

For Nail Buffers and Nail Buffer Strips.
First use Aug. 13, 1962.

SN 162,394. Johnson & Johnson, New Brunswick, N.J. Filed Feb. 11, 1963.

MODETTES

Owner of Reg. Nos. 215,220, 723,159, and others.
For Sanitary Tampons.
First use July 27, 1962.

Class 45—Soft Drinks and Carbonated Waters

SN 135,298. The T. J. Bottling Co., Inc., Lorain, Ohio. Filed Jan. 5, 1962.



No claim is made to the wording "Old English" apart from the mark.
For Ginger Beer.
First use Mar. 31, 1958.

Class 46—Foods and Ingredients of Foods

SN 119,028. Meat Industry Suppliers, Inc., Northfield, Ill. Filed May 1, 1961.

PROCESS SEASONING

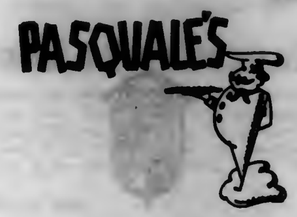
Applicant disclaims the word "Seasoning" apart from the trademark as shown.
For Blend of Spices and Condiments for Use in the Sausage-Making Industry.
First use in or about April 1941.

SN 119,623. J.F.G. Coffee Company, Knoxville, Tenn. Filed May 9, 1961.

THE BEST PART OF THE MEAL

Owner of Reg. No. 599,204.
For Coffee.
First use Mar. 6, 1923.

SN 121,423. Pasquale Foods, Inc., Cincinnati, Ohio. Filed June 5, 1961.



For Foods and Ingredients of Foods—Namely, Ground Sausage, Prepared Sandwich Meat, Garnish Having a Hot Flavor and Including Pickles, Cauliflower, Onions, Spices, Etc., Ice Cream, Mushrooms, Breadhoggie, Which Is an 8" Loaf of Bread, Mushroom Sauce, Meat Balls, Pizza Doughs, Pizza Sauce, Pepperoni, Pickles, Ravioli, Spaghetti Cheese, Spaghetti (Dry), Ground Beef Steaks, Salad Dressing, Individual Servings of Sugar in Paper Bound Sugar Packs, Spaghetti Sauce, Tartar Sauce, Sold in Cans, in Frozen Form, and Also in Dry Containers.
First use in September 1958.

SN 121,424. Pasquale Foods, Inc., Cincinnati, Ohio. Filed June 5, 1961.

PASQUALE'S

For Foods and Ingredients of Foods—Namely, Ground Sausage, Coffee, Prepared Sandwich Meat, Garnish Having a Hot Flavor and Including Pickles, Cauliflower, Onions, Spices, Etc., Ice Cream, Breadhoggie, Which Is an 8" Loaf of Bread, Mushrooms, Mushroom Sauce, Meat Balls, Pizza Doughs, Pizza Sauce, Pepperoni, Pickles, Ravioli, Spaghetti Cheese, Spaghetti (Dry), Ground Beef Steaks, Salad Dressing, Individual Servings of Sugar in Paper Bound Sugar Packs, Spaghetti Sauce, Tartar Sauce, Sold in Cans, in Frozen Form, and in Dry Packages.
First use April 1958.

SN 123,443. Sioux Honey Association, Cooperative, Sioux City, Iowa. Filed July 5, 1961.



Applicant disclaims the contour or configuration of the container apart from the verbiage shown. Owner of Reg. Nos. 542,942, 647,196, and others.
For Honey.
First use May 26, 1961.

SN 127,341. Eugen Hersog, d.b.a. Kedem Fruit Products Co., Long Island City, N.Y. Filed Sept. 6, 1961.

KEDEM

The word "Kedem" is the Hebrew word for "east."
For Fruit Syrups, Fruit Juices and Fruit Jellies.
First use Nov. 6, 1958.

SN 128,347. Edward Falcon, d.b.a. Falcon Rice Co., Crowley, La. Filed Sept. 21, 1961.



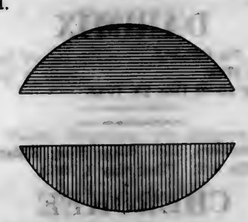
The drawing is lined for blue.
For Rice.
First use Feb. 10, 1961.

SN 129,404. Stephen "Bob" Scurich, Watsonville, Calif. Filed Oct. 6, 1961.



For Fresh Apples.
First use Aug. 30, 1961; Oct. 8, 1951, as to "Family."

SN 130,498. Renon Parisian Fontana Bakeries, Inc., d.b.a. Parisian Bakeries and/or Parisian Baking Company. Filed Oct. 23, 1961.



The drawing is lined for red and blue.
For Bakery Goods—Namely, Sweet, Sour and Hearth French Bread and Ring Bread (Koulouris).
First use Mar. 7, 1961.

SN 130,818. Anna Myers Pure Foods, Inc., Garfield, N.J. Filed Oct. 27, 1961.

MRS. ANNA MYER'S

The name "Mrs. Anna Myer's" is the name of the originator of applicants' business, as evidenced by Reg. Nos. 273,519 and 284,865. Owner of Reg. Nos. 273,519 and 284,865.
For Preserved Fruits and Vegetables, Mustard, Mustard Pickles, Onions, Tomato Sauce, Peanut Butter, and Salad Dressing, Also Piccalilli, Pickle Relish, Spices, Cherry Peppers and Olives.
First use Aug. 15, 1927.

SN 131,166. White Packing Co., Inc., Brooklyn, N.Y. Filed Nov. 1, 1961.

ROUMANIAN BRAND

Applicant disclaims the exclusive right to the word "Brand" apart from the rest of the mark.
For Cooked Ham.
First use June 29, 1961.

SN 135,969. Essex Packers Ltd., d.b.a. Dr. Foster Pet Foods, Hamilton, Ontario, Canada. Filed Jan. 17, 1962.

DR. FOSTER'S VITA-PAK

For Dog and Cat Food.
First use July 15, 1961; in commerce Oct. 1, 1961.

SN 137,722. Dansk Tyggegummi Fabrik A/S, Vejle, Denmark. Filed Feb. 12, 1962.

STIMOROL

Owner of Danish Reg. No. 1850/1956, dated Sept. 15, 1956.
For Chewing Gum, Chocolates, Caramels, Hard Candies, Licorice Candy and Dragees (or Jordan Almonds).

SN 141,429. Frito-Lay, Inc., Dallas, Tex. Filed Apr. 3, 1962.



For Snack Foods—Namely, Potato Chips and Sticks, Popcorn, Nuts (Shelled and Unshelled), and Cookie Sandwiches.
First use not later than Dec. 1, 1948.

SN 142,283. Dairy Products Company of Alabama, Inc., d.b.a. Darimix Sales Company, Birmingham, Ala. Filed Apr. 16, 1962.

DARIMIX

Owner of Reg. No. 604,363.
For Powdered Milk.
First use on or about Dec. 23, 1948.

SN 143,750. Meadors, Inc., d.b.a. Blue Ridge Candy Company, Greenville, S.C. Filed May 3, 1962.

CHEROKEE

For Candies.
First use on or about June 30, 1950.

SN 146,285. Fantasy Flavors, Inc., Wheaton, Ill. Filed June 6, 1962.



For Ice Cream.
First use June 3, 1959.

SN 148,082. Seiler's, Inc., Philadelphia, Pa. Filed June 29, 1962.



Owner of Reg. Nos. 136,932, 540,983, and others.
For Fresh Meats—Namely, Pork Cuts, Beef Cuts; Lard; Processed Meats—Namely, Frankfurters, Bologna, Liverwurst, Sausage, Meat Loaf, Cooked Ham, Smoked Meats, Dried Meats, Comminuted Meats; and Smoked Fish.
First use in 1956; 1920 as to "Seiler's."

SN 148,083. Seiler's, Inc., Philadelphia, Pa. Filed June 29, 1962.

Penn-Dutch

Owner of Reg. Nos. 434,204, 606,794, and others.
For Dried Beef, Lebanon Bologna, Liverwurst.
First use Nov. 19, 1946, on Lebanon bologna.

SN 148,084. Seiler's, Inc., Philadelphia, Pa. Filed June 29, 1962.

Seiler's
GOOSE-NECK BRAND

Owner of Reg. Nos. 136,932, 519,283, and others.
For Fresh Meats—Namely, Pork Cuts, Beef Cuts; Lard; Processed Meats—Namely, Frankfurters, Bologna, Liverwurst, Sausage, Meat Loaf, Cooked Ham, Smoked Meats, Dried Meats, Comminuted Meats; and Smoked Fish.
First use in 1956; 1920 as to "Seiler's."

SN 149,264. Chicken Delight, Inc., Rock Island, Ill. Filed July 18, 1962.

PIZZA DELIGHT

No claim of exclusive right is made to the word "Pizza" as the name of the goods herein. Owner of Reg. Nos. 578,807, 578,808, and 600,096.
For Packaged Food Product Comprising Ready-to-Eat Pizza.
First use July 2, 1962.

SN 149,443. Bowman Dairy Company, Chicago, Ill. Filed July 20, 1962.

BOWMAN

Owner of Reg. No. 511,736.
For Fresh Milk, Buttermilk, Chocolate Milk Drink, Cream, Butter, Fresh Eggs, Ice Cream, Sherbets, Ices, Powdered Milk, Powdered Buttermilk, and a Baking Compound.
First use June 1, 1962; Jan. 1, 1939, as to "Bowman" in a different display.

SN 150,843. The Great Atlantic & Pacific Tea Company, Inc., New York, N.Y. Filed Aug. 9, 1962.



The drawing is lined for red, yellow, and blue. Owner of Reg. Nos. 222,498, 581,102, and others.
For Frozen French Fried Potatoes.
First use Jan. 30, 1962.

SN 151,718. The Great Atlantic & Pacific Tea Company, Inc., New York, N.Y. Filed Aug. 23, 1962.



Owner of Reg. Nos. 62,926, 562,269, and others.
For Frozen Concentrated Orange Juice, Frozen Concentrated Grape Juice, Frozen French Fried Potatoes, Frozen Strawberries, Frozen Peas, Frozen Spinach, Frozen Green Beans, Frozen Lima Beans, Frozen Corn, Frozen Broccoli, Frozen Cauliflower, Frozen Asparagus, and a Preparation To Be Used as a Mix for Instant Chocolate Flavored Food Drink.
First use May 1955 on frozen concentrated orange juice.

SN 153,309. Nifty Foods Corporation, Brockport, N.Y. Filed Sept. 17, 1962.

MUSKET

For Sauces To Be Used on Meats, Fish, and in Soups.
First use Sept. 4, 1962.

SN 153,901. Standard Brands Incorporated, New York, N.Y. Filed Sept. 25, 1962.

ROYAL

Owner of Reg. Nos. 48,077, 135,855, and 711,305.
For Peanut Butter.
First use Sept. 19, 1962.

SN 153,902. Standard Brands Incorporated, New York, N.Y. Filed Sept. 25, 1962.

SAROMA

Owner of Reg. Nos. 395,094, 654,864, and others.
For Peanut Butter.
First use Sept. 19, 1962.

SN 155,518. National Dairy Products Corporation, Chicago, Ill. Filed Oct. 19, 1962.

SUN SWEPT

Owner of Reg. No. 643,268.
For Fruit Salad, Orange Segments, Grapefruit Segments, Pineapple Chunks, Ambrosia and Orange Juice Sold in Containers Which Are Normally Kept Under Refrigeration.
First use Mar. 1, 1951.

SN 156,342. Tobin Packing Co., Inc., Rochester, N.Y. Filed Oct. 31, 1962.

PEPPERSTIX

For Pepperoni Style Dry Sausage.
First use June 8, 1962.

SN 156,548. Anderson, Clayton & Co., Houston, Tex. Filed Nov. 5, 1962.

SPARCAHO

For Livestock Feed.
First use Oct. 29, 1962.

SN 156,673. South Bay Farmers Cooperative Association, d.b.a. South Bay Farmers Coop. Assn., San Ysidro, Calif. Filed Nov. 5, 1962.

FIRST PACK

For Fresh Vegetables.
First use Apr. 1, 1958.

SN 156,702. Gilbert Food Company, Los Angeles, Calif. Filed Nov. 7, 1962.

E-Z LEMON

Applicant disclaims the word "Lemon," except in its use in conjunction with the mark as a whole.
For Lemon Juice.
First use on or before Nov. 8, 1956.

SN 157,015. Salona Olive Importing Co. Inc., New York, N.Y. Filed Nov. 9, 1962.

DORIC

For Fruit and Vegetables in Cans or Jars.
First use Aug. 1, 1961.

SN 157,630. Pacific Vegetable Oil Corporation, Richmond, Calif. Filed Nov. 20, 1962.

NU-SAFF

For Margarine Made With Safflower Oil.
First use July 18, 1962.

SN 157,790. Giant Food, Inc., Landover, Md. Filed Nov. 23, 1962.

POUNCE

For Cat Food.
First use Mar. 3, 1961.

SN 157,966. Blue Ribbon Rice Mills, Inc., Houston, Tex. Filed Nov. 27, 1962.



For Milled Rice.
First use on or about June 30, 1952.

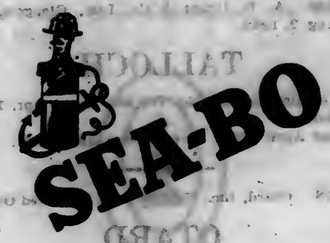
SN 158,467. A. V. Olsson Trading Co., Inc., Bronxville, N.Y. Filed Dec. 4, 1962.

SCANDIC

Owner of Reg. No. 683,382.
For Codfish (Salted and Dried).
First use October 1960.

Class 47—Wines

SN 130,586. Seaboard Beverage Co., Jacksonville, Fla. Filed Oct. 24, 1961.



The portrait shown on the drawing is fanciful.
For Wines.
First use October 1956; 1948 as to "Sea-Bo."

SN 139,671. Piat & Cie, Societe Anonyme, Macon, France. Filed Mar. 12, 1962.

SAINT-ANDRE

"Saint-Andre" is the French spelling of Saint Andrew, that is, one of the twelve apostles. Priority claimed under Sec. 44(d) on French Reg. No. 1,014, dated Jan. 12, 1962 (Macon); Natl. Inst. No. 177,954.
For Wines.

Class 48—Malt Beverages and Liquors

SN 158,066. The Genesee Brewing Company, Inc., Rochester, N.Y. Filed Nov. 28, 1962.

FYFE & DRUM

For Beer.
First use Nov. 12, 1962.

Class 49—Distilled Alcoholic Liquors

SN 141,922. Diamond Jim Brady, Inc., Los Angeles, Calif. Filed Apr. 9, 1962.

DIAMOND JIM'S

Owner of Reg. No. 732,863.
For Whiskey.
First use Dec. 28, 1961.

SN 146,320. Geo. A. Dickel & Co., Tullahoma, Tenn., assignee of Schenley Distillers, Inc., New York, N.Y. Filed June 6, 1962.

TENNESSEE VOLUNTEER

Owner of Reg. Nos. 730,601 and 747,023.
For Corn Whiskey.
First use May 14, 1962.

SN 147,224. Raleigh (Glasgow) Ltd., Glasgow, Scotland. Filed June 19, 1962.

SIR WALTER RALEIGH

"Sir Walter Raleigh" is the name of a famous English statesman. Owner of British Reg. No. 737,594, dated Dec. 29, 1954.
For Blended Scotch Whisky.
First use in January 1957; in commerce in January 1957.

SN 150,336. A. B. Grant & Co. Ltd., Glasgow, Scotland. Filed Aug. 2, 1962.

TALLOCH

Owner of British Reg. No. 752,965, dated Apr. 17, 1956.
For Whisky.
First use April 1961; in commerce April 1961.

SN 154,278. Otard, Inc., New York, N.Y. Filed Oct. 1, 1962.

OTARD

Owner of Reg. No. 632,012.
For Cognac.
First use Feb. 11, 1873.

SN 154,552. James B. Beam Distilling Co., d.b.a. The Clear Spring Distilling Co., Chicago, Ill. Filed Oct. 5, 1962.

Cocktail Hour

The word "Cocktail" is disclaimed apart from the mark.
For Ready Made Alcoholic Cocktails.
First use Sept. 21, 1962.

Class 50—Merchandise Not Otherwise Classified

SN 124,768. Superior Plastics Inc., Chicago, Ill. Filed July 26, 1961.

The Beating Heart

Applicant disclaims the word "Heart" apart from the mark.
For Plastic Models of the Human Heart.
First use June 26, 1961.

SN 138,215. Minnesota Mining and Manufacturing Company, St. Paul, Minn. Filed Feb. 19, 1962.



On the specimens submitted with the application the design appears at the top of the label. The mark is a plaid design; the drawing is lined to indicate the colors gold and black, black being shown by the square cross-hatching. The squares between the black squares are a screen printing of black over gold. Owner of Reg. Nos. 532,418, 536,381 and 558,476.
For Food Packaging Kit Comprising Bags Made From Plastic Film, a Measuring Cup for Filling Those Bags, a Heat Sealing Machine for Sealing the Bags, Labels for Use on the Bags and an Instruction Book for Use Therewith.
First use Jan. 31, 1962.

SN 152,975. Carolina Biological Supply Company, Burlington, N.C. Filed Sept. 12, 1962.

CAROPAK

For Preserved Plant and Animal Specimens Which Are Marketed in Transparent Bags or Containers.
First use June 22, 1962.

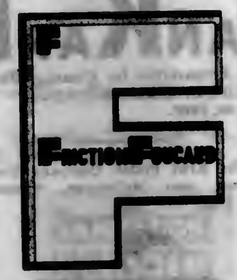
Class 51—Cosmetics and Toilet Preparations

SN 105,767. Societe Anonyme Funel, Le Cannet, Alpe Maritimes, France. Filed Oct. 4, 1960.

CIEL DE CANNES

The English translation of "Ciel de Cannes" is "sky of Cannes." Owner of French Reg. No. 1,002, dated Apr. 2, 1958 (Cannes); Natl. Inst. No. 106,141.
For Perfumes, Essential Oils, Toilet Water, Hair Lotions, and Dentifrices.

SN 121,186. Pierre Felix, Paris (Seine), France. Filed June 1, 1961.



Priority is claimed under Sec. 44(d) on French Reg. No. 492,484, dated Dec. 13, 1960 (Seine); Natl. Inst. No. 155,806. The drawing is lined for the colors red and blue, and Stippled for gold. The word "Friction" is disclaimed apart from the mark as shown. The translation of "Friction" is "rubbing liquid" and "Foucaud" is untranslatable, being a fanciful word.
For Perfumes, Beauty Creams, Beauty Powders, Lipsticks, Eye-Lash and Eyebrow Make-Up, Toilet Waters, Pre-Shave and After Shave Lotions, Cologne Waters, Bath Salts, Make-Up Removing Lotions, Depilatory Creams, Pastes and Liquids, Nail Varnish, Nail Varnish Solvents, Hair Setting Compounds, Pastes, Creams and Liquids for Massage, Dentifrices.

SN 128,296. Revlon, Inc., New York, N.Y. Filed Sept. 20, 1961.

PROGENITIN

For Pregnenolone Acetate in a Cream Carrier for Application to the Skin.
First use November 1960.

SN 134,023. Indola N.V., Rijswijk, Netherlands. Filed Dec. 14, 1961.

INDOLIS

Owner of Dutch Reg. No. 139,857, dated Feb. 8, 1961; and U.S. Reg. Nos. 591,383 and 597,998.
For Hair Dyes, Hair Lotions, Preparations for Fixing the Wave or Setting the Hair, Hair Creams, Hair Conditioning Preparations, Hair-Dye Washes, Hair-Waving Liquids and Oils Used in Connection With Sachets Which Are Applied to the Hair for the Purpose of Waving the Hair, Hair Improving Preparations—Namely, Oil Baths, Hair Rinses.

SN 141,413. Marc Berets and Paulette Berets, Strasbourg, France. Filed Apr. 3, 1962.

MAINDOR

The translation of "Maindor" is "hand of gold."
Owner of French Reg. No. 7,225, dated Jan. 17, 1961 (Strasbourg); Natl. Inst. No. 158,129.
For Hand Cream, Lotions, and Nail Lacquer and Polish.

SN 143,842. Lehn & Fink Products Corporation, Bloomfield, N.J. Filed May 4, 1962.

HIDDEN CHARM

Owner of Reg. No. 642,384.
For Toilet Water, Eau de Cologne, Dusting Powder, Bath Oil Capsules, Bubble Bath, Hand Lotion, Nail Polish, and Nail Polish Remover.
First use Apr. 6, 1956.

SN 156,309. Luzier Incorporated, Kansas City, Mo. Filed Oct. 31, 1962.

GLOWING IMAGE

For Hair Tinting, Dyeing and Coloring Preparations.
First use Sept. 17, 1962.

SN 156,508. M.M.S. Company, Philadelphia, Pa. Filed Nov. 2, 1962.

MONOCLE

For Cologne and Perfume.
First use on about Oct. 18, 1962.

SN 156,577. Diamon-Deb, Inc., Burbank, Calif. Filed Nov. 5, 1962.

DIAMON-DEB

For Hand Cream and Nail Buff Cream.
First use Aug. 10, 1962.

SN 156,644. Nutrine, Ltd., Brooklyn, N.Y. Filed Nov. 5, 1962.

KREKTONE

For Hair Conditioner in the Form of a Liquid Lotion.
First use Mar. 20, 1959.

SN 157,855. Carter Products, Inc., New York, N.Y. Filed Nov. 16, 1962.

SATUROL

Owner of Reg. No. 538,626.
For Fatty Acid Surface Active Agent Used as an Ingredient in a Shaving Lather.
First use Feb. 19, 1962.

SN 157,994. The Gillette Company, Boston, Mass. Filed Nov. 27, 1962.

HEADWAY

For Hair Dressing.
First use Nov. 16, 1962.

Class 52—Detergents and Soaps

SN 129,053. Southern Products Company, Inc., Chattanooga, Tenn. Filed Oct. 2, 1961.

SO-PRO

For Soaps and Detergents.
First use Oct. 19, 1955.

SN 130,037. Mary Chess, Incorporated, New York, N.Y. Filed Oct. 17, 1961.



For Soap.
First use Sept. 16, 1939.

SN 130,381. Dunhill International, Inc., New York, N.Y., by merger from The Pyramid Rubber Company, Ravenna, Ohio. Filed Oct. 20, 1961.

evenflo

Owner of Reg. Nos. 322,650, 716,212, and others.
For Cleansing Powder.
First use Jan. 20, 1934.

SN 133,433. Abso-Clean Chemical Company, Detroit, Mich. Filed Dec. 6, 1961.

Smoothie

Owner of Reg. Nos. 545,862 and 655,681.
For Laundry Detergents and Work Clothes Soap.
First use Sept. 28, 1956.

SN 134,906. The Theobald Industries, Harrison, N.J. Filed Dec. 29, 1961.

MERCURY

Owner of Reg. Nos. 388,315, 571,212, and others.
For Grease and Oil Solvent for Industrial Use, Detergents for Industrial and Household Use, and Detergents for Cleaning Glassware.
First use July 15, 1940.

SN 142,852. Pittsburgh Plate Glass Company, Pittsburgh, Pa. Filed Apr. 23, 1962.

Pitt-Glaze

For Cleaning Solvents.
First use Feb. 13, 1962.

SN 144,631. Montgomery Chemical Company, Jenkintown, Pa. Filed May 15, 1962.

MONCO

For Cleaning Preparations for Industrial and Institutional Use.
First use Oct. 4, 1956.

SN 145,065. The Drackett Company, Cincinnati, Ohio. Filed May 21, 1962.

TANKARD

For Chemical Preparation for Cleaning Tank Cars, Tank Trucks and the Like, Sold in Bulk.
First use Feb. 26, 1962.

SN 151,237. The Kiwi Polish Company Proprietary Limited, Richmond, near Melbourne, Victoria, Australia. Filed Aug. 15, 1962.

KIWI

Owner of U.S. Reg. Nos. 294,324, 593,120, and 739,162.
For Saddle Soap for Cleaning and Softening Boots, Shoes, and All Leathers.
First use Apr. 30, 1962; in commerce Apr. 30, 1962.

SN 154,766. Purex Corporation, Ltd., Lakewood, Calif. Filed Oct. 8, 1962.

LIQUI-FOAM

For Detergent for Hand Dishwashing.
First use Aug. 1, 1962.

SN 154,876. Armour and Company, Chicago, Ill. Filed Oct. 10, 1962.

TRIUMPH

For Detergents for Industrial Use.
First use Jan. 20, 1936.

SN 154,968. Geigy Chemical Corporation, Ardsley, N.Y. Filed Oct. 11, 1962.

MASTIFF

For All-Purpose Household Detergent.
First use Sept. 10, 1962.

SN 154,990. Pfaudler Permutit Inc., Rochester, N.Y. Filed Oct. 11, 1962.

SPALL-GARD

For Cleaning and Descaling Compound for Metallic Vessels Especially Suited for Use in Glass Lined Vessels.
First use Oct. 2, 1962.

SN 155,094. North American Philips Company, Inc., New York, N.Y. Filed Oct. 12, 1962.

NORELCO

Owner of Reg. Nos. 525,323 and 741,720.
For Cleaning Fluid for Electric Shavers.
First use June 29, 1962.

SN 157,641. Pennsalt Chemicals Corporation, Philadelphia, Pa. Filed Nov. 20, 1962.

PLACON

For Alkaline Electrochemical Cleaning Composition for Metals.
First use February 1952.

SERVICE MARKS

Class 100 — Miscellaneous

SN 114,795. Sanitation Unlimited, Inc., Alliance, Ohio. Filed Mar. 2, 1961.



Owner of Reg. No. 686,895.
For Rental of Portable Toilet Units and Maintenance Thereof.
First use on or about Oct. 30, 1959.

SN 115,763. Armour Research Foundation of Illinois Institue of Technology, Chicago, Ill. Filed Mar. 16, 1961.

ARMOUR RESEARCH FOUNDATION

For Research, Development and Engineering Services in the Fields of Physics, Chemistry, Mechanics, Electronics, Metallurgy, Ceramics, Propulsion, Data Processing and Economics.
First use Nov. 1, 1939.

SN 123,543. Henry's Drive-In, Inc., Chicago, Ill. Filed July 7, 1961.

HENRY'S

For Drive-In Restaurant Services.
First use in September 1954.

SN 152,408. International Textbook Company, Scranton, Pa. Filed Sept. 4, 1962.

EMPLOYEE TRAINING
EDS
FOR A PURPOSE

No registration rights are claimed for the wording "Employee Training for a Purpose" apart from the mark as shown.
For Planning, Organizing and Conducting Employee Training Programs for Others.
First use July 2, 1962.

Class 101 — Advertising and Business

SN 104,258. Kabushiki Kaisha Hakuhodo, d.b.a. Hakuhodo Incorporated, Chiyoda-ku, Tokyo-to, Japan. Filed Sept. 12, 1960.

HAKUHODO

For Planning Advertising Campaigns and Executing Said Plans; Conducting Research and Analysis of Markets and of Advertisements; Placing Advertising Into Newspapers, Magazines, Radio-Broadcasts, Television Broadcasts, and Motion Picture Films, Both in Japan and in the United States.
First use Oct. 15, 1905; in commerce June 5, 1956.

SN 131,899. Superior Cleaners and Dyers, Inc., Beverly Hills, Calif. Filed Nov. 13, 1961.

Heritage Traditions

For Hermetically Sealing and Preserving of Wedding Gowns in Specially Constructed Boxes.
First use Jan. 5, 1961.

SN 141,282. Frank H. Farmer, d.b.a. Oil-O-Form, Hopkins, Minn. Filed Apr. 2, 1962.

OIL-O-FORM

For Bookkeeping Services for Others.
First use on or about June 9, 1947.

SN 142,446. Photocopy Service Co., Washington, D.C. Filed Apr. 17, 1962.

VEND-A-COPY

For Rental and Service of Coin Operated Photocopy Machine.
First use Mar. 27, 1962.

SN 143,985. Phillip L. McLaughlin, d.b.a. The McLaughlin Company, Dallas, Tex. Filed May 7, 1962.

PAVE

For Promoting and Exploiting Inventions and New Ideas by and for Inventors, Conducting Market and Production Research and Distribution Studies, Evaluating Manufacturing Costs Relative to Inventions and Ideas by and for Manufacturers Seeking New Products.
First use Aug. 27, 1961.

SN 144,938. Charities Systems, Inc., Dayton, Ohio. Filed May 18, 1962.

GTC

For Promoting the Sale of the Goods and Services of Others by Means of Trading Stamps Redeemable in Cash.
First use Oct. 1, 1961.

SN 145,828. Gold Bell Enterprises, Inc., Detroit, Mich. Filed May 31, 1962.

ACTION

For Promoting the Sale of Goods and Services of Others Through the Medium of Trading Stamps, Awards, Prizes and the Like; and to Designing and Initiating Sales Incentive Ideas, Including the Preparation of Promotion Campaigns, the Maintenance of Accounts, and Delivery of Prizes and Awards.
First use Mar. 1, 1962.

SN 145,857. Seaboard Plywood and Lumber Corporation, Watertown, Mass. Filed May 31, 1962.

SCOTT'S

For Retail Builders' Supplies and Appliance Store Services.
First use Mar. 18, 1962.

SN 152,231. Melville Shoe Corporation, New York, N.Y. Filed Aug. 30, 1962.

McAnomatic

Owner of Reg. No. 170,095.
For Mail Order Services in the Field of Shoes.
First use Aug. 21, 1962.

Class 102 — Insurance and Financial

SN 114,842. Cuna Mutual Insurance Society, Madison, Wis. Filed Mar. 3, 1961.

For Services Rendered in Underwriting and Writing of Insurance for Credit Union Members, Said Coverage Including Life and Disability Insurance.
First use on or about Oct. 4, 1959.

SN 148,967. Insurance Company of North America, Philadelphia, Pa. Filed May 7, 1962.

CORVETTE

For Underwriting of Marine Insurance.
First use Jan. 10, 1962.

SN 153,196. National Insurance Underwriters, Inc., Silver Spring, Md. Filed Sept. 14, 1962.



For Insurance Agency Services.
First use Jan. 2, 1962.

SN 155,033. Wells Fargo Bank, San Francisco, Calif. Filed Oct. 11, 1962.



Owner of Reg. No. 743,913.
For Banking and Trust Services.
First use Jan. 31, 1962; June 30, 1936, as to representation of stagecoach.

SN 155,034. Wells Fargo Bank, San Francisco, Calif. Filed Oct. 11, 1962.



Owner of Reg. No. 743,913.
For Banking and Trust Services.
First use June 30, 1936.

Class 103 — Construction and Repair

SN 99,412. Burke & James, Inc., Chicago, Ill. Filed June 21, 1960.

LENS BANK

For Services of Repair, Modification and Testing of Optical Components.
First use on or before Apr. 10, 1957.

SN 107,864. Kerr-McGee Oil Industries, Inc., Oklahoma City, Okla. Filed Nov. 4, 1960.

THE STOP THAT KEEPS YOU GOING

For Minor Repair Services of the Type Performed at Automobile Service Stations.
First use July 1952.

SN 146,976. Callaway Mills Company, Lagrange, Ga. Filed June 15, 1962.



Owner of Reg. Nos. 231,767, 703,688, and others.
For Rental Services for Articles Used for Cleaning, Wiping, Dusting, and Polishing Purposes.
First use in or about December 1955.

SN 150,127. Videon Corporation, St. Louis, Mo. Filed July 30, 1962.

VIDEON

For Repair and Maintenance of Television Sets.
First use July 12, 1959.

SN 152,916. Piasecki Aircraft Corporation, Philadelphia, Pa. Filed Sept. 11, 1962.

PIASECKI

Owner of Reg. Nos. 570,182 and 644,876.
For Repairing, Overhauling, and Modification of Aircraft, Electronic Equipment, Nuclear Instruments and Mechanical Devices in the Mechanical, Aeronautical and Electrical Fields.
First use May 29, 1957.

Class 105 — Transportation and Storage

SN 139,621. California Western Railroad, Fort Bragg, Calif. Filed Mar. 14, 1962.



For Transportation of Persons and Property by Railroad.
First use May 1961.

Class 107 — Education and Entertainment

SN 98,998. Constance Gordon, d.b.a. Conni Gordon, Miami Beach, Calif. Filed Mar. 30, 1960.

CONNI GORDON

Giving Instructions in Artistic Paintings.
First use on or about July 8, 1959.

SN 152,341. Scripps-Howard Broadcasting Company, Cincinnati, Ohio. Filed Aug. 31, 1962.

LOONEY ZOO

For Title of a Television Program.
First use Jan. 28, 1957.

COLLECTIVE MEMBERSHIP MARKS

Class 200

SN 136,477. National Association of Real Estate Boards, Chicago, Ill. Filed Jan. 24, 1962.



For Indicating Membership in Applicant Association.
First use in or about January 1957.

SN 152,485. National Association of Independent Fee Appraisers, Phoenix, Ariz. Filed Aug. 28, 1962.



For Indicating Membership in Applicant.
First use October 1961.

TRADEMARK REGISTRATIONS ISSUED

PRINCIPAL REGISTER

Class 1—Raw or Partly Prepared Materials

751,099. BOYN-TAN LEATHERS AND CREST DESIGN. Philip F. Boynton, Inc. SN 127,216. Pub. 4-2-63. Filed 9-6-61.

751,100. DEKALB. De Kalb Agricultural Association, Inc. SN 127,575. Pub. 4-2-63. Filed 9-11-61.

751,101. ESTATE. Carl G. Klehm. SN 137,529. Pub. 4-2-63. Filed 2-8-62.

751,102. UREPAN. Farbenfabriken Bayer Aktiengesellschaft. SN 138,483. Pub. 4-2-63. Filed 2-23-62.

751,106. LINDSEY. James W. Lindsey, d.b.a. Lindsey Seed Company. SN 142,327. Pub. 4-2-63. Filed 4-16-62.

Class 2—Receptacles

751,104. LIFOAM. Life-Like Products, Inc. SN 130,221. Pub. 4-2-63. Filed S.R. 10-18-61; Am. P.R. 1-17-63.

751,105. UAP AND DESIGN. United Aircraft Products, Inc. SN 139,902. Pub. 4-2-63. Filed 3-14-62.

751,106. SERV-BASE. Smith-Lee Co., Inc. SN 141,898. Pub. 4-2-63. Filed 4-9-62.

751,107. DUK-IT. McDonald Products Corporation. SN 152,605. Pub. 4-2-63. Filed 9-6-62.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

751,108. JANA. Jana Handbags, Inc. SN 131,578. Pub. 4-2-63. Filed 11-3-61.

751,109. IH. International Harvester Company. SN 148,038. Pub. 4-2-63. Filed 6-29-62.

Class 4—Abrasives and Polishing Materials

751,110. MICROLON. Armour and Company, d.b.a. Armour Alliance Industries. SN 125,873. Pub. 4-2-63. Filed 8-14-61.

751,111. JET-O-LEC. Action Diamond Tool Company. SN 129,256. Pub. 4-2-63. Filed 10-5-61.

751,112. SPARTAN. Macklin Company. SN 131,054. Pub. 4-2-63. Filed 10-31-61.

751,113. RESIBON. Nihon Resibon Seito Kabushiki Kaisha. SN 135,378. Pub. 4-2-63. Filed 1-8-62.

751,114. POLYSAND. Frederick B. Anthon. SN 136,521. Pub. 4-2-63. Filed 1-25-62.

751,115. DOWGARD. The Dow Chemical Company. SN 137,216. Pub. 4-2-63. Filed 2-5-62.

Class 5—Adhesives

751,116. DUBO PLASTIC AND DESIGN. The Woodhill Chemical Sales Corporation. SN 112,991. Pub. 4-2-63. Filed 2-2-61.

751,117. EPOX-E-CAST. Delmonte Plastics Corporation. SN 127,099. Pub. 4-2-63. Filed 9-1-61.

751,118. HY SOL TAC. Hysol Corporation. SN 142,712. Pub. 4-2-63. Filed 4-20-62.

Class 6—Chemicals and Chemical Compositions

751,119. DOWGARD. The Dow Chemical Company. SN 137,213. Pub. 4-2-63. Filed 2-5-62.

751,120. PENPHENE. Pennsalt Chemicals Corporation. SN 137,454. Pub. 4-2-63. Filed 2-7-62.

Class 7—Cordage

751,121. SANTA RITA. Companhia Sisal do Brasil—Cosibra. SN 124,889. Pub. 4-2-63. Filed 7-28-61.

751,122. CIRCULAR ROPE DESIGN. Companhia Sisal do Brasil—Cosibra. SN 125,889. Pub. 4-2-63. Filed 8-3-61.

Class 8—Smokers' Articles, Not Including Tobacco Products

751,123. FINESSE. Martin J. Schwartz. SN 137,011. Pub. 4-2-63. Filed 1-31-62.

751,124. IH. International Harvester Company. SN 148,039. Pub. 4-2-63. Filed 6-29-62.

751,125. HOODWINK. Vohana of California. SN 149,976. Pub. 4-2-63. Filed 7-27-62.

Class 12—Construction Materials

751,126. PANELGLAS. Johns-Manville Corporation. SN 85,669. Pub. 11-15-60. Filed 11-19-59.

751,127. TRI-RIB. Transco Inc., assignee of Transportation Specialties Co. SN 120,155. Pub. 4-2-63. Filed 5-16-61.

751,128. LIGHT-FIX. Global Construction Devices, Inc., by change of name from Fast-Fix, Inc. SN 125,589. Pub. 4-2-63. Filed 8-8-61.

751,129. AMELCO AND DESIGN. The American Elumin Company. SN 125,563. Pub. 4-2-63. Filed 8-14-61.

751,130. ANTIQUE ASHTONE. The Bloomington Limestone Corporation. SN 126,599. Pub. 4-2-63. Filed 8-24-61.

751,131. VULCAN PRE-BED AND DESIGN. Vulcan Materials Company. SN 127,736. Pub. 4-2-63. Filed 9-12-61.

751,132. PRE-BED. Vulcan Materials Company. SN 127,737. Pub. 4-2-63. Filed 9-12-61.

751,133. X-NINETY. Masonite Corporation. SN 136,914. Pub. 4-2-63. Filed 1-30-62.

751,134. HUNTER AND DESIGN. Hunter Engineering Co. SN 146,053. Pub. 4-2-63. Filed 6-4-62.

751,135. WHITE LIGHTNIN'. Marsan Corporation. SN 146,740. Pub. 4-2-63. Filed 6-12-62.

751,136. EDGBON. L & M Tile Products, Inc. SN 153,297. Pub. 4-2-63. Filed 9-17-62.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

751,137. KAPT-O-SKREW. A.P.M. Corporation. SN 126,287. Pub. 4-2-63. Filed 8-21-61.

751,138. BLUE-CUT. Diamond Expansion Bolt Company, Inc. SN 132,669. Pub. 4-2-63. Filed 11-24-61.

751,139. FOUNTAINETTE. Haws Drinking Faucet Company. SN 133,266. Pub. 4-2-63. Filed 12-4-61.

751,140. D AND DIAMOND DESIGN. Diamond Expansion Bolt Company, Inc. SN 137,606. Pub. 4-2-63. Filed 2-9-62.

751,141. SHEPHERD. Shepherd Casters, Inc. SN 141,654. Pub. 4-2-63. Filed 4-5-62.

751,142. ANCO. Bethlehem Steel Company. SN 142,014. Pub. 1-8-63. Filed 4-11-62.

751,143. DUOFLEX. Cheney Bigelow Wire Works, Inc., assignee of Cheney Bigelow Wire Works. SN 145,247. Pub. 4-2-63. Filed 5-23-62.

751,144. CAMELOT. Regal Ware, Inc. SN 145,606. Pub. 4-2-63. Filed 5-28-62.

751,145. CONSOLIDATED. Consolidated Pipe Company of America. SN 145,669. Pub. 4-2-63. Filed 5-29-62.

751,146. MEMORY-LOCK. Talon, Inc. SN 145,872. Pub. 4-2-63. Filed 5-31-62.

751,147. KLIK. B-F Industries, Inc. SN 145,914. Pub. 4-2-63. Filed 6-1-62.

Class 14—Metals and Metal Castings and Forgings

751,148. REFRACTOMET ETC. AND DESIGN. Universal-Cyclops Steel Corporation. SN 138,067. Pub. 4-2-63. Filed 2-15-62.

751,149. DOFASCO ASBESTOSCOAT. Dominion Foundries and Steel, Limited. SN 140,663. Pub. 4-2-63. Filed 3-26-62.

751,150. DOFASCO DUALCOAT. Dominion Foundries and Steel, Limited. SN 140,668. Pub. 4-2-63. Filed 3-26-62.

751,151. DUO-BETHCOLITE. Bethlehem Steel Company. SN 141,935. Pub. 4-2-63. Filed 4-10-62.

751,152. EMITE. Lesher W. Van Buskirk. SN 145,225. Pub. 4-2-63. Filed 5-22-62.

Class 15—Oils and Greases

751,153. METHYL. Standard Oil Company of California, assignee of California Research Corporation. SN 94,868. Pub. 11-20-62. Filed 4-20-60.

751,154. CEREPLAX. National Wax Company. SN 141,743. Pub. 4-2-63. Filed 4-6-62.

Class 17—Tobacco Products

751,155. LONG ISLAND AND DESIGN. Abdulla & Company Limited. SN 144,300. Pub. 4-2-63. Filed 5-11-62.

751,156. COAT OF ARMS. Schermerhorn Cigar Stores, Inc. SN 144,989. Pub. 4-2-63. Filed 5-18-62.

751,157. BESTOVAL AND DESIGN. Schermerhorn Cigar Stores, Inc. SN 144,991. Pub. 4-2-63. Filed 5-18-62.

751,158. DU M. Brown & Williamson Tobacco Corporation. SN 149,708. Pub. 4-2-63. Filed 7-25-62.

751,159. HAMILTON-HARRIS & CO'S HOME MADE. Jno. H. Swisher & Son, Inc. SN 151,621. Pub. 4-2-63. Filed 8-21-62.

Class 18—Medicines and Pharmaceutical Preparations

751,160. SHAI SKIN TRETE. Rocal Laboratories Limited. SN 92,648. Pub. 3-26-63. Filed 3-11-60.

751,161. PANFEM. Pan American Laboratories, Inc. SN 131,704. Pub. 4-2-63. Filed 11-9-61.

751,162. McNEIL. McNeil Laboratories, Incorporated. SN 141,964. Pub. 4-2-63. Filed 4-10-62.

751,163. BOVINDEROL. Syracuse Pharmacal Co. Inc. SN 142,228. Pub. 4-2-63. Filed 4-13-62.

751,164. FLUVOIDS. Inducol Limited. SN 142,430. Pub. 4-2-63. Filed 4-17-62.

751,165. PANCANAL. Riker Laboratories, Inc. SN 147,087. Pub. 2-12-63. Filed 6-15-62.

751,166. ALCOPAD. Mason-Keller Corporation. SN 148,053. Pub. 4-2-63. Filed 6-29-62.

751,167. CATTUSSIN. Lakeside Laboratories, Inc. SN 148,510. Pub. 2-19-63. Filed 7-6-62.

Class 19—Vehicles

751,168. STAR LABEL DESIGN. Safege-Transport. SN 138,426. Pub. 4-2-63. Filed 2-21-62.

751,169. CUSTOM ROYAL. Gutsone Corporation. SN 142,371. Pub. 4-2-63. Filed 4-16-62.

751,170. MOBILEFREEZE. Mobilefreeze Co., Inc. SN 154,046. Pub. 4-2-63. Filed 9-27-62.

751,171. HALO-OF-COLD. Mobilefreeze Co., Inc. SN 154,047. Pub. 4-2-63. Filed 9-27-62.

751,172. CLARION AND DESIGN. Mobile Holdings Corporation. SN 154,272. Pub. 4-2-63. Filed 10-1-62.

751,173. LINDA. Etablissements Jean Gallet Fils & Cie (Société à Responsabilité Limitée). SN 154,340. Pub. 4-2-63. Filed 10-2-62.

Class 21—Electrical Apparatus, Machines, and Supplies

751,174. T/I. Texas Instruments Incorporated. SN 117,561. Pub. 12-18-62. Filed 4-10-61.

751,175. FADA. Symphonic Electronic Corporation. SN 136,254. Pub. 4-2-63. Filed 3-2-61.

751,176. FANCIFUL DESIGN INCLUDING THE LETTER K. King Electronics, Inc. SN 126,349. Pub. 2-19-63. Filed 8-21-61.

751,177. GARDEN MARK. Montgomery Ward & Co., Incorporated. SN 126,941. Pub. 4-2-63. Filed 8-30-61.

751,178. MOI MONOGRAM. Guardian Electric Manufacturing Company of California, Inc., assignee of Modern Industries, Inc. SN 131,857. Pub. 3-12-63. Filed 11-13-61.

751,179. PANELUME. Accesso Corporation. SN 132,781. Pub. 4-2-63. Filed 11-27-61.

751,180. TYLESCENT. Accesso Corporation. SN 132,782. Pub. 4-2-63. Filed 11-27-61.

751,181. PANEL-AIR. Accesso Corporation. SN 132,787. Pub. 4-2-63. Filed 11-27-61.

751,182. JET SET. Jet Line Products, Inc. SN 134,025. Pub. 4-2-63. Filed 12-14-61.

751,183. ILLUMITRONIC. Illumitronic Engineering Corporation. SN 134,983. Pub. 4-2-63. Filed 1-2-62.

751,184. COLUMBIA. Imperial Auto-Craft Products, Inc. SN 135,273. Pub. 4-2-63. Filed 1-5-62.

751,185. OXIT. Deutsche Edelstahlwerke Aktiengesellschaft. SN 140,106. Pub. 4-2-63. Filed 3-19-62.

751,186. DYNALOGIC. General Dynamics Corporation. SN 143,022. Pub. 4-2-63. Filed 4-25-62.

751,187. ACON. A & A Trading Corporation. SN 143,065. Pub. 4-2-63. Filed 4-26-62.

751,188. FONECADDY. Perry G. Baucum, d.b.a. Frigid Equipment Company. SN 146,567. Pub. 4-2-63. Filed 6-11-62.

751,189. NEXUS. Nexus Incorporated. SN 146,743. Pub. 4-2-63. Filed 6-12-62.

751,190. SURBOND. Surprenant Manufacturing Company. SN 150,289. Pub. 4–2–63. Filed 8–1–62.

751,191. ABCO. George K. Freeman, Jr., administrator of estate of Pierce W. Strider, deceased, d.b.a. Automatic Battery Company of America. SN 152,483. Pub. 4–2–63. Filed 9–4–62.

751,192. ORPIN. George K. Freeman, Jr., administrator of estate of Pierce W. Strider, deceased, d.b.a. Automatic Battery Company of America. SN 152,484. Pub. 4–2–63. Filed 8–21–62.

751,193. SUPER MAX-C AND DESIGN. JFD Electronics Corporation. SN 152,582. Pub. 4–2–63. Filed 9–6–62.

751,194. HI-LIFE AND DESIGN. JFD Electronics Corporation. SN 152,584. Pub. 4–2–63. Filed 9–6–62.

751,195. SHOREPAC. Engelhard Industries, Inc. SN 154,485. Pub. 4–2–63. Filed 10–4–62.

751,196. PARROT-BILL. Preformed Line Products Company. SN 155,099. Pub. 4–2–63. Filed 10–12–62.

751,197. NPC. Nucleonic Products Company, Inc. SN 155,178. Pub. 4–2–63. Filed 10–15–62.

751,198. LECTRO-POROUS. The Electric Auto-Lite Company. SN 155,400. Pub. 4–2–63. Filed 10–18–62.

Class 22 — Games, Toys, and Sporting Goods

751,199. APPROVED BY SANTA AND DESIGN. North Pole Toys, Inc. SN 114,781. Pub. 4–2–63. Filed 3–2–61.

751,200. SUMP'N. Roberta G. Renfrow, d.b.a. Roberta's Dress Shop. SN 117,734. Pub. 4–2–63. Filed 4–12–61.

751,201. HERRING SAILOR. Earl C. Poulsen, d.b.a. Poulsen Bros. SN 125,453. Pub. 4–2–63. Filed 7–31–61.

751,202. RAIL 'N ROAD. Louis Marx & Company, Inc. SN 131,378. Pub. 4–2–63. Filed 11–6–61.

751,203. SPAREMASTER. Edwin F. Wolff. SN 134,777. Pub. 4–2–63. Filed 12–27–61.

751,204. BERKLEY AND DESIGN. Berkley & Company, Inc. SN 136,723. Pub. 4–2–63. Filed 1–29–62.

751,205. LADY DOLLY. Helen Marian Manthorne, d.b.a. Character Creations. SN 137,447. Pub. 4–2–63. Filed 2–7–62.

751,206. SOPHISTIBUGS. Helen Marian Manthorne, d.b.a. Character Creations. SN 137,448. Pub. 4–2–63. Filed 2–7–62.

751,207. PRO-PAR. Pro-Par Products. SN 139,526. Pub. 4–2–63. Filed 3–9–62.

751,208. POCKET-GYM. Don-Jon Inc. SN 142,416. Pub. 4–2–63. Filed 4–17–62.

751,209. TWISTER. Earl Brock, d.b.a. Brock Specialty Company. SN 143,101. Pub. 4–2–63. Filed 4–26–62.

751,210. BEAVER AND DESIGN. St. Lawrence Manufacturing Co., Inc. SN 143,572. Pub. 4–2–63. Filed 5–1–62.

Class 23 — Cutlery, Machinery, and Tools, and Parts Thereof

751,211. REPCO AND DESIGN. Repco Limited. SN 79,291. Pub. 4–17–62. Filed 8–10–59.

751,212. ZECO. The Zeco Company. SN 89,040. Pub. 4–2–63. Filed 1–14–60.

751,213. ETCH-O-MATIC. Detroit Gravure Corporation. SN 119,611. Pub. 4–2–63. Filed 5–9–61.

751,214. BUG MASTER. Golden Arrow Manufacturing Limited, assignee of Golden Arrow Sprayers Ltd. SN 121,379. Pub. 4–2–63. Filed 6–5–61.

751,215. PAK-O-VAC. American Thermoform Corporation. SN 122,253. Pub. 4–2–63. Filed 6–19–61.

751,216. ORION. Press & Stanzwerke, Ltd. SN 126,609. Pub. 4–2–63. Filed 8–24–61.

751,217. COLUMBIA MARKING TOOLS AND DESIGN. Frank Krembel, Jr. SN 132,052. Pub. 4–2–63. Filed 11–15–61.

751,218. SPEEDAIRE. Dayton Electric Manufacturing Company. SN 132,905. Pub. 4–2–63. Filed 11–28–61.

751,219. SPANGALOY. Spang and Company. SN 133,178. Pub. 4–2–63. Filed 12–1–61.

751,220. DURA-BOSSED. Powell Muffler Company, Inc. SN 133,312. Pub. 4–2–63. Filed 12–4–61.

751,221. MERCURY. Estwing Manufacturing Company, Incorporated. SN 133,551. Pub. 4–2–63. Filed 12–7–61.

751,222. PANO. Pano-Werk Inh. Paul Nofer. SN 134,400. Pub. 4–2–63. Filed 12–20–61.

751,223. FOUR PIPS AND DESIGN. Zivi S.A. Cutelaria. SN 134,726. Pub. 4–2–63. Filed 12–27–61.

751,224. VAC-PAC. Howard H. Morgan, d.b.a. Morgan Incubator Sales & Service. SN 135,816. Pub. 4–2–63. Filed 1–15–62.

751,225. SOLVOMAT. Hamac-Hansella Aktiengesellschaft, by change of name from Hamac-Hansella Aktiengesellschaft Maschinenfabrik Viersen. SN 138,014. Pub. 4–2–63. Filed 2–15–62.

751,226. UNI-PLAST. Hamac-Hansella Aktiengesellschaft, by change of name from Hamac-Hansella Aktiengesellschaft Maschinenfabrik Viersen. SN 138,015. Pub. 4–2–63. Filed 2–15–62.

751,227. MICAFIL. Micafil AG. SN 138,965. Pub. 4–2–63. Filed 2–2–62.

751,228. ENGINEERED TO SERVE YOUR FUTURE. Phillocraft Company. SN 141,366. Pub. 4–2–63. Filed 4–2–62.

751,229. AIR-LEC. Air-Lec Industries, Inc. SN 145,017. Pub. 4–2–63. Filed 5–21–62.

751,230. CONQUEROR. Heyer Inc. SN 145,556. Pub. 4–2–63. Filed 5–28–62.

751,231. RUST-GARD. Walker Manufacturing Company. SN 145,902. Pub. 4–2–63. Filed 5–31–62.

751,232. IH. International Harvester Company. SN 148,042. Pub. 4–2–63. Filed 6–29–62.

751,233. TAPE-MATE. Red Devil Tools. SN 148,843. Pub. 4–2–63. Filed 7–11–62.

751,234. ESCAVEYOR. Standard Conveyor Company. SN 153,851. Pub. 4–2–63. Filed 9–4–62.

Class 25 — Locks and Safes

751,235. MASTRLOK. Master Lock Company. SN 144,403. Pub. 4–2–63. Filed 5–11–62.

751,236. JIM DANDY AND DESIGN. Willard Ohnmacht, d.b.a. Jim Dandy Safe Equipment Co. SN 145,960. Pub. 4–2–63. Filed 6–1–62.

Class 26 — Measuring and Scientific Appliances

751,237. H IN A FLAME CIRCLE DESIGN. Harper-Wyman Company. SN 98,217. Pub. 4–2–63. Filed 6–1–60.

751,238. 3 IN 1. Perfect Photo, Inc. SN 123,227. Pub. 4–2–63. Filed 6–30–61.

751,239. MEASURETROL. The Electron-Machine Corp. SN 136,858. Pub. 4–2–63. Filed 8–29–61.

751,240. FORMULAMATIC. The Fred D. Pfening Co. SN 134,669. Pub. 4–2–63. Filed 12–26–61.

751,241. VITORET. Voigtlander A.G. SN 147,102. Pub. 4–2–63. Filed 6–18–62.

751,242. SUPERFRUNT. Ametek, Inc. SN 148,460. Pub. 4–2–63. Filed 7–6–62.

751,243. FILMDEX. Filmdex Corporation. SN 149,641. Pub. 4–2–63. Filed 7–24–62.

Class 27 — Horological Instruments

751,244. CLOCK WATCHER. M. H. Rhodes, Inc. SN 147,958. Pub. 4–2–63. Filed 6–28–62.

751,245. GENEVA ROYAL. Montre de Sport Geneve S.A. (Geneva Sport Watch Ltd.). SN 148,458. Pub. 4–2–63. Filed 6–11–62.

Class 28 — Jewelry and Precious-Metal Ware

751,246. CEME WITHIN OVAL DESIGN. Arnold D. Golber, d.b.a. Certified Metals Co. SN 144,250. Pub. 4–2–63. Filed 5–10–62.

751,247. MARCHAL JEWELERS AND DESIGN. Marchal Inc. SN 145,194. Pub. 4–2–63. Filed 5–22–62.

751,248. LT MONOGRAM. Louis Tamis & Sons. SN 146,123. Pub. 4–2–63. Filed 6–4–62.

751,249. THC AND DESIGN. The House of Chasps, Inc. SN 146,723. Pub. 4–2–63. Filed 6–12–62.

751,250. P (FANCIFUL). Geo. Schuler & Co., Inc. SN 147,042. Pub. 4–2–63. Filed 6–15–62.

751,251. BS DESIGN. Leo Strauss, d.b.a. Strauss Chain & Jewelry Mfg. Co. SN 147,412. Pub. 4–2–63. Filed 6–21–62.

751,252. BY PHILIPS. Philips Mfg. Co. SN 147,497. Pub. 4–2–63. Filed 6–22–62.

751,253. BH. B & H Jewelry Co., Inc. SN 147,883. Pub. 4–2–63. Filed 6–28–62.

751,254. LF. & SON LTD. AND DESIGN. I. Freeman & Son, Inc. SN 147,918. Pub. 4–2–63. Filed 6–28–62.

751,255. IH. International Harvester Company. SN 148,040. Pub. 4–2–63. Filed 6–29–62.

751,256. 3H. Henry H. Harteveldt Company. SN 148,185. Pub. 4–2–63. Filed 7–2–62.

751,257. DDA 14 KT AND DESIGN. New York Fine Jewelry Co. SN 148,217. Pub. 4–2–63. Filed 7–2–62.

751,258. FIREBALL. Speidel Corporation. SN 148,333. Pub. 4–2–63. Filed 7–3–62.

751,259. SILK 'N SOFT. Speidel Corporation. SN 148,337. Pub. 4–2–63. Filed 7–3–62.

751,260. XA IN A CIRCLE DESIGN. Alexander's Department Stores, Inc. SN 148,456. Pub. 4–2–63. Filed 7–6–62.

751,261. CROSBY. A. Cohen & Sons Corp. SN 148,598. Pub. 4–2–63. Filed 7–9–62.

751,262. JU AND DESIGN. Josef Ungar. SN 148,678. Pub. 4–2–63. Filed 7–9–62.

751,263. BRD. Bayardi Brothers, Inc. SN 148,695. Pub. 4–2–63. Filed 6–25–62.

751,264. B WITHIN A CIRCLE. Benstock Ring Manufacturing Co. Inc. SN 148,696. Pub. 4–2–63. Filed 6–29–62.

751,265. SEA LUSTRE AND DESIGN. Bromberg & Company, Inc. SN 148,947. Pub. 4–2–63. Filed 7–13–62.

751,266. S & S AND DESIGN. Maurice Spain & Sons, Inc. SN 149,013. Pub. 4–2–63. Filed 7–13–62.

751,267. M.B. AND DESIGN. Muroff Bros., Inc. SN 149,194. Pub. 4–2–63. Filed 7–17–62.

751,268. KK DESIGN. Karl Kneisel. SN 149,348. Pub. 4–2–63. Filed 7–2–62.

751,269. BTF. Carl Cohen, d.b.a. Bon Ton Findings. SN 149,541. Pub. 4–2–63. Filed 7–23–62.

751,270. SMYTH. Albert S. Smyth Co., Inc. SN 150,189. Pub. 4–2–63. Filed 7–31–62.

751,271. BSD. Belgian Dutch Diamond Co. SN 150,224. Pub. 4–2–63. Filed 8–1–62.

751,272. FN. Samuel Nyer, d.b.a. Foremost Novelty Co. SN 150,273. Pub. 4–2–63. Filed 8–1–62.

751,273. CK DESIGN. Charles Kemper, d.b.a. Charles Kemper, Mfrg. Jeweler. SN 151,681. Pub. 4–2–63. Filed 8–22–62.

751,274. B & C. B & C Mfg. Co. SN 152,269. Pub. 4–2–63. Filed 8–31–62.

Class 29 — Brooms, Brushes, and Dusters

751,275. FLIP MITT. John Conti and Ruth Conti (joint owners). SN 141,937. Pub. 4–2–63. Filed 4–10–62.

Class 32 — Furniture and Upholstery

751,276. MEDI+GUARD. Global Plastics Inc. SN 134,314. Pub. 4–2–63. Filed 12–19–61.

751,277. LEGSUP. El-Ar Enterprises, Inc. SN 152,126. Pub. 4–2–63. Filed 8–29–62.

751,278. GAMEMASTER. Norcor Manufacturing Company, Inc. SN 152,427. Pub. 4–2–63. Filed 9–4–62.

751,279. BRIDGEMASTER. Norcor Manufacturing Company, Inc. SN 152,428. Pub. 4–2–63. Filed 9–4–62.

Class 33 — Glassware

751,280. SUPERBRITE. Minnesota Mining and Manufacturing Company. SN 123,343. Pub. 4–2–63. Filed 7–3–61.

751,281. IMPERIAL AND DESIGN. Imperial Glass Corporation. SN 150,870. Pub. 4–2–63. Filed 8–9–62.

751,282. TRILLIUM. Frank J. Newhouse Ltd. SN 155,631. Pub. 4–2–63. Filed 10–22–62.

751,283. MG AND DESIGN. Meteor Glass Company, Inc. SN 156,239. Pub. 4–2–63. Filed 10–30–62.

751,284. LORAD. Corning Glass Works. SN 156,382. Pub. 4–2–63. Filed 11–1–62.

Class 34 — Heating, Lighting, and Ventilating Apparatus

751,285. REGAL AND DESIGN. Regal Lamp and Shade Co., Inc., assignee of Max Lager, d.b.a. Regal Lamp & Shade Co. SN 127,284. Pub. 4–2–63. Filed 9–5–61.

751,286. KEMCO. Krueger Engineering & Manufacturing Company, Inc. SN 131,692. Pub. 4–2–63. Filed 11–9–61.

751,287. REPUBLIC. Autogas Company. SN 143,334. Pub. 1–15–63. Filed 4–30–62.

751,288. WHISPER. Rotron Manufacturing Co., Inc. SN 153,820. Pub. 4–2–63. Filed 9–24–62.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

751,289. CVC. United States Rubber Company. SN 153,841. Pub. 4–2–63. Filed 9–24–62.

751,290. PARKER-PAK. Parker-Hannifin Corporation. SN 154,280. Pub. 4–2–63. Filed 10–1–62.

Class 36 — Musical Instruments and Supplies

751,291. SOLOIST. H. & A. Selmer Inc. SN 76,117. Pub. 8–28–62. Filed 6–19–59.

751,292. MAYPE. Havana Music Record Co. SN 150,869. Pub. 4–2–63. Filed 8–9–62.

751,293. WANDRE. Don Noble & Company, Inc. SN 157,538. Pub. 4–2–63. Filed 11–19–62.

751,294. REPRESENTATION OF A GROTESQUE HUMAN. Choreo Enterprises, Inc. SN 157,770. Pub. 4–2–63. Filed 11–23–62.

751,295. TORCHLITE SERIES AND DESIGN. Columbia Pictures Corporation. SN 157,772. Pub. 4–2–63. Filed 11–23–62.

751,296. BATTLE. Bill Grauer Productions, Inc. SN 157,794. Pub. 4-2-63. Filed 11-23-62.

Class 37 — Paper and Stationery

751,297. PUREX. Purex Corporation, Ltd., assignee of Leonard Tissue Corporation. SN 15,549. Pub. 10-24-61. Filed 9-12-56.

751,298. PILOT. Pairotto Man-Neu-Hitsu Kabushiki Kaisha, d.b.a. The Pilot Pen Co., Ltd. SN 129,785. Pub. 2-12-63. Filed 10-12-61.

751,299. COUNTESS. Doeskin Products, Inc. SN 134,714. Pub. 4-2-63. Filed 12-7-61.

751,300. COUNTESS LYDIA. Doeskin Products, Inc. SN 134,715. Pub. 4-2-63. Filed 12-19-61.

751,301. AMERICAN MAID. Milo Harding Company. SN 140,121. Pub. 4-2-63. Filed 3-19-62.

Class 38 — Prints and Publications

751,302. ROVIR. Rognoni—Soc. in Nome Collettivo. SN 110,949. Pub. 4-2-63. Filed 12-28-60.

751,303. RED BOOK. New York World-Telegram Corporation. SN 121,218. Pub. 12-11-62. Filed 6-1-61.

751,304. I AND DESIGN. Idento Label Company. SN 122,312. Pub. 1-22-63. Filed 6-19-61.

751,305. ICS PL-100. International Textbook Company. SN 123,015. Pub. 4-2-63. Filed 6-28-61.

751,306. COACH-EZE AND DESIGN. The P. W. & B. Company. SN 124,577. Pub. 4-2-63. Filed 7-24-61.

751,307. FASHION FORESIGHT A GUIDE TO FASHION PROMOTION PLANNING. Independent Retailers Syndicate, Inc. SN 133,274. Pub. 4-2-63. Filed 12-4-61.

751,308. TECH-NI-TIPS. Ren Plastics, Inc. SN 133,820. Pub. 4-2-63. Filed 12-11-61.

751,309. FORETHOUGHT. Cambridge Associates, Inc. SN 136,025. Pub. 4-2-63. Filed 1-18-62.

751,310. MEDICINE IN SPORTS. Rystan Company. SN 137,279. Pub. 4-2-63. Filed 2-5-62.

751,311. TEACH-R-MATIC. Harry G. Clain. SN 137,423. Pub. 4-2-63. Filed 2-7-62.

751,312. THE YOUNG CONSERVATIVES. Wm. H. Waddington, Jr., d.b.a. Naconle Publishing Co. SN 140,789. Pub. 4-2-63. Filed 3-26-62.

Class 39 — Clothing

751,313. HAGGAR BANTAMWEIGHT AND DESIGN. Haggar Company. SN 126,592. Pub. 4-2-63. Filed 8-24-61.

751,314. MERRILAD. P. H. Hanes Knitting Company. SN 135,350. Pub. 4-2-63. Filed 1-8-62.

751,315. ALWAYS IN SEASON AND DESIGN. Novelty Sportswear Manufacturing Co. SN 136,071. Pub. 4-2-63. Filed 1-18-62.

751,316. FORTNITER. Excelsior Associates, Inc. SN 137,128. Pub. 4-2-63. Filed 2-2-62.

751,317. CHRISTOPHER CLOTH. F. Jacobson & Sons, Inc. SN 138,615. Pub. 4-2-63. Filed 2-26-62.

751,318. COMFORT ZONE. Exquisite Form Industries, Inc. SN 141,598. Pub. 4-2-63. Filed 4-5-62.

751,319. JONI JAY. Top Form Mills, Inc. SN 142,062. Pub. 4-2-63. Filed 4-11-62.

751,320. PHYLLIS LEE. Ben Wilson Company, Inc. SN 142,475. Pub. 4-2-63. Filed 4-17-62.

751,321. CUPID. Albert Hazan, d.b.a. Al-Jay Undergarment Mfg. Co. SN 143,063. Pub. 4-2-63. Filed 4-11-62.

751,322. CELLINI. LeMar Shoes, Inc. SN 144,508. Pub. 4-2-63. Filed 5-14-62.

751,323. BARDINI. Bernard Industries, Inc. SN 146,006. Pub. 4-2-63. Filed 6-4-62.

751,324. SPARKLON. Wembley, Inc. SN 146,131. Pub. 4-2-63. Filed 6-4-62.

751,325. RUNBAN. Hudson Hosiery Company. SN 146,194. Pub. 4-2-63. Filed 6-5-62.

751,326. MISSILE CLOTH. Joseph H. Cohen & Sons, Inc. SN 146,584. Pub. 4-2-63. Filed 6-11-62.

751,327. MAHARAJAH. The Richman Brothers Company. SN 146,661. Pub. 4-2-63. Filed 6-11-62.

751,328. FLORSHEIM SHOES THAYER McNEIL AND DESIGN. International Shoe Company, d.b.a. Florsheim Shoe Company. SN 147,742. Pub. 4-2-63. Filed 6-26-62.

751,329. IH. International Harvester Company. SN 148,041. Pub. 4-2-63. Filed 6-29-62.

751,330. SECUROSLAX. Silver Mfg. Co., Inc. SN 148,918. Pub. 4-2-63. Filed 7-12-62.

751,331. EASY-WEAVE. Palm Beach Company. SN 149,957. Pub. 4-2-63. Filed 7-27-62.

751,332. FISHERMAN KNIT. Camp and McInnes, Inc. SN 150,158. Pub. 4-2-63. Filed 7-31-62.

751,333. PERMA-SHAPE. Miller Brothers Hat Company. SN 150,176. Pub. 4-2-63. Filed 7-31-62.

751,334. COGNIZANTI. The E.V.D. Company, Inc., Beau Brummell Ties Division. SN 150,221. Pub. 4-2-63. Filed 8-1-62.

751,335. FISHERMAN KNIT AND DESIGN. Camp and McInnes, Inc. SN 150,324. Pub. 4-2-63. Filed 8-2-62.

751,336. CRIB-ETTES. U-Need-Em Specialty Co. Inc. SN 150,470. Pub. 4-2-63. Filed 8-3-62.

751,337. CHOREOGRAPHY. Maidenform, Inc. SN 150,573. Pub. 4-2-63. Filed 8-6-62.

751,338. SWEET DREAMS. Maidenform, Inc. SN 150,574. Pub. 4-2-63. Filed 8-6-62.

751,339. FROSTI-KNIT. Wonderknit Corporation. SN 151,629. Pub. 4-2-63. Filed 8-21-62.

Class 40 — Fancy Goods, Furnishings, and Notions

751,340. MONTCLAIR. Montclair Imports Inc. SN 142,727. Pub. 4-2-63. Filed 4-20-62.

Class 42 — Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

751,341. CARAVELLE. Deering Milliken, Inc. SN 116,485. Pub. 4-2-63. Filed 3-27-61.

751,342. ROYAL TUFT. Barth & Dreyfuss, Inc., d.b.a. Barth & Dreyfuss and as Royal Terry of California. SN 143,202. Pub. 4-2-63. Filed 4-27-62.

751,343. BRASHEER. Rosenstein Bros. SN 143,480. Pub. 4-2-63. Filed 4-30-62.

751,344. AVCOT. Graniteville Company. SN 149,843. Pub. 4-2-63. Filed 7-26-62.

751,345. PLAIDTUNE. Woodfield Fabrics, Inc. SN 150,189. Pub. 4-2-63. Filed 7-30-62.

751,346. EXPANDRA. Erwin Mills, Inc. SN 150,356. Pub. 4-2-63. Filed 8-2-62.

751,347. FABROLEEN. R. & W. Watson Limited. SN 150,462. Pub. 4-2-63. Filed 8-3-62.

751,348. AQUA-SHED. The Springs Cotton Mills. SN 150,647. Pub. 4-2-63. Filed 8-6-62.

751,349. TUPPERCRAFT. Rexall Drug and Chemical Company, d.b.a. Tupperware. SN 151,260. Pub. 4-2-63. Filed 8-15-62.

751,350. RANDO-FAB. Curator Corporation. SN 151,665. Pub. 4-2-63. Filed 8-22-62.

Class 43 — Thread and Yarn

751,351. MAGI SEW. Madison Throwing Company, Inc. SN 151,144. Pub. 4-2-63. Filed 8-14-62.

751,352. PAVELLE. Courtaulds, Limited. SN 151,477. Pub. 4-2-63. Filed 8-20-62.

Class 44 — Dental, Medical, and Surgical Appliances

751,353. MED-EQUIP AND DESIGN. Med-Equip Company. SN 128,575. Pub. 4-2-63. Filed 9-25-61.

751,354. 165. C. R. Bard, Inc. SN 135,483. Pub. 4-2-63. Filed 1-10-62.

751,355. 166. C. R. Bard, Inc. SN 136,426. Pub. 4-2-63. Filed 1-24-62.

751,356. STEP. Societe Technique de Pulverisation S.A. SN 139,348. Pub. 4-2-63. Filed 3-7-62.

751,357. SEP-CLIPS. Dental Corporation of America. SN 146,793. Pub. 4-2-63. Filed 6-18-62.

751,358. MIRA. The Mira Corporation. SN 147,608. Pub. 4-2-63. Filed 6-25-62.

751,359. HOT SOX. Maurice W. Duensing, d.b.a. Duensing Industries. SN 148,299. Pub. 4-2-63. Filed 7-3-62.

751,360. COLOBEL. Florence T. McClosky. SN 149,308. Pub. 4-2-63. Filed 7-16-62.

751,361. J. W. & S. J. Wiss & Sons Co. SN 149,796. Pub. 4-2-63. Filed 7-25-62.

751,362. DESIGN OF A PINWHEEL. Johnson & Johnson, assignee of Personal Products Corporation. SN 149,959. Pub. 4-2-63. Filed 7-27-62.

751,363. VMK VITA-METALL-KERAMIK. Vita-Zahnfabrik H. Rauter KG. SN 150,985. Pub. 4-2-63. Filed 8-10-62.

751,364. NORELCO. North American Philips Company, Inc. SN 154,502. Pub. 4-2-63. Filed 10-4-62.

751,365. NEW LIFE. North American Philips Company, Inc. SN 154,503. Pub. 4-2-63. Filed 10-4-62.

Class 45 — Soft Drinks and Carbonated Waters

751,366. DILLY. The It's-A-Dilly Co. SN 114,773. Pub. 4-2-63. Filed 3-2-61.

751,367. TAVERN AND DESIGN. Tavern Industries, by change of name from Garwick and Schneirow. SN 137,063. Pub. 4-2-63. Filed 2-1-62.

Class 46 — Foods and Ingredients of Foods

751,368. TOFFENETTI. Toffenetti Restaurant Company, Inc. SN 83,157. Pub. 4-2-63. Filed 9-29-59.

751,369. FVP FAMOUS CAN MARK AND DESIGN. Fair View Packing Company, Inc. SN 107,848. Pub. 4-2-63. Filed 11-4-60.

751,370. FISCO AND DESIGN. Frozen Institutional Sales Co-Op, Inc., d.b.a. Frozen Institutional Sales Company. SN 108,168. Pub. 4-10-62. Filed 11-10-60.

751,371. BAND DESIGN. Pet Milk Company. SN 110,081. Pub. 4-2-63. Filed 12-12-60.

751,372. PARKER'S AND DESIGN. Parker Products, Inc. SN 113,297. Pub. 4-2-63. Filed 2-8-61.

751,373. DANISH KNIGHT. Stanley Wallach, d.b.a. Stanley Wallach & Sons. SN 114,894. Pub. 4-2-63. Filed 3-3-61.

751,374. REPRESENTATION OF A CHEF. Colonial Provision Co., Inc. SN 116,978. Pub. 4-2-63. Filed 4-3-61.

751,375. SNACK PAK. Kellogg Company. SN 117,023. Pub. 4-2-63. Filed 4-3-61.

751,376. AGD-CREAM. Loomis, Ltd. SN 118,457. Pub. 4-2-63. Filed 4-24-61.

751,377. ADG-CREAM. Loomis, Ltd. SN 118,458. Pub. 4-2-63. Filed 4-24-61.

751,378. HYGRADE AND DESIGN. Hygrade Food Products Corporation. SN 119,129. Pub. 4-2-63. Filed 5-2-61.

751,379. IT'S LOVE AT FIRST BITE! The Illinois Canning Co. SN 123,014. Pub. 4-2-63. Filed 6-28-61.

751,380. GOLLOTT'S. Helen G. Gollott, d.b.a. L. D. Gollott Seafood Company. SN 126,756. Pub. 4-2-63. Filed 8-28-61.

751,381. DESIGN OF A RIGHT HAND GLOVE WITHIN A CIRCLE. Black & Gay Canners, Inc. SN 130,752. Pub. 4-2-63. Filed 10-27-61.

751,382. ALFA-CON. J. W. Easland & Sons, Incorporated. SN 131,820. Pub. 4-2-63. Filed 11-13-61.

751,383. CARVEL AND DESIGN. Thomas Carvel. SN 134,610. Pub. 4-2-63. Filed 12-26-61.

751,384. CANDY-RAMA AND DESIGN. Isodore Gerber, d.b.a. Candy-Rama. SN 134,734. Pub. 4-2-63. Filed 12-27-61.

751,385. COUNTRY GIRL. Sabrett Food Products Corp. SN 135,718. Pub. 4-2-63. Filed 1-12-62.

751,386. VIKING. The Paniplus Company. SN 136,389. Pub. 4-2-63. Filed 1-23-62.

751,387. GOOD LUCK. Lever Brothers Company. SN 136,469. Pub. 4-2-63. Filed 1-24-62.

751,388. ROSE NADIN. Old Betty Plant's Limited, d.b.a. Rose Nadin. SN 136,464. Pub. 4-2-63. Filed 1-24-62.

751,389. PRINCESA. Red Owl Stores, Inc. SN 136,817. Pub. 4-2-63. Filed 1-29-62.

751,390. LADY ELLEN. Cahokia Flour Company. SN 137,203. Pub. 4-2-63. Filed 2-5-62.

751,391. FLAVOR-HOUSE. Chicago Almond Products Co. SN 137,321. Pub. 4-2-63. Filed 2-6-62.

751,392. FH FLAVOR-HOUSE AND DESIGN. Chicago Almond Products Co. SN 137,322. Pub. 4-2-63. Filed 2-6-62.

751,393. SCC. Sebastopol Cooperative Cannery. SN 137,378. Pub. 4-2-63. Filed 2-6-62.

751,394. RY-SO. Lou Freeman Co. SN 138,853. Pub. 4-2-63. Filed 3-1-62.

751,395. REITZ AND DESIGN. Reitz Meat Products Company. SN 140,758. Pub. 4-2-63. Filed 3-26-62.

751,396. K AND DESIGN. Svenska Knäcke Aktiebolaget. SN 140,881. Pub. 4-2-63. Filed 3-27-62.

751,397. THREE LITTLE BAKERS. Three Little Bakers, Inc. SN 141,227. Pub. 4-2-63. Filed 3-30-62.

751,398. MOTHER AND CHILD MEDALLION DESIGN. Mead Johnson & Company. SN 141,587. Pub. 4-2-63. Filed 4-4-62.

751,399. GOLD-N-RICH. Missouri Farmers Association, Inc. SN 141,870. Pub. 4-2-63. Filed 4-9-62.

751,400. BAKONY. Bakon Yeast, Inc. SN 141,930. Pub. 4-2-63. Filed 4-10-62.

751,401. ELEANOR DAY'S. National Bakers Services, Inc. SN 142,124. Pub. 4-2-63. Filed 4-12-62.

751,402. PIONEERWAY. Hales & Hunter Co. SN 142,188. Pub. 4-2-63. Filed 4-13-62.

751,403. RED COMBWAY. Hales & Hunter Co. SN 142,189. Pub. 4-2-63. Filed 4-13-62.

751,404. UTZ AND DESIGN. Utz Potato Chip Company, Inc. SN 142,470. Pub. 4-2-63. Filed 4-17-62.

751,405. BERNEESE. August C. Kirchhoff & Co., d.b.a. A. C. Kirchhoff & Co. SN 142,642. Pub. 4-2-63. Filed 4-19-62.

Class 47 — Wines

751,406. JOUVET. Francois Michel Marie Joseph Antoine, Vicomte de Roquefeuil, d.b.a. T. Jouvet & Cie. SN 138,745. Pub. 4–2–63. Filed 2–27–62.

Class 49 — Distilled Alcoholic Liquors

751,407. GOLDEN DEVIL. Joseph E. Seagram & Sons, Inc. SN 126,686. Pub. 4–2–63. Filed 8–25–61.

751,408. UNICUM AND DESIGN. J. Zwack & Company. SN 136,415. Pub. 4–2–63. Filed 1–23–62.

751,409. BUSBY. Schenley Distillers, Inc. SN 139,535. Pub. 4–2–63. Filed 3–9–62.

751,410. SIR HARRY. Schenley Distillers, Inc. SN 140,389. Pub. 4–2–63. Filed 3–21–62.

751,411. OLD VIC. L. J. McGuinness and Co. Limited. SN 141,460. Pub. 4–2–63. Filed 4–3–62.

751,412. R & R. Hiram Walker & Sons, Inc. SN 142,233. Pub. 4–2–63. Filed 4–13–62.

Class 50 — Merchandise Not Otherwise Classified

751,413. BANK-A-PLATE. "Bank-A-Plate," Associates. SN 132,800. Pub. 4–2–63. Filed 11–27–61.

751,414. PANO. Pano-Werk Inh. Paul Nofer. SN 134,401. Pub. 4–2–63. Filed 12–20–61.

751,415. MARIANNE. John F. Muller. SN 136,674. Pub. 4–2–63. Filed 1–26–62.

751,416. ROTO-POR. Liquidmatic Corporation of America. SN 137,765. Pub. 4–2–63. Filed 2–12–62.

751,417. LAWN SPATS. Davol Rubber Company. SN 142,284. Pub. 4–2–63. Filed 4–16–62.

Class 51 — Cosmetics and Toilet Preparations

751,418. MURRAY'S SUPERIOR HAIRDRESSING POMADE AND DESIGN. Murray's Superior Products Company, assignee of Murray's Superior Products Company, Inc. SN 101,420. Pub. 4–2–63. Filed 7–25–60.

751,419. T.K.O. Mar-Jac Products, Inc. SN 102,775. Pub. 3–12–63. Filed 8–16–60.

751,420. OZON CREME-RICH. Associated Brands, Inc. SN 125,641. Pub. 4–2–63. Filed 8–9–61.

751,421. ROSEMINT. Avon Products, Inc. SN 130,872. Pub. 4–2–63. Filed 10–30–61.

751,422. L'INTERDIT. Hubert de Givenchy, Inc. SN 137,725. Pub. 4–2–63. Filed 2–12–62.

751,423. MONSIEUR DE GIVENCHY. Hubert de Givenchy, Inc. SN 137,726. Pub. 4–2–63. Filed 2–12–62.

751,424. SO DIFFERENT. The Fuller Brush Company. SN 138,490. Pub. 4–2–63. Filed 2–23–62.

Class 52 — Detergents and Soaps

751,425. VAN-KOR. Service Industries. SN 137,571. Pub. 4–2–63. Filed 2–8–62.

751,426. TRIO. The Theobald Industries. SN 141,388. Pub. 4–2–63. Filed 4–2–62.

751,427. TREO. The Theobald Industries. SN 141,902. Pub. 4–2–63. Filed 4–9–62.

Service Marks

Class 100 — Miscellaneous

751,428. TERRAN. Geotechnics and Resources, Inc. SN 125,299. Pub. 4–2–63. Filed 8–3–61.

751,429. METRO AND DESIGN. Douglas Van Der Linden, d.b.a. Metro Business Forms. SN 141,393. Pub. 4–2–63. Filed 4–2–62.

Class 101 — Advertising and Business

751,430. STYLE CREST. Style Crest Trade Association. SN 87,921. COLLECTIVE MARK. Pub. 4–2–63. Filed 12–23–59.

751,431. DINAH'S. Dinah's, Inc. SN 95,150. Pub. 4–2–63. Filed 4–15–60.

751,432. PHONE-A-THON. Robert S. Minor. SN 109,885. Pub. 4–2–63. Filed 12–8–60.

751,433. AETCO. Aircraft Equipment Testing Company, Inc. SN 137,308. Pub. 4–2–63. Filed 2–6–62.

751,434. ISBRANDTSEN MOBILE TRADE FAIR. Isbrandtsen Company, Inc. SN 138,023. Pub. 4–2–63. Filed 2–15–62.

Class 102 — Insurance and Financial

751,435. SILVER DART PLAN. Conway Credit Corp. SN 128,523. Pub. 4–2–63. Filed 9–25–61.

751,436. "CLINE SOLD MINE." Robert A. Cline, Residential, Inc. SN 129,741. Pub. 4–2–63. Filed 10–12–61.

751,437. INVESTSURANCE. Simon W. Heimlich, Inc. SN 133,874. Pub. 4–2–63. Filed 12–12–61.

751,438. WP. Western Pacific Insurance Company. SN 136,859. Pub. 4–2–63. Filed 1–29–62.

751,439. CARICATURE OF BENJAMIN FRANKLIN. Franklin National Life Insurance Company. SN 139,071. Pub. 4–2–63. Filed 3–5–62.

751,440. A AND DESIGN. American Sentinel Insurance Company. SN 142,591. Pub. 4–2–63. Filed 4–19–62.

Class 103 — Construction and Repair

751,441. DIAL HAVEN. Dial Haven, Inc. SN 114,453. Pub. 4–2–63. Filed 2–27–61.

751,442. PRESTO-CLEAN. Presto-Valet, Inc. SN 116,662. Pub. 4–2–63. Filed 3–28–61.

751,443. S.O.S. ONE HOUR CLEANERS ETC. AND DESIGN. S.O.S. One Hour Cleaners, Inc. SN 140,183. Pub. 4–2–63. Filed 8–19–62.

Class 107 — Education and Entertainment

751,444. CHILD SAFETY COUNCIL AND DESIGN. Child Safety Council. SN 106,690. Pub. 4–2–63. Filed 10–19–60.

751,445. NANCY ALLAN'S. McClatchy Newspapers. SN 111,521. Pub. 4–2–63. Filed 1–9–61.

751,446. WEATHERBIRD. The Pulitzer Publishing Company. SN 116,258. Pub. 4–2–63. Filed 3–22–61.

751,447. LOS CHURUMBELES DE ESPANA. Jose Fernandez. SN 132,320. Pub. 4–2–63. Filed 11–20–61.

751,448. SA AND DESIGN. Sports Arenas, Inc. SN 142,226. Pub. 4–2–63. Filed 4–13–62.

Collective Membership Marks

Class 200

751,449. GUILD OPTICIANS AND DESIGN. Guild of Prescription Opticians of America, Inc. SN 118,069. Pub. 4–2–63. Filed 4–18–61.

751,450. ATA ETC. AND DESIGN. Amateur Trapshooting Association of America. SN 123,255. Pub. 4–2–63. Filed 7–3–61.

751,451. ACSW. Academy of Certified Social Workers, Inc. SN 127,537. Pub. 4–2–63. Filed 9–11–61.

751,452. GREEK LETTERS GAMMA PHI BETA. Gamma Phi Beta Sorority, Inc. SN 141,608. Pub. 4–2–63. Filed 4–5–62.

Certification Marks

Class A — Goods

751,453. U.S. MONUMENT GUILD AND DESIGN. United States Monument Guild, Inc. SN 112,180. Pub. 4–2–63. Filed 1–19–61.

751,454. LIVING LIGHT ETC. AND DESIGN. Cahners Publishing Company, Inc., d.b.a. Practical Builder. SN 139,991. Pub. 4–2–63. Filed 3–16–62.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 2 — Receptacles

751,455. Manhattan Wire Goods Co., Inc., Long Island City, N.Y. SN 125,612. Filed P.R. 8–8–61; Am. S.R. 4–12–63.

SHOPKART

For Wire Baskets and Wire Seats.
First use July 17, 1961.

Class 4 — Abrasives and Polishing Materials

751,456. Lab Automated Chemicals Corp., Baltimore, Md. SN 156,623. Filed P.R. 11–5–62; Am. S.R. 4–15–63.

BUFF-AID

For Floor Cleaning and Polishing Compound in Liquid Form.
First use Jan. 25, 1962.

Class 21 — Electrical Apparatus, Machines, and Supplies

751,457. Applied Power Industries, Inc., West Allis, Wis. SN 138,146. Filed P.R. 2–19–62; Am. S.R. 4–8–63.

SHOP-LITE

For Fluorescent Trouble Lights for Mechanics.
First use on or about July 31, 1961.

Class 22 — Games, Toys, and Sporting Goods

751,458. The Columbus Auto Parts Company, Columbus, Ohio. SN 118,664. Filed P.R. 4–26–61; Am. S.R. 4–15–63.

C· B· L O

For Underwater Viewing Devices for Use by Fishermen and/or Sportsmen.
First use Dec. 16, 1960.

751,459. Clearsite Headwear, Inc., New York, N.Y. SN 125,890. Filed P.R. 8–14–61; Am. S.R. 4–18–63.

SCORE METER

For Golf Stroke Scoring Device for Attachment to a Hat, Cap Brim or Visor.
First use Jan. 26, 1961.

751,460. Neal House Incorporated, East Hampton, Conn. SN 134,554. Filed P.R. 12–22–61; Am. S.R. 4–9–63.

ADJUST

For Golf Clubs.
First use on or about Sept. 22, 1961.

751,461. Milton Bradley Company, Springfield, Mass. SN 135,755. Filed 1–15–62.

MONACO

For Equipment Sold as a Unit for Playing a Board Game, Card Game, or Other Type.
First use Oct. 28, 1940.

751,462. Uneeda Doll Co., Inc., Brooklyn, N.Y. SN 141,475. Filed P.R. 4–3–62; Am. S.R. 4–15–63.

DOLLY TOTE

For Carrying Container for Dolls.
First use Dec. 14, 1961.

Class 23 — Cutlery, Machinery, and Tools, and Parts Thereof

751,463. Morse Sewing Machine and Supply Corp., New York, N.Y. SN 143,041. Filed P.R. 4–25–62; Am. S.R. 4–23–63.

PHILLIPS

For Sewing Machines and Parts Thereof.
First use Apr. 18, 1962.

751,464. Fire Control Products, Inc., Linden, N.J. SN 148,268. Filed P.R. 7-2-62; Am. S.R. 4-18-63.

FIRE CONTROL

For Fire Extinguishers.
First use Aug. 30, 1961.

Class 24 — Laundry Appliances and Machines

751,465. Bishop Freeman Co., Evanston, Ill. SN 99,195. Filed P.R. 6-17-60; Am. S.R. 4-25-63.

PUF'N'IRON

For Machines for Pressing and Finishing Garments by the Application of Steam and/or Heat and/or Pressure.
First use May 16, 1960.

Class 39 — Clothing

751,466. P. H. Hanes Knitting Company, Winston-Salem, N.C. SN 146,184. Filed P.R. 6-5-62; Am. S.R. 4-9-63.

RIB-EYELET

For Knitted Undergarments for Men, Women, and Children.
First use Oct. 31, 1961.

Class 42 — Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

751,467. P. H. Hanes Knitting Company, Winston-Salem, N.C. SN 146,185. Filed P.R. 6-5-62; Am. S.R. 4-9-63.

RIB-EYELET

For Knitted Fabrics of Cotton, or Synthetic Yarns, or Mixtures Thereof.
First use Oct. 31, 1961.

Class 46 — Foods and Ingredients of Foods

751,468. Dunlap Freezer Company, Humboldt, Tenn. SN 129,580. Filed P.R. 10-10-61; Am. S.R. 12-7-62.

DUNLAP

For Frozen Vegetables and Frozen Berries.
First use May 1, 1961.

751,469. Delson Candy Co., Inc., New York, N.Y. SN 135,119. Filed P.R. 1-8-62; Am. S.R. 3-15-63.

Swiss Mints

For Candies—Namely, Chocolate Mints.
First use Jan. 17, 1952.

Class 51 — Cosmetics and Toilet Preparations

751,470. Hazel Bishop, Inc., New York, N.Y. SN 142,495. Filed P.R. 4-18-62; Am. S.R. 4-4-63.

FRESH 'N BRIGHT

For Cheek Color.
First use Mar. 15, 1962.

Service Mark

Class 100 — Miscellaneous

751,471. Waste Control of Florida, Inc., Jacksonville, Fla. SN 145,908. Filed P.R. 5-31-62; Am. S.R. 4-15-63.

SATISFACTION GUARANTEED . . OR DOUBLE YOUR GARBAGE BACK!

For Garbage and Trash Pick-Up and Disposal Services.
First use on or about Apr. 16, 1961.

TRADEMARK REGISTRATIONS RENEWED

23,509. SPOT CORD. Cl. 7. 8-15-1893.
23,616. EUREKA. Cl. 35. 9-19-1893.
23,617. PARAGON. Cl. 35. 9-19-1893.
163,909. VIKING. Cl. 23. 2-6-23.
163,966. SANITO. Cl. 39. 2-6-23.
164,278. ELINSTAR AND DESIGN. Cl. 44. 2-20-23.
164,347. DUSTITE. Cl. 44. 2-20-23.
164,476. CARON. Cl. 51. 2-20-23.
166,368. KEWANEE. Cl. 34. 4-3-23.
168,708. CRACK FINISH DESIGN. Cl. 37. 5-29-43.
168,756. STANOLIND. Cl. 15. 6-29-23.
169,330. ACCELLO. Cl. 12. 6-12-23.
170,547. NUTTING. Cl. 19. 7-17-23.
171,082. NOFIL. Cl. 4. 7-31-23.
171,328. SHERBICLE. Cl. 46. 8-7-23.
172,520. NUIT DE NOEL. Cl. 51. 9-4-23.
172,532. LE TABAC BLOND. Cl. 51. 9-4-23.
172,538. NAIMEZ QUE MOI. Cl. 51. 9-4-23.
172,539. INFINI. Cl. 51. 9-4-23.
172,673. DEW MAID. Cl. 46. 9-11-23.
173,931. SANTAVALLEY. Cl. 46. 10-2-23.
399,400. CHECKMATE. Cl. 51. 1-5-43.
399,704. HAWKSKIN. Cl. 42. 1-26-43.
399,734. CELANNA. Cl. 42. 1-26-43.
399,801. RED BAG. Cl. 46. 2-2-43.
399,941. GOLDEN GLOW. Cl. 46. 2-9-43.
399,989. MARGUERITE. Cl. 42. 2-9-43.
401,021. DUOTONE. Cl. 36. 4-20-43.
401,058. TREMFLAT. Cl. 16. 4-20-43.
401,066. HOT-STUF. Cl. 39. 4-20-43.
401,067. IRON MIKE. Cl. 39. 4-20-43.
401,069. LOAD LIFTER. Cl. 39. 4-20-43.
401,071. WOODSMAN. Cl. 39. 4-20-43.
401,162. STEWART. Cl. 23. 4-27-43.
401,167. X-ACTO. Cl. 23. 4-27-43.
401,185. D-Q. Cl. 46. 4-27-43.
401,235. METAL MINUTES. Cl. 38. 5-4-43.
401,252. PACT. Cl. 21. 5-4-43.
401,323. MILE KING. Cl. 35. 5-11-43.
401,595. DESERT BLOOM AND DESIGN. Cl. 46. 5-25-43.
401,795. AUNTY FLO. Cl. 18. 6-8-43.
402,329. EVERPOINT. Cl. 36. 7-13-43.
402,353. TRUCO. Cl. 23. 7-13-43.
402,483. CINE EXTENAR. Cl. 26. 7-27-43.
402,506. ZINAR. Cl. 1. 7-27-43.
402,525. NUROZ. Cl. 1. 7-27-43.
402,745. AMBASSADOR. Cl. 50. 8-10-43.
402,746. ARISTOCRAT. Cl. 50. 8-10-43.
402,747. MONARCH. Cl. 50. 8-10-43.
402,748. PREMIER. Cl. 50. 8-10-43.

402,777. MOORMAN'S. Cl. 50. 8-10-43.
402,819. DR AND DESIGN. Cl. 42. 8-17-43.
402,941. VARENE. Cl. 16. 8-24-43.
403,047. CRADLE GYM. Cl. 22. 8-31-43.
403,055. HYDROMITE. Cl. 15. 8-31-43.
403,070. RHINO-PRENE. Cl. 35. 8-31-43.
403,130. DURAGLAZE. Cl. 12. 9-7-43.
403,148. TWO TIMER. Cl. 39. 9-7-43.
403,383. KEMI KOTE. Cl. 12. 9-21-43.
403,597. STEAM-O-MATIC. Cl. 21. 10-5-43.

TRADEMARK REGISTRATIONS CANCELED

Section 8

341,693. MILLION $ HEN. Cl. 50. 12-22-36.
346,270. TABLAST. Cl. 23. 5-18-37.
440,819. DESIGN OF BIRD AND CIRCLE. Cl. 46. 9-28-48.

The following registrations issued Apr. 30, 1957

644,576. "BELL BRAND" AND DESIGN. Cl. 1.
644,600. PLYFLOOR. Cl. 12.
644,604. WAFERWOOD. Cl. 12.
644,609. SHADO-KOOL. Cl. 12.
644,614. BONDSTONE. Cl. 12.
644,615. MASTICO. Cl. 12.
644,618. ALL-SEAL. Cl. 12.
644,621. PROXIMITY BONDED. Cl. 13.
644,622. KNOKRODE. Cl. 13.
644,623. STAINLESSTELIUM. Cl. 13.
644,626. PROCESA ETC. AND DESIGN. Cl. 13.
644,630. ALLIED. Cl. 13.
644,636. BRASCO AND DESIGN. Cl. 16.
644,637. CATA-MIX. Cl. 16.
644,639. BICO-FLEX. Cl. 16.
644,644. ZESTIN. Cl. 18.
644,645. MERRILL SINCE 1828 AND DESIGN. Cl. 18.
644,646. PROSCOMIDE. Cl. 18.
644,651. PAYNOCIL. Cl. 18.
644,654. NCB. Cl. 18.
644,658. MOTIVAN. Cl. 18.
644,662. COBRETTE. Cl. 19.
644,664. RAIZERS. Cl. 19.
644,665. FLIP-REST AND DESIGN. Cl. 19.
644,669. ZOBEL'S SEA FOX AND DESIGN. Cl. 19.
644,671. POLY-RED. Cl. 21.
644,675. I-K-L. Cl. 21.
644,676. TEL-O-MATIC. Cl. 21.
644,677. TRYLON. Cl. 21.
644,680. DUODYNE. Cl. 21.
644,683. JAMES-UNIVERSAL. Cl. 21.
644,687. DOUBLE-PLAY. Cl. 21.
644,691. MOHAWK. Cl. 22.
644,692. BLACK KNIGHT. Cl. 22.
644,693. HEXIE THE VOODOO. Cl. 22.
644,696. KIRSTEN. Cl. 23.
644,697. ROTOR-SPADE AND DESIGN. Cl. 23.
644,698. GLIDE-EASY. Cl. 23.
644,699. SPARTUS "70." Cl. 23.
644,703. HEMPH-LON. Cl. 23.
644,707. SKY SCREEN. Cl. 26.
644,712. T.W.C. AND DESIGN. Cl. 27.
644,720. SERVEEZ LAWN BOY. Cl. 32.
644,725. KOFFEE KANE. Cl. 32.
644,726. WHITE AND DESIGN. Cl. 34.
644,727. YANKEE CLIPPER. Cl. 34.
644,731. KITCH-O-MATIC. Cl. 32.
644,730. BALL O FIRE AND DESIGN. Cl. 34.
644,741. ANCO VD AND DESIGN. Cl. 37.
644,750. DOWNGARD. Cl. 37.
644,753. ROUND THE TOWN AND DESIGN. Cl. 38.
644,754. IDEA ART AND DESIGN. Cl. 38.
644,758. WRITE WAY AND DESIGN. Cl. 38.
644,761. DONEL. Cl. 39.
644,762. SCOTTIES AND DESIGN. Cl. 39.
644,765. SUPREME. Cl. 39.
644,769. JOHNNY TREMAINE. Cl. 39.
644,771. JOHNNY TREMAIN. Cl. 39.
644,775. WARM-UPS. Cl. 39.
644,778. ERIK. Cl. 39.
644,783. LOW TRIM. Cl. 39.
644,796. SEA SANDALS AND DESIGN. Cl. 39.
644,800. CORAL ISLE. Cl. 39.
644,802. A JOHN ARNOLD CLARK BOOT—THE J.A.C. BRAND. Cl. 39.
644,807. CONTESSA. Cl. 42.
644,812. MINIRON. Cl. 42.
644,815. HY BROW. Cl. 42.
644,816. BELFIOCCO. Cl. 42.
644,819. PROVINCETOWN. Cl. 42.
644,828. BARKER. Cl. 46.
644,831. STAR OF IVANHOE. Cl. 46.
644,835. DESIGN OF RED SHIELD ON GREEN BACKGROUND. Cl. 46.
644,845. HOLSUM I.C.T. Cl. 46.
644,846. GOLD KIST. Cl. 46.
644,852. "TRIM-QUIK." Cl. 50.
644,858. GARDEN GLOVE. Cl. 51.
644,869. KLEEN-O-. Cl. 52.
644,870. FOAM OFF. Cl. 52.
644,871. SANTA CELESTA. Cl. 52.
644,884. QUIK-CURL. Cl. 7.
644,885. ELEGANT. Cl. 8.
644,887. SOIL SAVER ETC. AND DESIGN. Cl. 10.
644,888. PORPOSOILE. Cl. 15.
644,893. ARJON. Cl. 22.
644,901. GEM-ON-GEM. Cl. 28.
644,903. 88 KING-SIZE. Cl. 32.
644,908. WINN'S. Cl. 38.
644,910. PERISCOPING THE U.S. Cl. 38.
644,912. MAINTENANCE AND SANITARY SUPPLIES. Cl. 38.
644,913. TACKLE INDUSTRY. Cl. 38.
644,916. PLASTICS EXPOSITION NEWS. Cl. 38.
644,917. FOOD BUSINESS. Cl. 38.
644,919. KOOK GLOVES. Cl. 39.
644,920. BUTTON-IT BY BEMENT AND DESIGN. Cl. 39.
644,923. HEIGHT O'FASHION. Cl. 39.
644,926. TWO HUB. Cl. 39.
644,927. TOWN-N TRAVEL ETC. Cl. 39.
644,928. DETRANO ORIGINAL. Cl. 39.
644,932. LEATHERWOVEN. Cl. 39.
644,933. RITE HITE. Cl. 39.
644,942. TRU-CUSTOM. Cl. 42.
644,944. THE FEELING IS GREAT. Cl. 43.
644,945. CYNAR. Cl. 45.
644,946. DESIGN OF RED AND WHITE CIRCLE. Cl. 46.
644,947. DESIGN OF RED AND WHITE RECTANGULAR FIGURE. Cl. 46.
644,953. U-FIL-IT-BASE. Cl. 50.
644,954. THE HOUSE OF CASHMERE. Cl. 50.

TRADEMARK REGISTRATIONS AMENDED, DISCLAIMED, CORRECTED, ETC.

162,800. VITAX. Cl. 26. 12–26–22. Kimble Glass Company. Owens-Illinois Glass Company, Toledo, Ohio. Amended to appear:

VITAX

166,677. OILEX. Cl. 15. 4–10–23. Standard Oil Company. Humble Oil & Refining Company, Houston, Tex. Amended to appear:

OILEX

309,611. WINCHESTER. Cl. 37. 1–23–34. Byron Weston Company, Dalton, Mass. Amended to appear:

WINCHESTER

312,822. BLACKSTONE. Cl. 37. 5–8–34. Byron Weston Company, Dalton, Mass. Amended to appear:

BLACKSTONE

622,872. PRIME STANDARD AND DESIGN. Cl. 7. 3–13–56. N.V. Vereenigde Touwfabrieken, Rotterdam, Netherlands. Amended to appear:



653,265. PRAIRIE PRIDE AND DESIGN. Cl. 7. 10–22–57. N.V. Vereenigde Touwfabrieken, Rotterdam, Netherlands. Amended to appear:



729,151. IDENTO-PRESS. Cl. 23. 3–27–62. Idento Label Company, Charlotte, N.C. Corrected: In the statement, column 1, line 1, ", Inc." should be deleted.

731,141. I AND DESIGN. Cl. 23. 5–8–62. Idento Label Company, Charlotte, N.C. Corrected: In the statement, column 1, line 1, ", Inc." should be deleted.

731,343. AUTORAMA. Cl. 4. 5–15–62. Auto-Rama Chemical Co., Inc., Decatur, Ill. Corrected: In the statement, column 1, line 3, "Ohio" should be deleted and *Illinois* should be inserted.

739,456. ORE-IDA. Cl. 46. 10–16–62. Ore-Ida Potato Products, Inc. Ore-Ida Foods, Inc., Ontario, Oreg. Amended: In the statement, column 1, before line 1, *Ore-Ida Foods, Inc., by merger and change of name from* is inserted.

747,289. BIG SYSTEM. Cl. 34. 3–26–63. Hussmann Refrigerator Co., assignee of Big System Corporation, St. Louis, Mo. Corrected: In the statement, column 2, after line 5, *No right is asserted in the words "Big System" as used to properly describe the size of heat pumps.* should be inserted.

747,509. PILLO. Cl. 18. 4–2–63. Philip Mann Jackson, Toronto, Ontario, Canada. Corrected: In the statement, column 1, line 2, after "%" *Dillons* should be inserted.

747,591. SETAR. Cl. 26. 4–2–63. The Yellow Springs Instrument Company, Inc., Yellow Springs, Ohio. Corrected: In the statement, column 2, line 3, after "signals" *and parts therefor* should be inserted.

747,744. FASHIONED BY SWISS KNIT. Cl. 39. 4–2–63. Swiss Knitting Company, Dover, N.J. Corrected: In the statement, column 2, line 1, "suits" should be deleted and *shirts* should be inserted.

747,896. MIMICS AND DESIGN. Cl. 39. 4–9–63. Duchess Footwear Corporation, Salem, Mass. Corrected: In the statement, column 1, line 1, "Dutchess" should be deleted and *Duchess* should be inserted.

748,015. EROPAL. Cl. 6. 4–16–63. Rohm & Haas, G.m.b.H., Darmstadt, Germany. Corrected: In the statement, column 2, line 3, "batts" should be deleted and *bates* should be inserted.

748,048. BROMOCHAR. Cl. 6. 4–16–63. Amos Turk, Danbury, Conn. Corrected: In the statement, column 2, line 1, before "treatment" *brominated activated charcoal, for* should be inserted.

748,177. MIDNIGHT. Cl. 51. 4–16–63. Lehn & Fink Products Corporation, doing business as Tussy Cosmetics, Bloomfield, N.J. Corrected: In the statement, column 1, line 3, "19" should be deleted and *193* should be inserted.

INDEX OF REGISTRANTS

JUNE 18, 1963

(Registered; Renewed; Canceled; Amended, Disclaimed, Corrected, etc.; New Certificates; 12c Publications.)

A & A Trading Corp., New York, N.Y. 751,167, pub. 4–2–63. Cl. 21.
AB Arjon, Malung, Sweden. 644,893, canc. Cl. 22.
A.P.M. Corp., Englewood, N.J. 751,181, pub. 4–2–63. Cl. 13.
Abdulla & Co. Ltd., London, England. 751,155, pub. 4–2–63. Cl. 17.
Abod, Florence A., Wilkes-Barre, Pa. 644,691, canc. Cl. 22.
Academy of Certified Social Workers, Inc., New York, N.Y. 751,451, pub. 4–2–63. Cl. 200.
Accuseo Corp., Seattle, Wash. 751,179–81, pub. 4–2–63. Cl. 21.
Action Diamond Tool Co., Chicago, Ill. 751,111, pub. 4–2–63. Cl. 4.
Aircraft Equipment Testing Co., Inc., Baltimore, Md. 751,438, pub. 4–2–63. Cl. 101.
Air-loc Industries, Inc., Madison, Wis. 751,229, pub. 4–2–63. Cl. 23.
Aktiebolaget Lidkopings Sagbladsfabrik, Lidkoping, to Sandvikens Jernverks Aktiebolag, Sandviken, Sweden. 163,909, ren. 6–18–63. Cl. 23.
Albany Novelty Mfg. Co., Boston, Mass. 644,741 canc. Cl. 37.
Alexander's Department Stores, Inc., New York, N.Y. 751,260, pub. 4–2–63. Cl. 23.
Al-Jay Undergarment Mfg. Co.: *See*—
Hazan, Albert.
Allied Chain Link Fence Co., Inc., Miami, Fla. 644,630, canc. Cl. 12.
Altman, Bernhard, International Corp., New York, N.Y. 644,954, canc. Cl. 50.
Aluminum Base Mfg. Co., Pittsburgh, Pa. 644,953, canc. Cl. 50.
Amateur Trapshooting Association of America, Vandalia, Ohio. 751,450, pub. 4–2–63. Cl. 200.
American Blumin Co., The, Cleveland, Ohio. 751,129, pub. 4–2–63. Cl. 12.
American Foundry Equipment Co., The, Mishawaka, Ind. 346,270, canc. Cl. 23.
American Home Products Corp., d.b.a. Ayerst Laboratories, Division of American Home Products Corp., New York, N.Y. 644,658, canc. Cl. 18.
American Lead Pencil Co., to Venus Pen & Pencil Corp., New York, N.Y. 163,706, ren. 6–18–63. Cl. 37.
American Radiator & Standard Sanitary Corp.: *See*—
Kewanee Boiler Co.
American Sentinel Insurance Co., Harrisburg, Pa. 751,440, pub. 4–2–63. Cl. 102.
American Thermoform Corp., Culver City, Calif. 751,215, pub. 4–2–63. Cl. 23.
Ametek, Inc., Sellersville, Pa. 751,242, pub. 4–2–63. Cl. 26.
Anderson Co., The, Gary, Ind. 644,942, canc. Cl. 19.
Angier Chemical Co., Inc., Boston, Mass. 644,871, canc. Cl. 52.
Anthon, Frederick B., Los Angeles, Calif. 751,114, pub. 4–2–63. Cl. 4.
Anti-Hydro Waterproofing Co., Newark, N.J. 169,330, ren. 6–18–63. Cl. 12.
Applied Power Industries, Inc., West Allis, Wis. 751,457. Cl. 21.
Armour Alliance Industries: *See*—
Armour and Co.
Armour and Co., d.b.a. Armour Alliance Industries, Chicago, Ill. 751,110, pub. 4–2–63. Cl. 4.
Associated Brands, Inc., Brooklyn, N.Y. 751,420, pub. 4–2–63. Cl. 51.
Autogas Co., Bellwood, Ill. 751,287, pub. 1–15–63. Cl. 34.
Automatic Battery Co. of America: *See*—
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Auto-Rama Chemical Co., Inc., Decatur, Ill. 731,343, cor. Cl. 4.
Avon Products, Inc., New York, N.Y. 751,421, pub. 4–2–63. Cl. 51.
Ayers, Sara A., d.b.a. Originiques, New York, N.Y. 644,693, canc. Cl. 22.
Ayerst Laboratories: *See*—
American Home Products Corp.
B & C Mfg. Co., New York, N.Y. 751,274, pub. 4–2–63. Cl. 28.
B-F Industries, Inc., Hurst, Tex. 751,147, pub. 4–2–63. Cl. 13.
B & H Jewelry Co., Inc., New York, N.Y. 751,253, pub. 4–2–63. Cl. 28.
B.V.D. Co., Inc., The, Cincinnati, Ohio. 751,334, pub. 4–2–63. Cl. 39.
Bakon Yeast, Inc., New York, N.Y. 751,400, pub. 4–2–63. Cl. 46.
"Bank-A-Plate," Associates, Millstadt, Ill. 751,413, pub. 4–2–63. Cl. 50.
Bard, C. R., Inc., Murray Hill, N.J. 751,354–5, pub. 4–2–63. Cl. 44.
Barth & Dreyfuss, Inc., d.b.a. Barth & Dreyfuss and as Royal of California, Los Angeles, Calif. 751,342, pub. 4–2–63. Cl. 42.
Barron-Gray Packing Co., San Jose, Calif., to Dole Corp., Honolulu, Hawaii. 173,931, ren. 6–18–63. Cl. 46.
Barth & Dreyfuss: *See*—
Barth & Dreyfuss, Inc.
Barton, H. H., & Son Co. Inc., Philadelphia, Pa., to Norton Co., Troy, N.Y. 171,082, ren. 6–18–63. Cl. 4.
Baucum, Perry G., d.b.a. Frigid Equipment Co., Mobile, Ala. 751,188, pub. 4–2–63. Cl. 21.
Bayardi Brothers, Inc., New York, N.Y. 751,268, pub. 4–2–63. Cl. 28.
Belgian Dutch Diamond Co., New York, N.Y. 751,271, pub. 4–2–63. Cl. 28.
Bement Corp., The, New York, N.Y. 644,920, canc. Cl. 39.
Bencard, C. L., Ltd., London, England. 644,651, canc. Cl. 18.
Bendel, Henri, Inc., New York, N.Y. 399,400, ren. 6–18–63. Cl. 51.
Benstock Ring Mfg. Co. Inc., Buffalo, N.Y. 751,264, pub. 4–2–63. Cl. 28.
Berkley & Co., Inc., Spirit Lake, Iowa. 751,204, pub. 4–2–63. Cl. 22.
Bernard Industries, Inc., New York, N.Y. 751,328, pub. 4–2–63. Cl. 39.
Bernstein, Bernard, Textile Co., New York, N.Y. 644,812, canc. Cl. 42.
Bethlehem Steel Co., Bethlehem, Pa. 751,142, pub. 1–8–63. Cl. 13.
Bethlehem Steel Co., Bethlehem, Pa. 751,151, pub. 4–2–63. Cl. 14.
Bianchini, Ferier, Inc., New York, N.Y. 399,989, ren. 6–18–63. Cl. 42.
Big System Corp.: *See*—
Hussmann Refrigerator Co.
Bishop Freeman Co., Evanston, Ill. 751,465. Cl. 24.
Bishop, Hazel, Inc., New York, N.Y. 751,470. Cl. 51.
Black & Gay Canners, Inc., Thomaston, Maine. 751,381, pub. 4–2–63. Cl. 46.
Bloomingdale Bros.: *See*—
Federated Department Stores, Inc.
Bloomington Limestone Corp., The, Bloomington, Ind. 751,130, pub. 4–2–63. Cl. 12.
Bon Ton Findings: *See*—
Cohen, Carl.
Borden Co., The, New York, N.Y. 401,185, ren. 6–18–63. Cl. 46.
Boyden-Hansen, F. E., Co., Ltd., to George T. Hansen, Alameda, Calif. 401,595, ren. 6–18–63. Cl. 46.
Boynton, Philip F., Inc., Peabody, Mass. 751,099, pub. 4–2–63. Cl. 1.
Bradley, Milton, Co., Springfield, Mass. 751,461. Cl. 22.
Bridgeport Brass Co., Bridgeport, Conn. 644,636, canc. Cl. 16.
Brock, Earl, d.b.a. Brock Specialty Co., St. Louis, Mo. 751,209, pub. 4–2–63. Cl. 22.
Brock Specialty Co.: *See*—
Brock, Earl.
Bromberg & Co., Inc., Birmingham, Ala. 751,265, pub. 4–2–63. Cl. 28.
Brown Shoe Co., Inc., St. Louis, Mo. 644,783, canc. Cl. 39.
Brown & Williamson Tobacco Corp., Louisville, Ky. 751,158, pub. 4–2–63. Cl. 17.
Butler Enterprises, Inc., Winston-Salem, N.C. 644,903, canc. Cl. 32.
Cahners Publishing Co., Inc., d.b.a. Practical Builder, Boston, Mass. 751,454, pub. 4–2–63. Cl. A.
Cahokia Flour Co., St. Louis, Mo. 751,390, pub. 4–2–63. Cl. 46.
California Packing Corp., San Francisco, Calif. 644,835, canc. Cl. 46.
California Research Corp.: *See*—
Standard Oil Co. of California.
Cambridge Associates, Inc., Boston, Mass. 751,309, pub. 4–2–63. Cl. 38.
Camp and McInnes, Inc., Reading, Pa. 751,332, pub. 4–2–63. Cl. 39.
Camp and McInnes, Inc., Reading, Pa. 751,335, pub. 4–2–63. Cl. 39.
Candy-Rama: *See*—
Gerber, Isodore.
Caron Corp.: *See*—
Dalroff, Ernest.
Cary & Co., Inc., Binghamton, N.Y., to Sailant & Sailant, Inc., New York, N.Y. 163,966, ren. 6–18–63. Cl. 39.
Carvel, Thomas, Yonkers, N.Y. 751,383, pub. 4–2–63. Cl. 46.
Cavalier Cravat Co., Louisville, Ky. 644,765, canc. Cl. 39.
Celanese Corp. of America, New York, N.Y. 399,704, ren. 6–18–63. Cl. 42.
Celanese Corp. of America, New York, N.Y. 399,734, ren. 6–18–63. Cl. 42.
Central Wisconsin Canneries, Beaver Dam, Wis., to Green Giant Co., Le Sueur, Minn. 172,873, ren. 6–18–63. Cl. 46.
Certified Metals Co.: *See*—
Golber, Arnold D.
Character Creations: *See*—
Manthorne, Helen M.
Chatham Garment Co., Inc., New York, N.Y. 644,923, canc. Cl. 39.
Cheney Bigelow Wire Works: *See*—
Cheney Bigelow Wire Works, Inc.

Chesney Bigelow Wire Works, Inc., from Chesney Bigelow Wire Works, Springfield, Mass. 751,143, pub. 4–2–63. Cl. 13.
Chicago Almond Products Co., Chicago, Ill. 751,391–92, pub. 4–2–63. Cl. 46.
Chicago Flexible Shaft Co., to Sunbeam Corp., Chicago, Ill. 401,162, ren. 6–18–63. Cl. 23.
Chicago Flexible Shaft Co., to Sunbeam Corp., Chicago, Ill. 401,235, ren. 6–18–63. Cl. 38.
Child Safety Council, Jackson, Mich. 751,444, pub. 4–2–63. Cl. 107.
Childhood Interests, Inc., Roselle Park, N.J. 403,047, ren. 6–18–63. Cl. 22.
Choreo Interprises, Inc., Hollywood, Calif. 751,294, pub. 4–2–63. Cl. 36.
Cisin, Harry G., Amagansett, N.Y. 751,311, pub. 4–2–63. Cl. 38.
Clark, John A., Worcester, Mass. 644,802, canc. Cl. 39.
Clearasite Headwear, Inc., New York, N.Y. 751,459. Cl. 22.
Cline, Robert A., Residential, Inc., Cincinnati, Ohio. 751,436, pub. 4–2–63. Cl. 102.
Cluett, Peabody & Co., Inc., Troy, N.Y. 644,800, canc. Cl. 39.
Cohen, A., & Sons Corp., New York, N.Y. 751,261, pub. 4–2–63. Cl. 28.
Cohen, Carl, d.b.a. Bon Ton Findings, New York, N.Y. 751,269, pub. 4–2–63. Cl. 28.
Cohen, Joseph H., & Sons, Inc., New York, N.Y. 751,326, pub. 4–2–63. Cl. 39.
Colonial Provision Co., Inc., Boston, Mass. 751,374, pub. 4–2–63. Cl. 46.
Columbia Pictures Corp., New York, N.Y. 751,295, pub. 4–2–63. Cl. 36.
Columbus Auto Parts Co., The, Columbus, Ohio. 751,456. Cl. 22.
Companhia Sisal do Brasil-Coelbra, Rio de Janeiro, Brazil. 751,121–2, pub. 4–2–63. Cl. 7.
Consolidated Pipe Co. of America, Stow, Ohio. 751,145, pub. 4–2–63. Cl. 13.
Conti, John, and Ruth Conti, Waltham, Mass. 751,275, pub. 4–2–63. Cl. 29.
Conway Credit Corp., Chicago, Ill. 751,435, pub. 4–2–63. Cl. 102.
Corning Glass Works, Corning, N.Y. 751,284, pub. 4–2–63. Cl. 33.
Courtaulds, Ltd., London, England. 751,362, pub. 4–2–63. Cl. 43.
Coverdale & Bruebaker, Sioux City, Iowa, to Joe Lowe Corp., New York, N.Y. 171,328, ren. 6–18–63. Cl. 46.
Cribben and Sexton Co., Chicago, Ill. 644,683, canc. Cl. 21.
Cromwell Mills, New York, N.Y. 644,763, canc. Cl. 39.
Curlator Corp., East Rochester, N.Y. 751,350, pub. 4–2–63. Cl. 42.
Daltroff, E., & Cie, d.b.a. Parfumerie Caron, to Caron Corp., Paris, France to Caron Corp., New York, N.Y. 172,520, ren. 6–18–63. Cl. 51.
Daltroff, E., & Cie, d.b.a. Parfumerie Caron, to Caron Corp., Paris, France, to Caron Corp., New York, N.Y. 172,552, ren. 6–18–63. Cl. 51.
Daltroff, E., & Cie, d.b.a. Parfumerie Caron, to Caron Corp., Paris, France, to Caron Corp., New York, N.Y. 172,538–9, ren. 6–18–63. Cl. 51.
Daltroff, Ernest, to E. Daltroff & Cie, of Paris, France, Paris, France, to Caron Corp., New York, N.Y. 164,476, ren. 6–18–63. Cl. 51.
Dan River Mills Inc.: *See*—
Riverside & Dan River Cotton Mills, Inc.
Dandy, Jim, Safe Equipment Co.: *See*—
Ohanacht, Willard.
Davol Rubber Co., Providence, R.I. 751,417, pub. 4–2–63. Cl. 50.
Dayton Electric Mfg. Co., Chicago, Ill. 751,316, pub. 4–2–63. Cl. 23.
Deering Milliken, Inc., New York, N.Y. 751,341, pub. 4–2–63. Cl. 42.
De Givenchy, Hubert, Inc., New York, N.Y. 751,422–3, pub. 4–2–63. Cl. 51.
Dekalb Agricultural Association, Inc., Dekalb, Ill. 751,100, pub. 4–2–63. Cl. 1.
Delmonte Plastics Corp., Los Angeles, Calif. 751,117, pub. 4–2–63. Cl. 5.
Delson Candy Co., Inc., New York, N.Y. 751,469. Cl. 46.
Dental Corp. of America, Washington, D.C. 751,357, pub. 4–2–63. Cl. 44.
Denver Chemical Mfg. Co., The, d.b.a. Wampole Laboratories, Stamford, Conn. 401,795, ren. 6–18–63. Cl. 18.
Detroit Gravure Corp., Detroit, Mich. 751,213, pub. 4–2–63. Cl. 23.
Devoe & Raynolds Co., Inc., New York, N.Y. 644,639, canc. Cl. 16.
Deutsche Edelstahlwerke Aktiengesellschaft, Krefeld, Germany. 751,185, pub. 4–2–63. Cl. 21.
Dial Haven, Inc., Monroe, N.Y. 751,441, pub. 4–2–63. Cl. 103.
Diamond Expansion Bolt Co., Inc., Garwood, N.J. 751,138, pub. 4–2–63. Cl. 13.
Diamond Expansion Bolt Co., Inc., Garwood, N.J. 751,140, pub. 4–2–63. Cl. 18.
Dick, Lorene F., Dayton, Ohio. 644,919, canc. Cl. 39.
Dinah's, Inc., Los Angeles, Calif. 751,431, pub. 4–2–63. Cl. 101.
Doeskin Products, Inc., New York, N.Y. 751,299–300, pub. 4–2–63. Cl. 37.
Dole Corp.: *See*—
Barron-Gray Packing Co.
Dominion Foundries and Steel, Ltd., Hamilton, Ontario, Canada. 751,149–50, pub. 4–2–63. Cl. 14.
Donel Foundations, Inc., New York, N.Y. 644,761, canc. Cl. 39.
Don-Jon Inc., Readville, Mass. 751,208, pub. 4–2–63. Cl. 22.
Doolan, Thomas Howard, Inc., New York, N.Y. 644,576, canc. Cl. 1.
Dow Chemical Co., The, Midland, Mich. 751,115, pub. 4–2–63. Cl. 4.
Dow Chemical Co., The, Midland, Mich. 751,119, pub. 4–2–63. Cl. 6.
Dowdy, Harold P., Fort Myers, Fla. 644,883, canc. Cl. 15.
Downgard, Inc., Milwaukee, Wis. 644,750, canc. Cl. 37.
Duchess Footwear Corp., Salem, Mass. 747,896, cor. Cl. 39.
Duensing Industries: *See*—
Duensing, Maurice W.
Duensing, Maurice W., d.b.a. Duensing Industries, San Mateo, Calif. 751,359, pub. 4–2–63. Cl. 44.
Dunlap Freezer Co., Humboldt, Tenn. 751,468. Cl. 46.
Duotone Co. Inc.: *See*—
Everpoint Needle Co.
Duotone Co., Inc., Kayport, N.J. 401,021, ren. 6–18–63. Cl. 36.
Daltroff, E., & Cie: *See*—
Daltroff, Ernest.
Easland, J. W., & Sons, Inc., Woonsocket, S. Dak. 751,382, pub. 4–2–63. Cl. 46.
El-Ar Enterprises, Inc., New York, N.Y. 751,277, pub. 4–2–63. Cl. 32.
Electric Auto-Lite Co., The, Toledo, Ohio. 751,198, pub. 4–2–63. Cl. 21.
Electric Storage Battery Co., The: *See*—
Willson Goggles, Inc.
Electron-Machine Corp., The, Umatilla, Fla. 751,289, pub. 4–2–63. Cl. 26.
Emco Cement Products, Inc., Paxinos, Pa. 644,614, canc. Cl. 12.
Engelhard Industries, Inc., Newark, N.J. 751,195, pub. 4–2–63. Cl. 21.
Erik Sportswear Co.: *See*—
Hirsch, Pauline L.
Erwin Mills, Inc., Durham, N.C. 751,346, pub. 4–2–63. Cl. 42.
Estwing Mfg. Co., Inc., Rockford, Ill. 751,221, pub. 4–2–63. Cl. 23.
Etablissements Jean Gallet Fils & Cie, Chatillon sur Chalaronne, Ain, France. 751,173, pub. 4–2–63. Cl. 19.
Eureka Fire Hose Co., to United States Rubber Co., New York, N.Y. 23,616–17, ren. 6–18–63. Cl. 35.
Everpoint Needle Co., New York, N.Y., to Duotone Co. Inc., Kayport, N.J. 402,329, ren. 6–18–63. Cl. 36.
Excelsior Associates, Inc., New York, N.Y. 751,316, pub. 4–2–63. Cl. 39.
Exquisite Form Industries, Inc., New York, N.Y. 751,316, pub. 4–2–63. Cl. 39.
Fa. Uhrenfabrik "Timex" Jaisle & Co. K.G., Pforzheim, Germany. 644,712, canc. Cl. 27.
Fair View Packing Co., Inc., Hollister, Calif. 751,369, pub. 4–2–63. Cl. 46.
Fairchild Co.: *See*—
Fairchild, E. Payson.
Fairchild, E. Payson, d.b.a. Fairchild Co., Montclair, N.J. 644,730, canc. Cl. 32.
Faraday, Inc.: *See*—
Schwarze Electric Co.
Farbenfabriken Bayer Aktiengesellschaft, Leverkusen-Bayerwerk, Germany. 751,102, pub. 4–2–63. Cl. 1.
Fast-Fix, Inc.: *See*—
Global Construction Devices.
Feature Ring Co., Inc., New York, N.Y. 644,901, canc. Cl. 23.
Federated Department Stores, Inc., d.b.a. Bloomingdale Bros., New York, N.Y. 644,933, canc. Cl. 39.
Fernandez, Jose, Mexico City, Mex. 751,447, pub. 4–2–63. Cl. 107.
Filmdex Corp., Fairfax, Va. 751,243, pub. 4–2–63. Cl. 26.
Filmite Oil Corp., Butler, Wis. 403,055, ren. 6–18–63. Cl. 15.
Fire Control Products, Inc., Linden, N.J. 751,464. Cl. 22.
Fisherman Press, Inc., New York, N.Y. 644,913, canc. Cl. 38.
Flintkote Co., The, New York, N.Y. 644,809, canc. Cl. 12.
Florsheim Shoe Co.: *See*—
International Shoe Co.
Foil Process Corp., Van Nuys, Calif. 644,621–23, canc. Cl. 13.
Foremost Novelty Co.: *See*—
Nyer, Samuel.
Francois, Michel M. J. A., Vicomte de Roquefeuil, d.b.a. T. Jouvet & Cie, Bordeaux, France. 751,406, pub. 4–2–63. Cl. 47.
Frankel, Morris A.: *See*—
Spoer, Louis C.
Franklin National Life Insurance Co., Fort Wayne, Ind. 751,439, pub. 4–2–63. Cl. 102.
Freeman, George K., Jr., Administrator of estate of Pierce W. Strider, deceased, d.b.a. Automatic Battery Co. of America, Goldsboro, N.C. 751,191–192, pub. 4–2–63. Cl. 21.
Freeman, L., & Son, Inc., New York, N.Y. 751,254, pub. 4–2–63. Cl. 28.
Freeman, Lou, Co., Chicago, Ill. 751,394, pub. 4–2–63. Cl. 46.
Frigid Equipment Co.: *See*—
Baucum, Perry G.
Frozen Institutional Sales Co-op, Inc., d.b.a. Frozen Institutional Sales Co., San Francisco, Calif. 751,270, pub. 4–10–62. Cl. 46.
Fuller Brush Co., The, East Hartford, Conn. 751,424, pub. 4–2–63. Cl. 51.
Fuller, D. B., & Co., Inc., New York, N.Y. 644,819, canc. Cl. 42.
Funtime Playwear, Inc., New York, N.Y. 644,771, canc. Cl. 39.
Gamma Phi Beta Sorority, Inc., Chicago, Ill. 751,452, pub. 4–2–63. Cl. 200.
Garwick and Schneirow: *See*—
Tavern Industries.

Gaspare and Davis, Inc., Brooklyn, N.Y. 644,885, canc. Cl. 8.
General Dynamics Corp., Rochester, N.Y. 751,186, pub. 4–2–63. Cl. 21.
Georgette Juniors, Inc., New York, N.Y. 644,928, canc. Cl. 39.
Geotechnics and Resources, Inc., White Plains, N.Y. 751,428, pub. 4–2–63. Cl. 100.
Gerber, Isodore, d.b.a. Candy-Rama, Pittsburgh, Pa. 751,384, pub. 4–2–63. Cl. 46.
Gibson Refrigerator Co., Greenville, Mich., to Hupp Corp., Detroit, Mich. 644,676, canc. Cl. 21.
Global Construction Devices, from Fast-Fix, Inc., Fort Lee, N.J. 751,128, pub. 4–2–63. Cl. 12.
Global Plastics Inc., Beverly Hills, Calif. 751,276, pub. 4–2–63. Cl. 32.
Golber, Arnold D., d.b.a. Certified Metals Co., Newark, N.J. 751,246, pub. 4–2–63. Cl. 28.
Goldblatt Bros., Inc., Chicago, Ill. 644,828, canc. Cl. 46.
Golden Arrow Mfg. Ltd., from Golden Arrow Sprayers Ltd., Calgary, Alberta, Canada. 751,214, pub. 4–2–63. Cl. 23.
Golden Arrow Sprayers Ltd.: *See*—
Golden Arrow Mfg. Ltd.
Gollott, Helen G., Biloxi, Miss. 751,380, pub. 4–2–63. Cl. 46.
Goodrich, B. F., Co., The, Akron, Ohio. 401,823, ren. 6–18–63. Cl. 35.
Goodyear Tire & Rubber Co., The, Akron, Ohio. 402,745–48, ren. 6–18–63. Cl. 50.
Gould-National Batteries, Inc., St. Paul, Minn. 644,671, canc. Cl. 21.
Graniteville Co., Graniteville, S.C. 751,344, pub. 4–2–63. Cl. 42.
Grattan, D.M., Co., New York, N.Y. 644,816, canc. Cl. 42.
Grauer, Bill, Productions, Inc., New York, N.Y. 751,296, pub. 4–2–63. Cl. 36.
Great Lakes Growers Cooperative, North Girard, Pa. 440,819, canc. Cl. 46.
Green Giant Co.: *See*—
Central Wisconsin Canneries.
Guardian Electric Mfg. Co. of California, Inc., from Modern Industries, Inc., Culver City, Calif. 751,178, pub. 3–12–63. Cl. 21.
Guild of Prescription Opticians of America, New York, N.Y. 751,449, pub. 4–2–63. Cl. 200.
Gymer, Frederick E., Cleveland, Ohio. 644,758, canc. Cl. 38.
Haas, Kurt, New York, N.Y. 644,666, canc. Cl. 19.
Haggar Co., Dallas, Tex. 751,213, pub. 4–2–63. Cl. 39.
Hales & Hunter Co., Chicago, Ill. 751,402–3, pub. 4–2–63. Cl. 46.
Hamac-Hansella Aktiengesellschaft, from Hamac-Hansella Aktiengesellschaft Maschinenfabrik Viersen, Viersen, Rhineland, Germany. 751,225–6, pub. 4–2–63. Cl. 23.
Hamac-Hansella Aktiengesellschaft Maschinenfabrik Viersen: *See*—
Hamac-Hansella Aktiengesellschaft.
Hanes, P. H., Knitting Co., Winston-Salem, N.C. 751,314, pub. 4–2–63. Cl. 39.
Hanes, P. H., Knitting Co., Winston-Salem, N.C. 751,466. Cl. 39.
Hanes, P. H., Knitting Co., Winston-Salem, N.C. 751,467. Cl. 42.
Hansen, George T.: *See*—
Boyden-Hansen, F. E., Co., Ltd.
Harms, Herman L., South St. Paul, Minn. 644,696, canc. Cl. 23.
Harper-Wyman Co., Chicago, Ill. 751,237, pub. 4–2–63. Cl. 26.
Harteveldt, Henry H., Co., New York, N.Y. 751,256, pub. 4–2–63. Cl. 26.
Havana Music Record Co., Miami, Fla. 751,292, pub. 4–2–63. Cl. 36.
Hawkins, Luty, d.b.a. Hawkins Million Dollar Hen, Mount Vernon, Ill. 341,698, canc. Cl. 50.
Hawkins Million Dollar Hen: *See*—
Hawkins, Luty.
Haws Drinking Faucet Co., Berkeley, Calif. 751,189, pub. 4–2–63. Cl. 13.
Hazan, Albert, d.b.a. Al-Jay Undergarment Mfg. Co., New York, N.Y. 751,321, pub. 4–2–63. Cl. 39.
Heiman, Arthur S., Inc., New York, N.Y. 644,815, canc. Cl. 42.
Heimlich, Simon W., Inc., Elizabeth, N.J. 751,437, pub. 4–2–63. Cl. 102.
Hemphill Co., Pawtucket, R.I. 644,703, canc. Cl. 23.
Herold Products Co., Inc., Chicago, Ill. 644,699, canc. Cl. 28.
Heyer Inc., Chicago, Ill. 751,230, pub. 4–2–63. Cl. 23.
Hirsch, Pauline L., d.b.a. Erik Sportswear Co., New York, N.Y. 644,778, canc. Cl. 39.
Hockaday Associates, Inc., New York, N.Y. 644,944, canc. Cl. 42.
Holmes, Archibald, & Son, Philadelphia, Pa. 644,807, canc. Cl. 42.
Holsum Products: *See*—
Jewett & Sherman Co.
House of Claspe, Inc., The, New York, N.Y. 751,249, pub. 4–2–63. Cl. 28.
Hudson Hosiery Co., Charlotte, N.C. 751,825, pub. 4–2–63. Cl. 39.
Humble Oil & Refining Co.: *See*—
Standard Oil Co.
Hunter Engineering Co., Riverside, Calif. 751,134, pub. 4–2–63. Cl. 12.
Hurricane Import Co., San Francisco, Calif. 644,725, canc. Cl. 32.
Hussmann Refrigerator Co., from Big System Corp., St. Louis, Mo. 747,269, cor. Cl. 34.
Hygrade Food Products Corp., Detroit, Mich. 751,378, pub. 4–2–63. Cl. 46.
Hypol Corp., Olean, N.Y. 751,118, pub. 4–2–63. Cl. 5.
I-K-I Products Co., Edgerton, Wis. 644,675, canc. Cl. 21.
Idea-Art: *See*—
Palliatsek, Miriam.
Idento Label Co., Charlotte, N.C. 729,151, cor. Cl. 23.
Idento Label Co., Charlotte, N.C. 751,141, cor. Cl. 23.
Idento Label Co., Charlotte, N.C. 751,304, pub. 1–22–63. Cl. 38.
Illinois Canning Co., The, Hoopeston, Ill. 751,379, pub. 4–2–63. Cl. 46.
Illumitronic Engineering Corp., Sunnyvale, Calif. 751,183, pub. 4–2–63. Cl. 21.
Imperial Auto-Craft Products, Inc., Chicago, Ill. 751,184, pub. 4–2–63. Cl. 21.
Imperial Glass Corp., Bellaire, Ohio. 751,281, pub. 4–2–63. Cl. 33.
Independent Retailers Syndicate, Inc., New York, N.Y. 751,307, pub. 4–2–63. Cl. 38.
Influcol Ltd., Bradford, England. 751,164, pub. 4–2–63. Cl. 18.
International Harvester Co., Chicago, Ill. 751,109, pub. 4–2–63. Cl. 8.
International Harvester Co., Chicago, Ill. 751,124, pub. 4–2–63. Cl. 8.
International Harvester Co., Chicago, Ill. 751,232, pub. 4–2–63. Cl. 23.
International Harvester Co., Chicago, Ill. 751,255, pub. 4–2–63. Cl. 28.
International Shoe Co., d.b.a. Florsheim Shoe Co., Chicago, Ill. 751,328–9, pub. 4–2–63. Cl. 39.
International Textbook Co., Scranton, Pa. 751,305, pub. 4–2–63. Cl. 38.
Irwin, Adele M., New York, N.Y. 644,908, canc. Cl. 38.
Isbrandtsen Co., Inc., New York, N.Y. 751,434, pub. 4–2–63. Cl. 101.
It's-A-Dilly Co., The, Potsdam, N.Y. 751,366, pub. 4–2–63. Cl. 45.
Ivanhoe Fruit Association, Ivanhoe, Calif. 644,831, canc. Cl. 46.
JFD Electronics Corp., Brooklyn, N.Y. 751,193–4, pub. 4–2–63. Cl. 21.
Jacobson, F., & Sons, Inc., New York, N.Y. 751,317, pub. 4–2–63. Cl. 39.
Jackson, Philip M., Toronto, Ontario, Canada. 747,506, cor. Cl. 18.
Jana Handbags, Inc., New York, N.Y. 751,108, pub. 4–2–63. Cl. 3.
Jet Line Products, Inc., Charlotte, N.C. 751,182, pub. 4–2–63. Cl. 21.
Jewett & Sherman Co., d.b.a. Holsum Products, Milwaukee, Wis. 644,845, canc. Cl. 46.
Johns-Manville Corp., New York, N.Y. 751,126, pub. 11–15–60. Cl. 13.
Johnson & Johnson, from Personal Products Corp., New Brunswick, N.J. 751,262, pub. 4–2–63. Cl. 44.
Joseph & Feiss Co., The: *See*—
Shane, C. B., Corp.
Jouvet, T., & Cie: *See*—
Francois Michel Marie Joseph Antoine, Vicomte de Roquefeuil.
Kellogg Co., Battle Creek, Mich. 751,375, pub. 4–2–63. Cl. 46.
Kemper, Charles, d.b.a. Charles Kemper, Mftg. 751,273, pub. 4–2–63. Cl. 28.
Kemper, Charles, Mftg.: *See*—
Kemper, Charles.
Kenerson, Charles C., d.b.a. Kenerson Design Studio, Barre, Vt. 644,618, canc. Cl. 12.
Kenerson Design Studio: *See*—
Kenerson, Charles C.
Kent Fabric Corp., Chicago, Ill. 644,942, canc. Cl. 42.
Kerr, Edmund J, d.b.a. Kerr Publishing Co., Los Angeles, Calif. 644,753, canc. Cl. 38.
Kerr Publishing Co.: *See*—
Kerr, Edmund J.
Kewanee Boiler Co., Kewanee, Ill., to American Radiator & Standard Sanitary Corp., New York, N.Y. 166,368, ren. 6–18–63. Cl. 34.
Kimble Glass Co. Owens-Illinois Glass Co., Toledo, Ohio. 162,800. Am. 7(d). Cl. 26.
King Electronics, Inc., Pasadena, Calif. 751,176, pub. 3–19–63. Cl. 21.
Kirchhoff, A. C., & Co.: *See*—
Kirchhoff, August C., & Co.
Kirchhoff, August C., & Co., d.b.a. A. C. Kirchhoff & Co., Chicago, Ill. 751,405, pub. 4–2–63. Cl. 46.
Kitchens of Sara Lee, Inc., to Kitchens of Sara Lee, Inc., Chicago, Ill. 644,946–47, canc. Cl. 46.
Kleen-O-Products, Inc., Beverly Hills, Calif. 644,869, canc. Cl. 52.
Klehm, Carl G., Arlington Heights, Ill. 751,101, pub. 4–2–63. Cl. 1.
Kneisel, Karl, San Gabriel, Calif. 751,268, pub. 4–2–63. Cl. 28.
Knoxville Glove Co., Knoxville, Tenn. 401,066–67, ren. 6–18–63. Cl. 39.
Knoxville Glove Co., Knoxville, Tenn. 401,069, ren. 6–18–63. Cl. 39.
Knoxville Glove Co., Knoxville, Tenn. 401,071, ren. 6–18–63. Cl. 39.
Kochton Plywood & Veneer Co., Inc., Chicago, Ill. 644,604, canc. Cl. 12.
Krembel, Frank, Jr., Detroit, Mich. 751,217, pub. 4–2–63. Cl. 23.
Krueger Engineering & Mfg. Co. Inc., Houston, Tex. 751,286, pub. 4–2–63. Cl. 34.

L & M Tile Products, Inc., Dallas, Tex. 751,136, pub. 4–2–63. Cl. 12.
Lab Automated Chemicals Corp., Baltimore, Md. 751,456. Cl. 4.
Lager, Max: *See*—
Regal Lamp and Shade Co., Inc.
Lakeside Laboratories, Inc., Milwaukee, Wis. 751,167, pub. 2–19–63. Cl. 18.
Lehn & Fink Products Corp., d.b.a. Tussy Cosmetics, Bloomfield, N.J. 748,177, cor. Cl. 51.
LeMar Shoes, Inc., Haverhill, Mass. 751,322, pub. 4–2–63. Cl. 39.
Leonard Tissue Corp.: *See*—
Purex Corp., Ltd.
Lever Brothers Co., New York, N.Y. 751,387, pub. 4–2–63. Cl. 46.
Levine, Louis, & Sons, Inc., Cincinnati, Ohio. 644,927, canc. Cl. 39.
Lewis, Larry, Co., Inc., Kansas City, Mo. 644,664, canc. Cl. 19.
Life-Like Products, Inc., Baltimore, Md. 751,104, pub. 4–2–63. Cl. 2.
Lindsey, James W., d.b.a. Lindsey Seed Co., Lubbock, Tex. 751,103, pub. 4–2–63. Cl. 1.
Lindsey Seed Co.: *See*—
Lindsey, James W.
Liquidmatic Corp. of America, Newark, N.J. 751,416, pub. 4–2–63. Cl. 50.
Longdon, F., and Co. Ltd., Derby, England. 164,278, ren. 6–18–63. Cl. 44.
Loomis, Ltd., Oakland, Md. 751,376–7, pub. 4–2–63. Cl. 46.
Lowe, Joe: *See*—
Coverdale & Bruebaker.
Macklin Co., Jackson, Mich. 751,112, pub. 4–2–63. Cl. 4.
MacNair-Dorland Co., New York, N.Y. 644,912, canc. Cl. 38.
Madison Throwing Co., Inc., Madison, N.C. 751,351, pub. 4–2–63. Cl. 43.
Maidenform, Inc., New York, N.Y. 751,337–38, pub. 4–2–63. Cl. 39.
Manhattan Wire Goods Co., Inc., Long Island City, N.Y. 751,455. Cl. 2.
Manthorne, Helen M., d.b.a. Character Creations, Rochdale, Mass. 751,205–206, pub. 4–2–63. Cl. 22.
Marchal Inc., New York, N.Y. 751,247, pub. 4–2–63. Cl. 28.
Mar-Jac Products, Inc., Chicago, Ill. 751,419, pub. 3–12–63. Cl. 51.
Marson Corp., Revere, Mass. 751,135, pub. 4–2–63. Cl. 12.
Marx, Louis, & Co., Inc., New York, N.Y. 751,202, pub. 4–2–63. Cl. 22.
Marx, Louis, & Co., Inc., New York, N.Y. 644,769, canc. Cl. 39.
Mason-Keller Corp., Roseland, N.J. 751,166, pub. 4–2–63. Cl. 18.
Masonite Corp., Chicago, Ill. 751,183, pub. 4–2–63. Cl. 12.
Master Lock Co., Milwaukee, Wis. 751,235, pub. 4–2–63. Cl. 26.
Mastic Tile Corp. of America, The, Newburgh, N.Y. 644,615, canc. Cl. 12.
Mayer, H. J., and Sons Co., to H. J. Mayer & Sons Co., Inc., Chicago, Ill. 399,941, ren. 6–18–63. Cl. 46.
Mayer, H. J., & Sons Co., Inc.: *See*—
Mayer, H. J., and Sons Co.
Mead Johnson & Co., Evansville, Ind. 751,398, pub. 4–2–63. Cl. 46.
Med-Equip Co., Houston, Tex. 751,358, pub. 4–2–63. Cl. 44.
Merck & Co., Inc., Rahway, N.J. 644,654, canc. Cl. 18.
Merrell, Wm. S., Co., The, Cincinnati, Ohio. 644,645, canc. Cl. 18.
Meteor Glass Co., Inc., Vineland, N.J. 751,283, pub. 4–2–63. Cl. 33.
Metro Business Forms: *See*—
Van Der Linden, Douglas.
Micafil A.G., Zurich, Switzerland. 751,227, pub. 4–2–63. Cl. 23.
Michigan Chemical Corp., St. Louis, Mich. 399,801, ren. 6–18–63. Cl. 46.
Miller Brothers Hat Co., Dallas, Tex. 751,333, pub. 4–2–63. Cl. 39.
Miller, H. S., Laboratories, Inc., Los Angeles, Calif. 644,646, canc. Cl. 18.
Milo Harding Co., Monterey Park, Calif. 751,301, pub. 4–2–63. Cl. 37.
Minnesota Mining and Mfg. Co., St. Paul, Minn. 751,280, pub. 4–2–63. Cl. 33.
Minor, Robert S., Newark, N.J. 751,432, pub. 4–2–63. Cl. 101.
Mira Corp., The, Los Angeles, Calif. 751,358, pub. 4–2–63. Cl. 44.
Missouri Farmers Association, Inc., Columbia, Mo. 751,399, pub. 4–2–63. Cl. 46.
Mobilefreeze Co., Inc., Clayton, Mo. 751,170, pub. 4–2–63. Cl. 19.
Mobilefreeze Co., Inc., Clayton, Mo. 751,171, pub. 4–2–63. Cl. 19.
Mobile Holdings Corp., Cypress, Calif. 751,172, pub. 4–2–63. Cl. 19.
Modern Industries, Inc.: *See*—
Guardian Electric Mfg. Co.
Montclair Imports Inc., Westbury, N.Y. 751,340, pub. 4–2–63. Cl. 40.
Moorman Mfg. Co., Quincy, Ill. 402,777, ren. 6–18–63. Cl. 50.
Morse Sewing Machine and Supply Corp., New York, N.Y. 751,463. Cl. 23.
Montgomery Ward & Co., Inc., Chicago, Ill. 751,177, pub. 4–2–63. Cl. 21.
Montre de Sport Geneve S.A. (Geneva Sport Watch Ltd.), Geneva, Switzerland. 751,245, pub. 4–2–63. Cl. 27.
Morgan, Howard H., d.b.a. Morgan Incubator Sales & Service, Corona, Calif. 751,224, pub. 4–2–63. Cl. 23.
Morgan Incubator Sales & Service: *See*—
Morgan, Howard H.
Muller, John F., New York, N.Y. 751,415, pub. 4–2–63. Cl. 50.
Muroff Bros., Inc., New York, N.Y. 751,267, pub. 4–2–63. Cl. 26.
Murray's Superior Products Co., Inc.: *See*—
Murray's Products Co.
Murray's Superior Products Co., Detroit, Mich., from Murray's Superior Products Co., Inc., Chicago, Ill. 751,418, pub. 4–2–63. Cl. 51.
McClatchy Newspapers, Sacramento, Calif. 751,445, pub. 4–2–63. Cl. 107.
McClosky, Florence T., Philadelphia, Pa. 751,360, pub. 4–2–63. Cl. 44.
McDonald Products Corp., Buffalo, N.Y. 751,107, pub. 4–2–63. Cl. 2.
McGuinness, L. J., and Co. Ltd., Mimico, Ontario, Canada. 751,411, pub. 4–2–63. Cl. 49.
McNeil Laboratories, Inc., Fort Washington, Pa. 751,162, pub. 4–2–63. Cl. 18.
N.V. Vereenigde Touwfabrieken, Rotterdam, Netherlands. 622,872. Am. 7(d). Cl. 7.
N.V. Vereenigde Touwfabrieken, Rotterdam, Netherlands. 653,265. Am. 7(d). Cl. 7.
Naconle Publishing Co.: *See*—
Waddington, Wm. H., Jr.
Nadin, Rose. *See*—
Old Betty Plant's Ltd.
National Bakers Services, Inc., Hollywood, Fla. 751,401, pub. 4–2–63. Cl. 46.
National Wax Co., Skokie, Ill. 751,154, pub. 4–2–63. Cl. 15.
Neal House Inc., East Hampton, Conn. 751,460. Cl. 22.
Newhouse, Frank J., Ltd., Hamilton, Ontario, Canada. 751,282, pub. 4–2–63. Cl. 33.
Newport Industries, Inc., Pensacola, Fla., to Heyden Newport Chemical Corp., New York, N.Y. 402,506, ren. 6–18–63. Cl. 1.
Newport Industries, Inc., Pensacola, Fla., to Heyden Newport Chemical Corp., New York, N.Y. 402,941, ren. 6–18–63. Cl. 16.
Newport Industries, Inc., Pensacola, Fla., to Heyden Newport Chemical Corp., New York, N.Y. 402,525, ren. 6–18–63. Cl. 1.
New York Fine Jewelry Co., New York, N.Y. 751,257, pub. 4–2–63. Cl. 28.
New York Merchandise Co., Inc., New York, N.Y. 644,692, canc. Cl. 22.
New York World-Telegram Corp., New York, N.Y. 751,303, pub. 12–11–62. Cl. 38.
Nexus Inc., Stamford, Conn. 751,189, pub. 4–2–63. Cl. 21.
Nihon Resibon Seito Kabushiki Kaisha, Osaka, Japan. 751,113, pub. 4–2–63. Cl. 4.
Noble, Don, & Co., Inc., Chicago, Ill. 751,293, pub. 4–2–63. Cl. 36.
Norcor Mfg. Co., Inc., Green Bay, Wis. 751,278–9, pub. 4–2–63. Cl. 32.
North American Philips Co., Inc., New York, N.Y. 751,365, pub. 4–2–63. Cl. 44.
North American Philips Co., Inc., New York, N.Y. 751,364, pub. 4–2–63. Cl. 44.
North Pole Toys, Inc., North Pole, N.Y. 751,190, pub. 4–2–63. Cl. 22.
Northrop Aircraft, Inc., Hawthorne, Calif. 644,707, canc. Cl. 30.
Norton Co.: *See*—
Barton, H. H., & Son Co. Inc.
Novelty Sportswear Mfg. Co., St. Louis, Mo. 751,315, pub. 4–2–63. Cl. 39.
Nucleonic Products Co., Inc., Los Angeles, Calif. 751,197, pub. 4–2–63. Cl. 21.
Nu-Dell Plastics Corp., Chicago, Ill. 644,798, canc. Cl. 39.
Nutting Truck Co.: *See*—
Nutting, Walter M.
Nutting Truck and Caster Co.: *See*—
Nutting, Walter M.
Nutting, Walter M., d.b.a. Nutting Truck Co., to Nutting Truck and Caster Co., Faribault, Minn. 170,547, ren. 6–18–63. Cl. 19.
Nyer, Samuel, d.b.a. Foremost Novelty Co., New York, N.Y. 751,272, pub. 4–2–63. Cl. 28.
Ohnmacht, Willard, d.b.a. Jim Dandy Safe Equipment Co., Carbondale, Pa. 751,236, pub. 4–2–63. Cl. 25.
Old Betty Plant's Ltd., d.b.a. Rose Nadin, Hanley, Stoke-on-Trent, England. 751,388, pub. 4–2–63. Cl. 46.
Olin Mathieson Chemical Corp., New York, N.Y. 644,858, canc. Cl. 51.
Ore-Ida Foods, Inc.: *See*—
Ore-Ida Potato Products, Inc.
Ore-Ida Potato Products, Inc. Ore-Ida Foods, Inc., Ontario, Oreg. 739,456. Am. 7(d). Cl. 46.
Originiques: *See*—
Ayers, Sara A.
Orradio Industries, Inc., Opelika, Ala. 644,687, canc. Cl. 21.
Orr & Sembower, Inc., Reading, Pa. 644,727, canc. Cl. 34.
Owens-Illinois Glass Co.: *See*—
Kimble Glass Co.
P. W. & B. Co., The, Orlando, Fla. 751,306, pub. 4–2–63. Cl. 38.
Pairotto Man-Nen-Hitsu Kabushiki Kaisha, Chuo-ku, Tokyo-to, Japan. 751,298, pub. 2–12–63. Cl. 37.
Palm Beach Co., Portland, Maine. 751,331, pub. 4–2–63. Cl. 39.
Pan American Laboratories, Inc., New Orleans, La. 751,161, pub. 4–2–63. Cl. 18.
Paniplus Co., The, Rye, N.Y. 751,386, pub. 4–2–63. Cl. 46.

Pano-Werk Inh. Paul Nofer, Brunsbuttelkoog, Germany. 751,222, pub. 4–2–63. Cl. 23.
Pano-Werk Inh. Paul Nofer, Brunsbuttelkoog, Germany. 751,414, pub. 4–2–63. Cl. 50.
Papercraft Corp., The, Pittsburgh, Pa. 644,884, canc. Cl. 7.
Parfumerie Caron: *See*—
Daltroff, E., & Cie.
Parker-Hannifin Corp., Cleveland, Ohio. 751,290, pub. 4–2–63. Cl. 55.
Parker Products, Inc., Holliston, Mass. 751,372, pub. 4–2–63. Cl. 46.
Peirce-Phelps, Inc., Philadelphia, Pa. 644,721, canc. Cl. 32.
Pennsalt Chemicals Corp., Philadelphia, Pa. 751,120, pub. 4–2–63. Cl. 6.
Perfect Photo, Inc., Philadelphia, Pa. 751,238, pub. 4–2–63. Cl. 26.
Personal Products Corp.: *See*—
Johnson & Johnson.
Peter Pan Foundations, Inc., New York, N.Y. 644,926, canc. Cl. 39.
Pet Milk Co., St. Louis, Mo. 751,371, pub. 4–2–63. Cl. 46.
Pfening, Fred D., Co., The, Columbus, Ohio. 751,240, pub. 4–2–63. Cl. 26.
Philips Mfg. Co., Brooklyn, N.Y. 751,252, pub. 4–2–63. Cl. 28.
Philliocraft Co., Philadelphia, Pa. 751,228, pub. 4–2–63. Cl. 23.
Plyfloor, Inc., Beaumont, Miss. 644,600, canc. Cl. 12.
Pollatsek, Miriam, d.b.a. Idea-Art, New York, N.Y. 644,754, canc. Cl. 38.
Portis Style Industries Inc., Chicago, Ill. 644,775, canc. Cl. 39.
Poulsen Bros.: *See*—
Poulsen, Earl C.
Poulsen, Earl C., d.b.a. Poulsen Bros., Portland, Oreg. 751,201, pub. 4–2–63. Cl. 22.
Powell Muffler Co., Inc., Chicago, Ill. 751,220, pub. 4–2–63. Cl. 23.
Practical Builder: *See*—
Cahners Publishing Co., Inc.
Preformed Line Products Co., Cleveland, Ohio. 751,196, pub. 4–2–63. Cl. 21.
Press & Stanzwerke, Ltd., Eschen, Liechtenstein. 751,216, pub. 4–2–63. Cl. 23.
Presto-Valet, Inc., Alexandria, Va. 751,442, pub. 4–2–63. Cl. 103.
Productos Ceramicos, S.A., Monterrey, Nuevo Leon, Mexico. 644,626, canc. Cl. 13.
Pro-Par Products, San Marino, Calif. 751,207, pub. 4–2–63. Cl. 22.
Pulaski Canning Co., Pulaski, Wis. 644,846, canc. Cl. 46.
Pulitzer Publishing Co., The, St. Louis, Mo. 751,446, pub. 4–2–63. Cl. 107.
Purex Corp., Ltd., Lakewood, Calif., from Leonard Tissue Corp., Cambridge, Mass. 751,297, pub. 10–24–61. Cl. 37.
Putman Publishing Co., Chicago, Ill. 644,917, canc. Cl. 38.
Q-S-O Corp., New York, N.Y., to Max Wirgin, Bronxville, N.Y. 402,498, ren. 6–18–63. Cl. 26.
Red Devil Tools, Union, N.J. 751,233, pub. 4–2–63. Cl. 23.
Red Owl Stores, Inc., Hopkins, Minn. 751,389, pub. 4–2–63. Cl. 46.
Regal Lamp & Shade Co.: *See*—
Regal Lamp and Shade Co., Inc.
Regal Lamp and Shade Co., Inc., New York, from M. Lager, d.b.a. Regal Lamp & Shade Co., New York, N.Y. 751,285, pub. 4–2–63. Cl. 34.
Regal Ware, Inc., Kewaskum, Wis. 751,144, pub. 4–2–63. Cl. 13.
Reits Meat Products Co., Kansas City, Mo. 751,395, pub. 4–2–63. Cl. 46.
Renfrow, Roberta G., d.b.a. Roberta's Dress Shop, Perry, Fla. 751,200, pub. 4–2–63. Cl. 22.
Ren Plastics, Inc., Lansing, Mich. 751,306, pub. 4–2–63. Cl. 38.
Repco Ltd., Victoria, Australia. 751,211, pub. 4–17–62. Cl. 23.
Rexall Drug and Chemical Co., d.b.a. Tupperware, Los Angeles, Calif. 751,349, pub. 4–2–63. Cl. 42.
Rhodes, M. H., Inc., Hartford, Conn. 751,244, pub. 4–2–63. Cl. 27.
Rhodes Pharmacal Co., Inc., Cleveland, Ohio. 644,644, canc. Cl. 18.
Richman Brothers Co., The, Cleveland, Ohio. 751,327, pub. 4–2–63. Cl. 39.
Riker Laboratories, Inc., Northridge, Calif. 751,165, pub. 2–12–63. Cl. 18.
Rival Mfg. Co.: *See*—
Steam-O-Matic Corp.
Riverside & Dan River Cotton Mills, Inc., Danville, Va., and New York, N.Y., to Dan River Mills Inc., Danville, Va. 402,619, ren. 6–18–63. Cl. 42.
Roberta's Dress Shop: *See*—
Renfrow, Roberta G.
Rognoni—Soc. in Nome Collettivo, Milan, Italy. 751,302, pub. 4–2–63. Cl. 38.
Rohm & Haas, G.m.b.H., Darmstadt, Germany. 748,015, cor. Cl. 6.
Rosal Laboratories Ltd., Philadelphia, Pa. 751,160, pub. 2–26–63. Cl. 18.
Rosenstein Bros., Paterson, N.J. 751,343, pub. 4–2–63. Cl. 42.
Rotron Mfg. Co., Inc., Woodstock, N.Y. 751,288, pub. 4–2–63. Cl. 34.
Royal of California: *See*—
Barth & Dreyfuss, Inc.
Rystan Co., Mount Vernon, N.Y. 751,310, pub. 4–2–63. Cl. 38.
S.O.S. One Hour Cleaners, Inc., Lexington, Ky. 751,443, pub. 4–2–63. Cl. 103.
Sabrett Food Products Corp., Jersey City, N.J. 751,385, pub. 4–2–63. Cl. 46.
Safege-Transport, Paris (Seine), France. 751,168, pub. 4–2–63. Cl. 19.
Sailant & Sailant, Inc.: *See*—
Cary & Co., Inc.
St. Lawrence Mfg. Co., Inc., Gifford, Quebec, Canada. 751,210, pub. 4–2–63. Cl. 22.
Samson Cordage Works, Boston, Mass. 28,509, ren. 6–18–63. Cl. 7.
Sandvikens Jernverks Aktiebolag: *See*—
Aktiebolaget Lidkopings Sagbladsfabrik.
Sargent, George, Pawlet, Vt. 644,887, canc. Cl. 10.
Sarpolus, Frank W., d.b.a. Zobel's Sea Skiff and Yacht Works, Sea Bright, N.J. 644,669, canc. Cl. 19.
Schenley Distillers, Inc., New York, N.Y. 751,409–10, pub. 4–2–63. Cl. 49.
Schermerhorn Cigar Stores, Inc., Chicago, Ill. 751,156–7, pub. 4–2–63. Cl. 17.
Schuler, Geo., & Co., Inc., Pleasantville, N.Y. 751,250, pub. 4–2–63. Cl. 28.
Schwartz, Martin J., New York, N.Y. 751,123, pub. 4–2–63. Cl. 8.
Schwarze Electric Co., Adrian, Mich., to Faraday, Inc., Tecumseh, Ohio. 401,252, ren. 6–18–63. Cl. 21.
Seagram, Joseph E., & Sons, Inc., Lawrenceburg, Ind. 751,407, pub. 4–2–63. Cl. 49.
Sebastopol Cooperative Cannery, Sebastopol, Calif. 751,398, pub. 4–2–63. Cl. 46.
Selmer, H. & A., Inc., Elkhart, Ind. 751,291, pub. 8–28–62. Cl. 36.
Service Industries, Philadelphia, Pa. 751,425, 4–2–63. Cl. 52.
Shane, C. B., Corp., Chicago, Ill., to The Joseph & Feiss Co., Cleveland, Ohio. 408,148, ren. 6–18–63. Cl. 39.
Shepherd Casters, Inc., Benton Harbor, Mich. 751,141, pub. 4–2–63. Cl. 13.
Sherwin-Williams Co., The, Cleveland, Ohio. 644,637, canc. Cl. 16.
Silver Mfg. Co., Inc., East Chicago, Ind. 751,330, pub. 4–2–63. Cl. 39.
Smith-Lee Co., Inc., Oneida, N.Y. 751,106, pub. 4–2–63. Cl. 2.
Smyth, Albert S., Co., Inc., Baltimore, Md. 751,270, pub. 4–2–63. Cl. 28.
Societa Per Azioni G. B. Pezziol, Padova, Italy. 644,945, canc. Cl. 45.
Societe Technique de Pulverisation S.A., Pantin, Seine, France. 751,356, pub. 4–2–63. Cl. 44.
Society of The Plastics Industry, Inc., The, New York, N.Y. 644,916, canc. Cl. 38.
Spain, Maurice, & Sons, Inc., New York, N.Y. 751,266, pub. 4–2–63. Cl. 28.
Spang and Co., Butler, Pa. 751,219, pub. 4–2–63. Cl. 23.
Speidel Corp., Providence, R.I. 751,258–9, pub. 4–2–63. Cl. 28.
Spoer, Louis C., East Paterson, to M. A. Frankel, Bergen County, N.J. 644,852, canc. Cl. 50.
Sports Arenas, Inc., Yonkers, N.Y. 751,448, pub. 4–2–63. Cl. 107.
Springs Cotton Mills, The, Lancaster, S.C. 751,348, pub. 4–2–63. Cl. 42.
Standard Conveyor Co., North St. Paul, Minn. 751,234, pub. 4–2–63. Cl. 23.
Standard Oil Co. Humble Oil & Refining Co., Houston, Tex. 166,677. Am. 7(d). Cl. 15.
Standard Oil Co., Chicago, Ill. 168,756, ren. 6–18–63. Cl. 15.
Standard Oil Co. of California, from California Research Corp., San Francisco, Calif. 751,153, pub. 11–20–62. Cl. 15.
Steam-O-Matic Corp., New York, N.Y. and Milwaukee, Wis., to Rival Mfg. Co., Kansas City, Mo. 403,597, ren. 6–18–63. Cl. 21.
Steven, Steven J., Brookfield, Ill. 644,697, canc. Cl. 28.
Strauss Chain & Jewelry Mfg. Co.: *See*—
Strauss, Leo.
Strauss, Leo, d.b.a. Strauss Chain & Jewelry Mfg. Co., New York, N.Y. 751,251, pub. 4–2–63. Cl. 28.
Strider, Pierce W.: *See*—
Freeman, George K., Jr.
Style Crest Trade Association, Chicago, Ill. 751,430, pub. 4–2–63. Cl. 101.
Sunbeam Corp.: *See*—
Chicago Flexible Shaft Co.
Superb Glove Co., The, Johnstown, N.Y. 644,932, canc. Cl. 39.
Surprenant Mfg. Co., Clinton, Mass. 751,190, pub. 4–2–63. Cl. 21.
Sutone Corp., Paramount, Calif. 751,169, pub. 4–2–63. Cl. 19.
Svenska Knacke Aktiebolaget, Jarna, Sweden. 751,396, pub. 4–2–63. Cl. 46.
Swisher, Jno. H., & Son, Inc., Jacksonville, Fla. 751,159, pub. 4–2–63. Cl. 17.
Swiss Knitting Co., Dover, N.J. 747,744, cor. Cl. 39.
Symphonic Electronic Corp., New York, N.Y. 751,175, pub. 4–2–63. Cl. 21.
Syracuse Pharmacal Co. Inc., Syracuse, N.Y. 751,163, pub. 4–2–63. Cl. 18.
Talon, Inc., Meadville, Pa. 751,146, pub. 4–2–63. Cl. 13.
Tamis, Louis, & Sons, New York, N.Y. 751,248, pub. 4–2–63. Cl. 28.
Tavern Industries from Garwick and Schneirow, Los Angeles, Calif. 751,367, pub. 4–2–63. Cl. 45.
Telex, Inc., St. Paul, Minn. 644,680, canc. Cl. 21.
Texas Instruments Inc., Dallas, Tex. 751,174, pub. 12–18–62. Cl. 21.
Theobald Industries, The, Kearny, N.J. 751,426–27, pub. 4–2–63. Cl. 52.

Three Little Bakers, Inc., Wilmington, Del. 751,397, pub. 4–2–63. Cl. 46.
Toffenetti Restaurant Co., Inc., Chicago, Ill. 751,366, pub. 4–2–63. Cl. 46.
Top Form Mills, Inc., New York, N.Y. 751,319, pub. 4–2–63. Cl. 39.
Transco Inc., from Transportation Specialties Co., Chicago, Ill. 751,127, pub. 4–2–63. Cl. 12.
Transportation Specialties Co.: *See*—
Transco Inc.
Tremco Mfg. Co., The, Cleveland, Ohio. 401,058, ren. 6–18–63. Cl. 16.
Tremco Mfg. Co., The, Cleveland, Ohio. 403,130, ren. 6–18–63. Cl. 12.
Tremco Mfg. Co., The, Cleveland, Ohio. 403,383, ren. 6–18–63. Cl. 12.
Trylon Mfg. Corp., Brooklyn, N.Y. 644,677, canc. Cl. 21.
Tupperware: *See*—
Rexall Drug and Chemical Co.
Turk, Amos, Danbury, Conn. 748,048, cor. Cl. 6.
Tussy Cosmetics: *See*—
Lehn & Fink Products Corp.
Uneeda Doll Co., Inc., Brooklyn, N.Y. 751,462. Cl. 22.
U-Need-Em Specialty Co. Inc., Brooklyn, N.Y. 751,336, pub. 4–2–63. Cl. 39.
Ungar, Josef, New York, N.Y. 751,262, pub. 4–2–63. Cl. 28.
United Aircraft Products, Inc., Dayton, Ohio. 751,105, pub. 4–2–63. Cl. 2.
United States Monument Guild, Inc., Brooklyn, N.Y. 751,463, pub. 4–2–63. Cl. A.
United States Rubber Co.: *See*—
Eureka Fire Hose Co.
United States Rubber Co., New York, N.Y. 751,289, pub. 4–2–63. Cl. 35.
Universal-Cyclops Steel Corp., Bridgeville, Pa. 751,148, pub. 4–2–63. Cl. 14.
Uts Potato Chip Co., Inc., Hanover, Pa. 751,404, pub. 4–2–63. Cl. 46.
Van Buskirk, Lesher W., Easton, Pa. 751,152, pub. 4–2–63. Cl. 14.
Van Der Linden, Douglas, d.b.a. Metro Business Forms, Washington, D.C. 751,429, pub. 4–2–63. Cl. 100.
Venus Pen & Pencil Corp.: *See*—
American Lead Pencil Co.
Vita-Zahnfabrik H. Rauter KG, Essen, Germany. 751,363, pub. 4–2–63. Cl. 44.
Vohann of California, Capistrano Beach, Calif. 751,125, pub. 4–2–63. Cl. 8.
Voigtlander A.G., Braunschweig, Germany. 751,241, pub. 4–2–63. Cl. 26.
Vulcan Materials Co., Birmingham, Ala. 751,131, pub. 4–2–63. Cl. 12.
Vulcan Materials Co., Birmingham, Ala. 751,132, pub. 4–2–63. Cl. 12.
Waddington, Wm. H., Jr., d.b.a. Nacoale Publishing Co., Chicago, Ill. 751,312, pub. 4–2–63. Cl. 38.
Walker, Hiram, & Sons, Inc., Peoria, Ill. 751,412, pub. 4–2–63. Cl. 40.
Walker Mfg. Co., Racine, Wis. 751,231, pub. 4–2–63. Cl. 23.
Wallace, E., & Sons Mfg. Co., Wallingford, Conn. 644,696, canc. Cl. 23.
Wallach, Stanley, & Sons: *See*—
Wallach, Stanley.
Wallach, Stanley, d.b.a. Stanley Wallach & Sons, Chestnut Hill, Mass. 751,373, pub. 4–2–63. Cl. 46.
Wampole Laboratories: *See*—
Denver Chemical Mfg. Co., The.
Waste Control of Florida, Inc., Jacksonville, Fla. 751,471. Cl. 100.
Watson, R. & W., Ltd., Llawood, Scotland. 751,347, pub. 4–2–63. Cl. 42.
Weekly Publications, Inc., New York, N.Y. 644,910, canc. Cl. 38.
Wembley, Inc., New Orleans, La. 751,324, pub. 4–2–63. Cl. 39.
Western Pacific Insurance Co., Seattle, Wash. 751,438, pub. 4–2–63. Cl. 102.
Weston, Byron, Co., Dalton, Mass. 309,611. Am. 7(d). Cl. 37.
Weston, Byron, Co., Dalton, Mass. 312,822. Am. 7(d). Cl. 37.
Wheel Trueing Tool Co.: *See*—
Wheel Trueing Tool Co. of Delaware.
Wheel Trueing Tool Co. of Delaware, to Wheel Trueing Tool Co., Detroit, Mich. 402,353, ren. 6–18–63. Cl. 23.
White Products Corp., Middleville, Mich. 644,726, canc. Cl. 24.
Willson Goggles, Inc., Reading, Pa., to The Electric Storage Battery Co., Philadelphia, Pa. 164,347, ren. 6–18–63. Cl. 44.
Wilson, Ben, Co., Inc., Mount Vernon, N.Y. 751,320, pub. 4–2–63. Cl. 39.
Wirgin, Max: *See*—
Q-S-O Corp.
Wiss, J., & Sons Co., Newark, N.J. 751,361, pub. 4–2–63. Cl. 44.
Wolf, Edwin F., Indianapolis, Ind. 751,208, pub. 4–2–63. Cl. 22.
Wonderknit Corp., New York, N.Y. 751,339, pub. 4–2–63. Cl. 39.
Woodfield Fabrics, Inc., New York, N.Y. 751,345, pub. 4–2–63. Cl. 42.
Woodhill Chemical Sales Corp., The, Cleveland, Ohio. 751,116, pub. 4–2–63. Cl. 5.
Woodland Mfg. Co., Toledo, Ohio. 644,730, canc. Cl. 24.
Woodward-Wanger Co., Philadelphia, Pa. 403,070, ren. 6–18–63. Cl. 35.
Wycoff, Ralph H., d.b.a. Wycoff Sales Co., Columbus, Ohio. 644,870, canc. Cl. 52.
Wycoff Sales Co.: *See*—
Wycoff, Ralph H.
X-Acto Crescent Products, Inc., New York, N.Y., to X-Acto, Inc., Long Island City, N.Y. 401,167, ren. 6–18–63. Cl. 23.
X-Acto, Inc.: *See*—
X-Acto Crescent Products, Inc.
Yellow Springs Instrument Co., Inc., The, Yellow Springs, Ohio. 747,891, cor. Cl. 26.
Zoco Co., The, Minneapolis, Minn. 751,213, pub. 4–2–63. Cl. 23.
Zivi S.A. Cutelaria, Porto Alegre, Brazil. 751,233, pub. 4–2–63. Cl. 23.
Zobel's Sea Skiff and Yacht Works: *See*—
Sarpolus, Frank W.
Zwack, J., & Co., New York, N.Y. 751,406, pub. 4–2–63. Cl. 46.

U.S. GOVERNMENT PRINTING OFFICE: 0—1963

U.S. DEPARTMENT OF COMMERCE

OFFICIAL GAZETTE of the UNITED STATES PATENT OFFICE

June 25, 1963 Volume 791 Number 4

PATENTS

NOTICES

Board of Appeals Decisions Rendered in the Month of May 1963

Examiner affirmed	351
Examiner affirmed in part	52
Examiner reversed	103
Total	506

Classification Order No. 350

The following transfer is hereby ordered to take effect on Friday, May 17, 1963:

From Division 95 to Group 420
Class 189, METALLIC BUILDING STRUCTURES
Subclasses 1–44 and 82–92

H. B. WHITMORE,
Superintendent, Examining Corps.

Classification Order No. 351

Classification Order No. 351, dated May 29, 1963, incorporates changes in the following classes:

Plants—Established (Bulletin No. 455)
47—PLANT HUSBANDRY

The above changes will be incorporated in the Manual of Classification replacement pages dated July 1963.

N. H. EVANS,
Acting Superintendent, Examining Corps.

Annual Index of Patents

The 1962 edition of the Annual Index of Patents has been published. Copies may be obtained from the Superintendent of Documents, Government Printing Office, Washington 25, D.C.

Price: Buckram bound, $6.75.

Dedication

2,883,985.—*Robert P. Evans*, Kenmore, N.Y. MEDICAL APPLIANCE. Patent dated Apr. 28, 1959. Dedication filed May 6, 1963, by the assignee, *Sterilon Corporation*.

Hereby dedicates to the public the entire term of said patent.

United States District Court for the District of Columbia

Pre-Trial Briefs—Patent Cases

So long as I am assigned to hearing patent cases in the District Court, all pre-trial briefs in such cases shall be filed with the Assignment Commissioner 48 hours prior to the trial date, *and shall not be accepted for filing by the Clerk's Office.*

May 21, 1963. JOSEPH R. JACKSON,
Judge.

Transcripts—Patent Cases

Stipulations reflecting modifications in transcripts of patent cases shall be in all cases approved by the Court prior to their being filed with the Clerk of the District Court.

June 3, 1963. JOSEPH R. JACKSON,
Judge.

Disclaimers

3,006,510.—*Philip H. Sagarin*, Bridgeport, Conn. AEROSOL CAP CONSTRUCTION. Patent dated Oct. 31, 1961. Disclaimer filed Apr. 12, 1963, by the assignee, *Valve Corporation of America*.

Hereby enters this disclaimer to claim 4 of said patent.

3,084,835.—*John E. Welsh*, Beverly, Mass. CONTAINER COVERS WITH POURING SPOUTS. Patent dated Apr. 9, 1963. Disclaimer filed May 7, 1963, by the assignee, *United Shoe Machinery Corporation*.

Hereby enters this disclaimer to claim 1 of said patent.

Patents Available for Licensing or Sale

2,965,890. Fire Extinguisher Support. John H. Robillard, 320 Seymour St., Ogdensburg, N.Y.

3,039,308. Apparatus and Method for Measuring Surface Temperatures. Kamekichi Shiba, Tokyo, Japan. Correspondence to: Wenderoth, Lind & Ponack, 1343 H St., N.W., Washington 5, D.C.

3,058,640. Feeding Attachment for Woodworking Machines. Roman Schuster, Senden/Iller, Germany. Correspondence to: Michael S. Striker, 360 Lexington Ave., New York 17, N.Y.

3,071,024. Multipartite Cranks. Rudolf Nipken, Bad Godesberg, Germany. Correspondence to: Michael S. Striker, 360 Lexington Ave., New York 17, N.Y.

New Applications Received During April 1963

Patents	7,797
Designs	466
Plant Patents	9
Reissues	31
Total	8,303

Issue

Patents	871—No.	3,094,701 to No.	3,095,571, incl.
Designs	46—No.	195,495 to No.	195,540, incl.
Plant Patents	4—No.	2,265 to No.	2,268, incl.
Reissues	3—No.	25,405 to No.	25,407, incl.
Total	924		

3,076,142. Process for Separating Yttrium and Rare Earths. Kazimiers Josef Brill, et al. Correspondence to: Michael S. Striker, 360 Lexington Ave., New York 17, N.Y.

General Electric Company is prepared to grant non-exclusive licenses under the following 4 patents upon reasonable terms to domestic manufacturers.

Applications for license under the following patent may be addressed to: General Electric Company, Patent Counsel, Chemical and Metallurgical Division, One River Road, Schenectady 5, N.Y.

3,079,370. Peroxide Cured Polyethylene.

Applications for license under the following 3 patents may be addressed to: Patent Counsel, Radio and Television Division, General Electric Company, Electronics Park, Syracuse, N.Y.

2,878,841. Lead Straightening Machine.
2,915,625. Scan Tuning Receiver.
2,644,924. Frequency Modulation System.

Directory for Reorganized Patent Examining Operations

The movement of all Examining Groups incident to the reorganization of the Patent Examining Corps is now complete.

For your convenience, a yellow tear sheet, which provides a complete listing of room and telephone numbers of each Director and Supervisory Examiner as of May 15, 1963, is included as the last page of this issue of the OFFICIAL GAZETTE.

PATENT EXAMINING CORPS

H. B. WHITMORE, Superintendent

PATENT EXAMINING OPERATIONS AND GROUPS	Oldest Application	
	New	Amended
CHEMICAL EXAMINING OPERATION—P. E. MANGAN, Director.		
GENERAL CHEMISTRY, GROUP 110—R. L. CAMPBELL, Supervisory Examiner	7-21-61	9-6-61
Inorganic and Organo-metal (formerly Div. 50)—M. A. Brindisi.		
Metallurgy (formerly Div. 3).		
Electrochemistry (formerly Div. 56)—J. R. Speck.		
GENERAL ORGANIC CHEMISTRY, GROUP 120—I. MARCUS, Supervisory Examiner	1-16-62	12-7-61
Heterocyclic (formerly Div. 6)—H. J. Lidoff.		
Specialized Organic Compounds (formerly Div. 38)—C. B. Parker.		
Medicines (formerly Div. 43).		
PETROLEUM CHEMISTRY, GROUP 130—J. S. BAILEY, Supervisory Examiner	11-3-61	10-16-61
Hydrocarbons (formerly Div. 51).		
Oxo- and Oxy-Derivatives.		
HIGH POLYMER CHEMISTRY, GROUP 140—M. STERMAN, Supervisory Examiner	5-17-61	7-20-61
High Polymer Preparation (formerly Div. 60).		
Mixed High Polymers and Natural Resins (formerly Div. 50).		
COMPOSITIONS AND MOLDING, GROUP 150—L. H. GASTON, Supervisory Examiner	11-8-61	11-8-61
Coating Compositions and Molding.		
Special Utility Compositions (formerly Div. 64)—J. Greenwald.		
COATING AND LAMINATING, GROUP 160—I. G. STONE, (J. REBOLD, Acting) Supervisory Examiner	11-15-61	11-20-61
Coating Methods and Apparatus (formerly Div. 26)—R. D. Nevius.		
Laminating and Stock Materials (formerly Div. 67).		
SPECIALIZED CHEMICAL ARTS AND INDUSTRIES, GROUP 170—W. B. KNIGHT, Supervisory Examiner	11-24-61	10-11-61
Specialized Chemical Arts (formerly Div. 63)—A. H. Winkelstein.		
Reactors and Miscellaneous Industrial Processes.		
CHEMICAL ENGINEERING, GROUP 180—G. D. MITCHELL, Supervisory Examiner	1-2-62	1-2-62
Gases, Liquids and Solids Separating (formerly Div. 32)—H. L. Martin.		
Distillation, Drying and Physical Processes.		
ELECTRICAL EXAMINING OPERATION—N. H. EVANS, Director.		
POWER, GROUP 210—M. L. LEVY, Supervisory Examiner	10-5-61	8-31-61
Generation and Utilization (formerly Div. 26)—O. L. Rader.		
General Applications (formerly Div. 62)—S. Bernstein.		
Conversion and Distribution (formerly Div. 71)—L. McCollum.		
Heating and Related Art (formerly Div. 76)—R. M. Wood.		
SECURITY, GROUP 220—S. BOYD, Supervisory Examiner	12-22-61	12-6-61
Chemical (formerly Div. 46).		
Electrical (formerly Div. 44)—C. L. Justus.		
Mechanical (formerly Div. 10).		
INFORMATION TRANSMISSION, GROUP 230—S. W. CAPELLI, Supervisory Examiner	11-6-61	12-6-61
Communications (formerly Div. 16)— R. H. Ross.		
Multiplexing Techniques (formerly Div. 77)—D. G. Redinbaugh.		
Facsimile and Related Art (formerly Div. 41)— R. Lake.		
INFORMATION STORAGE AND RETRIEVAL, GROUP 240—W. W. BURNS, Supervisory Examiner	9-26-61	9-29-61
Processing and Related Art (formerly Div. 65)—M. A. Morrison.		
Storage Devices and Related Art (formerly Div. 42)—L. Sragow.		
ELECTRONIC COMPONENT SYSTEMS AND DEVICES, GROUP 250—B. G. MILLER, Supervisory Examiner	10-30-61	9-1-61
Semi-Conductor and Space Discharge Systems and Devices (formerly Div. 51)—G. N. Westby.		
Electronic Component Circuits (formerly Div. 72)—A. Gauss.		
Wave Transmission Lines and Networks (formerly Div. 65)—H. K. Saalbach.		
RADIATION AND INSTRUMENTS, GROUP 260—F. M. STRADER, Supervisory Examiner	9-20-61	10-4-61
Optics (formerly Div. 73)—J. H. Pedersen.		
Radiant Energy (formerly Div. 54)—R. G. Nilson.		
Measuring (formerly Div. 74)—W. L. Carlson.		
ELEMENTS, GROUP 270—E. J. SAX, Supervisory Examiner	10-5-61	9-27-61
Conductors (formerly Div. 75)—J. P. Wildman.		
Switches (formerly Div. 37)—B. A. Gilheany.		
Miscellaneous (formerly Div. 78)—J. F. Burns.		

CONDITION OF PATENT APPLICATIONS AS OF APRIL 30, 1963

Total number of pending applications (excluding Designs)	196, 995
Total number of Design applications pending	5, 979
Total number of applications awaiting action (excluding Designs)	112, 252
Total number of Design applications awaiting action	2, 202
Date of oldest new application awaiting action	May 17, 1961
Date of oldest amended application awaiting action	July 20, 1961

EXPIRATION OF PATENTS

The patents within the range of numbers indicated below expire during June 1963, except those which may have been extended under the provisions of the Veterans Patent Extension Act (64 Stat. 316 as amended by 66 Stat. 321) and those which may have expired earlier due to shortened terms under the provisions of Public Law 600. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1963*

Patents ..... Numbers 2,401,202 to 2,468,988, inclusive
Plant Patents ..... Numbers 666 to 701 inclusive

PATENT EXAMINING OPERATIONS AND GROUPS (Continued)	Oldest Application	
	New	Amended
MECHANICAL ENGINEERING EXAMINING OPERATION—R. A. WAHL, Director.		
MATERIAL OR ARTICLE HANDLING AND DISPENSING, GROUP 310—A. BERLIN, Supervisory Examiner...	3-5-62	1-15-62
Conveying and Loading (formerly Div. 4)—E. A. Faller.		
Handling.		
Dispensing (formerly Div. 35)—L. J. Dembo.		
METAL AND PLASTICS WORKING, GROUP 320—N. BERGER, Supervisory Examiner	4-18-62	4-24-62
Metal-Working.		
Plastics Working (formerly Div. 15)—M. V. Brindisi.		
MANUFACTURING AND ASSEMBLING MISCELLANEOUS ARTICLES, GROUP 330—A. HORTON, Supervisory Examiner	10-31-61	11-10-61
Combined Machines and Processes (formerly Div. 14)—W. A. Wiltz.		
Assembly and Special Article Making.		
MACHINE TOOLS, MECHANISMS, AND ELEMENTS, GROUP 340—F. BRONAUGH, Supervisory Examiner ...	1-15-62	12-11-61
Comminuting, Abrading and Drilling.		
Cutting.		
Machine Elements and Mechanisms (formerly Div. 12)—B. G. Durham.		
Clutches, Shafting and Workholders.		
HARDWARE, TOOLS AND JOINTS, GROUP 350—T. HICKEY, Supervisory Examiner	1-5-62	12-15-61
Hardware (formerly Div. 20)—J. D. Sears.		
Tools.		
Joints.		
FLUID HANDLING, GROUP 360—E. PAUL, Supervisory Examiner	2-26-62	2-12-62
Fluid Handling and Valves (formerly Div. 30)—I. Weil.		
Baths, Closets and Fluid Conduits (formerly Div. 11)—E. V. Benham.		
POWER PLANTS, MOTORS AND PUMPS, GROUP 370—C. GAREAU, Supervisory Examiner	1-22-62	1-30-62
Power Plants and Motors (formerly Div. 18)—A. Blum.		
Expansible Chamber Motors.		
Pumps (formerly Div. 9)—J. H. Branson.		
HEATING, COOLING AND VENTILATING, GROUP 380—P. PATRICK, Supervisory Examiner	1-2-62	12-6-61
Burners and Heat Exchange.		
Cooling and Ventilation (formerly Div. 30)—R. A. O'Leary.		
GENERAL ENGINEERING AND INDUSTRIAL ARTS EXAMINING OPERATION—J. A. MANIAN, Director.		
AGRICULTURE, GROUP 410—A. RUEGG, Supervisory Examiner	5-11-62	4-26-62
Animal (formerly Div. 5)—C. W. Robinson.		
Plant (formerly Div. 1)—A. G. Stone.		
CIVIL ENGINEERING, GROUP 420—B. BENDETT, Supervisory Examiner	1-8-62	12-8-61
Buildings.		
Construction and Structures.		
Earth Working, Drilling and Mining.		
PHYSICS, GROUP 430—R. L. EVANS, Supervisory Examiner	1-8-62	1-8-62
Photography, Sound and Lighting (formerly Div. 7)—E. G. Anderson.		
Indicators and Optics (formerly Div. 23)—L. Smilow.		
Measuring and Testing (formerly Div. 36)—J. P. Strizak.		
Geometric, Heat and Liquid Testing (formerly Div. 66)—I. Lisann.		
TEXTILES AND APPAREL, GROUP 440—R. C. MADER, Supervisory Examiner	2-21-62	2-14-62
Textiles.		
Apparel.		
TRANSPORTATION, GROUP 450—P. ARNOLD, Supervisory Examiner	1-11-62	1-9-62
Rail Vehicles and Brakes (formerly Div. 24)—L. Quackenbush.		
Land Vehicles.		
Aeronautics and Ships (formerly Div. 22)—M. Buchler.		
FURNITURE AND RECEPTACLES, GROUP 460—W. COLE, Supervisory Examiner	2-20-62	2-19-62
Furniture (formerly Div. 52)—C. A. Le Roy.		
Receptacles (formerly Div. 40)—E. J. Drummond.		
PRINTING, STATIONERY AND MATERIAL TREATMENT, GROUP 470—L. W. VARNER, Supervisory Examiner	12-19-61	11-24-61
Printing (formerly Div. 17)—R. A. Leigbey.		
Stationery (formerly Div. 53)—G. A. Ninas.		
Material Treatment.		
PERSONAL TREATMENT, ADORNMENT AND AMUSEMENT, GROUP 480—L. R. PRINCE, Supervisory Examiner	2-1-62	2-5-62
Personal Treatment.		
Adornment and Amusement (formerly Div. 62)—D. B. Lowe.		
DESIGNS—J. A. MANIAN, Supervisory Examiner	11-15-62	11-16-62
Industrial Arts (formerly Div. 31)—A. B. Hannah.		
Household, Personal and Fine Arts (formerly Div. 32)—E. Hunter.		
(CLASSIFICATION) GORECKI, G. A.—ARTS UNDERGOING RECLASSIFICATION AS LISTED UNDER CLASSIFICATION DIVISIONS.		
91. KENT, A. P. (acting)		
92. GAUSS, H.		
93. PURDY, W. F. (acting), Wire Working	6-1-62	5-11-62
94. BERLOWITZ, W.	7-11-62	7-23-62
95. ANGEL, C. D., (REZNEK, J., acting)	1-8-62	1-12-62

DECISIONS IN PATENT AND TRADEMARK CASES

U.S. Court of Customs and Patent Appeals

DWAINE R. FRANKLIN *v.* ROBERT J. HOPPER

No. 6891. Decided February 13, 1963

[50 CCPA —; 312 F.2d 949; 136 USPQ 454]

1. INTERFERENCE—CONSTRUCTION OF COUNT—RIGHT TO MAKE.

"* * *, we do find that the limitation 'means bonding the internal contacting surface of said body shell to said support means' is supported by the Franklin application. It is perfectly clear that in stating that the radar reflector supports are 'attached' to the shell, Franklin intended that by *some means* the supports would be made secure to the shell. Although we appreciate the significance of the precedents which require, that, in interference cases 'express limitations' in a count cannot be disregarded, this rule should not be applied so as to allow specific words in a count to make it impossible to use other words to express the same feature in a competing application. We believe it is reasonable to conclude that one skilled in this art would think that 'means bonding' and 'attached,' as used in this situation, for all practicable purposes, are synonymous."

2. SAME—QUESTIONS ANCILLARY TO PRIORITY—SUFFICIENCY OF DISCLOSURE TO SUPPORT COUNT FIRST RAISED AT FINAL HEARING—RULE 258.

"Coming now to the consideration by the Board of Hopper's second allegation that the Franklin application does not support the count, we are of the opinion that the Board violated Rule 258 in considering this matter. Of course, it has been conceded that this question, whether Franklin's application discloses 'support means formed of a low density, nonmetallic material having a relatively high volume weight ratio,' was not raised during the motion period. Also, the question is clearly one which Rule 258 bars a party from raising for the first time at final hearing in the absence of an adequate excuse for not raising it by motion. Since appellee did not raise it at the proper time and did not present an adequate excuse, the Board should not have considered it at final hearing. *Anderson* v. *Walch*, 33 CCPA 774, 152 F.2d 975, 68 USPQ 215."

3. SAME—SAME—SAME—DISSOLUTION SUA SPONTE.

"Without considering the merits of the decisions which hold that in proper cases the Board *sua sponte* can dissolve an interference proceeding for the reason that one party clearly has no right to make the claim, this situation does not involve facts by which that principle could be invoked. First of all, Hopper brought this matter to the attention of the Board by inserting it in the brief sumbitted to that tribunal for final hearing. Therefore it obviously was not a *sua sponte* action of the Board. In fact, the Board, in discussing the question, specifically stated that 'this additional ground for dissolution *raised by Hopper* will be considered by us.' * * * Second, as we understand from the argument made by Hopper in his brief, the propriety of such *sua sponte* action is based on it being '*clear* that the party had no right to make the claim forming the count of the interference.' * * * Although we will not decide whether Franklin's application supports the claim language, suffice it to say that the facts here do not warrant the invocation of that principle of law. It is not that clear to us that Franklin cannot support the particular limitation in the count."

4. SAME—SAME—SAME—RULE 258.

"The Board seems to predicate its right to consider this matter on the fact that Franklin did not object to it at final hearing or in his reply brief. We do not believe that the Board has authority to contravene Rule 258 in this case merely because of the failure to object to such contravention at the time the new issue was first raised."

APPEAL from the Patent Office. Interference No. 88,957.

REVERSED.

T. Hayward Brown, *H. L. Godfrey*, *Michael W. Werth* for appellant.

George F. Smyth, *Smyth, Roston & Pavitt*, *Richard P. Schulze* and *John J. Byrne* for appellee.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, SMITH, and ALMOND, Jr., *Associate Judges*

MARTIN, *J.*, delivered the opinion of the court.

This appeal is from the decision of the Patent Office Board of Patent Interferences in Interference No. 88,957 involving Franklin application Serial No. 559,496, filed January 16, 1956, and Hopper application Serial No. 555,858, filed December 28, 1955.

The interference involves a single count which reads:

An aerial tow target, comprising: a hollow, streamlined, elongate body member having a low-drag aerodynamic configuration, said body member being formed of a thin walled body shell, the tenuous walls of which are formed of a nonmetallic material having a low resistance to penetration by objects making impact therewith; a plurality of sheets of metallic foil; support means formed of a low density, nonmetallic material having a relatively high volume weight ratio for mounting the plurality of said sheets in at least three normally intersecting planes, said body shell being mounted about said support means; means bonding the internal contacting surfaces of said body shell to said support means, whereby the latter internally reinforces the body member; and means carried by said body shell for attaching the body member to a towline for tow by a towing aircraft.

The applications each disclose an aerial tow target composed of a streamlined, radar-permeable body shell containing a system of corner reflectors; the reflector system being so constructed as to reinforce the body shell. The aerial tow target is capable of being towed at relatively high speeds by jet aircraft and is used principally for training pilots of fighter or attack planes in the use of automatic fire control equipment. Such equipment is governed or controlled by automatic systems incorporating electronic tracking devices. In prior training programs, metallic tow targets were used since it was necessary to use a material which would reflect a radar beam. However, the malfunctioning of equipment and inexperience of pilots often gave rise to collisions between the aircraft and the metal tow target resulting in damage to or destruction of the aircraft and in some instances, death of the pilot. The aerial tow targets described in the Hopper and Franklin applications lessen the danger of a collision causing serious damage. Although the targets are designed to withstand the stresses caused by high speed towing, they are so light and frangible as to disintegrate if struck by aircraft.

The count did not originally appear in either application but was suggested by the Examiner for purposes of the interference. During the motion period, Hopper brought timely motions to (1) dissolve the interference on the ground that Franklin had no right to make the count, (2) declare an additional interference between three proposed counts of an earlier application of his, Serial No. 471,234, filed November 26, 1954, and the involved Franklin application, and (3) substitute his earlier application Serial No. 471,234, for his application Serial No. 555,858.

As the basis for his motion to dissolve, Hopper referred to that portion of the count which reads:

* * * means bonding the internal contacting surfaces of said body shell to said support means, * * *

and contended that "Franklin discloses only that his support means are *attached* to the shell." The Examiner denied that motion, stating:

Though Hopper does not cite authority for his position, reference to Webster's New Collegiate Dictionary, second edition, 1956, indicates that the verb *attach* means to *bind* * * *. Also, the transitive verb *bond* is therein defined * * * as to *bind*. Thus the words *bond* and *attach* are in fact sufficiently synonymous to establish Franklin's right to make the count.

The Examiner denied Hopper's motion to declare an additional interference, holding none of the proposed counts could be said to define an invention common to both Franklin and Hopper. Hopper's motion to substitute his application Serial No. 471,234 was denied on the ground that no support for two material limitations of the count could be found in the application Hopper proposed to substitute.

Those motions were decided by the Examiner as though unopposed by Franklin since Franklin did not appear at the oral hearing before the Examiner and did not file any briefs [1] in opposition to the motions until after that oral hearing.

Hopper renewed his motions, designated (1), (2) and (3) above, at final hearing before the Patent Office Board of Patent Interferences. The Board, citing *Josserand* v. *Taylor, Jr.*, 31 CCPA 709, 138 F.2d 58, 59 USPQ 140; *Scinta et al.* v. *Anderson*, 39 CCPA 790, 193 F.2d 1020, 92 USPQ 276, found motion (1) raises a matter ancillary to priority. It also found motion (3) involves a matter ancillary to priority so far as it relates to the right to rely on an earlier copending application. Motion (3), so far as it seeks substitution of the earlier application, and motion (2), were held not to involve matters ancillary to priority.

The Board also considered that, insofar as the record shows, the Hopper motion to dissolve appears to stand unopposed by Franklin. It stated:

* * * Despite the Primary Examiner's ruling that he did not consider Franklin's belated briefs, Franklin's main brief for final hearing is silent regarding the motion to dissolve. Likewise, in his reply brief Franklin has not commented on this motion to dissolve. Except for the arugment in the Franklin reply brief opposing the Hopper motion to substitute, the two Franklin briefs for final hearing are devoted primarily to the consideration of the parties' priority proofs. * * *

The Board held that Franklin does not have the right to make the count since his application does not support it.

Hopper also urged before the Board that Franklin cannot make the count for an additional reason which he admittedly did not raise below. It was urged that Franklin does not have adequate support in his application for the recitation of "support means formed of a low density, nonmetallic material having a relatively high volume weight ratio" in the count. In support of that contention, Hopper urged before the Board:

* * * the Primary Examiner took the position that the "light molded plywood, a frangible wood frame covered by a doped fabric, reinforced paper material, or a molded plastic" suggested by Franklin as materials for the body shell were just "ordinary lightweight materials." Franklin's application recites that the foundation for the radar reflecting surfaces is composed of a "frangible material" but the material of this foundation is not further identified.

Even if it was assumed that the foundation was formed of the same material as proposed for the body shell * * * of Franklin's target, it is not seen even then that the count can be read on the Franklin disclosure. This is so for the count requires the "support means," corresponding to Franklin's foundation, to

[1] On July 21, 1959, one day after the hearing before the Examiner, Franklin filed a motion for leave to file belated briefs containing an explanation purporting to account for the delay, and presented briefs opposing the motions 2 and 3. On July 30, 1959, Franklin filed a paper captioned "Reply Brief" to Hopper's motion to dissolve. The Examiner's failure to consider Franklin's briefs was not traversed by Franklin in view of the Examiner's denial of Hopper's motion to dissolve.

be formed "of a low density, non-metallic material having a relatively high volume-weight ratio."

The Board ruled that, "In the absence of any objection by Franklin at final hearing or in his reply brief, this additional ground for dissolution raised by Hopper will be considered by us," noting that the "low density * * * ratio" material of the count was discussed to some extent in Franklin's reply brief in connection with Franklin's conception and the Hopper motion to substitute.

Passing upon this new issue, the Board found Hopper's position to be well founded and agreed with him that the Franklin disclosure lacks support for the count on the additional ground. The Board pointed out that Hopper sought to differentiate between the materials he used for the shell and those for the support means, while that was not the case with Franklin. Having reached the conclusion that Franklin cannot make the count, the Board stated that there was no need to consider "other issues presented by counsel for the parties."

Franklin urges that the Examiner correctly found that his application supports the bonding limitation. Regarding the additional ground for dissolving the interference raised by Hopper before the Board for the first time, Franklin urges that it is not ancillary to priority and should not have been considered for the first time at the final hearing. He contends that Rule 258 [2] of the Rules of Practice of the Patent Office precludes consideration at final hearing of the new ground that Franklin cannot make the count. Further he points out that Hopper did not submit any showing of good cause why such a motion was not presented and prosecuted during the motion period.

With respect to Franklin making that part of the count "means bonding the internal contacting surfaces of said body shell to said support means," Hopper urges that Franklin's arguments ignore the well established rule that, to support a count in interference, an application must specifically disclose each express limitation of the count. It is said that under the broad meaning of the word "attach" as urged by Franklin, Franklin's body shell could be merely secured about the foundation to bring about the attaching of the foundation to the body shell, i.e. that the body shell be merely positioned about the edges of the elements forming the foundation.

As to the Board's consideration of that part of the count "support means formed of a low density, nonmetallic material having a relatively high volume weight ratio," Hopper further contends that even where a party to an interference does not bring a motion to dissolve on the ground that his opponent has no right to make the claim forming the issue count of the interference, the fact that such motion was not brought does not prevent the tribunals of the Patent Office from considering the question when it is clear that the party has no right to make the claim forming the count of the interference.

The case involves three questions: first, whether the Franklin patent application supports the limitation "means bonding the internal contacting surfaces of said body shell to said support means"; second, whether the Board was correct in considering the contention that

[2] 258. Matters considered in determining priority.—(a) In determining priority of invention, the Board of Patent Interferences will consider only priority of invention on the evidence submitted. Questions of patentability of a claim generally will not be considered in the decision on priority; and neither will the patentability of a claim to an opponent be considered, unless the nonpatentability of the claim to the opponent * * * relates to matters which have been determined to be ancillary to priority and must be considered, *but a party shall not be entitled to raise such nonpatentability unless he has duly presented and prosecuted a motion under Rule 232 for dissolution upon such ground or shows good reason why such a motion was not presented and prosecuted.* [Emphasis ours.]

Franklin does not support the term "support means formed of a low density, nonmetallic material having a relatively high volume weight ratio"; and third, the merits of the latter contention. If we find that the Board exceeded its authority in considering the second question, the third issue becomes irrelevant.

[1] As to the first question, we do find that the limitation "means bonding the internal contacting surface of said body shell to said support means" is supported by the Franklin application. It is perfectly clear that in stating that the radar reflector supports are "attached" to the shell, Franklin intended that by *some means* the supports would be made secure to the shell. Although we appreciate the significance of the precedents which require that, in interference cases "express limitations" in a count cannot be disregarded,[3] this rule should not be applied so as to allow specific words in a count to make it impossible to use other words to express the same feature in a competing application. We believe it is reasonable to conclude that one skilled in this art would think that "means bonding" and "attached," as used in this situation, for all practicable purposes, are synonymous.

There is nothing in the Hopper application which indicates that "means bonding" constitutes a narrow or restricted limitation. In fact, it seems to us that broad language has been used, in this instance having no special significance, to describe a simple but necessary characteristic of the construction of the tow target. The particular characteristic could have been expressed by the use of a variety of different words.

[2] Coming now to the consideration by the Board of Hopper's second allegation that the Franklin application does not support the count, we are of the opinion that the Board violated Rule 258 [4] in considering this matter. Of course, it has been conceded that this question, whether Franklin's application discloses "support means formed of a low density, nonmetallic material having a relatively high volume weight ratio," was not raised during the motion period. Also, the question is clearly one which Rule 258 bars a party from raising for the first time at final hearing in the absence of an adequate excuse for not raising it by motion. Since appellee did not raise it at the proper time and did not present an adequate excuse, the Board should not have considered it at final hearing. *Anderson* v. *Walch*, 33 CCPA 774, 152 F.2d 975, 68 USPQ 215.

[3] Without considering the merits of the decisions which hold that in proper cases the Board *sua sponte* can dissolve an interference proceeding for the reason that one party clearly has no right to make the claim,[5] this situation does not involve facts by which that principle could be invoked. First of all, Hopper brought this matter to the attention of the Board by inserting it in the brief submitted to that tribunal for final hearing. Therefore it obviously was not a *sua sponte* action of the Board. In fact, the Board, in discussing the question, specifically stated that "this additional ground for dissolution *raised by Hopper* will be considered by us." [Emphasis ours.] Second, as we understand from the argument made by Hopper in his brief, the propriety of such *sua sponte* action is based on it being "*clear* that

[3] In his brief, Hopper cites *Jepson* v. *Egly et al.*, 43 CCPA 858, 231 F.2d 947, 109 USPQ 354.
[4] See footnote 2.
[5] In his brief, Hopper cites *Eger* v. *Watson*, 26 CCPA 1411, 104 F.2d 953, 42 USPQ 157; *Heuberger* v. *Becker*, 27 CCPA 746, 107 F.2d 601, 43 USPQ 404; *Smith* v. *Foley* v. *Anderson* v. *Smith* (*Commissioner of Patents*), 1906 C.D. 210; and *Smith and Stadum* v. *Klemperer* (*Patent Office Board of Interference Examiners*), 103 USPQ 275.

the party had no right to make the claim forming the count of the interference." [Emphasis ours.] Although we will not decide whether Franklin's application supports the claim language, suffice it to say that the facts here do not warrant the invocation of that principle of law. It is not that clear to us that Franklin cannot support the particular limitation in the count.

[4] The Board seems to predicate its right to consider this matter on the fact that Franklin did not object to it at final hearing or in his reply brief. We do not believe that the Board has authority to contravene Rule 258 in this case merely because of the failure to object to such contravention at the time the new issue was first raised. Franklin has now presented his objections before this court and after due consideration we agree with his position.

For the above reasons the decision of the Board of Patent Interferences is reversed.

REVERSED.

PATENT SUITS

Notices under 35 U.S.C. 290; Patent Act of 1952

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2,526,928, F. W. Borgerson, Grinding or abrasive machines of the disk type, filed Mar. 18, 1963, D.C. Md. (Baltimore), Doc. 14498, *Federal Laboratories, Inc. et al.* v. *Ordnance Products, Inc.*

2,586,958, W. R. Keller, Archery range with movable target, filed Mar. 14, 1963, D.C., W.D. Wash. (Seattle), Doc. 5823, *West Coast Engineering, Inc.* v. *World Wide Archery, Inc. et al.*

2,606,601, E. Saarinen, Chair having a backrest in the form of a shell-like body; **Des. 188,586**, same, Chair or the like, filed Mar. 19, 1963, D.C., M.D.N.C. (Greensboro), Doc. C–58–G–63, *Knoll Associates, Inc.* v. *Gregson Manufacturing Company, Inc.*

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2,686,453, H. L. Sanders et al., Emulsifiers and toxicants containing same, filed Mar. 18, 1963, D.C., E.D. La. (New Orleans), Doc. 13257, *Stepan Chemical Company* v. *Thompson-Hayward Chemical Company, Inc.*

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2,805,443. (See 2,754,539.)

2,822,040, E. J. Petrick et al., Locking device for a picture screen, filed Mar. 22, 1963, D.C., N.D. Ill. (Chicago), Doc. 63c483, *Knox Manufacturing Company, Inc.* v. *A. T. Gault & Co. et al.*

2,825,587, Wolfe and Kessler, Picket fence, filed Mar. 15, 1962, D.C., N.D. Ill. (Chicago), Doc. 62c641, *All Products Company* v. *Custom Construction Company, Inc. et al.* Consent decree; patent held valid and infringed; injunction granted July 11, 1962.

2,841,066, L. D. Hincher, Paper edge flaring machine filed Dec. 19, 1961, D.C., N.D. Ill. (Chicago), Doc. 61c2162, *Howard F. Hincher* v. *Kroeck Paper Box Co.* Stipulation and order dismissing cause with prejudice Jan. 16, 1963.

2,859,664, A. C. Polizzi, Coffee filtering retainers, filed Mar. 22, 1963, D.C., W.D.N.Y. (Buffalo), Doc. 10202, *King Coffee Filter Co., Inc. et al.* v. *Andex Corporation et al.*

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2,916,137, I. Victor, Method and apparatus for the recovery of solvent vapors, filed Jan. 23, 1961, D.C.N.J. (Newark), Doc. 38/61, *Vic Manufacturing Company Profit Sharing Trust* v. *Lane Cleaners, Inc. et al.* Consent decree Mar. 12, 1963.

2,927,342, L. E. Soderquist, Pneumatic tire shaping and vulcanizing press and mechanism for servicing same; **2,978,741**, same, Mechanism for holding and inflating tires after vulcanization, filed Mar. 21, 1963, D.C., N.D. Ohio (Cleveland), Doc. C–63/203, *The McNeil Machine & Engineering Company* v. *National Rubber Machinery Company.*

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3,013,917, Karlan and Silver, Dry transfer sheet and method, filed Mar. 12, 1963, D.C., E.D.N.Y. (Brooklyn), Doc. 63c251, *MacKarlan et al.* v. *Harvey Carlton etc.*

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Re. 25,261 (of 2,971,039), H. W. Westeren, Resistance heating element for vacuum furnaces and the like, filed Mar. 15, 1963, D.C.N.H. (Concord), Doc. 2380, *C. I. Hayes, Inc.* v. *Richard D. Brew & Company, Inc.*

Des. 188,586. (See 2,606,601.)

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REISSUES

JUNE 25, 1963

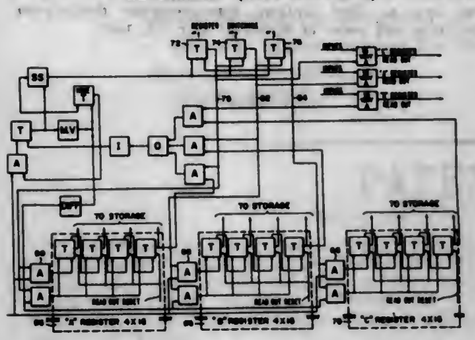
Matter enclosed in heavy brackets [ ] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates additions made by reissue.

25,405
SKEW ELIMINATION SYSTEM

Victor R. Witt, Los Gatos, Calif., and Peter I. Prentky, Wappingers Falls, and Erwin K. Dudek, Poughkeepsie, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York

Original No. 2,970,300, dated Jan. 31, 1961, Ser. No. 745,677, June 30, 1958. Application for reissue June 26, 1961, Ser. No. 124,274

11 Claims. (Cl. 340—174.1)



10. In a system for reading bits from a multiplicity of parallel channels wherein the bits come in blocks of the same pre-determined number of multi-bit characters and in which such blocks of characters are followed by a synchronizing bit in each channel, a first and second data storage register for each channel adapted to receive and register channel originated pulses, means for sending channel originated pulses into said first register in its respective channel, individual means for sensing when a synchronizing bit is shifted through said first register of each channel, means responsive to said sensing means when the same has sensed a synchronizing bit for sending said channel originated pulses into the second register of said channel, means operative when a synchronizing bit has been sensed for all said first registers for initiating a read out of all of said first registers, and means operative when a synchronizing bit has been sensed for all said second registers for initiating readout of all of said second registers.

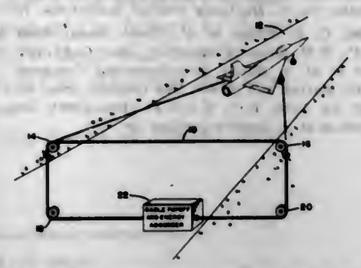
25,406
AIRCRAFT ARRESTING SYSTEM

John J. Byrne, Canton, Ohio, and Robert W. Cruger, Drexel Hill, Pa., assignors to E. W. Bliss Company, Canton, Ohio, a corporation of Delaware

Original No. 2,977,076, dated Mar. 28, 1961, Ser. No. 773,220, Nov. 12, 1958. Application for reissue July 20, 1962, Ser. No. 212,186

9 Claims. (Cl. 244—110)

1. In an aircraft arresting device including a runway pendant, a sheave on each side of said pendant, [an] energy absorber *means*, and pendant payout means, said energy absorber *means being* connected to said pendant payout means, the improvement comprising: a woven tape of synthetic fibers [connected at each end of said pendant to pass over said sheaves and to engage said payout means,] *placed in tension between each end of said pendant and said pendant payout means by which arrangement there is imposed on said tape a longitudinal stress wave caused by transverse impact of said aircraft against said pendant to actuate said payout means and said energy absorber means, short lengths of said tape extending from said sheaves to the ends of said pendant transverse to the direction of impact of said aircraft on said pendant, said short lengths of said tape serving to intercept and damp*



pendant destructive transverse waves set up in said pendant by said aircraft impact, wherein reflection of said transverse waves from said sheaves toward the point of impact in said pendant is retarded.

25,407
METHOD AND APPARATUS FOR DETONATING EXPLOSIVE DEVICES IN BORE HOLES

Maurice P. Lebourg, Houston, Tex., assignor, by mesne assignments, to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois

Original No. 2,873,675, dated Feb. 17, 1959, Ser. No. 362,214, June 17, 1953. Application for reissue Feb. 26, 1960, Ser. No. 11,396

5 Claims. (Cl. 166—35)



4. The method of perforating a well comprising, lowering a loaded perforating gun, with a primer cord for firing it, into a well and positioning the gun at the desired depth, then lowering an explosive charge until the charge is positioned adjacent a portion of the primer cord which forms a part of the perforating gun and which when ignited will fire the gun, and setting off the explosive charge to ignite the primer cord.

PLANT PATENTS

GRANTED JUNE 25, 1963

Illustrations for plant patents are usually in color and therefore it is not practicable to reproduce the drawing.

2,265
HYDRANGEA PLANT

Louis Fernand Cayeux, Le Havre, France, assignor to Roger Talbot, Saint-Symphorien, Indre-et-Loire, France

Filed Sept. 15, 1961, Ser. No. 138,536

Claims priority, application France Sept. 24, 1960

1 Claim. (Cl. Plt.—54)

A new and distinct variety of hydrangea plant, substantially as herein shown and described, characterized particularly as to novelty by the unique combination of stocky and medium tall habits of plant growth, thick and bright green foilage, a somewhat elongated leaf shape, with the leaves being serrated along approximately ⅔ of their upper edges, an early blooming habit, distinctive flowerheads composed of florets formed of petaloid sepals of round shape and having small bulges of irregular shape and uneven distribution over their upper surfaces, giving the impression of an embossed effect thereto, a distinctive and attractive satiny light pink general color tonality of the flowers and the ability to readily acquire a blue color, good disease and weather resistance, the ability to root easily from slips, good forming and keeping qualities of the flower buds, and good indoor lasting qualities of the fully open flowers.

2,266
HYDRANGEA PLANT

Louis Fernand Cayeux, Le Havre, France, assignor to Roger Talbot, Saint-Symphorien, Indre-et-Loire, France

Filed Sept. 26, 1961, Ser. No. 140,963

Claims priority, application France Oct. 3, 1960

1 Claim. (Cl. Plt.—54)

A new and distinct variety of hydrangea plant, substantially as herein shown and described, characterized particularly as to novelty by the unique combination of strong, stocky and medium tall habits of growth, thick and glossy green foliage, relatively round leaves which are serrated along approximately ¾ of their upper edges, an early blooming habit, well formed flower buds of good keeping qualities, flower-heads formed of florets having petaloid sepals of approximately diamond shape, a distinctive and attractive opaline lilac-pink general color tonality of the flowers and the ability to easily take on a blue coloration, the ability to root readily from slips, good weather and disease resistance, and good indoor behavior of blooming plants.

2,267
HYDRANGEA PLANT

Louis Fernand Cayeux, Le Havre, France, assignor to Roger Talbot, Saint-Symphorien, Indre-et-Loire, France

Filed Sept. 26, 1961, Ser. No. 140,964

Claims priority, application France Oct. 5, 1960

1 Claim. (Cl. Plt.—54)

A new and distinct variety of hydrangea plant, substantially as herein shown and described, characterized particularly as to novelty by the unique combination of a stocky and rather low habit of plant growth, thick and stocky wood, glossy and very dark green foliage, a leaf shape ranging between oval and round, with serrations beginning almost from the petiole and extending about the margins of the leaves, early flower buds which keep well, a relatively long blooming period extending late into hot weather and the ability of the blooms to withstand summer heat well, flowerheads formed of florets having petaloid sepals of a fan-like, round shape, a glossy and velvety dark red general color tonality of the flowers, with an ability to take on a blue coloration in a very dark blue shade, good weather and disease resistance, an ability to root easily from slips, and good behavior and very long lasting qualities when blooming indoors.

2,268
ROSE PLANT

Charles E. Schmalz, Greece, and Anthony S. Limpert, Rochester, N.Y.; said Limpert assignor to said Schmalz

Filed July 9, 1962, Ser. No. 208,656

1 Claim. (Cl. Plt.—2)

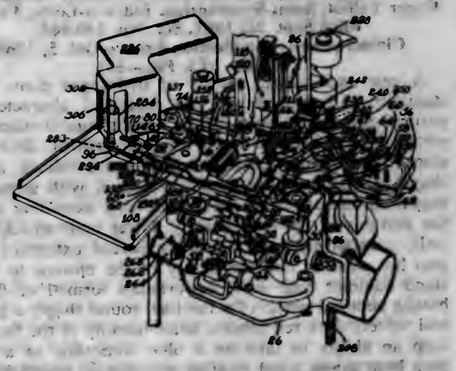
A new and distinct variety of rose plant, substantially as herein shown and described.

PATENTS

GRANTED JUNE 25, 1963

GENERAL AND MECHANICAL

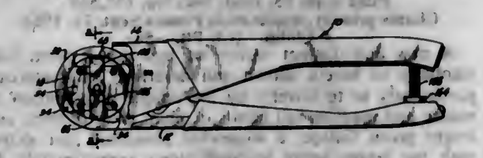
3,094,701
HEEL ATTACHING MACHINES
Herbert N. MacRae and Marcel A. Chaloux, both of Beverly, Mass., assignors to United Shoe Machinery Corporation, Boston, Mass., a corporation of New Jersey
Filed June 22, 1961, Ser. No. 118,974
13 Claims. (Cl. 1—97)



4. In a heel attaching machine, a nailing die having a fixed reference plane, a carrier slide comprising units for positioning and holding respectively two heel parts which are to be attached to a shoe, means for moving the carrier slide into positions in which the median planes of the respective units are successively moved into register with the fixed reference plane with the units arranged above and adjacent to the nailing die, said units having spring biased centralizing gages adapted to be engaged respectively by the rear lateral margins of the shoe parts presented to the units, said units having a common spring biased breast abutment which is adapted to engage the breasts of the heel parts presented to the units and to move said heel parts against the action of the spring biased centralizing gages whereby to position said heel breast widthwise in said units, and a back gage secured to the carrier slide and adapted to be engaged by the rear end of one of the heel parts to position this heel part lengthwise in its unit, said back gage operating through said one heel part being adapted to limit movement of the common abutment in accordance with the setting of the back gage whereby to position said other heel part lengthwise in its unit.

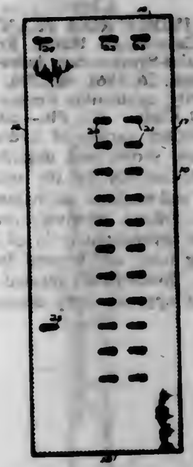
3,094,702
CRIMPING TOOL
George Ustin, Verona, and Paul A. Haucke, Rahway, N.J., assignors to Buchanan Electrical Products Corporation, Hillside, N.J., a corporation of New Jersey
Filed Mar. 27, 1961, Ser. No. 98,672
5 Claims. (Cl. 1—220)

1. A crimping tool comprising
(*a*) a dieholder having a workpiece receiving bore,
(*b*) at least one pair of opposed crimping dies reciprocably mounted in said dieholder,
(*c*) actuating means for advancing and retracting said dies toward and from said workpiece receiving bore, and
(*d*) floating locator means positioned in said bore having an opening therein in alignment with said work-



piece receiving bore adapted to receive and position a workpiece in said bore.

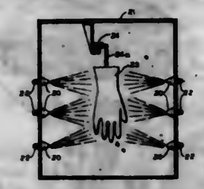
3,094,703
SEALING FLAPS FOR GARMENT OPENINGS
Theodore L. Bailey, Natick, Mass., assignor to the United States of America as represented by the Secretary of the Army
Filed June 22, 1961, Ser. No. 120,889
12 Claims. (Cl. 2—96)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. The combination with a garment having an opening defined by overlapping inner and outer garment free edges, at least one individual separable fastener element on each edge for securing said free edges together; of a flexible flap for sealing said opening, said flap being at least as long as said opening, said flap having an inner margin underlying said inner free edge, said flap having an integral middle portion which is reversely directed to extend between said inner and outer free edges and provide an inner bight receiving said inner free edge therein, said middle flap portion being formed with a hole therethrough in registry with said fastener elements, said flap having an integral outer margin which is reversely directed relative to said middle portion to overlie said outer free edge and provide an outer bight receiving said outer free edge therein, and means readily detachably securing said outer

flap margin to one of said separate fastener elements in said overlying relation to said outer free edge.

3,094,704
PLASTIC GLOVE
William H. Abildgaard, Sunnyvale, Calif., assignor to Plastomeric Products Corporation, San Jose, Calif., a Corporation of California
Continuation of application Ser. No. 676,351, Aug. 5, 1957. This application Sept. 29, 1960, Ser. No. 59,323
3 Claims. (Cl. 2—167)



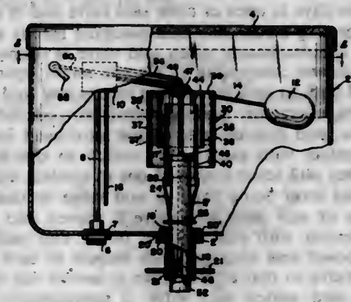
1. A seamless plastic glove adapted for use of physicians or surgeons comprising a skin-fitting form-molded plastic layer made from an elastomer having slow-to-recover characteristics after stretching, and having the configuration of the wearer's hand, and being sufficiently thin, soft and pliable so the textures of surfaces on which the physician or surgeon is working may be readily felt therethrough and so as not to hamper the performance of delicate work by the wearer, said form-molded plastic glove being impervious to moisture and also being highly resistant to tearing or rupturing, in which the resilience or stress energy which may be recovered from the deformed glove after stretching thereof in placing on the hand is expressed by the curves in FIG. 8, whereby the resilience or stress energy is sufficiently low to avoid blanching or interference with the capillary circulation of the skin.

3,094,705
METHOD FOR PRODUCING A PUCKER-FREE SEAM IN A GARMENT
John D. Reid and Terrence W. Fenner, New Orleans, and Julia M. Sloan, Metairie, La., assignors to the United States of America as represented by the Secretary of Agriculture
No Drawing. Filed Dec. 29, 1960, Ser. No. 79,468
9 Claims. (Cl. 2—243)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A method for producing a pucker-free seam in a garment comprising treating a cellulosic thread with a solution containing an essentially monomeric nitrogenous methylol resin and an acidic polymerization catalyst to impregnate the thread with the resin, drying the resin-impregnated thread at a temperature below the curing temperature of the resin, sewing the dried, resin-impregnated thread into a garment of the wash-wear type which has been previously resinified with a nitrogenous methylol resin, and pressing the thus-sewed garment in the area of the sewed thread at a temperature of about from 270° to 400° F. for about from 30 seconds to 4 hours, the longer time being employed with the lower temperature, to cure the thread in place in the garment, thereby to produce a finished garment characterized in that it is free from seam pucker after washing.

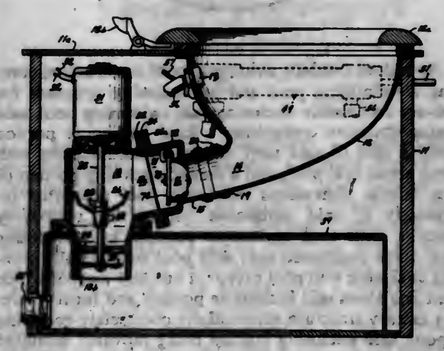
3,094,706
SIPHON APPARATUS FOR FLUSH TANKS
Paul E. Flint, Bluemont, Va., and Preston M. Hall, 9612 Merwood Lane, Silver Spring, Md.
Filed Feb. 17, 1960, Ser. No. 9,218
10 Claims. (Cl. 4—48)

1. In combination with a liquid receptacle having a bottom outlet opening open externally of said tank to atmosphere, a fluid flow outlet apparatus comprising a tubular fluid outlet conduit vertically disposed in said receptacle and having an open top and its lower end internally disposed to provide fluid communication with said receptacle outlet opening and externally connected in fluid tight relation thereto to prevent fluid flow from said receptacle other than through said conduit, an inverted cup-shaped element attached to said conduit for vertical reciprocating movement relative to said receptacle in a predetermined path between a normal elevated position and an operated depressed position and having a top end wall disposed in



spaced relation to the top end of said conduit to permit fluid to pass between the upper end of said conduit and the top end wall of said element, said element having a depending continuous side wall extending from said element end wall downwardly in spaced surrounding relation to the upper end portion of said conduit to define a flow passage with the exterior of said conduit, manually actuatable means for actuating said element from its normal toward its operated position, and means in said conduit operative at least during initiation of flow through said conduit to restrict the cross section of said conduit to assure formation of a water seal across said conduit during initiation of water flow through said conduit.

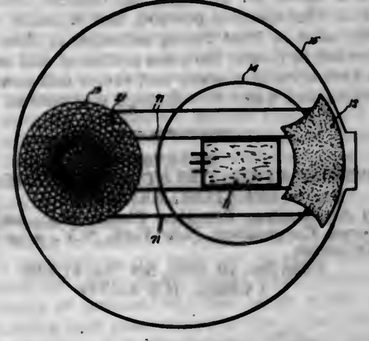
3,094,707
COMBINATION TOILET AND CHEMICAL TREATING FACILITY
Robert S. Fleming, Pompton Plains, N.J., assignor to Amerace Corporation, New York, N.Y., a corporation of Delaware
Filed Jan. 10, 1961, Ser. No. 81,848
1 Claim. (Cl. 4—77)



A marine toilet comprising in a unitary structure, a toilet bowl provided with a bottom outlet, a macerating chamber communicating with said bowl via said bottom

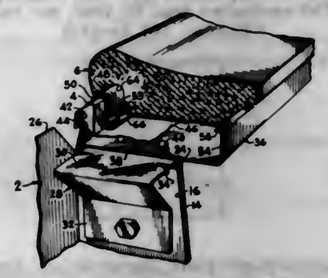
outlet, a holding chamber in fluid communication with the bottom of said macerating chamber, said holding chamber being provided with a chamber outlet, means for dispensing fluid to said bowl, macerating means provided within said macerating chamber, pumping means provided within said macerating chamber for moving fluid from said macerating chamber through the bottom thereof to said holding chamber and for discharging fluid from said holding chamber via said chamber outlet, a value operative in cooperation with said bottom outlet to open or shut off flow of fluid from said bowl via said bottom outlet to said macerating chamber and common means operative to open or close said valve and to operate said macerating means and said pumping means all substantially simultaneously when said valve is opened, said common means comprising an electric motor operatively connected both to said macerating means and said pumping means, a motor switch operatively connected to said motor, and a lever adapted for movement into and out of contact with said motor switch to operate said motor when said lever is moved out of contact with said switch, said lever being fixed to said valve so that upon movement of said lever said valve is moved into or out of engagement with said bottom outlet and said lever being disposed and arranged with respect to said switch and said valve so that as said lever is moved out of contact with said switch said valve is substantially simultaneously opened.

3,094,708
INDOOR-OUTDOOR SWIMMING POOL AND ENCLOSURE THEREFOR
Alfred Caldwell, 1351 W. Wilson Ave., Chicago 40, Ill.
Filed Feb. 7, 1958, Ser. No. 713,997
5 Claims. (Cl. 4—172)



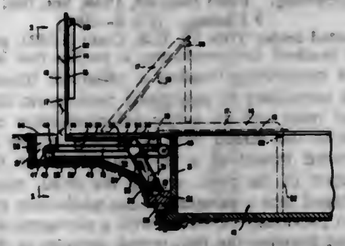
1. An indoor-outdoor swimming pool construction comprising a swimming pool and an enclosing structure for selectively completely enclosing said swimming pool, said enclosing structure comprising a fixed bathhouse portion adjacent a side of said pool and in communication with the area about said pool, and a domed enclosing portion of greater lateral dimensions than said pool supported independently of said bathhouse portion for removably connecting with said bathhouse portion, said enclosing portion when positioned over said pool substantially completely enclosing said pool except at one side thereof which is open and abuts said bathhouse portion and forms therewith a unitary structure substantially completely enclosing said pool, said enclosing portion being movably mounted for movement between said position connecting with said bathhouse portion and a position remote from said bathhouse portion and said pool, leaving said pool uncovered, and being capable of use as an enclosing building when remote from said pool and bathhouse portion.

3,094,709
SWIMMING POOL
Arthur Miccio, Trenton, N.J., and Robert E. West, Yardley, Pa., assignors to Cascade Industries, Incorporated, Edison, N.J., a corporation of New Jersey
Filed Jan. 29, 1962, Ser. No. 169,227
14 Claims. (Cl. 4—172)



1. A swimming pool embodying a wall having retaining means located adjacent the upper edge thereof and presenting an upwardly facing channel with inner and outer flanges, a liner for the pool formed of flexible sheet material arranged with its edge portion folded over said inner flange of the retaining means, a coping element overlying said retaining means and the edge portion of the liner, said coping element having a side portion engaging the outer flange and a second portion extending into the channel between the inner and outer flanges of the retaining means and cooperating with the inner flange to hold the edge portion of the liner in place.

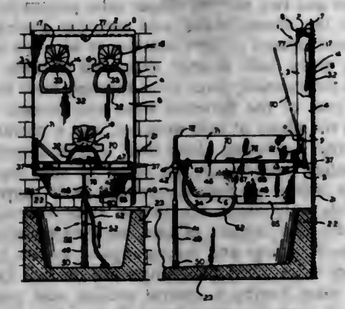
3,094,710
SWIMMING POOL SAFETY ENCLOSURE AND COVER
Le Roy Austin Hoke, Rte. 5, Frederick, Md.
Filed Aug. 13, 1962, Ser. No. 216,463
11 Claims. (Cl. 4—172)



1. A swimming pool safety enclosure and cover means comprising a cover section adapted when upright to form an integral part of a fence surrounding said pool and when lowered to cover at least a portion of the pool, a generally L-shaped carriage secured to and carrying the cover section including an arm which is substantially vertical and a second arm which is substantially horizontal when the cover section is upright, below ground well means adjacent one side of the pool receiving the second arm, a track mounted within the well means including a horizontal portion and a depending inclined portion, roller means on the second arm of the carriage engaging the track, a substantially horizontal endless flexible drive element attached to the second arm for propelling the carriage in opposite directions upon the track, power-

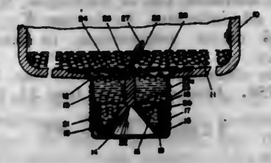
operated means connected with said flexible drive element to operate the same in opposite directions, and a roller diverter element pivoted to the track adjacent the juncture of the horizontal and inclined track portions and frictionally engaging the track and adapted to remain by friction in either of two adjusted positions, said roller means engageable with said diverter element during movement of the carriage in one direction for causing the roller means to enter the inclined track portion and said roller means again engaging the diverter element during reverse movement of the carriage to reset the diverter element to an original position thereof, said cover section swinging downwardly into covering relation with the pool and being substantially horizontal when the roller means is near the bottom of the inclined track portion.

3,094,711
PORTABLE BABY'S BATH AND CABINET UNIT
Frances M. Kentes, 2236 N. 39th St., Milwaukee, Wis.
Filed Apr. 26, 1962, Ser. No. 190,390
1 Claim. (Cl. 4—176)



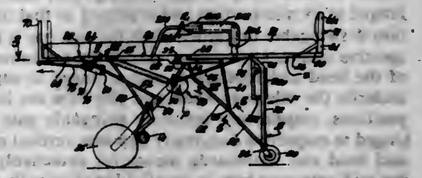
As a new article of manufacture, a portable baby's bath and cabinet, said cabinet having an open front, top wall, side walls, bottom wall and rear wall, said rear wall having supporting means for removably suspending said cabinet from the wall in a residence, said supporting means comprising three inverted T-like slots in said rear wall arranged in triangular relation with the base of the triangle adjacent and parallel to said top wall and the apex of the triangle adjacent said bottom wall, said supporting means also including three hangers detachably adherent to the wall of said residence, each slotted to receive the sides of each slot in said rear wall and, when adhering to said wall of said residence, disposed in a triangular relation corresponding to the triangular relation of said slots, whereby said cabinet may be freely mounted on or dismounted from said wall of said residence, said side walls each having adjacent said bottom wall an elongated aperture extending lengthwise of said side wall and toward said top wall and provided with a plurality of relatively spaced notches in the side thereof most remote from said rear wall; in combination with a baby's bath receivable in said cabinet through said open front and having at one end a pair of pivot pins each slidable in a corresponding slot in said side wall and receivable in either of said notches in said corresponding slot, and a longitudinally extensible leg pivotally mounted on the end of said bath opposite the first mentioned end of said bath, said leg comprising two relatively telescopic members and means for securing said members against relative movement in either of a plurality of selected positions, said last mentioned means comprising a slot extending longitudinally of the outer of said members and a pin secured to the inner of said members extending into and slidable in said slot in said outer member, at least one side of said slot in said outer member having a plurality of relatively spaced notches for selectively receiving said pin, whereby said bath may be supported in a horizontal position or concealed in said cabinet at the election of the operator, said top wall having latch means for retaining said bath in said cabinet and also having a retractable handle whereby said unit may be manually transported when removed from the wall of said residence, and a flexible drain hose connected with and beneath said bath, said hose being of sufficient length and including means for suspending the free end of the hose from the rim of said bath, thereby serving as means for retaining water in the tub, said hose being of sufficient length to prevent water from splashing while draining from the tub.

3,094,712
DRAIN PLUG
Virgil K. Rath, 112 S. Pearl St., Janesville, Wis.
Filed Oct. 12, 1961, Ser. No. 144,789
3 Claims. (Cl. 4—295)



1. A drain plug for use in a vessel adapted to contain a quantity of liquid and having a drain fitting with downwardly extending sides comprising, a substantially entirely entirely frustoconical hollow outer body having a wall of a thin, resilient and expansible material, the upper end of said wall being of greater circumference than the base of said wall, sealing means extending around the outer periphery of said wall near said upper end for contacting the downwardly extending sides of said drain fitting when said plug is placed within said fitting, and an integral center section having an upper surface extending inwardly and upwardly from said base of said wall within said outer body so as to form a handle for removal of said plug from said drain.

3,094,713
INVALID'S BED
Charles W. Wise, 511 Eastwood, Santa Ana, Calif.
Filed Nov. 19, 1959, Ser. No. 854,152
8 Claims. (Cl. 5—67)



1. An invalid's bed, comprising: a body-supporting member having a back portion, a buttock portion and a leg portion, said portions having their adjoined ends pivotally interconnected so as to be movable between a horizontally aligned normal position wherein an invalid may be supported in a supine condition and an alternate angularly displaced chair-defining position wherein said invalid is adapted to be supported in a seated condition; a pair of transversely aligned upright columns having their upper ends pivotally attached to the intermediate portion of said back portions; a pair of forwardly and downwardly extending struts; a cross-member extending transversely between the upper end of said struts; lever means movably interconnecting said columns, said buttock and back portions and the upper ends of said struts;

second lever means movably interconnecting the intermediate portions of said struts and said body-supported member at the point of pivotal interconnection of said buttock and leg portions; third lever means movably interconnecting the intermediate portion of said struts with the intermediate portion of said leg portion; a pusher member pivotally connected to said body-supporting member at the point of pivotal interconnection of the leg and buttock portions thereof, said pusher member extending downwardly and rearwardly; and drive means carried by said cross-member so as to receive said pusher member whereby actuation of said drive means will effect bodily movement of said pusher member away from said drive means so as to effect concurrent movement of said body-supporting member from said horizontally aligned position to said alternate angularly displaced position.

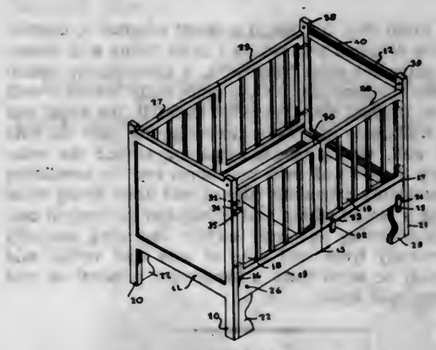
3,094,714

FOLDING BABY CRIB

Keene Lutes, deceased, late of Lexington, Ky., by Joseph C. Lewis, administrator, Lexington, Ky., assignor, by direct and mesne assignments, to Russell Yealey, Walton, Ky.

Substitute for abandoned application Ser. No. 177,722, Aug. 4, 1950. This application June 23, 1960, Ser. No. 38,388

3 Claims. (Cl. 5—99)



1. In a folding bed, the combination of head and footboards, a pair of parallel foldable side bars pivotally connected at their ends to said boards, each side bar being hinged at its mid-portion and arranged so that its mid-portion is swingable upwardly when the side bar is folded, respective abutment members carried by the lower portions of the head and footboards and arranged to supportingly underlie the side bars when said side bars are in unfolded positions, respectively inwardly swingable gate members hinged to respective diagonally opposite vertical margins of said head and footboards, means for detachably connecting said gate members in parallel longitudinally extending positions to the remaining diagonally opposite vertical margins of said head and footboards, the inside surfaces of the top marginal portions of the head and footboards being respectively formed with horizontal opposing grooves, a flat cover member arranged to overlie the hinged edges of the side bars when said side bars have been folded upwardly and the head and footboards have been moved near each other, respective opposing longitudinal marginal projections on said cover member fitting into the respective horizontal grooves of the head and footboards, inter-engageable releasable latch means arranged to connect the folded segments of the side bars to secure the side bars in folded positions, and additional releasable means adapted to connect the top portion of the headboard to the top portion of the footboard.

3,094,715

TUBULAR FRAME CONSTRUCTION FOR SPRING BEDS

Giancarlo Polleri, Prato, Florence, Italy, assignor to Ital-Bed Costruzione Letti ed Affini S.R.L., Pistoia, Italy

Filed Dec. 12, 1960, Ser. No. 75,383
Claims priority, application Italy Dec. 10, 1959
2 Claims. (Cl. 5—110)



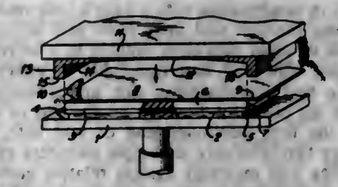
1. A bed frame construction, comprising an endless flat rigid rectangular tubular member having two parallel shorter sides and two parallel longer sides perpendicularly disposed to the shorter sides, said member having four arcuately bent tapered corners continuous with the shorter and longer sides, said shorter sides and corners being flattened to substantially oval form through their lengths, the major axes of the flattened sides and corners being disposed in the plane of said member, and a plurality of sinuous springs tensioned along their lengths disposed in axially parallel positions in the plane of said member, said springs being secured at opposite ends thereof to spaced points only along the longer sides thereof, the flattened sides and corners of said member resisting the tension in said springs and forces applied by the springs to the longer sides when the springs are loaded, each of the longer sides having a central section and two end sections, each central section being flattened to substantially oval form, each central section having two flat opposed faces disposed parallel to each other, the major axes of the flattened central sections being inclined outwardly upward and downwardly inward with respect to the horizontal plane of said member, the end sections of the longer sides being circular in cross-section, each end section being integrally joined at one end to a central section by a tapered transition section, each end section being integrally joined at its other end to a round end of one of the tapered corners, whereby the longer sides resist bending when strains are applied to the longer sides in both vertical and horizontal directions.

3,094,716

MOLDING OF SEAT CUSHIONS

Alex Friedman, 620 Prospect Place, Brooklyn 16, N.Y.

Filed June 30, 1960, Ser. No. 40,027
7 Claims. (Cl. 5—345)



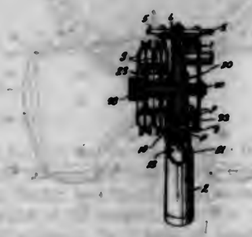
1. A method of making a cushion having a substantially rigid base comprising the steps of placing a cushioned pad on said rigid base, said pad being of substantial thickness throughout the area thereof, the edges of said cushioned pad being approximately in register with the edges of said base, placing a flexible cover on said cushioned pad, the edges of said cover extending beyond the edges of said pad sufficiently so that they overlap said base, applying adhesive to the edges of at least one of said cover and said base, and applying pressure uniformly to said cover around the entire periphery only of said pad, said pressure tightly stretching said cover over said pad, and bringing the edges of said cover into contact with the adhesive on said cover and base to bond said cover to said base.

3,094,717

SINKER APPLICATOR FOR FISHING LINES

Walter R. Gabbert, 21 S. Delaware, Wenatchee, Wash.

Filed Sept. 2, 1960, Ser. No. 53,792
17 Claims. (Cl. 7—14.1)



1. A device for applying lead sinkers to a fishing line comprising receiver means defining a tubular passage adapted to receive the sinkers and including means for propelling the sinkers through the passage, means for forming a slit in each sinker as it is propelled along the passage, and means adjacent said passage for thereafter crimping the sinker transverse the slit therein.

3,094,718

PROCESS OF TREATING FILAMENTS AND YARNS OF THERMOPLASTIC ADDITION POLYMERS

Stephen Bernard Robinson, Jr., Moorestown, N.J., assignor to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware

No Drawing. Filed Mar. 9, 1960, Ser. No. 13,731
14 Claims. (Cl. 8—155)

1. A process for chemically modifying a filamentous material formed of a thermoplastic linear addition polymer having an apparent second order transition temperature of 40° C. up to 200° C. which comprises the step of winding a yarn of such filamentous material into a compact bobbin, impregnating the bobbin with a liquid medium comprising an agent for modifying the polymer by chemical reaction, and then heating the impregnated bobbin to a temperature which is above the apparent second order transition temperature of the polymer and is at least 50° C. in order to effect chemical modification of the polymer in the fiber.

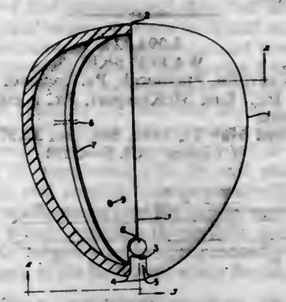
3,094,719

PLASTIC BUOYS

Sydney Nelson, 762 Vaughan Road, Toronto, Ontario, Canada

Filed Feb. 26, 1959, Ser. No. 795,807
1 Claim. (Cl. 9—8)

An ovoid plastic buoy having recessed anchoring means at the pole of minor amplitude, the pole of major amplitude surmounting said pole of minor amplitude when anchored to an object therebelow, said anchoring means being located at said pole of minor amplitude, and comprising a pair of spaced jaws including parallel walls having a gap therebetween, said walls receding into the interior of said buoy, an open sleeve being provided adjacent the base of said gap, the axis of said sleeve being parallel with said walls, and a set of inwardly projecting



ribs extending longitudinally within said body co-terminous at their upper ends, and substantially from one said pole to the other.

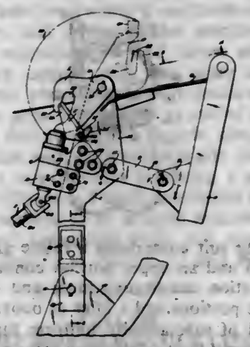
3,094,720

LIFE BOAT RELEASE GEAR

William F. Hickson, Westfield, N.J., assignor to Continental Copper & Steel Industries, Inc. (Welin Davit and Boat Division), Perth Amboy, N.J., a corporation of Delaware

Filed Nov. 5, 1957, Ser. No. 694,548
1 Claim. (Cl. 9—45)

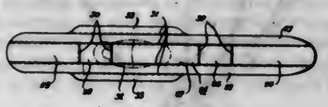
A lifeboat release gear comprising a lifeboat having a bow portion and a keel portion, a swinging, reversible falls-engaging hook having a bill portion and a tail portion mounted on each of said bow and keel portions of said lifeboat, two rotatably mounted open-sided cup members, one of said open-sided cup members engaging said tail portion of each of said hooks in one position and releasing said tail portion for pivotal movement when rotated 180° with respect to said one position, two short shaft members each having two ends, each of said short shaft members being fixed at one of its ends to one of said open-sided cups, two obliquely extending shaft mem-



bers each having two ends, one end of each of said obliquely extending shaft members being fixed to the other end of one of said short shaft members through a universal connection, a longitudinally extending shaft member having two ends, each end of said longitudinally extending shaft member being fixed to the other end of one of said obliquely extending shaft members through a universal connection, a vertically extending handle fixed to said longitudinally extending shaft member approximately midway between its ends, a double-bearing assembly rotatably supporting each of said short shaft members, each of said double-bearing assemblies consisting of an upper short needle bearing and a lower longer shaft bear-

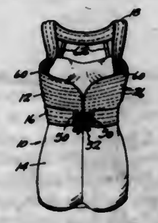
ing circumscribing, and extending the full length of, said short shaft member and being in abutting relationship with each other.

3,094,721
WATER SKIS
Cosimo V. Cravotta, Pittsburgh, Pa., assignor to Cravotta Brothers, Inc., East McKeesport, Pa., a corporation of Pennsylvania
Filed May 27, 1960, Ser. No. 32,374
1 Claim. (Cl. 9—310)



A water ski, having a foot binder position thereon, comprising a longitudinally extending central section and two one-piece side binder members of single thickness on the outer sides of said central section forming lengthwise joints therewith, said central section being made up of relatively shorter pieces of wood of single thickness in front and back abutting relation forming cross joints, said cross joints being bonded together with serration joints, said lengthwise joints being bonded together, a side support member of single thickness on the outer side of each side binder member in lengthwise joint abutting relation therewith, said last-mentioned lengthwise joints being bonded together, said side support members being substantially parallel to the center line of said ski and having a length comprising a minor portion of the over all length of said ski, said support members further being generally athwart said foot binder position on said water ski, said side support members further being positioned with the underside thereof extending laterally outwardly and upwardly.

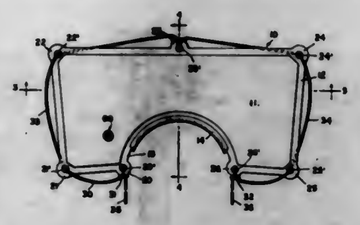
3,094,722
BATHING SUIT
Lovie E. Lerner, 2107 E. Jackson St., Elkhart, Ind.
Filed Oct. 27, 1960, Ser. No. 65,520
17 Claims. (Cl. 9—334)



2. A bathing suit comprising a fabric garment having a pant portion and an upper portion connected together, said upper portion constituting inner and outer garment defining fabric portions and a filler of buoyant unicellular sheet material of substantially uniform thickness, and a plurality of spaced lines of stitching securing together said inner and outer fabric portions and said unicellular material and arranged to camouflage the thickness of the filler when the garment is worn, at least some of said stitching passing through said unicellular material.

3,094,723
BUOYANT CUSHION DEVICE
Charles E. Manhart, 3133 SW. 25th Terrace, Miami, Fla.
Filed Mar. 26, 1959, Ser. No. 802,067
3 Claims. (Cl. 9—337)

1. A buoyant cushion designed to partially encircle the human neck and rest on the shoulders, said cushion comprising a substantially flat, hollow and air tight body characterized by a longitudinal rear border joining transverse materially shorter end borders and a longitudinal front border defined by a central inwardly curving, substantially semi-circular open neck receiving recess between and having opposite ends each joining longitudinally extending short substantially straight portions, said body including a major inflatable portion and a bordering encircling flange portion, the body being formed in two duplicate parts, each of said duplicate parts having an enlarged outwardly projecting ear section at each of several corners formed at points of joinder between said rear border and said end borders, between each end border and an end of a short straight front portion and between each of the ends of said recess and an end of a short straight front portion, there being also an outwardly projecting ear section on each duplicate part mid-



way between the ends of said longitudinal rear border, said ear sections each having an opening therethrough, the bordering and encircling flange portions and the ear sections of the duplicate parts being sealed together forming flanges and apertured ears of duplicate thickness of material, a harness means consisting of a cord passing doubled midway of its ends through the apertured ear which is located midway between the ends of said longitudinal rear border and tied to the latter ear and said cord then having its ends extending in opposite directions from the latter ear through the apertured ears at the two ends of an end border and then passing through and being tied in an apertured ear at an end of the recess, there being terminal lengths of said cord extending from the latter ears for tying together across and between the ends of said recess, and valve means in a wall of the body for inflating and deflating the body.

3,094,724
BUOYANT GARMENT
Lovie E. Lerner, 2107 E. Jackson St., Elkhart, Ind.
Filed Oct. 27, 1960, Ser. No. 65,519
6 Claims. (Cl. 9—338)



6. A bathing garment comprising a preformed contoured buoyant flexible body member, elongated shoulder straps projecting from the upper part of said body member, elongated straps projecting from opposite sides of said body member, side-strap-receiving loops at opposite sides of said body, and means slidably interconnecting the ends of said shoulder straps with said side straps, said side-strap-receiving loops being spaced below the side strap adjacent thereto said side straps being adapted for

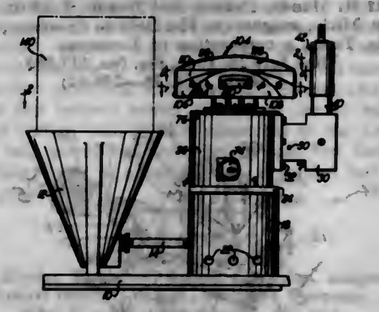
connection of their ends between said loops at the back of the wearer of the garment.

3,094,725
LIFE BELT
Clarence B. Martin, Jr., Greenville, S.C., assignor to Style-Crafters, Inc., Greenville, S.C., a corporation of South Carolina
Continuation of application Ser. No. 95,541, Mar. 14, 1961. This application Dec. 10, 1962, Ser. No. 244,544
3 Claims. (Cl. 9—340)



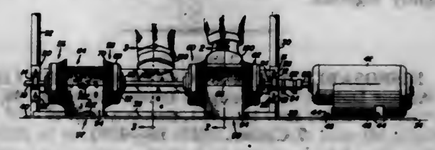
1. A life belt for use in water sports including, an elongated flexible buoyant element having substantial thickness and suitable width for floating the wearer when fastened about the waist of the wearer, a vertical rib defined within the buoyant element by a pair of longitudinally spaced aligned apertures adjacent each end of the buoyant element, a strap looped around each rib so that each strap forms a loop with a free strap portion, said free strap portions being disposed on one side of the buoyant element in alignment with each other on the side of the buoyant element remote from the body of the wearer when fastened about the waist of the wearer, and fastening means carried by the free strap portions, the ends of said buoyant element being in close proximity to each other when the fastening means are secured to position the belt about the waist of the wearer, whereby the fastening means are separated from the body of the wearer avoiding contact therewith.

3,094,726
APPARATUS FOR PREPARING A SHOE FOR LASTING
Jacob S. Kamberian, 133 Forest Ave., West Newton, Mass.
Original application Sept. 14, 1961, Ser. No. 138,135, now Patent No. 3,079,618, dated Mar. 5, 1963. Divided and this application June 13, 1962, Ser. No. 209,808
19 Claims. (Cl. 12—4.1)



3. A shoe treating mechanism comprising: shoe working means for performing a lasting operation that includes wiping a portion of the lasting margin of a shoe upper mounted on a last against a corresponding portion of a shoe insole located on the last bottom and adhesively uniting said lasting margin and insole portions; means for actuating the shoe working means to perform the lasting operation on a first last-mounted shoe that has been prepared by the application of steam to its said upper portion and the depositation of cement on its said insole portion; means for supporting a second last having a second upper mounted thereon and a second insole located on its bottom; a steam chamber for receiving the said portion of the second upper; means for supplying steam to said chamber; cement applying means mounted for movement into and out of engagement with the said portion of the second insole; and control means operatively connected to the shoe working means and the cement applying means to bring the cement applying means into and out of engagement with the said portion of the second insole during the performance of the lasting operation on the first shoe.

3,094,727
SHOE CLEANER
Emmett H. Osteen, Walsh, Colo.
Filed Feb. 23, 1961, Ser. No. 91,246
3 Claims. (Cl. 15—4)



1. A cleaning device comprising a rotatably mounted support member, a pair of motor driven brush assemblies, each having a circular shape, rotatably and coaxially fixed in axially spaced relation on said support member, said brush assemblies each including a sleeve having a flexible cleaning surface on its outer periphery, first and second cleaning discs larger in diameter than said sleeve fixed to said shaft adjacent each end of said sleeve, said first and second discs each having a flexible cleaning surface opposing one another and overlapping said first mentioned surface so as to form an annular groove adapted to receive and clean a piece of footwear, said first surface comprising a multitude of radially extending bristles and said other surfaces comprising a multitude of axially extending bristles, said device further comprising a fixed cleaning plate extending into and across said groove in positive rubbing contact with the outer ends of said bristles, a scraper plate fixed to said device so as to have a scraping edge generally parallel to and of the same elevation as said first mentioned flexible cleaning surface, said scraper plate extending substantially the full length of said support member thus providing a scraping edge between the axially spaced brush assemblies so as to allow said piece of footwear to be scraped without interference from said brush assemblies while still maintaining the same relative position in relation to said device.

3,094,728
LOCK-TIGHT BROOM HANDLE CONNECTOR AND SCRAPER
Oscar F. White, Chatham, N.Y., assignor of one-tenth to Jesse D. Langdon, East Rockaway, N.Y.
Filed Sept. 8, 1960, Ser. No. 54,767
3 Claims. (Cl. 15—111)

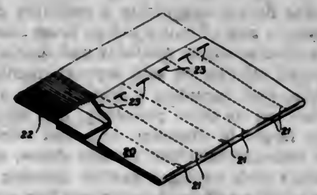
1. A device of the character described comprising broom handle connector means including in combination, flange means projecting laterally from handle attaching means provided by a socket, span means integral with and extended forwardly of said socket, scraper blade means bent to form a span portion interlapping and disposed parallel with said span means, adjustable bolt means extended thru the interlapping span means ex-

tended forwardly of said socket and the span portion of said scraper blade means, said flange means extended across and impinging a proximate edge of a broom back adjacent said socket, the back provided with sweeping elements for the broom, a portion of said scraper blade next to the bend terminating in a scraper edge and impinging a proximate border of that edge



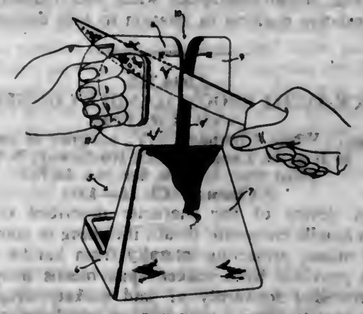
of said back forward of and opposite to the edge of said back proximate to said flange means, the portion of said scraper impinging the forward edge of said back and said flange means being interconnected with said span portion and straddling said back, whereby, said adjustable bolt means is effective to urge the components of the foregoing described organization together and lock same tightly together.

3,094,729
DISPOSABLE PAINT BRUSHES AND THE LIKE
Arthur Dalton, 100 Westport Drive, Pittsburgh 38, Pa.
Filed Jan. 16, 1961, Ser. No. 82,749
7 Claims. (Cl. 15—159)



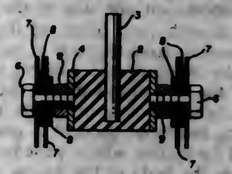
1. A brush structure comprising an elongated self-supporting foldable member folded lengthwise to form a pair of divergent sides and each side folded into the original fold to form a V-shaped handle unit and an elongated bristle member fixed into the opening in the handle unit, said handle unit and bristle member being perforated transversely of the length thereof into a multiplicity of readily separable handle members each carrying bristles.

3,094,730
KNIFE CLEANER
Paul Schwarz, 2963 N. 47th St., Milwaukee 10, Wis.
Filed Dec. 26, 1961, Ser. No. 161,939
3 Claims. (Cl. 15—210)



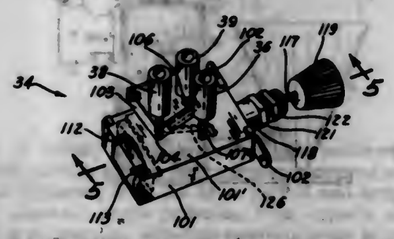
1. A knife cleaner comprising:
(A) a base member having a bottom adapted to rest upon a supporting surface, and having a stepped upper formation to provide
(1) a substantially horizontal upwardly facing surface, and
(2) an arm projecting upwardly from said surface near one side thereof, said arm providing a fixed jaw having a narrow elongated front face;
(B) a movable jaw member removably seated upon said upwardly facing substantially horizontal surface of the base member and also having a narrow elongated upright front face;
(C) a resilient wiper strip on each of said jaws projecting from the elongated front face thereof and extending lengthwise thereof;
(D) means providing a readily separable hinge connection between the movable jaw member and the base member comprising a finger on one of said members inserted in a socket in the other member, said hinge connection so positioning said members that the wipers on their front faces are normally in divergent opposing relationship; and
(E) handle means on the movable jaw member by which the knife cleaner may be held by one hand and the jaws pressed together as a knife blade is drawn between them with the other hand.

3,094,731
PAINT REMOVER
Theodore J. Owen, Akron, Ohio
(814 Mission Hill Road, Boynton Beach, Fla.)
Filed May 12, 1961, Ser. No. 109,623
3 Claims. (Cl. 15—236)



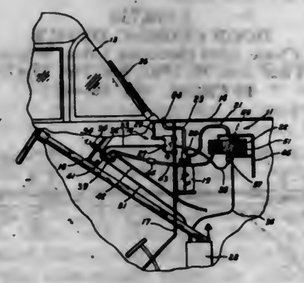
3. A paint remover which comprises a vertical shaft with means for rotating the same about its axis, a rubber bushing fastened to the bottom of the shaft and tightly enclosed in a piece of tubing, a plurality of axles radiating from the tubing and tightly attached thereto, and on each of said axles at least one toothed emery wheel dresser, each dresser being freely rotatable on its axis.

3,094,732
WINDSHIELD CLEANING SYSTEM
Robert R. Mandy, Detroit, and Donald Erkfritz, Clarkston, Mich., assignors to The Delman Company, Cookeville, Tenn., a corporation of Tennessee
Filed July 28, 1961, Ser. No. 127,583
4 Claims. (Cl. 15—250.02)



1. In a vehicle windshield clearing system including a wiper unit having a wiper motor and a fluid pressure operable control therefor, a washer unit having a fluid pump and a fluid pressure operable control therefor, and a source of subatmospheric pressure, a suction actuated control system for operating said wiper and washer units in variably timed relationship comprising, operator-actuated valve means including a housing having a chamber fluid connectable to said subatmospheric pressure source, said valve means operable to open and close said chamber to said source, a pair of fluid transmission lines each connected at one end to said chamber when open, one of said lines connected at the other end to said wiper motor control, and the other of said lines connected at its other end to said fluid pump control, and a pair of fluid bleed means each mounted in said housing and each connected to one of said lines, said bleed means providing a continuous bleed of atmospheric air into said lines during operation of said valve means to open said chamber, each bleed means adjustable whereby the relative bleeding of atmospheric air into said lines during operation of said valve means to open said chamber is selectively variable to provide thereby selected operating cycles of said washer and wiper units.

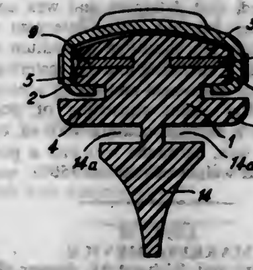
3,094,733
WINDSHIELD CLEARING SYSTEM
Robert R. Mandy, Detroit, Mich., assignor to The Delman Company, Cookeville, Tenn., a corporation of Tennessee
Filed Oct. 5, 1961, Ser. No. 143,108
10 Claims. (Cl. 15—250.02)



6. A windshield washing system comprising a fluid reservoir means, a fluid discharge nozzle fluid connected to said reservoir means, a source of subatmospheric pressure, a control valve fluid connected to said source for controlling the application of said pressure, and a vacuum actuated pump unit for supplying said fluid to said nozzle, said pump unit including a first resilient bellows fluid connected to said control valve and movably responsive to the application of said pressure therefrom, and a second resilient bellows fluid connected to said reservoir means and operable to withdraw fluid from said reservoir means and to expel said withdrawn fluid through said nozzle, said first bellows nested within said second bellows with the bottom wall thereof connected to the bottom wall of said second bellows, whereby said first and second bellows move as a unit between expanded and contracted positions.

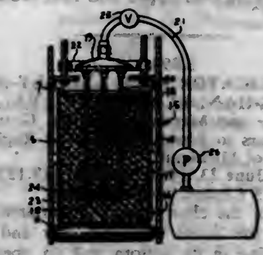
3,094,734
WINDSHIELD WIPER
Alfred Hoyler, Bühlertal, Baden, Germany, assignor to Robert Bosch G.m.b.H., Stuttgart, Germany
Filed Nov. 27, 1959, Ser. No. 855,732
Claims priority, application Germany Dec. 4, 1958
5 Claims. (Cl. 15—250.42)

1. In a windshield wiper, the combination which comprises an elongated wiper blade and claw means for holding said blade at spaced points along its length, said wiper blade having a rear beam portion, a protective beam portion on each side of said blade, and supporting beam means on each side of said blade, said supporting beam means being arranged intermediate said rear beam portion and the protecting beam portion on the corresponding side of said blade and being located at least at those points along the length of said blade at which said claw means engage said blade by encompassing said supporting beam means, said rear beam portion and each of said supporting beam means forming between themselves an



elongated groove having an open outer side and an elongated flat reinforcement arranged in each of said grooves, the width of each reinforcement being less than the depth of the groove within which it is arranged and each reinforcement being at least slightly spaced inwardly from the open side of the respective groove whereby physical contact between said claw means and said reinforcements is prevented, and each groove and the respective reinforcement being shorter than said blade whereby the end portions of sad blade are free of said reinforcements.

3,094,735
CLEANING DEVICE AND METHOD OF MAKING SAME
Patrick G. Hanlon, 1016 S. Coy, Kansas City 3, Kans.
Filed Aug. 9, 1961, Ser. No. 130,372
7 Claims. (Cl. 15—506)



1. A cleaning device comprising, a multi-cellular spongeous body of porous elastic material having communicating cells arranged therein and an outer surface of exposed cells, said body being of a size to be handled in a person's hand, a detergent and wax composition filling the cells in a distinct central portion of said spongeous body spaced from the outer surface thereof and the body cells between said distinct portion and the outer surface being substantially free of the detergent and wax composition and available to receive water in use, said detergent and wax composition being characterized by being in a liquid state at temperatures of more than 200°

F. and substantially non-flowing at temperatures below 140° F. whereby when used at temperatures wherein said composition is non-flowing water entering said spongeous body will contact the detergent and wax composition only in the cells at the periphery of said distinct portion presenting a limited area of the composition and thereby a limited rate of dissolving and use of said composition, said detergent and wax composition being a homogeneous mixture having water-insoluble materials and water-soluble materials which as dissolved with water forms a flowable emulsion moving to the outer surface of said body in response to deformation thereof for application by the spongeous body to the surface to be cleaned and waxed, said detergent and wax composition including an anionic surface active detergent of one of the group of sodium lauryl sulfate or sodium salt of N-methyloleyltaurine, a chelating and sequestering agent of one of the group of citric acid and acetyl acetone, a non-ionic surface active agent consisting of polyalkylene glycol ether, and a surface coating wax of one of the group of silicone wax, carnauba wax and a polyethylene glycol of molecular weight of 6000 to 7500.

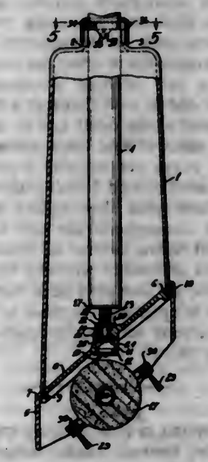
3,094,736
MARKING DEVICE
Rudolph H. Bunzl and Richard M. Berger, Richmond, Va., assignors to U.S. Filter Corporation, a corporation of New York
Filed Mar. 27, 1962, Ser. No. 183,344
15 Claims. (Cl. 15—563)



1. A marking device adapted to hold marking fluid and permit selective application thereof to a surface, said device comprising an elongate adsorbent body of continuous filaments randomly oriented primarily in a longitudinal direction and bonded at a plurality of spaced locations by a plasticizer for said filaments, and a liquid impervious overwrap surrounding at least substantially the entire periphery of said adsorbent body but terminating in spaced relation to one end thereof to expose said one end of said body for writing therewith, the terminal edges of said overwrap being overlapped and heat sealed to form a seam.

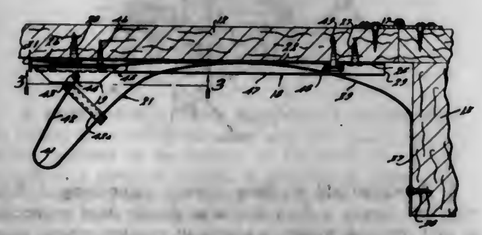
3,094,737
ROLLER APPLICATOR WITH AXIALLY-RECIPROCATING-HANDLE-OPERATED VALVE
Howard E. Baar and Martin R. Hughes, Grand Rapids, Mich., assignors to Bissell Inc., Grand Rapids, Mich., a corporation of Michigan
Filed June 23, 1961, Ser. No. 119,152
5 Claims. (Cl. 15—588)

1. A device of the class described comprising:
a receptacle for liquid detergent mix and having a valve opening in its bottom and an opening in its top generally aligned with said valve opening,
a rigid handle extending downwardly through said top opening and journalled therein for axial reciprocation relative to the receptacle,
a valve seat facing downwardly and encircling said valve opening,
a valve closing member disposed to engage said seat to close the valve opening and to move axially away from said seat to open the same,
said seat lying in a plane substantially normal to said valve opening,
rigid means carrying said valve member and extending upwardly loosely through said valve opening and rigidly secured to the lower end of said handle,
and spring means disposed between the bottom of said receptacle and the lower end of said handle and



biasing said handle upwardly to effect normal closing of said valve opening.

3,094,738
DOOR CLOSING DEVICE
Clyde H. Chase, 8868 Hendrick Drive, Brighton, Mich.
Filed Jan. 30, 1961, Ser. No. 85,675
13 Claims. (Cl. 16—49)

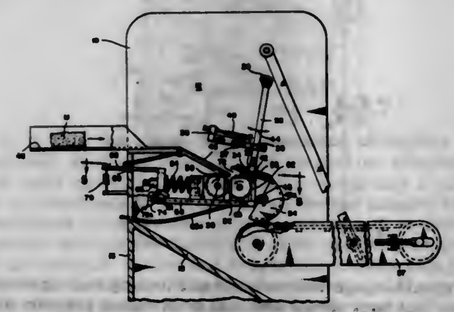


1. In a door closing device for a door member hinged along one edge to a door frame member, a track of elongated shape secured to one of said members at right angles to the hinge axis, an elongated leaf spring having an inner portion secured to the other of said members, an intermediate portion of arcuate shape convex toward said track, a second intermediate portion outwardly of said last-mentioned portion bent so as to be convex away from said track, a slide mounted in said track, and an outer spring portion extending toward said track and pivotally secured to said slide.

3,094,739
FISH SKINNING MACHINE
Monrad E. Eriksen, Seattle, Wash., assignor, by mesne assignments, of one-half to said Eriksen, and one-half to O. Clayton Helton, both of 5342 Ballard Ave. NW., Seattle, Wash.
Filed Feb. 15, 1960, Ser. No. 8,543
3 Claims. (Cl. 17—2)

1. A fish skinning machine, comprising: a main frame having two side members of open box form to form housings and vertically pivoted covers therefore; a power driven shaft revolvably mounted in bearings supported

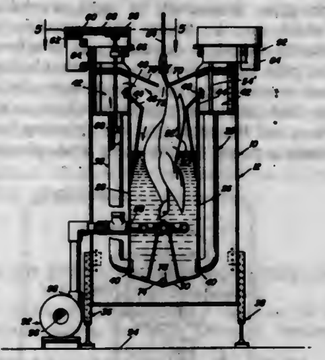
by said frame; a horizontally disposed driving roller fixedly secured on said power shaft and having an elongated gear tooth surface; a coacting driven roller having an elongated gear tooth surface driven by said driving roller, revolvably mounted in bearings resiliently supported and disposed in parallel, substantially horizontal relationship to said driving roller; said driven roller having spaced annular grooves in its surface and water jets disposed to direct water into said grooves; a knife assembly consisting of an upper knife, an under knife and a strike plate; a power driven reciprocating shaft journaled in the upper portion of said main frame; said upper knife having spaced apart lugs on its upper surface and a tubular sleeve revolvably positioned upon but adapted to move longitudinally with said reciprocating shaft positioned above said knife; downwardly directed struts fixedly se-



cured to said sleeve, pivotably connected to said lugs and adapted to give longitudinal movement to said upper knife; said under knife blade disposed in engagement with the underside of said upper knife and mounted for limited rotation on a shaft disposed below said knives and journaled in said frame side portions; guide means secured to said under knife adapted to engage the opposite ends of said upper knife and retain it in engagement with said under knife blade; said strike plate forming the downwardly directed delivery end of a feed table and terminating at a point substantially above the meeting line of said rollers; said under knife blade being sharpened at a bevel substantially parallel to the upper surface of said strike plate; said upper knife sharpened in the opposite direction so the under and upper knives may form a single common cutting edge.

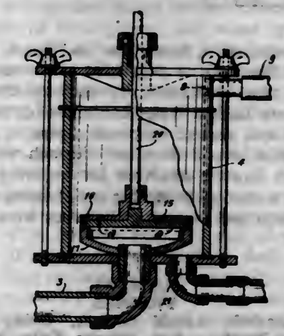
3,094,740
POULTRY SCALDING TANK WITH AIR AGITATING MEANS
Willard D. Reeves, Center, Tex., assignor of fifty percent to St. Elmo Cross, Center, Tex.
Filed July 25, 1961, Ser. No. 126,584
6 Claims. (Cl. 17—11.2)

1. In combination with a poultry scalding tank of the type including opposite side walls each having an interior and exterior face and in which a fowl is suspended in hot liquid disposed between said interior faces, means mounted on the exterior face of each of said side walls and having an inlet portion extending through said side walls into said liquid for recirculating said hot liquid disposed in said tank between the interior faces of said side walls by pumping the liquid between said interior faces of said side walls upwardly to a point above the liquid level in said tank and discharging the pumped liquid downwardly over the suspended fowl, liquid agitating means in addition to said liquid recirculating means including air pump means having discharge manifold means operatively associated therewith mounted in the lower portion of said tank between the interior faces of said opposite side walls above the inlet portions of said recirculating means but below the liquid level therein for bubbling air upwardly through said liquid against the



normal flow of circulating liquid to agitate the liquid in contact with said suspended fowl.

3,094,741
APPARATUS FOR MANUFACTURING PROPELLENT POWDER
Ralph L. Cook, Alton, Ill., and Eugene A. Andrew, St. Louis, Mo., assignors to Olin Mathieson Chemical Corporation, East Alton, Ill., a corporation of Virginia
Original application Oct. 4, 1954, Ser. No. 460,014, now Patent No. 3,014,246, dated Dec. 26, 1961. Divided and this application Dec. 20, 1961, Ser. No. 179,825
5 Claims. (Cl. 18—1)

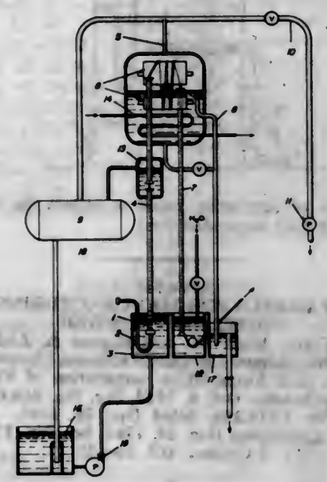


4. In an apparatus for graining and suspending lacquers of smokeless powder base, comprising a cylindrical vessel having a lacquer inlet positioned at the center of the bottom end of the vessel and a suspending liquor inlet located in the bottom end thereof, a plate across said lacquer inlet, said plate having a plurality of orifices therein through which lacquer may be extruded, and a rotatable blade riding on said plate and movable across said orifices to sever slugs from lacquer extruded through said orifices and a suspension outlet positioned tangentially at the upper end of said vessel.

3,094,742
APPARATUS FOR SPINNING VISCOSE FIBERS
Zbigniew Rybicki, Lodz Kopcinski-street 37; Mirosław Andrzej Kopa, Lodz Piotrkowska-street 111; Eugeniusz Wejnar, Lodz Tkacka-street 1a; Jan Klokot, Lodz Zbocze-street 35; and Zbigniew Wroclawski, Lodz Karolewska-street 1, all of Warsaw, Poland
Filed Nov. 14, 1960, Ser. No. 68,881
Claims priority, application Poland Nov. 18, 1959
4 Claims. (Cl. 18—8)

1. An apparatus for spinning viscose fibers comprising a first container containing a spinning bath, spinning

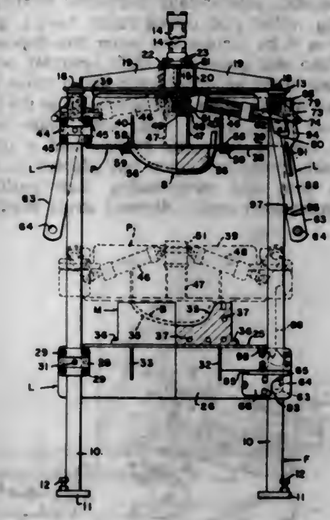
nozzles in said first container immersed in said spinning bath, a second container containing a degassing bath, a barometric pipe connected to said second container through which run the fibers, said degassing bath being hydrostatically closed, a degasifier, an overflow for said barometric pipe through which said circulating spinning bath passes to said degasifier, a hydrostatically closed circuit from said degasifier through which said spinning bath flows, a vat for receiving said spinning bath in said closed circuit, a pump for returning said spinning bath to



said first container, a heater for said fibers, rollers upon which said fibers to be degasified are wound, a second barometric pipe hydrostatically enclosed through which said fibers are lead, a water container for receiving said fibers from said second barometric pipe, a conduit connected to said second container through which said degassing bath flows, a chamber for receiving said degasifying bath, a suction pump for maintaining a vacuum in said apparatus and removing the gases from said second container.

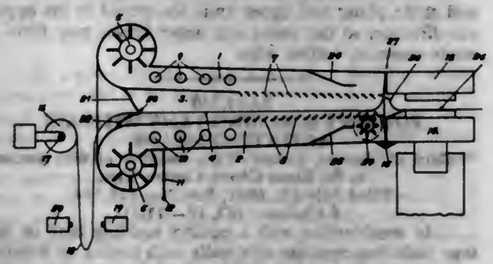
3,094,743
PRESSES
Willard Gmehlin Axtell, Denver, Colo., assignor to Shwayder Brothers, Inc., Denver, Colo., a corporation of Colorado
Filed Dec. 16, 1960, Ser. No. 76,387
7 Claims. (Cl. 18—16)

1. A press for molding concave resin and fibre glass shells and the like, comprising a frame having a plurality of upright columns; means interconnecting the tops of said columns; a lower platen fixedly attached to said upright columns at a lower position thereon; a mold mounted on said lower platen; an upper platen mounted on said columns for sliding movement therealong; means mounted on said connecting means for moving said upper platen upwardly and downwardly along said columns; means mounted on the underside of said upper platen for molding an article in cooperation with said mold; a shaft pivotally mounted on each of two opposite sides of said upper platen and having an eccentric portion pivotal with said shaft about the longitudinal axis of said shaft; at least one locking arm pivotally mounted on said eccentric portion of each shaft for movement inwardly and outwardly upon rotation of said shaft and provided at their lower ends with transversely disposed engaging means; means mounted on said upper platten for rotating said shafts to pivot said locking arms inwardly for locking and outwardly for unlocking; and hook means mounted on said lower platen for receiving said engaging means at the lower ends of said locking arms and for terminating the inward movement of said locking arms while said rotating means is still operative, whereby continued rotation of said shaft during locking causes said eccentric portions to



urge said engagement means of said locking arms upwardly into said hook means and said hook means prevents outward movement of said locking arms during initial unlocking rotation of said shaft until said rotation causes said eccentric portion to urge said engagement means downwardly and out of engagement with said hook means.

3,094,744
METHOD AND MEANS FOR STAMPING GRAMOPHONE RECORDS
Robert Albert Renoux, Paris, France, assignor to Societe d'Applications Industrielles Plastiques, Sartrouville, Seine-et-Oise, France, a company of France
Filed Oct. 28, 1958, Ser. No. 770,215
7 Claims. (Cl. 18—19)



1. In an arrangement for conditioning, conveying and pressing thin plastic film, comprising a supply reel of film off which the film is adapted to unwind, a press, a tunnel having a substantially horizontal rest position and respectively an input end near said supply reel and an output end near said press, means pivotally mounting said tunnel about a transverse axis, means whereby the pivotal movement of said tunnel effects the opening of a clearance space at the output end of the tunnel juxtaposed to said press, fan means streaming air through said tunnel for feeding the film through said tunnel to said press, means for conditioning and heating said air for bringing said film just prior to its entry into the press to a temperature adapted for pressing, means synchronized

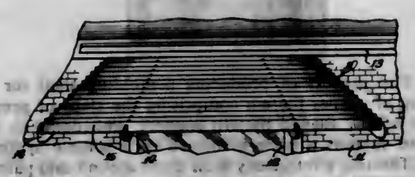
with the operation of said press for repeatedly rotating said tunnel about said axis for opening said clearance space whereby to direct outwardly of said clearance space said air stream to form an inverted loop in said film juxtaposed to the feed side of said press, and thereafter rotating said tunnel to close said clearance space whereby to direct the air stream to effect the collapse of the said inverted loop and the consequent feeding of said film rapidly into said press.

3,094,745
FLOOR CONSTRUCTION FOR BASEMENTLESS BUILDINGS AND THE LIKE
Gerald J. Stout, 262 E. Irvin Ave., State College, Pa.
Filed May 9, 1960, Ser. No. 27,956
4 Claims. (Cl. 20—6)



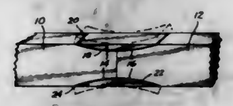
4. A truss for use in floor construction comprising a generally W-shaped body portion formed of relatively thin sheet material, said body portion comprising a pair of top substantially horizontal end flanges adapted for attachment to the bottom of a floor joist and an intermediate substantially horizontal plate portion arranged at the elevation of said end flanges and slidably engageable with the bottom of the joist and free to shift somewhat lengthwise of the joist to render the truss self-adjusting, substantially horizontal feet spaced below said end flanges and plate portion and intermediate the same and adapted to rest freely upon a base slab, diagonal legs extending between said feet and said end flanges and intermediate plate portion, bendable bight portions connecting said diagonal legs with said feet and said end flanges and intermediate plate portion for shifting said intermediate plate portion to compensate for a difference in elevation between said feet, upwardly directed side flanges on said diagonal legs to render the same rigid and said side flanges having corner portions projecting upwardly above said top end flanges and intermediate plate portion for centering floor joists which rest upon said top end flanges and plate portion.

3,094,746
AWNING STRUCTURE
Wallace H. Jobe, 606 Woodview, Elk Grove Village, Ill.
Filed Feb. 16, 1961, Ser. No. 89,858
13 Claims. (Cl. 20—57.5)



1. An awning structure comprising: a plurality of elongate support arms each having an upper surface and a plurality of parallel, transverse slots spaced longitudinally of the arm and opening through said upper surface and toward one end of the arm at an acute angle to the longitudinal centerline thereof; a connecting element at said one end of each arm securing the arms at an angle to the vertical between a pair of vertically spaced substantially horizontal planes with said slots vertical; and a plurality of resilient slats fitted in corresponding slots of said arms and extending longitudinally arcuately therebetween, the opposite ends of said slats terminating in a common plane substantially perpendicular to the longitudinal extent of said ends.

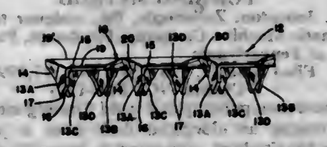
3,094,747
SPLICED STRUCTURAL PRODUCTS AND METHOD OF SPLICING
Robert W. Hess, Portland, Oreg., assignor to Georgia-Pacific Corporation, Portland, Oreg., a corporation of Georgia
Filed June 23, 1960, Ser. No. 38,374
5 Claims. (Cl. 20—92)



1. The spliced structural product comprising a pair of structural wood pieces arranged with their end edges abutting and their surface grains substantially aligned, and having their adjacent margins cut away on opposite sides of the pieces to form continuous shallow concave recesses including parts of both pieces, and wood splice pieces received one in each of the recesses with their face grain direction substantially aligned with the face grain direction of the structural pieces, and their edge grain direction conforming substantially to the arcuate contour of the concave recesses, the splice pieces overlying both structural pieces, the abutting surfaces of the splice pieces and structural pieces being glued together.

5. The method of making spliced structural products comprising forming shallow concave recesses in the adjacent margins of the opposite sides of a pair of wood structural pieces, arranging the pieces with their end edges abutting and their surface grains substantially aligned and the recesses registering with each other, seating a wood splice piece into each of the pair of recesses with the surface grain direction of the splice pieces substantially aligned with the surface grain of the structural pieces and the edge grain direction of the splice pieces conforming substantially to the arcuate contour of the concave recesses, and gluing the abutting surfaces of the splice pieces and the wood structural pieces.

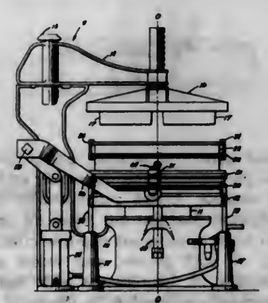
3,094,748
CORRUGATED TOOTHED CONNECTOR PLATE
Arthur Carol Sanford, Fort Lauderdale, Fla., assignor to Sanford Industries, Inc., a corporation of Florida
Filed Nov. 10, 1960, Ser. No. 68,530
10 Claims. (Cl. 20—92)



10. A connector plate for connecting abutting wood members, said plate having corrugations with ridges and valleys, said ridges and valleys being joined by sloping

sides, a plurality of teeth punched out of said plate in pairs with each tooth having at least one inclined edge, an inclined edge of each tooth of a pair of teeth being inclined in an opposite sense to an inclined edge of the other tooth, each said tooth being attached to the plate along a sloping side thereof with said tooth extending between a ridge and valley at least diagonally to the direction at said ridge and valley, whereby flattening the corrugations will tilt the teeth laterally edgewise, the depth of said corrugations before flattening being such that the tilting of the teeth due to flattening does not weaken the holding power of the teeth in the wood members.

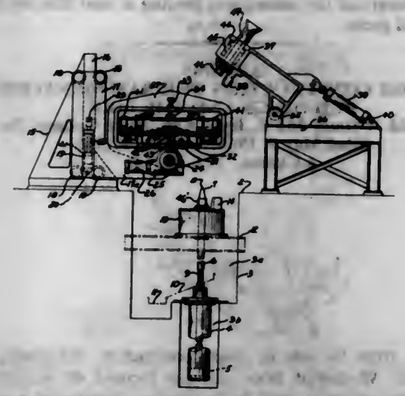
3,094,749
MOLDING MACHINE
Bernard C. Yearley, Shaker Heights, Ohio, Charles E. Norton, Highland Park, Ill., and Beauford E. Gavin, Indianapolis, Ind., assignors to National Castings Company, a corporation of Ohio
Filed May 9, 1960, Ser. No. 27,772
11 Claims. (Cl. 22—43)



1. Equipment for making sand molds comprising: a molding flask having upper and lower open ends, and a bottom surface defining an opening through said lower end; an invertible frame defining an aperture conforming generally to said flask opening; said frame having an upwardly-facing surface having an internal periphery defining said aperture greater than the internal periphery of said bottom surface defining said opening; means for vertically aligning the flask and the frame to dispose a perimetrically continuous portion of the bottom surface overhanging said aperture; rigid means underlying the frame for supporting the frame and the flask when resting on the frame; a liquid rigidly contained within said rigid means except for its upper surface; and resilient means supported along the entire upper periphery of the rigid means adapted for engaging the undersurface of a match-plate pattern supported by the frame in said aperture, said resilient means cooperating with the rigid means, when engaging a pattern, to maintain said liquid in direct hydraulic relation and complete conformity with the undersurface of said pattern.

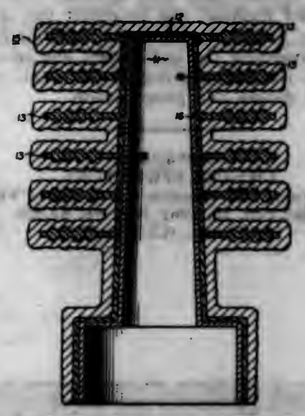
3,094,750
FLASK MANIPULATING AND MOLD FORMING METHOD
Loyal L. Johnston, Zelienople, Pa., assignor to Herman Pneumatic Machine Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed June 19, 1961, Ser. No. 117,999
2 Claims. (Cl. 22—193)

1. A flask manipulating and mold forming method comprising turning an elongated flask from a position in which its longitudinal dimension is generally horizontal to a position in which its longitudinal dimension is generally upright and setting the flask down above an upwardly movable former whose external transverse dimension is equal to the internal transverse dimension of the mold being formed, introducing finely divided mold forming material into the flask through the upper end thereof when the flask is disposed with its longitudinal dimension generally upright and moving the former rectilinearly upwardly only through the mold forming material in the



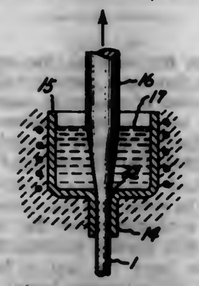
flask while maintaining the flask and former against relative rotation and by such single upward rectilinear movement of the former forming in the mold forming material an elongated cavity longitudinally of the flask and compacting the mold forming material to form a mold for casting.

3,094,751
METHOD OF FORM REMOVAL FROM PRECISION CASTING SHELLS
Robert A. Horton, Chesterland, Ohio, assignor to Precision Metalsmiths, Inc., Cleveland, Ohio, a corporation of Ohio
Filed Aug. 22, 1960, Ser. No. 51,072
10 Claims. (Cl. 22—196)



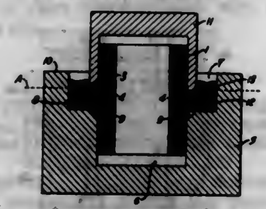
1. The process of producing a molding shell for the casting of shapes therein comprising the steps of preparing a hollow shaped pattern support, embedding to said pattern support a pattern formed of a soluble synthetic resin, forming a refractory shell mold around said pattern, removing said pattern support from said mold to expose a portion of said pattern, thereafter applying a liquid resin solvent to at least said exposed pattern portion until said pattern is at least partially dissolved and is softened to a condition wherein the softened pattern has a low degree of expansion force under heat of intensity necessary to volatilize the pattern, said solvent being applied while maintaining said pattern at a temperature below that which would cause said pattern to expand and crack said mold, and then heating said mold above the heat volatilization temperature of said pattern to remove any remaining pattern material from said mold.

3,094,752
DIP FORMING TUBING
Robert M. Parke, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
Filed Dec. 1, 1960, Ser. No. 73,069
1 Claim. (Cl. 22—203)



An improved method of forming tubular configurations of a given metal with an integral metal lining therein which comprises providing a molten metal bath of iron, providing an elongated core of a solid state metal taken from the class consisting of copper, silver, tin, aluminum, lead and nickel, passing the said core through the said bath in a dip forming process to provide a coating of iron on said core to form a composite body, thereafter passing said composite body through a temperature controlled duct, controlling the rate of cooling of said composite body in said duct to in turn vary the coating action between said iron and said core providing a lining for said iron, and thereafter heating said composite body for melting and removal of the remainder of said core resulting in an iron tube with a core metal lining.

3,094,753
METHOD OF MAKING A COMPOSITE METAL STRUCTURE
John F. Klement, Milwaukee, Wis., assignor to Ampco Metal, Inc., Milwaukee, Wis., a corporation of Wisconsin
Filed Feb. 4, 1960, Ser. No. 6,681
3 Claims. (Cl. 22—204)



1. A method of centrifugally casting an outer bronze member on a central core, comprising the steps of disposing the core having an outer surface to receive the member within a mold, heating the mold to a temperature in the range of 100° to 1000° F., rotating the mold about the axis of the core at a speed of 5 to 500 r.p.m., pouring the molten bronze at a temperature in the range of 1800° F. to 2400° F. into the rotating mold and into contact with said surface to form the member and continuing the pouring of said bronze around the entire circumference of the core above the upper extremity of said surface to form an annular riser, terminating the pouring when said riser has a weight in the range of 0.2 to 0.9 times the weight of the member, and solidifying the molten bronze to form an outer member integral with the core with said outer bronze member having a fine grain structure and having micro-constituents of fine size.

3,094,754
JEWELRY CLASP
Kurt Wayne, 580 5th Ave., New York 36, N.Y.
Filed Mar. 10, 1961, Ser. No. 94,754
2 Claims. (Cl. 24—116)



1. A jewelry clasp for a multi-stoned stringed article, said clasp comprising a rigid jaw member having an elongated base and curved spaced jaw elements, a swingable jaw member having an elongated base and two curved spaced jaw elements, a hinge connected with the bases of the two jaw members, a spring connected with said hinge for maintaining said jaw members in a closed position wherein the jaw elements of said rigid jaw member align with the jaw elements of said swingable jaw member, a tongue piece connected with the base of said swingable jaw member and extending outwardly from said swingable jaw member to constitute a lever for swinging said swingable jaw member outwardly relatively to said rigid jaw member, each of the jaw elements having a tip, the jaw elements being spaced in said aligned closed position, two aligned jaw elements having hook-shaped tips engaging each other in said closed position to enclose a space for the string of the article, the two other aligned jaw elements having flat tips contacting each other in said closed position, and a string-carrying eye carried by one of the last-mentioned jaw elements the two pairs of aligned jaw elements enclosing a space for a stone of the article.

3,094,755
ROPE AND CONNECTOR ASSEMBLY
Jean C. Casanave, New York, N.Y., assignor to Aldersvil Corp., a corporation of New York
Filed Sept. 5, 1961, Ser. No. 135,862
1 Claim. (Cl. 24—129)



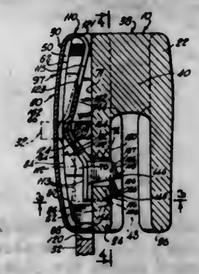
A rope connector adapted for repeated use comprising a rigid, substantially non-deformable connector body having spaced, substantially cylindrical, tubular sections of equal length and intermediate portions joining said tubular sections along the longitudinal portions thereof, said intermediate portions having a width less than the outside diameter of said tubular sections, each of said

tubular sections defining internal passageways, said body having a tapered portion at each end thereof, said tubular sections and said passageways being parallel and thereby giving said connector body a figure-eight shaped profile, whereby said connector is adapted to support sections of rope internally in said passageways, and is adapted to support sections of rope externally along the intermediate portions of said connector body between the outer walls of said tubular sections in crotch portions of said figure-eight shaped connector body.

3,094,756
AUTOMATIC LOCKING SLIDERS FOR SLIDE FASTENERS

Valentine Scheuerman, Mountainside, Westfield, N.J., assignor to Ernst Industries, Inc., Long Island City, N.Y., a corporation of New York

Filed Apr. 26, 1960, Ser. No. 24,770
3 Claims. (Cl. 24—205.14)

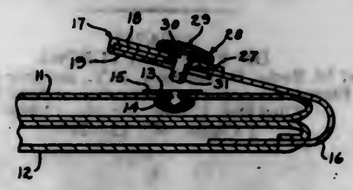


1. A self-locking slider for slide fasteners, comprising a slider body having passages therein for receiving and guiding a pair of fastener element stringers and for compressing the fastener elements to intermesh and form a single fastener chain, said passages including a single passage for the intermeshed chain, the single passage having a wall, said wall having a recess formed on the outside thereof and a pair of openings extending from the recess through the wall to said single passage, the openings being disposed to be positioned on opposite sides of the intermeshed portions of the elements and spaced from each other lengthwise of the body substantially the thickness of a single element, a single spring member carried in the recess, the spring member being formed of a single substantially flat strip of flexible material bent back upon itself to form upper and lower sections, the lower section being spaced from the bottom of the recess to provide an access space, the lower section having prongs at the side edges and adjacent the free end of said section, the prongs being substantially parallel to each other and being spaced lengthwise from each other a distance equal to the thickness of a single element and being spaced laterally from each other and positioned in said openings, a rigidifying ridge in the lower section between and substantially parallel to the prongs, said lower section having an opening therethrough beyond the ridge to impart increased flexibility to the section without interfering with the rigidification of the prong end of the section, each prong having an end edge, the prongs normally being biased by flexure of the spring to move through said openings to engage between pairs of intermeshed elements with the end edges in position to bear against the side faces of a pair of intermeshed elements, the two prongs being positioned to engage between pairs of elements spaced from each other longitudinally of the intermeshed elements, and a pull tab for the slider, the pull tab having an arm positioned in the access space to produce a bias contrary to that of the spring to move the prongs out of bearing position on application of a pulling force to the tab.

3,094,757
FASTENER MEANS

John T. Blake, Wolcott, Conn., assignor to Scovill Manufacturing Company, Waterbury, Conn., a corporation of Connecticut

Filed May 24, 1961, Ser. No. 112,291
1 Claim. (Cl. 24—265)

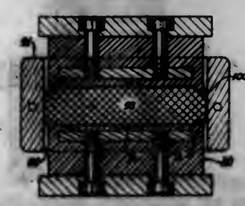


Fastener means for securing the end of a flexible strap or the like having a pierced hole therein to an adjacent wall portion of an article, said fastener means comprising a first snap fastener element spaced from the end of the strap adapted to have mating engagement with a second or complemental snap fastener element on said wall portion, a rigid one-piece protective clip for fitting about the end of the strap, said clip consisting of an outer flat section and a shorter inner flat section joined to each other by a fold portion positioned against the end of said strap, the inner flat section having a pair of spaced extensions, said extensions having spurs that embed into the strap material embraced between said outer flat section and extensions as a holding means, said outer flat section having a socket opening therein aligned with said strap opening, said socket opening having an inwardly drifted neck and a series of radial slits in said outer flat section and extending into said drifted neck, said first snap fastener element consisting of a stud member having an ornamental head portion adapted to seat against said outer flat section and a shank portion of larger diameter than said drifted neck, said stud member adapted to be inserted through said drifted neck and said strap opening whereby the stud member is held by said drifted neck, said stud member having a bulbous end for direct detachable engagement with said second snap fastener element.

3,094,758
APPARATUS AND PROCESS FOR PRESSING DETERGENTS

John Arthur Downie, Scarborough, Ontario, and William Boyd, Toronto, Ontario, Canada, assignors to Colgate-Palmolive Company, New York, N.Y., a corporation of Delaware

Filed Aug. 7, 1959, Ser. No. 832,279
Claims priority, application Canada Aug. 12, 1958
5 Claims. (Cl. 25—7)

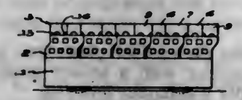


1. Apparatus for pressing detergent materials into cake form at high speed which comprises a die box, a pair of relatively movable opposed companion die members of soft, flexible, resilient, polymeric synthetic organic plastic, smaller than the die box cavity to allow a clearance between dies and die box as the dies enter the die box cavity and having pressing surfaces, the peripheral edge portions of the pressing surfaces of the dies being capable of expanding after contact with the detergent to be pressed due to the pressure exerted on the dies by the detergent as it resists compression, the dies each having embedded therein a rigid member so located with respect to the pressing face of it that a pressing force applied to the die will cause the die to press detergent material without objectionable distortion of the pressing face, but will allow the peripheral edge portion of the die to expand to the die box under pressure of the detergent on the pressing surface and thereby eliminate the clearance between die and die box at the pressing surface and prevent flashing of the detergent, and pressing means operatively connected with the dies and capable of rapidly and repeatedly imparting a pressing force to them.

3,094,759
TUNNEL KILN CAR TOP

Henry R. Herron, Vandalia, Mo., assignor to Harbison-Walker Refractories Company, Pittsburgh, Pa., a corporation of Pennsylvania

Filed Apr. 5, 1962, Ser. No. 185,473
6 Claims. (Cl. 25—142)



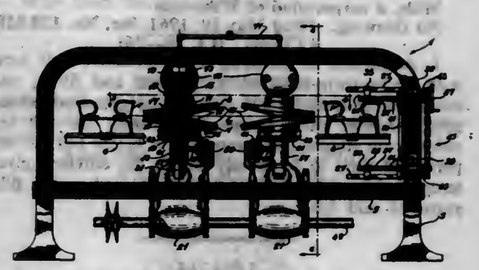
1. A tunnel kiln car top comprising a plurality of interlocking tiles disposed in parallel rows, all said tiles fabricated of the same refractory material, said tiles including three different shapes, the first shape being like a horizontal T having a stem and a cross bar, the second shape being like two of said first shape joined stem to stem to locate the cross bars at opposite ends of the tile, the last shape being like the second shape but with the ends of both cross bars omitted at one side of the stem, the stem side of each end of the cross bars forming an acute angle with the adjoining stem, the tiles in each row being arranged bar to bar with their stems in alignment, tiles of said last shape being in the two outer rows, tiles of said first and second shapes being in only the intermediate rows with said first shape only at row ends, and the space between the cross bars of each tile of the second and last shapes forming at the side of the tile a dovetail notch receiving and retaining the ends of a pair of cross bars of two tiles in an adjoining row, said dovetail notch being wider than a said pair of cross bars, whereby the tiles are interlocked in two directions horizontally at right angles to each other, the bottom of each tile being provided centrally of its stem with a downwardly opening recess extending throughout the length of the tile, all of said recesses in each row being in alignment with one another and in open communication with some of the joints between tiles.

3,094,760
WEFT SPREADING MACHINE

Arnold Pickup, 193 College St., Magog, Quebec, Canada

Filed Oct. 20, 1960, Ser. No. 63,834
4 Claims. (Cl. 26—54)

1. A weft spreading machine for stretching a travelling woven fabric comprising: at least two pairs of rotating circular disks, said pairs of discs being adjacent and extending across the width of the fabric; the disks of each pair having equiangular conical surfaces disposed in face-to-face relationship and pressed against one another from their apices to the circumferential edges thereof; said woven fabric adapted to move between said pairs of disks in a predetermined direction; upright supports on which the disks of each pair are centrally mounted for rotation; said supports having inclined tips the axes of which extend through the apices of the conical surfaces of said discs so as to allow said surfaces to contact one another along a radial portion lying in the horizontal plane of

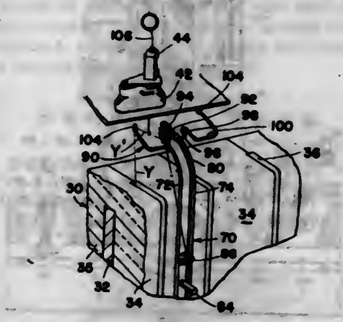


the woven fabric and means for rotating said supports about their axes so that the radial contacting portions of said pairs of disks made equal angles with said predetermined direction of travel of said fabric.

3,094,761
YARN GUIDING DEVICE

Chester J. Dudzik, Warwick, R.I., assignor to Leesona Corporation, Cranston, R.I., a corporation of Massachusetts

Filed Mar. 28, 1961, Ser. No. 98,811
1 Claim. (Cl. 28—62)



In a textile machine including a beater unit having at least one groove therein for receiving a strand of yarn the improvement comprising a guide disposed adjacent said groove, slidable means associated with said guide and movable parallel to said groove, and a U-shaped arm positioned on said slide and adapted to receive said strand of yarn and dispose it in a substantially horizontal plane, said arm aligned with said groove and adapted for cooperative movement with said sliding means to thread said strand of yarn in said groove and position said strand horizontally above said groove.

3,094,762
TETRAFLUOROETHYLENE RESIN TUBING

Norman Charles Jeckel, Glens Falls, N.Y., assignor to United States Catheter & Instrument Corporation, Glens Falls, N.Y., a corporation of New York

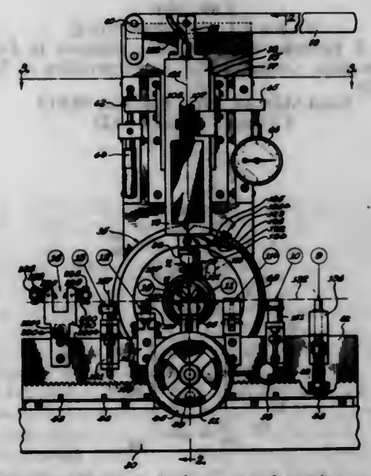
No Drawing. Filed Jan. 7, 1959, Ser. No. 785,315
5 Claims. (Cl. 28—72)

1. A process for reducing the porosity of a knitted tetrafluoroethylene blood vessel prosthesis having a tubular shape with a substantially circular cross-section comprising heating said prosthesis at a temperature range between 350° F. and immediately below the fusion point of tetrafluoroethylene.

3,094,763
METHOD OF FINISHING PAPERMAKERS' FELT AND THE FINISHED FELT
Louis R. Mizell, Montgomery County, and Charles G. Tewksbury, Silver Spring, Md., assignors to Appleton Mills, a corporation of Wisconsin
No Drawing. Filed May 10, 1961, Ser. No. 120,819
4 Claims. (Cl. 28—76)

1. A method of finishing a papermakers' felt woven with chloroform-resistant warp yarn and filling yarns consisting at least in part of ethylene glycol-terephthalic acid polyester fiber comprising treating the felt in a chloroform emulsion at temperatures below 140° F. for a period of time to selectively shrink the ethylene glycol-terephthalic acid polyester fiber contained in the filling yarns of said felt.

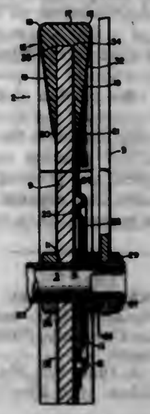
3,094,764
APPARATUS FOR MANUFACTURING SEMI-CONDUCTOR DEVICES
Robert G. Pohl, Chicago, Ill., assignor to The Rauland Corporation, a corporation of Illinois
Filed Apr. 3, 1957, Ser. No. 650,450
17 Claims. (Cl. 29—25.3)



1. Semi-conductor-device manufacturing apparatus comprising: a base; a plurality of processing stations for respectively performing sequential operations in the manufacture of said device; a standard rigid with respect to said base; means, supported by said standard, rotatable about a first predetermined axis and movable therealong between first and second positions for holding and applying heat to a body of semi-conductive material; means supported by said standard for feeding a wire along a second predetermined axis intersecting said body held by said rotatable means at said second position; and means on said base for moving said process stations along a predetermined path to successively dispose individual different ones of said stations at said second position intersected by said second predetermined axis.

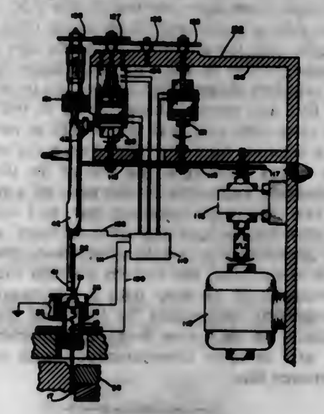
3,094,765
COATED RECTIFIERS AND PROCESS OF MAKING
Gerhard K. Willecke, Appleton, Wis., assignor to Miller Electric Manufacturing Company, Appleton, Wis., a corporation of Wisconsin
Filed Aug. 27, 1958, Ser. No. 757,564
4 Claims. (Cl. 29—25.3)

1. The method of fabricating rectifiers having a protective covering, which comprises forming the individual rectifier plates, covering the outer peripheral edges of the rectifier plates with a thick layer of protective ma-



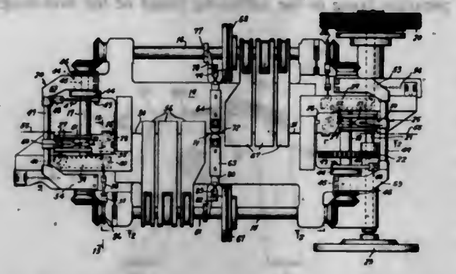
terial, assembling the rectifier plates into a rectifier, and covering the rectifier with a second protective material as a substantially continuous covering.

3,094,766
METHOD OF ASSEMBLING A SEMI-CONDUCTOR
John Hill, Malden, Mass., assignor to Clevite Corporation, Cleveland, Ohio, a corporation of Ohio
Filed Dec. 18, 1959, Ser. No. 860,597
4 Claims. (Cl. 29—25.3)



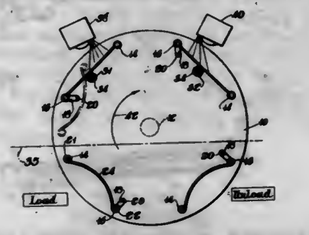
1. The method of assembling first and second semi-conductive sub-assembly devices which comprises the steps of holding said first sub-assembly device in a heater by means of gripping mechanism in engagement with the sides of the first device at a location above the bottom thereof, pushing the first device down within the heater, utilizing a portion of the heater as an index to limit the motion of the first device down within the heater thereby positively locating the first device in respect to said heater irrespective of deformities on the bottom of the first device thereafter indexing a second sub-assembly device into close proximity to said first device and energizing said heater to fuse together the said two sub-assembly devices to form a semi-conductor.

3,094,767
MACHINES FOR OPERATING ON SEPARATE LINES OF STOCK AND COMBINING PARTS MADE FROM THE SEPARATE LINES OF STOCK
Eric Grimm, East Orange, N.J., assignor, by mesne assignments, to Associated Patentees, Inc., East Orange, N.J., a corporation of New Jersey
Filed Aug. 16, 1961, Ser. No. 131,916
4 Claims. (Cl. 29—33)



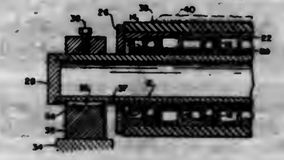
1. A machine for making companion shaped parts from separate lines of strip stock and for assembling and fastening the parts thus made into a unitary article, comprising
an elongated rectangular machine tool bed,
cam shafts geared together positioned at the front, back and opposite ends of said bed,
first and second slide feeds positioned at opposite ends of said bed,
first and second forming tool means positioned inwardly of said slide feed means,
first and second cutoff means positioned inwardly of said first and second forming means,
and assembling means positioned midway between said first and second cutoff means,
said first slide feed operated by the cam shaft at one end of the bed for intermittently advancing a first strip of stock, step by step, into that end of the machine,
said first forming tool means positioned inwardly of said first slide means on the bed in line with the strip stock advanced by said first slide feed for forming the strip material into a predetermined shape,
first cutoff means positioned inwardly of the first forming tool means for cutting off individually formed shapes from the strip material after it passes the forming means,
said first forming tool means and said first cutting means being operated by the cam shaft at the back of said machine,
said second slide feed means operated by the cam shaft at the opposite end of the bed for intermittently advancing a second strip of stock, step by step, into said opposite end of the machine,
said second forming tool means positioned inwardly of said second slide feed means on the bed in line with the strip stock advanced by said first slide feed for forming the strip material into a companion shape to match said first-mentioned formed shape,
second cutoff means positioned inwardly of the second forming tool means for cutting off individually formed shapes from the strip at the inner end of said second-mentioned strip material,
said second forming and second cutting means being operated by the cam shaft at the front of said machine,
assembly means, said assembly means including means for assembling, holding in registered relation and fastening said first-mentioned and companion cut shapes together to form a unitary article while disposed in said assembly means,
said first and second slide feeds cooperating to position said first-mentioned cut shape and said matching cut shape into cooperatively registered relation within said assembly means,
said assembly means being driven from said cam shafts at the front and back of the bed.

3,094,768
SPRING PEENING
Charles P. Croft, Hagerstown, Md., assignor to Pangborn Corporation, Hagerstown, Md., a corporation of Maryland
Filed Mar. 29, 1961, Ser. No. 99,107
4 Claims. (Cl. 29—90)



1. A spring peening apparatus comprising a conveyor, securing means on the conveyor for holding a spring in unstressed condition, deflector means positioned adjacent the path of travel of said conveyor for stressing the spring as it is moved into contact with said deflecting means by the conveyor, peening means positioned adjacent the path of travel of said conveyor and also said deflecting means for projecting peening particles against said spring as it is deflected, and means for moving said conveyor to, past, and beyond said deflector means.

3,094,769
TABLE ROLL
John D. Robertson, Taunton, Mass., assignor to Mount Hope Machinery Company, Taunton, Mass., a corporation of Massachusetts
Filed June 12, 1961, Ser. No. 116,576
7 Claims. (Cl. 29—116)

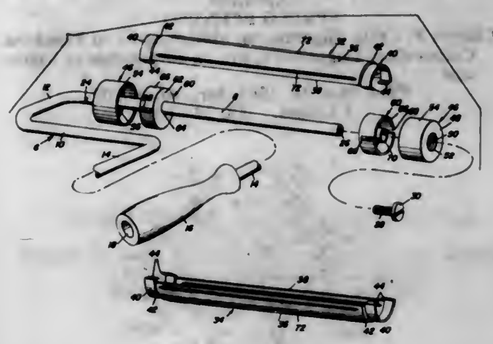


1. A roll comprising an elongated axle and an annular sleeve, means rotatably mounting and supporting said sleeve against transverse sagging with respect to said axle, the axle being a stiff beam permanently set in a bow with a predetermined longitudinal curvature lying in a plane, means stationarily supporting said axle horizontally for subjection to a predetermined resultant force acting transversely thereon, said axle being oriented with said resultant lying in said plane of curvature and acting against the convex side of the bow, the degree of bow being preselected for elastic deflection of said roll to a longitudinally straight configuration by said resultant.

3,094,770
COMPOSITE PAINT ROLLER
George Boyd Williams, Los Angeles, Calif. (P.O. Box 611, 11th and Main Sts., Lakeport, Calif.)
Filed June 21, 1961, Ser. No. 118,722
9 Claims. (Cl. 29—116)

8. A paint roller including an axle and a hollow cylindrical roller journaled on said axle, said roller comprising

a plurality of elongated concavo-convex shells disposed in side by side relation spaced circumferentially about and equidistantly from said axle, the opposite ends of each shell having axially extending flanges having convex cylindrical surfaces disposed at a lesser radial distance from said axle than the exterior surfaces of said shells, a pair of rigid connectors each at one end of said



roller, each connector having concentric inner and outer tubular members, the inner tubular member being journaled on said axle, the outer tubular member having slots and said flanges having portions received and anchored in said slots, said flanges resting upon the outer surface of said outer tubular member, end caps embracing said flanges and retaining them firmly upon said outer tubular member.

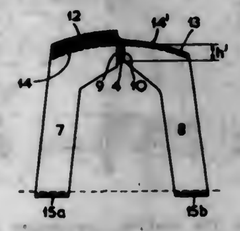
3,094,771
TABLE ROLL WITH MEANS FOR REMOVING LONGITUDINAL CURVATURE
John D. Robertson, Taunton, Mass., assignor to Mount Hope Machinery Company, Taunton, Mass., a corporation of Massachusetts
Filed June 13, 1961, Ser. No. 120,125
5 Claims. (Cl. 29—116)



1. A roll comprising an elongated tubular support of longitudinally uniform and substantially symmetrical cross-section, a sleeve, means supporting said sleeve against transverse sagging and mounting said sleeve for rotation about said support at at least three axially spaced points, and means for adjustably compressing said support longitudinally and eccentrically to eliminate longitudinal curvature of said roll.

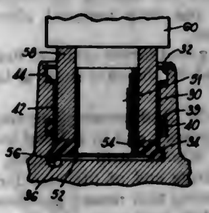
3,094,772
METHOD OF PRODUCING MAGNETIC HEADS WITH ACCURATELY PREDETERMINED GAP HEIGHTS
Simon Duinker, Eindhoven, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed June 26, 1957, Ser. No. 668,119
Claims priority, application Netherlands July 26, 1956
5 Claims. (Cl. 29—155.59)

1. A method of manufacturing magnetic heads for recording or reproducing magnetic recordings, comprising the steps of interposing a non-magnetic material capable of being softened when heated between machined exposed surfaces of two magnetic circuit parts, each of said surfaces having dimensions of height and width, each of said height dimensions being measured between top and bottom edges of the respective surface, the height dimension of the surface of one of said parts exceeding the height dimension of the other, heating the assembly to a temperature lying in the softening range of the non-magnetic



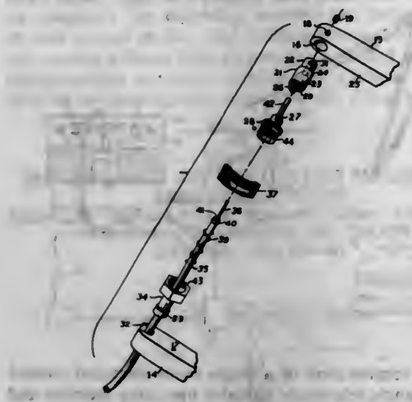
material, the magnetic circuit parts having a higher softening range than the non-magnetic material, compressing said assembly during heating until a desired thickness between the surfaces is set, cooling the assembly, maintaining the top and bottom edges of said other surface between the top and bottom edges, respectively, of said one surface while the assembly is being heated and cooled, and machining one end of said assembly including both surfaces comprising the guide face of the head, the surface which is smaller in said height dimension determining the gap height of the head.

3,094,773
PROCESS FOR INSTALLING LINERS IN FLUID ACTUATORS
Peter Bukoff, South Bend, Ind., assignor to The Bendix Corporation, a corporation of Delaware
Original application Mar. 8, 1957, Ser. No. 644,862, now Patent No. 2,926,053. Divided and this application Aug. 10, 1959, Ser. No. 832,703
1 Claim. (Cl. 29—156.4)



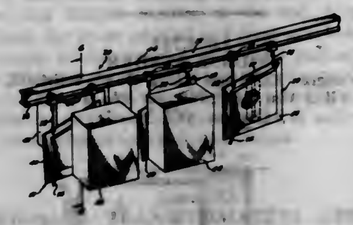
The process of attaching a liner to a cylinder bore having an open and a closed end comprising the steps of: forming a shoulder at one end of the liner to engage a stepped portion of the cylinder bore adjacent said open end, fitting said liner within the cylinder bore adjacent said closed end so that the shoulder is brought into engagement with the stepped cylinder portion and the end of the liner extends within a tapered groove portion at the base of the cylinder bore, said liner end being tapered and having on the inner surface thereof a cylindrical recessed portion, locating a resilient deformable plug at the base of the cylinder bore, and exerting pressure against the face of the resilient plug by means of a plunger fitted tightly within said sleeve whereby deformation of said plug will cause a flaring of the tube end to bring the tube end into intimate locking contact with the tapered groove.

3,094,774
ELECTRICAL CONNECTOR HOLDING DEVICES
John P. Nazarow, Gardner, Herbert F. Bailey, Winchester, and Harold D. Brinton, Dorchester, Mass., assignors to Raytheon Company, Lexington, Mass., a corporation of Delaware
Filed July 26, 1960, Ser. No. 45,419
8 Claims. (Cl. 29—203)



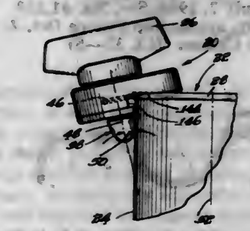
1. In a holder for assembling electrical connectors the combination comprising: first and second oppositely disposed jaws, said first jaw having a passage at one end and said second jaw having a recess at its extreme end the rear portion of which is concentric with the longitudinal axis of said passage; means for advancing said jaws toward each other in parallel relationship; a hollow adaptor plug having a shank portion located in said passage and a head portion located between said jaws; and two oppositely disposed lugs integral with the exposed end of said head portion and extending toward said recess.

3,094,775
METHOD OF BRAZING HONEYCOMB SANDWICH WITH EDGE MEMBERS AND INSERTS
Paul W. Warren, Los Angeles, Calif., assignor to Northrop Corporation, Beverly Hills, Calif., a corporation of California
Filed July 27, 1959, Ser. No. 829,705
2 Claims. (Cl. 29—471.1)



1. A method of bonding together an integrated sandwich structure that includes sections of thin gage cellular core arranged in combination with heavy gage reinforcing members assembled with the edges of the core walls perpendicular to and contacting facing surfaces of panels positioned on each side of said combination, said reinforcing members also having surfaces thereof contacting said facing surfaces of said panels, which comprises: inserting a fusible material between all contacting surfaces of said combination; sealing said combination to be bonded within mating halves of a thin walled flexible metallic envelope the interior of which is shaped to conform to the exterior shape of said sandwich combination, purging the envelope interior of atmosphere, injecting non-oxidizing gas into said envelope interior, the pressure of said non-oxidizing gas being less than atmospheric, gradually heating said envelope by controlled discrete temperature stages so that said heavy gage members and cellular core are maintained at substantially the same elevated temperature at all times to reduce warpage therebetween, while said envelope is vertically positioned so that said core walls are horizontal relative to said facing surfaces of said panels, said heating continuing to a sufficiently elevated temperature to melt said fusible material while said contacting surfaces are in said vertical position so that the core walls define flow controlling dams to induce controlled uniform distribution of said fusible material between the facing surfaces of said panels and contacting edges and surfaces of said combination, removing said envelope from heat, simultaneously compressing the bonded surfaces of said combination together and cooling said envelope in controlled discrete stages, and removing said combination from said envelope.

3,094,776
CAN OPENER
Clarence J. Smith, 1916 11th St., Rockford, Ill.
Filed Sept. 22, 1961, Ser. No. 139,972
21 Claims. (Cl. 30—15.5)

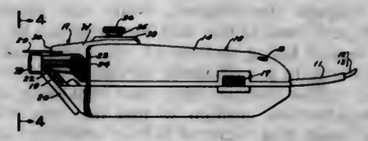


1. For opening a can having an axially projecting end seam, a can opener comprising a support member adapted to extend over the end of a can to be opened, a platen roller journalled on said support for engagement with the radially inward face of a can end seam, said support defining a bearing slot therein having a spacing from the axis of said roller which narrows in a predetermined direction of opener movement with respect to a coacting can, a rotor journalled in said slot and being slidable therein, a cutter on said rotor defining a circular cutting edge disposed in opposing spaced relation to said roller to engage a can end seam intervening between the cutter and said roller, means for rotating said rotor to effect movement of said opener in said predetermined direction with respect to a can, an abutment on said support, a cam connected with said rotor and coacting with said abutment to displace the rotor within said slot to move said cutter toward said roller as an incident to rotation of the rotor, and an end seam engaging rider disposed rearward of said cutter with respect to said direction of opener movement and being located with reference to said support in a predetermined position with respect to said cutter to effect a forward tipping of the axis of the cutter upon application of the opener to a can so that the cutter has a substantial angle of dive in said direction of opener movement.

3,094,777
HAIR CLIPPER ATTACHMENT
Irving K. Furst, Marion Ave., Plantsville, Conn.
Filed June 20, 1962, Ser. No. 203,838
5 Claims. (Cl. 30—202)

1. In a hair clipping device for producing a tapering haircut, a casing having an electric motor-operated vi-

brating toothed cutter which reciprocates over a stationary toothed guard plate located at the front of said casing, a longitudinally shiftable U-shaped attachment adjustably mounted on the top of said casing at the front end thereof, said attachment having a pair of side wings embracing said vibrating cutter and guard plate, a cross



pin passing through said side wings, a pair of side arms pivotally mounted outside of said wings respectively upon the cross pin, said arms being pivotally urged upwardly by coil springs, the ends of said arms having soft tips which engage the scalp without injury thereto, whereby when said clipper is raised upwardly said arms will yield and produce the desired tapered haircut.

3,094,778
ARTIFICIAL DENTURE
Claude François Hippolyte Mailland, 5 Rue Paul Valéry, Paris, France
Filed July 7, 1960, Ser. No. 41,319
Claims priority, application France Oct. 2, 1959
3 Claims. (Cl. 32—5)



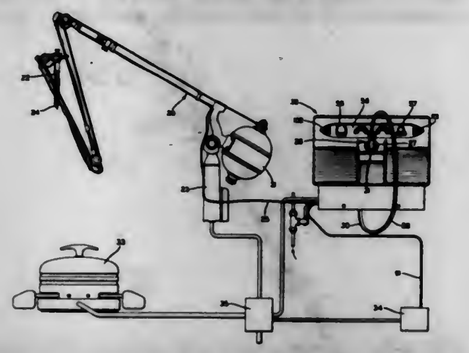
1. A denture comprising a main part including artificial teeth carried thereby, at least one further part having a surface for overlaying an outer portion of a gum of the wearer, resilient means interconnecting said parts including at least one assembly comprising a tubular casing element imbedded in one of said parts and a plunger element imbedded in and projecting from the other of said parts into said tubular casing element and slidable therein, and a spring in said casing element urging said plunger element thereinto.

3,094,779
DENTAL HANDPIECE
Geoffrey Boulsover and Emil Oscar Muller, London, England, assignors to The Amalgamated Dental Company Limited, London, England
Filed Mar. 21, 1960, Ser. No. 16,571
Claims priority, application Great Britain Jan. 21, 1960
2 Claims. (Cl. 32—27)



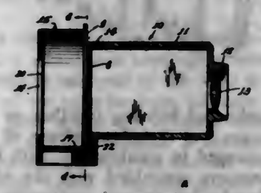
1. In a dental handpiece, a tubular stem, a water heater located within said tubular stem, said water heater including a casing spaced inwardly of said stem and providing a passageway for the flow of water, an electric heater element within said casing closely adjacent said water passageway, and the space between the stem and casing constituting a passageway for the flow of air which bypasses the electric heater element.

3,094,780
DENTAL CONTROL ASSEMBLIES
John A. Maurer and Victor R. Ferguson, Canton, Ohio, assignors to The Weber Dental Manufacturing Company, Canton, Ohio, a corporation of Ohio
Filed Nov. 1, 1957, Ser. No. 693,984
12 Claims. (Cl. 32—28)



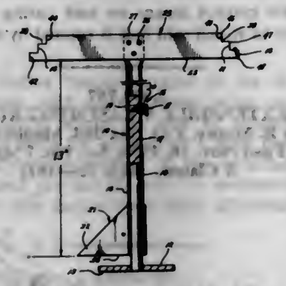
1. The combination of a single main electrical control having a single selectively movable operating member and at least two dental handpiece driving units, each separately actionable by electric power for driving separate dental handpieces; the operating member on the main electrical control being selectively movable between positions transmitting electric power through said main control and interrupting electric power through said main control; control switch means electrically connected to the main electrical control and separately to the two dental handpiece driving units, selectively movable to a position transmitting electric power from the main control to one of said dental handpiece driving units for actuating said one driving unit when the main control operating member is moved to said transmitting position, and selectively movable to a position transmitting electric power from the main control to the other of the dental handpiece driving units for actuating said other driving unit when the main control operating member is moved to said transmitting position; whereby, at least two dental handpiece driving units, each separately driving dental handpieces, may be alternately and selectively controlled through the same main electrical control and by the same operating member on said main electrical control.

3,094,781
COURSE FINDER
William Vangor, 325 High Ridge Road, Fairfield, Conn.
Filed Mar. 10, 1960, Ser. No. 14,129
3 Claims. (Cl. 33—1)



1. A course finder comprising a first transparency displaying geographical subject matter including indicia denoting location points and comprising a photographic film supported in a frame; a second transparency having indicia consisting of a plurality of spaced parallel lines; means for holding said transparencies in superposed position for simultaneous viewing by light transmitted through the transparencies, said means providing for the rotation of one of said transparencies through an arc of at least 180° relative to the other about an axis common to the planes of the transparencies and substantially at the geometrical center of the other transparency and for holding said first transparency for removal and replacement by hand; means including a compass rose and cooperating pointer for indicating the direction of a course to be found when said parallel lines align with or parallel an imaginary line extending between two location points on said subject matter, said holding means having means for causing diffused light to pass through said superposed transparencies to a sight opening; and a lens in said sight opening to magnify the indicia on the transparencies.

3,094,782
METHOD AND APPARATUS FOR MEASURING TROUSER LENGTHS
Ramón G. Gallado, 511 E. Riverside Drive, Austin, Tex.
Filed Mar. 10, 1959, Ser. No. 798,450
2 Claims. (Cl. 33—8)



1. A device for indicating trouser length on an individual comprising a base, a vertically extending member secured thereto and extending upwardly therefrom, a member slidably positioned on said vertically extending member, indicator means carried by said member which is slidably positioned on said vertically extending member for indicating the shoe heel height of the individual being fitted whereby said slidable member may be adjusted vertically along said vertically extending member in relation to the heel height, means for holding said slidable member at the adjusted position on said vertically extending member, a cross arm at the upper end of said slidable member for marking the position of the upper end of said slidable member at the heel height of the individual, the lower edge of said cross arm being in fixed relationship to the lower edge of said indicator means, and additional means for measuring downwardly from the marking, said last named means being in relationship with the distance from the lower edge of said cross arm to the lower edge of said indicator means.

3,094,783
COORDINATE TRANSFORMATION APPARATUS
Albert M. Loshin, 8640 Bay Parkway, Brooklyn 14, N.Y.
Filed Oct. 2, 1957, Ser. No. 687,844
1 Claim. (Cl. 33—24)
(Granted under Title 35, U.S. Code (1952), sec. 266)

A mechanical transformation apparatus for reproducing plane figures by tracing while concurrently varying the ratio of the height-to-width dimensions thereof, said apparatus comprising:

(*a*) an elongated member,

(*b*) means mounting said member for rotation about a first axis transverse to the longitudinal axis of said member so that said member is arranged to experience angular motion about said first axis,

(*c*) a pair of riders located at different positions relative to the length of the first axis and mounted on said member to slide lengthwise along the member, said riders being coupled to one another for joint lengthwise movement along said member to maintain them at equal radial distances from the first axis so that both riders are arranged to experience in two parallel planes identical polar motions about said first axis,

(*d*) a tracing stylus carried by one rider,

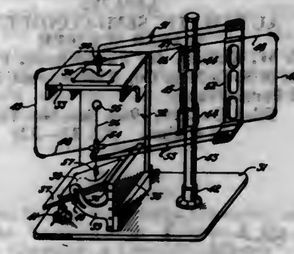
(*e*) a writing stylus carried by the other rider,

(*f*) means mounting at least one stylus on its rider for free movement relative thereto along an axis parallel to the first axis,

(*g*) a first plane support for an original figure to be traced,

(*h*) a second plane support for the traced figure,

(*i*) one of said plane supports being located below and



in operational association with the tracing stylus and the other of said plane supports being located below and in operational association with the writing stylus,

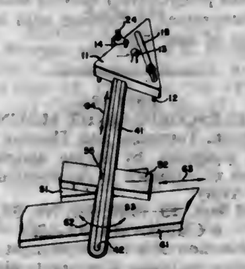
(*j*) and means mounting said supports in planes transverse to said first axis and including

means to selectively adjustably change relative to said first axis the angular position of at least the plane of the support operatively associated with the stylus that is freely movable parallel to the first axis,

(*k*) said last-named stylus being biased toward its associated plane support,

(*l*) whereby the height-to-width of the reproduced figure can be selectively differed from the height-to-width ratio of the original figure by varying the angular position of the plane of the adjustable support.

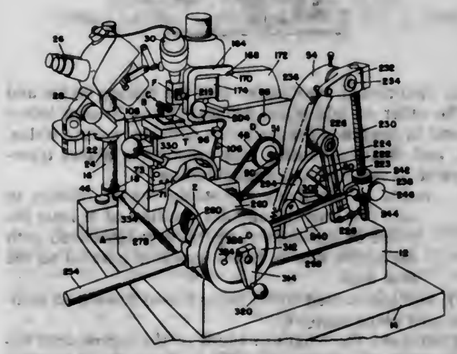
3,094,784
DRAFTING INSTRUMENT
Genevieve D. Van Dyke, Van Nuys, Calif., assignor of one-half to Roy A. Spencer, Jr., Woodland Hills, Calif.
Filed Nov. 12, 1958, Ser. No. 773,360
4 Claims. (Cl. 33—26)



1. A drafting instrument for constructing straight and arcuate lines comprising: a flat plate member defin-

ing an elongated slot therethrough for receiving a slidably adjustable pivot member; a plurality of support members affixed to and extending from one surface of said flat plate member for slidably supporting said drafting instrument upon a work piece, each of said support members being of a length to hold said plate member away from said work piece by an amount sufficient to permit contact between two of said support members and a straight edge during the time said drafting instrument is being used to construct straight lines; said one surface defining a recess therein for receiving an elongated extension member; marking means affixed to said flat plate member adjacent one end of said elongated slot; and an elongated flat extension member defining a slot therethrough along the length thereof and being disposed within said recess and detachably affixed to said flat plate member.

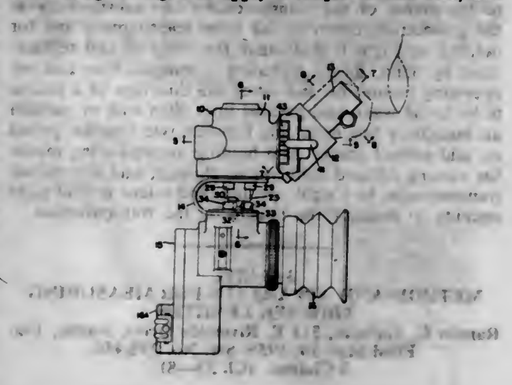
3,094,785
AUTOMATIC SEMI-CONDUCTOR WAFER SCRIBER
Frederick W. Kulicke, Jr., Philadelphia, Pa., assignor to Kulicke & Soffa Mfg. Co., Philadelphia, Pa., a corporation of Pennsylvania
Filed Dec. 20, 1960, Ser. No. 77,770
22 Claims. (Cl. 33—32)



1. An automatic semi-conductor wafer scriber comprising a frame, a table longitudinally reciprocable along one axis in said frame and laterally movable along a second horizontal axis transverse thereto, a scribing stylus in engagement with the wafer during the stroke of the table in one direction and elevated from the wafer during the stroke in the other, means imparting reciprocating motion to said table, intermittently actuated drive means imparting a uni-directional transverse motion to said table, and indexing means coupled with said first and second-mentioned means progressively moving said table laterally a precise predetermined dimension with each full cycle of reciprocation of said table.

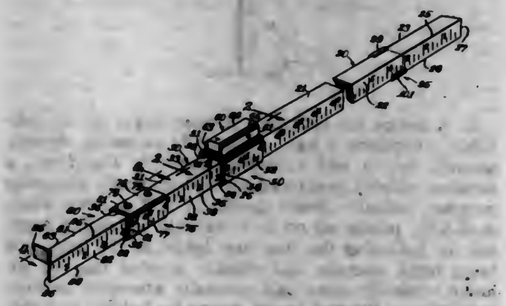
3,094,786
TELESCOPIC SIGHT MOUNT
Paul E. Anderson, Torrance, and Thomas H. Gill, Whittier, Calif., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Army
Filed Sept. 13, 1960, Ser. No. 55,814
6 Claims. (Cl. 33—50)

1. The combination of a telescopic sight, a sight mount including a casing enclosing a rotatable hub, an azimuth adjusting screw extending through and threadedly engaging said hub, a resilient bifurcated bracket having one leg fixed to said hub and the other leg fixed to said sight and to said azimuth adjusting screw, resilient means within said casing arranged to apply a torque to said hub, and



an elevation control means on said casing for adjusting the position to which said hub is rotated by said torque.

3,094,787
EXTENSIBLE MEASURING RULE
James R. Moore, P.O. Box 384, Manitowoc, Wis.
Filed Nov. 18, 1958, Ser. No. 774,651
8 Claims. (Cl. 33—161)

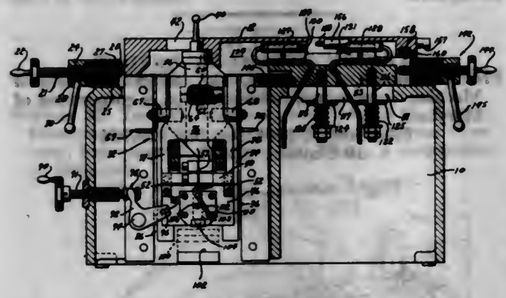


1. An extensible measuring rule comprising outer, intermediate and inner telescoping sections, each section being angular in cross section with the sections nested in one another, said sections being movable longitudinally relative to each other, and a clip angular in cross section and secured to the inner surfaces of the sides of said intermediate section at one end thereof, said clip having outer edge portions extending around and slidably retaining the outer edges of said outer section, and said clip having an offset portion spaced from the sides of said intermediate section for receiving the end of said inner section when said intermediate and inner sections are completely telescoped with respect to each other.

3,094,788
GAGING DEVICE
Raymond A. Mahlmeister and Jesse H. Straw, Dayton, Ohio, assignors to The Sheffield Corporation, Dayton, Ohio, a corporation of Delaware
Filed June 9, 1958, Ser. No. 740,970
3 Claims. (Cl. 33—174)

1. A gaging device for precision measurement of work dimensions comprising a base, a work supporting table, means supporting said table on said base and guiding it for movement in a given direction, a gaging contactor for

positioning engagement of its opposite sides with the surfaces at the extremities of a work dimension to be gaged carried on said base for gaging movement parallel the direction of table movement, sensing means controlled by positions of said contact relative to said base in the gaging direction, a gage caliper having opposed gaging means, means supporting said caliper in said base for



adjustment relative thereto parallel to the direction of table movement, said gaging means being supported in facing relationship along the line of adjustment, and means on said table for supporting a gage block of predetermined dimension relative to the nominal work dimension in fixed position thereon for movement between said opposed gage means upon table adjustments during gaging.

3,094,789
PLUMBING TRAINING AID
Stephen D. Pirko, 816 Auburn St., Ithaca, N.Y.
Filed Dec. 15, 1961, Ser. No. 159,643
3 Claims. (Cl. 35—10)



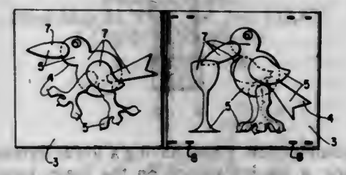
1. A training aid for plumbers comprising, in combination, a plurality of miniature, simulated pipe sections of circular cross section including enlarged, integral end portions, one of said enlarged end portions of each pipe section simulating a bell and having a tapered socket therein, the other of said enlarged end portions of each pipe section simulating a spigot and being externally tapered, a miniature simulated T-fitting including relatively right-angularly extending branches having tapered sockets therein and further including an internally threaded branch, a plurality of rods, one of said rods having one end portion threadedly engaged in the threaded fitting branch for adjustably and removably mounting the fittings on said one rod, and generally frusto-conical male members on one end portion of the rods, said male members being insertable selectively in the sockets for frictionally and detachably connecting the rods selectively to said relatively right-angularly extending branches of the fitting or to one end of the pipe sections, said spigots being engageable selectively in the sockets for frictionally and detachably connecting the pipe sections selectively to said relatively right-angularly extending branches of said fitting or to each other.

3,094,790
OPTICAL DEVICE FOR DEMONSTRATING COMATIC ABERRATION
Wright H. Scidmore, Langhorne, Pa., and Paul R. Yoder, Jr., Wilton, Conn., assignors to the United States of America as represented by the Secretary of the Army
Filed Nov. 2, 1961, Ser. No. 149,793
2 Claims. (Cl. 35—19)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. An optical system for demonstrating coma comprising a light source, a filter for isolating a particular broadband spectral region, a lens assembly coaxial with said light source and filter, said assembly being rotatable about an axis perpendicular to an optical axis thereof at a nodal point thereof, and means coaxial with said light source and said filter for viewing an image plane of said lens assembly under low magnification, whereby rotation of said lens assembly about a nodal point thereof causes an image of said light source in said image plane to appear as a comatic blur.

3,094,791
PICTURE BOOK
Gunter Thiebes, Hagen, Westphalia, Germany, assignor to Westfaelische Verlagsanstalt Thiebes & Co., Hagen, Westphalia, Germany, a German company
Filed Apr. 20, 1961, Ser. No. 104,458
1 Claim. (Cl. 35—26)

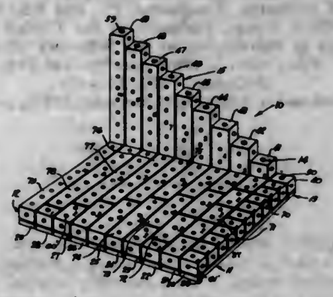


In a child's picture book, in combination, an elongated strip of material folded into a plurality of consecutive panels in accordion-like fashion each panel having thereon a plurality of sets of numbered outlines arranged in a predetermined overlapping relation, said sets of numbered outlines cooperating to show an animate object of nature in animated story-form of action, a plurality of sets of die-cut paper sections having top surfaces of varied colors, each of said sections of a set corresponding in size and shape to respective numbered outlines, said sections of each set being gummed on their lower surfaces and permanently secured to a respective panel.

3,094,792
EDUCATIONAL TOY
Harold W. Morgan and Evelyn E. Morgan, both of 2206 E. Buchanan, Phoenix, Ariz.
Filed Mar. 28, 1962, Ser. No. 183,171
12 Claims. (Cl. 35—31)

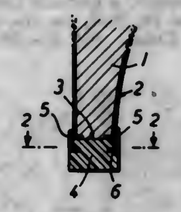
1. An educational toy block set comprising a plurality of elongated column strips connected together in alongside adjacent relation and constituting a playing board having a flat upper surface and parallel sides, an elongated guide strip connected to one side of said playing board and extending transversely of the direction of said column strips, upright blocks mounted on said guide strip in alongside alignment with each of said column strips, each of said upright blocks having a height different than the height of any other upright block, and number blocks mounted on said playing board and extending in the same

direction as said column strips, each of said column strips carrying at least one number block of a length cor-



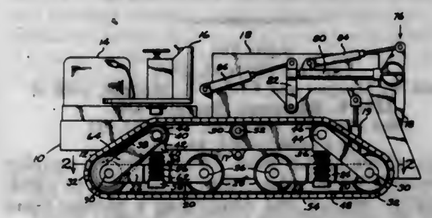
responding to the height of the upright block which is aligned therewith.

3,094,793
MEANS FOR SECURING TOP LIFTS TO SHOE HEELS
Siegmund Reichel, Bensberg-Refrath, Germany, assignor to Acla-Werke Aktiengesellschaft, Cologne-Mulheim, Germany, a firm
Filed June 20, 1961, Ser. No. 118,347
Claims priority, application Germany Sept. 6, 1960
2 Claims. (Cl. 36—36)



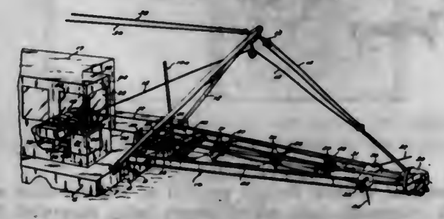
1. In combination, a heel having a lower terminal bearing surface, a lift juxtaposed on the lower bearing surface of said heel, and a rigid centering and securing sleeve compressively circumposed about the juxtaposed surfaces of said heel and lift, said rigid sleeve being of unitary construction and terminating above the adjacent surface of said lift and rigidly connected to said heel.

3,094,794
SELF-LOADING CARRY-ALL VEHICLE
Isaac J. Wardle, Pierce Park Lane, Rte. 3, Boise, Idaho
Filed Nov. 7, 1958, Ser. No. 772,528
1 Claim. (Cl. 37—4)



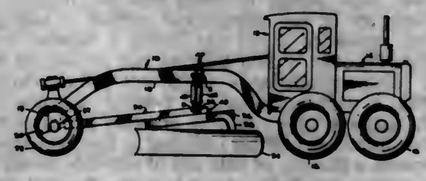
A carry-all vehicle comprising a mobile frame; a receptacle supported on the frame for receiving material to be carried; an apron member; an apron support mounted on the receptacle; first pivot means attaching the apron to the forward end of the support; second pivot means supporting at least a forward portion of the support for rotation on a horizontal axis whereby the apron is movable with said forward portion of the support between upper and lower positions, the support including first drive means having a member movable longitudinally of the receptacle for moving the apron in such longitudinal direction; second drive means pivotally connected to the pivoted apron support for rotating the latter on its horizontal axis; and third drive means interconnecting the apron and pivoted support for pivoting the apron in its support.

3,094,795
ELECTRIC-HYDRAULIC DREDGE
Fred J. Schmidt, Catonsville, Md., assignor to Ellicott Machine Corporation, Baltimore, Md., a corporation of Maryland
Filed Aug. 7, 1961, Ser. No. 129,764
10 Claims. (Cl. 37—67)



3. A dredge having a dredge ladder, a rotary cutter carried by said dredge ladder, a hydraulic motor mounted on the ladder to drive said cutter, said dredge having hauling machinery including a pair of swing drums, a pair of spud drums and a ladder drum, a hydraulic motor for driving said drums, hydraulic brake means for said drums, a first, second and third hydraulic pump, a reservoir providing fluid for the inlet of each pump, the output of said first pump being connected to said cutter motor, the output of said second pump being connected to said hauling machinery motor and the output of said third pump being connected to said hydraulic brake means, a central control panel, controls carried by said panel for selecting the directional rotation of said cutter motor and said hauling machinery motor and for varying the speed of said motors and for directing fluid to said hydraulic brake means.

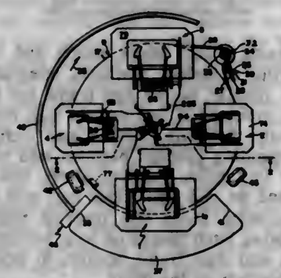
3,094,796
APPARATUS FOR CONTROLLING THE ATTITUDE OF TRACTOR MOUNTED EQUIPMENT
Raymond D. Atchley, Los Angeles, Calif., assignor to American Brake Shoe Company, New York, N.Y., a corporation of Delaware
Filed June 19, 1961, Ser. No. 127,423
19 Claims. (Cl. 37—156)



10. A vehicle-mounted road grader comprising a chassis, a road surfacing element, a frame mounted on said chassis, said element mounted on said frame, an articulated mounting for said frame on said chassis, means to adjust said frame and element in a horizontal and in a vertical plane transverse to the longitudinal axis of said chassis, said means including a fluid-actuated actuator connected to said frame, a fluid connection to said actuator, and a valve mounted on said frame in said fluid connection to valve fluid to actuate said actuator, said valve including a valve member to control the passage of

fluid to said actuator, a pendulum and a pendulum pivot, a pendulum pivot mounting on said frame and angularly displaceable on said frame about said pendulum pivot axis, a flexible connection between said valve member and said pendulum for movement of said valve member with a force responsive to the angular displacement of said element about said pivot axis, said actuator moving said frame to oppose variations in angular displacement of said element.

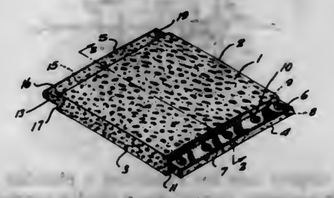
3,094,797
CONTROL MECHANISM FOR ROTARY PRESSING MACHINES
William M. Turner, Excelsior, and Donald B. Lucius, Bloomington, Minn., assignors to The Unipress Company, Incorporated, Minneapolis, Minn., a corporation of Minnesota
Filed Apr. 4, 1960, Ser. No. 19,542
17 Claims. (Cl. 38—22)



1. A rotary pressing machine comprising a rotary frame having thereon a plurality of presses for moving said presses in succession through an operator station and then a pressing station, each of said presses having a buck and a presser head, the latter being mounted for pressing movement toward and away from a press open position in which the presser head is away from the buck, and a press close position in which the presser head is against the buck, each of said presses including motor means connected to the respective presser head for moving said presser head between the aforementioned positions, individual press connecting lines on the frame extending inwardly to a point adjacent the axis of rotation of said rotary frame, a stationary fluid supply line extending to have an inner end adjacent the axis of rotation of the turntable, control means for supplying and disconnecting the supply of fluid from the stationary supply line to the individual connecting lines, said control means mounted adjacent the axis of rotation of said turntable and having a plurality of positions and control operator means for operating said control means through said plurality of positions to alternately supply and disconnect the supply of fluid to actuate each motor means in sequence to move each presser head between a press open position and a press closed position.

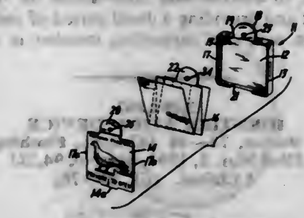
3,094,798
PADS FOR HANDLES OF IRONS
Billie E. R. Turner, Butler, Pa.
(595 Cresthaven Road, Wyckoff, N.J.)
Filed July 12, 1961, Ser. No. 123,499
1 Claim. (Cl. 38—95)

A hand pad for the handles of irons comprising a pad of uniform thickness of cellulose sponge material having a rectangular configuration, a pair of tapes each mounted on an opposite marginal end portion and side of said pad, one of said tapes having a series of male snap fitting members fixedly mounted thereon along the length thereof, the other of said tapes having a series of female snap fitting members fixedly mounted thereon along the length thereof and each positioned for receiving one of said male snap fitting members when said tapes are superimposed, stitching connecting said tapes to said pad and compressing said pad marginal end portions to portions of one-third the thickness of the medial portion of said



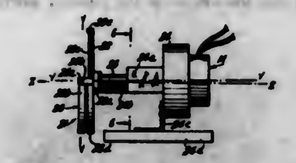
pad between said marginal end portions and providing end walls of said medial portion of said pad on each side of said flanges with each wall being of a depth equivalent to the thickness of each flange whereby said pad can be wrapped around the iron handle one time with said marginal end portions overlapping and fastened together detachably retaining said pad on said iron handle whereby said pad can be removed from the iron handle from time to time to absorb water and be replaced thereon.

3,094,799
IDENTIFICATION TAG
Benjamin M. Hines, 546 Old Academy Road, Fairfield, Conn.
Filed May 31, 1961, Ser. No. 113,877
2 Claims. (Cl. 40—2)



1. An identification tag comprising a casing member formed by walls extending from a base to define a chamber open at one side, gaps in the walls at opposite ends of the casing member, a first tongue integral with and extending from one end of the casing member and in alignment with the gap in the wall at that end, a closure member adapted to lock with said casing member substantially closing the chamber, a second tongue integral with and extending from one end of the closure member adapted to pass through the gap in the one end of the casing member and be in substantial alignment with the first tongue on said casing member, a flexible mailing tag within said chamber, a portion of said tag extending from the chamber in substantial alignment with the first and second tongues on the casing and closure members, a first aperture formed in said mailing tag portion, second and third apertures formed in the first and second tongues of the casing and closure members in alignment with the first aperture in the mailing tag portion, an attaching element passing through the three apertures, and a slot formed by the closure member and the gap in the wall at the other end of the casing member to facilitate separation of the members.

3,094,800
DISPLAY CONSTRUCTIONS
Bernard R. Jungerwirth, 97—37 63rd Road, Rego Park 74, N.Y.
Filed Oct. 25, 1957, Ser. No. 692,378
11 Claims. (Cl. 40—33)



1. A display unit for exhibiting a plurality of display motifs in sequence, comprising a display supporting member having a front face carrying display material mounted for rotation in a substantially vertical plane, a drop leaf member with opposite surfaces thereof having display material related to said supporting member display material, said drop leaf member being pivotally mounted on said supporting member to alternately overlie predetermined areas of the display material on said front face on rotation of said supporting member, a relatively constant speed power drive means engaging said display supporting member for rotation in one direction on an axis substantially normal to the plane of said front face, means for locating a center of gravity of said drop leaf member to effect a flip-over by the latter to a depending position on each one-half rotation of said supporting member, an overrunning drive connection interposed between said power drive means and said supporting member imparting intermittent rotation to the supporting member, and weight means for adding impetus to the rotation of said supporting member to overrun said drive means for righting the display unit and providing a dwell period of said intermittent rotation with said supporting member in an upright position.

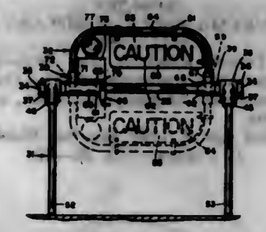
3,094,801
IDENTIFICATION DEVICE
Eugene H. Becker, 73—48 183rd St., Flushing 66, N.Y.
Filed Mar. 8, 1961, Ser. No. 94,221
4 Claims. (Cl. 40—70)



1. An identification device comprising, a hollow box with one side open, a support element including a base and an upstanding flange portion mounted within said box, a plurality of upstanding ears on said flange which are offset from the plane of said flange and which are parallel to each other, disks having numbers on the surface thereof rotatably mounted on each ear, a slot in one surface of said box for permitting observation of one number on each disk.

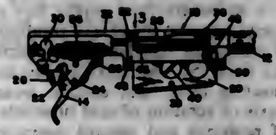
3,094,802
FOLDABLE BARRICADE AND SIGN FRAME
Arthur J. Perry, 40 Elm St., Methuen, Mass.
Filed Mar. 29, 1960, Ser. No. 18,337
1 Claim. (Cl. 40—125)

A foldable highway barricade comprising an elongated tubular cross bar; a first pair of identical leg brackets, each fixedly sleeved on said bar at an opposite end thereof, each said fixed bracket having a central opening, a central leg socket and a central stop flange; a second pair of identical leg brackets each rotatably sleeved on said bar in the opening of one of said first pair of brackets, each having a leg socket and each having a stop flange adapted to engage said first mentioned stop flange; four identical tubular legs, each having one terminal end fixed in one of said leg sockets and the legs at each opposite end of said bar having a common plane of rotation; a third pair of brackets, each rotatably sleeved on said



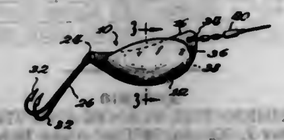
bar, each having a sign frame socket and one of said brackets having a lantern platform integral therewith; an elongated, tubular, bowed sign frame bar having each terminal end mounted in one of said sign frame sockets to freely rotate therewith, around said cross bar from a vertical depending position between said pairs of legs to a vertical upstanding position above said cross bar; a sign mounted on said sign frame bar, said sign having opposite inscription faces, one inverted relative to the other, and spring latch means on said barricade, detachably locking said sign frame sockets to said cross bar in one said position or the other.

3,094,803
BOLT ACTION MAGAZINE FIREARM WITH A CANTILEVER SPRING FOR HOLDING CARTRIDGES IN THE MAGAZINE
Frank T. Green, Haydenville, Mass., assignor to Noble Manufacturing Co., Inc., Haydenville, Mass., a corporation of Massachusetts
Filed Feb. 23, 1961, Ser. No. 91,072
9 Claims. (Cl. 42—18)



1. A bolt actuated firearm comprising a barrel, receiver, stock, a magazine and a bolt associated with said receiver, a magazine spring, a magazine follower on the spring, a loading port in the receiver, cartridges being adapted to be thrust downwardly through the port onto the follower, a cantilever spring, said cantilever spring being connected at one end with said receiver, the cantilever spring being substantially free at its other end, and means adjacent the free end of said cantilever spring extending into the loading port in the area of the follower overlying the same, said cantilever spring engaging a portion of the topmost shell in the magazine and holding the same in position therein against the action of the magazine spring until such time as the bolt is moved forwardly to move the shell from the magazine follower toward the breech.

3,094,804
FISHING LURE
Lyman E. Walton and Tom Jones, Chicago, Ill., assignors to Carroll-Walton Engineering Co., Inc., Chicago, Ill., a corporation of Illinois
Filed Mar. 30, 1961, Ser. No. 99,435
2 Claims. (Cl. 43—42.23)



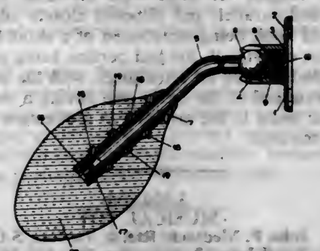
1. A fish lure that will travel through the water with an undulating or sinuous up and down movement with substantially no lateral movement when attached to a fish line and having associated therewith a hook, the lure comprising a concavo-convex base member generally heart-shaped in outline and an outwardly extending stabilizing fin member on the concave surface at the longitudinal axis of the base dividing the base member into lateral wing portions each of substantially the same dimensions and each being of concavo-convex configuration and having leading and trailing edges, the forward edges of the base each being similarly curved inwardly and converging at the longitudinal central axis of the body, the trailing edge of the base being curved and converging at the longitudinal axis and which is in axial alignment with the leading edge portion, the stabilizing fin being of a greater length than the said longitudinal central portion of the base and having an arcuate curved forward end portion thereof projecting slightly beyond the leading edge of the base and with its rear edge portion thereof projecting slightly beyond the trailing edge of the base at the said longitudinal axis of the base, the stabilizing fin being of a cross-sectional thickness not greater than the cross-sectional thickness of the said base, the height of the stabilizing fin adjacent the arcuate curved forward end portion being not less than half the width of each wing portion measured laterally from the juncture of said fin and the outermost edge of said wing member and diminishing toward the rear edge thereof, line attaching means provided adjacent the arcuate leading edge of said stabilizing fin and hook attaching means provided adjacent the rear edge portion of said fin.

3,094,805
BAIT STATION FOR RODENTS
Harry Leck, 3145 N. Argonne Drive, Milwaukee, Wis.
Filed Mar. 30, 1960, Ser. No. 18,685
7 Claims. (Cl. 43—131)



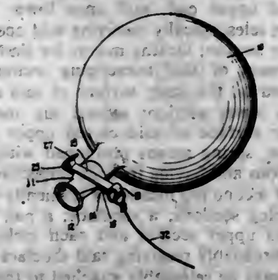
1. A method of baiting rodents comprising the steps of packaging a plurality of individual small-size rodent portable bait containers in a larger container, opening said larger container through a side thereof to provide a sheltered entry for the rodent into the larger container and from which the rodent may carry off said portable bait containers.

3,094,806
SOAP HOLDER
Manuel Herrero Rodrigo, Velazquez 102, Madrid, Spain
Filed Apr. 26, 1960, Ser. No. 24,796
Claims priority, application Spain Oct. 2, 1959
3 Claims. (Cl. 45—28)



1. A soap supporting arrangement comprising in combination, an arm having a first and a second end portion; bearing means connected to and defining with said first end portion a universal joint for said arm; a one-piece soap supporting sleeve of elastic plastic material turnably mounted on the second end portion of the arm, said sleeve having integral external anchoring means so as to prevent separation of the soap supported thereon in response to axial stresses acting on the soap in the direction of the longitudinal axis of the supporting arm; and means provided at said second end portion of said arm for turnably supporting said sleeve on said arm.

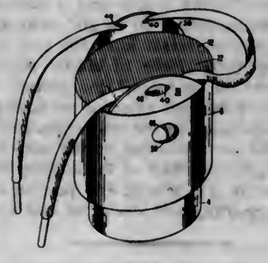
3,094,807
BALLOON AND SPRING CLIP
Isidore Dorman, Whitestone, N.Y. (% Dorman Manufacturing Co., 112—19 14th Road, College Point, N.Y.)
Filed Oct. 23, 1958, Ser. No. 769,164
2 Claims. (Cl. 46—90)



1. An inflated, deflatable toy comprising, in combination an inflated toy balloon having a constricted tubular neck portion formed with walls of thin section; a two-armed lockable spring clamp at all times biased to open position, said clamp being held closed by locking it and being in the form of a locking type spring clip attached to the said neck portion of the balloon and closing the same, said clip being constituted of a single piece of flat metal strip stock folded on itself to form two coextensive arms which are integral with each other at one pair of adjoining and corresponding ends, the fold of the clip having an appreciable radius forming a closed loop when the clip is closed on the neck of the balloon, the separate ends of the said arms having means for releasably locking them together, said arms being at all times biased apart and when released and allowed to separate being curved and bowed away from each other, and said arms when locked together at their separate ends and extending on opposite sides of said neck being forcibly held by said locking means so as to extend substantially

straight, and said arms pinching the neck virtually flat between them against the biasing action of the clip, thereby to prevent egress of air from the balloon, said means for releasibly holding the separate ends comprising a hook on one of the ends, adapted to engage the other end and confine the same with the arms substantially straight and parallel, and disposed closely adjacent each other, said hook being constituted of a short end portion of the arm carrying it, the end portion being substantially straight and making an acute angle with the arm portion, the separate end of the other arm having a short portion bent at an angle to the arm and in a direction away from the said one arm.

3,094,808
MUSICAL TOY
John P. Medlock, Rte. 2, Taylors, S.C.
Filed July 12, 1961, Ser. No. 123,567
3 Claims. (Cl. 46—175)



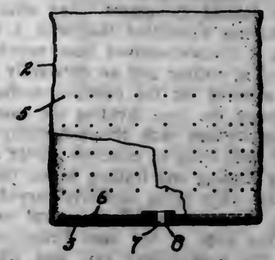
2. A musical toy for producing audible tones as the user moves about with the toy attached to his foot, comprising: a lower section having an open upper end and a closed lower end; an upper section having an open lower end and a closed upper end; said open lower end of said upper section telescopically receiving said open upper end of said lower section; locking means for limiting the outward movement of said telescoping sections; first lug means formed on the inner surface of said closed lower end of said lower section; second lug means formed on the inner surface of said closed upper end of said upper section; spring means positioned within said telescoping sections and having its ends respectively engaging said first and second lug means for resiliently urging apart said telescoping sections; a shoelace; a pair of flaps secured to said upper section and each including spaced eyelets for threadably receiving said shoelace so that said musical toy may be releasably attached to the user's foot; an aperture formed in said upper section; a vibratory tone generating reed mounted adjacent to the inner surface of said upper section and being positioned in front of said aperture so that when a compression force is applied to said telescoping sections air is forced through said aperture causing said reed to vibrate so as to generate an audible tone.

3,094,809
TREATING SOILS TO REDUCE EROSION
John J. Kaufmann, New Brighton, and Philip R. Tamplin, Oakmont, Pa., assignors to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware
No Drawing. Filed Aug. 23, 1960, Ser. No. 51,296
2 Claims. (Cl. 47—9)

1. A process for treating soils to reduce erosion thereof without excluding sunlight, oxygen, nitrogen and moisture needed for seed germination which comprises applying on the surface of the soil a small amount, sufficient to form a porous coating on the surface of the soil, of an aqueous wax emulsion composition having the following make-up:

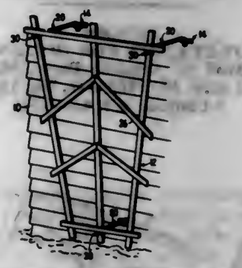
	Percent
Triethanolamine	2.1
Paraffin wax	10.4
Polyethylene	2.5
Polyisobutylene	2.5
Carnauba wax	1.0
Stearic acid	4.6
Water	76.9

3,094,810
CONTAINERS FOR PLANTS AND THE LIKE
Max L. Kalpin, 51 Timberlane Drive, Downsview, Ontario, Canada
Filed Dec. 19, 1960, Ser. No. 76,565
1 Claim. (Cl. 47—37)



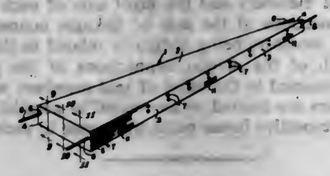
A plant container comprising a bottom and a body rising from said bottom made of a semi-rigid sheet plastic material, said body being adapted to stand erect to allow insertion of soil and planted matter and being readily foldable to a flat condition parallel to said bottom when the bag is empty, an insert of a relatively inflexible material seated on said bottom, said insert and said bottom being apertured in vertical alignment, an eyelet passing through said aligned apertures and securing said insert to said bottom, said eyelet providing a drainage passage leading to the exterior of the bag, said body having a plurality of air passages therethrough.

3,094,811
TRELLIS ASSEMBLY
James R. Feezel, 3732 12th St. SW., Canton, Ohio
Filed May 24, 1961, Ser. No. 112,365
2 Claims. (Cl. 47—47)



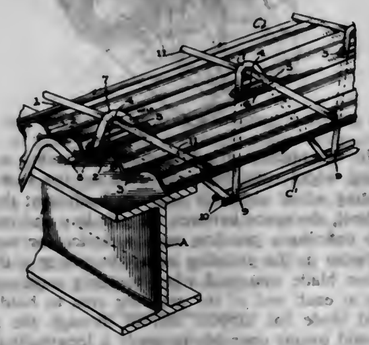
1. An invention of the character described, comprising a trellis embodying a trio of upright slats each one of which is rectangular when viewed from the end thereof, the said slats being secured in the basic outline of a trapezoid when viewed from the front or rear side thereof by a plurality of connecting slats the upper and lowermost one of which is in a horizontal position while the intermediate slats form a pair of spaced inverted V's and clamps secured to the rear portion of each of the said upright slats, each clamp having a basic top view configuration on an inverted letter U having an offset horizontally disposed portion provided with a centrally located opening, square in shape in which is placed one end of a Z-shaped bar member while the other end of the same said Z-shaped bar member is placed in a clamp similar to the already described clamp, the second said clamp being secured to a vertical wall surface disposed and a plurality of clamping elements secured to the rear of the said upright slats securing a vine to the rear portion of the trellis formed by the assembly of the said slats.

3,094,812
PRECAST UNIT FOR FORMING A HYPERBOLIC PARABOLOIDAL ROOF STRUCTURE
Lawrence F. Pooler and Eugene L. La Foy, both of 4655 N. Central Expressway, Dallas 5, Tex.
Filed June 22, 1959, Ser. No. 821,890
4 Claims. (Cl. 50—52)



4. A precast concrete unit for forming a hyperbolic paraboloidal roof structure, comprising, a slab having greater length than width and formed with ribs depending in parallel planes from the longitudinal edges thereof, a reenforcing rod embedded longitudinally in each of said ribs and extending beyond the ends thereof, a plurality of spaced ribs formed transversely of said slab between said longitudinal ribs, each having a plurality of bores therethrough adapted to receive a cable for connecting a plurality of said slab in juxtaposed relation in a roof structure, the said slab being twisted along its longitudinal axis.

3,094,813
BAR JOIST
Van Rensselaer P. Saxe, 1701 St. Paul St., Baltimore, Md.
Filed Apr. 7, 1961, Ser. No. 101,453
1 Claim. (Cl. 50—406)



A prefabricated bar joist having low profile bearing ends to rest on related supporting beams of a building, comprising, in combination,

a top chord constituting the upper compression member of the bar joist and comprising at least one sheet of corrugated metal continuous from end to end and having the corrugations manifested in the form of alternate ridges and grooves disposed parallel to the side edges of the sheet and also exposed at the ends of the sheet, whereby, said alternate ridges of the corrugations are adapted to rest directly on the building beams,

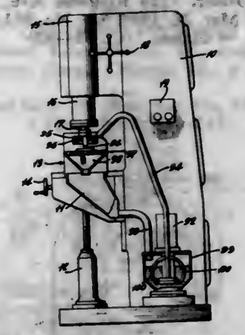
said corrugated sheet having slots with edge flanges,

a serpentine web member disposed in a plane parallel to the corrugations and having peaks projecting through the slots and welded to said flanges to provide high resistance to bending lengthwise of the sheet,

cross rods passing through and welded to said peaks of the serpentine web member projecting above the corrugated sheet and also welded at their ends to the edges of the sheet to prevent deflection thereof,

and a bottom tension chord member secured to the bottom portions of the serpentine web.

3,094,814
ULTRASONIC ABRASIVE MACHINING APPARATUS
Vladimir Nikolaevich Barke, Nagatinskoie Chaussee 7, Apt. 4; Naum Isaakovich Blitstein, Sivtsev Vrazhek 12, Apt. 14; Ievgueny Mikhailovich Griaznov, Bolshoi Kozlovsky per 13, Apt. 6; Abram Lazarevich Livshits, 5th Verkhne-Mikhailovsky Proezd 28, Apt. 9; Boris Khaimovich Mechetner, Leningradsky Prospect 28, Apt. 65; Serguei Serguelevich Podiazov, Gorodok Mossoveta, 1st Proezd 3, Apt. 3; and Dmitry Fedorovich Yakhimovich, Vadkovsky per 20, Apt. 55; all of Moscow, U.S.S.R.
Filed Nov. 21, 1960, Ser. No. 70,818
9 Claims. (Cl. 51—59)

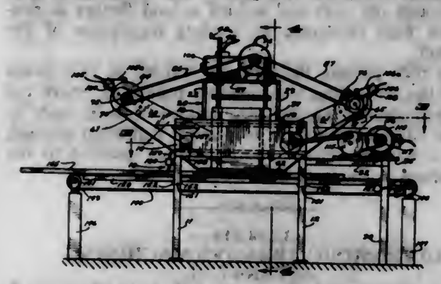


1. An ultrasonic abrasive machining apparatus comprising an upright frame, a work supporting table mounted on said frame for vertical and horizontal movement, an arm projecting from said frame and overhanging said table, a tool head mounted for vertical movement on said arm, an ultrasonic transducer secured to said head, said transducer including a sleeve rotatably mounted in said head, means for rotating said sleeve with respect to said head, an upwardly facing shoulder in said sleeve, a cup-shaped supporting member disposed within said sleeve, said cup member having a bottom wall and thin peripheral wall terminating in an annular flange engaging said shoulder, said cup member and said sleeve providing a chamber, a magnet core secured to said bottom wall and vertically disposed in sajd chamber and a tool secured to said bottom wall and projecting downwardly therefrom, a pump mounted on said frame for supplying a liquid abrasive mixture to said tool, and means to supply ultrasonic energy to said transducer.

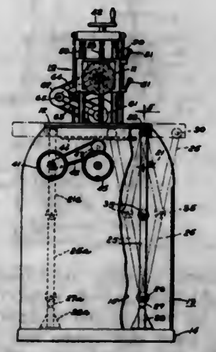
3,094,815
POLISHING APPARATUS
Raymond F. Pendergast, Grey Eagle, Minn.
Filed Oct. 2, 1961, Ser. No. 146,034
10 Claims. (Cl. 51—60)

1. A polishing apparatus having in combination, a polishing head assembly, a supporting frame, means car-

ried by said frame for adjustably holding said polishing head assembly, a pair of spaced polishing heads carried by said assembly, a polishing belt passing over each of said polishing heads, means for respectively supporting said belts, means for moving said belts, means for automatically reversing the direction of travel of said belts, means in association with said assembly for reciprocating said assembly in the direction of travel of said belts, means for reciprocating said assembly transversely of the direction of travel of said belts, and a work supporting means in operative association with said polishing heads.

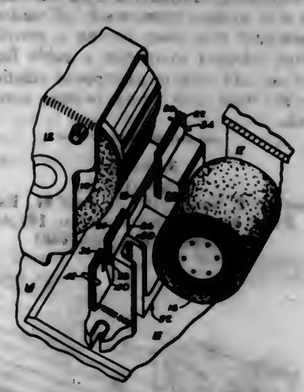


3,094,816
MACHINE TOOL
Raymond C. Dreier, 7326 Kingston Ave., Chicago, Ill.
Filed Mar. 26, 1959, Ser. No. 802,057
4 Claims. (Cl. 51—92)



1. In a machine tool including an upstanding supporting frame and separate relatively movable operating tool and work carrying members, apparatus for supporting said members above said frame and for limiting said members to predetermined straight line linear relative movement comprising, a pair of spaced apart linkage assemblies respectively interconnecting each of said members and said frame and movably supporting each of said members on said frame out of weight supporting contact with said frame, each said linkage assembly being physically located beneath that said member supported thereby and being physically disposed between that said member and said frame, thereby leaving the respective upper sides of said members unobstructed, each said linkage assembly comprising a first link pivotally connected at one end to said frame adjacent that said member supported by that said linkage assembly, said first link depending from said frame for swinging movement about an axis perpendicular to the path of movement of that said member, and an upstanding second link double the length of said first link and pivotally connected at its midpoint to the lower end of said first link, means pivotally and slidably connecting the lower end of said second link to said frame below and in spaced relation to the pivot connection of said first link to said frame, means pivotally connecting the upper end of said second link to that said member, the axes of the pivotal connections of said first and second links to each other and to said frame and the pivotal connection of said upper end of said second link to that said member all being parallel, and the axis of the pivotal connection of said second link to that said member lying in a common plane with the axis of the pivotal connection of said first link to said frame, the slidable connection between said lower end of said second link and said frame being such as to permit slidable movement of said lower end of said second link only along a line perpendicular to said common plane, said linkage assemblies of each said pair being spaced apart in the direction of said predetermined linear movement of that said member connected to and supported thereby, one said pair of said linkage assemblies being connected to each of said members and the pivot axis of each of the pivotal connections of the pair of linkages connected to one of said members being angularly related to the pivot axis of each of the pivotal connections of the pair of linkages connected to the other of said members whereby said members are limited to movement in parallel planes and along respective linear paths transverse to each other.

3,094,817
CENTERLESS GRINDING MACHINE
Jerry S. Bartholomew, Milford, Ohio, assignor to The Cincinnati Milling Machine Co., Cincinnati, Ohio, a corporation of Ohio
Filed Oct. 2, 1961, Ser. No. 142,118
4 Claims. (Cl. 51—103)

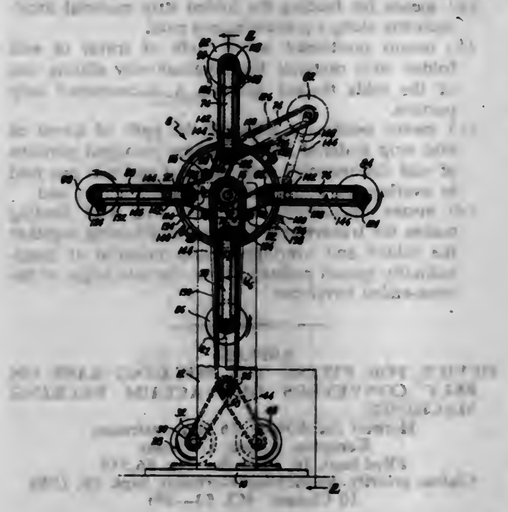


1. In a centerless grinding machine having a base, a grinding wheel rotatably supported on the base, and a regulating wheel rotatably supported adjacent the grinding wheel, the space between the grinding and regulating wheels defining a grinding area, a device for supporting workpieces in the grinding area comprising a thin strip workrest blade non-rigid when tensilely unstressed, and means at each end of the grinding area to hold an end of said blade for support thereof through the grinding area, said means operable to apply a longitudinal tensile stress to said blade whereby said blade is maintained rigid through the grinding area.

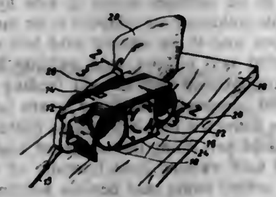
3,094,818
PROCESS AND APPARATUS FOR SHAPING AND POLISHING GEM STONE PARTICLES
Noble E. Price, R.R. 3, Paxa, Ill.
Filed Nov. 2, 1960, Ser. No. 66,736
11 Claims. (Cl. 51—164)

5. Apparatus for first shaping and then polishing a multitude of gem stone particles, said apparatus comprising

means for revolving a mass of such particles about a first axis, means for rotating such mass about a second axis spaced from the first axis, means for varying the revolutionary and rotational speed of such particles, and means for varying the spacing between the axes.



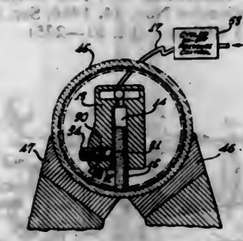
3,094,819
SANDING MACHINE
Erwin Murschel, Stuttgart-Weilimdorf, Germany, assignor to C. F. Scheer & Cie., Stuttgart-Feuerbach, Germany
Filed Aug. 6, 1962, Ser. No. 215,156
Claims priority, application Germany Aug. 10, 1961
17 Claims. (Cl. 51—170)



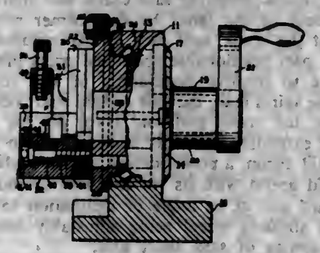
7. A belt sander comprising a housing, a driving motor secured to said housing, a driving roller connected to said motor for rotation thereby, a tensioning roller, a rocking lever member, axially movable means rotatably supporting said rocking lever member within said tensioning roller, a tensioning roller bolt shaft, said tensioning roller being rotatable on said bolt shaft, and means defined adjacent the free end of said rocking lever member rockingly supporting said bolt shaft.

3,094,820
HONING STONE RETAINER
William F. Hanson, Berlin, Conn., assignor to The Fafnir Bearing Company, New Britain, Conn., a corporation of Connecticut
Continuation of application Ser. No. 23,422, Apr. 20, 1960. This application Aug. 1, 1962, Ser. No. 216,268
8 Claims. (Cl. 51—184.1)

1. A honing stone retainer comprising a body member having a bore therein,
means on said body member to connect a source of pressurized fluid with said bore,
said body member having a chamber in communication with said bore,
and said chamber being dimensioned to receive a honing stone therein in close-fitting but axially movable relationship,
said fluid flowing through said bore and communicating directly with said chamber to contact said honing stone and to exert pressure directly upon said honing stone, whereby the pressure upon said honing stone may be varied in accordance with variations in said fluid pressure,
said pressurized fluid being dispensed around the peripheral fit of said honing stone to lubricate the honing action automatically.



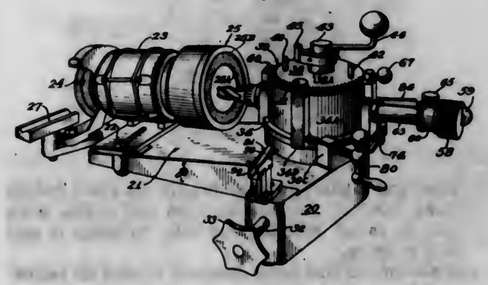
3,094,821
GRINDING FIXTURES
Theodore Eckert, Lincolnwood, Ill., assignor to Haig Manufacturing Corp., Chicago, Ill., a corporation of Illinois
Filed Sept. 20, 1960, Ser. No. 57,188
1 Claim. (Cl. 51—217)



An improvement in a perforator grinding fixture which has a rotatable face plate and means for rotating the plate about its central axis, the improvement comprising:
(*a*) oppositely disposed guide plates secured to the face plate in spaced relation with respect to each other and having on their opposing sides vertically extending flanges,
(*b*) a tool rest having a portion engaging said flanges on corresponding sides thereof,
(*c*) a clamping plate provided by said tool rest and engaging the opposite corresponding sides of the flanges,
(*d*) means for adjusting said tool rest and said clamping plate vertically with respect to said flanges and with respect to said face plate,
(*e*) and means for effecting clamping engagement of the tool rest and the clamping plate with respect to said flanges to hold said tool rest and said clamping plate in frictional engagement with said flanges during movement of said tool rest and said clamping plate relative to said flanges and said face plate,
(*f*) said last-named means comprising a bolt slidable in the tool rest and threaded in the clamping plate

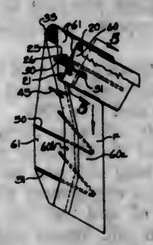
and having an expansion spring interposed between a shoulder of the tool rest and the head of the bolt.

3,094,822
SPIRAL GRINDING FIXTURE
Walter Umbdenstock, Chicago, Ill., assignor of one-half to Charles T. Breitenstein, Chicago, Ill.
Continuation of application Ser. No. 492,282, Mar. 4, 1955. This application Nov. 14, 1960, Ser. No. 69,218
13 Claims. (Cl. 51—225)



2. In a grinding fixture, a base having a head seat and sloping apron adjoining the seat; a swivel plate on said seat; a swivel pin removably positioning the plate on said seat; a head slidably carried on said plate; cooperative adjustable eccentric means on the plate and head for shifting the latter slidably on the plate; a spiral-displacement work shaft carried by the head; a rotatively adjustable top plate on said head and a feed crank journalled thereon; compound inter-pivoted rack means and cooperating pinion means on the shaft and crank drivingly inter-connecting said crank and shaft for spiral displacement of the latter by the former responsive to turning of the crank, said rack means including a planetary rack part positionable about the crank-pinion means responsive to rotative positioning of said top plate to change the spiral lead, the axis of said shaft being normal to that of the crank and said pivot pin for the swivel plate and extending generally in the direction of declination of said apron; a power-driven abrasive wheel mounted on said apron with its rotative axis extending generally toward and at an angle of inclination to said shaft axis, said abrasive wheel being adjustably movable in a sense crosswise of said shaft axis.

3,094,823
APPARATUS AND METHOD FOR FORMING SALES PACKAGES
Robert E. Merritt and Frank Sydnor, Mount Airy, N.C., assignors to Renfro Hosiery Mills Company, Mount Airy, N.C., a corporation of North Carolina
Filed Jan. 3, 1962, Ser. No. 164,057
16 Claims. (Cl. 53—28)



1. An improved apparatus for forming open-ended envelopes of flexible strip material which has been folded widthwise to form a pair of juxtapositioned folds, said apparatus comprising

(*a*) means for feeding the folded strip material longitudinally along a predetermined path,

(*b*) means positioned in the path of travel of said folded strip material for longitudinally slitting one of the folds thereof to form a disconnected strip portion,

(*c*) means positioned adjacent the path of travel of said strip material for positioning proximal portions of said disconnected strip material and said one fold in overlapping relationship with each other, and

(*d*) means operatively associated with said feeding means for transversely severing and joining together the folded and overlapped strip material at longitudinally spaced points to form the side edges of the open-ended envelopes.

3,094,824
DEVICE FOR FIXING THE WELDING BASE ON BELT CONVEYERS OF VACUUM PACKING MACHINES
Herbert Jacobowitz, 16 Sonnenstrasse, Kempten, Allgau, Germany
Filed Sept. 16, 1960, Ser. No. 56,519
Claims priority, application Germany Sept. 26, 1959
10 Claims. (Cl. 53—89)

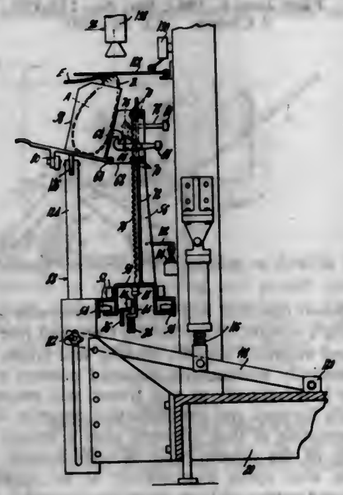


1. In a vacuum packaging machine including pulleys, a belt conveyor passing in a closed path about said pulleys and adapted to move in a feeding direction for carrying containers to be vacuum sealed in side by side relation and a flexible welding base adapted to be mounted on said belt conveyor and to lie against said belt conveyor as it passes around said pulleys, said welding base extending longitudinally of said belt in said feeding direction, the improvement comprising fastening means for said welding base on the conveyor belt including a plurality of holders secured to said belt along the length of said welding base to position said welding base laterally of said belt conveyor, and means fixing said flexible welding base against movement longitudinally of said belt at a point on its length.

3,094,825
FOOD PACKAGING MACHINE
Frederick J. Bracey, West Acton, Paul Joosse, Melrose, and Wilbur A. Mason, East Longmeadow, Mass., assignors to W. R. Grace & Co., Cambridge, Mass., a corporation of Connecticut
Filed Sept. 18, 1961, Ser. No. 139,340
13 Claims. (Cl. 53—112)

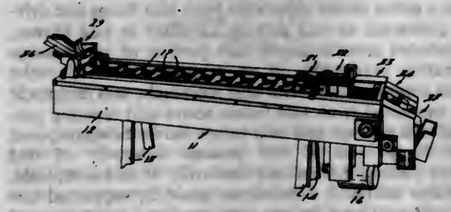
1. A machine for vacuum packaging in bags a series of articles varying in size one from another, said machine comprising an array of spaced article carriers each adapted to receive and hold a bagged article therein, a series of operating stations and operating means horizontally arranged in sequence respectively including a station for loading a carrier with a bagged article, means for lowering the carrier to a base level, means for raising the carrier to a second level determined by the height of the load in the carrier to position the article at a datum level, means for evacuating the bag, means for twisting the neck of the evacuated bag, means for sealing the twisted neck, and means for discharging the bagged, evacuated

and sealed packaged article from the carrier, and further means continuously driving said carriers horizontally past



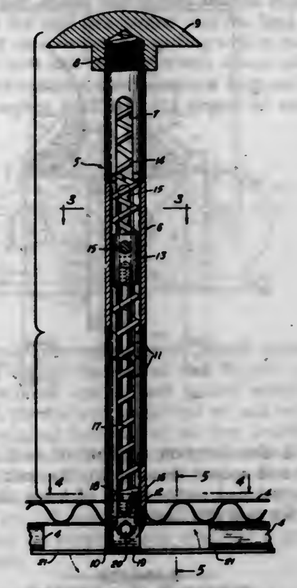
said operating stations and operating means in the sequence aforesaid.

3,094,826
PACKAGING MACHINE
Sidney M. Davey, Ferndale, and Robert J. Ebbert and William R. McBride, Rochester, Mich.; said Ebbert and said McBride assignors to said Davey
Filed Dec. 30, 1960, Ser. No. 79,815
23 Claims. (Cl. 53—131)



1. In a machine for wrapping paper currency, an endless conveyor having upper and lower flights, a plurality of trays mounted on said conveyor, each tray having a flat bottom approximately the size of paper currency with the long axis transverse to the direction of conveyor movement, side, front and rear walls on each tray, central recessed portions in the front and rear walls, a band feeding station at one end of the upper flight of said conveyor adapted to feed flat paper bands in single succession onto said trays in the direction of conveyor movement, said bands extending beyond said front and rear walls through said recessed portions, a forward extension on each tray in the plane of the tray bottom and extending from said front recessed portion, an upward extension on the outer end of said forward extension, whereby the forward extension is adapted to locate a band, a band wrapping station at the other end of said upper conveyor flight, fingers at said band wrapping station, and means for moving said fingers upwardly and within the said recessed portions to fold the ends of said bands over currency placed thereon in said tray.

3,094,827
FLAP HOLDING DEVICE FOR CARTONS
Phillip B. Mayer, 2029 E. Newport Ave., Milwaukee, Wis.
Filed June 20, 1961, Ser. No. 118,465
8 Claims. (Cl. 53—381)



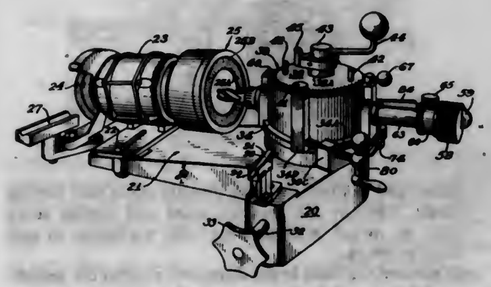
2. A device for firmly holding the folded overlapping flaps of a partially filled container while the flaps are mechanically fastened together, comprising an elongated tubular member having an inner portion adapted to be disposed within an opening between the folded flaps and having an outer portion adapted to be located outwardly of the container, a slide slidably disposed within the tubular member, a collapsible holding member having its central portion pivotally secured to said slide and disposed to be moved from an extended position in which the ends of said collapsible member extend laterally outward from the tubular member in at least two different directions to a collapsed position generally parallel to the axis of the tubular member as the slide is moved toward the outer portion of the tubular member, operating means connected to the slide for moving the slide outwardly within the tubular member to thereby pivot the collapsible holding member to the collapsed position, and means operably connected to the collapsible holding member for pivoting the same to the extended position as the slide is moved to the inner portion of the tubular member.

3,094,828
CENTRIFUGAL DUST SEPARATOR
Robert E. Payne, Newtown Square, and Fred P. Gooch, Media, Pa., assignors to The Sharples Corporation, a corporation of Delaware
Filed Aug. 11, 1958, Ser. No. 754,334
5 Claims. (Cl. 55—407)

1. Apparatus comprising a rotor, said rotor being bell-shaped, vanes on the outer surfaces of said rotor arranged generally longitudinally thereof, means for rotating said rotor, said vanes being inclined toward the direction of rotation of said rotor, a bell-shaped housing surrounding said vanes, said housing having an inlet and an outlet, an annular outlet for particles around the outlet for said housing and positioned in the path of separated particles ejected by said rotor, a second housing downstream from and surrounding said first housing for the flow therethrough of said gas, a plurality of spaced sta-

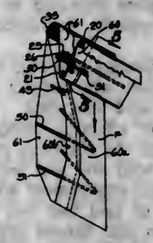
and having an expansion spring interposed between a shoulder of the tool rest and the head of the bolt.

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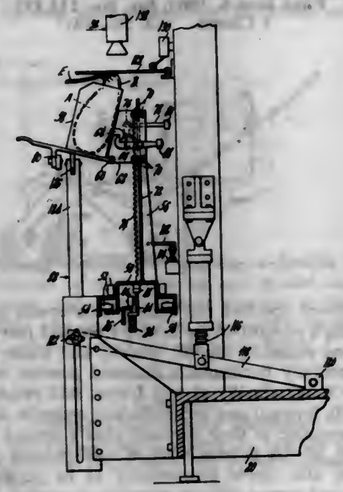


1. In a vacuum packaging machine including pulleys, a belt conveyor passing in a closed path about said pulleys and adapted to move in a feeding direction for carrying containers to be vacuum sealed in side by side relation and a flexible welding base adapted to be mounted on said belt conveyor and to lie against said belt conveyor as it passes around said pulleys, said welding base extending longitudinally of said belt in said feeding direction, the improvement comprising fastening means for said welding base on the conveyor belt including a plurality of holders secured to said belt along the length of said welding base to position said welding base laterally of said belt conveyor, and means fixing said flexible welding base against movement longitudinally of said belt at a point on its length.

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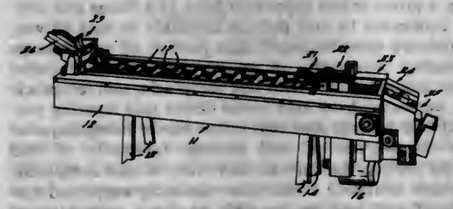
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and sealed packaged article from the carrier, and further means continuously driving said carriers horizontally past



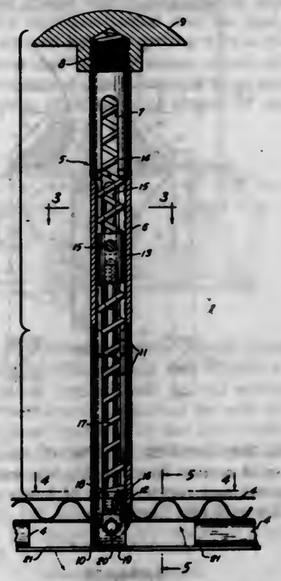
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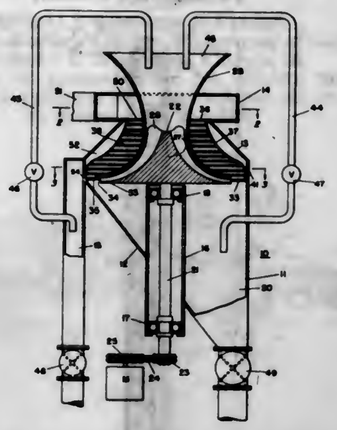


2. A device for firmly holding the folded overlapping flaps of a partially filled container while the flaps are mechanically fastened together, comprising an elongated tubular member having an inner portion adapted to be disposed within an opening between the folded flaps and having an outer portion adapted to be located outwardly of the container, a slide slidably disposed within the tubular member, a collapsible holding member having its central portion pivotally secured to said slide and disposed to be moved from an extended position in which the ends of said collapsible member extend laterally outward from the tubular member in at least two different directions to a collapsed position generally parallel to the axis of the tubular member as the slide is moved toward the outer portion of the tubular member, operating means connected to the slide for moving the slide outwardly within the tubular member to thereby pivot the collapsible holding member to the collapsed position, and means operably connected to the collapsible holding member for pivoting the same to the extended position as the slide is moved to the inner portion of the tubular member.

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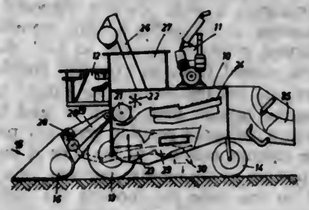
1. Apparatus comprising a rotor, said rotor being bell-shaped, vanes on the outer surfaces of said rotor arranged generally longitudinally thereof, means for rotating said rotor, said vanes being inclined toward the direction of rotation of said rotor, a bell-shaped housing surrounding said vanes, said housing having an inlet and an outlet, an annular outlet for particles around the outlet for said housing and positioned in the path of separated particles ejected by said rotor, a second housing downstream from and surrounding said first housing for the flow therethrough of said gas, a plurality of spaced sta-

tionary generally flat annuli arranged longitudinally of and around the path of flow of gas through said second housing, said annuli progressively decreasing in inner



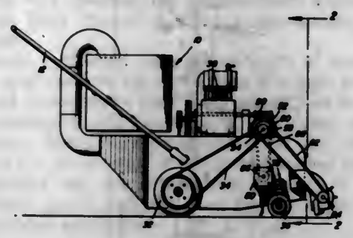
diameter in the direction of flow of said gas, and an outlet for said second housing for the exit of said gas, said last-mentioned outlet being of lesser diameter than the outlet for said first housing.

3,094,829
COMBINE HARVESTER
Reinhold Claas, 64 August-Claas Strasse, Harsewinkel, Westphalia, Germany
Filed Jan. 9, 1961, Ser. No. 81,428
Claims priority, application Germany Jan. 12, 1960
4 Claims. (Cl. 56—20)



1. In a combine harvester, in combination, a cutter assembly including a harvester table having a bottom wall, a cutter bar at a front edge of said bottom wall, and a transporting auger extending transversely to said harvester table above said bottom wall, rearwardly of and substantially parallel to said cutting bar; elongated mechanical conveying means including an elevator housing having an open front end facing said transporting auger and extending rearwardly therefrom, and conveying chain means extending longitudinally in said elevator housing for transporting the cut crop from said auger to a threshing mechanism of said combine harvester; and dust suction means carried by said harvester and including a single tubular member extending substantially parallel to said auger transversely through said open front end of said elevator housing fixed thereto above the chain means therein and being formed with a pair of elongated oppositely arranged suction openings extending uninterrupted substantially through the entire width of said elevator housing in direct contact with the atmosphere, one of said openings facing towards said transporting auger, removable closure means closing one end of said tubular member and suction fan means communicating with the other end of said tubular member.

3,094,830
COMBINATION RAKE-MOWER
Prosper J. Leblanc, 239 E. Hatfield St., Massena, N.Y.
Filed June 6, 1961, Ser. No. 115,197
3 Claims. (Cl. 56—24)



1. A power operated and hand maneuverable apparatus comprising a support frame having front and rear depending ground engaging support wheels, said frame defining a low generally horizontally disposed passage extending generally longitudinally of said frame, said passage being open at its forward end and including opposite side walls which terminate at their forward ends a spaced distance forwardly of the bottom wall of said passage whereby the latter also opens downwardly at its forward end, an elongated rotary pick-up assembly journaled for rotation about its longitudinal axis, extending transversely across the downwardly opening portion of the forward end of said passage and projecting slightly outwardly of and below said passage, an axial flow blower journaled for rotation about an axis generally coinciding with the longitudinal center line of said passage and disposed rearwardly of the forward end of said bottom wall and said pick-up assembly, said passage, a spaced distance rearwardly of said blower, gradually tapering, rearwardly of said rear depending support wheels, into a reduced cross-sectional area portion, said reduced cross-sectional area portion including an outlet having a receptacle communicated therewith, said receptacle being supported from said frame, a prime mover supported from said frame and drivingly connected to said pick-up assembly in said blower, said reduced cross-sectional area portion of said passage terminating rearwardly in an upwardly directed outlet conduit communicated with said receptacle, said receptacle being supported from said frame above said tapering portion of said passage and said prime mover being disposed above the portion of said passage forwardly of said tapering portion thereof and forwardly of said receptacle, said frame including a reel cutter assembly supported forwardly of said pick-up assembly having a rotatable reel to which said prime mover is drivingly connected, said reel cutter assembly being disposed in generally horizontal alignment with the lower portion of the forward end of said passage whereby the grass cutting discharged rearwardly and upwardly from said reel cutter assembly will be discharged directly into the forward end of said passage.

3,094,831
MOTOR WEEDER, PARTICULARLY FOR WEEDING ROAD SIDES AND THE LIKE
Luigi Boldrin, 35 Via Piave, Mestre, Italy
Filed Sept. 2, 1960, Ser. No. 53,760
Claims priority, application Italy Sept. 3, 1959
7 Claims. (Cl. 56—25.4)

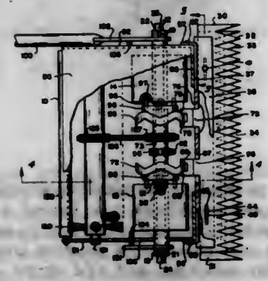
1. In a motor weeder of the character described comprising a frame provided with a pair of transversally arranged downwardly depending supporting members, a transversal horizontal shaft rotatably mounted in said supporting members, two vehicle wheels fastened to the ends of said shaft, a plurality of parallel vertical shafts rotatably mounted on said frame and each carrying at its lower end a revolving weed cutter, an engine mounted on said frame and having a drive shaft, transmission

means connecting said motor drive shaft with said vehicle wheels and parallel vertical shafts, control means for driving at appropriate speeds the said wheels and vertical shafts, a steering shaft attached to said frame, said trans-



mission means including a coupling, a flexible Bowden wire connected to said coupling and passed along said steering shaft, and control means attached to the end of said Bowden wire and mounted in a position on said steering shaft within reach of the operator's hands.

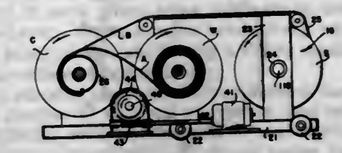
3,094,832
GRASS AND PLANT MOWER
Ga Ken Lee, formerly known as Lee Ga Ken, 439 Powell St., Vancouver, British Columbia, Canada
Filed July 1, 1960, Ser. No. 40,461
4 Claims. (Cl. 56—26.5)



1. A grass and plant mower comprising a shaft, supporting rollers mounted on and carrying the shaft and shiftable longitudinally thereof, a pair of horizontal relatively reciprocal blades suspended from the shaft, coacting cutting teeth on and projecting forwardly from the blades, a pair of opposed wavy cam wheels rotatably mounted on the shaft, spaced lugs connected to each blade and spanning a cam wheel, the lugs of each blade spanning a different wheel than the lugs of the other blade, said lugs being reciprocated by the cam wheels to reciprocate the blades relative to each other, clutch means on the rollers and the adjacent cam wheels, said clutch means being engaged to cause the rollers to rotate with the cam wheels when the rollers are in a first position on the shaft and being disengaged when said rollers are shifted along the shaft to a second position, and means selectively retaining the rollers in the first and second positions on the shaft.

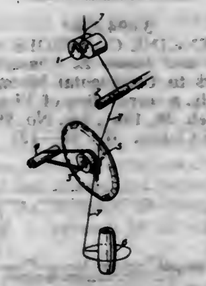
3,094,833
MULTI-STRAND CABLE FABRICATING APPARATUS AND METHOD
Helen H. Brella, 7301 W. 48th Ave., Wheatridge, Colo.
Filed July 10, 1961, Ser. No. 123,006
6 Claims. (Cl. 57—1)

1. The method for making up a multi-strand cable from a supply source consisting of a continuous length of single strand material which comprises engaging the lead end of a first strand from said supply source with a first reel and winding same about said first reel until the full length of the first strand has been removed from the supply source, parting said first strand and supply source, engaging the terminal end for said first strand and the lead end of a second strand derived by said parting with a second reel, winding said first and second strands about said second reel as they are removed simultaneously from said first reel and supply source until the full length of said second



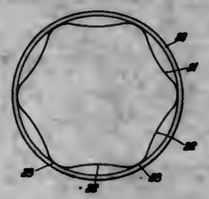
strand has been removed from the supply source, thereafter parting said second strand and supply source, engaging the terminal end of said second strand and the lead end of a third strand as derived by said second parting and the original lead end of the first strand with the said first reel, and winding said first, second and third strands simultaneously about said first reel as they are removed simultaneously from said second reel and supply source until the full length of said third strand has been removed from the supply source whereby a multi-strand cable is derived.

3,094,834
APPARATUS FOR SIMULTANEOUSLY STRETCHING AND FALSETWISTING YARN
John Colin Deeley, Llan-yr-Avon, Cwmbran, and John Llewellyn Burgess, Pontypool, England, assignors to British Nylon Spinners Limited, Pontypool, England
Filed June 27, 1960, Ser. No. 39,037
Claims priority, application Great Britain July 3, 1959
3 Claims. (Cl. 57—55.5)



1. A yarn drawing apparatus comprising means for supporting a yarn package; a feed roll spaced apart from said package; a draw roll including a hub and a convex peripheral flange, said flange surface being defined by a surface of rotation generated by a curved geodesic line connecting the points at which the yarn makes and breaks contact therewith; a snubbing pin spaced apart from said feed rolls and positioned in offset relationship with respect to the plane of said draw roll flange and operative to guide yarn therefrom in contact with said drawn roll flange surface in a direction defining an angle relative to the axis of said draw roll flange which is a maximum of approximately 60°; means for heating the yarn prior to passing the same past said flange surface, the ratio of said hub to said peripheral flange being sufficient to produce a false twist of at least 40 turns per inch.

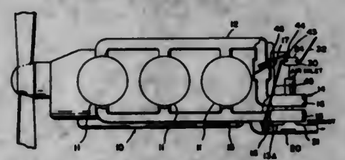
3,094,835
METHOD OF AND A MEANS FOR REDUCING THE YARN TENSION ON A BALLOON-FORMING TWIST SPINDLE
Klaus Nientz and Albert Kreuslein, Krefeld, Germany, assignors to Volkmann & Company, Krefeld, Germany, a partnership
Filed June 13, 1960, Ser. No. 35,756
Claims priority, application Germany June 20, 1959
3 Claims. (Cl. 57—106)



1. The method of reducing friction and yarn tension on balloon-forming twist spindles, particularly on double twist spindles, which comprises limiting the outer travel of the yarn in the balloon substantially from the zone at which the balloon is initiated and imparting inward periodic impulses to the ballooning yarn at regularly spaced discrete zones around and in staggered order along the axial length of the balloon while the yarn is tending to centrifuge out to a maximum ballooning diameter.

2. A balloon limiter on a balloon-forming twist spindle, particularly a double twist spindle, for limiting the outward travel of the yarn in the balloon from substantially the zone of initiation, said limiter having internally thereof a plurality of rings, the inner periphery of each of which has inwardly extending slip surface sections which are adapted and arranged to impart periodic impulses to the ballooning yarn whilst this is tending to centrifuge outwards to a maximum diameter, said rings being axially spaced from one another and the said inwardly extending sections being relatively angularly staggered in one ring in relation to another.

3,094,836
ENGINE CONTROLS
Robert J. Powell and James E. Champion, Muskegon, Mich., assignors to Continental Motors Corporation, Muskegon, Mich., a corporation of Virginia
Filed Feb. 20, 1961, Ser. No. 90,315
6 Claims. (Cl. 60—13)



1. In an internal combustion engine having air induction means provided with a throttle valve and an exhaust driven turbo-supercharger provided with a waste gate operable to vary exhaust back pressure for varying turbocharger pressure, a means for coordinating operation of said waste gate and said throttle valve, said means comprising,

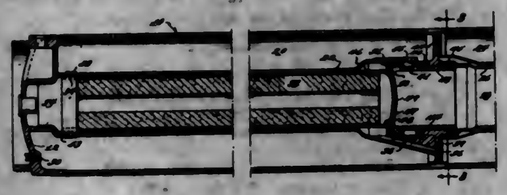
(*a*) a support,

(*b*) an input shaft rotatably carried by said support,

(*c*) a pair of output shafts rotatably carried by said support and having means for operably connecting said output shafts respectively with said throttle valve and said waste gate, and

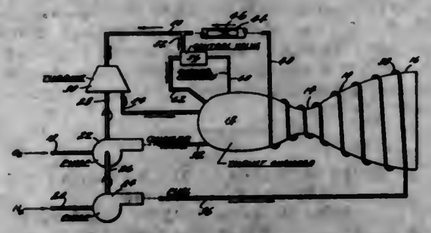
(*d*) separate linkage mechanisms connecting said output shafts with the input shafts and being operable to transmit rotative motion from the input shaft individually to each output shaft, whereby waste gate operation may be coordinated with the throttle valve operation throughout the throttle valve motion.

3,094,837
ROCKET MOTOR
Arthur Sherman, West Caldwell, and De Lacy F. Ferris and Robertson Youngquist, Morristown, N.J., assignors, by mesne assignments, to Thiokol Chemical Corporation, a corporation of Delaware
Filed Feb. 19, 1957, Ser. No. 641,436
12 Claims. (Cl. 60—35.6)



1. A rocket powerplant for missiles comprising a thrust chamber, a liquid propellant tank having a port communicating with said chamber, a cup sealing said port and projecting into said chamber, a pressure chamber communicating with said tank and said thrust chamber, a solid propellant positioned in said pressure chamber to effect pressurization of the propellant in said tank and ignition of the propellant in said thrust chamber upon ignition of said solid propellant, and means operable upon said ignition to shear and retain said cup to admit propellant to said thrust chamber.

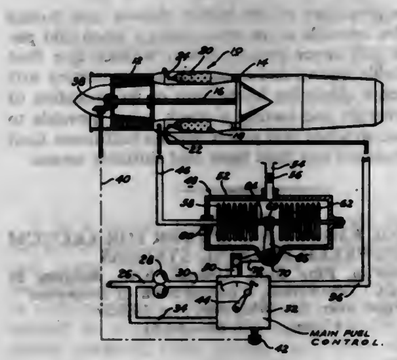
3,094,838
THRUST CONTROL SYSTEM
Frederick P. Evans, West Hartford, Conn., assignor to United Aircraft Corporation, East Hartford, Conn.
Filed June 17, 1959, Ser. No. 821,068
7 Claims. (Cl. 60—35.6)



7. A rocket having a combustion chamber, a source of hydrogen fuel, means receiving fuel from said source and adding energy thereto, a pump for pumping said fuel from said source to said means receiving fuel, a turbine

receiving said fuel from said receiving means and driving said pump, means for regulating the amount of fuel pumped from said source including conduit means containing valve means for regulating the amount of fuel passing to said turbine, said valve means directing a part of the fuel directly to said combustion chamber, and a restriction in said conduit means upstream of said valve and said turbine for preventing temporary fuel flow overshoot caused by the regulating effects of said valve, said restriction normally operating choked.

3,094,839
BELLOWS ARRANGEMENT PROVIDING FAILURE PROTECTION
John F. Kinney, South Bend, Ind., assignor to The Bendix Corporation, a corporation of Delaware
Filed Sept. 29, 1958, Ser. No. 764,168
7 Claims. (Cl. 60—39.09)



6. Pressure sensing apparatus comprising: a first bellows interiorly exposed to the pressure to be sensed; output means connected to said first bellows and movable in a first and a second direction; said first bellows being operative to move said output means in said first direction when the pressure to be sensed is increasing and being operative to move said output means in said second direction when the pressure to be sensed is decreasing; a second bellows having an effective surface area substantially equal to that of said first bellows and being connected to said output means; means operative on failure of said first bellows to communicate said sensed pressure to said second bellows; said second bellows arranged with respect to said output means to move said output means in said first direction with increasing sensed pressure and in said second direction with decreasing sensed pressure when said first bellows has failed.

3,094,840
INTERNAL COMBUSTION ENGINE HAVING A ROTARY PISTON ARRANGED ECCENTRICALLY ON A SHAFT
Fredrik Jeronimus Hoogwer, Nieuw Loosdrechtsedijk 264, Nieuw Loosdrecht, Netherlands
Filed Apr. 28, 1960, Ser. No. 25,294
Claims priority, application Netherlands Oct. 13, 1959
6 Claims. (Cl. 60—39.43)

1. A rotary internal combustion engine comprising, in combination,

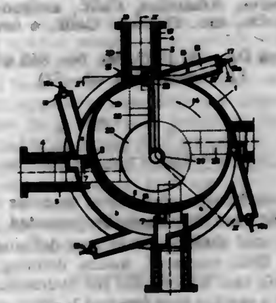
(*a*) a casing having a cylindrical inner surface and constituting a cylinder;

(*b*) a rotatable shaft extending coaxially of said cylindrical inner surface;

(*c*) a substantially disk shape rotary hollow main piston secured to said shaft for rotation within said cylinder, and including a pair of axially spaced end walls and a peripheral wall interconnecting said end walls;

(*d*) the periphery of said piston being divided into at least one group of four consecutive sections of substantially equiangular extent; the first three leading sections of each group, considered in the direction of rotation of said main piston, having a common curvilinear surface which is eccentric to said shaft, with the eccentricity increasing to a maximum at the mid-point of said common curvilinear surface, and which is tangent to the surface of said cylinder at the leading edge of the first section and the trailing edge of the third section, the fourth section of each group being substantially coaxial with said shaft, having a radius substantially equal to that of said cylinder, and having a sliding sealing fit with the surface of said cylinder;

(*e*) a plurality of substantially cylindrical sleeves, equal in number to the total number of said main piston periphery sections, mounted in equi-angular spaced relation circumferentially of said casing for substantially radial reciprocation relative to said shaft, each sleeve having a diameter equal to the axial extent of said main piston and an inner end in continuous fluid-tight engagement with the periphery of said main piston; each sleeve being slideably mounted in a respective substantially radially outwardly projecting sleeve guiding extension of said casing;



(*f*) means biasing said sleeves inwardly toward said main piston;

(*g*) a plurality of compression chambers, equal in number to said sleeves and independent of said sleeve guiding extensions, mounted in equi-angular spaced relation circumferentially of said casing and each communicating with said main cylinder, each of said compression chambers being associated with a respective one of said sleeves and located, considered with respect to the direction of rotation of said main piston, just in advance of its associated respective sleeve;

(*h*) each of said compression chambers extending tangentially to said cylinder in a direction away from its associated respective sleeve, and the outer end of each compression chamber being closed; combustible mixture ignition means associated with each compression chamber; an admission port opening axially through one side of said casing;

(*i*) inlet recesses in the outer surface of one end wall of said main piston, equal in number to said groups, each continuously communicating at its inner end with said admission port and having its outer end opening through the main piston periphery throughout substantially the full angular extent of the leading peripheral section of each group;

(*j*) a driving blade extending radially inwardly of said main piston adjacent the leading edge of the trailing section of each group, said blade having a radial outer end in continuous fluid-tight engagement, through-

out the inner axial extent of said piston, with the peripheral wall of said cylinder to completely seal its associated trailing section from its associated third section; whereby, as said shaft rotates, the space, defined by the leading peripheral section of each group and a pair of circumferentially adjacent sleeves, will expand to draw combustible mixture thereinto through the associated inlet recess, and the thus drawn in combustible mixture will be compressed in the space defined by the third peripheral section of each group, a pair of circumferentially spaced adjacent sleeves, and the associated compression chamber between the latter; the thus compressed mixture being ignited as the driving blade of the trailing section of each group passes the inner end of such associated compression chamber for impingement of the expanding gases, directed tangentially into the cylinder, against the trailing surface of the driving blade to rotate said main piston;

(*k*) means associated with each driving blade for directing the exhaust gases impinging there against radially inwardly of said piston;

(*l*) and means for exhausting gases from the interior of said main piston adjacent said shaft.

3,094,841

JACK MECHANISM HAVING AN INTERNAL LOCKING MEANS

Frank S. Pearne, Alhambra, Calif., assignor to Regent Jack Mfg. Co., Inc., Downey, Calif., a corporation of California

Filed Dec. 29, 1959, Ser. No. 862,648
11 Claims. (Cl. 60—52)



1. A jack mechanism comprising an outer shell, a hollow, extensible ram telescopically mounted in one end of said shell, said shell and said ram defining a substantially closed fluid reservoir, means defining a pressure chamber within said hollow ram for hydraulically moving said ram, and a ratchet-type internal locking means within said reservoir for locking said ram in an extended position, said internal locking means including two components relatively movable along the longitudinal axis of said shell, first means connecting a first one of said components to said ram, second means connecting a second one of said components to said shell, means for moving said components into co-operative engagement to lock said ram in a fixed position relative to the shell, a lock release slidably mounted through one end of said shell and extending into said fluid reservoir, strap means hanging from said lock release, a diagonal cam slot in said strap means, pin means fastened to said second means and extending through said cam slot whereby vertical movement of said lock release will cause said strap means to move toward and away from said first one of said components, a laterally extending leg on said first one of said components, said leg being engageable with said strap means upon movement of said strap means toward the first one of said components to force the first one of said components away from said second means thereby unlocking said ram to permit said ram to be moved relative to the shell.

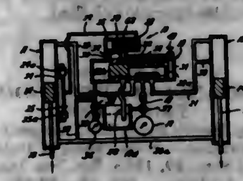
3,094,842

HYDRAULIC PUMPING SYSTEM

Rufus B. Johnston, 3507 Bryn Mawr, Dallas, Tex.

Filed Apr. 21, 1961, Ser. No. 104,695
17 Claims. (Cl. 60—52)

1. An hydraulic pumping system, comprising a pair of cylinders each having a piston reciprocable therein, a rod extending from each piston through the cylinder for connection to a load to be raised, a balance line fluidly connecting the cylinders to one another below the pistons, means shiftable between positions for alternately delivering hydraulic fluid to the upper end of one piston while exhausting it from the upper end of the other piston so as to reciprocate the pistons in opposite directions, a first line connecting with the one cylinder below the upper



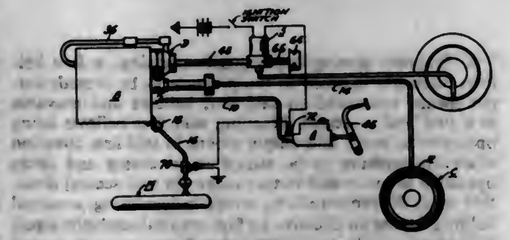
limit of reciprocation of the piston therein and having a check valve movable to an open position when said piston reaches said upper limit to admit balance line fluid to said shiftable means, and a second line connecting with the one cyinder above the lower limit of reciprocation of the piston therein and having a check valve movable to an open position when said piston reaches said lower limit to exhaust balance line fluid from said shiftable means.

3,094,843

AUTOMATIC EMERGENCY POWER FOR VACUUM POWERED BRAKING SYSTEMS

Steve E. Martin, Pine Bluff Arsenal, Ark., assignor to The Bendix Corporation, a corporation of Delaware

Filed Mar. 18, 1960, Ser. No. 16,059
2 Claims. (Cl. 60—54.5)



1. In an automotive vehicle having pneumatic load bearing tires and a pressure filled spare tire, a vacuum powered braking system including an emergency braking system operative in the event of inadequate vacuum supply, which vacuum powered braking system comprises:

a source of vacuum;

a master cylinder;

a fluid pressure motor having a movable wall therein which is normally actuated when atmospheric pressure is communicated to one side of said movable wall and said vacuum source is communicated to the opposite side of said movable wall;

a control valve operatively connected to said master cylinder, said control valve having a control port and an atmospheric port;

a conduit connecting a pressure source within the spare tire to the atmospheric port of said control valve;

a means sensing the amount of vacuum of said vacuum source;

a controllable valve blocking communication of the pressure in the spare tire with said atmospheric port; and

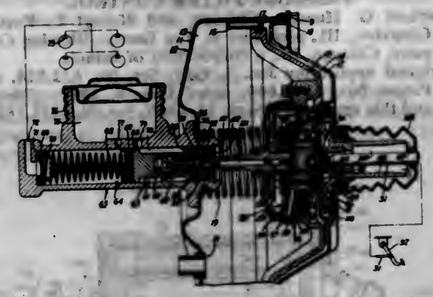
a means controlled by said master cylinder and operatively connecting said vacuum sensing means to said controllable valve upon actuation of said master cylinder whereupon the vacuum sensing means can actuate said controllable valve to open communication of said spare tire pressure to the atmospheric port of said control valve.

3,094,844

POWER BRAKE BOOSTER

James O. Heivern, Lewisburg, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Aug. 7, 1961, Ser. No. 129,789
5 Claims. (Cl. 60—54.6)



1. In a vacuum suspended power brake booster unit, the combination of, a power chamber, a movable wall in said power chamber dividing the same into two compartments the first of which is continuously maintained at subatmospheric pressure and the second of which is subject to subatmospheric pressure variable to atmospheric pressure, valve means controlling admission of atmospheric pressure to said second compartment to effect pressure variation therein to move said movable wall thereby, atmosphere passage means conducting air to said valve means, a master cylinder on a wall of said first compartment and having an open end subject to the subatmosphere pressure in said first compartment, a master cylinder piston reciprocable in said cylinder and having one end subject to the subatmospheric pressure in said first compartment, means between said piston and said movable wall to effect movement of said piston in said cylinder, first and second seal members between said cylinder and said piston at said one end thereof spaced axially of the piston, atmosphere passage means in said piston terminating at the periphery of said piston between said first and second seal members, and additional passage means connecting said last-mentioned passage means with said first-mentioned passage means to provide a common source from which atmospheric air is supplied to said valve means and second-mentioned passage means.

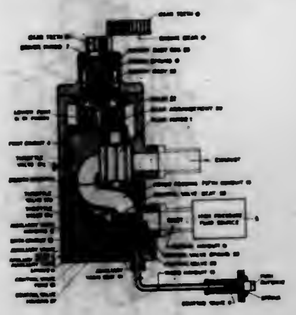
3,094,845

ENGINE STARTER ARRANGEMENT

Salvador Galí Mallofré, Hospitalet de Llobregat, Barcelona, Spain

Filed July 6, 1960, Ser. No. 41,860
Claims priority, application Spain July 10, 1959
6 Claims. (Cl. 60—60)

1. A starter arrangement for an engine adapted to be driven by an engine gear comprising, in combination, a fluid motor, driving means for transmitting rotation of said fluid motor to said engine gear, said driving means comprising a rotary body in driving engagement with said fluid motor, a bore formed in said rotary body and a driver pinion slidably mounted in said bore in a manner whereby in its inoperative condition said driver pinion is out of engagement with said engine gear and in its operative condition said driver pinion is axially displaced in said bore from its inoperative condition and in driving engagement with said engine gear, said driver pinion being rotated about its axis with said rotary body; and hydraulic system control means for controlling the condition of said driving means and for actuating said fluid motor to drive said engine gear through said driving means when said driver pinion is in its operative condition, said hydraulic system control means comprising conduit means communicating with the bore of said driving means at a first part thereof for supplying compressed fluid to said bore to displace the driver pinion of said driving means to its operative condition, starter valve



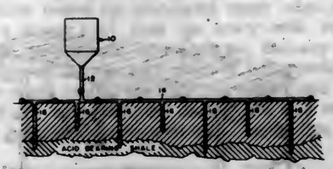
means in said conduit means for regulating the flow of fluid in said conduit means, other conduit means communicating with the bore of said driving means at a second part thereof blocked by the driver pinion of said driving means in its inoperative condition and unblocked by said driver pinion in its operative condition for conducting fluid from said bore to said fluid motor, and control valve means in said other conduit means for regulating the flow of fluid to said fluid motor, said control valve means being opened by fluid flowing through said other conduit means to permit the flow of such fluid to said fluid motor in a manner whereby said fluid motor is actuated.

3,094,846

TREATMENT OF EARTH STRATA CONTAINING ACID FORMING CHEMICALS

Cletus E. Peeler, Jr., Painesville, Ohio, assignor to Diamond Alkali Company, Cleveland, Ohio, a corporation of Delaware

Filed Feb. 27, 1961, Ser. No. 91,712
14 Claims. (Cl. 61—36)



1. The method of treating earth strata containing naturally present acid-forming chemicals which comprises providing within the soil an alkali metal silicate convertible therein by said chemicals to a silica gel.

3,094,847

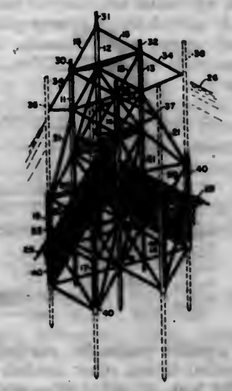
OFFSHORE PLATFORM STRUCTURE

Ivo C. Pogonowski, New Orleans, La., assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware

Filed Oct. 19, 1960, Ser. No. 63,610
4 Claims. (Cl. 61—46)

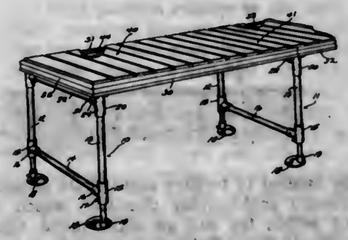
1. An offshore platform structure comprising a framework-type substructure made up of a plurality of pre-

fabricated tubular-legged substructure sections adapted to be positioned on the floor of a body of water one at a time, each of said substructure sections having a plurality of long vertical legs of a length greater than the water depth when normally extending to the water bottom and a plurality of short vertical legs, cross-bracing members securing the long and short legs together to form a framework, at least one of said substructure sections having at least two short legs arranged in the lower portion of the section on one side thereof, a guide pile extending through



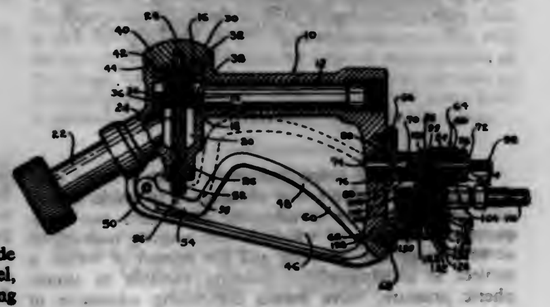
each short leg and into the floor, said short leg guide piles extending upwardly at least above the water level, a pile extending through each of at least some of said long legs and into the floor, and at least another of said framework substructure sections having at least two short legs arranged on the upper portion of said section, said upper short legs being of a spacing and diameter sufficient to pass downwardly over the guide piles in the lower short legs of said other substructure section, the combined length of said upper and lower short legs being no greater than the length of said long legs.

3,094,848
PIER
Paul H. Albrecht, Kewaskum, Wis.
Filed June 23, 1960, Ser. No. 38,328
5 Claims. (Cl. 61—48)



1. A pier comprising, a pair of vertical support sections positioned transversely in respect to said pier, a pair of stringers extending between said pair of support sections, one at each side thereof, each of said stringers being of L-shaped cross section and having an upwardly extending vertical flange and also a horizontal flange, said sections and said stringers having an interengaging keyhole slot and flanged stud for securing said stringers on said support sections, said keyhole slots having a narrow portion extending outwardly, the flange of said studs adapted to lock the latter in said narrow portions, said stud being in a locked position in said slot when said stringers are urged to a spaced apart position from one another, and deck sections supported between said stringers and of such a size that they rest on said horizontal flanges and abut against said vertical flanges and hold the stringers in said spaced apart and locked position on said sections, the width of said deck sections being greater than the distance between the wider portions of opposing keyhole slots.

3,094,849
PRESSURE FILLER CONTROL
Herbert G. Hanson, Chicago, and Robert E. Poethig, Glenview, Ill., assignors to The Bastian-Blessing Company, Chicago, Ill., a corporation of Illinois
Original application Jan. 7, 1957, Ser. No. 632,824, now Patent No. 2,916,060, dated Dec. 8, 1959. Divided and this application Sept. 24, 1959, Ser. No. 842,162
2 Claims. (Cl. 62—51)

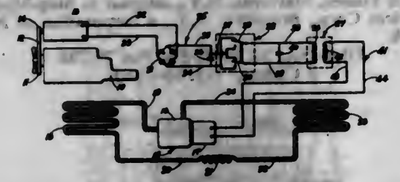


1. The method of expanding an expansible chamber under pressure comprising alternately injecting liquefied gas in its vapor phase and its liquid phase at a constant volume of flow thereof into a confined space adjacent to said chamber and in communication therewith, reducing the pressure in the chamber by aspirating fluid from said chamber by the flow of vapor phase gas injected into said confined space, halting said aspiration and said reduction of pressure by the injection of liquid phase gas into said confined space for the absorption of latent heat of vaporization from the walls of said space to vaporize said injected liquid phase gas in said space to increase the resultant amount of vapor and the pressure exertible thereby in said chamber above that induced by said injection of vapor phase gas alone, and venting vapor from said space at substantially constant volume of flow equal to the volume of flow of vapor injected into said space to accumulate in said space and chamber for brief periods of time portions of said increased amounts of vapor during liquid phase injection to develop a pressure increase in said space for expanding said chamber.

3,094,850
VEHICLE REFRIGERATION SYSTEMS
Alwin B. Newton, York, Pa., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Filed Mar. 28, 1960, Ser. No. 17,978
7 Claims. (Cl. 62—132)

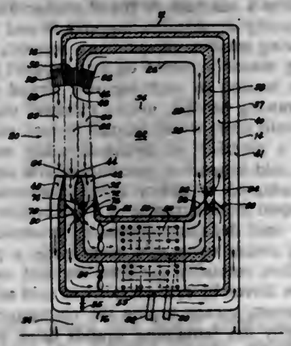
1. In combination, a variable speed prime mover; an alternating current generator driven by said prime mover at variable speeds; a transformer having a primary and a secondary coil, with the primary coil thereof being connected in an electrical circuit with said generator; a constant frequency inverter connected in said electrical circuit; means between said generator and inverter for rectifying the alternating current output of said generator to

direct current for delivery to said inverter; a second electrical circuit including said transformer secondary coil and



an alternating current motor; and refrigeration compression means driven by said motor.

3,094,851
REFRIGERATION CABINET AND DEFROST
Sterling Beckwith, Libertyville, Ill., assignor, by mesne assignments, to Dual Jet Refrigeration Company, Chicago, Ill., a corporation of Illinois
Filed May 1, 1961, Ser. No. 106,805
9 Claims. (Cl. 62—256)



1. In a refrigerated enclosure having an access opening in one wall communicating the otherwise enclosed space with the ambient atmosphere, an inner cold air nozzle and an outer warmer air nozzle extending in side-by-side relationship across one edge of said access opening, an inner cold air inlet and an outer warmer air inlet extending in side-by-side relationship across the opposite edge of said access opening, an inner cold air passage communicating the cold air inlet with the cold air nozzle, a warmer air passage adjacent the cold air passage and communicating the warmer air inlet with the warmer air nozzle, circulating means in each of said passages for causing air to flow from the inlets to the nozzles and then as adjacent inner cold air and outer warmer air panels across the access opening to the cold air inlet and warmer air inlet respectively for recirculation, a first refrigeration means in said cold air passage and a second refrigeration means in said warm air passage, and means for defrosting the refrigeration means comprising means for bypassing the cold air stream from the cold air passage into the warmer air passage in advance of the second refrigeration means and returning said cold air stream from said warmer air passage to said cold air passage beyond the second refrigeration means but before the cold air nozzle and for concurrently by-passing the warmer air stream from the warmer air passage to the vacated portion of the cold air passage in advance of the first refrigeration means and then returning the warmer air stream from the cold air passage to the warmer air passage beyond the first refrigeration means but before the warmer air nozzles for passage of the warmer air through the refrigeration means for defrosting.

ERRATUM
For Class 62—512 see:
Patent No. 3,095,255

3,094,852
SUPPORT FOR GAS AND OIL STRINGS
James S. Taylor, 10514 E. Admiral Place, Tulsa, Okla.
Filed July 13, 1960, Ser. No. 42,621
1 Claim. (Cl. 64—1)

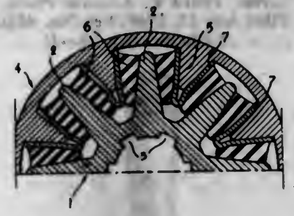


In gas and oil well equipment, an elongated tubular member, and a collar encircling and fixedly secured to the exterior of the member a substantial distance from both ends of the member, the member having a uniformly cylindrical outer contour of substantially the same diameter for a substantial distance on both sides of the collar, the collar consisting of a plurality of identical elements encompassing the member, the elements together defining a horizontal circular upper edge of the collar, the elements abutting each other along vertical edges of substantial length parallel to the axis of the member, each element having a downwardly extending rib of an extent peripherally of said member substantially less than the peripheral extent of the upper edge of the element, the side edges of each element defining the rib converging downward from the lower ends of said vertical edges, each element having an opening therethrough disposed a substantial distance below the associated upper edge of the element at a lower level than the lower ends of said vertical edges and spaced a substantial distance from both side edges of the rib, each element being welded to said member along said upper edge and within said opening, but said side edges defining the rib and said vertical edges away from said horizontal edge being free from weld metal.

3,094,853
FLEXIBLE TRANSMISSION COUPLING
Antonio Boschi, Milan, Italy, assignor to Societa Applicazioni Gomma Antivibranti "S.A.G.A." S.p.A., Milan, Italy
Filed Sept. 6, 1962, Ser. No. 221,832
Claims priority, application Italy Dec. 15, 1961
4 Claims. (Cl. 64—14)

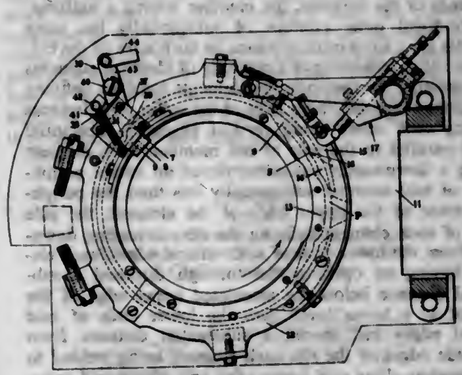
1. A flexible transmission coupling comprising a rigid rim member having integrally formed thereon a circumferential series of radially inwardly directed wedge-shaped ribs extending in axial planes, a rigid hub member having integrally formed thereon a circumferential series of radially outwardly directed wedge-shaped ribs extending in axial planes in the recesses between the ribs on the rim, an

axially elongated substantially prismatic pad of resilient elastomeric material located between a load-transmitting face on each of the ribs on the hub and a cooperating load-transmitting face on a rib on the rim, said pad being bonded to the load-transmitting face on the rib on the hub, and a V-bent metal plate between each pair of pads lo-



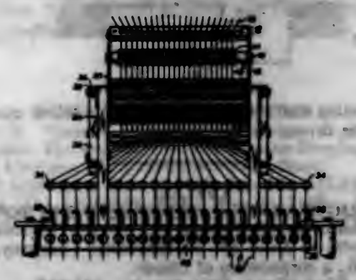
cated in a common recess between the ribs on the hub, said plate having its outer faces bonded to the respective pads in the pair and having a rib on the rim wedged into the mouth of the plate whereby the pads in the pair are precompressed against their respective ribs on the hub while leaving free a bottom section in each recess both in the rim and hub.

3,094,854
METHOD OF KNITTING
Oscar Fregeolle, Lincoln, R.I., assignor to Draper Corporation, Hopedale, Mass., a corporation of Maine
Filed Aug. 8, 1960, Ser. No. 47,980
2 Claims. (Cl. 66—108)



1. A method of knitting an article of hosiery on a circular knitting machine having sinkers and independent needles which includes the steps of drawing a single body yarn only behind the nibs and over the backs of said sinkers and through the needle loops of the previous course, casting off the previously formed needle loops by means of the sinkers acting upon the intervening previously formed sinker loops only, and before said needles are raised to a latch clearing position, causing the newly drawn sinker loops to pass over the tops of the nibs from the backs to the throats of said sinkers and then causing the sinkers to traverse the major portion of their circumferential travel with said newly drawn sinker loops in the throats thereof.

3,094,855
YARN FEEDING AND DEFECT DETECTING DEVICE
Edward Vossen, Malverne, N.Y., assignor to Stop-Motion Devices Corp., Brooklyn, N.Y., a corporation of New York
Filed Dec. 30, 1960, Ser. No. 79,708
3 Claims. (Cl. 66—163)

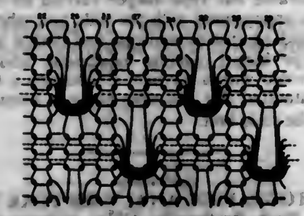


1. A yarn-feeding and defect detecting device adapted to be placed in a machine of the character described between a plurality of yarn-feeding spools and a plurality of yarn-drawing needles, comprising a support, a plurality of tensioning means mounted on said support for providing uniform tension to each separate strand of yarn at such yarn-drawing needles, means mounted on a support for guiding said plurality of strands toward said tensioning means, a plurality of defect-detecting means each mounted on said support in association with one separate strand and adapted to detect a predetermined slack in said strand upon the occurrence of a defect therein, means activated by said detecting means to automatically stop yarn feeding means upon said occurrence, a pair of engageable rollers rotatably mounted on said support and adapted to be driven by said plurality of said strands passing therebetween, means urging the engagement of said rollers whereby the remaining strands drive said rollers to overcome said tension and develop any slack in said defective strand which permits said detecting means to stop said feeding means, said rollers being in the form of toothed gears, one said gear being mounted on a movable bracket for engagement with the other, and said means urging said engagement including a spring connecting said bracket to said support, said guiding means including a first and second row of guides, said tensioning means including first and second rows of spring-urged tension discs, said rollers being positioned between said first row of tension discs and said second row of guides, and said detecting means including a row of wire loops resting on said strands and positioned between said second row of guides and said second row of tension discs, and said stop means comprising a row of electric switches adapted to be activated by said wire loops falling from said strands upon development of said slack and thereby causing said feeding means to stop.

3,094,856
KNITTED STOCKING TOP
Zephyr Mosley, Mount Airy, N.C., assignor to U-Stretch Corporation, Mount Airy, N.C., a corporation of North Carolina
Filed Dec. 8, 1960, Ser. No. 74,700
3 Claims. (Cl. 66—172)

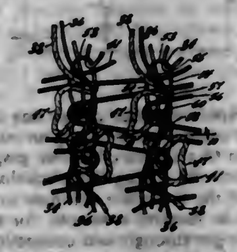
1. A knit stocking top having a crochet-like effect comprising a repeated continuous sequence of uniform groups of a plural number, not less than four, of courses knit of inelastic yarn, each group having interspersed with knit stitch wales a plurality of uniformly spaced wales in each of which spaced wales one tuck stitch extends throughout the courses of such group, said spaced wales

being uniformly laterally offset at least one wale from group to group, and elastic yarn laid behind a plurality



of adjacent courses and in each such tuck stitch in each group.

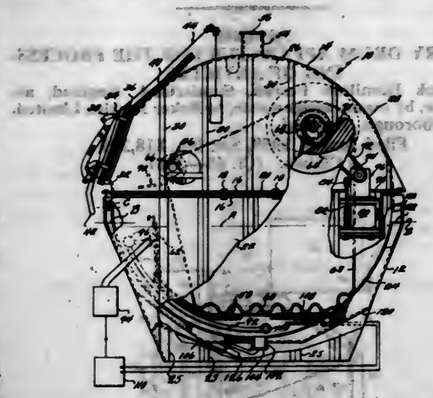
3,094,857
WARP KNITTED PILE FABRIC INVOLVING ORIENTATION BY MODIFYING WARP
Rex S. MacCaffray, Jr., Boiling Springs, Pa., assignor to C. H. Masland & Sons, Carlisle, Pa., a corporation of Pennsylvania
Filed Feb. 26, 1960, Ser. No. 11,306
20 Claims. (Cl. 66—191)



1. A warp knitted pile fabric comprising sinuously laid-in backing yarn forming bundles, warpwise rows of chain stitches binding together the backing yarn bundles, pile yarn forming pile projections the legs of which are bound into the warpwise rows of chain stitches, and modifying warp yarn also bound by inlay into the chain stitches and passing around the legs of each pile projection on the side opposite to the top stretch of the associated warpwise chain stitch, thus binding the legs of the pile projection between the said top stretch and the said modifying warp yarn.

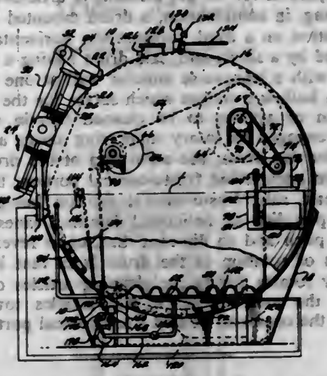
3,094,858
LOW PRESSURE, HIGH TEMPERATURE DYE BECK
John V. Isley, Burlington, and Robert A. Gilliam, Greensboro, N.C., assignors to Burlington Industries, Inc., Greensboro, N.C., a corporation of Delaware
Filed Mar. 1, 1961, Ser. No. 92,659
9 Claims. (Cl. 68—5)

3. In a dye machine for dyeing fabrics in rope form moving through a dye liquor at a temperature above the boiling point of the dye liquor at atmosphere and under an elevated pressure, the improvement comprising: a pressure tank having a dye liquor therein at a predetermined level and a superposed body of gas; means in said tank for endlessly moving the fabric through the dye liquor and the superposed body of gas; conduction heating means positioned in the tank below the predetermined level of the dye liquor therein for heating the dye liquor and thereby increasing the pressure of the superposed gas and causing the dye liquor to circulate; and a U-shaped duct in open communication at one end thereof to the interior of the tank at a level above the predetermined level of dye liquor therein and at the other end thereof to the atmosphere above its opening into the tank, said duct being filled with a liquid and providing a liquid seal



between the superposed body of gas within said tank and the atmosphere.

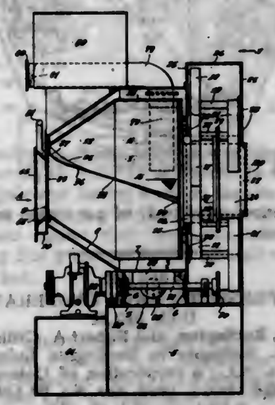
3,094,859
HIGH PRESSURE, HIGH TEMPERATURE DYE BECK
John V. Isley, Burlington, and Robert A. Gilliam, Greensboro, N.C., assignors to Burlington Industries, Inc., Greensboro, N.C., a corporation of Delaware
Filed Mar. 1, 1961, Ser. No. 92,658
5 Claims. (Cl. 68—15)



4. In a dye machine for dyeing fabrics in rope form moving through a dye liquor at a temperature above the boiling point of the dye liquor at atmosphere and under an elevated pressure, the improvement comprising: a horizontally disposed cylindrically shaped pressure tank for the dye liquor and a superposed body of gas; means for heating the dye liquor, said heating means including steam coils positioned in the lower portion of said tank and immersed in and beneath the level of dye liquor therein, said steam coils including at least one inlet adjacent one end of said tank and at least a second inlet adjacent an oppositely disposed end of said tank whereby steam may be supplied to said coils from opposite ends of said tank toward the center thereof so that temperature of the dye liquor may be evenly elevated throughout said tank, means for moving fabric through the dye liquor and superposed body of gas when the dye liquor has reached a predetermined temperature and the superposed body of gas is at a predetermined pressure; and means for circulating cold water through said steam coils after the

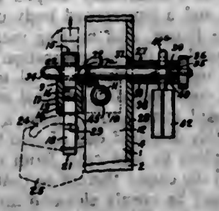
dyeing operation is completed whereby the dye liquor may be quickly cooled at a controlled rate of cooling.

3,094,860
ROTARY DRUM APPARATUS FOR THE PROCESSING OF ARTICLES
Frederick Hamilton Ferrah, Sunderland, England, assignor, by mesne assignments, to Baker Perkins Limited, Peterborough, England
Filed June 4, 1959, Ser. No. 818,209
4 Claims. (Cl. 68—210)



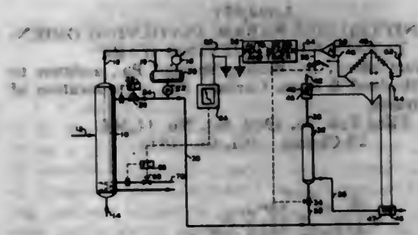
1. Apparatus for the dry cleaning of articles of clothing comprising, in combination, a drum mounted for reversible rotation on a fixed, substantially horizontal axis and supported by a single end, said drum having a cylindrical portion with a transverse annular wall at one end thereof and a hollow trunnion which serves for the entry into the drum of articles to be cleaned therein and is externally engaged by rotary supporting means and driving means for the drum, the other end of the drum having a conjoint open-ended frusto-conical portion, the interior of at least said frusto-conical portion being provided with a plurality of helicoidal laminar vanes set at a suitable pitch and so directed that, upon reversal of the direction of rotation of the drum from that in which it normally rotates during the cleaning articles of clothing therein, the vanes displace said articles towards and through the open end of said frustoconical portion.

3,094,861
TWO-WAY LOCK FOR SLIDING DOORS
Leonard B. Sayles, 9081 Otto St., Downey, Calif.
Filed Oct. 16, 1961, Ser. No. 145,105
2 Claims. (Cl. 70—95)



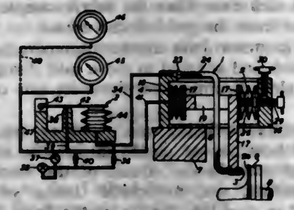
2. A device for locking a pair of sliding doors against relative movement, both doors provided with door frames, including: a bolt housing externally secured to the frame of one door, and provided with a slide bolt, means carried by the bolt housing for engagement with the slide bolt to lock the slide bolt against movement relative to the housing, a second housing carried by the frame of the second door, a movable bar type keeper carried by the second housing for engagement with the slide bolt when the slide bolt is locked against movement, and means for locking the bar type keeper against movement, said bar type keeper provided with a bayonet slot having a lateral slot and a longitudinal slot, the slots being in communication to receive the slide bolt.

3,094,862
CHROMATOGRAPHIC ANALYZER PEAK READER
Marvin C. Burk, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Dec. 3, 1958, Ser. No. 777,995
15 Claims. (Cl. 73—23)



1. A chromatographic analyzer comprising a plurality of chromatographic columns each having an inlet, an outlet and a connection to a source of carrier gas; a sample cell; means for selectively timing the admission of samples to the inlets of the respective columns so that only one column at a time receives a sample, for timing the admission of carrier gas through said connection to each respective column first in a flow for eluting the sample from one column after admission and next to a flow for flushing the column, and for directing a mixture of the carrier gas and eluted sample to said sample cell from the outlet of the column then subject to the carrier gas flow for eluting; a bridge having a branch in said sample cell and a pair of output terminals; a peak reader connected to said output terminals that comprises first means for storing voltages received from said output terminals; means connected between said first means and said bridge for terminating the storing on said first means when the maximum value of the stored signal occurs; second means for storing a signal transferred from said first means; third means connected to said first means for disconnecting said first means from said means for terminating while connecting said first means to said second means and vice versa; fourth means connected to said first means for removing a prior stored signal therefrom when said third means connects said first means to said means for terminating; means continuously connected to said second means for continuously producing an output signal in response to the signals stored on said second means; and means for operating said third means in a timed sequence thereby to maintain said first means disconnected from said means for terminating and to maintain said first means connected to said second means for a first interval of time, and then to reverse these connections for a second interval of time during the initial portion of which said fourth means removes any prior stored signal from said first means; said means for selectively timing and said means for operating both being operated in unison so that the flow of carrier gas for eluting is admitted to a selected column during said second interval of time and to admit the flow of carrier gas for flushing during said first interval of time.

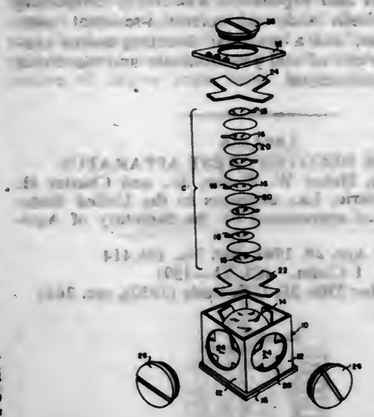
3,094,863
POSITION INDICATORS
Henry Albert Hallett, Cheltenham, England, assignor to Cheltenham Auto Controls Limited, Cheltenham, England
Filed May 16, 1960, Ser. No. 29,427
Claims priority, application Great Britain May 20, 1959
3 Claims. (Cl. 73—37.5)



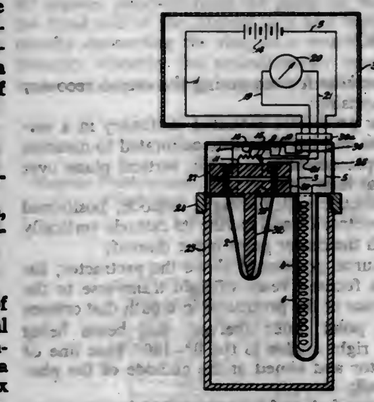
1. In pneumatic means for indicating the relative position of two parts, a nozzle mounting comprising a bellows system including a first bellows acting in opposition to a second bellows and adapted for location on one of said parts, a primary nozzle mounted between said bellows and adapted to discharge towards and be throttled by a surface of the other of said parts, a secondary nozzle the pressure upstream of which provides a control pressure fed to said first bellows, a third bellows, a throttling member for said secondary nozzle controlled by said third bellows, pipe means connecting the downstream side of said primary nozzle to said third bellows, and means for supplying pneumatic fluid to said nozzles so that movement of said surface varies the throttling of said primary nozzle to vary the primary nozzle pressure and hence the throttling of said secondary nozzle in a manner which varies the control pressure fed to said first bellows to produce movement of said primary nozzle tending to restore the original position of the latter relatively to said surface, whereby said primary nozzle follows said surface and said control pressure provides a pneumatic signal indicative of the relative position of said parts.

3,094,864
OMNI-DIRECTIONAL VIBRATION AND ACCELERATION SENSING TRANSDUCER
Roy G. Kahkonen and Robert A. Bartlett, Fort Walton, Fla., assignors to the United States of America as represented by the Secretary of the Air Force
Filed Oct. 12, 1960, Ser. No. 62,313
2 Claims. (Cl. 73—71.2)

1. An omni-directional transducer system capable of receiving and transmitting for measurement vibrational and G-load forces from any direction, said system comprising a cubical hollow body, six sides on said body, a movable mass of known density located in said body, six capacitor units, each unit comprising a plurality of flexible deformable capacitor plates and a plurality of dielectric elements placed in sandwiched formation, two capacitor units being located on each axis in said cube, one on each opposite side of said central mass, six pairs of negator spring elements, one negator of each pair located inwardly and one outwardly with respect to each of said capacitor units, a negator-element being interposed between each capacitor unit and an interior side of said cube, and a negator element being interposed between each capacitor unit and said central mass, said central mass moving in response to vibrational and G-load changes to vary the distance between said capacitor plates and thereby vary the capacitance of each capacitor unit, terminals on said capacitor plates for connecting selected electrical measuring instruments for making desired observations, a preloading adjusting means located in each side of said cubical transducer body for removing looseness and play in the elements of said transducer, for locating said mass in balanced relationship to each capacitor unit and, when desired, for applying pressure to said capacitor plates for raising the capacitance values of said capacitor elements above the nonlinear slope.



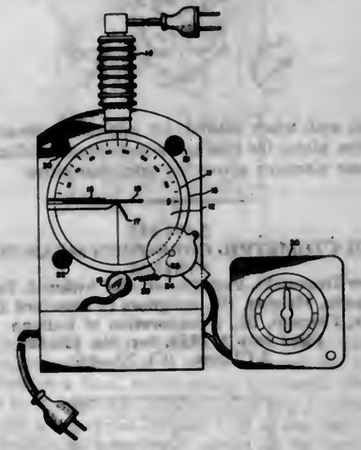
3,094,865
CONDUCTOMETRIC CORROSION MEASUREMENT SYSTEM
Andrew Dravnieks, Park Forest, and Arthur J. Freedman, Chicago Heights, Ill., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana
Filed July 3, 1959, Ser. No. 824,902
3 Claims. (Cl. 73—86)



1. A laboratory apparatus for corrosion rate measurements which comprises a container, a cover for said container, said cover carrying an expendable electrically-conducting corrosion specimen and a corrosion-insensitive compensator resistor having a resistance much larger than the resistance of said metallic electrically conducting corrosion specimen, a potentiometer connected across said expendable electrically-conducting corrosion specimen, conduit means connecting said expendable electrically conducting corrosion specimen and said corrosion-resistant compensator resistor in electrical series, a terminal block carried by said cover, additional conduit means connecting said terminal block with said expendable electrically conducting corrosion specimen, a center tap on said rheostat, and said corrosion-resistant compensator resistor; and a detachable corrosion measurement device having a terminal block removably attachable on the ter-

minal on said container cover, said measuring device including a source of E.M.F. arranged in electrical series connection with said expendable electrically conducting corrosion specimen and said corrosion-resistant compensator resistor, and a potential detecting means connectable to one end of said potentiometer and the center tap of said potentiometer.

3,094,866
WRINKLE RECOVERY TEST APPARATUS
Julia M. Sloan, Heber W. Weller, Jr., and Chester H. Haydel, Metairie, La., assignors to the United States of America as represented by the Secretary of Agriculture
Filed Apr. 28, 1961, Ser. No. 106,414
1 Claim. (Cl. 73—159)
(Granted under Title 35, U.S. Code (1952), sec. 266)



A testing apparatus for measuring the crease recovery of a fabric comprising:

(*a*) a circular protractor mounted stationary in a vertical position and having a face calibrated to measure angular displacement in a single, vertical plane over a range of at least 180°;

(*b*) a photoelectric cell, having a cathode, positioned below the protractor and having its cathode vertically aligned with the center point index thereof;

(*c*) a light source, positioned above the protractor, for projecting a focused beam of light transverse to the calibrated face of the protractor in a path that crosses the center point index thereof, said beam being oriented at right angles to the 0°–180° base line of the protractor and aimed at the cathode of the photoelectric cell;

(*d*) an electric switch and accompanying circuitry operatively associated with said photoelectric cell so that said switch is in open position at such time as the path of the focused beam of light from the light source is uninterrupted and is in closed position at such time as the path of the focused beam of light is interrupted;

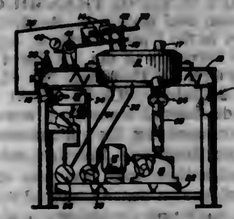
(*e*) clamping means, carrying an angle-indicating arm, for securely supporting in an angular position one end of a pre-creased, substantially rectilinear sample of textile fabric, said clamping means and angle-indicating arm being mounted for rotational movement across the calibrated face of the protractor with the axis of rotation coincident with the center point index of the protractor, the angle-indicating arm being aligned to traverse the calibrations on the face of the protractor when rotated, said clamping means being adapted to contact and hold said pre-created fabric sample at a line immediately adjacent and parallel to the fabric crease but not superimposed thereon, the unsupported portion of the pre-creased fabric sample depending vertically away from the clamping contact adjacent and parallel to, but not interrupting, the path of the focused beam of light while the fabric is in position when initially creased, but being capable of interrupting the path of the focused beam of light at such time when the fabric sample inherently recovers from the pre-induced crease;

(*f*) electric motor drive means responsive to said electric switch and adapted to move said clamping means and angle-indicating arm about its axis of rotation; and

(*g*) an automatic timing switch with contacts normally open but which are closed during the metering of time intervals in the circuit of the electric motor drive means, said automatic timing switch being adapted to stop the electric motor drive means at a preset time to terminate the test,

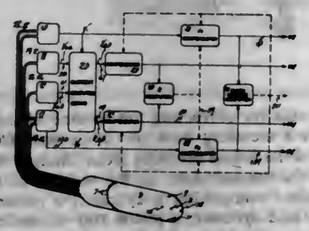
the above-recited elements being so aligned that recovery from deformation of the creased fabric sample, as evidenced by lateral movement of its unsecured end, interrupts the focused beam of light between the light source and the cathode of the photoelectric cell, actuating the electric switch which, in turn, actuates the electric motor drive means to move the clamping means and angle-indicating arm about the axis of rotation to reposition the angle-indicating arm relative to the protractor calibrations, and to move the unsecured end of the creased fabric sample out of the focused beam of light thereby reestablishing the photoelectric cell circuit and opening the electric switch circuit to stop the electric motor drive means, this repetitive operation continuing with cumulative angular measurement of the inherent recovery of the creased fabric sample until termination of the test.

3,094,867
METHOD AND APPARATUS FOR TESTING GEARING
Charles R. Hart, Jr., 5318 Ortega Forest Drive, Jacksonville, Fla.
Filed Sept. 6, 1960, Ser. No. 54,329
5 Claims. (Cl. 73—162)
(Granted under Title 35, U.S. Code (1952), sec. 266)



2. A device for testing a transmission having input and output shafts which comprises a test frame having a base and a bed plate, means including a plurality of lugs carried by said transmission for releasably mounting a to-be-tested transmission on the bed plate, a motor mounted on said base, reduction means in driving connection with said motor and adapted to apply a selected low speed and high torque to the transmission input shaft, a flexible shaft connecting said reduction means to the transmission input shaft, a pump mounted on said bed plate, hydraulically operated brakes carried by said frame in fluid communication with said pump and forcibly moved into engagement with a disc member on the transmission output shaft for applying a retardant force on the output shaft, a pressure responsive cell carried by the bed plate and operated by a plate supported on the transmission output shaft as said retardant force is applied to the transmission output shaft, means connected to and operated by said pressure responsive cell for indicating said retardant force, an oil reservoir mounted on said frame, an oil pump on said base in fluid communication with said reservoir, an oil heater in fluid communication with said oil pump and the transmission for adding heated oil thereto to heat the transmission in excess of that internally created, and a scavenger pump on the base in fluid communication with the reservoir and the transmission for returning the oil to the reservoir.

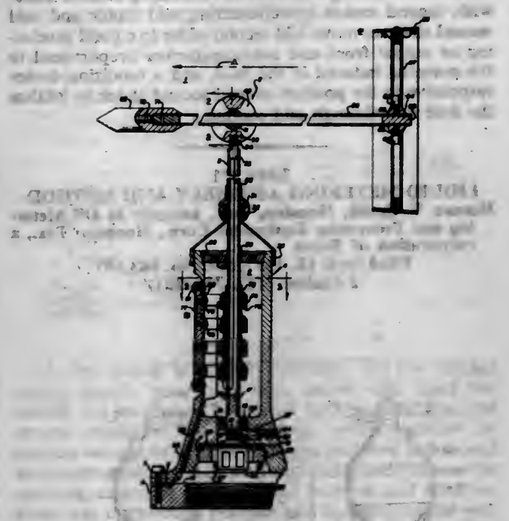
3,094,868
AIR DATA COMPUTER SYSTEM
Niels Yde Andersen, Jr., East Aurora, and Hiramie T. McAdams, Williamsville, N.Y., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Sept. 27, 1960, Ser. No. 58,865
5 Claims. (Cl. 73—178)



1. In an airborne transonic flight line computer system apparatus for determining the free stream value of static pressure of an aircraft said apparatus comprising a hemispherically-ended pressure probe mounted in alignment with the reference center line of the aircraft, said probe being constructed so as to detect the local value of static pressure; a transducer which converts the locally detected value of static pressure into a proportionate electrical voltage; and a compensator which includes a three dimensional cam which applies an experimentally determined compensating correction to the locally sensed value of static pressure to obtain the free stream value of static pressure, the circumferential contour of the cam being proportional to the Mach number of the aircraft, and the contour of the cam along its longitudinal periphery being proportional to the angle between the reference center line of the aircraft and the free stream velocity vector.

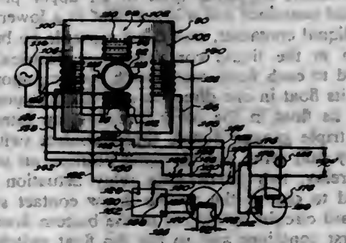
3,094,869
REMOTE RECORDING ANNULAR VANE ASSEMBLY
George Wehmann, Idaho Falls, Idaho, assignor to the United States of America as represented by the United States Atomic Energy Commission
Filed Aug. 26, 1959, Ser. No. 836,316
5 Claims. (Cl. 73—189)

1. A weather vane assembly for remotely indicating the three-dimensional wind direction, comprising a main housing having a central passage, a mast having an end rotatably supported in said central passage, a vane, means supporting said vane at its balance point on the other end of the mast for movement with the mast and providing for pivotal movement of the vane in a plane including the vane and the mast, a potentiometer, the shaft of the potentiometer being coupled to the vane to rotate as the vane pivots, said main housing having an opening at one side entering into said central passage adjacent the mast, a block of electrical insulation material, means removably securing said block over said opening, a conductive ring, means supporting said ring around the mast in a plane perpendicular to the axis of the mast, a contact arm and brush strip, means securing one end of said contact arm and brush strip against the inside face of said block opposite said ring and extending in a plane of said ring; said contact arm and brush strip having two successive 45 degree angle bends in the direction of said



ring spaced along the strip to position the unsecured end of the strip in resilient contact with the ring at a point 90 degrees removed from the point on the ring opposite the fixed end of the contact arm and brush, means electrically connecting the ring to a terminal of the potentiometer whereby the potentiometer may be connected to a remote point with any mast rotation pattern.

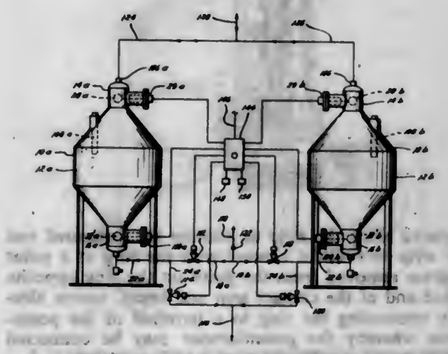
3,094,870
FLOWMETER
Eugene Mittelmann, 427 W. Wrightwood, Chicago, Ill.
Filed Dec. 26, 1956, Ser. No. 630,517
7 Claims. (Cl. 73—194)



1. Apparatus for measuring fluid flow comprising a conduit for carrying a flowing fluid, electromagnetic means for establishing an alternating magnetic field through a section of said conduit, a plurality of electrodes electrically contacting a fluid flowing in said conduit to detect a potential induced in the fluid, means to provide a reference signal potential proportional to and in phase with said magnetic field, a potentiometer having a slider making contact therewith connected so that a portion of said reference signal potential appears thereacross, a differential amplifier having applied as inputs thereto the potential on said potentiometer at the point of contact with

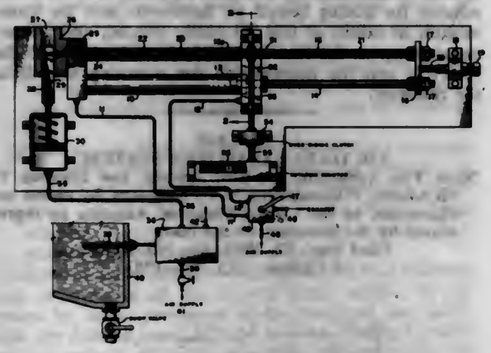
said slider and the potential induced in the fluid, a motor electrically connected to said amplifier, said amplifier amplifying the difference between the input potentials thereto and applying the amplified signal as an input to said motor, first means interconnecting said motor and said slider to move said slider to a potential point on said potentiometer proportional to the potential induced in the fluid, an autotransformer having a second slider making contact therewith, second means interconnecting said motor and said second slider to move said second slider to a point producing an output from said autotransformer proportional to the potential induced in the fluid, and a totalizing device responsive to the position of said second slider to totalize the fluid flow through said conduit.

3,094,871
LIQUID METERING ASSEMBLY AND METHOD
Horace V. Smith, Houston, Tex., assignor to Oil Metering and Processing Equipment Corp., Houston, Tex., a corporation of Texas
Filed Sept. 12, 1957, Ser. No. 683,607
2 Claims. (Cl. 73—221)



1. A metering assembly having alternate filling and draining liquid containers for measuring a flow of liquid through the assembly, said assembly including, first and second liquid containers, inlet and outlet flow lines connected to each liquid container, an inlet and an outlet electrical controlled valve element in the flow lines of each container, an upper float in an upper portion of each liquid container and a lower float in a lower portion of each liquid container, said floats movable by buoyancy of liquid in the liquid containers, an electrical switch connected to each float, each switch opening upon movement of its float in one direction and closing upon movement of its float in the other direction, an interlocking relay, a triple ganged double throw contact switch controlled by said relay and changing position on actuation of said relay, two interlocking relay actuation circuits connected to one of the double throw contact switches, one of said circuits connected to the bottom float switch of the first container and to the top float switch of the second container while the second circuit is connected to the bottom float switch of the second container and the top float switch of the first container whereby the relay is actuated by the floats and switches connected to the floats each time one of the containers is emptied and the other is filled, said inlet and outlet valve control elements being connected to the second and third double throw contact switches, the inlet valves being connected to opposite contacts of said second and third double throw switches and the outlet valves being connected to opposite contacts of the second and third double throw switches whereby simultaneously one container commences filling and the other commences emptying.

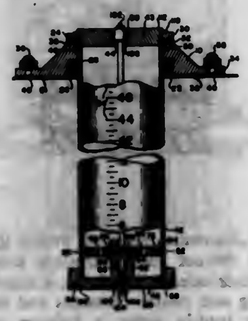
3,094,872
COMPENSATOR APPARATUS
Stephen S. Brown, La Porte, Tex., assignor, by mesne assignments, to Jersey Production Research Company, Tulsa, Okla., a corporation of Delaware
Filed Mar. 11, 1957, Ser. No. 645,264
15 Claims. (Cl. 73—223)



1. Apparatus for correcting the volume of liquid being measured in a metering tank to compensate for volume differences of the liquid resulting from changes in a factor that affects the measurement of the volume of the liquid being measured comprising a cylinder; a piston slidably arranged in said cylinder; a piston rod connected to said piston and movable therewith; a rack connected to said piston rod and movable therewith; adjustable first stop means adapted to limit movement of said piston rod a selected distance in one direction; adjustable second stop means adapted to limit movement of said piston rod a selected distance in a reverse direction; a pinion gear engagedly connecting with said rack; a rotation counter adapted to measure the amount of rotation of said pinion gear; means interconnecting said gear and said counter; a clutch arranged on said interconnecting means adapted to actuate said counter when said piston rod is moved in said reverse direction and to prevent actuation of said counter when said piston rod moves in said one direction; movable means connected to said second stop means adapted to adjust said second stop means upon movement thereof; means responsive to changes in said factor adapted to move said movable means to adjust the position of said second stop means; a source of fluid pressure; and means connecting said source of fluid pressure to said cylinder for effecting a reciprocation of said piston.

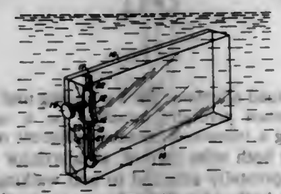
3,094,873
LIQUID LEVEL GAUGE
Samuel A. Urnham, Santee, Calif., assignor to General Dynamics Corporation, San Diego, Calif., a corporation of Delaware
Filed Nov. 16, 1961, Ser. No. 152,849
8 Claims. (Cl. 73—290)

1. A gauge for determining the liquid level in a container having a lower wall with an opening comprising a mounting member having a bore and adapted to be secured on the inside of the lower wall with said bore in axial alignment with the opening, a tubular housing having an orifice in its upper end and positioned for axial movement within said bore, mutually engaging means on said mounting member and said housing for releasably holding said housing in a normally fully inserted position within the container and lower surface of said housing in alignment with the lower surface of said wall, means carried by said housing and cooperable with said mounting member for arresting said housing in a fully retracted position when said housing is released and downwardly withdrawn, mutually cooperating fluid passage means carried by said mounting member and said housing for effecting a fluid path adjacent the lower end of said housing to allow liquid to flow from the container into said housing when said housing is in said fully inserted position, and actuatable valve means carried by said housing



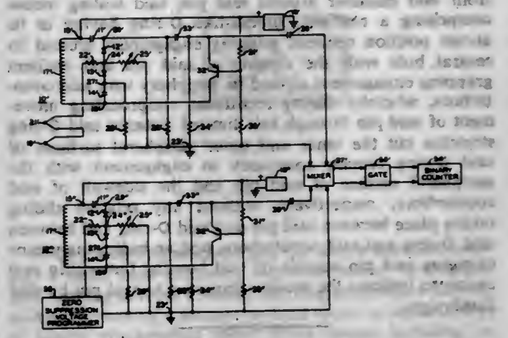
for normally maintaining said orifice and said path open to permit liquid to flow into said housing to attain a level equal to the level of liquid in the container and for closing said orifice and said path prior to withdrawal of said housing to said fully retracted position to contain liquid in said housing, whereby the level of liquid contained in said housing in said retracted position provides a measure of liquid level in the container.

3,094,874
UNDERWATER DEPTH GAUGE
Edward W. Rolle, P.O. Box 6456, Point Loma Station, San Diego, Calif.
Continuation of application Ser. No. 511,137, May 25, 1955. This application Apr. 15, 1959, Ser. No. 806,733
2 Claims. (Cl. 73—299)
(Granted under Title 35, U.C. Code (1952), sec. 266)



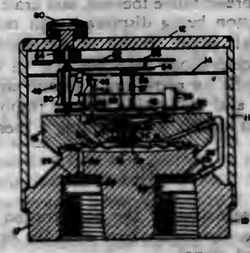
1. An underwater hydrostatic pressure gauge uneffected by water temperature variations comprising a capillary tube closed at one end and open at the other end thereof, a resilient reservoir completely filled with liquid mercury, said capillary tube being completely filled with helium gas, said open end of said tube inserted in said reservoir, said liquid mercury and said helium gas being in direct contact, the ratio of the tube cavity volume filled with helium gas and the reservoir cavity volume filled with mercury being provided in relative sizes in inverse proportion to the ratio of the thermal coefficients of expansion of said gas and said liquid, said reservoir and tube being encapsulated within a transparent housing, a diaphragm area on said reservoir exposed through an external pressure passage in said housing to the liquid hydrostatic pressure head to be measured, and indicia means associated with said tube for linearly indicating the hydrostatic pressure head.

3,094,875
LOW LEVEL VOLTAGE TO FREQUENCY CONVERTER
Dale A. Fluegel, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Sept. 29, 1961, Ser. No. 141,716
18 Claims. (Cl. 73—359)



15. An analog to digital converter for low voltage analog signals comprising first, second, and third terminals; an inductance connected between said first and second terminals; first and second voltage-sensitive capacitors connected in series between said first and second terminals and in parallel with said inductance; means for applying an analog voltage signal between said third terminal and the junction between said first and second voltage sensitive capacitors; an amplifier; means for connecting said first and second terminals to said amplifier to form an oscillator circuit; a gating circuit; means for connecting the output of said oscillator circuit to the input of said gating circuit; a binary counter; and means for connecting the output of said gating circuit to the input of said binary counter.

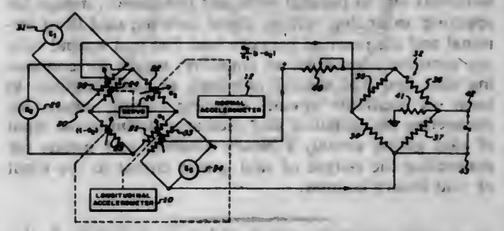
3,094,876
DIFFERENTIAL PRESSURE GAUGE
Warren W. Hastings, Rochester, N.Y., assignor, by mesne assignments, to American Radiator & Standard Sanitary Corporation, New York, N.Y., a corporation of Delaware
Filed Jan. 18, 1960, Ser. No. 3,194
1 Claim. (Cl. 73—407)



A differential pressure gauge, comprising a casing, a housing mounted in said casing and having a chamber formed therein, a flexible diaphragm extending across said chamber and sealed around its perimeter in said housing to partition said chamber into two separate parts, means for conducting a fluid under pressure from one source into said chamber against one side of said diaphragm, a second means for conducting a fluid under pressure from a second source into said chamber against the other side of said diaphragm, a pin attached at said

one side of said diaphragm and reciprocable rectilinearly through an opening in said housing through a limited distance no greater than .020 of an inch in either direction when said diaphragm flexes, resilient sealing means mounted in a circular counterbore in said housing which communicates with said opening, said sealing means surrounding and engaging said pin to seal against leakage from said chamber around said pin, said sealing means comprising a resilient, rubber-like O-ring having in its at-rest position resilient gripping engagement around its central hole with the outside of said pin and resilient grapping engagement around its periphery with said counterbore, whereby during rectilinear reciprocating movement of said pin through said limited distance said O-ring stretches but the inner and outer peripheral surfaces of said O-ring remain constantly in engagement with the peripheral surface of said pin and the sidewall of said counterbore, respectively, without any relative sliding taking place between said pin and said O-ring and between said O-ring and said counterbore, and an indicating means engaging said pin outside of said housing but within said casing to indicate the motion imparted to said pin by said diaphragm.

3,094,877
ACCELERATION MEASURING APPARATUS
Theodore Gold, Ronkonkoma, N.Y., assignor to Sperry Rand Corporation, Great Neck, N.Y., a corporation of Delaware
Filed Apr. 27, 1961, Ser. No. 106,072
5 Claims. (Cl. 73—517)



1. Apparatus for providing a measure of the acceleration of a craft in a reference direction irrespective of changes in the attitude of said craft within a predetermined range of attitude change where the craft is constrained to move along a lineal path in space comprising first accelerometer means responsive to accelerations parallel to an axis of said craft lying in the plane defined by said axis and said reference direction for providing a first signal representative thereof, said craft axis and said reference direction being displaced with respect to each other by a small angle, second accelerometer means responsive to accelerations perpendicular to said axis and lying in said plane for providing a second signal representative thereof, and computing means responsive to said first and second signals for providing a measure proportional to

$$a_1 - \frac{a_2}{a_1}(1 - a_2)$$

which is representative of the acceleration of the craft in the reference direction where a_1 is the first signal and a_2 is the second signal.

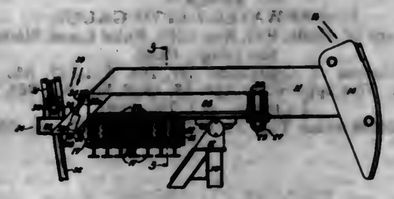
3,094,878
INSTRUMENT BALANCER
Wilbur L. Zingery, Long Beach, and Robert Willing, Anaheim, Calif., assignors to North American Aviation, Inc.
Filed Dec. 19, 1960, Ser. No. 76,973
7 Claims. (Cl. 74—5.7)

7. In combination with a sensitive instrument having a motor and lead-in wires coupling the motor to a power source of a first frequency, a balancer comprising a sealed cylinder fixed to the instrument, said cylinder including a number of turns of heater winding in intimate relation with the cylinder wall, a piston in the cylinder, a viscous thermoplastic resin coating the inner surface of the cylinder for preventing passage of gas pressure past the piston and releasably locking the piston to the cylinder, first and



second heater filaments mounted within the cylinder at opposite ends thereof for controlling temperature and pressure on either side of the piston, a number of capacitors connecting said heater filaments and heater winding to said motor lead-in wires, a balance control power source of a second frequency, and means for selectively coupling said balance control source to said lead-in wires.

3,094,879
WELL-LOAD ALLEVIATOR FOR PUMPING UNITS
John F. Eaton, Tulsa, Okla., assignor to Bethlehem Steel Company, a corporation of Pennsylvania
Filed July 6, 1961, Ser. No. 122,139
7 Claims. (Cl. 74—41)

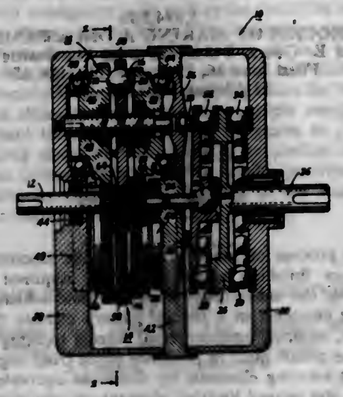


1. A well load alleviator for a pumping unit comprising a walking beam pivotally mounted on a samson post and including a transverse member adjacent one end and extending on both sides thereof, an alleviator frame having one end pivotally attached to said walking beam and extending on both sides thereof, a compressible medium between said transverse member and said alleviator frame, and means adapted to provide an oscillatory motion to the other end of said alleviator frame.

3,094,880
SPEED CHANGING MECHANISM
Arthur M. Marsh, Grassmere Hill Road, Wilton, Conn.
Filed Aug. 9, 1960, Ser. No. 48,482
10 Claims. (Cl. 74—69)

1. A speed-changing mechanism comprising, in combination, an exterior casing, an input shaft rotatably mounted in said casing, a plurality of motion converting mechanisms spaced about one end of said input shaft within said casing, each of said plurality of motion converting mechanisms including a pair of wavy race members rotatably mounted and connected to be driven at different rotational velocities by said input shaft, a plurality of rolling members held between said pair of wavy

race members producing reciprocating motion of one of said race members, and wobble plate means positioned



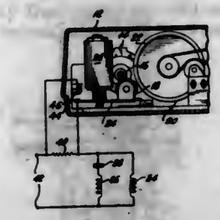
in said casing adjacent said mechanisms for converting said reciprocating motion into rotary motion.

3,094,881
SHEAVE
Edward H. Schultz, Jr., Chicago, Ill., assignor to The Nagel-Chase Manufacturing Company, Chicago, Ill., a corporation of Illinois
Filed Feb. 27, 1961, Ser. No. 91,738
5 Claims. (Cl. 74—230.8)



1. A sheave comprising a hub having spaced apart peripheral grooves having floor portions separated by a peripheral collar portion providing collar-defined edges of said grooves, first and second sheet material members mounted on said hub, the first member having an axially extending portion terminating in an edge facing in the direction of the second member and engaging the floor and collar-defined edge of one of said grooves, the second member being mounted in the other said groove and in engagement with the collar-defined edge thereof and having a connection with the first member radially outwardly of said hub, the said members having diverging portions radially outwardly of the said connection therebetween to define a pulley groove.

3,094,882
SYSTEM FOR OPERATING THE MOTOR IN A DICTATING MACHINE AND THE LIKE
Frederick W. Roberts, 230 Somerset Ave., Fairfield, Conn.
Filed Oct. 27, 1959, Ser. No. 849,108
3 Claims. (Cl. 74—472)



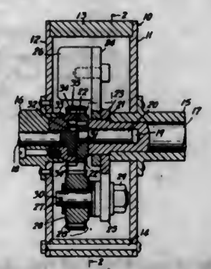
1. In a dictating machine and the like, a machine housing, a small high efficiency induction motor mounted in said housing to drive a record carrying mechanism therein, said motor having a normal no-load speed at rated voltage of nearly synchronous speed, drive means including an electric solenoid to drivingly engage said motor with said mechanism, said motor running under no-load when said drive means is disengaged, an electric circuit to energize said motor, an electric switch coupled to said solenoid, said switch being actuated when said drive means is engaged, and impedance means in said electric circuit and connected to be removed from circuit by said switch when said drive means is engaged, said impedance means when in circuit serving to reduce electric current to said motor at no-load and thereby eliminate audible motor beat-note noise.

3,094,883
STOP MECHANISM
Bjarne Junge, San Jose, and Kenneth C. Brown, Santa Clara, Calif., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed June 30, 1961, Ser. No. 121,039
5 Claims. (Cl. 74—527)



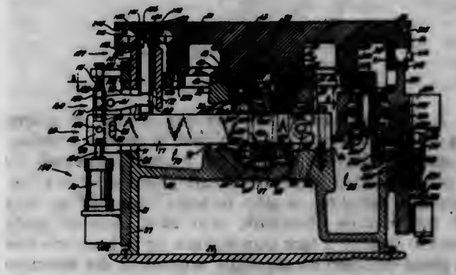
1. A stop mechanism for arresting a rack of spaced stubs wherein said rack moves relative to another member, said stop mechanism comprising a shaft supported by said other member, means for rotating said shaft in a predetermined direction, a stop member mounted on said shaft for rotation therewith, said stop member being formed to include a face cam surface on at least one side of a plane oriented substantially normal to the direction of relative movement between said rack and said other member, said face cam surface being further arranged to be interposed between a pair of said stubs, the maximum thickness of said stop member being passable between any pair of adjacent ones of said stubs, said cam surface being interrupted by a sufficiently relieved portion to pass said rack of stubs therethrough when aligned therewith whereby rotation of said stop member in one direction interposes said cam surface between adjacent stubs of said rack, moves said rack with respect to said other member in accordance with said cam surface, and releases said rack under continued rotation of said stop member in the same direction upon alignment of said relieved portion with said stubs.

3,094,884
SPEED REDUCER EMPLOYING A TIMING CHAIN CONTROL
Louis H. Morin, 125 Beechwood Ave., Bronx, N.Y.
Filed Dec. 27, 1961, Ser. No. 162,463
7 Claims. (Cl. 74—804)



1. A speed reducer comprising axially alined drive and driven shafts, a lever member fixed to and driven by said drive shaft, a fixed sprocket encircling the driven shaft and in which said driven shaft is rotatably mounted, a rotatable sprocket adjacent one side of said fixed sprocket and having less teeth than the teeth of said fixed sprocket, said rotatable sprocket having an axis supported in and eccentric to the axis of said drive shaft, means establishing a movable coupling engagement between said rotatable sprocket and said driven shaft, an endless drive element having teeth operatively engaging the teeth of both of said sprockets, and said lever member having means rotating around said sprockets and arranged within and operatively engaging said element in maintaining the teeth of said element in constant engagement with the teeth of both of said sprockets in reduction drive of the driven shaft by said drive shaft.

3,094,885
ROTARY TABLE
James N. Flannery, West Allis, and Joseph A. Becker, Greendale, Wis., assignors to Kearney & Trecker Corporation, West Allis, Wis., a corporation of Wisconsin
Filed Oct. 5, 1959, Ser. No. 844,258
17 Claims. (Cl. 74—826)



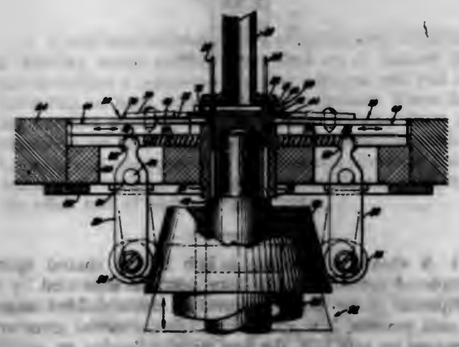
1. In a rotary table assembly; a base; a table supported on said base for rotational and axial movement relative to it; positioning means for angularly locating said table relative to said base; means operably connected to said table for effecting axial movement of said table relative to said base; coupling means positively and operably connecting said positioning means and said means for effecting axial movement of said table together for simultaneous reversible operation; whereby as said means for effecting axial movement of said table is operated in one direction to raise said table relative to said base said positioning means is actuated to a disengaged position to render said table freely rotatable and as said means for effecting axial movement of said table is operated in another direction to lower said table relative to said base said positioning means is actuated to an engaged position to lock said table against rotation.

3,094,886
PROCESS OF MAKING A DIE ASSEMBLY
Richard E. Goerz, 1431 NE. 82nd St., Seattle 5, Wash.
Filed June 26, 1961, Ser. No. 126,455
11 Claims. (Cl. 76—107)



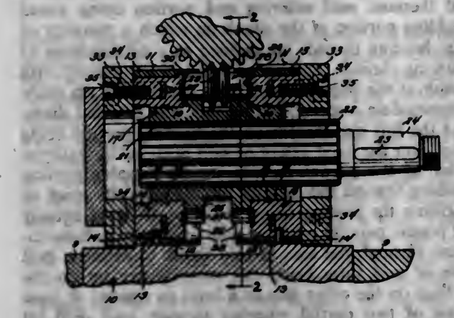
3. A process of manufacturing a die assembly which comprises finishing a punch of the required contour; mounting the same upon a punch plate which has first locating elements in a precise pattern outside the punch contour; securing complemental second locating elements upon the punch plate in positions offset from registry with the first locating elements by distances equivalent to the shift of the second locating elements by shrinkage of die metal wherein they are later embedded; casting a die about the punch and the second locating elements, and by shrinkage restoring the second locating elements to registry with the first locating elements; securing the several aligned pairs of locating elements together; finishing the exposed surface of the die; releasing the aligned pairs of first and second locating elements, and securing the first locating elements to third locating elements in the same pattern on a punch mount which is guided for rectilinear movement relative to a complemental die mount, and securing the second locating elements to fourth locating elements arranged in the same pattern on such die mount; and separating the die and die mount from the punch and punch mount by relative movement in the direction of guidance.

3,094,887
SECURING APPARATUS
Henry J. Zwald, Seneca Falls, N.Y., assignor to Sylvania Electric Products Inc., a corporation of Delaware
Filed Mar. 9, 1960, Ser. No. 13,928
2 Claims. (Cl. 78—1)



1. In an apparatus for securing eyelets to a stem having a plurality of leads arranged thereon in a particular pattern, said eyelets having a configuration of a conical segment connected to a tubular portion, each of the combination comprising a multiple swaging die, said die provided with a plurality of longitudinally extending passageways, selected ones of said passageways being provided with an eyelet receiving recess adjacent the upper surface of said die, said recess comprising a cylindrical portion terminating in an upper conical flaring portion of a size and shape to conform with that of said eyelet to firmly seat said eyelets completely within the die, tool receiving apertures formed in said multiple swaging die transverse to the longitudinal axis of said longitudinal passageways contiguous with said eyelet receiving recesses and spaced from said upper surface a distance exceeding said eyelet conical segment; a plurality of tool carrying slides; a swaging tool carried by each of said slides; and means associated with said tool carrying slides for reciprocating said slides to and from said multiple swaging die whereby said tools enter said tool apertures to perform said swaging operation on the tubular portion of said eyelets, the cylindrical and conical flaring portion of the die enabling an eyelet to be fastened to the lead without malformation of said conical portion.

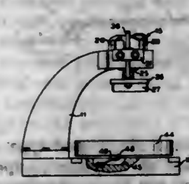
3,094,888
ROLLER TOOL MOUNTING AND DRIVING MEANS
Benjamin Grob, 1626 12th Ave., Grafton, Wis.
Filed Sept. 9, 1957, Ser. No. 682,765
3 Claims. (Cl. 80—16)



1. In a high speed planetary rolling machine including a stationary frame the combination of a roller tool mounting and driving means, said mounting and driving means comprising a housing secured to the frame, an element rotatably mounted in said housing, a pair of laterally spaced axially aligned substantially semi-circular shafts receiving grooves interrupting the peripheral surface of said rotatable element, a shaft journalled for rotation in said axially aligned grooves, said grooves serving to retain said shaft against inward radial movement, a roller tool formed integrally with said shaft and disposed intermediate its ends, a pair of spaced fixedly positioned members secured to said housing, an inner cylindrical surface on each of said members respectively contacting and overlying a peripheral portion of said shaft at opposite sides of said roller tool, said cylindrical inner surface on said fixedly positioned members serving to restrain outward radial movement of said integrally formed shaft and roller tool and frictionally drive the same under the influence of centrifugal force imparted thereto through rotation of said element, and said axially aligned shaft receiving grooves simultaneously serving to restrain inward radial movement of said integrally formed shaft and roller tool whereby the radius of the planetary path of travel of said roller tool remains fixed at all times.

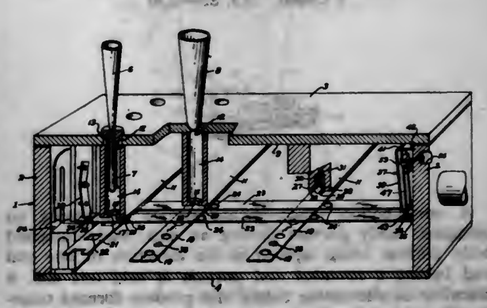
3,094,889
DIE CUTTING MACHINE
Norman E. Elsea, Atlanta, Ga., assignor to Nemo Industries, Inc., Atlanta, Ga., a corporation of Georgia
Filed Feb. 9, 1959, Ser. No. 792,174
3 Claims. (Cl. 83—529)

3. In a die cutting machine having a base, a pneumatic cylinder, means supporting said base and pneumatic cylinder in spaced relation to each other, a plunger operated by said cylinder, a die head secured to said plunger, means connected between said supporting means and said die head for adjustably determining the maximum stroke of said plunger, an anvil rotatably supported on said base in a plane normal to the line of movement of said plunger, said anvil being freely movable along its axis of rotation toward and away from said base, and spring means responsive to the impact of said die head on each stroke of



said plunger for affecting rotation of said anvil, said spring means including a spring secured to said base within a recess therein and extending away from said base, said spring having a return-bent free end in contact with and urging said anvil upwardly away from said base, said anvil being movable against the free end of said spring on each stroke of said plunger and upon retraction of said plunger, said spring acts to rotate said anvil, the line of movement of said plunger being offset from the axis of rotation of said anvil.

3,094,890
AIR CONTROL FOR THE PIPES OF A PIPE ORGAN
Lawrence L. Schoenstein, 130 Nueva Ave., San Francisco 24, Calif.
Filed Aug. 24, 1959, Ser. No. 835,633
34 Claims. (Cl. 84—332)



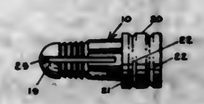
1. In a pipe organ having a windchest with pipes thereon arranged in stops over series of orifices, compressed air control to said orifices, and selective control means for manipulation of said compressed air control; the improvements in said compressed air control including intersecting control strips superimposed on one another at the areas of their intersection, each area of intersection being in registry with one of said orifices, said intersecting strips being movable relatively to one another and relatively to the respective orifices and having air conducting apertures therethrough registerable with the respective adjacent orifices, means to urge said strips into respective initial positions with said apertures offset from the respective orifices, and means connecting each intersecting strip to the respective control means for selectively shifting the respective strips into position when said respective control means are manipulated so as to register the respective apertures of said strips with the respective adjacent orifices at said area of intersection for admitting compressed air to the respective pipes.

3,394,891
WOODWIND INSTRUMENT MOUTHPIECE
Arnold R. Brilhart, Carlsbad, Calif., assignor to Brilhart Musical Instrument Corporation, Carlsbad, Calif., a corporation of New York
Filed Dec. 15, 1960, Ser. No. 76,058
2 Claims. (Cl. 84—383)



2. A mouthpiece for a single-reed type of woodwind musical instrument, said mouthpiece comprising a body portion adapted at one end for connection to the throat of an instrument and having a substantially flat seat portion extending from the opposite end of said body portion to a position intermediate the ends thereof and terminating at said intermediate position in an upwardly extending shoulder, said mouthpiece further comprising a separable bite portion received in and engaging said seat portion and said shoulder portion, whereby said body portion may be provided with a bite portion of a desired alternate shape merely by removing the bite portion in place and substituting therefor a bite portion having the desired configuration.

3,394,892
COMBINATION SPACER ANCHOR HAVING A FRANGIBLE HEAD PORTION
Sam B. Topf, Coral Gables, Fla., assignor to Jordan Industries, Inc., Miami, Fla., a corporation of Florida
Filed Mar. 31, 1960, Ser. No. 19,036
1 Claim. (Cl. 85—2.4)



A combination spacer-anchor device comprising an elongated body portion having an axis, said elongated body portion being tapered in the direction of one end and having a rounded end portion at said one end, a plurality of alternating ridges and grooves formed transversely of said body portion adjacent said rounded end portion, a pair of opposed slots extending longitudinally from adjacent said one end to adjacent the other end, said rounded end portion being joined together, a spacer portion mounted on said other end of said elongated body portion, said spacer portion being larger in diameter than said elongated body portion thereby forming a shoulder adapted to abut against the outside surface of a wall in which said device is mounted, an axially disposed bore extending through said body portion and said spacer portion for receiving a screw bolt, said bore being of constant diameter in said spacer portion and of decreasing diameter in the direction of said rounded end portion, and a plurality of peripheral V-shaped grooves located in planes which intersect the axis of said body portion at right angles in spaced relation to each other about said spacer portion whereby said spacer portion may be broken along any desired peripheral groove to provide a spacer of desired length, and producing a plane end surface perpendicular to the axis of said body.

3,394,893
DRILLING AND TAPPING SCREWS
Bert A. Lindstrom, Rockford, Ill., assignor to Elco Tool and Screw Corporation, Rockford, Ill., a corporation of Illinois
Filed Nov. 27, 1959, Ser. No. 855,843
3 Claims. (Cl. 85—47)



1. A drilling and tapping screw comprising a generally cylindrical shank having an entering end portion that includes a drilling tip portion ahead of a tapping portion, the latter having a plurality of partial entering threads defined thereon, said entering end portion being ahead of a holding portion of the shank on which a plurality of full size holding threads are defined as a continuation of the entering threads, and an enlarged head integral with the shank at the opposite end from the drilling tip made to accommodate a screw driving tool, the external diameters of the full size threads on the holding portion being constant over the axial extent of said portion, the external diameter of the partial threads on the tapping portion diminishing toward the drilling tip, the opposite sides of said drilling tip portion being removed to form equally spaced planar parallel portions with respect to a diametrical plane through the axis of said shank to define a drill bit, one of said sides being cut away higher up on the shank than on the other side to a level to remove at least the crest of two partial entering threads, said drill bit having its extremity V-shaped to define a tip on the axis of the screw and defining cutting edges on opposite sides of the entering end thereof which face in opposite directions and in such a relationship to the aforesaid threads to drill a hole in a piece of work when the screw is turned in the direction of threading said shank into the said hole, the cut away portions on opposite sides of said drilling tip portion having defined at the upper extremities thereof oppositely-inclined chip deflecting surfaces, each of which is inclined in the same direction with respect to the cutting edge on the same side of the drill bit, said one side cut away higher up on the shank being configured to present more than 180° of bearing area in a diametrical plane in the shank area having said two partial threads.

3,394,894
PIERCING AND TAPPING SCREW WITH GROOVE TO FACILITATE TAPPING
Elmer E. Broberg, Rockford, Ill., assignor to Elco Tool and Screw Corporation, Rockford, Ill., a corporation of Illinois
Continuation of application Ser. No. 509,402, Apr. 11, 1955. This application Feb. 28, 1961, Ser. No. 92,237
4 Claims. (Cl. 85—47)

1. A hole-piercing and tapping screw for use in thin sheet metals including a head and a threaded shank integral therewith having an upper holding section and a lower entering and tapping section, the threads on the shank being V-shaped and of relatively coarse pitch and the thread convolutions on said entering section diminishing in outside diameter but having sharp peripheries all the way to the end to facilitate entrance into an unthreaded hole and start the tapping thereof, the lower end of said entering and tapping section having a metal

piercing tapered point and having an annular groove of appreciable width and depth in relation to the thickness of the sheet metal to be penetrated provided therein above the metal piercing tapered point and immediately below the threads on the shank, said pointed and grooved lower end section being recessed on one side to define a substantially right angle groove, one side of which is in the diametrical plane of said lower end section and the other side at an acute angle to the axis of the screw inclined in the same direction as said threads, whereby to define a V-shaped piercing edge on the tapered point and a reaming edge on the periphery of the lower end section which leads in the same direction as that in which the



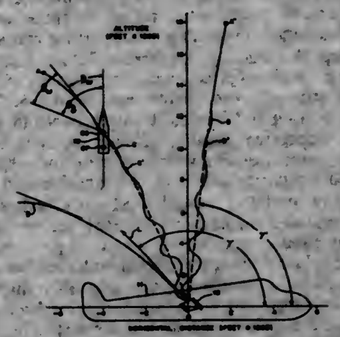
screw is turned to thread into the metal and having projections defined on its upper end portion by at least the last two threads for starting the tapping of threads in an unthreaded hole, said recessed lower end section being adapted first to pierce a non-circular hole in the sheet metal having a rounded flared entrance and then in the rotation of the screw round out and enlarge the hole preliminary to tapping and thereby also swedge the metal to define a rough flange around the hole on the opposite side from the entrance, which flange is also tapped as an extension of the hole in the tapping of the hole by said screw, the relief afforded by said annular groove leaving the last threads fully exposed and insuring better starting of the threads in the tapping of threads in the hole.

3,394,895
COMBINATION PIERCING, REAMING AND TAPPING SCREW
Elmer E. Broberg, Rockford, Ill., assignor to Elco Tool and Screw Corporation, Rockford, Ill., a corporation of Illinois
Continuation of application Ser. No. 720,796, Mar. 11, 1958, which is a continuation of application Ser. No. 551,475, Dec. 6, 1955. This application Feb. 28, 1961, Ser. No. 92,236
4 Claims. (Cl. 85—47)



1. A screw for piercing a hole in material and then reaming and tapping the hole prior to being screwed to a tightened position in the material, said screw comprising an elongated shank terminating at its upper end in a head and at its lower end in a tapered piercing point, said shank including an upper cylindrical portion adjacent said head and a lower cylindrical portion of reduced diameter interconnected by a tapered portion decreasing in diameter from that of said upper portion to that of said lower portion, said lower cylindrical portion terminating in said tapered point, a screw thread on said shank extending helically downwardly from said head, said thread terminating at the junction between said tapered portion and said lower cylindrical portion and being gradually diminished in height on said tapered portion to zero height at the lower end of said tapered portion, said shank having on one side thereof an elongated groove provided therein at an acute angle to the longitudinal axis of the screw extending from and open to one side of the shank shortly above the lower end of the thread downwardly to and opening on the opposite side of said shank and terminating at said tapered point, one side of said groove defining at its lower end a piercing edge in contiguous and transverse relation to a V-shaped piercing edge defined by the other side of the groove on the tapered point, said piercing edges cooperating to pierce through the material upon delivery of a hammer blow to the head end of the screw, said other side of said groove being in a diametrical plane including the longitudinal axis of the screw and defining a reaming edge on the periphery of said lower cylindrical portion, said reaming edge leading in the same direction as that in which the screw is turned to thread it into the material and serving to round out the hole preparatory for the tapping, said groove being of substantially right angle form in cross section throughout the length thereof with the first named piercing edge lying entirely in a plane oblique to the axis of the screw.

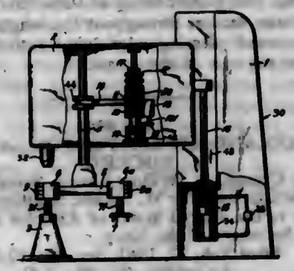
3,394,896
METHOD AND APPARATUS FOR LAUNCHING ROCKETS
Ralph C. Carson, Jr., Willow Grove, Salvatore J. Grillo, New Britain, and Tor W. Jansen, Southampton, Pa., assignors to the United States of America as represented by the Secretary of the Navy
Filed Feb. 27, 1961, Ser. No. 92,104
2 Claims. (Cl. 89—1.7)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. Apparatus for launching a meteorological rocket from aircraft in motion, said rocket having its center of pressure rearwardly displaced from its center of gravity, comprising, in combination: a hollow fairing having a plurality of launcher tubes therein, thermally nonconducting bracket means connecting said tubes to said fairing in parallel relationship, heating means connected within said fairing and adjacent to said tubes adapted for maintaining a predetermined operating temperature in any rockets inserted in said tubes, a latch means connected on and resiliently extending into the side of each of said tubes for laterally abutting and latching each inserted rocket in a firing position along the length of each of said tubes, said extending end of said latch means confronting the exhaust nozzle of the inserted rocket whereby the impinging jet from the rocket when fired urges said latch means out of abutment with the rocket, latch adjusting means respectively connected between each of said tubes and said latch means for varying the impinging force required for unlatching, manual means included in said latch means for selectively releasing the rocket, fairing support means formed to be fixed on rigid structure of the

aircraft, and launch angle adjusting means coupled to said support means and said fairing for varying the angular position of said fairing relative to the fore and aft axis of the aircraft; whereby the angle of launching may be varied with the velocity of the aircraft to form a vertical obtuse angle with the forward direction of the aircraft and to obtain a substantially vertical trajectory of the rocket when fired.

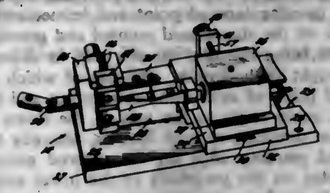
3,094,897
SAFETY DEVICE FOR AUTOMATIC WORK LOADER
Paul Kaulfuss, Schorndorf, Wurttemberg, and Karlheinz Speyer, Ludwigsburg, Wurttemberg, Germany, assignors to Hermann Pfauter, Schwieberdingerstr, Germany, a firm of Germany
Filed Apr. 12, 1961, Ser. No. 102,531
Claims priority, application Germany Apr. 13, 1960
7 Claims. (Cl. 90—1)



1. A device for the overload protection of automatic work changing mechanism for a machine such as a milling machine, comprising a supporting frame, a head stock support vertically displaceable along said supporting frame, a workpiece clamping device including a centering arbor disposed below said head stock, a workpiece supporting rod vertically displaceable in said head stock, a workpiece loading gripper on said workpiece supporting arm movable with said arm toward and away from said centering arbor, a displaceable rod member displaceably mounted in said head stock, a hubbed arm slidably mounted on said rod member and having an extending portion connected to said workpiece supporting rod for displacement thereof, said rod member having a flange portion, a resilient spring assembly disposed between said flange portion of said rod member and said hubbed arm member, and means for displacing said rod member to displace said hubbed arm member through said springs and to move said workpiece supporting arm accordingly, said spring assembly being compressible upon said centering arbor offering resistance to movement of said workpiece supporting arm, and means responsive to compression of said spring assembly beyond a predetermined amount to stop the operation of said machines.

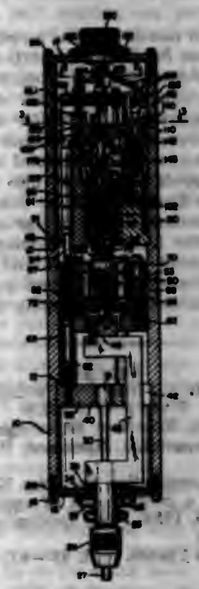
3,094,898
TEMPLATE FIXTURE
Francis J. Fuchs, Jr., Winston-Salem, N.C., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed June 23, 1959, Ser. No. 822,287
8 Claims. (Cl. 90—13)

1. An apparatus for shaping a workpiece which comprises pattern-tracing means, forming means for producing a predetermined shape of the workpiece co-operatively coupled to the pattern-tracing means and controlled thereby, means for rotating the workpiece to expose different portions of the surface of the workpiece to the forming means, pattern-generating means engaged by the tracing means for causing the forming means to shape the workpiece to the design of the generated pattern, means for changing the pattern, and means for relating the rotation



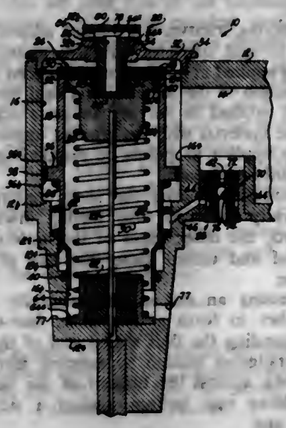
of the workpiece to the motion of the means for changing the pattern.

3,094,899
SINGLE AXIS TRACER MECHANISM
William C. Otis, Richfield, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Aug. 1, 1960, Ser. No. 46,395
6 Claims. (Cl. 90—62)



1. In a single axis tracer, casing means, support means in said casing means, flexible rod means positioned in said support means and extending beyond said casing, a feeler connected to the end of said flexible rod, linkage means connected to said rod means and extending through an aperture in said support means connected at one extremity to said rod means and extending along its other extremity through said support means, an inverted cone member connected to the free extremity of said linkage, a second inverted cone member, ball means positioned between said inverted cone members and adapted to cooperate with said cone members to transmit sidewise movement to longitudinal movement, a pair of disc type spring suspension means connected to said casing and mounting said second cone member for centering and positioning said second cone member relative to said ball means, a rod attached to said second cone member, a multi-part signalling means said rod mounting one of said parts of said signalling means and extending through another of said parts, lever means, switch means mounted on said casing and adapted to cooperate with the extremity of said lever means for operation thereby, a first adjustable pivot means mounted on said casing and contacting said lever on one surface, a second adjustable pivot means mounted on said casing and contacting said lever on the opposite surface, connection means mounted on said rod and connected to said lever intermediate said pivots, said pivots being so positioned that predetermined movement of said rod from a predetermined position in either direction along the axis of said rod will pivot said lever selectively about said pivots away from said switch to operate said switch, and biasing means urging said lever towards the switch.

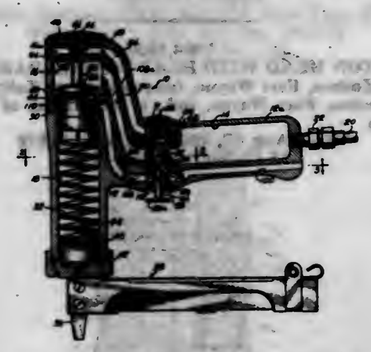
3,094,900
FASTENER DRIVING APPARATUS
Oscar A. Wandel, Mundelein, and Richard H. Doyle, Mount Prospect, Ill., assignors to Fastener Corporation, Chicago, Ill., a corporation of Illinois
Filed Dec. 27, 1956, Ser. No. 630,883
39 Claims. (Cl. 91—423)



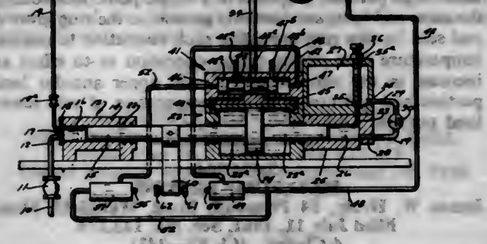
1. A fastener driving apparatus comprising a housing defining a chamber to which a medium under pressure is continuously supplied, a valve element, a cylinder movably mounted in said chamber and engaging said valve element so that the interior of said cylinder is closed off from communication with said chamber, a piston slidably mounted relative to and disposed within said cylinder, and means for moving said cylinder relative to said housing and away from said valve element to place the interior of said cylinder in communication with said chamber so that the piston is advanced by the medium under pressure.

3,094,901
PNEUMATICALLY OPERATED TACKER
Oscar A. Wandel, Mundelein, and Richard H. Doyle, Mount Prospect, Ill., assignors to Fastener Corporation, Chicago, Ill., a corporation of Illinois
Filed May 2, 1958, Ser. No. 734,381
29 Claims. (Cl. 91—454)

1. A fastener driving apparatus comprising a housing defining a pair of reservoirs and an operating chamber, fastener driving means movable within said chamber, one of said reservoirs being supplied with air under pressure from a source thereof, the other of said reservoirs being disposed closely adjacent said chamber and in continuous fluid communication with said one reservoir, said other reservoir having a volume of the order of from one-eighth to one-half of the volume of said chamber, valve means controlling communication between said other reservoir and said chamber, and control means for operating said valve means to admit air from said other reservoir to said chamber thereby to operate said fastener driving means with compressed air of substantially the same pressure as the air supplied from said source.



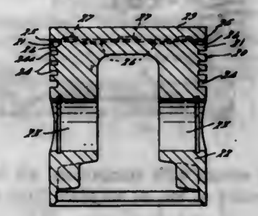
3,094,902
MOTOR CONTROL APPARATUS FOR CENTRALIZED LUBRICATOR
Harry O. Riepelle, Alton, Ill., assignor to Owens-Illinois Glass Company, a corporation of Ohio
Filed Nov. 7, 1960, Ser. No. 67,617
1 Claim. (Cl. 92—12)



Automatic time control apparatus for a reciprocating motor that is adapted to be operated cyclically for driving a load device comprising a member connected to the motor and mounted for reciprocating movement thereby, said movement of the member in one direction being restricted by the load device, and yieldable means opposing the movement of said member in the opposite direction comprising a fluid chamber housing one end of said member for axial movement therein, a reservoir containing fluid, an operative fluid connection extending from the reservoir to said chamber and permitting only reservoir-to-chamber flow therethrough, an operative fluid connection extending from the said chamber to the reservoir, a valve in said last-mentioned fluid connection adjustable for, at will, varying the rate of fluid flow from said chamber, thereby controlling the rate of movement of said member into said chamber, the amount of opposition of said movement being adjustable by said valve in varying the rate of fluid flow from said chamber to thereby either increase or decrease the time interval required for one complete reciprocatory cycle of the motor, and a safety device connected to said chamber comprising a fluid connection to the reservoir and spring loaded ball check valve having a predetermined pressure-opening setting, said check valve being interposed in said connection to normally block passage of fluid therethrough whenever

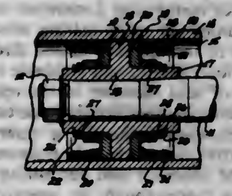
the pressure in said reservoir to chamber connection is less than the pressure required for opening said check valve.

3,094,903
PISTON HEAD WITH HEAT DAM OR BARRIER
Fred Zollner, Fort Wayne, Ind., assignor to Zollner Corporation, Fort Wayne, Ind., a corporation of Minnesota
Filed Aug. 17, 1961, Ser. No. 132,078
15 Claims. (Cl. 92—222)



1. A piston for an engine including a head having ring groove means including an uppermost annular ring groove for the reception of a separate removable piston ring and an annular land disposed between said ring groove and the top of the piston head, a substantially annular heat barrier ring immovably mounted within an outer groove in said head and dividing the head into two sections comprising an upper annular portion of said land disposed in its entirety above the barrier ring and a lower annular portion disposed below the barrier ring and in its entirety above said ring groove, said barrier ring having outer and inner edge portions disposed in a single plane intersecting the same and lying substantially parallel to the ring groove, and said barrier ring providing such restriction to normal temperature flow during piston operation as to effect an increase in the temperature of said upper annular land portion and a decrease in the temperature of said lower land portion.

3,094,904
MUD PUMP PISTONS
James W. Healy, 54 Plymouth Road, Wakefield, Mass.
Filed July 11, 1961, Ser. No. 123,274
4 Claims. (Cl. 92—241)



1. A pump piston comprising a body adapted to be secured to a rod of a pump for reciprocation within a cylinder, an annular flange extending radially from the body, an annular packing ring positioned on the body in abutment with said flange with the surface of said packing ring opposite said flange providing a pressure face with a packing ring lip at the outer diameter of said pressure face, said packing ring including a body of elastomeric material and a plurality of circumferentially spaced longitudinally extending leaf springs positioned within said elastomeric body, said leaf springs being so constructed and arranged as to normally urge said lip to a diameter substantially equal to but less than the diameter of said cylinder.

3,094,905
PROCESS FOR MAKING BAGS
Alfred B. Hasbacher, deceased, late of San Francisco, Calif., by Robert L. Hasbacher, administrator, 817 Greenwich Place, Palo Alto, Calif.
Filed July 8, 1960, Ser. No. 41,701
1 Claim. (Cl. 93—35)



The process of producing bags from sheet material comprising:

(*a*) continuously advancing a continuous web of sheet material;

(*b*) applying a continuous adhesive stripe to one longitudinal margin of the continuously advancing material;

(*c*) applying transverse bands of adhesive at right angles to said stripe of adhesive material said bands being applied at predetermined spaced intervals along the length of the material and said band of adhesive being applied in varying amounts across the width of the material with the greatest amount of adhesive being applied at points corresponding to offsets on the finished bags;

(*d*) thereafter folding the sheet material to form a generally flattened tube having inwardly disposed gussets, the outer edges of the material being overlapped and united along the line of the adhesive stripe;

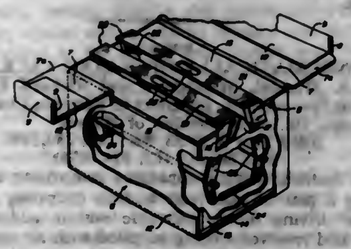
(*e*) pressing an end of the generally flattened tube together to form a transverse, face-to-face seal;

(*f*) expanding the thus sealed end of the bag to form a rectangular bottom by exerting force from inside the bag against the bottom of the bag;

(*g*) folding said bottom against a sidewall of said bag; and

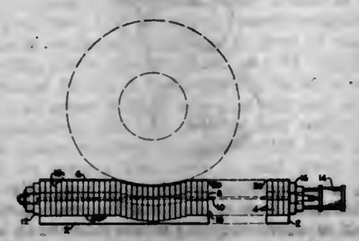
(*h*) severing the material to form the completed bag detached from the web of material.

3,094,906
MANDREL FOR FORMING CONTAINERS
John T. Bell, Lombard, Ill., assignor to Container Corporation of America, Chicago, Ill., a corporation of Delaware
Filed Oct. 12, 1961, Ser. No. 144,620
4 Claims. (Cl. 93—59)



1. A mandrel for use in the production of an open-top, rectangular paperboard container, such container having side and end walls and a hinged cover on at least one wall, the cover having a depending flange of double thickness formed from a first narrow panel extending from the outer edge of the cover, a second, or interior, narrow panel of a width comparable to the first panel extending from the free edge of the first panel, the second panel having an anchoring panel joined to its free edge, said second panel being secured to the first panel and the anchoring panel having glue freshly applied thereto for adherence to the underside of the cover, the mandrel having vertical wall portions arranged to fit closely within a container of the type referred to, a supporting portion at the top of the mandrel to underlie the cover when in closed position, such supporting portion being formed with a receiving opening for a cover flange, an elongated abutment member disposed at the top of the mandrel along the flange-receiving opening and against which one surface of the depending cover flange is arranged to contact when the cover is moved toward closed position, and a clamping member comprising a flat, elongated plate with a pressure-applying edge extending lengthwise thereof, said plate being supported generally horizontally on the upper end of an upwardly extended link element swingable in a vertical plane, pivot means for such link element located inside the mandrel, medially of the height of its vertical wall portions, and medially between a vertical plane through the long axis of the abutment and the plane of a vertical wall of the mandrel parallel to the abutment, said link element having a length above its pivot sufficient to support the surface of the plate at one point above the level of the supporting portion at the top of the mandrel, whereby the plate may be engaged in such position by the under side of the downswinging cover of an enclosing container before the cover has reached its normally closed position, and whereby said plate may be caused to swing down and toward the abutment under downward pressure applied to the cover, causing the plate to bear firmly edgewise against the inner surface of the depending cover flange and clamp the flange against the abutment member.

3,094,907
TAKE-OFF AND LANDING STRIP
Donald Arthur Hirst, R.D. 1, Lambertville, N.J.
Filed Apr. 22, 1960, Ser. No. 23,973
4 Claims. (Cl. 94—4)



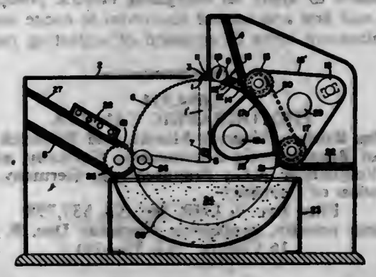
1. A surface for the landing and take-off of aircraft comprising a yieldable base structure, a group of blocks formed of substantially rigid material extending transversely of said surface and supported on said base structure, said blocks having adjacent faces which are substantially flat and vertical and having upper edges which cooperate to present a substantially flat runway surface, a cover sheet extending over the surface formed by said blocks, a pressure member positioned adjacent one end of said group of blocks, anchor means located adjacent the other end of said group of blocks, cables extending through openings in said blocks and attached to the pressure member, and hydraulic means located adjacent said anchor means and operable to place said cables under tension to clamp the blocks together and present a rigid surface for the take-off of aircraft, said hydraulic means being operable to release said cables and said blocks being individually movable to provide a yieldable surface for the landing of aircraft.

3,094,908
EXPANSION-CONTRACTION JOINT AND GROOVE FORM
Morris Berman, G.P.O. Box 115, New York, N.Y.
Filed May 7, 1962, Ser. No. 192,774
6 Claims. (Cl. 94—18)



1. Load transfer mechanism adapted to be positioned between spaced slab ends for transferring applied loads from one slab end to the other comprising, a pair of spaced plates including means for anchoring said plates to the respective slab ends, each of said plates being provided with laterally alternating inwardly projecting upper and lower shoulder elements, said upper and lower shoulder elements being vertically spaced and having seats facing downwardly and upwardly respectively, and compression elements extending between the upper shoulder elements of each of said plates and the lower shoulder elements of the other plate, said compression elements being pivotally seated in said shoulder seats.

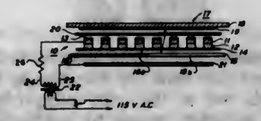
3,094,909
REPRODUCTION APPARATUS
James Szekeres, 19 Colony Court, Stamford, Conn.
Filed May 26, 1959, Ser. No. 815,875
Claims priority, application Germany May 29, 1958
9 Claims. (Cl. 95—1.7)



1. An electrophotographic copying device comprising in combination, a support, means for moving said support through a fixed path, holding means mounted on said support for attaching an electrophotographic paper to said support for movement with said support through said fixed path, means on said support for readily moving said holding means in a first direction for attaching an electrophotographic paper to said support when said support is at a first preset position in said fixed path and for readily moving said holding means in a second direction for releasing said paper from said support when said support is at a second preset position in said fixed path, electrical discharge means in communication with and lying along said fixed path for charging said paper as said paper moves in said path past said discharging means, transport means

adjacent said discharge means and lying along one side of said fixed path for moving material to be copied into and out of engagement with said electrophotographic paper in said fixed path, feed means for delivering material to be copied to said transport means, photosensitive material exposure means along said path on the side of said path opposite said transport means for exposing said electrophotographic paper as said paper and said material to be copied move through said transport means in said fixed path, a translucent plate in said path intermediate said transport means and said exposure means, and reservoir means in said fixed path adjacent said exposure means for receiving said paper from said exposure means.

3,094,910
REFLEX XEROGRAPHIC APPARATUS
Edward M. Van Wagner, North Rochester, and Christopher Snelling, Brockport, N.Y., assignors to Xerox Corporation, a corporation of New York
Filed July 5, 1960, Ser. No. 40,772
7 Claims. (Cl. 95—1.7)



1. Xerographic exposure apparatus comprising means to support a photoconductive insulating layer in an exposure position, an electroluminescent layer adapted to be positioned and located adjacent to said photoconductive layer, means shielding said photoconductive layer from direct optical exposure to said electroluminescent layer, support means adapted to position hard copy in a face-to-face relationship with said electroluminescent layer and facing said photoconductive layer, and means presenting said photoconductor to direct optical exposure to the face of said hard copy, a first conductive electrode and a second conductive electrode adapted to be positioned adjacent said electroluminescent layer and means to position the electroluminescent layer therebetween, said electrodes being disposed to permit radiation from the hard copy to impinge on the photoconductive layer, and means to apply an energizing electric potential between said first and second electrodes to excite said electroluminescent layer to emission of activating radiation.

3,094,911
PHOTOGRAPHIC CAMERA
Wilhelm Reiche, Friedrich Mische, and Friedrich Papke, all of Braunschweig-Gliesmarode, Germany, assignors to Voigtländer A.G., Braunschweig, Germany, a corporation of Germany
Filed Dec. 7, 1959, Ser. No. 857,798
Claims priority, application Germany Dec. 9, 1958
16 Claims. (Cl. 95—10)



1. A photographic camera comprising, in combination, a viewfinder including a prism having an insight surface through which the line of sight of an observer is directed, and reflecting surfaces directing light rays forming the finder image into the eye of an observer along such line of sight; an objective mount projecting externally of the camera body; exposure condition adjusting components movably supported on the projecting portion of said mount and carrying indicia for use in setting exposure conditions; and fixedly positioned optical means having a first surface mounted on and forming an interface with a non-reflecting surface portion of said prism, and a second surface facing said indicia; said optical means directing light rays entering said second surface through said interface, and in a straight line from said interface through said insight surface to provide an image of at least part of said indicia in the field of view of an observer viewing said finder image.

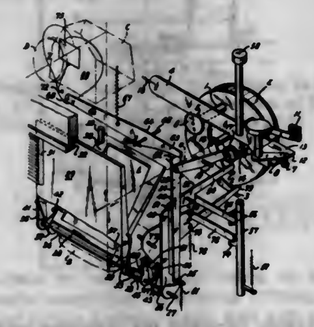
3,094,912
CAMERA WITH AUTOMATIC EXPOSURE-DETERMINING STRUCTURE
Alfred Winkler, Munich, Dieter Engelmann, Unterhaching, Munich, and Hubert Hackenberg, Munich, Germany, assignors to Agfa Aktiengesellschaft, Leverkusen, Germany
Filed May 2, 1962, Ser. No. 191,974
Claims priority, application Germany May 19, 1961
14 Claims. (Cl. 95—10)



1. In a camera, in combination, manually operable means movable from a given starting position to a given end position; shutter-tripping means actuated by said manually operable means, when the latter is in the region of said end position thereof, for tripping a shutter of the camera; exposure-determining means participating at least partly in the determination of the extent to which film in the camera is exposed, said exposure-determining means being movable from a given starting position toward a given end position; light-responsive means operatively connected to said exposure-determining means for limiting the extent of movement thereof from said starting position toward said end position thereof in accordance with the lighting conditions; and elongated spring means extending between and connected to said manually operable means and said exposure-determining means for transmitting movement of said manually operable means to said exposure-determining means, said spring means being stressed to a given extent when said manually operable means and said exposure-determining means are both in said starting positions thereof, and said manually operable means and said exposure-determining means co-

operating with said spring means for increasing the stress thereof beyond said given extent during movement of said manually operable means and said exposure-determining means from said starting positions thereof, whereby, when the operator releases said manually operable means after the latter has been moved to said end position thereof, said spring means will automatically return said manually operable means and said exposure-determining means respectively to their starting positions.

3,094,913
REFLEX PHOTOGRAPHIC APPARATUS WITH SINGLE OBJECT-LENS, WITH IMPROVED SYNCHRONIZED CONTROL AND COUPLING MECHANISM
Jules Louis Eugene Morelle, Paris, France, assignor to Optique et Precision de Levallois, Levallois-Perret, France, a company of France
Filed Jan. 5, 1960, Ser. No. 527
Claims priority, application France Jan. 16, 1959
11 Claims. (Cl. 95—42)



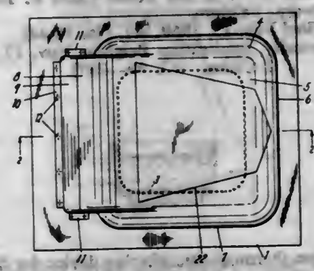
1. In a single lens reflex camera, in combination, a wall formed with an exposure aperture through which film in the camera is exposed; an ocular located at an elevation higher than said aperture; a semi-transparent reflector having an operating position in front of said aperture extending across the optical axis at a 45° angle thereto; lens means having a lower portion beneath said reflector and an upper portion over said reflector, said lens means cooperating with said reflector and ocular for directing an image received by said reflector from the objective of the camera first down to said lower portion of said lens means and then back from said lower portion of said lens means up through said reflector to said upper portion of said lens means and from the latter to said ocular; shutter means located adjacent said ocular and having an open position permitting viewing of an image through said ocular and a closed position closing said ocular; a light shield closing said aperture and spaced from said reflector when said reflector is in said operating position, said light shield and reflector having a common turning axis located adjacent said wall beneath said aperture; means cooperating with said light shield and reflector for moving said light shield away from said aperture and said reflector away from its operating position to an inoperative position adjacent said lower portion of said lens means when an exposure is to be made; and means cooperating with said shutter means for placing the latter in said closed position when said reflector is in its inoperative position and for placing said shutter means in its open position when said reflector is in its operating position, whereby light cannot pass through said ocular to the interior of the camera when said reflector is in its inoperative position.

3,094,914
PHOTOGRAPHIC DEVELOPMENT EQUIPMENT
Harold I. Smith, Pasadena, Calif., assignor, by mesne assignments, to Consolidated Electrodynamics Corporation, Pasadena, Calif., a corporation of California
Filed Apr. 6, 1959, Ser. No. 804,338
6 Claims. (Cl. 95—89)



1. In apparatus having means for applying liquid to successive portions of a photosensitive layer on a flexible strip of wettable backing material and means for drying the successive portions rapidly thereafter, the combination which comprises a member having an open-ended slit, means for supplying the liquid to the slit in the member by means of gravity feed, a resilient body disposed adjacent the open end of the slit and extending along it and pressing toward it, and means for moving the strip lengthwise of itself and transverse to the length of the slit and bending the strip over the slit as the strip passes between the slit and the resilient body with the photosensitive layer disposed toward the slit and thence to the drying means, said slit having a width selected to control the flow of liquid therethrough so that the liquid wets the photosensitive layer without substantially wetting the wettable backing material.

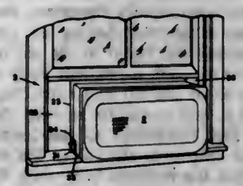
3,094,915
ROOF VENTILATOR
Robert L. Leigh, Coopersville, Mich., assignor, by mesne assignments, to Leigh Products, Inc., Coopersville, Mich., a corporation of Delaware
Filed Dec. 7, 1961, Ser. No. 157,689
9 Claims. (Cl. 98—42)



1. A roof ventilator comprising a base member having a substantially rectangular vent opening therein, a first baffle member of substantial height integral with and projecting upwardly from said base member in surrounding relation to said opening therein, a hood comprising a top disposed in substantially vertical spaced relation to said first baffle member and having downwardly projecting front, rear and side walls spaced outwardly relative to said first baffle member, the rear wall of said top member extending downwardly and being fixedly secured to said base member, a plurality of laterally spaced struts mounted on said first baffle member to project outwardly and upwardly therefrom with their outer ends fixedly secured to the inner sides of said hood front and side

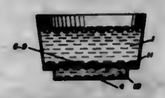
walls, said struts having upwardly opening slots therein spaced outwardly from said first baffle member, and a second baffle member of U-shape supportingly engaged in said slots in said struts and having strut receiving slots extending from its lower edge fittingly receiving portions of said struts, the said second baffle member being substantially spaced from said hood top and walls with its upper edge projecting above the plane of the lower edges of said walls and its lower edge projecting below the plane of the top of said first baffle member.

3,094,916
SELF-CONTAINED AIR-CONDITIONING UNIT INSTALLATIONS
William L. McGrath and Francis D. Stevens, Syracuse, N.Y., assignors to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware
Original application Jan. 5, 1954, Ser. No. 402,364, now Patent No. 2,889,764, dated June 9, 1959. Divided and this application Apr. 10, 1959, Ser. No. 805,590
3 Claims. (Cl. 98—94)



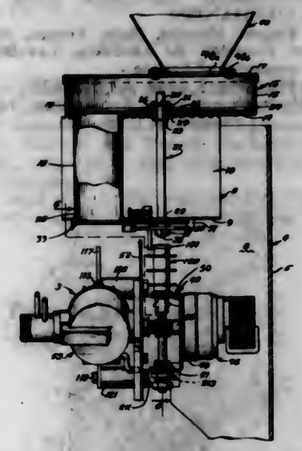
1. A substantially rectangular ring gasket adapted to surround an air conditioning unit when it is disposed in place in a window opening, said gasket having slots therein adapted to receive the edges of wing panels, the upper portion of the gasket having a protruding portion adapted to rest against a side of the window.

3,094,917
FILTERING DEVICE FOR THE PREPARATION OF INFUSIONS, TO BE USED ONLY ONCE
Victor Rombouts, Antwerp, Belgium, assignor to Koffie F. Rombouts N.V. in het Frans Cafes F. Rombouts S.A., Antwerp, Belgium
Filed Feb. 23, 1960, Ser. No. 10,441
Claims priority, application Belgium Nov. 17, 1959
1 Claim. (Cl. 99—287)



A single-use thermoplastic filtering device for the preparation of infusions, said device comprising a bowl having the shape of a truncated cone, an annular ledge integral with the end of the cone-shaped bowl having the smaller diameter, and a cylindrical member integral within said ledge and located outside of said bowl, said cylindrical member having a perforated fixed bottom and being of smaller diameter than said bowl, a perforated disc-shaped false bottom movably mounted upon said ledge adajcent said end of the bowl parallel to said fixed bottom, a plurality of pins circumferentially fixed upon said ledge and extending with play through holes formed in said false bottom, said pins being perpendicular to said bottoms, whereby said false bottom is guided by said pins for upward movement relatively to said fixed bottom, and mushroom-shaped heads upon the tops of said pins having sufficient length in order to permit a predetermined upward movement of the false bottom, the said upward movement being limited by the said mushroom-shaped heads of the said pins.

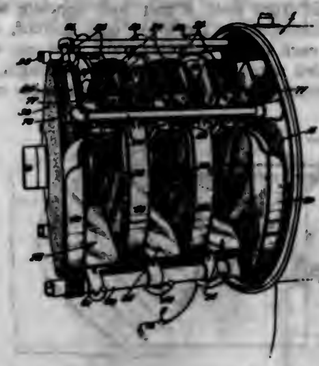
3,094,918
BREWING APPARATUS
Richard J. Mueller, Franklin Park, and Carl Weber, Chicago, Ill., assignors to Automatic Canteen Company of America, Chicago, Ill., a corporation of Delaware
Filed Aug. 20, 1959, Ser. No. 834,986
12 Claims. (Cl. 99—289)



1. A brewing apparatus for subjecting brewing material to a brewing liquid to produce a brewed liquid and separating said brewed liquid from said brewing material, said apparatus comprising supporting means, a brewing container rotatably mounted on said supporting means for rotation from a normal position through a brewing-material-receiving position, a brewing position, and a flushing position back to said normal position, means on said supporting means for feeding such brewing material into said container during movement of said container through said brewing-material-receiving position, means for feeding liquid into and out of said container during said rotation of the latter, and means for opening and closing said container, said last named means comprising mounting means fixedly mounted on said container, a cover, a pivot member pivotally mounting said cover on said mounting means, cam means mounted on said supporting means, and means connected to said cover member and engageable with said cam means during such a rotation of said container for opening and closing said cover, said means engageable with said cam means including said pivot member for opening said cover.

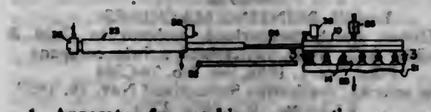
3,094,919
FRUIT JUICE EXTRACTOR
Frank W. Bixley, North Hollywood, and Harry A. Foss, Sunland, Calif., assignors to Brown Citrus Machinery Corporation, Whittier, Calif., a corporation of California
Original application June 26, 1956, Ser. No. 593,991, now Patent No. 3,017,821, dated Jan. 23, 1962. Divided and this application Feb. 14, 1961, Ser. No. 97,122
7 Claims. (Cl. 100—39)

1. A method of extracting juice from fruit which includes the steps of: simultaneously directing cut sections of fruit of randomly different sizes in one direction in separate paths spaced from one another according to the size of the cut sections; and simultaneously applying to the



cut sections during such advance a different juice extracting pressure in each of said paths.

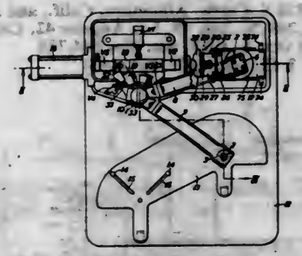
3,094,920
EGG MARKER
Charles Priesmeyer, Park Ridge, Ill., assignor to Meyer & Wenthe, Inc., Chicago, Ill., a corporation of Illinois
Filed June 1, 1959, Ser. No. 817,165
4 Claims. (Cl. 101—41)



1. Apparatus for marking eggs resting on a support, said apparatus comprising: a housing defining a closed chamber and having a planar under wall with a plurality of openings therethrough; a plurality of plungers slidably disposed for limited endwise movement individually in each of said openings; a printing die coupled to the exposed end of each of said plungers; bias means urging said plungers inwardly of said chamber; valve means coupled to said chamber admitting therein air under pressure sufficient to drive said plungers outwardly of said chamber and project said dies away therefrom; an ink pad disposed alongside said support; a reversible motor coupled to said housing for moving the latter between first and second positions disposing said dies in alignment over and adjacent said link pad and said support, respectively; means responsive to movement of said housing into said first position for actuating said valve means to move said dies into engagement with and withdraw the same from said ink pad; means responsive upon withdrawal of said dies from said ink pad for moving said housing into said second position; means responsive to movement of said housing into said second position for actuating said valve means to move said dies into gentle engagement with and withdraw the same from said eggs on said support; and means responsive upon withdrawal of said dies from said eggs for moving said housing into said first position.

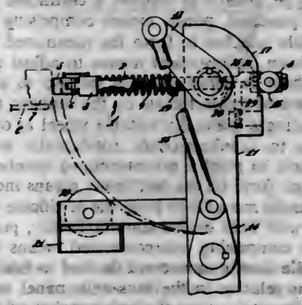
3,094,921
MACHINES FOR PRINTING OR DECORATING ARTICLES OF WARE
David Richard James, Coverdale, Hadfield, England, assignor to Murray Carver Printing Limited, Gloucester, England
Filed Aug. 17, 1960, Ser. No. 50,275
Claims priority, application Great Britain Aug. 18, 1959
11 Claims. (Cl. 101—44)

1. A machine for the off-set printing of stackable articles comprising an inking station, a printing station constructed to receive a stack of said articles, a third station constructed to receive a stack of said articles, a printing head movable automatically between said inking station and said printing station, and transfer means movable automatically in timed relation to the movement of the printing head to transfer articles one at a time between a stack of articles at the printing station and a stack of articles at the third station as the printing head moves between the inking station and the printing station, the printing head printing the article at the top of the stack of articles at the printing station between its movement



to and from the inking station, and the transfer means, which comprise a pick-up head including a suction cup, being arranged to pick up the top article of the stack of unprinted articles at the third station during a printing operation of the printing head at the printing station and to release that article at the printing station during an inking operation of the printing head at the inking station, whereby said machine may be loaded with a stack of unprinted articles at the printing station and after printing said articles may be removed in a stack from the third station.

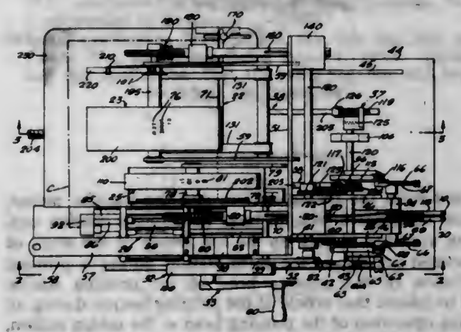
3,094,922
AUTOMATIC MARKER
Hartley J. Crane, Machias, Maine
Filed May 21, 1962, Ser. No. 196,314
3 Claims. (Cl. 101—44)



1. A marking device comprising a frame, a pivot member journaled in said frame, a printing head slidably mounted in said pivot member with the sliding freedom of motion being in a direction perpendicular to the axis of rotation of said pivot member, an actuating spring resiliently urging said printing head away from said pivot member, a crank and linkage mechanism for imparting a rotational oscillatory motion to said pivot member whereby the printing head is swung between an operating and a withdrawn position, a cam follower attached to said printing head, a cam surface integral with the frame and operating upon the cam follower in such fashion as to draw back the printing head against the actuating spring as the printing head is swung from operating to withdrawn position, a latch interacting between said pivot

member and the printing head so as to maintain the printing head in its drawn back state as said printing head swings from withdrawn to operating position, and an adjustable abutment attached to the frame and arranged so as to disengage said latch as the printing head reaches operating position.

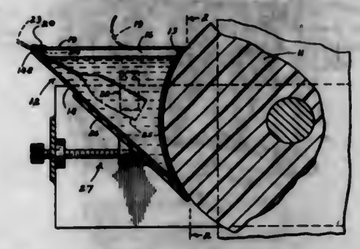
3,094,923
MACHINE FOR IMPRINTING AND PUNCHING THE NUMBER OF SHARES ON A STOCK CERTIFICATE
John J. Lobas, 328 S. Curtis, Alhambra, Calif., and Albert M. Rowlan, 209 N. Ave. 49, Los Angeles 42, Calif.
Filed Oct. 6, 1959, Ser. No. 844,718
7 Claims. (Cl. 101—93)



1. A machine for imprinting a rectangular certificate with a number in word form and the same number in digit form and offset both longitudinally and transversely relative to the number in word form and for punching two holes in said certificate that have a relationship to each other and to the digits of a tens-units panel imprinted on the certificate and which is in conformance with said number, said machine comprising two separate printing drums, one with word-imprinting type and the other with digit-imprinting type, means to support a certificate to be imprinted and punched, punch means comprising two relatively movable punches to form the mentioned two holes in the certificate, independent means to adjust the drums to dispose them in offset relation relative to each other and to the face of the certificate on the support, as desired, means including a manually settable wheel at one side of the machine to simultaneously, rotationally set the imprinting drums to print a predetermined number in both word and digit form on the certificate, means including an operating handle movable to press the certificate into printing contact with both drums simultaneously, punch operating means comprising interconnected means controlled by said handle during movement thereof to first move the punch means relative to the tens-units panel on the certificate and then to project the two punches of the punch means simultaneously with the certificate-pressing means to punch the certificate, and means controlled by said settable wheel to limit the hole-punching positions of the two punches of the punch means during a punching operation to conform said positions to the adjusted positions of the drums and said predetermined number.

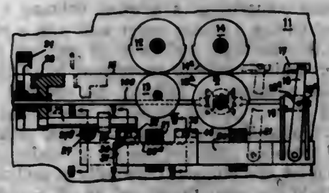
3,094,924
DISPOSABLE CONTAINER FOR PRINTING INK FOUNTAINS
Carl K. Stark, 109 Morris St., Yonkers, N.Y.
Filed Mar. 19, 1962, Ser. No. 180,473
2 Claims. (Cl. 101—210)

1. A disposable liner for insertion in the fountain of a printing machine equipped with an ink roll, which comprises, in combination, a container having a front wall nearest to said ink roll; one side wall connected to each side of said front wall; a rear wall opposite said front wall and connected to the lower edge thereof, also connected on each side to said side walls, said rear wall having a beaded upper edge throughout its length; a cover rigidly connected to said front wall, removably connected



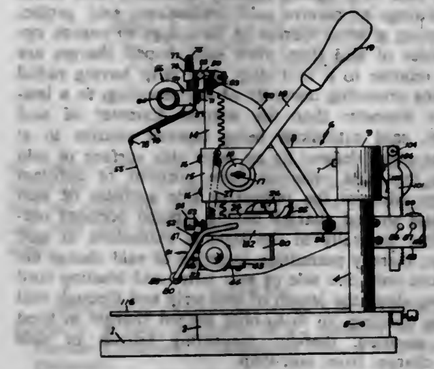
to said rear wall and at least partly removably connected to said side walls; an ink agitator attached to said beaded edge removably and slidably thereon and extending into said container when said cover is opened; a removable strip near the lower edge of said front wall to allow the egress of ink from said liner; and means for suspending said liner in said fountain.

3,094,925
LABEL PRINTING MACHINES
Fritz Huber, Basel, Switzerland, assignor to Guhl & Scheibler A.G., Basel, Switzerland, a Swiss company
Filed Oct. 1, 1958, Ser. No. 764,564
Claims priority, application Switzerland Nov. 18, 1957
9 Claims. (Cl. 101—227)



1. In a printing machine including rotatable printing means and means for feeding blanks to said printing means in timed relationship thereto, the improvement comprising a wall structure, a first support movably mounted upon the wall structure, blank positioning means carried on said first support for repositioning said blanks moved by said feed means, said blank positioning means being operable in timed relationship to said printing means and including a movable member arranged to contact each blank and reposition it along the feed path, said movable member being displaceable in respect to said blank feeding means along with said first movable support, a second support movably mounted upon the wall structure, knife means carried on said second support including a blade disposed to reciprocate into the path of feed of said blanks as they are discharged from said printing means to sever said blanks, and control means for selectively shifting said first and second supports relative to each other and relative to said printing means including a lockable rotatable drive member interconnecting said first and second movable supports operable to effect interdependent movement of one of said supports relative to the other when said lockable drive member is rotated, and when locked, to effect combined movement of said first and second supports relative to said printing means, whereby to adjust cutting and feeding to effect operation on various blank sizes.

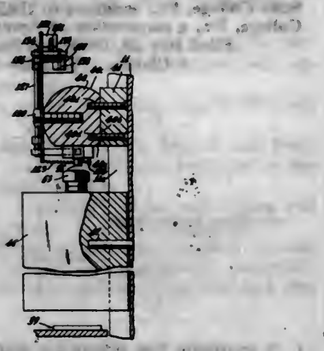
3,094,926
STAMPING MACHINE
Henry A. Mintz, 86 Bond St., Norwood, Mass.
Filed Mar. 10, 1958, Ser. No. 720,169
2 Claims. (Cl. 101—318)



1. A stamping machine comprising a base having a supporting surface adapted to support a member to be stamped, a cantilever supporting structure secured to said base, a bar reciprocatingly mounted in the outer end of said cantilever supporting structure in a position to move substantially perpendicularly to said supporting surface, means carried by the lower end of said bar for supporting stamping type, means for manually reciprocating said bar, a spool adapted to contain a supply of foil, said spool being supported by said bar, said foil extending from said spool, across the face of said type and being received in, means carried by said bar for feeding said foil across the face of said type, a member resting upon said foil and urging said foil away from the face of said type, bias means tending to pull said foil into engagement with said type face, means for lifting said member in a direction to relieve said foil of the weight of said member as said type approaches its stamping position whereby said bias means pulls said foil into engagement with said type face immediately prior to said type reaching its stamping position.

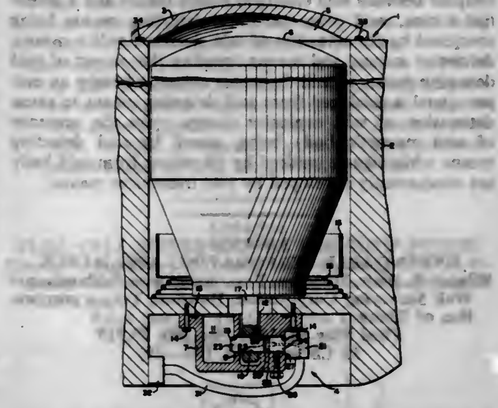
3,094,927
PRESSES FOR PRINTING ENGRAVED STATIONERY
Edmund A. Gillis, Paramus, N.J., assignor to The Cronite Co., Inc., North Bergen, N.J., a corporation of New Jersey
Filed Aug. 11, 1960, Ser. No. 49,886
14 Claims. (Cl. 101—322)

1. In a printing press, a frame, a cross-head slidable on the frame, means to reciprocate the cross-head up and down on the frame, a ram located below the cross-head and slidably mounted on said frame, a member movably mounted on the cross-head and having a portion adapted, in one position of said member, to engage and depress the ram as the cross-head is moved down, said member being movable to another position where said portion is inoperative to depress said ram, spring means tending to move said member to said inoperative position, releasable latch means to retain said member in operative position against the influence of said spring means, means to feed sheets to be printed on said press, means including an electrically actuated means to release said latch means, a circuit to supply current for actuating said electrically actuated means, and switch means in said circuit adapted to be held in open position by presence of a fed sheet to retain said circuit in de-energized condition, whereby lack of such sheet will permit said switch to close to complete and energize the circuit for actuating said



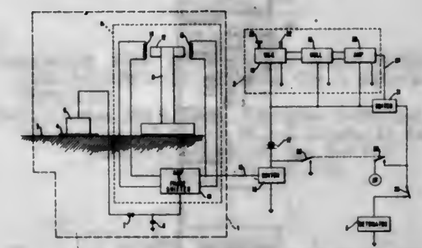
electrically operated means, to release said latch means and permit said member to move to inoperative position.

3,094,928
EXPLOSIVE RELEASE BOLT AND VALVE
Vivian G. Costley, Takoma Park, and Clark W. Dovell, Silver Spring, Md., and La Verne C. Luh, Alexandria, Va., assignors to the United States of America as represented by the Secretary of the Navy
Filed Sept. 21, 1961, Ser. No. 139,811
3 Claims. (Cl. 102—10)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A release bolt and valve mechanism comprising a cylindrical U-shaped housing having an aperture therein, a wall extending interiorly across said housing, said wall having an aperture therein in axial alignment with the aperture in said housing, a release bolt extending through the apertures in said wall and in said housing, said bolt comprising a substantially solid shaft having a bore therein and a recess thereabout, the recess being defined by a cylindrical shaft portion of reduced diameter and having an annular bevel at one end thereof of less diameter than the cylindrical shaft portion, the recess in said shaft being positioned within the aperture in said housing, a squib located within the bore and having one end thereof terminating in the same plane as the beveled end of said shaft portion, and means to detonate said squib whereby when said squib is detonated said shaft is ruptured along said plane and the ruptured portions of said shaft are driven out of the apertures in said wall and said housing axially in opposite directions.

3,094,929
DETONATING SYSTEM
James H. McGinley, Clyde W. Dickey, and Carl Volz, State College, Pa., assignors to HRB-Singer, Inc., State College, Pa., a corporation of Pennsylvania
Filed July 29, 1960, Ser. No. 46,171
8 Claims. (Cl. 102—18)



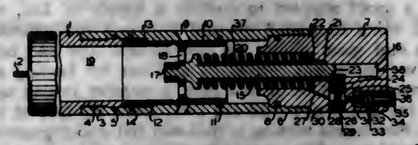
1. A proximity fuse system for automatically detonating an explosive charge in response to the presence of a moving magnetic body in the neighborhood thereof, said fuse system comprising pressure responsive transducer means mounted in the neighborhood of said explosive charge, said transducer means producing electrical output signals in response to vibrations produced by said moving body in the neighborhood of said explosive charge, an electro-mechanical oscillator coupled to the output of said transducer means, said electro-mechanical oscillator receiving its entire operating power from the output signal of said transducer means and oscillating in response to said output signal, normally open electrical switch means coupled to said electro-mechanical oscillator and actuated by oscillations therefrom; magnetic mass detecting means coupled between said electrical switch means and a potential source, said magnetic mass detecting means being energized by the actuation of said electrical switch means, detonator means, and means coupling the output of said detecting means to said detonator means, whereby an output signal is produced from said detecting means to cause detonation of said explosive charge upon the presence of said magnetic body being sensed by said detecting means while signals induced by vibrations from said body are concurrently developed by said transducer means.

3,094,930
EXPENDABLE PERFORATING APPARATUS
Winton B. Blair, Houston, Tex., assignor to Schlumberger Well Surveying Corporation, Houston, Tex., a corporation of Texas
Filed May 18, 1960, Ser. No. 29,919
12 Claims. (Cl. 102—20)



6. Perforating apparatus for use in a well bore comprising a plurality of capsulated shaped charges having spaced radial projections and a rear end with a blasting cord receiving opening, a blasting cord sized for retention in said primacord receiving openings in the rear ends of said shaped charges, and an integral strip of infrangible material of a given thickness and having openings spaced along its length to receive said shaped charges, said strip having radially extending slots about said openings to receive said projections, said projections having grooves therein to form lugs to engage opposite sides of said strip when said shaped charges are rotated relative to a said strip, said strip having radial extensions extending inwardly of said openings to a lesser given diameter than the normal diameter of said openings, said extensions being tapered relative to at least one plane defined by an outer side surface of said strip so that said openings have portions of different diameters adjacent the respective side surfaces of said strips, said shaped charges having tapered portions corresponding generally to the tapered extensions in said openings, thereby permitting insertion of said charge devices from only one side of said strip, said blasting cord extending along the length of said strip and through said receiving openings so as to hold shaped charges in fixed rotated position, thereby preventing release of said shaped charges from said strip.

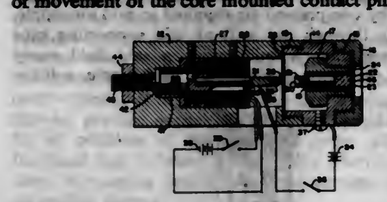
3,094,931
GAS LIBERATING DEVICES
Edward Christian Filstrup, St. Joseph, Mich., assignor to Olin Mathieson Chemical Corporation, East Alton, Ill., a corporation of Virginia
Filed Nov. 10, 1960, Ser. No. 68,537
4 Claims. (Cl. 102—25)



1. A device for liberating a charge of compressed gas comprising a substantially cylindrical body,
means for introducing gas under pressure into one end of the body,
a discharge head located proximate the opposite end of the body,
a lateral discharge port,
a pressure-responsive valve normally closing and spanning said port, said gas pressure tending to urge said valve to an open position,
a stem having a bevel portion rigidly connected to the valve and extending therefrom toward the discharge head,
trigger means operable to engage the bevel portion portion of said stem normally blocking movement of the stem and the valve toward the discharge head, said trigger means being held in restraining position by gas pressure within the body,
and valve means for reducing the gas pressure on the trigger means whereby the pressure on the valve is operative to drive the stem axially causing the stem to cam the trigger means out of blocking position.

3,094,932
ELECTROMAGNETIC RADIATION PROOF IGNITING DEVICE
William D. Greenlees, 2321 Saddle Tree Drive, Alexandria, Va.
Filed July 15, 1960, Ser. No. 43,255
12 Claims. (Cl. 102—28)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. An igniting device comprising a housing, a solenoid disposed within said housing and having a moveable core, a contact pin mounted on said core and moveable therewith upon the energization of the solenoid, an electrically initiated detonator supported by said housing in the path of movement of the core mounted contact pin, and metal-

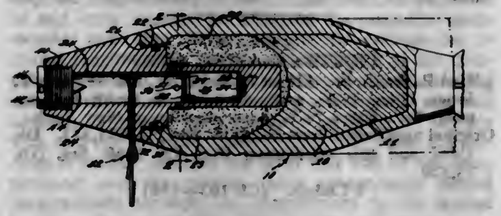


lic means completely surrounding and shielding said detonator from all electromagnetic radiation, said contact pin rupturing said shielding means and making contact with said detonator upon energization of said solenoid.

3,094,933
IGNITION COMPOSITIONS AND DEVICE
David T. Zebree, Kingston, N.Y., assignor to Hercules Powder Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Dec. 30, 1960, Ser. No. 79,529
12 Claims. (Cl. 102—28)

10. In an electric blasting cap containing a detonatable base charge and a primer charge for initiating said base charge upon being heated, and an ignition charge for generation of heat, from burning of same, to cause initiation of said primer, the improvement providing as said ignition charge an ignition mixture of lead and selenium and from 0.4 to 6 weight percent of a siliceous material consisting of skeletons of microscopic aquatic plants characterized by a particle size within the range of about 0.020 to 4 microns.

3,094,934
PRACTICE MORTAR SHELL AND FUSE ASSEMBLY
William E. Anthony, Box 2485, Gastonia, N.C.
Filed July 29, 1960, Ser. No. 46,181
16 Claims. (Cl. 102—41)



1. A mortar training shell and fuse assembly comprising: a shell body having an interior cavity provided with an open forward end for receiving a spotting charge disposed in said cavity; an impact fuse having a body; and means separate from said bodies for retaining said fuse body within said shell body at the open end thereof and operative in response to an explosion of the spotting charge within said shell body to separate said shell body from said fuse head without damage to either.

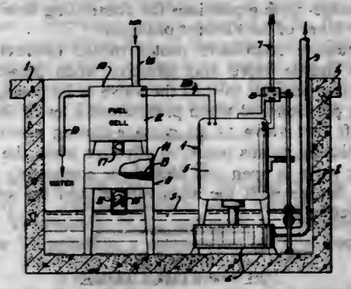
3,094,935
PNEUMATIC-EFFECTED DELAYED-ACTION TRIPPING DEVICES
Carle Mettler, Chiasso, Switzerland
Filed July 24, 1961, Ser. No. 126,300
Claims priority, application Switzerland July 26, 1960
4 Claims. (Cl. 102—70)

1. In a delayed action tripping device particularly adapted for the ignition of explosive substances for controlling electrical units, etc., and of the type that is insensitive to sudden pressures but adapted to trip when subjected to prolonged pressures, said device comprising,
a body member providing a casing,
a firing arm rotatably mounted in said casing for pivotal movement and for axial movement with respect to the pivotal axis,
means adapted to rotate said firing arm to fire said device,
a pressure plate extending over a side of said body member which is substantially perpendicular to the pivotal axis of said firing arm,
diaphragm means extending between said casing and said pressure plate,
flexible means connecting the pressure plate to said body member to provide an imperfect pneumatic chamber between said pressure plate and said diaphragm,



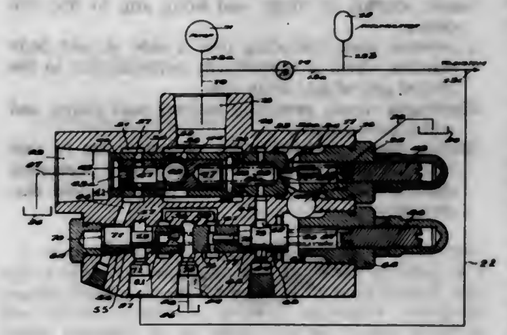
means on said firing arm extending through said diaphragm means and adapted to contact said pressure plate to determine the axial position of said firing arm,
safety means adapted to contact said firing arm and prevent rotation thereof when said firing arm is not depressed by said pressure plate,
said safety means being mounted for axial movement in the same direction as said firing arm to prevent pivotal movement of said firing arm when in contact therewith,
means urging said safety means away from said firing arm when both are in depressed position,
said safety means comprising a head portion acted on by said pneumatic chamber to temporarily depress the same together with the firing arm when the pressure plate is depressed whereby said pressure plate must be held in depressed position for a predetermined length of time for the device to fire.

3,094,936
FUEL CELL POWER SUPPLY FOR SUMP PUMPS
Edwin N. Lightfoot, Jr., Madison, Wis., assignor to A. O. Smith Corporation, Milwaukee, Wis., a corporation of New York
Filed Dec. 20, 1961, Ser. No. 160,872
7 Claims. (Cl. 103—25)



1. In combination with a sump pump having an electrically operated input for pumping of an accumulating liquid, a fuel cell connected to said input and generating power in response to receipt of an operating fluid, and a source of said operating fluid connected to said fuel cell and being responsive to the accumulating liquid to introduce said fluid to said fuel cell.

3,094,937
HYDRAULIC DEVICE
Kyle E. McAfee, Jr., Kalamazoo, Mich., assignor to The New York Air Brake Company, a corporation of New Jersey
Filed Nov. 20, 1961, Ser. No. 153,453
3 Claims. (Cl. 103—42)



1. A system for delivering fluid under pressure comprising:
a. a pump;
b. a sump;
c. a supply conduit connected with the pump and containing a check valve;
d. an accumulator connected with the supply conduit downstream of the check valve;
e. an unloading conduit connecting the pump with the sump;
f. an unloading valve controlling flow through the unloading conduit and shiftable between conduit-opening and conduit-closing positions;
g. first means responsive to the pressure in the unloading conduit upstream of the unloading valve for shifting the unloading valve toward its conduit-opening position;
h. a pressure responsive piloted motor for shifting the unloading valve toward its conduit-closing position;
i. a restricted passage connecting the piloted motor with the unloading conduit upstream of the unloading valve;
j. a pair of exhaust passages connecting the piloted motor with the sump;
k. a relief valve located in one of the exhaust passages;
l. a shuttle valve shiftable between passage-opening and passage-closing positions for controlling flow through the other of the exhaust passages;
m. pressure responsive motor means connected with the shuttle valve and effective when pressurized a certain amount to shift the valve to its passage-opening position and when pressurized a lesser amount to shift that valve to its passage-closing position; and
n. selecting means rendered effective when the unloading valve is open and closed for connecting the motor means with the accumulator and the sump, respectively.

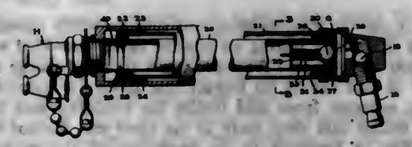
3,094,938
PUMP STRUCTURE
Loren C. Blomeke, Bryan, and Wilbert G. Kautz, West Unity, Ohio, assignors to The Aro Corporation, a corporation of Ohio
Filed June 19, 1961, Ser. No. 118,071
13 Claims. (Cl. 103—50)

1. In a pump structure of the character described, a single, elongated supporting tube, a pair of spaced plugs therein dividing said tube into a lower fluid pump chamber, an upper air motor chamber and a separation chamber between said fluid pump and air motor chambers, an air nipple through the wall of said supporting tube into said upper plug, an air motor in said air motor chamber actuated by compressed air supplied to said air nipple, a fluid nipple through the wall of said supporting tube into said lower plug, a fluid pump in said fluid pump chamber for delivering fluid to said fluid nipple, a tubu-



lar piston rod connecting said fluid pump with said air motor and extending through said plugs and said separation chamber, said air motor exhausting into said tubular piston rod, from said rod into said separation chamber and from said separation chamber to atmosphere, and means at the lower end of said supporting tube for mounting the same on a container of fluid, said means having an intake conduit extending therefrom into such container.

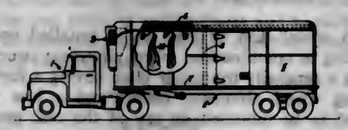
3,094,939
LIQUID SPRAYING PUMP
Alfred P. Smith, Sr., Alfred P. Smith, Jr., and William T. Jones, Utica, N.Y., assignors to D. B. Smith & Company, Inc., Utica, N.Y., a corporation of New York
Original application June 18, 1959, Ser. No. 821,213. Divided and this application Dec. 13, 1960, Ser. No. 75,520
4 Claims. (Cl. 103—188)



1. In a trombone type fluid pressure pump comprising, an outer cylinder, an inner cylinder slidably and telescopically disposed within said outer cylinder, a nozzle at the outlet end of said inner cylinder, a hollow handle secured to said inner cylinder adjacent the outlet end thereof, and inwardly of said nozzle, valve means at the inlet end of said inner cylinder to control the flow of fluid therethrough; the improvement comprising a gland secured to the outer end of said outer cylinder, said gland comprising a nut having a first axially outer and a second axially inner spaced annular groove in its inner wall, a resilient member of circular cross section securely

seated in said first groove and extending beyond the depth of the groove, and a packing gasket securely seated in said second groove and contacting the inner cylinder, said resilient member being of lesser interior diameter than the outside diameter of said inner cylinder, said inner cylinder having an outwardly directed annular groove of arcuate cross section near its outlet end for receiving the extension of the resilient packing member when said outer cylinder is in its maximum overlapping position, to thereby provide a packing structure operable uniformly for all positions of the inner and outer cylinders and a frictional lock between the cylinders when in their maximum telescoping position to thus prevent unintentional separation thereof.

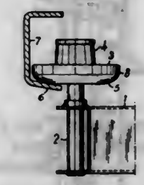
3,094,940
APPARATUS FOR LOADING AND STORING ARTICLES
Robert K. Learmont, Hales Corners, Wis., assignor of one-half to C. J. Williams, River Hills, Wis.
Filed Mar. 7, 1960, Ser. No. 13,135
8 Claims. (Cl. 104—98)



7. In a trailer, a body defining a storage compartment and including a pair of side walls, a top wall and a bottom wall and having an open rear end, a longitudinal guide member secured to each side wall with the guide members being disposed in a substantially horizontal plane and extending substantially continuously from said rear open end throughout the length of said compartment, at least one carriage movably supported on the guide members and including a cross member extending transversely of the compartment with the ends of the cross member extending above the respective longitudinal guide members, means connected to each end of the cross member and disposed longitudinally of the compartment on each side of said cross member for engaging the respective guide member and riding thereon whereby the carriage can be moved longitudinally throughout the length of the compartment, a rail secured to the carriage and extending substantially transversely of the compartment, said rail adapted to receive and support a plurality of articles with said articles being loaded on the rail while the carriage is located adjacent the open rear end of the compartment and the carriage being subsequently moved longitudinally through the compartment to the desired location for transporting, and feeder rail means permanently secured to the body and having a generally straight portion disposed longitudinally of the compartment and extending outwardly to said open rear end and having an inner curved portion disposed to connect said straight portion to said rail.

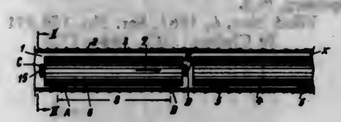
3,094,941
TRACK SYSTEMS
Karl Gustaf Hellner, Allingsas, Sweden, assignor, by mesne assignments, to AB Transportpatent, Stockholm, Sweden, a corporation of Sweden
Filed Dec. 20, 1960, Ser. No. 77,124
Claims priority, application Sweden Dec. 22, 1959
10 Claims. (Cl. 104—130)

1. A carriage supporting assembly comprising a plurality of tracks arranged in a common plane and intersecting one another, and at least one carriage including supporting wheels supported on said tracks, said wheels having axes of rotation which are perpendicular to said plane and stationary relative to said carriage, each said track comprising at least two parallel rails in spaced relation, each of which rails include a supporting surface for supporting said wheels, said supporting surfaces of at least one of said parallel rails being interrupted at the intersection of said tracks to form a passage thereat to permit the wheels of said carriage to be transferred from said



one rail onto the rail of the intersecting track, one of said rails at the intersection including means comprising a guiding projection extending parallel to the other of said rails at said intersection and constituting a limit for movement of said wheels transverse of said other rail whereby the carriage is transferable to an intersecting track wtihout turning of the carriage.

3,094,942
APPARATUS FOR TRANSPORTING PIPE SECTIONS IN TUNNELS AND LIKE EXCAVATIONS
Johannes Blümel, Gelsenkirchen, Germany, assignor to Rheinstahl Union Brueckenbau A.G., Dortmund, Germany
Filed Aug. 3, 1961, Ser. No. 129,052
Claims priority, application Germany Aug. 5, 1960
16 Claims. (Cl. 104—138)

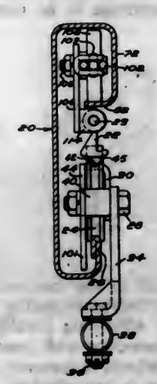


1. An apparatus for transporting pipes through tunnels and like excavations whose inner surfaces are close to the outer sides of the pipes, said apparatus comprising, in combination, at least one supporting component adapted to be placed beneath the pipe and having wheel means adapted to travel along the inner surface and in the longitudinal direction of the tunnel; and at least one guiding component comprising means adapted to be detachably fixed to a longitudinal end of the pipe and comprising a pair of spaced rollers adapted to engage the inner surface of the tunnel intermediate the highest and lowest points thereof at the opposite lateral sides of the pipe.

3,094,943
CONVEYOR TROLLEY STABILIZERS
Humphrey F. Parker, Buffalo, and Erford E. Robins, North Tonawanda, N.Y., assignors to Columbus McKinnon Corporation, a corporation of New York
Filed Feb. 16, 1960, Ser. No. 8,959
3 Claims. (Cl. 104—172)

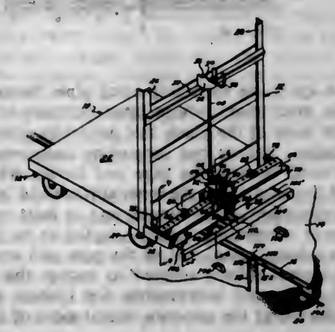
1. A conveyor trolley trackway including a top section of generally box-shaped sectional form and a bottom portion terminating in an upstanding rail portion, a trolley carriage including a support wheel of flanged form straddling the rail portion of said trackway, a load suspension bracket extending downwardly from said carriage alongside the trackway rail portion and thereby providing a derailment safeguard at one side of said rail, pendant

arm means extending downwardly from said carriage at the opposite side of said wheel and therebelow to reach inside of said bottom portion of said trackway and alongside the upstanding rail portion of said trackway thereby providing a second derailment safeguard at the opposite



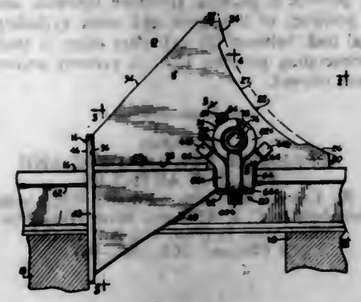
side of said rail, a conveyor power strand device disposed within said top section and having guide roller means at intervals thereon running in guiding relation against the inside wall portions of said top section, and interdigitating coupling means interconnecting said carriage and said power strand device.

3,094,944
TOW TRUCK SYSTEM
Lynn Bradt, Easton, Pa., and John G. Dorrance, Phillipsburg, N.J., assignors to S.I. Handling Systems, Inc., Phillipsburg, N.J.
Filed Nov. 6, 1961, Ser. No. 150,271
20 Claims. (Cl. 104—172)



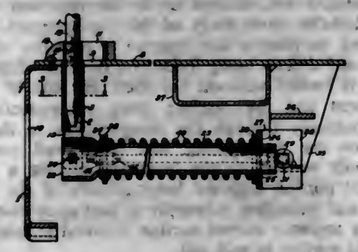
1. A tow truck system comprising means defining a main slot, a truck mounted for movement along said main slot by means of engagement between a tow pin on said truck and a portion of a dragline, the direction of said dragline corresponding to the direction of said main slot, a movably mounted accumulation bumper on said truck, a rear bumper, means supporting said rear bumper on said truck so that said rear bumper has an operative disposition wherein it may cause accumulation of other trucks and an inoperative position wherein it cannot cause accumulation of other trucks, and means structurally interconnecting said accumulation bumper with said rear bumper on said truck so that said rear bumper is moved to an operative disposition in response to movement of said accumulation bumper.

3,094,945
WHEEL STOP
Stanley W. Hayes, Wayne Township, near Richmond, Wayne County, Ind., assignor to Hayes Track Appliance Company, Richmond, Ind., a corporation of Indiana
Original application Mar. 25, 1957, Ser. No. 648,120, now Patent No. 3,043,238, dated July 10, 1962. Divided and this application Apr. 16, 1962, Ser. No. 187,485
3 Claims. (Cl. 104—259)



1. A wheel stop adapted to be installed upon a rail, including in combination, wheel abutment structure comprising a generally triangular plate having a forward edge defining wheel abutment means and a low rear edge adapted to be mounted on top of the rail, generally U-shaped bracket structure secured to the rear edge of said plate straddling the rail and having portions extending into the road bed at opposite sides of the rail, guiding and holding means secured to said abutment structure forwardly of said bracket structure for holding the stop seated upon the rail, diagonally disposed plates, one at each side of the stop, and means securing said plates to the triangular plate, bracket structure and guiding and holding means.

3,094,946
BRIDGE ATTACHING DEVICE
Charles R. Bain and William E. Kurtz, Johnstown, Pa., assignors to Bethlehem Steel Company, a corporation of Pennsylvania
Filed Nov. 15, 1960, Ser. No. 69,496
3 Claims. (Cl. 105—458)

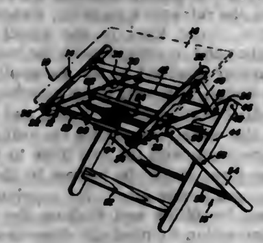


1. A device for securing a bridge pin, comprising, in combination,
(a) a vehicle having a floor with a vertically extending aperture therein near an end thereof to receive a bridge pin,
(b) upright support means secured to the floor on opposite sides of said aperture,
(c) arm means pivotally secured to the support means for allowing movement in a vertical plane,
(d) a pin receiving socket secured parallel to said arm means,
(e) said arm means and socket extending through the aperture and below the floor,
(f) a bracket secured beneath the floor and spaced from the aperture, and
(g) resilient means secured to the bracket and to the lower end of the arm means to hold the socket yieldably in normally vertical position and to return it to said position after any deflection therefrom.

3,094,947
SUGAR-COATING PROCESS
Julius Green, New City, N.Y., and Paul S. Smith, Hawthorne, N.J., assignors to General Foods Corporation, White Plains, N.Y., a corporation of Delaware
No Drawing. Filed Feb. 12, 1959, Ser. No. 792,697
14 Claims. (Cl. 107—54)

1. The method of candy-coating pieces of food products which comprises tumbling with a quantity of said food product a quantity of a finely comminuted coating powder having a saccharidal composition which is transformed to a molten candy upon heating, whereby said coating powder is distributed over the surfaces of said food product, heating the tumbling mass of powder and pieces to cause particles of said powder to fuse and adhere discretely to the surfaces of said pieces, and continuing said tumbling and heating until said particles are evenly distributed over said surfaces and fused to said surfaces and to each other to form a substantially uniform and complete coating on said pieces of food product.

3,094,948
ADJUSTABLE TABLE SUPPORTING CONSTRUCTION
George F. Clow, 2145 Andover Court, Oklahoma City, Okla.
Filed Mar. 23, 1962, Ser. No. 182,048
5 Claims. (Cl. 108—10)



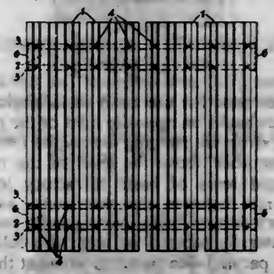
1. An adjustable and collapsible table top support comprising horizontal frame means, foldable leg means pivotally connected to one end of the horizontal frame means and adjustably engageable with the frame means adjacent the other end thereof for vertically adjustable support of the frame means in horizontal position, angularly adjustable top support means pivotally connected to the frame means at said other end thereof, releasable lock means movably mounted on the frame means for engagement with the leg means adjacent said other end of the frame means for locking the leg means in adjusted position on the frame means, said frame means comprising a pair of parallel spaced frame members interconnected by spaced anchoring members on which said lock means is mounted in suspended relation therebelow, and height adjusting notch means formed on said frame members closer to said other end of the frame means and top angle adjusting notch means formed on said frame member closer to said one end of the frame means, said lock means including slide means mounted between said frame members having locking notch means aligned with the height adjusting notch means for locking engagement with the leg means and release means connected to the slide means for displacement of said locking notch means out of alignment.

3,094,949
ACCESSORY FOR OVERBED TABLE
Benjamin J. Oom, Grand Rapids, Mich., assignor to American Seating Company, Grand Rapids, Mich., a corporation of New Jersey
Filed Mar. 1, 1962, Ser. No. 176,599
15 Claims. (Cl. 108—32)



1. An accessory for a table comprising:
an open-front supporting frame having forwardly-rearwardly extending guides at the opposite sides thereof;
a slide frame mounted in said guides for forward-rearward movement in the supporting frame and outwardly through the open front thereof; and
means for mounting said supporting frame on the underside of a table top for pivotal movement about a vertical axis whereby the open front of the supporting frame may be presented toward one or another side of said table top.

3,094,950
PALLETS
Antony Charles Barrington Brown, King's Langley, England, assignor to Dexion Limited, London, England
Filed Feb. 1, 1961, Ser. No. 86,430
Claims priority, application Great Britain Feb. 2, 1960
7 Claims. (Cl. 108—56)

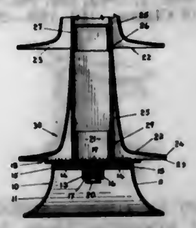


1. A pallet comprising a plurality of elongated metal boards arranged side by side to form the load-bearing surface of the pallet and detachably secured to a pair of metal channel-section bearers which extend transversely of the boards from one end of the pallet to the other, said channel-section bearers having longitudinal flanges along their open sides, the width of said boards being not more than twice the depth of said channel-section bearers, and the depth of said boards multiplied by the number of said boards being not more than the width of the narrowest part of said channel-section bearers, so that when the pallet is dismantled, said channel-section bearers can be secured together with their open sides facing one another, and said boards can be stowed inside the container thus formed.

3,094,951
DISPLAY STAND
Neville Lovineau, Toronto, Ontario, Canada, assignor to Neville Enterprises, Inc., Buffalo, N.Y., a corporation of New York
Filed Sept. 13, 1961, Ser. No. 137,834
3 Claims. (Cl. 108—103)

1. In a sectional display stand, a shelf comprising a tray base and a substantially broad vertical column rising

centrally therefrom, a projection on one end of the column and a projection receiving socket on the other end, said projection and socket forming complemental interfitting parts whereby a plurality of like shelves may be interconnected and supported in superimposed relation-



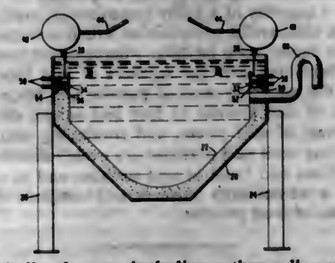
ship, a base and a turntable carried by the base, the lowermost shelf of said plurality of shelves, the turntable and the base being interconnected by complemental mating elements consisting of interfitting projections and sockets separately and correspondingly located in the base, the turntable and the lowermost shelf.

3,094,952
RIBBED BASIC REFRACTORY ROOF
Russell Pearce Heuer, Villanova, Pa., assignor to General Refractories Company, a corporation of Pennsylvania
Filed May 24, 1960, Ser. No. 31,384
4 Claims. (Cl. 110—99)



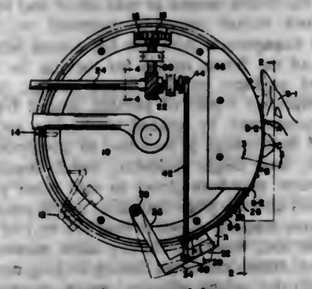
1. A furnace roof for use on a metallurgical furnace, comprising skewbacks on opposite sides of the roof, metallic supporting structure running across the roof from one skewback to another above the level of the roof, a plurality of spaced rows of basic refractory longer brick extending as ribs between the skewbacks, each of said basic refractory longer brick having cold ends and hot ends, being laterally tapered adjacent the cold ends and having lateral parallel side portions adjacent the hot ends, each of said basic refractory longer brick extending generally vertically from the hot surface of the roof through the thickness of the roof to the cold end, metallic hanger support means interconnecting said longer brick at the cold ends with said supporting structure, said longer brick being supported by said hanger support means, intervening basic refractory brick positioned between said longer rib brick having a shorter length than the rib brick and extending upward from the hot surface of the roof along the lateral parallel portions of the rib brick, said intervening basic refractory brick having lateral parallel sides adjoining the lateral parallel side portions of said rib longer brick and said intervening basic refractory brick being in plural arch rows between the adjacent ribs and supported by said skewbacks, independently of said rib brick, and supplemental basic refractory brick containing magnesia in amounts of 10 percent or more in the refractory composition thereof and being superimposed as short beams between said longer rib brick above said intervening brick and extending laterally across said plural arch rows of said intervening brick, said supplemental basic refractory brick having oxidizable ferrous metal plates internally thereof dividing the magnesia-containing refractory composition thereof into a plurality of partitioned sections each extending at least a major portion of the distance between the corresponding hot faces and cold faces of said supplemental brick and extending in the direction toward and away from the skewbacks, each of said supplemental brick having lateral tapering sides which engage the laterally tapering sides of said rib brick and being supported by said rib brick and thus placing said partitioned sections in series laterally with rib brick in the adjacent ribs.

3,094,953
BOILER FURNACE ASH HOPPER SEAL
Edwin S. Alexander, 26 Deerfield Drive, Florham Park, N.J.
Filed Oct. 27, 1961, Ser. No. 148,267
4 Claims. (Cl. 110—171)



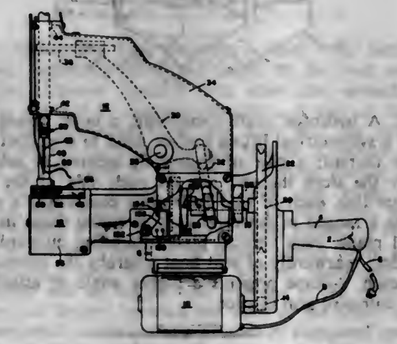
1. In a boiler furnace including a thermally expansive section and wherein the boiler is adapted to burn solid fuel and produce a gaseous flow, a water-filled vessel which serves as an ash hopper for receiving combustion by-products originating from solid fuel-fired boiler operation, said vessel comprising a metallic outer shell and an inner refractory member, said metallic shell extending vertically above the refractory member, means for maintaining a normal water level in the vessel above the refractory member and in contact with the metallic shell, a seal plate member attached to the thermally expansive section of the boiler, said seal plate member extending into the water-filled section of the vessel, and seal means located within the vessel and above the refractory, said seal means cooperating with the seal plate to prevent the escape of boiler gases inside the hopper to the surrounding atmosphere, and nozzle means for supplying water to said hopper and for filling and flushing the seal means free of any combustion by-products deposited therein.

3,094,954
LOOPING MACHINE
Samuel I. Bard, New York, N.Y., and John G. Lord, Swarthmore, Pa., assignors to Prestige, Inc., New York, N.Y., a corporation of Pennsylvania
Filed Feb. 12, 1960, Ser. No. 8,374
7 Claims. (Cl. 112—27)



1. A looping machine comprising a sewing dial,
stitch supporting points which project radially and horizontally from the periphery of said dial and on which all of the stitches of the courses of fabric to be sewed are adapted to be serially impaled, said supporting points including
spaced end points for receiving end stitches of said courses and intermediate points for receiving the intermediate stitches of said courses, said spaced points projecting to a greater extent than said intermediate points.

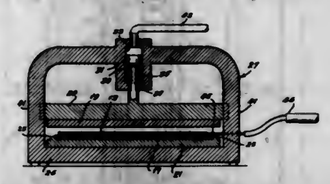
3,094,955
LOOPER MECHANISM FOR A SEWING MACHINE
Harold Fischbein and Irving George Fischbein, both of 2720 30th Ave. S., Minneapolis, Minn.
Filed May 6, 1960, Ser. No. 27,421
4 Claims. (Cl. 112—199)



1. In a sewing machine having a pointed eye needle adapted to carry the thread and to move upward and downward to pass through the material being sewn, a first elongated drive shaft means, a feed dog mechanism for movement of the material being stitched, said first elongated drive shaft means disposed horizontally and adapted to operate said feed dog mechanism at its forward end, said first drive shaft means having a forward full revolution cam, means for moving said feed dog mechanism vertically as well as horizontally, said first drive shaft means having a rear full revolution cam means mounted generally coaxially of said rearward end of said first drive shaft means, a second elongated drive shaft means disposed generally horizontally and adapted to be driven at its rearward end by said rear full revolution cam means, said second drive shaft means extending forwardly toward said first drive shaft means at an oblique angle thereto, a looper mechanism mounted at the forward end of said second drive shaft means for engaging the thread carried by said needle during a sewing operation and adapted to move in synchronism with said feed dog mechanism whereby said sewing and looping operation will cooperate with the movement of said material by said feed dog mechanism.

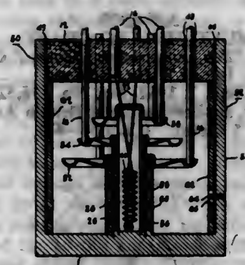
3,094,956
FABRICATION OF HOLLOW ARTICLES
Theron F. Pauls, Godfrey, Ill., assignor to Olin Mathieson Chemical Corporation, East Alton, Ill., a corporation of Virginia
Filed Apr. 16, 1956, Ser. No. 578,296
6 Claims. (Cl. 113—44)

6. An apparatus for expanding a blank formed of a plurality of sheets having an unjoined interior portion defined and contained within joined portions of said sheets provided with an inlet for fluid pressure to said unjoined portion with said unjoined portion being adapted to contain a fluid under pressure, said apparatus comprising a pair of opposed pressure means operatively connected to each other for receiving said blank thereinbetween, one of said pressure means being rigid and noncompressible and the other of said pressure means being compressible, said rigid means having a surface against which one side of said blank is placed in adjacent relationship, engaging means operatively connected to said compressible pressure means for engaging said compressible pressure means with the other side of said blank so that said compressible pressure means applys a uniform pressure to said other side to hold said one side of said blank substantially contiguously against said surface during expansion of said unjoined portion, fluid



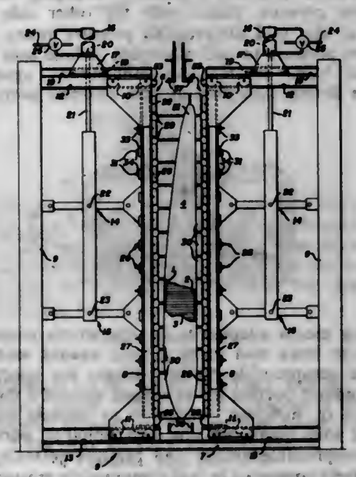
injecting means adapted to be operatively connected to said inlet while said blank is held against said surface by said compressible pressure means for injecting into said unjoined portion for expansion thereof a fluid under pressure of sufficient magnitude to impress said other side of said blank opposite said unjoined portion into said compressible means, and pressure releasing means operatively connected to said compressible pressure means and to said fluid injecting means to simultaneously relieve the force of said compressible pressure means and said fluid pressure applied within the unjoined interior portion of said blank.

3,094,957
BRAZING JIG FOR ELECTRON TUBE FABRICATION
Harry V. Knaul, Jr., Mountainside, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Sept. 11, 1959, Ser. No. 839,358
4 Claims. (Cl. 113—99)



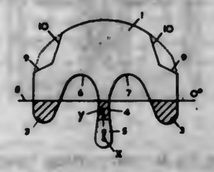
1. A brazing jig for supporting electron tube parts in predetermined spaced relationship during brazing operations comprising a housing including a base and side wall portions extending from said base on one side thereof, at least one jigging element extending from said base within said housing, and an insert support member of a material different from that of said housing side wall for supporting one of said tube parts, said insert resting on said base within said housing in a loose fit therewith and extending from said base part way along said wall portions, said insert exhibiting an axial thermal expansion for a given temperature rise no greater than the total axial thermal expansion of that portion of said tube parts disposed between the ends of said insert.

3,094,958
BRAZING FIXTURE
Frederick A. Gruetjen, Wauwatosa, Wis., assignor to A. O. Smith Corporation, Milwaukee, Wis., a corporation of New York
Filed Oct. 27, 1958, Ser. No. 769,908
8 Claims. (Cl. 113—133)



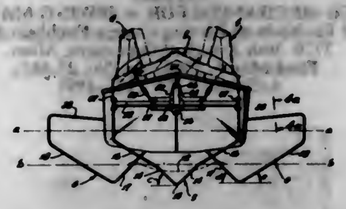
1. In an apparatus for brazing an assembly, heating means adapted to heat the assembly, a plurality of spaced clamping means adapted to clamp and support the assembly in position for brazing, said clamping means and heating means being disposed in the path of each other when the clamping means are in the clamped position, means to effect relative movement between said heating means and the assembly to progressively braze the assembly, and means to individually and successively move each of said clamping means to a retracted position in timed relation to relative movement between the heating means and the assembly to thereby provide passage for the heating means.

3,094,959
MULTI-HULLED CRAFT
Uffa Fox, "The Commodores House," Cowes, Isle of Wight, England
Filed Sept. 7, 1961, Ser. No. 136,529
Claims priority, application Great Britain Aug. 2, 1961
1 Claim. (Cl. 114—61)



A multi-hulled craft having two buoyant hulls relatively widely spaced by a superstructure positioned generally above the water line, a depending keel fin formed on the superstructure and positioned with its centre line in the median plane between the two hulls, a ballast keel mounted at the base of the keel fin at a level below the two hulls, said hulls and keel fin extending both above and below the normal water line in the upright condition of the craft, such that upon positioning of the craft in water at any inclination to level there is exerted on the craft a restoring turning couple constituted by the weight of the ballast keel acting downwardly in a first plane and the buoyancy reaction of the remaining immersed part of the craft acting upwardly in a second plane spaced horizontally from the first plane.

3,094,960
HYDROFOIL FOR WATER CRAFT
Thomas G. Lang, Arcadia, Calif.
(1777 Grevelia St., Apt. 7, South Pasadena, Calif.)
Filed Nov. 19, 1959, Ser. No. 854,176
6 Claims. (Cl. 114—66.5)



1. A hydrofoil craft comprising; a boat; means defining a symmetrical lifting surface fixed to said boat at the bow thereof; a pair of hydrofoils secured to said boat near the stern thereof, one on each side of the boat's center line, each of said hydrofoils comprising a pair of arms arranged in downwardly converging shape in a vertical plane, each vertical plane extending outwardly and slightly rearwardly of said boat whereby the inboard arm of each V-shape presents a higher angle of attack than the outboard arm thereof.

3,094,961
HYDROFOIL SAILBOAT
Bernard Smith, Chino Lake, Calif.
(214 Carroll Ave., Newport, R.I.)
Filed June 13, 1961, Ser. No. 116,891
6 Claims. (Cl. 114—66.5)
(Granted under Title 35, U.S. Code (1952), sec. 266)



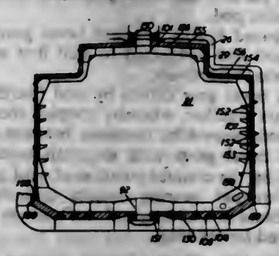
4. A hydrofoil,
(a) the outer surface of which encloses a volume which displaces a sufficient amount of water, when submerged at rest therein, to support a substantial load disposed above the water,
(b) the displacement being considerably in excess of that of a conventional hydrofoil constructed solely to produce maximum lift with minimum drag and also having greater drag than said conventional hydrofoil,
(c) said hydrofoil having a substantially flat side and a cambered side,
(d) their intersections forming leading and trailing edges,
(e) said cambered side being symmetrical on each side of its central section, whereby it may produce equal lift in either of opposite directions of movement in the plane of said flat side,
(f) means for moving said hydrofoil through water with said flat side disposed at an angle to the vertical, said means adapted to also produce a force equal and in opposition to the horizontal component of force produced by said hydrofoil,
(g) and means for rotating the hydrofoil about a substantially vertical axis for steering it along a desired course.

3,094,962
HYDRO PLANE
Harry Joseph Gear, 2425 Broadway, Mattoon, Ill.
Filed Apr. 27, 1962, Ser. No. 190,557
3 Claims. (Cl. 114—66.5)



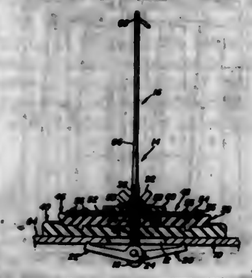
1. A hydroplane boat including a boat body having two sides extending along the length of the boat with a bottom disposed beneath both sides and extending laterally outward in opposite directions, a pair of rigid short wings projecting from said sides with the lower surfaces thereof merging with said bottom, a cockpit for a drive for the boat in the forward portion thereof between said sides, means carried upon said wings for balancing and determining the trim of said boat, said bottom having a pair of inclined chines extending rearwardly at the sides defining air traps between them, said body having a high intermediate portion rearwardly of the cockpit and an engine well disposed at the extreme rear portion thereof between the sides of the craft, said last mentioned means including a pair of elongated sponsons detachably secured upon the outer ends of the wings, said wings having an airfoil sectional form, a depending fin upon the boat bottom, and a depending fin upon one of the two sponsons.

3,094,963
MARINE TANKERS
Ewan Christian Brew Corlett, Worting Park, near Basingstoke, England, assignor to Wm. Cory & Son Limited, London, England
Filed Apr. 1, 1958, Ser. No. 725,676
Claims priority, application Great Britain Apr. 5, 1957
8 Claims. (Cl. 114—74)



1. In a marine tanker for the bulk transport in the liquid state at low temperature of methane or like ordinarily-gaseous substance, at least one externally-insulated cargo tank having a circumferential wall the insulation for which is in the form of a resilient coherent material such as glass fibre matting, which is in a state of being compressed against the tank surface when the tank is in its thermally expanded condition, so as to be able to itself expand to follow the tank movement when the tank contracts, the extent of the compression being sufficient to allow the full thermal contraction of the tank to occur without the insulation breaking contact with the tank surface, and wherein circumferential bands are provided around said circumferential wall to clamp the insulation on to the external tank surface and of which the circumferential length can be adjusted to impose the required degree of compression on the insulation.

3,094,964
BOAT HULL PATCH
Louis J. Witten, 71 Wildwood, Boston, Mass., and Louis Goldstein, 1124 Brook Road, Milton, Mass.
Filed Nov. 15, 1961, Ser. No. 152,529
4 Claims. (Cl. 114—227)

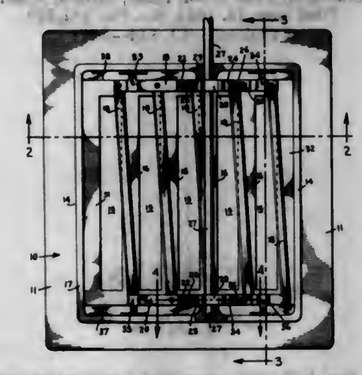


1. A boat hull patch assembly for making an emergency repair of a punctured boat hull panel, said patch assembly comprising an elongated support shank, a pair of anchor arms pivotally secured to one end of said shank for movement about axes extending transversely of said shank and of said anchor arms between generally radially outwardly extending positions and collapsed positions generally paralleling said shank and with the free ends thereof extending toward the other end of said shank, a centrally apertured large diameter sealing disk slidably disposed on said shank having one side facing toward said one end of said shank and adapted for sealing engagement with a punctured boat hull panel on the side thereof remote from the side on which said anchor arms are disposed, said one end of said shank being externally threaded from a point spaced from said anchor arms a distance somewhat greater than the width of said sealing disk forwardly toward said one end of said shank, said shank from said point rearwardly at least to a point adjacent the other end of said shank being reduced in diameter, a jamnut loosely slidably disposed on said diametrically reduced portion of said shank and threadedly engageable on said externally threaded portion thereof for urging said disk toward said anchor arms whereby the portions of said hull panel disposed about the punctured portion thereof may have said one side face of said disk disposed in frictional engagement therewith to seal said puncture, a thrust washer slidingly disposed on said shank between said disk and said jamnut, said thrust washer being freely slidable on said diametrically reduced portion and including ratchet means lockingly and threadedly engageable with said threaded portion of said shank yieldingly resisting movement of said disk toward said anchor arms without rotation of said disk, preventing movement of said disk along said threaded portion away from said arms in the absence of rotation of said disk and effecting movement of said disk along said threaded portion away from said anchor arms upon rotation of said disk relative to said shank.

3,094,965
PUMP INTAKE WEED SHEARING STRUCTURE
Kermit H. Burgin, Whitestown, Ind., assignor of fifty per cent to Frederick B. Cline, Indianapolis, Ind.
Filed June 19, 1962, Ser. No. 203,538
4 Claims. (Cl. 115—5)

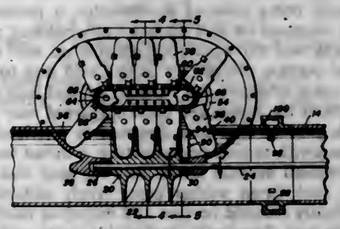
1. The combination with
a protective water intake grille having a plurality of

spaced apart bars between and past which intake water may flow from an inner, discharge side of the bars,
said bars having faces in a common plane;
of a plurality of knives extending along the lengths of said bars; and
means reciprocating said knives in unison across said bar faces setting up a shearing action therebetween;



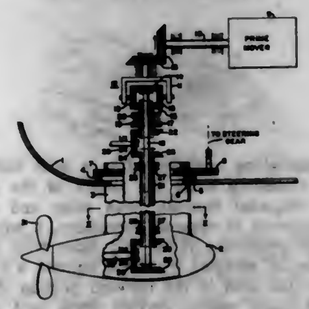
said knives being double edged and diagonally positioned across said bars;
tie bars, one attached across each of opposite ends of said knives requiring them to reciprocate in unison; and
shoulders carried transversely and at the ends of said bars of said grille;
said shoulders limiting longitudinal travel of the knives.

3,094,966
SCREW-TYPE PROPULSION UNIT
Joseph E. Meyer, Sparta, Wis., assignor of two thirty-fifths each to William H. Meyer, Martha Meyer, Herbert Meyer, James Meyer, Beverly Meyer, Davis Meyer, and Eugene Meyer, all of Athens, Wis.
Filed Dec. 16, 1958, Ser. No. 780,864
9 Claims. (Cl. 115—15)



1. A hydraulic pumping system comprising a tube having axially aligned liquid pump inlet and outlet passage port portions, a pump chamber in said tube between said inlet and said outlet passage portions, a drive shaft adapted to be driven from a power source, a screw secured to said shaft and rotatably mounted in said chamber to displace liquid in said chamber and move the liquid through said outlet portion, rotational flow blocking means drivingly connected to said drive shaft for separately powered movement through said pump chamber for restricting fluid flow through said chamber to axial flow, said tube having at least one air inlet opening upstream of said screw, air passage control means communicating with said air inlet opening for controllably admitting air to the tube for compression by the screw and subsequent expansion, and suction means connected to said tube upstream of said screw to elevate the liquid level in said tube for initial propulsion of incompressible liquid through said tube.

3,094,967
STEERABLE TORQUE-BALANCED MARINE PROPULSION DRIVE
Robert J. Willis, Jr., Nahant, Mass., assignor to General Electric Company, a corporation of New York
Filed Dec. 12, 1961, Ser. No. 158,817
5 Claims. (Cl. 115—35)

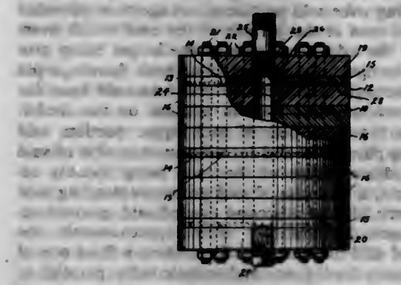


1. A torque-balanced steerable marine propulsion drive comprising:
a vessel structure including a prime mover disposed therein,
a propeller pod supported below said vessel structure and rotatably mounted for oscillation about a vertical axis,
steering means for oscillating said propeller pod relative to the vessel structure,
differential gearing means including first and second gears and a cage driven by said prime mover, said cage having freely rotatable planet gears driving said first and second gears in the same direction while providing differential movement therebetween,
reversing gear means coupled to said second gear and including a third gear driven in the reverse direction from said first and second gears at the same absolute speed as the first gear,
first and second rotatably journaled coaxial shaft means driven by the first and third gears and extending into the propeller pod,
vertically spaced fourth and fifth bevel gears disposed in said pod and connected to said first and second shaft means respectively,
and a sixth bevel gear driven by said fourth and fifth bevel gears together, whereby couples about the pod vertical axis caused by reactions between the fourth and fifth bevel gears with the sixth bevel gear are balanced by the counter-rotation of said gears while said differential gearing means permits different speeds of said first and second shaft means as the pod is oscillated for steering.

3,094,968
EXPENDABLE VAPOR NOISEMAKER
Richard F. Post, Alexandria, Va.
(% Naval Research Laboratory, Washington, D.C.)
Filed Jan. 25, 1945, Ser. No. 574,602
7 Claims. (Cl. 116—27)
(Granted under Title 35, U.S. Code (1952), sec. 266)

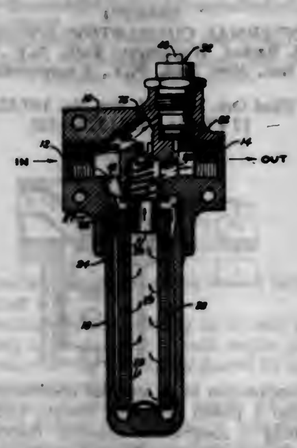
1. An underwater sound producing device comprising means forming a manifold chamber, means forming a plurality of separate channels leading from the manifold chamber to points of discharge spaced apart at least one-quarter of an inch, a gaseous body filling the space extending from the manifold chamber through the channels,

said channels with the particular gaseous body having, for sound waves of substantially 24 kc., an acoustic



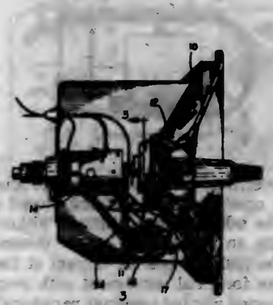
impedance substantially equal to the radiation resistance of water.

3,094,969
VISIBLE FILTER CLOGGING INDICATOR
James Clifford Whiting, Madison Heights, Mich., assignor to The Bendix Corporation, a corporation of Delaware
Filed Apr. 11, 1960, Ser. No. 21,469
4 Claims. (Cl. 116—70)



1. A temperature sensitive differential pressure indicating device comprising a housing having a bore therein, a cage located in one end of said bore, said cage having a plurality of axial slots formed therein and notches formed on the end thereof, a hollow indicator button slidable within said cage and movable from a hidden first position to a visible second position, said indicator button having helical slots formed in the walls thereof and projections extending therefrom, said projections being located in said axial slots of said cage for preventing relative rotation between said indicator button and said cage, a spring for urging said indicator button from said hidden first position to said visible second position, a shaft located within said indicator button and extending substantially the length of said cage, said shaft having a transverse slot formed on one end thereof and a transverse pin extending through the other end thereof for engagement with the helical slots in said indicator button, said transverse pin thereby preventing movement of said indicator button to a visible position except when said shaft is permitted to rotate with respect to said indicator button and cage, a locking pin located in the transverse slot of said shaft and the notches of said cage for preventing relative rotation between said shaft and said cage, a piston member operatively connected to said locking pin and movable in said bore for permitting egress and ingress of said locking pin from the notches of said cage, a flexible bladder located in said bore, said piston member and bladder forming a chamber therebetween within said bore, spring means located in said chamber for opposing movement of said piston member and securing the end of said bladder to said housing, fluid temperature sensitive means confined in said chamber for transmitting forces from the bladder to the piston member, said fluid means solidifying at temperatures below a predetermined value to thereby prevent movement of said piston, a first port for communicating one side of said piston member with a first pressure, and a second port for communicating one side of said bladder with a second pressure.

3,094,970
GAUGES WITH ELECTROLUMINESCENT LIGHTING
Rouhollah Zargarpur, River Forest, Ill., assignor to Stewart-Warner Corporation, Chicago, Ill., a corporation of Virginia
Filed Apr. 25, 1960, Ser. No. 24,576
4 Claims. (Cl. 116—129)

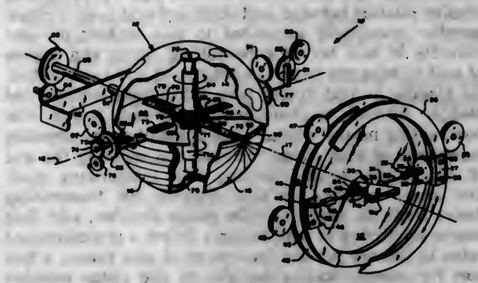


1. A panelescent gauge construction comprising an electro-conductive shaft, and electro-conductive pointer carried by said shaft, means for rotatably mounting the shaft on the gauge, an electroluminescent phosphor coating on the said pointer, a conductive, translucent coating on said phosphor coating, an insulating member on said shaft, a spring element mounted on said insulating member to bias rotation of said shaft, means holding said spring relative to said gauge and connectable to an electric current source, means electrically joining said translucent coating to said spring, and means including said shaft connectable to electric ground, whereby rotation of the shaft is resisted only by said spring.

3,094,971
VERTICAL DISPLAY
Louis S. Guarino, Hatboro, Pa., and Flint G. Holt, Carmel, Calif., assignors to the United States of America as represented by the Secretary of the Navy
Filed Apr. 29, 1960, Ser. No. 25,006
10 Claims. (Cl. 116—129)
(Granted under Title 35, U.S. Code (1952), sec. 266)

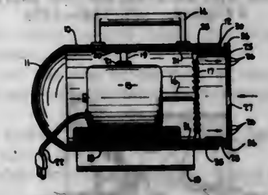
2. In a vertical display device, ball means, a flag representative of an aircraft disposed in front of said ball means, collimating lens means disposed in front of said flag and focused to make said ball means appear to be at infinity, means forming vertical and horizontal reference lines fixed relative to said lens means for cen-

tering said flag, means for controlling the roll, pitch and yaw of said flag, and said ball means including means



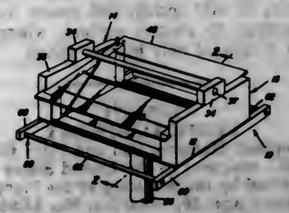
to give illusion of forward motion to a viewer of said flag.

3,094,972
SOUND PRODUCING DEVICE
Max H. Leavenworth, Solon, Ohio (4411 Swede Road, Midland, Mich.)
Filed Jan. 4, 1962, Ser. No. 164,244
9 Claims. (Cl. 116—147)



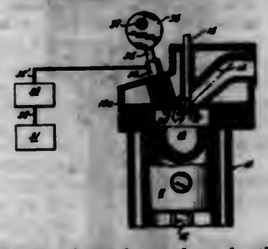
1. A low level, non-disturbing sound producing device comprising in combination a housing closed at one end and open at the other, means disposed within said housing for creating an air stream, barrier means adjustably disposed in the path of said air stream at the open end of said housing for axial movement with respect to said housing and having myriad openings peripherally disposed in said barrier through which at least a portion of said air stream is caused to pass, said barrier having air inlet means centrally disposed therein, and means coacting between said housing and said barrier for modulating the sound.

3,094,973
BIRD FEEDER WITH REMOVABLE COMPONENTS
James W. Duvall, P.O. Box 726, Fairhope, Ala.
Filed Apr. 21, 1961, Ser. No. 104,626
4 Claims. (Cl. 119—52)



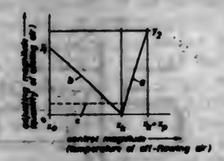
1. In a bird feeder, a base, spaced vertically extending end walls secured thereto, each end wall having an upper portion and a lower portion, said lower portion being offset inwardly relative to the upper portion, a flat ledge formed by the top of the inwardly offset portion, said portions having inner faces, a plurality of grooves, said grooves being in the inner face of said lower portion, said grooves extending downwardly from said ledge, said grooves being of a depth less than the depth of said ledge, partitions slidably received in said grooves, a roof supported on and between the ledges of each end wall, said roof extending over said partitions, an aperture provided through said roof in the portion of the roof which overlaps one of the ledges, said one of the ledges being provided with an upwardly opening blind bore therein, a pin extending through said aperture and into said bore for releasably retaining said roof in position on the feeder, a groove in the inner face of each upper portion, said groove being parallel to and forming an extension of said ledge, the adjacent edge of the roof being slidably received therein, a first one of said grooves extending substantially vertical, and a second one of said grooves extending diagonally upwardly from approximately the lower end of said first one of said grooves, a third one of said grooves spaced from and substantially parallel to said first one of said grooves, and a fourth one of said grooves extending diagonally upwardly from approximately the lower end of said third one of said grooves, said second and fourth ones of said grooves intersecting each other at a point slightly below said ledge, the partitions in said first and third ones of said grooves extending from the ledge downwardly to a point above the lower end of the corresponding diagonal groove, the partitions in said second and fourth grooves extending from the point of intersection of said grooves downwardly to the bottom thereof.

3,094,974
INTERNAL COMBUSTION ENGINE
Everett M. Barber, Wappingers Falls, N.Y., assignor to Texaco Inc., New York, N.Y., a corporation of Delaware
Filed Oct. 23, 1961, Ser. No. 147,021
17 Claims. (Cl. 123—32)



1. In combination in an internal combustion engine, a cylinder and a piston operating therein and a cylinder head defining a combustion chamber therewith, intake means for said combustion chamber adapted to introduce air thereinto and to impart a high velocity of swirling movement thereto, a fuel injection nozzle carried by said cylinder head to provide a fuel spray into said combustion chamber so that at least a portion of the first increment of injected fuel forms with a localized portion of swirling air an ignitable fuel-air mixture adjacent said nozzle, means for supplying fuel to said nozzle, ignition means protruding into said combustion chamber close to said nozzle and fuel spray therefrom so that said ignitable fuel-air mixture formed from said first increment of injected fuel envelope the protruding part of said ignition means substantially as soon as it is formed, means coordinated with engine operation for controlling the start of injection of fuel from said nozzle during the latter part of the compression stroke of said piston, means synchronized with engine operation for energizing said ignition means at the time said ignitable fuel-air mixture formed from said first increment of injected fuel reaches said protruding part of said ignition means to initiate combustion and establish a flame front, and means for controlling the rate and duration of fuel injection following ignition to impregnate shortly in advance of said flame front additional quantities of swirling air at a controlled fuel-air ratio to form and burn progressively additional combustible fuel-air mixture ignited by said flame front substantially as rapidly as formed to provide the power required on each cycle, said combustion chamber being located substantially within said piston and having a cup shape with a circular cross section normal to the piston axis to define an open combustion chamber, the maximum diameter of said open combustion chamber exclusive of the entrance chamber ranging from about 30% to about 80% of the bore of said cylinder, the center line of said fuel spray under static conditions being tangent to an imaginary cylinder with an axis parallel to the cylinder axis and centered with the cup shape open combustion chamber and having a diameter which may vary from about 50% to about 80% of the combustion chamber diameter, the angle of intersection between the static fuel spray center line and the element of said imaginary cylinder to which it is tangent ranging from about 15° to about 45°, the point of intersection on the cylindrical element being located from about 20% to about 80% of the depth of the combustion chamber measured along this element from the bottom surface of the cylinder head.

3,094,975
GOVERNOR
Reinhard Müller, Cologne-Deutz, Germany, assignor to Klockner-Humboldt-Deutz Aktiengesellschaft, Cologne-Deutz, Germany
Filed Sept. 6, 1960, Ser. No. 57,863
Claims priority, application Germany Sept. 22, 1959
4 Claims. (Cl. 123—41.12)



1. In a cooling system for an air cooled internal combustion engine,

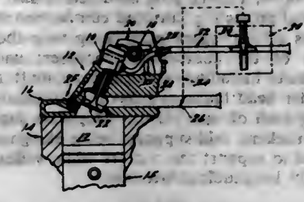
blower means supplying cooling air to said engine immediately after the start of said engine so that the temperature of the cooling air passed by said engine increases continuously,

control means to control the supply of cooling air from said blower to said engine operable through a first temperature range to decrease the supply of air to said engine as the temperature of said engine increases and operable through a second temperature range to increase the supply of air to said engine as the temperature of said engine increases,

thermostatic means responsive to the temperature of said cooling air after having passed said engine to activate said control means through said first temperature range until the temperature of said air passed by said engine reaches a certain value and to actuate said control means through said second temperature range after the temperature reaches said certain value.

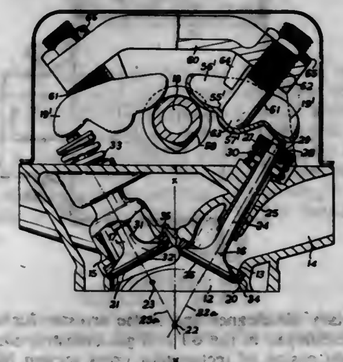
3,094,976
AUTOMOTIVE DEVICE
Claude H. May, Racine, Wis., assignor to Walker Manufacturing Company, Racine, Wis., a corporation of Delaware
Filed Apr. 19, 1961, Ser. No. 104,060
10 Claims. (Cl. 123—119)

1. A fuel system for an internal combustion engine having a combustion chamber, said fuel system comprising an intake manifold for the induction of air into the combustion chamber, a pump chamber, means for inducting an air-fuel mixture into said pump chamber, means for



compressing the air-fuel mixture within said pump chamber, and means for injecting the air-fuel mixture into the intake manifold upon induction of the air into the combustion chamber.

3,094,977
CYLINDER HEAD ASSEMBLIES FOR SPARK IGNITION INTERNAL COMBUSTION ENGINES
Achilles C. Sampietro, 286 Puritan, Birmingham, Mich.
Filed Nov. 7, 1960, Ser. No. 67,594
5 Claims. (Cl. 123—191)



1. In a spark ignition internal combustion engine, the combination comprising: a cylinder head assembly including a cylinder head block having at least one hemispherical combustion chamber the center of which lies on the axis of the cylinder; inlet and exhaust ports opening into said chamber on opposite sides of a central longitudinal plane through the chamber and so disposed that the axis of the inlet port lies in a second plane extending longitudinally of the combustion chamber and inclined to said central longitudinal plane and the axis of the exhaust port lies in a third plane extending longitudinally of the combustion chamber and inclined to said central longitudinal plane on the opposite side thereof from said second plane, the three planes intersecting in a common line on which lies the center of the hemispherical combustion chamber; inlet and exhaust poppet valve means controlling the flow of gas through said inlet and exhaust ports respectively, the axis of each of said valve means being coincident with the axis of the corresponding port and each of said valve means including a stem, a valve head carried by said stem, said head being located within the said chamber, and a valve seat formed in a wall of said chamber; guide means in said head block slidably receiving said valve stems; at least one of said valve means being arranged with its axis in a plane parallel to and offset from a central transverse plane through the chamber normal to the central

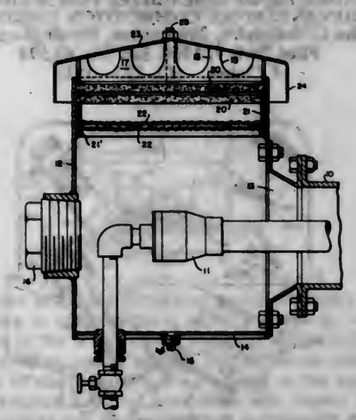
longitudinal plane; means defining a pocket in the wall of said combustion chamber, the valve seat for said offset valve being located in said pocket and the surface of said seat being a surface of revolution about the axis of the offset valve; a spark plug mounted in said cylinder head block and projecting into said combustion chamber, the electrodes of said spark plug being near the central vertical axis of the combustion chamber; and valve-operating means including a single cam shaft mounted on the cylinder head block and having a separate rocker for operating each of said valves, a separate support for each of said rockers, said supports being elongated members arranged to support the rockers while suffering substantially only longitudinal stresses.

3,094,978

UNITARY AIR CLEANER AND FLAME ARRESTER

Harold Earl McCray and Loyd Bennie Paden, Pampa, Tex., assignors to Cabot Corporation, Boston, Mass., a corporation of Delaware

Filed Sept. 15, 1960, Ser. No. 56,314
1 Claim. (Cl. 126—85)



A unitary air cleaner and flame arrester for use with heaters employed in the oil and gas industry, comprising an upright casing of rectangular cross section having an outlet adapted to lead to the heater in one side wall and an open top inlet, a rectangular sleeve having walls extending from within the casing upwardly above its open top, forming an open unobstructed tranquilizing chamber and having a series of spaced air inlet apertures in its walls above said casing, a rectangular air-cleaning pad extending across the casing and serving as the bottom of the tranquilizing chamber, a wire mesh flame arrester of substantially the same area as the air-cleaning pad disposed in parallel relation thereto and sealed at its edges within the casing, and a dome surrounding the upper portion of the sleeve, with clearance thus providing an upwardly extending peripheral air passage leading to the air inlet apertures in said sleeve.

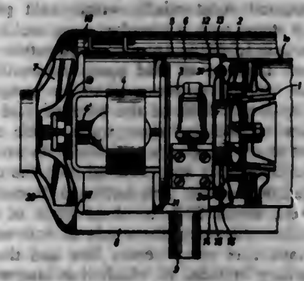
3,094,979

HEATING DEVICES OPERATED WITH LIQUID FUEL

Hartwig Volbehr, Lochham, near Munich, Rudolf Reinhardt, Krailling, near Munich, and Adalbert Nemschl, Stockdorf, near Munich, all of Bavaria, Germany, assignors to Webasto Werk G.m.b.H., Stockdorf, near Munich, Germany

Filed Aug. 16, 1961, Ser. No. 131,859
Claims priority, application Switzerland Sept. 3, 1960
9 Claims. (Cl. 126—110)

1. A heating device operated with liquid fuel for motor vehicles comprising a first blower for air to be heated; a tubular casing having an annular outer housing in spaced coaxial relation about the outer surface thereof defining an annular heating air duct; a burner unit mounted within said casing including a driving motor, a second blower for combustion air, and a rotary atomizer; said first blower and said burner unit mounted co-



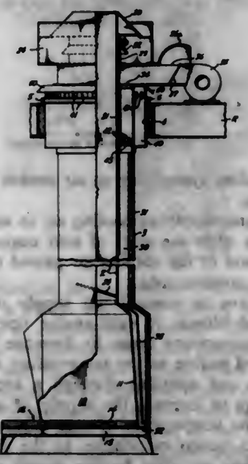
axially with respect to one another and operatively connected to said drive motor; stop means secured to the inner surface of said casing and extending radially inwardly; a stop member connected to said burner unit engaging said stop means for maintaining said burner unit within said casing; and means for urging said stop member against said stop means.

3,094,980

FIREPLACE INSTALLATION FOR MOBILE HOMES

Charles Daniel Inabnit, 13000 S. Empire Way, Seattle, Wash.

Filed Jan. 23, 1961, Ser. No. 84,193
6 Claims. (Cl. 126—121)



1. In combination with a living enclosure having an aperture in the roof thereof, a fireplace installation comprising inner casing means defining a firebox in the enclosure and a smokestack extending upwardly from the firebox through the roof aperture, outer casing means extending about the firebox and upwardly therefrom through the roof aperture in spaced relation with the inner casing means to define therewith an annular air passage communicating with the interior and exterior of the enclosure, said outer casing means having ports therein in the portion thereof projecting through the roof aperture, and additional casing means extending through the roof aperture about said outer casing means portion and defining therewith an annular air jacket communicating with the exterior of the enclosure to induce inflow of outside air into

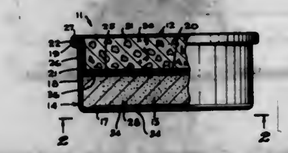
and through the outer casing means portion upon draft of air through said annular passage.

3,094,981

SELF-HEATING COMPOSITE CONTAINER

Alice K. Brewer, 5173 Hollywood Blvd., Los Angeles 27, Calif.

Filed Jan. 2, 1962, Ser. No. 163,500
1 Claim. (Cl. 126—263)



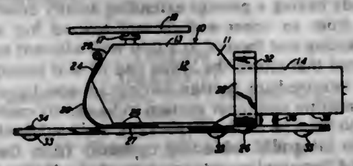
A sanitary, self-heating food container comprising a first container formed of thin-gauge sheet metal and including a bottom wall and a continuous, relatively high, upright side wall terminating at its upper edge portion in an outturned peripheral flange; a dished closure member of thin-gauge sheet metal for said first container including a bottom wall spaced vertically above the bottom wall of said first container and also spaced vertically below the upper edge portion of the side wall thereof; said dished closure having a side wall extending upwardly from its bottom wall in sealing fit within the side wall of said first container and also having an outturned peripheral flange resting on and in sealing engagement with the peripheral flange of said first container, said walls and flanges providing a closed hermetically sealed chamber in the bottom portion of said first container adapted to hold and isolate a quantity of an exothermic material therein and an open-top dished receptacle in the upper portion of said first container; a second dish-like container adapted to hold food or the like and also formed of thin-gauge sheet metal received within said open top dished receptacle and shaped to co-fit therewith and rest upon said bottom wall thereof in direct heat transfer relationship; said second dish-like container also having a peripheral flange at its upper edge seated upon the flange of said dished closure member; and a top closure sheet extending over said second dish-like container and hermetically sealed to the flange thereof; said closure sheet extending outwardly beyond said flange to which it is sealed and extending downwardly, around and under the flange of said first container, whereby upon release of said top closure sheet, said second dish-like container may be readily removed from its heat transfer engagement with said open top dished receptacle in the upper portion of said first container in a clean, sanitary and sealed food-containing serving dish.

3,094,982

BODY MASSAGING DEVICE

Alfred J. Krenzke and Robert L. Fox, Sr., Racine, Wis., assignors to Allover Clipper Products Co., Racine, Wis., a partnership

Filed Aug. 28, 1961, Ser. No. 134,526
6 Claims. (Cl. 128—32)



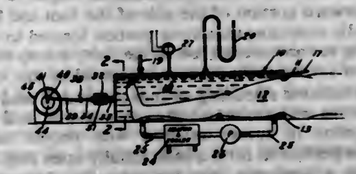
4. In a massaging device, the invention comprising an electro-magnetic vibrator including a casing having a handle portion at one end thereof and being of a reduced size relative to the remainder thereof, a shaft included in said vibrator and extending from said casing on one side thereof, a support member releasably attached to said casing for releasably supporting said casing with said shaft on the upper side thereof, said support member including a base plate and spring clips attached to said base plate and extending thereabove to a height below the plane of the upper end of said shaft, said spring clips being disposed both on opposite sides of said handle portion and at the other end of said casing opposite said handle portion, and a massaging element releasably attached to said shaft.

3,094,983

BLOOD CIRCULATION DEVICE AND METHOD

Norman A. MacLeod, La Habra, Calif., assignor of thirty-six percent to R. Welton Whann and eighteen percent to Wilbur A. Selle, Los Angeles, and ten percent to Frank F. Reed, Pasadena, Calif.

Filed July 25, 1961, Ser. No. 126,586
23 Claims. (Cl. 128—40)



1. In a variable, liquid pressure device for affecting the metabolism of parts of the body of human beings or animals, a chamber for containing a liquid under pressure; said chamber having an opening adapted to receive a part of a body; a seal being formable at said opening in contact with said body to close said chamber; means to fill said chamber with liquid after said opening is closed; and means to vary the pressure of all the liquid in the chamber.

3,094,984

SURGICAL BRACE

Eugene L. Jewett, Maitland, Fla., assignor to Florida Brace Corporation, Winter Park, Fla., a corporation of Florida

Filed Sept. 1, 1961, Ser. No. 135,669
6 Claims. (Cl. 128—78)



1. A surgical brace comprising a pubic pad, pubic arms connected with the pubic pad, lateral torso pads connected with the pubic arms, a lumbar pad, and tension strap means for supporting the lumbar pad from the pubic arms, the lumbar pad having lateral extensions along the strap means lapping the lateral torso pads, the lateral torso pads having internal re-enforcement and extending downwardly and rearwardly and curvilinearly inwardly from their connection with said pubic arms.

3,094,985
ORTHOPEDIC APPLIANCE FOR RESTORING NORMAL FOOT POSTURE
Frances Kendall, 144—53 38th Ave., Flushing, N.Y.
Filed Sept. 25, 1961, Ser. No. 140,383
10 Claims. (Cl. 128—81)



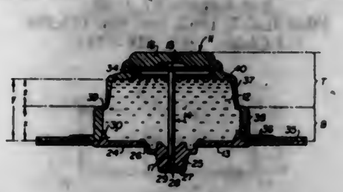
1. A foot corrective and pain relieving appliance comprising, a base pad member formed as a section of readily compressible resilient foam-like material shaped to underlie the forward portion of the sole of the foot and having a forwardly extending transverse portion formed to underlie the big toe and second toe of the foot, a loop element formed of substantially the same material as that of said base pad member extending up fom one end of said transverse portion and around to the other end of said transverse portion in spaced relation with respect to said transverse portion to form a substantially open loop therewith, and a separator member extending between the upper surface of said transverse portion and the undersurface of said loop portion and secured to both of the same, thereby separating said open loop into two passages, one for the big toe and the other for the second toe, whereby proper relative positioning of the big and second toes is effected for curative purposes while at the same time relieving pain and preventing irritation, and adhesive means securing said loop element to said transverse portion.

3,094,986
PORTABLE SHOCK SPLINT WITH TRACTION
James J. Lally, 800 W. 52nd Terrace, Kansas City, Mo.
Filed Dec. 19, 1961, Ser. No. 160,601
3 Claims. (Cl. 128—84)



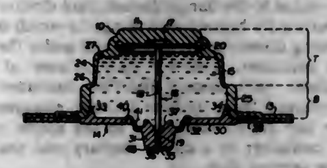
1. Shock splint apparatus comprising a body-receiving frame portion; a pair of leg-receiving splints carried by said frame portion and inclined upwardly and outwardly relative thereto; and a traction unit for each of said splints, each of said traction units including a coil spring, tension regulating means connected to one end of said spring, a pulley of constant radius rotatably disposed adjacent the opposite end of said spring, a pulley of decreasing radius secured to said pulley of constant radius in overlying relationship thereto, said pulleys having a common axis of rotation, a line extending from said opposite end of the spring and having a portion thereof trained over said pulley of decreasing radius, and a traction line having one end thereof trained over said pulley of constant radius and the other end thereof at the outer end of the corresponding splint for attachment to a leg of the person received by said apparatus.

3,094,987
HYPODERMIC AMPOULES
Russell P. Dunmire, deceased, late of Chagrin Falls, Ohio, by Hannah Dunmire, executrix, 29550 Pike Drive, Chagrin Falls, Ohio
Filed Sept. 18, 1961, Ser. No. 138,999
23 Claims. (Cl. 128—216)



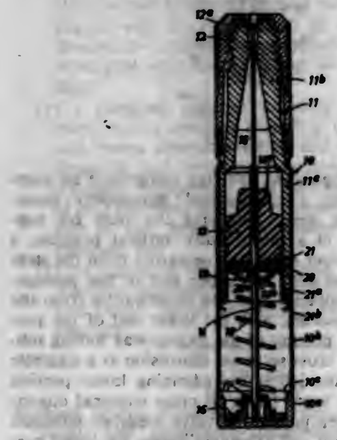
14. A generally cup-shaped body particularly suited for use in hypodermic devices of the type described comprising a substantially circular end wall and a circumferentially extending side wall, said side wall having an upper side wall portion defining a top section of said body and a lower side wall portion defining a bottom section of said body, said upper side wall portion being relatively flexible for progressively bending and rolling on itself from one end to the opposite end thereof and thereby turning inside-out to invert said top section of said body within the confines of said bottom section of said body; said lower side wall portion being of greater diameter and relatively more rigid and inflexible than said upper side wall portion, and said upper wall portion having a relatively flexible, circumferentially extending zone at said one end thereof for defining a primary hinge at which bending of said side wall will first occur in response to axial pressure on said body to initiate said bending and rolling of said upper wall portion on itself.

3,094,988
HYPODERMIC AMPOULES
Russell P. Dunmire, deceased, late of Chagrin Falls, Ohio, by Hannah Dunmire, executrix, 29550 Pike Drive, Chagrin Falls, Ohio
Filed Sept. 18, 1961, Ser. No. 139,000
11 Claims. (Cl. 128—216)



10. A disk-like diaphragm particularly suitable for use in hypodermic devices of the type described comprising a generally flat, annular, outer portion, a generally cylindrical inner portion having one end projecting axially downwardly beyond said outer portion, and a relatively flexible, annular, intermediate portion connecting said inner and outer portions to permit relative movement therebetween, said inner portion constituting a relatively rigid body having a passage extending axially downwardly therein from an upper end thereof toward but short of the projecting end thereof to a thin wall adjacent said projecting end that closes the lower end of said passage, said flexible intermediate portion having an annular corrugation permitting said inner portion to be axially canted with respect to the axis of the diaphragm, and a concentric, annular rib integrally extending upwardly from the upper surface of the annular, outer portion of the diaphragm and being disposed radially inwardly of the periphery of said outer portion.

3,094,989
AMPULLA INCORPORATING AN INJECTION SYRINGE
Ferdinand Stauffer, Lucerne, Switzerland, assignor to Internationale Treuhand A.G., Basel, Switzerland, a Swiss company
Filed June 7, 1961, Ser. No. 115,470
Claims priority, application Switzerland June 10, 1960
12 Claims. (Cl. 128—218)



1. A combined ampulla and injection syringe, comprising a cylindrical body enclosing a liquid-filled chamber constituted by a rear cylindrical section and a forwardly tapering front section opening at its front end into the outer surface of the body, a piston closing the rear end of the liquid-filled chamber slidingly carried inside the cylindrical section of the body and provided with an axial bore, a rod adapted to move inside the bore between a normal position and a forwardly shifted position and provided with a blind bore, a hollow needle fitted inside said blind bore of the rod and the tip of which registers normally with the opening of the tapering section, means adapted to communicate the hollow of said needle with said chamber in the shifted position thereof, a control sleeve slidably mounted on the cylindrical body, means connecting said rod to said sleeve so that on the forward movement thereof, said sleeve is adapted to urge the rod forwardly along the piston bore to make the needle project forwardly of the opening of the tapering section into its operative position, a compression spring subjected to the forward movement of the control sleeve, a member inserted between said spring and the piston and adapted to be moved forwardly by said compression spring to make the piston move forwardly and urge the liquid in the chamber into the forwardly projecting needle, and an elastic system having means normally engaging said rod and said body for releasably locking said rod and last-mentioned member in position and rendered adapted to release said rod and member upon forward movement of the sliding control sleeve to obtain in succession the forward projection of the needle and the forward movement of the piston.

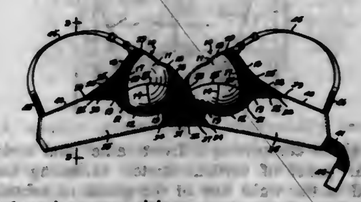
3,094,990
GARMENT
Mary D. Neilson, 2035 Crestlake Ave., South Pasadena, Calif.
Filed Feb. 19, 1960, Ser. No. 9,748
17 Claims. (Cl. 128—289)

1. An article of wearing apparel comprising: a flexible sheet of material having dimensions of length and width, the dimension of length being adapted to pass through the crotch of a wearer and to be brought up in front of and behind the wearer, the dimension of width of the part of the flexible sheet which is adapted to stand in front of the wearer being less than its dimension of length, whereby the sheet when drawn up in front of a person will lie substantially entirely upon the abdomen; suspension means for the sheet comprising two pairs of lengths of elastic material, the two lengths of each pair being joined at a point, there being two of said points, a fastener on each of said lengths spaced from the respective point, and support means for supporting the lengths at the respective points; the sheet being adapted to receive the fastener means at places in a quadrilateral pattern, whereby when



the sheet is passed through the crotch and brought up in front of and behind the wearer, the fasteners may be fastened to the sheet at two places to the front and to the back of the wearer in said quadrilateral pattern, one of said points being disposed at each side of the wearer and above the fasteners when they are fastened to the sheet as aforesaid, whereby, with the lengths supported as aforesaid, and the said four places of attachment of the fasteners to the sheet being the sole points of restraint on the sheet, the supporting forces exerted by the lengths are directly upwardly and outwardly relative to the wearer when in a standing position, the sheet being thereby freely supported from the said two points at the side of the wearer.

3,094,991
BRASSIERE
Frances M. Smith, Bridgeport, Conn., assignor to The La Resista Corset Company, Bridgeport, Conn., a corporation of Connecticut
Filed July 14, 1961, Ser. No. 124,148
10 Claims. (Cl. 128—489)



1. A brassiere comprising:
(*a*) a body encircling band;
(*b*) a pair of breast cups respectively disposed at each side of the forward center line of the brassiere;
(*c*) each said breast cup comprising in part a preshaped cup member to support and mold the breast of the wearer, and in part a transition member of elastic material;
(*d*) each said cup member having an inward upper edge inclined upwardly and outwardly relatively to said center line, a lower edge convexly curved downwardly to substantially conform in part to the lower periphery of the wearer's breast, and an outward side edge extending between the outer extremities of its said upper and lower edges in a generally up and down direction for engagement over the breast of the wearer along an arched line having its crown

outwardly of the center and substantially inwardly of the outer periphery of the breast cup;

(*e*) each said transition member having an upper elastic edge constituting an elastic extension of said inward upper edge of said cup member, a lower edge having an inward portion constituting an extension of said lower edge of said cup member and an outward portion extending outwardly to a point intermediate the length of said body encircling band and secured thereto, an inner side edge coextensive with and secured along its full length to said outward side edge of said cup member, and an outer elastic edge meeting at its upper extremity with the outer extremity of its said upper elastic edge in an upwardly directed apex and extending downwardly and outwardly from its said upper extremity and meeting at its lower extremity with the outer extremity of its said lower edge in a laterally outwardly directed apex;

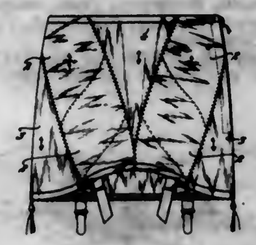
(*f*) said body encircling band extending at each side of said forward center line of the brassiere and having upper and lower edges, said upper edge in part being coextensive with and secured along said lower edges of said cup members and said lower edges of said transition members, and in part extending outwardly from said laterally directed apex of each of said transition members for disposition at the back of the wearer; and

(*g*) a pair of shoulder straps, each connected at its forward end to said upwardly directed apex of a respective transition member and connected at its rearward end to the upper edge of said band at a point adapted to be disposed at the back of the wearer.

3,094,992
GIRDLE

Bette K. Kaupp, New York, N.Y., assignor to Maidenform, Inc., New York, N.Y., a corporation of New York

Filed Mar. 20, 1961, Ser. No. 96,901
2 Claims. (Cl. 128—548)



1. A girdle comprising a front center and abdominal triangular panel of vertical stretch extending from its wide end at the waist line of the girdle to substantially the base line of the girdle front at which it terminates at its pointed end, two-front panels joined at their inner margins to said abdominal panel, hip panels of triangular form but reversed in direction relative to the abdominal panel, said hip panels being extended to the front of the girdle and each joined to the outer margin of an appropriate one of said two front panels, said front panels angularly extending from the waist line of the girdle to the base line thereof and diverging toward the top of the garment, and back panels, in combination with two elastic bias-cut control panels each at and intermediate the inner face of one of the said diverging front panels and extending upwardly, at an angle, in each case, from a triangular hip panel to the abdominal panel, the ends of each control panel being joined to said hip panel and the triangular abdominal panel, as for the purpose described.

3,094,993
EXTINGUISHING ASH TRAY

James M. Sackman, 2908 S. Adams St., Tacoma, Wash.

Filed Jan. 30, 1961, Ser. No. 85,712
1 Claim. (Cl. 131—235)

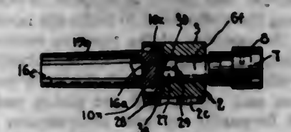


A cigarette extinguishing ash tray comprising an elongated stem having a longitudinal passageway therethrough, mounting means engaging the stem for supporting the latter in a substantially vertical position, a funnel-shaped receiver extending upwardly from the stem and communicating with the upper end of the passageway, a hollow receptacle extending downwardly from the stem and communicating with the lower end of the passageway, an upper portion of the passageway having substantially the same cross sectional dimension as a cigarette for extinguishing the latter, the adjoining lower portion of the passageway being larger in cross sectional dimension than the upper portion, a valve member mounted movably on the stem and extending across the lower passageway intermediate the ends of the latter, whereby the lower passageway above the valve member provides an ash reservoir, the valve member having a transverse opening therethrough alignable with the passageway, the opening in the valve member having a cross sectional dimension substantially the same as that of the lower portion of the passageway, the valve member being movable between an open position in which the opening is aligned with the passageway, and a closed position in which the valve member closes the passageway.

3,094,994
HAIR CURLERS

Samuel Freeman, Long Beach, N.Y.

Filed May 3, 1960, Ser. No. 26,465
2 Claims. (Cl. 132—34)



2. A hair curler for use in forming curls of varying diameters, secured by a U-shaped hairpin having legs with a resilient connection normally urging said legs toward each other and providing an elastic limit of separation of the legs, comprising

(*a*) a head having a recess in one end and a longitudinal through bore opening into said recess;

(*b*) an insert rotatably received in said bore having one end in said recess and having its other end extending beyond the other end of said head;

(*c*) a replaceable hollow barrel selected from a set of barrels of varying diameters having one end rotatably received in said recess and extending longitudinally therefrom exteriorly of said head, said barrel being of selected diameter corresponding to the inner diameter of the curl which is to be formed;

(*d*) detachable connection means comprising a generally C-shaped resilient strip with end snap fingers having its medial region non-rotatably connected to one end of said insert, said end of said hollow barrel received in said recess being an enlarged cylindrical closure and having on its periphery diametrically opposed, longitudinally extending open-end slot with holes to detachably and non-rotatably receive said snap fingers of said resilient strip, whereby barrels of varying diameters but single sized cylindrical closures can be placed in said recess with said slots aligned with the snap fingers of said strip and then detachably attached into non-rotatable engagement when said snap fingers spring into the holes in said slots;

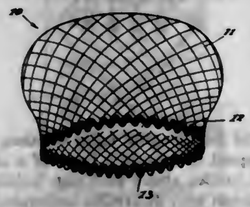
(*e*) a clamping member pivotally mounted on said insert having one end extending through and out of said recess externally along said barrel for rotation therewith and swinging movement into and out of clamping engagement with said barrel, the other end of said clamping member extending beyond the other end of said head for operation of said clamping member; and

(*f*) an actuating member on said other end of said insert for manually effecting simultaneous rotation of said insert, barrel, connection means and clamping member.

3,094,995
HAIR NET

Ruthard Dietze, Helmstedt, Germany, assignor to Solida Textil- und Netzwaren-Manufaktur Ruthard Dietze K.G., Helmstedt, Germany

Filed Aug. 24, 1960, Ser. No. 52,106
Claims priority, application Germany Aug. 28, 1959
3 Claims. (Cl. 132—49)

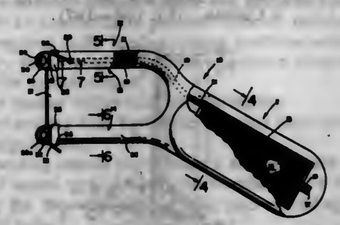


1. A hair net consisting essentially of transparent substantially glass-clear threads of synthetic material, said hair net having an edge; an elongated resilient element being connected along its length to said edge of said hair net; and a thin layer of a tinting agent covering said threads so as to tint the same without substantially reducing the transparency of the tinted threads.

3,094,996
DENTAL FLOSS HOLDER AND APPLICATOR

David Lewis, 187 Newark Ave., Jersey City, N.J.

Filed Oct. 25, 1961, Ser. No. 147,636
3 Claims. (Cl. 132—92)

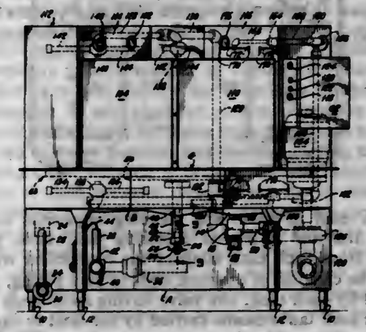


1. A dental floss holder and applicator comprising a unitary body including an elongated hollow handle portion having a substantially cylindrical chamber therein containing a spool of thread rotatably mounted therein and a yoke integral with and extending from one end of the handle portion and lying in the plane of the axis of said chamber at an acute angle to the axis, the yoke comprising a first arm and a second arm, said arms having top surfaces lying in a common plane, each of said arms having a spring clip secured on the outer end thereof on said top surfaces thereof, said first yoke arm having a passage extending thereinto through the top surface thereof at a position near but spaced from the spring clip thereon and having a second passage therein extending longitudinally of the arm between the adjacent end of said chamber and said first-named passage, the thread from the spool passing through said passages, the spring clips being formed of resilient material and including a base portion and two spaced members extending from the base portion at an acute angle to each other, means for securing the base portions of the spring clips to the yoke arms, the portion of the thread which extends from the first-named passage to the outside of said first yoke arm being adapted to be frictionally secured between said members on the first yoke arm and bridged across the yoke arms and frictionally secured between said members on the second yoke arm, the spring clip on the second yoke arm having additionally a cutter thereon for severing the thread after the device has been used.

3,094,997
UTENSIL WASHER

Robert K. Nolte, Chatham, and Edwin Dana Cowles, Freehold, N.J., assignors to Metalwash Machinery Company, Elizabeth, N.J., a co-partnership

Filed Dec. 19, 1960, Ser. No. 76,846
2 Claims. (Cl. 134—46)



1. A washer comprising a substantially rectangular tank, a substantially semi-octagonal shallow depth tank in communication with the upper portion of said rectangular tank, an annular article supporting table rotatably mounted central of said substantially semi-octagonal shallow-depth tank, said table including a plurality of substantially radial spoke members and cross members bridging selected pairs of said spoke members to form tray receiving pockets therebetween, said semi-octagonal shallow depth tank having a top cover portion in alignment with the top of said annular article supporting table extending horizontally outward from the periphery of said supporting table, a substantially octagonal cover covering portions of said annular table and said shallow depth tank and having a cut-out portion exposing a portion of said supporting table to define a loading and unloading station, said shallow depth tank having a vertical wall portion substantially tangent to the outer periphery of said annular supporting table at the approximate horizontal midpoint of said loading and unloading station, at least two washing chambers defined above

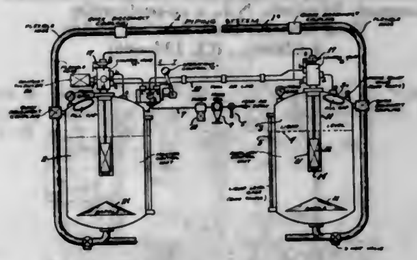
and below said table at angularly displaced locations therearound, at least one rinsing chamber adjacent said washing chambers, said annular supporting table including spaced radially extending upstanding walls arranged to close off each of said washing and said rinsing chambers when said table is positioned in a correctly indexed position, indexing means to hold said table against movement when it is positioned with the walls in position to seal off said washing and said rinsing chambers and said loading and unloading station, means for circulating wash water from said tank to said washing chambers, control means for said circulating means, means on said table to contact said control means to circulate wash water to said washing chambers upon indexing of said table a predetermined amount, rotating washing sprays above and below said table in said washing chambers adapted to receive wash water under pressure from said circulating means, said rinsing chamber including means for spraying fresh water in said rinsing chamber above and below said table, a solenoid control valve connected to said fresh water spraying means, and means on said table for actuating said solenoid control valve upon the rotation of said table a predetermined amount.

3,094,998

DUAL IN-PLACE PIPE CLEANING APPARATUS

Paul R. Gley, Hillsdale, N.J., assignor to Dependable Printed Circuit Corp., Wayne, N.J., a corporation

Filed Apr. 19, 1962, Ser. No. 189,671
6 Claims. (Cl. 134—56)



1. A dual in-place pipe cleaning apparatus comprising a first and a second cleansing fluid tank, conduit means from each tank adapted for connection with piping to be cleaned, at opposite ends of said piping, a valve carried by each tank, one valve having an exhaust port, a float in each tank, means carried by the float in each tank for operating said valve, magnet means acting upon the float to hold the same in downward position until the fluid in the tank reaches a predetermined height, a source of air under pressure and pipes leading therefrom to the two valves, and pipes connecting each valve to its appropriate tank, said valves being so constructed that upon the rise of the float in either of the tanks, overcoming the force of its appropriate magnet, the resultant operation of the valve for said tank connects the air line to said tank and opens the exhaust port in the valve for the second tank.

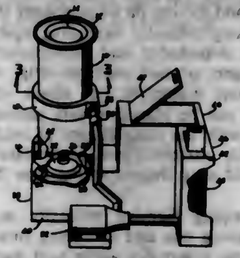
3,094,999

CLEANING MACHINE

Arthur C. Schoow, Detroit, and Robert R. Mosher, Utica, Mich., assignors to Ferro-Fab, Inc., Fenton, Mich., a corporation of Michigan

Filed Nov. 25, 1960, Ser. No. 71,743
1 Claim. (Cl. 134—132)

In a cleaning machine having a vertical cylindrical chamber, means for injecting fluid tangentially into the lower end of the chamber so as to create a fluid vortex therein, and drain means for said chamber, the improvement which comprises a spiral parts track disposed along the inner side of said chamber and means for introducing



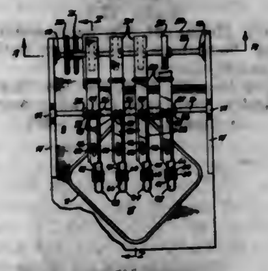
parts at the lower end of the track which may be moved along the track under the forces of the fluid vortex.

3,095,000

APPARATUS FOR CLEANING PAINT BRUSHES

Raymond V. Hirst, 357 Englewood Ave., Buffalo, N.Y.

Filed Sept. 7, 1961, Ser. No. 136,481
11 Claims. (Cl. 134—164)



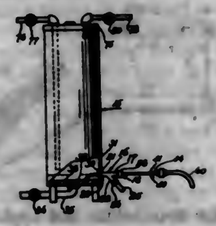
1. Apparatus for cleaning paint brushes, comprising a receptacle adapted to contain a body of a cleaning liquid, a paint brush holder above said pan holding the handle of said paint brush with its bristles suspended, downwardly facing shoulders at the lower end of said holder engaging the handle side of the head of the brush, and means reciprocating said holder vertically to bring said bristles forcibly downwardly against an opposed submerged surface of said receptacle to spread the bristles of the paint brush and admit said cleaning liquid to the interior bristles at the heel of the paint brush, the force for so spreading the bristles of said brush being transmitted through said shoulders.

3,095,001

FLUSHING DEVICE

John Steltz, 1524 W. 20th St., Sioux Falls, S. Dak.

Filed July 19, 1962, Ser. No. 211,072
4 Claims. (Cl. 134—167)



1. A flushing device for a water containing tank having a bottom, side wall, top and a threaded opening in

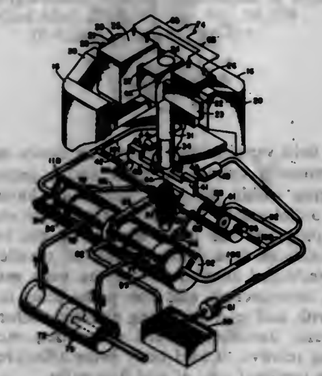
the said side wall adjacent the said bottom, said device comprising a nipple type pipe fitting of substantially T-shaped configuration having a straight top portion and a depending tubular portion integrally formed between the ends of said top portion, a cap secured to the rear end of said top portion, said cap having a central bore in its flat end wall, an innermost water conveying tube slidably and rotatably extending through said bore in said cap, through said top portion and out the forward open end thereof, said innermost tube having its forward end portion extending angularly at an obtuse angle relative to the longitudinal axis of the central and rear end portion thereof, said forward end portion of said tube forming a water nozzle outlet whereby water under normal water pressure can be directed in various locations by turning said tube relative to said pipe fitting, the annaular space between said innermost tube and the said top portion forming a foreign matter annular passageway, the forward end of said top portion of said pipe fitting forming an annular foreign matter inlet coacting with said annular passageway, said annular passageway joining the cylindrical passageway inside said depending portion for conveying foreign matter and water to the outlet of said depending portion, and a hose coupling secured to the rear end of said innermost tube adapted to receive the outlet end of a hose furnishing a source of water supply.

3,095,002

DRY TYPE HYDRAULIC SERVO VALVE

Donald V. Healy, Newhall, Calif., assignor to The Bendix Corporation, North Hollywood, Calif., a corporation of Delaware

Filed June 20, 1961, Ser. No. 118,373
5 Claims. (Cl. 137—85)



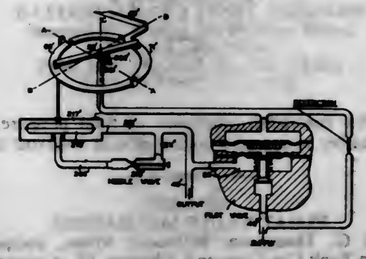
1. A servo valve comprising:
a hydraulic housing;
a flow-control system within said housing including a pair of substantially parallel directed nozzles and an elongated baffle having spaced portions positioned to vary the flow of fluid from respective nozzles;
a motor compartment;
motor means within said compartment;
means sealing said hydraulic housing from said motor compartment;
said sealing means comprising a nonrigid tube with one end sealed to said hydraulic housing and a shaft sealing the free end of said tube and extending through said tube;
said shaft coupled to a point midway between the spaced portions to transmit torque from said motor means to said baffle to vary the relative spacing of said baffle spaced portions with respect to said nozzles simultaneously in opposite sense;
said tube and shaft supporting said baffle for simultaneous translation movement in the same sense toward and away from said nozzles in response to fluid pressure changes thereat.

3,095,003

MEASURING AND CONTROL APPARATUS

Ernest F. Dyson, Cheshire, Conn., assignor to The Bristol Company, Waterbury, Conn., a corporation of Connecticut

Filed July 15, 1960, Ser. No. 43,165
14 Claims. (Cl. 137—86)



9. Pneumatic apparatus for controlling a variable condition, said apparatus comprising a unitary housing structure including a fluid pressure conduit having an outlet, a member movable in said structure to obstruct said outlet to varying extents to vary the magnitude of fluid pressure therein, a pilot valve in said structure controlling a supply of fluid under pressure to regulate the value of said condition, a fluid pressure chamber in said structure for receiving fluid under pressure under control of said pilot valve, means in said structure responsive to fluid pressure in said conduit to control the position of said pilot valve and thereby the magnitude of fluid pressure supplied to said chamber, means responsive to deviation of said variable condition from a set value for actuating said movable member and thereby varying the fluid pressure in said conduit, a bellows in said chamber responsive to fluid pressure supplied thereto by said pilot valve, means controlled by said bellows for operating said member to produce an effect on the pressure in said conduit opposite to that of said deviation responsive means, means in an opening in a wall of said chamber having a passage formed therethrough, and means connected with said passage for imparting a reset action to said bellows.

3,095,004

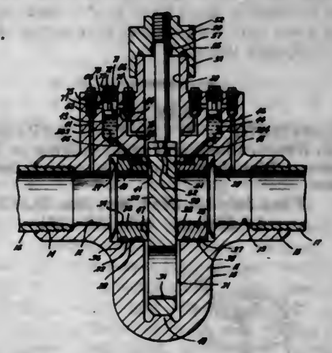
VALVES WITH UPSTREAM-DOWNSTREAM SEALING

John G. Jackson, Jr., Angleton, and Allen F. Rhodes, Houston, Tex., assignors to McEvoy Company, Houston, Tex., a corporation of Texas

Filed Sept. 26, 1961, Ser. No. 140,952
8 Claims. (Cl. 137—246.11)

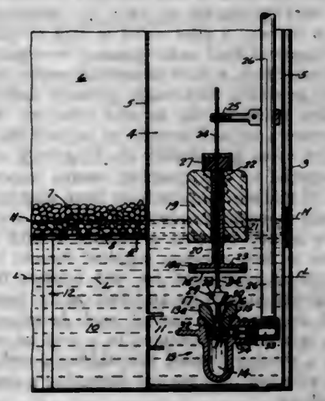
1. Gate valve of the internal pressure automatic sealing type, comprising a body having flow passage means therethrough and an internal valve chamber therewithin intermediate the length of said flow passage, valve closure means disposed in said chamber for closing said flow passage means, means for moving said closure means between open and closed positions with respect to said flow passage from the exterior of said body, sealing means within said body for sealing around said flow passage means at said closure means when said closure means is in said closed position with respect to said flow passage, sealant reservoir means having sealant flow communication means therefrom to said sealing means, means for

controlled admission of fluid pressure from said flow passage means to pressure sealant in said reservoir means,



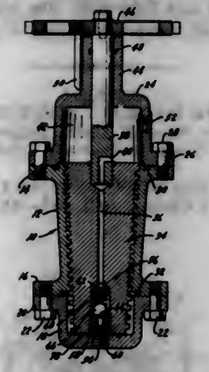
means for controlled admission of fluid pressure from said chamber to pressure sealant in said reservoir means.

3,095,005
FLOAT VALVE MECHANISM
Richard G. Thompson, Stillwater, Minn., assignor to Union Tank Car Company, Chicago, Ill., a corporation of New Jersey
Filed Dec. 8, 1960, Ser. No. 74,600
4 Claims. (Cl. 137—268)



1. In a water treatment system, a tank containing a body of solid regenerating material supported on a foraminous false bottom, a liquid underflow compartment extending beneath said false bottom, a float chamber in continuous communication with said underflow compartment, float valve mechanism in said float chamber, having a casing normally submerged in liquid therein and defining a valve chamber, a first passage extending upwardly from said valve chamber to said float chamber, a second passage for alternately supplying liquid to said valve chamber and withdrawing brine therefrom, upper and lower valve seats surrounding the upper and lower ends respectively of said first passage, a lower valve closure member movable in said valve chamber to close said first passage at said lower seat against the ingress of liquid into said float chamber, a float body connected to said lower valve closure member for actuating it to and from said lower valve seat in response to changes in the elevation of liquid in said float chamber, a first elongated valve stem extending downwardly from said float body in axial alignment with said first passage and upper valve seat, an upper valve closure member carried by said stem in downwardly spaced relation to said float body and disposed to close said first passage at said upper seat against the egress of liquid from said float chamber, means for securing said upper valve closure member in variously spaced relation to said float body, and an upper level stop for said float body disposed at a predetermined elevation above said false bottom, whereby said lower valve closure member may be actuated to close said first passage when the float body rises to an upper level position determined by the elevation of said upper level stop, the spacing of said first valve closure member from said float body being determinative of the quantity of brine effluent when the float body descends to selected low levels, independently of the high level position of said stop.

3,095,006
VARIABLE FLOW RESTRICTION DEVICE
Sydney S. Smith, Scarsdale, N.Y., assignor to Smith Development Co., Pebble Beach, Calif., a corporation of California
Filed Dec. 8, 1961, Ser. No. 158,095
9 Claims. (Cl. 137—269.5)

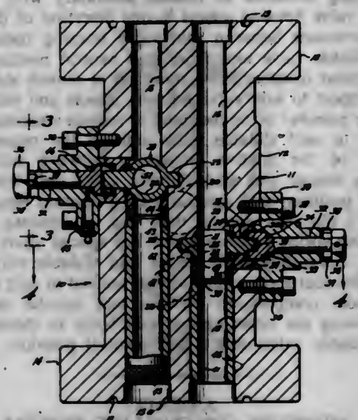


1. A fluid variable flow restriction device including an outer generally cylindrical body and a generally cylindrical plug within the body, said body having an inlet and an outlet axially spaced therefrom, the outer surface of the plug and the inner surface of the body having mated surfaces that define a pair of parallel generally helical restricted annular flow paths, each generally uniform in cross section, said flow paths being in communication with said inlet and being directed uniformly and in an annular direction toward the outlet, movement of said plug relative to said body being effective to change the cross sectional area of said flow paths.

3,095,007
THROUGH CONDUIT TYPE VALVE APPARATUS
Herbert Allen, Houston, Tex., assignor to Cameron Iron Works, Inc., Houston, Tex., a corporation of Texas
Filed Sept. 6, 1960, Ser. No. 53,956
3 Claims. (Cl. 137—330)

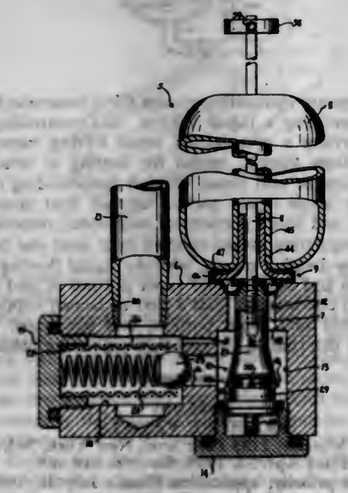
1. Valve apparatus, comprising a body having at least three spaced apart, substantially parallel flowways extending longitudinally therethrough with their centerlines arranged in a generally circular pattern, a separate chamber intersecting each flowway, the maximum width of any chamber in a plane transverse to the axes of the flowways being greater than the shortest distance between the flowways on each side of the chamber, and a ball-shaped valve plug within each chamber and across the flowway intersected by said chamber for controlling flow therethrough, each plug having an opening therethrough and

stems on its opposite sides mounting it within the body for rotation about an axis extending radially from the center of said circular pattern and transversely to the



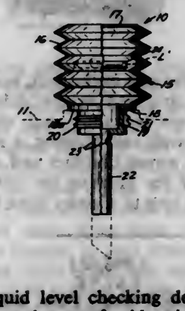
centerline of said flowway between positions opening and closing said flowway, the axis of rotation of each plug being staggered longitudinally with respect to the axes of rotation of the plugs in the other chambers.

3,095,008
FLOAT VALVE PARTICULARLY FOR WATER SOFTENER BRINE VESSELS
John Rudelick, Milwaukee, Wis., assignor to Bruner Corporation, Milwaukee, Wis., a corporation of Wisconsin
Filed Mar. 24, 1961, Ser. No. 98,250
10 Claims. (Cl. 137—391)



1. In a float actuated valve; a body having a passage opening to its exterior, the body being adapted to be mounted in a vessel with the axis of said passage substantially vertical, and the wall of said passage providing an internal annular seating surface near the upper end of the passage, that faces toward the axis of the passage; a stem carried by the body for axial up and down motion between defined limits with the stem projecting substantially coaxially upwardly through said passage a distance beyond the body; an annular float surrounding the stem and guided thereby for movement toward and from the valve body; a valve member carried by said float and having a resiliently flexible downwardly projecting annular portion of a size to enter the upper end of said passage and sealingly engage said internal seating surface therein upon movement of the float toward the body; and means on said stem providing an external circumferential seating surface which faces away from the axis of said passage and is adapted to be sealingly engaged by said annular portion of the valve member concurrently with its engagement with the internal seating surface in said passage when the stem is in its lower limit of motion, to close said passage.

3,095,009
BATTERY LIQUID LEVEL CHECKER
Howard W. Conley, West Shore Drive, Detroit Lakes, Minn.
Filed Nov. 21, 1960, Ser. No. 70,838
1 Claim. (Cl. 137—453)

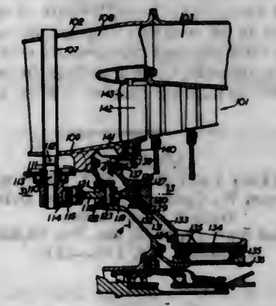


A battery liquid level checking device comprising an elongate hollow enclosure of acid-resisting material having upper, lower and intermediate portions, said intermediate portion being substantially cylindrically shaped and having externally formed threads thereon to fit into the cap-mounting threads of a battery, said threads having a groove transversely thereacross to permit passage of air past the threads, the lower portion comprising an elongate tube having an upper end sealed to and communicating with said intermediate portion and having an open end to normally extend into the battery liquid, and said upper portion having a transparent, vertically collapsible and extendable bellows-type and generally cylindrical sidewall and a flat top wall extending across and sealed to the upper end of said sidewall, a bottom wall sealed to the lower end of said sidewall and also sealed to said intermediate portion and defining a shoulder surface at the lower end of said side wall to rest upon the periphery of the access opening into the battery and stabilizing the side wall when the same is depressed by fingertip action to draw liquid into said upper portion to be viewed through the transparent wall.

3,095,010
GAS TURBINE ENGINE HAVING ADJUSTABLE GUIDE VANES
Donald McLean and Nelson Hector Kent, Derby, and Thomas Steel, Littleover, Derby, England, assignors to Rolls-Royce Limited, Derby, England, a company of Great Britain
Filed Apr. 21, 1960, Ser. No. 23,804
Claims priority, application Great Britain July 7, 1959
3 Claims. (Cl. 137—601)

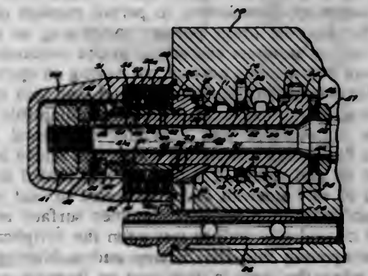
1. In a vane actuating mechanism for use in a gas turbine engine of a type having a plurality of pivotally adjustable, angularly spaced, radially extending guide vanes supported in an annular gas duct between coaxial inner and outer casings of the engine, said vane actuating mechanism comprising: a rotatably mounted vane operating

ring disposed within the inner casing and rotatable about the axis of the duct for effecting pivoting movement to the guide vanes about their radial axes, a lever pivotally mounted about an axis extending radially relative to the axis of the duct, a substantially cylindrical bushing mounted in said vane operating ring with its axis extending



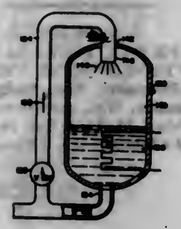
radially relative to the axis of the duct, said bushing being pivotable about its axis and axially slidable in a radial direction in said vane operating ring, said lever having sliding engagement with said bushing, a rotatable operating shaft extending across the duct and operatively connected to said lever for pivoting the latter and rotating said vane operating ring to thereby pivot the guide vanes.

3,095,011
VALVE
Oscar H. Banker, Bay Village, Ohio, assignor to Fawick Corporation, Cleveland, Ohio, a corporation of Michigan
Filed Sept. 6, 1960, Ser. No. 54,312
5 Claims. (Cl. 137—625.69)



1. In a valve, valve housing means defining flow passages, a slidable valve unit in said valve housing means, said valve housing means and said slidable valve unit being relatively movable with respect to one another in opposite directions from a neutral position of said slidable valve unit in said valve housing means to control the flow of fluid through said flow passages, said valve housing means defining an annular space which is disposed completely to one side axially of said flow passages and which extends circumferentially completely around said slidable valve unit, said valve housing means at the opposite axial ends of said annular space presenting a pair of oppositely facing, radially disposed, annular walls, annular spring reaction means in said annular space, said last-mentioned means comprising a pair of annular members relatively slidable axially with respect to said valve housing means and with respect to said slidable valve unit, one of said annular members being mounted to remain stationary with respect to said slidable valve unit and the other of said annular members being mounted to remain stationary with respect to said valve housing means in one direction of the relative movement between said valve housing means and said slidable valve unit from said neutral position, said one annular member being mounted to remain stationary with respect to said valve housing means and said other annular member being mounted to remain stationary with respect to said slidable valve unit in the opposite direction of the relative movement between said valve housing means and said slidable valve unit from said neutral position, said annular spring reaction means also having a plurality, greater than two, of separate, axially extending spring recesses which are spaced apart in succession circumferentially about said slidable valve unit, and individual springs removably received in said recesses and under compression between said annular members and biasing the latter against said walls to thereby bias said slidable valve unit to said neutral position.

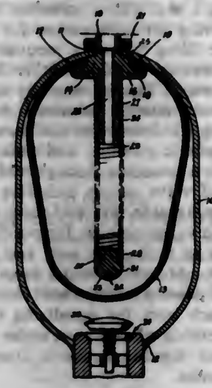
3,095,012
PRESSURE CONTROLLING SYSTEM
William J. McShane, Scott Township, Allegheny County, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Aug. 13, 1957, Ser. No. 677,875
11 Claims. (Cl. 138—30)



1. A pressure controlling system for a pressurized fluid system containing a liquid vehicle, said controlling system comprising a pressurizing vessel having vapor and liquid portions therein, means for heating at least said liquid portion of said vessel, conduit flow-dividing means coupling a single liquid portion of said fluid system to said vapor and liquid portions of said vessel, respectively, and flow-regulating means coupled in at least one branch of said flow-dividing means, whereby liquid flowing from said system and entering said vapor portion of said vessel operates to condense at least a part of heated vapor contained within said vapor portion, said condensed vapor part being determined by said flow-regulating means.

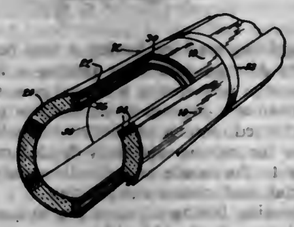
3,095,013
PRESSURE VESSELS
Jean Mercier, 1185 Park Ave., New York, N.Y.
Filed Apr. 30, 1959, Ser. No. 810,165
Claims priority, application France July 30, 1958
6 Claims. (Cl. 138—30)

1. A pressure vessel comprising a rigid container having a deformable partition therein defining two chambers for fluid, each having a fluid passageway leading thereinto, a flexible closely wound coil spring defining a central guide member for said partition in one of said chambers, said closely wound coil spring having adjacent convolutions substantially in engagement and being encompassed by said partition and having a substantially continuous surface with respect to said partition to restrain passage therethrough of the partition, said surface permitting passage therethrough of the fluid flowing through one of said fluid passageways, at least a portion of said



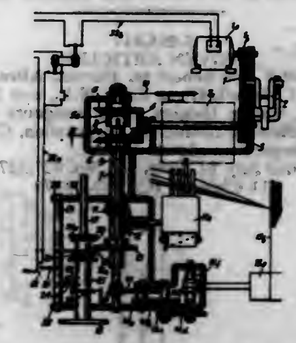
coil spring being movable from its central position toward the wall of said container.

3,095,014
STAVE SECURED SECTIONAL INSULATED CONDUIT
Cornelius D. Dosker, Louisville, Ky., assignor, by mesne assignments, to Conch International Methane Limited, Nassau, Bahamas, a corporation of the Bahamas
Filed July 2, 1958, Ser. No. 746,149
3 Claims. (Cl. 138—151)



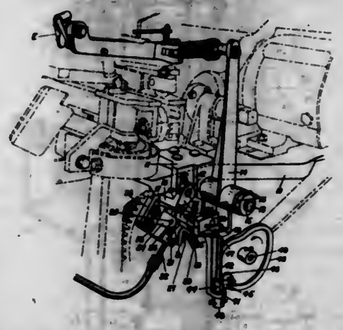
1. A conduit for the transmission of large volume of a liquefied natural gas at about atmospheric pressure consisting of elongate staves arranged in end-to-end and side-by-side relation to form an endless housing, the meeting end edge of the staves being staggered so that no more than one abutting edge between staves occurs in any one cross-section and restraining bands surrounding and wrapping tightly, said staves comprising an inner facing layer of 1/8 to 1/2 inch in thickness of a fluid and vapor impervious dense hardwood, an outer facing layer of 1/8 to 1/2 inch in thickness spaced from the inner facing layer to provide a confined space therebetween of about 2 to 6 inches in thickness and thermal insulating material consisting of balsa within the space between the facing layers, hardwood strips composing the perimetric edge sections of said staves which are slotted in a position to align the slots of adjacent staves in the assembled relation and in which the slotted portions extend inwardly for a distance less than the thickness of the hardwood strips and a hardwood spline extends crosswise between the staves and into the aligned slots.

3,095,015
WEAVING LOOMS
Alfred Calengnet, Lambersart, France, assignor to Raymond Dewas, Amiens (Somme), France
Filed Apr. 30, 1958, Ser. No. 732,027
Claims priority, application France May 3, 1957
11 Claims. (Cl. 139—1)



1. In a weaving loom having positively driven weft-inserting means supplied with weft from bobbins located outside the shed, the shed closing upon each weft being released by said inserting means, a main drive shaft, power means adapted to rotate said drive shaft in a predetermined direction, heald operating means, and cloth take-up means, and gear driven transmission means for driving said heald operating means and said cloth take-up means from said main drive shaft; the combination of reversing means located in said transmission means between said main drive shaft and said heald operating means and said cloth take-up means, and manually movable control means adapted in one position thereof to make said reversing means inoperative for normal running of the loom and in another position thereof to make said reversing means operative for allowing removal of defective weft threads.

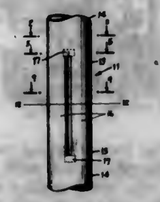
3,095,016
LOOM REPLENISHING MECHANISM
George Cadorette, Hopedale, Mass., assignor to Draper Corporation, Hopedale, Mass., a corporation of Maine
Filed June 21, 1961, Ser. No. 118,628
4 Claims. (Cl. 139—257)



1. In combination in a loom for weaving a bobbin feeding means for retaining and presenting for transfer to a loom shuttle a supply of bobbins having filling wound thereon an end of which is wound in the form of a tip bunch adjacent the bobbin end, a tip bunch extractor, a cam follower member, camming means for moving said tip bunch extractor endwise over the end of said bobbin, an intermediate motion transferring member, a transfer

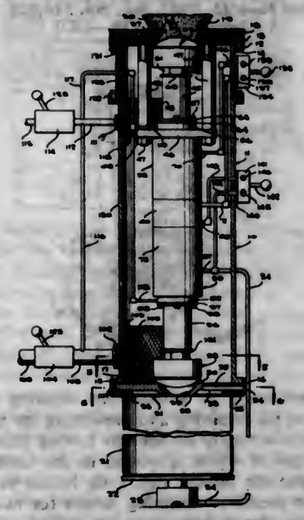
indicating means effective only on indication for bobbin replenishment upon said member, a further means effective by said intermediate motion transfer member for moving said follower member into the path of said camming means thus actuating said extractor to remove said tip bunch from said bobbin end.

3,095,017
WOVEN ARTICLES
Richard Bleiler and Robert M. Harries, Allentown, Pa., Norman C. Jeckel, Glens Falls, N.Y., and Samuel H. Lamport, Shaker Heights, Ohio, assignors to United States Catheter & Instrument Corporation, Glens Falls, N.Y., a corporation of New York
Filed July 14, 1959, Ser. No. 827,127
11 Claims. (Cl. 139—387)



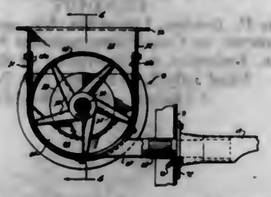
1. An integral woven tubular member formed of warp and filler threads comprising a pair of longitudinally spaced body tube portions, a pair of parallel leg tube portions between said body tube portions and interconnected at their opposite ends to adjacent ends of said body tube portion, and a planar fabric portion at the juncture of each body tube portion and the adjacent ends of the pair of leg tube portions all warp threads extending and being woven throughout the entire length of said member.

3,095,018
FILLER ASSEMBLY FOR PULVERULENT MATERIALS
Stephen T. Moreland, Chicago, Ill., assignor to Continental Can Company, New York, N.Y., a corporation of New York
Filed Dec. 28, 1959, Ser. No. 862,203
4 Claims. (Cl. 141—67)



3. A filler assembly comprising an upright member having a top wall adapted to be connected to a material supply and a bottom wall, an intake opening in said top wall and a discharge opening in said bottom wall, intake and discharge valve means for closing said intake and discharge openings, a sealing ring carried by said bottom wall for forming a seal with a container to be filled, said bottom wall having air vent means for venting a container during the filling thereof, a vacuum line and a pressure air line connected to said member for reducing and increasing the pressure therein, whereby said member may be first evacuated, material admitted thereinto through said inlet opening, the interior of said member pressurized to a superatmospheric pressure, and material forced from said member into a container through said discharge opening, each of said valve means including a valve seat, a valve member engageable with said valve seat, a valve rod connected to said valve member for positioning said valve member relative to said valve seat, and a boot encasing said valve rod for protecting said valve rod against abrasion by material passing through said member, and means connected to each boot for equalizing the pressures interiorly and exteriorly of said boot under the various subatmospheric and superatmospheric operating pressures within said member.

3,095,019
FEED MACHINE FOR BAGS
Edric W. Vredenburg, Oakland, Calif., assignor to St. Regis Paper Company, New York, N.Y., a corporation of New York
Filed Mar. 8, 1960, Ser. No. 13,520
1 Claim. (Cl. 141—68)



In a bag-filling machine having a feed hopper with a downwardly directed mouth for feeding a finely divided aerated material and having a discharge nozzle for supporting an end of a bag into which said finely divided material is charged, means positioned immediately below said hopper for moving said finely divided material from the hopper to the nozzle and simultaneously deaerating said material, said means comprising:

(*a*) a housing having an open top in communication with the mouth of said feed hopper;

(*b*) a rotor horizontally journalled at the ends thereof in said housing for rotation about a horizontal axis;

(*c*) a plurality of generally U-shaped blades secured radially about said rotor, said blades terminating in upper edges which describe straight lines, said blades being directly secured to said rotor at points intermediate the ends of said rotor whereby finely divided material falling onto said rotor at points intermediate the ends thereof immediately falls into one of said blades, each of said blades having a uniform inward taper from the end at which said blade is secured to said rotor to the distal end thereof so as to provide a passageway of constantly diminishing width whereby to provide means for exerting constant compressive force on finely divided material in said troughs as said finely divided material is being forced toward the distal ends thereof by centrifugal force;

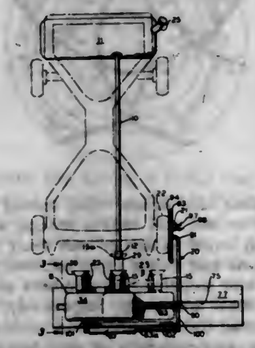
(*d*) a ring mounted coaxially about said rotor and closely enveloping the distal ends of said blades and fixed relative to said housing, said ring having upstanding flanges secured along either lowermost side thereof to form a trough;

(*e*) an opening in said ring in an area where said flanges are secured to said ring for removal of particulate material;

(*f*) means for rotating the rotor to force material out along each blade for compaction between the blade and said ring;

(*g*) and a screw flight mounted on said horizontal shaft on each side of the rotor, said flights each being oriented to feed material toward the said blades and toward the said trough formed by said ring and the said flanges therefor.

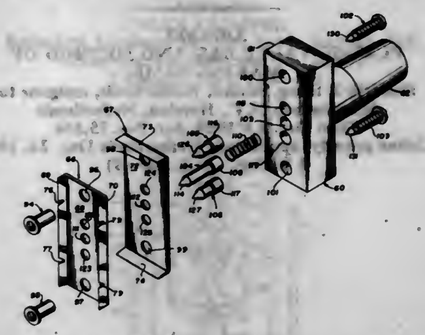
3,095,020
FUELING MECHANISM FOR AUTOMOBILES
Lee E. Darwin, San Jose, Calif.
(924 5th St., Apt. 8, Santa Monica, Calif.)
Filed Sept. 22, 1960, Ser. No. 57,836
6 Claims. (Cl. 141—232)



1. In a service station, a fueling mechanism for use with an automobile having a fuel tank with a fuel filler line communicating at one end thereof with the interior of such tank, and having a coupling member on the other end of such fuel line in a selected, fixed, exposed location, such coupling member being spaced a selected distance from a reference member of such automobile; said fueling mechanism comprising means for locating such automobile in a servicing position in the service station, a fuel supply carriage mounted in such service station adjacent a servicing position of an automobile in the station, a fueling nozzle on said carriage and formed to be automatically actuated to have quick coupling engagement with a coupling member on such automobile, drive means for propelling said carriage toward and away from such automobile in servicing position in the station, positioning means spaced from the nozzle by the same selected distance as that separating a reference member from a coupling member on such automobile for positioning the filling nozzle in alignment with a coupling member on such automobile, and selectively actuable means for extending the nozzle into coupled engagement with such coupling member in alignment therewith, whereby liquid fuel flowing through said extended nozzle passes through such coupling member and filler pipe into a fuel tank of such automobile.

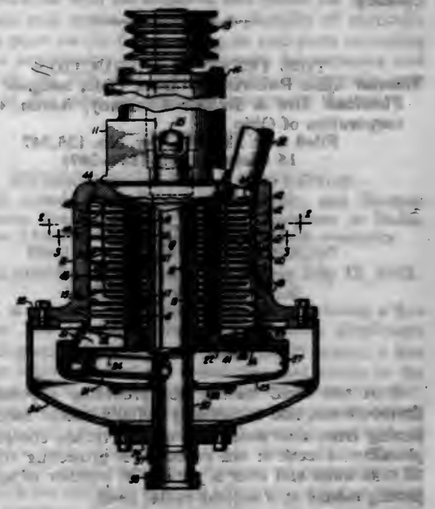
3,095,021
STRIKE PLATE MORTISING TOOL
Ernest L. Schlage, Burlingame, and Armin H. Green, San Mateo, Calif., assignors to Schlage Lock Company, a corporation
Original application Apr. 13, 1959, Ser. No. 805,819, now Patent No. 3,057,053, dated Oct. 9, 1962. Divided and this application Apr. 28, 1961, Ser. No. 92,096
2 Claims. (Cl. 145—25)

1. A strike plate mortise forming tool comprising: a body provided with a rectangular cutting frame formed with coplanar cutting edges adapted to be embedded in the jamb of a door, a locating element having a pointed outer end and extending outwardly of said body and said cutting edges and slidably disposed in said body, a spring in said body for urging said element outwardly thereof at all times, whereby said frame may be located relative



to a point on said jamb by applying the outer end of said element to said point and urging said frame against said jamb against the force of said spring, a pair of marking points carried by said body on opposite sides respectively of said element and adapted to be embedded in said jamb when said cutting edges are forced against said jamb.

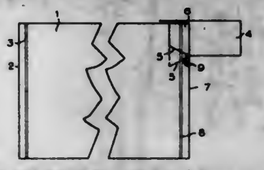
3,095,022
MEAT COMMINUTOR
Edward Schmock, Jr., Madison, Wis., assignor to Oscar Mayer & Company, Inc., Chicago, Ill., a corporation of Illinois
Filed May 5, 1960, Ser. No. 27,105
11 Claims. (Cl. 146—192)



1. Material comminution apparatus comprising a cylindrical housing having material inlet and discharge means, a rotatable blade assembly in said housing between said material inlet and discharge means and including relatively thin and flat blade members having sharpened outer edges extending into close non-engaging proximity to the inner surface of said housing for movement along said inner surface in a direction longitudinally of said edges, and at least one longitudinally directed groove in the inner surface of said housing defining a recessed radial

shoulder portion transversely opposed to the direction of movement of said blade members and past which the sharpened edges of said blade members move in close slicing proximity, said groove being of sufficient width to provide for dislodgement of material which tenaciously adheres to said edges.

3,095,023
PLASTIC VALVE BAG AND METHOD OF MAKING SAME
Hendrik J. Rang, Sittard, Netherlands, assignor to Stamicarbon N.V., Heerlen, Netherlands
Filed Dec. 13, 1960, Ser. No. 75,556
Claims priority, application Netherlands Dec. 24, 1959
4 Claims. (Cl. 150—9)



1. A valve bag for particulate substances comprising, in combination: a plastic tube having one of its ends completely closed, and having its other end partially closed, thereby leaving a filling opening for the particulate substances, and a valve member connected to the outer surface of the tube and about said filling opening consisting of an open plastic tubular member one side of which overlaps the end of said tube adjacent said filling opening, having a single slit at one end thereof extending in the general longitudinal direction of the valve member and into which the end of the tube adjacent the other side of said opening extends, whereby said valve end is enabled to be mounted about the filling opening and sealed to said tube by a continuous seam about but not within said filling opening.

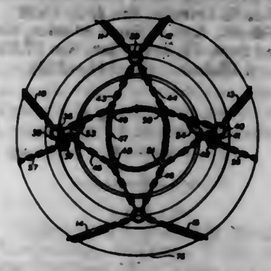
3,095,024
TIRE TREAD CONSTRUCTION
Thomas Allan Robertson, Akron, Ohio, assignor to The Firestone Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
Filed Aug. 31, 1961, Ser. No. 135,347
15 Claims. (Cl. 152—209)



8. A tire tread having ribs providing opposed walls therebetween, and comprising radially spaced means projecting from said walls, one of said means comprising a plurality of teeth at one radial level projecting from one of said walls and over a portion of another of said projecting means at a second radial level.

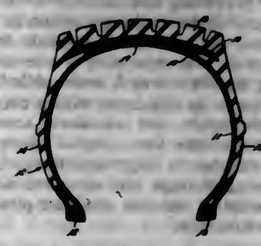
3,095,025
TIRE CHAIN
Thomas J. Rhodes, Smoke Rise, Kinnelon Borough, N.J., assignor to United States Rubber Company, New York, N.Y., a corporation of New Jersey
Filed July 14, 1961, Ser. No. 124,158
11 Claims. (Cl. 152—241)

9. An anti-skid chain for an automobile tire comprising: endless outer flexible tensile means being shorter in length than the circumference of said tire; a plurality of flexible tensile tread members, each member being embedded in a tough elastomeric material; gripping means protruding from said elastomeric material on one face of said tread members; a first tread member being connected at one of its extremities to a first point on said endless outer flexible tensile means, second and third tread members being connected at one of their respective extremities to a second point on said endless outer flexible tensile means, a fourth tread member being attached at one of its extremities to a third point on said endless outer flexible tensile means and fifth and sixth tread members being attached at one of their respective extremities to a fourth point on said endless outer flexible tensile



means, the four said points being spaced approximately equidistantly on the said endless means; a bar of length approximately equal to that of said tread members being attached at one end to the other extremity, respectively, of said first and second tread members and at the other end to the other extremity, respectively, of said third and fourth tread members; first and second inner flexible tensile means, one extremity of each being attached to a respective end of said bar; loop means at the other extremities of said fifth and sixth members, said loop means being threaded with said first and second inner flexible tensile means, respectively; and fastening means for securing the free ends of said first and second inner flexible tensile means to said endless outer flexible means.

3,095,026
PNEUMATIC TIRE
Arthur Frederick Weber, Akron, Ohio, assignor to The Firestone Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
Filed Aug. 7, 1959, Ser. No. 832,238
5 Claims. (Cl. 152—355)



1. A pneumatic tire having a radial cord body and a tread ply assembly comprising three individual tread plies arranged radially inwardly of the tread surface of said tire, two of said individual tread plies of said assembly comprising rubbery material reinforced with parallel cords of substantially non-extensible material extending continuous from edge to edge of said tread plies at acute angles to the rolling axis of said tire and with the cords of one of said two tread plies extending oppositely to and crossing the cords of said other ply, the third tread ply consti-

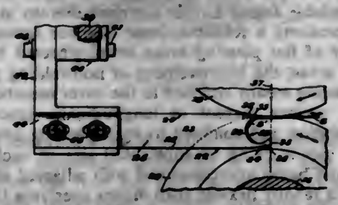
tuting the exterior layer of said tread ply assembly and comprising rubbery material reinforced with discontinuous, individual, discrete oriented fibers, the direction of orientation extending at an angle to the cords of each of said other two tread plies, said tread ply assembly providing stability to said radial cord tire body.

3,095,027
PNEUMATIC TIRE
Arthur Frederick Weber, Akron, Ohio, assignor to The Firestone Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
Filed Oct. 12, 1959, Ser. No. 845,855
5 Claims. (Cl. 152—355)



1. A pneumatic tire having a radial cord body and a tread ply assembly comprising three individual tread plies arranged radially inwardly of the tread surface of said tire, two of said individual tread plies of said assembly comprising rubbery material reinforced with parallel cords of substantially non-extensible material extending continuous from edge to edge of said tread plies at acute angles to the rolling axis of said tire and with the cords of one of said two tread plies crossing the cords of said other tread ply, the third tread ply constituting the exterior layer of said tread ply assembly and comprising elastomeric material having dispersed therein discontinuous, individual, discrete fibers, the majority of which are oriented in a single direction, the direction of orientation extending at an angle to the cords of each of said other two tread plies, said third tread ply extending beyond the shoulders of said tire and into the sidewalls thereof a sufficient amount to provide stability to said radial cord tire body.

3,095,028
SHEET SLITTING AND SCRAP COILING METHOD
Raymond F. Galitz, La Grange, Ill., assignor to Continental Can Company, Inc., New York, N.Y., a corporation of New York
Original application Oct. 24, 1955, Ser. No. 542,290, now Patent No. 2,969,103, dated Jan. 24, 1961. Divided and this application June 2, 1960, Ser. No. 33,546
3 Claims. (Cl. 153—2)



1. In a method of the class described, the steps of feeding a sheet along a straight path, progressively slitting the sheet near one edge thereof on a line parallel with the line of feed, thereby progressively forming a scrap strip from the portion of the sheet between said edge and the slit, utilizing the advancing movement of the sheet to feed said scrap strip into a fixed strip guiding and coiling device as said scrap strip is being progressively formed, and utilizing said strip coiling device to progressively coil said scrap strip helically about an axis, whereby said scrap strip will have the form of a substantially cylindrical coil upon final severance from the sheet.

3,095,029
CAN CRIMPER
Robert M. Lambert, 29 Dixie Drive, Raleigh, N.C.
Filed Oct. 31, 1960, Ser. No. 66,178
2 Claims. (Cl. 153—70)

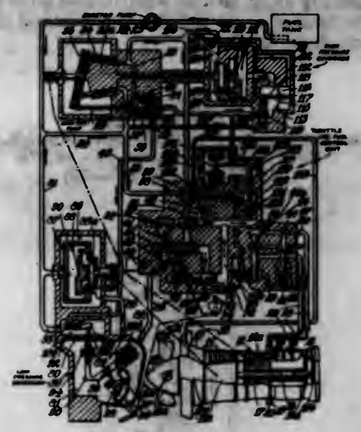


1. A can crimper comprising a supporting frame, a stationary can support on said frame, a vertically movable mandrel on the frame overlying the can support having a flat horizontal plate mounted thereon at its end remote from said can support whereby the mandrel may be inserted in a can disposed on said can support and said plate will engage the upper end of said can to thereby effectively clamp the can in a non-movable position, a plurality of crimping bars pivotally mounted on the frame adjacent the can support for swinging movement toward the can and engageable therewith for crimping the same in cooperation with the mandrel, and means for actuating said bars, said means comprising a plurality of vertically slidable posts on the frame, a ring on said posts encircling the bars and slidably engaged therewith for engaging said bars with the can, and driving means operatively connected to the posts for effecting movement thereof.

3,095,030
HYDRO-MECHANICAL GOVERNOR
Kenneth Arnold Basford, Alvaston, Derby, and Thomas Johnson Paxton, Derby, England, assignors to Rolls-Royce Limited, Derby, England, a British company
Filed July 10, 1959, Ser. No. 826,197
Claims priority, application Great Britain July 15, 1958
19 Claims. (Cl. 158—36.4)

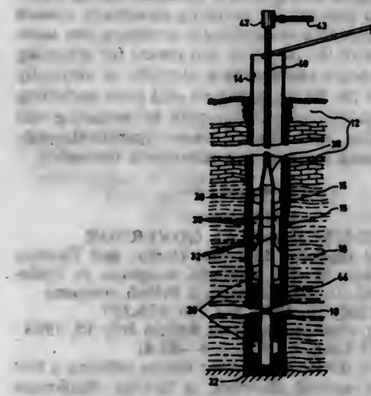
1. A governor device comprising means defining a first chamber and a second chamber, a flexible diaphragm separating said chambers, a pressure liquid source, a low pressure region, a restrictor connecting said source to the first chamber, a restrictive outlet from the first chamber, a rotational speed responsive element adapted to be driven at a rotational speed representing an operating variable in accordance with which the governor device is to effect a control, said speed-responsive element co-operating with said restrictive outlet to vary the effective restriction thereof on variation of said rotational speed, a connection from the restrictive outlet to said second chamber and to the low pressure region, whereby a flow of liquid occurs from said source through said first chamber and said restrictive outlet to the low-pressure region and a pressure drop dependent on the said rotational speed is created across the flexible diaphragm from the first chamber to the second chamber, a biasing spring, an anchorage, the biasing spring being connected between the diaphragm and the anchorage and loading the diaphragm in oppos-

tion to the pressure drop, and controlled means connected to be adjusted by the diaphragm, said anchorage being



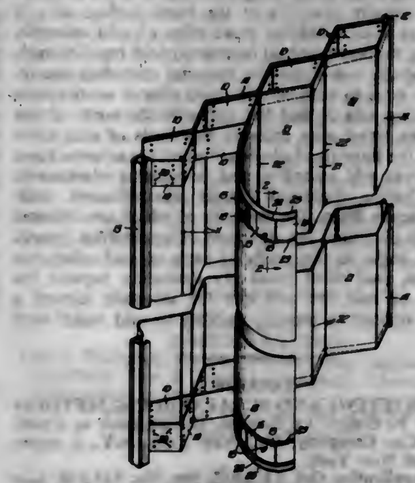
adjustable during operation of the governor to enable the governing effect to be varied.

3,095,031
BURNERS FOR USE IN BORE HOLES IN THE GROUND
Malte Oscar Euremius, 7 von Rosenteins Vag, and Leif Harry Sinclair, 6 Andreas Vag, both of Kumla, Sweden
Filed Dec. 28, 1959, Ser. No. 862,212
Claims priority, application Sweden Dec. 9, 1959
6 Claims. (Cl. 158—99)



1. A burner for heating a sub-surface deposit for recovery of valuable products and constituted of a burner tube adapted to be lowered into a vertical hole formed in the ground and penetrating from the surface into the deposit, said burner tube comprising a feeder portion connectable with its upper end to a source of a mixture containing fuel and oxygen and merging at its lower end into a downwardly conically tapering portion constituting the zone of combustion of said mixture during normal operation of the burner, and an exhaust portion having a continuously equal cross-sectional area of the same size as, and connected to the widest cross-sectional area of the conically tapering portion, the exhaust portion constituting a passage of flow in a downward direction for the flue gases produced in the conically tapering portion by the combustion of said mixture, a casing surrounding said exhaust portion and feeder portion, and at its base in open communication with the open base of the exhaust portion to constitute a flow passage in an upward direction to and above the surface of the ground for the flue gases leaving the open base end of the exhaust portion, said casing containing a body of solid granular particles providing particles between the lower part thereof and the lower part of the burner tube in floating condition by upwardly moving flue gases within a zone substantially coinciding with that part of the deposit to be heated, characterized by said exhaust portion being subdivided at a slight distance from the conically tapering portion into two individual end-to-end communicating parts of which a first part is integral with said conically tapering portion and a second part formed as a separate member, means to keep said two parts of the exhaust portion in end-to-end abutting and sealing connection with one another and to lift the first part together with the conically tapering portion and the feeder portion during the operation of igniting said fuel and oxygen mixture with the second part remaining in its location within the hole.

3,095,032
FOLDING DOOR FABRIC STIFFENING
Pomeroy Sinnock, New Castle, Ind., assignor to New Castle Products International, Inc., New Castle, Ind., a corporation of Liberia
Filed June 6, 1960, Ser. No. 34,033
1 Claim. (Cl. 160—84)



In an accordion-type folding door structure characterized by the provision of a lazytongs-type collapsible and expandable frame having attached thereto at spaced points therealong a foldable cover member formed with a plurality of flat pleating areas interconnected by flexible hinge areas, the improvement of non-folding pleating areas stiffening means attached to the cover member along the inner surface thereof in longitudinally spaced and aligned relation and confined to each pleating area, each stiffening means being of substantial size in each pleating area and being interconnected with adjacent stiffening means by a readily flexible strip means overlying the flexible hinge areas of said cover member, said strip means being of substantially reduced width as compared to the width of said stiffening means and being integrally formed with said stiffening means and from the same material thereof, said stiffening means and strip means being attached to said cover member along bottom longitudinal edge portions of said stiffening means and strip means by

a continuous sew line, fastening means projecting transversely through said stiffening means into attachment with said frame and being held captive between said stiffening means and said cover member, said stiffening means rigidifying the cover member at its points of attachment to the frame.

3,095,033
TRAVERSE ROD FOR DRAPERIES
Bernard Leonard Polkowski, Fairfield, Conn., assignor to Conso Products, Inc., a corporation of New York
Filed Sept. 12, 1958, Ser. No. 760,717
5 Claims. (Cl. 160—345)



4. A traverse rod for draperies, curtains and the like, including a thin-walled split tubular rod having a longitudinal slit in its topmost portion, a pulley frame member in each end of said rod, one of said pulley frame members having a return-pulley therein over which the traverse-cord is looped to form two oppositely movable spans and the other pulley frame member having a pair of pulleys over which the two spans of the cord extend and from which they may extend downwardly to form the manually engageable pull-ends of the cord, ring-like carriers embracing said rod and arranged to ride on the topmost portion thereof, said carriers having means thereon disposed beneath said rod to which the head of the curtain can be detachably secured, and a cord-anchorage rigidly secured to the uppermost portions of the inside of two carriers spaced a short distance from each other, said cord-anchorage extending downwardly from the uppermost portions of said two carriers through the slit at the top of the tube, into the tube, said cord-anchorage having a longitudinal cord-passageway therethrough and having a vertically movable cord-locking element in operative juxtaposition to a wall of said passageway, for clampingly securing the cord to said cord-anchorage, in a releasable manner, between said cord-locking element and said wall of said passageway and means interconnecting the lowermost portions of said two carriers and maintaining them in spaced relation to each other.

3,095,034
RETRACTABLE WINDSHIELD AWNING
John P. Francis, 20 Boston St., Haverhill, Mass.
Filed Jan. 3, 1962, Ser. No. 165,061
5 Claims. (Cl. 160—364)



1. A longitudinally retractable taut supported rain awning panel adjustably supported in said taut supported form over the roof top and the windshield area of an automobile comprising, a frame structure having opposing side spaced apart longitudinal frame members provided with longitudinally spaced apart vertical apertures, longitudinally spaced apart threaded bolt members extending upwardly from the vertical apertures of said side frame members and provided with threaded frame fastening members thereon, a removably attached longitudinally repositionable lateral frame member provided with laterally spaced apart vertical apertures, said longitudinally movable lateral frame member adapted to be clampingly engaged to the selected said vertical bolt and fastening members to adjustably attach and to restrain each side spaced longitudinal frame member from inward or outward lateral movement, a roller supported on the upperside of the outer periphery of and forwardly of the rear end of the said side longitudinal frame members, a longitudinally adjustable awning panel coiled around the said roller for taut supported extensible adjustment therefrom and retractable adjustment thereto, a laterally disposed awning cross member engaged to the free end of said awning panel and provided with laterally spaced apart vertical apertures to adjustably and removably engage the selected said vertically disposed threaded bolt and fastening members to clampingly secure said cross member and to restrain each side longitudinal frame member from individual inward or outward lateral movement independently of and at a spaced distance forwardly or rearwardly of the said repositionable lateral frame member, said longitudinally adjustable taut supported awning panel being partially or fully retractable or extensible in said taut supported form upon the unclamped removal of and the longitudinally movable and clamped attachment of the said lateral awning cross member to the selected said vertical threaded bolt and fastening members, and means for supporting the said frame structure to the roof top.

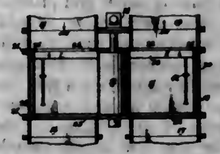
3,095,035
FREIGHT CAR CLOSURE
Barton H. Ford, Omaha, Nebr., assignor, by mesne assignments, of one-half to International Paper Company, New York, N.Y., a corporation of New York, and one-half to The Stanley Works, New Britain, Conn., a corporation of Connecticut
Filed June 21, 1957, Ser. No. 667,187
2 Claims. (Cl. 160—368)

1. In a closure for a freight car doorway, or the like, a corrugated paperboard panel comprising a flute-equipped corrugated core equipped on both sides with liner sheets adhesively secured thereto, spaced-apart parallel metal strap members extending the width of said panel, said panel being planar and having said strap members included between one liner sheet and the core thereof with the straps in contacting relation wtih the core flutes, the flutes of said panel extending transversely of the length of said strap members, said panel and strap members being provided with aligned openings therethrough only adjacent the ends of said strap members, each of said openings being provided by simultaneously punching through said core, liner sheets, and strap, the distance between the outermost openings at each strap end being less than the width of the structural member of the car to which the closure is adapted to be secured.

3,095,036
THERMAL ACTUATED RADIAL SEAL FOR ROTARY REGENERATIVE HEAT EXCHANGER
John Teufel, Yonkers, N.Y., assignor, by mesne assignments, to Combustion Engineering, Inc., a corporation of Delaware
Filed Apr. 1, 1960, Ser. No. 19,349
3 Claims. (Cl. 165—9)

1. A regenerative air preheater having a rotor including a cylindrical rotor shell and a central rotor post, radial

partitions extending between the rotor post and rotor shell to form a series of sectorial compartments therebetween, a mass of heat transfer material carried by each compartment of the rotor, a cylindrical housing surrounding the rotor, end plates at opposite ends of the rotor housing spaced from adjacent ends of the rotor and provided with imperforate portions between circumferentially spaced apertures that direct a flow of heating gas and air to and through the regenerative heat transfer material carried by the compartments of the rotor, radial sealing means bridging the space between an end edge of each radial



partition and its adjacent end plate to preclude fluid flow therebetween, said sealing means comprising radially extending leaf members rigidly secured at their inboard ends to the rotor post and yieldingly secured at their outboard ends to an adjacent radial partition, and thermal actuating means secured between the outboard end of the radial sealing means and the radial partition, said thermal actuating means having a coefficient of expansion greater than that of its adjacent radial partition whereby an increase of temperature will effectively move said sealing means into a sealing relationship with its adjacent end plate.

3,095,037

AIR COOLER FOR POWER TUBES

Helmut Böhm, Freiburg, Germany, assignor to Mlwag Mikrowellen A.G., Basel, Switzerland

Filed June 15, 1959, Ser. No. 820,337
Claims priority, application Germany June 14, 1958
2 Claims. (Cl. 165—47)



1. Apparatus for cooling a magnetron of the type having a generally cylindrical body and having connecting means extending outwardly from a relatively small portion of said cylindrical body comprising:

two packages of cooling fins mounted on and extending away from said cylindrical body, each of said fins in each of said packages having an inner edge, an outer edge and lateral edges; an inner portion of each of said fins extending perpendicularly to the main axis of the cylindrical body;

the inner edge of each of said fins conforming to the surface of a portion of said cylindrical body;

the arcuate length of the inner edge of each of the fins in one of the packages being less than the arcuate length of the inner edge of each of the fins in the other package;

the remaining portions of each of said fins as bounded by said outer edge, said lateral edges and the outer end of said inner edge thereof being spread apart from each other in a fanlike manner so as to define wedge-shaped spaces therebetween for the straight passage of a coolant air stream in a direction perpendicular to the axis of said cylindrical body;

said two packages being arranged whereby the inner edges of said fins substantially encompass said cylindrical body with the exception of said outwardly extending connecting means;

means defining a pivot member lying in a plane parallel to the axis of said cylindrical body and spaced outwardly of the outer surface of said cylindrical body, said packages being in contact with said pivot member;

and means for drawing said packages together about said pivot to draw said conforming inner edges of each of said fins into intimate contact with said cylindrical body.

3,095,038

PLURAL COMPLETION OF WELLS

Gene D. Thompson, Houston, and David E. Smink, Talco, Tex., assignors, by mesne assignments, to Jersey Production Research Company, Tulsa, Okla., a corporation of Delaware

Filed Oct. 24, 1960, Ser. No. 64,636
4 Claims. (Cl. 166—46)



1. In a well comprising a cased borehole and a flow tubing string extending to a first productive earth formation for producing the formation, and packer means between the flow tubing and casing for preventing fluid flow up the annulus between the flow tubing and casing, a method of initiating production of a formation at a level above the packer comprising: perforating the flow tubing and casing at the level of a second productive earth formation above the packer and first productive earth formation; blanking off the perforations in the flow tubing with a pack-off anchor; producing the second earth formation through the annulus between the flow tubing and the casing; and producing the first productive earth formation through the flow tubing and the pack-off anchor.

3,095,039

WHIPSTOCK AND ANCHORING MECHANISM THEREFOR

Robert B. Kinzbach, Houston, Tex., assignor to Bowen-Itco, Inc., Houston, Tex., a corporation of Texas

Filed Oct. 7, 1960, Ser. No. 61,111
5 Claims. (Cl. 166—117.6)

1. In a whipstock for use in a well having upper and lower vertically spaced well pipe sections therein, a cylindrical body adapted to be lowered into the well pipe, a slip movably mounted on the body for longitudinal movement relative thereto, means on the slip and body positioned for coaction to move the slip to a position in

wedging engagement with the body and pipe to anchor the body against longitudinal movement in the pipe upon downward movement of the body relative to the slip, means movably connected to the slip for movement into and out of a position for engagement with the upper end of the lower section of the well pipe to hold the slip against downward movement, yieldable means



positioned for coaction with the body and said holding means to yieldingly urge the holding means toward said position, releasable means connected to the body and holding means to hold the holding means out of said position and means movably carried by the body in position for coaction with said releasable means and the upper section of the pipe to release the holding means upon insertion of the body in said upper section.

3,095,040

ACCESS VALVE FOR COMPLETING OIL WELLS

Merlin F. Bramlett, Tyler, Tex., assignor to Bramlett Oil Field Service, Inc., Tyler, Tex., a corporation of Texas

Filed June 30, 1961, Ser. No. 121,099
4 Claims. (Cl. 166—224)



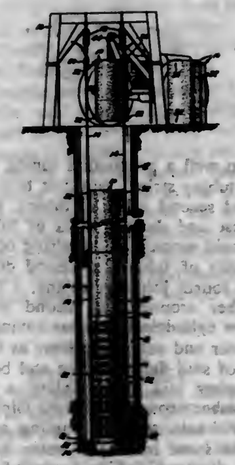
1. An access valve for temporarily closing a flow tube in an oil well having a casing, and a packer in said casing about said tube, a tubular body having means thereon for threaded attachment to the lower end of said flow tube below said packer, the said body having a smooth internal bore equal in diameter to that of said flow tube and having an internally beveled seat formed in its lowermost end, sealing means internally of said body adjacent to said beveled seat, a plug having a flanged portion on said beveled seat and extending into said body closing the same, the said body having a port in one side above said beveled seat, and a break-off plug closing said port capable of being broken away to open said port by the force of a tool lowered into said flow tube.

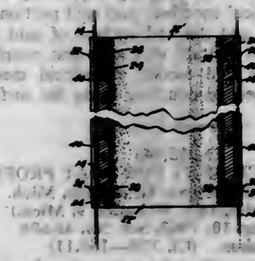
3,095,041

MEANS FOR INSTALLING CONCRETE WELL CASINGS

Ross H. Rasmussen, Hooper, Nebr.

Continuation of application Ser. No. 686,376, Sept. 26, 1957. This application Nov. 17, 1959, Ser. No. 853,478
2 Claims. (Cl. 166—235)





1. A well casing assembly comprising a pair of vertically disposed cables in diametrically opposed positions in a well, means for anchoring the cables in the bottom of the well, means for anchoring upper ends of the cables

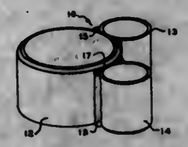
at the top of the well and at points aligned with the points where the lower ends are anchored in the bottom of the well, a plurality of vertically disposed tubular cylinders having inner and outer surfaces and having continuous longitudinally disposed and diametrically opposite grooves in the outer surfaces of the well casing and positioned between the cables, and vertically spaced and vertically aligned eyes mounted in the cylinders and positioned in the grooves, the eyes being spaced inwardly from the ends of the cylinders and the cables being disposed through the eyes and positioned in the grooves whereby the cables are not subject to being pinched or broken by the cylinders rubbing against the well wall.

3,095,042

SUSPENSION HANGER FOR DEEP WELL TUBING

Edgar W. Clark, Jr., Big Spring Tex., and Paul W. Reynolds and William F. Root, Ardmore, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

Filed May 13, 1960, Ser. No. 29,080
2 Claims. (Cl. 166—243)



1. In a deep well a production tubing assembly comprising a first tubing string, said first tubing string comprising first and second joints of tubing, a first coupling joining said first and second joints of tubing, a second tubing string, said second tubing string comprising third and fourth joints of tubing, a second coupling joining said third and fourth joints of tubing, a first hollow cylindrical member around said second joint of tubing, said first hollow cylindrical member having approximately the same inner and outer diameters as the corresponding diameters of said first coupling and being positioned immediately below said first coupling, a second hollow cylindrical member around said third joint of tubing immediately above said second coupling and having approximately the same inner and outer diameters as the corresponding diameters of said second coupling, said first and second cylindrical members being positioned at the same level and rigidly attached to each other whereby said first cylindrical member supports said first coupling and at least a portion of said first tubing string, said second coupling and the portion of said second tubing string above said second coupling supporting said first and second cylindrical members and said portion of said first tubing string, and the end surface of said first cylindrical member in contact with said first coupling and the end surface of said second cylindrical member in contact with said second coupling being flat surfaces.

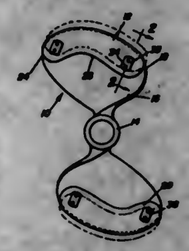
3,095,043

SLIDING ATTACHMENT FOR BOAT PROPELLER

Leo A. Holmelunen, Grandville, Mich.
(4990 Burlingame, Wyoming 9, Mich.)

Filed Aug. 10, 1960, Ser. No. 48,680
2 Claims. (Cl. 170—160.11)

1. In combination with a boat propeller having a plurality of generally radially extending blades, an attachment comprising an elongated extensible plate for each blade of the propeller, each of said plates overlying and extending across one face of the outer end portion of the corresponding blade and having a curved outer longitudinal edge portion generally conforming to the plan outline of the outer edge portion of the corresponding blade, means at each of the opposite ends of each plate slidably mounting that end on and exteriorly of the corresponding blade by means of a pin and slot connection for movement generally radially of the corresponding blade and including resilient means connected between portions of said blade and the corresponding plate yieldably urging said plate toward a radially inwardly displaced position relative to the corresponding blade when the propeller is rotated at slow speed and enabling the plate to move radially outwardly when the propeller is rotated at higher speeds, said pin and slot connections on each extension plate including a pair of enlarged openings formed in and disposed adjacent the opposite ends of the plates, retaining means projecting laterally from the one face of each of said



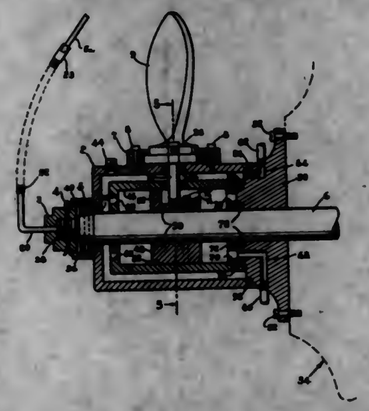
blades extending through each opening and anchored to the corresponding propeller blade, a retainer member on the outer ends of each of said anchor means and slidably engaging the corresponding extensible plate thus slidably retaining the extension plate in position, said resilient means interconnecting the anchor means and the extension plates for biasing each of the extension plates radially inwardly of the corresponding blade, said means urging the extension plate inwardly of the propeller blade including a flattened spiral coil spring disposed in each opening and having one end anchored to the extension plate and the other end anchored rigidly in relation to the propeller blade thereby resiliently biasing the extension plate inwardly in relation to the propeller blade.

3,095,044

VARIABLE PITCH BOAT PROPELLER AND SHEAR PIN TOOL THEREFOR

John P. Medlock, Rte. 2, Taylors, S.C.

Filed Sept. 25, 1959, Ser. No. 842,238
1 Claim. (Cl. 170—160.32)



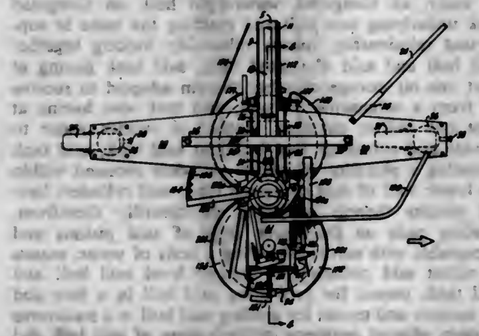
A variable pitch propeller assembly for a motor boat, comprising a rotatable motor boat shaft, a first cylindrical housing being concentric with the motor boat shaft, one end of the housing being coupled to the shaft, the opposite end of the housing being journalled on a bearing cap, a second cylindrical housing being concentric with and coupled to the shaft, the second housing being spaced inwardly of the first housing to form therewith an annular chamber, one end of the second housing being spaced inwardly of one end of the first housing and having a plurality of ports, the opposite end of said housing being journalled on the bearing cap, piston means mounted on the shaft within the second housing, said piston means being rotatable with the shaft and slidable relative thereto, a plurality of propeller blades mounted on the first housing for rotation therewith, a plurality of bell crank members, each having one lever secured to one of said blades, the other lever of each bell crank member being formed with a slot, studs projecting from the piston means through the slotted portion of each bell crank member, whereby reciprocation of the piston means causes a corresponding change of pitch in each of the propeller blades, and a pair of conduits formed in the bearing cap for conveying hydraulic fluid to the second housing to thereby actuate the piston means, one conduit communicating with the annular chamber and one end of the second housing and the other conduit communicating with the opposite end of the second housing, whereby the increase in fluid pressure in one conduit causes the piston means to slide in one direction and the increase in fluid pressure in the other conduit causes the piston to slide in the opposite direction.

3,095,045

CULTIVATOR

Joseph F. Eanis, Box 365, Lucerne, Calif., and Bruce A. Peters, Rte. 1, Box 667, Lakeport, Calif.

Filed May 31, 1962, Ser. No. 198,991
4 Claims. (Cl. 172—38)



1. A cultivator for cultivating around one side of a tree trunk comprising:
- a supporting frame;
- an elongated carriage mounted on said frame;
- means for attaching said frame to a tractor for translating said frame in a direction normal to the line of travel of said tractor;
- an elongated cultivator head journaled intermediate its ends on said frame for rotation relative thereto about a vertical axis;
- a first cultivator disc journaled on said cultivator head adjacent one end thereof;
- a second cultivator disc journaled on said cultivator head adjacent the other end thereof;
- a power take-off carried by said cultivator head for driving said discs;
- first latching means mounted on said frame adjacent the path of travel of the ends of said cultivator head;
- a first mating latching means mounted at one end of said cultivator head for detachably locking said one end to said first latching means;
- a second mating latching means mounted on the other end of said cultivator head for detachably locking said other end to said first latching means;
- first pressure-responsive latch-releasing means mounted on said cultivator head and overlying one side of said first cultivator disc for releasing the said first mating latching means at the other end of the cultivator head in response to the impact of said first pressure-responsive means with a tree trunk during the forward translation of said cultivator head;
- second pressure-responsive latch-releasing means mounted on said cultivator head and overlying the diagonally opposite side of said second cultivator disc for releasing the said second mating latching means in response to the impact of said second pressure-responsive latch-releasing means with a tree trunk during the forward translation of said cultivator head;
- an indented arcuate latching member fixed to said frame laterally thereof and paralleling the locus of the ends of said cultivator head;
- third mating latching means mounted on said one end of the cultivator head adjacent said locus for detachably engaging said arcuate latching member;
- fourth mating latching means similarly mounted on said other end of said cultivator head for detachably engaging said arcuate latching member;
- means for resiliently biasing said third and fourth latching means in their retracted positions;
- third latch-releasing means mounted on said cultivator head opposite said first latch-releasing means and overlying said first cultivator disc, said third latch-releasing means functioning to lock one of said third or fourth mating latching means on said arcuate latching member in response to the contact of said third latch-releasing means with the trunk of a tree during the rotation of said cultivator head; and
- a fourth latch-releasing means similarly mounted on said cultivator head opposite said second latch-releasing means and overlying said second cultivator disc.

3,095,046

HAMMER DRILL

Ernest A. Mori, Hampton Township, Allegheny County, Pa., assignor to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware

Filed Sept. 15, 1961, Ser. No. 138,309
2 Claims. (Cl. 173—136)



1. A fluid-operated well-drilling mechanism comprising a tubular housing, an inverted cup-like cylinder longitudinally mounted in the top of said housing, means affording operating fluid access to the interior of said housing below said cylinder, an elongate annular hammer smaller in diameter than the inside diameter of said housing and slidably disposed in and sealed against the

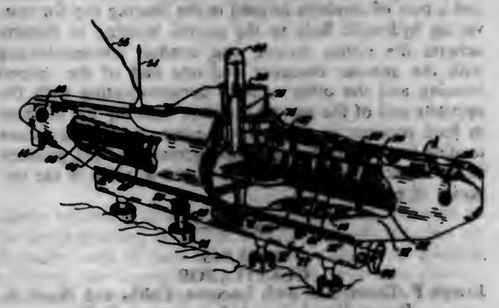
inside of said cylinder, said hammer having a longitudinal central passage therethrough, an annular valve slidably disposed on and sealed against the outside surface of said hammer, the inside diameter of said valve being less than the inside diameter of said cylinder, a passageway leading from said longitudinal central passage of said hammer to a point outside said hammer proximately below said valve, a first annular ledge on the inside surface of said housing below said valve, the lower end of said valve being adapted to seat on the upper portion of said first ledge to form an annular seal, a stop on said hammer limiting upward movement of said valve on said hammer, a second annular ledge in said housing below said valve, a collar on said hammer below said second ledge adapted to penetrate said second ledge and form a sliding seal therewith, and a bit stem slidably disposed in and sealed against said housing below said hammer and having a longitudinal central passage, the upper end of said bit stem being disposed to be struck by the lower end of said hammer.

3,095,047
HAMMER DRILL
Fred E. Fleischer, Oakmont, and Edward Topsoelian, Jr., Pittsburgh, Pa., assignors to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware
Filed Sept. 15, 1961, Ser. No. 138,310
6 Claims. (Cl. 173—137)



6. A fluid-operated well-drilling mechanism comprising a tubular housing, an inverted cup-like cylinder longitudinally mounted in the top of said housing, an elongate annular hammer in said housing and slidably disposed in and sealed against the inside of said cylinder, said hammer having a longitudinal central passage therethrough, means affording operating fluid access to the interior of said housing below said hammer, an annular valve having a longitudinal passage therethrough slidably disposed in and sealed against said passage in said hammer, the outside diameter of said valve being less than the inside diameter of said cylinder, resilient means in said hammer urging said valve upward in said passage in said hammer, a stop on said hammer restricting upward movement of said valve with respect to said hammer, said stop being positioned so that when said valve is in its uppermost position with respect to said hammer the bottom end of said valve is proximately above the bottom end of said hammer, an upwardly facing shoulder on said valve, means affording operating fluid access to said upwardly facing shoulder of said valve when said valve is in contact with said bit stem, and a bit stem slidably disposed in and sealed against said housing below said hammer and having a longitudinal central passage, the upper end of said bit stem being disposed to be struck by the lower end of said hammer.

3,095,048
SUBMARINE AUTOMATIC OIL WELL DRILLING MACHINE
Joseph V. O'Neill, Inkster, George Homanick, Livonia, and Robert C. McCord, Inkster, Mich; said Homanick and said McCord assignors to said O'Neill
Filed Feb. 2, 1959, Ser. No. 790,486
6 Claims. (Cl. 175—6)

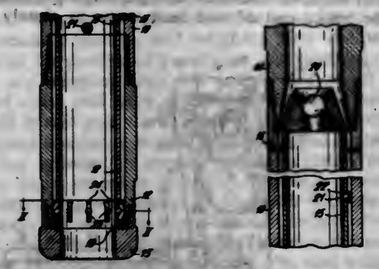


1. In apparatus for drilling earth underlying a body of water, an elongated, water-tight hull, an elongated tank underlying said hull and cradling the same in supporting relationship, means releasably locking together said hull and said elongated tank, said tank having at least one oil storage chamber therein adapted to receive oil from a submarine oil well, said tank also having at least one ballast chamber adapted to receive water to elevate and submerge said hull and said tank, said tank including a plurality of spaced cylinders recessed within the lower wall of said elongated tank, said cylinders having pistons therein extending downwardly therefrom, leveling pads on the lower ends of said pistons and engageable with earth underlying a body of water, means to adjust said pistons and thereby level said hull and said tank, means for propelling said hull in a fore and aft manner and means for guiding said hull in a transverse manner, aligned openings in the bottom of said hull and in the top and bottom of said tank, means sealing said openings against the entry of surrounding water, drilling equipment housed in said hull and adapted to extend a drill string in drilling relation through the openings in the bottom of said hull and in said tank to pierce an earth formation upon which said tank and hull are positioned.

3,095,049
CORE DRILLING APPARATUS
Roland Joseph du Berger, 106A 9th Ave., Calgary, Alberta, Canada
Filed Apr. 2, 1962, Ser. No. 184,189
Claims priority, application Canada Feb. 15, 1962
2 Claims. (Cl. 175—244)

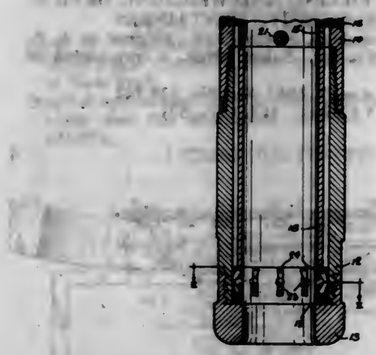
1. In core drilling apparatus, a drill string assembly comprising
(a) barrel means having an inner cylindrical face defining a core space,
(b) means for rotating said barrel means,
(c) a drill bit secured to an end of said barrel means to form a core,

(d) and a plurality of free running spherical bearings fixed in position on said barrel means to rotate therewith,



(e) said bearings being distributed around and along said inner face in position to project therefrom into the core space for supporting a core therein,
(f) and each of said bearings being mounted to be freely rotatable about all axes through its centre.

3,095,050
CORE DRILLING APPARATUS
Roland Joseph du Berger, 106A 9th Ave., Calgary, Alberta, Canada
Filed Apr. 2, 1962, Ser. No. 184,181
Claims priority, application Canada Feb. 15, 1962
3 Claims. (Cl. 175—254)



1. For use in core drilling appartus, a core cutting mechanism comprising:
(a) an annular housing,
(b) a circumferentially arranged series of cutters in said housing having cutting edges facing radially inwardly,
(c) means mounting each cutter in said housing to be movable between a radially outwardly withdrawn position and a radially inwardly projecting position,
(d) balls mounted in said housing, each ball bearing against an associated cutter and each ball projecting radially inwardly from said housing,
(e) each cutter including a pair of cam surfaces against which its associated ball bears for controlling movement of the cutter, whereby thrust in a first axial direction on the balls relative to the housing urges each ball against a first said cam surface of its associated cutter to maintain the cutters in withdrawn position and thrust in the other axial direction on the balls relative to the housing urges each ball against a second said cam surface of its associated cutter to force the cutters to projecting position.

3,095,051
EARTH BORING AUGER AND SAMPLER
Eli Ivan Robinsky, Don Mills, Ontario, Canada, and Henry A. Nelson Holland, Ridgewood, N.J., assignors to Raymond Concrete Pile Company Limited, Unionville, Toronto, Ontario, Canada, a corporation of Canada
Filed Nov. 24, 1961, Ser. No. 157,297
9 Claims. (Cl. 175—270)



1. A cutting head for attachment to a hollow stem earth boring auger, such cutting head being formed with an axial cavity for communicating with the hollow interior of the auger, means for normally closing said axial cavity to exclude earth during operation of the cutting head, said means comprising a plurality of members of resilient sheet material providing a downwardly directed cusp-like formation, said members being adapted to separate at the vertex of the cusp and allowing a sampling tool to be advanced through said axial cavity into the earth below the cutter head, such resilient members being adapted to come together again to close off said axial cavity upon upward withdrawal of the sampling tool.

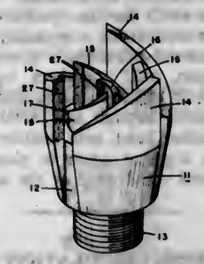
3,095,052
REVERSE CIRCULATION SUB
John Gordon Jackson, Denver, Colo., assignor to Gas Drilling Services Co., Los Angeles, Calif., a co-partnership
Filed July 13, 1959, Ser. No. 826,683
4 Claims. (Cl. 175—324)



1. Apparatus for drilling wells and the like, comprising: a rotary bit having a head with an axial opening therethrough, said head having depending arms, cutter elements operably mounted on said arms, and an externally threaded pin extending upwardly from the upper end of said head and having an upwardly opening recess therein; an upwardly extending tube secured in the opening in the bit head and projecting upwardly of the upper end of the pin, the external diameter of said tube being substantially less than that of the recess in the pin; and a tubular sub adapted to be connected to the lower end of a pipe string and having an internally threaded box at the lower end in which said pin is threadably received, the external diameter of said sub being substantially uniform throughout its length, the

passage through the sub being of substantially the same diameter as the diameter of the recess of said pin, said sub having a plurality of annularly spaced openings in the wall thereof upwardly of the box and in the same plane relative to each other, said tube extending upwardly into the passage of the sub and said openings being inclined inwardly and upwardly with the inner ends thereof spaced downwardly of the upper end of said tube, gaseous fluid passing downwardly in the well at the outer sides of the sub flowing upwardly through the tube and also through the openings in the sub and passing upwardly about the tube to effect reduced pressure at the upper end of said tube.

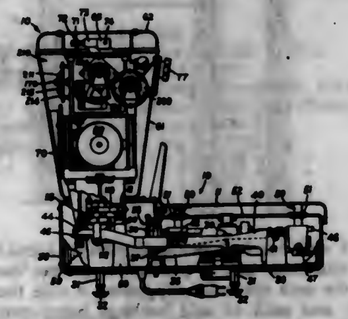
3,095,053
DRILL BIT
Harry Pistole and Harold H. Hansen, Jr., Houston, Tex., assignors, by mesne assignments, to Jersey Production Research Company, Tulsa, Okla., a corporation of Delaware
Filed Feb. 1, 1960, Ser. No. 5,778
9 Claims. (Cl. 175—329)



1. A drill bit adapted to be connected to a hollow drill string comprising a body member having a plurality of inner and outer blades arranged concentrically thereon to provide at least one groove between the inner and outer concentric blades, the inner blades having a length no greater than the length of the outer blades, said body member being formed to provide a passageway adapted to communicate with said hollow drill string, said passageway having at least one port arranged to discharge drilling fluid in said groove, and at least one breaker means on said body member arranged in said groove, said breaker means and discharge of drilling fluid through said port fracturing formation material in said groove.

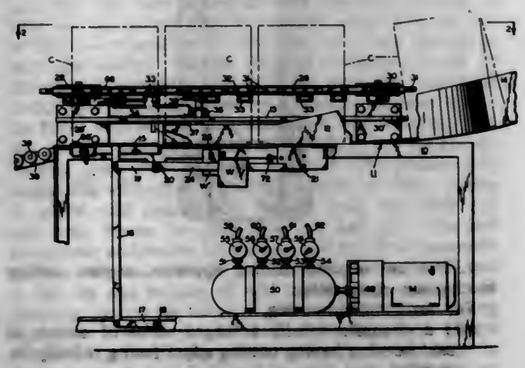
3,095,054
WEIGHING SCALES
Kenneth C. Allen, Dayton, Ohio, assignor to The Hobart Manufacturing Company, Troy, Ohio, a corporation of Ohio
Original application Feb. 1, 1957, Ser. No. 637,725, now Patent No. 3,045,229, dated July 17, 1962. Divided and this application June 25, 1959, Ser. No. 822,836
5 Claims. (Cl. 177—3)

1. In a power operated scale having a weighing mechanism including a lever supported on a base for displacement upon application of a load to the scale and having also a drive motor and a sensing mechanism connected with said lever for sensing the position thereof, the combination of a generally vertically-extending combined lead screw and counterbalancing spring support column having a lower end secured to said base, counterbalancing spring means connected at an upper end thereof to said column in spaced relation to said base and at the other end thereof to said lever for tensioning in response to displacement of said lever, a generally vertically-extending lead screw having a driving connection with said motor for rotation controlled by said sensing mechanism in proportion to the displacement of said lever, means supporting said sensing mechanism in driving relation with said lead screw for movement with respect to said lever in response to rotation of said lead screw, bearing means on said column, engaging and establishing a single reference point for the upper end of said lead screw in closely spaced



relation with the connection of said upper end of said spring means on said column, and spring bias means urging said upper end of said lead screw into engagement with said reference point to prevent relative movement of said upper end of said lead screw and said upper end of said spring means.

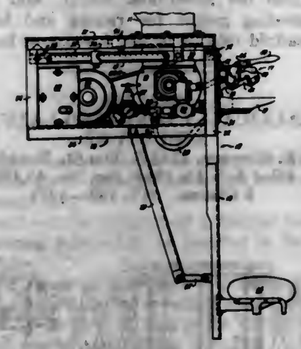
3,095,055
AUTOMATIC FILLING AND WEIGHING DEVICE FOR SUCCESSIVE CONTAINERS
Robert D. McLauchlan, Salem, Oreg., assignor to A. B. McLauchlan Co. Inc., Salem, Oreg., a corporation of Oregon
Filed Aug. 7, 1961, Ser. No. 129,742
3 Claims. (Cl. 177—53)



1. In an automatic dispensing and weighing device of the character described, a weighing plate, a supply receptacle having a discharge spout positioned above said weighing plate, a gate valve in said spout, means for operating said gate valve, said means including a first double-acting air cylinder, a stationary support for said cylinder mounted on said spout, a second double-acting air cylinder carried on the piston rod of said first air cylinder, said gate valve connected to the piston rod of said second air cylinder, said cylinders so arranged that the movement of the piston rod of said first cylinder to fully extended position while the piston rod of said second cylinder remains in retracted position will move said gate valve into nearly closed position, whereupon the subsequent movement of the piston rod of said second cylinder into extended position will complete the closing of said gate valve, and whereby the retraction of the piston rods

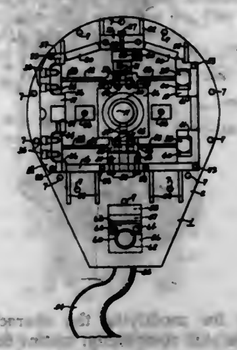
of both cylinders simultaneously will move said gate valve into fully opened position, an air pressure line connected to both of said cylinders for moving both piston rods into retracted position, a control valve in said air pressure line, electrically operated means for opening said latter mentioned valve, a switch element in said latter mentioned means located on said weighing plate and so arranged that the moving of a container into receiving position on said weighing plate will contact said switch element and cause said latter mentioned valve to be opened and result in said gate valve in said spout being moved to fully opened position, a second air pressure line connected to said first cylinder for moving said first cylinder piston rod into fully extended position, electrically operated means controlling the passage of air under pressure into said second air pressure line, a second switch element for said last mentioned electrically operated means, an adjustable balance assembly connected with said weighing plate, said second switch element connected with said balance assembly and so arranged as to be momentarily actuated when the load on said weighing plate has nearly reached a predetermined amount, the actuation of said second switch element causing air under pressure to pass into said second air pressure line and causing the circuit through said first switch element to be interrupted, a third air pressure line connected to said second cylinder for moving said second cylinder piston rod into extended position, and a third switch element in said balance assembly so arranged as to be actuated momentarily when the load on said weighing plate reaches said desired predetermined amount.

3,095,056
FEED MACHINE FOR BAGS
Edric W. Vredenburg, Oakland, Calif., assignor to St. Regis Paper Company, New York, N.Y., a corporation of New York
Original application Mar. 8, 1960, Ser. No. 13,520. Divided and this application July 21, 1961, Ser. No. 131,956
1 Claim. (Cl. 177—68)



A device for filling a bag with finely divided particulate solids comprising:
(*a*) a stationary frame;
(*b*) a storage hopper for said particulate solids fixed to said frame;
(*c*) a weighing scale supported by said frame;
(*d*) a nozzle supported by said weighing scale;
(*e*) means for supporting the bottom of a bag positioned below the said nozzle, said means being supported by said weighing scale;
(*f*) means in communication with said hopper for receiving particulate solids therefrom and for advancing said solids to said nozzle;
(*g*) a flexible conduit between said last mentioned means and said nozzle whereby said nozzle may move relative to the said last mentioned means; and
(*h*) means positioned immediately adjacent the discharge orifice of said nozzle for closing said nozzle, said means comprising a tubular elastomeric member positioned with one end thereof fixed to the inner surface of said nozzle immediately adjacent the discharge orifice thereof, the other end of said tubular elastomeric member being in communication with the interior of the said conduit of subparagraph *g* and being connected to the opposite end of said nozzle, said elastomeric tubular member being of lesser diameter than the said nozzle and being concentric with a portion thereof whereby to provide an unsupported section intermediate the ends thereof and a space between the nozzle and the said elastomeric member, said nozzle having means for applying a fluid pressure within the said space to cause said elastomeric tubular member to move between a first position in which said unsupported section is substantially concentric with said nozzle and a second position in which the said unsupported section is collapsed upon itself sufficiently to prevent passage of particulate matter therethrough, said means for applying the fluid pressure being operatively associated with said weighing scale whereby to cause the said elastomeric tubular member to be collapsed upon itself through the application of fluid pressure when a predetermined weight of particulate material has been supplied by the means of subparagraph *f*;
(*i*) and an aspirator connected by a fluid line to the said space and adapted to remove fluid from the said space to create a pressure lower than said fluid pressure prevailing in the said space.

3,095,057
TRAVELING BLOCK WEIGHING DEVICE
John B. Kraeling, Meadville, Pa., assignor to Drafto Corporation, Cochranton, Pa., a corporation of Pennsylvania
Filed Jan. 11, 1961, Ser. No. 82,119
9 Claims. (Cl. 177—147)



1. A traveling block weighing device comprising a housing having a centrally disposed sheave chamber and a load hook, a load cell mounted on each side of said housing with its pressure applicating button facing downwardly, horizontally disposed flexible stabilizing bar means under each load cell with their opposite ends supported by said housing and their intermediate portions free and engaging said pressure applicating buttons, a sheave carrying pin rotatably supporting sheaves in said sheave chamber and having its ends secured to said intermediate free

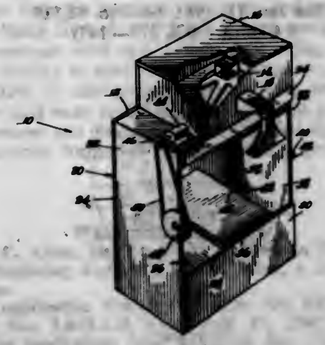
portions of said horizontally disposed stabilizing bar means and wholly supported thereby, said sheave pin being free of said housing.

3,095,058
MOTORCYCLE ORNAMENT AND SPLASH GUARD
Michael Woytowich, 78 Rutgers, Belleville, N.J.
Filed Nov. 30, 1961, Ser. No. 156,079
7 Claims. (Cl. 180—29)



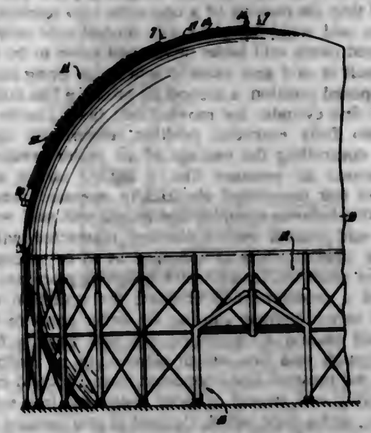
1. A motorcycle ornament and extension for dual exhaust pipes extending along opposite sides of the rear of a motorcycle and terminating at their rear ends alongside the rear wheel of the motorcycle, said ornament and extension comprising a pair of pipe members each including a longitudinally extending and laterally directed mounting plate, said plates disposed in parallel free end overlapping relation and secured together to define a brace extending between said pipe members and a splash guard adapted to pass a spaced distance behind the rear wheel, and means carried by the forward ends of said pipe members adapting the latter for communicating engagement with said exhaust pipes.

3,095,059
TONE CABINETS
Joseph H. Hearne, Corinth, Miss., assignor to The Wurlitzer Company, Chicago, Ill., a corporation of Ohio
Filed Jan. 3, 1961, Ser. No. 80,258
12 Claims. (Cl. 181—31)



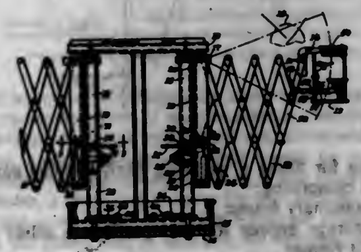
1. Apparatus for modifying the character of sound waves, said apparatus comprising: means defining a resonant air column including a pipe having a plurality of generally radially opening apertures spaced apart along the effective length of said column intermediate the ends thereof; sound generating means disposed at one end of said column and operatively connected thereto for driving said column and operatively connected thereto for driving said column; and stop means connected to said column-defining means, including closure means for each of said apertures, each of said closure means being movable in a cycle for variously obstructing the corresponding aperture.

3,095,060
SCAFFOLDING FOR DOME STRUCTURES
John P. Reinhardt, Syosset, N.Y., assignor, by mesne assignments, to Baker-Roos, Inc., Indianapolis, Ind., a corporation of Indiana
Filed June 28, 1961, Ser. No. 120,234
8 Claims. (Cl. 182—12)



1. In combination, a domed structure, an anchor at the top of the structure, scaffolding comprising a plurality of scaffold ladders provided with steps and located on the outside of the structure, means to connect said ladders in tandem, said anchor comprising a member rotatable about the vertical axis of the domed structure, cable means connecting the uppermost of said ladders to said rotatable member, dolly means connected to said cable means and engaging the outer surface of the domed structure, motive means on the scaffolding and engaging the outer surface of the domed structure for moving the scaffolding about the vertical axis of the domed structure, a hanging scaffold, and means suspending said hanging scaffold from the lowermost ladder, said last named means including means for raising and lowering the hanging scaffold relative to said lowermost ladder.

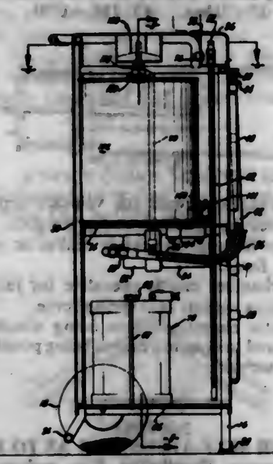
3,095,061
HYDRAULICALLY OPERATED LAZY TONGS STRUCTURE
Louis E. Gregory, 2345 S. 21st St., Rockford, Ill.
Filed July 15, 1960, Ser. No. 43,182
8 Claims. (Cl. 182—141)



1. In combination in a lazy tongs structure, a supporting frame having horizontal top and bottom members in a fixed vertically spaced relationship, a vertical standard mounted for support between said top and bottom frame members, an elongated guide member pivotally suspended on a horizontal axis at its upper end on the upper end portion of said standard adjacent said top frame member

and disposed alongside said standard, a lazy tongs boom disposed in a vertical plane and pivotally suspended on a horizontal axis at the upper end of its inner end portion relative to the upper ends of said standard and guide member and having its lower inner end portion supported on said guide member for up and down movement, power operable jack means carried vertically on the lower end portion of said guide member and operatively connected with the lower inner end portion of said lazy tongs boom to cause extension and return of said boom, a load carrier mounted on the outer end of said boom, and power operable jack means carried horizontally on said standard and operatively connected with the lower end portion of said guide member to swing it and said lazy tongs boom with it upwardly relative to said standard to raise the load carrier and support it at different selected elevations.

3,095,062
OIL CHANGE SYSTEM
George L. Neely, Berkeley, Calif., assignor to California Research Corporation, San Francisco, Calif., a corporation of Delaware
Filed Nov. 10, 1961, Ser. No. 151,494
14 Claims. (Cl. 184—1.5)



5. An evacuation system for an engine crankcase having a dip stick guide tube in downward communication therewith comprising

an open-end tubular member of a flexible non-conductive material adapted to be inserted in the dip stick guide tube,

an elongate electrically conductive probe secured within said tubular member to extend axially thereof with one end tip portion of said probe extending beyond the open end of said tubular member,

said probe having sufficient elastic restoring force to overcome flexural deformation of said tubular member,

a source of electric current,

said probe being connected to said source,

an electrically actuated signal device connected to said source and adapted to be connected to the crankcase,

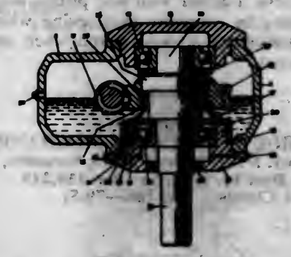
a fluid pump in communication with said tubular member,

electrically actuated pump driving means,

conductor means connecting said pump driving means across said source, and

selectively operated on-off switch means interposed in said conductor means.

3,095,063
GEAR UNITS
Maurice Eskenazi, London, England, assignor to David Brown Industries Limited
Filed Dec. 27, 1960, Ser. No. 78,605
Claims priority, application Great Britain Jan. 8, 1960
7 Claims. (Cl. 184—6)



1. A gear unit comprising a casing containing oil to a selected level, a shaft rotatably mounted within and extending downwardly through the base of the casing, a gear mounted on the shaft within the casing and forming with said shaft a sub-assembly, said gear being partly immersed in said oil, means providing an annular recess in said shaft and gear sub-assembly, said recess being open at its lower end and generally concentric with said shaft, the upper end of said annular recess being above the oil level, a removable tubular shroud member surrounding the shaft and extending from the base of the casing into the recess to terminate above the oil level, an upwardly extending boss member surrounding said shaft within said casing, and means for mounting and locating said shroud member in sealed relation upon said boss member comprising a resilient ring disposed in sealing relation between the tubular shroud member and the boss member with said locating means being coacting parts on the resilient ring and a least one of said members.

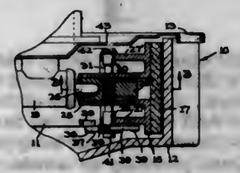
3,095,064
COMBINATION ADJUSTER AND RESET MECHANISM
James A. Tankersley and Paul A. Driscoll, South Bend, Ind.; said Tankersley assignor to The Bendix Corporation, a corporation of Delaware
Filed Mar. 21, 1956, Ser. No. 572,855
9 Claims. (Cl. 188—72)



1. In a brake, the combination of: a fluid motor carrier, a cylinder bore formed in said carrier wherein a fluid pressure is developed to cause actuation of said brake, a piston responsive to said fluid pressure slidably received in said cylinder bore, said piston being centrally apertured to receive a positioning device, said positioning device including a stem threadedly secured at one end to said carrier and having a fixed abutment at the other end thereof, a sleeve member received in the piston aperture, a friction ring encircling said sleeve, a threaded member screwed onto said piston to bear against said friction ring to develop friction which impedes relative movement between said piston and sleeve, a tubular member located

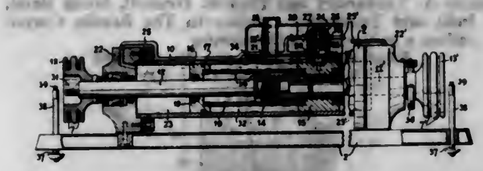
within said sleeve and operatively secured at one end thereof to said sleeve and engageable at the other end thereof with the fixed abutment on said stem to prevent further movement of said sleeve, and a spring member which is compressed between the fixed abutment on said stem and a transverse portion of said sleeve, said tubular member being constructed with a length permitting movement of said sleeve together with said piston, said sleeve movement serving to compress said spring which then exerts a retractive force on said piston when said fluid pressure is relieved.

3,095,065
BRAKE SHOE ADJUSTMENT MECHANISM
Leonard Troy, 5 Pen-Y-Bryn Drive, Scranton, Pa.
Filed Dec. 11, 1961, Ser. No. 158,219
8 Claims. (Cl. 188—79.5)



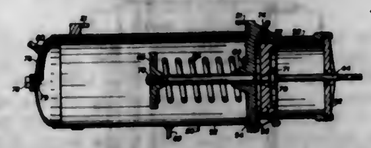
1. In a vehicle wheel brake, an elongated brake shoe having a braking surface and an integral internally threaded socket extending from adjacent one end of said shoe and opening opposite said braking surface, a pressure receiving fitting for said brake shoe adjustably threaded in said socket, and adjusting means journaled on said brake shoe directly engaging said fitting for rotating and extendibly adjusting said fitting in response to actuation of the wheel brake.

3,095,066
BRAKE FOR COFFIN-LOWERING APPARATUS
Hans Abplanalp, Jr., Busswil, near Bueren,
Canton of Bern, Switzerland
Filed Nov. 4, 1960, Ser. No. 67,432
7 Claims. (Cl. 188—97)



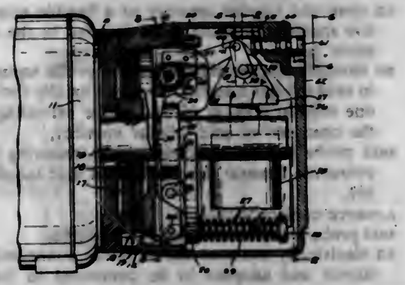
1. A braking apparatus, comprising, in combination, an elongated cylinder having a pair of end walls closing opposite ends of said cylinder; elongated shaft means extending along the axis of said cylinder and having opposite end portions extending through said end walls in sealing engagement therewith and being mounted in said end walls for rotation about said axis, said shaft means having intermediate said opposite end portions a screw portion located in said cylinder; a nut mounted in said cylinder coaxial therewith movable in longitudinal direction thereof while being prevented from turning about said axis, said nut being located about and in engagement with said screw portion of said shaft means to be moved in longitudinal direction during rotation of said shaft means; a pair of pistons located in said cylinder about and coaxial with said shaft means spaced from and respectively on opposite sides of said screw portion of said shaft means, said pistons being in sealing engagement with said shaft means and the inner surface of said cylinder, said pistons defining between faces thereof directed towards each other a reservoir and between the other faces thereof and said end walls a pair of pressure chambers, said reservoir and said pressure chambers being adapted to be filled with pressure fluid; spacer means located between said pistons and said nut and fixed at opposite ends thereto for keeping said pistons at fixed distances from said nut; conduit means for connecting said pressure chambers with each other; means attached to at least one end portion of said shaft means for applying a torque thereto tending to rotate said shaft means and to displace thereby said nut and said pistons attached thereto in axial direction so as to force pressure fluid through said conduit means from one to the other of said pressure chambers; and valve means operatively connected to said conduit means for opening and closing the latter so that when said valve means is closed said shaft means cannot be rotated if a torque is applied thereto and so that when said valve means is opened rotational movement of said shaft means will be braked.

3,095,067
SAFETY BRAKE APPARATUS FOR VEHICLE
Anthony F. Murty and Benedict P. Murty, both of
9415 SW. Florida St., Portland, Oreg.
Filed Dec. 19, 1961, Ser. No. 160,560
17 Claims. (Cl. 188—170)



1. Safety brake apparatus for vehicles comprising:
a storage reservoir for fluid under pressure,
spring means for applying safety brakes on said vehicle by spring force,
expansible chamber means operative for releasing said safety brakes against said spring force,
said expansible chamber means being attached to said reservoir and said spring means being positioned within said reservoir.

3,095,068
ACTUATOR SELF-ADJUSTING AS TO RANGE
Quinten A. Hansen, Franksville, Wis., assignor to R. H.
Stearns and R. N. Stearns, Milwaukee, Wis.
Filed Aug. 23, 1960, Ser. No. 51,437
13 Claims. (Cl. 188—171)



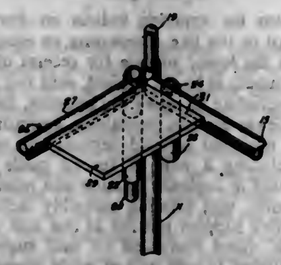
1. A self-adjusting connection for a part subject to variable displacement in the event of wear, said connection including an over-running clutch having relatively movable elements, one of which has motion transmitting connections to said part and a contractile helical spring having windings encircling said elements, and fixed stop means for relaxing the contractile grip of said spring upon one of said elements when this spring exceeds a predetermined range of movement with said elements.

3,095,069
TENT STRUCTURE
Max L. Winkler, Monterey Park, Calif., assignor to Canvas Specialty Manufacturing Company, Los Angeles, Calif., a corporation of California
Filed Nov. 21, 1960, Ser. No. 70,770
13 Claims. (Cl. 189—1)



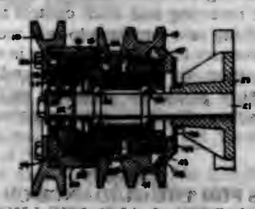
10. In a tent structure: a frame comprising spaced side poles and opposed rafters extending from said side poles toward each other and connected to each other and to said side poles; a member slidable on each rafter; a tension member extending between said rafters and through said slidable members and connected to said frame adjacent to the junctures between said side poles and rafters; and means for shifting said slidable members along said rafters to apply tension to said tension member.

3,095,070
KNOCKDOWN SCAFFOLD
David McDonald, 10 N. 2nd Ave., Birmingham, Ala.
Filed Oct. 5, 1959, Ser. No. 844,340
6 Claims. (Cl. 189—15.5)



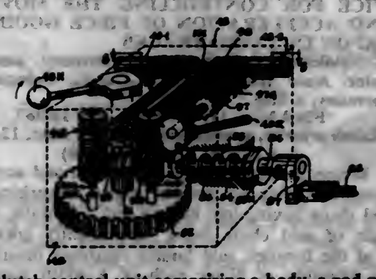
1. A knockdown scaffold comprising a pair of parallel frames detachably connected to each other, each of said frames having a pair of spaced vertical tubular end members forming the ends of the frames, at least one horizontal cross member extending between and integrally connected to the end members of each frame, each of the end members of each frame having a socket secured to the side thereof at a right angle to the longitudinal axis of the cross member thereof, the sockets on one frame facing the sockets on the other frame and having receiving ends disposed at a level adjacent the lower surface of the adjacent cross member, a detachable connecting member extending between the end members of the separate frames and having a downwardly extending pin on each end thereof fitting in the sockets of the end members between which the connecting member extends, and each end of said detachable connecting member having an abutting member extending laterally therefrom, said abutting member having an abutting surface extending in a plane generally perpendicular to the longitudinal axis of said connecting member and in contact with the integrally connected cross member directly adjacent thereto and without a mechanical attachment to retain the frames in parallel relation to each other and in a right angular relation to said detachable connecting members.

3,095,071
BAND TYPE FRICTION COUPLING
James A. Mason, Beloit, Wis., assignor to Warner Electric Brake & Clutch Company, South Beloit, Ill., a corporation of Illinois
Filed Jan. 14, 1960, Ser. No. 2,364
2 Claims. (Cl. 192—81)



1. A friction coupling having, in combination, two members disposed end to end and mounted for relative turning about a common axis, annular friction surfaces on the respective members, one of said members being a driver, a free floating friction band extending around said surfaces for free turning relative thereto, said band being changeable in diameter to grip said surfaces frictionally and thereby transmit torque from the driving member to the other member, a multiple turn helical coil of magnetic material loosely telescoped with said band, means anchoring one end of said coil to one of said members, the turn at the other end of the coil being free and constituting a magnetic armature, a magnetic core carried by the other of said members and having axially facing pole faces disposed closely adjacent one side of said band and opposing said armature to form therewith a flux path extending axially into and out of the armature, means for creating magnetic flux threading said path to draw said armature and pole faces into gripping engagement and thereby derive a pilot torque for varying the diameter of said coil in a direction to press said band against said surfaces, one side of said band extending axially into the plane of said end turn and telescoping with the latter so as to be engaged by such turn and hold the same separated at all times from the member beneath the band.

3,095,072
MACHINE TOOLS
Russel E. Frushour, Niles, Mich., and Otto A. Costello, Stephen E. Farekas, and Wayne B. Irish, all of South Bend, Ind., assignors, by mesne assignments, to Amsted Industries Incorporated, Chicago, Ill., a corporation of New Jersey
Original application Aug. 26, 1958, Ser. No. 757,371. Divided and this application Mar. 31, 1960, Ser. No. 58,871
18 Claims. (Cl. 192—82)



1. A clutch control unit comprising a body, a rod member mounted in said body for longitudinal sliding move-

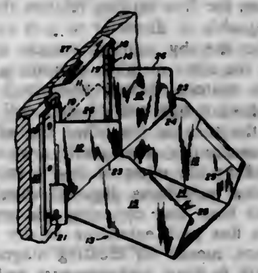
ment between first and second position and adapted to be connected to a clutch for engaging and disengaging the same, a gear member mounted in said body for movement angularly between first and second positions, means connecting the members for movement in unison between their first and second positions, spring means urging said members to said first position, first and second latching devices operable, respectively, to latch said members in said first or second positions, reversible latch control means for releasing one of said latch devices and concurrently rendering the other latch device operative, manual means for reversing said latch control means, manual means for shifting said members to said second positions, and control plungers in said body facing in opposite directions for actuation by the table dogs and connected to said latch control means for releasing said second latch device when either of said plungers is actuated.

3,095,073

APPARATUS FOR THE GUIDANCE OF GRANULAR MATERIAL AND THE LIKE

Ernest Oscar Larson and Roy Larson, both of R.R. 1, New Norway, Alberta, Canada

Filed Nov. 20, 1961, Ser. No. 153,273
9 Claims. (Cl. 193—33)



1. Apparatus for the guidance of granular material and the like emanating from an aperture located in a wall, comprising a pair of wings adapted to project from the wall, one positioned on each side of the aperture, a chute having a floor and a pair of side walls, the side walls of the chute being adapted to be detachably appended one from each wing in a first angular position of the floor of the chute with respect to the plane of the wall by means on each side wall adapted to interengage with means on the lower portion of its associated wing whereby the floor extends in a downward sloping direction, and in a second angular position by means on each side wall adapted to interengage with the upper edge of its associated wing whereby the floor extends in an upward sloping direction, the floor being adapted to bear against the wall below the aperture.

3,095,074

DEVICE FOR CONTROLLING THE MOVEMENT AND ACCELERATION OF PIECE GOODS SLIDING ON INCLINED TRACKS

Karl Neidhardt, Cologne-Deutz, Germany, assignor to Heinr. Anor Mühlenwerke K.G.a.A., Cologne-Deutz, Germany, a firm

Filed Mar. 11, 1960, Ser. No. 14,467
Claims priority, application Germany Mar. 12, 1959
3 Claims. (Cl. 193—40)

1. Means for retarding the movement and acceleration of bundles sliding on inclined tracks comprising an enclosed chute having top, bottom and side walls, the cross section of said chute being only slightly greater than that of the bundles, said bundle retarding means including a plurality of plates each of a width substantially equal to the width of the chute, means pivoting the end of each plate on the approach side of the bundles to a wall of said chute, a flexible air-impermeable member secured between the other end of said plate and the wall to which it is pivoted, forming an air chamber wholly contained within said chute wherein the air is automatically compressed by passage of a bundle through the chute against said plate, the space between the walls adjacent the sides of said plate and the edges of the plate forming relatively restricted openings for the relatively slow escape of air from the air chamber after passage of a bundle.

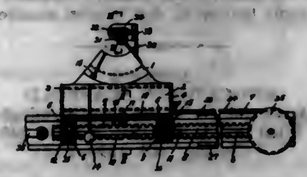


3,095,075

APPARATUS FOR DRAWING LINES AND MARKING MEASUREMENTS AND INSCRIPTIONS ON DRAWINGS

Otto Butter, Neckargemund, Germany, assignor to Gesellschaft fur Industrielle Technik m.b.H., Heidelberg, Germany, a firm

Filed Jan. 6, 1961, Ser. No. 81,107
Claims priority, application Germany Mar. 23, 1960
6 Claims. (Cl. 197—2)



1. Apparatus for applying indicia on drawings on a drawing board or the like comprising an elongated guide rail having a flat lower surface for receipt of a drawing onto which indicia is to be applied, said rail including a vertical rib including an upwardly opening, longitudinally extending raceway portion therealong, a printing assembly reciprocably mounted on said vertical rib, said printing assembly including a pair of spaced guide wheels rotatably mounted in coplanar relation and received on said raceway portion, said printing assembly including a laterally projecting support portion at one side of said rail, a third guide wheel journaled on said support portion in parallel relation to said pair of guide wheels providing a three point, anti-friction support for said printing assembly, said printing assembly including at least one operating key and vertically pivotal type lever, said support portion including inking means adjacent said third guide wheel for engagement by type on said type lever when type indicia is applied.

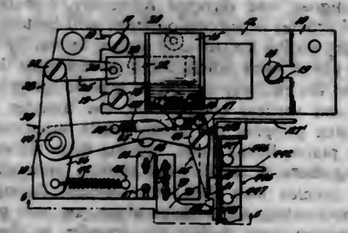
3,095,076

CARRIAGE ESCAPEMENT MECHANISM

George J. H. Sensale, New Providence, N.J., assignor to American Type Founders Co., Inc., Elizabeth, N.J., a corporation of Delaware

Filed July 30, 1962, Ser. No. 213,417
7 Claims. (Cl. 197—84)

1. In a typographic composing machine which comprises a carriage spring-urged in the direction to progress a receiving medium thereon past an imprinting position, carriage escapement controlling means including means for selectively varying the increments of escapement according to the nature of the characters or spaces involved, and a spring retracted reciprocating escapement trip slide for effecting the carriage escapement: operating means for said trip member comprising an actuator member having a releasable operative connection with said trip slide; electro-magnetic means for moving said actuator member in the same general direction as said trip slide and in proximity thereto, and in the return direction; means for tripping said releasable connection at a point near the end of the movement of said moving means in said first direction, to release the escapement trip slide for quick return under spring retraction.

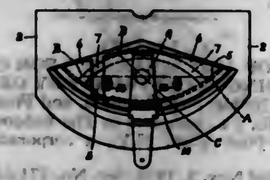


3,095,077

UNIVERSAL BAR FOR TYPEWRITERS

Edward Victor Byers, 16 Barrack Lane, The Park, Nottingham, England

Filed Feb. 5, 1960, Ser. No. 7,014
4 Claims. (Cl. 197—97)



1. Typewriter carriage escapement operating mechanism comprising in combination a type bar segment, type bars including type bar levers pivotally mounted in the type bar segment, a universal bar mounted on the back of the type bar segment and being in the form of a plate, an arcuate flange on one edge of the plate for engagement by the type bar levers, a fulcrum for the plate of arcuate form, the fulcrum for the plate being formed by the edge of a rib-like part on the back of the type bar segment, and a pivoted arm which engages with the plate and is adapted to connect the arm to the carriage escapement.

3,095,078

PAPER BAIL CONSTRUCTION AND MOUNTING

Aaron C. Zoumer, Groton, N.Y., assignor to Smith Corona Marchant, Inc., Syracuse, N.Y., a corporation of New York

Filed Sept. 1, 1960, Ser. No. 53,454
3 Claims. (Cl. 197—138)



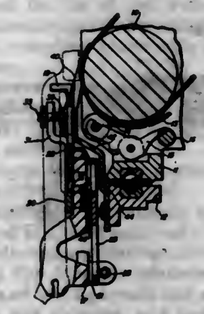
1. In combination with a carriage, a rotatable platen and a work sheet retaining bail mounted for movement into and out of cooperation with said platen to hold work sheets wrapped around the platen, said bail comprising a pair of similar arms pivoted at opposite ends of the platen and a rigid bar overlying the platen when in operative position and interconnecting the ends of said arms remote from their pivots, at least the ends of said bar being of non-circular cross section, the adjacent faces of said ends of said arms having non-circular recesses therein of substantially identical cross sectional configuration to the ends of said bar, the ends of said bar projecting into said recesses in firm interlocking relation and means fastening said bar and arms together at the ends of said bar in rigid assembly.

3,095,079

TYPEWRITER PRINT CONTROL

Joseph L. Morelli, Hartford, Frederick A. Brignole, Jr., Granby, and Lloyd E. Hare, Hartford, Conn., assignors to Royal McBee Corporation, Port Chester, N.Y., a corporation of New York

Filed Aug. 4, 1961, Ser. No. 129,327
15 Claims. (Cl. 197—183)



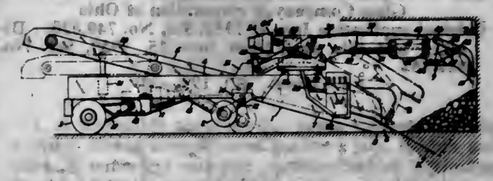
1. In a typewriter having a movable cylinder for operatively supporting variable numbers of superimposed record sheets, a plurality of type bars pivotally mounted for selective printing movement towards said cylinder and record sheets, and a banking ring adapted to be engaged by said type bars during their respective printing strokes; the improvement comprising means mounting said banking ring for movement to different operative positons so as to vary the ring-cylinder clearance of the machine, and resilient means adapted to engage the record sheets for shifting the operative position of said banking ring in accordance with the cumulative thickness of the record sheets supported by said cylinder.

3,095,080

HOE TYPE LOADING MACHINE

John H. Wagner, Franklin, Pa., assignor to Joy Manufacturing Company, Pittsburgh, Pa., a corporation of Pennsylvania

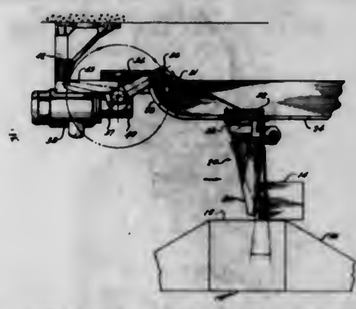
Filed Dec. 18, 1958, Ser. No. 781,297
11 Claims. (Cl. 198—19)



1. In combination, a mobile base having front and rear ground engaging supporting means, a material gathering mechanism comprising a boom carrying a material gathering element movable along said boom, means for mounting said boom for swinging movement in at least a vertical plane relative to said base, power means

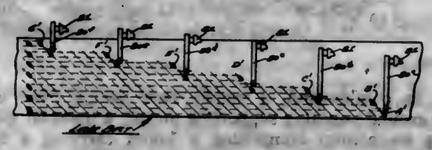
for swinging said boom to engage said gathering element with the ground for elevating the forward end of the machine so that said front ground engaging means are disengaged from the ground and with the base at that time entirely supported by its rear supporting means and said boom, and selectively operable means for moving said material gathering element along said boom to move said mobile base in either of opposite directions over the ground relative to said boom, and means for swinging said boom horizontally about a vertical axis, while said machine is supported as aforesaid to move said mobile base relative to said boom on its rear supporting means.

3,095,081
TRANSFER MECHANISM
Raymond A. Anderson, Wood Dale, Ill., assignor to Stewart-Warner Corporation, Chicago, Ill., a corporation of Virginia
Filed Aug. 7, 1961, Ser. No. 129,600
7 Claims. (Cl. 198—24)



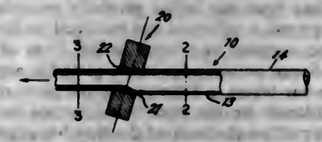
1. In a transfer mechanism for transferring an object to and from a moving conveyor member including a paddle assembly translatable along a horizontal support member transversely positioned above said conveyor member and means for reciprocating the paddle assembly along the horizontal support member from a position adjacent one side of the conveyor to a position whereat the paddle assembly engages the object, said paddle assembly comprising a rider member in translatable engagement with said horizontal support member, a paddle member rigidly supporting a pivot shaft, means on said rider member flexibly and resiliently journaling said shaft for rotation about an axis aligned in a direction parallel with the movement of said conveyor member, and spring means between said paddle member and said rider member to absorb shock forces when sadi paddle member encounters a heavy object on the conveyor.

3,095,082
METHOD FOR HANDLING GLASSWARE ARTICLES
Guy H. Allgeyer, Godfrey, Ill., assignor to Owens-Illinois Glass Company, a corporation of Ohio
Original application June 5, 1958, Ser. No. 740,020. Divided and this application June 15, 1959, Ser. No. 820,452
6 Claims. (Cl. 198—30)



1. The method of handling irregularly shaped molded articles which are shaped and adapted to stand in upright position on a horizontal bottom support with their axes vertical, said method comprising bringing the articles in succession in pairs spaced apart horizontally at fixed distances and at regular intervals for support on a pair of mold bottom plates, their major horizontal dimensions being aligned and directed forwardly, transferring the pairs of articles in succession from said bottom plates to a delivery station horizontally spaced forwardly from said bottom plates, each article being moved from the bottom plates to the delivery station in a path comprising horizontal and vertical components, the transfer operation comprising gripping the article while supported on the bottom plates, lifting them, moving them forwardly and lowering them at the delivery station, maintaining each of the articles with their axes vertical throughout the transfer, rotating the articles about an axis parallel to their vertical axes during the transfer to the delivery station so that the major horizontal dimension of each is in predetermined position of rotation, shifting the pair of articles horizontally toward each other during said rotation thereof to close the spacing therebetween, releasing the ware at said delivery station to a horizontally traveling conveyor which receives the articles in plural rows, the articles being oriented by said rotation so that their major horizontal dimension extends substantially parallel and at an angle of 45° with the direction of travel of said conveyor, the spacing between the articles in a direction normal to their major dimension being substantially equal to the height of the articles, whereby tipping of one article will avoid falling against other articles.

3,095,083
METHOD OF AND APPARATUS FOR CORRECTING TUBING ECCENTRICITY BY DRAWING
Chalmers L. Hebble, New Brighton, and Frank L. Boyer, Beaver Falls, Pa., assignors to The Babcock & Wilcox Company, New York, N.Y., a corporation of New Jersey
Filed Nov. 3, 1958, Ser. No. 771,642
7 Claims. (Cl. 205—4)



1. A method of increasing by a pre-selected maximum amount the wall thickness of a metal tube through a selected arc of the tube circumference, comprising the steps of drawing the tube through an annular reducing die, having a flared entry throat, to reduce the tube diameter; and, during such drawing, selectively tilting the die so that the die axis intersects the axis of the tube entering the die at an angle proportional to such pre-selected amount to exert on the tube wall within said selected arc a radial unit pressure greater than that exerted on the remaining portion of the tube circumference, by virtue of the angular relation of the flared entry throat and entering tube axes, to crowd metal of the tube wall, within such selected arc, circumferentially of the tube to increase the tube wall thickness within said selected arc.

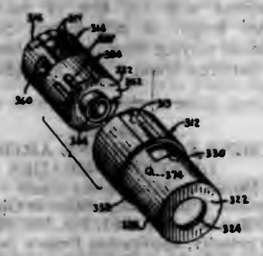
3,095,084
COIN WRAPPER
Roby Byron White, 381 N. Main St., Sharon, Mass.
Filed June 3, 1960, Ser. No. 33,677
3 Claims. (Cl. 206—.83)

1. In combination,
a stack of coins,
a flexible plastic sheet drawn tightly about more than 180° and less than 360° of the circumference of the stack of coins and more than half and less than the entire ends of the coin stack and thereby providing



a trough-like coin package with a cylindrical wall and a pair of unfolded end walls,
said end walls being defined by an arc of more than 180° and a cord smaller than the diameter of the stack.

3,095,085
POCKET CONTAINERS FOR THE SELECTIVE DISPENSING OF TABLETS
Leo Meijer, 4900 N. Marine Drive, Chicago 40, Ill.
Filed Oct. 15, 1959, Ser. No. 846,656
2 Claims. (Cl. 206—42)



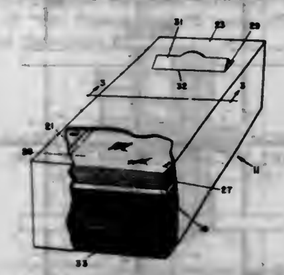
1. In a container for the selective dispensing of medical tablets and similar small articles, an elongated outer cylindrical shell having its forward end open, a generally cylindrical compartmented core mounted for rotation and limited sliding movement within said shell and defining a series of elongated, longitudinally extending, circumferentially spaced compartments, each adapted to contain a plurality of tablets, there being a discharge opening in the wall of said shell adjacent the forward end of the latter and designed for selective register with the said compartments upon relative rotation between the shell and core, a generally cylindrical closure member for said common discharge opening having an outer cylindrical wall telescopically and slidably received over the open end of the shell, means constraining said closure member and core to move bodily as a unit between a rear retracted position wherein the cylindrical wall of the closure member at least partially covers said common discharge opening and a series of forward advanced positions wherein such wall at least partially uncovers said latter opening, said core being formed with a series of circumferentially spaced, longitudinally extending elongated recesses therein, each recess providing a forwardly facing shoulder at the rear end thereof, and an inwardly extending locking lug carried by said shell and designed for selective locking register with said recesses when said core and closure member are moved toward their forward advanced positions, each forwardly facing shoulder being engageable with said locking lug when its respective recess is in register with the lug to limit the extent of forward movement of the core and closure member relative to the shell to limit, in turn, the extent to which the common discharge opening is uncovered by said wall of the closure member.

3,095,086
PLATFORM CARTON
Robert A. Berg, Chicago, Ill., assignor to Weyerhaeuser Company, Tacoma, Wash., a corporation of Washington
Filed Apr. 19, 1961, Ser. No. 104,026
4 Claims. (Cl. 206—45.19)



1. A carton comprising a base having upstanding side, front and rear walls,
a platform within the said carton located between said base and the top of said walls, said platform being approximately parallel to said base,
side flaps extending downwardly from the sides of said platform,
said platform having locking apertures adjacent the juncture of said side flaps and said platform, said apertures being inward of the front and rear edges of said side flaps,
said platform also having a product holding aperture in the center portion thereof,
bellows fold members hingedly connected to said side wall and said front wall, and extending between said side walls and said platform side flaps,
a locking flap hingedly connected to the upper edge of each of said side walls and extending downwardly toward said platform, said locking flap having locking tabs on its outer edge extending through said locking apertures,
a cover member hingedly connected to said rear wall, said member having downwardly extending front and side flaps.

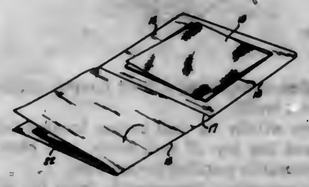
3,095,087
COMBINATION TISSUE DISPENSING AND DISPOSAL CONTAINER
Sam M. Yates, 1315 Delafield Place NW., Washington 11, D.C.
Filed Jan. 12, 1960, Ser. No. 1,916
6 Claims. (Cl. 206—57)



1. A disposable container for paper tissue comprising a major closed compartment having a top, bottom and sides, a semi-rigid movable partition having depending flaps in slidable contact with the sides of said container for forming upper and lower minor compartments within said major compartment, said partition being in substantially parallel relationship with said top and said bottom, a folded expansible closed container within said lower minor compartment and secured only to said partition and

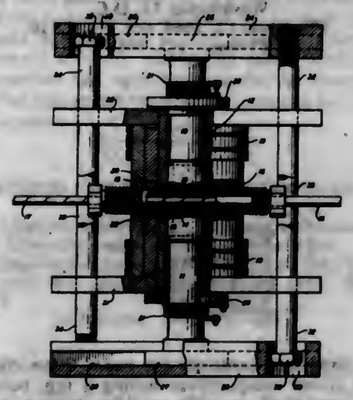
the inner face of said bottom for providing an airtight seal between said upper and lower minor compartments, an aperture in said top and an aperture through said bottom and the portion of said expansible container secured thereto whereby access to said expansible container is provided only through said bottom.

3,095,088
STERILE SURGICAL DRESSING UNIT
William R. Blaikie, Watchung, and James H. Murray, Plainfield, N.J., assignors to Johnson & Johnson, a corporation of New Jersey
Filed Sept. 27, 1961, Ser. No. 141,063
2 Claims. (Cl. 206—63.2)



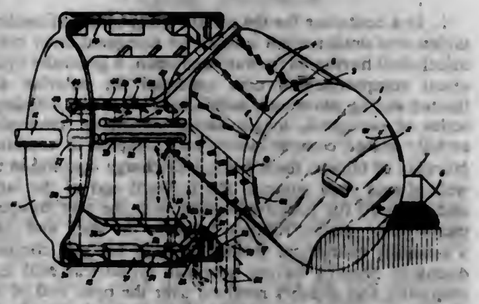
1. A sterile surgical dressing unit comprising in combination a surgical drape having a plurality of folds therein, a plurality of surgical articles disposed within and completely encompassed by said folds and a sealed outer wrapper enclosing said folded drape, said surgical articles being disposed in successive folds of said drape in a predetermined sequence paralleling the steps of a surgical dressing procedure, whereby on opening said sealed outer wrapper, removing said folded surgical drape and unfolding the plurality of folds of said drape successively, surgical articles useful in the surgical dressing procedure are made available successively as needed in said dressing procedure.

3,095,089
PRESS FOR TUBULAR EXTRUSION
George M. Bouton, Madison, and John H. Helm, Jr., Union, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Jan. 26, 1955, Ser. No. 484,163
7 Claims. (Cl. 207—4)



1. A press for extruding a metal covering on an electrical cable core comprising a chamber for containing metal to be extruded, a coacting extrusion die and core tube situated within said chamber, said die and core tube each having an inner bore, said die and core tube inner bores being centered about coincident axes, the bore of said die being larger than the bore of said core tube, the outer surface of the portion of said core tube adjacent to said die being in the form of a first right, circular, conical frustrum having its axis coincident with the axis of the bore of said core tube and having the edge of its smaller diameter base coincident with that end of the bore of said core tube which is adjacent to said die, said outer surface forming an angle of between 20 degrees and 45 degrees with its axis, the end of the die adjacent to said core tube having an opening constituting an enlargement of the bore of said die, said opening being in the form of a second right, circular, conical frustrum having its axis on the same line as the bore and having the edge of its smaller diameter base coincident with the edge of said die bore, the surface of said second conical frustrum forming an angle with the axis of said second conical frustrum which is between 5 degrees and 10 degrees larger than the angle formed by the surface of said first conical frustrum, the outer surface of the portion of said die adjacent to said core tube being in the form of a third right, circular, conical frustrum having its axis coincident with the axis of the die bore and having the edge of its smaller diameter base coincident with the edge of the larger diameter base of said second conical frustrum the surface of said third conical frustrum forming an angle of between 30 and 60 degrees with the axis of said third conical frustrum, the length of said second conical frustrum along its conical surface from its larger base to its smaller base being between about 5 mils and about 50 mils.

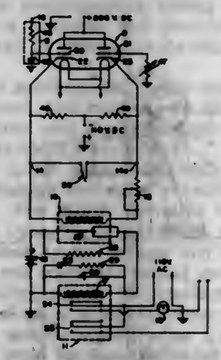
3,095,090
MACHINE FOR SORTING ARTICLES OF DIFFERENT GRADES
Paul Louis Duran, Abidjan, Ivory Coast (Rue des Folles Entreprises, L'Isle-Adam, Seine-et-Oise, France)
Filed Feb. 20, 1961, Ser. No. 90,449
Claims priority, application France Jan. 14, 1961
7 Claims. (Cl. 209—111.5)



7. A machine for sorting articles of different grades, chiefly grains, fruit, ore and the like showing different magnetic, radioactive, optic and the like properties, comprising a cylinder having a horizontal axis, a plurality of rows of article-catching members carried by said cylinder along curvilinear lines extending from one end of the cylinder to the other and in which said members are distributed substantially in successive transverse planes, said members being adapted to catch the articles near the lower end of the cylinder and to follow the upward movement of the upwardly moving section of the cylinder and then the downward movement of the downwardly moving section of the cylinder down to a predetermined level, means constraining said members to release the articles when they reach said level to cause them to drop in succession in a predetermined plane, a rotary disc extending laterally of the cylinder and revolvable round a horizontal axis substantially perpendicular to the cylinder axis,

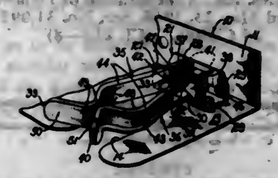
at least one arm carried by said disc, scanning means carried by each arm and including two interchangeable reflecting surfaces, the paths followed by which lie to either side of the plane in which the articles drop off the cylinder, optical means including a source of light extending along the axis of the disc, means forming with the light from said source two beams impinging on the corresponding reflecting surfaces, two chromatic selecting means subjected to the action of the light reflected by the corresponding reflecting surfaces, a photo-cell subjected to the action of each monochromatic beam of light produced by each chromatic selecting means, a reference reflective surface illuminated by said source of light, a further chromatic selecting means subjected to the action of the light reflected by the reference surface, a further photo-cell subjected to the action of each monochromatic beam of light produced by said further chromatic selecting means, at least one electric bridge fed by the currents passing out of the cells illuminated by light of a same color, means for synchronously driving the cylinder and the disc, a plurality of flaps registering substantially with each transverse plane of the cylinder and adapted to be shifted each out of its normal vertical position into an oblique position for which it shifts the corresponding dropping article out of the plane in which it drops, an electromagnet controlling each flap, means associating and amplifying the currents produced by lack of equilibrium in the bridges and feeding them into the electromagnets, and a rotary switch rigid with the disc and controlling last-mentioned means to feed that electromagnet which corresponds to the transverse plane in which the scanning of the dropping article is being performed.

3,095,091
CIGARETTE EJECTING SYSTEM
Julian A. Blunt, Louisville, Ky., assignor to The American Tobacco Company, New York, N.Y., a corporation of New Jersey
Filed July 21, 1959, Ser. No. 828,526
5 Claims. (Cl. 209—121)



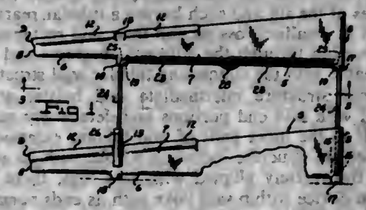
1. In a cigarette maker, means for selecting and ejecting off-weight cigarettes, which includes a measuring head and circuit means connected thereto adapted to generate electric signals commensurate with the weight of tobacco in the cigarettes, a differential amplifier which has a signal input electrode and an output circiut, means for establishing in said output circuit a a preselected reference voltage representative of a preselected cigarettee weight, a polarized relay having an actuation coil connected in said output circuit so as to respond to signal voltage in both polarities, a second relay having an actuating coil connected to be energized by operation of said polarized relay in either direction, a cigarette catcher belt, a stacker belt spaced therefrom, a cigarette ejector including a movable vane positioned normally to bridge the space between said belts so as to provide a conveying surface therebetween, electromechanical means for moving said vane so as to interrupt said surface and prevent cigarettes from being conveyed to said stacker belt, electric connections operatively connecting said second relay to said electromechanical means, first delay-circuit means connected to said signal input electrode, and second delay-circuit means connected to the actuating coil of said second relay, said first and second delay-circuit means together being proportioned such that the time delay between the detection of an off-weight cigarette and the resultant operation of said ejector is substantially equal to the travel time of a cigarette between said measuring head and said ejector.

3,095,092
HOLDER FOR TOOLS AND THE LIKE
Masick C. Magarian, P.O. Box 494, Fresno, Calif.
Filed Nov. 21, 1960, Ser. No. 70,621
6 Claims. (Cl. 211—60)



5. A tool holder comprising an elongated channel-shaped member having a base and a pair of substantially parallel legs integral with the base, the legs having openings therein providing spaced substantially parallel facing edges normal to the base, a pair of fingers extended through the openings of the legs providing arcuate cooperative tool gripping portions laterally adjacent to a leg of said member, each finger having a substantially straight portion within the member engaged outwardly against corresponding edges of each leg and each finger having portions engaging the legs to limit longitudinal movement of the fingers, a compression spring positioned between the fingers within the member and holding the fingers outwardly against the edges with which they are engaged, and means retaining the spring in said finger engaging position whereby the tool gripping portions of the fingers can be separated to receive or to release a tool by pivoting the fingers about the respective edges of the leg adjacent to said gripping portions and compressing the spring, and whereby engagement of the fingers with the respective edges of the opposite leg limits movement of the gripping portions of the fingers toward each other under the urgency of the spring.

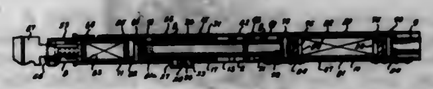
3,095,093
TRAYS
Andrew Polak, 49 Columbus Ave., Garfield, N.J.
Filed Aug. 16, 1961, Ser. No. 131,871
4 Claims. (Cl. 211—126)



1. A tray having side and end walls and adapted to be disposed in vertically spaced relation with a similar tray,

said first mentioned tray being provided at one end with interiorly disposed rod retaining means and with said side walls and one of the end walls being equipped with flanges, a pair of rods extending upwardly from said tray for supporting said similar tray thereabove and having pairs of coincident end sections, one pair of said end sections intersecting said flanges of said side walls and detachably connected to said side walls and the other pair of end sections being detachably connected to said retaining means for maintaining said rods in position for supporting the similar tray, said flanges adapted to embrace the side walls and an end wall, respectively, of the similar tray to constitute a closed receptacle when said end sections are detached from said side walls and said retaining means and said similar tray reversed end for end over said first mentioned tray.

3,095,094
CUSHIONED UNDERFRAME
Richard L. Lich, Ferguson, Mo., assignor to General Steel Industries, Inc., a corporation of Delaware
Filed May 23, 1960, Ser. No. 31,095
24 Claims. (Cl. 213—8)



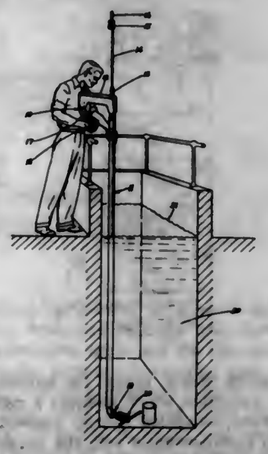
21. A railway car underframe structure comprising an elongated center sill and two pairs of transversely extending aligned bolster arms intersecting said sill and spaced lengthwise of the sill from each other and each spaced from an opposite end of said sill, said sill and bolster arms being generally of hollow rectangular cross section, with common top and bottom walls in the region of their intersections and the adjacent sill and bolster arm side walls arcuately merging with each other, vertical webs extending transversely of said sill between the side walls thereof adjacent the arcuate mergers of the sill and bolster arm sidewalls, said vertical webs being centrally apertured, tubular wall structure registering with said apertures and extending between adjacent transverse vertical webs, vertical web structures extending longitudinally of the underframe and connecting the top and bottom of said tubular wall structure with said top and bottom walls and extending between and merging at its ends with adjacent transverse vertical webs, an additional transverse vertical web intermediate adjacent bolster arm side walls and extending across said sill and terminating at both sides thereof laterally outwardly of the arcuate mergers between said sill and bolster arm side walls, a pair of longitudinally spaced pairs of transversely-aligned inwardly directed lugs formed on said sill side walls intermediate said spaced pairs of bolster arms and forming a cushion pocket between them, a draft column longitudinally slidably received within said sill and comprising separate end sections of rectangular cross section positioned in the spaces between said bolster arms and the adjacent end of the sill and slidably engageable with inner surfaces of the sill and each having a tubular rearward extension of smaller cross section than said rectangular sections passing through the adjacent apertures and slidably engageable with the connecting tubular wall structure, and columnar structure intermediate said bolster arms and aligned with said end portions and detachably secured at its ends to the inner ends of said tubular extensions, said intermediate structure including a yoke with its ends normally transversely aligned with said lugs, there being a cushion device within said yoke with its ends normally engaging the ends of said yoke and said lugs whereby energy imparted to said column by the application thereto of buffing and draft forces is dissipated.

3,095,095
MANIPULATOR
Jean-Claude Mettetal and Georges Fritz, Paris, France, assignors to Electricite de France—Service National, Paris, France, a French organization
Filed Apr. 20, 1960, Ser. No. 23,474
Claims priority, application France July 28, 1959
23 Claims. (Cl. 214—1)



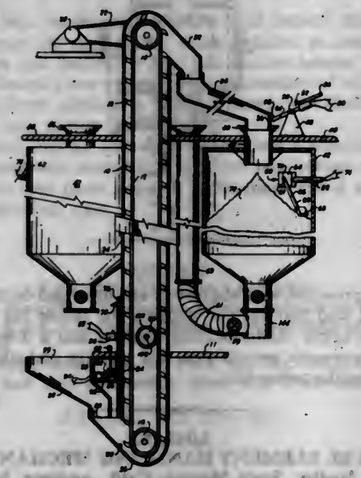
1. A handling apparatus, mountable in a tunnel, comprising: an elongated first arm and means supporting same for movement in the direction of its lengthwise extent; means carried by said first arm for moving same in the direction of its lengthwise extent; a second arm mounted on the front end of said first arm for pivotal movement about a first pivot axis which extends transverse to the lengthwise extent of said first arm, said second arm extending from said first arm in the direction of the lengthwise extent of said first arm; means for effecting pivotal movement of said second arm with respect to said first arm about said first pivot axis; a third arm mounted on the front end of the second arm for pivotal movement about a second pivot axis perpendicular to said first pivot axis and transverse to the lengthwise extent of said first arm; means for effecting pivotal movement of said third arm with respect to said second arm; clamping means carried by said third arm and means for opening and closing said clamping means.

3,095,096
MANIPULATOR
Frank G. Chesley, Red Wing, Minn., assignor to Central Research Laboratories, Inc., Red Wing, Minn., a corporation of Minnesota
Filed Mar. 27, 1961, Ser. No. 98,365
7 Claims. (Cl. 214—1)



1. A remote control master-slave manipulator comprising a master arm, a slave arm and an interconnecting housing between said master arm and slave arm, means for freely suspending said entire manipulator for rotational, side-to-side, forward-and-backward, and up-and-down movement above a work area, wrist joint and handle means at the end of said master arm, wrist joint and tong means at the end of said slave arm, and linear motion transmission means movable in response to manipulation of said handle means extending between the ends of said master and slave arms through said interconnecting housing to cause corresponding manipulation of said tong means.

3,095,097
GRAIN ELEVATOR CONTROL SYSTEM
Paul A. Mellow, Box 184, Hillsdale, Okla.
Filed June 13, 1960, Ser. No. 35,776
11 Claims. (Cl. 214—2)



1. In a grain elevator having a plurality of storage bins, a vertical conveyor, a discharge spout adjustably connected to the top of said conveyor for delivering grain to said bins, scales for weighing and delivering grain, and a discharge chute over said scales and connectible to said bins and said discharge spout for delivering grain to said scales—an elevator control system which comprises:

(*a*) means for simultaneously halting the supply of grain to said conveyor and providing visible and audible signals in response to the filling of said bins with grain;

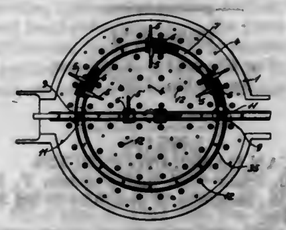
(*b*) means for indicating the proper alignment of said discharge spout with each of said bins as said bins are filled from said discharge spout and for indicating the bin which is being filled;

(*c*) electrical circuit means electrically connected to said grain halting and signal providing means and including a first switch operative in response to loading and unloading of said scales, and a counting device actuated by the opening and closing of said first switch and connected to said grain halting and signal providing means for simultaneously halting the supply of grain to said conveyor and providing visible and audible signals when a predetermined quantity of grain has been delivered by said scales and indicated on said counter; and

(*d*) means responsive to the speed of said conveyor for halting the supply of grain to said conveyor.

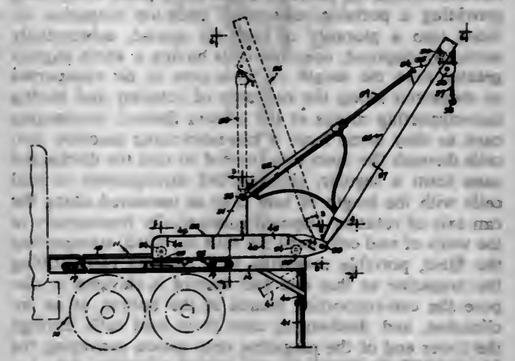
3,095,098
APPARATUS FOR THE CONVEYING OF SILO GOODS
Johannes Maaløe, Gorlev, Denmark, assignor to Aktieselskabet de Danske Sukkerfabrikker, Copenhagen, Denmark
Filed Feb. 20, 1961, Ser. No. 90,469
Claims priority, application Denmark Feb. 26, 1960
6 Claims. (Cl. 214—17)

1. A conveying apparatus for operative association with any one of a plurality of openings of a silo, such openings being distributed both radially and circumferentially over the cross sectional area of said silo, and an exchange station common to said openings, said apparatus comprising an annular band conveyor movable in a horizontal plane around a vertical axis located in a central position with respect to the silo, said annular band conveyor being located in an intermediate position



between the radially outermost and innermost openings of the silo, and at least one chute device movable along the length of the band conveyor and adjustable radially thereof so as to be selectively connectable to silo openings in an annular zone extending radially inwards and outwards of the band conveyor thereby to transfer goods between such openings and the annular band conveyor.

3,095,099
SELF-LOADING FLAT-BED TRUCK
Daniel R. Costello, 20028 15th NE., Seattle, Wash.
Filed Feb. 8, 1961, Ser. No. 87,883
3 Claims. (Cl. 214—77)



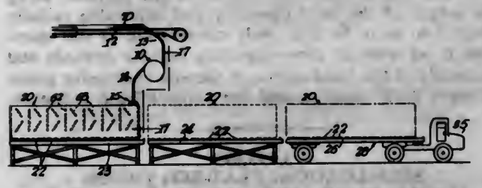
1. In combination with a wheeled vehicle having a load-receiving flat bed extending between outwardly facing longitudinal channel members of a vehicle frame, a respective rail extending longitudinally of the bed in surmounting relation to said channel member, a respective carriage providing wheels at the front and rear ends riding upon each of said rails, rollers journaled from each of the carriages bearing upon the underside of the upper flange of the related channel to counter forces imposed upon the carriages tending to up-end the same, a respective set of front and rear sprocket wheels journaled at each side of the bed for rotation about transverse horizontal axes which coincide as between the two sets, a respective chain for each of said sets trained about the sprocket wheels and dead-ended to the related carriage, said chains and the sprocket wheels about which they are trained being wholly housed by the related channel member of the frame in the space between the channel flanges, power-driven means for turning said two sets of sprocket wheels in unison in either direction selectively for moving the carriages along the rails, a unitary swing-frame formed to a yoke shape so as to provide upright side arms connected across

the top by a bridging cross-arm and having the lower ends of said side arms co-axially pivoted one to one and the other to the other of the two carriages for fore-and-aft swing movement about a transverse horizontal axis, hoist means carried by the cross-arm of the swing-frame, and power-operated means for moving said swing-frame in its said swing movement.

ERRATUM

For Class 214—83.36 see:
Patent No. 3,095,570

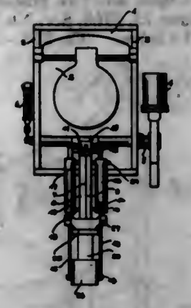
3,095,100
CAN HANDLING PROCESS
Lee E. Russell, Plant City, and Franklin P. Robinson, Lakeland, Fla., assignors of one-third to Ira B. Russell, Plant City, Fla.
Filed Mar. 29, 1957, Ser. No. 649,501
8 Claims. (Cl. 214—152)



1. The process of transporting cylindrical cans from a can-manufacturing plant to a can-using plant comprising providing a portable, elongated, open-top magazine divided into a plurality of laterally spaced, substantially vertically disposed, open-top cells having a width slightly greater than the length of such cans to be transported as measured along the can axis of rotation and having can-supporting means at the bottom thereof, discharging cans as they come from a can-fabricating machine into cells through the open tops thereof so that the discharged cans form a regular, close-packed arrangement in said cells with the length of said cans as measured along the can axis of rotation disposed substantially transversely to the walls of said cells until the cells are filled, transporting the filled, portable magazine to a canning plant, tilting the magazine so that one end thereof is elevated to dispose the can-supporting means at the bottom at an inclination, and discharging cans from said cells through the lower end of the magazine onto means conveying the cans to filling apparatus.

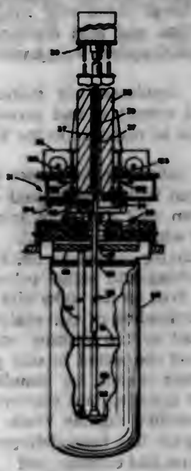
3,095,101
LIFT TIPPER, ESPECIALLY FOR REFUSE BINS
Hans Zöller, deceased, late of Laubenheim, near Mainz, Germany, by Elisabeth Katharina Zöller, nee Kehl, and Helga Schulz-Zöller, nee Zöller, heirs, both of 50–60 Wormserstrasse, Laubenheim, near Mainz, Germany
Filed July 15, 1960, Ser. No. 43,242
Claims priority, application Germany July 21, 1959
7 Claims. (Cl. 214—302)

1. Lift tipper, especially for refuse bins, comprising in combination with a chute a swing arm for swinging a refuse bin into the chute, a lifting carriage arranged for hanging the refuse bin thereon and guided along said swing arm, power means for mechanically swinging said swing arm, said carriage, and said refuse bin, said swing arm composed of two channel irons placed back to back, inwardly directed guiding elements mounted on said lifting carriage and engaging in the lateral longitudinal channels between the flanges of said channel irons, an eye arranged at the upper end of said swing arm, an abutment for the carriage provided on said swing arm below said eye, a carrier on said swing arm, two cylinders fixed on said carrier one on each side of said swing arm, pistons slidable under the action of a pressure medium in said cylinders and each provided with a piston rod, two lugs on said carriage in engagement with said piston rods, two



hooks provided with abutments and arranged on the upper end of said carriage for hanging the refuse bin thereon, and an upper elastic bearing member and a lower elastic bearing bracket provided on said carriage and constituting rests for the refuse bin.

3,095,102
FUEL ELEMENT HANDLING MECHANISM
Harry Nadler, Santa Monica, Calif., assignor, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission
Filed Mar. 28, 1960, Ser. No. 17,955
3 Claims. (Cl. 214—698)



1. A device for handling a vertically disposed rod comprising:
(*a*) grapple means having a radially inwardly extending end portion;
(*b*) linkage means connected to said grapple end portion and movable about a pivot point on said end;
(*c*) first and second drums;
(*d*) means mounting said first and second drums for rotation about a common shaft so that only said second drum rotates freely about said shaft;
(*e*) tape means for supporting said grapple means along a longitudinal axis having a first tape connecting said grapple means to said first drum and

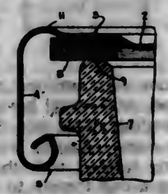
further having a second tape connecting said linkage means to said second drum;
(*f*) a first drive means for rotating said first and second drums;
(*g*) a lost motion means between said first and second drums;
(*h*) said lost motion means including an arcuate slot of predetermined length in said first drum and a pin extending from said second drum slidable in said slot;
(*i*) a bias means connected to said second tape for rotation of said second drum relative to said first drum and limited by said lost motion means;
(*j*) a second drive means for contrarotation of said second drum relative to said first drum and limited by said lost motion means; and
(*k*) said limited arcuate rotation and contrarotation moving said second tape to move said linkage means about said pivot point in a direction lateral to said longitudinal axis.

3,095,103
CLOSURE FOR CONTAINERS
John W. Harrison, Winchester, Mass., assignor to W. R. Grace & Co., Cambridge, Mass., a corporation of Connecticut
Original application Nov. 25, 1959, Ser. No. 855,376. Divided and this application Nov. 23, 1960, Ser. No. 80,716
2 Claims. (Cl. 215—38)



1. In combination, a container having a lip surrounding an opening, and a closure for said container, said closure comprising a layer of heat shrinkable film of a size covering the entire opening and lip of the container, said layer of heat shrinkable film having its edges shrunk about said lip, and a layer of non-heat shrinkable material conformed and held in position at its edges to the lip of the container by the layer of heat shrinkable film, said non-heat shrinkable layer being metal particles vacuum-metalized to the surface of the heat shrinkable film and being shiny across the top of the closure and dull on the edge portion which has been conformed to the lip by the shrunk edges of the film.

3,095,104
CLOSURE CAP AND METHOD OF MAKING
Harry E. Stover and Daniel D. Acton, Lancaster, Ohio, assignors to Anchor Hocking Glass Corporation, Lancaster, Ohio, a corporation of Delaware
Filed June 10, 1960, Ser. No. 35,201
1 Claim. (Cl. 215—40)



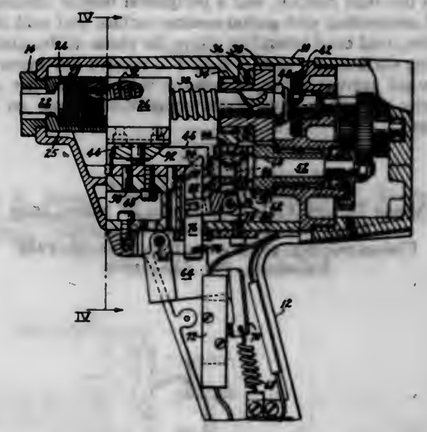
A closure cap having a cover portion and a depending skirt portion, a flat peripheral annular gasket-seating surface in said cover portion, the plane of said gasket seating surface being substantially parallel to and spaced above the plane of the cover portion, a sealing gasket seated on said gasket-seating surface, said sealing gasket having a peripheral outer edge and being of a diameter less than the diameter of the skirt portion of the closure cap so that its peripheral outer edge is spaced inwardly from the skirt portion, and a peripheral hollow clearance bead connecting said gasket-seating surface and said skirt portion, said bead extending above the plane of the gasket-seating surface and being adapted to receive any inwardly deflected portion resulting from a blow to the cap and thereby prevent release of the compression force on the gasket.

3,095,105
ATOMISER HOLDERS
Mario Turatti, Viale Coni Zugna 29, Milan, Italy
Filed Mar. 8, 1961, Ser. No. 94,236
Claims priority, application Italy Mar. 23, 1960
5 Claims. (Cl. 215—100)



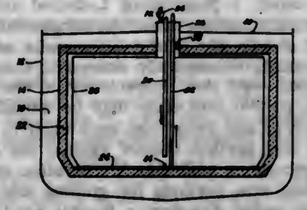
1. An adjustable holder for attachment of an atomizer to a container neck, comprising, in combination, a cap formed with a plurality of radial slots angularly displaced from each other; a plurality of L-shaped arms having each a first arm portion extending substantially parallel to said cap at one side of the latter and a second arm portion extending substantially normal to said first arm portion through said slots, respectively, to the other side of said cap so that said arms may be moved in radial direction toward and away from each other to abut with the second arm portion thereof against the neck of a container; means on said cap in operative engagement with said first arm portions for guiding said arms for movement in radial direction; a flexible band extending about said second arm portions engaging the outer surfaces thereof; means on said second arm portions slidingly engaging said band for holding the same on said second arm portions; and adjustable clamping means operatively connected to said band for tightening said band about said second arm portions to press the latter in tight engagement with the neck of the container, whereby said holder is adapted to fit tightly on container necks of widely differing diameters.

3,095,106
AUTOMATIC RIVET SETTING TOOLS
Ralph A. Morrison, Topsfield, Mass., assignor to United Shoe Machinery Corporation, Boston, Mass., a corporation of New Jersey
Filed Dec. 28, 1961, Ser. No. 162,804
7 Claims. (Cl. 218—42)



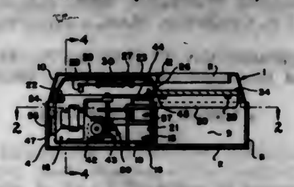
1. An automatic power tool for setting blind rivet assemblies, by tensioning a mandril stem portion until said stem becomes severed, comprising: gripping means engageable with the stem of a rivet setting mandril and movable from a forward extended position to a rearward retracted position; a ball bearing jack screw and nut assembly operatively connected with said means; power means, including a rotary electric motor and a shiftable clutch assembly, for rotating the screw in a direction to retract the gripping means; manually operated control means for engaging the clutch; automatic means, responsive to the retraction of the gripping means, for disengaging the clutch; and resilient means, responsive to the disengagement of the clutch, for automatically restoring the gripping means to the forward extended position.

3,095,107
STABILIZATION MEANS FOR STORAGE TANKS
Heinrich W. Bergmann, Norman, Okla., assignor to Conch International Methane Limited, Nassau, Bahamas, a corporation of the Bahamas
Filed Mar. 16, 1961, Ser. No. 96,120
8 Claims. (Cl. 220—15)



1. In the storage and transportation of a material having a temperature differing widely from ambient temperature, a container of large capacity having a relatively flat bottom, means for mounting said container within a supporting structure in a manner to stabilize the position of the container within the supporting structure while permitting free expansion and contraction due to temperature change, comprising a flooring forming a part of the supporting structure having a relatively flat top surface upon which the container rests, an elongated key member extending upwardly from the surface of the floor to extend lengthwise of the container, a pair of elongated members secured to the bottom of the container in alignment with the key member and spaced one from the other laterally by an amount corresponding to the width of said key member to form a keyway dimensioned slidably to receive the key member therebetween when the container is properly positioned within the supporting structure, and a spacer between the bottom wall of the container and the supporting floor dimensioned to have a thickness greater than the maximum thickness of any one of the members including the key and keyway but less than the sum of the thicknesses thereof whereby the key will be received within the keyway without engagement with the bottom wall of the container and without the keyway engaging the surface of the floor when in the assembled relationship.

3,095,108
SELF CLEANING ASH TRAY
Archibald M. McKenzie, 3968 Marine Drive, West Vancouver, British Columbia, Canada
Filed Sept. 5, 1961, Ser. No. 135,917
9 Claims. (Cl. 220—20.5)



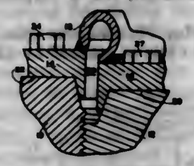
1. A self-cleaning ash tray comprising a casing having a top opening, a plate depressably supported in the casing beneath the top opening, said plate being slidably mounted for reciprocatory movement in a horizontal plane, a wiper blade engaging the top surface of the plate adjacent a side edge thereof, a motor in the casing and having a drive shaft, reciprocating means operatively connecting the drive shaft of the motor to the plate, means for starting the motor in response to downward pressure being applied to the plate and means for stopping the motor as the plate returns to its original position beneath the top opening.

3,095,109
PREMIUM CONTAINER
Norman T. Exton, Harbor Acres, Sands Point, N.Y., assignor to Gilbert Manufacturing Company, Inc., Long Island City, N.Y., a corporation of New York
Filed Oct. 22, 1959, Ser. No. 848,019
7 Claims. (Cl. 220—23)



1. The combination of a unitized premium container for use with a vessel, said vessel having a shoulder and a neck portion extending above said shoulder, said neck having an opening communicating with the contents of the vessel and being formed with thread-like members thereon for holding a cap thereto to seal the said contents in the vessel, said premium container comprising a base member having an opening therein for fitting around said neck, said base member resting on the shoulder of said vessel, an inner wall extending upwardly from said base around said opening and surrounding at least a portion of said neck, said inner wall having a opening at the top thereof which is subtantially coaxial with the opening in the base, a rim around the outer edge of said base, said rim being lower in height than said inner wall, a one-piece cover formed with a wall having a bottom portion which engages the rim to hold the cover to the base and a top portion which extends over said base and lies adjacent the top of said inner wall, said cover having an opening in the top thereof which is substantially coaxial with the opening in the inner wall, said base and cover forming a unitized container for holding a premium therein when separated from said vessel, and a cap member having means thereon for fastening said cap to the thread-like members on said neck, said cap sealing the contents of the vessel therewithin and having a flange portion adjacent said cover for securing the container to said vessel.

3,095,110
CLOSURE MEANS
Elwood K. Pierce, Jr., Houston, Tex., assignor to Gray Tool Company, Houston, Tex., a corporation of Texas
Filed June 1, 1960, Ser. No. 33,212
15 Claims. (Cl. 220—46)



1. Closure means for sealing an opening in a pressure vessel casing comprising:
(*a*) load bearing plug means engageable in said opening in tightly secured relation, the outer surface of said plug means having an axially extending frustro-conical sealing surface, and an axially extending frustro-conical sealing surface on said casing around said opening in cooperative alignment with the sealing surface of said plug means, defining with said plug means sealing surface a first pair of concentric sealing surfaces, the planes of said first pair of frustro-conical sealing surfaces intersecting one another;
(*b*) sealing means constructed and arranged to be joined to the open end of said pressure vessel and the outer surface of said plug means in bridging relationship to the joint between said plug means and said pressure vessel, said sealing means including a second pair of concentric frustro-conical sealing surfaces extending axially inwardly in cooperative relationship with said first pair of outwardly extending concentric sealing surfaces and aligned therewith for sealingly engaging the latter for preventing fluid leakage between said plug means and said pressure vessel casing;
(*c*) and a pair of resilient, concentrically spaced apart deflectable lips of hard metal or the like carrying one of said pairs of sealing surfaces, the included angle of the sealing surfaces on said lips being normally less than the included angle of the other pair of sealing surfaces, said lips being operative for transverse deflection to engage their sealing surface into mating stressed sealing engagement with the other pair of sealing surfaces, the internal energy in said lips creating a fluid seal between said sealing surfaces to thereby seal the joint between said plug means and said pressure vessel.

3,095,111
CHIME STRUCTURES FOR BARRELS
Harry Mulder, Akron, Ohio, assignor to The Firestone Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
Filed Nov. 4, 1960, Ser. No. 67,188
2 Claims. (Cl. 220—66)



1. In a barrel having a dome shape end wall surface, a pair of disconnected double-walled chime sections, each of said chime sections comprising a unitary fabricated structure having a circumflexed flat top surface and outwardly sloping side surfaces projecting downwardly from the periphery of said circumflexed surface, said sloping surfaces bordered at their base by an inclined angular peripheral flange, each said peripheral flange of said pair shaped to conform with and be secured to the end wall surface of said barrel and each chime section extending axially beyond and partially encircling said end wall surface so as to leave portions of the end wall surface free between the respective adjacent ends of said pair of chime sections for the drainage of accumulations of water or beverage.

3,095,112
SEALING CONTAINER COVER AND WALL MEMBERS
Meir Weinstein, Chicago, and Howard Primack, Stickney, Ill., assignors to The Richardson Company, Melrose Park, Ill., a corporation of Ohio
Filed Dec. 11, 1961, Ser. No. 158,364
2 Claims. (Cl. 220—67)

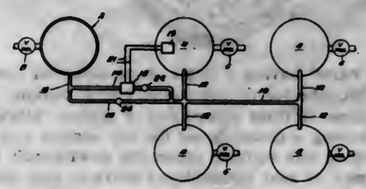


1. A method of sealing cover and wall members of a container which comprises passing current through an electrically conductive element in contact with thermoplastic material containing particulate thermally sensitive blowing agent, said thermoplastic material being positioned where cover and wall members are to be sealed whereby the heat generated through power loss in said electrically conductive element causes melting of said thermoplastic material which under gaseous pressure developed by said thermally sensitive blowing agent flows to produce a bond between said members when the current is stopped and the generated heat is dissipated.

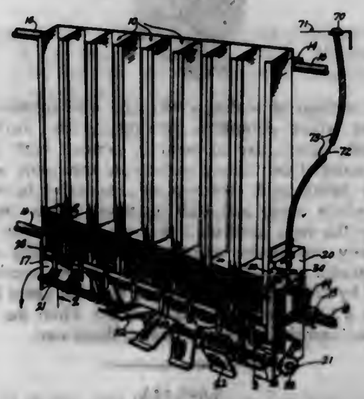
3,095,113
VALVE STRUCTURE FOR STORAGE TANK SYSTEM
Robert W. Bodley, Highland, Ind., assignor to Union Tank Car Company, Chicago, Ill., a corporation of New Jersey
Filed Aug. 1, 1960, Ser. No. 47,575
8 Claims. (Cl. 220—85)

8. A storage tank system comprising a fixed volume storage tank, a variable volume storage tank, means for

providing vapor communication between said fixed volume storage tank and said variable volume storage tank, a valve structure provided in said vapor communication means for controlling flow between said tanks in opposite directions, and including a first line connected to said fixed volume storage tank, a second line connected to said variable volume storage tank, a first movable pallet positioned in said valve structure adapted to control flow in said valve structure between said first line and said second line, a second movable pallet positioned in said valve structure adapted to control flow in said valve structure between said second line and said first line and operable in response to a predetermined pressure differential existing between said variable volume storage tank and said fixed volume storage tank, and a pressure responsive arrangement including a chamber provided with a diaphragm member connected to said second movable pallet and eductor means having a first end in communication with said chamber and a second end disposed in said first line to decrease the pressure in said chamber when vapor flows through said first line to said fixed volume storage tank and cause said diaphragm member to maintain said second pallet in an open position without chatter to effect flow from said variable volume storage tank to said fixed volume storage tank as long as a pressure differential exists between the tanks.

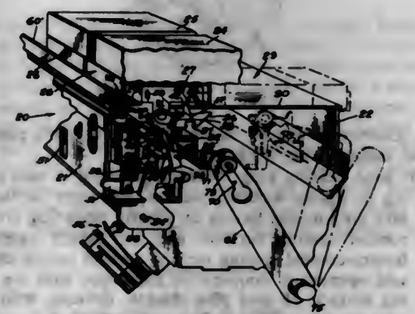


3,095,114
PACKET EJECTOR WITH OPTIONAL LATCH
Arthur A. Tobias, Morton Grove, Ill., assignor, by mesne assignments, to Rock-Ola Manufacturing Corporation, Chicago, Ill., a corporation of Delaware
Filed Sept. 14, 1960, Ser. No. 55,945
7 Claims. (Cl. 221—114)



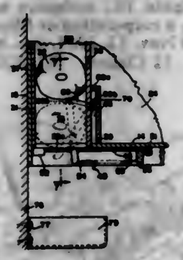
1. Actuating mechanism for a package-ejecting mechanism to be selectively pre-set for automatic or manually-controlled ejecting action, and comprising, namely: an ejector shaft to be advanced unidirectionally step-by-step; a ratchet wheel fast with said shaft; a reciprocable driving pawl for advancing said ratchet wheel in steps, said pawl being provided with latch means; cooperative electromagnetic and spring means operatively connecting with said pawl for reciprocating the same; and selectively pre-set latch means for said pawl including a latch lever pivotally mounted adjacent thereto and having a latching part cooperable with the latch means on said driving pawl disposed for movement into latching relation with said pawl in a certain position thereof responsive to rocking of the latch lever in a certain direction, and movable out of said latching relation responsive to movement in an opposite direction; spring-attachment means on said latch lever on opposite sides of the rocking axis thereof together with selector spring means having optional operative connection with said latch lever at one or the other of the attachment means on respectively opposite sides of the rocking axis thereof as aforesaid and effective to urge the latch lever either in said certain direction or oppositely thereto depending upon which of said optional connections is used, whereby said lever is rendered effective to latch the pawl or rendered inoperative for this purpose; and manually operable means having an impositive driving relation with said latch lever for moving the same out of latching engagement with said pawl.

3,095,115
DELIVERY MECHANISM FOR VENDING MACHINES
Herman G. Jensen, Chicago, Ill., assignor to The Seeburg Corporation, Chicago, Ill., a corporation of Pennsylvania
Filed May 27, 1960, Ser. No. 32,343
11 Claims. (Cl. 221—129)



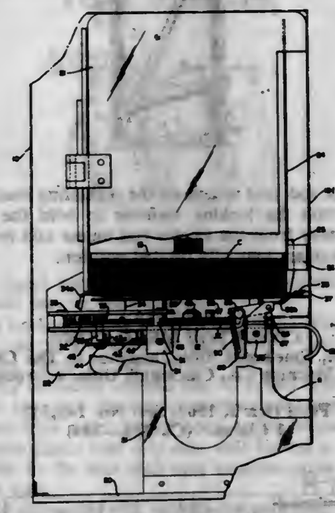
4. In a delivery mechanism for vending machines of the type adapted to dispense the lowermost article from a selected one of a row of columns containing stacks of articles to be dispensed, an apparatus comprising a frame including an upper horizontal surface extending the length of said row of columns and having a plurality of transverse guide slits therein, one for each column; a plurality of delivery slides positioned upon said horizontal surface and adapted to reciprocate in a horizontal plane thereon, one of said slides normally being positioned beneath each of said columns so as to support a stack of articles; a plurality of guide members, one affixed to each slide, said members being accommodated respectively in said transverse slits so as to project downwardly beneath said horizontal surface; a reciprocating bar extending the length of said row of columns and positioned beneath said horizontal surface; a plurality of coupling means one of which is movably mounted on each of said guide members and each adapted upon actuation to couple its associated delivery slide to said bar; means for selectively conditioning said slides and coupling means for actuation including a plurality of solenoids and a plurality of latch-release mechanisms controlled thereby, one for actuating each of said coupling means; and means for reciprocating said bar in a horizontal plane whereby the delivery slide corresponding to the selected column will be carried along the path of its respective guide slit so as to be moved from beneath its stack of articles and thence will be returned to its normal position whereby the lowermost article from said selected column will be ejected.

3,095,116
CABINET-TOILET TISSUE DISPENSER
Delbert W. Kolbe, 11349 Palm St. NW., Coon Rapids, Minn.
Filed Oct. 6, 1958, Ser. No. 765,370
10 Claims. (Cl. 221—151)



3. Apparatus suitable for storing items of a first variety and both storing and dispensing items of a second variety comprising a cabinet having a side, back and bottom walls connected together, said cabinet having a front access aperture to permit storing materials in the interior of the cabinet, a vertically extending dispenser housing for holding articles to be dispensed mounted in the cabinet within close proximity of the back wall, spaced a substantial distance away from said access aperture and having both a top inlet opening and a bottom discharge opening, said cabinet having a bottom discharge opening coextensive with the dispenser housing discharge opening, said bottom wall being of sufficient area intermediate the access opening and the dispenser housing to permit storing various items therein, closure means movably mounted on the cabinet between positions for alternately closing said cabinet discharge opening and permitting an article to be dispensed to be discharged therethrough, and means extending into the dispenser housing connected to the closure means and operated by the closure means for alternately retaining all the articles in the dispenser housing other than the article to be discharged when the closure means is moved to a discharge position and permitting the thus retained articles to move downwardly in the dispenser housing upon the closure means being moved to a close position, said retaining means including an elongated vertically extending lever arm pivotally secured to the dispenser housing intermediate the ends of said lever arm, the lower end of the lever arm extending into the cabinet discharge opening, a horizontal member mounted on the upper end of said lever arm and being of a length to extend into the midportion of said housing, the lever arm in a vertical position having the upper end thereof spaced from the closure means in a closed position approximately a distance equal to the height of the article to be dispensed, and means for connecting the lower end of the lever arm to the closure means to pivot said lever arm to move the horizontal member into the central portion of said housing prior to the closure means being moved to a fully open position to prevent more than one item being discharged for each operation of the closure means between a closed and an open position, said closure means being a door slidably mounted on the bottom wall for movement between a closed position and an open position and engageable with the lower end of the lever arm to move said lever arm and the horizontal member out of the central portion of the housing upon said door being moved to a closed position.

3,095,117
CARD VENDING MACHINE
Lincoln M. Keefe, Elmhurst, N.Y., assignor, by mesne assignments, to The International Postal Supply Corporation, a corporation of Massachusetts
Filed July 10, 1959, Ser. No. 826,354
7 Claims. (Cl. 221—152)



1. A vending machine comprising a magazine for a stack of pliable cards, the magazine having a throat affording clearance for edgewise exit of the leading card alone of the stack, card ejecting means manually actuated to eject the leading card partially from the magazine and advance it via the magazine throat to a manual seizure position, detent means normally disengaged from the ejecting means, and card-actuated means engaged by a face of the card, being ejected, and actuated by this card, under the confining restraint of the magazine throat on the opposite face of the card, during the advance of the card to the seizure position and while the card remains in seizure position, for causing the detent means to engage the ejecting means to block a repeat card ejecting actuation thereof after removal of the card from the seizure position.

3,095,118
EJECTOR CONTROL MECHANISMS FOR STRAW DISPENSERS
Leonard A. Wills, P.O. Box 7354, Benjamin Franklin Station, Washington 4, D.C.
Filed Oct. 19, 1960, Ser. No. 63,669
17 Claims. (Cl. 221—152)

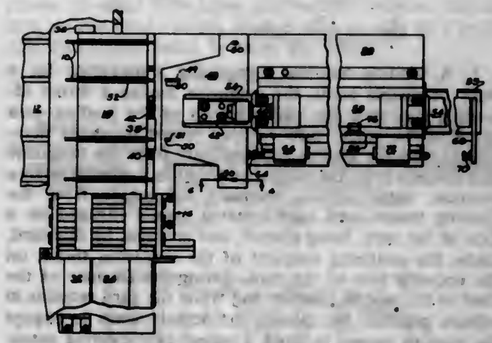
1. In a sipping straw dispenser, a receptacle adapted to support a plurality of straws in upright positions, said receptacle having an inclined bottom wall element on which the bottom ends of the straws tend to gravitate downwardly, an upwardly tapering top cover on the receptacle formed with a discharge opening at its apex, a vertical ejector rod slidably mounted in the receptacle adjacent to and extending through the lowermost portion of said bottom wall element and extending through said top cover, vertically spaced prong elements on the ejector rod located to engage in the bottom ends of straws when the ejector rod is elevated and to lift the straws toward said discharge opening, a regulating member pivoted to said top cover

and being rotatable upwardly by the top end of a straw passing through the discharge opening at said apex, a locking member pivoted to said top cover adjacent said ejector rod and being biased towards locking engagement with



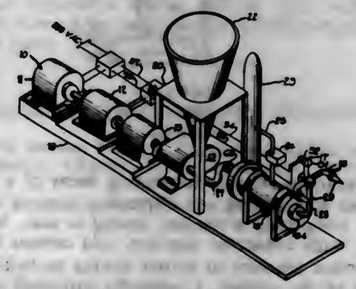
said ejector rod, and means on the regulating member engageable with the locking member to hold the locking member away from the ejector rod unless said regulating member is in an upwardly rotated position.

3,095,119
CONVEYOR MECHANISM
Henry Gill, Cincinnati, Ohio, assignor to The Cincinnati Milling Machine Co., Cincinnati, Ohio, a corporation of Ohio
Filed Oct. 2, 1961, Ser. No. 142,317
1 Claim. (Cl. 221—234)



An automatic conveyor mechanism adapted to move workpieces into a receiving mechanism comprising, a magazine having a discharge chute in which a single file stack of elongated workpieces can be maintained for gravity discharge therefrom one at a time, a carriage below said magazine having a plane upper surface closely spaced from said discharge chute to engage the lowermost workpiece therein and support the stack, said carriage movable between extremes defining a loading position adjacent said receiving mechanism and a retracted position, said plane upper surface having a series of spaced slots thereacross parallel to the stack of workpieces in said discharge chute, each of said slots adapted to allow the lowermost workpiece only to fall therein when moved beneath said chute, a fluid motor having a piston rod therein connected to said carriage for reciprocation of said carriage beneath said magazine between said extreme positions thereof to pass said slots beneath said chute, a ram adjacent said carriage in the loading position and opposite from said receiving mechanism, said ram having pins depending therefrom in alignment with each of said slots when said carriage is in said loading position, said pins received in said ram for limited movement parallel to said slots, yieldable bias springs to hold said pins in said ram toward said receiving mechanism, a piston and cylinder motor coonnected to said ram and selectively operable for reciprocation of said ram parallel to said slots between extremes defining a retracted position and an advanced position to push workpieces from said slots into the receiving mechanism, and a set of limit switches operable by movement of said carriage and ram between extremes to coordinate alternate operation of said motors.

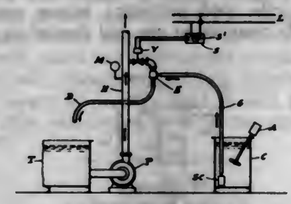
3,095,120
PUMPING SYSTEM FOR MEAT EMULSIONS
Charles S. Steiner, Homewood, and Julian G. Atwater, Chicago Heights, Ill., assignors to Swift & Company, Chicago, Ill., a corporation of Illinois
Filed Nov. 12, 1959, Ser. No. 852,386
12 Claims. (Cl. 222—1)



1. A method of compensating for variations in demand for flow of a food emulsion, said method comprising: pumping said emulsion through a passageway which at all times conforms to streamline flow therethrough at a rate of flow at least equal to the maximum expected demand for said emulsion; measuring the pressure of said emulsion in said passageway; expanding said passageway as demand falls below said maximum demand and while the pressure of said emulsion increases through a given pressure range, thereby dampening the rate of increase of said pressure and storing a quantity of said emulsion within said passageway; terminating the pumping of said emulsion upon the pressure in said passageway exceeding said given range; supplying demand for said emulsion immediately subsequent to said termination from said quantity stored within said passageway so long as the pressure therein remains within said given range; and recommencing pumping said emulsion upon the pressure within said passageway decreasing below said given range.

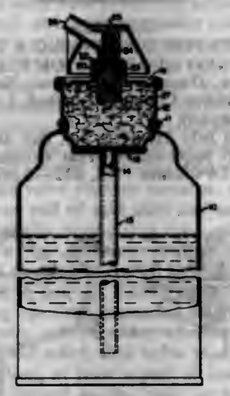
3,095,121
CHEMICAL FEED CONTROL SYSTEM
Alfred Dosty, Wyncote, and Dwight E. Buczkowski, Ambler, Pa., assignors to Amchem Products, Inc., Ambler, Pa., a corporation of Delaware
Filed Oct. 20, 1960, Ser. No. 63,918
2 Claims. (Cl. 222—52)

1. A chemical feed control system comprising a reservoir containing a relatively dilute chemical treating solution, a supply tank containing a relatively concentrated solution of said chemical, an aspirator, a suction conduit connecting the aspirator with the concentrated solution in said supply tank, a conduit adapted to deliver dilute solution from the reservoir to the aspirator, a pump for placing the dilute solution which is delivered to the aspirator under pressure above atmospheric pressure, said aspirator being actuated by said dilute solution under pressure to effect said withdrawal of concentrated solution, the concentrated and the dilute solutions being mixed by the aspirator, a second conduit independent of the conduit which delivers dilute solution to the aspirator, said second conduit delivering said mixture to the dilute solution reservoir, the discharge of said mixture being open to the atmosphere at a point above the level of the solutions in the reservoir and in the tank, a valve controlling the flow of dilute solution to the aspirator, and means intermittently opening said valve as desired to effect withdrawal of concentrated solution, mixture thereof with dilute solution and delivery of the mixture to said reser-



voir as described, all of said parts being so constructed and arranged that, when the valve which controls the flow of dilute solution to the aspirator is closed, the solution remaining in the second conduit which delivers the mixture to the dilute solution reservoir, in the aspirator itself and in the suction conduit which connects the aspirator with the concentrated solution tank, will run back into the concentrated solution tank whereby the aspirator, the dilute solution delivery conduit and the concentrated solution suction conduit will be washed free of solution and sediment.

3,095,122
AEROSOL DISPENSERS
Edward M. Lewlecki, Hingham, and Meyer J. Shaitzler, Brookline, Mass., assignors to The Gillette Company, Boston, Mass., a corporation of Delaware
Filed Dec. 9, 1959, Ser. No. 858,456
5 Claims. (Cl. 222—146)



1. A device for preparing and dispensing heated foam, comprising a container for a supply of a liquid colloidal dispersion of a volatile propellant in a soap solution, a cylindrical heat-conductive chamber of sheet metal projecting in exposed position from said container and having an inlet connection within the container and an outlet in its outer portion, heat-conductive means in and in contact with the walls of said chamber, and a circular baffle in said chamber above the inlet connection shaped to direct liquid from said inlet connection into heat exchange relation with the outer walls of said chamber and said heat-conductive means.

3,095,123
AMBULANT LIQUID SPRAYING PUMP AND SUPPLY TANK
Alfred P. Smith, Sr., Alfred P. Smith, Jr., and William T. Jones, Utica, N.Y., assignors to D. E. Smith & Company, Inc., Utica, N.Y., a corporation of New York
Filed June 18, 1959, Ser. No. 821,213
1 Claim. (Cl. 222—175)



In a liquid spraying apparatus transportable on the back of the user, in combination,

a fluid holding casing adapted to quickly receive, hold, and discharge liquid at atmospheric pressure, the casing being of transversely elongated shape, said casing including integral top, side, and bottom walls, said top wall having an unobstructed centrally located filler cap opening open to the atmosphere to receive liquid and said side wall having a discharge outlet in the side wall and continuous to said bottom wall,

a pump connected with said discharge outlet,

the improvement comprising means within said casing for stabilizing its fluid contents while the user is walking and operating the pump to balance the load on the back of the user and also to insure constant liquid flow to the discharge outlet,

said means including,

an internal vertical baffle disposed perpendicularly across the short dimension of said casing substantially at the axis of the filler opening and terminating at the top a short distance beneath the top wall, and having a bottom edge contacting the bottom wall and with bottom edge cut away at an angle adjacent each vertical wall to thus provide liquid passages both at the top and at the bottom,

said baffle defining with the side walls equal sized fluid stabilizing compartments in communication with said discharge outlet,

and a combined single plane strainer and baffle member disposed at a steep angle from the bottom wall and over said discharge outlet toward the related vertical wall of the casing, the bottom edges of the internal baffle and the strainer being parallel to provide a fluid outlet chamber, the bottom of the strainer openings and the bottom of the discharge outlet being in a common plane parallel to the bottom wall to provide between said plane and the bottom wall, a space for the deposition of non-fluid heavy foreign materials,

said vertical baffle and combined strainer and baffle member cooperating to maintain equalization of fluid pressure at either side of the baffle and in said chamber during the pumping operation of fluid from said outlet,

whereby, when the container is in use, a fluid head is constantly maintained at the discharge outlet until the pump has exhausted the strained fluid contents in the outlet chamber of the casing.

3,095,124
BLEEDING APPARATUS FOR HYDRAULIC BRAKE SYSTEMS

Walter F. Wesley, 2410 Garfield Ave. S., Minneapolis, Minn.
Filed Mar. 9, 1960, Ser. No. 13,828
2 Claims. (Cl. 222—189)



1. A brake bleeding apparatus for use in applying even and constant hydraulic pressure to a hydraulic brake system during a brake bleeding operation, said apparatus comprising

an elongate cylindrical member defining a brake fluid reservoir therewithin and having a fluid outlet at one end thereof and having an aperture at the other end thereof,

a piston positioned within said cylindrical member for axial movement relative thereto,

an elongate piston rod having one end thereof rotatably secured to said piston for rotation relative thereto and having the other end thereof extending through the aperture in said other end of the cylindrical member, said rod being extensibly and retractably movable through said aperture for moving said piston axially of said cylindrical member,

resilient means urging said piston towards said one end whereby piston pressure will be applied to brake fluid within said reservoir,

cooperating retaining elements on said rod and cylindrical member respectively being engageable with each other for retaining said rod in a selected one of a plurality of adjusted positions and said retaining elements being readily disengageable to permit said piston to be moved toward said one end under the influence of said resilent means,

an elongate flexible tubular member having one end thereof connected to said cylindrical member in uninterrupted communication with said fluid outlet and having coupling means at the other end thereof for ready connection to the inlet of a master brake cylinder,

and a perforate member disposed across said fluid outlet and having perforations therein sufficiently small in size such that the surface tension of the hydraulic brake fluid will cooperate therewith and being the sole means to preclude the flow of fluid therethrough in absence of external pressure.

3,095,125
LIQUID MEASURING AND DISPENSING DEVICE

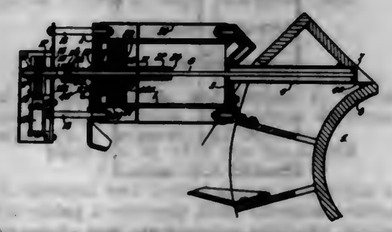
Maurice G. Bundy, Kansas City, Mo., assignor to The Industrial Fumigant Co., Kansas City, Mo., a corporation of Illinois
Filed Feb. 29, 1960, Ser. No. 11,615
4 Claims. (Cl. 222—309)

3. A liquid measuring and dispensing device comprising a tubular housing adapted to be connected to a source of liquid under pressure, a discharge nozzle in fluid communication with said housing, a piston reciprocably positioned in said housing, means positioned in said housing for normally urging said piston downwardly, by-pass means in said housing for dividing said liquid into two streams so that one stream enters said housing below said piston and the other stream enters said housing above said piston, first valve means in said housing for normally admitting said other stream of liquid into said housing, said first valve means including a reciprocable plunger for closing the same when moved downwardly, second valve means in said housing for normally closing the fluid communication between said body and said discharge nozzle, said second valve means including a reciprocable plunger for opening the same when moved downwardly, activating means on said housing for reversing the normal condition of said first and second valve means whereby the pressure of said one stream of liquid forces said piston upwardly to dispense the liquid thereabove out of said discharge nozzle, said activating means comprising a lever pivotally mounted at one end thereof on said housing above said plungers and spring means for normally urging said lever upwardly, said lever movable to simultaneously urge both of said plungers downwardly, cut-off means in said housing for releasing said activating means when the liquid above said piston is dispensed so that said first and second valve means are returned to their normal condition, said cut-off means comprising a spacing rod reciprocably mounted in the top of said housing and protruding thereinto, said spacing rod being movable upwardly by said piston as said piston approaches the top of said housing, and a bell crank pivotally mounted on the free end of said lever, said valve crank including a hooked arm and a straight arm, and spring means positioned to normally urge said straight arm away from said lever.



3,095,126
APPARATUS FOR DISPENSING A PREDETERMINED QUANTITY OF FLUID

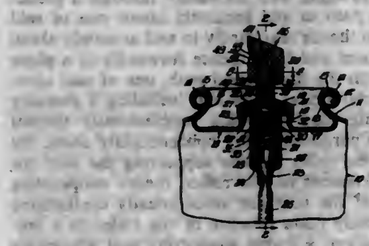
Harry Willshaw, Hampstead, London, England, assignor to Dunlop Rubber Company Limited, London, England, a British company
Filed July 21, 1960, Ser. No. 44,308
Claims priority, application Great Britain July 31, 1959
14 Claims. (Cl. 222—334)



1. Apparatus for injecting a measured amount of material into a mixing chamber comprising, a cylinder having at a delivery end an inlet for material and a delivery extension of smaller diameter than that of said cylinder having one end open to said cylinder and extending from said delivery end axially of said cylinder and having at its other end an outlet to deliver material to the mixing chamber, a piston in said cylinder slidable fluid-tightly therein axially toward and from said delivery end, an extension of said piston extending axially of and toward said delivery extension and positioned to extend into said delivery extension towards the outlet thereof when said piston moves forwardly towards said delivery end of said cylinder on a forward delivery stroke of said piston, said piston extension being withdrawn clear of said delivery extension and into said cylinder to permit free flow of material from said cylinder into said delivery extension on the return stroke of said piston, an outlet valve on the outlet of said delivery extension to close said outlet, fluid actuated means to open and close said outlet valve and means to admit pressure fluid to the opposite end of said cylinder and simultaneously to said fluid actuated means to open said valve on the forward stroke of said piston and alternatively to exhaust pressure fluid from said opposite end of said cylinder and to reverse the supply of pressure fluid to said fluid actuated means to close said outlet valve on the return stroke of said piston.

3,095,127
DISPENSER VALVE

Edward H. Green, % Newman-Green, Inc., 151 Interstate Road, Addison, Ill.
Filed Mar. 30, 1960, Ser. No. 18,548
4 Claims. (Cl. 222—394)



1. In an aerosol valve assembly having a generally cylindrical valve shell with a dip tube projecting from the lower end thereof, and a sealing gasket closing the upper end of said shell and having an aperture formed therein, the improvement which comprises a valve plunger member having an upper tubular portion slidably projecting through said aperture in sealed engagement with said gasket and an enlarged plunger portion slidably fitted in said shell and having a shoulder engageable with the underside of said gasket, a spring seat formed on the lower end of said valve plunger member, a spring seated between the lower end of said shell and said valve member seat for normally urging said valve plunger member upwardly into a first position relative to said sealing gasket with said shoulder disposed in sealing engagement with said gasket, a pair of diametrically opposite transversely extending openings formed in said tubular portion immediately above said shoulder whereby said openings are sealingly closed when said valve plunger member is in said first position, at least a pair of longitudinally extending grooves formed on the outer surface of said enlarged plunger portion of said valve plunger member whereby to permit passage of material from said dip tube into the upper portion of said shell, a replaceable spray head having a spray orifice and an integral depending solid stem adapted to be telescopically fitted in the outer end of said tubular portion of said valve plunger member in sealed engagement therewith whereupon the application of finger pressure to said spray head is effective to move said valve plunger member downwardly into a second position relative to said sealing gasket wherein said shoulder is spaced away from said gasket to permit material to flow from the upper portion of said shell through said openings into the tubular portion of said valve plunger member, an external groove of predetermined cross-sectional area and shape for the particular material to be dispensed formed on the outer surface of said stem and extending longitudinally the full length thereof whereby to define with the inner wall surface of said tubular portion of said valve plunger member a metering passage specifically adapted for the flow characteristics of the material to be dispensed between said stem and the inner surface of said tubular portion of said valve plunger member, and passage means in said spray head between the upper end of said groove and said spray orifice.

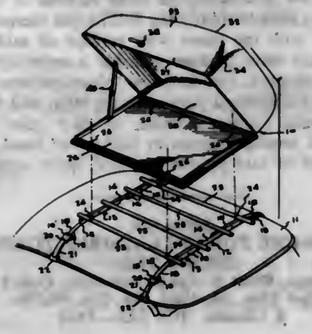
3,095,128
CLOSURE FOR COLLAPSIBLE TUBES OR BOTTLES

Stanley Wonso, 9940 S. Crawford Ave., Oak Lawn, Ill.
Filed Mar. 24, 1961, Ser. No. 98,196
6 Claims. (Cl. 222—514)



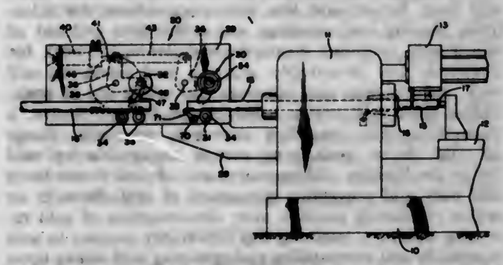
1. A closure assembly for receptacles of the type having an elongated open ended neck with a lateral discharge orifice intermediate the ends of said neck; said closure assembly comprising a closure member disposed entirely outside of said neck and including a sleeve slidably embracing said neck, an end wall closing the upper end of said sleeve and overlying the open end of said neck which is remote from said receptacle, said sleeve having intermediate its ends discharge openings of different cross-sectional areas individually selectively registerable with said discharge orifice, said sleeve being mounted upon said neck for straight line sliding movement for selectively placing said openings and orifice into and out of registration, retaining means on said sleeve and neck for releasably but immovably securing said sleeve to said neck and retaining said openings and orifice out of registration with said orifice being closed by said sleeve, a circumferentially extending outwardly projecting flange on said sleeve, restraining means engageable by said flange for limiting sliding movement of said sleeve upon said neck and preventing movement of said sleeve to an orifice registering position after disconnection of said retaining means, a retaining cap removably secured to said receptacle and surrounding and retaining said sleeve upon said neck, said cap having an end wall with an opening through which said sleeve is movable, said restraining means including an inwardly projecting member on said retaining cap adjacent to and below its end wall and in the path of straight line sliding movement of said flange, said flange having a notch registerable with said member for passage thereby upon rotation of said sleeve, the distance between said member and said end wall being substantially equal to the thickness of the flange whereupon further rotation of said flange after passing said member will cause said flange to be held captive between said member and end wall, the last named position of said flange defining an orifice registering position of said sleeve and neck.

3,095,129
CAR TOP TRUNK LUGGAGE CARRIER
Ralph W. Kerr, Bowman, N. Dak.
Filed July 7, 1959, Ser. No. 825,494
1 Claim. (Cl. 224—42.1)



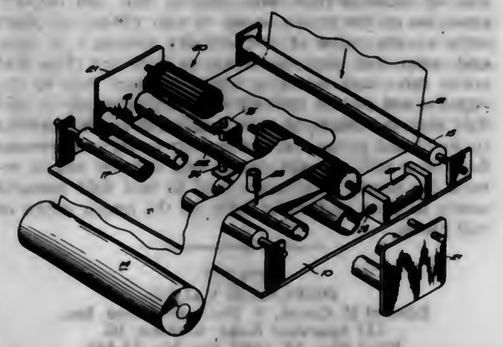
In a car top trunk luggage carrier, a foundation comprising a pair of units of similar construction which each embodies an intermediate member and respective terminal members, the intermediate members and terminal members being arranged in parallel relation for a portion of their length, there being a plurality of spaced apart openings in said terminal members, securing elements extending through certain of said openings and engaging said intermediate members, the outer ends of said terminal members being curved and having suction cups connected thereto, loops affixed to said terminal members and said loops having straps connected thereto and said straps including clips for engaging the edge of a car top, and a plurality of spaced parallel bars arranged transversely with respect to said intermediate members and affixed thereto.

3,095,130
ROLL FEED DEVICE
Franklin G. Schultz, 13109 Broadway, Cleveland 25, Ohio
Continuation of application Ser. No. 7,492, Feb. 8, 1960
This application Jan. 24, 1961, Ser. No. 84,624
6 Claims. (Cl. 226—108)



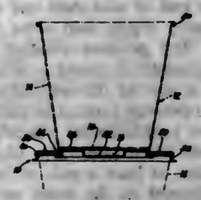
1. Apparatus for feeding bar stock into the entrant end of a machine tool comprising in combination: a pair of drive rolls in aligned tandem relationship longitudinally relative to the bar stock, each of said rolls being movable transversely of the length of said bar stock into and out of frictional engagement therewith, means rotating each of said drive rolls with the peripheral speed of said drive roll remote from said machine tool being greater than the peripheral speed of said drive roll closest to said machine tool, the means driving said last mentioned roll including an over-running clutch whereby said remote drive roll may advance bar stock through said close drive roll into said machine tool at a rate greater than the normal driven peripheral speed of said close drive roll.

3,095,131
WEB GUIDING METHOD AND APPARATUS
John Douglas Robertson, Taunton, and Raymond H. Foster, Norton, Mass., assignors, by mesne assignments, to Mount Hope Machinery Company, Taunton, Mass., a corporation of Massachusetts
Filed July 6, 1959, Ser. No. 825,874
10 Claims. (Cl. 226—190)



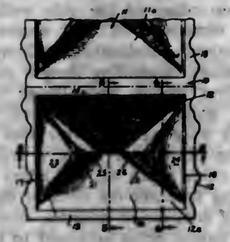
1. A web guiding apparatus comprising in combination, means including two parallel web supporting abutments for guiding a traveling web forwardly through a predetermined plane path to and arcuately about one of said abutments, from thence rearwardly to and arcuately about the other abutment and from thence forwardly in a plane path parallel with the first named path, one of said abutments being a cylindrical roller and including a plurality of web engaging bars extending longitudinally thereof and disposed in parallel relation concentrically about the rotary axis of the roller, means supporting the bars for longitudinal movement on the roller, means cooperating with the ends of the bars for automatically centralizing them longitudinally uuon rotation of the roller to a predetermined position, a frame supporting said abutments at their ends and including means rotatably supporting the roller, and means supporting the frame for pivotal movement about an axis disposed normally to the planes of said paths.

3,095,132
COMBINATION LID AND STAND FOR PAPER CUPS
Harry R. Hawley, Lombard, Ill., assignor to Solo Cup Company, Chicago, Ill., a corporation of Delaware
Filed June 27, 1961, Ser. No. 119,982
2 Claims. (Cl. 229—1.5)



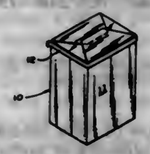
1. A combination lid and stand for a paper cup of the type having a downwardly tapering frusto-conical side wall closed by a bottom wall which is spaced upwardly from the lower edge of the side wall so as to form a recess in the bottom of the paper cup, said combination lid and stand comprising a circular disk having a downwardly projecting annular flange extending around the periphery thereof for snug reception around the upper end of the paper cup, said disk having an upwardly projecting circular portion formed thereon for snug reception and frictional retention within the recess in the lower end of the cup, said upwardly projecting circular portion being substantially smaller in diameter than said downwardly projecting annular flange, said disk having a pair of vent openings extending through the portion of said disk between said downwardly projecting annular flange and said upwardly projecting circular portion, substantially at diametrically opposite points, to prevent the development of a vacuum under said disk.

3,095,133
RECEPTACLE AND METHOD OF MAKING THE SAME
Clarence W. Vogt, Weston, Conn.
(Rte. 4, Westport, Conn.)
Filed May 10, 1957, Ser. No. 658,300
8 Claims. (Cl. 229—2.5)



1. A receptacle comprising a sheet of stretchable material having a plurality of angularly-related wall portions defining a cavity therein having an open-mouth for receiving a product, and a portion of the sheet at a junction of at least three wall portions forming a re-entrant corner portion having a continuous wall converging to an apex extending into said cavity, said re-entrant corner portion being displaceable out of said cavity to direct said apex outwardly and dispose said continuous wall substantially in the planes of said at least three wall portions to form a closed corner of said cavity.

3,095,134
LINED CONTAINER FOR LIQUIDS AND LINER THEREFOR
Raymond E. Jacke, Richmond, Va., assignor to Reynolds Metals Company, Richmond, Va., a corporation of Delaware
Filed Mar. 23, 1960, Ser. No. 17,222
10 Claims. (Cl. 229—14)



1. A lined container adapted to hold a product and comprising, a comparatively rigid, box-like member having a bottom portion, wall portions and a top portion, said top portion comprising a first top flap hinged to the front wall portion, a second top flap hinged to the rear wall portion and side top flaps hinged to the side wall portions, said first and second top flaps having a combined length less than the distance between said front and rear wall portions and said side top flaps having a combined length greater than the distance between said side wall portions; and a liner having a non-metallic outer surface heat-sealed to said bottom, top, and wall portions and an inner metallic surface heat-sealed to itself along bottom, side and top seams extending respectively across said bottom portion, longitudinally along a side wall portion, and across said top portion, said top seam being disposed above and between said first and second top flaps and beneath each of said side top flaps, said liner having a non-yielding layer intermediate said non-metallic outer surface and said inner metallic surface sandwiched between yielding layers to permit differential movement between said container walls and said metallic surface without tearing of said unyielding layer because said unyielding layer is floatingly carried between said yielding layers, said liner containing a product therein.

3,095,135
POURING SPOUT CARTONS
Russell J. Hennessey, St. Paul, Minn., assignor to Waldorf Paper Products Company, St. Paul, Minn., a corporation of Minnesota
Filed Oct. 4, 1962, Ser. No. 228,434
6 Claims. (Cl. 229—17)



2. A pour spout carton including,
a rectangular tubular structure including parallel face panels and parallel side panels,
flaps hingedly connected to an end of said panels,
the flaps hingedly connected to said face panels being divided by cut lines extending from the end thereof to the line of hinge connecting these flaps to the face panels to form main flap portions and end flap portions,
the main flap portions and one side panel flap being secured in face contact,
the said end flap portions being hingedly connected to the other side panel flap along extensions of the lines of fold connecting said other side panel to said face panels,
the end flap portions being divided into pairs of gusset flaps by diagonal lines of fold extending thereacross from the junctures of the fold lines connecting the flaps to their respective panels and the fold lines connecting said other side panel to said face panels,
the gusset flaps of one end flap portion being confined within an area to one side of a plane midway between, and parallel to, said face panels, and
one of the gusset flaps of the other end flap portion including a projection sandwiched between the gusset flaps of said one end flap portion.

3,095,136
FOLDING BOX CONSTRUCTION
Sidney Conescu, Neponsit, N.Y., assignor to Spear Box Company, Inc., New York, N.Y.
Filed Aug. 2, 1962, Ser. No. 214,308
1 Claim. (Cl. 229—41)

A knockdown folding box construction having a full open top and adapted to set up between knockdown and erected positions whereby said full open top box is self-supporting in the erected position comprising

(*a*) a blank of sheet material defining a bottom panel

having opposed side panels and end panels connected thereto along respective fold lines,

(*b*) said side panels being of a width so that in the knockdown position of said box said side panels overlap said bottom panel and one another;

(*c*) a first pair of corner flaps integrally connected between one end panel and the adjacent side panels along fold lines that constitute extensions of the fold lines between the bottom panel and the adjacent sides and end panels,

(*d*) and a second pair of corner flaps connected along respective fold lines extending along the side edges of the other end panel only,

(*e*) each of said side panels having a diagonally extending crease line extending between the juncture of said side panels and said other end panel and a point on the outer edge of said side panels to define in each of said side panels a side corner portion which is adapted to be reversely folded along said crease line onto its respective side panel in the knockdown position of said box,

(*f*) and said second pair of corner flaps and side corner portions of the respective side panels being coated on opposite surfaces of the blank with a layer of bonding material so that in the folded position of said blank the opposed coated portions of said second pair of corner flaps and side corner portions of the side panel adjacent thereto are bonded to one another whereby the said second pair of corner flaps and end panel connected therebetween are in-folded only in flat overlying position with respect to said bottom panel in the knockdown position of the box



and disposed normal to their connected end panels and the bottom panel in the erected position of said box;

(*g*) said first pair of corner flaps being each provided with a diagonal crease line for defining an end corner flap portion and a side corner flap portion;

(*h*) said first pair of corner flaps being folded in overlying position on the end panel therebetween in the knockdown position;

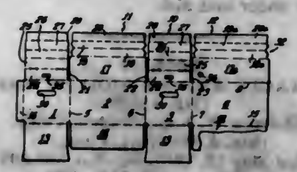
(*i*) means for adhering the respective end corner flap portions to the end panel disposed therebetween in the folded position of said blank so that in the knockdown position of said box said first pair of corner flaps overlie said adjacent end panel in an outfolded position and in the erected position of said box said first pair of corner flaps are reversely bent inwardly of the box along said diagonal crease line;

(*j*) an end flap connected to said outfolded end panel only along a fold line about which it is reversely folded in the folded position of said blank;

(*k*) means for adhering the central portion of said end flap to its adjacent end panel in the folded position of said blank so that in the erected position of said box the end portions of said end flap overlie the inwardly bent corner flap adjacent thereto to maintain said box in its self-supporting, erected position thereof,

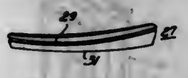
(*l*) and a die cut formed intermediate the ends of said end flap to facilitate overlapping the ends of the end flap over the edges of the said corner flap portions in the erected position of the box.

3,095,137
CONTAINER WITH COVER FLANGE AND METHOD OF FORMING
Clifford E. Reynolds, Cincinnati, Ohio, assignor to Container Corporation of America, Chicago, Ill., a corporation of Delaware
Filed Aug. 11, 1961, Ser. No. 130,962
2 Claims. (Cl. 229—44)



1. A container formed from relatively thick, foldable paperboard, comprising end and side walls, cover panels hinged to the top edges of the side walls, each cover panel having a dimension at right angles to its hinge to adapt it to extend substantially half-way across the top of the container, depending flanges on the meeting edges of the cover panels, each flange comprising an elongated outer panel integrally joined along a fold line to the outer edge of the cover and an elongated inner panel integrally joined along a fold line to the free edge of the outer panel, the end edges of said flange panels terminating adjacent the ends of the cover panel and being free of connection with the cover panel, such inner and outer panels being arranged to be secured together in facing relation and in depending relation to the cover, an anchoring panel integrally joined along a fold line to the free edge of the inner panel, the effective width of the inner panel being slightly less than the width of the outer panel measured on its side facing the outer panel, the inner panel being folded flat against and firmly secured by adhesive to the outer panel, and the anchoring panel being firmly secured by adhesive to the under face of the cover with the angle between the anchoring panel and inner panel closely received within the angle formed between the outer panel and the cover, whereby the flanges on the covers are each rigidly held at an angle of less than 90° with respect to the under surface of the attached cover.

3,095,138
ROTATING SHROUD
Elmer P. Warnken, Cincinnati, Ohio, assignor, by mesne assignments, to Studebaker Corporation, South Bend, Ind., a corporation of Michigan
Original application May 28, 1957, Ser. No. 662,229, now Patent No. 2,952,442, dated Sept. 13, 1960. Divided and this application Apr. 4, 1960, Ser. No. 19,686
5 Claims. (Cl. 230—134)



1. A shroud for a row of rotor blades which comprises a ring composed of a plurality of arcuate blade-receiving segments having on their periphery outwardly facing flanges thereby forming a continuous annular channel, said arcuate segments having radially extending sockets for receiving the tips of the blades in a row of rotor blades with the tips of the blades being slidable lengthwise of the sockets, a second plurality of arcuate segments outboard of the blade tips and located between and spanning the flanges of the blade-receiving segments, the segments of the second plurality forming a ring, a relatively stiff filler member in the space between the segment rings and surrounding tips of the blades, and a substantially

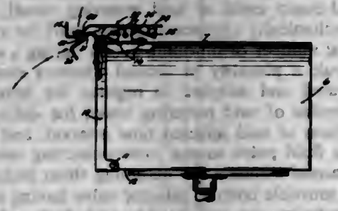
continuous winding of resin-impregnated filamentary material forming a retaining band embracing the segments of the second plurality to hold the segments together.

3,095,139
DUAL SAVINGS BANK
Wilbur W. Randall, 15 Staples Place, West Hartford, Conn., and Julia Rabenstein, 33 Washington Square W., New York, N.Y.
Filed Feb. 5, 1962, Ser. No. 170,870
6 Claims. (Cl. 232—5)



1. A savings bank for coins comprising in combination two adjacent, vertically disposed, parallel tubes of circular cross-section closed at the bottom, closure caps for the tops of the tubes, each having a coin receiving slot, a platform immediately beneath the cap in one tube and normally horizontal to receive and hold a coin inserted in the slot above it, and means in the adjacent tube positioned for engagement by a coin being inserted in the slot in its cap and arranged to tilt the said platform and drop the coin thereon into the tube beneath.

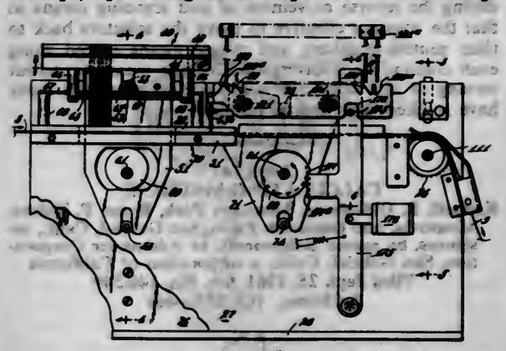
3,095,140
MAILBOX SIGNAL
Wilmer E. Buedingen, Rte. 1, Box 99, Delafield, Wis.
Filed July 2, 1962, Ser. No. 206,601
4 Claims. (Cl. 232—35)



1. In a signaling device to be adjustably placed on a first latch member mounted on a mail box for co-action with a second latch member mounted on a door for the mail box and with the first latch member having a hole therein, a base having a clamping portion for gripping the first latch member, a signal plate pivotally mounted on the base and having a tab portion extending therefrom, a pin extending from the tab for engagement in the hole in the first latch member, and a spring acting between the base and the plate for swinging the plate to an angle with the base upon pulling on the second latch member to press the pin from the hole and to dis-engage the two latch members.

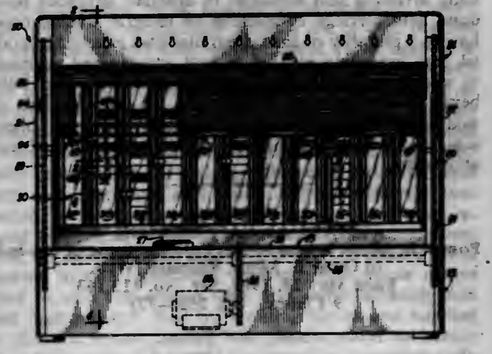
3,095,141
DATA HANDLING MECHANISM
John S. Baer, Medford Township, Burlington County, N.J., assignor to Dennison Manufacturing Company, Framingham, Mass., a corporation of Massachusetts
Filed May 3, 1962, Ser. No. 192,134
5 Claims. (Cl. 234—45)

1. Mechanism for assembling information in punched hole form comprising reading means and punching means controlled thereby for transferring the information contained in a plurality of columns of punching on a ticket to corresponding columns of punching on a tape, manually settable punching means, including punch selector mechanism, for applying further columns of punching to the tape, tape feeding means adapted to advance the tape



for each column of punching applied by the manually settable punching means, and means for operating the tape feeding means through a plurality of successive cycles for carrying the transferred-information columns of punching past the region of action of the manually settable punching means.

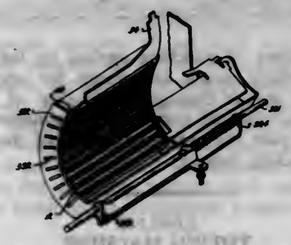
3,095,142
VOTING MACHINE
Edward J. Crossland and Marshall P. Ragan, Tulsa, and James E. Hawkins, Broken Arrow, Okla., assignors to Seismograph Service Corporation, Tulsa, Okla., a corporation of Delaware
Filed June 28, 1961, Ser. No. 120,250
13 Claims. (Cl. 235—54)



1. In a voting machine of the type employing a voting panel made up of a number of different side by side columns, a plurality of office stops spaced along each column for dividing each column into different office groups, a plurality of selectors mounted for manual sliding movement along each column from a neutral position adjacent one of the stops to any desired one of a plurality of selecting positions within each office group, there being at least one selector for each office group, scanning means including an elongated rail movable along said columns in one direction to determine each selecting position to which a selector has been moved, said scanning means being movable along said columns in a reverse direction and including selector restoring means for returning each of said selectors from its selecting position to its neutral position when said scanning means is moved in said reverse direction, the improvement which comprises a plu-

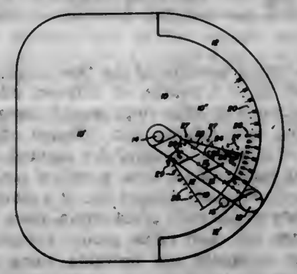
rality of spaced apart, restoring cogs on said rail, forming part of said selector restoring means and positioned to respectively engage the selectors of the different columns during the reverse movement of the scanning means, locking means normally preventing rotation of said cogs during the reverse movement of said scanning means so that the cogs are effective to move the selectors back to their neutral positions, and release means spaced along each column for releasing said locking means to permit turning of said cogs over said selectors when the latter have reached their neutral positions.

3,095,143
CALCULATING MACHINE
Kenneth F. Oldenburg, Monterey Park, Bryan F. Kulmo, Monrovia, and Dominick Fazio, San Gabriel, Calif., assignors, by mesne assignments, to Addmaster Corporation, San Gabriel, Calif., a corporation of California
Filed Sept. 25, 1961, Ser. No. 140,549
6 Claims. (Cl. 235—60)



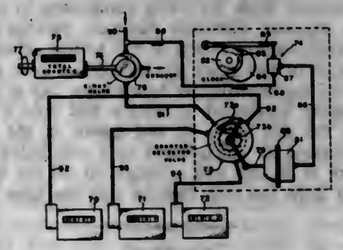
1. In a calculating machine having denominationally arranged actuators differentially and independently advanceable about a common axis, each of said actuators having an abutment thereon, and means for yieldably advancing said actuators; a stop pin carriage for differentially arresting said actuators in different advanced positions, said carriage comprising an integral arcuate body having a plurality of spaced parallel bars extending parallel bars extending parallel to said axis, spaced openings in said bars, and webs connecting said bars, said webs being of smaller cross section than the cross sections of said bars, and stop pins movable lengthwise in said openings, said stop pins being movable into the paths of said abutments.

3,095,144
MANUAL CALCULATOR
Powell O. Mims, Wheat Ridge, Colo., assignor of one-half to Oscar B. Mims, Sheridan, Wyo.
Filed May 29, 1961, Ser. No. 113,163
9 Claims. (Cl. 235—77)



1. In a manual calculator having a case and a circular paten revolubly housed within said case in partial peripheral exposure at one side thereof, a transparent arm radial of said paten pivoted to and exteriorly of said case in spacedly-overlying extension across the exposed area of the paten for independent angular adjustment concentrically thereof, a stop fixedly outstanding from said case adjacent the exposed area of the paten effective to limit angular adjustment of said arm relative to the case in one direction, visible complementary scales on said case and paten shiftably correlatable for the solution of mathematical problems, a reference line on said arm radially of the paten for visually relating adjustments of said arm to said scales, and an offset stepped from said arm in opposition to the subjacent exposed area of the paten optionally grip-engageable against said area to accommodate simultaneous shift of said arm and paten in and with maintenance of a selected condition of relative angular adjustment.

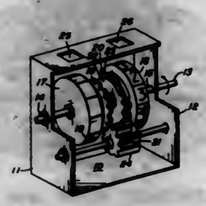
3,095,145
COUNTER TYPE DATA STORAGE UNIT
Norman A. Nelson, South Houston, Tex., assignor, by mesne assignments, to Jersey Production Research Company, Tulsa, Okla., a corporation of Delaware
Filed Oct. 12, 1959, Ser. No. 845,724
1 Claim. (Cl. 235—91)



A data storage unit for storing information relating to filling and dumping of an oil metering vessel comprising a rotatable shaft adapted to rotate in response to each fill-dump cycle of said metering vessel; a first counter mechanically connected to said shaft for registering the total number of fill-dump cycles during a selected time interval; a plurality of second counters each fluid pulse operated and adapted to register the number of fill-dump cycles of said metering vessel for different selected portions of said selected time interval; and means including a fluid pulse source interconnecting said shaft and said second counters for actuating them including a fluid pulse movable counter selector valve having selected positions, valve means connected to said shaft and adapted to transmit fluid pulses to said second counters via said counter selector valve periodically in response to rotation of said shaft, and timing means connected to said counter selector valve adapted to cause said counter selector valve to move from one selected position to another at different selected portions of said selected time interval to thereby register on each of said second counters the number of fill-dump cycles that occur during a different selected portion of said selected time interval.

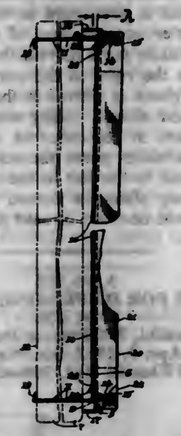
3,095,146
CONTINUOUS COUNTER
John H. McCallum, Marion, Iowa, assignor to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa
Filed Aug. 2, 1961, Ser. No. 128,852
4 Claims. (Cl. 235—117)

2. A counter mechanism for digitally displaying each digit from unity to $10n$, where n is an integer and the highest ten's digit to be displayed; comprising first and second digit wheels, said first digit wheel including ten uniform and symmetrically placed digit fields about the periphery thereof with said fields consecutively displaying the units digits one through zero, said second digit wheel having symmetrically displaced about the periphery thereof a plurality of $10n/2$ digit display fields and including one such field carrying the digit n with predetermined ones of the remaining fields thereon carrying the ten's digits of lower order than the digit n, a rotational input imparted to said first wheel, transfer means intermediate said first and second wheels adapted for effecting a predetermined



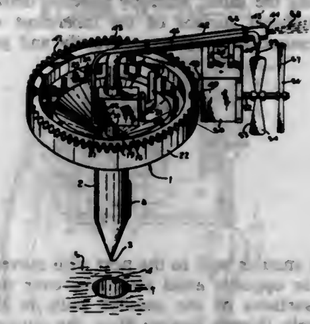
number of intermediate angular transfer motions between said first wheel and said second wheel, said number of transfers during n revolutions of said first wheel being equal to $10n/2$, said transfer motions including one immediately preceding and following each complete revolution of said first wheel and a remaining plurality of $3n$ transfers intermediately effected between complete revolutions of said first wheel.

3,095,147
WINTER FRONT FOR AUTOMOTIVE RADIATORS
Victor R. Abrams, 1834 National Ave., Rockford, Ill.
Filed Oct. 17, 1960, Ser. No. 62,941
11 Claims. (Cl. 236—35.2)



11. As an article of manufacture, a temperature control device for use with a fluid-cooled unit having an opening provided therein for flow therethrough of cooling fluid, said device comprising a cover for the opening having a plurality of smaller openings provided therein for fluid flow therethrough, and elongated closures for said smaller openings of heat sensitive material which extend over said openings and expand relative to said cover when heated and contract relative to said cover when cooled and which are secured to said cover at their ends so as normally to cover said openings against fluid flow therethrough but adapted normally to cover said openings against fluid flow therethrough but adapted when warmed beyond a predetermined temperature to expand and serve thereby to uncover said smaller openings and regulate fluid flow through said openings so as to maintain a predetermined temperature for said fluid-cooled unit.

3,095,148
LAWN SPRINKLER
Archie G. Smith, 709 Palisades Drive NW., Albuquerque, N. Mex.
Filed Oct. 30, 1961, Ser. No. 149,819
1 Claim. (Cl. 239—97)

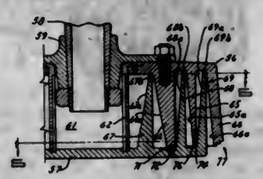


A lawn sprinkler, comprising, a housing, a fluid flow valve having an input port and an output port, means rotatably supporting said valve with respect to said housing, said valve communicating at said input port with a high pressure fluid transmitting means and having a laterally extending control rod pivotally mounted at one end thereof on said valve, said control rod being adapted to control the flow rate through said valve in response to the vertical pivotal position thereof with respect to said valve, a weight on the other end of said control rod and adapted to apply a torque to said control rod for operating said valve, said weight having a lower circumferentially elongated cam-follower surface, a plurality of circumferentially spaced elongated screws adjustably, threadedly engaged in said housing and being spaced apart a distance less than the length of said cam-follower surface, said screws being adapted to sequentially contact said weight for sequentially altering the pivotal position of said control rod with respect to said valve, said valve being fixed to and communicating at said output port with one end of an elongated tube, said tube terminating at the other end thereof in a spray nozzle adapted to rotate with said valve for radially dispensing fluid over an area surrounding said sprinkler, said housing including a circular gear base on the periphery thereof, a pinion engaged with said gear face, said pinion being operatively connected to the output of a gear reducer, said gear reducer being fixed to said tube and adapted to rotate therewith, an input shaft on said gear reducer, a paddle wheel secured to said input shaft, and tube and nozzle means fixed to said first named tube and communicating with said high pressure fluid transmitting means and adapted to direct a stream against said paddle wheel to induce the rotation thereof whereby said valve is continuously rotated with respect to said housing and said sprinkler is responsive to the adjusted position of said screws to spray fluid in a predetermined pattern.

3,095,149
CENTRIFUGAL ATOMIZER AND METHOD
David D. Peebles, Davis, Calif., assignor to Foremost Dairies, Inc., San Francisco, Calif., a corporation of New York
Filed June 23, 1961, Ser. No. 119,153
6 Claims. (Cl. 239—224)

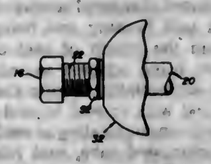
1. In a centrifugal atomizer, a hollow body adapted to be secured to a rotating shaft and including axially spaced circular plate-like members, a series comprising two sets of concentric annular walls disposed within the body and between the plates, base portions of said walls being secured to said members with a first set of said

annular walls secured to one member and a second set of said annular walls being secured to the other member and interleaved between the first set, the annular end portions of said walls, with the exception of the outermost wall, each serving to discharge material upon the inner peripheral surfaces of the next wall of the series surrounding the same, whereby material delivered to the inner peripheral surface of the innermost wall of the series is caused to progress outwardly and progressively



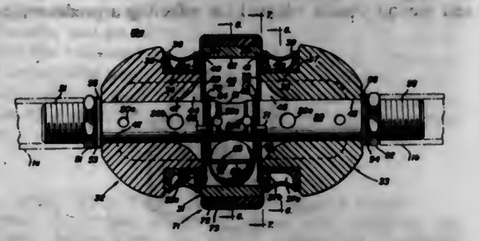
from one annular wall to the next with movement of the material in opposite axial directions over the inner peripheral surfaces of the annular walls in the form of progressively thinner flowing films, the outermost one of said walls comprising the outer peripheral wall of the atomizer, at least certain of the walls having circumferentially spaced slots in their extremities whereby the flowing film of fluid material passing through said slots has rotary energy imparted to the same to increase its tangential velocity.

3,095,150
SPRINKLER ATTACHMENTS
Chester M. MacCheeney, Chicago, Ill., assignor to Ellamac Incorporated, Chicago, Ill., a corporation of Illinois
Filed June 27, 1962, Ser. No. 205,736
7 Claims. (Cl. 239—267)



7. A sprinkler attachment comprising a substantially ball-like hollow casing, a longitudinally extending tube carried by said casing and projecting through an end portion thereof and arranged in water-tight relation therewith, the outer end of said tube accommodating the connection thereto of a water hose section and an inner portion of said tube arranged within said casing having an opening therein communicating with the interior of said casing, an inner section of said tube arranged in said casing having an annular inner trackway formed therein, the interior of said casing having an annular outer trackway formed therein and positioned in surrounding relation with said inner trackway and in radial alignment therewith, a single ball arranged within said casing and positioned between said trackways, a cage arranged within said casing and mounted for free rotation upon the inner section of said tube and positioned in trapping relation with said ball, whereby said ball is biased by gravity to roll between said trackways into a bottom position with respect thereto so as to pivot said cage into a position directed downwardly when said tube is disposed in a generally horizontal position and independently of the portion of said casing that is positioned downwardly, said casing having an annular array of sprinkler ports therein that communicate with the interior thereof and that are directed generally radially outwardly therefrom, and means arranged in said casing and operated by said cage in its position directed downwardly for closing the ones of said sprinkler ports that are directed generally downwardly.

3,095,151
SPRINKLER ATTACHMENTS
Chester M. MacCheeney, Chicago, Ill., assignor to Ellamac Incorporated, Chicago, Ill., a corporation of Illinois
Filed Aug. 27, 1962, Ser. No. 219,400
9 Claims. (Cl. 239—267)



6. A sprinkler attachment comprising a substantially ball-like hollow casing having a longitudinal axis, a tube carried by an end portion of said casing and communicating with the interior thereof, the outer end of said tube accommodating the connection thereto of a water hose section in order to supply water into the interior of said casing, said casing having two annular arrays of sprinkler ports therein that are respectively arranged substantially in two longitudinally spaced-apart substantially laterally extending planes, all of the sprinkler ports in each of said annular arrays commonly communicating with the interior of said casing and being generally radially directed outwardly therefrom in the corresponding one of said laterally extending planes, and automatic mechanism arranged in said casing and operative when said casing is disposed with the longitudinal axis thereof in a generally horizontal position and independently of the portion of said casing that is positioned downwardly for closing all of the sprinkler ports in one of said annular arrays except those sprinkler ports therein that are directed both upwardly and to the right in the corresponding one laterally extending plane as viewed in the longitudinal direction from one end of said casing and for closing all of the sprinkler ports in the other of said annular arrays except those sprinkler ports therein that are directed both upwardly and to the left in the corresponding other laterally extending plane as viewed in the longitudinal direction from said one end of said casing.

3,095,152
APPARATUS FOR DISPENSING AND MIXING LIQUIDS
Sven A. Westdahl, 301 Putnam Road, Union, N.J.
Filed Apr. 3, 1962, Ser. No. 184,819
7 Claims. (Cl. 239—318)



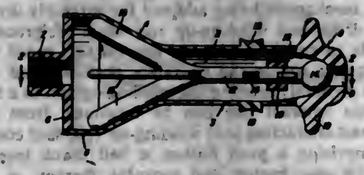
1. A device for dispensing and mixing a concentrated liquid with water including an open bowl-shaped member having an open extension in the bottom thereof, an elongated clamping member attached to said bowl-shaped member adjacent the bottom thereof, said clamping member being of U-shaped transverse section and increasing in transverse section from said bowl-shaped member to the free end thereof, said clamping member being of resilient material, said open extension having a flat surface, said clamping member being adapted to receive and clamp a nozzle thereon with said flat surface in engagement with the end of said nozzle.

3,095,153
VARIABLE AREA SPRAY NOZZLE
John Michael Seth, Des Moines, Iowa, assignor to Delavan Manufacturing Company, a corporation of Iowa
Filed Nov. 20, 1961, Ser. No. 153,309
4 Claims. (Cl. 239—405)



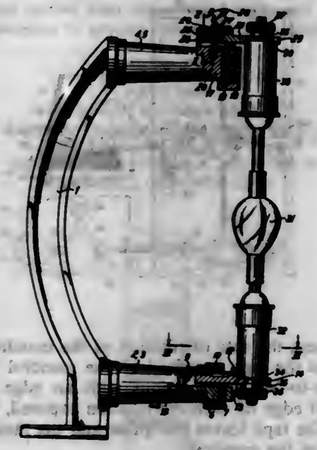
4. A variable area nozzle comprising a housing, an orifice disc in one end of the housing defining an outlet opening for fuel passing through said nozzle, a wall on said orifice disc defining a swirl chamber communicating with said opening, a distributor within said housing having a surface adapted to engage said wall and having swirl slots in said surface for delivering fuel to said swirl chamber with a tangential component of velocity, means for retaining said distributor in said housing, an annular fuel retaining chamber formed between said distributor and said housing with said annular chamber in communication with said swirl chamber through said slots for passing fuel to said swirl chamber, a first passageway in said distributor arranged on an axis common to said swirl chamber and outlet opening and in communication therewith, another passageway in said distributor for communicating said first passageway with said annular chamber, a poppet member mounted for movement along said axis, means for biasing said poppet member into closed relationship with said first passageway for preventing the passage of fuel from said first passageway to said swirl chamber, whereby during a first operating condition, said first passageway is closed and fuel passes from said annular chamber through said swirl slots into said swirl chamber and discharges through said outlet opening, and during a second operating condition, said poppet member is opened responsive to the pressure of said fuel rising above a predetermined value to permit the flow of fuel from said first passageway into said swirl chamber and through said outlet opening.

3,095,154
HOSE VALVE AND NOZZLE
Dean E. Lange, 2656 Holly St., Denver, Colo.
Filed Mar. 30, 1962, Ser. No. 183,709
10 Claims. (Cl. 239—576)



1. A hose valve and nozzle comprising a resilient collapsible tubular body for connection at one end to a hose for receiving fluid under pressure therefrom, said body having a discharge orifice in its other end, a control valve for the orifice operable in the body, said control valve including cams engageable by the body and operable thereby upon collapsing thereof for opening the control valve, and means for releasably securing the control valve in open position.

3,095,155
ILLUMINATING ARRANGEMENT
Josef Schleifer, Krumbach, Swabia, Germany, assignor to Eugen Bauer, G.m.b.H., Stuttgart-Unterturkheim, Germany
Filed May 21, 1959, Ser. No. 814,373
Claims priority, application Germany Apr. 23, 1955
6 Claims. (Cl. 240—52)

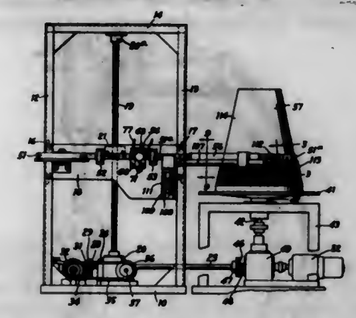


1. Lamp-holding arrangement for holding a discharge lamp at opposite ends thereof, comprising, in combination, a rigid support member; a first rigid holding member; a second rigid holding member; first securing means for rigidly clamping said first holding member firmly to one end of said lamp; second securing means for rigidly clamping said second holding member firmly to the opposite end of said lamp, said first and second securing means defining a mounting axis for said lamp; first mounting means mounting said first holding member to said support member immovably in direction of said mounting axis away from said second holding member and in direction transverse to said axis, but tiltably in all directions relative thereto; and second mounting means mounting said second holding member to said support member immovably in direction transversally of said mounting axis but movably in direction thereof and tiltably in all directions relative thereto.

3,095,156
MACHINE FOR LAYING UP HOLLOW LAMINATED ARTICLES
Elmer P. Warnken, Cincinnati, Ohio, assignor to Studebaker-Packard Corporation, South Bend, Ind., a corporation of Michigan
Filed Nov. 5, 1959, Ser. No. 851,144
4 Claims. (Cl. 242—7)

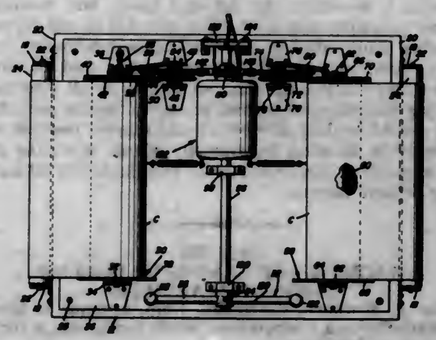
1. A machine for laying-up a resin impregnated tape to form a hollow annular wall having laminations sloping with respect to the axis thereof which comprises a main frame, a mandrel rotatably mounted on said main frame, means for rotating said mandrel, a guide frame mounted on the main frame and advanceable along the main frame substantially parallel to the axis of the mandrel, a source of tape mounted on said guide frame, means mounted on said guide frame adjacent the source of tape for cutting spaced slits in the tape extending transversely thereof and intersecting one lengthwise edge thereof as the tape is drawn from the source of tape, a guide mounted on the guide frame and receiving tape from the slit cutting means, said guide including a body and a pair of spaced parallel guide portions, said guide portions embracing opposite lengthwise edges of the tape to keep edges of the

slit tape in parallelism, said guide extending from adjacent the slit cutting means to adjacent the mandrel and directing the tape to the mandrel with the tape extending substantially tangentially of the mandrel, and means for advancing the guide frame to advance the guide lengthwise of the mandrel in timed relation to the mandrel



rotating means, the rate of rotation of the mandrel being so timed that the tape is wound on the mandrel in overlapping face-to-face convolutions with an edge portion along the slit edge of each convolution exposed, the slits opening as the tape leaves the guide and the laminations are wound on the mandrel.

3,095,157
POWER OPERATED CHART STORAGE MEANS
Ward N. Nichols, Edmonds, Wash., assignor to Dan Luketa, Seattle, Wash.
Filed Jan. 11, 1961, Ser. No. 82,086
4 Claims. (Cl. 242—67.4)



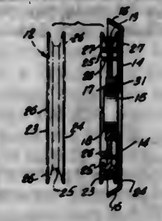
3. A chart table attachment comprising a flat base panel for mounting on the underneath side of a chart table over which a strip map is supported, a pair of reeling and storing spools, means mounting said spools in parallel relationship on said panel, said means comprising two pairs of brackets secured to and depending from said panel, each spool being supported by one of said pairs of brackets, driven elements fixed to like ends of each spool, a shaft, means rockably mounting said shaft between the spools, said means comprising bracket members secured to and depending from the panel, a reversible-type electric motor fixed on and depending from said shaft and bodily rockable therewith, said motor being in substantially the same horizontal plane as said spools, said motor having an axial drive shaft carrying a drive element, idler sheaves mounted on said panel and positioned between the drive and driven elements for selectively transferring motion from the drive element to either one of the driven elements, spring means secured to and between the motor casing and the panel serving to normally maintain the motor in a neutral position between the idler sheaves, and a pair of oppositely extending selectively usable levers on said shaft, said levers actuatable to rock the shaft so as to selectively engage one of said idler sheaves for the driving of the adjoining spool.

3,095,158
FISHING REEL AND HANDLE COMBINATION
Claude Louison, Rue de Cotentin, Le Chambon-Feugerolles, Loire, France
Filed Feb. 1, 1961, Ser. No. 86,383
Claims priority, application France Feb. 11, 1960
4 Claims. (Cl. 242—84.21)



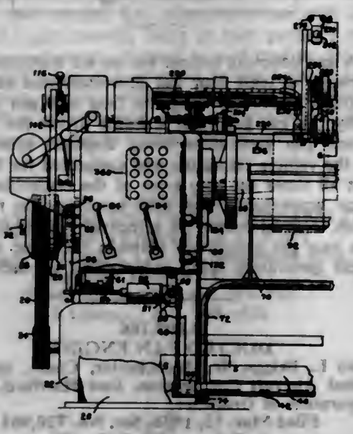
1. A handle and reel combination comprising a tubular handle, a hollow shaft rotatably supported in said handle, a spindle supported within said hollow shaft for movement axially of the shaft, a drum coupled to said shaft for rotating therewith, a winding-up rod supported on said drum and pivotable relative to said drum, a spool, means frictionally connecting the spool to said spindle for axial movement therewith, a crank mechanism for rotating said shaft and reciprocating the said spindle, and control means in said handle for pivotably moving the winding-up rod between operative and free-line positions, said crank mechanism being adapted for rotatably driving the shaft, drum and winding-up rod while reciprocating said spindle to cause winding of line on said spool with said winding-up rod in the operative position, said control means pivotably moving the winding-up rod to a free-line position whereat line can be unwound from said spool without contacting said winding-up rod, said control means comprising a push button, a bell crank lever in contact with said button and movable thereby, a ring engaged by said bell crank lever and movable thereby, slidable rods secured to said ring, a thrust disc, a spring between the thrust disc and ring biassing the latter rearwardly away from said drum, a contact plate adjacent said thrust disc, said thrust disc being secured to said rods for being displaced therewith to engage said contact plate with said button pressed and displace the same, and means pivotally supported from said contact plate and coupled to the winding-up rod for moving the winding-up rod between the operative and free-line positions.

3,095,159
SURGICAL DISPENSER
Stanley Leroy Stacy, Somerville, N.J., and Francis Arthur Tanner, Jr., Wayland, Mass., assignors to Ethicon, Inc., a corporation of New Jersey
Filed Dec. 29, 1961, Ser. No. 163,139
5 Claims. (Cl. 242—96)



1. A ligature dispenser comprising a flat cylindrical reel adapted to carry a length of ligature wound thereon in a plurality of turns, in the form of a coiled ligature, a circular supporting disc at one side of the reel and a centrally located cylindrical boss extending sideways from said disc for supporting said reel, the central portion of said reel defining a bore having an inside diameter approximately equal to the outside diameter of said boss so that the reel may be mounted for rotation on said boss by inserting the boss in said bore, the supporting disc having an annular peripheral shield extending radially beyond the maximum periphery of said reel and axially over the reel and the coiled ligature carried by said reel, whereby the dispenser may be held by cupping it in the palm of one hand so as to press upon the disc and the annular peripheral shield thereof and a length of ligature may be drawn out for dispensing by pulling on the ligature to cause the reel to turn on the boss and unwind the desired length.

3,095,160
TRAVERSING MECHANISM FOR TRANSFORMER COIL WINDING MACHINE
Harry W. Moore, 5051 Kittridge Road, Dayton 24, Ohio
Filed May 22, 1958, Ser. No. 737,079
3 Claims. (Cl. 242—158.2)



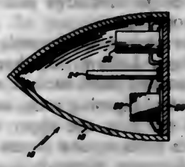
1. A device for reversing the direction of movement of the wire traversing mechanism of a coil winding machine, said device including a pair of brackets, means for adjustably mounting the brackets upon the traversing mechanism, said brackets being arranged in spaced relation from each other, a switch control mechanism having a pair of stops selected from a plurality of pairs of differentially spaced stops mounted between the brackets, yieldable means for supporting the pairs of stops, said stops being mounted for movement from inoperative position to operative position and vice versa, each pair of stops being mounted for lateral adjustment on the yieldable supporting means, a pair of reversing switches mounted adjacent the support means so that as one of the brackets engages one of the selected stops the support means moves into engagement with one of the reversing switches to reverse the traversing mechanism.

3,095,161
ANTI-SLOUGHING BOBBIN
Rawson Atwood, Rumson, and Charles C. L'Allemand, Murray Hill, N.J.
Filed Aug. 1, 1957, Ser. No. 675,739
1 Claim. (Cl. 242—159)



A textile package comprising a bobbin and yarn wound thereon, the bobbin having a yarn winding surface comprising a microgroove indented in the bobbin surface, the pitch of the groove being a small multiple of the yarn diameter and the depth and width of the groove being a fraction of the yarn diameter, the yarn thickness being in a range from about 15 denier to about 70 denier, the groove spacing being about .008" and the groove depth being in a range from about .0001" to .001"

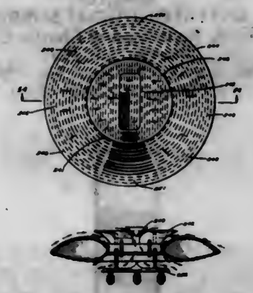
3,095,162
RE-ENTRY BODY NOSE CONES
Edward F. Keon, Lowell, Mass., assignor to Raytheon Company, Lexington, Mass., a corporation of Delaware
Filed Sept. 18, 1959, Ser. No. 840,887
4 Claims. (Cl. 244—1)



1. An improved nose cone for re-entry bodies and the like, comprising a hollow member having a substantially conical outer surface, said hollow member constituting a body of pyrolytically-formed graphite characterized by respectively high and low degrees of heat conductivity in mutually orthogonal directions the A—B crystal structure plane of which is substantially parallel to said outer

surface, said body oriented to provide high thermal conductivity along such surface and low thermal conductivity through the thickness of said member.

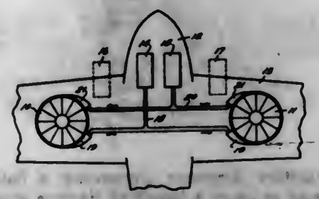
3,095,163
IONIZED BOUNDARY LAYER FLUID PUMPING SYSTEM
Gilman A. Hill, Englewood, Colo., assignor to Petroleum Research Corporation, Denver, Colo., a corporation of Colorado
Filed Oct. 13, 1959, Ser. No. 846,210
16 Claims. (Cl. 244—12)



1. A fluid moving system for producing substantially laminar flow of ambient fluid over and adjacent a substantially smooth surface exposed to the fluid which comprises a multiplicity of electrode elements mounted in spaced relationship to one another adjacent said surface and electrically insulated from one another and constituting a series of elements extending along a portion of the surface, means comprising a multiplicity of sharp points on predetermined ones of said elements oriented in the direction of flow of fluid over said elements for producing charged particles adjacent said predetermined ones of said elements, all of said sharp points for each of said elements lying substantially in a plane perpendicular to the direction of fluid flow and equidistant from the next element in the direction of flow whereby the production of charged particles by a corona-type discharge is facilitated at each of said sharp points, electric exciting means connected with said electrode elements for producing progressively changing electric potentials along said surface thereby creating an electric potential field for propelling charged particles dispersed in the ambient fluid progressively from one electrode element toward the next and inducing a surface layer fluid flow over said portion of the surface, certain of said predetermined elements comprising conducting bars having said sharp points arranged in two sets pointing in opposite directions, auxiliary electrodes spaced from said bars one on one side and one on the other of each of said bars, and switching means for selectively connecting each of said bars alternatively to the auxiliary electrode on either side thereof for reversing the direction of corona discharge and the direction of charged particle propulsion.

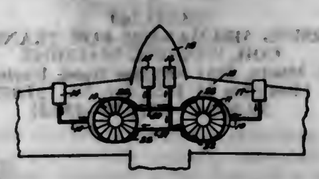
13. A vehicle for movement through an ambient fluid medium comprising a hollow ring-shaped body having walls of bluntly rounded cross-section about the central opening thereof and of tapering cross-section toward the outer periphery of the ring, the upper wall of said ring presenting a smooth surface, and means including a plurality of spaced electrode elements insulated from one another and mounted adjacent said smooth upper wall and an electric excitation system therefor for producing electric winds at high velocities in generally radial paths from the periphery of the ring inwardly over said surface and downwardly through the central opening of the ring, the winds passing downwardly through the central opening producing an upward thrust against the electrode elements about the central opening and the high wind velocity reducing the fluid pressure on the surface for facilitating the sustentation of said vehicle.

3,095,164
GAS COUPLING SYSTEM FOR VTOL AIRCRAFT
William R. Collier, Madeira, Ohio, assignor to General Electric Company, a corporation of New York
Filed May 27, 1960, Ser. No. 32,162
6 Claims. (Cl. 244—12)



1. A gas coupling system for an air supported vehicle comprising, at least two gas generators and at least two fans symmetrically disposed about the longitudinal centerline of the vehicle, ducts interconnecting the fans and gas generators whereby the gas generator exhaust directly drives the fans, two of said fans being connected to and gas driven by a single gas generator, each fan receiving some of its power from said gas generator, and said gas generators are independent of each other.

3,095,165
GAS COUPLING DUCT SYSTEM FOR FLUID SUPPORTED VEHICLE
Brian H. Rowe, Cincinnati, Ohio, assignor to General Electric Company, a corporation of New York
Filed May 27, 1960, Ser. No. 32,163
7 Claims. (Cl. 244—12)

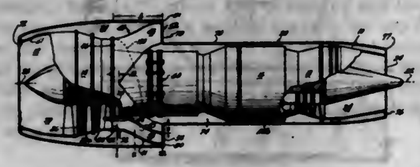


1. A gas coupling system for an air supported vehicle comprising, at least four gas generators and at least two fans, ducts interconnecting the fans and gas generators whereby the gas generator exhaust drives the fans, said fans and gas generators being disposed symmetrically about the vehicle centerline and connected for fan operation at all times on both sides of the centerline, at least two gas generators being duct connected to more than one fan, control means to selectively divide the output of the two gas generators between the fans, and all of said gas generators being independent of each other.

3,095,166
DUCTED FAN ENGINE
Thomas L. Briggs, Jr., Manchester, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed Mar. 12, 1958, Ser. No. 720,961
3 Claims. (Cl. 244—53)

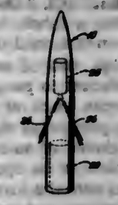
2. A vertical engine support strut extending downwardly from an aircraft and being of airfoil shape, a jet engine having an axis and an outer housing with an air inlet section at its forward end and an exhaust gas discharge section at its after end defining a vertical slot discharge nozzle which aligns with said vertical strut, a plural stage compressor and a turbine operatively connected and

in spaced axial relation within said housing, a burner in axial alignment with and positioned between said compressor and turbine within said housing so that air enters said air inlet section, is compressed in passing through said compressor, is heated in passing through said burner, has energy extracted therefrom in passing through said turbine and is discharged through said discharge section to atmosphere as pressurized and heated exhaust gas to generate thrust, said compressor having at least one enlarged stage at its forward end, said housing constructed in two sections with a first section enlarged to envelop said enlarged compressor stage only and defining a first gas passage therewithin and with a second section reduced in size from said first section so that an annular aperture is defined between the housing sections and with said second section defining a second gas passage therewithin extending from said enlarged compressor stage to said discharge section, a bifurcated duct unit of short axial dimension with respect to said outer housing having an annular inlet section attached to said housing aperture and separating into ducts positioned on laterally opposite sides of



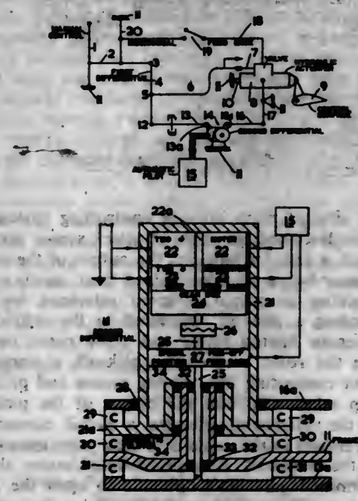
said engine and each defining convergent flow and culminating in a slot shaped nozzle having a primarily vertical major axis through which nozzle the air which enters said duct unit inlet section from said first gas passage is discharged as pressurized air to generate thrust, and an engine nacelle enveloping said engine outer housing in spaced radial relation to define a cooling air cavity therebetween and extending from said air inlet section to and smoothly blending with said discharge section, said nacelle having a smooth exterior and being enlarged at its forward end to enclose said enlarged compressor stage and duct unit then reducing in cross-sectional area through a transition section to enclose said second section of said outer housing in close proximity, said transition section defining apertures in which said ducts are received to place said duct unit nozzles into communication with atmosphere, said engine nacelle being at least partially removable, engine accessories located in said cooling air cavity between said ducts and attached to the bottom of said outer housing, engine mount means attached to said strut and extending between said ducts and attached to the top of said outer housing to support said engine.

3,095,167
APPARATUS FOR THE PROMOTION AND CONTROL OF VEHICULAR FLIGHT
Horace C. Dudley, 120—41 Springfield Blvd., Cambria Heights 11, N.Y.
Filed Jan. 5, 1960, Ser. No. 581
2 Claims. (Cl. 244—62)



1. An aerial vehicle comprising an outer substantially corona-free shell of electrostatically chargeable material, propulsion means carried by said vehicle, a reservoir carried by said vehicle, at least one discharge conduit coupled with said reservoir and extending through said shell and a material carried by said reservoir for discharge through said conduit and from said vehicle independently of said propulsion means during flight of the vehicle to electrostatically charge said vehicle shell.

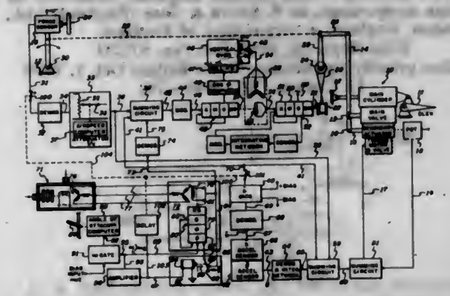
3,095,168
ACTUATOR SYSTEMS FOR THE CONTROL SURFACES OF DIRIGIBLE CRAFT
Richard Julian Treadwell, Gretton, Cheltenham, and Derek Anthony Rush, Stroud, England, assignors, by mesne assignments, to S. Smith & Sons (England) Ltd., London, England, a corporation of England
Filed Sept. 20, 1960, Ser. No. 57,231
Claims priority, application Great Britain Oct. 1, 1959
11 Claims. (Cl. 244—76)



1. An actuator system for a control surface of a dirigible craft, the system comprising an actuator having an input member which has a datum position from which it can be displaced and an output member for mechanically coupling the actuator to a control surface to be positioned by the actuator, the output member having a datum position corresponding to a datum position of the control surface and being displaced from said datum position in dependence upon any displacement of the input member from its datum position; a manual control member for applying manual demands to the actuator system; a first differential having first and second inputs and an output, its output being coupled to the input member of the actuator and its first input being coupled to the manual control member; a second differential having an output and first and second inputs, its output being coupled to the second input of the first differential; a first drive from the output member of the actuator; first settable means settable to either of first and second conditions of operation in the first of which it couples the first input of the second differential to said first drive and in the second of which it clamps the first input of the second differential fixed; a source of automatic stabilising and steering signals; means for applying said stabilising and steering signals to the second input of the second differential; second settable means having two conditions of operation in the first of which it clamps the output of the second differential fixed and in the second of which it leaves the output free to be driven in dependence upon the signals applied

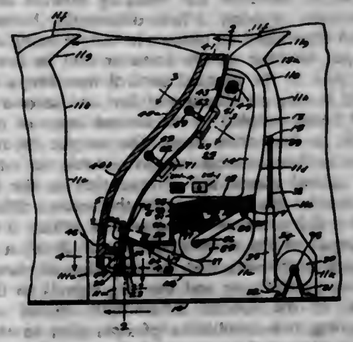
to the inputs of the second differential; a second drive from the output member of the actuator; and means engageable to establish a coupling between the second drive and the manual control member.

3,095,169
FLIGHT PATH CONTROL SYSTEM
Stephen S. Geier, Phoenix, Ariz., assignor to Sperry Rand Corporation, Great Neck, N.Y., a corporation of Delaware
Filed June 23, 1960, Ser. No. 38,164
13 Claims. (Cl. 244—77)



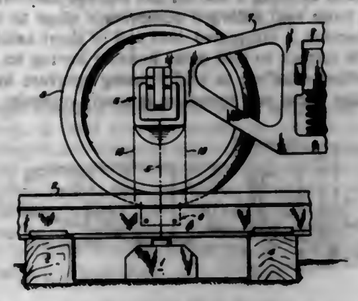
1. In an aircraft pitch attitude controlling system of the character described, an angle of attack sensor providing an output, a gate for blocking the output of the angle of attack sensor below a predetermined limit; an air speed sensor providing an output, a speed reference for the sensor including a pick-off connected to the output of the speed sensor having stator and rotor parts, means for rotating the rotor part of the pick-off, a normally closed circuit connecting the rotating means and pick-off in follow-up relation to null the output of the pick-off and render the reference ineffective, a circuit connecting the rotating means to the angle of attack gate; means responsive to the output of the angle of attack sensor above the predetermined gate limit operable to open the normally closed circuit, and means responsive to the output of the pick-off for changing the attitude of the craft about its pitch axis to prevent the occurrence of a stall condition.

3,095,170
CRASH SEATS FOR PASSENGER PLANES
Mitchell A. Harb, P.O. Box 261, Winston Road, Lexington, N.C.
Filed Jan. 5, 1961, Ser. No. 80,777
9 Claims. (Cl. 244—122)



3. A reclinable seat mounted in an airplane body, a pivotal mounting for said seat, means for swinging said seat about said pivotal mounting from upright to reclined position and vice versa, and a crash shield mounted on said pivotal mounting swingable to a position in which it encloses the front of said seat.

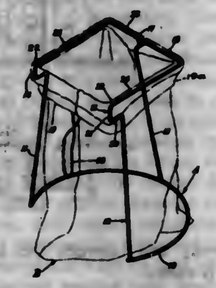
3,095,171
HOT BOX DETECTORS
Cornelius A. Gallagher, Hicksville, and William M. Pelino, Garden City, N.Y., assignors to Serro Corporation of America, New Hyde Park, N.Y., a corporation of New York
Filed Mar. 16, 1959, Ser. No. 799,620
1 Claim. (Cl. 246—169)



A hot-box detector, comprising an infrared detection device mounted alongside a longitudinally extending length of railroad track, said device comprising heat-responsive means producing an electrical signal in response to incident radiant energy, optical means imaging said heat-responsive means along an axis directed upwardly in a vertical plane that is at a right angle to the longitudinal direction of the track and in a direction to view on passing journal boxes or axles an area indicative of heat in an adjacent journal bearing, a normally blocked gating circuit coupled to the output of said heat-responsive means, radiant-energy indicating means coupled to the output of said gating circuit, actuating means for said gating circuit including bi-directionally responsive wheel-operated trip means symmetrically disposed on opposite sides of said vertical plane and producing an electrical impulse for each passing wheel, the connection to said gating circuit being such as to open the same in response to said electrical impulse, whereby signals from said heat-responsive device are passed to said radiant-energy indicating means regardless of the direction of train movement on said length of track.

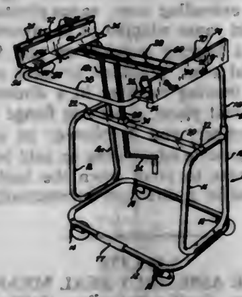
3,095,172
BAG HOLDING RACK
Maurice J. Dwyer, San Jose, Calif., assignor, by mesne assignments, to L. W. Moss, San Mateo, Calif.
Filed Nov. 20, 1961, Ser. No. 153,301
1 Claim. (Cl. 248—97)

A rack for supporting a fabric bag having a hemmed mouth portion of known size, said rack comprising a plurality of supporting legs, two of said legs being spaced apart by a distance sufficient to pass such bag when completely filled therebetween, each of said two legs having a forwardly extending portion at the upper end thereof, and each of the remainder of said legs having an outwardly extending portion at its upper end, a top frame continuous and integral with the forwardly extending portion of each of said two legs, and connecting the outer extremity of each of said outwardly extending leg portions to the other, said top frame being omitted between said two legs, and being shaped to define an area having a circumference substantially equal to that of the mouth of such bag when fully open, the forwardly bent portion of said two legs and the portion of the top frame connected thereto defining a pair of bag retaining ears, one thereof being co-extensive with each end of said top frame and



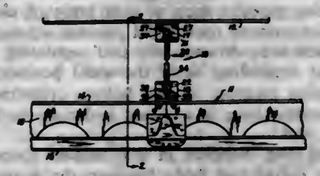
extending beyond the upper end of each of said two legs, whereby, when such bag is placed within the top frame, and the mouth portion of such bag is folded outwardly and downwardly and is stretched over the top frame and below said ears, the bag is drawn into the outwardly bent portion of each of said other legs to be supported in open mouth position.

3,095,173
MOVABLE MOUNT
Anthony N. Parsolo, Norridge, Ill., assignor to Advertising Metal Display Co., Chicago, Ill., a corporation of Illinois
Filed June 20, 1961, Ser. No. 120,879
9 Claims. (Cl. 248—124)



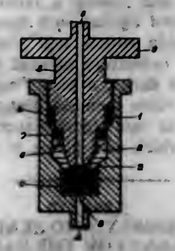
1. A movable mount comprising lower frame means, upper frame means axially extensible relative to said lower frame means, spaced guide means secured to upper terminal portions of said upper frame means disposed in a plane substantially transversely disposed to the axis of said upper frame means movement, each of said guide means having a supporting elongate surface portion and an elongate, open-bottom, passageway-defining portion connected to said elongate surface portion, reciprocally movable, spaced carriage means supportably engaged by said guide means elongate surfaces, each of said carriage means having an upper terminal edge portion interfittingly disposed within said elongate passageway-defining portion of each of said guide means whereby lateral movement of said carriage means relative to said guide means is obviated in the course of carriage means reciprocal movement, and friction-reducing means secured to upper and lower portions of said carriage means for facilitating movement of said carriage means relative to said guide means.

3,095,174
OVERHEAD MONORAIL TRACK SUSPENSION
Roy F. Dehn, Wickliffe, and Harry A. Cotesworth, Cleveland Heights, Ohio, assignors to The Cleveland Crane & Engineering Company, Wickliffe, Ohio, a corporation of Ohio
Filed Apr. 3, 1961, Ser. No. 100,214
8 Claims. (Cl. 248—324)



1. A track suspension comprising an overhead support member having an opening therethrough, a track support member having an opening in substantial alignment with the opening in said overhead support, a hanger rod extending through said openings, a convex bearing surface on at least one end of the hanger rod adjacent one of said support members, an annular thrust member having a circular opening therethrough encircling the hanger rod, said opening through said annular thrust member being of larger diameter than said hanger rod to provide clearance therebetween, a concave bearing surface in one side of the annular thrust member receiving said convex bearing surface, and an annular skirt on the side of said thrust member opposite said one side encircling the hanger rod and extending into said opening in said one of said support members, said annular skirt having an opening therethrough which has a radius substantially equal to the radius of said opening through said thrust member and the center of which lies on the center line of said opening through said thrust member.

3,095,175
GASEOUS FUEL REGULATING DEVICE FOR LIQUEFIED GAS LIGHTERS
Taisho Iketani, 589, 1-chome, Nogata-cho, Nakano-ku, Tokyo, Japan
Filed Mar. 13, 1961, Ser. No. 95,239
Claims priority, application Japan Jan. 19, 1961
1 Claim. (Cl. 251—4)



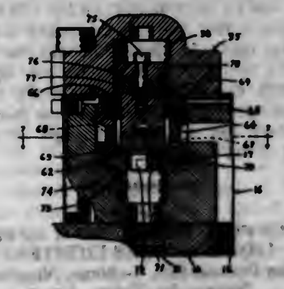
A valve device comprising
a hollow cylindrical body having upper, middle and lower wall portions defining communicating coaxial upper, middle and lower cylindrical spaces, respectively, said upper space being of larger diameter than that of said middle space, and said lower space being of smaller diameter than said middle space, said upper wall portion having an inner thread,
said hollow cylindrical body having an axial passage extending through its bottom portion,
a cylindrical body of elastic material disposed in said lower space of said hollow cylindrical body and having an axial, central bore of a diameter smaller than that of said axial passage,

a regulating member having an outer thread at its upper portion threadedly received by said inner thread of said upper wall portion,

said regulating member having an axial passage communicating with said central bore of said body of elastic material and forming at its lower end an annular ridge surrounding the lower end of the axial passage of said regulating member, for engagement with the opposite face of said body of elastic material in order to exert axial pressure upon the latter upon screwing downwardly said regulating member, so that depending upon the axial position of said regulating member in said hollow cylindrical body, said central bore is widened and narrowed, respectively, and

a packing ring disposed in said middle space of said hollow cylindrical body between the inner face of said middle wall portion and the outer face of said regulating member in order to seal off any fluid flow between the latter and said hollow cylindrical body.

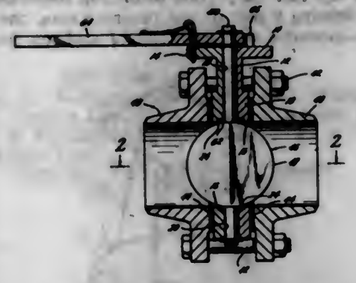
3,095,176
FLUID CONTROL VALVES
Nathan C. Hunt, Salem, Ohio, assignor, by mesne assignments, to International Basic Economy Corporation, New York, N.Y., a corporation of New York
Filed Jan. 29, 1959, Ser. No. 789,894
8 Claims. (Cl. 251—62)



1. A valve for controlling flow of pressurized fluid, comprising a valve housing having a bore extending inwardly of one face thereof, a sleeve removably disposed within said bore and having a radially outwardly extending flange seated against said housing face, a valve member reciprocable within said sleeve and having a portion extending outwardly of said valve housing and beyond said sleeve flange, a piston carried by said outwardly extending valve member portion, and means removably secured to said sleeve flange and providing a cylinder bore in which said piston is reciprocable.

3,095,177
VALVE ASSEMBLY AND SEAL FORMING MEANS FOR THE SAME
Frank G. Muller, Box 967, La Porte, Tex.
Filed Mar. 10, 1961, Ser. No. 94,894
8 Claims. (Cl. 251—173)

2. In a butterfly valve assembly a casing formed in two parts each having a flat surface and an opening therethrough and a recess shaped to form with the recess of the other part when the parts are assembled with said surfaces in facing relation and said openings positioned in communication to form a flowway, a groove surrounding and opening into the flowway, a valve disk mounted for rotation in the flowway and a seal forming element formed in one piece of resilient material in the groove and having flexible, peripherally extending portions extending into the flowway in position for engagement with the valve radially inwardly of the outermost peripheral portion of the disk under the influence of the pressure of fluid in the flowway to form a seal between the parts



about the flowway and between the casing and valve when the valve is closed.

3,095,178
PIVOTED VANE DAMPER
Hoyt K. Veber, Kellogg, Iowa, assignor to Titus Manufacturing Corporation, Waterloo, Iowa, a corporation of Iowa
Filed June 6, 1960, Ser. No. 34,094
5 Claims. (Cl. 251—312)



2. In a flow control device, a frame comprising a plurality of radially extending arms, vanes pivotally mounted on said arms, said vanes adapted to be pivoted to lie in a common plane, a bearing member on said frame at the hub of said radial arms, a hollow actuator member slidable about said bearing member in a direction substantially normal to said plane, a bearing flange on said hollow actuator member, and a follower on each of said vanes having an arcuate edge riding on said bearing flange to cause said vanes to pivot when the hollow actuator member is moved in a direction substantially normal to said plane.

3,095,179
VALVE ASSEMBLY SEAL MEANS
Ralph H. Lebow, Pacific Palisades, Calif., assignor to Parker-Hannifin Corporation, Cleveland, Ohio, a corporation of Ohio
Filed Aug. 3, 1959, Ser. No. 831,350
1 Claim. (Cl. 251—333)



In a valve assembly, a fluid-conducting member having a straight line bore with an open end and an internal flare extending to said open end, said flare being convexly rounded in section and extending gradually tangentially away from said bore, said flare including a valve seat portion, a valve seated on said valve seat portion, said valve comprising a head and a clamping disk secured together and having portions coacting in forming

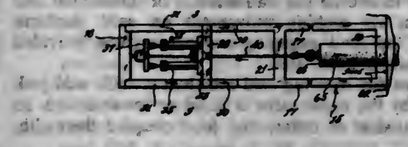
a relatively radially deep and axially narrow flat-sided groove including upper and lower coacting surfaces which terminate substantially identically at the periphery of said valve, said head and disk being of smaller diameter than the valve-seat portion of said fluid-conducting member thereby leaving a continuous space between the surface of the valve-seat portion and said head and disk, and a flat-sided sealing ring of a uniform cross-section configuration including upper and lower peripheral edges, said sealing ring being formed of polyfluorethylene seated in the aforesaid groove and tightly clamped between said head and disk, said sealing ring having an outer peripheral surface portion which terminates in an initially cylindrical sealing surface which projects beyond the periphery of the aforesaid head and disk, the initial diameter of said sealing ring being less than the largest diameter of said flare and only slightly greater than the diameter of said valve-seat portion, said upper peripheral edge of said sealing ring being peripherally deformed toward said disk and said lower peripheral edge of said sealing ring being peripherally deformed toward said head and into said continuous space between said head and said flare whereby said plastic sealing ring has a thickened outer peripheral sealing portion in engagement with said valve-seat portion and conforming to the opposed surface of said flare, said sealing portion being sufficiently stiff to resist distortion under fluid pressure yet sufficiently resilient to tightly seal the open end of said fluid-conducting member.

3,095,180
BLADES FOR COMPRESSORS, TURBINES AND THE LIKE
Daniel J. Clarke and Otto Ostlker, Bay City, Mich., assignors to The Stalker Corporation, Essexville, Mich., a corporation of Michigan
Filed Mar. 5, 1959, Ser. No. 797,540
2 Claims. (Cl. 253—77)



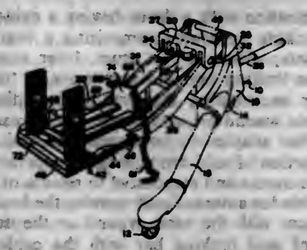
1. In combination in a blade for compressors, turbines, and the like and subject to vibratory stresses, a blade shell, a blade base at the root end of the shell, said base having a thickened inner portion merging smoothly into integral spaced flanges extending tipward into said shell at said root end thereof each lapping a side wall of said shell and being bonded thereto, said base flanges extending upwardly and inwardly from said thickened portion and smoothly tapering in thickness tipward to a thin edge, said flanges defining a recess therebetween within said root end, a stiffener within said shell bonded to opposite inside surfaces of said side walls, said shell extending inward to the point at which said thickened portion merges with said flanges to provide a contacting area of substantial radial extent for securing said shell thereto, said stiffener extending into said recess and having chordwise extending stiffener flanges of substantial chordwise extent bonded to the inside surfaces of said base flanges, each said base flange being positioned between a wall of said shell and said stiffener flange to provide smoothly varying structural thicknesses to preclude structural failure from fatigue caused by said vibratory stresses.

3,095,181
HYDRAULIC CHAIN MOVER
Stephen Dromboski, 4 Mine St., Flemington, N.J.
Filed Aug. 17, 1961, Ser. No. 132,206
5 Claims. (Cl. 254—105)



3. A machine of the character described, comprising a pair of spaced, parallel cylinders, a piston in each cylinder adapted to move forwardly and to be retracted, a yoke joining the forward ends of the pistons, hydraulic means for extending and retracting the pistons, a first tube secured to and extending forwardly from the middle of the yoke, a self-closing gate hinged to effectively close the forward end of said first tube and adapted to open forwardly only, a second tube positioned behind and in spaced alignment relative to the first tube, a self-closing gate hinged to effectively close the forward end of said second tube and adapted to open forwardly only, a single chain passing through said tubes to be attached to a load, said chain comprising links adjacent ones of which are at right angles to each other, whereby the gate of said first tube holds the chain when said pistons are extended and the gate of said second tube holds the chain when the pistons are retracted.

3,095,182
ATTACHMENT FOR LIFT JACK
Clyde D. Platt, 3717 McCormick, Fort Wayne, Ind.
Filed July 8, 1960, Ser. No. 41,608
1 Claim. (Cl. 254—134)



An attachment in combination with a jack for raising and lowering transmissions, differentials and the like during installation or repair thereof:

(a) said attachment comprising a platform adapted to be carried by an elevatable portion of said jack,

(b) a portion of said platform providing a load engaging support surface for said transmission or differential,

(c) means forming two transverse tracks disposed in perpendicular relation to each other and secured to said platform,

(d) means defining slots within said tracks and extending substantially the entire length of said tracks,

(e) two generally vertically disposed elongated guide arms having slide portions received within the slot of one of said tracks and movable adjustably, one

toward the other in clamping relation with said transmission or differential which is located therebetween,

(*f*) means for locking said arms in a preselected position wherein said guide arms are in clamping relation with said transmission or differential,

(*g*) retaining means slidably mounted in the other slot of said tracks in a direction generally perpendicular to the line of movement of said guide arms,

(*h*) a chain connected at one end of said retaining means and passed over said transmission and thereafter secured through its free end to said retaining means to overlie the transmission or differential and prevent its rocking movement on said platform about the load engaging support surface provided by said platform, and

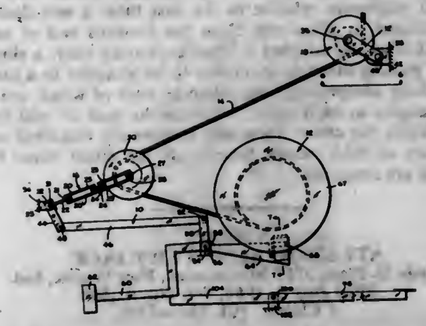
(*i*) means for securing said attachment with said jack whereby the attachment is lifted or lowered with its transmission or differential load coupled therewith.

3,095,183

BRAKING APPARATUS AND SLACK LINE CONTROL DEVICE

Franklin L. Le Bus, Sr., Longview, Tex., assignor to Le Bus Royalty Company, Longview, Tex., a partnership

Filed Sept. 28, 1960, Ser. No. 58,987
3 Claims. (Cl. 254—175)



2. In combination with a drum having a cable wound thereon, a braking apparatus comprising a braking bar secured in juxtaposition to the drum, lever arm means carried by the braking bar and responsive to tension in the cable for maintaining the braking bar disengaged from the cable wound on said drum, means carried by said braking bar adapted to be moved into braking contact with a portion of said drum, means cooperating with said lever arm means and responsive to release of the tension in the cable for automatically moving the braking bar into engagement with the cable wound on the drum, the engagement of said braking bar with the cable wound on the drum actuating said means carried by said braking bar into braking contact with said portion of said drum, said braking bar when disposed in contact with the outermost layer of cable wound on the drum in the engaged position thereof substantially precluding loosening of the wound cable.

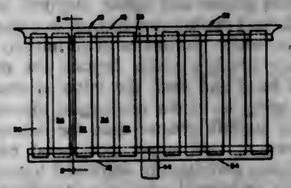
3,095,184

METALLIC PICKET FENCE

Carl C. Bexberger, 3828 Brunsel, Fort Wayne, Ind.

Filed June 14, 1961, Ser. No. 117,064
7 Claims. (Cl. 256—22)

1. A fence comprising two horizontally extending parallel and vertically spaced stringers, each stringer in cross-section being generally of stepped channel shape in which two channel sections are joined together, the first channel having a horizontal web and two upright legs, the second channel having two ledge portions connected to the distal ends of said legs, said ledge portions extending horizontally laterally outwardly from said legs, two reinforcing flanges extending from the outer ends respectively of said ledge portions and at angles thereto, each said stringer having a plurality of longitudinally extending and spaced slots in the ledge portions thereof, the slots in one ledge portion being longitudinally staggered with respect to the slots of the other ledge portion, said two stringers being in reversed relation with respect to each



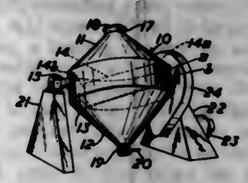
other with the webs thereof being outermost, a plurality of elongated flat upright metallic slats, said slats having the opposite ends thereof transversely bent into hook-shaped portions, each slat having the hook-shaped portion on one end thereof received by a respective slot in one stringer and the hook-shaped portion on the other end thereof received by a respective slot in the other stringer whereby the slat extends between and is attached to said stringers, all of said slats being so attached to said stringers on opposite sides thereof in staggered relation.

3,095,185

DOUBLE CONE MIXING MACHINES

William Smalley, Gloucester, England, assignor to Wm. Gardner & Sons (Gloucester) Limited, Gloucester, England

Filed June 3, 1958, Ser. No. 739,549
5 Claims. (Cl. 259—82)



1. A mixing machine comprising a drum having generally frusto-conical terminal portions the axes of which are aligned, means for mounting the drum for rotation about an axis at right angles to said aligned axes, and a deflector element of flat plate-like form extending transversely across the drum in a direction which makes an angle less than a right angle with said axis of rotation.

3,095,186

CERAMIC KILN

Dominic Sondy, 28040 Hollywood, Roseville, Mich.

Filed June 9, 1961, Ser. No. 115,980
8 Claims. (Cl. 263—7)



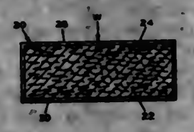
1. A kiln apparatus for firing objects comprising a base member having an upper surface, a boss member formed on the upper surface of said base member, a heating element assembly, a single stud means for centrally supporting said heating element assembly upon said boss member and in substantially spaced relation to said base, a plurality of depending legs formed integrally with said base member for supporting the same, a hood assembly disposed in shielding relation over said heating element and adapted to at least partially enclose said base member, a single stud member for securing said hood member to said base member, object supporting means pivotally mounted upon said base member, said supporting means being rotatable between positions in which at least a portion thereof is disposed between said base member and said hood in heat exchanging relationship with said heating element assembly and another position in which at least a portion of said rack is disposed exteriorly of said hood member.

3,095,187

APPARATUS FOR ISOLATING VIBRATIONS

Patrick M. Sweeney and Laurence L. Eberhart, Dublin, Ohio, assignors to Consolidated Kinetics Corporation, Columbus, Ohio, a corporation of Ohio

Filed June 20, 1960, Ser. No. 37,584
18 Claims. (Cl. 267—1)



1. An air and glass fiber spring for isolating vibrations comprising, in combination, a pad of non-impregnated glass fiber material including a load supporting side, the fibers of said material being cross-wise oriented substantially parallel with said load supporting side; and a flexible material covering said pad of glass fiber material, the interior regions of said pad including impregnant free interstices.

3,095,188

SEAT BACK REST WITH ADJUSTABLE SPRING RATE

Ralf Giese, Cologne, Germany, assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware

Filed July 13, 1961, Ser. No. 123,822
Claims priority, application Germany Nov. 28, 1960
5 Claims. (Cl. 267—99)



1. A seat structure comprising a main frame and an auxiliary frame,

a plurality of elongated spring elements having end portions supporting said auxiliary frame in spaced relationship to said main frame,

said elongated spring elements being disposed in substantially parallel relationship to each other and having the center portions thereof displaced outwardly from the plane of said auxiliary frame,

at least one additional elongated spring element interposed between a pair of said first mentioned spring elements and having its center portion displaced outwardly from the plane of said auxiliary frame,

said additional spring element being supported at each of its ends on support members displaceable in the plane of said main frame,

and means operative to displace said support members toward or from each other to vary the displacement of the center portion of said additional spring element,

the displacement of the center portion of said additional spring element when said support members are at a maximum displacement from each other being substantially the same as that of the center portions of said first mentioned spring elements,

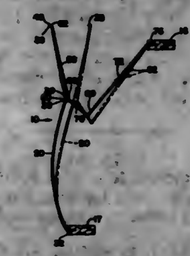
said additional spring element center portion being displaced outwardly from the plane of said auxiliary frame member further than the center portions of said first mentioned spring elements when the displacement of said support members relative to each other is less than said maximum displacement.

3,095,189

SPRING ASSEMBLIES

Walter V. Slominski, Garfield Heights, Ohio, assignor to Hoover Ball and Bearing Company, Saline, Mich., a corporation of Michigan

Filed Feb. 26, 1962, Ser. No. 175,702
11 Claims. (Cl. 267—102)



1. In a spring assembly for seating structures having top and bottom supporting rails, a plurality of upright face springs arranged in a side by side relation and each of which has a lower end adapted to be mounted on said bottom rail, a pair of substantially parallel vertically spaced wires at least one of which is connected to and extends between said face springs at a position above said bottom rail, and a plurality of support springs each of which includes a connecting section secured to said wires at a position between adjacent face springs and a substantially V-shape section integral with said connecting section and adapted to be secured to said top rail.

3,095,190

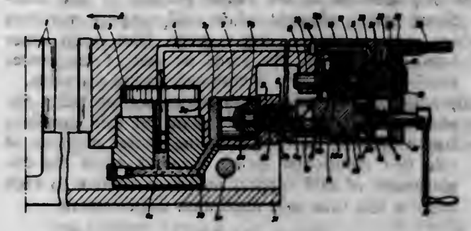
PNEUMATIC HYDRAULIC VISE

Hans W. M. Freund, Hilchenbach, Westphalia, Germany, assignor to Maschinenfabrik Hilma G.m.b.H., Hilchenbach, Westphalia, Germany

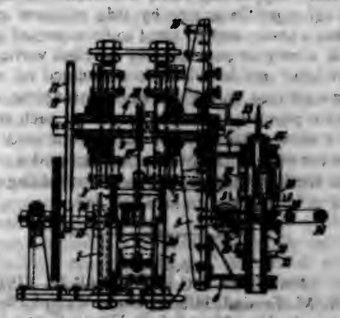
Filed Sept. 7, 1961, Ser. No. 136,624
Claims priority, application Germany Sept. 10, 1960
4 Claims. (Cl. 269—28)

1. In a vise: a stationary jaw, a movable jaw for cooperation with said stationary jaw, mechanical means mechanically drivingly connected to said movable jaw and operable mechanically to move said movable jaw selectively toward and away from said stationary jaw, said mechanical means comprising a first member with a first jaw clutch element and also comprising a second member movable relative to said first member and pro-

vided with a second jaw clutch element for engagement and cooperation with said first jaw clutch element, said second jaw clutch element being adapted in response to a certain torque acting thereupon to ride on said first jaw clutch element to thereby impart a certain axial movement upon said second member, fluid operable pressure transformer means operatively connected to said movable jaw and operable in response to fluid pressure acting upon said transformer means to move said movable jaw toward said stationary jaw, conduit means leading to said pressure transformer means and arranged for connection with a pressure fluid source, and valve means interposed in said conduit means and movable into a first position for conveying pressure fluid to said pressure transformer means and also being movable into a second position for preventing the supply of pressure fluid to said pressure transformer means while releasing the fluid pressure thereon, said valve means including control means operatively connected to said second member and responsive to said axial movement in view of said certain torque for moving said valve means into said first position.

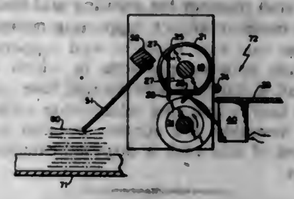


3,095,191
THERMOMETER MANUFACTURE
Eudmon Canice De Freyne, London, England, assignor to Heath, Hicks & Perken (Thermometers) Limited, London, England
Filed Oct. 17, 1960, Ser. No. 63,137
Claims priority, application Great Britain Oct. 26, 1959
4 Claims. (Cl. 269—43)



1. Apparatus for the manufacture of thermometers comprising a supporting base, a framework mounted on the base for rotation about a horizontal axis between two positions spaced 180° apart, clamping means mounted on the framework for rotation about an axis which is vertical in each of the two spaced positions and having a clamp to hold a thermometer stem with its longitudinal axis in alignment with said vertical axis and means mounted on the framework for holding a thermometer bulb in contact and alignment with the clamped thermometer stem while permitting vertical movement.

3,095,192
FEEDING MECHANISM FOR DOCUMENTS OR THE LIKE
Luther G. Simjian, Greenwich, Conn., assignor to Universal Match Corporation, St. Louis, Mo., a corporation of Delaware
Filed Mar. 6, 1961, Ser. No. 93,720
8 Claims. (Cl. 271—3)



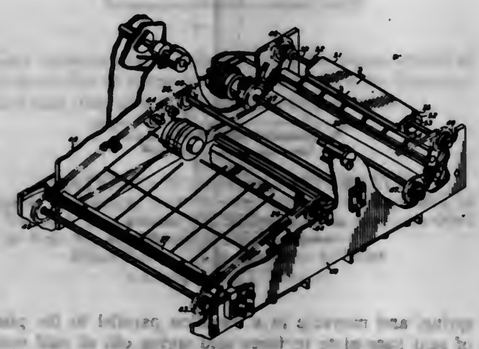
1. A cyclically operated feeding mechanism for documents comprising:
an upper and a lower roller disposed substantially parallel to one another for feeding a document therebetween;
drive means coupled to at least one of said rollers for causing a document supplied to the parting line between said rollers to be fed through the rollers;
a depository for receiving documents fed through the rollers disposed behind said rollers at an elevation below the parting line between said rollers whereby sequentially fed documents come to rest stacked on one another;
a retaining means adapted to engage a face portion of the topmost document on the depository to maintain the latter document in substantially flat condition;
means mounting said retaining means for rocking motion about an axis which is disposed above said parting line and causing the retaining means to be inclined away from the rollers toward said depository whereby the lower end of said retaining means is adapted to engage the topmost document;
further means coupled to at least one of said rollers and said retaining means for cyclically rocking said retaining means about said axis to free said retaining means from engagement with the topmost document to enable a subsequent document fed through said rollers to assume the topmost position on the stack, and said further means returning the retaining means to its previous position for engaging a face portion of said subsequent document after the latter document has assumed the topmost position.

3,095,193
PILE SEPARATING DEVICE
William H. Sorensen, Western Springs, Ill., assignor to Miehle-Goss-Dexter, Incorporated, Chicago, Ill., a corporation of Delaware
Filed Oct. 9, 1961, Ser. No. 143,896
12 Claims. (Cl. 271—42)



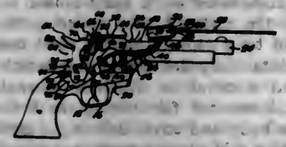
1. A device of the character described comprising a portable member adapted to be inserted between or withdrawn from a stack of sheets and a supporting medium for said sheets, a load supporting surface provided by said member, and means carried by said member for longitudinal movement relative to said surface, said means having operation to prevent contact between said surface and the bottom sheet of said stack during insertion or withdrawal of said member.

3,095,194
SHEET GUIDING APPARATUS
Gordon P. Tallie, Rochester, N.Y., assignor to Xerox Corporation, Rochester, N.Y., a corporation of New York
Filed Mar. 1, 1962, Ser. No. 176,530
3 Claims. (Cl. 271—79)



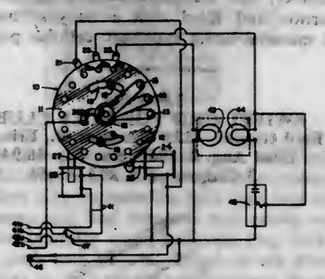
1. In a sheet conveyor mechanism including a pair of endless chains mounted on parallel pairs of sprockets and a sheet gripper mechanism mounted on said endless chains,
a sheet guide roll means consisting of
an arcuate guide plate having a flat segment in interference relation with the path of travel of the gripper mechanism,
said guide plate being pivotably mounted on one or more collars rigidly secured to a shaft between a pair of said parallel sprockets,
and a counterweight positioned on the underneath side of said flat segment to position the arcuate section coincidental with the pitch circle of said sprockets.

3,095,195
FAST DRAW GAME APPARATUS
Leo G. D'Amico, 6720 Government St., Baton Rouge, La.
Filed Mar. 2, 1962, Ser. No. 176,969
3 Claims. (Cl. 273—1)



1. Quick-draw game apparatus comprising a pair of hand-guns, adapted to be held by a pair of opposing players in erect and horizontal positions, a resilient and stretchable cord having "bullets" secured on its ends and adapted to be stretched between the hand-guns, and "bullet" retaining means on the hand-guns, said retaining means being operative in erect positions of the hand-guns to retain the "bullets" in the hand-guns and in level horizontal position of one hand-gun to release the "bullet" related thereto to be pulled by the cord toward the other gun, said retaining means including a chamber open at the forward end, said bullets each comprising a body shaped for acceptance in the chamber, there being a cap-holding recess behind the chamber, the chamber having a bottom provided with an opening, and spring-pressed detonating mechanism on the hand-gun having a sear reaching through said opening engaging the bullet, engagement of the bullet in the chamber with the sear serving to hold the mechanism in cocked condition and withdrawal of the bullet from the chamber serving to release the mechanism for detonating a cap in the cap recess.

3,095,196
FREE PLAY DEVICE FOR AUTOMATIC BOWLING ALLEYS
Harry Keith Hollenbeck, 8610 E. Mission, Spokane, Wash.
Filed July 13, 1960, Ser. No. 42,725
1 Claim. (Cl. 273—54)

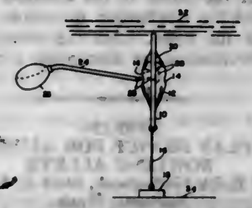


An automatic bonus indicating device for use with automatic pin setters comprising, in combination, a ratchet stepping member having a planar circular face with a plurality of electrical contacts spaced about the periphery thereof and a three arm rotator associated therewith, adapted to contact three adjacent face contacts simultaneously; solenoid activated mechanical means rotatably moving said three arm rotor over consecutive face contacts in response to each frame of a bowling game; solenoid means in series with said stepping member adapted to reset said device to a normally null position when said rotor advances to a predetermined face contact; means for biasing said rotor to a normally null position and for adjustably varying the angular distance between this null position and aforesaid reset position; a first signal device in series therewith adapted to operate, after a predetermined number of frames are bowled, in response to the angular position of said contact arms then existing at a position rotatably forward of said reset position; a second signal device in series with said ratchet stepping member adapted to operate if a strike is bowled immediately after the operation of the first signal device, in response to the angular position of said contact arms then existing at a position rotatably between said reset position and said first signal position; a normally open pressure switch in parallel with said reset solenoid associated with a pin setting device so as to close and operate said reset solenoid if the ball bowled after the operation of said first signal device fails to knock down all pins; and means for supplying electric current to said indicating device.

3,095,197
SUBMERSIBLE TARGET FOR UNDERWATER EXERCISES
Jerry Weitzman, South Miami, Fla., assignor to Water Games, Inc., Miami, Fla., a corporation of Florida
Filed Aug. 6, 1959, Ser. No. 832,070
2 Claims. (Cl. 273—102)

1. A submersible target for an underwater exercise comprising: an elongated weighted body having portions defining an internal chamber, said chamber including wall portions defining at least two apertures to provide communication between the interior of said chamber

and the surrounding water whereby said chamber is normally filled with water, one of said apertures adapted to permit the ingress of air to said chamber, the other



said aperture adapted to permit the egress of water from said chamber, said elongated body comprising an outer shell portion and filled with a buoyant material, said buoyant material being expanded cellular polystyrene.

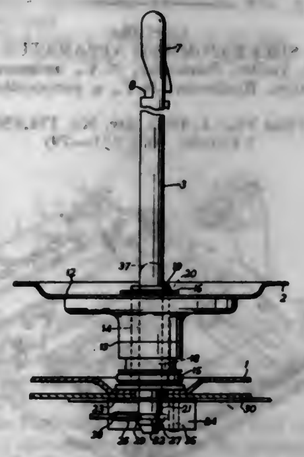
3,095,198
SWIVEL GRIP FOR GOLF CLUBS
Fred Gasche, 4225 Sassafras St., Erie, Pa.
Filed Aug. 2, 1960, Ser. No. 46,944
3 Claims. (Cl. 273—165)



1. In a golf club having a shaft with a head at the lower end and a grip section of non-slip material throughout a substantial part of the upper end of the shaft so the golfer has a choice of positions in which to grip the club, a sleeve encircling the grip section below the hand nearer the upper end of the shaft and having an inside diameter sufficiently larger than the outside diameter of the grip section to be freely rotatable and slidable thereon, said sleeve being a cylinder, the cross section of which consists of a segment of a circle of extent substantially greater than 180°, said sleeve having sufficient rigidity so that no matter how tightly gripped the grip section of the shaft is free to turn freely relative to the sleeve and said sleeve having an unobstructed cylindrical outer gripping surface for overlapping grip by the hand nearer the club head whereby the hand nearer the club head may not interfere with the direction of the shot.

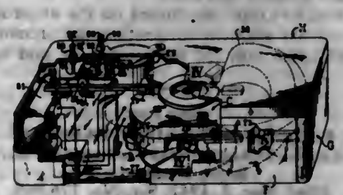
3,095,199
SOUND REPRODUCING APPARATUS USING DISC RECORDS
Norman Lane, Halesowen, Worcester, England, assignor to B S R Limited, a British company
Filed June 19, 1961, Ser. No. 117,907
Claims priority, application Great Britain June 20, 1960
3 Claims. (Cl. 274—10)

1. In sound reproducing apparatus for use with disc records the combination comprising: an apertured base plate; a turntable above the base plate; an elongated round spindle composed of and a lower part upstanding through the center of said turntable, said lower part of said spindle extending downwards through the aperture of said base plate to a position below said base plate and removably mounted therein so as to be upwardly and axially movable in the aperture to be completely removed therefrom; means defining a radial notch in the exterior surface of said lower part of said spindle; a fixed abutment mounted on the under side of said base plate; an expansible spring loop mounted beneath said base plate and compressed between said fixed abutment and said lower part of said spindle with a portion of said spring engaging in said notch to restrain said spindle against axial movement relative to said base plate; and a manually operable element mounted on said base plate, engageable with said



spring, and movable in a direction parallel to the plane of said base plate to force said spring out of said notch to release said spindle.

3,095,200
SUPPORT FOR THE RECORDING OF SOUNDS AND IMAGES AND APPARATUS FOR THE USE THEREOF
Serge Léon Louis Cailliet, 38 Rue du Bois de Boulogne, Neuilly-sur-Seine, France
Filed Mar. 31, 1958, Ser. No. 725,114
Claims priority, application France Apr. 2, 1957
32 Claims. (Cl. 274—11)

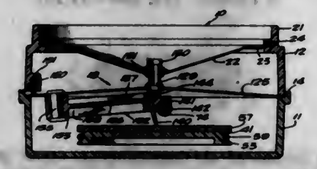


1. Magazine for a recording support having a coiled portion constituted by a band coiled in the form of a helicoid, the ends of said coiled portion being interconnected by a closing portion, said magazine comprising a substantially flat-shaped case which includes a case body and a cover in which is journalled a rotatable cylindrical member for driving the helicoid in rotation, said case body and cover defining a guiding passageway for guiding said closing portion separating said closing portion from and preventing it from rubbing against the helicoid.

3,095,201
MULTIPLE SPEECH PHONOGRAPH WITH IMPROVED TONE ARM MOUNTING
John W. Ryan, Bel Aire, Calif., assignor to Mattel, Inc., Hawthorne, Calif.
Filed Feb. 2, 1962, Ser. No. 170,643
8 Claims. (Cl. 274—26)

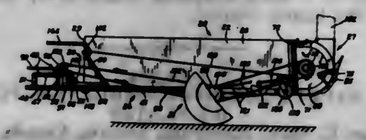
1. In a phonograph device having a record, a reproducing element and a tone arm carrying a needle, means providing a connection between the tone arm and the reproducing element, said tone arm being mounted for movement toward and from said record, said connection

including relatively movable members whereby to allow movement of the tone arm relative to the record without movement of the reproducing element, and means dis-



posed between said members having the characteristic of being capable of transmitting vibrations of sonic frequency from said tone arm to said reproducing element.

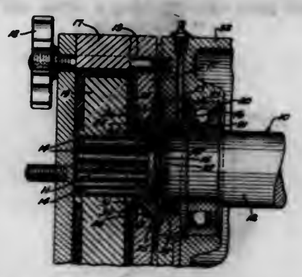
3,095,202
MATERIAL HANDLING APPARATUS
Joseph B. Kucera, Traer, Iowa, assignor of one-third to Rudolph L. Lowell, Des Moines, Iowa, and one-third to Eric M. McElhinney, Dysart, Iowa
Filed Dec. 7, 1959, Ser. No. 857,604
4 Claims. (Cl. 275—6)



1. A combined spreader and loader apparatus including a box open at one end, a wheel and axle assembly intermediate the ends of said box, said box having a conveying means movable longitudinally thereof, means pivotally supporting the box on said assembly for tilting up and down movement, a rotatable beater assembly at the open end of said box including a shaft extended transversely of and mounted on said box, a plurality of beaters pivoted on said shaft of a length to provide for the movement of the free ends thereof in a contiguous relation with that end of the conveying means at said one end of the box, means for rotating said beater assembly in a direction such that the lower peripheral portion thereof is moved in a direction away from said end of the conveying means, and a housing for partially encircling said beater assembly positioned rearwardly of said box providing a downwardly facing opening adjacent the rear end of said conveying means so as to expose said lower peripheral portion of said beater assembly, said beater assembly, on a forward movement of the apparatus, acting to spread material received from said conveying means through said housing opening when said box is in a substantially horizontal position, and to load material into said box when the box is tilted to bring said housing opening into a substantially ground engaging position and said lower peripheral portion of the beater assembly into a ground engaging position.

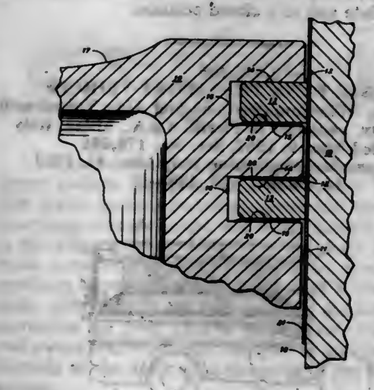
3,095,203
SEALS
John R. Erickson, South Milwaukee, and Donald F. Smith, Kenosha, Wis., assignors to Ladish Co., Cudahy, Wis., a corporation of Wisconsin
Filed Nov. 15, 1960, Ser. No. 69,374
9 Claims. (Cl. 277—82)

1. In a device having a casing and having a splined rotary shaft journalled in said casing, said casing having a bore surrounding a portion of said shaft, a first resilient ring surrounding said shaft; a driven ring having a bore portion removably splined to said shaft and having a bore portion in overlapping relation to said first resilient ring when in assembled position and having an annular sealing flange, there being stop means preventing axial movement of said driven ring when said driven ring is in said assembled position; a seal ring surrounding said driven ring and having a portion abutting said annular



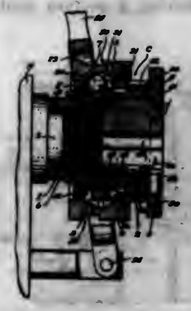
flange; cooperating means on said seal ring and casing removably locking the seal ring against rotation; and a second resilient ring surrounding said seal ring and compressed between said seal ring and said casing and positioned to continuously urge said seal ring axially into engagement with said annular flange of the driven ring and also acting as an external seal between the seal ring and casing.

3,095,204
WEAR-RESISTANT LINING FOR PISTON-RING GROOVE
George L. Neely, Berkeley, Calif., assignor to California Research Corporation, San Francisco, Calif., a corporation of Delaware
Filed Mar. 8, 1961, Ser. No. 94,273
6 Claims. (Cl. 277—189.5)



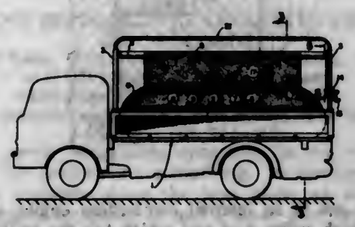
1. For use in an internal combustion engine adapted to burn high sulfur fuel and which has the walls of its cylinders lined with a material containing chromium, the combination of a ferrous metal piston being provided with at least one circumferential groove having parallel side faces, a thin layer of metallic chromium bonded to that side face of said groove against which the greatest thrust occurs during reciprocation of said piston in one of said cylinders, and said thin layer being chamfered to prevent chromium-to-chromium contact between chromium at the corner of said groove and the chromium-containing material on the walls of said cylinder.

3,095,205
CHUCK
Lawrence Farnsworth, Racine, Wis., assignor of one-half to Max M. Soft, Racine, Wis.
Filed July 28, 1961, Ser. No. 127,630
7 Claims. (Cl. 279—74)



1. A collet chuck for use with a machine tool having a spindle including a free end, said chuck comprising a tubular body adapted to be removably secured to said free end, a tubular collet closer axially slidable within said body between collet closed and collet open positions, gripper jaws in said closer and actuated thereby, said closer having an inclined closing surface, an actuating collar slidably mounted around said body for axial sliding relative thereto and also having an inclined closing surface, a plurality of circumferentially spaced balls carried by and shiftable relative to said body and located between and abuttable against said closing surfaces, an adjusting ring threadably engaged on said body for axial adjustment therealong and having a conical cam surface adjacent to but oppositely facing the inclined closing surface of said closer and engageable by said balls, and means for axially shifting said collar to thereby cause its closing surface to radially shift said balls inwardly between the closing surface of said closer and said cam surface to consequently axially shift the closer away from said cam surface and to a closed position.

3,095,206
FLEXIBLE TANK TRANSPORT VEHICLE
Giulio Fresia, Millesimo (Savona), and Aldo Valentinotti, Milan, Italy, assignors to Pirelli, S.p.A., Milan, Italy
Filed Mar. 9, 1962, Ser. No. 178,686
Claims priority, application Italy Mar. 11, 1961
14 Claims. (Cl. 280—5)



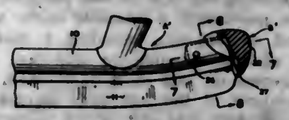
2. A vehicle which can be used both for transporting liquid or powdered materials and for transporting hard goods, characterized in that it comprises a loading platform provided with side boards, a carrying structure able to support, at a level higher than that of the platform, at least one rotatable supporting roller to which a flexible envelope, forming a tank, is connected, said envelope resting during use on the platform and being wound up after use on the roller in order to allow the full use of the platform for the transport of said hard goods.

3,095,207
SKI
Howard Head, 1507 Roland Heights, Baltimore 11, Md.
Filed Sept. 21, 1956, Ser. No. 611,095
2 Claims. (Cl. 280—11.13)



1. In a laminated ski including an upper plate and a lower metallic plate having a core material disposed therebetween, the improvement that comprises a marginal slit having at least three planar surfaces defined along each side of the lower plate, a steel strip at least partially received in each of said slits, said strip having at least one flat transverse surface, the flat transverse surfaces of the respective strips being disposed at an angle of less than 20° to the plane of the lower plate, the portion of said lower plate forming the lower boundary of each of said slits defining a supporting lip to support the strip against movement relative to the remainder of the ski, said strip being secured to said lower plate, the lowermost transverse surface of said strip defining with the extreme end of said lip a notch extending longitudinally of the ski along the bottom thereof.

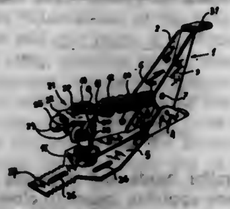
3,095,208
SAFETY GUARD CONSTRUCTION FOR ICE SKATES
William C. Shaw, Streetsville, Ontario, Canada, assignor to Canada Cycle and Motor Company Limited, Weston, Ontario, Canada
Filed Oct. 12, 1961, Ser. No. 144,617
Claims priority, application Canada Dec. 19, 1960
4 Claims. (Cl. 280—11.17)



1. A safety guard for tube bladed skates comprising a body incorporating a blunt toe element and a shank of smaller cross-sectional area, said shank being capable of securement in the rear end of the blade carrying tube of the skate to cause a portion of said toe element to project beyond the rear end of said blade and tube, said body being recessed in an area surrounding the inner end of the shank as to form a socket for receiving and surrounding an end portion of the tube of the skate.

3,095,209
HEEL SAFETY DEVICE FOR SKI BINDING
Lorenzo Covini, Milan, Italy, assignor to Cober, Milan, Italy, a corporation of Italy
Filed June 9, 1961, Ser. No. 116,052
Claims priority, application Italy June 24, 1960
6 Claims. (Cl. 280—11.35)

1. In a ski binding including a base plate provided with boot-engaging abutments, the combination therewith of a heel-clamping assembly comprising an operating lever pivotally secured to said base plate rearwardly of the boot of a skier, universal swivel means on said base plate between said lever and said boot, an upstanding stem tiltably secured to said base plate by said swivel means, a resilient connection between said lever and the top of said stem, and a heel-gripping member hinged to the top of said stem for swinging motion about a horizontal axis, said member being provided with a heel-engaging extremity forwardly of said stem and below said axis, said lever being displaceable between a released position and an operating position in which said connec-



tion resiliently urges the top of said stem forwardly while maintaining said extremity in clamping engagement with the heel of said boot.

3,095,210
SKI BINDINGS
Henry Arthur Hallam, London, England, assignor to Partridge's Models Limited, London, England, a British company
Filed Oct. 31, 1961, Ser. No. 148,901
Claims priority, application Great Britain Nov. 2, 1960
3 Claims. (Cl. 280—11.35)



1. A ski binding for co-operation with a ski boot, the binding comprising a toe-retaining device for attachment to the upper surface of the ski, a toe-piece for attachment to the toe of a ski boot, a first member on the toe-retaining device, a second member on the toe-piece, a first recess in one of said members, a first convex projection on the other of said members for releasable engagement with the recess, a heel-retaining device for attachment to the upper surface of the ski, a heel-piece for attachment to the heel of the boot, a third member on the heel-piece, a fourth member on the heel-retaining device, one of the third and fourth members having a second recess and the other of them having a second convex projection for releasable engagement with the second recess, a spring associated with one of said first and fourth members for urging it towards the other of said first and fourth members, a slider member carrying the spring and said member associated therewith, a housing in which the slider member is mounted, a shoulder on the slider member, a cam rotatably mounted on the housing and co-operating with the shoulder, an operating member for rotating the cam to displace the slider member from a rearward position where the projections and recesses are disengaged to a forward position where the projections and recesses are engageable to secure the boot to the ski, said operating member also serving for controlling displacement of said slider member rearwardly from the forward position, and means for locking the slider member when displaced forwardly from the rearward position.

3,095,211
AUTOMATIC BRAKE FOR TELESCOPING CARTS
Jacob J. Altherr, 8213 Fendale Ave., Affton, Mo.
Filed May 18, 1962, Ser. No. 195,932
2 Claims. (Cl. 280—33.99)

1. In a telescoping cart having a frame carrying two front wheels and two rear wheels, and a basket provided with a rear wall hingeably hung from a basket handle, a pair of brake lever brackets mounted in fixed positions on said handle at opposite sides of the cart, a brake lever pivotally mounted on and between said brake lever brackets, rear wall actuated arms mounted on said brake lever at opposite ends adjacent said brake lever brackets and adjacent said rear wall, a pair of sockets one of which is mounted on each of said rear wall actuated arms, a pair of brake arms one of which is mounted upon each of said sockets, a pair of brake arm guides, one mounted on the cart adjacent each of said rear wheels and adapted to guide the brake actuating end of each of said brake arms, a pair of brake plate members pro-



vided with two pivot pins at one end, a caster horn on each rear wheel, each of said caster horns being disposed around a brake plate member and having the end provided with pivot pins pivoted upon said horn, a brake spring centrally mounted on each brake plate and fixed in position between said brake plate and its associated caster horn, a brake cup member carried upon the underside of said brake plate member and maintainable in engagement with the wheel associated with said caster, horn, and a lug on the brake plate member in which is pivoted the lower end of said brake arm.

3,095,212
WEAPON TRANSFER DOLLY
George W. Gilbert, Kensington, Md., assignor to the United States of America as represented by the Secretary of the Navy
Filed Dec. 29, 1960, Ser. No. 79,475
13 Claims. (Cl. 280—124)



1. A material handling dolly including pairs of side frame sections arranged in parallel spaced relation, said side frame sections including upper and lower rails, leg assemblies connecting the side frame sections at each side of the dolly, a hydraulically operated shock absorber and brake actuator unit carried by said leg assemblies, cross members connecting the leg assemblies at one side of the dolly with those at the other side of the dolly, bumpers carried on the lower rails of opposed side frame sections, and means for moving the bumpers to positions extending laterally of the dolly upon elevation of the dolly above a surface.

3,095,213
LOW ENERGY LOAD LEVELING VEHICLE SUSPENSION
Benjamin F. Hair, Dearborn, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed June 9, 1961, Ser. No. 115,949
3 Claims. (Cl. 280—124)

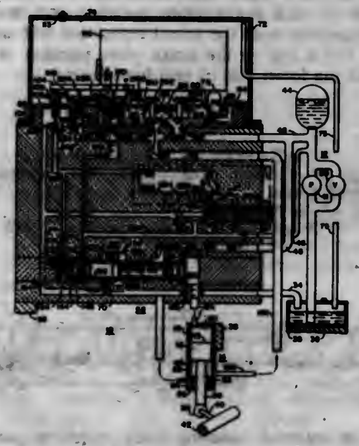
2. A suspension system for a vehicle having a pair of wheels joined by a rigid axle housing, sprung frame structure positioned relative to said housing by a pair of pivotally mounted longitudinally extending control arms, a

pair of transversely disposed torsion bar springs each having longitudinally extending load arms overlying said control arms, an intermediate load bearing member interposed between each set of said control arms and load arms, said member being adapted to transfer sprung load



to unsprung portions of the vehicle, means for positioning said intermediate member relative to said load arm in response to the vertical height between said frame structure and axle housing, said means comprising a transversely situated motor actuated shaft having crank arms engaging said intermediate member.

3,095,214
FLUID POWER APPARATUS
Clinton R. Hanna, Fort Lauderdale, Fla., and Lawrence B. Lynn, Clarence, N.Y., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed July 7, 1961, Ser. No. 122,459
3 Claims. (Cl. 280—124)



1. In a fluid power stabilizing system for a vehicle having a fluid power actuator, a body, inertia sensing means for controlling the flow of fluid in and out of said actuator, said sensing means comprising a mass pivotally carried by said body, said body having a surface facing a surface of said mass, said body having a bore open to said body surface, a first plug in said bore, said plug having an axial off-center bore extending therethrough, a reciprocable fluid pressure operated piston in said off-center bore and extending into contact with said surface of the mass, said first plug being rotatable for adjusting the contact position of said piston along said surface of the mass.

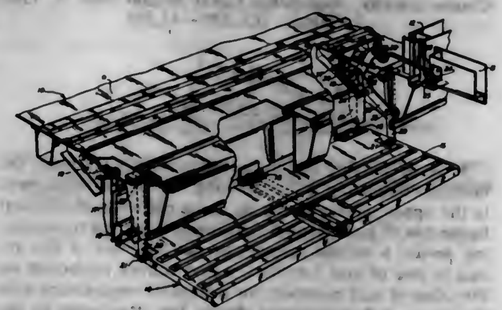
3,095,215
SPLASH GUARD
James J. Black, Cincinnati, Ohio, assignor, by mesne assignments, to Pullman Incorporated, a corporation of Delaware
Filed Nov. 13, 1961, Ser. No. 151,958
4 Claims. (Cl. 280—154.5)

1. A splash guard comprising a sheet of flexible material having top, bottom and side edges, at least two adjacent parallel beads along said top edge and integral with said sheet, a rib along each of the side edges of said sheet and interconnecting the ends of said parallel beads, a clamp terminating in elongated jaw edges disposed be-



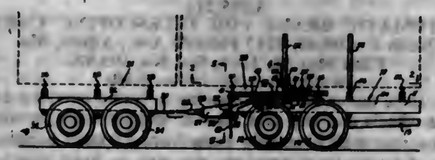
tween said parallel beads and engaging said side edge ribs, and pressure applying means to close said jaw edges thereby crushing that portion of each said side edge rib between said parallel beads.

3,095,216
MECHANICAL AUTOMATIC STEP
Horace L. Browne, Dearborn, and Robert A. Myers, Garden City, Mich., assignors to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Sept. 9, 1960, Ser. No. 55,056
4 Claims. (Cl. 280—166)



1. In a motor vehicle, a vehicle body, a door supported for swinging movement by said body, a movable step, linkage means operatively connected to said step and to said body allowing swinging movement of said step from an operative to a storage position, a first link pivoted at one end to said step and at the other end to said body, a bell crank pivotally supported by said body and having an extending arm, a second link pivotally connecting said arm and said first link, and an actuating rod operatively connected at one end thereof to said door for movement therewith, the other end of said rod being operatively connected to said bell crank, the point of pivotal connection between said second link and said arm lying below a line connecting the point of pivotal support of said bell crank and the pivotal connection between said second link and said first link when said step is in its operative position.

3,095,217
TRUCK ADAPTER
Amos A. Horner, Star Rte. 2, Cascadia, Oreg.
Filed Mar. 26, 1962, Ser. No. 182,163
5 Claims. (Cl. 280—404)



3. An adapter for tractor vehicles of the type embodying a bifurcated fifth wheel for connection purposes, and

having apertured lugs extending from the rear thereof, said adapter comprising front and rear spaced transverse beams, longitudinally extending connections between said beams, said front beam having openings therein for the reception of the bifurcations of the fifth wheel, a plate depending from said rear beam, a connection for a trailer secured to said plate, openings in said plate for the reception of the apertured lugs of the tractor, pins engaging the apertures in said lugs for securing said adapter to the tractor, connecting means extending from said front beam into the slot of the fifth wheel, an inclined guide means extending beneath the bifurcated end of the fifth wheel for leveling the same to direct the bifurcations into said openings in said front beam,

and an inclined support on the side of said front beam opposite said guide means for retaining said bifurcations in level position after said bifurcations have extended through said openings.

3,095,218
HIGH PRESSURE GAS CONNECTION AND SEAL WHEREIN SAID SEAL HAS COLLAPSE PREVENTING MEANS
Alton P. Elder and Theodore P. Le Grand, China Lake, Calif., assignors to the United States of America as represented by the Secretary of the Navy
Filed Mar. 25, 1959, Ser. No. 801,974
1 Claim. (Cl. 285—8)
(Granted under Title 35, U.S. Code (1952), sec. 266)



A manually readily severable conduit connector comprising:

(*a*) a first conduit having a cylindrical male portion of uniform diameter having a chamfered end,

(*b*) a second conduit having a female portion of larger diameter than the male portion providing an annular space surrounding the male portion,

(*c*) said female portion having an annular abutment adjacent one end thereof,

(*d*) a body of elastic material having a central cylindrical bore of uniform diameter disposed in said annular space and having first and second annular end surfaces,

(*e*) the first end surface of said body abutting said annular abutment,

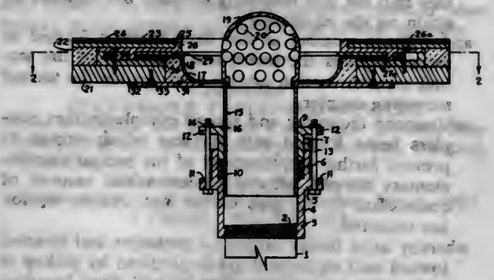
(*f*) the second end surface of said body being subjected to conduit pressure tending to compress it in a direction toward the first end surface and compressing the body radially inwardly onto said male portion,

(*g*) said male portion being inserted into the bore of the body for only a variable portion of the length of the bore and being manually removable axially therefrom,

(*h*) the remaining portion of the bore tending to reduce in diameter to close communication therethrough due to axial compression of the body resulting from pressure applied to said second end face, and

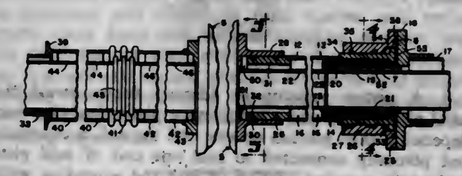
(*i*) a rigid stepped axially movable washer abutting said second end face and recessed into same having a central portion extending toward said end of the first conduit portion and having an opening therethrough concentric with the axis of the bore in said elastic body, but terminating in spaced relation thereto, adapted to prevent said remaining portion of the bore from compressing inwardly and closing communication therethrough.

3,095,219
DRAIN OR VENT PIPE CONSTRUCTION HAVING MEANS TO ALLOW LATERAL AND LONGITUDINAL EXPANSION
La Verne F. Tatty, Toronto, Ontario, Canada, assignor to Johns-Manville Corporation, New York, N.Y., a corporation of New York
Filed June 23, 1958, Ser. No. 743,668
1 Claim. (Cl. 285—42)



A drain or vent pipe extension comprising a drain pipe, a tubular extension, means coupling the pipe and extension to each other, means in said coupling sealing said extension relative to the pipe and allowing for perpendicular expansion of either the pipe or the extension, a roof deck, a flange on the extension, said flange being spaced on its outer periphery from adjacent lateral portions of the roof deck, a gasket mated to each face of the flange allowing the flange to move laterally between the gaskets, and means to mount the gaskets and flange to the roof deck.

3,095,220
ZERO LOAD PUMP FLANGE CONNECTION
Herrick L. Johnston and James G. Pierce, Columbus, Ohio, assignors to Herrick L. Johnston, Inc., Columbus, Ohio, a corporation of Ohio
Filed Feb. 16, 1959, Ser. No. 793,481
6 Claims. (Cl. 285—114)



1. Apparatus for transferring a cryogenic liquid from liquid-supply equipment to a remote fixed location without imposing breaking strains on said equipment, comprising:

first and second double-walled transfer sections each having a rigid inner liquid-transfer pipe and a rigid outer jacket, said sections defining vacuum chambers,

the first one of said sections being formed with an extension having an enlarged interior bore and the second of said sections being formed with a complementary extension having a reduced outer diameter, said extensions telescoping to form a joint,

first and second mounting couplers rigidly secured to said equipment and to said fixed location, respectively,

first and second complementary couplers secured to the outer jacket of the first transfer section and gas-

tightly but slidably and non-rigidly fitted to the first and second mounting couplers, respectively, said first and second complementary couplers and the inner pipe and outer jacket of the first transfer section defining a vacuum space,

the inner pipe of the first transfer section being rigidly secured to said equipment at one end and the first complementary coupler being axially displaceable relative to that inner pipe so that thermal contraction of said equipment and said inner pipe and its associated extension axially displaces the complementary couplers relative to their respective mounting couplers and inserts the first complementary coupler further into the first mounting coupler, but imposes no strain on the equipment,

and a flange member at said fixed location formed to secure together the jacket and extension of the second transfer section and to abut against the second mounting coupler,

said second mounting and second complementary couplers being formed with surfaces which engage to prevent further displacement of the second complementary coupler after a predetermined amount of contraction of the pipe of the first transfer section has occurred,

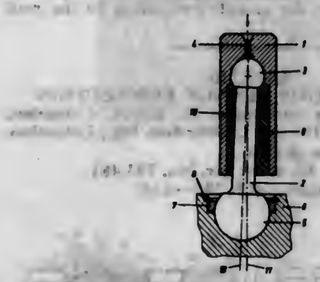
whereby axial forces caused by pressures and directed toward said equipment are neutralized by pickup at said surfaces and dissipation at said fixed location.

3,095,221

PISTON CONSTRUCTION

Otmar Kaup, Aschaffenburg, Germany, assignor to Gesellschaft fur Linde's Eismaschinen Aktiengesellschaft, Wiesbaden, Germany

Filed Oct. 25, 1961, Ser. No. 147,604
Claims priority, application Germany Nov. 2, 1960
6 Claims. (Cl. 287—21)



1. A piston particularly adapted for a swash-plate axial-piston unit, and comprising a piston body having a depending skirt portion on one end thereof, a connecting rod pivotally connected to said one end of said piston body with a major portion of said rod extending within said skirt portion, and a layer of resilient material on the portion of the connecting rod within said skirt portion and the inner surface of said skirt portion.

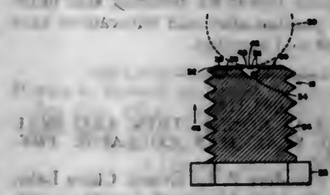
3,095,222

JOINT HAVING SET SCREW WITH NON-MARRING GROOVED ENGAGING FACE

Gilbert E. Davies and Gino L. Gasparini, Fort Wayne, Ind., assignors to Superior Ball Joint Corporation, Fort Wayne, Ind.

Filed Aug. 31, 1959, Ser. No. 837,163
1 Claim. (Cl. 287—52.06)

In combination: a locking device comprising a body having a first cylindrical bore therethrough, said body having a second bore which is threaded and which opens into said first bore, said first and second bores being at right angles to each other, and a locking screw having a solid shank having a thread of given pitch formed thereon, said shank being threadedly received in said second bore, said shank having a flat extended area work-engaging end face, said end face lying in a plane normal to the axis of said shank, said end face having a central indentation formed therein having a diameter substantially smaller than the diameter of said end face, said end face having at least three pairs of equally angularly spaced diametral detent grooves formed therein extending radially outwardly from said indentation and through the peripheral edge of said end face, each of said grooves being narrow and shallow with respect to the diameter of said end face and of uniform width throughout its length and defining with adjacent grooves substantially flat land portions having no sharp edges or points; and a cylindrical rod received by



said first bore, said screw being movable axially in said second bore forcefully to engage one diametral pair of grooves with an axial portion of the peripheral surface of said rod, said surface portion projecting slightly into said one groove with the groove sides engaging said surface portion thereby locking said rod in said first bore and locking said screw against loosening without mutilation of said surface portion of said rod, the pitch of the thread and the angle defined between adjacent grooves being such that said screw is rotatable in a direction to tighten said screw on said rod through said angle after initial engagement of a diametral pair of said land portions with said axial surface portion of said rod thereby to cause engagement only of the next diametral pair of grooves with said surface, under normal torque loads applied to said locking screw.

3,095,223

WIRE CLAMP

David C. Hubbard and Harry R. Weltkemper, Centralia, Mo., assignors to A. B. Chance Company, Centralia, Mo., a corporation of Missouri

Filed Mar. 3, 1961, Ser. No. 93,136
3 Claims. (Cl. 287—83)



1. In a cable wedge clamp having an elongated inner wedge member and a channeled outer wedge member complementally receiving said inner wedge member with the cable wedged between and supported by said members, the combination with said members of:

a resilient, generally U-shaped bail having a pair of opposed legs in normal spaced relationship, one of said legs having a bent portion on the outer extremity thereof extending away from the major plane of said bail, there being an elongated latch element secured at one end thereof to the outer extremity of the other leg and extending generally toward said one leg; and

a securing plate carried by one of said members and provided with journal means thereon receiving the bent portion of said one leg for rotatably mounting the bail on said plate to permit shifting movement of the latter from a stored position with the bail being disposed along and adjacent said members to an operative position with the bail extending outwardly and away from said members, said plate being provided with a latch element receiving slot extending thereinto from one edge thereof, there being an enlarged portion on the latch element adjacent the opposite end thereof and engageable with said plate adjacent the margin thereof forming said slot to retain said latch element in said slot when said bail is in said operative position and said legs are spaced apart a distance less than the normal spacing of the legs.

3,095,224

BALL AND SOCKET JOINTS

Viktor Langen, Meererbusch, near Dusseldorf, and Hans Mau, Leichlingen, Rhineland, Germany, assignors to A. Ehrenreich & Cie., Dusseldorf-Oberkassel, Germany, a corporation of Germany

Filed Mar. 11, 1960, Ser. No. 14,270
Claims priority, application Germany Mar. 18, 1959
1 Claim. (Cl. 287—87)



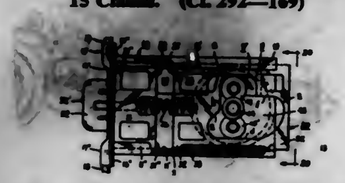
A ball and socket joint for use in the front wheel suspension and the steering and control gear of power vehicles comprising a joint housing, a ball in said housing, a pin on said ball extending from said housing, and bearing means between said ball and said housing for supporting said ball in said housing, said bearing means comprising a lining of synthetic polyamide containing from 2–5% polytetrafluoroethylene.

3,095,225

AUTOMATIC DOOR LOCKING ASSEMBLIES

Paul M. Domsic, Cleveland, and Harold J. Dielman, Lyndhurst, Ohio, assignors to The Sanymetal Products Company, Inc., Cleveland, Ohio, a corporation of Ohio

Filed Jan. 29, 1962, Ser. No. 169,212
15 Claims. (Cl. 292—169)



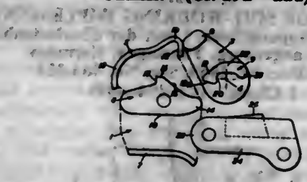
14. A door locking structure including in combination; a lock case presenting a face plate having a lockbolt hole therein designed to be secured to the jamb edge of a door body, and a case section extending from said face plate and designed for insertion into the door body; a primary slide reciprocably supported in the case section of the lock case, said primary slide including a forwardly projecting lockbolt designed to extend through the lockbolt hole in the face plate of the lock case, and a rearwardly projecting cam member presenting a lockbolt-retracting cam edge portion; a secondary slide reciprocably supported in the case section of the lock case, resilient means extending between said primary and secondary slides, and a camming hole presenting a camming rim extending through said secondary slide; and slide manipulating means which includes a rotatably mounted camming element extending into the camming hole of said secondary slide and which is designed to be rotated into camming engagement with the camming rim of said secondary slide when rotated in one direction and into camming engagement with the cam edge portion of said primary slide when rotated in the opposite direction, and means for manually rotating said camming element in opposite directions from a neutral position to thereby manipulate said lockbolt into rigidly extended door-locking position when said camming element is rotated in one direction from neutral position, and to manipulate said lockbolt to door-unlocking retracted position when rotated in the opposite direction from neutral position.

3,095,226

RELEASABLE FASTENING DEVICES

Victor Chanaryn and Kenneth Peter Pugh, Solihull, England, assignors to Wilmot-Breeden Limited, Birmingham, England

Filed Jan. 4, 1960, Ser. No. 255
Claims priority, application Great Britain Jan. 8, 1959
7 Claims. (Cl. 292—221)



1. A releasable fastening device comprising a cam rotatably mounted about an axis, said cam having first and second distinct portions thereon, said first and said second portions being spaced from each other and projecting from one face of the cam in the general direction of said axis, a keeper having third and fourth separate portions thereon, said third and said fourth portions being spaced from each other and similarly projecting from one face to the keeper for engagement with said cam portions during a fastening operation, spring means urging said cam towards a relative coupling position in the angular sense about said axis, and means for mounting said cam and said keeper so that said first and said third portions initially engage each other during a fastening operation and rotate the cam, against said spring means, away from said relative coupling position, and said third portion thereupon enters the space between said first and said second portions to enable said second and said fourth portions to move into coupling engagement with each other close to said axis at the end of the fastening operation.

3,095,227

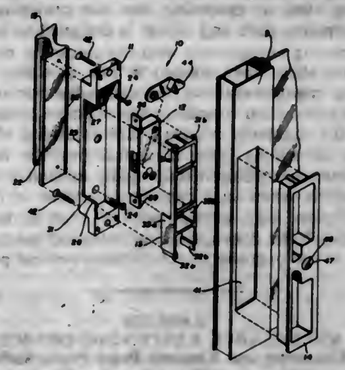
REVERSE LATCHING ASSEMBLY FOR SLIDING DOOR

Ralph T. Casebolt, 1610 E. 12th St., Oakland, Calif.

Filed Nov. 10, 1960, Ser. No. 68,490
5 Claims. (Cl. 292—244)

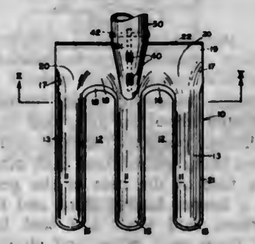
1. In a lock assembly affixed to the side of a door for locking the door against its cooperating door jamb, the combination of a body member supported alongside the leading edge of the door and having a cut out in its leading side, a locking device having a rotatable latch member operable to pivot outwardly away from one end thereof and upwardly, said locking device being symmetrically constructed whereby said one end thereof may be disposed in said body member adjacent the upper end thereof irrespective of direction of movement of the door to a closed position, and a symmetrical reversible spacing member for maintaining said locking device adjacent the

desired end of said body member so that the latch member at all times moves toward the top of the door and



jamb to engage retaining means associated with said jamb.

3,095,228
BLADE FOR SOIL-WORKING IMPLEMENT
Karl August Düppengiesser, Unter der Charlottenberg 1, Gera-Langenberg, Thuringen, Germany
Filed Dec. 31, 1959, Ser. No. 863,353
1 Claim. (Cl. 294—49)



A soil-working implement comprising a blade having a heel portion and a handle portion attached to said heel portion, said blade further having an odd number of identically shaped elongated tongues of generally rectangular configuration spacedly projecting integrally from said heel portion, said blade having a working surface to which said handle portion is secured in line with the middle one of said tongues while extending to and partly over the latter, said tongues terminating in rounded free ends and being surrounded by sharpened edges along an outline identical with that of the spaces separating them from one another, each of said tongues being formed over its entire length with an elongated trough which is concave on the side of said working surface and extends into said heel portion, said heel portion being provided with ridges convex on the side of said working surface on opposite sides of said handle portion in alignment with said spaces, said heel portion being further provided with a transverse edge remote from said free ends which is bent over toward said working surface to substantially the level of said ridges.

3,095,229
DEVICE FOR HANDLING ARTICLES
Kenneth Hobbs, Bassett, Southampton, England, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Apr. 27, 1960, Ser. No. 25,101
Claims priority, application Great Britain May 1, 1959
3 Claims. (Cl. 294—64)

1. A vacuum pickup pencil comprising:
an elongated member having a central bore communicating with a fluid pressure inlet at one end, a working aperture at the other end, and a lateral outlet aperture between said inlet and working apertures, means closing the bore of said tubular member between said outlet and working apertures and dividing said bore into a first bore and a second bore, said first bore extending between said inlet and lateral outlet apertures,



means secured to said tubular member within said first bore defining a venturi throat coaxial with said first bore, said venturi throat being located in said first bore between said inlet and lateral outlet apertures, and passage means interconnecting said venturi throat and said working aperture through said second bore.

3,095,230
TRAILER FOR USE IN HARVESTING OF TOBACCO
William R. Long, Tarboro, N.C., assignor to Long Manufacturing Company, Tarboro, N.C.
Filed Nov. 6, 1961, Ser. No. 150,422
4 Claims. (Cl. 296—5)



1. A vehicle for use in the harvesting of tobacco comprising a wheel supported bed, an upright wall disposed centrally and longitudinally on said bed, said bed being inclined upwardly from said wall toward the outer side edges of said vehicle, a plurality of grooves in said bed adjacent to said wall, at least one tobacco holder carried by said bed and including a base and a top, a depending flange on said base receivable in one of said grooves, an upright stanchion on each end of said base, a guideway forming member on each stanchion, a guide on each end of the top for cooperative engagement with the guideway forming members, and latching means carried by said top for securing said top to said base.

3,095,231
COLLAPSIBLE TENT AND TRAILER
Lloyd E. Reed, 122 Davis St., Mankato, Minn.
Filed Sept. 29, 1961, Ser. No. 141,785
3 Claims. (Cl. 296—23)



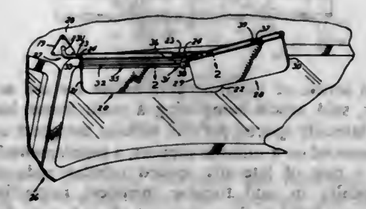
1. A collapsible tent and trailer comprising a rigid floor structure having ground engaging wheels and adapted for connection to a towing vehicle; foldable side walls; collapsible front, rear and top walls; a pair of retractable supporting rods one each secured on opposite sides of said floor structure adjacent the bottom thereof and movable between a laterally outwardly projecting extended position and a retracted position in underlying relationship to said floor structure; and a pair of flexible guy elements; said guy elements being one each connected at its upper end to a different one of said side walls adjacent the upper edge thereof and also connected at its lower end to the outer end of said supporting rod; said supporting rods and said guy elements being of such length and further arranged and adapted to prevent said front, rear and top walls of said trailer tent from collapsing.

3,095,232
WALK-THROUGH SEAT
Myron T. Stevens, Kenosha, Wis., assignor to Outboard Marine Corporation, Waukegan, Ill., a corporation of Delaware
Filed Jan. 9, 1961, Ser. No. 81,431
5 Claims. (Cl. 296—65)



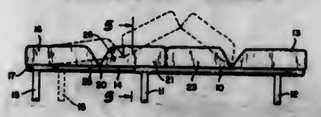
5. A walk-through seat movable between a stored position and a position of use and comprising the combination with a seat, of a unitary rigidly extending bracket having generally upright leg portions, means providing a pivotal connection between said leg portions and one margin of the seat, means providing a floor pivotal connection parallel to said first pivotal connection and remote from the bracket leg portions in a direction away from the seat when the seat is in its said position of use, said bracket including generally horizontal portions connecting the lower ends of the leg portions with said means providing a floor pivotal connection, and means independent of said bracket and wholly at the other side of the seat therefrom for supporting the seat in said position of use.

3,095,233
VEHICLE SUN VISOR MEANS HAVING A MAIN SHIELD MOUNTING A HORIZONTALLY SLIDINGLY POSITIONALLY CHANGEABLE AUXILIARY SHIELD
Eva Dryden, 11952 Cantara St., North Hollywood, Calif.
Filed Feb. 20, 1961, Ser. No. 90,268
5 Claims. (Cl. 296—97)



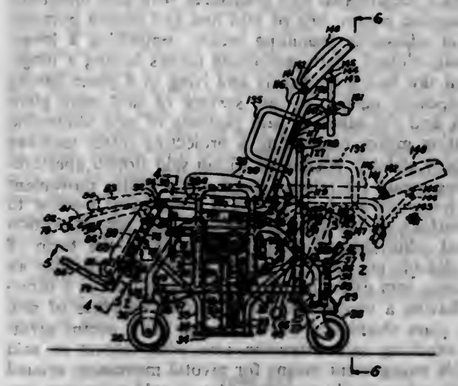
5. Vehicle sun visor means having a main shield mounting a slidingly positionally adjustable auxiliary shield, comprising: a main glare shield; means for adjustably mounting said main glare shield with respect to a desired portion of a vehicle adjacent to window means thereof; an auxiliary glare shield, and means for adjustably mounting said auxiliary glare shield for controllably positionable adjustment with respect to said main glare shield along a junction line extending along said main glare shield, said means for adjustably mounting said auxiliary glare shield with respect to said main glare shield comprising first and second portions, with said first portion including longitudinal junction means carried by one surface of said main glare shield on one side thereof along the length thereof in a location spaced between top and bottom edges of said main glare shield, and with said second portion including slidable engagement means in slidable engagement therewith and pivotally connected to said auxiliary glare shield in a manner supporting it in outwardly projecting relationship with respect to said surface of said main glare shield and having a component normal thereto; said slidable engagement means and said longitudinal junction means slidably engaged therewith including means for preventing relative rotation thereof around a longitudinal axis coincident with said longitudinal junction means; one of said first and second portions of said adjustable mounting means comprising a longitudinally slotted aperture-defining means having a longitudinal slot facing outwardly and lying in a plane having a component normal to said surface of said main glare shield, and the other of said portions of said adjustable mounting means comprising a projecting insert member relatively slidably positioned within said slotted aperture-defining means for relative longitudinal sliding movement in a longitudinal plane having a component normal to said surface of said main glare shield, said second portion of said adjustable mounting means taking the form of said slidable engagement means being provided with an extension arm extending outwardly therefrom in a direction having a component normal to said surface of said main glare shield and provided with pivot means pivotally attaching said extension arm with respect to said slidable engagement means for pivotal movement around an axis substantially perpendicular to said extension arm and to the longitudinal direction of said main glare shield, said extension arm adjustably rotatively and longitudinally slidably carrying said auxiliary glare shield for rotation of said auxiliary glare shield, along the length thereof, around said extension arm, and for longitudinal slidable movement of said auxiliary glare shield toward and away from said surface of said main glare shield in a direction having a component normal thereto.

3,095,234
CONVERTIBLE SEAT-BED ASSEMBLY
Wesley M. Brooks and Earl W. Hoffitt, Toledo, Ohio, assignors, by mesne assignments to Globe-Wernicke Industries, Inc., Toledo, Ohio, a corporation of Ohio
Filed Feb. 21, 1962, Ser. No. 174,780
3 Claims. (Cl. 297—65)



1. An article of furniture convertible for use as a bed or chair, said article comprising a main frame having a pair of laterally spaced parallel tubular members adapted to be mounted on a suitable support, a supplemental frame having a pair of laterally spaced tubular rods slidable telescopically in said tubular members respectively, a cushion unit fixed to the outer end of said main frame, a cushion unit hinged at its outer end to the outer end of said supplemental frame, a pair of cushion units disposed between said first and second mentioned cushion units, a hinge connecting said pair of cushion units, a hinge connection between said fixed cushion unit and the adjacent cushion unit of said pair, a hinge connection between said second cushion unit and the adjacent cushion unit of said pair, said pair of cushion units being adapted to assume an inverted V for chair use when the supplemental frame unit is slid telescopically into said main frame, and releasable means for positively retaining said supplemental frame in the position where said pair of cushions is disposed in such inverted V position, said releasable means comprising pins depending from the second mentioned cushion unit, and holes in the tubular members and tubular rods which when in registry receive said pins thereby to retain the parts in chair position.

3,095,235
HYDRAULICALLY OPERATED BED CHAIR
Mary E. Babcock and Harold S. Babcock, both of 50740 Delft Ave., South Bend, Ind.
Filed Sept. 5, 1961, Ser. No. 135,867
3 Claims. (Cl. 297—68)



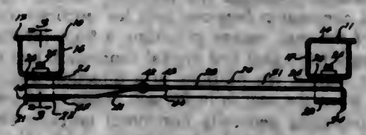
1. In a bed chair, the combination of a frame, caster wheels supporting said frame, brake means for said caster wheels, a platform disposed centrally of said frame and being dependingly carried and supported thereby, an hydraulic cylinder carried by said platform, a piston in said cylinder, a seat support positioned upon and carried by said piston, an hydraulic jack for raising and lowering said piston, a guide cylinder on said platform, a guide piston secured to said seat support and engaging in said guide cylinder, a foot operated pumping lever for actuating said hydraulic jack, a back rest pivotally secured to said seat support, a head rest pivotally secured to said back rest, leg supports pivotally secured to said seat support, and foot rests removably and pivotally secured to said leg supports.

3,095,236
STACK CHAIR
Edward J. Klassen, 11461 Sunset Blvd., Los Angeles 49, Calif.
Filed Oct. 4, 1961, Ser. No. 142,872
7 Claims. (Cl. 297—239)



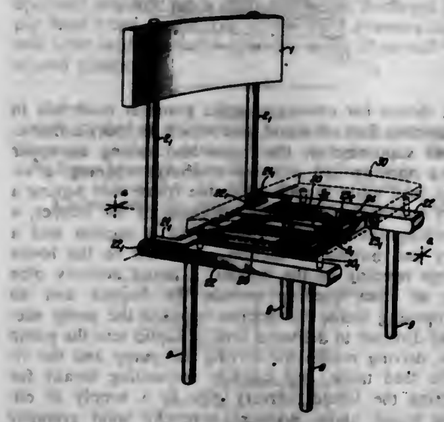
1. A stack chair comprising a rigid chair structure including a seat, a back rest, front legs and rear legs, said rear legs being disposed beyond the side edges of said seat, a pair of front stacking brackets mounted on the front side of said back rest adjacent the side edges thereof and defining upwardly facing shoulder surfaces, a pair of rear stacking brackets mounted on the rear side of said back rest adjacent the side edges thereof and defining downwardly facing shoulder surfaces, said front brackets projecting beyond the front side of said back rest and said rear brackets projecting beyond the rear side of said back rest, the front and rear brackets at each side of the chair being located approximately in a common plane parallel to the sides of the chair and said shoulder surfaces of the front brackets being spaced above said shoulder surfaces of the rear brackets a distance which is greater than the thickness of said seat, whereby one chair may be stacked on top of another with the rear legs of the upper chair straddling the seat of the lower chair and the downwardly facing shoulder surfaces of the rear stacking brackets on the upper chair resting on the upwardly facing shoulder surfaces of the front stacking brackets on the lower chair to support the upper chair on the lower chair with the back rest and seat of the upper chair retained out of pressured contact with the back rest and seat, respectively, of the lower chair.

3,095,237
RETRACTIBLE CHAIR COUPLER
Joseph H. Desmoyers, 26085 Berg Road, and Edmond Robert, 21899 8½ Mile Road, both of Southfield, Mich.
Filed Apr. 10, 1962, Ser. No. 186,505
3 Claims. (Cl. 297—248)



1. A coupling device for interconnecting chairs and the like into rows, said device comprising a latch bar adapted to be slidably mounted beneath the side edge of a seat of one chair for limited projection outwardly beneath the contiguous side edge of an adjacent chair, a keeper means having a lower bar portion adapted to be mounted beneath the contiguous side edge of said adjacent chair seat and arranged for reception of the outwardly projecting end portion of said latch bar with said keeper lower bar portion arranged beneath said latch bar outer end portion, and a single spring latch carried by the outer end portion of said latch bar arranged to latchingly engage the latch bar with said keeper lower bar portion on said adjacent chair when said latch bar outer end is projected from beneath said one chair and to latchingly anchor said latch bar beneath the seat of said one chair when said latch bar outer end is retracted beneath the seat of said one chair, said latch bar being formed with a downwardly extending stop means on its inner end portion to limit the outward projection of the latch bar while permitting slidable adjustment of the latch bar relative to said one chair seat to permit variation in the spacing of the adjacent chairs, said spring latch having a pair of longitudinally spaced apart, downwardly extending keeper engaging formations at the outer end of said latch bar to limit relative sliding movement between the latch bar outer end and the keeper bar portion engaged therewith.

3,095,238
SEAT OR OTHER ARTICLES SUCH AS COUCH
Jean Paul Tarascon, Ave. de la Gare, Oloron Sainte Marie (Basses-Pyrenees), France
Filed Jan. 18, 1961, Ser. No. 83,527
9 Claims. (Cl. 297—306)



1. A seat, chair, sofa and the like comprising a pair of side members adapted to be supported above a floor surface, a back pivotally attached to said side members about an axis, a yoke attached to said back and having a portion spaced from and in parallel relation to said axis, a torsion bar rigidly attached to said side members and spaced from and in parallel relation to said axis, and a lever arm rigidly attached adjacent one end thereof to said torsion bar with the other end thereof positioned to contact said portion of said yoke so as to transmit a torsional stress to said torsion bar when said back is rotated around said axis.

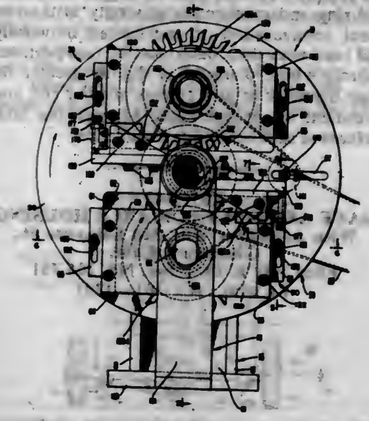
3,095,239
CHAIR
Severin B. Hendrickson, Templeton, Mass., assignor to Heywood-Wakefield Company, Gardner, Mass., a corporation of Massachusetts
Filed Aug. 31, 1961, Ser. No. 135,213
3 Claims. (Cl. 297—396)

1. A chair comprising a base; a seat cushion, said seat cushion resting on said base; a back-rest, said back-rest mounted on said base; side-walls, said side-walls mounted upon and extending between said base and back-rest; a head-rest cushion, said head-rest cushion integrally mounted on said back-rest between said side-walls; a back-rest cushion, said back-rest cushion including a resilient pad of poly-urethane foam and entirely contained in an upholstery covering; flat surfaces in said base,



seat-cushion, back-rest, side-walls and head-rest cushion defining a five-sided cavity for receiving said back-rest cushion; said back-rest cushion modularly located in the cavity formed by said flat surfaces located in the area normally corresponding to the middle and lower back of an occupant, said surfaces retaining said back-rest cushion in said cavity and limiting the extent of curvature of said back-rest cushion.

3,095,240
MACHINES FOR TRIMMING TWISTED WIRE BRUSHES
Theodore Marks, Hartsdale, N.Y., assignor, by mesne assignments, to American Technical Machinery Co., Inc., Mount Vernon, N.Y., a corporation of New York
Filed May 5, 1960, Ser. No. 27,210
21 Claims. (Cl. 300—17)



1. In combination, a support, a tube fixed to said support through which a twisted wire brush may be fed, a member rotatably mounted on said support coaxially of and about said tube, means to rotate said member, said member having an opening coaxial with said tube, through which said brush may pass, a rotary cutter mounted for rotation on said member on an axis parallel to and offset from the rotational axis of said member and being also rotatable therewith, said cutter being located axially beyond the fixed tube and means controlled by rotation of said member, including means to rotate said cutter about its own axis for trimming the ends of bristles of the brush being fed through said tube and through the opening in said member and a blade mounted on said member and having a cutting edge against which the rotary cutter may shear the ends of the bristles.

3,095,241
WHEEL COVER CONSTRUCTION
Albert J. Fitzgerald, Cranston, R.I., assignor to Thompson Industries, Inc., Indianapolis, Ind., a corporation of Massachusetts
Filed Jan. 15, 1963, Ser. No. 251,556
6 Claims. (Cl. 301—37)



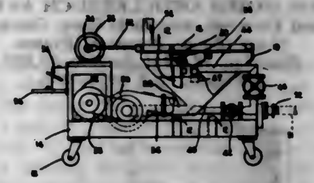
1. In combination,
(*a*) an automobile wheel having a tire receiving rim provided with a convex radially inwardly facing annular rib having a radially outwardly inclined surface on its inner side,
(*b*) a wheel cover overlying said wheel on the outer side of said rib and having an annular retaining ring extending laterally from near the peripheral edge thereof in radially inwardly spaced relation to and beyond said convex annular rib,
(*c*) a bead along the distal edge of said retaining ring constituting an integral extension thereof and spaced from said convex annular rib, said bead having an out turned section merging with an in turned section and an outer diameter not more than the inner diameter of said convex annular rib,
(*d*) a plurality of clips secured in spaced relation along said ring and conforming generally to the cross sectional configuration of and spaced outwardly from said bead with their outermost surface portions along a circle whose diameter is slightly greater than the inner diameter of said convex annular rib, and
(*e*) resilient means interposed between the juxtaposed surfaces of said bead and of said clips.

3,095,242
BRACE ASSEMBLY FOR AXLE HOUSINGS
Wien A. van der Wilt, 320 Lafayette St., Glendale 5, Calif.
Filed July 2, 1962, Ser. No. 206,751
1 Claim. (Cl. 301—129)



A brace construction in combination with a rear axle housing of an automotive vehicle, said housing having a central enlarged portion projecting both downwardly and rearwardly below and behind laterally extending housing portions, and said central enlarged portion having a downwardly facing lower surface and a rearwardly facing and substantially vertical rear surface, said surfaces lying at a substantial angle to each other;
said brace construction embodying a bearing member which includes
an elongate plate bearing upwardly against said downwardly facing axle housing surface with its longer dimension in the direction of the laterally extending axle housing length,
a pair of upstanding flanges at the rear longitudinal edge of said plate, said flanges being spaced apart longitudinally of the plate and engaging said rearwardly facing surface at spaced areas,
a pair of flanges depending from the longitudinal end edges of said plate, each of said depending flanges having an opening located near the rear longitudinal plate edge,
a single tension rod extending through said openings between rod ends located near the outer ends of the lateral housing portions,
clamps engaging the outer end parts of the lateral housing portions and rotatively adjustable in set positions about said portions,
and the ends of the single tension rod engaging said clamps and provided with tension adjusting means.

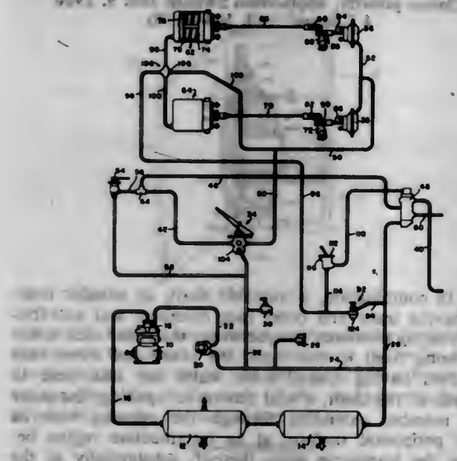
3,095,243
DEVICE FOR ENTRAINING MATERIALS IN A FLOW OF LIQUID
Angelo Joseph Rossi, Port Elizabeth, Cape Province, Republic of South Africa, assignor to G. B. Rossi & Figli (Africa) (Proprietary) Limited
Filed Feb. 23, 1961, Ser. No. 90,987
Claims priority, application Republic of South Africa Feb. 25, 1960
4 Claims. (Cl. 302—14)



1. A device for entraining solid granular materials in a transporting flow of liquid, and which includes a frame, a hopper supported by the frame and having an upper charging opening and a lower discharge opening, a vibratable feed table supported by the frame and having a delivery end over the charging opening of the hopper, a non-choking centrifugal pump having a suction and a delivery and having its suction connected to the lower discharge opening of the hopper, a liquid delivery pipe having an inlet opening outside the hopper and an outlet opening inside the hopper opposite the pump suction and directed to deliver a flow of liquid into the pump suction, driving means for driving the pump and the vibratable feed table, and conduit connecting means for connecting the liquid delivery pipe to a supply of entraining liquid under pressure, whereby solid granular materials delivered in bulk onto the vibratable feed table, are fed at a substantially constant rate into the hopper by the table.

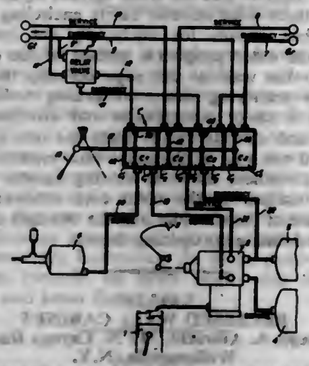
3,095,244
BRAKE SYSTEM AND CONTROL VALVE THEREFOR
Harry M. Valentine, Elyria, and Earl T. Andrews, Lorain, Ohio, assignors to Bendix-Westinghouse Automotive Air Brake Company, Elyria, Ohio, a corporation of Delaware
Filed July 14, 1960, Ser. No. 42,876
4 Claims. (Cl. 303—9)

1. A vehicle fluid valve brake system having a source of fluid pressure, a fluid pressure actuator for normally applying a vehicle brake, a spring operated fluid pressure released actuator for mechanically applying the brake when the fluid pressure from said source is below a predetermined pressure, a manually operable valve having an inlet port connected with said source, an outlet port and an exhaust port connected to atmosphere, means including a selectively operable valve for connecting said outlet port with said spring operated actuator, said valve also having a manually movable valve element movable to one position to connect said inlet and outlet ports and movable to a second position to connect said outlet and exhaust ports, a manually operable brake valve movable to connect said source and fluid pressure actu-



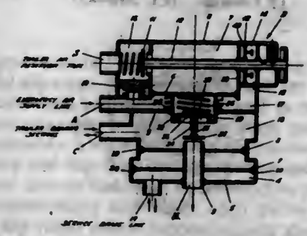
ator, and means to connect said source through said brake valve and said selectively operable valve with said spring operated actuator when the brake valve is moved to supply fluid from the source to the fluid pressure actuator and after said manually operable valve is moved to said second position.

3,095,245
BRAKING PLANT FOR A TOWABLE VEHICLE
Giuseppe Alfieri, Milan, Italy, assignor to Fabbrica Italiana Magneti Marelli S.p.A., Milan, Italy, a firm
Filed May 12, 1960, Ser. No. 28,591
Claims priority, application Italy June 12, 1959
5 Claims. (Cl. 303—14)



1. A pneumatic braking system for a self propelled motor vehicle connected to a trailer vehicle and adapted to be towed by a third vehicle, comprising air-operated brake-actuating means carried by the self propelled motor vehicle, air-operated brake-actuating means carried by the trailer vehicle, a compressed air reservoir tank for the self propelled motor vehicle, another compressed air reservoir tank for the trailer vehicle, both tanks being carried by said self propelled motor vehicle, compressed air supply means in said third vehicle, selectively operable dual-position control means, a pipe connecting the first-mentioned air-operated brake-actuating means with said dual-position control means, pedal-actuated valve means carried by the self propelled motor vehicle and operatively connected with the two compressed air reservoir tanks, a service control line connected with the second-mentioned air-operated brake actuating means and said dual-position control means, another service control line connected with said compressed air supply means in the third vehicle and said dual-position control means, other service lines connecting said pedal actuated valve means with said dual-position control means, said dual-position control means in its one position being adapted to interconnect one of said other service lines and said pipe, and interconnect a second one of said other service lines and the first-mentioned service control line whereby compressed air may be supplied from said reservoir tanks to the two brake actuating means when the pedal on said pedal actuated valve means is actuated, separate emergency lines connected with said compressed air supply means in the third vehicle and said dual position control and adapted for supplying compressed air for the first mentioned brake actuating means and said second mentioned brake actuating means, said other service control line including a control means for controlling the connection of one of said separate emergency lines with said dual-position control means, a third emergency line connecting said dual-position control means with the second-mentioned brake actuating means, said dual-position control means in its other position being adapted to interconnect the first one of said separate emergency service lines and the first-mentioned pipe, and interconnect a second one of said separate emergency service lines and the third emergency line whereby compressed air may be supplied to said two brake-actuating means.

3,095,246
AUTOMATIC RELAY VALVE APPARATUS FOR PNEUMATIC BRAKING INSTALLATIONS ON TOWED VEHICLES
Giuseppe Alfieri, Milan, Italy, assignor to Fabbrica Italiana Magneti Marelli S.p.A., Milan, Italy, a firm
Filed June 23, 1960, Ser. No. 38,359
Claims priority, application Italy June 26, 1959
1 Claim. (Cl. 303—40)



An automatic relay valve for pneumatic braking systems installed on towed vehicles comprising a housing, a transverse partition mounted within said housing defining therewith an upper section and a lower section, a service piston and a second piston slidably mounted in the lower section, a first chamber defined by the service piston and one end of the housing, a second chamber defined by the second piston and said partition, the service piston having a larger diameter than the second piston, a piston rod connected between the service and second pistons, said piston rod provided with an axial duct connecting the second chamber with the atmosphere, a first pipe fitting secured to said housing for connecting said first chamber to a service brake pipe, a second pipe fitting secured to said housing for connecting said second chamber to a towed vehicle braking section, an emergency piston slidably mounted in the upper section

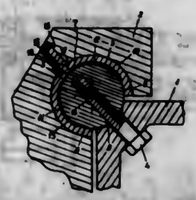
and having one end slidably mounted in an opening formed in said partition, a third chamber defined by the third piston and said partition, a fourth chamber defined by said third piston and the other end of said housing, a third pipe fitting secured to said housing for connecting said third chamber to an emergency brake pipe, a fourth pipe fitting secured to the housing for connecting the fourth chamber to an air reservoir tank, spring means mounted between said partition and the emergency piston for biasing the third piston upwardly relative to said partition, said emergency piston having an axial bore formed therein for connecting the second chamber with the fourth chamber, valve means carried by the emergency piston within said bore for controlling the flow of air between the second chamber and the fourth chamber and between the second chamber and the atmosphere, said valve means comprising a seat formed within the bore of the emergency piston, a first inlet valve disc carried by the seat, said disc having a plurality of axial ports formed therein and a bushing depending therefrom, a second inlet valve disc carried by the first disc closing the ports, and a depending stem slidably mounted within the bushing, said stem having one end connected to the second disc and the other end connected to a discharge valve, whereby upon upward movement of the service and second pistons, the discharge valve seats against one end of the piston rod thereby lifting the second inlet valve disc to open the ports, further upward movement of the service and second pistons causing the discharge valve to engage the bushing to thereby lift the first valve disc from the seat and upon downward movement of the service and second pistons, the inlet valve discs engage their respective seats and the discharge valve is lifted off the end of the piston rod.

3,095,247

GUIDING MEANS FOR STRAIGHT GUIDING OF PARTS, ESPECIALLY SLIDES

Ottomar von Zelewsky, Neuhausen am Rheinfall, Switzerland, assignor to Georg Fischer Aktiengesellschaft, Schaffhausen, Switzerland

Filed Mar. 2, 1961, Ser. No. 92,906
Claims priority, application Switzerland Mar. 5, 1960
10 Claims. (Cl. 308—3)



6. In a guiding arrangement for guiding machine elements, especially slides and carriages, along a straight path: supporting means, a guiding bar supported by and connected to said supporting means, a guiding bushing slidably engaging and circumferentially surrounding at least 180° of the circumference of said guiding bar, said guiding bushing being provided with at least three strip sections extending in longitudinal direction of said guiding bar and upstanding toward said guiding bar, said strip sections being the only sections of said bushing in sliding engagement with said guiding bar, and a machine element surrounding at least the major portion of said bushing on the side opposite said guiding bar and being firmly connected to said bushing, and means carried by said machine element engaging the bushing in the circumferential region of one of said strip sections operable for adjusting at least the said one strip section radially of said guiding bar.

3,095,248

BEARING MOUNT FOR ROTATABLE MACHINES

Nils Knarl Lindgren, Stockholm, Sweden, assignor to Aktiebolaget Electrolux, Stockholm, Sweden, a corporation of Sweden

Filed Jan. 9, 1961, Ser. No. 81,430
Claims priority, application Sweden Jan. 9, 1960
4 Claims. (Cl. 308—178)



1. In combination, a rotatable shaft, an annular bearing having inner and outer race members and anti-friction bearing elements therebetween, the inner race member being fixed to the shaft, the inner and outer race members having spaced sides which are transverse to the axis of the shaft, a wall having an opening, the outer race member extending through the opening with its outer peripheral surface, at an intermediate region between the transverse sides thereof, substantially at the edge of the wall member defining the opening therein, a pair of plates having radially disposed inner parts and outer flanges, at least one of the plates having a shoulder extending axially of the shaft between its inner part and outer flange, means for fixing the flanges of the plates to opposing sides of the wall, the inner parts of the plates being axially removed from the transverse sides of the inner and outer race members, the inner part of the one plate projecting radially beyond the outer peripheral surface of the outer race member, and the shoulder of the one plate being radially removed from the outer peripheral surface of the outer race member and encircling a region thereof at one side of the wall, the one side of the wall and the outer peripheral surface of the outer race member and the inner surface of the shoulder defining a three-sided annular cavity encircling the outer race member, means for anchoring the intermediate region of the outer peripheral surface of the outer race member to the wall at the edge defining the opening therein, the anchoring means comprising resilient material which is under compression and distributed about the cavity and extends axially from the one side of the wall toward one side of the outer race member, and the compressed resilient material bearing against the outer peripheral surface of the outer race member and the inner surface of the shoulder and the one side of the wall at the edge defining the opening therein.

3,095,249

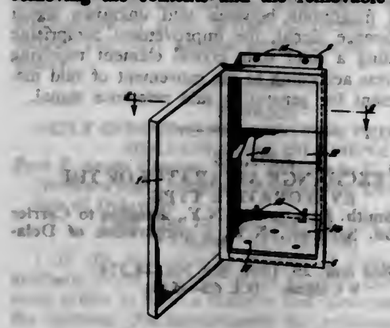
RECESSED WALL CABINET

Joseph A. Albrecht, 117 N. Cayuga Road, Williamsville, N.Y.

Filed Sept. 14, 1960, Ser. No. 56,064
1 Claim. (Cl. 312—242)

An invertable cabinet, including a box-like body of only vertical sides, a frame and a removable bottom, the vertical sides form an enclosure designed to be recessed in a wall, in the center of the enclosure is a horizontal shelf in which shelf is a V-shaped slot with the mouth or wide part of the V facing the frame, and in the ends of the enclosure are holes to receive the lugs that are on the removable bottom for whichever end of the enclosure is used as the bottom of the cabinet, the enclosure is attached to the frame which is larger dimensionally than the wall opening for the enclosure and is designed to be

on the face of the wall, the frame having a door which when closed hides from view the interior of the enclosure and its contents and when open allows the placing in or removing the contents and the removable bottom, the



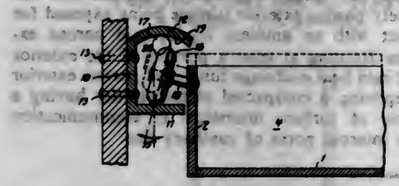
removable bottom has a shape corresponding to the cross section of the interior of the enclosure, holes in it for drainage and ventilation and lugs protruding from it to engage the holes in the ends of the enclosure to hold it in position as the bottom of the cabinet.

3,095,250

ROLLER DRAWER SUSPENSION DEVICE

Philip Frederick, Beechhurst, N.Y., assignor to Supreme Steel Equipment Corp., Brooklyn, N.Y., a corporation of New York

Filed Aug. 11, 1961, Ser. No. 130,792
8 Claims. (Cl. 312—341)



1. In a cabinet having at least one drawer, a pair of rails on opposite sides of said cabinet, rollers mounted on the sides of said drawer and engaging said rails, the improvement which comprises an upstanding wall on each of said rails adapted to be attached to said cabinet, a lower flange on said rails extending inwardly therefrom, an upper flange on said rails extending inwardly, a forward roller and a rear roller on each side of said drawer, the diameter of said rollers being substantially less than the distance between said flanges, said lower flange being substantially horizontal, the plane passing through said rollers forming an acute angle with the inward portion of said lower flange.

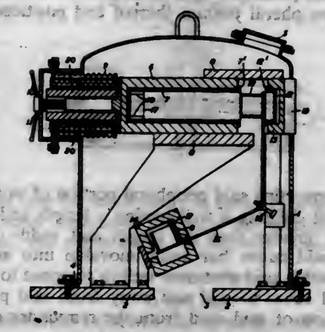
3,095,251

MANUFACTURE OF CASCADE IMAGE AMPLIFIERS

Norman Arthur Skarr, Chelmsford, England, assignor to English Electric Valve Company Limited, London, England, a company of Great Britain

Filed Jan. 15, 1960, Ser. No. 2,648
Claims priority, application Great Britain Mar. 25, 1959
5 Claims. (Cl. 316—19)

1. A method of manufacturing a cascade image amplifier including the steps of mounting a plurality of separate membranes on a carrier member in an evacuated space, mounting parts of the envelope of said amplifier in separated positions in said space, said parts being separated from said carrier member, depositing photo-cathode material on and heat treating said membranes to form photoelectric cathodes thereon while mounted on said carrier member in said space separated from said envelope parts, transferring desired processed cathodes from said carrier to predetermined positions in one of said envelope parts



while still in said evacuated space, bringing the separated parts of the envelope together and cold sealing them to one another to produce a hermetically sealed closed envelope with the processed cathodes in position inside it, and releasing the vacuum and removing the sealed envelope from the space.

3,095,252

SLIP RING APPARATUS FOR SIGNAL TRANSFER

John S. Adkins, 2555 La Mesa Drive, Santa Monica, Calif.

Filed July 25, 1960, Ser. No. 44,952
3 Claims. (Cl. 339—5)



1. Signal transfer apparatus comprising: spaced sets of coaxial slip rings, the slip rings in each set being spaced; a respective lead connected at one end to each slip ring, said leads extending from their slip rings toward one end of the assembly; a shaft including nonconductive material supporting said slip rings and embedding said leads therein; spaced sleeves including nonconductive material, said sleeves surrounding said shaft, each sleeve surrounding a set of slip rings; means supporting said sleeves and said shaft for relative angular movement; brush elements supported by said sleeves and engaging said slip rings; and leads extending through said sleeves to the brush elements.

3,095,253

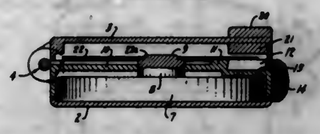
TIME ANALYZER

Alfred Dube and John A. Kasper, Lincoln, Ill., assignors to Stetson China Company, Lincoln, Ill., a corporation of Illinois

Filed June 9, 1961, Ser. No. 116,088
3 Claims. (Cl. 346—20)

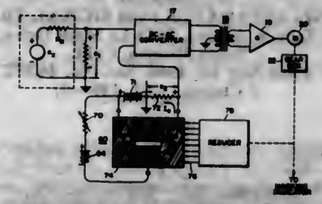
1. A time analyzer comprising a substantially circular watch case, a watch mechanism in said case, a central post driven within said case by said watch mechanism, a circular data collection card rotatably secured to said post within said case, a spring-loaded cover for said case, said cover being pivotally mounted at one side area of said cover and case, an integral cutter bar member

downwardly depending within said cover and overlying a peripheral portion of said collection card at a point substantially diametrically opposed on said cover from said area of pivotal mounting, a plate covering said watch mechanism within said case, said post extending through said plate, said plate having a U-shaped abutment uprising from a peripheral portion thereof and positioned be-



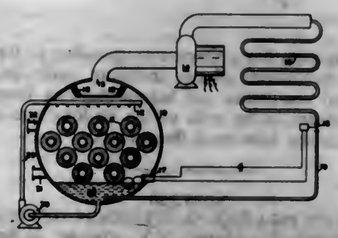
neath and supporting said peripheral portion of said card, said abutment defining a well having a length and width only slightly greater than the length and width of said cutter bar, said cutter bar being movable into and out of the area within said abutment well in response to movement of said cover toward and away from said plate to sever a portion of said card from the remainder of said card.

3,095,254
INDICATING AND RECORDING DEVICE
Henry R. Chope, Columbus, Ohio, assignor to Industrial Nucleonics Corporation, a corporation of Ohio
Filed July 28, 1961, Ser. No. 127,651
7 Claims. (Cl. 346—32)



1. In a self-balancing electrical instrument for indicating the value of a signal having an unknown magnitude, said instrument having means for comparing said signal with a reference signal and means including motor means responsive to said comparing means for moving a mechanical element in a direction dependent on the difference in magnitude between said unknown signal and said reference signal, the improvement comprising means including a solid state crystal element receiving a variable stress according to the movement of said mechanical element for generating said reference signal.

3,095,255
HEAT EXCHANGE APPARATUS OF THE EVAPORATIVE TYPE
John F. D. Smith, Fayetteville, N.Y., assignor to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware
Filed Apr. 25, 1960, Ser. No. 24,314
9 Claims. (Cl. 62—512)



4. A heat exchange tube for a heat exchanger of the type employing a wetted exterior surface heat exchange tube, comprising an axially elongated tubular metal body having a relatively impervious interior surface and another relatively porous exterior surface being exposed for direct contact with an ambient liquid, said porous exterior surface forming at least a portion of the exterior periphery of said heat exchange tube, said porous exterior surface comprising a compacted metal powder having a large number of surface interstices in communication with minute internal pores of capillary size.

CHEMICAL

3,095,256
VAT-DYE FLASH-AGING PRINTING PROCESS
Edward F. Scott, New Brunswick, and Ralph D. Greene, Basking Ridge, N.J., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine
No Drawing. Filed May 8, 1958, Ser. No. 733,808
15 Claims. (Cl. 8—70)

1. An oil-in-water type emulsion, suitable as a vehicle for the coloring of fibrous cellulosic material, comprising a hydrocarbon oil, water and an emulsifying agent comprising a medium oil, oxidizing type, (modified) alkyd resin containing soya and dehydrated castor oils, the amount of said resin emulsifier being less than 0.5% by weight of the emulsion.

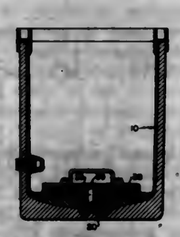
3,095,257
NITROGEN-CONTAINING POLYVINYL ALCOHOL SHAPED ARTICLES
Kenichi Tanabe and Kenji Matsubayashi, Kurashiki City, Japan, assignors of three-fourths to Kurashiki Rayon Co., Ltd., Okayama Prefecture, Japan, a corporation of Japan, and one-fourth to Air Reduction Company Incorporated, New York, N.Y., a corporation of New York
No Drawing. Filed June 4, 1959, Ser. No. 818,009
Claims priority, application Japan June 9, 1958
2 Claims. (Cl. 8—115.5)

1. The method for preparing solid shaped polyvinyl alcohol articles having improved dyeability which comprises forming a polymeric material comprised of polyvinyl alcohol and having carbonyl-containing units incorporated therein into a shaped article, said polymeric material consisting of at least 80 mol percent vinyl alcohol units and from about 0.1 to about 20 mol percent carbonyl-containing units, said carbonyl-containing units being a member selected from the group consisting of (*a*) carbonyl-containing units produced by partially acetalizing polyvinyl alcohol with a member of the group consisting of aldehydes and ketones having up to 9 carbon atoms and containing at least two carbonyl groups selected from the group consisting of aldehyde groups, ketone groups and acetyl groups, wherein at least one of the carbonyl groups is one of the first two members of the aforesaid carbonyl group, (*b*) carbonyl-containing units produced by co-polymerizing a vinyl ester with a member of the group consisting of vinyl ketone monomers, vinyl aldehyde monomers and vinyl acetal monomers containing up to 6 carbon atoms, and hydrolyzing the resultant copolymer to replace the ester groups with hydroxyl groups of vinyl alcohol, and (*c*) carbonyl-containing units produced by polymerizing a member of the group consisting of vinyl aldehydes and vinyl ketones containing up to 4 carbon atoms and the sodium sulfite addition products of said vinyl aldehydes, and blending the resultant polymer with polyvinyl alcohol, and treating said shaped article with an aqueous solution containing a compound selected from the group consisting of ammonia, primary and secondary amines having up to 12 carbon atoms in the chain attached to the nitrogen atom of the amine, and water-soluble salts thereof, and a compound selected from the group consisting of hydrogen cyanide, alkali metal cyanides and alkaline earth metal cyanides at a temperature of from 0-100° C. thereby to produce a shaped polyvinyl alcohol article having improved dyeability.

3,095,258
MELT SPINNING PROCESS FOR PRODUCING HOLLOW-CORE FILAMENT
Paul T. Scott, Kinston, N.C., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed June 22, 1962, Ser. No. 204,409
9 Claims. (Cl. 18—54)

1. In the melt-spinning process of extruding molten synthetic linear polymer under pressure through a spinneret orifice to form a filament and quenching to solidify the filament, the improvement for producing a hollow-core filament of extruding a polymer melt which releases gas, as pressure on the polymer decreases during formation of the filament, through a center-obstructed orifice to form a central void surrounded by a continuous unbroken polymer sheath, the quantity of released gas being sufficient to maintain a void in the filament produced which is at least 5% of the cross-sectional area of the filament.

3,095,259
HOLLOW ENCLOSED MOLDED ARTICLES WITH MOLDED INTERNAL WALL SURFACES
Verity C. Smith, Dedham, Mass., assignor to Bernstead Still and Sterilizer Co., Boston, Mass., a corporation of Massachusetts
Filed Jan. 9, 1961, Ser. No. 81,641
6 Claims. (Cl. 18—58)



1. A method of making substantially enclosed hollow slush molded articles having an internal molded wall surface, comprising filling complementary molds with a heat-hardenable liquid resinous material, heating said resinous material at the surface of said molds to cause a portion of said resinous material in contact with the internal surfaces of said molds to harden, partially draining at least one of said molds and leaving a reservoir of liquid resinous material therein, placing an internal mold in said reservoir, draining any remaining ones of said molds, heating said liquid resinous material in said molds to cause it to harden, removing the heat-hardened resinous members so formed from the molds, and joining the members to complete the article.

3,095,260
PROCESS FOR PRODUCING PLASTIC ARTICLES
Joseph V. Ferriot, Akron, Ohio, assignor to Ferriot Brothers, Incorporated, Akron, Ohio, a corporation of Ohio
Filed Sept. 20, 1960, Ser. No. 57,274
8 Claims. (Cl. 18—58.3)

1. In a process for making hollow articles from thermosetting vinyl plastisols and like liquid materials, the steps of forming a weak gelled layer of plastisol over a mold cavity surface, breaking the layer and introducing a liquid hot wax at, at least, the fusing temperature for the



plastisol into the mold cavity to contact the gelled plastisol on its inner surface to complete the solidification of the plastisol, and withdrawing the hot wax from the cavity.

3,095,261
METHOD FOR MAKING HOLLOW BODIES FROM PLASTIC MATERIAL
Horst Meyer, Sachsenstrasse 28, Radebeul I, Germany
Filed May 18, 1960, Ser. No. 29,856
Claims priority, application Germany June 9, 1959
2 Claims. (Cl. 18—59)



2. A method for making a hollow ball elastic under impact and compression, which comprises preshaping two solid shells, placing each of said shells into a mold of conforming shape, placing within the interior of one of said shells a mass of plastic in substantially liquid state, superimposing the two molds in a substantially aligned position, centrifuging the liquid mass to form an inner shell on the inner surfaces of the aligned preshaped shells, and heat treating the centrifuged mass under conditions causing an intimate bonding of the centrifuged inner shell with said preshaped shells.

3,095,262
COMPACTING METALLIC POWDERS
George O. Malsh and Elwood F. Seasholtz, Bethlehem, Pa., assignors to Bethlehem Steel Company, a corporation of Pennsylvania
Filed Oct. 15, 1957, Ser. No. 690,202
4 Claims. (Cl. 18—59.3)



1. A method of compacting magnetic metallic powders which comprises magnetizing said powder and compacting the magnetized powder by passing said powder between a pair of magnetized compacting surfaces.

3,095,263

METHOD AND COMPOSITION FOR INHIBITING EVAPORATION OF WATER

George W. Eckert, Wappingers Falls, and Kenneth M. Hall, Beacon, N.Y., assignors to Texaco Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Dec. 27, 1961, Ser. No. 162,551
14 Claims. (Cl. 21—69.5)

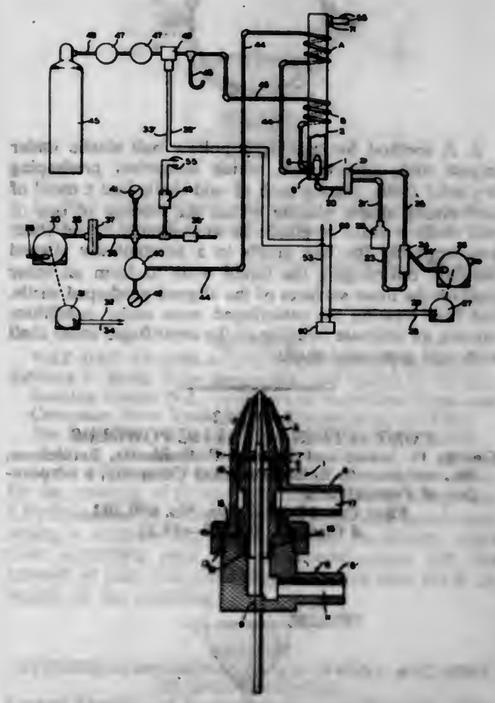
1. A method for inhibiting the evaporation of water which comprises contacting with the water a solution consisting essentially of wax selected from the group consisting of petroleum wax and natural wax, said wax having a melting point of from about 115° F. to 300° F.; mineral oil having a boiling point above 600° F., an S.U.S. viscosity at 100° F. of from 40 to 1,000 and an A.P.I. gravity of between 25 and 34; the ratio of said wax to said oil ranging from 20:1 to 1:20; and a hydrocarbon having not less than 5 carbon atoms per molecule and having a boiling point of from about 90 to 700° F.; said wax and said oil comprising 0.5 to 25% by volume of the resulting solution; whereby a vapor barrier film is formed on the exposed surface of the water.

3,095,264

DEVICE FOR ASPIRATING AND HEATING A LIQUID FUMIGANT

Gerald L. Rounds, Fontana, and John F. Hoefferle, Riverside, Calif., assignors to Kaiser Steel Corporation, Oakland, Calif., a corporation of Nevada

Filed Oct. 9, 1958, Ser. No. 766,292
11 Claims. (Cl. 21—111)



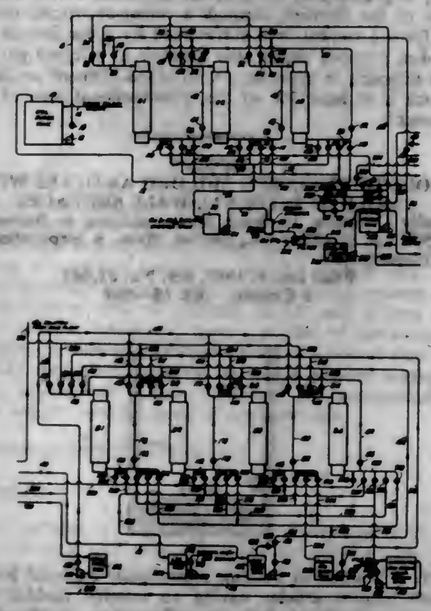
1. In a fumigating device the combination of a flue open at both ends, an atomizer and burner unit mounted within said flue and adjacent one of the open ends thereof, said atomizer and burner unit including concentrically arranged gaseous fuel and aspirating gas nozzles and a capillary tube, said nozzles and tube being in open communication with the interior of the flue, means for supplying gaseous fuel in a heated condition to said first-mentioned nozzle including a gaseous fuel conduit portions of which are disposed in surface-to-surface contact with said flue, means for supplying an aspirating gas to said second-mentioned nozzle and means for supplying a liquid solution containing a fumigant to said capillary tube, whereby upon the aspiration and heating of said liquid solution containing a fumigant by said atomizer and burner unit the fumigant will be freed from said liquid solution and pass through the other open end of said flue.

3,095,265

ION EXCHANGE PROCESS FOR RECOVERY OF MONOVALENT IONS FROM WASTE SULFITE PULPING LIQUOR

Walter Raymond Eller, Agincourt, Ontario, and Harry Borden Marshall, Toronto, Ontario, Canada, and Edward William Hopper, Pittsburgh, Pa., assignors to J. F. Pritchard & Co., Kansas City, Mo., a corporation of Missouri

Filed Nov. 3, 1958, Ser. No. 771,589
13 Claims. (Cl. 23—49)



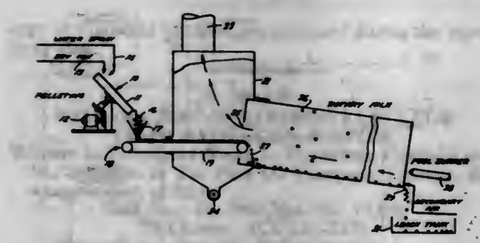
2. An ion exchange method of treating the waste sulfite liquor resulting from monovalent cation sulfite pulping of wood wherein the monovalent cation is selected from the group consisting of ammonia and alkali metals for selectively separating said monovalent cations from multivalent cations contained in the liquor comprising the steps of passing the waste liquor successively through a pair of first ion exchange resins having monovalent cations thereon selected from the group consisting of ammonia and alkali metals, to effect preferential exchange of multivalent cations in the waste liquor for said monovalent cations on the resins and producing a lignosulfonate effluent therefrom, said passage of the waste sulfite liquor successively through said first resins being continued until a predetermined proportion of multivalent cations begin to leak with the effluent from the first of said pair of first resins; subsequently passing the lignosulfonate effluent from the last of said pair of first resins through at least one second ion exchange resion having hydrogen ions thereon to effect exchange of said monovalent cations in the lignosulfonate effluent for hydrogen ions on the second resin; then passing a solution containing sulfurous acid through the second resin to effect exchange of the hydrogen ions of the acid for said monovalent cations on the second resin to thereby simultaneously regenerate the latter and produce a quantity of monovalent cation sulfite pulping liquor; and passing a quantity of a relatively highly dissociated monovalent cation bisulfite regenerant through the first of said pair of first resins upon cessation of passage of waste liquor therethrough, the concentration of monovalent cations in the bisulfite regenerant being sufficiently high to effect exchange of the monovalent cations of the bisulfite regenerant for multivalent cations on said first of the pair of first resins to thereby regenerate the latter.

3,095,266

PRODUCTION OF SODIUM CHROMATE FROM CHROMITE ORES

William B. Lander, Syracuse, and Winslow H. Hartford, Fayetteville, N.Y., assignors to Allied Chemical Corporation, New York, N.Y., a corporation of New York

Filed July 11, 1960, Ser. No. 42,184
5 Claims. (Cl. 23—56)



1. The process of producing sodium chromate from chromium ores containing at least 40% Cr_2O_3, which process comprises mixing powdered ore, hydrated lime from the group consisting of non-dolomitic and dolomitic lime, soda ash and water in the proportions of from 60 to 80 parts of hydrated non-dolomitic lime when using the latter and 75 to 115 parts of hydrated dolomitic lime when using hydrated dolomitic lime, 50 to 70 parts water per 100 parts of ore and approximately the stoichiometric amount of soda ash required to react with the chromium content of the ore to produce sodium chromate, pelleting said mixture to produce small pellets, each of said small pellets containing substantially the same relative proportions of the hydrated lime, water, soda ash and powdered ore as in the mixture subjected to pelleting, with the powdered ore particles dispersed substantially uniformly relative to the other constituents within each pellet, heating said pellets to a temperature of from 900° to 1100° F. to produce strong, hard pellets, roasting said resulting hard pellets by passing them through an oxidizing atmosphere varying in temperature from 1000° F. to 1500° F. at the pellet-inlet end to from about 2000° F. to 2200° F. at the pellet-exit end of said oxidizing atmosphere and leaching the thus roasted pellets to remove the sodium chromate therefrom.

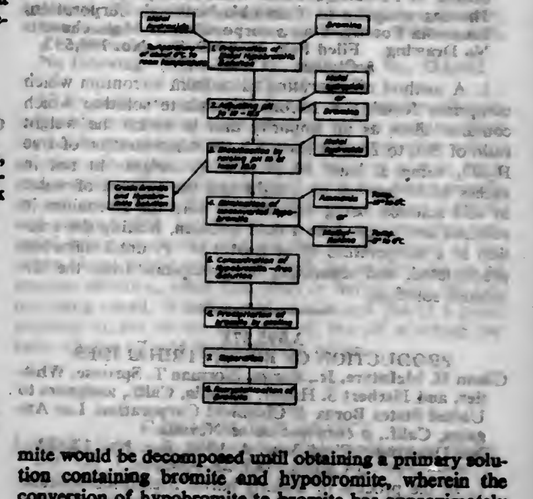
3,095,267

PROCESS FOR PRODUCING ALKALINE EARTH METAL BROMITES

René Kircher, Argenteuil, and Robert Périat, Chaville, France, assignors to Societe d'Etudes Chimiques pour l'Industrie et l'Agriculture, Paris, France

Filed June 23, 1959, Ser. No. 822,233
Claims priority, application France June 25, 1958
4 Claims. (Cl. 23—89)

1. In the method of producing alkaline earth metal bromite, selected from the group consisting of barium and strontium bromite, the steps, in combination, of preparing a starting suspension of solid hypobromite of the said alkaline earth metal in a saturated aqueous solution of said hypobromite, and further processing the suspension by adjusting the initial pH of the aqueous hypobromite solution to a pH of at least about 10 so as to start spontaneous conversion of the hypobromite to the corresponding bromite; maintaining the operating temperature of the solution below that temperature at which the bromite would be decomposed until obtaining a primary solution containing bromite and hypobromite, wherein the conversion of hypobromite to bromite has approximately attained a maximum value for the respective pH and temperature; and adding to the primary solution a metal hydroxide in such amounts as to raise the pH of the solution to at least 12.9, so as to stop the conversion of hypobromite to bromite at the aforesaid maximum, and simultaneously stabilize the resulting solution.



3,095,268

PROCESS FOR THE PREPARATION OF LEAD AZIDE

Allan Gustav Boström, Stockholm, and Stig Yngve Ek and Lars Anders Malte Lindahl, Sundbyberg, Sweden

No Drawing. Filed July 11, 1955, Ser. No. 521,388
4 Claims. (Cl. 23—101)

1. A method of producing lead azide by reacting a solution of lead nitrate with a solution of alkali metal azide comprising the steps of heating both solutions to a temperature of at least 65° C., adding a quantity of the alkali azide solution to an excess quantity of the lead nitrate solution in a mole proportion of at most 1.5:4, and filtering off the lead azide precipitate obtained from the lead nitrate solution.

3,095,269

CONVERSION OF CALCIUM HYDROGEN PHOSPHATE DIHYDRATE TO THE ANHYDROUS FORM

Vincent Chiola and Clarence D. Vanderpool, Towanda, Pa., assignors to Sylvania Electric Products Inc., a corporation of Delaware

No Drawing. Filed Oct. 12, 1960, Ser. No. 62,097
2 Claims. (Cl. 23—109)

1. A process of converting calcium hydrogen phosphate dihydrate to anhydrous calcium hydrogen phosphate, which process comprises adjusting the pH of the dihydrate in its own mother liquor to a value between about 2.5 to 5.5, by adding acid, then heating the dihydrate in its own mother liquor to a temperature be-

tween about 65° C. and its boiling point until the pH drops substantially below its initial value to a value between about 2.2 to 3.6, and recovering the resultant anhydrous phosphate from the remaining mother liquor.

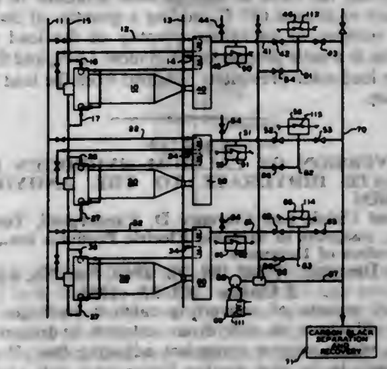
3,095,270
METHOD OF SEPARATING SILICA FROM ZIRCONIUM SULPHATE SOLUTIONS
Malcolm Korach and James K. Thomas III, Corpus Christi, Tex.; said Korach assignor, by mesne assignments, to Pittsburgh Plate Glass Company; and said Thomas assignor to Columbia-National Corporation, Escambia County, Fla., a corporation of Massachusetts
No Drawing. Filed Feb. 26, 1959, Ser. No. 795,597
8 Claims. (Cl. 23—117)

1. A method of separating silica from zirconium which comprises forming a zirconium-sulphate solution which contains silica as an impurity and in which the weight ratio of SO_4 to Zr is at least 2.5, the concentration of free H_2SO_4 being at least 10 percent by weight but not in excess of 45 percent by weight and the amount of water in said solution being sufficient to hold the zirconium in solution and to produce a fluid solution, heating the solution at a temperature of at least 125° F. until silica has precipitated, and separating the precipitate from the zirconium solution.

3,095,271
PRODUCTION OF BORON TRIHALIDES
Glenn H. McIntyre, Jr., Boron, Norman T. Sprouse, Whittier, and Herbert S. Haber, Arcadia, Calif., assignors to United States Borax & Chemical Corporation, Los Angeles, Calif., a corporation of Nevada
No Drawing. Filed Mar. 4, 1960, Ser. No. 12,682
5 Claims. (Cl. 23—205)

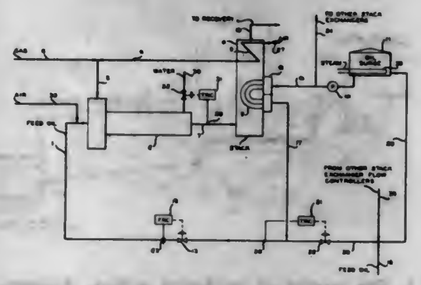
1. In the process of making boron trichloride by reaction of chlorine, carbon and an anhydrous oxygen containing boron material at a temperature range of from about 400 to about 800° C., the step which comprises removing from the reaction zone gaseous BCl_3 in an admixture with a reaction product comprising gaseous BCl_3 and B_2O_3, contacting such admixture with finely divided carbon at a temperature below about 150° C. whereby said reaction product of BCl_3 and B_2O_3 disproportionates, and B_2O_3 deposits on the surfaces of said carbon and substantially pure BCl_3 is obtained therefrom.

3,095,272
SMOKE CONTROL
Sam C. Naifeh, Orange, Tex., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Aug. 14, 1961, Ser. No. 131,177
9 Claims. (Cl. 23—209.4)



6. A method for producing carbon black comprising the steps of converting a hydrocarbon to a smoke comprising carbon black in a plurality of reaction zones, passing said smoke from each of said reaction zones through a separate conducting zone to a single smoke collection zone, preventing backflow of smoke from said collection zone to one of said conducting zones during an interval when the corresponding reaction zone is not in operation by producing a buffer zone in said one conducting zone adjacent said collection zone by substantially restricting the flow area of said one conducting zone at two locations, reducing the pressure in said buffer zone below atmospheric by withdrawing fluid from said buffer zone and passing said fluid into said collection zone.

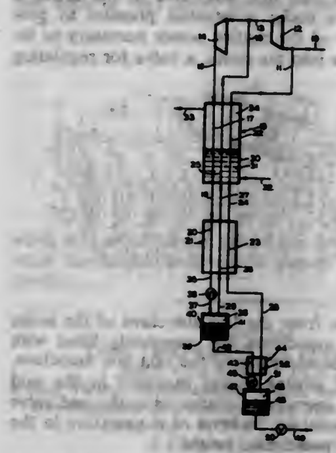
3,095,273
CONTROL OF CARBON BLACK FEED OIL PREHEAT
Oliver K. Austin, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Apr. 17, 1961, Ser. No. 103,600
9 Claims. (Cl. 23—209.6)



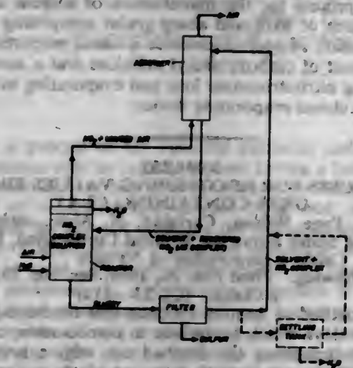
1. A method for preheating to a predetermined temperature a liquid feed at a predetermined flow rate for a process comprising heating a stream of said liquid at a flow rate greater than the flow rate of liquid required by said process by indirect heat exchange with a heating agent, dividing the heated stream of liquid into two portions, regulating the rate of flow of one portion at a rate required by said process, passing said one portion to said process at said rate, sensing the temperature of said one portion and controlling the temperature of said one portion by regulating the rate of flow of the other portion whereby the total rate of flow of said stream of liquid in said heat exchange is varied thereby controlling the temperature of said one portion of heat exchanged liquid.

3,095,274
HYDROGEN LIQUEFACTION AND CONVERSION SYSTEMS
Dudley B. Crawford, Allentown, Pa., assignor, by mesne assignments, to Air Products and Chemicals, Inc., Trexlertown, Pa., a corporation of Delaware
Filed July 1, 1958, Ser. No. 746,850
24 Claims. (Cl. 23—210)

1. Method of producing hydrogen of high para concentration which comprises the steps of cooling hydrogen to a low temperature, providing a source of liquefied gas under superatmospheric pressure, catalytically treating cooled hydrogen to accelerate conversion of ortho hydrogen to para hydrogen and establish a high para hydrogen concentration, vaporizing liquefied gas under superatmospheric pressure by heat generated from the conversion, and providing a portion of the power required to cool the hydrogen to the low temperature from the energy of vaporized liquefied gas produced during the vaporizing step.



3,095,275
PREPARATION OF ELEMENTAL SULFUR FROM HYDROGEN SULFIDE
William L. Fierce and Roger L. Weichman, Crystal Lake, Ill., assignors to The Pure Oil Company, Chicago, Ill., a corporation of Ohio
Filed Dec. 22, 1960, Ser. No. 77,651
18 Claims. (Cl. 23—225)



1. A method of converting hydrogen sulfide to elemental sulfur which comprises passing hydrogen sulfide-containing gas through a solution of a nitrogen dioxide complex, said nitrogen dioxide complex being an addition compound of nitrogen dioxide and a compound other than either nitrogen dioxide or water, whereby hydrogen sulfide is oxidized to elemental sulfur and water with nitric oxide being formed as a by-product, and separating elemental sulfur precipitated in said solution.

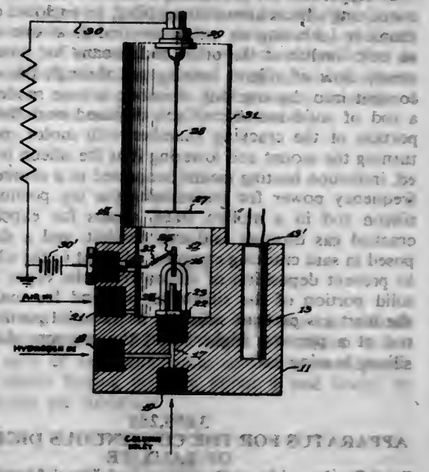
3,095,276
PRODUCTION OF SULFUR
Peter Urban, Northbrook, Ill., assignor to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware
No Drawing. Filed July 21, 1961, Ser. No. 127,787
15 Claims. (Cl. 23—225)

1. A process for the production of sulfur which comprises reacting oxygen with hydrogen sulfide dissolved in an aqueous solution of a soluble salt selected from the group consisting of alkali metal and alkaline earth metal acid antimonates, arsenates, borates, phosphates and silicates in the presence of a catalyst selected from the group consisting of the monosulfonates, polysulfonates, monocarboxylates and polycarboxylates of cobalt phthalocyanine and vanadium phthalocyanine, and recovering the desired sulfur.

3,095,277
DIAGNOSTIC COMPOSITION
Alfred H. Free, Elkhart, and Mary Lou Kercher, Goshen, Ind., assignors to Miles Laboratories, Inc., Elkhart, Ind., a corporation of Indiana
No Drawing. Filed Mar. 25, 1958, Ser. No. 723,662
8 Claims. (Cl. 23—253)

1. An indicator body for use in determining albumin in liquids, comprising a dry bibulous carrier incorporating the solids remaining from a previous impregnation with a solution of an indicator dye which exhibits protein error and a solid acid reacting material, said dye being present in said solution to the extent of between about 0.005% and about 0.30% by weight, and said acid reacting material being present in said solution to the extent of between about 0.5% and about 25% by weight and in an amount effective, when said body is wetted with the liquid being tested, to buffer said carrier and dye at a point adjacent to, but on the acid side of, the pH at which the color change of said dye normally occurs.

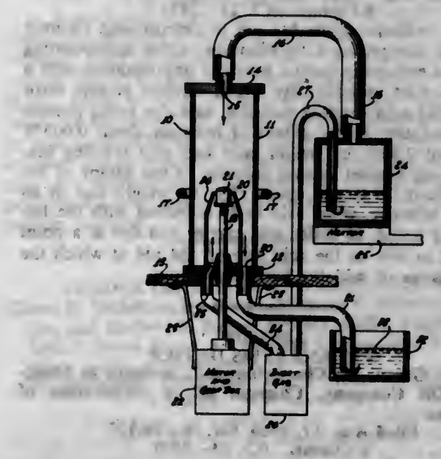
3,095,278
GAS ANALYSIS DEVICE
Louis E. Green, Jr., Chesterton, Ind., assignor to Standard Oil Company, Chicago, Ill., a corporation of Indiana
Filed Aug. 17, 1960, Ser. No. 50,127
8 Claims. (Cl. 23—254)



1. In a flame ionization detector adapted to receive sample components from a gas chromatography column and to identify said components, a base member of a thermally conductive material and of sufficiently large mass to provide a heat sink, heater means in contact with said base member, a sample vaporization chamber positioned in said base member, means for introducing a sample into said vaporization chamber, means for removing sample from said vaporization chamber, sample gas supply means positioned in said base member and adapted

to receive sample from said vaporizer, said heater means being adapted to maintain said vaporization chamber at a temperature above the vaporization temperature of sample components introduced therein and to maintain a detector operating temperature at least above the dew point of vapors introduced into said detector.

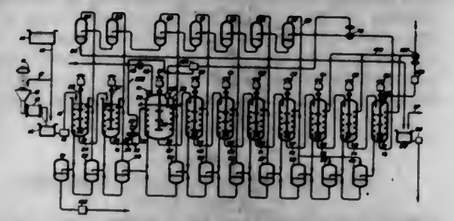
3,095,279
APPARATUS FOR PRODUCING PURE SILICON
Horst A. R. Wegener, Bloomfield, N.J., assignor to Tung-Sol Electric Inc., a corporation of Delaware
Filed Apr. 7, 1960, Ser. No. 20,608
4 Claims. (Cl. 23—277)



2. Apparatus for producing a silicon crystal from a gas containing silicon atoms comprising, an enclosed cracking chamber including an entrance conduit at one end and an exit conduit at the other end, means for producing a steady flow of silicon bearing gas through the entrance conduit into the cracking chamber, a base mounting for a rod of solid metallic silicon disposed near the central portion of the cracking chamber with motor means for turning the mount and lowering it as the silicon is deposited, induction heating means connected to a source of high frequency power for maintaining the top portion of the silicon rod in a molten state, means for expelling the cracked gas through said exit conduit, and a shield disposed in said cracking chamber adjacent to the silicon rod to prevent deposition of silicon from the vapor onto the solid portion of the silicon crystal and for maintaining the inert gas pressure adjacent to the solid portion of the rod at a pressure higher than the pressure due to the silicon bearing gas.

3,095,280
APPARATUS FOR THE CONTINUOUS DIGESTION OF BAUXITE
Paul Soudan, Aix-en-Provence, and Henri Mercier, Gardanne, France, assignors to Pechiney Compagnie de Produits Chemique et Electrometallurgique, Paris, France, a corporation of France
Filed May 24, 1961, Ser. No. 135,688
4 Claims. (Cl. 23—290)

1. Apparatus for the continuous digestion of powdered bauxite by an alkaline solution, comprising a series of autoclaves mounted on the same general level connected together for the continuous successive passage therethrough of a mixture of the bauxite and solution, a heating means in each autoclave, a pump preceding the first autoclave providing a portion of the motive power necessary to introduce the mixture into the series, means for maintaining in the said first autoclave in the series a gaseous atmosphere under substantial pressure to provide the remainder of the motive power necessary to introduce the mixture into the series, a valve for regulating



the flow of mixture from the last autoclave of the series to assure that all autoclaves are completely filled with the mixture with the exception of the said first autoclave, and a liquid level sensing means mounted in the said first autoclave and operatively connected to the said valve to automatically maintain the level of the mixture in the first autoclave at a preselected height.

3,095,281
PROCESS FOR THE PREPARATION OF COMMON SALT BY THE EVAPORATION OF SOLUTIONS
Gerrit Schimmel, Hengelo, Netherlands, assignor to N.V. Koninklijke Nederlandsche Zoutindustrie, Hengelo, Netherlands, a limited-liability company of the Netherlands
No Drawing. Filed July 5, 1957, Ser. No. 669,920
Claims priority, application Netherlands July 6, 1956
2 Claims. (Cl. 23—300)

1. A process for the manufacture of sodium chloride in the form of hard and sharp grains comprising adding to a solution of sodium chloride a small proportion of a soluble salt of carboxymethyl cellulose and a compound supplying nitrilotriacetate ions and evaporating said solution in a closed evaporating device.

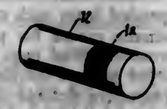
3,095,282
PROCESS FOR RECOVERING VALUES FROM ORES CONTAINING CLAY
William Page Wilson, Carlsbad, N. Mex., assignor to United States Borax & Chemical Corporation, Los Angeles, Calif., a corporation of Nevada
No Drawing. Filed Feb. 26, 1959, Ser. No. 795,604
1 Claim. (Cl. 23—312)

The method of treating sylvinite ores containing slime-forming clays which comprises, in combination, crushing said ore, scrubbing the crushed ore with a brine saturated with respect to both KCl and NaCl, removing the clay from the ore along with said brine, submitting the scrubbed ore to a flotation process wherein the KCl and NaCl are separated, adding at least some of the separated NaCl and from about 0.0005 to about 0.01% based on the weight of the ore of a flocculent selected from the group consisting of the polymers of acrylic acid derivatives and polymers of methacrylic acid to the brine containing the suspended clay, wherein the suspended clay adheres to the particles of NaCl and separating the brine from the clay-coated NaCl.

3,095,283
POROUS WALL STRUCTURE
Harry L. Wheeler, Jr., Madison Heights, Mich., assignor to The Bendix Corporation, a corporation of Delaware
Filed June 22, 1959, Ser. No. 821,983
8 Claims. (Cl. 29—191.6)

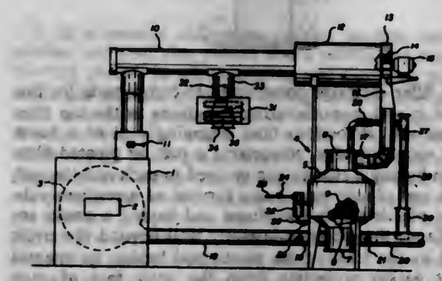
1. A self-supporting porous wall structure capable independently of other extraneous means of withstanding

mechanical and hydraulic forces comprising alternate contacting three stranded wires and solid wires arranged so that each of said wires contacts only the other of said



wires, said stranded and solid wires being bonded to each other throughout their entire lengths at their points of contact.

3,095,284
LOW TEMPERATURE PROCESS OF DRY CLEANING TEXTILES
Irving Victor, Minneapolis, Minn., assignor to Research Development Co., Minneapolis, Minn., a partnership
Filed Apr. 8, 1960, Ser. No. 20,903
6 Claims. (Cl. 34—32)



1. In a process of dry cleaning garments and/or textile materials with an organic solvent having a latent heat of vaporization less than that of water, a low temperature method of removing said solvent from said materials, comprising the steps of disposing the solvent ladened materials in a substantially vapor-tight enclosure, enclosing a mass of solid adsorbent which selects an organic solvent in preference to water within a portion of a confined channel whose opposite ends are joined to spaced-apart portions of said enclosure to form a closed substantially gas-tight circuit, cyclically passing the gas in said circuit from the enclosure through the adsorbent and back to the enclosure until the materials are relatively dry, the circulation of gas in the circuit through the enclosure increasing the rate of evaporation of solvent from the materials therein and thereby reducing the temperature of gases passing to the adsorbent proportionate to the amount of solvent being evaporated, at which temperature the said gases are introduced into the adsorbent, the adsorption of vapors from said gases by the adsorbent causing the latter to be heated to a temperature proportionate to the amount of vapors being adsorbed, substantially at which temperature the residual gases are returned through the circuit to the enclosure to increase the rate of evaporation of solvent from the materials, thereafter recovering the solvent from the adsorbent by isolating the portion of said channel containing the adsorbent from the remainder of said circuit, passing steam through said adsorbent and directing the vapors emitted therefrom through a condenser, and subsequently removing residual moisture from the adsorbent by admitting air into a part of the circuit and forcing such air through the adsorbent and then out of the circuit.

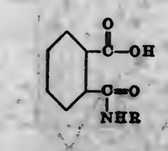
3,095,285
PHOSPHORUS-CONTAINING GASOLINE MOTOR FUELS
Troy L. Cantrell, Drexel Hill, Pa., and John G. Peters, Audubon, N.J., assignors to Gulf Oil Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
No Drawing. Original application Mar. 6, 1956, Ser. No. 569,684, now Patent No. 2,979,523, dated Apr. 11, 1961. Divided and this application Aug. 8, 1960, Ser. No. 47,924
15 Claims. (Cl. 44—58)

10. A gasoline motor fuel comprising a major amount of a hydrocarbon mixture boiling in the gasoline range that has a 50 percent ASTM distillation point not greater than about 235° F. and that normally tends to promote stalling of internal combustion engines, and containing an amount sufficient to inhibit the engine stalling tendencies of said hydrocarbon mixture of a substantially neutral addition product of an olefin oxide that contains 2 to 4 carbon atoms and a dialkyl acid o-phosphate whose alkyl groups contain 5 to 8 carbon atoms.

12. The composition of claim 10 wherein the hydrocarbon mixture contains additionally about 0.25 to about 0.75 percent by volume of the composition of a light lubricating oil having a viscosity at 100° F. of about 50 to about 500 Saybolt Universal seconds.

3,095,286
STABILIZED DISTILLATE FUEL OIL
Harry J. Andress, Jr., Pitman, and Paul Y. C. Gee, Woodbury, N.J., assignors to Socony Mobil Oil Company, Inc., a corporation of New York
No Drawing. Filed May 7, 1958, Ser. No. 733,484
4 Claims. (Cl. 44—71)

1. As a new liquid composition, a petroleum distillate fuel oil having an initial boiling point of at least about 100° F. and an end boiling point no higher than about 750° F. containing between about one pound and about 200 pounds, per thousand barrels of fuel and sufficient to inhibit said fuel oil against screen clogging and sedimentation, of a compound from the group consisting of (1) a phthalamic acid having the formula:



wherein R is a mixture of aliphatic hydrocarbon radicals having between about 12 and about 18 carbon atoms and (2) salts of said phthalamic acid with an aliphatic primary amine having between about 4 and about 30 carbon atoms per molecule.

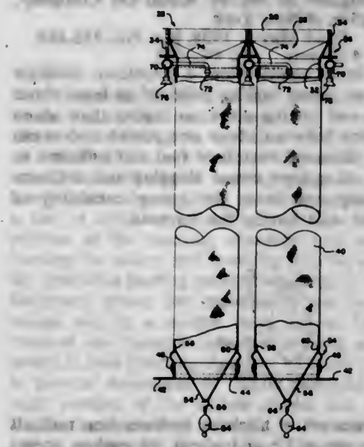
3,095,287
JET FUEL COMPOSITIONS
Thomas H. Coffield, Farmington, and Allen H. Filbey, Walled Lake, Mich., assignors to Ethyl Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed Aug. 28, 1961, Ser. No. 134,141
10 Claims. (Cl. 44—78)

1. A thermally stabilized distilled hydrocarbon jet fuel having an endpoint of at least about 480° F. and API gravity of from 35–50° containing from about 0.01 to about 0.1 percent by weight of a 3,3',5,5'-tetraalkyl-4,4'-dihydroxydiphenyl in which each alkyl group contains up to about 12 carbon atoms.

3,095,288
FRACTIONATION PROCESS INVOLVING MOLECULAR SIEVES
Eugene E. Semsel, Beacon, N.Y., assignor to Texaco Inc., New York, N.Y., a corporation of Delaware
No Drawing. Filed Dec. 7, 1959, Ser. No. 857,567
7 Claims. (Cl. 55—62)

2. A method of fractionating a petroleum mixture consisting essentially of straight chain hydrocarbons and non-straight chain hydrocarbons having at least 5 carbon atoms per molecule, which comprises incorporating in said petroleum mixture a straight chain hydrocarbon containing less than 5 carbon atoms per molecule, contacting the resulting mixture with an alumino-silicate molecular sieve type adsorbent which selectively adsorbs straight chain hydrocarbons to the substantial exclusion of non-straight chain hydrocarbons under conditions to effect the adsorption of said straight chain hydrocarbons from said admixture whereby said molecular sieve adsorbent becomes substantially saturated with straight chain hydrocarbons containing at least 5 carbon atoms per molecule and less than 5 carbon atoms per molecule and desorbing said adsorbed straight chain hydrocarbons from said adsorbent, by contacting said adsorbent with said straight chain hydrocarbon containing less than 5 carbon atoms per molecule.

3,095,289
GAS CLEANING APPARATUS
Richard T. Egan, Basking Ridge, N.J., assignor to Research-Cottrell, Inc., Bridgewater Township, N.J., a corporation of New Jersey
Filed Sept. 2, 1960, Ser. No. 53,726
1 Claim. (Cl. 55—293)



Gas cleaning apparatus comprising a housing having a dirty gas inlet and a clean gas outlet, header means supported within the housing between the gas inlet and the gas outlet, a collected material receiving hopper at the lower end of the housing, a partition member supported within the housing and separating the gas inlet and the gas outlet from the material receiving hopper, means defining a plurality of complementary opposed openings through the header plate means and the partition member, a plurality of gas permeable flexible filter bags, each of said filter bags having a length greater than the distance between the header means and the partition member, means supporting each of said bags at one end about each opening in the header means, means mounting the other end of each of said bags about the complementary opposed opening in the partition member, means for tensioning each of the bags comprising an elongated, relatively narrow flexible draft member for each bag having opposite ends secured to radially opposite points adjacent the lower end of each bag above the zone of connection between each bag and its opening in the partition member, a stiffening band encircling each bag adjacent the points of attachment of the flexible draft member to the bags, a weight member suspended from each of the flexible draft members, and pneumatic means for periodically flexing each of the gas permeable filter bags, whereby material collected on the interior surface thereof will be dislodged and fall past the respective flexible draft members and into said hopper.

3,095,290
END SEALING MEANS FOR FILTER CARTRIDGES
Carl G. Hockett, Uxbridge, Mass., assignor to Fram Corporation, Providence, R.I., a corporation of Rhode Island
Filed Oct. 26, 1960, Ser. No. 65,212
2 Claims. (Cl. 55—502)



1. A filter cartridge constructed to compensate for distortions in and manufacturing variations in the top filter engaging wall or bottom filter engaging wall of a housing for such cartridge, comprising a tubular pleated filter medium having a closure cap secured to each end thereof, at least one of said caps being formed of a resilient rubber-like plastic molded to shape and having a single annular flange that projects laterally well beyond the circle defined by the folds of the pleats, and having an integral annular gasket projecting from the outer face of such flange and positioned so that the entire gasket lies some distance from said circle to engage a wall of such housing, so that when pressure is applied the projecting flange can flex and bend to permit the gasket in its entirety to move bodily and bend to secure a seal against said wall under a minimum end pressure upon the cartridge.

3,095,291
COOLING ENVELOPE WITH BREAKABLE DIAPHRAGM
Albert A. Robbins, 333 S. Glendora Ave., West Covina, Calif.
Filed May 12, 1961, Ser. No. 120,821
2 Claims. (Cl. 62—4)



1. A cooling envelope containing a cooling reagent with breakable diaphragm comprising an outer envelope, consisting of an upper and a lower sheet, said sheets being superimposed and all of the engaging edges of the sheets being hermetically sealed, said upper and lower sheets being formed of thin flexible plastic sheet material, a diaphragm arranged between the upper and lower sheets and dividing the envelope into two compartments, said diaphragm being formed of a thin flexible plastic sheet material, said diaphragm being structurally weaker than the upper and lower sheets whereby said diaphragm will rupture under impact before the upper and lower sheets, said diaphragm being structurally weakened by addition of a solvent plasticizer thereto, said plasticizer being added in a plurality of discrete spots.

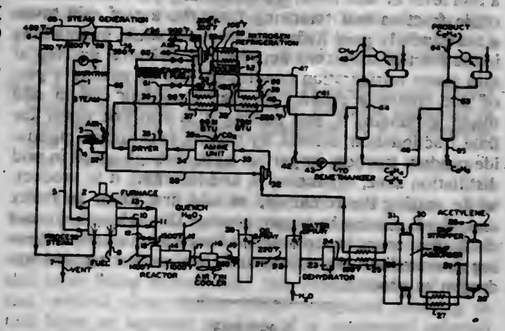
3,095,292
PROCESS AND DEVICE FOR COOLING AND RECTIFYING GASES IN HEAT EXCHANGER WITH A COLDER GAS, PARTICULARLY WITH (THEIR) DECOMPOSITION PRODUCTS
Wolfgang Karl Hermann Ulbrich, Munich, Germany, assignor to Gesellschaft fur Linde's Eismaschinen Aktiengesellschaft, Munich, Germany
Filed May 29, 1959, Ser. No. 816,880
Claims priority, application Germany June 6, 1958
10 Claims. (Cl. 62—12)



1. In a process alternating in two periods, namely a cooling and purifying period and a scavenging and cold-blowing period, in which cooling and purifying period a crude gas mixture is passed through one of two periodically reversible passageways, of a heat-exchanger in the direction from the warm end to the cold end thereof, whereby said crude gas mixture is cooled and its gaseous impurities are frozen and deposited in solid state in said one passageway of said heat-exchanger, before the purified gas mixture is separated into its components by rectification at low temperature, and in which cold-blowing and scavenging period a cold gas, preferably a component of said gas mixture, is passed through the other of said two periodically reversible passageways of said heat-exchanger, said other passageway containing frozen gaseous impurities deposited during a preceding cooling and purifying period; in the direction from the cold end to the warm end thereof, whereby the heat-exchanger is cooled and said deposited impurities are scavenged and discharged at the warm end, the improved method for scavenging said other passageway during said cold-blowing and scavenging period comprising a first part of said cold-blowing and scavenging period in which the cold gas is passed through a separate passageway in said heat-exchanger in the opposite direction to that of the crude gas mixture, whereby said gas is warmed, before it is passed through said impurity-containing passageway to be scavenged, and a second part of said cold-blowing and scavenging period in which the cold gas is passed through said other passageway, thereby cooling said heat-exchanger in a known manner.

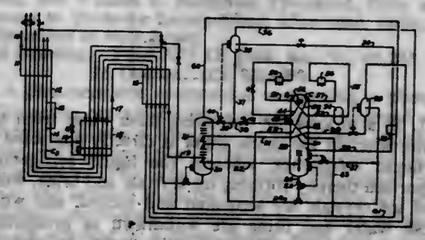
3,095,293
PRODUCTION AND RECOVERY OF ETHYLENE
Richard D. Knorston, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Nov. 30, 1960, Ser. No. 72,720
4 Claims. (Cl. 62—23)

3. A process comprising incompletely burning a hydrocarbon naphtha having an average molecular weight of about 90 in the presence of steam, as subsequently produced, thereby producing a hydrocarbon conversion effluent comprising ethylene and other difficulty condensible components, chilling said effluent by indirect heat exchange with a cold process stream as subsequently produced, further chilling the once-chilled stream and condensing at least a portion thereof by indirect heat exchange with an expanding refrigerant as subsequently produced, from this further chilling and condensing step separating a condensate from an uncondensed phase, recovering ethylene from the condensate as the main product of the process, said uncondensed phase being the cold process stream as subsequently produced, withdrawing said process stream from the heat exchange operation, burning the withdrawn process stream in a combustion



turbine thereby producing motive power and therewith directly actuating a refrigeration operation whereby a refrigerant is compressed, expanding the compressed refrigerant as said expanding refrigerant as subsequently produced, withdrawing hot gases of combustion from the outlet of said combustion turbine, and heat exchanging these withdrawn hot gases with water thereby producing steam, a portion of this produced steam being the above-mentioned steam as subsequently produced.

3,095,294
GAS SEPARATION PROCESS AND SYSTEM
Helmut Knapp, Yonkers, N.Y., and Karl Stork, Frankfurt am Main, Germany; said Knapp assignor to American Messer Corporation, New York, N.Y., a corporation of New York
Filed July 8, 1960, Ser. No. 41,700
7 Claims. (Cl. 62—31)



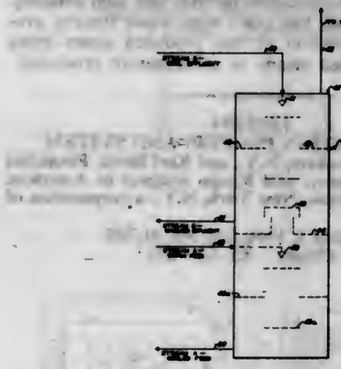
1. The method of separating a complex gas mixture into separate substantially pure components wherein the said gas mixture contains about 50 percent hydrogen, 25 percent carbon monoxide, up to 10 percent methane, up to 20% propane, propylene and residue small amounts of carbon dioxide, the process serving to separate the gas into four principal product components consisting individually of a first product of about 98 percent hydrogen and not more than about 2 percent carbon monoxide; a second product consisting of about 98 percent carbon monoxide and about 2 percent hydrogen and the remaining products being a methane fraction and a heavier hydrocarbon fraction, the process consisting of first compressing and cooling said raw gas in a sequence of heat exchangers by passing it through said heat exchangers in heat exchange relationship with the separate product streams, and passing the partially liquefied gas through a coil in a first distilling

tower in heat exchange relationship with gas to be distilled therein, thereafter passing said partially liquefied gas into the base of a fractionating column maintained under a high pressure and a temperature gradient from top to bottom, the said gas entering said distilling tower at the base, removing from the base of said tower methane as will condense and collect in the base of the tower, removing from an intermediate level above the base of said tower a major portion of methane, removing from approximately a mid level of said tower a substantially pure carbon monoxide fraction and removing from the top of said tower a substantially pure hydrogen fraction, while maintaining in the fractionation zone between the mid level and top of said tower refrigeration conditions, first by passing a part of said methane product through a cooling coil in said tower, expanding it, and passing it to said first tower for final fractionation, second, by passing said carbon monoxide product fraction, in part at least, through a coil in said distillation zone, expanding it, and returning it to product, while passing the remainder ot said first tower as reflux and, third, passing hydrogen product through coils in said distillation zones in a plurality of successive stages following intermediate expansions and then recovering said hydrogen as product.

3,095,295
CHEMICAL PROCESS

John White Colton, Pelham Manor, N.Y., assignor to Scientific Design Company, Inc., a corporation of Delaware

Filed Sept. 22, 1960, Ser. No. 57,748
11 Claims. (Cl. 62—58)



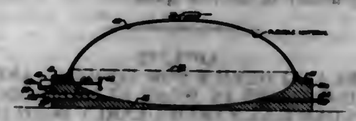
1. In a process for recovering fresh water from saline water wherein the saline water is directly contacted with a liquid refrigerant, wherein the liquid refrigerant is vaporized thereby forming ice crystals and brine, wherein said ice crystals are separated and melted, and wherein fresh water and brine are withdrawn as products, the improvement of cooling the saline water by vaporizing a portion thereof in a zone continuously maintained under a vacuum, condensing said vapors by contact with at least one of said products in said zone, thereby transferring heat from said saline water to said product, and maintaining the zone under substantially adiabatic conditions.

3,095,296
PROCESS AND APPARATUS FOR THE PRODUCTION OF FRESH WATER

John White Colton, Pelham Manor, and Joseph E. Jewett, Jr., Larchmont, N.Y., assignors to Scientific Design Company, Inc., a corporation of Delaware

Filed Nov. 21, 1960, Ser. No. 70,573
14 Claims. (Cl. 62—58)

9. A process for the treatment of saline water in an enclosure having a collapsible top portion and a rigid bottom portion, which comprises: confining said saline water mostly in the bottom portion of said enclosure; directly contacting said saline water with a boiling liquid refrigerant; forming a slurry in said saline water of fresh water ice crystals; inflating and supporting said collapsible



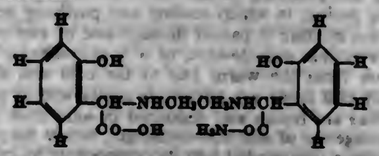
top portion by maintaining vapors of said refrigerant at a pressure of at least 0.1 p.s.i. above ambient pressure in said enclosure; withdrawing vapors of said refrigerant from said enclosure; and withdrawing said slurry from the rigid bottom portion.

3,095,297
PROCESS FOR THE PREPARATION OF N,N'-ETHYLENE-BIS-[2-(o-HYDROXYARYL)GLYCINE] FERRIC CHELATES

Ekbert Lederle Rombo, Badalona, Spain, assignor of one-half to Sociedad Anonima Cros, Barcelona, Spain

No Drawing. Filed Sept. 1, 1960, Ser. No. 53,364
Claims priority, application Spain May 27, 1960
6 Claims. (Cl. 71—1)

1. Composition which consists of (1) chelating agent of the formula



combined with trivalent iron, and (2) iron salts with water of crystallization, the total iron in said composition being in molecular ratio of greater than 1:1 with respect to chelate, and said iron chelate being dissolved in said water of crystallization.

3,095,298
DEFOLIATION OF COTTON PLANTS WITH AMMONIA

James B. Fisher, Westhaven, and George W. Cassly, Hanford, Calif., assignors to California Research Corporation, San Francisco, Calif., a corporation of Delaware

No Drawing. Filed Mar. 23, 1961, Ser. No. 97,723
2 Claims. (Cl. 71—2.2)

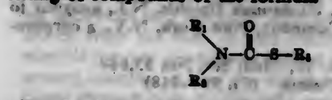
1. A method of defoliating cotton plants which comprises admixing with the air surrounding said cotton plants a sufficient amount of anhydrous ammonia vapor to surround said cotton plants with an ammonia vapor-air mixture containing from about 0.01 to 0.10 pound of anhydrous ammonia per cubic yard of air for a period of at least about 0.5 second.

3,095,299
HERBICIDAL COMPOSITION AND METHOD

Raymond W. Luckenbaugh, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed May 11, 1960, Ser. No. 28,191
2 Claims. (Cl. 71—2.6)

1. A herbicidal composition comprising a herbicidally effective amount of a compound selected from the group consisting of 1,1-dimethyl-3-phenylurea, 1,1-dimethyl-3-p-chlorophenylurea, 1,1-dimethyl-3-(3,4-dichlorophenyl) urea, 3-(3,4-dichlorophenyl)-1-n-butyl-1-methylurea, 1-methoxy-1-methyl-3-phenylurea, 1-methoxy-1-methyl-3-p-chlorophenylurea, and 1-methoxy-1-methyl-3-(3,4-dichlorophenyl)urea in admixture with a herbicidally effective amount of a compound selected from the group consisting of compounds of the formula

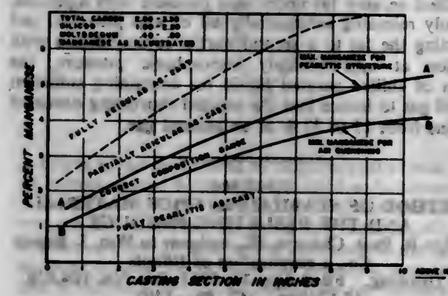


where R_1, R_2, and R_3 are alkyl radicals containing from 2 through 4 carbon atoms.

3,095,300
AIR HARDENING CAST IRON

William H. Moore and Walter E. Gruver, Jr., New Rochelle, N.Y., assignors to Mechanite Metal Corporation, a corporation of Missouri

Filed Feb. 24, 1961, Ser. No. 91,468
3 Claims. (Cl. 75—123)



1. A gray iron casting having a definite manganese content in relation to the cross section thereof, said casting, in percent by weight, consisting essentially of total carbon in the range of from 2.80% to 3.30%, silicon in the range of 1.60% to 2.20%, molybdenum in the range of from .40% to .80%, manganese in the range of from 1.2% to 5.3%, and the balance essentially iron, the manganese content and the cross section of the casting being further limited in amount and cross section to an intersection of the ordinate and abscissa within the area defined by lines AA and BB of FIGURE 1 of the drawing.

3,095,301
ELECTROPHOTOGRAPHIC ELEMENT

John Kosolcic and Helmut F. Nittka, Binghamton, N.Y., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

Filed Apr. 6, 1959, Ser. No. 804,411
11 Claims. (Cl. 96—1)



9. An electrophotographic member comprising a nonmetallic base plate of high electrical resistance, a coating on said base plate for increasing the electrical conductivity of the plate, said coating comprising an aminoalcohol selected from the group consisting of 2-amino-1-butanol, 2-amino-2-methyl-1-propanol, 2-amino-2-methyl-1,3-propanediol, 2-amino-2-ethyl-1,3-propanediol, tris(hydroxymethyl)aminomethane, 2-amino-2-methyl-1-butanol, 2-amino-1-ethanol, 3-amino-2,3-dimethyl-2-butanol, 1-amino-2-methyl-2-butanol, 1-amino-3-methyl-2-butanol, 2-amino-1-propanol, 1-amino-2-methyl-2-propanol, 2-amino-1-pentanol, 3-amino-1,2-pentanol and 2-amino-2-methyl-3-pentanol; said coating covered by a layer comprising a photoconductive zinc oxide uniformly dispersed in an insulating film-forming binder having an electrical resistance higher than that of the base plate on said coated base plate.

3,095,302
METHOD OF INHIBITING DISCOLORATION OF COLOR PHOTOGRAPHIC LAYERS CONTAINING DYE IMAGES AND RESULTING PHOTOGRAPHIC PRODUCTS

Roy Arthur Jeffreys, Arthur Neil Davenport, and David George Saunders, all of Harrow, England, assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Jan. 21, 1959, Ser. No. 788,053
12 Claims. (Cl. 96—11)

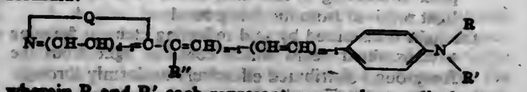
1. The method of inhibiting the discoloration of a water permeable photographic layer containing an image composed of a dye selected from the group consisting of azomethine, indoaniline, indophenol and indamine dyes, said layer being substantially free from developed silver and residual silver halide which comprises inhibing in said layer an aqueous solution of a compound selected from the group of polyhydroxy compounds consisting of:
3,3,5,5-tetrahydroxymethyl tetrahydro-γ-pyrone
3,3,5,5-tetrahydroxymethyl tetrahydropyran-4-ol
quinic acid
hexoses
hexose-hexoses
monoamino derivatives of hexoses and their salts
hexitols
methylene ethers of hexitols
and allowing said layer to dry containing sufficient absorbed treating agent to inhibit discoloration of said layer.

3,095,303
STYRYL DYE BASE COMPOSITION AND PHOTOGRAPHIC PROCESSES FOR PRODUCING LITHOGRAPHIC SURFACES PHOTORESISTS AND PRINTS THEREWITH

Robert H. Sprague, Cleveland, Harry L. Fichter, Jr., Lakewood, and William P. Hamilton, Cleveland, Ohio, assignors to Horizons Incorporated, Cleveland, Ohio, a corporation of New Jersey

No Drawing. Filed July 12, 1960, Ser. No. 42,233
15 Claims. (Cl. 96—33)

1. A photosensitive composition comprising a photolytically active organic halogen-containing compound selected from the group consisting of compounds capable of being split by absorption of light into free radical fragments consisting of halogen free radicals and organic free radicals, and selected from the group consisting of alkyl and aralkyl compounds in which at least three halogen atoms are attached to a single carbon atom and a compound selected from the group consisting of styryl dye bases and vinylene homologues thereof represented by the formula:

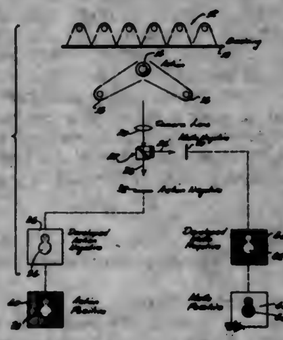


wherein R and R' each represent monovalent radicals selected from the group consisting of lower alkyl and benzyl, and may be different from one another; R'' represents a monovalent radical selected from the group consisting of H and —CN; *d* and *n* each represent a positive integer which is not greater than 2; *m* is a positive integer not greater than 3; and the sum of *n*—1 and *m*—1 is not greater than 2; and Q represents the nonmetallic atoms necessary to complete a heterocyclic nucleus having at least 5 and not more than 6 members in the ring, said

halogen compound being present in an amount sufficient to sensitize said dye base.

15. A process for producing a litho master, comprising preparing the composition of claim 1; coating a casein-filled paper therewith; exposing the composition to light through a suitable negative, thereby producing a positive image in color; swabbing the exposed sheet with water to render the background ink-repellent, the image area then being ink-receptive.

3,095,304
COMPOSITE PHOTOGRAPHY UTILIZING SODIUM VAPOR ILLUMINATION
Petro Vlahos, Los Angeles, Calif., assignor to Motion Picture Research Council, Inc., Los Angeles, Calif., a corporation of California
Filed May 15, 1958, Ser. No. 735,427
2 Claims. (Cl. 96—42)



1. The method of producing a photographic record of a foreground and a photographic matte, which record and matte are suitable for use, together with a selected background record, for producing a composite picture;

said method including the steps of illuminating a face of a backing with light essentially confined to a substantially monochromatic band in the medial portion of the visible spectrum,

illuminating a foreground in front of the illuminated face of the backing with substantially white light,

forming a main image-forming beam of light from both the illuminated face of the backing and the foreground,

directing said main beam obliquely upon a selective reflecting element comprising a multiple array of interference layers having a reflectance peak centered adjacent said monochromatic band to remove from the main beam a reflected beam containing at least approximately 80% of the light of said monochromatic band received from the backing,

and containing foreground light within said reflectance peak amounting to less than about 10% of the total light received from the foreground,

the light transmitted by said reflecting element forming a transmitted beam which contains light from the foreground distributed effectively uniformly throughout the visible region and which includes at least approximately 90% of the total light received from the foreground,

exposing an actinic surface to said reflected beam without sharply selective absorptive filtering thereof to produce the photographic matte,

and exposing an actinic surface to said transmitted beam without sharply selective absorptive filtering thereof to produce said photographic record of the foreground.

3,095,305
PROCESS FOR PRODUCING AERATED SHORTENING
John J. Kearns, Jr., Hasbrouck Heights, N.J., assignor to Lever Brothers Company, New York, N.Y., a corporation of Maine
Filed Jan. 19, 1961, Ser. No. 83,684
6 Claims. (Cl. 99—118)



1. A process for producing an aerated shortening which comprises placing a stream of chilled aerated liquid fat under a high pressure, partially crystallizing the stream of chilled aerated fat under said pressure with agitation, suddenly releasing substantially all of said pressure, and subjecting the fat to a second partial crystallization with agitation at approximately atmospheric pressure, the stream of chilled aerated liquid fat containing sufficient aerated gas to insure that the aerated shortening obtained contains from 15 to 32% of an aerated gas.

3,095,306
METHOD OF STABILIZING SPICE MATERIAL AND THE RESULTING PRODUCT
Maclyn R. Post, Chicago, Ill., assignor to Wm. J. Stange Co., a corporation of Illinois
No Drawing. Filed Apr. 24, 1961, Ser. No. 104,838
15 Claims. (Cl. 99—140)

1. The method of stabilizing a spice extractive carried by a particulate, ingestible, solid carrier substance containing a metal constituent which normally catalyzes deterioration of said spice extractive, which method comprises incorporating in said spice extractive an antioxidant, treating said carrier substance with a metal deactivator selected from the group consisting of the edible water-soluble salts of ethylene diamine tetraacetic acid, and combining said spice extractive and said solid carrier, said metal deactivator being present in said carrier substance in an amount effective to complex the metal constituent contained therein and to stabilize said spice extractive against metal-catalyzed deterioration.

3,095,307
DEOXYGENATING METHOD AND PRODUCT
Don Scott and Frank E. Hemmer, Chicago, Ill., assignors to Fermco Laboratories, Inc., a corporation of Illinois
No Drawing. Filed Sept. 22, 1961, Ser. No. 139,848
10 Claims. (Cl. 99—171)

1. An article of manufacture which comprises a closed receptacle containing a product normally subject to oxidative deterioration, a solid carrier for enzyme, a deoxygenating composition interpenetrated into said solid carrier to form a deoxygenating body, said deoxygenating composition comprising substrate, an enzyme system reactive with oxygen in the presence of said substrate and water sufficient to support oxidase activity while the outer surface of said carrier remains substantially free of unbound water.

3,095,308
METHOD FOR PRESSURE-PACKING OF MEAT PRODUCTS
Herbert Ramsey, Jr., P.O. Box 630, Rochester, N.Y.
Filed June 15, 1959, Ser. No. 820,547
1 Claim. (Cl. 99—174)

A method of pressure-packing meat products within a casing for holding compressible boned meat products; providing a dry casing of cellulose fiber material; subjecting said casing to water for a sufficient period of time to render it readily workable and deformable; restricting sectors of said casing by securing means at a location spaced from the ends of said casing to reduce the permissible interior passageway defined by said casing at such sectors; inserting at least one boned meat product into said casing through each of said ends; restricting said casing between each boned meat product as well as at each of said ends by securing means; compressing said boned meat



products within said casing by displacing all of said restricted sectors spaced from said restricted ends, towards said restricted ends; maintaining said boned meat products in a compressed condition by fixing the location of the restricted sectors of said casing whereupon the gathered portions of said casing between the fixed restricted sectors is deformable thereby permitting the encased boned meat products to be suspended therefrom; drying said casing; and severing said casing at its restricted sectors.

3,095,309
ELECTROLESS COPPER PLATING
Rudolph John Zeblisky, Wyandanch, John Francis McCormack, Roslyn Heights, John Duff Williamson, Mount Sinai, and Frederick W. Schneble, Jr., Oyster Bay, N.Y., assignors, by mesne assignments, to Day Company, N.V., a corporation of Curacao
No Drawing. Filed May 3, 1960, Ser. No. 26,401
12 Claims. (Cl. 106—1)

1. A bath for the electroless plating of copper consisting essentially of: water, and a water-soluble copper salt, from 0.002 to 0.15 mole per liter; a copper complexing agent, from 0.5 to 2.5 times the moles of the copper salt; an alkali metal hydroxide, to give a pH of from 10.5 to 14; formaldehyde, from 0.06 to 3.4 moles per liter; and a soluble inorganic cyanide, from 0.00002 to 0.06 mole per liter.

3,095,310
METHYL CELLULOSE ADDITIVE FOR GREEN MOLDING SAND
Burgess P. Wallace, Brooklyn, and Ronald E. Melcher, Cambria Heights, N.Y., assignors to Whitehead Brothers Company, New York, N.Y., a corporation of New Jersey
No Drawing. Filed May 29, 1961, Ser. No. 113,072
3 Claims. (Cl. 106—38.5)

1. A green sand mold consisting essentially of a mixture of silica sand, bonding clay, temper water and an amount of an additive consisting of methyl cellulose having its greatest ability to absorb water at temperatures above 160° F. and forming gel structures at temperatures substantially in excess of 160° F. sufficient to prevent the formation of surface defects in castings made using said mixture.

3,095,311
GLASS COMPOSITIONS
Guido von Wranau, Plainfield, and Charles J. Phillips, New Brunswick, N.J., assignors of 102/200 to said Von Wranau, 38/200 to said Phillips, 9/200 to Thomas T. Chappell, Cedar Knolls, 51/200 to Raymond J. Lamb, Ridgewood, 9/200 to H. Curtis Meanor, Glen Ridge, and 9/200 to Walter A. Sproule, Rutherford, N.J.
No Drawing. Filed June 29, 1960, Ser. No. 39,462
13 Claims. (Cl. 106—50)

13. Glass fibers consisting essentially of

	Percent
SiO_2	40 to 59
Al_2O_3	7 to 17
CaO	9 to 24
PbO	0 to 11
ZnO	0 to 11
BaO	0 to 5
MgO	0 to 5
CaF_2	0 to 3
B_2O_3	0 to 6
TiO_2	0 to 7
ZrO_2	0 to 4
Li_2O	1 to 4
Na_2O	0 to 2
K_2O	0 to 6

the combined amounts of Li_2O, Na_2O and K_2O varying between 2 and 7%.

3,095,312
POROUS FOAMED SILICATE PRODUCTS
Sidney T. Holmes, 1410 Warrington Road, Deerfield, Ill.
No Drawing. Filed Dec. 24, 1959, Ser. No. 861,739
2 Claims. (Cl. 106—75)

1. A process for producing a water-insoluble light rigid porous rapidly-foamed product having a multicellular structure consisting essentially of mixing together in an aqueous medium at ambient temperature about 1 to 20 parts by weight of a gas-producing peroxy compound, about 30 to 135 parts of water-soluble inorganic silicate, and about 1 to 5 parts of paraformaldehyde, while maintaining a silicate/aldehyde weight ratio between about 1.26 to about 2.4 (expressed as Na_2O/paraformaldehyde).

ERRATUM
For Class 106—79 see:
Patent No. 3,095,571

3,095,313
TOASTED BLOOD GLUE BASE
Charles N. Cone, Portland, Oreg., assignor to Pacific Resins & Chemicals, Inc., Seattle, Wash., a corporation of Washington
Filed Oct. 31, 1960, Ser. No. 76,384
7 Claims. (Cl. 106—124)

4. A glue base consisting essentially of a substantial portion of dried, water-insoluble, animal blood-solids particles, each of said particles having: an inner alkali-soluble portion within an outer alkali-insoluble membrane, the outer membrane being swellable and permeable to alkali metal hydroxide solution and capable of passing an alkaline solution of the inner soluble portion therethrough, and a solid filler in particle form.

7. A glue base as recited in claim 4 in which the solid filler in particle form is a carbonate in powdery form selected from the group consisting of calcium, magnesium, strontium and barium and is present in an amount between 0.5 and 10% by weight based on the weight of the blood-solids particles.

3,095,314

ASPHALT CONTAINING MIXED METAL SALTS

John C. Munday, Cranford, Dilworth T. Rogers, Summit, and Arnold J. Morway, Clark, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

Filed Dec. 20, 1961, Ser. No. 160,786
7 Claims. (Cl. 106—269)

1. A normally solid asphaltic composition comprising a major amount of asphalt and a minor hardening amount, within the range of about 1 to 40 wt. percent, of calcium mixed salt of C_1 to C_2 fatty acid and C_8 to C_{30} fatty acid, in a molar ratio of C_1 to C_2 fatty acid salt to C_8 to C_{30} fatty acid salt of about 1/1 to about 100/1, wherein said asphalt has a Saybolt Furol viscosity of 25 to 5,000 seconds at 300° F., and contains at least 80 wt. percent based on the total weight of said asphalt, of asphalt having an ASTM needle penetration of 100 mm./10 at 77° F., under a 100 gram load for five second.

3,095,315

PROCESS OF MAKING A POROUS, COATED MATERIAL

Donald G. Magill, Jr., and Joseph W. Judge, Jr., Milford, N.J., assignors to Riegel Paper Corporation, New York, N.Y., a corporation of Delaware

Filed May 3, 1961, Ser. No. 107,586
9 Claims. (Cl. 117—10)



3. The method of processing a porous base web coated on one surface with a normally non-porous layer of undissolved heat-softenable resinous plastic material which comprises rendering said non-porous layer substantially porous by passing the coated base web in direct contact with a heated continuously moving surface, the web and heated surface being so oriented that said layer of normally non-porous material is in direct contact with said heated surface, maintaining said coated web in contact with said heated surface for a predetermined period of short duration to heat said resinous plastic material to but not substantially beyond its tacky state by causing said coated web to pass around a predetermined portion of said continuous surface, maintaining the surface speeds of said heated surface and said web substantially exactly equal during said predetermined period, and withdrawing said web from said heated surface whereby said layer of plastic material is rendered porous, said heated surface constituting the sole effective heat source operative in the step of rendering said resinous plastic material substantially porous.

3,095,316

PROCESS FOR COATING CARBONACEOUS ARTICLES WITH SILICON DIOXIDE

Jurgen Hartwig, Fostoria, Ohio, assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Sept. 30, 1959, Ser. No. 843,363
8 Claims. (Cl. 117—16)

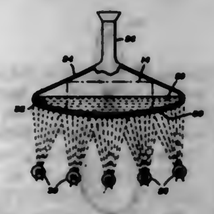
2. A process for coating carbonaceous articles with surface coatings of silicon carbide, comprising bringing said article into intimate contact with a mixture of at least one metal carbide selected from the group consisting of silicon carbide, titanium carbide, zirconium carbide, hafnium carbide and tantalum carbide and at least one powdered source of silicon selected from the group consisting of silicon metal and silicon dioxide; heating said article and the surrounding mixture in a suitable container to temperatures ranging from 1500 to 2200° C.; maintaining said final temperature for a time necessary for formation of a coating, and slowly cooling said articles.

3,095,317

CATHODE RAY TUBE SCREENING

Victor N. Sedlire, Lafayette Hills, Pa., assignor to General Electric Company, a corporation of New York

Filed Oct. 27, 1959, Ser. No. 849,100
7 Claims. (Cl. 117—33.5)



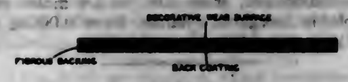
1. A method of making cathode ray tube screens comprising covering a screen support substrate to a substantial depth with a pool of liquid screen solution including particles of luminescent screen material mixed with a photo-sensitive resist, while said substrate is covered by said liquid pool exposing said solution with light incident through said substrate to solidify on said substrate a layer of said solution having particles of luminescent screen material entrapped therein, continuing said exposure to progressively solidify the portion of said solution at the interface thereof with the solidified material therebeneath, terminating said exposure when the layer of said solidified material has built up to the desired thickness, removing the remainder of said liquid pool covering said solidified layer, drying said solidified layer, and applying heat to the dried layer for a sufficient period to volatilize and remove therefrom the resist portions of said dried layer.

3,095,318

RESILIENT FLOOR AND WALL COVERING HAVING A BACK COATING

James R. Potzold, East Hempfield Township, Lancaster County, Pa., assignor to Armstrong Cork Company, Lancaster, Pa., a corporation of Pennsylvania

Filed Apr. 15, 1960, Ser. No. 22,391
16 Claims. (Cl. 117—68)



1. A resilient floor and wall covering comprising a decorative wear layer and a backing of fibrous material, a coating on said backing on the side opposite said wear layer, said coating comprising a cellulosic ester and a diatomaceous silica filler of small particle size.

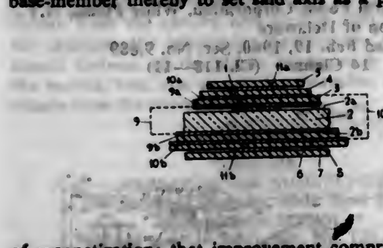
3,095,319

MANUFACTURE OF APPARATUSES INCLUDING THIN MAGNETIC FILMS

Michael Williams, Watford, England, assignor to The General Electric Company Limited, London, England

Filed May 26, 1959, Ser. No. 816,007
Claims priority, application Great Britain May 28, 1958
3 Claims. (Cl. 117—107)

2. In a method of manufacturing a uniaxially anisotropic magnetic thin film in which method a thin magnetic film of a magnetic metal is formed by incrementally depositing magnetic metal on a non-ferromagnetic base-member in the presence of a magnetic field acting in the film along an axis that is stationary relative to the base-member thereby to set said axis as a preferred axis



of magnetization: that improvement comprising the step of submitting the film during its formation to a magnetic field that rotates relative to the base-member in the plane of the film so as to effect a reduction in the degree of uniaxial magnetic anisotropy of the film.

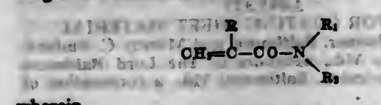
3,095,320

LOW TEMPERATURE PIGMENT BINDER COMPOSITIONS FOR TEXTILE FABRICS

George J. Leitner, Peekskill, N.Y., assignor to Geigy Chemical Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Oct. 24, 1960, Ser. No. 64,263
8 Claims. (Cl. 117—119.6)

1. A method for coloring textile material, which comprises the steps of applying to a fabric of said material an aqueous composition containing from about 0.025% to about 2% by weight of the total composition of a latent acid catalyst and comprising a water-insoluble pigment intimately mixed with a binder, said binder being composed substantially of the following elements: (*a*) from about 90% to about 10% by weight of a soft latex component consisting essentially of a polymerization product having from about 2% to about 10% of methacrylic acid, from about 60% to about 85% of butadiene and from about 38% to about 5% of a member selected from the group consisting of acrylonitrile and styrene, and (*b*) from about 10% to about 90% by weight of a mixture composed of (1) a hard latex component consisting essentially of a water-insoluble linear polymer of a mixture comprising (i) from about 1% to about 25% by weight of a monomer of the formula



wherein

R is a member selected from the group consisting of hydrogen and lower alkyl,

R_1 and R_2 are each independently selected from the group consisting of hydrogen and alkyl, and

(ii) from about 99% to about 75% by weight of at least one alkyl ester of a member selected from the group consisting of acrylic acid, methacrylic acid and a mixture of methacrylic and acrylic acid, the alkyl group of said ester containing from 1 to 8 carbon atoms, and (2) a water-soluble resinous condensate selected from the group consisting of polymethylated melamine-formaldehyde, polymethylated urea-formaldehyde and polymethylated ethylene-urea-formaldehyde, said condensate being dissolved in the aqueous composition and the copolymer and pigment being dispersed therein, the ratio of the weights of the copolymer to the crosslinking agent being from about 6:1 to about 1:6, and then simultaneously drying and heating said fabric at a temperature of from about 180° F. to about 250° F. for from about 0.5 to about 5 minutes.

3,095,321

HIGH HARDNESS PORCELAIN ENAMEL COMPOSITION, METHOD OF COATING THEREWITH AND ARTICLE PRODUCED THEREBY

James G. Breedlove, Signal Mountain, Tenn., assignor to American Lava Corporation, Chattanooga, Tenn., a corporation of Tennessee

Filed June 5, 1961, Ser. No. 114,990
13 Claims. (Cl. 117—129)

4. As a new article of manufacture: an article having a metal base member and a high hardness porcelain enamel coating adherent to said base member, said porcelain enamel coating being formed by firing to maturation a coating comprising glassy frit particles suitable for use in providing a porcelain enamel coating on aluminum base materials, said glassy frit particles being maturable at temperatures not in excess of 600° C. into a porcelain enamel which exhibits a coefficient of thermal expansion of at least 10×10^{-6} per ° C. between 50 and 350° C., and between 5 and 100 parts by weight of magnesium aluminate spinel for every 100 parts by weight of said glassy frit material.

3,095,322

COLOR STABILIZED FIBERS AND PROCESS FOR PREPARING SAME

Jan Z. Sadowski and Robert E. Wagner, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Mar. 20, 1961, Ser. No. 96,651
13 Claims. (Cl. 117—138.8)

8. The process for fume stabilizing spandex fibers which comprises applying thereto a treating composition containing benzanilide.

3,095,323

PROCESS FOR THE UPGRADING OF CELLULOSE TEXTILES

Hermann Behncke, Frankfurt am Main, Germany, assignor to Inventa A.G. für Forschung und Patentverwertung, Zurich, Switzerland

No Drawing. Filed Sept. 22, 1960, Ser. No. 57,644
Claims priority, application Switzerland Oct. 3, 1959
2 Claims. (Cl. 117—143)

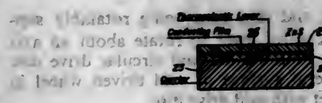
1. A process for the upgrading of cellulosic textiles, which comprises impregnating said textiles with a self-polymerizing ω-carboxylalkyleneurea, having an alkylene group consisting of 5 to 10 methylene groups, in aqueous solution, hardening and drying said resin.

3,095,324

METHOD FOR MAKING ELECTRICALLY CONDUCTING FILMS AND ARTICLE

Dominic A. Cusano, Schenectady, and Richard L. Sormberger, Ballston Lake, N.Y., assignors to General Electric Company, a corporation of New York

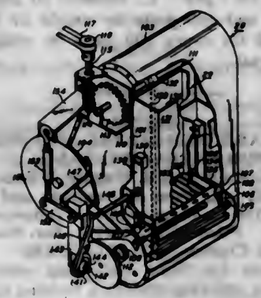
Filed Apr. 14, 1960, Ser. No. 22,247
20 Claims. (Cl. 117—215)



1. The method of forming a conductive film upon the surface of a crystalline layer of a high resistance compound having a cation selected from the group consisting of zinc, cadmium and mixtures thereof and an anion selected from the group consisting of sulphur, selenium, tellurium and mixtures thereof which method comprises immersing said layer in a solution containing metallic

ions which are capable of replacing the cation of said compound and causing said solution to react with said compound by maintaining said layer in said solution at a temperature of approximately 25° C. to 150° C. for a time sufficient to allow a chemical reaction therebetween to form a surface-adjacent film of a substance having a low electrical resistance.

3,095,325
TONER DISPENSER DRIVE MECHANISMS
Harold E. Trumbull, Columbus, Ohio, assignor, by mesne assignments, to Xerox Corporation, a corporation of New York
Filed Dec. 23, 1960, Ser. No. 85,947
5 Claims. (Cl. 118—7)



1. In a developing apparatus for developing an electrostatic latent image formed on a xerographic drum wherein the developing apparatus includes a developer housing having a sump portion for developer material, a bucket-type conveyor mounted within the developer housing, a drive connected to the conveyor to operate the conveyor at a predetermined speed to convey a developer material to the upper portion of the developer housing where it is cascaded onto the drum, and wherein a toner dispenser is positioned within the developer housing, the toner dispenser including a metering element to dispense metered quantities of toner to the developer material;

the improvement comprising a variable speed drive connected between the conveyor and the metering element of the toner dispenser whereby to vary the rate at which toner is dispensed to the developer material,

the variable speed drive including a circular drive disc rotated at constant speed about an axis by said bucket-type conveyor drive,

a driven wheel,

a cam connected to said driven wheel for rotation therewith,

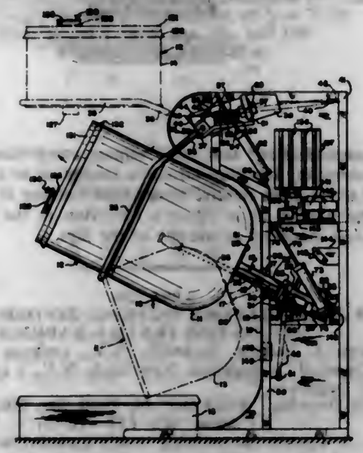
a control lever pivotally connected to said developer housing,

said driven wheel and said cam being rotatably supported by said control lever to rotate about an axis at right angles to the axis of said circular drive disc with the peripheral surface of said driven wheel in frictional contact with said drive disc,

said control lever permitting the position of said driven wheel on said circular drive disc to be varied with respect to the axis of rotation of said circular drive disc to vary the rotative speed of said driven wheel and therefore said cam with respect to the speed of said circular drive disc,

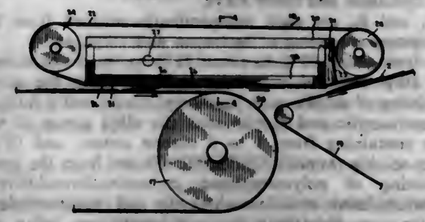
and cam follower means operatively connected at one end to said cam and at its other end to said toner dispenser for effecting operation of said toner dispenser.

3,095,326
BATCH-TYPE APPARATUS FOR TUMBLE COATING DISCRETE PARTICLES
Julius Green, New City, Richard W. Morse, Garden City, and Dick R. Westfall, Massapequa Park, N.Y., assignors to General Foods Corporation, White Plains, N.Y., a corporation of Delaware
Filed Feb. 19, 1960, Ser. No. 9,889
14 Claims. (Cl. 118—11)



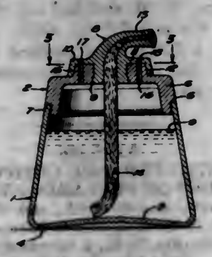
1. An apparatus for applying a coating composition to discrete particles, comprising a container open at one end and disposed in one position to retain a quantity of said particles and said composition and in another position to discharge by gravity the contents thereof, means for moving said container in said retaining position to tumble said contents, a cover overlying the open end of said container when said container is in said retaining position, means mounted on said cover for heating said particles and said composition during the movement of said container to fuse said composition to said particles individually as said particles are tumbled in said container, and means for moving said container from said retaining position to said discharge position.

3,095,327
MEANS FOR COATING SHEET MATERIAL
Gordon H. Dalsemer, Baltimore, and Murray C. Binford, Long Green, Md., assignors to The Lord Baltimore Press, Incorporated, Baltimore, Md., a corporation of Maryland
Filed Nov. 5, 1959, Ser. No. 851,122
4 Claims. (Cl. 118—101)



1. In a coating machine of the class in which a succession of paperboard blanks have a thermo-plastic coating applied to one surface thereof and said coated blanks are then pressed against an elongated run of a casting belt with the coated surface of the blanks against the smooth surface of the belt and adhered thereto and a cooling means is applied to said run for hardening the thermo-plastic coating, the combination with said run of a permeable conveyor belt positioned adjacent to the terminal portion of the elongated run of said casting belt and spaced outwardly of the casting belt, means to move said conveyor belt at about the speed of the casting belt, vacuum means at said conveyor belt for transferring the blanks from the casting belt to said conveyor belt and for retaining the blanks on the conveyor belt with the coated surfaces of the blanks continuously spaced from the casting belt, and means for thereafter removing the blanks from the conveyor belt.

3,095,328
STAMP HINGE MOISTENER
Nicholas R. Tanchuk, 4062 West Blvd., Los Angeles 8, Calif.
Filed June 30, 1961, Ser. No. 121,150
5 Claims. (Cl. 118—268)



1. A device for moistening stamp hinges or the like comprising a receptacle member, a lid assembly, said lid assembly including a first member threadably engaging the upper portion of said receptacle member, said first member having a central aperture in the end wall thereof, a second member having a portion extending through said aperture in said first member, a flange extending over said end wall of said first member, and a tip portion extending upwardly from the central portion of said flange and laterally to one side of said assembly, said second member being rotatable relative to said first member, said first member including at least one aperture in said end wall, said second member including at least one aperture in said flange alignable with said first mentioned aperture at a relative rotational position of said first and second members, said second member including a centrally disposed aperture therethrough, and a wick extending through said aperture in said second member from the distal end of said tip portion and depending therefrom to the interior of said receptacle for contact with fluid therein for conducting said fluid to said distal end of said tip portion.

3,095,329
PROCESS FOR THE CONCENTRATION OF SUBSTANCES BY ABSORPTION FROM SOLUTIONS
Johann Gleson, Haldenstein, near Chur, Switzerland, and Fritz Müller, deceased, late of Chur, Switzerland, by Gertrud Müller-Grunwaldt, administratrix, Chur, Switzerland, assignors to Inventa A.G. fuer Forschung und Patentverwertung, Zurich, Switzerland
No Drawing. Filed Mar. 7, 1958, Ser. No. 719,978
7 Claims. (Cl. 127—55)

1. A process for the concentration of substances from solutions by solvent absorption, which comprises depositing the substances onto absorbents selected from the group consisting of ion exchangers, activated carbon, silica gel and alumina, which are impregnated with complex-formers selected from the group consisting of borax, boric acid and ions of copper, tin, aluminum and silver, and incompletely extracting the substances with solutions of neutral liquids selected from the group of aqueous neutral salts and of materials analogous to the absorbed substances, the quantity of said neutral liquids being less than that of the solvent used in the absorption, allowing part of the substance to remain on the absorbent.

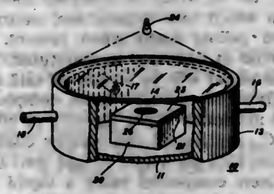
3,095,330
THERMOELECTRICITY
Arnold Epstein and Stanley M. Kulifay, Dayton, Ohio, assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
Filed Dec. 7, 1959, Ser. No. 857,892
13 Claims. (Cl. 136—5)

1. A thermoelectric body which is composed of at least one composition selected from the group consisting of silver antimonide, copper antimonide, silver selenide, copper selenide, silver telluride and copper telluride, the said components in finely-divided form having been compressed at a pressure of at least 500 pounds per square inch and maintained at a temperature of between 30° C. and a temperature of 50° C. below the melting point.

3,095,331
GALVANIC CELLS
Jack Davis, Gidea Park, England, assignor to The Ever Ready Company (Great Britain) Limited, London, England, a company of Great Britain
No Drawing. Filed Feb. 10, 1960, Ser. No. 7,751
Claims priority, application Great Britain Feb. 12, 1959
4 Claims. (Cl. 136—107)

1. A method of improving the efficiency of a primary galvanic cell of the kind comprising a zinc electrode and depolarising mix including manganese dioxide, which method comprises incorporating in the cell a chelating agent selected from the group consisting of amino carboxylic acids and their derivatives in a proportion at least chemically equivalent to foreign trace metal ions selected from the group consisting of copper, nickel, lead and cobalt ions, introduced into the cell as trace impurities in the manganese dioxide depolariser, whereby said foreign trace metal ions are incorporated in the chelate rings and are thereby rendered inert with respect to the essential chemical reactions in the cell.

3,095,332
PHOTOSENSITIVE GAS PHASE ETCHING OF SEMICONDUCTORS BY SELECTIVE RADIATION
Joseph R. Ligenza, Westfield, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed June 30, 1961, Ser. No. 121,066
5 Claims. (Cl. 148—1.5)



3. In the fabrication of a semiconductor device from a semiconductor wafer of one conductivity type, the steps of forming a silicon dioxide layer on a surface of said wafer, said silicon dioxide layer being of a diffusion-resistant thickness, enclosing the thus coated wafer in an ambient IF_5 gas, directing at said wafer radiation in accordance with a pattern for a time and at a wavelength to penetrate the irradiated portion of said silicon dioxide layer and expose selectively said surface, removing said

ambient IF_5 gas and subjecting said surface to a vapor of an impurity of the opposite conductivity type for converting selectively at least one surface portion of said wafer to the opposite conductivity type.

3,095,333

PROCESS FOR THE MANUFACTURE OF LAMINATED MAGNETIC CORES

Edward A. Sweeney, Dayton, and Joseph B. Carr, Miamisburg, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

No Drawing. Filed Nov. 14, 1960, Ser. No. 68,605
3 Claims. Cl. (148—121)

1. In a procedure for the improved quality of stators having sheet metal laminations stacked in groups, in combination therewith, the steps comprising forming the stator from laminations of unannealed cold rolled steel and thereafter heating the stator in a temperature range between 1350° F. and 1450° F. for substantially two hours such that a temperature of 1400° F. is reached during the first hour thereof.

3,095,334

THIXOTROPIC MONOPROPELLANTS

Arch C. Scurlock, Alexandria, Va., assignor to Atlantic Research Corporation, Alexandria, Va., a corporation of Virginia

No Drawing. Filed Nov. 6, 1957, Ser. No. 694,897
22 Claims. (Cl. 149—21)

1. In a heterogeneous monopropellant composition consisting essentially of a dispersion of finely-divided, insoluble, solid inorganic oxidizer in a continuous oxidizable organic fuel matrix, which forms gaseous combustion products, and said organic fuel matrix being selected from the group consisting of an inert organic compound which does not contain combined oxygen available for combustion of other components of the molecule and requires an external oxidizer for combustion and an active organic compound which contains combined oxygen available for oxidation of other molecularly-combined components of said active compound, said inert compound being selected from the group consisting of compounds containing molecularly-combined carbon, hydrogen, and oxygen and compounds containing molecularly-combined carbon, hydrogen, and nitrogen, said active compound containing a radical selected from the group consisting of nitroso, nitro, nitrite and nitrate, said oxidizer being present in amount sufficient to maintain active combustion of the inert organic fuel compound, said organic fuel matrix containing, in addition, from 0 to a minor amount of a gelling agent, all of which is dissolved therein, the improvement in which said organic fuel matrix, including said dissolved gelling agent when present, is a liquid which is mobile at ordinary temperatures, which comprises at least about 8% by weight of said composition, which comprises one or more liquid components, all of which have a maximum vapor pressure of about 25 mm. Hg at 100° C., said liquid components consisting essentially of at least 50% by weight of said inert organic compound, said inert compound being a liquid at ordinary temperatures, and from 0 to about 50% by weight of said active organic compound, said active compound being a liquid at ordinary temperatures, said monopropellant being an extrudable, thixotropic composition which requires a finite stress to produce flow, is indefinitely capable, after storage, of continuous flow at ambient temperatures under a maximum shear stress at a wall of 10 p.s.i. and has a minimum tensile strength of about 0.01 p.s.i.

2. The monopropellent composition of claim 1 in which the solid oxidizer comprises particles of different size.

3,095,335

BLASTING AGENT OF MULTI-SIZED AND MULTI-DENSITY AMMONIUM NITRATE WITH FUEL OIL

Don B. McCloud and Dean E. Albon, Du Quoin, Ill., assignors to Airsite-Midwest Incorporated, a corporation of Illinois

No Drawing. Filed Mar. 21, 1960, Ser. No. 16,194
3 Claims. (Cl. 149—21)

1. In a non-cap-sensitive blasting agent, the combination consisting essentially of a homogeneous mixture of relatively porous-coated fertilizer-grade ammonium-nitrate prills of a size to substantially completely pass through an 8-mesh screen and be retained on a 20-mesh screen, relatively dense crystalline powdered fertilizer-grade ammonium nitrate of particle-size distribution to substantially completely pass through a 20-mesh screen and be at least partially retained on screens of 28, 35, 48, 100 and 200 mesh, the ratio by weight of prills to powder being between 28:72 and 70:30, and fuel oil, the amount of oil being between 4% and 7% by weight of the total mixture, to define a free-flowing mixture having a density of at least 1.1 and a rate of detonation not less than 14,000 feet per second.

3,095,336

HIGH STRENGTH CERAMIC COMPOSITIONS AND METHODS FOR PREPARING THE SAME

James M. Church, Tenafly, N.J., and Walter H. Greenberg, Syosset, N.Y., assignors to Riverside Plastics Corporation, Hicksville, N.Y., a corporation of New York

No Drawing. Filed Mar. 20, 1959, Ser. No. 800,635
3 Claims. (Cl. 154—2.2)

1. A rigid high strength material consisting essentially of a plurality of superposed layers of fused glass fabric formed from a relatively high melting glass which melts at a temperature of about 2000° F. to 2600° F., a fused relatively low melting glass consisting of a monovalent alkali metal phosphate which melts at a temperature of about 600° F. to 800° F., and a ceramic filler in which the weight ratio of glass to ceramic filler is between 100 parts by weight of glass to 30 parts by weight of ceramic filler to 100 parts by weight of glass to 140 parts by weight of ceramic filler, with said fused relatively low melting glass being homogeneously fused to said ceramic filler, and with said fused relatively low melting glass and ceramic filler extending through the interstices of said layers of fused glass fabric so as to bind said layers of fused glass fabric together, and with said fused high melting glass fibers of the glass fabric fused to said homogeneous fusion of the fused relatively low melting glass and ceramic filler.

3,095,337

SEMICYLINDRICAL FOAM ELASTOMER INSULATION SHELL

Ascher Chase, Portsmouth, Va., assignor to General Foam Plastics Corporation, a corporation of Virginia

Filed July 10, 1961, Ser. No. 122,942
1 Claim. (Cl. 154—45)



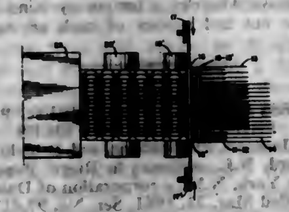
A molded, integral insulation construction of foamed closed uniform cell elastomer having a continuous outer strong resilient skin much thicker than the average cell diameter made up of a uniformly thick semicylindrical inner shell portion and a uniformly thick semicylindrical outer shell portion, said outer and inner portions meeting at a common longitudinal edge, said outer shell portion having a raised bead forming a tongue along the entire length and midway between one longitudinal edge and having a groove whose depth is substantially equal to the height of said tongue along the entire length and midway between the other longitudinal edge, the thickness of said outer shell portion being about 1.5 to 2.5 times the thickness of said inner shell portion and the inside diameter of said outer shell portion being equal to the outside diameter of said inner shell portion, said inner shell portion being substantially equal in length to said outer shell portion and resting inside said outer shell portion with one end of said inner shell portion projecting past one end of said outer shell portion, thereby forming a circumferential flange at one end of the insulation construction, and being circumferentially recessed at the other end of the same shell portion with the recess being substantially equal in depth to the length of the flange projecting from the opposite end of the semicylindrical shell construction, said semicylindrical shell construction being joined by circumferential flange-in-recess and longitudinal tongue-in-groove to another identical insulation construction to form a hollow, endless cylindrical insulation to snugly embrace an elongated tubular member and said insulation being thus joined end-to-end to identical cylindrical structures by inserting the end circumferential flange into the recess of interfitting paired shell halves.

3,095,338

WEB-LIKE CONTINUOUS TEXTILE STRUCTURE

Bruno Romanin, 8 Via Vincenzo Monti, Milan, Italy

Filed Jan. 19, 1959, Ser. No. 787,571
Claims priority, application Italy Jan. 25, 1958
1 Claim. (Cl. 154—46)



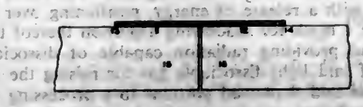
A web-like continuous textile structure comprising two sets of closely spaced organic warp yarns running longitudinally throughout the structure, a third set of similarly closely spaced organic weft yarns interposed between the two sets of the closely spaced warp yarns, each yarn of the interposed weft set of yarns running in a sinusoidal manner longitudinally throughout the textile structure, each sinusoid lying laterally over a plurality of the longitudinally running warp yarns of the first two sets, the amplitude of the sinusoids being greater than the spacing between adjacent warp yarns and smaller than the width of the textile structure, a fourth set of similarly closely spaced organic weft yarns interposed between the third set of sinusoidal weft yarns and one of the two sets of the longitudinally running warp yarns, said fourth set of weft yarns running sinusoidal in alternate phase opposition to the sinusoids of said third set of sinusoidal weft yarns and across the sinusoids thereof, said warp yarns crushed upon the weft yarns and the weft yarns being bent to accommodate the warp yarns, and all of said yarns being bonded at their intersections with one another.

3,095,339

ASPHALT ROOFING ELEMENT

Willis G. Craig, Willoughby, Ohio, assignor to The Lubrizol Corporation, Wickliffe, Ohio, a corporation of Ohio

Filed Mar. 25, 1958, Ser. No. 723,903
4 Claims. (Cl. 154—51)



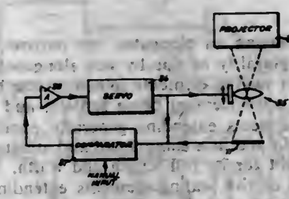
1. A roofing element comprising in combination a first strip of porous, tacky asphalt-bonded fibrous mat 4 to 12 inches wide, and centered longitudinally thereunder and held in facewise contact therewith by the surface tack of said first strip, a second, asphalt-impermeable strip narrower than said first strip, said second strip being characterized by a tensile strength less than that of said first strip and an adhesion to asphalt less than the cohesion of asphalt.

3,095,340

PRECISION RESISTOR MAKING BY RESISTANCE VALUE CONTROL FOR ETCHING

David P. Triller, Indianapolis, Ind., assignor to the United States of America as represented by the Secretary of the Navy

Filed Aug. 21, 1961, Ser. No. 132,992
2 Claims. (Cl. 156—8)
(Granted under Title 35, U.S. Code (1952), sec. 266)



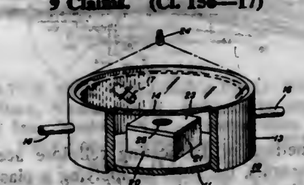
1. A method of producing precision resistors comprising: depositing a resistance film on first and second areas of an insulated base, then coating at least said second area with a photosensitive material, then comparing the resistance value of said first area with a predetermined resistance value, then projecting a light pattern onto said photosensitive material of a size determined by the resistance value of said first area thereby hardening a portion of said photosensitive material, and then etching the areas of said second area that are not covered by said hardened photosensitive material thereby forming a plurality of precision resistors on said insulated base.

3,095,341

PHOTOSENSITIVE GAS PHASE ETCHING OF SEMICONDUCTORS BY SELECTIVE RADIATION

Joseph R. Ligenza, Westfield, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

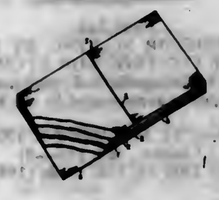
Filed June 30, 1961, Ser. No. 121,065
9 Claims. (Cl. 156—17)



1. A method for selectively etching a desired pattern on a workpiece capable of forming halides which are sub-

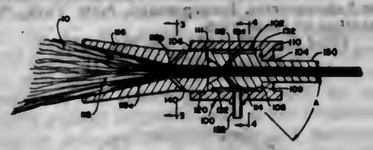
stantially completely volatile at the processing temperature, said method comprising positioning the workpiece in ambient gases including a heat-activated halide gas capable of forming said halides with said workpiece for etching the surface of the workpiece when activated and a light-dissociable gas capable of being dissociated by incident radiation and of recombining in the absence of such radiation with a release of energy, positioning over said workpiece a mask for shadowing a portion thereof to be etched and providing radiation capable of dissociating enough of said light-dissociable gas for raising the temperature of said shadowed portions to a processing temperature sufficient to cause localized etching there while little affecting the illuminated portions.

3,095,342
TIRE REPAIR INSERT
John Kraly, 3629 S. 59th Ave., Chicago, Ill.
Filed Dec. 15, 1961, Ser. No. 159,642
9 Claims. (Cl. 156—97)



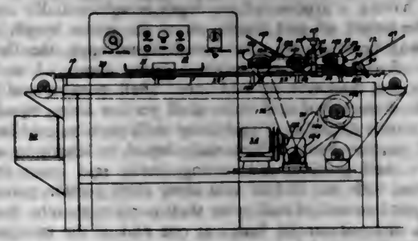
8. A tire having an elongated but narrow injury slit filled with a plurality of side by side elongated wide and relatively thin sealing elements joined at one end by an integral fold, each element being resilient and multi-ply, the sealing elements extending generally parallel to the walls of the slit and in a compressed and attentuated state through the slit for its full length and width, the folded end portions of the sealing elements extending beyond the slit and being unconfined for lateral expansion, when relaxed, into locking heads engaging the proximate faces of the tire adjacent said slit, and each sealing element comprising an elastic base and a facing of adhesvie coating of uncured rubber united thereto and in pressure engagement with the adjacent element facings and with the tire walls surrounding the injury opening to establish a sealing connection therewith.

3,095,343
METHOD FOR TREATING CONTINUOUS FILAMENTARY TOWS
Richard M. Berger, Richmond, Va., assignor to U.S. Filter Corporation, a corporation of New York
Filed Sept. 15, 1960, Ser. No. 56,189
11 Claims. (Cl. 156—180)



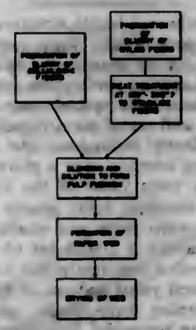
8. In a method of fabricating cellulose acetate tow into filter elements, the steps of applying a plasticizer to the tow, passing the tow through a heated confined area and introducing steam into the tow during its passage through said confined area to effect rapid curing thereof.

3,095,344
APPARATUS FOR ASSEMBLING NUTS AND WASHERS
Albert C. Sandow, Hatboro, Pa., assignor, by mesne assignments, to Philadelphia Steel and Wire Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Filed July 7, 1960, Ser. No. 41,365
6 Claims. (Cl. 156—566)



1. In a system for assembling nuts and washers into combined units, a moving conveyer, a nut feed station positioned adjacent the conveyer and operable for feeding nuts to the conveyer at predetermined spaced intervals, an adhesive applicator positioned adjacent the conveyer downstream of the nut feed station operable for depositing a heat-settable adhesive substance on a face of each of said nuts on the conveyer adjacent parallel side edges thereof, means for aligning the nuts in a predetermined manner with respect to the direction of movement of the conveyer and prevent rotation thereof as the nuts pass through the applicator, a washer feed station adjacent the conveyer downstream of the adhesive applicator operable for supplying washers at a predetermined rate in synchronization with the nut feed and the conveyer for assembling a single washer on the adhesive substance on the face of each said nut, means engaging through the nut and washer of each unit for concentrically aligning the nut and washer of each of the combined units and heating means for heating the combined units to a predetermined temperature to set the adhesive whereby a temporary bond is provided between the nut and washer of each of the combined units.

3,095,345
PROCESS FOR MANUFACTURING PAPER FROM SYNTHETIC FIBERS
Richard T. Jackson, Phillipsburg, and Donald G. Magill, Jr., Milford, N.J., assignors to Riegel Paper Corporation, New York, N.Y., a corporation of Delaware
Filed Mar. 22, 1961, Ser. No. 97,412
22 Claims. (Cl. 162—146)



1. A substantially continuous process for manufacturing paper from heat-shrinkable synthetic fibers subject to shrinkage when exposed to temperatures above 180° F. and below 300° F. which comprises annealing the heat-shrinkable synthetic fiber by heating it to a temperature of not less than 180° F. nor substantially more than 300° F. to shrink and dimensionally stabilize it, cutting the annealed synthetic fiber to a predetermined length, forming an aqueous slurry of the synthetic fibers, preparing a furnish from the aqueous slurry, said furnish having a predominant proportion of the synthetic fibers in relation to the total fiber content thereof, and including at least 2% by dry weight of cellulose fiber, forming a wet web from the furnish wherein the synthetic fibers become intimately interlaced, removing water from the wet web to form a damp sheet of synthetic fiber paper, and drying the synthetic fiber paper by applying heat thereto.

3,095,346
METHOD OF PRODUCING SHAPED ASBESTOS-CEMENT ARTICLES
Nicholas M. Sifscko, Manville, Reynold Nebel, New Brunswick, and William L. Van Derbeek, Short Hills, N.J., assignors to Johns-Manville Corporation, New York, N.Y., a corporation of New York
No Drawing. Filed Feb. 11, 1959, Ser. No. 792,482
1 Claim. (Cl. 162—154)

In a method of producing asbestos-cement pipe having good strength properties by:

(A) forming a slurry comprising

(1) water, and

(2) particulate solids in amount between about 0.5 and about 5 parts by weight dispersed in 100 parts by weight of the water, said particulate solids comprising:

(*a*) asbestos fibers, and

(*b*) hydraulic cement

in a weight ratio of asbestos to cement between about 1 to 5 and about 1 to 1,

(B) mixing and maintaining the solids of said slurry dispersed therethrough under agitation;

(C) feeding said slurry to a rotary cylinder mold vat of a machine containing a rotary cylinder mold, and continuing the agitation of said slurry in said cylinder mold vat to maintain the dispersion of the solids in the slurry;

(D) forming from said slurry, by filtration thereof through said rotary cylinder mold, a thin, continuous sheet comprising said asbestos fibers dispersed in a solid matrix comprising said hydraulic cement;

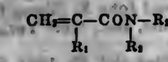
(E) winding said sheet around a mandrel to form a plurality of superposed layers of said sheet on the mandrel and applying compressive forces to said layers to consolidate them into a handleable but principally uncured tubular asbestos-cement article;

(F) removing said tubular article from the mandrel; and

(G) curing said tubular article to form a cured asbestos-cement pipe having good strength properties;

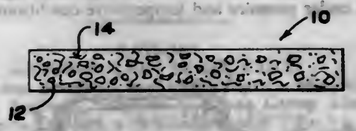
the improvement comprising, in combination:

(H) employing, as said asbestos fibers, asbestos fibers comprising chrysotile asbestos fibers, which acquire a positive charge when suspended in water, and including in said slurry between about 0.005 percent and about 0.1 percent by weight, based upon the weight of the dispersed solids in the slurry, of a water-soluble, high-molecular-weight polymer of an amide of the formula:



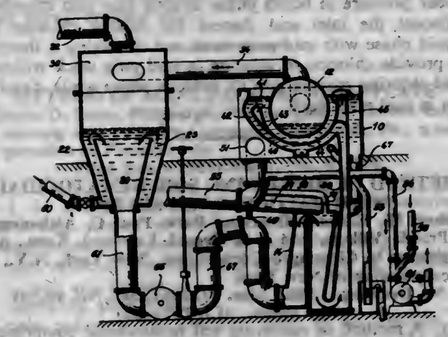
wherein R_1 is a radical selected from the group consisting of hydrogen and methyl, and R_2 and R_3 are radicals selected from the group consisting of hydrogen, one-to-four-carbon-atom alkyl, and one-to-four-carbon-atom hydroxy alkyl.

3,095,347
INSULATING MATERIAL AND THE LIKE
Norbert V. Becker, Joliet, Ill., assignor to Johns-Manville Perlite Corporation, a corporation of Illinois
Filed Sept. 11, 1958, Ser. No. 760,294
1 Claim. (Cl. 162—181)



An insulating board comprising in combination 60 to 75 percent of expanded perlite enmeshed in a network of 15 to 21 percent fiber and bonded together with binding material consisting essentially of 2 to 7 percent sodium silicate, 2–8% bentonite, and 15–7% starch.

3,095,348
UP-FLOW HEADBOX
Philip H. Goldsmith, 4300 Western Ave., Apt. 512, Montreal, Quebec, Canada
Filed Mar. 31, 1960, Ser. No. 19,076
8 Claims. (Cl. 162—216)

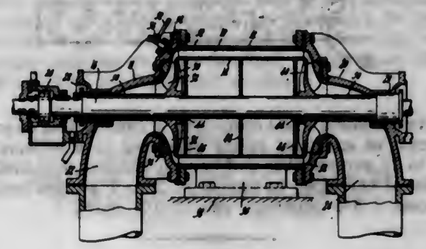


7. The method of forming a fibrous web from dilute stock on a cylinder mold of a cylinder paper machine, comprising the steps of delivering the white water leaving the mold, fresh stock and recirculated stock in separate streams to a common mixing zone having an entry point and a discharge point, combining said streams at said mixing zone entry point and confining said combined streams within said mixing zone to follow a spiral flow path raising at a gradually decreasing velocity to a predetermined point of maxium area within said zone and from said point descending at a gradually increasing velocity to said zone discharge point thereby simultaneously intimately mixing and deaerating said combined flow of white water, fresh and circulated stock, and from said mixing zone discharge point delivering said mixed, deaerated, diluted stock to the cylinder mold.

3,095,349
APPARATUS FOR CHLORINATING WOOD PULP
John P. Rich, Nashua, N.H., assignor to Improved Machinery Inc., Nashua, N.H., a corporation of Maine
Filed Feb. 10, 1960, Ser. No. 7,971
2 Claims. (Cl. 162—236)

1. Apparatus for mixing chlorine with a pulp stock comprising a stationary cylindrical housing having an inlet at one end thereof and an outlet at the other end thereof, a rotatable shaft extending through said housing

having a rotatable drum mounted therein within said housing and extending therealong, pump impeller means mounted within said housing adjacent the inlet end thereof, fluid turbine impeller means mounted on said shaft adjacent the outlet end thereof, said housing, drum, pump impeller means and fluid turbine impeller means defining an annular pressure chamber for maintaining said pulp stock under pressure and temperature conditions in excess



of those conditions required to maintain chlorine in liquid phase, and conduit means through the housing communicating directly with said chamber for introducing chlorine under pressure in liquid phase directly into said chamber adjacent the inlet end thereof for mixing chlorine in liquid phase with said pulp stock and dissolving it therein to provide chlorine in solution in said pulp stock without said chlorine passing into its gaseous phase while dissolving in said pulp stock.

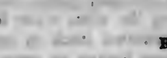
3,095,350

METHOD OF RENDERING SOIL NEMATOCIDAL WITH HALOGENATED SULFIDES

Robert W. Earhart, Overland Park, Paul C. Aichenegg, Prairie Village, and Jack Hensel, Leawood, Kans., assignors to Chemagro Corporation, New York, N.Y., a corporation of New York

No Drawing. Filed Mar. 27, 1961, Ser. No. 98,341
10 Claims. (Cl. 167—22)

1. A method of rendering soil nematocidal comprising introducing into the soil a nematocidal amount of a compound having the formula



where R is selected from the group consisting of a 1 to 8 carbon atom alkyl and benzyl, two of X, Y and Z being a halogen having an atomic weight between 35 and 80 and the remaining member of X, Y and Z being hydrogen.

3,095,351

STABILIZATION OF INSECTICIDES

Kenneth L. Godfrey, Kirkwood, and Henry L. Merrill, Clayton, Mo., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Aug. 31, 1959, Ser. No. 836,876
3 Claims. (Cl. 167—30)

1. The method of preparing a stable insecticidal emulsified concentrate of O,O-diethyl, O-p-nitrophenyl phosphorothioate prepared by reacting diethyl phosphorochloridothioate and p-nitrophenol which comprises contacting the said phosphorothioate containing more than 0.01 percent chlorine as acid chloride with gaseous ammonia in sufficient amount to reduce the chlorine content to less than 0.01 percent by weight, filtering to remove the precipitated ammonium chloride, and dispersing the filtrate in water and in emulsifying agents.

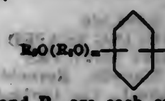
3,095,352

FUNGICIDES AND METHODS OF MAKING THE SAME

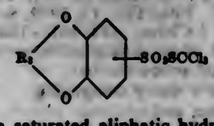
Jan Hendrik Uhlenbrook and Martinus Johannes Koopmans, Weesp, Netherlands, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

No Drawing. Original application June 10, 1957, Ser. No. 664,456, now Patent No. 2,959,518, dated Nov. 8, 1960. Divided and this application July 6, 1960, Ser. No. 41,040
5 Claims. (Cl. 167—30)

1. A method of destroying fungi harmful to plants comprising contacting the plants with a non-phytotoxic fungicidal composition containing a compound selected from the formulae:



wherein R_2 and R_3 are each saturated aliphatic hydrocarbon residues and m is a whole number from 1 to 5 and



wherein R_3 is a saturated aliphatic hydrocarbon residue.

3,095,353

AQUEOUS MIXTURE OF SURFACE ACTIVE AGENTS

John M. Sargant, Richmond Heights, Mo., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Mar. 30, 1960, Ser. No. 18,507
6 Claims. (Cl. 167—43)

1. A homogeneous mixture of surface-active agents for emulsifying and dispersing water-insoluble substances in water which mixture is water-soluble and contains from about 1 to 2 parts by weight of (*a*) an alkali metal alkyl sulfate water-soluble surfactant of the structure $RO.SO_2.OM$ wherein R is a long chain alkyl radical containing 8 to 18 carbon atoms and wherein M is an alkali metal, about 1 to 3 parts by weight of (*b*) the water-soluble condensation product of a mono-higher fatty acid ester of hexitol anhydride with 10 to 30 moles of alkylene oxide of the empirical formula $C_nH_{2n}O$ wherein n is a whole number from 2 to 3 per mole of ester, and 2 to 6 parts by weight of (*c*) water.

3,095,354

INHALATION ANESTHETIC: 2-BROMO-1,1,2-TRIFLUROETHYL METHYL ETHER

Eric R. Larson, Midland, and Max R. Brandwerth, Bay City, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed July 28, 1960, Ser. No. 45,810
8 Claims. (Cl. 167—52)

1. The process which comprises administering 2-bromo-1,1,2-trifluoroethyl methyl ether as a general inhalation anesthetic.

3,095,355

AEROSOL COMPOSITION

Bernard Abramson, White Plains, Norman L. Greif, Howard Beach, and John E. Silson, Pleasantville, N.Y., assignors to Revlon, Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Oct. 12, 1961, Ser. No. 147,402
8 Claims. (Cl. 167—54)

1. A composition adaptable to use in aerosol form for inhalation therapy and comprising finely divided particles of a water-soluble acid addition salt of a member of the group consisting of epinephrine and isoproterenol dispersed in a non-toxic liquid propellant, said particles being coated with a dispersing agent selected from the group consisting of oleyl alcohol and mixtures of oleyl alcohol with other fatty alcohols having from 12 to 22 carbon atoms.

3,095,356

DENTIFRICE COMPRISING INSOLUBLE SODIUM METAPHOSPHATE AND A CADMIUM, TIN, ZINC, MANGANESE OR IRON COMPOUND TO INHIBIT CALCIUM ION SEQUESTERING

Henry V. Moss, Clayton, Mo., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Feb. 20, 1956, Ser. No. 566,353
11 Claims. (Cl. 167—93)

1. A dentifrice polishing composition comprising finely divided insoluble sodium metaphosphate normally containing calcium ion sequestering soluble phosphates and a sufficient amount of a compound selected from the group consisting of cadmium halides, cadmium phosphates, cadmium sulphates, cadmium oxides, zinc halides, zinc phosphates, zinc sulphates, zinc oxides, manganese halides, manganese phosphates, manganese sulphates, manganese oxides, iron halides, iron phosphates, iron sulphates, iron oxides, tin oxides, tin sulphates, tin phosphates and tin halides other than fluorides, to inhibit said calcium ion sequestering effect.

3,095,357

BETA-CAROTENE PRODUCTION

Roland C. Fulde, Downers Grove, Ill., assignor to Swift & Company, Chicago, Ill., a corporation of Illinois

No Drawing. Filed Feb. 8, 1960, Ser. No. 7,083
9 Claims. (Cl. 195—28)

1. A process for producing carotenoids which comprises dispersing a culture of carotenoid-producing microorganisms of the family Choanephoraceae on particulate surface bearing material, said material containing nutrients assimilable by said micro-organisms and characterized by greater than about 4% of fatty material selected from the group consisting of animal fats, vegetable oils, and fatty acids thereof, and incubating the inoculated material under surface aerobic conditions conducive to active propagation of the micro-organisms.

3,095,358

LIQUID CHILL PROOFING COMPOSITION

Heinrich Meister, Staten Island, N.Y., assignor to Baxter Laboratories, Inc.

No Drawing. Filed Mar. 15, 1961, Ser. No. 95,788
5 Claims. (Cl. 195—63)

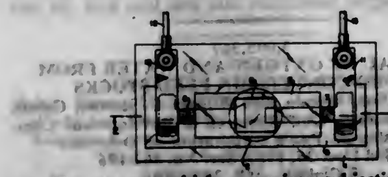
1. A composition for the chillproofing of malt beverages comprising a liquid mixture of papain and sorbitol, said mixture being stable at room temperatures for extended periods.

3,095,359

HIGH-FREQUENCY TREATMENT OF MATTER

John H. Heller, Wilton, Conn., assignor to New England Institute for Medical Research, Ridgefield, Conn., a corporation of Connecticut

Filed Nov. 16, 1959, Ser. No. 853,188
4 Claims. (Cl. 195—78)



1. The process which comprises subjecting a living organism to a pulsed high-frequency electromagnetic E field at a frequency of from 1 to 250 mc., at a voltage of from 0 to 100 kv., with pulse width of from 1 μsecond to 10 milliseconds, and pulsed at from 30 to 10K pulses per second, said organism being in a carrier medium having extremely high dielectric properties through which substantially no current flows to minimize the passage of current through the organism.

3,095,360

GRISEOFULVIN PRODUCTION

Alan Rhodes, Bracknell, and Moira Patricia McGonagle, Slough, England, assignors to Glaxo Group Limited, Greenford, England, a British company

No Drawing. Filed Apr. 17, 1961, Ser. No. 103,213
Claims priority, application Great Britain Apr. 22, 1960
22 Claims. (Cl. 195—81)

1. A process for the production of griseofulvin under submerged aerobic conditions which includes the step of culturing a griseofulvin producing organism in a culture medium therefor, said medium including a source of carbon and energy, a primary source of assimilable nitrogen, and a further substance increasing the rate of accretion of griseofulvin in the culture, said substance being a member selected from the group consisting of a compound containing a labile methyl group attached to an atom selected from the group consisting of sulphur and nitrogen, a compound converted to said first-named compound in the culture, formaldehyde-bisulphite complex, glyoxylic acid, xanthine, L-histidine, folic acid, dihydrofolic acid and tetrahydrofolic acid.

3,095,361

METHOD OF MANUFACTURING TINPLATE

Morris D. Stone, Pittsburgh, Pa., assignor to United Engineering and Foundry Company, Pittsburgh, Pa., a corporation of Pennsylvania

Filed Feb. 27, 1961, Ser. No. 91,708
3 Claims. (Cl. 204—28)

1. In a method of producing tinplate characterized by a high degree of hardness suitable for use in the manufacture of containers, the steps including:
cold reducing the strip to a thickness of at least .006 inch and thicker;
annealing such strip;
cold reducing the annealed strip by an amount of at least 30 percent and greater to impart to the strip a hardness of at least T–5,
and electrolytically tinning the strip in its thin hard condition.

3,095,362

ZINC PLATING COMPOSITION AND PROCESS

John B. Winters, Bay Village, Ohio, assignor to Incar, Inc., Cleveland, Ohio, a corporation of Ohio

No Drawing. Filed Nov. 21, 1960, Ser. No. 70,436
9 Claims. (Cl. 204—55)

1. In the process of electroplating zinc from an aqueous acid solution of a zinc salt, the step of adding to said solution between about 1.0 and about 10 grams per liter of para vinyl benzene sulfonic acid.

3,095,363

CALCINATION OF ZINC SULFIDE CONCENTRATES

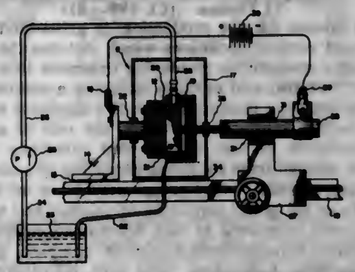
Kurt F. Ruckwardt, Bernard T. McDonald, and John F. Mahoney, Anaconda, Mont., assignors to The Anaconda Company, a corporation of Montana

No Drawing. Filed Feb. 17, 1960, Ser. No. 9,177
2 Claims. (Cl. 204—119)

1. In a process in which a zinc sulfide concentrate is roasted in an oxidizing atmosphere to convert the zinc sulfide to zinc oxide, the improvement which comprises incorporating from about 0.5 to about 1 percent by

weight of zinc sulfate in the zinc sulfide concentrate prior to roasting to substantially improve oxidation of the sulfur content of the concentrate and to substantially decrease the amount of residual sulfide-sulfur remaining in the calcine product.

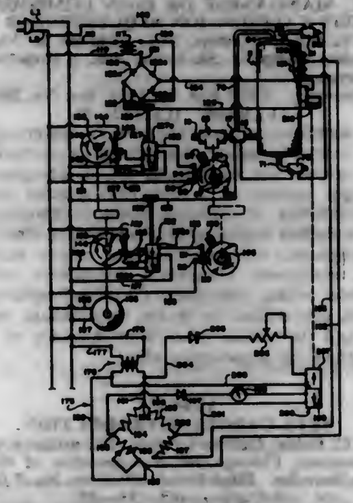
3,095,364
MATERIAL REMOVAL
Charles L. Faust and John A. Gurklis, Columbus, Ohio, assignors, by mesne assignments, to Steel Improvement & Forge Company, Cleveland, Ohio, a corporation of Ohio
Filed Nov. 27, 1959, Ser. No. 855,873
9 Claims. (Cl. 204—143)



3. A method of electrolytically removing material from an electrically conductive mass to provide the mass with a surface having a predetermined three dimensional contour and shape substantially corresponding to the contour, shape and area of the imperforate face portion of an electrically conductive tool, comprising: supplying a positive voltage to said mass; supplying a negative voltage to such an electrically conductive tool; placing said tool in close proximity to said mass; positively advancing said tool relative to said mass at a rate substantially equal to the rate at which material is removed from said mass and maintaining a gap of about 0.002 to 0.03 inch between the closest portions of said tool and said mass without contact between said face portion and said mass; supplying an electrically conductive electrolyte throughout said gap between said closest portions and flowing said electrolyte in a closed passage under pressure through said gap from an inlet disposed beyond the periphery of said face portion on one side thereof to an outlet disposed beyond the pehiphery of said face portion on another side thereof only in directions generally parallel to the surface of the face portion of said tool and transverse to the direction of movement of said tool at a speed relative to the adadjacent surfaces of said tool and said mass of about 20 to 250 feet per second, and supplying a voltage sufficient to provide a current density of at least about 5 amperes per square inch through said electrolyte in each said gap between said closest portions of said tool and said mass.

3,095,365
WATER CONDITIONING APPARATUS
William G. Green, St. Petersburg, Fla., assignor, by mesne assignments, to Aquatron Engineering Corp., St. Petersburg, Fla., a corporation of Florida
Filed Oct. 4, 1961, Ser. No. 142,851
5 Claims. (Cl. 204—229)

1. In a water treating system including apparatus having electrodes supplied with current by an electrode power supply circuit and provided with solenoid valves for reversing the flow of water through the apparatus, a first latching relay having first and second operative positions and connected in said power supply circuit for respectively energizing and deenergizing said electrodes, a second latching relay having first and second operative positions and connected for respectively energizing and deenergizing said solenoid valves, rotary means disposed in the water supply line and adapted to provide rotation of a shaft at a rate proportional to the flow of water through the apparatus, a first switch means actuated by rotation of said shaft corresponding to a first predetermined amount of water through said apparatus, said first switch means connected to operate said first latching relay to cause energization of said electrodes, a sec-



ond switch means actuated by rotation of said shaft corresponding to a second predetermined amount of water through said apparatus so as to operate said second latching relay to reverse the flow of water through the apparatus, and timer actuated switch means for periodically actuating said relays to their first positions so as to respectively deenergize said electrodes and said solenoid valves until said predetermined quantities of water again flow through said apparatus.

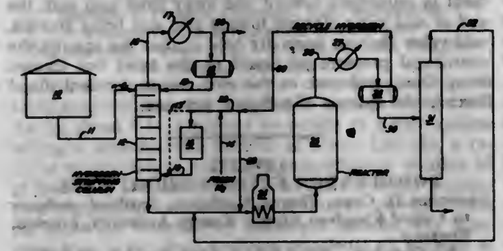
3,095,366
INSULATING OIL
Richard D. Schleman, Avon Lake, Ohio, assignor to The Standard Oil Company, Cleveland, Ohio, a corporation of Ohio
No Drawing. Filed Mar. 3, 1960, Ser. No. 12,517
1 Claim. (Cl. 208—14)

An insulating oil having a pour point below —50° F. and excellent oxidation stability consisting essentially of at least 40% by volume of a solvent refined and de-waxed catalytic cracker decanted oil boiling within the range of about 500° F. to about 800° F. and having a gravity (° API) within the range of 35–40, a viscosity @ 100° F. (SSU) within the range of 30–80, a minimum flash point of 275° F. and a pour point above 0° F. and the remainder, but not less than 25 vol. percent of the insulating oil, being a naphthenic oil distillate derived from a Coastal crude oil, said naphthenic oil having a pour point below —50° F.

3,095,367
REMOVAL OF OXYGEN AND WATER FROM HYDRO-CONVERSION FEED STOCKS
Robert E. Kline, Verona, and William C. Starnes, Cabot, Pa., assignors to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware
Filed Dec. 28, 1959, Ser. No. 862,196
5 Claims. (Cl. 208—89)

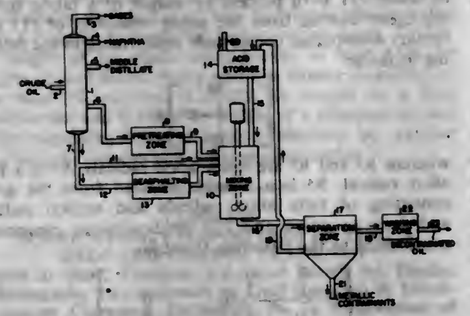
1. The dehydrocyclization process which comprises stripping a charge stock consisting only of a saturated

aliphatic hydrocarbon fraction of the C_6 to C_{10} range in the liquid phase with a stream of dry hydrogen at a pressure below 30 pounds per square inch gauge and at ambient temperature below about 90° F., in a gas to liquid ratio sufficient to reduce the oxygen content of the hydrocarbon fraction to less than 15 milligrams per liter of hydrocarbon, thereafter maintaining the stripped frac-



tion out of contact with oxygenic fluids and contacting the stripped hydrocarbon fraction with a dehydrocyclization catalyst comprising an oxide of a group VI–A metal on a non-acidic support in the presence of hydrogen and at dehydrocyclization reaction conditions, including a partial pressure of hydrogen less than 150 pounds per square inch gauge, and recovering a product enriched in aromatics.

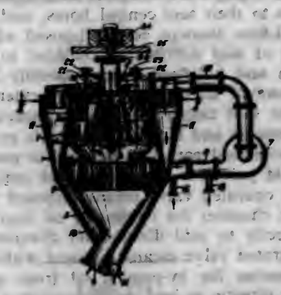
3,095,368
PROCESS FOR REMOVING METALLIC CONTAMINANTS FROM OILS
Herman Bieber, Rahway, Harry M. Hartzband, Westfield, and Walter M. Beech, Rumson, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware
Filed July 31, 1957, Ser. No. 675,421
4 Claims. (Cl. 208—252)



1. A process for selectively removing iron, nickel and vanadium porphyrins from an asphaltic petroleum oil boiling above about 950° F. which comprises deasphalting said oil; contacting said deasphalted oil with aqueous hydrochloric acid having a concentration between about 3% and about 37% to coagulate metallic porphyrins present in said oil; and thereafter separating said oil, said acid and said coagulated porphyrins.

3,095,369
AIR-CIRCULATION CLASSIFIER
Heinz Jäger, Bochum-Riemke, Germany, assignor to Westfalia Dinnendahl Groppel Aktiengesellschaft, Bochum, Germany, a corporation of Germany
Filed June 14, 1961, Ser. No. 117,067
6 Claims. (Cl. 209—139)

1. A classifier of the air-circulation type, comprising a housing defining in its upper portion a grading chamber having a height less than the overall height of said housing, a rotatable whirling plate located in the lower portion of said housing, a supply duct and a generally tubular guide structure located within said housing and communicating with said chamber above said plate for supplying the material to be classified, said housing having a discharge opening at its bottom for discharging separated coarse components of the material, external air



circulation means comprising an air inlet duct communicating with the bottom portion of said housing to pass an ascending air flow through said chamber, said circulation means having a plurality of suction ducts tangentially joined with said housing at the top portion of said chamber and distributed over its periphery for causing the ascending air flow to travel on helical paths in said chamber, and dust separtaor means with which said suction conduits are tangentially joined.

3,095,370
FILTER
Alfred W. Krogman, 72—74 Oceanport Ave., Long Branch, N.J.
Filed Jan. 21, 1960, Ser. No. 3,852
5 Claims. (Cl. 210—133)



1. A filter for removing sediment from oil delivered thereto under pressure from a sump, comprising in combination, a base member having a generally hollow interior forming a distribution chamber and including an inlet opening and an outlet opening adapted to be connected to an oil lubricated device, a filter casing connected to said base, a vertically disposed inlet conduit passing through said distribution chamber and including an enlarged end portion having a valve seat therein for

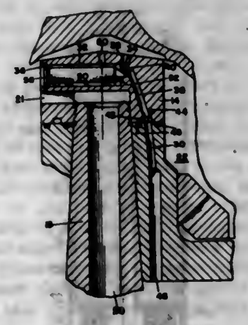
delivering oil to said casing from the sump, an outlet conduit extending through said distribution chamber for delivering oil from said casing to the sump, a full-flow element and a part-flow element of cylindrical form, each having a central bore and being axially aligned within said casing, each of said elements having an outer periphery spaced from said casing to permit the flow of inlet oil into said casing and therefrom radially through said filter elements to their said central bores, said central bore of said full-flow element being disposed adjacent the inlet opening of said distribution chamber to permit flow of oil from said full flow element directly to said distribution chamber, an imperforate tube extending from said base into said casing through the central bores of said filter elements and having a perforate portion communicating with said part-flow element to permit flow of oil from said part-flow element to said outlet conduit, first pressure operated valve means disposed within said distribution chamber for by-passing oil from said inlet conduit directly to said distribution chamber, second pressure operated valve means disposed within said distribution chamber for by-passing oil from said distribution chamber directly to said outlet conduit, a retaining member disposed within said filter casing partially closing the enlarged end portion of said vertically disposed inlet conduit and defining a confined chamber therein, and an unbiased ball disposed within said confined chamber and moveable therein in response to the flow of oil through said inlet conduit, said ball engaging said valve seat to prevent oil from flowing outwardly of said filter casing upon a reduction in the pressure of the oil flowing through said inlet conduit.

3,095,371

CENTRIFUGE HAVING GAS VENT

Harold C. Fitzsimmons, West Chester, Pa., assignor to The Sharples Corporation, a corporation of Delaware

Filed June 16, 1961, Ser. No. 117,578
3 Claims. (Cl. 233—45)



1. A centrifuge bowl divided internally by a partition segregating a lower distributing compartment from an upper primary separating zone, means for feeding feed mixture into the distributing compartment, said partition having ports spaced below the top of the compartment through which feed passes into the primary separating zone, the bowl having a central hub with an axial opening adapted to receive a drive spindle, said hub having a vent opening in its upper end and a vent passage from the undersurface of the bowl to the vent opening, a hub cap removably secured against and over the hub and having a valve chamber with a valve seat opening at one end and a passage extending between the vent opening and the valve seat opening, the valve chamber being disposed in a direction transverse to the axis of the bowl and having a seat surrounding the valve seat opening, the opposite end of said valve chamber from the seat mounting stop means and being open to the inside of the distributing compartment above the uppermost of the ports, a rigid elongated cylindrical valve element disposed for reciprocation in said valve chamber and having a plurality of outwardly directed fins engaging the walls of said valve chamber and serving to guide said valve element in movement toward and away from said seat, the end of said valve element toward said seat being pointed, said valve element normally held against the seat by the centrifugal pressure of liquid in the bowl but thrown away from said seat to the stop means by centrifugal force in the absence of sufficient pressure.

3,095,372

POWDERS FOR EXTINGUISHING FIRES

Lawrence H. Cope, Thurso, Caithness, Scotland, assignor to United Kingdom Atomic Energy Authority, London, England

No Drawing. Filed July 5, 1960, Ser. No. 40,530
Claims priority, application Great Britain July 6, 1959
9 Claims. (Cl. 252—2)

2. A powder composition for extinguishing fires of burning metals consisting essentially of prefused inorganic salts having a melting point of less than 590° C., said salts being potassium chloride in the range of 20%–40%, barium chloride in the range of 25%–55% and the remainder consisting of one of the salts of the group consisting of sodium chloride and lithium fluoride.

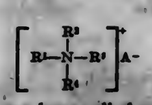
3,095,373

FABRIC SOFTENERS

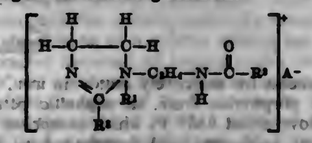
Rodney A. Bloomfield, Wyandotte, Mich., assignor to Wyandotte Chemicals Corporation, Wyandotte, Mich., a corporation of Michigan

No Drawing. Filed Jan. 30, 1959, Ser. No. 790,855
11 Claims. (Cl. 252—8.8)

1. A fabric softening composition consisting essentially of about (I) 1–70 percent by weight of a fabric softening agent selected from the group consisting of (1) quaternary ammonium compounds conforming to the following formula:



wherein R^1 and R^2 are lower alkyl radicals, R^3 is a fatty alkyl radical, R^4 is a member selected from the group consisting of fatty alkyl radicals and aralkyl radicals and A is an anion and (2) imidazolinium compounds conforming to the following formula:



wherein R^1 is a lower alkyl radical, R^2 is a member selected from the group consisting of lower alkyl and hydrogen radicals and R^3 is a fatty alkyl radical and A is an anion, and (II) at least about 30% by weight of a finely divided, highly porous synthetic calcium silicate.

3,095,374

LUBRICATING COMPOSITION

Richard E. Bass, Philadelphia, and Earl R. Fisher, Glenolden, Pa., assignors to Gulf Oil Corporation, Pittsburgh, Pa., a corporation of Pennsylvania

No Drawing. Filed Apr. 25, 1957, Ser. No. 655,003
4 Claims. (Cl. 252—18)

1. A stable liquid lubricating composition consisting essentially of a uniform blend of a mineral lubricating oil containing from about 0.1% to 10% by weight magnesium carbonate and from 0.25% to 6% by weight of a magnesium stearate.

3,095,375

EXTREME PRESSURE LUBRICANTS CONTAINING HIGHLY OXIDIZED WAXES

Herbert J. Pisanó, Jefferson, Tex., assignor to Texaco Inc., a corporation of Delaware

No Drawing. Filed June 24, 1958, Ser. No. 744,293
14 Claims. (Cl. 252—28)

1. A lubricating composition comprising a mineral lubricating oil in major proportion having incorporated therein about 0.5–15 percent by weight of a wax oxidate having a neutralization number of about 150–550, a ratio of neutralization number to saponification number of at least 0.5, and comprising in at least a major proportion compounds containing more than 3 carbon atoms per molecule, obtained by reacting a paraffin wax separated from a paraffinic distillate petroleum oil with air at a temperature in the range of 200° F.–400° F., under a pressure of about 30–500 pounds per square inch gauge, and with an air feed rate of 10–60 cubic feet of air per hour per pound of wax charge until an oxidized product having a neutralization number in about the range 200–550 is obtained, said oxidate being present in the lubricating composition in sufficient amount to impart improved extreme pressure properties thereto.

3,095,376

GREASE COMPOSITION AND PROCESS FOR ITS PREPARATION

Harvey E. Hook, Danville, and Harold A. Woods, Martinez, Calif., assignors to Shell Oil Company, a corporation of Delaware

No Drawing. Filed Nov. 16, 1959, Ser. No. 852,979
6 Claims. (Cl. 252—28)

1. A grease composition comprising a major proportion of a lubricating oil, a grease-forming proportion of a colloidally dispersed clay, said clay being waterproofed with a cationic hydrophobic surface active agent, 2–10% by weight of an alkali metal borate, at least 65% by weight of said borate being particles having diameters of less than 50 microns, 0.25–2% by weight of a lead naphthenate and 0.5–5% by weight of a phosphorus- and sulfur-containing reaction product obtained by reaction of a bicyclic terpene and a phosphorus sulfide.

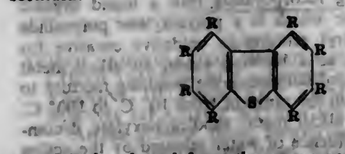
3,095,377

LUBRICATING COMPOSITION HAVING A REDUCED COKING TENDENCY

Albert J. Hart, Camden, S.C., and Alfred M. Henke, Springdale, Pa., assignors to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware

No Drawing. Filed Oct. 10, 1960, Ser. No. 61,385
3 Claims. (Cl. 252—45)

1. A lubricating composition comprising a major amount of a hydrogenated mineral lubricating oil and a small amount, sufficient to improve the coking tendencies of the oil, of a compound having the following structural formula:



where R is selected from the group consisting of hydrogen, alkyl, aryl, aralkyl, alkaryl and cycloalkyl radicals each one of which contains not more than 14 carbon atoms.

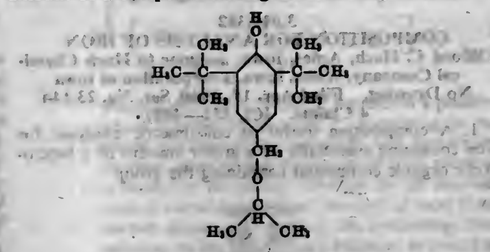
3,095,378

NOVEL ANTI-OXIDANT ADDITIVE AND OXIDATION RESISTANT LUBRICANT COMPOSITION

Harold J. Watson, Danville, Va., assignor to Texaco Inc., a corporation of Delaware

No Drawing. Filed June 18, 1958, Ser. No. 742,760
2 Claims. (Cl. 252—49.6)

1. A mineral lubricating oil containing an anti-oxidant amount of a compound having the following formula:



3,095,379

METAL CLEANING COMPOSITIONS

Hyman Schwartz, 1150 S. Beverly Drive, Los Angeles 35, Calif.

No Drawing. Filed July 26, 1960, Ser. No. 45,284
4 Claims. (Cl. 252—101)

1. A metal cleaning composition consisting essentially of a dilute aqueous solution of a water soluble acid and at least 1/20% of the chemical product resulting from the reaction of citric acid and a quantity of monethanolamine within the range of proportions of equimolar to twice equimolar at a temperature maintained within the range 150° C. to 180° C. until evolution of gas ceases.

3,095,380

COMPOSITION FOR REMOVAL OF HEAT SCALE AND CARBON DEPOSITS

Benjamin Arden, Los Angeles, Calif., assignor, by mesne assignments, to Purex Corporation, Ltd., a corporation of California

No Drawing. Filed July 14, 1958, Ser. No. 748,183
4 Claims. (Cl. 252—152)

1. A composition of matter which when present in a water solution in amounts sufficient to give a free alkali content of about 4% by weight of the solution is suitable for the removal of heat scale and carbon deposits, said composition of matter consisting essentially of an alkali metal hydroxide and a polyalkanolpolyamine having a boiling point in excess of 400° F., said polyalkanolpolyamine being present in the composition in amounts sufficient to give in said solution from about .2 to about 30% of polyalkanolpolyamine by weight of said solution, said polyalkanolpolyamine being dispersible and stable in aqueous alkaline solution at 200°–300° F.

3,095,381

CLEANING COMPOSITIONS

John M. Tinnon, Mount Kisco, N.Y., and Morton W. Leeds, Murray Hill, N.J., assignors to Air Reduction Company, Incorporated, New York, N.Y., a corporation of New York

No Drawing. Filed Aug. 28, 1959, Ser. No. 836,606
5 Claims. (Cl. 252—161)

1. A cleaning composition consisting essentially of: about 0.1 percent to about 2.0 percent by volume of 3,5-dimethyl-1-hexyn-3-ol, about 0.02 percent to about 0.05 percent by volume of a non-soap synthetic organic surface active agent, said non-soap synthetic organic surface active agent being a nonvolatile detergent, and water comprising the balance of said composition.

5. A cleaning composition consisting essentially of: about 0.48 percent by weight of 3,5-dimethyl-1-hexyn-3-ol,

about 0.02 percent by weight of a non-soap synthetic organic surface active agent selected from the group consisting of, a nonvolatile detergent alkyl phenyl ether of polyethylene glycol, a nonvolatile detergent alkyl aryl sodium sulfonate, and a nonvolatile detergent sodium salt of condensed aryl sulfonic acid; and water comprising the balance of said composition.

3,095,382

COMPOSITION FOR ANALYSIS OF IRON

Clifford C. Hach, Ames, Iowa, assignor to Hach Chemical Company, Ames, Iowa, a corporation of Iowa

No Drawing. Filed Apr. 19, 1960, Ser. No. 23,144
4 Claims. (Cl. 252—408)

1. A composition useful in colorimetric analyses for iron consisting essentially of a minor amount of a heterocyclic organic compound containing the group



which is capable of reacting with ferrous ion to yield a color change from about 15 to about 85% by weight of sodium hydrosulfite and from about 15 to about 85% of compound selected from the group consisting of sodium bisulfite and sodium metabisulfite, the combined amount of said sodium hydrosulfite and of said bisulfite in said composition being at least about 90% of the total composition.

3,095,383

ETHYLENE POLYMERIZATION CATALYST PREPARED BY GRINDING TITANIUM AND IODINE

Gaetano F. D'Alelio, South Bend, Ind., assignor, by mesne assignments, to W. R. Grace & Co., New York, N.Y., a corporation of Connecticut

No Drawing. Filed Nov. 6, 1957, Ser. No. 694,729
4 Claims. (Cl. 252—441)

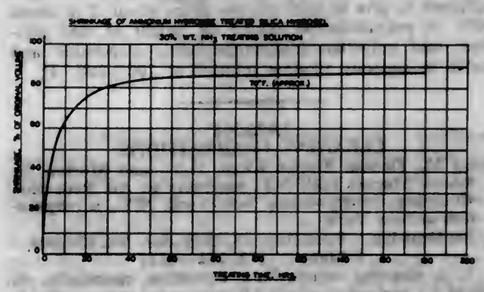
1. The method of preparing a catalyst that includes the step of grinding under inert conditions a mixture consisting essentially of Ti and iodine in a weight ratio of 1 Ti:100 I_2 to 100 Ti:1 I_2.

3,095,384

HYDROGEL TREATMENT

Edwin E. Jenkins, Elmer, N.J., and Albert B. Schwartz, Philadelphia, Pa., assignors to Socony Mobil Oil Company, Inc., a corporation of New York

Filed Sept. 9, 1960, Ser. No. 55,012
7 Claims. (Cl. 252—451)



1. A method of partially dehydrating and reducing the volume of a siliceous hydrogel comprising treating said hydrogel, after its formation and prior to drying, with an aqueous solution of ammonium hydroxide containing at least 10% ammonia on a weight basis for a peirod of at least one half an hour at a temperature of from about 30° F. up to the boiling point of the ammonium hydroxide solution to thereby shrink the hydrogel.

3,095,385

POLYETHERS CONTAINING N-METHYLOL GROUPS

Kuno Wagner, Leverkusen, Germany, assignor, by mesne assignments, of one-half to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany, and one-half to Mobay Chemical Company, Pittsburgh, Pa., a corporation of Delaware

No Drawing. Filed Nov. 26, 1957, Ser. No. 698,939
Claims priority, application Germany Nov. 30, 1956
4 Claims. (Cl. 260—2)

1. A method of making a water soluble polyether having a relatively large number of N-methylol groups and a molecular weight of at least about 700 without undesirable cross-linking which comprises further reacting a water soluble polyether having about 2 to about 8 percent by weight of methylol groups and terminal hydroxyl groups which was prepared by a process which comprises reacting a member selected from the group consisting of dimethylol, trimethylol and tetramethylol substituted ureas and thioureas with a different polyhydric alcohol, with a monomeric poly-N-methylol compound at a pH of at least about 6.2 and a temperature of at least about 90° C. in a member selected from the group consisting of water and alcohol solvents for the reaction mixture until a polyether having more N-methylol groups than the initial water-soluble polyether is obtained.

3,095,386

POLYURETHANE POLYMERS CONTAINING TALL OIL

George A. Hudson, New Martinsville, W. Va., assignor to Mobay Chemical Company, Pittsburgh, Pa., a corporation of Delaware

No Drawing. Filed May 31, 1960, Ser. No. 32,586
22 Claims. (Cl. 260—2.5)

1. A solidified polyurethane polymer prepared from a reaction mixture which comprises at least about 10 percent by weight, based on the weight of the reaction mixture, of tall oil containing at least about 10 percent rosin acids, an organic polyisocyanate and an organic compound containing at least two active hydrogen containing groups as determined by the Zerewitinoff method, said active hydrogen containing groups being reactive with an —NCO group.

3,095,387

LOW-TEMPERATURE EXPANSION OF LIQUID ORGANIC POLYSULFIDE POLYMER WITH SODIUM AZODICARBOXYLATE

Martin J. Kleinfeld, Naugatuck, and Byron A. Hunter, Woodbridge, Conn., assignors to United States Rubber Company, New York, N.Y., a corporation of New Jersey

No Drawing. Filed Nov. 14, 1960, Ser. No. 68,689
7 Claims. (Cl. 260—2.5)

1. A method of making an expanded, cured rubber product comprising incorporating into a liquid organic polysulfide polymer which is a polyalkylene polysulfide containing sulfhydryl groups, an oxidative curative for said polymer and, as a blowing agent, an alkali metal azodicarboxylate, and subjecting the resulting mixture to a temperature within the range of from 10° C. to 100° C. whereby the said alkali metal azodicarboxylate decomposes under the influence of water released by the action of the said curative on the said polymer to produce gaseous products capable of expanding said mixture, and the composition simultaneously cures to produce an expanded, cured rubber product.

3,095,388

DISPERSION POLYMERISATION OF AN ACRYLATE IN THE PRESENCE OF A RUBBER AND A NON-POLAR ORGANIC SOLVENT AND PRODUCT OBTAINED

Desmond Wilfrid John Osmond, Iver Heath, and Horace Henry Thompson, Slough, England, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

No Drawing. Filed Jan. 29, 1962, Ser. No. 169,609
Claims priority, application Great Britain May 27, 1957
22 Claims. (Cl. 260—4)

1. A process for producing a stable dispersion of a solid polymer in an inert relatively non-polar organic liquid in which the polymer is insoluble, which comprises polymerising at least one monomer selected from the group consisting of acrylic acid and methacrylic acid, lower esters, amides and nitriles thereof in said organic liquid and in the presence of a catalyst for the polymerisation of said monomer and rubber which is soluble in said organic liquid to form said stable dispersion of solid polymer in organic liquid.

11. A process for producing a stable dispersion of a solid polymer in an inert relatively non-polar organic liquid in which the polymer is insoluble, which comprises polymerising at least one monomer selected from the group consisting of acrylic acid and methacrylic acid, lower esters, amides and nitriles thereof in said organic liquid and in the presence of a catalyst for the polymerisation of said monomer and a member of the group consisting of organic block and graft copolymers of which one constituent is rubber which is soluble in said organic liquid and another constituent is insoluable in the organic liquid and compatible with the polymer being formed such that, if a film is cast from a solution containing said polymer and said compatible constituent in the same proportions as will be present in the dispersed particles, the film is clear.

3,095,389

NATURAL AND SYNTHETIC ALCOHOL SOLUBLE RESIN WITH OTHER SYNTHETIC COPOLYMERS FOR COATINGS

Albert C. Mueller, Berkeley, and Roy W. H. Tess, Orinda, Calif., assignors to Shell Oil Company, a corporation of Delaware

No Drawing. Filed June 30, 1958, Ser. No. 745,291
12 Claims. (Cl. 260—8)

1. A composition consisting of (1) a coating resin having at least 20% solubility in ethanol and selected from the group consisting of shellac, Manilla gum, cellulose ethers, nitrocellulose, liquid polyamides of dimerized fatty acids and diethylene triamine, zein, polyvinyl acetate, polyvinyl formate and polyvinyl acetals, and mixtures thereof, and (2) a resinous polyol of the group consisting of copolymers of a 2-alkenol containing from 3 to 8 carbon atoms and an alkenyl-substituted aromatic compound of the group consisting of the individual compound styrene, alpha-methylstyrene, p-methoxystyrene, and beta-vinyl naphthalene, and the nuclear chloro- and alkyl-substituted styrenes wherein the alkyl group contains from 1 to 4 carbon atoms, and hydroxy-containing derivatives of the aforedescribed copolymers obtained by reacting the copolymer with an alkylene oxide.

3,095,390

COPOLYMERISATION PRODUCTS OF AMIDES OF COPOLYMERISABLE CARBOXYLIC ACIDS CONTAINING QUATERNARY AMMONIUM GROUPS BOUND TO AMIDE NITROGEN

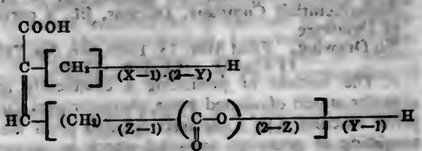
Arthur Maeder, Basel, Switzerland, assignor to Ciba Limited, Basel, Switzerland

No Drawing. Filed Oct. 25, 1954, Ser. No. 464,599
Claims priority, application Switzerland Oct. 30, 1953
5 Claims. (Cl. 260—17)

1. A stable aqueous cationactive dispersion comprising:

(A) in finely divided state a polymerization product which contains copolymerized

(I) an amide of a copolymerizable aliphatic carboxylic acid of the formula



wherein each of X, Y and Z represents a positive whole number of at most 2, containing in the amide portion of the molecule one quaternary nitrogen atom which by one of its four valences is bound to the amide nitrogen by an alkylene radical containing at least two and at most three carbon atoms, and each of the remaining three valences of the quarternary nitrogen is bound to a saturated aliphatic radical, and

(II) at least one other polymerizable compound selected from the group consisting of a diene containing conjugated double bonds and a monoethylenically unsaturated compound, which last-mentioned compound is in a proportion of at most 50% calculated on the weight of total monomers when said compound is acrylonitrile, and

(B) a member selected from the group consisting of

(I) Cationactive dispersing agent selected from the group consisting of

(*a*) a compound of a higher fatty amine with an acid selected from the group consisting of acetic acid, hydrochloric acid and sulphuric acid,

(*b*) salt of diethylaminoethyl ester of a higher fatty acid,

(*c*) oleyl amido ethyl-diethylamine acetate, and

(*d*) a quaternary ammonium compound selected from the group consisting of

(1) cetyl - dimethyl - benzyl - ammonium chloride,

(2) cetyl-trimethyl-ammonium bromide,

(3) para-(trimethylammonium)-benzoic acid cetyl ester methosulphate,

(4) cetyl-pyridinium methosulphate,

(5) octadecyl-trimethyl-ammonium bromide, and

(6) the quaternary ammonium compound from diethyl sulphate and triethanolamine tristearate,

(II) non-ionogenic emulsifying agent selected from the group consisting of

(*a*) polyglycol ether of a fatty acid,

(*b*) polyglycol ether of a fatty amine,

(*c*) polyglycol ether of a fatty alcohol,

(*d*) octylphenol polyglycol ether,

(*e*) polyhydric alcohol partially esterified with a higher fatty acid, and

(III) protective colloid selected from the group consisting of

(*a*) polyvinyl alcohol,

(*b*) partially hydrolyzed polyvinyl ester,

(*c*) starch,

(*d*) dextrin,

(*e*) cellulose ether,

(*f*) polyethylene oxide, and

(*g*) water-soluble polymer which contains groups selected from those consisting of

(1) amino and

(2) carboxylic acid amide.

3,095,391

AMYLACEOUS GRAFT COPOLYMERS AND PROCESS FOR PREPARING SAME

Charles E. Brockway, Reedus R. Estes, and David R. Smith, all of Decatur, Ill., assignors to A. E. Staley Manufacturing Company, Decatur, Ill., a corporation of Delaware

No Drawing. Filed Mar. 13, 1959, Ser. No. 799,108
11 Claims. (Cl. 260—17.4)

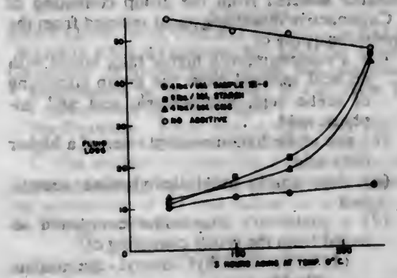
1. The method of producing a chemically modified granular starch of altered paste characteristics that comprises reacting, (1) a material selected from the group consisting of granular, unpasted starch in aqueous suspension and superficially dry, granular unpasted starch containing at least 10% water, and (2) ethylenically unsaturated monomer that polymerizes by addition polymerization, in the presence of a peroxidic free-radical catalyst at a temperature below the gelatinization temperature of said starch, maintaining said material in its granular form throughout the reaction and separating in the physical form of the original starch a product that is filterable from its aqueous suspensions.

3,095,392

WATER-SOLUBLE SULFITED LIGNIN-PHENOLIC-FORMALDEHYDE COMPLEX

Franklin W. Herrick, Shelton, Wash., assignor to Rayonier Incorporated, Shelton, Wash., a corporation of Delaware

Filed Apr. 15, 1959, Ser. No. 806,545
13 Claims. (Cl. 260—17.5)



1. The process of forming a polymeric lignin-phenolic complex which comprises partially condensing a concentrated sulfited lignin in aqueous solution with alkaline polymethylolphenol having a formaldehyde-to-phenol mole ratio of from 2.0 to 3.0 and controlling the reaction by means of the temperature and time of treatment to prevent the viscosity of the complex from rising so high as to form a water-insoluble complex.

3,095,393

WATER-SOLUBLE COATING COMPOSITIONS COMPRISING A WATER-SOLUBLE MELAMINE FORMALDEHYDE RESIN AND A SALT OF AN ACID

Joseph Z. Matt, Chicago, Ill., assignor, by mesne assignments to Reichhold Chemicals, Inc., White Plains, N.Y., a corporation of Delaware

No Drawing. Filed Dec. 29, 1958, Ser. No. 783,116
9 Claims. (Cl. 260—21)

1. An article having a coating formed by producing a salt of an acid, said acid being formed by reacting the hydroxyl groups of one mole of glyceryl triricinoleate with 2 to 3 moles of dibasic acid anhydride selected from the group consisting of maleic anhydride and tetrahydrophthalic anhydride, said anhydride being used in such ratio to hydroxyl that one ester linkage and one carboxyl remain per mole of dibasic anhydride used, said salt being formed by neutralization of said acid with an agent selected from the group consisting of ammonia, trimethylamine, triethylamine and an ethanolamine, thereafter adding a water-soluble melamine-formaldehyde resin, a metallic organic drier, and a pigment, followed by subjecting the resulting composition to dissolution in water, applying the resulting aqueous composition to a surface of an article, and baking at 300° to 350° F. for 20 to 25 minutes.

3,095,394

POLYOLEFIN OXIDES STABILIZED WITH 1,1-DIPHENYL-2-PICRYLHYDRAZINE AND 1,1-DIPHENYL-2-PICRYLHYDRAZYL

Charles W. McGary, Jr., Charleston, W. Va., assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Filed May 3, 1960, Ser. No. 26,413
7 Claims. (Cl. 260—29.2)

1. A composition comprising an olefin oxide polymer selected from the group consisting of (1) poly(ethylene oxide) and (2) copolymers comprised of at least 50 weight percent of ethylene oxide in copolymerized form with up to 50 weight percent of lower olefin oxides of the group consisting of propylene oxide and butylene oxide, said polymer having a reduced viscosity value of at least 1.0 as measured at a concentration of 0.2 gram of said polymer in 100 milliliters of acetonitrile at 30° C., and a stabilizing amount of a compound which is selected from the group consisting of 1,1-diphenyl-2-picrylhydrazine and 1,1-diphenyl-2-picrylhydrazyl.

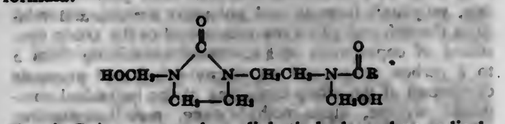
3,095,395

TEXTILE FINISHING COMPOSITION COMPRISING AQUEOUS SOLUTION OF AMINOPLAST AND TEXTILE IMPREGNATED THEREWITH

Henry G. Goodman, Jr., White Plains, N.Y., assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Original application Mar. 11, 1959, Ser. No. 798,579, now Patent No. 3,024,246, dated Mar. 6, 1962. Divided and this application Jan. 27, 1961, Ser. No. 85,177
16 Claims. (Cl. 260—29.4)

1. A finishing composition for use in the treatment of cellulosic fibrous materials which comprises an aqueous solution containing (1) from about 3 percent to about 15 percent by weight of a member selected from the group consisting of aminoplasts and an aminoplast-forming compound reactive with the acylamide defined in (2) below, and (2) from about 0.1 percent to about 5 percent by weight of a N-methylol-N-[2-(3-methylol imidazolidon-2-yl-1)ethyl] acylamide represented by the general formula:



wherein R is a monovalent aliphatic hydrocarbon radical possessing from about 8 to about 22 carbon atoms selected from the group consisting of alkyl and alkenyl.

3,095,396

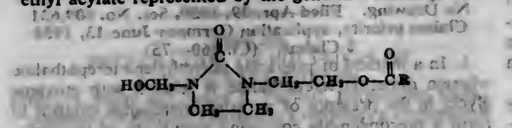
AQUEOUS SOLUTION OF AMINOPLASTS AND CELLULOSIC TEXTILE MATERIAL IMPREGNATED THEREWITH

Alonzo L. Mantz, Tarrytown, N.Y., assignor to Union Carbide Corporation, a corporation of New York

Original application Mar. 11, 1959, Ser. No. 798,578, now Patent No. 3,014,042, dated Dec. 19, 1961. Divided and this application Jan. 27, 1961, Ser. No. 85,178
14 Claims. (Cl. 260—29.4)

1. A finishing composition for use in the treatment of cellulosic fibrous materials which comprises an aqueous solution containing (1) from about 3 percent to about

15 percent by weight of a member selected from the group consisting of aminoplasts and an aminoplast-forming compound reactive with the acylate defined in (2) below, and (2) from about 0.1 percent to about 5 percent by weight of a 2-(3-methylol imidazolidon-2-yl-1) ethyl acylate represented by the general formula



wherein R is a monovalent aliphatic hydrocarbon radical possessing from about 8 to about 22 carbon atoms selected from the group consisting of alkyl and alkenyl.

3,095,397

STABLE POLYBUTADIENE LATEX PAINT CONTAINING ZINC OXIDE AND HAVING ENHANCED FREEZE STABILITY AND WASH RESISTANCE

John H. Musch, Silver Lake, Ohio, assignor to The Firestone Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

No Drawing. Filed Oct. 3, 1957, Ser. No. 687,877
4 Claims. (Cl. 260—29.7)

1. A process of preparing a stable water dispersion paint of increased freeze-stability and increased wash resistance which comprises (1) homopolymerizing 100 parts by weight of water-insoluble 1,3-butadiene in an emulsifier-free system at a temperature between about 20° C. and 150° C. in the presence of between 75 and 300 parts by weight of water and from 1 to 20 parts by weight of a water-soluble salt of persulfuric acid to produce a latex, and (2) admixing said latex with an alkylaryl polyether alcohol having the structural formula

$$RC_6H_4(OCH_2CH_2)_nOH$$

wherein R is an alkyl group having from 6 to 10 carbon atoms and n is an integer from 6 to 30, the ammonium salt of linseed oil fatty acid and a paint pigment system containing from 15 to 35 parts by weight of zinc oxide per 100 parts by weight of 1,3-butadiene homopolymer present to produce a paint.

3,095,398

PROCESS OF INCREASING THE PARTICLE SIZE OF SYNTHETIC RUBBER LATEX

Louis H. Howland, Watertown, and Victor S. Chambers, Naugatuck, Conn., assignors to United States Rubber Company, New York, N.Y., a corporation of New Jersey

No Drawing. Filed Jan. 28, 1960, Ser. No. 5,100
16 Claims. (Cl. 260—29.7)

1. The method which comprises treating a synthetic rubber latex which is an aqueous emulsion polymerizate of synthetic rubber forming monomeric material selected from the group consisting of butadiene-1,3, isoprene, 2,3-dimethyl butadiene-1,3, and piperylene, and mixtures thereof, and mixtures of such butadienes-1,3 with up to 70% by weight of such mixtures of monoethylenic compounds which contain a $CH_2{=}C<$ group and are copolymerizable with butadienes-1,3, and which has been polymerized to a latex of 60% to 95% conversion, in the presence of at least 5% of residual unreacted polymerizable monomeric material based on the weight of the original synthetic rubber forming monomeric material with 0.02 to 2 parts of polyvinyl alcohol per 100 parts by weight of original synthetic rubber forming monomeric material at a temperature from 0° C. to 15° C., said polyvinyl alcohol having a viscosity in 4% aqueous solution at 20° C. from 4 to 70 centipoises, and then removing unreacted monomeric material from the latex.

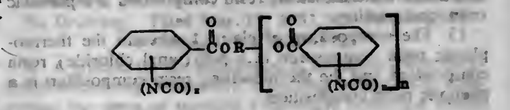
3,095,399

POLYESTERS CONTAINING ISOCYANATE GROUPS

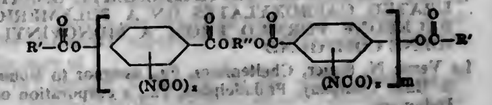
Erwin Müller, Otto Bayer, Hugo Wilms, Franz von Spulak, and Manfred Theis, Leverkusen, Germany, assignors, by mesne assignments, of one-half to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany, and one-half to Mobay Chemical Company, Pittsburgh, Pa., a corporation of Delaware

No Drawing. Filed Feb. 13, 1959, Ser. No. 793,221
6 Claims. (Cl. 260—33.6)

1. A compound selected from the group consisting of

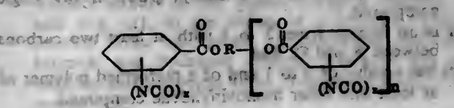


and

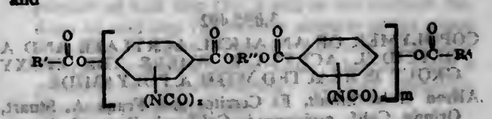


wherein R is an organic radical obtained by removing the —OH groups from an unsubstituted aliphatic polyhydric alcohol of up to 12 carbon atoms, R′ is alkyl of 1 to 12 carbon atoms, R″ is alkylene of up to 12 carbon atoms, n is an integer of from 1 to 4, m is an integer making up a molecular weight for the whole compound of up to about 3000 and x is 1 to 2.

5. An organic solvent solution of an adhesive amount of a compound selected from the group consisting of



and



wherein R is an organic radical obtained by removing the —OH groups from an unsubstituted aliphatic polyhydric alcohol of up to 12 carbon atoms, R′ is alkyl of 1 to 12 carbon atoms, R″ is alkylene of up to 12 carbon atoms, n is an integer of from 1 to 4, m is an integer making up a molecular weight for the whole compound of up to about 3000 and x is 1 to 2, said organic solvent being selected from the group consisting of hydrocarbons and chlorinated hydrocarbons.

3,095,400

PLASTIC COMPOSITIONS HAVING A SPECKLED APPEARANCE

Carlo F. Martino, Somerville, and John C. Miano, Edison (Fords), N.J., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Nov. 27, 1957, Ser. No. 699,183
13 Claims. (Cl. 260—43)

1. A composition of matter decoratively speckled with discrete, well-defined centers of color comprising 100 parts

by weight of a normally solid synthetic thermoplastic resin composition and 0.05 to 5.0 parts by weight of a different color particulate, heat-hardened thermosetting resin composition having a particle size of from 10 to 200 U.S. mesh, said thermosetting resin composition being substantially insoluble in said thermoplastic resin composition.

10. The composition of claim 1 wherein the thermoplastic resin composition is a styrene resin composition and the thermosetting resin composition is a phenolic resin composition.

12. The composition of claim 1 wherein the thermoplastic resin composition is a polyethylene resin composition and the thermosetting resin composition is a phenolic resin composition.

13. The composition of claim 1 wherein the thermoplastic resin composition is a poly(vinyl chloride) resin composition and the thermosetting resin composition is a phenolic resin composition.

3,095,401

GRAFT COPOLYMER VINYLTHIOALKYL UNSATURATED CARBOXYLATES ON A POLYMERIC BACKBONE FORMED FROM A MONOVINYLIDENE COMPOUND

La Verne N. Bauer, Cheltenham, Pa., assignor to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware

No Drawing. Filed July 20, 1959, Ser. No. 828,053
2 Claims. (Cl. 260—45.5)

1. Graft copolymers of

$$CH_2{=}CHSC_nH_{2n}(OC_nH_{2n})_mOCOCR{=}CHR^\circ$$

wherein

R and R° are members of the class consisting of hydrogen and the methyl group with the proviso that only one of R and R° is a methyl group in any single compound,

n is an integer from 2 to 3 with at least two carbons between S and O, and

m has a value of 0 to 1 and of a preformed polymer of at least one other monovinylidene compound.

3,095,402

COPOLYMER OF AN ALKYL ACRYLATE AND A GLYCIDYL ACRYLATE WHERE THE EPOXY GROUP IS REACTED WITH A POLYAMIDE

Alfred Goldschmidt, El Cerrito, and Frank A. Stuart, Orinda, Calif., assignors to California Research Corporation, San Francisco, Calif., a corporation of Delaware

No Drawing. Filed Mar. 31, 1961, Ser. No. 99,678
3 Claims. (Cl. 260—45.5)

1. An oil-soluble detergent copolymer of (A) an alkyl ester selected from the group consisting of alkyl acrylates and alkyl methacrylates containing 8 to 24 carbon atoms in the alkyl group and (B) an ester of an unsaturated acid selected from the group consisting of acrylic acid and methacrylic acid and glycidol, the epoxy ring of the glycidyl portion of the polymer being reacted with a linear polyamide selected from the group consisting of the polyamide of hexamethylene diamine and adipic acid and the caprolactam polymer obtained by reacting caprolactam and alkyl amine in which the alkyl group contains from 1 to 18 carbon atoms, said linear polyamide containing from about 5 to about 30 recurring amide units, said copolymer having from about 5 to about 40 units of (A) for each unit of (B), a total molecular weight of at least about 2000 and a solubility in mineral lubricating oil of at least about 0.5% by weight.

3,095,403

PROCESS FOR THE PRODUCTION OF POLYETHYLENE TEREPHTHALATE

Erhard Siggel, Laudenbach (Main), and Lothar Riehl, Obernburg (Main), Germany, assignors to Vereinigte Glanzstoff-Fabriken AG, Wuppertal-Elberfeld, Germany

No Drawing. Filed Apr. 29, 1959, Ser. No. 809,621
Claims priority, application Germany June 13, 1958
2 Claims. (Cl. 260—75)

1. In a method of preparing polyethylene terephthalate wherein dimethyl terephthalate is reacted with ethylene glycol in the presence of an ester interchange catalyst to form a precondensate consisting essentially of the diglycol ester of terephthalic acid and wherein the precondensate subsequently is polymerized in the presence of a polycondensation catalyst, the improvement which comprises: adding the polycondensation catalyst to the reaction system in the form of a mixture of solidified precondensate having a K value of from about 17 to about 25 and a polycondensation catalyst, the weight ratio of catalyst to precondensate in the catalyst mixture being from about one part catalyst and one part precondensate to about one part catalyst and 10 parts precondensate, the addition of said mixture of precondensate and polycondensation catalyst taking place when the reaction system is under a vacuum of less than 15 mm. mercury and when the reaction mixture has reached a viscosity corresponding to a K value of from about 17 to about 25; and thereafter allowing the polymerization of the precondensate to proceed until polyethylene terephthalate of a desired viscosity has been obtained.

3,095,404

PREPARATION OF HIGH VISCOSITY WATER-SOLUBLE POLYCATIONICS

Dwight C. Lincoln, Coatesville, Pa., and Walter P. Shyluk, Wilmington, Del., assignors to Hercules Powder Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Apr. 7, 1959, Ser. No. 804,602
4 Claims. (Cl. 260—88.3)

1. Process of preparing water-soluble polymers which comprises dissolving a water-soluble monomeric vinyl pyridinium salt in a solvent therefor to a concentration of about 65%–85% by weight of the monomer, and allowing the monomer to polymerize at 0° C.–25° C., said salt being the reaction product of a 2-methyl-5-vinyl pyridine and dimethyl sulfate, said polymers having a reduced specific viscosity of at least about 7 as measured on 0.5% solutions thereof in 0.2 molar aqueous sodium chloride.

2. Process of preparing water-soluble polymers which comprises dissolving a monomeric vinyl pyridinium salt in water to a concentration of about 65%–85% and dissolving in the water 0.001%–0.008% of potassium persulfate as polymerization catalyst therefor, and allowing the monomer to polymerize at 0° C.–25° C. in the substantial absence of air, all percentages being by weight based on the monomer, said salt being the reaction product of a 2-methyl-5-vinyl pyridine and dimethyl sulfate, said polymers having a reduced specific viscosity of at least about 7 as measured on 0.5% solutions thereof in 0.2 molar aqueous sodium chloride.

3,095,405

POLYMERIZATION OF VINYL ACETATE IN THE PRESENCE OF A CERIC SALT

Masakazu Matsumoto, Junji Ukida, and Gozo Takayama, Kurashiki City, Japan, assignors to Kurashiki Rayon Co., Ltd., Okayama Prefecture, Japan, a corporation of Japan

No Drawing. Filed Mar. 18, 1960, Ser. No. 15,902
Claims priority, application Japan, Mar. 20, 1959
4 Claims. (Cl. 260—89.1)

1. A method of producing polyvinyl acetate which comprises adding at least one compound selected from the group consisting of lower alkyl alcohols and lower saturated aliphatic monomer carboxylic acids to a solution of a ceric salt in water, the resulting solution containing at least 10% water, adding vinyl acetate monomer to said solution, and polymerizing said vinyl acetate in the resulting solution.

3,095,406

PREPARATION OF POLYMERS OF CONJUGATED DIENES

James N. Short and James E. Puckett, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed July 28, 1958, Ser. No. 751,187
15 Claims. (Cl. 260—94.3)

1. In a process for preparing rubbery polymers comprising contacting a conjugated diene suitable for polymerization and containing from 4 to 10, inclusive, carbon atoms per molecule with a catalyst selected from the group consisting of (1) a compound corresponding to the formula RLi_x, wherein R is a hydrocarbon radical selected from the group consisting of aliphatic, cycloaliphatic and aromatic radicals and *x* is an integer from 1 to 4, inclusive, and (2) mixtures obtained by mixing at least two essential components, one of said components being selected from the group consisting of hydrides of metals of Groups I, II and III and organo compounds of Groups I, II, III and IV–B metals and the other of said components being a metal compound selected from the group consisting of Group IV–A, Group V, Group VI and Group VIII metal compounds, said contacting occurring in the presence of a hydrocarbon diluent, the improvement which comprises mixing said conjugated diene with a polyhydric alcohol, thereby forming a conjugated diene phase and an alcohol phase, said polyhydric alcohol being liquid under the mixing conditions and being selected from the group consisting of dihydric and trihydric alcohols having from 2 to 10 carbon atoms per molecule; separating said conjugated diene phase from said alcohol phase; and contacting said catalyst with said conjugated diene phase.

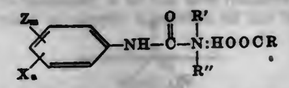
3,095,407

SUBSTITUTED UREA-ACID COMPLEXES

Harry F. Brust, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Oct. 6, 1960, Ser. No. 60,810
6 Claims. (Cl. 260—96.5)

1. Complex of a halogenated saturated fatty acid containing from 3 to 18, inclusive, carbon atoms with substituted urea, the complex corresponding to the formula



wherein

HOOCR

represents a saturated polyhaloaliphatic monocarboxylic acid containing from 3 to 18, inclusive, carbon atoms and from 2 to 5, inclusive, atoms of halogen selected from the group consisting of chlorine and bromine, two of them being substituents upon the α carbon atom, any others being substituents upon the β and γ carbon atoms of said acid; R' is an alkyl radical containing up to two carbon atoms, R'' is selected from the group consisting of hydrogen and alkyl containing up to two carbon atoms; X is halogen, Z is a member of the group consisting of lower alkyl and oxylower alkyl; subscript *n* is a positive integer up to 2; subscript *m* is an integer in the range of 0 to 1; of the benzene ring which is attached to the urea nitrogen atom, at least one unsubstituted carbon atom is adjacent the carbon atom which is attached to said nitrogen atom: the expression unsubstituted carbon atom defines a carbon atom which is attached only to a member of the group consisting of carbon and hydrogen, and the expression lower alkyl designates alkyl containing from 1 to 4, inclusive carbon atoms.

3,095,408

PROCESSES IN PEPTIDE SYNTHESIS

George W. Anderson, Darien, and Anne C. McGregor, Glenbrook, Conn., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Mar. 19, 1957, Ser. No. 646,982
9 Claims. (Cl. 260—112)

1. A process for the production of an alpha-(N-tertiarybutyloxycarbonyl)-naturally occurring amino acid comprising the steps of reacting a naturally occurring amino acid with para-nitrophenyl tertiary butyl carbonate in the presence of a water-miscible organic solvent selected from the group consisting of lower alkyl alcohols and di-(lower)alkyl ketones at a pH of between 8 and 12.

8. A process for preparing an alpha-(N-tertiary butyloxy carbonyl) tripeptide lower alkyl ester comprising the steps of

(*a*) reacting a member of the group consisting of alpha-(N-tertiarybutyloxycarbonyl)-naturally occurring amino acids with a member selected from the group consisting of lower alkyl esters of alpha naturally occurring amino acids in the presence of a peptide reaction-promoting agent consisting of a lower alkyl pyrophosphite and a phosphite hydrogen halide acceptor selected from the group consisting of di-(lower) alkyl phosphites, tri-(lower alkyl) phosphites, tri-(lower alkenyl) phosphites having allylic unsaturation and lower alkyl alkylene phosphites;

(*b*) subjecting the product of said step (*a*), while said product is still in the peptide-forming medium of said step (*a*), to the action of a hydrogen halide selected from the group consisting of hydrogen bromide and hydrogen chloride whereby the tertiary butyloxycarbonyl alpha N-blocking group is removed; and

(*c*) reacting the product of said step (*b*), while said product of said step (*b*) is still in the reaction medium of said step (*b*), with a member of the group consisting of alpha-(N-tertiary butyloxy carbonyl)-naturally occurring amino acids, whereby there is produced as alpha-(N-tertiary butyloxy carbonyl) tripeptide lower alkyl ester.

3,095,409

ACID TREATED SULFONATED LIGNIN-CONTAINING MATERIAL AND PROCESS FOR THE PRODUCTION THEREOF

Ellis Gray King and Carl Adolphson, Bellingham, Wash., assignors to Puget Sound Pulp & Timber Co., Bellingham, Wash., a corporation of Delaware

No Drawing. Filed Apr. 1, 1960, Ser. No. 19,165
36 Claims. (Cl. 260—124)

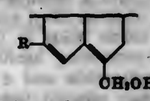
3. A process for producing useful products from sulfonated lignin-containing material comprising the step of forming a water soluble salt of an acid polymerized sulfonated lignin-containing material, said salt having a cation selected from the group consisting of iron, aluminum, chromium, copper and combinations thereof, and oxidizing said salt with an oxidizing agent having an oxidizing power stronger than an oxidation potential of about —1.3.

3,095,410
DEAE SUBSTITUTED BALSA WOOD ION-EXCHANGE MATERIAL
Winston Kenney Anslow, Slough, England, assignor to Glaxo Group Limited, Greenford, England, a British company
No Drawing. Filed Dec. 23, 1960, Ser. No. 77,982
Claims priority, application Great Britain Dec. 28, 1959
4 Claims. (Cl. 260—231)

1. An ion-exchange material in particulate form consisting essentially of N,N-diethylaminoethylated balsa wood prepared by reacting substantially uniformly sized particulate balsa wood with an alkali metal hydroxide, thereafter reacting the resultant product with an N,N'-diethylhaloethylamine until ion-exchange capacity of 0.3 to 1.5 meq./g., dry weight, is introduced into said balsa wood and then separating said particulate ion-exchange balsa wood.

3,095,411
3-ENOL ETHERS OF 6-HYDROXYMETHYL-3-OXO-Δ^4-STEROIDS AND PROCESS FOR THEIR PREPARATION
David Neville Kirk and Vladimir Petrow, London, England, assignors to The British Drug Houses Limited
No Drawing. Filed Nov. 6, 1961, Ser. No. 150,176
Claims priority, application Great Britain Nov. 7, 1960
31 Claims. (Cl. 260—239.55)

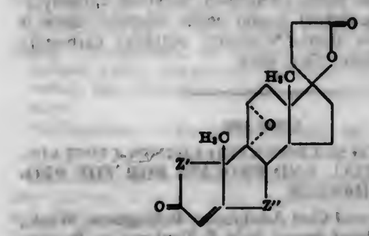
6. 3-enol ethers of 6-hydroxymethyl-3-oxo-Δ^4-steroids, said 3-enol ethers having in rings A and B of the steroid nucleus the structure



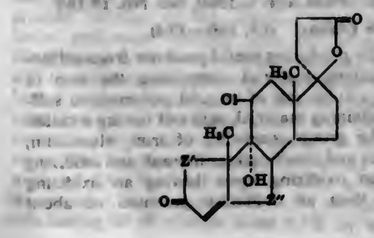
where R is selected from the group consisting of O-alkyl, O-hydroxyalkyl, O-cycloalkyl, O-alkaryl and O-alkyl-alkoxy.

3,095,412
9α,11α - EPOXY AND 11β - CHLORO-9α-HYDROXY 17α - (2 - CARBOXYETHYL) - 17β - HYDROXYANDROST-4-EN-3-ONE γ-LACTONES AND Δ^1 AND Δ^6 ANALOGS
Edward A. Brown, Wilmette, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware
No Drawing. Filed Dec. 19, 1961, Ser. No. 160,633
6 Claims. (Cl. 260—239.57)

1. A compound selected from the group consisting of 9α,11α-epoxides of the formula



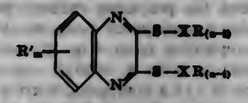
and corresponding halohydrins of the formula



in which formulas one of Z' and Z'' designates an ethylene radical and the other designates a member of the group consisting of ethylene and vinylene radicals.

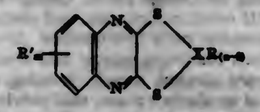
3,095,413
METALLIC DERIVATIVES OF 2,3-DIMERCAPTO QUINOXALINES
Klaus Sasse, Cologne-Stammheim, Richard Wegler, Leverkusen, and Günter Unterstenhöfer, Opladen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany
No Drawing. Filed Jan. 6, 1961, Ser. No. 80,986
Claims priority, application Germany Jan. 16, 1960
10 Claims. (Cl. 260—242)

1. A compound of the formula



wherein X stands for a member selected from the group consisting of arsenic, antimony, bismuth, silicon, tin and boron, R being a member selected from the group consisting of lower alkyl, phenyl and chlorophenyl, *n* being the valency number of X and wherein R' stands for a member selected from hydrogen, lower alkyl, hydrogen atom and nitro and *m* is a whole number up to two.

2. A compound of the formula



wherein X stands for a member selected from the group consisting of arsenic, antimony, bismuth, silicon, tin and boron, R being a member selected from the group consisting of lower alkyl, phenyl and chlorophenyl, *n* being the valency number of X and wherein R' stands for a member selected from hydrogen, lower alkyl, halogen atom and nitro and *m* is a whole number up to two.

3,095,414
SYNTHESIS OF CERTAIN SUBSTITUTED TRIAZINES
James D. Spainhour, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
No Drawing. Filed July 1, 1960, Ser. No. 40,173
6 Claims. (Cl. 260—248)

1. A process for the preparation of a substituted triazine having the following structural characteristics

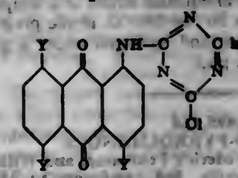


wherein R is a radical in which the carbon alpha to the ring is fully substituted by a substituent other than hydrogen and is selected from the group consisting of phenyl, naphthyl, anthryl, alkyl of 1–10 carbon atoms, substituted phenyl, substituted naphthyl, substituted anthryl, and substituted alkyl and wherein the substituents of said substituted compounds are selected from the group consisting of halogen, nitro, and alkyl of 1–5 carbon atoms which comprises contacting a nitrile having the structural characteristic R—C≡N wherein R is as previously defined and in which the carbon atom alpha to the cyano group is substituted by other than hydro-

gen with a catalyst selected from the group consisting of titanium tetrachloride, titanium trichloride, vanadium pentachloride, chromyl chloride, titanium tetrabutoxide, and iridium tetrachloride together with a compound selected from the group consisting of a trialkylaluminum, a dialkyl zinc, and ethylaluminum sesquichloride for a time sufficient to effect trimerization and at a temperature at which reaction ensues in the range 25–150° C.

3,095,415
ANTHRAQUINONE DYESTUFFS CONTAINING A 2-CHLORO, 4-HYDROXY(LOWER)ALKYLAMINO, TRIAZINYLAMINO GROUP
Max Staeuble and Karl Weber, Basel, Switzerland, assignors to Ciba Limited, Basel, Switzerland, a company
No Drawing. Filed June 5, 1961, Ser. No. 114,598
Claims priority, application Switzerland May 30, 1958
5 Claims. (Cl. 260—249)

1. Anthraquinone vat dyestuff of the formula



in which Y is a member selected from the group consisting of benzoylamino and H, the molecule containing at most one benzoylamino group.

3,095,416
UREA TO MELAMINE PROCESS
Edgar I. Crowley, Johnstone S. Mackay, Milton Manes, and Frank J. Vancheri, all of Pittsburgh, Pa., assignors, by mesne assignments, to Pittsburgh Chemical Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Dec. 22, 1959, Ser. No. 861,272
9 Claims. (Cl. 260—249.7)

1. A process for the conversion of urea to melamine comprising gasifying urea over a fluidized bed of a particulate porous material which does not catalyze the decomposition of urea to melamine at the temperature employed at atmospheric pressure and at a temperature of 230 to 300° C. in an endothermic reaction in a first reaction zone in the presence of ammonia as a fluidizing gas, thereafter passing the gasified urea at a temperature of 350 to 450° C. at atmospheric pressure over a fluidized bed of catalyst in an exothermic reaction in a second reaction zone to convert the gasified urea to melamine and employing a heat transfer agent to pick up at least a portion of the exothermic heat in the second reaction zone apd to transport it to the first reaction zone where it can be used to supply a portion of the heat required therein.

3,095,417
PROCESS FOR THE PREPARATION OF PIPERAZINE
Féder Poppelsdorf, Charleston, and Richard C. Myerly, South Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York
No Drawing. Filed July 20, 1960, Ser. No. 44,005
4 Claims. (Cl. 260—268)

1. In the process for preparing piperazine by the pyrolysis of monoethanolamine hydrohalide to piperazine and recovering piperazine from the pyrolysis mixture, the improvement which comprises the step of passing anhydrous hydrogen halide through the monoethanolamine hydrohalide pyrolysis mixture maintained at a temperature from about 215° to 250° C. at an hourly rate of flow from 0.58 to 4.40 moles of hydrogen halide per mole of monoethanolamine hydrohalide.

3,095,418
3-[2-(5 - ACETOXY - 2 - HYDROXY-3,5-DIMETHYLCYCLOHEXYL) - 2 - HYDROXYETHYL]GLUTARIMIDE AND DERIVATIVES THEREOF
Koppaka V. Rao, Pine Brook, N.Y., assignor to Chas. Pfizer & Co., Inc., New York, N.Y., a corporation of Delaware
Filed May 25, 1960, Ser. No. 31,623
5 Claims. (Cl. 260—281)

1. A compound selected from the group consisting of 3-[2-(5-acetoxy-2-hydroxy-3,5-dimethylcyclohexyl)-2-hydroxyethyl]-N-methyl-glutarimide, the monoesters and diesters thereof, the ester group being of the formula RCOO— wherein RCO is the acyl group of an acid selected from the group consisting of fatty acids having 2 to 18 carbon atoms, acrylic acid, undecylenic acid, oleic acid, succinic acid, maleic acid, hydroxypropionic acid, benzoic acid, toluic acid, naphthoic acid and phthalic acid; 3-[2-(2,5-dihydroxy-3,5-dimethylcyclohexyl)-2-hydroxyethyl]glutarimide, 3-[2-(2,5-dihydroxy-3,5-dimethylcyclohexyl)-2-hydroxyethyl]-N-methyl-glutarimide, the monoesters, the diesters and the triesters thereof, wherein the ester group has the same significance as above, and 3-[2-(5-acetoxy-2-hydroxy-3,5-dimethylcyclohexyl)-2-hydroxyethyl]-glutarimide.

3,095,419
PROCESS FOR PREPARING 2-OXO-3-(N,N-DISUBSTITUTED CARBOXAMIDO) - 1,2,3,4,6,7 - HEXAHYDRO-11b-H-BENZOPYRIDOCOLINES
James R. Tretter, Niantic, Conn., assignor to Chas. Pfizer & Co., Inc., New York, N.Y., a corporation of Delaware
No Drawing. Filed Sept. 6, 1961, Ser. No. 136,186
8 Claims. (Cl. 260—287)

1. A process for the production of a 2-oxo-3-(N,N-disubstituted carboxamido)-1,2,3,4,6,7-hexahydro-11b-H-benzopyridocoline wherein the substituted carboxamido moiety is chosen from the group consisting of N,N-di(lower alkyl)-carboxamido, N-(lower alkyl) - N - (p-tolyl)carboxamido and N-(lower alkyl) - N - phenylcarboxamido, which comprises contacting a 3,4-dihydroisoquinoline acid addition salt in a reaction-inert polar organic solvent with at least a molar equivalent of a correspondingly N,N-disubstituted acetoacetamide compound in the presence of an equivalent amount in moles of formaldehyde at a temperature that is in the range of from about 20° C. up to about 100° C. for a period of about one to about twenty-four hours.

3,095,420
RESOLUTION OF β- AND γ-PICOLINE MIXTURES
William D. Schaeffer, Pomona, Calif., assignor to Union Oil Company of California, Los Angeles, Calif., a corporation of California
No Drawing. Filed Apr. 8, 1960, Ser. No. 20,831
17 Claims. (Cl. 260—290)

1. A method for recovering in purified form a picoline isomer selected from the group consisting of β-picoline and γ-picoline from a mixture containing the said isomers, which comprises intimately contacting and reacting the following components: (1) a thiocyanate of a divalent transitional metal, (2) a mixture of β- and γ-picolines, and (3) an organic compound capable of forming a clathrate with one of the homo-(tetra-picoline) Werner complexes formed by the reaction of said components (1) and (2), but which is relatively incapable of forming a clathrate with the other of said homo-(tetra-picoline) Werner complexes, separating an unreacted picoline phase from the resulting solid phase, and recovering from at least one of said phases a picoline fraction enriched in one of the said isomers thereof; said organic compound (3) being selected from the class consisting of benzene, mono-substituted benzenes, para di-substituted benzenes,

naphthalene, 1 - substituted naphthalenes, thiophene, methyl thiophenes, and substituted aliphatic hydrocarbons containing not more than four carbon atoms joined one to another in a saturated chain and having at least one substituent, said substituent being selected from the class consisting of chlorine, bromine, and hydroxyl, said substituted aliphatic hydrocarbon always having at least one substituent selected from the class consisting of bromine and chlorine, any ring-substituents on said organic compounds being selected from the class consisting of lower alkyl, chlorine, bromine, nitro, amino, lower alkyl amino, lower alkoxy, hydroxyl, lower alkyl carbonyl, lower carbalkoxyl, and sulfhydryl.

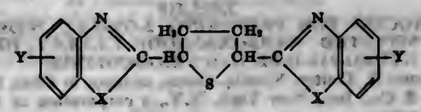
3,095,421

BIS-AZOLYL-TETRAHYDROTHIOPHENE COMPOUNDS

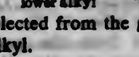
Peter Liechti, Binningen, Adolf Emil Siegrist, Basel, Max Duennenberger, Birsfelden, and Erwin Maeder, Muenchenstein, Switzerland, assignors to Ciba Limited, Basel, Switzerland, a company of Switzerland

No Drawing. Filed July 31, 1961, Ser. No. 127,879
Claims priority, application Switzerland Aug. 11, 1960
9 Claims. (Cl. 260—304)

1. A bis-azolyl-tetrahydrothiophene compound of the formula



wherein X is a member selected from the group consisting of —O—, —S—, —NH— and



and Y is a member selected from the group consisting of hydrogen and lower alkyl.

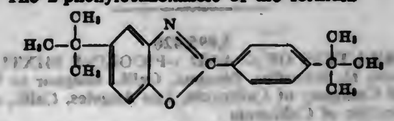
3,095,422

NEW PHENYLBENZAZOLES

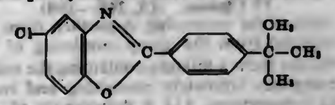
Max Duennenberger, Birsfelden, Erwin Maeder, Muenchenstein, Adolf Emil Siegrist, Basel, and Peter Liechti, Binningen, Switzerland, assignors to Ciba Limited, Basel, Switzerland, a Swiss company

No Drawing. Filed Sept. 12, 1960, Ser. No. 55,122
Claims priority, application Switzerland Sept. 23, 1959
5 Claims. (Cl. 260—307)

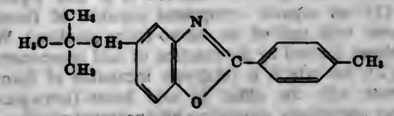
1. The 2-phenylbenzoxazole of the formula



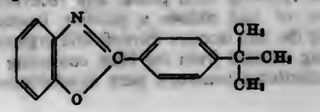
2. The 2-phenylbenzoxazole of the formula



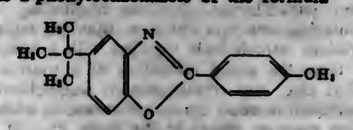
3. The 2-phenylbenzoxazole of the formula



4. The 2-phenylbenzoxazole of the formula



5. The 2-phenylbenzoxazole of the formula



3,095,423

SYNTHESIS OF 2-PYRROLIDINONE

John W. Copenhaver, North Oaks, and William O. Ney, Jr., Lincoln Township, Washington County, Minn., assignors to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

No Drawing. Filed Feb. 1, 1961, Ser. No. 86,284
4 Claims. (Cl. 260—326.5)

1. The process for the synthesis of 2-pyrrolidinone, which comprises catalytically hydrogenating and cyclizing succinonitrile by heating in aqueous milieu at a temperature in the range of about 20° to 200° C. in the presence of a hydrogenation catalyst and hydrogen under a pressure of at least about 500 p.s.i.

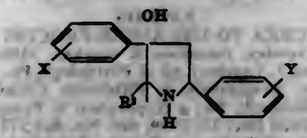
3,095,424

3,5-DIARYL-3-PYRROLIDINOLS

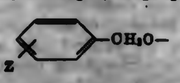
Yao Hua Wu, Rolland Frederick Feldkamp, and William Andrew Gould, Evansville, Ind., assignors to Mead Johnson & Company, Evansville, Ind., a corporation of Indiana

No Drawing. Filed Aug. 14, 1961, Ser. No. 131,065
9 Claims. (Cl. 260—326.5)

1. A compound selected from the group consisting of



and the pharmaceutically acceptable acid addition salts thereof wherein X and Y are independently selected from the group consisting of hydrogen, hydroxy, dihydroxy, halo, dihalo, alkyl, dialkyl, alkoxy, phenoxy, halophenoxy, phenyl, halophenyl, methylenedioxy, benzhydryloxy, trifluoromethyl, methylmercapto, isopropylidenedioxy, and



wherein Z is selected from the group consisting of hydrogen, halo, dihalo, lower alkoxy, and lower alkyl, each of said alkyl and alkoxy groups having up to four carbon atoms, and R^3 is selected from the group consisting of hydrogen and lower alkyl groups having up to four carbon atoms.

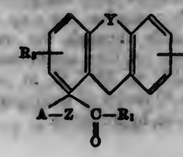
3,095,425

ALKANOYLTHIAXANTHENES AND -XANTHENES

Charles L. Zirkle, Haddon Heights, N.J., assignor to Smith Kline & French Laboratories, Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Filed Aug. 14, 1959, Ser. No. 833,703
7 Claims. (Cl. 260—328)

1. A chemical compound of the class consisting of a free base and its nontoxic, pharmaceutically acceptable, acid addition salts, the free base having the structural formula:



in which Y is a member selected from the group consisting of sulfur and oxygen; R_1 is lower alkyl; R_2 and R_3 are members selected from the group consisting of hydrogen, halogen having an atomic weight of less than 80, trifluoromethyl, lower alkyl, lower alkoxy and lower alkylthio; A is an alkylene chain having 2 to 4 carbon atoms; and Z is a member selected from the group consisting of di-lower alkylamino, N-pyrrolidinyl, N-piperidyl, C-(N-lower alkyl)piperidyl, N-piperazinyl, N'-formyl-N-piperazinyl, N'-lower alkyl-N-piperazinyl, N'-hydroxyethyl-N-piperazinyl, N'-acetoxyethyl-N-piperazinyl, N'-hydroxyethoxyethyl-N-piperazinyl and N'-hydroxyethoxyethoxyethyl-N-piperazinyl.

3. 10 - (2' - dimethylaminoethyl) - 10 - propionylthiaxanthene.

3,095,426

SYNTHESIS OF 1,2'-DINAPHTHALENE 2,1'-OXIDE

David W. Peck, Charleston, W. Va., assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Nov. 23, 1960, Ser. No. 71,160
4 Claims. (Cl. 260—346.2)

1. The process for producing 1,2'-dinaphthalene 2,1'-oxide which comprises reacting tetralone with oxygen at a temperature of from about 200° C. to about 300° C. and recovering 1,2'-dinaphthalene 2,1'-oxide from the resulting reaction mixture.

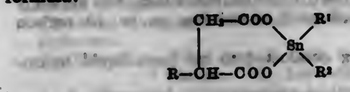
3,095,427

HYDROCARBYLTIN SALTS OF EPOXYALKYL-SUBSTITUTED SUCCINIC ACIDS

Robert G. Kelso, St. Albans, W. Va., assignor to Union Carbide Corporation, a corporation of New York

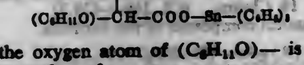
No Drawing. Filed Dec. 3, 1958, Ser. No. 777,841
11 Claims. (Cl. 260—348)

2. The dihydrocarbyltin epoxyalkylsuccinate of the formula:



wherein R is epoxyalkyl of from about 3 to about 18 carbon atoms and one oxygen atom attached to vicinal carbon atoms thereof, and R^1 and R^2 each is alkyl of from about 3 to about 14 carbon atoms.

11. Bis(triphenyltin)epoxyhexylsuccinate of the formula:



wherein the oxygen atom of $(C_6H_{11}O)$— is attached to vicinal atoms thereof.

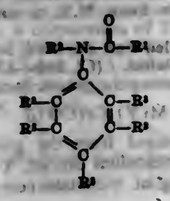
3,095,428

N,N-DISUBSTITUTED ARYLAMIDES

John O. Van Hook, Abington, Pa., assignor to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware

No Drawing. Filed Apr. 7, 1959, Ser. No. 804,592
8 Claims. (Cl. 260—348)

1. An N,N-disubstituted arylamide which has the formula



in which R^1 is an epoxidized residue of an olefinically unsaturated fatty acid having a carbon atom content of 12 to 22 carbon atoms,

R^2 is an epoxidized residue of an olefinically unsaturated fatty acid having a carbon atom content of 12 to 22 carbon atoms,

R^3 is selected from the group consisting of a hydrogen atom and an alkyl group,

said N,N-disubstituted arylamide being further characterized by having a total carbon atom content of 24 to 72, and being liquid at about 25° C.

4. N-decyl-N-phenyl-9,10-epoxystearamide.

3,095,429

PROCESS FOR THE PREPARATION OF CRYSTALLINE DIGLYCIDYL ETHER OF BISPHENOL A

John C. Smith and William R. Bradshaw, Lake Jackson, Tex., Lionel M. Raff, Champaign, Ill., and Wilbur L. Bressler, Lake Jackson, Tex., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed May 19, 1959, Ser. No. 814,163
7 Claims. (Cl. 260—348)

1. A process for making monomeric diglycidyl ether of bisphenol A having a melting point of at least about 39° C. and an epoxy content of at least about 24.4% comprising the steps of dissolving crude diglycidyl ether of bisphenol A having a melting point below about 39° C. and an epoxy content below about 24.4% in a lower alkanol, cooling the resulting solution until a substantial portion of the ether separates in liquid form from the solution, separating this portion from the solution, redissolving said portion in fresh solvent, cooling the thus formed second solution until crystals of monomeric diglycidyl ether of bisphenol A are formed and separating said crystals from the said second solution.

3,095,430

CATALYTIC MASSES FOR THE OXIDATION OF NAPHTHALENE TO 1:4-NAPHTHOQUINONE

Walter Wettstein, Muenchenstein, Switzerland, assignor to Ciba Limited, Basel, Switzerland

No Drawing. Filed Jan. 26, 1959, Ser. No. 788,773
Claims priority, application Switzerland Feb. 5, 1958
3 Claims. (Cl. 260—396)

1. A process for the catalytic oxidation in the gaseous phase of naphthalene to 1:4-naphthoquinone wherein a mixture of naphthalene with air is passed under atmospheric pressure, at a temperature of about 360 to 380° C., and at a flow rate of naphthalene-containing air of about 20,000 parts by volume per hour, the naphthalene being present in the range from about 0.600 to about 0.827 part by weight per 20,000 parts by volume of air, over a member selected from the group consisting of

(A) a catalyst consisting essentially of

(*a*) vanadium pentoxide,

(*b*) more than 50 percent by weight, calculated on the vanadium pentoxide, of stannic oxide, and

(*c*) 100 to 200 percent by weight, calculated on the vanadium pentoxide, of a member selected from the group consisting of an alkali metal bisulfate and an alkali metal pyrosulfate;

(B) a catalyst consisting essentially of

(*a*) vanadium pentoxide,

(*b*) more than 50 percent by weight, calculated on the vanadium pentoxide, of stannic oxide.

(*c*) 100 to 200 percent by weight, calculated on the vanadium pentoxide, of a member selected from the group consisting of an alkali metal bisulfate and an alkali metal pyrosulfate; and

(*d*) a chemically inert silicon compound as carrier;

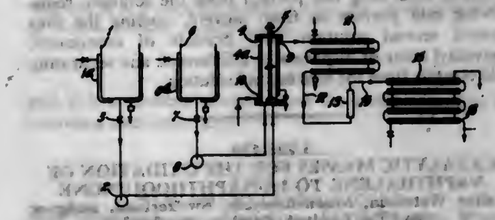
(C) a catalyst consisting essentially of
(*a*) vanadium pentoxide,
(*b*) more than 50 percent by weight, calculated on the vanadium pentoxide, of stannic acid,
(*c*) 100 to 200 percent by weight, calculated on the vanadium pentoxide, of a member selected from the group consisting of an alkali metal bisulfate and an alkali metal pyrosulfate; and
(*d*) an alkali metal sulfate; and
(D) a catalyst consisting essentially of
(*a*) vanadium pentoxide,
(*b*) more than 50 percent by weight calculated on the vanadium pentoxide, of stannic oxide,
(*c*) 100 to 200 percent by weight, calculated on the vanadium pentoxide, of a member selected from the group consisting of an alkali metal bisulfate and an alkali metal pyrosulfate;
(*d*) an alkali metal sulfate, and
(*e*) a chemically inert silicon compound as carrier.

3,095,431

INTERESTERIFICATION PROCESS

Ronald William Giddings, Liverpool, and Alan Charles Davies, Bebington, Chester, England, assignors to Lever Brothers Company, New York, N.Y., a corporation of Maine

Filed June 17, 1960, Ser. No. 36,805
Claims priority, application Great Britain June 17, 1959
5 Claims. (Cl. 260—410.7)



1. A process for the continuous liquid-phase interesterification of glycerides consisting essentially of esters of glycerol in which at least two of the hydroxyl groups of the glycerol are esterified, which comprises continuously feeding the glyceride together with a polyhydric alcohol, an interesterification catalyst and an inert gas, in the absence of free oxygen, into and through a reaction zone maintained at a temperature of about 200°–275° C., passing the products issuing from said zone immediately into and through a cooling zone maintained at a temperature below about 100° C., and collecting the products from said cooling zone at a temperature not substantially above 100° C., the products having a free fatty acid content of not more than about 0.28% based on the weight of the products.

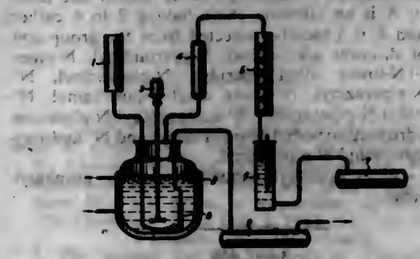
3,095,432

PROCESS FOR THE PRODUCTION OF OLEFINIC ACID ESTERS

Hans Feichtinger, Dinslaken, and Heinz Noeske, Oberhausen-Sterkrade, Germany, assignors to Rahrchemie Aktiengesellschaft, Oberhausen-Holten, Germany

Filed Oct. 3, 1960, Ser. No. 60,024
Claims priority, application Germany Oct. 8, 1959
3 Claims. (Cl. 260—410.9)

1. A process for the manufacture of olefinic acid esters from olefinic acids and alcohols, which consists of placing unsaturated aliphatic acids together with 5 to 15 percent by weight thereof of potassium bisulfate in a reaction zone, heating the contents of said reaction zone to 140–180° C., continuously introducing therein in small portions, and immediately vaporizing, an alcohol having one to 10 carbon atoms in its molecule, selected from the group consisting of aliphatic and cycloaliphatic alcohols,



passing the vaporized alcohol directly through said acids, and continuously removing the water of reaction formed together with unreacted alcohol under a vacuum.

3,095,433

PREPARATION OF ALKYL TIN COMPOUNDS

Jesse Roger Maughan, Baton Rouge, La., assignor to Ethyl Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed Aug. 23, 1960, Ser. No. 51,254
3 Claims. (Cl. 260—429.7)

1. A process for the preparation of alkyl tin compounds which comprises reacting a trialkyl aluminum compound, each alkyl group thereof containing up to 10 carbon atoms, with a tin compound selected from the group consisting of
(1) alkyl tin oxides consisting of tin, two to three alkyl groups per atom of tin, and oxygen, the alkyl groups thereof each having up to 10 carbon atoms,
(2) alkyl tin salts derived solely from monocarboxylic acids having from 1 to 8 carbon atoms, and the alkyl groups thereof each containing up to 10 carbon atoms,
the reaction being conducted in an inert liquid hydrocarbon.

3,095,434

ORGANOTIN SULFONATES

Walter A. Stamm, Dobbs Ferry, and Arthur W. Breindel, Yonkers, N.Y., and Ashley H. Freiberg, Santa Clara, Calif., assignors to Stauffer Chemical Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed June 27, 1961, Ser. No. 119,775
10 Claims. (Cl. 260—429.7)

1. An organotin compound of the formula:

$$(R)_2Sn\text{—}(Z\text{—}SO_2\text{—}CH_3)_{4-x}$$

wherein R is selected from the class consisting of an alkyl group of from 1 to 12 carbon atoms, a phenyl group and a naphthyl group, Z is selected from the class consisting of oxygen and sulfur atoms and x designates an integer of from 2 to 3.

3,095,435

ALKALI-METAL-ETHER COMPLEX SALTS OF A GROUP VIB METAL PENTACARBONYL IODIDE

Raymond E. Maginn, Detroit, Mich., assignor to Ethyl Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed Apr. 11, 1961, Ser. No. 102,122
20 Claims. (Cl. 260—438)

1. Compounds having the generic formula:

$$M(Y)_xCr(CO)_5I$$

in which M is selected from the group consisting of alkali metal and ammonium cations, Y is selected from the group consisting of trideatate non-cyclic ethers, bidentate non-cyclic ethers and aliphatic hydrocarbon ketones, and x is an integer ranging from 2 to 3.

3,095,436

ALKALI METAL-ETHER COMPLEX SALTS OF A NITROGENOUS GROUP VIB METAL PENTACARBONYL ANION

Raymond E. Maginn, Detroit, Mich., assignor to Ethyl Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed Apr. 11, 1961, Ser. No. 102,123
11 Claims. (Cl. 260—438)

1. Compounds having the formula:

$$A(Y)_xM(CO)_5\begin{pmatrix}O\\N\end{pmatrix}$$

in which A is an alkali metal cation, Y is a bidentate noncyclic ether, and M is a group VIB metal.

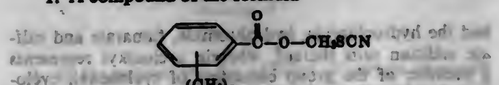
3,095,437

α-THIOCYANATOALKYL ESTERS OF AROMATIC CARBOXYLIC ACIDS

John A. Stephens and Erhard J. Prill, Dayton, Ohio, assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Jan. 29, 1959, Ser. No. 789,799
2 Claims. (Cl. 260—454)

1. A compound of the formula



where n is an integer from 0 to 2 inclusive.

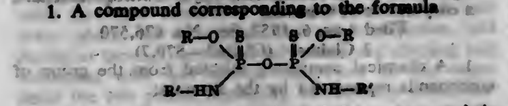
3,095,438

SYMMETRICAL DIALKYL DIAMIDODITHIO-PYROPHOSPHATES

Kenneth C. Kauer, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Aug. 2, 1961, Ser. No. 128,664
7 Claims. (Cl. 260—461)

1. A compound corresponding to the formula



wherein R represents a member of the group consisting of methyl and ethyl and R' represents an alkyl radical containing from 1 to 3 carbon atoms, inclusive.

3,095,439

S,S-DIPROPYL O-METHYL PHOSPHORODITHIOITE

Thomas Mason Melton, Richmond Va., assignor to Virginia-Carolina Chemical Corporation, Richmond, Va., a corporation of Virginia

No Drawing. Filed Feb. 2, 1962, Ser. No. 170,795
1 Claim. (Cl. 260—461)

S,S-dipropyl O-methyl phosphorodithioite.

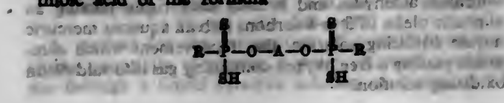
3,095,440

ESTERS OF PHOSPHONODITHIOIC ACID

Peter E. Newallis, Crestwood, and John P. Clapp, Kirkwood, Mo., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Mar. 8, 1962, Ser. No. 178,243
16 Claims. (Cl. 260—461)

1. The method of making an ester of a phosphonothioic acid of the formula



wherein R is a hydrocarbyl radical selected from the group consisting of alkyl, aryl, alkaryl, aralkyl, cycloalkyl, fused carbocyclic aromatic, partially hydrogenated fused carbocyclic aromatic and fully hydrogenated fused carbocyclic aromatic radicals and wherein A is a divalent aliphatic hydrocarbon radical of the empirical formula C_mH_{2m} wherein m is a whole number from 2 to 6, the said A having a chain length of at least two carbon atoms connecting the respective oxygen atoms of the afore set forth structural formula, the respective carbon atoms of said A attached to the said oxygen atoms respectively containing at least one hydrogen substituent, which comprises reacting at least one dihydric alkane of the formula HO—A—OH wherein A has the aforedescribed significance with at least one hydrocarbylthionophosphine sulfide having a ratio of substituents of phosphorus to sulfur to hydrocarbyl radical R of approximately 1:2:1, the said hydrocarbyl radical R having the aforedescribed significance.

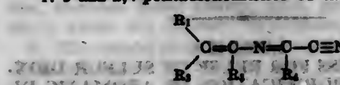
3,095,441

AZAPENTADIENENITRILES

Robert M. Kliss, Marblehead, Mass., assignor to Monsanto Research Corporation, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed May 17, 1962, Ser. No. 195,426
3 Claims. (Cl. 260—465.5)

1. 3-aza-2,4-pentadienenitriles of the formula



where each of R_1, R_2, R_3 and R_4 is selected separately from the class consisting of hydrogen and halogen.

3,095,442

PROCESS FOR PRODUCTION OF 1-OXO-2-NITRATOCYCLOALKANES

Wilfred John Arthur, Charleston, W. Va., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Nov. 15, 1961, Ser. No. 152,657
8 Claims. (Cl. 260—466)

1. A process for the preparation of 1-oxo-2-nitratocycloalkanes which comprises mixing a cycloalkene with NO_2 in a saturated hydrocarbon reaction medium at a temperature in the range of —15° to +25° C. and separation of the product of the reaction, the corresponding 1-oxo-2-nitratocycloalkane in the resulting immiscible lower liquid layer.

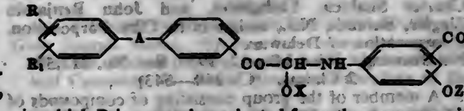
3,095,443

(α-HYDROXY-α-ARYLAMINOACETYL)ARYL DERIVATIVES

Guido Cavallini and Elena Massarani, Milan, Italy, assignors to Francesco Vismara S.p.A., Castenovo (Como), Italy

No Drawing. Filed Apr. 25, 1961, Ser. No. 105,293
Claims priority, application Italy May 3, 1960
6 Claims. (Cl. 260—471)

1. A chemical compound of the formula:



in which R is a member selected from the group consisting of hydrogen, halogen of atomic weight less than 80, hydroxy, alkoxy of from 1 to 4 carbon atoms, alkyl of from 1 to 4 carbon atoms and benzyloxy; R_1 is a member selected from the group consisting of hydrogen and halogen of atomic weight less than 80; A is a member selected from the group consisting of a single direct valence bond, oxygen, sulfur, sulfinyl, sulfonyl, methylene, ethylene and

vinylene; X is a member selected from the group consisting of hydrogen, aliphatic hydrocarbon of from 1 to 12 carbon atoms, cyclohexyl and benzyl; Y is a member selected from the group consisting of hydrogen, an alkali metal cation and alkyl of from 1 to 4 carbon atoms; and Z is a member selected from the group consisting of hydrogen, methyl and acetyl.

3,095,444

PREPOLYMERS OF ACETYL TRIALLYL CITRATE

Peter J. Borchert, Elkhart, Ind., assignor to Miles Laboratories, Inc., Elkhart, Ind., a corporation of Indiana

No Drawing. Filed Nov. 25, 1960, Ser. No. 71,449
17 Claims. (Cl. 260—484)

1. A process for the preparation of prepolymers of acetyl triallyl citrate which comprises prepolymerizing acetyl triallyl citrate in the presence of from about 0.25% to 1.0% of hydrogen peroxide by weight of said acetyl triallyl citrate at a temperature of from about 100° C. to 160° C. for from about 1 hour to 3 hours and stopping the prepolymerization when the desired degree of prepolymerization is reached.

11. A prepolymer of acetyl triallyl citrate having a refractive index within the range of from about n_D^{30} 1.4700 to n_D^{30} 1.4750, a percentage of unsaturation of from about 80% to 90%, and a viscosity of about 525 centipoises.

3,095,445

CYCLIC PROCESS FOR REUSE OF SULFUR DIOXIDE IN THE PURIFICATION OF AROMATIC DICARBOXYLIC ACIDS

Richard H. Baldwin and Philip H. Towle, Chicago, Ill., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana

Filed July 16, 1959, Ser. No. 827,660
7 Claims. (Cl. 260—515)

1. A cyclic process for the utilization of sulfur dioxide to liberate free terephthalic acid from its water-soluble alkaline salt in aqueous solution containing activated carbon purified water-soluble alkaline salt of terephthalic acid in a concentration in the range of 25–100% of its saturation concentration which comprises acidifying said aqueous solution to a pH in the range of from 1 to 2 by the addition of sulfur dioxide under pressure to said aqueous solution thereby liberating free terephthalic acid as a precipitate and forming an aqueous solution of alkaline sulfite, separating said aqueous solution of alkaline sulfite from the terephthalic acid precipitate, reacting at 90 to 100° C. said separated aqueous alkaline sulfite solution with terephthalic acid to form an aqueous solution of its water-soluble alkaline salt for activated carbon purification thereof and to liberate sulfur dioxide, and withdrawing and recycling the liberated sulfur dioxide under pressure to the acidification step.

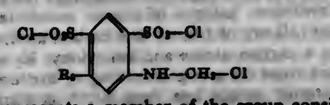
3,095,446

HALOALKYLANILINE DISULFONYL CHLORIDES

Richard Bennett Margerison, Florham Park, Anthony Charles Shabica, Livingston, and John Benjamin Ziegler, Summit, N.J., assignors to Ciba Corporation, a corporation of Delaware

No Drawing. Filed May 12, 1959, Ser. No. 812,579
2 Claims. (Cl. 260—543)

1. A member of the group consisting of compounds of the formula:



in which R_3 represents a member of the group consisting of lower alkyl, trifluoromethyl and halogen, and the acid addition salt thereof with hydrochloric acid.

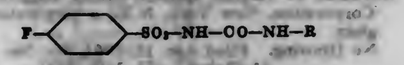
3,095,447

N-SUBSTITUTED N-ARYL SULPHONYL UREAS

Willy Stoll and Henri Dietrich, Basel, Switzerland, assignors to Geigy Chemical Corporation, Yonkers, N.Y., a corporation of Delaware

No Drawing. Filed July 22, 1957, Ser. No. 673,139
Claims priority, application Switzerland July 27, 1956
5 Claims. (Cl. 260—553)

1. A compound of the formula:



wherein R stands for lower alkyl.

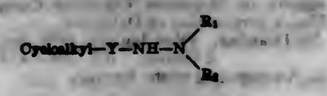
3,095,448

CYCLOALKYL-ALKYL HYDRAZINES

John H. Biel, Milwaukee, Wis., assignor, by mesne assignments to Lakeside Laboratories, Inc., Milwaukee, Wis., a corporation of Delaware

No Drawing. Filed July 30, 1958, Ser. No. 751,887
5 Claims. (Cl. 260—563)

1. A member of the group consisting of compounds of the formulas



and the hydrochloride, hydrobromide, fumarate and sulfate addition salts thereof, wherein cycloalkyl represents a member of the group consisting of cyclohexyl, cyclopentyl and cyclopropyl, Y is an alkylene group of one to five carbons, and R_1 and R_2 are members of the group consisting of hydrogen, lower alkyl, phenyl and phenyl-lower alkyl.

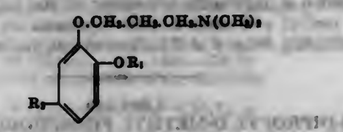
3,095,449

1-(GAMMA-DIMETHYLAMINOPROPOXY)-2-ALKOXY ALKENYLBENZENES

Wolfgang Wirth, Rudolf Hiltmann, and Fritz Mietzsch, Wuppertal-Elberfeld, Germany, assignors, by mesne assignments, to Farbenfabriken Bayer Aktiengesellschaft, a corporation of Germany

Filed Aug. 6, 1957, Ser. No. 676,570
3 Claims. (Cl. 260—570.7)

1. A chemical compound selected from the group of compounds represented by the formula:



wherein R_1 is a member selected from the group consisting of methyl, ethyl, n-propyl, isopropyl and benzyl radicals; and R_2 is an alkenyl radical containing three (3) carbon atoms.

3,095,450

OXIDATION OF UNSATURATED HYDROCARBONS

Adolph C. Shotts, Maplewood, La., assignor, by mesne assignments, to Cities Service Research and Development Company, New York, N.Y., a corporation of New Jersey

No Drawing. Filed Jan. 27, 1960, Ser. No. 4,866
4 Claims. (Cl. 260—597)

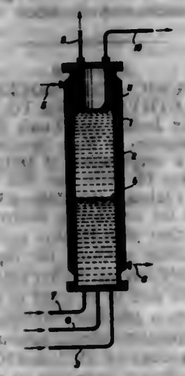
1. In a process of oxidizing aliphatic olefins to unsaturated aldehydes and ketones comprising passing an aliphatic olefin of 3 to 8 carbons into an aqueous mercuric nitrate oxidizing solution, the improvement which comprises passing a free oxygen-containing gas into said olefin oxidizing solution.

3,095,451

CATALYTIC ADDITION OF CARBON MONOXIDE AND HYDROGEN TO OLEFINIC COMPOUNDS

Otto Roelen, Oberhausen-Holten, Karl Büchner, Oberhausen-Sterkrade, and Josef Metz, Oberhausen-Osterfeld, Germany, assignors to Ruhrchemie Aktiengesellschaft, Oberhausen-Holten, Germany, a corporation of Germany

Filed Dec. 13, 1957, Ser. No. 702,636
Claims priority, application Germany Dec. 18, 1956
5 Claims. (Cl. 260—598)



1. In the process for the addition of carbon monoxide and hydrogen to olefinic compounds, in accordance with the oxo-synthesis in which a carbon monoxide and hydrogen containing gas is contacted with an olefinic compound under reaction conditions of elevated temperature and pressure in the presence of an oxo-catalyst comprising an aqueous metal salt solution, the improvement which comprises establishing a substantially vertically extending reaction zone, maintaining a liquid-liquid two phase system in said reaction zone, comprising a lower phase of said aqueous metal salt solution, and a super-adjacent upper oily phase of reaction product, passing said carbon monoxide hydrogen containing gas upwardly through said lower phase, the inter-phase between said phases, and thereafter through said upper oily phase and effecting said contacting with said olefinic compound in said upper phase the two phases remaining substantially intact during the passing therethrough of the said carbon monoxide hydrogen containing gas.

3,095,452

MANUFACTURE OF CROTONALDEHYDE

James L. Callahan, Bedford, and Robert W. Foreman, Chagrin Falls, Ohio, assignors to The Standard Oil Company, Cleveland, Ohio, a corporation of Ohio

No Drawing. Filed Jan. 26, 1960, Ser. No. 4,611
3 Claims. (Cl. 260—604)

1. A process for the manufacture of crotonaldehyde which comprises contacting ethylene with copper phosphomolybdate as a solid oxidant at a temperature in the range of 600° F. to 1000° F.

3,095,453

HYDRATION OF ACETYLENE TO PRODUCE ACETALDEHYDE

Roger M. Dille, La Habra, Ronald W. Chapman, Whittier, John C. Ahlborn, Pomona, and Du Bois Eastman, Whittier, Calif., assignors to Texaco Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Dec. 3, 1959, Ser. No. 856,922
1 Claim. (Cl. 260—605)

A method for the preparation of acetaldehyde consisting essentially of passing a water saturated acetylene gas through a liquid catalytic solution at a rate of 0.5 cubic feet of said gas per 300 ccs. of said solution, while maintaining said solution at a temperature of between about 100 and 200° F. and recovering said acetaldehyde, said solution consisting of 94.5 wt. percent acetic acid, 4 wt. percent water, 0.5 wt. percent sulfuric acid and 1 wt. percent mercuric sulfate.

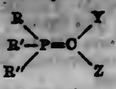
3,095,454

TRIARYLPHOSPHINEDIHALOMETHYLENES

Gino Joseph Marco, Webster Groves, and Angelo John Speziale, Kirkwood, Mo., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

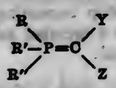
No Drawing. Filed Nov. 29, 1961, Ser. No. 155,817
14 Claims. (Cl. 260—606.5)

1. A phosphinedihalomethylene of the formula

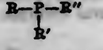


wherein Y is halogen of atomic weight in the range of 35 to 80, wherein Z is halogen of atomic weight in the range of 18 to 80, and wherein R, R′ and R″ are selected from the group consisting of aromatic hydrocarbon radicals containing 6 to 12 carbon atoms and said aromatic hydrocarbon radicals having substituents on the aromatic ring selected from the group consisting of fluorine, chlorine, bromine, lower alkoxy, nitro, amino, mono(lower alkyl) amino and di(lower alkyl)amino.

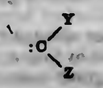
9. The method of making a phosphinedihalomethylene of the formula



wherein Y is halogen of atomic weight in the range of 35 to 80, wherein Z is halogen of atomic weight in the range of 18 to 80, and wherein R, R′ and R″ are selected from the group consisting of aromatic hydrocarbon radicals containing 6 to 12 carbon atoms and said aromatic hydrocarbon radicals having substituents on the aromatic ring selected from the group consisting of fluorine, chlorine, bromine, lower alkoxy, nitro, amino, mono(lower alkyl)amino and di(lower alkyl)amino, which comprises reacting triaryl phosphine of the formula



wherein R, R′ and R″ have the abovedescribed significance with dihalocarbene generated in situ in an inert anhydrous organic liquid medium, said dihalocarbene being of the formula



wherein Y and Z have the abovedescribed significance.

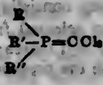
3,095,455

PHOSPHINEDICHLOROMETHYLENES

Gino Joseph Marco, Webster Groves, and Angelo John Speziale, Kirkwood, Mo., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Nov. 29, 1961, Ser. No. 155,818
10 Claims. (Cl. 260—606.5)

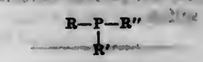
1. A phosphinedichloromethylene of the formula



wherein R, R′ and R″ respectively contain from 1 to 12

carbon atoms and are selected from the group consisting of alkyl, alkoxyalkyl and chloroalkyl.

7. The method of making a phosphinedichloromethylene of claim 1 which comprises reacting phosphine of the formula



wherein R, R' and R'' respectively contain from 1 to 12 carbon atoms and are selected from the group consisting of alkyl, alkoxyalkyl and chloroalkyl, with dichlorocarbene generated in situ in an inert anhydrous organic liquid medium.

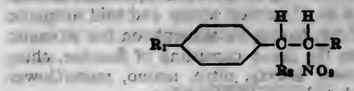
3,095,456

NITROSULFIDES AND THEIR CORRESPONDING SULFONES

Edward B. Hodge, Terre Haute, Ind., assignor to Commercial Solvents Corporation, New York, N.Y., a corporation of Maryland

No Drawing. Filed May 23, 1960, Ser. No. 30,783
17 Claims. (Cl. 260—607)

1. Compositions of matter having the following general formula:



wherein R is a member selected from the group consisting of lower alkyl and hydrogen; wherein R_1 is a member selected from the group consisting of, halo, alkyl, and alkoxy; wherein R_2 is a member selected from the group consisting of the radical:



and the radical

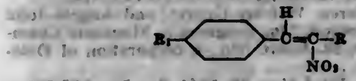


wherein R_3 is a member selected from the group consisting of phenyl, tolyl, xylyl, p-t-butylphenyl, and alkyl.

13. A process for the production of nitrosulfides having the following general formula:



wherein R is a member selected from the group consisting of lower alkyl and hydrogen; wherein R_1 is a member selected from the group consisting of halo, alkyl, and alkoxy; and wherein R_2 is a member selected from the group consisting of phenyl, tolyl, xylyl, p-t-butylphenyl, and alkyl, which comprises interacting a nitro-olefin having the following general formula:



wherein R is a member selected from the group consisting of lower alkyl and hydrogen; and R_1 is a member selected from the group consisting of halo, alkoxy and alkyl with a mercaptan selected from the group consisting of alkyl substituted aryl mercaptans, aryl mercaptans, and alkyl mercapatns in the presence of catalytic amounts of a lower alkyl amine.

3,095,457

METHOD FOR PREPARING BIS(2-ALKOXYETHYL) SULFONES

Charles H. Chang, Easton, Pa., assignor to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Dec. 29, 1961, Ser. No. 163,961
8 Claims. (Cl. 260—607)

1. A method for preparing a bis(2-alkoxyethyl) sulfone comprising reacting 1 mole of 2,2'-sulfonyldiethanol with 2 moles of an alkanol at an elevated temperature in the presence of a member of the group consisting of alkali metal hydroxides and alkoxides.

3,095,458

WEAK SULFURIC ACID PROCESS FOR CONVERTING ETHYL ETHER TO ETHANOL

Carlton Alexander Judice and Louis Earl Pirkle, Baton Rouge, La., assignors to Esso Research and Engineering Company, a corporation of Delaware

Filed May 14, 1959, Ser. No. 813,305
4 Claims. (Cl. 260—639)

1. In a process for converting diethyl ether to ethanol by reacting said ether with sulfuric acid and hydrolyzing the resulting reaction product, the improvement which comprises intimately mixing diethyl ether with a 63 to 70 wt. percent sulfuric acid in an ether to acid mole ratio of 0.5:0.7::1 to form a reactant mixture, and introducing steam under a superatmospheric pressure of 150 to 200 p.s.i.g. at a temperature of 350° to 450° F. directly into said mixture in sufficient quantities to raise the temperature of said mixture to about 230° to 270° F.

3,095,459

PRODUCTION OF ETHYLENE DIBROMIDE

Orjaex Schachter and Abraham Baniel, both of Haifa, Israel, assignors to Mekhkarvei Israel, Haifa, Israel

No Drawing. Filed Apr. 17, 1962, Ser. No. 188,260
Claims priority, application Israel Apr. 28, 1961
1 Claim. (Cl. 260—660)

A process for the production of ethylene dibromide wherein a bromide brine containing not less than 0.5 g./l. of bromide is chlorinated, the chlorinated brine is extracted with tetrabromoethane, the tetrabromoethane extract is separated from the brine, ethylene is introduced into the extract and the ethylene dibromide thereby formed is separated from the tetrabromoethane by distillation.

3,095,460

PREPARATION OF STABILIZED MAGNESIUM ALKYLS

George A. Olah, Sarnia, Ontario, Canada, assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Oct. 25, 1961, Ser. No. 147,460
3 Claims. (Cl. 260—665)

1. In a process for preparing stabilized magnesium alkyl compounds in the absence of ether which comprises reacting in a liquid hydrocarbon carrier and in the presence of a catalyst at a temperature of from about 50° C. up to reflux a mixture of comminuted magnesium and an organic halide selected from the group consisting of alkyl, cycloalkyl alkaryl and aryl halides, the mole equivalent ratio of said magnesium to said organic halide in said mixture ranging from about 0.8 to about 1, the amount of catalyst employed being from about 0.1 to about 3 mole percent of the total moles of said magnesium and said organic halide reactant present in said mixture and the volume of said liquid hydrocarbon based carrier ranging from about 1 to about 5 times the volume of said organic halide reactant the improvement which comprises employing as catalyst a mixture of a Friedel-Crafts Lewis acid metal halide catalyst and a metal hydride selected from the group consisting of alkali metal and alkaline earth metal hydrides wherein the mole ratio of the metal halide: metal hydride ranges from about 1.1 to 1.5.

3,095,461

PREPARATION OF 1-ALKENES

John B. Wilkes, Albany, Calif., assignor to California Research Corporation, San Francisco, Calif., a corporation of Delaware

No Drawing. Filed Jan. 5, 1961, Ser. No. 80,748
11 Claims. (Cl. 260—683.15)

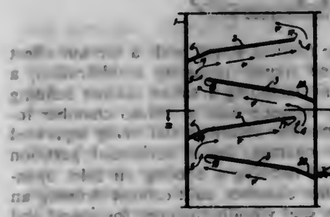
1. A process for the homo- and heteropolymerization of lower 1-alkenes which comprises contacting a 1-alkene feed containing less than six carbon atoms with a catalyst which comprises an alkali metal selected from the group consisting of potassium, rubidium, and cesium supported upon a crystalline porous material selected from the class consisting of alkali and alkaline earth metal silicates, effecting said contact at a temperature between about 150° F. to 400° F. and recovering a compounded 1-alkene having from five to twelve carbon atoms.

3,095,462

PLATE COLUMNS

Boris Pomper, Paris, France, assignor to The British Petroleum Company Limited, London, England, a British joint-stock corporation

Filed Mar. 22, 1960, Ser. No. 16,796
Claims priority, application France Mar. 25, 1959
11 Claims. (Cl. 261—113)



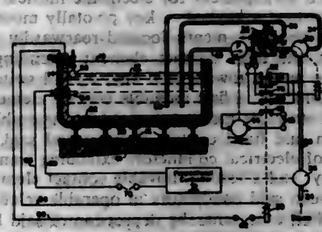
1. An improved liquid-vapour contacting column which comprises a casing and a series of superimposed plates, said plates being alternately inclined in opposite directions and secured to said casing at their lower ends, each plate having an overflow space between its upper edge and the casing of the column and each plate having a series of perforations, said perforations progressively decreasing in size down the plate so that when said column is in operation, the smallest perforations correspond to the greatest liquid depth, the rate of said progressive decrease in size of said perforations being such, in relation to the angle of inclination of the plate portion in which they are formed, that a substantially uniform flow of liquid through said perforations is maintained over the submerged portion of said plates.

3,095,463

TEMPERATURE CONTROL APPARATUS

Melvin C. Chang and David Goldstein, Pittsburgh, Pa., assignors to Crucible Steel Company of America, Pittsburgh, Pa., a corporation of New Jersey

Filed Mar. 12, 1958, Ser. No. 721,003
7 Claims. (Cl. 261—130)



7. In a liquid-containing tank, means to measure the level of liquid in the tank, first and second alternative heating means responsive to liquid level changes as detected by said liquid level measuring means to maintain the level of said liquid in said tank substantially constant, said first heating means comprising heat exchanger means to heat said liquid indirectly and said second heating means comprising injection means to heat said liquid directly, said first heating means being actuated when the liquid level is within a set range and said second heating means being actuated when the liquid level falls below said set range.

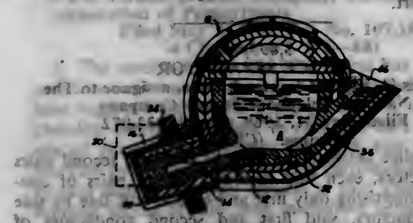
ELECTRICAL

3,095,464

FOREHEARTH OR HOLDING FURNACE FOR HEATING MOLTEN METALS, EQUIPPED WITH STIRRER AND INDUCTION HEATER

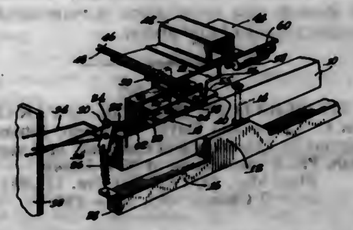
Aldo Tagliaferri, 59 Viale Certosa, Milan, Italy

Filed Aug. 3, 1960, Ser. No. 47,232
Claims priority, application Italy Feb. 11, 1960
8 Claims. (Cl. 13—29)



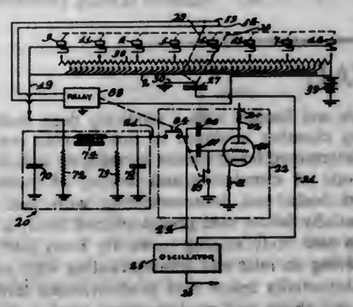
1. An induction holding furnace comprising a furnace body supported for tilting about a transversely extending axis and formed with a relatively deep molten metal holding chamber arranged to hold molten metal up to a predetermined level; means forming an induction heating loop, for circulation and heating of molten metal, in said body and communicating with said chamber substantially below said predetermined level; a first passage in said body sloping upwardly from said chamber and having an inlet end communicating with said chamber substantially below said predetermined level and an outlet end above said predetermined level; a second passage in said body sloping upwardly from said chamber and having an outlet end communicating with said chamber substantially below said predetermined level and a slag discharge outlet above said predetermined level and at a level higher than the outlet end of said first passage; a molten metal receiving vat on said body above said chamber; and a third passage in said body connecting said vat to the upper end of said second passage for delivery of molten metal into said chamber and discharge of slag through said slag discharge outlet.

3,095,465
SWITCH FOR ELECTRONIC MUSICAL INSTRUMENTS
Howard E. Holman, Corinth, Miss., assignor to The Wurlitzer Company, Chicago, Ill., a corporation of Ohio
Filed Oct. 8, 1959, Ser. No. 845,117
8 Claims. (Cl. 84—1.01)



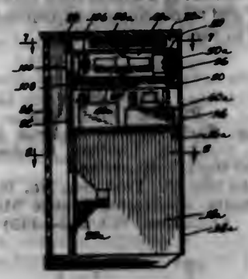
1. A switch arrangement for electronic musical instruments comprising: a keybed; a key pivotally mounted to said keybed; structure means located rearwardly of said key; at least one fixed contact element extending from said structure means toward said key; a rigid switch arm fastened to said key; a first movable contact element fastened to said structure means to extend into operable relationship with said fixed contact element and said switch arm; a pair of electrical conductors extending transversely of said key; and a second movable contact element extending between said conductors in operable relationship with said switch arm, whereby depression of said key repositions said first movable contact element with respect to said fixed contact element while simultaneously repositioning said second movable contact element with respect to said electrical conductors.

3,095,466
KEYBOARD FOR A MONOPHONIC INSTRUMENT WITH IMPROVED SOUND-SUSTAINING MEANS
Hugh Le Caine, Ottawa, Ontario, Canada, assignor to National Research Council, Ottawa, Ontario, Canada, a corporation of Canada
Filed Jan. 8, 1959, Ser. No. 785,706
2 Claims. (Cl. 84—1.11)



1. An electronic musical instrument comprising oscillator means for generating a tone at a pitch determined by the voltage of a signal received thereby, a frame, keyboard means on said frame for applying a signal of a selected voltage on said oscillator means and including voltage gradient means and a plurality of key and contact assemblies operable to tap said voltage gradient means at discrete fixed locations, coupling means connecting said keyboard means and said oscillator means, said key and contact assemblies including a first set pivoted on said frame spaced apart a distance to produce chromatic intervals and a second set more closely spaced than said first set and pivoted to said first set, and force sensitive capacitor means connected to said frame for controlling said oscillator means in response to pressure applied on any of said key and contact assemblies, said coupling means including a vacuum triode having an anode connected to a source of electrical power, a cathode connected to ground, and a grid connected to said oscillator means.

3,095,467
SOUND GENERATING MEANS
Harold O. Schwartz and Anthony C. Ippolito, North Tonawanda, and William V. Machanian, Niagara Falls, N.Y., assignors to The Wurlitzer Company, Chicago, Ill., a corporation of Ohio
Filed Feb. 13, 1961, Ser. No. 88,998
3 Claims. (Cl. 84—1.25)

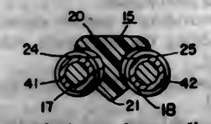


1. For producing musical sound with a vibrato effect from electronic tone signals requiring amplification, a sound generating unit including a sound cabinet defining therein an amplifier chamber and a vibrato chamber located above said amplifier chamber and being separated from the amplifier chamber by a horizontal partition member, said cabinet defining a cooling air inlet opening into said amplifier chamber, said cabinet defining an outlet opening from said vibrato chamber for sound and heated air, an electronic amplifier mounted in said amplifier chamber, said partition member defining a chimney opening therethrough located above said amplifier to allow air heated by said amplifier in said amplifier chamber to rise upwardly into said vibrato chamber, a speaker support mounted for rotation within said vibrato chamber about a generally vertical axis, a speaker electrically coupled to said amplifier and being mounted on said speaker support in spaced relation to said axis about which the support rotates, a motor connected to rotate said speaker support to move said speaker through an annular path, said vibrato chamber having a height which is only a fraction of the diameter of the annular path of the speaker, and said chimney opening through said partition being located closer to the axis of rotation of said support than is said outlet opening from the vibrato chamber so that air rising through said chimney opening is propelled outwardly through said outlet opening by the rotating speaker and support.

3,095,468
SPLICE SEPARATOR
Charles H. Klein, Cleveland, Ohio, assignor to The National Telephone Supply Company
Filed May 31, 1960, Ser. No. 32,972
2 Claims. (Cl. 174—88)

1. A splice between the ends of first and second pairs of conductors, each said first and second pairs of conductors comprising only first and second stiff side by side wire conductors, said first and second conductors of each said first and second pair having insulation thereabout which insulates said first and second conductors from each other and secures the same in said side by

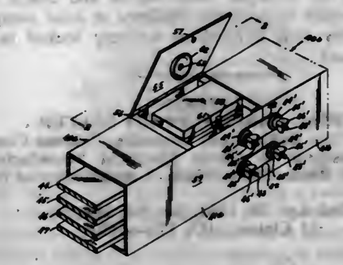
side relationship, said insulation between said first and second conductors of each said first and second pair being split to separate said first and second conductors a first distance from the ends thereof, said insulation around said first and second conductors of each said first and second pair being completely removed to bare said first and second conductors a second distance from the ends thereof which is less than said first distance, first and second sleeve members, said bared ends of said first conductors of said first and second pair residing in opposed ends of said first sleeve member to secure said first conductors together, said bared ends of said second conductors of said first and second pair residing in opposed ends of said second sleeve member to secure said second conductors together, said first and second conductors having a stiffness that resists separation of said first and second sleeve members beyond a separated distance whereby the conductors remain generally straight, a substantially rigid non-deformable splice separator, said splice separator consisting of an elongated insulation member in cross section having only first and second side portions and first and second end portions, first and second arcuate detent surfaces on said first and second



side portions, respectively, and extending longitudinally of said insulation member, each said first and second detent surface having a first entrance portion and a second entrance portion and an intermediate portion therebetween, said first entrance portion of said first and second detent surfaces being spaced apart a distance greater than the distance between said second entrance portions, said second entrance portions of said first and second detent surfaces being spaced apart a distance greater than said separated distance between said first and second sleeve members, said intermediate portions of said first and second detent surfaces being spaced apart a distance less than said distance between said first entrance portions and less than said distance between said second entrance portions, said second end portion having a dimension less than said distance between said second entrance portions, said first and second entrance portions and said intermediate portions of said first and second detent surfaces being rigid and fixedly disposed relative to each other, said stiffness of said first and second conductors urging said first and second sleeve members within said first and second detent surfaces, and tape means covering the length of said splice.

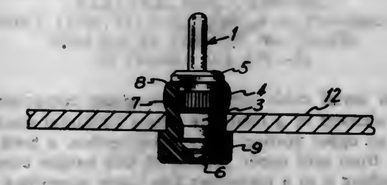
3,095,469
JOINT MEANS FOR BUS DUCT
John B. Cataldo, Bloomfield Hills, Mich., assignor to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed May 2, 1961, Ser. No. 107,161
4 Claims. (Cl. 174—88)

2. The combination comprising a first bus duct section and a second bus duct section in electrical series at a joint region; each of said bus duct sections comprising a plurality of elongated face to face bus bars mounted in spaced parallel relationship; said first bus duct section bus bars overlapping and abutting corresponding bus bars of said second bus duct section at said joint region; insulating means at said joint interposed between pairs of abutting bus bars; an anchoring means having opposite surfaces between which said joint region is disposed; a threaded force multiplying means operatively constructed and positioned to act upon a first of said surfaces and urge said bus bars toward the other of said surfaces to firmly seat abutting bus bars against each other and thereby achieve good electrical contact; each of the bus duct section including an elongated housing wherein said bus bars are disposed, said joint region being positioned and constructed whereby a first of said housings exerts a



reaction force opposing forces generated by tightening of said force multiplying means; a second wall of said housing including a cover hinged along a first edge thereof, said force multiplying means comprising a threaded member extending through said cover at a point near a second edge thereof opposite said first edge.

3,095,470
INSUALTED ELECTRICAL TERMINAL CONSTRUCTION
Hilliard Dozier, % U.S. Terminals Inc., 7508 Camargo Road, Cincinnati 43, Ohio
Filed Mar. 5, 1962, Ser. No. 177,581
3 Claims. (Cl. 174—153)



1. A terminal consisting of an insulator and an electrode, said insulator being formed from a distortable dielectric material and having a cylindrical body portion terminating at one end in an enlarged head, and an axial bore extending inwardly from the free end of said cylindrical body portion to at least within the area of said enlarged head, said electrode comprising an elongated pin inserted in said axial bore from the free end of the cylindrical body portion thereof, said electrode having a barbed shoulder the maximum diameter of which is greater than the diameter of the axial bore in said insulator, a tapered expansion shoulder lying beyond said barbed shoulder, said expansion shoulder having a maximum diameter which is greater than the maximum diameter of said barbed shoulder and terminating at its maximum diameter in an enlarged body part, and an essentially flat cap portion lying beyond said enlarged body part, said cap portion being of larger diameter than said enlarged body part but of no greater diameter than the outside diameter of the cylindrical body portion of said insulator, the axial spacing of said barbed shoulder, said tapered expansion shoulder, and said enlarged body part relative to each other and to said cap portion being such that when the cylindrical body portion of the insulator is inserted in a terminal receiving opening in a terminal board with the enlarged head seated against one face of the terminal board, and the cap portion of the electrode

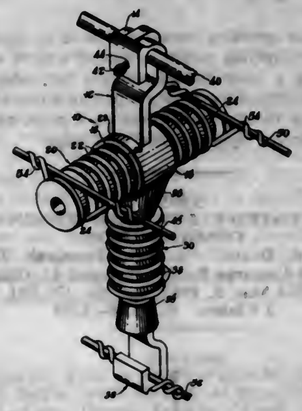
is seated against the free end of the cylindrical body portion of the insulator, the enlarged body part of the electrode lies to the side of the terminal board opposite the enlarged head of the insulator and expands the cylindrical body of the insulator radially outwardly, said tapered expansion shoulder lies in alignment with the circular opening in the terminal board, and said barbed shoulder is in biting engagement with the insulator in the area of the enlarged head thereof and coacts with said cap portion to hold the insulator in axial compression, whereby said terminal is securely locked to the terminal board.

3,095,471

AERIAL CABLE SUPPORT SPACER

George C. Price, Battle Creek Township, Calhoun County, Mich., assignor to Oliver Electrical Manufacturing Company, Battle Creek, Mich., a corporation of Delaware

Filed Apr. 20, 1961, Ser. No. 104,391
11 Claims. (Cl. 174—160)



4. An aerial cable support and spacer comprising a hanger element of a relatively strong structural material having an upper portion and a lower section, a hook extending from said upper portion of said hanger element for attaching it to a messenger line, cable supporting elements attached to opposite sides of said hanger element, said cable supporting elements being made of a vitrified insulating material, said lower section of said hanger element being formed to include a bore which passes through opposite sides of said hanger element, a rod of a vitrified insulating material being inserted within said bore and extending from opposite sides of said lower section to form said cable supporting elements, grooved sections being provided upon portions of said rod spaced from both sides of said lower section for retaining electrical cables which are inserted within them, said rod being cylindrically formed, and said grooved sections comprising peripheral grooves formed upon the ends of said rod remote from said lower section of said hanger element.

3,095,472

VIDEO RECORDING SYSTEM AND METHOD

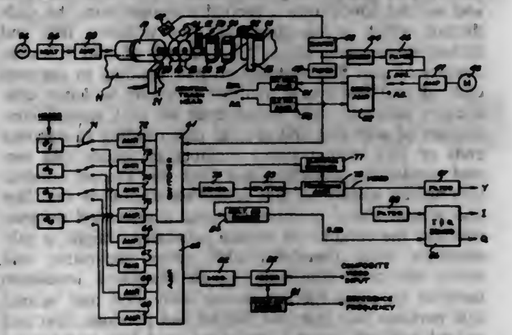
Ray M. Dolby, Cambridge, England, and Louis J. Kabell, Palo Alto, and Howard E. Murphy and Harold L. Walsh, Redwood City, Calif., assignors to Ampex Corporation, Redwood City, Calif., a corporation of California

Filed June 2, 1958, Ser. No. 739,051
5 Claims. (Cl. 178—5.4)

1. A magnetic recording system wherein a composite color video signal, including a color burst signal, is recorded on a magnetic medium and is subject to frequency and phase errors comprising:

means for deriving the color burst signal from the video signal during the record mode;

means for transforming the frequency of the burst signal to a frequency outside the band of the color



video signal to be recorded, the transformed signal providing a pilot signal;

means for providing a carrier signal;

means for adding the composite video signal and the pilot signal;

means for modulating the carrier signal with the added signal; and

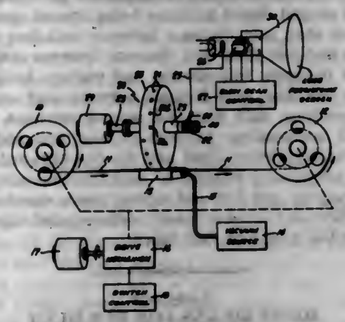
means for amplifying and recording the modulated signal on track portions of the magnetic medium.

3,095,473

EDITING SYSTEM FOR ELECTRONIC RECORDINGS

Joseph Roizen, Palo Alto, Calif., assignor to Ampex Corporation, Redwood City, Calif., a corporation of California

Filed May 16, 1960, Ser. No. 29,318
6 Claims. (Cl. 178—6.6)



1. Apparatus for monitoring information magnetically recorded along a plurality of successive tracks substantially transverse to the length of a magnetic tape comprising:

a drum;

a plurality of magnetic transducers mounted on and spaced around the circumference of the drum in lateral off-set relation with the circumferential spacing between successive transducers being equal to the length of the recorded tracks and with the lateral off-set between successive transducers being equal to the distance between center lines of successive recorded tracks;

means for rotating the drum to bring the transducers in sequence into scanning position with respective

sequential tracks of a selected stationary portion of the tape;

means for displaying the information of the scanned tracks; and

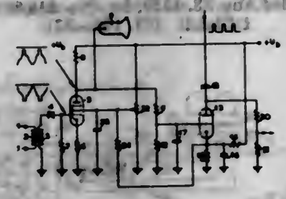
means for selectively moving the tape longitudinally past the drum between stationary scanning positions.

3,095,474

TELEVISION RECEIVER WITH CONTRAST CONTROL AND AGC-CONTROLLED VIDEO AMPLIFIER

Gerhard Förster, Hamburg-Stellingen, Germany, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Filed May 29, 1959, Ser. No. 816,894
6 Claims. (Cl. 178—7.5)



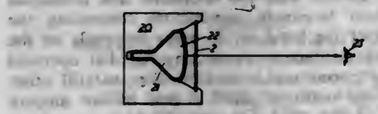
1. A television receiver comprising an amplifying device having an input circuit and an output circuit, a source of television signals having video signals negatively modulated on high frequency oscillations, means for demodulating said television signals to provide video signals having a direct current component, means applying said video signals with said direct current component to said input circuit, an image reproducing device, means connecting said output circuit to said image reproducing device, gain control means connected to said output circuit for maintaining the level of peak values of said video signals in said output circuit constant, means for varying the characteristics of said amplifying device to control the contrast of images on said reproducing device, said last-mentioned means providing a direct voltage having a value dependent upon the contrast of said image, and means applying said direct voltage to said gain control means to control the level at which said peak values of said video signals are maintained.

3,095,475

SMOOTHING SPATIALLY DISCONTINUOUS IMAGES

David George Brake, Langley, England, assignor to Technicolor Corporation of America, a corporation of Maine

Filed Sept. 14, 1960, Ser. No. 56,017
8 Claims. (Cl. 178—7.85)



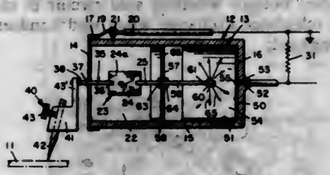
1. In combination with means for producing at an image surface a real spatially discontinuous image including discrete image elements, optical diffracting means having periodic optical variation on an axis along which the said real image is discontinuous so as to produce from each pencil of light incident thereon at least two pencils of emergent light, said diffracting means being disposed at such a distance from the image surface that at least two resultant images of every image element, each corresponding to at least one of the said pencils, are produced.

3,095,476

VARIABLE CAPACITANCE TRANSDUCER WITH A RADIOACTIVE BATTERY

Joseph W. Crownover, Sherman Oaks, Calif., assignor, by mesne assignments, to Gulton Industries, Inc., a corporation of New Jersey

Filed Jan. 8, 1954, Ser. No. 402,960
3 Claims. (Cl. 179—1)



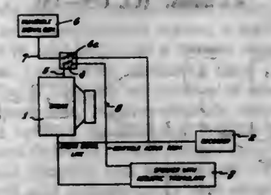
1. In a transducer, in combination: a circuit including a high voltage D.C. source comprising a radioactive battery having internal capacitance said battery comprising a cylindrical member and a radio active emitter centrally positioned within it; a variable capacitor in said circuit and means for physically adjusting the capacitor to vary the capacitance thereof; a container made of dielectric material having therein said radio-active battery and said variable capacitor, said capacitor being in close proximity to said radio-active battery and the radio-active battery having an electrode connecting with a fixed plate of the capacitor; and electrical resistance means in series with the capacitor and the high voltage source whereby upon physical adjustment of the capacitor to vary its charge storing capacity there is a transfer of energy between the capacitor and the capacitance of the high voltage source resulting in a substantial voltage drop across the electrical resistance means.

3,095,477

SYSTEM FOR RECORDING AND REPRODUCING ELECTRIC ORGAN MUSIC

Donald J. Leslie, 313 S. Fair Oaks Ave., Pasadena, Calif.

Filed Jan. 12, 1959, Ser. No. 786,151
15 Claims. (Cl. 179—1)



1. The process of recording the music of an electronic instrument which produces sound only by the aid of a speaker system including acoustic apparatus for imparting tremulant, which comprises: producing, by the aid of the instrument, electrical impulses corresponding to musical tones that are free of acoustic effects, and independently of the production of audible sound; intercepting the impulses so produced at a stage in advance of the speaker system and recording the impulses on a record; controlling the operation of the acoustic apparatus; producing a signal in accordance with the operation of said acoustic apparatus; and recording the signal on said record.

3,095,478

TELEPHONE ALARM DEVICE

Wayne W. Adams, Tulsa, Okla., assignor, by mesne assignments, to Frontier Manufacturing Company, Tulsa, Okla., a corporation of Oklahoma

Filed Mar. 25, 1960, Ser. No. 17,701
7 Claims. (Cl. 179—5)

1. A telephone alarm device for use in connection with a telephone subset to automatically make connection to

ring a pre-selected number, said telephone subset having a handset and handset buttons and wherein said telephone subset is connected by a circuit to a telephone exchange comprising, in combination:

a handset arm extending beneath said handset;

a handset solenoid affixed to said arm to actuate said arm to lift said handset from engagement with said handset buttons whereby said circuit is closed with said telephone exchange when said handset solenoid is engaged;



a button arm extending to engage said handset buttons;

a button solenoid affixed to said button arm to actuate to depress said handset buttons when said button solenoid is energized;

means of energizing said handset and solenoid;

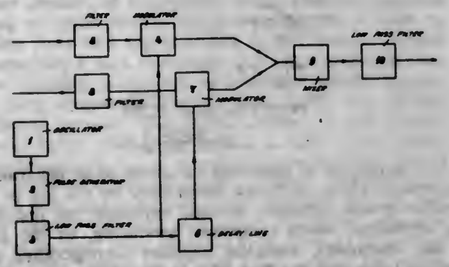
and means of sequentially energizing said button solenoid whereby said handset buttons are sequentially depressed to open and close said circuit whereby a predetermined number is selected and rung by said telephone.

3,095,479

SIGNAL TRANSMISSION AND RECEIVING SYSTEM, MORE PARTICULARLY FOR USE IN TELEVISION

Louis Le Blan, Paris France, assignor, by mesne assignments, to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Filed Oct. 18, 1954, Ser. No. 462,996
Claims priority, application France Nov. 13, 1953
4 Claims. (Cl. 179—15)



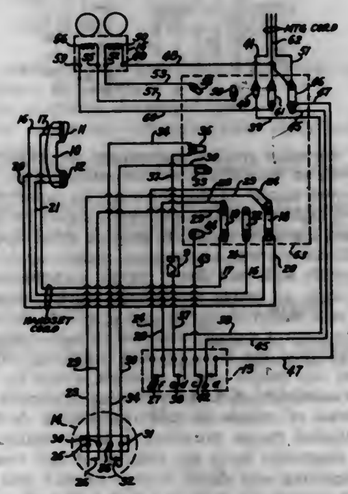
1. A system for transmitting and receiving two simultaneous input signals, comprising a transmitter having a source of said two signals and means for producing a carrier wave of which the positive-polarity excursions are amplitude modulated by one of said input signals and of which the negative-polarity excursions are amplitude modulated by the other of said input signals, a receiver, and means for transmitting said modulated carrier wave to said receiver, said receiver comprising means for producing from said modulated carrier wave an alternating sampling signal synchronized with the frequency of said carrier wave, and two demodulator means respectively connected to periodically sample, under the control of said sampling signal, the amplitudes of said positive-polarity excursions and of said negative-polarity excursions, thereby reproducing both of said input signals, said demodulator means comprising a pair of demodulator stages, means for feeding the received carrier wave as an input to said demodulator stages, and means for feeding said sampling signal as a second input to said demodulator stages, the sampling signal which is fed to one of said demodulator stages being in phase with the positive-polarity excursions of said carrier wave and the sampling signal which is fed to the other of said demodulator stages being in phase with the negative-polarity excursions of said carrier wave.

3,095,480

TELEPHONE PARTY LINE CLEARING COMPONENT

Leland B. Popejoy, 2620 Princeton St., North Sacramento 15, Calif.

Filed Aug. 28, 1959, Ser. No. 836,801
1 Claim. (Cl. 179—32)



A circuit arrangement for intentionally disconnecting a subscriber's station including a hand set having a receiving end and a transmitting end connected in a bridge circuit, a support upon which said hand set normally rests, a pair of circuit making and breaking devices in said support held closed by the hand set when in position on the latter, and a dial operated pulse sending circuit maker and breaker on said support, from a telephone line; comprising a network panel having a plurality of terminals thereon with the telephone line connected to two of said terminals, conductors connecting the bridge circuit of the hand set to other terminals on the network panel, conductors connecting the dial operated pulse sending circuit maker and breaker to still other terminals on the network panel, a fuse of low ampere rating, and a circuit for connecting the bridge circuit of the hand set and the fuse across the telephone line comprised on one side by a conductor from one terminal for the telephone line to one side of a first circuit maker and breaker in the support, a conductor from the other side of the first circuit maker and breaker to one terminal corresponding to a first terminal for the handset, and on the other side by a conductor from the other terminal for the telephone line to one side of the other circuit maker and breaker in the support, a conductor from the other side of the latter circuit maker and breaker to the fuse, a conductor from the fuse to one of the terminals

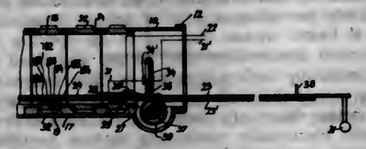
to which a conductor from the dial operated pulse sending circuit maker and breaker is connected, over the latter conductor, through the dial operated pulse sending circuit maker and breaker, and over the other conductor from the dial operated pulse sending circuit maker and breaker to still another terminal corresponding to a second terminal for the handset, whereby a heavy current may be sent over the telephone line to blow the fuse and open the circuit through the circuit making and breaking devices in the support with the handset off the latter.

3,095,481

DIALING ARRANGEMENT FOR TELEPHONE APPARATUS

Hermann Ries, 180 Sebaldsbruecker Heerstrasse, Bremen, Germany

Filed June 10, 1958, Ser. No. 741,184
6 Claims. (Cl. 179—90)



1. A dialing arrangement for impulse controlled telephone apparatus, comprising, in combination, a housing; a plurality of annular selector means respectively associated with the orders of a telephone number and being mounted on said housing for independent turning movement about a common axis, each selector means including a set of control means spaced along a circle on the inner surface of the respective selector means, each control means having a number of axially spaced actuating means corresponding to a digit, each selector means being turnable about said axis independently of the other selector means between a plurality of positions in which selected control means are aligned in axial direction so that said actuating means are located on a straight axially extending path; feeler means movable parallel to said axis and along said path between a first position at least partly located within said selector means and a second position located at least partly outside of said selector means, said feeler means including impulse creating means having an impulse creating condition and an inoperative condition, said feeler means cooperating successively with said actuating means of said selected control means during movement along said path, each actuating means placing said impulse creating means in said impulse creating condition when cooperating with said feeler means; and circuit means for electrically connecting said impulse creating means with said impulse controlled telephone apparatus.

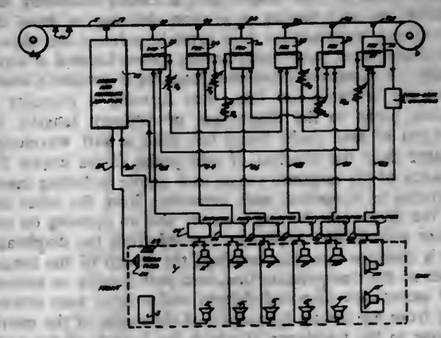
3,095,482

METHOD OF AND APPARATUS FOR SIGNAL REPRODUCTION

Joseph S. Whiteford, Seabrook, N.H.

Filed May 8, 1959, Ser. No. 811,937
16 Claims. (Cl. 179—100.2)

1. Sound-reproducing apparatus having, in combination, a plurality of time-sequentially operative sound-reproducing channels, a plurality of loud-speakers distributed in positional sequence corresponding to the time sequence of the operation of the reproducing channels, each loud-speaker corresponding to and being connected with the corresponding reproducing channel, means for pre-adjusting the level of each sound-reproducing channel to successively lower predetermined values to correspond to the successive positional separations of the loudspeakers, a plurality of further connections disposed between each channel and one or more randomly selected non-corresponding loudspeakers, and means for adjusting the level of signal fed along each further connection from



each channel to a randomly selected non-corresponding loudspeaker to a value corresponding to the said pre-adjusted level of that channel.

3,095,483

HEARING AID DEVICE

Raleigh E. Treise, Chagrin Falls, and Paul D. Kendall, Gates Mills, Ohio, assignors to Paravox, Inc., Cleveland, Ohio

Filed Mar. 23, 1956, Ser. No. 573,474
5 Claims. (Cl. 179—107)



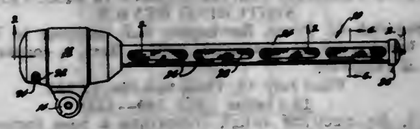
1. A spectacle hearing aid device comprising an ophthalmic member and a temple member pivotally attached on each side thereof, each temple member comprising a shell-like body defining compartment means, hearing aid circuitry in said compartment means, a battery compartment formed in said body and a battery disposed therein, cover means completely enclosing said compartment means, said body defining an opening at one side of said battery compartment, a cover slidably mounted on said body at said opening to close said battery compartment, resilient means disposed in said battery compartment connected to said circuitry and biasing said battery into engagement with said slidable cover, and switch means connecting said battery to said circuitry comprising a contact member attached to said temple member and connected to said circuitry and a contact attached to the inner side of said slidable cover and engaging said battery and said contact member to connect the battery to said circuitry.

3,095,484

UNIDIRECTIONAL MICROPHONE

Wayne A. Beaverson, Buchanan, and Robert C. Ramsey, Niles, Mich., assignors to Electro-Voice, Incorporated, Buchanan, Mich., a corporation of Indiana

Filed Oct. 22, 1959, Ser. No. 848,120
10 Claims. (Cl. 179—115.5)



1. A microphone responsive through a frequency range comprising an electroacoustical transducer having a

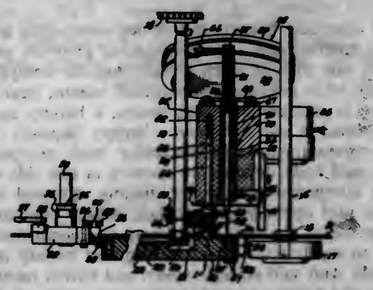
diaphragm, said transducer generating an electrical signal responsive to the difference in pressures exerted on opposite sides of the diaphragm, a casing enclosing said transducer and having a portion defining at least one acoustical transmission line extending from one side of the diaphragm, said casing having means located at a plurality of distances from the diaphragm to admit sound into the transmission line, thus forming a plurality of sound paths to the diaphragm of different lengths, the longest of said paths being less than a half wavelength longer than the shortest of said paths at the lowest frequency of the response range, said casing including means defining an acoustical path extending from the other side of the diaphragm having a cavity and an opening on said other side of the diaphragm spaced from the diaphragm by a distance less than one-half the length of the longest path of the transmission line, said path having an acoustical impedance disposed therein and a band pass extending from the lowest frequency of the range of the microphone to the frequency at which the longest of the paths of the transmission line is a half wavelength, the volume of said cavity and the magnitude of said impedance comprising means for producing an acoustical phase shift approximately equal to the shift in phase of a sound wave in said pass band traveling between the diaphragm and opening whereby the microphone achieves a directional response in the portion of the frequency range of the microphone covered by the band pass of said acoustical path to said other side of the diaphragm.

3,095,485

PROGRAMMER

Paul H. Rowe, Jr., Los Angeles, Calif., assignor, by mesne assignments, to Maas-Rowe Carillons, Los Angeles, Calif., a co-partnership

Filed July 5, 1961, Ser. No. 121,960
10 Claims. (Cl. 200—35)



1. In an electrical control system: means forming a series of contact members; a movable probe; a contact member movable in unison with the probe to cooperate with any one of the series of contact members; means for limiting the movement of the probe; said limiting means including a member having a succession of recesses into which the probe may enter, and having pre-selected depths; and means for operating the probe contact member into contact with one of the series of contact members.

3,095,486

MINIATURIZED PRINTED CIRCUIT ELECTRICAL SWITCHING DEVICE

Frederick G. Perry, Barrington, R.I., assignor to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware

Filed July 14, 1960, Ser. No. 42,902
15 Claims. (Cl. 200—122)

1. An electrical switch comprising a base formed of electrically insulated material, said base having at least two elongated electrically conductive portions comprising layers of electrically conductive material adhered to one side of said electrically insulating base and arranged in spaced electrically insulated relation, a first one of said portions providing a stationary electrical contact; a thermally responsive element conductively connected to a second one of said conductive portions and operatively associated with electrical contact means for movement of the latter into and out of engagement with said stationary electrical contact; a third electrically conductive surface



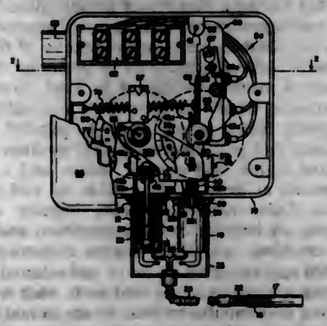
portion on said base in spaced, electrically insulated relation to said first and second electrically conducting surface portions, said first and third conducting portions respectively providing a pair of spaced terminals; and electrical heater means disposed in an opening in said base located intermediate said second and third electrically conducting surface portions in close thermal juxtaposition to said thermally responsive element; said heater means being electrically connected between said second and third electrically conducting surface portions.

3,095,487

CONTROL APPARATUS

Veikko J. Jokela, Plymouth Village, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Filed Dec. 28, 1959, Ser. No. 862,273
11 Claims. (Cl. 200—140)



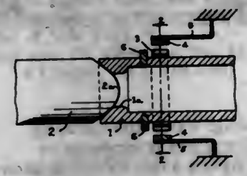
1. A temperature indicating controller, the combination comprising: a housing; a force transfer mechanism operatively connected to said housing and including a first lever and a second lever, said first lever arranged to be rotated about a first axis, said second lever pivotally carried by said first lever and arranged to be rotated about a second axis perpendicular to said first axis; a first fluid filled expansible chamber responsive to a temperature sensed by a remote bulb operatively connected thereto as well as responsive to ambient temperature, said first expansible chamber being operatively secured to said housing and including an output member acting on a portion of a first arm of said second lever removed from the second axis thereof, a second fluid filled expansible chamber responsive to ambient temperature only, said second chamber being operatively secured to said housing and including an output member parallel to the output member of said first chamber and acting on said first lever and through the second axis of said second lever; a snap switch including a plunger disposed in said housing and arranged to be rotated about a third axis parallel to said second axis; a second arm of said second lever perpendicular to the first arm thereof disposed proximate to the plunger of said switch; temperature control point setting means, including indicia means, for positioning said switch about said third axis; actual temperature indicating means including indicia means and further including a pinion supported from said first lever and a gear sector provided on said second lever, said temperature indicating means arranged to be positioned upon relative movement betwen said first lever and said second lever caused by a change in temperature sensed by the bulb; said indicia means arranged with respect to said housing so the temperature control point and the actual temperature are each displayed through appropriate openings in said housing; said switch arranged to be actuated by the second arm of said second lever as a result of rotation thereof caused by the temperature control point being sensed by the bulb, changes in ambient temperature being effective to vary the length of the lever arm between the second axis of said second lever and the portion of the second arm thereof arranged to cooperate with said switch to thereby effectively compensate for said changes in ambient temperature.

3,095,488

COMPRESSED AIR SWITCH WITH ELECTRICALLY CONTROLLED BLASTING OF THE SWITCHING GAPS

Adolf Eldinger, Nussbaumen, Switzerland, assignor to Brown, Boveri & Cie, Aktiengesellschaft, Mannheim, Germany, a joint-stock company

Filed June 21, 1961, Ser. No. 118,686
Claims priority, application Germany June 29, 1960
3 Claims. (Cl. 200—148)



1. In a compressed air electrical switch the combination comprising a pair of contact members, one of said contact members being a pin contact and the other of said contact members being a nozzle contact, said contact members being relatively movable towards and away from each other to effect engagement and disengagement respectively, a ring of ferromagnetic material surrounding said movable contact member and spaced therefrom to permit said movable contact member to be displaced longitudinally of itself, said ferromagnetic ring being provided with at least one gap extending radially, and an armature member magnetically attractable into said gap only when the current through said movable contact member reaches a predetermined maximum amplitude, said armature member when attracted into said gap being cooperative with means provided on said movable contact member to block further movement thereof in the contact disengaging direction and thereby hold the nozzle of said movable contact member in a spaced quenching position from the end of said pin contact member.

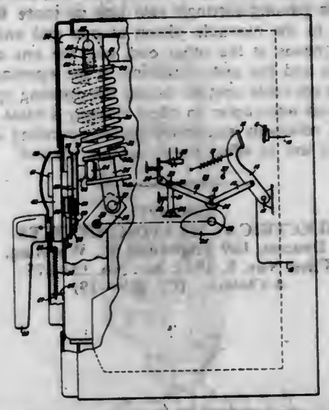
3,095,489

MANUAL CHARGING MEANS FOR STORED ENERGY CLOSING MECHANISMS OF ELECTRIC CIRCUIT BREAKERS

Leslie L. Baird, Swarthmore, Pa., assignor to General Electric Company, a corporation of New York

Filed Oct. 20, 1960, Ser. No. 63,802
10 Claims. (Cl. 200—153)

1. In an electric circuit breaker: a pair of separable switch contacts; first means for moving one of the switch contacts from an open circuit position to a closed circuit position; stored energy actuating means, including a spring; second means coupling the actuating means to said first means for operating the first means upon discharge of the spring; and charging means for stressing said spring, the charging means comprising a ratchet wheel connected to said spring so as to stress the spring upon predetermined rotation of the wheel, a pair of reciprocating pawls



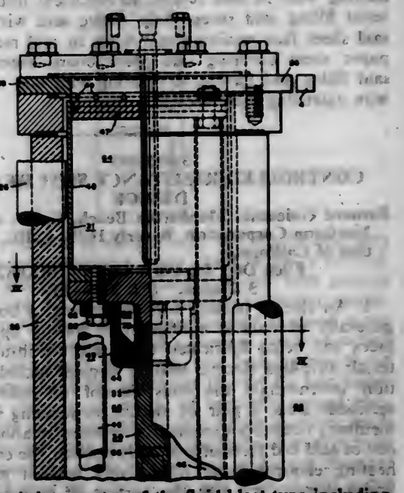
mounted in driving engagement with said wheel, said pawls being alternately operated to rotate the wheel in a step-by-step manner, and a manual operating handle mounted for oscillatory movement in a plane which is substantially perpendicular to the plane of movement of said one switch contact, said handle being connected to said pawls so as to operate both of them in turn during each oscillation of the handle.

3,095,490

CIRCUIT INTERRUPTERS

Charles F. Cromer, Penn Township, Westmoreland County, Jerome Sandia, Forest Hills, and Benjamin P. Baker, deceased, late of Monroeville, Pa., by Mellon National Bank and Trust Company, executor, Pittsburgh, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

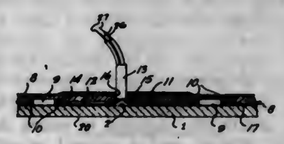
Filed Feb. 26, 1960, Ser. No. 11,175
11 Claims. (Cl. 200—148)



1. A circuit interrupter of the fluid-blast type including a relatively stationary contact and a cooperable movable

contact separable to establish an arc, a puffer mechanism including a relatively stationary conducting puffer operating cylinder and a movable piston movable therein, the relatively stationary puffer operating cylinder supporting said relatively stationary contact adjacent one end thereof, said conducting puffer operating cylinder having one or more openings therein, operating means for actuating said movable contact to the open-circuit position, one or more piston rods passing through said one or more openings connected to the movable piston at one end and to the operating means at the other end, and the one or more piston rods and the piston moving in the opening direction of the movable contact during the opening operation of the circuit interrupter to effect thereby a blast of fluid out of the relatively stationary puffer operating cylinder toward said arc to effect the extinction thereof.

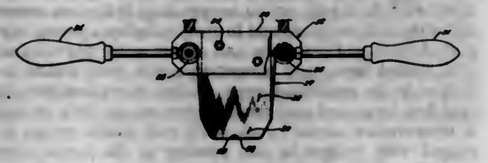
3,095,491
ELECTRICAL HEATING DEVICES
George P. Deacon, 169 Edgewood St., Wheeling, W. Va.
Filed Nov. 9, 1961, Ser. No. 151,275
4 Claims. (Cl. 219—19)



2. An electrical radiaant heating panel comprising a rectangular electrical insulating and thermal conducting sheet of plasterboard, said sheet having a continuous recess in a face thereof with parallel straight spaced apart portion extends lengthwise of said sheet parallel to, but spaced from, the side edges thereof with said lengthwise portions joined at their opposite ends by end portions of said recess extending parallel to, but spaced from, the end edges of said plasterboard sheet, an electrical heating wire extending lengthwise of said sheet recess with the opposite ends of said wire terminating adjacent one another in said recess, non-heating electrical conducting wires extending from said sheet recess, means connecting each end of said heating wire to an end of said non-heating wire in said recess, an electrical insulating material filling said recess only above said wires level to said sheet face retaining said wires in said recess, and a paper sheet covering said plasterboard sheet face and said filling and having an opening with said non-heating wire extending therethrough.

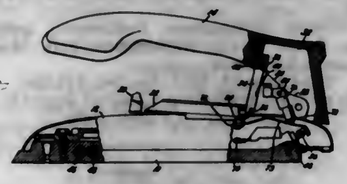
3,095,492
CONTROLLED RESISTANCE SPOT HEATING DEVICE
Bernerd Galeanié, Manhattan Beach, Calif., assignor to Northrop Corporation, Beverly Hills, Calif., a corporation of California
Filed Dec. 26, 1961, Ser. No. 162,082
3 Claims. (Cl. 219—21)

1. An electric heating unit comprising: a body portion generally of cubical configuration having opposed end faces and being fabricated of an electric insulating material; strip-like electric heating element including a portion intermediate the ends thereof of reduced cross-sectional area; a pair of electric conducting cylindrical members rotatably mounted in opposed relation adjacent one of said end faces of said body portion; the ends of said heating element being respectively secured to said cylindrical members with the portion of said heating element of reduced cross-sectional area being in full contact with the other one of said end faces; and a pair of handles one of which is fixedly secured to a respective cylindrical



member extending radially thereof and functioning to provide means whereby slack may be removed from said electric heating element.

3,095,493
DUAL VOLTAGE FLATIRON
Arthur C. Downing, Ontario, Calif., assignor to General Electric Company, a corporation of New York
Filed Jan. 16, 1962, Ser. No. 166,571
9 Claims. (Cl. 219—25)

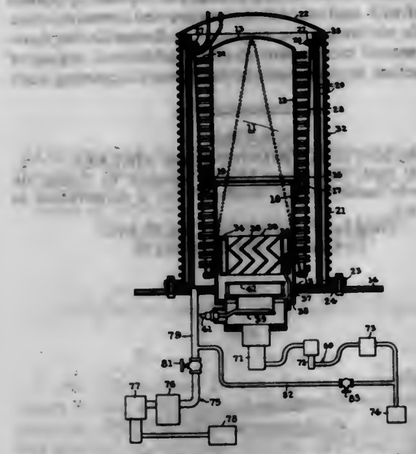


1. A dual voltage travel iron including,
(*a*) a plurality of heater elements,
(*b*) a switch having a low voltage position wherein said heater elements are connected to be operated at the lower of the two voltages and having a high voltage position wherein said heater elements are connected to be operated at the higher of said two voltages.
(*c*) a movable handle for manipulating the iron adapted to be moved from a raised operative position to a collapsed stowage position,
(*d*) means actuated by said handle to automatically place said switch in the high voltage position when the handle is placed in the stowage position, and
(*e*) manually operable means to return said switch to the low voltage position.

3,095,494
ULTRA HIGH VACUUM DEVICE
Richard A. Denton, Haddonfield, N.J., and Michael P. Rivera, Palo Alto, Calif., assignors to The New York Air Brake Company, a corporation of New Jersey
Filed Feb. 25, 1960, Ser. No. 11,011
6 Claims. (Cl. 219—35)

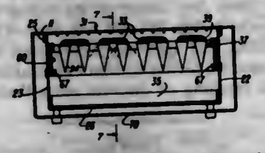
1. In combination, an inner casing enclosing a vacuum chamber having an outlet port; at least one penetration through the wall of the inner casing; a nonhermetic, bakeable seal for each penetration; means for heating the inner casing; an outer casing enclosing a space surrounding each sealed penetration; a first pumping system capable of operating at pressures at least as low as 1×10^{-9} mm. Hg and connected with the outlet port for evacuating the vacuum chamber; and a second pumping system connected with the space enclosed by the outer casing for evacuating it to a pressure at least as low as 1×10^{-3} mm. Hg, each sealed penetration providing a leakage path

whose conductance is correlated with the pumping speed of the first pumping system, the rate of evolution of ad-



sorbed gases from the walls of the inner casing and the pressure in the space enclosed by the outer casing.

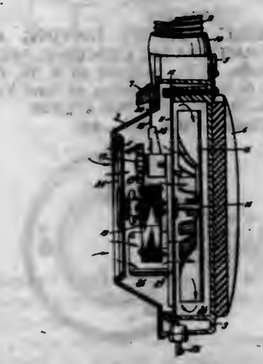
3,095,495
FOOD BROILING DEVICE
John Gvozdjak, Calumet City, and Roy M. Onischak, Chicago, Ill., assignors to General Electric Company, a corporation of New York
Filed Apr. 28, 1960, Ser. No. 25,312
4 Claims. (Cl. 219—35)



1. In cooking apparatus comprising a casing, an electrical resistance heating unit disposed within said casing, said heating unit comprising a heat source encased within a tubular metal sheath for radiating heat energy, said sheath being configurated in a sinuous pattern including a plurality of straight run sections in mutually spaced relation; the invention comprising a radiant energy shield disposed below each of said straight run portions, each of said shields comprising a substantially convex face exposed to the heating unit above, depending inturned sidewalls extending from said convex face, said convex surface and said inturned sidewalls combinedly deflecting or absorbing all downwardly directed radiant energy from the straight run above said shield and from the next adjacent runs.

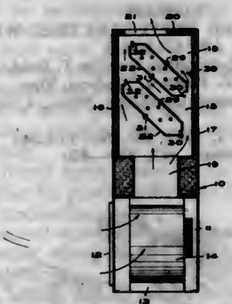
3,095,496
HAIR DRYER
William A. Omohundro, Fairfield, Conn., assignor to General Electric Company, a corporation of New York
Filed July 1, 1960, Ser. No. 40,254
13 Claims. (Cl. 219—39)

12. A portable hair dryer assembly comprising first and second molded portions which cooperate together to form the hollow interior of a housing, curved wall means extending within the housing from said second housing portion toward said first housing portion, a flat plate having an orifice therein and having a shape conforming to said curved wall means, said plate extending in a direction perpendicular to said wall means to form first and second compartments in cooperation with said first and second housing portions respectively, a motor supported by said plate and positioned within said first compartment, said motor having an output shaft extending through said plate orifice, a centrifugal fan positioned within said curved wall means in said second compartment and mounted on said shaft to be rotatably driven by said



motor, an air inlet in said first housing portion positioned so that air drawn in by said fan flows by said motor and through said plate orifice, an air outlet formed in said wall means and said housing in substantially tangential relation to the fan, and an electric heater fixed to said plate and positioned within said air outlet so that the forced air output of said fan is heated as it leaves said housing.

3,095,497
ELECTRIC HOT AIR FURNACE
Thomas Stanley Martin, 1068 Dunsmure Ave., Hamilton, Ontario, Canada
Filed May 8, 1962, Ser. No. 193,195
2 Claims. (Cl. 219—39)



1. An air furnace of the character described comprising a vertical housing having a lower chamber and a vertically extending upper chamber therein, an air inlet passage in said housing for said lower chamber, a blower mounted in said lower chamber for impelling air into said upper chamber, said housing having a passage interconnecting said upper and lower chambers, said housing having an air outlet opening in the upper end thereof for said upper chamber, a plurality of groups of vertically spaced electrical heating units mounted in said upper chamber, each group of heating units extending angularly upwardly from points adjacent one of the side walls of said upper chamber to points adjacent the other of the side walls of said upper chamber, a shell encompassing each of said groups of heating units, said shells each comprising a vertically ex-

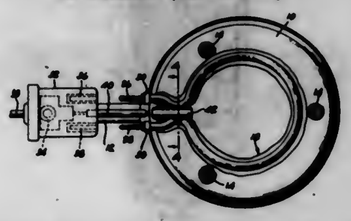
tending rear plate, a vertically extending front plate spaced from and parallel to said rear plate, and a plurality of horizontally extending shield members interconnecting the peripheral edge portions of related front and rear plates and having their ends in spaced relation to provide air inlet openings in the lower and under sides of each of said shells, and air outlet slots in the upper and top sides of each of said shells.

3,095,498

ELECTRIC COOKING UTENSIL HAVING A DETACHABLE THERMOSTATIC CONTROL MEANS

Hoyt K. Foster, Hollis, N.Y., assignor to S. W. Farber, Inc., New York, N.Y., a corporation of New York

Filed Nov. 30, 1954, Ser. No. 471,949
15 Claims. (Cl. 219—44)



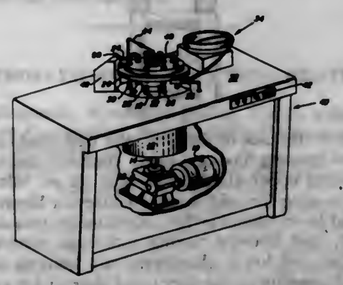
9. An electrical heating device comprising a member including a surface to be heated, electrical heating means for said member including electrical terminals, means on said member including a body having an elongated open-end cavity defining a temperature-sensing zone, said cavity being positioned between said terminals and having a diameter greater than the minimum thickness of said member, and electrical energy conducting and regulating means detachable from said device, said detachable means including terminals directly engageable with the first said terminals and a temperature-sensing projecting member, said member being of such length that it will enter said zone at least as soon as engagement is made between said engageable terminals.

3,095,499

CONTINUOUS DIAL FEED ELECTRIC WELDING APPARATUS

Harold R. Shurtleff, Lexington, Vaughn T. Judd, Framingham, and George E. Burdick, Hudson, Mass., assignors to Raytheon Company, Lexington, Mass., a corporation of Delaware

Filed June 1, 1961, Ser. No. 114,245
5 Claims. (Cl. 219—80)



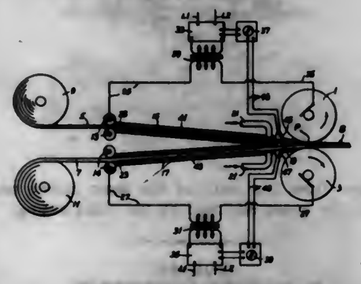
5. Electric welding apparatus comprising a base, supporting means rotatable on said base about an axis, a track on said base, opposed upper and lower sets of electrodes carried by said supporting means, one of the sets of electrodes being movable toward and away from the other set, cam means on said track for successively moving the individual electrodes in said movable set toward respective opposed electrodes, second cam means on said track adjacent said first cam means for successive engagement by said movable electrodes, and operating means connected with said second cam means and operable when a movable electrode is in engagement therewith for moving said second cam means to cause additional urging of the respective movable electrodes toward opposing electrodes.

3,095,500

SOLID-PHASE BONDING OF METALS

Ernest M. Jost, Attleboro, Mass., assignor to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware

Filed Jan. 11, 1961, Ser. No. 82,012
11 Claims. (Cl. 219—117)



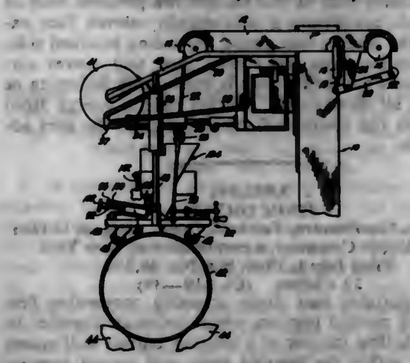
1. The bonding method comprising moving reaches of discrete metal portions toward squeeze means through individual paths extending from supplies for said reaches, individually electrically heating at least one of said reaches in its path to prepare it for solid-phase metallurgical bonding by raising its temperature to a degree different from that of the other but short of its liquid phase passing into the squeeze means at least one of said reaches which has been heated, and applying pressure on the metal portions in the squeeze means to effect pressurized solid-phase metallurgical bonding of discrete parts thereof.

3,095,501

FULL FLOATING WELDING HEAD CARRIAGE FOR WELDING CYLINDRICAL OBJECTS OF RELATIVELY LARGE DIAMETER

Robert G. Goekler and William B. Handwerk, Tulsa, Okla., assignors to Cross-Perrault Equipment Corporation, Tulsa, Okla., a corporation of Oklahoma

Filed Apr. 10, 1961, Ser. No. 101,968
14 Claims. (Cl. 219—124)



1. A welding apparatus for workpieces having irregular surface contours comprising a support; a carriage suspended with the support; means for lowering and raising the carriage into and out of contact with the workpiece; and floating means operably suspending the carriage from the support to permit simultaneous vertical and horizontal movement of the carriage relative to the workpiece when the carriage is resting on the workpiece whereby the carriage is freely movable to compensate for the irregularities in the surface contours of the workpiece.

3,095,502

RESETTABLE INFORMATION STORAGE DEVICE

Donald S. Sikora, Moorestown, N.J., assignor to Monroe Calculating Machine Company, Orange, N.J., a corporation of Delaware

Filed July 13, 1961, Ser. No. 123,887
21 Claims. (Cl. 235—61.12)



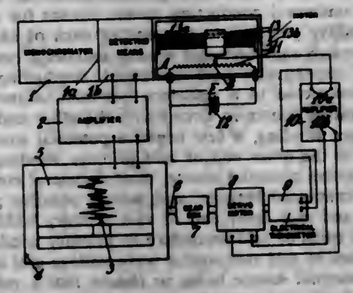
1. An information storage device comprising record means having a plurality of columns of information-representing members, each member being movable from a first position to a second position and from said second position to said first position, said member being secured to said record means in both said positions, and detenting means operable to block said member in at least one of said positions against movement to the other of said positions.

3,095,503

INFRARED SPECTROMETER RECORDER WHEREIN THE SPECTRA IS RECORDED ON A LINEAR WAVENUMBER SCALE

Albert E. Martin, Walkergate, Newcastle-upon-Tyne, England, assignor to Sir Howard Grubb Parsons & Company Limited, Newcastle-upon-Tyne, England

Filed Aug. 4, 1960, Ser. No. 46,627
Claims priority, application Great Britain Aug. 27, 1959
3 Claims. (Cl. 250—43.5)



1. In a spectrometer having means for forming a spectrum and driving means for traversing the spectrum across the exit slit whereby a narrow band of wavelength can be isolated and including detecting means receiving radiation from said exit slit to produce an electrical signal proportional to the energy associated with each wavelength and recording means incorporating a movable chart and a relatively fixed recorder responsive to the magnitude of the signal from the detecting means for recording the signal on the chart, the provision of means for moving the chart at a varying speed proportional to

$$\frac{d\lambda}{dt}\,\frac{1}{\lambda 2}$$

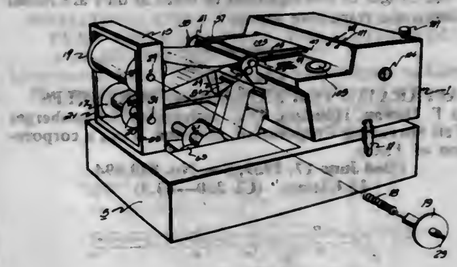
where λ is the wavelength focussed on the exit slit.

3,095,504

OSCILLOGRAM DUPLICATOR PAPER TRANSPORT

Edward Lynn, Bristol, Pa., assignor to the United States of America as represented by the Secretary of the Navy

Filed Dec. 29, 1960, Ser. No. 79,472
1 Claim. (Cl. 250—65)
(Granted under Title 35, U.S. Code (1952), sec. 266)

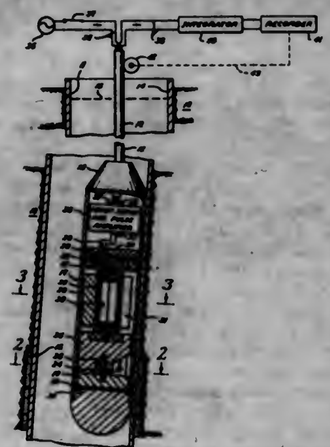


A portable duplicating machine which may be used in the reproduction of oscillograms, the machine comprising in combination:

(*a*) a base member having a cover which is partially cutaway to provide an enlarged port therein;
(*b*) a frame removably fastened in an upright position to the base member at its open end;
(*c*) a first spool designed to hold an oscillogram;
(*d*) a spring biased pin for rotatably securing the first spool to the frame;
(*e*) a second spool positioned on the frame above the first spool and being adapted to receive a copy paper;
(*f*) a second spring biased pin for rotatably securing the second spool to the frame above the first spool;
(*g*) a duplicating means located on the cover of the said base member, said duplicating means being adapted for receiving the oscillogram and the copy paper from their respective spools;
(*h*) a first pair of rollers suitably attached to the said cover through which both the oscillogram and the copy paper are threaded for maintaining tension upon both the oscillogram and copy paper whereby the copy paper is pressed upon the oscillogram;
(*i*) a third spool placed on the bottom of the base member for receiving the oscillogram as it exits from the duplicating means;
(*j*) a first shaft passing through the third spool for rotatably attaching the said third spool to the base member;
(*k*) a fourth spool placed on the bottom of the base member for receiving the copy paper as it exits from the duplicating means;
(*l*) a second shaft passing through the fourth spool for rotatably attaching the fourth spool to the base member;
(*m*) a second pair of rollers suitably attached to the base member, through which both the oscillogram and the copy paper are threaded, for maintaining tension upon both the oscillogram and copy paper as they are being wound upon the third and fourth spools respectively;
(*n*) a first pulley connected to one end of the said first shaft;
(*o*) a second pulley connected to one end of the said second shaft;
(*p*) an electric motor attached to the base member;
(*q*) an armature shaft attached to the motor and extending therefrom;
(*r*) a third pulley joined to the end of the armature shaft and
(*s*) a tension spring belt placed over the three pulleys,

said belt being positioned so that if the motor turns above a predetermined speed the belt will stretch and thereby slip causing it to disengage the first and second pulleys thereby coordinating the speed of the receiving spools to the speed of the duplicating means thereby serving to maintain both the oscillogram and the copy paper in a taut condition thereby eliminating the danger of tearing either of them as they are rolled onto the respective spools.

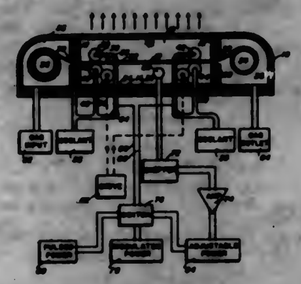
3,095,505
APPARATUS FOR EXPLORING BOREHOLES
John T. Dewan, Houston, Tex., assignor to Schlumberger Well Surveying Corporation, Houston, Tex., a corporation of Texas
Filed June 17, 1959, Ser. No. 820,994
15 Claims. (Cl. 250—83.3)



1. Apparatus for exploring boreholes comprising: a support adapted to be passed through a borehole and slide along a side of the borehole; radiant energy means and shield means carried by said support and operatively associated with one another to provide a radial directional radiation pattern with respect to a vertical axis for said apparatus, at least one of said means being mounted for rotation about said axis to permit effective rotation of said pattern about said axis; and means coupled to said one means for aligning said pattern in a selected orientation with respect to the shortest radial distance between said axis and the sidewall of the borehole.

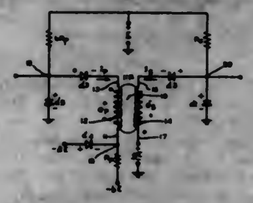
3,095,506
INFRARED RADIATING SOURCE
Davis R. Dewey, Lincoln, and Louis Kopito, Brookline, Mass., assignors to Baird-Atomic, Inc., Cambridge, Mass., a corporation of Massachusetts
Filed Apr. 24, 1961, Ser. No. 105,036
6 Claims. (Cl. 250—83.3)

1. A source of infrared radiation comprising a housing providing a chamber, at least one wall of said chamber being an infrared radiation window and remaining walls of said chamber being coated with a reflecting metal, at least a pair of graphite mounts in said chamber, a graphite fabric sheet carried by said mounts, fluid conduits composed of metal supporting said mounts for transmitting a coolant therethrough, electrical supply means for directing an electrical current through said conduits and said mounts across said sheet, supply means, takeup means, means for advancing said web from said supply means to said takeup means in order to position fresh sections of said web between said mounts, said chamber having an inert atmosphere, a detector for receiving radiation from



said sheet, and means for varying the electrical supply of current across said sheet in response to a signal received from said detector.

3,095,507
SERIES MAGNETIC AMPLIFIER
Clifford J. Holmes, Norwalk, Conn., assignor to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Filed Sept. 25, 1957, Ser. No. 686,252
9 Claims. (Cl. 307—88)

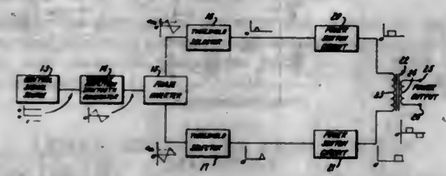


1. A magnetic amplifier comprising a core consisting of a magnetic material, primary and secondary windings on said core, a source of positive potential, first and second unilateral conducting means, means for applying said positive potential to one end of each of said windings through said first and second unilateral conducting means respectively, said unilateral conducting means being connected to a reference potential, a rectangular wave voltage source in circuit with the other end of said secondary winding, a first negative potential source connected to the other end of said primary winding, a second negative potential source, third unilateral conducting means connected between said second negative potential source and said other end of said primary winding, the ratio of turns of said secondary to primary winding, and the values of said rectangular wave voltage and said negative potential source being so chosen that a voltage reflected from said secondary to said primary winding is sufficient to render said third unilateral conducting means non-conductive.

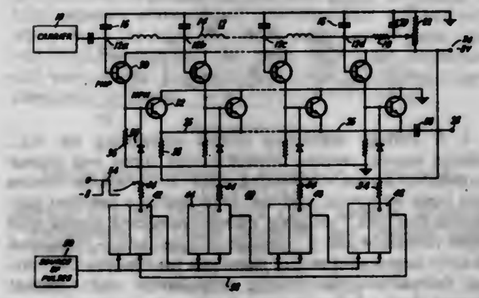
3,095,508
ALTERNATING CURRENT POWER CONTROL SYSTEM
Herbert Karah, La Habra, Calif., assignor, by mesne assignments, to Consolidated Electrodynamics Corporation, Pasadena, Calif., a corporation of California
Filed Feb. 6, 1959, Ser. No. 791,575
8 Claims. (Cl. 307—88.5)

5. A power control system comprising a source of an A.-C. potential, a source of a control potential, means connected to the source of A.-C. potential and the source of control potential for modulating the A.-C. potential by the control potential, phase inversion means

having an input circuit and first and second output circuits whose outputs are opposite in phase, means for applying the modulated A.-C. potential to said phase inversion means, first and second normally non-conducting threshold selectors, each having an input circuit and an output circuit and operable to conduct current in response to the application to the respective input circuits thereof of a potential exceeding a selected magnitude in a predetermined polarity, means connecting the phase inversion means first output circuit to the first threshold selector input circuit, means connecting the phase inversion means second output circuit to the second threshold selector input circuit, a normally non-conducting transistor switch consisting of a first section and a second section connected together in push-pull and having first and second input circuits connected to the respective switch sections and an output circuit, means connecting the first threshold selector output circuit to the first switch section input circuit so as to initiate current conduction in the first switch section in response to current conduction by the first threshold selector, and means connecting the second threshold selector output circuit to the second switch section input circuit so as to initiate current conduction in the second switch section in response to current conduction by the second threshold selector.

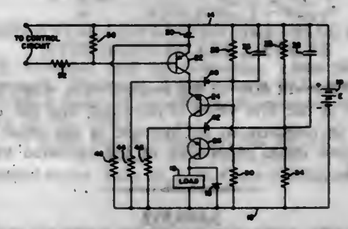


3,095,509
SWITCHING CIRCUITS
Ronald E. Hileman, Williamsville, and Howard E. Parks, Buffalo, N.Y., assignors to Sylvania Electric Products, Inc., a corporation of Delaware
Filed May 19, 1960, Ser. No. 30,262
5 Claims. (Cl. 307—88.5)



4. A gate circuit comprising first and second transistors of opposite conductivity types each having base, emitter and collector electrodes, separate means respectively connecting the emitter electrodes of said first and second transistors through first and second resistors to first and second sources of potential, respectively, said first source of potential being positive relative to said second source, separate means connecting the collector electrodes of said first and second transistors to said second and said first sources of potential, respectively, means directly connecting the emitter electrode of said first transistor to the base electrode of said second transistor, an output terminal connected to the emitter electrode of said second transistor, and means connected to the emitter electrode of said first transistor and the base electrode of said second transistor for applying thereto a pulse of sufficient amplitude simultaneously to cause both said transistors to conduct for the period of the pulse to thereby transmit to said output terminal, during the pulse period, a signal applied to the base electrode of said first transistor.

3,095,510
SWITCHING CIRCUIT FOR VOLTAGE MAGNITUDE GREATER THAN THE RATED VOLTAGE OF ONE TRANSISTOR
Lawrence J. Lane, Stuarts Draft, Va., assignor to General Electric Company, a corporation of New York
Filed June 22, 1960, Ser. No. 38,004
2 Claims. (Cl. 307—88.5)



1. A switching circuit for applying a voltage source of magnitude E to a load in response to a control signal comprising a master transistor having an emitter, a base, and a collector, means coupled to said master transistor for normally biasing said master transistor in a cut-off condition, means coupled to said master transistor to render said master transistor conductive in response to said control signal, N slave transistors each having an emitter, a base, and a collector, where N is any integer, means coupling said master transistor, said slave transistors, and said load in a series circuit in that order between first and second points, means coupling said first and second points of said series circuit across said source of voltage, N voltage divider circuits coupled between said first and second points, and first means coupling said emitter of each of said slave transistors to a respective one of said voltage divider circuits at a point thereon that has a potential with respect to said first point which is substantially equal to

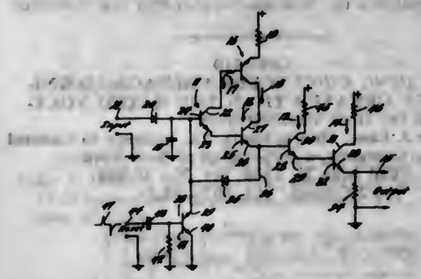
$$\frac{E \times n}{N+1}$$

where n is the number of the slave transistor counted from said master transistor, said first means including a rectifier device coupled between said emitter and base of each of said slave transistors and including a direct current path for said rectifier device to one of said first and second points of said series circuit.

3,095,511
CASCADED EMITTER-FOLLOWERS WITH CURRENT CONTROL MEANS FOR EFFECTING TRANSMISSION OF SIGNALS WITHOUT APPRECIABLY LOADING INPUT
Neil E. Maestre, Levittown, N.J., assignor to Vector Manufacturing Company, Incorporated, a corporation of Pennsylvania
Filed Sept. 22, 1960, Ser. No. 58,598
12 Claims. (Cl. 307—88.5)

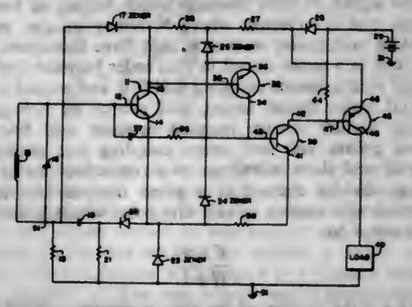
1. A high impedance read-out circuit comprising a pair of electron valves interconnected in cascaded connection, each valve having a pair of current carrying electrodes and at least one additional control electrode being energizable to regulate the flow of electrons therebetween, means interconnecting a current carrying electrode of the first valve to the control electrode of the second valve, means for coupling an input signal to the control electrode of the first valve, an output means coupled to one

of the current carrying electrodes of the second valve, and a current generating means for differentially energizing the remaining current carrying electrodes of both valves, said differential energizing means providing a



decreased current flow to the second valve when the current flow to the first valve is increased and the reverse, whereby in response to an increase in the input signal, the effective input impedance of the cascaded valves is increased.

3,095,512
LOW LEVEL SEMICONDUCTOR SWITCH HAVING A VOLTAGE REGULATING ZENER DIODE IN A FEEDBACK PATH
William R. Little, Seattle, Wash., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Oct. 25, 1960, Ser. No. 64,969
11 Claims. (Cl. 307—88.5)



1. An impulse producing circuit responsive to signals exceeding a predetermined rate of change comprising a first transistor, means for coupling one polarity of an input signal to the base of said transistor, a Zener diode having one terminal connected to the collector of said transistor, means for coupling the other polarity of the input signal to the other terminal of said diode, a capacitor connected between the other terminal of said diode and the emitter of said transistor, a power supply having a first terminal coupled to the collector of said transistor and a second terminal coupled to the emitter of said transistor, and a resistor connected between the other terminal of said Zener diode and the second terminal of said power supply.

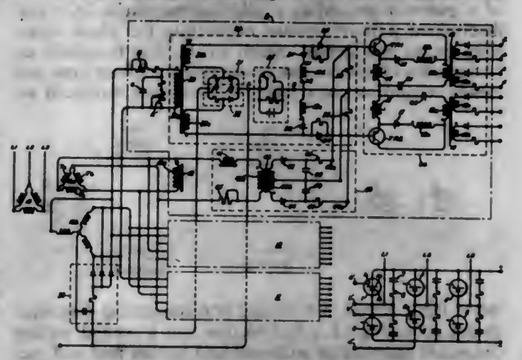
3,095,513
FIRING PULSE CIRCUIT FOR SILICON CONTROLLED RECTIFIERS
Georges R. E. Lezan, Haddonfield, N.J., assignor to General Electric Company, a corporation of New York
Filed Feb. 9, 1962, Ser. No. 172,273
7 Claims. (Cl. 307—88.5)

1. A firing circuit for a solid state controlled rectifier having a gate circuit for receiving firing pulses comprising:

(*a*) a capacitor,

(*b*) a charging circuit for said capacitor including a saturable core reactance device and a translating device,

(*c*) a discharge circuit for said capacitor comprising a transistor having a control electrode and having main current conducting electrodes connected in



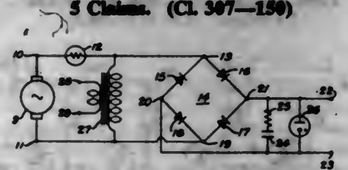
series circuit relationship with said reactance device, said translating device and said capacitor,

(*d*) a control circuit for said transistor including one of said main electrodes and said control electrode and having two parallel branches,

(*e*) means for supplying to said branches alternating voltages that are dephased with respect to each other in substantial amount, and

(*f*) means for supplying to said control circuit a direct voltage of adjustable value.

3,095,514
VOLTAGE REGULATING CIRCUIT
Rolla B. Custer, Santa Cruz, Calif. (Rte. 4, Box 420, Lodi, Calif.), and Clarence Field, 1335 17th Ave., Santa Cruz, Calif.
Filed Feb. 13, 1959, Ser. No. 793,082
5 Claims. (Cl. 307—150)



1. A voltage regulating circuit comprising an A.C. voltage source, rectifier means having input and output terminals, means connecting said A.C. source across said input terminals, said means including a constant current device, A.C. utilizing means connected across said input terminals and a constant voltage device connected directly across said output terminals for limiting the voltage thereacross, the voltage drop across said constant current device being increased when the voltage across said constant voltage device tends to increase due to the increased current flow through said constant voltage device, regulated D.C. voltage being provided across said output terminals and regulated A.C. voltage being provided across said A.C. utilizing means.

3,095,515
SUBMINIATURE ELECTRIC MOTOR
Noel L. Case and Willis E. Rexford, Girard, Pa., assignors to Louis Marx & Company, New York, N.Y., a corporation of New York
Filed Nov. 6, 1961, Ser. No. 150,375
14 Claims. (Cl. 310—43)

1. A miniature motor including an armature assembly, said assembly comprising a ferrous armature core having

poles and having no shaft hole, and a body of plastics material molded around the poles, said body of plastics material providing solid insulation shaft ends for supporting the armature and also providing an insulation



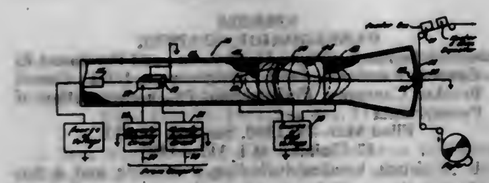
lining in the slots of the armature and around the ends, and also providing a commutator segment-locating cylinder, said insulation shaft ends being the sole shaft of the armature.

3,095,516
ARMATURE COIL FOR AXIAL AIR GAP MACHINES
Georges Morenade, Neuilly-sur-Seine, and Robert Déchet, Boulogne-sur-Seine, France, assignors to Normacem S.A., Paris, France, a French body corporate
Filed Mar. 2, 1960, Ser. No. 12,395
Claims priority, application France Apr. 30, 1959
3 Claims. (Cl. 310—268)



1. In an axial air gap electrical machine having a stator and an armature, the improvement wherein said armature includes at least two parallel non-conductive disks each having coil half-turn segments on both sides thereof, said disks being separated by a layer of electrical insulation, the half-turn segments on one disk being connected to form separate wave-shaped coil turns and the half-turn segments on the other disk being connected to form separate overlapped-shaped coil turns, and means connecting said wave-shaped turns and said overlapped-shaped turns alternately in series.

3,095,517
HIGH SPEED DIRECT WRITING CATHODE-RAY TUBE
Norman F. Fyler, Menlo Park, Calif., assignor, by mesne assignments, to Litton Industries, Inc., Beverly Hills, Calif., a corporation of Delaware
Filed Mar. 22, 1960, Ser. No. 16,759
10 Claims. (Cl. 313—86)



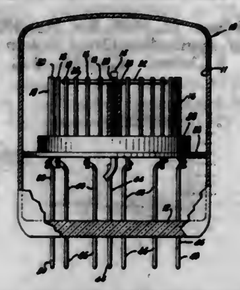
1. In a cathode-ray writing tube wherein a relatively high intensity electron beam is utilized to actuate a target to produce an output signal representative of a character selected in accordance with a coded intelligence signal, the combination comprising: beam shaping means having a non-planar surface with a predetermined number of character apertures positioned therein, said beam shaping means including apparatus responsive to the coded intelligence signal for deflecting the electron beam to pass the electron beam through a selected one of the character apertures substantially orthogonal to a plane defined by the edges thereof; first means operating in conjunction with the beam shaping means for convergently directing the electron beam from the selected character aperture along a predetermined path to the target whereby the target is actuated to produce the output signal having the configuration of the selected character aperture.

3,095,518
RESERVOIR CONTAINER MATERIAL FOR HYDROGEN FILLED DEVICES
John E. Creedon and Sol Schneider, Little Silver, and Norman L. Yeamans, Asbury Park, N.J., assignors to the United States of America as represented by the Secretary of the Army
Filed Jan. 4, 1961, Ser. No. 80,710
8 Claims. (Cl. 313—189)
(Granted under Title 35, U.S. Code (1952), sec. 266)



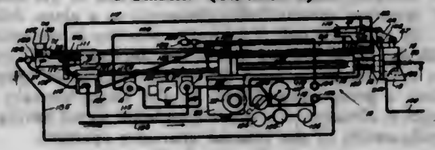
1. In a gaseous discharge device including a closed vessel containing a plurality of electrodes and a hydrogen gaseous medium of a pressure of 300 to 800 microns, a gas generating source comprising a gas reservoir member, said member comprising a rare earth metal containing absorbed hydrogen gas, a rare earth oxide container for the gas reservoir member, and means for operating the reservoir member at about 700° C. to 800° C.

3,095,519
GASEOUS DISCHARGE DEVICE
Charles F. Eyer, Williamsport, and Joseph W. Ritz, Montoursville, Pa., assignors to Sylvania Electric Products Inc., a corporation of Delaware
Filed June 2, 1961, Ser. No. 114,459
6 Claims. (Cl. 313—188)



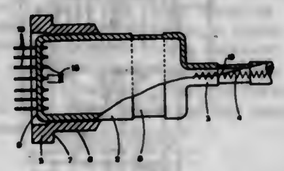
1. A multi-electrode gaseous discharge device having an envelope with a multiplicity of internal electrodes therein operable at one potential, an insulator supporting the electrodes, and means for interconnecting said electrodes comprising bonded conductors on a face of the support insulator, said conductors having portions electrically connected to said electrodes.

3,095,520
AUTOMATIC AIR-ARC GOUGER
Clifford M. Westfall, Peotone, Ill., assignor to Chicago Bridge & Iron Company, Chicago, Ill., a corporation of Illinois
Filed June 2, 1961, Ser. No. 114,470
8 Claims. (Cl. 314—5)



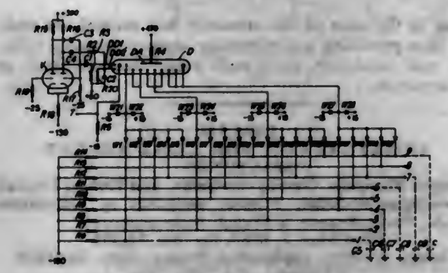
1. In an apparatus for gouging a channel on a metal workpiece:
barrel means for receiving a carbon rod;
pusher means at the rearward end of said barrel means;
means mounting said pusher means for reciprocal movement in forward and rearward directions from a retracted position through an intermediate position to an extended position and then back to said retracted position;
means on said pusher means for engaging the rearward end of said carbon rod when the pusher means moves forwardly from its intermediate position and for advancing the rod in a forward direction, towards an area to be arc gouged on the workpiece, when the pusher is moving forward from its intermediate position toward its extended position;
jaw means at the forward end of said barrel and actuable to engage said advancing carbon rod;
mechanical driving means actuable in response to attainment by said pusher means of said intermediate position for advancing the pusher means from its intermediate position to its extended position at a steady deliberate rate;
first fluid driving means actuable in response to attainment by the pusher means of its extended position for rapidly retracing the pusher means from its extended position to its retracted position;
and second fluid driving means actuable in response to attainment by the pusher means of its retracted position for rapidly advancing the pusher means from its retracted position to its intermediate position.

3,095,521
TRAVELLING WAVE TUBES
John Morland Winwood, Salfords, and James Patrick Beasley, Langley Green, Crawley, England, assignors to North American Philips Company, Inc., New York, N.Y.
Filed Nov. 13, 1959, Ser. No. 852,730
Claims priority, application Great Britain Dec. 17, 1958
6 Claims. (Cl. 315—3.5)



1. A travelling-wave tube comprising a glass envelope having a portion thereof formed of precision-bore glass tubing, a helical slow-wave structure concentrically disposed within the said portion, a cylindrical reference surface concentric with the bore of the said portion formed on the exterior of said envelope, an end cap for said tube, a cylindrical reference surface on said end cap, the end cap being firmly secured to the glass envelope in such a position that the cylindrical reference surface on the cap is co-axial with the cylindrical reference surface formed on the glass envelope.

3,095,522
MULTIPLE-OUTPUT GENERATOR SYSTEM
Norbert Kitz, Hugh Lyon Mansford, and John George Lloyd, London, England, assignors to Bell Punch Company Limited, London, England, a British company
Filed July 13, 1960, Ser. No. 42,528
Claims priority, application Great Britain July 16, 1959
9 Claims. (Cl. 315—84.6)



1. A multi-output pulse generator comprising a multi-cathode electronic stepping tube, means for driving said stepping tube, a plurality of output terminals each coupled to a different number of said cathodes, a plurality of first asymmetrically conducting devices adapted to limit the potential swing of said cathodes in the negative direction, and a plurality of second asymmetrically conducting devices adapted to limit the potential swing of said cathodes in the positive direction.

3,095,523
MEANS DISCHARGING STATIC ELECTRICITY FROM HAIR
James R. Stith, 2401 N. Main, Fort Worth, Tex.
Filed Apr. 10, 1961, Ser. No. 102,004
2 Claims. (Cl. 317—2)

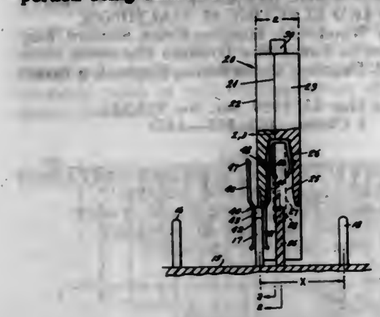


2. A hair brush having a base of dielectric material and tufts of bristles projecting therefrom, said bristles also being of dielectric material, a branched electrically conductive wire within said base and extending to the base ends of said bristles, an extension cord connected with said wire and means connecting said cord with a ground.

3,095,524
PANELBOARD ADAPTER
James H. Leonard, Clifton Heights, Pa., and Ferdinand E. Chabot, Pasadena, Calif., assignors to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Mar. 29, 1960, Ser. No. 18,411
17 Claims. (Cl. 317—117)

1. A circuit breaker including a housing and a terminal member; said housing including an internal chamber communicating with an area external of said housing; said terminal member being disposed within said chamber; adapter means including a first portion for engaging a panelboard bus bar, a second portion and a third portion

substantially parallel to said second portion; said second portion being entered into said chamber in frictional en-



gagement with said terminal member; said third portion being disposed externally of said housing.

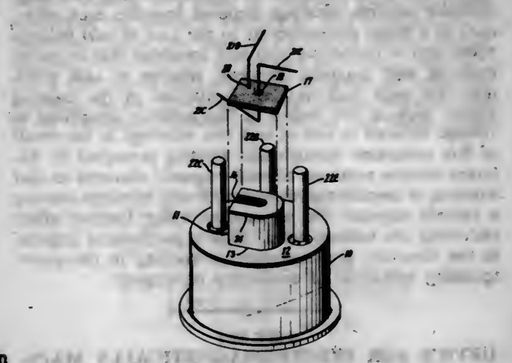
3,095,525
PERMANENT MAGNET ASSEMBLY
John R. Hanson, New Providence, N.J., assignor to Crucible Steel Company of America, Pittsburgh, Pa., a corporation of New Jersey
Filed Jan. 20, 1958, Ser. No. 709,969
5 Claims. (Cl. 317—159)



1. A magnetic circuit having at least one air gap therein comprising a permanent magnet in the form of a rectangular parallelepiped having a short length and large cross sectional area, said magnet being magnetized along an axis parallel to said short length and having poles on its opposite large cross sectional area surfaces, first and second ferromagnetic parts each having an L-shaped cross section with one leg of the cross section abutting a respective pole surface of said magnet, the other leg of the cross section of said first ferromagnetic part being substantially shorter than its said one leg and extending outwardly from an edge of its associated pole surface, and the other leg of the cross section of said second ferromagnetic part being substantially shorter than its said one leg and extending along an opposite side of the permanent magnet which is parallel to said short length, said other leg of the second ferromagnetic part being spaced from said last-mentioned side and said first ferromagnetic part to form an air gap therebetween and being equal in length to the outwardly extended perpendicular distance from the permanent magnet surface abutted by said one leg of the second ferromagnetic part to the terminus of said other leg of the first ferromagnetic part, thereby defining contacts for effecting adherence to a metallic surface.

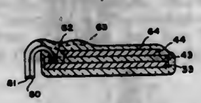
3,095,526
SEMICONDUCTOR UNIT
Clarence G. Thornton, Philadelphia, Pa., assignor, by mesne assignments, to Philco Corporation, Philadelphia, Pa., a corporation of Delaware
Filed Feb. 20, 1961, Ser. No. 119,755
3 Claims. (Cl. 317—235)

1. In a transistor unit, a glass-filled stem; a U-shaped, nickel-plated copper heat sink block on said stem, with the aperture of the U extending to a lateral end surface of said block; stem leads extending through the glass of said stem and along parallel upright surfaces of said block at a slight distance from said surfaces; a layer of resinous material on a top surface of said block; and a transistor wafer on said layer, with whiskers including a whisker extending through said aperture to one of said



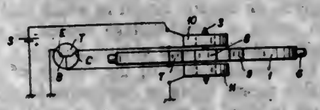
leads and other whiskers upwardly extending to the other leads.

3,095,527
ELECTRICAL CAPACITOR HAVING A SILICON NITRIDE DIELECTRIC
Charles R. Barnes, Medway, and Charles R. Geesner, Waynesville, Ohio, assignors to the United States of America as represented by the Secretary of the Air Force
Original application Aug. 31, 1959, Ser. No. 837,306, now Patent No. 3,038,243, dated June 12, 1962. Divided and this application Dec. 5, 1960, Ser. No. 73,939
6 Claims. (Cl. 317—258)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A capacitor comprising a metal substrate, a thin film of silicon nitride dielectric covering said substrate and a metallic conductor plate on the exposed surface of the dielectric.

3,095,528
ELECTROMAGNETIC DEVICE FOR MAINTAINING THE OSCILLATORY MOVEMENT OF A BALANCE WHEEL COMPRISING A HAIR SPRING
Peter Dôme, Geneva, Switzerland, assignor to Societe Suisse pour l'Industrie Horlogere S.A., Geneva, Switzerland, a firm of Switzerland
Filed May 21, 1959, Ser. No. 814,892
Claims priority, application Switzerland May 24, 1958
4 Claims. (Cl. 318—132)



1. In an electric device for maintaining oscillating movement, said device comprising a balance wheel having a hair spring, three magnetic elements on said balance wheel, of which at least one is a permanent magnet, said permanent magnet being polarized on an axis parallel to the axis of said balance wheel and said three elements being so disposed that the direction of flux through an intermediate one of the three elements is opposite to that

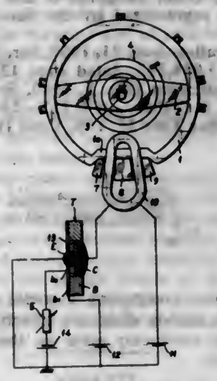
of the outer two elements, a transistor and a direct-voltage source connected to said transistor, and two magnetically coreless windings disposed opposite each other, each in a plane perpendicular to the axis of said balance wheel and so connected with said transistor that in movement of said magnetic elements relative to said windings, for each half-cycle of oscillation of the balance wheel, each of two pulses of like polarity comprised in voltage induced in one of said two windings as the result of flux variations through said winding prompted by different relative positions of said magnetic elements to said winding, is amplified in the other of said windings causing a current impulse and an accompanying Laplace effect endowing the balance wheel with a mechanical impulse in the direction that the wheel is moving in the corresponding half-cycle of oscillatory movement.

3,095,529

DEVICE FOR ELECTROMAGNETICALLY MAINTAINING OSCILLATING MOVEMENT

Peter Dôme, Geneva, Switzerland, assignor to Societe Suisse pour l'Industrie Horlogere S.A., Geneva, Switzerland, a firm of Switzerland

Filed June 3, 1960, Ser. No. 33,744
Claims priority, application Switzerland June 10, 1959
8 Claims. (Cl. 318—132)



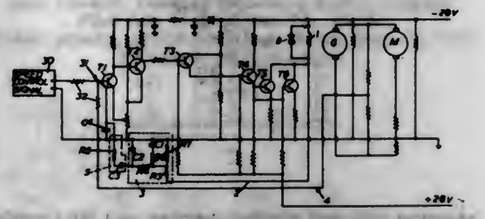
1. In a timepiece comprising an oscillating regulating member and a device for electromagnetically maintaining the oscillating movement of said regulating member, said device comprising a magnetic flux generator and a coil, one of which two members moves integrally with said regulating member, while the other is stationary, so that the interaction of the magnetic flux and of the current flowing through said coil sets up an electromagnetic force maintaining the movement of said regulating member of the timepiece, an electric circuit in which said coil is connected in series, a direct-voltage source in said circuit, and bistable means in said circuit, having a negative resistance for certain values of the voltage of said source, said bistable means being so responsive to subtraction of the voltage induced in said coil as a result of variations of the flux passing through the coil from the voltage of said source that change-over of said bistable means occurs from its stable state determined by its maximum resistance to its stable state determined by its minimum resistance, while addition of the voltage induced in the coil to that of the source produces change-over of said bistable means from its stable state determined by its minimum resistance to its stable state determined by its maximum resistance.

3,095,530

DIGITAL CONTROL APPARATUS FOR WARD-LEONARD ELECTRICAL MACHINES

William Henry Woodward, Weeping Cross, Stafford, England, assignor to Lancashire Dynamo Electronic Products Limited, Rugeley, Staffordshire, England, a British company

Filed May 22, 1959, Ser. No. 815,226
1 Claim. (Cl. 318—145)



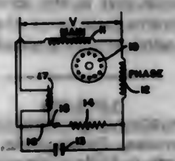
An automatic controller comprising an amplifier having an input and a power output, an electrical machine having a controlled condition variable in dependence upon said power output, a source of control voltage, means for generating an opposing voltage dependent upon said controlled condition, a bistable trigger circuit having an input and output coupled to the input of said amplifier, a summing network including two summing resistances connected to the input of said trigger circuit, means for applying said control and opposing voltages to said resistances respectively, and an oscillation-generating feedback path from said power output to the input of said trigger circuit, said feedback path including a resistance-capacitance integrating circuit arranged to produce an integrated voltage which varies in the direction for reducing the input to said amplifier during periods of high power output thereof at a rate dependent upon the difference between the maximum output voltage of the amplifier and the standing value of the integrated voltage and which varies in the direction for increasing the output of said amplifier during periods of low power output thereof at a rate dependent upon the standing value of the integrated voltage, and including also a coupling circuit interposed between said integrating circuit and the input circuit of said bistable trigger circuit and designed to transmit a correcting feedback dependent upon the standing value of said integrated voltage.

3,095,531

DYNAMOELECTRIC MACHINE BOOSTER

Robert W. Leland, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed July 25, 1960, Ser. No. 44,938
15 Claims. (Cl. 318—221)



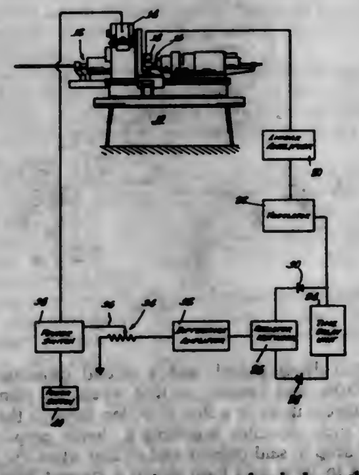
1. In combination, a dynamoelectric machine having first and second winding means physically displaced from each other and carrying currents out of phase with each other as effected by capacitance means in series with one of said winding means at all times including both starting and running operation, and torque-booster resistance means switchable into parallel connection with the capacitance means in effect to short out said capacitance means to simulate split-phase starting operation only during starting for positive limit of starting current per se while increasing real starting current vector closer to unity power factor though free of costly additional starting capacitance, said resistance means having a low-wattage rating and resistance value at least over 100% of the resistance value of said winding means of the dynamoelectric machine.

3,095,532

VIBRATION RESPONSIVE SYSTEM FOR STOPPING MOTOR DRIVEN MACHINES

Peter G. Floyd, 857 Altadle, Chicago 40, Ill.

Filed June 29, 1959, Ser. No. 823,681
6 Claims. (Cl. 318—460)



1. Apparatus responsive to mechanical machine tool vibrations for continuously controlling the operation of an initially started cyclically operable machine tool generating a pattern of mechanical vibrations corresponding with a cycle of operation, said apparatus comprising: fixed mechanical-electrical transducing means arranged in adjacency with said machine tool to sense said vibrations and produce an electrical output indicative thereof; time delay means receiving said output and delaying a portion of said output corresponding with one machine cycle; circuit means for comparing the instant output of said transducing means with the delayed output signal of said time delay means to yield an error signal representative of the deviation in the vibrational pattern of the instantly occurring machine cycle from the vibrational pattern of the machine cycle the signal of which has been stored in said time delay means; and means responsive to said error signal for terminating operation of said machine tool when the magnitude of said error signal exceeds a predetermined value corresponding with the maximum allowable deviation in said vibrational patterns.

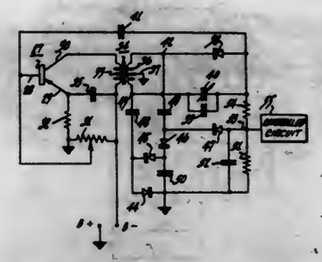
3,095,533

VOLTAGE CONTROL CIRCUITS

Eugene O. Keizer, Princeton, N.J., assignor to Radio Corporation of America, a corporation of Delaware

Filed Jan. 28, 1960, Ser. No. 5,157
11 Claims. (Cl. 321—2)

9. An electrical control circuit comprising in combination a voltage-responsive variable-capacitance diode and a variable capacitor coupled in series to form a reactive circuit, a transistor feedback oscillator for producing oscillatory electrical waves, said transistor having an input electrode, an output electrode and a common electrode, a transformer having a primary winding and a tapped secondary winding, means connecting the tap of said secondary winding to a point of reference potential, means connecting the primary winding of said transformer between said output and common electrodes, means connecting said reactive circuit across said secondary winding so that a 180° phase shift will occur between the oscillatory electrical waves appearing at said output electrode and at the secondary winding connected to said diode, means



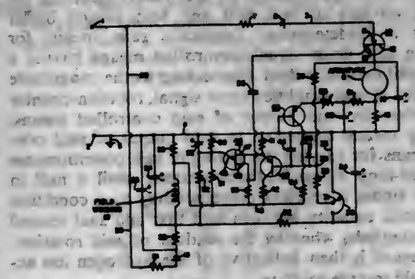
for regeneratively feeding back to said input electrode a portion of the oscillatory electrical waves developed across said reactive circuit, the portion being a function of the ratio of reactances of said reactive circuit, means providing a rectifying circuit coupled to said reactive circuit for deriving a D.C. control voltage, and means connecting said rectifying circuit to said diode to apply a D.C. bias voltage to control the feedback oscillatory waves.

3,095,534

CIRCUIT FOR CONTROLLING ENERGIZATION OF A DIRECT CURRENT LOAD

William D. Cockrell, Waynesboro, Va., assignor to General Electric Company, a corporation of New York

Filed Nov. 22, 1960, Ser. No. 71,001
10 Claims. (Cl. 321—19)

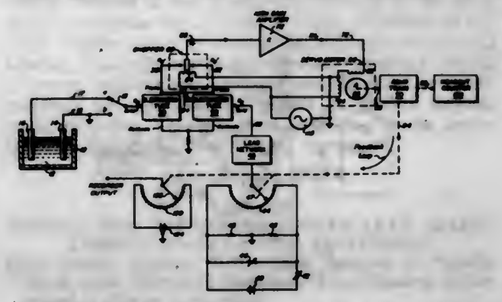


1. A circuit for controlling the direct current energization of an electrical load from an alternating current source comprising a controlled semiconductor rectifier having a gate electrode, said rectifier being adapted to be connected between said source and said load, first means adapted to be coupled to said load for deriving a unidirectional control signal indicative of the operation of said load, control means responsive to said control signal and operative to produce an output signal commensurate with the deviation of said control signal from a predetermined condition second means adapted to be coupled to said source for producing a varying signal, firing means coupled to said second means and to said control means for combining said output signal and said varying signal to produce a firing pulse at a time determined by the characteristic of said output signal, and means coupling said firing means to said gate electrode to cause said rectifier to conduct in response to said pulse.

3,095,535
DIGITAL pH METER

David Lawrence Jaffe, Great Neck, and Charles French, Yonkers, N.Y., assignors to Polarad Electronics Corporation, Long Island City, N.Y., a corporation of New York

Filed Nov. 22, 1960, Ser. No. 70,978
2 Claims. (Cl. 324—30)



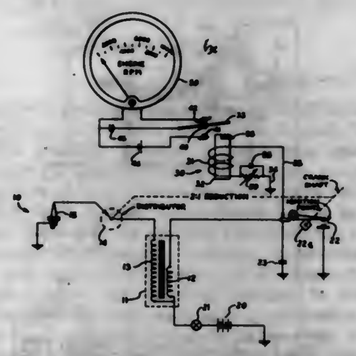
1. In a pH meter of the class described, the combination comprising: an indicator electrode and a reference electrode for generating a first electric potential proportional to the hydrogen ion activity of a sample solution into which both said electrodes are immersed, a variable source of second electric potential, said source comprising a potentiometer connected to a stable reference voltage source having a temperature compensation resistor in series therewith and a calibration resistor in parallel with said potentiometer for calibrating the response of the apparatus by the use of standard solutions, comparator means for obtaining an error signal representative of the difference between said first electric potential and said second electric potential, said comparator means including first and second high-input-impedance buffer means respectively connected to said first and said second electric potentials and chopper means for alternately sampling the respective outputs of said first and said second buffer means at a predetermined frequency rate, means for amplifying said error signal, controlled means having a rotably positionable output responding to the magnitude and polarity of said amplified error signal, rotation-counter means driven by said output of said controlled means, translating means connected to said output of said controlled means for varying the setting of said potentiometer in a closed-loop signal-feedback manner until a null in said error signal is reached corresponding to a condition of substantial equality between said first and said second electric potentials, whereby the readout of said rotation-counter means is then indicative of the hydrogen ion activity of said sample solution.

3,095,536
RELAY TYPE AUTOMOTIVE TACHOMETER WITH TIME DELAY CIRCUITRY FOR THE RELAY TO ENABLE OPERATION AT HIGH ENGINE SPEEDS

Vernon C. Westberg, 520 E. Haven St., Arlington Heights, Ill.

Filed July 15, 1959, Ser. No. 827,368
3 Claims. (Cl. 324—70)

1. In an electrical tachometer for use with an automotive ignition system having a primary circuit including breaker points for grounding the same, the combination comprising a relay having a coil and armature, contacts on said relay including a central contact and relatively stationary charging and discharging contacts alternatively engaged therewith, a spring for biasing the armature for engagement between the central contact and the discharging contact, a charging circuit including a battery of constant voltage connected to the charging contact, a discharging circuit including an indicating meter connected to the discharging contact, a first capacitor connected to the central contact so that the capacitor is alternatively charged across the battery and discharged through the indicating meter, a resistor connected in series with the relay coil so that an IR drop is developed across the resistor depending upon the current in the coil, means for connecting the relay coil and its series-connected resistor across the breaker points so that the relay is supplied with current from the primary circuit by direct current flow through said restrictor when the points are open and so that the relay is connected to form a short-circuiting loop circuit with said resistor when the points are closed during

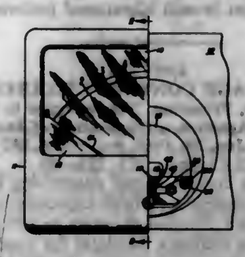


the ignition dwell period, and a second capacitor connected across said resistor so that when the points are opened current flows in a first direction through the relay coil with such capacitor acquiring a charge proportional to the IR drop in said resistor and so that when the points are closed to form said loop circuit a current flow is set up in said relay coil in the opposite direction, said relay being of the type having a single pole face and so constructed that the armature is attracted to the pole face regardless of the direction of current flow in said coil so that the relay armature is held in not only during the interval that the points are open but also during an additional finite interval as the second capacitor discharges during the ensuing ignition dwell period when the points are closed.

3,095,537
PERMANENT MAGNET ELECTRICAL INSTRUMENT WITH FLUX GAP ADJUSTMENT

Gerald Stolar, Linden, Bernard P. Gropp, Irvington, and John W. Higley, Glen Ridge, N.J., assignors, by mesne assignments, to Daystrom, Incorporated, Murray Hill, N.J., a corporation of Texas

Filed May 5, 1960, Ser. No. 27,185
2 Claims. (Cl. 324—151)



1. In an electrical instrument which includes a U-shaped magnet, pole pieces extending inwardly from

the legs of the U-shaped magnet with shaped inner portions forming a pole piece bore and shaped outer portions, said pole pieces and magnet forming a substantially closed magnetic circuit, means fixedly securing the pole pieces to the magnet, an integral subassembly comprising:

an integral movement bracket having two bridges and a core supporting structure formed thereon,

pivot means mounted in said bridges,

a cylindrical core mounted by the movement bracket such that the core axis substantially intersects the center points of said pivot means,

and a coil surrounding the said core and pivotally mounted by the pivot means, a pointer fixed to the coil,

said movement bracket having a cradle-shaped side portion which includes curved ends adapted to substantially cover the shaped outer portions of the pole pieces,

the curved ends of the cradle-shaped side portion being spaced from the outer portions of the pole pieces thereby to permit relative movement therebetween in a plane substantially perpendicular to the axis of the core,

one of said bridges spanning substantially only the curved ends of the mounting bracket, thereby to permit greater angular movement of said pointer,

the other one of said bridges being of the cantilever type extending from the center of said cradle shaped side portion,

the said subassembly being attached to the pole pieces of the instrument by insertion of the cantilever bridge through the pole piece bore to position the said core and coil between the pole pieces,

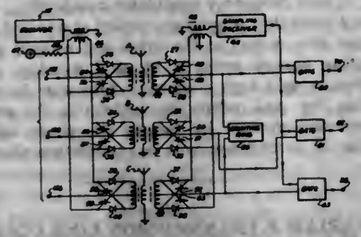
said one bridge having holes formed therein, said pole pieces having tapped holes formed therein,

and means including screws of smaller diameter than the holes through the movement bracket and extending therethrough to threadedly engage the tapped holes, the clearance between the movement bracket holes and screws and between the outer portions of the pole pieces and movement bracket permitting positional adjustment of the movement bracket on the pole pieces, thereby to permit adjustment of said core in all directions in a plane normal to the core axis.

3,095,538
SATELLITE RELAY STATION USING ANTENNA DIVERSITY SELECTION

Richard Silberstein, Boulder, Colo., assignor to the United States of America as represented by the Secretary of Commerce

Filed Oct. 28, 1960, Ser. No. 65,876
8 Claims. (Cl. 325—4)

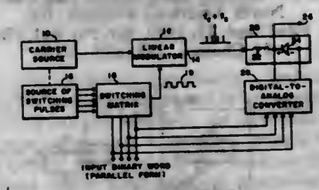


1. A diversity antenna selection system comprising: a plurality of receiving antennas, a sampling receiver, means for sequentially applying the output of each of said receiving antennas to said sampling receiver, a plurality of selecting circuits interconnected so that only one selecting circuit is activated in dependency upon the relative magnitudes of the signals applied to said selecting circuits, each selecting circuit being associated with a respective one of said receiving antennas, means for applying the output of said sampling receiver in sequence to each of said selecting circuits, a second receiver, and means responsive to the output of each of said selecting circuits when activated for coupling the receiving antenna associated with the selecting circuit to said second receiver.

3,095,539
DIGITALLY POSITIONED WAVE FILTER

John E. Bennett, Clarence, N.Y., and Stanley A. Fierston, Lynn, Mass., assignors to Sylvania Electric Products Inc., a corporation of Delaware

Filed Dec. 18, 1959, Ser. No. 860,511
8 Claims. (Cl. 325—163)

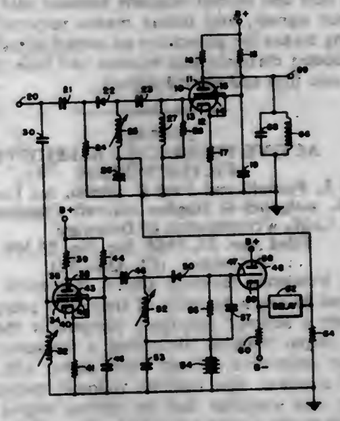


2. A filter tunable in response to a digital word comprising, in combination, a tuned circuit including an inductance and a voltage variable capacitor having a pair of terminals, means for applying a reference voltage to one terminal of said voltage variable capacitor, and means for applying a voltage to the other terminal varying in accordance with a binary word comprising a digital-to-analog converter connected to said other terminal, and means for applying a binary word to said converter.

3,095,540
INTERMEDIATE FREQUENCY BALANCE BIAS SYSTEM

Robert E. Carson, Levittown, Pa., and Wayne C. Johnson, Cincinnati, Ohio, assignors to Avco Corporation, Cincinnati, Ohio, a corporation of Delaware

Filed Nov. 17, 1960, Ser. No. 69,886
6 Claims. (Cl. 325—323)



1. In a receiver, means for separating combined signals comprised of simultaneously received short duration intelligence signals and relatively long duration interference signals, the combination comprising: a signal processing stage having an input circuit; a variable impedance device, the impedance of which is variable in proportion to

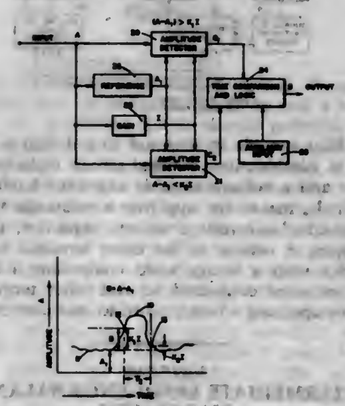
the magnitude of an applied direct voltage; means for coupling said combined signals to said input circuit through said variable impedance device; means coupled to said combined signals for producing a direct voltage proportional in magnitude to the magnitude of said combined signals; means for delaying said direct voltage for a predetermined period; and means for biasing said variable impedance device with said delayed direct voltage to increase the impedance thereof at the end of said period, whereby the duration of said interference signals will be reduced to the duration of said period.

3,095,541

DETECTOR HAVING DESIRED WAVEFORM DETECTED WITHIN SPECIFIED AMPLITUDE RANGE AND AS FUNCTION OF TIME

William D. Ashcraft, Long Beach, Calif., assignor to North American Aviation, Inc.

Filed Sept. 22, 1959, Ser. No. 841,550
11 Claims. (Cl. 328—115)



1. Detecting apparatus comprising an input channel for receiving an input signal containing a waveform to be detected, a source of reference signal, amplitude detecting means responsive to said input and reference signals for providing first and second signals respectively indicative of first and second relations between said input and reference signals, and timing means responsive to said detecting means for generating an output signal indicative of a selected chronological relation and time interval between said first and second signals.

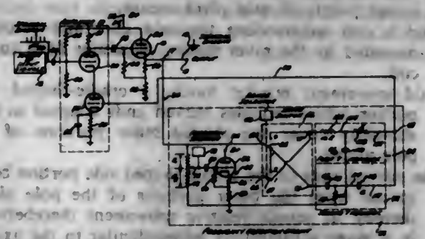
3,095,542

ACTIVE FREQUENCY SELECTIVE FILTER SYSTEM

Robert L. Fusfield and Paul E. Sterbe, Jr., Los Angeles, Calif., assignors to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware

Filed Apr. 28, 1960, Ser. No. 25,309
6 Claims. (Cl. 330—71)

1. A frequency rejection system responsive to an input signal having a plurality of frequency components to pass only a selected frequency component thereof to a system output terminal comprising a frequency selective amplifier responsive to said input signal and having a control terminal, first cathode follower means coupled between said amplifier and the system output terminal, switching means having a first and a second input terminal with the first input terminal coupled to the system output terminal for providing a first signal path, voltage divider means coupled to said system output terminal, second cathode follower means coupled between said voltage divider means and the second input terminal of said switching means to provide a second signal path, and a first and a second T-network each having an input terminal coupled to said switching means and an output terminal coupled to a summing point, said first and second T networks having phase characteristics that differ by substantially 180 degrees independent of frequency and having relative amplitude characteristics that vary differently with frequency being equal in amplitude at a definite frequency so as to cancel at said summing point, said switching means being controllable to couple said first and second signal paths respectively through said first and second T networks in a first switch position and respectively through said second and first T networks in a second switch position, said summing point being coupled to said control terminal of said frequency selective amplifier for varying the gain characteristics thereof, whereby said switching means selects a first and a second range of operation and said voltage divider means selects the definite frequency where the signals applied through the T network cancel at said summing point to control said amplifier so as to determine the pass band frequency in the selected range and pass the selected frequency component to said output terminal.

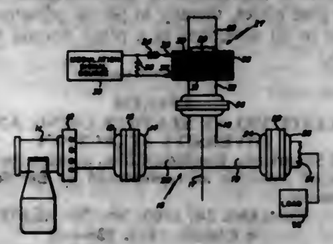


3,095,543

MEANS FOR MODULATING HIGH FREQUENCY GENERATORS

David R. S. McColl, Sudbury, Mass., assignor to Raytheon Company, Lexington, Mass., a corporation of Delaware

Filed June 22, 1959, Ser. No. 822,043
11 Claims. (Cl. 332—51)



1. A high frequency modulator comprising: a high frequency generator; a gyrator coupled at one end to a transmission line; means at the other end of said gyrator for reflecting energy received by said gyrator; means for connecting said high frequency generator to said transmission line; and means for modulating the generator in a controlled manner by varying the phase shift of said gyrator in accordance with a modulation signal.

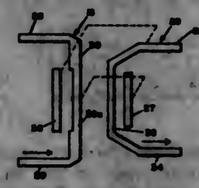
3,095,544

VARIABLE TRANSMISSION LINE COUPLER

Donald R. Ayer and Jesse L. Butler, Nashua, and Robert L. Willston, Milford, N.H., assignors to Sanders Associates, Inc., Nashua, N.H., a corporation of Delaware

Filed May 10, 1960, Ser. No. 35,102
19 Claims. (Cl. 333—10)

1. A variable transmission line coupler comprising, in combination, first and second transmission lines, each of said lines comprising a pair of conductors, said lines including first and second coupling sections in close proximity to each other, and adjusting means for varying the spacing between a first conductor in said first section and a second conductor in said second section, thereby to vary the mutual inductance of said first and second conductors, a compensator providing an electrical conducting path in close proximity to said first conductor and means for varying the spacing between said compensator and said first conductor in coordination with variations in spacing between said first and second conductors and in such manner that the spacing between said compensator and said first conductor decreases as the spacing between said first and second conductors increases.



3,095,545

CONNECTION ASSEMBLY FOR COAXIAL CONDUCTOR

James R. Bird, Chagrin Falls, and Harold E. Stevens, Lyndhurst, Ohio, assignors to Bird Electronic Corporation, Cleveland, Ohio, a corporation of Ohio

Original application Feb. 4, 1953, Ser. No. 335,118, now Patent No. 2,884,603, dated Apr. 28, 1959. Divided and this application Mar. 11, 1959, Ser. No. 796,728
9 Claims. (Cl. 333—22)



1. In a high frequency electrical device of the type comprising an inner resistive conductor and a tubular outer conductor arranged as a coaxial line and in which the inner conductor comprises an insulator tube carrying a resistive film, improved means for connecting the inner and outer conductors at one end of the line, said connecting means comprising a conductive element received within and a conductive band embracing and carried by the tube at said end of the line, the conductive band being electrically connected to the resistive film and constituting a terminal of the inner conductor at said one end, means electrically connecting the element to the band, said element being fast to and wholly supported by the tube independently of the outer conductor for movement of the tube and the element as a unit relative to said outer conductor, the outer conductor having a terminal portion embracing the terminal band in a slip joint for relative axial sliding movement to accommodate longitudinal shifting of one conductor relative to the other, said slip joint providing electrical connection between the outer conductor and both the resistive film and the conductive element in different shifted positions, and the conductive element and the resistive film comprising a capacitive coupling between the conductors at said one end of the line.

3,095,546

GYROMAGNETIC ISOLATOR USING A NON-UNIFORM MAGNETIC BIAS

Wesley P. Ayres, Los Altos, Jack L. Melchor, Mountain View, and Perry H. Vartanian, Jr., Menlo Park, Calif., assignors, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware

Filed Mar. 1, 1956, Ser. No. 568,744
6 Claims. (Cl. 333—24.2)



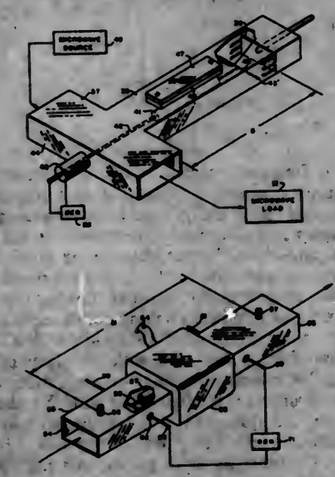
1. Microwave apparatus comprising, a section of hollow rectangular wave guide adapted to propagate linearly polarized electromagnetic waves, an elongated slab of dielectric material having a dielectric constant at least nine times greater than that of the medium filling said guide disposed within said guide at a position to concentrate the energy of waves launched down said guide and to locate the locus of the circularly rotating magnetic component of said waves in a predetermined region adjacent said slab over a broad band of frequencies, an elongated sheet of ferrite material supported on said slab of dielectric material in said predetermined region, and means for producing in said ferrite a static magnetic field varying in intensity along the length of said ferrite of sufficient magnitude to produce ferromagnetic resonance in said ferrite at all frequencies in said broad range of frequencies.

3,095,547

HIGH SPEED MICROWAVE SWITCH UTILIZING GYROMAGNETIC ELEMENT

John F. Zaleski, Pleasantville, N.Y., assignor to General Precision, Inc., a corporation of Delaware

Filed May 28, 1959, Ser. No. 816,417
3 Claims. (Cl. 333—24.2)



1. A microwave switch comprising, a rectangular waveguide shunt T having a main section and a shunt sidearm joined thereto, means for applying microwave

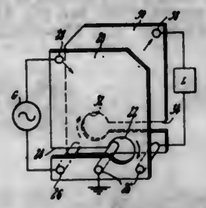
energy to one end of said main arm, load means for extracting microwave energy from the other end of said main arm, a conductive plate short-circuiting the end of said shunt sidearm distal to said main section, a ferrite component positioned coaxially in said shunt sidearm, a permanent magnet positioned adjacent said ferrite component outside of said shunt sidearm, an electrical conductor extending axially through said ferrite component, and means applying to said conductor a switching current having at any instant one of two magnitudes whereby when the current has one magnitude said main section is interdicted and when the current has the other magnitude said main section is microwave transmissive.

2. A microwave switch comprising, a rectangular waveguide, means for applying microwave energy to one end thereof, load means for extracting microwave energy from the other end thereof, a ferrite component positioned coaxially in said waveguide, discontinuity matching means positioned in said wave guide between one end thereof and said ferrite component, another discontinuity matching means positioned in said waveguide between the other end thereof and said ferrite component, a magnetizing coil wound around the outside of said waveguide adjacent said ferrite component and coaxial therewith, means applying direct current to said coil, an electrical conductor extending axially through said ferrite component, and means applying to said conductor a switching current having at any instant one of two magnitudes whereby when the current has one magnitude said waveguide is microwave transmissive while at other times said waveguide is nontransmissive.

3,095,548
RADIO FREQUENCY RESONANT CIRCUIT, UTILIZING CONFRONTING PARALLEL CONDUCTIVE PLATES HAVING CURRENT FLOW IN OPPOSITE DIRECTIONS

Joshua G. D. Manwaring, Needham, Mass., assignor to Radio Frequency Company Inc., Medfield, Mass., a corporation of Massachusetts

Filed July 18, 1961, Ser. No. 128,326
21 Claims. (Cl. 333—76)

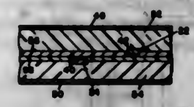


21. A radio frequency circuit including a tuned radio frequency circuit component consisting of a plurality of generally parallel electrically conductive plates spaced from one another in a direction perpendicular to the plane of the plates, said plates forming two series of plates arranged alternately with one another, and connected at a common point to provide a common connection, with the plates of each of said series having points remote from said common point to provide two independent series of remote connection points, and with the plates of each series having slot means of similar configuration within its series and of different configuration with the plates of the other series, said slot means defining a radio frequency current path in one series of plates of opposite direction from those in the other series of plates, said path in said one series of plates being transversely spaced in a direction parallel to the plane of the plates from said path in said other series of plates, and radio frequency generator means connected between said common point and one only of said series of remote connection points.

3,095,549
TRANSMISSION STRIP LINE CROSSOVER

Jesse L. Butler, Nashua, N.H., assignor to Sanders Associates, Inc., Nashua, N.H., a corporation of Delaware

Filed June 28, 1960, Ser. No. 39,314
6 Claims. (Cl. 333—84)

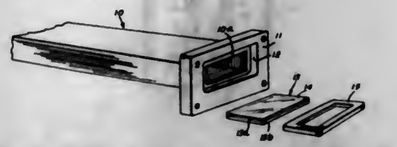


1. A transmission line crossover comprising a first transmission line having a pair of first center conductors disposed between a pair of ground plane conductors, a second transmission line including a second center conductor disposed between said ground plane conductors, first and second sections in said first line, said first center conductors being substantially in registration at the end points of said first and second sections and one of said first conductors being an odd number of half wavelengths longer than the other in each of said first and second sections, a third section between said first and second sections, said first conductors being in registration in said third section, insulating means disposed between said first conductors in said first, second and third sections, said second center conductor passing through said first transmission line between said first conductors in said third section.

3,095,550
POLYTETRAFLUOROETHYLENE WAVEGUIDE WINDOW CONSTRUCTION

Timothy J. Kilduff, Washington, D.C., and Asaf A. Benderly, Bethesda, Md., assignors to the United States of America as represented by the Secretary of the Army

Filed Apr. 9, 1959, Ser. No. 805,350
1 Claim. (Cl. 333—98)
(Granted under Title 35, U.S. Code (1952), sec. 266)



In a waveguide assembly comprising a metallic section, a bore through said section substantially coaxial to the longitudinal axis of said section, a flange formed on one end of said section, a recess formed in said flange, the improvement comprising: a waveguide window in said recess, said window consisting of a film of polytetrafluoroethylene, said film having a bondable surface portion on all planar surfaces thereof, and an adhesive covering substantially the entire area of that planar surface of said film which is in contact with said waveguide and bonding said film in said recess, said adhesive comprising epichlorhydrin bis-(4-hydroxyphenyl)-2,2-propane and an acid anhydride.

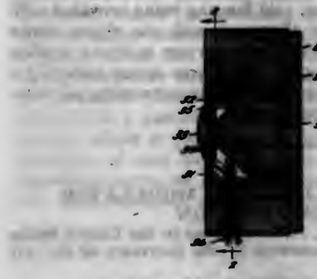
3,095,551
LOAD CELL

Gerald A. Hebert, Chicago, Ill., assignor, by mesne assignments, to Goodman Manufacturing Company, Chicago, Ill., a corporation of Illinois

Filed July 17, 1961, Ser. No. 124,587
2 Claims. (Cl. 338—5)

1. A load cell comprising a metal body formed with a central cavity therein terminating in a flat bottom short

of one end of the body to leave a flat metal disc of uniform thickness integrally secured around its periphery to the body, a central projection on the outer face of the

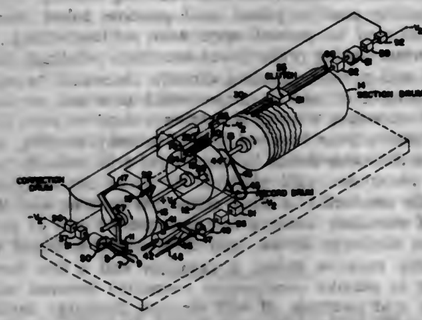


disc to receive a load to be measured and apply it to the central portion of the disc, and strain measuring devices secured to the disc between the central portion and the periphery thereof.

3,095,552
AUTOMATIC CORRECTION OF SEISMIC RECORDS

Warren A. Alexander and Robert L. Wilcox, Tulsa, Okla., assignors, by mesne assignments, to Jersey Production Research Company

Filed Nov. 27, 1956, Ser. No. 624,568
5 Claims. (Cl. 340—15.5)

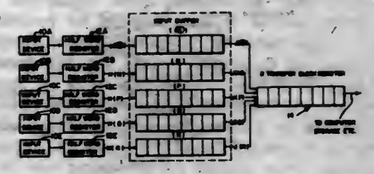


1. In seismic recording or reproducing apparatus including means for mounting a reproducible record medium, and a transducer mounted adjacent said record medium in a manner to enable repeated trace-recording or trace-scanning motions between said transducer and said record medium, the improvement which comprises a reversing-type lead screw, a traveling nut on said lead screw, means coupling said traveling nut with said transducer to move said transducer along a trace on said record medium in response to motion of said traveling nut along said lead screw, motor means adapted to rotate said lead screw and thereby move said traveling nut and said transducer, positioning means actuatable during separate scanning motions between said transducer and said record medium to start and stop said motor means at different positions of said traveling nut along said lead screw, and programming means operable in response to a sequence of separate scanning motions between said transducer and said record medium to actuate said positioning means at a corresponding preselected and variable sequence of positions of said traveling nut along said lead screw.

3,095,553
INPUT BUFFER SYSTEM

Frank A. Hill, Van Nuys, and Howard L. Stahle, Montrose, Calif., assignors to General Precision, Inc., a corporation of Delaware

Filed Apr. 15, 1960, Ser. No. 22,465
6 Claims. (Cl. 340—172.5)

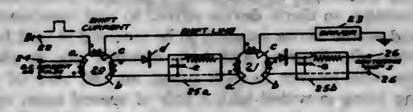


1. An input buffer system for use in conjunction with an electronic digital computer, and the like, including: first circulating register means for storing binary signals representative of a pre-determined number of multi-bit characters, second circulating register means for storing binary signals representative of a number of multi-bit characters greater than said pre-determined number, an input reading system for successively reading a plurality of multi-bit characters stored in an input device, first control circuitry coupled to said reading system and to said first circulating register and responding to timing signals from the computer for causing said input reading system to serially introduce each of the characters read thereby to said first circulating register for circulation therein with a pre-determined timing, second control circuitry coupled to said first circulating register means and to said second circulating register means and responsive to timing signals from the computer for causing the contents of said first register means to circulate into said second register means and the contents of said second register means to circulate into said first register means, and circuit means responsive to a first signal for de-activating said second control circuitry and for activating said first control circuitry and responsive to a second signal for activating said second control circuitry and for de-activating said first control circuitry.

3,095,554
INTELLIGENCE CONTROL SYSTEMS

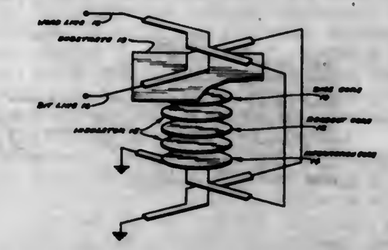
Sadia S. Guterman, Dorchester, and Robert D. Kodis, Brookline, Mass., assignors to Raytheon Company, Lexington, Mass., a corporation of Delaware

Filed Mar. 22, 1955, Ser. No. 495,976
8 Claims. (Cl. 340—174)



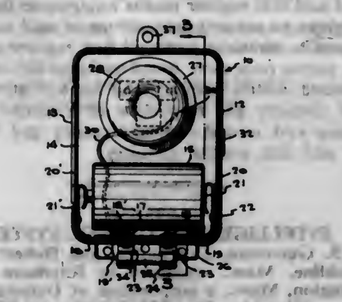
1. In a signal control system, a chain of signal storing elements, a bias winding for entering into the first of said elements a signal of predetermined significance, output winding means for reading said signal out of said elements, feedback winding means of opposite polarity with respect to said bias winding for setting up an opposing magnetic field to prevent any change of magnetic flux in said first of said elements, and means for energizing said read-out means for a period which runs concurrently with the period of operation of said signal entering means.

3,095,555
MAGNETIC MEMORY ELEMENT
Richard L. Moore, Minneapolis, Minn., assignor to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Filed Feb. 13, 1961, Ser. No. 88,789
26 Claims. (Cl. 340—174)



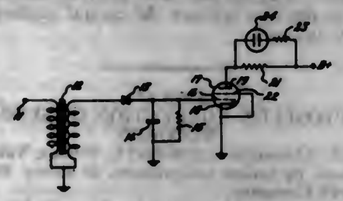
1. A magnetic memory element providing nondestructive readout of a magnetic core comprising three magnetic film cores each core having a substantially rectangular hysteresis characteristic, a first core having a high coercivity and initially permanently magnetized in one of its two remanent magnetic states, a second core having a relatively low coercivity, a third core having a relatively intermediate coercivity, said first and third cores having substantial external remanent magnetic fields in the area of said second core with the field of said first core being of equal or greater intensity than that of said third core.

3,095,556
FIRE ALARM UNIT
Russell W. Fuller, 503 Allegheny St., Jersey Shore, Pa.
Filed Aug. 24, 1960, Ser. No. 51,706
1 Claim. (Cl. 340—227)



A fire alarm unit comprising a rectangular metallic base member having a circumscribing wall, a metallic housing hingedly connected to said wall, a dry cell positioned in said housing, an alarm device affixed to said base member and said alarm device adapted to be received in said housing when the housing and base member are in closed relation with respect to each other, an end wall of said housing being provided with a pair of spaced apart openings, a pair of binding posts extending through said openings, said posts being insulated from said end wall by means of insulation which is of a length to extend a distance along a side wall of the housing, a first spring contact arranged in said housing and abutting the portion of the insulation contiguous to the side wall of the housing, a securing element connecting said spring contact to the side wall of the housing, a second spring contact secured to the opposed side wall of the housing and arranged in direct contact with the last named side wall, and said spring contacts engaging opposite end portions of the dry cell, U-shaped clip members connected to said binding posts and arranged exteriorly of said housing, and said clip members being arranged in spaced aligned relation for receiving a cartridge having a fusible element normally maintaining an open circuit to said alarm device, a ventilated casing arranged exteriorly of said housing and surrounding said cartridge, said housing being provided with a perforated disk for alignment with the alarm device when the housing and base member are in closed relation with respect to each other, said alarm device including a contact, and a conductor electrically connecting said contact to one of said binding posts.

3,095,557
SYSTEM FOR LOCATING MODULATOR MALFUNCTION
Paul A. Bryan, Rome, N.Y., assignor to the United States of America as represented by the Secretary of the Air Force
Filed Oct. 4, 1960, Ser. No. 60,530
2 Claims. (Cl. 340—248)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. An apparatus to indicate the malfunctioning of a thyratron switch tube incorporated in a modulator, the grid electrode of said switch tube receiving directly thereat actuating positive pulses, said positive pulses being short-circuited to ground upon said malfunctioning, a transformer having primary and secondary windings, one leg of said primary winding directly connected to said grid electrode of said thyratron switch tube and one leg of said secondary winding delivering a negative pulse for each positive pulse received at said primary winding, an electron discharge device having control grid, cathode and anode electrodes, said electron discharge device being normally conductive, a diode connected between said leg of said secondary winding and said control grid of said electron discharge device, said diode being arranged to pass only negative pulses, a capacitor and a first fixed resistor in parallel combination connected between said control grid electrode of said electron discharge device and ground, said combination being selected to provide an average bias level at said control grid of said electron discharge device sufficient to prevent conduction therein upon the receipt of negative pulses by said combination, and an illuminating circuit consisting of a neon tube in series with a second resistor, said series combination being connected between a positive source of voltage and said anode electrode of said electron discharge device, a third resistor in parallel circuit with said series combination, said illuminating circuit operating to illuminate said neon tube upon the occurrence of conduction within said electron discharge device.

3,095,558
VACANCY INDICATOR FOR MOTELS AND LIKE ESTABLISHMENTS
Cleveland B. Crudgington, San Leandro, Calif., and Colin D. Murdoch, Reno, Nev.; said Murdoch assignor to said Crudgington
Filed Dec. 27, 1960, Ser. No. 78,480
3 Claims. (Cl. 340—286)

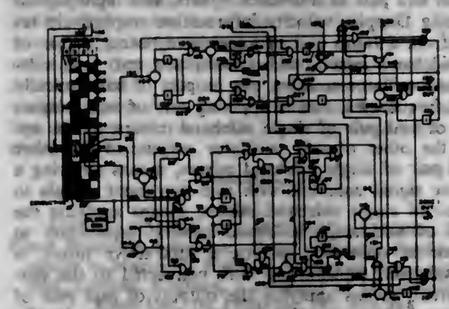
1. An arrangement for indicating room vacancies in motels and like establishments comprising a signalling board having individual signalling means for each of

the rooms of the establishment and in each of the rooms an apparatus for returning a deposit for the room key, said apparatus comprising a container for the key deposit, a door for affording access to the deposit in said container, means for activating a corresponding one of the signalling means on said signalling board having a switch within said container, lock means in the walls of said container settable by a key from an initial normal position wherein it holds said door in a closed position to a position wherein it releases said door to provide access to the deposit in the container and causes actuation of said switch to activate the corresponding signalling means on said signalling board, means effective upon departure of said lock means from its initial



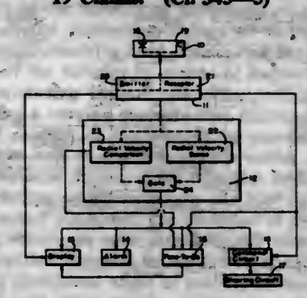
position to block its return to said initial position and thus prevent withdrawal of the key, a chute for the insertion of coins into said container, means at the end of said chute for retaining coins inserted into the chute within said chute, means effective in response to the accumulation of a number of coins of predetermined size to disable said blocking means and thus permit said lock means to be returned to its initial position where the key may be withdrawn and said corresponding signalling means is de-activated, and means effective in response to the return of said lock means to its initial position and upon closure of said door to withdraw said coin retaining means and permit the coins to drop from the chute into the closed container.

3,095,559
BINARY DIGITAL SINGLE-BRUSH READOUT DEVICE
Albert Wellinsky, New Rochelle, N.Y., assignor to General Precision, Inc., a corporation of Delaware
Filed Apr. 7, 1959, Ser. No. 804,752
7 Claims. (Cl. 340—347)



7. An analog to digital converter comprising, a code translator bearing natural binary code representations thereon in alternate 1 and 0 binary areas separated by boundaries in a plurality of zones of increasing digital significance, a single readout device per zone each associated with a respective one of said zones, an additional pair of sensing devices positioned on either side of the single readout device associated with the next to least significant zone, said additional pair of sensing devices together with the single readout device associated with the least significant zone constituting motion-sensing readout devices, all of said readout devices producing readout signals representative of the binary digits 1 or 0 in accordance with the representations of the associated zones, means for producing relative motion between said code translator and all of said readout devices as a group whereby the transition of any boundary by any readout device changes the signal produced thereby from one to the other of said representative signals, said readout devices being so positioned with respect to said code representations that a change in signal produced in a readout device associated with any one zone is always accompanied by a change in signal in the readout devices associated with all zones of lesser significance, means including said motion-sensing readout devices for producing a pair of direction-indication signals in respective ones of a pair of conductors, one of said pair of signals in one of said pair of conductors being indicative of relative motion between said code translator and said group of readout devices in one direction and the other of said pair of signals in the other of said pair of conductors being indicative of relative motion in the opposite direction, a plurality of parallel binary output terminals, and an AND circuit operated by the coincidence of one of said pair of direction signals and the signal produced by the readout device associated with the most significant of the zones in which signal change occurs for producing an executing signal, means operated by said executing signal for changing the signals in the binary output terminals representing the readouts of said most significant zone in which signal change occurs and all less significant zones, and means operated by said executing signal for repeating the output signals at the output terminals representing readout devices associated with all other zones, and means including an AND circuit and an INHIBIT-AND circuit to produce said output changes when the most significant zones which produces a signal change in its associated readout device is the highest order zone and the signal change thereof is of the same kind as that produced in the readout devices associated with all zones of lesser significance.

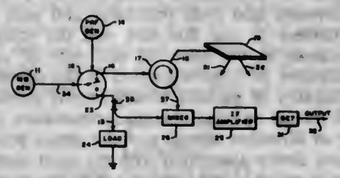
3,095,560
METHOD AND APPARATUS FOR DETERMINING COLLISION COURSES
Nello R. Castellini, 42 Bruce Road, Red Bank, N.J.
Filed Jan. 5, 1959, Ser. No. 784,951
19 Claims. (Cl. 343—5)



1. In combination, a moving vehicle, and control means on said vehicle adapted to determine when said vehicle is on a collision course with an interfering object,

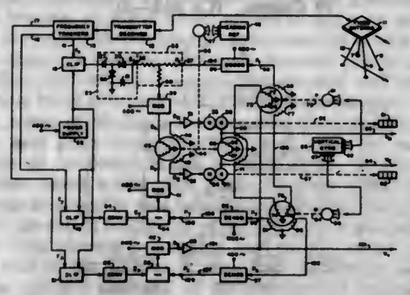
said control means comprising first means for measuring the tangential component of relative velocity between said vehicle and object, said first means being operative to produce a first control signal when said tangential component has a magnitude below a predetermined limit indicative of the line-of-sight between said vehicle and object remaining substantially parallel to itself as the relative motion between said vehicle and object progresses, second means for measuring the radial component of relative velocity between said vehicle and object, said second means being operative to produce a second control signal when said radial component has a sense indicative of said vehicle and object approaching one another as said relative motion progresses, and third means responsive to the simultaneous presence of said first and second control signals for indicating the presence of a collision course between said vehicle and object.

3,095,561
MICROWAVE TRANSMITTER AND RECEIVER
Theodore Hubka, Briarcliff Manor, N.Y., assignor to General Precision, Inc., a corporation of Delaware
Filed Sept. 12, 1961, Ser. No. 137,551
7 Claims. (Cl. 343—5)



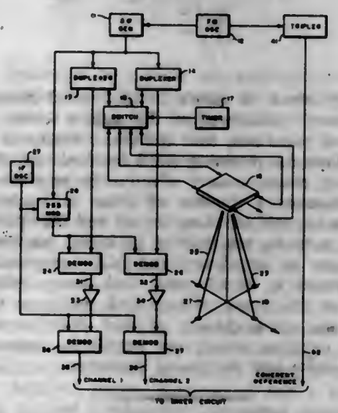
1. A microwave transmitter-receiver comprising, a microwave generator, double-throw switch means, oscillator means for operating said double-throw switch means, a transmitter-receiver element energized by said generator through said switch means in one position of operation thereof, load means energized by said generator through said switch means in the other position of operation thereof, and a receiver element excited from said transmitter-receiver element and also by said generator through said switch means in said other position of operation.

3,095,562
COMPUTER FOR DATA CONVERSION AND STABILIZATION
Lawrence H. Dworetzky, Valhalla, and John W. Gray, Pleasantville, N.Y., assignors to General Precision, Inc., a corporation of Delaware
Filed Mar. 8, 1960, Ser. No. 13,647
9 Claims. (Cl. 343—8)



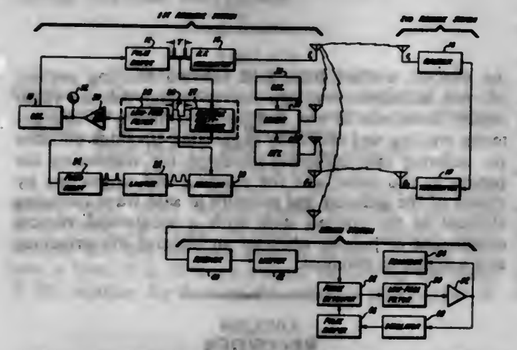
1. A navigation system computer comprising, an antenna rigidly fixed to the airframe of an aircraft and emitting a plurality of signal beams toward the earth's surface for reflection thereby, means responsive to echo signals reflected from the earth's surface for producing transverse, longitudinal and vertical velocity coordinate signals, a pitch resolver having its rotor positioned in accordance with the pitch of said aircraft and energized by signals representative of aircraft longitudinal velocity and aircraft vertical velocity, a roll resolver having its rotor positioned in accordance with the roll of said aircraft and energized by a signal representative of aircraft transverse velocity and one output derived from said pitch resolver, means for comparing said longitudinal coordinate velocity signal and another output of said pitch resolver for producing a first error signal, means comparing said transverse coordinate signal and one output of said roll resolver for producing a second error signal, first servo means energized by said first error signal for applying a pitch correction signal to the aircraft longitudinal velocity signal impressed on said pitch resolver, and second servo means energized by said second error signal for applying a pitch and roll correction signal to said aircraft transverse velocity signal impressed on said roll resolver.

3,095,563
MIXER CIRCUIT FOR RADAR SYSTEMS
Leonard O. Vladimir, Chappaqua, N.Y., assignor to General Precision, Inc., a corporation of Delaware
Filed Apr. 28, 1960, Ser. No. 25,301
11 Claims. (Cl. 343—8)



1. A mixer circuit for deriving signals representing horizontal and vertical velocity components of an airborne velocity-measuring radar system comprising, a pair of difference mixers, a pair of filters respectively connected to the outputs thereof transmitting lower sidebands only, means applying two input signals respectively to said pair of difference mixers, said input signals containing Doppler velocity information respectively received from a Janus pair of microwave beams, a pair of single-sideband mixers each transmitting only one sideband, an oscillator emitting two outputs of harmonically related frequencies, means applying one of said outputs to one of said pair of single sideband mixers, means applying the other of said oscillator outputs to the other of said pair of single sideband mixers, means applying a reference signal coherent with said two input signals to said pair of single sideband mixers, means applying the outputs of said single sideband mixers respectively to said pair of difference mixers, a subtractive mixer, a lower sideband transmitting filter connected to the output thereof, means applying the outputs of said pair of difference mixers to said subtractive mixer whereby the output of said lower sideband transmitting filter constitutes a mixer circuit output having a frequency representing said horizontal velocity component, a difference mixer, means applying one of said two input signals to said difference mixer, means applying the output of one of said pair of single sideband mixers to said difference mixer, an additive mixer, an upper sideband transmitting filter connected to the output thereof, means applying the output of one of said pair of difference mixers to said additive mixer, and means applying the output of said difference mixer to said additive mixer to form at the output of said upper sideband transmitting filter a mixer circuit output having a frequency representing said vertical velocity component.

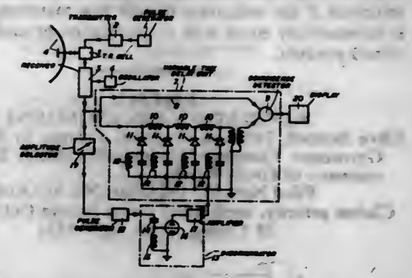
3,095,564
RANGE MEASURING SYSTEM
Victor F. Cartwright, Fullerton, Calif., assignor to Traid Corporation, Encino, Calif., a corporation of California
Filed Dec. 21, 1959, Ser. No. 860,834
3 Claims. (Cl. 343—13)



3. A miss-distance measuring system for indicating the minimum distance between two moving stations, one of which is a missile and the other of which is a target, the system comprising, at one station, a transponder for receiving modulated signals at a first carrier frequency and transmitting them at a second frequency, and at the other moving station, means for generating pulses at a controllable repetition rate variable over a predetermined range, a transmitter having a carrier at said first carrier frequency and modulated by the output of the pulse generating means, a receiver for demodulating signals received at said second carrier frequency, delay means coupled to the output of the receiver for delaying the received pulses by a predetermined amount, a phase sensitive device for generating an output signal indicative of the phase relation between two input pulse trains, said phase sensitive device being coupled to the output of the pulse generating means and the output of the delay means for producing a control signal in response to variations in the phase relationship of the transmitted and received pulses, and means for controlling the pulse repetition rate of the pulse generating means in response to the control signal from the phase sensitive device, whereby the pulse repetition rate of the pulse generating means is varied in proportion to changes in the total phase relation between the two pulse train signals applied to the phase sensitive device.

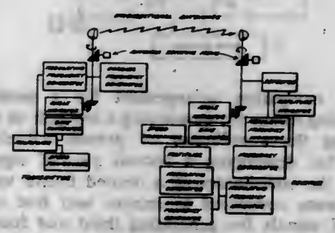
3,095,565
ANTI-JAMMING PULSED-RADAR CIRCUIT
Ernst Friedrich Scheibach, Great Baddow, England, assignor to Marconi's Wireless Telegraph Company Limited, London, England, a company of Great Britain
Filed Dec. 16, 1959, Ser. No. 859,954
Claims priority, application Great Britain June 4, 1959
6 Claims. (Cl. 343—17.1)

1. A pulsed radar system including in the receiver portion thereof, two signal paths having their input ends fed in parallel with signals derived from the radar receiver, a variable delay line in one of said paths, means for combining the outputs of said paths in opposition, display means fed with signals derived from the combined output



of said paths, means for selecting and separating from the received signals only those signals having an amplitude exceeding a predetermined value, and means dependent on the frequency of said selected and separated signals, for varying the delay of said delay line.

3,095,566
METHOD AND APPARATUS FOR PREVENTING COLLISIONS BETWEEN VEHICLES
Jürgen Dethloff, Avenariusstrasse 30, Hamburg-Blankenese, Germany, and Heinz Matzeche, Borsteler Chaussee 186, Hamburg, Germany
Filed Aug. 10, 1959, Ser. No. 832,575
Claims priority, application Germany Aug. 8, 1958
13 Claims. (Cl. 343—106)



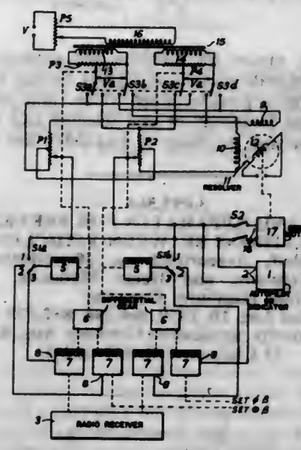
1. A method of preventing collisions between moving aerial or maritime vehicles, comprising the steps of transmitting from one of the vehicles as a first signal a wireless signal beam of rotationally varying angular direction in a substantially horizontal plane and determined as the angle between the direction of said beam and the direction of movement of said one vehicle, said first signal having a varying message characteristic functionally indicative of the product of the velocity of movement of said one vehicle and of the momentary values of the sine of said varying angle; receiving said wireless signal aboard another one of the vehicles by means of a direction finding antenna; producing aboard said other vehicle a second signal having a varying characteristic functionally indicative of the product of the velocity of movement of said other vehicle and of the momentary values of the sine varying positional angles of the direction finding antenna cyclically increasing between zero and 360° in a substantially horizontal plane with the direction of movement of said other vehicle as zero direction and increasing in a circular direction opposite to the direction of increase of the varying directional angle of said signal beam; indicating aboard said other vehicle, at the moment of the reception of said first signal transmitted from said one vehicle, said message characteristic indicative of said product of the velocity of movement of said one vehicle and the momentary value of the sine of the directional angle

of said signal beam; and indicating aboard said other vehicle at the same moment said characteristic of said second signal indicative of the product of the momentary value of said positional angle and of the velocity of movement of said other vehicle, whereby danger of collision is indicated if the indication of said first mentioned product is substantially equal with the indication of said last mentioned product.

3,095,567
NAVIGATION ARRANGEMENT

Clive Britnell, Feltham, England, assignor to The Sperry Gyroscope Company Limited, Brentford, England, a company of Great Britain

Filed Nov. 17, 1959, Ser. No. 853,614
Claims priority, application Great Britain Oct. 23, 1959
10 Claims. (Cl. 343—112)



1. A navigation arrangement for a mobile vehicle comprising means for developing a first pair of signals representing the coordinates of present vehicle position, means for developing a second pair of signals representing the coordinates of a desired future vehicle position, means connected to receive said first and second pairs of signals for generating third and fourth signals each representing the difference between the values of respective ones of said coordinates which are of the same kind, means for generating fifth and sixth signals, the ratio between the values of said fifth and sixth signals being related to the ratio between the values of said third and fourth signals, multiplying means connected to receive said third, fourth, fifth and sixth signals for producing seventh and eighth signals respectively representing the product of said third and fifth signals and the product of said fourth and sixth signals, and means responsive to said seventh and eighth signals as said vehicle progresses toward said desired future position.

3,095,568
LIFE PRESERVER WITH INTEGRAL PNEUMATIC ANTENNA ERECTING APPARATUS

Harry E. Aine, 3422 Janice Way, Palo Alto, Calif., and Arthur Leinwohl, Los Altos, Calif. (979 Amstutz Drive, San Jose, Calif.)

Filed Apr. 10, 1958, Ser. No. 727,696
12 Claims. (Cl. 343—709)

1. An inflatable life saving apparatus including, an elongated tubular inflatable envelope structure, said envelope structure when inflated having a pair of spaced apart elongated portions directed generally in the horizontal plane for flotation on the surface of the water, said elongated envelope portions being disposed adjacent the water and being formed and arranged to straddle and to attach to a body portion of a person with the body portion being disposed inbetween said inflated envelope portions for supporting when inflated the body of an unconscious person with at least his head and neck out of the water, said inflatable envelope including an inflatable antenna erecting portion of a flexible material in gas communication with said first envelope structure for erection when inflated, a collapsible pliable radio frequency wave radiat-

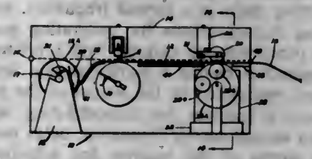


ing element carried from said antenna erecting portion of said inflatable envelope for radiating distress radio signals therefrom in use, and means common to said antenna erecting and said body supporting envelope portions for inflating said inflatable envelope for supporting the person in the water and for erecting and supporting by means of the inflating gas pressure in said wave radiating element in the erected state with a substantial vertical component of height, whereby an integral life preserver and antenna is obtained.

3,095,569
RECORDER

Paul E. Smith, Jr., Littleton, and Daniel P. Norman, Ipswich, Mass., assignors to Conval Corporation, Cambridge, Mass., a corporation of Massachusetts

Filed July 24, 1958, Ser. No. 750,678
28 Claims. (Cl. 346—74)



4. A recorder having a pair of spaced electrodes adapted to have recording paper pass therebetween, means for creating a spark between said electrodes by applying a sparking voltage across said electrodes and means in parallel with said last mentioned means for applying immediately subsequently to said sparking voltage an increased voltage adapted to cause a current surge through said spark caused by said sparking voltage.

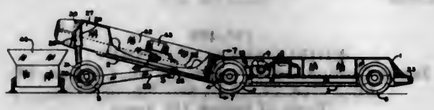
3,095,570
MINE HAULAGE VEHICLE

Edmund M. Warner and Paul R. Johnson, Franklin, Pa., assignors to Joy Manufacturing Company, Pittsburgh, Pa., a corporation of Pennsylvania

Filed Apr. 3, 1959, Ser. No. 804,011
2 Claims. (Cl. 214—83.36)

1. A mine haulage vehicle comprising, a movable flexible conveying means, elongated body sections supporting said flexible conveying means, each body section supporting a portion of said conveying means wherein said conveying means extends for the entire length of said body sections, pivot means connecting said body sections at their adjacent ends in tandem for unrestrained pivotal action through an arc relative to each other, trac-

tion wheels located on one of said body sections adjacent said pivot means, a frame member pivotally mounted at one end to said one body section adjacent said pivot means, the other end of said frame member having steerable wheels mounted thereon for steering the one said body section, adjusting means secured to said steer-



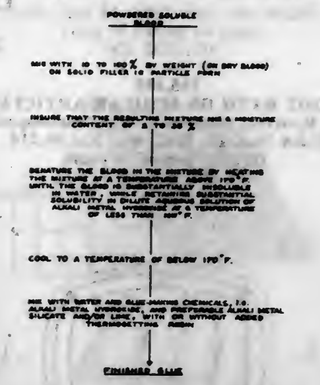
able wheels and the end of said one body section which is adjacent thereto for elevating said end of said one body section for positioning said one body section for discharging material therefrom, and steerable wheels located at the end of the other of said body sections for steering said other body section.

3,095,571
TOASTED BLOOD GLUE

Charles N. Cone, Portland, Oreg., assignor, by mesne assignments, to Pacific Resins & Chemicals, Inc., Seattle, Wash., a corporation of Washington

Filed Oct. 15, 1959, Ser. No. 846,628
38 Claims. (Cl. 106—79)

7. The process of making a glue which comprises mixing spray dried soluble blood particles with from 10 to 100% by weight of solid filler in particle form, insuring that the moisture content of the resulting mixture is from 2 to 35% by weight, denaturing the blood in the mixture by heating the mixture above 170° F. until the blood content thereof is substantially insoluble in water but retains substantial solubility in dilute aqueous alkali metal hydroxide at a temperature of less than 100° F., cooling the heated mixture to a temperature



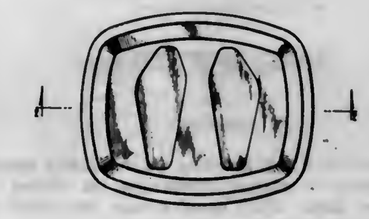
of below 170° F. for arresting the denaturing operation, and forming a mixture comprising the cooled blood glue base, water, alkali metal caustic, and alkali metal silicate in the following proportions:

	Parts by weight
Blood	100
Filler	10–100
Water	300–1200
Alkali metal caustic	1–50
Alkali metal silicate	10–400

DESIGNS

JUNE 25, 1963

195,495
FOOT BATH OR SIMILAR ARTICLE
Mikeal G. Bystrom, 6106 Park Ave., Minneapolis, Minn.
Filed Mar. 12, 1962, Ser. No. 69,218
Term of patent 14 years
(Cl. D4—4)



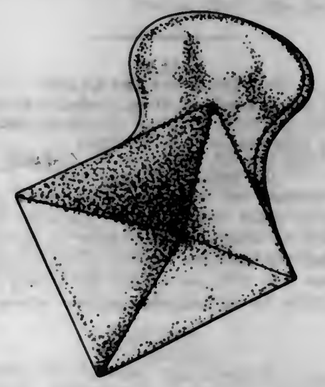
195,496
PLATFORM SHOE SOLE
Beth Levine, 59 W. 12th St., New York, N.Y.
Filed Dec. 6, 1962, Ser. No. 72,741
Term of patent 14 years
(Cl. D7—5)



195,497
SLIPPER
Florence B. Zacks, Columbus, Ohio, assignor to R. G. Barry Corporation, Columbus, Ohio, a corporation of Ohio
Filed July 9, 1962, Ser. No. 70,843
Term of patent 14 years
(Cl. D7—7)



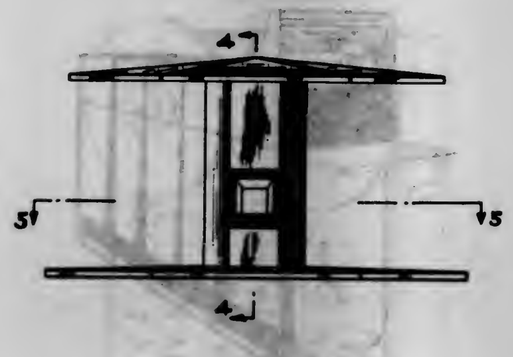
195,498
EDIBLE SERVING SPOON
James Gordon, 3625 N. Halsted St., Chicago, Ill.
Filed Dec. 21, 1961, Ser. No. 68,011
Term of patent 3½ years
(Cl. D8—1)



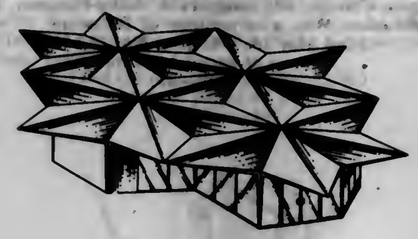
195,499
HARDBOARD PANELING OR THE LIKE
Daniel R. Nikolich, Palatine, Ill., assignor to Edward Hines Lumber Co., a corporation of Delaware
Filed Jan. 8, 1962, Ser. No. 68,224
Term of patent 14 years
(Cl. D13—1)



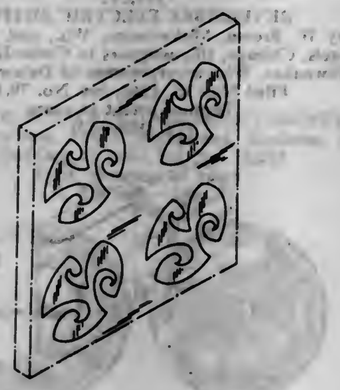
195,500
COMBINED OUTDOOR RECREATIONAL PAVILION, BARBECUE GRILL, AND PATIO
John W. Munn, P.O. Box 2144, and Allen D. McKenzie, Box 13, both of Casper, Wyo.
Filed Mar. 5, 1962, Ser. No. 69,073
Term of patent 3½ years
(Cl. D13—1)



195,501
BUILDING
Joseph B. Schwartz, 278 W. 86th St., New York, N.Y.
Filed Mar. 30, 1962, Ser. No. 69,514
Term of patent 14 years
(Cl. D13—1)



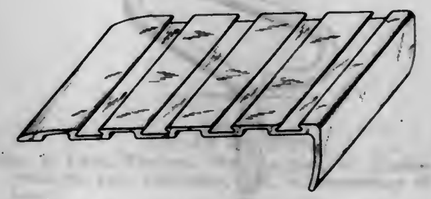
195,502
PANELLING MATERIAL OR THE LIKE
Colman Zola, 58 Tamarack Way, Pleasantville, N.Y.
Filed May 7, 1962, Ser. No. 69,998
Term of patent 3½ years
(Cl. D13—1)



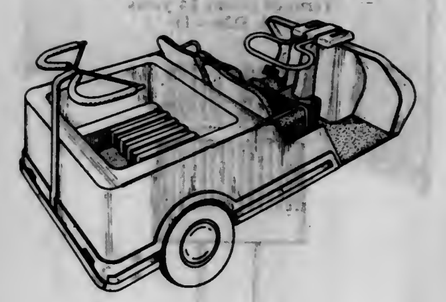
195,503
RESTAURANT BUILDING
Robert L. Fellers, Lawrence, Kans., assignor to Griff's of America, Inc., Kansas City, Mo., a corporation of Missouri
Filed May 21, 1962, Ser. No. 70,218
Term of patent 14 years
(Cl. D13—1)



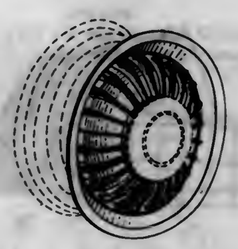
195,504
STAIR TREAD
George F. Waite, Glen Ridge, N.J., assignor to Irving Air Chute Co., Inc., New Hyde Park, N.Y., a corporation of New York
Filed Oct. 16, 1961, Ser. No. 67,090
Term of patent 7 years
(Cl. D13—7)



195,505
GOLF CAR
Edward L. Saffert, Milwaukee, Wis., assignor to Harley-Davidson Motor Co., Milwaukee, Wis., a corporation of Wisconsin
Filed June 13, 1962, Ser. No. 70,535
Term of patent 7 years
(Cl. D14—3)



195,506
WHEEL
Romayne E. Holmes, Jr., Madison Heights, Mich., assignor to Kelsey-Hayes Company, Romulus, Mich., a corporation of Delaware
Filed July 9, 1962, Ser. No. 70,832
Term of patent 14 years
(Cl. D14—30)



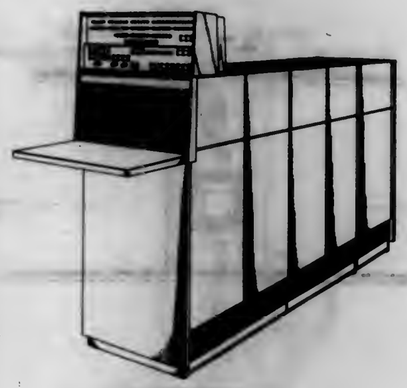
195,507
CAN OPENING KEY
Henry William Abts III, New York, N.Y., assignor to American Can Company, New York, N.Y., a corporation of New Jersey
Filed Dec. 4, 1961, Ser. No. 67,791
Term of patent 14 years
(Cl. D22—2)



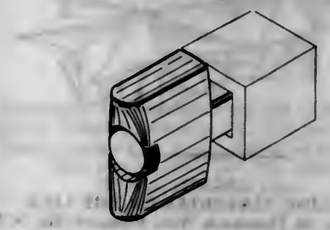
195,508
ELECTRICAL CONNECTOR
Matthew J. McCabe, Bristol, Conn., assignor to The Superior Electric Company, Bristol, Conn., a corporation of Connecticut
Filed Oct. 1, 1962, Ser. No. 71,943
Term of patent 14 years
(Cl. D26—1)



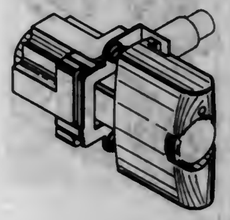
195,509
ELECTRONIC CABINET
Robert Van Valkinburgh, Montgomery County, Pa., assignor to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Filed Oct. 18, 1962, Ser. No. 72,186
Term of patent 7 years
(Cl. D26—5)



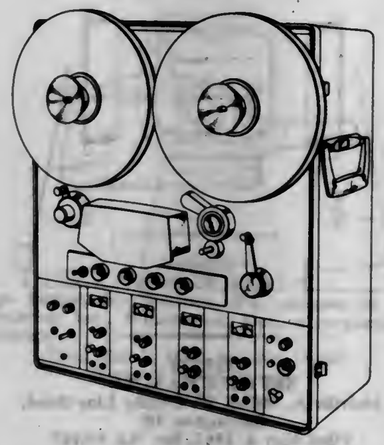
195,510
DEPRESSIBLE TRIGGER ACTUATOR FOR A REVERSIBLE ELECTRIC SWITCH
Harry W. Brown, Mukwonago, Wis., and Raymond C. Ingels, Chicago, Ill., assignors to Cutler-Hammer, Inc., Milwaukee, Wis., a corporation of Delaware
Filed May 15, 1962, Ser. No. 70,144
Term of patent 14 years
(Cl. D26—13)



195,511
REVERSIBLE ELECTRIC SWITCH
Harry W. Brown, Mukwonago, Wis., and Raymond C. Ingels, Chicago, Ill., assignors to Cutler-Hammer, Inc., Milwaukee, Wis., a corporation of Delaware
Filed May 15, 1962, Ser. No. 70,145
Term of patent 14 years
(Cl. D26—13)

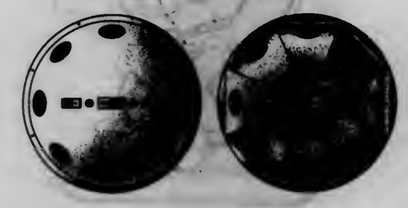


195,512
PORTABLE TAPE RECORDER
James K. Hackney, Jr., Mountain View, Calif., assignor to Ampex Corporation, Redwood City, Calif., a corporation of California
Filed Jan. 15, 1962, Ser. No. 68,307
Term of patent 14 years
(Cl. D26—14)

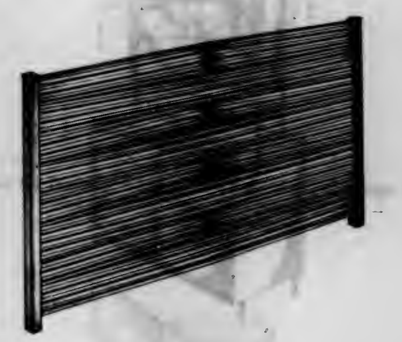


195,513
ADJUSTABLE INDOOR ANTENNA
Charles C. Y. Liu, Ellenville, N.Y., assignor to Channel Master Corporation, Ellenville, N.Y., a corporation of New York
Filed Oct. 10, 1962, Ser. No. 72,063
Term of patent 14 years
(Cl. D26—14)

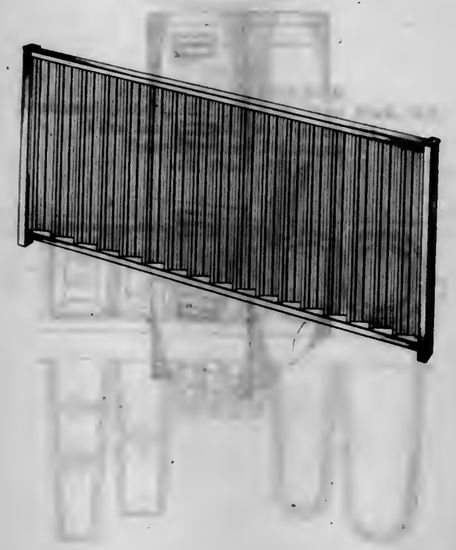
195,514
CEILING-SUSPENDED SPEAKER CABINET
Alfred J. Erickson, 928 S. Hampstead, Anaheim, Calif.
Filed Oct. 25, 1962, Ser. No. 72,268
Term of patent 14 years
(Cl. D26—14)



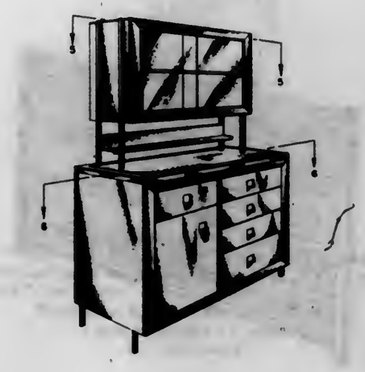
195,515
FENCE SECTION
John S. Case, Towson, Md., assignor to Anchor Post Products, Inc., Baltimore, Md., a corporation of New Jersey
Filed Mar. 15, 1962, Ser. No. 69,274
Term of patent 14 years
(Cl. D28—1)



195,516
FENCE SECTION
John S. Case, Towson, Md., assignor to Anchor Post Products, Inc., Baltimore, Md., a corporation of New Jersey
Filed Mar. 15, 1962, Ser. No. 69,275
Term of patent 14 years
(Cl. D28—1)



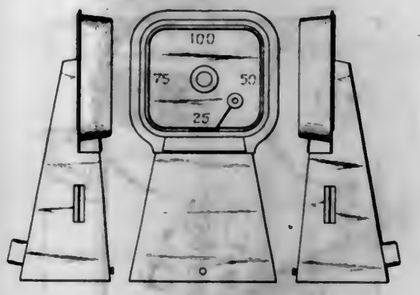
195,517
CABINET OR SIMILAR ARTICLE
Robert R. Peters, Great Neck Estates, N.Y., assignor to Patents Management Corporation, Atlanta, Ga., a corporation of Georgia
Filed May 10, 1960, Ser. No. 60,521
Term of patent 14 years
(Cl. D33—19)



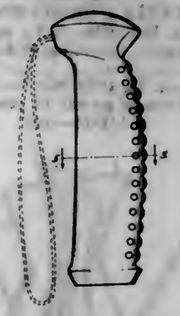
195,518
FILE CABINET
Earle C. Bullock, Grand Rapids, and Adrian R. Ohree, Caledonia, Mich., assignors to Steelcase, Inc., Grand Rapids, Mich., a corporation of Michigan
Filed Mar. 7, 1962, Ser. No. 69,131
Term of patent 14 years
(Cl. D33—19)



195,519
TOY TARGET
Thomas C. Mills, Wheaton, and Frank Miyagawa, Chicago, Ill., assignors to Manning Manufacturing Corporation, Chicago, Ill., a corporation of Illinois
Filed Dec. 26, 1962, Ser. No. 72,950
Term of patent 3½ years
(Cl. D34—5)



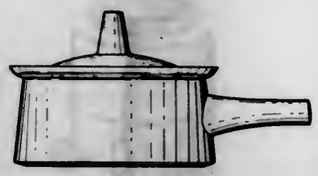
195,520
SKI POLE HANDLE
Melville A. Miller, W. County Line Road, Barrington, Ill.
Filed May 4, 1962, Ser. No. 69,967
Term of patent 14 years
(Cl. D34—14)



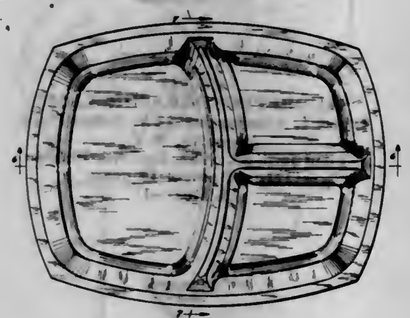
195,521
ACTION TOY
Walter P. Doe, East Aurora, N.Y., assignor to Fisher-Price Toys, Inc., East Aurora, N.Y., a corporation of New York
Filed Feb. 12, 1963, Ser. No. 73,522
Term of patent 14 years
(Cl. D34—15)



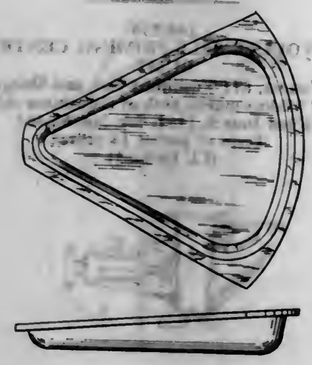
195,522
HANDLED CASSEROLE
Jens H. Quistgaard, Lucerne, Switzerland, assignor to Dansk Ovenware, Inc., Great Neck, N.Y., a corporation of New York
Filed Nov. 30, 1962, Ser. No. 72,671
Term of patent 14 years
(Cl. D44—1)



195,523
DIVIDED DISH
George Patton, Jr., Warwick, R.I., assignor to Haveg Industries, Inc., Wilmington, Del., a corporation of Delaware
Filed May 8, 1962, Ser. No. 70,027
Term of patent 14 years
(Cl. D44—15)



195,524
PIE DISH
George Patton, Jr., Warwick, R.I., assignor to Haveg Industries, Inc., Wilmington, Del., a corporation of Delaware
Filed May 8, 1962, Ser. No. 70,040
Term of patent 14 years
(Cl. D44—15)



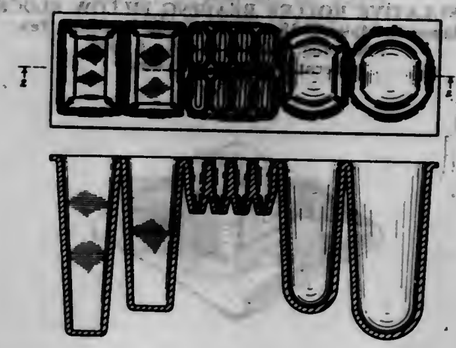
195,525
DISH
George Patton, Jr., Warwick, R.I., assignor to Haveg Industries, Inc., Wilmington, Del., a corporation of Delaware
Filed May 8, 1962, Ser. No. 70,041
Term of patent 14 years
(Cl. D44—15)



195,526
PITCHER
James D. Wallner, 1718 W. Collum Ave., Chicago, Ill.
Filed Jan. 26, 1962, Ser. No. 68,529
Term of patent 7 years
(Cl. D44—21)



195,527
SILVERWARE HOLDER
Nathaniel Gilbert, 1075 1st Ave., New York, N.Y.
Filed Jan. 2, 1962, Ser. No. 68,141
Term of patent 3½ years
(Cl. D44—29)



195,528
END LINK FOR A BRACELET OR SIMILAR ARTICLE
Karl C. Augenstein, Cranston, R.I., assignor to Speidel Corporation, Providence, R.I., a corporation of Rhode Island
Filed Feb. 6, 1962, Ser. No. 68,680
Term of patent 3½ years
(Cl. D45—4)



195,529
LIGHTING FIXTURE
Noel S. Florence, Cranford, N.J., assignor to Lightolier Incorporated, a corporation of New York
Filed June 12, 1961, Ser. No. 65,558
Term of patent 14 years
(Cl. D48—23)



195,530
KNOB
John R. Morgan, Wheeling, Ill., assignor to Amerock Corporation, Rockford, Ill., a corporation of Illinois
Filed Dec. 13, 1962, Ser. No. 72,836
Term of patent 14 years
(Cl. D50—3)



195,531
INSULATIVE ROLLER BEARING PILLOW BLOCK
James B. Mallard, 3800 W. Alabama, Houston, Tex.
Filed Aug. 2, 1960, Ser. No. 61,600
Term of patent 3½ years
(Cl. D55—1)



195,532
BOTTLE
Carl Louis Otto, New York, N.Y., assignor to Geo. G. Sandeman Sons & Co. Limited, London, England
Filed Aug. 25, 1961, Ser. No. 66,507
Claims priority, application Great Britain June 14, 1961
Term of patent 14 years
(Cl. D58—8)



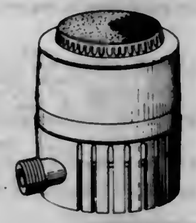
195,533
STUDIO PHOTOGRAPHIC LAMP
James T. Aneshansley, 12 St. James Place, Brooklyn, N.Y.
Filed June 25, 1962, Ser. No. 70,674
Term of patent 14 years
(Cl. D61—1)



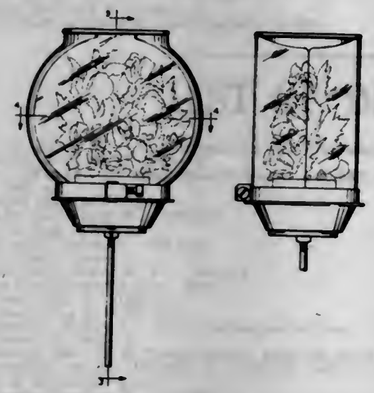
195,534
DOUBLE VOLUTE SELF-PRIMING CENTRIFUGAL PUMP
Hidekuni Yokota, 671 Yoshijima-cho, and Shingo Yokota, 8 of 1627 Midori-machi, both of Hiroshima-shi, Japan
Filed June 5, 1961, Ser. No. 65,461
Term of patent 14 years
(Cl. D65—1)



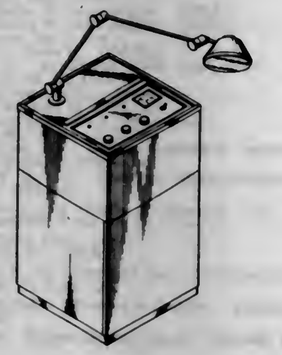
195,535
BOAT BAILING PUMP
Nolan K. Rhoades, Beloit, Wis., assignor to The Electric Storage Battery Company, Philadelphia, Pa., a corporation of New Jersey
Filed Aug. 6, 1962, Ser. No. 71,191
Term of patent 14 years
(Cl. D65—1)



195,536
CEMETERY FLORAL DISPLAY
Carmen Charles Falco, Jr., 130 Lawrence St., Syracuse, N.Y.
Filed Aug. 30, 1961, Ser. No. 66,595
Term of patent 7 years
(Cl. D79—2)



195,537
PULSED HIGH FREQUENCY ELECTRO-THERAPEUTIC UNIT
William Denis Kendall, Los Angeles, Calif., assignor to Dynapower Systems Corporation, Los Angeles, Calif., a corporation of Delaware
Filed Apr. 17, 1962, Ser. No. 69,751
Term of patent 14 years
(Cl. D83—1)



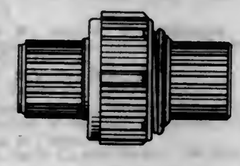
195,538
HANDBAG CLOSURE CLASP
Etienne Aigner, 217 Haven Ave., New York, N.Y.
Filed Feb. 19, 1962, Ser. No. 68,879
Term of patent 14 years
(Cl. D87—2)



195,539
SPRAY NOZZLE
Joel K. Williams, 8280 Garden Grove Blvd., Garden Grove, Calif.
Filed Dec. 13, 1961, Ser. No. 67,902
Term of patent 3½ years
(Cl. D91—1)



195,540
HOSE FITTING
James O. Knight, Peoria, Ill., assignor to L. R. Nelson Mfg. Co., Inc., Peoria, Ill., a corporation of Illinois
Filed Oct. 27, 1961, Ser. No. 67,277
Term of patent 14 years
(Cl. D91—3)

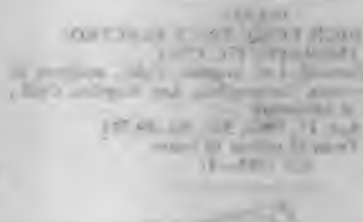
















LIST OF REISSUE PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 25TH DAY OF JUNE, 1963

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

Bliss, E. W., Co.: *See*—
Byrne, John J., and Cruger. Re. 25,406.

Borg-Warner Corp.: *See*—
Lebourg, Maurice P. Re. 25,407.

Byrne, John J., and R. W. Cruger, to E. W. Bliss Co. Aircraft arresting system. Re. 25,406, 6–25–63, Cl. 244—110.

Cruger, Robert W.: *See*—
Byrne, John J., and Cruger. Re. 25,406.

Dudek, Edwin K.: *See*—
Witt, Victor R., Prentky, and Dudek. Re. 25,405.

International Business Machines Corp.: *See*—
Witt, Victor R., Prentky, and Dudek. Re. 25,405.

Lebourg, Maurice P., to Borg-Warner Corp. Method and apparatus for detonating explosive devices in bore holes. Re. 25,407, 6–25–63, Cl. 166—36.

Prentky, Peter I.: *See*—
Witt, Victor R., Prentky, and Dudek. Re. 25,405.

Witt, Victor R., P. I. Prentky, and E. K. Dudek, to International Business Machines Corp. Skew elimination system. Re. 25,405, 6–25–63, Cl. 340—174.1.

LIST OF PLANT PATENTEES

Cayeux, Louis F., to R. Talbot. Hydrangea plant. 2,265, 6–25–63, Cl. 47—60.

Cayeux, Louis F., to R. Talbot. Hydrangea plant. 2,266, 6–25–63, Cl. 47—60.

Cayeux, Louis F., to R. Talbot. Hydrangea plant. 2,267, 6–25–63, Cl. 47—60.

Limpert, Anthony S.: *See*—
Schmalz, Charles E., and Limpert. 2,268.

Schmalz, Charles E., and A. S. Limpert; said Limpert assor. to said Schmalz. Rose plant. 2,268, 6–25–63, Cl. 47—61.

Talbot, Roger: *See*—
Cayeux, Louis F. 2,265.
Cayeux, Louis F. 2,266.
Cayeux, Louis F. 2,267.

LIST OF DESIGN PATENTEES

Abts III, Henry W., to American Can Co. Can opening key. 195,507, 6–25–63, Cl. D22—2.

Aigner, Etienne. Handbag closure clasp. 195,538, 6–25–63, Cl. D67—2.

American Can Co.: *See*—
Abts III, Henry W. 195,507.

Amerock Corp.: *See*—
Morgan, John R. 195,530.

Ampex Corp.: *See*—
Hackney, James K., Jr. 195,512.

Anchor Post Products, Inc.: *See*—
Case, John S. 195,515.
Case, John S. 195,516.

Anschansley, James T. Studio photographic lamp. 195,533, 6–25–63, Cl. D61—1.

Augenstein, Karl C., to Speidel Corp. End link for a bracelet or similar article. 195,528, 6–25–63, Cl. D45—4.

Barry, R. G., Corp.: *See*—
Zacks, Florence B. 195,497.

Brown, Harry W., and R. C. Ingels, to Cutler-Hammer, Inc. Depressible trigger actuator for a reversible electric switch. 195,510, 6–25–63, Cl. D26—13.

Brown, Harry W., and R. C. Ingels, to Cutler-Hammer, Inc. Reversible electric switch. 195,511, 6–25–63, Cl. D26—13.

Bullock, Earle C., and A. R. Olree, to Steelcase, Inc. File cabinet. 195,518, 6–25–63, Cl. D33—19.

Bystrom, Mikeal G. Foot bath or similar article. 195,495, 6–25–63, Cl. D4—4.

Case, John S., to Anchor Post Products, Inc. Fence section. 195,515, 6–25–63, Cl. D28—2.

Case, John S., to Anchor Post Products, Inc. Fence section. 195,516, 6–25–63, Cl. D28—2.

Channel Master Corp.: *See*—
Liu, Charles C. Y. 195,513.

Cutler-Hammer, Inc.: *See*—
Brown, Harry W., and Ingels. 195,510.
Brown, Harry W., and Ingels. 195,511.

Dansk Orenware, Inc.: *See*—
Quistgaard, Jens H. 195,522.

Doe, Walter P., to Fisher-Price Toys, Inc. Action toy. 195,521, 6–25–63, Cl. D34—15.

Dynapower Systems Corp.: *See*—
Kendall, William D. 195,537.

Electric Storage Battery Co., The: *See*—
Rhoades, Nolan K. 195,535.

Erickson, Alfred J. Ceiling-suspended speaker cabinet. 195,514, 6–25–63, Cl. D26—14.

Falco, Carmen C., Jr. Cemetery floral display. 195,536, 6–25–63, Cl. D79—2.

Fellers, Robert L., to Griff's of America, Inc. Restaurant building. 195,503, 6–25–63, Cl. D13—1.

Fisher-Price Toys, Inc.: *See*—
Doe, Walter P. 195,521.

Florence, Noel S., to Lightolier Inc. Lighting fixture. 195,529, 6–25–63, Cl. D48—23.

Gilbert, Nathaniel. Silverware holder. 195,527, 6–25–63, Cl. D44—29.

Gordon, James. Edible serving spoon. 195,498, 6–25–63, Cl. D8—1.

Griff's of America, Inc.: *See*—
Fellers, Robert L. 195,503.

Hackney, James K., Jr., to Ampex Corp. Portable tape recorder. 195,512, 6–25–63, Cl. D26—14.

Harley-Davidson Motor Co.: *See*—
Saffert, Edward L. 195,505.

Haveg Industries, Inc.: *See*—
Patton, George, Jr. 195,523.
Patton, George, Jr. 195,524.
Patton, George, Jr. 195,525.

Hines, Edward, Lumber Co.: *See*—
Nikolich, Daniel R. 195,499.

Holmes, Romayne E., Jr., to Kelsey-Hayes Co. Wheel. 195,506, 6–25–63, Cl. D14—30.

Ingels, Raymond C.: *See*—
Brown, Harry W., and Ingels. 195,510.
Brown, Harry W., and Ingels. 195,511.

Irving Air Chute Co., Inc.: *See*—
Waite, George F. 195,504.

Kelsey-Hayes Co.: *See*—
Holmes, Romayne E., Jr. 195,506.

Kendall, William D., to Dynapower Systems Corp. Pulsed high frequency electrotherapeutic unit. 195,537, 6–25–63, Cl. D83—1.

Knight, James O., to L. R. Nelson Mfg. Co., Inc. Hose fitting. 195,540, 6–25–63, Cl. D91—3.

Levine, Beth. Platform shoe sole. 195,496, 6–25–63, Cl. D7—5.

Lightolier Inc.: *See*—
Florence, Noel S. 195,529.

Liu, Charles C. Y., to Channel Master Corp. Adjustable indoor antenna. 195,513, 6–25–63, Cl. D26—14.

Mallard, James B. Insulative roller bearing pillow block. 195,531, 6–25–63, Cl. D55—1.

Manning Mfg. Corp.: *See*—
Mills, Thomas C., and Miyagawa. 195,519.

McCabe, Matthew J., to The Superior Electric Co. Electrical connector. 195,508, 6–25–63, Cl. D26—1.

McKenzie, Allen D.: *See*—
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Miller, Melville A. Ski pole handle. 195,520, 6–25–63, Cl. D34—14.

Mills, Thomas C., and F. Miyagawa, to Manning Mfg. Corp. Toy target. 195,519, 6–25–63, Cl. D34—5.

Miyagawa, Frank: *See*—
Mills, Thomas C., and Miyagawa. 195,519.

Morgan, John R., to Amerock Corp. Knob. 195,530, 6–25–63, Cl. D50—3.

Munn, John W., and A. D. McKenzie. Combined outdoor recreational pavilion, barbecue grill, and patio. 195,500, 6–25–63, Cl. D13—1.

Nelson, L. R., Mfg. Co., Inc.: *See*—
Knight, James O. 195,540.

Nikolich, Daniel R., to Edward Hines Lumber Co. Hardboard paneling or the like. 195,499, 6–25–63, Cl. D13—1.

Olree, Adrain R.: *See*—
Bullock, Earle C., and Olree. 195,518.

Otto, Carl L., to Geo. G. Sandeman Sons & Co. Ltd. Bottle. 195,532, 6–25–63, Cl. D58—8.

Patents Management Corp.: *See*—
Peters, Robert R. 195,517.
Patton, George, Jr., to Haveg Industries, Inc. Divided dish. 195,523, 6–25–63, Cl. D44—15.
Patton, George, Jr., to Haveg Industries Inc. Pie dish. 195,524, 6–25–63, Cl. D44—15.
Patton, George, Jr., to Haveg Industries, Inc. Dish. 195,525, 6–25–63, Cl. D44—15.
Peters, Robert R., to Patents Management Corp. Cabinet or similar article. 195,517, 6–25–63, Cl. D33—19.
Quistgaard, Jens H., to Dansk Orenware, Inc. Handled casserole. 195,522, 6–25–63, Cl. D44—1.
Rhoades, Nolan K., to The Electric Storage Battery Co. Boat bailing pump. 195,535, 6–25–63, Cl. D65—1.
Saffert, Edward L., to Harley-Davidson Motor Co. Golf car. 195,505, 6–25–63, Cl. D14—3.
Sandeman, George G., Sons & Co. Ltd.: *See*—
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Schwartz, Joseph B. Building. 195,501, 6–25–63, Cl. D13—1.
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Van Valkinburgh, Robert, to Sperry Rand Corp. Electronic cabinet. 195,509, 6–25–63, Cl. D26—5.
Waite, George F., to Irving Air Chute Co., Inc. Stair tread. 195,504, 6–25–63, Cl. D13—7.
Wallner, James D. Pitcher. 195,526, 6–25–63, Cl. D44—21.
Williams, Joel K. Spray nozzle. 195,539, 6–25–63, Cl. D91—1.
Yokota, Hidekuni and S. Double volute self-priming centrifugal pump. 195,534, 6–25–63, Cl. D65—1.
Yokota, Shingo: *See*—
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Zacks, Florence B., to R. G. Barry Corp. Slipper. 195,497, 6–25–63, Cl. D7—7.
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LIST OF PATENTEES

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Abildgaard, William H., to Plastomeric Products Corp. Plastic glove. 3,094,704, 6–25–63, Cl. 2—167.
Abplanalp, Hans, Jr. Brake for coffin-lowering apparatus. 3,095,066, 6–25–63, Cl. 188—97.
Abrams, Victor R. Winter front for automotive radiators. 3,095,147, 6–25–63, Cl. 236—35.2.
Abramson, Bernard, N. L. Grief, and J. E. Silson, to Revlon, Inc. Aerosol composition. 3,095,355, 6–25–63, Cl. 167—54.
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Adkins, John S. Slip ring apparatus for signal transfer. 3,095,252, 6–25–63, Cl. 339—5.
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Ahlborn, John C.: *See*—
Dillie, Roger M., Chapman, and Ahlborn. 3,095,453.
Aichenegg, Paul C.: *See*—
Earhart, Robert W., Aichenegg, and Hensel. 3,095,350.
Aine, Harry E., and A. Leinwohl. Life preserver with integral pneumatic antenna erecting apparatus. 3,095,568, 6–25–63, Cl. 343—709.
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Air Products and Chemicals, Inc.: *See*—
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Air Reduction Co. Inc.: *See*—
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Tinnon, John M., and Leeds. 3,095,381.
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Maaløe, Johannes. 3,095,098.
Albon, Dean E.: *See*—
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Albrecht, Joseph A. Recessed wall cabinet. 3,095,249, 6–25–63, Cl. 312—242.
Albrecht, Paul H. Pier. 3,094,848, 6–25–63, Cl. 61—48.
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Casanave, Jean C. 3,094,755.
Alexander, Edwin S. Boiler furnace ash hopper seal. 3,094,953, 6–25–63, Cl. 110—171.
Alexander, Warren A., and R. L. Wilcox, to Jersey Production Research Co. Automatic correction of seismic records. 3,095,552, 6–25–63, Cl. 340—15.5.
Alfieri, Giuseppe, to Fabbrica Italiana Magneti Marelli S.p.A. Braking plant for a towable vehicle. 3,095,245, 6–25–63, Cl. 303—14.
Alfieri, Giuseppe, to Fabbrica Italiana Magneti Marelli S.p.A. Automatic relay valve apparatus for pneumatic braking installations on towed vehicles. 3,095,246, 6–25–63, Cl. 303—40.
Allen, Herbert, to Cameron Iron Works, Inc. Through conduit type valve apparatus. 3,95,007, 6–25–63, Cl. 137—630.
Allen, Kenneth C., to The Hobart Mfg. Co. Weighing scales. 3,095,054, 6–25–63, Cl. 177—3.
Allgeyer, Guy H., to Owens-Illinois Glass Co. Method for handling glassware articles. 3,095,082, 6–25–63, Cl. 198—30.
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Allover Clipper Products Co.: *See*—
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Altherr, Jacob J. Automatic brake for telescoping carts. 3,095,211, 6–25–63, Cl. 280—33.99.
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Amerace Corp.: *See*—
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American Brake Shoe Co.: *See*—
Atchley, Raymond D. 3,094,796.
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Anderson, George W., and McGregor. 3,095,408.
Scott, Edward F., and Greene. 3,095,256.
American Lava Corp.: *See*—
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American Messer Corp.: *See*—
Knapp, Helmut, and Stork. 3,095,294.
American Radiator & Standard Sanitary Corp.: *See*—
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American Seating Co.: *See*—
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Anderson, George W., and A. C. McGregor, to American Cyanamid Co. Processes in peptide synthesis. 3,095,408, 6–25–63, Cl. 260—112.
Anderson, Paul E., and T. H. Gill, to United States of America, Army. Telescopic sight mount. 3,094,786, 6–25–63, Cl. 33—50.
Anderson, Raymond A., to Stewart-Warner Corp. Transfer mechanism. 3,095,081, 6–25–63, Cl. 198—24.
Andress, Harry J., Jr., and P. Y. C. Gee, to Socony Mobil Oil Co., Inc. Stabilized distillate fuel oil. 3,095,286, 6–25–63, Cl. 44—71.
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Anslow, Winston K., to Glaxo Group Ltd. DEAE substituted balsa wood ion-exchange materials. 3,095,410, 6–25–63, Cl. 260—231.
Anthony, William E. Practice mortar shell and fuse assembly. 3,094,934, 6–25–63, Cl. 102—41.
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Atwood, Rawson, and C. C. L'Allemand. Anti-sloughing bobbin. 3,095,161, 6–25–63, Cl. 242—159.
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Neidhardt, Karl. 3,095,074.
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Ayres, Wesley P., J. L. Melchor, and P. H. Vartanian, Jr., to Sylvania Electric Products, Inc. Gyromagnetic isolator using a non-uniform magnetic bias. 3,095,546, 6–25–63, Cl. 333—24.2.
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Babcock, Mary E. and H. S. Hydraulically operated bed chair. 3,095,235, 6–25–63, Cl. 297—68.

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Baer, John S., to Dennison Mfg. Co. Data handling mechanism. 3,095,141, 6–25–63, Cl. 234—45.

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Bailey, Theodore L., to United States of America, Army. Sealing flaps for garment openings. 3,094,703, 6–25–63, Cl. 2—96.

Bain, Charles R., and W. E. Kurtz, to Bethlehem Steel Co. Bridge attaching device. 3,094,946, 6–25–63, Cl. 105—458.

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Barke, Vladimir N., N. I. Blitstein, I. M. Griasnov, A. L. Livshits, B. K. Mechetner, S. S. Podiazov, and D. F. Yakhimovich. Ultrasonic abrasive machining apparatus. 3,094,814, 6–25–63, Cl. 51—59.

Barnes, Charles R., and C. R. Geesner, to United States of America, Air Force. Electrical capacitor having a silicon nitride dielectric. 3,095,527, 6–25–63, Cl. 317—258.

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Bartholomew, Jerry S., to The Cincinnati Milling Machine Co. Centerless grinding machine. 3,094,817, 6–25–63, Cl. 51—103.

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Bauer, La Verne N., to Rohm & Haas Co. Graft copolymer vinylthioalkyl unsaturated carboxylates on a polymeric backbone formed from a monovinylidene compound. 3,095,401, 6–25–63, Cl. 260—45.5.

Baus, Richard E., and E. E. Fisher, to Gulf Oil Corp. Lubricating composition. 3,095,374, 6–25–63, Cl. 252—18.

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Becker, Norbert V., to Johns-Manville Perlite Corp. Insulating material and the like. 3,095,347, 6–25–63, Cl. 162—181.

Beckwith, Sterling, to Dual Jet Refrigeration Co. Refrigeration cabinet and defrost. 3,094,851, 6–25–63, Cl. 62—256.

Behncke, Hermann, to Inventa A.G. fur Forschung und Patentverwertung. Process for the upgrading of cellulose textiles. 3,095,323, 6–25–63, Cl. 117—143.

Bell, John T., to Container Corp. of America. Mandrel for forming containers. 3,094,906, 6–25–63, Cl. 93—59.

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Black, James J., to Pullman Inc. Splash guard. 3,095,215, 6–25–63, Cl. 280—154.5.

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Blair, Winton B., to Schlumberger Well Surveying Corp. Expendable perforating apparatus. 3,094,930, 6–25–63, Cl. 102—20.

Blake, John T., to Scovill Mfg. Co. Fastener means. 3,094,757, 6–25–63, Cl. 24—265.

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Blomfield, Rodney A., to Wyandotte Chemicals Corp. Fabric softeners. 3,095,373, 6–25–63, Cl. 252—8.8.

Blümel, Johannes, to Rheinstahl Union Bruckenbau AG. Apparatus for transporting pipe sections in tunnels and like excavations. 3,094,942, 6–25–63, Cl. 104—138.

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Bodley, Robert W., to Union Tank Car Co. Valve structure for storage tank system. 3,095,113, 6–25–63, Cl. 220—85.

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Boldrin, Luigi. Motor weeder, particularly for weeding road sides and the like. 3,094,831, 6–25–63, Cl. 56—25.4.

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Bosker, Cornelius D., to Conch International Methane Ltd. Stave secured sectional insulated conduit. 3,095,014, 6–25–63, Cl. 138—151.

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Brewer, Alice K. Self-heating composite container. 3,094,961, 6–25–63, Cl. 126—263.

Briggs, Thomas L., Jr., to United Aircraft Corp. Ducted fan engine. 3,095,166, 6–25–63, Cl. 244—58.

Brignole, Frederick A., Jr.: *See*—
Morelli, Joseph L., Brignole, and Hare. 3,095,079.

Brilhart, Arnold R., to Brilhart Musical Instrument Corp. Woodwind instrument mouthpiece. 3,094,891, 6–25–63, Cl. 84—383.

Brilhart Musical Instrument Corp.: *See*—
Brilhart, Arnold R. 3,094,891.

Brinson, Harold D.: *See*—
Nazarow, John P., Bailey, and Brinson. 3,094,774.

Bristol Co., The: *See*—
Dyson, Ernest F. 3,095,003.

British Drug Houses Ltd., The: *See*—
Kirk, David N., and Petrow. 3,095,411.

British Nylon Spinners Ltd.: *See*—
Deeley, John C., and Burgess. 3,094,834.

British Petroleum Co. Ltd., The: *See*—
Pompeo, Boris. 3,095,462.

Britnell, Clive, to The Sperry Gyroscope Co. Ltd. Navigation arrangement. 3,095,567, 6–25–63, Cl. 343—112.

Broadworth, Max R.: *See*—
Larsen, Eric R., and Broadworth. 3,095,354.

Broberg, Elmer E., to Elco Tool and Screw Corp. Piercing and tapping screw with groove to facilitate tapping. 3,094,894, 6–25–63, Cl. 85—47.

Broberg, Elmer E., to Elco Tool and Screw Corp. Combination piercing, reaming and tapping screw. 3,094,895, 6–25–63, Cl. 85—47.

Brockway, Charles E., R. R. Estes, and D. R. Smith, to A. E. Staley Mfg. Co. Amylaceous graft copolymers and process for preparing same. 3,095,391, 6–25–63, Cl. 260—17.4.

Brooks, Wesley M., and E. W. Hoffsis, to Globe-Wernicke Industries, Inc. Convertible seat-bed assembly. 3,095,234, 6–25–63, Cl. 297—65.

Brown, Antony C. B., to Dexion Ltd. Pallets. 3,094,950, 6–25–63, Cl. 108—56.

Brown, Boveri & Cie, Aktiengesellschaft: *See*—
Eidinger, Adolf. 3,095,488.

Brown Citrus Machinery Corp.: *See*—
Bireley, Frank W., and Foss. 3,094,919.

Brown, David, Industries Ltd.: *See*—
Eskenazi, Maurice. 3,095,063.

Brown, Edward A., to G. D. Searle & Co. 9α,11ε-epoxy and 11β-chlorol 9α-hydroxy 17α-(2-carboxyethyl)-17β-hydroxyandrost-4-en-3-one γ-lactones and Δ¹ and Δ⁶ analogs. 3,095,412, 6–25–63, Cl. 260—239.57.

Brown, Kenneth C.: *See*—
Junge, Bjarne, and Brown. 3,094,883.

Brown, Stephen S., to Jersey Production Research Co. Compensator apparatus. 3,094,672, 6–25–63, Cl. 73—223.

Browne, Horace L., and R. A. Myers, to Ford Motor Co. Mechanical automatic step. 3,095,216, 6–25–63, Cl. 280—166.

Bruner Corp.: *See*—
Rudelick, John. 3,095,008.

Brust, Harry F., to The Dow Chemical Co. Substituted urea-acid complexes. 3,095,407, 6–25–63, Cl. 260—96.5.

Bryan, Paul A., to United States of America, Air Force. System for locating modulator malfunction. 3,095,557, 6–25–63, Cl. 340—248.

Buchanan Electrical Products Corp.: *See*—
Ustin, George, and Haucke. 3,094,702.

Büchner, Karl: *See*—
Roelen, Otto, Büchner, and Meis. 3,095,451.

Buczkowski, Dwight E.: *See*—
Douty, Alfred, and Buczkowski. 3,095,121.

Buedingen, Wilmer E. Mailbox signal. 3,095,140, 6–25–63, Cl. 232—35.

Bukoff, Peter, to The Bendix Corp. Process for installing liners in fluid actuators. 3,094,773, 6–25–63, Cl. 29—156.4.

Bundy, Maurice G., to The Industrial Fumigant Co. Liquid measuring and dispensing device. 3,095,125, 6–25–63, Cl. 222—309.

Bunzl, Rudolph H., and R. M. Berger, to U.S. Filter Corp. Marking device. 3,094,736, 6–25–63, Cl. 15—568.

Burd, Samuel I., and J. G. Lord, to Prestige, Inc. Looping machine. 3,094,954, 6–25–63, Cl. 112—27.

Burdick, George E.: *See*—
Shurtleff, Harold R., Judd, and Burdick. 3,095,499.

Burgess, John L.: *See*—
Deeley, John C., and Burgess. 3,094,834.

Burgin, Kermit H., 50% to F. B. Cline. Pump intake weed shearing structure. 3,094,965, 6–25–63, Cl. 115—5.

Burk, Marvin C., to Phillips Petroleum Co. Chromatographic analyser peak reader. 3,094,862, 6–25–63, Cl. 73—23.

Burlington Industries, Inc.: *See*—
Isley, John V., and Gilliam. 3,094,858.
Isley, John V., and Gilliam. 3,094,859.

Butler, Jesse L., to Sanders Associates, Inc. Transmission strip line crossover. 3,095,549, 6–25–63, Cl. 333—84.

Butler, Jesse L.: *See*—
Ayer, Donald E., Butler, and Williston. 3,095,544.

Butter, Otto, to Gesellschaft fur Industrielle Technik m.b.H. Apparatus for drawing lines and marking measurements and inscriptions on drawings. 3,095,075, 6–25–63, Cl. 197—2.

Byers, Edward V. Universal bar for typewriters. 3,095,077, 6–25–63, Cl. 197—97.

Cabot Corp.: *See*—
McGray, Harold E., and Paden. 3,094,978.

Cadorette, George, to Draper Corp. Loom replenishing mechanism. 3,095,016, 6–25–63, Cl. 139—257.

Cailliot, Serge L. L. Support for the recording of sounds and images and apparatus for the use thereof. 3,095,200, 6–25–63, Cl. 274—11.

Caldwell, Alfred. Indoor-outdoor swimming pool and enclosure therefor. 3,094,708, 6–25–63, Cl. 4—172.

California Research Corp.: *See*—
Fisher, James B., and Casaly. 3,095,298.
Goldschmidt, Alfred, and Stuart. 3,095,402.
Neely, George L. 3,095,062.
Neely, George L. 3,095,204.
Wilkes, John B. 3,095,461.

Callahan, James L., and R. W. Foreman, to The Standard Oil Co. Manufacture of crotonaldehyde. 3,095,452, 6–25–63, Cl. 260—604.

Cameron Iron Works, Inc.: *See*—
Allen, Herbert. 3,095,007.

Canada Cycle and Motor Co. Ltd.: *See*—
Shaw, William C. 3,095,208.

Cantrell, Troy L., and J. G. Peters, to Gulf Oil Corp. Phosphorus-containing gasoline motor fuels. 3,095,285, 6–25–63, Cl. 44—58.

Canvas Specialty Mfg. Co.: *See*—
Winkler, Max L. 3,095,069.

Carr, Joseph B.: *See*—
Sweeney, Edward A., and Carr. 3,095,333.

Carrier Corp.: *See*—
McGrath, William L., and Stevens. 3,094,916.
Smith, John F. D. 3,095,255.

Carroll-Walton Engineering Co., Inc.: *See*—
Walton, Lyman E., and Jones. 3,094,804.

Carson, Ralph C., Jr., S. J. Grillo, and T. W. Jansen, to United States of America, Navy. Method and apparatus for launching rockets. 3,094,896, 6–25–63, Cl. 89—1.7.

Carson, Robert E., and W. C. Jonson, to Avco Corp. Intermediate frequency balanced bias system. 3,095,540, 6–25–63, Cl. 325—323.

Cartwright, Victor F., to Traid Corp. Range measuring system. 3,095,564, 6–25–63, Cl. 343—13.

Casanave, Jean C., to Aldersvil Corp. Rope and connector assembly. 3,094,755, 6–25–63, Cl. 24—129.

Cascade Industries, Inc.: *See*—
Miccio, Arthur, and West. 3,094,709.

Case, Noel L., and W. E. Rexford, to Louis Marx & Co. Subminiature electric motor. 3,095,515, 6–25–63, Cl. 310—43.

Casebolt, Ralph T. Reverse latching assembly for sliding door. 3,095,227, 6–25–63, Cl. 292—244.

Castellini, Nello R. Method and apparatus for determining collision courses. 3,095,560, 6–25–63, Cl. 343—5.

Cataldo, John B., to I-T-E Circuit Breaker Co. Joint means for bus duct. 3,095,469, 6–25–63, Cl. 174—88.

Cavallini, Guido, and E. Massarani, to Francesco Vismara, S.p.A. (α-hydroxy-α-arylaminoacetyl)aryl derivatives. 3,095,443, 6–25–63, Cl. 260—471.

Cazaly, George W.: *See*—
Fisher, James B., and Cazaly. 3,095,298.

Central Research Laboratories, Inc.: *See*—
Chesley, Frank G. 3,095,096.

Chabot, Ferdinand E.: *See*—
Leonard, James H., and Chabot. 3,095,524.

Chaloux, Marcel A.: *See*—
MacRae, Herbert N., and Chaloux. 3,094,701.

Chambers, Victor S.: *See*—
Howland, Louis H., and Chambers. 3,095,398.

Champion, James E.: *See*—
Powell, Robert J., and Champion. 3,094,836.

Chanaryn, Victor, and K. P. Pugh, to Wilmot-Breeden Ltd. Releasable fastening devices. 3,095,226, 6–25–63, Cl. 292—221.

Chance, A. B., Co.: *See*—
Hubbard, David C., and Weitkemper. 3,095,223.

Chang, Charles H., to General Aniline & Film Corp. Method for prepaling bis(2-alkoxyethyl)sulfones. 3,095,457, 6–25–63, Cl. 260—607.

Chang, Melvin C., and D. Goldstein, to Crucible Steel Co. of America. Temperature control apparatus. 3,095,463, 6–25–63, Cl. 261—130.

Chapman, Ronald W.: *See*—
Dillie, Roger M., Chapman, Ahlborn, and Eastman. 3,095,453.

Chappell, Thomas T.: *See*—
Von Wranau, Guido, and Phillips. 3,095,311.

Chase, Ascher, to General Foam Plastics Corp. Semicylindrical foam elastomer insulation shell. 3,095,337, 6–25–63, Cl. 154—45.

Chase, Clyde H. Door closing device. 3,094,738, 6–25–63, Cl. 16—49.

Cheltenham Anto Controls Ltd.: *See*—
Hallett, Henry A. 3,094,863.

Chemagro Corp.: *See*—
Earhart, Robert W., Aichenegg, and Hensel. 3,095,350.

Chesley, Frank G., to Central Research Laboratories, Inc. Manipulator. 3,095,096, 6–25–63, Cl. 214—1.

Chicago Bridge & Iron Co.: *See*—
Westfall, Clifford M. 3,095,520.

Chiola, Vincent, and C. D. Vanderpool, to Sylvania Electric Products Inc. Conversion of calcium hydrogen phosphate dihydrate to the anhydrous form. 3,095,269, 6–25–63, Cl. 23—109.

Chope, Henry B., to Industrial Nucleonics Corp. Indicating and recording device. 3,095,254, 6–25–63, Cl. 346—32.

Chupp, John P.: *See*—
Newallis, Peter E., and Chupp. 3,095,440.

Church, James M., and W. H. Greenberg, to Riverside Plastics Corp. High strength ceramic compositions and methods for preparing the same. 3,095,336, 6–25–63, Cl. 154—2.2.

Ciba Corp.: *See*—
Margerison, Richard B., Shabica, and Ziegler. 3,095,446.
Duennenberger, Max, Maeder, Siegrist, and Liechti. 3,095,422.
Liechti, Peter, Siegrist, Duennenberger, and Maeder. 3,095,421.
Maeder, Arthur. 3,095,390.
Staeuble, Max, and Weber. 3,095,415.
Wettstein, Walter. 3,095,430.

Cincinnati Milling Machine Co., The: *See*—
Bartholomew, Jerry S. 3,094,817.
Gill, Henry. 3,095,119.

Cities Service Research and Development Co.: *See*—
Shotts, Adolph C. 3,095,450.

Claas, Reinhold. Combine harvester. 3,094,829, 6–25–63, Cl. 56—20.

Clark, Edgar W., Jr., P. W. Reynolds, and W. F. Root, to Phillips Petroleum Co. Suspension hanger for deep well tubing. 3,095,042, 6–25–63, Cl. 166—243.

Clarke, Daniel J., and O. Oetliker, to The Stalker Corp. Blades for compressors, turbines and the like. 3,095,180, 6–25–63, Cl. 253—77.

Cleveland Crane & Engineering Co., The: *See*—
Dehn, Roy F., and Cotesworth. 3,095,174.

Clevite Corp.: *See*—
Hill, John. 3,094,766.

Cline, Frederick B.: *See*—
Burgin, Kermit H. 3,094,965.

Clow, George F. Adjustable table supporting construction. 3,094,948, 6–25–63, Cl. 108—10.

Cober: *See*—
Covini, Lorenzo. 3,095,209.

Cockrell, William D., to General Electric Co. Circuit for controlling energization of a direct current load. 3,095,534, 6–25–63, Cl. 321—19.2.

Coffield, Thomas H., and A. H. Filbey, to Ethyl Corp. Jet fuel compositions. 3,095,287, 6–25–63, Cl. 44—78.

Colgate-Palmolive Co.: *See*—
Downie, John A., and Boyd. 3,094,758.

Collier, William R., to General Electric Co. Gas coupling system for VTOL aircraft. 3,095,164, 6–25–63, Cl. 244—12.

Collins Radio Co.: *See*—
McCallum, John H. 3,095,146.

Colton, John W., to Scientific Design Co., Inc. Chemical process. 3,095,295, 6–25–63, Cl. 62—58.

Colton, John W., and J. E. Jewett, Jr., to Scientific Design Co., Inc. Process and apparatus for the production of fresh water. 3,095,296, 6–25–63, Cl. 62—58.

Columbia-National Corp.: *See*—
Korach, Malcolm, and Thomas. 3,095,270.

Columbus McKinnon Corp.: *See*—
Parker, Humphrey F., and Robins. 3,094,943.

Combustion Engineering, Inc.: *See*—
Teufel, John. 3,095,036.

Commercial Solvents Corp.: *See*—
Hodge, Edward B. 3,095,456.

Conch International Methane Ltd.: *See*—
Bergmann, Heinrich W. 3,095,107.
Booker, Cornelius D. 3,095,014.

Cone, Charles N., to Pacific Resins & Chemicals, Inc. Toasted blood glue base. 3,095,313, 6–25–63, Cl. 106—124.

Cone, Charles N., to Pacific Resins & Chemicals, Inc. Toasted blood glue. 3,095,571, 6–25–63, Cl. 106—79.

Conescu, Sidney, to Spear Box Co., Inc. Folding box construction. 3,095,136, 6–25–63, Cl. 229—41.

Conley, Howard W. Battery liquid level checker. 3,095,009, 6–25–63, Cl. 137—453.

Conoco Products, Inc.: *See*—
Polkosnik, Bernard L. 3,095,033.

Consolidated Electrodynamics Corp.: *See*—
Karsh, Herbert. 3,095,508.
Smith, Harold I. 3,094,914.

Consolidated Kinetics Corp.: *See*—
Sweeney, Patrick M., and Eberhart. 3,095,187.

Container Corp. of America: *See*—
Bell, John T. 3,094,906.
Reynolds, Clifford E. 3,095,137.

Continental Can Co.: *See*—
Moreland, Stephen T. 3,095,018.

Continental Can Co., Inc.: *See*—
Galitz, Raymond F. 3,095,028.

Continental Copper & Steel Industries, Inc.: *See*—
Hickson, William F. 3,094,720.

Continental Motors Corp.: *See*—
Powell, Robert J., and Champion. 3,094,836.

Conval Corp.: *See*—
Smith, Paul E., Jr., and Norman. 3,095,569.

Cook, Ralph L., and E. A. Andrew, to Olin Mathieson Chemical Corp. Apparatus for manufacturing propellant powder. 3,094,741, 6–25–63, Cl. 18—1.

Cope, Lawrence H., to United Kingdom Atomic Energy Authority. Powders for extinguishing fires. 3,095,372, 6–25–63, Cl. 252—2.

Copenhaver, John W., and W. O. Ney, Jr., to Minnesota Mining and Mfg. Co. Synthesis of 2-pyrrolidinone. 3,095,423, 6–25–63, Cl. 260—326.5.

Corlett, Ewan C. B., to Wm. Cory & Son Ltd. Marine tankers. 3,094,963, 6–25–63, Cl. 114—74.

Cory, Wm., & Son Ltd.: *See*—
Corlett, Ewan C. B. 3,094,963.

Costello, Daniel R. Self-loading flat-bed truck. 3,095,099, 6–25–63, Cl. 214—77.

Costello, Otto A.: *See*—
Frushour, Russel E., Costello, Farekas, and Irish. 3,095,072.

Costley, Vivian G., C. W. Dovell, and L. V. C. Luh, to United States of America, Navy. Explosive release bolt and valve. 3,094,928, 6–25–63, Cl. 102—10.

Cotesworth, Harry A.: *See*—
Dehn, Roy F., and Cotesworth. 3,095,174.

Covini, Lorenzo, to Cober. Heel safety device for ski binding. 3,095,209, 6–25–63, Cl. 280—11.35.

Cowles, Edwin D.: *See*—
Nolte, Robert K., and Cowles. 3,094,997.

Craig, Willis G., to The Lubrisol Corp. Asphalt roofing element. 3,095,339, 6–25–63, Cl. 154—51.

Crane, Hartley J. Automatic marker. 3,094,922, 6–25–63, Cl. 101—44.

Cravotta Brothers, Inc.: *See*—
Cravotta, Cosimo V. 3,094,721.

Cravotta, Cosimo V., to Cravotta Brothers, Inc. Water skis. 3,094,721, 6–25–63, Cl. 9—310.

Crawford, Duffer B., to Air Products and Chemicals, Inc. Hydrogen liquefaction and conversion systems. 3,095,274, 6–25–63, Cl. 23—210.

Creedon, John E., S. Schneider, and N. L. Yeamans, to United States of America, Army. Reservoir container material for hydrogen filled devices. 3,095,518, 6–25–63, Cl. 313—180.

Croft, Charles P., to Pangborn Corp. Spring peening. 3,094,768, 6–25–63, Cl. 29—90.

Cromer, Charles F., J. Sandin, and B. P. Baker, deceased (by Mellon National Bank and Trust Co., executor), to Westinghouse Electric Corp. Circuit interrupters. 3,095,490, 6–25–63, Cl. 200—148.

Cronite Co., Inc., The: *See*—
Gillis, Edmund A. 3,094,927.

Cross-Perrault Equipment Corp.: *See*—
Goekler, Robert G., and Handwerk. 3,095,501.

Crossland, Edward J., M. P. Ragan, and J. E. Hawkins, to Seismograph Service Corp. Voting machine. 3,095,142, 6–25–63, Cl. 235—54.

Crowley, Edgar I., J. S. Mackay, M. Manes, and F. J. Vanchert, to Pittsburgh Chemical Co. Urea to melamine process. 3,095,416, 6–25–63, Cl. 260—249.7.

Crownover, Joseph W., to Gulton Industries, Inc. Variable capacitance transducer with a radioactive battery. 3,095,476, 6–25–63, Cl. 179—1.

Crucible Steel Co. of America: *See*—
Chang, Melvin C., and Goldstein. 3,095,463.
Hansen, John R. 3,095,525.

Crudgington, Cleveland B., and C. D. Murdoch; said Murdoch assors. to Crudgington. Vacancy indicator for motels and like establishments. 3,095,558, 6–25–63, Cl. 340—286.

Culengnet, Alfred, to R. Dewas. Weaving looms. 3,095,015, 6–25–63, Cl. 139—1.

Curtis, Meanor: *See*—
Von Wranau, Guido, and Phillips. 3,095,311.

Cusano, Dominic A., and R. L. Sormberger, to General Electric Co. Method for making electrically conducting films and article. 3,095,324, 6–25–63, Cl. 117—216.

Custer, Rolla B., and C. Field. Voltage regulating circuit. 3,095,514, 6–25–63, Cl. 307—150.

D'Alello, Gaetano F., to W. R. Grace & Co. Ethylene polymerization catalyst prepared by grinding titanium and iodine. 3,095,383, 6–25–63, Cl. 252—441.

Dalsemer, Gordon H., and M. C. Binford, to The Lord Baltimore Press. Means for coating sheet material. 3,095,327, 6–25–63, Cl. 118—101.

Dalton, Arthur. Disposable paint brushes and the like. 3,094,729, 6–25–63, Cl. 15—159.

Darwin, Lee E. Fueling mechanism for automobiles. 3,095,020, 6–25–63, Cl. 141—232.

D'Aubin, Leo G. Fast draw game apparatus. 3,095,195, 6–25–63, Cl. 273—1.

Davenport, Arthur N.: *See*—
Jeffreys, Roy A., Davenport, and Saunders. 3,095,302.

Davey, Sidney M., R. J. Ebbert, and W. R. McBride; said Ebbert and McBride assors. to Davey. Packaging machine. 3,094,826, 6–25–63, Cl. 53—181.

Davies, Alan Co.: *See*—
Giddings, Ronald W., and Davies. 3,095,431.

Davies, Gilbert E., and G. L. Gasparini, to Superior Ball Joint Corp. Joint having set screw with non-marring grooved engaging face. 3,095,222, 6–25–63, Cl. 287—52.05.

Davies, Jack, to The Ever Ready Co. (Great Britain) Ltd. Galvanic cells. 3,095,331, 6–25–63, Cl. 136—107.

Day Co., N.V.: *See*—
Zeblisky, Rudolph J., McCormack, Williamson, and Schneble. 3,095,309.

Daystrom, Inc.: *See*—
Stolar, Gerard, Gropp, and Higley. 3,095,537.

Deacon, George P. Electrical heating devices. 3,095,491, 6–25–63, Cl. 219—19.

Dechet, Robert: *See*—
Moressée, Georges, and Dechet. 3,095,516.

Deeley, John C., and J. L. Burgess, to British Nylon Spinners Ltd. Apparatus for simultaneously stretching and false-twisting yarn. 3,094,834, 6–25–63, Cl. 57—55.5.

De Freyne, Eudmon C., to Heath, Hicks & Perken (Thermometer) Ltd. Thermometer manufacture. 3,095,191, 6–25–63, Cl. 269—43.

Dehn, Roy F., and H. A. Cotesworth, to The Cleveland Crane & Engineering Co. Overhead monorail track suspension. 3,095,174, 6–25–63, Cl. 248—324.

Delavan Mfg. Co.: *See*—
Soth, John M. 3,095,153.

Delman Co., The: *See*—
Mandy, Robert R. 3,094,733.
Mandy, Robert R., and Erkfritz. 3,094,732.

Dennison Mfg. Co.: *See*—
Baer, John S. 3,095,141.

Denton, Richard A., and M. P. Rivera, to The New York Air Brake Co. Ultra high vacuum device. 3,095,494, 6–25–63, Cl. 219—35.

Dependable Printed Circuit Corp.: *See*—
Gley, Paul R. 3,094,998.

Desnoyers, Joseph H., and E. Robert. Retractible chair coupler. 3,095,237, 6–25–63, Cl. 297—248.

Dethloff, Jurgen, and H. Matusche. Method and apparatus for preventing collisions between vehicles. 3,095,566, 6–25–63, Cl. 343—106.

Devall, James W. Bird feeder with removable components. 3,094,973, 6–25–63, Cl. 119—52.

Dewan, John T., to Schlumberger Well Surveying Corp. Apparatus for exploring boreholes. 3,095,505, 6–25–63, Cl. 250—83.3.

Dewas, Raymond: *See*—
Culengnet, Alfred. 3,095,015.

Dewey, Davis R., and L. Kopito, to Baird-Atomic, Inc. Infrared radiating source. 3,095,506, 6–25–63, Cl. 250—83.3.

Dexion Ltd.: *See*—
Brown, Antony C. B. 3,094,950.

Diamond Alkali Co.: *See*—
Peeler, Cletus E., Jr. 3,094,846.

Dicker, Clyde W.: *See*—
McGinley, James H., Dickey, and Vols. 3,094,929.

Dielman, Harold J.: *See*—
Domsic, Paul M., and Dielman. 3,095,225.

Dietrich, Henri: *See*—
Stoh, Willy, and Dietrich. 3,095,447.

Dietze, Ruthard to Solida Textil- und Netzwaren-Manufactur Ruthard Dietze K.G. Hair net. 3,094,995, 6–25–63, Cl. 132—49.

Dillie, Roger M., R. W. Chapman, J. C. Ahlborn, and D. B. Eastman, to Texaco Inc. Hydration of acetylene to produce acetaldehyde. 3,095,453, 6–25–63, Cl. 260—605.

Dolby, Ray, M. L. J. Kabell, H. E. Murphy, and H. L. Walsh, to Ampex Corp. Video recording system and method. 3,095,472, 6–25–63, Cl. 178—5.4.

Dôme, Peter, to Societe Suisse pour l'Industrie Horlogere S.A. Electromagnetic device for maintaining the oscillatory movement of a balance wheel comprising a hair spring. 3,095,528, 6–25–63, Cl. 318—132.

Dôme, Peter, to Societe Suisse pour l'Industrie Horlogere S.A. Device for electromagnetically maintaining oscillating movement. 3,095,529 6–25–63, Cl. 318—132.

Domsic, Paul M., and H. J. Dielman, to The Sanymetal Products Co., Inc. Automatic door locking assemblies. 3,095,225, 6–25–63, Cl. 292—169.

Dorman, Isidore. Balloon and spring clip. 3,094,807, 6–25–63 Cl. 46—90.

Dorrance, John G.: *See*—
Bradt, Lynn, and Dorrance. 3,094,944.

Douty, Alfred, and D. E. Buckowski, to Amchem Products, Inc. Chemical feed control system. 3,095,121, 6–25–63, Cl. 222—52.

Dovell, Clark W.: *See*—
Costley, Vivian G., Dovell, and Luh. 3,094,928.

Dow Chemical Co., The: *See*—
Brust, Harry F. 3,095,407.
Kauer, Kenneth C. 3,095,438.
Larsen, Eric R., and Broadworth. 3,095,354.
Smith, John C., Bradshaw, Raff, and Bressler. 3,095,429.

Downie, John A., and W. Boyd, to Colgate-Palmolive Co. Apparatus and process for pressing detergents. 3,094,758, 6–25–63, Cl. 25—7.

Downing, Arthur C., to General Electric Co. Dual voltage flatiron. 3,095,493. 6–25–63, Cl. 219—25.

Doyle, Richard H.: *See*—
Wandel, Oscar A., and Doyle. 3,094,900.
Wandel, Oscar A., and Doyle. 3 094 901.

Dozier, Hilliard. Insulated electrical terminal construction. 3,095,470, 6–25–63, Cl. 174—153.

Drafto Corp.: *See*—
Kraeling, John B. 3,095,057.

Draper Corp.: *See*—
Cadorette, George. 3,095,016.
Fregeolle, Oscar. 3,094 854.

Draynieks, Andrew, and A. J. Freedman, to Standard Oil Co. Conductometric corrosion measurement system. 3,094,865, 6–25–63, Cl. 73—86.

Dreier, Raymond C. Machine tool. 3,094,816, 6–25–63, Cl. 51—92.

Driscoll, Paul A.: *See*—
Tankersley, James A., and Driscoll. 3,095,064.

Dromboski, Stephen. Hydraulic chain mover. 3,095,181, 6–25–63, Cl. 254—105.

Dryden, Eva. Vehicle sun visor means having a main shield mounting a horizontally slidingly positionally changeable auxiliary shield. 3,095,233. 6–25–63, Cl. 296—97.

Dual Jet Refrigeration Co.: *See*—
Beckwith, Sterling. 3,094,851.

Dube, Alfred, and J. A. Kasper, to Stetson China Co. Time analyzer. 3,095,258, 6–25–63, Cl. 346—20.

Du Berger, Roland J. Core drilling apparatus. 3,095,049, 6–25–63, Cl. 175—244.

Du Berger, Roland J. Core drilling apparatus. 3,095,050, 6–25–63, Cl. 175—254.

Dudley, Horace C. Apparatus for the promotion and control of vehicular flight. 3,095,167, 6–25–63, Cl. 244—62.

Dudzik, Chester J., to Leesona Corp. Yarn guiding device. 3,094,761, 6–25–63, Cl. 28—62.

Duennenberger, Max: *See*—
Liechti, Peter, Siegrist, Duennenberger, and Maeder. 3,095,421.

Duennenberger, Max, E. Maeder, A. E. Siegrist, and P. Liechti, to Ciba Ltd. New phenylbenzasoles. 3,095,422, 6–25–63, Cl. 260—307.

Duinker, Simon, to North American Philips Co, Inc. Method of producing magnetic heads with accurately predetermined gap heights. 3,094,772, 6–25–63, Cl. 29—155.59.

Dunlop Rubber Co. Ltd.: *See*—
Willshaw, Harry. 3,095,126.

Dunmire, Hannah: *See*—
Dunmire, Russell P. 3,094,987.
Dunmire, Russell P. 3,094,998.

Dunmire, Russell P., deceased, by H. Dunmire, executrix. Hypodermic ampoules. 3,094,987, 6–25–63, Cl. 128—216.

Dunmire, Russell P., deceased, by H. Dunmire, executrix. Hypodermic ampoules. 3 094,998, 6–25–63, Cl. 128—216.

Du Pont de Nemours, E. I., and Co.: *See*—
Arthur, Wilfred J. 3,095,442.
Luckenbaugh, Raymond W. 3,095,299.
Sadowski, Jan Z., and Wagner. 3,095,322.
Scott, Paul T. 3,095,258.

Düppengiesser, Karl A. Blade for soil-working implement. 3,095,228, 6–25–63, Cl. 294—49.

Duran, Paul L. Machine for sorting articles of different grades. 3,095,090, 6–25–63, Cl. 209—111.5.

Dworetzky, Lawrence H., and J. W. Gray, to General Precision, Inc. Computer for data conversion and stabilization. 3,095,562, 6–25–63, Cl. 343—8.

Dwyer, Maurice J., to L. W. Moss. Bag holding rack. 3,095,172, 6–25–63, Cl. 248—97.

Dyson, Ernest F., to The Bristol Co. Measuring and control apparatus. 3,095,003, 6–25–63, Cl. 137—86.

Earhart, Robert W., P. C. Aichenegg, and J. Hensel, to Chemagro Corp. Method of rendering soil nematocidal with halogenated sulfides. 3,095,350, 6–25–63, Cl. 167—22.

Eastman, Du Bois: *See*—
Dillé, Roger M., Chapman, Ahlborn, and Eastman. 3,095,453.

Eastman Kodak Co.: *See*—
Jeffreys, Roy A., Davenport, and Saunders. 3,095,302.

Eaton, John F., to Bethlehem Steel Co. Well-load alleviator for pumping units. 3,094,879, 6–25–63, Cl. 74—41.

Ebbert, Robert J.: *See*—
Davey, Sidney M., Ebbert, and McBride. 3,094,826.

Eberhart, Laurence L.: *See*—
Sweeney, Patrick M., and Eberhart. 3,095,187.

Eckert, George W., and K. M. Hall, to Texaco Inc. Method and composition for inhibiting evaporation of water. 3,095,263, 6–25–63, Cl. 21—60.5.

Eckert, Theodore, to Harig Mfg. Corp. Grinding fixtures. 3,094,821, 6–25–63, Cl. 51—217.

Effer, Walter R., H. B. Marshall, and E. W. Hopper, to J. F. Pritchard & Co. Ion exchange process for recovery of monovalent ions from waste sulfite pulping liquor. 3,095,265, 6–25–63, Cl. 23—49.

Egan, Richard T., to Research-Cottrell, Inc. Gas cleaning apparatus. 3,095,289, 6–25–63, Cl. 55—223.

Ehrenreich, A., & Cie: *See*—
Langen, Viktor, and Mau. 3,095,224.

Eidinger, Adolf, to Brown, Boveri & Cie, Aktiengesellschaft. Compressed air switch with electrically controlled blasting of the switching gaps. 3,095,488, 6–25–63, Cl. 200—148.

Ek, Stig Y.: *See*—
Boström, Allan G., Ek, and Lindner. 3,095,266.

Elco Tool and Screw Corp.: *See*—
Broberg, Elmer E. 3,094,894.
Broberg, Elmer E. 3,094,895.
Lindstrom, Bert A. 3,094,893.

Elder, Alton P., and T. P. Le Grand, to United States of America, Navy. High pressure gas connection and seal wherein said seal has collapse preventing means. 3,095,218, 6–25–63, Cl. 285—8.

Electricite de France-Service National: *See*—
Mettetal, Jean-Claude, and Fritz. 3,095,095.

Electrolux, Aktiebolaget: *See*—
Lindgren, Nils K. 3,095,248.

Electro-Voice, Inc.: *See*—
Beaverson, Wayne A., and Ramsey. 3,095,484.

Ellamac Inc.: *See*—
MacChesney, Chester M. 3,095,150.
MacChesney, Chester M. 3,095,151.

Ellicott Machine Corp.: *See*—
Schmidt, Fred J. 3,094,795.

Elsas, Norman E., to Nemo Industries, Inc. Die cutting machine. 3,094,889, 6–25–63, Cl. 83—529.

Engelsmann, Dieter: *See*—
Winkler, Alfred, Engelsmann, and Hackenberg. 3,094,912.

English Electric Valve Co. Ltd.: *See*—
Slark, Norman A. 3,095,251.

Ennis, Joseph F., and B. A. Peters. Cultivator. 3,095,045, 6–25–63, Cl. 172—38.

Epstein, Arnold, and S. M. Kulifay, to Monsanto Chemical Co. Thermoelectricity. 3,095,330, 6–25–63, Cl. 136—5.

Erickson, John R., and D. F. Smith, to Ladish Co. Seals. 3,095,203, 6–25–63, Cl. 277—82.

Eriksen, Monrad E., ½ to said Eriksen, and ½ to C. O. Helton. Fish skinning machine. 3,094,739, 6–25–63, Cl. 17—2.

Erkfritz, Donald: *See*—
Mandy, Robert R., and Erkfritz. 3,094,732.

Ernst Industries, Inc.: *See*—
Scheuerman, Valentine. 3,094,756.

Eskenazi, Maurice, to David Brown Industries Ltd. Gear units. 3,095,063, 6–25–63, Cl. 154—6.

Esso Research and Engineering Co.: *See*—
Bieber, Herman, Hartsband, and Basch. 3,095,368.
Judice, Carlton A., and Pirkle. 3,095,458.
Munday, John C., Rogers, and Morway. 3,095,314.

Estes, Reedus R.: *See*—
Brockway, Charles E., Estes, and Smith. 3,095,391.

Ethicon, Inc.: *See*—
Stacy, Stanley L., and Tanner. 3,095,159.
Ethyl Corp.: *See*—
Coffield, Thomas H., and Filbey. 3,095,287.
Maginn, Raymond E. 3,095,435.
Maginn, Raymond E. 3,095,436.
Mangham, Jesse R. 3,095,433.
Eurenius, Malte O., and L. H. Sinclair. Burners for use in bore holes in the ground. 3,095,031, 6–25–63, Cl. 158—99.
Evans, Frederick P., to United Aircraft Corp. Thrust control system. 3,094,838, 6–25–63, Cl. 60—35.6.
Ever Ready Co. (Great Britain) Ltd., The: *See*—
Davis, Jack. 3,095,331.
Exton, Norman T., to Gilbert Mfg. Co., Inc. Premium container. 3,095,109, 6–25–63, Cl. 220—23.
Eyer, Charles F., and J. W. Rits, to Sylvania Electric Products Inc. Gaseous discharge device. 3,095,519, 6–25–63, Cl. 313—188.
Fabbrica Italiana Magneti, Marelli S.p.A.: *See*—
Alfieri, Giuseppe. 3,095,245.
Alfieri, Giuseppe. 3,095,246.
Fafnir Bearing Co., The: *See*—
Hannon, William F. 3,094,820.
Farbenfabriken Bayer Aktiengesellschaft: *See*—
Müller, Erwin, Bayer, Wilma, Van Spulak, and Theis. 3,095,399.
Sasse, Klaus, Wegler, and Unterstenhofer. 3,095,413.
Wagner, Kuno. 3,095,385.
Wirth, Wolfgang, Hiltmann, and Mietzsch. 3,095,449.
Farber, S. W., Inc.: *See*—
Foster, Hoyt K. 3,095,498.
Farekas, Stephen E.: *See*—
Fruahour, Russel E., Costello, Farekas, and Irish. 3,095,072.
Farnsworth, Lawrence, ½ to M. M. Seft. Chuck. 3,095,205, 6–25–63, Cl. 279—74.
Fastener Corp.: *See*—
Wandel, Oscar A., and Doyle. 3,094,900.
Wandel, Oscar A., and Doyle. 3,094,901.
Faust, Charles L., and J. A. Gurklis, to Steel Improvement & Forge Co. Material removal. 3,095,364, 6–25–63, Cl. 204—143.
Fawick Corp.: *See*—
Banker, Oscar H. 3,095,011.
Fazio, Dominick: *See*—
Oldenburg, Kenneth F., Kuhne, and Fazio. 3,095,143.
Feesel, James R. Trellis assembly. 3,094,811, 6–25–63, Cl. 47—47.
Feichtinger, Hans, and H. Noeske, to Ruhrchemie Aktiengesellschaft. Process for the production of olefinic acid esters. 3,095,432, 6–25–63, Cl. 260—410.9.
Feldkamp, Rolland F.: *See*—
Wu, Yao, H., Feldkamp, and Gould. 3,095,424.
Fenner, Terrence W.: *See*—
Reid, John D., Fenner, and Sloan. 3,094,705.
Ferguson, Victor E.: *See*—
Maurer, John A., and Ferguson. 3,094,780.
Fermco Laboratories, Inc.: *See*—
Scott, Don, and Hammer. 3,095,307.
Ferrah, Frederick H., to Baker Perkins Ltd. Rotary drum apparatus for the processing of articles. 3,094,860, 6–25–63, Cl. 68—210.
Ferriot Brothers, Inc.: *See*—
Ferriot, Joseph V. 3,095,260.
Ferriot, Joseph V., to Ferriot Brothers, Inc. Process for producing plastic articles. 3,095,260, 6–25–63, Cl. 18—58.8.
Ferris, De Lacy F.: *See*—
Sherman, Arthur, Ferris, and Youngquist. 3,094,837.
Ferro-Fab, Inc.: *See*—
Schouw, Arthur C., and Mosher. 3,094,999.
Fichter, Harry L., Jr.: *See*—
Sprague, Robert H., Fichter, and Hamilton. 3,095,303.
Field, Clarence: *See*—
Custer, Rolla B., and Field. 3,095,514.
Fierce, William L., and R. L. Weichman, to The Pure Oil Co. Preparation of elemental sulfur from hydrogen sulfide. 3,095,275, 6–25–63, Cl. 23—225.
Fieraton, Stanley A.: *See*—
Bennett, John E., and Fieraton. 3,095,539.
Filbey, Allen H.: *See*—
Comeld, Thomas H., and Filbey. 3,095,287.
Filstrup, Edward C., to Olin Mathieson Chemical Corp. Gas liberating devices. 3,094,931, 6–25–63, Cl. 102—25.
Firestone Tire & Rubber Co., The: *See*—
Mulder, Harry. 3,095,111.
Musch, John H. 3,095,397.
Robertson, Thomas A. 3,095,024.
Weber, Arthur F. 3,095,026.
Weber, Arthur F. 3,095,027.
Fischbein, Harold and I. G. Looper mechanism for a sewing machine. 3,094,955, 6–25–63, Cl. 112—199.
Fischbein, Irving G.: *See*—
Fischbein, Harold and I. G. 3,094,955.
Fischer, Georg, Aktiengesellschaft: *See*—
Von Zelewsky, Ottomar. 3,095,247.
Fisher, Earl E.: *See*—
Baus, Richard E., and Fisher. 3,095,374.
Fisher, James B., and G. W. Gasaly, to California Research Corp. Defoliation of cotton plants with ammonia. 3,095,298, 6–25–63, Cl. 71—2.2.
Fitzgerald, Albert J., to Thompson Industries, Inc. Wheel cover construction. 3,095,241, 6–25–63, Cl. 301—37.
Fitzsimmons, Harold C., to The Sharples Corp. Centrifuge having gas vent. 3,095,371, 6–25–63, Cl. 233—45.
Flannery, James N., and J. A. Becker, to Kearney & Trecker Corp. Rotary table. 3,094,885, 6–25–63, Cl. 74—826.
Fleischer, Fred E., and E. Topanelian, Jr., to Gulf Research & Development Co. Hammer drill. 3,095,047, 6–25–63, Cl. 173—137.
Fleming, Robert S., to Amerace Corp. Combination toilet and chemical treating facility. 3,094,707, 6–25–63, Cl. 4—77.
Florida Brace Corp.: *See*—
Jewett, Eugene L. 3,094,984.
Floyd, Peter G. Vibration responsive system for stopping motor driven machines. 3,095,532, 6–25–63, Cl. 318—460.
Fluegel, Dale A., to Phillips Petroleum Co. Low level voltage to frequency converter. 3,094,875, 6–25–63, Cl. 73—359.
Ford, Barton H., ½ to International Paper Co., and ½ to The Stanley Works. Freight car closure. 3,095,035, 6–25–63, Cl. 160—368.
Ford Motor Co.: *See*—
Browne, Horace L., and Myers. 3,095,216.
Giese, Ralf. 3,095,188.
Hair, Benjamin F. 3,095,218.
Foreman, Robert W.: *See*—
Callahan, James L., and Foreman. 3,095,452.
Foremost Dairies, Inc.: *See*—
Peebles, David D. 3,095,149.
Forster, Gerhard, to North American Philips Co. Inc. Television receiver with contrast control and AGC-controlled video amplifier. 3,095,474, 6–25–63, Cl. 178—7.6.
Foss, Harry A.: *See*—
Bireley, Frank W., and Foss. 3,094,919.
Foster, Hoyt K., to S. W. Farber, Inc. Electric cooking utensil having a detachable thermostatic control means. 3,095,498, 6–25–63, Cl. 219—44.
Foster, Raymond H.: *See*—
Robertson, John D., and Foster. 3,095,131.
Fox, Robert L., Sr.: *See*—
Krenake, Alfred J., and Fox. 3,094,982.
Fox Uffa. Multi-hulled craft. 3,094,959, 6–25–63, Cl. 114—61.
Fram Corp.: *See*—
Hockett, Carl G. 3,095,290.
Francis, John P. Retractable windshield awning. 3,095,034, 6–25–63, Cl. 160—364.
Frederick, Philip, to Supreme Steel Equipment Corp. Roller drawer suspension device. 3,095,250, 6–25–63, Cl. 312—341.
Free, Alfred H., and M. L. Kercher, to Miles Laboratories, Inc. Diagnostic composition. 3,095,277, 6–25–63, Cl. 23—253.
Freedman, Arthur J.: *See*—
Dravnieks, Andrew, and Freedman. 3,094,865.
Freeman, Samuel. Hair curlers. 3,094,994, 6–25–63, Cl. 132—34.
Fregeolle, Oscar, to Draper Corp. Method of knitting. 3,094,854, 6–25–63, Cl. 66—108.
Freiberg, Ashley H.: *See*—
Stamm, Walter A., Breindel, and Freiberg. 3,095,434.
French, Charles: *See*—
Jaffe, David L., and French. 3,095,535.
Fresia, Giulio, and A. Valentinotti, to Pirelli, S.p.A. Flexible tank transport vehicle. 3,095,206, 6–25–63, Cl. 280—5.
Freund, Hans W. M., to Maschinenfabrik Hilma G.m.b.H. Pneumatic hydraulic vise. 3,095,190, 6–25–63, Cl. 269—28.
Friedman, Alex. Molding of seat cushions. 3,094,716, 6–25–63, Cl. 5—345.
Fritz, Georges: *See*—
Mettetal, Jean-Claude, and Fritz. 3,095,095.
Frontier Mfg. Co.: *See*—
Adams, Wayne W. 3,095,478.
Frushour, Russel E., O. A. Costello, S. E. Farekas, and W. B. Irish, to Ameted Industries Inc. Machine tools. 3,095,072, 6–25–63, Cl. 192—82.
Fuchs, Francis J., Jr., to Western Electric Co., Inc. Template fixture. 3,094,898, 6–25–63, Cl. 90—13.
Fulde, Roland C., to Swift & Co. Beta-carotene production. 3,095,357, 6–25–63, Cl. 195—28.
Fuller, Russell W. Fire alarm unit. 3,095,556, 6–25–63, Cl. 340—227.
Furst, Irving K. Hair clipper attachment. 3,094,777, 6–25–63, Cl. 30—202.
Fusfield, Robert L., and P. E. Sterba, Jr., to Hughes Aircraft Co. Active frequency selective filter system. 3,095,542, 6–25–63, Cl. 330—71.
Fyler, Norman F., to Litton Industries, Inc. High speed direct writing cathode-ray tube. 3,095,517, 6–25–63, Cl. 313—86.
Gabbert, Walter R. Sinker applicator for fishing lines. 3,094,717, 6–25–63, Cl. 7—14.1.
Galennie, Bernard, to Northrop Corp. Controlled resistance spot heating device. 3,095,402, 6–25–63, Cl. 219—21.
Gall Mallofre, Salvador. Engine starter arrangement. 3,094,845, 6–25–63, Cl. 121—37.
Galindo, Ramon G. Method and apparatus for measuring trouser lengths. 3,094,782, 6–25–63, Cl. 33—3.
Galitz, Raymond F., to Continental Can Co., Inc. Sheet slitting and scrap coiling method. 3,095,026, 6–25–63, Cl. 153—2.
Gallagher, Cornelius A., and W. M. Peline, to Servo Corp. of America. Hot box detectors. 3,095,171, 6–25–63, Cl. 246—169.
Gardner, Wm., & Sons (Gloucester) Ltd.: *See*—
Smalley, William. 3,095,185.
Gas Drilling Services Co.: *See*—
Jackson, John G. 3,095,052.
Gasche, Fred. Swivel grip for golf clubs. 3,095,198, 6–25–63, Cl. 273—185.
Gasparini, Gino L.: *See*—
Davies, Gilbert E., and Gasparini. 3,095,222.
Gavin, Beauford E.: *See*—
Yearley, Bernard C., Norton, and Gavin. 3,094,749.
Gee, Paul Y. C.: *See*—
Andreas, Harry J., Jr., and Gee. 3,095,286.
Geesner, Charles R.: *See*—
Barnes, Charles R., and Geesner. 3,095,527.

Geigy Chemical Corp.: *See*—
Leitner, George J. 3,095,320.
Stoll, Willy, and Dietrich. 3,095,447.
General Aniline & Film Corp.: *See*—
Chang, Charles H. 3,095,457.
Kostelec, Jose, and Nitka. 3,095,301.
General Dynamics Corp.: *See*—
Urshan, Samuel A. 3,094,873.
General Electric Co.: *See*—
Baird, Leslie L. 3,095,489.
Cockrell, William D. 3,095,524.
Collier, William R. 3,095,184.
Cuseno, Dominic A., and Bornberger. 3,095,324.
Downing, Arthur C. 3,095,493.
Gvozdjak, John, and Onischak. 3,095,495.
Lane, Lawrence J. 3,095,510.
Leman, Georges R. E. 3,095,513.
Omohundro, William A. 3,095,496.
Parks, Robert M. 3,094,752.
Rowe, Brian H. 3,095,165.
Saffire, Victor N. 3,095,317.
Willis, Robert J. Jr. 3,094,967.
General Electric Co. Ltd., The: *See*—
Williams, Michael. 3,095,319.
General Foam Plastics Corp.: *See*—
Chase, Ascher. 3,095,387.
General Foods Corp.: *See*—
Green, Julius, Morse, and Westfall. 3,095,326.
Green, Julius, and Smith. 3,094,947.
General Motors Corp.: *See*—
Helvern, James O. 3,094,844.
Leland, Robert W. 3,095,531.
Sweeney, Edward A., and Carr. 3,095,333.
General Precision, Inc.: *See*—
Dworetzky, Lawrence H., and Gray. 3,095,562.
Hill, Frank A., and Stahle. 3,095,553.
Hubka, Theodore. 3,095,561.
Vladimir, Leonard O. 3,095,563.
Wolinsky, Albert. 3,095,559.
Zaleski, John F. 3,095,547.
General Refractories Co.: *See*—
Heuer, Russell P. 3,094,952.
General Steel Industries Inc.: *See*—
Lich, Richard L. 3,095,094.
Georgia-Pacific Corp.: *See*—
Hess, Robert W. 3,094,747.
Gesellschaft fur Industrielle Technik m.b.H.: *See*—
Butter, Otto. 3,095,075.
Gesellschaft fur Linde's Eismaschinen Aktiengesellschaft: *See*—
Kaup, Otmar. 3,095,221.
Ulbrich, Wolfgang K. H. 3,095,292.
Giddings, Ronald W., and A. C. Davies, to Lever Brothers Co. Interesterification process. 3,095,431, 6–25–63, Cl. 260—410.7.
Giese, Ralf, to Ford Motor Co. Seat back rest with adjustable spring rate. 3,095,188. 6–25–63, Cl. 267—89.
Giesen, Johann, and F. Müller, deceased (by G. Müller-Grunwaldt, administratrix), to Inventa A.G. fur Forschung und Patentwertung. Process for the concentration of substances by absorption from solutions. 3,095,329, 6–25–63, Cl. 127—55.
Gilbert, George W., to United States of America. Navy. Weapon transfer dolly. 3,095,212, 6–25–63, Cl. 280—124.
Gilbert Mfg. Co., Inc.: *See*—
Exton, Norman T. 3,095,109.
Gill, Henry, to The Cincinnati Milling Machine Co. Conveyor mechanism. 3,095,119, 6–25–63, Cl. 221—234.
Gill, Thomas H.: *See*—
Anderson, Paul E., and Gill. 3,094,786.
Gillette Co., The: *See*—
Lewiecki, Edward M., and Shnitzler. 3,095,122.
Gilliam, Robert A.: *See*—
Isley, John V., and Gilliam. 3,094,858.
Isley, John V., and Gilliam. 3,094,859.
Gillis, Edmund A., to The Cronite Co., Inc. Presses for printing engraved stationery. 3,094,927, 6–25–63, Cl. 101—322.
Glaxo Group Ltd.: *See*—
Anslow, Winston K. 3,095,410.
Rhodes, Alan, and McGonagle. 3,095,360.
Gley, Paul E., to Dependable Printed Circuit Corp. Dual in-place pipe cleaning apparatus. 3,094,998, 6–25–63, Cl. 134—56.
Globe-Wernicke Industries, Inc.: *See*—
Brooks, Wesley M., and Hoffsis. 3,095,234.
Goar, Harry J. Hydro plane. 3,094,962, 6–25–63, Cl. 114—66.5.
Godfrey, Kenneth L., and H. L. Morrill, to Monsanto Chemical Co. Stabilization of insecticides. 3,095,351, 6–25–63, Cl. 167—30.
Goekler, Robert G., and W. B. Handwerk, to Crose-Perrault Equipment Corp. Full floating welding head carriage for welding cylindrical objects of relatively large diameter. 3,095,501, 6–25–63, Cl. 219—124.
Goerz, Richard E. Process of making a die assembly. 3,094,886, 6–25–63, Cl. 76—107.
Gold, Theodore, to Sperry Rand Corp. Acceleration measuring apparatus. 3,094,877, 6–25–63, Cl. 73—517.
Goldschmidt, Alfred, and F. A. Stuart, to California Research Corp. Copolymer of an alkyl acrylate and a glycidyl acrylate where the epoxy group is reacted with a polyamide. 3,095,402, 6–25–63, Cl. 260—45.5.
Goldsmith Philip H. Up-flow headbox. 3,095,348, 6–25–63, Cl. 162—216.
Goldstein, David: *See*—
Chang, Melvin C., and Goldstein. 3,095,463.
Goldstein, Louis: *See*—
Witten, Louis J., and Goldstein. 3,094,904.
Gooch, Fred P.: *See*—
Payne, Robert E., and Gooch. 3,094,828.
Goodman, Henry G., Jr., to Union Carbide Corp. Textile finishing composition comprising aqueous solution of aminoplast and textile impregnated therewith. 3,095,395, 6–25–63, Cl. 260—29.4.
Goodman Mfg. Co.: *See*—
Herbert, Gerald A. 3,095,551.
Grace, W. R., & Co.: *See*—
Bracey, Frederick J., Joonase, and Mason. 3,094,825.
D'Alello, Gaetano F. 3,095,383.
Harrison, John W. 3,095,103.
Gray, John W.: *See*—
Dworetzky, Lawrence H., and Gray. 3,095,562.
Gray Tool Co.: *See*—
Pierce, Elwood K., Jr. 3,095,110.
Green, Armin H.: *See*—
Schlage, Ernest L., and Green. 3,095,021.
Green, Edward H. Dispenser valve. 3,095,127, 6–25–63, Cl. 222—394.
Green, Frank T., to Noble Mfg. Co., Inc. Bolt action magazine firearm with a cantilever spring for holding cartridges in the magazine. 3,094,803, 6–25–63, Cl. 42—18.
Green, Julius, and P. S. Smith, to General Foods Corp. Sugar-coating process. 3,094,947, 6–25–63, Cl. 107—54.
Green, Julius, R. W. Morse, and D. R. Westfall, to General Foods Corp. Batch-type apparatus for tumble coating discrete particles. 3,095,326, 6–25–63, Cl. 118—11.
Green, Louis E., Jr., to Standard Oil Co. Gas analysis device. 3,095,278, 6–25–63, Cl. 23—254.
Green, William G., to Aquatron Engineering Corp. Water conditioning apparatus. 3,095,365, 6–25–63, Cl. 204—229.
Greenberg, Walter H.: *See*—
Church, James M., and Greenberg. 3,095,336.
Greene, Ralph D.: *See*—
Scott, Edward F., and Greene. 3,095,256.
Greenlees, William D. Electromagnetic radiation proof ignition device. 3,094,932, 6–25–63, Cl. 102—28.
Gregory, Louie E. Hydraulically operated lazy tongs structure. 3,095,061, 6–25–63, Cl. 182—141.
Greif, Norman L.: *See*—
Abramson, Bernard, Greif, and Silson. 3,095,355.
Grianov, Levgueny M.: *See*—
Barke, Vladimir N., Blitstein, Grianov, Livshits, Mechetner, Polazov, and Yakhimovich. 3,094,814.
Grillo, Salvatore J.: *See*—
Carson, Ralph C., Jr., Grillo, and Jansen. 3,094,896.
Grimm, Eric, to Associated Patentees, Inc. Machines for operating on separate lines of stock and combining parts made from the separate lines of stock. 3,094,767, 6–25–63, Cl. 29—33.
Grob, Benjamin. Roller tool mounting and driving means. 3 094 888. 6–25–63, Cl. 60—16.
Gropp, Bernard P.: *See*—
Stolar, Gerard, Gropp, and Higley. 3,095,537.
Gruetjen, Frederick A., to A. O. Smith Corp. Brazing fixture. 3,094,958, 6–25–63, Cl. 113—133.
Gruver, Walter E., Jr.: *See*—
Moore, William H., and Gruver. 3,095,300.
Guarino, Louis S., and P. G. Holt, to United States of America. Navy. Vertical display. 3,094,971, 6–25–63, Cl. 116—129.
Guhl & Scheibler A. G.: *See*—
Huber, Fritz. 3,094,925.
Gulf Oil Corp.: *See*—
Baus, Richard E., and Fisher. 3,095,374.
Cantrell, Troy L., and Peters. 3,095,285.
Gulf Research & Development Co.: *See*—
Fleischer, Fred E., and Topanelian. 3,095,047.
Hart, Albert J., and Henke. 3,095,377.
Kaufman, John J., and Templin. 3,094,809.
Kline, Robert E., and Starnes. 3,095,367.
Mori, Ernest A. 3,095,046.
Gulton Industries, Inc.: *See*—
Crownover, Joseph W. 3,095,476.
Gurklis, John A.: *See*—
Faust, Charles L., and Gurklis. 3,095,364.
Guterman, Sadia S., and R. D. Kedis, to Raytheon Co. Intelligence control systems. 3,095,554, 6–25–63, Cl. 340—174.
Gvozdjak, John, and R. M. Onischak, to General Electric Co. Food broiling device. 3,095,495, 6–25–63, Cl. 219—35.
HRB-Singer, Inc.: *See*—
McGinley, James H., Dickey, and Vola. 3,094,929.
Haber, Herbert S.: *See*—
McIntyre, Glenn H., Sprouse, and Haber. 3,095,271.
Hach Chemical Co.: *See*—
Hach, Clifford C. 3,095,382.
Hach, Clifford C., to Hach Chemical Co. Composition for analysis of iron. 3,095,382, 6–25–63, Cl. 252—408.
Hackenberg, Hubert: *See*—
Winkler, Alfred, Engelsmann, and Hackenberg. 3,094,912.
Hair, Benjamin F., to Ford Motor Co. Low energy load leveling vehicle suspension. 3,095,213, 6–25–63, Cl. 280—124.
Hall, Kenneth M.: *See*—
Eckert, George W., and Hall. 3,095,263.
Hall, Preston M.: *See*—
Pihl, Paul E., and Hall. 3,094,706.
Hallam, Henry A., to Partridge's Models Ltd. Ski bindings. 3,095,210, 6–25–63, Cl. 280—11.35.
Hallett, Henry A., to Cheltenham Auto Controls Ltd. Position indicators. 3,094,863, 6–25–63, Cl. 73—37.5.
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Sprague, Robert H., Fichter, and Hamilton. 3,095,303.
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Scott, Don, and Hammer. 3,095,307.
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Goekler, Robert G., and Handwerke. 3,095,501.
Hanlon, Patrick G. Cleaning device and method of making same. 3,094,735, 6–25–63, Cl. 15—506.

Hanna, Clinton R., and L. B. Lynn, to Westinghouse Electric Corp. Fluid power apparatus. 3,095,214, 6–25–63, Cl. 280—124.

Hannon, William F., to The Fafnir Bearing Co. Honing stone retainer. 3,094,820, 6–25–63, Cl. 51—184.1.

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Pistole, Harry, and Hansen. 3,095,053.

Hansen, Quinten A., to R. H. and R. N. Stearns. Actuator self-adjusting as to range. 3,095,068, 6–25–63, Cl. 188—171.

Hanson, Herbert G., and R. E. Poethig, to The Bastian-Blessing Co. Pressure filler control. 3,094,849, 6–25–63, Cl. 62—51.

Harb, Mitchell A. Crash seats for passenger planes. 3,095,170, 6–25–63, Cl. 244—122.

Harbison-Walker Refractories Co.: *See*—
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Morelli, Joseph L., Brignole, and Hare. 3,095,079.

Harig Mfg. Corp.: *See*—
Eckert, Theodore. 3,094,821.

Harries, Robert M.: *See*—
Bleiler, Richard, Harries, Jeckel, and Lanport. 3,095,017.

Harrison, John W., to W. R. Grace & Co. Closure for containers. 3,095,108, 6–25–63, Cl. 215—38.

Hart, Albert J., and A. M. Henke, to Gulf Research & Development Co. Lubricating composition having a reduced coking tendency. 3,095,377, 6–25–63, Cl. 252—45.

Hart, Charles R., Jr. Method and apparatus for testing gearing. 3,094,867, 6–25–63, Cl. 73—162.

Hartford, Winslow H.: *See*—
Lauder, William B., and Hartford. 3,095,266.

Hartwig, Jurgen, to Union Carbide Corp. Process for coating carbonaceous articles with silicon dioxide. 3,095,816, 6–25–63, Cl. 117—16.

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Haslacher, Alfred B. 3,094,905.

Hastings, Warren W., to American Radiator & Standard Sanitary Corp. Differential pressure gauge. 3,094,876, 6–25–63, Cl. 73—407.

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Crossland, Edward J., Ragan, and Hawkins. 3,095,142.

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Sloan, Julia M., Weller, and Haydel. 3,094,866.

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Hayes Track Appliance Co.: *See*—
Hayes, Stanley W. 3,094,945.

Head, Howard. Ski. 3,095,207, 6–25–63, Cl. 280—11.13.

Healy, Donald V., to The Bendix Corp. Dry type hydraulic servo valve. 3,095,002, 6–25–63, Cl. 137—85.

Healy, James W. Mud pump pistons. 3,094,904, 6–25–63, Cl. 92—241.

Hearne, Joseph H., to The Wurlitzer Co. Tone cabinets. 3,095,059, 6–25–63, Cl. 181—31.

Heath, Hicks & Perken (Thermometer) Ltd.: *See*—
De Freyne, Eudmon C. 3,095,191.

Heintzelman, Leo A. Sliding attachment for boat propeller. 3,095,043, 6–25–63, Cl. 170—160.11.

Heiss, John H., Jr.: *See*—
Bouton, George M., and Heiss. 3,095,089.

Helbig, Chalmers L., and F. L. Boyer, to The Babcock & Wilcox Co. Method of and apparatus for correcting tubing eccentricity by drawing. 3,095,083, 6–25–63, Cl. 205—4.

Heller, John H., to New England Institute for Medical Research. High-frequency treatment of matter. 3,095,359, 6–25–63, Cl. 195—78.

Hellner, Karl G., to Transportpatent, AB. Track systems. 3,094,941, 6–25–63, Cl. 104—130.

Helms, Clifford J., to Sperry Rand Corp. Series magnetic amplifier. 3,095,507, 6–25–63, Cl. 307—88.

Helton, Clayton O.: *See*—
Eriksen, Monrad E. 3,094,739.

Helvern, James O., to General Motors Corp. Power brake booster. 3,094,844, 6–25–63, Cl. 60—54.6.

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Hennessey, Russell J., to Waldorf Paper Products Co. Pouring spout cartons. 3,095,135, 6–25–63, Cl. 229—17.

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Herbert, Gerald A., to Goodman Mfg. Co. Load cell. 3,095,651, 6–25–63, Cl. 338—5.

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Zebree, David T. 3,094,933.

Herman Pneumatic Machine Co.: *See*—
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Herrero Rodrigo, Manuel. Soap holder. 3,094,806, 6–25–63, Cl. 45—26.

Herrick, Franklin W., to Rayonier Inc. Water-soluble sulfited lignin-phenolic-formaldehyde complex. 3,095,392, 6–25–63, Cl. 260—17.5.

Herron, Henry R., to Harbison-Walker Refractories Co. Tunnel kiln car top. 3,094,759, 6–25–63, Cl. 25—142.

Hess, Robert W., to Georgia-Pacific Corp. Spliced structural products and method of splicing. 3,094,747, 6–25–63, Cl. 20—92.

Heuer, Russell P., to General Refractories Co. Ribbed basic refractory roof. 3,094,952, 6–25–63, Cl. 110—99.

Heywood-Wakefield Co.: *See*—
Hendrickson, Severin B. 3,095,239.

Hickson, William F., to Coatinental Copper & Steel Industries, Inc. (Welin Davit and Boat Division). Life boat release gear. 3,094,720, 6–25–63, Cl. 9—45.

Higley, John W.: *See*—
Stolar, Gerard, Gropp, and Higley. 3,095,587.

Hileman, Ronald E., and H. E. Parks, to Sylvania Electric Products, Inc. Switching circuits. 3,095,509, 6–25–63, Cl. 307—88.5.

Hill, Frank A., and H. L. Stahle, to General Precision, Inc. Input buffer system. 3,095,553, 6–25–63, Cl. 340—172.5.

Hilma G.m.b.H., Maschinenfabrik: *See*—

Hill, Gilman A., to Petroleum Research Corp. Ionized boundary layer fluid pumping system. 3,095,163, 6–25–63, Cl. 244—12.

Hill, John, to Clevite Corp. Method of assembling a semiconductor. 3,094,766, 6–25–63, Cl. 29—25.3.

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Hines, Benjamin M. Identification tag. 3,094,799, 6–25–63, Cl. 40—2.

Hirst, Donald A. Take-off and landing strip. 3,094,907, 6–25–63, Cl. 94—4.

Hirst, Raymond V. Apparatus for cleaning paint brushes. 3,095,060, 6–25–63, Cl. 134—164.

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Hobbs, Kenneth, to North American Philips Co., Inc. Device for handling articles. 3,095,229, 6–25–63, Cl. 294—64.

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Hodge, Edward B., to Commercial Solvents Corp. Nitrosulfides and their corresponding sulfones. 3,095,456, Cl. 260—607.2.

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Rounds, Gerald L., and Hoefferle. 3,095,264.

Hoffsis, Earl W.: *See*—
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Hogguer, Fredrik J. Internal combustion engine having a rotary piston arranged eccentrically on a shaft. 3,094,640, 6–25–63, Cl. 60—39.43.

Hoke, Le Roy A. Swimming pool safety enclosure and cover. 3,094,710, 6–25–63, Cl. 4—172.

Holland, Henry A. N.: *See*—
Robinsky, Eli I., and Holland. 3,095,051.

Hollenbeck, Harry K. Free play device for automatic bowling alleys. 3,095,196, 6–25–63, Cl. 273—54.

Holman, Howard E., to The Wurlitzer Co. Switch for electronic musical instruments. 3,095,465, 6–25–63, Cl. 84—1.01.

Holmes, Sidney T. Porous foamed silicate products. 3,095,312, 6–25–63, Cl. 106—75.

Holt, Pliny G.: *See*—
Guarino, Louis S., and Holt. 3,094,971.

Homanick, George: *See*—
O'Neill, Joseph V., Homanick, and McCord. 3,095,048.

Hook, Harvey E., and H. A. Woods, to Shell Oil Co. Grease composition and process for its preparation. 3,095,376, 6–25–63, Cl. 252—28.

Hoover Ball and Bearing Co.: *See*—
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Hopper, Edward W.: *See*—
Effer, Walter R., Marshall, and Hopper. 3,095,265.

Horizons Inc.: *See*—
Sprague, Robert H., Fichter, and Hamilton. 3,095,303.

Horner, Amos A. Truck adapter. 3,095,217, 6–25–63, Cl. 280—404.

Horton, Robert A., to Precision Metalsmiths, Inc. Method of form removal from precision casting shells. 3,094,751, 6–25–63, Cl. 22—196.

Howland, Louis H., and V. S. Chambers, to United States Rubber Co. Process of increasing the particle size of synthetic rubber latex. 3,095,398, 6–25–63, Cl. 260—29.7.

Hoyler, Alfred, to Robert Bosch, G.m.b.H. Windshield wiper. 3,094,734, 6–25–63, Cl. 15—250.42.

Hubbard, David C., and H. B. Weitkemper, to A. B. Chance Co. Wire clamp. 3,095,223, 6–25–63, Cl. 287—83.

Huber, Fritz, to Guhl & Scheibler A.G. Label printing machines. 3,094,925, 6–25–63, Cl 101—227

Hubka, Theodore, to General Precision, Inc Microwave transmitter and receiver. 3,095,561, 6–25–63, Cl. 343—5.

Hudson, George A., to Mobay Chemical Co. Polyurethane polymers containing tall oil. 3,095,386, 6–25–63, Cl. 260—2.5.

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Fusfield, Robert L., and Sterba. 3,095,542.

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Hunt, Nathan C., to International Basic Economy Corp. Fluid control valves. 3,095,176, 6–25–63, Cl. 251—62.

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Iketani, Taisho. Gaseous fuel regulating device for liquefied gas lighters. 3,095,175, 6–25–63, Cl. 251—4.

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Osmond, Desmond W. J., and Thompson. 3,095,388.

Improved Machinery Inc.: *See*—
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Inabnit, Charles D. Fireplace installation for mobile homes. 3,094,980, 6–25–63, Cl. 126—121.

Incar, Inc.: *See*—
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Industrial Fumigant Co., The: *See*—
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Industrial Nucleonics Corp.: *See*—
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International Basic Economy Corp.: *See*—
Hunt, Nathan C. 3,095,176;

International Business Maschines Corp.: *See*—
Junge, Bjarne, and Brown. 3,094,883.

International Paper Co.: *See*—
Ford, Barton H. 3,095,085.

International Postal Supply Corp., The: *See*—
Keefe, Lincoln M. 3,095,117.

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Isley, John V., and R. A. Gilliam, to Burlington Industries, Inc. Low pressure, high temperature dye beck. 3,094,858, 6–25–63, Cl. 68—5.

Isley, John V., and R. A. Gilliam, to Burlington Industries, Inc. High pressure, high temperature dye beck. 3,094,859, 6–25–63, Cl. 68—15.

Israel, Makhtsavei: *See*—
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Ital-Bed Gastrusione Letti ed Affini S.R.L.: *See*—
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Jacke, Raymond E., to Reynolds Metals Co. Lined container for liquids and liner therefor. 3,095,134, 6–25–63, Cl. 229—14.

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Jackson, John G., to Gas Drilling Services Co. Reverse circulation sub. 3,095,052, 6–25–63, Cl. 175—324.

Jackson, Richard T., and D. G. Magill, Jr., to Riegel Paper Corp. Process for manufacturing paper from synthetic fibers. 3,095,345, 6–25–63, Cl. 162—146.

Jacobowitz, Herbert. Device for fixing the welding base on belt conveyers of vacuum packing machines. 3,094,824, 6–25–63, Cl. 53—89.

Jaffe, David L., and C. French, to Polarad Electronics Corp. Digital pH meter. 3,095,535, 6–25–63, Cl. 324—30.

Jäger, Heinz, to Westfalia Dinnendahl Groppel Aktiengesellschaft. Air-circulation classifier. 3,095,369, 6–25–63, Cl. 209—139.

James, David R., to Murray Curaex Printing Ltd. Machines for printing or decorating articles of ware. 3,094,921, 6–25–63, Cl. 101—44.

Jansen, Tor W.: *See*—
Carson, Ralph C., Grillo, and Jansen. 3,094,896.

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Jeckel, Norman C., to United States Catheter & Instrument Corp. Tetrafluoroethylene resin tubing. 3,094,762, 6–25–63, Cl. 28—72.

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Jensen, Herman G., to The Seeburg Corp. Delivery mechanism for vending machines. 3,095,115, 6–25–63, Cl. 221—129.

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Jobe, Wallace H. Awning structure. 3,094,746, 6–25–63, Cl. 20—57.5.

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Johns-Manville Perlite Corp.: *See*—
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Wu, Yao H., Feldkamp, and Gould. 3,095,424.

Johnson, Paul R.: *See*—
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Johnston, Herrick L., Inc.: *See*—
Johnston, Herrick L., and Pierce. 3,095,220.

Johnston, Loyal L., to Herman Pneumatic Machine Co. Flask manipulating and mold forming method. 3,094,750, 6–25–63, Cl. 22—193.

Johnston, Rufus B. Hydraulic pumping system. 3,094,842, 6–25–63, Cl. 60—52.

Jokela, Veikko J., to Minneapolis-Honeywell Regulator Co. Control apparatus. 3,095,487, 6–25–63, Cl. 200—140.

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Jones, William T.: *See*—
Smith, Alfred P., Smith, and Jones. 3,094,989.
Smith, Alfred P., Smith, and Jones. 3,095,123.

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Joonase, Paul: *See*—
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Jost, Ernest M., to Texas Instruments Inc. Solid-phase bonding of metals. 3,095,500, 6–25–63, Cl. 219—117.

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Warner, Edmund M., and Johnson. 3,095,570.

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Judice, Carlton A., and L. E. Pirkle, to Esso Research and Engineering Co. Weak sulfuric acid process for converting ethyl ether to ethanol. 3,095,458, 6–25–63, Cl. 260—639.

Junge, Bjarne, and K. C. Brown, to International Business Machines Corp. Stop mechanism. 3,094,883, 6–25–63, Cl. 74—527.

Jungerwirth, Bernard R. Display constructions. 3,094,800, 6–25–63, Cl. 40—33.

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Kaiser Steel Corp.: *See*—
Rounds, Gerald L., and Hoefferle. 3,095,264.

Kalpin, Max L. Containers for plants and the like. 3,094,810. 6–25–63. Cl. 47—37.

Kamborian, Jacob S. Apparatus for preparing a shoe for lasting. 3,094,726, 6–25–63, Cl. 12—4.1.

Karah, Herbert, to Consolidated Electrodynamics Corp. Alternating current power control system. 3,095,508, 6–25–63, Cl. 307—88.5.

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Kaufman, John J., and P. R. Templin, to Gulf Research & Development Co. Treating soils to reduce erosion. 3,094,809, 6–25–63, Cl. 47—9.

Kaulfuss, Paul, and K. Speyer, to H. Pfauter. Safety device for automatic work loader. 3,094,897, 6–25–63, Cl. 90—1.

Kaup, Otmar, to Gesellschaft fur Linde's Eismaschinen Aktiengesellschaft. Piston construction. 3,095,221, 6–25–63, Cl. 287—21.

Kaupp, Bette K., to Maidenform, Inc. Girdle. 3,094,992, 6–25–63, Cl. 128—548.

Kautz, Wilbert G.: *See*—
Blomeke, Loren C., and Kautz. 3,094,938.

Kearney & Trecker Corp.: *See*—
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Kearns, John J., Jr., to Lever Bros. Co. Process for producing aerated shortening. 3,095,305, 6–25–63, Cl. 99—118.

Keefe, Lincoln M., to The International Postal Supply Corp. Card vending machine. 3,095,117, 6–25–63, Cl. 221—152.

Kehl, Elisabeth K.: *See*—
Zoller, Hans. 3,095,101.

Keizer, Eugene O., to Radio Corp. of America. Voltage control circuits. 3,095,533, 6–25–63, Cl. 321—2.

Kelso, Robert G., to Union Carbide Corp. Hydrocarbyltin salts of epoxyalkyl-substituted succinic acids. 3,095,427, 6–26–63, Cl. 260—348.

Ken, Lee G.: *See*—
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Kendall, Frances. Orthopedic appliance for restoring normal foot posture. 3,094,985, 6–25–63, Cl. 128—81.

Kendall, Paul D.: *See*—
Treslee, Raleigh E., and Kendall. 3,095,483.

Kent Nelson H.: *See*—
McLean, Donald, Kent, and Steel. 3,095,010.

Kentes, Frances M. Portable baby's bath and cabinet unit. 3,094,711, 6–25–63, Cl. 4—176.

Keon, Edward F., to Raytheon Co. Re-entry body nose cones. 3,095,162, 6–25–63, Cl. 244—1.

Kercher, Mary L.: *See*—
Free, Alfred H., and Kercher. 3,095,277.

Kerr, Ralph W. Car top trunk luggage carrier. 3,095,129, 6–25–63, Cl. 224—42.1.

Kilduff, Timothy J., and A. A. Benderly, to United States of America, Army. Polytetrafluoroethylene waveguide window construction. 3,095,550, 6–25–63, Cl. 333—98.

King, Ellis G., and C. Adolphson, to Puget Sound Pulp & Timber Co. Acid treated sulfonated lignin-containing material and process for the production thereof. 3,095,409, 6–25–63, Cl. 260—124.

Kinney, John F., to The Bendix Corp. Bellows arrangement providing failure protection. 3,094,839, 6–25–63, Cl. 60—39.09.

Kinsbach, Robert B., to Bowen-Itco, Inc. Whipstock and anchoring mechanism therefor. 3,095,039, 6–25–63, Cl. 166—117.6.

Kircher, René, and R. Périat, to Societe d'Etudes Chimiques pour L'Industrie et L'Agriculture. Process for producing alkaline earth metal bromites. 3,095,267, 6–25–63, Cl. 23—85.

Kirk, David N., and V. Petrow, to The British Drug Houses Ltd. 3-enol ethers of 6-hydroxymethyl-3-oxo-4-steroids and process for their preparation. 3,095,411, 6–25–63, Cl. 260—239.55.

Kitz, Norbert, H. L. Mansford, and J. G. Lloyd, to Bell Punch Co. Ltd. Multiple-output generator system. 3,095,522, 6-25-63, Cl. 315—84.6.

Klassen, Edward J. Stack chair. 3,095,236, 6-25-63, Cl. 297—239.

Klein, Charles H., to The National Telephone Supply Co. Splice separator. 3,095,468, 6-25-63, Cl. 174—88.

Kleinfeld, Martin J., and B. A. Hunter, to United States Rubber Co. Low temperature expansion of liquid organic polysulfide polymer with sodium azodicarboxylate. 3,095,-387, 6-25-63, Cl. 260—2.5.

Klekot, Jan: *See*—
Rybicki, Zbigniew, Kopa, Wejner, Klekot, and Wroclawski. 3,094,742.

Klement, John F., to Ampco Metal, Inc. Method of making a composite metal structure. 3,094,753, 6-25-63, Cl. 22—204.

Kline, Robert E., and W. C. Starnes, to Gulf Research & Development Co. Removal of oxygen and water from hydroconversion feed stocks. 3,095,367, 6-25-63, Cl. 208—89.

Kliss, Robert M., to Monsanto Research Corp. Alkapentadienenitriles. 3,095,441, 6-25-63, Cl. 260—465.5.

Klockner-Humboldt-Deutz Aktiengesellschaft: *See*—
Muller, Reinhard, 3,094,975.

Knapp, Helmut, and K. Stork, to American Messer Corp. Gas separation process and system. 3,095,294, 6-25-63, Cl. 62—31.

Knauf, Harry V., Jr., to Radio Corp. of America. Brazing jig for electron tube fabrication. 3,094,957, 6-25-63, Cl. 113—99.

Kodis, Robert D.: *See*—
Guterman, Sadia S., and Kodis. 3,095,554.

Koffe F. Rombouts N.V. in het Frans Cafes F. Rombouts S.A.: *See*—
Rombouts, Victor. 3,094,917.

Kolbe, Delbert W. Cabinet-toilet tissue dispenser. 3,095,116, 6-25-63, Cl. 221—151.

Koninklijke Nederlandsche Zoutindustrie, N.V.: *See*—
Schinkel, Gerrit. 3,095,281.

Koopmans, Martinus J.: *See*—
Uhlenbroek, Jan H., and Koopmans. 3,095,352.

Kopa, Mirosław A.: *See*—
Rybicki, Zbigniew, Kopa, Wejner, Klekot, and Wroclawski. 3,094,742.

Kopito, Louis: *See*—
Dewey, Davis R., and Kopito. 3,095,506.

Korach, Malcolm, and J. K. Thomas III; said Korach assor. to Pittsburgh Plate Glass Co., and said Thomas assor. to Columbia-National Corp. Method of separating silica from zirconium sulphate solutions. 3,095,270, 6-25-63, Cl. 23—117.

Kostelec, Jose, and H. F. Nitka, to General Aniline & Film Corp. Electrophotographic element. 3,095,301, 6-25-63, Cl. 96—1.

Kraeling, John B., to Drafto Corp. Traveling block weighing device. 3,095,057, 6-25-63, Cl. 177—147.

Kraly, John. Tire repair insert. 3,095,342, 6-25-63, Cl. 156—97.

Krenzke, Alfred J., and R. L. Fox, Sr., to Allover Clipper Products Co. Body massaging device. 3,094,982, 6-25-63, Cl. 128—32.

Kresslein, Albert: *See*—
Nimtz, Klaus, and Kresslein. 3,094,835.

Krogman, Alfred W. Filter. 3,095,370, 6-25-63, Cl. 210—133.

Kucera, Joseph B., ⅓ to R. L. Lowell, and ⅓ to E. M. McElhinney. Material handling apparatus. 3,095,202, 6-25-63, Cl. 275—6.

Kueraton, Richard D., to Phillips Petroleum Co. Production and recovery of ethylene. 3,095,293, 6-25-63, Cl. 62—23.

Kuhne, Bryan F.: *See*—
Oldenburg, Kenneth F., Kuhne, and Fasio. 3,095,143.

Kulicke, Frederick W., Jr., to Kulicke & Soffa Mfg. Co. Automatic semi-conductor wafer scriber. 3,094,785, 6-25-63, Cl. 83—32.

Kulicke & Soffa Mfg. Co.: *See*—
Kulicke, Frederick W., Jr. 3,094,785.

Kulifay, Stanley M.: *See*—
Epstein, Arnold, and Kulifay. 3,095,330.

Kurashiki Rayon Co., Ltd.: *See*—
Matsumoto, Masakazu, Ukida, and Takayama. 3,095,405.
Tanabe, Kenichi, and Matsubayashi. 3,095,257.

Kurtz, William E.: *See*—
Bain, Charles R., and Kurtz. 3,094,946.

Ladish Co.: *See*—
Erickson, John R., and Smith. 3,095,203.

La Foy, Eugene L.: *See*—
Peeler, Lawrence F., and La Foy. 3,094,812.

Lakeside Laboratories, Inc.: *See*—
Biel, John H. 3,095,448.

L'Allemand, Charles C.: *See*—
Atwood, Rawson, and L'Allemand. 3,095,161.

Lally, James J. Portable shock splint with traction. 3,094,-966, 6-25-63, Cl. 128—84.

Lamb, Raymond J.: *See*—
Von Wranau, Guido, and Phillips. 3,095,311.

Lambert, Robert M. Can crimper. 3,095,029, 6-25-63, Cl. 153—70.

Lamport, Samuel H.: *See*—
Bleiler, Richard, Harries, Jeckel, and Lamport. 3,095,017.

Lancashire Dynamo Electronic Products Ltd.: *See*—
Woodward, William H. 3,095,530.

Lane, Lawrence J., to General Electric Co. Switching circuit for voltage magnitude greater than the rated voltage of one transistor. 3,095,510, 6-25-63, Cl. 307—88.5.

Lane, Norman, to BSR Ltd. Sound reproducing apparatus using disc records. 3,095,199, 6-25-63, Cl. 274—10.

Lang, Thomas G. Hydrofoil for water craft. 3,094,960, 6-25-63, Cl. 114—66.5.

Langdon, Jesse D.: *See*—
White, Oscar F. 3,094,728.

Lange, Dean E. Hose valve and nozzle. 3,095,164, 6-25-63, Cl. 239—576.

Langen, Viktor, and H. Man, to A. Ehrenreich & Cie. Ball and socket joints. 3,095,224, 6-25-63, Cl. 287—87.

La Resista Corset Co., The: *See*—
Smith, Frances M. 3,094,991.

Larsen, Eric R., and M. R. Broadworth, to The Dow Chemical Co. Inhalation anesthetic: 2-bromo-1,1,2-trifluoroethyl methyl ether. 3,095,354, 6-25-63, Cl. 167—52.

Larson, Ernest O. and R. Apparatus for the guidance of granular material and the like. 3,095,073, 6-25-63, Cl. 193—33.

Larson, Roy: *See*—
Larson, Ernest O. and R. 3,095,073.

Lauder, William B., and W. H. Hartford, to Allied Chemical Corp. Production of sodium chromate from chromite ores. 3,095,266, 6-25-63, Cl. 23—56.

Learmont, Robert K., ½ to C. J. Williams. Apparatus for loading and storing articles. 3,094,940, 6-25-63, Cl. 104—98.

Leavenworth, Max H. Sound producing device. 3,094,972, 6-25-63, Cl. 116—147.

Le Bian, Louis, to North American Philips Co., Inc. Signal transmission and receiving system more particularly for use in television. 3,095,479, 6-25-63, Cl. 179—15.

Leblanc, Prosper J. Combination rake-mower. 3,094,880, 6-25-63, Cl. 56—24.

Lebow, Ralph H., to Parker-Hannifin Corp. Valve assembly seal means. 3,095,179, 6-25-63, Cl. 251—333.

Le Bus, Franklin L., Sr., to Le Bus Royalty Co. Braking apparatus and slack line control device. 3,095,183, 6-25-63, Cl. 254—175.

Le Bus Royalty Co.: *See*—
Le Bus, Franklin L., Sr. 3,095,183.

Le Caine, Hugh, to National Research Council. Keyboard for a monophonic instrument with improved sound-sustaining means. 3,095,466, 6-25-63, Cl. 81—1.11.

Lederle, Rembe, ½ to Societal Anonima Cros. Process for the preparation of N,N'-ethylene-bis-2-(O-hydroxyaryl) glycine ferric chelates. 3,095,297, 6-25-63, Cl. 71—1.

Lee, Ga Ken (formerly known as Lee Ga Ken). Grass and plant mower. 3,094,832, 6-25-63, Cl. 56—26.5.

Leeds, Morton W.: *See*—
Tinnon, John M., and Leeds. 3,095,381.

Leesona Corp.: *See*—
Dudzik, Chester J. 3,094,761.

Le Grand, Theodore P.: *See*—
Elder, Alton P., and Le Grand. 3,095,218.

Leigh Products, Inc.: *See*—
Leigh, Robert L. 3,094,916.

Leigh, Robert L., to Leigh Products, Inc. Roof ventilator. 3,094,915, 6-25-63, Cl. 98—42.

Leinwohl, Arthur: *See*—
Aine, Harry E., and Leinwohl. 3,095,568.

Leitner, George J., to Geigy Chemical Corp. Low temperature pigment binder compositions for textile fabrics. 3,095,320, 6-25-63, Cl. 117—119.6.

Leland, Robert W., to General Motors Corp. Dynamoelectric machine booster. 3,095,531, 6-25-63, Cl. 318—221.

Leonard, James H., and F. E. Chabot, to I-T-E Circuit Breaker Co. Panelboard adapter. 3,095,524, 6-25-63, Cl. 317—117.

Lerner, Lovie E. Bathing suit. 3,094,722, 6-25-63, Cl. 9—334.

Lerner, Lovie E. Buoyant garment. 3,094,724, 6-25 63, Cl. 9—338.

Leslie, Donald J. System for recording and reproducing electric organ music. 3,095,477, 6-25-63, Cl. 179—1.

Lever Brothers Co.: *See*—
Giddings, Ronald W., and Davies. 3,095,431.
Kearns, John J., Jr. 3,095,305.

Levinson, Neville, to Neville Enterprises, Inc. Display stand. 3,094,951, 6-25-63, Cl. 108—108.

Lowiecki, Edward M., and M. J. Shnitzler, to The Ilette Co. Aerosol dispensers. 3,095,122, 6-25-63, Cl. 222—146.

Lewis, David. Dental floss holder and applicator. 3,094,996, 6-25-63, Cl. 132—92.

Lewis, Joseph C.: *See*—
Lutes, Keene. 3,094,714.

Lezan, Georges R. E., to General Electric Co. Firing pulse circuit for silicon controlled rectifiers. 3,095,513, 6-25-63, Cl. 307—88.5.

Lich, Richard L., to General Steel Industries, Inc. Cushioned underframe. 3,095,004, 6-25-63, Cl. 213—8.

Liechti, Peter, A. E. Siegrist, M. Duennenberger, and E. Maeder, to Ciba Ltd. Bis-asolyl-tetrahydrothiophene compounds. 3,095,421, 6-25-63, Cl. 260—304.

Liechti, Peter: *See*—
Duennenberg, Max, Maeder, Siegrist, and Liechti. 3,095,422.

Ligenza, Joseph R., to Bell Telephone Laboratories, Inc. Photosensitive gas phase etching of semiconductors by selective radiation. 3,095,332, 6-25-63, Cl. 148—1.5.

Ligenza, Joseph R., to Bell Telephone Laboratories, Inc. Photosensitive gas phase etching of semiconductors by selective radiation. 3,095,341, 6-25-63, Cl. 156—17.

Lightfoot, Edwin N., Jr., to A. O. Smith Corp. Fuel cell power supply for sump pumps. 3,094,936, 6-25-63, Cl. 103—25.

Lincoln, Dwight C., and W. P. Shyluk, to Hercules Powder Co. Preparation of high viscosity water-soluble polycationics. 3,095,404, 6-25-63, Cl. 260—88.3.

Lindgren Nils K., to Electrolux, Aktiebolaget. Bearing mount for rotatable machines. 3,095,248, 6-25-63, Cl. 308—178.

Lindner, Lars A. M.: *See*—
Bostrom, Allen G., Ek, and Lindner. 3,095,266.

Lindstrom, Bert A., to Elco Tool and Screw Corp. Drilling and tapping screws. 3,094,903, 6-25-63, Cl. 85—47.

Little, William R., to United States of America, Navy. Low level semiconductor switch having or voltage regulating zener diode in a feedback path. 3,095,512, 6-25-63, Cl. 307—88.5.

Litton Industries, Inc.: *See*—
Fyler, Norman F. 3,095,517.

Livshits, Abram L.: *See*—
Barke, Vladimir N., Blitstein, Grisanov, Livshits, Mechetner, Polazov, and Yakhimovich. 3,094,814.

Lloyd, John G.: *See*—
Kitz, Norbert, Mansford, and Lloyd. 3,095,522.

Lobas, John J., and A. M. Rowlan. Machine for imprinting and punching the number of shares on a stock certificate. 3,094,923, 6-25-63, Cl. 101—93.

Long Mfg. Co.: *See*—
Long, William R. 3,095,230.

Long, William R., to Long Mfg. Co. Trailer for use in harvesting of tobacco. 3,095,230, 6-25-63, Cl. 296—5.

Lord Baltimore Press, Inc., The: *See*—
Dalsemer, Gordon H., and Binford. 3,095,327.

Lord, John G.: *See*—
Burd, Samuel I., and Lord. 3,094,954.

Loshin, Albert M. Coordinate transformation apparatus. 3,094,783, 6-25-63, Cl. 33—24.

Louison, Claude. Fishing reel and handle combination. 3,095,158, 6-25-63, Cl. 242—84.21.

Lowell, Rudolph L.: *See*—
Kucera, Joseph B. 3,095,202.

Lubrizol Corp., The: *See*—
Craig, Willis G. 3,095,339.

Lucius, Donald B.: *See*—
Turner, William M., and Lucius. 3,094,797.

Luck, Harry. Bait station for rodents. 3,094,805, 6-25-63, Cl. 43—131.

Luckenbaugh, Raymond W., to E. I. du Pont de Nemours and Co. Herbicidal composition and method. 3,095,299, 6-25-63, Cl. 71—2.6.

Luh, La Verne C.: *See*—
Costley, Vivan G., Dovell, and Luh. 3,094,928.

Lukets, Dan: *See*—
Nichols, Ward N. 3,095,157.

Lutes, Keene, deceased, by J. C. Lewis, administrator, to R. Yealey. Folding baby crib. 3,094,714, 6-25-63, Cl. 5—99.

Lynn, Edward, to United States of America, Navy. Oscillogram duplicator paper transport. 3,095,504, 6-25-63, Cl. 250—65.1.

Lynn, Lawrence B.: *See*—
Hanna, Clinton R., and Lynn. 3,095,214.

Maalse, Johannes, to Aktieselskabet de Danske Sukkerfabrikker. Apparatus for the conveying of silo goods. 3,095,098, 6-25-63, Cl. 214—17.

Maas-Rowe Carillons: *See*—
Rowe, Paul H. 3,095,485.

MacCaffray, Rex S., Jr., to C. H. Masland & Sons. Warp knitted pile fabric involving orientation by modifying warp. 3,094,857, 6-25-63, Cl. 66—191.

MacChesney, Chester M., to Illamac Inc. Sprinkler attachments. 3,095,150, 6-25-63, Cl. 239—267.

MacChesney, Chester M., to Illamac Inc. Sprinkler attachments. 3,095,151, 6-25-63, Cl. 239—267.

Machanian, William Y.: *See*—
Schwartz, Harold O., Lppolito, and Machanian. 3,095,467.

Mackay, Johnstone S.: *See*—
Crowley, Edgar L., Mackay, Manes, and Vancheri. 3,095,416.

MacLeod, Norman A., 36% to R. W. Whann, 18% to W. A. Selle, and 10% to F. F. Reed. Blood circulation device and method. 3,094,983, 6-25-63, Cl. 128—40.

MacRae, Herbert N., and M. A. Chaloux, to United Shoe Machinery Corp. Heel attaching machines. 3,094,701, 6-25-63, Cl. 1—97.

Maeder, Arthur, to Ciba Ltd. Copolymerisation products of amides of copolymerisable carboxylic acids containing quaternary ammonium groups bound to amide nitrogen. 3,095,390, 6-25-63, Cl. 260—17.

Maeder, Erwin: *See*—
Liechti, Peter, Siegrist, Duennenberger, and Maeder. 3,095,421.
Duennenberger, Max, Maeder, Siegrist, and Liechti. 3,095,422.

Maestre, Neil E., to Vector Mfg. Co., Inc. Cascaded emitter-followers with current control means for effecting transmission of signals without appreciably loading input. 3,095,511, 6-25-63, Cl. 307—88.5.

Magarian, Masick C. Holder for tools and the like. 3,095,092, 6-25-63, Cl. 211—60.

Magill, Donald G., Jr., and J. W. Judge, Jr., to Riegel Paper Corp. Process of making a porous, coated material. 3,095,315, 6-25-63, Cl. 117—10.

Magill, Donald G., Jr.: *See*—
Jackson, Richard T., and Magill. 3,095,345.

Maginn, Raymond E., to Ethyl Corp. Alkali-metal-ether complex salts of a group VIB metal pentacarbonyl iodide. 3,095,435, 6-25-63, Cl. 260—438.

Maginn, Raymond E., to Ethyl Corp. Alkali metal-ether complex salts of a nitrogenous group VIB metal pentacarbonyl anion. 3,095,436, 6-25-63, Cl. 260—438.

Mahlmeister, Raymond A., and J. H. Straw, to The Sheffield Corp. Gaging device. 3,094,788, 6-25-63, Cl. 33—174.

Mahoney, John F.: *See*—
Ruckwardt, Kurt F., McDonald, and Mahoney. 3,095,363.

Maidenform, Inc.: *See*—
Kaupp, Bette K. 3,094,992.

Mailland, Claude F. H. Artificial denture. 3,094,778, 6-25-63, Cl. 32—5.

Maish, George O., and E. F. Seasholtz, to Bethlehem Steel Co. Compacting metallic powders. 3,095,262, 6-25-63, Cl. 18—59.5.

Mandy, Robert R., and D. Erkfritz, to The Delman Co. Windshield cleaning system. 3,094,732, 6-25-63, Cl. 15—250.02.

Mandy, Robert R., to The Delman Co. Windshield clearing system. 3,094,733, 6-25-63, Cl. 15—250.02.

Manes, Milton: *See*—
Crowley, Edgar L., Mackay, Manes, and Vancheri. 3,095,416.

Mangham, Jesse R., to Ethyl Corp. Preparation of alkyltin compounds. 3,095,433, 6-25-63, Cl. 260—429.7.

Manhart, Charles E. Buoyant cushion device. 3,094,728, 6-25-63, Cl. 9—337.

Mansford, Hugh L.: *See*—
Kitz, Norbert, Mansford, and Lloyd. 3,095,522.

Mantz, Alonzo L., to Union Carbide Corp. Aqueous solution of aminoplasts and cellulosic textile material impregnated therewith. 3,095,396, 6-25-63, Cl. 260—29.4.

Manwaring, Joshua G. D., to Radio Frequency Co. Inc. Radio frequency resonant circuit, utilizing confronting parallel conductive plates having current flow in opposite directions. 3,095,548, 6-25-63, Cl. 333—76.

Marco, Gino J., and A. J. Speziale, to Monsanto Chemical Co. Triarylphosphinedihalomethylenes. 3,095,454, 6-25-63, Cl. 260—606.5.

Marco, Gino J., and A. J. Speziale, to Monsanto Chemical Co. Phosphinedichloromethylenes. 3,095,455, 6-25-63, Cl. 260—606.5.

Marconi's Wireless Telegraph Co. Ltd.: *See*—
Schelisch, Ernst F. 3,095,565.

Margerison, Richard B., A. C. Shabica, and J. B. Ziegler, to Ciba Corp. Haloalkylaniline disulfonyl chlorides. 3,095,-446, 6-25-63, Cl. 260—543.

Marks, Theodore, to American Technical Machinery Co., Inc. Machines for trimming twisted wire brushes. 3,095,240, 6-25-63, Cl. 300—17.

Maroth, Arthur M. Speed changing mechanism. 3,094,880, 6-25-63, Cl. 74—60.

Marshall, Harry B.: *See*—
Effer, Walter R., Marshall, and Hopper. 3,095,265.

Martin, Albert E., to Sir Howard Grubb Parsons & Co. Ltd. Infrared spectrometer recorder wherein the spectra is recorded on a linear wavenumber scale. 3,095,508, 6-25-63, Cl. 250—43.5.

Martin, Clarence B., Jr., to Style-Crafters, Inc. Life belt. 3,094,725, 6-25-63, Cl. 9—340.

Martin, Steve E., to The Bendix Corp. Automatic emergency power for vacuum powered braking systems. 3,094,843, 6-25-63, Cl. 60—54.5.

Martin, Thomas S. Electric hot air furnace. 3,095,497, 6-25-63, Cl. 219—39.

Martino, Carlo F., and J. C. Misko, to Union Carbide Corp. Plastic compositions having a speckled appearance. 3,095,-400, 6-25-63, Cl. 260—43.

Marx, Louis, & Co.: *See*—
Case, Noel L., and Rexford. 3,095,515.
Freund, Hans W. M. 3,095,190.

Masland, C. H., & Sons: *See*—
MacCaffray, Rex S., Jr. 3,094,857.

Mason, James A., to Warner Electric Brake & Clutch Co. Band type friction coupling. 3,095,071, 6-25-63, Cl. 192—81.

Mason, Wilbur A.: *See*—
Bracey, Frederick J., Joonase, and Mason. 3,094,825.

Massarani, Elena: *See*—
Cavallini, Guido, and Massarani. 3,095,448.

Matsubayashi, Kanji: *See*—
Tanabe, Kenichi, and Matsubayashi. 3,095,257.

Matsumoto, Masakazu, J. Ukida, and G. Takayama, to Kurashiki Rayon Co., Ltd. Polymerization of vinyl acetate in the presence of a ceric salt. 3,095,405, 6-25-63, Cl. 260—89.1.

Matt, Joseph Z., to Reichhold Chemicals, Inc. Water-soluble coating compositions comprising a water-soluble melamine formaldehyde resin and a salt of an acid. 3,095,393, 6-25-63, Cl. 260—21.

Mattel, Inc: *See*—
Ryan, John W. 3,095,201.

Matusche, Heinz: *See*—
Dethloff, Jürgen, and Matusche. 3,095,566.

Mau, Hans: *See*—
Langen, Viktor, and Mau. 3,095,224.

Maurer, John A., and V. R. Ferguson, to The Weber Dental Mfg. Co. Dental control assemblies. 3,094,780, 6-25-63, Cl. 32—28.

May, Claude H., to Walker Mfg. Co. Automotive device. 3,094,976, 6-25-63, Cl. 123—119.

Mayer, Oscar, & Co., Inc.: *See*—
Schmook, Edward, Jr. 3,095,022.

Mayer, Phillip B. Flap holding device for cartons. 3,094,-827, 6-25-63, Cl. 53—381.

McAdams, Hiramie T.: *See*—
Andersen, Niels Y., Jr., and McAdams. 3,094,868.

McAfee, Kyle E., Jr., to The New York Air Brake Co. Hydraulic device. 3,094,937, 6-25-63, Cl. 103—42.

McBride, William R.: *See*—
Davey, Sidney M., Ebbert, and McBride. 3,094,826.

McCallum, John H., to Collins Radio Co. Continuous counter. 3,095,146, 6-25-63, Cl. 235—117.

McCloud, Don B., and D. E. Albon, to Airmite-Midwest Inc. Blasting agent of multi-sized and multi-density ammonium nitrate with fuel oil. 3,095,335, 6-25-63, Cl. 149—21.

McColl, David R. S., to Raytheon Co. Means for modulating high frequency generators. 3,095,543, 6-25-63, Cl. 332—51.

McCord, Robert C.: *See*—
O'Neill, Joseph V., Homanick, and McCord. 3,095,048.

McCormack, John F.: *See*—
Zebilsky, Rudolph J., McCormack, Williamson, and Schneble. 3,095,309.
McDonald, Bernard T.: *See*—
Ruckwardt, Kurt F., McDonald, and Mahoney. 3,095,363.
McDonald, David. Knockdown scaffold. 3,095,070, 6–25–63, Cl. 189—15.5.
McElhinney, Eric M.: *See*—
Kucera, Joseph B. 3,095,202.
McElroy Co.: *See*—
Jackson, John G., Jr., and Rhodes. 3,095,004.
McGary, Charles W., Jr., to Union Carbide Corp. Polyolefin oxides stabilized with 1,1-diphenyl-2-picrylhydrazine and 1,1-diphenyl-2-picrylhydrazyl. 3,095,394, 6–25–63, Cl. 260—29.2.
McGinley, James H., C. W. Dickey, and C. Vols, to HRB-Singer, Inc. Detonating system. 3,094,929, 6–25–63, Cl. 102—18.
McGonagle, Moira P.: *See*—
Rhodes, Alan, and McGonagle. 3,095,360.
McGrath, William L., and F. D. Stevens, to Carrier Corp. Self-contained air conditioning unit installations. 3,094,916, 6–25–63, Cl. 98—94.
McGray, Harold E., and L. B. Paden, to Cabot Corp. Unitary air cleaner and flame arrester. 3,094,978, 6–25–63, Cl. 126—85.
McGregor, Anne C.: *See*—
Anderson, George W., and McGregor. 3,095,408.
McIntyre, Glenn H., Jr., N. T. Sprouse, and H. S. Haber, to United States Borax & Chemical Corp. Production of boron trihalides. 3,095,271, 6–25–63, Cl. 23—205.
McKenzie, Archibald M. Self cleaning ash tray. 3,095,108, 6–25–63, Cl. 220—20.5.
McLauchlan, A. B., Co., Inc.: *See*—
McLauchlan, Robert D. 3,095,055.
McLauchlan, Robert D., to A. B. McLauchlan Co., Inc. Automatic filling and weighing device for successive containers. 3,095,055, 6–25–63. Cl. 177—53.
McLean, Donald, N. H. Kent, and T. Steel, to Rolls-Royce Ltd. Gas turbine engine having adjustable guide vanes. 3,095,010, 6–25–63, Cl. 137—601.
McShane, William J., to Westinghouse Electric Corp. Pressure controlling system. 3,095,012, 6–25–63, Cl. 138—30.
Meanor, Curtis: *See*—
Von Wranau, Guido, and Phillips. 3,095,311.
Mechetner, Boris K.: *See*—
Barke, Vladimir N., Blitstein, Griasnov, Livshits, Mechetner, Podlasov, and Yakhimovich. 3,094,814.
Medlock, John P. Musical toy. 3,094,808, 6–25–63, Cl. 46—175.
Medlock, John P. Variable pitch boat propeller and shear pin tool therefor. 3,095,044, 6–25–63, Cl. 170—160.32.
Meehanite Metal Corp.: *See*—
Moore, William H., and Gruver. 3,095,300.
Meijer, Leo. Pocket containers for the selective dispensing of tablets. 3,095,085, 6–25–63, Cl. 206—42.
Meis, Josef: *See*—
Roelen, Otto, Büchner, and Meis. 3,095,451.
Meister, Heinrich, to Baxter Laboratories, Inc. Liquid chill proofing composition. 3,095,358, 6–25–63, Cl. 195—63.
Melcher, Ronald E.: *See*—
Wallace, Burgess P., and Melcher. 3,095,310.
Melchor, Jack L.: *See*—
Ayres, Wesley P., Melchor, and Vartanian. 3,095,546.
Mellon National Bank and Trust Co.: *See*—
Cromer, Charles F., Sandin, Baker, and Mellon National Bank and Trust Co. 3,095,490.
Mellow, Paul A. Grain elevator control system. 3,095,097, 6–25–63, Cl. 214—2.
Melton, Thomas M., to Virginia-Carolina Chemical Corp. S,S-dipropyl O-methyl phosphorodithioite. 3,095,439, 6–25–63, Cl. 260—461.
Mercier, Henri: *See*—
Soudan, Paul, and Mercier. 3,095,280.
Mercier, Jean. Pressure vessels. 3,095,013, 6–25–63, Cl. 138—30.
Merritt, Robert E., and F. Synnor, to Renfro Hosiery Mills Co. Apparatus and method for forming sales packages. 3,094,823, 6–25–63, Cl. 53—28.
Metalwash Machinery Co.: *See*—
Nolte, Robert K., and Cowles. 3,094,997.
Mettetal, Jean-Claude, and G. Frits, to Electricite de France-Service National. Manipulator. 3,095,095, 6–25–63, Cl. 214—1.
Mettler, Carlo. Pneumatic-effected delayed-action tripping devices. 3,094,935, 6–25–63, Cl. 102—70.
Meyer, Beverly: *See*—
Meyer, Joseph E. 3,094,966.
Meyer, Davis: *See*—
Meyer, Joseph E. 3,094,966.
Meyer, Herbert: *See*—
Meyer, Joseph E. 3,094,966.
Meyer, Horst. Method for making hollow bodies from plastic material. 3,095,261, 6–25–63, Cl. 18—59.
Meyer, James: *See*—
Meyer, Joseph E. 3,094,966.
Meyer, Joseph E., ⅜s to W. H., M., H., J., B., D., and E. Meyer. Screw-type propulsion unit. 3,094,966, 6–25–63, Cl. 115—15.
Meyer, Martha: *See*—
Meyer, Joseph E. 3,094,966.
Meyer & Wenthe, Inc.: *See*—
Priesmeyer, Charles. 3,094,920.
Meyer, William H.: *See*—
Meyer, Joseph E. 3,094,966.
Miccio, Arthur, and R. E. West, to Cascade Industries, Inc. Swimming pool. 3,094,709, 6–25–63, Cl. 4—172.
Miehle-Goss-Dexter, Inc.: *See*—
Sorenson, William H. 3,095,193.
Mietzsch, Fritz: *See*—
Wirth, Wolfgang, Hiltmann, and Mietzsch. 3,095,449.
Miles Laboratories, Inc.: *See*—
Borchert, Peter J. 3,095,444.
Free, Alfred H., and Kercher. 3,095,277.
Miller Electric Mfg. Co.: *See*—
Willecke, Gerhard K. 3,094,765.
Mims, Oscar B.: *See*—
Mims, Powell O. 3,095,144.
Mims, Powell O., ½ to O. B. Mims. Manual calculator. 3,095,144, 6–25–63, Cl. 235—77.
Minneapolis-Honeywell Regulator Co.: *See*—
Jokela, Veikko J. 3,095,487.
Otis, William C. 3,094,899.
Minnesota Mining and Mfg. Co.: *See*—
Copenhaver, John W., and Ney. 3,095,423.
Mintz, Henry A. Stamping machine. 3,094,926, 6–25–63, Cl. 101—318.
Mische, Friedrich: *See*—
Reiche, Wilhelm, Mische, and Papke. 3,094,911.
Misko, John C.: *See*—
Martino, Carlo F., and Misko. 3,095,400.
Mittelmann, Eugene. Flowmeter. 3,094,870, 6–25–63, Cl. 73—194.
Miwag Mikrowellen A.G.: *See*—
Bohm, Helmut. 3,095,037.
Misell, Louis E., and C. G. Tewksbury, to Appleton Mills. Method of finishing papermakers' felt and the finished felt. 3,094,763, 6–25–63, Cl. 28—76.
Mobay Chemical Co.: *See*—
Hudson, George A. 3,095,386.
Muller, Erwin, Bayer, Wilms, Van Spulak, and Theis. 3,095,399.
Wagner, Kuno. 3,095,385.
Monday, Zephyr, to U-Stretch Corp. Knitted stocking top. 3,094,856, 6–25–63, Cl. 66—172.
Monroe Calculating Machine Co.: *See*—
Sikora, Donald S. 3,095,502.
Monsanto Chemical Co.: *See*—
Epstein, Arnold, and Kullfay. 3,095,330.
Godfrey, Kenneth L., and Morrill. 3,095,351.
Marco, Gino J., and Speziale. 3,095,454.
Marco, Gino J., and Speziale. 3,095,455.
Moss, Henry V. 3,095,356.
Newallis, Peter E., and Chupp. 3,095,440.
Stephens, John A., and Prill. 3,095,437.
Surgant, John M. 3,095,353.
Monsanto Research Corp.: *See*—
Kliss, Robert M. 3,095,441.
Moore, Harry W. Traversing mechanism for transformer coil winding machine. 3,095,160, 6–25–63, Cl. 242—158.2.
Moore, James R. Extensible measuring rule. 3,094,787, 6–25–63, Cl. 33—161.
Moore, Richard L., to Sperry Rand Corp. Magnetic memory element. 3,095,555, 6–25–63, Cl. 340—174.
Moore, William H., and W. E. Gruver, Jr., to Mechanite Metal Corp. Air hardening cast iron. 3,095,300, 6–25–63, Cl. 75—123.
Moreland, Stephen T., to Continental Can Co. Filler assembly for pulverulent materials. 3,095,018, 6–25–63, Cl. 141—67.
Morelle, Jules L. E., to Optique et Precision de Levallois. Reflex photographic apparatus with single object-lens, with improved synchronised control and coupling mechanism. 3,094,913, 6–25–63, Cl. 95—42.
Morelli, Joseph L., F. A. Brignole, Jr., and L. E. Hare, to Royal McBee Corp. Typewriter print control. 3,095,079, 6–25–63, Cl. 197—183.
Moressee, Georges, and R. Dechet, to Normacem S.A. Armature coil for axial air gap machines. 3,095,516, 6–25–63, Cl. 310—268.
Morgan, Evelyn E.: *See*—
Morgan, Harold W. and E. E. 3,094,792.
Morgan, Harold W. and E. E. Educational toy. 3,094,792, 6–25–63, Cl. 351—31.
Mori, Ernest A., to Gulf Research & Development Co. Hammer drill. 3,095,046, 6–25–63, Cl. 173—136.
Morin, Louis H. Speed reducer employing a timing chain control. 3,094,884, 6–25–63, Cl. 74—804.
Morrill, Henry L.: *See*—
Godfrey, Kenneth L., and Morrill. 3,095,351.
Morrison, Ralph A., to United Shoe Machinery Corp. Automatic rivet setting tools. 3,095,106, 6–25–63, Cl. 218—42.
Morse, Richard W.: *See*—
Green, Julius, Morse, and Westfall. 3,095,326.
Morway, Arnold J.: *See*—
Munday, John C., Rogers, and Morway. 3,095,314.
Mosher, Robert R.: *See*—
Schouw, Arthur C., and Mosher. 3,094,999.
Moss, Henry V., to Monsanto Chemical Co. Dentifrice comprising insoluble sodium metaphosphate and a cadmium, tin, zinc, manganese or iron compound to inhibit calcium ion sequestering. 3,095,356, 6–25–63, Cl. 167—93.
Moss, L. W.: *See*—
Dwyer, Maurice J. 3,095,172.
Motion Picture Research Council, Inc.: *See*—
Vlahos, Petro. 3,095,304.
Mount Hope Machinery Co.: *See*—
Robertson, John D. 3,094,769.
Robertson, John D. 3,094,771.
Robertson, John D., and Foster. 3,095,131.
Mueller, Albert C., and R. W. H. Tess, to Shell Oil Co. Natural and synthetic alcohol soluble resin with other synthetic copolymers for coatings. 3,095,389, 6–25–63, Cl. 260—8.
Mueller, Richard J., and C. Weber, to Automatic Canteen Co. of America. Brewing apparatus. 3,094,918, 6–25–63, Cl. 99—289.

Mulder, Harry, to The Firestone Tire & Rubber Co. Chime structures for barrels. 3,095,111, 6–25–63, Cl. 220—66.
Muller, Emil O.: *See*—
Boulsover, Geoffrey, and Muller. 3,094,779.
Muller, Erwin, O. Bayer, H. Wilms, F. Van Spulak, and M. Theis, ½ to Farbenfabriken Bayer Aktiengesellschaft, and ½ to Mobay Chemical Co. Polyesters containing isocyanate groups. 3,095,399, 6–25–63, Cl. 260—33.6.
Muller, Frank G. Valve assembly and seal forming means for the same. 3,095,177, 6–25–63, Cl. 251—178.
Müller, Fritz: *See*—
Giesen, Johann, and Müller. 3,095,329.
Muller, Reinhard, to Klockner-Humboldt-Deutz Aktiengesellschaft. Governor. 3,094,975, 6–25–63, Cl. 123—41.12.
Munday, John C., D. T. Rogers, and A. J. Morway, to Esso Research and Engineering Co. Asphalt containing mixed metal salts. 3,095,314, 6–25–63, Cl. 106—269.
Murdoch, Colin D.: *See*—
Crudgington, Cleveland B., and Murdoch. 3,095,558.
Murphy, Howard E.: *See*—
Dolby, Ray M., Kabell, Murphy, and Walsh. 3,095,472.
Murray Curnex Printing Ltd.: *See*—
James, David R. 3,094,921.
Murray, James H.: *See*—
Blaikie, William R., and Murray. 3,095,068.
Murschel, Erwin, to C. F. Scheer & Cie. Sanding machine. 3,094,819, 6–25–63, Cl. 51—170.
Murty, Anthony F. and B. P. Safety brake apparatus for vehicle. 3,095,067, 6–25–63, Cl. 188—170.
Murty, Benedict P.: *See*—
Murty, Anthony F. and B. P. 3,095,067.
Musch, John H., to The Firestone Tire & Rubber Co. Stable polybutadiene latex paint containing zinc oxide and having enhanced freeze stability and wash resistance. 3,095,397, 6–25–63, Cl. 260—29.7.
Myerly, Richard C.: *See*—
Poppelsdorf, Fedor, and Myerly. 3,095,417.
Myers, Robert A.: *See*—
Browne, Horace L., and Myers. 3,095,216.
Nadler, Harry, to United States of America, Atomic Energy Commission. Fuel element handling mechanism. 3,095,102, 6–25–63, Cl. 214—650.
Nagel-Chase Mfg. Co.: *See*—
Schultz, Edward H., Jr. 3,094,881.
Naifeh, Sam C., to Phillips Petroleum Co. Smoke control. 3,095,272, 6–25–63, Cl. 23—209.4.
National Castings Co.: *See*—
Yearley, Bernard C., Norton, and Gavin. 3,094,749.
National Research Council: *See*—
Le Caine, Hugh. 3,095,466.
National Telephone Supply Co., The: *See*—
Klein, Charles H. 3,095,468.
Nazarow, John P., H. F. Bailey, and H. D. Brinson, to Raytheon Co. Electrical connector holding devices. 3,094,774, 6–25–63, Cl. 29—203.
Nebel, Reynold: *See*—
Sisco, Nicholas M., Nebel, and Van Derbeck. 3,095,346.
Neely, George L., to California Research Corp. Oil change system. 3,095,062, 6–25–63, Cl. 184—1.5.
Neely, George L., to California Research Corp. Wear resistant lining for piston-ring groove. 3,095,204, 6–25–63, Cl. 277—189.5.
Neidhardt, Karl, to Auer, Heinr., Muhlenwerke K.G.a.A., firm. Device for controlling the movement and acceleration of piece goods sliding on inclined tracks. 3,095,074, 6–25–63, Cl. 193—40.
Nellson, Mary D. Garment. 3,094,990, 6–25–63, Cl. 128—289.
Nelson, Norman A., to Jersey Production Research Co. Counter type data storage unit. 3,095,145, 6–25–63, Cl. 235—91.
Nelson, Sydney. Plastic buoys. 3,094,719, 6–25–63, Cl. 9—8.
Nemo Industries, Inc.: *See*—
Elsas, Norman E. 3,094,889.
Neuschl, Adalbert: *See*—
Volbehr, Hartwig, Reinhardt, and Neuschl. 3,094,979.
Neville Enterprises, Inc.: *See*—
Levinson, Neville. 3,094,951.
Newallis, Peter E., and J. P. Chupp, to Monsanto Chemical Co. Esters of phosphonodithioic acid. 3,095,440, 6–25–63, Cl. 260—461.
New Castle Products International, Inc.: *See*—
Sinnock, Pomeroy. 3,095,032.
New England Institute For Medical Research: *See*—
Heller, John H. 3,095,259.
Newton, Alwin B., to Borg-Warner Corp. Vehicle refrigeration systems. 3,094,850, 6–25–63, Cl. 62—132.
New York Air Brake Co., The: *See*—
Denton, Richard A., and Rivera. 3,095,494.
McAfee, Kyle E., Jr. 3,094,937.
Ney, William O., Jr.: *See*—
Copenhaver, John W., and Ney. 3,095,423.
Nichols, Ward N., to D. Luketa. Power operated chart storage means. 3,095,167, 6–25–63, Cl. 242—67.4.
Nimtz, Klaus, and A. Kreesteln, to Volkmann & Co. Method of and a means for reducing the yarn tension on a balloon-forming twist spindle. 3,094,838, 6–25–63, Cl. 57—106.
Nitka, Heinz F.: *See*—
Kostelec, Jose, and Nitka. 3,095,301.
Noble Mfg. Co., Inc.: *See*—
Gross, Frank T. 3,094,868.
Noeske, Heinz: *See*—
Feichtinger, Hans, and Noeske. 3,095,432.
Nolte, Robert K., and E. D. Cowles, to Metalwash Machinery Co. Utensil washer. 3,094,997, 6–25–63, Cl. 134—46.
Normacem S.A.: *See*—
Moressee, Georges, and Dechet. 3,095,516.
Norman, Daniel P.: *See*—
Smith, Paul E., Jr., and Norman. 3,095,500.
North American Aviation, Inc.: *See*—
Ashcraft, William D. 3,095,541.
Dingery, Wilbur L., and Willing. 3,094,878.
North American Philips Co. Inc.: *See*—
Duinker, Simon. 3,094,772.
Forster, Gerhard. 3,095,474.
Hobbe, Kenneth. 3,095,229.
Le Blan, Louis. 3,095,479.
Uhlenbrock, Jan H., and Koopmans. 3,095,352.
Winwood, John M., and Beasley. 3,095,521.
Northrop Corp.: *See*—
Galennie, Bernerd. 3,095,492.
Warren, Paul W. 3,094,775.
Norton, Charles E.: *See*—
Yearley, Bernard C., Norton, and Gavin. 3,094,749.
Oetliker, Otto: *See*—
Clarke, Daniel J., and Oetliker. 3,095,180.
Oil Metering and Processing Equipment Corp.: *See*—
Smith, Horace V. 3,094,871.
Olah, George A., to The Dow Chemical Co. Preparation of stabilized magnesium alkyls. 3,095,460, 6–25–63, Cl. 260—665.
Oldenburg, Kenneth F., B. F. Kuhne, and D. Fazio, to Addmaster Corp. Calculating machine. 3,095,143, 6–25–63, Cl. 235—60.
Olin Mathieson Chemical Corp.: *See*—
Cook, Ralph L., and Andrew. 3,094,741.
Filstrup, Edward C. 3,094,931.
Pauls, Theron F. 3,094,956.
Oliver Electrical Mfg. Co.: *See*—
Price, George C. 3,095,471.
Omohundro, William A., to General Electric Co. Hair dryer. 3,095,496, 6–25–63, Cl. 219—39.
O'Neill, Joseph V., G. Homanick, and R. C. McCord; said Homanick and said McCord assors. to said O'Neill. Submarine automatic oil well drilling machine. 3,095,048, 6–25–63, Cl. 175—6.
Onischak, Roy M.: *See*—
Gvozdjak, John, and Onischak. 3,095,495.
Oom, Benjamin J., to American Seating Co. Accessory for overbed table. 3,094,949, 6–25–63, Cl. 108—32.
Optique et Precision de Levallois: *See*—
Morelle, Jules L. E. 3,094,913.
Osder, Stephen S., to Sperry Rand Corp. Flight path control system. 3,095,169, 6–25–63, Cl. 244—77.
Osmond, Desmond W. J., and H. H. Thompson, to Imperial Chemical Industries Ltd. Dispersion polymerization of an acrylate in the presence of a rubber and a non-polar organic solvent and product obtained. 3,095,388, 6–25–63, Cl. 260—4.
Osteen, Emmett H. Shoe cleaner. 3,094,727, 6–25–63, Cl. 15—4.
Otis, William C., to Minneapolis-Honeywell Regulator Co. Single axis tracer mechanism. 3,094,899, 6–25–63, Cl. 90—62.
Outboard Marine Corp.: *See*—
Stevens, Myron T. 3,095,232.
Owen, Theodore J. Paint remover. 3,094,731, 6–25–63, Cl. 15—236.
Owens-Illinois Glass Co.: *See*—
Allgeyer, Guy H. 3,095,082.
Riopelle, Harry O. 3,094,902.
Pacific Resins & Chemicals, Inc.: *See*—
Cone, Charles N. 3,095,313.
Cone, Charles N. 3,095,571.
Paden, Loyd B.: *See*—
McGray, Harold E., and Paden. 3,094,978.
Pangborn Corp.: *See*—
Croft, Charles P. 3,094,768.
Panton, Thomas J.: *See*—
Basford, Kenneth A., and Panton. 3,095,030.
Papke, Friedrich: *See*—
Reiche, Wilhelm, Mische, and Papke. 3,094,911.
Paravox, Inc.: *See*—
Tresise, Raleigh E., and Kendall. 3,095,483.
Parke, Robert M., to General Electric Co. Dip forming tubing. 3,094,752, 6–25–63, Cl. 22—203.
Parker-Hannifin Corp.: *See*—
Lebow, Ralph H. 3,095,179.
Parker, Humphrey F., and E. E. Robins, to Columbus McKinnon Corp. Conveyor trolley stabilisers. 3,094,943, 6–25–63, Cl. 104—172.
Parks, Howard E.: *See*—
Hileman, Ronald E., and Parks. 3,095,509.
Parsons, Sir Howard Grubb & Co. Ltd.: *See*—
Martin, Albert E. 3,095,503.
Partridge's Models Ltd.: *See*—
Hallam, Henry A. 3,095,210.
Paruolo, Anthony N., to Advertising Metal Display Co. Movable mount. 3,095,173, 6–25–63, Cl. 248—124.
Pauls, Theron F., to Olin Mathieson Chemical Corp. Fabrication of hollow articles. 3,094,956, 6–25–63, Cl. 113—44.
Payne, Robert E., and F. P. Gooch, to The Sharples Corp. Centrifugal dust separator. 3,094,828, 6–25–63, Cl. 55—407.
Pearne, Frank S., to Regent Jack Mfg. Co., Inc. Jack mechanism having an internal locking means. 3,094,841, 6–25–63, Cl. 60—52.
Peat, Madly R., to Wm. J. Stange Co. Method of stabilizing spice material and the resulting product. 3,095,306, 6–25–63, Cl. 99—140.
Pechiney Compagnie de Produits Chemique et Electro-metallurgique: *See*—
Soudan, Paul, and Mercier. 3,095,280.
Peck, David W., to Union Carbide Corp. Synthesis of 1,2'-diaphthalene 2,1'-oxide. 3,095,426, 6–25–63, Cl. 260—346.2.
Peebles, David D., to Foremost Dairies, Inc. Centrifugal atomizer and method. 3,095,149, 6–25–63, Cl. 239—224.

Peeler, Cletus E., Jr., to Diamond Alkali Co. Treatment of earth strata containing acid forming chemicals. 3,094,846, 6-25-63, Cl. 61—36.

Peeler, Lawrence F., and E. L. La Foy. Precast unit for forming a hyperbolic paraboloidal roof structure. 3,094,-812, 6-25-63, Cl. 50—52

Pelak, Andrew. Trays. 3,095,093, 6-25-63, Cl. 211—126.

Pelino, William M.: *See*—
Gallagher, Cornelius A., and Pelino. 3,095,171.

Pendergast, Raymond F. Polishing apparatus. 3,094,815, 6-25-63, Cl. 51—60.

Périat, Robert: *See*—
Kircher, René, and Périat. 3,095,267.

Perry, Arthur J. Foldable barricade and sign frame. 3,094,-802, 6-25-63, Cl. 40—125.

Perry, Frederick G., to Texas Instruments Inc. Miniaturized printed circuit electrical switching device. 3,095,486, 6-25-63, Cl. 200—122.

Peters, Bruce A.: *See*—
Ennis, Joseph F., and Peters. 3,095,045.

Peters, John G.: *See*—
Cantrell, Troy L., and Peters. 3,095,285.

Petroleum Research Corp.: *See*—
Hill, Gilman A. 3,095,163.

Petrow, Vladimir: *See*—
Kirk, David N., and Petrow. 3,095,411.

Petsold, James R., to Armstrong Cork Co. Resilient floor and wall covering having a back coating. 3,095,318, 6-25-63, Cl. 117—68.

Pfauter, Hermann: *See*—
Kaufuss, Paul, and Speyer. 3,094,897.

Pfiser, Chas., & Co., Inc.: *See*—
Rao, Koppaka V. 3,095,418.
Tretter, James R. 3,095,419.

Philadelphia Steel and Wire Corp.: *See*—
Sandow, Albert C. 3,095,844.

Philco Corp.: *See*—
Thornton, Clarence G. 3,095,526.

Phillips, Charles J.: *See*—
Von Wranau, Guido, and Phillips. 3,095,311.

Phillips Petroleum Co.: *See*—
Austin, Oliver K. 3,095,273.
Burk, Marvin C. 3,094,862.
Clark, Edgar W., Jr., Reynolds, and Root. 3,095,042.
Fluegel, Dale A. 3,094,875.
Kuerston, Richard D. 3,095,293.
Naifeh, Sam C. 3,095,272.
Short, James N., and Puckett. 3,095,406.
Spainhour, James D. 3,095,414.

Pickup, Arnold. Weft spreading machine. 3,094,760, 6-25-63, Cl. 26—54.

Pierce, Elwood K., Jr., to Gray Tool Co. Closure means. 3,095,110, 6-25-63, Cl. 220—46.

Pierce, James G.: *See*—
Johnston, Herrick L., and Pierce. 3,095,220.

Pihl, Paul E., and P. M. Hall. Siphon apparatus for flush tanks. 3,094,706, 6-25-63, Cl. 4—48.

Pirelli, S.p.A.: *See*—
Fresia, Giullo, and Valentinotti. 3,095,206.

Pirkle, Louis E.: *See*—
Jurice, Carlton A., and Pirkle. 3,095,458.

Pirko, Stephen D. Plumbing training aid. 3,094,789, 6-25-63, Cl. 35—10.

Pistole, Harry, and H. H. Hansen, Jr., to Jersey Production Research Co. Drill bit. 3,095,053, 6-25-63, Cl. 175—329.

Pitman, Herbert J., to Texaco Inc. Extreme pressure lubricants containing highly oxidised waxes. 3,095,375, 6-25-63, Cl. 252—28.

Pittsburgh Chemical Co.: *See*—
Crowley, Edgar L., Mackay, Manes, and Vancheri. 3,095,410.

Pittsburgh Plate Glass Co.: *See*—
Korach, Malcolm, and Thomas. 3,095,270.

Plastomeric Products Corp.: *See*—
Abildgaard, William H. 3,094,704.

Platt, Clyde D. Attachment for lift jack. 3,095,182, 6-25-63, Cl. 254—134.

Podlazov, Serguei S.: *See*—
Barke, Vladimir N., Blitstein, Grigsnov, Livshits, Mechetner, Podlazov, and Yakhimovich. 3,094,814.

Poethig, Robert E.: *See*—
Hanson, Herbert G., and Poethig. 3,094,849.

Pofferi, Giancarlo, to Ital-Bed Castrusione Letti ed Affini S. R. L. Tubular frame construction for spring beds. 3,094,715, 6-25-63, Cl. 5—110.

Pogonowski, Ivo C., to Shell Oil Co. Offshore platform structure. 3,094,847, 6-25-63, Cl. 61—46.

Pohl, Robert G., to The Rauland Corp. Apparatus for manufacturing semi-conductor devices. 3,094,764, 6-25-63, Cl. 29—25.3.

Polarad Electronics Corp.: *See*—
Jaffe, David L., and French. 3,095,535.

Polkosnik, Bernard L., to Conso Products, Inc. Traverse rod for draperies. 3,095,033, 6-25-63, Cl. 160—245.

Pomper, Boris, to The British Petroleum Co. Ltd. Plate columns. 3,095,462, 6-25-63, Cl. 261—113.

Popejoy, Leland B. Telephone party line clearing component. 3,095,480, 6-25-63, Cl. 179—82.

Poppelsdorf, Fedor, and R. C. Myerly, to Union Carbide Corp. Process for the preparation of piperazine. 3,095,417, 6-25-63, Cl. 260—268.

Post, Richard F. Expendable vapor noisemaker. 3,094,968, 6-25-63, Cl. 116—27.

Powell, Robert J., and J. E. Champion, to Continental Motors Corp. Engine controls. 3,094,536, 6-25-63, Cl. 60—13.

Precision Metalsmiths, Inc.: *See*—
Horton, Robert A. 3,094,751.

Prestige, Inc.: *See*—
Burd, Samuel L., and Lord. 3,094,954.

Price, George C., to Oliver Electrical Mfg. Co. Aerial cable support spacer. 3,095,471, 6-25-63, Cl. 174—160.

Price, Noble E. Process and apparatus for shaping and polishing gem stone particles. 3,094,818, 6-25-63, Cl. 51—164.

Priesmeyer, Charles, to Meyer & Wenthe, Inc. Egg marker. 3,094,920, 6-25-63, Cl. 101—41.

Prill, Erhard J.: *See*—
Stephens, John A., and Prill. 3,095,487.

Primack, Howard: *See*—
Weinstein, Meir, and Primack. 3,095,112.

Pritchard, J. F., & Co.: *See*—
Eifer, Walter R., Marshall, and Hopper. 3,095,265.

Puckett, James E.: *See*—
Short, James N., and Puckett. 3,095,406.

Puget Sound Pulp & Timber Co.: *See*—
King, Ellis G., and Adelphson. 3,095,4009.

Pugh, Kenneth P.: *See*—
Chasaryn, Victor, and Pugh. 3,095,226.

Pullman Inc.: *See*—
Black, James J. 3,095,215.

Pure Oil Co., The: *See*—
Fierce, William L., and Weichman. 3,095,275.

Purex Corp., Ltd.: *See*—
Arden, Benjamin. 3,095,380.

Radio Corp. of America: *See*—
Keizer, Eugene O. 3,095,532.
Kasuf, Harry V., Jr. 3,094,957.

Radio Frequency Co. Inc.: *See*—
Manwaring, Joshua G. D. 3,095,548.

Raff, Lionel M.: *See*—
Smith, John C., Bradshaw, Raff, and Bressler. 3,095,429.

Ragan, Marshall P.: *See*—
Crossland, Edward J., Ragan, and Hawkins. 3,095,142.

Ramsey, Robert C.: *See*—
Beaverson, Wayne A., and Ramsey. 3,095,484.

Randall, Wilbur W., and J. Rubenstein. Dual savings bank. 3,095,139, 6-25-63, Cl. 232—5.

Rang, Heudrik J., to Stamicarbon N.V. Plastic valve bag and method of making same. 3,095,028, 6-25-63, Cl. 150—9.

Rao, Koppaka V., to Chas. Pfiser & Co., Inc. 3-[2-(5-acetoxy-2-hydroxy-3,5-dimethylcyclohexyl)-2-hydroxyethyl] glutarimide and derivatives thereof. 3,095,418, 6-25-63, Cl. 260—281.

Rasmussen, Ross H. Means for installing concrete well casings. 3,095,041, 6-25-63, Cl. 166—285.

Rath, Virgil K. Drain plug. 3,094,712, 6-25-63, Cl. 4—295.

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Raymond Concrete Pile Co. Ltd.: *See*—
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Rayonier Inc.: *See*—
Herrick, Franklin W. 3,095,392.

Raytheon Co.: *See*—
Guterman, Sadia S., and Kodis. 3,095,554.
Keon, Edward F. 3,095,162.
McColl, David B. S. 3,095,543.
Nasarow, John P., Bailey, and Brinson. 3,094,774.
Shurtleff, Harold R., Judd, and Burdick. 3,095,499.

Reed, Frank F.: *See*—
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Reed, Lloyd E. Collapsible tent and trailer. 3,095,231, 6-25-63, Cl. 296—23.

Reeves, Willard D., 50% to St. Elmo Cross. Poultry scalding tank with air agitating means. 3,094,740, 6-25-63, Cl. 17—11.2.

Regent Jack Mfg. Co., Inc.: *See*—
Pearne, Frank S. 3,094,841.

Reiche, Wilhelm, F. Mische, and F. Papke, to Voigtlander A.G. Photographic camera. 3,094,911, 6-25-63, Cl. 95—10.

Reichel, Siegmund, to Acla-Werke Aktiengesellschaft. Means for securing top lifts to shoe heels. 3,094,798, 6-25-63, Cl. 36—36.

Reichhold Chemicals, Inc.: *See*—
Matt, Joseph Z. 3,095,390.

Reid, John D., T. W. Fenner, and J. M. Sloan, to United States of America, Agriculture. Method for producing a puckerfree seam in a garment. 3,094,705, 6-25-63, Cl. 2—248.

Reinhardt, John P., to Baker-Roos, Inc. Scaffolding for dome structures. 3,095,060, 6-25-63, Cl. 182—12.

Reinhardt, Rudolf: *See*—
Volbehr, Hartwig, Reinhardt, and Neuschl. 3,094,979.

Renfro Hosiery Mills Co.: *See*—
Merritt, Robert E., and Synnor. 3,094,823.

Renoux, Robert A., to Societe d'Applications Industrielles Plastiques. Method and means for stamping gramophone records. 3,094,744, 6-25-63, Cl. 18—19.

Research-Cottrell, Inc.: *See*—
Egan, Richard T. 3,095,239.

Research Development Co.: *See*—
Victor, Irving. 3,095,284.

Revlon, Inc.: *See*—
Abramson, Bernard, Greif, and Silson. 3,095,855.

Rexford, Willis E.: *See*—
Case, Noel L., and Rexford. 3,095,515.

Reynolds, Clifford E., to Container Corp. of America. Container with cover flange and method of forming. 3,095,137, 6-25-63, Cl. 220—44.

Reynolds Metals Co.: *See*—
Jacke, Raymond E. 3,095,134.

Reynolds, Paul W.: *See*—
Clark, Edgar W., Jr., Reynolds, and Root. 3,095,042.

Rheinstahl Union Bruckenbau A.G.: *See*—
Blümel, Johannes. 3,094,942.

Rhodes, Alan, and M. P. McGonagle, to Glaxo Group Ltd. Griseofulvin production. 3,095,360, 6-25-63, Cl. 195—81.

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Jackson, John G., Jr., and Rhodes. 3,095,004.

Rhodes, Thomas J., to United States Rubber Co. Tire chain. 3,095,025, 6-25-63, Cl. 152—241.

Rich, John P., to Improved Machinery Inc. Apparatus for chlorinating wood pulp. 3,095,349, 6-25-63, Cl. 162—236.

Richardson Co., The: *See*—
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Riegel Paper Corp.: *See*—
Jackson, Richard T., and Magill. 3,095,345.
Magill, Donald G., Jr., and Judge. 3,095,315.

Riehl, Lothar: *See*—
Siggel, Erhard, and Riehl. 3,095,408.

Ries, Hermann. Dialing arrangement for telephone apparatus. 3,095,481, 6-25-63, Cl. 179—90.

Riopelle, Harry O., to Owens-Illinois Glass Co. Motor control apparatus for centralised lubricator. 3,094,902, 6-25-63, Cl. 92—12.

Ritz, Joseph W.: *See*—
Eyer, Charles F., and Ritz. 3,095,519.

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Robbins, Albert A. Cooling envelope with breakable diaphragm. 3,095,291, 6-25-63, Cl. 62—4.

Robert, Edmond: *See*—
Desnoyers, Joseph H., and Robert. 3,095,237.

Roberts, Frederick W. System for operating the motor in a dictating machine and the like. 3,094,882, 6-25-63, Cl. 74—472.

Robertson, John D., to Mount Hope Machinery Co. Table roll. 3,094,769, 6-25-63, Cl. 29—116.

Robertson, John D., to Mount Hope Machinery Co. Table roll with means for removing longitudinal curvature. 3,094,771, 6-25-63, Cl. 29—116.

Robertson, John D., and R. H. Foster, to Mount Hope Machinery Co. Web guiding method and apparatus. 3,095,131, 6-25-63, Cl. 226—190.

Robertson, Thomas A., to The Firestone Tire & Rubber Co. Tire tread construction. 3,095,024, 6-25-63, Cl. 152—209.

Robins, Erford E.: *See*—
Parker, Humphrey F., and Robins. 3,094,943.

Robinsky, Eli I., and H. A. Holland, to Raymond Concrete Pile Co. Ltd. Earth boring auger and sampler. 3,095,051, 6-25-63, Cl. 175—270.

Robinson, Franklin P.: *See*—
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Robinson, Stephen B., Jr., to Rohm & Haas Co. Process of treating filaments and yarns of thermoplastic addition polymers. 3,094,718, 6-25-63, Cl. 8—155.

Rock-Ola Mfg. Corp.: *See*—
Tobias, Arthur A. 3,095,114.

Roelen, Otto, K. Büchner, and J. Meis, to Ruhrchemie Aktiengesellschaft. Catalytic addition of carbon monoxide and hydrogen to olefinic compounds. 3,095,451, 6-25-63, Cl. 260—598.

Rogers, Dilworth T.: *See*—
Munday, John C., Rogers, and Morway. 3,095,314.

Rohm & Haas Co.: *See*—
Bauer, La Verne N. 3,095,401.
Robinson, Stephen B., Jr. 3,094,718.
Van Hook, John O. 3,095,428.

Rolsen, Joseph, to Ampex Corp. Editing system for electronic recordings. 3,095,475, 6-25-63, Cl. 178—6.6.

Rolle, Edward W. Underwater depth gauge. 3,094,874, 6-25-63, Cl. 73—299.

Rolls-Royce Ltd.: *See*—
Basford, Kenneth A., and Panton. 3,095,080.
McLean, Donald, Kent, and Steel. 3,095,010.

Romanin, Bruno. Web-like continuous textile structure. 3,095,338, 6-25-63, Cl. 154—46.

Rombouts, Victor, to Koffie F. Rombouts N.V. in het Frans Cafes F. Rombouts S.A. Filtering device for the preparation of infusions, to be used only once. 3,094,917, 6-25-63, Cl. 99—287.

Root, William F.: *See*—
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Rossi, Angelo J., to G. B. Rossi & Figli (Africa) (Proprietary) Ltd. Device for entraining materials in a flow of liquid. 3,095,243, 6-25-63, Cl. 302—14.

Rossi, G. B., & Figli (Africa) (Proprietary) Ltd.: *See*—
Rossi, Angelo J. 3,095,243.

Rounds, Gerald L., and J. F. Hoefferle, to Kaiser Steel Corp. Device for aspirating and heating a liquid fumigant. 3,095,-364, 6-25-63, Cl. 21—111.

Rowe, Brian H., to General Electric Co. Gas coupling duct system for fluid supported vehicle. 3,095,165, 6-25-63, Cl. 244—12.

Rowe, Paul H., to Maas-Rowe Carillons. Programmer. 3,095,485, 6-25-63, Cl. 200—35.

Rowlan, Albert M.: *See*—
Lobas, John J., and Rowlan. 3,094,923.

Royal McBee Corp.: *See*—
Morelli, Joseph L., Brignole, and Hare. 3,095,079.

Rubenstein, Julia: *See*—
Randall, Wilbur W., and Rubenstein. 3,095,139.

Ruckwardt, Kurt F., B. T. McDonald, and J. F. Mahoney, to The Anaconda Co. Calcination of zinc sulfide concentrates. 3,095,863, 6-25-63, Cl. 204—119.

Rudelick, John, to Bruner Corp. Float valve particularly for water softener brine vessels. 3,095,008, 6-25-63, Cl. 137—391.

Ruhrchemie Aktiengesellschaft: *See*—
Feichtinger, Hans, and Noeske. 3,095,432.
Roelen, Otto, Büchner, and Meis. 3,095,451.

Rumsey, Herbert, Jr. Method for pressure-packing of meat products. 3,095,308, 6-25-63, Cl. 99—174.

Rush, Derek A.: *See*—
Treadwell, Richard J., and Rush. 3,095,168.

Russell, Ira B.: *See*—
Russell, Lee E., and Robinson. 3,095,100.

Russell, Lee E., and F. P. Robinson, ½ to I. B. Russell. Can handling process. 3,095,100, 6-25-63, Cl. 214—152.

Ryan, John W., to Mattel, Inc. Multiple speech phonograph with improved tone arm mounting. 3,095,201, 6-25-63, Cl. 274—26.

Rybicki, Zbigniew, M. A. Kopa, E. Wejner, J. Klekot, and Z. Wroclawski. Apparatus for spinning viscose fibers. 3,094,742, 6-25-63, Cl. 18—8.

S.I. Handling Systems, Inc.: *See*—
Bradt, Lynn, and Dorrance. 3,094,944.

Sackman, James M. Extinguishing ash tray. 3,094,993, 6-25-63, Cl. 131—235.

Sadowski, Jan Z., and R. E. Wagner, to E. I. du Pont de Nemours and Co. Color stabilized fibers and process for preparing same. 3,095,322, 6-25-63, Cl. 117—138.8.

Sahire, Victor N., to General Electric Co. Cathode ray tube screening. 3,095,317, 6-25-63, Cl. 117—33.5.

St. Elmo Cross: *See*—
Reeves, Willard D. 3,094,740.

St. Regis Paper Co.: *See*—
Vredenburg, Edric W. 3,095,019.
Vredenburg, Edric W. 3,095,056.

Sampietro, Achilles C. Cylinder head assemblies for spark ignition internal combustion engines. 3,094,977, 6-25-63, Cl. 123—191.

Sanders Associates, Inc.: *See*—
Ayer, Donald R., Butler, and Williston. 3,095,544.
Butler, Jesse L. 3,095,549.

Sandin, Jerome: *See*—
Cromer, Charles F., Sandin, and Baker. 3,095,490.

Sandow, Albert C., to Philadelphia Steel and Wire Corp. Apparatus for assembling nuts and washers. 3,095,844, 6-25-63, Cl. 156—506.

Sanford, Arthur C., to Sanford Industries, Inc. Corrugated toothed connector plate. 3,094,748, 6-25-63, Cl. 20—62.

Sanford Industries, Inc.: *See*—
Sanford, Arthur C. 3,094,748.

Sanymetal Products Co., Inc., The: *See*—
Domsic, Paul M., and Dielman. 3,095,225.

Sasse, Klaus, R. Wegler, and G. Unterstenhofer, to Farbenfabriken Bayer Aktiengesellschaft. Metallic derivatives of 2,3-dimercapto quinoxalines. 3,095,418, 6-25-63, Cl. 260—242.

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Jeffreys, Roy A., Davenport, and Saunders. 3,095,802.

Sausele, George J. H., to American Type Founders Co., Inc. Carriage escapement mechanism. 3,095,076, 6-25-63, Cl. 197—84.

Saxe, Van Rensselaer P. Bar joist. 3,094,813, 6-25-63, Cl. 50—406.

Sayles, Leonard B. Two-way lock for sliding doors. 3,094,-861, 6-25-63, Cl. 70—95.

Schachter, Oxjass, and A. Baniel, to M. Israel. Production of ethylene dibromide. 3,095,459, 6-25-63, Cl. 260—660.

Schaeffer, William D., to Union Oil Co. of California. Resolution of β- and γ-picoline mixtures. 3,095,420, 6-25-63, Cl. 260—290.

Scheer, C. F., & Cie: *See*—
Marschel, Erwin. 3,094,819.

Schelisch, Ernst F., to Marconi's Wireless Telegraph Co. Ltd. Anti-jamming pulsed-radar circuit. 3,095,565, 6-25-63, Cl. 343—17.1.

Scheuerman, Valentine, to Ernst Industries, Inc. Automatic locking sliders for slide fasteners. 3,094,756, 6-25-63, Cl. 24—205.14.

Schieman, Richard D., to The Standard Oil Co. Insulating oil. 3,095,366, 6-25-63, Cl. 208—14.

Schinkel, Gerrit, to Koninklijke Nederlandsche Zoutindustrie, N.V. Process for the preparation of common salt by the evaporation of solutions. 3,095,281, 6-25-63, Cl. 23—300.

Schlage, Ernest L., and A. H. Green, to Schlage Lock Co. Strike plate mortising tool. 3,095,021, 6-25-63, Cl. 146—251.

Schlage Lock Co.: *See*—
Schlage, Ernest L., and Green. 3,095,021.

Schleifer, Josef, to Eugen Bauer G.m.b.H. Illuminating arrangement. 3,095,155, 6-25-63, Cl. 240—52.

Schlumberger Well Surveying Corp.: *See*—
Blair, Winton B. 3,094,930.
Dewan, John T. 3,095,505.

Schmidt, Fred J., to Ellicott Machine Corp. Electric-hydraulic dredge. 3,094,795, 6-25-63, Cl. 37—67.

Schmook, Edward, Jr., to Oscar Mayer & Co., Inc. Meat comminutor. 3,095,022, 6-25-63, Cl. 146—192.

Schneble, Frederick W., Jr.: *See*—
Zeblisky, Rudolph J., McCormack, Williamson, and Schneble. 3,095,309.

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Creedon, John E., Schneider, and Yeamans. 3,095,518.

Schoenstein, Lawrence L. Air control for the pipes of a pipe organ. 3,094,890, 6-25-63, Cl. 84—332.

Schouw, Arthur C., and R. R. Mosher, to Ferro-Fab, Inc. Cleaning machine. 3,094,999, 6-25-63, Cl. 134—132.

Schultz, Edward H., Jr., to Nagel-Chase Mfg. Co. Sheave. 3,094,881, 6-25-63, Cl. 74—230.8.

Schultz, Franklin G. Roll feed device. 3,095,130, 6-25-63, Cl. 226—108.

Schwartz, Albert B.: *See*—
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Schwartz, Harold O., A. C. Ippolito, and W. V. Machanian, to The Wurlitzer Co. Sound generating means. 3,095,467, 6-25-63, Cl. 84—1.25.

Schwartz, Hyman. Metal cleaning compositions. 3,095,379, 6-25-63, Cl. 252—101.

Schwarz, Paul. Knife cleaner. 3,094,730, 6-25-63, Cl. 15—210.

Scidmore, Wright H., and P. R. Yoder, Jr. Optical device for demonstrating comatic aberration. 3,094,790, 6-25-63, Cl. 33—19.

Scientific Design Co., Inc.: *See*—
Colton, John W. 3,095,295.
Colton, John W., and Jewett. 3,095,296.

Scott, Don, and F. E. Hammer, to Fermco Laboratories, Inc. Deoxygenating method and product. 3,095,807, 6-25-63, Cl. 99—171.

Scott, Edward F., and R. D. Greene, to American Cyanamid Co. Vat-dye flash-aging printing process. 3,095,256, 6-25-63, Cl. 8—70.

Scott, Paul T., to E. I. du Pont de Nemours and Co. Melt spinning process for producing hollow-core filament. 3,095,258, 6-25-63, Cl. 18—54.

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Blake, John T. 3,094,757.

Scurlock, Arch C., to Atlantic Research Corp. Thixotropic monopropellants. 3,095,334, 6-25-63, Cl. 149—21.

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Seasholtz, Elwood F.: *See*—
Maish, George O., and Seasholtz. 3,095,262.

Seeburg Corp., The: *See*—
Jensen, Herman G. 3,095,115.

Seft, Max M.: *See*—
Farnsworth, Lawrence. 3,095,205.

Seismograph Service Corp.: *See*—
Crossland, Edward J., Hagan, and Hawkins. 3,095,142.

Selle, Wilbur A.: *See*—
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Servo Corp. of America: *See*—
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Margerison, Richard B., Shabica, and Ziegler. 3,095,446.

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Payne, Robert E., and Gooch. 3,094,828.

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Mahlmeister, Raymond A., and Straw. 3,094,788.

Shell Oil Co.: *See*—
Hook, Harvey E., and Woods. 3,095,376.
Mueller, Albert C., and Tess. 3,095,389.
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Sherman, Arthur, De L. F. Ferris, and R. Youngquist, to Thiokol Chemical Corp. Rocket motor. 3,094,837, 6-25-63, Cl. 60—35.6.

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Short, James N., and J. E. Puckett, to Phillips Petroleum Co. Preparation of polymers of conjugated dienes. 3,095,406, 6-25-63, Cl. 260—94.3.

Shotts, Adolph C., to Cities Service Research and Development Co. Oxidation of unsaturated hydrocarbons. 3,095,450, 6-25-63, Cl. 260—597.

Shurtleff, Harold R., V. T. Judd, and G. E. Burdick, to Raytheon Co. Continuous dial feed electric welding apparatus. 3,095,499, 6-25-63, Cl. 219—80.

Shwayder Bros., Inc.: *See*—
Axtell, Willard G. 3,094,743.

Shyluk, Walter P.: *See*—
Lincoln, Dwight C., and Shyluk. 3,095,404.

Siegrist, Adolf E.: *See*—
Liechti, Peter, Siegrist, Duennenberger, and Maeder. 3,095,421.

Siegrist, Adolf E.: *See*—
Duennenberger, Max, Maeder, Siegrist, and Liechti. 3,095,422.

Siggel, Erhard, and L. Riehl, to Vereinigte Glanzstoff-Fabriken AG. Process for the production of polyethylene terephthalate. 3,095,403, 6-25-63, Cl. 260—75.

Sikora, Donald S., to Monroe Calculating Machine Co. Resettable information storage device. 3,095,502, 6-25-63, Cl. 235—61.12.

Silberstein, Richard, to United States of America, Commerce. Satellite relay station using antenna diversity selection. 3,095,538, 6-25-63, Cl. 325—4.

Silson, John E.: *See*—
Abramson, Bernard, Greif, and Silson. 3,095,355.

Simjian, Luther G., to Universal Match Corp. Feeding mechanism for documents or the like. 3,095,192, 6-25-63, Cl. 271—3.

Sinnock, Pomeroy, to New Castle Products International, Inc. Folding door fabric stiffening. 3,095,032, 6-25-63, Cl. 160—84.

Slark, Norman A., to English Electric Valve Co. Ltd. Manufacture of cascade image amplifiers. 3,095,251, 6-25-63, Cl. 316—19.

Sloan, Julia M.: *See*—
Reid, John D., Fenner, and Sloan. 3,094,705.

Sloan, Julia M., H. W. Weller, Jr., and C. H. Haydel, to United States of America, Agriculture. Wrinkle recovery test apparatus. 3,094,866, 6-25-63, Cl. 73—159.

Slominski, Walter V., to Hoover Ball and Bearing Co. Spring assemblies. 3,095,189, 6-25-63, Cl. 267—102.

Smalley, William, to Wm. Gardner & Sons (Gloucester) Ltd. Double cone mixing machines. 3,095,185, 6-25-63, Cl. 259—82.

Smink, David E.: *See*—
Thompson, Gene D., and Smink. 3,095,038.

Smith, A. O., Corp.: *See*—
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Lightfoot, Edwin N., Jr. 3,094,936.

Smith, Alfred P., Jr.: *See*—
Smith, Alfred P., Sr., A. P. Smith, Jr., and Jones. 3,094,939.
Smith, Alfred P., Sr., A. P. Smith, Jr., and Jones. 3,095,123.

Smith, Alfred P., Sr., A. P. Smith, Jr., and W. T. Jones, to D. B. Smith & Co., Inc. Liquid spraying pump 3,094,939, 6-25-63, Cl. 103—188.

Smith, Alfred P., Sr., A. P. Smith, Jr., and W. T. Jones, to D. B. Smith & Co., Inc. Ambulant liquid spraying pump and supply tank 3,095,123, 6-25-63, Cl. 222—175.

Smith, Archie G. Lawn sprinkler. 3,095,148, 6-25-63, Cl. 239—97.

Smith, Bernard. Hydrofoil sailboat. 3,094,961, 6-25-63, Cl. 114—66.5.

Smith, Clarence J. Can opener. 3,094,776, 6-25-63, Cl. 30—15.5.

Smith Corona Marchant, Inc.: *See*—
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Smith, D. B., & Co., Inc.: *See*—
Smith, Alfred P., Sr., A. P. Smith, Jr., and Jones. 3,094,939.
Smith, Alfred P., Sr., A. P. Smith, Jr., and Jones. 3,095,123.

Smith, David R.: *See*—
Brockway, Charles E., Estes, and Smith. 3,095,391.

Smith Development Co.: *See*—
Smith, Sydney S. 3,095,006.

Smith, Donald F.: *See*—
Erickson, John R., and Smith. 3,095,203.

Smith, Frances M., to The La Resista Corset Co. Brassiere. 3,094,991, 6-25-63, Cl. 128—489.

Smith, Harold I., to Consolidated Electrodynamics Corp. Photographic development equipment. 3,094,914, 6-25-63, Cl. 95—89.

Smith, Horace V., to Oil Metering and Processing Equipment Corp. Liquid metering assembly and method. 3,094,871, 6-25-63, Cl. 73—221.

Smith, John C., W. R. Bradshaw, L. M. Raff, and W. L. Bressler, to The Dow Chemical Co. Process for the preparation of crystalline diglycidyl ether of bisphenol A. 3,095,429, 6-25-63, Cl. 260—348.

Smith, John F. D., to Carrier Corp. Heat exchange apparatus of the evaporative type. 3,095,255, 6-25-63, Cl. 62—512.

Smith Kline & French Laboratories: *See*—
Zirkle, Charles L. 3,095,425.

Smith, Paul E., Jr., and D. P. Norman, to Conval Corp. Recorder. 3,095,569, 6-25-63, Cl. 346—74.

Smith, Paul S: *See*—
Green, Julius, and Smith. 3,094,947.

Smith, S., & Sons (England) Ltd.: *See*—
Treadwell, Richard J., and Rush. 3,095,168.

Smith, Sydney S., to Smith Development Co. Variable flow restriction device. 3,095,006, 6-25-63, Cl. 137—269.5.

Smith, Verity C., to Barnstead Still and Sterilizer Co. Hollow enclosed molded articles with molded internal wall surfaces. 3,095,259, 6-25-63, C. 18—58.

Snelling, Christopher: *See*—
Van Wagner, Edward M., and Snelling. 3,094,910.

Sociedad Anonima Cros: *See*—
Lederle, Rembe. 3,095,297.

Societa Applicazioni Gomma Antivibranti "SAGA" S.p.A.: *See*—
Boschi, Antonio. 3,094,853.

Societe d'Applications Industrielles Plastiques: *See*—
Renoux, Robert A. 3,094,744.

Societe d'Etudes Chimiques pour L'Industrie et L'Agriculture: *See*—
Kircher, René, and Périat. 3,095,267.

Societe Suisse pour l'Industrie Horlogere S.A.: *See*—
Dôme, Peter. 3,095,528.
Dôme, Peter. 3,095,529.

Socony Mobil Oil Co., Inc.: *See*—
Andress, Harry J., Jr., and Gee. 3,095,286.
Jenkins, Edwin E., and Schwartz. 3,095,384.

Solida Textil- und Netzwaren-Manufactur Ruthard Dietze K.G.: *See*—
Dietze, Ruthard. 3,094,995.

Solo Cup Co.: *See*—
Hawley, Harry R. 3,095,132.

Sondy, Dominic. Ceramic kiln. 3,095,186, 6-25-63, Cl. 263—7.

Sorenson, William H., to Miehle-Goss-Dexter, Inc. File separating device. 3,095,193, 6-25-63, Cl. 271—42.

Sormberger, Richard L.: *See*—
Cusano, Dominic A., and Sormberger. 3,095,324.

Soth, John M., to Delavan Mfg. Co. Variable area spray nozzle. 3,095,153, 6-25-63, Cl. 239—405.

Soudan, Paul, and H. Mercier, to Pechiney Compagnie de Produits Chemique et Electrometallurgique. Apparatus for the continuous digestion of bauxite. 3,095,280, 6-25-63, Cl. 23—290.

Spainhour, James D., to Phillips Petroleum Co. Synthesis of certain substituted triazines. 3,095,414, 6-25-63, Cl. 260—248.

Spear Box Co., Inc.: *See*—
Conescu, Sidney. 3,095,186.

Spencer, Roy A., Jr.: *See*—
Van Dyke, Genevieve D. 3,094,784.

Sperry Gyroscope Co. Ltd., The: *See*—
Britnell, Clive. 3,095,567.

Sperry Rand Corp.: *See*—
Gold, Theodore. 3,094,877.
Helms, Clifford J. 3,095,507.
Moore, Richard L. 3,095,555.
Oader, Stephen S. 3,095,169.

Speyer, Karlheins: *See*—
Kaulfuss, Paul, and Speyer. 3,094,897.

Speziale, Angelo J.: *See*—
Marco, Gino J., and Speziale. 3,095,454.
Marco, Gino J., and Speziale. 3,095,455.

Sprague, Robert H., H. L. Fichter, Jr., and W. P. Hamilton, to Horizons Inc. Styryl dye base composition and photographic processes for producing lithographic surfaces photoresists and prints therewith. 3,8095,303, 6-25-63, Cl. 96—38.

Sproule, Walter A.: *See*—
Von Wranau, Guido, and Phillips. 3,095,311.

Sprouse, Norman T.: *See*—
McIntyre, Glenn H., Jr., Sprouse, and Haber. 3,095,271.

Stacy, Stanley L., and F. A. Tanner, Jr., to Ethicon, Inc. Surgical dispenser. 3,095,159, 6-25-63, Cl. 242—96.

Staeuble, Max and K. Weber, to Ciba Ltd. Anthraquinone dyestuffs containing a 2-chloro.4-hydroxy(lower)alkylamino, triazinylamino group. 3,095,415, 6-25-63, Cl. 260—249.

Stahle, Howard L.: *See*—
Hill, Frank A., and Stahle. 3,095,553.

Staley, A. E., Mfg. Co.: *See*—
Brockway, Charles E., Estes, and Smith. 3,095,391.

Stalker Corp., The: *See*—
Clarke, Daniel J., and Oetliker. 3,095,180.

Stamicarbon N.V.: *See*—
Rang, Hendrik J. 3,095,028.

Stamm, Walter A., A. W. Breindel, and A. H. Frieberg, to Stauffer Chemical Co. Organotin sulfonates. 3,095,434, 6-25-63, Cl. 260—429.7.

Standard Oil Co. (Indiana): *See*—
Baldwin, Richard H., and Towle. 3,095,445.
Dravnieks, Andrew, and Freedman. 3,094,865.
Green, Louis E., Jr. 3,095,278.

Standard Oil Co., (Ohio) The: *See*—
Callahan, James L., and Foreman. 3,095,452.
Schieman, Richard D. 3,095,866.

Stange, Wm. J., Co.: *See*—
Peat, Maclyn R. 3,095,306.

Stanley Works, The: *See*—
Ford, Barton H. 3,095,035.

Stark, Carl K. Disposable container for printing ink fountains. 3,094,924, 6-25-63, Cl. 101—210.

Starnes, William C.: *See*—
Kline, Robert E., and Starnes. 3,095,367.

Stauffer Chemical Co.: *See*—
Stamm, Walter A., Breindel, and Freiberg. 3,095,434.

Stauffer, Ferdinand, to Internationale Treuhand A.G. Ampulla incorporating an injection syringe. 3,094,989, 6-25-63, Cl. 128—218.

Stearns, R. H.: *See*—
Hansen, Quinten A. 3,095,068.

Stearns, R. N.: *See*—
Hansen, Quinten A. 3,095,068.

Steel Improvement & Forge Co., The: *See*—
Faust, Charles L., and Gurkins. 3,095,864.

Steel, Thomas: *See*—
McLean, Donald, Kent, and Steel. 3,095,010.

Steiner, Charles S., and J. G. Atwater, to Swift & Co. Pumping system for meat emulsions. 3,095,120, 6-25-63, Cl. 222—1.

Stelts, John. Flushing device. 3,095,001, 6-25-63, Cl. 134—167.

Stephens, John A., and E. J. Prill, to Monsanto Chemical Co. α-thiocyanatoalkyl esters of aromatic carboxylic acids. 3,095,437, 6-25-63, Cl. 260—454.

Sterba, Paul E., Jr.: *See*—
Fusfield, Robert L., and Sterba. 3,095,542.

Stetson China Co.: *See*—
Dube, Alfred, and Kasper. 3,095,253.

Stevens, Francis D.: *See*—
McGrath, William L., and Stevens. 3,094,916.

Stevens, Harold E.: *See*—
Bird, James R., and Stevens. 3,095,454.

Stevens, Myron T., to Outboard Marine Corp. Walk-through seat. 3,095,232, 6-25-63, Cl. 296—65.

Stewart-Warner Corp.: *See*—
Anderson, Raymond A. 3,095,081.
Zargarpur, Reuholah. 3,094,970.

Stith, James R. Means discharging static electricity from hair. 3,095,523, 6-25-63, Cl. 317—2.

Stolar, Gerard, B. P. Gropp, and J. W. Higley, to Daystrom, Inc. Permanent magnet electrical instrument with flux gap adjustment. 3,095,537, 6-25-63, Cl. 324—161.

Stoll, Willy, and H. Dietrich, to Geigy Chemical Corp. N-substituted N-aryl sulphonyl ureas. 3,095,447, 6-25-63, Cl. 260—553.

Stone, Morris D., to United Engineering and Foundry Co. Method of manufacturing tinplate. 3,095,361, 6-25-63, Cl. 204—28.

Stop-Motion Devices Corp.: *See*—
Voesen, Edward. 3,094,856.

Stork, Karl: *See*—
Knapp, Helmut, and Stork. 3,095,294.

Stout, Gerald J. Floor construction for basementless buildings and the like. 3,094,745, 6-25-63, Cl. 20—6.

Stover, Harry E., and D. D. Action, to Anchor Hocking Glass Corp. Closure cap and method of making. 3,095,104, 6-25-63, Cl. 215—40.

Straw, Jesse H.: *See*—
Mahlmeister, Raymond A., and Straw. 3,094,788.

Stuart, Frank A.: *See*—
Goldschmidt, Alfred, and Stuart. 3,095,402.

Studebaker Corp.: *See*—
Warnken, Elmer P. 3,095,138.
Warnken, Elmer P. 3,095,156.

Style-Crafters, Inc.: *See*—
Martin, Clarence B., Jr. 3,094,725.

Superior Ball Joint Corp.: *See*—
Davies, Gilbert E., and Gasparini. 3,095,222.

Supreme Steel Equipment Corp.: *See*—
Frederick, Philip. 3,095,250.

Surgant, John M., to Monstanto Chemical Co. Aqueous mixture of surface active agents. 3,095,353, 6-25-63, Cl. 167—43.

Sweeney, Edward A., and J. B. Carr, to General Motors Corp. Process for the manufacture of laminated magnetic cores. 3,095,333, 6-25-63, Cl. 148—121.

Sweeney, Patrick M., and L. L. Eberhart, to Consolidated Kinetics Corp. Apparatus for isolating vibrations. 3,095,187, 6-25-63, Cl. 267—1.

Swift & Co.: *See*—
Fulde, Roland C. 3,095,357.
Steiner, Charles S., and Atwater. 3,095,120.

Sydnor, Frank: *See*—
Merritt, Robert E., and Sydnor. 3,094,823.

Sylvania Electric Products, Inc.: *See*—
Ayres, Wesley P., Melchor, and Vartanian. 3,095,546.
Bennett, John E., and Fierston. 3,095,539.
Chiola, Vincent, and Vanderpool. 6,095,269.
Eyer, Charles F., and Ritz. 3,095,519.
Hileman, Ronald E., and Parks. 3,095,509.
Zwald, Henry J. 3,094,887.

Szekeres, Janos. Reproduction apparatus. 3,094,909, 6-25-63, Cl. 95—1.7.

Tagliaferri, Aldo. Forehearth or holding furnace for heating molten metals, equipped with stirrer and induction heater. 3,095,464, 6-25-63, Cl. 13—29.

Taillie, Gordon P., to Xerox Corp. Sheet guiding apparatus. 3,095,194, 6-25-63, Cl. 271—79.

Takayama, Gozo: *See*—
Matsumoto, Masakasa, Ukida, and Takayama. 3,095,405.

Tanabe, Kenichi, and K. Matsubayashi, ¾ to Kurashiki Rayon Co., Ltd. and ¼ to Air Reduction Co. Inc. Nitrogen-containing polyvinyl alcohol shaped articles. 3,095,257, 6-25-63, Cl. 8—115.5.

Tanchuk, Nicholas R. Stamp hinge moistener. 3,095,328, 6-25-63, Cl. 118—268.

Tankersley, James A., and P. A. Driscoll; said Tankersley assor. to The Bendix Corp. Combination adjuster and reset mechanism. 3,095,064, 6-25-63, Cl. 188—72.

Tanner, Francis A., Jr.: *See*—
Stacy, Stanley L., and Tanner. 3,095,159.

Tarascon, Jean P. Seat or other articles such as couch, etc. 3,095,238, 6-25-63, Cl. 297—306.

Taylor, James S. Support for gas and oil strings. 3,094,852, 6-25-63, Cl. 175—200.

Technicolor Corp. of America: *See*—
Brake, David G. 3,095,475.

Templin, Philip R.: *See*—
Kaufman, John J., and Templin. 3,094,809.

Tess, Roy W. H.: *See*—
Mueller, Albert C., and Tess. 3,095,389.

Teufel, John, to Combustion Engineering, Inc. Thermal actuated radial seal for rotary regenerative heat exchanger. 3,095,036, 6-25-63, Cl. 165—9.

Tewksbury, Charles G.: *See*—
Mizell, Louis R., and Tewksbury. 3,094,763.

Texaco Inc.: *See*—
Barber, Everett M. 3,094,974.
Dillie, Roger M., Chapman, Ahlborn, and Eastman. 3,095,453.
Eckert, George W., and Hall. 3,095,263.
Pitman, Herbert J. 3,095,375.
Sensel, Eugene E. 3,095,288.
Watson, Harold J. 3,095,378.

Texas Instruments Inc.: *See*—
Jost, Ernest M. 3,095,500.
Perry, Frederick G. 3,095,486.

Theis, Manfred: *See*—
Muller, Erwin, Bayer, Wilms, Van Spulak, and Theis. 3,095,399.

Thiebes, Gunter, to Westfaelische Verlagsanstalt Thiebes & Co. Picture book. 3,094,791, 6-25-63, Cl. 35—26.

Thiokol Chemical Corp.: *See*—
Sherman, Arthur, Ferris, and Youngquist. 3,094,837.

Thomas, James K., III: *See*—
Korach, Malcolm, and Thomas. 3,095,270.

Thompson, Gene D., and D. E. Smink, to Jersey Production Research Co. Plural completion of wells. 3,095,038, 6-25-63, Cl. 166—46.

Thompson, Horace H.: *See*—
Osmond, Desmond W. J., and Thompson. 3,095,388.

Thompson Industries, Inc.: *See*—
Fitzgerald, Albert J. 3,095,241.

Thompson, Richard G., to Union Tank Car Co. Float valve mechanism. 3,095,005, 6-25-63, Cl. 137—268.

Thornton, Clarence G., to Philco Corp. Semiconductor unit. 3,095,526, 6-25-63, Cl. 317—235.

Tinnon, John M., and M. W. Leeds, to Air Reduction Co., Inc. Cleaning compositions. 3,095,381, 6-25-63, Cl. 252—161.

Titus Mfg. Corp.: *See*—
Veber, Hoyt K. 3,095,178.

Tobias, Arthur A., to Rock-Ola Mfg. Corp. Packet ejector with optional latch. 3,095,114, 6-25-63, Cl. 221—114.

Topanelian, Edward, Jr.: *See*—
Fleischer, Fred E., and Topanelian. 3,095,047.

Topf, Sam[illegible], to Jordan Industries, Inc. Combination spacer anchor having a frangible head portion. 3,094,892, 6-25-63, Cl. 85—2.4.

Towle, Philip H.: *See*—
Baldwin, Richard H., and Towle. 3,095,445.

Traid Corp.: *See*—
Cartwright, Victor F. 3,095,564.
Transportpatent, AB: *See*—
Heliner, Karl G. 3,094,941.
Treadwell, Richard J., and D. A. Rush, to S. Smith & Sons (England) Ltd. Actuator systems for the control of surfaces of dirigible craft. 3,095,168, 6-25-63, Cl. 244—76.
Tresise, Raleigh E., and P. D. Kendall, to Paravox, Inc. Hearing aid device. 3,095,483, 6-25-63, Cl. 179—107.
Tretter, James R., to Chas. Pfizer & Co., Inc. Process for preparing 2-oxo-3-(N,N-disubstituted carboxamido)-1,2,3,4,6,7-hexahydro-11b-H-benzopyridocolines. 3,095,419, 6-25-63, Cl. 260—287.
Triller, David P., to United States of America, Navy. Precision resistor making by resistance value control for etching. 3,095,340, 6-25-63, Cl. 156—8.
Troy, Leonard. Brake shoe adjustment mechanism. 3,095,085, 6-25-63, Cl. 188—79.5.
Trumbull, Harold E., to Xerox Corp. Toner dispenser drive mechanisms. 3,095,825, 6-25-63, Cl. 118—7.
Tung-Sol Electric Inc.: *See*—
Wegener, Horst A. R. 3,095,279.
Turatti, Mario. Atomiser holders. 3,095,105, 6-25-63, Cl. 215—100.
Turner, Billie E. B. Pads for handles of irons. 3,094,798, 6-25-63, Cl. 38—95.
Turner, William M., and D. B. Lucius, to The Unipress Co., Inc. Control mechanism for rotary pressing machines. 3,094,797, 6-25-63, Cl. 38—22.
Tutty, La Verne F., to Johns-Manville Corp. Drain or vent pipe construction having means to allow lateral and longitudinal expansion. 3,095,219, 6-25-63, Cl. 285—42.
U-Stretch Corp.: *See*—
Monday, Zephyr. 3,094,856.
Uhlenbroek, Jan H., and M. J. Koopmans, to North American Philips Co., Inc. Fungicides and methods of making the same. 3,095,352, 6-25-63, Cl. 167—30.
Ukida, Junji: *See*—
Matsumoto, Masakazu, Ukida, and Takayama. 3,095,405.
Ulbrich, Wolfgang K. H., to Gesellschaft fur Linde's Eismaschinen Aktiengesellschaft. Process and device for cooling and rectifying gases in heat exchanger with a colder gas, particularly with (their) decomposition products. 3,095,292, 6-25-63, Cl. 62—12.2.
Umbdenstock, Walter, ½ to C. T. Breitenstein. Spiral grinding fixture. 3,094,822, 6-25-63, Cl. 51—225.
Union Carbide Corp.: *See*—
Goodman, Henry G., Jr. 3,095,895.
Hartwig, Jurgen. 3,095,316.
Kelso, Robert G. 3,095,427.
Mantz, Alonso L. 3,095,396.
Martino, Carlo F., and Misko. 3,095,400.
McGary, Charles W., Jr. 3,095,894.
Peck, David W. 3,095,426.
Poppelsdorf, Fedor, and Myerly. 3,095,417.
Union Oil Co. of California: *See*—
Schaeffer, William D. 3,095,420.
Union Tank Car Co.: *See*—
Bodley, Robert W. 3,095,118.
Thompson, Richard G. 3,095,005.
Unipress Co., Inc., The: *See*—
Turner, William M., and Lucius. 3,094,797.
United Aircraft Corp.: *See*—
Briggs, Thomas L., Jr. 3,095,166.
Evans, Frederick P. 3,094,838.
United Engineering and Foundry Co.: *See*—
Stone, Morris D. 3,095,361.
United Kingdom Atomic Energy Authority: *See*—
Cope, Lawrence H. 3,095,372.
United Shoe Machinery Corp.: *See*—
MacRae, Herbert N., and Chaloux. 3,094,701.
Morrison, Ralph A. 3,095,106.
United States Borax & Chemical Corp.: *See*—
McIntyre, Glenn H., Jr., Sprouse, and Haber. 3,095,271.
Wilson, William P. 3,095,282.
United States Catheter & Instrument Corp.: *See*—
Bieller, Richard, Harries, Jeckel, and Lanport. 3,095,017.
Jeckel, Norman C. 3,094,762.
U.S. Filter Corp.: *See*—
Berger, Richard M. 3,095,343.
Bunzl, Rudolph H., and Berger. 3,094,736.
United States of America
Agriculture: *See*—
Reid, John D., Fenner, and Sloan. 3,094,705.
Sloan, Julia M., Weller, and Haydel. 3,094,866.
Air Force: *See*—
Barnes, Charles R., and Geesner. 3,095,527.
Bryan, Paul A. 3,095,557.
Kahkonen, Roy G., and Bartlett. 3,094,864.
Army: *See*—
Anderson, Paul E., and Gill. 3,094,786.
Bailey, Theodore L. 3,094,703.
Creedon, John E., Schneider, and Yeamans. 3,095,518.
Kilduff, Timothy J., and Benderly. 3,095,550.
Atomic Energy Commission: *See*—
Nadler, Harry. 3,095,102.
Wehmann, George. 3,094,869.
Commerce: *See*—
Silberstein, Richard. 3,095,538.
Navy: *See*—
Andersen, Niels Y., Jr., and McAdams. 3,094,868.
Carson, Ralph C., Jr., Grillo, and Jansen. 3,094,896.
Costley, Vivian G., Dovell, and Luh. 3,094,928.
Elder, Alton P., and Le Grand. 3,095,218.
Gilbert, George W. 3,095,212.
Guarino, Louis S., and Holt. 3,094,971.
Little, William R. 3,095,512.
Lynn, Edward. 3,095,504.
Triller, David P. 3,095,340.
United States Rubber Co.: *See*—
Howland, Louis H., and Chambers. 3,095,896.
Kleinfeld, Martin J., and Hunter. 3,095,887.
Rhodes, Thomas J. 3,095,025.
Universal Match Corp.: *See*—
Simjian, Luther G. 3,095,192.
Universal Oil Products Co.: *See*—
Urban, Peter. 3,095,276.
Unterstenhofer, Gunter: *See*—
Sasse, Klaus, Wegler, and Unterstenhofer. 3,095,413.
Urban, Peter, to Universal Oil Products Co. Production of sulfur. 3,095,276, 6-25-63, Cl. 23—225.
Urshan, Samuel A., to General Dynamics Corp. Liquid level gauge. 3,094,878, 6-25-63, Cl. 73—290.
Ustin, George, and P. A. Haucke, to Buchanan Electrical Products Corp. Crimping tool. 3,094,702, 6-25-63, Cl. 1—220.
Valentine, Harry M., and E. T. Andrews, to Bendix-Westinghouse Automotive Air Brake Co. Brake system and control valve therefor. 3,095,244, 6-25-63, Cl. 303—9.
Valentinotti, Aldo: *See*—
Fresia, Giulio, and Valentinotti. 3,095,206.
Vancheri, Frank J.: *See*—
Crowley, Edgar L., Mackay, Manes, and Vancheri. 3,095,416.
Van Derbeek, William L.: *See*—
Sflecko, Nicholas M., Nebel, and Van Derbeek. 3,095,346.
Vanderpool, Clarence D.: *See*—
Chiola, Vincent, and Vanderpool. 3,095,269.
Van Der Wilt, Wien A. Brace assembly for axle housings. 3,095,242, 6-25-63, Cl. 301—129.
Van Dyke, Genevieve D., ½ to E. A. Spencer, Jr. Drafting instrument. 3,094,784, 6-25-63, Cl. 33—26.
Vangor, William. Course finder. 3,094,781, 6-25-63, Cl. 33—1.
Van Hook, John O., to Rohm & Haas Co. N,N-disubstituted arylamides. 3,095,428, 6-25-63, Cl. 260—348.
Van Spulak, Frans: *See*—
Muller, Erwin, Bayer, Wilms, Van Spulak, and Theis. 3,095,399.
Van Wagner, Edward M., and C. Snelling, to Xerox Corp. Reflex xerographic apparatus. 3,094,910, 6-25-63, Cl. 95—1.7.
Vartanian, Perry H., Jr.: *See*—
Ayres, Wesley P., Melchor, and Vartanian. 3,095,546.
Veber, Hoyt K., to Titus Mfg. Corp. Pivoted vane damper. 3,095,178, 6-25-63, Cl. 251—212.
Vector Mfg. Co., Inc.: *See*—
Maestre, Neil E. 3,095,511.
Vereinigte Glanzstoff-Fabriken AG: *See*—
Siggel, Erhard, and Riehl. 3,095,403.
Victor, Irving, to Research Development Co. Low temperature process of dry cleaning textiles. 3,095,284, 6-25-63, Cl. 34—32.
Virginia-Carolina Chemical Corp.: *See*—
Melton, Thomas M. 3,095,439.
Visnuara, Francesco, S.p.A.: *See*—
Cavallini, Guido, and Massarani. 3,095,443.
Vladimir, Leonard O., to General Precision, Inc. Mixer circuit for radar systems. 3,095,563, 6-25-63, Cl. 343—8.
Vlahos, Petro, to Motion Picture Research Council, Inc. Composite photography utilizing sodium vapor illumination. 3,095,304, 6-25-63, Cl. 96—42.
Vogt, Clarence W. Receptacle and method of making the same. 3,095,133, 6-25-63, Cl. 229—2.5.
Voigtlander A.G.: *See*—
Reiche, Wilhelm, Mische, and Papke. 3,094,911.
Volbehr, Hartwig, R. Reinhardt, and A. Neuschl, to Webasto Werk G.m.b.H. Heating devices operated with liquid fuel. 3,094,979, 6-25-63, Cl. 126—110.
Volkmann & Co.: *See*—
Nimtz, Klaus, and Kressiein. 3,094,825.
Volz, Carl: *See*—
McGinley, James H., Dickey, and Volz. 3,094,929.
Von Wranau, Guido, and C. J. Phillips, 10^{29}/$_{200}$ths to said von Wranau, 3^{4}/$_{200}$ths to said Phillips, 9^{2}/$_{200}$ths to T. T. Chappell, 33^{2}/$_{200}$ths to R. J. Lamb, 9^{2}/$_{200}$ths to C. Meanor, and 9^{2}/$_{200}$ths to W. A. Sproule. Glass compositions. 3,095,311, 6-25-63, Cl. 106—50.
Von Zelewsky, Ottomar, to Georg Fischer Aktiengesellschaft. Guiding means for straight guiding of parts, especially slides. 3,095,247, 6-25-63, Cl. 308—3.
Vossen, Edward, to Stop-Motion Devices Corp. Yarn feeding and defect detecting device. 3,094,855, 6-25-63, Cl. 66—163.
Vredenburg, Edric W., to St. Regis Paper Co. Feed machine for bags. 3,095,019, 6-25-63, Cl. 141—68.
Vredenburg, Edric W., to St. Regis Paper Co. Feed machine for bags. 3,095,056, 6-25-63, Cl. 177—78.
Wagner, John H., to Joy Mfg. Co. Hoe type loading machine. 3,095,080, 6-25-63, Cl. 198—10.
Wagner, Kuno, ½ to Farbenfabriken Bayer Aktiengesellschaft, and ½ to Mobay Chemical Co. Polyethers containing N-methylol groups. 3,095,385, 6-25-63, Cl. 260—2.
Wagner, Robert E.: *See*—
Sadowski, Jan Z., and Wagner. 3,095,322.
Waldorf Paper Products Co.: *See*—
Hennessey, Russell J. 3,095,135.
Walker Mfg. Co.: *See*—
May, Claude H. 3,094,976.
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U.S. DEPARTMENT OF COMMERCE

OFFICIAL GAZETTE of the UNITED STATES PATENT OFFICE

June 25, 1963 Volume 791 Number 4

TRADEMARKS

NOTICES

Annual Index of Patents

The 1962 edition of the Annual Index of Patents has been published. Copies may be obtained from the Superintendent of Documents, Government Printing Office, Washington 25, D.C.

Price: Buckram bound, $6.75.

Erratum

In the OFFICIAL GAZETTE of February 14, 1961, at page TM 72 at the bottom of the first column, "Easton Manufacturing Company" should read *Eston Manufacturing Company.*

Trademark Suits

Notices under 15 U.S.C. 1116; Trademark Act of July 5, 1946

Reg. No. 27,166 (ZENITH AND DESIGN), Marshall-Wells Hardware Co., Hardware, machines and miscellaneous goods; **Reg. No. 171,067**, same, Marshall-Wells Company, Laundry washing machines and wringers; **Reg. No. 382,329**, same, Refrigerators; **Reg. No. 534,713**, same, Electric domestic vacuum cleaners; **Reg. No. 590,840**, same, Laundry washing machines and dryers; **Reg. No. 666,654**, same, Electrically operated dish washers and garbage disposers, sink type, filed Jan. 10, 1958, D.C., N.D. Ill. (Chicago), Doc. 58c51, *Zenith Radio Corporation* v. *Marshall-Wells Company.* Consent decree; defendant enjoined Nov. 30, 1962.

Reg. No. 46,832 (GRAND UNION), Grand Union Tea Co., Teas, filed Dec. 6, 1962, D.C.N.J. (Newark), Doc. 1005/62, *The Grand Union Company* v. *Grand Union Oil Company.* Consent judgment; injunction granted; counterclaim dismissed Mar. 28, 1963.

Reg. No. 167,064 (KRAFT AND DESIGN), J. L. Kraft & Bros. Co., Cheese; **Reg. No. 179,451** (KRAFT ANTILLANO AND DESIGN), same; **Reg. No. 202,600** (KRAFT K CHEESE), Kraft Cheese Company, same; **Reg. No. 237,328** (KRAFT K MALTS), Kraft Milk Products Co., Confection in the form of compressed tablet and containing malted milk as its principal ingredient; **Reg. No. 285,539** (KRAFT ETC. AND DESIGN), Kraft Foods Company, French dressing, thousand island dressing, mayonnaise and sandwich relish or spread; **Reg. No. 426,709** (KRAFTEEN), same, Milk fat obtained by mechanical separation from cream; **Reg. No. 554,187** (KRAFT), same, Grated cheese, pasteurized process cheese food, cheese spread, etc.; **Reg. No. 670,330**, same, National Dairy Products Corporation, Fresh fruits, fruit juices, soup bases, jellies, marmalades, etc., filed Mar. 27, 1962, D.C., N.D. Ill. (Chicago), Doc. 62c702, *National Dairy Products Corporation* v. *Sesa-Kraft, Inc. et al.* Stipulation and order dismissing action without prejudice Aug. 28, 1962.

CONDITION OF TRADEMARK APPLICATIONS AS OF APRIL 30, 1963

Total number of applications awaiting action [excluding renewals and Sec. 12 (c)]	16,696
Date of oldest new application	Sept. 14, 1962
Date of oldest amended application	Aug. 2, 1962

J. H. MERCHANT, Director, Trademark Examining Operation

TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION	Oldest Application: New	Oldest Application: Amended
(I) C. M. WENDT, Classes 8, 12, 13, 14, 15, 17, 19, 20, 21, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 39, 41, 42, 43, 44	9-14-62	8-2-62
(II) H. E. KASCHUB, Classes 1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 16, 18, 22, 27, 37, 38, 40, 45, 46, 47, 48, 49, 50, 51, 52; Service Mark Classes 100, 101, 102, 103, 104, 105, 106, 107; Collective Membership Marks, Class 200; Certification Marks, Classes A and B	9-26-62	9-5-62
Renewals (All Classes)	3-29-63	4-24-63
Sec. 12 (c) Publications (All Classes)	3-26-63	

Applications filed during the month of April 1963—2,166

Registrations Issued	394—No. 751,472 to No. 751,865
Renewals Issued	60

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, is mailed under the direction of the Superintendent of Documents, Government Printing Office, Washington 25, D. C., to whom all subscriptions should be made payable and all communications addressed; subscription price, $10.00 per annum, foreign mailing $3.75 additional; single copies, 20 cents each.

PRINTED COPIES OF TRADEMARK REGISTRATIONS are furnished by the Patent Office for 10 cents each. Address orders to the Commissioner of Patents, Washington 25, D.C.

Reg. No. 171,667. (See Reg. No. 27, 102.)

Reg. No. 179,451. (See Reg. No. 167,054.)

Reg. No. 202,660. (See Reg. No. 167,054.)

Reg. No. 237,328. (See Reg. No. 167,054.)

Reg. No. 285,539. (See Reg. No. 167,054.)

Reg. No. 352,329. (See Reg. No. 27,102.)

Reg. No. 466,292 (DANA), Les Parfums de Dana, Inc., Toilet soaps; **Reg. No. 535,818**, same, Toilet preparations, perfumery and cosmetics; **Reg. No. 580,767**, same, Toilet soaps, filed Jan. 3, 1962, D.C., S.D.N.Y., Doc. 62/60, *Les Parfums de Dana, Inc.* v. *Madonna, Incorporated*. Default judgment; defendants enjoined Mar. 27, 1963.

Reg. No. 426,700. (See Reg. No. 167,054.)

Reg. No. 500,503 (ARMCO), The American Rolling Mill Company, Ferrous metals and ferrous metal castings and forgings; **Reg. No. 534,552**, same, Armco Steel Corporation, Specially prepared ferrous metal products, etc.; **Reg. No. 537,313** (ARMCO AND DESIGN), same, Ferrous metals and ferrous metal castings and forgings; **Reg. No. 563,516** (ARMCO), same, Ferrous metal pipe and ferrous metal conduits for conveying liquids and gases and ferrous metal conduit fittings and parts; **Reg. No. 621,462**, same, Construction services, as jacking, tunneling, threading, open trench installation of all drainage products, subdrainage and the erection of steel buildings, filed Jan. 25, 1962, D.C., N.D. Ill. (Chicago), Doc. 62c243, *Armco Steel Corporation et al.* v. *Armco Industrial Rubber Co. et al.* Order and stipulation enjoining defendant Mar. 2, 1962.

Reg. No. 534,713. (See Reg. No. 27,102.)

Reg. No. 534,552. (See Reg. No. 500,503.)

Reg. No. 535,818. (See Reg. No. 406,392.)

Reg. No. 537,313. (See Reg. No. 500,503.)

Reg. No. 554,187. (See Reg. No. 167,054.)

Reg. No. 563,516. (See Reg. No. 500,503.)

Reg. No. 580,767. (See Reg. No. 406,392.)

Reg. No. 580,840. (See Reg. No. 27,102.)

Reg. No. 608,654. (See Reg. No. 27,102.)

Reg. No. 621,462. (See Reg. No. 500,503.)

Reg. No. 670,230. (See Reg. No. 167,054.)

MARKS PUBLISHED FOR OPPOSITION

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105.
As provided by section 31 of said act, a fee of twenty-five dollars must accompany each notice of opposition.

Class 1—Raw or Partly Prepared Materials

SN 138,157. Durward V. Cavan, d.b.a. Cavan's North Point Minkery, Racine, Wis. Filed Feb. 19, 1962.

TIARA ORCHID

For Raw and Dressed Mink Fur Pelts for Industrial Use Only.
First use on or about Nov. 17, 1961.

SN 142,181. Excel-Mineral Company, Inc., d.b.a. Ex-M-Co., Los Angeles, Calif. Filed May 10, 1962.

JONNY CAT

For Granular, Fluid-Absorbent Material Used as a Litter for Small Animals, To Absorb Oil, Grease, Water and Like Fluids From Floors and Similar Surfaces, and as a Plant Mulch.
First use Jan. 31, 1955.

SN 145,818. Edgar Plastic Kaolin Co., Edgar, Fla. Filed May 31, 1962.

EPK

Owner of Reg. No. 639,486.
For Clay, Specifically Kaolin.
First use 1892.

SN 149,722. Druid Hill Park Seed Corporation, Baltimore, Md. Filed July 25, 1962.

"Rainy Day"

For Grass Seed, Flower Seeds.
First use Jan. 9, 1961.

SN 154,269. Mineral Mining Corporation, Mineola, N.Y. Filed Oct. 1, 1962.

MINERALKOTE

Owner of Reg. No. 401,640.
For Mold and Core Washes and Foundry Facings.
First use Feb. 11, 1942.

SN 154,284. The Perma-Flex Mold Co., Columbus, Ohio. Filed Oct. 1, 1962.

BLU-SIL-CMC

Owner of Reg. No. 523,087.
For Synthetic Resin Molding Material Used in Making Flexible Molds and Flexible Castings.
First use Mar. 9, 1962.

SN 155,496. The Firestone Tire & Rubber Company, Akron, Ohio. Filed Oct. 19, 1962.

FR-N

Owner of Reg. No. 638,239.
For Synthetic Rubber.
First use Sept. 13, 1962.

SN 155,531. Teleflex Incorporated, North Wales, Pa. Filed Oct. 19, 1962.

TELEFLEX

Owner of Reg. Nos. 360,963 and 684,359.
For Ceramic Compounds Shipped Either as Powders or Aqueous Dispersions, Which May Be Used as Supplied or Further Compounded by the User for This Particular Purpose.
First use June 27, 1962.

SN 157,093. Farmers Hybrid Seed Corn Co., Hampton, Iowa. Filed Nov. 13, 1962.



The drawing is lined for red and green.
For Seed Corn.
First use Sept. 17, 1962.

SN 157,417. Stora Kopparbergs Bergslags Aktiebolag, Falun, Sweden. Filed Nov. 16, 1962.

STORA

Owner of U.S. Reg. Nos. 217,115 and 419,482.
For Wood Pulp.
First use Jan. 1, 1912; in commerce June 4, 1925.

SN 157,501. Thomas B. Harvey Leather Company, Philadelphia, Pa. Filed Nov. 19, 1962.

KIDIPAT

For Leather.
First use Aug. 1, 1962.

SN 158,309. American Colloid Company, Skokie, Ill. Filed Dec. 3, 1962.

VOLCANIC CAKES

For Material Designed To Focus and Control Heat in Molten Metal, Comprising an Exothermic Substance, Metallics, Oxidizing Agents, and Binders.
First use Nov. 9, 1962.

Class 2 — Receptacles

SN 146,834. Marvel Sales Co. Inc., New York, N.Y. Filed June 13, 1962.

MARVEL-ITE

For Plastic Tumblers, Bowls, Cups, Bottles, Dishes, Plates, Serving Spoons, and Like Articles of Kitchenware and Tableware.
First use June 1, 1960, on plastic bottles.

SN 151,715. The Belt Corporation, d.b.a. Transtan Company, Orient, Ohio. Filed Aug. 23, 1962.

TRAN/STAN BIN

No claim is made to the use of the word "Bin."
For Portable Bins for Storing and Dispensing Bulk Materials.
First use July 18, 1962.

SN 155,061. Mallory-Randall Co., Inc., New York, N.Y. Filed Oct. 12, 1962.

VACUWALL

For Insulated Tumblers, Cups, Bowls, Mugs, Water Pitchers, Trays, Ice Buckets, Double Old Fashioned Glasses.
First use Sept. 24, 1962.

SN 155,062. Mallory-Randall Co., Inc., New York, N.Y. Filed Oct. 12, 1962.

VACUTEMP

For Insulated Tumblers, Cups, Bowls, Mugs, Water Pitchers, Trays, Ice Buckets, Double Old Fashioned Glasses.
First use Sept. 24, 1962.

SN 156,103. Evans-Crowder Co., South Lyon, Mich. Filed Oct. 29, 1962.

ROLLA-SCENT

For Dispensers of the Roll-On Type Particularly Suited for Cosmetic Use To Apply Cologne, Perfume, Toilet Water and the Like.
First use Oct. 3, 1962.

Class 3 — Baggage, Animal Equipments, Portfolios, and Pocketbooks

SN 129,241. Sporting Goods Corporation of America, Woonsocket, R.I. Filed Oct. 4, 1961.

SPORTING GOODS CORPORATION of AMERICA

For Camping Bags, Duffle Bags, Musette Bags, Blue Denim Bags, Sea Bags, Gadget Bags, Knapsacks, Gym Bags and Camp Trunks.
First use Feb. 25, 1961.

SN 142,224. C. F. Rumpp & Sons, Inc., Philadelphia, Pa., assignee of I. Smallman & Sons Co., New York, N.Y. Filed Apr. 13, 1962.

LADY JAN

For Baggage, Portfolios and Pocketbooks.
First use Apr. 10, 1962.

Class 4 — Abrasives and Polishing Materials

SN 156,473. Churchill Chemical Company, Galesburg, Ill. Filed Nov. 2, 1962.

CHURCHILL

For Liquid Self-Polishing Wax; Slip Resistant Polishing Wax for Floors; and Self-Polishing Slip Resistant Polishing Wax for Floors.
First use on or about May 3, 1962; in or about 1922 on related goods.

Class 5 — Adhesives

SN 135,909. Rayclad Tubes, Inc., Redwood City, Calif. Filed Jan. 16, 1962.

RAYCLAD

Owner of Reg. No. 685,802.
For Adhesive for Electrical Insulation Materials.
First use about Aug. 1, 1961.

SN 156,842. United States Rubber Company, New York, N.Y. Filed Nov. 7, 1962.

NEO-TRAZ

For Liquid Rubber Bonding Agent.
First use Oct. 26, 1962.

SN 162,382. United States Rubber Company, New York, N.Y. Filed Feb. 8, 1963.

UNIROYAL

For Rubber Adhesives.
First use Sept. 5, 1962.

Class 6 — Chemicals and Chemical Compositions

SN 71,403. Metasurf Corporation, Detroit, Mich. Filed Apr. 13, 1959.

METACOTE

For Rustproofing and Phosphating Compounds for Treatment of Metals To Provide a Base for Paint.
First use October 1952.

SN 99,794. Sterno, Inc., New York, N.Y. Filed June 27, 1960.



For Solid Fuel Composed Mainly of Alcohol.
First use Mar. 12, 1960.

SN 141,932. Barium & Chemicals, Incorporated, Willoughby, Ohio. Filed Apr. 10, 1962.

BARCO

Owner of Reg. No. 402,308.
For Barium Compounds and Strontium Compounds—Namely, Barium Oxide-Porous, Barium Oxide-Technical, Barium Octahydrate-Crystal and Flake, Barium Pentahydrate, Barium Hydroxide Anhydrous, Barium Nitrate, Barium Peroxide, Barium Acetate, Barium Fluoride, Barium Chloride, Barium Carbonate, Barium Sulfide, Barium Chromate, Barium Potassium Chromate, Strontium Oxide Porous, Strontium Octahydrate, Strontium Hydroxide-Anhydrous, Strontium Carbonate, Strontium Chloride, Strontium Chromate, Strontium Nitrate, Strontium Peroxide, Strontium Fluoride, Strontium Sulfide, and Strontium Sulfate; Lithium Peroxide, Calcium Sulfide, Calcium Peroxide, Calcium Nitrate, Calcium Chromate, and Hydrogen Peroxide.
First use on or about Jan. 1, 1939.

SN 155,532. Teleflex Incorporated, North Wales, Pa. Filed Oct. 19, 1962.

TELEFLEX

Owner of Reg. Nos. 860,963 and 684,359.
For Ceramic Bonding or Coating Materials.
First use May 29, 1962.

SN 155,642. The Polymel Corporation, Baltimore, Md. Filed Oct. 22, 1962.

PLASTICIL

For Plasticiser.
First use Sept. 1, 1956.

SN 158,121. Wytane, Inc., Denver, Colo. Filed Nov. 28, 1962.

WYTANE

For Combustion Catalyst for Fuel Oils.
First use June 25, 1962.

SN 158,122. Wyton Oil and Gas Company, Denver, Colo. Filed Nov. 28, 1962.

WYTON

For Compressed Petroleum Fuel Gases.
First use Aug. 1, 1960.

SN 158,541. Kilsdonk Chemical Corporation, Lock Haven, Pa. Filed Dec. 5, 1962.

KC

For Organic Chemicals, Dyes and Organic Chemical Intermediates Used in Producing Dyes for Textiles and in the Manufacture of Pigments.
First use Nov. 1, 1962.

SN 162,519. United States Rubber Company, New York, N.Y. Filed Feb. 8, 1963.

UNIROYAL

For Agricultural Pesticides, and Chemicals for Compounding With Rubber.
First use Aug. 13, 1962, on chemicals for compounding with rubber.

Class 10 — Fertilizers

SN 156,001. Kerley Chemical Corporation, Stockton, Calif. Filed Oct. 26, 1962.

THIO-SUL

For Nitrogen-Sulfur Liquid Plant Foods and Fertilizers.
First use Sept. 21, 1960.

Class 12 — Construction Materials

SN 153,844. Union Asbestos & Rubber Company, Chicago, Ill. Filed Sept. 17, 1962.

INSUBESTOS

For Woven Insulating Blankets of Amphibole Insulating Fibers, Utilized for Insulating Steam Turbines and the Like.
First use Aug. 8, 1934.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

SN 152,988. Dresser Industries, Inc., Dallas, Tex. Filed Sept. 12, 1962.

STAB-40

Owner of Reg. Nos. 702,104, 735,192, and 735,193.
For Preassembled Pipe Couplings.
First use July 18, 1962.

SN 153,939. Continental Plastics of Oklahoma Incorporated, Oklahoma City, Okla. Filed Sept. 26, 1962.

AERO-DRAIN

For Drain Hole Covers.
First use June 8, 1959.

SN 154,374. Perma-Fix Company, Fair Lawn, N.J. Filed Oct. 2, 1962.

PERMA-FIX

For Shelf Brackets and Closet Pole Brackets for Use With Wallboard.
First use Feb. 8, 1962.

SN 154,810. Ekco Containers, Inc., Wheeling, Ill. Filed Oct. 9, 1962.

PLUS PACKAGING

Owner of Reg. No. 666,470.
For Metallic Foil Receptacles—Namely, Pans, Plates, Dishes, Cups, and Trays.
First use Sept. 4, 1962.

Class 14—Metals and Metal Castings and Forgings

SN 123,712. Vanadium-Alloys Steel Company, Latrobe, Pa. Filed July 10, 1961.

Consumable Vacuum Melted
CVM

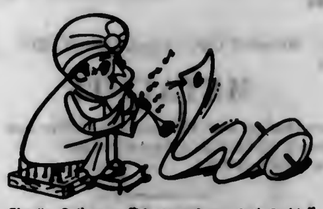
For Heat Resisting Alloys, Low Alloy Steels for Bearings and Springs, High Strength Alloy Steels, Tool Steels and High Speed Steels, Stainless Steels, Electronic Alloys, Nuclear Reactor Materials—Namely, Zircaloy and Zirconium Alloys and Boron Containing Stainless Steels, Hard Facing Alloys, Investment Castings, and Special Analysis Alloy.
First use Apr. 21, 1959.

SN 145,849. Plastic Development & Research, Inc., Detroit, Mich. Filed May 31, 1962.

FOMETL

For Metals, Metal Fibers, Bonded Metal Fibers in Sheet and Other Forms.
First use Dec. 13, 1958.

SN 153,080. Souther Steel and Aluminum Company, St. Louis, Mo. Filed Sept. 12, 1962.



No rights are asserted herein in the words "It's time for a Coil Caddy" apart from remaining features of the mark shown.
For Rolls of Sheet Metal and Mounting Therefor.
First use on or about May 29, 1962.

SN 155,361. Aluminum Company of America, Pittsburgh, Pa. Filed Oct. 18, 1962.



Owner of Reg. No. 132,436.
For Aluminum Ingots, Aluminum Sheet, Aluminum Plate, Aluminum Extruded Shapes, Aluminum Castings, Aluminum Rod, Aluminum Bar, and Aluminum Tubing.
First use Sept. 10, 1962.

Class 16—Protective and Decorative Coatings

SN 129,245. W. R. Grace & Co., New York, N.Y., assignee of Sun Chemical Corporation, New York, N.Y. Filed Oct. 4, 1961.

DUOCREX "C"

For Liquid Sealers for Interior Concrete Floors.
First use in 1946.

SN 156,474. Churchill Chemical Company, Galesburg, Ill. Filed Nov. 2, 1962.

CHURCHILL

For Floor Sealing and Coating Compositions for Industrial Use; Self-Polishing Waxless Coating for Floors Containing Polymeric Components; Waterproof Polymeric Coatings for Floors; Slip Resistant Acrylic Coatings for Floors; Floor Finishing Coatings Containing Aliphatic Solvents; Concrete Floor Paint; and Rubber Base Floor Enamel.
First use on or about May 11, 1962; in or about the year 1922 on related goods.

SN 157,044. The Atlas Mineral Products Company of Pennsylvania, Mertztown, Pa. Filed Nov. 13, 1962.

NEELIUM

For Liquid Synthetic Rubber Coating Composition.
First use May 8, 1952.

SN 158,113. United States Rubber Company, New York, N.Y. Filed Nov. 28, 1962.

U.S. ENSOCOTE

For Polymeric Lacquers, and Polymeric Materials Adapted To Be Formulated With Other Ingredients To Form Lacquers.
First use Oct. 31, 1962.

SN 158,147. The Debevoise Company, Brooklyn, N.Y. Filed Nov. 29, 1962.

Festival

For Ready-Mixed Paints.
First use Oct. 19, 1962.

Class 17—Tobacco Products

SN 158,661. H. E. Snyder Cigar Co., Perkasie, Pa. Filed Dec. 6, 1962.

Senate Club

For Cigars.
First use 1935.

SN 158,662. H. E. Snyder Cigar Co., Perkasie, Pa. Filed Dec. 6, 1962.

WHITE ASH

For Cigars.
First use 1910.

Class 18—Medicines and Pharmaceutical Preparations

SN 144,967. Medics Pharmaceutical Corporation, Decatur, Ga. Filed May 18, 1962.

FEVERALL

For Analgesic and Antipyretic Tablet (Pain and Fever Reducing Medication).
First use Apr. 29, 1962.

SN 154,408. Crookes-Barnes Laboratories, Inc., Wayne, N.J. Filed Oct. 3, 1962.

VISTACAINE

For Sterile Ophthalmic Solution.
First use July 20, 1962.

SN 154,482. Deseret Pharmaceutical Co., Inc., Salt Lake City, Utah. Filed Oct. 4, 1962.



Owner of Reg. No. 654,041.
For Reserpine Alkaloid Tablets, Estrogenic Tablets, Vitamin Tablets, Prenatal Dietary Supplements, and Ferrous Sulfate Tablets.
First use July 6, 1962.

SN 156,197. U.S. Ethicals Inc., Long Island City, N.Y. Filed Oct. 29, 1962.

ETNABEX-C

For Therapeutic B Complex With Vitamin C Preparation.
First use Aug. 15, 1962.

SN 160,509. Rexall Drug and Chemical Company, d.b.a. Rexall Drug Company, Los Angeles, Calif. Filed Jan. 10, 1963.

TOURISTA

For Preparation for Treating Diarrhea.
First use Feb. 14, 1962.
Subj. to Intf. with SN 153,167.

Class 19—Vehicles

SN 138,494. General Motors Diesel Limited, London, Ontario, Canada. Filed Feb. 23, 1962.



For Railroad Cars.
First use Sept. 28, 1960; in commerce Mar. 11, 1961.

SN 140,143. M-T-A-Co., Phoenix, Ariz. Filed Mar. 19, 1962.

Mother's Third Arm

For Restraining Device for a Small Child, Adapted for Attachment to an Automobile Seat.
First use in October 1961.

SN 140,347. Georges Auto Glass Co., Inc., d.b.a. Novi Manufacturing Co., Los Angeles, Calif. Filed Mar. 21, 1962.

Novi

For Automobile Air-Conditioning Units.
First use at least as early as June 1, 1955.

SN 155,992. International Harvester Company, Chicago, Ill. Filed Oct. 26, 1962.



Vertical shading indicates the color red. Owner of Reg. Nos. 416,823, 705,836, and others.
For Seat Covers for Use in Vehicles.
First use Feb. 22, 1950.

SN 156,735. Ferree Motor & Equipment Company, Climax, N.C. Filed Nov. 8, 1962.

FERREE

For Truck Trailers and Trailer Hitches and Parts Thereof.
First use Jan. 1, 1954.

SN 162,899. Bantam-U.S. Toys, Inc., New York, N.Y. Filed Feb. 18, 1963.

ROLL-A-TRAYS

For Cart for Holding Trays.
First use Jan. 23, 1963.

SN 163,405. Relaxo-Bak Incorporated, Gainesville, Tex. Filed Feb. 25, 1963.

Relaxo-Bak

For Body Support for Vehicle Seats.
First use Aug. 26, 1962.

Class 21—Electrical Apparatus, Machines, and Supplies

SN 118,907. Salton, Incorporated, New York, N.Y., by change of name from Salton Manufacturing Co., Inc., New York, N.Y. Filed Apr. 28, 1961.

HOTRAY

Owner of Reg. No. 620,271.
For Trays, Tables, and Carts for Heating Foods, Chemicals, Drugs, Etc., the Heating Being Effected by an Electrical Unit.
First use 1959; Jan. 5, 1949, in a different form.

SN 119,932. Chicago Condenser Corporation, Chicago, Ill. Filed May 15, 1961.



The applicant makes no claim to explicit rights in the capacitor symbol used in the mark.
For Capacitors for Radios, Television Sets, and Electronic Apparatus.
First use October 1945.

SN 126,829. James E. Weymouth, Seattle Heights, Wash. Filed Aug. 28, 1961.

SAF-AIR

For Electronic Precipitators for Cleaning the Air in Buildings To Remove Smoke, Odors and Other Contaminants.
First use on or about June 10, 1961.

SN 138,252. Trans Continents Radio di Dario Prandoni, Treviglio, Italy. Filed Feb. 19, 1962.

TRANSCONTINENT

Owner of Italian Reg. No. 120,030, dated Dec. 16, 1954.
For Radio Sets, Television Sets and Their Parts.

SN 140,508. N.J. Thermex Company, Inc., Harrison, N.J. Filed Mar. 21, 1962.



For Radiant Heaters.
First use Oct. 3, 1961.

SN 140,631. CTS Corporation, Elkhart, Ind. Filed Mar. 26, 1962.



Owner of Reg. Nos. 507,559, 666,232, and others.
For Variable and Fixed Resistors; Potentiometers; Rotary, Snap, Foot, Push-Pull, and Selector Switches; Volume and Tone Controls; Buss and Balance Rheostats; Thermal Switches; Tube Savers; Pellet Resistors and Capacitors; Terminal Strips; Loudspeakers; Reed Relays; Control Panels; Cermet Film Resistors and Capacitors; Transformers; Micromedule Electronic Circuit Packages; Ignition and Solenoid Coils; Indicator Light Assemblies; Motor Operated Variable Resistors and Switches; and Accessories for and Parts of the Foregoing Apparatus.
First use Mar. 16, 1962.

SN 140,850. The Mica Corporation, Culver City, Calif. Filed Mar. 27, 1962.

MICAPLY

For Electrical Circuit Board Laminates.
First use Nov. 17, 1954.

SN 142,121. NRA, Inc., New York, N.Y. Filed Apr. 12, 1962.

NRA

For Electrical Wire Cable.
First use Sept. 19, 1961.

SN 143,201. Autovox Corporation of America, New York, N.Y. Filed Apr. 27, 1962.

AUTOVOX

Owner of Reg. No. 681,744.
For Radios.
First use on or about May 1, 1958.

SN 144,592. Big-T-Inc., Eau Claire, Wis. Filed May 15, 1962.

POKER BEER

For Electric Type Beer Poker Machines.
First use Sept. 17, 1959.

SN 145,090. Julius Kupfer, Inc., Elmhurst, N.Y. Filed May 21, 1962.

EVER-LITE

Owner of Reg. No. 516,659.
For Electrical Christmas Tree Light Bulb Sets.
First use Apr. 1, 1948.

SN 151,851. Toledo Scale Corporation, Toledo, Ohio. Filed Aug. 24, 1962.

QUIK-FLIP

For Spray Tubes for Commercial Dishwashers.
First use May 21, 1962.

SN 153,500. Motorola, Inc., Franklin Park, Ill. Filed Sept. 19, 1962.

ROTO-TENNA

For Combination Handles and Antennas for Portable Radio Receivers.
First use Feb. 17, 1955.

SN 155,218. The Wurlitzer Company, Chicago, Ill. Filed Oct. 15, 1962.

VIBRA-FORK

For Electro-Mechanical Resonant Vibrators.
First use December 1961.

SN 155,533. Teleflex Incorporated, North Wales, Pa. Filed Oct. 19, 1962.

TELEFLEX

Owner of Reg. Nos. 360,963 and 684,359.
For Flexible Conduit Containing One or More Insulated Electrical Lead Wires.
First use Sept. 11, 1958.

SN 156,989. Interstate Battery System of America, Inc., Dallas, Tex. Filed Nov. 9, 1962.



The stippling on the drawing is for shading purposes only, and does not indicate any particular color. Owner of Reg. No. 733,348.
For Storage Batteries.
First use Oct. 30, 1962.

SN 157,586. The Wiremold Company, Hartford, Conn. Filed Nov. 19, 1962.

PLUGTRIM

Owner of Reg. No. 351,326.
For Raceways for Electric Wires and Accessories Therefor.
First use March 1950.

SN 158,029. The Thomas & Betts Co., Incorporated, Elizabeth, N.J. Filed Nov. 27, 1962.

CONNECTO-BLOK

For High Density Wiring Devices, Such as Multi-Terminal Boards and the Like Adapted for the Solderless, Detachable Connection Thereto of a Plurality of Separate Insulated Wire Conductors Independently of Each Other.
First use May 1961.

SN 158,484. Edwards Company, Inc., Norwalk, Conn. Filed Dec. 4, 1962.

ANSERCALL

For Communication Systems.
First use July 30, 1962.

SN 159,055. Fansteel Metallurgical Corporation, North Chicago, Ill. Filed Dec. 13, 1962.

CRICKETTE

For Electrical Snap-Action Switch.
First use on or about Nov. 30, 1962.

SN 159,249. Lighting Products Inc., Highland Park, Ill. Filed Dec. 17, 1962.

CARDINAL

For Lighting Fixtures.
First use Nov. 15, 1962.

SN 161,922. United Fabricators, Inc., Farmington, Conn. Filed Feb. 1, 1963.



For Sun Lamps and Other Therapeutic Lamps.
First use May 1, 1962.

SN 161,993. Hawley Products Company, St. Charles, Ill. Filed Feb. 4, 1963.

MICROBOLIC

For Loudspeaker Acoustic Diaphragms.
First use Dec. 10, 1962.

SN 162,381. United States Rubber Company, New York, N.Y. Filed Feb. 8, 1963.

UNIROYAL

For Batteries and Battery Separators.
First use Aug. 23, 1962, on battery separators.

SN 162,644. C-B-C Industries, Inc., Philadelphia, Pa. Filed Feb. 13, 1963.

ACROSOUND

For Audio Transformers.
First use May 1, 1949.

SN 162,819. Channel Master Corporation, Ellenville, N.Y. Filed Feb. 15, 1963.

BRING-ALONG

For Television Receivers, Parts Thereof and Accessories Therefor.
First use Jan. 7, 1963.

SN 163,149. Interstate Battery System of America, Inc., Dallas, Tex. Filed Feb. 20, 1963.

POWER-BOY

For Storage Batteries.
First use Feb. 1, 1963.

Class 22 — Games, Toys, and Sporting Goods

SN 119,301. McDaniel Newton, Harbor Island, N.C. Filed May 4, 1961.

MARK'S STALLION

No claim of exclusive right is made to "Stallion" as used on toy horses.
For Toy Horses.
First use May 16, 1960.
Subj. to Intf. with SN 147,941.

SN 128,056. Kohkoku Chemical Industry Co., Ltd., Chuo-ku, Tokyo, Japan. Filed Sept. 18, 1961.

ACHILLES

For Sporting Goods for Surf Riders, Air Mattresses, and Fishing Equipment.
First use in April 1957; in commerce in April 1957.

SN 155,237. Coleman Enterprises, Inc., Mobile, Ala. Filed Oct. 16, 1962.

Twin Twirler

For Spinning Tops.
First use Aug. 21, 1962.

SN 155,261. Franz Kneissl, Skifabrik, Kufstein, Kufstein, Tirol, Austria. Filed Oct. 16, 1962.



For Skis.
First use Dec. 1, 1960; in commerce Dec. 1, 1961.

SN 155,541. Wilson Sporting Goods Co., River Grove, Ill. Filed Oct. 19, 1962.

DYNAPOWER

For Golf Clubs.
First use July 31, 1961.

SN 162,380. United States Rubber Company, New York, N.Y. Filed Feb. 8, 1963.

UNIROYAL

Owner of Reg. Nos. 149,278 and 149,533.
For Golf Balls.
First use Aug. 8, 1962.

Class 23 — Cutlery, Machinery, and Tools, and Parts Thereof

SN 128,949. Battenfeld Grease & Oil Corporation, Inc., Kansas City, Mo. Filed Oct. 2, 1961.

"CARTRI-GUN"

Owner of Reg. Nos. 625,731 and 644,164.
For Dispensing Unit Containing Caulking Compound or Lubricant.
First use Aug. 18, 1961.

SN 133,033. Valor Sales Corp., New York, N.Y. Filed Nov. 29, 1961.



Owner of Reg. No. 735,855.
For Hunting and Fishing Knives and Pocket Knives.
First use Dec. 9, 1956.

SN 133,345. Ramsey Winch Company, Tulsa, Okla. Filed S.R. Dec. 4, 1961; Am. P.R. Nov. 1, 1962.

RAMSEY WINCH

Without waiver of common law rights, applicant disclaims the use of the word "Winch" except in the precise relation and association in which it appears in the drawing and description.
For Winches and Parts Thereof.
First use Sept. 1, 1946.

SN 140,553. Giddings & Lewis Machine Tool Company, Fond du Lac, Wis. Filed Mar. 23, 1962.

BICKFORD

Owner of Reg. No. 663,756.
For Drilling Machines.
First use Jan. 4, 1960.

SN 141,946. Heinemann Saw Corporation, Canton, Ohio. Filed Apr. 10, 1962.

HARD-TIP

For Saw Blades.
First use Apr. 1, 1952.

SN 142,790. Champion De Arment Tool Company, Meadville, Pa. Filed Apr. 23, 1962.

CHAMPION DE ARMENT

Owner of Reg. Nos. 166,796, 167,707, and 522,034.
For Hammers, Pincers, Nippers, Clippers, Chisels, and Wrecking Bars.
First use Jan. 15, 1925.

SN 144,654. Triumph Machinery Company, Hackettstown, N.J. Filed May 15, 1962.

ROTO-FLEX

The lines appearing in the mark do not indicate any particular color.
For Hydraulic Mowing Equipment.
First use Apr. 5, 1962.

SN 153,387. The De Laval Separator Company, Poughkeepsie, N.Y. Filed Sept. 18, 1962.

Sterling

Owner of Reg. No. 398,215.
For Milking Machines, Teat Cups, and Parts and Attachments Therefor.
First use in or about November 1940.

SN 153,560. Everson Manufacturing Corporation, Chicago, Ill. Filed Sept. 20, 1962.

SterElators by Everson

For Apparatus and Parts Thereof for Treating Water or Sewage With Gas, Such as Chlorine or Ammonia.
First use about 1947; about Sept. 10, 1938, as to "Sterelator."

SN 153,610. Reda Pump Company, Bartlesville, Okla. Filed Aug. 30, 1962.

SUB-URBAN

For Electric Submergible Pumps.
First use Sept. 1, 1961.

SN 153,635. Economy Engineering Company, Chicago, Ill. Filed Sept. 21, 1962.

ECONOMY

For Portable Lift Trucks, and Overhead Maintenance and Materials Handling Equipment.
First use 1902.

SN 154,025. Ralph W. Grauert, Inc., New York, N.Y. Filed Sept. 27, 1962.

Cembrite

For Label Presses.
First use on or about Nov. 20, 1961.

SN 154,273. Mono Manufacturing Company, Springfield, Mo. Filed Oct. 1, 1962.

GRASSMOBILE

For Grass and Weed Cutter.
First use Sept. 4, 1962.

SN 154,337. Duff-Norton Company, Charlotte, N.C. Filed Oct. 2, 1962.

PORTA-HOIST

For Hand-Operated Chain Hoist.
First use Apr. 1, 1959.

SN 154,354. Imperial Knife Associated Companies, Inc., Providence, R.I. Filed Oct. 2, 1962.

NEW ROSE

Owner of Reg. No. 729,388.
For Stainless Steel Flatware, Tableware and Kitchen Cutlery, Utensils, and Tools.
First use July 30, 1962.

SN 154,440. SKF Industries, Inc., Philadelphia, Pa. Filed Oct. 3, 1962.

NICE

Owner of Reg. No. 104,231.
For Anti-Friction Bearings.
First use Mar. 14, 1962.

SN 154,460. The Atrax Company, Newington, Conn. Filed Oct. 4, 1962.

ATRAX

For Boring and Grinding Tools.
First use January 1956.

SN 155,719. Hyde Manufacturing Company, Southbridge, Mass. Filed Oct. 23, 1962.

SHAKE-A-LATOR

For Device for Mixing Paint by Shaking It in a Container.
First use Aug. 28, 1962.

SN 159,073. Lambert Incorporated, Dayton, Ohio. Filed Dec. 13, 1962.

SNO-WONDER

For Rotary Snow Plows.
First use Oct. 15, 1962.

SN 163,837. Hayes & Stola Industrial Manufacturing Co., Inc., Fort Worth, Tex. Filed Mar. 4, 1963.

For Machinery for Handling, Processing, Compounding and Storing Feeds, Grains, Fertilizers, Chemicals, Cement and Other Bulk Material, Including Distributors, Conveyors, Mixers, Agitators, Blenders, Pumps, Applicators, Valves, Gates, Elevators, Bins and Hoppers, Steamers, Loading Belts, Lifts, Cleaners, Feeders, and Heating and Storage Tanks.
First use Nov. 21, 1962.

Class 24 — Laundry Appliances and Machines

SN 154,905. McCrory Corporation, New York, N.Y. Filed Oct. 10, 1962.

MONTCLAIR

For Clothes Washers and Dryers.
First use Sept. 11, 1958.

Class 26 — Measuring and Scientific Appliances

SN 130,787. Environ Electronic Laboratories, Inc., Minneapolis, Minn. Filed Oct. 27, 1961.

For Laboratory Environmental Testing Equipment Used for Testing Electronic Equipment Under Conditions of Vibration, Shock, Acceleration, Altitude, Radio Interference, Noise, Salt Spray, Fog, Fungus, Sand, Dust, Rain, Humidity, Sunlight, Etc.
First use Apr. 27, 1961.

SN 144,002. Rank Precision Industries Limited, d.b.a. The Rank Organisation Rank Taylor Hobson Division, Leicester, England. Filed May 7, 1962.

DUOPANCHRO

Owner of British Reg. No. 824,173, dated Aug. 14, 1961.
For Photographic Lenses.

SN 146,663. Robertshaw-Fulton Controls Company, Richmond, Va. Filed June 11, 1962.

DA DEMAND AUGMENTATION

Applicant disclaims the exclusive right to the use of the words "Demand" and "Augmentation."
For Temperature Regulators and Automatic Gas Cut-Offs.
First use Feb. 27, 1962.

SN 146,800. Dynamic Products Corporation, Herminie, Pa. Filed June 13, 1962.

CREAM-O-MATIC

For Liquid Dispensers—Namely, Containers for Dispensing Liquids in Controlled Amounts.
First use Feb. 28, 1961.

SN 150,686. Elastic Stop Nut Corporation of America, Union, N.J. Filed Aug. 7, 1962.

AGASTAT

Owner of Reg. No. 590,141.
For Time Delay Control Instruments.
First use May 10, 1933.

SN 155,837. Progressive Edu-Kits, Inc., Hewlett, N.Y. Filed Oct. 24, 1962.

EDU-KIT

Owner of Reg. No. 663,721.
For Electrical Measuring and Testing Equipment—Namely, Volt-Ohm Milliammeter Meters; Tube Testers; Voltmeters; Signal Generators; Signal Tracer and Signal Injector Test Equipment; Transmitters; Receivers and Oscillators.
First use during April 1950 on signal tracer testers.

SN 157,143. Ramsey Engineering Company, St. Paul, Minn. Filed Nov. 13, 1962.

Vey-R-Weigh

For Conveyor Scales.
First use during July 1961.

SN 158,216. Baird-Atomic, Inc., Cambridge, Mass. Filed Nov. 30, 1962.

SPECTROPAC

For Spectroscopic Equipment.
First use Nov. 1, 1961.

SN 158,330. Electro-Nite Engineering Company, Philadelphia, Pa. Filed Dec. 3, 1962.

For Temperature Measuring Equipment and Parts Therefor.
First use Oct. 22, 1962.

SN 158,405. Versa Products Company, Inc., Englewood, N.J. Filed Dec. 3, 1962.

KNOW-A-COUNT

For Pneumatic Impulse Counters.
First use on or about Oct. 17, 1962.

SN 158,639. Micro-Measurements, Inc., Romulus, Mich. Filed Dec. 6, 1962.

MM

For Precision Strain Gages.
First use on or about Aug. 23, 1962.

Class 27 — Horological Instruments

SN 156,592. General Electric Company, Schenectady, N.Y. Filed Nov. 5, 1962.

MUSALARM

For Clock Timers.
First use during May 1958.

SN 156,805. Elgin National Watch Company, Elgin, Ill. Filed Nov. 7, 1962.

DREAM AWHILE

For Watches and Clocks.
First use in July 1962.

Class 28 — Jewelry and Precious-Metal Ware

SN 144,361. Barnett Davis, Inc., Pittsburgh, Pa. Filed May 11, 1962.

DAVIS

Owner of Reg. No. 647,259.
For Diamond Rings and Other Diamond Jewelry.
First use previous to 1949.

SN 146,714. Jerome Dreyfuss, d.b.a. International Ring Company, Buffalo, N.Y. Filed June 12, 1962.

I.R.C.

For Finger Rings and Other Jewelry for Personal Wear.
First use on or before Jan. 2, 1955.

SN 150,521. Carole Accessories, Los Angeles, Calif. Filed Aug. 6, 1962.



The trademark comprises a fanciful design of a tropical bird.
For Real and Costume Jewelry Items—Namely, Finger-Rings, Necklaces, Bracelets, Pins, Earrings, Pendants, Tiaras, Key-Rings, Anklets, and Sweater Guards.
First use July 11, 1962.

SN 150,822. Chas. Thomae & Son, Inc., Attleboro, Mass. Filed Aug. 8, 1962.



The mark consists of a double-crossed letter "T" superimposed on the letter "C."
For Jewelry for Personal Wear and Use, Not Including Watches, Specifically Brooches, Pins, Key Chains, Identification Bracelets, and the Following Made of Precious or Semi-Precious Metal, or Ornamented With Precious or Semi-Precious Metal: Tags, Cigarette Cases, Brushes, Combs, Mirrors, Picture Frames, Compacts, Religious Medals, Liquor Jiggers, Lipstick Holders, and Pill Boxes.
First use June 29, 1944.

SN 154,781. Gary Langweiler, Wyncote, Pa. Filed Oct. 8, 1962.

RAYS OF LOVE

For Diamond Rings.
First use Feb. 1, 1962.

SN 154,819. Gem-Dandy, Inc., Madison, N.C. Filed Oct. 9, 1962.

DANBURY

For Tie Clips, Tie Bars, Cuff Links, and Lapel Pins.
First use Jan. 1, 1962.

Class 29—Brooms, Brushes, and Dusters

SN 151,576. Dunhill International, Inc., New York, N.Y. Filed Aug. 21, 1962.

EVENFLO

Owner of Reg. Nos. 322,650, 716,212, and others.
For Brushes for Cleaning Feeding Equipment.
First use Sept. 14, 1961.

Class 31—Filters and Refrigerators

SN 140,700. The Marley Company, Kansas City, Mo. Filed Mar. 26, 1962.

MULTI-JET

For Liquid Cooling Towers and Parts Thereof.
First use Mar. 16, 1962.

Class 32—Furniture and Upholstery

SN 145,970. The San Hygene Furniture Manufacturing Company, Akron, Ohio. Filed June 1, 1962.

San Hygene

Owner of Reg. No. 158,876.
For Mattresses, Box Springs, Bed Springs, Pillows, Chairs, Sofas, Sectional Divans, and Furniture Articles.
First use in January 1912.

SN 151,754. Wilfred C. Guntrum, Harper Woods, Mich. Filed Aug. 23, 1962.

SAFE-T-BABE

For Infants' Harnesses, Baby Pillows, and Pillow Cases.
First use Aug. 4, 1962.

SN 157,648. Rubber Products Company, Inc., Chattanooga, Tenn. Filed Nov. 20, 1962.

EASY-REST

For Mattresses and Box Springs.
First use Oct. 8, 1962.

SN 159,996. Montgomery Ward & Co., Incorporated, Chicago, Ill. Filed Dec. 31, 1962.

STYLE HOUSE

Owner of Reg. No. 443,332.
For Kitchen Chairs, Kitchen Tables, Cabinets, Desks, Bookcases, Hutches, Benches, Chests of Drawers, Footstools, Commodes, Ottomans, Room Dividing Screens, Vanities, Smoking Stands, Wall Shelves, Tea Carts, Settees, Hassocks, Stools, Mattresses, and Bed Springs.
First use at least as early as July 15, 1960, on mattresses.

SN 160,736. Whiting Manufacturing Company, Inc., Cincinnati, Ohio. Filed Jan. 15, 1963.

PERMA-PUFF

For Pillows.
First use Dec. 31, 1962.

SN 160,889. Peerless Steel Equipment Company, Philadelphia, Pa. Filed Jan. 17, 1963.

PEERLESS

Owner of Reg. Nos. 388,355 and 402,993.
For Steel Office Furniture—Namely, Filing Cabinets, Desks, and Tables.
First use Jan. 13, 1930.

SN 160,941. Herbert Ritts, Inc., Los Angeles, Calif. Filed Jan. 18, 1963.

JAPANOMA

For Furniture—Namely, Chairs, Tables, Lounges, Sofas, and Chaise Longues.
First use Sept. 1, 1961.

Class 33—Glassware

SN 144,798. Actien-Gesellschaft der Gerresheimer Glashuttenwerke, Dusseldorf-Gerresheim, Germany. Filed May 17, 1962.



Owner of German Reg. No. 503,224, dated June 20, 1938.
For Bottles, Jars, Flasks, Demijohns, Carboys, Spherically Shaped Containers, Floats, Prisms, Tubes, Hollowware and the Like, All Made of Glass as Well as Sheets of Raw Glass.

SN 166,309. Owens-Illinois Glass Company, Toledo, Ohio. Filed Apr. 8, 1963.

ECONO-BOTTLE

For Glass Bottles.
First use May 8, 1961.

Class 34—Heating, Lighting, and Ventilating Apparatus

SN 143,703. Worthington Corporation, Harrison, N.J. Filed May 2, 1962.

RESISTAL

For Gas-Fired Unit Heaters, Gas-Fired Duct Heaters, and Gas-Fired Furnaces.
First use Apr. 13, 1962.

SN 145,627. Spanner Boilers Limited, Bracknell, England. Filed May 28, 1962.

SWIRLYPAC

Owner of British Reg. No. B822,185, dated June 22, 1961; and U.S. Reg. No. 689,503.
For Steam Boilers and Parts Thereof.

SN 146,956. Allied Manufacturing Corporation, Bozeman, Mont. Filed June 15, 1962.

TIX

For Solder, Flux, and Anti-Flux Preparations.
First use Jan. 12, 1952.

SN 148,944. Atomized Materials Company, Inc., Cecil, Pa. Filed July 13, 1962.

NICKALOY

For Solder.
First use Mar. 5, 1962.

SN 149,224. Suburban Appliance Co., Dayton, Tenn. Filed July 17, 1962.

Dyna-Temp

For Combination Air Conditioner and Heater.
First use at least as early as May 9, 1962.

SN 154,487. Eutectic Welding Alloys Corporation, Flushing, N.Y. Filed Oct. 4, 1962.

STAINTRODE

Owner of Reg. No. 537,852.
For Welding Electrodes.
First use Sept. 28, 1962.

SN 154,932. Union Metal Works Ltd., Hong Kong. Filed Oct. 10, 1962.

UNIMET

For Camping Stoves and Gas Lanterns.
First use in January 1962; in commerce in January 1962.

SN 155,162. Stanley L. Lundsten, d.b.a. Lundsten Associates, Southfield, Mich. Filed Oct. 15, 1962.

LEXALITE

For Street Lamp Globes.
First use Sept. 20, 1962.

SN 155,168. McCord Corporation, Detroit, Mich. Filed Oct. 15, 1962.

McCORD

Owner of Reg. Nos. 140,711, 525,412, and others.
For Heat Exchangers—Namely, Condensers, Air Conditioning Coils and Finned Tubing for Refrigeration and Air Conditioning Systems.
First use at least as early as 1950.

SN 155,360. Air Reduction Company, Incorporated, New York, N.Y. Filed Oct. 18, 1962.

AIRCOMASTER

Owner of Reg. Nos. 119,485, 705,901, and others.
For Welding and Cutting Outfit.
First use on or about Feb. 9, 1962.

SN 156,325. Paraco Metals, Inc., Elmhurst, N.Y. Filed Oct. 31, 1962.

PARACO-BOND '61

For Solder for Aluminum and Other Metals.
First use Oct. 4, 1962.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

SN 142,151. White Stores, Inc., Wichita Falls, Tex. Filed Apr. 12, 1962.

WHITE SERVICE CUSTOM

Owner of Reg. Nos. 623,991 and 706,662.
For Vehicle Tires.
First use March 1962.

SN 142,152. White Stores, Inc., Wichita Falls, Tex. Filed Apr. 12, 1962.

WHITE SAFETY CUSTOM

Owner of Reg. Nos. 623,991 and 706,662.
For Vehicle Tires.
First use March 1962.

SN 142,884. White Stores, Inc., Wichita Falls, Tex. Filed Apr. 23, 1962.

WHITE DUAL CUSTOM

Applicant disclaims the word "Custom" apart from the mark as shown. Owner of Reg. Nos. 623,991 and 706,662.
For Tires.
First use Mar. 23, 1962; in 1952 as to the word "White."

SN 142,885. White Stores, Inc., Wichita Falls, Tex. Filed Apr. 23, 1962.

WHITE PREMIUM CUSTOM

Owner of Reg. Nos. 623,991 and 706,662.
For Tires.
First use Mar. 23, 1962; 1952 as to "White."

SN 162,379. United States Rubber Company, New York, N.Y. Filed Feb. 8, 1963.

UNIROYAL

Owner of Reg. Nos. 82,356, 642,083, and others.
For Tires for Vehicles, Inner Tubes for Tires, Hose Made Wholly or Partly of Rubber, and Belting Made Wholly or Partly of Rubber.
First use Aug. 24, 1962, on tires.

SN 162,718. FMC Corporation, San Jose, Calif. Filed Feb. 14, 1963.

ARMADILLO

For Packing Seals for Pipes.
First use Jan. 7, 1963.

SN 162,872. Seiberling Rubber Company, Barberton, Ohio. Filed Feb. 15, 1963.

LEMANS

For Pneumatic Rubber Tires.
First use Oct. 26, 1962.

Class 36 — Musical Instruments and Supplies

SN 132,687. Liberty Records, Inc. (California corporation—new corporation), Los Angeles, Calif., by mesne assignment and change of name from Liberty Records, Inc. (California corporation), Los Angeles, Calif. Filed Nov. 24, 1961.

FREEDOM

For Phonograph Records and Albums Thereof.
First use September 1958.

SN 132,688. Liberty Records, Inc. (California corporation—new corporation), Los Angeles, Calif., by mesne assignment and change of name from Liberty Records, Inc. (California corporation), Los Angeles, Calif. Filed Nov. 24, 1961.

LIBERTY

For Phonograph Records and Albums Thereof.
First use March 1955.

SN 132,689. Liberty Records, Inc. (California corporation—new corporation), Los Angeles, Calif., by mesne assignment and change of name from Liberty Records, Inc. (California corporation), Los Angeles, Calif. Filed Nov. 24, 1961.

FREEDOM

For Phonograph Records and Albums Thereof.
First use September 1958.

SN 133,159. Liberty Records, Inc. (California corporation—new corporation), Los Angeles, Calif., by mesne assignment and change of name from Liberty Records, Inc. (California corporation), Los Angeles, Calif. Filed Dec. 1, 1961.

LIBERTY

For Phonograph Records and Albums Thereof.
First use March 1955.

SN 154,735. The Lionel Corporation, New York, N.Y. Filed Oct. 8, 1962.

LIONEL

Owner of Reg. Nos. 173,957, 313,353, and 735,256.
For Phonographs and the Parts Therefor, Tape Recorders and Parts Therefor, Phonograph Records, Recording and Pre-Recorded Tape.
First use March 1962.

SN 157,866. V-M Corporation, Benton Harbor, Mich. Filed Nov. 23, 1962.

Owner of Reg. Nos. 683,593 and 685,061.
For Phonographs, Tape Recorders, and Record Changers.
First use June 28, 1962, on phonographs; April 1949 as to "VM" on phonographs.

SN 157,867. V-M Corporation, Benton Harbor, Mich. Filed Nov. 23, 1962.

THE VOICE OF MUSIC

Owner of Reg. Nos. 683,593 and 685,061.
For Phonographs, Tape Recorders, and Record Changers.
First use June 28, 1962, on phonographs; July 29, 1955, in another style on phonographs; and May 1949 as to "VM."

SN 158,673. York Recording Co., Inc., Hollywood, Calif. Filed Dec. 6, 1962.

MELIC

For Phonograph Records.
First use Aug. 14, 1962.

SN 164,367. Robert E. Mooney, d.b.a. Rem Records, Lexington, Ky. Filed Mar. 11, 1963.

REM

For Phonograph Records.
First use April 1960.

SN 166,145. The H. N. White Company, Cleveland, Ohio. Filed Apr. 4, 1963.

KING

Owner of Reg. No. 165,363.
For Trumpets, Cornets, Trombones, Saxophones, Flutes, Piccolos, Clarinets, French Horns, Baritones, Tromboniums, Altoniums, Sousaphones, Symphony Basses, String Basses, and Cellos.
First use January 1943.

SN 166,241. Acoustiguide, Los Angeles, Calif. Filed Apr. 8, 1963.

ACOUSTIGUIDE

For Tape Recording and Playback Devices.
First use May 1957.

SN 166,246. Audiofax Inc., Scottsdale, Ariz. Filed Apr. 8, 1963.

AUDIOFAX

For Magnetic Recording and Transcribing Machines, Recording Discs, and Filing Pockets.
First use Jan. 31, 1963.

Class 37 — Paper and Stationery

SN 116,509. Hamilton Paper Company (Washington corporation), Miquon, Pa., by change of name and assignment from Hamilton Paper Company (Pennsylvania corporation), Miquon, Pa. Filed S.R. Mar. 27, 1961; Am. P.R. Sept. 27, 1962.

TEST OFFSET

Applicant disclaims right to use of "Offset" apart from the mark as shown.
For Printing Papers.
First use July 25, 1933.

SN 151,084. St. Clair Specialty Manufacturing Co., Inc., Bellwood, Ill. Filed Aug. 13, 1962.

LADY CLAIR

Owner of Reg. Nos. 648,295, 740,693, and 745,644.
For Gift Wrapping Paper and Foil.
First use Nov. 13, 1961.

SN 155,180. Oregon-Washington-California Pear Bureau, Portland, Oreg. Filed Oct. 15, 1962.

The Hartman Wrap

For Paper Wrap for Fruit.
First use on or about Mar. 1, 1933.

SN 155,644. Potlatch Forests, Inc., Lewiston, Idaho. Filed Oct. 22, 1962.

TOLO

For Commercial Grade Papers for Printing.
First use July 31, 1962.

SN 155,714. Paper Manufacturers Company, Philadelphia, Pa. Filed Oct. 23, 1962.

PAMACO

For Coated Paper, Coated Foils, and Coated Films for Wrapping Purposes and Coated Paper per se.
First use Sept. 14, 1962.

SN 156,203. Weber-Costello Co., Chicago Heights, Ill. Filed Oct. 29, 1962.

ALPHASITE

Owner of Reg. No. 516,712.
For Chalkboard Chalk.
First use 1936.

Class 38 — Prints and Publications

SN 122,370. Publication House, Inc., New York, N.Y. Filed June 19, 1961.

TEEN LIFE

For Entertainment Field Magazine for Teenagers, Published Periodically.
First use on or about Apr. 5, 1961.
Subj. to Intf. with SN 142,876.

SN 130,889. The Reuben H. Donnelley Corporation, Chicago, Ill. Filed Oct. 30, 1961.

MODERN HIGHWAYS

For Magazine in the Road-Building and Maintenance Field.
First use in or before September 1956.

SN 131,072. The Railway Equipment and Publication Company, New York, N.Y. Filed Oct. 31, 1961.

THE HANDY MAILING LIST

For Transportation Reference Periodical Published Quarterly.
First use at least as early as 1920.

SN 135,722. School Management Magazines, Inc., Greenwich, Conn. Filed Jan. 12, 1962.

p/i
PRODUCT INFORMATION FOR SCHOOLS

For Directory of School Products.
First use Dec. 1, 1961.

SN 138,675. System Development Corporation, Santa Monica, Calif. Filed Feb. 26, 1962.

SDC

For Scientific and Technical Publications Issued Periodically and Also From Time to Time.
First use in December 1957.

SN 141,620. Jesse and Jesse, d.b.a. Timeless-Treasures, Wichita, Kans. Filed Apr. 5, 1962.

Timeless-Treasure

For Two and Three Dimensional Objects of Art—Namely, Pictures and Portraits.
First use Feb. 5, 1962.

SN 142,376. Teen Publications, Inc., Los Angeles, Calif. Filed Apr. 16, 1962.

'TEEN

For Periodical Magazine.
First use Nov. 1, 1956.
Subj. to Intf. with SN 122,370.

SN 146,703. BNA Incorporated and Auerbach Corporation (joint venture), d.b.a. Auerbach/BNA, Washington, D.C. Filed June 12, 1962.

STANDARD EDP REPORTS

The words "Standard" and "Reports" are disclaimed apart from the mark as a whole.
For Loose-Leaf Volume and Periodically Published News Reports, Constituting an Informational Service Containing Data on Electronic Computer Systems.
First use December 1961.

SN 151,190. Avon Products, Inc., New York, N.Y. Filed Aug. 15, 1962.

OUTLOOK

For Trade Publications Describing Applicant's Goods and Their Use.
First use in 1905.

SN 151,191. Avon Products, Inc., New York, N.Y. Filed Aug. 15, 1962.

PANORAMA AVON

For Trade Publications Describing Applicant's Goods and Their Use.
First use in April 1954.

SN 160,844. Clay-Adams, Inc., New York, N.Y. Filed Jan. 17, 1963.

CL ADAMS

For Medical and Scientific Pamphlets, Leaflets and Sections of Specialized Trade Publications Issued Periodically.
First use on or about Nov. 1, 1957.

Class 39—Clothing

SN 99,349. Merit Clothing Company, Mayfield, Ky. Filed June 20, 1960.

KYLOOM

For Fabrics Sold as Finished Apparel—Namely, Men's Suits.
First use Apr. 15, 1960.

SN 102,627. Dixon-Bartlett Company, Baltimore, Md. Filed Aug. 15, 1960.

FOR THE SMART YOUNG WOMAN WHO LIVES IN A SHOE

For Ladies' Shoes.
First use May 31, 1957.

SN 109,704. Knit Products Corporation, Belmont, N.C. Filed Dec. 6, 1960.

Casa de Celli

The meaning of the words representing this mark or the translation thereof is "House of Celli."
For Women's and Misses' Hosiery.
First use Sept. 9, 1960.

SN 119,624. The Joseph & Feiss Company, Cleveland, Ohio. Filed May 9, 1961.

THERMOSTATIC

For Men's Tailored Wearing Apparel.
First use May 2, 1961.

SN 122,692. Genesco, Inc., Nashville, Tenn. Filed June 23, 1961.

The Counsel

For Suits, Top Coats, Overcoats, Slacks, Sport Coats, and Jackets for Men, Boys, and Youths.
First use Aug. 15, 1960.

SN 126,934. The Joseph & Feiss Company, Cleveland, Ohio. Filed Aug. 30, 1961.

OUTLINES

For Men's Tailored Wearing Apparel—Namely, Suits, Topcoats, Overcoats, Jackets, and Slacks.
First use Aug. 23, 1961.

SN 127,827. Alberti Originals, Inc., Boston, Mass. Filed Sept. 14, 1961.

YOUNG ERA

For Women's Outerwear—Namely, Skirts, Blouses, Suits, Pants, Jamaicas, Shorts, Sweaters, Jumpers, Dresses, Jackets and Coats.
First use Aug. 29, 1961.

SN 138,594. Dutchess Underwear Corporation, New York, N.Y. Filed Feb. 26, 1962.

WULYWEAR

For Ladies' Knitted Underwear.
First use July 1, 1934.

SN 145,364. Hollywood Rambler, Los Angeles, Calif. Filed May 24, 1962.

CALIFORNIA LEAGUE

The word "California" is disclaimed apart from the mark as a whole.
For Men's and Boys' Apparel—Namely, Shirts.
First use Oct. 30, 1961.

SN 145,375. Kroywen Coats, Inc., New York, N.Y. Filed May 24, 1962.

21 Jewel

For Ladies' and Misses' Coats, Suits, and Jackets.
First use Feb. 6, 1962.

SN 146,573. C & I Screen Prints, Phoenix, Ariz. Filed June 11, 1962.

ADVER-TIES

For Ties.
First use May 8, 1962.

SN 146,787. Cape Cod Sportswear, Inc., New York, N.Y. Filed June 13, 1962.

Cape Cod Clothing

BY bernard murray

Applicant claims no exclusive rights in "Clothing" as the name of the goods identified herein. Owner of Reg. No. 649,342.
For Men's and Boys' Suits and Sport Jackets.
First use Jan. 2, 1962.

SN 148,311. Infanta Knitting Mills, Rockledge, Pa. Filed July 3, 1962.

Infanta

Owner of Reg. No. 441,196.
For Children's Sweaters and Sweater Sets.
First use on or about Jan. 2, 1926.

SN 148,390. Infanta Knitting Mills, Rockledge, Pa. Filed July 5, 1962.

I.K.M.

Infanta

Owner of Reg. No. 441,196.
For Children's Sweaters and Sweater Sets.
First use on or about Jan. 2, 1926.

SN 149,175. Evan-Picone, Inc., New York, N. Y. Filed July 17, 1962.

DIONE

For Women's Slacks and Coats.
First use June 1960.

SN 150,532. Douglas Dahle, d.b.a. Douglas Dahle Imports, Arcadia, Calif. Filed Aug. 6, 1962.

VIA VENETO

For Women's Sandals.
First use May 1, 1962.
Subj. to Intf. with SN 157,207.

SN 153,514. Robert Reis & Co., New York, N.Y. Filed Sept. 19, 1962.

REIS MIDLINER

Owner of Reg. Nos. 71,837 and 420,166.
For Men's and Boys' Underwear—Namely, Support-Type Undergarments.
First use Sept. 7, 1962.

SN 153,553. Curilow Coats and Suits of California, San Francisco, Calif. Filed Sept. 20, 1962.

Curilette Originals

The word "Originals" is disclaimed apart from the balance of the mark.
For Women's and Misses' Coats.
First use Aug. 9, 1962.

SN 154,024. Globe Mills, Inc., Leesport, Pa., assignee of Globe Underwear Co., Inc., Shoemakersville, Pa. Filed Sept. 27, 1962.

CAVENDALE

For Men's and Boys' Underwear, Specifically, T-Shirts, Athletic Shirts and Briefs.
First use June 1958.

SN 156,223. Edmont Inc., Coshocton, Ohio. Filed Oct. 30, 1962.

FANCY PLANTS

For Garden Gloves.
First use on or about Sept. 24, 1962.

SN 157,207. Finn Fabrics Corporation, New York, N.Y. Filed Nov. 14, 1962.

VIA VENETO

"Via Veneto" is the name of a street in Rome, Italy.
For Men's Neckties and Shirts.
First use July 20, 1962.
Subj. to Intf. with SN 150,532.

Class 40—Fancy Goods, Furnishings, and Notions

SN 144,565. United-Carr Fastener Corporation, Cambridge, Mass. Filed May 14, 1962.

SOFSNAP

For Snap Fasteners.
First use May 3, 1962.

SN 155,366. B. Blumenthal & Co. Inc., New York, N.Y. Filed Oct. 18, 1962.

LE CHIC

Owner of Reg. No. 899,779.
For Buttons and Buckles, Not Made of Precious Metal.
First use October 1928.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 153,181. M. Lowenstein & Sons, Inc., New York, N.Y. Filed Sept. 14, 1962.

SUTTAKNIT

Owner of Reg. Nos. 566,634 and 714,789.
For Crib Sheets, Made of Cotton and/or Synthetic Fibres.
First use June 13, 1962.

SN 158,957. Brook Textiles, Inc., Long Island City, N.Y. Filed Dec. 12, 1962.

Fab-Brook

For Textile Fabrics—Namely, Fleeces, Nylons, and Cottons Used for Men's, Women's, and Children's Outer Wear Garments.
First use November 1962.

Class 43—Thread and Yarn

SN 158,573. Spray Cotton Mills, Inc., Spray, N.C. Filed Dec. 5, 1962.

"SPRAY-SPUN"

For Yarns.
First use January 1950.

SN 158,653. Reynolds Yarns, Inc., Great Neck, N.Y. Filed Dec. 6, 1962.

REYNOLDS VERSAILLES

For Yarn and Balls of Yarn.
First use Jan. 1, 1961.

Class 44—Dental, Medical, and Surgical Appliances

SN 140,323. Audium, Electro-Acoustische Industrie N.V., Amsterdam, Netherlands. Filed Mar. 21, 1962.

Audium

For Electro-Acoustic Equipment—Namely, Hearing Aids and Components Thereof.
First use in or about July 1953; in commerce in or about July 1953.

SN 145,705. Mercury Manufacturing Company, Pittsburg, Calif. Filed May 29, 1962.

STATICGARD

For Disposable Conductive Explosion Preventative Plastic Boots for Use in Surgery.
First use Mar. 26, 1962.

SN 155,124. American Optical Company, Southbridge, Mass. Filed Oct. 15, 1962.

CARDIOSYNC

For Medical Electronic Instruments for Regulating Operation of Heart Defibrillating Apparatus in Accordance With Heart Action or Other Stimulus.
First use June 14, 1962.

SN 156,041. John F. Whitaker, Glen Cove, N.Y. Filed Oct. 26, 1962.

FISHERMAN'S FRIEND

For First Aid Kit Containing Plastic Case and Cover, Fish Dial, Insect Repellent, Hook Cutters, Scissors, Forceps, Antiseptic, First Aid Instructions, Ammonia Inhalants, Seasick Pills, Adhesive Tape, Burn Ointment, Bandage, Bandaids, Gauze Pads, Aspirin Tablets, Primarily for Use as a First Aid Kit To Take Care of Minor Injuries Incurred by a Fisherman While on a Fishing Trip.
First use July 26, 1960.

SN 160,149. John Yellott Engineering Associates, Inc., Phoenix, Ariz. Filed Jan. 3, 1963.

PORTIOSCOPE

For Portable Diagnostic Instrument Used by Physicians and Surgeons for Examining the Cervix.
First use Dec. 29, 1962.

SN 160,493. Jerry Lewis, Cleveland, Ohio. Filed Jan. 10, 1963.

UNITED

For Electronic Hearing Aids and Accessories.
First use May 1961.

SN 160,916. Cellulose Products Corporation, Milltown, N.J. Filed Jan. 18, 1963.

CARESS

Owner of Reg. No. 736,487.
For Tampons.
First use Mar. 27, 1962.

SN 160,933. Frost Engineering Development Corporation, Englewood, Colo. Filed Jan. 18, 1963.

CATTLCAPS

For Protective Coverings for Animal Teeth.
First use Dec. 24, 1962.

SN 161,040. Frost Engineering Development Corporation, Englewood, Colo. Filed Jan. 21, 1963.

CATTLCAPS

For Plier-Type Tool for Applying Caps to Animal Teeth.
First use Dec. 24, 1962.

SN 161,538. Meadox Medicals, Incorporated, Haledon, N.J. Filed Jan. 28, 1963.

MEADOX

For Surgical Supplies, Particularly Vascular Prosthetic Devices and Materials.
First use on or about Oct. 30, 1962.

Class 46—Foods and Ingredients of Foods

SN 120,122. Paul-Lewis Laboratories, Inc., Milwaukee, Wis. Filed May 16, 1961.

DOUGHZYME

For Enzyme Preparation for Bakery Products.
First use January 1961.

SN 121,837. J. Manaster Co., Chicago, Ill. Filed June 12, 1961.



Owner of Reg. No. 695,004.
For Dressed Turkey.
First use Mar. 15, 1961.

SN 127,648. Ralston Purina Company, St. Louis, Mo. Filed Sept. 11, 1961.

EDI-PRO

For Edible Soy Protein.
First use May 4, 1961.

SN 135,410. Eleanora S. Waddell, d.b.a. Tropical Freeze Dairy Products, Memphis, Tenn. Filed Jan. 8, 1962.

Tropical

Owner of Reg. No. 716,578.

For Sherbet; Ice Cream; Frozen Dessert—viz., Frozen Flavored and/or Fruit-Containing Milk Products of Low Butter-Fat Content; and Concentrate With Fruit (Being an Unfrozen Mixture of Concentrated Flavoring Materials and Preserved Fruits, for Admixture with Sherbets, Ice Creams, and Frozen Desserts).

First use Nov. 22, 1961.

SN 139,603. D. De Franco & Sons, Los Angeles, Calif. Filed Mar. 12, 1962.



For Fresh Tomatoes, Dates, Nuts, Figs, Prunes, and Nutmeats.

First use Dec. 29, 1961.

SN 140,938. Frito-Lay, Inc., Dallas, Tex. Filed Mar. 28, 1962.

LAY'S

For Snack Foods—Namely, Potato Chips and Sticks, Popcorn, Nuts (Shelled and Unshelled), and Cookie Sandwiches.

First use not later than Dec. 1, 1943.

SN 144,608. Duffy-Mott Company, Inc., New York, N.Y. Filed May 15, 1962.

FRUIT TREAT

The word "Fruit" is disclaimed apart from the mark as shown. Owner of Reg. No. 255,153.

For Canned Fruits—Namely, Chunky Apple Sauce and Apple Sauce and Pineapple.

First use Mar. 9, 1962.

SN 146,127. Lawrence G. Udell, Miami, Fla. Filed June 4, 1962.

SWEET CHICK

No claim is made to the word "Chick" apart from the mark.

For Fresh and Frozen Dressed Poultry.

First use Feb. 3, 1962.

SN 146,171. Felix & Jack Costa, Stockton, Calif. Filed June 5, 1962.



No claim of exclusive right is made to the representation of the cherries as a showing of the goods herein.

For Fresh Cherries.

First use May 10, 1962.

SN 146,362. Cortland Produce Company, Inc., Toledo, Ohio. Filed June 7, 1962.



For Dressed Poultry, Both Fresh and Frozen, and Fresh Eggs.

First use May 15, 1960.

SN 146,605. Fairmont Foods Company, Omaha, Nebr. Filed June 11, 1962.

BIG DEAL

For Dairy Products—Namely, Ice Milk.

First use May 4, 1962.

SN 147,078. Bio-Zyme, Incorporated, Hospers, Iowa. Filed June 18, 1962.



No registration rights are claimed for the notation "Researched Product" apart from the mark shown and applicant waives none of its common law or other rights in said notation.

For Nutritional Additives for Animal and Poultry Feeds and Silage Preservatives.

First use on or about May 11, 1962.

SN 147,144. P.L.W. Corporation, New York, N.Y. Filed June 18, 1962.



For Fresh Fruits and Vegetables.

First use December 1960.

SN 147,304. Pacific Vegetable Oil Corporation, San Francisco, Calif. Filed June 20, 1962.



The wording "Vegetable Oils From All Over the World" is disclaimed apart from the mark as shown. The drawing is lined to indicate the color yellow but no claim is made as to the color so named.

For Safflower, Coconut, Cottonseed and Sesame Oils for Culinary Purposes, and Margarine.

First use Apr. 2, 1960, on safflower oil.

SN 149,147. Weidner Canning Company, Inc., d.b.a. R-Way Canning Co., Plymouth, Ind. Filed July 16, 1962.

NUBBIES

For Pickles and Pickle Products—Namely, Sweet Pickles, Dills, and Kosher Dills.

First use May 25, 1962.

SN 150,716. Pangburn Company, Inc., Fort Worth, Tex. Filed Aug. 7, 1962.



No registration rights are claimed for the words "Corn Oil Brittle" apart from the mark as shown; however, the applicant waives none of its common law rights in the mark as shown or any feature thereof. Owner of Reg. Nos. 157,170 and 212,887.

For Candy.

First use June 8, 1962.

SN 151,290. August Battaglia Co., Chicago, Ill. Filed Aug. 16, 1962.

FILIPPO MAZZEI

The mark is fanciful and is not the name of any living person.

For Edible Olive Oil, Fresh Fruits—Namely, Tomatoes; Dried Fruits—Namely, Figs; Fresh Vegetables—Namely, Artichokes, Onions, Garlic, Chestnuts, and Chick Peas; Canned Fruits and Canned Vegetables, Canned Snails, Canned Sardines, Bottled Wine Vinegar, and Cheese.

First use July 5, 1962.

SN 152,166. The Sugardale Provision Company, Canton, Ohio. Filed Aug. 29, 1962.

OHIO FARM BRAND

The word "Brand" is disclaimed apart from the mark as shown.

For Pork Sausage.

First use on or about Jan. 25, 1957.

SN 157,592. Bay State Milling Company, Winona, Minn. Filed Nov. 20, 1962.

RECORD BREAKER

Owner of Reg. No. 346,384.

For Wheat Flour.

First use Jan. 1, 1907.

SN 157,709. The E. H. Koester Bakery Co., Baltimore, Md. Filed Nov. 21, 1962.



For Bread.

First use Oct. 25, 1962.

SN 158,460. Miss America Foods, Inc., Laurel, Miss. Filed Dec. 4, 1962.

QUEEN OF LOUISIANA

For Canned Sweet Potatoes.

First use Mar. 14, 1962.

SN 158,461. Miss America Foods, Inc., Laurel, Miss. Filed Dec. 4, 1962.

HEART OF LOUISIANA

For Canned Sweet Potatoes.

First use Mar. 14, 1962.

SN 159,350. J. A. Joffe and Co., Inc., Mount Vernon, N.Y. Filed Dec. 18, 1962.

SUGAR-QUICK

For Sugar Decorations for Baked Goods, Candies, and Ice Cream.

First use on or about Nov. 25, 1962.

Class 47—Wines

SN 142,743. Seaboard Beverage Co., d.b.a. Fruit Wine Purveyors, Jacksonville, Fla. Filed Apr. 20, 1962.

WILD RUSSIAN VANYA

For Wines.

First use June 30, 1960.

Class 49 — Distilled Alcoholic Liquors

SN 137,543. Mr. Boston Distiller Inc., Boston, Mass. Filed Feb. 8, 1962.

LONDON MARKET

No claim of exclusive right is made to "London" as used on distilled London dry gin.
For Gin.
First use Jan. 26, 1962.

Class 51 — Cosmetics and Toilet Preparations

SN 76,709. Les Parfums Jean Desses, Societe a Responsabilite Limitee, Paris, France. Filed June 29, 1959.

CELUI DE JEAN DESSES

Priority claimed under Sec. 44(d) on French Reg. No. 479,706, dated Apr. 14, 1959 (Seine); Natl. Inst. No. 124,865. The English translation of "Celui De" is "that of."
For Perfumes.

SN 121,030. Shulton, Inc., Clifton, N.J. Filed May 29, 1961.

S #1

For Cream Deodorant.
First use May 19, 1961.

SN 121,262. Avon Products, Inc., New York, N.Y. Filed June 2, 1961.

CRYSTAL GLORY

For Cologne.
First use May 16, 1961.

SN 134,835. North American Philips Company, Inc., New York, N.Y. Filed Dec. 28, 1961.

PRELEC

For Shaving Lotion.
First use Dec. 14, 1961.

SN 140,090. Colgate-Palmolive Company, New York, N.Y., assignee of Cannolene Company, Atlanta, Ga. Filed Mar. 19, 1962.

TOUCHDOWN

For Astringents, Astringent Cerates, Bleach Creams, Beauty Creams, Cold Creams, Cleansing Creams, Obesity Creams, Refreshing Creams, Vanishing Creams, Obesity Astringents, Dry Rouges, Liquid Rouges, Face Bleaches, Face Packs, Skin Whitener in Liquid, Cream or Solid Form, Eyebrow and Eyelash Grower, Eye Drops, Eyebrow Pencils, Chemical Preparations for the Darkening of Eyelashes and Eyebrows, Hand Lotions, Skin Lotions, After Shaving Lotions, Pomades, Face Powders, Talcum Powders, Body Powders, Sachets, Hair Salves, Hair Elixirs, Dandruff Preparations, Hair Tonics, Hair Oils, Hair Dyes, Hair Dressing, Brilliantine, Bath Salts, Lip Sticks, Tooth Powders, Mouth Washes, Dentifrices, Tooth Pastes, Depilatories, Nail Powders, Nail Polishes, Nail Creams, Nail Bleaches, Witch Hazel Salve, Camphor Creams, Foot Powders, Personal Deodorants, Bay Rum, Perfumes, and Toilet Waters.
First use July 1930.

SN 143,700. The Wella Corporation, Englewood, N.J. Filed May 2, 1962.

wellaform

Owner of Reg. Nos. 575,177, 581,521, and others.
For Hair Dressing Cream.
First use Apr. 18, 1962.

SN 147,216. Henriette Nam de Beaufort, d.b.a. de Beaufort, New York, N.Y. Filed June 19, 1962.

de Beaufort

For Toiletries—Namely, Eau de Cologne, Eau de Toilette, After-Shave Lotion, Cosmetic Soap, Parfum, Bath Oil, Bath Parfum, Air Perfume and Sachet.
First use 1955 on eau de toilette and parfum.

SN 151,009. Chesebrough-Pond's Inc., New York, N.Y. Filed Aug. 13, 1962.

SHADOW BOX

Applicant disclaims the term "Shadow" apart from the mark as shown.
For Eye Shadow and Eye Mascara.
First use July 27, 1962.

SN 156,645. Nutrine, Ltd., Brooklyn, N.Y. Filed Nov. 5, 1962.

FINISH-UP

For Hair Setting Preparation.
First use Apr. 22, 1960.

SN 157,505. The House for Men, Inc., d.b.a. Treasure Island Sales Company, Chicago, Ill. Filed Nov. 19, 1962.

SUN DECK

For After-Shave Lotion and Cologne.
First use Sept. 1, 1962.

SN 157,678. Carter Products, Inc., New York, N.Y. Filed Nov. 21, 1962.

MEDI-SHAVE

For Shaving Cream.
First use Oct. 5, 1962.

SN 157,693. The Gillette Company, d.b.a. The Toni Company, Boston, Mass. Filed Nov. 21, 1962.

HURRY UP

For Wave Set and Hair Spray.
First use Nov. 9, 1962.

SN 157,789. Robert Alan Franklyn, d.b.a. Robaire Alain, Los Angeles, Calif. Filed Nov. 23, 1962.

DURANGO

For Perfume and Toilet Water.
First use Nov. 1, 1962.

Class 52 — Detergents and Soaps

SN 145,279. Moorman Manufacturing Company, Quincy, Ill. Filed May 28, 1962.

MOOR MA KLEEN

Owner of Reg. No. 513,104.
For Disinfectant-Detergent for Farm and Home Use.
First use Sept. 22, 1961.

SN 150,677. Colgate-Palmolive Company, New York, N.Y. Filed Aug. 7, 1962.

COLD POWER

For Cleaner, Cleanser, and Detergent.
First use May 28, 1962.

SN 155,184. Plunkett Chemical Company, Chicago, Ill. Filed Oct. 15, 1962.

PLUNKETT'S

Owner of Reg. No. 398,748.
For Scouring Powder, Soap, Cleaning Compound, Detergent Compound and Water Softener; and Skin Cleanser.
First use June 25, 1941, on scouring powder and detergent compound.

SN 155,737. Nykon Chemical Corporation, Mount Vernon, N.Y. Filed Oct. 23, 1962.

SHAM-PRUF

For Liquid Detergent for Household Use on Fabrics, Rugs, Drapery and Upholstery Materials.
First use Sept. 24, 1962.

SN 156,297. Harvey Hoffman, Douglaston, N.Y. Filed Oct. 31, 1962.

For Household Detergent for Laundry Use, Specifically a Cold Water Wash for Woolens.
First use June 1, 1962.

SN 156,475. Churchill Chemical Company, Galesburg, Ill. Filed Nov. 2, 1962.

CHURCHILL

For Liquid Synthetic Detergent Hand Cleaner; All-Purpose Synthetic Detergent Concentrate; Industrial Detergents for Cleaning Floors, Having Germicidal and Disinfectant Qualities; Detergents for Both Medical and Non-Medical Applications; and Dishwashing Detergents.
First use on or about May 3, 1962; in or about 1922 on related goods.

SN 157,776. Helene Curtis Industries, Inc., Chicago, Ill. Filed Nov. 23, 1962.

50-50

For Hair Shampoo.
First use on or about Oct. 18, 1962.

SN 157,777. Helene Curtis Industries, Inc., Chicago, Ill. Filed Nov. 23, 1962.

SWIRL

For Hair Shampoo.
First use on or about Oct. 18, 1962.

SERVICE MARKS

Class 100 — Miscellaneous

SN 150,125. Uris Buildings Corporation, New York, N.Y. Filed July 30, 1962.

For Planning, Construction, and Management of Commercial, Industrial, and Residential Buildings for Others.
First use Dec. 2, 1960.

SN 157,530. Minnesota Rubber Company, Minneapolis, Minn. Filed Nov. 19, 1962.

Owner of Reg. No. 706,772.
For Research and Development Service Offered to Prospective Purchasers of Molded Rubber Products.
First use Apr. 1, 1958.

Class 101 — Advertising and Business

SN 116,886. The Headliners International, New York, N.Y. Filed Mar. 31, 1961.



For Designing of Lettering for Use in Photo-Process Printing by Franchises.
First use Apr. 9, 1959.

SN 130,903. Gift Stars, Inc., Minneapolis, Minn. Filed Oct. 30, 1961.

GIFT STARS

For Promoting the Sale of Manufacturers' Products Through the Use of Gift Certificates Redeemable in Various Selected Items of Merchandise.
First use Apr. 24, 1961.

SN 145,808. Consumers Trading Stamp Corporation, Chicago, Ill. Filed May 31, 1962.



For Promoting the Sale of the Goods and Services of Others by Means of Trading Stamps Redeemable in Goods or Cash, or Both.
First use in or about April 1955.
Subj. to Intf. with SN 137,535 and SN 137,537.

SN 148,652. Rayflex Exploration Company, Dallas, Tex. Filed July 9, 1962.

LEAK-SEARCH

For Gas Leak Detection Services.
First use Apr. 1, 1960.

SN 154,716. Gift Stars, Inc., Minneapolis, Minn. Filed Oct. 8, 1962.

GIFT STAR

For Promoting the Sale of Manufacturers' Products Through the Use of Gift Certificates Redeemable in Various Selected Items of Merchandise.
First use Apr. 24, 1961.

Class 102 — Insurance and Financial

SN 149,485. Occidental Life Insurance Company of California, Los Angeles, Calif. Filed July 20, 1962.

CHANGE-EASY

Owner of Reg. No. 694,060.
For Underwriting of Life Insurance.
First use on or about June 1, 1958.

Class 103 — Construction and Repair

SN 139,495. Imperial Cleaners, Sharon, Pa. Filed Mar. 9, 1962.



For Dry Cleaning Services.
First use Feb. 6, 1962.

SN 146,635. M-C-T Enterprises, Inc., Salinas, Calif. Filed June 11, 1962.

HYDRO-VAC

For Washing, Cooling, Treating With a Fungicide, and Icing Fresh Produce.
First use at least as early as July 1960.

Class 105 — Transportation and Storage

SN 136,583. Poly Travel Inc., New York, N.Y. Filed Jan. 25, 1962.

POLY BONUS TOURS

Applicant disclaims the words "Tours" and "Bonus" used apart from the mark as stated.
For Travel Services.
First use on or about Dec. 15, 1956.

Class 106 — Material Treatment

SN 157,704. International Steel Company, Evansville, Ind. Filed Nov. 21, 1962.



Owner of Reg. Nos. 604,088, 611,915, and 649,881.
For Services in Connection With Custom Fabrication of Steel and Other Metal Products.
First use Feb. 15, 1954.

COLLECTIVE MEMBERSHIP MARKS

Class 200

SN 156,455. American Institute of Timber Construction, Washington, D.C. Filed Nov. 2, 1962.



Owner of Reg. Nos. 651,313 and 661,931.
For Indicating Those Members of Applicant Whose Structural Glued Laminated Timber and Methods of Manufacture Meet the Standards of Quality Promulgated From Time to Time by Applicant.
First use Dec. 5, 1961.

SN 159,266. National Board of the Young Women's Christian Association of the U.S.A., New York, N.Y. Filed Dec. 17, 1962.



Owner of Reg. Nos. 581,709, 606,539, and 632,427.
For Indicating Membership in Applicant's Association.
First use in or about 1918.

CERTIFICATION MARKS

Class A — Goods

SN 103,715. Federation Nationale des Dentelles, Tulles, Broderies, Guipures, Paris, France. Filed Aug. 30, 1960.

CALAIS FRENCH LACE

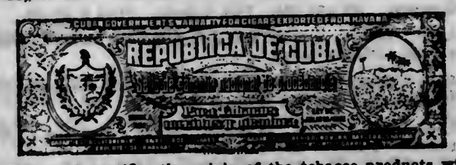
The mark certifies that the origin of the goods is France and that the goods conform to standards set by applicant with respect to the quality of material and design. Priority claimed under Sec. 44(d) on French Reg. No. 487,566, dated Apr. 15, 1960 (Paris); Natl. Inst. No. 142,927. The exclusive use of the words "French Lace" is disclaimed apart from the mark as a whole.
For Lace.

SN 131,918. Mobile Homes Manufacturers Association, Chicago, Ill. Filed Nov. 13, 1961.



The mark certifies that the mode of manufacture of the product upon which the mark is used complies with certain standards with respect to the manufacture and installation of electrical, plumbing, and heating equipment, which standards were adopted and promulgated by the applicant. Owner of Reg. No. 720,147.
For Travel Trailers.
First use Jan. 11, 1961.

SN 153,423. Republic of Cuba, Havana, Cuba. Filed Sept. 18, 1962.



The mark certifies the origin of the tobacco products with which the mark is used. The exclusive use of the individual words is disclaimed apart from the mark as shown in the drawing, all common law rights to the mark as a whole being reserved.
For Cigars and Cut Tobacco.
First use May 5, 1930; in commerce May 5, 1930.

SN 156,509. National Electrical Manufacturers Association, New York, N.Y. Filed Nov. 2, 1962.



The mark certifies that homes, apartments and apartment houses to which the mark is applied, or the plans and specifications therefor, conform to minimum standards set by applicant as to home electrification; that is, lighting, wiring, heating and number of major electrical appliances. Owner of Reg. Nos. 674,842 and 692,579.
For Homes, Apartments, and Apartment Houses.
First use in October 1962.

TRADEMARK REGISTRATIONS ISSUED
PRINCIPAL REGISTER

Class 1—Raw or Partly Prepared Materials

751,472. DECURE. The Barash Company, Inc. SN 144,130. Pub. 4–9–63. Filed 5–9–62.

751,473. SIMPLEX WONDER TUFF. Simplex Shoe Manufacturing Company, Inc., by change of name and assignment from Simplex Shoe Manufacturing Company. SN 147,965. Pub. 4–9–63. Filed 6–28–62.

751,474. PLIOTHENE. Westchester Plastics, Inc. SN 148,697. Pub. 4–9–63. Filed 6–29–62.

751,475. FORMACOLOR. Westchester Plastics, Inc. SN 148,698. Pub. 4–9–63. Filed 6–29–62.

751,476. UNICOLOR. Westchester Plastics, Inc. SN 148,699. Pub. 4–9–63. Filed 6–29–62.

751,477. LITTLE SQUIRT ETC. AND DESIGN. Non-Tox Chemical Corp. SN 149,196. Pub. 4–9–63. Filed 7–17–62.

751,478. PRE-NOC. Central Wisconsin Seed Company. SN 150,018. Pub. 4–9–63. Filed 7–30–62.

751,479. ZENDEL. Union Carbide Corporation. SN 153,230. Pub. 4–9–63. Filed 9–14–62.

751,480. GOA. Armour and Company. SN 153,542. Pub. 4–9–63. Filed 9–20–62.

751,481. LOW TORQUE. Hammons Products Company. SN 153,564. Pub. 4–9–63. Filed 9–20–62.

751,482. NCR IN DESIGN. The National Cash Register Company. SN 153,585. Pub. 4–9–63. Filed 9–20–62.

751,483. ZEAL. Armour and Company. SN 153,615. Pub. 4–9–63. Filed 9–21–62.

751,484. KAYBOND. Archer-Daniels-Midland Company. SN 153,721. Pub. 4–9–63. Filed 9–24–62.

751,485. CEL-U-MOL. Colonial Board Company. SN 153,737. Pub. 4–9–63. Filed 9–24–62.

751,486. THERM-X. Colonial Board Company. SN 153,738. Pub. 4–9–63. Filed 9–24–62.

751,487. DUO-COL. Colonial Board Company. SN 153,739. Pub. 4–9–63. Filed 9–24–62.

751,488. EZE-LAST. Colonial Board Company. SN 153,740. Pub. 4–9–63. Filed 9–24–62.

Class 2—Receptacles

751,489. ZIP-LOK. Leslie E. Herman, d.b.a. Zip-Lok Company. SN 141,887. Pub. 1–29–63. Filed 4–9–62.

751,490. BOLERO. Nibot Corporation, by change of name from Fedco Corporation. SN 146,807. Pub. 3–19–63. Filed 6–13–62.

751,491. MILTON. Milton Manufacturing Co., Inc. SN 156,631. Pub. 4–9–63. Filed 11–5–62.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

751,492. CONTINENTAL. Hartmann Luggage Company. SN 94,297. Pub. 11–1–60. Filed 4–4–60.

751,493. COACH. Gail Leather Products, Inc. SN 134,804. Pub. 5–1–62. Filed 12–28–61.

751,494. MISS BOUTIQUE AND FEMALE HEAD DESIGN. Just Accessories, Inc. SN 145,370. Pub. 4–9–63. Filed 5–24–62.

Class 4—Abrasives and Polishing Materials

751,495. GLEAMIT AND DESIGN. Mary F. Burr, assignee of Martha Moore Von Gronau, d.b.a. Gleamit Company. SN 147,427. Pub. 4–9–63. Filed 5–9–62.

751,496. TITAN. Simonis Company. SN 153,824. Pub. 4–9–63. Filed 9–24–62.

Class 6—Chemicals and Chemical Compositions

751,497. CINDERELLA. Cinderella International Company, Inc. SN 133,537. Pub. 4–9–63. Filed 12–7–61.

751,498. CADOX. Cadet Chemical Corporation. SN 145,244. Pub. 4–9–63. Filed 5–23–62.

751,499. PENTOXONE. Shell Oil Company. SN 145,291. Pub. 4–9–63. Filed 5–23–62.

751,500. PENTOXOL. Shell Oil Company. SN 145,292. Pub. 4–9–63. Filed 5–23–62.

751,501. MSK AND DESIGN. Sola Distributing Corporation. SN 147,047. Pub. 4–9–63. Filed 6–15–62.

751,502. POLY-TOX. Cotton States Chemical Co., Inc. SN 147,895. Pub. 4–9–63. Filed 6–28–62.

751,503. SUPER DUPER. S. M. Flickinger Co. Inc. SN 153,081. Pub. 4–9–63. Filed 9–13–62.

751,504. STARBOND. Morningstar-Paisley, Inc. SN 153,099. Pub. 4–9–63. Filed 9–13–62.

751,505. KMER. Eastman Kodak Company. SN 153,557. Pub. 4–9–63. Filed 9–20–62.

Class 7—Cordage

751,506. RESISTEX. American Manufacturing Company, Inc. SN 97,361. Pub. 4–9–63. Filed 5–18–60.

Class 8—Smokers' Articles, Not Including Tobacco Products

751,507. LORD DANE. I. Smallman & Sons, Co. SN 142,749. Pub. 4–9–63. Filed 4–20–62.

Class 10—Fertilizers

751,508. EASY-LITE. Kahn Bros. Co. SN 144,256. Pub. 4–9–63. Filed 5–10–62.

Class 12—Construction Materials

751,509. DIAMOND PINK. Cold Spring Granite Company. SN 124,800. Pub. 4–9–63. Filed 7–27–61.

751,510. SUPERTITE. Nukem Products Corporation. SN 131,863. Pub. 4–9–63. Filed 11–13–61.

751,511. QUIK/LITE. Permanente Cement Company. SN 138,045. Pub. 4–9–63. Filed 2–15–62.

751,512. AMKORITE. The American Oil Company. SN 141,687. Pub. 4–9–63. Filed 4–6–62.

751,513. RENAISSANCE. Banner Industries, Inc. SN 143,594. Pub. 4–9–63. Filed 5–2–62.

751,514. ELECTROLINE. International Minerals & Chemical Corporation. SN 143,835. Pub. 4–9–63. Filed 5–4–62.

751,515. TEMPLINE. International Minerals & Chemical Corporation. SN 143,837. Pub. 4–9–63. Filed 5–4–62.

751,516. BASIBRIK Basic Incorporated. SN 144,925. Pub. 4–9–63. Filed 5–18–62.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

751,517. TR AND DESIGN. Towne Robinson Fastener Company, by change of name from Towne Robinson Nut Co. SN 126,965. Pub. 4–9–63. Filed 8–30–61.

751,518. MASTER-PLUMBER. Radiator Specialty Company. SN 128,681. Pub. 4–9–63. Filed 9–26–61.

751,519. SELVAGE DESIGN. Chicopee Mills, Inc. SN 137,507. Pub. 4–9–63. Filed 2–8–62.

751,520. AA COIL PRODUCTS AND DESIGN. M. Lizen Manufacturing Co. MULTIPLE CLASS, (Classes 13 and 14). SN 141,629. Pub. 4–9–63. Filed 4–5–62.

751,521. HILTI. Anstalt fuer Montage-Technik. CONSOLIDATED CERTIFICATE. SN 142,768, pub. 1–1–63, filed 4–16–62, Cl. 13; SN 142,769, pub. 1–1–63, filed 4–16–62, Cl. 21; SN 142,770, pub. 1–1–63, filed 4–16–62, Cl. 23.

751,522. PORTA JON AND DESIGN. Arthur R. Carr. SN 143,005. Pub. 4–9–63. Filed 4–25–62.

751,523. HANDY JEFF. Jefferson Tank & Seats Manufacturing Co., Inc. SN 144,390. Pub. 4–9–63. Filed 5–11–62.

751,524. FLIP-FLOP. Associated Spring Corporation. SN 146,778. Pub. 4–9–63. Filed 6–13–62.

751,525. ACCESSO. Crane Co. SN 148,012. Pub. 4–9–63. Filed 6–29–62.

751,526. JASTAC. J. & S. Engineers Limited. SN 148,045. Pub. 4–9–63. Filed 6–29–62.

751,527. FERUM AND DESIGN. The Ferum Co., Inc. SN 153,471. Pub. 4–9–63. Filed 9–19–62.

751,528. MILTON. Milton Manufacturing Co., Inc. SN 156,632. Pub. 4–9–63. Filed 11–5–62.

Class 14—Metals and Metal Castings and Forgings

751,529. QUILT-WRAP. Kaiser Aluminum & Chemical Corporation. SN 127,934. Pub. 4–9–63. Filed 9–15–61.

751,530. KLUSTRITE. Houston Oil Field Material Company, Inc. SN 128,275. Pub. 4–9–63. Filed 9–20–61.

751,531. CCR. Canadian Copper Refiners Limited. SN 129,736. Pub. 4–9–63. Filed 10–12–61.

751,532. CU-PELS. Inspiration Consolidated Copper Company. SN 129,946. Pub. 4–9–63. Filed 10–16–61.

751,533. NDZ. R. Lavin & Sons, Inc. SN 142,516. Pub. 4–9–63. Filed 4–18–62.

751,534. THERMAL 92. Wabash Smelting Inc. SN 146,129. Pub. 4–9–63. Filed 6–4–62.

751,535. HARVEY ALUMINUM. Harvey Aluminum (Incorporated). SN 146,899. Pub. 4–9–63. Filed 6–14–62.

751,536. BESITE. John W. Bolton & Sons, Inc. SN 147,544. Pub. 4–9–63. Filed 6–25–62.

Class 15—Oils and Greases

751,537. MR. ZIP. American Grease Stick Company, Ltd. SN 136,019. Pub. 10–2–62. Filed 1–18–62.

751,538. FERRET ETC. AND DESIGN. Ferret Manufacturing Corporation, assignee of Bill Walsh Marine, Inc. SN 140,791. Pub. 2–19–63. Filed 3–26–62.

751,539. HUMBLE. Humble Oil & Refining Company. SN 145,558. Pub. 4–9–63. Filed 5–28–62.

751,540. REV-UP AND DESIGN. Tiona Petroleum Company. SN 146,757. Pub. 4–9–63. Filed 6–12–62.

751,541. CHRIS-CRAFT. Chris-Craft Corporation. SN 149,539. Pub. 4–9–63. Filed 7–23–62.

Class 18—Medicines and Pharmaceutical Preparations

751,542. PARELIXIR. The Purdue Frederick Company. SN 149,769. Pub. 4–9–63. Filed 7–25–62.

751,543. OPTINATE. Steven Laboratories, Inc. SN 150,462. Pub. 4–9–63. Filed 8–3–62.

751,544. OSMITROL. Travenol Laboratories, Inc. SN 151,100. Pub. 4–9–63. Filed 8–13–62.

751,545. RHINOGUTT. Dr. Karl Thomae GmbH. SN 151,173. Pub. 4–9–63. Filed 8–14–62.

751,546. RHINOSPRAY. Dr. Karl Thomae GmbH. SN 151,174. Pub. 4–9–63. Filed 8–14–62.

751,547. PI-LOW. Barnes-Hind Ophthalmic Products, Inc. SN 151,467. Pub. 4–9–63. Filed 8–20–62.

751,548. MILOPI. Barnes-Hind Ophthalmic Products, Inc. SN 151,468. Pub. 4–9–63. Filed 8–20–62.

751,549. VETDOSER. American Cyanamid Company. SN 151,557. Pub. 4–9–63. Filed 8–21–62.

751,550. VLV. Bay Pharmaceuticals Company, Inc. SN 151,714. Pub. 4–9–63. Filed 8–23–62.

Class 19—Vehicles

751,551. PILOT AND DESIGN. Motive Equipment Manufacturers, Inc. SN 112,477. Pub. 4–9–63. Filed 1–25–61.

751,552. IH. International Harvester Company. SN 139,753. Pub. 4–9–63. Filed 3–13–62.

751,553. VYNA-MAT. Turtle Wax, Inc. SN 143,694. Pub. 4–9–63. Filed 5–2–62.

751,554. PUSH-PULL. United Steel & Wire Company. SN 144,116. Pub. 4–9–63. Filed 5–8–62.

751,555. HUTCH. Hutchens & Son Metal Products, Inc. SN 147,825. Pub. 4–9–63. Filed 6–27–62.

751,556. TUBLOC. E & R Laboratory Service Corporation. SN 150,539. Pub. 4–9–63. Filed 8–6–62.

751,557. EN GARDE AND DESIGN. American Seat Belt Company. SN 154,799. Pub. 4–9–63. Filed 10–9–62.

751,558. REYCO-TRAC. A.J. Industries, Inc. SN 155,036. Pub. 4–9–63. Filed 10–12–62.

Class 20—Linoleum and Oiled Cloth

751,559. CELEBRITY. Robbins Floor Products, Inc. SN 147,503. Pub. 4–9–63. Filed 6–22–62.

751,560. AMTICO CONTINENTAL AND DESIGN. American Biltrite Rubber Co., Inc. SN 151,387. Pub. 4–9–63. Filed 8–17–62.

751,561. AMTICO DORADO AND DESIGN. American Biltrite Rubber Co., Inc. SN 151,388. Pub. 4–9–63. Filed 8–17–62.

Class 21—Electrical Apparatus, Machines, and Supplies

751,521. CONSOLIDATED CERTIFICATE. See Class 13.

751,562. SATURN. In-Sink-Erator Manufacturing Company. SN 95,726. Pub. 4-9-63. Filed 4-25-60.

751,563. ROTO/REMOTE. Packard-Bell Electronics Corporation. SN 109,619. Pub. 4-9-63. Filed 12-5-60.

751,564. ARROW "102." Arrow Armatures Company. SN 109,838. Pub. 4-9-63. Filed 12-8-60.

751,565. SEALECTOBOARD AND DESIGN. Sealectro Corporation. SN 112,780. Pub. 4-9-63. Filed 1-30-61.

751,566. DYNATRONICS. Dynatronics, Inc. SN 116,297. Pub. 4-9-63. Filed 3-23-61.

751,567. STA-VO-TROL. General Electric Company. SN 120,717. Pub. 4-9-63. Filed 5-24-61.

751,568. G AND DESIGN. Grayhill, Inc. SN 121,727. Pub. 4-9-63. Filed 6-9-61.

751,569. FRIGECO. Frigeco S.A., Societe Anonyme. SN 122,184. Pub. 4-9-63. Filed 6-16-61.

751,570. AMCHEM. Amchem Products, Inc. SN 126,290. Pub. 4-9-63. Filed 8-21-61.

751,571. HOTPOINT. General Electric Company. SN 131,585. Pub. 4-9-63. Filed 11-6-61.

751,572. MM ETC. AND DESIGN. General Cable Corporation. SN 134,538. Pub. 4-9-63. Filed 12-22-61.

751,573. HOLIDAY BY BROWN. Brown Stove Works, Inc. CONSOLIDATED CERTIFICATE. SN 135,174, pub. 4-2-63, filed 1-4-62, Cl. 21; SN 135,173, pub. 4-2-63, filed 1-4-62, Cl. 34.

751,574. BROWN. Brown Stove Works, Inc. CONSOLIDATED CERTIFICATE. SN 135,176, pub. 4-2-63, filed 1-4-62, Cl. 21; SN 135,175, pub. 4-2-63, filed 1-4-62, Cl. 34.

751,575. VOGUE. Vogue Electronics & Appliance Corp. SN 140,605. Pub. 4-9-63. Filed 3-23-62.

751,576. TUNE-O-MATIC. Fisher Radio Corporation. SN 141,424. Pub. 4-9-63. Filed 4-3-62.

751,577. CUBIC CORPORATION AND DESIGN. Cubic Corporation. SN 142,170. Pub. 4-9-63. Filed 4-13-62.

751,578. RANGETTE. Regal Ware, Inc. SN 145,406. Pub. 4-9-63. Filed 5-24-62.

751,579. CH CONTROL. Cutler-Hammer, Inc. SN 145,811. Pub. 4-9-63. Filed 5-31-62.

751,580. TRANSIGNITER. The Electric Auto-Lite Company. SN 147,858. Pub. 4-9-63. Filed 6-21-62.

751,581. SHINE-O-MATIC. Shields, Inc. SN 149,380. Pub. 4-9-63. Filed 7-18-62.

751,582. ONE O-T TIME. The Chase-Shawmut Company. SN 151,007. Pub. 4-9-63. Filed 8-13-62.

751,583. BALE-O-LARM. Crow Scales, Inc. SN 153,070. Pub. 4-9-63. Filed 9-13-62.

751,584. QUADPLEX. The Bryant Electric Company. SN 154,687. Pub. 4-9-63. Filed 10-8-62.

751,585. BIG SHOT. The H. J. Ashe Co., Inc. SN 154,800. Pub. 4-9-63. Filed 10-9-62.

751,586. GRO-LUX. Sylvania Electric Products, Inc. SN 154,928. Pub. 4-9-63. Filed 10-10-62.

751,587. UNITONE. Union Metal Works Ltd. SN 154,930. Pub. 4-9-63. Filed 10-10-62.

751,588. E. Erie Resistor Corporation. SN 154,964. Pub. 4-9-63. Filed 10-11-62.

751,589. TRAVELPAD. Kaz Heating Products, Inc. SN 155,079. Pub. 4-9-63. Filed 10-12-62.

751,590. MIXELLE. Scovill Manufacturing Company. SN 155,201. Pub. 4-9-63. Filed 10-15-62.

751,591. TOKAI. Tokai Corporation of America. SN 155,210. Pub. 4-9-63. Filed 10-15-62.

751,592. ZIPPER. Arthur L. Kuhlman. SN 155,810. Pub. 4-9-63. Filed 10-24-62.

751,593. MILTON. Milton Manufacturing Co., Inc. SN 156,633. Pub. 4-9-63. Filed 11-5-62.

751,594. THERMOTRIMMER. Oxley Developments Company Limited. SN 156,758. Pub. 4-9-63. Filed 11-6-62.

751,595. DISC. Disc Instruments, Inc. SN 157,085. Pub. 4-9-63. Filed 11-13-62.

751,596. PYROMET. Pyrofilm Resistor Company, Inc. SN 157,645. Pub. 4-9-63. Filed 11-20-62.

Class 22 — Games, Toys, and Sporting Goods

751,597. KINGBIRD PRODUCTS INC. AND DESIGN. Kingbird Products, Inc. SN 111,504. Pub. 1-23-62. Filed 1-9-61.

751,598. ICECABLADES. St. Lawrence Manufacturing Co., Inc. SN 143,573. Pub. 4-9-63. Filed 5-1-62.

751,599. BANK CHECKERS. Bank Checkers. SN 145,439. Pub. 4-9-63. Filed 5-25-62.

751,600. FOAM FUN. Hassenfeld Bros., Inc. SN 145,553. Pub. 4-9-63. Filed 5-28-62.

751,601. JOK-O. Bernard P. Schumacher. SN 145,617. Pub. 4-9-63. Filed 5-28-62.

751,602. PAY-OFF. Wilson Sporting Goods Co. SN 148,114. Pub. 4-9-63. Filed 6-29-62.

Class 23 — Cutlery, Machinery, and Tools, and Parts Thereof

751,521. CONSOLIDATED CERTIFICATE. See Class 13.

751,603. LITTLE GIANT AND DESIGN. Little Giant Corporation, by merger and change of name from Little Giant Vaporizer Company, Inc. SN 100,375. Pub. 4-9-63. Filed 7-6-60.

751,604. SEALZIT. The Flintkote Company. SN 115,798. Pub. 4-9-63. Filed 3-16-61.

751,605. VOLLMER. Vollmerwerke Maschinenfabrik G.m.b.H. SN 125,852. Pub. 4-9-63. Filed 8-11-61.

751,606. NIA-TEX AND DESIGN. Niagara Screens and Plant Limited. SN 128,914. Pub. 4-9-63. Filed 9-29-61.

751,607. FARM BELT. Kummeth Manufacturing Company. SN 129,504. Pub. 4-9-63. Filed 10-9-61.

751,608. HOTPOINT. General Electric Company. SN 131,536. Pub. 4-9-63. Filed 11-6-61.

751,609. E-Z MO. Carter Brothers Mfg. Co., Inc. SN 131,553. Pub. 4-9-63. Filed 11-8-61.

751,610. LAWNMATE. Portable Electric Tools, Inc. SN 133,311. Pub. 4-9-63. Filed 12-4-61.

751,611. ROYAL TAPER AND DESIGN. Wahl Clipper Corporation. SN 133,724. Pub. 4-9-63. Filed 12-8-61.

751,612. SPEEDY. Manufacture Belge d'Aiguilles. SN 135,281. Pub. 4-9-63. Filed 1-5-62.

751,613. PERIPHERAL WHEEL GROOVE DESIGN. The Tool Steel Gear and Pinion Company. SN 141,132. Pub. 4-9-63. Filed S.R. 3-29-62; Am. P.R. 11-15-62.

751,614. ROCRONI. Wilhelm Drache, d.b.a. Wilh. Drache KG. SN 141,172. Pub. 4-9-63. Filed 3-30-62.

751,615. BENDIX-WESTINGHOUSE AND DESIGN. Bendix-Westinghouse Automotive Air Brake Company. SN 143,204. Pub. 4-9-63. Filed 4-27-62.

751,616. BEAVER. Beaver Precision Products, Inc. SN 143,335. Pub. 4-9-63. Filed 4-30-62.

751,617. LITTLE JOE. Bruton Manufacturing Company. SN 143,717. Pub. 4-9-63. Filed 5-3-62.

751,618. METROSTILE. Universal Controls, Inc. SN 144,569. Pub. 4-9-63. Filed 5-14-62.

751,619. DASHA RECORDER. Dashew Business Machines, Inc. SN 144,815. Pub. 4-9-63. Filed 5-17-62.

751,620. TRIPLE TREAT AND DESIGN. Universal American Corporation. SN 145,007. Pub. 4-9-63. Filed 5-18-62.

751,621. SA AND DESIGN. Sjostrom Automations, Inc. SN 145,623. Pub. 4-9-63. Filed 5-28-62.

751,622. PACK-VEYOR. American Truck Body Company. SN 145,752. Pub. 4-9-63. Filed 5-31-62.

751,623. LAMIFLEX AND DESIGN. Randolph Research Co. SN 146,213. Pub. 4-9-63. Filed 6-5-62.

751,624. LEV'L TORQ. Associated Spring Corporation. SN 146,780. Pub. 4-9-63. Filed 6-13-62.

751,625. ADJUSTOMATIC. Hawkeye Steel Products, Inc. SN 146,818. Pub. 4-9-63. Filed 6-13-62.

751,626. POULAN AND DESIGN. Beaird-Poulan Inc. SN 147,885. Pub. 4-9-63. Filed 6-28-62.

751,627. S AND DESIGN. Diamond Saw Works, Inc. SN 148,016. Pub. 4-9-63. Filed 6-29-62.

751,628. MIX-MILL. Mix-Mill, Inc. SN 148,057. Pub. 4-9-63. Filed 6-29-62.

751,629. POWER CHIEF. Nordberg Manufacturing Company. SN 148,994. Pub. 4-9-63. Filed 7-13-62.

751,630. NCR IN DESIGN. The National Cash Register Company. SN 153,586. Pub. 4-9-63. Filed 9-20-62.

751,631. S-W. Stowe-Woodward, Inc. SN 153,903. Pub. 4-9-63. Filed 9-25-62.

751,632. STOPRENE. Stowe-Woodward, Inc. SN 153,904. Pub. 4-9-63. Filed 9-25-62.

751,633. WHITE STAR. Stowe-Woodward, Inc. SN 153,906. Pub. 4-9-63. Filed 9-25-62.

751,634. WHITE DIAMOND. Stowe-Woodward, Inc. SN 153,907. Pub. 4-9-63. Filed 9-25-62.

751,635. MICROMATE. Stowe-Woodward, Inc. SN 153,908. Pub. 4-9-63. Filed 9-25-62.

751,636. STO-KOTE. Stowe-Woodward, Inc. SN 153,909. Pub. 4-9-63. Filed 9-25-62.

751,637. STO-FOIL. Stowe-Woodward, Inc. SN 153,910. Pub. 4-9-63. Filed 9-25-62.

751,638. PERMAERATOR. Pfaudler Permutit Inc. SN 154,285. Pub. 4-9-63. Filed 10-1-62.

751,639. MILTON. Milton Manufacturing Co., Inc. SN 156,634. Pub. 4-9-63. Filed 11-5-62.

Class 24 — Laundry Appliances and Machines

751,640. HOTPOINT. General Electric Company. SN 131,537. Pub. 4-9-63. Filed 11-6-61.

751,641. STAPH GUARD. Pellerin Milnor Corporation. SN 143,044. Pub. 4-9-63. Filed 4-25-62.

751,642. LAUNDRY-MATE. Laundry-Mate, Inc. SN 150,257. Pub. 4-9-63. Filed 8-1-62.

Class 25 — Locks and Safes

751,643. TJ. The Tyden Corporation. SN 146,844. Pub. 4-9-63. Filed 6-13-62.

Class 26 — Measuring and Scientific Appliances

751,644. VAROMETER. Micrometrical Manufacturing Company (Delaware corporation), assignee of Micrometrical Manufacturing Company (firm). SN 107,958. Pub. 4-9-63. Filed 11-7-60.

751,645. KALART VICTOR AND DESIGN. The Kalart Company, Inc. SN 110,342. Pub. 4-9-63. Filed 12-16-60.

751,646. CHROMAJAR. Shandon Scientific Company Limited. SN 116,349. Pub. 4-9-63. Filed 3-23-61.

751,647. CHROMATANK. Shandon Scientific Company Limited. SN 116,350. Pub. 4-9-63. Filed 3-23-61.

751,648. V AND DESIGN. Vector Manufacturing Company, Incorporated. SN 116,852. Pub. 4-9-63. Filed 3-30-61.

751,649. ATI ASSURED STERILIZATION AND DESIGN. Aseptic Thermo Indicator Company. SN 127,993. Pub. 4-9-63. Filed 9-18-61.

751,650. NAUTOMAC. National Automation Corporation. SN 128,286. Pub. 4-9-63. Filed 9-20-61.

751,651. MOTEC. Motec Industries, Inc. SN 129,320. Pub. 4-9-63. Filed 10-4-61.

751,652. 4 SITE AND DESIGN. Vision Master, Inc. SN 137,874. Pub. 4-9-63. Filed 2-13-62.

751,653. DYNATRONICS. Dynatronics, Inc. SN 138,087. Pub. 4-9-63. Filed 2-16-62.

751,654. THERMICON. Science Materials Center. SN 141,115. Pub. 3-26-63. Filed 3-29-62.

751,655. DECITRAK. Theta Instrument Corporation. SN 145,977. Pub. 4-9-63. Filed 6-1-62.

751,656. PLANOVAR. Carl Zeiss-Stiftung, d.b.a. Carl Zeiss. SN 146,139. Pub. 4-9-63. Filed 6-4-62.

751,657. SONNOVAR. Carl Zeiss-Stiftung, d.b.a. Carl Zeiss. SN 146,140. Pub. 4-9-63. Filed 6-4-62.

751,658. ADASTRA. Meopta, Narodni Podnik. SN 146,300. Pub. 4-9-63. Filed 6-6-62.

751,659. SWAMI. The Singer Manufacturing Company. SN 146,840. Pub. 4-9-63. Filed 6-13-62.

751,660. NAVITIMER. Aircraft Owners and Pilots Association. SN 146,865. Pub. 4-9-63. Filed 6-14-62.

751,661. PRESSUR-GARD. Screen Products, Inc. SN 147,231. Pub. 4-9-63. Filed 6-19-62.

751,662. EECOWELD. Electronic Engineering Company of California. SN 147,560. Pub. 4-9-63. Filed 6-25-62.

751,663. EECOWELD. Electronic Engineering Company of California. SN 147,561. Pub. 4-9-63. Filed 6-25-62.

751,664. EECOWELD. Electronic Engineering Company of California. SN 147,562. Pub. 4-9-63. Filed 6-25-62.

751,665. DRY-EYE. Ansul Chemical Company. SN 147,671. Pub. 4-9-63. Filed 6-26-62.

751,666. EAI. Electronic Associates, Inc. SN 148,158. Pub. 4-9-63. Filed 7-2-62.

751,667. DELTIME. Deltime, Inc. SN 149,270. Pub. 4-9-63. Filed 7-18-62.

751,668. COMPUTALIZER. Emil H. Lehtonen. SN 149,301. Pub. 4-9-63. Filed 7-18-62.

751,669. RM RETRIEVABLE MINIATURIZATION AND DESIGN. Charles Bruning Company, Inc. SN 150,155. Pub. 4-9-63. Filed 7-31-62.

751,670. LAB-ETT. Instructomatic, Inc. SN 150,172. Pub. 4-9-63. Filed 7-31-62.

751,671. REDY-LOAD. General Aniline & Film Corporation. SN 150,410. Pub. 4-9-63. Filed 8-3-62.

751,672. OZAPHANE. General Aniline & Film Corporation. SN 150,551. Pub. 4-9-63. Filed 8-6-62.

751,673. MEMO-CORDER. Hughes Aircraft Company. SN 151,229. Pub. 4-9-63. Filed 8-15-62.

751,674. P FOR I AND DESIGN. Physics for Industry, Inc. SN 152,151. Pub. 4-9-63. Filed 8-29-62.

751,675. GISMO. Spex Industries, Inc. SN 152,164. Pub. 4-9-63. Filed 8-29-62.

751,676. VERLORT. Reeves Instrument Corporation. SN 152,246. Pub. 4-9-63. Filed 8-30-62.

751,677. DOCUSTAT. Documat, Inc. SN 152,287. Pub. 4-9-63. Filed 8-31-62.

751,678. ROTOMATIC. Sawyers, Inc. SN 152,445. Pub. 4-9-63. Filed 9-4-62.

751,679. DC DESIGN. Dura Corporation. SN 152,502. Pub. 4-9-63. Filed 9-5-62.

751,680. RISO. Riso Optical Co., Inc. SN 152,527. Pub. 4-9-63. Filed 9-5-62.

751,681. AUTO-STROB. Vernon C. Westberg, d.b.a. Auto Meter Products. SN 152,654. Pub. 4-9-63. Filed 9-6-62.

751,682. THOROX. National Beryllia Corp. SN 152,658. Pub. 4-9-63. Filed 9-5-62.

Class 27 — Horological Instruments

751,683. BAYLOR. Zale Jewelry Company, Inc. SN 151,859. Pub. 4-9-63. Filed 8-24-62.

Class 28 — Jewelry and Precious-Metal Ware

751,684. GEOMETRICAL DESIGN. Armbrust Chain Company. SN 142,677. Pub. 4-9-63. Filed 4-20-62.

751,685. 14-K AND DESIGN. Arnold D. Golber, d.b.a. Certified Metals Co. SN 144,248. Pub. 4-9-63. Filed 5-10-62.

751,686. E. Eastern Jewelry Manufacturing Co. SN 147,362. Pub. 4-9-63. Filed 6-21-62.

751,687. SJ CO. Stronghold Jewelry Co. SN 147,644. Pub. 4-9-63. Filed 6-25-62.

751,688. HO. House of Oland Inc. SN 148,506. Pub. 4-9-63. Filed 7-6-62.

751,689. DET. David Edward Trabich. SN 149,342. Pub. 4-9-63. Filed 7-18-62.

751,690. FRL. Federated Department Stores, Inc., d.b.a. The F. & R. Lazarus & Company. SN 149,397. Pub. 4-9-63. Filed 7-19-62.

751,691. WJT. Weiden Jewelry & Trading Co. SN 149,427 Pub. 4-9-63. Filed 7-19-62.

751,692. J.D. Nat Young. SN 150,205. Pub. 4-9-63. Filed 7-31-62.

751,693. WACO. Warren William Welch, d.b.a. Wil-Aren. SN 150,377. Pub. 4-9-63. Filed 8-2-62.

751,694. PW AND DESIGN. Paul Wachs. SN 150,656. Pub. 4-9-63. Filed 8-6-62.

751,695. RJ & S. Russ Jensen & Sons, Mfg. Jewelers. SN 152,411. Pub. 4-9-63. Filed 9-4-62.

751,696. AMERICAN BEAUTY. Untermeyer, Robbins & Co. SN 152,474. Pub. 4-9-63. Filed 9-4-62.

751,697. FALSTAFF. Arnold E. Williams and Sons Limited. SN 152,545. Pub. 4-9-63. Filed 9-5-62.

751,698. CROWN DESIGN. Royalite Jewelry Mfg., Inc. SN 152,631. Pub. 4-9-63. Filed 9-6-62.

751,699. LEON. Leon Jewels, Limited. SN 152,710. Pub. 4-9-63. Filed 9-7-62.

Class 29 — Brooms, Brushes, and Dusters

751,700. WHITE DANDY. The Wooster Brush Company. SN 145,813. Pub. 4-9-63. Filed 5-23-62.

751,701. 7. E. I. du Pont de Nemours and Company. SN 145,448. Pub. 4-9-63. Filed 5-25-62.

751,702. WEBRIL. The Kendall Company. SN 145,565. Pub. 4-9-63. Filed 5-28-62.

751,703. GAIN-WAY. The Procter & Gamble Company. SN 147,223. Pub. 4-9-63. Filed 6-19-62.

Class 31 — Filters and Refrigerators

751,704. HOTPOINT. General Electric Company. SN 131,538. Pub. 4-9-63. Filed 11-6-61.

751,705. MICRO-FLOW. Filterite Corporation. SN 134,627. Pub. 4-9-63. Filed 12-26-61.

751,706. MANESCO. Manesco, Inc. SN 134,821. Pub. 4-9-63. Filed 12-28-61.

751,707. MILLIPORE MICROTUBE. Millipore Filter Corporation. SN 135,033. Pub. 4-9-63. Filed 1-2-62.

751,708. SUR-VIVA-PAC. Continental Water Conditioning Corporation. SN 139,598. Pub. 4-9-63. Filed 3-12-62.

751,709. MICROFLOC AND DESIGN. Microfloc Corporation. SN 140,150. Pub. 4-9-63. Filed 3-19-62.

Class 32 — Furniture and Upholstery

751,710. DURAFIL. Fisher Products Company. SN 147,723. Pub. 4-9-63. Filed 6-26-62.

751,711. MINUTE MART. Union Oil Company of California. SN 150,121. Pub. 4-9-63. Filed 7-30-62.

751,712. DYNA-TUFT. Eclipse Sleep Products, Inc. SN 153,468. Pub. 4-9-63. Filed 9-19-62.

751,713. VANI-CHEST. Wolf Appliance Corporation. SN 153,536. Pub. 4-9-63. Filed 9-19-62.

751,714. VS. The Home-O-Nise Co. SN 153,656. Pub. 4-9-63. Filed 9-21-62.

751,715. HONOR. The Home-O-Nise Co. SN 153,657. Pub. 4-9-63. Filed 9-21-62.

751,716. CARRIAGE HOUSE. Federated Department Stores, Inc. SN 154,228. Pub. 4-9-63. Filed 10-1-62.

751,717. VIA VENETO. Drexel Enterprises, Inc. SN 154,336. Pub. 4-9-63. Filed 10-2-62.

751,718. SKYLARK. The Englander Company, Inc. SN 154,580. Pub. 4-9-63. Filed 10-5-62.

Class 33 — Glassware

751,719. REPRESENTATION OF KANJI DESIGN WITHIN A SQUARE FIGURE ENCLOSED WITHIN A CIRCLE. Kabushiki Kaisha Matsusakaya. SN 117,756. Pub. 4-9-63. Filed 4-12-61.

751,720. SAF. Wheaton Glass Company. SN 142,474. Pub. 4-9-63. Filed 4-17-62.

751,721. STARLUX. American-Saint Gobain Corporation. SN 153,541. Pub. 4-9-63. Filed 9-20-62.

751,722. A DISTINGUISHED GIFT CREATION AND DESIGN. Distinguished Gift Manufacturers, Inc. SN 153,745. Pub. 4-9-63. Filed 9-24-62.

Class 34 — Heating, Lighting, and Ventilating Apparatus

751,573. CONSOLIDATED CERTIFICATE. See Class 21.

751,574. CONSOLIDATED CERTIFICATE. See Class 21.

751,723. MULTIDUCTOR AND DESIGN. Ajax Magnethermic Corporation, assignee of The General Engineering Company Ltd. SN 64,287. Pub. 4-9-63. Filed 12-15-58.

751,724. HEAT-MOBILE. Robinson Blower and Engineering Corp. SN 117,134. Pub. 4-9-63. Filed 4-4-61.

751,725. MANESCO. Manesco, Inc. SN 135,807. Pub. 4-9-63. Filed 1-15-62.

751,726. FLAMA VITA. Clare Candles, Incorporated. SN 145,929. Pub. 4-9-63. Filed 6-1-62.

751,727. TRADER VIC'S. Trader Vic's. SN 146,126. Pub. 4-9-63. Filed 6-4-62.

751,728. VAPOR-WHEEL. The Lau Blower Company. SN 146,204. Pub. 4-9-63. Filed 6-5-62.

751,729. FLIP-TOP. Ametek, Inc. SN 146,447. Pub. 4-9-63. Filed 6-8-62.

751,730. LINDE. Union Carbide Corporation. SN 151,175. Pub. 4-9-63. Filed 8-14-62.

751,731. UNION CARBIDE AND DESIGN. Union Carbide Corporation. SN 151,176. Pub. 4-9-63. Filed 8-14-62.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

751,732. PURE PRIDE. The Pure Oil Company. SN 149,964. Pub. 4-9-63. Filed 7-27-62.

751,733. URETHEN. Farbenfabriken Bayer Aktiengesellschaft. SN 154,341. Pub. 4-3-63. Filed 10-2-62.

751,734. REYCO-TRAC. A.J. Industries, Inc. SN 155,037. Pub. 4-9-63. Filed 10-12-62.

Class 36 — Musical Instruments and Supplies

751,735. TRIUMPH. Triumph Werke Nurnberg Aktiengesellschaft. SN 124,857. Pub. 4-9-63. Filed 7-27-61.

751,736. DELTA AND DESIGN. Melvin Verni, d.b.a. Delta Records. SN 126,580. Pub. 4-9-63. Filed 8-24-61.

751,737. UNIDICTA. Unidicta Canada Limited. SN 141,666. Pub. 4-9-63. Filed 4-2-62.

751,738. BIRTHSTONE. Birthstone Records. SN 142,688. Pub. 4-9-63. Filed 4-20-62.

751,739. STAGE. Leeds Records Inc. SN 144,077. Pub. 4-9-63. Filed 5-8-62.

751,740. NSS AND DESIGN. National Sound Systems, Inc. SN 144,408. Pub. 4-9-63. Filed 5-11-62.

751,741. TEL-ALL. The DoAll Company. SN 145,064. Pub. 4-9-63. Filed 5-21-62.

751,742. AUDIOLETA. Verbaleta Recorder Corporation. SN 145,144. Pub. 4-9-63. Filed 5-21-62.

751,743. ITALDISC. Italdisc Distributing Co. Inc. SN 146,060. Pub. 4-9-63. Filed 6-4-62.

751,744. THIS IS AN AMERIDISC. Americom Corporation. SN 146,155. Pub. 4-9-63. Filed 6-5-62.

751,745. SONIC-AIRE. Kreiss Corporation. SN 147,593. Pub. 4-9-63. Filed 6-25-62.

751,746. UNITY. Camelot Productions, Inc. SN 148,471. Pub. 4-9-63. Filed 7-6-62.

751,747. TIKI AND DESIGN. Tahiti Musique. SN 150,981. Pub. 4-9-63. Filed 8-10-62.

751,748. LODEON. J. Chein & Company. SN 151,661. Pub. 4-9-63. Filed 8-22-62.

Class 37 — Paper and Stationery

751,749. INSERTOMATIC. R & R Printing Corporation. SN 144,539. Pub. 4-9-63. Filed 5-14-62.

751,750. WASCO. Talens & Son, Inc. SN 145,743. Pub. 4-9-63. Filed 5-29-62.

751,751. CO-REC-KIT. Eaton Allen Corp. SN 146,598. Pub. 4-9-63. Filed 6-11-62.

751,752. A AND DESIGN. American Greetings Corporation. SN 147,669. Pub. 4-9-63. Filed 6-26-62.

751,753. GOLDEN SHOWCASE. Hudson Pulp & Paper Corp. SN 150,418. Pub. 4-9-63. Filed 8-3-62.

751,754. STAND-N. Mason Marking Systems Corporation. SN 150,806. Pub. 4-9-63. Filed 8-8-62.

Class 38 — Prints and Publications

751,755. VETQUICK. Ames Company, Inc. SN 148,124. Pub. 4-9-63. Filed 7-2-62.

751,756. NON SOLUS AND DESIGN. N.V. Uitgeversmaatschappij Elsevier. SN 148,694. Pub. 4-9-63. Filed 6-13-62.

751,757. THE FORT RILEY POST AND DESIGN. John D. Montgomery, d.b.a. The Fort Riley Post. SN 149,074. Pub. 4-9-63. Filed 7-16-62.

751,758. VERMONT VACATIONER. Vacationer Enterprises, Inc. SN 149,143. Pub. 4-9-63. Filed 7-16-62.

751,759. S9 THE CITIZENS BAND JOURNAL. Cowan Publishing Corp. SN 149,268. Pub. 4-9-63. Filed 7-18-62.

751,760. FRANCES CLARK. Summy-Birchard Company. SN 149,421. Pub. 4-9-63. Filed 7-19-62.

751,761. PERSONAL AND DESIGN. Sexology Corp. SN 149,625. Pub. 4-9-63. Filed 7-19-62.

751,762. LOGETRONIC. Logetronics, Inc. SN 149,939. Pub. 4-9-63. Filed 7-27-62.

751,763. GLOBE OF THE WORLD DESIGN. New York World's Fair 1964-1965 Corporation. SN 155,219. Pub. 4-9-63. Filed 10-5-62.

Class 39 — Clothing

751,764. VANTAGE. The Lovable Brassiere Co., assignee of Kops Bros., Inc. SN 93,812. Pub. 4-9-63. Filed 3-28-60.

751,765. KASEILON. Asahi Kasei Kogyo Kabushiki Kaisha. SN 99,482. Pub. 4-9-63. Filed 6-22-60.

751,766. WEST BEST AND DESIGN. West Brothers of De Bidder La., Inc. SN 102,811. Pub. 4-9-63. Filed 8-16-60.

751,767. KEYSTONE SLACKS. The Hercules Trouser Company. SN 109,062. Pub. 4-9-63. Filed 11-25-60.

751,768. PINKY. Perry Manufacturing Company. SN 111,756. Pub. 4-9-63. Filed 1-12-61.

751,769. DRESDEN. Peter Paul Maymar, d.b.a. Fleetwood Company. SN 117,720. Pub. 4-9-63. Filed 4-12-61.

751,770. PEROCHE. Société Peroche. SN 124,003. Pub. 4-9-63. Filed 7-17-61.

751,771. STYLED BY ED. WALLACE. Edwin C. Wallace. SN 125,855. Pub. 4-9-63. Filed 8-11-61.

751,772. EXOTICA. L & M Fashions, Inc. SN 126,238. Pub. 4-9-63. Filed 8-18-61.

751,773. HAGGAR ACTION SLACKS. Haggar Company. SN 127,476. Pub. 4-9-63. Filed 9-8-61.

751,774. PLEBE AND DESIGN. Irving Samuels. SN 129,695. Pub. 4-9-63. Filed 10-11-61.

751,775. LAWTON'S. Plymouth Shoe Company. SN 130,494. Pub. 4-9-63. Filed 10-23-61.

751,776. LEG-BEAUTY. Wayne Knitting Mills. SN 137,295. Pub. 4-9-63. Filed 2-5-62.

751,777. MAGICOLLAR. Western Garment Company. SN 139,977. Pub. 4-9-63. Filed 3-15-62.

751,778. GARIBALDI. Fuchs Bros. Sales Corporation. SN 143,621. Pub. 4-9-63. Filed 5-2-62.

751,779. DUNCANNON. Duncannon Sportswear Co., Inc. SN 145,171. Pub. 4-9-63. Filed 5-22-62.

751,780. MATISSE. Gallenkamp Stores Co. SN 145,455. Pub. 4-9-63. Filed 5-25-62.

751,781. OFF BEATS. Sbicca of California. SN 145,484. Pub. 4-9-63. Filed 5-25-62.

751,782. IDENTO. Atlas Novelty Co., Inc. SN 145,754. Pub. 4-9-63. Filed 5-31-62.

751,783. HUG-EASE. Le Roi Hosiery Co., Inc. SN 146,202. Pub. 4-9-63. Filed 6-5-62.

751,784. SHUN RUN. Sapphire Corporation. SN 146,667. Pub. 4-9-63. Filed 6-11-62.

751,785. BOBBI-TOPPS. Stanley Zukowski, d.b.a. Jewels by Stanlee. SN 147,170. Pub. 4-9-63. Filed 6-18-62.

751,786. PERFINOS. Freeman Shoe Corporation. SN 147,276. Pub. 4-9-63. Filed 6-20-62.

751,787. MAXEASE. Dunlop Tire and Rubber Corporation. SN 147,455. Pub. 4-9-63. Filed 6-22-62.

751,788. MR STYLE. Style Footwear Co., Inc. SN 147,516. Pub. 4-9-63. Filed 6-22-62.

751,789. LISA LORD. Bobbie Brooks, Incorporated. SN 147,791. Pub. 4-9-63. Filed 6-27-62.

751,790. ATLAS DESIGN. Atlas Novelty Co., Inc. of Phila. SN 147,881. Pub. 4-9-63. Filed 6-28-62.

751,791. PETERS WHALER AND DESIGN. Peters Sportswear Co., Inc. SN 149,672. Pub. 4-9-63. Filed 7-24-62.

751,792. NAN PAIGE. Imperial Shirt Corp. SN 150,063. Pub. 4-9-63. Filed 7-30-62.

751,793. MAGIC STITCH. Sidney J. Kreiss, Inc. SN 150,076. Pub. 4-9-63. Filed 7-30-62.

751,794. JERSEYMASTER. Sy Frankl, Inc. SN 150,549. Pub. 4-9-63. Filed 8-6-62.

751,795. DIGBY. Jack Schultz, Inc. SN 150,624. Pub. 4-9-63. Filed 8-6-62.

751,796. SAN-BOB. Jack Schultz, Inc. SN 150,626. Pub. 4-9-63. Filed 8-6-62.

Class 40 — Fancy Goods, Furnishings, and Notions

751,797. USM AND DESIGN. United Shoe Machinery Corporation. SN 150,475. Pub. 4-9-63. Filed 8-3-62.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

751,798. KIDDYTEX. Anderson, Clayton & Co., assignee of Maurice David. SN 123,529. Pub. 3-13-62. Filed 7-7-61.

751,799. TRUST THE BIG RED "A." Monsanto Chemical Company, by merger from The Chemstrand Corporation. SN 136,114. Pub. 4-9-63. Filed 1-19-62.

751,800. AMERICA'S PRIDE. Weil & Durrse, Inc. SN 137,022. Pub. 4-9-63. Filed 1-31-62.

751,801. TRI-FI. Wellington Sears Company. SN 147,524. Pub. 4-9-63. Filed 6-22-62.

751,802. REFLEX. Graniteville Company. SN 151,226. Pub. 4-9-63. Filed 8-15-62.

751,803. PERMA-FLEECE. Gehring Textiles, Inc. SN 151,311. Pub. 4-9-63. Filed 8-16-62.

Class 43—Thread and Yarn

751,804. PEER GYNT ETC. AND DESIGN. Sandnes Uldvarefabrik A/S. SN 135,915. Pub. 4-9-63. Filed 1-16-62.

751,805. UNIT-SPUN. Morehead Mills, Inc. SN 143,853. Pub. 4-9-63. Filed 5-4-62.

751,806. SNUGLDOWN. Collins & Aikman Corporation. SN 145,787. Pub. 4-9-63. Filed 5-31-62.

Class 44—Dental, Medical, and Surgical Appliances

751,807. HAEMO-PAK. McGaw Laboratories, Inc., assignee of American Sterilizer Company. SN 113,676. Pub. 4-9-63. Filed 2-15-61.

751,808. PHYSIOTEL. Dallons Laboratories, Incorporated. SN 116,483. Pub. 4-9-63. Filed 3-27-61.

751,809. LITTMANN. Cardiosonics Medical Instruments Company. SN 131,009. Pub. 4-9-63. Filed 10-31-61.

751,810. GOLD-KOIN. Universal Compounding Company. SN 141,185. Pub. 4-9-63. Filed 3-29-62.

751,811. OSTEOCIZOR. Bryan Hendershott, d.b.a. Hende Co. SN 147,925. Pub. 4-9-63. Filed 6-28-62.

751,812. MICROPORE. Minnesota Mining and Manufacturing Company. SN 150,270. Pub. 4-9-63. Filed 8-1-62.

751,813. LEVITOR. Institute for Gravitational Strain Pathology, Inc. SN 151,757. Pub. 4-9-63. Filed 8-23-62.

751,814. POSTUREZE. Hennessy Lubricator Co., Inc., d.b.a. Postureze. SN 151,911. Pub. 4-9-63. Filed 8-27-62.

751,815. SILITEX. Clay-Adams, Inc. SN 152,879. Pub. 4-9-63. Filed 9-11-62.

751,816. FORM-IT. The Foregger Company, Inc. SN 153,082. Pub. 4-9-63. Filed 9-13-62.

751,817. UNISERT. Esta Medical Laboratories, Inc. SN 154,222. Pub. 4-9-63. Filed 10-1-62.

751,818. TROJAN WITHIN DIAMOND DESIGN. Youngs Rubber Corporation. SN 154,390. Pub. 4-9-63. Filed 10-2-62.

751,819. UNICORN DESIGN. Akron Catheter Inc. SN 154,944. Pub. 4-9-63. Filed 10-11-62.

Class 46—Foods and Ingredients of Foods

751,820. DAIRY CHARM ETC. AND DESIGN. Cooperative Quality Marketing, Inc. SN 78,431. COLLECTIVE MARK. Pub. 12-15-59. Filed 7-27-59.

751,821. GORDO'S. Gordo's Mexican Food Products. SN 143,951. Pub. 4-9-63. Filed 5-7-62.

751,822. TOPPER AND DESIGN. Topper Bakeries. SN 144,900. Pub. 4-9-63. Filed 5-17-62.

751,823. BONNIE BAKER. Piggly Wiggly Operators' Warehouse, Inc. SN 146,655. Pub. 4-9-63. Filed 6-11-62.

751,824. BLUE-ORE. Blue Mountain Growers, Inc. SN 147,336. Pub. 4-9-63. Filed 6-20-62.

751,825. BRANSTON. The Nestlé Company, Inc. SN 147,842. Pub. 4-9-63. Filed 6-27-62.

751,826. RITE CARE. Rite-Care Corp. SN 149,773. Pub. 4-9-63. Filed 7-25-62.

751,827. GRANDMA'S. Boston Molasses Company. SN 151,470. Pub. 4-9-63. Filed 8-20-62.

751,828. BLACK BEAUTY AND DESIGN. Milwaukee Cheese Co. SN 153,097. Pub. 4-9-63. Filed 9-13-62.

751,829. PURPLE WRAP AND DESIGN. Gro-Pak, Inc. SN 153,171. Pub. 4-9-63. Filed 9-14-62.

Class 48—Malt Beverages and Liquors

751,830. STA-BRU. A. E. Staley Manufacturing Company. SN 145,628. Pub. 4-9-63. Filed 5-28-62.

Class 49—Distilled Alcoholic Liquors

751,831. CHIN CHIN. Ronrico Corporation. SN 145,735. Pub. 4-9-63. Filed 5-29-62.

751,832. BRAS ARME. Schieffelin & Co. SN 149,775. Pub. 4-9-63. Filed 7-25-62.

Class 50—Merchandise Not Otherwise Classified

751,833. FUL-LITE. Fulton Company. SN 130,060. Pub. 4-9-63. Filed 10-17-61.

751,834. WIPONKOTE. Polychrome Corporation. SN 131,153. Pub. 4-9-63. Filed 11-1-61.

751,835. SANA-CABANA. General Panel Corporation. SN 145,181. Pub. 4-9-63. Filed 5-22-62.

751,836. KLING KLEEN. John J. Nappi, d.b.a. Liberty Machine Co. SN 149,402. Pub. 4-9-63. Filed 7-19-62.

Class 51—Cosmetics and Toilet Preparations

751,837. BITE-AND-BRUSH. Colgate-Palmolive Company. SN 144,344. Pub. 4-9-63. Filed 5-11-62.

751,838. COMME-CI-COMME-ÇA. Jacques Reich, d.b.a. Jacques Fourcy. SN 145,122. Pub. 4-9-63. Filed 5-21-62.

Class 52—Detergents and Soaps

751,839. CINDERELLA. Cinderella International Company, Inc. SN 133,535. Pub. 4-9-63. Filed 12-7-61.

751,840. DU-L-IZE. Carl R. Van Zile, d.b.a. Van Zile Products Company. SN 144,583. Pub. 4-9-63. Filed 4-30-62.

751,841. TRANSENE. Charlotte F. Hecht, d.b.a. Transene Company. SN 144,838. Pub. 4-9-63. Filed 5-17-62.

Service Marks

Class 100—Miscellaneous

751,842. MEDICOR. Medical Investment Corporation. SN 147,943. Pub. 4-9-63. Filed 6-28-62.

Class 101—Advertising and Business

751,843. FRANCES FAIR'S. Food Fair Stores, Inc. SN 143,731. Pub. 4-9-63. Filed 5-3-62.

751,844. NSSA AND BIRD DESIGN. The National Skeet Shooting Association. SN 147,301. Pub. 4-9-63. Filed 6-20-62.

751,845. HIDDEN TREASURE. E. F. MacDonald Stamp Company. SN 152,321. Pub. 4-9-63. Filed 8-31-62.

Class 102—Insurance and Financial

751,846. CLICO AND DESIGN. Constitution Life Insurance Company. SN 143,799. Pub. 4-9-63. Filed 5-4-62.

Class 107—Education and Entertainment

751,847. PAPPY SHOW. Sydney Letcher. SN 148,819. Pub. 4-9-63. Filed 7-11-62.

Collective Membership Marks

Class 200

751,848. PAA ETC. AND SHIELD DESIGN. Professional Archers Association of America. SN 148,418. Pub. 4-9-63. Filed 7-5-62.

751,849. THE YOUNG CONSERVATIVES. Young Conservatives of Illinois, Inc. SN 148,286. Pub. 4-9-63. Filed 7-24-62.

Certification Mark

Class A—Goods

751,850. ACWA UNION MADE AND DESIGN. Amalgamated Clothing Workers of America. SN 148,286. Pub. 4-9-63. Filed 7-3-62.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 2—Receptacles

751,851. West Chemical Products, Inc., Long Island City, N.Y. SN 137,964. Filed P.R. 2-14-62; Am. S.R. 4-26-63.

FIST-GRIP

For Plastic Jugs.
First use Dec. 1, 1961.

751,852. Zylon Products Co., Inc., Pawtucket, R.I. SN 144,290. Filed P.R. 5-10-62; Am. S.R. 4-22-63.

HANDY FOR THE HANDS OF THE HANDICAPPED

For Molded Plastic Invalid Utensils—Namely, Food Serving Trays, Cups, Bowls, Tray Holders, and Dishes.
First use August 1961.

Class 12—Construction Materials

751,853. Richmond Screw Anchor Co., Inc., Brooklyn, N.Y. SN 126,187. Filed P.R. 8-17-61; Am. S.R. 2-11-63.

TYWEDGE

For Adjustable Couplings for Fastening Form Ties to Wooden Concrete Forms.
First use July 10, 1961.

751,854. Cool-Temp Awning Company, Inc., Wichita, Kans. SN 137,324. Filed P.R. 2-6-62; Am. S.R. 1-28-63.

CUSTOM SEAL

For Aluminum Combination Storm and Screen Doors and Storm and Screen Windows and Permanent Awnings of Wood, Aluminum or Plastic.
First use Nov. 6, 1961.

751,855. Edward Hines Lumber Co., Chicago, Ill. SN 137,525. Filed P.R. 2-8-62; Am. S.R. 1-18-63.

HINES WIDEBOARD

For Lumber Paneling.
First use Nov. 28, 1961.

Class 19—Vehicles

751,856. Applied Power Industries, Inc., West Allis, Wis. SN 138,145. Filed P.R. 2-19-62; Am. S.R. 4-8-63.

TOOL-TOTER

For Mechanics' Tool Carrying and Storage Carts.
First use on or about Nov. 30, 1961.

Class 21—Electrical Apparatus, Machines, and Supplies

751,857. Enlite Products Co. Inc., New York, N.Y. SN 151,897. Filed 8-27-62.



The drawing is lined for red and yellow.
For Electric Accessories for Bicycles—Namely, Electric Lights, Electric Horns, Electric Sirens, and Electric Generators.
First use on or prior to Feb. 1, 1958.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

751,858. Stero Chemical Mfg. Co., San Francisco, Calif. SN 142,753. Filed P.R. 4–20–62; Am. S.R. 3–15–63.

CORK POPS

For Pressurized Device for Uncorking Bottles.
First use Mar. 2, 1962.

751,859. Sossner Steel Stamps, Inc., Long Island City, N.Y. SN 149,154. Filed 5–17–62.

Artistiqur

For Steel Stamps and Dies for Marking and Engraving Insignia, Data, Designs and Trademarks on Watch Cases, Silverware, Gold Pens, Articles of Jewelry and Similar Merchandise; Ornamental Dies and Rollers for Fancy Metal Goods; Rollers and Machine Stamps for Cutlery, Hardware, Tools, Twist Drills and Like Merchandise; Precision Dies for Graduating Rules, Verniers and Micrometers and Precision Measurement Instruments and Devices Generally; Hand Engraved and Machine Engraved Dies; Precision Gages of the Snap, Plug, Ring and Other Types; Cutting Tools for All Types of Machine Tools; Millers; Reamers; Borers; Drills; Slitting Saws; and Taps.
First use August 1927.

Class 26—Measuring and Scientific Appliances

751,860. Universal Electronics Laboratories Corporation, Hackensack, N.J. SN 139,248. Filed P.R. 3–5–62; Am. S.R. 2–28–63.

SPEED-LEARNING METHOD

Applicant disclaims the word "Method" apart from the mark as shown.
For Teaching Machines for Self-Learning Various Subject Matters, Such as Scholastic, Commercial, and Domestic Subjects, Etc.
First use Feb. 5, 1962.

Class 27—Horological Instruments

751,861. Leo Halbeck, d.b.a. Midwest Importers, Kansas City, Mo. SN 139,937. Filed P.R. 3–15–62; Am. S.R. 4–30–63.

MIDWEST IMPORTERS
Kansas City, Mo.

For Clocks and Clock Movements.
First use July 1, 1956.

Class 32—Furniture and Upholstery

751,862. Clarin Mfg. Co., Chicago, Ill. SN 154,689. Filed P.R. 10–8–62; Am. S.R. 4–25–63.

RESERVE SEATING

For Chairs.
First use April 1959.

Class 39—Clothing

751,863. Craddock-Terry Shoe Corporation, Lynchburg, Va. SN 127,843. Filed P.R. 9–14–61; Am. S.R. 8–20–62.

. . . AND SUDDENLY YOU'RE IN LOVE WITH A SHOE!

For Shoes for Women.
First use July 18, 1961.

751,864. Angelica Uniform Company, St. Louis, Mo. SN 158,767. Filed 12–10–62.

HUNTLEY

For Men's Coats and Pants.
First use Apr. 6, 1961.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

751,865. David Crystal, Inc., New York, N.Y. SN 122,281. Filed P.R. 6–19–61; Am. S.R. 4–11–63.

THE UNCRUSHABLES

For Piece Goods Intended for Use in Making Misses' and Ladies' Dresses, Suits, Skirts, Blouses, Shirts, Coats, Slacks, Jumpers; Men's Shirts, Swim Trunks, Shorts, Slacks, Socks, and Jackets.
First use June 1, 1961.

TRADEMARK REGISTRATIONS RENEWED

166,883. INTERNATIONAL COVER. Cl. 37. 4–17–23.
167,017. MFB. Cl. 46. 4–24–23.
167,087. VITA-VIGO. Cl. 46. 4–24–23.
167,898. CROWN BRAND. Cl. 46. 5–1–23.
167,744. HONEOLA. Cl. 18. 5–8–23.
167,800. ARCTIC. Cl. 15. 5–8–23.
167,912. MAGANATE. Cl. 18. 5–8–23.
167,913. ZINOX. Cl. 51. 5–8–23.

168,111. SWP. Cl. 16. 5–15–23.
168,904. HICKORY. Cl. 40. 5–29–23.
169,179. DOUBLE HEADED ARROW DESIGN. Cl. 35. 6–12–23.
169,461. RUBREX. Cl. 15. 6–19–23.
169,462. AMBREX. Cl. 15. 6–19–23.
169,485. SNUFFITE. Cl. 4. 6–19–23.
170,038. EULAN. Cl. 6. 7–10–23.
170,241. DYNAMICUT. Cl. 23. 7–10–23.
170,369. BUDDIE. Cl. 45. 7–17–23.
170,794. NUTRAVIT. Cl. 46. 7–24–23.
172,336. KERITE. Cl. 21. 8–28–23.
172,537. STORAXOL. Cl. 18. 9–4–23.
173,213. BLUE RIBBON. Cl. 42. 9–18–23.
173,329. YAK. Cl. 46. 9–25–23.
173,683. ORBIT. Cl. 46. 10–2–23.
174,253. HOP-SCOTCH. Cl. 39. 10–9–23.
174,315. ROYAL ARTIST. Cl. 36. 10–16–23.
174,470. COLORMIX. Cl. 12. 10–16–23.
174,600. DAYS KERITE AND DESIGN. Cl. 21. 10–23–23.
174,601. MOTHER ANN. Cl. 46. 10–23–23.
174,764. DURA. Cl. 15. 10–23–23.
399,905. BAREES. Cl. 39. 2–2–43.
401,120. MASTICAL. Cl. 12. 4–27–43.
401,201. CASA-LAINE. Cl. 43. 4–27–43.
401,340. BARRETT. Cl. 12. 5–11–43.
401,410. PARFUMETTE. Cl. 51. 5–18–43.
401,429. ALBI AND DESIGN. Cl. 6. 5–18–43.
401,458. SO-NU. Cl. 16. 5–18–43.
401,504. ROYAL CREST AND DESIGN. Cl. 46. 5–25–43.
401,540. COPPER-X. Cl. 1. 5–25–43.
401,542. NICKEL-X. Cl. 1. 5–25–43.
401,614. NO-WHIPBASK. Cl. 22. 5–25–43.
401,793. VEDS. Cl. 18. 6–8–43.
401,807. 4 WAY. Cl. 18. 6–8–43.
401,877. SKYTOP. Cl. 42. 6–15–43.
401,978. PARACHUTE. Cl. 35. 6–22–43.
402,007. HAEMO-SOL. Cl. 52. 6–22–43.
402,071. SOVASUDS. Cl. 52. 6–29–43.
402,190. PLASTITE. Cl. 21. 7–6–43.
402,396. LEXOL. Cl. 46. 7–20–43.
402,462. SOLVENTOL. Cl. 4. 7–27–43.
402,596. E. W. GROVE. Cl. 18. 8–3–43.
402,870. STAR DUST AND DESIGN. Cl. 46. 8–17–43.
403,141. ARGO SHEEN. Cl. 52. 9–7–43.
403,300. HYDROFECT. Cl. 6. 9–14–43.
403,468. AIR CHIEF. Cl. 46. 9–28–43.
403,487. MARY BAKER EDDY. Cl. 38. 9–28–43.
403,506. BUSTER BROWN. Cl. 39. 9–28–43.
403,680. WESTAG. Cl. 46. 10–12–43.
403,718. APEX. Cl. 44. 10–12–43.
403,714. MARCH AND DESIGN. Cl. 46. 10–12–43.
403,740. ENDLESS WOVEN AND DESIGN. Cl. 35. 10–19–43.

TRADEMARK REGISTRATIONS CANCELED

Section 8

395,850. CHECKMATE. Cl. 16. 6–16–42.

The following registrations issued May 7, 1957

644,961. DESIGN OF MAN AND LAMP. Cl. 1.
644,968. FAMILY-PAK. Cl. 2.
644,970. PUL-EZE. Cl. 2.
644,973. MONTE CARLO. Cl. 2.
644,975. AQUA-SHINE. Cl. 4.
644,976. AQUA-SHINE. Cl. 4.
644,977. RAZORMATE. Cl. 4.
644,978. WOW. Cl. 4.
644,990. GALLOSAN. Cl. 6.
644,993. TIDE-STAR. Cl. 6.
644,996. FORMEA AND DESIGN. Cl. 6.
644,997. PROTI-QUAN. Cl. 6.
645,007. ELECTROTEST. Cl. 18.
645,010. TOAS-TITE. Cl. 13.
645,011. KOVAX. Cl. 13.
645,028. FROSTIN. Cl. 14.
645,033. POLY-SOL. Cl. 16.
645,045. GERISERP. Cl. 18.
645,046. NORMALIN. Cl. 18.
645,048. ARTHRYCIN. Cl. 18.
645,052. FORSALTOL. Cl. 18.
645,053. SOMATOVITE CHEWTAB. Cl. 18.
645,056. GLASS RAY ETC. AND DESIGN. Cl. 21.
645,057. GARVENS AND DESIGN. Cl. 21.
645,058. CLAREMONT. Cl. 21.
645,061. INFRA AND CIRCULAR DESIGN. Cl. 21.
645,069. WAMO AND DESIGN. Cl. 22.
645,071. HOOK MASTER. Cl. 22.
645,073. JUMPMASTER TEST OF CHAMPIONS. Cl. 22.
645,075. SEA-SPIN. Cl. 22.
645,076. TRIM-SPIN. Cl. 22.
645,077. OCTAGONAL DESIGN. Cl. 23.
645,085. JET BUG-AIRE. Cl. 23.
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67,494. GOLDEN GLOW. Cl. 46. 2–4–08. Geneva Preserving Company. The Borden Company, New York, N.Y. Amended to appear:

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157,962. GOLD SEAL. Cl. 47. 8–22–22. Gold Seal Vineyards, Inc., Hammondsport, N.Y. Amended to appear:

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224,453. COLONIAL. Cl. 15. 3–1–27. Beacon Oil Company. Humble Oil & Refining Company, Houston, Tex. Amended to appear:

COLONIAL

401,714. COLONIAL. Cl. 15. 6–1–43. Colonial Beacon Oil Company. Humble Oil & Refining Company, Houston, Tex. Amended to appear:

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516,464. AMERICAN BRAKEBLOK. Cl. 35. 10–18–49. American Brake Shoe Company, New York, N.Y. Amended: In the statement, column 1, lines 8, 9 and 10, "; and for fan belts, radiator hose, and generator couplings, made partly of rubber," is deleted.

524,065. KINGLY. Cl. 39. 4–16–50. Hirsch Shirt Corporation. The Manhattan Shirt Company, New York, N.Y. Amended to appear:

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734,839. A AND DESIGN. Cl. 21. 7–24–62. Aerotec Industries, Inc., Greenwich, Conn. Corrected: In the statement, column 1, line 1, "Aerotex" should be deleted and *Aeroteo* should be inserted.

743,447. ROYAL GOLD BURRO. Cl. 35. 1–8–63. United States Rubber Company, New York, N.Y. Corrected: In the statement, column 2, line 2, "1962" should be deleted and *1961* should be inserted.

747,560. DORR RAPI DIE REGISTER AND DESIGN. Cl. 23. 4–2–63. Dorr Sales & Engineering Co. Inc., Milwaukee, Wis. Corrected: In the statement, column 1, "Door" should be deleted and *Dorr* should be inserted.

747,581. KILAR. Cl. 26. 4–2–63. Photoptic Import Corp., New York, N.Y. Corrected: In the statement, column 1, line 2, "Parke" should be deleted and *Park* should be inserted.

747,592. BIOMAT. Cl. 26. 4–2–63. The Dentists' Supply Company of New York, York, Pa. Corrected: In the statement, column 1, line 1, after "Company" *of New York* should be inserted.

747,628. WING IFB. Cl. 34. 4–2–63. L. J. Wing Mfg. Co., Division of Aero-Flow Dynamics, Inc., Linden, N.J. Corrected: In the statement, column 1, before line 1, *L. J. Wing Mfg. Co., Division of* should be inserted.

747,712. OMAR AND DESIGN. Cl. 50. 4–2–63. Hoosier Tarpaulin and Canvas Goods Company, Inc., Indianapolis, Ind. Corrected: In the statement, column 1, line 1, after "Company", *Inc.* should be inserted.

748,242. ASSEMBLY ENGINEERING. Cl. 38. 4–16–63. Hitchcock Publishing Company, Wheaton, Ill. Corrected: In the heading, after "1962", *Am. S.R. Feb. 4, 1963* should be inserted.

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Adams, George W., C. E. Heltman, N. E. Ritchie, W. S. Booth, F. L. Jandron, and J. E. Fernald, trustees under the will of M. B. G. Eddy, deceased to F. L. Jandron, L. I. Gwalter, C. B. Craig, T. E. Hurley, and I. M. Douglas, trustees under the will of M. B. Eddy, deceased, Boston, Mass. 403,487, ren. 6–25–63. Cl. 38.
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Freeman Shoe Corp., Beloit, Wis. 751,786, pub. 4–9–63. Cl. 39.
Frigeco S.A., Societe Anonyme, Courbevoie (Seine), France. 751,509, pub. 4–9–63. Cl. 21.
Fuchs Bros. Sales Corp., New York, N.Y. 751,778, pub. 4–9–63. Cl. 39.
Fulton Co., Shreveport, La. 751,833, pub. 4–9–63. Cl. 50.
Gail Leather Products, Inc., New York, N.Y. 751,493, pub. 5–1–62. Cl. 3.
Gallenkamp Stores Co., Los Angeles, Calif. 751,780, pub. 4–9–63. Cl. 39.
Gallowhur Chemical Corp., Ossining, N.Y. 644,990, canc. Cl. 6.
Garvenswerke: *See*—
Schoenborn-Buchheim, George.
Gehring Textiles, Inc., New York, N.Y. 751,803, pub. 4–9–63. Cl. 42.
Gemex Co., to The Gemex Corp., Union, N.J. 645,101, canc. Cl. 28.
Gemex Corp., The: *See*—
Gemex Co.
General Aniline & Film Corp., New York, N.Y. 751,671–2, pub. 4–9–63. Cl. 26.
General Aniline & Film Co.: *See*—
Farbenfabriken vorm. Friedr. Bayer & Co.
General Cable Corp., New York, N.Y. 751,572, pub. 4–9–63. Cl. 21.

General Electric Co., Pittsfield, Mass. 751,567, pub. 4–9–63. Cl. 21.
General Electric Co., Schenectady, N.Y. 751,640, pub. 4–9–63. Cl. 24.
General Electric Co., Schenectady, N.Y. 751,608, pub. 4–9–63. Cl. 23.
General Electric Co., Schenectady, N.Y. 751,704, pub. 4–9–63. Cl. 31.
General Electric Co., Schenectady, N.Y. 751,571, pub. 4–9–63. Cl. 21.
General Engineering Co. Ltd., The: *See*—
Ajax Magnethermic Corp.
General Panel Corp., Page Park, Fort Myers, Fla. 751,835, pub. 4–9–63. Cl. 50.
Geneva Preserving Co. The Borden Co., New York, N.Y. 67,494. Am. 7(d). Cl. 46.
Gleamit Co.: *See*—
Burr, Mary F.
Golber, Arnold D., d.b.a. Certified Metals Co., Newark, N.J. 751,885, pub. 4–9–63. Cl. 26.
Gold Seal Vineyards Inc., Hammondsport, N.Y. 157,962. Am. 7(d). Cl. 47.
Goodrich, B. F., Co., The: *See*—
Hood Rubber Co.
Gordo's Mexican Food Products, Los Angeles, Calif. 751,821, pub. 4–9–63. Cl. 46.
Gorton-Pew Fisheries Co., to Gorton's of Gloucester Inc., Gloucester, Mass. 174,601, ren. 6–25–63. Cl. 46.
Gorton's of Gloucester Inc.: *See*—
Gorton-Pew Fisheries Co.
Graham-Palmer, William J., London, England. 645,157, canc. Cl. 44.
Graniteville Co., Graniteville, S.C. 751,802, pub. 4–9–63. Cl. 42.
Grayhill, Inc., La Grange, Ill. 751,568, pub. 4–9–63. Cl. 21.
Gray Pharmaceutical Co., Inc., Newton, Mass. 645,045, canc. Cl. 18.
Gro-Pak, Inc., Tacoma, Wash. 751,829, pub. 4–9–63. Cl. 46.
Grove Laboratories Inc.: *See*—
Grove Laboratories, Inc., The.
Grove Laboratories, Inc., The, Wilmington, Del., and St. Louis, Mo., to Grove Laboratories Inc., St. Louis, Mo. 402,596, ren. 6–25–63. Cl. 18.
Grove Laboratories, Inc., The, Wilmington, Del., and St. Louis, Mo., to Grove Laboratories Inc., St. Louis, Mo. 401,793, ren. 6–25–63. Cl. 18.
Grove Laboratories, Inc., The, Wilmington, Del., and St. Louis, Mo., to Grove Laboratories, Inc., St. Louis, Mo. 401,807, ren. 6–25–63. Cl. 18.
Haggar Co., Dallas, Tex. 751,773, pub. 4–9–63. Cl. 39.
Halbeck, Leo, d.b.a. Midwest Importers, Kansas City, Mo. 751,861. Cl. 27.
Hammons Products Co., Stockton, Mo. 751,481, pub. 4–9–63. Cl. 2.
Hartmann Luggage Co., Racine, Wis. 751,492, pub. 11–1–60. Cl. 3.
Harvey Aluminum (Inc.), Torrance, Calif. 751,585, pub. 4–9–63. Cl. 14.
Hassenfeld Bros., Inc., Central Falls, R.I. 751,600, pub. 4–9–63. Cl. 22.
Hawkeye Steel Products, Inc., Waterloo, Iowa. 751,625, pub. 4–9–63. Cl. 23.
Heatrite, Inc., Minneapolis, Minn. 645,114, canc. Cl. 34.
Hecht, Charlotte F., d.b.a. Transene Co., Danvers, Mass. 751,841, pub. 4–9–63. Cl. 52.
Heilkraft Medical Co., Boston, Mass. 645,052, canc. Cl. 18.
Hende Co.: *See*—
Hendershott, Bryan.
Hendershott, Bryan, d.b.a. Hende Co., Washington, D.C. 751,811, pub. 4–9–63. Cl. 44.
Hennessy Lubricator Co., Inc., d.b.a. Postureze, Chambersburg, Pa. 751,814, pub. 4–9–63. Cl. 44.
Hercules Trouser Co., The, Columbus, Ohio. 751,767, pub. 4–9–63. Cl. 39.
Herman, Leslie E., d.b.a. Zip-Lok Co., Orinda, Calif. 751,-489, pub. 1–29–63. Cl. 2.
Hicks Pharmacal Co., Newark, N.J. 645,048, canc. Cl. 18.
Hill Bros. Coffee, Inc., San Francisco, Calif. 644,970, canc. Cl. 2.
Hines, Edward, Lumber Co., Chicago, Ill. 751,855. Cl. 12.
Hirsch Shirt Corp. The Manhattan Shirt Co., New York, N.Y. 524,065. Am. 7(d). Cl. 39.
Hitchcock Publishing Co., Wheaton, Ill. 748,242, cor. Cl. 38.
Holden, Edwin R., d.b.a. Master Cleaners, Idaho Falls, Idaho. 645,253, canc. Cl. 52.
Home-O-Nize Co., The, Muscatine, Iowa. 751,714–15, pub. 4–9–63. Cl. 32.
Hood Rubber Co., Watertown, Mass., to The B. F. Goodrich Co., Akron, Ohio. 169,179, ren. 6–25–63. Cl. 35.
House of Oland Inc., New York, N.Y. 751,688, pub. 4–9–63. Cl. 28.
Houston Oil Field Material Co., Inc., Houston, Tex. 751,530, pub. 4–9–63. Cl. 14.
Hudson Pulp & Paper Corp., New York, N.Y. 751,753, pub. 4–9–63. Cl. 37.
Hughes Aircraft Co., Culver City, Calif. 751,673, pub. 4–9–63. Cl. 26.
Humble Oil & Refining Co.: *See*—
Colonial Beacon Oil Co.
Beacon Oil Co.
Humble Oil & Refining Co., Houston, Tex. 751,539, pub. 4–9–63. Cl. 15.
Hoosier Tarpaulin and Canvas Goods Co., Inc., Indianapolis, Ind. 747,712, cor. Cl. 50.
Hunt Foods and Industries, Inc.: *See*—
Southern Cotton Oil Co., The.
Hurty-Peck & Co., Indianapolis, Ind. 170,369, ren. 6–25–63. Cl. 45.
Hutchens & Son Metal Products, Inc., Springfield, Mo. 751,-555, pub. 4–9–63. Cl. 19.
Imperial Shirt Corp., New York, N.Y. 751,792, pub. 4–9–63. Cl. 39.
Indian Head Mills, Inc.: *See*—
Ulman, Bernhard, Co. Inc.
Infra Electronic Corp., Roseland, N.J. 645,061, canc. Cl. 21.
Inland Steel Co., Chicago, Ill. 645,028, canc. Cl. 14.
In-Sink-Erator Mfg. Co., Racine, Wis. 751,562, pub. 4–9–63. Cl. 21.
Inspiration Consolidated Copper Co., New York, N.Y. 751,532, pub. 4–9–63. Cl. 14.
Institute for Gravitational Strain Pathology, Inc., New York, N.Y. 751,813, pub. 4–9–63. Cl. 44.
Instructomatic, Inc., Detroit, Mich. 751,670, pub. 4–9–63. Cl. 26.
Intercontinental Dynamics Corp., Englewood, N.J. 645,098, canc. Cl. 26.
International Harvester Co., Chicago, Ill. 751,552, pub. 4–9–63. Cl. 19.
International Minerals & Chemical Corp., Skokie, Ill. 751,-514–15, pub. 4–9–63. Cl. 12.
Italdisc Distributing Co. Inc., New York, N.Y. 751,743, pub. 4–9–63. Cl. 36.
J. & S. Engineers Ltd., Crayford, Kent, England. 751,526, pub. 4–9–63. Cl. 13.
Jacques Fourcy: *See*—
Reich, Jacques.
Jandron, Francis L.: *See*—
Adams, George W.
Jefferson Tank & Seats Mfg. Co., Inc., Brooklyn, N.Y. 751,-523, pub. 4–9–63. Cl. 13.
Jensen Co., The: *See*—
Jensen, William G.
Jensen, Russ, & Sons, Mfg. Jewelers, Toledo, Ohio. 751,-695, pub. 4–9–63. Cl. 28.
Jensen, William G., d.b.a. The Jensen Co., Elkhorn, Wis. 645,085, canc. Cl. 23.
Jewels By Stanlee: *See*—
Zukowski, Stanley.
Johnson, Mary, Bridgeport, Conn. 645,135, canc. Cl. 39.
Jumpmaster Co., Calumet, Iowa. 645,073, canc. Cl. 22.
Just Accessories, Inc., New York, N.Y. 751,494, pub. 4–9–63. Cl. 3.
Kabushiki Kaisha Matsuzakaya, Naka-ku, Nagoya City, Japan. 751,719, pub. 4–9–63. Cl. 33.
Kahn Bros. Co., Chicago, Ill. 751,508, pub. 4–9–63. Cl. 10.
Kaiser Aluminum & Chemical Corp., Oakland, Calif. 751,529, pub. 4–9–63. Cl. 14.
Kalart Co., Inc., The, Plainville, Conn. 751,645, pub. 4–9–63. Cl. 26.
Kannenglesser & Co., Inc., New York, N.Y. 645,250, canc. Cl. 46.
Kas Heating Products, Inc., New York, N.Y. 751,589, pub. 4–9–63. Cl. 21.
Keech, Dana E., d.b.a. Keech Mfg. Co., Los Angeles, Calif. 644,977, canc. Cl. 4.
Keech Mfg. Co.: *See*—
Keech, Dana E.
Kendall Co., The, Walpole, Mass. 751,702, pub. 4–9–63. Cl. 29.
Kerite Co., The: *See*—
Kerite Insulated Wire & Cable Co., Inc., The.
Kerite Insulated Wire & Cable Co., Inc., The, Seymour, Conn., and New York, N.Y., to The Kerite Co., New York, N.Y. 172,336, ren. 6–25–63. Cl. 21.
Kerite Insulated Wire & Cable Co., Inc., The, Seymour, Conn., and New York, N.Y., to The Kerite Co., New York, N.Y. 174,600, ren. 6–25–63. Cl. 21.
Kingbird Products, Inc., El Monte, Calif. 751,597, pub. 6–23–62. Cl. 22.
Kogan, David, and Joseph Kogan, New York, N.Y. 645,248, canc. Cl. 39.
Kops Bros., Inc.: *See*—
Lovable Brassiere Co., The.
Kovax Products, New York, N.Y. 645,011, canc. Cl. 13.
Kreiss Corp., Los Angeles, Calif. 751,745, pub. 4–9–63. Cl. 36.
Kreiss, Sidney J., Inc., New York, N.Y. 751,793, pub. 4–9–63. Cl. 39.
Kuhlman, Arthur L., New Baltimore, Mich. 751,592, pub. 4–9–63. Cl. 21.
Kummeth Mfg. Co., Owatonna, Minn. 751,607, pub. 4–9–63. Cl. 23.
L & M Fashions, Inc., New York, N.Y. 751,772, pub. 4–9–63. Cl. 39.
Lau Blower Co., The, Dayton, Ohio. 751,728, pub. 4–9–63. Cl. 34.
Laundry-Mate, Inc., Fort Lauderdale, Fla. 751,642, pub. 4–9–63. Cl. 24.
Lavin, R., & Sons, Inc., Chicago, Ill. 751,533, pub. 4–9–63. Cl. 14.
Lazarus, F. & R., Co., The: *See*—
Federated Department Stores, Inc.
Leading Lady Foundations, Inc., Cleveland, Ohio. 645,148, canc. Cl. 39.
Leeds Records Inc., New York, N.Y. 751,739, pub. 4–9–63. Cl. 36.
Leon Jewels, Ltd., New York, N.Y. 751,699, pub. 4–9–63. Cl. 28.
Lehtonen, Emil H., Joppa, Md. 751,668, pub. 4–9–63. Cl. 26.
Le Roi Hosiery Co., Inc., New York, N.Y. 751,783, pub. 4–9–63. Cl. 39.
Letcher, Sydney, Erie, Pa. 751,847, pub. 4–9–63. Cl. 107.
Liberty Machine Co.: *See*—
Nappi, John J.
Lilly, Eli, and Co., Indianapolis, Ind. 645,243, canc. Cl. 6.

Listerated Gum Corp., New York, N.Y., to Wm. Wrigley Jr. Co., Chicago, Ill. 173,683, ren. 6–25–63. Cl. 46.
Little, J. J. & Ives Sales Corp., New York, N.Y. 644,973, canc. Cl. 2.
Little Giant Corp., from Little Giant Vaporizer Co., Inc., Oklahoma City, Okla. 751,603, pub. 4–9–63. Cl. 23.
Little Giant Vaporizer Co., Inc.: *See*—
Little Giant Corp.
Littleton, Edward C., San Francisco, Calif. 645,159, canc. Cl. 44.
Lizen, M., Mfg. Co., Chicago, Ill. 751,520, pub. 4–9–63. (Consolidated certificate, Classes 14, 13.)
Logetronics, Inc., Alexandria, Va. 751,762, pub. 4–9–63. Cl. 38.
Lovable Brassiers Co., The, Atlanta, Ga., from Kops Bros., Inc., New York, N.Y. 751,764, pub. 4–9–63. Cl. 39.
MacDonald, E. F., Stamp Co, Dayton, Ohio 751,845, pub. 4–9–63. Cl. 101.
Manesco, Inc., Manhasset, N.Y. 751,706, pub. 4–9–63. Cl. 31.
Manesco, Inc., Manhasset, N.Y. 751,725, pub. 4–9–63. Cl. 34.
Manattan Shirt Co., The: *See*—
Hirsch Shirt Corp.
Manufacture Belge d'Aiguilles, Eupen, Belgium. 751,612, pub. 4–9–63. Cl. 23.
Martin-Marietta Corp.: *See*—
Master Builders Co., The.
Martin-Senour Co., The, Chicago, Ill. 645,033, canc. Cl. 16.
Mason Marking Systems Corp., Norfolk, Va. 751,754, pub. 4–9–63. Cl. 37.
Master Builders Co., The, Cleveland, Ohio, to Martin-Marietta Corp., New York, N.Y. 174,470, ren. 6–25–63. Cl. 12.
Master Cleaners: *See*—
Holden, Edwin R.
Maymar, Peter Paul, d.b.a. Fleetwood Co., Mill Valley, Calif. 751,769, pub. 4–9–63. Cl. 39.
McGaw Laboratories, Inc., Milledgeville, Ga., from American Sterilizer Co., Erie, Pa. 751,807, pub. 4–9–63. Cl. 44.
Medical Investment Corp., Minneapolis, Minn. 751,842, pub. 4–9–63. Cl. 100.
Meinecke & Co. Inc., New York, N.Y. 402,007, ren. 6–25–63. Cl. 52.
Meopta, Narodni Podnik, Prerov, Czechoslovakia. 751,658, pub. 4–9–63, Cl. 26.
Mercury-Stat Co., Philadelphia, Pa. 645,120, canc. Cl. 37.
Microfloc Corp., Portland, Oreg. 751,709, pub. 4–9–63. Cl. 31.
Micrometrical Mfg. Co., from Micrometrical Mfg. Co., Ann Arbor, Mich. 751,644, pub. 4–9–63, Cl. 26.
Midgley, Charles William, Sacramento, Calif. 645,172, canc. Cl. 45.
Midwest Importers: *See*—
Halbeck, Leo.
Millipore Filter Corp., Bedford, Mass. 751,707, pub. 4–9–63. Cl. 31.
Milton Mfg. Co., Inc., Chicago, Ill. 751,639, pub. 4–9–63. Cl. 23.
Milton Mfg. Co., Inc., Chicago, Ill. 751,593, pub. 4–9–63. Cl. 21.
Milton Mfg. Co., Inc., Chicago, Ill. 751,491, pub. 4–9–63. Cl. 2.
Milton Mfg. Co., Inc., Chicago, Ill. 751,528, pub. 4–9–63. Cl. 13.
Milwaukee Cheese Co., Brookfield, Wis. 751,828, pub. 4–9–63. Cl. 46.
Minnesota Mining and Mfg. Co., St. Paul, Minn. 751,812, pub. 4–9–63. Cl. 44.
Mix-Mill, Inc., Bluffton, Ind. 751,628, pub. 4–9–63. Cl. 28.
Monsanto Chemical Co., St. Louis, Mo., from The Chemstrand Corp., New York, N.Y. 751,799, pub. 4–9–63. Cl. 42.
Montgomery, John D., d.b.a. The Fort Riley Post, Junction City, Kans. 751,757, pub. 4–9–63. Cl. 38.
Montmarquet, Francis H., Little Falls, N.J. 403,713, ren. 6–25–63. Cl. 44.
Morehead Mills, Inc., Spray, N.C. 751,805, pub. 4–9–63. Cl. 43.
Morningstar-Paisley, Inc., New York, N.Y. 751,504, pub. 4–9–63. Cl. 6.
Motec Industries, Inc., Hopkins, Minn. 751,651, pub. 4–9–63. Cl. 26.
Motive Equipment Manufacturers, Inc., Chicago, Ill. 751,551, pub. 4–9–63. Cl. 19.
N.V. Uitgeversmaatschappij Elsevier, Amsterdam, Netherlands. 751,756, pub. 4–9–63. Cl. 38.
Nappi, John J., d.b.a. Liberty Machine Co., Berlin, Conn. 751,836, pub. 4–9–63. Cl. 50.
Nashua Textile Co., Inc., Nashua, N.H. 645,102, canc. Cl. 29.
National Automation Corp., Jamaica, N.Y. 751,650, pub. 4–9–63. Cl. 26.
National Beryllia Corp., Haskell, N.J. 751,682, pub. 4–9–63. Cl. 26.
National Cash Register Co., The, Dayton, Ohio. 751,482, pub. 4–9–63. Cl. 1.
National Cash Register Co., The, Dayton, Ohio. 751,630, pub. 4–9–63. Cl. 23.
National Skeet Shooting Association, The, Dallas, Tex. 751,844, pub. 4–9–63. Cl. 101.
National Sound Systems, Inc., Long Island City, N.Y. 751,740, pub. 4–9–63. Cl. 36.
Nestle Co., Inc., The, White Plains, N.Y. 751,825, pub. 4–9–63. Cl. 46.
New York World's Fair 1964–1965 Corp., Flushing, N.Y. 751,763, pub. 4–9–63. Cl. 38.
Niagara Screens and Plant Ltd., Enfield, England. 751,606, pub. 4–9–63. Cl. 23.
Nibot Corp., from Fedco Corp., Chicago, Ill. 751,490, pub. 3–19–63. Cl. 2.
Niehues & Dutting, Nordhorn, Germany. 645,130, canc. Cl. 39.
Non-Tox Chemical Corp., Mamaroneck, N.Y. 751,477, pub. 4–9–63. Cl. 1.
Nordberg Mfg. Co., Milwaukee, Wis. 751,629, pub. 4–9–63. Cl. 23.
Nukem Products Corp., Buffalo, N.Y. 751,510, pub. 4–9–63. Cl. 12.
Ogle, Robert W., Los Angeles, Calif. 645,154, canc. Cl. 44.
Old Town Corp., Brooklyn, N.Y. 645,244, canc. Cl. 11.
Olin Mathieson Chemical Corp.: *See*—
Endless Belt Corp.
Omaha Chemical Co., Omaha, Nebr. 644,997, canc. Cl. 6.
Oxley Developments Co., Ltd., Ulverston, England. 751,594, pub. 4–9–63. Cl. 21.
Packard-Bell Electronics Corp., Los Angeles, Calif. 751,563, pub. 4–9–63. Cl. 21.
Parke, Davis & Co., Detroit, Mich. 172,537, ren. 6–25–63. Cl. 18.
Patterson-Fletcher Co., Fort Wayne, Ind. 645,131, canc. Cl. 39.
Pellerin Milnor Corp., Kenner, La. 751,641, pub. 4–9–63. Cl. 24.
Permanente Cement Co., Oakland, Calif. 751,511, pub. 4–9–63. Cl. 12.
Perry Mfg. Co., Mount Airy, N.C. 751,768, pub. 4–9–63. Cl. 39.
Pet Food Packers: *See*—
Free, R. G.
Peters Sportswear Co., Inc., Philadelphia, Pa. 751,791, pub. 4–9–63. Cl. 39.
Pfaudler Permutit Inc., Rochester, N.Y. 751,638, pub. 4–9–63. Cl. 23.
Photoptic Import Corp., New York, N.Y. 747,581, cor. Cl. 26.
Physics For Industry, Inc., Rochester, N.Y. 751,674, pub. 4–9–63. Cl. 26.
Piggly Wiggly Operators' Warehouse, Inc., Shreveport, La. 751,823, pub. 4–9–63. Cl. 46.
Plymouth Shoe Co., Middleboro, Mass. 751,775, pub. 4–9–63. Cl. 39.
Polychrome Corp., Yonkers, N.Y. 751,834, pub. 4–9–63. Cl. 50.
Portable Electric Tools, Inc., Geneva, Ill. 751,610, pub. 4–9–63. Cl. 23.
Postureze: *See*—
Hennessy Lubricator Co., Inc.
Procter & Gamble Co., The, Cincinnati, Ohio. 751,703, pub. 4–9–63. Cl. 29.
Professional Archers Association of America, Hickory Corners, Mich. 751,846, pub. 4–9–63. Cl. 200.
Purdue Frederick Co., The, New York, N.Y. 645,053, canc. Cl. 18.
Purdue Frederick Co., The, New York, N.Y. 751,542, pub. 4–9–63. Cl. 18.
Pure Oil Co., The, Palatine, Ill. 751,732, pub. 4–9–63. Cl. 35.
Pyrofilm Resistor Co., Inc., Parsippany, N.J. 751,596, pub. 4–9–63. Cl. 21.
R & R Printing Corp, New York, N.Y. 751,749, pub. 4–9–63. Cl. 37.
Radiant Glass Heating Corp., to Continental Radiant Glass Heating Corp., New York, N.Y. 645,056, canc. Cl. 21.
Radiator Specialty Co., Charlotte, N.C. 751,518, pub. 4–9–63. Cl. 13.
Raetone Commercial Refrigerator Corp., Plymouth Meeting, Pa. 645,107, canc. Cl. 31.
Randolph Research Co., Akron, Ohio. 751,623, pub. 4–9–63. Cl. 23.
Reich, Jacques, d.b.a. Jacques Fourcy, Paris, France. 751,838, pub. 4–9–63. Cl. 51.
Reeves Instrument Corp., Garden City, N.Y. 751,676, pub. 4–9–63. Cl. 26.
Regal Ware, Inc., Kewaskum, Wis. 751,578, pub. 4–9–63. Cl. 21.
Richmond Hosiery Mills, Rossville, Ga., to Weber Shoe Co., Inc., Tipton, Mo. 174,253, ren. 6–25–63. Cl. 39.
Richmond Screw Anchor Co., Inc., Brooklyn, N.Y. 751,853. Cl. 12.
Rilling Co., to The Rilling-Dermetics Co., New York, N.Y. 645,222, canc. Cl. 51.
Rilling-Dermetics Co., The: *See*—
Rilling Co.
Risher Radio Corp., Long Island City, N.Y. 751,576, pub. 4–9–63. Cl. 21.
Riso Optical Co., Inc., New York, N.Y. 751,080, pub. 4–9–63. Cl. 26.
Rite-Care Corp., Center, Tex. 751,826, pub. 4–9–63. Cl. 46.
Riverside & Dan River Cotton Mills, Inc., Danville, Va., and New York, N.Y., to Dan River Mills, Inc., Danville, Va. 401,877, ren. 6–25–63. Cl. 42.
Robbins Floor Products, Inc., Tuscumbia, Ala. 751,559, pub. 4–9–63. Cl. 20.
Robinson Blower and Engineering Corp., San Martin, Calif. 751,724, pub. 4–9–63. Cl. 34.
Roche Fruit Co., Inc.: *See*—
Roche, William E.
Roche Fruit and Produce Co., The: *See*—
Roche, William E.
Roche, William E., d.b.a. The Roche Fruit and Produce Co., to Roche Fruit Co., Inc., Yakima, Wash. 173,329, ren. 6–25–63. Cl. 46.
Ronrico Corp., San Juan, Puerto Rico. 751,831, pub. 4–9–63. Cl. 49.
Roper, Geo. D., Corp., Rockford, Ill. 645,111, canc. Cl. 34.
Royalite Jewelry Mfg., Inc., West New York, N.J. 751,698, pub. 4–9–63. Cl. 28.
Rubin, Louis, Long Island City, N.Y. 645,058, canc. Cl. 21.
Safeway Stores, Inc.: *See*—
Safeway Stores, Inc. of Nevada.

Safeway Stores, Inc. of Nevada, d.b.a. Table Products Co., Reno, Nevada, and Oakland, Calif., to Safeway Stores, Inc., Oakland, Calif. 403,680, ren. 6–25–63. Cl. 46.
St. Lawrence Mfg. Co., Inc., Giffard, Quebec, Canada. 751,598, pub. 4–9–63. Cl. 22.
Samuels, Irving, New York, N.Y. 751,774, pub. 4–9–63. Cl. 39.
Sanders, Luther D., d.b.a. Traverse Bay Woolen Co., Traverse City, Mich. 645,142, canc. Cl. 39.
Sandnes Uldvarefabrik A/S, Sandnes, Norway. 751,804, pub. 4–9–63. Cl. 43.
Sapolin Co. Inc., to Sapolin Paints Inc., New York, N.Y. 401,458, ren. 6–25–63. Cl. 16.
Sapolin Paints Inc.: *See*—
Sapolin Co. Inc.
Sapphire Corp., New York, N.Y. 751,784, pub. 4–9–63. Cl. 39.
Sawyers, Inc., Portland, Oreg. 751,678, pub. 4–9–63. Cl. 26.
Sbicca of California, El Monte, Calif. 751,781, pub. 4–9–63. Cl. 39.
Schieffelin & Co., New York, N.Y. 751,832, pub. 4–9–63. Cl. 49.
Schoenborn-Buchheim, George, d.b.a. Garvenswerke, Vienna, Austria. 645,057, canc. Cl. 21.
Schultz, Jack, Inc., St. Louis, Mo. 751,795–6, pub. 4–9–63. Cl. 39.
Schumacher, Bernard P., N. Dak. 751,601, pub. 4–9–63. Cl. 22.
Science Materials Center, New York, N.Y. 751,654, pub. 3–26–63. Cl. 26.
Seovill Mfg. Co., Racine, Wis. 751,590, pub. 4–9–63. Cl. 21.
Screen Products, Inc., Caldwell, N.J. 751,661, pub. 4–9–63. Cl. 26.
Seager, Helaine, Inc., Newark, N.J. 645,224, canc. Cl. 51.
Sealectro Corp., Mamaroneck, N.Y. 751,565, pub. 4–9–63. Cl. 21.
Sexology Corp., New York, N.Y. 751,761, pub. 4–9–63. Cl. 38.
Shandon Scientific Co. Ltd., London, England. 751,646–7, pub. 4–9–63. Cl. 26.
Shell Oil Co., New York, N.Y. 751,499–500, pub. 4–9–63. Cl. 6.
Sherwin-Williams Co., The, Cleveland, Ohio. 168,111, ren. 6–25–63. Cl. 16.
Shields, Inc., New York, N.Y. 751,581, pub. 4–9–63. Cl. 21.
Simonis Co., Chicago, Ill. 751,496, pub. 4–9–63. Cl. 4.
Simplex Shoe Mfg. Co.: *See*—
Simplex Shoe Mfg. Co., Inc.
Singer Mfg. Co., The, New York, N.Y. 751,659, pub. 4–9–63. Cl. 26.
Sjostrom Automations, Inc., Boca Raton, Fla. 751,621, pub. 4–9–63. Cl. 23.
Smallman, I. & Sons, Co., New York, N.Y. 751,507, pub. 4–9–63. Cl. 8.
Smith, Geraldine A., d.b.a. Mrs. Harold Smith, Cody, Wyo. 645,178, canc. Cl. 46.
Smith, Harold (Mrs.): *See*—
Smith, Geraldine A.
Societe Peroche, Paris, France. 751,770, pub. 4–9–63. Cl. 39.
Socony Mobil Oil Co.: *See*—
Socony-Vacuum Oil Co., Inc.
Socony Mobil Oil Co., Inc.: *See*—
Standard Oil Co. of New York.
Socony-Vacuum Oil Co., Inc., to Socony Mobil Oil Co., Inc., New York, N.Y. 402,071, ren. 6–25–63. Cl. 52.
Sola Distributing Corp., Dallas, Tex. 751,501, pub. 4–9–63. Cl. 6.
Solventol Chemical Products, Inc., Highland Park, Mich. 402,462, ren. 6–25–63. Cl. 4.
Sossner Steel Stamps, Inc., Long Island City, N.Y. 751,859. Cl. 23.
Southern Cotton Oil Co., The, Jersey City, N.J., to Hunt Foods and Industries, Inc., Fullerton, Calif. 167,017, ren. 6–25–63. Cl. 46.
Sousa Bros. Packing Co., to Sousa Bros. Packing Co., Santa Maria, Calif. 403,714, ren. 6–25–63. Cl. 46.
Spex Industries, Inc., Scotch Plains, N.J. 751,675, pub. 4–9–63. Cl. 26.
Staley, A. E., Mfg. Co., Decatur, Ill. 751,830, pub. 4–9–63. Cl. 58.
Standard Oil Co. of New York, New York, N.Y., to Socony Mobil Oil Co., Inc., New York, N.Y. 169,461–2, ren. 6–25–63. Cl. 15.
Standard Oil Co. of New York, to Socony Mobil Oil Co., Inc., New York, N.Y. 167,800, ren. 6–25–63. Cl. 15.
Standard Packaging Corp.: *See*—
Chemical Paper Mfg. Co.
Stein, A., & Co., to A. Stein & Co., Inc., Chicago, Ill. 168,904, ren. 6–25–63 Cl. 40.
Stein, S., & Co., New York, N.Y., to H. Freeman & Son, Inc., Philadelphia, Pa. 173,213, ren. 6–25–63. Cl. 42.
Stero Chemical Mfg. Co., San Francisco, Calif. 751,858. Cl. 23.
Steven Laboratories, Inc., Clayton, Mo. 751,543, pub. 4–9–63. Cl. 18.
Stein, A., & Co., Inc.: *See*—
Stein, A., & Co.
Stowe-Woodward, Inc., Newton Upper Falls, Mass. 751,631–7, pub. 4–9–63 Cl. 23.
Stronghold Jewelry Co., New York, N.Y. 751,687, pub. 4–9–63. Cl. 28
Style Footwear Co., Inc., South Norwalk, Conn. 751,788, pub. 4–9–63. Cl. 39.
Summy-Birchard Co., Evanston, Ill. 751,760, pub. 4–9–63. Cl. 38.
Sylvania Electric Products Inc., New York, N.Y. 751,586, pub. 4–9–63. Cl. 21.
Table Products Co.: *See*—
Safeway Stores, Inc. of Nevada.
Tahiti Musique, Los Angeles, Calif. 751,747, pub. 4–9–63. Cl. 36.
Talens & Son, Inc., Union, N.J. 751,750, pub. 4–9–63. Cl. 37.
Texas Delta Development Corp., Lockhart, Tex. 645,112, canc. Cl. 34.
Theta Instrument Corp., Saddle Brook, N.J. 751,655, pub. 4–9–63. Cl. 26.
Thomas, Dr. Karl, G m.b.H., Biberach an der Riss, Germany. 751,545–6, pub. 4–9–63. Cl. 18.
Tide-Tan Corp., Dallas, Tex. 644,993, canc. Cl. 6.
Tiona Petroleum Co., Pennsauken, N.J. 751,540, pub. 4–9–63. Cl 15.
Topper Bakeries, Port Chester, N.Y. 751,822, pub. 4–9–63. Cl. 46.
Towne Robinson Nut Co.: *See*—
Towne Robinson Fastener Co.
Triumph Werke Nurnberg Aktiengesellschaft, Nurnberg, Germany. 751,735, pub. 4–9–63. Cl. 36.
Tokai Corp. of America, New York, N.Y. 751,591, pub. 4–9–63. Cl. 21.
Tool Steel Gear and Pinion Co., The, Cincinnati, Ohio. 751,613, pub. 4–9–63. Cl. 23.
Towne Robinson Fastener Co., from Towne Robinson Nut Co., Dearborn, Mich. 751,517, pub. 4–9–63. Cl. 13.
Trabich, David E., New York, N.Y. 751,689, pub. 4–9–63. Cl. 28.
Trader Vic's, San Francisco, Calif. 751,727, pub. 4–9–63. Cl. 34.
Transene Co.: *See*—
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Travenol Laboratories, Inc., Morton Grove, Ill. 751,544, pub. 4–9–63. Cl. 18.
Traverse Bay Woolen Co.: *See*—
Sanders, Luther D.
Trimline Tackle Co., Inc., New York, N.Y. 645,075–6, canc. Cl. 22.
Turtle Wax, Inc., Chicago, Ill. 751,553, pub. 4–9–63. Cl. 19.
Tyden Corp., The, Hastings, Mich. 751,643, pub. 4–9–63. Cl. 25.
Ulman, Bernhard, Co. Inc., to Indian Head Mills, Inc., New York, N.Y. 401,201, ren. 6–25–63. Cl. 43.
Unidicta Canada Ltd., Toronto, Ontario, Canada. 751,737, pub. 4–9–63. Cl. 36.
Union Carbide Corp., New York, N.Y. 751,479, pub. 4–9–63. Cl. 1.
Union Carbide Corp., New York, N.Y. 751,730–1, pub. 4–9–63. Cl. 34.
Union Metal Works Ltd., Hong Kong. 751,587, pub. 4–9–63. Cl. 21.
Union Oil Co. of California, Los Angeles, Calif. 751,711, pub. 4–9–63. Cl. 32.
United Geophysical Corp., Pasadena, Calif. 645,234, canc. Cl. 100.
United Hosiery Mills Corp., Chattanooga, Tenn., to Buster Brown Textiles, Inc., Wilmington, Del. 399,905, ren. 6–25–63. Cl. 39.
United Shoe Machinery Corp., Boston, Mass. 751,797, pub. 4–9–63. Cl. 40.
United States Gypsum Co., Chicago, Ill. 401,120, ren. 6–25–63. Cl. 12.
United States Rubber Co., New York, N.Y. 743,447, cor. Cl. 35.
United Steel & Wire Co., Battle Creek, Mich. 751,554, pub. 4–9–63. Cl. 19.
Universal American Corp., New York, N.Y. 751,620, pub. 4–9–63. Cl. 23.
Universal Compounding Co., Akron, Ohio. 751,810, pub. 4–9–63. Cl. 44.
Universal Controls, Inc., New York, N.Y. 751,618, pub. 4–9–63. Cl. 23.
Universal Electronics Laboratories Corp., Hackensack, N.J. 751,860. Cl. 26.
Untermeyer, Robbins & Co., New York, N.Y. 751,696, pub. 4–9–63. Cl. 28.
Vacationer Enterprises, Inc., Burlington, Vt. 751,758, pub. 4–9–63. Cl. 38.
Van Zile, Carl R., d.b.a. Van Zile Products, Lexington, Ky. 751,840, pub. 4–9–63. Cl. 52.
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Van Zile, Carl R.
Vector Mfg. Co., Inc., Southampton, Pa. 751,648, pub. 4–9–63. Cl. 26.
Verbaleta Recorder Corp., Garden City, N.Y. 751,742, pub. 4–9–63. Cl. 36.
Vermont Maple Products Co., Inc., Barre, Vt. 645,198, canc. Cl. 46.
Verni, Melvin, d.b.a. Delta Records, Chicago, Ill. 751,736, pub. 4–9–63. Cl. 36.
Vision Master, Inc., Cleveland, Ohio. 751,652, pub. 4–9–63. Cl. 26.
Vogue Electronics & Appliance Corp., Brooklyn, N.Y. 751,575, pub. 4–9–63. Cl. 21.
Vollmerwerke Maschinenfabrik G.m.b.H., Biberach (Riss), Germany. 751,605, pub. 4–9–63. Cl. 23.
Von Gronau, Martha M.: *See*—
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Wachs, Paul, New York, N.Y. 751,694, pub. 4–9–63. Cl. 28.
Wahl Clipper Corp., Sterling, Ill. 751,611, pub. 4–9–63. Cl. 23.
Wallace, Edwin C., Port Washington, N.Y. 751,771, pub. 4–9–63. Cl. 39.
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Ferret Mfg. Corp.
Wamo Mfg. Co.: *See*—
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Ward Baking Co., New York, N.Y. 167,087, ren. 6–25–63. Cl. 46.

Ward Baking Co., New York, N.Y. 170,794, ren. 6–25–63. Cl. 46.
Watumull Brothers, Honolulu, Hawaii. 645,134, canc. Cl. 39.
Wayne Knitting Mills, Humboldt, Tenn. 751,776, pub. 4–9–63. Cl. 39.
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Richmond Hosiery Mills.
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Weil & Durrse, Inc., New York, N.Y. 751,800, pub. 4–9–63. Cl. 42.
Welch, Warren William, d.b.a. Wil-Aren, Colorado Springs, Colo. 751,693, pub. 4–9–63. Cl. 28.
Wellington Sears Co., New York, N.Y. 751,801, pub. 4–9–63. Cl. 42.
West Brothers of Deridder La., Inc., De Ridder, La. 751,766, pub. 4–9–63. Cl. 39.
West Chemical Products, Inc.: *See*—
West Disinfecting Co.
West Chemical Products, Inc., Long Island City, N.Y. 751,851. Cl. 2.
West Disinfecting Co., to West Chemical Products, Inc., Long Island City, N.Y. 403,300, ren. 6–25–63. Cl. 6.
Westberg, Vernon C., d.b.a. Auto Meter Products, Elgin, Ill. 751,681, pub. 4–9–63. Cl. 26.
Western Garment Co., Ripley, Tenn. 751,777, pub. 4–9–63. Cl. 39.
Westland Oil Co., Minot, N. Dak. 174,764, ren. 6–25–63. Cl. 15.
Wham-O Powermaster Corp., d.b.a. Wamo Mfg. Co., San Gabriel, Calif. 645,069, canc. Cl. 22.
Wheaton Glass Co., Millville, N.J. 751,720, pub. 4–9–63. Cl. 33.
Wheeling Steel Corp., Wheeling, W. Va. 645,007, canc. Cl. 13.
Whitney Blake Co., The, Hamden, Conn. 402,190, ren. 6–25–63. Cl. 21.
Whiz Fish Products Co., Inc., Seattle, Wash. 645,194, canc. Cl. 46.
Wil-Aren: *See*—
Welch, Warren W.
Wilbur & Williams Co., The, Norwood, Mass. 395,850, canc. Cl. 16.
Williams, Arnold E., and Sons Ltd., Birmingham, England. 751,697, pub. 4–9–63. Cl. 28.
Wilson Sporting Goods Co., River Grove, Ill. 751,602, pub. 4–9–63. Cl. 22.
Wing, L. J., Mfg. Co., Division of Aero-Flow Dynamics, Inc., Linden, N.J. 747,628, cor. Cl. 34.
Wolff Appliance Corp., Long Island City, N.Y. 751,713, pub. 4–9–63. Cl. 32.
Wooster Brush Co., The, Wooster, Ohio. 751,700, pub. 4–9–63. Cl. 29.
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Listerated Gum Corp.
Young Conservatives of Illinois, Inc., Chicago, Ill. 751,849, pub. 4–9–63. Cl. 200.
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Youngs Rubber Corp., New York, N.Y. 751,818, pub. 4–9–63. Cl. 44.
Zale Jewelry Co., Inc., Dallas, Tex. 751,683, pub. 4–9–63. Cl. 27.
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Zeiss-Stiftung, Carl, d.b.a. Carl Zeiss, Wurttemberg, Germany. 751,656–7, pub. 4–9–63. Cl. 26.
Zip-Lok Co.: *See*—
Herman, Leslie E.
Zukowski, Stanley, d.b.a. Jewels By Stanlee, Bristol, Conn. 751,785, pub. 4–9–63. Cl. 39.
Zylon Products Co., Inc., Pawtucket, R.I. 751,852. Cl. 2.

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